

Country Bridge Solutions

October 2016

Roads and Maritime Services, on behalf of the NSW Government, has developed Country Bridge Solutions, an innovative and cost effective solution to help regional councils replace ageing bridges. The Country Bridge Solution designs have been completed and certified and are now available on the Roads and Maritime project website.

Background

The Country Bridge Solutions (CBS) project involved three phases:

- Concept development
- Proof of concept (including building a trial bridge)
- Producing a set of designs and guides available for councils to use for replacing ageing bridges.

When a bridge fails or is load limited, the impact on regional communities and the local economy can be significant.

As road authorities, local councils face the growing challenge of maintaining and eventually replacing ageing bridges on Regional and Local roads. Roads and Maritime began work in 2014, on behalf of the NSW Government, to develop CBS to help councils meet this challenge.

CBS has been designed to:

- Provide regional and rural councils with simple and easy to build bridge solutions developed by expert bridge and construction engineers

Project objectives

- Improve the connectivity of local communities
 - Create regional employment opportunities
 - Improve natural disaster resilience
 - Enhance and support work forces
 - Improve social interaction and access to community and industry
 - Minimise disruption to communities during construction.
- Deliver cost savings through the use of standardised prefabricated bridge components
 - Use existing council resources and regional manufacturing capability to replace and build bridges
 - Assist council staff during investigation, design, construction and maintenance through the provision of technical guides
 - Promote regional economic growth through local employment opportunities.

Trial bridge

A site in the Tenterfield local government area was selected to build the trial bridge. The site is located on Mt Lindesay Road, 34 kilometres north of Tenterfield and 29 kilometres south-east of Stanthorpe. The new bridge replaces the existing old timber bridge at Bookookoorara Creek.

The site was selected from round one of the Federal Government's Bridges Renewal Program. Importantly, the site also met key selection criteria for the Country Bridge Solutions project, including:

- Minimum of three spans, each 10–12m long
- Being on a route with fewer than 1000 vehicles per day
- Being an old, timber beam bridge in need of replacement.

Roads and Maritime built the trial bridge in conjunction with Tenterfield Shire Council. It was jointly funded by the NSW and Federal governments and Tenterfield Shire Council (this funding arrangement relates to the trial bridge only).

Roads and Maritime completed the bridge structure in July 2016. Work by Tenterfield Shire Council to complete the road approaches is expected to be completed by December 2016. Completion of the trial bridge has enabled Roads and Maritime to develop and finalise a suite of CBS guides for bridge investigation, design, construction and maintenance to assist councils.

The CBS guides

Following is a description of each of the CBS guides and their purpose.

Overarching guide

Explains the system and delivery process for CBS.

Suitability and investigation guide

Establishes criteria for CBS site suitability and describes the site investigation process.



The new Bookookoorara Creek bridge.

Design guide

Details CBS design elements and informs the CBS bridge designers.

Construction guide

Describes the CBS construction sequence.

Operational management

Details future maintenance over whole of life asset management.

Next steps

The complete set of CBS designs and guides are now available on the Roads and Maritime project website. Regional councils managing bridge assets now have access to these valuable resources.

Enquiries

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