

Kyogle Council Causeway Upgrade Program

Improving environmental outcomes and supporting community access, and resilience



The facts

Causeways are an important part of Kyogle Council's road network; they provide safe and reliable means to cross watercourses during low flow flooding events. Causeways are concrete structures constructed at, or close to, natural surface levels and are designed to be overtopped in flood events.

- Kyogle Council has 115 causeways.
- More than 60% of these are more than 40 years old.
- 67 causeways are constructed across fish habitat waterways.

Due to their age and deteriorating condition, many of Council's causeways are frequently damaged from flooding and storm events. Recurring issues of overtopping and scouring impact accessibility and connectivity for the rural communities that depend on the causeways.

Project scope

To improve road safety and increase the resilience and reliability of the road network, Kyogle Council



This causeway on Theresa Creek Road is one of 67 in the Kyogle Council area identified as requiring an upgrade.

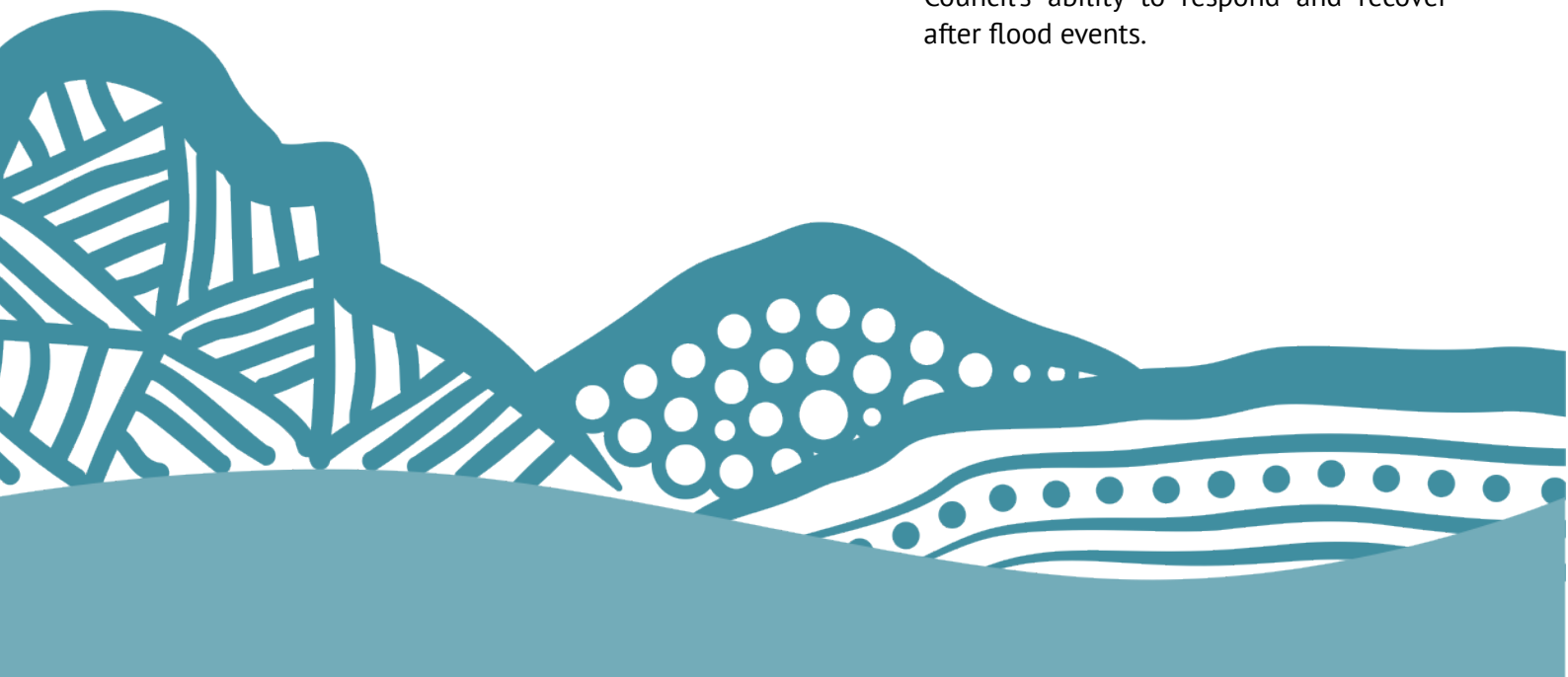
has identified 67 causeways that require upgrades.

Of these, 34 can be replaced with a low level, small to medium sized bridge. A further 33 are suitable for box culvert replacement.

Project benefits

The benefits of the upgrading causeways to bridges and/or box culverts include:

- Providing more resilient and reliable infrastructure that can better withstand natural disasters. This will improve Council's ability to respond and recover after flood events.





- Increasing road levels will reduce the frequency and times of road closure improving accessibility and ensuring communities can stay connected.
- Removal of bed-level traffic surfaces and opening the waterway area will provide environmental benefits by removing barriers in fish habitat areas.
- Reduction in maintenance and repair costs after natural disasters.

Estimated costs

Causeway to Bridge replacements at 34 sites:
 $\$9000/\text{m}^2 \times 2790\text{m}^2 = \25.1 million

Causeway to Box Culvert replacements at 33 sites:
 $\$400\text{K per site} \times 33 \text{ sites} = \13.2 million

Total causeway replacement estimate = \$38.3 million

Capacity to deliver

Kyogle Council is nearing completion of its unprecedented timber bridge renewal program, with the successful replacement of almost 100 timber bridges with concrete structures over a three-year period at a total program value of approximately \$60 million.

Council sees an opportunity to take advantage of the in-house skills and experience developed through the bridge replacement program and continue to use these resources to improve safety and build resilience into its road infrastructure.

