

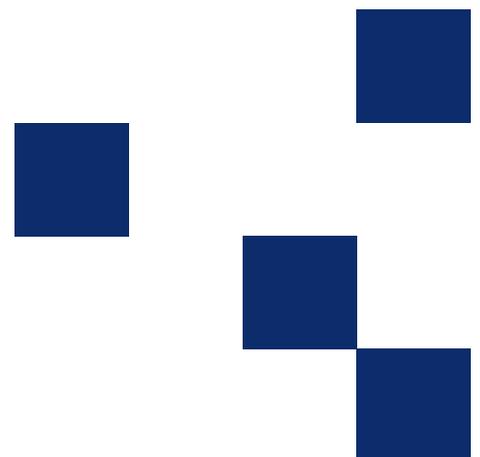


**Transport**  
Roads & Maritime  
Services

# **TIMBER TRUSS BRIDGE CONSERVATION STRATEGY**

Submissions report and revised  
conservation strategy

AUGUST 2012



Roads and Maritime Services

*Timber Truss Bridge Conservation Strategy*

Submissions report and revised conservation  
strategy

August 2012

Prepared by Futurepast Heritage Consulting P/L and NSW Roads and Maritime Services



# Executive summary

The Roads and Maritime Services (RMS) *Timber Truss Bridge Conservation Strategy Submissions Report and Revised Conservation Strategy* sets out how RMS undertook public consultation on its draft Strategy for conservation of timber truss road bridges in NSW, how submissions from stakeholders and the public were analysed, and presents the revised strategy which reflects its response to those submissions.

In 2010 NSW Roads and Maritime Services prepared the document *Timber Truss Road Bridges – A Strategic Approach to Conservation* (the Strategy), which detailed a methodology for assessing the conservation suitability and approach to managing the 48 remaining timber truss bridges managed by RMS. These bridges have a range of limitations within a modern road network and the Timber Truss Bridge Conservation Strategy (the Strategy) outlines both operational and heritage considerations and applies a methodology to determine which of the 48 bridges represent better candidates for long-term conservation within the road network.

The Strategy was advertised for public comment, and these comments form the basis of this Submissions Report. Responses have been provided to all matters raised in the submissions.

The Strategy was advertised between 18 July and 26 August 2011 in a range of local and state-wide newspapers. Roads and Maritime Services also set up a website containing the complete Strategy, a Summary Report and supporting documentation including the initial heritage assessment of the timber truss bridges undertaken in 1998. A project-specific telephone number and email address were also established to receive submissions and answer questions.

Roads and Maritime Services wrote directly to many stakeholders, including 367 local historical societies, affected NSW local councils and other bodies and individuals who have made representations in relation to this issue in the past. Several public meetings were held including at Carrathool, Bombala and in Sydney (for the National Trust of Australia (NSW) and Engineering Heritage Australia). Submissions were accepted up until 15 September 2011.

The 106 submissions received included general comments on the approach of the Strategy, however the majority of submissions focussed on one bridge or a small subset of bridges in a local area. Submissions from heritage stakeholder agencies acknowledged the need for a strategic approach to the issue, although with some reservations. Community comment included submissions from 10 local councils, 15 historical societies and community groups, 13 businesses and more than 50 individuals. Comments varied in terms of support for retention or replacement of various bridges. The bridges with the greatest community concern were Carrathool (17 submissions – majority for replacement), Tabulam (14 submission – majority for replacement), Crankies Plains (also called Coolumbooka) (11 submissions – majority for retention) and Barham (9 submissions – majority for retention). Only six bridges attracted more than half a dozen submissions, 13 attracted between two and six submissions, another ten attracted one submission and the remaining 19 bridges attracted no individual submissions.

The Strategy has been amended in response to the results of the community consultation. The amended Strategy presented in this report proposes retaining 26 timber truss bridges and progressively replacing the remaining 22, as road demands

and funding become available.

The 26 bridges identified for retention now include Barham and Wallaby Rocks bridges. Roads and Maritime Services will retain these bridges in response to strong community support. Following strong representations from Goulburn-Mulwaree Council for a new bridge RMS now proposes to replace Lansdowne Bridge.

RMS also received very strong representations from Carrathool Shire Council and the local community for a new bridge. However Carrathool Bridge has unique features which strongly support its retention. As it would be located on a local road the provision of a new bridge is outside the scope of this strategy.

Roads and Maritime Services' position remains unchanged on all other bridges.

The Revised Strategy is presented in Section 4 of the report. Roads and Maritime Services will present this position to the NSW Heritage Council for endorsement.

## Summary of the Strategy recommendation for individual bridges

### Bridges proposed to be retained

Bridge	LGA	Current listing	Proposed listing	Comment
<b>Old PWD</b>				
Clarence Town	Dungog	SHR	SHR	
Monkerai	Great Lakes	SHR	SHR	
<b>McDonald</b>				
Galston	Hornsby	SHR	SHR	Traditional construction
Junction	Tumut	SHR	SHR	
McKanes	Lithgow City	SHR	SHR	
<b>Allan</b>				
Beryl	Mid-Western Regional	S170	S170	Central West group
Carrathool	Carrathool	SHR	SHR	
Dunmore	Maitland City	SHR	SHR	
Hinton	Maitland City	SHR	SHR	
Morpeth	Maitland City	SHR	SHR	
Paytens	Forbes	S170	S170	Central West group
Rossi	Goulburn-Mulwaree	SHR	SHR	Traditional construction
Swan Hill	Wakool	SHR	SHR	
Victoria	Wollondilly	SHR	SHR	Traditional construction
Wallaby Rocks*	Bathurst Regional	SHR	SHR	Central West group
Wee Jasper	Yass Valley	SHR	SHR	
<b>deBurgh</b>				
Barham*	Wakool	SHR	SHR	
Cobram	Berrigan	S170	SHR	Traditional construction
Middle Falbrook	Singleton	SHR	SHR	
St Albans	Hawkesbury City	SHR	SHR	
<b>Dare</b>				
Briner	Clarence Valley	S170	SHR	
Colemans	Lismore City	SHR	SHR	

New Buildings	Bega Valley	SHR	SHR	
Rawsonville	Dubbo City	S170	S170	Central West group
Scabbing Flat	Wellington	S170	S170	Central West group
Warroo	Forbes	S170	S170	Central West group

### Bridges proposed to be replaced

Bridge	LGA	Current listing	Comment
<b>McDonald</b>			
Crankies Plains	Bombala	SHR	
Five Day Creek	Kempsey	SHR	
<b>Allan</b>			
Abercrombie	Bathurst Regional	S170	
Barrington	Gloucester	S170	
Boonanga	Moree Plains	S170	
Charleyong	Palerang	S170	
Gundaroo	Upper Lachlan	S170	
Thornes	Goulburn-Mulwaree	S170	
Tooleybuc	Wakool	SHR	
Vacy	Dungog	SHR	
<b>deBurgh</b>			
Beckers	Singleton	SHR	
Crookwell	Upper Lachlan	S170	
Holman	Cowra	S170	
Lansdowne*	Goulburn-Mulwaree	S170	
Tabulam	Kyogle	SHR	
<b>Dare</b>			
Bulga	Singleton	SHR	
Coonamit	Wakool	SHR	
Coorei	Dungog	SHR	
Gee Gee	Wakool	SHR	
Korns Crossing	Tweed	S170	
Mungindi	Moree Plains	S170	
Sportsmans Creek	Clarence Valley	S170	

\* Significant change in outcome to the draft Timber Truss Bridge Strategy ('Traditional construction' refers to bridges that can be maintained without introducing modern materials as they will not carry loads exceeding 16 tonnes.)

RMS will support the strategy with policies to ensure that heritage conservation, interpretation and sustainability outcomes are achieved.

- Prepare an environmental assessment guideline for timber truss bridge replacement.
- Undertake a heritage assessment of timber truss lift span bridges to allow their opening mechanisms to be reactivated where necessary.
- Within five years Roads and Maritime Services will undertake a heritage study of all 26 movable span bridges within its ownership.
- Prepare a heritage interpretation strategy that will apply to both bridges to be

retained and to the sites and materials from bridges that have been replaced, to identify suitable means of capturing and sharing information about the heritage significance of these places.

- Prepare a comprehensive book on the heritage significance of the timber truss bridges of NSW.
- Implement the *Recycling of used bridge timbers policy* for all bridges to be removed.
- Implement the *Timber Procurement Strategy* to ensure adequate timber supply for all bridges to be retained.
- Implement a skills development program to ensure the skills for timber bridge maintenance are retained within RMS, including bridge carpentry skills and heritage awareness for engineers and designers.

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### Abbreviations

EA	Environmental assessment
ICOMOS	International Council on Monuments and Sites
PCO	Permanent conservation order (under NSW Heritage Act 1977)
RMS	NSW Roads and Maritime Services
RTA	NSW Roads & Traffic Authority
S170 Register	RMS Heritage and Conservation Register (NSW Heritage Act 1977)
SHR	NSW State Heritage Register
T44	Bridge standard – allows for 42.5 tonne vehicle weight



# 1 Introduction and background

## 1.1 Purpose

The Roads and Maritime Services (RMS) *Timber Truss Bridge Conservation Strategy Submissions Report and Revised Conservation Strategy* sets out how RMS undertook public consultation on its draft Strategy for conservation of timber truss road bridges in NSW, how submissions from stakeholders and the public were analysed, and presents the revised Strategy which reflects its response to those submissions and to the resolutions of the Heritage Council following its review of the draft November 2010 strategy.

This Submissions Report relates to the release of the report *Timber Truss Bridges – A Strategic Approach to Conservation* (the Strategy) in November 2010 for public consultation and should be read in conjunction with that document. The Strategy proposed that specific timber truss bridges be replaced, while others were retained. With the support of the NSW Heritage Council, Roads and Maritime Services sought the comments of community and heritage stakeholders and road users throughout NSW.

The Strategy was placed on public display and submissions were sought relating to the overall strategy as well as individual bridges. This report summarises the issues raised and provides responses to each issue raised on individual bridges, groups of bridges and broader conservation and heritage issues (Sections 2 and 3). Section 4 presents Roads and Maritime Services' response in the form of a revised Timber truss Bridge Conservation Strategy. Section 4 also sets out how the Strategy is intended to be implemented.

The Roads and Traffic Authority was amalgamated with NSW Maritime on 1 November 2011 to form NSW Roads and Maritime Services. In this document references to Roads and Maritime Services includes activities that took place before 1 November 2011 by the Roads and Traffic Authority.

## 1.2 The proposal

Roads and Maritime Services manages 48 timber truss road bridges in NSW. Timber truss bridges were used extensively throughout the state from 1860 through to 1936 and five different truss types were developed over that period. Of the 407 timber truss road bridges originally constructed, most have been replaced with new structures on the same or similar alignments. The remaining bridges are heavily affected by modern road and traffic requirements which, in the longer term, will necessitate the substantial upgrading of these bridges or their replacement with a new bridge.

Roads and Maritime Services has developed the report *Timber Truss Bridges – A Strategic Approach to Conservation* that sets out a methodology for identifying which bridges represent better candidates for conservation when assessed against a range of factors. The RTA Strategy recommended conservation of 25 bridges. In the revised Strategy (this document) a total of 26 bridges have been identified as suitable candidates for long-term conservation while the remaining 22 are bridges that Roads and Maritime Services proposes to replace with new structures in the next 10–20 years.

## 1.3 Report consultation

Roads and Maritime Services has undertaken an extensive program of consultation with stakeholder groups and the public. Consultation operated between 18 July and 26 August 2011, with late submissions being accepted until 15 September 2011.

The Strategy consultation period was advertised in 46 state-wide and regional newspapers, with the advert appearing twice in most publications (93 times in all) (see Appendix B for a full list of newspapers). The RTA Strategy was also placed on the corporate website and made available for download.<sup>1</sup> A project-specific email address and information phone number were established to take enquiries or comments. There were also a number of radio interviews and announcements generated by the consultation (see Appendix C).

In addition to the above public exhibition, an invitation to comment and copy of the Strategy report was sent directly to 223 identified stakeholders (listed in Appendix A1). These were local councils near all bridges included in the Strategy, as well as businesses and individuals who were on established Roads and Maritime Services contact lists, for example as a result of previous contact over bridge works. Roads and Maritime Services engaged the Royal Australian Historical Society to forward a copy of the Community update and an invitation to submit a response to all of its 367 affiliated historical societies throughout NSW.

Roads and Maritime Services convened or attended a number of meetings with different groups, as requested, during the course of this consultation program, detailed in Table 1.1.

Table 1.1: Meetings held during the Consultation process

<b>Location and Groups</b>	<b>Date</b>
National Trust Centre, Observatory Hill, The Rocks, Sydney Industrial Heritage Committee of the National Trust of Australia (NSW) and the Engineering Heritage Committee of Engineers Australia	10 August 2011
Carrathool, Carrathool Shire Carrathool local community	15 August 2011
Bombala, Bombala Council Bombala Historical Society and community	15 August 2011

<sup>1</sup> [http://www.rta.nsw.gov.au/roadprojects/projects/maintenance/timber\\_truss\\_bridges/index.html](http://www.rta.nsw.gov.au/roadprojects/projects/maintenance/timber_truss_bridges/index.html)

## 2 Response to issues

Roads and Maritime Services received 106 submissions in total. The advertised closing date was 26 August 2011, with late submissions accepted until 15th September. Appendix D lists all respondents. Appendix E provides a summary of each submission, identifying the issues raised and categorising them for discussion within this section of the Submissions report.

All submissions will be retained by Roads and Maritime Services. Submissions from State and local government bodies, professional heritage groups and local historical societies are available for examination upon request. Submissions from private individuals and businesses may be made available with the writer's consent.

### 2.1 Overview of issues raised

A total of 106 submissions were received in response to the exhibition of the Strategy. Submissions varied from short emails to multipage letters. All submissions were listed and numbered in order of receipt (Appendix D). After the close of the public comment period the submissions were reviewed and issues raised were listed and grouped into categories (Appendix E). The issues raised and Roads and Maritime Services' response to these issues forms the basis of this Section.

Submissions were received from groups and individuals as follows:

State government bodies	2
Local government bodies	10
Historical societies & community groups	14
Businesses	13
Individuals	60
Professional heritage groups	4
Public meeting minutes	3

In broad terms, the submissions fall into two categories:

- Submissions that relate to the Strategy as a whole, or to broad-scale issues with timber truss bridges – the majority of these are from stakeholder groups.
- Submissions that relate to a specific bridge and/or local community – the majority of these are from individuals, local community groups and local councils.

The submissions that addressed the Strategy as a whole were mixed in their views. Most recognised that balancing road use and heritage conservation was a complex task. Some were generally critical of the whole approach, indicating that they felt the Strategy would not lead to good conservation outcomes. Others, including some heritage groups, expressed a certain level of discomfort with the Strategy where it departed from accepted heritage assessment methodology; although they did agree it was a useful approach to attempting to find a path through a difficult issue.

The majority of submissions were from individuals, local community groups (historical societies, community progress groups and similar organisations), businesses and local government bodies in relation to a specific bridge or several bridges within a local area. These submissions ranged from being in favour of replacement of a timber bridge, retaining the old bridge and seeing a new bridge constructed nearby, or simply wanting the old bridge retained. Nineteen bridges attracted no specific submissions, 22 bridges received between one and four comments, and seven received more than five, the

maximum being 18 for Carrathool. The number of responses for individual bridges is summarised in Table 3.1.

### 2.1.1 Summary of issues raised by State government bodies

#### **Heritage Council of NSW**

Submission number: 78

The Heritage Council submission included a resolution and a detail report containing 14 recommendations regarding the draft Timber Truss Bridge Strategy. A summary follows with a more complete discussion including the Roads and Maritime Service's response in Section 2.3.

The Heritage Council also sought the views of the National Trust of Australia, Australia ICOMOS and Engineers Australia in its preparation, which are included in its submission. These are numbered separately. The Heritage Council appointed a committee to undertake a detailed review of the Strategy. The revised Roads and Maritime Services strategy benefited from the detailed examination and discussion offered by the Committee.

The Heritage Council noted that the Strategy was comprehensive and provides 'an appropriate basis on which to proceed to community consultation and notification processes'. Decisions made regarding the future of the timber truss bridge portfolio must be made in the context of the Heritage Act and the NSW Government's Total Asset Management framework. The submission also notes that any proposed de-listings from the SHR should be undertaken on an individual basis, before budgetary allocations and development approvals are sought and that all bridges to be retained should have endorsed conservation management documents prepared for them, which should be reviewed every five years. The submission expresses reservations about the representative sampling approach to some aspects of the Strategy. It does not support transfer of bridges to local government or other owner without the provision of ongoing funding ('an endowment fund') or technical support, such as provision of trained bridge carpentry crews. For its own bridges Roads and Maritime Services should make special budgetary provision for conservation to ensure continued funding, as well as ensuring that accredited heritage professionals, particularly engineers made decisions regarding the conservation and structural integrity of the bridges.

The submission identified lift span bridges as requiring special consideration for conservation because of their particular aesthetic and historical values, and noted that Barham, Tooleybuc and Carrathool were important examples of timber truss bridges with lift spans.

The submission recommended that Roads and Maritime Services reconsider retaining the Central West group of bridges (Warroo, Rawsonville, Scabbing Flat, Beryl, Paytens) as locally significant, and assess them for potential SHR listing.

The Heritage Council also felt that Roads and Maritime Services should resource a quality commemorative book on timber truss bridges.

#### **State Emergency Service**

Submission number: 35

The submission from the State Emergency Service West of the Range Rescue Team at

Tabulam raised concerns regarding the adequacy of Tabulam Bridge in an emergency situation and argued in favour of a new two-lane bridge to service the community.

## 2.1.2 Summary of issues raised by heritage groups and local government

### **National Trust of Australia (NSW)**

Submission number: 18

The National Trust supports a strategic approach to this issue. The submission is concerned there is too much emphasis on operational constraints and that there has been insufficient consideration of alternate options for bridges that are operationally unsuitable. The submission also expresses concerns that the 14 council-owned bridges that are not dealt with by the Strategy will be lost through lack of resources and omission from an agreed conservation commitment.

### **Australia ICOMOS (International Council on Monuments and Sites)**

Submission number: 19

Australia ICOMOS supports strategic consideration of conservation and operational issues; however it raised some concerns about the level of assessment undertaken and the issue of representative sampling. Australia ICOMOS recognised the challenges faced by Roads and Maritime Services in regards to retaining and conserving timber bridges, particularly the financial burden of these assets due to their maintenance demands. Concerns were raised, however, that too much weight was given to the operability of a bridge in determining its retention. The submission urged that the significance assessment set out in the 1998 MBK study be reviewed, with particular regard to comparative analysis. Australia ICOMOS also urged that further consideration of conservation techniques and methods of increasing load limits be taken into account and raised concerns as to the emphasis of the report on retaining a 'representative sample of the population'. It was argued that this approach is detrimental to bridges that have previously been identified as less significant, that are nonetheless highly valued by local communities.

### **Engineers Australia**

Submission numbers: 20, 20.1

Two submissions were received from Engineers Australia. These submissions agreed 'in-principle' that a strategic approach to managing heritage and operational issues was appropriate, and endorsed the process that produced the Strategy. Engineers Australia raised concerns about the size of the sample of bridges to be retained, noting that this was from a heavily depleted original population. These concerns were based on the potential for future strategies to seek to further dilute the number conserved, and the increased risk posed by natural disaster, vehicle impact or accidental-overloading, due to the smaller sample size. Engineers Australia argued that the strategy should have appropriate safeguards to prevent either attrition of numbers over time or divestment of responsibility to local government. The submission particularly noted that the Central West group of bridges to remain as locally significant were vulnerable to either divestment or replacement. Delisting from the SHR should only be sought when funding for a replacement bridge eventuated. All bridges to be retained should have adequate conservation, as well as operational maintenance funding, including those transferred to council ownership.

Engineers Australia also proposes that lift spans be assessed separately from the timber bridge structure. They note the effect of conserving multiple span bridges for comparable cost to more single and double span bridges. It endorsed the need for a Communication and Information Strategy for the bridges.

Two bridges – Paytens and Carrathool – were considered to have higher significance than represented and Engineers Australia requested that this was investigated.

### **Bathurst Regional Council**

Submission number: 64

Bathurst Regional Council seeks retention of Wallaby Rocks and Abercrombie Bridges due to their historical associations with the region.

### **Carrathool Shire Council**

Submission number: 68

Carrathool Shire Council seeks construction of a new bridge over the Murrumbidgee River in the existing bridge location, particularly to service the needs of over-width agricultural equipment and to address the long detour required when the bridge is unusable. Council proposes retention of a portion of the existing bridge in a park with interpretation.

### **Clarence Valley Council**

Submission number: 66

Clarence Valley Council notes that Sportsmans Bridge is identified for replacement and Briner Bridge for retention in the Strategy and supports the retention of one bridge.

### **Dungog Shire Council**

Submission number: 57

Dungog Shire Council supports the replacement of Coorei and Vacy bridges and proposes Clarence Town Bridge also be replaced due to the restrictions these bridges place on the expansion of the community.

### **Goulburn-Mulwaree Council**

Submission number: 46

Goulburn-Mulwaree Council seeks the replacement of Lansdowne Bridge. Council also made separate representations to the Minister for Roads and Ports on this issue.

### **Hay Shire Council**

Submission number: 69

Hay Shire Council supports the retention of the existing Carrathool Bridge but seeks the establishment of a new two-lane bridge in this location as well.

### **Kempsey Shire Council**

Submission number: 83

Kempsey Shire Council notes that Five Day Creek Bridge was bypassed in 2001. Council supports its retention and asks Roads and Maritime Services to undertake conservation 'to preserve the bridge in its current form' Council also seeks clarification in relation to ownership and responsibility for maintenance.

### **Kyogle Council**

Submission number: 88

Kyogle Council seeks clarification as to when Roads and Maritime Services proposes to remove Tabulam Bridge, what agency would be responsible for future maintenance of the timber bridge in the event the bridge is wholly or partially retained and what interpretation measures are proposed for the bridge.

### **Wakool Shire Council**

Submission number: 94

Wakool Shire Council supports the overall strategic approach to this issue. It identifies the load limits of the five timber truss bridges in the shire as impediments to local development. It seeks improvement in load bearing capacity or replacement of these bridges. Council is concerned about the adequacy of the existing bridges in a flood situation.

### **Gannawarra Shire Council**

Submission number: 89

Gannawarra Shire Council, in Victoria, supports the replacement of Barham Bridge, and considers that part of the bridge should be retained for interpretive purposes. Council is concerned about the adequacy of the bridges in a flood situation.

## **2.2 General issues in relation to the Strategy**

**Submission numbers: 1, 2, 3, 4, 11, 15, 17, 18, 19, 20, 31, 43, 45, 59, 61, 62, 72, 78, 94, 95**

Twenty one submissions addressed the Strategy as a whole, or the management of timber truss bridges at a broad level. Seven of these are lengthy submissions addressing issues related to the Strategy in some detail and a further 14 shorter submissions went to general issues regarding timber truss bridge management. Some 14 submissions were generally supportive of the Strategy and its intent, with some reservations in relation to certain issues or individual bridges. Seven submissions were generally not supportive of the Strategy as a whole, due to a concern that either the underlying methodology was flawed, or that Roads and Maritime Services should retain and manage all the bridges regardless of the constraints or costs.

The major issues raised by this group of submissions are:

- Concerns regarding the methodology of the Strategy generally.
- Concerns regarding the removal of bridges from the State Heritage Register (as a matter of principle).
- The impact to local community identity if a heritage bridge was replaced.
- The need to investigate further reuse options for timber truss bridges.
- Broader transport policy issues that were beyond the scope of the Strategy (eg why not use rail freight rather than road freight for transportation of goods?).

Responses in relation to these issues are set out below.

### 2.2.1 Sub-issue: general methodology of the Strategy

#### **Issue description**

Roads and Maritime Services developed its Strategy over the last three years and had detailed consultation with major heritage stakeholder groups including the Heritage Council of NSW, the National Trust of Australia (NSW) and Engineers Australia. These groups have been progressively informed of the development of the approach of the Strategy and have all made submissions acknowledging a strategic approach to the issues is required. They all indicate some reservations or concerns regarding aspects of the methodology expressed in the Strategy. The nature of the responses from these organisations reflects this progressive briefing process during the development of the Strategy.

The groups above express some concern that the Strategy methodology does not conform to the *Burra Charter*, or that it provides for an overarching decision-making process inconsistent with the determination of significance of individual bridges. Similarly there is concern that the composition of the final representative sample was pre-determined or over-influenced by operability. Representative sampling was criticised as not sufficiently allowing the retention of a greater number of bridges. Engineers Australia raised particular issues in relation to the treatment of lift span bridges, both those within the timber truss portfolio and other movable spans. Australia ICOMOS considered that the significance assessment in the 1998 MBK study should be revisited with a greater emphasis on comparative assessment.

Submissions from individuals tended to either be wholly critical of the approach or wholly supportive. Some submissions identified a statutory duty upon Roads and Maritime Services to maintain these bridges and some submissions felt this should be undertaken irrespective of cost or issues of useability.

#### **Response**

Roads and Maritime Services acknowledges the Strategy departs from general heritage assessment methodology, however the Strategy does not purport to be a heritage assessment document; rather, it is a tool that builds upon the 1998 MBK study, which was a robust heritage assessment of an entire category of heritage item to assist in decision-making regarding the deployment of resources amongst a pool of bridge assets that all have heritage significance. The Strategy was developed following extensive research and internal and external review and debate.

The Strategy accepted the levels of significance identified for the bridges as identified in the MBK Study, as it was felt that these levels of significance had been well established, although for a limited spectrum of significance. The Strategy addressed other aspects of significance where such information was able to differentiate between bridges.

Roads and Maritime Services acknowledges it has statutory obligations regarding heritage management, however those obligations do not override other statutory obligations in relation to the provision of road services. The Strategy aims to resolve the conflicts arising from recognising both issues and attempts to provide a balanced approach to their resolution.

## 2.2.2 Sub-issue: removal of bridges from the State Heritage Register

### **Issue summary**

Some submissions raised in-principle concerns with removal of items from the State Heritage Register (SHR) and stated that a detailed assessment process had supported those listings in the initial period. This issue was also raised at the National Trust meeting in Sydney.

### **Response**

There is some misconception as to how these bridges came to be listed on the SHR, as they were not the subject of individual nomination and assessment by the Heritage Council.

In 1998, the *Heritage Amendment Act* replaced the system of Permanent Conservation Orders (PCO) with the State Heritage Register. As a part of the savings and transitional provisions under the *Heritage Amendment Act* 1998, any items listed on state agency Section 170 Heritage and Conservation Registers that were identified as having 'high' or 'State' significance were automatically transferred to the SHR, in addition to any items subject to Permanent Conservation Orders. No timber truss bridges were the subject of PCOs at that time. This process saw approximately 700 PCO items and another 700 state agency assets transferred onto the newly created State Heritage Register under a process referred to as 'bulk listing'. These items were not individually reviewed by the Heritage Council at the time.

Following the 1998 MBK Study, a number of timber truss bridges were placed on the Roads and Maritime Services Section 170 Heritage and Conservation Register as they had been identified as having 'national' or 'State' level heritage significance. These were the bridges that were transferred onto the SHR on 20 June 2000 as a part of the bulk-listing process. The bridges were not the subject of individual nomination and consideration by the Heritage Council. Therefore these bridges have not been the subject of the same level of rigorous assessment and scrutiny as other items listed on the SHR, post the bulk-listing process.

The Sensitivity Analysis phase of the methodology gives a higher weight to SHR-listed bridges than those on a local planning instrument was given than bridges, in recognition of the value of such listings.

The procedure for delisting from the SHR is set out in the Heritage Act and Roads and Maritime Services would be required to follow this process, even with an endorsed strategy. This includes public advertising of the proposed removal on two occasions and a recommendation from the Heritage Council to the Minister with the final decision for

removal resting with the Minister.

RMS confirms that it will seek delisting of a SHR-listed bridge when it is approaching operational redundancy. RMS proposes a protocol where the Heritage Council would be advised three years before the expected start date for construction of a replacement bridge. Section 4.2 of the report describes the protocol in detail.

Notification would either be a request to delist a SHR-listed bridge or, in compliance with cl. 4.14 of the NSW *State Agency Heritage Guide*, providing notice of intention to demolish an item of state heritage on a S170 Register.

The broad plan of the notification is provided in Section 4.2.

### 2.2.3 Sub-issue: impacts to community identity if a bridge is removed

#### **Issue summary**

Some submissions raised general concerns about the social impact of the removal of a bridge from within a local community, particularly where that bridge was an integral part of a town.

#### **Response**

The level of social significance assessment was an acknowledged limitation of the original 1998 MBK Study and, given the strategic overview provided by the Strategy, was not revisited at the level of individual bridges. The Sensitivity Analysis component of the methodology did consider 'social value' as a surrogate for significance, giving greater positive weight to bridges which were within close proximity of a community, with the highest rating given to bridges which were less than one kilometre from a population centre, or which were within an identified historic precinct.

One of the goals of the public consultation process was to seek further views from local communities as to the social values of these bridges and the vast majority of the responses received relate to individual bridges from members of nearby communities. This has given Roads and Maritime Services much better data on the social value of individual bridges. Issues related to individual bridges are addressed in Section 3.3 below.

### 2.2.4 Sub-issue: investigation of additional options for operationally unsuitable bridges

#### **Issue summary**

Some submissions, including some individual bridge submissions, expressed concern with the proposed option of removal for bridges that are not kept in operation and requested a consideration of different options. In some cases suggestions were offered for individual bridges.

The range of suggestions offered included:

- Transfer to another authority (eg local government)

- Retention for light traffic in parallel to a new bridge
- Retention for pedestrian or cycleway use
- Retention in place as a whole or in part as a non-accessible landscape element
- Relocation of all or part of a bridge
- Reuse of timber salvaged from a bridge
- Archival recording
- Interpretation.

## Response

During the development of the Strategy, the RMS reviewed previous experience with adaptive reuse of bridges and bridge elements, including:

- Hampden Bridge, Wagga Wagga – timber truss bridge transferred to Wagga Wagga Council in the late 1990s including funds for maintenance. Maintenance was not kept up and the bridge is now closed and in very poor condition.
- Thornes Bridge, Goulburn – new bridge constructed adjacent to the timber truss bridge which was closed to all traffic. As the bridge is on the edge of town there is no demand for pedestrian or cycle use.
- Federation Bridge over Johnstons Creek, Jubilee Park, Annandale – timber truss bridge was adapted as a footbridge by Leichhardt Council. Bridge was not maintained and was ultimately replaced with a new timber bridge by Council.
- Coramba Bridge over Orara River – new bridge constructed adjacent to the timber truss bridge in City of Coffs Harbour LGA. The bridge received regular use as by pedestrians and cyclists until its removal by Council.
- Palmers Channel Bridge, Yamba – following collapse of the bridge in 1985, the two truss spans were re-erected at entrance to local school and in Story Park, Yamba.

Roads and Maritime Services retained Cobram Bridge as a pedestrian/cycleway bridge following construction of a new road bridge. The old bridge operates as a link between two picnic and recreational areas on either side of the Murray River. Nevertheless, the old bridge will still require regular, high-cost maintenance.

In response to the range of alternate options generally:

**Transfer to another authority (eg local government)** – Roads and Maritime Services has had mixed experiences with this option in the past (see comment re Hampden Bridge above). Even where a local authority has been funded the lack of skills and experience to manage these structures on an ongoing basis has led to poor conservation outcomes. Roads and Maritime Services would only consider transfer in circumstances where the organisation had a demonstrated ability and capacity to manage the bridge and where there would be no recurring costs to the organisation. It is beyond Roads and Maritime Services' control to ensure the conservation of these bridges once handed over to a third party.

**Retention for light traffic in parallel to a new bridge** – this may be appropriate in some circumstances, though not on all routes. Roads and Maritime Services proposes this option for the Swan Hill Bridge on the Victorian border. There may be other limited opportunities to consider this in some locations where there is sufficient traffic need. Maintenance costs to maintain trafficability will remain high

**Retention for pedestrian or cycleway use** – as with the light traffic use, this is only appropriate in limited circumstances where there is demand from a nearby population. This approach has been used with Cobram Bridge, but only because the bridge linked two recreational areas. This option does not reduce the maintenance costs of the bridge substantially.

**Retention in whole or in part as a non-accessible landscape element** – this option is not generally favoured as it still creates an ongoing maintenance liability as well as potentially creating new risks if bridge sections remains over a waterway, or are placed within a park or public area. In general Roads and Maritime Services would not favour this unless another organisation was to take responsibility for the maintenance and public safety issues. There may be some limited scope to consider this option in relation to the lift span components of some bridges as these have different levels of deterioration than timber. The bascule lift span component of the demolished Darlington Point Bridge (a sister bridge to Carrathool) marks the entry to the Darlington Point caravan park as an example. In contrast the Lachlan River Bridge at Cowra (a bowstring truss) was re-erected in a park in Cowra in 1990 but was later removed by Council due to vandalism.

**Relocation of all or part of a bridge** – relocation of bridge elements into public spaces can create potential interpretation opportunities but all timber structures require continual maintenance. Interpretation benefit needs to be offset against the loss of significance from the act of removing the bridge from its original location. Reuse of spans as pedestrian footbridges elsewhere may be possible with existing timbers, but generally dismantling trusses will result in the timber no longer being acceptable for use in structures with load limits. If there is an opportunity and an individual, group or council was ready to take responsibility for the long term conservation of the relocated bridge Roads and Maritime Services could consider this option in future.

**Reuse of timber salvaged from a bridge** – Roads and Maritime Services has a *Recycling of used bridge timbers policy* that sets out how timber is to be salvaged, decontaminated and made available for reuse or sale rather than disposal as waste. This policy will be implemented for any timber truss bridges that are removed where dismantling to recover timber is feasible.

**Archival recording** – Roads and Maritime Services intends to prepare an Archival Recording in accordance with Heritage Council Guidelines for any bridge that is replaced or substantially altered. Copies of these records will be retained in the corporate library and provided to the Heritage Council and relevant local government bodies.

**Interpretation** – Roads and Maritime Services intends to commission a book on the heritage significance of timber truss bridges in NSW, to provide a permanent public record of the structures. In addition, Roads and Maritime Services will prepare a heritage interpretation strategy that will provide suitable options for interpretation of both retained and replaced bridges, through a range of techniques. It is recognised that interpretation should be installed at the bridge site where a suitable location is available and also be provided to a broader audience.

#### 2.2.5 Sub-issue: consideration of heritage significance (including local community significance, social significance, historical and aesthetic significance)

##### **Issue summary**

Some submissions raised concerns about the assessment of heritage significance, at a general level or in relation to specific bridges. These concerns were primarily around social and local community significance, but in some cases extended to historical and aesthetic significance.

##### **Response**

The Strategy considered the significance of the bridges using the 1998 MBK Study and subsequent assessments as a basis. The limitations of this approach were acknowledged and in the Sensitivity Analysis Roads and Maritime Services took into consideration additional bridge-specific factors where information was available. Technical information was generally detailed and comprehensive compared to other data available to the Roads and Maritime Services at the time.

A primary aim of the broad-based consultation process was to seek the community's views on the value of individual bridges, to provide further information on social, historical or aesthetic value. Roads and Maritime Services believes that the responses have provided a good indicator of which bridges have strong community interest and have responded to those concerns in relation to individual bridges.

#### 2.2.6 Sub-issue: risks to bridge users

##### **Issue summary**

A number of submissions raised the question of risk for the timber truss bridges, particularly in relation to school buses, livestock or agricultural machinery using bridges.

##### **Response**

Risk is one of the significant considerations for Roads and Maritime Services in the retention of any bridge. It considers that those bridges nominated for retention can perform to an acceptable level of risk, while the bridges identified for replacement are not able to perform to an acceptable level of risk.

Consideration will be given to how activities such as stock movement can be better managed by further consultation with Rural Lands Protection Boards

#### 2.2.7 Sub-issue: tourism impacts if bridges removed

##### **Issue summary**

A number of submissions raised the issue of the contributions of bridges to the heritage tourism of the area.

##### **Response**

While local and regional tourism strategies are outside Roads and Maritime Services scope, it is acknowledged that some bridges do contribute to local tourism. The bridges that are most likely to contribute to tourism are ones located close to towns with other recreational and business opportunities focussed on their river setting. Examples are bridges in towns like Morpeth and Swan Hill. Cobram Bridge links recreational areas on either side of the Murray River.

Roads and Maritime Services will retain Barham Bridge, which is located on the edge of town and is placed at the centre of a riverside heritage and recreational zone.

As river levels in the Murray and Murrumbidgee increase there is greater demand for operation of lift span bridges than in the recent past from tourist, recreational and fishing vessels. Roads and Maritime Services will assess all liftspans where there is an operational need with the aim of improving their operability.

Roads and Maritime Services will, in the short term, undertake a heritage assessment of timber truss liftspan bridges to allow their opening mechanisms to be reactivated where required for operational reasons.

## 2.2.8 Sub-issue: rarity of the bridges

### **Issue Summary**

Several responses point out that timber truss bridges are rare within NSW and Australia generally.

### **Response**

The Strategy acknowledges the rarity of the timber truss bridge population. One of the aims of the Strategy is to ensure that the limited resources of Roads and Maritime Services are appropriately directed to those bridges that have the best prospects for long-term conservation. While the Strategy allows for the reduction in the overall number of bridges, those that are retained will be subject to rigorous management regimes that will ensure their long-term conservation. Decision-making regarding individual bridges without such a strategic framework is likely to result in continual attrition of bridge numbers.

Additionally, the role of the heritage interpretation strategy is to ensure that the significance of the timber truss bridges is communicated to a broad audience.

## 2.2.9 Sub-issue: context

### **Issue summary**

Some submissions raised the issue of bridges taking some of their significance from their context, particularly when the bridge is within a town.

### **Response**

The context of some bridges has been noted as a significant aspect of their heritage value. Roads and Maritime Services has endeavoured to account for this in the Sensitivity Analysis by giving higher rankings to bridges that are located in towns or identified conservation areas.

## 2.2.10 Sub-issue: maintenance and condition monitoring

### **Issue summary**

A number of submissions raised the issue of bridge maintenance. In some cases it was the disruption caused by maintenance frequency and in others it was the cost of maintenance.

### **Response**

Ongoing maintenance remains a concern for Roads and Maritime Services because maintenance costs and frequencies are disproportionately high with timber truss bridges compared to modern bridges. Timber truss bridges require major routine maintenance whether under traffic load or not, therefore removing traffic from a bridge does not necessarily significantly reduce the maintenance requirements.

Upgrading bridges results in reduced maintenance frequency, but the timber elements still require replacement at intervals far less than modern designs. Some truss types, particularly the Old PWD bridges, require complete dismantling of trusses to replace any elements.

## 2.2.11 Sub-issue: traffic

### **Issue summary**

The issues of traffic volumes and the types of traffic using individual bridges were raised in many of the submissions.

### **Response**

Roads and Maritime Services has accurate traffic data for all bridges subject to the Strategy. Average Annual Daily Traffic (AADT) figures for all bridges are supplied in the Strategy. High traffic volumes increase the risks in relation to bridges due to loads, vibration, braking stresses and potential for a collision with a vehicle or with the bridge itself. Heavy vehicle volumes are a particular concern for timber truss bridges.

Roads and Maritime Services will continue to investigate methods of discouraging illegal overloading of bridges.

## 2.2.12 Sub-issue: alternate routes

### **Issue summary**

Some submissions have raised the question as to whether alternate routes can serve to direct heavy traffic away from a timber truss bridge.

### **Response**

This was one of the issues considered in the Strategy. Diversion impacts were considered to be significant if an alternate route required a diversion of more than 50 kilometres. Additionally, due to the remoteness of some bridges, there is not always a viable alternate route servicing a particular area. This may require lengthy diversion as well as placing the area at risk in the event of, for example, a natural disaster that requires the evacuation of

the community.

#### 2.2.13 Sub-issue: timber supply

##### **Issue summary**

A few submissions questioned the availability of suitable timber to maintain the bridges.

##### **Response**

Roads and Maritime Services has been proactively pursuing this issue for a number of years and has worked with Forests NSW to develop a specification for timber suitable for bridge maintenance. This was communicated to timber mills and merchants across the State. In addition, Roads and Maritime Services commissioned the consultant URS to prepare a *Timber Procurement Strategy* which looked at short, medium and long-term supply issues.

Roads and Maritime Services is confident that future timber supplies can be managed to allow for cyclical replacement and repair of bridges under the Strategy.

#### 2.2.14 Sub-issue: interpretation

##### **Issue summary**

Interpretation was raised in relation to both existing bridges and any bridges proposed for replacement. This issue was mainly raised by councils and historical societies; however some individuals also made submissions on the issue.

##### **Response**

Roads and Maritime Services believes that all timber truss bridges should be interpreted to allow the public to appreciate their significance and role in the development of NSW. A heritage interpretation strategy will be developed to provide guidance on appropriate forms of interpretation that can be implemented for both retained and replaced bridge sites to a more general audience.

A comprehensive book on the heritage significance of timber truss bridges in NSW will be published.

Where bridges are to be replaced interpretation opportunities that mitigate loss of significance will be considered in the environmental assessment process, guided by the interpretation strategy.

#### 2.2.15 Sub-issue: funding and costs

##### **Issue summary**

Financial issues were raised by many submissions with varied concerns, ranging from those who did not consider that costs should be part of the decision-making process, to those who felt costs of maintenance of these bridges was too high.

##### **Response**

Roads and Maritime Services has noted in the Strategy the high costs of maintaining the timber truss bridges and the matter of costs and maintenance funding has been raised in a number of submissions. Roads and Maritime Services receives a specific allocation for bridge maintenance and must use this to cover the maintenance costs of the more than 5000 bridges within its care. It has been noted that the timber truss bridges consume a disproportionate share of this budget.

The Strategy was structured so that operational costs did not influence the analysis or outcome. Implementing the Strategy will not result in substantial savings; rather it will result in funding being directed towards those bridges that are better candidates for conservation. The Strategy is still a high-cost option requiring specific Treasury funding, which will be sought once a Strategy is agreed to and endorsed by Roads and Maritime Services and the Heritage Council.

#### 2.2.16 Sub-issue: loads

##### **Issue summary**

The increase in vehicle loads beyond the design capacity of the bridges and the need to reduce such loads were raised in many submissions.

##### **Response**

Regional and interstate freight route planning is continually evolving in response to the pressure for more efficient networks, rural economic growth and more powerful vehicle configurations.

National standards require Roads and Maritime Services to provide general access for state and regional roads, which is essentially equivalent to a loading of 42.5 tonnes. Local government is responsible for maintaining local roads. While timber truss bridges were designed to meet a lower load of some 16 tonnes, they can be upgraded to carry the 42.5 tonne loads in a manner that does not compromise their heritage significance,

Roads and Maritime Services has limited ability to challenge the placement of higher mass limits on state and regional roads although it can presently limit new vehicle configurations in excess of 60 tonnes.

Illegal overloading and over-width vehicles remain a risk. In some cases the risk has been mitigated through the use of portal frames or due to the narrowness and curvature of approach roads; however this is not possible in all locations. Roads and Maritime Services will continue to investigate methods of discouraging illegal overloading of bridges.

#### 2.2.17 Sub-issue: vehicle size limitations

##### **Issue summary**

Many of the submissions from businesses were from agricultural concerns which felt their business activities were restricted by the width limits of the bridges, which are effectively single-lane.

##### **Response**

Most of the bridges are no more than a single lane and some have overhead bracing elements that restrict the size of vehicles that can use the bridge. It is not physically possible to remove these restrictions and retain the bridge. In cases where diversion to an alternate route was considered excessive, this restriction was one of the factors that weighed against the long-term conservation of a bridge.

#### 2.2.18 Sub-issue: development constraints

##### **Issue summary**

Several councils and businesses raised the issue of bridges restricting the development of areas on the periphery of town, particularly industrial or agricultural development, due to load or width limitations on a particular bridge.

##### **Response**

Roads and Maritime Services has considered this to a certain extent, based on foreseeable future traffic demands along different routes. Where Roads and Maritime Services expects high future traffic demands, bridges have been identified as operationally unsuitable.

Roads and Maritime Services has also identified a group of bridges in the Central West of NSW which are, on current evidence and foreseeable traffic, able to meet demand and are retained as operable. However this area is most vulnerable if national freight policy moves towards larger multi-combination vehicles. Because of this longer-term uncertainty Roads and Maritime Services is proposing to retain these bridges as locally listed heritage items where they are not already listed on the SHR.

#### 2.2.19 Sub-issue: lift span bridges

##### **Issue summary**

The Heritage Council and Engineers Australia raised the issue of lift span bridges and whether the liftspans required special consideration for retention.

##### **Response**

One lift span bridge – Tooleybuc - is proposed for replacement. Roads and Maritime Services will retain Barham Bridge and Carrathool Bridge.

#### 2.2.20 Sub-issue: consultation process

##### **Issue summary**

One submission raised an issue about the consultation process not being advertised in Victoria.

##### **Response**

Roads and Maritime Services confirms consultation took place with VicRoads and Queensland Department of Transport as the authorities with whom it shares management

responsibility for cross-border bridges. No general advertising was undertaken in Victorian or Queensland papers. If a border bridge is proposed to be removed, there would be further consultation with the Victorian and Queensland roads authorities and affected communities; however it should be noted that the bridges are owned in their entirety by NSW. The approaches of border bridges may be listed in the relevant Queensland or Victorian heritage register.

## 2.3 Heritage Council submission

The NSW Heritage Council referred the draft Strategy, dated November 2010 to a Committee to review the strategy and advise the Council. The Committee sought comment on the Strategy from a range of stakeholders organisations as well as a number of individuals with expert knowledge on timber truss bridges. The Committee prepared a detailed analysis titled '*Timber truss road bridges of NSW: review of Roads and Traffic Authority's proposed approach to conservation* (July 2011). The Heritage Council considered this report and its recommendations at its meeting of 3 August 2011 and made an out of session resolution to provide the report to Roads and Maritime Services, advise it of a range of actions to progress consideration of the strategy and matters that it requested be considered in a revised strategy.

This section lists the components of the Heritage Council's resolution and Committee's recommendations that seek a specific response from Roads and Maritime Services. The Heritage Council's resolution and the Committee's recommendations are italicised, with the Roads and Maritime Services response immediately beneath each resolution or recommendation.

### **Heritage Council resolutions**

*3. advises the RTA that it:*

- c. supports keeping, conserving and maintaining the twenty five timber truss bridges identified by the RTA for conservation, and requests the RTA to commit to funding the long-term conservation and continued maintenance of those bridges as part of the Strategy, once endorsed; and*

[Note - The 'twenty five bridges' refers to the draft RMS Strategy; the current Strategy proposes twenty six bridges]

Roads and Maritime Services is committed to implementing the Strategy, noting that the timing of that implementation may vary according the availability of funding. The funds will be committed, as they become available. Roads and Maritime Services recognises its obligations to maintain heritage items in line with the requirements of the Heritage Act in addition to its obligation to manage safety on the road network.

Roads and Maritime Services will inform the Heritage Council when funding for replacement of a SHR-listed bridge has been allocated.

- d. will consider the delisting/removal of individual bridges from the State Heritage Register when they are approaching redundancy and before a budgetary allocation is sought, provided each proposal is in accordance with the endorsed Strategy and provided the RTA continues to conserve and maintain the bridges until such time as approval is given to their delisting.*

Roads and Maritime Services will seek delisting of a SHR listed bridge that is approaching operational redundancy in the year prior to commencing environmental assessment of replacement bridges (i.e. delisting would normally be sought three years prior to commencement of construction of a new bridge).

The availability of funding will not on its own be a trigger for commencing SHR delisting.

Section 4.2 of this document proposes a protocol for initiating the process to replace a specific timber truss bridge.

4. *notes that the RTA proposes nominating Cobram, Lansdowne and Briner bridges to the SHR and recommends that the RTA also assesses Warroo, Scabbing Flat, Beryl, Rawsonville and Paytens as possible nominees for inclusion on the SHR (and within the Strategy) and advise the Heritage Council of the outcome.*

Roads and Maritime Services is not proposing to seek the listing of the currently unlisted central west bridges, being Warroo, Scabbing Flat, Beryl, Rawsonville and Paytens - onto the SHR. This is to help ensure that there is certainty and separation around which bridges it is committing to maintain indefinitely and those that will be subject to review should increased freight demand emerge in the future.

Roads and Maritime Services will retain Barham and Briner bridges, and seek their nomination to the SHR.

Roads and Maritime Services has reviewed its position on Lansdowne Bridge following consultation with Goulburn-Mulwaree Council and now proposes to replace this bridge due the safety concerns raised by the local community.

5. *advises the RTA that, following the community consultation phase, a revised Strategy should be submitted to the Heritage Council incorporating any necessary changes resulting from such consultation, the report of the Heritage Council's Committee and the above advice and recommendations, whereupon the Heritage Council will give further consideration to its endorsement.*

Roads and Maritime Services prepared this submissions report to document the public consultation process. It incorporates a revised timber truss bridge conservation strategy that reflects the results of consultation with the Heritage Council of NSW, the community and other stakeholders.

### **Committee recommendations**

3. *Decisions taken by the RTA should be made in the context of both the Heritage Act and the Government's Total Asset Management policies.*

Roads and Maritime Services understands that this recommendation was raising the issue of its responsibility to fund the retention of heritage assets when they become redundant. Roads and Maritime Services investigated options for retention of bridges and believes that this is most effectively done when bridges can be retained as operational assets. The retention of Swan Hill and Barham bridges is based on proposed reuse as local traffic operational assets with new bridges built on town bypasses.

4. *The RTA should provide to the Heritage Council a case for de-listing of any bridge on*

*the State Heritage Register (SHR) before a budgetary allocation is sought for its replacement and in sufficient time for the Heritage Council to make its position known to the RTA.*

See response to Heritage Council resolution 3d above.

- 5. While it is desirable that the portfolio of retained bridges should be representative of as many of the different features and heritage values of timber truss bridges as possible, the selection of a representative sample should not be a prime determining factor in deciding the number of bridges of any given type to be retained.*

Roads and Maritime Services confirms that assessment of representativeness is the third step in the four step process described in the Strategy. Its role is limited to ensuring that the range of bridges proposed to be retained reflected as much as possible the range of difference seen in the current and original population.

- 6. Where the RTA plans to transfer ownership of a bridge to a local council an endowment fund should be established to allow the council to maintain and conserve the bridge in the long term.*

Roads and Maritime Services has no provision for funding the maintenance of redundant assets held by another body.

Roads and Maritime Services acknowledges that managing redundant assets is an issue that applies to the whole of government. This is an issue that may benefit from being addressed by the NSW Heritage Council.

- 7. Because of their significance lift span bridges should receive special consideration for conservation as they have a special place in the history of river navigation, as features in the landscape and as heritage tourist attractions.*

Roads and Maritime Services will, in the short term, undertake a heritage assessment of timber truss lift span bridges to allow their opening mechanisms to be reactivated where required for operational reasons. As similar mechanisms are also found on other lift spans the study will address a broader group than just the timber truss lift spans.

Within five years Roads and Maritime Services will undertake a heritage study of all 26 movable span bridges within its ownership. This will identify whether any bridges should be added to the S170 Register or the State Heritage Register.

- 8. The Committee proposes that further consideration should be given to the long term retention and conservation of the Barham and Tooleybuc lift span bridges and of Carrathool, the only remaining bascule bridge associated with timber truss spans (all of which are on the SHR) because of their significance.*

One lift span bridge – Tooleybuc - is proposed for replacement. Roads and Maritime Services will retain Barham Bridge and Carrathool Bridge.

- 9. While noting that the RTA proposes nominating Cobram, Lansdowne and Briner bridges to the SHR, the Committee recommends that the RTA also assesses Warroo, Rawsonville, Scabbing Flat, Beryl and Paytens bridges as possible nominees for inclusion on the SHR, and advises the Heritage Council of the outcome.*

See response to Heritage Council resolution 4 above.

10. *Conservation Management Plans (CMPs) should be prepared for all bridges which are to be retained and conserved beyond 2016. These CMPs should be reviewed every five years.*

Roads and Maritime Services will seek endorsement of conservation management documents prepared for each of the five truss types. These endorsed documents will be revised to reflect works undertaken and those required for individual bridges in the next five years and, where relevant, to identify where there has been a change in their operational or heritage context. A five yearly review of the documents would be undertaken. RMS proposes that this is undertaken by an expert panel reviewing all of the documents together to provide a portfolio overview, and recommending a renewal of endorsement by the Heritage Council or its delegate.

11. *The RTA should make special budgetary provisions for the conservation of timber truss bridges in order to honour its conservation, heritage and total asset management obligations.*

Roads and Maritime Services has reviewed the experience of other organisations that have used special funding models for heritage assets and believes that both heritage and operations outcomes are best met through a general operational allocation rather than having a dedicated 'heritage' budget.

12. *The RTA should ensure that only accredited heritage and conservation engineers make decisions affecting the significance and structural integrity of timber truss bridges.*

Roads and Maritime Services work on heritage bridges is assessed in accordance with environmental assessment procedures that require the involvement of in-house heritage specialists. These are supplemented by other external heritage specialists as required by the nature of the project considered. The advice of heritage engineers and other specialists is sought at a number of places in the development process. Roads and Maritime Services will continue to develop in-house heritage awareness training for engineering and technical staff.

13. *The RTA should be asked to explain to the Heritage Council the condition of Five-day Creek Bridge, an item on the SHR.*

Roads and Maritime Services recognises that the duplication of Five Day Creek Bridge resulted in an adverse heritage outcome for an item on the SHR.

The present Strategy has been developed with the intention of avoiding similar occurrences. Roads and Maritime Services has devoted considerable effort to developing and refining a strategic approach that meets the Heritage Council's expectations for the management of state significant heritage assets, including a transparent process of seeking delisting prior to commencing any action to replace SHR listed items.

14. *A quality commemorative book should be prepared on NSW's timber truss bridges, similar to Victoria's "Wooden Wonders".*

Roads and Maritime Services will commission a comprehensive book on the heritage significance of the timber truss bridges of NSW. This will form part of an overall heritage interpretation strategy, along with *in situ* heritage signage for retained and replaced bridges, the retention of bridge components and other means of

communicating and marking the significance of these bridges to the history of NSW.

Roads and Maritime Services will seek the involvement of Sydney Branch of Engineering Heritage Australia, the National Trust of Australia (NSW), Royal Australian Historical Society and local historical societies in its research.

## 2.4 Issues related to specific bridges

Most submissions relate to individual bridges and typically come from individuals who use the bridge, or from the local council or community groups in the local area. The responses included broadly comparable numbers of submissions in favour of retention of specific bridges and their replacement, with some seeking a new bridge, but maintaining the existing bridge as well. Submissions relating to individual bridges are discussed below.

Twenty nine bridges received some form of individual representation regarding them, with seven bridges receiving more than half a dozen representations, including: Carrathool - 18 submissions, Tabulam - 16, Barham - 14, Crankies Plain (also known as Coolumbooka) - 12, Clarence Town - 8, Coorei - 7, and Barrington - 6. Eight bridges received 3–4 submissions each, while the remaining 14 received only 1–2 submissions each.

The table below summarises the number of submissions in relation to each bridge. Please note the numbers in columns A-D refer to the total number of submissions for / against / neutral. The next column provides a cross-reference to the numbered submission.

Submissions are summarised in Appendix E.

Table 3.1: Submissions received for individual timber truss bridges (ordered by total number of submissions received for each bridge).

Bridge name	Total submissions	A Submissions for retention [total]	B Submissions for replacement [total]	C Submissions for new bridge but retain current bridge [total]	D Neutral submissions [number]	Cross-reference to submissions received [Submission no.]	RMS proposal
<b>Carrathool</b>	18	<b>7</b>	<b>9</b>	<b>2</b>	0	A - 16, 20, 43, 47, 69, 78, 81 B - 21, 29, 65, 68, 77, 79, 80, 82, 86 C - 85, 87	Retain
<b>Tabulam</b>	16	<b>6</b>	<b>9</b>	0	<b>1</b>	A - 1, 28, 39, 44, 52, 93 B - 33, 34, 35, 36, 37, 38, 39, 63 D - 88	Replace
<b>Barham</b>	14	<b>12</b>	<b>1</b>	<b>1</b>	0	A - 2, 14, 43, 59, 75, 76, 91, 96, 97, 98, 100 B - 94 C - 89	Retain

<b>Crankies Plain</b>	12	<b>9</b>	<b>2</b>	<b>1</b>	0	A - 30, 32.1-32.6, 49, 73 B - 26, 99 C - 22	Replace
<b>Clarence Town</b>	8	<b>5</b>	<b>3</b>	0	0	A - 17, 31, 42, 92, 93 B - 10, 57, 71	Retain
<b>Coorei</b>	7	<b>4</b>	<b>3</b>	0	0	A - 31, 42, 51, 74 B - 17, 57, 71	Replace
<b>Barrington</b>	6	<b>2</b>	<b>3</b>	1	0	A - 5, 53 B - 27, 54, 56 C - 25	Replace
<b>Holman</b>	4	0	<b>4</b>	0	0	B - 6, 7, 8, 24	Replace
<b>Monkerai</b>	4	<b>3</b>	0	1	0	A - 58, 60, 61 C - 13	Retain
<b>Vacy</b>	4	0	<b>4</b>	0	0	A - 17, 55, 57, 71	Replace
<b>Wallaby Rocks</b>	4	<b>4</b>	0	0	0	A - 12, 43, 59, 64	Retain subject to future network needs
<b>Abercrombie</b>	4	<b>3</b>	<b>1</b>	0	0	A - 43, 59, 64 B - 41	Replace
<b>Swan Hill</b>	4	0	<b>4</b>	0	0	B - 11, 50, 71, 94	Retain
<b>Five Day Creek</b>	4	<b>4</b>	0	0	0	A - 78, 83, 84, 93	Replace
<b>Paytens</b>	3	<b>1</b>	<b>2</b>	0	0	A - 20 B - 43, 59	Retain subject to future network needs
<b>Beckers</b>	2	<b>2</b>	0	0	0	A - 43, 59	Replace
<b>Beryl</b>	2	0	<b>2</b>	0	0	B - 43, 59	Retain subject to future network needs
<b>Coonamit</b>	2	0	<b>2</b>	0	0	B - 11, 94	Replace
<b>Sportsmans Creek</b>	2	<b>1</b>	0	0	<b>1</b>	A - 93 D - 66	Replace
<b>Bulga</b>	1	<b>1</b>	0	0	0	A - 67	Replace

<b>Charleyong</b>	1	1	0	0	0	A - 70	Replace
<b>Gee Gee</b>	1	0	1	0	0	B - 94	Replace
<b>Gundaroo</b>	1	0	0	0	1	D - 90	Replace
<b>Victoria</b>	1	1	0	0	0	A - 40	Retain
<b>Lansdowne</b>	1	0	1	0	0	B - 46	Replace
<b>Morpeth</b>	1	0	1	0	0	B - 15	Retain
<b>Rossi</b>	1	0	1	0	0	B - 48	Retain
<b>Thornes</b>	1	1	0	0	0	A - 9	Replace
<b>Tooleybuc</b>	1	0	1	0	0	B - 94	Replace

Nineteen bridges received no specific submissions. For seven bridges all public submissions received sought an outcome consistent with Roads and Management Services' position (Holman, Vacy, Sportsmans Creek, Gundaroo, Gee Gee and Coonamit for replacement, Victoria for retention).

Twenty two bridges received one or more submissions seeking outcomes different to the Strategy. Of these, five had a strongly expressed community view that differs from the Strategy's proposal as follows:

- Carrathool – Roads and Maritime Services proposed retention, majority of 18 submissions seek replacement
- Crankies Plain – Roads and Maritime Services proposed replacement, majority of 12 submissions seek retention
- Barham – Roads and Maritime Services proposed for replacement, all but one of 14 submissions favour retention
- Wallaby Rocks – Roads and Maritime Services proposed replacement, all four submissions seek retention
- Coorei – Roads and Maritime Services proposed replacement, majority of seven submissions seek retention.

For the remaining 17 bridges where specific submissions were received, opinions expressed positions that were both consistent with the Roads and Maritime Services proposal or the opposite outcome.

With a maximum of 18 submissions and the great majority receiving less than four, it would be a false presumption that the majority in any community are either 'for' or 'against' retention of specific bridges. The largest number of submissions was from communities where public meetings or radio coverage helped to encourage responses. A significant proportion of bridges received no response, which could be due to a range of factors, including acceptance of Roads and Maritime Services' proposal, lack of a nearby community of interest, misunderstanding of the consultation process and so on.

## 2.4.1 Carrathool Bridge

### **Submission number(s)**

Retention: 16, 20, 43, 47, 69, 78, 81

Replacement: 21, 29, 65, 68, 77, 79, 80, 82, 86

Construct new bridge with old bridge retained: 85, 87

### **Issue description**

Carrathool Bridge is an Allan truss bridge with two timber trusses and a lift span that Roads and Maritime Services identified for retention.

A public meeting was held with members of the Carrathool community on 15 August 2011. Concerns expressed at that meeting, and later echoed in many of the submissions, included the risks from use by heavy vehicles and school buses, no access for large farm machinery the delays and inconvenience caused by maintenance works, the time, risks and financial costs associated with detours especially for primary producers. Risk to the passage of livestock was also identified as a concern. There was concern from many at the meeting that funds being proposed for the capacity upgrade should be placed instead towards a new bridge. Some submissions noted the bridge makes a contribution to the area in terms of aesthetics and tourism, while others noted this was the last bascule-style lift span bridge remaining in NSW. At the meeting there was generally a favourable view of retaining the old bridge only if a new two-lane bridge could be provided in addition.

### **Response**

Carrathool Bridge has unique features which strongly supports its conservation. Because its retention is required, the additional capacity sought by the Carrathool community would require construction of a new bridge. Providing a new bridge is outside the scope of this strategy as Roads and Maritime Services is effectively prevented from funding local road activities apart from the maintenance of the current Carrathool Bridge, which is one of a group of gazetted bridges which Roads and Maritime Services continues to maintain..

Roads and Maritime Services will work with the Rural Lands Protection Board to identify and resolve issues relating to movement of stock across this bridge.

## 2.4.2 Tabulam Bridge

### **Submission number(s)**

Retention: 1, 28, 39, 44, 52, 93

Replacement: 33, 34, 35, 36, 37, 38, 39, 63

Neutral: 88

### **Issue description**

Tabulam Bridge is a five-span de Burgh truss bridge that Roads and Maritime Services has proposed for replacement.

The community view in relation to this bridge is mixed. While more than half the submissions support its replacement, there are a significant number that support its retention. A major basis asserted for its retention is its status as the longest remaining timber truss bridge in NSW, and one of only six timber truss bridges ever constructed of this length or longer.

### **Response**

Roads and Maritime Services partially upgraded this bridge in the late 1990s. As the bridge is located on a route identified for substantial load increases beyond the T44 standard it is not possible to upgrade the bridge to an acceptable level of risk. In the Sensitivity Analysis the bridge scored three 'green' positive heritage factors and five 'red' negative operational factors. One of the particular issues associated with this longer type of bridge is the braking risk from long, heavy vehicles due to the stresses it places on the multiple spans, increasing the risk of failure.

While the bridge is the longest remaining timber truss bridge there is nothing else unique about its construction or configuration that is not replicated by other de Burgh trusses that are proposed for retention. Roads and Maritime Services' preferred position remains in favour of replacing this bridge as route requirements demand.

### 2.4.3 Barham Bridge

#### **Submission number(s)**

Retention: 2, 14, 43, 59, 75, 76, 91, 96, 97, 98, 100

Replacement: 94

Construct new bridge with old bridge retained: 89

#### **Issue description**

Barham Bridge is a Dare Truss bridge with two timber trusses and a lift span that Roads and Maritime Services has proposed for replacement.

All of the public submissions support the retention of this bridge. The Council submission identifies the bridge as an impediment to agricultural and industrial growth and would support its replacement. One submission supports the construction of a new bridge in addition if required. The submissions largely argue that the bridge is an important part of local community identity and a local landmark.

#### **Response**

Roads and Maritime Services identified the route requirements for this location as being in excess of the T44 (42.5 tonne) load standard, due to its importance as a cross-state transport route. In the sensitivity analysis, this bridge received five positive green factors for heritage and five red negative factors for operations.

Roads and Maritime Services has reviewed its position regarding Barham Bridge and will retain it.

### 2.4.4 Crankies Plain

#### **Submission number(s)**

Retention: 30, 32.1-32.6, 49, 73

Replacement: 26, 99

Construct new bridge with old bridge retained: 22 (public meeting minutes)

#### **Issue description**

Crankies Plain Bridge (also known as Coolumbooka or Bombala Bridge), is a two-span McDonald truss bridge near Bombala that Roads and Maritime Services has identified for replacement.

A public meeting was held with members from the Bombala community on 15 August 2011. Many attendees at the meeting subsequently presented submissions to Roads and Maritime Services. That meeting heard a range of views regarding the need for a new

bridge to service large logging trucks and the importance of retaining the existing bridge. This sentiment was repeated in a number of submissions, which referred to the place of the bridge in local community identity and expressed concern that this was the last timber truss bridge in the area. The one submission that was strongly in favour of a new bridge due to the needs of large vehicles did however desire to see the old bridge commemorated due to its place in the community.

### **Response**

While it was recognised through existing heritage listings, Crankies Plain Bridge does not possess distinguishing features or a landscape setting that would increase its significance. Roads and Maritime Services has identified this route as requiring a load capacity in excess of the T44 standard and therefore the existing bridge cannot be upgraded to meet the necessary requirements. As this is an otherwise typical McDonald Truss bridge, the characteristics of which are represented by the three McDonald Truss bridges to be retained, Roads and Maritime Services does not propose to retain this bridge.

## 2.4.5 Clarence Town Bridge

### **Submission number(s)**

Retention: 17, 31, 42, 92, 93

Replacement: 10, 57, 71

### **Issue description**

Clarence Town Bridge is one of only two remaining two-span Old PWD truss bridges and Roads and Maritime Services has identified it for retention.

Community opinion remains split as to whether the bridge should be retained or replaced, with a majority of one in favour of retention. Issues identified with this bridge include its width and capacity to carry large vehicles.

### **Response**

Roads and Maritime Services has made a decision to retain both remaining examples of Old PWD bridges within the road network, including Clarence Town Bridge. The bridge will be upgraded to the T44 standard in future. Planning for this work is underway. The matters raised regarding restricting heavy vehicle access are have been acknowledged by Roads and Maritime Services and will be considered in the future management of the bridge.

## 2.4.6 Coorei Bridge

### **Submission number(s)**

Retention: 31, 42, 51, 74

Replacement: 17, 57, 71

### **Issue description**

Coorei Bridge is a single span Dare truss bridge that Roads and Maritime Services has identified for replacement.

Submissions in relation to this bridge were closely split between retention and replacement, with one more in favour of retention. A submission from Dungog Shire Council as well as a local councillor noted this bridge as an impediment to development north of Dungog, although the Council submission did note there may be scope for retention of the bridge for pedestrian or cycleway use. The submissions in favour of

retention noted the importance of the bridge to the local town and rejected the similarity of other bridges as a basis for replacement.

### **Response**

Coorei Bridge is located on a route that Roads and Maritime Services has identified as requiring load capacity in excess of the T44 standard. While the bridge is located adjacent to a picnic area, it is not located within the town of Dungog itself but is north of the town centre. As it leads to a rural and semi-industrial area, it is not clear that there is sufficient demand for a specific pedestrian or cycle bridge in this location. While appreciating the local community value for the bridge, in this instance Roads and Maritime Services has taken a strategic approach to managing this bridge in relation to other Dare truss bridges in NSW. This bridge is listed for replacement. The Heritage Council requested further consultation with the local community. Consultation with the community and local government will be undertaken as part of the SHR delisting and Environmental assessment process.

## **2.4.7 Barrington Bridge**

### **Submission number(s)**

Retention: 5, 53, 93

Replacement: 25, 27, 54, 56

### **Issue description**

Barrington Bridge is a two-span standard Allan truss bridge crossing Barrington River, which has been identified for replacement.

Submissions were roughly evenly split between retention and replacement of the bridge, with one more in favour of replacement. Submissions were from members of the public only. Those in favour of retaining the bridge noted that it is in good condition, fits in well with its environment and causes the community no problems. The submissions in favour of replacement noted that the bridge did not meet traffic needs, required regular maintenance that affected access and gave rise to safety concerns.

### **Response**

This bridge is an otherwise unremarkable Allan truss bridge. Due to the emerging load requirements of this route, the bridge has been identified for replacement. Roads and Maritime Services has not changed its position on this bridge.

## **2.4.8 Holman Bridge**

### **Submission number(s)**

Retention: -

Replacement: 6, 7, 8, 24

### **Issue description**

Holman Bridge is a single-span de Burgh truss bridge located on Main Road 237, 1 km from Gooloogong that is identified for replacement.

All submissions on the Holman Bridge were in favour of replacement. The submissions noted that the bridge is in constant need of maintenance that is both costly in monetary terms as well as the inconvenience of traffic stoppages, being an essential river crossing.

Additionally, it is noted that the bridge is in poor condition and is no longer meets the demands placed on it.

### **Response**

This is an unremarkable example of a de Burgh truss bridge and cannot meet the identified load requirements for the route. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.9 Monkerai Bridge

##### **Submission number(s)**

Retention: 58, 60, 93

Replacement: 13, 61

##### **Issue description**

Monkerai Bridge is a three-span Old PWD truss bridge on a little-used unsealed road (RR101). It is located over 30 km from a populated area. It is identified for retention.

The public submissions on Monkerai Bridge were slightly in favour of its retention. Those in favour of retaining the Monkerai timber truss bridge point to its heritage value. The submissions against retaining the bridge point out that it has hindered development in the valley, it disadvantaged landholders on both sides and created operational and logistical difficulties for businesses in the district.

### **Response**

Roads and Maritime Services made a decision to retain both remaining examples of Old PWD bridges within the road network, including Monkerai Bridge. While Roads and Maritime Services recognises the limitations of this bridge, as it is only one of two Old PWD truss bridges it has been identified for retention. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.10 Vacy Bridge

##### **Submission number(s)**

Retention: -

Replacement: 17, 55, 57, 72,

##### **Issue description**

Vacy Bridge is an Allan truss bridge located on the Paterson-Gresford Road near the village of Vacy. It has been identified for replacement.

All submissions regarding Vacy Bridge were in support of its replacement. The submissions pointed out that the crossing provided a critical connection, however the bridge poses access issues in its current state and is an impediment to development. The submissions also raised concerns over the safety of the bridge.

### **Response**

The Vacy Bridge has been identified as having major operational limitations and no unique features for its truss type. It is also a high-risk bridge due to the depth of the valley it spans and has been identified for replacement. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.11 Wallaby Rocks Bridge

##### **Submission number(s)**

Retention: 12, 43, 59, 64

##### **Issue description**

Wallaby Rocks Bridge is a three-span Allan truss bridge that Roads and Maritime Services has proposed for replacement.

Submissions noted that the bridge is on the road into the Hill End Historic Site and all submissions received (including one from Bathurst Council) support its retention.

##### **Response**

Roads and Maritime Services upgraded this bridge in 2008 to the T44 load standard. The route is however identified as one that will be subject to pressure from higher mass limit vehicles in the longer term and will not be able to provide the required load standard.

Wallaby Rocks was identified as the final bridge to be replaced for upgrading. As the need to upgrade this route may be some time in the future, Roads and Maritime Services will retain Wallaby Rocks as the sixth bridge in the Central West bridge group (along with Beryl Bridge, Paytens Bridge, Rawsonville Bridge, Scabbing Flat Bridge and Warroo Bridge). Roads and Maritime Services will commit to maintaining this group of bridges while highlighting that network demand on these roads may result in a need to review this decision in future.

#### 2.4.12 Abercrombie Bridge

##### **Submission number(s)**

Retention: 41, 43, 59, 64

Replacement: -

##### **Issue description**

Abercrombie Bridge is an Allan truss bridge, with local granite masonry piers and abutments incorporated from the previous 1879 Old PWD truss bridge at the crossing. The bridge is close to Bathurst on State Road 54. This bridge has been identified for replacement.

All submissions regarding Abercrombie Bridge were in favour of retaining the structure. These submissions pointed to the good condition of the bridge and its recent upgrade to a T44 loading. The submission from Bathurst Regional Council noted the rarity of the style of bridge in the area, and suggested that the bridge be retained *in situ* with the diversion of the road to a new crossing if required.

##### **Response**

Abercrombie Bridge is on a strategic route connecting the southern tablelands to the central western plains. It has been identified as having to carry loads in excess of the 42.5 tonnes to which it has been upgraded. The bridge has irregular span dimensions due to its reliance on piers built for an earlier Old PWD bridge at that crossing. Apart from this characteristic the bridge is otherwise unremarkable among Allan trusses. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.13 Swan Hill Bridge

##### **Submission number(s)**

Retention: -

Replacement: 11, 50, 71, 94

##### **Issue description**

Swan Hill Bridge is an Allan truss bridge located between Swan Hill and Moulamein. It has been identified for retention for light vehicle traffic only once a duplicate bridge is constructed nearby.

The submissions regarding Swan Hill Bridge were in favour of replacement, due to the impediment posed by the bridge to road and river traffic as well as the cost of maintenance.

##### **Response**

Roads and Maritime Services has recognised the need for an alternate bridge in this area. Planning for a modern duplicate bridge will allow the retention of Swan Hill to carry light vehicles. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.14 Paytens Bridge

##### **Submission number(s)**

Retention: 20

Replacement: 43, 59

##### **Issue description**

Paytens Bridge is a standard two-span Allan timber truss bridge. It is identified for retention subject to future network needs.

One submission was in favour of retaining Paytens Bridge and two were against. The submission for the retention of the structure argued that the bridge could have higher significance than that stated and suggested the reconsideration of this status. The submissions in support of replacement pointed out that the structure has little significance beyond being timber truss in design, has insufficient load capacity and would be very costly to upgrade.

##### **Response**

At present Roads and Maritime Services has identified this bridge as adequate for the route requirements, subject to upgrade to the T44 standard. It is on a low-volume traffic route and is identified for retention. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.15 Beckers Bridge

##### **Submission number(s)**

Retention: 43, 59

Replacement: -

##### **Issue description**

Beckers Bridge is a single-span de Burgh truss bridge located on the Gresford-Glendon

Brook Rd, 10 km from Gresford West and away from any local community. It is identified for replacement.

All submissions regarding Beckers Bridge were in support of its retention. The submissions argued that its retention would be at a low cost and would provide an example of its type in the region.

### **Response**

This bridge cannot meet the load requirements for this route and is identified for replacement. It is an unremarkable example of its type. Roads and Maritime Services has not changed its position in relation to this bridge.

#### **2.4.16 Five Day Creek Bridge**

##### **Submission number(s)**

Retention: 78, 83, 84, 93

Replacement: -

##### **Issue description**

Five Day Creek (also called Comara) Bridge is a single-span McDonald truss located on the Kempsey to Armidale road, more than 30 km from Kempsey and away from any local community. A new crossing was built in 2001, the timber truss bridge was closed and is identified for demolition.

The four submissions regarding Five Day Creek Bridge were in support of retaining the structure. Kempsey Shire Council's submission questions the ownership of the bridge, arguing that it was transferred to Council in 1928, with Roads and Maritime Services continuing to be responsible for its maintenance. The heritage listings of the item, its technical value, historical and community associations and its proximity to the Bellbrook Village Heritage Conservation Area were all pointed to in support of its retention.

### **Response**

Five Day Creek Bridge has been bypassed and cannot meet the load requirements of the area. There are other examples of this type of bridge that remain operational. Five Day Creek Bridge is in a remote location and lacks any distinctive characteristics for its truss type. Roads and Maritime Services has not changed its position in relation to this bridge.

#### **2.4.17 Victoria Bridge**

##### **Submission number**

Retention: 40

Replacement: -

##### **Issue description**

Victoria Bridge, Picton, is a three-span Allan truss bridge located within the centre of the town of Picton. It is identified for retention.

There was one submission in favour of retaining Victoria Bridge. This submission pointed out that the bridge was popular with residents of the shire, and argued for the historical significance of the structure to the community. It was argued that if an alternative bridge were constructed for road traffic, Victoria Bridge should be retained for pedestrian and light local traffic access to the nearby railway station.

## **Response**

Roads and Maritime Services proposes the retention of this bridge due to the low route requirements and its prominent position within the town. Roads and Maritime Services has not changed its position in relation to this bridge.

### 2.4.18 Lansdowne Bridge

#### **Submission number**

Retention: -  
Replacement: 46

#### **Issue Description**

Lansdowne Bridge is a single span de Burgh Truss located on the Goulburn to Bungonia Road, 5 kilometres from the Goulburn town centre. It is on a local road with identified traffic safety issues at the bridge approaches, and these have been identified by the community as a major concern. Council is responsible for the locally classified road, with RMS responsible for upkeep of the bridge.

Lansdowne Bridge was identified for retention in the draft Timber Truss Bridge Strategy. One submission seeking replacement of Lansdowne Bridge was made by Goulburn-Mulwaree Council. The Council also made separate representations to the Minister for Roads and Ports seeking a new bridge,

## **Response**

Roads and Maritime Services has reviewed its position on Lansdowne Bridge following consultation with Goulburn-Mulwaree Council and now proposes to replace this bridge due the safety concerns raised by the local community.

### 2.4.19 Rossi Bridge

#### **Submission number**

Retention: -  
Replacement: 48

#### **Issue description**

Rossi Bridge is located on the edge of Goulburn and the crossing relates to the historical development of the township. It is a three-span Allan truss bridge on the Goulburn-Wheeo Road, over the Wollondilly River. It is identified for retention.

One submission was made regarding Rossi Bridge, in favour of replacing the bridge. This submission refers to the structure's inability to cater for modern-day demands and as such the danger it poses, noting particularly the safety concerns for pedestrians.

## **Response**

Rossi Bridge is on a route with low traffic volumes and low load requirements. Therefore it can be maintained using traditional timber truss bridge materials and design. Because the bridge can remain operational without upgrading to T44 the bridge has been identified for retention. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.20 Sportsmans Creek Bridge

##### **Submission number(s)**

Retention: 66, 93

Replacement: -

##### **Issue description**

Sportsmans Creek Bridge is a two-span Dare truss located on the Grafton to Maclean road, at the entrance to Lawrence, a town with a strong agricultural focus. It is identified for replacement.

Two submissions were made in support of retaining Sportsmans Creek Bridge. The submission made by Clarence Valley Council stated that Council supports the retention of either the Sportsman Creek Bridge or the Briner Bridge.

##### **Response**

Due to the requirements identified for this route, the bridge is operationally unsuitable and is identified for replacement. Roads and Maritime Services has not changed its position in relation to this bridge. Briner Bridge has been identified for retention.

#### 2.4.21 Bulga Bridge

##### **Submission number**

Retention: 67

Replacement: -

##### **Issue description**

Bulga Bridge is a two-span Dare truss bridge located over the Wollombi Brook, less than 1 km from Bulga. It is identified for replacement.

One submission was made regarding Bulga Bridge, in support of retaining the structure. The submission pointed to the heritage significance of the bridge, its recent load capacity upgrade and the localised use of the structure.

##### **Response**

The Bulga Bridge is located on a heavy traffic route and cannot be upgraded to meet operational requirements. Six other Dare truss bridges are identified for retention, however this bridge is identified for replacement. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.22 Charleyong Bridge

##### **Submission number**

Retention: 70

Replacement: -

##### **Issue description**

Charleyong Bridge is a single-span Allan truss bridge, located 10 km from Goulburn. It is identified for replacement.

One submission was made in support of retaining the Charleyong Bridge. This submission suggested an examination of the option to retain as much original fabric as possible whilst carrying out necessary structural and fabric alterations to sufficiently upgrade the structure to meet modern standards.

### **Response**

Charleyong Bridge is an unremarkable single-span Allan truss bridge. The requirements of this route are in excess of the T44 standard and the bridge cannot be upgraded to meet those requirements. Due to this, the bridge is identified for replacement. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.23 Gundaroo Bridge

##### **Submission number**

Retention: -

Replacement: 90

##### **Issue description**

Gundaroo Bridge is a single-span Allan truss located 1 km from the historic Gundaroo township. This bridge has been closed and a replacement bridge has been completed adjacent to it. It is identified for demolition.

The one submission received in support of replacing Gundaroo Bridge put forward the suggestions of using part of the bridge trusses in an interpretive display in the local park and using leftover timber in building projects in the village.

### **Response**

This bridge has been bypassed and there is no scope for placing it back into service. The suggestion for partial retention is acknowledged and will be investigated as a part of the planning for the removal of this bridge.

#### 2.4.24 Thornes Bridge

##### **Submission number**

Retention: 9

Replacement: -

##### **Issue description**

Thornes Bridge is a single-span Allan truss bridge of standard form. It has already been replaced, is closed to traffic and has been identified for demolition.

One submission was received in support of retaining Thornes Bridge, pointing to its age and aesthetic qualities. The submission also put forward the idea of retaining the bridge adjacent to a new structure.

### **Response**

A new bridge has been built adjacent to this bridge and due to its location there is no demand for an alternate light duty crossing. As it is an otherwise unremarkable example of its type, Roads and Maritime Services cannot justify retention. Roads and Maritime

Services has not changed its position in relation to this bridge.

#### 2.4.25 Coonamit Bridge

##### **Submission number(s)**

Retention: -

Replacement: 11, 94

##### **Issue description**

Coonamit Bridge is a two-span Dare truss bridge located over the Wakool River on the Swan Hill to Moulamein road, more than 30 km from Moulamein. It is identified for replacement.

The two submissions on Coonamit Bridge were in favour of replacing the structure. These pointed to the cost of maintenance and the impediment the bridge posed to growth in the area.

##### **Response**

This bridge has been identified as operationally unsuitable and is listed for replacement. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.26 Morpeth Bridge

##### **Submission number**

Retention: -

Replacement: 10

##### **Issue description**

Morpeth Bridge is located on the edge of the historic riverside town of Morpeth. Its three overhead braced Allan truss spans on iron piers are currently being conserved.

The submission made regarding Morpeth Bridge commended the work Roads and Maritime Services had carried out to restore the bridge, however questioned the cost of the works and the continual need for maintenance.

##### **Response**

The Morpeth Bridge has undergone extensive work to raise it to the T44 standard and improve its approaches. The bridge also makes an important contribution to the Morpeth town centre. The bridge has been identified for retention. Roads and Maritime Services has not changed its position in relation to this bridge.

#### 2.4.27 Tooleybuc Bridge

##### **Submission number**

Retention: -

Replacement: 94

##### **Issue description**

Tooleybuc Bridge crosses the Murray River. It has two Allan trusses on timber piers with a

central vertical lift span. Unlike many other Murray bridges it is not adjacent to a township. It is identified for replacement.

Wakool Shire submitted that Tooleybuc, along with the other four bridges in the shire, were inadequate to meet escalating heavy traffic requirements. The load restrictions at Tooleybuc presented an impediment to growth of agriculture and industry in the shire.

### **Response**

Tooleybuc Bridge is required to carry freight loads in excess of the T44 (42.5 tonne) standard. The bridge is similar to other Allan truss lift span bridges, two of which (Hinton and Dunmore) are to be retained. Cobram and Barham, although of different truss types have similar lift mechanisms and are also to be retained.

Roads and Maritime Services has not amended its position in relation to Tooleybuc Bridge.

#### **2.4.28 Beryl Bridge**

##### **Submission number(s)**

Retention: -

Replacement: 43, 59

##### **Issue description**

Beryl Bridge is a two-span Allan truss bridge located on the Gulgong-Wyaldra Road. It is proposed to retain Beryl Bridge as it will meet the expected load carrying limits for the route when upgraded to T44 standard. RMS has included it in its list of 'Central West' bridges, to be retained as an item of local heritage significance in recognition that there remains a long-term risk that a bridge in excess of the T44 standard will be required on the route.

Two submissions were received relating to Beryl Bridge. Both were from RTA Chief Bridge Engineers and both recommended that it be replaced. The submissions argued that the cost of upgrading Beryl Bridge to T44 standard would be excessive given that it has not previously been added to the State Heritage listing nor had it any specific features that merited consideration for listing.

### **Response**

At present Roads and Maritime Services has identified this bridge as adequate for the route requirements, subject to upgrade to the T44 standard. It is on a low-volume traffic route and is identified for retention. Roads and Maritime Services has not changed its position in relation to this bridge.

#### **2.4.29 Gee Gee Bridge**

##### **Submission number(s)**

Retention: -

Replacement: 94

##### **Issue description**

Gee Gee Bridge is a single span Dare truss bridge, situated on the Swan Hill- Deniliquin Road, and is listed on the NSW State Heritage Register. It is identified for replacement.

One submission was received, from Wakool Shire, which expressed concern that Gee Gee Bridge, as well as other timber truss bridges within the shire, 'are real impediments to the growth of agricultural and industrial development within the Shire'.

### **Response**

Gee Gee Bridge is an unremarkable example of a single span Dare truss bridge. It cannot be upgraded to meet the expected load limits required for the route. Roads and Maritime Services has not changed its position in relation to this bridge.

## **2.5 Issues not specific to the Strategy or individual bridges**

### **2.5.1 Broader transport policy issues**

#### **Submission number(s)**

**1, 2, 3, 4, 11, 15, 17, 18, 19, 20, 31, 43, 45, 59, 61, 62, 72, 78**

#### **Issue description**

A number of submissions raised the issue as to why increasing traffic loads and vehicle weights were allowed on routes containing timber truss bridges. Some submissions suggested the use of rail transport rather than road transport to alleviate demands to the bridges, or the limitation of load capacity on roads containing timber truss bridges. The public meeting at Carrathool noted particularly issues with livestock movement across the bridge.

### **Response**

Mode of transport is dependent on availability of rail heads, choice of transporter, convenience, etc, all of which are beyond Roads and Maritime Services' control. The Council of Australian Governments (COAG) is directly overseeing national transport reforms to assist industrial and economic growth and, as part of this program, is promoting the national adoption of 'Higher Mass Limits' (HML) for heavy vehicles equivalent to a 45.5 tonne semi-trailer. Where a bridge is on a State or Regional road, Roads and Maritime Services is required provide at least a 42.5 tonne general access limit load capacity on bridges, but can also apply restrictions.

Load alone is not the limiting factor for some bridges: width, height and risk to livestock are also significant factors. For example, some of the bridge issues relate to their use by farm equipment rather than transport vehicles, where a landowner has properties on either side of a waterway. Similarly, some bridges fall on Travelling Stock Routes and therefore rail may not be an appropriate option.

In terms of the use of load limits and load-limiting devices, this has been effective in some areas but with roads that are major traffic routes or are in remote areas, the Roads and Maritime Services does not believe these measures will be appropriate or effective. Bridges such as Victoria Bridge at Picton (which is height limited by a portal frame) and Galston Gorge (which has limited access due to topography) have measures that work to effectively limit the size of vehicles that can use these bridges. In some instances, the Roads and Maritime Services may be able to investigate the use of similar measures for bridges that are deemed to be at risk from overloading, although this will depend very

much on their location. Such measures are reactive and may deter illegal use because of a higher risk of being identified and charged, but too late to prevent damage to the bridge.

Roads and Maritime Services will continue to investigate technological solutions to monitor illegal overloading or over-dimension use of bridges.

## 2.5.2 Movement of stock

### **Submission number(s)**

**21, 47, 82**

### **Issue description**

The Carrathool public meeting noted stock crossing as a particular issue of concern. As the bridge is narrow stock movement is restricted and uneven, making some stressed animals defecate. As the deck becomes slippery the pressure of other animals behind can make animals stumble or sprawl, resulting in physical damage such as broken legs or split pelvises.

### **Response**

Roads and Maritime Services acknowledges that non-road users of bridges, such as travelling stock, have particular safety considerations. Roads and Maritime Services will work with local Rural Lands Boards to identify measures to improve safety on individual timber truss bridges where stock movement occurs.

### 3 Other heritage conservation considerations

In the absence of any other established processes Roads and Maritime Services believes that, despite reservations by some stakeholders, the underlying methodology for the Strategy is well considered and balances all relevant issues. Broad support for a strategic approach has been expressed by the Heritage Council of NSW, Engineering Heritage Australia and other stakeholder groups. On this basis, Roads and Maritime Services does not intend to undertake any fundamental review of the methodology or Strategy as a whole.

#### 3.1 Further investigations required for groups of bridges

##### **Lift span bridge operation**

There is increased demand for liftspan bridges that currently do not operate and restrict river use, to be made operable.

Roads and Maritime Services will, in the short term, undertake a heritage assessment of these timber truss liftspan bridges to allow their opening mechanisms to be reactivated where required for operational reasons. As similar mechanisms are also found on other lift spans the study will address a broader group than just the timber truss lift spans. This will address the repair and replacement of lifting mechanism components, changes to the bridges to meet current safety requirements and the capacity of the bridge to return to lift operation.

##### **Movable Span bridge heritage study**

Roads and Maritime Services will undertake a population study of all 26 movable lift span bridges it currently manages. Only a few of these are timber truss bridges and the remainder are a diversity of forms and materials.

Roads and Maritime Services will schedule this study within the first five years of the Strategy. It will identify whether any of the bridges should be added to the S170 Register or the State Heritage Register.

#### 3.2 Additional works for retained bridges

For the bridges that are retained, Roads and Maritime Services proposes the following management strategy:

- Develop a forward funding program.
- Report every two years on progress with implementation of heritage, interpretation and sustainability strategies to the Heritage Council.
- Further develop heritage-sympathetic conservation technology and techniques for timber truss bridges, in conjunction with the Heritage Council and key stakeholders.
- Prepare conservation management documentation for each of the five types of timber trusses in Roads and Maritime Services' portfolio for endorsement by the NSW Heritage Council. Update the conservation documents every five years to reflect works undertaken and those required for individual bridges in the next five years and any substantial change in their operational or heritage context. Seek a renewal of the

endorsement for a further five years.

- Implement interpretation works at bridge sites and develop publications and heritage resources that are accessible to a broad audience.

### 3.3 Additional works for removed bridges

For bridges that are to be replaced, Roads and Maritime Services proposes the following management strategy:

- Develop a forward funding program.
- Undertake archival recordings of all bridges in accordance with Heritage Council guidelines.
- Request Heritage Council to seek delisting of SHR-listed bridges at least three years before a replacement bridge is scheduled to begin construction.
- Undertake environmental assessment for each bridge, which will include identification of mitigation measures such as interpretation, as appropriate.
- Roads and Maritime Services may use bridges and bridge members identified for removal to test different engineering solutions to improve load capacity and conservation techniques, and long-term management of the bridge resource as required.

## 4 Revised RMS Timber Truss Bridge Conservation Strategy

### 4.1 Retention and replacement of bridges

The Roads and Maritime Services Timber Truss Bridge Strategy seeks the retention of 26 timber truss bridges and the replacement of 22 bridges. This reflects three significant changes resulting from the community consultation program that amend the draft Timber Truss Bridge Strategy. These are:

- Retain Barham Bridge.
- Replace Lansdowne Bridge.
- Retain Wallaby Rocks Bridge within the Central West group of bridges.

There are 10 bridges proposed to be replaced that are presently on the NSW State Heritage Register. RMS will consult with the NSW Heritage Council as to how the statutory process for the complete removal of SHR-listed heritage items will be undertaken. For the five bridges that have already been duplicated – Boonanga, Mungindi, Thornes, Five Day Creek and Gundaroo - RMS would seek to complete any required environmental assessment and obtain approvals within one year once the Strategy has been accepted by the Heritage Council of NSW.

Bridges to be retained as part of the Central West Group – Beryl, Paytens, Rawsonville, Scabbing Flat, Wallaby Rocks and Warroo - have been identified as meeting demand and being operable within the forecasting range of this study. However, this region is most vulnerable if national freight policy moves towards larger multi-combination vehicles. RMS proposes to retain these bridges as locally listed heritage items, apart from Wallaby Rocks which is presently on the SHR.

Bridges identified as traditional construction are situated in locations where traffic is not expected to exceed their original design load. Upgrades on these bridges – Cobram, Galston, Rossi, Victoria – will use traditional methods and materials where possible, in contrast to the remainder of retained bridges, which will make use of modern materials such as composites to achieve their 42.5 tonne load capacity. By retaining these bridges RMS will encourage the conservation of the full suite of traditional bridge carpentry skills.

Funding needs for the first five years of bridge replacements and upgrades forms part of the Bridges for Bush submission which is currently being finalised with Transport for New South Wales and Infrastructure New South Wales.

More generally Roads and Maritime Services will continue to promote the heritage significance of its timber truss bridges and use the opportunities arising from the replacement of some bridges to improve its knowledge of their conservation, engineering and future management.

## Summary of the Strategy recommendation for individual bridges

### Bridges proposed to be retained

Bridge	LGA	Current listing	Proposed listing	Comment
<b>Old PWD</b>				
Clarence Town	Dungog	SHR	SHR	
Monkerai	Great Lakes	SHR	SHR	
<b>McDonald</b>				
Galston	Hornsby	SHR	SHR	Traditional construction
Junction	Tumut	SHR	SHR	
McKanes	Lithgow City	SHR	SHR	
<b>Allan</b>				
Beryl	Mid-Western Regional	S170	S170	Central West group
Carrathool	Carrathool	SHR	SHR	
Dunmore	Maitland City	SHR	SHR	
Hinton	Maitland City	SHR	SHR	
Morpeth	Maitland City	SHR	SHR	
Paytens	Forbes	S170	S170	Central West group
Rossi	Goulburn-Mulwaree	SHR	SHR	Traditional construction
Swan Hill	Wakool	SHR	SHR	
Victoria	Wollondilly	SHR	SHR	Traditional construction
Wallaby Rocks*	Bathurst Regional	SHR	SHR	Central West group
Wee Jasper	Yass Valley	SHR	SHR	
<b>deBurgh</b>				
Barham*	Wakool	SHR	SHR	
Cobram	Berrigan	S170	SHR	Traditional construction
Middle Falbrook	Singleton	SHR	SHR	
St Albans	Hawkesbury City	SHR	SHR	
<b>Dare</b>				
Briner	Clarence Valley	S170	SHR	
Colemans	Lismore City	SHR	SHR	
New Buildings	Bega Valley	SHR	SHR	
Rawsonville	Dubbo City	S170	S170	Central West group
Scabbing Flat	Wellington	S170	S170	Central West group
Warroo	Forbes	S170	S170	Central West group

### Bridges proposed to be replaced

Bridge	LGA	Current listing	
<b>McDonald</b>			
Crankies Plains	Bombala	SHR	
Five Day Creek	Kempsey	SHR	
<b>Allan</b>			
Abercrombie	Bathurst Regional	S170	
Barrington	Gloucester	S170	
Boonanga	Moree Plains	S170	
Charleyong	Palerang	S170	
Gundaroo	Upper Lachlan	S170	
Thornes	Goulburn-Mulwaree	S170	

Tooleybuc	Wakool	SHR	
Vacy	Dungog	SHR	
<b>deBurgh</b>			
Beckers	Singleton	SHR	
Crookwell	Upper Lachlan	S170	
Holman	Cowra	S170	
Lansdowne*	Goulburn-Mulwaree	S170	
Tabulam	Kyogle	SHR	
<b>Dare</b>			
Bulga	Singleton	SHR	
Coonamit	Wakool	SHR	
Coorei	Dungog	SHR	
Gee Gee	Wakool	SHR	
Korns Crossing	Tweed	S170	
Mungindi	Moree Plains	S170	
Sportsmans Creek	Clarence Valley	S170	

\* Significant change in outcome to the draft Timber Truss Bridge Strategy

The expected program of works for the first five years of the Strategy's implementation will include:

Propose bridges for SHR listing	Cobram*, Briner*
Initiate SHR delistings	Five Day Creek*, Tabulam*
Seek S60 approvals for upgrading	Middle Falbrook*
Heritage management	Archival recording Heritage interpretation strategy Timber truss bridge publication Heritage assessment on lift span operability Movable bridge span heritage study Environmental assessment guideline
Remove duplicated bridges	Five Day Creek*, Boonanga, Mungindi, Thornes, Gundaroo
Complete current maintenance	St Albans*, Vacy*, Carrathool*
Construct replacement bridge	Crookwell, Holman, Lansdowne, Tabulam*, Sportsmans Creek
Upgrade to T44 standard (* SHR-listed bridges)	Clarence Town*, Warroo, Dunmore*, McKanes*, Middle Falbrook*

#### 4.2 Protocol for advising of proposed bridge replacement

The following timetable shows indicative timing for advising the NSW Heritage Council of the intention to replace a bridge, and related project development processes.

Indicative timing	Bridges on the State Heritage Register	Bridges not on the State Heritage Register
Biennial from commencement of Strategy	Reporting on funds sought and allocated to replacement across Timber truss bridge portfolio	Reporting on funds sought and allocated to replacement across Timber truss bridge portfolio
When funding has been allocated for bridge replacement	RMS advises Heritage Council that funding has been allocated for replacement of specific bridge	RMS advises Heritage Council that funding has been allocated for replacement of specific bridge
Three years prior	RMS advises Heritage Council of intention to replace a specific bridge. Seeks delisting from SHR	
	Delisting process managed by Heritage Council	
Two years prior	RMS commences environmental assessment process	RMS commences environmental assessment process
	EA will not be determined until delisting of bridge is confirmed	
One year prior	RMS begins project delivery planning	RMS begins project delivery planning
	RMS confirms intention and feasibility of replacing bridge	RMS confirms intention and feasibility of replacing bridge
Bridge construction begins [target date]	New bridge commenced	New bridge commenced
Bridge completed	Demolition of older bridge	Demolition of older bridge

Roads and Maritime Services will identify those bridges for which funding has been sought or received in its biennial reporting on the progress of the Strategy to the Heritage Council.

For bridges that are SHR-listed Roads and Maritime Services will request that a delisting process is commenced in accordance with the NSW Heritage Act 1977. Where bridges are not SHR-listed, notification of intention to replace will be consistent with cl. 4.14 of the *NSW State Agency Heritage Guide*.

Roads and Maritime Services may commence its environmental assessment process while the delisting process is in progress. It cannot determine or finalise an assessment until the delisting process has been resolved.

An environmental assessment guideline for timber truss bridge replacement will be prepared to guide preparation of reviews of environmental factors.

#### 4.3 Additional policy and heritage conservation matters

Roads and Maritime Services commits to implementing the following heritage conservation

policies in relation to the timber truss bridges:

- Prepare an environmental assessment guideline for timber truss bridge replacement.
- Undertake a heritage assessment of timber truss lift span bridges to allow their opening mechanisms to be reactivated where necessary.
- Within five years Roads and Maritime Services will undertake a heritage study of all 26 movable span bridges within its control.

Roads and Maritime Services commits to implementing the following heritage interpretation policies in relation to the timber truss bridges:

- Prepare a heritage interpretation strategy that will apply to both bridges to be retained and to the sites and materials from bridges that have been replaced, to identify suitable means of capturing and sharing information about the heritage significance of these places.
- Prepare a comprehensive book on the heritage significance of the timber truss bridges of NSW.

Roads and Maritime Services commits to implementing the following sustainability policies in relation to the timber truss bridges:

- Implement the *Recycling of used bridge timbers policy* for all bridges to be removed.
- Implement the *Timber Procurement Strategy* to ensure adequate timber supply for all bridges to be retained.
- Implement a skills development program to ensure the skills for timber bridge maintenance are retained within RMS, including bridge carpentry skills and heritage awareness for engineers and designers.

#### 4.4 Reporting to the NSW Heritage Council

Every two years from the commencement of the Strategy RMS commits to reporting to the NSW Heritage Council on the following issues with the identified information

- Management of the timber truss bridge portfolio
  - (maintenance and other significant works activities planned in the coming five years for all timber truss bridges / works undertaken on all bridges in past two years)
- Implementation of the bridge replacement program
  - (bridges identified for replacement / capacity upgrading / funding sought and allocated)
- Progress / completion of the lift span bridge operability heritage assessment, and its implementation to individual bridges
  - (identification of bridges requiring works / progress of works to movement mechanism operable)

- Progress / completion of the movable span bridges heritage study and resulting updating of the RMS S170 Register
  - (completion of project study stages / assessments of significance of individual bridges / progress in listing on S170 or SHR)
- Status of the heritage interpretation strategy
  - Production of a comprehensive timber truss bridge book
    - (progress against contract milestones / publication)
  - Production of supporting interpretative material
    - (program for delivery / locations where emplaced or used)
  - Installation of on-site interpretation
    - (interpretation installations undertaken in past two years / copy of interpretation materials)
- Status of the sustainable conservation actions:
  - Timber recycling policy
    - (bridges dismantled in previous 2 years where policy applies / issues affecting recyclable recovery)
  - Timber procurement strategy
    - (stockpile quantities of timber held by RMS / quantities added / quantities used)
  - Training / skills development program
    - (four bridge training courses / programs are delivered every 1-2 years dependent on demand – reporting on which courses held in previous two year period and no of attendees)

## 5 References

NSW Roads and Traffic Authority (RTA) 2011  
*Timber Truss Bridges – A Strategic Approach to Conservation.*

NSW Roads and Traffic Authority (RTA) 2011  
*Timber Truss Bridges Community Update.*

McMillan Britten and Kell (1998)  
*Study of the Relative Heritage Significance of all Timber Truss Road Bridges in NSW.*