Submission No 6

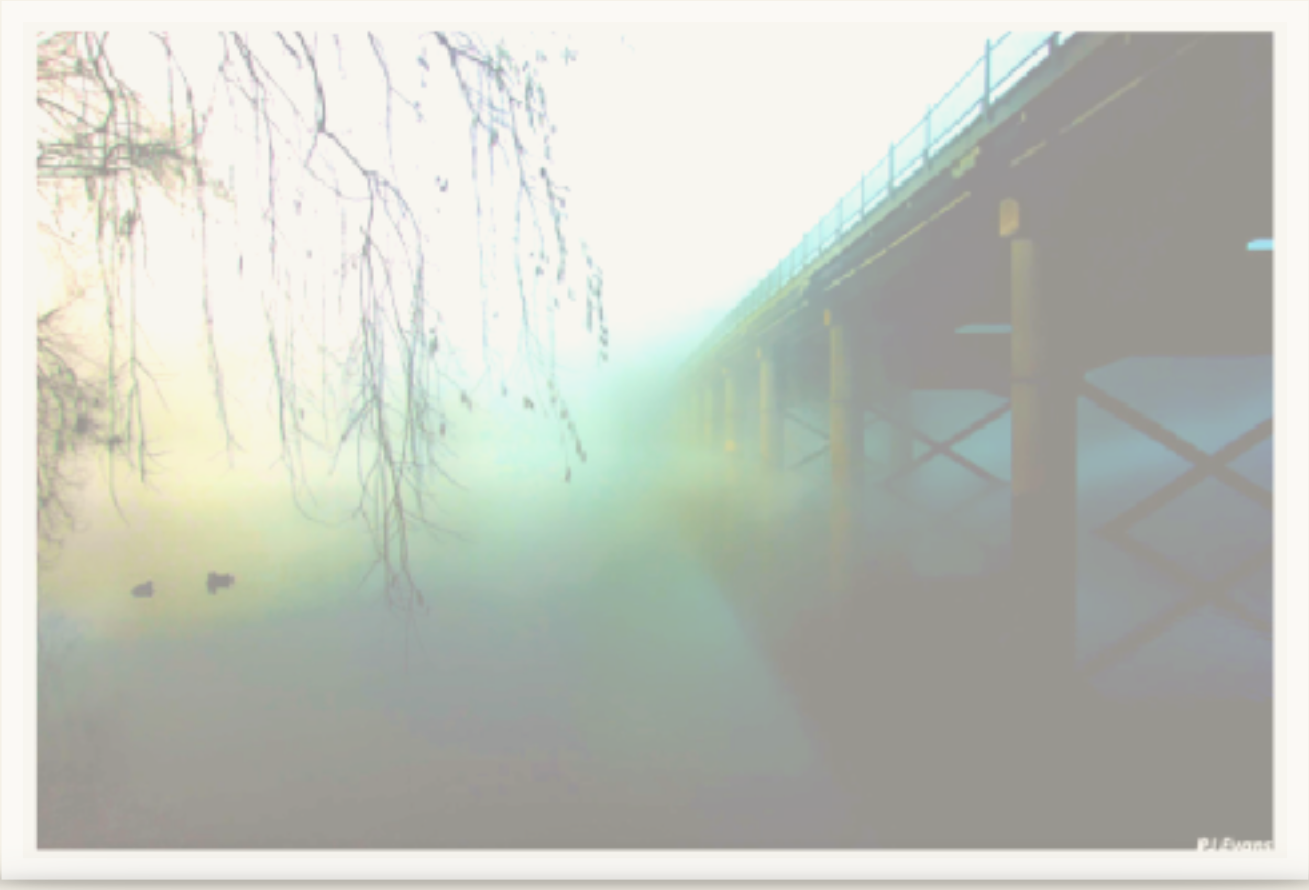
INQUIRY INTO WINDSOR BRIDGE REPLACEMENT PROJECT

Organisation: Community Action for Windsor Bridge

Date received: 28 January 2018

SUBMISSION

Upper House Inquiry into the
Windsor Bridge Replacement Project
Portfolio Committee No. 5 - Industry and Transport
January 2018



Volume 1

COMMUNITY ACTION FOR WINDSOR BRIDGE

EXECUTIVE SUMMARY

- This submission is presented by Community Action for Windsor Bridge (CAWB), an action group created to fight for the best outcomes for Thompson Square and Windsor Bridge stakeholders. Since 21 July 2013 CAWB has occupied Thompson Square for twenty-four hours per day, seven days per week, among other advocacy activities.
- Windsor Bridge is a State listed heritage item that is currently facing demolition. In 2011, changes to NSW planning legislation effectively 'switched off' previous State and Local Heritage protections associated with the Bridge.
- The RMS suggests that Windsor Bridge has reached the end of its economic life and the level of maintenance required to maintain adequate road safety is no longer cost effective. However, this submission presents evidence that Windsor Bridge remains functional and fit for purpose. The RMS relies on spurious technical arguments, with emotional overtones designed to frighten the general community. No part of the case for replacement of Windsor Bridge withstands independent, expert scrutiny and rational analysis.
- No meaningful consideration has been given to a bypass option for Windsor, which would be a more appropriate upgrade to such an important arterial route. A bypass which diverts heavy vehicles and through traffic away from the historic town centre and the Thompson Square precinct is the only adequate solution that will provide for future traffic needs whilst protecting the heritage that is key to Windsor's economic and cultural viability.
- One of the most damning aspects of the Windsor Bridge Replacement Project is the misleading and deceitful presentation of alternative options. Options appear to have been generated simply to demonstrate that alternatives were considered, however each seems to have been deliberately designed to be inadequate and unacceptable.
- The RMS's community consultation processes and practices have arguably done more to alienate the community than any other aspect of the Windsor Bridge Project. The RMS has consistently chosen to ignore widespread public opposition to the Project, preferring to massage response data, or in the case of local politicians, attribute such opposition to a vocal minority or a fringe group. The suggestion that the Project is opposed by a 'minority', vocal, or otherwise, is not borne out by the facts.

- The Windsor Bridge Replacement Project fails to address road network capacity issues or deliver outcomes expected of fiscally responsible planning for public infrastructure. In failing to take into account the regional destinations of traffic crossing Windsor Bridge, the Project deprives the community of significant, measurable and highly desirable outcomes that might reasonably be expected from such significant public expenditure.
- The Hawkesbury is in desperate need of another crossing of the Hawkesbury River and increased road network capacity. Car and Heavy Vehicle volumes across Windsor Bridge and through Thompson Square exceed traffic volumes which have been used to justify bypasses of towns such as Berry, Kempsey, Moree, Macksville and other towns. Despite insistence by the Government and Option One proponents that heavy vehicle use is not increasing, traffic counts by the RMS and others show the opposite is the case.
- Despite admitting that more than 70% of Windsor Bridge traffic is “through traffic” and does not stop in Windsor, the Project funnels an increasing volumes of cars and Heavy Vehicles into a known bottleneck. The RMS itself admits that the bridge is not cause of the traffic problems, but rather the Macquarie/Bridge Street intersection is acknowledged to be the main bottleneck, and is outside the scope of this project.
- As the oldest Town Square in Australia, Thompson Square deserves the highest levels of professional competence and probity, to say nothing of protection. A government agency and their consultants, charged with acting on behalf of the community, are delivering the exact opposite.
- The RMS has consistently been warned that the Windsor Bridge replacement project EIS was completely inadequate in its treatment of heritage.
- Thompson Square is rightly referred to as ‘The Birthplace of the Fair Go’. In naming the Square for Andrew Thompson, a convict made good, Governor Macquarie took a bold step — contrary to instructions — that created an idea which would ring down throughout our Nation’s history.
- There can be no doubt the heritage impacts of Option 1 will be devastating to Thompson Square. At the time of writing this submission archaeologist are undertaking destructive ‘salvage’ activities.
- The recently excavated c.1814 brick barrel drains demonstrate the importance of Windsor to Colonial authorities who invested public funds in this port town through which so much of the colony's produce was shipped. These rare and remarkable

archaeological relics may also have much to tell us about life in the early colony and their construction may reveal much about the technical skills and knowledge of the day.

- Yet the community has been forced to watch, helplessly, as heavy machinery has ground colonial artefacts to dust, each day increasing the area of destruction.
- It is claimed that the proposed replacement bridge will have flood immunity consistent with that of the roads on the northern side of the Hawkesbury River. However, it is primarily the level of the floodplain that dictates access to and from Windsor during flood events. Once the relevant sections of the surrounding road network are submerged, the height of the bridge is irrelevant.
- Statements that the existing Bridge is becoming increasingly dangerous and fragile due to its advancing age, or that the bridge is in such a condition that a flood could sweep parts or all of it away, seem designed more to reinforce the flawed rationale for its replacement, than to be founded on any basis of reality. If this is indeed the case, then it is incomprehensible that the RMS hasn't carried out preventative measures, and has undertaken only minimal maintenance in recent years.
- The project assessment process seems to have been a charade, in that the NSW Government was always going to proceed with the Option 1 Windsor Bridge, regardless of any heritage impacts or failure to address traffic issues. Indeed there is evidence of direct political interference in the assessment process on the part of individuals.
- In relation to cost benefit assessment, the Windsor Bridge Replacement Project explicitly disregards its stated objective to minimise impact on heritage and character of the local area.

  Significant economic and non-economic costs have been left out of the calculation of the Benefit Cost Ratio, and specifically, no cost value is attached to adverse heritage impacts. Methods for quantifying the economic costs and benefits of heritage and cultural assets exist and could have been used in developing the EIS, but weren't.

BACKGROUND

Background Overview

- Documents show there were forces at play to replace historic Windsor Bridge c2004, and anecdotal evidence it could be as early as 1994.

- A major driving force was Hawkesbury City Council from 2004.

- A recommendation to build the bridge through Thompson Square was made c2004 (see Windsor Masterplan)

- The previous Government announced in July 2008 a plan to replacement Windsor Bridge with work to start in 2009.

- The previous Government rejected the RTA preferred “Option 1” through Thompson Square in 2010, after objections from the NSW Heritage Council.

- For the 2011 election, a policy of the current Government was to build a replacement bridge through Thompson Square and demolishing the existing historic bridge.

- The 2011 the current Government was elected, and passed planning legislation amendments. Heritage Council approval was no longer required for State Significant Infrastructure (via new Part 5.1 of EP&A Act)

- On the first working day after the legislation passed, the RTA applied to build “Option 1” as SSI.

- EIS is released November 2012.

- At the 2013 a “Community Cabinet” in Penrith, Duncan Gay stated the project will be assessed independently within the Planning Department with no interference.

- In 2013 the Department of Planning peer reviews into heritage, traffic and engineering all rejected the project, recommending renovation of existing bridge and construction of second crossing/bypass near Windsor.

- The Department of Planning Bridge Structural Condition review could not verify the RMS justifications for demolishing the existing bridge.

- In July 2013 the Department of Planning recommended project refusal. (CFP docs)

- July 2013 pressure was applied by the Premier's Office on the Department of Planning for project approval (CFP docs)

- December 2013 the project was approved by the Minister for Planning.

- Staff from the office of the Member for Hawkesbury and State Treasurer have been heard citing the Option 1 bridge will cost in excess of $100 million, and a bypass would cost $300 million. No official budget has been released. However multiple letters from the Minister of Roads and the member for Hawkesbury state $67 million has been allocated by the Government for the project and once commenced, funds will be allocated to complete the project. Since then, the RMS has stated the $67 million was an 'administrative error'.

COMMUNITY ACTION FOR WINDSOR BRIDGE

In 2011 the RMS conducted a Design and Heritage Focus Group comprising of community members who were interested in contributing to the new Windsor replacement bridge.

It was during this focus group the absurdity of not only the design of the bridge but also the process of selecting the preferred option became apparent, and members of the group formed together an action group Community Action for Windsor Bridge (CAWB) to fight for the best outcomes for the community.

On 21 July, 2013 CAWB began occupying Thompson Square in Windsor twenty four hours a day, seven days a week.

For four hours at a time, two ambassadors are rostered on over six shifts a day. Currently there are several hundred volunteers who continue the occupation that is now approaching 1,700 days.

Community Action for Windsor Bridge and CAWB's wider supporters, without reservation, condemn the RMS for prosecuting this project in the face of unequivocal expert advice against proceeding; for failing to properly advise the Government on the implications of the project and for the unconscionable damage they are proposing to wreak on the historic township of Windsor.

1. THE WINDSOR BRIDGE

This section relates to the Terms of Reference

> *1a) the current Windsor Bridge, including its maintenance regime, renovation methods and justification for demolition.*

"Windsor Bridge is the oldest existing structure still in use for crossing the Hawkesbury River and is considered to be a rare item listed on the Section 170 NSW State Agency register, relating to its initial construction, its subsequent modifications and survival." RMS Urban Design And Landscape, Detailed Design Report, September 2017 pg.xiii

Windsor Bridge, a State listed heritage item is currently facing demolition. Whilst recognised as historically significant on the NSW State Heritage register and having never been delisted, a change (in 2011) to NSW planning legislation effectively 'switched off' previous State and Local Heritage protections associated with the Bridge and this change will result in the destruction of a heritage asset with demonstrable national significance.

Figure 1. The Windsor Bridge with the original deck

1.1 History

1874: Designed by the Public Works Department.

1897: Modified by raising the deck 8 feet (2.4 metres).

1922: Timber deck replaced with a reinforced concrete beam deck and girders over the existing cast iron piers, designed to be aesthetically sympathetic to the structure and

1941: Cross bracing renewal work was undertaken when steel and skilled labour was in short supply, due to the resources required for the war effort.

1.2 Significant Features

- First use of pneumatic bridge caissons in Australia.
- Most successful of a new class of bridge introduced in the 1800s.
- Designed and built to withstand flood waters.
- Original design highly adaptable; meeting increased road-user demands;
- Use of precast reinforced concrete girders in 1922 is unique for its time, the first documented use of this technology for bridge construction by some 30 years.
- Significant link in national road network.
- Use of divided girders to allow contraflow without closing the bridge.
- Possesses historical, aesthetic/technical, social and research significance.
- RMS s170 register as State significant Item Number 4309589.
- Hawkesbury LEP 2012 as an item of local significance.

1.3 Engineering

The Piers

The initial concept was to use screw piles but they were found to be unsuccessful due to the amount of debris on the river bed. The alternative was to use caissons at a greater expense. A caisson is constructed such the water can be pumped out, keeping the working environment dry.

There is very strong evidence to show these caissons were pneumatic, in that air was pumped into the hollow caissons thus stopping water entering the caisson. This allowed workers access to the caissons to remove the silt, sand rocks and debris so the caissons could be sunk to well into the bedrock. Air lochs were used to ensure the air pressure remained at the appropriate level.

Cast iron cylinders were specified to resist the type of flooding experienced on the Hawkesbury River around Windsor. Each cylinder was 3 feet 6 inches in diameter and approximately 6 feet in length (1.84 to 1.86 metres), each cylinder section was connected by internal flanges when assembled. The piers were sunk through to bedrock and secured to the rock by Lewis bolts. Lewis bolts have a wedge-shaped end that is placed in an indentation cut into bedrock.

The number of hollow cast iron cylinders used in the piers is 130. Their weight exceeded 150 tons. They were cast at the Mort's Dock and Engineering Works at Balmain and are another instance of the facility afforded for such works by colonial establishments.

The workers dealt with huge weights with limited mechanical assistance as they laid the 1000s of specially shaped bricks to fill the caissons so they would not buckle under flood pressure: a "ring of 9 inch radiating specially tapered bricks enclosing a cone of concrete"

The Australian Town and Country Journal mentions that divers were used to install the cross-bracing and that, "By the use of the sand-pump and air-lochs, boulders, drift-wood,

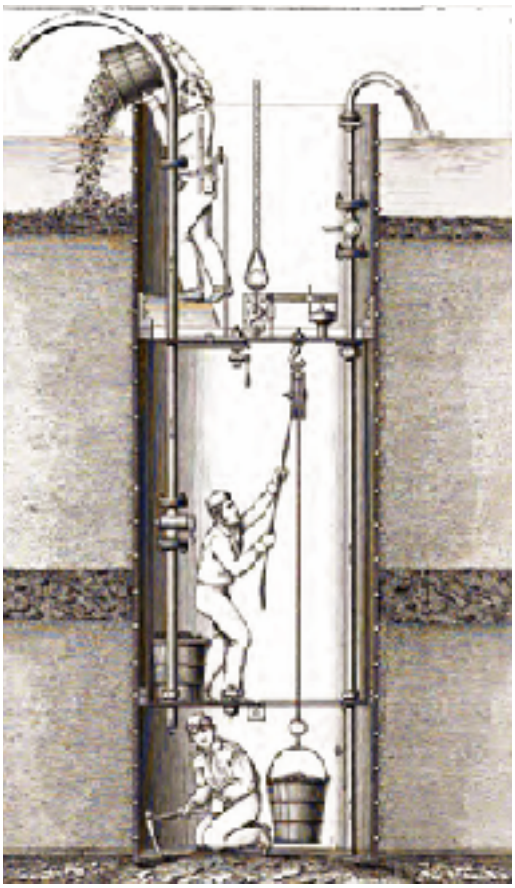


Figure 2. Caissons constructed for the Pyrmont Bridge, NSW. Figure 3. Caisson; devised 1846, Jules Triger

and logs, several feet in thickness, were removed at considerable depths, and each pillar firmly bedded and lewised four feet into solid rock".

Many freshets and several heavy floods retarded operations; and the sinking of all the piers could not be completed until December, 1873. Although a few feet only of the iron columns appeared above water, the cylinders reached an average depth of 40 feet below summer level. The bracing beams were also fixed below water by divers, before the erection of the superstructure.

At 3 feet 6 inches (about 1 metre) they would have been just large enough to accommodate one labourer to dig and fill a bucket. Today with our heightened safety systems and powerful tools we can only imagine what it was like to construct this landmark engineering structure 144 years ago. It took two and a half years as work progressed through a series of floods. And ten pairs of these massive piers were sunk

"...through 12 foot of water, 26 foot of sand and 12 foot of loose rock to stand and be bolted into bedrock...". Underwater they average the height of a five-storey building.

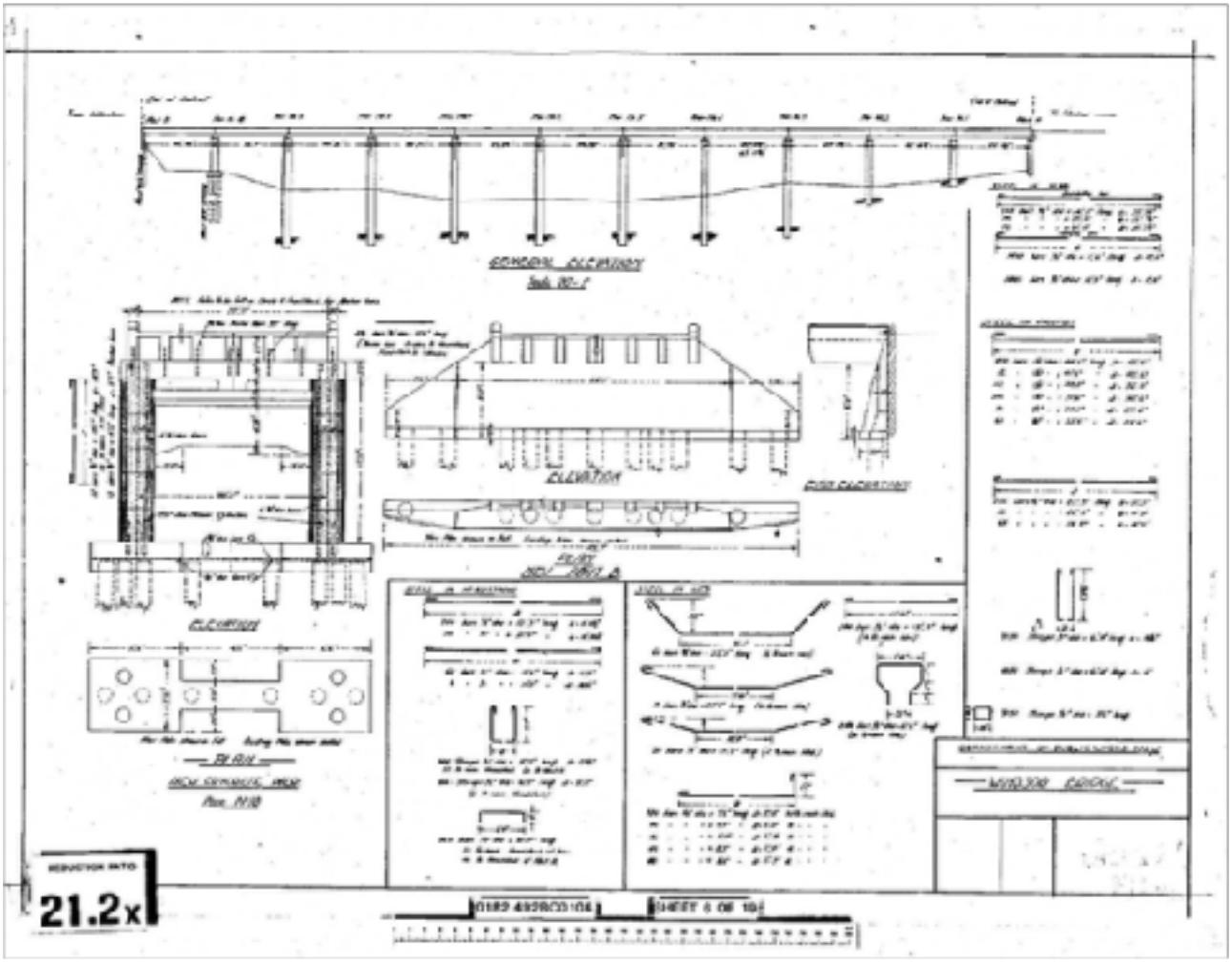


Figure 4. Technical drawing of Windsor Bridge

Raising the Height of the Bridge

In 1897 additional 8 foot piers were placed on top of the existing piers to raise the height of the bridge to improve its flood immunity qualities. A temporary low level bridge was constructed beside the bridge to provide a river crossing.

Replacing the Timber Deck

In 1921/22 precast reinforced concrete girders with a concrete deck above, replaced the timber superstructure, which is unique for its time, the first documented use 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.

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.

The Windsor and Richmond Gazette also records that, in order to maintain traffic flow, the concrete girders were "..built on the bank and carried into position";.

The author of the article goes on to say that "...therefore the design is unique and proves the versatility of Mr Mitchell, manager of the State Monier Pipe and Reinforced Concrete Works, and of Mr Humphreys, foreman of the bridge work."

The amalgamation of these two separate technologies - pneumatic caissons and pre stressed concrete beams in a bridge initially constructed in the 1870s, is extremely rare.

For further information please see the supporting document Nomination for Emergency National Heritage Listing of Windsor Bridge.

2. CURRENT CONDITION OF THE WINDSOR BRIDGE

The RMS's key argument for the project is Windsor Bridge was built for horse-drawn vehicles and pedestrians and the level of maintenance required to maintain adequate road safety is no longer cost effective, and it is therefore regarded that the bridge has reached the end of its economic life.

If this claim is found not to be justifiable, the rationale becomes groundless. All other claimed benefits are hung around that basic tenet.

This section brings to the attention of the Committee two reports that brings the claims of the RTA/RMS into question. One is the report from Peter Stewart Consulting. This company was commissioned by the Department of Planning to peer review the RMS' EIS bridge condition claims.

The second is the submission from Ray Wedgwood & Brian Pearson, two retired engineers from the DMR/RTA with 80 years experience between them. Both have impeccable reputations within the industry.

The above two are truly independent report/submission. Neither were commissioned by CAWB. Neither are in the position of defending any stated position.

The Committee will have to ascertain which reports are the more reliable. Never-the-less, it has been powerfully argued, infrastructure through a significant heritage precinct should be maintained regardless of the cost to preserve that precinct.

2.1 Scare Tactics

The proponents of Option 1 would have people believing:

- The bridge is unsafe and is likely to fail at any moment.
- One of the piers has become adrift from the rock bottom and shakes as vehicles traverse the bridge.

On 29 March 2012, Bart Bassett asserted in Parliament that, "….a replacement bridge across the Hawkesbury River at Windsor to replace the existing structure, which is old and in such poor condition that it could disintegrate if major flooding were to occur." Hansard, and on 18 October, 2012 he said,"Roads and Maritime Services—the Roads and Traffic Authority at the time—agreed that the bridge needed to be replaced because of safety concerns with a decaying bridge."

2.2 Scrutiny

It sounds so bad the bridge should be closed immediately. But the RMS has not done so. So does what the RMS say stack up to scrutiny?

- Since 2008 the weight limit on the bridge has been raised from 50t to 62.5t to the current limit for general vehicles of 68t, which is at the point there is no weight limit on the bridge as stated by Duncan Gay in a written answer to a question in Estimates in Parliament. Refer to the Wedgwood/Pearson submission.

- The engineer's report in the EIS says the bridge can carry its current load until a replacement bridge is built but does not give a deadline for that to happen.

- It has been observed that the bridge has been inspected and surveyed on a regular basis to ascertain any possible movements whilst traffic was passing over it. When approached at the site by community members, the surveyors indicated there was no movement.

- the surface of the footpath has been replaced but no maintenance to the fabric or structure of the bridge appears to have been carried out over the period of the WBRP process.

From: Windsor_Bridge <Windsor_Bridge@rms.nsw.gov.au>
Date: 7 April 2016 at 12:07:09 PM AEST
To: [redacted]
Subject: RE: Windsor Bridge replacement 2016

Dear [redacted]

The existing Windsor Bridge is currently safe due to ongoing extensive repair and maintenance.

Please contact the project team on 1800 712 909 if you wish to discuss this matter further.

Kind regards

Windsor Bridge replacement project team
P 1800 712 909
E windsor_bridge@rms.nsw.gov.au
www.rms.nsw.gov.au
Every journey matters

Figure 5. Reply to an email from the WBRP Team to a concerned resident who enquired as to the bridge condition.

- In an email to a concerned community member, the WBRP team stated that the Windsor Bridge is currently 'safe due to ongoing extensive repair and maintenance'.

- However, in an email to CAWB, Ian McLeod indicated that the RTA had spent only $57,000 on maintenance over a 19 year period

Peter Stewart, the independent bridge condition engineer, who was commissioned by the Department of Planning and Infrastructure to peer review the RMS documents said:

- The conclusion that **the whole bridge is in a poor condition is not supported** by the level 2 Inspection Report Ratings [B8]. There is no linkage provided between the condition of the various elements and the overall condition. If it is assumed that the condition of the bridge is equivalent to the worst element then again the argument is thin as only 2.1% of the reinforced concrete beams is categorised as condition 4 or 'poor'. (p. 11) (Emphasis added)

- Due to the very slow rate of deterioration it **would not warrant demolition of the bridge for some considerable time.** It is also evident that the process can be arrested or prevented either by installing an impressed current or jacketing the damaged sections. (p. 15)

- The cracks have been there for decades and during that time the bridge has been subjected to severe flooding (overtopped approximately 64 times in 100 years) as well as increases in traffic volumes. **The bridge has not exhibited any signs that it is about to fail.** (p. 16)

The RMS was asked what, if any, interventions in the Bridge's condition had been undertaken in the previous 10 years, and it responded that ***"no specific interventions have taken place to reinstate the fabric of the bridge,*** *although activities such as removal of spalling continue as part of bridge maintenance"* (p.38, emphasis added).

The Stewart Consulting Report goes on to provide additional detail:

> "Bridge Engineer Issue 16. Please advise costs for the maintenance activities undertaken from 1994 to present. RMS Response: As discussed in responses to DP&I comments made on 6 May 2013, maintenance costs for particular assets on the RMS database are only available until 2002 at which point the system began recording on a region/area basis. From 1994 until 2002 maintenance activities for Windsor Bridge totalled $57,347. Since then RMS has advised on spall removal on 30 Nov 2009 costing $1021 and collision damage repair on 30 April 2010 of $3032." (p.39)

On 11 April, 2014, Question 5269 in the Legislative Council referred to maintenance activities on Windsor Bridge. The response mentions minor repairs and maintenance including to timber walkways, deck joint, collision damage, spall removal and general clean, paint or repair. Repairs made between 1994 and 2012 total $89,614.

In summary, the Stewart Report concludes that:

> While the bridge is deteriorating from various ailments, **it is not about to collapse in the short term.** (p.4)

Has it been a deliberate decision within the RTA/RMS to carry out only superficial maintenance on the bridge and consequently allow it to decay by neglect? Yet despite protestations that bridge is in need of extensive maintenance and repair, over 21,000 vehicles, including up to 3,000 heavy vehicles travel across the bridge each day.

2.3 Lane Width

The RMS promotes demolition and replacement of this historic bridge on the basis of road safety standards, a position that also fails to withstand reasonable scrutiny.

The RMS website cites a project benefit of Option 1 as

> "Improved traffic flow from a bridge that allows two-way heavy vehicle traffic and shoulders for vehicle breakdowns"

This statement falsely implies two-way heavy vehicle traffic cannot currently pass on the existing bridge.

Figures 6 & 7. Heavy vehicles are currently able to pass on the Windsor Bridge.

On 19 March 2008 T*he Hawkesbury Gazette* reported Hawkesbury City Council organised a demonstration of a bus and truck passing on the bridge to highlight concerns raised by then Councillor Bob Porter and Mayor Bart Bassett of the 'dangerously narrow lanes'.

Attended by RTA officials, a 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,". See Appendix 1.

Despite this finding, Mayor Bart Bassett said the only 'true fix' was a new bridge.

Since then 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. (Figures 6&7)

Despite this, proponents in favour of Option One continue to make uninformed claims 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 = 3.05m**

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.

In their report to the Department of Planning, Cambray Consulting reports

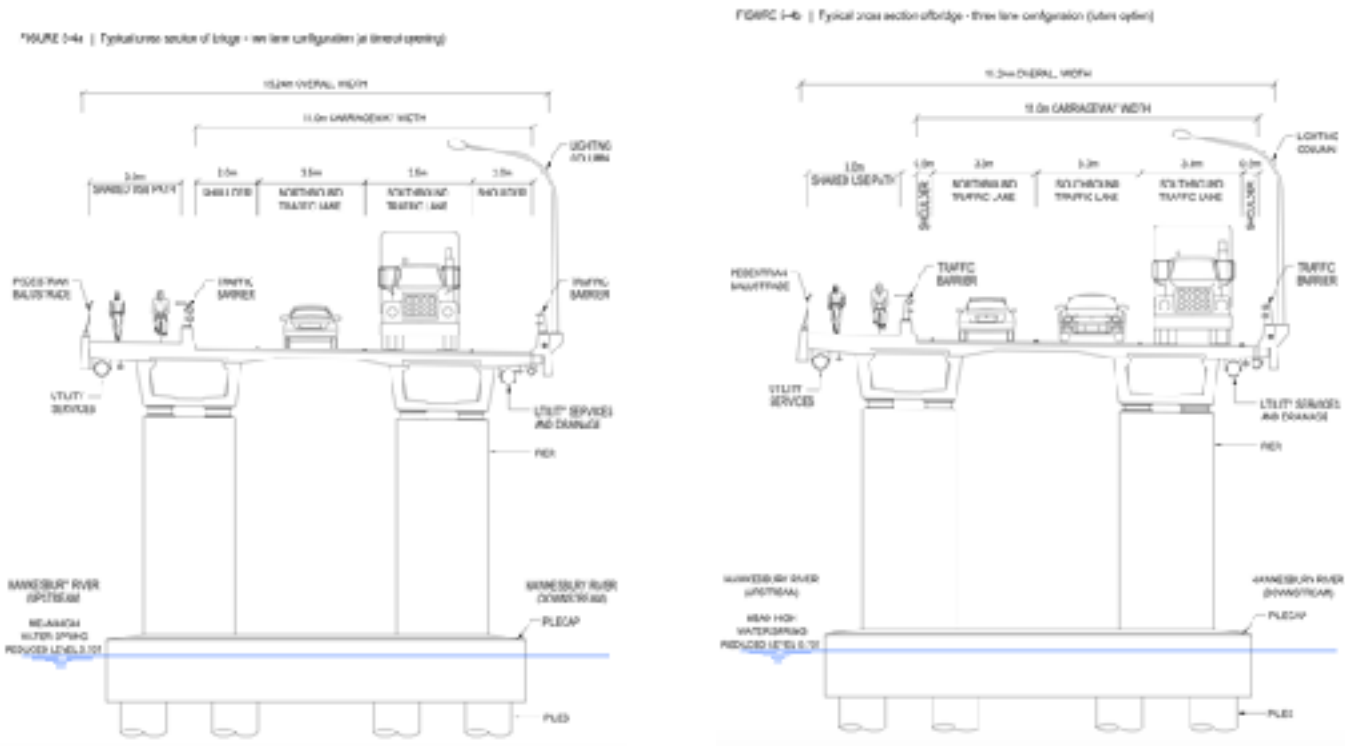
> "In relation to the refurbishment of the existing bridge, we understand that the current traffic lanes are approximately 3.05m wide. Whilst traffic lanes widths of 3.5m are generally desirable, Austroads Part 3 and the RTA Supplement to this guideline suggest a lane width of 3.0m – 3.3m may be acceptable for general traffic lanes on urban arterial roads which are low speed, and where truck volumes are low .
>
> Therefore we believe that it may be feasible for the current carriageway width to be maintained , if the bridge is restricted to light vehicle traffic and a 50km /hr speed limit is imposed. "

By retaining the existing bridge for light and local traffic, and diverting heavy vehicles onto a bypass, the lane width would not be an issue.

However, quite hypocritically, the Option 1 carriageway will no longer meet standards for breakdown lanes and shoulders. This is despite the RMS website currently claiming shoulders as a project benefit of Option 1.

Initially the proposed bridge was designed with two unidirectional lanes, one northbound and one southbound, with the option to remark the roadway to allow three lanes of traffic - one northbound, two southbound when traffic demand increased, predicted to be in

2026. This, according to the EIS, would see the two, 3.5 metre wide lanes with a 2 metre shoulder on each side remarked to traffic lanes 3.3 metres wide with 0.5m shoulders. Thus, no longer meeting the minimum lane and shoulder width.



Figures 8 & 9. Cross section drawings of the original lane configuration from the EIS

In December 2016 the Member for Hawkesbury, in what appeared to be an attempt to silence a community who were angered the Government was replacing a two lane bridge with a two lane bridge, announced that from the time of completion (2020) the new bridge would operate as three lanes.

At a shopping centre display following the release of the Urban Design and Landscape Plan for the WBRP, CAWB had the opportunity to speak to the Project Manager. He revealed the lane configuration would involve three, 3 metre lanes with a 1 metre shoulder on either side. Three metre lanes? The same as the current ‘dangerously narrow lanes’?

Not satisfied with the verbal statement alone, CAWB contacted the Project manager for confirmation of his statement. The reply email, attached below, corrected this by indicating the 11 metre carriageway would be divided into:

3.8 metres Lane 1 Southbound

3.45 metres Lane 2 Southbound

3.75 metres Lane 1 Northbound

with no shoulders.

From: Windsor_Bridge <Windsor_Bridge@rms.nsw.gov.au>
Subject: RE: Clarification of Questions
Date: 26 June 2017 9:27:03 am AEST
To: [redacted]

Dear [redacted]

As discussed with our Project Manager Gurjit Singh, please see below responses to your queries provided over the phone on Friday afternoon 23/6/2017:

1) What is the depth of the proposed bridge measured from the piers? 1.85 metres deep incrementally launched double T-Girders.
2) When was the Business Case made? The case for the project was originally made and adopted under Roads and Maritime Services processes at that time. When the project was recommenced in late 2015, Roads and Maritime had adopted new procedures that required a Business Case for the project to be funded. This was completed in late 2016. Since then the Business Case has been subject to an assurance review.
3) What is the width of the proposed bridge, the proposed lane widths and the width of the shared pedestrian / cycle way? 11 metres in total lane width (three lanes) and a three metre shared path. Total width of the bridge is 15.332 metres.
3.8 metres â€" Lane 1 - Southbound
3.45 metres â€" Lane 2 - Southbound
3.75 metres â€" Lane 1 - Northbound
4) What is the anticipated date for calling tenders for the construction of the bridge? At this stage the RMS anticipates inviting companies to register their interest in tendering for the construction in August 2017.

Regards,

Windsor Bridge replacement project team
1800 712 909
rms.nsw.gov.au/windsorbridge

Retaining the existing bridge for light traffic with bypass for heavy traffic has the ability to provide the much lauded road safety standards. Option 1, does not.

An apparent case of “Rules for some and Rules for Others”.

3. MAINTENANCE

This section relates to the Terms of Reference

> *1a) the current Windsor Bridge, including its maintenance regime, renovation methods and justification for demolition.*

During the last recorded flood of the Hawkesbury River in 1992 a section of the northern embankment gave way which resulted in the abutment needing repair with gabions put in place. Note: Local chatter has it that this was due in part to the sand dredging being carried our below the bridge.

Email advice from Ian McLeod, Senior Project Manager at the time for the Windsor Bridge replacement project team indicated in an email to CAWB the RTA/RMS had spent $57,000 on maintenance on the Windsor Bridge from 1994 to 2013.

On 11 April, 2014, Question 5269 in the Legislative Council was answered about maintenance activities on Windsor Bridge. The answer talks about minor repairs and maintenance including to timber walkways, deck joint, collision damage, spall removal and general clean, paint or repair. These repairs were made between 1994 and 2012 and the total cost of repairs on Windsor Bridge for this period is $89,614. With conflicting figures, is the RMS unable to keep track of their maintenance spending?

On page 39 of the Peter Stewart Consulting report commissioned by the DPI it says,

> "Bridge Engineer Issue 16. Please advise costs for the maintenance activities undertaken from 1994 to present. RMS Response: As discussed in responses to DP&I comments made on 6 May 2013, maintenance costs for particular assets on the RMS database are only available until 2002 at which point the system began recording on a region/area basis. From 1994 until 2002 maintenance activities for Windsor Bridge totalled $57,347. [Average $6371.89 per year or $6.10/m2/year].

Since then RMS has advised on spall removal on 30 Nov 2009 costing $1021 and collision damage repair on 30 April 2010 of $3032."

In the same report, in answer to a question by Peter Stewart, the RMS responded, "No specific interventions have taken place to reinstate the fabric of the bridge, although activities such as removal of spalling continue as part of bridge maintenance."

Since then it has been observed that regular inspections of the bridge have been conducted, and the surface of the footpath has been replaced. No maintenance to the fabric or structure of the bridge appears to have been carried out.

In a letter to a constituent dated 12 September, 2016 (see Appendix 2), the Roads Minister Duncan Gay notes maintenance costs for the existing bridge are "very high", with $100,000 being spend since 2012, which equates to $25,000 a year. It doesn't specify what maintenance was actually carried out, and how much the footpath repairs were. He also claims regular inspections costing $50,000 a year are undertaken. In comparison, the new bridge will cost $20,000 a year to maintain. Compare this to the $57,000 thousand from 1994 to 2013, which the RMS spent on Windsor Bridge.

It is argued if the bridge is refurbished as recommended by Peter Stewart Consulting, the need for Level 3 bridge inspections would be significantly reduced, virtually eliminating this cost.

Then if we go by Duncan's figures for bridge maintenance, the existing bridge would be comparable in costs as the new bridge, but without cost of construction of the new bridge.

3.1 Renovation and Retention

For further information please refer to the Brian Pearson and Ray Wedgwood submission to the Inquiry.

3.2 The Dishonest RMS

One of the consistent objectives of the WBRP appears to be the demolition of the existing bridge.

Despite the Department of Planning reports which state

> *"In our opinion there may be alternatives to the preferred option warranting consideration, which involve retaining and refurbishing the existing bridge…" Cambray Consulting,*
>
> *"Given that the bridge is considered an item of state significance within the EIS, give further consideration to options for the proposed route that retain the bridge to provide either a primary or secondary use." Casey and Lowe*
> *"The condition of the existing bridge is such that it is not in a dire condition and could relatively economically be refurbished and strengthened." Peter Stewart Consulting*

the RMS is unwavering in its determination for the heritage listed bridge to go.

In June 2017, Hawkesbury City Council voted on a motion to retain the existing bridge for pedestrian traffic and a cycle was should Option 1 proceed.

As the current Council stands, 8 Independent, Greens and Labor Councillors are opposed to the WBRP, and 4 Liberal Councillors maintain their support for the replacement bridge.

During the debate the Liberal Councillors indicated they had contacted the office of local member and state treasurer Dominic Perrottet MP to seek advice on the feasibility of retaining the existing bridge for pedestrian traffic.

The advice they received back, which was read out at the meeting, indicated the bridge was in such dire condition that its retention would require a renovation of $16 million which would only extend its life for 10 years, even as a pedestrian bridge.

Further to this, to reverse engineer a handrail to the downstream side of the bridge would cost in excess of $1 million.

What follows is an email chain obtained by CAWB which demonstrates the RMS knowingly and deliberately distributes false information to suit their agenda.

Monday 26 June, 5:16 PM - Email from Dominic Perrottet's office to Leslie Wells in Roads Minister Melinda Pavey's office seeking advice to be presented at the meeting.

Monday 26 June, 5:16 PM - Email forwarded to Steven Head at the RMS

Monday, 26 June 2017 5:21 PM - Email is forwarded to the Asset Management department in the RMS.

Tuesday, 27 June 2017 9:08:18 AM - Reply sent by Joe Krsul from the Asset Management Dept to Steven Head saying repairs to the bridge could cost in excess of $5M which includes underwater repairs. A new railing would have to be fitted to the downstream side of the bridge, and the existing railing would have to be upgraded, which is estimated to cost $0.5 - $1 million. The RMS would undertake a 30 year maintenance plan and handover the amount to council to maintain.

Tuesday, 27 June 2017 11:34:35 AM - Steven Head replies to Leslie Wells that *"it has been assessed that at least $16M would be required to repair areas of existing substantive damage. Even with this maintenance work, the repairs would only extend the service life of the bridge for up to 10 years". The new railing would cost at least $1 million, and* RMS has no allocation to handover to Council funding for Council to undertake the required maintenance.

Within 2 hours, the RMS altered the information to suit claims made to date regarding the condition of the bridge. False information was then supplied to Minister Perrottet's staff, and this was then passed on to local Councillors who based their decision to vote against the retention of the existing bridge on this dishonest advice.

From: Danica Zegarac [mailto:Danica.Zegarac@parliament.nsw.gov.au]
Sent: Monday, 26 June 2017 5:16 PM
To: Leslie Wells <Leslie.Wells@minister.nsw.gov.au>
Subject: RE: Windsor Bridge

Thank you

Are you able to get a response from RMS to the following:

Does RMS have the ability to handover the bridge to Council?

What is the estimated costing to upgrade the bridge to a standard for pedestrian use?

Council claims the maintenance of the bridge will be less than $8.00 per day, is this true?

If the bridge was to remain – what risks does this pose to the new bridge?

What are the plans for pedestrian/cycleways under the new Windsor Bridge?

You're a legend!

Kind regards,

Dee

Danica Zegarac
Electorate Officer (Media & Communications)
Office of The Hon. Dominic Perrottet MP
Treasurer

From: Leslie Wells [mailto:Leslie.Wells@minister.nsw.gov.au]
Sent: Monday, 26 June 2017 5:17 PM
To: HEAD Steven
Cc: HARDWICK John T
Subject: FW: Windsor Bridge

See below questions being asked about tomorrows Council meeting.

Kind Regards,

Les Wells
Policy Advisor – Major Projects & Regional NSW
Office of the Minister for Roads, Maritime & Freight

T: +61 2 8574 7300
M: 0438 511 967

From:	KRSUL Joe
To:	HEAD Steven; LANGFORD Colin W; SWALLOW Maria E; TANSEY Michael C; FORREST Neil
Cc:	HILL Michelle E
Subject:	RE: Windsor Bridge
Date:	Tuesday, 27 June 2017 9:08:18 AM
Attachments:	image012.png image013.png image014.png image017.png image018.png

---

Steven
The existing bridge is in need of significant repairs and works – it's going to cost more than $8/day.
The bridge is 143 metres in length.
The piles and substructure (cracks and section loss on cast iron piers) are in need of major rehab work with concrete spalls on the bridge.
Ballpark figure to repair could be in excess of $5M which includes underwater repairs. Needs to be confirmed. Not sure what was in EIS

The bridge has a manually removable railing on one side during flood times.
If this was a pedestrian bridge, a new railing on the other side would need to be designed and constructed. The existing railing may need to be upgraded.
Cost of the upgrading this may be about $0.5 M to $1M

Without major strengthening the old bridge would be a liability during flood events and cause significant damage to the new downstream bridge if it was to be retained. I believe this was covered in the EIS..?

Normally if we were to hand it to council, we would undertake a 30 year maintenance plan and handover the amount to council to maintain.
It depends on the expertise of council whether this is a good idea as they may not have the expertise to maintain and the issue would come back to RMS to sort out.
Otherwise, RMS would have to fix and then handover.

Let me know if you need any more information

Joe Krsul
A/ Principal Manager, Asset Management
Network Sydney | Journey Management
P 02 49 087857 M 0411 111946
www.rms.nsw.gov.au
Every journey matters

From: HILL Michelle E on behalf of HEAD Steven
To: Leslie Wells; HEAD Steven
Cc: HARDWICK John T
Subject: RE: Windsor Bridge
Date: Tuesday, 27 June 2017 11:34:35 AM
Attachments: image012.png
image013.png
image014.png
image017.png
image018.png

Hi Les

The proposed replacement bridge will provide a 3 metre wide shared pedestrian / cycle pathway on the western side of the new bridge. The shared path connects to George Street at Windsor and also provides a series of cycle paths on the northern side of the river to safely connect to Macquarie Park, Wilberforce Road and Freemans Reach Road.

The existing Windsor Bridge is in poor condition and it has been assessed that at least $16M would be required to repair areas of existing substantive damage. Even with this maintenance work, the repairs would only extend the service life of the bridge for up to 10 years.

Roads and Maritime does not support retaining the old bridge for pedestrian / cyclists use as:

- The underside of the concrete deck has significant spalling and requires regular checking and work to prevent risk to river users.
- The piles and substructure (cracks and section loss on cast iron piers) are in need of major rehabilitation work.
- The bridge has a manually removable railing on one side during flood times. If this was a pedestrian bridge, a new railing on the other side would need to be designed and constructed. The existing railing may need to be upgraded. Estimated cost of the upgrade is at least $1M.
- Without major strengthening, the old bridge would be a liability during flood events and could cause significant damage to the new downstream bridge if it was to be retained and did fail during a flood
- Walking / cycling facilities are included on the new bridge.

While RMS continues to maintain the bridge at an appropriate level for ongoing use at this time, RMS will not be undertaking the level of maintenance required on the existing bridge to hand it over to Council. In addition, RMS has no allocation to handover to Council funding for Council to undertake the required maintenance.

Should Council still request the handover of the existing bridge, RMS will require Council agree to fully fund all maintenance of the bridge and would also require indemnity from Council for any damage the existing bridge causes to, and not limited to, property, people, environment and the new bridge structure.

Let me know if you wish to discuss further.

Regards, Steven

3.3 Tibby Cotter Bridge

TIBBY COTTER BRIDGE AND WINDSOR BRIDGE

In the 2014-15 NSW State Budget the following information is recorded:

Project Description	Location	Complete	Estimated Total Cost $000	Est. Expend to 30-06-14 $000	Allocation 2014-15 $000
Windsor Bridge over Hawkesbury River Replacement	Windsor	n.a.	n.a.	14,900	6,000

In the same budget we are advised:

The Albert 'Tibby' Cotter Bridge over Anzac Parade	Moore Park	2015	25,000	10,000	15,000

The Albert Tibby Cotter Bridge ultimately cost $38 million.
http://www.smh.com.au/nsw/13-million-blowout-for-albert-tibby-cotter-bridge-is-not-our-fault-heritage-council-20150206-1379qz.html

In an answer provided to the NSW Upper House by Roads Minister, Duncan Gay, the Minister incorrectly links his decision to approve the transfer of Windsor Bridge funds (to the Tibby Cotter bridge project) to an unrelated court action.

In an answer to MLC, Penny Sharp (14.10.14) regarding what Roads projects had their budgets reallocated to fund the Tibby Cotter Bridge, a pedestrian and cycle-way project, the Minister indicated Windsor Bridge funds had been included in the funding package

because “The (Windsor Bridge Alliance) team was unable to continue with the project as a result of delays and **planning challenges through the court system**.”

Yet, according to a briefing sent to the Chief Executive, Roads and Maritime Services in April, Minister Gay endorsed the funding reallocation on 28 February 2014 (see below).

This is significant because on the date the Minister decided to approve the reallocation of Windsor Bridge Funds he could not have known there would be a court case. CAWB itself (as the group responsible for the case) was still in discussions with legal advisors. A decision to go ahead was only made just prior to affidavits being served on 24 March, 2014. (see below)

Therefore, a month before the Minister could have known of the court case, he approved transferring funds from the Windsor Bridge project to a different project.

Minister Gay: “The project did not go to tender as we were able to utilise an already established alliance team that had been selected to undertake the construction of the Windsor bridge. The team was unable to continue with the **project as a result of delays and planning challenges through the court system.”** (Hansard 14.10.14)

https://www.parliament.nsw.gov.au/prod/parlment/hansart.nsf/V3Key/LC20141014059

Objective Ref. IP14/06204

Transport for NSW

To: Chief Executive, Roads and Maritime Service
FROM: Deputy Director General, Planning and Programs
CC: Chief Financial Officer
Deputy Director General, Policy and Regulation
DATE: 17.4.14
PRIORITY: URGENT

ROAD SAFETY AND ANZAC PARADE PEDESTRIAN BRIDGE 2013/14 FUNDING

PURPOSE

- To confirm funding for the Road Safety Program and Anzac Parade Pedestrian Bridge in 2013/14 and to provide additional adjustments to the RMS capital allocation.

BACKGROUND

- Anzac Parade Pedestrian Bridge was not funded in the 2013/14 budget. The Minister for Roads and Ports has requested $10M to be identified from within the Roads Portfolio in 2013/14 to ensure completion of the bridge by February 2015.
-

CURRENT POSITION

- $25.9m in 2013/14 from within the Roads Portfolio has been identified to fund $10M for Anzac Parade Pedestrian Bridge
- The $25.9m in funding has been obtained as agreed with RMS Officers from:
    - underspends in 2013-14 (with no impact to project estimated total costs) for Bringelly Road, Windsor Bridge and Sydney Harbour Bridge Southern Toll Plaza
    - funds no longer required for Bulahdelah Upgrade and the Pacific Highway Safety and Minor Works Strategy
- These reallocations have been endorsed by the Minister for Roads and Ports on 28 February 2014.
-

Form 85 (version 1)
UCPR 6.2, 59.4

LAND AND ENVIRONMENT COURT
19 MAR 2014
FILED

SUMMONS (JUDICIAL REVIEW)

COURT DETAILS

Court	Land & Environment Court
Class	4
Registry	Sydney
Case number	14 / 40163

TITLE OF PROCEEDINGS

Applicant	**Community Action for Windsor Bridge Inc. (Inc9896883)**
First Respondent	**NSW Roads and Maritime Services**
Second Respondent	**The Minister for Planning and Infrastructure**

DECISION BEING REVIEWED

Application number	SSI-4951
Date of approval	20 December 2013
Material date	20 December 2013
Decision of	The Honourable Brad Hazzard, The Minister for Planning and Infrastructure

FILING DETAILS

Filed for	**Community Action for Windsor Bridge Inc. (Inc9896883)**, applicant
Filed in relation to	Whole approval
Legal representative	Roderick Storie Roderick Storie Solicitors 290 Windsor Street, Richmond NSW PO Box 1077 Richmond NSW 2753
Legal representative reference	149588
Contact name and telephone	Roderick Storie 61+ 2 4578 8544
Contact email	mail@rodstorie.com.au

A copy of this document must be served by 24 MAR 2014

3.4 Justification for Demolition

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

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

The RTA/RMS has stated,

“While the existing structure is still considered safe for general traffic, parts of the bridge are now 134 years old.” 2009.

“Opened in 1874, Windsor Bridge is the oldest existing crossing of the Hawkesbury River and parts of the bridge are now over 130 years old. Windsor Bridge is deteriorating due to age and heavy usage.” 2011.

“The existing Windsor Bridge is over 140 years old, is deteriorating, no longer meets current engineering and road safety standards and needs to be replaced.” 2016

These are purely statements, with little technical information to back them up. Age alone is not a reason to demolish the bridge. ‘Deterioration’ isn’t neither. Every RMS asset, regardless of age, is deteriorating, unless properly maintained.

4. THE REPLACEMENT BRIDGE - OPTION 1

This section relates to the Terms of Reference

b) the replacement bridge project, including:

i. options presented to the community

vi. planning and procurement strategies and associated project costs

4.1 Options And Alternatives

This section focuses on the options chosen by the then RTA to replace Windsor Bridge in Thompson Square and to use all its efforts to achieve one option only, regardless of the damage it would do to heritage and indeed to Windsor.

There was never any meaningful attempt to give consideration to a bypass option for Windsor, which would be a more appropriate upgrade to such an important arterial route. A bypass which diverts heavy vehicles and through traffic away from the historic town centre and the Thompson Square precinct is the only adequate solution that will provide for future traffic needs whilst protecting the heritage that is key to Windsor's economic and cultural viability. What does this blinkered approach say about the ethics and culture of the RTA/RMS?

The initiative to create a new crossing of the Hawkesbury River at Windsor could have given the Government an opportunity to incorporate the project into broader transport planning, through linking it with the outer metropolitan road network.

Across the world and in Australia there is an overarching trend towards building bypasses to keep traffic moving. In NSW, recent years have seen the completion of bypasses at Berry, Kempsey, Nambucca Head and Moree. Many of these roads have less daily traffic and heavy vehicles than currently crosses Windsor Bridge. This submission asks why the same consideration hasn't been given to Windsor by the NSW Government?

If the RTA had decided on Option 1 well before public consultation had commenced, why go through that charade and at a not inconsiderable cost? It is treating the concept of ‘the planning process’ and the community with contempt.

4.2 No Option But Option 1

RTA/RMS officials claim the RMS only builds (project manages) what the Government tells it to build. In this case there is evidence the RTA at least was complicit in, and very successfully promoted, Option 1 with both Governments.

Another significant player in this selection and promotion process was the Hawkesbury City Council from 1994 to 2015. From its initial emergence, Council strongly supported Option 1. An email disclosed through a GIPA revealed that the Hawkesbury City Council was the only Government agency in favour of Option 1. Since September 2016, when a local government election was fought significantly on the Windsor Bridge issue, the Council has been transformed, with eight of 12 councillors now strongly opposed to Option 1. See Annexure 1.

So what is the key aim of the Windsor Bridge Replacement Project? The clue is in the name - ‘Replacement’.

Hawkesbury City Councillors Tree & Richards and the Hon Dominic Perrottet, Member for Hawkesbury have continually made that claim publicly.

On 29 March 2012 the then member for Londonderry, Bart Bassett, said in Parliament (Hansard): “Prior to the last election the Liberal-Nationals Coalition made a clear undertaking to build a replacement bridge across the Hawkesbury River at Windsor to replace the existing structure…”

Cambray Consulting in its report said, “In summary, based upon the information provided to us, it appears that the scope throughout much of the duration of the project has focussed on justifying the preferred option, as opposed to undertaking a thorough investigation into alternative options.”

Similarly, Casey & Lowe in its report said, “RMS’s heritage consultants in Working Paper 1 state the proposed impacts on Thompson Square Conservation Area are so major the WBRP should not go ahead. But RMS has chosen not to accept this advice because they had already chosen to explore only Option 1 in this EIS.”

Peter Stewart Consulting in its report said, “It is clear however that the documentation does not show a strong resolve to preserve the existing bridge for an alternative use, with a continuing theme throughout the documentation that it will replaced by a new bridge. This was clear when a decision was made within the then RTA (now RMS) to replace the bridge sometime before 2003.”

So if the project is about replacing the existing bridge, what it is NOT about? The project is not about providing for increasing traffic flow into the future. It fails to preserve and enhance 30,000 year old non European history, and European history and heritage from 1795. It is a piece of infrastructure that the Government has repeatedly been warned they should not proceed with yet they continue to do so anyway.

4.3 RMS Options

One of the most damning aspects of the Windsor Bridge Replacement Project is the misleading and deceitful presentation of alternative options. Every alternative to Option 1 was deliberately designed to be inadequate and unacceptable.

In 2008 the RTA approached residents in Thompson Square and told them, in person, the bridge would be built as “Option 1” and the other options were “just to show people we've considered alternatives”.

The *Windsor Bridge over the Hawkesbury River Options Report*, published August 2011’[1] states:

[1]http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-options-report-aug2011.pdf

"In June 2008, in recognition of the need to replace Windsor Bridge, the NSW Government announced it had committed $25 million for a replacement bridge. The RTA undertook investigations into potential options a (sic) new of refurbished bridge."

Nine potential options to upgrade or replace the existing bridge were identified. This included 8 options to *replace* the bridge and one *(Note: actually 10 as Option 9 had two further options)* to upgrade the existing bridge. The options below are from the 2011 Windsor Bridge options report.

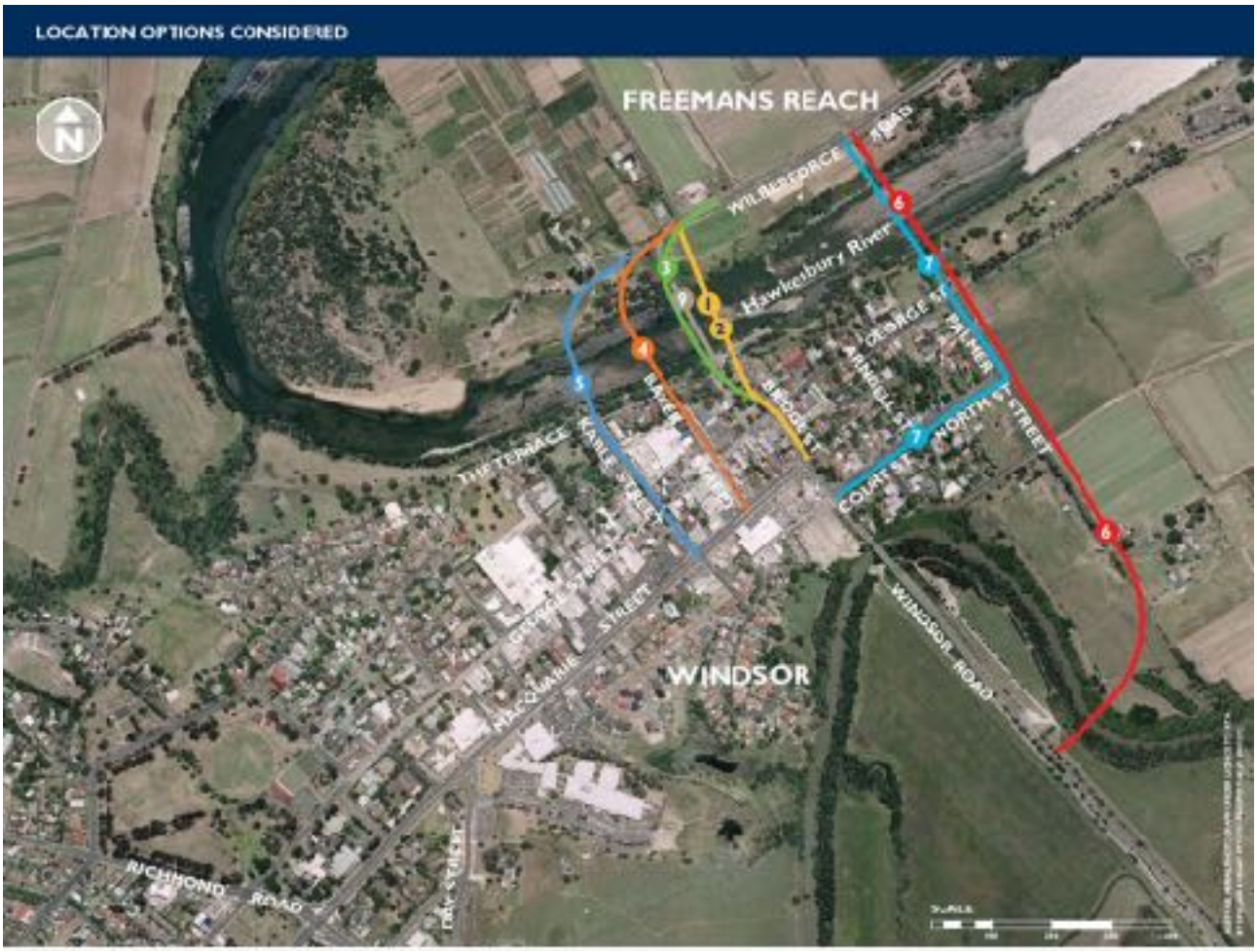


Figure 10. Image shows all RTA/RMS options apart from the distant option 8, located 6.5km downstream from Windsor.

Option 1

‘A replacement high level bridge around 35 metres downstream of the existing bridge as an extension of Old Bridge Street (originally Bridge Street). It would provide sufficient clearance for services vehicles and buses along The Terrace.”

It has been claimed this option will follow the original alignment from George St to the river. However, page 131 of the draft SCMP says, “Bridge Street had been created in 1814, soon after the completion of the new bridge over South Creek” and “Bridge Street, however, was a very short thoroughfare, ending at present day George Street.” Therefore to claim the proposed Option 1 would follow a traditional road as often claimed is fallacious. (See Volume 2 “The Precedent Argument”)

- The Terrace will be lowered to allow coaches access to the wharf.
- The Bridge /George Street intersection will be lowered to improve sight lines.
- The selected site arguably provides more challenges for the project and thus the most difficult due to the heritage, historical and site constrictions.

This option was initially costed at $25m and was deemed the better value for money (in this case read ‘cheapest”). As the projected costs have risen the RMS has not changed its position. By the end of this financial year the project would have cost over $33.5m before construction has even started. (See Volume 2, Budgets)

The proposed bridge is an incrementally launched bridge, rather than the less costly and more unobtrusive plank bridge. The RMS made this choice so that most of the construction could be carried out on the north bank. A plank bridge requires work to be carried out on both banks. This would have considerable negative impact on traffic flow across the existing bridge during construction, public access to the upper reserve and business activity in and around Thompson Square.

Option 2

“A replacement low level bridge around 35 metres downstream of the existing bridge as an extension of Old Bridge Street. It would provide a clearance of around 3.5 metres for light vehicles only along The Terrace.”

Over the various stages of the project the height of the proposed bridge has risen, been reduced, risen and been reduced. As far as can be ascertained the chosen option is closer to Option 2 than Option 1. Option 2 is not really a low level bridge given it would still have to provide a clearance over The Terrace to allow coaches access to the wharf. It is simply lower than Option 1.

- Option 2 would have no greater or lesser flood immunity benefits than Option 1.
- The Terrace would have to be lowered to allow coaches access to the wharf.
- The Bridge/George Street intersection would have to be lowered to improve sight lines.

Option 3

“A replacement bridge around 10 metres upstream of the existing bridge. It would primarily use the existing Bridge Street road alignment.”

This would be a high level bridge meeting the river bank adjacent to, and level with, the Doctor’s House. In fact, from the options illustrations provided by the RMS, it appears that this option would require part of the house’s front verandah to be part of the bridge.

- Option 3 would have a curved sweep onto Wilberforce Road.
- It would be above much of the parkland and thus separate the various reserves both physically and visually
- It would increase noise levels across Thompson Square.

Option 4

There is no indication as to whether this option would be a high or low level bridge.

If a low level bridge, say at a similar road level to The Terrace, this option would either require The Terrace to be closed on either side of Baker Street, or the installation of traffic lights to allow access to The Terrace and the wharf. If the former, Thompson Square Road (originally named Callaghan Street) would also need to be widened to allow ingress and egress from the buildings along the street, as it is currently one-way. Traffic lights would also have to be installed to allow access to the wharf, particularly for coaches.

If this option was to be a high level bridge, the requirement to allow vehicles to access The Terrace would cause considerable access issues for the Macquarie Arms carpark, the buildings on the western side of Baker Street, and egress from the Marketplace carpark. Again, Thompson Square Road would need to be widened.

In either case the practicalities of vehicles, particularly heavy vehicles, using such an option are intriguing. Traffic would be required to turn left from Windsor Road into Macquarie Street, then turn right in considerably less than 100 metres at a new set of traffic lights into Baker Street, then travel along a narrow road to gain access to the proposed bridge.

Option 5

> "A replacement bridge that is an extension of Kable Street, Windsor. The bridge would connect within Macquarie Park on the northern bank."

There is no indication as to whether it would be a high or low level bridge.

If a low level bridge (e.g. at the road level of The Terrace) it would either cause The Terrace to be closed on either side of Kable Street, or require the installation of traffic lights to allow access along The Terrace.

If it was to be a high level bridge, to allow vehicles to proceed along The Terrace there would be considerable access issues for the Marketplace carpark, the public carpark, the houses on the western side and the Medical Centre on the eastern side of Kable Street.

In any case, the practicalities of vehicles using this option are intriguing. Traffic would be required to turn left from Windsor Road into Macquarie Street, then turn right at the traffic lights into Kable Street, then travel along a narrow road to gain access to the bridge across the river, after travelling through the commercial heart of Windsor and over the pedestrian crossing linking sections of the mall.

Option 6

> "A replacement bridge beginning with a new T-intersection on Windsor Road, creating a new road crossing over South Creek. The road then heads north parallel to Palmer Street, leading to the bridge over the Hawkesbury River."

This option has been promoted by the RMS as a bypass option but in reality it is only a partial bypass.

As for all options (except 9) it requires the removal of the current Windsor Bridge. Hence if access into Windsor is desired from the north side of the Hawkesbury River, drivers would have to turn right onto Windsor Road to return to Windsor. The considerable proportion (over 30%) of vehicles travelling west to Richmond, Penrith, the M7, Blacktown and so on would still have to access Macquarie Street.

A variation to this option was to use the gazetted unused (except for the growing of turf) Livingstone Road, further east of Palmer Street.

Considerable resistance to this option was generated by members of the Upper Hawkesbury Powerboat Club as any bridge in that area would cross over the powerboat course.

It should be noted this option is would enter Windsor Road north of the point at which McGraths Hills Flats begin to flood. This can occur with local flooding or through South

Creek flooding. Housing developments in Riverstone, Schofields and parts of Box Hill are affecting this process, and recent experience suggests that the McGraths Hill Flats flood point is now around 1 metre lower than at Windsor Bridge. Local flooding does occur at different levels, however in 2015 when McKenzies Creek flooded, the Flats were about 2 metres over the road whilst the river height was 5.5 metres.

Note: With this option impacting on properties on The Peninsula, it is now known RMS officers and local politicians encouraged residents affected by Option 6 to actively lobby for Option 1 under threat of Option 6 being constructed. Senior project managers held private meetings with residents in their homes a number of times over several years as part of this encouragement.

CAWB does not support Option 6 as-

- The road connections which are cut in local flooding, let alone major flooding
- The impacts on residential properties on Palmer Street
- The impacts on the North Street Conservation Area.
- It severs Tebbutts Observatory and Peninsula House from the historic Peninsula
- It impacts Governor Philip Park.
- It impacts the Upper Hawkesbury Power Boat Club racing circuit

Option 7

> "A replacement bridge running down the existing Court/North Street in Windsor, before turning north along Palmer Street to the bridge over the Hawkesbury River."

To access this option, vehicles from McGraths Hill would have to turn right at Court Street, about 20 metres after crossing Fitzroy Bridge.

Vehicles coming from Macquarie Street or George Street West would turn left into Court Street about 30 metres from the Macquarie Street lights. Traffic lights would therefore have to be installed within 30 metres of the Macquarie Street lights.

Vehicles would then travel through a suburban street beside the historic Court House, which was designed by the colonial architect Francis Greenway in 1821, and alongside a group of heritage houses from the period between 1840–1875 in North Street. They would then turn left into Palmer Street before crossing the Hawkesbury River.

Option 8

> "A replacement bridge through Pitt Town and connecting to Wilberforce, removing a crossing at Windsor."

This option was promoted as a bypass, however the Windsor Bridge was still to be removed.

This option would require drivers wishing to access Windsor from north of the river, or to travel south to Blacktown, Penrith or the M7, to travel an extra 9 kilometres to do so. It is intriguing that this option included a sweeping road from King Road Wilberforce to Punt Road Pitt Town. See Figure 12.

All of the above options in 2011 were claimed to "provide access in a 1 in 5 year flood event". A 1 in 5 year flood level is stated to be a 11 metres flood. However, the RMS had to adjust this claim down to "less than a 1 in 3 flood". This compares with the current bridge providing access in a 1 in 2 flood. The irony is that the RMS is unable to indicate at what level a 1 in 3 or indeed a 1 in 2 flood level would be. At the time of writing, the RMS is unable or unwilling to indicate exactly what benefit the proposed bridge would achieve in flood terms. An email chain documenting this discussion is provided in the Flood Immunity section of this submission.

Option 9

> "Retaining and refurbishing the existing bridge. Two potential methods were identified to carry out the refurbishment works."

Option 9A would:

- Replace the bridge joints, concrete the bridge deck, install deck drainage and beams and add additional steel girders between the existing concrete beams. The cast iron piers would require strengthening by concrete encasement.
- Close the existing bridge for three months during the refurbishment."

In the 2011 Windsor Bridge Options Report it is stated that "refurbishment of the existing bridge for a 25 years life span was estimated to cost in excess of $18 million, not including the community costs and impacts from extensive detours that would be required during repairs and refurbishment of the bridge. Closure of the bridge requires a road detour of 30 kilometres via Richmond Bridge. (It is not clear if the $18m figure applies to 9A or 9B.)

The Peter Stewart Report says that "It appears the optimum option is some combination between the RMS and the Pearson Wedgwood options which will be able to provide a viable option to refurbish and strengthen to carry T44 loading with a load factor of 2 which will be sustainable for the next 25 to 50 years, and not build a new bridge at this stage". This report concludes "so with a relatively modest expenditure (approx. $14.5m) the bridge can be serviceable for the next 50 years within which time an alternative route will have been identified and agreed."

Brian Pearson and Ray Wedgwood's option did not require the current bridge to be closed except for some minor night work. The work would be carried out from the river.

Option 9 B would:

- Remove and replace the existing bridge deck.

- Remove and dispose of the existing super structure including the bridge deck. The rubble in the existing cast iron casings would be drilled out and replaced with a reinforced concrete infill to create permanently cased bored piles.
- Refurbish the bridge super-structure to include a head stock, beams and decking that would accommodate a wider road platform.
- Require closing the bridge for twelve months during the refurbishment.

Technical details of the Windsor Bridge are given in *Hawkesbury Heritage & Happenings*, posted by Michelle Nichols, Hawkesbury Library:

> "In October 1872, three of the iron piers had been sunk 4 feet into the rock to the depth of 25 feet below river bed; each column was lewised with four inch bolt and filled up with strong cement and concrete, supporting a ring of 9-inch radiating bricks; enclosing a cone of concrete to the top of the pier."

The *Windsor Bridge Historic Heritage Working Paper* describes how "the completed piers were filled with a 'ring of 9 inch radiating bricks enclosing a cone of concrete'. This description is consistent with what was interpreted in 2005 as 'construction debris', although the *Australian Town and Country Journal* suggests a more orderly placement of the masonry than was reported by an inspection carried out in 2005 (refer to Plate 72 in "Bridge Elements)"

The *Windsor Bridge Historic Heritage Working Paper* elaborates: "it was not until 1897 that the bridge was raised eight feet in height. The new height of the road deck was achieved by the installation of new cylinders eight feet in length placed on top of the original cylinders. The new cylinders were filled with concrete, which in 2005 was assessed as of 'good quality'". If the concrete was assessed as of good quality in 2005, why did the RMS choose to use the term 'rubble'?

The *Windsor Bridge Historic Heritage Working Paper* goes on to say that in "1922 the bridge superstructure was replaced, marking its final phase of modification. It involved the installation of new concrete girders and deck on the existing piers. In order to maintain traffic flow, the concrete girders were "built on the bank and carried into position".

Brian Pearson and Ray Wedgwood point out that the split beams allowed contraflow to occur and thus the bridge did not need to be closed for the 1922 refurbishment. Given today's engineering techniques and night work capabilities, it is possible that Option 9B could be built without closing the bridge for twelve months after all.

In the Negatives section of the Options report it says that Option 9:

- "Would not meet current road design or bridge load capacity standards. Speed limit on bridge would likely remain at 40km/h." Note: the current speed limit of 40km/h is for trucks only.
- "Queue lengths, delays and road performance would not be improved." Note: see the Cambray Report for an assessment of traffic conditions for Option 1.
- "Would not provide sufficient lane width for heavy vehicles to pass on the bridge." Note: elsewhere in the Options Report it says, "The bridge deck, at 6.1 metres wide restricts the movement of heavy vehicles with some drivers electing to wait on one side of the bridge while an oncoming heavy vehicle passes which can delay traffic behind the waiting vehicles". Observations carried out over 4 years indicate that some drivers choose to wait whilst others do not. Interestingly, a header image on RMS Community documents which featured a bus and a truck passing on the bridge has now been replaced.
- "Ongoing traffic problems using the existing crossing may impact on the accessibility and amenity of local businesses in the long term." Note: this would occur for any bridge through Thompson Square. The only long term solution to achieve good traffic flow is a bypass.
- "Construction would require closing the existing bridge to all traffic for a minimum of 12 months (no temporary replacement bridge would be built)." Note: this claim should only apply to Option 9B. Closure of the bridge "requires a thirty kilometre road detour to cross the Hawkesbury River via Richmond Bridge." Note: Brian Pearson and Ray Wedgwood point out that the split beams allowed contraflow to occur and thus the bridge was not closed when it was upgraded in the 1920s. Given today's engineering techniques and night work capabilities, it is possible that Option 9 could be implemented without closing the bridge.

With hindsight it is clear to see the RMS employs a “divide and conquer” philosophy instead of true community consultation. It offers Options designed to split the community, cause conflict and so generate support for its woefully inadequate preferred option.

A far better option is to move the bypass downstream of South Creek so it uses existing road corridors, minimises land acquisition, connects Heavy Vehicle routes together and has no impact on residential properties.

4.4 Alternatives

Despite there being several ideal locations for bypasses, both RMS ‘bypass’ proposals were deliberately designed to negatively impact on residents in Wilberforce and Pitt Town, so as to make them untenable. No reasonable bypass option has ever been systematically evaluated as part of the processes leading to the Windsor Bridge Replacement Project.

In particular, no RMS bypass option:

- “follows high ground”
- takes advantage of existing road corridors to make construction financially viable
- connects to the designated flood evacuation route
- provides any strategic traffic benefits
- or offers increased road network capacity.

The statement that “In comparison to other options, the preferred option for the project performs best in terms of value for money and satisfies the majority of project objectives” (Response to Submissions Report 2013) is repeated in various forms throughout RMS documentation as justification for Option1. Compared to the other farcical options it probably does, however this should in no way be interpreted as demonstrating that Option 1 is the best solution to the stated objectives of the project, when it has been proven to fall desperately short of the Director General’s Requirements.

As discussed in section 4.3 the ‘bypass options’ that were presented both fail as strategically planned traffic solutions, and in addition impact heavily on other heritage areas.

There is a considerable amount of open space adjoining the river in both directions from township of Windsor. The lack of investigation into a more suitable location for a bypass bridge only compounds the argument that the planning of this project has been a charade.

There are two options in particular that should have warranted serious consideration.

4.5 The Rickaby's Line

The Rickaby's line bypass option was presented in an EIS Submission by Ray Wedgwood & Brian Pearson, the two retired engineers from the DMR/RTA mentioned in section 2. It is also discussed in the Peter Stewart Consulting report.

Figure 11. The Rickaby's Line

In essence it would connect Wilberforce Road with the flood evacuation route, Hawkesbury Valley Way (HVW). (Figure 11) There are a number of alternatives as to its exact route but one likely variation is it would travel west of the kiosk in Macquarie Park and join HVW west of Crowne Plaza Hawkesbury Valley either at Percival Street or south of Percival Street. This has been costed by the RMS in the WBRP Submissions Report as $116.9 million.

As a Stage 2 to this option, the high land south of HVW is owned by Rob Tolson. Some years ago the Hawkesbury City Council approved a rezoning application of the land from rural to commercial/light industrial. As part of the approved submission, Mr Tolson was to build a bridge across the railway line to link both parcels of land. Hence the Rickaby Line option could be extended to Blacktown Road utilising the Sydney Western University land located between the Mr Tolson owned land and Blacktown Road, thus creating a total bypass of Windsor.

An alternative or additional staged option would be to construct an overpass on HVW at the Macquarie Street intersection, circumventing the traffic light intersection and facilitating traffic flow. An added advantage to this development is that it would improve the flood evacuation capabilities of HVW, because that intersection is prone to flooding in the case of floods requiring evacuation plans to be activated. There is ample land available for such a facility.

In the Submissions Report in response to the EIS, the RMS costed the Rickaby's Line. (see below).

Table 4-4 Cost estimate for the Rickabys Line option – bypass only

Item	Cost estimate (including contingency)
1. Project development	
1 (a) Route/Concept/EIS or REF	$2,596,832
1 (b) Project Management Services	$155,810
1 (c) Client Representation	$15,581
Sub total	**$2,768,223**
2. Investigation and design	
2 (a) Investigation and Design	$7,163,674
2 (b) Project Management Services	$429,820
2 (c) Client Representation	$42,982
Sub total	**$7,636,476**
3. Property acquisitions	
3 (a) Acquire Property	$6,211,376
3 (b) Professional Services for Property	$0
3 (c) Project Management Services	$124,228
3 (d) Client Representation	$6,211
Sub total	**$6,341,815**
4. Public utility adjustments	
4 (a) Adjust Utilities	$0
4 (b) Project Management Services	$0
4 (c) Client Representation	$0
Sub total	**$0**
5. Construction	
5 (a) Infrastructure	$92,530,784
5 (b) PAI	$508,919
5 (c) Primary Testing	$0
5 (d) Project Management Services	$5,551,847
5 (e) Client Representation	$555,185
Sub total	**$99,146,735**
6. Handover	
6 (a) Refurbish old route	$0
6 (b) Project data and performance	$925,308
6 (c) Project Management Services	$55,518
6 (d) Client Representation	$5,552
Sub total	**$986,378**
TOTAL COST	**$116,879,627**

4.6 The ‘Lynwood’ Bypass - the Pitt Town Bottoms Alternative

This option was mentioned in early WBRP however was was prematurely discarded due to being “beyond the objectives established for this project.” The *Windsor Bridge over the Hawkesbury River Options Report*, published August 2011.

This bypass option (Figure 12) is located downstream of the existing Windsor Bridge and would link Pitt Town Road and Wilberforce Road, and by following an existing road corridor of Pitt Town Bottoms Road would negate the need for significant land acquisition.

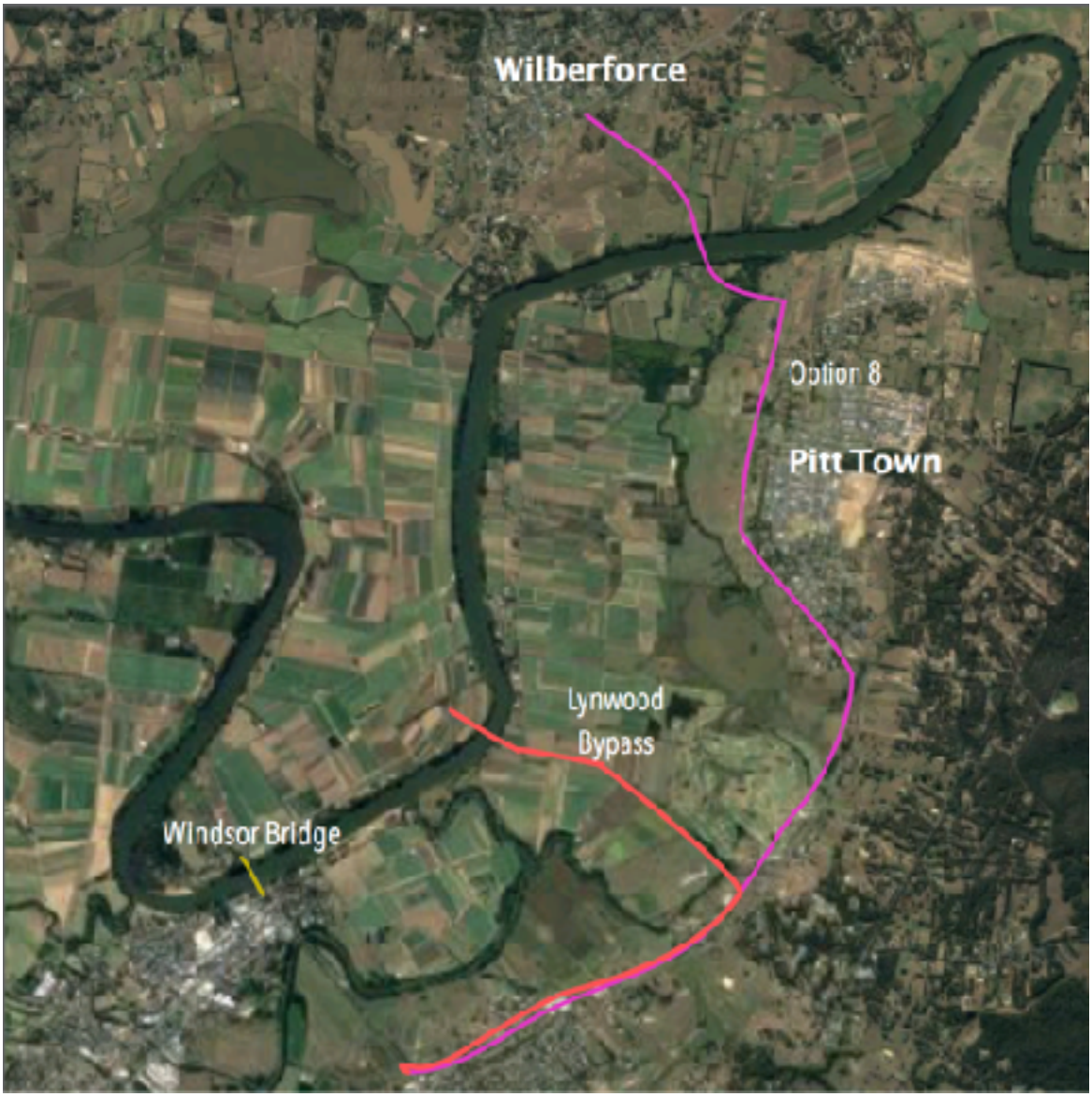


Figure 12. Note the impact of Option 8 on the two townships either side of the river. It isn’t a bypass. It’s building a bridge from one town to another.

For costing comparison, the new duplicate Tourle St bridge crossing is 250m long, requires 3.8km of new 2 lane road and is costing $103 million. The Lynwood crossing is only 130m long and requires the upgrading of 2.3km of 2 lane road.

The crossing at Windsor is a designated heavy vehicle route, so it is of strategic importance to the growth of western Sydney and greater Sydney as a whole. As such, consideration should be given to a request for Federal assistance .

Figure 13. Two of the major intersections for the Lynwood Bypass.

Figure 14 Intersection A - Cnr of Windsor Road and Pitt Town Road. Map shows the adequate road corridor to allow intersection upgrades.

Figure 15. Intersection B - Junction between Pitt Town Bottoms Road and Pitt Town Road. Map shows the adequate road corridor to allow intersection upgrades.

4.7 Advice Received and Ignored

Overwhelmingly, the NSW Government has received and ignored advice to retain the existing bridge and build a bypass.

In 2008 the Government Architect's office advised:

> "The proposal to develop a new two lane bridge (Option 1)… downstream of the existing Windsor Bridge is not supported for the reasons outline above. There are two other proposals that should be considered:"
>
> "Option 3: refurbish the existing bridge." (Note: This does not refer to the option 3 put forward by the RMS, but rather is an option put forward by the GAO)
>
> "In the longer term in line with demand a new bridge could be built in a more suitable location on the periphery of the historic town centre more closely related to future urban growth"
>
> "Option 4: a new bridge in a new location"
> "In consideration of future traffic demands and urban growth develop a new bridge in a more appropriate location on the periphery of the historic town centre and more closely related to future urban growth." *Government Architect's Office, 2008.*

The WBRP's own Historic Heritage Working Paper, published as part of the 2012 EIS, parallels this advice:

> "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." *Windsor Bridge, EIS, Historic Heritage Working Paper Part 1, pg. v.*

As does the Heritage Council of NSW:

> "It is unequivocally opposed to the project for the 'irrevocable damage' it will do to Windsor and Thompson Square. The Heritage Council of NSW reinforced its preference for a bypass option. It argues the project should be refused on heritage grounds." *Heritage Council of NSW*

In 2013 Casey and Lowe's Independent Heritage Review requested:

> "Given that the bridge is considered an item of state significance within the EIS, give further consideration to options for the proposed route that retain the bridge to provide either a primary or secondary use." *Casey and Lowe, Windsor Bridge Replacement Project Independent Heritage Review August 2013, pg.38*

Engineers Australia also sees significant problems with the preferred option:

> "The major work will have very long term implications for the routing of traffic through this area and for conserving the heritage values of not only Thompson Square but the town of Windsor, of which the Square is an integral part. The opportunity should be taken now to resolve the heritage and traffic issues by completely removing the bridge route from the Thompson Square area. Leaving the route through the Square area, at very best, can only postpone problems for future generations. There is no doubt that eventually another crossing will be required that better copes with through traffic" *Engineers Australia, Submission to the WBRP EIS, 2012*

Civil Engineer Peter Stewart recommends:

> "It appears the optimum option is some combination between the RMS and the Pearson Wedgewood options which will be able to provide a viable option (3 above) for the next 25 to 50 years and hence not build a new bridge at this stage. Then at some time in the future a bypass can be built which avoids all the damage to property, heritage values etc. So with a relatively modest expenditure the bridge can be serviceable for the next 50 years with in which time an alternative route will have been identified and agreed." *Peter Stewart Consulting, 2013, pg. 31*

Traffic Engineering and transport planning experts Cambray Consulting propose that:

> "there may be alternatives which offer a better long term solution, which can be staged, and perhaps make better use of the funds being invested into the construction of a new bridge. … We suggest that it may be prudent to 'step back' and undertake a broader study to investigate long term solutions, and once a preferred long term solution is identified, consider a staged approach or interim treatments to progressively deliver that long term solution. This would avoid investing substantial funds into a traffic route which will have a limited 'life' due to constrained intersection capacity on the roads feeding the bridge." *Cambray Consulting, 2013, pg.70.*

4.8 So why not build a bypass?

In the most recent Questions and Answers,[2] released in February 2017 by the RMS, the question is posed:

> "Q. Why not take traffic out of Windsor and bypass the town?"

The response is predictable by now:

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[2] http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-questions-and-answers.pdf

> “A bypass option was considered as part of the options assessment process and would involve building a replacement bridge via Pitt Town. This option was not preferred for a number of reasons.”

It is evident from this response that the RMS chooses to assess the merit of a bypass based only on the deeply flawed Option 8. They continue to rely on this flawed reasoning to justify proceeding with a bad plan, rather than investigate an effective one.

We address the specific issues below.

Comment	Response
“It would have a much higher cost than the preferred option”	This is unjustified. There is no current costing or budget for the preferred option, and no acceptable bypass has ever been studied. Hence there is no available basis for comparison. The Cambray Consulting report recommends a bypass as “this would avoid investing substantial funds into a traffic route which will have a limited ‘life’ due to constrained intersection capacity on the roads feeding the bridge.” This would be a ‘get it done once, and get it done right’ approach.
“Traffic volumes are too low to warrant a bypass”	False. As is addressed in section 6 the average daily number of vehicles travelling across Windsor Bridge far exceed the numbers used to justify recently completed bypasses elsewhere in the state.

“It would not provide an efficient connection for local traffic into Windsor, which would reduce access to businesses in the town centre”	This is false. This statement would only warrant consideration if the existing bridge were demolished.
“It would provide poor pedestrian and cyclist connectivity for Windsor town centre”	This is unjustified and false. Pedestrian and cyclist connectivity, safety and amnesty can be addressed independently of this project. A cantilevered footpath and cycleway can be fitted to the existing bridge. This is not a reason to dismiss a bypass option.
“Large amounts of property acquisition would be needed”	This is unjustified. As was outlined above, a bypass option warranting further consideration is the ‘Lynwood’ bypass, which uses existing road corridors and would require minimal land acquisition..
“It would have a high impact on potential Aboriginal heritage artefacts and the heritage character of Pitt Town and surrounds”	This is unjustified. Option 8 fails on very many levels to be an acceptable option, including heritage impacts. Of course, it is not lost on observers that the RMS chooses to dismiss one option based on its high impacts on heritage, in favour of another that is even more detrimental to heritage values.

“It would still require the refurbishment of the old bridge once the bypass is built. The refurbished bridge would have a limited lifespan at a high cost and would eventually need to be replaced. “	This is unjustified. The overwhelming advice that has been given to the Government is to retain the existing bridge and build an additional crossing in an alternate location. The Peter Stewart Consulting report for the Department of Planning, for example, advised that “The condition of the existing bridge is such that it is not in a dire condition and could relatively economically be refurbished”. See Section 2.2

The Government has failed to provide adequate justification as to why a bypass was not adequately considered as part of this project.

5. COMMUNITY CONSULTATION

1b) the replacement bridge project, including:

i. options presented to the community
v. project assessment process
vi. planning and procurement strategies and associated project costs

It is arguable that the RMS's community consultation processes and practices have done more to alienate the community than any other aspect of the Windsor Bridge Project. This is a matter of particular concern, given the level of disquiet associated with most aspects of the Project.

The inadequacies and problems surrounding the consultation processes include the following:

- The RTA selected Option One as early as 2008, if not before
- 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 has been to promote and deliver the preferred option, rather than to seriously canvas community opinion, or indeed, to take advantage of local knowledge and expertise.
- Information provided by the RMS did not always meet the RMS's own policy 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 subsequently have been modified to the point that 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 that is currently on the table.

5.1 The Preferred Option

As with many aspects of the Windsor Bridge replacement project, the community has become increasingly cynical about the credibility and accuracy of statements made by the RMS.

In July 2009 the RMS (then RTA) commenced community consultation with the release of "Community Update. Windsor Bridge over the Hawkesbury River" [3], detailing the 9 design options for the new bridge. These were presented to residents, stakeholders and community groups, and feedback was invited in order to determine a shortlist of preferred bridge options.

A shopping centre promotion was held on Saturday 25 July 2009 at the Riverview Shopping Centre in Windsor. A community workshop was held at the Deerubbin Centre in Windsor on 1 August 2009. Community displays were on exhibition at Hawkesbury City Council and Richmond Motor Registry from Monday 13 July until Friday 14 August 2009.

The Community Update document stated:

> "All submissions from members of the community and other interested parties will be taken into account in preparing a preferred list of options. Once a short list of options has been determined the community will be consulted again to provide further feedback so a preferred option for Windsor Bridge can be chosen."

Later that year the RMS released 'Windsor Bridge, Over the Hawkesbury River, Report on community consultation November 2009'[4], in which it asked:

> "Has the RTA got a preferred option?"

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[3] http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-cu-july2009.pdf

[4]http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-cc-report-nov2009.pdf

The answer?

> "Currently the RTA has no preferred option. The preferred option will be decided after the community consultation has been completed."

This may have been reassuring were it not for an internal RTA document from the year before, "The status on the Windsor Bridge Replacement Project, 25 August 2008" which states:

> "**2. Preferred Location for the New Bridge:**
> The Option Report for the location of the new bridge has been finalised and preferred location selected. In this report 6 options were considered and feasibility of each option discussed." (Attach 1a)

In NSW Parliamentary Hansard records of 29th October 2010[5], 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 that 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 this action is brought into question, given that 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 Riverstone, held at that time by John Aquilina MP (NSW Electoral Commission).

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

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[5] https://www.parliament.nsw.gov.au/Hansard/Pages/HansardResult.aspx#/docid/HANSARD-1323879322-42643

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

This is reinforced by a media release dated 17 June 2008 announcing a new bridge at Windsor by Eric Roozendaal, the then Minister for Roads, where he is quoted as saying, “The new bridge will be built next to and downstream of the current Windsor Bridge” (Attach 1b).

Curiously, Mr Roozendaal does not mention that the rehabilitation of the existing bridge is also under consideration, as was later included in the options offered during the Community Consultation process.

Considering that one of the main considerations for choosing Option 1 is said to be its cost, the RMS has seemingly wasted considerable time and money justifying Option 1 through what appears to be a box ticking exercise of consulting with the community — an exercise in futility with the preferred option decided well before consultation commenced. This is time and money that could have been used to investigate a more effective bypass option.

5.2 ‘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.

Indeed, RMS staff made it clear in a conversation with community members who resided in Thompson Square that the options were to demonstrate they had gone through the process of offering choices, no matter how impractical they were. It is not unreasonable

to further conclude their sole purpose was also to lead the community towards supporting Option 1.

Only by comparison to the absurd alternative options would Option 1 appear to be the most practical. In fact, despite expert advice to the contrary, no reasonable alternative has ever been explored by the RMS.

5.3 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 that only two options (incrementally launched and plank) were possible due to the bridge being under flood at times. When asked why the group's time had been wasted by showing options that were impractical, the group was told the RMS was required to provide a broad range of options.

5.4 Design & Heritage Community Focus Group

In August 2011 the RMS held a community workshop where they called for interested community members to be participants in a Design and Heritage Focus Group. The stated purpose of this group was to meet regularly and was an opportunity for participants to positively contribute to the project.

The conduct of the Design and Heritage Focus Group was 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 how the focus group was conducted.

With the wisdom of hindsight it is clear that the project was far more advanced 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 left the clear impression that 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 response of the RMS personnel was that the EIS was the time for articulating objections.

Given the objections that were vigorously and unmistakably directed at the entire concept behind Option One, waiting until the EIS was lodged represented 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 the community has been treated with the respect, honesty and in accordance with the agreed terms of reference and table this report 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.

5.5 The Deliberative Forum

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 was 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 happened in the EIS this information only told 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. 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 states:

> “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 one 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 that consultation regarding the Windsor Bridge Replacement Project was extensive, implying that 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?

5.6 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 appearing superficially reasonable, this assertion does not withstand further scrutiny. The question arises: why give priority to the areas of Berkshire Park, Windsor Downs, South Windsor, McGraths Hill, Pitt Town, where very few of the 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 and so on, which are the very communities most likely to use Windsor Bridge on a regular basis?

5.7 Public Response and Community Opposition

The RMS has consistently chosen to ignore widespread public opposition to the Project, preferring to massage response data, or in the case of local politicians, attribute such opposition to a vocal minority or a fringe group. The suggestion that the Project is opposed by a 'minority': vocal, or otherwise is not borne out by the facts.

The Windsor Bridge Community Consultation Report, published in November 2009 (page 9, Submissions) says that "approximately 136 submissions were received on the nine options". However, elsewhere in the report (5.3 Preferences Indicated, page 11) it is stated that "the RTA did not request people to nominate a preferred option, as a result some submissions did not include this information" and "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 'debated' in the NSW State Parliament on 14 March 2013. This petition consisted of in excess of 12,000 signatures from people opposed to Option One, and has since been supplemented by around 30,000 signed letters of protest sent to the Premier, a CAWB Facebook page with over 10,200 followers and an occupation of a small corner of Thompson Square upper reserve for over 1650 days, 24/7.

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 on 28th September 2012.

A selection of the questions and responses are as follows:

> 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 found similar levels 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 abundantly clear that there is a major groundswell of opposition to the proposal. The argument from 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 that the EIS does not accurately portray the extent or intensity of the opposition. It made no attempt to acknowledge the limited support for Option One, nor did it seek to actually respond to the issue.

In response to the EIS, a total of 94 submissions were received. Of those, 70 were lodged as an objection to the project, 19 were in support and 5 were submitted as a comment only.[6]

In a poll on the Hawkesbury Gazette Facebook page in December, 2016, 67% of the 1892 respondents didn’t believe the bridge would fix traffic (Figure 16).

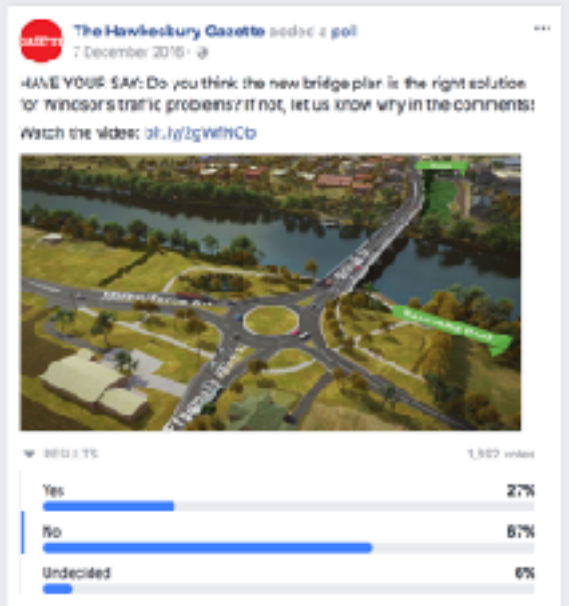


Figure 16. A Facebook poll in *The Hawkesbury Gazette,* on 7 December, 2016.

[6] http://majorprojects.planning.nsw.gov.au/?action=list_submissions&job_id=4951&title=Website%20Submissions&type=2

6. TRAFFIC

This section relates to the Terms of Reference

b) the replacement bridge project, including:

ii. Post construction strategic outcomes, including traffic benefits, transport and network service capacity,

6.1 Introduction

The Windsor Bridge Replacement Project fails to address road network capacity issues or deliver outcomes expected of fiscally responsible planning for public infrastructure.

In failing to take into account the regional destinations of traffic crossing Windsor Bridge, the Project deprives the community of significant, measurable and highly desirable outcomes that might reasonably be expected from such significant public expenditure.

Despite admitting that more than 70% of Windsor Bridge traffic is “through traffic” and does not stop in Windsor, the Project funnels an increasing volumes of cars and Heavy Vehicles into a known bottleneck.

The Project fails to deliver benefits that could be achieved more rapidly and cheaply by simply modifying relevant intersections and maintaining the existing bridge.

The Project fails to address critical network issues at a key intersection. It relocates the problem from one intersection (George and Bridge Streets), to a second, busier and more important intersection (Macquarie and Bridge Streets)

The proposed destruction of a significant public asset (the historic Windsor Bridge) is therefore a pointless waste of public resources.

6.2 Traffic planning challenges

Increasing levels of regional traffic funneling into the historic township of Windsor and its surrounds 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 adds further planning complexity.

Windsor's existing river crossing capacity is already inadequate during peak periods and the proposed new bridge, 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 severely congested, peak period traffic conditions across the North Richmond Bridge and on its approaches are at crisis levels. 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 is clear that Windsor Bridge cannot be viewed in isolation. While the Government continues to spend tens of millions of dollars at North Richmond intersections, it has failed to undertake a regional analysis to cover current and potential future crossings of the Hawkesbury River.

The scope of the Windsor Bridge Replacement project has been too narrow and simplistically focused on just the bridge and its immediate approaches. A broader analysis is required.

6.3 Traffic considerations — overview

Figure 17. Thompson Square and the surrounding road network.

Car and Heavy Vehicle volumes across Windsor Bridge and through Thompson Square *exceed* traffic volumes which have been used to justify bypasses of towns such as Berry, Kempsey, Moree, Macksville and other towns (see below).

The Hawkesbury is in desperate need of another crossing of the Hawkesbury River and increased road network capacity.

Despite this, the Option 1 bridge fails to deliver any improvement over the current situation.

The RMS admits that the bridge itself is not cause of the traffic problems, but rather the intersections at either end. Indeed, the Macquarie/Bridge Street intersection is acknowledged to be the main bottleneck, and is outside the scope of this project.

In 2012 when addressing a meeting of the Windsor Business Group, then local Liberal MP Kevin Conolly said, "In a sense we are building 'like for like'...we are not building for greater capacity".

In its 2013 Submissions Report, the RMS says "It is recognised that the project is not a long term solution to traffic congestion in Windsor" (p.42). The Submissions Report goes on to say that "an alternative route around Windsor may be considered in the future depending on growth in traffic numbers and local congestion" (p.42).

However 5 years earlier, a 2008 RTA document stated that *traffic volume across Windsor Bridge already exceeded the threshold requiring 4 lanes across the river.*

Traffic Modelling indicates that traffic volumes just exceed the criteria to justify a four lane bridge. Constructing the bridge and approaches for four lanes would significantly increase the cost of the project and extend the intended objective of the project, which is to replace an existing bridge at the end of its life. The need for property acquisition would be increased see Appendix**. Such process would be more difficult and costly since it would affect properties along old Bridge street.

It is now 10 years since this observation was made. Traffic volumes have increased considerably, especially Heavy Vehicle volumes (see "Bypass Justification" below).

In a 2012 Question and Answers document, the RMS said "The traffic performance of the preferred option is largely related to the Macquarie Street / Bridge Street and the Windsor Road / Hawkesbury Valley Way intersections." It acknowledges that "modelling shows that these key intersections could not accommodate the predicted future traffic volumes and the models indicated traffic congestion."

All this makes it quite clear the existing bridge is not the traffic problem – adjacent bottleneck intersections are.

This issue is best addressed by referring to the Department of Planning's consultant traffic engineers Cambray Consulting:

"Rather than constructing a three-lane (ultimate) bridge which has more traffic capacity than the roads and intersections feeding it, we would suggest considering alternative

bridge crossing locations which may provide adequate traffic capacity for a longer period of time (e.g. a bypass option)." Cambray Consulting (p.24)

"If the current bridge was to be retained for local traffic, this could offer a good result all-round. The new bridge could take B-doubles and heavy vehicles away from town, allowing a load limit to be imposed on the existing bridge to possibly extend its life, minimise the effects of heavy vehicles on the town, and retain local connectivity." Cambray Consulting (p.67)

"We suggest that it may be prudent to 'step back' and undertake a broader study to investigate long term solutions, and once a preferred long term solution is identified, consider a staged approach or interim treatments to progressively deliver that long term solution. *This would avoid investing substantial funds into a traffic route which will have a limited 'life' due to constrained intersection capacity on the roads feeding the bridge.*" Cambray Consulting (p.70)

To summarise – The RMS is proposing to demolish a functioning state asset, one which could be used as part of a strategic approach to address traffic issues within the Hawkesbury. **It is then going to waste over $100 million of taxpayers money, to build a replacement bridge which does nothing to improve traffic conditions, because it fails to add capacity to the road network.**

6.4 Modelling the traffic outcomes for vehicles crossing the new bridge

Solving the traffic issues related to Option 1 appears to be challenging. The WBRP has had to remodel its traffic plans on a regular basis in an effort to devise a traffic plan that may provide some projected traffic improvements, even for a short time.

For example, the Windsor Bridge replacement Options Report of 2011 states that "the project can be delivered in two stages based on traffic demands and available funding" (p.42):

- The section between Wilberforce Road and George Street including construction of a new bridge is estimated at $31 million.
- Future works including traffic signals at the George Street/Bridge Street intersection and modification of lanes on Fitzroy Bridge (South Creek) are estimated at $14 million. These would only be constructed based on traffic demands and available funding.

The total estimated project cost for the both stages is $45 million (2011 dollars).

Using the traffic configuration outlined above, option 1 was modelled for its impact on future traffic. A number of issues were identified in relation to the capacity of this option and a number of improvements were made to the option design. These included:

- "The original option 1 included a roundabout at the northern end of the bridge, at the Freemans Reach/Wilberforce Road intersection. The traffic model results suggested that the roundabout would be barely operational at the 2009 traffic levels and would not accommodate any future traffic growth. The roundabout would need to be replaced with a signalised intersection that would operate satisfactorily up to 2026." **Note: Not done. Reverted to a roundabout**
- "The southern intersection would be at capacity under future growth levels. A signalised intersection would need to be included at the George Street/Bridge Street intersection replacing the roundabout." **Note: Done**
- "In order for the George Street/Bridge Street signalised intersection to operate sufficiently, three of the existing right hand turns would need to be prohibited. This included prohibiting the southbound right hand turn from Bridge Street into George Street, the northbound right hand turn from Bridge Street into George Street and the east bound turn from George Street onto Bridge Street." **Note: Not done**
- "The existing Macquarie Street/Windsor Road intersection would be at capacity under future traffic. Future upgrades to this intersection would be required." **Note: Not done**
- "The existing traffic arrangements across Fitzroy Bridge would not accommodate the above changes to traffic arrangements. In the future the bridge would need to be widened to three lanes (two northbound and one southbound). This could be

able to be achieved within the existing bridge by removing the pedestrian path from the existing structure and re-linemarking." **Note: Not done**

The *Windsor Bridge over the Hawkesbury River Traffic modelling and evaluation of options - preliminary report* (August 2011), on page 3 under the heading of Base model it is stated that:

- "The 2009 base model showed the Bridge Street/George Street roundabout in combination with the nearby Bridge Street/Windsor Road/Macquarie Street signalised intersection experiencing random congestion in both AM and PM peaks."
- "In the AM peak, southbound traffic using the existing bridge experiences heavy queuing, on occasions stretching from Macquarie Street and/or George Street extending for several hundred metres, sometimes even beyond the Freemans Reach Road intersection." *Note: Currently the queue can extend over 2 kms and on occasions, 5 kms*
- "Queuing is less extensive in PM peak, however the northbound traffic queue may extend for several hundreds meters from the roundabout." *Note: The Jim Anderson Bridge was opened in September 2007 and hence provided an alternative to vehicles normally using Macquarie Street. Currently this queue can extend for 1 km and on occasions 2 kms.*
- "It appears that congestion is primarily caused by insufficient capacity at the intersections of Bridge Street with George Street and Macquarie Street, and the configuration of Bridge Street between them."
- "Traffic growth to 2026 was estimated using the Sydney Strategic Traffic Model. The forecast increase in trips to and from the Windsor study area was added to the 2009 traffic base model."
- "The 2026 traffic demand exceeded the capacity of a number of key intersections in the base models, notably along Bridge Street and Hawkesbury Valley Way (the former Richmond Road). The traffic model showed traffic congestion. Therefore substantial improvements would be required to cater for the forecast traffic growth."

The *Traffic and Transport Working Paper 4* in the EIS of November 2012 states on page 51 that:

- •a "4 arm roundabout (with Macquarie Park Access)" would provide the best performance for the Wilberforce Road / Freemans Reach Road intersection in the long term." (p.51) **Note: This is the chosen model**
- "New signals at the Bridge Street/George Street intersection would improve capacity for future traffic … Based on the constraints and impacts of the other options, option 4 was selected as the preferred intersection arrangement … Option 4 would remove the right turn facility from Bridge Street (south) and would provide a dedicated left turn only and through only lanes at the stop line. This would allow a right turn bay to be provided on Bridge Street (north) to cater for the Bridge Street (north) to George Street (west) vehicle movement." (p.55) **Note: The right turn bay may no longer be what is planned.**
- "The revised design of the intersection allows the flexibility for the right turn from Bridge Street (north) into George Street (west) to be prohibited during peak traffic periods should traffic conditions warrant such a change" (p.55) *Note: A condition of approval states: "C46. Any proposed closure of the right hand turn movement from Bridge Street southbound into George Street shall be sequenced to occur outside business hours (9.00 a.m. to 5.00 p.m. Monday to Friday). Hawkesbury City Council shall be provided with a minimum one month notice of any planned closure in writing."*
- "Also with the new arrangement of the intersection left turns for vehicles over 9 metres in length from Bridge Street (north) to George Street (east) would not be permitted." (p.55)
- "An alternative route to allow vehicles to access the East side of Windsor from Bridge Street would be via Court Street and Arndell Street. Modifications to line marking at the Bridge Street and Court Street intersection would be required to provide a safe right turn facility for northbound vehicles." (p.55) *Note: The right turn bay may no longer be what is planned*
- "In the future when traffic levels increase to a point when additional capacity is required, the bridge would be re-line marked to provide two lanes southbound and one lane northbound." (p.56)

- “The requirement to provide an additional southbound lane could occur within the first ten years of the project’s life; however, this is dependent upon the rate of traffic growth and traffic generating developments occur.” (ibid) *Note: The three lane configuration has now been announced to occur from the opening of the proposed bridge.*
- “The additional traffic lane would be accommodated on the existing bridge deck by reducing the width of shoulders to 0.5 metres. The three lane configuration would comprise two 3.3 metre wide southbound lanes and one 3.3 metre wide northbound lane.” (ibid) *Note: This is no longer the case. There will be three wider lanes with no shoulders.*

In the EIS (2011/12) the RMS claimed that 19,000 vehicles a day were projected to be using the bridge in 2016. The RMS had stated that 18,000 vehicles per day were already using the bridge in 2008. In the 3D visualisation released by the RMS in December 2016 (available at the RMS Windsor Bridge Project website) the RMS stated that on Wilberforce Road the peak a.m. queue length was 810m and on Bridge Street/Windsor Road the p.m. queue length was 420m.

Everyone who travels along those roads at peak times knows that these estimates are absurdly inaccurate. In the morning peak the queue length is often 2-3 kilometres and sometimes 5 kilometres. In the afternoon peak the queue length is usually 1 kilometre and sometimes much further.
If these are the figures that the RMS is using for its traffic modelling, its predictions are brought into question.

In March 2017 RMS commissioned Arcadis to conduct a traffic survey through the project area. That was carried out three months after the release of the 3D animation. That traffic survey indicated there were 21 600 vehicles a day on average using the bridge. The difference is staggering.

The Arcadis report has remained hidden with the project technical documents on the RMS website, the RMS did not publicly announce the findings of the study. Probably because the report shows traffic volumes have increased to the point where the current project should be cancelled.

We refer the committee to the submission #0032 to the current Inquiry, made by traffic engineers Chris Hallam and Associates. In his analysis of the Arcadis report Mr Hallam found the existing conditions provide better Levels of Service in the AM peak, but the project is better in the PM peak. Surely the project should be superior in both situations?

Of even more importance is the results showing a bypass, either upstream or downstream is far superior in all circumstances.

6.5 Crash Data

A recently released RMS survey reported that between June 2011 and December 2016 there were 52 crashes in the study area.

Figure 18. Note the majority of accidents are at intersections on the surrounding road network, which can be addressed independently of the bridge.

Of these crashes, none were fatal, 62% were non-casualty, and nearly 80% were at intersections on the surrounding approach road network. From the diagram above it

appears no accidents occurred on the bridge itself in that period. Therefore the argument the bridge is not safe on the basis of crash data is unfounded. Any issue with the surrounding road network can be addressed independently of the bridge being replaced.

6.6 Heavy vehicle volume projections

Despite insistence by the Government and Option One proponents that heavy vehicle use is not increasing, traffic counts by the RMS and others show the opposite is the case.

Consider the following statistics. In the 2012 EIS the RMS presented a table with daily traffic volumes as below:

Time commencing	Total vehicles	Light vehicles	Heavy vehicles
Total	19,133	17,796	1,337

The EIS also provided growth rates for traffic:

Table 7-15 Growth rates of key roads (using 2011 as the base year)

Road	Growth to 2021 (%)	Growth to 2026 (%)
Bridge Street, over Windsor Bridge	17.3	25.3

From the above it can be calculated:

*2021 = 22,433 Vehicles/1,568 Heavy Vehicles

*2026 = 23,973 Vehicles/1,675 Heavy Vehicles

In **March 2017** RMS consultants Arcadis conducted traffic counts with the following results: up to **22,300 Vehicles/2,600 Heavy Vehicles** cross Windsor Bridge daily.

In **November 2017** CFE Technologies conducted traffic counts with the following results: up to **23,078 Vehicles/3,022 Heavy Vehicles** cross Windsor Bridge daily.

In other terms, in 2017 traffic had already reached and exceeded volumes predicted by the RMS for 2021 and is approached volumes predicted for 2026.

Of major concern is the fact Heavy Vehicle volumes have more than doubled in only 5 years.

Yet as recently as January 25th 2018, the parliamentary secretary for Roads Minster Melinda Pavey stated that: “the number of Heavy Vehicles using the new bridge is not expected to increase.”

Either the Minister and her staff are ignorant or they are lying. We leave it to the Committee to decide.

6.7 Justification for a Windsor Bypass

The RMS and Government claim that there is not enough traffic to justify a bypass of Windsor. However traffic through Thompson Square exceeds that used to justify bypasses of other towns in NSW.

Consider the following data:

- Windsor: 22,600 vehicles/3,000 Trucks – Arcadis/CFE Technologies
- Berry Bypass: 21,300 vehicles/1,704 Trucks – Environmental Assessment
- Kempsey Bypass: 21,538 vehicles/2,700 Trucks – Environmental Assessment
- Nambucca-Urunga Bypass: 14,000 vehicles – Macleay Argus
- Moree Bypass: 1,700 Trucks – RMS Community Update

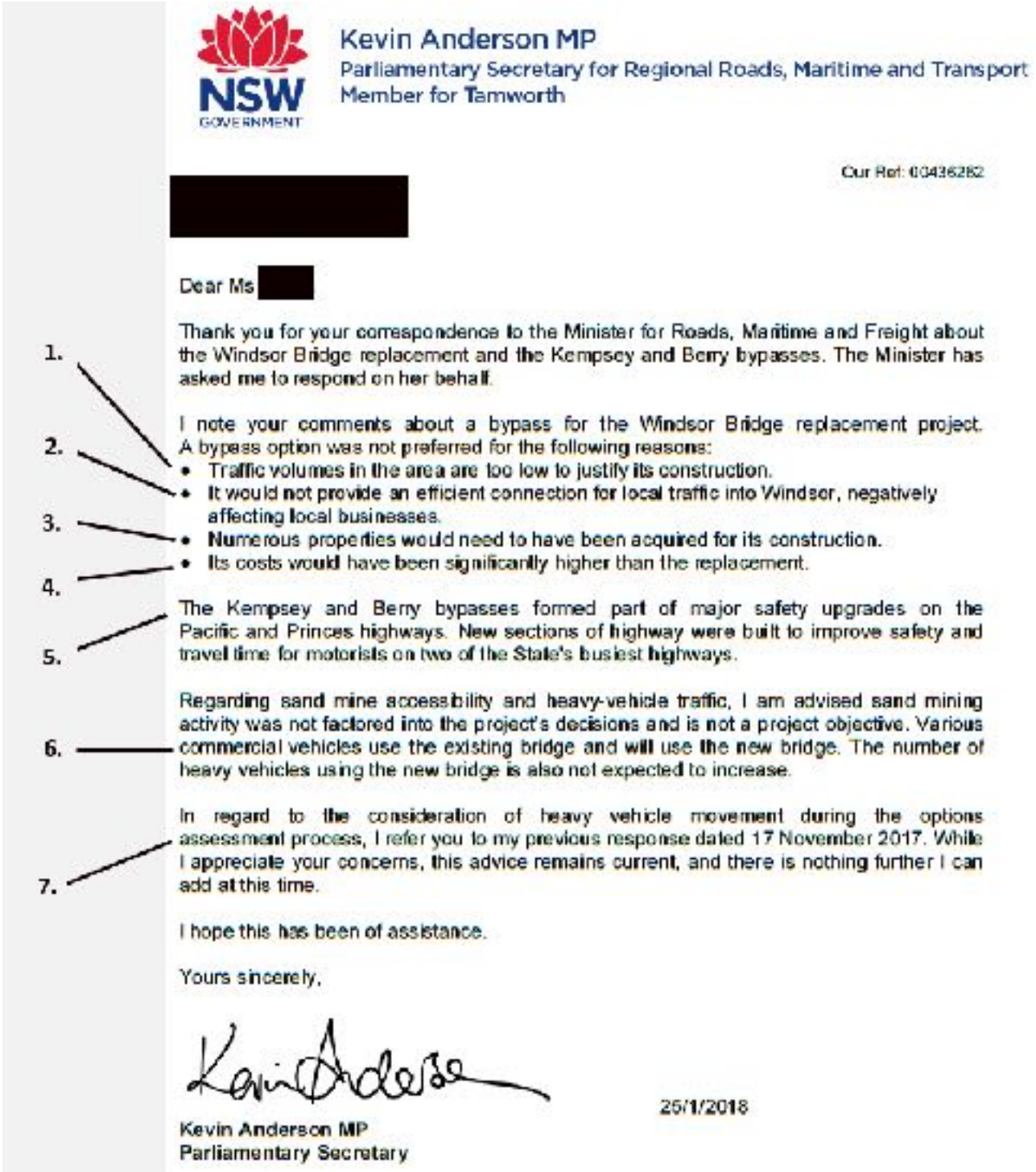
As shown earlier the number of Heavy Vehicles travelling across the bridge and through Windsor is increasing at an alarming rate.

It has been NSW Government practice to remove such excessive numbers of trucks from towns and pedestrian areas. In Berry, Premier Gladys Berejklian proclaimed that “The people of Berry have their town back”.

At Tenterfield, planning has begun for a Heavy Vehicle Bypass, yet it has less than a fraction of the heavy vehicle traffic that Windsor does.

Yet in 2016 Member for Hawkesbury Dominic Perrottet wrote to a resident that *"Traffic volumes are too low to warrant a bypass"*. Clearly Mr Perrottet is either ignorant or lying. We leave it to the committee to decide.

Consider also a recent letter sent on behalf of NSW Roads Minister Pavey. Points highlighted are addressed below -



Kevin Anderson MP
Parliamentary Secretary for Regional Roads, Maritime and Transport
Member for Tamworth

Our Ref: 00436282

[redacted]

Dear Ms [redacted]

Thank you for your correspondence to the Minister for Roads, Maritime and Freight about the Windsor Bridge replacement and the Kempsey and Berry bypasses. The Minister has asked me to respond on her behalf.

I note your comments about a bypass for the Windsor Bridge replacement project. A bypass option was not preferred for the following reasons:

1. Traffic volumes in the area are too low to justify its construction.
2. It would not provide an efficient connection for local traffic into Windsor, negatively affecting local businesses.
3. Numerous properties would need to have been acquired for its construction.
4. Its costs would have been significantly higher than the replacement.

5. The Kempsey and Berry bypasses formed part of major safety upgrades on the Pacific and Princes highways. New sections of highway were built to improve safety and travel time for motorists on two of the State's busiest highways.

6. Regarding sand mine accessibility and heavy-vehicle traffic, I am advised sand mining activity was not factored into the project's decisions and is not a project objective. Various commercial vehicles use the existing bridge and will use the new bridge. The number of heavy vehicles using the new bridge is also not expected to increase.

7. In regard to the consideration of heavy vehicle movement during the options assessment process, I refer you to my previous response dated 17 November 2017. While I appreciate your concerns, this advice remains current, and there is nothing further I can add at this time.

I hope this has been of assistance.

Yours sincerely,

25/1/2018

Kevin Anderson MP
Parliamentary Secretary

As we have been discussing, Windsor Bridge and the Thompson Square Conservation Area are subject to higher traffic volumes and heavy vehicle traffic than that used to justify bypasses of Kempsey, Berry, Moree and other NSW towns.

A bypass, by definition, is not a connection to a town, it is a network connectivity solution to facilitate through traffic travelling between points other than the town itself.

There are six main routes out of Sydney: The Pacific Highway, Princes Highway, Hume Highway, Great Western Highway, Bells Line of Road and Putty Road.

Putty Road, the route accessed via the road through Thompson Square and across Windsor Bridge carries more traffic than roads through Berry or Kempsey and is still the main inland road north from Sydney. To claim that it and the people who travel it are less important and less worthy of adequate infrastructure reeks of social discrimination.

The RMS deliberately ignored possible options such as the Lynwood Bypass which use existing rural road corridors and therefore reduce any land acquisition costs to a minimum. The RMS also fails to mention land acquisition is part of its proposed Option One bridge.

The RMS costed one bypass option, the “Rickabys Line” in its Response to Submissions Report (2013). The estimated cost of this bypass is given as $116.9 million. While this is 16% more expensive than the figure of $100 million which has been given as the cost of Option One, the difference cannot be considered as significant when state and nationally significant heritage is saved from destruction. It is important to note that less expensive bypass options may be possible but we don't know because the RMS never looked.

6.8 Traffic Planning Challenges —Local traffic and intersections

This section discusses how the RMS have designed a solution for the documented traffic problems within the Thompson Square precinct that simply relocates them elsewhere.

The image below illustrates the converging roadways at the intersection of George and Bridge Streets.

Figure 19.

6.9 Turning Restrictions – right-turn into George St West

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, p.239).

The Minister Conditions of Approval C46 states:

> *Any proposed closure of the right turn movement from Bridge Street southbound into George Street shall be sequenced to occur outside business hours (9:00am to 5:00pm Monday to Friday). Hawkesbury City Council shall be provided with a minimum one month notice of any planned closure in writing.*

It is clear that it is planned to restrict right hand turns into George St and the Windsor business precinct. This means that 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, Conditions of approval C46) will compound existing issues by directing further load through the Macquarie and Bridge Streets intersection.

These additional kilometres 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 organisation 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 deemed the disaster area “outside the scope of the project” and state that works on the intersection will be part of a future “Environmental Assessment”. One has to ask why this is so, especially when the area around this intersection has been part of the Archaeological Investigations for current project.

The impacts of this new “Environmental Assessment” on Thompson Square after the damage caused by the current project are unimaginable.

Figure 20. Turning restrictions will force traffic into Court St

6.10 Turning Restrictions – right-turn into George St East

The right-turn into George St East will be prohibited when the new bridge is opened. This will prevent direct access to the only motels in Windsor, and to Governor Philip Park, for people travelling from Sydney. Motorists can turn earlier at Court St, however if two boats and trailers try to turn right into Court St they will block all traffic following them. In this instance the RMS advises that cars towing boats should continue along Bridge Street, through two sets of lights at Macquarie and George Sts, over the new bridge and around the new roundabout, back across the bridge, and through the lights at George St. They will not be able to turn left at George Street because of the restriction on vehicles over 8m in length, so they will need to proceed back through the Macquarie St lights to Court St where they will finally be able to turn left and proceed to Governor Philip Park, the boat ramp and aquatic facilities.

The same considerations will apply for turf trucks and any large vehicles accessing the Motels or residences in the Peninsula.

6.11 Turning Restrictions – left-turn into George St East

After crossing the new bridge the only vehicles which can turn left into George St East will be vehicles under 8m in length. This means that all cars towing boats and heading to Governor Philip Park will have to continue on, through two sets of traffic lights to Court St and then turn left.

The same will apply to all turf trucks trying to access turf farms on the peninsula and any trucks delivering to the motels or peninsula residents.

The RMS is proposing to create new and substantial traffic problems within the Thompson Square precinct, and has designed a solution that relocates or transfers existing problems to an intersection already subject to significant peak period delays.

Figure 21

6.12 Why Be Dishonest?

Below is part of the final draft of the report given to the NSW Planning Minister and made public – with some last minute edits by senior staff.
Note what was removed so the Public couldn't see it.

An independent traffic review was undertaken for the Department as part of the assessment. The review questioned whether 'traffic design to 2021 predicted traffic volumes' was appropriate noting that the project's capacity will always be constrained by the intersection capacity on adjacent roads. ~~It is also concluded that an improved traffic network is not contingent on bridge replacement provided further road network improvements are undertaken.~~ The RMS agreed with the view that there remains the need to undertake considerable work on adjacent intersections to alleviate traffic congestion in the Windsor area. ~~It further argued that a bypass option of Windsor which clearly did not meet the project objectives would be required to avoid this need altogether.~~

Basically improved traffic is NOT dependent on replacing the bridge and the RMS argued that A BYPASS WOULD BE REQUIRED to alleviate traffic congestion.

For some reason they do not want the Public to know this.

6.12 Summary

The RMS has failed to adequately consider all reasonable bypass options, failed to apply a dollar value to heritage in their cost analysis and have inflated benefits due to imaginary reductions travel distance and travel times which have coloured their benefit-cost ratios to the point of surrealism.

7. FUTURE DEVELOPMENT

This section relates to the Terms of Reference

1c) Any other related matters

7.1 Arrangements regarding development in the catchment

The Jacaranda Ponds housing development at Glossodia was approved by Hawkesbury City Council on the condition that the new Option One Windsor Bridge was built, or progress made towards its construction.

As part of the project's Voluntary Planning Agreement (VPA) the developers of Jacaranda Ponds will pay for the construction of the large new roundabout on the northern side of the new bridge.

The developers will also pay for the installation of the new traffic lights at the intersections of George and Bridge Streets in Thompson Square.
We request that the Committee investigate these arrangements.

7.2 Sand and gravel

There is a shortage of sand and gravel for the Sydney Construction Industry. Currently the major companies involved are trucking sand down from Calga on the Central Coast and from Stockton near Newcastle.

It is known the industries major companies are currently investigating establishing plants along the Putty Road to save transport costs. Already the existing quarry at Tinda Creek has received approval to double its output.

A State Significant Development application for the new Putty Road Quarry on land partly owned by the St Shenouda Monastery would see the area’s output of sand double yet again. However all reference to this development was removed from the Government's

“Major Projects” website about 10 days ago. Normally if an application is withdrawn the application stays on the website but is flagged as “Withdrawn”.

In this case the whole application, complete with all documentation has completely disappeared. When questioned Department of Planning staff were at a loss to explain what happened.

We request that the committee investigate this issue.

8. HERITAGE

This section relates to the Terms of Reference

1b) iii. economic, social and heritage impacts

8.1 Introduction

As the oldest Town Square in Australia, Thompson Square deserves the highest levels of professional competence and probity, to say nothing of protection. A government agency and their consultants, charged with acting on behalf of the community, are delivering the exact opposite.

The RMS has seemingly chosen to minimise, erode, diminish and generally understate the importance of a precinct which dates from 1795 and includes archaeological remains from the 18th Century; a unique Georgian streetscape, as well as physical evidence of the life of Andrew Thompson, “Father of Green Hills”, during the late 1700’s and early 1800’s.

It is unclear what measure of Significance would be required by the government to save Thompson Square: that other, infinitely less significant places and structures are treated with gentle reverence by the politicians currently committed to destroying Thompson Square simply adds insult to injury.

As research has progressed it has become increasingly clear that prosecuting the argument the project mitigates Heritage impacts is a facile exercise. It self-evidently does not.

The RMS was warned by the Department of Planning heritage peer review the Windsor Bridge replacement project EIS was completely inadequate in its treatment of heritage.
The Department, on behalf of the Government, accepted the Independent Heritage Report. Yet the RMS has based every subsequent document on this inadequate

foundation and the Heritage “experts” working for them have apparently allowed this to happen without challenge.

As a nation, Australia is being betrayed and the names of all associated with this tragedy should be inscribed in very fabric of the Square as a memorial to their role in the destruction of this place. Thompson Square, should Option One go ahead, will become the place all other heritage disasters are measured from. It is impossible to imagine any other project delivering greater destruction than this one will.

Perhaps in time, a second Memorial will also appear in Thompson Square, one which includes the 45,000 names of those who stood, shoulder to shoulder, united in a burning ambition to win justice for a community which for far too long has been abused, neglected and lied to by politicians and bureaucrats alike.

8.2 Heritage Awards

CAWB has been the recipient of two awards for our work with heritage advocacy.

The first was from the Heritage Council of NSW in 2014, for an outstanding contribution to heritage conservation in NSW

Figure 22. Heritage Council Award

The second was the award for the heritage advocacy campaign, presented by the National Trust in May, 2015.

Figure 23. The National Trust Award

Figure 24. CAWB members with the event MC, Michael Caton.

8.3 Historical Significance of Thompson Square

It is the key issue of 'The Birthplace of the Fair Go' which raises Thompson Square above the level of its already impressive historic National importance. This is what makes it of outstanding National significance.

When Lachlan and Elizabeth Macquarie arrived in 1810 they came already immersed in the ideas of the Enlightenment and the revolutionary policies of their good friend, William Wilberforce the great Emancipist. All these revolutionary ideas of egalitarianism and redemption were soon to take solid form in Thompson Square by a deliberate and controversial symbolic act.

"Macquarie nurtured a dream of what the new country might become... in raising people to positions of trust and authority, he drew no distinction between the free and the freed; his object was to eliminate faction and to introduce harmony."
– John Ritchie, historical author "Lachlan Macquarie," published 1986.

In 1810 the colony was a very small place teetering on the edge of a very large continent...and the third town of the Colony – Windsor - was its first country town.

When Macquarie elevated Andrew Thompson, a freed convict, to the position of Chief Magistrate of Windsor, he challenged the power base of free settlers (known as "Exclusivists") and sided with those who desired a redemptive and inclusive philosophy for this fledgling nation (known as the "Emancipists"). It would set a formative principal this nation would model itself upon.

Thompson by his own endeavours and entrepreneurship had risen to become a model citizen and the wealthiest man in the fledgling colony. He was a man who had redeemed himself. Thompson died in 1810 a hero of the Hawkesbury after rescuing over 100 colonists from disastrous flood waters. Macquarie saw in his life the model of how a penal society could become a reformist society. This is what makes the founding of Australia unique in world history.

When Macquarie renamed Bell Post Square, Windsor after Andrew Thompson, he challenged the British class and ethnic power system and created what Australians today call with pride – The Fair Go. This meant an egalitarian, inclusive and tolerant society where worth was judged by actions and character not status or wealth.

In naming the Square not for a King or a Lord or for himself, Macquarie, (as the king's representative) took a bold step contrary to instructions that created an idea which would ring down throughout our Nation's history – sometimes softly, sometimes loudly – but always present. He proved he was a courageous Statesman and not just a government functionary.

On that symbolic day in January 1811 a wooden plank with the words Thompson Square was nailed in that place. With this, Macquarie in effect had signed an 'unwritten contract'

with those yet-unborn Australians that they would live in a new type of world. This was to hold true in all areas to come and across this vast nation – a birth right for all. It underpins our society, the law and governmental action.

Thompson Square thus stands today as a heritage precinct of national importance. It is a monument to the Father of the Nation, Lachlan Macquarie, and his bold social experiment.

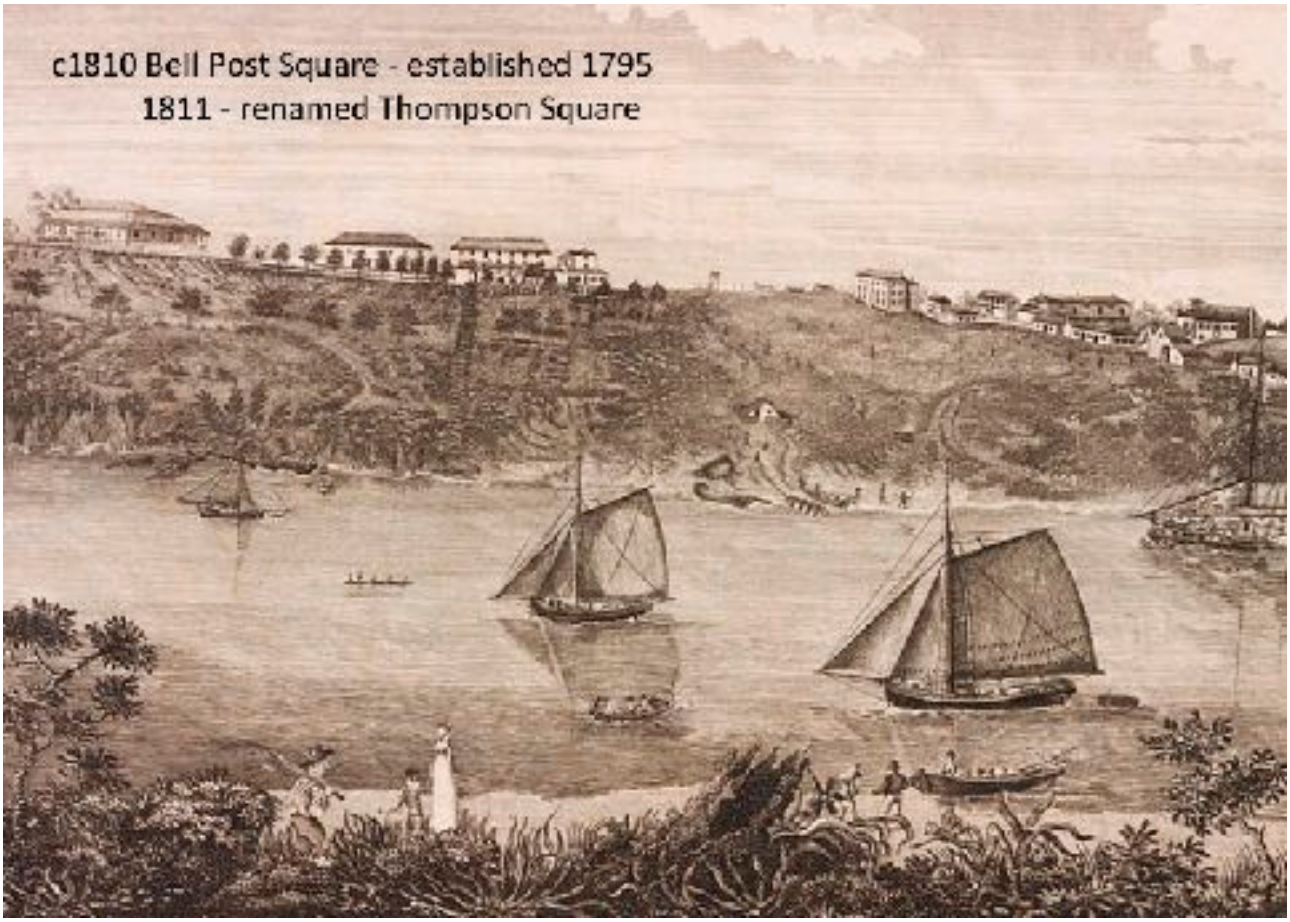


Figure 25.

8.4 Cultural Significance of Thompson Square

In Thompson Square you can still experience the atmosphere and physical form of the colonial first decades of this nation because the integrity of the built environment and its central communal open space remains largely intact. Elsewhere only disconnected pieces remain in the rush towards modernity.

Its rich history still informs us of our shared heritage and the legacies it has gifted us and those to come. To experience it is to feel the common thread that unites us to the past and to each other as Australians. This place is living history, each generation is charged as custodians during their lives to preserve and enjoy it from denigration and then hand it on to another generation of custodians. The motto “do no harm applies”. It’s our duty and privilege.

Windsor and Thompson Square have served as an outpost to feed a starving colony, as a military outpost on the edge of the settler’s world, as a frontier country town, as a seat of governmental administration, as a defensive backstop in times of rebellion and foreign threat and above all as a place where a vision for a new type of egalitarian world took form. Thompson Square was the epicentre of the only rebellion to overthrow the government in Australian history with the hanging of their leader on the night of the nearby Battle of Vinegar Hill. Thompson Square was the springboard for the bridging of the waterway that opened up the heart of the country with an engineering marvel for its time that still stands today.

The Square is Georgian, not only in plan but in form. Nowhere else in Australasia can one look at a streetscape built under the reign of the Georgian kings – it is a unique treasure to all the nation. In the Square people celebrated the Battle of Trafalgar, Federation and the end of WW2. It is the first and oldest remaining dedicated civic space in the nation.

For further information please see Volume 2 “Defended By The People - A Symbolic History of Thompson Square”.

8.5 ’Significant Heritage Impacts'

In 2011 the Heritage Council said they would not be able to approve Option 1 on heritage grounds[7]

At the time legislation dictated heritage assessments would be required on each of the heritage items within the Square.

On October 1 2011, a short six months after a change of government, Part 3A of the NSW Planning Act was repealed and Part 5.1 commenced.

Three days later, in a letter dated October 4, 2011 and sent to Mr Sam Haddad then Director-General, Department of Planning and Infrastructure, Michael Bushby CEO of the RTA said the project was supported as a state significant infrastructure proposal, noting, “The RTA has formed the opinion that the impact of the project on non- Aboriginal heritage would be significant. Accordingly the project is state significant infrastructure”[8]
So to get around the issue of heritage, the project was assessed as SSI due to its impacts on heritage, under legislation that saw heritage protections switched off.

It is acknowledged that the legislative changes referred to make this project “legal”.However, no legislative change can have the slightest impact on the physical reality of the destruction delivered by Option One. That the legislative changes eliminate any review on merit does not make this project meritorious. It is an incompetent plan to deliver the wrong bridge in the wrong place.

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[7]https://web.archive.org/web/20110306121206/http:/www.hawkesburygazette.com.au/news/local/news/general/impasse-over-windsor-bridge-after-new-delay/2084877.aspx

[8]https://majorprojects.accelo.com/public/454cfa1a6eba0e3818751c877720d2c4/Windsor%20Bridge%20Replacement_%20Application%20Letter.pdf

8.6 Heritage Advice

In a letter to a constituent in October 2017, the Member for Hawkesbury wrote “Our office has been assured that no items of historical significance will be affected by the construction of the new bridge”.

In NSW Parliament Hansard, Ray Williams MP was recorded on 18 October 2012,

“A very important and pertinent point is that Windsor, as the second oldest European settlement in this country, has some of the most valuable and unique heritage aspects in its centre. There is not one member in this Parliament that would jeopardise or diminish any of that heritage nature. Option one will not diminish them.”

On 4 April, 2012, the Hawkesbury Gazette reported then Councillor Bart Bassett as saying

“Thompson Square will be enhanced by filling in the existing roadway and the new bridge alignment will follow Bridge Street which has always been there and has always led down to the river,”[9] (See ‘The Precedent Argument, Volume 2)

At a Community Cabinet in 2013, then Roads Minister Duncan Gay remarked “we're not alienating our important colonial history. I would not deliberately do that.”

There is a clear disjunct in what the public are told by their elected representative and what is contained in the RMS, Consultants and Expert’s reports.

There can be no doubt the heritage impacts of Option 1 will be devastating on our Square.

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[9]http://www.hawkesburygazette.com.au/story/273879/debate-rages-over-windsors-thompson-square/

The State Significant Application Report states:

> "The RTA recognises that the project would also result in adverse impacts on non-Aboriginal and Aboriginal heritage, noise and vibration, the socio-economic environment, and landscape character and visual amenity. The RTA has formed the opinion that the impact of the project on non-Aboriginal heritage would likely be significant based on direct and indirect impacts to the Thompson Square Heritage Conservation Area as well as at least 13 other items of Commonwealth, State and/or local heritage significance.[10]

The 2011 report 'Landscape and visual investigation for bridge options at Windsor' by the Government Architect's Office:

Historic	The proposal would have a high impact on the integrity of Thompson Square historic precinct.	Very high

Windsor Bridge, EIS, Historic Heritage Working Paper Part 1, pg. v. :

> "...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."

Windsor Bridge Replacement Project Independent Heritage Review August 2013, pg.8:

> "Working Paper 1 says impacts are so major WBRP should not go ahead. RMS's heritage consultants in Working Paper 1 state the proposed impacts on Thompson

[10] http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-state-significant-infrastructure-application-report.pdf

Square Conservation Area are so major the WBRP should not go ahead. But RMS has chosen not to accept this advice because they had already chosen to explore only Option 1 in this EIS."

Heritage Council of NSW:

"It is unequivocally opposed to the project for the 'irrevocable damage' it will do to Windsor and Thompson Square. The Heritage Council of NSW reinforced its preference for a bypass option. It argues the project should be refused on heritage grounds."

Heritage Council of NSW, 2011:

The Heritage Council reiterates its prior view that Thompson Square is of crucial importance to the heritage of the State and that Option 1 is likely to have a long term irrevocable and negative impact on Windsor as a whole and Thompscn Square in particular. Option 1 does not adequately respect the unique history and State heritage significance of this area.

Figure 26. Thompson Square c.1879

8.7 Three Heritage Items

The 2008 Statement of Heritage Impact, recently uncovered by CAWB, makes clear there are three **critical heritage items** within the project zone:

• The historic, heritage listed 1874 Bridge
• Macquarie's brick barrel drains aka “Smugglers Tunnels” (earliest example of public sanitation engineering in Australia)
• The Macquarie-Greenway wharf (oldest existing wharf remains in Australia)

Yet these three critical heritage items are in the crosshairs, with imminent destruction looming.

With the bridge having been discussed in Section 2 we will focus on the remaining two.

8.8 Brick Barrel Drains aka “Smuggler’s Tunnels”

The famed and revered tunnels have played a role in the folklore of the Hawkesbury and indeed the nation with stories of a network of tunnels running under Thompson Square as well as further afield under the township of Windsor.

Illicit rum-running was rife along the Hawkesbury in the early days and legend has it that kegs of spirits were brought up from the river bank through a tunnel into an excavation in Thompson Square. Access to these “tunnels” is rumoured to be in the basements of the buildings in. George St and The Macquarie Arms.

Older residents remember playing in the tunnels as children, accessing them from the river bank.

However behind the legend was a progressive step to provide Thompson Square with sanitation.

A contract was issued:

“To Sink and Erect One Sewer in the middle of the Square with Channels leading thereto or to sink and Erect two sewers one on each side of the Square as laid down in the Plan in the possession of His Excellency Governor Macquarie”.

The contractors for the work were John Howe and James McGrath of Windsor. The first contract was paid for with £350 and 350 gallons of Bengal Rum or other spirits “of the best kind” and the second was paid at £600. They were allowed the use of bullocks and carts and for the sewer they were allowed to make between 120,000 to 150,000 bricks on the new government brickfields at Windsor and they could purchase spikes from the store. They were contracted to complete the first contract in six months and the second in twelve months.

Whilst today we take for granted wastewater systems, deaths from waterborne diseases have been a problem throughout history. Sanitation is necessary for a healthy life, and would be have been necessary for a healthy colony.

In 1858 an Australian commentator describes an absence of drainage in the Rocks, with sewage trickling down walls and soaking into foundations… but there was no trickling sewage in Thompson Square.

Thompson Square had its brick barrel drains, commissioned by Governor Lachlan Macquarie in 1814: an example of the Governor's interest in good town planning,.

The drains demonstrate the importance of Windsor to Colonial authorities who invested public funds in this port town through which so much of the colony's produce was shipped.

These rare and remarkable archaeological relics may also have much to tell us about life in the early colony and help to identify other early, associated structures. Their construction may reveal much about the technical skills and knowledge of the day, the

quality of the brickwork an indication of the level of skills available in New South Wales c1814.

In 1986 archaeologist Edward Higginbotham prepared a historical and archaeological investigation into Thompson Square for the Hawkesbury Council.

He noted the barrel drain "..is important because it is an early example of its type, a very rare survival…"

The early archaeological reports for the WBRP all mention the likelihood of the drains still in existence in the Square.

In December 2011 the RMS used a Ground Penetrating Radar Survey which identified potentially intact lateral drain and an unidentified domed object at a depth of 1.5 meters. It was believed this would likely be the brick barrel drains.

Despite this overwhelming evidence of their existence, archaeological investigations in the Square in 2016 failed to find any evidence of the drains.

In an email received from the RMS (9.3.17) in answer to a question about excavation of Howe's Brick Barrel drains we were advised:

"The Howe's brick barrel drain you enquired about was not found during the extensive archaeological testing program. The report you referred to was used as a reference during the investigations. Based on this, as well as previous investigations and data collected, test pit SH7 was targeted in the search for Howe's brick barrel drain but no items of significance were located. A number of other test pits were completed in the lower parts of Thompson Square to look for any items of significance including, but not limited to the Howe's brick barrel drains. Please note, the area is highly degraded and the comprehensive investigations of all 48 test pits on the southern side (plus those on the north) have not identified the Howe's brick barrel drains."

So with no knowledge of the location of the drains, and no plans in place should they locate them, in October 2017 the excavators moved in to salvage archaeological remnants under the footprint of the new bridge abutments.

It should be noted however the WBRP Strategic Conservation Management Plan included an image of a brick drain uncovered on Bridge St, but did not provide further information on if it could be part of the barrel drain network.

Figure 26. Test pit SA26

Later in the “Windsor Bridge Replacement Project, Detailed Salvage Strategy, AAJV, November 2017”, it is suggested this brick drain could be part of the barrel drain network.

Is there evidence for Howe's brick barrel drain(s) in the square?	No, however the section of the brick drain identified in SA26 may suggest its location as it was likely that this drain emptied into the main drain.

So it really didn't come as any surprise when in December, 2017 the RMS revealed their archaeological excavation of the lower reserve in Thompson Square (Area 1. See figure 28) revealed what at first appeared to be a brick box drain, with more excavation revealing Macquarie's famed brick barrel drain.

On January 18, the RMS released an image the sump of the drain, having been pumped out to remove silt and debris.

Brick barrel drain pumped out

Figure 27. The sump of Howe's 1814 Brick Barrel Drain, recently uncovered by RMS Archaeologists

So what will become of the rare and precious drains?

The recently released "Windsor Bridge Replacement Project, Detailed Salvage Strategy, AAJV, November 2017" states in Area 1 there is limited potential for in situ conservation - the drains will have to be removed.

Area	Impacts	Approach	Anticipated finds	Conservation outcome
1 – lower area of Thompson Square	Substantial construction impact, including excavation, piers, footings and ground reshaping for bridge.	Main area of potential in situ archaeological remains, based on testing. Entire area proposed for historical salvage excavation, followed by limited Aboriginal excavation.	Post holes and occupation deposits associated with late 18th/early 19th century occupation. Already disturbed by sewer line and boat shed construction. No structural remains identified during testing.	Limited potential for in situ conservation. There may be some opportunistic locations where materials may be able to be retained in situ and encapsulated below the new bridge, but this is not considered likely given the aggregated impact of construction and service relocations

Our humble drains, rarely seen over the past 203 years represent an asset that still has the potential to contribute to the economy of the Hawkesbury today, as such increasingly rare archaeological relics attract tourists keen to know more about historic locations, such as Windsor.

At the time of writing this submission archaeologist are reportedly excavating more of the structure.

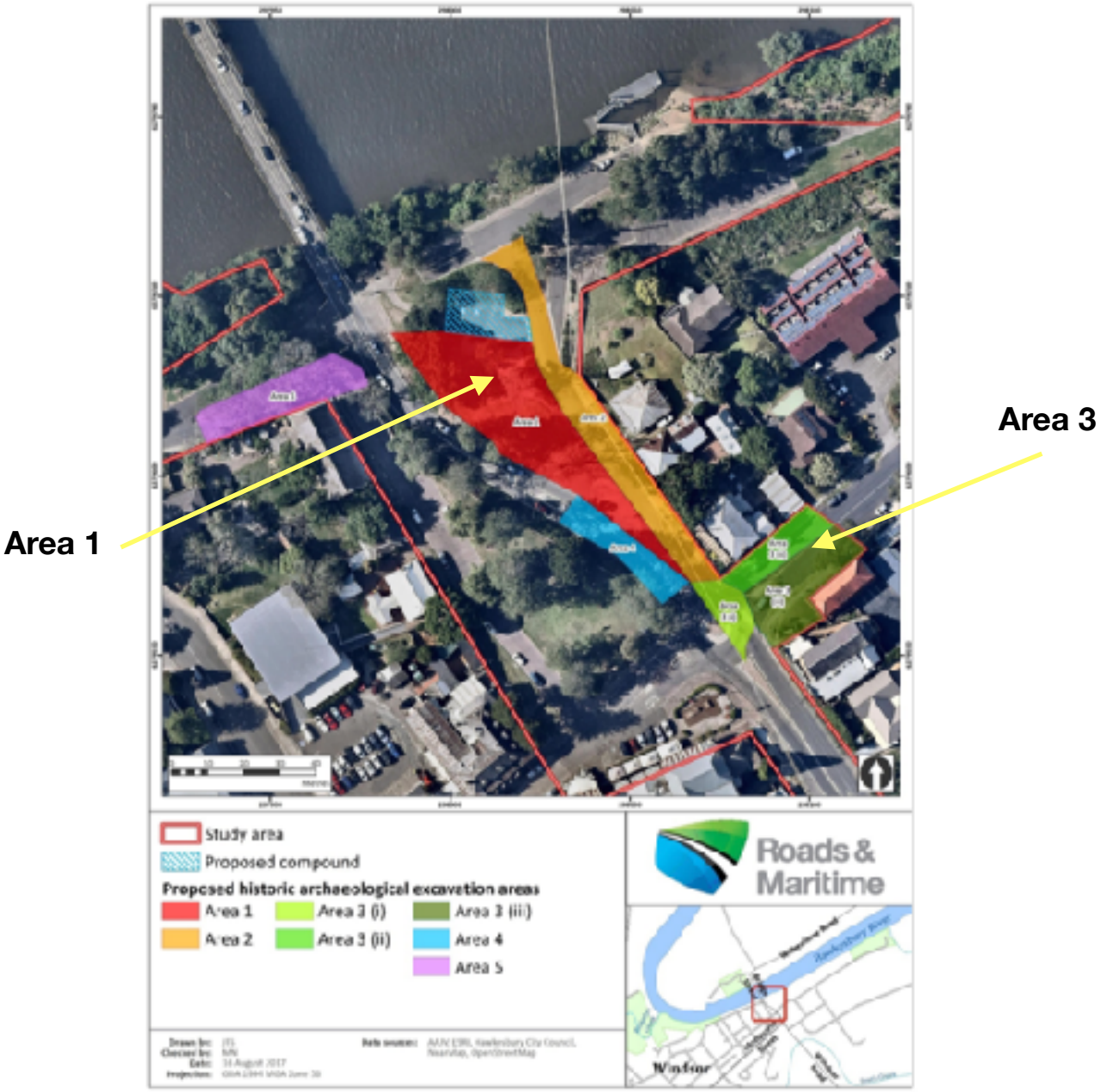

Figure 28. Excavation areas in the project construction zone

8.9 The Macquarie/Greenway Wharf

In the earliest days of the Green Hills settlement, there was a sandy beach near the site of the present bridge, onto which boats from Sydney were pulled ashore. Soon a wharf was built (1795) to allow boats to tie up and unload their cargo without the inconvenience of having to be beached. This was known as the Green Hills Wharf. It is likely posts from this wharf remain in the riverbed.

This early wharf was ultimately washed away by floods (1799), and Governor Macquarie instigated tenders for a Government contract to construct a better wharf on the exact same site. The wharf ran parallel to the bank, rather than a pier (which would have extended finger- like into the river).

It was designed to allow large cargo vessels (up to 100 tons) to pull alongside, from which drays would take their cargo up Punt Hill Road, Thompson Square and beyond or in reverse, goods could be loaded from the Hawkesbury farmers to take to the Sydney settlement.

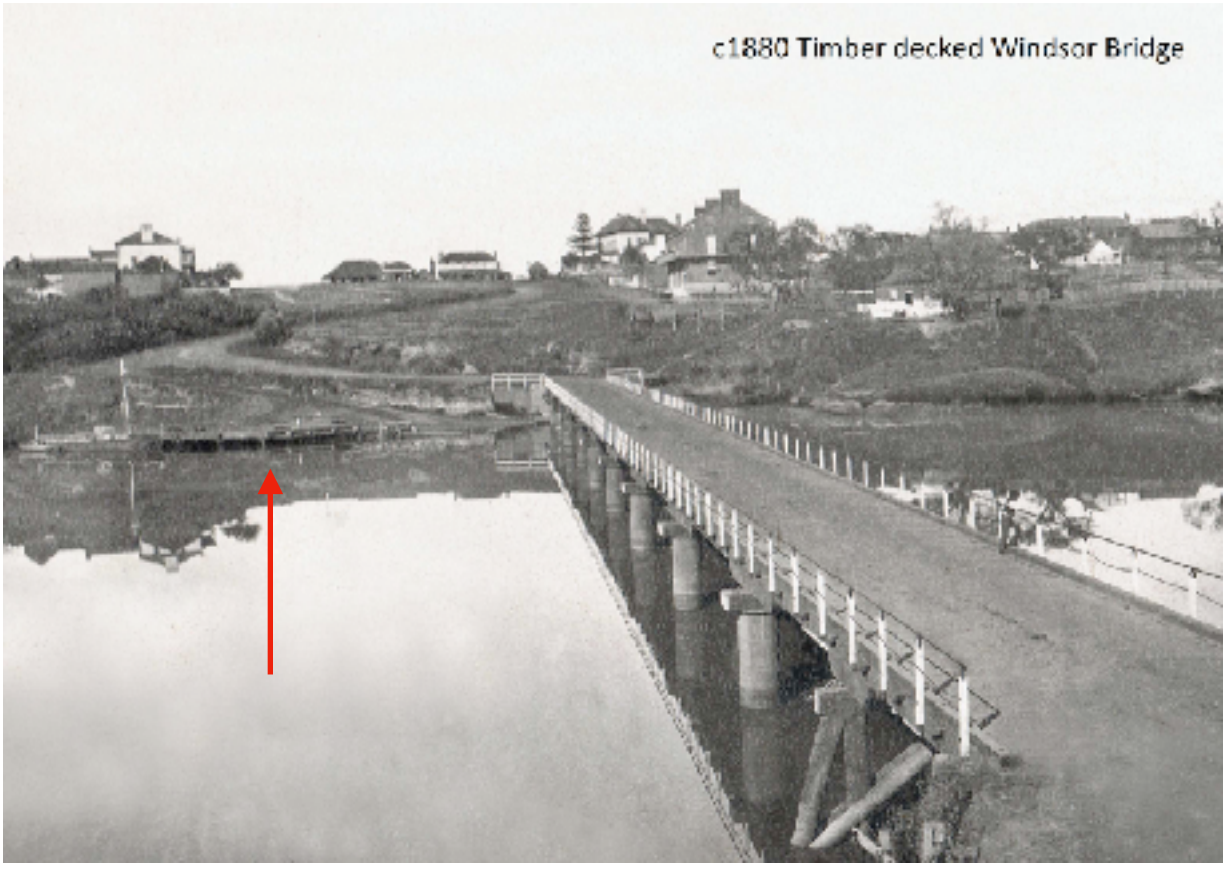

Figure 29. Thompson Square 1880. Wharf indicated by arrow.

Returns of the Public Works undertaken in Windsor state:

“A wharf was constructed there in 1815 for the sum of one thousand, one hundred and seventy nine pounds and 10 shillings.”

Construction for this new wharf began in 1814 and was nearly completed by 1815. The fact that the first government contract from 1814 survives, is a very significant fact in itself.

Governor Lachlan Macquarie described this new structure as:
“a large substantial wooden wharf or quay constructed in the centre of town on the right bank of the Hawkesbury River for the convenience of vessels and boats, trading to Windsor, at which quay vessels of 100 ton burthen can load their cargoes. A very convenient ferry has been established from the same wharf to the north bank of the river by a large punt”.

John Howe and James McGrath undertook the contract. They were able to purchase 5,000 five inch iron spikes from the stores.

The original construction of the design of the wharf from the contract states:

“The front of the Square to be piled with sound piles from 16 to 18 inches thick to be from three to four feet apart in the (illegible) to be three feet above the Water Mark at Spring Tides (but in a line with it). Well capped and Secured by Land Ties to extend from side line to side line of the Square to be planked on the Inside of the Piles and then filled up to the top.

“The Wharf to Commence from the Upper Side Line of the Square to Extend Eighteen feet from the above row of Piles which will be in deep water to extend fifty feet in length to be planked on the inside and filled up unless it should be thought best to plank the top and in that Case the same is to be planked and not filled up, the whole to be Capped and well secured by Land Ties as also to the Row of Piles in the Front of the Square”

On 14th November 1816, Macquarie wrote that a good part of the partially constructed wharf was carried away by a June flood.” So he commissioned the government civil architect, Francis Greenway:

“to draw up a new plan for the contractors to follow and allowing them iron and spike nails as can be spared from the stores, plus the assistance of some carpenters”.

Howe and McGrath were paid an additional sum of 220 pounds sterling to assist them to pay for additional iron spikes and nails as could be spared from the stores, plus an extra carpenter and 2 sawyers to enable the wharf to be completed in 8 months. They were somewhat disgruntled that the new structure was grander than the original contract, yet they were not given an extension of funds to meet their additional costs!

The wharf was completed by 1820, if not before.

Figure 30.

The archaeologist Higginbotham (1986) concluded about the remains evident today:

“the timbers are secured by hand made bolts and spikes which definitely date to 19th century and probably to the wharf built by Howe and McGrath to the Greenway plan between 1816-1820”.

The remains have been neglected by successive Hawkesbury Councils to the point where they are difficult to access today. However, they exist and should be preserved.

In 2011 the report ‘Windsor bridge over the Hawkesbury River, Punt and wharf sites, maritime archaeological inspection, August 2011’ stated -

> “An archaeological survey recorded remains associated with the 1816 wharf, both above and below the waterline. Structural remains of the wharf, including a pile, deck beam and walings, are present protruding from the riverbank above the waterline.”

In the 2012 EIS report RMS marine archaeologists stated -

> “Above water remains of the 1816-20 wharf are still visible.”

Yet incredibly the RMS recently stated the remains do not exist. What follows is from RMS community consultation for the Strategic Conservation Management Plan -

Historian - “Did you not find the iron spikes, deadman anchors or any of the other stuff from the wharf?"

RMS -"No"

Historian - "I can show you where it is. It is very obvious"

RMS - "They may have been outside of the salvage zone"

Historian - "No, they are exactly where the the first bridge pylon is suppose to go"

The subject was then changed and the matter dismissed.

The recent RMS Strategic Conservation Management Plan (SCMP) also follows their new line and says “No above ground remains of any of these phases of maritime history and development survive”

Yet the more recent document, ‘Windsor Bridge Replacement Project, Detailed Salvage Strategy, November 2017’ states

“Along the southern river embankment, archaeological evidence was found within the project area for the c1814 wharf and associated deposits “ and “The southernmost set of bridge piers will directly impact upon the archaeological wharf remains identified during maritime archaeological testing”.

With archaeological marine timbers highly likely to disintegrate upon exposure to air the possibility for any meaningful salvage seems near impossible.

Figure 31. Wharf remains currently visible.

The three most critically important heritage items in the Square are the ones guaranteed to be destroyed.

8.10 A Bridge Designed to Destroy

So let's look at the bridge the RMS is building.

In the Biosis report in the EIS, it is noted:

> "The principal value of the potential archaeological profile in Thompson Square is its cumulative value. It has the potential to document events, processes, improvements and places that span the full history of European development in this place from 1794 to the present day. It is likely to be the only place in Windsor or its environs that can do so. The archaeological profile of the project area on the south bank is completely unique to it. Because of the potential chronological depth of the profile it may include sites that are rare beyond the specific history of this place.
>
> "Apart from the potential to document and demonstrate the changing town and the place of Thompson Square in it over a long period of time the archaeological profile of Thompson Square can be evaluated for different levels of significance that are largely relevant to their rarity either through age or singular uses. **In particular, evidence that relates to the founding settlement of 1794 up to and inclusive of Macquarie-era works is assessed to be of exceptional significance** for its importance within the town, its rarity and its contribution to documenting the growth of the colony in its formative years." Historic Heritage Assessment for Windsor Bridge Replacement Project[11], pg 230. (Emphasis added)

With Thompson Square the oldest remaining Georgian town square in the nation it's a safe assumption some fairly remarkable archaeology would remain.

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[11]http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-historic-heritage-working-paper-pt-4.pdf

The Heritage Council made it clear it could not support Option 1 when it stated:

> "It is unequivocally opposed to the project for the 'irrevocable damage' it will do to Windsor and Thompson Square. The Heritage Council of NSW reinforced its preference for a bypass option. It argues the project should be refused on heritage grounds." *Heritage Council of NSW*

So with the introduction of the State Significant Infrastructure legislation, effectively 'switching off' heritage protections, the RMS' concerns of potential roadblocks due to heritage became a whole lot less.

In December 2013, the WBRP was approved, despite not really knowing what archaeology they were potentially going to find, and how that would affect the final bridge design.

The Court Case

In 2011 when Part 3A of the NSW Planning Act was repealed and Part 5.1 commenced, projects could no longer be challenged on the grounds of merit.

In 2014, CAWB proceeded with a judicial review of the administrative decision on the grounds that the legislation ineffectively dealt with heritage impact.

Ultimately, CAWB was unsuccessful in the judicial review, as it was found the Minister didn't have to consider the impacts on heritage.

Justice Brereton commented, "So major impacts on cultural heritage, as identified by the (conservation management) plan, will just be an irrelevance. - Brereton, J. Day 1, pg49.

Even the Government's Barrister was in agreement with the heritage impacts:

"He (the Minister) has rejected the advice of every heritage advocate who has looked at it (the new bridge)" - Kirk. Day 1, pg51, and,

“This is going to be bad for heritage, no doubt about it…" – Kirk, Day 2, pg53

When Senior Counsel was consulted on the possibility of taking the matter to the NSW Court of Appeals, the response was “there is nothing in the legislative scheme which prevents the Minister from being an environmental vandal”.

Greenhills Appears

In 2016 the RMS began archaeological investigations by studying 61 test trenches for both European and Aboriginal archaeology. These pits revealed 3,147 items of European historical value, and 1,434 stone artefacts.

Figure 32. Test pit locations for Aboriginal and historical archaeological testing.

In test pit, SA25, located on George St just east of the Bridge St roundabout, a remarkable discovery was found.

Brick footings, from a wall of some type, sat 200mm beneath the current road surface.

It would appear the RMS was not expecting this find as it was an Aboriginal pit they were testing at the time, not European.

Figure 33. Government Cottage and Domain entry gate. Sketch from 1820.

From the WBRP Archaeological Main Report, 2017 further investigation has revealed it is believed to be from an early 19th century wall, dating back as early as 1802, and most likely to be a brick wall footing from the Government Cottage and Domain entry gate.

This puts the footings at either the pre-Macquarie or the Macquarie era, and therefore, as mentioned in the WBRP EIS, “of exceptional significance”.

Figure 33. Test pit SA25 revealed footings from the Government Cottage and Domain entry gate.

Due to the limited size of the test pits, the full extent of the remains could not be determined. However it is very likely, with no further pits being excavated, more archaeological treasures exist in this location.

Page 176 describes,

> "The significance is the group of related structural remains comprising the brick wall footing of the Government Cottage and Domain entry gate ; the brick and stone surface associated with the stables of the Government compound and the brick drain, both located in Old Bridge Street. These archaeological features and the retrieved artefact assemblage provide an important resource for further research of **a site that formed part of the early colonial establishment which exploited convicts to build a new nation** , and as such would be considered to be significant…" (Emphasis added)

So what does the future hold for these amazing remains, located just under our feet in Thompson Square?

"In situ conservation of historical archaeological materials within the project zone is unfeasible due to the depth of impact and nature of construction." WBRP, Detailed Salvage Strategy, November 2011, pg 64.

3ii – George and Bridge St intersection and roundabout	Road resurfacing, ~500mm of ground lowering	Full archaeological salvage	Mid-19th century structural remains. Occupation deposits uncertain due to shallow depth of deposit	Little opportunity for in situ conservation due to shallow depth to archaeological remains (~200mm below current ground surface). Roadworks anticipated to impact to ~500mm below current road surface.

WBRP, Detailed Salvage Strategy, November 2011.

With the remains sitting 200mm beneath the current ground surface, and the anticipated impact of the roadworks being 500mm, there is no chance these remains will survive construction of Option1.

An Incrementally Launched Bridge

From the RMS, WBRP Questions and Answer, February 2017:

“Q: What type of bridge will be used?

“The new bridge will be an incrementally launched bridge, which means the bridge deck will be built mostly from the northern bank.”

Across the river from Thompson Square sits a compound, from which the Option 1 bridge will slowly emerge, launching itself across the river until it collides with Thompson Square.

This type of construction allows the bulk of the work to be carried out without disruption to traffic on Bridge St.

Yet this type of construction, and the RMS being so considerate of the motorists need to not have their travel disrupted, means the location of the early footings are in a zone that wont be salvaged until those final intersection roadworks.

So, if there does happen to be further, even more exciting finds under the surface, it will be too late. The bridge will be near completion.

But what if the RMS chose an alternative method of construction to build the bridge - one that allowed for further investigation of the intersection prior to the bridge being built?

Well that’s too late as well, because the SSI legislation, as confirmed by the Minister’s barrister, “..requires, so far as possible, to save what you can, do what you can as you go through but you must go through. - Day 1, pg 51

The switching off of heritage protections with SSI, means those remains of 'exceptional significance' are an irrelevance.

The Bleak Future

We know from the independent traffic review by Cambray Consulting[12] that even with the improvements to the intersections that they will be at least near or at capacity upon the expected completion of the bridge, which at that stage was 2016.

With increases in traffic volumes, particularly the significant rise of heavy vehicles (see section 6), this problem will compound, with the expectation of many the intersections will be beyond capacity.

So how will the RMS address this issue?

In the Questions and Answers, Road User Benefits document released in December 2016, it states,

"Future demand

"**Q: Would the new bridge be widened in future to provide more lanes?**

"The new bridge would not be widened in future due to a number of constraints. Widening the bridge would have significant impacts on Thompson Square and surrounding heritage sites and would also require significant network improvements and upgrades to the approach roads to increase traffic capacity.

"Q: What will happen when traffic demand increases in the future?

"Roads and Maritime will monitor traffic volumes over the new bridge once completed and will assess options for meeting future traffic growth, including improvements to the local and regional road network."

[12]https://majorprojects.affinitylive.com/public/73c09e5a9e90d23f750d8d5447be63be/001.%200001_Windsor%20Bridge_Traffic%20Review%20Report.pdf

There is no scope for improvement. Which then of course, begs the question, why proceed so stubbornly with an infrastructure project that has no capacity for expansion, when the actual monetary cost and loss of unique and rare heritage is so high?

The structural engineers have told the government "The condition of the existing bridge is such that it is not in a dire condition and could relatively economically be refurbished and strengthened." Report on Structural Condition of the existing Windsor Bridge, pg.31

Their own traffic engineers have stated, "Rather than constructing a three-lane (ultimate) bridge which has more traffic capacity than the roads and intersections feeding it, we would suggest considering alternative bridge crossing locations which may provide adequate traffic capacity for a longer period of time (e.g. a bypass option)." Cambray Consulting pg. 24

Even the Government's legal team told them, "This is going to be bad for heritage, no doubt about it…" – Kirk, Day 2, pg53

Their excuses have run out, and it's time they were held to account.

9. ARCHAEOLOGY

This section relates to the Terms of Reference

1b) iii. economic, social and heritage impacts

From the outset the RTA/ RMS have known the damage Option One would cause. And CAWB has long known our final stand might be over the precious archaeology of Thompson Square. Yet despite all our research and hopes, it is unlikely any of us anticipated just how extraordinary the archaeology would turn out to be. It is incomprehensible that, faced with structures of the scale and quality seen in this image, the project would be allowed to proceed. Yet, this is precisely what has happened and what the RMS anticipate, from long experience, is going to happen.

The community has been forced to watch, helplessly, as heavy machinery has ground colonial artefacts to dust, each day increasing the area of destruction, as the land itself has been torn apart in a process bearing little resemblance to our genteel image of archaeology, and the majestic trees of the Square are executed with chainsaws, one by one. And whilst there are feelings of awe and amazement at what has been revealed, the certainty of its fate is crushing- leaving many with deep feelings of guilt and grief at our failure to protect this extraordinary legacy of a bygone era.

The conditions of consent, drafted by the Department of Planning have not served the Hawkesbury community, nor the nation, well. At best they have proved to be confusing, at worst, a deliberate linguistic maze, designed to mask the realities of the project. Repeated use of words such as ”mitigate” do not moderate in any way the reality of this project. And words such as “enhance and conserve”, “salvage and interpret”, “avoid or minimise disturbance to archaeology”, “retain heritage significance” and “minimise impacts on heritage sites” are completely facile in the context of what is that already happening.

We need to be very precise about this: salvage does not mean save. What the RMS are about to embark on is the eradication of the archaeological record of Thompson Square. As independent heritage expert, Mary Casey, pointed out, what the RMS describe as

mitigating Heritage impacts is actually inflicting further damage on a heritage landscape. To you characterise the process witnessed in Thompson Square as mitigating archaeological damage is risible.

The second picture on this page is a screenshot taken from a video that gives the lie to any claims the RMS might make regarding “careful” excavation. In it the operator repeatedly drops a large chunk of concrete onto an area believed to contain the exposed brick barrel drain. Not only is this process brutal, in its scale and nature, it is industrial. The RMS has claimed there would be no more than 8 truck movements across the bridge from the dig site to the compound each day. Last week community observers counted 43 in a single day.

In both 2016 and 2017 the archaeology has been a source of serious concern. The techniques, and approaches very much at odds with the care cautioned by Mary Casey in her report.

In June 2016 the RMS announced the construction of an archaeology compound on the North bank. Advice was the work would include:

- Widening a section of Wilberforce Road
- Rebuilding the road shoulder to provide room for vehicles to turn into the compound,
- Minor earthworks to level the site,
- Installing offices, staff amenities, signage and fencing around the compound.

No mention was made of the heavy roller that also turned up. However because condition B4 says “The Applicant shall undertake an Archaeological Investigation Program comprising Aboriginal Heritage in the northern side of the Hawkesbury River project area, **prior** to the commencement of pre-construction and construction activities in the northern area” representations were made to the RMS. B4 had been taken to mean the RMS could not commence pre-construction or construction activities until the archaeological investigation program had been undertaken. The RMS said we were wrong.

So CAWB, through the Environmental Defenders Office (EDO) lodged an official complaint with the Department Planning. It seemed very obvious a breach of the conditions had

occurred. However, we were advised the archaeology compound was a ‘before pre-construction activity’ and was therefore acceptable.

There is no definition of ‘before pre-construction activities’ in the conditions of consent.

The following pages contain information about the spiraling cost of the archaeology, about the significance of Aeolian Sand Dunes and the evidence that Option One should never have been proposed as option at all.

In tandem with concerns regarding spiraling costs is the issue of contract management by the RMS. These concerns are set out in some detail.

9.1 The Archaeology of 2016

Under the Project’s Conditions of Consent the RMS was required to undertake archaeological excavations. The contract for this commenced at the end of December 2015.

Ultimately it involved large mechanical diggers, huge bags of soil and ...concrete. (See images below)

Before any archaeology trenches were dug the RMS created an ‘archaeology compound’. CAWB, through the EDO, made a formal complaint to Planning as we believed, and still do, that this was in breach of the consent conditions. The Department of Planning didn’t agree.

CAWB was also concerned as we were advised it was an unusually large archaeology compound.

6/7/16

10/7/16

12/7/16 – The RMS filled the compound with ‘hardstand’.

Around 27/7/16 we were concerned to notice the RMS had put a fence around the driveway into the compound.

On noticing contractors at the site who specialise in contaminated materials, CAWB made enquiries of the RMS. It was only then that we were advised there was asbestos contamination in the 'hardstand'.

28.7.16

All "asbestos" contaminated material was piled up but not covered. The "geotex" fabric was removed and the original turf paddock exposed.

29/7/16 people in hazmat suits and respirators were cleaning up, although no warning was given to passing motorists and weather conditions were appalling with very high winds while they were moving the stuff around.

3/8/16 - RMS had put down road base/blue metal at the compound and access driveway. On or around this date the then-President of CAWB, Pete Reynolds was visited by local police regarding the photographs being taken of the compound.

4/8/16 - Roller being used in the compound. We believe there is a risk compression may have impacted on any underlying profile.

9/8/16 Bitumen is being laid in the compound to seal the surface.

15/09/2016 – “fill bags” on the lower reserve. Several truckloads of bags were taken from a new dig on the Terrace near the Doctors House across to the compound.

16/9/16 - A series of pictures showing the digger filling the white bags held by two workers

16/9/16 – Bags stored in archaeology compound

21/9/16 – It appears some dirt taken from the dig was being returned and used for backfilling.

An observer reported, truck comes from compound with bags of fill. Bags are off-loaded at the site and then lifted into the hole using a digger. Contractor cuts the bottom of the bag to release the fill into the hole.

23/9/16 – the following screenshots of ‘stabilised sand’ (sand/cement mix at a 4:1 ratio) being poured into a trench are taken from a short video, which was recorded during the ‘pour’.

Close ups of ‘stabilised sand’ being poured out of hopper and into trench.

The brief video these screen shots came from also shows the traffic controller angrily threatening the person recording the video with the police if they are in the film.

When this matter was raised with the RMS, CAWB was advised the mixture was “stabilised sand” and was a requirement imposed by Council.

Yet one of the very early archaeology trenches (possibly 2012), located in the middle of a road carrying garbage trucks, coaches, an occasional crane, as well as multiple cars on a daily basis didn’t require stabilised sand.

The archaeology undertaken in Thompson Square in 2016 was a brutal, industrial process, far, far removed from the intelligent, careful and professional approach articulated by Mary Casey in her Independent Heritage Report.

In the absence of any project documentation, (despite repeated requests RMS refused to make public the Archaeological Testing and Research Design as approved by the Delegate of the Heritage Council) the process appeared to be quick, dirty, nasty and horribly destructive and at locations that puzzled locals.

9.2 ABORIGINAL ARCHAEOLOGY

In August 2011 the Windsor Bridge Preliminary Urban Design And Heritage Review For Options 1 & 3 (2.11 Local Heritage) by Spackman Mossop Michaels was published. Importantly, it makes reference to a “sand body”, saying,

“Test excavations during the development of the Windsor flood evacuation route (located to the south west of Windsor Bridge) confirmed the presence of Aboriginal objects in subsurface deposits.

Archaeological excavation on the site of the Hawkesbury Regional Museum extends more than a metre and revealed a Pleistocene sand body containing a very high density of Aboriginal artefacts.”

Also in August 2011, the Windsor Bridge replacement Options Report, Roads and Traffic Authority of NSW

http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-options-report-aug2011.pdf

Says:

"An excavation at the Windsor Museum site (Baker Street) saw 26 conjoining pits excavated totalling 26 metres square of open area excavated. This excavation found an intact sandy deposit in this location beneath the existing municipal car park and historical archaeological features previously identified on this site. It is hypothesised that the site represents an intact Pleistocene sand dune. About 11,000 Aboriginal artefacts were salvaged from this excavation. It is expected the sand dune would extend well beyond the excavated area. At the time of writing this report, a statistical breakdown on the materials and styles and dating of the finds was not complete. It is expected a report outlining this information would be released in the near future."

In 2012 an archaeologist contacted CAWB on the basis of anonymity. In conversation it was indicated the archaeology profession was monitoring the Thompson Square situation with concern. A particular worry was the existence of 'Aeolian' sand dunes, which are unique and, we were told, considered particularly significant by archaeology professionals. Concerns have been expressed to the RMS of the possibility of the dunes containing ancient human remains.

The existence of the 'Aeolian' sand dunes was first confirmed to members of CAWB by RMS archaeologist, Mr Denis Gojack during a National Trust tour of Thompson Square in 2012.

A large volume of briefings and correspondence from, and within, the Heritage Office testifies to the mounting concern amongst both public officials and private contractors.

Call for Papers documents show a cluster of emails between RMS and Planning staff in April of 2012 regarding archaeology methodology.

In a briefing to the Minister for Roads and Ports dated 10.4.12, the Chief Executive, Mr Peter Duncan advises the Minister, "A number of heritage professionals have also

expressed concern regarding the preferred option in public statements in the press and informal approaches to project staff. **Several respected heritage professionals have declined to tender for work on the project.**" (This reluctance of the profession to be involved with the project was again confirmed by the Project Manager, in conversation with a member of CAWB, in 2016 in relation to the archaeological investigations taking place that year).

20 April 2012: RMS advised the community that geotechnical testing was to commence 23 April 2012.

24 April 2012: Email to Nathan Chehoud RMS from Andrew Beattie Planning: Proposal by Kelleher Nightingale Consultancy Pty Ltd adequately responds to requirements re: test excavations on site for Aboriginal heritage. Approval given by OEH. Fieldwork occurred 2 May- 8 May 2012 resulting in Kelleher report September 2012.

Document 937, Call for Papers
Email from OEH to Planning "Aboriginal Heritage" (24.4.12)
"a. The area is archaeologically important based on the findings of the Windsor Museum excavations (Austral 2011) which identified Pleistocene archaeology."

Against this background, and despite the absence of acknowledgment of a construction budget in State Budget Papers, the RMS proceeded to make commercial arrangements and on 28.8.12 tenders closed for "Windsor Bridge Alliance Construction" (Contract ID 12. 2615.3184)

On 21.09.12, in a document called Windsor Bridge Replacement Project Aboriginal Cultural Heritage Cultural Heritage Assessment Report, which was prepared by KELLEHER-NIGHTINGALE, the RMS received the following plan

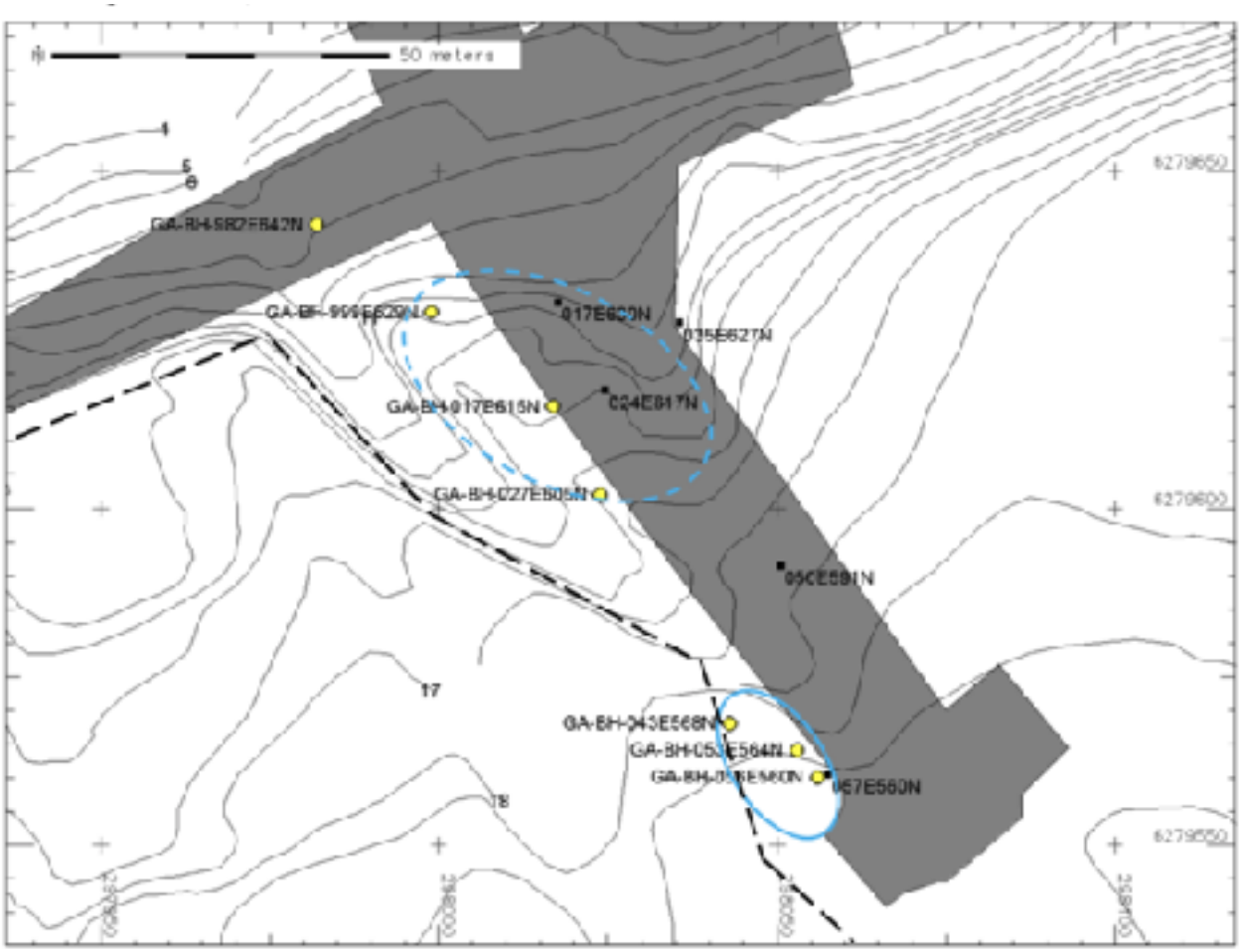


Figure 10. Site WBR South showing the zone of deep course sands represented by the dashed oval and zone of shallow fine sands represented by the solid oval

The concerns regarding this plan relate to plans indicating the location of the proposed structure and associated excavations. Whilst this information only became available to the general public much later, the RMS and Department of Planning must have been aware of the implications of the project in terms of Aboriginal archaeology, specifically in relation to the Aeolian sand dune for some considerable time.

On 16 October the following correspondence was directed to the Secretary of Planning, Ms Carolyn McNally:

Ms Carolyn McNally
Secretary
NSW Department of Planning and Environment
Level 22, 320 Pitt Street,
Sydney NSW 2000

Dear Ms McNally,

Re: The Windsor Bridge Replacement Project (WBRP)

The first attached image (below) comes from the "Registration of Interest" (ROI) documentation for the Windsor Bridge Replacement Project. This documentation is not readily available to the general public.

In it the two, hatched boxes are described as “Sandbody Salvage Zone”. The hatched section of the red area is marked “Area 1 Before Pre-Construction Salvage Excavation” and the entire red zone is marked “Area 1 Pre-Construction and Construction Salvage Excavation”.

The Government says salvage is 'mitigating' heritage impacts of the WBRP. This is a lie. The proposed 'mitigation' results in destruction of heritage significance. It is clear from the cited documents that planning for this destruction is well advanced. Indeed, the RMS has notified local residents that "salvage" is about to commence.

The RMS is proceeding in the absence of a publicly approved SCMP. There is no publicly approved Salvage Plan. Community Consultation regarding the SCMP was compromised. The document was incomplete and the necessary, precursor documents have never been made publicly available. There has been no public consultation regarding planned salvage.

The description recorded above opens up additional, extremely serious questions about how the State is managing potentially internationally significant archaeology. Archaeologists have previously identified, within the Square, a 1.8m deep sand body and recovered 12,000 stone artefacts dating to ~34,000 – 8,500 years ago (Austral Archaeology, 2011). At ~34,000 these artefacts approach Lake Mungo’s ~40,000. Mungo Lady and Mungo Man remain, to-date, the oldest human remains ever found in Australia and are the oldest modern humans found outside of Africa*. We know conditions within sand bodies may protect unique and important archaeology.

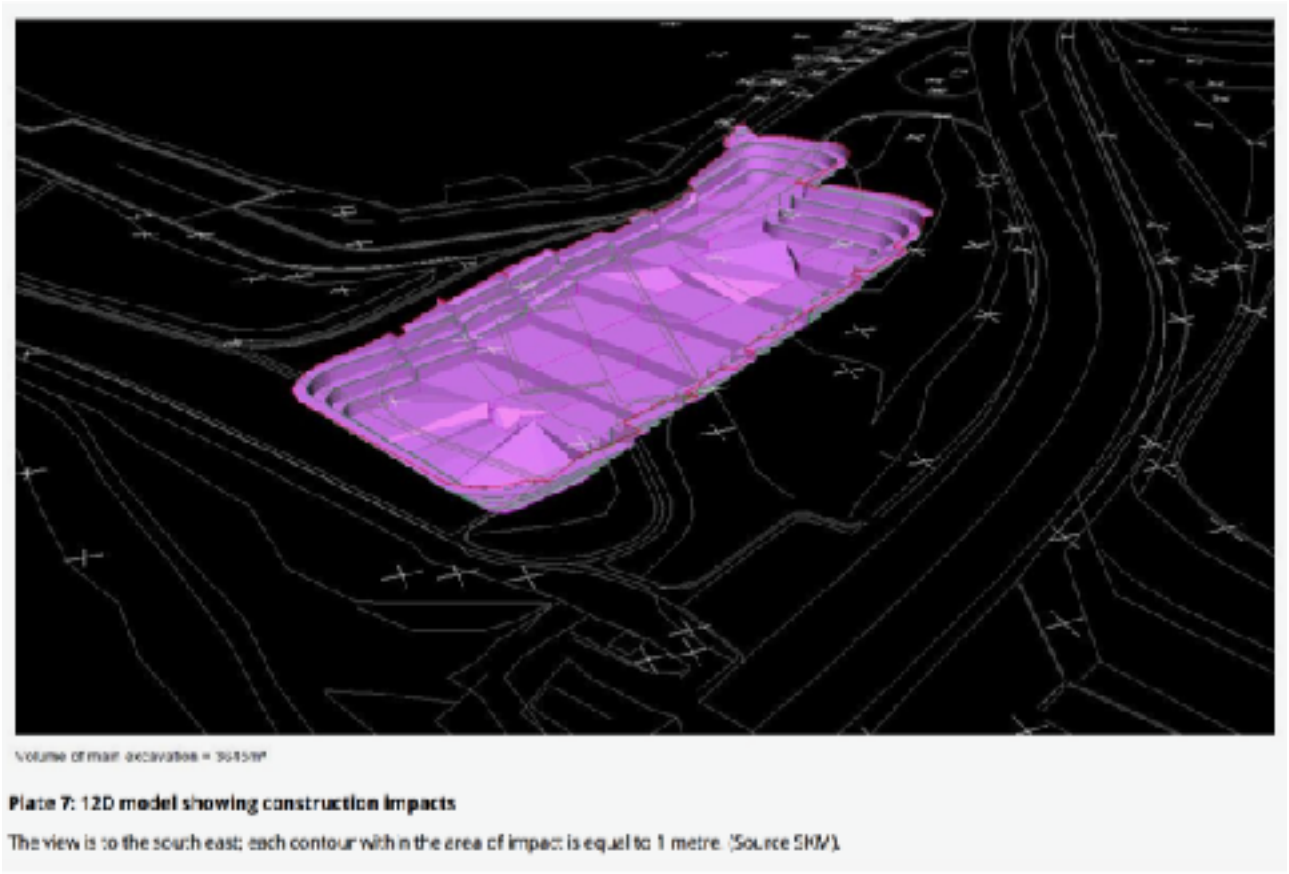
This plan fails to make clear how, beyond two, extremely limited areas, any significance of the sand body with be "protected". Additionally, the identified excavation areas do not

extend to the full extent of construction excavation. See second and third attached plans.

The State of NSW cannot allow one of its agents, Roads and Maritime Services, to continue with this destruction. Please advise when your Department will fulfil its regulatory responsibilities and halt this project.

Yours sincerely
Kate Mackaness
Former Senior Heritage Advisor, NSW Government

*This requires correction as recent archaeological discoveries in Israel predate Mungo Man.



Volume of main excavation = 364[illegible]m³

Plate 7: 12D model showing construction impacts

The view is to the south east; each contour with in the area of impact is equal to 1 metre. (Source SKM)

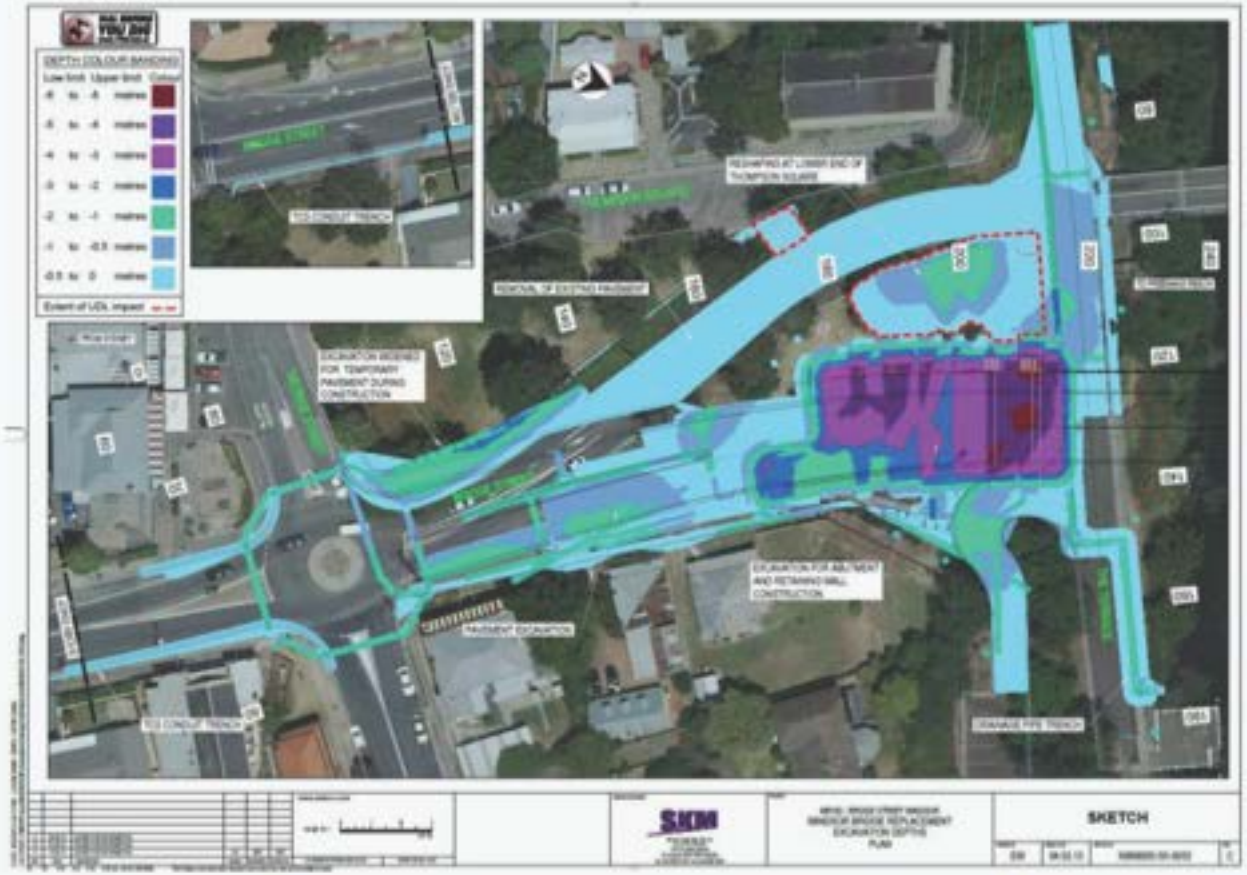
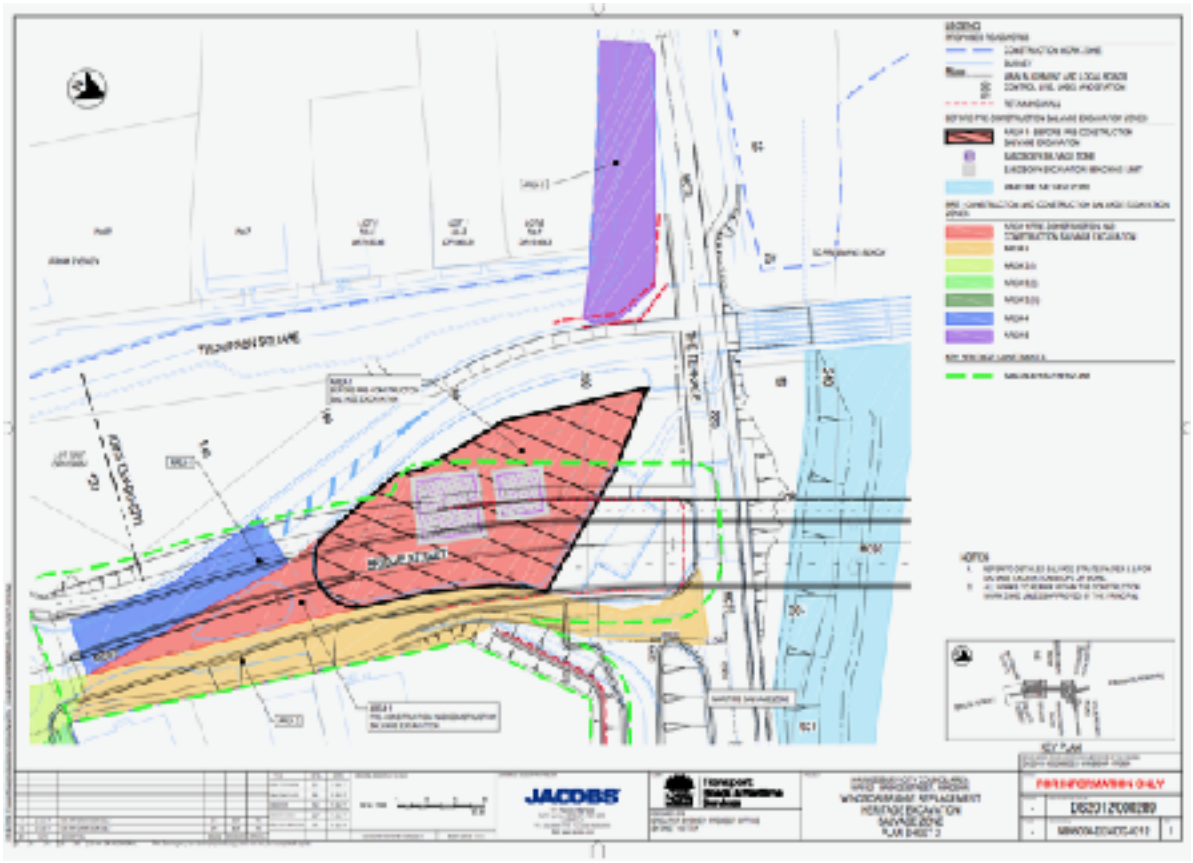
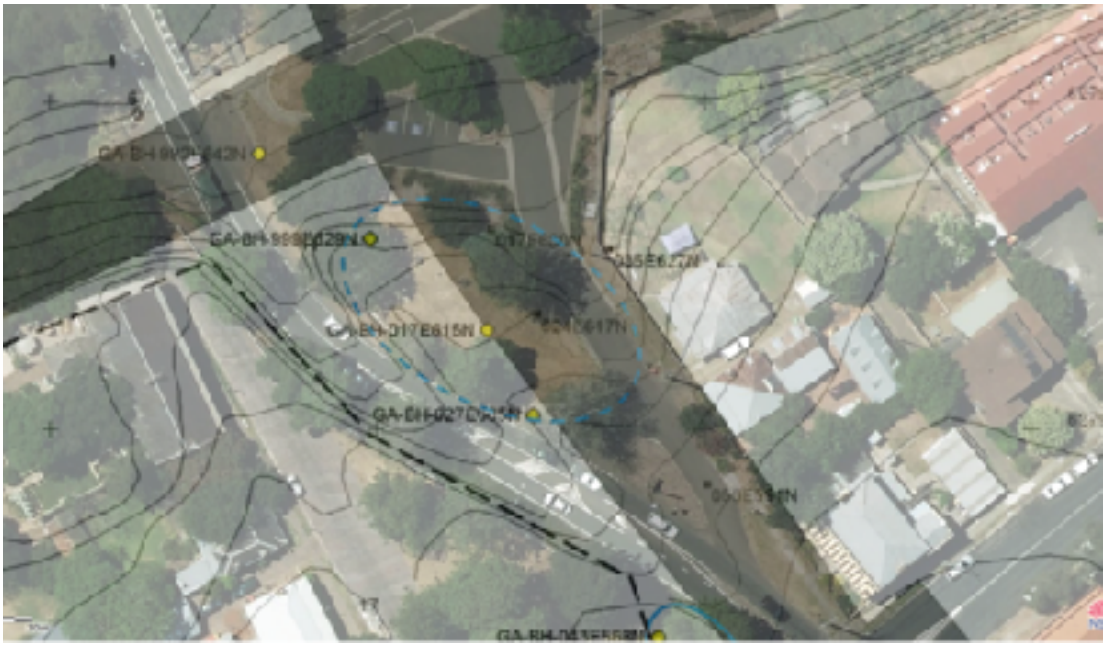


Plate 4: Diagram showing the depth of excavation in Thompson Square associated with the construction program. (Source SKM)



These three images were provided to Ms McNally.



An overlay of a satellite image of the relevant section of Thompson Square with the 2012 document. This map alone should have stopped the project in 2012.

The 2012 report also contained the following references to “Aeolian sands”

•“Significant archaeological information was identified in elevated portions of the south bank. Two test squares on the south bank found moderate to high levels of Aboriginal objects. The most elevated test square in the south east corner of Thompson Square revealed high numbers of stone artefacts within a thin layer of fine grained aeolian-like sands, which offers the possibility of obtaining important cultural dates. A second test square, lower in elevation, revealed a disturbed Aboriginal shell midden, possibly (re)deposited during historic times.”

•“Where sufficiently undisturbed biomantle is found on top of the clay it is possible to conclude a moderate to high archaeological potential. Particular attention should be made to identify aeolian sands as these have been recorded in the area. Aeolian sands are enticing archaeologically because they have the potential to show chronologically stratified soils and are not limited by the deflationary cycle (temporal collapse) affecting most of the Cumberland Plain.”

•“Borehole samples GA-BH-043E568N and GA-BH-056E560N (proximal to square 057E 560N) exhibited a fine brown sand unit of archaeological interest as this was similar to aeolian sands identified at the Windsor Museum. The fine sand was absent at borehole GA-BH-053E564N (between the two other samples). The implication is that the sand unit has been truncated to some degree, although given the sample was near the top of the ridge, any fine sand body would be expected to be thin. Archaeologically, this fine brown sand may have acted as a chronological blanket, in effect covering and capturing past cultural activity.”

•"Preserved shallow aeolian topsoils exist at the upper slope locations at site WBR South (represented by a solid oval in Figure 10). They are a primary archaeological context and expected to continue to the southwest, beyond the proposed project work zone. **Deep intact sand profiles** exist at mid to lower-slope locations and their known extent as determined by the current excavations is indicated in Figure 10 by a dashed oval. " (emphasis added)

•"The deposit and artefact depths could be stratigraphically compared to the sand body found at the nearby Windsor Museum site, thought to be aeolian in origin."

•"The DGRs were prepared in consultation with relevant government authorities, including the Office of Environment and Heritage (OEH) which provided comment relating to Aboriginal cultural heritage. OEH, in a letter dated 31/10/11, stated that:

OEH notes that the location of the proposed new Windsor Bridge coincides with a highly sensitive archaeological landscape feature with the potential to contain some of the oldest surviving evidence of Aboriginal life along the Hawkesbury River and in NSW. The landscape feature is an alluvial terrace which occurs on both sides of the Hawkesbury River and where surface objects and areas of potential archaeological deposit (PAD) have already been identified (Austral 2008). Recent excavations in this alluvial terrace at the Windsor Museum, immediately to the south west of the bridge corridor, have demonstrated that Aboriginal occupation on this landscape feature started in the late Pleistocene, possibly as early as 30,000 years ago (Austral 2011). Excavations in this landscape feature at Pitt Town, to the north east of Windsor, have also revealed early occupation evidence. The alluvial terrace in the location of the proposed bridge is therefore of potentially of very high significance.

OEH agrees that it is appropriate that the draft EARs specify that the potential impacts to Aboriginal cultural heritage are assessed in the EIS.

OEH recommends that the draft EARs pertaining to Aboriginal cultural heritage be

amended to specifically require that test excavations are undertaken to establish the extent and significance of the areas of PAD identified on both sides of the Hawkesbury River. OEH recommends that these test excavations are undertaken in a manner that establishes the full spatial extent and nature of any archaeological evidence across each area of PAD. Understanding the extent and significance of the areas of PAD are fundamental to assessing the impact of the proposal on Aboriginal cultural heritage.

OEH recommendations were incorporated into the DGRs."

Document Information in relation to these quotes is as follows:

Project Name	Windsor Bridge Replacement Project Aboriginal Cultural Heritage Cultural Heritage Assessment Report
Project Number	1111
Status	Final
Version	1 (EIS)
Client Name	Roads and Maritime Services
Recipient	Nathan Chehoud RMS Project Manager, Dalene Amm RMS Environment Manager\ Braith Gilchrist SMEC
Issue Date	21 September 2012
Prepared by	Dr Matthew Kelleher; Sam Player; Mark Rawson
Approved by	Alison Nightingale; Dr Matthew Kelleher

14 Nov 2012: the project EIS exhibited to public

5 December 2012: Denis Gojack (RMS) to Andrew Beattie Snr Planner (NSW DP & I) RMS finalising research design for additional testing to cater for placement of traffic

lights….rejects larger trenches dug mechanically due to impact/greater traffic and pedestrian control needs.

17 Dec 2012: EIS exhibition closes

24.12.12 was the commencement date of the Detailed Design phase of Windsor Bridge Replacement Project. (contract award notice RMS 12.2615.3149). This contract expired on 30.09.13.

30 Jan 2013: CAWB response to EIS submitted

14-22 February 2013 archaeology fieldwork occurred relating to traffic signals. Extra trench opened outside project zone. (NB this fieldwork occurred AFTER EIS) Braith Gilchrist email to heritage Office explicitly states that the objectives of this archaeology were to "address impact of the proposed traffic signals and services at this intersection" and "provide additional information that would expand existing knowledge with respect to the archaeological profile within Thompson Square and immediate environs". This was nine months after Kelleher's report.

18 February 2013: Application under S60 of the NSW Heritage Act 1977 from NSW Heritage Council to RMS. Proposal for test trench locations for traffic signals and existing cable trenches to confirm archaeological relics.

19 February 2013: initial intention of proposed trenches to check for archaeological relics in traffic signal area. Constraints due to utilities/ground conditions/tenancy. Thus a much "smaller sample than intended".

1 March 2013: Braith Gilchrist to Andrew Beattie… had sent copies of research design as provided to Heritage Office 24th December 2012.

4 March 2013: Department of Planning and Infrastructure meeting re: archaeological assessment.

Appendix F - Options for archaeological investigation of Thompson Square

2.2.1 Aboriginal Archaeological Resources (20 March 2013)

http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-submissionspir-appendixf-g.pdf

"The Aboriginal Cultural Heritage Assessment posed the question regarding the existence of intact sand deposits on Tertiary substrate or non-gravel alluvial sand.

Research was undertaken using geomorphological and archaeological information to inform the predictive model, which was tested with the subsurface test excavation. The indicators to significant archaeological resources (of Aboriginal origin) are reproduced below:

○Intact biomantles, especially sand bodies, on Tertiary substrate have the potential to contain archaeological objects;

○Biomantles containing sand (Aeolian or alluvial) and low level bioturbation may also allow chronologic, stratified cultural deposition;

○Archaeological excavation of Aeolian sands within 100 m of the study area has identified stratigraphic cultural deposit representing possible Pleistocene occupation;

○Significant artefact densities exist above 1:100 flood level along the Windsor – Pitt Town river terraces.[13]

August 2013 Independent Heritage review by Casey and Lowe et. al.

DG endorses Director General's Assessment Report 20/9/2013 (Haddad)

At Page 41 of the NSW Planning and Infrastructure Final EAR report (Sept 2013):

[13] 4 Kelleher Nightingale Consulting Pty Ltd September 2012: 13

“ “Located on the southern bank of the Hawkesbury River. A portion of the site is above the 1 in 100 year flood zone within Thompson Square at the corner of George and Bridge streets. Contains fine grained sand layers and high artefact densities.

On 6 December 2013, a community member wrote to the RMS, noting the final report on the archaeological investigations ie: the three test pits for the traffic lights, were not due until February 2014, however a summary of the results of the fieldwork was to have been submitted to the Heritage Council of NSW within one month of completion of the archaeological field work.

The final report was to be available on an open-access repository; however no mention is made of the public availability of the summary of results, as detailed in the S60 Conditions issued 12.02.13.

The community member requested a copy of the summary document, if available.

The RMS responded saying the report was titled "Test Excavation to Inform Traffic Signals and Cable Trenches including Evidence from Geotechnical Cores" dated March 2013, located at Attachment 1 to Appendix B titled "Additional Heritage Investigations" in the Submissions Report (April 2013) which was accessible via both the RMS Road Projects website and the DP&I's website under Major Projects.

The RMS officer went on to advise that this report was completed within one month of the excavations undertaken on 14 February 2013. Asked whether this was the final report, RMS officer responded: "I spoke to the archaeologist yesterday, and she confirmed that it is the final report for the test excavations that were undertaken in February 2013. As far as I'm aware it is consistent with condition 15 of the section 60 approval.”

Regarding Test Excavation to Inform Traffic Signals and Cable Trenches including Evidence from Geotechnical Cores

In “Analysis and Reporting Conditions”, Section 14. The following is advised:

"a summary of the results of the field work up to 500 words in length, prepared by the approved Primary Excavation Director…. Is to be submitted within 1 month of the completion of archaeological fieldwork. This information is required in accordance with Section 148(b) of the heritage Act 1977"

and in Section 15:

" The applicant must ensure that a final excavation report is written by the approved Primary Excavation Director nominated…..**to publication standards within one (1) year of completion of the field based archaeological activity".**

Section 16:

"The applicant must ensure that electronic copy of the final excavation report is submitted to the Heritage Council of NSW together with two (2) printed copies of the final excavation report ……must also ensure that further copies are lodged with local library and/or appropriate local repository".

Comment

Despite the recognised significance of the work being undertaken, and the requirements of the S60 certificate, the archaeologist spent less than one month preparing a "final" report on work which the S60 approval anticipated would take up to a year to complete (Section 16)

Issued on 20.12.2013, the project's Conditions of Consent for the Windsor BRP require *A Hawkesbury Region Sand Bodies Study* ***should*** *any Pleistocene and/or early Holocene be encountered during construction works*

•This condition (variously worded) appears three times in the Conditions of Consent (pages 4, 43, 56). As a condition it is poorly worded and that is a problem in itself, as is evident in CAWB's Landscape and SCMP submissions.

However it is also extremely disingenuous, given both the RMS and Department of Planning were by then, well aware of evidence of Aboriginal occupation in Thompson

Square from “the late Pleistocene, possibly as early as 30,000 years ago” long before the Conditions were approved by the Minister.

However, the “uncertainty principle” is promulgated in Planning’s own documents:

The Director General’s Environmental Assessment Report, Final, Page 54 says,

“The Department acknowledges the heritage impacts associated with the project including the loss of the existing Windsor Bridge and the impact on the heritage value of the Thompson Square Conservation Area. The Department also recognises the strong views expressed in submissions in relation to heritage impacts. However, on balance, the Department is satisfied that despite these impacts, the Windsor Bridge Replacement Project is consistent with the objects of the Act and is in the broader public interest given its immediate and long term regional and local traffic benefits. The Department considers that the heritage impacts associated with the project can, to some degree, be managed by a range of stringent conditions, including:

•The preparation of a Strategic Conservation Management Plan and Archival Recording on the southern side of the Hawkesbury River;

•Archaeological Investigation Programs comprising Aboriginal and non-Aboriginal Heritage with the results detailed in a Historic Archaeological Report and preparation of a Detailed Salvage Strategy;

•A Hawkesbury Region Sand Bodies Study **should** any Pleistocene and/or early Holocene be encountered during construction works; and

•An Urban Design and Landscape Plan.”

On Page 43,

“Overall, the Department accepts the level heritage impacts associated with the project, which to some degree can be managed by the range of stringent conditions that have

been recommended by the Department for inclusion in the conditions of approval. These include:

•the preparation of a Strategic Conservation Management Plan and Archival Recording on the southern side of the Hawkesbury River;

•an Archaeological Investigation Program in accordance with the Heritage Council's Archaeological Assessment Guideline (1996) and comprising Aboriginal and non-Aboriginal Heritage with the results detailed in a Historic Archaeological Report;

•a Detailed Salvage Strategy, prepared in consultation with OEH and Aboriginal stakeholders;

•a Hawkesbury Region Sand Bodies Study to locate and evaluate sand bodies likely to contain evidence of Aboriginal activity, **should** any Pleistocene and/or early Holocene be encountered during construction works; and

•an Urban Design and Landscape Plan. “

Page ii

“The Department recognises the strong views expressed in submissions in relation to heritage impacts. However, on balance, the Department is satisfied that despite these impacts, the Windsor Bridge Replacement Project is consistent with the objects of the Act and is in the broader public interest given its immediate and long term regional and local traffic benefits. Overall the Department accepts the level heritage impacts associated with the proposal, which to some degree can be managed by a range of stringent conditions. These include:

•The preparation of a Strategic Conservation Management Plan and Archival Recording on the southern side of the Hawkesbury River;

•An Archaeological Investigation Program comprising Aboriginal and non-Aboriginal Heritage with the results detailed in a Historic Archaeological Report and a Detailed Salvage Strategy;

•A Hawkesbury Region Sand Bodies Study **should** any Pleistocene and/or early Holocene be encountered during construction works; and

• An Urban Design and Landscape Plan."

This "uncertainty principle" avoids admitting that both government departments were well aware of the location and significance of the sand dune.

In fact, information was emerging as early as 2005 regarding the significance of Thompson Square for Aboriginal archaeology, when in April 2005 Austral Archaeology (*in draft – b)* commenced the Aboriginal archaeological salvage excavation undertaken upon Lot 1, DP60716/Lot 3, DP 864088 (the Windsor Museum – 45-5-3011). See images below.

Figure 5.5: Salvage excavation of the Windsor Museum site showing example of intact archaeological deposit that can be expected beneath Windsor (Austral Archaeology)

Figure 5.6: Salvage excavation of the Windsor Museum site showing example of the intact archaeological deposit that can be expected beneath Windsor (Austral Archaeology)

In 2008 the RMS engaged Heritage Concepts Pty Ltd to prepare Statements of Heritage Impact (SoHI) regarding both Aboriginal and non-Aboriginal archaeology. These reports are cited in subsequent reports, however they were not available on the RMS website. Repeated requests for the non-Aboriginal archaeological SoHI failed to elicit a copy from the RMS. The request was then put through the Department of Planning and eventually a copy was provided. Despite similarly vigorous representations regarding the Aboriginal Archaeology SoHI, CAWB has been unable to obtain a copy.

To add insult to injury, the EIS Heritage Assessment confirms elements within the project area to be unique:

“Thompson Square is the single place that links the earliest settlement on the Hawkesbury with the Macquarie-era town. The site was used as a civic precinct... It evolved into a small village... It was this village that was incorporated into the Macquarie planned town of Windsor: it was the only town to incorporate this layer of early settlement. **It is unique**.”

“The archaeological resource is likely to provide a depth of historical layering and a sense of place to the acknowledged visual qualities of Thompson Square. ....The cumulative profile record of evidence of works and change over two centuries is unique. ... evidence contained within it, above and below ground ... would potentially be of National Significance.

Whilst the DG’s EAR, page 44 says,

“In addition to these conditions, the Applicant has committed to conduct further research work and heritage assessment work for the endorsement of the Director-General focusing on the Thompson Square Conservation Area and the southern bank of the Hawkesbury River at the project location. This would enable an accurate record to be kept of the heritage value of the project location, prior to construction of the project, in perpetuity. The Department considers this approach would ensure complete and robust heritage research is conducted in conjunction with the development of the bridge.”

10. THE LANDSCAPE AND AMENITY

This section relates to the Terms of Reference

1b) iii. economic, social and heritage impacts

10.1 Historical Context

In its earliest form, dating from 1795, the place today known as Thompson Square was called ‘Bell Post Square’. The bell is visible in Evans’ 1807 painting of the settlement of Green Hills, which Governor Macquarie, some four years later, named Windsor.

Despite being the only extensive area of fertile land between the Hunter and Shoalhaven, and despite the difficulties experienced in providing enough food for the colony, it was not until 1794 that Governor Grose commenced making the land grants to freed convicts which brought European agricultural practices to the relatively remote Hawkesbury area.

Grose’s decision to direct ex-convicts to the Hawkesbury puts Thompson Square at the centre of the first, and most significant predominantly ex-convict farming community in colonial Australia, where emancipists, expirees and convicts along with a very small group

of free settlers, wrested the first European crops from the soils of the Hawkesbury floodplain and shipped their produce to feed the ever-growing population of Sydney.

It was these ex-convict farmers of the Hawkesbury who first confirmed the viability of colonial NSW as a self-supporting entity and it was from Thompson Square this produce was shipped to Sydney. This deployment and application of the labour of convicts and former convicts, free land grants and an early engagement in international trade by local entrepreneurs like Andrew Thompson were significant factors in ensuring the colony's survival and prosperity.

The document, “UNESCO Convict Sites” (page 92) says,

> “They housed tens of thousands of men, women, and children condemned by British justice to transportation to the convict colonies. This vast system of transportation, for penal and political reasons, supported the British colonization effort to conquer and settle the vast Australian continent. Each of the sites had a specific purpose, in terms both of punitive imprisonment and of rehabilitation through forced labour to help build the colony. After being set free, the convicts generally settled in the country as colonists and they form one of the main backgrounds of the European population in contemporary Australia.”

The earliest settlement of the Hawkesbury provides a unique opportunity to further explore themes established in the UNESCO listing regarding convicts because, beyond punishment and rehabilitation, their transportation was founded in the assumption of forced labour and a captive population, which would “settle the vast Australian continent”.

Thus the significance of the Thompson Square precinct derives from three interrelated conditions: the concentration of ex-convicts who settled in the Hawkesbury, initially on land adjacent to Thompson Square and their contribution to the survival of the settlement; the Square’s unique status as possibly the oldest continuously operating mercantile precinct in Australia, serving those farmers and; the Square’s close physical and functional relationship with the oldest continuously cultivated agricultural lands in Australia , which it looks out upon.

The produce coming from the Thompson Square wharf was so critical to the survival of the colony that In October 1810, Governor Macquarie gave orders to construct a new wharf at Cockle Bay to provide facilities for the unloading of produce brought in from the Hawkesbury.

In destroying this landscape by imposing a massive contemporary structure, out of all proportion with the scale of the surrounding elements, the RMS is destroying an economic asset. It is also destroying the heritage value of this place.

10.2 RMS Disclaimer

Despite a disclaimer at the end of the “3D visualisation” (see image, below) on the official government website of Roads and Maritime, visitors to the site are invited to “View the 3D visualisation showing the key features and benefits of the project.” During that “3D visualisation” a series of claims and statements are made against a background designed to look like the Windsor Bridge Replacement Project, post-completion.

Yet the aforementioned disclaimer says “The illustrations contained herein are indicative only. No person or organisation should rely on these illustrations for any purpose, and Roads and Maritime Services takes no responsibility for assumptions based on these illustrations.”

This RMS disclaimer gives rise to the question, “If we cannot ‘rely’ on the RMS illustrations for any purpose, how will the community have certainty on the outcomes for the Square upon project completion?

10.3 A Definitional Issue - What is Thompson Square?

Throughout the planning process the RMS has continually failed to understand what it is that makes up Thompson Square.

Just as heritage spaces like Port Arthur and The Rocks are valued as a sum of their parts, so too the heritage and cultural value of Thompson Square does not exist solely in a building, or a drain, or a green space.

The significance of Thompson Square exists in its entirety. It is the collective stories of each building, each space and each past event. It is the relationship of the civic space to the river and the agricultural land beyond, and the role this all played in feeding and therefore saving the emerging colony from starvation.

It is the location upon which Philip Cunningham, leader of the Rum Rebellion was hung, and the building where Breaker Morant worked. It is the the space where Governor Lachlan Macquarie named the Square for a convict, and the road running through it for a King.

Yet the RMS continues to, in a move that appears to be a deliberate strategy to devalue the Square, refer to Thompson Square as just the green space in the middle, and it is this incorrect definition of the Square that is used to justify the severe heritage impacts of the replacement bridge. By excising the buildings from their definition of Thompson Square they are then making fallacious claims in regard to restoring the Square to its original form, thus app tempting to negate the intrusive, obstructive and destructive impacts of Option 1.

The Heritage Council of NSW, in their submission:

> "There has been inadequate recognition that the State Heritage Register listing for the Square includes the open space and all of the buildings which surround it. Thus the relationship not only within the open space, but between the buildings and the Square, or the entire setting of the Square is of importance. The placement of a new major road along the side of Thompson Square will sever the relationship between the buildings along Old Bridge Street to the Square, and also with the buildings on the opposite side of the Square.
>
> "Thompson Square thus comprises a series of interrelated components – the setting, historic plantings, monuments, fencing, roadways, surrounding buildings and connections to the River. Such squares are rare in NSW and in Australia."

In Volume 2 of the Strategic Conservation Management Plan, Thompson Square is described as "one of the oldest public squares in Australia and notable for the large number of Colonial Georgian buildings which **surround** it". (Our emphasis)

It then goes on to describe the study area as consisting of,

"Thompson Square itself, now a public park, Windsor Bridge and the Hawkesbury River, a variety of residential and commercial buildings surrounding the Thompson Square on three sides".

Even when the buildings are recognised as being significant, it isn't for the whole building. Correspondence between CAWB and the RMS has revealed that when drafting the Strategic Conservation Management Plan "the assumption is that only the front of the buildings contributed significantly to the public space". Not the whole building. Just the front.

A mistake this basic is at best an embarrassing blunder, but for the 'professionals' determining the significance of the space, it is downright underhanded.

10.4 A Unified Space

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' (See attached) however this cutting has become part of a rhetoric designed to deliver fa specific outcome: Option One. It has been made responsible for the 'reunification' argument.

Our local politicians have purported the claim the new alignment of the road will 'restore the square to its original form'.

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"*

A road existing in Thompson Square has never been the issue of the heritage destruction. The park was never "unified" as the RMS claim. On the contrary, the various roads that

have snaked their way through the square have played an important role in the functioning of the civic space.

From the earliest days of the township these tracks have provided access between the high ground of the town and the wharf and river. The main route through the square was never straight up the hill. The slope was simply too steep for horse and cart. Instead it had various incarnations, winding up the hill to join the river with the ridge, in much the same way the current road does - a feature the RMS is quick to condemn. Unlike the RMS proposal the existing road makes traffic disappear through a cutting leaving the heritage integrity, views and vistas intact.

The common feature of the roads, past and present, is their ability to sit naturally and unobtrusive within the space. The new road destroys that. High, wide, modern and alien to a Georgian Square, the new road will obscure sight lines. Its sheer size and scale, built to accommodate large trucks, is completely out of character with the square and the surrounding buildings and will dominate the space built for human scale.

To counter this, the RMS will remove mature trees - trees that themselves are part of the historic landscape - in order to open up views from the lower square to the river. The effect of this of course is an already dominating structure will jut out even more.

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.

The Casey and Lowe report debunks any argument of the restoration of the Square when it states,

"This proposed design is not based on a full understanding of the significance of the heritage values of the place, nor on any heritage design principles or conservation policies, on which to base a future design. Therefore it is not mitigating impacts on heritage but an additional impact." Windsor Bridge Replacement Project Independent Heritage Review August 2013, pg.8

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.

10.5 Increased Usable Area

A claimed project benefit of the WBRP by the RMS is to “increase the usable area in the square by more than 500 square metres with direct access to the river” WBRP, Project Update, December 2016.

Firstly, let’s clear up that Thompson Square, being bordered by the river, currently has direct access via Old Bridge St.

To understand what an underwhelming benefit this is, let’s look at what 500 square metres of extra usable space means in real terms.

A standard bowling green, used to play lawn bowls, is 1500 square metres. Therefore, the additional usable space in Thompson Square would be equivalent to one-third the size of a bowling green.

In discussions with the RMS in 2012, the then Project Manager revealed the extra space was gained by the bridge connecting with the slope in Thompson Square higher than the current bridge. In other words, the extra space is **under** the bridge.

While we ponder how ‘usable’ this would be, it is also worth noting around 40% of the green space will be graded to have a 25% slope, or a 1 in 4 gradient. (See 10.9)

In the Volume 2 of the WBRP, Strategic Conservation Management Plan, 2017 it states “While the overall size of Thompson Square will be **reduced** by the new bridge …”.

This certainly not the first time conflicting information has been offered by the RMS, and even if we are gifted with some extra space under the bridge, it will be gift that keeps on taking.

10.6 Pedestrian Safety

The location of our occupation in Thompson Square gives us front row seats to the issues of pedestrian safety currently existing in the Square.

The RMS will address these by continuing to push large volumes of traffic including heavy vehicles through the pedestrian space, and trust traffic lights will sort the problem.

The 2009 report on the replacement bridge by the NSW Government Architect[14] states "... locating the bridge within the town would exacerbate the effects and impacts of local traffic on pedestrian and cyclist amenity close to the town centre" (pg.12).

A recent article in the Sydney Morning Herald states NSW truck deaths have increased by more than 86% in 12 months, with 20% of these deaths being pedestrians and cyclists.

Heavy transport is dictating road standards in NSW. And it is those standards that which require the increasingly monumental structures to carry them. That being the case, it is essential the government recognise the consequences. Heavy vehicles are heavy . They not only require brutalist structures to carry them, but those structures must be quarantined from pedestrians.

Yet not in the 'newly designed' Thompson Square.

To allow access to the wharf, the Urban Design and Landscape Plan outlines the Terrace, along the bottom of the square, will be reworked to become "a shared zone for heavy vehicle and pedestrian use". It goes on to say "In this location a flush concrete kerb is proposed to provide pedestrian movement throughout the shared zone."

The only remaining Georgian public square in the country is being reworked to promote vehicles and heavy traffic on a 21st century structure, rather than planning for movement on a pedestrian scale.

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[14] http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-landscape-and-visual-invest-aug2011.pdf

Clearly the first step to improving pedestrian safety would to be remove the 70% of through traffic that currently does not stop in Windsor. This includes up to 3000 heavy vehicles per day.

To address the issue of connectivity of Macquarie Park to Windsor, former chief bridge engineers Ray Wedgwood and Brian Pearson advise the retrofitting of a cantilevered pedestrian/cycleway is a straightforward procedure.

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.

The pedestrian safety features provided by Option 1 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

10.7 Landscaping

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.

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 embraced by those buildings, the scale neither intimidates nor overwhelms. Views and sightlines allow views within the Square as well as vistas across the Hawkesbury River to the oldest continuously cultivated agricultural land in Australia, allowing visitors to see the Square in context and thus gain an appreciation of its significance.

The RMS is willing to pull out the ‘built for horse and cart’ mantra when frightening people into thinking the bridge is substandard when it was actually built to withstand the forces of severe flooding, yet fails to apply the same mantra to the Square itself, which was formed at a time where horse and cart fit comfortably within the spacial context of the square - something that heavy vehicles and the infrastructure needed to carry them doesn’t.

In the design of Option One the conflict is between the domestic and human scale and proportions of Thompson Square and a proposed structure whose DNA comes from a grey, massive, looming brutalist aesthetic.

It is the monumentalism of the proposed structure which is alien, jarring and in no way addressed by the current detailed landscape plans and structural designs.

As a result we have a project which as consistently has been assessed as having high visual impacts.

In their submission for the WBRP, the Heritage Council wrote,

"The placement of a new major road along the side of Thompson Square will sever the relationship between the buildings along Old Bridge Street to the Square, and also with the buildings on the opposite side of the Square.”

In 2009, the Government Architect’s Office prepared “Landscape and visual investigation for bridge options at Windsor” (published 2011).

It assessed the visual impacts of Option 1 as ‘very high’, noting

“Option 1 would have a negative visual impact on the immediate views to and from the historic centre of Windsor particularly around Thompson Square due to the elevated road approach to the bridge and the related road works in the immediate environs.
“From a distance the new bridge being higher and broader should also have a greater impact on the views up and down the river.”

However none of this appears to be of concern when in the WBRP, Urban Design and Landscape Plan, 2017 they note “Being of a substantial scale and set within a uniquely characteristic context, the new bridge also brings with it opportunities for an enhanced public domain…” Because being the oldest public Square in the country isn’t enough?

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.

A genuine landscape plan for the Thompson Square precinct would not promote the supremacy of heavy vehicles in a recreational, retail, residential pedestrian precinct and fail to respect its historic credentials. Yet that is exactly what is on offer and no amount of describing generic 21st century elements as ‘respecting’ Georgian style disguises the reality of this plan which is so clearly contemptuous of any historical associations or aesthetic considerations

It is not difficult to connect 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 impossible to reconcile it with the current proposal.

10.8 A Unique Sense Of Arrival?

The claim WBRP will “Enhance the unique sense of arrival to Windsor both from the north and south while also strengthening the landscape character of historic Thompson Square through appropriate tree planting” is incorrect, indeed, absurd.
Submission by CAWB and 754 others
Regarding Version 10: Windsor Bridge Replacement Project (WBRP) Urban Design and Landscape Detailed Design Report (UD&LP)
Page 64.
There will be no sense of arrival as can be clearly seen in the RMS flythrough:

In this image Windsor is no longer a ‘destination”. It is an invisible irrelevance on a longer journey. These screenshots make it painfully clear: the road leaps ahead, forging through and dominating an anodyne landscape. Its visual aggression and dominance promising a ‘real’ destination ....somewhere else. But just keep going…

10.9 Gradient

The Urban Design Landscape Plan, approved and released in March 2017, has done nothing to suggest impacts on landscape character have been reduced. Like most documents for the WBRP, the introductory line stating the heritage significance of the space is followed by a ‘mitigating measure’ that is anything but. The dominance of this infrastructure in a heritage precinct has not changed.

The issue of landscape remains contentious. EIS Volume 1 (page 195), 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.”

Concept drawings of the park to date have indicated there would be a small flat section at the top which then falls away to the river, at a gradient of 25%, (1:4), requiring a set of stairs on either side for access This is order to ‘improve connectivity’ to the river.

To put that into perspective, this is the same gradient as the steepest street in Sydney, Attunga Street in Double Bay[15]. It is also as steep as parts of the steepest residential street in the world, Baldwin St in Dunedin, NZ.

Attunga St in Double Bay which has a 1:4 gradient. Photo: The Daily Telegraph

This brings into question the concept of what is ‘usable’. At a slope of 1:4, the space becomes completely unusable for anyone with mobility issues, especially when you consider a wheelchair ramp requires a maximum gradient of 1:14.

The RMS however appears to be some confused regarding gradient, which, while describing the proposed slope of the grasslands as being ‘gentle’ also says, “The steep grade on Bridge Street (which currently slopes down to the river) increases the noise

[15] http://www.news.com.au/finance/real-estate/lifes-uphill-on-sydneys-steepest-street/news-story/e6f3ce94663000233998d99d55fcd1eb

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.

In fact the steepness of the slope in the parkland would be greater than that of Bridge St. The current road starts sloping from George Street, whereas the parkland will have a flattish area at the top before dropping away to the river.

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?

Most relevantly we refer to the independent heritage report by Mary Casey, (part of the documentation available to the Minister for Planning in determining to approve the project and in formulating the associated Conditions of Approval) in which Ms Casey says:

"The **Urban Design** mitigation measures must be examined closely as they do not relate to heritage significance, or heritage design principles and conservation policies. The mitigation measures do not alleviate the implication that appears to be acceptable to RMS that the WBRP can have such a major impact on a SHR conservation area and State significant archaeology. The urban design report's assessment has concluded that all visual impacts within Thompson Square are High, the highest level of impact. The heritage report's assessment has stated that the only real mitigation for the proposed impacts relates to archival recording, archaeological excavation of the site, reporting and interpretation. The main mitigation for the built heritage appears to be a design which consolidates the park and undertakes planning for a redesign of Thompson Square and the Terraces. This proposed design is not based on a full understanding of the significance of the heritage values of the place, nor on any heritage design principles or

conservation policies, on which to base a future design. Therefore it is not mitigating impacts on heritage but an additional impact ."

This position is probably best described as unequivocal in its condemnation of both the project and the associated landscape plan.

10.10 Noise

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.[16]

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.

In January 2018 noise mitigation measures began to be installed in properties as part of the Windsor Bridge Replacement Project.

When you look at how close the new road is to the buildings on Bridge St you can understand why it will be necessary to protect the buildings with double glazing and other structural treatments.

Unfortunately not much can be done for users of the open space in the Square.

The EIS states the operation of the new road will see noise levels in the parkland in excess of 72dB LAeq with peaks near 90dB.

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[16] http://www.rta.nsw.gov.au/newsevents/news/2012/120802-nthsydney.html

If we look to the European Environmental Agency, they advise “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”.

The Government's own Road Noise Policy guidelines for noise in an open area is 55dB - much less that those anticipated for the Thompson Square parkland.

The levels recorded for the WBRP EIS 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.

With increasing numbers of heavy vehicles beyond those predicted by the RMS the issue of excessive noise levels is only set to get worse.

The heritage significance of Thompson Square imposes significant constraints upon landscaping responses to noise intrusion. The sound barrier walls seen on motorways would extremely inappropriate in that space. Even the noise mitigation measures applied to the heritage buildings are a negative heritage impact.

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.

There is no need for such a historic site to be subjected to noise levels well above those recommended by the very Government forcing this project through.

The only solution is to bypass the Thompson Square Heritage precinct.

10.11 Vibrational Impacts

The Government and RMS have tried to make assurances that no damage will occur to the existing heritage buildings as part of the Windsor Bridge Replacement Program.

Despite this the RMS have clearly stated “Vibration from the operation of the road may impact on the structural integrity of these buildings and require vibration treatments to be undertaken. These vibration treatments may further impact the heritage value of the buildings”.[17]

In the recently released tender documents for the WBRP it states,

"In addition to the direct impacts on the fabric and curtilage of listed heritage items and direct impacts on archaeological relics and remains, vibration generated during construction of the project has the potential to result in physical impacts on six additional items. These items are as follows:

• House at 4 Bridge Street
• House at 6 Bridge Street
• House and outbuildings at 10 Bridge Street
• Former School of Arts building
• Shops at 62-68 George Street
• The Doctors House”

The buildings in Thompson Square are some of the earliest surviving structures in the nation.

Buildings that have stood for 160 years or more are now at the mercy of pile drivers and vibrating rollers, plus the continued rumbling of increasing numbers of heavy vehicles.

[17] http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-state-significant-infrastructure-application-report.pdf

In March this year it was reported property owners affected by the construction of a major road project in Sydney were experiencing cracking and movement of their houses. [18]

One resident, who lives 250 metres from the closest construction site (and outside the 50 metre zone of potential impact), noticed a metre long crack in a wall in his 1920s home.

Another resident noticed cracking in her walls two years ago, only to learn her house would require repinning of its foundations.

In Granville, a resident who was told his property would not be affected at all now finds his house full of cracks, initially from the vibrations during construction, and now from continued used of the road by heavy vehicles. His house is virtually uninhabitable, and significantly devalued.[19]

This is happening now, in Sydney. And it could happen in Thompson Square.

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[18]https://www.dailytelegraph.com.au/newslocal/inner-west/residents-in-haberfield-and-beverly-hills-claim-westconnex-work-is-cracking-the-walls-of-houses-near-motorway-construction-sites/news-story/d1fe2685fa896aaa90fed7767cd0003d

[19] http://www.abc.net.au/news/2017-08-09/westconnex-overshadows-house-and-leaves-it-falling-apart/8787194

11. FLOOD IMMUNITY

11.1 Overview

Not all floods are the same. Inflows come from many sources.

Factors that affect flood immunity include the height of the underside of the bridge, which determines when the bridge would be closed, the river height, the height of the connecting roads and the height of the natural levee characteristics of the river bank. Furthermore, the flood plain does not fill evenly. Initial flooding is primarily caused by flood water backing up along connecting waterways. Housing developments within the catchment area will continue to affect the nature of local flooding. There has not been a significant flood of the Hawkesbury River since 1992, so directly relevant experience is rare.

The RTA's documents, prior to the EIS, claimed the flood immunity benefit from the project would be above the 1 in 5 year flood event. The claimed flood immunity benefit of 1 in 5 was promoted during the public consultation process, and was instrumental in setting community expectations for the project. A 1 in 5 flood can be understood to be a flood of 11 metres.

The current criterion for determining bridge closure due to flooding is that the water levels reach 500mm below the bottom of the deck. The current bridge has a depth of approximately 1 metre to the bottom of the deck. The proposed bridge has a depth of 1.85 metres to the bottom of the deck, thus negating a proportion of the benefit gained by raising the overall height of the bridge.

Three of the approach roads are already lower than the existing bridge, and another one is much lower than 9.8 metres. Therefore it is incorrect to state that a new bridge will have the same 'flood immunity' as surrounding approach roads on the northern river bank.

11.2 Initial RTA Claims

The RTA's *Windsor Bridge over the Hawkesbury River Options Report 2011* states that:

- "Windsor and the surrounding areas lie within the floodplain of the Hawkesbury River. The town is located on a small ridge above the Hawkesbury River on its southern bank" (p.1)
- "the surrounding approach roads provide access at a 1-in-5 year flood level. (Executive Summary Page iii)
- "The bridge height would accommodate a 1-in-5 year flood event." (Page v)

Under Objectives, the EIS proposes "to improve the level of flood immunity: provides a crossing that is above the 1 in 5 year flood event" (p.4). This information was used in the public consultation process, which was instrumental in setting community expectations for the project. For example, the *Windsor Bridge Replacement Project, Honouring the Past and Building for the Future Project Update, May 2012* notes that "a new bridge would cope with higher levels of flooding and have the same 'flood immunity' as surrounding approach roads on the northern riverbank" (p.2).

This apparent commitment was reinforced by Ray Williams, the then Member for Hawkesbury in his Newsletter of May 2012: "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" (see also Annexure 2).

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 Option 1 to develop an EIS around.

11.3 Amended RMS Claims

However, sometime after May 2012 the RMS amended its claims.

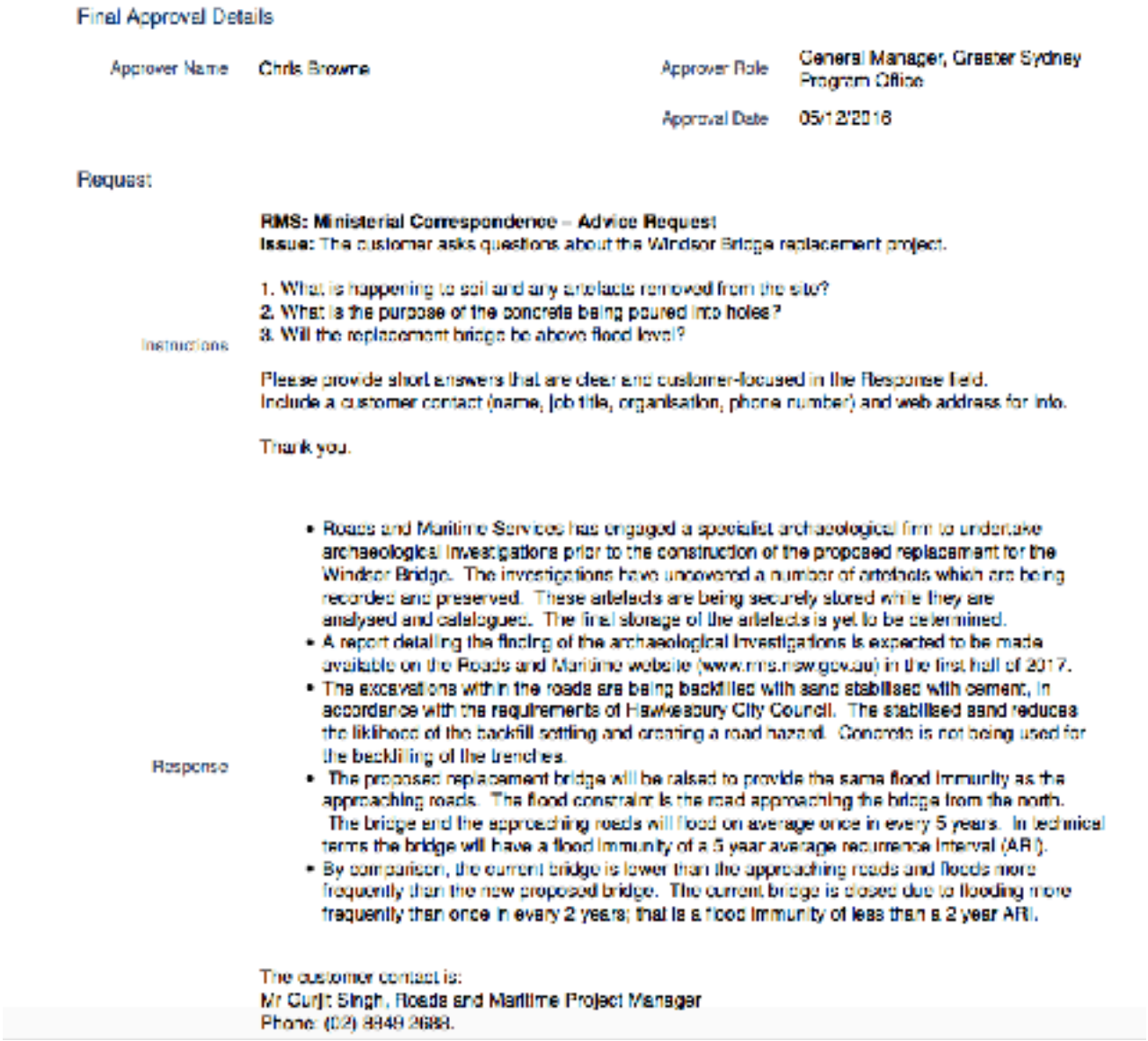
The EIS Project description states that:

> "the low point of the replacement bridge at deck level would be around 9.8 metres Australian Height Datum (AHD), making it around 2.8 metres higher than the lowest point of the existing bridge. This would give the replacement bridge a **slightly higher** level of flood immunity than the existing bridge. 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**." (p.83, emphasis added)

The EIS claims that "this level of flood immunity is consistent with that of the immunity of the roads on the northern side of the Hawkesbury River i.e. Wilberforce Road and Freemans Reach Road, which have a flood immunity that lies about midway between the one in two year and one in three year flood levels. The replacement bridge would be **marginally above** minimum road levels along Wilberforce Road and Freemans Reach Road, and thus **may** improve flood access into Windsor from the north." (p.97, emphasis added).

The EIS also states that "a new bridge with a flood immunity similar to surrounding roads would provide improved flood evacuation opportunities for floodplain areas north of Windsor and would provide access across the Hawkesbury River for a wider range of flood events" (p.24). It should be noted that the RMS made the same claim for a 1 in 5 flood.

On 5 December 2016, Mr Gurjit Singh, Roads and Maritime Project Manager wrote in in response to a request for clarification: "The bridge and the approaching roads will flood on an average once in every five years. In technical terms the bridge will have a flood immunity of a 5 year average occurrence interval (ARI)." The 1 in 5, however, is an 11 metre flood. The low point of the proposed bridge is 9.8m. How are to believe anything claimed by the Project when the Project Manager himself maintains that the bridge will provide a 1 in 5 flood immunity? (See below)



Final Approval Details

Approver Name	Chris Browne	Approver Role	General Manager, Greater Sydney Program Office
		Approval Date	05/12/2016

Request

Instructions	**RMS: Ministerial Correspondence – Advice Request** **Issue:** The customer asks questions about the Windsor Bridge replacement project. 1. What is happening to soil and any artefacts removed from the site? 2. What is the purpose of the concrete being poured into holes? 3. Will the replacement bridge be above flood level? Please provide short answers that are clear and customer-focused in the Response field. Include a customer contact (name, job title, organisation, phone number) and web address for info. Thank you.
Response	• Roads and Maritime Services has engaged a specialist archaeological firm to undertake archaeological investigations prior to the construction of the proposed replacement for the Windsor Bridge. The investigations have uncovered a number of artefacts which are being recorded and preserved. These artefacts are being securely stored while they are analysed and catalogued. The final storage of the artefacts is yet to be determined. • A report detailing the finding of the archaeological investigations is expected to be made available on the Roads and Maritime website (www.rms.nsw.gov.au) in the first half of 2017. • The excavations within the roads are being backfilled with sand stabilised with cement, in accordance with the requirements of Hawkesbury City Council. The stabilised sand reduces the likelihood of the backfill settling and creating a road hazard. Concrete is not being used for the backfilling of the trenches. • The proposed replacement bridge will be raised to provide the same flood immunity as the approaching roads. The flood constraint is the road approaching the bridge from the north. The bridge and the approaching roads will flood on average once in every 5 years. In technical terms the bridge will have a flood immunity of a 5 year average recurrence interval (ARI). • By comparison, the current bridge is lower than the approaching roads and floods more frequently than the new proposed bridge. The current bridge is closed due to flooding more frequently than once in every 2 years; that is a flood immunity of less than a 2 year ARI. The customer contact is: Mr Gurjit Singh, Roads and Maritime Project Manager Phone: (02) 8849 2688.

11.4 Examples of RMS's Contradictory Statements

The Environmental Impact Statement Volume 1 - Main Report 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." (p.365)

It should be noted that this implies that 40 percent of Wilberforce Road is at or lower than 9.8 metres. In fact, “the low point of Wilberforce Road at 8.4 metres, is considerably lower than the proposed bridge.” (EIS Volume 1 - main report, p.353)

A survey of road heights was commissioned by CAWB. The report by Monaghan Surveyors Pty Ltd (See Annexure 3) has indicated that the relevant road heights are:

- Wilberforce Road - Lowest surveyed level RL 8.2m AHD - approximately on the deck of the bridge over Buttsworth Creek.
- Gorricks Lane / Freemans Reach Road - RL 6.5m AHD - approximately 950m north along Gorricks Lane from the intersection with Freemans Reach Road.
- Hibberts Lane - RL 10.0m AHD - approximately 250m north along Hibberts Lane from the intersection with Freemans Reach Road.

11.5 Potential for bridge damage due to flood debris

Throughout this Project information and concepts have become embedded into the project and have been repeated without the due diligence of evaluation. One such claim is that:

- “the bridge would continue to be subject to impacts from flood waters that could seriously damage the bridge through the build up of debris and sediment that may wash from upstream.” Options report 1.3 page 3
- “…it is not feasible to maintain the Windsor Bridge in addition to constructing a new bridge. The existing bridge may also pose a risk to the new bridge during a heavy flooding.” Options report 4.4 page 57

RTA/RMS personnel repeatedly stated they are fearful that in the event of a flood, logs would be swept down the river, building up on the pylons and causing the Windsor Bridge to collapse. One example of that belief was expressed by Peter Duncan, then D-G of RMS in 2012 to two members of CAWB at a meeting (Ian Macleod, Senior Project Officer

at that time also was in attendance). Mr Duncan said the RMS was so concerned that it had a series of Bailey bridges on standby during the 2012 river fresh.

These statements seem designed more to reinforce the often stated claims that the existing Bridge is becoming increasingly dangerous and fragile due to its advancing age, than to be founded on any basis of reality. During floods, when the flood height reaches a level of about RL 11 AHD, water travels overland from upstream at Freemans Reach at the Breakaway and rejoins the river downstream of Windsor. This overland flow effect mitigates the effects of flood flow velocity at Windsor Bridge (Ray Wedgwood and Brian Pearson report).

The claims by the RMS quoted above were made over 6 years ago. A flood may happen at any time, and since that time there have been devastating floods in Victoria & Queensland. Since 1994 the RMS has not carried out any major repair work on Windsor Bridge. If the Project proceeds it will be another two years before a replacement bridge is built. During that time, and until the current bridge is demolished, the stated belief of the RMS is that the Bridge could poise a risk to the replacement bridge in the event of a flood. It is assumed this belief is partly related to the fact there has not been a recorded flood for 25 years and therefore the potential exists for unknown debris lying on the river bed.

It seems reasonable to ask whether, is the bridge really in such a condition that a flood could sweep parts or all of it away? If this is indeed the case, then why hasn't the RMS carried out preventative measures, since a flood can happen at any time?

The river has risen to around the 6 metre mark on three occasions over the last 5 to 6 years, which will have at least partially cleared debris from the bed of the river. So much so that in the last rise the lack of debris in the river was commented on by farmers and other long term local residents.

The possibility of the river carrying large logs to crash into the Bridge is one scenario that is raised. Where would these logs come from? The area between Windsor and Richmond Bridges is mainly agricultural land, and the opportunities for logs to be waiting to be

swept down the river is limited. Above Richmond Bridge is the mouth of the Grose River. A number of logs could be swept down the Grose, however the Richmond Bridge would be a partial barrier. Further upstream is the Yarramundi Bridge. It would be more of a barrier to logs coming from further upstream. As mentioned above, once the river rose above 11 metres it would break the banks at The Breakaway and thus most of the force of the river would miss Windsor.

11.6 What flood immunity would Option 1 Provide?

The amount of flood immunity provided by Option 1 is unclear, due in part to the RMS's inability to accurately define claimed flood immunity levels other than 1 in 5. However, the following should be considered:

- It is primarily the level of the floodplain that dictates access to and from Windsor during flood events. Once the relevant sections of the surrounding road network are submerged, the height of the bridge is irrelevant.
- Both existing approach roads, Windsor Road and Wilberforce Road, have sections of the road that are inaccessible in a 1-in-5 year flood event.
- Both existing approach roads, Windsor Road and Wilberforce Road, have sections of the road that are inaccessible in much lower floods.
- Windsor Road at McGraths Hill Flats floods with local rain well before Windsor Bridge would be closed thus causing all traffic to divert to Hawkesbury Valley Way.
- While it is mildly interesting to state that the proposed bridge is higher than around 60 per cent of Wilberforce Road, this ignores the reality that 40% of Wilberforce Road will be flooded before the bridge is closed. The low point on Wilberforce Road is 8.2 metres.
- It is misleading to make the statement that Option 1 provides a crossing with a flood immunity that is comparable with the surrounding approach roads. A cursory glance at the map clearly shows that the height of Freemans Reach Road is only relevant to those who live in the approximately twenty farm houses on Freemans Reach Road.
- Access to Freemans Reach and Glossodia areas is generally via Gorricks Lane, which has a low point of 6.5 metres, lower even than the current bridge at 7.0 metres.

- Hibberts Lane, despite a low point of 10 metres, is rarely used as it is considered unsafe for trucks or heavy traffic due to its sharp bends. Freemans Reach Road terminates on the flood plain at the T-intersection with Hibberts Lane.
- 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, p. 83) fails to address the reality of the 'flood immunity' of the related road network.
- A further governing factor in determining flood immunity is the policy determining when either bridge (current & proposed) would be closed. The current policy is to close a bridge when the water reaches 500mm below the bottom of the carriageway. (Ref SES and a letter from the Member for Hawkesbury)

11.7 Conclusion

It is acknowledged the proposed bridge could improve flood immunity. However the degree of improvement relates entirely to the difference in the level of the underside of the current bridge and the underside of Option 1 and the lowest points in the surrounding access roads.

Improvements in flood immunity are minimal and insufficient to justify the project.

Flood immunity is another area of this project where the RMS has demonstrated a lack of the necessary accuracy and specificity. How can the RMS be trusted?

12. PROJECT ASSESSMENT PROCESS

It is clear from Hansard and Call for Papers Documents that the NSW Government was going to proceed with the Option 1 Windsor Bridge regardless of any heritage impacts or failure to address traffic issues.

In July 2013 Roads Minister Duncan Gay stated that:

- "When I said that this (project) will be evaluated properly and fairly and independently within the Planning Area, I meant it", Community Cabinet Meeting, Penrith July 2013.
- Yet documents show that all Department of Planning independent assessments into traffic, heritage and bridge engineering were ignored. Internal Department of Planning assessments were also ignored.
- Documents prove that the project was approved only after political interference by the then Premier.

12.1 The Former Labor Government

It is important to remember that this project began with a proposal put forward under the former Labor Government in 2008. In late 2010 the proposal was dropped by the Labor Government because the NSW Heritage Office (Heritage Council) refused to agree to the project, because of severe impacts to the Thompson Square State Heritage Conservation Area.

- "I firmly believe that any suggestion of heritage issues indicates that it is being used as a red herring and that it is an excuse by this Government once again to do nothing", Ray Williams MP, Hansard 29th October 2010.
- "The member for Hawkesbury was incorrect when he said that the alignment proposed in option No. 1 will not have a heritage impact … The history of the Hawkesbury area is vital to the State and the nation and we have every right to preserve it. The member does himself ill to belittle the heritage impact of the area", John Aquilina MP, Hansard 29th October 2010

12.2 The New Liberal Government

The March 2011 election saw the O'Farrell Liberal Government elected and the proposed Option One bridge was pulled out of the trash, its construction being an election commitment. However the project still faced the veto of the NSW Heritage Office. To overcome this:

- The RMS did not apply to build the new Windsor Bridge until the planning laws were changed with the introduction of Part 5.1 of the Environmental, Planning and Assessment Act
- The new Planning Laws were introduced on Friday the 30th of September
- These allowed the issue of heritage and objections by the NSW Heritage Office to be circumvented
- The application to build the new Windsor Bridge was made the following Tuesday, October 4th, 2011. This was the first possible business day because Monday 3rd October was a public holiday.

Despite being effectively sidelined, the NSW Heritage Office continued to try to protect the heritage of Thompson Square. Politicians such as Bart Bassett railed against the Heritage Office, failing to comprehend the significance of the Office's independence.

> ***"****There had been, and continues to be, ongoing consultation and detailed works around the heritage aspects of this project; yet the New South Wales Heritage Office, an unelected body, continues to engage in what amounts to a campaign against the construction of the new bridge."* **-** Bart Bassett MP, Hansard 29th March 2012

12.3 The Approval

As quoted earlier, Roads Minister Duncan Gay promised a Community Cabinet meeting in 2013 that the project would be assessed independently in the Planning Department, and the Planning Minister would approve or reject the project accordingly.

“It doesn't matter whether it's the larger group or the smaller group (who support the project) it's whether it's appropriate and whether we are doing the right thing and we're not alienating our important colonial history. …

We promised we'd build this bridge and we promised we'd build it subject to proper planning and that's what we're doing.”

However, documents obtained in the 2013 Upper House Call for Papers (CFP) show that this was not the case:

- these documents show that the Planning recommendation was for project disapproval.
- they demonstrate that approval was not in the public interest, and could result in legal action and “false approval”.
- they show that the recommendation to approve came only after pressure was applied by the office of then Premier Barry O'Farrell.

The Department of Planning carried out a thorough assessment of the proposed new Option 1 Windsor Bridge. It commissioned independent, peer reviews into heritage issues, bridge engineering and traffic engineering. The Department of Planning summarised the project and the three independent reviews as follows, in a report dated 1 July 2013:

The Department was very clearly recommending that the project not proceed.

Things changed on July 21st, when CAWB held a rally in Thompson Square. Senator Doug Cameron spoke, and announced that a Labor Federal Government would give the NSW Government funding for an independent study for a bypass of Windsor. The CAWB continuous occupation of Thompson Square began that evening.

The following morning things heated up for the Department of Planning. Director General Sam Haddad calls an urgent “no papers required” meeting with senior staff of the RMS and Department of Planning. Those contacted to attend were:

Peter Duncan, Chief Executive, RMS

Erica Adamson, General Manager Environment, RMS

Geoff Fogarty, Director of Infrastructure, RMS

Chris Wilson, Executive Director, Dept of Planning

Karen Jones, Assistant Director, Dept of Planning

CAWB has been told that the Premier personally attended this "No Papers" meeting

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Sam Haddad - Peter Duncan / Erica Adamson / Geoff Fogarty re Windsor Bridge + C Wilson + Karen Jones

From: Sam Haddad
Date: 22/07/2013
Time: 11:00 AM - 11:30 AM
Subject: Peter Duncan / Erica Adamson / Geoff Fogarty re Windsor Bridge + C Wilson + Karen Jones
Place: Room 107

Contact: Carmel Elliott

22/7 DG requested urgent meeting. Scheduled all
No papers required

The timeline over the following two days was as follows:

- 22nd July 11.34am - Bart Bassett emailed Premier O'Farrell's Chief of Staff (CoS), complaining about the CAWB rally and pleading for project approval.

-----Original Message-----
From: Bart Bassett [mailto:bartobassett@gmail.com]
Sent: Monday, 22 July 2013 11:34 AM
To: Jaymes Boyce-Rudder
Subject: Rally

Dear JBR here is picture of Rally during speeches tiny no more than 200. The delays are killing us Brad has put on pressure on Dept to get it in shed as you know this was election commitment. The delays have now allowed mobilisation of Unions and Fed Labor. Please we need this issue finished we need the leadership to support us.
Regards Bart

- 22nd July 5.03pm – Premier O'Farrell's CoS emailed Bassett, advising that he had spoken to the Chiefs of Staff for Roads Minster Gay and Planning Minister Hazzard, about the project and the need for it to proceed. (for the committee's

information former CAWB President Dail Miller has never been a member of a union, let alone a union secretary as suggested in the email)

- 23rd of July 11.57am – Premier O'Farrell's CoS emailed Macfarlane (Hazzard CoS) and DeSousa (Gay CoS) claiming that they are behind "agreed delivery". A Gantt Chart is attached to this submission for the committee's reference)
- 23rd July 12.14pm – Macfarlane (Hazzard CoS) emailed the Premier's CoS questioning the Dept of Planning's involvement in the project timeline
- 23rd July 3.17pm – The Premier's CoS emailed MacFarlane (Hazzard CoS) and DeSousa (Gay CoS) confirming that the Dept of Planning, RMS and the OEH were involved in the project timeline

It is clear that the project was independently assessed by the Department of Planning. However the Department's assessment was ignored, along with the independent reports of experts in the critical fields of heritage, traffic engineering and bridge engineering.

As this timeline makes clear, it was after the offer of Federal Government funding to find a superior option, a bypass of Windsor, that the Premier stepped in and personally pressured the Department of Planning to change its recommendation to that of approval.

The Windsor Bridge Replacement Project was approved not on its merits, but instead for personal or political reasons by the NSW Premier and some in the Government.

The Windsor Bridge Replacement Project is a sham.

Heritage Assessment

There are 22 State Heritage Items located within the vicinity of the site. This includes the Thompson Square Conservation Area which contains individual State Heritage Items. The Thompson Square Conservation Area is directly impacted by the proposal. The Commonwealth Department of Sustainability, Environment, Water, Population and Communities is due to re-consider an emergency application to list the Conservation Area on the National Heritage Register. The existing bridge (proposed to be demolished) is listed on the s.170 Register of the Heritage Act 1977 and is also a Local Heritage Item.

Initial Recommendations of the Independent Heritage Advisor

- RMS' heritage consultants suggest the archaeology will be diminished by the proposal and recommended that the place remain intact.
- The RMS Heritage Assessment does not
  - provide an adequate description of the heritage values of the Conservation Area
  - provide a detailed analysis of the Conservation Area, relationships between buildings/square, principles/policies of the impact assessment;
  - assess the effectiveness of the mitigation measures (it is unclear if stated mitigation measures are commensurate to the level of impact);
  - specify whether the conservation area will still be of State significance if the project is undertaken;
  - appear to have been prepared by appropriately qualified and/or experienced heritage consultants.
- The RMS has prepared a Statement of Heritage Impact. The Statement of Heritage Impact
  - is more appropriate as a standalone document for 'minor works to items of regional or State significance';
  - suggests the main mitigation measure is a redesign of Thompson Square and the Terraces. This is considered to be an additional impact;
  - is inadequate in its analysis of historic maps and images and does not conform to the NSW Heritage Manual.
- A Conservation Management Plan is the 'minimum supporting information required' to assess impact on State significant heritage.
- The Heritage Assessment and Statement of Heritage Impact do not meet the key requirements of a Conservation Management Plan, including:
  - a careful analysis of why the item is significant;
  - outline of policies that have been developed to retain that significance; and
  - conservation strategies to achieve the long term viability of the item or area.
- The Independent Heritage Advisor will not recommend relevant conditions for approval given the inadequate assessment and information.

RMS Response

- RMS responded with a draft framework for a Conservation Management Plan.
- The draft Conservation Management Plan reiterates information already provided and outlines assessment to be conducted post approval.

Independent Heritage Advisor Recommendations re: RMS Response

- Conservation Management Plans inform the appropriateness of the project and are routinely required prior to determination.
- A Conservation Management Plan will result in a clearer understanding of the significance and it is likely to be more significant than stated.
- A Conservation Management Plan will result in a clearer understanding of the impacts and it is likely that a greater impact will be revealed.
- Deferred commencement subject to approval of an adequate Conservation Management Plan is not supported.

Traffic Assessment

Local and sub-arterial roads surrounding the site are approaching or above desired maximum capacity. Prior to submitting the EA, RMS identified eleven options for reconfiguring the local traffic network, including options to bypass the Windsor town centre. The proposal includes reconfiguring intersections north and south of the bridge, and identifies potential to add a third lane to the future bridge.

Initial Recommendations of the Independent Traffic Reviewer

- The options assessment does not provide sufficient justification (on traffic performance grounds) for discounting a number of identified options.
- Options considered provide short term (to 2021) traffic improvements, due to constrained intersection capacity on adjacent roads.
- Improved traffic network performance is not contingent on bridge replacement, provided further road network improvements are undertaken.
- The independent review provides four alternative options that would perform within acceptable capacity limits at 2021 peak times:
- Alternative 1 – Retain existing bridge and upgrade adjacent intersections:
  - Northern Intersection (Bridge St/Wilberforce Road/Freemans Reach Road):
    - Installation of a two lane roundabout or seagull intersection would increase network performance, with some AM peak queuing.
    - A new roundabout could tie into the existing bridge, subject to review of sightlines for southbound traffic.
  - Southern Intersection (Bridge St/George St):
    - Installation of a new signalised intersection (in EIS) with some adjustment of the northern approach to help address sightline issues.
    - Closing the eastern end of George St at Bridge St would improve performance of the existing roundabout.
- Alternatives 2 & 3 – Construct the new bridge adjacent to the existing bridge or duplicate the existing bridge and upgrade intersections.
  - It is noted that these options would require resumption of open space and may have unacceptable impacts on the Conservation Area.
- Alternative 4 – Broader Network Options (Maintaining Existing Bridge)
  - Options for realignment of Freemans Reach Road to insect with Bridge St and Wilberforce Road have not been sufficiently assessed.
  - Exclusion of realigning Freemans Reach Road may have restricted the number of options considered, given traffic issues associated with the current T-intersection.
- Options for bypass (including the community proposal 'Rickaby's Line') have not been adequately considered, and warrant further analysis.
- Bypass options could provide ability to retain current bridge for local traffic, and allow diversion of through-traffic and heavy vehicles.
- Initial analysis indicates a bypass would enable the bridge and the bypass bridge to perform within acceptable capacity limits.

RMS Response

- RMS has provided further detail regarding constraints on upgrades to adjacent intersections and broader network options.

Independent Traffic Reviewer Recommendations re: RMS Response

- There remains need to undertake considerable work on adjacent intersections, notwithstanding constraints on identified options.
- A bypass of Windsor would avoid need to undertake such work and may warrant further consideration.

Bridge Condition

The condition of the existing bridge is a key argument of RMS to justify the proposal to construct a new bridge. Due to age, deterioration and heavy use, RMS acknowledge that rehabilitation of the existing bridge would be required if it is to be used and maintained into the future.

Initial Recommendations of the Independent Engineer Reviewer

- Deterioration of the existing bridge is primarily due to neglect of the bridge over many decades, but most notably in the last two decades.
- Deterioration is evident in various bridge structures/components (carbonisation and cracking of concrete elements, graphitisation and cracking of piers and deck joints being 'locked up').
- In isolation and if left untreated these could warrant demolition of the bridge (with the exception of deck joints which are presently alleviating lateral forces usually transferred to piers); however, cumulatively, sufficient strength in the existing bridge remains. load testing (undertaken by RMS in 2006) concluded that the existing bridge is capable of carrying semi-trailers and B-Doubles until a replacement bridge is constructed.
- The condition of the existing bridge is such that it is not in a dire condition and could — relatively economically — be refurbished.
- RMS has commissioned a number of reports, tests and investigations (2003, 2005, 2009, 2010, 2011) to ascertain the condition of the existing bridge, each concluding with specific recommendations for arresting further deterioration of the bridge. RMS has not undertaken any of these recommended works.
- Evidence presented by RMS indicates that no maintenance has been undertaken since the decision was made to replace the bridge, unless a risk to the public is observed.
- The refurbishment methods proposed by RMS and the former RMS chief bridge engineers (the alternative) are both constructible. However the RMS approach is more complex and has greater impacts on existing traffic, heritage fabric and construction worker safety than the alternative.
- Key recommendations include:
  - Refurbish and retention of existing bridge for local traffic only;
  - Refurbish and retention of existing bridge for pedestrians and cyclists only; and
  - Refurbish and strengthen to cater for current traffic at a cost of $14.5M (compared to $65M for the project).

RMS Response

- RMS provided additional information (mostly sourced from the EA and Submissions Report) regarding the alternative refurbishment methodology. This also includes a costing ($16M) based on some modifications to the alternative.

Independent Engineer Reviewer Recommendations re: RMS Response

- Believes the optimum refurbishment and strengthening methodology (combination of RMS and alternative) is over-costed by approx. $1.5M.
- Reiterates his concern that additional costs of the project over those of bridge refurbishment and retention is huge (approx. $50M).
- This optimum option would result in a bridge that is serviceable for the next 50 years.

Current Options Available to Department of Planning and Infrastructure

Option No.	Description	Outcomes
1	That the project be modified such that refurbishment works are carried out to the existing bridge and that the existing intersections are upgraded to address traffic efficiency issues/congestion in Windsor.	+ Achieves project objectives + Limited heritage impacts + Traffic issues are mitigated + Cost efficient + Consistent with public interest -- Inconsistent with RMS commitment
2	That the State Significant Infrastructure application be refused for reasons relating to heritage impact, urban design, visual impact, insufficient information and public interest.	+ Responds to community expectations + No heritage impacts -- Does not resolve the present traffic issues -- Existing bridge maintenance still required -- Public project refusal
3	That the State Significant Infrastructure application be approved subject to conditions so that the outstanding heritage issues are addressed prior to the project commencing.	+ Achieves project objectives + Traffic issues are mitigated - Legality of the approval is questionable - Leaves DP&I open to legal challenge - Could result in a "false" approval - Significant heritage impacts likely - Redesign of proposal is likely - Inconsistent with Heritage Council views - Inconsistent with community expectations

13. ECONOMIC IMPACTS AND THE COST BENEFIT ANALYSIS

The discussion below relates to the following terms of reference of the Inquiry:
iii. economic, social and heritage impacts

vii. cost benefit analysis process, and

Summary of the argument presented below

The submission makes on the following points:

- The Windsor Bridge Replacement Project explicitly disregards its stated objective to minimise impact on heritage and character of the local area
- Significant economic and non-economic costs have been left out of the calculation of the Benefit Cost Ratio in the EIS (2012), specifically, no cost value is attached to adverse heritage impacts
- The Response to Submissions Report (2013) presents extensive evidence that heritage aspects of the site have significant value to the community, and provides ample detail on them
- Methods for quantifying the economic costs and benefits of heritage and cultural assets exist and could have been used in developing the EIS, if appropriate expertise had been contracted
- Paradoxically, the project erodes the cultural tourism potential of Windsor, at the same time as a Destination Management Plan is being developed
- Portfolio Committee No. 5 is urged to bring political leadership and a broadened policy orientation to bear on the Windsor Bridge Replacement Project.

13.1 Background and context

This submission responds to both the 2012 EIS documentation and the 2013 Response to Submissions document.

The 2013 document states many times that the justification for the project is alignment with the project objectives, which are given in the 2012 EIS Executive summary[20] as:

The primary aim of the project is to provide a safe and reliable crossing of the Hawkesbury River at Windsor. Specific objectives for the project are:

- To improve safety for motorists, pedestrians and cyclists.
- To improve traffic and transport efficiency.
- To improve the level of 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.

The document acknowledges in many places that the preferred option will impact negatively on heritage, but was selected because:

"the preferred option for the project performs best in terms of value for money and satisfies the majority of project objectives" (p.9)

"The preferred option addresses the project objectives and provides greater value for money than other options considered. However, compared to other options considered, it does not perform as well in relation to minimising impact on heritage and character. While other options have lower heritage impacts, the costs and other potential impacts of these alternative options are considered to exceed their benefits." (p.12)

"Despite minimising impacts on heritage as part of the design process, and implementing additional management measures during construction, the project would still have significant adverse impacts on heritage, including impacts on the form of Thompson Square, demolition of the existing Windsor Bridge, and impacts on historic views and vistas." (p.21)

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20 http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-EIS-contents-exec-summary-nov2012.pdf

With these quotations the April 2013 Submissions Report makes explicit that it effectively disregards the objective to minimise impact on heritage and character of the local area.
It acknowledges that other options would have lower heritage impacts but the other options are rejected because their costs exceed their benefits.

13.2 Benefit-Cost Ratio calculation

In Section 3.3 of the EIS the outcomes of an economic analysis are offered, which quantifies the costs and benefits of the project in dollar terms and provides a benefit cost ratio (BCR) as an indicator of the proposal's economic performance.
The economic costs considered are:

- Capital expenditure ($46.36m)
- Incremental operating costs ($0.26m)

Economic benefits are given as:

- Travel time savings ($548.8 m)
- Vehicle operating cost savings ($118.95 m)
- Safety savings ($3.7m)
- External savings ($.58m)
-

The resulting benefit cost ratio is calculated to be 14.6, which is said to be a sufficiently high figure to strongly justify the project.[21]
Leaving aside any question of how realistic a half-billion dollar estimate of travel time savings might be, it is argued below that this justification is inadequate, because significant economic and non-economic costs have been left out of the equation.
Specifically, the preferred option comes out ahead of others because no value is attached to adverse heritage impacts which are clearly recognised by the project documentation:

- General impacts on the heritage values and heritage character of Windsor
- Impacts on Thompson Square

[21] http://www.rms.nsw.gov.au/documents/projects/sydney-west/windsor-bridge-replacement/windsor-bridge-EIS-chapter-3.pdf

- Impacts on the existing Windsor Bridge
- Impacts on heritage buildings and structures
- Impacts on archaeological records
- Impacts on Aboriginal heritage
- Impacts on maritime heritage.
  (Submissions Report p.20)

Measures will be taken to 'minimise' these impacts, but these merely take the form of recording and documenting heritage assets before their destruction by the project, including:

- An archival record of the project footprint and the immediate vicinity
- Documenting the construction and evolution of the existing bridge as an archival record (with the possible preservation of one of the concrete beams or cast iron piers to be considered later)
- A social record of Thompson Square and the building of the replacement bridge
- salvage excavation … to recover and record archaeological material
- Urban design and landscape treatments said to be 'sympathetic with the heritage character of the township' offered in return for the losses (p.20).

Just as there is no accounting given of the economic value of the heritage losses as items in the costs column of the project ledger, there is no evalution of the value of these replacement assets that can be added to the benefits column of the balance sheet.

Qualitative indicators of the value of heritage aspects of the site

Submissions made in response to the EIS point out in qualitative terms that the heritage aspects of the site have significant value to the community:

- The adverse heritage impacts of the project will constitute a significant and irretrievable loss of the heritage of Australia's most historic colonial town
- The location and scale of the proposed replacement bridge and southern approach road is totally inappropriate for such a significant heritage precinct
- The heritage impacts of the project seem a high price to pay …

- The historic value of Windsor to NSW and Australia will be realised in future years. Something of inestimable value will be lost if we look at this from a purely financial level today.
  (Submissions Report pp.102-3)

In response, the document offers only the reiteration of impact minimisation, and that the preferred option is 'the best option, on balance, to achieve the primary aim of the project, being to maintain a safe and reliable crossing of the Hawkesbury River at Windsor'. It is selected because it performs best in terms of 'value for money', even though it satisfies only 'the majority of project objectives' (p.104) and 'does not include costs associated with heritage impacts' (p.104).

In other words, the devaluation of heritage assets and capital as a result of the project is considered to be negligible.

The discussion below outlines some possible methodologies and directions through which the costs associated with heritage impacts could have been evaluated.

13.3 Evaluating heritage value

"Whilst heritage economics is still in its infancy, there is now a growing body of literature that uses economic research tools to explore the value of heritage." (Clark p.14)

Internationally, research methods have been developed that are capable of rigorously estimating the value people put on local heritage, museums, libraries and the arts.
The concept of *stakeholder value* is one such method for estimating the dollar value of cultural asset capital. Stakeholder value can be thought of as 'the hypothetical cost of the willingness of any stakeholder to pay for the resource's protection, preservations for future generations, or acquisition' (Lucas et al, p.99). For example, the BBC commissioned a major project to estimate the value people put on its output. People were asked how much they would be willing to pay for the BBC if, instead of paying through the licence fee, they were asked to subscribe for the same programmes. English Heritage and others have conducted a broadly similar piece of research to attribute a monetary value to aspects of the nation's heritage. It is unfortunate that Australia has no

equivalent to the UK's *Heritage Counts* annual series of publications gathering together data on the economic contribution of heritage assets and activities.[22]

This concept is an example of a *public value* approach, which attempts to reconcile quantitative economic methods of assessing public value and more qualitative arguments about the intrinsic value of unique and irreplaceable sites and resources that can't be readily converted to economic value through utilitarian calculation methods (Travers 2006, p.10).

The rather precise figure of $548.8 m in travel time savings in the EIS can also be considered to be a kind of stakeholder value. Professional research expertise and methodology based on data, modelling and assumptions was applied to develop this estimate of the value to road users of the time differential between the old and new bridges. Some portion of the $6.4m that had been spent on the project prior to June 2013 was presumably allocated to SKM to come up with this figure. Why could a similar contract not have been awarded to heritage economists or other relevant experts to provide a comparative quantitative assessment of the dollar value of the heritage differential between competing options?

Heritage value assessment methods can be rigorous and capable of sophistication in quantitative evaluation of heritage value. For example, Ready and Navrud make a distinction between *use value*, or the maximum 'willingness to pay' of consumers wishing to gain access to a resource (2002, p.9), and other forms of value. A cultural heritage asset may generate value to those who do not access it, including benefits to people because they know that the site is being preserved. These benefits might be motivated by a desire that the site be available for others to visit (*altruistic values*), that the site be preserved for future generations (*bequest values*), that the current non-visitor may decide to become a visitor in the future (*option value*), or simply that the site be preserved, even if noone ever actually visits it (*existence values*). The volume edited by Ready and Navrud goes on to present a range of techniques used in valuing public goods, and in particular as appropriate to contexts where a 'willingness to pay' evaluation cannot easily be made.

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22 https://historicengland.org.uk/research/heritage-counts/2016-heritage-and-place-branding/heritage-and-the-economy/).

Frustratingly, there is plenty of detail in both the EIS and Response to Submissions documents to elaborate on the different kinds of heritage value impacted by the project. So much evidence is presented, only to be swept aside because the proposed bridge provides 'value for money' and meets 'the majority' of objectives.

Australians certainly seem to care about protecting heritage. An online survey of 2,024 Australian adults found that 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 Summary of Heritage Impacts (SoHI) included as Addendum B of the 2013 Response to Submissions document gives a detailed and comprehensive overview of the heritage impacts (that is, unquantified costs) of the project. These include:

- Major negative impacts to the significant historical view from the northern bank from Bridgeview, impacts on the archaeological site, and change to the current layout of Thompson Square, which is identified by many in the Windsor community as an authentic representation of historical Windsor
- Negative impacts to archaeological resources surviving in and around the lower reserve and in the George and Bridge Street intersection, as well as impacts on the archaeological resource through compression and ground damage by plant and stockpiles
- Impacts to the cultural landscape through substantial modification to the setting of Thompson Square and its significant views and vistas, and visual intrusion of the replacement bridge and roads into the historic landscape, increased with the modified design of the bridge deck height

The only negligible or neutral impact of the project is to slightly open up views beneath the bridge from The Terrace, and the SoHI finds no positive impacts at all. Indeed, the primary recommendation of the Statement of Heritage Impact is "for all components of Thompson Square to be retained; this recommendation includes retaining the existing bridge" (Response to Submissions, Addendum B, p.25).

The RMS's own commissioned Statement of Heritage Impact concludes that:

The negative impact of the project on the built environment of Thompson Square, the aesthetic values of the surrounding cultural landscape, including the Thompson Square Conservation Area, and the removal of a significant archaeological resource will change a familiar and valued space irreversibly. ... the impacts associated with the fundamental elements of the project cannot be mitigated to retain the strong sense of the past that is currently evident there. Furthermore, the opportunity to remove through traffic entirely and enhance the significance of Thompson Square and the existing bridge by creating a more usable and pedestrian-friendly community space will be lost permanently. (Response to Submissions, Addendum B, p.24)

Why was the cost of this permanent loss not given at least the semblance of an attempt at incorporation into the Benefit Cost Ratio calculations of the EIS?
If the value of these losses were added to the balance sheet for the project, how would it stack up against the price given to the time savings for vehicles crossing the bridge?
The next section of this submission offers another perspective on the Benefit Cost equation of the project, in the form of the project's potential to impact on cultural and heritage tourism for the region.

13.4 Cultural and heritage tourism

"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

In 2016, NSW received 62% of international cultural and heritage travellers in Australia, 31% of domestic overnight visitors and 34% of domestic day trip visitors. Cultural and heritage visitors accounted for 67% of all international visitors to NSW in 2016, 15% of all domestic overnight visitors and 9% of all daytrip visitors to the State. Compared with 2012, cultural and heritage visitors accounted for 59% of all international visitors to NSW

while their shares of domestic overnight and day trip visitors were steady (15% and 8%, respectively) (Destination NSW 2017 p.1).

Tourism is expected to continue as a growth sector of the national economy. Austrade projections indicate that in 2026-27 overnight spend is expected to increase by 50% over 2016-17 levels, representing annual growth of 4.1%; international visitors increasing 75% over current levels; domestic spend up 21% (Austrade 2017, p.1).

Heritage tourism is "the one activity forecast for growth in an otherwise stagnant domestic tourism market", and it is thereby able to put "an economic value on heritage assets, thereby contributing to their preservation for future generations" (Leaver p.2). Heritage tourism is particularly important to regional social and economic development because it is:

- 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. (Leaver 'Delivering the Social and Economic Benefits of Heritage Tourism')

Yet the Windsor Bridge Replacement Project aggressively erodes the cultural tourism potential of Windsor, as well as diminishing one of the key factors in its desirability as a place to live and work.

Paradoxically, on 15 January 2017 the Hawkesbury Gazette reported on the launch a few days earlier of the Hawkesbury Destination Management Plan (Hawkesbury Gazette, 15 January 2017). The Destination Management Planning (DMP) system for NSW is a Key Year One Deliverable under the Industry Action Plan for the Visitor Economy (NSW Government 2012). Heritage is featured frequently as an aspect of the visitor economy throughout the Industry Action Plan documentation. The DMP approach has the vistor at its core, and aims to ensure that "the visitor perspective is central to the development of visitor experiences, products and services". It is built on the premise that "each

destination will be able to determine the best allocation of resources to grow the visitor economy. … Leadership for the planning process will come from the destination itself and be determined by local knowledge and enterprise." (NSW Government Visitor Economy IAP 2012, p.8-10)

The Gazette's report on the Hawkesbury Destination Management Plan cites the region's 'beautiful waterways, historically important sites and tourist attractions' as key assets to be leveraged to 'help boost local economies, generate jobs and drive investment in the Hawkesbury region for years to come'. Giovanna Lever, the chief executive of Sparrowly Group, which will oversee the implementation of the DMP, is quoted as saying that 'there is so much opportunity in the Hawkesbury region to showcase to domestic and international visitors'.

Intriguingly, this story was deleted from the Hawkesbury Gazette website within a few days, although it can still be read at the Internet Archive.[23]

The importance of the visitor economy to the Hawkesbury region is indicated by Tourism Australia data, which show that the LGA welcomed 961,000 visitors in 2016. Of these, 764,000 were domestic day visitors, 190,000 were domestic overnight visitors, and 8,000 were overseas visitors. International visitors spend on average around three nights for each one spent by domestic overnight visitors, so 23% of the 663,000 nights spent in the Hawkesbury were spent by international visitors. These visitors injected $115m into the local economy (Tourism Research Australia: Tourism Profiles for Local Government Areas in Regional Australia)[24].

The Windsor Bridge EIS proposes that the impact of the project on tourism will be 'minimal':

"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

[23] https://web.archive.org/web/20180115070119/http://www.hawkesburygazette.com.au/story/5168398/plan-to-boost-tourism-in-the-hawkesbury-launched-by-government/

[24] https://www.tra.gov.au/research/regional-tourism/local-government-area-profiles/local-government-area-profiles

project. The assessment therefore concludes that overall impacts on tourism during operation are expected to be minimal." (EIS, p.383)

The logic here is flawed. If over one third of visitors come to see family, then *nearly two thirds* of visitors are coming for other reasons. Indeed, the 2016 Tourism Research Australia data gives the number of visitors to the Hawkesbury who come for a holiday as 494,000. It is certainly possible that the transformation to the Thompson Square/Windsor Bridge site will negatively impact on the desirability of the region as a destination.

Windsor's historic precinct is a vibrant lifestyle centre that attracts patrons who spend money in its cafes and restaurants throughout the week, and at the Sunday Craft Markets in Windsor Mall. Heritage is also believed to be an important factor in what makes the Hawkesbury attractive to residents or businesses, but research is lacking to quantify this. Research conducted in Ballarat, for example, found that nearly a third of residents said that heritage was the main or most important reason for living there, and only 12% said that heritage was of no interest to them (Clark p.12).

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.

Within the broader region, Thompson Square and the Windsor Bridge provide a key focal point, because of the historical significance of the site, but also because they sit at a geographical point that is inevitably passed through by visitors to Windsor. The importance of the site and its interest to visitors has been significantly enhanced in recent weeks with the uncovering of the brick barrel drains, which has received unprecedented levels of interest in social media.

Policy and political leadership

A 'sense of place' is central to community identity building and belonging or attachment to a locality. It is developed through an understanding and appreciation of the distinctiveness of the locality. Local distinctiveness is often recognisable, yet difficult to describe. ... Heritage and

character are key determinants of the distinctiveness and sense of place." (Arts Queensland and Queensland Department of Housing 2005, p.40)

This submission has so far focussed on the flaws in the economic arguments used to justify the Windsor Bridge project, because of the extremely narrow financial logic of the EIS and the Submissions Response and Preferred Infrastructure Report. This final section makes a broader call for Portfolio Committee No. 5, through this Upper House Inquiry, to deliver on the potential for new political leadership and a broader policy orientation to be brought to bear on this project.

Recently, in the case of Millers Point Community Assoc. Incorporated v Property NSW [2017], Justice Molesworth said: "the Sydney Harbour Bridge, listed on the State Heritage Register, is of such iconic heritage value to the State, that whatever the financial hardship occasioned in maintaining it, those costs could never be contemplated to cause "undue" financial hardship to the owner. "The financial impost associated with such iconic heritage items might be enormous, never cease, and cause the owner to suffer financial hardship, but however onerous, any financial hardship would, arguably, never be considered to be "undue" (p.139).

Undoubtedly the Sydney Harbour Bridge and Windsor Bridge are quite different, but both have high levels of *cultural significance* within their broad constituent communities. The Australian Burra Charter, an ICOMOS document which sets the philosophical basis for heritage conservation, emphasises the diversity of stakeholders in heritage. It asks what is significant and to whom, in order to ensure that the heritage process is inclusive and comprehensive:

Cultural significance is the sum of the qualities or values that a place has, including the five values — aesthetic, historic, scientific, social and spiritual—that are listed in Article 1.2 of the Burra Charter. Through the processes of investigating the place and assessing each of these values, we can clearly describe why a place is important. (Australia ICOMOS 2013, p.1)

The five values categories listed are often expanded to include architectural and archaeological value, which is relevant to comprehensively assessing the cultural significance of Thompson Square and the Windsor Bridge.

More broadly, the eminent Australian cultural economist David Throsby has demonstrated how heritage assets and resources – in both tangible and intangible forms – needs to be regarded as a kind of *cultural capital*. In particular, investment in heritage produces 'return on investment' that has economic and non-economic dimensions, and conversely, depleting those assets has both economic and non-economic costs:

[it] is something that we have inherited; it provides a cultural system that supports human cultural endeavour and an important element of cultural diversity. Protecting and investing in cultural capital can produce social, economic or environmental returns, whist eroding or 'spending' it diminishes the ability of future generations to do so." (Clark p.9)

Even if it is difficult to put a dollar value on heritage assets, they can still have real economic benefits to their communities. Clark quotes US research indicating that, dollar for dollar, investment in heritage preservation and heritage-led regeneration is one of the most cost effective forms of local economic development (p.10). Evidence from the UK supports similar conclusions, and in the Australian context, Clark argues that "those Australian rural communities that have actively embraced their heritage such as Broken Hill in NSW with a very positive program of heritage protection and celebration, seem on the surface at least to demonstrate a greater confidence and sense of hope than those which do not."

(p.11)
In his address to the 2015 National trust Heritage Awards, the NSW Minister for Heritage Mark Speakman said, "our heritage reminds us daily of where we come from and contributes to our social identity and our sense of place. It provides a road map for our future. … Heritage is a right to your identity, and a connection to culture touches our happiness and our well-being."

It is this sense that heritage is a right, that is fundamental to social identity and sense of place, and that cannot simply be reduced to dollars and cents, which is missing from the project.

14. PROJECT OBJECTIVES

Community Update August 2011 Page 4

"The project is to provide a safe and reliable crossing of the Hawkesbury River at Windsor. The following objectives were considered in the process to select a preferred option:"

* The current bridge is safe in terms of fatal accidents. Since 1980 there has only been one fatality on the bridge and one suicide. Pearson Wedgwood
* The current bridge has been reliable for 144 years and according to Peter Stewart Consulting it is so for many years to come.

OBJECTIVES	CRITERIA	EVALUATION
1. To improve safety for motorists, pedestrians and cyclists	Meets various design codes (eg traffic lane widths, shoulder widths and shared path widths).	There are no shoulders. The lanes are wider but so what. Trucks already pass on the bridge.
	Meets a current road speed of 60 km/h.	The speed limit will be 50km/h so it was announced
	Pedestrian safety.	So would a bypass. There has been 1 pedestrian accident at the George Street intersection.
2. To improve traffic and transport efficiency	Minimises queue length/delays.	But not by very much and not for very long, on Bridge Street but not on other streets
	Improves performance of road network (level of service).	Disagree. Current statements lack credibility
	Enables two heavy vehicles to pass on the bridge without waiting.	Heavy vehicles already pass on the bridge
	Improves the load capacity of the crossing to meet current load standards.	The current bridge already is approved for 68t
3. To improve the level of flood immunity	Provide access in a 1-in-5 year flood event.	Total failure. The current claim is less than 1 in 3 whatever that is.

4. To meet community needs for the long term	Provide an efficient connection for local and regional traffic.	Disagree. Funnelling more traffic, especially heavy vehicles through a bottle neck in a heritage precinct will not improve connection. It will not be long before the intersections are chocked.
	Provide pedestrian and cyclist connections to surrounding locations	Agree, So would a bypass with modifications to the current bridge
	Minimise impact on recreational space.	Some of the recreational space will have a slope of 1 in 4
	Minimise impact on noise.	Total failure.Noise will be greater
	Minimise impacts to businesses and shopping environment.	Windsor needs major positive impacts on business. This project will not achieve that.
	100 year life span for the bridge structure.	Agreed. So will a bypass and the current bridge. Just the reverse.
5. To minimise the impact on the heritage and character of the local area	Minimise impact on Aboriginal and non-Aboriginal heritage and conservation areas.	The project would have major negative impacts on heritage. It will destroy the bridge and the notion of Thompson Square.
	Minimise visual impact of the bridge and road approaches on the character of the area.	The project would have major negative visual impact as would the road approaches and the character
6. To be cost effective and an affordable outcome	The option provides a cost effective solution in terms of: • Capital cost. • Maintenance cost. • Return on investment.	This was written when Stage 1 was $31m and stage 2 $14m. when more funds became available. It is unclear what the project would cost but must be approaching $100m
	Minimise construction impact	A bypass would greatly minimise construction impact.

Recommendations

- RECOMMENDATION 1, is the immediate cessation of Option One and commencement of the renovation of Windsor's historic 1874 bridge using the combination of the Wedgwood-Pearson and RMS methodologies as out lined in the Submissions Report following the WBRP EIS.

- RECOMMENDATION 2, is the immediate re-phasing of the Macquarie Street Lights to enhance traffic flows; intersection improvements at Freemans Reach and Wilberforce Road and improvements of the approaches to the historic Windsor Bridge.

- RECOMMENDATION 3, project funding be reallocated to immediately commencing genuine investigations as to the route of a Windsor Town Bypass with a view to enhancing travel experiences for drivers of heavy vehicles whilst protecting and enriching the heritage experience of the town for tourists thus....

- RECOMMENDATION 4, construction of the Windsor Town Bypass commence within the next 12-18 months.

- RECOMMENDATION 5, NSW Planning laws amended to protect State Significant Heritage

- RECOMMENDATION 6, reinstatement of the NSW Heritage Council as the peak body for all approvals impacting NSW Heritage

- RECOMMENDATION 7, an investigation carried out into the RMS practices when dealing with the community and major projects.

Conclusion

What was the rationale

The burning question is who and why instigated the plan to replace Windsor Bridge. It is intriguing to contemplate the reasons for that to occur when it is clear the project would have serious negative impacts on the heritage and archaeology of Thompson Square and with little or no improvements in traffic flow and little improvement in flood immunity. Obviously heritage was not an aspect of any concern.

The first strategy in an endeavour to find an answer was to follow the money trail.

Many people posting on social media, and judging by those who visit the CAWB Occupation in Thompson Square, are fully convinced it is all about sand. This is reinforced by the Windsor Bridge replacement project team when it makes clear one constant aim of the project is to remove the current bridge at all costs. It listed one of the advantages of its project was to allow larger vessels upstream with the resultant economic benefits.

One wonders, should larger vessels go upstream passing Macquarie & Howe Parks that form the major swimming area in the river. So what economic benefit would there be upstream.

Many people, as stated above, say, sand.

Upstream there are two sources of sand. One source is in the river and the other is the $10 billion worth of sand and metal on the Richmond lowlands and another deposit on the Freemans Reach lowlands. Bruce Baird in Parliament in 2004 criticised the Government for not preparing for the closure of the Penrith quarry and listed the Richmond Lowlands as a major alternate source of sand and gravel.

The theory goes there are three sand treatment plants downstream of Windsor Bridge. The one closest to the bridge is the old Davidson's sand plant which although not used for many years, the various owners have kept paying the licence fees. Barges would be

used to transport the sand and metal to this treatment plant(s). The size of the barges precludes them from fitting between the pylons of the current bridge.

However, there is another source of sand and that is at Tinder Creek, Putty Road, and sources in the vicinity of the St Shenouda Monastery also on Putty Road. There have been visitors to the Occupation who claim to know and quote chapter and verse that is the core reason for the project. This sand is of excellent quality especially in the production of concrete. If all quarries were in full operation there would be up to 5 000 truck movements per day through Thompson Square.

If the rationale was to provide the cheapest solution to cater for the increasing truck movements through Thompson Square, no matter how nasty it is, then the project would be it.

There is another possible rationale. This one actually has two arms to it.

The first is there were forces within the RTA sometime around 1994 that came to the conclusion Windsor Bridge needed to be replaced. This theory is supported by three main decisions. The first was to only carry out superficial and safety work on the bridge. The second, but related decision, was not to carry out the maintenance as recommended by various engineering assessments.

However the third decision required a higher level of authority. It is argued the RTA approached the Government early in 2008 to put forward the Windsor Bridge replacement plan. To do so, required time to prepare a case as to why the bridge needed to be replaced and the projected costings. The Government announced the replacement of Windsor Bridge in June 2008. The projected cost was $25m.

RTA officers visited Ray Williams, Member for Hawkesbury in October 2008 presenting the case for the replacement of Windsor Bridge.

The second arm was around Bart Bassett and the Hawkesbury City Council of 2004 -16. These two are treated as one.

In the early 2000s Bart Bassett was the chair of the North West Infrastructure Taskforce and on the Windsor Road Taskforce. He was on the Council Committee in conjunction with the Government Architects Office that was tasked to prepare a Windsor Masterplan. A draft report was released in 2004 but was not approved due to the financial impost required to carry out the recommendations. In that report was a plan for a new bridge through Thompson Square.

In 2004 Bart Bassett and Bob Porter were elected as councillors of the Hawkesbury City Council. They joined other like minded councillors in Henry (Ted) Books & Trevor Devine.

Crs Porter, Books & Devine. became members of the Flood Plain Management Advisory Committee. In 2007 that Committee recommended, “Council investigate funding for replacement of Windsor Bridge under the Natural Disaster Mitigation Program which provides up to 50/50 funding from the Commonwealth Government.”

Earlier that year there was a Council motion, “The Roads and Traffic Authority be requested to provide an urgent structural and safety report on Windsor Bridge”.

This started a regular campaign of the Council urging for the current bridge to be replaced.

In 2010 Bart Bassett led a delegation of perhaps 3 others to the Roads Minister pushing for the Windsor Bridge to be replaced. It is speculated the others were Mr Porter, Books & Devine.

During that time Cr Bassett became Mayor and in 2011 he was elected as the Member for Londonderry. He continued his campaign for Option 1 both in Council and in Parliament.

Whether Bart Bassett and the Council, and the RTA/RMS worked together to get Option 1 approved can only be pure speculation. However, it is interesting to note both organisations started to use the same terminology about the project at the same time. One example was the use of the phrase, ‘built for horse drawn vehicles and pedestrians’.

The motives of these groups can again only be speculation however, a motive for Bart Bassett could have been for him to have a project to assist him in being elected to State Parliament.

However, whatever the rationale behind the project, it is clear there is steely determination to ram the project through regardless of the cost to heritage, regardless of the minimal benefits, regardless of the poor planning, regardless of the removal of a valuable asset, regardless of the public outcry and regardless of any backlash if the replacement bridge does not achieve acceptable benefits in traffic flow. It is a courageous decision.

Annexure and Appendices

Annexure 1

- In the 2004 Draft Windsor Masterplan there was a proposal for another bridge through Thompson Square.
- There was a Committee established that worked with the Government Architects Office to devise this plan during 2003/4. However the Master Plan was not approved.
- On the Committee was Bart Bassett, later to become a councillor in 2004, later Mayor and later Member for Londonderry.
- Also on Council at that period of time was Bob Porter.
- Those two passionately led the campaign for a replacement bridge through Thompson Square.
- Bart Bassett continued that campaign when he became Member for Londonderry.
- It is believed there is another submission that explores the involvement of Council in general and Bart Bassett in particular.

Annexure 2

On 10 August the following email was sent to Graham Standen Senior Project Officer WBRP.

Dear Graham,

Apologies for my persevering with my questions about the river levels in a flood event but I am having some considerable difficulty in achieving clarity in my understandings about this matter. I would appreciate your assistance in unmuddying the waters.

In a previous email response you stated, "*Please note that the northern approach roads to the bridge will be closed before flood water reaches this level."* As I understand it, the road level of the bridge at the northern end will be 9.8m. As previously stated, the depth of the bridge to the piers is 1.85m. As previously stated, the bridge will be closed when the water level reaches 500mm below the bottom of the deck. By my simple calculations that means when the river rises to a height of 7.45m the bridge will be closed.

Are my understandings/calculations correct? If not, could you please clarify. If my understandings/calculations are correct, from where was the information obtained that the approach roads would be closed before the river height of 7.45m was achieved?

I look forward to receiving a response to this email and my previous email of 28 July.

Kind regards,

On 21 August there was an email requesting a reply with an added question: In the deep recesses of my memory I seem to remember vehicles in excess of 8 metres in length will be prohibited in turning left into George Street east after crossing the proposed bridge. Can you please confirm or otherwise.

As no response was received by 30 August an email was sent to the Hawkesbury Electorate Office asking if it could obtain the requested answers.

A letter was received from the Member for Hawkesbury providing replies to other emails that had been received from the WBrpt but not the email(s) in question.

On 26 September an email was sent to the Hawkesbury Electorate Office indicating the written reply did not address the emails in question but actually other emails that had already received replies and asking for answers to the questions in the appropriate emails. So far no response has been received.

Question: Does this imply that what was in the original email was correct and the WBRP did not wish to admit the reality?

"When we raise this bridge by 7metres it will avoid all but the very, very worst floods, 5 we've seen this century because it will be at the height of 13 or 14 metres. There has only been 5 floods in the last century that have topped 13 or 14 metres.

“This will provide access, safe flood free access for everybody between Windsor and the Wilberforce side of the road in all but the only very worst floods.

“That's factual, that's the story and I'm proud of the government that's committed to that piece of infrastructure and delivering it.” Ray Williams, Member for Hawkesbury (at that time) Community Cabinet Meeting at Penrith 2013

The RMS cannot be held responsible for the above comment. However, it is an indications of the information provided to the community which may influence at least some residents’ opinion of the project, especially given there has not been a flood since 1992 that could show the reality of flooding in the Hawkesbury.

Annexure 3

At the request of CAWB, I have completed the level survey of the two (2) local roads and the only RMS controlled road approaching the Windsor Bridge from the north. The surveys were undertaken on the 19th November 2017 for the Gorricks Lane / Freemans reach Road approach and on the 9th January 2018 for the Wilberforce Road approach and the Hibberts Lane alternative to Gorricks Lane.

The surveys were performed using a Real Time Kinematic (RTK) GNSS vehicle mounted survey grade receiver connecting to the NSW Government CORSNET Mulgrave GNSS Base Station which has Reduced Level of RL 21.343m AHD. The vehicle mounted receiver permitted road surface levels to be determined whilst driving at low speed at a preset record distance of 30 metres rather than having to apply for Road Occupancy Licenses through the RMS so that conventional surveys could be carried out.

With that, the surveys were undertaken in order to determine the lowest level (in terms of AHD level) for each of the roads noted above. The results of the surveys are listed below.

1. Wilberforce Road - Lowest surveyed level RL 8.2m AHD - approximately on the deck of the bridge over Buttsworth Creek.
2. Gorricks Lane / Freemans Reach Road - RL 6.5m AHD - approximately 950m north along Gorricks Lane from the intersection with Freemans Reach Road
3. Hibberts Lane - RL 10.0m AHD - approximately 250m north along Hibberts Lane from the intersection with Freemans Reach Road.

The stated levels are within +/-0.1m AHD as the vehicle mounting a RTK GNSS Receiver is subject to inherent vertical accuracy issues relating to vehicle movement and satellite observation interference caused by road side obstructions.
Trusting that the above assists and should you require any additional information, please feel free to call me.

Best regards

Greg Monaghan

Registered Surveyor
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Monaghan Surveyors Pty Ltd

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APPENDIX 1

HAWKESBURY
GAZETTE

Wednesday, March 19, 2008 | *A good friend in the Hawkesbury since 1888* | $1.50

PAGE 7
World cup polo coming to Richmond

WIN – Page 6
Ride shotgun with the Toyota Hilux Heroes

FREE
Hawkesbury Life autumn issue inside

Seeing green on St Pat's Day – Page 5

Call for new bridge

Wide load warning: Councillor Bob Porter on Windsor Bridge, which was built in 1874. A demonstration last week (inset) showed just how tight a squeeze the bridge can be when a bus and a B-double truck share the road.

Photos: Kylie Pitt, Video Innovations

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."

Appendix 2

The Hon Duncan Gay MLC
Minister for Roads, Maritime and Freight
Leader of Government in the Legislative Council

00121195

The Hon Dominic Perrottet MP
Minister for Finance, Services and Property
Member for Hawkesbury
PO Box 505
RICHMOND NSW 2753

Dear Minister

Thank you for your correspondence on behalf of [redacted] about the Windsor Bridge upgrade.

I appreciate receiving [redacted] feedback and thank her for taking the time to write.

I note [redacted] raises several issues in her correspondence. As such, Roads and Maritime Services has provided detailed answers to her questions and I have enclosed these in an attachment with this letter.

For more information about this project, [redacted] may wish to visit the Roads and Maritime website at (www.rms.nsw.gov.au – search 'Windsor Bridge'). Alternatively, Mr Gurjit Singh, Project Manager at Roads and Maritime, would be pleased to take her call on (02) 8849 2688. I hope this has been of assistance.

Yours sincerely

Duncan Gay MLC 12-9-16

Encl

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Appendix 3

NSW GOVERNMENT | Transport for NSW

00121195

Overview

Parts of the existing Windsor Bridge are over 140 years old and are deteriorating due to age and heavy use. The bridge would need extensive and costly repairs to be used and maintained into the future. The existing bridge also does not meet current engineering and road safety standards, such as minimum lane widths. The roads and intersections have safety issues, including a lack of safe pedestrian crossing locations and poor vehicle sight distances.

The approaches to the bridge are being upgraded to provide additional capacity and efficiency to the network in this area. The roundabout at the intersection of Bridge and George streets will be upgraded to traffic lights and synchronised with the Macquarie and Bridge streets intersection. The give-way signs at the intersection of Freemans Reach and Wilberforce roads are being upgraded to a dual lane roundabout.

Cost of the upgrade

The cost of the project is being reviewed and will be made public once a construction contractor is engaged.

What the upgrade will achieve

- Upgrading an essential local and regional road link across the Hawkesbury River at Windsor.
- Improved safety for motorists, pedestrians and cyclists with a new, reliable bridge that meets current engineering and road safety standards.
- Improved traffic flow from a bridge that allows for three lanes of heavy vehicle traffic.
- Improved traffic efficiency by placing traffic lights at the intersection of Bridge and George streets, and a new dual-lane roundabout at Freemans Reach and Wilberforce roads.
- A new bridge able to withstand higher levels of flooding, and with the same flood protection as surrounding approach roads on the northern riverbank.
- Better access for pedestrians and cyclists from a three-metre wide shared pedestrian and cycle path, which provides safe, efficient connections to Thompson Square and surrounds.
- Reduced road footprint within the Thompson Square heritage precinct.
- A unified open space in Thompson Square, increasing the usable area by more than 500 square metres, with direct access to the river.

Improvements to traffic

- The current approaches will be upgraded and provide a better level of service.
- Active sustainable transport links will be provided to encourage people to change from vehicles to cycling and walking.
- Freight traffic will be able to use the bridge without restriction.

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Increased traffic from the developments
Roads and Maritime Services arranged for traffic modelling for expected 2011, 2021 and 2031 traffic conditions for the project. Traffic modelling takes into account an expected rate of population growth over time, and includes the impacts of confirmed development activity.

Cost of the second upgrade
A bypass to Wilberforce via Pitt Town was considered under option eight of the Windsor Bridge Options Report. The cost was estimated to be $130 million dollars, using 2011 figures. The $130 million figure is the capital cost to complete the construction of the project.

The preferred option one has a capital cost of $45 million, based on 2011 figures and the bypass is about three times more expensive. In addition, the preferred option has a BCR of 9.5, which is over nine times higher than the bypass option. This could not be justified with such a low Benefit Cost Ratio (BCR).

Building a bypass
Roads and Maritime examined this option in the Windsor Bridge Options Report. Option one, the preferred option, was the best match to project objectives.

Even if a bypass was built, the existing bridge still needs to be replaced, as parts are over 140 years old and deteriorating due to age and heavy use. The bridge would need extensive and costly repairs to be used and maintained into the future.

Alternative options using South Creek
It is not economically viable to explore this option, and is also outside the scope of the project, which is to address the short comings of the existing bridge to provide a safe and reliable crossing of the Hawkesbury River at Windsor.

Maintenance costs old bridge versus new bridge
The maintenance costs for the existing bridge are high. Currently, $50,000 is spent each year on Level 3 bridge inspections and access. Since 2012, $100,000 has been spent on bridge maintenance. The new bridge will cost only $20,000 per year for inspections and minor maintenance.

There is a high risk that by 2020, heavier vehicles would be prohibited from using the existing bridge and shortly after, it will have to be closed. To prevent this from happening, extensive and costly refurbishments (approximately $20 million) would have to be completed. This would also require it to be closed during construction, which would have a very negative social and economic impact. This 'do nothing' option was ruled out in 2011 and consequently, replacing the bridge was considered to be the best option.

Heritage listing
No heritage listings are being amended as part of this project, and no buildings will be demolished.

As part of standard construction procedures, Roads and Maritime will carry out dilapidation reports of buildings near the construction area, to assess any impacts from construction activity.

Sand mining
Providing access past the bridge for sand mining activity is not an objective of this project, and has not been factored into decisions on this project.

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