

## The process to find the best option

Preliminary investigations

Engineering considerations to identify options

**WE ARE HERE ▶ Community workshop to obtain feedback on nine options**

Community comments on refined list of options

Preferred option identified

Environmental assessment

Project approval sought, followed by detailed design and construction

## Community workshop

The RTA values your views and comments about the project. The RTA will meet with businesses and residents at a community workshop where members of the project team will be available to answer questions and receive feedback. A formal presentation will not be given, so please feel free to drop in at any time during the workshop.

## Display locations

The options will be on display from **Monday 13 July until Friday 14 August 2009** at the following locations:

- **Hawkesbury City Council**  
366 George Street, Windsor  
Monday to Friday 8.30am to 5pm
- **Richmond Motor Registry**  
173 Windsor Street, Richmond.  
Monday to Friday 8.30am to 5pm  
Saturday 8.30am to 12pm

**The Deerubbin Centre (Windsor Central Library)**  
300 George Street, Windsor  
Saturday 1 August 2009  
Between 10am and 3pm

## Your comments are invited

Written comments on the options are welcome. Please address these to:  
John Navamani, Senior Project Manager | Roads and Traffic Authority | PO Box 973 PARRAMATTA NSW 2124

Or email comments to: [John\\_Navamani@rta.nsw.gov.au](mailto:John_Navamani@rta.nsw.gov.au)

**All comments are required by Friday 14 August 2009.**

All submissions from members of the community and other interested parties will be taken into account in preparing a refined 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.



**SPEEDING KILLS ROADWORKERS TOO.**  
Slow down at worksites.

## Roads and Traffic Authority

All information in correspondence is collected for the sole purpose of assisting in the assessment of this proposal. The information may be used by the RTA and/or the RTA's project contractors. All information received, including names and addresses of respondents, may be published in subsequent documents unless clear indication is given in the correspondence that all or part of that information is not to be published.

## For further enquiries

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July 2009  
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# Community Update

## Windsor Bridge over the Hawkesbury River

JULY 2009

The Roads and Traffic Authority (RTA) is seeking community feedback on nine options to rehabilitate or replace the Windsor Bridge across the Hawkesbury River.

A community workshop will be held on Saturday 1 August 2009 from 10am to 3pm at the The Deerubbin Centre, Windsor.

This \$25 million project is fully funded by the NSW Government.

## Background

Windsor Bridge is the oldest existing crossing of the Hawkesbury River. The bridge was originally built with a timber deck on cast iron piers in 1875. Over the years the bridge has undergone many alterations including raising the bridge by 2.4 metres and adding a pier in 1897. The timber deck, abutment and the same pier were replaced by reinforced concrete in 1920 and a footpath was added on the downstream side in 1968.

The bridge is 143 metres long and 6.1 metres wide. It carries an average of 18,000 vehicles per day.

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

## What has happened so far?

In June 2008 the NSW Government announced it had committed \$25 million to replace Windsor Bridge.

The announcement followed investigations by the RTA into the condition of the existing bridge and the options for rehabilitation or replacement.

This document outlines:

- Nine options currently being considered to rehabilitate or replace the existing bridge.
- The objectives of an improved crossing over the Hawkesbury River (see table opposite).

## Project objectives

The project is to provide a safe and reliable crossing of the Hawkesbury River at Windsor that meets the following objectives:

OBJECTIVES	CRITERIA
<b>Improve safety for motorists, pedestrians and cyclists</b>	<ul style="list-style-type: none"> <li>• Meets design codes (eg traffic lane widths, shoulder widths and shared path widths).</li> <li>• Meets current road speed 60 km/h.</li> </ul>
<b>Improve traffic and transport efficiency</b>	<ul style="list-style-type: none"> <li>• Minimise queue length/delays.</li> <li>• Improve performance of road network (level of service).</li> <li>• Enable two heavy vehicles to pass on the bridge without waiting.</li> <li>• Improved load capacity to meet current load standards.</li> </ul>
<b>Improve flood immunity</b>	<ul style="list-style-type: none"> <li>• Provide for a 1 in 5 year flood event.</li> </ul>
<b>Meet community needs for the long term</b>	<ul style="list-style-type: none"> <li>• Provide efficient connection for local and regional traffic.</li> <li>• Provide pedestrian and cyclist connection to surrounding locations.</li> <li>• Minimise impact on recreational space.</li> <li>• Minimise impact on noise.</li> <li>• Minimise impacts to businesses and shopping environment.</li> <li>• Minimise impact on property access and need for acquisition.</li> <li>• 100 year life span for the bridge structure.</li> </ul>
<b>Minimise impacts on heritage and character of the local area</b>	<ul style="list-style-type: none"> <li>• Minimise impact on Aboriginal and non-Aboriginal heritage and conservation areas.</li> <li>• Minimise visual impact of the bridge and road approaches on the character of local area.</li> </ul>
<b>Cost effective and an affordable outcome</b>	<p>Provide a cost effective solution in terms of:</p> <ul style="list-style-type: none"> <li>• Capital cost.</li> <li>• Maintenance cost.</li> <li>• Investment on return.</li> <li>• Cost benefit ratio.</li> </ul>

PHOTO TAKEN 16/09/08

PHOTO TAKEN 16/09/08

# A summary of the options to improve the Hawkesbury crossing at Windsor

## OPTIONS 1 and 2 DOWNSTREAM OF EXISTING BRIDGE

Approximately 35 metres downstream from the existing bridge, aligned with Old Bridge Street.

### OPTION 1 – HIGH LEVEL BRIDGE

Option 1 would provide clearance of approximately 4.5 metres for the bridge from The Terrace. This would allow access for service vehicles including garbage trucks, cars and coaches under the bridge from the Windsor side.

### OPTION 2 – LOW LEVEL BRIDGE

Option 2 would provide clearance of approximately 3.5 metres for the bridge from The Terrace. This would allow access for cars only under the bridge from the Windsor side.

- Key considerations:
- These options are a continuation of the existing Windsor Road corridor.
  - Central to the Windsor township, connecting the northern side of the Hawkesbury River from within the township of Windsor.
  - Easier access to southern river bank by continuing The Terrace under the bridge.
  - Safe pedestrian and vehicle access to the southern river bank.
  - Potential for the Bridge Street road cutting to be backfilled and landscaped to reinstate the shape of Thompson Square.
  - The bridge approach would cut through part of Thompson Square which is listed on State Heritage Register.
  - Existing northbound right turn from Bridge Street to heritage properties in Old Bridge Street would be removed.
  - Aboriginal heritage is likely to be found in areas near the presence of permanent water.
  - Tree loss would be required along both river banks.
  - Traffic would be closer to existing properties on the east side of Bridge Street.
  - Property would be acquired from the turf farm on the northern river bank.

## OPTION 5 KABLE STREET – FROM WINDSOR ROAD, ALONG MACQUARIE STREET

Along Macquarie Street through to Kable Street, crossing the Hawkesbury River at Macquarie Park on the northern river bank.

Key considerations:

- As Kable Street is narrow, existing vehicle parking would need to be restricted/denied between Macquarie Street and George Street.
- Potential for the Bridge Street road cutting to be backfilled and landscaped to reinstate the shape of Thompson Square.
- Reconstruction of the intersection at Macquarie Street and Kable Street, providing an extended right turn bay to accommodate additional turning traffic.
- Traffic lights required at The Terrace to manage the increased traffic volumes. Alternatively this access may be closed.
- Removal of raised pedestrian threshold at George Street and replacement with traffic lights would allow pedestrians to cross safely.
- Increased traffic along shopping precinct in Kable Street reducing pedestrian and parked vehicle safety.
- Potential impact to the heritage listed Masonic Centre on Kable Street.
- Tree loss would be required along both river banks.
- Aboriginal heritage is likely to be found in areas near the presence of permanent water.
- Property would be acquired on Kable Street, along the southern and northern river banks and from Macquarie Park.

## OPTION 6 PALMER STREET

This option begins at a new T intersection on Windsor Road, north of Pitt Town Road, travels east by a new bridge/viaduct across South Creek to run parallel to the east of Palmer Street, proceeding to a new bridge over the Hawkesbury River.

Key considerations:

- Safe navigation for river traffic around bridge piers.
- Potential access difficulties to properties east of Palmer Street.
- Increase in traffic noise to properties along the route.
- Potential for the Bridge Street road cutting to be backfilled and landscaped to reinstate the shape of Thompson Square.
- Tree loss would be required along both river banks.
- Aboriginal heritage is likely to be found in areas near the presence of permanent water.
- Property would need to be acquired for the entire proposed route.

## OPTION 3 HIGH LEVEL – UPSTREAM OF EXISTING BRIDGE

Slightly upstream of the existing structure, crossing the Hawkesbury River 10 metres to the west of existing bridge and using the same road approaches.

Key considerations:

- This option goes through the middle of Thompson Square.
- Existing northbound right turn from Bridge Street to heritage properties in Old Bridge Street would be removed.
- Approach roads would need to be realigned, affecting Thompson Square and Macquarie Park.
- Existing service road access for through traffic would be denied in front of the properties in Thompson Square immediately west of Bridge Street.
- Access for buses and other vehicles would be provided along The Terrace under the new bridge.
- Aboriginal heritage is likely to be found in areas near the presence of permanent water.
- Tree loss would be required along both river banks.
- A retaining wall or the full acquisition of property is likely from the Doctors House in Thompson Square.
- Property would be required along the northern river bank through Macquarie Park.
- Difficult construction due to the close proximity to the existing bridge.

## OPTION 4 BAKER STREET – UPSTREAM OF EXISTING BRIDGE

Along Macquarie Street via Baker Street, crossing the Hawkesbury River at Macquarie Park on the northern river bank.

Key considerations:

- As Baker Street is narrow, existing parking would need to be restricted/denied between Macquarie Street and George Street.
- Potential for the Bridge Street road cutting to be backfilled and landscaped to reinstate the shape of Thompson Square.
- Reconstruction of the intersection at Macquarie Street and Baker Street, providing a signalised right turn bay to accommodate right turning traffic.
- Increased traffic along shopping precinct in Baker Street reducing pedestrian and parked vehicle safety.
- Traffic lights would be required at The Terrace to manage the increased traffic volumes. Alternatively this access may be closed.
- Potential for traffic to queue back onto Windsor Road if the right turn bay cannot meet the needs of traffic during peak or busy periods.

## OPTION 9 REHABILITATE THE EXISTING BRIDGE

The rehabilitation of the existing bridge with a 25 year life span would cost between \$14 million and \$17 million. The bridge would have to be closed for up to 12 months during the work and a significant detour (approximately 20 km) would be required to cross the river during the work.

Key considerations:

- Replacing the deck requires substantial modifications to the piers.
- There would be no additional impact on Thompson Square.
- Provide for a 1 in 2 year flood event.
- Minimal vegetation would be disturbed.
- No property acquisitions would be required.
- Potential safety hazard for traffic could be created with current sight distances along approaches to the bridge.

## CHALLENGES OF RETAINING THE EXISTING BRIDGE

If the preferred option is to construct a new bridge the following needs to be considered:

- Potential risk to the new bridge if constructed downstream of the existing bridge.
- The ongoing cost of maintaining the existing bridge.
- The heritage of the existing bridge.
- Pedestrian and cyclist connectivity to local areas.

## OPTION 7 COURT STREET

This option would provide a signalised T intersection on Windsor Road to enable traffic to turn right into Court/North streets, meeting at a T intersection with Palmer Street and proceeding north along Palmer Street to a new bridge over the Hawkesbury River.

Key considerations:

- Safe navigation for river traffic around bridge piers.
- Widening of Court Street and North Street.
- Potential for queuing across Fitzroy Bridge along Windsor Road. Widening of the bridge may be necessary to accommodate right turn queuing along Windsor Road/Bridge Street.
- Increased traffic along Court, North and Palmer streets.
- Increase in traffic noise to properties along the route.
- Potential access difficulties to properties along Court, North and Palmer streets.
- Potential impact to the North Street Conservation Area in Windsor.
- Potential for the Bridge Street road cutting to be backfilled and landscaped to reinstate the shape of Thompson Square.
- Tree loss would be required along both river banks.
- Aboriginal heritage is likely to be found in areas near the presence of permanent water.
- Property would be acquired at Windsor Road/Court Street intersection and along Court and North streets.

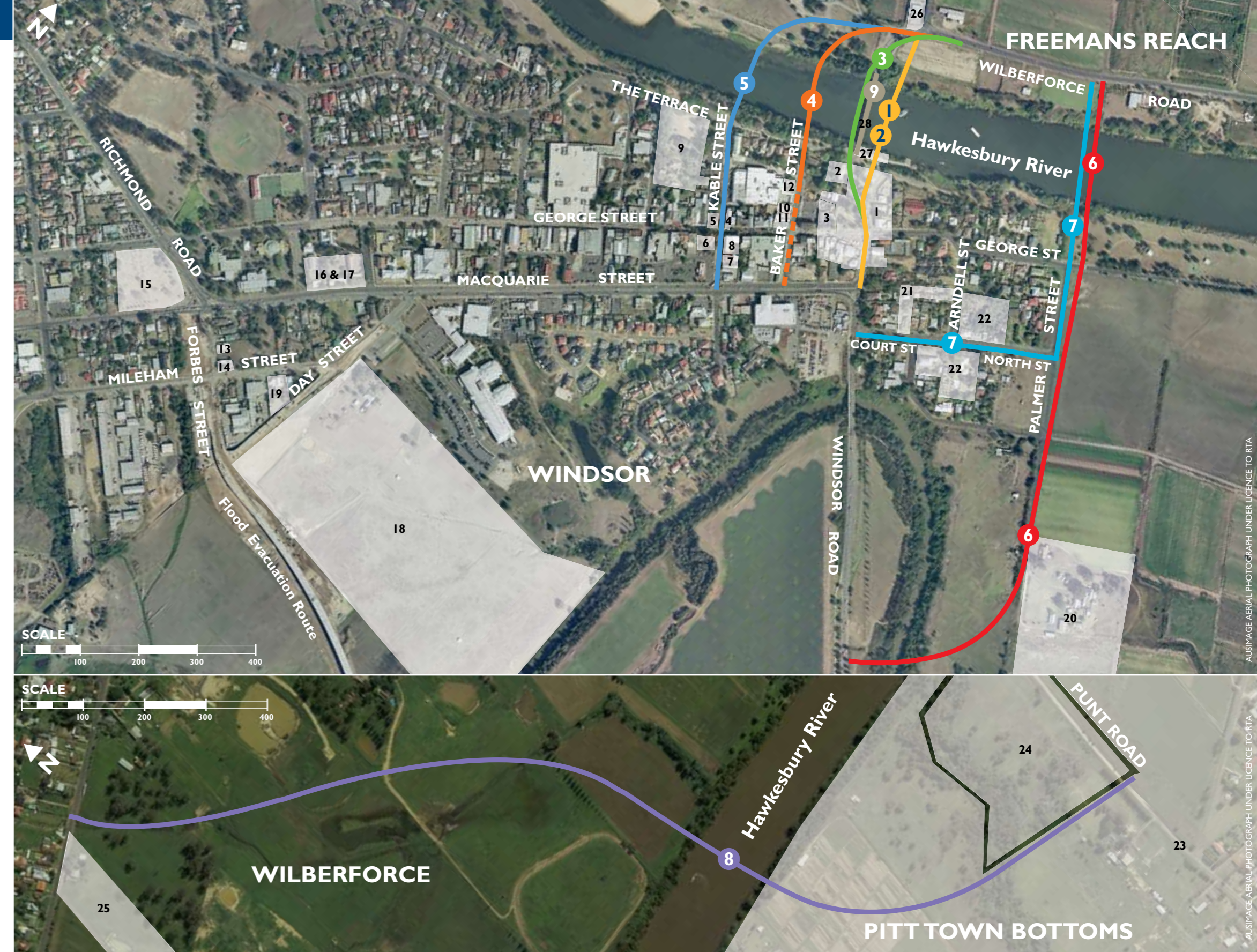
## OPTION 8 PITT TOWN ROAD

Access from Pitt Town Road onto Punt Road, then by viaduct or low embankment and bridge across Bardenarang Creek, across the floodplain crossing the Hawkesbury River to King Road, Wilberforce.

Key considerations:

- Safe navigation for river traffic around bridge piers.
- Punt Road is a gravel road and would require reconstruction to accommodate anticipated traffic volumes.
- Bathurst Street is narrow and would require widening and upgrading to accommodate anticipated traffic volumes.
- Increase in traffic through Pitt Town.
- Potential access difficulties to properties along the route.
- Increase in traffic noise to properties along the route.
- Potential for the Bridge Street road cutting to be backfilled and landscaped to reinstate the shape of Thompson Square.
- Potential impact to heritage items along the route.
- Tree loss would be required along both river banks.
- Aboriginal heritage is likely to be found in areas near the presence of permanent water.
- Property would be acquired across the flood plains on both river banks.

## LOCATION OPTIONS CONSIDERED



KEY – Location options		Heritage properties/items	
<span style="color: orange;">—</span>	Options 1 & 2	<span style="color: red;">—</span>	Option 6
<span style="color: green;">—</span>	Option 3	<span style="color: cyan;">—</span>	Option 7
<span style="color: orange;">—</span>	Option 4	<span style="color: purple;">—</span>	Option 8
<span style="color: blue;">—</span>	Option 5	<span style="color: grey;">—</span>	Option 9

<b>1</b>	Thompson Square Conservation Area	<b>10</b>	9 Baker St, Arnold Centre	<b>19</b>	8 Mileham St, House
<b>2</b>	1-3 Thompson Square, House	<b>11</b>	11 Baker St, Doctors Surgery	<b>20</b>	Palmer St, Peninsula House/Tebbutt's Observatory
<b>3</b>	Macquarie Arms Hotel	<b>12</b>	3 Baker St, 'Uralia'	<b>21</b>	Court St, Old Barrack Wall, Stables
<b>4</b>	137 George St, Office	<b>13</b>	12 Forbes St, Cottage	<b>22</b>	North St Conservation Area, North St Group
<b>5</b>	141 George St, Former CBC Bank	<b>14</b>	16 Forbes St, Cottage	<b>23</b>	Pitt Town District Cultural Precinct
<b>6</b>	146 George St, Form Bank of NSW	<b>15</b>	Catholic Cemetery	<b>24</b>	1 Punt Road Pitt Town, Manse of Ebenezzer
<b>7</b>	22 Kable St, Masonic Temple Church, The Manse Farm	<b>16</b>	Ashlar Morgue Building, Hospital block and fence	<b>25</b>	62 King Road, Wilberforce Butcher's Shop
<b>8</b>	136 George St, Commercial Building	<b>17</b>	Macquarie St, Dedication Stone	<b>26</b>	27 Wilberforce Rd, 'Bridgeview'
<b>9</b>	12 Fitzgerald St, 'Sunnybrae'	<b>18</b>	Day St, 'Trevallyn'	<b>27</b>	Possible remains of Windsor Wharf and convict drain
				<b>28</b>	Existing Windsor Bridge