

Friday 12 October 2018

THE NARRANDERA SHIRE BRIDGE ASSESSMENT PROJECT

Throughout the Narrandera Shire Local Government Area (LGA) there are currently ten bridge assets managed by Council.

The majority of bridges within Narrandera Shire and surrounds were not built for the heavier vehicles that we see on our roads today. Taking a proactive approach in the maintenance of these assets, Narrandera Shire Council applied for funding through the Restart NSW Fixing Country Roads program, a State Government initiative, to conduct a study of the structural integrity of the ten bridges within the network. The application was successful and Council received \$160,400 and co-contributed \$52,000 to complete the project.

Narrandera Shire Council Works Manager, Krishna Shrestha said of the project, “Bridges form an integral part of the road network and in some cases can limit the capacity of some roads to certain vehicle types. It is important to understand the capacity of our bridges to assist with efficient and safe freight movement.”

Member for Cootamundra Steph Cooke said the bridge assessments were vital to Council’s long-term strategies for bridge asset management in the Narrandera Shire.

“Ensuring the integrity of our local bridges and identifying where works are needed are an important part of the ongoing viability of local freight networks,” Ms Cooke said.

“It’s also about making sure our bridges are safe for all members of the community, including local traffic, school buses and emergency vehicles.

“This is part of the government’s commitment to improving our regional road networks through the Restart NSW Fixing Country Roads program.”

The investigation comprised analytical analysis, physical inspection and various testing work utilising the latest technology and systems available.

The outcome of the study, based on all testing and analytical assessments, concluded that seven of the ten bridges in the LGA meet the requirements of a B-Double load rating at General Mass Limit (GML). The remaining three include Brewarrana Bridge, Bassett Bridge and Somerset Park Bridge. Council is investigating various options to ensure these bridges will meet the needs of the community for freight movement and emergency vehicles.

A rigorous high level structural simulation (Finite Element Analysis) is required to determine the actual failure load of bridges, which will guide Council on asset management and replacement plan in future.

The superstructure of the bridges tested including deck, girder and headstock are in sound condition and meeting their original design objective. However, some form of retrofitting of the footing systems may be required to meet the current demand of heavier freight loads.

MEDIA RELEASE

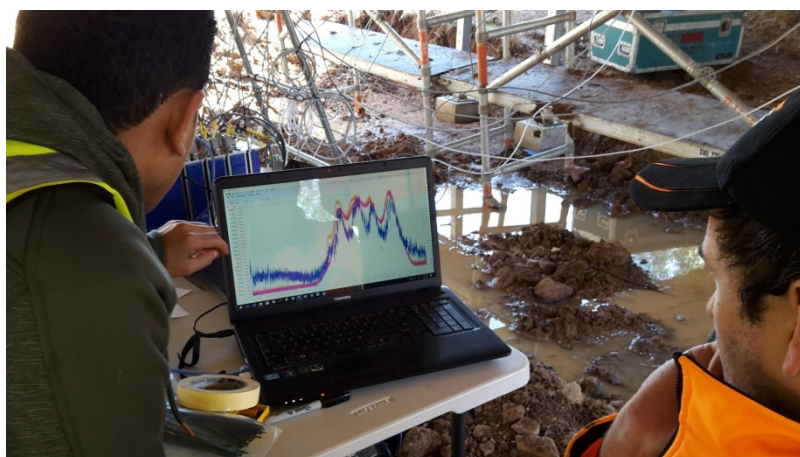
Narrandera Shire Council will be considering the following strategies where required:

- Short term strategy - Devise and implement signage system on bridges so that bridge function can be retained without significantly reducing the load limit on bridges e.g. converting bridges to one lane bridges, reduce speed limit on bridges and sealing bridge approaches to reduce dynamic load on bridges.
- Medium term strategy - Investigate critical elements (footing system and pile system) and options for retrofitting to increase the bridge capacity to meet current industry demand of road trains at Higher Mass Limit (HML).
- Long term strategy – Continue to develop a stronger asset management plan for bridges, culverts and causeways, considering need, economy and affordability.

Prepared by: Krishna Shrestha MIEAust CPEng NER, project manager of this project.

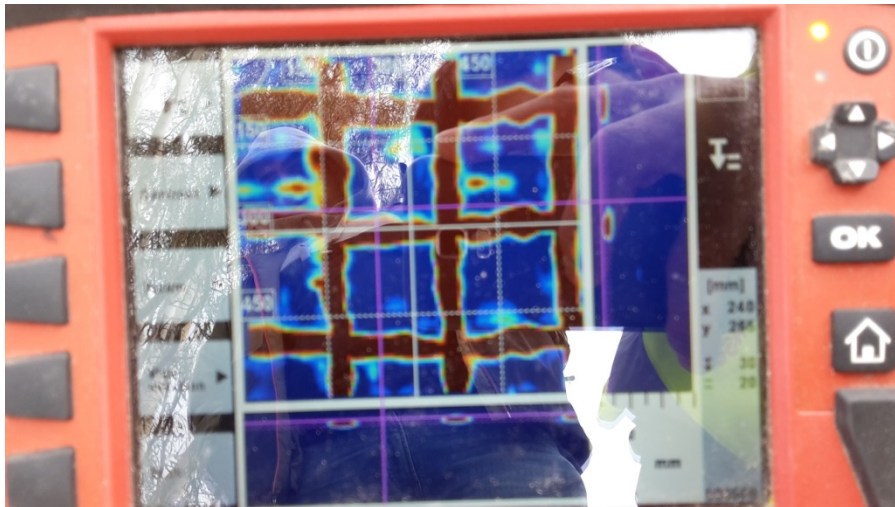


Test set up of deflection and strain measurement of Barellan Bridge for Road Train at HML



Acquiring real time deflection and strain data for applied dynamic load

MEDIA RELEASE



Using Ground Penetrating Radar to confirm the size and location of steel bar on bridge units



Mod Shock testing to check the integrity of bridge foundation and pile system

END

Precis or Summary: The Narrandera Shire Bridge Assessment Project			
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