

Windsor Bridge Replacement Project Historic Heritage Assessment & Statement of Heritage Impact

Report for Roads and Maritime Services NSW
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ABBREVIATIONS

AHC	Australian Heritage Council
CHL	Commonwealth Heritage List
CMP	Conservation Management Plan
DGRs	Director General's environmental assessment requirements
DUAP	Department of Urban Affairs and Planning (former); now Department of Planning and Infrastructure
EIS	Environmental Impact Statement
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act</i>
GPO	Government Printing Office
ICOMOS	International Council on Monuments and Sites
km	Kilometre
LEP	Local Environmental Plan – for the purposes of this report, also refers to the <i>Hawkesbury LEP 2012</i>
LGA	Local Government Area

MGA	Map Grid of Australia – unless otherwise specified all coordinates are in MGA
m	Metre
mm	Millimetre
NLA	National Library of Australia
NHL	National Heritage List
NT	National Trust of Australia (NSW)
OEH	NSW Office of Environment and Heritage, Department of Premier and Cabinet
PCO	Permanent Conservation Order (former)
REP	Regional Environment Plan
RMS	Roads and Maritime Services NSW
RNE	Register of the National Estate
RTA	Roads and Traffic Authority (former) – now Roads and Maritime Services
Section 170	Section 170 of the <i>Heritage Act 1977</i> ; a Heritage and Conservation Register kept by a State Government instrumentality
SEPP	State Environmental Planning Policy
SEWPaC	Sustainability, Environment, Water, Populations and Communities (Department of)
SHI	State Heritage Inventory
SHR	State Heritage Register
SL NSW	State Library of NSW
SL VIC	State Library of Victoria
SoHI	Statement of Heritage Impact
SPF	Small Pictures File, Mitchell Library (State Library of NSW)
SSS	Side Scan Sonar

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EXECUTIVE SUMMARY

Roads and Maritime Services NSW (RMS) are seeking approval to replace the existing crossing of the Hawkesbury River at Windsor. A replacement bridge would be constructed 35 metres downstream of the existing Hawkesbury River Bridge (Windsor Bridge), which would be demolished as part of the current proposal.

Following the NSW Government's announcement for a replacement bridge in June 2008, RMS commissioned an investigation into nine options for the replacement crossing. An assessment of heritage constraints was prepared as part of the Preliminary Environmental Investigation of the nine options (Austral Archaeology: draft 2009) and in August 2011 the Minister for Roads and Ports announced the selection of Option 1 for a high-level crossing 35 m downstream of the existing Windsor Bridge.

The proposed bridge has been declared a State significant infrastructure project (number SSI-4951) and Director General's Requirements have been issued to guide the environmental assessment of the proposal by the Department of Planning. The following report has been prepared in accordance with the Director General's Requirements as they relate to the assessment of impacts to historic period heritage.

Windsor, originally Green Hills (and Mulgrave Place) is one of the oldest towns in Australia. Established in 1794, it is the third settlement of the colony after Sydney and Parramatta and is also one of the five Macquarie towns in the Hawkesbury. Thompson Square, named by Governor Macquarie in 1810 when he extended the boundaries of Green Hills to create Windsor, is the location of the centre of the earliest successful settlement in the Hawkesbury region. Thompson Square is located on the sloping southern bank of the Hawkesbury River and overlies an area that was used intensively by the inhabitants of Green Hills prior to and after its inclusion into the new town of Windsor. This area was used to access the river and river traffic, store produce from the surrounding farms as well as deliveries from Sydney and was located within the government domain. The space had a number of buildings including stores, Andrew Thompson's house and garden and the government cottage as well as a bell post, Fences and pathways and possibly a bridge were also located in the Green Hills public area. Wharves were built along the banks of the river.

When Governor Macquarie declared the town of Windsor and incorporated the settlement of Green Hills into the town plan, he also declared part of the open space "Thompson Square" and ordered the clearing of the structures, amongst other improvements. The place grew rapidly and became known for the quality of the farmland and a gateway to the west. Macquarie's Thompson Square was a fraction of the size of the earlier civic space and it became more organised with the construction of a brick drain through the centre of the square, a new wharf and continual modifications to the topography down to the river.

On the north side of the river, land was granted in 1794 to Edward Whitton who farmed the land and built his home on it. The Squatters Arms Hotel (c 1830 to 1914) occupied a prominent position on the corner of Freemans Reach Road and Wilberforce Road, and there is evidence of other buildings within the vicinity of the project area. Nevertheless, the north side of the Hawkesbury River, within the project area was not extensively developed but retains the rural uses that have characterised it since early colonial settlement. The residential property "Bridgeview", built in 1915 is a locally listed item within the landscape of the northern bank.

Windsor, including Thompson Square, has transformed and grown through many periods of development. The topography of the square has been modified several times to made access to the river, and later the bridge, easier. The buildings surrounding Thompson Square represent most of the phases of the town, starting from 1815 with the completion of the Macquarie Arms Hotel and ending with the cottage built in 1955 over Thompson's allotment. Other buildings around Thompson Square have been constructed and demolished to make way for more recent developments such as the Doctors House and a section of the former Hawkesbury Stores and

the former Hawkesbury Garage. The existing road to the bridge was built in 1934 and while it created a deeper division across the square than previously existed, it is part of the place's history.

The significance of Thompson Square was recognised early in the period when heritage conservation was gaining prominence in NSW. Thompson Square and the Macquarie Arms Hotel were protected by Permanent Conservation Orders in response to the threat of inappropriate development and listed on the newly formed State Heritage Register in the early 1990s.

Historical research and archaeological test excavation conducted for this report has confirmed that the project area in Windsor has a rich history and complex archaeological profile.

This report re-assesses the significance of Thompson Square by reviewing its historical development and current attitudes about the place. The re-assessment questions a number of assumptions made about Thompson Square but confirms its significance at a State level.

The Windsor Bridge has also been investigated and re-assessed in this report. In form the bridge is an unassuming structure but it has a history of technical achievement and a high social profile. It is also part of the familiar cultural landscape in the immediate area. Questions regarding archaeological resources beneath the bridge have also arisen during heritage investigations undertaken for this project.

The proposal would result in impacts to the significance of the project area by removing the existing bridge and replacing the crossing with a new bridge 35 metres downstream. Impact would be physical and affect the bridge, a significant archaeological resource in Windsor with the potential to impact archaeological resources on the northern bank of the river. Other impacts would be significant impacts to the aesthetic values of the surrounding cultural landscape. Overall Thompson Square would retain a level of State significance but the familiar form of the square, developed over the last 200 years would be changed.

The project would provide the opportunity to consolidate of the two parks within Thompson Square and create a more user-friendly public space. It would also provide the opportunity for high quality historical interpretative programs through archival research and archaeological excavation.

This report concludes with the assessment that impacts to significant heritage cannot be avoided. Mitigation measures predominantly focus on collecting data prior to impacts, interpretation of data and avoiding inadvertent impacts. The report concludes with recommendations and a number of mitigation measures, reproduced below:

RECOMMENDATIONS

11.7.2 Conservation

Thompson Square is significant to at least a State level for its historical, associative, research and social values. It has an exceptional level of rarity. Some of the archaeological resource within Thompson Square and extending further south and north is also likely to be of at least State heritage significance, as are archaeological remains of the wharves within the body of the river. Windsor Bridge is a State significant structure that is rare and has historical and technical significance. Each item has, through the historical association with the other, become part of the same landscape. Both the square and bridge contribute to State significant views of Windsor as a historic township.

From a heritage conservation perspective the most appropriate treatment of Thompson Square and Windsor Bridge is to avoid any further negative impact and to take the opportunity identified by the Heritage Council to remove through traffic. The recommendations below have been made in response to the cultural significance of the project area.

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

1. *All components of Thompson Square are formally recognised as being of State significance; preservation is the primary recommendation to retain significance. The project will impact on the State significance heritage values of Thompson Square and the most appropriate management measure for a significant cultural landscape such as this is to avoid the impacts proposed by the project.*
2. *The Windsor Bridge is also of State significance and retention and stabilisation of the bridge is the preferred action to ensure that its significance is retained.*
3. *If the project proceeds, mitigation strategies that reduce the impact are to be implemented. Refer to the mitigation measures below.*

MITIGATION MEASURES

11.8.1 The cultural landscape

Impacts to the cultural landscape would be generated by the project. These impacts would effect the setting and view and vistas as well as archaeological fabric (which is addressed in a separate section below). The measures below have been formulated to reduce the overall impacts to the cultural landscape.

1. *Ensure that the replacement bridge is designed to minimise visual impact to the landscape.*
2. *Ensure that the landscape scheme for the Thompson Square parkland area retains its informal character. Refer also to section 11.8.5.*
3. *Investigate the possibility of further reducing the size of the roundabout at Freemans Reach Road and Wilberforce Road.*
4. *Investigate opportunities to relocate above-ground utilities underground so that they do not pose a visual impediment to the resulting cultural landscape.*
5. *Include the existing cultural landscape in all archival recording activities undertaken for the project.*

11.8.2 Prior to and during construction

Safeguards will be required in the area of construction to avoid inadvertent impacts to heritage items and significant trees (refer to the landscape assessment report) within or adjacent to the project area.

6. *Prior to construction:*
 - a. *prepare dilapidation reports for heritage items in the immediate vicinity of the project area and ensure that appropriate safeguards against vibration and accidental impacts are in place. Items identified for dilapidation assessment are:*
 - *"Bridgeview", 27 Freemans Reach Road*
 - *4 Bridge Street, the brick retaining wall in the backyard*
 - *6 (8) Bridge Street*
 - *"House and Outbuildings", 10 Bridge Street*
 - *62 George Street, single-storey building of the former Hawkesbury Stores*
 - *"The Macquarie Arms Hotel", 81 George Street and surrounding brick wall*
 - *"The Doctors House" 1 – 3 Thompson Square*
 - *Other heritage items if the requirement is identified during construction*
 - b. *Ensure that all personnel working on site undergo a heritage induction to clearly identify the value of the place and how to avoid inadvertent impacts.*

7. *Identify heritage items in the project area to ensure that inadvertent impacts do not occur.*
8. *Monitor heritage items during construction for construction-related impacts as described in the Noise and Vibration working paper.*
9. *Ensure that architectural noise mitigation measures proposed to minimise traffic noise on heritage listed residential properties are developed by a suitably qualified professional. Refer to advice prepared by City Plan Heritage (9 August 2012).*
10. *Ensure that installation of noise mitigating systems is undertaken by a suitably qualified professional.*

11.8.3 Archaeological management

This section should be read in conjunction with section 11.5.5 *Principles to Guide Future Archaeological Investigation*. The loss of information through the anticipated construction-related excavation requires careful management. Open area excavation would require a combination of mechanical and manual excavation undertaken by professional archaeologists in association with an experienced excavator operator. All professional standards of excavation, recording and artefact curation must be adhered to and a comprehensive report and interpretation of the work prepared at the conclusion of site works. As the history of Windsor goes back further than two centuries, it must be designed to meet best practice standards for the recovery of both Aboriginal and historical archaeology, conducted as a single investigative process.

Impacts are also predicted where it is proposed that utilities will be installed along Bridge Street from Macquarie Street to the George Street intersection. Installation is likely to be by one of two methods: directional drilling or open trenching. Consideration has been given in these recommendations for managing impacts deriving from the installation of services along Bridge Street by minimising impacts.

Archaeological research design

11. *Develop an integrated archaeological project (terrestrial, maritime and Aboriginal) and research design in conjunction with heritage agency stakeholders. The research design should seek to investigate the project area and realise its archaeological potential. The archaeological project and research design will set out in detail the archaeological program, the research objectives and questions, and methods of analysis and dissemination of the results. The points identified in the discussion of archaeological resources should be considered when developing the archaeological program.*

11.8.4 Archival recording

The changes to the surrounding landscape that will result from the project will be extensive. Therefore prior to commencing works, an archival record of the project area and the immediate vicinity should be undertaken in accordance with Heritage Council guidelines for items of State significance. Prior to starting any work associated with archival recording, it would be prudent to discuss the range and level of documentation with the Heritage Branch and the Hawkesbury Museum.

Following the record of the project area and surrounds prior to works commencing, include a photographic record of the project in progress, including the large scale works such as the construction of the replacement bridge, a photographic record of the demolition of the Windsor Bridge and other major events during the project.

Consideration should also be given to making a social record before, during and after the project that captures intangible aspects of the project area's significance and community esteem.

Any archaeological program includes an archival record of the process and findings as part of the methodology.

12. *Consult with the Heritage Branch (on behalf of the Heritage Council) and the Hawkesbury Museum regarding the level of archival recording appropriate for the site.*
13. *At a minimum undertake archival recording in accordance with the Heritage Council guidelines for recording items of State significance prior to any further works.*
14. *Continue the archival record during construction of the replacement bridge.*
15. *Prepare an archival record of the Windsor Bridge prior to, and during, its demolition.*
16. *Prepare a final archival record of the project area and its immediate vicinity promptly once the project works have been completed.*
17. *RMS to develop a social record of Thompson Square and the building of the replacement bridge in conjunction with the Hawkesbury Museum and potentially other partners to capture community views on this change to their environment.*

Post-construction landscaping

Landscaping and urban design principles of the project area and Thompson Square have been addressed in the *Urban Design and Landscape Concept Report* (2012) prepared by Spackman Mossop and Michaels and Hill Talis Architecture + Urban Projects for RMS. It is essential that during the landscaping process for this project and any future project, due consideration is given to the archaeological potential of the project area, in particular Thompson Square and the immediate waterfront. Until an extensive archaeological excavation program is complete and the interpretation of the data has been prepared, the area within and surrounding Thompson Square, including the foreshore, must be considered to be archaeologically sensitive. In the first instance, any potential archaeological resource should be treated as if it is of state significance until additional investigation is undertaken.

The preferred landscape design would be one that interprets significant aspects of Thompson Square and enables it to be interpreted as a historical civic space. One of the most significant aspects of Thompson Square is its setting, and the views and vistas to and from it. Historical views that are documented in Appendix 1 of this technical paper provide the basis for both reinforcing the historical structure of the project area and addressing change and evolution within the open space and riverside settings. Whether directly alluded to through pictorial reminders, or just enhanced by vegetation reduction, the visual curtilage will become one of the strongest passive interpretative measures that can be applied.

From the 1880s Thompson Square has been subject to informal landscaping with the planting of trees, the erection of a pavilion, which was removed in the early twentieth century and aris rail fencing. The asymmetry and unstructured look of Thompson Square reinforced the informal design. More recently, the Pioneers Memorial and other features such as picnic tables and chairs were added.

The *Urban Design and Landscape Concept Report*, prepared for this project respects the historical development of Thompson Square by promoting an informal landscape scheme that maintains the current character of the square and maintains the unstructured character of the parkland areas. The signature species suggested in the Urban Design Landscape Plan of native and exotic trees and their placement continues the tradition of deliberately planted trees in a naturalistic fashion. There are no straight lines of trees and a mix of species. Other than the retaining wall of the approach road and the stairs, there are few hard edges shown and a high degree of grassed areas. The terraced section, as shown in the long section (Plate 121), undulates gently to The Terrace. The concept for the future landscape plan is for an informal scheme; it is strongly recommended that the notion of the informal landscape scheme is carried through to the final landscape plan.

The landscape on the northern side of the project area is currently open farmland and a small number of buildings. The proposal on this side of the river is for the construction of a roundabout, shared pedestrian/cycle ways and a water quality basin. The recommendations of the *Urban Design and Landscape Concept Report* is for a planting scheme comprising of a mixture of trees, grass and garden beds on the relatively level section before it drops toward the river. A shared pathway over a retaining wall marks the extent of the level area, which then drops away to the river. Where the landscape drops to the river the concept suggests that the river bank is revegetated with riparian (river) species and at the bank/water interface, the project construct riprap scour protection. This scour protection should be constructed of roughly dimensioned sandstone blocks, which would be loosely coursed with the gaps in between planted with sedges to provide a more naturalistic finish than basic concrete scour protection (refer to Figures 6.8, 6.15 and plan on page 90 of the SMM/HT report).

18. *Prepare an urban design landscape plan to guide the rehabilitation of Thompson Square following replacement bridge construction that takes its cue from the concept design prepared for the project (SMM and Hills Thalys 2012). Further works must consider the need for further assessment of the archaeological and built heritage values of the area to be landscaped or potentially impacted.*
19. *Post-construction landscaping should be prioritised where it would provide residences and businesses with a buffer to the completed project. The items that have been identified include:*
 - a. *"Bridgeview" at 27 Wilberforce Road Freemans Reach*
 - b. *4 Bridge Street Windsor*
 - c. *6 Bridge Street Windsor*
 - d. *"House and outbuildings", 10 Bridge Street Windsor*
 - e. *"The former Hawkesbury Stores", 62 – 68 George Street Windsor*
 - f. *"The Macquarie Arms Hotel", 81 George Street Windsor*
 - g. *"The Hawkesbury Museum", 7 Thompson Square Windsor*
 - h. *"House and outbuildings", 5 Thompson Square Windsor*
 - i. *"The Doctors House", 1 – 3 Thompson Square Windsor*
20. *Ensure that any future landscape plan retains the informal scheme that characterises Thompson Square. That is, a minimum of hard-paved areas including pathways and retaining walls, maximise grassed areas, employ an informal planting scheme and a gently terraced ground plan down to the river.*
21. *The preferred landscape design would be that Thompson Square retains the sense of open space and its setting and enhances its significant aspects, particularly those historical views that have contributed to the sense of place and access to the river bank.*
22. *Consult with the Heritage Council in the preparation of the urban design and landscape plan.*
23. *Ensure that the landscape plan integrates with the Aboriginal, historical and maritime archaeology assessments.*

Interpretation

The Windsor Bridge Replacement Project has provided the opportunity to carry out interpretive projects to enhance the community's knowledge about the history of Windsor. The heritage reports prepared for this project, that is, the Aboriginal, historical and maritime archaeological assessments as well as the results of archaeological excavations would provide good quality

data for interpretive displays in and around Thompson Square. Without limiting the scope of potential interpretation of heritage values, some ideas that have been successfully tried in other places are as follows:

- An interpretation strategy within the archaeological project plan and research design would identify opportunities for public understanding and engagement with the archaeological investigation process. This would assess and recommend strategies such as those listed below which can be done prior to completion of the interpretation plan.
- Provide guided tours during archaeological excavations
- Have elements of the post-excavation archaeological analysis such as artefact sorting take place in the Museum environment, potentially with public involvement
- Identify particular vistas of historical significance or interest in the urban design and landscape plan and ensure these are maintained
- Consider incorporating interpretation about Thompson Square, Windsor Bridge and Freemans Reach into the Great River Walk. For instance, historic views to Thompson Square from Freemans Reach could be included as a numbered interpretive display that incorporates historic Windsor and Green Hills into a leg of the Great River Walk. This way, the replacement bridge is crossed and becomes part of the story of Windsor.
- Temporary and permanent interpretive displays in the Hawkesbury Museum that incorporate the pre-colonial landscape, the historic landscape, the environmental history such as floods and their effect on the geology and history of the place, based on the results of excavation.
- Artefacts from the historical archaeological excavation can be used for future workshops at the Hawkesbury Museum.
- Papers on aspects of the investigations and their results in magazines and journals to a range of different audiences
- A virtual reality walk through the project alignment at different periods of time.
- Heritage-based interpretative ideas have also been expressed in the landscape plan, including reflecting the river connection, incorporating shells and flood levels in finishes to the abutments.

24. *Prepare an Interpretation Strategy as part of the Archaeological research design and project plan to maximise opportunities for people to visit and understand the process of archaeology and witness revelation of the site's significance during the archaeological excavation programs.*

25. *Prepare an interpretation plan drawing on all of the heritage assessments to provide a framework for making information about the site's significance publicly accessible. Include provision for interpretation as follows:*

- a. *Undertake interpretation prior to, during and after the Windsor Bridge Replacement Project to ensure that the community is kept informed of progress, can participate in the act of revealing information about and understands the historical context of the project area.*
- b. *Ensure that the interpretation plan provides a framework for a sustainable permanent interpretive legacy for the project.*
- c. *Explore ways of communicating the significance of the project area to the broadest possible audience.*
- d. *Consider naming the replacement bridge to reflect a particular aspect of its significance or the history of the site.*

Re-use

The Windsor Bridge will be dismantled as part of the replacement project. Kerb stones, soil, historic fills and other material will also be recovered during construction. Consistent with RMS' sustainability objectives consideration should be given to how those materials with heritage association may be given a second life. Some of the items will be able to be re-used within the project. The interpretation plan and the sustainability component of the construction environment management plan should address the re-use, transfer or disposal of all items with a heritage provenance.

- 26. If possible, removed fabric such as the iron piers on the existing Windsor Bridge, should be re-used within the project. Ensure that all components are properly labelled with provenance to assist with re-use elsewhere.*
- 27. If re-use is not possible within the project, explore re-use elsewhere rather than be discarded. Ensure that all components are properly labelled with provenance to assist with re-use elsewhere.*

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1 INTRODUCTION

1.1 Project Background

Roads and Maritime Services NSW (RMS) are seeking approval to replace the existing crossing of the Hawkesbury River at Windsor. The existing Hawkesbury River Bridge (Windsor Bridge) would be demolished as part of the current proposal.

Following the NSW Government's announcement for a replacement bridge in June 2008, RMS commissioned an investigation into nine options for the replacement crossing. An assessment of heritage constraints was prepared as part of the Preliminary Environmental Investigation of the nine options (Austral Archaeology: draft 2009). Community consultation was undertaken as part of the selection process and in August 2011 the Minister for Roads and Ports announced the selection of Option 1 for a high-level crossing 35 m downstream of the existing Windsor Bridge.

The proposed bridge has been declared a State significant infrastructure project (number SSI-4951) and Director General's Requirements have been issued to guide the environmental assessment of the proposal by the Department of Planning. The following report has been prepared in accordance with the Director General's Requirements as they relate to the assessment of impacts to historic period heritage. Refer to Figure 1 for the location of Windsor in a regional context.

1.2 Summary of the Project

RMS is seeking approval to replace the existing Hawkesbury River Bridge at Windsor (Windsor Bridge) with a new bridge approximately 35 metres downstream. The Windsor Bridge is aging, having been opened in 1874, raised in 1897 and then upgraded with concrete decking in 1922. An RMS engineer's inspection of the Windsor Bridge concluded that it is deteriorating.

In addition to the replacement of the Windsor Bridge, the proposal would reshape and landscape the two reserves of Thompson Square by infilling the existing road cutting from George Street to the Windsor Bridge and upgrading and infilling with minor landscaping of the northern approach to the bridge.

The proposal is described in detail in Section 9 of this report. Supplementary reports to the current application are available on the RMS website under "Road Projects" and on the Department of Planning and Infrastructure website "Major Project Assessments".

The Project scope is summarised below:

The project would comprise:

- Construction of a replacement bridge over the Hawkesbury River at Windsor, around 35 metres downstream of the existing Windsor bridge.
- Reconstruction and upgrading of existing intersections and bridge approach roads to accommodate the replacement bridge, including:
 - Removal of the existing roundabout and installation of traffic signals at the intersection of George and Bridge Streets.
 - Construction of a new dual lane roundabout at the intersection of Freemans Reach Road, Wilberforce Road, northern bridge approach road and the access road to Macquarie Park. All roads serviced by the new roundabout would require minor realignments.
 - Realignment of the southern and northern bridge approach roads. The new southern bridge approach road would generally follow the alignment of Old Bridge Street along the eastern side of Thompson Square. The northern bridge approach road would be a new road connecting the bridge to the new dual lane roundabout.
- Construction of a shared pedestrian/cycle pathway for access to and across the replacement bridge.

- Removal of the existing bridge approach roads and then backfilling, rehabilitating and landscaping these areas.
- Demolition of the existing Windsor Bridge including piers and abutments.
- Landscaping works within Thompson Square parkland and adjacent to the northern intersection of Bridge Street, Wilberforce Road, Freemans Reach Road and the access road to Macquarie Park.
- Redevelopment of part of The Terrace to provide continuous access along the southern bank of the river and under the replacement bridge to Windsor Wharf.
- Construction of scour protection works on the southern and northern banks and around three bridge piers.
- Construction of a permanent water quality basin to capture and treat stormwater runoff from the bridge and northern intersection prior to stormwater being discharged to the Hawkesbury River.
- Architectural treatments for noise mitigation, as required, where feasible and reasonable and in agreement with affected property owners.
- Ancillary works including:
 - Adjustment, relocation and/or protection of utilities and services, as required.
 - Construction and operation of temporary construction, stockpiling and compound sites.

In Figure 2 the main elements of the project are shown including the construction zone and project boundary.

In addition to the above-listed work elements, early works for further identification, salvage, recording and protection of Aboriginal and historic heritage, would be carried out as part of impact mitigation for the project. These early works would include:

- Salvage excavation at identified Aboriginal heritage sites on the southern bank of the river in accordance with the procedures identified in the Aboriginal heritage chapter of the Environmental Impact Statement for the project.
- Recording and protection of historic heritage in accordance with the procedures identified in the historic heritage chapter of the Environmental Impact Statement for the project.

1.3 Objectives of this Report

This study has the following objectives:

1. Identify and assess the historic cultural heritage significance of the study area.
2. Assess the impact of the project on the historic cultural heritage significance of the study area; and
3. Recommend measures to avoid, mitigate or manage any negative impacts on the historic cultural heritage significance of the study area.

1.4 The Study Area & the Project Area

The study area at Windsor, about 60 kilometres north-west of Sydney, is located within the Hawkesbury Local Government Area (LGA), on the banks of the Hawkesbury River (Figure 1). The project area comprises the extent of land in which work would physically take place if the project is approved, the boundaries of which have been provided by RMS. The wider study area for this report encompasses the project area but also includes adjoining sites within the immediate vicinity. In assessing the potential heritage impact of the project, consideration needs to be given to visual

impacts which extend beyond the project area as well as the potential for any physical impacts to adjoining properties from construction activity.

The project area comprises two sections of land north and south of the Hawkesbury River as well as the area of the river that the Windsor Bridge crosses. The existing Windsor Bridge, its abutments and approaches, is included within the project area. The southern side of the project area is centred on Bridge Street, Old Bridge Street, and the public reserve between them, and extends from the river up the hill to George Street, which marks the top of the ridgeline which runs parallel to the river. The roundabout on the corner of George and Bridge Streets will be signalised. From George Street, the project area continues south on Bridge Street to the corner of Macquarie Street.

The project area includes Thompson Square, an area that was once the original connection to the river and later formalised into reserve by Governor Macquarie. Macquarie is responsible for naming the space Thompson Square and it should be noted that Macquarie's Thompson Square is not exactly the same entity as that which is listed on the State Heritage Register (SHR). The differentiation of these two entities is discussed in the assessment of significance in more detail. It is a distinction that is easily confused when considering Macquarie's Thompson Square and the situation that exists today.

The project area on the south side of the river also includes a section of The Terrace running above the river bank and including the newly constructed Windsor Wharf downstream of the bridge.

The north side of the project area includes the northern approach to Windsor Bridge, sections of Wilberforce Road and Freemans Reach Road, and the entry to Macquarie Park. The northern side of the project area is centred on an area of land currently used for turf farming. The riverbank to the east of the Windsor Bridge is where the proposed new bridge would cross the river and where a new intersection connecting Wilberforce Road and Freemans Reach Road would be constructed.

For the purposes of this report, individual sites within the study area have been named and numbered for ease of reference. For the most part these sites comprise individual properties (parcels of land); however, they also include some properties made up of more than one parcel of land as well as road corridors that do not have strictly defined linear boundaries. The purpose of the numbered units was to manage descriptions and area of potential, if they arose. They are illustrated in Figure 3 and should be cross referenced to Table 1 below.

There are 22 identified heritage items within and directly adjacent to the project area, most of which are on statutory heritage registers. One item, the government wharf, is represented by a remnant timber structure approximately 35 m downstream of the existing bridge on the southern foreshore. The sites affected by statutory heritage listings (current and draft) are identified in Section 3.2 of this report and illustrated in Figure 4. Where a site is also listed as a heritage item, the names used in this report are generally consistent with those by which the site is identified in the relevant heritage listings. Where a site is not listed as a heritage item, the name used is specific to this report.



Figure 1: Location of the Study Area in a Regional Context

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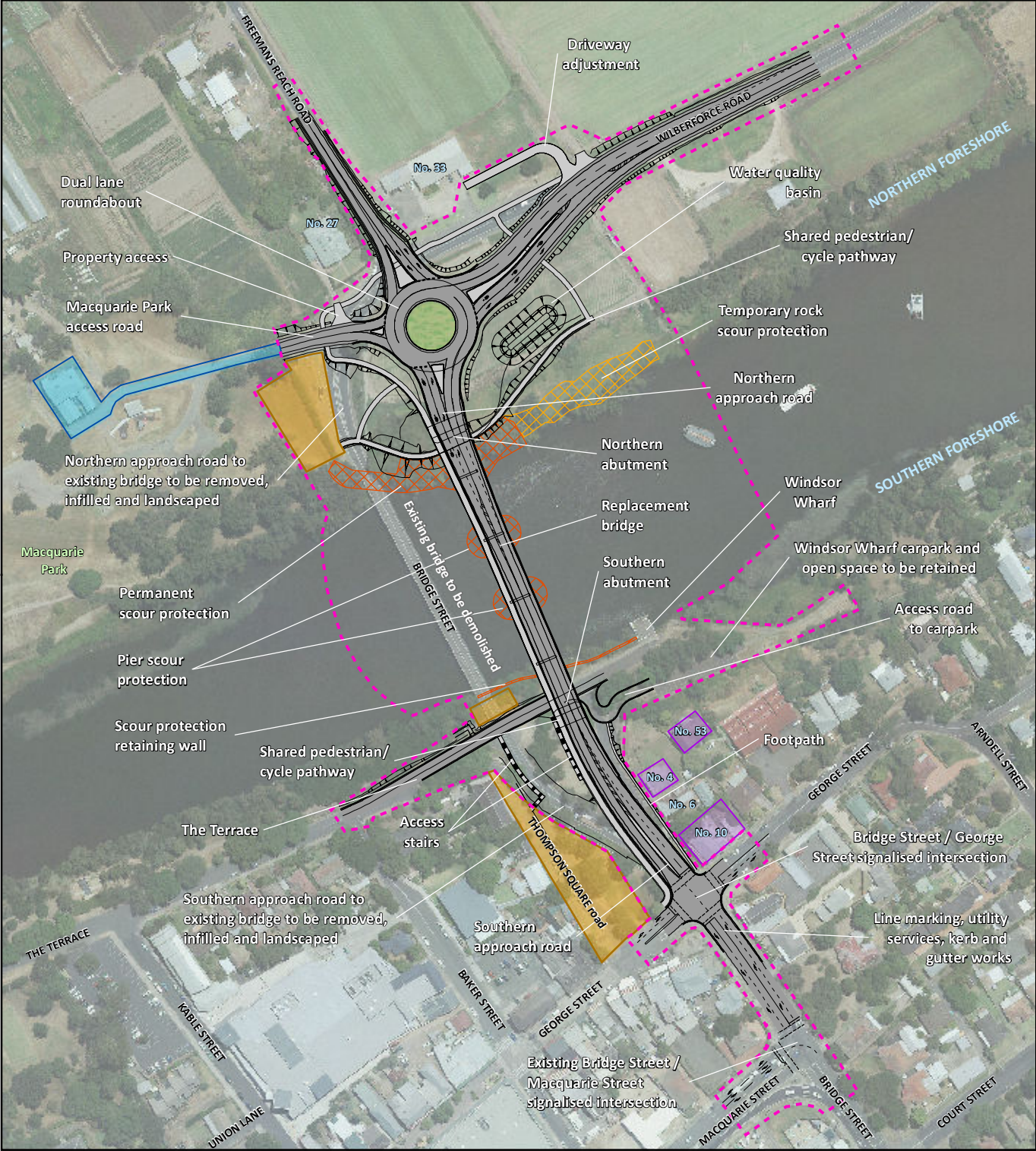
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 Canberra, Wangaratta.

0 75 150 225 300 375
 Metres
 Scale: 1:15,000 at A4



Figure 2 | Key project elements



LEGEND

- Concept design
- Construction work zone
- Permanent rock scour protection *
- Temporary rock scour protection *
- Properties requiring flood mitigation works.
- Works subject to further consultation with and agreement from affected property owners
- Properties requiring noise mitigation works.
- Works that are feasible and reasonable would be subject to further consultation with and agreement from affected property owners.
- Works subject to further consultation

Indicative only - subject to detailed design

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GDA 1994 | MGA Zone 56
A4 1:3,000

0 100
Metres



Legend

- Construction Work Zone
- Investigation Units (as defined by the report authors)

Figure 3: Investigation units within the Project Area

Numbers relate to units presented in table 1 and the data sheets

0 15 30 45 60 75 90 105 120

Metres

Scale: 1:2,500 @ A3

Coordinate System: GDA 1994 MGA Zone 56



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Table 1: Breakdown of the project area into discrete sites – note that not all have heritage significance.

Site Number	Site Name	Address/Property Description
01	Thompson Square	Thompson Square including Bridge Street, Old Bridge Street, The Terrace, George Street and the parkland and surrounding buildings.
02	Thompson Square – upper square parkland	Thompson Square; Lot 7007 DP 1029964
03	Thompson Square – lower square parkland	1 Bridge Street, Lot 345 DP 752061. Also addressed as 3 Old Bridge Road and Thompson Square.
04	The Doctors House	1-3 Thompson Square; Lot B, DP 161643 and Lot 1, DP 196531
05	House and Outbuilding	5 Thompson Square; Lot 1, DP 7450356
06	Hawkesbury Museum and Tourist Information Centre	7 Thompson Square; Lot 1, DP 60716
07	Macquarie Arms Hotel	81 George Street (also addressed as Thompson Square); Lot 1, DP 864088
08	House	No. 4 Bridge Street; Lot 10, DP 666894
09	House	No. 6 Bridge Street (also addressed as No. 8 Bridge Street); Lot 1, DP 995391
10	Building	No.10 Bridge Street; Part Lot A, DP 381403
11	Former School of Arts building	No. 14 Bridge Street; Lot 1, DP 136637; Lots 1 and 2, DP 1127620
12	Cottage	No. 20 Bridge Street; Part Lot 2, DP 420926
13	Cottage	No. 17 Bridge Street (also addressed as 68 George Street); Lot 1, DP 555685
14	Shops	Nos. 62 – 68 George Street; Lots 1 and 2, DP 555685.
15	Shops	Nos. 70 – 72 George Street (also addressed as 70 George Street); Lot 1, DP 1011887
16	AC Stern Building	No. 74 George Street; Lot 1, DP 87241
17	Shops	Nos. 80-82 George Street; Lots 10 and 11, DP 630209
18	Shops	84 and 88 George Street; Lots 1 and 2, DP 223433
19	Shops	92 George Street; Lot 1 DP 730435
20	Windsor Bridge	Variously addressed as Wilberforce Road, Hawkesbury River, Bridge Street, MR 182 and Bridge No.415.
21	Bridgeview	27 Wilberforce Road, Freemans Reach; Lot A DP 370895
22	Green Hills Wharf c. 1795	Adjacent to upstream and downstream of southern abutment of existing Windsor Bridge. Upstream of

Site Number	Site Name	Address/Property Description
		bridge - within or directly adjacent to Lot 7011 DP 1030959; downstream of bridge – within or adjacent to Lot 7008 DP 1029964.
23	Government Wharf site c. 1815	1 Bridge Street; Lot 7008 DP 1029964
24	Government House Wharf site c. 1800	Riverbank at the base of former government house cottage within or directly adjacent to Lot 7008 DP 1029964
25	The Terrace	Part of The Terrace west of Bridge Street
26	River bank – south bank	1 The Terrace; Lot 7011 DP 1030959
27	North river bank and turf farm	2 and 26 Wilberforce Road, Freemans Reach; Lot 2 DP 65136 and Lot 2 DP 1096472
28	Bridge Approach – north side	Parts of Wilberforce Road and Freemans Reach Road
29	Turf farm	33 Wilberforce Road, Freemans Reach; Lot 1 DP 1096472
30	Macquarie Park	1 Wilberforce Road, Freemans Reach; Lot 1 DP 226141 and Lot B DP 386334
31	Temporary bridge and punt landing	Possibly directly adjacent upstream of the existing bridge
32	Terrestrial archaeological resources	Includes any potential sites that have not been identified in this report.
33	Maritime archaeological resources	Includes any potential sites that have not been identified in this or the maritime report (Cosmos Archaeology 2012).
34	The location of the former punt house (now part of the Terrace)	
35	The location of the former Old Government House (also referred to as Government Cottage)	41 George Street Windsor; Lot 1 DP 995355. This item is not strictly within the project area but has been included as the potential site "Government House Wharf" number 023 in this list would have belonged to the house.

1.5 Limitations of the report

The primary limitation in the preparation of this report is time frame. The history of Windsor is long and complex and in some cases, documentary sources attesting to activities in and around Thompson Square could not be found. In other cases, inferences of activities and structures have had to be made based on descriptions and illustrations. Many of the holdings facing Thompson Square were not converted to Torrens Title until the early twentieth century, with some as late as the mid-twentieth century. This made tracing the chain of title challenging.

Another major challenge was finding a way to consolidate the research and conclusion in a comprehensive and cohesive manner.

Inconsistencies in the description of heritage listings have also been identified via the cross-checks undertaken for this report and are presented in Section 3.2.7. The layers of heritage protection (be it

statutory or community) are many and the location is complex involving built items, archaeological items, views, vistas and settings. These are discussed in Section 2 "Legislative Framework".

The *Hawkesbury Local Environmental Plan 2012* was gazetted in September 2012. All attempts have been made to update the LEP details in this report but it is acknowledged that some references to the *Hawkesbury Local Environmental Plan 1989* may remain where they should not.

1.6 Study Team

This report was prepared by a team of consultants and researchers. The team that worked on the preparation of this report consisted of:

Pamela Kottaras

Wendy Thorp

Peter Woodley

Peter Howard

Anna Nardis

Samantha Gibbins

Additional research was also undertaken by Louise Doherty and Rebecca Ward.

Team qualifications are included in Appendix 5.

Sections 1.0 "Introduction", 2.0 "Methodology" and 3.0 "Legislative Requirements" were written by Pamela Kottaras and Peter Woodley.

Section 4.0 "Historical Development – Windsor" was written by Wendy Thorp and reviewed by Pamela Kottaras.

Section 5.0, "Historical Development – Windsor Bridge" was written by Pamela Kottaras, Gary Vines, Wendy Thorp and Peter Howard; it was reviewed by Wendy Thorp and Gary Vines.

The majority of Section 6.0 was written by Pamela Kottaras with Section 6.4 "Windsor Bridge Elements" written by Gary Vines, Peter Howard and Pamela Kottaras.

Section 7.0 The archaeological assessment was prepared by Wendy Thorp, the excavation director and reviewed by Pamela Kottaras.

Section 8.0 "Assessment of Significance" was written by Wendy Thorp and was reviewed by Pamela Kottaras. Wendy Thorp prepared the assessment of archaeological significance.

Section 9.0 "The Project" was prepared by SKM and integrated into this report.

Section 10.0 "The Statement of Heritage Impact" was based on information provided by SKM and RMS and was prepared by Pamela Kottaras.

Section 11.0 "Conclusions and Recommendations" was written by Pamela Kottaras with review by Wendy Thorp and consultation with Denis Gojak (RMS).

All sections describing the archaeological program, including the excavation report, were prepared by Wendy Thorp with review by Pamela Kottaras.

Research for the preparation of this report including the archaeological research design was undertaken by Anna Nardis, Peter Howard, Peter Woodley, Louise Doherty, Pamela Kottaras and Wendy Thorp.

The final report was reviewed by Gary Vines and Wendy Thorp.

The authors of this report would also like to acknowledge the contribution of the project team for the collaborative approach taken with respect to data sharing and discussion.

Chris Lewczak, Cosmos Archaeology Pty Ltd for discussions around the maritime cultural material within and in proximity to the project area

Michael Wright Spackman Mossop and Michaels Urban Design

Aiden Nyhan Spackman Mossop and Michaels Urban Design
Philip Thalís, Hill Thalís Architecture + Urban Projects Pty Ltd
Laura Harding, Hill Thalís Architecture + Urban Projects Pty Ltd

2 METHODOLOGY

2.1 Approach

The following report is structured according to the three steps of the NSW heritage management system as described in the *NSW Heritage Manual* (DUAP & Heritage Office, 1996):

- Step 1: investigate significance;
- Step 2: assess significance; and
- Step 3: manage significance

The objectives of report are achieved by:

- Identifying above ground sites and features within the study area which are already recognised for their cultural heritage value through statutory and non-statutory heritage listings;
- Identifying the cultural heritage significance of above ground sites and features within the study area which are not already recognised through statutory heritage listings;
- Identifying known or potential archaeological sites within the study area; and
- Identifying significant views and vistas within the study area that contribute to the cultural heritage significance of the place.

2.2 Report Structure

The structure of the report is also consistent with the client's reporting requirements outlined in the "Description of Services" provided to Biosis Research for this project. This report has also been structured to meet the environmental assessment requirements for the project determined by the Department of Planning.

Section 3.0 to 8.0 of this report comprise an investigation of the historic heritage significance of the study area through a review of statutory and non-statutory heritage listings, historical research, and an analysis of the built environment, archaeology and landscape of the study area. The cultural significance of the project area – Step 2 of the conservation process – is analysed and assessed in Section 8.0.

Step 3 relates to managing the historical significance which has been identified, and this is achieved through an understanding of the likely impact of the proposed works on this significance (Sections 9 to 11). Recommendations to avoid, mitigate or manage impacts on the historic significant of the study area are made in Section 11.

2.3 Documentary Investigation

This analysis is based on the evidence acquired from primary and secondary archival research. This research has encompassed a wide variety of resources including land titles, images, newspaper accounts and government records as well as research from local historians amongst many. Paintings, etchings, photographs, maps and plans were also used to assist with compiling an image of the project area through time.

- Information has been acquired from many repositories including the following:
- Mitchell Library of the State Library of NSW
- State Records, Globe Street, The Rocks
- State Records, Kingswood
- National Library Australia

- Newspaper Archives including Trove
- NSW Land and Property Information
- Local Studies Collection: Hawkesbury Library, Hawkesbury City Council
- Sydney University Library
- Roads and Maritime Services Archives
- Sydney Water Archives
- Specialist technical reports
- Private collections

Internet sources were also searched and include:

- Trove, for newspaper articles
- The National Heritage List
- The Commonwealth Heritage List
- The State Heritage Register
- The State Heritage Inventory
- The RMS Heritage and Conservation Register (s170 Register)
- Heritage Space for heritage listings including National Trust classifications
- The Australian Heritage Places Inventory
- The heritage Schedule of the *Hawkesbury Local Environmental Plan 1989*
- The heritage Schedule of the *DRAFT Hawkesbury Local Environmental Plan 2011*
- The Department of Public Works Annual Reports were checked for records of unemployment relief works related to the Windsor Bridge
- Parish Maps

2.4 Site Survey

The project area was surveyed on two occasions prior to the archaeological test excavation:

- 21 December 2011 and attended by Peter Woodley, Peter Howard, Pamela Kottaras.
- 17 February, 2012 and was attended Peter Woodley, Pamela Kottaras.

The project area was surveyed after the archaeological test excavation by Pamela Kottaras on 19 June 2012 and additional photographs were taken in October 2012.

The project area was photographed and comparisons were made between the current landscape and that recorded in historical photographs and plans. Areas that were accessed for the site visit were only those that were safe. Therefore a search for evidence of the brick drain mentioned in an 1815 contract for the wharf (refer to the historical analysis) was not made in the sides of the road-cutting or along the foreshore. The photographs taken for this investigation have been used in the analysis of views (Appendix 1) and the data sheets (Appendix 4).

The site survey was conducted in order to understand the landscape within the Project Area in Windsor and Freemans Reach, including fabric, views, vistas and setting. The Project Area is within and surrounded by a sensitive historical precinct in Windsor and in close proximity to a heritage item (Bridgeview) and what may be the site of an early hotel (the Squatters Arms).

Overall surface feature visibility was approximately 5% as most of the project area is covered by bitumen or grass.

2.5 Summary of the Archaeological Research Design

2.5.1 Explanation of the Layout

An archaeological research design was prepared to guide the test excavations, which were conducted in late April/early May. Since then, the history of the study area was augmented, and sections of the research design have necessarily been amended and repeated. Therefore an abridged version of the research design has been included in this section. The submitted archaeological research design has been included in full in Appendix 2.

2.5.2 Project Requirements

The project is being assessed under Part 5.1 of the *Environmental Planning and Assessment Act 1979*. The Director General's Requirements required that test excavation be undertaken to inform a comprehensive assessment.

The research design was developed using primary and secondary historical research; this has since been augmented. It also made reference to other sources of information including previous archaeological investigations and geophysical evidence.

2.5.3 The potential archaeological resource

It was concluded from the sources that the research undertaken to date and other evidence that Thompson Square and its immediate environs are of substantial archaeological sensitivity encompassing sites of potential state significance. These sites include buildings and works that date to the first year of settlement in 1795. However, identifying specific locations for these sites could not be determined with a high level of accuracy from available historic records.

On the northern bank of the river the archival evidence indicates that the settlement was dispersed over a wide area where much of the landscape was devoted to pastures or crop fields. The historical evidence for this area is less specific but it was concluded that the area is likely to be of less archaeological sensitivity and significance even though settlement here also commenced in the mid-1790s.

With respect to the river bed, a search of the Australian National Shipwrecks Database was undertaken and while there are no known shipwrecks it is anticipated that there could be an assemblage of artefacts accumulated through either deliberate disposal or accidental loss or casual discard, both from the bridge and wharf. Flooding may not have substantially disturbed this resource but disturbance from dredging may have. A separate maritime archaeological evaluation discusses the occurrence and significance of the potential archaeological resource within the river.

2.5.4 Research questions

The outcomes and the principal questions addressed by the testing were as follows:

- Will the depths of excavation required for the several components of the new bridge impact on levels that encompass intact archaeological resources?
- Can the archaeological test excavations establish a profile that generally characterises each part of the construction area and, thus, establish what the impacts of the proposed works will be on the integrity and significance of the archaeological resource?
- Will the profiles provide sufficient evidence to establish dates or specific associations for archaeological evidence revealed in them?
- Is it possible to determine whether the impacts of previous earthworks and the provision of infrastructure have combined to effectively remove a substantial and significant archaeological resource?

2.5.5 Premises of the work

The premises underlying the work were as follows:

- Any work undertaken will be as small as possible to minimise the damage caused to the resource while still meeting the project objectives. This makes no assumption concerning the likely approval or otherwise of the proposal but is standard best practice for archaeological works.
- The work is not designed to locate specific archaeological sites that have been identified in the analysis; the objective of the work is to determine whether the maximum depths of excavation required for the various parts of the design will impact on an intact archaeological profile or be confined to depths already disturbed for road and other contemporary works.
- If an intact archaeological profile is revealed within any test pit further excavation will be undertaken to determine the nature, extent and date if possible.

2.5.6 Methodology

On the southern side of the river impacts from the bridge construction would reach depths of 0.5 metres at the southern end, one metre in the centre of the project area of Thompson Square and 1.5 metres at the northern end. Test trench 1 in Old Bridge Street was excavated to a depth of one metre and test trench 2 in the car park at the northern end of Thompson Square was excavated to a depth of 1.5 metres. A test trench proposed at the southern end of Thompson Square was not excavated; in its place evidence was used from test pits excavated for Aboriginal archaeology. This confirmed the conclusions made in Test trench 1 that the southern portion of the project area has been substantially disturbed by twentieth century works to the depth of excavation required for the construction of the bridge. Further excavation was highly unlikely to change this result and would further disturb the profile in this area. The results of four other test pits excavated in the parkland were used to augment the results of the historic period archaeological testing.

On the northern side of the river within the project area excavations were required for geo-technical purposes. These six pits were excavated stratigraphically to provide a sample of the sub-surface profile across the project area.

Artefacts recovered from the testing were cleaned and processed and the information provided by them was included in interpretation of the excavation program.

At the conclusion of the work the test trenches and test pits were backfilled and the sites made good. Geo-fabric was laid over the base of Test Trenches 1 and 2 before backfilling.

Each pit was to be excavated stratigraphically with the record of the results made by means of an inventory, plans and sections as appropriate and images. All pits were to be backfilled on completion.

2.5.7 Outcomes

The results of the test excavations have been used to refine the archaeological assessment. The historic period archaeology is one component that will inform the decision-making process for the proposed bridge.

The test excavation was conducted over a total of five days in late April to early May. The outcome and interpretation of the archaeological test excavation is presented in full in Appendix 3 and summarised in Section 7.15.

3 LEGISLATIVE FRAMEWORK

3.1 Environmental Assessment Requirements

The client, the NSW Department of Roads and Maritime Services (RMS), formed the opinion that the impact of the project on historic heritage would be a significant environmental affect and so would require an environmental impact statement to be prepared under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Therefore, in accordance with clause 14 and Schedule 3 of State Environmental Planning Policy (State and Regional Development) 2011, the project is State significant infrastructure under Part 5.1 of the EP&A Act. The project requires the approval of the Minister for Planning and Infrastructure and does not require development consent under Part 4 of the EP&A Act.

Director General's environmental assessment Requirements (DGRs) have been issued for the project. The DGRs require that the Environmental Impact Statement (EIS) for the project address heritage impacts as a key issue.

Separate approvals which would normally be required, for example local council consent for changes to locally listed heritage items, or Heritage Council approval for changes to items entered on the State Heritage Register, are not sought in this instance as the project is a State significant Infrastructure (SSI) project. However, the DGRs require that heritage items of State and local significance be identified and the impact of the project on their significance be assessed.

Having regard to historic cultural heritage, the DGRs require the following:

"impacts to State and local historic heritage (including archaeology, heritage items and conservation areas), in particular, impacts on the Thompson Square Conservation Area, heritage listed buildings and sites in the Thompson Square conservation area and the Windsor Bridge should be assessed. Where impacts to State or locally significant historic heritage items are identified, the assessment shall:

- outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the guidelines in the NSW Heritage Manual (1996),*
- be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria),*
- include a statement of heritage impact for all heritage items (including significance assessment),*
- consider impacts from vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment, and*
- develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime) and include the results of these excavations"*

Table 2: The DGRs and summary response.

Director General's Requirements	Response
<i>"impacts to State and local historic heritage (including archaeology, heritage items and conservation areas), in particular, impacts on the Thompson Square Conservation Area, heritage listed buildings and sites in the Thompson Square conservation area and the Windsor Bridge should be assessed. Where impacts to State or locally significant historic heritage items are identified, the assessment shall:</i>	The DGRs have been addressed in this report as follows:
<ul style="list-style-type: none"> <i>outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the guidelines in the NSW Heritage Manual (1996),</i> 	<p>This report was prepared using the guidelines of the NSW Heritage Manual (1996) and in accordance with the philosophy of the ICOMOS Burra Charter.</p> <p>Impacts associated with the project were identified in Section 10 of this report.</p> <p>This report concludes that significant impacts to the heritage significance of Thompson Square and Windsor Bridge cannot be avoided as archaeological fabric and current views, vistas and setting will be adversely affected by the project.</p> <p>Mitigation and management measures of the identified and potential impacts have been provided in Sections 11.7 and 11.8 of this report. The recommendations and mitigation measures have been formulated with the aim of reducing the level of impact that the proposal is predicted to have on the heritage significance of Thompson Square and Windsor Bridge.</p>
<ul style="list-style-type: none"> <i>be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria),</i> 	<p>The historical heritage report was researched by a team of qualified heritage consultants with the core team comprising Pamela Kottaras, Wendy Thorp and Peter Woodley with assistance from Peter Howard and Anna Nardis. A substantial contribution was made by Gary Vines (Biosis Melbourne Resource Group).</p> <p>Wendy Thorp (Cultural Resources Management) was the excavation director; her role was approved by the Department of Planning and Infrastructure, and the Heritage Branch.</p> <p>CVs for the historical heritage team members have been provided to the Department of Planning.</p>
<ul style="list-style-type: none"> <i>consider impacts from vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment, and</i> 	Potential impacts are identified in Section 10, with additional detail on architectural noise treatment in Appendix 6.

<ul style="list-style-type: none"> • <i>develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime) and include the results of these excavations"</i> 	<p>This report incorporates an assessment of built heritage and terrestrial archaeological resources in detail and maritime archaeology in brief. A detailed maritime archaeological assessment has been prepared as a separate document by Cosmos Archaeology Pty Ltd.</p> <p>The report includes all components required to assess archaeological sensitivity and significance. It includes the research design that was formulated to guide test excavations and the results of those test excavations. The archaeological research design was reviewed and agreed to by the Department of Planning and Infrastructure and by the Heritage Branch. The results of the archaeological program have been incorporated into this report and the detailed excavation report is provided in Appendix 3.</p>
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3.2 Heritage Listings

3.2.1 Overview

Items of identified State and local significance within and adjacent to the study area are listed under the following legislation and planning instruments:

- *NSW Heritage Act 1977*: items entered on the State Heritage Register (SHR) and in a State government instrumentality Heritage and Conservation Register (Section 170 Register).
- *Hawkesbury LEP 2012*: items listed in Schedule 5 and included on LEP plan HER_008DB.

Non-statutory heritage listings include the Register of the National Trust of Australia, NSW (NT) and the Register of the National Estate (RNE). The RNE, formerly a statutory register under Commonwealth legislation for items belonging to the Commonwealth, now exists as a "publicly available archive and educational resource".¹ There are no items listed under Commonwealth legislation within or adjacent to the study area.

Table 3 identifies heritage listings which affect properties within and adjacent to the project area and includes both statutory and non statutory listings. Individual properties have been allocated a site number and a site name for the purposes of this report and are shown on Figure 3. Listed sites are illustrated on Figure 4 and have been shown on a cadastral basis so that it can be clearly understood which heritage listings affect a specific property and where they are within the conservation area. Sites that are not included on any heritage lists are not included in Table 3.

Properties within and adjacent to Thompson Square are subject to multiple listings under the state and local planning framework. Some properties are individually listed heritage items, but many properties are listed under the conservation area on the SHR as well as the LEP heritage schedule.

3.2.2 National Heritage List Nomination

An emergency listing request for inclusion of Thompson Square on the National Heritage List was submitted to the Minister for Sustainability, Environment, Water, Populations and Communities (SEWPaC) and forwarded to the Heritage Council on 1 March 2012. The implications of the nomination are discussed in Section 6.7 "Community Esteem" and Section 11 "Conclusions & Recommendations".

¹ <http://www.environment.gov.au/heritage/places/rne/index.html>

3.2.3 State Heritage Register

There are four items listed on the State Heritage Register within or adjacent to the study area. Most of the properties within and surrounding Thompson Square are included within SHR Item number 00126, "Thompson Square Precinct" (or "Conservation Area" on the Heritage Branch database) (Plate 1). However, key sites such as the Macquarie Arms Hotel and the House and Outbuilding at 5 Thompson Square are excluded from the Thompson Square Precinct and listed separately as individual SHR items (SHR items 00041 and 00005 respectively). This is because Thompson Square was protected in 1982 with a Permanent Conservation Order (PCO), the Macquarie Arms Hotel and 5 Thompson Square were already protected by existing Permanent Conservation Orders (PCO). Subsequently, each of these listings was automatically transferred to the State Heritage Register in 1999 following amendments to the Heritage Act in 1998. The fourth item on the SHR, the Government Cottage Archaeological Site, was added to the SHR in February 2011 in recognition of the significant archaeological resource that the site is likely to contain. The Government Cottage Archaeological Site is included in this report as it would have a direct relationship to a potential archaeological resource that was identified during the course of the investigation. A wharf on the bank below the government cottage may have existed to service the tenants of the cottage.

Background information on the listing of Thompson Square and the Macquarie Arms Hotel state that both of these items were under development threats and this is what influenced the decision to protect them. The preservation orders were place to ensure that future development would be adequately controlled.

With regard to Thompson Square, a report prepared in November 1978² in response to a development application to demolish 80-82 George Street identified four heritage issues, which were:

1. The emphasis of site usage control and the absence of heritage conservation controls in the Prescribed Windsor Planning Scheme.
2. The identification of Thompson Square as one of the oldest public squares in Australia and the large number of nineteenth century buildings surrounding it.
3. The superficial but reversible nature of intrusive architectural fabric to building in Thompson Square.
4. The conclusion that a "*conservation instrument over the whole precinct, would alleviate the current threats of demolition and inappropriate, unsympathetic infill buildings on the George Street side.*"³

Also excluded from the SHR listing of Thompson Square Precinct is the main thoroughfare of Bridge Street, including the 1930s road between the kerbs down to where it meets The Terrace and Windsor Bridge.

² H.C File 30043; report prepared by Otto Cserhalmi, Assistant Specialist Architect.

³ *Ibid.*

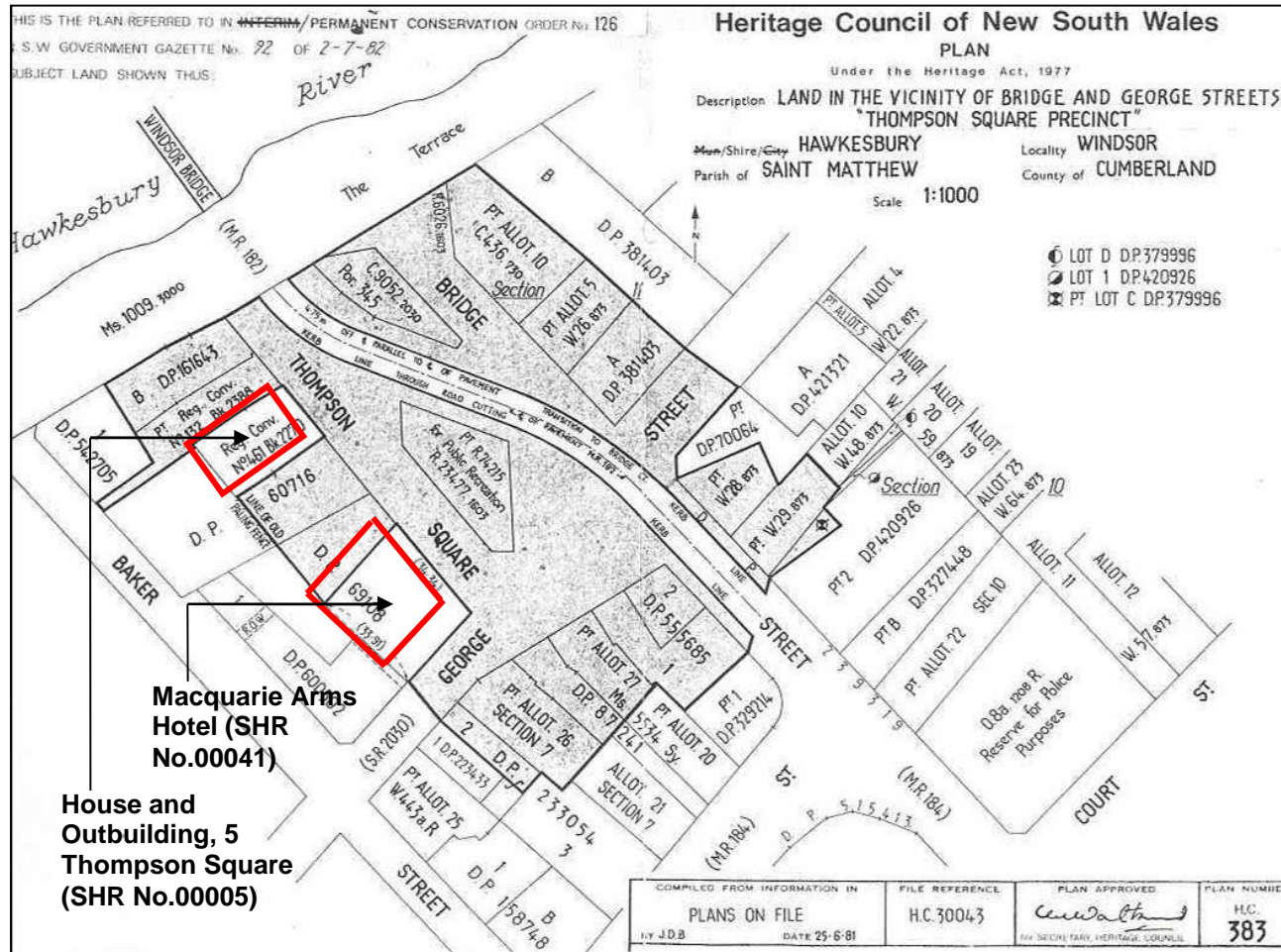


Plate 1: Heritage Council plan of the “Thompson Square Precinct” which defines the curtilage of the item (SHR No.00126). Note the exclusion of the House and Outbuilding at 5 Thompson Square and the Macquarie Arms Hotel which are both separately listed on the SHR (shown here outlined in red). Refer to Plate 2 and Plate 3 for SHR plans. Also note the exclusion of Bridge Street.⁴

⁴ SHR No.00126.

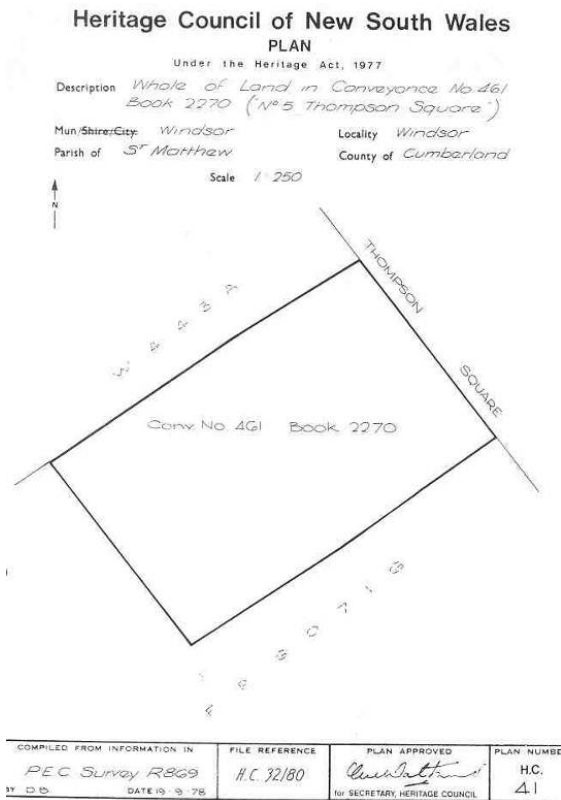


Plate 2: Heritage Council plan of the "House and Outbuildings" at no. 5 Thompson Square.⁵

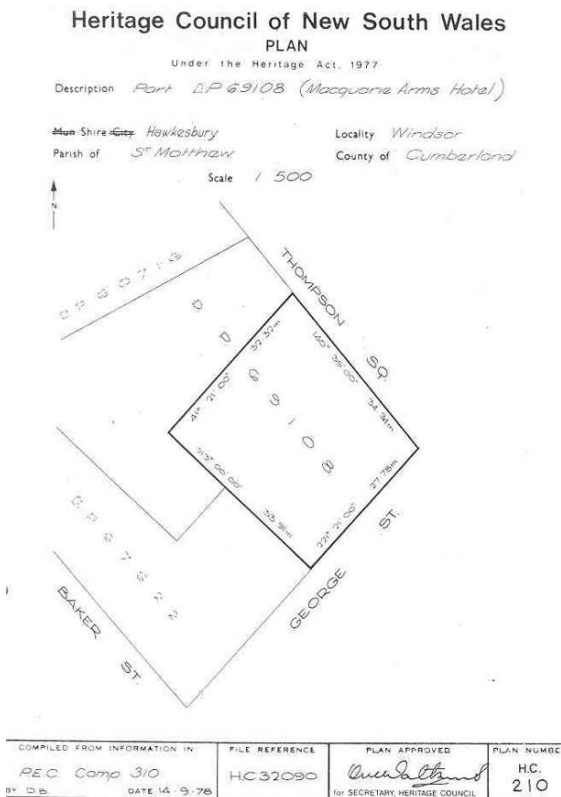


Plate 3: Heritage Council plan of the Macquarie Arms Hotel.⁶

⁵ SHR No 00005.

⁶ SHR No 00041.

3.2.4 Section 170 Heritage and Conservation Registers

Windsor Bridge is entered in the RMS (former RTA) Heritage and Conservation Register, in accordance with Section 170 of the *Heritage Act 1977*. The bridge was assessed at a State level of significance on the register. There are no other items within or adjacent to the study area which are entered in a State government instrumentality Section 170 Register.

3.2.5 Environmental Planning Instruments

Hawkesbury Environmental Plan 2012

The *Hawkesbury LEP 2012* (LEP 2012) was gazetted in September 2012. At the commencement of the project the prevailing planning instrument was the Hawkesbury Local Environmental Plan 1989. While the current LEP was in draft (draft LEP 2011) components (the buildings) included in the Thompson Square Conservation Area were listed separately as well as part of the conservation area (C4). The LEP 1989 included these items as components of the conservation area.

The gazetted LEP 2012 removed the individual listings but identifies them with a consistent identifier, which is "Part of I00126". Some anomalies in the LEP 2011 heritage schedule have been noted and are discussed briefly in Section 3.2.7 below.

Other LEP listings within or adjacent to the study area include Windsor Bridge (I276), the house "Bridgeview" on the north bank of the river (I274), and the cottage at 20 Bridge Street adjacent to the former School of Arts building (I147). Table 3 lists items that are on the heritage schedule of the LEP 2012.

3.2.6 Non-statutory Registers

National Trust of Australia (NSW)

The National Trust of Australia (NSW) is a community based, non-government organisation established in 1945 in response to the increased destruction of the built and natural environment. The organisation is involved in the promotion of natural and cultural heritage through advocacy work and the custodianship of heritage properties and objects.⁸ The National Trust classifies items of natural and cultural significance and its independence from government and corporate relationships is a strong indication that classified items are a reflection on their significance to the community. The National Trust of Australia (NSW) has classified a number of items in and around the project area; those items are included in Table 3.

Engineering Heritage Australia

Engineering Heritage Australia manages the Australian Historic Engineering Plaquing Program, where selected engineering heritage sites are judged to be significant works. The program was established by the Institute of Engineers Australia (now Engineering Heritage Australia) with the aim of raising the public profile of significant historic engineering works for the purposes of education and conservation. Items that have been chosen to be "plaqued" are referred to as "plaqued works".⁹ The Windsor Bridge is not a plaqued work; however it has a commemorative plaque sponsored by the Department of Main Roads (DMR, now RMS) and the National Roads & Motorist's Association (NRMA) as part of the Australian Bicentenary celebrations in 1988.

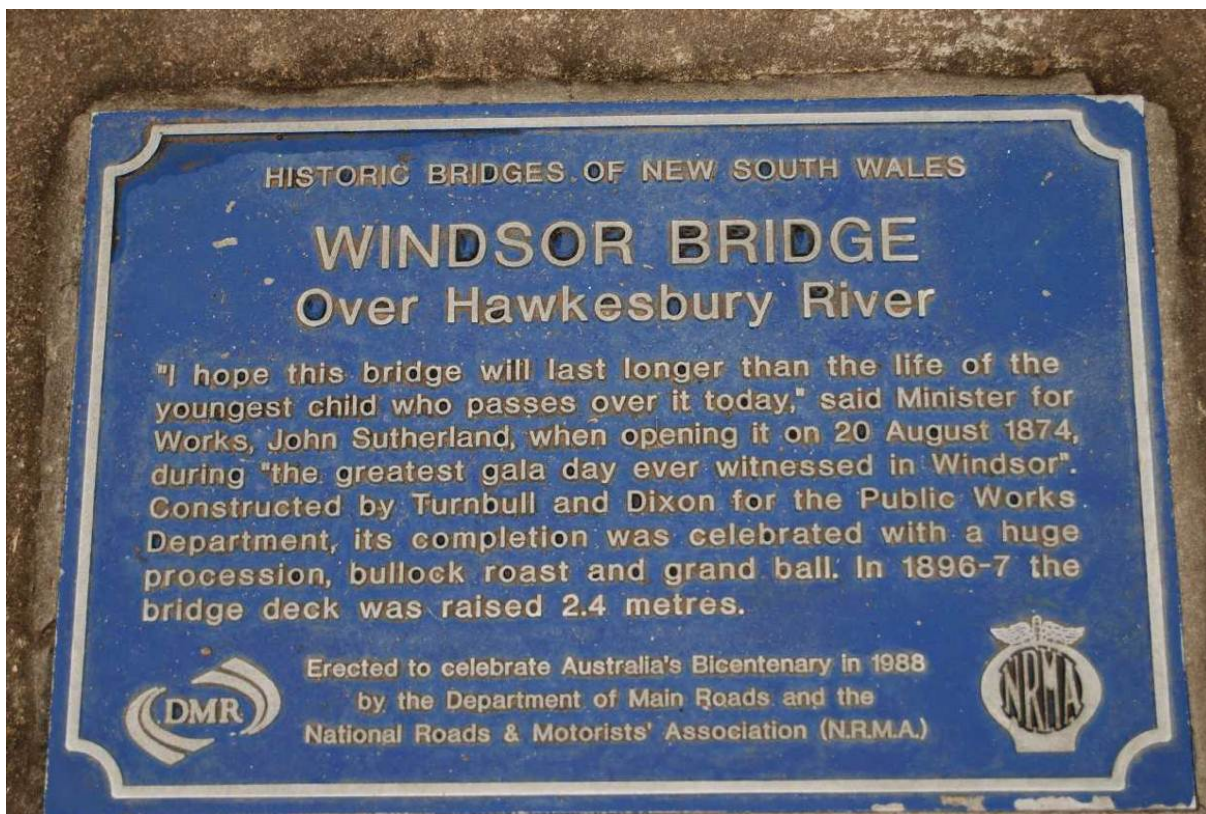


Plate 5: The "Historic Bridges of New South Wales" for Windsor Bridge to commemorate the national Bicentenary.

⁸ www.nationaltrust.org.au

⁹ <http://www.engheritage-sydney.org.au/>

3.2.7 Anomalies in the Listings and Property Descriptions

- The SHR entry for "Thompson Square Conservation Area" includes the property description for Lot 2 DP 223433, which does not exist on SixViewer; it is likely that this property description is an error as Lot 2 DP 233054 is one part of 88 George Street. The lot adjacent, Lot 1 DP 223433, also with the street address of 88 George Street does not form part of the SHR listing but it is included in the LEP Thompson Square Heritage Conservation Area (C4). Note that the SHR entry for the Thompson Square Conservation Area also uses the name "Thompson Square Precinct" on the legal plan (refer Plate 2).
- The *Hawkesbury LEP 2012 gazetted in September 2012* lists items in Schedule 5 (heritage schedule) but does not provide individual listing numbers for some items. Whereas the Draft LEP 2011 described all the buildings within Thompson Square as individual items with their own allocated number, as well as part of the conservation area (C4), the gazetted LEP has identified them using "part of" without defining the term. That means that most of the buildings within Thompson Square, as well as the reserves are "Part of I00126". I00126 is not defined anywhere within the heritage schedule. Those items that are listed individually on the SHR are provided with their own identifier in the LEP heritage schedule, which corresponds with the SHR listing number. This numbering system raises the question of whether any of the items identified as "Part of I00126" are individually listed. For the purposes of this report, they items that are identified in the heritage schedule by the number I00126 are not considered to be individually listed in the heritage schedule of the LEP.

All of the items in the list below are included in the LEP 2012 conservation area C4.

The identifying numbers in the Draft LEP 2011, LEP 2012 and their SHR number and are listed below:

Item	SHR		Draft LEP 2011		LEP 2012	
	Item	Conservation Area	Item	Conservation Area	Item	Conservation Area
Thompson Square Conservation Area	00126	00126	C4	C4	C4	C4
Macquarie Arms Hotel 81 George Street	0041		I442	C4	I00041	C4
7 Thompson Square		00126	I528	C4	Part of I00126	C4
5 Thompson Square	00005		I527	C4	I00005	C4
1 – 3 Thompson Square		00126	I525	C4	Part of I00126	C4
4 Bridge Street		00126	I73	C4	Part of I00126	C4
6 (or 8) Bridge Street		00126	I206	C4	Part of I00126	C4
10 Bridge Street		00126	I253	C4	Part of I00126	C4
14 Bridge Street		00126	I273	C4	Part of I00126	C4
17 Bridge Street		00126	I300	C4	Part of I00126	C4

62 – 68 George Street	00126	I295	C4	Part of I00126	C4
70 George Street	00126	I400	C4	Part of I00126	C4
74 George Street	00126	I401	C4	Part of I00126	C4
80-82 George Street	00126	I402	C4	Part of I00126	C4
84 and 88 George Street	00126	I479	C4	Part of I00126	C4
92 George Street			C4		C4
11 Macquarie Street			C4		C4

- 84 and 88 George Street are listed as a pair (Part of I00126) on the LEP 2012. Hawkesbury Council describes the properties as: "84 and 88 George Street", "Lot 1 DP 223433 and Lot 2 DP 233054" (presumably in respective order) but data from SixViewer indicates that Lot 2 DP 233054 is between 82 and 88 George Street but the query tool returns a street address of 88 George Street.
- 84 George Street is classified by the National Trust of Australia (NSW) and is identified as S9736. It is described on "Heritage Space"¹⁰ as "*The site adjoining the Thompson Square Precinct*" which suggests it is not part of the conservation area listing. It is also included on the classification card as no. 84 George Street but this may be a typographical error that has been repeated as the number 84 does not appear again on the old classification card. No building exists that is numbered 84, only the one-storey brick cottage at 82 George Street, separated from number 88 (a Chinese restaurant) by an empty lot and which is currently being used as the side entrance to the restaurant.

3.2.8 Planning Documents

Hawkesbury Cultural Plan 20-2011

Hawkesbury City Council commissioned the *Hawkesbury Cultural Plan 2006-2011* "in recognition of the role that culture plays in shaping the quality of life of the Hawkesbury"¹¹ and Council's role in cultural development. The aim of the Cultural Plan was to provide Council with the information it required to effectively support cultural activities and the arts in the Hawkesbury region (Hawkesbury City Council May 2006).¹²

Information was collected through a number of sources including interview and community workshops. The information was then collated and presented in the Cultural Report, which identified the cultural landscape, heritage and history as key components of the area's identity and sense of place.

¹⁰ <http://www.heritagespace.com.au/register?resetfilters=0>

¹¹ Hawkesbury City Council, *Hawkesbury Cultural Plan 2006-2011*, adopted 30 May 2006, p 5.

¹² *Ibid.*

The entire list of key components is reproduced below:

- i. Hawkesbury River and the cultural landscape*
- ii. Heritage and history including Indigenous culture*
- iii. Rural amenity and lifestyle and the friendliness of the people*
- iv. Education facilities and support for learning*
- v. Proximity to the City*
- vi. Arts and cultural facilities (e.g. Regional Gallery and Regional Museum) and the strength and experience of the area's arts and cultural groups.*¹³

Windsor Foreshore Parks Incorporating the Great River Walk

This report is a plan of management (PoM) prepared for Hawkesbury City Council in 2009. The purpose of the PoM is to incorporate selected foreshore areas in Windsor into the Great River Walk, a planned pedestrian and bicycle path which, when complete is proposed to extend 570 kilometres from Broken Bay, through the Southern Highlands and on to Canberra.¹⁴ The report aims to provide guidance to manage community and crown land within the framework of community recreation facilities. The PoM (2009) refers specifically to Windsor and proposes ways of incorporating significant elements in the locality into the larger walk.

The River Walk PoM identifies areas of natural and cultural significance to be integrated into the Windsor section of the walk and formulates management strategies for both. Aboriginal and historic heritage were considered as part of the planning process for the walk. By virtue of its location adjacent to the Hawkesbury River, Thompson Square features as one of three identified heritage locations recommended for inclusion in the Windsor section of the walk. The other two explicitly "heritage" locations are the "George Street North Precinct" and Fitzgerald Street at the intersection with The Terrace.¹⁵ The Great River Walk provides the opportunity to expand the identified routes to incorporate more elements of Thompson Square; these have been explored more fully in the discussion on interpretation.

¹³ *Op. Cit.*, Hawkesbury City Council 2006, p 13.

¹⁴ *Ibid* p 5.

¹⁵ *Ibid* p 74 -75.

3.3 Summary of Heritage Listings

The following table presents a summary of heritage listings within and adjacent to the project area. The table identifies the heritage listings for each site within the study area (refer to Figure 3 and Figure 4). Sites within the study area that do not have any heritage listing are not included in the following table.

Table 3: Summary of heritage listings

Listings that have statutory implications under Part 4 and Part 5 of the EP&A Act are followed by an asterisk.

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
01	Thompson Square	Thompson Square including Bridge Street, Old Bridge Street, The Terrace, and George Street as well as the surrounding buildings identified on the SHR listing for Thompson Square and the separately listed buildings.	-	SHR #00126* (Excluding the cutting through Thompson Square)	State
				LEP 2012: C4*	State
			-	NT: S10510	Not stated
			RNE 3167	RNE 3166	Not stated
02	Thompson Square – upper parkland area	Thompson Square, Lot 7007 DP 1029964.	-	SHR: 00126*	State
				LEP 2012: C4 (both reserves)*	State
			NT: S11456	NT: S11456 (reserves) and S10510 (precinct) under 'Portion of land known as Thompson Square'.	Not stated

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
			RNE (3167)	-	Not stated
03	Thompson Square – lower parkland area	1 Bridge Road, Lot 345 DP 752061. Also addressed as 3 Old Bridge Road and Thompson Square.	-	SHR 00126	State
				LEP 2012: C4 (both reserves)	State
			NT: S11456	NT S10510 under 'Portion of land known as Thompson Square'	Not stated
			RNE 3167	-	
04	The Doctors House	1-3 Thompson Square; Lot B, DP 161643 and Lot 1, DP 196531	-	SHR 00126	State
			-	LEP 273 as part of the conservation area	Not stated
			LEP Part of I00126	LEP C4	State
			NT S11446	NT S10510 – Thompson Square Precinct	Not stated
			RNE 3168	-	Not stated
05	House and Outbuilding	No. 5 Thompson Square; Lot 1, DP 7450356	SHR 00005	-	State
			LEP Part of I00216	LEP C4	State
			NT S11447	NT S10510 – Thompson Square	Not stated

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
				Precinct	
			RNE 3169		Not stated
06	Hawkesbury Museum and Tourist Information Centre	No. 7 Thompson Square; Lot 1, DP 60716	-	SHR 00126	State
			LEP Part of I00126	LEP #C4	State
			NT S11448	NT S10510 – Thompson Square Precinct)	Not stated
			RNE 3170	-	Not stated
07	Macquarie Arms Hotel	81 George Street (also addressed as Thompson Square); Lot 1, DP 864088;	SHR 00041	-	State
			LEP Part of I00126	LEP #C4	State
			NT S10510	NT S10510 – Thompson Square Precinct	Not stated
			RNE 3171	-	Not stated
08	House	No. 4 Bridge Street; Lot 10, DP 666894	-	SHR #00126	State
			LEP Part of I00126	LEP #C4	State
			NT S11455	NT S10510 –	Not stated

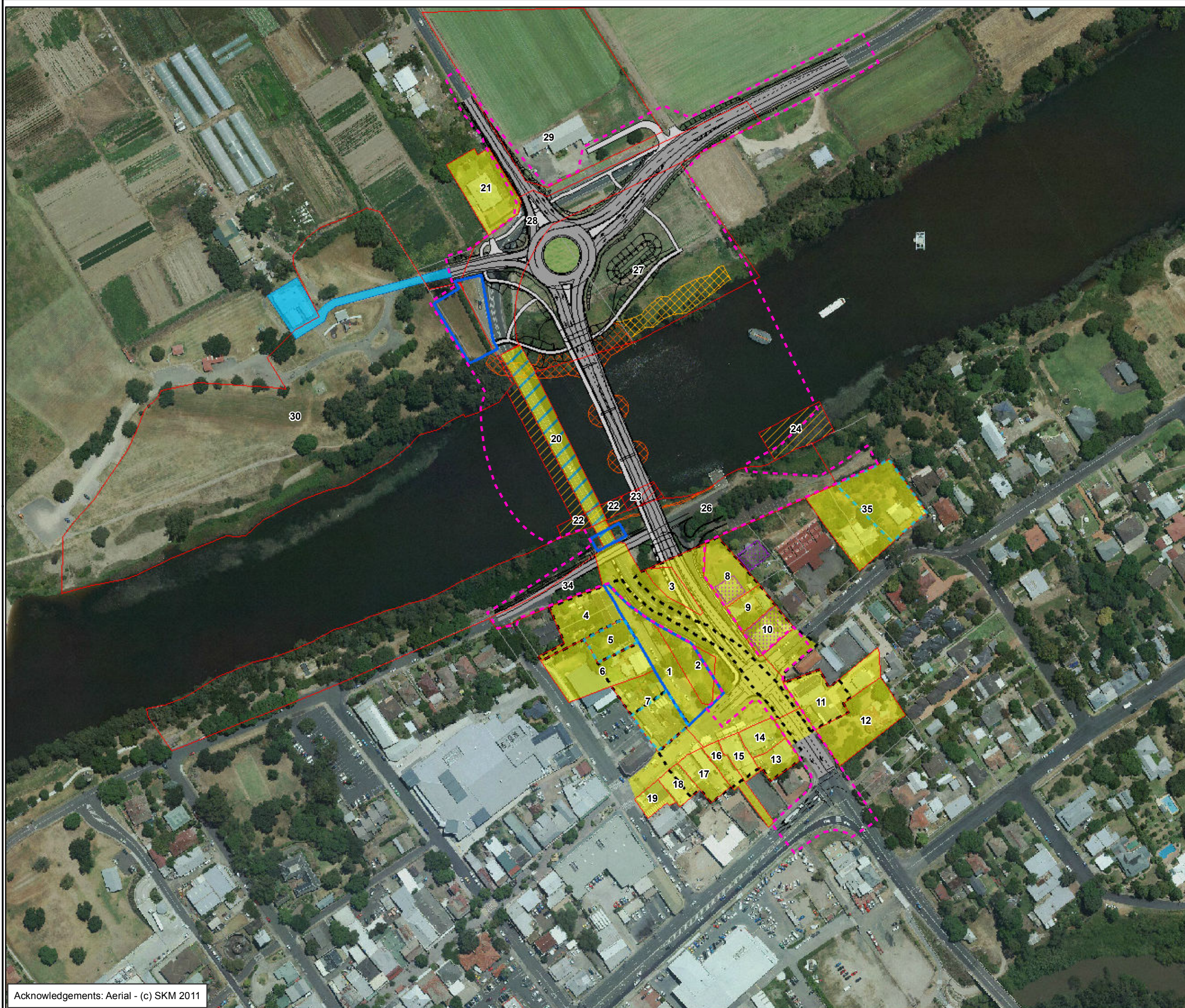
Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
09	House	No. 6 Bridge (also addressed as No. 8 Bridge Street); Lot 1, DP 995391		Thompson Square Precinct	
			RNE 3166	-	Not stated
			-	SHR 00126	State
			LEP Part of I00126	LEP C4	State
			NT S11451	NT S10510 – Thompson Square Precinct	Not stated
10	Building	No.10 Bridge Street; Part Lot A, DP 381403	RNE 3173	-	Not stated
			-	SHR 00126	State
			LEP Part of I00126	LEP #C4	State
			NT S11452	NT S10510 – Thompson Square Precinct	Not stated
11	Former School of Arts building	No. 14 Bridge Street; Lot 1, DP 136637; Lots 1 and 2, DP 1127620	RNE 3174		Not stated
			-	SHR 00126	State
			LEP Part of I00126	LEP C4	State
			NT S11450	NT S10510 – Thompson Square	Not stated

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
				Precinct	
			RNE 3172		
12	Cottage	No. 20 Bridge Street; Part Lot 2, DP 420926	LEP I147		Local
13	Cottage	No. 17 Bridge Street (also addressed as 68 George Street); Lot 1, DP 555685	-	SHR #00126	State
			LEP Part of I00126	LEP #C4	State
			NT S11453 -	NT S10510 – Thompson Square Precinct	Not stated
			RNE 3175	-	Not stated
14	Shops	Nos. 62 – 68 George Street; Lots 1 and 2, DP 555685.	-	SHR 00126	State
			LEP Part of I00126	LEP C4	State
			NT S11454	NT S10510 – Thompson Square Precinct	Not stated
			RNE 3176	-	Not stated
15	Shops	Nos. 70 – 72 George Street (also addressed as 70 George Street); Lot 1, DP 1011887	-	SHR 00126	State
			LEP Part of I00126	LEP C4	State

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
16	AC Stern Building	No. 74 George Street; Lot 1, DP 87241	NT (S9737 – Listed under 64 – 74 George Street)	NT S10510 – Thompson Square Precinct	Not stated
			RNE 3177	-	Not stated
			-	SHR 00126	State
			LEP Part of I00126	LEP #C4	State
			NT (S9737 - listed under 64 – 74 George Street)	NT S10510 – Thompson Square Precinct	Not stated
17	Shops	Nos. 80-82 George Street; Lots 10 and 11, DP 630209	RNE 3177	-	Not stated
			-	SHR 00126	State
			-	LEP 273	Not stated
			LEP Part of I00126	LEP #C4	State
			NT (11455 – listed under 4 Bridge St and George St 60 – 82)	S10510 – Thompson Square Precinct	Not stated
18	Shops	82 -88 or 84-88 George Street	RNE (5045195 – listed under Thompson Square Conservation Area)	-	Not stated
			-	SHR 00126 (Lot 2	State

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
		comprising of 2 lots: · Lot 2 DP 233054 · Lot 1 DP 233433 Refer discussion in 0 above – these items are variously called 82-88 George Street and 84 – 88 George Street.		233054 only)	
			-	LEP 273	Not stated
			LEP Part of I00126	LEP C4	State
			NT (S9736 –no. 84 is listed on data sheet– see notes adjacent)	NT No. 84 also listed under S10510 conservation area– as well as "site adjoining Thompson Square Precinct	Not stated
19	Shops	92 George Street; Lot 1 DP 730435	-	LEP C4	Not stated
			LEP Part of I00126? (listed individually on map but is missing from heritage schedule	LEP C4 (Partly within conservation area	Not stated
			RNE 3177	-	Not stated
20	Windsor Bridge	Variously addressed as Wilberforce Road, Hawkesbury River, Bridge Street, MR 182 and Bridge No.415.	S.170 RTA 4309589	-	State
				-	
			LEP I276	-	Local
			-	-	Not stated
21	Bridgeview	27 Wilberforce Road, Freemans Reach; Lot A DP 370895			
			LEP I274	-	Local
35	Government Cottage	41 George Street, Windsor; Lot 1,	SHR 01843	-	State

Report Site Number	Site Name	Address/Property Description	Listings		Significance
			Individual Item	As a Conservation Area	
	archaeological site	Section 11, DP 995355.	LEP I172		State



Legend

Investigation Units

Listed Heritage Items

LEP/Draft LEP

s170 Register

SHR

Thompson Square Conservation Area (SHR)

Non-listed Items

Known Heritage Items

Potential Heritage Items

Construction Works

Construction Work Zone

Concept design

Permanent rock scour protection

Temporary rock scour protection

Properties requiring flood mitigation works. Works subject to further consultation with and agreement from affected property owners

Properties requiring noise mitigation works. Works that are feasible and reasonable would be subject to further consultation with and agreement from affected property owners.

Works subject to further stakeholder consultation

Figure 4: Heritage Items within the Project Area

Numbers relate to investigation units presented in table 1 and the data sheets

0 15 30 45 60 75 90 105 120

Metres
Scale: 1:2,500 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Biosis Research Pty. Ltd.
18-20 Mandible Street
Alexandria
NEW SOUTH WALES
2015

Offices also in: Ballarat, Melbourne, Wollongong, Canberra, Wangaratta

Date: 13 September 2012, File number: 14020
Checked by: PBK, Drawn by: JMS
Location: P:\14000s\14020\Mapping\14020_SoH\F4_HeritageItems_310812.mxd