Appendix F

Statement of Heritage Impact
Statement of Heritage Impact

CHARLEYONG BRIDGE REPLACEMENT

JULY 2016
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1 INTRODUCTION

1.1 BACKGROUND

The heritage team of NGH Environmental was commissioned to prepare a Statement of Heritage Impact (SoHI) relating to proposed works to the historic Charleyong Bridge over the Mongarlowe River, NSW.

The NSW Roads and Maritime Services (Roads and Maritime) propose to demolish and replace the Charleyong Bridge. The bridge was identified for replacement as part of the strategic document, the *Timber Truss Road Bridges – a Strategic Approach to Conservation* (the Strategy) (RMS 2012). The Strategy was prepared in order to represent a balance of transport needs and heritage conservation for heritage listed timber truss bridges. The Strategy identified that of the 48 timber truss bridges then managed by Road and Maritime, 26 would be retained and 22 would be progressively replaced over the next 15 years, including Charleyong.

Prior to the development of the Strategy, all timber truss bridges were upgraded or bypassed on a case-by-case basis. The endorsed Strategy (2012) provides Roads and Maritime asset managers planning certainty by identifying those bridges to be progressively removed and those which will be maintained and upgraded as part of the significant heritage of NSW for future generations to appreciate.

The retention of the bridge as an ‘out of service’ option is considered unviable, as Roads and Maritime has no statutory obligation to provide funding, nor does the local council (Queanbeyan-Palerang) have the capability or resources to provide the regular and expensive maintenance of the bridge which would be required to prevent it from falling into disrepair.

This SoHI is required by the RMS as part of the consent conditions, as the proposed works directly impact on Charleyong Bridge, which is listed as a heritage item on the RMS Heritage & Conservation Register (under s170 of the NSW Heritage Act).

The SoHI assesses aspects of the heritage significance of the bridge, and determines the significance of the impact on the heritage item, and as a representative of its type in NSW. The assessment follows the guidelines set out by the NSW Heritage Division (Office of Environment and Heritage) publication *Statements of Heritage Impact* and the principles of the Australia ICOMOS *Burra Charter*. The Charter sets the standard of practice for providing advice or making decisions about, or undertaking works at places of heritage or cultural significance, including owners, managers and custodians (ICOMOS 1999). All Australian states have adopted the Charter as the basis for the conservation assessment and management of heritage places in Australia.

A site inspection was carried out by the NGH heritage consultant on 15 March 2016 in order to determine the existing physical aspects of the site.
### 1.2 LOCATION

The Charleyong Bridge crosses over the Mongarlowe River on the Nerriga Road (Main Road 92) about 95kms west of Nowra and 25 km north of Braidwood (Figure 1.1). The bridge is located in a fairly remote setting of farmland and forest. Nerriga Road is a main alternative travel route between the Canberra region and the Shoalhaven coast. It is a favoured holiday travel route and is increasingly used for freight traffic due to recent upgrades to Nerriga Road.

![Location of Charleyong Bridge project area to the north of Braidwood.](image)

Figure 1.1. Location of Charleyong Bridge project area to the north of Braidwood.

### 1.3 THE PROPOSAL

Roads and Maritime is proposing to replace the timber truss Charleyong Bridge over the Mongarlowe River at Marlowe, on Nerriga Road (main Road 92). The work will also include improvements to the approaches to address some road safety deficiencies on the existing road.

Charleyong Bridge was identified in the Strategy (RMS 2012) for replacement as it does not meet current loading standards and is expensive to maintain. The Strategy determined that the bridge did not have characteristics as an Allan truss that were not represented elsewhere in the population of bridges that had been chosen for conservation.

The existing bridge has substandard traffic barriers and has a single lane carriageway. The substructure and superstructure are in poor condition due to severe deterioration of timber piers and critical truss elements. It has a load limit of 50 tonnes and all the piers have been propped to keep the bridge operational.

The proposed work will include construction of a new bridge just south of the existing location and about 1.4 km of approach roadworks from 94.9 km to 96.3 km west of Nowra and about 25 km north of Braidwood (Figure 1.2).
Some of the tasks involved in constructing this proposal will include acquisition of private property, utility adjustments, clearing of vegetation, earthworks, bridge construction (including piling operations within or in close proximity to the river), road pavement construction, landscaping, decommissioning and demolition of the existing bridge, and decommissioning and rehabilitation of the existing road. Part of the proposed footprint for the work will include space for the stockpiling of materials and a site compound.

### 1.4 APPROACH

Our approach to the SoHI has been to determine factors contributing to the heritage significance of the place and assess the significance of the impact of the proposed works on the intrinsic heritage value of the bridge. The assessment has been prepared in accordance with the NSW Heritage Division guideline *Statements of Heritage Impact* (2001) in addition to any further requirements that need to be considered in order to satisfy legislative and management obligations of Roads and Maritime.

The report specifically includes the following:

- Review of existing heritage assessments and condition of the heritage item.
- Searches of national and state heritage databases. This includes the Australian Heritage Database (National and Commonwealth Heritage Lists), and the NSW Heritage Division State Heritage Inventory.
- Search of the Palerang Local Environmental Plan (LEP).
- Review of relevant literature.
- A site inspection to determine the physical aspects of the site.
- Assessment of the heritage significance of the site (if not done previously), and determination of the impacts on these items and if they are acceptable.
Recommendations are provided accordingly that would help to avoid, minimise or mitigate against impacts to the identified cultural heritage values of the heritage item.

1.5 REPORT STRUCTURE

This report:

- Outlines the background of the current study/proposal (Section 1).
- Outlines the statutory considerations and requirements (Section 2).
- Provides an overview of the historical context of the area and description of heritage items (Section 3).
- Provides an overview of the existing built environment and description of heritage items (Section 4).
- Provides a significance assessment of the heritage items (Section 5).
- Assesses the impacts or potential impacts from the proposal (Section 6).
- Makes any recommendations regarding the items in regard to those impacts (Section 7).

Note, it is outside of the scope of this report to provide a detailed historical account of the area. We have relied upon previous historical information.
2 LEGISLATIVE CONSIDERATIONS

Places of heritage value can be subject to different levels of recognition and protection. This protection (at local, state and national levels) includes specific measures for the protection of heritage items. The text below provides a summary of the legislative framework at each level of government.

2.1 NSW HERITAGE ACT

2.1.1 State Heritage Register

The NSW Heritage Act 1977 is a statutory tool designed to conserve the cultural heritage of NSW and used to regulate development impacts on the state’s heritage assets. Administered by the NSW Heritage Division of the Office of Environment and Heritage (OEH), the Act details the statutory requirements for protecting historic buildings and places and includes *any place, building, work, relic, movable object, which may be of historic, scientific, cultural, social, archaeological, natural or aesthetic value*.

When items are listed on the State Heritage Register (SHR) applications to carry out works on those items need to be made to the Heritage Council under Section 60 of the Act.

A search of the study area and surrounds indicated that Charleyong Bridge is not on the SHR. Also, no items in the vicinity of this area of Nerriga Road are included on the SHR, therefore no Section 60 applications or other approvals are required.

2.1.2 State Agency Heritage Registers

State agencies and authorities in NSW are required to keep a register of heritage places under their management under Section 170 of the Act. The s.170 registers are also held in the NSW Heritage Division’s (OEH) State Heritage Inventory (SHI), an electronic database of statutory listed heritage items in NSW. The Charleyong Bridge is listed on the Roads and Maritime s.170 register as follows. Refer to Appendix A for full listing description.

- Charleyong Bridge is an Allan type timber truss road bridge. It has a single timber truss span of 27.4m (90ft). There are four timber approach spans at one end and two at the other, giving the bridge an overall length of 89.3m (293ft). The superstructure is supported by timber trestles and provides a single lane carriage way with a minimum width of 4.6m. The guard rail is of post and rail construction and extends the full length of the bridge (NSW Heritage 2016).

2.1.3 Relics provisions

Under Clause 139 of the Heritage Act an excavation permit from the Heritage Division (OEH) is required in certain circumstances as identified below:

(1) A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

(2) A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.
(3) This section does not apply to a relic that is subject to an interim heritage order made by the Minister or a listing on the State Heritage Register.

(4) The Heritage Council may by order published in the Gazette create exceptions to this section, either unconditionally or subject to conditions, in respect of any of the following:

(a) any relic of a specified kind or description,

(b) any disturbance or excavation of a specified kind or description,

(c) any disturbance or excavation of land in a specified location or having specified features or attributes,

(d) any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates that there is little likelihood of there being any relics in the land.

(5) This section does not prevent a person from disturbing or excavating land in which a historic shipwreck is situated in accordance with a historic shipwrecks permit in force in respect of that shipwreck.

2.2 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979

The Environmental Planning & Assessment Act 1979 (EP&A Act) controls land use planning in NSW. The planning system established by the EP&A Act includes Local Environment Plans (LEPs) and other provisions relating to development control.

Heritage items are added to a heritage schedule of a LEP often following identification and assessment from a local shire heritage study. The SHI also holds local heritage items listed by local councils in NSW. These items are then given protection by the heritage provisions within the relevant plan, which will then require consent of Council for certain developments.

The Charleyong Bridge over the Mongarlowe River is listed as a local heritage item (item I306) on the heritage schedule of the Palerang LEP (2014).

The nearest other local heritage item is the Marlowe Village and Cemetery that is over 3km south of the bridge site. Charleyong/Marlowe was an important settlement from the 1870s on the Mongarlowe Goldfield, second only to Mongarlowe to the south. The site is significant for its archaeological and historic values. There would be no impact from the proposal to these places.

No other local heritage items listed by Queanbeyan Palerang Regional Council are within proximity to the proposal area.

2.3 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) enhances the management and protection of Australia’s heritage places. Any action that is likely to have a significant impact on the matters protected under the EPBC Act must be referred to the Commonwealth Environment Minister for further consideration.

The Australian Heritage Database (AHD) includes the National Heritage List, which includes the natural, historic and indigenous places that are of outstanding national heritage value to the Australian nation. The AHD also contains the Commonwealth Heritage List that comprises those places on Commonwealth
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lands and waters or under Australian Government control. Items on both of these lists are protected under the EPBC Act. The AHD also includes places listed as World Heritage by UNESCO.

A search of the Queanbeyan Palerang Regional Council local government area determined that no heritage items listed on the AHD are within the project area.

2.4 NSW STATE ENVIRONMENTAL PLANNING POLICIES

2.4.1 SEPP (Infrastructure) 2007

Clause 14

Clause 14 of State Environmental Planning Policy (SEPP) Infrastructure relates to development carried out by, or on behalf of a public authority with potential to impact to local heritage items. This applies to development carried out by, or on behalf of a public authority if the proposal:

(a) is likely to have an impact that is not minor or inconsequential on a local heritage item (other than a local heritage item that is also a state heritage item) or a heritage conservation area, and

(b) is development that this Policy provides may be carried out without consent.

In addition, a public authority, or a person acting on behalf of a public authority, must not carry out development to which this section applies unless the authority or the person has:

(a) had an assessment of the impact prepared, and

(b) given written notice of the intention to carry out the development, with a copy of the assessment, to the council for the area in which the heritage item or heritage conservation area (or the relevant part of such an area) is located, and

(c) taken into consideration any response to the notice that is received from the council within 21 days after the notice is given.

Clause 94

Under Clause 94 this SEPP, development for the purpose of a road or road infrastructure facilities may be carried out by or on behalf of a public authority without consent on any land. However, relevant planning staff and/or the Heritage Advisor at Queanbeyan Palerang Regional Council should be notified as the impact of the works are not considered as inconsequential, due to the replacement of the existing bridge. The bridge would also require de-listing from Councils heritage schedule.

As the Charleyong Bridge is a local item on the Palerang LEP, RMS has advised Council of the proposed works in complying with ISEPP.

2.5 SUMMARY

- As the Charleyong Bridge is a local item on the Palerang LEP, RMS has advised Queanbeyan Palerang Regional Council of the proposed works, complying with ISEPP 2007.
- No Section 60 applications or other approvals are required from the NSW Heritage Council under the Heritage Act.
- No referral to the Commonwealth Minister is required under the EPBC Act.
3 HISTORICAL OVERVIEW

The summary below is adapted from the State Heritage Inventory listing (2016). The scope of works for this SoHI did not require additional historical research on the study area. The summary below and assessment of significance (Section 4) is sufficient for the purposes of providing a historical context for this particular assessment.

3.1 LOCAL CONTEXT

European Settlement

Europeans first entered the upper Shoalhaven River basin in 1822 under instruction from the new Governor, Thomas Brisbane, to investigate the possibility of a track between the Limestone Plains and Bateman's Bay. The reports of good country would have stimulated land selection in the area. The system of land grants available in the 1820s were attractive to settlers. A free grant of 640 acres of land (one square mile) was given to a selector for every £500 of money or stock held, with a limit of 2000 acres, shortly afterwards increased to 2560 (four square miles).

In 1828, grazier George Galbraith was listed as the owner of some 2,000 acres (810 ha) of land on the Endrick River, to the east of the current village of Nerriga. This property was then known as "Narriga". The name "Nerriga" was first recorded by surveyor Robert Hoddle on an 1828 expedition of the Shoalhaven River. Following Galbraith's death in 1837, his land holdings were subsequently auctioned. In 1840, James Larmer surveyed a village site and a route over the mountains from Nerriga to Vincentia. It was intended that this pass, known as the 'Wool Road' would allow movement of agricultural produce to a port on Jervis Bay from the Braidwood and Goulburn districts. The road was completed in 1841, a distance of approximately 37 miles (60 km) at an estimated cost of £997. In 1842, the existing road linking Nerriga to Braidwood was substantially upgraded. Both projects utilised convict labour under the command of Nerriga landowner Colonel John Mackenzie (NSW Heritage 2016).

Mining

The discovery of alluvial gold on the Shoalhaven River in 1851 led to increased interest in the area around Nerriga, and the town began to grow, with the Commercial Hotel opening for business sometime around 1864. Records show that between 1878 and 1901, the peak of production in the area, some 14,177 ounces (401,900 g) of gold were produced from the Nerriga Mining Division. Some quartz reefs were also worked in the area, however the yields from these activities were not significant. Prospecting on a large scale continued through to the 1960s.

The NSW Heritage entry for a mining site in the Mongarlowe area (2016) states that mining in the area commenced in the early 1850s and included both reef and alluvial mining. Newbury's Point near Marlowe in the Mongarlowe field was worked by pan and cradle, box and ground sluicing. These sites still retain evidence of early workings. This site has been conclusively identified as of Chinese origins although there may be other overlays of activity. There is some overlay of later activities in the early 1900s.

Wool Road

The location and remnants of the Wool Road are closely associated with the area. All sections of the Wool Road immediately adjacent to MR92 (Nerriga Road) have been previously impacted either by grading of the road verges or the construction of other infrastructure adjacent to the roadway.
The main section of the surviving historic Wool Road is located along the existing road route to the west of Bulee Gap. This section has considerable significance based on a number of heritage criteria including historic, aesthetic, and technical value. The section through Bulee Gap (over 50km north east of the Charleyong site) was part of the original 1841 route. However, the section of existing road west of the Gap is part of the 1856 realignment of the Wool Road, and has not been considered by previous surveys. The existing road west of Bulee Gap is characterised by a narrow carriageway constructed between and through large sandstone formations in rugged countryside. Drill marks are visible in the sandstone outcrops where they have been cut by the roadmakers. Dry-stone retaining walls are evident, some of which have been compromised by modern road grading (SKM 2002).

The Wool Road is a direct link to the growth of the European settlement in the area in the mid-nineteenth century and the need to supply transport links for goods, services and communication, of which the Charleyong Bridge and setting became a major link over the river crossing that was previously a ford. The Bulee Gap section remains an example of road making from the late Colonial period in the immediate post-convict period, before the formation of the Department of Public Works in 1859. This section is an integral part of the evolution of the Wool Road, the older 1841 section through Bulee Gap having been made impassable (i.e. it was deliberately destroyed to reduce access) during WW II (SKM 2002).

**Marlowe / Charleyong Village**

Marlowe, also known as Charleyong, was an important settlement from the 1870s on the Mongarlowe Goldfield. The site is significant for its archaeological and historic values. Following the construction of the current bridge residents would have had more reliable access to and from Nerriga and the coast.

This settlement near the Charleyong Bridge would appear to have been the largest settlement serving the Mongarlowe gold field outside Mongarlowe itself. The establishment of a post office was noted at William Taylor's store, Charleyong in March 1871. The Hush family continued to run the post office until the closure of the office in September 1942. Specific reference to Taylor's was also made in a book which confirms that Taylor's was a settlement of some significance comprising a church, the general store, and school held in the chapel (NSW Heritage 2016).

Part of the stone walls and oven of one building are intact and the stone footings and fireplace for another building measuring 14 m x 8 m are clearly visible. This building included a 2 m wide verandah and what appears to be a separate adjoining room at right angles to the main structure. A plough share is located nearby. This building may have been Taylor's store and post office. There are also a number of other levelled areas with vestiges of stone footings, which would have also been hut sites. The church was located somewhere between the cemetery and the store. There is one site about 128 m south east of the first mentioned house site, where there are four metre poles (now on the ground) which would have supported a large building, and this may well be the church site. This site was not known to be associated directly with mining. It is, however, an important site for it was a viable settlement for many years and included a post office, church, school and store. The cemetery measures 60 m x 40 m and some of the wooden gate and fence posts are still in place. In one corner three mounds can be clearly seen and in another location there are iron railings and stone footings for a vault.

### 3.2 CHARLEYONG BRIDGE

The Charleyong Bridge over the Mongarlowe River is an Allan type timber truss road bridge and was completed in 1901.
Timber truss road bridges have played a significant role in the expansion and improvement of the NSW road network. Prior to the bridges being built, river crossings were often dangerous in times of rain, which caused bulk freight movement to be prohibitively expensive for most agricultural and mining produce. Only the high priced wool clip of the time was able to carry the costs and inconvenience imposed by the generally inadequate river crossings that often existed prior to the timber truss bridge construction.

Timber truss bridges were preferred by the Public Works Department from the mid-19th to the early 20th century because they were relatively cheap to construct, and used mostly local materials. The financially troubled governments of the day applied pressure to the Public Works Department to produce as much road and bridge work for as little cost as possible, using local materials. This condition effectively prohibited the use of iron and steel, as these, prior to the construction of the steel works at Newcastle in the early 20th century, had to be imported from England.

Allan trusses were the first truly scientifically engineered timber truss bridges, and incorporate American design ideas for the first time. This is a reflection of the changing mindset of the NSW people, who were slowly accepting that American ideas could be as good as or better than European ones. Allan trusses were third in the five-stage design evolution of NSW timber truss bridges, and were a major improvement over the McDonald trusses which preceded them. Allan trusses were 20% cheaper to build than McDonald trusses, could carry 50% more load, and were easier to maintain. The high quality and low cost of the Allan truss design entrenched the dominance of timber truss bridges for NSW roads for the next 30 years.

Percy Allan, the designer of Allan truss and other bridges, was a senior engineer of the Public Works Department, and a prominent figure in late 19th century NSW.

The bridge was constructed in 1901 to replace the long standing ford at Charleyong. This ford was associated with the Wool Road, a key transport route since the 1840s. A tender was accepted to construct the bridge for some £2,221 by Jakob Nybeck of Bega, NSW (Trove 2016).

In October 2010, a substantial upgrade of the road between Nerriga and Nowra was completed by the Roads and Maritime, NSW Department of Infrastructure and Transport and the Shoalhaven City Council, providing high quality, sealed all weather road access for the community. The bridge has continued to be maintained by RMS since then.

### 4 PHYSICAL OVERVIEW

Charleyong Bridge is an Allan type timber truss road bridge. It has a single timber truss span of 27.4m (90ft). There are 4 timber approach spans at the northern end and 2 at the southern end giving the bridge an overall length of 89.3m (293ft) (Figures 4.1-4.6).
Figure 4.1. Approach span from the northern side.

Figure 4.2. Northern approach span

Figure 4.3. Trusses and decking from the southern approach
Figure 4.4. Southern approach towards the bridge

Figure 4.5. Bridge viewed from the southern bank
The bridge is orientated east-west across the Mongarlowe River. The main spans are visible for approximately 150-200 metres from each approach prior to the road bending on each approach. The main timber trusses are clearly visible within the bushland and river setting. The stone abutments, believed to be sourced from local stone, appear to be in reasonably good condition.

The superstructure is supported by timber trestles and provides a single lane carriage way with a minimum width of 4.6m. The guard rail is of post and rail construction and extends the full length of the bridge. Between 2008 and 2010, the bridge was subject to major maintenance works, which included installation of steel piers and board piles to prop up the timber piers. The substructure and superstructure are currently in poor condition due to severe deterioration of timber piers and critical truss elements. Some corbel sections are dated 1998 and in good condition.
Figure 4.8. Substructure from northern abutment.

Figure 4.9. Southern stone abutment.

Figure 4.10. Northern stone abutment.
The register’s recording of the bridge identified the following; Original condition assessment: 'Good' (Last updated: 22/10/1998.). 2007-08 condition update: 'Poor.' (Last updated: 17/4/09.)

5 HERITAGE SIGNIFICANCE

5.1 INTRODUCTION

‘Heritage significance’ is a term used to describe the inherent cultural and historical value of an item. Significance may be contained within the fabric of a building or other place, in its setting and its relationship with other nearby items.

The main aim in assessing significance is to produce a succinct statement of significance, which summarises an item’s heritage values. The statement is the basis for policies and management structures that will affect the item’s future (NSW Heritage 2001).

An item will be considered to be of state or local heritage significance if it meets one or more of the seven NSW heritage criteria as listed below:

a) an item is important in the course, or pattern of NSW’s cultural or natural history.

b) an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history.

c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.

d) an item has a strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.

e) an item has the potential to yield information that will contribute to an understanding of NSW’s cultural and natural history.

f) an item possesses uncommon, rare, or endangered aspects of NSW’s cultural or natural history.

g) an item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places; or cultural or natural environments.

The following assessment of significance is based on the NSW heritage assessment criteria. The criteria encompass the four values in the Australia ICOMOS Burra Charter (1999):

- Historical significance.
- Aesthetic significance.
- Scientific significance.
- Social significance.

The above are expressed as criteria in a more detailed form than this to:

- Maintain consistency with the criteria of other Australian heritage agencies.
- Minimise ambiguity during the assessment process.
- Avoid the legal misinterpretation of the completed assessments of listed items.
5.2 HERITAGE ASSESSMENT

5.2.1 Assessment of Significance

The Charleyong Bridge is assessed to be of significance against six of the above criteria, as outlined below. Note, the criteria where the bridge is not assessed to meet the threshold are not included below.

a) An item is important in the course, or pattern, of NSW’s cultural or natural history

Through the bridge’s association with the expansion of the NSW road network, its ability to demonstrate historically important concepts such as the gradual acceptance of NSW people of American design ideas. The bridge has additional historical significance as it is associated with the Wool Road, local gold fields, and as a historically maintained crossing point. It is also likely to have played a major role in the establishment and development of the settlement of Marlowe.

The item has local and state historical significance. Overall the bridge is of local significance but is considered to be of state historical significance due to its association with a significant gold field, road and crossing in NSW.

b) an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history

The bridge is strongly associated with Percy Allan, a civil engineer who designed a large number of public works in New South Wales, including the design of 583 bridges. The bridge is considered to be of local significance as an example of this style of bridge.

c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW

The bridge exhibits the technical excellence of its design, as all of the structural detail is clearly visible. In the context of its landscape it is visually attractive as it is sited over a large, slow moving, quiet river with mature trees on both banks. The approaches from both sides and the scene of the bridge in its rural setting are highly photogenic. As such, the bridge, including its setting and views to and from the main spans has local aesthetic significance.

d) An item has a strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons

Timber truss bridges are prominent to road travellers, and NSW has in the past been referred to as the "timber truss bridge state". Through this, the complete set of bridges gain some social significance, as they could be said to be held in reasonable esteem by many travellers in NSW. As such, Charleyong Bridge is of local significance under this criterion.

e) An item has the potential to yield information that will contribute to an understanding of NSW’s cultural and natural history

The bridge is highly technically significant because it is an example of an Allan truss, and is representative of some major technical developments that were made in timber truss design by the Public Works Department. It is likely that remnants of the existing bridge may remain, particularly components within the river bed and possibly the stone abutments. The site is considered to be of local significance under this criterion.

f) An item possesses uncommon, rare, or endangered aspects of NSW’s cultural or natural history
In 1998 there were 38 surviving Allan trusses in NSW of the 105 built, and 82 timber truss road bridges survive from the over 400 built. Charleyong Bridge therefore represents an example of a dwindling number of such bridges. The RMS Strategy identified 26 truss bridges to be retained. A total of eight Allan Truss bridges are being removed with eleven remaining. The site is considered to be locally significant as a rare type of Allan Truss bridge.

g) An item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places; or cultural or natural environments

Charleyong Bridge is representative of Allan truss bridges. It was assessed to be one of eight Allan Truss bridges to be replaced as part of the Strategy (2012) with the remaining eleven to be retained.

The bridge is considered to be of representative significance of the group of Allan Truss bridges.

5.3 STATEMENT OF SIGNIFICANCE

In summary, the Charleyong Bridge is of local heritage significance due to:

- Its association with the expansion of the NSW road network and related historical significance with the Wool Road, local gold fields, and as a historically maintained crossing point.
- The bridge is strongly associated with Percy Allan, a civil engineer who designed a large number of public works and timber bridges.
- As a timber truss road bridge, it has strong associations with the expansion of the road network and economic activity throughout NSW.
- The bridge exhibits the technical excellence of its design, as all of the structural detail is clearly visible and is an example of an Allan truss, and is representative of some major technical developments.
- Timber truss bridges are prominent to road travellers and the set of timber bridges gain social significance by many travellers and communities.
- The bridge is also visually attractive within the landscape setting.
- Charleyong Bridge represents an example of a rare number of remaining such bridges. The Strategy identified 26 truss bridges to be retained.
- The bridge site is representative of a group of Allan Truss bridges. It is one of eight Allan Truss bridges to be replaced as part of the Strategy (2012) with the remaining eleven to be retained.

6 IMPACT ASSESSMENT

6.1 PROPOSED WORKS

The Charleyong Bridge was identified in the Strategy (RMS 2012) for replacement as it does not meet current loading standards and is expensive to maintain.

The design of the existing bridge does not meet the minimum loading standards (AS5100-2004) and cannot be upgraded to meet these requirements. The existing bridge has substandard traffic barriers and has a single lane carriageway. The substructure and superstructure are in poor condition due to severe
deterioration of timber piers and critical truss elements. It has a load limit of 50 tonnes and all the piers have been propped to keep the bridge operational.

The proposed work will include construction of a new bridge just south of the existing location and about 1.4 km of approach roadworks from 94.9 km to 96.3 km west of Nowra and about 25 km north of Braidwood. This section assesses the heritage impacts of the proposal.

A detailed description of the proposed works is in the project REF.

6.2 ASSESSING HERITAGE IMPACTS

This section relates to the proposed works to remove the existing Charleyong Bridge to be replaced with a modern concrete bridge at the same location. The following questions are presented in the NSW Heritage Manual document Statements of Heritage Impact to prompt considerations to avoid or minimise impacts from proposals on heritage items which would result in the demolition or removal of the item (NSW Heritage 1996).

Have all options for retention and adaptive re-use been explored?

The option of retaining the historic Charleyong Bridge at the existing site or for adaptive re-use has been considered. However, this is not considered viable, due to:

- The increased volume and loadings of modern traffic that use the Nerriga Road have made it necessary to replace the old bridge with a stronger structure. The design of the existing bridge does not meet the minimum loading standards (AS5100-2004) and cannot be upgraded to meet these requirements. The route on which the Charleyong Bridge is situated is required to meet the regulatory limits well in excess of the T44 standard (the design standard for bridges carrying a 42.5 tonne semi-trailer or equivalent).
- Retaining the existing bridge and handing over management to a new owner for an alternative use is not considered feasible due to the isolated location of the site.
- Ongoing maintenance remains a concern for Road and Maritime because maintenance costs and frequencies are disproportionately high with timber truss bridges compared to modern bridges. Between 2008 and 2010, the bridge has been the subject of major maintenance works. All timber piers are now propped with steel piers and board piles. This work is not considered to be permanent and will require replacement, addition or alteration in the next ten years. The substructure and superstructure are in poor condition due to severe deterioration of timber piers and critical truss elements. 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.
- Charleyong is reaching a point in its life cycle where it requires a major refurbishment. The replacement of all elements of the truss would be required if the bridge continued to operate. Replacing like with like, even if strengthened with the introduction of modern materials, would not provide a level of service that was acceptable to Roads and Maritime for a major bridge on a strategic road. Should the bridge fail it would require a very large detour via either 1.5hrs via Tarago to the west on a high proportion of gravel road, or via Batemans Bay and the coast.
- Retention of the bridge in whole or in part as a non-accessible landscape element 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.
Statement of Heritage Impact
Charleyong Bridge Replacement

or public area. In general, this is not favourable unless another organisation was to take responsibility for the maintenance and public safety issues. The bridge is not located in an area that would be able to sustain sufficient visitation.

*Can all of the significant elements of the heritage item be kept and any new development be located elsewhere on the site?*

The proposal is for the demolition of the existing timber truss bridge to be replaced with a new concrete structure.

Demolition of the existing bridge is required as the structure cannot be retained in situ without adverse effects to itself or the waterway.

Furthermore, it is considered that the individual elements of Charleyong Bridge do not have a high or exceptional significance that demands their retention. This is mainly due to the current condition of the timbers. It is considered that retention of the bridge and elements are no longer feasible due to a number of factors including:

- The increased volume and loadings of modern traffic that use the road has made it necessary to construct a stronger structure.
- The on-going costs associated with keeping the bridge maintained, whilst not being utilised for its intended purpose.
- Roads and Maritime 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 on Charleyong Bridge.
- The more significant elements of the bridge are the truss spans and associated timbers, however these are not considered to be of high or exceptional significance compared to other timber truss bridges that will be retained.

*Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?*

The demolition is considered necessary at this time due to increasing heavy traffic loads on the Nerriga Road. As a consequence there is a relatively high risk of an impact to the bridge, and consequent closure of road with very large detour via either 1.5hrs via Tarago to the west on a high proportion of gravel road, or via Batemans Bay and the coast.

### 6.3 STATEMENT OF HERITAGE IMPACTS

From the detailed assessment against the Heritage Division guidelines a number of potential impacts have been identified. These are graded to determine their relative impact upon the significance of the site. As currently proposed the development will have the following impacts.

**Major negative impacts (substantially affects fabric or values of state significance)**

Nil.

**Moderate negative impacts (irreversible loss of fabric or values of local significance; minor impacts on state significance)**

- A loss of part of the story of the later history of the Wool Road and its relationship to the crossing and bridge, gold fields and the local area.
• Demolition of the existing timber truss bridge fabric.
• The new bridge would be located on a different alignment to the existing bridge and constructed of concrete. This would lead to loss of aesthetics the existing bridge offers.

These impacts can be partially mitigated by the provision of appropriate onsite interpretation and an archival recording of the bridge.

**Minor negative impacts (loss of local significance fabric or where mitigation retrieves some value of significance; loss of fabric not of significance but which supports or buffers local significance values)**

• Loss of one example of Allen truss bridge from the remaining State’s inventory.
• Loss of local association with development of the goldfields and Marlowe.
• The esteem and regard the bridge is held by locals and travellers on the road would be lost.
• The loss of the bridge fabric cannot be mitigated by its retention as an unmaintained structure. Such an approach would provide a high risk of eventual collapse into the waterway.
• The loss cannot be mitigated by the retention of the current bridge as a non-operational asset, as it is unlikely to find a viable use that would justify the significant maintenance outlay required from any owner.

The above impacts could be mitigated by the appropriate use of onsite interpretation.

**Negligible or no impacts (does not affect heritage values either negatively or positively)**

Nil.

**Minor positive impacts (enhances access to, understanding or conservation of fabric or values of local significance)**

Nil.

**Moderate positive impacts (enhances conservation of local significance, encourages sympathetic planning and sustainable development)**

• The stone abutments of the bridge could be retained to provide clear evidence of the bridge location following removal.
• The Roads and Maritime policy for the recycling of timber bridge elements will be implemented for any timber truss bridges that are removed where dismantling to recover timber is feasible on Charleyong Bridge.

**Major positive impacts (enhances access to, understanding or conservation of fabric or values of state significance)**

Nil.
CONCLUSION & RECOMMENDATIONS

7.1 CONSERVATION POLICY

As the replacement of Charleyong Bridge will result in the loss of an item of local heritage significance, the conservation policy should aim to minimise the loss of significance through specific strategies to document its significance for the future.

The proposal to demolish the Charleyong Bridge is considered to result in the loss of a significant item of local heritage within Queanbeyan Palerang Regional Council, and, if not mitigated, to be the loss of an item of local heritage significance within NSW. Avoidance or deferral of the impact is not feasible.

The cumulative effect of the proposed demolition of Charleyong Bridge on the remaining Allan truss bridges extant in the state is considered to be acceptable. The remaining seven nationally significant and four state significant Allan truss bridges that have been deemed to have higher historic, aesthetic, social and technological value than Charleyong Bridge would not be affected by this proposal. It is these bridges that would be retained as part of the Roads and Maritime Timber Truss Bridge Strategy (2012) and therefore appropriately maintained.

Minimisation of impact, such as retention as an unused asset, or transfer for pedestrian access, is not considered to be a sustainable or operationally viable outcome.

Mitigation of impact is considered feasible to ensure that the loss of some attributes of Charleyong Bridge’s significance are able to be moderated. It is therefore recommended that the conservation policy for the further management of Charleyong Bridge’s significance is to be mitigation of the impact of the demolition of significance.

A range of measures will be used to reduce the loss of significance, including:

- An archival recording be prepared for Charleyong Bridge. This should follow the guidelines for Items of Local Heritage Significance as outlined in the NSW Heritage Branch publication *How to Prepare Archival Records of Heritage Items*.
- Retention of timber and metal elements where feasible, and recycling for use in accordance with RMS practice.
- Retention of the stone abutments of the bridge to provide clear evidence of its location following its removal.
- Prepare interpretation relating to the bridge, to be placed in a suitable location on the Nerriga road. This is to include the history and significance of the bridge, relevant images about it and the relationship with the Wool Road, the establishment of the Marlowe village and gold mining.
- Where feasible, work with Council to collectively interpret their Council-owned Allan Truss bridge, Foxlow Bridge, with additional contextual information about Charleyong and other removed / replaced timber truss bridges within the LGA.

7.2 LEGISLATIVE COMPLIANCE

The following recommendations are made for the proposed activity:

- The RMS notifies the NSW Heritage Division (OEH) not less than 14 days prior to any works commencing to remove the s.170 listed bridge. It is a statutory requirement under s.170
that a delisting process be undertaken when transferring or demolishing items listed on an s.170 register.

- Under Clause 14 of the SEPP (Infrastructure) Roads and Maritime would provide written notice of the intention to carry out the proposed works, with a copy of this SoHI provided to the Queanbeyan Palerang Regional Council.

- The Standard Management Procedure - Unexpected Heritage Items (Roads and Maritime, 2015) will be followed in the event that any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered. Work will only re-commence once the requirements of that Procedure have been satisfied.

The proposed works at the Charleyong Bridge indicated in this SoHI, be approved with no further conditions
8 REFERENCES


NSW Heritage Division (2016)


Charleyong Bridge over Mongarlowe River

Item details

Name of item: Charleyong Bridge over Mongarlowe River
Other name/s: RTA Bridge No. 6506
Type of item: Built
Group/Collection: Transport - Land
Category: Road Bridge
Primary address: Nerriga Road, Charleyong, NSW 2622
Local govt. area: Palerang

All addresses

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Owner/s

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Statement of significance:

Completed in 1901, the Mongarlowe bridge is an Allan type timber truss road bridge, and in 1998 was in good condition.

As a timber truss road bridge, it has strong associations with the expansion of the road network and economic activity throughout NSW, and Percy Allan, the designer of this type of truss.

Allan trusses were third in the five-stage design evolution of NSW timber truss bridges, and were a major improvement over the McDonald trusses which preceded them. Allan trusses were 20% cheaper to build than McDonald trusses, could carry 50% more load, and were easier to maintain.

In 1998 there were 38 surviving Allan trusses in NSW of the 105 built, and 82 timber truss road bridges survive from the over 400 built.

The Mongarlowe bridge is a representative example of Allan timber truss road bridges, and is assessed as being Locally significant, primarily on the basis of its technical and historical significance.

Date significance updated: 02 Feb 99

Note: There are incomplete details for a number of items listed in NSW. The Heritage Division intends to develop or upgrade statements of significance and other information for these items as resources become available.

Description

Designer/Maker: Percy Allan
Builder/Maker: J Nybeck, Bega
Physical description: Charleyong Bridge is an Allan type timber truss road bridge. It has a single timber truss span of 27.4m (90ft). There are 4 timber approach spans at one end and 2 at the other giving the bridge an overall length of 89.3m (293ft).

The superstructure is supported by timber trestles and provides a single lane carriage way with a minimum width of 4.6m. The guard rail is of post and rail construction and extends the full length of the bridge.
The Mongarlowe bridge is an Allan type timber truss road bridge and was completed in 1901. Timber truss road bridges have played a significant role in the expansion and improvement of the NSW road network. Prior to the bridges being built, river crossings were often dangerous in times of rain, which caused bulk freight movement to be prohibitively expensive for most agricultural and mining produce. Only the high priced wool clip of the time was able to carry the costs and inconvenience imposed by the generally inadequate river crossings that often existed prior to the trusses construction.

Timber truss bridges were preferred by the Public Works Department from the mid 19th to the early 20th century because they were relatively cheap to construct, and used mostly local materials. The financially troubled governments of the day applied pressure to the Public Works Department to produce as much road and bridge work for as little cost as possible, using local materials. This condition effectively prohibited the use of iron and steel, as these, prior to the construction of the steel works at Newcastle in the early 20th century, had to be imported from England.

Allan trusses were the first truly scientifically engineered timber truss bridges, and incorporate American design ideas for the first time. This is a reflection of the changing mindset of the NSW people, who were slowly accepting that American ideas could be as good as or better than European ones. The high quality and low cost of the Allan truss design entrenched the dominance of timber truss bridges for NSW roads for the next 30 years.

Percy Allan, the designer of Allan truss and other bridges, was a senior engineer of the Public Works Department, and a prominent figure in late 19th century NSW.

Timber truss bridges, and timber bridges generally were so common that NSW was known to travellers as the "timber bridge state".

The bridge was constructed in 1901 to replace the long standing ford at Charleyong. This ford was associated with the Wool Road.

### Historic themes

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### Assessment of significance

**SHR Criteria a)**

(Historical significance)

Through the bridge’s association with the expansion of the NSW road network, its ability to demonstrate historically important concepts such as the gradual acceptance of NSW people of American design ideas, and its association with Percy Allan, it has historical significance.

**SHR Criteria c)**

(Aesthetic significance)

The bridge exhibits the technical excellence of its design, as all of the structural detail is clearly visible. In the context of its landscape it is visually attractive. As such, the bridge has a small amount of aesthetic significance.
Timber truss bridges are prominent to road travellers, and NSW has in the past been referred to as the “timber truss bridge state”. Through this, the complete set of bridges gain some social significance, as they could be said to be held in reasonable esteem by many travellers in NSW.

The bridge is highly technically significant because it is an example of an Allan truss, and is representative of some major technical developments that were made in timber truss design by the Public Works Department.

Relative heritage significance of all Timber truss bridges in NSW

Representative of Allan truss bridges

Intact

Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of significance. Refer to the Listings below for the level of statutory protection.

Recommended management:

continued sympathetic management

Study details

References, internet links & images

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<td>Allan, Percy</td>
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<td>1985</td>
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Note: internet links may be to web pages, documents or images.

Data source

The information for this entry comes from the following source:
Charleyong Bridge over Mongarlowe River | NSW Environment & Her...

http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDet...