

THOMPSON SQUARE EST 1795
UNDER GOVT. ATTACK 2013

**DEFENDED BY
THE PEOPLE**



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EXECUTIVE SUMMARY

- ❖ The proposal to demolish the heritage-listed Windsor Bridge and the consequent destruction of heritage values in the oldest public square in Australia is unacceptable.
- ❖ In addition the project fails to deliver strategically justifiable outcomes.
- ❖ There are very high levels of community dissatisfaction with project processes.
- ❖ The assumptions upon which the project was based have been credibly and authoritatively challenged.
- ❖ Community consultation has been inadequate and has failed to acknowledge or address the very significant issues raised by the community.
- ❖ The project delivers adverse outcomes with regard to Noise, Amenity, Town Planning and Local Economic Benefits and is of questionable value with regard to Traffic Management.
- ❖ Project costings are unjustified and have failed to consider the value of significant public heritage assets both in dollar terms and social terms.

RECOMMENDATIONS

It is recommended that:-

- i) The current project to replace the current Windsor Bridge be halted and a full, complete and independent review of the project be conducted by suitably qualified and independent non-RMS experts.
- ii) An independent review establish appropriate, quantifiable, publicly endorsed project parameters and objectives.
- iii) The Review includes an evaluation of bypass options, especially the Rickaby Creek Line, with reference and comparison to the performance of Option 1 and against such parameters and objectives.
- iv) Historic Windsor Bridge be renovated using the method developed by Brian Pearson and Ray Wedgwood.

THE WRITERS, RESEARCHERS, PHOTOGRAPHERS AND EDITORS...

A document like this takes a LOT of work. The material presented in this submission is the result of thousands of hours of collaborative research and reporting undertaken by the following people:

Harry Terry	Local resident (68 years) Teacher (41 years, 21 years as Principal)
Brian Pearson	Former Chief Engineer (Bridges) NSW Dept of Main Roads
Ray Wedgwood.	Former Chief Bridge Engineer NSW RTA
Chris Hallam	Christopher Hallam and Associates Pty Ltd. BE, MEngSc, FIEAust, CPEng
Brian Marston	BGMA Acoustic Engineering Pty Ltd. . MAAS CPEng
Shayne Reynolds	Industrial Design Engineer
Dr Ian Ross	BE, MAppSc, PhD, FIE Aust ,CPEng, PHD Director, Environment Professionals Australia Pty Ltd
Pete Reynolds	Company Director Committee Member, Windsor Business Group Member Hawkesbury Chamber of Commerce
Peter Armstrong	Thompson Square resident
Ms Roma Armstrong	Thompson Square resident for 95 years
Kate Mackaness	B.Ed (Hons) Dip Teach
David Hope	BVSc (Syd)
Dail Miller	Local resident 55 years. Business Proprietor Bach Comm (Econ), Dip FP
Graeme Edds	Local Resident.40 years. Heritage Architect. B Arch (Hon). MBEnv (Building Conservation) Member Nat Trust Aus (NSW) Hawksbury Branch.
Carol Edds	Local Resident. 40 years. Heritage Consultant. B Building (Hon). MBEnv (Building Conservation) Chair Nat Trust Aus (NSW) Hawksbury Branch.
Megan Wood	Local Resident, Antique Dealer, L.R.E.A.
Roderick Storie	Local Resident, Solicitor, B.Bus. LLB.
Venecia Wilson	Local Resident, IT Manager
Rob Lewry	Local Resident
Eva Lewry	Local Resident
Noel Butler	Local Resident 34 years Ret Teacher. Dip Ed (Hon)
Nina Butler	Local Resident 34 years. Ret Teacher. Dip Ed
Jennifer Butler	Local Resident B. Sociology. B. Law. M. Ed
Christopher Paine	Local Resident for over 60 years.

BURRA CHARTER AND NEW BUILDING

“The Heritage Debate of the 1960s and '70s, which lead to the adoption of the Burra Charter in 1979, agonised over whether copying the old or creating brand new was a better match for existing heritage buildings. The solution was The statement:

22.1 New work such as additions to the place may be acceptable where it does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation.

22.2 New work should be readily identifiable as such.

and the Explanatory Note:

New work may be sympathetic if its siting, bulk, form, scale, character, colour, texture and material are similar to the existing fabric, but imitation should be avoided.

While Reconstruction or replication based on conjecture is discouraged, reinstatement of elements that add to the significance of the place, based on sound research evidence is acceptable and encouraged.

The Victorian Heritage Council provides guidelines that state:

New buildings should not undermine the significance or detract from the prominence and character of adjoining and nearby Contributory Elements and the area covered by the Area HO. ... Either contemporary or conservative design approaches may be appropriate. The design of new buildings should have close regard to context and reflect the relationships between nearby Contributory Elements and the streetscape. Design that closely imitates, replicates or mimics historic styles is discouraged because it can distort an understanding of the development of an area, and hence the significance of a Heritage Place. New buildings designed in a conservative manner should not misrepresent the historical form of a Heritage Place. They should be clearly distinguishable as new buildings.

http://www.heritage.vic.gov.au/admin/file/content2/c7/HO_Guidelines_New%20Buildings.pdf

In many respects, as the values of a heritage building or precinct are in what has been created in the past, the new structures should remain the least prominent and therefore least important part of the place. The architects should sublimate their egos for heritage so if their creations go unnoticed, they have succeeded the best.”

This is an edited version of a blog, posted by Gary Vines

<http://australianarchaeology.blogspot.com.au/2010/05/burra-charter-and-new-building.html>

1. CONTEXT AND GEOGRAPHICAL CONSIDERATIONS

The NSW State Government proposes a bridge replacement project at Windsor.

The project itself, the Windsor Bridge Replacement Project (WBRP) will directly impact a key commercial and heritage precinct in the Windsor township, as well as agricultural lands on the northern side of the Hawkesbury River. It is anticipated economic impacts will extend well beyond the immediate areas of physical destruction, landscape degeneration and general erosion of heritage values of this historic town, at a minimum across the Hawkesbury River to the agricultural landscape to the north and across the Region more generally.

In order to better understand the implications of the WBRP the following contextual information is provided.

Location

Windsor is located in the Hawkesbury City Local Government Area and is approximately 57km north west of the Sydney CBD.

It sits centrally within the greater Hawkesbury Valley area at the foot of the Blue Mountains, the predominate settlements of which are the significant townships of Windsor and Richmond. These two towns together with the developing area of North Richmond contribute the bulk of the residential, commercial and administrative functions for the district.

Additionally, maps of the area indicate villages such as Wilberforce and Pitt Town and smaller, but important village developments which include Glossodia, Freemans Reach, Kurrajong, East Kurrajong and Ebenezer. Wilberforce and Pitt Town, together with Windsor and Richmond comprise four of the five so-called Five Macquarie Towns (the other being Castlereagh which is more practically located in the Penrith sphere of influence). (*Macquarie's Towns*, Professor Ian Jack, 2010)

Even casual observation alerts the visitor to the rural and agricultural setting throughout which these townships and villages are scattered: the overall effect being significantly more country and rural than that of many of the adjoining jurisdictions.

The Hawkesbury's role as a food-producing region dates from the earliest days of European settlement in Australia. Governor Arthur Phillip discovered the flood plains in 1789 while searching for fertile farmland to grow food for the struggling Sydney settlement.

http://www.hawkesburyaustralia.com.au/information/townships_windsor.asp

Looking out today across the flood plain to the north of Thompson Square is it possible to imagine the agricultural potential those early visitors saw.

After the rugged sandstone and dry sclerophyll landscape of the Sydney Region (http://www.dictionaryofsydney.org/entry/the_rocks) this was a landscape where the

early settlers could see agricultural possibilities and where perhaps an aching longing for a more green and gentle landscape was eased, resulting in the town originally being named 'Green Hills'.

Today it is still possible to view that landscape as if through that eighteenth century lens....verdant, 'English', productive. A journey along Wilberforce road, for example with unobstructed vistas to the Blue Mountains, and today, the occasional poplar in the distance reflects an unusually European landscape.

Topography

"The Hawkesbury River valley generally comprises a flat undulating floodplain that is subject to regular flooding. However, at Windsor a ridge exists on the southern bank of the river on which much of the township sits. The existing southern bridge approach through the township descends steeply to the north and down to the river. The northern approach is less distinct being almost level with the existing bridge crossing. (Windsor Bridge Replacement, Urban Design and Landscape Concept Report, page 15)

The Hawkesbury-Nepean River, which finds its source west of the Woronora Plateau, flows into the Warragamba Catchment Area and then meanders through the Hawkesbury Valley to provide an important and unique connection and identifier for the whole district.

From the Emu Plains to Castlereagh Section there is a narrow, slightly elevated area and the topography forms a slight restriction to the river, which then flows through Castlereagh at the foot of the Nepean Escarpment. The confluence with the Grose River is at Yarramundi. Upstream of this point it is referred to as the Nepean River.

Downstream of the constriction at Castlereagh the River enters a distinct basin extending from North Richmond to Wilberforce. This is the largest sub-floodplain of the River's primary floodplain and can be further sub-divided into several sections:

- a. Richmond Lowlands;
- b. Rickabys Creek;
- c. South Creek (incorporating Eastern Creek) and
- d. Bushells Lagoon.

Characterised in these reaches by this meandering form, from Castlereagh to Wilberforce the river snakes backwards and forwards across the floodplains around Windsor, creating a significant transport planning challenge, due to both its form and context in a low lying flood plain.

A trip down the River itself indicates the characteristic sandstone bluffs of the lower Hawkesbury River only really appear once you travel downstream of Sackville. A secondary floodplain takes in the area from Sackville, downstream to Spencer. It starts at the lower end of the primary floodplain where the river flows through a very narrow gorge that starts near Ebenezer (the "Sackville Choke"). This area downstream of Ebenezer is generally referred to as the Lower Hawkesbury. The secondary floodplain is mostly located within the Baulkham Hills, Hornsby and

Gosford local government areas. (Ref: Hawkesbury/Nepean Flood Emergency Sub Plan December 2005 Section 2.39, page 6.)

Initially utilised as an important transport hub for produce flowing to the infant colony, today the Hawkesbury River provides a major source of enjoyment for recreational boaters, fishermen and skiers as well as a haven for tourists.

Despite increasing encroachments from urban development the area has not lost its strong agricultural connection and the rich fluvial soils today support local turf and vegetable farmers.

The River itself is prone to regular flooding with the Hawkesbury–Nepean River Valley having experienced numerous serious floods since the earliest days of European settlement.

The effect of such floods ranges from nuisance to catastrophic (in the event of a Probable Maximum Flood) (Hawkesbury/Nepean Flood Emergency Sub Plan December 2005, page 4)

The more significant floods and their levels at the Windsor Bridge are detailed below:

Major Floods Year	Height (m AHD)
1864	14.40
1867	19.20
1870	13.49
1873	12.50
1879	12.98
1949	11.96
1956	13.61
1961	15.09
1961	15.00
1964	14.60
1978	14.30
1988	12.65
1990	13.36

(Hawkesbury/Nepean Flood Emergency Sub Plan December 2005 Section 2.39 page 11.)

Another significant riverine influence in the immediate Windsor area, obvious from the McGraths Hill approach is South Creek, which flows into the Hawkesbury River downstream from Windsor Bridge

Historic Influences

Windsor is the third oldest European settlement in Australia following Sydney and Parramatta (http://en.wikipedia.org/wiki/Windsor,_New_South_Wales).

As already noted, the site of the historic township was originally selected because it sits on a ridge of land that rises above by the Hawkesbury River and South Creek flood plains. Early European arrivals who were in the area from 1794, (when Lieutenant Governor Francis Grose made land grants of 30 acres each to 22 settlers http://www.hawkesburyaustralia.com.au/information/townships_windsor.asp), quickly recognised the importance of this and it was instrumental in the town providing a flood free refuge for early settlers.

Then, in 1811 Governor Macquarie visited the existing settlement, then known as Green Hills and marked out a new town, incorporating the original Green Hills settlement. He re-named the town Windsor (Macquarie's Journals of his Tours in New South Wales and Van Dieman's Land, Library of Australian History & Library Council of NSW, 1979, ML ref. 981.115, page 42).

The choice of location by the original European settlers which was reinforced by Macquarie in his decision that Green Hills would become the town of Windsor, (Macquarie's Journals *ibid*) relatively high above the surrounding Hawkesbury floodplain arguably has insulated the old township from significant encroaching urban development.

Even cursory observation indicates that, unlike many other parts of Sydney, particularly on the metropolitan fringe, Windsor has retained much of its rural and regional charm. The original part of the township has not materially altered from Macquarie's time and the original street layout is preserved even to this day. (Macquarie's Towns, Professor I Jack, 2010). That the streetscape remains relatively unchanged can be readily recognised today when comparisons are made with images from earlier times. See below:





It also has resulted in the preservation of much of the early vistas and sightlines attainable from the Town across the Windsor Bridge, McGraths Hill flats and the Peninsular area to the east. The preservation of Windsor as a relatively clearly articulated colonial town is best understood in comparison with other locations of a somewhat later but similar age. The Liverpool's original Macquarie streetplan can be seen in plan, (Professor Jack 2010) however, surrounding development today obscures the original town.

Significantly the WBRP is located at the very heart of the original Macquarie Town.



In *Macquarie's Towns*, (2010) Professor Jack describes how the public square to the north (Thompson Square) had been developing since 1795. Today the density of remaining heritage buildings in this part of Windsor testifies to its early commercial development and significance in the early days of settlement.

The Thompson Square Heritage Precinct

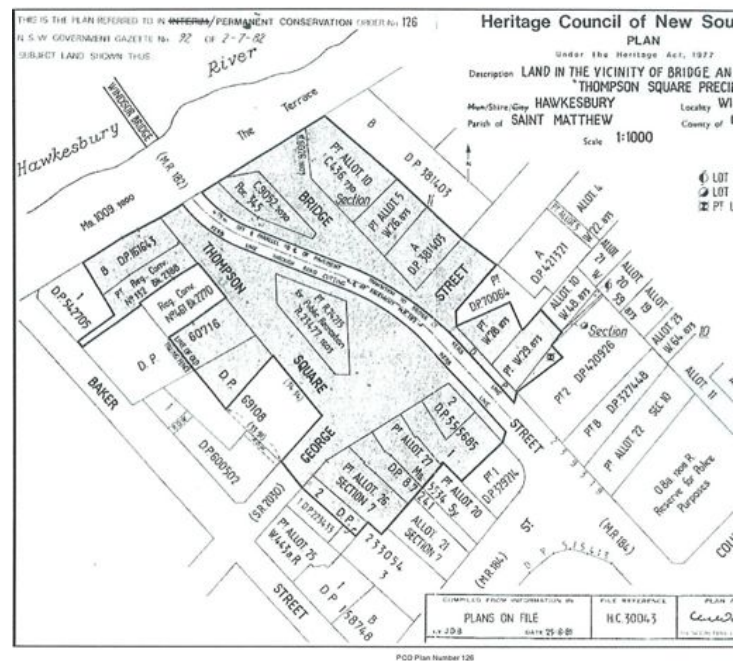
Thompson Square Conservation Precinct rises, initially steeply, from the Hawkesbury River embankment (north), toward the alignment of George Street (south, following the east/west high ridgeline), Windsor's main street. The public green space at the heart of the Square is split into two sections with a diagonal roadway referred to as Bridge Street. The larger green space is located at the higher elevation to the east of the prominent Macquarie Arms Hotel and is bounded by George Street (south), Thompson Square [Street] (west) and Bridge Street diagonally, forming a triangle.

The smaller green space is located with frontage to Old Bridge Street (east), the Hawkesbury River (north) and the diagonal roadway Bridge Street (west), forming a second triangle. Each green space is predominantly grassed with isolated mature tree landscape plantings. (NHL Nomination)



Map of the eastern end of Windsor Township. Red border delineates the Thompson Square Conservation Precinct and the area proposed for National Listing.

Since 1975, Thompson Square Conservation Precinct has been identified as a heritage conservation area and recognised by Local and State Government. Many of its surrounding commercial and residential buildings have been individually recognised on the State Heritage Register (SHR) and the others forming part and culminating in the Thompson Square Precinct being given State Heritage recognition as early as 1981. The National Trust of Australia also recognised this important Precinct from June 1975. Below, the shaded area indicates the SHR (PCO) boundary.



The Square includes a large number of Colonial Georgian buildings on its three street frontages. Commercial and residential buildings within the Square include:

❖ The Doctor's House	c1830	1-3 Thompson Square
❖ Georgian Cottage	c1852	5 Thompson Square
❖ Howe's House	c1828	7 Thompson Square (Hawkesbury Museum)
❖ Macquarie Arms Hotel	1815	99 George Street
❖ Single Storey Shop	c1865	82 George Street (former cottage)
❖ A C Stern Commercial Building	c1907	74 George Street (former single storey cottage)
❖ Single Storey Shop	c1920	70-72 George Street (former Garage)
❖ Victorian Commercial Building	c1880	64-68 George Street (former triple single storey terrace house together with 62 George Street)
❖ Georgian Commercial Building	c1830	62 George Street (formerly single storey terrace together with 64-68 George Street)
❖ Victorian Georgian Cottage	c1840	17 Bridge Street
❖ Victorian Classical Revival building	1861	14 Bridge Street (former Windsor School of Arts)
❖ Lillburn Hall	c1856	10 Old Bridge Street
❖ Victorian Building		
❖ Victorian Georgian Cottage	c1860	6 Old Bridge Street
❖ Cottage infill	c1955	4 Old Bridge Street (archaeological wall remnant)

In addition, and not previously recognised through heritage listings, is remnant archaeology from before and following Governor Macquarie's 1810 formation of Thompson Square. These items are mainly located down the slope toward and interface with the Hawkesbury River, a vital part of riverboat traffic/mooring and the position of the first Hawkesbury River crossing and include:

❖ Wharf archaeology (Kings Wharf)	c1816	Old Bridge Street/Hawkesbury River
❖ Potential wharf/mooring archaeology	c1795/6	Hawkesbury River
❖ Punt crossing archaeology	c1795	Hawkesbury River
❖ Barrel Drain archaeology	c1810	Thompson Square Precinct
❖ Street Layout and Sandstone Kerbing	c1810	Old Bridge Street, George Street and Thompson Square
❖ Hawkesbury River Bridge	1874/1897	

As this list illustrates, Thompson Square represents an extraordinarily rich and significant collection of both visible and as yet unexplored heritage items.

Maritime Historical Perspective.

In a report prepared for RMS, Biosis Research in March 2012 we learn that soon after it was established, expansion of the early settlement at Sydney Cove was needed, as soils used for farming around the colony were considered to be poor. Expansion of farming land had resulted in settlement at Parramatta; however, further arable land was needed to increase production for the growing settlement. Land grants in the greater Windsor area began in 1794 with grants being made to James Ruse and Charles Williams. (Research Design to Inform the Non-Aboriginal Heritage Assessment for the Windsor Bridge Replacement Project, March 2012.)

Reflecting the poor state of the road between Sydney and Windsor, by 1812 a flourishing river trade had developed and records indicate just over 100 voyages from the Hawkesbury region to Sydney, involving 21 vessels making six or seven return trips. (**Purtell, Jean. 1995** *The Mosquito Fleet: Hawkesbury River Trade and Traders 1794-1994*, 37. as detailed in Cosmos Archeology Final working paper October 2012)

Chris Lewczak, Cosmos Archaeology (Maritime Archaeological Statement Of Heritage Impact, Final Working Paper Report October 2012, page 31) details the development of maritime facilities at Windsor in response to this flow of goods and people from Windsor to areas in the lower Hawkesbury and beyond, saying that:

To facilitate the conveyance of produce to and from this area to the Colony at Sydney a wharf was constructed at the initial settlement at Windsor in 1795 which supplied the early store and military garrison and also provided transportation for crops from the surrounding farms.

The original wharf may have been destroyed by flood and a second wharf was built at Windsor in ca.1814 and repaired in 1820 under the direction of Governor Macquarie.

A private punt service also started in 1815 using the wharf as the southern Landing and in 1832 the punt was taken over and operated by the Government.

In c.1835 the location of the punt moved upstream and a cabling system was installed for the crossing.

Once the bridge across the Hawkesbury River was built in 1874 the punt service ceased soon after.

To facilitate the building of the Windsor Bridge in 1896 a temporary bridge was constructed for the raising of the main bridge across the Hawkesbury River.

The second wharf was present until the late 1930s or early 1940s.” (EIS Maritime Archaeological Statement Of Heritage Impact, Final Working Paper Report October 2012, page 31)



Windsor also prospered as a busy port for small river craft. Later (circa 1888), lighter, smaller draft vessels ferried cargo from Windsor wharf to larger vessels

located in deeper water, at Lower Portland. (**Purtell, Jean. 1995** *The Mosquito Fleet: Hawkesbury River Trade and Traders 1794-1994*, 51.)

When Windsor railway station was opened in December 1864, (http://en.wikipedia.org/wiki/Windsor,_New_South_Wales) goods, generally produce that came from upstream, was unloaded at the wharf and transported by rail from Windsor to Sydney. Cargoes included maize, poultry, watermelons, fruit, eggs, bark and gourds.

Windsor also developed a boatbuilding industry, as did Richmond and Pitt Town. The Hawkesbury boats were smaller craft than those being built in Sydney, most being less than 50 tons, but were suited to the river trade. (**Purtell, Jean. 1995** *The Mosquito Fleet: Hawkesbury River Trade and Traders 1794-1994*, 48,41.)

Against this backdrop of maritime progress Windsor became a well established, busy and important inland port facility, but its importance declined with the silting up of the river and the establishment or improved development of other transport systems.

Indeed a report by Austral Archaeology in August 2011 (p.33) advises that “...*Smaller vessels continued to trade to Windsor from the beginning of the 20th century, but they were soon made redundant by road transport. Windsor thrived for many decades as one of the main ports on the Hawkesbury River, but changing river conditions and easier methods of transport* inevitably lead to the relinquishment of trading. It is very likely therefore by the late 19th century, the role of Windsor as a serious commercial port had become redundant.*

(**Purtell, Jean. 1995** *The Mosquito Fleet: Hawkesbury River Trade and Traders 1794-1994*)

*The Blacktown to Richmond railway line was completed towards the end of 1864 and the first regular train ran on 1st December 1864. (Trove SMH 30 Nov 1864)

Surrounding Areas

The area surrounding Windsor is predominantly rural. Traditionally grains such as corn and maize were grown. Poultry, watermelons, fruit, eggs, bark and gourds were early agricultural products. Of later times, potatoes, greens, corn and citrus fruits became important and today turf farming is an important commercial agricultural activity.

There is extensive and expanding urban development to the south and west of the town where the effect of the flood plain is not felt. These are the areas of Windsor South and Bligh Park. McGraths Hill to the east also represents an area of additional urban and industrial development separated from Windsor by the Hawkesbury River/South Creek flood plain.

As noted earlier, Windsor's role as a supplier of food to the early colony was based on the availability of its rich farming soils derived from fluvial deposits with areas of active floodplain and low, gently rolling hills.

This early establishment of the importance of agriculture to the regional economy has carried over to this day with a district priding itself on its rural and agricultural connections. Indeed the area today is an important centre for turf and vegetable farming as well as equestrian pursuits such as training and racing of thoroughbreds, polo pursuits and recreational and competition dressage and riding activities.

Even today land use in the Hawkesbury local government area can be generally characterised as pastoral and agricultural. It is this landscape, of rich architectural and arguably untapped historical interpretation that supports local business and industry, residential, tourism and recreational uses.

The Road Network

The settlements of the Hawkesbury are connected with varying grades of roads depending on population and land use.

The relevant section of the RMS Restricted Access Vehicle (RAV) Map (<http://www.rta.nsw.gov.au/heavyvehicles/ravmap/>) indicates key link roads between the Hawkesbury and other regional areas include:

- Putty Road (the Hunter Valley)
- Bells Line of Road (Lithgow)
- Blacktown/Richmond road (Blacktown)
- Windsor Road (Parramatta)
- The Northern Road (Penrith)
- Freemans Reach Road, is a collector road connecting Windsor to Freemans Reach

Another road connection is Wisemans Ferry Rd via Pitt Town, linking to Wisemans Ferry and beyond.

Additionally the more major or significant internal roads include:

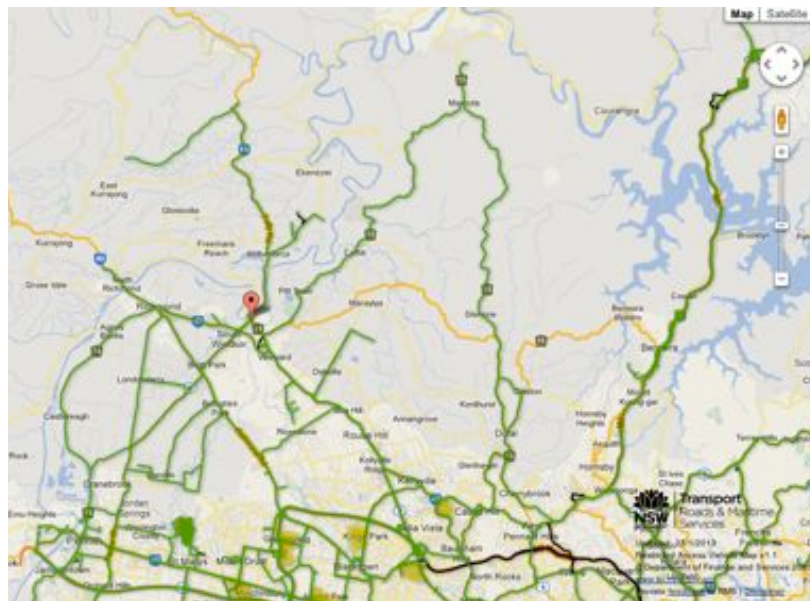
- Hawkesbury Valley Way ('Flood Evacuation Route' Windsor to Windsor Road via Grove Avenue)
- Macquarie Street (arterial road linking Windsor town centre with Richmond, Penrith and Campbelltown, which forms part of Metroad 9).

Locally,

- Thompson Square Road is a local road. It is brick-paved and connects George Street to The Terrace.



The RAV Map provides additional detail by 'switching on' the B-Double layer. (see below)



Of further interest is the impact of the recently announced changes to Route Numbering in NSW (Alpha Numeric Route Numbers - A New Road Numbering System) resulting in Macquarie Street, Windsor being identified as the A9 and Windsor Road as the A2.

Interestingly, an 'A' road is designated a Route of National Significance and 'A' routes are defined as the principal arterial routes in urban areas and connecting routes between cities and towns of key regional significance in rural areas"

This takes on considerable significance when considering a quote from the Ballina Bypass Project, which advises that “RTA’s current definition of arterial class roads requires that they must be developed with a strategy *for conversion to motorway class roads in the future.*”

http://www.rta.nsw.gov.au/roadprojects/projects/pac_hwy/ballina_tweed_heads/ballina_bypass/documents/study_documents/icd_report_chapter_03.pdf page 14

Significantly, the only two permanent river crossings over the Hawkesbury River in the area are via Windsor and North Richmond Bridges.

River crossings are listed below.

1. Hawkesbury River Railway Bridge, Brooklyn (1889 and 1946).
2. Peats Ferry Bridge, Brooklyn (1945).
3. Hawkesbury River Freeway Bridge, Brooklyn (1977).
4. Windsor bridge, Windsor (1874).
5. Richmond Bridge, Richmond (1905).
6. Victoria Bridge, Penrith (1867 & 1907).
7. M4 bridge, Penrith (1971 & 1986).

In addition to these a number of ferry crossing points also exist on the Hawkesbury River These ferry crossings are:

1. • Wisemans ferry.
2. • Webbs Creek ferry.
3. • Colo River ferry.
4. • Sackville ferry.

This pattern of road connections and the limited number of crossings over the river serve to establish Windsor as a hub for transport connections in the wider area.

It also dictates that any project that has an effect on this transport system has to be considered within the context of its wider ramifications for the access across the River for ever increasing level of inter town and interregional transport.

Rail Transport

Today Windsor continues to be served by its historic railway, part of the Sydney transport system Western Line via Riverstone and Blacktown which links the area to the Sydney CBD.

The line opened in 1864. In 1926, an extension northwards to Kurrajong opened. This extension closed in 1952 after flooding, due to low and uneconomical levels of traffic, and little evidence of it now remains.

Electrification was completed to Richmond station in 1991, and at that time significant remodelling of the tracks at the station was performed, including the

building of the current train storage sidings on the northern side of the station and removal of tracks from the southern side.

http://en.wikipedia.org/wiki/Richmond_railway_station,_Sydney

Current service level is two trains per hour each way, with additional trains during weekday peak hours.

Conclusion

The Hawkesbury is uniquely placed: only an hour from Australia's only global city, Sydney, international gateway and home to over four and a half million people.

Set against the backdrop of the mighty Great Dividing Range: the Blue Mountains frames views to the west. Homes are set in and around a fertile, productive landscape, laced with the blessings and the occasional blight of the great Hawkesbury-Nepean River system. It is the Hawkesbury, or 'Deerubbun'; thought to mean wide, clear water, that sets the scene. It is those wide, clear waters that created the rich alluvial floodplains, the agricultural landscape and was the basis for the area's unique European heritage.



Hawkesbury City Council Heritage Advisory Committee 2000-2001

Green outline and hatched - Windsor Heritage Building precinct

Red outline and hatched - Windsor Town Conservation Area

2. HISTORY AND HERITAGE

Summary

The EIS Volume One is the most accessible reference for the casual reader. It is supposed to contain the conclusions and recommendations from all the Working Papers contained in the other three volumes. One would expect it to be accurate.

Curiously, this is often not the case with this EIS, especially in regards to the Project's impacts on History and Heritage.

One has to go to the working papers to find the true results of the consultant's studies. Their findings are:

- ❖ The impact of the demolition of Windsor Bridge would be high.
- ❖ The impact of the replacement bridge to the existing significant cultural landscape is anticipated to be high.
- ❖ Physical impacts associated with the construction of the replacement bridge are anticipated to be very high.
- ❖ The visual impact of the project on Thompson Square is anticipated to be very high.
- ❖ The physical impact on relics within Thompson Square is anticipated to be very high.
- ❖ Physical impacts of the modification to The Terrace are anticipated to be high with respect to archaeological resources
- ❖ The visual impact of the roundabout on the northern bank is anticipated to be high with respect to the existing cultural landscape.

It continues:

"From a heritage conservation perspective the most appropriate treatment of Thompson Square and Windsor Bridge is to avoid any further negative impact and to take the opportunity identified by the Heritage Council to remove through traffic."

We trust the Director General will heed the advice of the consultants. We trust he will provide an objective recommendation, free of political bias, to the Minister based on these findings.

Discussion

The EIS states that Thompson Square is significant to “at least” a State level for its historical, associative, research and social values (Biosis p.347).

It is agreed that Thompson Square is significant at a State level however, the EIS fails to adequately describe its significance as a National heritage precinct. This is evidenced by the fact that most sites forming part of Thompson Square are listed on the Register of the National Estate.

Thompson Square’s significance at a National level is also evidenced by the fact that it is the only eighteenth century civic square in Australia and also the first civic square in Australia, something *the EIS fails to acknowledge*.

Thompson Square also has further social and political significance to Australia. Thompson Square memorialises Andrew Thompson and is representative of the entrepreneurial spirit of the early settlers and the esteem emancipists had in a new egalitarian society forged under Governor Macquarie, as influenced by William Wilberforce. (See attachments A and B)

The Biosis specialist heritage report acknowledges that Windsor Bridge is both rare and unique:

“The Windsor Bridge is considered to be a rare item, within the state, relating to its initial construction, its subsequent modifications and survival. Its composition of iron cylinder piers is extremely rare in a bridge built only for road traffic. In combination with timber beam spans, it is unique” (Biosis p159).

Thompson Square is also acknowledged to be rare:

“It is a rare survivor in a rapidly growing city, it has an aesthetic that links it to the past and retains an historic setting that has not changed dramatically since the mid-nineteenth century. It has research potential in the form of archaeological and archival resources that have a high potential to yield information about the earliest uses of the place and the expansion of the colony. It is also representative of the entrepreneurial spirit of the early settlers and the importance of the region as a food producing area for Sydney.

Thompson Square is both rare and representative and may surpass the State significant threshold where evidence of Green Hills survives,” (p.180).

Conclusion

Once again one has to trawl through the Working Papers to find the results of the consultant's studies.

"As the significance of the archaeological resource within the project area, and in particular within Thompson Square and down to the river would be diminished by the project, the preferred outcome is that this resource remains intact."

- All components of Thompson Square are formally recognised as being of State significance; preservation is the primary recommendation to retain significance. The project will impact on the State significance heritage values of Thompson Square and the most appropriate management measure for a significant cultural landscape such as this is to avoid the impacts proposed by the project.
- The Windsor Bridge is also of State significance and retention and stabilisation of the bridge is the preferred action to ensure that its significance is retained. "

Ultimately the EIS recommends the following:

"The primary recommendation is to avoid all impacts to Thompson Square"
(Recommendation 11.7.2)

"The primary recommendation that has been made is to retain Windsor Bridge" (Recommendation 11.7.2)

Again we trust the Director General of Planning will accept the objective findings of the consultants. We also trust he will provide an objective recommendation to the Minister.

The only conclusion that can be drawn from the consultant's findings is that the Project ***not be approved.***

PEOPLE OF THE SQUARE – The formative years.

1. MACQUARIE, WILBERFORCE, THOMPSON AND CUNNINGHAM

This report by the EIS falls far short of exploring the historical importance of Thompson Square both for the Square itself, the township of Windsor and indeed the Nation. Scant reference is made to the social significance of Windsor and especially Thompson Square in the formation of the character of our nation. Indeed it will be demonstrated that events that took place within it were a catalyst in forming part of the nation's character. It was here that a dedication took place that has echoed down through the centuries and helped make us what we are today. The RMS seems oblivious of the value of symbolic places and events as it immerses itself in the minutia of government required check lists.

This significant consideration revolves around the unlikely spiritual association of three very different men that demands attention in any plans regarding Thompson Square. These men were Andrew Thompson, Governor Lachlan Macquarie and William Wilberforce.

The EIS says that Thompson Square is of at least State significance but it is asserted that it is of National Heritage significance as it is a nominated place on the National Heritage List and most sites forming part of Thompson Square are listed on the Register of the National Estate. The lives and contributions of the aforementioned men, influenced by the great ideas that were changing western society and philosophy at the time, made an indelible mark on the young colony by forming the concept egalitarianism which underpins our Nation today.

Lachlan Macquarie had Bell Post Square re-named Thompson Square. *"The Square in the present Town I have named" Thompson Square, in honour of the memory of the good and worthy late Andrew Thompson Esqr. Justice of Peace & Principal Magistrate for this District – and who may justly be said to be the Father and Founder of the Village hitherto known by the name of the Green Hills; there being hardly a vestige of a single building here, excepting the Government Granary, when he first came to reside on the Green Hills ten years ago. - I had a Post erected this afternoon in Thompson Square having a Board nailed thereon with the name painted on it in large characters...*¹. The letters were painted with paint brought specially by Macquarie for the occasion. Paint was a rare and expensive commodity in the early colony as only limited amounts were sent out from England and all supplies were under the watchful eye of the Governor.

¹ Macquarie, Lachlan. *Memoranda & Related Papers; 22 December 1808-14 July 182*. Saturday 12 January 1811.

Macquarie, in writing the name of Andrew Thompson, in effect, signed a great “contract” with the ‘State’ and those who were to become the Australian people. Andrew Thompson stood for the people, Macquarie stood for the State and Thompson Square was the “paper” on which it was written. This was the great “unwritten contract” that every Australian now takes as their birth-right and every immigrant who comes here to live does so knowing of the benefits it bestows. This “contract” embodies the ideals of Egalitarianism; the idea that a person’s past should not be used to inhibit their future ability to contribute in a positive manner to their community and to other fellow human beings and they would be recognised for the quality of their character not the status of their birth.

The idea of “a fair go” was thus born with this declaration as the governor publically sided with the forces within the colony that favoured this approach and had split the young colony from its first years even to the extent of overthrowing a governor. Thompson Square is a tangible reminder of this great idea understood by all at the time for its symbolic significance.

The story begins in the little town of Yetholm, Scotland in 1773 when Andrew Thompson was born. He is the 6th child of John and Agnes Thompson. His father was a manufacturer and dyer and Andrew, educated at a parochial school, worked in his father’s business until illness forced him to study for the excise. But Andrew fell foul to “youthful indiscretions” as Governor Macquarie referred to them and was convicted of stealing cloth. He pleaded guilty and was sentenced to 7 years transportation.

He became his family’s “outcast goat” and in 1791 he and 401 other convicts set sail on the “Pitt”, arriving in Sydney on the 14th February 1792². Also on the Pitt was Benjamin Singleton, convict and later founder of Singleton and fellow explorer of John Howe. Also on board was Lt. Governor Francis Grose, his wife and 3 yr old son; John Piper, military officer, of Point Piper fame; Thomas Rowley and his wife, Elizabeth (who died on the voyage) and a female prisoner, Elizabeth Selwyn, who became the second Mrs Rowley.

Thompson was a person who impressed all the Governors of the colony up to and including Macquarie. Governor Phillip first gave Thompson a ‘lift’ by recommending him to his successor and in 1801 Thompson was appointed Chief Constable by Governor King. After working with distinction in the men’s provision store Thompson joined the fledgling constabulary in 1793, serving with similar distinction at Toongabbie and other centres. In 1796 Governor Hunter appointed him to Green Hills (Windsor), which he made his home and where his entrepreneurial skills came to the fore in areas such as farming. Andrew acquired many farms in the Hawkesbury and also at Minto – (“St

² Byrnes, J. V., (June 1962). Andrew Thompson, 1773 -1810 Part 1 – To the Arrival of Macquarie. *RAHS Journal*, 48(2), 105 -139.

Andrew's"), running them all with great efficiency. He also became a brewer, hops grower, a boat builder, bridge builder (first bridge over South Creek), salt manufacturer at Scotland Island, overseer of Bligh's farm, "Blighton" at Pitt Town, tanner, store owner, grain producer and race horse owner.



Governor's Residence shortly before demolition in the late 1920's. The residence was located in the Government Domain, which bounded Thompson Square. Many early Governors spent time here especially Macquarie who visited it regularly.

Macquarie believed in a policy of rewarding merit and promoted emancipists of ability to positions of authority and trust, stating:

*"Some of the Most Meritorious Men of the few to be found, and who were Most Capable and Most willing to Exert themselves in the Public Service, were Men who had been Convicts!"*³.

When Macquarie arrived in 1810, he appointed Andrew to Justice of the Peace and Chief Magistrate of Windsor. This was the first appointment of an emancipist to such an office and in doing so Macquarie earned the ire of the Exclusivists who regarded convicts, fully pardoned or not, as not fit company and as "always a convict"

Macquarie and his Lady Elizabeth were influenced by the beliefs and ideals of their friend, William Wilberforce, the great emancipist of the slaves and by Enlightenment thinker. In letters that Wilberforce sent to Macquarie in Sydney it can be seen that they discussed the nature and treatment of the convicts under Macquarie's care and that they were in agreement that if treated well most convicts would repent their indiscretions and would make good contributions to society⁴. In Macquarie's eyes the convicts were judged the 'slaves' of the colony.

³ Lachlan Macquarie. Extract from Letter to John Thomas Bigge, 6 November 1819 (NSW Governors' Dispatches, ML A 1192, pp.589-590) *FROM Elevating the Emancipists* (n.d.). Retrieved 10 January 2012, from http://www.sl.nsw.gov.au/events/exhibitions/2010/governor/10_emancipists/index.html

⁴ *The Letters of Lachlan Macquarie; Received and Sent 1809 to 1822* (Mitchell Library Vol 39A797).

When on their voyage to Australia, the Macquarie's ship had encountered a Portuguese slave trading vessel off the Brazilian coast and they had been made terribly distraught by the treatment of the female slaves⁵. There was a fever on board and when a slave showed any signs of illness they were thrown alive overboard. Elizabeth Macquarie was shocked. Her husband's biographer, John Ritchie, records: "*Elizabeth's humanity shuddered at this monstrousness and caused her to think of William Wilberforce*".⁶

Such brutality left them both determined to implement as many of Wilberforce's ideas as possible and so within two months of his arrival he appointed Andrew, an Emancipist to the high rank of a Magistrate - not a free settler or an Exclusivist of wealth or importance. This was a direct challenge to the existing social structure. One of Macquarie's five towns "Wilberforce" is named after his social mentor.

When Andrew Thompson died in Oct. 1810 he epitomised the 'freed slave' ideal of Wilberforce and Macquarie. He had risen to become one of the most respected and wealthiest men in the colony. He died after a chest condition contracted after he spent many days in flood waters rescuing 109 settlers from the floods of 1806 and 1809. He used his boats to pluck the settlers of the Hawkesbury from their roof tops and flood waters. Andrew Thompson was one of our Nation's first heroes. Macquarie honoured him in death with a large ceremonial funeral and a lengthy epitaph which has come down to us as one of the seminal speeches of the early colony. His was the first burial to take place in the grounds of what was to become St Matthew's Church, Windsor.

Andrew Thompson had gained redemption in a place that offered him the opportunity to prove himself unfettered by social class. So it was that just three months after his death, Macquarie and his Lady Elizabeth returned to Windsor to visit the grave of their friend and to name the Square for him. Macquarie called him the Father and Founder of Windsor and he created a memorial to him in the naming of the Square. Thus it was in this act that the 'contract' was 'written'.

So what is the nature of this un- written contract that is symbolised in Thompson Square and warrants protection?

After the Rum Rebellion the colony was heavily divided. The two groups that vied for setting the destiny of the colony were known as the "Exclusivists" made up largely of landed and property people and the officer corps⁷ – those that sought a society based on class, religion and ethnic

⁵ Windschuttle, K., (2007 March 24-25), Breaking the shackles. *The Weekend Australian*. Retrieved from <http://www.theaustralian.com.au/news/features/breaking-the-shackles/story-e6frg6z6-111113212163>

⁶ Windschuttle, K., (2007 March 24-25), Breaking the shackles. *The Weekend Australian*. Retrieved from <http://www.theaustralian.com.au/news/features/breaking-the-shackles/story-e6frg6z6-111113212163>

⁷ *Elevating the Emancipists* (n.d.). Retrieved 10 January 2012, from http://www.sl.nsw.gov.au/events/exhibitions/2010/governor/10_emancipists/index.html

background where an underclass served a landed upper class not unlike North Carolina⁸. The other group were the “Emancipists” which were a mixed group of freed convicts and free thinkers and had the support of the Irish, convicts and poorer settlers. Past Governors saw merit in the Emancipists ideals and Governor Bligh was partly destroyed in the protracted battle between these opposing ideas⁹.



Phil Cunningham awaiting flogging for mutiny at sea prior to arrival in Australia and being declared king of “New Ireland” by the rebel convicts prior to the Battle of Vinegar Hill and hanging in Thompson Square (executed footpath of the new road)

Essentially the new colony of Australia was to become the first trial test bed for the concept extolled by the free thinkers in Europe, England and the Americas which believed in the concept of the “noble savage”¹⁰ and that divided societies created dysfunctional societies and the ills that resulted from them. They believed that if true egalitarian societies could be made under heaven as God intended where all citizens were given the opportunity to prove their worth and respected as equals unrestrained by birth, class or beliefs they would make moral citizens. They rejected any form of slavery or serfdom and the current belief that certain groups of people were inherently morally and intellectually inferior. Governor Macquarie and his wife were unlikely supporters to this concept but fully embraced it though in the end it destroyed Macquarie’s health and career¹¹.

Governor Macquarie outraged the powers that be by giving 1000’s of convicts conditional pardons and freedom early in his administration to construct their own destinies in the new colony irrespective of ethnic origin or religion. They even were appointed to the majority of positions in his newly re-structured police force. He added to this by appointing an ex- convict to the rank of a Magistrate and then magnified this further by declaring the first public square in Australia not after a king, Governor or prominent free settler but rather a convict that had redeemed himself through

⁸ *Elevating the Emancipists* (n.d.). Retrieved 10 January 2012, from http://www.sl.nsw.gov.au/events/exhibitions/2010/governor/10_emancipists/index.html

⁹ A. G. L. Shaw, 'Bligh, William (1754–1817)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/bligh-william-1797/text2037>, accessed 11 January 2013.

¹⁰ Windschuttle, K., (2007 March 24-25), Breaking the shackles. *The Weekend Australian*. Retrieved from <http://www.theaustralian.com.au/news/features/breaking-the-shackles/story-e6frg6z6-111113212163>

¹¹ N. D. McLachlan, 'Macquarie, Lachlan (1762–1824)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/macquarie-lachlan-2419/text3211>, accessed 11 January 2013.

hard work and strength of character. This was a calculated action that all understood and aligned him permanently with the Emancipists' course. It is in this that Thompson Square attains a national significance well beyond just being a park. It is here that the concept of "a far go" that underpins the national character has its clear reference point.

It has been claimed that Australia is the greatest example in the world of a successful penal reform system. In this Andrew Thompson even at that time was recognised as its precursor. In light of this Thompson Square takes on an international significance in the evolution of social thinking. All countries have significant places that are totems for what they believe and mark the journey they have taken – Thompson Square is such a place. Like most places that underlay major social changes it lacks the drama of dramatic sites such as Gallipoli or Glenrowan but its social impact was much greater in moulding the nation's character. In all the detritus over the RMS proposal the symbolic significance of this area has been largely overlooked in their EIS submission and given minimal worth.

This is a major flaw in the RMS submission and undermines their whole proposal to alter the square.

Beyond that, this area was to play a major part in our early colonial history. All the early Governors regarded Windsor as paramount in the survival of the colony because of its agricultural richness and river trade. Thompson Square was at its centre.

It is no accident that in the Vinegar Hill Uprising the rebels sought to secure Windsor and its produce before taking Sydney. At an international level the importance of Windsor was recognised in Washington and Paris when the fledgling Independent American nation and France were at war with England and Lord Bathurst informed Governor Macquarie that a joint military action may be expected to take Windsor and the garrison in the square in order to cut off the colonies food supply prior to invading it (12). The execution of Phillip Cunningham, the leader of the Vinegar Hill Uprising, at the corner of the park, where traffic will rumble past, and the mass burial of those that fell interned at the bottom of the hill near South Creek gives testimony to these events as does the building of the Macquarie Arms Hotel in the square under government instruction to act as a military support depot if needed (13).

Governor Macquarie's frequent visits to the Government Domain that bordered the square testifies to the great importance the Square had during his administration. Governor Macquarie always regarded Windsor as very important to the fledgling colony and lavished money on its built heritage which caused him great problems and in laying it out with a public square and a common near his grand church he sought to set in brick and stone a model new community based on new age concepts of how societies could be modelled in the empire.

This place does not deserve to become a thoroughfare for 1800 trucks plus a day as extrapolated from RMS surveys. Seventy percent of the traffic which enters the Square today is through traffic. This place deserves to be respected and retained as a quiet precinct where citizens can come to learn about the story of the Square and understand what it symbolizes for all Australians.

In all this development application this subtle symbolic aspect has been overlooked. It holds a significance in the same scale as Old Government House in Canberra and dozens of our war memorials dotted around the world. With these examples and many others it is recognised that not only specific objects are important but the context they are framed within.

The RMS has treated with contempt this framework that cradles places they even recognise are of major importance. Everything is contextual and as an elevated by pass meters from the war memorial in Canberra diminishes the symbolic value of our war dead so does this RMS proposal treat with disdain the heritage of this colonial square. Any claims that heritage values will be retained is insulting to any informed person and diminishes the person that writes or supports this proposition.

The State Government should retain this whole precinct as a living 'museum', with explanatory plaques which tell the story of this great adventure into advancing the human condition and with statues of the major players in its history, plaques of Governor Macquarie's eulogy to Andrew Thompson and a replacement bell post to focus the thoughts of those who visit.

We are both privileged and burdened to preserve and protect this heritage.

2. JOHN HOWE – Years of consolidation.

After the death of Andrew Thompson in 1810, it is John Howe who steps into his shoes and becomes the next significant figure to stride the ground of the Square. John was a settler who consolidated what Andrew Thompson had begun. He lived in Thompson Square and was a family man who created a line of descendants who in turn further settled both the Hawkesbury region and the Hunter Valley. John was also an explorer thus aiding the spread of settlement out of the Hawkesbury to the northern regions.

The information which follows is a summary of a work which appeared in five parts in the Windsor and Richmond Gazette - "Ebenezer Pioneers of the Hawkesbury (By Geo. G. Reeves) John Howe, Pioneer, Patriot and Explorer" - Friday 11 January 1924.

To remedy the problem of food shortages, which often afflicted the early colonists and at times threatened them with starvation, both Governors Phillip and King sought the help of the Home authorities to seek out people with families with special concessions to those willing to go on the land and become agriculturalists to settle in the colonies frontier. As a result, ten free-settler families left Deptford on the Thames in the "Coromandel" 10/02/1802. Also on board were 200 people "in bond" to be assigned to officers, settlers and others on arrival in Sydney.

The Under Secretary for the Colonies in London wrote:- "The settlers arriving by the Coromandel are all fixed and generally doing well as can be expected, considering none of them are farmers, but they are generally a well-disposed set of people and industrious". Amongst this group of settlers were John and Francis Ward Howe, and daughters – Mary, aged 3 years and Elizabeth Charlotte, born on the Coromandel (1802) aged 6 months on arrival at Sydney. John Howe was born at Redbourne, Lincolnshire, England, in 1774, and was a nephew to two famous brothers – Admiral Lord Howe and Sir William Howe, both distinguished Englishmen in the American War in the great sea battle against the French off Ushant in June 1794. Our patriot-pioneer-explorer, John Howe, served with his uncle as a midshipman and was then about 20 years old. He chose not to follow a naval career.

John and his family settled on the 100 acres of land granted to him just beyond the Ebenezer Church near Windsor with the major portion of the grant on the river. He built a substantial house near the river and it is here that his first wife dies – she is interred nearby. Howe appears to have cleared and cultivated much of the land, with the aid of his two assigned Government men, and lived on and worked his grant for at least 8 years (1802 – 1810).

John became the trusted clerk for Andrew Thompson some time before the latter's death and it would appear that Thompson's many ventures and interests were growing too fast for he himself to handle, or his declining health made it necessary for him to employ help an assistant. In the Sydney Gazette of 03/12/1809, appears the following advertisement: "John Howe begs leave to inform the public that he keeps and carries on the extension house and business of Mr Andrew Thompson, at the Green Hills, Hawkesbury, with every respectful attention and has now on sale a valuable assortment of Woollen and Linen Drapery, Haberdashery, Hosiery, Stationery.....Leaden Pipes, and other Brewing Utensils, with a variety of other Goods of the best quality and at the most reduced prices, for ready payment only. All persons indebted to A. Thompson are once more requested to make good their payments without delay". It appears that Thompson had very large stores and had a very large turnover in diverse stock.

When Andrew Thompson was on his death bed he sent for his secretary-clerk, Mr John Howe. Howe places on record the communication which he received from the emancipist. The report is dated 04/10/1810.

" Mr Thompson called me to his room.....saying he wanted me particularly, and after naming to me that I (Howe) knew him to be a native of Scotland, that he had an elder brother, who, though

intended and bred for the law, was in the mercantile way, under the Firm of Thompson, Gillespie and Sweet”.

Andrew Thompson had been employed at Workington, Cumberland, and after giving Mr Howe a narrative of his family, and his early life, wished to arrange for a will to be made out by Howe, and he (Thompson) would order it to be filled up, as he should settle in his mind by the time it was made out. Howe proposed that George Smith, a clerk in the Provost Marshal’s office, at Windsor, should make out a rough copy for Thompson’s approval, as Howe was desired by Thompson as one of his three executors.

All this was made known when Commissioner Brig was enquiring into the administration of Governor Macquarie. This culminative witch hunt on Macquarie at the end of his life was impart linked to his actions in elevating Thompson and naming of the square in the Emancipist verses the Exclusivist confrontation 13 years before. It was John Howe’s attestation on the affidavit made by the dying Andrew Thompson which prevented Governor Macquarie from being prosecuted. Howe was from Flinders County ‘ Lincolnshire, although judging from Thompson’s statements as he was near death, Howe knew the Northern Counties and their ports on Tyneside, at Whitehaven in Cumberland. Both had become acquainted years before either had come to Australia.

It was the death of Andrew Thompson (22nd Oct. 1810) which was the key to induced John Howe to leave his 100 acre farm at Lower Wilberforce and take over the large storekeeping business established on the site in George Street Windsor, where Thompson Square gardens are now. In the Sydney Gazette 11/12/ 1813, appears this notice:-

“HOWE’S FARM”

To be sold by private contract, a valuable farm, free from every encumbrance, on the banks of the Hawkesbury River....within 8 miles of the town of Windsor....apply to J. Howe , Windsor.

Shortly after John left the farm on the river and married for a second time as cited in the Sydney Gazette of the time:-

MARRIED

“At Parramatta, on Monday last (May 13, 1811) by the Rev. Mr Marsden, Mr John Howe, of Windsor, to Miss Jane Kennedy, of Parramatta”

By 1811 Howe was proprietor of the large store in Thompson Square formally conducted by Andrew Thompson, which business Howe now purchased from the trustees of the Thompson’s estate. In the year 1810 he held the position of Government Appraiser at Windsor. He was also an auctioneer in the same year on his own account.

John now applied himself to being a good and trustworthy citizen in the offices he held in the public life of Windsor. He was Chief Constable at Windsor from 1811 until 18/09/1818. He was also the Coroner for Windsor and the Hawkesbury district generally from 1817, holding an inquest at the Wool Pack Inn, Nth Richmond in 1835 into the death of an Elizabeth Whitford. He was also magistrate's clerk at Windsor for the years 1814 and 1815. He was a trusted and confidential man in both his public, official and private capacities. He was a good master to his servants but expected they live up to his rigid conception of duty to others.

From a map showing part of the town of Windsor in 1835, John Howe and his family of daughters and sons lived on the site in Callaghan Street, towards the river, immediately next to the Royal Hotel (Macquarie Arms), the palatial residential mansion house of Mr Richard Fitzgerald. The Royal Hotel which faced the square was built in 1815 and for some years after it's completion it was leased to the military as an officers' residence and mess barracks.

Howes cottage in Thompson Square is today maintained by the Windsor Historical Society and has been returned to a state which is reminiscent of the time that Howe and his family would have inhabited it.

Howe led a very active life conducting auction sales all over the district and always expected to conduct a coronial inquiry concerning deaths or misadventures occurring within a radius of 50 miles. On the site where Howe's store first stood in Thompson Square, we find after it's demolition a meeting being called of the inhabitants of Windsor and adjacent districts, held at the Court House, Windsor, on the 25/10/1832, for the purpose of taking into consideration the best means of carrying into effect the Proclamation of His Excellency the Governor (Bourke). It sought to authorise the establishment of an Annual Fair and Weekly Market in that town. "The first market is to be held on Saturday, 05/01/1833 at 7 o'clock in the morning, in Thompson Square, and the first Fair on the second a Tuesday in June, 1833, when it is anticipated that there will be a full attendance of both buyers and sellers, as there are no fees charged". Mr Howe having handsomely offered to act as clerk of the market gratuitously, his offer was accepted.

Throughout the whole of the proceedings the greatest unanimity and good humour prevailed. And everyone seemed impressed with the importance of the objects of the meeting, as well as to the town of Windsor and neighbouring districts as to the colony in general.

This official recognition of the square to act as a civic space for market and festive activities, which was first envisaged by Macquarie, has been carried on for to this day and probably makes it amongst the oldest functioning town squares in the country. At that time as maps show no roads existed in the park area, at least until about 1850, and the high embankment that shouldered it along the

Terrace Road rendered a low profile and broad quiet space for such activities. The RMS plans for the square will bring to an end this long tradition within this space.

Howe, like Thompson, was a bridge builder, completing the Bridge that Thompson had begun over South Creek in 1813. This bridge honoured his name for quite some time until it was changed to Fitzroy Bridge to commemorate a visit by the Governor of that name. Like Thompson, Howe liked boats. He was the first man to launch a ferry service on the Hawkesbury River, the site of it where Windsor Bridge is today at the foot of Thompson Square. Howe's ferry service to Wilberforce was running as early as 1812. In 1826, John launched a new ferry boat which was made a matter of great rejoicing and a day of feasting for family and friends.

Windsor families of storekeepers and those in official positions were very happy. The connections which resulted from them living close by each other enabled them to have frequent gatherings, with music and dancing, picnics, and boating excursions on the river. But the families of free settlers and those freed by servitude were rapidly increasing, and new ground had to be sought out for homes and pastoral land. John Howe was commissioned by the Governor to lead an expedition north towards the Hunter River. As Chief Constable, Howe had come into contact with runaway "Government men" from the Coal River so he knew there must be a way to that locality. In Oct. 1819, Howe set out from Turnbull's Farm on the Colo with a party of men and within 21 days he had reached his objective and opened up a way overland to the Hunter. From his well kept journal, it can be seen how his previous life at sea had given him some experience of navigation enabling him to take bearings from prominent mountains. A copy of Howe's journal is kept in the Mitchell Library.

On Feb. 5th, 1820, a second expedition left Windsor under Howe's leadership. Amongst the party was Benjamin Singleton who had come as a convict on the "Pitt" with Andrew Thompson. The party arrived at Patrick Plains on the 17/03/1820 and a week was spent in examination of the River Hunter. The township was named after Benjamin Singleton who received 600 acres of land nearby. John Howe received 700 acres for his services and he called his estate "Redbourneberry" after his native town in England.

John Howe moved from Windsor to "Raworth Farm", Morpeth in 1839 where he stayed until his death on the 16th Sept., 1852. He had 10 children, three sons who never married and seven girls all of whom married and produced families who settled in the Hawkesbury or the Hunter.

A description is given of John Howe by Mrs Emma Butler who was born in 1835. At the time this report was written by Mr Reeve in 1924 she was 89 but still remembered seeing John Howe when she was 8 years old and visiting Singleton with her parents. She describes the pioneer as "above medium height, large shoulders, with a thick bull neck and extremely large, full, round eyes. One seeing those eyes could not easily forget them....."

Howe was not an uncompromising Irish rebel like Cunningham or from reformed Scottish convict origins like Thompson. Neither was he a government man like Macquarie. He was a free English enterprising settler that sought to fashion a new life in a new land by choice. He was a true immigrant like so many to come.

He came to typify this new egalitarian society where character and ability set ones social standing. He worked with and befriended those of convict origins as equally as he would Governors. It is fitting he lived and raised a large family within Thompson Square where Macquarie's plans for such a society was given form. It is also acknowledged that we today like Howe can enjoy this civic space in a way not out of character with what his children would have seen from their veranda.



2. John Howe's house in Thompson Square where he raised his large family over looking the park which was devoid of internal roads to at least C1843.

3. THOMAS MINA

– The forgotten years.

Note - The information upon which this account is given is derived largely from the Richmond and Windsor Gazette c 1900/1950 plus information from the Register of Birth, Deaths and Marriages – NSW, State Records Office, National Archives of Australia and Ancestry Australia.

We who now seek to preserve and honour Thompson Square come at the end of a long line of citizens that shared a common belief. Newspapers over the last 100 years testify to community feeling about the desecration and neglect of this area. Strong objections in the late 1920's were expressed about the dishonouring of our heritage by pulling down of the Governor's Residence within the Governor's Domain which abuts the square and was at the time the oldest wooden structure existing from that era. The same objections were expressed in the early 1930's about the cutting of a road across the park to accommodate larger vehicles and traffic flow as were objections to the nature of the new bridge over South Creek and its visual impact on listed structures, all were ignored to our shame and loss.

To give flesh to this history of genuine commitment by citizens over time it is worth reflecting upon one resident to exemplify local concern for the area and our shared history. This was the now forgotten and mysterious Thomas Mina.

This part of the story of Thompson Square brings us up to the C 20th and up to the end of WW 2. The giants of our early history had long departed, leaving in their wake a place which has now staked out its part in history. Many tourists come to the sleepy little town of Windsor to recall what it was like in the "old days" of the early colony and to see the well known and famous landmarks which recall the times of Andrew Thompson, Lachlan Macquarie, Philip Cunningham and John Howe. They come to see the smuggler's tunnel that, it was said, had been built by Andrew Thompson to traffic his "illegal" liquor and see the beautiful architecture of Francis Greenway, another of Lachlan Macquarie's emancipists. They come to see many of the old settler's dwellings and shops which still existed in the streets of Windsor. But unfortunately, Windsor, its Council and its people, whilst benefiting from their heritage, have failed to respect and maintain it well.

The people of Windsor knew this man as Thomas Mina but he had been born in far away Japan under the name of Obimune Minami. He is significant because the people of Windsor thought him to be so and all the myriad of reports about him which appear in the Windsor and Richmond Gazette of those years confirm and mirror those thoughts. His connection with our little historic township is revealing.

He successfully straddled two nations and through his efforts to integrate into our town he won the hearts and minds of the citizens of Windsor. Multiculturalism is a relatively new term in Australia but it appears it was alive and well and being practised some time ago in Windsor. He, like Andrew Thompson before him, was a man of diverse abilities. He saw our town through the worldly eyes of an educated stranger and took a leading roll with other concerned citizens, to revive Thompson Square, which, under the 'care' of the local council he believed had become a dilapidated and an unappealing entrance to all who visited the town. He came to know the history of the Square and to understand its cultural significance. He knew that such a place needed to be cared for and, in his words, 'beautified'.

He was born in 1876 in Japan and his native city was called Miye. In June 1930 he answered an appeal from Japan and sent 100 dollars (20 Aust. pounds) to the War Memorial Hospital in Miye showing his ancestral attachment. He received a certificate conferring upon him the honour of a life governor of that institution. Thomas's father, who was still living in Miye was delighted by his son's contribution. Thomas spent 40 years in Australia, but before he came here he began his career as an arts student at Kyoto University , Japan. He appears to have come from a wealthy family that held property and status. He was a very capable and restless soul with a high social conscience and command of languages.

According to an article in the W. and R. Gazette ' Whitest Man In Australia – remarkable career of Windsor's Japanese laundryman' dated 10/09/1937, we are given some clues regarding his life story. He abandoned his studies at University and went to Manchuria where he taught geometry and algebra to Chinese students. He then travelled, going twice round the world as a passenger in ships. He learned to cook by spending time in the ships' galleys. In each country he tried some new profession or trade – a journalist, a chef, a language master, maths teacher and a sailor, until he arrived in Sydney where he became a business man.

His savings from his work were substantial so he went to Tamworth where he bought a tobacco farm but this failed and he lost the huge sum of 7,000 pounds he invested in the project. He then came to Sydney where he offered his services as a chef to the Hotel Australia and was very successful there, later being offered Head Chef status. Then in about 1920 , he went to Windsor , where he began his laundry business. This is where he stayed for nearly two decades and where gradually, despite racial opposition, he was eventually admitted to the many progressive organisations of the town.

Obimune Minami married Lydia Florence Trogg in 1901, in Sydney. At some time the name of Minami is shortened to Mina. Their dry cleaning business was in George St, Windsor – near to Thompson Square. Several advertisements in The West Australian, 110 May, 1898, for a " Japanese Laundry , 379 Murray Street, Work Guaranteed, Ladies Clothing a Speciality, Orders Promptly attended to – T. Minami, Proprietor". It appears that Thomas may have spent some time in Western Australia before coming to Sydney and that he had experience in the laundry trade.

There is no evidence that they had any children , so it appears they were childless. Mrs Mina worked with her husband in the laundry and she also supported many charities, just as he did . They were partners until her death in 1941. The Mina's successful dry cleaning and laundry service was such an asset to Windsor that when Thomas's leased property was sold and he could find no other premises a man called Mr Curl offered him the use of his cottage beside the Royal Hotel ((now the Macquarie's Arms in Thompson Square) so as the town would not lose such a treasured and respected citizen.

In Aug. 1922 his permanent address is announced in the Gazette ' Mr Thomas Mina, the expert laundryman and drycleaner, has removed from the cottage at the Royal Hotel to premises in George St (opp. Messrs Hayes Bros. and Co 's garage) where he will in future conduct his business '. By 1 Aug. 1924, he finds that his business has increased so much that he has to install 3 new machines at a cost of 300 pounds so he can cope with all the work. On the 4 April, he advertises "THE FLEET IS COMING! EASTER IS COMING! THE SHOW IS COMING! If you require your Suit, Costume or overcoat cleaned and pressed, do not leave it to the last moment, or you may be disappointed. THOMAS MINA , Dyer and Cleaner, The Hawkesbury Laundry , George Street , Windsor ".

Thomas was a very prominent citizen and he is often referred to as " our good townsman ". His name appears so often in the local paper (the Richmond and Windsor Gazette) that at times it is like reading his personal diary. He was involved in any activity which would benefit the town and it's people. He was a driving force behind the Town Improvement Association, securing funds and finding new members for the Association. The T.I.A. was formed in about the late 20 's by citizens who were concerned about the neglected state of Windsor and in particular Thompson Square, which they considered to be the gateway to the historic town.

It was in connection with this group of civic minded citizens that Thomas's connection with Thompson Square really begins. The Square was and is an important heritage item, not only for Windsor but the State and also for the Nation. By the 1920 's, however , it had fallen into a rather shabby , ill-kept eyesore , which distressed many civic minded folk. The T.I.A. decided to take the care of the Square away from Council and into their own hands. The T.I.A. organised many fund raising events for the purpose of carrying out the Association's scheme of progress to the delight of the populace.

In Dec. 1929 they organised a Carnival which included raffles and competitions , such as the Greasy Pig Chase and the on going and heavily contested Ugly Man Competition. Thomas created a decorated cake which was offered as a prize for one of the competitions and we find a description of one of his famous cakes in an article in the W. and R. Gazette , Week to Week , 9 Dec. 1932 ".....he brought to our office a novelty Xmas cake shaped like a footballin aid of the Xmas Cheer for

Home For Infirm. A triumph of the pastry cook's art, the football being true to label in every detail, including the leather stitching and lace tucked in in an approved rugby fashion....."

This particular Carnival made a net profit of 600 pounds and was a fitting close to a week of festival. Citizens also made donations of money to the Association's scheme for beautifying Thompson Square and on 29 Nov. 1935 we see in the newspaper that Mr T. Mina has collected subscriptions from some 45 residents and business folk to a total of 7 pounds, 12 shillings and 6 pence. Thomas said in the article about his life "Whitest Man in Australia" – "I believe in progress. When I came here (Windsor) 17 years ago, I wanted to make the town progress, so I took an interest in all things. Now you see Windsor going ahead quickly".

Thomas was the one who walked the Square and planned for its "beautification". One of the things he recalled with pride about his life in Windsor was that it was he who had designed the garden layout of Thompson Square. He planned gardens, terraces, a summerhouse, a fountain and put forward the idea of a statue to Gov. Macquarie to stand in front of the School of Arts building. Hence we read, on 31/03/1933, "At the Annual meeting of the T.I.A., Mr Thos. Mina suggested the erection of a statue of Gov. Macquarie, the founder of Windsor and to whom the town owes so much, in the vicinity of the local School of Arts. Mr Gosper, however pointed out that it was proposed to alter the road near the School of Arts for the purpose of a deviation from Bridge Street to the River Bridge in which case the proposal was rather premature.....it was resolved that Mr Mina and Dr Harbison interview Mr Goe. G. Reeve on the matter....."

Thomas himself secured donations to put in a garden in front of the School of Arts building which he tended himself and reports show his efforts were appreciated by all as his garden created a wonderful entrance for visitors to the town. In an article in Week To Week, Sept. 1932, we read "Our good townsman, Mr Thos. Mina who has a keen eye for beauty is making good progress with his beautification scheme in front of the Windsor Literary Institute. Mr Mina is voluntarily carrying out the whole work and soon the entrance to the Institution should put on quite a bright appearance".

But it was not all plain sailing for Thomas and his beautiful garden as the forces of nature and of man sometimes got in his way as can be seen in the following Gazette articles. On the 16 Dec. 1932, we read "Poor old Tom Mina had tears in his voice, if not in his eyes, when he complained the other day that the Mayor had refused his request to be allowed to use a little water to keep the pretty plantation facing the South of the Arts building alive. 'I would not ask for such a concession for myself but this is the property of the Public and so many people have said to me how pretty the place looked and it would be a pity to see the plants die'. Nature took a hand and a downpour did more in an hour than a week of sprinkling".

At the Monthly Committee Meeting of the Literary Institute, 16/03/1934, we read, " The committee took a serious view of the reported damage caused by straying stock to the flower beds which Mr Thomas Mina cares for gratuitously in front of the institution, and some strong comments were made.It was resolved that a letter to Windsor Council regarding straying stock in the vicinity of the School of Arts and urge that something be done to abate the nuisance".

The good work of the T.I.A. was recognised in an article which reported on Thompson Square on 31/01/1936 when we read " Progress already accomplished in the matter of beautifying Thompson Square.....it was decided to keep the grass under control and maintain the attractive appearance which the Square is now beginning to assume, that a lawn mower be purchased and that Windsor Council be asked to install a rubbish receptacle for the convenience of the number of visitors who are already making use of the area. The chairman remarked that he had made an inspection of the area and found that the flowers already planted were beginning to bloom and give a very pleasing effect to the enclosure while the swings were in popular demand with the children....the visiting parent expressed his appreciation of the manner in which the Square was being improved and provision made for visitors....Mr Mina mentioned that evidently for want of facilities for storing rubbish, visitors who had been making use of the area of late had left papers strewn about in a very untidy manner, and suggested that the council be asked to supply a rubbish receptacle for the Square, on which a small notice enjoining the public to "be tidy" might prove effective. Mr Mina further reported that a Sydney visitor....had presented him with 150 portulacas for planting in the Square as a mark of appreciation for the efforts of the Association in improving the appearance of the area." It was suggested that a hedge of yellow jasmine be planted to eventually replace the old fence which enclosed the area. It was also felt that two standard lamps should be erected for the increased number of visitors now making use of the area but this was not favoured due to the expense involved.

On the 28 Aug. we read "MATTER FOR REGRET Fri. 28 Aug.1936 TOWN IMPROVEMENT ASSOCIATION UNABLE TO CARRY ONCARE OF THOMPSON SQUARE" Thomas Mina also expressed himself as favouring the continuance of their activities even though 'the association without money is like a motor car without juice '. He suggested they should hand over the care of Thompson Square to Windsor Council to carry on their work until the Ass. could resume responsibility. The President replied that it would be unfortunate if the Ass. were constrained to give up it's work in Thompson Square as the improvements in this area were the greatest advertisement that body had received for some considerable time, and were fully appreciated by the Council and residents generally, as well as visitors. However, they could do no more than their best, and, after all, the care of the area was really the Council's responsibility".

Thomas also worked tirelessly for the District Hospital and the Home for Infirm. He said "I do not like see anyone sick or hungry, I help all I can. No person should be sick or hungry, and not able to get attention. It is just something I feel here" with a quick movement of the hand to his heart. Thomas baked and decorated his famous cakes for raffling off at Hospital Balls, Carnivals and even on his

own through his business or travelling to Riverstone where he found a high degree of support for the Hospital. He organised an annual evening of entertainment at the Royal Picture Theatre for the residents of the Home For Infirm, for which they were most grateful. Indeed the whole town was in great appreciation for the good work of Mr Thomas Mina, and so we read in the Gazette on the 3 Jan 1930 the following article " APPRECIATION OF MR MINA " – Presentation of Illuminated Address – " The Illuminated address presented to Mr Mina by the Committee of the Hawkesbury District Hospital....It is a quarto folded size, the cover of which is padded morocco, silk lined. On the front cover is stamped in gold lettering, " Thomas Mina , Esq. "On the front page of the inset is a delicate watercolour painting of the District Hospital , while on the outside page is a similar painting of the Home For Infirm....it was unanimously decided that your wonderful work during the last eight years in raising such large sums of money for these deserving institutions was entitled to some special recognition....The Committee feels that your efforts have been prompted solely by a laudable desire to alleviate the suffering of the sick, and to brighten the lives of the aged and helpless inmates of our Home. No nobler work could be undertaken by any one.... The members pray that you may never grow weary in well – doing, and that you may long be spared to carry on your labour of love".

The Minas sold their business in Windsor in Dec 1938 , leaving to live in Sydney. The paper writes ".... During his long period of residence in Windsor Mr Mina had proved himself a citizen of undoubted worth and the news of his departure will be received with wide and genuine regret. His many acts in the cause of charity, especially in connection with the Hawkesbury District Hospital of which institution he holds the high honour of being a Life Member – and the Home for Infirm are well known, while he was always a keen and active worker for any more that had for its objective the advancement and beautification of the town and district....."

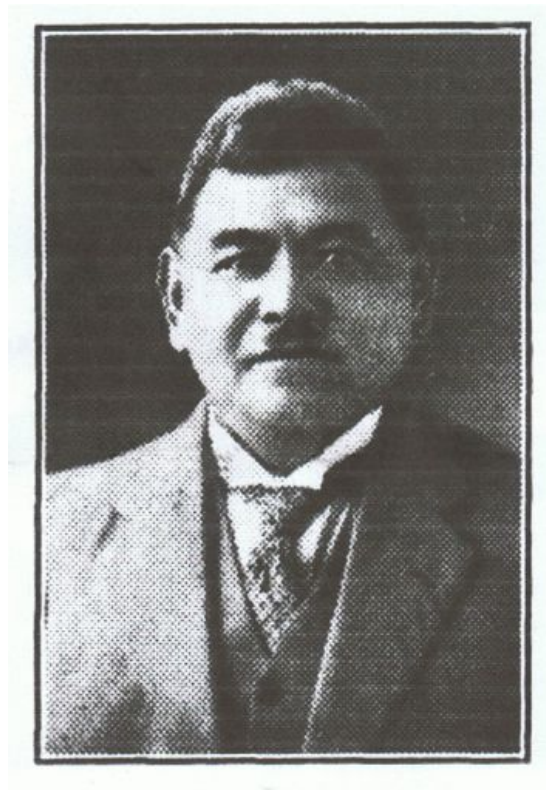
Then in March 1941 Thomas returns to Windsor to visit old friends but he comes with a heavy heart for he has suffered the lose of Mrs Mina who had died just three weeks previous after a prolonged illness brought on by a nasty fall from which she did not recover. Some time after this he leaves Australia to return to Japan and he is not heard of again until in September 1945 when he appears in an article in the magazine " Truth " – "....Tokyo, Saturday. – Thomas Mina came nearly 250 miles from a place near Osaka just to get his name in Truth. ' I lived in Sydney for 34 years and I am a J.P. at Windsor, where I had a dry-cleaning company' he said. He added that he had returned to Japan in 1941 and is now a Japanese citizen. His immediate aim is to open Japan's biggest night club at Osaka for Allied troops – especially Australians if they would come."

Meanwhile the residents of Windsor were struggling with the events of the War and their memories of "their good townsman" verses the "spy in our midst" who was tracked by our Secret Service. They sought to find a balanced between an individual and the actions of a nation. A battle ensued over whether or not to remove Thomas's name from the Honour Roll of the Hospital and from our history. His name is removed - then reinstated – then removed again. Arguments are put for and against in this wrestling match between an old memory of a friend and a new one of a foe. It is a sorry footnoted to his life and efforts.

What happened to Thomas Mina or Obimune Minami? At this point it is unknown. Did he open Japan's biggest night club in Osaka for Allied Troops? What happened to him when he returned to Japan? When and where did he die? He is the only Japanese recorded who has had a significant attachment to Windsor's history.

Thomas Mina demonstrates there have always been citizens that understood the significance of the square as a social venue, tourist sight and historical artefact and that particular individuals often see the greater significance of things then do those voted to represent us and protect the things we value.

He also shows how dedicated people can have an impact in shaping our world even against short sighted views. The fact he was an "outsider" from a very different world but still could see the heritage and aesthetic values of the town, which others could not, causes us to reflect on our own actions.



Thomas Mina



Dear Mrs Butler

Yetholm Historical & Archaeological Society, some of whose members reside in Kirk Yetholm, birthplace of Andrew Thompson, expresses its support for the petition, about which we learned from Mrs Liz Leitch of Kirk Yetholm, a few days ago. I have taken the liberty of drafting an e-mail about your petition, which is set out below. You may care to use it in support of your campaign. Best wishes for success.

To the Local Authority
Windsor
New South Wales.

December 2012

Dear Sirs,

Yetholm Historical & Archaeological Society was dismayed this week to learn that a native son, the late Andrew Thompson, born here in Kirk Yetholm, Scotland and subsequently an honoured citizen of Windsor, NSW, is to have his memory undermined by the community to which he contributed so much in his lifetime.

We understand there is a proposal to drive a highway through the Square in Windsor which bears Andrew Thompson's name, in the face of opposition by many of your residents, who for many years have found the square a tranquil area for recreation to the community's benefit.

Andrew Thompson's family were connected with Kirk Yetholm at least as far back as 1760. He himself, having been born in 1773 and brought up in modest circumstances, carved a successful career in Australia from the 1790s onwards. He was one of the founding fathers of Windsor, a farmer, an emancipator, and a friend of the State Governor.

Our Society feels it would be sad indeed if this Australian's memory were to decline in the eyes of later generations. We ourselves in Scotland are frequently confronted with similar planning proposals, and in most cases it is found possible to modify the line of the new road. We ask that all possible alternatives should be considered before any decision is taken to damage a cherished historic link between Scotland and Australia.

Yours faithfully

Yetholm Historical & Archaeological Society

3. SIGNIFICANCE OF WINDSOR BRIDGE

Key Issues

“The Windsor Bridge has a high level of historic, technical, aesthetic and social significance as an important historical and physical landmark in one of the State's pre-eminent historic towns, and in the wider Sydney region.”. NSW RMS Heritage and Conservation register.

Under Option One, this “... *important historical and physical landmark in one of the State's pre-eminent historic towns*” will be demolished. By these words alone the project is condemned.

Windsor Bridge is unique. It is historically significant. It is technically significant. Its contribution to the visual narrative of “*one of the State's pre-eminent historic towns*” is recognised and well documented. It is a bridge of outstanding significance.

Indeed, it is robustly contended the current Windsor Bridge, in addition to its status as an item of State heritage significance, is an item of National historic and engineering significance.

The EIS is misleading in its description of the bridge's concrete components. They have historical engineering significance.

Discussion

In 1874, as the outcome of extensive local political agitation and significant community action, the opening of the Windsor Bridge was greeted by the wider Hawkesbury community with a jubilant series of celebrations.

In the report published in the Town and Country Journal, August 22, 1874* the excitement is clear, *“The concourse of people was far larger than ever before gathered together in the town, and was variously estimated at 6000 to 7000”*.

The article goes on to say that a train from Sydney delivered the numerous visitors, and a procession of dignitaries, clubs, organisations and school children formed up at the Town Hall with bands and banners to march to the Bridge, across it and back.

After the Bridge was declared open the school children were *“regaled with cakes, buns, and sweets. In various parts of in the grounds were also erected Punch and Judy shows, and other diversions for the amusement of the children.”* Celebrations included roasting a bullock in the Square, a formal luncheon held in the School of Arts and a public ball, held in the evening in the old barrack room.

There were cheers, laughter and applause and “the town of Windsor was gaily decorated – flags flying from nearly all of the houses in the principal streets; and on the bridge were festoons, floral arches, and the flags of all nations.”

[*http://trove.nla.gov.au/ndp/del/article/70484364?searchTerm=%22windsor%20bridge%22&searchLimits=l-decade=187](http://trove.nla.gov.au/ndp/del/article/70484364?searchTerm=%22windsor%20bridge%22&searchLimits=l-decade=187)



Wood engraving print by Ebenezer and David Syme.
State Library of Victoria

Today the significance of Windsor Bridge is recognised with its inclusion on the RTA Heritage Register (Section 170). It is the oldest surviving crossing over the Hawkesbury section of the Hawkesbury-Nepean River and is only the second method of crossing, (the first being the punt that had serviced the town since 1794), the opening in 1874 celebrated the completion of a major piece of public infrastructure which was to contribute to the development of the historic Windsor township. (Edds Report, attached)

i.) History

The design of the bridge came from the NSW Department of Public Works and construction was the work of William King Dixon and Andrew Turnbull, both notable engineers in the colony. Dixon came to the colony to work on the first railway in NSW and Andrew Turnbull was an experienced bridge builder who became business partners with Dixon before his (Dixon's) death. Andrew Turnbull went on to build many other bridges in the state including over Cattai Creek and Wisemans Ferry Road. (Ref: Edds, Attachment A)



James Mills Photograph 1888. ML At Work and Play Image 04405.

In 1897 the bridge deck was raised by 2.4 metres (approx). This project, like the original construction, was considered a substantial Public Works project for its time. Further work in 1922, replacing the timber beam structure and deck with precast reinforced concrete, was acknowledged at its opening as 'unique'. (Edds)

Recent research (Wedgewood and Brassil) has revealed it is the earliest use of precast concrete girders in NSW bridge construction, some 30 years before the technology of pre-stressing was sufficiently advanced to allow the general use of precast structural beams.

This early timeframe is relevant when considering the establishment by the Department of Public Works (PWD) of the State Monier Pipe and reinforced Concrete Works in NSW in 1915. It is thought the PWD engineers of the day may have been pushing the envelope with the use of precast beams in order to explore, test and demonstrate the potential of the Monier Works. (Wedgewood)

Today the site adjacent to the bridge retains its potential to reveal important archaeological evidence that predates the bridge and is relevant to the former punt crossing, the first wharf of 1795 and the much grander later wharf of 1815. (Edds)

ii.) Technical Significance

Engineering Australia, in their EIS response, attribute the bridge with substantial heritage value, making specific reference to the cast iron piers.

The RMS Heritage and Conservation register acknowledges this element, saying, *“The iron cylinders, each three-foot-six-inches long, were filled with concrete and bolted into the rock, penetrating twelve feet of water, twenty-six feet of sand and*

twelve feet of loose rock to reach a solid footing” going on to say, “The bridge represents a major engineering project in the State for its time, the piers penetrating 15-20 metres below the water surface, and its construction proceeding through flood conditions.”

In fact, Windsor Bridge exemplifies and demonstrates two distinct historical phases in bridge building: the technologies employed in NSW in the later nineteenth century and then the technical innovations of the first quarter of the twentieth century.

- The late nineteenth century:

The 1874 bridge has piers made of cast iron cylinders more usually associated with railway bridges but here designed to resist the severe flooding experienced by the Hawkesbury. The simpler timber structure and deck of the upper construction was more usually employed in the construction of road bridges.

Whilst neither construction method is, in itself, unusual, the amalgamation of these two separate technologies in a bridge constructed in the 1870s, is however, extremely rare.

- Early twentieth century:

Furthermore, the 1922 precast reinforced concrete girders with a concrete deck above, replaced the timber superstructure, which is unique for its time, the first documented use (in NSW and possibly in Australia) of this technology for bridge construction by some 30 years. This replacement of the timber components with precast reinforced concrete girders and reinforced concrete deck introduces the twentieth century technology previously mentioned. No other bridge compares to it elsewhere in NSW.

On the subject of this the EIS is misleading in its description of the bridge’s new concrete elements. It says: *“A cast-in-place reinforced concrete road deck is tied to the beams via the hook ends of the reinforcing bars. The girders and deck were cast **in situ** by the State Monier Pipe and Reinforced Concrete Works in 1922.”* (Historic-Heritage Working paper, part 3, Page 141.)

This is not true. Most recent research, undertaken by Ray Wedgwood, retired bridge engineer, in conjunction with Tony Brassil, industrial archaeologist, confirms the concrete girders were **precast** and then lifted into position. This was arguably the first time this technology was used on a bridge in NSW and most likely Australia.

The Wedgwood-Brassil findings are confirmed in Windsor and Richmond Gazette 20 January 1922, (*Windsor Bridge – Reconstructed with Reinforced Concrete*, pages 1, 2 & 5) which reports the precast concrete girder system as structurally 'unique'.

This early use of precast concrete for Windsor Bridge has strong associations with

Mr Percy Allan, chief engineer of the NSW Public Works Department who over his distinguished career was responsible for the design of 583 bridges; this is the same 'Allan' after whom the Allan Timber Truss was named. It also relates to Mr G.W. Mitchell, manager of the State Monier Pipe and Reinforced Concrete Works who would have arranged for the precasting of the reinforced concrete girders and to Mr G Humphreys foreman of the 1922 bridge structure and deck replacement. Using this advanced technology enabled part of the bridge to remain trafficable whilst the other part was being replaced.

Indeed, the ongoing development of the bridge testifies to its significance over time as engineers upgraded and maintained the Bridge to ensure its viable and continued use. The raising of the original timber deck bridge in 1897 by approx 2.4 metres is typical of this approach.

In summary, Windsor Bridge since the 1920's can be regarded as an unusual amalgam of technologies, the cast iron piers are a response to environmental conditions of flooding and the pier web strengthening with concrete together with the use of the precast girder structure spanning to each set of piers being a way of maintaining the trafficability of the bridge during a major overhaul of its structure. Yet, importantly, despite the alterations and refurbishment in 1922, the form of the bridge closely resembles its original form of 1874. (Edds)

As such, Windsor Bridge has the potential to increase current knowledge regarding nineteenth century building practice and very particular aspects of it, for example, the methods used to sink the cast iron cylinders into the riverbed. The Bridge also has the potential to increase knowledge and understanding of twentieth century technology used in pre-casting the reinforced girders that span the cast iron piers.

iii.) Aesthetics

The Bridge is a visually modest structure: its scale and proportions consistent with its location and historic context. There is an honesty and lack of pretention in its design. It is functional and reflects the technologies of its construction without unnecessary decoration.



The deck and road are purposeful and uncompromising. It is the river vistas that reveal the Bridge's real charm. The simplicity and proportions of the piers and the engineering of the cross bracing speak of technical resolution to the challenges of its location

The approach road, which has evolved over time is equally harmonious with the immediate heritage landscape comprising Colonial, Georgian and Victorian structures.





Whilst newspaper sources reflect the controversy that accompanied the cost and the location of the bridge, the descending approach from the south has an intimate feel, due to the framing provided by the cutting itself and the modest scale of the approach road, consistent with the broader agricultural landscape and the immediate heritage precinct.

The bridge reinforces and encourages the traveller to witness the relationship of Thompson Square with the river itself. Whilst no real effort has been made by local, or State authorities, to provide interpretive information, the Bridge makes a significant contribution to the waterfront aesthetic and defines the northern boundary of the Square. In descending from the George Street level to the bridge deck the traveller may gain an appreciation of the role of this public space fronting the River and the changing use of the Square from an early destination port for produce and services to a vibrant community space.

Windsor Bridge also makes a major contribution to the broader views and vistas of Thompson Square. It has been included in this cultural landscape in photographs and works of art for well over a century and continues to do so. It is a substantial element in the mature cultural landscape and it contributes to the picturesque qualities of the Thompson Square river forecourt; its built heritage and township landscape. The bridge is an extension of the visual curtilage of Thompson Square with the eye sweeping along it from the Doctors House to the west, to the George Street facade of commercial buildings to the south and the enclosure formed by the buildings to the east. (Edds)



Indeed, the River, this crossing and the associated public Square have defined the life of generations of local inhabitants on both sides of the River. The community's relationship with the River is at times ambivalent, their lives having been interrupted by its flooding. However, as the anodyne outskirts of suburban Sydney approach the still-distinct and distinctive Macquarie Towns, the rich history of the area and its physical remains become increasingly important to the community's sense of identity. Windsor Bridge has been an inseparable part of the township and community for almost 140 years. It remains a landmark feature of the Windsor township and particularly Thompson Square.

iv.) Symbolism And Role

Today, Windsor Bridge physically demonstrates, in an built form and language respectful of its venerable context, the historic connection between the northern and southern banks of the Hawkesbury River and by inference, the relationship between the surrounding agricultural areas and Thompson Square itself, which is undisputedly Australia's earliest and remaining civic square.

Indeed, the bridge is a visual element that reinforces the role Windsor, by any name, has played in the region since 1794. However the significance of Windsor Bridge is not limited to its immediate vicinity. Like the Hinton Bridge over the Paterson River (see Chapter xxx) Windsor Bridge is historically significant in the development of the NSW road network, and more specifically in the development of the road network in the Hawkesbury Region, forming a critical link between routes that have existed since the very early nineteenth century.

For almost 140 years the bridge has functioned as an all-important connection between communities on either side of the Hawkesbury River and as an essential component in a route important in the development of the Sydney region. A series of major upgrades to the bridge since its construction further enhance its historical importance. These upgrades also acknowledge the importance of the bridge as a crossing of this major waterway with its frequent floods which have historically been such a significant, and to some extent defining, influence on the lives of the community on both sides of the River.

Conclusion

- Windsor Bridge has demonstrable heritage significance far beyond the current level of recognition.
- The proposed demolition of historic Windsor Bridge represents and

unconscionable assault of Australian engineering history.

- The demolition of the bridge is also an irreversible and hostile assault on a heritage landscape icon, one that arguably contributes to the economic wellbeing of Windsor business.
- There is more-than sufficient heritage justification for the current bridge to be restored and to remain in situ.
- Restored, Windsor Bridge provides a charming and ideal access point for light and local traffic access to Windsor.
- Restoration of Windsor Bridge would make a genuine and positive contribution to local economic conditions.

This chapter was prepared with information sourced from:

1. *The Windsor Bridge replacement project – EIS Volume 2 November 2012 (pp251-252)*
2. *Hawkesbury Heritage Inventory SHI 1741878 – prepared by Graham Edds and Associates 2012*
3. *Recent research by Ray Wedgewood and Tony Brassil regarding the Windsor Bridge structure 2012*

Further historical references:

- Empire, 2-3-1866
- Empire, 22-12-1869
- Empire, 12-8-1871
- The Sydney Morning Herald, 1-7-1871
- Empire, 20-2-1872
- The Sydney Morning Herald, 20-2-1872

ATTACHMENT A: WINDSOR BRIDGE ASSESSMENT AND STATEMENT OF SIGNIFICANCE

Graham Edds & Associates – January 2013

- **4 ASSESSMENT OF CULTURAL SIGNIFICANCE**
- **4.1 BACKGROUND**
- Assessment of heritage significance endeavours to establish why a place is considered important and is valued by the community. Different heritage agencies use a range of similar techniques for the evaluation and definition of heritage significance. Most approaches to significance emphasise the value of an item for the community as well as for future generations.
- The NSW Heritage Office today recognises two levels of criteria – Local and State. These reflect the two levels of listing and managing items in NSW.
- Normally items designated of Local significance are listed on local LEP's as well as the State Heritage Inventory. The Local Council is normally the controlling authority for items of local significance.
- Items designated of State significance are listed on the State Heritage Register are managed by the State Government through the Heritage Branch, Department of Planning. Items of State significance are normally also listed by the Local Councils in their LEP and they also appear in the State Heritage Inventory list.
- The following significance criterion assessment has been a compilation of assessment material from within three sources:
 - 1. The Windsor Bridge replacement project – EIS Volume 2 Biosis Research November 2012 (pp251- 252) Identified as text in "Italics"
 - 2. Hawkesbury Heritage Inventory SHI 1741878 – prepared by Graham Edds and Associates 2012
 - 3. Recent research by Ray Wedgewood and Tony Brassil regarding the Windsor Bridge structure 2012, identified with citations.
- **4.2 NSW SIGNIFICANCE CRITERION ASSESSMENT**
- **4.2.2 Criterion (a):** An item is important in the course of, or pattern, of the NSW cultural or natural history.
- Windsor Bridge physically demonstrates the connection that has existed between the northern and southern banks of the Hawkesbury River since 1795 and by inference the relationship between the agricultural areas and the service centre located within and around the present site of Thompson Square undisputedly Australia's earliest and remaining civic square. The bridge helps to define the role of Windsor in the region and the principal routes that have existed here since the very early nineteenth century.
- The Windsor Bridge constructed in 1874 is the oldest surviving crossing over the Hawkesbury section of the Hawkesbury-Nepean River and is only the second method of crossing, the first being the punt that had serviced the town since 1794.
- 1
- Windsor Bridge Assessment and Statement of Significance Graham Edds & Associates – January 2013
- Its construction in 1874 was a major event in the development of the town and again when it was heightened by 2.4 metres (approx) in 1897 and also considered a substantial Public Works program for the time. Its repair in 1922 replacing the timber beam structure and deck with precast reinforced concrete has been acknowledged at its opening as 'unique' and only recent research has revealed that it is the earliest use of precast concrete girders in NSW bridge construction, some 30 years before the technology of pre-stressing was sufficiently advanced to allow the general use of precast structural beams. This early timeframe may coincide with the Department of Public Works establishing the State Monier Pipe and reinforced Concrete Works in NSW in 1915. It is thought possible that the PWD engineers could have been pushing the envelope with the use of precast beams.¹
- For almost 140 years the bridge has functioned as an all important link between the communities on either side of the River and as an essential component in a through route of importance in the development of the Sydney region. The series of major upgrades to the bridge since its construction articulate the difficulties of negotiating a crossing of this major waterway with its frequent floods and its importance to the lives of the community on both

- sides of the River.
- The relationship of the bridge to Thompson Square helps to define the relationship of that public space fronting the River and the changing use of the square as an early destination port for produce and services to a transit space crossing the River.
- 4.2.3 Criterion (b); An item has strong or special association with life or works of a person, or group of persons, of importance in the NSW's cultural or natural history.
- Windsor Bridge was the outcome of extensive local political agitation and represents a significant community action designed to improve the management and economy of the town.
- The design of the bridge came from the NSW Department of Public Works and construction was the work of William King Dixon and Andrew Turnbull, both notable engineers in the colony. Dixon came to the colony to work on the first railway in NSW. Andrew Turnbull was an experienced bridge builder who became business partners with Dixon before his (Dixon's) death. Andrew Turnbull went on to build many other bridges in the state including over Cattai Creek and Wisemans Ferry Road.
- Part of the bridges' significance is also related to the engineers who saw to continually upgrade and maintain it to ensure its viable and continued use. To highlight this the original timber deck bridge was heightened in 1897 by approx 2.4 metres, then in 1922 this timber deck and support structure was replaced with a precast concrete girder system and reported as structurally 'unique' to bridge construction and technologically well before its time by some 30 years.²
- ¹
- ²
- "Windsor Bridge Use of Precast Concrete", Email correspondence Ray Wedgewood, retired RTA bridge engineer 20 September 2012 quoting from Windsor and Richmond Gazette 20 January 1922 (p1,2&5) "Windsor Bridge – Reconstructed with Reinforced Concrete", Windsor and Richmond Gazette 20 January 1922 (p1,2&5)
- ²
- Windsor Bridge Assessment and Statement of Significance Graham Edds & Associates – January 2013
- The early use of precast concrete for Windsor Bridge has strong associations with Mr Percy Allan, chief engineer of the NSW Public Works Department who over his distinguished career was responsible for the design of 583 bridges and the same Allan after whom the Allan Timber Truss was named. It also relates to Mr G.W. Mitchell, manager of the State Monier Pipe and Reinforced Concrete Works who would have arranged for the precasting of the reinforced concrete girders and to Mr G Humphreys foreman of the 1922 bridge structure and deck replacement, and using this advanced technology enabled part of the bridge to remain trafficable whilst the other part was being replaced.³
- 4.2.4 Criterion (c): An item is important in demonstrating aesthetic characteristics and / or a high degree of creative or technical achievement in NSW.
- Windsor Bridge exemplifies two historical phases in bridge building technology employed in NSW in the later nineteenth century and then in the first quarter of the twentieth century. The 1874 bridge has piers made of cast iron cylinders more usually associated with railway bridges but here designed to resist the severe flooding experienced by the Hawkesbury. The simpler timber structure and deck of the original construct was more usually employed in the construction of road bridges.
- The replacement of the timber components of the bridge with precast reinforced concrete girders and reinforced concrete deck introduces the twentieth century technology to an already constructed bridge. The most recent research undertaken by Ray Wedgewood, retired RTA bridge engineer, in conjunction with Tony Brassil, industrial archaeologist, confirmed that the use of precast concrete to span between the piers at Windsor Bridge is the first use of precast reinforced concrete for bridge construction in NSW and potentially its first use in Australia, however the latter would entail further research to confirm.
- Image: Engineering drawing for the replacement structure and deck with precast and reinforced concrete date unknown but c1920's RMS archives
- ³
- January 1922 (p1,2&5)
- "Windsor Bridge – Reconstructed with Reinforced Concrete", Windsor and Richmond Gazette 20
- ³
- Windsor Bridge Assessment and Statement of Significance Graham Edds & Associates – January 2013

- Windsor bridge since the 1920's can be regarded as an unusual amalgam of of these technologies, the cast iron piers being a response to environmental conditions of flooding and the pier web strengthening with concrete together with the use of the precast girder structure spanning to each set of piers being a way of maintaining the trafficability of the bridge during such a major overhaul of its structure⁴. Refer to engineering drawing held in RMS archives. (previous page).
- Despite the major alterations and substantial refurbishment in 1922 the form of the bridge closely resembles the original form of the 1874 bridge.
- Windsor Bridge makes a major contribution in the broader views to and from Thompson Square and it has been included in this cultural landscape in photographs and works of art for well over a century and continues to be so. It is a substantial element in the mature cultural landscape and contributes to the picturesque qualities of the Thompson Square river forecourt, its built heritage and township landscape. The bridge is an extension of the visual curtilage of Thompson Square with the eye sweeping along it from the Doctors House to the west, to the George Street facade of commercial buildings to the south and the enclosure formed by the buildings to the east. The Bridge is considered a landmark feature of the Windsor township and particularly Thompson square.
- 4.2.5 Criterion (d): An item has strong or special association with a particular community or cultural group in the area of social, cultural or spiritual reasons
- The wider Hawkesbury community greeted the opening of the bridge in 1874 with a jubilant series of celebrations. The River and this crossing of it has defined the life of several generations of local inhabitants on both sides of the River. The community's view of the bridge is at times ambivalent, as their lives have been interrupted by its overtopping in flood. As the suburban outskirts of Sydney widen and become closer to the still distinct and distinctive Macquarie Towns, the rich history of the area and its physical remains become increasingly important to the community's sense of identity. Windsor Bridge has been an inseparable part of the township and community for almost 140 years.
- 4.2.6 Criterion (e): An item has potential to yield information that will contribute to an understanding of the area's cultural or natural history
- Windsor Bridge has the potential to provide further evidence that can increase our current knowledge concerning the nineteenth century bridge building practice and very particular aspects of it, for example, the methods used to sink the cast iron cylinders into the River bottom and during the twentieth century the technology used in precasting the reinforced girders that span the cast iron piers.
- The site adjacent to the bridge has potential to reveal important archaeological evidence that predates it and relevant to the former punt crossing, the first wharf of 1795 and the much grander later wharf of 1815.
- ⁴
- structure and deck with precast and reinforced concrete date unknown c1920's
- DWG archive provided by Ray Wedgewood and obtained from RMS archives for the replacement
- 4
- Windsor Bridge Assessment and Statement of Significance Graham Edds & Associates – January 2013
- 4.2.7 Criterion (f): An item possesses uncommon, rare or endangered aspects of the area's cultural or natural history
- Windsor Bridge employs two separate technologies, not unusual for bridge construction in the 1870s, but the amalgamation of them in one structure is rare. Also the 1922 precast reinforced concrete girders with a concrete deck above replacing the timber superstructure is also uncommon, and a very early use of the technology for bridge construction by some 30 years.
- No other bridge compares to it elsewhere in NSW.
- 4.2.8 Criterion (g) An item is important in demonstrating the principal characteristics of a class of the areas cultural or natural places; or cultural or natural environments
- This criterion does not apply to Windsor Bridge.
- 5
-

4. THE PRECEDENT ARGUMENT

Key Issues

- A significant element the case being mounted in support for Option One is the purported historical alignment of Bridge/Old Bridge Street and its previous use as access to 'Windsor Bridge'.
- This so-called 'precedent argument' has been widely used in the NSW Parliament, media statements by local politicians and official government correspondence to justify Option One.
- This argument calls upon historical precedent as justification for inserting a major, contemporary concrete structure into a heritage precinct.
- The claimed historical precedent does not exist. Should it exist, it would not justify such vandalism.
- Historical research reveals the inconvenient truth. The RMS, prior to making public statements on the issue, should have undertaken this research.
- There are six classes of evidence to support the argument against the Bridge Street claims: topographic, cartographic, photographic, contemporaneous reports, anecdotal and nomenclature.
- The evidence set out below makes clear the 'precedent argument' should never have been mounted. Its use reflects either incompetence or deliberate dishonesty.

Discussion

Before analysing evidence that reveals the truth about the 'Precedent Argument', the point must be made that whether true or not, 'precedent' was never a valid justification for what is proposed. It is the equivalent of saying "Port Arthur was a penal institution, so this justifies building a super-max gaol on the site of Port Arthur."

The premise that "Bridge Street" at some time provided access to bridge/s over the Hawkesbury River and this justifies building a super-highway on the site is complete nonsense. It is not a rational reason for the destruction of such a significant heritage asset.

In the same vein, the precedent of the 1934 'cutting' cannot form a justification for increasing the volume and size of vehicles in a heritage precinct.

The EIS appears to use a single image, an 1809 watercolour by George Evans (EIS, page 161), to create the impression a precedent exists for a route on the eastern side of Thompson Square. While Evans was an explorer and surveyor, given the ample written and photographic evidence to the contrary, a single artistic watercolour is hardly the basis upon which to take such a significant step.

Nonetheless, throughout the process of the Windsor Bridge Replacement Project (WBRP), much has been made of the proposed Option One following the “historic alignment” of the so-called “original road” through Thompson Square.

In a letter on behalf of the Premier of NSW, Mr John Ajaka says, ***“Significantly, the upgraded approach road will be built over the original early nineteenth century bridge approaches.”*** (Old Bridge Street) (See Attachment A).

Numerous examples of this claim, made by local politicians, are detailed in Attachment G .

In addition, the Hon. Duncan Gay, MLC as Minister for Roads, on August 14 last year said, in Parliament in answer to a Question Without Notice from the Hon. Peter Primrose MLC, ***“Significantly, the upgraded approach road will be built on the original nineteenth century bridge approaches—there have been bridges there before—called Old Bridge Street”***

<https://www.parliament.nsw.gov.au/prod/parlment/hansart.nsf/V3Key/LC20120814038>

This answer reveals the extent of the ignorance surrounding the “Precedent Argument”.

Perhaps more disturbing is the absence of any reference in the EIS to material such as maps and surveys which challenges the so-called ‘precedent’. Maps and surveys showing any evidence countering the use of Bridge-Old Bridge Street route to the river are absent from the main volume of the EIS, buried instead in the “Working Papers” where readers are less likely to spot the inconsistency between Government and RMS claims and historical evidence.

This arrangement clearly denies all but the most diligent of interested readers the opportunity to access all relevant information.

However, for those appalled by the proposal, reference to external sources makes it possible to establish where the “historic” route to the bridge lies – and it is not along the alignment of what is called “Old Bridge Street”, neither does it take much research to find where these “previous bridges” were – and they were not over the Hawkesbury River.

Both of these matters are dealt with below.

i.) The “Old Bridge Street Route”

The evidence that counters the Government and RMS claims is outlined below:

- Topography

The overall incline between the current bridge deck and George Street today is approximately 1:8. This is significant. By way of comparison AS/NZS 1428 calls for a 1:14 slope for access ramps. Today, even with Old Bridge Street cut into the slope to ease the climb, the gradient is 1:4.5. The original historical gradient, based

on measurements at the boundary of 4 Old Bridge St indicates an original slope closer at times to around 1:3.5, a significant incline for even unencumbered human foot traffic; impossible for loaded vehicles pre 1934. Presently the footpath from 4 George St to the wharf is so steep as to be generally unusable.

- Cartographic and Photographic Evidence.

Examination of the documentation of the Square fails to support the 'Precedent Argument'. The evolution of traffic routes can be clearly seen in these maps (Attachment B) and illustrates the impact the steep incline had on the routes taken. The routes are an absolute reflection of the slope of the Square, using the same strategy employed in the nearby Zig Zag railway of travelling across the slope, rather than directly up it.

It is reasonable to ascribe this strategy to transport technology of the day. Until relatively recently vehicles, horse-drawn and motorised, did not have the power to haul even modest loads directly up what was known as 'Punt Hill'.

- Contemporaneous reports

Reports such as newspaper articles and official records further discredit the 'Precedent Argument'

The route from George Street to the river was a constant cause for complaint. The press of the day report it a steep, winding climb. The track or road was difficult to maintain and was in frequent need of repair due to water damage. Sometimes the route was in such poor condition that Council stopped access. Signs were erected stating **"No Thoroughfare – Dangerous"** (Attachment D)

In fact, the route caused so much trouble it wasn't gazetted until the turn of the 20th century. It wasn't until official government maps were prepared in 1894 and again in 1898 by surveyor, Charles Scivener that the route appears on an official map, albeit un-named. (EIS Historic Working Paper, page 94)

Indeed, the Hawkesbury Chronicle and Farmers Advocate (22.9.1883) notes the route was never recorded on the Parish Roads Trust and it was never officially recognised with a name and contemporary press reports show the road was not a responsibility of the Government but instead under the control of the Council (Attachment D).

However, this original, historic, yet un-named route to the wharf, ferry then bridge was locally referred to as **"Punt Hill Road"**. This name, while not recorded on official maps and surveys was commonly used, even by the Mayor and local Councillors, including in official minutes of meetings as noted in the press of the day (Attachment D)

- Anecdotal Advice

Ms Roma Armstrong was born at what is today known as 6 Bridge Street Thompson Square. The year was 1917. Roma has lived all her life in Thompson Square, never living anywhere else and remembers well life in Thompson Square and Windsor before the present cutting was made.

Roma currently owns 4 Bridge Street. Recorded interviews were conducted with her on 30th of May and 18th of October 2012. An extraordinarily alert and lucid interlocutor, Ms Armstrong has provided very clear first hand reports of the routes through the Square prior to 1934.

Ms Armstrong is quite clear on the use of the dirt extension of Bridge Street stating:

“Nobody used as it was far to steep. More often people used Kable St and the Terrace to reach the bridge. Sometimes they would use the road from the Macquarie Arms down to the Doctors House. Now and then somebody might use ‘the track’” (Punt Hill Road). (R. Armstrong)

“Nobody used Old Bridge St for traffic access to the bridge. It was only used to access the properties at 6 and 10 Bridge Street”. (R. Armstrong)

In fact the Armstrong’s postal address in Thompson Square was just that “Thompson Square”. Their postal address was never “6 Bridge Street, Thompson Square”.

This addressing format is confirmed by advertisements for Craginsh Hospital (10 Bridge Street). The address was given as “CRAINISH PRIVATE HOSPITAL, THOMPSON'S SQUARE, WINDSOR” (Attachment G). The address was never “Bridge St, Thompson Square”.

- Nomenclature

Definitive evidence exists to establish the following:

- Bridge Street was named for its relationship with the bridges which, over time, crossed South Creek; (Attachment E)
- The South Creek Bridges were called ‘Windsor Bridge’ prior to the construction of the Hawkesbury River Bridge. (Attachment E)
- Even though it was never given an official name, the historic route to the river was known locally as “Punt Hill Road”. The section of Thompson Square it climbed was known as Punt Hill. (Attachment E)

The assumption that the name ‘Bridge Street’ reflects a relationship with the Hawkesbury Bridge is unsustainable; an easy, unjustified assumption to support Option One. The name ‘Bridge Street’ predates the bridge built over the Hawkesbury by at least 41 years (Sydney Monitor, 29-6-1833). This is demonstrated in the sequence of historical maps and analysis in Attachment B.

Furthermore, for 61 years the bridge connecting Windsor to the rest of the world across South Creek was the only bridge in Windsor. It was THE Windsor Bridge and both official government tender documents and newspaper reports of the day confirm this general usage up until the Hawkesbury crossing was completed. (Attachment E).

The assumption that the name ‘Bridge Street’ reflects a role in the Hawkesbury crossing is facile, driven by a quest for easy justifications and is not substantiated by the facts.

ii.) "Previous Bridges"

"There have been bridges there before" (sic)

– NSW Roads Minister Duncan Gay. Hansard, 14- August, 2012

There has only been one permanent bridge crossing of the Hawkesbury at Windsor: it was built in 1874 by William Dixon and Andrew Turnbull.

The "previous bridges" were the old timber bridges across South Creek. People in Sydney referred to the South Creek bridges as "Windsor Bridge".

There is ample evidence to show that prior to 1874 the term "Windsor Bridge" did not apply to a bridge over the river but rather the bridge over South Creek (Attachment E)

A fine example of this is from the **Colonial Secretary's Office** on the 18th July 1836:

*"It being intended to build a Stone Bridge over South Creek, near Windsor. Persons disposed to contract for the performance of this work, are requested to transmit their tenders to this Office, by 12 o'clock of Friday, the 19th of August, endorsed " **Tender for Windsor Bridge**" (Attachment E)*

Another earlier example speaks of multiple "Windsor Bridges. From 12-9-1829:

*"**Three Windsor bridges** have now been built in less than five years, if we recollect right. It is said that it is the large white grub eating into the piles below water has caused these' bridges to fail." (Attachment E)*

Conclusion

There is no justification on the basis of historical precedent for locating a new, four-lane intersection within the heritage precinct of Thompson Square.

Even if such a precedent existed (and it doesn't) it does not constitute a valid reason for what is proposed.

The road known as Old Bridge Street was never the traditional route to the bridge as it was far too steep. (Attachment E Gazette 11-3-1927)

The press from the day clearly points out that a road on the alignment of Old Bridge Street was never the route to the river and was never classified as a Main Road. (Attachment E Gazette 1-6-1928)

Even with today's advanced machinery and technology it is still a steep climb.

Although never given an official name, the historic route to the river was known locally as "Punt Hill Road". The section of Thompson Square it climbed was known as Punt Hill.

Starting below the Macquarie Arms hotel near Howe House, the route wove a parabolic line down Thompson Square to the wharf and ferry.

There was no beast or machine that could have carried a load up the gradient on the eastern side of Thompson Square now known as Old Bridge Street.

Claims made by the Members of the NSW State Government (Attachment F) like many aspects of the Windsor Bridge Replacement Project, do not withstand reasonable research and scrutiny.

It would appear Minister Gay in making references to '*bridges there before*' is deliberately confusing the three 'Windsor Bridges' across South Creek which were, prior to the construction of the Hawkesbury River Bridge, known as Windsor Bridge.

Any claim of heritage value associated with any particular route through Thompson Square is completely baseless.

ATTACHMENT A: GOVERNMENT CORRESPONDENCE



The Hon. John Ajaka MLC
Parliamentary Secretary for Transport and Roads
Member of the Legislative Council

ML12/97202

Ms Megan Wood
290 Windsor Street
RICHMOND NSW 2753

Dear Ms Wood

Thank you for your letter to the Premier about the preferred option for the replacement Windsor Bridge. The Premier has asked me to respond on his behalf.

On 1 November 2011 a new organisation called Roads and Maritime Services (RMS) replaced the Roads and Traffic Authority and NSW Maritime. RMS will focus on service delivery, concentrating on the key tasks of building and maintaining road infrastructure and the day-to-day compliance and safety for roads and waterways.

RMS considered nine options for the bridge and approaches and selected the one that offers the most value for money while best meeting the requirements. The design will offer motorists a modern, higher level bridge with upgraded approaches providing smooth, improved road conditions for all vehicle types through the northern side of Thompson Square and across the river to Wilberforce Road.

RMS advises that the new bridge will be designed to meet current load standards for heavy vehicles, and it will be wide enough to enable them to pass without waiting. The 15.5 metre wide bridge will be linemarked for one lane in each direction and include road shoulders and a shared path for added vehicle, pedestrian and cyclist safety. It has been designed to maintain access during a 'once in five year' flood.

I acknowledge your concern and others in the community about a major road being built through the early 19th century Thompson Square. In order to alleviate this concern RMS will lower the level of the new approach road to reduce its visual obtrusiveness within the historic precinct. This has been made possible by lowering the planned speed limit on the approach road through the square from 60 km/h to 50 km/h.

Significantly, the upgraded approach road will be built over the original early 19th century bridge approaches (Old Bridge Street).

Level 35, Governor Macquarie Tower, 1 Farrer Place, Sydney NSW 2000
Phone: (61 2) 9228 5271 Fax: (61 2) 9228 5499 Email: office@gov.minister.nsw.gov.au

This will reunify the open space, restore the original shape of the Thompson Square reserve and once again allow a view of this very significant heritage asset as it originally was. In addition, the realignment will allow unimpeded access to the river for the tourists and local residents in the park.

RMS is working with the Heritage Council of NSW and the NSW Office of Environment and Heritage to develop a concept design and environmental impact statement for the proposed bridge and the approaches through Thompson Square. The environmental impact statement will be submitted to the Department of Planning and Infrastructure and placed on public display in late 2012.

The environmental impact statement will provide a record of the existing heritage, traffic, noise and other environmental conditions. The statement will outline the anticipated effects of the construction of the new bridge and approaches on Thompson Square and the ongoing impact when the bridge is opened for traffic. The environmental impact statement will also list recommended management and/or mitigation measures for those effects and provide the justification for the chosen option against cost, social and environmental criteria. The public will be invited to make submissions on the environmental impact statement. RMS will present a submissions report to the Minister for Planning and Infrastructure for his consideration and final determination.

Residents are invited to attend an upcoming meeting where RMS's project team will answer any questions, outlining plans for the site and show an interactive guided tour of the new bridge.

This meeting will be held at:

- Windsor Marketplace
Saturday 8 September 2012, 10am to 2pm

I hope this has been of assistance. For more information please contact Mr Peter Letts, General Manager Project Management, at RMS on (02) 8849 2009 or visit the Windsor Bridge project page on the RMS website (www.rms.nsw.gov.au/windsorbridge).

Yours faithfully



4 - SEP 2012

John Ajaka MLC
Parliamentary Secretary for Transport and Roads

THE UNIVERSITY OF CHICAGO LIBRARY

This is simply not true. The following nine maps and historical paintings provide a great deal of information.

[illegible]

1813: No evidence to support the precedent argument

B.) 1814

The following map, a section of a map published in 'Macquarie's Towns' (Professor Ian Jack, 2010 – full image available on line

<http://www.baseline.nsw.gov.au/exhibitions/macquaries-towns/windsor2.html>) clearly reveals the existence of a road approaching Thompson Square from the south on the alignment of Bridge Street today.

Professor Jack advises this road has always been known as 'Bridge Street'. It should be noted that **this roadway ends where it joins George Street**.



1814: No evidence to support the precedent argument

C.) 1842

By 1842 the Armstrong survey clearly shows a track or dirt road winding from west to east through Thompson Square. It also shows a track or dirt road extension of George Street leading to Government House. For some period this extension of George Street was known as North Street. This is noted on the Town Plan of 1848.

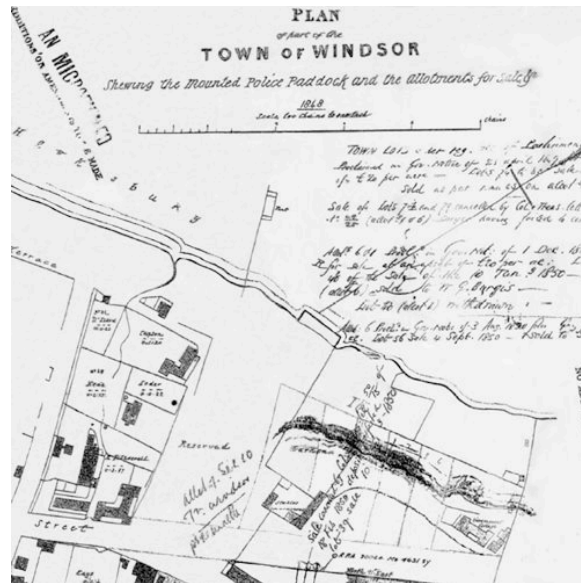


1842 Survey showing route to punt.

Note: This route to the punt was left out of the Town Plan of 1848. However it reappears in the 1863 image by Henry James Lloyd.

1842: No evidence to support the precedent argument

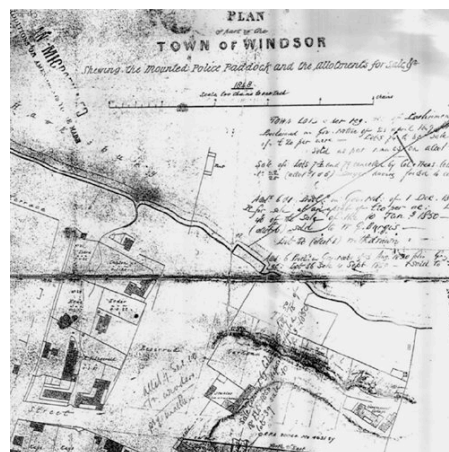
D.) 1848



1848 Town Plan (clarified)

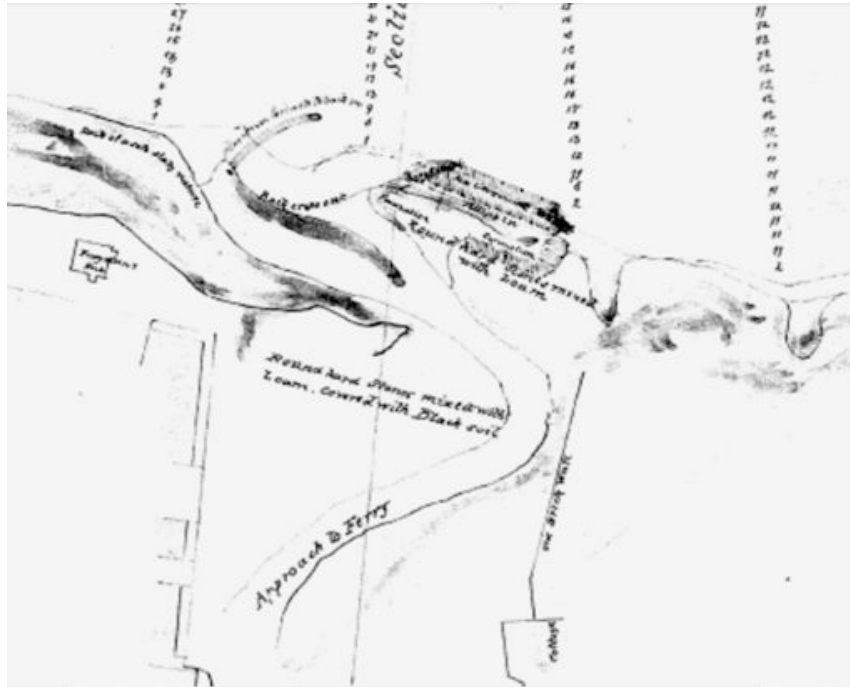
Interestingly the 1848 Plan of the Town of Windsor shows the track to Government House is now a gazetted road labeled North Street. However the track through Thompson Square is not shown in this image.

1848: No evidence to support the precedent argument.



1848 Town Plan (Original)

E.) 1863



1863 image by Henry James Lloyd.

On his map, above the indication of the “Approach to Ferry” Lloyd notes that Punt Hill Road is made of “Round hard stones mixed with loam. Covered with black soil”. This is the same sweeping alignment, (see 1813 image, above) drawn half a century earlier by Slaeger in 1813.)

1863: No evidence to support the precedent argument

F.) 1879

Punt Hill Road is clearly visible in this 1879 photograph.



Thompson Square 1879.

“Old Bridge Street” does not exist in this 1879 image. There is only “Punt Hill Road” The roads are still as drawn by Lloyd in 1863. There is no traffic connection to the bridge along the length of the eastern side of Thompson Square

Note that the area in front of 6 and 10 Bridge Street is still the same as the reserve. While there is a fence there is not a macadamized road.

Nonetheless, EIS Vol 1, page 152 draws states: *“In 1885 there were reports that the roads on the eastern side of the Thompson Square were lowered by up to a metre to improve drainage, vehicular and pedestrian access. This work would account for the loss of the tar or bitumen that may have been used to seal the road in 1855 and any later pavement works between that year and 1885.”*

“Tar or bitumen that may have been used to seal the road in 1855”???

Really? An interesting hypothesis given tar and woodblocking was not used on Sydney roads until the 1880's with Bitumen not being introduced until 1929! In fact dusty Macadam roads dominated Sydney well into the 20th Century.

http://www.cityofsydney.nsw.gov.au/history/sydneystreets/How_to_Build_a_Street/Woodblocking/default.html

http://www.history.sa.gov.au/chu/programs/sa_history/roads/road_history/surfaces.htm

This photograph from 1879 (above) as well as the 1888 image and the RAAF image from 1929 (below) show the roads in Thompson Square were not sealed with tar or bitumen. This is supported by anecdotal evidence from resident Ms Armstrong.

1879: No evidence to support the precedent argument

G.) 1888



Thompson Square 1888

While the section where it divides the Square is in a cutting, Punt Hill Road is still clearly visible in this image from 1888

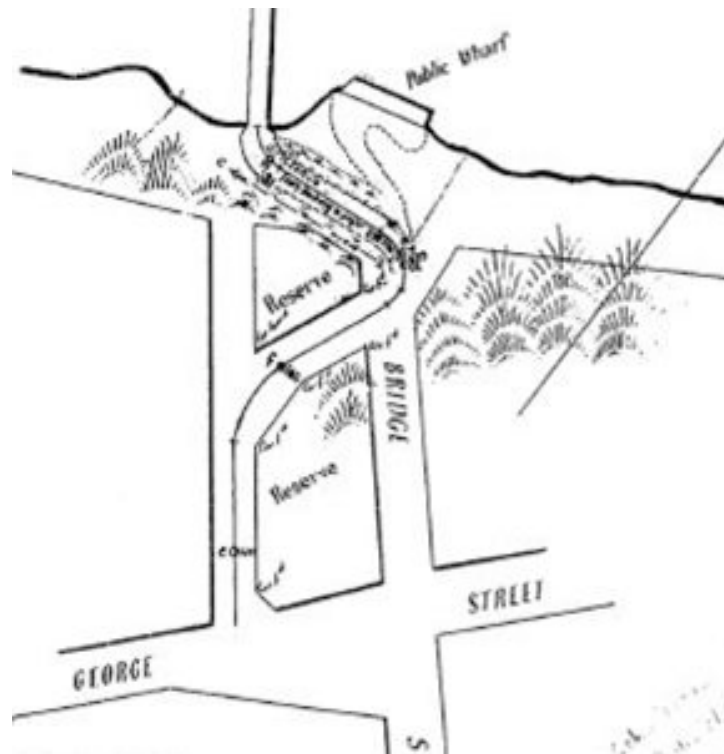
In this image the extension of Bridge Street is actually connected to Punt Hill Road. Cuts have been made in the hill to enable the connection of both roads. However the extreme gradient of the Bridge Street slope is plainly evident. Note also the much gentler slope of the road on the western side of the Square. After connection to the Terrace was made, this became the favoured route through the Square to the bridge (R. Armstrong)

Despite the raising of the bridge in 1897, this extreme gradient of Bridge Street remained unchanged. The raising of the bridge only affecting the gradient of lower Punt Hill Road as the upper stayed the same.

1888: No evidence to support the precedent argument

H.) c1897

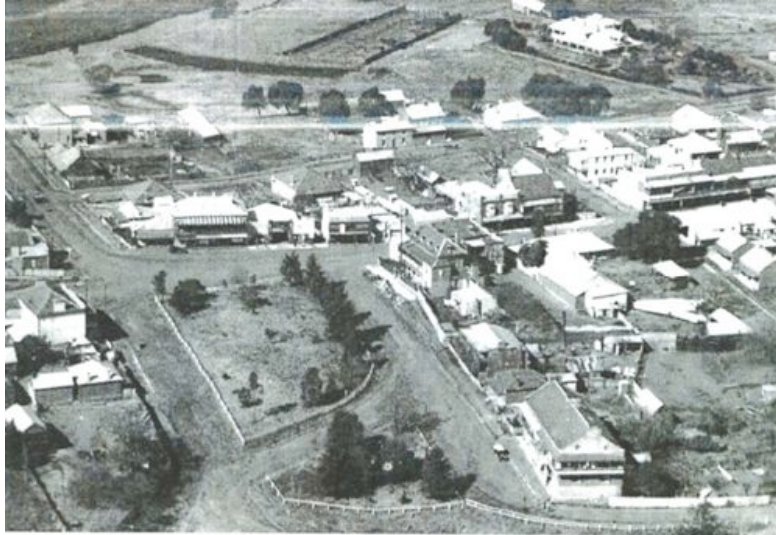
A part of the plan to raise the bridge in 1898. This clearly shows the designated route to the river through Thompson Square.



1897: No evidence to support the precedent argument.

I.) 1929

The 1929 RAAF image clearly shows the traffic wear on the roads.



NOTE: There is no traffic wear on the road now known as Old Bridge Street.

Careful observation shows erosion on the steep section where Bridge St joins Punt Hill Road.

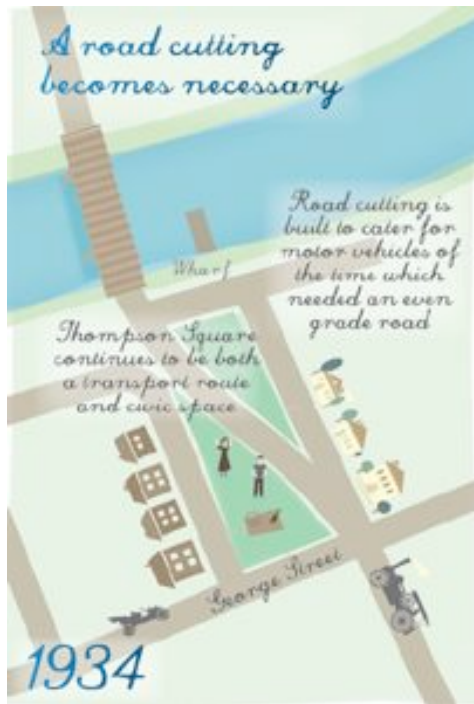
1929: No evidence to support the precedent argument



Note absence of houses on the eastern side of the Square. This drawing shows Bridge Street connected to Punt Hill Rd. Refer to photographs from 1879 (above) for actual conditions within the Square



Still no houses recorded on the eastern side of the Square. The image shows horses pulling loads on Bridge Street in the Square, which they never did, due to its severe gradient.



Houses finally appear on the eastern side of the Square.

NOTE: the road cutting becomes necessary for "motor vehicles of the time".

ATTACHMENT D: PERIOD PRESS ON THE ROUTE:

The Sydney Morning Herald 26-1-1854

“THE PUNT HILL. We beg to call the attention of the public of Windsor, and we would say more particularly of Wilberforce, for the traffic to and from the latter place is considerably the greater of the two over it, to the dangerous state of this thoroughfare. The late very heavy rains have washed the soil at the side of part of it completely away, and left a deep gully, into which if a horse passenger fell in the dark he would most assuredly meet with a serious accident. Whilst therefore subscriptions are being raised for the repair of other streets, we trust this indispensable thoroughfare will not be overlooked.

Gazette 21-9-1889

“It is high time that some steps were taken to put the Punt Hill in a better state of repair than it is now in. It is sheer cruelty to horses to make them haul heavy loads of water along that incline.” (Gazette 21-9-1889)

Gazette 15-11-1890

“Numerous well-grounded complaints have been made recently respecting the condition of the Punt Hill, which is in a rough state. It is terribly hard upon the poor animals which have to draw loads up from the bridge – *in fact it is difficult enough for a horse to pull an empty vehicle up – let alone one with a load.*”

Gazette 4-2-1893

Mr Burdekin (MP) has written to the Minister for Works, re necessity for improved access at each end of Windsor Bridge, and pointing out that the incline is so great that *no team that can be put together can draw more than 3 tons up the Punt Hill.*

Gazette 8-2-1902

“With regard to the punt hill, the Government had nothing to do with it ; it was in the hands of the Borough Council.”

Gazette 11-3-1927

“.... The Board, however, was of opinion that there should be a through connection between Main Road No 92 and Main Road No. 93, and the obvious route for this connection was to begin at the bridge and go east straight up the Bridge-street hill to George street.

This route, however, was steep, and some improvement would be necessary before it could be recognised as the Main Road route.

Perhaps a survey by one of the Board's engineers might show that it would be practicable to improve the gradient, but at present the Board could not spare an officer to make the investigation..."

Gazette 1-6-1928

WHICH ROAD?

MAIN ROUTE TO RIVER TRAFFIC PROBLEM AGAIN

"In view of the enormous amount of motor traffic using Kable and Terrace streets, between George Street and the bridge over the river, the Mayor (Ald. Dean) suggested in a mayoral minute to Windsor Council last week that the Main Roads Board be asked to have that portion of the road declared a Main Road, thereby linking up Main Roads 92 and 93.

The Mayor said that the (Mains Road) Board would have to provide against engineering difficulties on the old Punt Hill Road - a cutting would be necessary to ease the grade - and it might be considered a better proposition for the Main Road to follow the Kable street route.

Ald. Ross stated that two years ago they had a Conference in Sydney on the same subject, and Mr. Garlick (Chairman of the Board) produced maps *but was unable to determine which route was the Main Road*. He stated that he would go further into the matter."

ATTACHMENT E: PERIOD PRESS ON WINDSOR BRIDGE OVER SOUTH CREEK

19-8-1826

"Tuesday, AUGUST 8 -Jeremiah Malowney, of *the Windsor bridge* gang, was charged that he was drunk, and absent from the church muster on sunday last. A constable who went to apprehend the prisoner, deposed that he found him in a state of inebriation, and that the prisoner, when asked why he did not attend tho muster, replied, in terms too awful to describe Sentenced for diabolical language and drunkenness, 35 lashes" (The Sydney Gazette and New South Wales Advertiser)

12-9-1829

"Three Windsor bridges have now been built in less than five years, if we recollect right. It is said that it is the large white grub eating into the piles below water has caused these' bridges to fail." (The Sydney Monitor)

26-1-1831

"Several of our correspondents have equired of us what they are called upon to pay eight pence for, in crossing the Windsor Bridge & whether the prospect of breaking their necks or having a sound ducking at the least is the cause of the premium ? (The Sydney Monitor)

23-7-1836

'Colonial Secretary's Office,

Sydney, l8th July. 1836. STONE BRIDGE NEAR WINDSOR.

IT being intended to build a Stone Bridge over South Creek, near Windsor. Persons disposed to contract for the performance of this work, are requested to transmit their tenders to this Office, by 12 o'clock of Friday, the 19th of August, endorsed " Tender for Windsor Bridge." (The Sydney Gazette and New South Wales Advertiser)

11-9-1838

"The Windsor Bridge is in an awful state of dilapidation. The road between Parramatta and Windsor requires more attention than has recently been bestowed on it." (The Australian)Attachment F: Political Statements

ATTACHMENT F: STATEMENTS REGARDING ALIGNMENT

Bart Bassett: Hansard 18-10-12

“It will follow Bridge Street—that must mean there was a bridge there”

Kevin Conolly: Hansard 18-10-12

“... move the traffic from the middle of the square down along one side following the alignment of Bridge Street, which was the traditional access to the bridge.”

Bart Bassett: Hansard 29-3-2012

“That option would result in some remodelling of the roads to follow the original alignment of old Bridge Street, which currently leads to the wharf and historically has led to a number of wharves and crossings in the vicinity.”

Ray Williams: Hansard 29/3/12:

“Two hundred years ago when Thompson Square was proclaimed by Governor Lachlan Macquarie my forefather Charles Whalan sat at his side. That site was chosen and left aside for the recreational purposes of the people of Windsor. I can say firmly that the site was not dissected by Bridge Street at that time.”

(Actually, it was dissected by what would be known as Punt Hill Road)

ATTACHMENT G: CRAIGNISH HOSPITAL

Gazette 10-8-1923

“CRAIGNISH PRIVATE HOSPITAL, THOMPSON'S SQUARE, WINDSOR. All surgical operations. Medical and Maternity Cases taken. Outdoor Maternity Cases attended to. Miss L. WILSON, A.T.N.A.”

5. PROJECT HISTORY

The history of the campaign for a replacement bridge at Windsor probably started in the mists of time as it has been very difficult to get the appropriate information from the RTA/RMS. Bart Bassett, Member for Londonderry was quoted in Hansard (18.10.12) as saying, "The former Labor Government started the process to replace the Windsor Bridge between 2000 and 2008."

The first piece of real information we have been able to procure is that in 2004 the RTA reported the bridge was in overall good condition as was the substructure. In September of that year Bob Porter, property owner from Wilberforce, was elected as a councillor to the Hawkesbury City Council. Mr Porter had campaigned for a replacement bridge at Windsor. Cr Porter has continued to passionately lobby for a replacement bridge.

Incidentally in that year, a draft Windsor Master Plan was prepared for the Hawkesbury City Council. Within that plan there was a replacement bridge slightly downstream of the current bridge which implies the concept at least had been around for some years previously. This draft plan was never approved. In October of that year the Windsor Bridge Heritage register was updated.

Sometime in 2006 the RTA carried out a safety audit of the bridge and determined it was in a safe condition to carry legal loads.

Bob Porter continued his lobbying and in July, 2007 enquired if the Windsor Bridge was a designated B-Double route. Two months later he was reported in the Hawkesbury Gazette as moving a motion requesting the RTA provide a structural report on Windsor Bridge after councillors had agreed unanimously the bridge was unsafe. In March of 2008 Clr Porter stepped up his campaign by organising a demonstration on Windsor Bridge of a B-Double truck and a bus passing each other. An RTA spokesman was reported in the Gazette as saying the bridge was overall in good condition.

Notwithstanding the above, sometime within the 2007/8 period a condition assessment was apparently undertaken resulting in the bridge condition being downgraded to poor. It is hoped the assessment took place after March, 2008. Otherwise questions could be asked about the processes of the RTA.

In that year (2008) John Aquilina the then Member for Riverstone advised the Parliament the Government would spend \$25m to replace the bridge. In July, the Hawkesbury City Council resolved: "That the State Government through the

Minister for Roads and the Member for Riverstone, John Aquilina, be appropriately acknowledged for the quick response to the concerns of the community with the proposal to replace Windsor Bridge and ask the RTA to work with the Council in the development of the project and to provide a written timeframe for the development, design and construction of the project.”

Again in that year Ray Williams, Liberal Member for Hawkesbury was visited by two RTA officers in his Rouse Hill Office. He was briefed on the project. He supported their preferred option - Option One and said so in Parliament. (Hansard 29.10.10) He was in opposition at that time and the Windsor Bridge was not in his electorate.

In October, 2008 in the RMS's Q&As (page 2) it says, “Initial investigations led the project team to consider replacing the bridge at a location similar to the current preferred option. (Option One) RMS presented this idea to HCC.” Two Thompson Square property owners were briefed in 2008 by two RTA officers. They were told: “Windsor bridge is dangerous and needs demolishing. Option One is preferred and “will be built”, “all we can afford”, Option Six too expensive – no detail of costings provided.”

Ray Williams, Member for Hawkesbury who is a strong supporter of Option One (see above) in his newsletter of April, 2009 to his constituents promoted Option One as the preferred option. From July to September, 2009 the RTA commenced its community consultation on the selection of a preferred option. This consultation included distribution of 12 000 copies of the July, 2009 community update to residents and businesses in Berkshire Park, Windsor Downs, South Windsor, McGraths Hill, Pitt Town, (Not normally bridge users) & only parts of Wilberforce and Freemans Reach areas omitting the other residents west and north of the river.

The RTA conducted a display of bridge options in Riverview shopping centre and in the HCC Library in September, 2009. About that time it also met with the NSW Heritage Office. In July, 2010 Council resolved not to consider nominations for State Heritage listing until confirmation is received from the Department of Planning, Heritage Branch, that the listing would not be a hindrance to the “progressive revitalisation and everyday operations of the Hawkesbury towns”.

HCC continued its agitation during 2010 for a replacement bridge with Cr Whelan in July asking if there was a completed structural report on the bridge and in September Cr Bassett in a Mayoral Minute pushing for a new bridge to be built ASAP. In that month the RTA indicated it would undertake a further structural assessment in late 2010, and to complete the year, the RTA met with the NSW Heritage Office.

Tony Kelly announced in Parliament, "The Roads and Traffic Authority is scheduled to brief the Heritage Council regarding options for a proposed new bridge at

Windsor at its special meeting to be held on 16 September 2010—next week. The Heritage Council was briefed previously about the six options initially put forward by the Roads and Traffic Authority for the relocation of the bridge. The most appropriate way forward is still under consideration."

On 3.8.11 the Heritage Council was advised, "that the Roads and Traffic Authority (RTA) had just advised the Heritage Branch that they will be submitting an application under State Significant Infrastructure to the Department of Planning and Infrastructure (DoP&I) for the replacement of Windsor Bridge. The members were advised that the RTA will be basing their application on Option One which as previously discussed by the Heritage Council will impact on Thomson Square, Windsor. The RTA will be starting a public consultation process in the coming weeks." It was received on 4.10.11. In September the RTA sent a letter to the NSW Heritage Office referring to considerable correspondence between the two bodies.

Two months later the RTA established the Design & Heritage Focus Group including members of the community. (02.11.11). On 14th of that month as a result of a Mayoral Minute it was resolved, That Council:

1. Note with thanks the advice that has been received from the Minister for Roads as a result of Council's representations regarding the ongoing delay to the replacement of the Windsor Bridge.
2. Make representations to the Minister for Planning outlining the Council's concerns regarding the delays experienced to date in respect of the replacement of the Windsor Bridge; reiterating the Council's support of Option One and requesting that he facilitate an early resolution of the matter by the Heritage Council to allow commencement of the replacement as soon as possible
3. Request the local State Members of Parliament to support Council's representations in this regard.

In April of 2012 the RTA commenced its archaeological and geotechnical investigations.

In May, 2012 Ray Williams, Member for Hawkesbury distributed a newsletter to his constituents, saying in part, "The new Windsor Bridge is underway with geotechnical earth works now commenced. The new high level bridge will.....provide flood free access for residents of Wilberforce, Glossodia, Freemans Reach, East Kurrajong, Colo Heights and other areas west of the Hawkesbury River."

On 30th May 2012 a deliberative forum was run on behalf of the RMS by GA Research/AFS Smart Askers/ Kreab Gavin Anderson. (See Community Consultation) Two weeks later the Design & Heritage Focus Group was closed down prematurely

by the RMS. (See Community Consultation)

Around this time the RMS ran three of community promotions of the project. The first was on 1st September, 2012 in the Riverview shopping centre. At that display an independent film maker was prohibited by RMS to record any audio. A security guard prohibited the handing out of pamphlets by a group opposing the project. A second display was held at Windsor Market town on the day of the Council elections. A third display was held on the next weekend at Governor Phillip Park. This was at the Bridge-to-Bridge event and spectators had to pay an entry fee.

In October 2012 at the Estimates Hearing, Robyn Parker, Minister for Heritage replied to a question that she had not been consulted about the application for State Significant Infrastructure. At the same hearings, Duncan Gay, the Minister for Roads was at that time unable to explain why the weight limit on Windsor Bridge, a bridge that was supposed to be in poor condition, was approved to carry vehicles carrying vastly increased weight limits.

On 24.10.2012 the RMS informed the public via the Hawkesbury Gazette of the successful application for SSI approval. This was almost exactly one year after it had been approved.

On 14th November, 2012 the EIS was released and submissions invited. The deadline for submissions was 17th December, 2012. An extension of time was granted to CAWB and some individuals to 31.01.13.

6. PROJECT DEVELOPMENT: PROCESS ISSUES

Summary

1. The process of selecting Option One was fundamentally flawed.

Option One was identified for construction before community consultation commenced. (see also Chapter on Community Consultation)

Alternative Options presented to the community were risible; arguably developed exclusively to support Option One.

2. Suggested options fail to consider genuine alternative solutions.
3. All options were based on the questionable premise the existing bridge had deteriorated to the point the RMS could need to close it at any time (cite ref).

This assessment of the deterioration of Windsor Bridge is neither consistent with subsequent RMS actions, nor other expert opinions. (See Chapter X: Bridge Condition)

4. Alternative options, specifically bypass options that retain the current Windsor Bridge as a local and light vehicle access to Windsor (See Chapter xx: Bypass Option), were not adequately explored.
5. Financial costs have been used to eliminate alternatives to Option One regardless of social, environmental and historic and heritage costs imposed by Option One.

Background

The proposed Windsor Bridge Replacement Project is a project with a long history; one that spans many years and two governments. While longevity, of itself, is not a concern of this submission, neither is it an excuse for 'retrofitting' project processes to make them appear more virtuous than they in fact were. The project is an unacceptable public infrastructure proposal for a number of reasons. This Chapter deals with some of the process issues contributing to the currently unacceptable situation.

The process of selecting Option One was fundamentally flawed.

Early issues:

The Windsor Bridge Replacement project may, from a bureaucratic perspective, be a model of good project management. Community members observing the project have a totally different perspective. From the outset the project has appeared chaotic, structured to deliver a predetermined outcome, with 'key messages' re-engineered to massage community responses as community hostility to the project grew.

Arguably the project was not founded on a clear understanding of even the most fundamental of strategic considerations, resulting in the hasty and ill-advised announcement in June 2008 when Mr John Aquilina told Parliament that the NSW Government had committed \$25 million to **replace** Windsor Bridge. (Hansard 24.6.08)

Mr Aquilina went on to say, *"I understand the RTA started work on the design process for a new bridge earlier this year."*

By 2012 the RMS were taking a more conservative approach, advising in the EIS (Section 4.1.1), that *"In recognition of the need to address the deteriorating condition of the existing Windsor bridge, the NSW Government announced in June 2008 that it would provide funding to **rehabilitate or replace** this important river crossing."*

Yet in 2008 conditions had been investigated, options for rehabilitation or replacement explored, a decision made to **replace** Windsor Bridge and the design process for a new bridge had commenced.

The reality is the RMS, (the RTA in 2008), rather than developing the project as part of a structured and strategic response to transport planning for the region, were responding to increasingly strident, highly localised calls that simply demanded a 'new bridge' (see Project History), and rather than do the responsible thing and assess the situation thoroughly, a new bridge was announced.

Strategic Analysis

Responding to community concerns is not inappropriate. Issues raised by the community should be investigated. The issue with the Windsor Bridge project was

the RTA failed to either thoroughly investigate the nature of the problem, or at any time acknowledge its own lack of strategic insight.

Arguably even a desktop audit would have enabled a more objective, accurate and effective statement of the strategic context and related project considerations.

They are certainly not difficult to identify (the following are not exhaustive):

- 1.) increasing development is putting considerable pressure on the local network and whilst this submission does not comment on levels of development, it is noted that current NSW Government policy settings (Refer Sydney Growth Centres, Strategic Assessment Program report Nov 2010 and A New Planning System for NSW, Green Paper – July 2012) are likely to see further significant developments (both residential and industrial) north of the Windsor crossing of the Hawkesbury River;
- 2.) whilst the bridge itself is functional (see Condition of Windsor Bridge), the surrounding road network is less than optimum (see Traffic Study);
- 3.) in particular, approaches to the bridge on both sides of the river, whilst charming and suitable for smaller vehicles are visibly less than ideal for very large vehicles;
- 4.) the Government's Draft Upper Hunter Strategic Regional Land Use Plan (<http://www.planning.nsw.gov.au/srlup>) suggests there will be increasing numbers of heavy vehicles travelling from the Putty Valley to points south of the river crossing at Windsor;
- 5.) the current route, through the oldest public square in Australia, arguably one of the most historically significant urban spaces in the nation, is considerably less than ideal for either large volumes or traffic, or indeed any volume of large vehicles;
- 6.) An alternative route for carrying heavy traffic is required; (NSW Route assessment Guideline for restricted Access Vehicles – Jan 2012 http://www.rta.nsw.gov.au/doingbusinesswithus/downloads/lgr/nsw_route_assessment_guideline_for_restricted_access_vehicles_ed5-13.pdf)
- 7.) the local economy, at a minimum, should be protected and ideally would be enhanced by any proposed government expenditure;
- 8.) the only other alternate crossing, at North Richmond is under even greater pressure; *"Over the years, the steady residential growth in North Richmond and Kurrajong has put additional traffic pressure on the study area. During critical peak periods, intersections on both sides of the Bridge experience major congestion. The two-lane Bells Line of Road on the bridge is also close to capacity".* (Richmond Bridge and Approaches Congestion Study Stage 1 Summary Report – July 2012 Page 3)
- 9.) the bridge is an existing public asset, valued at around \$7m, any option incorporating the demolition of the bridge must not only factor in demolition costs, but also loss of asset and the consequent removal of existing maintenance costs balanced against new maintenance costs.
- 10.) A flood evacuation route between Windsor Road and Winsor exists via the Jim Anderson Bridge.
- 11.) The existing Bridge Street – Macquarie Street intersection is a key element in resolving existing network capacity issues.

Such a list, if it were a genuine attempt to use public funds wisely, aside from a range of technical issues, might well include other contextual issues regarding public amenity and the contribution made by past road building projects to the erosion of historical, heritage, landscape, economic and cultural values in the immediate area.

However, instead of a clear, strategic piece of analysis driving an infrastructure project, the strident calls for a 'new bridge' prevailed, the 2008 announcement was made and the project compromised from the outset.

Quality Controls

While the 2008 announcement certainly compromised the project, things did not improve over time. From the outset the public has had no participation in a public process of review and evaluation. There is no doubt the risk of forcing the RMS revisit decisions made on the basis of inadequate or inaccurate data was the reason for **excluding the public from such processes**.

In fact, it would appear no formal Quality Assurance processes were employed in the Selection and Implementation Process for the WBRP. In particular, procedures for the ongoing review of each step to ensure that it was meeting the project objectives appear lacking.

For example, once "Option 6" was eliminated, there was no review process in place to enable the consideration of other "viable bypass options" as possible solutions; and deficits in the accurate and comprehensive identification of the strategic context have never been revisited.

Quality Assurance (QA) is described on the NSW Government Trade & Investment website as *a set of activities or processes within a business which ensures that goods/services produced satisfy customer requirements. QA seeks to avoid and minimise mistakes before they happen. This makes it different from **quality control**, which identifies defects/mistakes after the fact.*

QA can also be an important part of the risk management process. The definition of risk may, of course, depend on perspective. The community would like the risk of a strategically inadequate, inappropriate and destructive project solution managed effectively. It would appear this community expectation is perceived by the RMS as the critical risk.

Of more concern, there is no evidence that such quality control mechanisms were mandated, as might be expected of a project that will see the Government expend considerable public funds.

Without such checks and balances any project phase incorporating incomplete or inaccurate data and/or assumptions inevitably passed errors and omissions through to subsequent stages. This issue has been a significant frustration for the community and is dealt with in greater detail in the Chapter on Community Consultation.

“Retrofitting” Project Processes

The 2012 EIS document (Chapter 4) disingenuously provides the ‘development process’ for the preferred option under the Windsor Bridge Replacement Project:

Stage 1 - Identification of alternatives for a river crossing at Windsor and development of route options and project objectives.

Stage 2 - Short-listing of route options and further investigation and assessment against project objectives and criteria.

Stage 3 - Selection of a preferred route option.

Stage 4 - Development, assessment and selection of options for the existing Windsor Bridge.

Stage 5 - Development, assessment and selection of options for the approach roads and intersection types.

Stage 6 - Development, assessment and selection of options for the bridge type.

Stage 7 - Development, assessment and selection of options for the urban design of Thompson Square and the shared pathway.

This creates the impression of order and structure that was not evident to the community. It also, whilst omitting any reference to ‘review’ phases, creates the impression of an orderly sensible progression of events that involved all stakeholders. This is not in fact, the case.

Firstly, to participate the public needed to know about these stages. Yet, aside from a somewhat cryptic, ‘where are we up to’ graphic on the RMS website, these stages were not made explicit to the community from the outset. In fact, at no point was the public involved in “Stage 1” of this process.

Stage 1:

The first stage required:

- the identification of alternatives for a river crossing at Windsor,
- the development of route options and
- the development of project objectives.

Yet the first mention of the project alternatives was in November 2012, in the EIS. Despite the reasonable assumption that these ‘alternatives’ informed the development of the options presented to the community in mid-2009, they first appear in 2012.

No community input was sought regarding these alternatives prior to their application to the development of options.

Alternatives

Nonetheless the four alternatives were apparently developed. Were community input to have been sought the RMS would have been challenged to improve them. The alternatives were:

1. *Do nothing and continue to maintain the existing bridge – This option would involve doing nothing except continuing the ongoing regular maintenance of the existing Windsor Bridge.*
2. *Refurbishment of the existing bridge – this alternative would involve temporarily closing the existing bridge and refurbishing elements of the bridge and approach roads to meet current design standards where possible.*
3. *Bypass of Windsor – this alternative would involve constructing one or more bridges and associated roads to bypass the town centre of Windsor.*
4. *Replacement bridge – this alternative would involve constructing a replacement bridge either up or downstream of the existing bridge, with traffic still being able to access the town centre directly*

The first alternative, offering the somewhat disingenuous ‘continue to maintain the existing bridge’ is dealt with in “Condition of Windsor Bridge”, which questions the diligence, historically, of bridge maintenance activities.

The refurbishment alternative (Alternative 2), is a startling case of a project component that has been called into question and yet never formally revisited in light of new information. The statement is incorrect when it says refurbishment would entail closing the bridge. However, interestingly, this alternative does acknowledge that an absolute adherence to current design standards is negotiable, using the expression ‘where possible’ (see Chapter on Bridge Condition).

Alternatives three and four are also disingenuous. Alternative 3 is worded to sound daunting and Alternative 4 is particularly phrased to imply a deficit in Alternative 3, as if a bypass precluded any access for traffic to the Windsor township.

Indeed if the ‘benefit’ of Alternative 4 can be stated: *‘traffic still being able to access the town centre directly’*, why does Alternative 3 fail to make mention of its benefits ‘through-traffic able to flow more efficiently around the historic Thompson Square precinct’ or ‘heritage values of Thompson Square conserved’ or public amenity in Thompson Square enhanced’?... to name but a few.

And NOT one alternative mentioned the possibility of retaining the current bridge whilst bypassing the town for large and through traffic.

Aim and Objectives

So, publicising the stages and alternatives and allowing the community to contribute to this process was sadly lacking. When it came to identifying the aim of the project, the RMS did advise, in 2011 (Options Report, August - June, 2011, page 77 at http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/documents/windsor_bridge_options_report_aug2011.pdf), that the project aim was to *“provide a safe and reliable crossing of the Hawkesbury River at Windsor.”*

However, even this seemingly innocuous statement once again telegraphs the Government's intent. How much more objective would the project aim have been if expressed as, *“to provide safe and reliable crossing of the Hawkesbury River possibly at, and/or near Windsor.”?*

The project objectives, as identified in Community Update July 2009 Project Objectives

http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/documents/windsor_cu_july09.pdf were:

- To improve safety for motorists, pedestrians and cyclists
- To improve traffic and transport efficiency
- To improve flood immunity
- To meet long term community needs
- To minimise the impact on heritage and the character of the local area
- To be a cost effective and an affordable outcome

Concern regarding the project processes is heightened when one considers that there is no benchmarking of the project objectives. At no time has the RMS provided guidance as to what constitutes acceptable levels of safety, traffic and transport efficiency or flood immunity.

However, some insight into objectives such as Community Long Term Needs is provided (Options Report 2011, page 4) with Sub-objectives being identified as:

- Provides an efficient connection for local and regional traffic.
- Provides a pedestrian and cyclist connection to surrounding locations.
- Minimises impact on recreational spaces.
- Minimises impact of noise.
- Minimises impact to businesses and the shopping environment.
- Minimises impact on property access and need for acquisition.
- Provides a 100 year life span for the bridge structure.

Again the wording leaves much open to interpretation and questions. ‘Connections’ imply links between points, generally linear. The links for local versus regional traffic will be different and the journeys of pedestrians and cyclists different again. Indeed, it could be argued that no single solution could ever reconcile the needs of these three user groups.

Just as there are no benchmarks for the overall objectives, many of the objectives identified as Community Long Term Needs lack any objective measure of achievement. This is particularly problematic for an objective such as 'minimises impact of noise' where existing noise levels in Thompson Square already exceed acceptable levels (see chapter on Noise).

The subject of minimising the impact on heritage and the character of the local area is more complex and dealt with in depth in Town Planning. However, it should be noted here that what constitutes an acceptable level of impact is a point of significant difference between the Government and the Windsor community, NSW more generally, or indeed, national interests. Further, the point must be made that this objective completely fails to recognise the possibility of eliminating impacts altogether.

Finally the failure to define 'cost effective' is a significant omission. If cost effective simply means 'cheapest option' there is little point in having any other objectives, as the cheapest project must in such a situation, always be the preferred option, regardless of the consequences.

For example, in examining the comparative table of the performance of the various route options (Options Report, August 2011 comparative table, p.77) the "Provides a cost effective solution – capital cost" has been given a higher weighting than any other. This can be concluded because on other criteria the alternative options, apart from the effect on heritage, either outperform or are equivalent to. With regard to Heritage, Option One underperforms significantly in comparison with other options.

Therefore COST was THE overriding factor in these considerations and insufficient weighting was applied to heritage considerations in this most highly sensitive Heritage Precinct.

To this point it is fair to say the objectives of the Windsor Bridge Replacement Project are ill-defined and without measures of success, the community was never consulted as to what **its** objectives were for the project, or allowed to provide feedback on the objectives determined by the RMS.

Route Options

Whilst the issues of objectives and alternatives have now been addressed, there is a further promise of action in Stage I that requires analysis: the development of route options.

In the context of the four alternative approaches this might reasonably be seen to mean just that, developing general routes or in-principle suggestions and crossing locations, which may have required a range of final resolutions. Option 6 is a prime example. Instead of investing in detailed solutions, including expensive costings, and subject option developments, a general concept involving the Peninsular could have been flagged. Equally, the bypass alternative could have been explored through a number of suggested general routes. Clearly progressing in this slightly

more cautious fashion would have saved time and money and avoided current dissatisfaction and anger over both the process and the current outcomes.

And so, the EIS is a flawed document, because on every point Stage 1 was flawed, the community were not consulted and these flaws have never had appropriate review and correction, resulting in all subsequent conclusions and decisions being, and continuing to be, compromised.

Stage 2

To quote Windsor Bridge Over the Hawkesbury River (Report on community consultation November 2009, Section 1, Background Page 3) *“A community update outlining the nine options to rehabilitate or replace the existing bridge was released to the community in July 2009. The community update invited comments on the nine options.”*

“In July 2009 the community was invited to provide their comments on the proposed nine options. A community information session was held to answer questions and receive feedback on 1 August 2009”

Windsor Bridge community consultation report November 2009 page 4

So it is only in July 2009, at Stage 2 that community consultation commences. Questionable as this may be, by this time the RTA had already developed their 10 potential options: two for refurbishment of the existing bridge, two for a “bypass” and six for a replacement bridge. All but one option required the removal and demolition of the existing, historic Windsor Bridge.

The ‘conclusion’ reached was that the two “bypass” options identified would substantially exceed the project budget and the “do nothing” alternative was not investigated further due to perceived cost of maintaining the current bridge.

From this three preferred Options: Option 1 and Option 2 (replacement Bridge downstream) and Option 6 (a “bypass” option), were shortlisted. RMS should be congratulated for their very efficient process: meaningless, but efficient.

Apart from these three options, each with significant inadequacies of their own which should have seen them also dismissed, all other options put forward were quickly rejected for what they were: severely limited, inadequate and risible offerings, completely inappropriate to address the significant strategic issue involved.

Lack of genuine choice

Process failures aside, all the Options offered to the community, ostensibly to address the strategic requirement for additional capacity and improved bridge approaches to move vehicles across the Hawkesbury River, failed to offer mature, effective responses to the issues.

Not a single option developed by the RMS genuinely delivers options that could be considered a serious attempt to solve the locational issues. In fact to varying degrees the options are so inept as to be either laughable, or offensive, depending on to what degree your sense of humour is offended by the wasting of public funds.

Issues in relation to each of the Options that were rejected have been distilled from the *Report on community consultation* (November 2009), which together with additional comments, are outlined below. This summary gives a clear indication of the unsatisfactory nature of these Options which were offered to the community, presumably with the expectation the community would give them serious consideration.

Details of the nine Options provided to the community can be found at:
http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/documents/windsorbridge_poster_0709.pdf

Option 3: Bridge Immediately downstream of current Bridge.

- Required a higher, wider structure straight through the middle of Thompson Square;
- Encroached on the Doctor's House;
- Reduced the size of Thompson Square;
- Extreme impacts on the heritage of the Square;
- Failed to provide functional, visual, amenity, safety, acoustic or air quality improvements to Thompson Square.

Option 3 could never offer a serious alternative option due to the overwhelming and extremely significant negative impact on heritage and overall amenity and functionality. Offering something in the middle of the heritage precinct of Thompson Square was a deliberate design strategy to make the route of Option One, in contrast, appear sensitive to heritage considerations.

Option 4: Baker St.

- Split the township in half;
- Directed large and heavy and non-local vehicles through the town centre;
- Adverse impact on the aesthetics and history of the township;
- Interfered with the Windsor retail precinct by increasing traffic along the Baker Street shopping area and reducing pedestrian and parked vehicle safety;
- Impact on pedestrian safety along the George Street mall by increasing traffic volumes on Baker Street;
- May require traffic lights at The Terrace for pedestrian access;
- Impact on noise levels at new residences along Baker Street;
- Compromised the business centre of Windsor;
- Impact on heritage buildings adjacent to Baker Street and the heritage setting of the area;
- Removed on-street parking along Baker Street and reduced access to Baker Street properties;
- Reduced vehicle access along The Terrace from Baker Street;

- Required a minimum six months construction within the town centre and some construction in Thompson Square to remove existing road.

Option 4 was a similarly facile offering, a solution so ridiculous it would clearly be quickly eliminated. Like Option 3 this was an option designed to make Option One appear sensitive, this time to commercial considerations.

Option 5: Kable St

- Split the township in half;
- Directed large and heavy and non-local vehicles through the town centre;
- Impact on the aesthetics and history of the township;
- Interfered with the Windsor retail precinct by increasing traffic along the shopping precinct in Kable Street and reduced pedestrian and parked vehicle safety;
- Closed The Terrace and redirected traffic, further dividing the Windsor pedestrian mall;
- Impact on pedestrian safety along the George Street mall by increasing traffic volumes along Kable Street
- Due to a road width of 8.7m reduced on-street parking;
- May have required traffic lights at The Terrace for pedestrian access;
- Impact on noise levels at new residences along Baker Street;
- Compromised the business centre of Windsor;
- Impact on the heritage buildings adjacent to Baker Street and the heritage setting of the area;
- Removed on-street parking along Kable Street and reduced access to properties;
- Cut vehicle access along The Terrace from Kable Street;
- Required a minimum six months construction within the town centre and some construction in Thompson Square to remove existing road.

Option 5 is another facile and ridiculous offering, also designed to be quickly eliminated, again on the basis of commercial impacts.

Option 7: Court/ North St

- Significant impact on the North Street Conservation Area and Court House;
- Directed large and heavy and non-local vehicles through the town centre;
- Impact on residents who live along the route;
- Increased traffic and associated noise;
- Reduced motorist motivation to enter the Windsor CBD for shopping.

Option 7 was quickly rejected as inappropriate due to its impact on the residential and heritage precinct near the Court House and North.

Option 8: Pitt Town Rd Bypass.

- Generated greater traffic flows on King Road and at North Richmond;
- Affected the boating race course currently used for the Hawkesbury bridge to bridge boat races and other boating events;

- Did not provide an efficient connection for local traffic into Windsor thus reducing access to businesses in the town centre.

Option 8 was principally rejected due to estimated infrastructure investment costs

Option 9: Refurbish existing Bridge.

Concerns regarding this option are dealt with in Condition of Bridge. However the RMS were able to have this option eliminated by claiming:

- Refurbishment would require replacement of all original fabric on the bridge and may have included altered deck configuration;
- Did not improve queue lengths, delays and road performance;
- Would not provide sufficient lane width for heavy vehicles to pass on the bridge;
- Ongoing traffic problems using the existing crossing may impact on the accessibility and amenity of local businesses in the long term;
- Construction would require closing the existing bridge to all traffic for a minimum of 12 months (no temporary replacement bridge would be built). Requires a thirty kilometre road detour to cross the Hawkesbury River via Richmond Bridge;
- Bridge refurbishment costs were estimated at \$18.5 million.

A detailed discussion regarding the refurbishment of Windsor Bridge is available in Chapter on Bridge Condition.

The RMS apparently takes great pride in its projects and promotes itself as a public organisation that embraces technically and aesthetically exemplary design of public infrastructure. (RMS Bridge Aesthetics, July 2012), and yet, despite the clear opportunity to develop robust, indeed, visionary alternatives, the RMS:

- provided a series of options with consequences so dire no community could have chosen them;
- provided technically inadequate and inappropriate options;
- failed to meet reasonable strategic or town planning principles;
- failed to meet their own philosophical standards;
- failed to identify any genuine bypass options and
- eliminated the historic Bridge as a potential contribution to the ultimate solution

Preferred Options

In contrast, how did the community fare when considering the short-listed options?

Benefits of the selected three options were promoted as follows:

Option 1 and 2: High or Low level Bridge 35 metres downstream of Current Bridge.

- Potential for the Bridge Street road cutting to be backfilled and landscaped to 'reinstate the shape of Thompson Square'.
- Most direct route from Windsor Road to Freemans Reach Road.
- Opening The Terrace under the bridge would reinstate vehicle access to Windsor Wharf and the car park.

- Retains a connection from the Windsor township to the northern side of the Hawkesbury River.
- ‘Least disruptive’ of all existing areas because it follows the existing road corridor (sic).
- Concerns were raised that the current traffic through Thompson Square and across Windsor Bridge is a nightmare for residents due to increased noise, pollution and congestion.
- Improved connection at Freemans Reach Road and Wilberforce Road.
- Would not affect the navigation of vessels.
- Option 2 restricts coach access to Windsor Wharf.

Like much to do with the Windsor Bridge Replacement Project, these so-called benefits fail to withstand reasonable scrutiny. It is this submission that provides much of the detailed critique, so the following is a brief summary of some of the objections to these claims:

- 1.) The historic form of the Square as a basis for justifying a brutal, modern concrete structure is unprofessional and simply incorrect, it relies on limited definitions and fails to take into account the extremely robust objections of every heritage organisation aware of what is happening
- 2.) The directness of a route is not necessarily equivalent to efficiency, functionality or desirability.
- 3.) Vehicle access to the wharf currently exists.
- 4.) Option One does not have an exclusive mandate for this claim.
- 5.) The measure of ‘disruptive’ as ‘least’ is simply untrue. The ‘least disruptive’ solution would be to provide a bypass.
- 6.) Option One is a like-for-like project. Analysis shows traffic congestion is significantly attributable to issues associated with surrounding intersections.

Option 6: The Peninsular

- Impacts a number of residents who live along the route.
- Increases traffic and noise for local residents.
- May result in a loss of business for Windsor town centre.
- Could be affected by flooding.
- Would affect the navigation of vessels on the river.
- Would affect the boating racecourse due to shadowing.
- Affects too many heritage items.

It would be fair to say that Option Six was a highly successful strategy, which achieved its goal of dividing the local community and distracting them from the real fight: a universal rejection of all options.

Costings

“ It is unwise to pay too much. But it is worse to pay too little... There is hardly anything in the world that someone can't make a little worse and sell a little cheaper and people who consider price alone are this man's lawful prey.”

– Ruskin (RMS Bridge Aesthetics, July 2012, page 20)

It seems the RMS philosophy of valuing quality has been thrown out the window of the Windsor Bridge Project office.

Any costings which have been supplied at best appear to have been “back of the envelope” calculations.

The costings of various options are a prime example. All that was provided was a costings comparison table (Options Report, 2011, table 5.2), which was supposedly based on engineering assumptions from a previous table (Options Report, 2011, table 5.1).

There was no breakdown of costings for accurate comparisons in this document. Indeed the same costings philosophy has migrated to the EIS. There are no breakdowns provided.

Where a breakdown has been provided was in the RMS estimate to renovate the existing Windsor Bridge, which the RMS calculated to be some \$18.5million.

This figure has been challenged as inflated “*with a quantum beyond the bounds of reasonableness*” (Attachment A).

Given the RMS trait of over inflating the costs of all alternatives to its preferred option, no reasonable person could seriously entertain the thought that any costings to do with this project are anything more than a “stab in the dark”.

Other examples of costing inconsistencies include the variance in costings between that of the RMS and third party estimates are:

- RMS originally estimated that to demolish the existing bridge would cost in the vicinity of \$500,000.(1.) Wedgwood and Pearson estimate this as close to \$4m.
- RMS originally estimated that the rehabilitation of Windsor Bridge would be in the vicinity of \$18m (1.). Wedgwood and Pearson and Arenco Pty Ltd estimate the rehabilitation and repair at less than \$4m.
- RMS have estimated an alternative bypass via Hawkesbury Valley way at approx. \$150 to \$200m however Wedgwood and Pearson estimate that such

a bypass and rehabilitation of the current bridge could be achieved for approx. \$68m – similar cost to that of Option 1.

(1.) Windsor Bridge Replacement Project Options Report August 2011 page 66

Probably the most disturbing aspect of the costings involved in this project is that at no time has the RMS placed a value on the Heritage it is going to destroy.

Heritage has value. This value is quantifiable. Not only in dollar terms to the community, State and Nation – but to the social well being of the people.

http://fennerschool-people.anu.edu.au/richard_baker/SRES3028/lectures_and_tutorials/week08/Valuing%20CH.pdf

http://www.dpcd.vic.gov.au/data/assets/pdf_file/0003/36885/allens_rpt2_pt1.pdf

In failing to value the Heritage of Thompson Square in its costings, the RMS has failed to value the existing Windsor Bridge. A piece of infrastructure worth approximately \$7million (R. Wedgwood), its Heritage value is worth more again.

By not valuing Heritage the RMS and the Government is in breach of its commitment to the Burra Charter.

Equally disturbing is the disseminating of inflated RMS costings and RMS technical information to members of the public and local politicians to counter alternatives to its preferred option (Gazette 19-9-2012. Conolly, Hansard 18-10-2012)

Conclusion

For reasons best understood by the RMS itself, and possible attributable as much to organisational history and culture as any other factor, in 2008 the RMS provided advice to the then-government that a new bridge was to be built at Windsor.

Public records of undisputable credentials (Hansard) indicate that the design for the proposed bridge was well underway by June 2008, leading to the inevitable conclusion that EVERY single variation, option, discussion paper, poll, canvassing of public opinion, information brochure or display of information has been an unconscionable waste of public funds.

It is possible the RMS were lulled initially into a false sense of security about their bridge plans, due to the influence of a small group of vocal locals who claimed to represent the community. It may be that the level of opposition that has arisen was completely unexpected. The process analysis indicates the RMS initially dismissive of local interest and expertise and subsequently needing to adjust their rhetoric.

Proper strategic analysis would have immediately revealed that the RMS preferred Option One was completely inappropriate, inadequate and in opposition to its own design principles and philosophy.

And yet, the RMS continued obstinately to pursue this objectionable offering. In their pursuit of their objective they used arguments and costings that have not withstood professional scrutiny and they compromised their own professional standards, offering the community (belatedly) opportunity to comment on a series of designs unworthy of a large modern, well-resourced public agency.

Bridge over Hawkesbury River at Windsor

Proposal to Repair the Existing Bridge

as

Part of a Scheme Involving a New Road Linking

to

Hawkesbury Valley Way, the Flood Evacuation Route

Brian Pearson and Ray Wedgwood

We note that a meeting was held recently, on Wednesday 31 October, 2012, between the Chief Executive of Roads and Maritime Services (RMS), Mr Peter Duncan, together with the RMS Project Manager, Windsor Bridge Replacement, Mr Iain McLeod, and representatives of the Community Action for Windsor Bridge (CAWB), Mr Dail Miller and Ms Kate Mackaness.

It is our understanding that our estimate for the repair of the existing Windsor Bridge was criticised by RMS to be unrealistically low, notwithstanding that it is supported by a firm and detailed quotation from bridge contractor Arencos, known for quality work and with RMS registration.

We advise, with a degree of sadness, that it is also our understanding that the RMS estimate for the repair of the existing bridge was prepared in-house by RMS personnel. In our view, the RMS estimate is inflated, with a quantum beyond the bounds of reasonableness at \$18 millions. We believe this figure illustrates a lack of practical experience in the area of remedial bridge engineering.

Our scheme restores the existing bridge to its original condition with only minor disruption to traffic using the bridge, as the bulk of the work will be carried out below deck level. Our separate calculations indicate that the bridge so restored could accommodate a traffic load well in excess of a 20 tonne vehicle. The notion is

that the restored bridge would carry only light traffic, pedestrians and cyclists, with a new by-pass bridge to be designed to satisfy the load requirements of AS 5100 and carry legally loaded vehicles.

To offer our credentials, between us we have had over 80 years' experience with bridge design, construction, maintenance, Design Code and specification development. We, as the last and only surviving Government bridge engineers, have enjoyed the title of Chief Engineer (Bridges) and Chief Bridge Engineer respectively. We are not aware of any other bridge engineers with similar experience.

If we, as a community, allow our heritage to be destroyed we will have no history. The present Windsor Bridge is the oldest example of precast reinforced concrete girders supporting a cast-in-place deck, to our knowledge. This bridge is historically linked to Thompson Square, the oldest such public common in Australia. The proposed new bridge in this location will severely compromise the heritage value of the Square.

The original 1874 cast iron cylinder piers of the bridge have withstood many floods for almost a century and a half. During floods, when the flood height reaches a level of about RL 11 AHD, water travels overland from upstream at Freemans Reach and rejoins the river downstream of Windsor. This overland flow effect mitigates the effects of flood flow velocity, in terms of flood forces and scour and erosion effects, in the area of the present bridge and the proposed new bridge for the link road to meet the Hawkesbury Valley Way.

We believe that the funds available for the RMS Project Option 1 would be more effectively spent to construct the proposed link road with Hawkesbury Valley Way (the Flood Evacuation Route) and the repair and reuse of the existing bridge.

We recommend our scheme for more detailed investigation.

Yours faithfully,

Brian Pearson and Ray Wedgwood

Members RMS Heritage Committee

7. CONDITION OF WINDSOR BRIDGE

Question:

Which remarkable and historically significant 19th Century NSW Bridge is capable of carrying full 21st Century loads?

Answer:

Windsor Bridge crossing the Hawkesbury River.

Introduction: Historic Significance

Windsor Bridge contains extraordinarily significant engineering heritage. This is not commonly known or appreciated.

It is the first use of precast concrete for beams in the construction of bridges in NSW, and most likely Australia. (Significance of Windsor Bridge)

Unlike most other road bridges of the day that used timber piers, Windsor Bridge uses cast iron caissons which were more commonly used for railway bridges. The caissons are sunk some 20 metres below the water surface. This was quite an engineering feat for the day. The project was also overtopped by flood several times. (Significance of Windsor Bridge)

The strength of these foundations meant that for the timber elements to be replaced with a concrete superstructure in 1922, it was economical and efficient to precast the girders to support the deck on the bank and build the new deck a half width at a time, thus enabling the bridge to be used by traffic. This initiative would have been instigated by Percy Allan who was in charge of the Bridge Design Section of the Public Works at that time. (Wedgwood-Pearson)

Apart from designing the famous “Allan Truss”, Percy Allan was also the mentor of JJC Bradfield. Bradfield is most famous for overseeing the construction of the Sydney Harbour Bridge. It is recorded that Allan attended the celebrations for the opening of the re-decked Windsor bridge. (Windsor and Richmond Gazette, 21-1-1922)

Key Issues

Historic Windsor Bridge meets the current, full legal load requirements of all traffic. It is on a certified Restricted Access Vehicle Route.
(<http://www.rta.nsw.gov.au/heavyvehicles/ravmap/>)

In its current condition it is cleared to carry unrestricted loads. Minister Duncan Gay states: “There is no load limit on Windsor Bridge” (2012 Budget Estimates Transcript Page 19).

Windsor Bridge, like a significant number of other RMS assets across NSW, is functional and fit for purpose.

Windsor Bridge deserves the same consideration for maintenance, restoration or renovation as has been extended to other ageing assets of historic significance managed by the RMS.

Despite written requests from the community for information about the Bridge's maintenance regime, the RMS has failed to identify any interventions since 2002 to the fabric of Windsor Bridge, designed to maintain or reinstate the functionality of bridge elements. (see attached RMS email advice)

Discussion:

There are two parts to the case put forward by the RMS in support of their determination to demolish the heritage-listed Windsor Bridge. Both parts rely on technical arguments, with emotional overtones designed to frighten the general community. Neither part of their case withstands independent, expert scrutiny and rational analysis.

In fact, such rational, objective analysis raises a significant question: if the bridge is **not** in the perilous condition claimed by the RMS, what justification exists for demolishing this significant heritage asset? Given that demolition was initially costed at \$540,000 (Options Report, 2011, Page 12).

In the opinion of Brian Pearson and Ray Wedgwood, both former Chief Bridge Engineers of NSW, the cost of demolition of the existing bridge would be at least \$3 million. This brings the cost of demolition to be comparable with the quote from Arencos Pty Ltd of \$2.7 million to restore the bridge to good working order.

As the demolition of the existing bridge will see the government 'write off', in dollar terms alone, at least \$7M (R. Wedgwood) worth of public infrastructure alternative evidence supporting the retention of this historic public asset should be very carefully considered

Part I: Condition

The first justification used by the RMS for demolishing historic Windsor Bridge is their assessment of the condition of the bridge, claiming (EIS Volume 1, Chapter 1, page 2) that, "*Parts of the existing bridge are deteriorating as a result of age and heavy use*" and further stating "*it is not practical to replace or repair these elements.*"

Cost-effectiveness is also cited as a consideration, with the claim that “...*the bridge has reached the end of its economic life.*”

However, despite dramatic rhetoric suggesting the bridge could “*disintegrate during a flood event*”, (Bassett, Hansard 29-3-12) apparently the condition of the bridge is sound enough to ensure that it “*is extremely unlikely to fail in the next three years*” (Volume 4, Working Paper 7, Executive Summary, page 3); an extremely specific prediction. This specificity is puzzling until one realises the nominated timespan happens to coincide with the anticipated project completion in three years time. Possibly, a bridge that “is **extremely** unlikely to fail in the next three years” is also *unlikely* to fail for some time beyond that date.

Independent opinion, analysis and evidence reveals:

- The bridge can be renovated economically. (Refer ii below)
- EIS claims (Vol 1, Page 46, paragraph 5) that the renovation method proposed in this submission (refer ii below) will limit the bridge to light loads are incorrect.
- EIS claims (Volume 1, page 37) regarding limited bridge longevity, post repair, due to corrosion and the spalling of the bridge girders are incorrect. The proposed renovation method fully restores the historic bridge girders and addresses the concrete spalling (refer ii below).
- EIS claims (Vol 1, Page 46, paragraph 5) that the proposed renovation method (refer ii below) will force the bridge to be closed while work is completed (as with RMS Options 9A and 9B) are incorrect (refer ii below)
- Despite claims regarding its condition, the bridge load limit has actually increased since Windsor Bridge was declared to be in ‘poor’ condition in 2009 (50t to 62.5 t to 68t) (refer iv below)

i.) Economic Renovation

The EIS (Vol 1, Appendix C) identifies three forms of deterioration to the bridge structure:

- Spalling to the heritage concrete girders
- Cracks in the heritage cast iron caissons
- Graphitisation to the heritage cast iron caissons.

Engineers Ray Wedgwood and Brian Pearson advise both spalling and graphitisation are very slow processes. As noted in the engineering reports in the EIS these processes occur over several decades or longer. They did not occur over a few, short years. The cracks are also several decades old. (Vol 1, Appendix C)

This confirms these problems have existed for several decades and nothing has been done to alleviate the issues. Despite the significant engineering heritage of Windsor Bridge, the RMS appears to have decided upon a *demolition by neglect* strategy.

However all three forms of degradation can be economically repaired using the peer-reviewed Pearson-Wedgwood Renovation Method (refer ii below)

This method, which was developed by former NSW Chief Bridge Engineers Brian Pearson and Ray Wedgwood, has been quoted by RMS-registered bridge contracting company, Arenco Pty Ltd, as costing \$2.7million to complete (Attachment B)

Mr Ray Wedgwood, former RTA Chief Bridge Engineer, has performed an analysis of the reinforced concrete deck section of Windsor Bridge post proposed renovation. (Refer iii, below) This analysis shows the bridge will be capable of withstanding the bending moment and shear effects from various actual and design truck loads, exceeding the requirements of T44 Design load (1992 – 2008 Code.)

Importantly this restoration method maintains and respects the heritage of the bridge by conserving its historic engineering elements, particularly the precast reinforced concrete girders.

It also restores the bridge to a “better than original” load bearing capability – a capability that is currently cleared by the RMS to carry full loads (refer iii below)

ii.) Pearson-Wedgwood Renovation Method

Consistent with recommendation made by Mr Wedgwood and Mr Pearson, the community-proposed refurbishment would:

- i. *Be carried out from barges located beneath the deck, to minimise disruption to traffic using the bridge deck;*
- ii. *Use high pressure water blasting on the deteriorated concrete from the underside of the superstructure, inspecting, cleaning and replacing the reinforcement where required, replacing the removed concrete by a shot-creting process and sealing with a sealant to enhance the impermeability of the concrete. When a similar process was carried out for the underside of the Swansea Bridge at the Entrance to Lake Macquarie it is understood that the working area was enclosed by drop sheets hanging from the sides with a lower heavy duty sheet to catch the blasted concrete by-product;*
- iii. *If it is required that additional reinforcement be added to the cross section this can be achieved by bonding carbon fibre strips to the repaired concrete face;*
- iv. *Supplement the deteriorated cast iron pier cylinders by attaching pairs of semi circular steel plates around the existing cylinders and by bolting against packing rings to achieve a friction connection between the new steel plates and the cast iron cylinders over the depth of the cast iron deterioration. The cracks in the cast iron cylinders can be held by placing steel bands around the cylinders near the cracks;*

“These restoration proposals would revive the structure to a load carrying capacity beyond its future needs. We have verified this by separate calculations” – Ray Wedgwood

iii.) Bridge Deck Analysis After Proposed Renovation

When repaired, Windsor Bridge will be capable of withstanding the Bending Moment and Shear Effects from various actual and design truck loads as follows:

TABLE OF STRESSES FOR VARIOUS LOAD CONDITIONS AND DESIGN PHILOSOPHIES

Loading	Max Bending Moment Stresses Reinforcement fs psi (lb/sqin)	Max Bending Moment Stresses Concrete fc psi (lb/sqin)	Max Shear Reinforcement Stresses fs psi (lb/sqin)
Windsor Bridge allowable stresses	18,000	900	18,000
MS18 design load (pre-1992 Code)	16,350	736	17,200
44.5 tonne semi-trailer (legal)	16,860	759	18,500* (3%)
62.5 tonne B- Double (legal)	15,159	682	16,390
T44 design load (1992 - 2008 Code)	19,125* (6%)	861	20,599*(14%)
M1600 (post 2008 Code)	21,711* (20%)	977* (9%)	25,701* (43%)

The above stresses have been calculated using Working Stress Design principles as would have been used at the time of design, in the 1920's.

However current Codes allow Limits States Design principles to be used, which results in lower design forces because of a rationalisation of safety factors for Dead Loads and Live Loads viz:

T44 design load (1992-2008 Code))	14,930	672	17,626
M1600 (post 2008 Code)	17,258	777	22,090* (23%)

*Notes:- For the above Table, f_s means stress in steel reinforcement, f_c means concrete stress in psi (lb/sqin). * indicates % overstress.*

The effects of the B-Double Truck are less than the effects from a semi-trailer because of the short span of 13m. The B-Double effects become predominant above 26m spans.

These figures demonstrate that the reinforced concrete section, when repaired, will have more than adequate capacity to continue to carry legal loads well into the future.

Even for the M1600 load, for which modern bridges are now being designed for a future increase in legal load, the overstress is not catastrophic.

In summary, the proposed Pearson-Wedgwood renovation of Windsor Bridge would:

- See the Bridge able to safely carry full loads well into the future (refer iii above).
- Allow for its use as a Higher Mass Limit Vehicle RAV Route, as it is now (<http://www.rta.nsw.gov.au/heavyvehicles/ravmap/>); and
- Could be achieved for the same cost of its demolition. (Attachment B).

iv.) Load Limits

Disingenuous rhetoric seems to abound in RMS documents. In justifying the demolition of the existing asset, the EIS (Vol 1, Table 11.2, page 458) states that, *“The replacement bridge would have a load capacity to meet current load standards.”*

The issue of standards is dealt with in the next section of this chapter, however the statement can be seen for the meaningless verbiage it is, when one considers the existing bridge is currently carrying unrestricted loads, regardless of standards. The NSW Roads Minister confirmed this himself in response to a question asked by the Hon Penny Sharpe in the 2012 Estimates Hearings. (2012 Budget Estimates Transcript Page 19.)

The question that remains unanswered is, if the bridge is in such poor condition, why are there no load limits currently imposed? More to the point: why has the load limit actually increased since the bridge condition assessment was formally updated on Heritage Register to 'poor' in 2009?

(<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4309589>)

1. In fact, in 2008 the load on the bridge was 50t (a 19m B-Double) ("Operating Conditions: Specific Permits for Oversize and Overmass Vehicles" RTA, ISBN: 9781921242045, Page 27)
2. Despite the condition assessment being changed, as has been mentioned, to 'poor' in 2009, in 2011 the maximum load on the bridge was 62t (25m B-Double) (Class 2 B-Double Notice, Appendix 1" 20-5-2011, Page 2) and;
3. In 2012 the maximum load on the bridge was 68t (25m B-Double, Livestock) (Duncan Gay media release 10-10-12)

These loadings would appear consistent with advice contained in the Inspection and Structural Assessment Report – Windsor Bridge (15 April 2011, Access UTS), (Vol 1, Appendix C, UTS Report, page 6,) which says, in part, ***"the bridge in its present condition and loading will be safe for some time."***

It is quite clear that despite the hysterical rhetoric from a group of a small group of pro-Option One commentators, Windsor Bridge is not in danger of collapse. It has no load limit applied to it. Indeed even in its current "poor" condition, testing shows it is strong enough to be a recognised Restricted Access Vehicle Route.

(<http://www.rta.nsw.gov.au/heavyvehicles/ravmap/>) As shown in the analysis of the bridge deck by Ray Wedgwood, the existing bridge when renovated will have a load capacity capable of exceeding the requirements of T44 Design Load (1992-2008 Code). It will be able to carry legal loads well into the future.

How many other 19th Century Bridges are capable of this?

Part II: Standards

The RMS also promotes demolition and replacement of this historic bridge on the basis of engineering and road safety standards (EIS Volume 1, page xii), a position that also fails to withstand reasonable scrutiny.

This argument deliberately confuses technical standards with functionality and reeks of applied discrimination. Whilst the RMS can create increasingly demanding

and stringent new 'standards' to apply to the entire NSW road network and thus, Windsor Bridge, there is a functional reality that calls into question the validity of, or need, to apply such new and demanding 'standards' to one historic bridge.

The RMS approach to improving the structural capacity of the existing bridge was to incorporate additional steel girders between each concrete girder to share some of the increased loading on the deck (SM1600 Load). The installation and support of these steel girders would be quite complicated, although not so complicated as to justify the \$18.5M estimate of cost.

In fact, elsewhere in the EIS the Standards argument is challenged by the RMS' own project Alternatives (EIS Vol 1, page 30), which includes an option to refurbish the Bridge, " ... to meet current design standards **where possible**." So, "where possible" IS an acceptable measure for the RMS to apply, should it choose to.

In March 2008, with RTA Officers in attendance, a test was conducted on the functionality of the Bridge. A bus and a B-Double truck passed each other on the bridge. Clearances were noted. The RMS officer stated:

"Both vehicles passed without incident and the B-double was able to remain within its lanes during the crossing". "Windsor Bridge was constructed in 1874 and although it represents an ageing asset, it continues to perform adequately," (Gazette, page 1, March 19, 2008, see Attachment C)

In the last 4-5 years nothing has changed: heavy vehicles can still pass each other on the bridge without incident and B-Double trucks continue to be able to cross the bridge while remaining wholly within their lane.

Most importantly and more recently, Windsor Bridge in its existing, current condition is cleared to carry unrestricted loads. (Duncan Gay, 2012 Budget Estimates Transcript Page 19.) The Minister's statement is supported by relevant RMS documents including the RMS Travel Restrictions Vehicle Routes, Sydney, Map A; Class 2 B-Double Notice App 1; RMS Interactive RAV. (<http://www.rta.nsw.gov.au/heavyvehicles/ravmap/>)

So Windsor Bridge can carry the loads and the vehicles can pass. This is no different from many other RMS assets across NSW that are accepted as functional and fit for purpose. In fact nothing has physically changed that warrants the demolition of Windsor Bridge:

- The heavy vehicles that use Windsor Bridge have not got wider (ADR 43/04, 2006)
- It is reasonably evident that Windsor Bridge has not become more narrow.
- Classification 9 semi-trailers have been passing each other while crossing Windsor Bridge for 40 odd years.

Despite this, proponents in favour of Option One continue to make uninformed noise about the width of Windsor Bridge. Once again this is an issue that doesn't withstand reasonable scrutiny and the following lane width comparisons are enlightening points to scrutinise:

- Victoria Road = 2.6 to 2.9m
- Buttsworth Creek Bridge = 2.7m (the next bridge along Putty Road after Windsor)
- Sydney Harbour Bridge = 2.8m
- Parramatta Road = 2.8m
- Anzac Bridge = 3.0m
- Gladesville Bridge = 3.0m
- F3 Hawkesbury Bridge = 3.0m
- Windsor Road = 3.0m
- *Windsor Bridge = 3.0m*

Whilst Windsor Bridge, like sections of Parramatta Rd and Victoria Rd has no median strip, the Bridge has wider lanes than either of these roads. It is also worth noting that at a width of 2.8 metres Parramatta Road is a Class 2 Heavy Vehicle Route, carrying four times as much traffic as Windsor Bridge, on a road with smaller lanes, no shoulders and no median strip.

Curiously, all Class 2 heavy vehicles that cross Windsor Bridge heading north towards Putty must then cross a second bridge over Buttsworth Creek, which is not scheduled for demolition despite being 10% narrower than Windsor Bridge and, while all these roads and bridges are 'functioning' on a daily basis, **not one** achieves the Austroads Standard which calls for a lane width of 3.5metres.

Curiously and quite hypocritically, the proposed Option One bridge when configured for 3 lanes also does not meet the current standards. The EIS shows the traffic lanes will be 3.3m wide with no median strip. (Vol 1, Figure 5-4b).

An apparent case of "Rules for some and Rules for Others"

Bridge Maintenance

The maintenance of Windsor Bridge is a matter of some concern to the community. The available history of condition assessments (Attachment B) is confusing and there is no information available regarding the specific maintenance activities undertaken on the Bridge in recent years. Indeed, Project Engineer Iain MacLeod, in a presentation to some CAWB members, (held in the CAWB Thompson Square Offices, Thursday October 25th, 2012) acknowledged, in response to a question from Kate Mackaness with regard to a lack of maintenance action, the RMS had effectively been 'running down the clock' on the condition of the bridge.

This cavalier approach is deeply concerning. If the Bridge is in the perilous condition claimed by a Local Member (Bassett, Hansard 29.3.12,) then the RMS is playing Russian Roulette with public safety. Such an approach, dating back, as it does to pre 2002 (Attachment A), well before there was any public discussion regarding the Bridge and long before a decision had been made to replace the Bridge, reinforces the impression the agency was either paying scant attention to maintenance issues or the bridge is in a far better condition than is acknowledged by the government.

This matter receives some attention in the EIS (Vol 1, page 7), which less-than-reassuringly advises, *“Speed restrictions are currently imposed due to the structural weakness of the bridge and it is inspected regularly to ensure public safety. A load limit may also need to be applied in the short term and ultimately closure of the bridge is expected in the longer term when **ongoing maintenance** can no longer provide a structurally adequate bridge.”*

Hold on ... “ongoing maintenance”?

The Windsor Bridge Replacement Project Community Issues Report October 2011 says, *“Routine inspections on Windsor Bridge were last conducted in May/June 2011. These inspections are part of the RTA’s ongoing monitoring of the bridge to ensure it remains safe and serviceable for use until a replacement bridge is constructed.”*

Keen to know what this meant an email was sent to RMS officer, Mr Roy Surace. A reply was received from Project Manager Iain Macleod on 7-12-2012. (See Attachment X) Mr Surace was asked for:

1. the schedule of inspections, (data back to 2002 was requested, on the basis that information on such a standard asset management activity would be easily accessible, particularly given the significance of the issue for this project);
2. who conducted them;
3. what they involved;
4. how they were reported on; and
5. what actions, if any, arose from the content of those reports.

The only example provided of an action arising from maintenance inspections was “the reduction in the speed limit for heavy vehicles from 60km/hr to 40km/hr in June 2011 due to the structural degradation of the bridge.”

Not one example of an intervention to prolong the life of the bridge elements. Despite claiming they *“...could need to close it anytime without notice to protect public safety...”* not one action to reinforce, stabilise, conserve or otherwise protect bridge elements from deterioration was noted in the response from the RMS, just a decade of 'looking'.

Curiously, RMS online information regarding another NSW heritage bridge provides evidence of a range of potential maintenance interventions, both remedial and preventative, lavished on the fabric of that bridge, including: replacing piles; repairing trusses and cross girders to preserve structural integrity; treating abutments and girders to protect against rot and infestation; the replacing of bottom and top chords to maintain load capacity; deck replacements for smoother travel conditions and regular repainting of the bridge to protect the timber components ...”

(http://www.rta.nsw.gov.au/roadprojects/community_environment/urban_design/documents/rms_bridge_aesthetics_guidelines_2012.pdf Particular Conditions, Section 7, page 99)

... nonetheless the only example the RMS can come up with, when asked how they maintained Windsor Bridge was by ‘lowering the speed limit’.

So, a key question regarding the actions of the RMS is why, when the spalling, graphitisation and cracks were apparent in 2004, was no remedial action taken?

And, if the spalling, graphitisation and cracks are so terminally significant, why was the bridge’s condition at this time classified as “Good”?

<http://www.rta.nsw.gov.au/cgi-bin/index.cgi?action=heritage.show&id=4309589>

Other Bridges

There are a number of historic bridges in NSW, which serve to establish a precedent for arguing the case to conserve Windsor Bridge. Arguably, Windsor Bridge stands as a proud and significant contender for preservation, even in the company of already successfully preserved bridges such as Hinton Bridge over the Paterson River, Junction Bridge over the Tumut River, Corowa Bridge over the Murray River, Dunmore Bridge over the Paterson River between Maitland and Paterson, Rossi Bridge over the Wollondilly River at Goulburn and Hampden Bridge over the Kangaroo Valley.

Like these bridges, the Windsor Bridge is public infrastructure of undoubted historic significance, it is listed as an item of State significance, (RTA Heritage and Conservation Register item 4309589) it is clearly functional and yet it is scheduled for demolition. The disquiet caused by this intention is in no way relieved by looking at the RMS website regarding two of these NSW heritage bridges which have been preserved.

i) Junction Bridge over the Tumut River

Junction Bridge was officially opened on 20 December, 1893. It is a bridge “...assessed as the state’s second most important example of a McDonald truss bridge and is listed on the State Heritage Register”. Apparently, unlike Windsor

Bridge, *“The RTA is committed to the conservation of this historic bridge.”*

(http://www.rta.nsw.gov.au/roadprojects/community_environment/urban_design/documents/rms_bridge_aesthetics_guidelines_2012.pdf Particular Conditions, Section 7, page 99)

And yet, like the Windsor Bridge, the *“... design of Junction Bridge has changed over the years.”* The site goes on to advise that *“Changes to the original bridge have included:*

- *Replacement of new piles and repairs to trusses and cross girders to preserve structural integrity;*
- *Treatment of the abutments and girders to protect against rot and infestation;*
- *Replacement of bottom and top chords to maintain load capacity;*
- *Deck replacements for smoother travel conditions;*
- *Regular repainting of the bridge to protect the timber components of the trusses. Lead based paints are no longer used.”*

So, the historic modifications to Windsor Bridge are no obstruction to its contemporary preservation after all...

As has been frequently noted already, Windsor Bridge continues to carry unrestricted loads yet Junction Bridge was so severely damaged in January 2003 that it was temporarily closed for emergency stabilisation works. The restoration, which was completed in 2006, and estimated to cost \$4 million was approved by the NSW Heritage Office. It required a temporary crossing be installed and the *“historic bridge was modified to improve strength, ride quality, safety and durability. Work included:*

- *New concrete abutments, piles and pile caps replacing aged timber abutments and piles. New timber and concrete approach spans replacing old timber approach spans.*
- *A new steel safety barrier along the length of the bridge. Installation of steel plates to strengthen bottom chords. Replacement of timber cross girders with steel cross girders. Replacement of wrought iron tension rods with stronger steel rods.*
- *Replacement of 18 steel shoes and retention of 4 original cast iron shoes.*
- *Attachment of monorails under the bridge for improved future inspection and maintenance.*

This is in stark contrast to the NSW State Government's current refusal to contemplate the expenditure of \$2.7 million on historic Windsor Bridge.

ii.) Hinton Bridge over the Paterson River.

The RMS website

(http://www.rta.nsw.gov.au/roadprojects/projects/the_hunter_region/complete

[d_projects/hinton/index.html](http://www.rta.nsw.gov.au/roadprojects/projects/the_hunter_region/complete_d_projects/hinton/index.html)) says that Hinton Bridge on the Paterson River, one of the 37 remaining Allan truss bridges in NSW, has been ranked fifth in terms of heritage significance, and eleventh in significance out of the remaining 82 timber truss bridges in NSW.

The RMS site goes on to say, *“The bridge is historically significant in the development of the NSW road network and more specifically in the development of the road network in the Hinton-Morpeth area. It holds technical significance being one of only seven timber truss bridges with a lift span in the State. Hinton Bridge is representative of some of the major technological developments made in timber truss design at that time.”*

And so, the Hinton Bridge qualifies for restoration. By comparison, Windsor Bridge’s significance (Chapter xx) merely qualifies it for destruction.

The RMS site goes on to advise, *“The trusses and lift span had deteriorated to the extent that the load carrying capacity of the bridge had been considerably reduced. The bridge was restricted to a 15 tonne load limit and to one lane operation under traffic signals.”*

The rehabilitation and strengthening works will ensure that Hinton Bridge operates as a road bridge for general access traffic. The deck of the truss spans have been replaced with stress laminated timber decking and the approach spans were replaced with a concrete timber composite deck. This will ensure routine maintenance on the bridge and the need for replacement timber are reduced to a minimum, and importantly, the heritage value of the bridge is retained.”

http://www.rta.nsw.gov.au/roadprojects/projects/the_hunter_region/complete_d_projects/hinton/index.html

Hinton Bridge was in such parlous condition that load limits had been imposed. In fact, so significant was the rescue of Hinton that it warrants mention in the RMS publication, *Bridge Aesthetics Design Guideline to Improve the Appearance of Bridges In NSW*, (Centre For Urban Design, July 2012) which notes that, *“...due to the deterioration of the bridge’s trusses and lift span and the need to increase load carrying capacity, rehabilitation and strengthening works were undertaken in 2005. The bridge is an example of carrying out repair sensitively by using timber, steel and concrete composites so as to preserve its heritage character.”*

Windsor Bridge is carrying unrestricted loads. Windsor Bridge is demolished, Hinton Bridge’s heritage value is recognised and retained.

The restoration of Hinton Bridge apparently cost close to \$10 million. The RMS refuse to consider spending around \$2.7 million to rehabilitate Windsor Bridge. And so, unlike Hinton Bridge this wonderful 140 year-old structure, inextricably linked to Australia’s history, is condemned to be destroyed; vandalism justified by the RMS on the basis that the Bridge doesn’t meet a 21st century technical specification.

How many bridges in NSW don't meet the current M1600 standards? Are they all going to be knocked down too? When? If Windsor Bridge is condemned because it doesn't meet current standards then where is the replacement schedule for all other non-compliant bridges in NSW?

The fact is Windsor Bridge meets the current, full legal load requirements of all traffic. (2012 Budget Estimates Transcript Page 19.)

Exactly how many 19th Century, heritage listed bridges in the RMS' inventory currently carry unrestricted loads? Windsor Bridge does.

NOTE:

To anticipate the demolition of a heritage asset, in this case the Windsor Bridge, the proposer must in accordance with the Heritage Act of NSW have prepared a Conservation Management Plan (CMP), amongst other things, investigating and detailing the significance of the bridge, its condition, statutory requirements, stating the reasons for considering demolition and recommendations and conservation policy supporting such proposed demolition.

Conclusion

Windsor Bridge, built in 1874, is not just "any bridge". It is a 19th century bridge of State, and quite possibly, national historic and technical significance, currently cleared to carry Class 2 Heavy Vehicles.

The NSW State Government is planning to destroy a significant, listed heritage item. In heritage terms alone the loss of the Bridge is incalculable.

The destruction of this asset, simply to replace it with a similar service or a "like for like" replacement (Conolly, WBG Meeting, 27-2-12) is quite simply incompetent strategic planning. If, as would appear to be the case, the condition assessments and costs of rehabilitation put forward by the RMS are incorrect, the State will sustain a double loss: that of a significant heritage item and an unnecessary loss of the opportunity to **double river crossing service capacity**, rather than simply replace it to a similar level.

The purported condition of the Bridge which forms a major justification for the demolition of this heritage asset; the expenditure of in excess of \$62 million; and the intrusion of a modern, concrete structure in a Nationally significant heritage precinct is not upheld by objective, independent analysis.

It is clear the condition of Windsor Bridge is not terminal and the opportunity exists to bring Windsor Bridge up to a standard that is cost effective to maintain

Such rehabilitation can demonstrably be achieved economically and with minimal disruption to traffic. (Part 1, section ii)

These renovations, performed for only 15% of the RMS estimated renovation cost, will enable the bridge to bear full loads well into the future while preserving the unique cultural heritage and historic engineering elements of the bridge (Part 1, sections ii and iii)

These renovations can be performed without interruption to traffic. (Part 1, section ii)

Funds allocated to the destruction of the bridge should be urgently redirected to preserving it as a component of a broader strategic plan to address 21st century transport requirements in the Hawkesbury Region

ATTACHMENT: MAINTENANCE EMAILS

From: MACLEOD Iain C <Iain.MACLEOD@rms.nsw.gov.au>
Date: 7 December 2012 8:31:07 AM AEDT
To: 'Kathleen Mackaness' <kmackaness@icloud.com>, "'pete@reynolds-valveart.com.au'" <pete@reynolds-valveart.com.au>, "'hm.terry@bigpond.net.au'" <hm.terry@bigpond.net.au>, "'vw@rodstorie.com.au'" <vw@rodstorie.com.au>
Subject: RE: Socio-economic Data

Hi Kate, Pete, Venecia and Harry,
In response to questions regarding bridge maintenance that were asked of Roy our maintenance people have come back with the following information,

A number of routine and special inspections have occurred on the Windsor Bridge since 2002. Regarding the special inspections, these reports can be found on the RMS website at the following link:
http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/project_documents.html then look under Technical Reports/Inspection and Investigations

With respect to routine inspections these are scheduled by the RMS Bridge Maintenance Planner.
It involves an experienced bridge inspector undertaking a visual inspection every week looking for any unusual deflection or movement, and any changes in bridge elements. The inspector walks over the bridge and then inspects the underside of the bridge.

In addition to the routine inspections, RMS does a six monthly survey measurement of 12 fixed points on the bridge for any vertical or horizontal movement. Furthermore, an underwater inspection is undertaken following a flood event that requires the bridge to be closed to traffic (e.g. following the minor flood in March 2012).

An example of one of the actions that was implemented following an inspection was the reduction in the speed limit for heavy vehicles from 60km/hr to 40km/hr in June 2011 due to the structural degradation of the bridge.

As future inspections identify further structural degradation this would lead to the imposition of a load limit in the short term and ultimately closure of the bridge in the long term when ongoing maintenance can no longer provide a structurally adequate bridge.

I hope this is helpful. I'll get responses to you for some of your other questions as soon as they become available,
Regards
Iain

ATTACHMENT A: BRIDGE MAINTENANCE CHRONOLOGY

The following information summarises publicly available information. No claims are made regarding its completeness or accuracy, although it is accurate to the extent that source sites are accurate.

Prior to 2000:

- Concrete decking and kerbing replaced the timber deck in about 1921 or 1922.(Bridging the Barrier, IEAust, Multidisciplinary Transactions Vol GE 14 No 2).
- A new approach was cut on the Windsor side in 1934 to meet the requirements of motor traffic. (Bowd, 1979, p. 64)
- Maintenance Records from the 1930s to the 1970s are unavailable.
- Guard railing on the bridge was replaced around 1980 following a number of fatal accidents.
- A timber and metal truss underpass for pedestrians was completed in 1988 below the eastern span as pedestrian traffic on the bridge was high, especially at weekends, due to the growth of tourism in Windsor, with many activities centred around the river.
- Circa 1990 steel sheet piling was installed on the Wilberforce Road side of the bridge to stabilise the western abutment, which had been undermined due to scour in flooding. (RTA File 91.1526; 1)

Post 2000:

Date	Issue/Event	Reference
xx.12.03	Bridge inspection and condition assessment report completed by RTA. Assessed as being in poor condition, concluded that structure requires extensive repairs. Regular inspections since.	Info Pack/SSI Application Report.pdf
28.05.04	Original condition assessment: 'Overall the bridge is in good condition, with the deck showing no signs of leaching. However, there is some spalling on the outer beams where they are more exposed to the weather. The substructure appears in good condition.' (Last updated: 28/05/2004.)	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4309589

2006*	<p>"The RTA has not carried out a safety audit but undertook a structural assessment of the bridge in 2006"</p> <p>No online record of assessment report yet identified</p>	http://www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/fc955a9a1e201e40ca2577ba007c4489/\$FILE/101012%20Answers%20to%20QoN%20-%20Roads%20-%20additional.pdf
September 2007	<p>The Hawkesbury Gazette, 19.3.08 (see below) quotes Cr Porter as saying he moved that the RTA be requested to provide a structural report on Windsor Bridge, after councillors unanimously agreed that it was unsafe.</p> <p>(Has not yet been confirmed in searches of the Council's online records)</p>	
19.3.08	<p>Hawkesbury Gazette Page 1:</p> <p>Reports: Hawkesbury Council, in cooperation with the RTA, last week held a demonstration on Windsor Bridge of a B-double truck and a bus passing each other.</p> <p>RTA officials attended the demonstration, one of them a passenger in the B-double organised by the RTA.</p> <p>Council organised the bus.</p> <p>"In September last year, Cr Porter moved that the RTA be requested to provide a structural report on Windsor Bridge, after councillors unanimously agreed that it was unsafe. To date, neither Cr Porter nor Mayor Bassett have seen that structural report."</p> <p>"Despite the demonstration, the RTA has yet to be convinced of safety issues on Windsor Bridge. An RTA spokesperson told The Gazette that "both vehicles passed without incident and the B-double</p>	

	<p>was able to remain within its lanes during the crossing”. “Windsor Bridge was constructed in 1874 and although it represents an ageing asset, it continues to perform adequately,” the spokesperson said.</p> <p>“Over the past few years the RTA has carried out geotechnical investigations and structural assessments to assist in developing a future maintenance strategy for the bridge. “As with most ageing infrastructure, the reports have highlighted areas that require attention, however they have also confirmed the bridge is structurally adequate for current traffic loadings.</p> <p>“At this time the RTA has yet to finalise a future strategy for the bridge.”</p>	
2007-08	Windsor Bridge condition assessment (undated) apparently undertaken sometime during this period, resulting in it being downgraded to ‘poor’ in April 2009.	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4309589
24.6.08	<p>Mr John Aquilina (Riverstone) advised the House that the Government would spend \$25 million to replace the Windsor Bridge across the Hawkesbury River, noting that “The Windsor bridge has served the community well, but maintaining the bridge is no longer economically viable. While the bridge is still considered safe to carry legal loads in its present condition, it would require extensive and costly upgrading in the near future.” Going on to say, “I am advised that the Roads and Traffic Authority [RTA] has looked at a number of options for the Windsor bridge and found that it is not cost effective to continue to upgrade the structure due to its age and condition.</p> <p>In relation to the Windsor bridge,</p>	
17.4.09	Windsor Bridge condition assessment formally updated on Heritage Register to ‘poor’	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

		?ID=4309589
29/6/10	<p>Whelan: Enquired if Council has had a structural report completed on Windsor Bridge and asked if there was an existing resolution of Council that indicates the Bridge should be replaced immediately.</p> <p>The Director Infrastructure Services advised that a structural investigation on the Bridge was completed by the RTA. A request for a copy of the report will be submitted.</p>	Council Minutes (insert link)
16.9.10	<p>Page 7 16). The RTA has not carried out a safety audit but undertook a structural assessment of the bridge in 2006* and has implemented a routine inspection program to identify any changes in condition since that assessment.</p> <p>Based on this structural assessment, the RTA is satisfied that the existing bridge remains in safe condition to carry legal loads. The RTA will undertake a further structural assessment in late 2010*, to confirm the bridges condition remains suitable to maintain existing traffic loadings.</p>	http://www.parliament.nsw.gov.au/Prod/parliament/committee.nsf/0/fc955a9a1e201e40ca2577ba007c4489/\$FILE/101012%20Answers%20to%20QoN%20-%20Roads%20-%20additional.pdf
Late 2010*	<p>Further structural assessment to be undertaken to confirm condition</p> <p>No online record of assessment report yet identified</p>	
August 2011	<p>Page 7 This review will be one of a number of inputs that will assist the RTA's selection of a preferred option for a new bridge crossing at Windsor, which is required due to the structural deterioration of the current bridge.</p> <p>Page 41 ...the following structural issues:</p> <p>Spalling of girders Graphitisation of cast iron piers</p>	<p>[PDF]</p> <p>Preliminary Urban Design and Heritage Review of Options 1 and 3</p>
1.9.12	RMS continues to tell public at public display that old bridge unsafe and will fall down - in contradiction of RMS engineers' reports	Stat Dec??

1.9.12	Project Manager tells public RE repair method unworkable, GM John Statton says repair method sound in earlier email.	Stat dec?? Copy of email??
8.9.12	Project Manager tells public bridge repairs will cost \$18m. He tells public RE repair method unworkable despite himself being present at RMS Heritage Committee meeting on 6-9-12 where Arengo P/L quote of \$2.5m for said repairs is tabled.	Stat dec??
1.9.12	Despite attendance at RMS heritage meeting, Iain Mcleod at RMS shopping centre display tells general public that costs are \$18 mill	Stat dec??

EIS Submission from BJ Pearson & RJL Wedgwood

Former Chief Engineer (Bridges) Former Chief Bridge Engineer
DMR NSW DMR/RTA NSW

This submission is a joint submission from Brian Pearson and Ray Wedgwood, both former Chief Bridge Engineers, DMR/RTA NSW. Brian from 1981 to 1987; Ray from 1987 to 2000.

Brian authored the original "Aesthetics of Bridges" book that is now in its 3rd edition by RMS NSW. He also instigated contact with the National Trust to discuss heritage bridge issues during his term, with the committee he developed now having morphed into the current RMS Heritage Committee. Ray led the design team for the Anzac Bridge design and was also heavily involved in the development of AUSTRROADS/SAA codes of practice for Bridge Design.

We are currently members of the RMS Heritage Committee and also the National Trust.

We believe that all nine RMS Options investigated for the project are unsuitable, particularly on the basis that none of these Options was aimed at leading to the high ground to the south of Windsor. Also, for Option1, the RMS favoured option, this option will cause serious disruption to the heritage values of Thompson Square, Windsor's historic town square from which, since the late 1790's, produce, both livestock and vegetables, was assembled before being loaded on to boats to be transported down the Hawkesbury River to the Pacific Ocean at Broken Bay, then down the ocean to Sydney Heads and back up Sydney Harbour to the early settlement around Circular Quay, to provide food for the colony.

DISADVANTAGES OF RMS OPTION 1

We consider that the RMS Option 1 scheme has the following unfavourable aspects:

- a) for the next century or longer the new bridge will direct an increasing volume of traffic, including heavy vehicles, through the heart of Windsor;
- b) for the next century or longer the new bridge will experience a flooding frequency only marginally better than the flooding frequency of the existing bridge;
- c) the construction of the new bridge will have a dramatic impact on the historic Thompson Square, the importance of which to Australia's heritage has been expounded many times, both by written and spoken word. The fate of the Square

has been the subject of a recent petition of at least 12,000 signatures from the local community to the State Parliament;

d) the existing bridge is an integral component of Thompson Square. Sections of the bridge have served the community and the traffic for about 150 years. The precast concrete bridge girders were installed over 90 years ago, (after being manufactured on the bank of the river) to enable re-use of the cast iron cylinder piers. To our knowledge these are the first reinforced concrete bridge girders to have been manufactured in this State, and most likely Australia.

CLAIMED ADVANTAGES OF THE RMS OPTION 1 SCHEME

The RMS Option1 scheme is claimed to have the following advantages over other options:

- a) lower visual impact;
- b) relatively small number of four piers in the river;
- c) can be constructed and launched from the western bank;
- d) reflects the heritage values of Windsor.

With regard to a), the superstructure will be heavy in appearance with a depth to span ratio of about 1 to 15*. The underside of the girders will be close to normal water level and on a slope. The RMS manual "Bridge Aesthetics", page 35, states: "water always forms a horizontal plane and a bridge structure when skewed (inclined) to this plane can appear discordant". Thus the RMS Option 1 scheme does not follow the RMS guidelines in this regard.

(* Goehler and Pearson "Incrementally Launched Bridges - Design and Construction", Ernst and Sons, Germany, 2000)

With regard to b) our proposal involves only two piers in the river.

With regard to c), fully loaded concrete agitator trucks will need to travel over the existing bridge to service the concrete girder production and launching site, adding to local traffic.

With regard to d), as former Chief Bridge Engineers, we cannot accept that a modern concrete bridge design, introduced by us for incremental launching, reflects the historical values of Windsor or even the historical values of the bridge that RMS plans to remove. There is no commonality to any component of the two bridges. They are, in fact, "poles apart" with respect to design and appearance.

ALTERNATIVE PROPOSAL FOR THE HAWKESBURY VALLEY WAY OPTION OR "RICKABYS LINE"

We consider that a much more suitable scheme would be to:

- 1) repair and renovate the existing bridge;
- 2) link up to the Hawkesbury Valley Way (the local Flood Evacuation Route) from near the western end of the existing bridge, at the intersection of Wilberforce Road and Freemans Reach Road, on a line passing through Macquarie Park to the west of the restaurant, with a two lane bridge over the Hawkesbury River, following the western side access to Deerubbun Park, across an intersection with Cornwallis Road controlled by "Stop" signs, on a new bridge over Rickabys Creek then between the Rum Corps Conference Centre and the associated golf course, just west of the power lines to meet Hawkesbury Valley Way west of the parking area. (see Fig A as File attachment 1a)

FLOOD INFORMATION (See Working Paper No 8 - Hydrology)

Windsor's location on the Hawkesbury River results in a unique flood regime. Fig 2.3 "Land use and approximate extent of flooding" (see File attachment 2) shows that approximately 3km upstream from Windsor, near Freemans Reach, a breakout of flood waters occurs at approx RL11 (AHD) which allows significant overland flow to bypass Windsor on its way to the Sackville "Choke", another unique feature of the Hawkesbury River, where a narrow sandstone gorge constrains the combined flow from the Hawkesbury and the Colo Rivers, resulting in widespread upstream inundation during major floods. This issue is discussed in Sections 2.6.3 and 2.6.4 of Working Paper No 8 - Hydrology, reproduced below and shown in inverted commas.

"2.6.3 Flow distribution

Peak flows at Windsor and flow at Sackville are presented in Table 2-3. Flows at Windsor are from the RUBICON model output for existing conditions, reporting locations are shown on Figure 2-2. Flow at Sackville provides an indication of combined flow within the river and floodplains at Windsor as there is limited floodplain at Sackville. Results provide an indication of the distribution of flow between the main river channel and flow onto the floodplain at Windsor. As floods increase in size a larger proportion of flow is conveyed or stored within the floodplains and doesn't pass Windsor bridge."

Table 2-3 Peak design flows near Windsor Bridge (Note: This table does not transfer well to the format provided for submissions. A modified version of Table 2-3 is given in the text below. (See also File attachment 3)

COMMENT ON HYDROLOGY ASPECTS

- a) Table 2.3 of Working Paper No 8 in the EIS indicates that, when the river level reaches approximately RL 11 (AHD), the breakout upstream at Freemans Reach results in the bulk of the flow above RL11 (AHD) almost completely bypassing Windsor, forming a reach between two relatively closely spaced bends upstream and downstream of Windsor (See Map 2-3 of the EIS Working Paper No 8, as File attachment 2 and Spreadsheet A as File attachment 3);
- b) Table 2.3 also infers that the flood velocity at the two bridge sites (proposed new and existing) would actually decrease as the flood level increases above RL 11 (AHD).

Table 2.3 Modelled estimates of existing peak flood flows near Windsor bridge (also Spreadsheet A - Table 2.3 modified to include flood heights at the existing bridge)

Location	Peak flow for modelled flood events (cum/s)	5 year ARI	20 year ARI	100 year ARI	PMF (1)
6.2 km upstream	3,790	7,140	8,310	8,420	
3.5 km upstream	3,750	6,610	7,660	7,800	
Windsor bridge	3,650	5,440	6,250	6,690	
Flood Level (AHD) at Windsor Bridge	m	11.04	13.81	17.29	25.54
Sackville(2)	3,680	6,260	10,800	32,000	
1. Probable maximum flood.					
2. Represents combined flow of river and floodplain.					

Area sqm Discharge cumecs Velocity m/sec

Waterway Area at Bridge Site for 1 in 5 years flood (natural)	sqm	2253	3650	1.62
Waterway Area at Bridge Site for 1 in 5 years flood (constricted)	sqm	1825	3650	2.00

Waterway Area at Bridge Site for 1 in 20 years flood (natural)	sqm	2953	5440	1.84
Waterway Area at Bridge Site for 1 in 20 years flood (constricted)	sqm	2725	5440	2.00

Waterway Area at Bridge Site for 1 in 100 years flood (natural)	sqm	3828	6250	1.63
Waterway Area at Bridge Site for 1 in 100 years flood (constricted)	sqm	3600	6250	1.74

MPF (natural)	5851	6690	1.14
MPF (constricted)	5623	6690	1.19

The reason the velocity decreases as the flood level rises is because of the breakout channel that occurs just upstream at Freemans Reach at approx.. RL 11 (AHD), which results in the bulk of the water bypassing Windsor.

REPAIR AND RENOVATION OF EXISTING BRIDGE

"4.2.2 Description of the route options and performance against objectives (p 37 Chapter 4)

Community options (p 45 Chapter 4)

As a result of the display of the initial ten options developed by RMS and through the community focus group, a number of additional options were suggested by community stakeholders.

Hawkesbury Way Option (p46 Chapter4)

{The community stakeholders who suggested the Hawkesbury Valley Way options also proposed an alternative option for refurbishment of the existing Windsor bridge. The scope of refurbishment proposed under this option differed from that proposed under options 9A and 9B above. It would employ different strengthening methods that would allow the bridge to be retained for light vehicles only. Refurbishment under this option would be less expensive than options 9A and 9B, however like those options it would necessitate temporary closures of the bridge.

Benefits to traffic efficiency and pedestrian safety within Windsor would be expected due to a reduction in the number of vehicles travelling through the area and impacts on Thompson Square and the existing Windsor bridge would be reduced. However, the option would impact on the local character of the area along the proposed route, including a number of recreational areas and businesses. Further, it would not meet the cost objective, with high costs associated with two bridge structures and considerable property acquisition. Significant adjustments to the surrounding road network would also be required and these could include new traffic signals, road widening with associated property acquisitions, bridge rehabilitation/replacement, utility adjustments and adjustments to drainage."

COMMENT ABOUT THE EXISTING BRIDGE

1. The underside of the superstructure was inspected and photographed by ourselves, in the company of an experienced Architectural Conservator, Mr Graham Edds, from a boat, on Wednesday 27 June, 2012. We were all of the opinion that the corrosion of the reinforcement and the associated concrete spalling was not especially severe;
2. The spalling is mainly apparent on the outer faces of the edge girders (particularly the upstream one), although it occurs elsewhere as well. Also noted is the spalling of the bottom edges of the concrete cross heads linking the cast iron cylinders at each pier. Also some shear cracking in the webs of the girders near each support is visible;

3. The level of deterioration damage to the underside of the deck (concrete cancer) is considered not bad enough to require replacement of the bridge superstructure - repair and renovation is still a reasonable option;
4. The degree of wall thickness loss in the cast iron pier cylinders, caused by graphitization, is also considered to be repairable. It appears to only be critical in the upper sections of the submerged cast iron cylinders;
The axial and bending stresses in the cylinders have been calculated to be very small;
5. Despite the claim made in the EIS as noted above, the majority of repair work is possible from under the deck, resulting in minimal disruption to traffic during this repair work - both for the underside of deck and the cast iron cylinders;
6. It is proposed to restore the strength of the superstructure to the original design strength - however, if a stronger superstructure is required, it would be possible to improve the design strength by the use of carbon fibre sheets bonded to the surface of the concrete as a supplement to the existing reinforcement;
7. Pier cylinder strengthening is relatively simple and easy to do - use of packers and tightening of pairs of steel half cylinders to provide friction to achieve connectivity between cast iron and steel elements;
8. It is noted that the existing bridge currently has no load limit, although a speed limit of 40kph exists;
9. The heritage value of what are certainly the first precast reinforced concrete bridge girders made in Australia would be preserved.

REFURBISHMENT METHOD

The refurbishment method proposed would be less expensive than the \$18M figure nominated by RMS, because the RMS solution was to bring the existing bridge up to a design load standard similar to the current Austroads Code Design Load.

The community proposed refurbishment would:

- i. be carried out from barges located beneath the deck, to minimise disruption to traffic using the bridge deck;
- ii. use high pressure water blasting on the deteriorated concrete from the underside of the superstructure, inspecting, cleaning and replacing the reinforcement where required, replacing the removed concrete by a shot-creting process and sealing with a sealant to enhance the impermeability of the concrete. When a similar process was carried out for the underside of the Swansea Bridge at the Entrance to Lake Macquarie it is understood that the working area was enclosed by drop sheets hanging from the sides with a lower heavy duty sheet to catch the blasted concrete by-product;
- iii. if it is required that additional reinforcement be added to the cross section this can be achieved by bonding carbon fibre strips to the repaired concrete face;
- iv. supplement the deteriorated cast iron pier cylinders by attaching pairs of semi circular steel plates around the existing cylinders and by bolting against packing

rings to achieve a friction connection between the new steel plates and the cast iron cylinders over the depth of the cast iron deterioration. The cracks in the cast iron cylinders can be held by placing bands around the cylinders near the cracks; v. in the future, when the route through to the Hawkesbury Valley Way has been opened to traffic, it is suggested that, to ensure heavy traffic is excluded from the bridge and the town, that a load limit of, say, 16 tonnes be applied to the existing refurbished bridge.

These restoration proposals would revive the structure to a load carrying capacity beyond its future needs. We have verified this by separate calculations

NEW HAWKESBURY WAY OPTION ("RICKABYS' LINE") (P46 EIS Chapter 4)

"Hawkesbury Way Option

Three potential options were identified with bridges proposed upstream of the existing bridge and access provided from Hawkesbury Valley Way. Two of the options would begin at the intersection of Freemans Reach Road and Wilberforce Road with a road through Macquarie Park, a bridge across the Hawkesbury River from Macquarie Park to Howe Park and then a connection to The Hawkesbury Way via either The Terrace and Moses Street or across Primrose Place, Greenway Crescent and Rum Corps Lane. While these two options would meet project objectives for heritage by maintaining heritage values of Thompson Square, neither would meet other project objectives and criteria with respect to impacts on recreational areas and from noise.

A third option would similarly begin at the intersection of Freemans Reach Road and Wilberforce Road, but would follow a different alignment through the centre of Macquarie Park instead of spanning the beach areas as proposed in the former two variants. The alignment would then cross the Hawkesbury River from Macquarie Park to Deerubbun Park. While the river is narrow at this location the bridge structure would be need to begin from within Macquarie Park due to the topography and geology of the eastern bank. The alignment would continue almost parallel with the access road for the playing field car park, cross Rickabys Creek on a second bridge crossing and extend between a resort and a golf club to connect with Hawkesbury Valley Way at a new intersection.

While this third Hawkesbury Valley Way option would meet project objectives for heritage and safety, it is anticipated to only partially meet the traffic objective unless a number of additional significant improvements were made to the surrounding traffic network."

COMMENT

(Note: Of the three Hawkesbury Valley Way Options shown on Fig 4.1 'Windsor Bridge replacement options', the two closest to Windsor are not shown correctly. All three options meet Hawkesbury Valley Way at the same location as the option furthest from Windsor. The two inner options pass just on the Windsor side of Rickabys Creek bridge on Cornwallis Road.)

1. This line connects directly from the intersection of Wilberforce Road and Freemans Reach Road at the western end of the existing bridge to the Hawkesbury Valley Way, which is the local Flood Evacuation Route;
2. The level of the road would be at about RL11 (AHD), higher than allowed by the RMS Option 1 line;
3. The proposed route means heavy vehicles could be excluded from the Windsor marketplace, only allowing access for light vehicles, if required;
4. Using the Bridge over the Macleay River on the Kempsey Bypass as a guide, with due allowance for lesser economies of scale, but adopting a similar form of superstructure (precast Super T girders, of 35m span, weighing 65 tonnes, with a reinforced concrete deck), an efficient bridging solution is possible. A bridge length of 200m to 245m is proposed, depending on the soil characteristics at Abutment B. Some additional scour protection walls may be required at the north west corner of the Abutment. It would also be appropriate to provide continuity of the deck slab over the piers to enable a thinner wall section to be used for the piers by having only one bearing surface and to reduce water resistance effects;
5. This superstructure has a construction depth of 1.75m (1.5m girder plus 200mm deck plus crossfall), which, together with safety barriers (about a metre high above deck) when submerged will result in an overall height of 2.7m, a significant impediment to flood flow, but at least 0.5m less than RMS Option 1. However because of the reduction in the flood forces as a result of the upstream flood breakout described below, this should not be a problem. Special drainage and pressure relief holes for the deck should be provided;
6. The proposed bridge would support a two lane carriageway and a footway on the Windsor town side, a total width of 11.4m between kerbs, made up of 2/3.5m traffic lanes, 2/1.2m shoulders and a 2m footway;
7. Abutment B would thus be located at some 105m to 145m from the western bank (note EIS refers to eastern bank). At this location the soil consists of coarse sand. The location of Abutment B would depend on an assessment of the scour characteristics of the sand. It is suggested that Abutment B be located between the RL 5 (AHD) and RL 7 (AHD) contours;
8. The deck will be on a level grade, generally considered advisable for a bridge which will be submerged;
9. We understand that the foundations for the RMS Option 1 bridge will be bored piles through the sands to rock. It is expected that similar foundation conditions will apply at the "Rickabys Line" Bridge. However this fact will need to be confirmed by

some site investigations

10. The line allows retention of the existing conditions in Thompson Square.

COSTS

"P46 EIS Chapter 4

Further, it would not meet the cost objective, with high costs associated with two bridge structures and considerable property acquisition."

COMMENT

1. Using published costs (see File attachment 1b) for the Bridge over the Macleay River on the Kempsey Bypass as a guide, it appears that an economical bridge solution can be achieved for the main river crossing and the project as a whole (Spreadsheet B, see File attachment 4);
2. The road is envisaged as having only a two lane carriageway;
3. An independent estimate for the repair of the existing bridge, prepared by prequalified bridge contractor Arenco, indicates that the repairs to the existing bridge can be done for under \$3M;
4. For the 200m long main bridge the estimated total cost (including the repair of the existing bridge) is \$59M; the 245m bridge, \$63M (see Spreadsheets C & D);
5. It appears that the Rickabys Line alternative, together with the renovation of the existing bridge, would be possible for a cost similar to the current RMS Option 1 scheme.

KEMPSEY BYPASS COSTS (SPREADSHEET B - see File attachment 4)

L W AREA COST \$ RATE \$/SQM*

m m sqm

Kempsey Bridge 3200 22 70400 185M 2628

Because Reduced Economies of Scale Say 3500/sqm

Kempsey Bypass 14,500 618M

Roadworks RATE \$/M

Roadworks (4 Carriageways)

L m COST \$ RATE \$/M

11,300 433M 38319

2 Carriageways 19159

Construction Cost 30% 5748

Roadworks easier going at Windsor Say 4500\$/m

Windsor Bridge - Rickabys Line Estimate of costs Spreadsheet C (See File attachment 5)

MAIN BRIDGE LENGTH 200M

Length 1900m

Width 11.4m

L W A RATE \$/SQM* AMOUNT \$

Main Brldge 200 11.4 2280 3500 7,980,000

Rickabys Ck 40 11.4 456 2750 1,254,000

RATE \$/M

Length Road 1660 4500 7,470,000

TOTAL CONSTRUCTION 16,704,000

ASSUMED 30%

OF GRAND TOTAL

THUS GRAND TOTAL 55,680,000

Restore exist bridge Arenco estimate \$2.36M, say 3,000,000

OVERALL TOTAL 58,680,000

SAY \$59M

Windsor Bridge - Rickabys Line Estimate of costs

MAIN BRIDGE LENGTH 245M Spreadsheet D (See File attachment 5)

Length 1900m

Widrh 11.4m

L W A RATE \$/SQM* AMOUNT \$

Main Brldge 245 11.4 2793 3500 9,775,500

Rickabys Ck 40 11.4 456 2750 1,254,000

RATE \$/M

Length Road 1615 4500 7,267,500

TOTAL CONSTRUCTION 18,297,000

ASSUMED 30% OF

GRAND TOTAL

THUS GRAND TOTAL 60,990,000

Restore exist bridge

Arenco estimate \$2.36M, say 3,000,000

OVERALL TOTAL 63,990,000

SAY \$64M

CONCLUSIONS

Our scheme for providing a new bridge over the Hawkesbury River at Windsor offers many advantages over the RMS Option 1 scheme:

1. No interference with Thompson Square or the historic bridge that has served the community for almost a century and a half. Thus the community's concerns regarding the Square and the bridge have been relieved;
2. The frequency of flooding has been reduced by adopting a road level of RL 11

(AHD;)

3. In the event of the existing low level bridge being closed by floodwaters, all eastbound traffic can proceed along to the Windsor Flood Evacuation Route. The RMS Option 1 does not offer this advantage;

4. If the existing bridge has a load limit imposed, Windsor marketplace will not be subjected to any heavy vehicles.

We submit our proposal in the interests of the RMS, the Government and the local community.

BJ Pearson RJL Wedgwood
Former Chief Engineer (Bridges) Former Chief Bridge
Engineer
DMR NSW DMR/RTA NSW

ATTACHMENT 1

Estimate of costs for Bridge length 245m

Length	1900m				
Width	11.4m (2*3.5+2*1.2+2.0)				
	LENGTH	WIDTH	AREA		AMOUNT
	m	m	sqm	RATE \$/SQM*	\$
Main Bridge	245	11.4	2793	3500	9,775,500
Rickabys	40	11.4	456	2750	1,254,000
				RATE \$/M	
Length Road	1615			4500	7,267,500
				TOTAL	
				CONSTRUCTION	18,297,000
				ASSUMED 30% OF	
				PROJECT TOTAL	
				THUS PROJECT	
				TOTAL	60,990,000
				Arengo estimate	
Restore exist bridge				\$2.36M, say	3,000,000
				GRAND TOTAL	63,990,000

*Estimated from a comparison of rates for the Kempsey By-pass (see attachment 3)

The cost of the proposed Option One bridge is now \$60M**.

**This \$60m cost may not include the cost of demolition of the existing bridge

Windsor Bridge - Rickabys

Estimate of costs for Bridge length 200m

Line					
Length	1900m				
Width	11.4m (2*3.5+2*1.2+2.0)				
	LENGTH	WIDTH	AREA		AMOUNT
	m	m	sqm	RATE \$/SQM*	\$

Main Bridge	200	11.4	2280	3500	7,980,000
Rickabys	40	11.4	456	2750	1,254,000
				RATE \$/M	
Length Road	1660			4500	7,470,000
				TOTAL	
				CONSTRUCTION	16,704,000
				ASSUMED 30% OF PROJECT TOTAL THUS PROJECT TOTAL	55,680,000
Restore exist bridge				Arengo estimate \$2.36M, say	3,000,000
				REAL TOTAL	58,680,000

*Estimated from a comparison of rates for the Kempsey By-pass (see attachment 3)
The cost of the proposed Option One bridge is now \$60M**.

**This \$60m cost may not include the cost of demolition of the existing bridge

ATTACHMENT 2

BRIDGE OVER HAWKESBURY RIVER AT WINDSOR ALTERNATIVE LINE TO HAWKESBURY VALLEY WAY

ATTACHMENT 3

Kempsey Bypass Costs	L	W	AREA		
	m	m	sqm	COST \$	RATE \$/SQM*
Kempsey Bridge	3200	22	70400	185M	2628
Because Reduced Economies of Scale					Say 3500/sqm
Kempsey Bypass Project Cost	14,500			618M	
	-3,200				RATE \$/M
Roadworks (4 Carriageways)	11,300			433M	38319
2 Carriageways					19159
Construction Cost 30%					5748
Roadworks easier going at Windsor					Say 4500\$/m

*Rates used for Windsor
Bridge Estimate (See
Attachment 1)

Table 2.3 Modelled estimates of existing peak flood flows near Windsor bridge

Location	Peak flow for modelled flood events (cum/s)			
	5 year ARI	20 year ARI	100 year ARI	PMF (1)
6.2 km upstream	3,790	7,140	8,310	8,420
3.5 km upstream	3,750	6,610	7,660	7,800
Windsor bridge	3,650	5,440	6,250	6,690
Flood Level (AHD) at Windsor Bridge m	11.04	13.81	17.29	25.54
Sackville(2)	3,680	6,260	10,800	32,000
<i>1. Probable maximum flood.</i>				
<i>2. Represents combined flow of river and floodplain.</i>				
	Area sqm	Discharge cumecs	Velocity m/sec	
Waterway Area at Bridge Site for 1 in 5 years flood (natural) sqm	2253	3650	1.62	
Waterway Area at Bridge Site for 1 in 5 years flood (constricted) sqm	1825	3650	2.00	
Waterway Area at Bridge Site for 1 in 20 years flood (natural) sqm	2953	5440	1.84	
Waterway Area at Bridge Site for 1 in 20 years flood (constricted) sqm	2725	5440	2.00	
Waterway Area at Bridge Site for 1 in 100 years flood (natural) sqm	3828	6250	1.63	
Waterway Area at Bridge Site for 1 in 100 years flood (constricted) sqm	3600	6250	1.74	
MPF (natural)	5851	6690	1.14	
MPF (constricted)F	5623	6690	1.19	

The reason the velocity decreases as the flood level rises is because of the breakout channel that occurs just upstream at Freemans Reach which results in the bulk of the water bypassing Windsor at approx RL10 to RL11 (AHD)

8. COMMUNITY CONSULTATION

Key Issues

It is possible community consultation processes have done more to alienate the community than any other aspect of the Windsor Bridge Project. This makes it a matter of particular significance, given the level of concern associated with most aspect of the Project.

In considering inadequacies and problems regarding the consultation processes, the following items are of particular relevance:

The RTA selected Option One as early as 2008, if not before, (see Chapters on Project Processes and Project History).

All consequent RTA/RMS behaviours, strategies and activities were designed to achieve that goal.

Whilst consultation processes could reasonably be described as exhaustive, their function was to deliver the preferred option rather than generally canvass community opinion, or indeed, take advantage of local knowledge and expertise.

Information provided by the RMS did not always meet the RMS's own objective of providing accurate, complete and timely information.

Shopping centre displays run by the RMS, rather than being a source of objective, factual information, or giving the RMS access to that local knowledge and opinion, functioned as a promotional exercise, delivering a 'hard sell' of Option One.

Objectives upon which Option One was justified and presented to the community have subsequently had to be modified to the point the original decision must be revisited.

Even if it were acceptable, and this is not the case, the option chosen by the Minister for Roads is not the option currently on the table.

Discussion

Preferred Option?

As with many aspects of the Windsor Bridge Replacement Project, (the Project) the community has become increasingly cynical about the credibility and accuracy of statements made by the RMS.

The RMS website (*Project Documents - Letters and Reports. Windsor Bridge Over the Hawkesbury River Report on community consultation November 2009, Section 8 - page 17*) asks: “Has the RTA got a preferred option?”

The answer? *“Currently the RTA has no preferred option. The preferred option will be decided after the community consultation has been completed.”* This might have been reassuring were it not for the NSW Parliamentary Hansard records of 29th October, 2010 when Ray Williams, Member for Hawkesbury announced that, “ On 27 October, 2008 two representatives of the Roads and Traffic Authority visited my office to discuss options for the replacement of the Windsor Bridge” he goes on to say he was told *“....that construction on the new bridge would commence in late 2009 and that the preferred option was Option 1, which I totally support”*.

The propriety of that action is brought into question given Mr Williams was in opposition in 2008 and his electorate did not encompass Windsor Bridge. The bridge was, in fact, located in the electorate of Londonderry, held at that time by John Aquilina. (NSW Electoral Commission)

Aside observing that the original statement was made well before any formal public consultation had taken place and it makes it clear the RTA had already made up its mind as to the preferred option, it is disturbing that Department officers were apparently visiting an Opposition Member’s office to discuss a public infrastructure project outside that member’s electorate.

The RTA clearly did have a ‘*preferred option*’. It was Option One and what has happened since 2008 was simply a matter of going through the motions and paying lip service to the consultation process.

This is reinforced in an article in the Hawkesbury Gazette of June 18, 2008 P3 where Mr Roozendaal, the then-Minister for Roads is quoted as saying, “The new bridge will be built next to and downstream of the current Windsor Bridge.”

‘Supporting’ Options

The perception that the RTA/RMS was working towards a very specific and pre-determined goal is reinforced when one considers the ten bridge replacement options taken to the community by the RTA. (Table 4-1 P37 onwards Chapter 4 Windsor Bridge replacement project Environmental impact statement Volume 1 - main report). Most of these options are patently ridiculous and should never have had time wasted on their consideration. (see analysis, Chapter xx: Project Processes).

Indeed, RMS staff made it clear in a conversation with community members the options were to demonstrate they had gone through the process of offering choices, no matter how impractical they were. (See Attachment 1) It is not unreasonable to further conclude their sole purpose was also to lead the community towards supporting Option 1.

Bridge Styles

The practice of providing options for the sake of process requirements, rather than genuine outcomes was illustrated in a Design and Heritage Community Focus Group meeting (13th March, 2012). Participants were shown about eleven possible bridge styles. As the group went through them it was clear only two options (incrementally launched and plank) were possible due to the bridge being on occasions, flooded. When asked why the group's time had been wasted by showing options that were impractical, the group was told the RMS had to provide a broad range of options.

Design & Heritage Community Focus Group

The conduct of the Design and Heritage Focus Group (the Focus Group) is an extremely disappointing example of process requirements versus genuine, community-based outcomes. Arguably the differing, but never enunciated goals of the group contributed to the considerable participant disquiet about the conducting of the focus group.

With the wisdom of hindsight it is clear the process was far further advanced (See Chapter on Project Processes) than was appreciated by Group members, resulting in an unmet expectation that their input would achieve adjustments to the project out of all proportion with the actual stage of development. A broad review of email exchanges between participants and RMS officers leaves the clear impression the RMS personnel involved in the process were not unaware of this situation.

Indeed, when confronted with issues they were unwilling to address, the default mantra of the RMS personnel was that the EIS was the time for articulating objections. Given the objections were vigorously and unmistakably directed at the entire concept behind Option One, waiting until the EIS was lodged represents an unconscionable waste of public resources, leading to the very unpleasant conclusion the RMS was simply stonewalling until project expenditure and development was, in their opinion, at such a stage as to be unchallengeable .

One Focus Group member, after direct approaches failed to correct repeatedly raised concerns, tabled a document at what turned out to be the last meeting of that group, detailing these issues. Many, if not the majority, of community participants shared the concerns raised. Specifically, the tabled document said, "I

do not believe that the community has been treated with the respect, honesty and in accordance with the agreed terms of reference and table this report at the last meeting as a statement of my dissatisfaction of the process, the reporting and the miss-leading (sic) information promulgated and widely disseminated by the RMS on Option 1.”

The tabled document identified three aspects of the terms of reference that were not complied with:

- Ensuring transparent and effective communication arrangements are established with all interested and affected residents, businesses, interest and industry groups.”
- All information provided should be accurate, complete and timely and written in a manner that is easy to understand” and
- The group will discuss and agree the means of media reporting and of sharing the process of the group with the wider community.

An initial agreement between the RMS and Focus Group members was that their discussions would remain confidential. In the face of vehement protests from community members, this agreement was reneged on by the RMS when, at the penultimate meeting, they declared they would publish “notes” of all the meetings. (Attachment E)

The Deliberative Forum

(EIS Volume , page 130)

At the last meeting of the Focus Group a community member requested information regarding the background and purpose of another group whose participants had been paid to comment on the Project. This event is mentioned in the EIS: “*A deliberative forum was conducted by GA Research on behalf of RMS on 30 May 2012. The objective was to explore knowledge and perceptions of the Windsor Bridge Replacement Project among the community.*” (Windsor Bridge replacement project Environmental impact statement Volume 1 - main report, P130).

As often happens in the EIS this information only tells part of the story.

As advised by some of the people involved, selected Windsor residents received phone calls inviting them to attend a local community issues forum. The invitation included offering to pay them for their time and some participants received a followed up email confirming the details and the amount they were to be paid for their time. In the email, the company concerned is identified as AFS Smart Askers.

A meeting of around 40 people was reportedly held in the Council Function Centre on the evening of Wednesday, 30th May. Apparently after about half an hour of discussing a range of issues, including policing, the RAAF base and road works, someone mentioned the Windsor Bridge Project. At this point a group of about 8 people stood up and identified themselves as RMS representatives. They then proceeded to give a presentation about the Bridge project and the community participants were asked to give their response to certain design elements. Based on the description of a community member who was there, it seems there was some type of 'worm' device used to record their responses.

After about three hours the meeting ended and people were given envelopes containing cash. We have spoken to a number of people who attended and of those people, some claim they were paid \$175 while others say \$200. All payments were reportedly in unmarked envelopes. Clearly there may have been other amounts as well.

Later the RMS identified the other company involved in these 'paid consultations' as being Kreab Gavin Anderson (KGA). KGA is a large company with strong historical links through key staff to the former RTA. It describes itself on its website as, *"a global strategic communications partnership, advising corporations and other organisations on issues of strategic importance in business, finance and politics. We help our clients solve complex communications challenges, maximise their opportunities and achieve their strategic goals."* It also says, *"An effective communications strategy can turn the tide of public opinion, create a splash with a new initiative, or contain a brewing storm. The key is putting a strong integrated team in place at the start - providing the insight, communications, strategy and execution necessary to get great results for our clients."*

The RMS did not appear to have planned to discuss the existence of the 'deliberative forum' with the Focus Group, however it did, with prompting, respond at the final Focus Group meeting to the request for an explanation. What followed simply heightened the frustrations of much of the Group. Indeed the information provided seemed to also offend members of the RMS team who were present, one of whom approached at least community members after the meeting and said, more or less, *I just want you to know I agree with you entirely. I have been involved in hundreds of these types of projects. I have never seen anything like this. I will probably be hauled over the coals for saying this. I don't care.*

At the final Focus Group meeting RMS staff asserted the consultation regarding the Windsor Bridge Replacement Project was extensive, implying it was unprecedented in NSW. In fact one of the RMS officers said it was the most extensive consultation

ever carried out by the then RTA.

That being the case, what prompted the RMS to pay privately approached local community members to give feedback on the Project?

Effectiveness

RMS Questions and Answers (June and August, 2012) advises, *“Community consultation on the selection of a preferred option was undertaken between July 2009 and September 2009. This consultation included:*

Publication and distribution of 12 000 copies of the July, 2009 community update to residents and businesses in Berkshire Park, Windsor Downs, South Windsor, McGraths Hill, Pitt Town, Wilberforce and Freemans Reach areas.”

Whilst superficially appearing reasonable, this assertion does not withstand reasonable scrutiny. The question arises: why select the areas of Berkshire Park, Windsor Downs, South Windsor, McGraths Hill, Pitt Town, where very few of those residents would have cause to use Windsor Bridge on a regular basis, rather than parts of Freemans Reach, Wilberforce (not all of those areas were covered), Ebenezer, Colo, Sackville, Glossodia, Tennyson etc, when these are the very communities that use Windsor Bridge on a regular basis?

Shopping Centre Displays

Please refer to two complaints to the Ombudsman (Attachments C and D)

In addition to a complaint sent to the Ombudsman which is currently under investigation, the following is feedback from another community member, *Eva Lewry* who attended the Shopping Centre display on Saturday, 24th November, 2012.

“They were happy to spout the advertisements again, but ask for any detail and they either don't know, or it hasn't been fully decided yet...”

The complaint goes on to say:

“Basically, when I told them that I expected the EIS to be much more comprehensive in addressing the reasons for refuting the alternate bridge repair methods and bypass:

They said they did address them. I said only very generally, with little detail and I had expected to see the numbers.

They replied they didn't have time to report all the details and they're expecting to provide more detail for the submission response."

Arguably, the lack of definitive information would indicate the RMS is either withholding information in order to reduce the community's ability to effectively counter RMS claims, or the RMS simply haven't given adequate consideration to key aspects of the Project.

The irony is, in the past when some detailed questions were asked, the standard reply was to wait until the EIS was released. The EIS has now been released, it is a monstrous document and the 34-day standard response period gives very little time for respondents to evaluate that information and prepare a response.

Quality of Answers

There are many examples of when questions were asked of RMS officers, their replies have been demonstrably inadequate. It had been anticipated the answers would be accurate, precise, complete and written in a manner that is easy to read.

One example of the answers received by email is as follows

Q. At what height do the following roads get cut by floodwater?

Wilberforce Road
Gorricks lane
Hibberts Lane

A. The water level that inundates Wilberforce Road was estimated in the EIS Working Paper assuming a flat flood profile between Windsor Bridge and the road low points. The minimum road level along Wilberforce Road was based on ALS provided by Council.

A similar assessment can be done for the other roads noted. However results from the two-dimensional modelling that is being done for detailed design, will provide an improved estimate of when these roads are inundated compared to water levels at Windsor Bridge. This will take some time to carry out, but Council may have some information regarding this.

Q. What height is a 1 in 2 flood at Windsor Bridge? What height is a 1 in 3 flood at Windsor Bridge?

The best information I have is from the question in your earlier email, we had the

following... Anything more detailed than this would require more detailed modelling, which would take some time.

Specifically, while the existing bridge is overtopped in a one in two year flood, the replacement bridge is predicted to remain above water for the one in two year flood but be overtopped in an event just smaller than the one in three year flood.

Given the EIS used the figures 1 in 2 and 1 in 3 year floods as specific descriptions of the relative flood performances of the existing and proposed bridges, it could be inferred the authors would have knowledge of the precise flood heights to which these figures refer. Not to know implies carelessness, incompetence, or (and this suggestion is made with the utmost reluctance), a deliberate intent to conceal.

In addition, the RMS officer could not/would not detail the minimum road levels as requested. Rather reference was made to ALSs as provided by (Hawkesbury City) Council. What were those levels? As such levels are critical to a key performance indicator for the Project, this is information that should, and indeed, must be readily and publicly available.

Public Response

The RMS has consistently chosen to ignore widespread public opposition the Project, preferring to massage response data, or in the case of local politicians, attribute such opposition to a vocal minority. The suggestion the Project is opposed by a 'minority': vocal, or otherwise is not borne out by the facts.

Windsor Bridge community consultation report, November 2009 (page 9, Submissions) says, *"Approximately 136 submissions were received on the nine options"* However, elsewhere in the report (5.3 Preferences Indicated, page 11) it says, *"The RTA did not request people to nominate a preferred option, as a result some submissions did not include this information. This is important - the data is not statistically significant."*

This comment notwithstanding the EIS also notes (page 11 Table 5-3) that 40% of the respondents who nominated an option nominated Option One as their preferred option. A starting-point analysis of the figures reveals that 40% of 136 respondents totals around 53 submissions. However as not all of the 136 submissions expressed an option preference 53 represents the maximum number of submissions supporting Option One. This is less-than-significant support, particularly in light of a petition due to be debated in the NSW State Parliament on 14 March 2013: a petition of in excess of 12,000 signatures from people opposed to Option One.

Despite claims of support made by a small group of local and highly vocal proponents of Option One, a petition opposing a replacement bridge through Thompson Square was delivered to Parliament House on 14th November, 2012. That petition had over 12 000 signatures.

In addition, a petition of over 800 signatures for the Legislative Council exists and over 700 supporters have already endorsed an on line submission to the Hon. Tony Burke MP, Federal Minister for Sustainability, Environment, Water, Population and Communities.

In 2012 the Hawkesbury District Independent magazine conducted an on-line survey, in part about the Windsor Bridge Replacement Project. The survey was IP sensitive using the SurveyMonkey protocols. The results of the survey were published in the Spring edition, 28th September, 2012. A selection of the questions and responses are:

Q. Since 2009 have you received any formal notification regarding the new Windsor Bridge?

Response: Yes 17% No 83%.

Q. Do you agree with the current new Windsor Bridge plans?

Response: Yes 16.4% No 83.6%

Q. Do you think a bypass bridge would be a better option for Windsor?

Response: Yes 79.2% No 20.8%

Q. If a bypass was agreed upon for Windsor do you feel that Windsor Bridge should stay in place for light, local traffic and pedestrians?

Response: Yes 91.1% No 8.9%

Q. If a bypass bridge option was adopted would you still shop in, and use, Windsor, Richmond or North Richmond town centres.

Response: Yes 92.2% No 7.8%

In the Rouse Hill Times, another online survey achieved a similar level of disapproval of a replacement bridge through Thompson Square.

The online discussion forum run by the RMS demonstrated a commensurate level of disapproval.

It is very abundantly clear there is a major groundswell against the proposal. The argument from the local politicians that there is broad support for the project simply does not withstand objective scrutiny. Indeed, the EIS does acknowledge the

opposition to the proposal: *“there is clear community opposition to the project from other parts of the community on the grounds of heritage impacts, as evidenced by banners hanging from balconies overlooking Thompson Square, articles published in the local newspaper, and submissions received on RMS' "Have your say" e-forum. The Heritage Council is also opposed to the project for the “irrevocable” damage it will do to Windsor and Thompson Square”.* (Chapter 7 P185 Windsor Bridge replacement project Environmental impact statement Volume 1 - main report)

However, it is also clear the EIS does not accurately portray the extent or intensity of the opposition. It makes not attempted to acknowledge the extremely limited support for Option One, nor does it seek to actually respond to the issue.

There is clear evidence the RTA did not engage the community in the selection of the preferred project. It is clear the preferred option was chosen well before the community consultation process commenced in 2009.

To achieve the optimum solution - for heritage, for traffic flow, for the protection and development for commercial activities and for the protection and development of the local community; it is critical a new river crossing does not irreparably damage a major asset for Windsor – a place that makes it unique in Australia - Thompson Square.

State Significant Infrastructure

An application was made by the RTA for this project to be classified as state significant infrastructure on 4th October, 2011. The application was received on that date by the Department of Planning and Infrastructure. Members of the Design & Heritage Community Focus Group were given a copy of the application. However, the general public did not have the opportunity to be informed of this application until twelve months later when a notification of the successful application appeared in the Hawkesbury Gazette, Wednesday, 24th October, 2012.

Precision of the EIS

It was expected the EIS would provide a level of precision hopefully associated with an engineering project. These expectations have not been met. Too frequently claims were made in the EIS that could not be referenced or substantiated. When questions were asked to elicit sufficient information on which to base responses, answers given were inadequate. This does not engender confidence in the quality of the EIS.

The community is being asked to make responses on incomplete information. Apparently the ‘standard practice’ is for any such responses to be ‘addressed’ by the RMS in its general EIS responses. There is no further right of reply for the

community. If the RMS are unwilling, or unable to answer questions at this point in the development of the project, it is highly unlikely any answers provided over the next six months are likely to be any more satisfactory.

Questions Regarding Process

- ❖ Why has the RMS not satisfied its consultation process as set out in its RTA Community Involvement and Communications - A Resource Manual for Staff for this project?

Considering that the IAP2 Spectrum of Public participation document provides a promise to the public that "We will deliver what you decide"...

- ❖ Why has the Minister decided prior to any community/public consultation to proceed with the Option 1 bridge alignment? (cite: RTA Community Involvement and Communications - A Resource Manual for Staff p11)
- ❖ Was a Community involvement Plan prepared as part of the community consultation process particularly as it is acknowledged on p12 How to Prepare a Community Involvement Plan, when substantial community involvement is likely to be needed? ie:
 - The project is likely to have significant impact on the community;
 - The project involves significant issues, that is, the wider community may be affected;
 - There are statutory requirements for communication activities;
- ❖ Have the Statutory Requirements for communication activities been met?
- ❖ Why did such a community involvement plan, if one was prepared, exclude the following as representative groups to be included in your community involvement plan? (p14 and p15):
 - **All** of the Business operators;
 - Road users;
 - People living in the vicinity of the proposed works, ie: the project neighbours (residential and business); those near the project; the wider community that still may have an interest in the project.
- ❖ Why did the RMS forward preliminary information about the Windsor Bridge Replacement project to only selected areas that are not, or minimally impacted by the replacement bridge project and exclude those to the north that are the principal users that are directly impacted? eg: those townships of Glossodia, Kurmond, Blaxland Ridge, Kurrajong, Kurrajong Heights, Kurrajong Hills, Colo and Colo Heights.
- ❖ Why did the RMS consider 3D modelling over a scale model for the Thompson Square replacement bridge project, when the latter would provide visually the true attributes and negative impacts of the proposed replacement bridge?

In 2008 and 2009 we were visited by two ladies from the RTA. They said the existing bridge was in dangerous condition and needed to be demolished. The Government wanted to build a new bridge at Windsor and had allocated \$23m for the project.

They showed us some drawings of various options. Some were quite bizarre, re-routing the traffic way out through Pitt Town or running all the traffic down Baker or Kable Streets. One option did seem to make sense, it was called "Option 6".

However we were told "that would cost too much money". We were told the first option (Option One) "is all we can afford so that is what we will build".

We asked why then had they developed other options. They said, "We have to show people we've considered other things."

They told us the commencement of construction was still some way off as they had to hold Community Consultation meetings and talk to Council. We asked why they had to consult the community when they had already made up their mind. They replied, "It's all part of the process".

We asked about the heritage issues with Thompson Square, knowing a lot of people would be against the new bridge. They said, "The Minister can overrule any of that". I asked about the NSW Heritage Council and they said, "They will be consulted but if they take too long the Minister will just overrule them."

They also told us, "It won't affect you. It will affect the people down the road because they won't be able to get in and out of their driveways..."

"It will be the same out the front of your place, nothing will change."

They were all terribly nice about it.

Peter Reynolds

My husband and I own three buildings in Thompson Square namely: 62-64 George Street, 66-68 George Street and 17 Bridge Street Windsor. We have carried on a business from one or other of those addresses since 1994. All our buildings are listed on the NSW State Heritage Register.

In the time we have owned these buildings we have seen a marked and steady increase in the traffic traversing the Square and in particular the heavy vehicle traffic. Due to the historically sensitive nature of Thompson Square and its main use as a recreational and tourist precinct we could see that sooner or later the traffic would grow to such a magnitude that it would destroy the charm and amenity of the Square and render it an unusable space. We looked forward to a day when there would be the need for a bypass of Windsor and Thompson Square would be preserved for generations to enjoy.

The first time we became aware of the Windsor Bridge Replacement Project was when we received the brochure regarding the Options in July 2009 called "Community Update" July 2009 advising the nine Options. We felt that some of the nine options being proposed were outright farcical. Funneling traffic down Kable and Court Streets just made no sense at all even to someone who knew nothing about traffic management. In our minds the obvious selection was one of the bypass options, either a modification of Option 6 or Option 8.

My husband and I attended the "Community Workshop" on the 1st August in the Library. We put in a submission in response to this workshop. We did not receive a reply to our submission or any acknowledgment of receipt. We were never sent a copy of the November, 2009 Community Consultation Report that resulted from this workshop.

I emailed all the Hawkesbury City Councillors expressing my concerns and received dismissive emails from Cllrs McKay and Porter. I contacted Councillor Leigh Williams who visited our premises at 62-64 George Street Windsor. He experienced first hand the traffic issues when we were unable to converse at the front door due to the truck traffic noise and had to retreat inside to be able to hear one another. Councillor Williams advised that there had been a council vote to support Option 1 that was unanimous apart from Councillor Calvert who voted against it. He advised that the RMS had addressed council concerning the safety of the bridge and the cost to repair it. He felt that the councillors were compelled to vote for Option 1 as they had a responsibility to their constituents regarding the safety of the bridge and there were issues with regard to council's liability in the event of an accident. We know now that these representations were greatly overstated regarding the cost of

repairs and also regarding safety in that the bridge, three years later, remains open to traffic with recently increased heavy truck load limits.

It was around the same time in 2009 that I spoke to one of the other Thompson Square owners, Blake Morrison of 8 Bridge Street, and asked what he thought about the new bridge. He told me about the Reynolds (10 Bridge Street) having a meeting with representatives from the RMS . I thought that this was highly unusual that the RMS would not choose to meet with the other property owners directly affected by the project. I telephoned Yogaratham Sutham of the RMS who was the Project manager and advised that we owned properties in Thompson Square and had not been approached by anyone from the RMS about any of the issues surrounding the new bridge and its impacts on our buildings. He asked me what number in George Street I was then quickly dismissed me as **someone who would not be affected by the project.**

The project thankfully appeared to disappear over the following 2 years until in August 2011 we read in the Gazette that comments were invited again however now a preferred option, Option 1 had been identified as the chosen option. I again submitted our objections to the proposed Option by the due date and again received no reply or acknowledgment of the receipt of my letter.

By November I recall reading about the Community Design Workshop. I had just started a new business in Richmond and was unable to attend the workshops until February in the new year. My experience of the workshops was that they were professionally run sessions where the RMS consultants would tell the community representatives about the progress of the project rather than really seeking any input from the community. In essence the RMS appeared to be going through the motions. There was much criticism of the project and a growing understanding by many of attendees at the workshops of the stark realities regarding noise, traffic, visual and economic impacts that would result from the project. The RMS decided to abruptly close down the workshops in July as attendees became more vocal and began to demand more information regarding issues associated with option 1 other than the design elements.

It was at these sessions that some of the computer animations of the project were launched. I became alarmed that our building at 62 George Street, a single storey building built about 1830, had disappeared and a wide green grass verge replaced it. We felt that this was misleading and deceptive as it appeared that the other buildings were set back from the road and this would give the wrong impression to anyone not familiar with Thompson Square. Alternatively the RMS may have had plans to demolish that part of our building. My husband wrote a letter to the RMS pointing out the omissions and demanding that the images be removed from the website. He received a telephone call to his office from Nathan Chehoud, the

Community Liaison Officer, for the project who advised that it was only an artistic impression and there were no plans to demolish the building. The misleading images remained on the website for months after assurances that they would be removed .

At no time were we ever approached by anyone from the RMS prior to this. As the owners of three buildings directly affected by this project and business owners in Thompson Square we have never been directly approached by anyone from the RMS at any stage of the project.

We were never at any stage identified as “stakeholders” in the project despite the fact that the current EIS identifies our buildings 62-68 George Street as being likely to be impacted by noise and vibration and recommends that dilapidation reports be completed on the buildings prior to commencement of works. (ref Heritage Working Paper –Part 1 page 8).

At a very recent meeting (October 2012) I introduced myself to Iain Macleod and advised him that I wanted it put on the record that we have never been approached or consulted at any stage of the project by the RMS or their representatives. Nor have we ever received any replies to our submissions. All our dealings with the RMS have been at our instigation and we have either been treated in a dismissive manner or outright ignored.

Rod & Megan Storie

Attachment C: Complaint sent to the Ombudsman RE: Accuracy of information being provided by Roads and Maritime Services Staff at public information sessions.

On Saturday 1 September and Saturday 8 September (the Saturday before and the Saturday of, the recent local government elections) Roads and Maritime Services staff manned a promotional stand at Windsor Riverview shopping centre and Windsor Marketplace shopping centre respectively. The purpose of each 'stand' was to 'sell' a project to demolish the historic Windsor Bridge and bulldoze a major road through our historic town centre, Thompson Square.

We were present on both days throughout the operation of the information stand. We witnessed, first hand, the statements being made by staff and take great exception to the misrepresentations being used to promote the Government's preferred option, particularly in light of newly emerging alternatives that deliver significantly better economic, traffic, community and heritage outcomes.

We wish to formally complain about the information being provided during this public event. We also wish to complain about the constraints that were put upon the community's right to access alternative information regarding this extremely contentious project. In addition, there are a number of other issues of a more general nature and relevant to our complaint we wish to raise with you.

With regard to the information being provided:

1.) During the display on 1 September the public was repeatedly informed the new bridge would improve traffic flow.

In response, and as part of an amicable dialogue, we pointed out RMS reports on Option 1 state:

- Traffic efficiency at completion is expected to be similar to current;
- (traffic) ...will reach maximum capacity by 2026*;

The RMS officer then replied: 'That was only the original Traffic Study'. In regard to reaching 'maximum capacity by 2026' the officer said, "that's only for 2 lanes, that's when the 3rd lane will need to be marked."

2.) By 8 September the RMS staff were saying:

- Unfortunately this isn't a Traffic Solution Project, only 'Bridge Replacement';
- Hopefully, there 'should' be some improvements to traffic flow;

In response, and again as part of an amicable dialogue, we said:

- Where are the latest Traffic Studies published?
- Has the RMS planned on this based on invalid traffic studies? (No actual answer given);

The RMS officer then replied to the question regarding publication of latest traffic studies:

'Not sure if any have been as yet.'

3.) On 8 September the RMS staff were saying:

- Windsor Bridge needs to be replaced urgently, in danger of falling down.

In response, and again as part of an amicable dialogue, we said:

- Not true, RMS have confirmed the bridge is still safe for quite some time to come;
- If the Bridge is not safe, why no load limits?

RMS officer then repeatedly claimed the Bridge doesn't meet current road safety standards. (Whilst we accept the width of the bridge is not consistent with contemporary standard configuration, specifically, lane widths, this answer in no way addresses the key issue of the RMS claim that the bridge is 'falling down').

4.) On 8 September the RMS staff were saying historic Windsor Bridge:

- Needs to be demolished;
- It is too costly to repair and maintain with an estimated cost of \$18 million;
- Represents a danger of damage to a new bridge if it collapses during flood;

In response, and again as part of an amicable dialogue, we said:

- Ex RMS Engineers have advised RMS of a method to repair the bridge to better than original without traffic disruption for low cost;
- RMS General Manager has confirmed Engineers repair method can be done;
- Repairs have been independently estimated to cost \$2.5 million. (independent bridge builders (Arenco) have quoted \$2.5 million to undertake repairs to the Bridge to a higher standard than that proposed by the RMS at a cost of over \$18 million);
- Why hasn't the RMS published rebuttal information if these repairs aren't possible?

RMS officers repeatedly disputed \$2.5 million estimated cost and claimed:

- The Bridge would need to be repaired so it wouldn't collapse in flood;
- They didn't *think* such repairs could be done;
- Repairs couldn't be done from underneath; (Note: Arenco says the work would be done from underneath without the bridge having to be closed)

5.) Finally, with regard to a recently proposed bypass solution put forward by a community group which is based on advice from retired RTA engineers:

On 1 September the RMS officers said the bypass would cost \$200 million and on 8 September that the RMS has not reviewed this option, but it would cost in the order of \$150 - \$250 million.

When asked why the RMS had not proposed such a solution we were told that it wasn't within the scope of the project to design a bypass. This is in direct contravention of their own Options report, which offers two solutions that bypass the township of Windsor.

Constraints put upon the community's right to access alternative information:

An independent documentary maker had obtained permission from centre management to film within the centre on 8 September. RMS officers refused to allow any recording of audio associated with their promotional activities during any filming. We are perplexed as to why a public event, with publicly accountable Government employees, providing information to our community is so secret that the material being presented cannot be captured for posterity.

Also on 8 September an RMS security guard insisted that we could not hand out fliers within the shopping centre.

Issues of a more general nature:

I. Thompson Square is an area of almost incalculable historic significance, however the Government's declaration of the project as 'State Significant Infrastructure' has effectively 'switched off' heritage and environmental protections.

II. The RTA/RMS has repeatedly expressed a preference for 'Option One' (the most destructive of their nine proposals) and it was made abundantly clear this option was going to be built, long before any public consultation commenced. (Video of Mr Mike Vesey, from the RMS restating this commitment at a Windsor Business Group Breakfast on 23 July 2012, can be seen at <http://www.youtube.com/watch?v=MjYe0cdlONc&feature=youtu.be>)

III. RTA officers have, in the past, made clear their expectations that heritage considerations are irrelevant and will be overridden by the Minister to see this bridge built.

IV. The eight alternative options were clearly designed to support the selection of Option One.

V. RTA/RMS costings of all aspects of this proposal are highly questionable.

VI. Despite claiming (final Focus Group meeting 13th June 2012) the Windsor Bridge replacement project was one of the most comprehensively consulted projects in the State's history, communication with key stakeholders has been non-existent or extremely poor. In fact, the owners of a heritage-listed building in Thompson Square, Megan Wood and Rod Storie say, "There was absolutely no consultation with the businesses or property owners other than Pete and Gail (Reynolds) and the Wellers. The only thing we received was the Options brochure that they sent to selected areas advising of the information session at the library. The first time Rod and I heard about Option 1 was when the Gazette published a picture of Bob Porter on the bridge announcing that he had secured a new bridge for Windsor and this was before the Options brochure was produced in August 2009".

VII. At the promotional event on 8 September RMS employee, Jennifer Gatt said, "ALL the business owners have been extensively consulted throughout." When this was disputed she continued to say, "Yes, they were.... "

VIII. The community Focus Group, established to provide a forum for community representatives to communicate their concerns to the Government was prematurely shut down.

IX. This 'shut down' occurred just after the RMS undertook 'paid consultations' with community members

X. We understand an RMS officer (Mr Iain Macleod) is briefing a community member (Mr Ted Books) on objections to the alternative bypass for that community member to use in a media interview.

XI. According to Hansard, two RTA officers visited an Opposition Member's Office and briefed him on this project in 2008, indicating their preference for Option One. This seems to us to be a breach of process: the project was unfunded (and remains so); consultation with the community only commenced in July 2009; and we don't believe that it is appropriate for public servants to be briefing Opposition Members regarding infrastructure projects.

XII. On the Saturday after the local government elections we believe the RMS held a further promotional event on the Peninsula, during a separate annual boating event. Locating their stand within a restricted area meant anyone wishing to see the RMS stand and talk to them had to pay the \$20 entry fee.

We are deeply concerned about the conduct of this project and specifically the behaviour of Government employees in pursuing this project beyond what would be considered normal diligence. We welcome the opportunity to discuss this matter with you in greater detail.

Yours sincerely,
Rob Lewry Eva lewry

Recent information on traffic flow: Windsor Bridge Replacement Project Questions and Answers updated June 2012, page 10.

This is a formal complaint about the form and style of the operation of the Windsor Bridge - Design and Heritage Community Focus Group conducted under the auspices of the Roads and Maritime Services.

Background

Invitations from the RMS to participate in the above focus group as community representatives were issued apparently to those who had responded to a request for comment about the proposal. The first meeting was held on 2.11.2011

Areas of Concern

Closure of the Focus Group

The Focus Group was prematurely terminated on 13th June, 2012 before it had completed its intended process as determined by the facilitators. Some members of the Focus Group were informed by email immediately prior to the meeting whilst others learnt of its termination at that meeting. It is understood the Focus Group had yet to discuss at least the cladding of the abutments, what was to occur with the landscaping of Thompson Square and the traffic survey.

The formation of another Focus Group

The RMS organised a very large public relations company, Kreab Gavin Anderson to run a forum. The members of that forum were invited to attend a meeting to identify aspects of life in the Windsor area that were causing concern. During the meeting the Windsor Bridge was mentioned. At that point representatives of the RMS rose to give a presentation of the bridge replacement proposals. The opinions of the members was sought as to the appropriateness of the proposal. At the conclusion of the meeting the members were each handed an envelope that contained cash. Some apparently received \$175 and others \$200.

At the last Focus Group meeting on 13th June a RMS representative was asked to explain the purpose of the paid focus group. In essence, the meeting was told it was set up to ascertain if the feedback given by the main Focus Group was an accurate representation of the feeling of the general community. Apparently it was. The main Focus Group was described as being elitist.

Accuracy of RMS documents

A significant number of the community members of the Focus Group expressed concerns about the accuracy of documents produced by the RMS especially those

documents being provided to the community. There were constant calls for greater accuracy raised at a number of meetings. One example was the pamphlet sent by Ray Williams to a number of his constituents. At the meeting on 13th June one of the community members tabled a document detailing a raft of inaccuracies in a RMS brochure asking for the RMS brochure to be replaced. Unfortunately this happened at the conclusion of the meeting where the focus group was terminated. A significant amount of the material that was made public contained information that was challengeable or indeed patently incorrect.

Lip Service

It is acknowledged that throughout any planning process changes will be made. However, the amount and scope of changing information provided by the RMS made many participants believe the RMS was paying lip service to the consultation process. One example was the difficulty in ascertaining the height of the proposed bridge across The Terrace. Another example was the difficulty in getting the exact dimensions of the united square if the proposed bridge option was built.

Knowledge of Heritage

The RMS seemed to be using incorrect information about heritage to support the case for its proposed option. One example was the claim the proposed bridge and road was to use the Old Bridge Street access which used to provide access to the current bridge or a previous bridge. No other bridge in fact existed. Bridge Street was the name of the street from South Creek (Fitzroy Bridge) to George Street.

Inappropriate Bridge Styles

Just as in the same manner as the RMS chose bridge placement alternatives (chose 7 that were patently unworkable) it selected about 9 different bridge styles to be discussed at a Focus Group meeting. When the options were being shown to the group the meeting was told one by one that 7 of the bridges were unsuitable in a flood plain setting. When questioned why those options were being presented, the meeting was told the RMS had to go through the process.

Promised Information

At the conclusion of each Focus Group the participants were told what would be on the agenda for the next meeting. On many occasions the agenda was changed. One example was the promise to release the most up to date traffic survey information. This did not occur.

* Privacy of Minutes

The Focus Group was told the minutes were to be kept in house. Well into the process the Focus Group was told the minutes were to be published on the RMS webpages. Members of the Focus Group complained. If it had been known the minutes were to be published, members would have made greater endeavours for

the minutes to really encapsulate what actually happened at the meetings rather than going along with the sanitised versions. If it was known the minutes were to be made public a greater effort would have been made to ensure certain aspects were put in the minutes and therefore be on the public record. It was disturbing the facilitator acknowledged he had told the Focus Group the minutes were to be kept in house but was overruled by a supervisor.

* Public Consultation

Although not directly within the parameters of the intended agenda, the RMS officers were made clear a number of the members of the Focus Group believed the choice of areas of the Hawkesbury Council area to be advised through the letter box was rather strange. A number of areas where the residents would seldom use the Windsor Bridge were advised whilst other areas where the residents used Windsor Bridge on a regular basis were not.

Post Focus Group

When the Focus Group was curtailed, direct access to the facilitators was removed and all further questions were to be directed to a generic email address. This action did not acknowledge the time and effort provided by the members. However, the language in the Questions and Answers section of the RMS webpage imply that the RMS is still in the consultative process. There is also evidence that the RMS is in fact in informal contact with selected members of the community.

* Public Relations Exercise

A significant number of the participants believe the purpose of the Focus Group was for the RMS to go through the process of public consultation and only paid lip service to it. There was a strong belief the RMS had made its choice and no matter what feedback it received it was set on its course. Unfortunately this belief was reinforced by the rhetoric of the local politicians, often as reported in Hansard and in brochures.

Reasons for Making a Formal Complaint

In the Hawkesbury Gazette of Wednesday, 24th October, 2012 the RMS made a public announcement of Notice of Infrastructure application for the Windsor Bridge replacement project. This application had been made and received over twelve months previously.

In the Hawkesbury City Council Planning Proposal - Jacaranda Ponds dated 10th July, 2012 it says,

“RMS has currently commenced work on the proposed (funded) upgrade of the Windsor Bridge to increase the peak period traffic capacity and to provide flood free

access to the Freemans Reach, Wilberforce and Glossodia areas.”

Work on the bridge has not started, it is not funded and it will not provide flood free access to Freemans Reach, Wilberforce and Glossodia areas.

Harry Terry

ATTACHMENT E: PAPER TABLED AT FINAL DESIGN AND HERITAGE COMMUNITY FOCUS GROUP
MEETING

Tabled document from Carol Edds, member of the Design and Heritage Community Focus group. 13 May, 2012. This paper is tabled at the Design and Heritage Community Focus Group meeting for inclusion in the Meeting Notes of 13 June 2012 and in response to the following email dated 6 June.

Dear Graham and Carol,

Thank you for your e-mails and apologies for not responding sooner - I have been off work caring for sick family. After reading your e-mails, your credentials, professional affiliations and recommendations are noted. However, your assertions that the May 2012 community update is 'deliberately misleading' and 'historically inaccurate' are not substantiated. Please be more specific with your concerns and RMS will be happy to look into them.

Kind regards,
Nathan Chehoud

This email is in response to the following emails dated 30 May

Hello Nathan,

As a heritage professional and member of the Bridge focus group, I find the refreshed website documentation, particularly misleading and historically inaccurate. It does not seem to accord with the RMS consultant reports previously provided. Also the perspective of the proposed bridge is most misleading as it shows a level bridge, not with an elevation of approx 6.5 metres across the river as the later pages indicate in cross section. I am most disappointed that you personally, as the RMS Bridge Interface Manager, would have condoned this report with such blatant errors.

I believe that the only proper course of action that should be undertaken is to remove the May update documentation in both hard copy and electronic media immediately.

Graham

Dear Nathan,

We have read the latest project update, May, 2012 from the RMS and make the following observations. The entire document is misleading based on information both produced by RMS consultants and other independent expert information that is currently publicly available. From a heritage perspective the document reveals either complete ignorance of what Thompson Square comprises or is deliberately misleading. Page 10 is particularly misleading in this regard. As the National Trust of NSW representative on the Heritage Focus Group, I have raised this matter with Professor Ian Jack, RAHS representative who agrees with me and supports the the following recommendation:-

We request the RMS to immediately withdraw the May update from all forms of distribution both electronic and hard copy until it is factually correct.

Regards

Carol Edds

On behalf of the National Trust of Australia (NSW)

FOCUS GROUP TERMS OF REFERENCE.

If we revisit relevant sections of the terms of reference which apply not only to focus group community members but also to members of the RMS project team,

One of the objectives adopted was:

"Ensuring transparent and effective communication arrangements are established with all

interested and affected residents, businesses, interest and industry groups."

Under processes and protocol

Dot point 8

"All information provided should be accurate, complete and timely and written in a manner

that is easy to understand"

Media reporting

"The group will discuss and agree the means of media reporting and of sharing the process of

the group with the wider community"

I do not feel that the agreed terms of reference have been honoured by the RMS representatives.

WINDSOR BRIDGE REPLACEMENT PROJECT.

Tabled document from Carol Edds, member of the Design and Heritage Community Focus group. 13 May 2012

IDENTIFIED CONCERNS FOR RMS CONSIDERATION

Firstly let me state that I do not accept that it is my or any of the unpaid community members of this focus group responsibility to quality control RMS publications. That being said let me briefly address some of the issues referred to by Graham & myself regarding RMS Windsor Bridge project Update May, 2012.

* The front cover: It should be self evident that there is conflicting diagrammatic information between the front cover which depicts a level bridge and page 16 which is an unscaled sectional representation of the bridge approaching Thompson

Square at inclined slope.

* The pleasure cruiser depicted going upstream of the bridge on the front cover and others upstream replicated on page 3/4. Any informed river user should know that only boats with an exceedingly low draft are allowed upstream of the bridge. The water levels are too low for pleasure cruisers. Hardly an honest and responsible message to the community from the Maritime section of the RMS.

* The May update with its childish and distorted illustrations, devoid of any scaled drawings is incredibly insulting to those of us who reside in the Western Sydney. Believe it or not most of us can read and interpret scaled drawings plans, sections etc. We all adopted a protocol for dissemination of information. Scaled plans and sections accompanied by accurate descriptions would provide accurate information easily understood as per the agreed protocol.

* I could elaborate in more detail but will finish here with the following statement and recommendations.

RECOMMENDATIONS

As an attendee of the focus group I do not believe that the community has been treated with the respect, honesty and in accordance with the agreed terms of reference and table this report at the last meeting as a statement of my dissatisfaction of the process, the reporting and the miss-leading information promulgated and widely disseminated by the RMS on Option 1.

I repeat my request that

The RMS withdraw the Project update May, 2012 publication and

Secondly I request that

The RMS provide the community of Western Sydney and in particular the Hawkesbury community with a retraction statement as well as an accurate update with illustrations, scaled drawings including sections across through all of Thompson Square so the community is honestly informed about the project and its impact on Australia's; first and oldest Civic square.

The update should also, if it is to be an honest and informative update, include a chapter where objectives stated in the Options report of August 2011 have not been achieved. Eg flooding, noise minimisation, improve queue length/delays etc.

WINDSOR BRIDGE REPLACEMENT PROJECT.

Tabled document from Carol Edds, member of the Design and Heritage Community Focus group. 13 May 2012.

This is particularly important to those of us who live in the Hawkesbury electorate

and have received a glossy flyer from our State representative stating,

'The new high level bridge will be located 35 metres downstream from the existing bridge and provide flood free access for residents of Wilberforce, Glossodia, Freeman's Reach, East, Kurrajong, Colo Heights and other areas west of the Hawkesbury.'

The Project team was provided with a copy of this flyer at the previous focus group meeting and a request made for the RMS, as per our agreed objective, to release a media statement correcting this obvious miss information. This issue was not accurately reported in the meeting notes nor, as an affected resident, have I received any rebuttal of the deliberately miss leading information provided to the Hawkesbury Electorate. In it place I received the insulting and factually and historically incorrect Project update May 2012.

All of this has again been compounded by the release of the June update and that the RMS have decided that this is to be our last meeting. Issues that were identified community concerns listed in the project objectives and expected to be discussed at the focus group meetings are now identified to be included in the EIS, e.g. minimise impact of noise, minimise impact on recreational spaces, minimise impact on the built heritage of the town and its setting. In all of the public RMS documentation the statement appears **Thompson Square design is indicative only**. No Conservation Plan has been prepared either for Thompson Square or the Historic Windsor Bridge. Proper process, which should apply to all items of State significance are also being ignored.

This focus group has not been provided with sufficient documentation to meet the principal aim stated in the terms of reference.

"to work closely with the RMS project team to contribute to the concept design ... including areas of urban design, landscape, archaeology, heritage and traffic."

The focus group members deserved more respect and honesty from this process. In my personal opinion we have been treated with disrespect by some of those involved in what can only be described as a farcical exercise and a waste of community time, taxpayers money and consultants' valuable time.

Carol Edds

9. TRAFFIC

"The replacement of a bridge alone is unlikely to improve capacity..."

(RMS: Q&A, August 2012, page 11)

Key Issues

- Option One fails to address capacity issues or deliver outcomes expected of fiscally responsible planning for public infrastructure.
- In failing to take into account the destinations of traffic crossing Windsor Bridge, Option One deprives the community of significant, measurable and highly desirable outcomes that might reasonably be expected from such significant public expenditure.
- Option One fails to deliver benefits that could be achieved more rapidly and cheaply by simply modifying relevant intersections and maintaining the existing bridge.
- Option One relocates a problem from one intersection (George and Bridge Streets), to a second, busier and more important intersection (Macquarie and Bridge Streets)
- Option One fails to address critical network issues at a key intersection.
- The proposed destruction of a significant public asset (the historic Windsor Bridge) is pointless and a waste of public resources.
- The EIS analysis is not only flawed, it is fraudulent.

Link to analysis of the EIS traffic engineering undertaken by traffic engineers, Christopher Hallam and Associates Pty Ltd (CHA) and submitted to the Department of Planning:

<https://majorprojects.affinitylive.com/public/8a72cb30a3ce87403a7f77038df43628/HALLAM%20SUBMISSION%20ON%20WINDSOR%20BRIDGE%20REPLACEMENT%20PROJECT.pdf>

Discussion

Context

Increasing levels of local and through traffic for the historic township of Windsor and its surrounds (see Chapter Development in the Hawkesbury Region) present public authorities with a planning challenge requiring a fiscally responsible, effective and historically responsible solution.

Windsor's location in relation to the Hawkesbury River and its associated floodplain (Geographical Considerations) adds further planning complexity.

The Hawkesbury's existing river crossing capacity is already inadequate during peak periods (Vol 1, Table 7.13) and the proposed new bridge, a like-for-like replacement project (Conolly, Windsor Business Group, 27-2-2012), cannot, in isolation, bring improvement to traffic queuing or improve the service of the road network. The existing bridges over the Hawkesbury River in the vicinity of Richmond and Windsor, accessing Bells Line of Road, Putty Road and the land uses within Hawkesbury City west of the River are limited to two, at North Richmond, plus the subject Windsor Bridge. While the existing peak period conditions on Windsor Bridge and through Windsor are moderately congested, peak period traffic conditions across the North Richmond Bridge and on its approaches are severely congested. Some drivers from the Bells Line of Road and Kurrajong areas divert via Freemans Reach to Windsor Bridge to avoid the North Richmond Bridge. It can be seen that Windsor Bridge cannot be viewed in isolation. While road capacity studies are continuing at North Richmond, a regional analysis needs to be undertaken to cover current and potential future crossings of the Hawkesbury River in the region.

The scope of the Windsor Bridge Replacement project has been too narrow and simplistically focused on just the bridge and its immediate approaches. Broader analysis is required.

The Influence of B-Double Trucks

Despite insistence by Option One proponents that 25m B-Doubles passing other heavy vehicles on the Bridge is a significant issue (Attachment A), independent traffic surveys conducted by CFE Technologies show that, out of a total of over 19,000 vehicles crossing Windsor Bridge each day, on average a mere 29 are Class 2 B-Double trucks (refer CHA Submission)

Significantly, this insistence that B-doubles represent a critical risk is not supported by the RTA who, in 2008 (Attachment A), stated B-Doubles can cross the bridge staying within their lane. B-doubles are no wider than large semi-trailers and large rigid trucks. The potential for a significant increase in B-double numbers is limited

by the physical constraints of the Putty Road. All vehicles must have a maximum body width of 2.5m, with mirrors adding to the total clearance required. The carriageway width of the bridge is 6.1m. The worst case is if two large trucks arrive at the same time to travel across the bridge in opposite directions. As set out in the submission by Christopher Hallam & Associates Pty Ltd dated 14 December 2012, in the morning, the hour with highest heavy vehicle movements (Class 3 – 10) is 9-10am, when the northbound flow of 27 trucks/hour would have an arrival headway of one truck each 133 seconds. The southbound flow of 23 trucks/hour would have an average arrival headway of one truck each 157 seconds. These numbers suggest that the probability of two trucks meeting and passing on the bridge is low.

The recent five year accident history of the area showed no accidents on Windsor Bridge, involving cars or trucks. There have been some accidents at the Wilberforce Road/Freemans Reach Road junction “*with most occurring when vehicles were approaching from adjacent roads*” (EIS Vol 1, page 228). A reconstruction of this intersection with a roundabout, while maintaining the existing Windsor Bridge could resolve these accidents.

Traffic routes and destinations

Less than half of the traffic using Windsor Bridge has an origin or destination on Windsor Road. Traffic surveys and analysis by Christopher Hallam & Associates for Hawkesbury City Council, based on surveys undertaken in February 2011, found that in the morning peak hour some 40-41% of bridge traffic comes from or goes to Windsor Road. In the afternoon peak hour the Windsor Road figures are 35% southbound and 41% northbound. Some traffic has origins/destinations in Windsor itself, with the balance using Macquarie Street to access South Windsor, Blacktown, Penrith and areas further away. These traffic distributional issues have not been addressed in the EIS because the project was limited just to Windsor Bridge and its immediate approaches and did not cover bypass alternatives to the RMS Option 1 proposal.

Splitting current Bridge traffic on the northern side of the river (see Rickaby Line in Chapter on Bypass), rather than continuing to funnel it through the Macquarie and Bridge Streets intersection via Thompson Square (ie Option One) would:

- * ensure regional traffic is directed onto Hawkesbury Valley Way and hence onto the flood free route across South Creek, or to Macquarie Street West
- * ensure an additional bridge over the Hawkesbury River would be provided
- * reduce travel times and fuel consumption for about 50% of vehicles (CHA surveys and analysis)

- * reduce traffic delays through the Bridge Street/George Street and Bridge Street/Macquarie Street intersections. The latter intersection was identified in the EIS as an intersection of concern.
- * reduce traffic along Macquarie Street, reduce traffic delays along its intersections and reduce traffic noise.
- * provide improved access to recreational areas between Wilberforce Road and Hawkesbury Valley Way.
- * remove significant environmental risks from a community precinct,
- * enhance amenity and functionality at the eastern end of the Windsor township, with particular regard to noise issues, an area of assessment where the EIS was deficient in ignoring traffic noise at non-residential buildings in Thompson Square
- * improve both driver and pedestrian safety
- * improve localised air quality outcomes,
- * increase transport efficiency
- * enhance the economic and tourism potential of the township.

The Rickaby Line option has the potential to either give all drivers the route option of a refurbished Windsor Bridge or the Rickaby Line bridge, or to divert all heavy traffic off Windsor Bridge onto the Rickaby Line, while still giving light vehicle drivers a route choice to best suit their origins/destinations.

Road network connections to Rickabys Line Option

The Rickaby Line further discussed: In traffic engineering terms, its connection with Wilberforce Road and Freemans Reach Road could be adequately handled by a roundabout. While this would be different from that developed for the Option 1 roundabout layout, there is sufficient land to allow a satisfactory design to be achieved.

At the western end, the route would intersect with Hawkesbury Valley Way. This could either be a roundabout or a traffic signal controlled intersection. The latter could more easily fit into the road reserve. Christopher Hallam & Associates Pty Ltd (CHA) have modelled a signal controlled junction, based on current traffic distributions found in surveys undertaken by CHA for Hawkesbury City Council (*Windsor Town Centre Traffic Study*, June 2011). The SIDRA modelling found a morning peak hour level of service of A and an afternoon peak hour level of service

of B, for current traffic levels. These results suggest spare capacity for traffic growth.

The intersection of Hawkesbury Valley Way and Macquarie Street is and will remain the busiest intersection in Windsor. It currently operates close to capacity in peak periods. The Line option will channel additional southbound and northbound traffic along Hawkesbury Valley Way, being traffic that currently uses Bridge Street and thence Windsor Road. Traffic from Windsor Bridge with destinations towards South Windsor and Penrith will have their routes altered, from travelling straight through along each direction of Macquarie Street, to either a left turn from Macquarie Street West or a right turn into Macquarie Street West. The proportion of traffic between Windsor Bridge and Windsor Road, and Macquarie Street, have again been derived from the traffic surveys undertaken for the *Windsor Town Centre Traffic Study*.

This intersection of Hawkesbury Valley Way and Macquarie Street has been modelled by CHA using the SIDRA program. For the 8.00-9.00am peak hour, with a fixed cycle time, the impact of the Line is to improve the level of service and reduce delays. Under alternative vehicle-actuated control, the modelled delays are higher, but the impact of the Line still improves the level of service. The 4.00-5.00 pm peak hour sees higher traffic flows. Under vehicle-actuated control, the operation remains little different with the traffic redistribution. A 3% increase in average intersection delay is indicated, although the degree of saturation of the intersection reduces. Looking at both peak periods, the impact of Rickabys Line on this intersection is neutral.

In summary, Rickabys Line can be developed with satisfactory intersection performance while achieving the extensive benefits that are highlighted above.

Intersections

RMS documents available to the public provide a confusing picture of the network analysis and benefits the RMS anticipate will be generated by Option One. As recently as August 2012 the RMS state (RMS Q&A) “***The traffic performance of the preferred option is largely related to the Macquarie Street / Bridge Street and the Windsor Road / Hawkesbury Valley Way intersections.***”



Key Roads in the Study Area (EIS Vol 1, page 222)

The reference to “Windsor Road/Hawkesbury Valley Way intersection” is very confusing and appears to be an error. Perhaps the RMS are not clear as to what intersections they are actually assessing.

However, the earlier Traffic and Transport Working Paper says that “*The principal focus of the traffic and transport assessment was the route along Bridge Street between Macquarie Street on the southern side of the Hawkesbury River and Wilberforce Road on the northern side of the river.*” (Working Paper 4, page i)



Yet despite the RMS stating the performance of their option is largely related to the Macquarie/Bridge Street intersection (Project Update August 2012, page 10), and despite it being *within* the EIS study area, there is no evidence in the EIS that modelling has been undertaken of this intersection.

Indeed, to justify this absence of data or analysis regarding a key component of local network functionality an RMS Officer (RMS display, Windsor Marketplace 12/12) stated that now this intersection is “**Outside the scope** of the project

This is confusing as Figure 2.1 (EIS Traffic & Transport Working Paper, Part 1, page 5) shows the intersection **inside the scope** of the project.

To add further confusion, the EIS also states the intersection of Macquarie and Bridge Streets is already at capacity with a poor level of service (EIS Vol 1, Table 7.13)

During the community focus group meetings, the treatment of the intersection of Bridge and George Streets was discussed, with the advantages and disadvantages of signals and roundabouts discussed. Statements were made by RMS/RMS consultants that if traffic signals were installed at the Bridge Street/George Street intersection, these signals would be co-ordinated with the existing signals at Bridge Street/Macquarie Street. Any driver would recognise the importance of traffic signal co-ordination with two closely spaced junctions, particularly when one of these junctions (Macquarie Street/Bridge Street) is currently operating close to capacity.

Clearly, signal phasing at the Macquarie Street junction providing a green light to northbound Bridge Street traffic would demand an equivalent northbound green light through the George Street intersection. However there has been no reported analysis of traffic signal co-ordination at these two closely-spaced intersections.

Standard practice would be to undertake SCATES analysis or similar. Since an integral component of the project is to replace the current roundabout at Bridge Street/George Street with traffic signals, an adequate assessment of the consequences of the Option One proposal would require such a co-ordination assessment.

George Street Intersection

Traffic improvement, as presented in EIS traffic modeling Working Paper (page 81), is actually attributable to changes to the intersections of George and Bridge Streets and Wilberforce and Freemans Reach Roads.

Despite reassurances to Windsor businesses and the community, (RMS Display at Windsor Market Place), the EIS confirms southbound right hand turns into George Street will be restricted in the future when queue lengths increase. (EIS Vol 1, page 239).

This means vehicles will instead have to go down to Macquarie St to turn right and then loop around into the township.

Clearly this route, resulting when turning restrictions are applied to the intersection of George and Bridge Streets (EIS Vo1, page 239) will compound existing issues by directing further load through the Macquarie and Bridge Streets intersection. (CHA Submission)

However the failure to model the Macquarie/Bridge Street intersection, means the impact of this change on the network is not calculated. This inadequacy not only relates to the impact of an increased right-turn flow from Bridge Street (North) into Macquarie Street, but also to the additional travel forced onto drivers who currently make a right turn from Bridge Street (North) into George Street (West). This additional kilometers of travel and travel time is a dis-benefit of the Option One proposal that has been presented. There is no evidence that these impacts have been considered in the assessment of the traffic benefits of the proposal, and hence the benefit-cost analysis would be affected.

This is unworthy of the RMS as an organization charged with the responsible delivery of services and expenditure of tax revenue on behalf of the NSW community.

The RMS have taken substantial and documented traffic problems that exist within the Thompson Square precinct and designed a solution that relocates or transfers these problems to an intersection already subject to significant peak period delays.

In order to avoid accounting for the newly created, consequential disaster the RMS have now deemed the disaster area “outside the scope of the project”.

This is unacceptable

Benefit Cost Ratio

This unacceptable approach to ‘problem solving’ has wide-ranging consequences.

The EIS applies to the claimed, but unsubstantiated improvements to the Macquarie Street, Bridge Street intersection. These unsubstantiated benefits are then used to derive a highly questionable Benefit Cost Ratio,

Perhaps even worse, the following unsubstantiated and demonstrably incorrect assertions are used to justify changes the baseline to improve the Benefit Cost Ratio:

Assertion #1: Travel time benefits accrued from improved travel speeds due to the removal of speed restrictions and proposed improvements to the existing curvature, grade.

Response:

Currently over 90% of all vehicles obey a 60kmh speed limit. CFE traffic surveys show the existing bridge's **85th Percentile Speed is 59kmh.**

The proposed bridge sees a 50kmh speed limit imposed on all vehicles – and yet the EIS states there are “*Travel time benefits accrued from improved travel speeds due to **the removal of speed restrictions***”. While the traffic safety benefits of a speed reduction are clearly warranted within Thompson Square, and are supported, their impact on the calculation of travel time “benefits” needs to be adequately considered.

Assertion #2: Reduced vehicle operating costs due to improved road conditions and the increase in average vehicle speed compared the base case.

Response:

Average vehicle speed increase claimed is justified due to the failure to model the impact of Macquarie and Bridge Streets.

Assertion #3: Annual crash savings due to proposed safety measures and the change in vehicle-kilometres travelled. (EIS Vol 1, page 25)

Response:

How is there a change in “vehicle-kilometres travelled”? The bridge is only 35m from the existing bridge. This gives a potential change of 0.07 kilometre.

A significant proportion of claimed improvements are a function of changes to intersections and the neglect to model negative impacts of other intersections

The analysis of the benefit-cost ratio of the bridge proposal has varied substantially during the project. The August 2011 report *Windsor Bridge over the Hawkesbury River – Traffic modeling and evaluation of options – preliminary report*, quotes a Benefit-Cost ratio of Option 1 of 4.5, assuming a capital cost of \$45.4M. However on page 26 of the EIS, for a capital cost of \$46.36M, the Benefit-Cost ratio is stated to be 14.6. In the earlier assessment, the benefits were reduced travel costs (travel

time and vehicle operating costs). The EIS included “external savings” and “safety benefits”. Looking at Table 3.5 of the EIS, these however make up less than 1% of the total benefits, and hence do not explain the difference.

The *EIS Traffic and transport working paper* sets out in Sections 5.3.1 – 5.3.2 their analysis of traffic delays and travel times. Comparing network performance indicators in Table 3.10 with Table 5.1 of this *Working paper*, the Year 2016 AM peak average speed would increase from 45 km/hr to 54 km/hr with Option 1, while in the PM peak the average speed would increase from 44 km/hr to 49 km/hr. With an adopted design speed of 50 km/hr (which is totally supported for safety and amenity reasons), this option appears to speed traffic through Thompson Square relatively quickly. In the AM peak hour the Current (2011) average delays to Bridge Street traffic through the Macquarie Street intersection are 35 seconds/vehicle northbound and 11 seconds per vehicle southbound. These would marginally increase for year 2016, where at the Bridge Street/George Street intersection the northbound delays will be 5 seconds and the southbound delays will be 15 seconds. At these two intersections the total northbound intersection delay is 40 seconds, with southbound delays totaling 26 seconds. PM peak hour flows show similar delay levels. The improvements in average travel speeds do appear ambitious.

The intersection analysis of the future situation – with the Option 1 bridge and associated intersection works completed – makes no mention of the Bridge Street/Macquarie Street intersection. Presumably it remains unchanged. However, as previously commented on, there is no apparent analysis reported on that covers the signal co-ordination implications of adding signals at the Bridge Street/George Street intersection. At this latter intersection the current operation as a roundabout is set out in the analysis results in the Annexure to the *Working Paper*, where the average AM peak hour delay is given as 8.4 seconds, and the average PM peak hour delay is given as 14.9 seconds. The Option 1 works include the addition of traffic signals at this intersection. Tables 5.3 and 5.4 give the resulting average Year 2016 (one lane approaches) delays as 15 seconds in the AM and 29 seconds in the PM, compared with the Year 2011 Current figures of 8 and 15 seconds respectively. This being the case, where are the travel time benefits coming from?

Going back to the economic analysis results set out in Table 3.5 of the EIS, almost all of the Benefits would accrue if the ancillary intersection works at Bridge Street/George Street and Bridge Street/Freemans Reach Road/Wilberforce Road were constructed without the new bridge. The resulting Benefit-Cost ratio would be very substantial. Without a cost breakdown of the elements of the project, the actual figure is hard to calculate. Funds could be put aside for repairs to the existing Windsor Bridge, and the Benefit-Cost ratio would still be significantly higher than any figure for Option 1.

Director General's Requirements

“To meet the DGRs, the proposed bridge design must meet the traffic and transport objectives of the project”

Although the EIS attempts to do so, the Traffic and Transport objectives and the Community Long Term Needs cannot be separated. They must be considered together.

It is also a matter of significant concern that Traffic and Transport DGRs on the EIS ***are different*** from those presented for the Director General's Requirements in the 2011 State Significant Infrastructure (SSI) application.

The traffic and transport objectives, as stated in the SSI Application Report, along with an independent assessment of achievement are detailed below:

<u>OBJECTIVE</u>	<u>RESPONSE</u>
<i>“To improve safety for motorists, pedestrians and cyclists.”</i>	
<ul style="list-style-type: none">• Meets the various design codes (eg traffic lanewidths, shoulder widths and shared path widths).• Meets a road speed of 60 km/h.• Ensures pedestrian safety.	<p>× <i>Fail.</i> proposed Option One bridge when configured for 3 lanes also does not meet the current standards. The EIS shows the traffic lanes will be 3.3m wide with no median strip. (Vol 1, Figure 5-4b)</p> <p>× <i>Fail.</i> Road speed is reduced to 50 km/h (although it is recognized that this would provide benefits)</p> <p>× <i>Fail.</i> The northern side requires pedestrians to negotiate four lanes of traffic with no crossing, no signals and minimal refuge.</p>
<i>“To improve traffic and transport efficiency.”</i>	

<ul style="list-style-type: none"> • Minimises queue length/delays. • Improves performance of road network (level of service). • Enables two heavy vehicles to pass on the bridge without waiting. • Improves load capacity of the crossing to meet current load standards. 	<ul style="list-style-type: none"> × Fail. The bridge does not minimize queue lengths or delays. Any improvements come from changes to intersection design. × Fail. The bridge does not improve the level of service. Any improvements come from changes to intersection design. (refer text) × Non-essential objective. According to RTA statements in 2008, vehicles can already pass without waiting. (Attachment A) × Non-essential objective. The current bridge is a designated RAV route. It has no load limit.
“To improve the level of flood immunity.”	
<ul style="list-style-type: none"> • Provides a crossing that is above the 1 in 5 year flood event. 	<ul style="list-style-type: none"> × Fail. The bridge will be below a 1 in 3 year flood level.

Comment on “Long Term Community Needs”, as stated in the SSI Application Report, is provided below:

<u>OBJECTIVE</u>	<u>RESPONSE</u>
“Long Term Community Needs”	

<ul style="list-style-type: none"> • Provides an efficient connection for local and regional traffic. 	<ul style="list-style-type: none"> × Fail. The bridge does not provide an efficient connection for regional traffic. Only a bypass does that.
<ul style="list-style-type: none"> • Provides a pedestrian and cyclist connection to surrounding locations. 	<ul style="list-style-type: none"> × Fail. Cycling organisations confirm that they do not use shared pedestrian/cycleways.
<ul style="list-style-type: none"> • Minimises impact on recreational spaces 	<ul style="list-style-type: none"> × Fail. (see Chapters on economic implications, heritage and town planning).
<ul style="list-style-type: none"> • Minimises impact of noise. 	<ul style="list-style-type: none"> × Fail. (see Chapter on Noise)
<ul style="list-style-type: none"> • Minimises impact on property access and need for acquisition. 	<ul style="list-style-type: none"> × Fail. The project restricts property access and creates traffic turning restrictions.
<ul style="list-style-type: none"> • Provides a 100 year life span for the bridge structure. 	<ul style="list-style-type: none"> × The existing bridge has lasted 140 years. One would hope any new bridge could do the same.

Conclusion:

This section of the EIS highlights how the RMS and its consultants have modified objectives and parameters to deliver their chosen Option.

The EIS completely disregards the impact of the Macquarie/Bridge Street intersection on its modelling, with the need for signal co-ordination between the intersections of Bridge Street with Macquarie Street and with George Street not considered.

The EIS states: “The bridge is operating at capacity” but contradicts itself in following paragraph “...performance of the bridge is constrained...by the operation of intersections” (Traffic & Transport Working Paper, Part 1, page 32)

Addressing contentious ‘requirements’ for a cohort of less than 30 vehicles a day (B-doubles) and maintaining the status quo regarding the type of vehicles approved to cross Windsor Bridge, do not pass a value-for-money assessment.

Modelling makes clear the bulk of benefit for traffic is generated from changes to the format of the intersections at Bridge/George St and Wilberforce/Freemans Reach Roads.

Little traffic benefit is derived from the new bridge itself.

The same benefits could be achieved with these changes and the current bridge. The saving to NSW taxpayers would be astronomical.

Finally, the study area covered by the EIS fails to address the regional transport issues that need to be addressed in a project of this magnitude. Alternatives such as the Rickaby Line bypass have not been addressed.

From a Planning perspective we find it quite neglectful that impending changes to the use of the Richmond RAAF Base have not been taken into account, including the likely Federal funding for road infrastructure that such a decision will bring.

Article by Amanda Perry

THE fight for a new bridge at Windsor has been stepped up.

Hawkesbury Council, in co-operation with the RTA, last week held a demonstration on Windsor Bridge of a B-double truck and a bus passing each other.

It highlighted Councillor Bob Porter's concerns that the bridge was dangerous, and an accident waiting to happen.

"It's not my intention to put truck drivers off the roads or out of business," Cr Porter said.

"The bridge is totally inadequate for today's traffic."

Cr Porter has been campaigning for the bridge to be replaced since he was first elected to Council in 2004.

Cr Porter said the guardrails have been smashed out for years, and the bridge flexes when used by heavy vehicles.

Hawkesbury City Mayor Bart Bassett is also worried about the potential for serious accidents.

He said RTA officials attended last week's demonstration, one of them a passenger in the B-double organised by the RTA.

Council organised the bus through Westbus, which was keen to participate as some of its drivers had raised concerns about the bridge.

"The short-term fix is to get the approach on the Wilberforce side and bring it in line so it's not quite so sharp on approach," Mayor Bassett said.

He said heavy vehicles needed a straightforward approach to help them stay on the right side of the road when crossing the bridge.

But, Mayor Bassett said, the only "true fix" was a new bridge.

He said it would achieve two things: it would improve safety for vehicles and therefore safety for the community, and it would also mean the bridge's height would be raised, ensuring it is not cut off during medium-sized floods.

"The RTA is aware of the issue," Mayor Bassett said.

"We've got to encourage our MPs, Allan Shearan and John Aquilina, to get money allocated in this year's budget."

In September last year, Cr Porter moved that the RTA be requested to provide a structural report on Windsor Bridge, after councillors unanimously agreed that it was unsafe.

To date, neither Cr Porter nor Mayor Bassett have seen that structural report.

Despite the demonstration, the RTA has yet to be convinced of safety issues on Windsor Bridge.

An RTA spokesperson told The Gazette that “both vehicles passed without incident and the B-double was able to remain within its lanes during the crossing”. “Windsor Bridge was constructed in 1874 and although it represents an ageing asset, it continues to perform adequately,” the spokesperson said.

“Over the past few years the RTA has carried out geotechnical investigations and structural assessments to assist in developing a future maintenance strategy for the bridge.

“As with most ageing infrastructure, the reports have highlighted areas that require attention, however they have also confirmed the bridge is structurally adequate for current traffic loadings.

“At this time the RTA has yet to finalise a future strategy for the bridge.”

10. NOISE AND VIBRATION

Key Issues

The Noise and Vibration report in the EIS is inadequate. It provides for only token treatment for a minority of the affected premises, and ignores the existing situation where noise levels in Thompson Square are already too high. In particular:

- The EIS fails to consider the impact of noise and vibration on *all* residences in Thompson Square.

There are five Heritage buildings currently used as residences in Thompson Square. The EIS fails to monitor three residential Heritage buildings and address potential impacts upon these residences.

- The EIS fails to consider the impact of noise on the businesses that operate alfresco dining areas within the Heritage Precinct. These areas should be regarded as “Open Space” and the according to the Government’s own Road Noise Policy (RNP) noise limits applied.
- The EIS failed to physically monitor current noise levels in the Heritage open space of the Thompson Square reserve.

Instead it modelled for a mere two points within the reserve.

- The EIS actually guarantees that noise levels three times louder than is stipulated in the RNP will be inflicted upon the Heritage parkland. This will increase as traffic increases.
- The EIS fails to consider adverse noise impacts in the event the bridge is raised to allow coach access to the Wharf.

Thus, should the design of the new bridge be raised at The Terrace to a higher level than is currently contemplated, this EIS will be null and void.

Source Notes:

This Chapter is based on a report from BGMA Pty Ltd, which was commissioned by Community Action for Windsor Bridge. It also references the NSW Road Noise Policy (Department of Environment, Climate Change and Water NSW, 2011236nswroadnoisepolicy.pdf).

The Environment Protection Authority website notes that the “*NSW Road Noise Policy replaced the Environmental Criteria for Road Traffic Noise from 1 July 2011.*” It goes on to say “*State Significant Development projects that have DGRs issued on*

and following 1 July 2011 are to be assessed according to the NSW RNP.”

<http://www.environment.nsw.gov.au/noise/traffic.htm>

Discussion

Before specifically addressing noise and vibration with regard to the Windsor Bridge project, it is interesting to note more generally that, in July 2012, the RMS closed its North Sydney Motor Registry due to excessive noise from nearby construction. At the time of writing, the office was still closed due to these ‘excessive’ noise levels. (<http://www.rta.nsw.gov.au/newsevents/news/2012/120802-nthsydney.html>).

The noise levels that ‘forced’ the closure of the RMS office are similar to noise levels predicted for Thompson Square. So, the much used and much loved historic Thompson Square will be subjected to ongoing noise levels in excess of those which closed the North Sydney Motor Registry.

Yet the RMS insists that although the levels in Thompson Square are in excess of the Government’s own Road Noise Policy (RNP), because it’s an existing condition, they are effectively not obliged to address the issue.

As the RMS knows only too well and as evidenced by their response to noise levels at the North Sydney Motor Registry, excessive noise and vibration will have an insidious and destructive impact on the amenity of a location. Literally ‘invisible’, noise and vibration are nonetheless a crucial component of the amenity of any location and as such deserve stringent attention.

In terms of noise and vibration there are impressively negative consequences for the Thompson Square precinct with the proposed Windsor Bridge Replacement Project.

BGMA Pty Ltd

ABN 55 101 186 805 Consulting Acoustical Engineers

To: Megan Wood

Community Action for Windsor Bridge

Re: Thompson Square Precinct Introduction

Unit 31 / 12 Meadow Crescent, Meadowbank NSW 2114

RMS proposes the construction of new bridge and approaches be constructed following the general alignment of Old Bridge Street.

The proposal extends from the intersection of Bridge Street (south) &

Macquarie Street, through the intersection of Bridge Street & George Street, then out across the river. Lights are to be installed at the intersection of Bridge Street & George Street.

Thompson Square parkland is bounded by George Street (west) on the south-eastern side, by Thompson Square on the south-western side, Old Bridge Street on the north-eastern side, and the Hawkesbury River.

Concerns have been raised as to the impact of this proposal on the Thompson Square parkland, and on the premises surrounding.

Several of the older buildings surrounding the Thompson Square parkland that are currently utilised as commercial cottages, office spaces, eateries, and teaching facilities. Their construction pre-dates motorised travel, and as such were never designed for road traffic noise intrusion.

Acoustic mitigation has been indicated for No.4 Bridge Street and the upper floor of No.10 Bridge Street (only).

Despite significant acoustic impact, commercial non-residential premises, and open spaces, have not been considered for noise mitigation in the Environmental Impact Statement.

Current Situation

Traffic across Windsor Bridge is currently speed restricted by a roundabout (intersection of George & Bridge Streets), and 60 kph speed limit. The approach to the bridge (from the intersection to the bridge) is within a cutting that shields the parkland and buildings to the west.

The proposal will bring the road alignment closer to buildings on the eastern side of the parkland. Some shielding of buildings on the western side will be lost.

This is an area that has seen ‘horse & buggy’ traffic transformed, over the years into light motor vehicle traffic, and then seen that motor vehicle traffic progressively increase in volume.

There has been a slow and progressive climb in traffic noise level. The parkland and the surrounding heritage buildings have had their peace and quiet eroded by a gradual increase in traffic volume.

Reviewing Data

The ADT projections for Windsor Bridge were 19,000 vehicles in 2012, 22,500 vehicles in 2021, and 24,000 vehicles in 2026. In terms of acoustic modelling, these are increases of only 0.7 dB and 1 dB

According to Noise & Vibration Working Paper (Part 3), automated noise logging was carried out at 10 Bridge Street, from midday Friday 9 March 2012 to 23 March 2012.

A member firm of the National Council of Acoustical Consultants Principal – Brian Marston MAAS MASA MIE Aust

Ph: 02 98090745

Mob: 0405 493 726

Thursday 6 December 2012

BGMA Pty Ltd - Acoustical Consultants This data is presented graphically within the Environmental Impact Statement.

According to Noise & Vibration Working Paper (Part 1), a logger was on the “edge of veranda facing Bridge Street”, “on upper floor terrace about 6 metres high relative to Bridge Street”. The description in the Environmental Impact Statement places the logger on a balcony (about 2.5 metres wide), 8 to 12 metres (horizontally) from the nearest carriage way, about 5.5 metres above the acoustic height of cars and about 2.5 metres above truck exhausts.

Analysis of the monitoring (shown in Table 3.4) indicates a $L_{Aeq,15hr}$ (daytime) of 71 dB(A), a $L_{Aeq,9hr}$ (night time) of 66.5 dB, with L_{Amax} levels of 87.5 to 83.7 dB(A).

I have compared this to traffic counts in Table 3.3 of Traffic & Transport Working Paper (Part 1). Based on the CoRTN model and processing of hourly traffic flow data, the L_{Aeq} result shows reasonably close agreement.

Impacted Areas - Thompson Square

The Noise & Vibration Working Paper (Part 1) receivers divides into “residential sensitive receivers” (Table 3-1) and “non residential sensitive receivers” (Table 3.2). This has been combined with other information spread across the Environmental Impact Statement.

Relevant buildings adjacent to eastern side of Bridge Street (north) are:

4 Bridge Street

6 Bridge Street

10 Bridge Street

(Residential Table 3-1) 71/67 (Non-Residential Table 3-2) (Residential Table 3-1) 72/68

Residence R2 Commercial H2 Commercial/Residence R3

Eatery H9 Eatery H8 Eatery H7

Relevant buildings along George Street (west) are:

68 George Street 74 George Street 70 George Street

(Non-Residential Table 3-2) (Non-Residential Table 3-2) (Non-Residential Table 3-2)

Relevant buildings adjacent to eastern side of Bridge Street (south) are: 14 Bridge Street (Non-Residential Table 3-2) Former School of Arts H12 16 Bridge Street (Residential Table 3-1) Residence (shielded) R16

Relevant buildings adjacent to western side of Bridge Street (south) are:

62 George Street 17 Bridge Street

Buildings along “Thompson 99 George Street

7 Thompson Square 5 Thompson Square 3 Thompson Square

Note: Of all of the above, only **4 Bridge Street** & **10 Bridge Street** are as indicated as requiring “noise mitigation work”.

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(Non-Residential Table 3-2) Commercial H10 (Non-Residential Table 3-2) Commercial H11 (Described in “Historic Heritage Working Paper (Part 9c)” as residential) Square” are:

(Non-Residential Table 3-2)(Non-Residential Table 3-2)(Non-Residential Table 3-2)(Non-Residential Table 3-2)(Described in “Historic Heritage Working Paper (Part 9a)” as residential)

“Macquarie Arms Hotel” H3 Museum/ Information Centre H4 Doctors
Surgery H5 “The Doctors House” H6

BGMA Pty Ltd - Acoustical Consultants At No.4 Bridge Street, the
predicted daytime “facade” $L_{Aeq,15hr}$ noise level is 71 dB(A) and the

predicted “facade” night time $L_{Aeq,9hr}$ noise level is 67 dB(A). At No.10
Bridge Street, the predicted daytime “facade” $L_{Aeq,15hr}$ noise level is 72
dB(A) and the

predicted “facade” night time $L_{Aeq,9hr}$ noise level is 68 dB(A). These would
appear to indicate that at 10 metres from the edge of the carriageway:

daytime “facade” $L_{Aeq,15hr}$ is about 72 dB(A) at 10 metres,

night time “facade” $L_{Aeq,9hr}$ is about 68 dB at 10 metres, and

L_{Amax} levels are about 83 dB(A) at 10 metres. This information can be
used to approximate projected traffic noise exposures across the
Thompson Square park land and down Bridge Street to the
intersection with Macquarie Street. These are approximations as the
Environmental Impact Statement does not contain detailed maps.

Estimated “Facade” Traffic Noise Exposures Along the eastern
side of Bridge Street (north) the estimated “facade” noise levels
become:

4 Bridge Street

6 Bridge Street

(1955) 10.5 metres (1860) 8.0 metres (1856) 9.0 metres

Day L_{Aeq} 72

73

Night L_{Aeq} L_{Amax} 68 82 R2 69 84 H2 68 83 R3

10 Bridge Street

72 Along George Street (west) the estimated “facade” noise levels become:

68 George Street 74 George Street 70 George Street

(1889) 15 metres (1835) 30.0 metres (1923) 45 metres

Day L_{Aeq} 67

64

Night L_{Aeq} L_{Amax} 63 78 H9 60 72 H8 58 69 H7

62 Along the eastern side of Bridge Street (south) the estimated “facade” noise levels become:

Day L_{Aeq} 14 Bridge Street (1861) 6.0 metres 74 16 Bridge Street (?) 10.0 metres 72

Night L_{Aeq} L_{Amax} 70 86 H12 68 82 R16

Along the western side of Bridge Street (south) the estimated “facade” noise levels become:

Day L_{Aeq} 62 George Street (1835) 5.5 metres 74 17 Bridge Street (?) 6.0 metres 74

Night L_{Aeq} L_{Amax} 70 86 H10 70 86 H11

Along the western side of “Thompson Square” the estimated “facade” noise levels become:

99 George Street 7 Thompson Square 5 Thompson Square 3 Thompson Square

Day L_{Aeq} (1815) 53 metres 63 (1835) 47.0 metres 64 (1857) 46.0 metres 64 (1844) 48.5 metres 64

Night L_{Aeq} L_{Amax} 58 68 60 69 60 69 60 68

H3 H4 H5 H6

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BGMA Pty Ltd - Acoustical Consultants These are estimates only as neither detailed topographical maps nor detailed design drawings were

readily available in the Environmental Impact Statement.

The proposed changes will bring traffic closer to premises along Bridge Street between Gorge Street and Macquarie Street, and remove shielding effects of the existing roadway cutting.

Acoustic Criteria

The Environmental Impact Statement refers to the NSW Road Noise Policy.

In section 2.3.1 (Table 3) of that document refers to “noise assessment criteria for residential uses” with a day time “facade” $L_{Aeq,15hr}$ criteria of 60 dB(A) and a night time “facade” $L_{Aeq,9hr}$ criteria of 55 dB(A). [As such, only 4 Bridge Street and part of 10 bridge Street fall within that category].

According to SEPP (Infrastructure) 2007, for residences adjacent to a road corridor, bedrooms should have an “internal” L_{Aeq} noise level of 35 dB(A) or less, between 10 pm and 7 am, and elsewhere, an “internal” L_{Aeq} noise level of 40 dB(A) or less.

In section 2.3.2 (Table 4) of the Road Noise Policy also refers to “noise assessment criteria for non- residential uses”. The affected sites are limited to “internal” noise criteria for school classrooms, hospital wards, places of worship, and childcare facilities (and “open spaces”). The criterion does not include “commercial” premises.

Table 4 also includes “external” noise criteria for “open spaces”.

For an open space (active use), day time $L_{Aeq,15hr}$ of 60 dB(A).

For an open space (passive use), day time $L_{Aeq,15hr}$ of 55 dB(A).

For an open space that mixes both “active use” and “passive use”, the policy document indicates the use of the day time $L_{Aeq,15hr}$ criteria of 55 dB(A).

Although, the Thompson Square park land would be “mixed use”, it appears to have been overlooked in the assessment.

Discussion – Open Spaces & Surrounds

The estimates in the previous sections indicates that across the “open space” of Thompson Square park, the day time $L_{Aeq,15hr}$ traffic noise would be of 60 to 70 dB(A).

As a “mixed use” open space, the day time $L_{Aeq,15hr}$ noise criteria would be 55 dB(A) or less. *For an established “mixed use” open space, the new bridge approach will bring projected*

traffic levels to 5 to 15 dB(A) over the recommended criteria.

Along George Street, premises have outdoor dining.

Estimates from the previous sections indicates that from the corner of George Street and Bridge Street, along the outdoor dining area, the estimated day time $L_{Aeq,15hr}$ traffic noise would be: 71 dB(A) close to the corner (outside 62 George Street (H10)); dropping from 64 dB(A) (outside 68 George Street (H9)) to about 59 dB(A) (outside 70 George Street (H7)).

The outdoor dining areas are currently partially shielded from traffic noise by the building on the corner, and by the cutting. The proposed bridge approach will fully expose these areas to traffic noise.

When viewing traffic it is necessary to understand the noise source heights. For domestic vehicles, it is about 0.5 metres above pavement level from engine noise and exhaust noise. For heavy vehicles, there are also the exhaust noise emissions from about 3.5 metres above pavement level.

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BGMA Pty Ltd - Acoustical Consultants It should be noted that ambient noise levels drive conversation levels.

Across the park land, and throughout the outdoor dining area along George Street, voice levels would be pushed to 64 dB(A) at 1 metre to 71 dB(A) at 1 metre to compete with traffic noise.

This should be compared to a “normal” voice level of 55 dB(A) at 1 metre for an ambient of 50 dB(A) or less.

For a background level of 64 dB(A), speech has to be lifted to a “raised” voice level.

For a background level of 71 dB(A), speech has to be lifted to a “raised to loud voice” level for men to converse, and to a “loud voice” level for women.

At these upper ambient noise levels, people have to lean toward each other to maintain conversation.

The proposal continues the erosion of ease of speech within the park land.

In Chapter 7 of the Environmental Impact Statement, there are graphical representations noise contours across Thompson Square and surrounding areas for 2026 (Figures 7-33 & 7-34).

Lack of labelling on the noise contours make these representations difficult to interpret. For the building facades, there is minimal difference between “build” and “no build”.

The redevelopment, does not reduce the noise levels across the park land and the “mixed use” open space criteria does not appear to have been addressed in the design.

Noise Levels for the Local Commercial Premises

For commercial premises, the Road Noise Policy document does not provide a criterion for commercial premises and in Section 2.5.6, it refers us to Australia Standard AS 2107:2000.

It appears that the Road Noise Policy throws the onus of noise mitigation across to the owners of commercial premises to combat the increased noise intrusion caused by road modification.

For commercial premises Australian standard AS 2107:2000 recommends:

an “internal” noise level of 40 dB(A) “satisfactory” to 45 dB(A)
“maximum” for general office spaces.

“internal” noise level of 35 dB(A) “satisfactory” to 40 dB(A) “maximum”
for private office spaces.

an “internal” noise level of 45 dB(A) “satisfactory” to 50 dB(A)
“maximum” for inside coffee bars, restaurants, and shops. For
residences near major roads Australian standard AS 2107:20000
recomends:

an “internal” noise level of 35 dB(A) “satisfactory” to 45 dB(A)
“maximum” for living areas & work areas.

an “internal” noise level of 30 dB(A) “satisfactory” to 40 dB(A)

“maximum” for sleeping areas. Note: According to the standard, “satisfactory” and “maximum” are described as follows: *The “satisfactory” level is the level “found to be acceptable to most people”. The “maximum” level is the level “above which most people occupying the space start to become dissatisfied” with the level of noise.* The “satisfactory” level is below which most people are satisfied, while the “maximum” level is the level above which most people are dissatisfied. A member firm of the National Council of Acoustical Consultants Principal – Brian Marston MAAS MASA MIE
Aust Page 5 of 10

BGMA Pty Ltd - Acoustical Consultants SEPP (Infrastructure) 2007 that is applied to new residences along major roads, appears takes a 50%

satisfied approach to “internal” noise levels.

According to SEPP (Infrastructure) 2007, “living & working areas” are required to have an “internal” L_{Aeq} noise level of 40 dB(A) or less, and “sleeping areas” required to have an “internal” L_{Aeq} noise level of 35 dB(A) or less between 10:00pm & 7:00am.

Local Councils usually only require proposed “residential” developments to be assessed for “traffic noise intrusion”.

Proposed commercial developments are usually assessed for their noise emissions (and how that could affect nearby residential premises). Occasionally, a developer will require an assessment into new commercial premises.

The NSW Road Noise Policy limits impact assessment to existing residential premises (only).

The “open space” criterion in the NSW Road Noise Policy has not been addressed, and commercial premises are left to fend for themselves.

Noise Intrusion Implications - Residential

Now, along Bridge Street, between George & Macquarie Streets, the external daytime “facade” L_{Aeq} noise levels are likely to be about 74 dB(A). Further along Bridge Street, passed George Street, the external

daytime “facade” L_{Aeq} noise levels are likely to be about 73 dB(A).

Both No.10 Bridge Street and No.14 Bridge Street would appear to have similar composite R_w rating requirements. The required a “daytime” composite R_w rating is about 36 dB. The required “night time” composite R_w rating is about 30 dB into “sleeping areas”.

Upgrading older style buildings to achieve current acoustic requirements is not a simple procedure of one or two minor changes.

Older style windows are likely to have an R_w rating of 20 to 25 dB.

Older style doors are likely to have an R_w rating of 15 to 20 dB.

Older style light-weight timber construction is likely to have an R_w rating of 30 to 35 dB.

Older style masonry or stone construction should achieve an R_w rating of about 45 dB (without penetrations).

Older style masonry or stone construction with upper wall ventilation blocks could have their performance degraded to an R_w rating of 30 to 35 dB.

For No.14 Bridge Street, it is likely that doors, windows, ceilings and walls will need to be substantially modification.

The dwelling will require a full Traffic Noise Intrusion Report by a recognised Acoustical Engineering Consultant before any works are undertaken.

For No.10 Bridge Street there has been a review limited to the upstairs rooms.

Noise & Vibration Working Paper (Part 5), Appendix E Architectural Heritage Report recommends a range of acoustic treatments to No.10 Bridge Street. The recommendations provided appear to be only partial recommendations, providing only partial solutions.

The dwelling requires a full Traffic Noise Intrusion Report by a recognised Acoustical Engineering Consultant before any works is undertaken and that work would need to be appropriate and acceptable to the heritage of the building.

BGMA Pty Ltd - Acoustical Consultants **Noise Intrusion Implications - Commercial**

Along Bridge Street, between George & Macquarie Streets, the external daytime “facade” L_{Aeq} noise levels are likely to be about 74 dB(A). A number of the buildings along this section, namely No. 14, No.16, & No.17 Bridge Street, and No.62 George Street, appear to be used for business activities.

Further along Bridge Street, passed George Street, the external daytime “facade” L_{Aeq} noise levels are likely to be about 72 to 73 dB(A). The lower part of No. 10 Bridge Street, and also No.6 Bridge Street, appear to be used for business activities.

To achieve even a basic internal “office type” L_{Aeq} noise level of 40 dB(A) or less, would require a composite R_w (Weighted Sound Reduction Index) acoustic rating of about 38 dB or greater.

Each of the commercial premises would require a full Traffic Noise Intrusion Report by a recognised Acoustical Engineering Consultant, before any works are undertaken appropriate and acceptable to the heritage of the building.

Across the park, along western side of Thompson Square, the buildings are likely to require a composite R_w acoustic rating of 28 dB.

To achieve even a basic internal “office type” L_{Aeq} noise level of 40 dB(A) or less, the windows are likely to require R_w rating of about 28 dB or greater. This would normally indicate at least well- sealed windows, with 6.4mm thick laminated glass. Front doors would need to be the equivalent of solid core doors with acoustic edge and bottom seals.

Each of the commercial premises would require a full Traffic Noise Intrusion Report by a recognised Acoustical Engineering Consultant, before any works are undertaken appropriate and acceptable to the heritage of the building.

Noise Intrusion Implications – Eateries & Open Space

Along the southern side of Thompson Square, No.68, No.70 and No.74

George Street are ;likely to be exposed to “facade” L_{Aeq} noise levels of 62 to 67 dB(A).

To achieve internal “restaurant type” L_{Aeq} noise level of 45 dB(A) or less, would require composite R_w acoustic rating of 20 to 25 dB via their front facades.

Externally, the pavement area is used for “outdoor dining”.

These “dining areas” appear to be exposed to potential “free field” L_{Aeq} noise levels of 59 to 64 dB(A). If the “mixed use” criterion for open spaces is applied, their exposure will be 4 to 9 dB(A) above the recommended levels.

The estimates indicate that Thompson Square park will be exposed to day time “free-field” $L_{Aeq,15hr}$ traffic noise would be of 60 to 70 dB(A). If the “mixed use” criteria for open spaces is applied, the exposure will be 5 to 15 dB(A) above the recommended levels.

Not even the most basic of noise control barriers appears to have been considered.

Within the Environmental Impact Statement traffic noise barriers are briefly mentioned than discounted.

Traffic noise barriers come in a range of configurations from the large hulking translucent barriers often seen along the sides of motorways, to the clear acrylic barriers also seen along sections of motorway.

This latter type would be least “visually” intrusive.

The clear acrylic barrier, although clear, can cause sunlight reflections that would need to be consideration for road safety and impact on residences.

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BGMA Pty Ltd - Acoustical Consultants

Construction Noise

The Environmental Impact Statement utilises the current Interim Construction Noise Guideline. This policy has been a substantial improvement over previous construction noise restrictions.

The 1985 Noise Control Manual did contain time restrictions and noise restrictions of $L_{A10,15min}$ of ‘background plus 20 dB(A) for less than 4 weeks, less than $L_{A10,15min}$ of ‘background plus 10 dB(A) for less than 26 weeks, and less than $L_{A10,15min}$ of ‘background plus 5 dB(A) thereafter.

[This was, and is, often interpreted by Councils as construction time restrictions only without noise levels restrictions].

The Interim Construction Noise Guideline contains both time restrictions and a “desirable” noise limit of less than $L_{Aeq,15min}$ of ‘background plus 10 dB(A)’ to residences.

The time restrictions are:

7:00am to 6:00pm (Monday to Friday),

8:00am to 1:00pm (Saturday) and

not on Sunday or Public Holidays. This fortunately will minimise weekend impacts. Outside of these hours, the limit is $L_{Aeq,15min}$ of ‘background plus 5 dB(A)’ to residences, but then only with strong justification. Above these noise levels, but below 75 dB(A) to residences, it is necessary to simply keep the local residents inform. Above 75 dB(A) the restrictions require agreement from the local community. For commercial premises, the external limit is 70 dB(A). **Driving of Piers** Of some concern is the driving of piers.

A pile driver produces a short, sharp, repetitive series of noise events. Most of the other noise sources are semi-continuous with only minor variation in noise level over time. The Environmental Impact Statement uses a Sound Power Level of 121 dB(A), but it is not clear whether this relates to a L_{Amax} sound Power Level or an $L_{Aeq,15min}$ Sound Power Level. The predicted $L_{Aeq,15min}$ noise levels of 61 to 71 dB(A) across the park, which appears to indicate a Sound Power Level of 115 dB(A). This is 6 dB(A) below the Sound Power Level indicated in the document. *There needs to be far more clarity as to what the impact of this noise source will be.* Other sources indicate that the L_{Amax} sound power level could be 116 to 131 dBA (AS 2436:1981). Utilising a L_{Amax} level of 131 dB(A) results in L_{Amax} noise levels of 77 to 87 dB(A) across the park. These repetitive noise levels could be quite intrusive to both residential premises and to commercial operations. *I would suggest that the*

pile driving be re-assessed as to its potential L_{Amax} impact. If the NSW Industrial Noise Policy were also applied to the character of this noise source, there is likely to be even further restrictions on the noise emissions. A member firm of the National Council of Acoustical Consultants Principal – Brian Marston MAAS MASA MIE Aust Page 8 of 10

BGMA Pty Ltd - Acoustical Consultants Conclusion

The future operation of the bridge, as proposed, will significantly increase acoustic impacts to the whole of the Thompson Square Precinct.

The Thompson Square Precinct is a historic area with several historic buildings built well before traffic noise intrusion was a consideration.

This historic precinct has been subject to gradually increasing traffic noise levels, and this is a process that has been ongoing for decades.

It would be normal for the NSW Road Noise Policy to be applied in newer areas, or in areas where construction has occurred within the last 50 years.

In this situation, the policy is being applied to an area, where much of the construction was undertaken between 1835 and 1890s before the advent of the modern motor car.

The proposal affects a range of heritage buildings and the associated “open area”.

The proposal is likely to impact on the ongoing commercial viability of the area. The Environmental Impact Statement stops short of considering this aspect. The onus for achieving acceptable internal noise levels within the historic buildings is passed back to current building owners.

In this situation:

- There appears to be discrepancies between the lists of “residential” and “non-residential” premises in the Noise & Vibration Working Paper (Part 1) and Historic Heritage Working Papers (Part 9a & 9c). *These discrepancies need to be resolved.*
- Noise mitigation measures have been limited to one residence, and to the upper residential area of a second building. The full extent of these noise mitigation measures has not been clearly defined. *Full acoustic reports will be required on both premises, before*

appropriate mitigation measures can be assessed. Heritage buildings have significant restrictions on what can and can't be done to these buildings.

- Over the years, there would have been a gradual increase in “through traffic” and hence traffic noise across the Thompson Square Precinct will have been getting progressively worse. *The Environmental Impact Statement appears to do almost nothing to rectify this situation.*
- While “open spaces” are referred to in the Road Noise Policy, there appears to have been no assessment of how the changed acoustic impacts on this historic “mixed use” area will be addressed. *There appears to have been no assessment of the current or future economic effects on these “non-residential” premises given the restrictions placed upon these heritage buildings.*
- The effect of the ‘pile driving’ during construction phase appears to be understated. While most of the equipment used is of a relatively continuous nature, the pile driving is a series of short, sharp sounds. Using a $L_{Aeq,15min}$ noise descriptor for the pile driving would mask to character of this noise source. *I would suggest that by the nature of the sound of the pile driver requires that it be assessed in terms of its L_{Amax} noise emissions, that the noise character modifiers in the NSW Industrial Noise Policy (5 to 10 dB) be included, and then compared to the 75dB(A) limit of the Interim Construction Noise Guidelines. It is likely that a significant degree of noise control will be necessary before it could be considered acceptable to the local community.* A member firm of the National Council of Acoustical ConsultantsPrincipal – Brian Marston MAAS MASA MIE Aust Page 9 of 10

BGMA Pty Ltd - Acoustical ConsultantsDuring construction the noise of the pile driving (unless properly addressed) is likely to be an extremely annoying noise source.

The buildings in this precinct area have seen ‘horse & buggy’ traffic replaces by the automobile, and over the years seen this motor vehicle traffic progressively increase in volume.

The Environmental Impact Statement appears to be a document to

maintain the “status quo”.

The Environmental Impact Statement appears to provide only “token treatment” for a minority of the affected premises, and ignores the current situation where noise levels are currently too high.

Avoidance of the “mixed use” open space criteria leaves the precinct with a bad situation that will only get worse in time.



Brian Marston Director / Principal Consultant BGMA Pty Ltd

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Context

The RNP notes [Page 1] that, *“Vehicle use is increasing. The total number of vehicle kilometres travelled in Australia rose by an average of 2.2% each year from 2002 to a 2006 level of 209,405 million kilometres. Haulage of freight by road in Australia is also increasing, with total tonne-kilometres travelled rising by an average of 4.5% per annum in 2002–06, with 95% of goods hauled by rigid and articulated trucks. Heavy vehicles accounted for 3.75% of the national vehicle fleet in 2006 (Australian Bureau of Statistics 2007).”*

It goes on to say *“General levels of road traffic noise throughout NSW have increased significantly...”* and that *“...a community survey of neighbourhood noise issues in NSW in 2004... showed that 46% of respondents considered that road traffic noise was a problem in their neighbourhood. Road traffic noise was identified as the main issue affecting neighbourhood amenity.”* [page 1]

Whilst local traffic volumes are dealt with separately in this submission, the message is clear; there are increasing numbers of vehicles on our roads and associated noise is a growing issue for NSW communities.

In the case of the Windsor Bridge project it is concerning that the *“... growth in motor vehicle numbers, persistent undesirable levels of road traffic noise, and the community response to road traffic noise (which) confirm the need to continue to develop programs to minimise the impact of such noise...”* [page 1] is effectively ignored.

NSW Road Noise Policy

Whilst acknowledging the relevance of the NSW RNP, comparisons between the views of NSW and European authorities in relation to acceptable noise levels (see

below) indicate good reason for the NSW population to be concerned about some basic standards imposed by the Policy.

Furthermore, the RNP does not take into account the special and intrinsic value of heritage precincts. An online word search on the RNP failed to identify a single incidence of the use of the word 'heritage'. This is a disturbing omission. It is particularly disturbing when considering the relevance of this policy to redevelopment of spaces throughout urban NSW and in Thompson Square in particular.

It is acknowledged standard practice in NSW for the RNP to be applied in newer areas, or in areas where construction has occurred within the last 50 years, however the policy is, in this situation, being applied to an area where much of the construction was undertaken between 1835 and 1890s, some as early as 1815 and all of this long before the advent of the modern motor car.

This is unreasonable and perverse, particularly given the complete absence of any acknowledgement of heritage issues within the policy itself. The buildings and associated open space in the historic Thompson Square precinct have seen the automobile replace foot and 'horse and buggy' traffic, and over the years this motor vehicle traffic has seen a progressive and associated increased in volume. In addition to much of the building inventory of Thompson Square being constructed well before traffic noise intrusion was a consideration, most of the buildings have their original glass, which is much thinner than the modern material. This further contributes to the structures' vulnerability to external noise.

Furthermore, the RNP fails to differentiate between types or classes of open space. Open space that has an added value because it is heritage (and clearly, in the case of Thompson Square it does, that's why people go there) deserves particular consideration from a noise perspective. The RNP does not make allowance for heritage use or heritage value.

Applying Relevant Standards

The European Environmental Agency advises that noise affects people physiologically and psychologically: noise levels above 40 dB LAeq can influence well-being, with most people being moderately annoyed at 50 dB LAeq and seriously annoyed at 55 dB LAeq. Levels above 65 dB LAeq are detrimental to health (WHO, 2000). Overall, the external costs of road and rail traffic noise have been estimated at some 0.4 % of GDP. (ECMT, 1998).

The policy that guides the RMS regarding acceptable noise levels, the RNP, states the noise level for passive open space is 55dB LAeq; by European standards a disturbingly high noise level.

Yet, noise levels in the Thompson Square parkland are already **in excess** of 72dB LAeq with peaks near 90dB. The current levels are over 3 times the level stipulated in the RNP (every 10dB increment doubles the noise level, so 15dB is 3 times as loud, 20dB 4 times as loud) and in the future, noise in the Thompson Square parkland will be twice as loud (75dB) as levels detrimental to health.

Nonetheless the Environmental Impact Statement (EIS) maintains the status quo, providing only token treatment for a minority of the affected premises and ignoring the current situation where noise levels are already too high.

It not only fails to propose remedial action in relation to noise impacts in Thompson Square in general, it specifically fails to take into account the Heritage significance of the open space itself within the Thompson Square precinct which, as a NSW Conservation Precinct should be entitled to every available measure to reduce noise levels.

EIS shortcomings

In addition to failing to propose remedial action in relation to noise impacts in Thompson Square, the EIS in addressing noise and vibration suffers from a number of other shortcomings.

The EIS (Volume 1, page 318) claims that the “... *noise levels in Thompson Square parkland with the project would be similar to existing levels ranging from 72 dB(A) to about 64 dB(A). The noise levels for both the project and no build daytime scenarios in 2026 indicate that both scenarios would exceed the criterion for recreational use.*”

This means that noise levels will be 3 times louder than recommended and nearly twice as loud as noise that European experts regard as detrimental to health.

Disturbing as this analysis is, it may also significantly understate the issue as no noise monitoring was actually carried out in the Thompson Square parkland. There was only **modelling** performed for two receivers in the Thompson Square park land (T1 and T2, one near-field and one far-field) and there was no monitoring and no modelling performed for receivers at either the southern the northern end of the Parkland.

Despite this, the EIS suggests that the “... *area of Thompson Square parkland impacted by the higher noise levels would decrease slightly with the project especially the northern area of the parkland near the river.*

This is because the new southern approach road would be along the eastern side of the parkland, rather than the existing situation where the southern approach road bisects the parkland”. (Volume 1, pages 318/319)

It is impossible to draw such comparisons between the current situation and the proposed situation on the basis of the cited investigations. A basic topographic

analysis reveals that the existing road dives down below the parkland, directing traffic into a sound-attenuating cutting well below the level of the parkland. It is this topographical relationship that currently provides enough attenuation to make the parkland useable.

RMS images of the new road alignment show traffic level with the parkland with no attenuation or shielding of any form.

The raising of the level of the new road will also increase noise levels at the residential buildings on the western side of Thompson Square. No monitoring or modelling has been performed to investigate this, presumably because the RMS recognises the futility of such an exercise.

There is, in fact, no evidence to support the conclusion that noise levels would be similar in both a 'build' and a 'no-build' scenario. Indeed, experience suggests the exact opposite. The noise from traffic will increase, rather than decrease as is claimed in the EIS.

It is also worth pointing out the "northern area of the parkland near the river" will be unusable as recreational area because of its excessive steepness.

Mixed uses

Furthermore, while "open spaces" are referred to in the Road Noise Policy there appears to have been no assessment of how the changed acoustic impacts on this historic "mixed use" area will be addressed.

"Avoidance of the "mixed use" open space criteria leaves the precinct with a bad situation that will only get worse in time"

Discrepancies in classification of buildings

In considering the general treatment of acoustic issues in the EIS, discrepancies between the lists of "residential" and "non-residential" premises in the Noise & Vibration Working Paper (Part 1), the Socio-Economic Investigation Report. August 2011, Page 14 and Historic Heritage Working Papers (Part 9a & 9c) are alarming. This lack of consistency is cavalier and represents a systemic failure to take these issues seriously. As a consequence proposed noise mitigation measures have been limited to one residence, and to the upper residential area of a second building. Of further concern, the full extent of these noise mitigation measures has not been clearly defined.

Commercial implications

On the basis of available evidence, the proposal will significantly impact on the ongoing commercial viability of the area. The Environmental Impact Statement stops short of considering this issue. The onus for achieving acceptable internal noise levels within the historic buildings is passed back to current building owners. Regrettably, there appears to have been no assessment of the current or future

economic effects on these “non-residential” premises given the building restrictions placed upon owners of these heritage buildings.

Heritage Residences

“The closest residences are located along the lower end of Old Bridge Street adjacent to the southern approach road of the existing and... on the corner of Freemans Reach Road and Wilberforce Road.” EIS Vol 1, page 304.

This is an extremely disingenuous statement. It implies they are the only residences worthy of consideration in the EIS. Residents of the Square may have a different opinion. In addition to the residence at the corner of Freemans Reach and Wilberforce Roads, there are residences located on three sides of Thompson Square. However, the EIS only considered 4 and 10 Bridge Street. The following buildings also currently contain residences –

- 14 Bridge St (one residence)
- 64-68 George St (three first floor residences)
- 3 Thompson Square (two residences)

None of these buildings have been monitored for noise and vibration. At best this is careless. It is certainly an inadequacy of the EIS, as full acoustic reports will be required on all premises, before any appropriate mitigation measures could be developed and assessed.

Impact of vibration

A further area of concern is the impact of vibration on this venerable heritage precinct. Indeed the EIS acknowledges that, *“Vibration levels from vibratory compaction would exceed the human comfort criterion at all adjacent sensitive residential receivers and would be just below the structural damage criterion for heritage structures at all sensitive heritage receivers.”* (Volume 1, page 315).

Yet the EIS provides neither remedy nor strategy to deal with vibration in excess of human comfort levels and there is no evidence to suggest Dilapidation Reports have been obtained for all “sensitive heritage receivers”. So, if vibration levels are even slightly higher than predicted (which is likely), the EIS provides no method, remedy or strategy to prevent damage to such heritage structures.

Pile driving

Of additional concern, the effect during the construction phase of ‘pile driving’ appears to be understated. While most of the equipment used is of a relatively continuous nature, the pile driving is a series of short, sharp sounds. Using a LAeq, 15min noise descriptor for the pile driving would mask the character of this noise source.

By its nature the sound of the pile driver requires that it be assessed in terms of its LAmax noise emissions, that the noise character modifiers in the NSW Industrial Noise Policy (5 to 10 dB) be included, and then compared to the 75dB(A) limit of the Interim Construction Noise Guidelines.

During construction the noise of the pile driving (unless properly addressed) is likely to be an extremely annoying noise source requiring a significant degree of noise control before it could be considered acceptable to the local community.

Conclusion

Thompson Square is the oldest Public Square in Australia. Government agencies are duty bound to ensure noise levels are decreased in an area of such significance. The EIS actually predicts and accepts the opposite: traffic growth is anticipated and projected, with consequent increases in noise levels.

While full acoustic reports would be required on all premises before appropriate mitigation measures could be assessed and commented upon, it should be noted that heritage buildings have significant restrictions on what can and can't be done to their fabric.

Additionally, the heritage significance of Thompson Square imposes significant constraints upon landscaping responses to noise intrusion.

These factors inexorably lead to the conclusion that noise intrusion issues which cannot be satisfactorily mitigated will have immediate and catastrophically adverse consequences for this part of the historic Windsor township.

It is impossible for current and future noise impacts on the heritage space to be addressed to obtain Sound Pressure Levels of 60db LAeq as required in the RNP.

The only solution is to bypass the Thompson Square Heritage precinct.

11. FLOOD IMMUNITY

Key Issues

- The original claims made in the press of “flood free access” will never be met given the topography of the area.
- The proposed design does not meet the original requirement of the project of maintaining access during a 1 in 5 year flood event.
- There is doubt as to whether the alternative requirement of delivering an improvement on the current 1 in 2 year situation has been met.
- The proposed option is not in accordance with local flood management and evacuation plans.

Introduction

The Windsor Bridge Replacement, Urban Design and Landscape Concept Report p15 gives the following description of the topography around the township of Windsor:

“The topography of the area surrounding the township is generally characterised by a gently sloping alluvial plain with occasional terraces or levees providing low relief. River beds and banks are common in the area, which in many parts is active floodplain. Local relief is mainly level and less than 10 metres with slopes generally less than 5 per cent.”

This is also outlined in some detail elsewhere in this submission, (Chapter 1: Context,)

Against this topographical context the objective for the Windsor Bridge Replacement Project (WBRP), cited in Options Report August 2011, (Section 1.4, page 4), was for a bridge that, *“Provides a crossing that is above the 1 in 5 year flood event.”* That information was used in the public consultation process, which was instrumental in setting the community’s expectation for the project. It was also part of the information given to the Hon. Duncan Gay, Minister for Roads and Ports on which he based his decision to select the option around which to develop an EIS.

However, in Hansard on 23rd October 2012 Ray Williams, Member for Hawkesbury asserts that, “(The new) Windsor Bridge provides those residents with flood-free access in all but some of the worst floods we have seen in the history of European settlement of this country.” and in his newsletter to his constituents he says, “The new high level bridge will be located downstream from the existing bridge and provide flood free access for residents of Wilberforce, Glossodia, Freemans Reach, East Kurrajong, Colo Heights and other areas west of the Hawkesbury River.”

The promise of ‘flood-free access’ was an early claim, made by a small group of Option One proponents, designed to capture the imagination of the public who may be less experienced with the reality of Hawkesbury floods, and subsequently promulgated by the RMS.

Context

The following details are taken from the *Reconciling Development With Flood Risks: The Hawkesbury-Nepean Dilemma* and the Sydney Catchment Authority website and provide some context to the flood situation in the Hawkesbury Nepean and the challenges for flood mitigation in this area.

This part of the eastern seaboard experiences irregular and unpredictable weather events. Exceptionally heavy rainfall over several days can lead to severe flooding in the Hawkesbury-Nepean River valley, basically because water flows into the valley at a far higher rate than it can flow out. The narrowing of the valley downstream at Castlereagh controls the flow of water between the wide floodplain at Penrith and the even larger floodplain at North Richmond and Wilberforce. The flow of water is restricted by the narrow gorges downstream of Wilberforce which act like a bottleneck and result in backing up of floodwater producing flooding much deeper than on a typical coastal river in NSW.

This backwater flooding can be extremely deep and it is the depth rather than the velocity that is the key component of the flood hazard in most areas. For example, in the largest flood of record in June 1867, floodwaters reached 19.2m Australian Height Datum (AHD) in Windsor — three metres higher than the majority of development there today and two metres higher than the current flood planning level of 17.3m AHD. The probable maximum flood (PMF) will reach to 28.9m AHD or 11 metres above the planning level in Windsor.

During rare and extreme floods, the auxiliary spillway will allow floodwaters to pass safely around the dam, reducing the pressure on the dam wall. This will protect the areas downstream of the dam from the devastating effects of a dambreak, and will safeguard Sydney’s water supply. (Sydney Catchment Authority)

It is important to note that this is a dam and water supply protection mechanism and not a flood mitigation mechanism; it does nothing to alleviate the conditions present during a Probable Maximum Flood (PMF) event or any event in which the flow of water exceeds that which can be released from the dam using the normal methods. A PMF would see water levels that completely inundate Richmond, Windsor, McGraths Hill and partially flooding Penrith, Emu Plains and Riverstone, an area of up to 300km²

It is only in the last decade that the full extent of potential flooding has become known. A critical problem in the Hawkesbury-Nepean is the potential for the roads leading from Windsor, Richmond, McGraths Hill and Emu Plains to become cut by

rising floodwater, leaving ever shrinking islands. Once a decision is taken to act upon a flood prediction, the emergency services mobilise and issue flood warnings and commence the evacuation. The safety of residents relies on an effective emergency evacuation going according to plan within extremely tight timeframes that give very little margin for error or delay. Evacuation planning for isolated towns has emerged as the most complex and by far most costly part of the implementation of the strategy. This is not only because of the provision of numerous road upgrades but also the serious limitations on future urban growth due to constraints on improving the timeframe for implementing evacuation plans during floods.

Response to the EIS

Flood Free Access

Though the claim of flood free access is never made in the EIS it has formed a large part of the justification for the initialisation of the project and has played an important part in setting community expectations for the project, it is also informative in the context of the ever-reducing flood access promised by this project.

It is worth examining what is meant by flood free access. Assuming the standard measure of ‘flood prone’ has been adopted i.e. is land which is affected by a 1 in 100 year flood event, then flood free access could reasonably be assumed to mean access which is passable in the event of a 1 in 100 year flood.

Despite repeated and indeed, recent claims and statements about flood-free access, there were, even prior to the release of the EIS, reasons to doubt the likelihood of such an objective being achieved with Option One or indeed any option.

Molino Stewart (pages 12, 13) gives the following description of the landscape surrounding Windsor. *“There is very little slope on the flood surface in the Richmond/Windsor floodplain and the gauge level at Windsor is almost the same as the flood level in all of the surrounding areas.”*

Local experience alone indicates that much of the road network to the north of Windsor Bridge is highly vulnerable to flooding even during relatively minor flood events, resulting in considerable cynicism regarding any claim that ‘flood-free access’ was to be delivered.

Let us be completely clear about this: it is primarily the level of the floodplain that dictates access to and from Windsor during flood events. Once sections of the surrounding network start to be submerged, the height of the bridge is irrelevant. This is well demonstrated by Figure 7-37 in the EIS which shows the area of inundation for each of the flood categories.

Original Requirement: 1 in 5 year flood event

The project options report and other related documents set forth a more specific target for the flood mitigation aims of the project of providing access during a 1 in 5 year flood, this is stated in both the Windsor Bridge replacement Option Report P4 1.4 Project objectives

Objective	
<i>To improve the level of flood immunity</i>	<ul style="list-style-type: none"><i>Provides a crossing that is above the 1 in 5 flood event</i>

As well as in the Windsor Bridge Replacement State Significant Infrastructure application report October 2011. Under the heading, OBJECTIVES: *To improve the level of flood immunity*, under the heading, CRITERIA: *Provides a crossing that is above the 1 in 5 flood event*.

The reason given for not building for a 1 in 5 year flood event is based on the fact that the approach roads themselves are not to this level. This is in fact the reason why flood free access above is not possible. While this is true, the expected lifespan of this project is 100 years, and the further reduction of the flood mitigation target deem somewhat myopic as it fails to allow for future requirements, a 1 in 5 year height may be appropriate for a bridge which is linking with other infrastructure.

Note: The proposed Rickaby Line Bridge is at the 1 in 5 flood level and allows for future infrastructure.

Revised Requirement: Better than the current 1 in 2 year situation

Given the difficulties described above, it is not surprising that the EIS abandoned the rather ambitious 'flood free' language, using instead the rather more modest, although still un-achievable claim of 'flood immunity'

The current objective is: "To improve the level of flood immunity." (P xi Windsor Bridge replacement project Environmental impact statement Volume 1 - main report) and the flood mitigation capacity is now claimed to be less than a 1 in 3 flood.

Windsor Bridge replacement project: Honouring the past and building for the future Project update / May 2012 P2 1. Building for the future. "Flooding: a new bridge would cope with higher levels of flooding and have the same 'flood immunity' as surrounding approach roads on the northern riverbank."

The EIS (Volume 1, page 83) advises that flood immunity level of the proposed bridge had been reduced to, ".....just smaller than the one in three year flood".

And yet, there is little precise information in the EIS to validate even the increasingly modest nature of this new objective.

In fact, in light of the following information, this claim is robustly challenged.

On page 365 of the Environmental Impact Statement Volume 1 - Main Report it says: *"The bridge would connect Bridge Street in Windsor to Wilberforce Road and Freemans Reach Road. The project would have a minimum road level of RL 9.8 metres AHD (2.8m higher than the existing bridge). This would result in the replacement bridge being a similar height to the lowest level of Freemans Reach Road and higher than around 60 per cent of Wilberforce Road, from the bridge to Wilberforce."*

With regard to actual road heights this is correct. However significant omissions make it a misleading statement.

The EIS fails to admit that the height of Freemans Reach Road is relevant only to those who live in the approximately twenty farm houses on Freemans Reach Road, access to the Freemans Reach and Glossodia villages is generally via Gorricks Lane, which has a low point of 6.001 metres, lower even than the current bridge at 7.0 metres. Hibberts Lane, despite a low point of 8.076 metres, is rarely used as it is considered unsafe for trucks or heavy traffic use due to its sharp bends. Freemans Reach Road ceases on the flood plain at the T intersection with Hibberts Lane. (See map below)



So whilst the proposed Option One bridge may be 2.8m higher than the existing, historic Windsor Bridge, the levels of the surrounding roads remain unchanged, some of which are even lower than the existing bridge.

While it is mildly interesting to state the proposed bridge is higher than around 60 per cent of Wilberforce Road, this ignores the reality that 40% of Wilberforce Road will therefore go under before the bridge does.

The low point of Wilberforce Road at 8.4 metres, is considerably lower than the proposed bridge. (Windsor Bridge Replacement Project Environmental impact statement Volume 1 - main report, page 353)

“Additionally Wilberforce Road is potentially inundated due to local catchment runoff surcharging culverts at Buttsworth Creek.” (Windsor Bridge replacement project Environmental Impact Statement, Volume 1 - main report, page 353)

The tactic of using the height of the bridge to promote the project as delivering even a flood immunity level of, *“.....just smaller than the one in three year flood”* (Volume 1, page 83) fails to address the reality of the ‘flood immunity’ of the related road network. It is acknowledged the proposed bridge could improve flood immunity, however the degrees of improvement relates entirely to the difference in the level of the historic bridge deck and the lowest points in the surrounding access roads. It also fails to meet community expectations for this project, which are the result of overly optimistic assumptions/claims about the deliverables of this project

Finally the point is made that; given the changing litigious nature of our society and the greater emphasis on safety, the proposed bridge may in fact be closed at a lower flood height than in the past. This sensitivity to risk was demonstrated during the 2012 flood event with the precautionary closure of BOTH the Richmond Bridge and the Windsor Bridge.

It is therefore conceivable there would be NO improved flood immunity as a consequence of the construction of Option One.

Flood Planning

Flood planning needs to be in accordance with Council’s Floodplain Risk Management Plan, NSW Flood Policy (1984), NSW Floodplain Management Manual (2001) and Hawkesbury Nepean Floodplain Management Strategy (adopted 1998) and the Draft Hawkesbury Floodplain Risk Management Study and Plan. The design and construction of roads, car parking areas, pathways, public amenities, picnic shelters and other existing and proposed infrastructure need to consider the implications of flood events. New structures should not obstruct, reduce or interfere with upstream or downstream flood behaviour or adversely impact occupiers of the floodplain. The potential magnitude of flood impacts including the rate of rise and duration need to be considered in the design.

Further to the Flood Risks document quoted above it is interesting to note that *The North West Sector Flood Evacuation Analysis - Final Report* (Molino Stewart, page iv) advises that in order to deal with existing problems *“Windsor can only be fully*

evacuated if the evacuation route to Windsor Road is widened to two lanes from the west side of Jim Anderson Bridge to the Bandon Road Windsor Road intersection.”

All other considerations aside, it would seem a significant imperative already exists and has been formally identified by the government to upgrade the Jim Anderson Bridge. This being the case, the proposed ‘Rickaby Line’ would be consistent with the Government’s own strategic planning for flood evacuation and claims that the ‘Line’ would create new areas of project expenditure is entirely incorrect.

Conclusion

The Flood Mitigation section of the EIS is flawed in that it omits vital information that would have a major impact on the accuracy of the claimed benefits of the proposed bridge in regards to flood mitigation.

The capacity to provide access to citizens across the Hawkesbury River from Windsor for up to a 1 in 5 flood was one of the five major objectives of this project. As for other sections, the objective has had to be modified.

References

Reconciling Development With Flood Risks: The Hawkesbury-Nepean Dilemma, 2002, a document prepared by Catherine Gillespie, NSW DLWC, Paul Grech, Don Fox Planning Pty Ltd, Sydney & Drew Bewsher, Bewsher Consulting Pty Ltd, Sydney

Broken Bay Oysters Association, 4th Draft Environmental Management System. Nov 2010. 5

The North West Sector Flood Evacuation Analysis - Final Report (Molino Stewart)

<http://www.sca.nsw.gov.au/dams-and-water/major-sca-dams/warragamba-dam>

12. THE 'HERITAGE' ECONOMY

Key Points

Research used to justify the project on the basis of impacts to the local economy is fundamentally flawed.

Heritage tourism is a significant component of the town's economic viability.

The project will irrevocably erode the local economy and have catastrophic consequences for businesses in the local vicinity.

Discussion

Windsor's historic precinct is a vibrant lifestyle centre that attracts patrons who spend money in its cafes and restaurants and at the regular Sunday Craft Markets in Windsor Mall.

A visit to the area on any given Sunday, will provide evidence of the hundreds of residents and tourists who visit Thompson Square and the Windsor Craft Market, spending time with their families and friends in this historic country town.



History is important to communities ... Why?

The straightforward answer to this complex and multi-dimensional question is simply that heritage is important because it is considered to be so by the people of Australia (AGPC 2006) (*The value of built heritage: Community, economy and environment, Irons & Armitage 2010*). In respect of heritage places, their importance is seen to lie in the values or benefits they produce

(AGPC 2006). Thus, *importance* stems from the values or benefits that heritage places are capable of delivering, both to individuals and, collectively, to society as a whole. Based on an on-line survey of 2,024 Australian adults, 56.1% of people strongly agree that looking after heritage is important in creating jobs and boosting the economy, 92.3% strongly agree that heritage is part of Australia's identity and 96.9% strongly agree that it is important to educate children about our heritage (p.53, *Conservation of Australia's Heritage Places*, AGPC, 2006)

The World Tourism Organisation reports that the two fastest growing sectors of global trade are eco tourism and cultural/heritage tourism (Staiff, Russell 26 July 2005 at Hawkesbury Cultural Futures Forum). Tourism Australia defines a cultural visitor as one who “participated in one or more of the cultural activities listed below:

- Attend theatre, concerts or other performing arts
- Visit museum or art galleries
- Attend festivals/fairs or cultural events
- Experience Aboriginal art/craft and cultural displays
- Visit an Aboriginal site/community
- Visit history/heritage buildings, sites and monuments

This activities-based definition of the cultural tourist is not mutually exclusive. For example a cultural tourist can also be a wine tourist or a nature-based tourist (Cultural Tourism in regions of Australia, 2005. Tourism Research Australia for the SWG of the Cultural Ministers Council.)

The Windsor Bridge Replacement Project aggressively erodes and diminishes the cultural tourism potential of the Town of Windsor and significant adjacent landscape (See Town Planning). In destroying the character of Thompson Square the RMS is arguably destroying a key economic generator for the area.

This claim rejects the data of the Socio-Economic Appraisal, used by the RMS in support of Option One and is based on the contribution made by heritage tourism to local economies and an analysis of the relationship between the Thompson Square precinct and businesses in the town centre.

The Value of Heritage Tourism

- “The statistics of domestic tourism generally indicate a gloomy picture for regional Australia but there is one area of projected growth – heritage tourism.”

- “The largest average annual growth is in cultural and heritage activities, forecast to increase by 1.7% per year on average between 2006 and 2020.
- Heritage tourism has the following features which are particularly appealing to regional social well being:
 - based largely on existing infrastructure
 - offers tourism diversification away from the (often) heavy reliance on existing resort areas and peak seasons
 - establishes heritage structures and landscapes as economic assets
 - engenders respect and value for the social history of communities that have been marginalised through changes to the economic base and demography.

(“Essay: Delivering the Social and Economic Benefits of Heritage Tourism”, Leaver, Bruce <http://www.environment.gov.au/heritage/strategy/pubs/essay-benefits-leaver.pdf>)

“Focus on what your byway has that is truly unique and different. Focus on the qualities that separate your location from anywhere else in the world. That’s your hook. That’s your marketing angle. That is what visitors are looking for. As we become more homogenous, people are looking for those special one-of-a-kind places.” Amy Webb, Director of Heritage Tourism, US National Trust for Historic Preservation

“Today’s rapidly-urbanising cities, with uncontrolled growth and informal expansion, pose a significant risk for irreplaceable cultural and natural resources. For example, developers exert pressure to demolish low-rise traditional buildings and eliminate parks in favour of high-density developments, and municipalities install needed infrastructure in a manner that has unnecessarily negative impacts on traditional cityscapes.”

“The UN World Tourism Organization (UNWTO) reports that it "expects 2009 international tourism [growth] to be in the range of 0 percent to a 2 percent decline. **However, the UNWTO also reports that the niche markets of adventure and cultural tourism are two of the strongest segments of the tourism industry and that culture has become a component in almost 40% of all international trips.**”

(*Directions in Urban Development: Infrastructure and Heritage Conservation: Opportunities for Urban Revitalisation and Economic Development.*
www.worldbank.org)

Ensure monitoring mechanisms are in place to keep the strategy on course. All decisions by the council have cultural implications – particularly in the infrastructure, land use and economic decisions made daily. It is therefore recommended that the

issue of corporate culture and its impact on the cultural development of the community be kept on the agenda during implementation (*Grogan and Mercer 1995*)

Culture has a values dimension:

- relationships;
- shared memories, experiences and identity;
- diverse cultural, religious and historic backgrounds;
- values and aspirations; and
- what we consider valuable to pass on to future generations.

In this dimension culture is about a way of life and connections between people and between places and people. Along with the experiences of its inhabitants, the culture of an area is strongly shaped by its history, its geography, its character (land use, settlement patterns, demographics, the built environment). Our culture encompasses the ways in which we belong in and to a place. Local cultural planning helps us to understand the unique character of our communities and to assist communities to express pride in their place. Cultural places are those with importance or symbolic significance to people, often with an important role in collective memory, identity and spirituality. These places can include landmark buildings and sites such as lookouts, meeting places – both traditional and contemporary like the town hall steps - significant streetscapes, monuments and public art. (*Cultural Planning Guidelines for Local Government: NSW Minister for the Arts & Department of Local Government*)

Heritage Tourism in the Hawkesbury

“In 2010 the Hawkesbury had 646,000 day and 163,000 overnight visitors. These tourists injected an additional \$81 million dollars into every facet of the Hawkesbury economy.” (Federal Member for Macquarie, Louise Marcus, 11 July 2012)

Page 383, Windsor Bridge EIS chapter 7 states: *“Baseline tourism data in the region indicates that for over one third of domestic visitors, the primary purpose of the visit is to see family members. These visitors would not be expected to reduce the frequency or duration of visits to the town centre from changes associated with the project. The assessment therefore concludes that overall impacts on tourism during operation are expected to be minimal.”*

This statement appears to infer that the largest portion of visitors to the region are visiting family or friends. This is patently incorrect. Tourism Australia figures show that of an average of 646,000 day visitors to the Hawkesbury, 363,000 were for the purposes of holiday/leisure (4% more than the State or National average); 198,000 were visiting friends/relatives; and 85,000 showed as “other.” According to the statement in the EIS (above), if over 1/3 of visitors to the Hawkesbury were here to

see family members, the number would equate to approximately 215,333 and above. As the leading tourism body in Australia, Tourism Australia has computed their figures from a number of sources, including the *Tourism Research Australia International Visitor Survey and National Visitor Survey*; the *Australian Bureau of Statistics*; and the *ABS Business Register*. One would assume they know what they are talking about, as opposed to Roads and Maritime Services, whose figures appear to be managed and at odds with accepted statistics. (Tourism Australia: Tourism Profiles for Local Government Areas in Regional Australia: New South Wales.

<http://www.ret.gov.au/tourism/documents/tra/local%20government%20area%20profiles/hawkesbury%20lga.pdf>)

Furthermore, the question must be asked: what changes will occur associated with the project that are so dire as to “*reduce the frequency of visits*” by anyone other than loyal family members?

There is a substantial tourism focus on heritage and agriculture within the Hawkesbury region. With 187 items listed on the Register of the National Estate (RNE), the Hawkesbury region forms a cache of our nation's colonial and agricultural history. This being so, it is an area which is becoming increasingly important to the national heritage as it sits as an island amongst generic, homogenised, over-developed areas which have been stripped of much of their own precious heritage.

Windsor contains 55 items in the RNE. The Hawkesbury region has been robbed of many of its economically valuable heritage assets over the years at the hands of Local and State governments. Iconic buildings have been demolished and irreversibly damaged by less than sympathetic renovation – all sanctioned by authorities that should have been protecting them. The loss of these assets has denied the nation the chance to have a permanent record of formation and denied the Hawkesbury region the chance to capitalise on the tourism opportunities those additional assets would have produced.

As the Sydney-side gateway to the economic centre of the Hawkesbury region, Windsor is the point at which the visitor should be welcomed to the historical, agricultural and natural environmental jewel in Sydney's crown. Windsor Road is so named because it forms the route to Windsor from Sydney. It may be felt, with plans to “number” major routes that Windsor is just “that town at the end of the A2.” Thompson Square is situated at the end of two Routes of National Significance, which, with the new numbering system introduced this year by Roads and Maritime Services, means that many tourists will soon be on their way, following the A2 and A9 to Thompson Square, where they both terminate.

With this in mind, foresight, common sense and the most basic of marketing principals would tell us that there should be something for those tourists to experience when they reach the terminus of their journey. Option 1 is a modern, unremarkable, homogenised vision of a river crossing and what is worse, the approach road through Australia's oldest public square suffers from the same traits. Rather than enhancing such a valuable tourist asset, Option 1 will be a jarring reminder of the lack of historical care and economic vision of the current government.

In addition to the heritage assets within the Hawkesbury region, experience based tourism is an area of great potential. Across Australia there is growing policy emphasis on developing the resilience capacity of farmers, farming families and rural communities to deal with increasing climate and economic variability and uncertainty. Innovative ideas and concepts arise out of concern for the future of things people think is important to their quality of life. One such concept that has been developing as part of Sydney's land use and food culture is Hawkesbury Harvest. Hawkesbury Harvest, which began in 2000 as a raw agri-tourism product, offering 13 destinations in the Hawkesbury Shire, has been evolving as a multifunctional agriculture development mechanism that now extends right around the Sydney Basin and down into the Illawarra region. This paper proposes that the Hawkesbury Harvest model has something to offer to rural NSW for developing resilience capacity. This is being recognised and is currently being acted upon by Regional Development Australia Southern Inland. (*Hawkesbury Harvest – a multifunctional agriculture model for regional rural development* www.hawkesburyharvest.com.au)

It would seem that tourism and a heritage-as-asset vision for the Hawkesbury has long been left to the care of private citizens and community groups, with little more than token support or encouragement from any level of government. (www.windsorbusinessgroup.com.au ; www.hhart.com.au ; www.ilovewindsor.info)

Flaws in the EIS Study

Socio-economic studies were completed as part of this project. Regrettably, there is no evidence of data being gathered from businesses or patrons on any Sunday – the prime trading day for Windsor as a result of the Windsor Mall Sunday Craft Markets and associated entertainments and promotions by local business owners.

Of equal concern, no data appears to have been gathered from businesses within Thompson Square itself – the area which will be primarily affected by Option 1. Objections from property owners and business owners within Thompson Square have been dismissed as the work of a “few people with vested commercial interests,” by Members of Parliament and some Hawkesbury City Councillors. This is inaccurate and dismissive of the local knowledge and expertise of business

owners who understand the importance of Thompson Square. It is, furthermore, dismissive of issues associated with the economic viability and longevity of Windsor's commercial partners.

The following pages directly address various points within Chapter 7, Part 8 of the EIS.

All responses have been formulated following a review of "*Windsor Bridge Over the Hawkesbury River – Socio-Economic Investigations*" published August 2011 and available online

at http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/documents/tech_reports_aug2011/socio-economic_investigations_aug11.pdf which is referenced in the EIS.

Land use, property and socio-economic issues

Table 7-64 Director General's requirements, page 368

<p>Director General's Requirements The EIS must address the following specific matters: Land use, property and socio-economic – including but not limited to:</p>	<p>Response</p>
<p>Impacts on directly affected properties and land uses, including impacts related to access, land use, property acquisition and amenity related changes.</p>	<p>Directly affected commercial properties within the Thompson Square precinct were not consulted or surveyed. Despite repeated requests of RMS Officers for confirmation that any businesses within Thompson Square were surveyed, none has been received.</p>
<p>Impacts of the project on tourist and recreational uses of Thompson Square, the town centre and the Hawkesbury River and its foreshores.</p>	<p>The EIS states that impact surveys were conducted on Thursday, Friday and Saturday. Despite repeated requests, no explanation was given as to why economic data was not collected on any Sunday, the prime trading day for Thompson Square and Windsor in general due to the operation of the Windsor Sunday Craft Market. On most Sundays, the Macquarie Arms Hotel provides a band in the Thompson Square greenspace for patrons and visitors to the town, which is a major</p>

	drawcard. No survey was taken of the Macquarie Arms Hotel or surrounding businesses.
Social and economic impacts to the Windsor town centre businesses and the community associated with traffic, access, property, public domain and amenity related changes.	As no survey data appears to have been collected within Thompson Square and no stakeholder group was identified and approached with the businesses in that precinct, this requirement has not been adequately addressed.

7.8.1 Guidelines and methodology – page 369

Data Sources

Survey of 55 Windsor businesses undertaken in December 2009. The purpose of these surveys was to collect information about the current function of the Windsor town centre and the potential impacts of bridge replacement options. Specifically, information was sought about the level of trade attributed to passing traffic, customer origin and travel patterns, the purpose of visits to the town, and reasons for choosing to visit the Windsor town centre instead of other centres. (Ref: *“Windsor Bridge Over the Hawkesbury River – Socio-Economic Investigations” published August 2011*)

Business

The survey data was compiled by SGS Economics and Planning Pty Ltd. Data was collected in Roam Areas 1, 2 & 3 as indicated in Figure 1 – Map of Roam Areas in of the above referenced document. Thompson Square is located within Roam Area 1.



Data was collected on Thursday, Friday and Saturday

In figure 6 on page 14 of that document, a map is provided detailing Buildings by Industry Category.



Surveys were conducted from Thursday 11 December through to Saturday 13 December 2009 at various times throughout the day between 9.00am and 5.00pm.

Read in conjunction with those two maps, it is apparent, that the Business Survey (*Attachment C, P.xix, table 1*) shows that, at best, one business was surveyed within the Thompson Square Precinct. It is not, however, entirely clear if indeed that one business was surveyed. The other possibility is that no businesses at all were surveyed within that precinct.

Independent enquiries with almost all of the business owners of the relevant time has received responses that no survey data was collected within the precinct.

Without accurate data as to the operating conditions, patronage and preferences of patrons within Thompson Square itself, the supplied data would appear to be deficient and therefore not a true assessment of the project's socio-economic impact.

Businesses were asked for their opinions on what share of their turnover is attributable to 'people who visit Windsor as their final destination'. The median response to this question was 80 per cent. Businesses were also asked what share of their turnover is attributable to 'people who visit Windsor on their way to another destination'. The median response to this question was 20 per cent. Many

businesses owners did, however, feel that their turnover would be likely to improve if there was more vehicle traffic (73 per cent). Approximately a quarter of business owners indicated that there would be 'no impact' on their turnover with a change in vehicle traffic. Only 4 per cent stated their 'business would be better with less vehicle traffic'. (Ref: "Windsor Bridge Over the Hawkesbury River – Socio-Economic Investigations" published August 2011)

As the majority of businesses surveyed appear to be located either within a shopping centre, or situated along Windsor Mall, which has no street parking or traffic flow, these results are deficient and and irrelevant to the project's impact assessment.

Why customers chose to shop in Windsor town centre

Businesses were asked to nominate the reasons they believe customers choose to visit Windsor, as opposed to another location. The most common responses were 'because it is close to home' (50 per cent of businesses), 'for the character of the centre' (50 per cent of businesses) and for 'a particular product or service' (33 per cent of businesses). Factors such as ease to drive, park and walk were considered reasons by a smaller share of business. (Ref: "Windsor Bridge Over the Hawkesbury River – Socio-Economic Investigations" published August 2011)

As no survey data of either businesses or patrons was conducted on any Sunday, which is the prime trading day for Windsor, and little or no data was collected with the Thompson Square Precinct, the source of customers is in question. Looking at the respondent descriptors, it would appear that a great majority of the businesses surveyed were situated within a shopping centre and provide groceries and every day items. Thompson Square businesses consist mainly of take-away food, cafes and restaurants, more likely to have a larger tourist patronage. As the surveys were conducted between the hours of 9.00am and 5.00pm, it would also appear that no account was taken of patrons stopping on the way to or from work, which has skewed the data regarding ease of driving and parking.

A further matter of some concern was the actual 'source' of data. 'Methodology page ix advises "*The business survey was conducted with **the shop attendants** of 55 randomly selected businesses within Windsor town centre.*"

At a number of points the methodology of this research raises questions as to the reliability of the resulting data. Obviously, the attendant in a shop may well be an owner-operator with a clear grasp of the issues being explored. Conversely a young, possibly casual shop attendant might reasonably be expected to have less information available.

A sample of related issues includes: Businesses were asked for their "*opinions on what share of their turnover is attributable to 'people who visit Windsor as their final destination'.*"

The validity of 'opinions' in such a set of circumstances is questioned.

"Many businesses owners did, however, feel that their turnover would be likely to improve if there was more vehicle traffic (73 per cent)." Whether the 'feel' that business owners /shop attendants (? See earlier point) had regarding the consequences of increased traffic for their business is an objective and useful basis for making decisions involving significant expenditure of public funds, is an issue of some magnitude.

Patrons

The patrons' survey revealed that patrons choose to visit Windsor, as opposed to another location, because it is close to home (40 per cent), for a particular product/ service (18 per cent), and for the character of the centre (9 per cent). Other reasons include ease to drive, park and walk which were nominated fewer times than the others discussed. Around half of the respondents who answered 'for a particular product/ service' worked in the centre. Other particular product/ services responses included local real-estate agents, beauticians and car servicing. (Ref: "Windsor Bridge Over the Hawkesbury River – Socio-Economic Investigations" published August 2011)

The absence of patronage data collected on any Sunday or, apparently, within the Thompson Square precinct, presents a lack of any accurate tourist patronage quota. Tourist patrons account for a large proportion of overall patronage of businesses within the directly affected area of Thompson Square. The majority answer of "close to home" is indicative of general, every day shopping and services, such as groceries and banking, revealing that patrons were mostly surveyed within the shopping centre. Similarly, "real-estate agents, beauticians and car-servicing" indicate a lack of tourist patron opinion. It would therefore appear that the data is deficient and irrelevant to the project's primary impact zone. This review is supported by the Footnote on P. xiii:

"12 Fewer than 20 persons gave responses to visiting for the purpose of 'take away food',

'newspaper or confectionary shopping', 'household goods shopping',
'eating/drinking out',

'visiting a medical specialist', 'personal business', 'travelling though the area',
'dropping/

picking up a friend', 'looking for work', 'recreation/ sport related to river' or
'tourism'."

The survey indicates that the impact of existing traffic on patrons' enjoyment of the centre is likely to be minimal, with 59 per cent of people stating there is 'no impact'.

This was followed by 20 per cent of people preferring less traffic because it would be faster to get things done, 12per cent because it would be easier to walk around, and 10 per cent because there would be less noise. Only 2 per cent of people would prefer 'more traffic'. (Ref: "Windsor Bridge Over the Hawkesbury River – Socio-Economic Investigations" published August 2011)

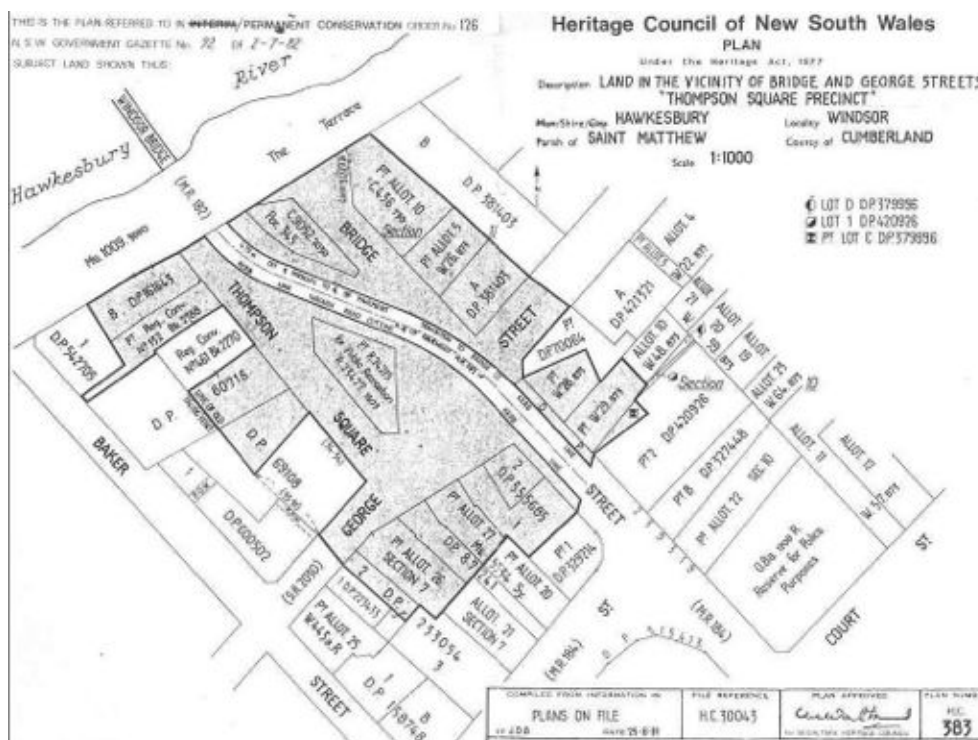
Of the patrons surveyed, no data was collected either on a Sunday, or within the Thompson Square precinct. Therefore the statement that the impact of existing traffic on patrons' enjoyment of the centre is likely to be minimal, which 59 per cent of people stating there is 'no impact'. As the data was collected between the hours of 9.00am and 5.00pm, it would stand to reason that the very people who are actually affected by traffic congestion would not have been present during those hours as they were undoubtedly actually at work.

7.8.2 Existing environment

Property and land use

"The project is located adjacent to the town centre of Windsor in the Hawkesbury LGA." Overview – page 371, EIS

This opening statement is erroneous and an example of the lack of understanding of the area. Option 1 is located within the boundaries of the Windsor Town Centre, not adjacent to it. Thompson Square is not just the green space in the middle. It encompasses all of the buildings surrounding it to their rear boundaries and the roads within it. The Thompson Square heritage precinct is part of Windsor Town Centre, not adjacent to it.



Tourism is a key industry for the region, building on the area's historic and Aboriginal heritage and natural values. The area around the project includes a number of tourist uses and attractions, such as the Hawkesbury Paddle Wheeler and the Hawkesbury Regional Gallery. (Overview – page 371, EIS)

Despite mentioning tourism in a number of points within the EIS, the existing tourism industry in Thompson Square has been largely ignored. However, the Hawkesbury Paddlewheeler seems to be an object of interest, despite being a single private business whose patrons generally arrive at Windsor Wharf by bus and depart from there without ever having visited the town. Special mention is made on page 29 of the following document:

http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/documents/tech_reports_aug2011/socio-economic_investigations_aug11.pdf "This includes an opportunity for the Hawkesbury Paddle Wheeler to travel upstream." This concern for a single, privately owned business, over and above the concerns of around 21 other businesses is disturbing. The Hawkesbury Paddlewheeler is neither a heritage item, nor constrained to a fixed point. At any time, the vessel could be sold (the business is currently for sale: http://www.noagentproperty.com.au/private-real-estate/search/sell/NSW/for_sale/all_property/12056/location-Sydney_North-Hornsby-Hawkesbury_River) and moved to another location, or become a casualty of flooding.



Hawkesbury Regional Gallery is located within Roam Area 3, at the other end of Windsor in a location unlikely to contribute significantly to tourism within the project area, or be affected by the desecration of the historic precinct. Visitor figures for location and current access arrangements, there being no right turns to access its vicinity from Macquarie Street and upper George Street being closed to traffic by the Windsor Mall it would be unlikely to be affected by either Option 1 or a bypass.

Despite the above concerns, the RMS has deemed it necessary to violate the very heart of the economic viability of Windsor and the Hawkesbury with an inappropriate, aggressive and offensively ineffective structure.

13. DEVELOPMENT IN THE HAWKESBURY

“Accommodate between 5,000 and 6,000 additional dwellings by 2031, primarily within the existing urban areas identified in the Department of Planning’s North West Sub-regional Strategy”.

Option 1 will not address the current traffic congestion. (as publicly stated by RMS employees on a number of occasions). This being the case, what management strategies are in place cope with additional traffic?

Jacaranda Ponds

A planning proposal is currently under consideration for Jacaranda Ponds, located at Spinks Road, Glossodia, which has gateway approval for re-zoning.

The development is approximately 8 minutes drive from Windsor Bridge and the current proposal is for 580 half and quarter acre lots.

Hawkesbury City Council has declared that the development will not be approved without significant progress in the building of the new bridge.

The developers of Jacaranda Ponds, EJ Cooper & Sons Pty Ltd, (represented by EG Property Group), have declared they will make a “voluntary” contribution of approximately \$6,000,000:00 which may go towards the cost of putting the 3rd lane on Windsor Bridge.

There is currently a planning proposal for development at Glossodia – Jacaranda Ponds, by EJ Cooper & Sons (EJC), represented by EG Property Group (EGPG).

The original Development Application was submitted to Hawkesbury City Council in May 2010.

The reference for that project is LEP89001/10.

The original proposal was based on a development of “179 rural residential allotments.”

In 2011, following further consultation, EJ Cooper & Sons made the following statements in documents presented to Council:

“ EJC understands that the local community believes development should be accompanied by a commensurate increase in infrastructure provision.

EJC is therefore prepared to enter into a voluntary planning agreement that will specifically designate up to 2/3rds of its development contributions to local road upgrades.

Furthermore, EJC understands that the **Windsor Bridge** upgrade is now on exhibition. Stage One, which will provide for a lane in each direction, is to be fully funded by the NSW State Government.

It is also apparent that there is no funding for Stage Two of the project. Stage Two is necessary in order to deliver the works that will allow the bridge to become three lanes. Currently, it appears that there is no funding available from any level of Government for this second stage of the project, which means that the bridge will remain one lane in each direction for the foreseeable future.

EJC would be more than willing to, as part of its voluntary planning agreement with Council, designate $\frac{1}{3}$ rd of its total contributions specifically to Stage Two of the Windsor Bridge upgrade (being $\frac{1}{2}$ of the contributions for local road upgrades referred to above.) Depending on the density achieved at Jacaranda Ponds, this would be several million dollars worth of contributions set aside specifically towards delivering three lanes over the Hawkesbury at Windsor.”

Council’s response to that statement:

“This response attempts to address one matter of concern discussed in the report of 26 July 2011, that being the capacity of Windsor Bridge. It does not address the other concerns relating to the development’s likely impacts on the Grose Vale Road/ Terrace Road/ Bells Line of Road intersection, the proponent’s claim that the new community would be flexible during peak periods in switching between using either North Richmond or Windsor bridges, and the undesirable proposed northern access point located along the bend section of Spinks Road.

In principle, no objection is raised into entering a voluntary planning agreement for infrastructure upgrades. The rationale behind the proposed ratio of 2/3 for local roads and 1/3 for Windsor Bridge has not been explained by the proponent and there is no indication as yet in regards to the quantum of contributions applicable. However, this could be further examined by Council, RTA and the proponent.”

(Hawkesbury City Council Ordinary Meeting Agenda 29 November 2011)

Furthermore, Hawkesbury City Council has determined that approval for the Jacaranda Ponds development will not be given until “satisfactory” progress has been made:

- (a) Towards resolving the existing traffic problems.
- (b) Replacement of the Windsor Bridge.
- (c) Measures to upgrade local roads affected by the proposal.

(Hawkesbury City Council business papers 2nd March 2012, page 13.
http://www.hawkesbury.nsw.gov.au/_data/assets/pdf_file/0010/46765/ORD_MAR2_2012_Mins.pdf)

HCC Development Policies

The RMS has repeatedly advised that traffic management is outside the scope of the Windsor Bridge Replacement Project. This is in direct conflict with Hawkesbury City Council's development policies and even in contravention of the North West Growth Sector Sub Region planning documents, which require the Hawkesbury Region to supply 5000-6000 new residences in the near future. Replacing a two-lane bridge with a two-lane bridge, cannot, by any reasonable measure, improve traffic congestion sufficiently to cope with the vehicles from additional thousands of residences. Jacaranda Ponds is not the only proposed development west of the Hawkesbury River.

It would appear that residential development approval is dependent on a marked improvement to current traffic congestion affecting residents living on the western side of Hawkesbury River. Whilst acknowledging that RMS has repeatedly advised that the Windsor Bridge Replacement Project is not a traffic management project, it is difficult to comprehend how a State authority can justify costs in excess of \$60,000,000 and irreversible change to a nationally important heritage precinct in constructing a bridge which makes no allowance for traffic congestion nor for significantly improved flood immunity.

There is a second development at Grose Vale Road, North Richmond, which will also contribute further to already unacceptable traffic congestion. Option 1 is an inadequate and inappropriate project from a traffic point of view.

The Hawkesbury Residential Land Strategy

"While the specific development targets of the Hawkesbury Residential Land Strategy were not expressly included in the traffic growth estimates, the traffic growth due to changes in land use and residential development have been considered on a regional scale using growth rates derived from the Sydney Strategic Transport Model (SSTM). This is the accepted model used for such projections and is supplied by the Bureau of Transport Statistics. The traffic impact assessment for the project indicates that with a 25% growth in traffic using the river crossing at Windsor (See Section 7.3), the project would operate at an acceptable level of service." (3.1.6 The Hawkesbury Residential Land Strategy: EIS – Chapter 3, page 16)

Joint Study on Aviation Capacity for the Sydney Region

In 2009-2010, the Federal Government commissioned extensive studies into potential locations of Sydney's 2nd airport. **One of the proposed sites identified within that study is Wilberforce.** These studies were ongoing during the assessment period for the Windsor Bridge Replacement Project.
(http://www.infrastructure.gov.au/aviation/sydney_av_cap/index.aspx)

During the study and subsequent analysis of the viability of potential sites, it was determined:

The sites in the Nepean locality were assessed as clearly superior against most criteria compared with the sites in any other locality. The key advantage of these sites is their relative proximity to the sources of potential demand and the

associated benefits that would accrue to airport users. Site development costs were also estimated to be relatively lower than for compared with most of the sites in other localities.

The next best ranking site in the quantitative assessment was Wilberforce in the Hawkesbury locality. Its main advantage was also proximity to potential demand including nearby commercial growth opportunities.

Estimates indicate that up to 50 air traffic movements per hour or 240,000 per annum could be possible should Wilberforce be selected as a Stage 1 airport site. In addition, up to 46,800 people could move through such an airport each year.

Another relative point in the document was:

Specific issues in constructing a road link: The existing roadways (Wilberforce and Windsor Roads) would require an upgrade. Upgrade to the road bridge over the Hawkesbury River, connection would be relatively easy.

As this was a joint study, overseen by an independent Steering Committee of government and industry experts, inclusive of the NSW Director General of Planning and Infrastructure, whose requirements have determined the planning process for the Windsor Bridge Replacement Project, and the NSW Director General of Transport for NSW (formerly Chief Executive of the Roads and Traffic Authority from 2006 to 2009) it seems remiss in the extreme that such a significant project was not considered as part of the Windsor Bridge plan.

14. LEGAL ISSUES

There are a series of legal issues which have either not been addressed, ignored or challenge the decision to proceed with option 1. These are summarised below but, subject to further advice, are not exhaustive.

State Legal Issues

Challenge by the Owners of Buildings In Thompson Square

There has been identified a lack of consultation with interested parties or stakeholders. In particular, the owners of structures in Thompson Square have been subject to a lack of consultation, most notably prior to the recommendation of Option 1.

The then Roads Transport Authority, now the RMS, conducted surveys of unrelated areas including Berkshire Park, McGraths Hill, Windsor Downs, Bligh Park and couched their recommendation in misleading and deceptive terms, ie. That the RMS/RTA had consulted with the interested stakeholders.

The EIS also refers to the RMS having consulted with numerous “interested parties” who are referred to in the EIS as “The Public, including community groups and adjoining and affected landholders”. These included “residents”, “business owners” and a group called “Windsor Residents First”. Evidence available demonstrates that the, the stakeholders, being building owners and businesses in Thompson Square were not consulted until after the decision was made to proceed with Option 1.

The fact that they did not consult with the directly affected interested stakeholders breaches both the RMS’s own guidelines and the owner’s rights as stakeholders, leaving both individual business owners and land owners with rights, or claims, jointly and severally.

The owners and stakeholders point out that, apart from the general destruction of this historic precinct, the RMS has disseminated misinformation and exercised artistic licence to depict the road and bridge as spacious, peaceful and tranquil, including misleading images of grassed areas where currently ancient historic buildings stand.

A number of individual owners will pursue claims for loss, occasioned by the disruption to business in the Square precinct during construction, and compensation for damage to historic buildings arising as a result of heavy

earthmoving and engineering works being carried out adjacent to some of Australia's most ancient and fragile buildings. There also remains live the possibility of a class action against the RMS, which is being considered by the owners.

Challenge in the Land and Environment Court

The Minister for Roads and Ports, has made statements in the media, reported in the Hawkesbury Gazette presenting the determination of Option 1, as a settled ministerial decision, prior to the completion of the EIS process and determination made by the Minister for Planning.

Couched in language which welcomes the public's positive response to Option 1, it appears, an act of brinkmanship, designed to force opponents into accepting an inevitable adverse outcome.

This statement foreshadows the inevitable determination of the Minister. It would be extremely unlikely that such statements would be withdrawn. However, it raises the issue that the decision is a "fait accompli" prior to any deliberation following the EIS.

It demonstrates that the EIS is effectively "window dressing", so far as the State Government is concerned, and exposes the decision to challenge.

It is recognised that this type of statement, being a premature announcement, represents an opportunity to contest the Minister through the Land and Environment Court.

Defamation Proceedings

Some individual members of organisations, opposed to Option 1, have provided statements to the effect that they have been singled out and arguably have suffered damage from defamatory statements made by Local and or State Members. Such statements made in parliament are, at law, subject to Parliamentary privilege.

Those individuals also claim to have been subjected to libellous or defamatory comment by RMS Staff and Hawkesbury City Councillors sympathetic to Option 1. These, of course, could be subject to litigation but, at this time, have been disregarded by these members given the costs and complexity of challenging such statements. Their rights remain, however, at least in the short term.

Referral to Planning and Assessment Commission

Although not a right normally exercised through Court process, nor in relation to issues of State Significant Infrastructure, the Minister for Planning has the power to

refer matters to the Planning and Assessment Commission, particularly in the case of a publicly contentious project such as the Windsor Bridge Replacement Project.

It is recognised that any referral of the Windsor Bridge Replacement Project to the Planning and Assessment Commission, which results in recommendation for the approval of the project, would be regarded as a determination of an independent referee.

Such referral, although not a legal remedy, would likely involve public hearings which would have the benefit of public airing of the historic and national issues which have been ignored or sidestepped by the RMS, the Minister for Roads and Ports, the Minister for Planning and the State Government.

Commonwealth Issues

Challenge to Ruling of State Significant Infrastructure

There has been a determination, made by the Minister for Planning, to declare the Windsor Bridge Replacement Project as “State Significant Infrastructure.” This determination overrides all other Heritage legislation both State and Federal. It is, so far as the current law is concerned, almost unchallengeable.

Although such a determination appears unchallengeable, such decisions are, in effect, dictatorial and dismissive of rights of individual landowners’, dismissive of Australians’ rights collectively and individually. Such determinations also disregards the significant heritage value of the Thompson Square Precinct, the importance Lachlan Macquarie’s ally Andrew Thompson and the declaration of Australia’s Oldest Square by Lachlan Macquarie as , effectively, insignificant.

The determination to declare a three lane road and bridge (including demolishing an historic bridge) can be challenged on the basis that the proposed road and bridge is not of any “State significance” whatsoever. In contrast the history is. It will be argued that there are numerous alternatives which would be of greater benefit to the public and particularly road users which include significant heavy transport and light alike.

It will be argued that the declaration of this road (purportedly only three lanes) cannot be of “State Significance” which can override all planning and historic protections placed on the buildings it surrounds. A definition of what is describes as “of State significance” needs to be determined by the Courts – inevitably the High Court.

It will be argued that a State Minister does not have the power to determine an insignificant structure of “State Significance” merely by declaration. In particular a State Minister cannot declare a three lane road and bridge as having such state

significance as to override all state and commonwealth protection and planning laws for the preservation of Australia's most ancient buildings. It will be argued that it is ultra vires a state minister's power and offends the doctrine of separation of powers in that it excludes redress to the Courts, following such declaration.

15. THE BYPASS OPTION

Key Issues

- The Project failed to consider all available solutions and Options for the WBRP.
- The Retention and rehabilitation of the current Windsor Bridge and construction of an alternative bypass could be developed for similar cost to the current project.
- This option would have considerable traffic benefits for the Region.
- Bypass solutions for regional and country towns in general are consistent with RMS policy and have been demonstrated as having significant social and economic benefits.
- All alternative bypass solutions need to be considered in a full review of the project.

Discussion

In strategic planning terms the absence of genuine consideration of a bypass solution for Windsor is deeply concerning. And yet, as evidenced by the RMS website, the RMS acknowledges the benefits of bypassing towns on main roads and has invested considerable public resources to achieve this outcome elsewhere.

At a minimum, the RMS (Economic Evaluation Of Town Bypasses, Review Of Literature, November 2011) clearly recognise that *“in the longer-term highway bypasses do not have adverse economic impacts ...on towns that are bypassed; what economic impacts do occur tend to be minimal and of a short-term duration. The evidence suggests that in most cases highway bypasses have resulted in economic development benefits for towns which have been bypassed.”*

http://www.rta.nsw.gov.au/roadprojects/resources/documents/economic_evaluation_town_bypasses.pdf

The lack of due consideration for an alternative solution which retains the existing heritage-listed Windsor Bridge to accommodate local/light traffic AND sees the construction of an alternative bypass option for through traffic and heavy vehicles, goes to the very heart of community concern regarding the Windsor Bridge Replacement Project (WBRP).

Bypass Options

The degree of consideration given to a genuine solution for Windsor is dealt with elsewhere in this submission. However, in light of contributing strategic considerations such as flood evacuations, to say nothing of heritage considerations, the scant effort invested in such a solution is a scandal.

A properly considered, well-designed bypass for Windsor would:

- Improve travel times
- Improve both vehicle and pedestrian safety

- Help conserve heritage buildings by removing vibration impacts
- Improve amenity and economic conditions....

Draft NSW Long Term Transport Master Plan September 2012

A bypass solution is also consistent with the NSW Government's recently compiled **Draft NSW Long Term Transport Master Plan**, (September 2012), designed to outline a clear direction for NSW transport over the next 20 years.

In Chapter 6: Providing Essential Access for Regional NSW, it speaks of the importance of Regional Small and Medium Towns. Windsor is unique in the sense that whilst it is (relatively) close to the Sydney Metropolitan Region, due to the topography of flood plain and its unique heritage character it retains many of the characteristics of a Regional centre. The Government's Master Plan talks of the need to consider bypasses as an alternative for more efficient freight movement and to preserve the amenity and character of regional towns (Chapter 6.5).

The Draft Long Term Transport Master Plan proposes a new program of town bypasses to improve travel within towns, reduce delays caused by freight traffic and to increase safety and says that *"Bypass projects allow us to improve safety for road users and increase the amenity of towns through reduced noise, lower emissions and less traffic."* . (NSW LONG TERM TRANSPORT MASTER PLAN Section 8 Moving regional freight more efficiently Page 242)

While the Long Term Master Plan was drafted after the Windsor Bridge Replacement Option was developed, its content and conclusions add considerable weight to the claim for a bypass solution for Windsor.

Rickaby Line:

In the absence of a genuine bypass solution being offered by the RMS, the community has proposed a "Bypass and Retention" Option which would connect Wilberforce Rd with Hawkesbury Valley way across Rickaby Creek. This solution has been given the description "The Rickaby Line".

The Rickaby Line is created by extending the Wilberforce Road from the Freemans Reach/ Wilberforce Rd intersection to connect with Hawkesbury Valley Way, via a crossing of the Hawkesbury River upstream of the historic Windsor Bridge at the Ben's Point

Traffic engineers (Attachment A) advise that approximately 50% of the traffic that crosses Windsor Bridge and goes through Thompson Square then turns right into Macquarie St. It then generally heads to Richmond, South Windsor or Penrith.

Given that

a percentage of traffic also turns into George St east, less than 50% of the Windsor Bridge traffic goes straight ahead to McGraths Hill and Windsor Road.

The Rickaby Line effectively splits the traffic on the Wilberforce side of the existing bridge. Light local traffic heading into Windsor or towards McGraths Hill could continue across (the renovated) existing bridge into Windsor. Traffic travelling to Richmond or Penrith would bypass Windsor and head straight to Hawkesbury Valley Way.

All heavy vehicles would also travel this route. Heavy vehicles accessing Windsor Road would travel via the Rickaby Line to Hawkesbury Valley Way, then across the Jim Anderson Bridge to McGraths Hill.

In proposing this alternative solution, the community enlisted the assistance of retired bridge engineers, Brian Pearson and Ray Wedgwood who, between them, have had over 80 year's experience in the location, design, construction and maintenance of the State of NSW's bridges, with each of their careers culminating as the State's Chief Bridge Engineer.

These engineers, with their extensive experience in Road and Bridge building have estimated that the proposed Bypass solution could be built for less than \$70million.

RMS response to the Rickaby Line

The original "bypass options" provided by the RMS for consideration (Options 6 and 8) were ill-conceived and ultimately dismissed on cost grounds (for a brief discussion regarding costings see page xxx). Due to ongoing public outcry over the project the RMS has belatedly used the EIS to "consider" the alternative proposed by the community.

In their response (EIS Vol 1, page 46) the RMS dismisses the Rickabys Line on cost grounds. Additional claimed impacts include:

- Impact on local character of the area along the proposed route
- Impact on a number of recreational areas and businesses.
- Need for adjustments to the surrounding road network.
- Cost factors associated with two bridge structures and property acquisition.

The irony of these claims cannot be ignored:

1. *"Impact on local character of the area along the proposed route".* The Rickaby's Line travels through open land - turf farms and public recreation spaces of varying calibre. Some of the area involved is described in the EIS (Chapter 7, page 378) as "... is flood prone (below the level of the three year flood event), which limits its potential uses and value to agricultural and horticultural enterprises."

In fact this assertion regarding 'local character' takes on a somewhat hypocritical hue when one considers the relatively recent construction of the Jim Anderson Bridge.



Jim Anderson Bridge

By way of contrast, Option One travels through the oldest public square in Australia, surrounded by recognised heritage assets: residential, retail and commercial.

2. *“Impact on a number of recreational areas and businesses”.* It is difficult to understand why impact on turf farms, sporting fields and public land is considered more significant than the impacts on Thompson Square and its associated buildings, businesses and residences.



3. *“Need for adjustments to the surrounding road network.”* Elsewhere in this submission it has been established that the bridge construction component of Option One makes little contribution to traffic conditions, the bulk of the benefit derived from Option One relates to changes to surrounding intersections.

However Traffic Engineering analysis of the Rickabys Line proposal shows benefits to Windsor network as a whole, with district access benefits for all towns north of Windsor.

Furthermore, given that traffic volumes are the product of external factors (residential, industrial and resource development, for example) it is difficult to comprehend why any option would be responsible for greater adjustments to the surrounding road network than any other option.

4. *“Cost factors associated with two bridge structures and property acquisition”.*

Given the extraordinary historical significance of Thompson Square and the established recognition that large interurban vehicles should be removed from residential, retail and recreational environments - (http://www.rta.nsw.gov.au/roadprojects/projects/western_region/moree/index.html - “Benefits”), “cost factors” are considered to be an unsafe argument for the Government to pursue. Nonetheless, it is worth pointing out Rickaby’s Line costs have been reliably estimated to be comparable with Option One. Especially when the Heritage value of Thompson Square to Windsor is considered by Cost Benefit Analysis.

The established precedent of no cost land transfer in the case of Option One makes references to land acquisition costs appear unnecessary. However approximately 50% of the Rickabys Line route is through publically owned parkland.

It is further contended that established RMS priorities such as “Protects the Towns Built Heritage and its Setting” outweigh any remnant considerations relating to cost. A cost benefit analysis of Thompson Square’s Heritage value to Windsor and the Hawkesbury must be completed before any comparison can be made



Bypass Benefits

In dealing with the planning issues of this project, no analysis would be complete without reference to the RMS' own research into the benefits of bypasses.

Much debate has been undertaken regarding the relative merits of a bypass for Windsor. Invariably it has fallen into two camps: those contending a bypass will "kill" the town and those contending that it will revitalise the town.

Significantly, with regard to the limited bypass assessment by the RMS in relation to the alternative Option 6, the RMS concluded that:

"The impact on trade in Windsor town centre as a result of the bypass under option 6 was tested but found to be negligible." (3)

Various studies have been undertaken regarding potential effects on bypassed towns. Two publications cited by the RTA/ RMS are:

1. Government Options Review Workshop Report Prepared September 2009 by Tierney Page Kirkland Pty Ltd Published August 2011
2. Bureau of Transport and Communications Economics - The Effects on Small Towns of Being Bypassed by a Highway: "A Case Study of Berrima and Mittagong"

Salient points to be taken from those studies include:

- The general consensus from the myriad of bypass literature is that a highway bypass is not associated with the death of a town. Page 5 (1)
- Communities and business districts that have a strong identity as a destination for visitors or for local shoppers are the ones that are most likely to be strengthened due to the reduction in traffic delays through their centres (1)
- A landmark US study (NCHRP, 1996 – and still a landmark report in 2011) reviewed the literature associated with 83 highway bypasses. The study reported that - a community's overall business activity (gross annual sales) grows more rapidly where bypasses have been constructed. Page 8 (1)
- The longer-term traffic levels in medium or larger bypassed towns may approach those of pre-bypass levels, with the studies indicating increased economic activity from local and regional clientele and from stopping traffic. Page 28 (1)
- A bypass generally brings about positive land use and land value changes for the bypassed community and for businesses on the main street. Page 28 (1)
- Bypasses rarely have created adverse economic impacts on communities. The most likely communities to see any adverse impacts are the smallest communities (under 1,000 population) Page 10 (1)
- The social impacts of a highway bypassed on a bypassed community are generally very positive. Page 28 (1)

- There is a perception on the part of residents and businesses in bypassed communities that the bypass is very important to the quality of life in their communities and to the environmental amenity of their communities. Page 28 (1)

Berrima

- In Berrima, tourism has taken off now that its historic charms are unblemished by heavy traffic. Page vii (2)
- *About 80 per cent of tourists to Berrima who were interviewed in a recent BTCE survey commented that the reduction in heavy vehicle traffic had made the town a nicer place to visit Page 3 (2)
- Effects of the bypasses on Berrima's economy are all positive, reflecting the increase in the town's tourist appeal Page 7 (2)
- The town's retail and tourist establishments indicate that the bypasses caused about a 7 per cent increase in gross sales and a 2 per cent increase in employment. Page 7(2)
- Berrima now attracts the same high property values that Bowral does; before the bypass, it was on a par with less expensive Moss Vale. Page 7 (2)
- It is projected that retail and tourist employment will be 8 per cent larger as a result of the bypasses, and that land and property values will be 22 per cent higher. Page 6 (2)
- Berrima's experience with tourism has shown that towns can profit from the improvement in their environment after being bypassed. Page 15 (2)

Conclusion

There is every evidence to suggest that given:

- its existing, unique position as a destination
- its population size
- the level of through traffic that currently does not stop at the town (traffic data shows that 70 per cent of vehicles using the Windsor Bridge crossing are considered to be through traffic. Much of this traffic is likely to be freight transport. * Windsor Bridge Options Report August 2011 Page 42), and
- the overriding need to preserve the heritage and history of the area,

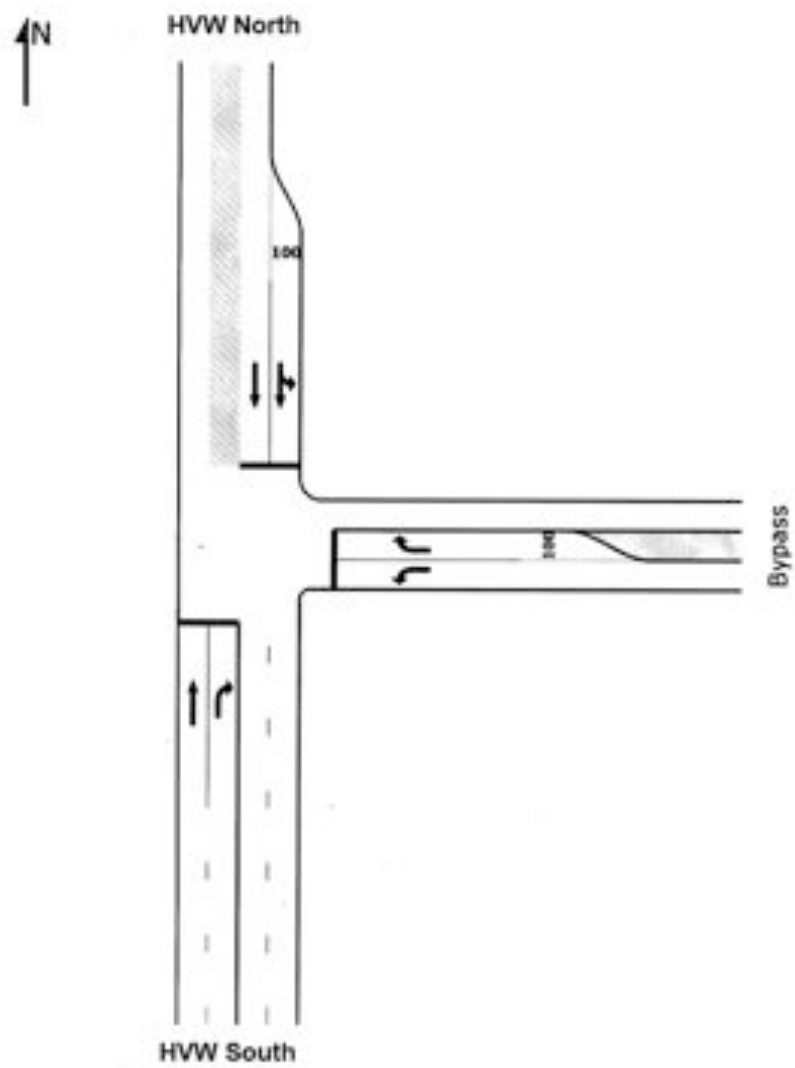
Windsor presents as an excellent candidate to significantly benefit from a bypass for through traffic, especially so when the bypass is considered in conjunction with the retention of the current heritage bridge to provide access to what is arguably the State's premier heritage precinct, and as a heritage destination in its own right.

References:

1. Government Options Review Workshop Report Prepared September 2009 by Tierney Page Kirkland Pty Ltd Published August 2011,
2. Bureau of Transport and Communications Economics - The Effects on Small Towns of Being Bypassed by a Highway: "A Case Study of Berrima and Mittagong"
3. August 2011. Windsor Bridge over the Hawkesbury River. Socio-economic Investigations. ISBN: 978-1-921899-77-5 Publication Number: 11.338.

1. The Bypass Option will allow light traffic to continue to use the existing Windsor Bridge, but heavy traffic (over 3 tonnes) will be diverted onto the Bypass route. Light traffic would have this option, should it choose to use it. Thus, only a proportion of the current Windsor Bridge traffic would be diverted.
2. The capacity of the new intersection of the Bypass with Richmond Road has been assessed using SIDRA intersection modelling software. The morning peak hour would have a Level of Service of A, while the afternoon peak hour would have a Level of Service of B. These are good levels, indicating spare capacity.
3. The intersection of Hawkesbury Valley Way and Macquarie Street is and will remain the busiest intersection in Windsor. It currently operates close to capacity in peak periods. The Bypass option will channel additional southbound and northbound traffic along Hawkesbury Valley Way, being traffic that currently uses Bridge Street and thence Windsor Road. Traffic from Windsor Bridge with destinations towards South Windsor and Penrith will have their routes altered, from travelling straight through along each direction of Macquarie Street, to either a left turn from Macquarie Street West or a right turn into Macquarie Street West. The proportions of traffic between Windsor Bridge and Windsor Road, and South Windsor/Penrith have been derived from traffic surveys undertaken as part of the “Windsor Town Centre Study”, (June 2011), by Christopher Hallam & Associates Pty Ltd. This study also provides the base traffic flow data for this assessment.
4. The traffic using the Bypass has been estimated from the August 2012 traffic counts in Bridge Street, overlaid on the 2011 traffic counts.
5. The Hawkesbury Valley Way and Macquarie Street intersection has been analysed using the SIDRA program. As with any intersection close to capacity, the results are sensitive to how the traffic signals operate. For the 8.00-9.00am peak hour, with a fixed signal cycle time, the impact of the Bypass is to improve the Level of Service and reduce delays. Under vehicle-actuated control, the modelled delays are higher, but the impact of the Bypass still improves the Level of Service and reduces delays.
6. The 4-5pm peak hour sees higher traffic flows. While detailed sensitivity testing has not been undertaken at this stage, under vehicle-actuated control, the operation remains little different with the addition of Bypass traffic and concurrent redistribution of movements. A 3% increase in average intersection delay is indicated, although the degree of saturation of the intersection reduces.
7. Looking at both peak periods, the impact of the Bypass on this intersection is neutral.

8. The construction of the Bypass reduces traffic flows along Bridge Street, allowing the existing roundabout at the George Street intersection to remain unchanged, and reducing the pressure on the current intersection of Bridge and Macquarie Streets. All intersections along Macquarie Street between Bridge Street and Hawkesbury Valley Way would have reduced traffic flows and hence lower delays.



16. TOWN PLANNING

Thompson Square

Sir John Sulman in 'An Introduction to the Study of Town Planning in Australia', (Sydney 1921 p.98) notes that *'Direct road connection with the centre of the town or city is essential for the suburb; but for through traffic to the country it is desirable that there should be a bye-pass road or a separate radial avenue. In the latter case it might with advantage be confined to quick transit only, and should be formed of materials that would be dustless and suitable for motor traffic. It should run through the open land that ought to surround every suburb. The dangers of quick traffic in a busy street, and the loss by dust to the residents, as well as loss of time by travellers, would thus be avoided.'*

It is difficult to comprehend why something so apparently self-evident, so completely inappropriate as a major road in a heritage town square requires any rebuttal at all, but apparently in the NSW of 2013 it does.

The rejection of Option One is based on wide-ranging concerns, which are the object of other chapters in this submission. This chapter is a particular response to issues of visual impact within the Square.

As has been repeatedly pointed out, Thompson Square is a collection of (by Australian standards) very old buildings. That, of itself might alert the conscientious bureaucrat to the need for caution. However there are other significant concerns, beyond both heritage and objections raised in other chapters.

An Issue of Scale: Georgian Aesthetics

Probably the single most difficult thing for many people to appreciate the significance of, yet is arguably the most brutal of all the impacts of the Windsor Bridge Replacement Project, is the issue of scale.

Much has been said elsewhere (EIS, Vol 2, Biosis) of the historic credentials of Thompson Square. It is frequently described as Australia's oldest Georgian square.

The Georgian Period is defined as the years from 1720 to 1840. Thompson Square has existed as a public space since 1794 (see Chapter 1), and was named by Governor Macquarie in 1811.

The Royal Institute of British Architects describe Georgian architecture as "perennially popular" going on to speak of "elegant town developments, the tree-lined terraces, select squares and crescents that proliferated after 1740"

In terms of a streetscape we are also told that “Regularity of house fronts along a street was a desirable feature of Georgian town planning.” and “Georgian designs usually lay within the Classical orders of architecture .

<http://www.architecture.com/HowWeBuiltBritain/HistoricalPeriods/GeorgianWestAndIreland/GeorgianBuildings.aspx>

But Thompson Square in 1794 was about as far away from Georgian England as it is possible to imagine... it existed in the farthest reaches of the Empire. It was not a neat tidy, elegant town development. There was a variety of house fronts, with some of the more substantial buildings only appearing as late as the 1860's and Windsor Bridge itself being added to the landscape in 1874. Indeed, whilst the Doctor's House can claim the distinctive air of Georgian aesthetics, other buildings in the Square speak somewhat of Victoria loyalties.

And yet, the Square retains a charm and consistency that defies its architectural stylistic variations, perhaps unified instead by its Georgian roots. British architect, Stephen Gardiner said that “Georgian architecture respected the scale of both the individual and the community” and Thompson Square today still respects the scale of both the individual and the community. Its defining buildings, whilst extraordinary achievements in a fledgling colony, are of relatively modest scale, even the tallest rising no more than xx metres from ground level. And at a community level, the Square is equally proportionate, generous enough for community events, whilst respectful of its country-town responsibilities.

Put bluntly, Thompson Square is a place of human scale, defined and blessed by its history. Whether speaking of the structures that form the Square, or the spaces within, the scale neither intimidates nor overwhelms. Views and sightlines allow views within the Square as well as vistas across the Hawkesbury River to the agricultural lands beyond.

The view to the floodplain, where today farms still produce fresh food for Sydney, allows the visitor to see the Square in context and perhaps gain some small appreciation of its history.

The 'Reunification' Argument

No consideration of the Thompson Square landscape can avoid the much maligned 1934 cutting, which dives modestly down from the George and Bridge Streets intersection to access the Windsor Bridge at the Terrace. The evolution of traffic routes is dealt with under the 'Precedent Argument' however this cutting has become part of a rhetoric designed to deliver a specific outcome: Option One. It has been made responsible for the 'reunification' argument.

The Option One rhetoric, in the case of the precedent argument ignores historical evidence; it ignores the defining character of the Square when speaking of 'reunification'.

In the Biosis Report (Historic Heritage Assessment for Windsor Bridge Replacement Project, page 263) the writer repeats the oft-repeated mantra that Option One would *“unite the two parkland areas of Thompson Square by infilling the existing road cutting from George Street to the Windsor Bridge”*

Two parklands, of themselves, are not a bad thing. The creation of large and smaller spaces within the domain of the Square arguably contributes to its interest and charm. The cutting itself is demonstrably proportionate. Human scale. An element like the bridge it was built to serve, it is functional and has an honesty and lack of pretention. This is unquestionably a road that is the product of cultural and technological development yet to challenge the Square’s ‘human scale’.

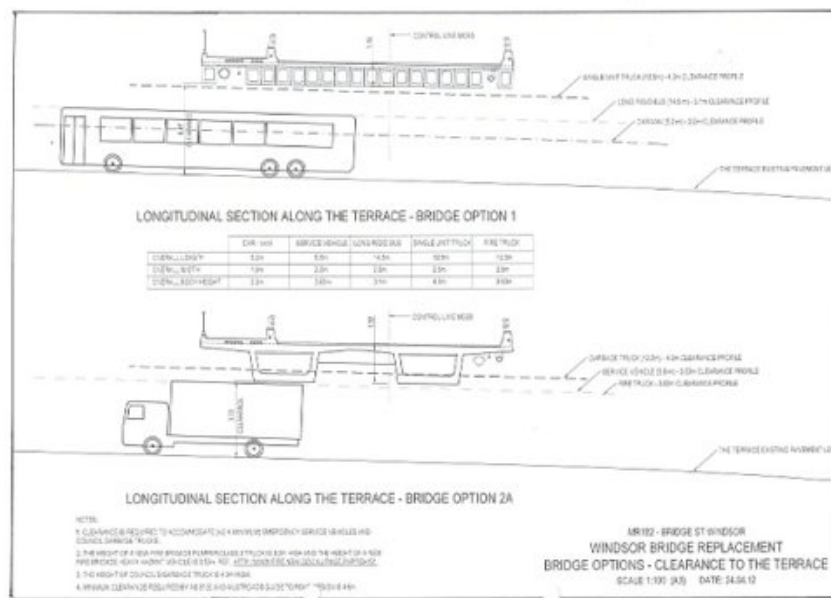
And yet the rhetoric continues, (Biosis, page 263). *“By locating the southern approach road close to the eastern perimeter of Thompson Square, the opportunity has arisen to consolidate the two open spaces that create the upper and lower parkland area at present.”* Like the precedent argument, the reunification argument does not withstand even moderate scrutiny. The Biosis Report goes on to say *“The Bridge Street cutting physically disconnects the two spaces and **makes access from the commercial side of Windsor to the lower parkland area difficult and dangerous. Bridge Street disconnects eastern Windsor from the rest of the town during peak traffic periods.**”*

This is a remarkably disingenuous approach to the issue. The current road is 6 metres wide: a dimension consistent with a road that might have carried the types of vehicles that Andrew Thompson would have been familiar with. It is a dimension consistent with human scale.

What is proposed is 15 metres wide, which although a significant change, does not tell the entire story. The road that is supposed to ‘reunify’ Thompson Square has another significantly different characteristic from the modest 1934 cutting: it is elevated. Not for its entire journey, but ‘lift off’ occurs approximately halfway between the George Street intersection and the riverbank, although the bridge, of course, continues out across the river and despite having now “left the square” so to speak, its influence will still be felt. This influence is no longer a simple two-dimensional impact because it now has elevation impacts and the elevation includes additional elements: massive concrete foundations and piers holding this huge structure aloft.

Nonetheless, the RMS insist that *“While the project would have a substantial impact on landscape character, some of the landscape character changes are likely to benefit the community and enhance the experience of visitors to the area in the long term.”* (page 283 EIS Volume 1). This seems highly unlikely.

Furthermore any suggestion the RMS has selected the most discreet engineering solution available to them is challenged in correspondence between the RMS and Hawkesbury City Council which reveals that, of the two design solutions under consideration, the incrementally launched bridge would have an more significant elevation than the rejected 'plank' alternative.



Two construction options for Windsor Bridge

And at the landscape level, Biosis continues to insist, *“Another substantial physical impact would be the results of the consolidation of the two parkland areas into one. The purpose of consolidation and one of the outcomes of the project would be to transform the two parkland areas into a more useable space with a connection to the river”*.

This is a curious promise, given Biosis had previously said that a road xxx metres wide “physically disconnects the two spaces and makes access from the commercial side of Windsor to the lower parkland area difficult and dangerous. Bridge Street disconnects eastern Windsor from the rest of the town during peak traffic periods.” So, in reading the Biosis promise, it is important to understand intent. The project does NOT reunify Thompson Square. It replaces what would become an increasingly pedestrian-friendly local road with the hostile environment of an inter-urban arterial road.

The visual difference between the proportionally unified, human scale elements of existing architecture, landscape and 1934 road versus the brutalist concrete intrusion of the proposed bridge is comparable to the differences between Georgian and European architecture around the second World War.

Monumentalism

Wikipedia says that, *“Most regimes, especially new ones, wish to make their mark both physically and emotionally on the places they rule. The most tangible way of doing so is by constructing buildings and monuments.”*

http://en.wikipedia.org/wiki/Nazi_architecture

It goes on to say that in the case of one particular regime *“ architecture has three primary roles in the creation of its new order: (i) Theatrical; (ii) Symbolic; (iii) Didactic”* and in the Didactic mode apparently, *“Engineering could be coupled with architecture to teach lessons ... It is clear that the Autobahn was seen as a way of creating a community, which was both physically and symbolically linked. When Carl Theoder Protzen entitled his painting of the Autobahn bridge at Leipheim, "Clear the forest - dynamite the rock; conquer the valley; overcome the distance; stretch the road through the German land," he was linking clear connections between what should be done and what it was to accomplish.... The effort that went into the styling of Autobahn bridges and garages shows plainly that it was more than just a motorway. In some circumstances, the design used for the Autobahn actually affects the functioning of its supposed purpose.”*

However, whilst it might be conjectured that making a *“mark both physically and emotionally on (the) places”* may motivate some local politicians, the issue is neither that, nor functionality. Neither is it about a cult of victory.

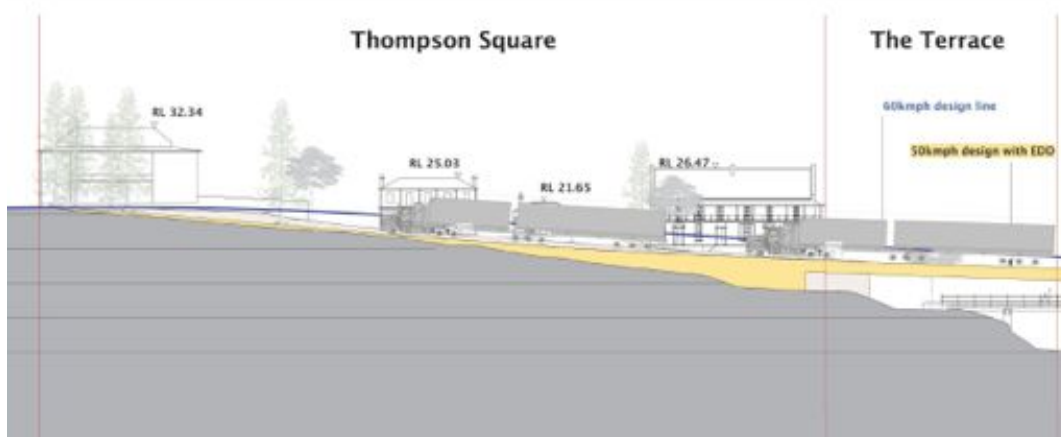
The comparison is between the domestic and comfortable scale and proportions of Thompson Square and a structure whose DNA comes from gray, massive, looming structures like Zeppelinfeld stadium in Nuremberg. It is the monumentalism of the proposed new structure in Thompson Square that references such architectural influences.

The life-span of Thompson Square is significant. It has been a period of enormous and increasingly rapid change. Change that has particular implications for the Square today.

Despite American statistics that show the energy cost of carrying one ton of freight a distance of one kilometre averages 337 kJ for water, 221 kJ for rail, 2,000 kJ for trucks, and nearly 13,000 kJ for air transport, heavy transport continues to dictate road standards in NSW. And it is those standards that which require the increasingly monumental structures to carry them. And so, from the days of horse and cart and trucks like this:



... Thompson Square will finally arrive in the twenty first century:



“Human Scale” Today

The Georgians do not hold exclusive rights to human scale architecture. Today these precepts are recognised in theories such as Principles of Intelligent Urbanism (PIU).

PIU includes *“environmental sustainability, heritage conservation, appropriate technology, infrastructure efficiency, placemaking, “Social Access,” transit oriented development, regional integration, human scale, and institutional integrity.”* (Harvard, http://en.wikipedia.org/wiki/Principles_of_Intelligent_Urbanism)

In fact PIU says that the should integrate *“with existing cultural assets, respecting traditional practices and precedents of style (Spreiregen: 1965). This urban planning principle demands respect for the cultural heritage of a place, “ and calls for respect for “historic monuments and heritage structures, leaving space at the ends of visual axis to “frame” existing views and vistas. Natural views and vistas demand respect, assuring that buildings do not block major sight lines toward visual assets.”*

The principle that *“Planning decisions must operate within the balance of tradition, aggressively protecting, promoting and conserving generic components and elements of the urban pattern.”* is considered particularly relevant to Thompson Square.

A philosophy that creates, sustains and promotes “people friendly places, pedestrian walkways and public domains where people can meet freely is needed: ... parks,

gardens, glass-covered gallerias, arcades, courtyards, street side cafes, river- and hill-side stroll ways, and a variety of semi-covered spaces,”

And so, PIU offers a philosophical model that is entirely consistent with the Georgian respect for *“the scale of both the individual and the community”*

Right now Windsor needs a planning philosophy that *“promotes the scale of the pedestrian moving on the pathway, as opposed to the scale of the automobile on the expressway... and imaginable precincts, as opposed to the imagery of façades and ... monumentality”*.

In developing a genuine town plan Windsor must not go down a route that creates artificial barriers, promotes vehicles in recreational precincts and fails to respect the precepts of its historical origins.

Planning and Behaviour

The structures and spaces within any townscape provide the backdrop for peoples' lives. They shape the community's connection with the workings of a town and therefore how the community interacts within itself. It is the interaction between the built structures and the community response that creates and sustains the intrinsic nature of a town.

In the process of planning, it is important to examine the community's preferred response to a space and the behaviors within it, and then plan accordingly. In a number of ways the local community has clearly and unequivocally expressed their ambitions for Thompson Square. Online surveys (Chapter xxx) and feedback forums, along with social media have made clear the community's rejection of the current plans for this particular townscape.

In light of this expressed community position there are serious questions that remain unaddressed by the EIS:

- How would the noise, vibration and visual impacts of a large road through a public square contribute to the behaviours of humans in the adjacent spaces?
- Will they genuinely be inspired to stay and partake in activities within the square, or will they feel inclined to move away?
- If they do stay away, will the space then attract anti social behavior, and then detract further visitors to the area?
- What contingency plans does the Government have prepared to mitigate social and economic consequences of Option One, post –construction?
- If the preferred response is to have a lively, bustling area that is attractive, safe and welcoming, then what needs to change in the planning to facilitate this?

When considering parks, Sulman (pp.130-131) remarks:

'In the suburbs where there is no congestion of population, or much through traffic, the park may well be treated on more natural lines ...Dwellers in the suburbs, though they have more space than dwellers in the city itself, still need a change from their surroundings, and this only a real park can supply ... For change, rest, and fresh air any waste piece of land can... be satisfactorily utilised, provided it is properly laid out Riverside reserves lend themselves to the formation of a continuous road or path, and a varied treatment of the different sections, making full use of any natural features, would be desirable.'

Thompson Square can be all that and more. It is a true 'Square'. It should have a vibrant economic life, in addition to the functions that Sulman proposes.

Planning that encourages areas to have high pedestrian activity will generally be perceived as safe, welcoming and attractive. Providing well-lit areas that allow for after hours access can also enhance this. It is important as well to make it easy for people to want to engage in a event or activity, for visitors to feel embraced and their needs considered.

In this climate, local residents who have not been passionate about supporting their town may have an interest sparked, leading to greater participation within the community and bringing about an interest in where they live. This increased patronage by both visitors and locals can bring about a sense of well being within the community, and the feeling of pride that comes with being involved in a thriving and popular town.

It is not difficult to connect the images of a vibrant public space, which experiences high pedestrian activity and is perceived as safe, welcoming and attractive with the Thompson Square of today. It is considerably more difficult to reconcile it with the current proposal.

Case Study: Toll House

The Hawkesbury is rich in architectural gems dating from as early as 1815 when the Macquarie Arms was constructed. One that tells a most poignant story is Windsor's Toll House, one of only two intact toll houses remaining in NSW (the other is at Mt Victoria)

Tenders were called for a Toll House in 1834 and the building was completed in 1835, although it was practically demolished as a result of the 1864 flood. However it was rebuilt with some alterations shortly after. It is a small building, with a projected bay window, which the toll keeper could view the road from both angles, to collect tolls.

In 1975 a new high level bridge was constructed over South Creek almost concealing the Toll House from view. The Toll House provides a salutatory lesson regarding heritage destruction for questionable transport outcomes.

Below is a photograph of the 'flood free' Fitzroy Bridge circa 1990. The photo tells its own story: yet another example of Government investment in a 'flood-free' bridge at the expense of heritage.

The next photograph shows all that is generally visible today of the Toll House, and the third image is of the Toll House prior to the construction of the current Fitzroy Bridge, which replaced the 1853 structure of the same name.

These pictures of the Toll House, viewed in light of the meaningless contribution made by this new Fitzroy Bridge to flood-free access, and the consequent destruction of the historic context of this little building, are illustrative of the destruction that inappropriate, inadequate and poorly conceptualized projects can inflict on heritage assets.

References : "Exploring the Hawkesbury" Ian Jack;
"Macquarie Country" D. G. Bowd
"Windsor Toll House : user pays in the 19th century"



The Fitzroy Bridge over South Creek, surrounded by water, circa 1990



The Fitzroy Bridge dwarfs the historic Windsor Toll House



The Toll House before the new Fitzroy Bridge.

Case Study: Rouse House

In contrast to the poor outcome for the Toll House at Windsor, the story of co-operation between various authorities in regard to Rouse House and the adjacent Old Rouse Hill School House is a testament to just what can be achieved when there is shared values and a will to achieve a positive outcome amongst responsible authorities.

The story of Rouse House goes back to 1813 when Richard Rouse, the Colonial Superintendent of Public Works, chose the site for his new house and farm at Rouse Hill. He cleared a small area of native Cumberland Plain woodland adjacent to Windsor Road half way between the towns of Parramatta and Windsor on the Hawkesbury River.

The grant of 450 acres, however, was not made until October 1816 and sometime between 1818 and 1825 Rouse, his wife Elizabeth (1772-1849) and their family moved from Parramatta to the new house.

The property was passed down the generations to Richard Rouse's second son Edwin (1806-1862), to Edwin Jnr (1849-1931). Edwin Jnr and his wife Bessie had two daughters the elder of which, Nina (1875- 1968) married wealthy George Terry of nearby Box Hill House, where they brought up six sons and she lived in the house until her death in 1968.

Subdivision of the property began in 1951 and continued until 1974 when only 8.15 hectares of the original 182 hectares remained.

Nina's sons Gerald Terry, Roderick Terry, Roderick's daughter Miriam and her husband Ian Hamilton occupied the house as co-tenants until Roderick's death in 1980. Foreseeing problems with 'multiple ownership', Gerald persuaded the New South Wales government to resume the property in March 1978 and it came under the management of the Historic Houses Trust (HHT) in 1986.

The HHT sought three major and interrelated planning outcomes for the estate pledged by the then-Premier, The Hon. Bob Carr: the acquisition of the old Rouse Hill School; the deviation of Windsor Road and the realisation of stage two of Rouse Hill Regional Park.

An opportunity came after the HHT had purchased the Old School Site from the Dept of Education and with the construction of the upgraded Windsor Rd taking place, the RTA agreed in 2001 to deviate approximately 1.5 kilometres of the new Windsor Road to the north of the school building in an arc from Second Ponds Creek to Guntawong Road. The HHT worked closely with the RTA to achieve quite outstanding results. Instead of carving a scar through a nationally significant cultural landscape, the RTA engineers and designers worked with the HHT to enhance the historic site.

The cutting between the house and school has been refilled so that they are once again connected. The original section of Windsor Road has been re-gravelled and the overhead power lines removed so that the historic Windsor Road will also be a focus of the museum site.

Overall the result has been a big win for the people of NSW and Australia.



Aerial View of the “deviation” of Windsor Rd



The Old School House



Rouse House

References:

Historic Houses Trust.

http://www.hht.net.au/discover/highlights/insites/rouse_hill_house_and_farm_planning_for_the_future

Rouse Hill Estate by [Terri McCormack](#), 2008

RMS Principles

The role of the RMS in the Windsor Bridge Replacement Project should be consistent with a range of publicly stated policy positions, including:

Roads and Maritime Services is committed to achieving good urban design outcomes. This means:

- *Road projects must fit sensitively with the built, natural and community environments through which they pass, in both urban and rural locations.*
- *Road planning and design must contribute to the accessibility and connectivity of communities by all modes of movement, including walking, cycling, and catching public transport.*
- *The design and management of roads must contribute to the overall quality of the public domain.*

http://www.rta.nsw.gov.au/roadprojects/community_environment/urban_design/index.html

*“A key principle in roads and maritime services’ Beyond the Pavement urban design policy is to incorporate heritage and cultural context in infrastructure planning and design and, in particular, **to protect bridges of heritage significance** not only in themselves but also in relation to their physical and community context.”*

RMS staff are also encouraged (7.2.3) to *“Respect the setting heritage is part of place. Bridges of heritage significance often define and sometimes are an icon within the community. They are often an important visible element. preservation of, modifications to, and duplication of, such bridges should respect their setting by:*

- *preserving the curtilage, in this instance, the envelope around, below and above the bridge necessary to protect its heritage or cultural value. The bridge and its curtilage form a spatial and aesthetic entity, and may also be part of a listed heritage precinct, such as the Sydney Harbour Bridge. therefore, keep the curtilage as intact as possible and ensure that design changes of the bridge are sensitive to the character of that curtilage. consider that the curtilage is also part of a wider setting. (refer to Heritage Curtilages publication – companion to NSW Heritage Manual).*

Engineers Australia, Practice Note on engineering and industrial heritage, April 2010 says *“the present generation of engineers owe a duty of care in dealing with significant engineering heritage works.”*

It is deeply disappointing to how how significantly the Windsor Bridge Replacement Project diverges from these standards and to contemplate how very different the project might have been if the RMS had adhered to its own standards.

Other Project Concerns:

Speed limits

The RMS online resource, NSW Speed Zoning Guidelines indicate that Thompson Square is in a built up area.

“Built-up area – In relation to a length of road, an area in which either of the following is present for a distance of at least 500 metres or, if the length of road is shorter than 500 metres, for the whole road:

buildings, not over 100 metres apart, on land next to the road.

street lights not over 100 metres apart.” (page 5)

If Thompson Square is part of a built up area, the original objective of achieving a speed limit of 60 km/h is in breach of RMS Guidelines, which say:

“Default speed limits, which are statutory speed limits that apply in the absence of speed limit signage and do not require signposting. There are two types of default speed limits: 50 km/h in urban (built-up) areas and 100 km/h in rural (non-built-up areas).” Page 11.

However, if the original speed limit was correct, the only reasonable assumption is that the route is, in fact an arterial road.

“Arterial road – Roads that provide for traffic movement across and between regional areas.” (page 5)

If Bridge Street is, in fact or will become a arterial road, will the 80 km/h speed limit, which also applies to rural roads in semi-urban/rural fringe areas (with pavement width greater than 5.6 metres) with limited adjacent development or undivided **arterial** roads passing through fringe urban areas. Semi-urban/rural be applied in Thompson Square?

The RMS advises that fringe areas can be defined as having one to two intersections per kilometre and five to six regularly used driveways or private accesses per kilometre.

http://www.rta.nsw.gov.au/roadsafety/downloads/nsw_sza.pdf

This question is asked in some trepidation: Thompson Square is a commercial, tourist and heritage area, which would significantly benefit from a shared zone classification:

(a) 10 km/h speed limits

A shared zone is a road or a network of roads in an area where pedestrians and motor vehicles share the road space. Drivers must not exceed 10 km/h, must give way to pedestrians at all times and must park only in marked bays.

10 km/h urban shared zones including:

- *Carparks.*
- *Reserves/parks.*

The most common uses of shared zones are in commercial, tourist and heritage areas. However, this facility may also be used in other appropriate situations, such as some shopping malls.

Shared traffic zones must:

- *Clearly indicate pedestrian priority.*
- *Be a self-enforcing speed environment.*
- *Have low traffic volumes. For detailed guidelines for the implementation of shared traffic zones, refer to TD 2000/6 Shared Zone Signs.”*

Given European models of traffic management in similar situations, it is strongly recommended that a shared zone be implemented in Thompson Square; most particularly should the situation arise where the current speed-calming roundabout was no longer part of traffic management.

Landscaping

The final appearance of Thompson Square, should Option One go ahead, is a matter of deep concern to the community and is, once again, a matter of deep cynicism

EIS Volume (page 100) says, “Urban design and landscape works....within Thompson Square parkland would include: “Minor earthworks in the upper Thompson Square parkland to provide a gentle slope.” The present contours of the Square being as they are, it would seem likely that, in the interests of mutual understanding, the RMS should provide definitions of ‘minor’ and ‘gentle’.

The issue of landscape remains contentious EIS Volume 1 (page 195) which talks about, “a gently terraced slope down to the river,” and (page 194) “The result would be a greater area of continuous parkland that would slope gently to The Terrace and the river.”

Thompson Square cannot be sloped down to the river. To be sloped in such manner would see the removal of The Terrace and the river bank and the slope, and even if terraced it would be very, very steep.

This observation is offered as there appears to be some confusion regarding gradient, which, while describing the proposed slope of the grasslands as being 'gentle' also says, "The steep grade on Bridge Street increases the noise levels generated by heavy vehicles due to the need to use low range gearing and engine breaking (sic)."

The RMS cannot have it both ways. The slope can either be gentle or steep.

But in fact the steepness of the slope actually increases. The current road starts sloping from George Street. Using Figure 58 (page 101 EIS Volume 1) it could be assumed the area closest to George Street would have a flatter component sloping gently towards the river and sloping more to the Thompson Square Road. The slope down to The Terrace would start from about half way to The Terrace. Given the reduced distance from The Terrace it would have to be very steep, so steep the EIS plans to have it terraced.

Although it is appreciated the planning for the grassland is still under consideration, there is no indication within the EIS whether the use of retaining walls is being considered. Therefore it is assumed there would be a series of flatter sections and other sections of a severe slope. This raises the question as to whether the joined upper and lower grasslands would result in more usable space.*

In summary: The plan by the RMS is to reshape the grassland into a "gentle slope" to the foreshore. (It is assumed the RMS means The Terrace, which is about 6 metres above the river. To slope Thompson Square to the river would mean the removal of The Terrace and a very steep slope.) The current road does that and that slope is not "gentle". In the EIS the road is described as being steep. However that road curves down to The Terrace so the slope is minimised. A better example would be the road to the wharf. Now that road is certainly not a gentle slope. However, the grassland area portrayed in the RMS diagrams retains a flatish area at the top so the slope has to start nearly half way along the grassed area. Therefore the "gentle slope" becomes steeper. The RMS intends to terrace the slope, which will provide some flatish land and some embankments. Section 4.3.1 on page 50 of the EIS states in part: "While The Terrace could be lowered to achieve the required clearance under the replacement bridge this was considered undesirable due to the potential disturbance of terrestrial and maritime archaeological sites." Yet to totally reshape Thompson Square is considered appropriate. This reconstruction will have a major negative impact on the public use of this space. In addition this means the oldest civic square in Australia will be totally reconstructed and not restored to the

vision of Governor Macquarie as claimed by the RMS. Fewer people using the park will reduce business activity.

Archaeological Impact

Section 4.3.1 (page 50) states in part: *“While The Terrace could be lowered to achieve the required clearance under the replacement bridge this was considered undesirable due to the potential disturbance of terrestrial and maritime archaeological sites.”*

On the other hand, the RMS plans to lower the grassland by up to around three metres if not more. If it was deemed not appropriate to lower The Terrace actions that lower the grassland must be questioned.

The EIS and the specialist urban design landscape report indicate that the degree of the incline in ‘open space’ within Thompson Square will be altered so as to consolidate the two grassy areas and provide *“a more direct connection down to the river”* (Spackman Mossop Michaels and Hill Tallis p.273). Yet the images showing sections and cross sections of Thompson Square suggest that the open space will be in filled in places and excavated in other places. Further, it will be affected by new tree plantings and the removal of older, established trees. This activity would suggest impact on levels that may contain intact archaeological resources.

Only two test pits were excavated in Thompson Square, one in Old Bridge Street and one in the northern car park (Biosis p.212), both within the footprint of the proposed bridge and approach road. There is no record of exploratory excavations in the areas of Thompson Square which may be affected by landscaping, tree plantings and tree removal.

There is, therefore, deep concern the information obtained from the archaeological assessment does not provide adequate information for decision-making on the proposal.

Trees

Page 100, EIS Volume 1, reports, “Removal of some trees that would be impacted by the project.”

Page 64 says, The Thompson Square upper parkland... is predominately grassed parkland with about 14 medium to large trees... The Thompson Square lower parkland contains ... about 10 medium to large trees...

A count of trees in that area (local resident, Harry Terry) basically agrees with these figures, counting 2 extra trees in the upper parkland. However, given the scope of works that is required to slope the grassland down to The Terrace, questions arise as to how this work can be completed without the majority, if not all of trees being removed to complete that work: 15 trees removed is not “some” as claimed.

Visual Amenity

The section on visual impacts in 7.4 does not include anything on the construction phase whereas the section on landscape character does. Visual impact during construction should be addressed

In considering visual impacts attention is drawn to the RMS Bridge Aesthetic Guidelines, which advise

“Bridges with a horizontal form are generally preferable to bridges on a grade over flood plains and significant expanses of water.” And goes on to suggest ...*“if this is unable to be achieved due to differing levels either side of the water body then **fine-tuning the location of the bridge** should be considered, or adjusting the levels along the bridge approaches.”*

Helpfully, we are advised that *“Water always forms a horizontal plane and a bridge structure when skewed to this plane can appear discordant: this may be because it introduces another plane adding unnecessary complexity. consider a horizontal bridge in the same location”*

http://www.rta.nsw.gov.au/roadprojects/community_environment/urban_design/documents/rms_bridge_aesthetics_guidelines_2012.pdf

Despite its own clear and explicit guidelines indicating that Thompson Square, topographically, is a less desirable location for the proposed bridge, the RMS continues to pursue this option.

17. Project 'Justification' and Conclusion

This chapter presents a critique of the identically named Chapter 11 in the EIS (Pages 457 – 468) ,and as such, should be read in conjunction with that chapter. It is intended, after an introduction, to follow the form of that chapter and where more detailed, referenced analysis of an individual issue is covered elsewhere in this submission, to internally reference it.

There is no doubt that the road transport requirements of the Hawkesbury and surrounding areas now, and into the future, necessitate improved river crossings. Any new crossings should address issues of effective traffic management and performance; safety for motorists and pedestrians; public health and safety for the local community; amenity of public spaces and flood mitigation. They should also be part of, and contribute to, an overall transport management plan that also addresses all the above issues.

The ten potential options identified by the RMS in July 2009 do not constitute an exhaustive list of all possible options. The widely divergent strategies and sites they represent clearly indicate a lack of any overarching regional transport plan. Rather they appear to very localised, non-integrated remedies for a perceived, but overstated problem – the integrity and performance of the existing Windsor Bridge. As demonstrated elsewhere in this submission the existing bridge can be repaired economically and with minimal disruption using accepted engineering techniques. It would then be able to play its part as a local, light traffic crossing with a new crossing built for heavy and through traffic. Many of options, including the preferred option, appear to be favoured and justified by historical precedent. Traffic needs in terms of volume, destination and vehicle type now, and over the working life of any replacement crossing, are vastly different from the historical requirements that that dictated the siting of the existing bridge. Good infrastructure planning should be guided by much more than precedent. The opportunity exists at Windsor to reassess the site of a new river crossing on a more strategic basis, rather than to commit to expenditure of scarce capital funding on a project that will only reinforce the inadequacies of previous decisions.

The preferred option has demonstrably been based on cost (Chapter x). It may be easier to place a crossing between existing access roads, than it is to construct new access roads on green fields sites. However this attitude only serves to reinforce the perception that there is no regional transport plan guiding the planning and siting of the new crossing. Increased expenditure on planned, efficient and purpose built transport infrastructure is always more than recouped in terms of savings in man hours, losses through accidents, fuel efficiency, vehicle wear and tear and reduced human costs through accidental death and disability

Economic benefits are normally categorised into either direct or indirect benefits. Direct benefits are those that flow directly to the road user and include:

Lower vehicle operating costs – better roads allow vehicles to operate more efficiently resulting in reduced fuel costs, vehicle maintenance and capital

charge components.

Improved travel times – reducing the time spent travelling frees up time for other uses, including work and leisure. Travel time benefits may be achieved in several ways, including increased road capacity, improved connectivity and increased average travel speeds. This would translate to increased productivity for businesses engaged in the transport sector.

Accident and safety benefits – savings related to a reduction in loss of life and permanent disability, health care costs, vehicle repairs costs and the cost of legal and insurance services.

Reduced cost of maintenance – upgrading can reduce the cost of maintaining a poor road.

Environmental impacts — includes savings related to less noise and air pollution.

(NRMA Budget Submission 2011-12 to NSW
Government <http://www.mynrma.com.au/images/About-PDF/2011-12-Budget-Submission-to-the-NSW-Government.pdf>.)

Considerations of cost are not always paramount in the decisions regarding the route and other infrastructure components of RMS (or as they were - RTA) projects. For example, the route selection of the Yelgun to Chinderah freeway, a 28.5 km project north of Brunswick Heads completed in 2002 at a cost of \$270M are described as follows

“The expenditure on environmental measures on the Yelgun to Chinderah Freeway was very high, being of the order of \$60 M. This represents of the order of 18 % of the cost of the project. This highlights, along with other initiatives in this letter, the very high level commitment to environmental protection displayed by RTA. Flora and fauna mitigation measures and compensatory habitat costs are of the order of \$14.2 M. Note that there was a very large additional cost estimated at \$40 M, representing the difference in cost of the selected route that reduced impacts on the environment, including flora and fauna, and the most economical route that satisfied other project objectives.”
(http://www.rta.nsw.gov.au/roadprojects/projects/pac_hwy/ballina_tweed_heads/documents/yelgun_chinderah_supplementary_report.pdf)

The potential for duplicate river crossings afforded by the siting of a new crossing elsewhere than proposed, offers savings over and above the repair costs for the existing bridge detailed in this submission. It provides an alternative in case of closure of either bridge, crucial at times of natural disaster as well as for the day to day transport needs of the community. In addition, it would prolong the functional life of any new crossing by reducing the traffic volumes it was required to carry, and hence delay the necessity for its upgrading or duplication.

In terms of flood mitigation, it is best to start from the premise that flood proofing the Hawkesbury floodplain is impossible. During the short history of European occupation of the Hawkesbury region there have been numerous flood events, which even the more moderate would require unaffordable levels of infrastructure to mitigate. What is important is that any river crossings are not the lowest point in the road network, and thus the first to

flood. Neither should they be higher than their access roads are now, or proposed to be over the life of the crossing. Elsewhere in this submission it is shown that the slight increase in flood mitigation from one in two years for the existing bridge to less than one in three years for the preferred option is inconsequential as far as access beyond the immediate northern access road is concerned. Flood mitigation as a project justification is therefore irrelevant.

One area the EIS clearly admits is a failing of the preferred option is the impact on the heritage and character of the area. The heritage can be divided into two components – the existing bridge and Thompson Square. Windsor Bridge is of State heritage significance and is listed on the RMS Section 170 Register (Item # 4309589). The effect of the preferred proposal on Windsor Bridge is unequivocal and irreversible. It will be demolished. It is not possible to have a more catastrophic effect on a heritage item. Recent investigation detailed elsewhere in this submission has served to strengthen the significance of Windsor Bridge in the history of bridge construction in NSW. Design elements and construction techniques that are rare and/or the first recorded uses have come to light. Along with the modest, independently verified repair methodology and cost previously outlined, and the benefits discussed above, the case for the retention of the existing bridge is compelling.

Thompson Square Conservation Area is of State significance and listed on the State Heritage Register (Item # 00126). However it is defined, it is more than a collection of old buildings, and indeed more than just the oldest Georgian Square in Australia. It has a long and evolving social history. In colonial times it was the site of the aftermath of the Battle of Vinegar Hill, the site of one of the early musters (census) and a focal point in Governor Macquarie's (the father of Australia) town plan for Windsor. Among the five Macquarie towns it remains as the most complete example of Macquarie's vision. The very fact that it was named by Macquarie after Andrew Thompson, an emancipated convict who rose to become chief magistrate of the Hawkesbury, rather than a member of the English Royalty or nobility was a statement by Macquarie in favour of the Emancipists instead of the Exclusives. This makes Thompson Square the birthplace of the egalitarian society we value in Australia today.

More recently, Thompson Square has become an important recreational public space for the town of Windsor. It is the site of weekend concerts, as well as more organised events such as the annual Blues and Roots Festival. The removal of regional traffic through the Square and the establishment of a local light traffic corridor would enhance its potential as a usable public space. This potential would be severely compromised by the routing of a significant arterial road through the Square. The reduced heritage vistas, increased noise and pollution created by a modern concrete bridge and access road would render the Square far less user friendly.

Thompson Square has evolved in form and function over the subsequent two hundred years. That evolution has always been on a human scale and with community function at its core. The preferred option for a new bridge would mean that human scale evolution had ceased. By its size, construction materials, elevated aspect, focus on traffic and associated

noise, visual and atmospheric pollution it would change Thompson Square from a human focussed space to a motor vehicle focussed space.

The benefits to traffic management and safety of a new river crossing elsewhere than through Thompson Square are sufficient in themselves to mean the preferred option is unjustified. When the destruction of the character, amenity, fabric, appearance and humanity of one of the oldest sites of Australia's architectural, cultural and historical heritage is factored in, the evidence against the justification of preferred option is compelling.

More usually applied to environmental matters, the Precautionary Principle should apply at all levels in the consideration of this project. Once approved, one heritage item will be gone forever, and another will be irreversibly damaged. When the alternatives are so viable and compelling, both socially and economically, and the consequences of proceeding so final, surely a different road should be followed.

To improve safety for motorists, pedestrians and cyclists

Meets the various design codes	The project has been designed to meet RMS and Ausroads design codes for road and pedestrian safety.
Meets a road speed of 50 km/h	The project has been designed for a 50 kilometre per hour design speed. The design speed has been lowered to allow a reduction in the height of the southern approach road to minimise heritage impacts.
	The project incorporates many features to improve pedestrian safety including:
	A wide shared path across the new bridge and beside the approach roads to provide safe access across the river.
Ensures pedestrian safety	Traffic signals at the George Street and Bridge Street intersection which allows pedestrian crossings to be incorporated across all legs of the intersection – where none now exists.
	Other pedestrian facilities such as paths and crossings which link various pedestrian routes and provide safer access for pedestrians.

Comments

- 1. All projects should be designed to meet RMS and Ausroads design codes for road and pedestrian safety. This is neither a distinguishing feature, nor justification for this project in particular.*
- 2. Siting the project elsewhere may allow for a higher design speed than 50 kph with consequent improvements in traffic management.*
- 3. The pedestrian safety features listed are not contingent on the building of a bridge and could be constructed independently. As such they don't justify construction of this particular bridge option*

To improve traffic and transport efficiency

Minimises queue length/delay	The project has been designed to minimise queue lengths and delays especially during peak periods. The traffic and transport assessment demonstrates that the road configuration and new intersections will provide high levels of service on opening and into the future.
Improves performance of road network	Network modelling undertaken for the project demonstrates that the project would improve the performance of the road network compared with the existing situation. As well as providing a higher capacity bridge to cater for future growth in traffic, the new northern and southern intersections would provide a high level of service on opening and into the future.
Enables two heavy vehicles to pass on the bridge without waiting	The width of traffic lanes for both the two and three lane configurations would comply with appropriate guidelines and would allow heavy vehicles to pass without waiting.
Improves load capacity of the crossing to meet current load standards	The replacement bridge would have a load capacity to meet current load standards

Comments

1. *Routing the project along existing access roads and through existing intersections and the restrictions caused by Thompson Square is the cause of the projected queue lengths and delays. Siting the project elsewhere eliminates the problem.*
2. *Traffic lanes on the existing bridge (3.0m) are wider than Parramatta Rd (2.8m), Sydney Harbour Bridge (2.8m) and Victoria Rd (2.6m to 2.9m). Heavy vehicles presently pass without waiting.*
3. *Notwithstanding (2) above any new bridge would comply with lane width and load capacity guidelines and standards. As such this is neither a distinguishing feature, nor a justification for this particular option.*

To improve the level of flood immunity

Provides a crossing that has a higher level of flood immunity than the existing bridge	The project would have a flood immunity of about a 1 in 3 year ARI flood event – which would be higher than the flood immunity of the existing bridge which is about a 1 in 2 year ARI flood event. There was no advantage in providing a higher flood immunity as the Freemans Reach Road and Wilberforce Road would be cut by floodwaters for events greater than the 1 in 3 year ARI flood event.
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Provides a crossing with a flood immunity that is compatible with the surrounding approach roads	The flood immunity of Freemans Reach Road and Wilberforce Road was assessed and for both roads is about 1 in 3 year ARI. The project flood immunity would be compatible with these roads.
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Comments.

1. Improvements in flood immunity are negligible and insufficient to justify the project.

To meet long term community needs

Provides an efficient connection for local traffic	The project would provide a very efficient connection for local traffic as it provides a direct connection to the town centre
Provides an efficient connection for regional traffic	<p>The project provides a reasonably efficient connection for regional traffic by providing direct access to Windsor Road and to Macquarie Street.</p> <p>The project would substantially enhance pedestrian and cyclist connections between the northern and southern bank, between the town centre and east Windsor, between the foreshore and George Street and to Macquarie Park.</p>
Provides a pedestrian and cyclist connection to surrounding locations	
Minimises impacts on recreational spaces	The project would have a minimal direct impact on recreational spaces – and would result in an increase in the area of public open space in Thompson Square and on the northern bank.
Minimises impacts of noise	<p>While noise levels at sensitive receivers immediately adjacent to the project would be high, these receivers are already impacted by noise from the existing road and architectural noise mitigation would be provided to affected residential properties. The project would not have any impacts on properties currently not affected by road noise.</p> <p>The project has been designed to maintain access to business and shops in the town centre by allowing access to George Street (west) for both northbound and southbound traffic.</p>
Minimises impacts to businesses and the shopping environment	<p>Amenity impacts experienced by businesses adjacent to the project would be similar to those experienced from the existing road and intersections.</p> <p>Overall the project would have negligible impacts on businesses and the shopping environment.</p>
Minimises impacts on property	

access

The project would result in the loss of direct access from the northbound direction for two residential properties, however direct access would still be available from the southbound direction. This would be the only loss of access due to the project.

Minimises need for acquisition

On the northern bank full acquisition of two properties and partial acquisition of two further properties, all of which currently used for turf farming would be required. The land is flood prone. On the southern bank two Crown properties would be acquired and the majority of land (>90%) would be retained as public open space. Overall the land acquisition required would be minimal especially in comparison to other crossing options.

Provides a 100 year life span for the bridge

The replacement bridge would be designed and constructed to have a 100 year life span.

Comments.

1. Local traffic connection would be more efficient with the existing bridge repaired and maintained for local traffic and through traffic diverted elsewhere.
2. Regional and through traffic would be better served by alternative routes identified by a properly researched and implemented regional traffic management plan.
3. Pedestrian and cyclist connections would be enhanced by retention of the existing bridge as above (1) and relocation of regional and through traffic (2)
4. The admission that the project would have a minimal direct impact on recreational spaces is an admission that there would be an impact. While it is contentious whether there will be an increase in public open space in Thompson Square real measures relate as much to perception as usable public space. For reasons of noise, overshadowing and topography the amount of usable public space will be reduced and the quality of the experience severely impacted.
5. Rather than having negligible impacts on shopping and business the maintenance of the heritage character of the town and the exclusion of through traffic would have a beneficial effect in line with the experience of bypassed towns elsewhere in the state. "The evidence suggests that in most cases highway bypasses have resulted in economic development benefits for towns which have been bypassed" ("Economic Evaluation of Town Bypasses" Bruno Parolin, Faculty of Built Environment, UNSW RTA Document http://www.rta.nsw.gov.au/roadprojects/resources/documents/economic_evaluation_town_bypasses.pdf)
6. Property access issues could be eliminated with the rerouting of through traffic away from Thompson Square.
7. Any replacement bridge could be designed for a 100 year lifespan, hence this is not a justification for the preferred option.

To minimise the impact on heritage and the character of the local area

Minimises impact on Aboriginal and non-Aboriginal heritage and conservation areas	<p>The project would have an adverse impact on the Historic heritage and to a lesser extent Aboriginal archaeology. The project would directly impact Thompson Square Conservation Area and any archaeological resources within the project footprint. While mitigation measures have been incorporated in the project design and would be implemented during the further design and construction of the project, impacts on heritage and the Thompson Square Conservation Area would not be totally mitigated.</p> <p>Apart from the visual impact of the project, the town built heritage around Thompson Square would be protected. The main potential impacts would be during construction and mitigation measures have been developed to protect heritage buildings and items.</p>
Protects the town built heritage and its setting	<p>There would be both benefits and adverse impacts on the heritage setting of Thompson Square from the project. The project would allow the reunification of the currently bisected Thompson Square parkland and would enhance views to the river with foreshore improvements, removal of weeds and landscaping. However the modern bridge would contrast with the heritage setting of Thompson Square.</p>

Minimises visual impact and impacts on the character of local area

The project would be higher in the landscape than the existing bridge and would be a modern structure in an essentially heritage and rural landscape. While mitigation measures have been incorporated in the design of the project to reduce its visual intrusiveness, it generally would have a high visual impact.

However the project would only be one element in character of the local area. Other important elements such as heritage buildings adjacent to and outside the project area would be directly impacted.

Comments.

- 1. There are very few projected positive outcomes noted here. They are the reunification of the currently bisected Thompson Square parkland, and enhanced river views with foreshore improvements, removal of weeds and landscaping. None of these are contingent on the construction of a new bridge and could be implemented independently. Weed removal in particular should be the present responsibility of the relevant agency and not be used as justification for the preferred option.*
- 2. Of particular note is that "heritage buildings adjacent to and outside the project area would be directly impacted"*

To be a cost effective and an affordable outcome

Provides a cost effective solution - capital cost

The project would provide a cost effective solution as it requires only short approach roads and paths to connect to existing infrastructure and only minimal land acquisition.

Provides a cost effective solution - maintenance

The project would be designed to have minimal maintenance costs.

Provides a cost effective solution -

An economic analysis was prepared for

investment on return

the project using the most up to date costs and other design information. The benefit cost ratio for the project was 14.6 indicating that the project provides substantial value for money and an excellent return on the investment.

Minimises the impact of construction in regards to length and timing

Due to the relatively short approach roads, the construction period would be reduced. As the majority of the construction activities would be undertaken from the northern bank, impacts from construction on urban areas on the southern bank would be minimised.

Comments

- 1. Cost analyses are dependent on the values ascribed to various components of the equation, many of which are subjective. What value was put on the decreased heritage value of the square? In an analysis of the effectiveness of capital cost with regard to minimal land acquisition and minimal construction of approach infrastructure, what value was placed on savings on man hours, fuel, vehicle wear and tear and the social and medical costs of accidental death, disability and injury that would accrue from a bypass alternative. The relative weighting of these components can be adjusted to support any alternative. The claimed affordability and cost effectiveness need to be seen in the light of the proponent's preferred project option.*

Table 11-3 Justification of the project in consideration of the objectives of the EP&A Act

<p>To encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, waters, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.</p>	<p>Overall the project would manage, develop and conserve natural and artificial resources appropriately and would result in social and economic benefits to the community. However there would be the loss of the existing Windor bridge. Environmental management measures have been developed for the construction, demolition and operational phases for all environmental aspects. These management measures comply with relevant national, State and RMS guidelines, policies and legislation. The design of the project has been developed to conserve natural and artificial resources through measures such as minimising land acquisition, providing efficient connections to the existing road network and minimising impacts on flora, fauna and water quality.</p>
<p>.</p>	<p>The project would not directly impact threatened species, ecologically endangered communities and key habitats and would involve minimal clearing of mainly weed infested vegetation.</p>
	<p>The project would provide efficient and safe road crossing of the Hawkesbury River which would support the social and economic welfare of the community. The project would improve flood immunity compared to the existing bridge, reducing the frequency and duration of closures of the river crossing. However the project is not intended to be a new flood evacuation route.</p>
	<p>The project has also been designed to withstand regular inundation by flood waters and would be able to cope with climate</p>

change impacts such as increased flooding.

Greenhouse gas reduction measures have also been identified to minimise emissions during the construction and operation of the project

The removal of the southern approach road to the existing bridge would increase the area of open space in Thompson Square and pedestrian linkages between recreational areas, along the foreshore and across the river would be substantially improved.

The project would have a significant impact on the heritage vistas of the Thompson Square Conservation Area. While this impact has been minimised through sympathetic urban design, the selection of bridge type with lower visual impact and other measures, the impact on heritage vistas of the Thompson Square Conservation Area cannot be totally mitigated. The project would also involve the demolition of the heritage listed existing Windsor bridge.

However the project would meet most of the other functional and environmental project objectives and criteria and would provide the best value for money for the community.

Comments.

- 1. The objective specifically relates to “management, development and conservation of natural and artificial resources.....for the purpose of promoting the social and economic welfare of the community and a better environment”. It would seem the authors of the EIS have chosen to ignore the objectives of proper management and conservation of the artificial environment and the promotion of social welfare in favour of the provision of the “best value for money for the community”. They freely admit the “loss of the existing Windsor Bridge” and “significant impact on heritage vistas” obviously feeling this is more than balanced by the derisory increase in open space in Thompson Square, the negligible flood mitigation and the claimed greenhouse gas emission reduction during the operation of the project*

To encourage the promotion and co- ordination of the orderly and economic use and

The project would support the further urban development of the villages and townships north of the Hawkesbury River by providing an essential

development of land.

river crossing and road link to Windsor and the greater metropolitan area of Sydney. It would also support agricultural and horticultural development north of the river by providing a safe and efficient link to markets and services south of the river.

The project would allow businesses, agricultural / horticultural enterprises and residents north of the river efficient and safe access to services, employment and markets – which would make urban and agricultural development of land north of the Hawkesbury River more attractive and economically viable.

Businesses in Windsor would be largely unaffected by the project as motorists would still be able to access the town centre and the noise and air quality impacts from the project would be similar to the impacts from the existing bridge.

While there would be impacts on the heritage vistas of Thompson Square, the other important heritage elements of the town that attract tourists would not be affected. Also with a larger usable open space in Thompson Square and improved pedestrian access across the river to Macquarie Park, to the foreshore and to east Windsor, the area would become more attractive to visitors.

During construction there would be some temporary amenity and access impacts on businesses, however these will be minimised through the implementation of environmental management measures detailed in the EIS.

To encourage the protection, provision and co-ordination of communication and utility services.

The project would involve the relocation of a number of communication and utility services, which would be undertaken in consultation with the relevant service providers as described in Chapter 5.

To encourage the provision of land for public purposes

The project itself is a public purpose and would provide roads, paths and a bridge that would be used by the public. The project would also increase usable public open space on both the northern and southern banks and improve safe access for the

public to parks and other recreational areas.

The project includes the reconfiguration of Thompson Square by the removal of the southern approach road to the existing bridge which currently bisects Thompson Square parkland. As a result the area of usable green space in Thompson Square parkland would increase – and the parkland would be landscaped to maximise its potential community uses in consultation with the community and Hawkesbury City Council.

To encourage the provision and co-ordination of community services and facilities.

Other community facilities that would be provided as a result of the project include:

A shared path across the bridge that would provide a safe and efficient link between Macquarie Park and the Windsor town centre.

Safe pedestrian crossing of Bridge and George Street to provide a link between east Windsor and the town centre.

Reconnecting The Terrace to provide pedestrian access along the river.

Comment.

- 1. The increased urban development of flood prone land or land whose access is flood prone should be seen as at best problematic in times of climate change. Orderly, planned development by consolidation of areas of Sydney already serviced with transport and other services is more economically and environmentally desirable given the high costs of infrastructure on finite government budgets.*
- 2. The stated community facilities provided are not contingent on the construction of the bridge and could be constructed independently.*
- 3. The utility services are simply being relocated, not protected, provided or coordinated.*

Biosis Report

In contrast to the attempted justifications detailed above, the Biosis Report on the heritage impacts of the preferred project to the RMS (http://www.rta.nsw.gov.au/roadprojects/projects/sydney_region/western_sydney/windsor_bridge/documents/eis/volume_2/windsor_bridge_historic_heritage_working_paper_part_5_nov2012.pdf) is **damning**.

Even taking into account the mitigation measures, they assess some of the heritage

impacts of the project as follows -

- The impact of the demolition of Windsor Bridge would be high.
- The impact of the replacement bridge to the existing significant cultural landscape is anticipated to be high.
- Physical impacts associated with the construction of the replacement bridge are anticipated to be very high.
- The visual impact of the project on Thompson Square is anticipated to be very high.
- The physical impact on relics within Thompson Square is anticipated to be very high.
- Physical impacts of the modification to The Terrace are anticipated to be high with respect to archaeological resources
- The visual impact of the roundabout on the northern bank is anticipated to be high with respect to the existing cultural landscape.

As a result their conclusion and recommendations are as follows

"I 11.7.2 Conservation

Thompson Square is significant to at least a State level for its historical, associative, research and social values. It has an exceptional level of rarity. Some of the archaeological resource within Thompson Square and extending further south and north is also likely to be of at least State heritage significance, as are archaeological remains of the wharves within the body of the river. Windsor Bridge is a State significant structure that is rare and has historical and technical significance. Each item has, through the historical association with the other, become part of the same landscape. Both the square and bridge contribute to State significant views of Windsor as a historic township.

From a heritage conservation perspective the most appropriate treatment of Thompson Square and Windsor Bridge is to avoid any further negative impact and to take the opportunity identified by the Heritage Council to remove through traffic. The recommendations below have been made in response to the cultural significance of the project area.

As the significance of the archaeological resource within the project area, and in particular within Thompson Square and down to the river would be diminished by the project, the preferred outcome is that this resource remains intact.

All components of Thompson Square are formally recognised as being of State significance; preservation is the primary recommendation to retain significance. The project will impact on the State significance heritage values of Thompson Square and the most appropriate management measure for a significant cultural landscape such as this is to avoid the impacts proposed by the project.

The Windsor Bridge is also of State significance and retention and stabilisation of the bridge is the preferred action to ensure that its significance is retained. “

Ecologically Sustainable Development

Ecologically sustainable development (ESD) is underpinned by four main principles – the Precautionary Principle, Intergenerational Equity, Conservation of Biological Diversity and Ecological Integrity, and Improved Valuation and Pricing of Environmental Resources. The EIS concentrates the majority of its discussion of the project’s ESD credentials, on the negative heritage impacts that will result from the implementation of the proposal.

The Precautionary Principle is essentially about “the management of scientific risk” (“The Precautionary Principle – its Origins and Role in Environmental Law” David Cole LL.B., Master of Environmental Studies). The authors of the EIS claim to be able to assess the seriousness and reversibility of impacts on “in situ terrestrial and maritime archaeological resources”. This is despite the extent, location, fragility and significance of these resources being unknown. Prudence would dictate a more complete catalogue of the nature of these resources prior to claiming they “would not be irreversibly lost”. More quantifiable are the impacts on the “heritage vistas and values of Thompson Square” which the authors rate as so significant, that future demolition of the replacement bridge may be needed to restore them. Why, it would follow, build the bridge in the first place? They rightly concede the demolition of the present bridge to be an irreversible impact. Despite all of this they conclude the preferred option to be “the best solution on balance”.

A similar argument is presented for Intergenerational Equity with the authors presumably knowing the value future generations will place on heritage, and deeming it to be outweighed by traffic and flood immersion considerations.

Improved Valuation and Pricing of Environmental Resources has little to do with alliance contracts as discussed in the relevant section of the EIS. What it does relate to is the contribution of environmental factors to the value of assets and services, in this case heritage values. Nowhere in the EIS does this valuation appear to impact in assessments of cost benefit analysis of various options.

Conclusion

The EIS concludes with a single page summary. Firstly it states that the relevant Director General’s Requirements and the requirements under the Environmental Planning and Assessment Regulation 2000 have been met. It then details the strategies to minimise the “significant impacts on the heritage vistas of Thompson Square Conservation Area and its archaeological resources.” These strategies are as follows. :

1. Reducing the height of the bridge

The final height of the bridge is yet to be determined. It may be raised to accommodate buses along the Terrace as far as the Wharf. This is the preferred position of Hawkesbury City Council.

This situation is completely unsatisfactory at his point in the EIS

2. Selecting a bridge type that has a lower visual profile
The profile of an incrementally launched bridge is greater than a conventionally constructed bridge. Hence the minimised disruption at time of construction results in a more obtrusive bridge for the duration of its operational life (100 years plus)
3. Including appropriate urban design features and landscaping.
Not detailed as yet . No amount of urban design will offset the scale, overshadowing, visual intrusion, noise, air pollution and inappropriate modern design of the proposed bridge.

An attempt is then made to justify the location of the bridge on the basis of historical precedence. Appropriate planning should only take some account of precedence, rather allowing it to be the major consideration. Infrastructure, particularly transport infrastructure, can often outgrow its original site or become inappropriate for that site. In such circumstances alternatives need to be strongly considered. In the case of Windsor there is no shortage of open space and river frontage able to be considered for crossing sites and access roads. The independently designed 'Rickaby Line' is but one example of a crossing option.

Other operational impacts of the project such as noise, air quality flooding are said to be similar to the existing bridge. The relative levels of noise, air quality and flood mitigation are discussed elsewhere in this submission. Suffice to say impacts are worse or at best equivalent to situation today with the existing bridge.

The benefits to Thompson Square as a result of the project are not contingent on the construction of a new bridge as per the preferred option. Changes if deemed beneficial and appropriate could be provided as a stand-alone projects. In fact the absence of a replacement bridge and hence the majority of the traffic would greatly improve the amenity of the Thompson Square parkland as well as any pedestrian and cycle paths.

The most common theme of the conclusion however is that of cost. It is mentioned four times. In paragraph 2 "do not provide as high value for money as the project", paragraph 3 "would cost significantly more than the project", paragraph 7 "cost effective, efficient and safe route" and again in paragraph 7 "best value for money"

It would seem that cost is the principle criteria underlying the EIS project preference in spite of demonstrable traffic management and safety benefits from alternative routes. The negative heritage impacts are seen to have no monetary value for the present or future generations, and thus deemed insignificant concerns for a project justified purely on budgetary considerations.



18. SUMMER IN WINDSOR

The following pages are offered as a ‘conversation starter regarding the future of the historic Windsor Township



Town Planning

Planning to Enhance A Sense of Community

A sense of community is reflected in the interactions of people with each other and their connection with the built townscape. A connection within the community can be enhanced by planning that encompasses an appealing urban landscape, access to retail spaces and services, recreational facilities and pedestrian friendly spaces.

The benefits of having a sense of belonging can only impact positively on the town as a whole. The need for human interaction and its importance for the health and well being of individuals and communities can be facilitated by planning for a connected, cohesive community. Planning that aims at enhancing a sense of community will see a greater embracing of the facilities and activities within the region. Increased employment through development of tourist areas can give community members a sense of belonging. The general feeling of well being that exists when the needs of a community are nurtured will help promote a lively, thriving town that will in turn foster greater community spirit and participation.

Planning and Diversity

Diversity in planning when revitalizing a town relates to both the physical spaces in the townscape, as well as the individuals and groups who use them.

The differing needs of the community have to be recognized when planning amenities, services and public spaces, as well as the desires of those visiting the town. The activities within those spaces can also appeal to a range of audiences. Displays and reenactments that are targeted to school groups during the week, can then be promoted for families and day visitors on the weekend. It is the diversities in activities that will show to people a view of the town that may differ from they one they know, but within a space that retains a sense of familiarity.

Planning also has to take into account those with varying physical needs. Wheelchair access and convenient Disabled Parking areas are essential to provide access and

opportunities for wide ranging participation.

The diversity of social and cultural groups within a common space can also help promote a tolerant and inclusive community.

Planning and Community Consultation

For successful outcomes in the redevelopment process it is paramount that Governments and Planners take into account the thoughts, desires and opinions of informed locals regarding the community in which they live and have helped create. The encouragement of public participation will facilitate the quality of planning outcomes and strengthen civic identity, both of which enhance community well being.

Dismissal of the opinions of locals and unwelcome changes to a cherished space can lead to a disconnection of locals from their sense of place.

Planning in the Hawkesbury

Outside the Rocks in Sydney, it is conceivable the Hawkesbury has the richest repository of Colonial landscape heritage in NSW. Chapter xx, on the economy of the Hawkesbury identifies the enormous benefits of heritage tourism to local economies. Yet, it would appear that, between the State Roads departments (see page xx, Toll House) and the local council there has been a persistent and constant erosion of the heritage 'capital' of the Region.

While scrutiny of Hawkesbury City Council's online documents reveals significant investment in reports and investigations, to date, this investment has failed to deliver anything of substance in the way of visionary planning for the Hawkesbury in general, or Windsor in particular.

Historical photographs reveal the extent to which Council has allowed the heritage qualities of the built environment to be compromised and eroded. The damage this has historically, and what it will potentially do to the Windsor economy is almost incalculable. (See Tourism and the Economy).

Whilst perplexing and disappointing, the actions of Council are not the object of the submission beyond observing their unreliability as a source of advice on town planning strategies in this arena.

This inadequacy might be excused on the basis of the Council's limited resources for such strategic planning (although expenditure on consultants' report could call such an assertion into question) however the Roads and Maritime Services cannot claim such a defense for the inadequacies in their strategic planning for the Windsor Bridge Replacement Project.

The diminishing and devaluing of the Region's heritage capital is being further hastened by an apparent lack of appreciation of the extraordinary value of 'context' when considering the value of these assets. As has been outlined in Chapter 1: Context,

Windsor is unique. The combination of a rich inventory of extraordinary architecture like St Matthews Church, Tebbutt's Observatory and the Windsor Court House, to say nothing of Thompson Square itself, set within the fertile Hawkesbury floodplains, all within a forty five minute drive of the Nation's only global city sees the town ideally placed as an economic powerhouse, driven by its natural resources.



However, rather than protecting the visual and physical attributes of the town, the Local Council and State Government have apparently united to again embark on an attack upon these very assets. Regardless of ANY mitigations claimed for the Windsor Bridge Replacement Project, the fact remains, and is comprehensively and exhaustively supported by the research undertaken by Biosis and detailed in Volume 2 of the EIS, this project is wrong. It is simply in the wrong place. There is no genuine cost benefit to the State in destroying a region's economic and heritage capital. It is an unconscionable misuse of Ministerial and Parliamentary powers to continue to expend public resources to pursue such a project.

The Chapter on Project Processes, visits this issue. Arguably a more objective and comprehensive upfront analysis would have more adequately identified the significant risks inherent in the plan, whilst also identifying the extraordinary opportunities that might be leveraged , thus avoiding the waste of time, money, effort and emotional resources caused by a determined, but misplaced loyalty to Option One.

Whilst in no way pretending to the type of expertise of resources required for such analysis, the following general points are made, in addition to and including points made elsewhere in this submission.

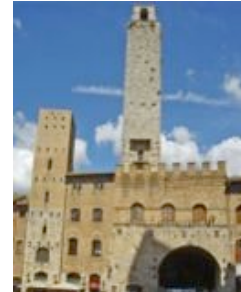
Heritage landscapes have significant economic value beyond that attributed to individual ownership. (Tourism and the Economy)

The vibrancy and charm of, for example, French and Italian mediaeval villages shows that sensible management of heritage precincts, their historical relevance and landscape integrity, produces economic growth, when coupled with suitable planning strategies. Arguably the NSW State Government is potentially depriving business owners and general economic stakeholders of future prosperity by eroding the quality of this prime heritage asset.

There are observable and simple components to the European formula for success in managing key heritage locations:

- Retain the original place (do as little as possible, only as much as strictly necessary)
- Incorporate essential contemporary changes invisibly
- Ensure seamless availability of and access to consequent services

- Provide transport access that is convenient for visitors without compromising the authenticity of what is visible
- As far as possible keep vehicles OUT of heritage precincts (*San Gimignano, CINQUE TERRA*)



So, what are the options?

From a planning perspective the new Hawkesbury River Bridge represents a once in a lifetime opportunity to make a difference.

As C.S. Lewis once famously said, “We all want progress, but if you're on the wrong road, progress means doing an about-turn and walking back to the right road; in that case, the man who turns back soonest is the most progressive.”

The options are:

1. do nothing and burden future generations of the Hawkesbury to a destructive, sub-standard solution;
2. be progressive and find the right road. It isn't through Thompson Square.

Doing nothing is not an option.

Windsor is a fantastic part of NSW: properly managed as a tourist destination it presents a unique opportunity to counterpoint Sydney destination options for the international traveller. Close enough to provide a rural experience for even the briefest of stop-overs, yet a world away from the sophisticated offerings of Australia's only Global City



Its location also positions it perfectly for weekend breaks for jaded urbanites and opens up endless possibilities for day trips.

The Tourism industry has come to recognize the power of heritage as a tourist magnet and the value of the heritage tourist, frequently a longer stayer and better-resourced traveller.

Finding the 'right road' means building on Windsor's economic strengths, not diminishing them.

Strengths

- ❖ Distance from Sydney
- ❖ Hawkesbury River
- ❖ Heritage
- ❖ Agriculture
- ❖ Landscape
- ❖ Services – capable, innovative, reliable
- ❖ Existing and experienced hospitality
- ❖ Surrounded by floodplain



Weaknesses

- ❖ Civic Presentation - no sense of arrival, anodyne streetscape at Sydney gateway
- ❖ Traveller services – toilets and parking, information
- ❖ Precinct identification and interpretation
- ❖ Traveller information not well-located
- ❖ Under capitalised, poorly presented and under utilised waterfront

Opportunities

- ❖ Bypass to take industrial vehicles out of heritage precinct
- ❖ Identification of Georgian Township
- ❖ Identification and co-ordinated promotion of key heritage assets
- ❖ Increased economic return from river waterfront
- ❖ Hawkesbury boardwalk – improved circulation around historic precinct, better use of river asset
- ❖ Thematic approach that identifies the Windsor experience, increasing recognisability
- ❖ Build on maritime heritage and waterfront opportunities
- ❖ Manage business risk associated with flooding through high season concessions to location-appropriate stalls – ice cream, ‘fingerfood’, deckchairs, canoes
- ❖ Strategic planning around new river crossing to facilitate tourist circulation and parking.
- ❖ Invest in a Windsor Gateway, incorporating tourist information at entry to Windsor.
- ❖ Cinema in the Square
- ❖ Examine ways to provide start up support for fledgling local tourist initiatives.
- ❖ Potential to extend to other ‘Macquarie Towns’
- ❖ Encourage small boat access to wharf, boardwalk areas to access economic potential from existing river users

Benefits

- ❖ Sustainable local economy, if managed properly
- ❖ Lifestyle benefits for community
- ❖ Improved facilities
- ❖ Economic growth
- ❖ Environmental and heritage protection.



Way Forward

COLONIAL WINDSOR: GROWING THE BRAND

In Windsor today, the town planning legacy of arguably the most visionary, humane and capable of Australia's Colonial Governors: Lachlan Macquarie remains visible, although undefined and unrecognized.



The 'bones' of Governor Macquarie's breathtakingly ambitious plan for the young colony still exist today in the roads of the Five Towns.

Macquarie's plans were visionary, but not complex. Each town consists of a simple grid.

Images from Macquarie's Towns, (Jack, 2010) below:



A 10 Point Plan

1. Identify the actual Macquarie roads with signage that alerts drivers when they are entering and leaving the original colonial precinct.
2. Impose vehicle weight limits within the original colonial precincts.
3. Impose 'shared zone' speed limits within these precincts.
4. Identify each significant building within the historic town:
 - *Red medallion*: more than 150 years old (medallion states original function and year of construction).
 - *Blue medallion*: between 150 and 100 years old (medallion states original function and year of construction).
 - *Cream medallion*: Other locations/buildings of significance (medallion states significance).
5. Install interpretive signage promoting the significance of the historic precinct and the meaning of the plaques.
6. Offer incentives to property owners within the identified precincts to reflect the historic nature of the location in property maintenance and building presentation.
7. Gradually introduce civic furniture, plantings and colour schemes consistent with the historic nature of the precinct.
8. Identify colonial buildings currently 'at risk' and explore opportunities to incorporate these buildings into the revitalization of Windsor (See notes re 'Jolly Frog')
9. Reinstall a low level bridge at South Creek and create a 'gateway precinct' to the historic township.
10. Undertake local route adjustments to enhance traffic flows, parking and cyclist and pedestrian circulation.



The Value of a Waterfront

- ❖ The Windsor riverbanks are probably the most undervalued waterfront real estate in the nation
- ❖ Boats bring business (generally boaties have disposable income)
- ❖ Boating activities have been quarantined from the local economy to date. This must be addressed/reversed for the local economy to develop a more robust economic framework.
- ❖ Boats then bring second level business, the romance of the 'nautical' attracts the dreamers!
- ❖ Boats also bring associated business, directly servicing the pastime (repairs, services, supplies, etc)

The Roads

- ❖ It's time to reclaim our Georgian Town
- ❖ Its time to reclaim Macquarie Street
- ❖ Trucks out, cars and people in
- ❖ Better directional flows
- ❖ Better, more convenient, less ugly parking
- ❖ A new gateway at South Creek: Tourist Information, Bus Parking, Toilet Facilities



Fear of the River

The Hawkesbury River winds across its flood plain: a mighty waterway, snaking through the verdant countryside. Water.

One of the most desirable landscapes, yet, historically the great asset that Windsor has ignored.

History and geography have combined to make invisible Windsor's greatest natural asset: riverfront assess.

Anywhere else in NSW, almost anywhere else in the world....prime real estate.

It's time for Windsor to rediscover it's maritime history and capitalize on it. It's time to leverage the economic benefits of a waterfront location.

Imagine... summer... canoes...deckchairs. A boardwalk linking the riverfront below the commercial centre of Windsor with the community, recreational and tourist energy of Thompson Square.

Places for visiting craft to tie up. Ice cream concessions. People promenading... or just sitting in the sun, maybe fishing?

Anything is possible in Windsor.

Getting There

Concept	Benefit	Action
To develop a master plan that embodies the principles of a sustainable and adaptable environment in order to honour the integrity of the heritage of the town.	<ul style="list-style-type: none"> • Within historical renewal exists the potential to compensate current deficiencies. • To reenergise existing spaces and see history in a different way. • Revitalises the township. • Addresses the interests of tourist as well as the need of the locals, without producing a static environment. (Windsor is a working town, not a theme park e.g. Port Arthur) 	<ul style="list-style-type: none"> • Understanding that the visual appeal of the town depends on its historical & heritage authenticity. • Careful management of the continuing regeneration process. • Design charter for new development to maintain the historic urban landscape and rural vistas. • Widespread promotion of the unique aspects of Windsor to attract day visitors and tourists as well as engaging local interest and participation. • Thoughtful planning of restaurants, cafes and specialty shops aimed at visitors to Windsor.
Careful restoration and revival of historical and heritage areas.	<ul style="list-style-type: none"> • The possibility of uncovering previously lost historical details through new research during the restoration process. • Public investment into the revitalisation process encourages private owners and townspeople to engage in historic rehabilitation and cultural renewal. • Identification of key historical sites to attract tourist activity and generate excitement within the community. 	<ul style="list-style-type: none"> • Well planned traffic management to unburden public spaces from moving traffic, and therefore ensuring pedestrian safety and reducing pollution, noise and vibration. • Divert through and heavy traffic away from the township. • Informative signage and story boards displayed at the various historical locations and buildings in the town. • Sufficient traffic signage to allow easy movement of tourists through the town and around different attractions.

Concept	Benefit	Action
Promotion of Special Events such as: <ul style="list-style-type: none"> • Sand Sculpting • Music Festivals • Movies in the Square • Night Food Markets • Art by the River (Think Sculptures by the Sea) • Performances on the riverbank in Macquarie Park (Shakespeare by the River) 	<ul style="list-style-type: none"> • The potential to attract day trippers due to the close proximity to greater Sydney as well as those who are planning a longer stay. • Engage new audiences with increased visibility and foster community involvement. • Exploration of new collaborations and funding possibilities. • Integrating cultural needs into the community. 	<ul style="list-style-type: none"> • Promote the diversity of uses of the area. • Improve entrances to the town. • Ensure careful planning into parking and public toilet facilities for visitors to the tourist precinct. • Reliable connections to public transport.
Development of tourist and educational attractions such as: <ul style="list-style-type: none"> • Re-enactments in Thompson Square and on the river • Working Studios • Walking Tours. 	<ul style="list-style-type: none"> • Increased employment opportunities. • The potential to bring groups from over 1400 schools in the Sydney region, and therefore promoting the town for families. 	<ul style="list-style-type: none"> • Encourage the participation of school groups through the development of educational attractions. • Relating the importance of Windsor to the development of the colony and the mores of the nation • Involve local established families in the telling of their stories.

Concept	Benefit	Action
Identification of existing precincts within the community e.g. <ul style="list-style-type: none"> • Historical/heritage • Retail • Industrial • Medical etc. 	<ul style="list-style-type: none"> • To ensure tourist activity does not impact negatively on locals and their ability to move through the town freely in the undertaking of their daily tasks. • To ensure large retail and industrial areas do not impact negatively on the heritage and tourist precincts 	<ul style="list-style-type: none"> • Minimise traffic restrictions within the town • Careful investigation into traffic management to ensure ease of movement through the town. • Ensure ease and safety of pedestrian activity • Convenient parking facilities for locals and those frequenting services and retail spaces. • Providing locals with shopping facilities and services without the need to compete with surrounding, larger shopping precincts.

