

The Timber Truss Bridges of New South Wales, Australia: Conservation challenges

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Abstract

Between the 1870s and 1930s a distinctive tradition of timber truss bridge building grew in New South Wales, taking advantage of its magnificent hardwoods, the sparsity of resources and the need to consolidate an expanding frontier. More than 420 such bridges were built, in five distinct types, each more refined and effective than the last. Only a tenth of these now remain in the road network, demanding the attention of the heritage community on a rapidly diminishing resource.

This paper is framed around the strategy that Roads and Maritime Services has adopted to ensure the conservation of a viable and sustainable sample of the remaining bridges into the future.

The key obstacles in the bridges' conservation relate to their construction in timber. Firstly, they have a finite load capacity. The conflicting demands of heritage and road network operability have had to be negotiated and compromises made on both sides to allow even a number to remain in operation.

The second is the durability of timber, which requires that the entire bridge is replaced every few decades. The need to undertake a cyclical process of dismantling and rebuilding, tweaked to ensure it remains effective is sufficiently unusual that it falls outside the normal challenges of Australian heritage practice conducted according to the *Burra Charter*, developed by Australia ICOMOS.

We usually accept that authenticity, and therefore heritage significance, resides in retained original fabric, preserved to provide a tangible link to the past. However, the reality of the timber truss bridges requires a contrary stance, urging consideration of other ways to understand and appreciate the process of their constant dismantling and renewal. The paper explores some alternative models of managing heritage significance that are more relevant to these engineered structures, including the comparable cyclical rebirth of the Ise Grand Shrine.