



## **Resurfacing The Only Overwater Single Lane Bridge To An Island Without Environmental Or Traffic Impact.**

28<sup>th</sup> November 2017

# Introduction

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## RMS NSW

- Needed to address the disrepair of a single lane spray seal timber bridge passing over the Murray River which was the only access to/from an island community
- Discovered most timber slabs needed replacing and resealing
- Identified that spray sealing at this location would risk contaminants falling into the Murray River and pose potential risk to the environment
- Island residents concerned that the repair would remove their only link to Albury

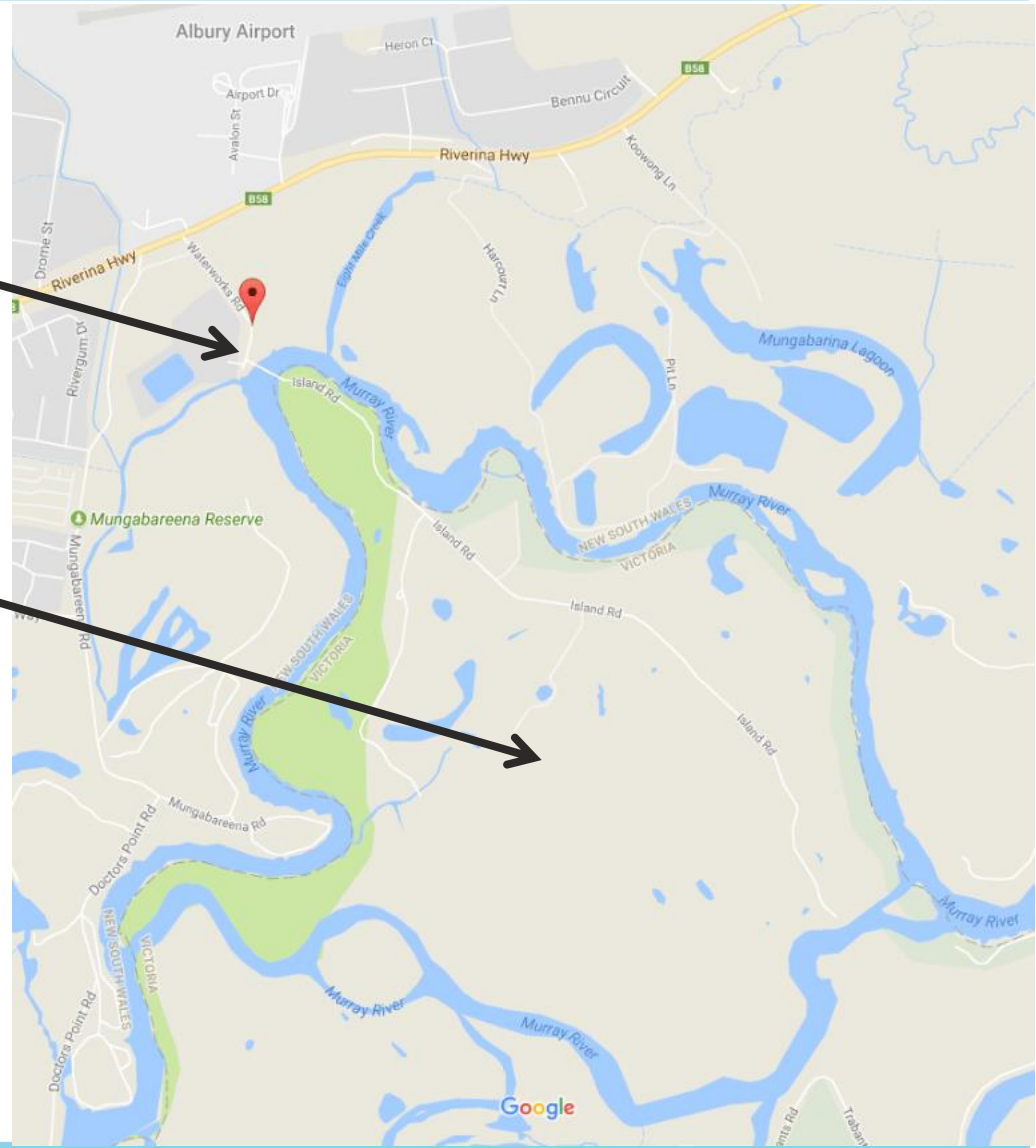
# Location



# Location

*A single lane bridge is the only access to/from the island*

The island – Bonegilla VIC



# Boundary Rd Bridge - Albury

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# Boundary Rd Bridge - Albury

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# Scope

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- Find a product to permanently replace and seal the surface
- Provide a surface equivalent to a spray seal
- Minimise any potential environmental contamination
- Minimise island access disruption

# Project Challenges

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- How to resurface the existing bridge
- How to deliver a quality surface
- Don't negatively impact
  - the sensitive Murray River environment
  - or local resident access/egress.

# How was this managed

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- The solution of RMS/Downer was to use the BRP Road Patch to resurface the timber bridge deck.
- BRP Road Patch is a rubber bitumen spray seal prefabricated sheet
- Enabled resurfacing to be completed without resident interruption
- Delivered a spray seal surface
- Without conducting any activity to harm such an environmentally sensitive area.

# What is the BRP Road Patch?

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- 1m x 0.75m Prefabricated sheets
- 22% rubber bitumen spray seal
- Aggregate size Fine, 7mm, 10mm, 14mm & 20mm
- Requires no plant/capital equipment for installation
- Applied to surface with standard bitumen emulsion



# 5 step application procedure

Prep



Adhesion



Position



Seal



Roll



- In 5 simple steps the BRP Road Patch has been applied,
- protecting the surface against further water damage & providing texture,
- leaving a neat appearance with minimal financial & social costs.

# City Of Knox – VIC Experience

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- FY 12/13 City of Knox – VIC
  - 12 reported accidents on wooden decks
    - 11 Bicycle crashes
      - At least one serious resultant in a
        - Dislocated Shoulder
        - Fractured Arm
        - Chipped hip bone
  - 1 pedestrian trip
  - ?????? Unreported

# City Of Knox - VIC Experience

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# City Of Knox – VIC Experience



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# City Of Knox - VIC Experience

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# City of Knox – VIC Experience

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- Cycling is a fast growing recreation/exercise pursuit in Council Area
- Improved safety needed to avoid injuries and deaths
- BRP offers long term cost effective solution
- Has proven to Knox to successfully address dangers
- Is the Knox preferred deck treatment option



**June 2015 - Boundary Rd Bridge Albury NSW**



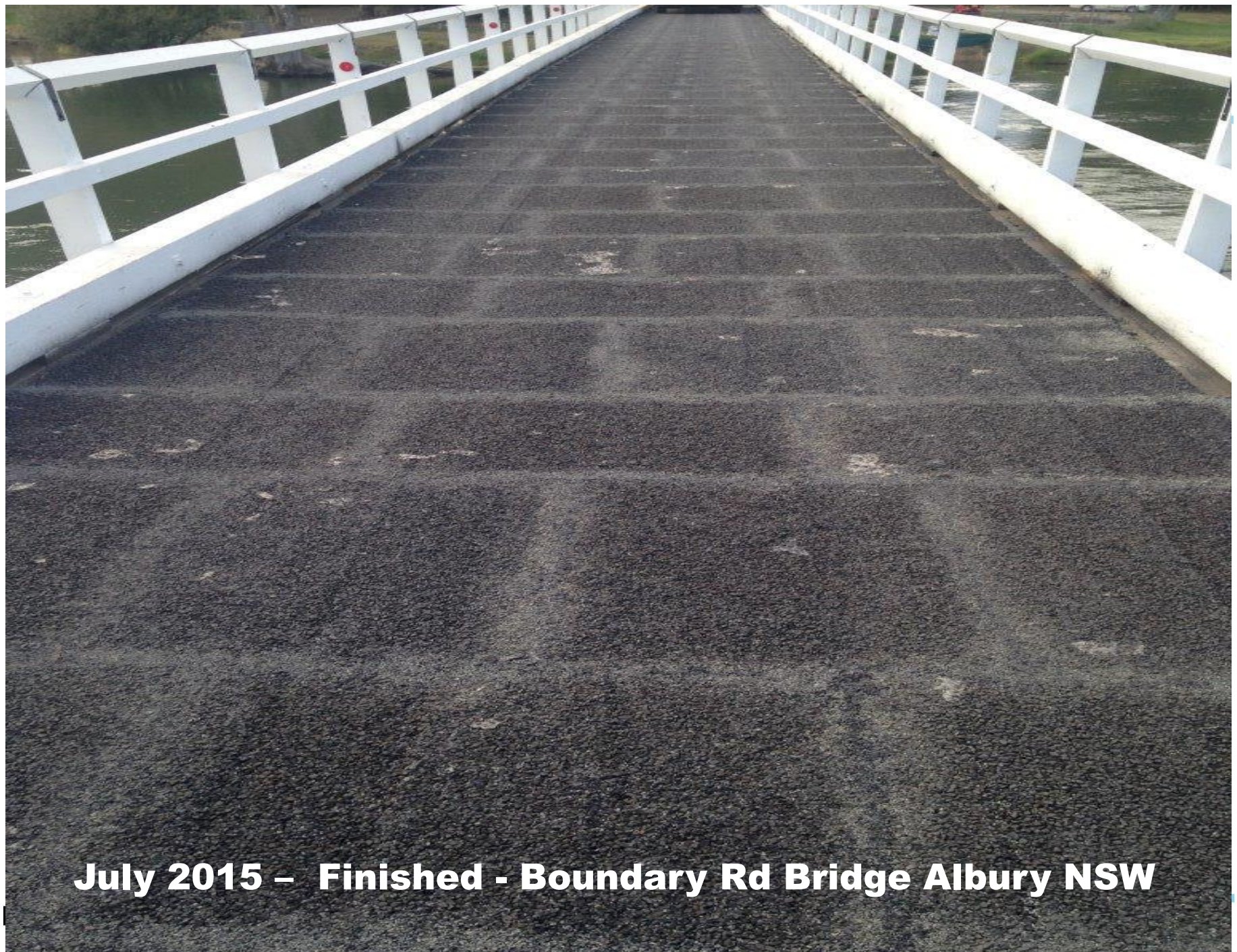


July 2015 - RMS Wagga Wagga BRP Installation

The photograph shows two workers in high-visibility yellow and white protective suits and hats, kneeling on a wooden deck. They are installing a dark, textured Bituminous Rubber Pavement (BRP) membrane. The worker on the left is using a brush to apply a dark liquid substance, likely a primer or adhesive, to the wooden surface. The worker on the right is holding a large white bag, presumably containing the BRP material. A white plastic container is visible on the left. In the background, a white concrete wall separates the deck from a body of water.



**RMS Wagga Wagga BRP Installation “Nearly There” July 2015**



**July 2015 – Finished - Boundary Rd Bridge Albury NSW**



**June 2016 – 1 yr later - Boundary Rd Bridge Albury NSW**



**June 2017 – 2 yrs later - Boundary Rd Bridge Albury NSW**



**RMS Wagga Wagga – Boundary Rd Bridge Albury NSW**

# Key Customer Outcomes

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## Resurfacing with the BRP Road Patch

- was done safely with no incidents
- delivered an aesthetically pleasing surface
- improved surface safety
- eliminated previously problematic bridge noise.
- eliminated environmental pollution concerns
- used no heavy equipment = lower noise/Co2 levels.
- completed quickly in ½ a day
- trafficable during & immediately after = no resident impact
- received no complaints to council
- stops water penetrating wood deck surface assisting with decking longevity

# Conclusion

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Glen Henderson- Bridge Works Supervisor  
Regional Maintenance Delivery  
Asset Maintenance  
RMS Wagga Wagga

*“The product (BRP Road Patch) was good to work with and the sheets were a manageable size. Easy to lay, environmental controls were easier to manage dealing with smaller quantities of emulsion and being able to contain it. Good to use as crew can lay it and there is no requirement to organise asphalt companies for such small jobs. It can also be used for remote locations. Only problem we had was when it was cold, the plastic backing was hard to remove. We are already planning a second project in the coming months.”*



**RMS Wagga Wagga – Wee Jasper Bridge NSW**



**RMS Wagga Wagga – Wee Jasper Bridge NSW**