

## **Break O'Day Road Bridge Replacement - FAQs**

### **Why is the bridge being replaced?**

Break O'Day Road Bridge is an old bridge and no longer meets current and future traffic needs. It was constructed in the 1950s and only caters for single-lane traffic.

Break O'Day Road is used by local residents, and as a through route for general freight trucks, busses and logging vehicles, including B double trucks.

Council recently engaged an independent bridge engineer to inspect the bridge and provide a report on its condition to Council. The report outlines widespread deterioration of the concrete structure, resulting in exposed reinforcement steel.

If the bridge is retained, it would need to have a 15-tonne load limit for the bridge, in line with the engineering report. This load limit will prohibit heavier vehicles above 15-tonne from traveling on Break O'Day Road.

We are replacing and upgrading the bridge so it can cater for an unrestricted load limit and two-lane traffic.

### **What are the benefits of replacing the bridge?**

The benefits of replacing the bridge include:

- two lane access, unlimited loading providing better service and safety for road users
- improved resilience in the face of extreme weather events such a flooding
- fewer disruptions for community
- a bridge that will have a 100-year life

### **What is the outcome if the bridge isn't replaced?**

If Council doesn't replace the bridge, we are required to implement a 15-tonne load limit on the bridge, in line with the recent engineering report. This load limit will impact heavier vehicles, that will be unable travel on Break O'Day Road. The current bridge has limited life so it will need to be replaced in the near future even with a 15-tonne limit.

We will lose the grant funding we have secured from the Australian Government's Heavy Vehicle Safety & Productivity Program. There is also a risk that returning the funding may impact our ability to secure future grant funding, which is a highly competitive process against other councils and organisations.

Further, Council will incur significant costs resulting from a breach of contract with our appointed contractor.

### **How is this project funded?**

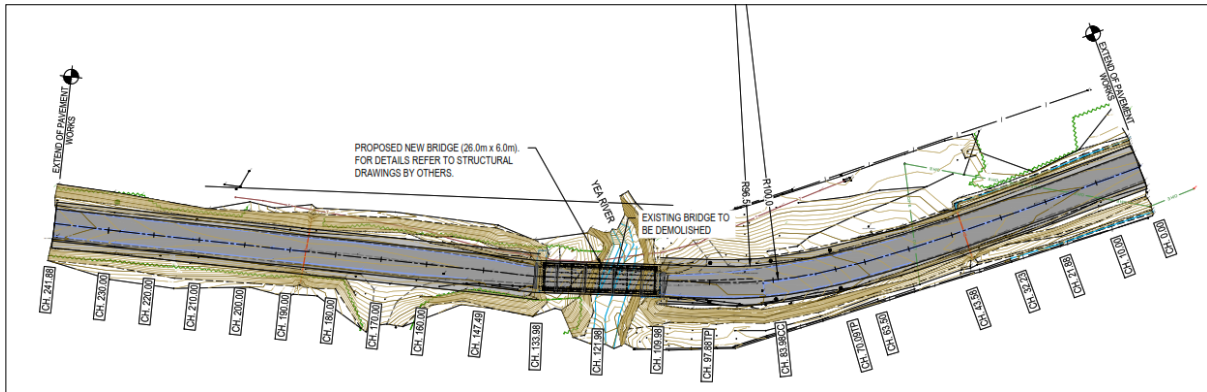
This project has been part-funded through the Australian Government's Heavy Vehicle Safety & Productivity Program (HVSP) to improve safety and heavy vehicle access on this important road. The Program requires a 50/50 contribution from Council and the Australian Government. Council has matched the Australian Government's funding equally.

Through the HVSP funding stream, this financial year, we are replacing three bridges: McDonalds Bridge along Yarck Road, the bridge at the entrance to the Yea Caravan Park on Court Street, and Break O'Day Road Bridge.

## What are the different approaches to replace the bridge?

### Option 1 – Replace Bridge on existing alignment:

This option would see the bridge replaced on its current alignment, meaning the current bridge will be removed and the road would need to close for 6 weeks within a 9-week construction period to erect the new bridge structure.



*Diagram 1: Birds eye view of Break O'day Road Bridge design built on existing alignment (North – top of diagram)*

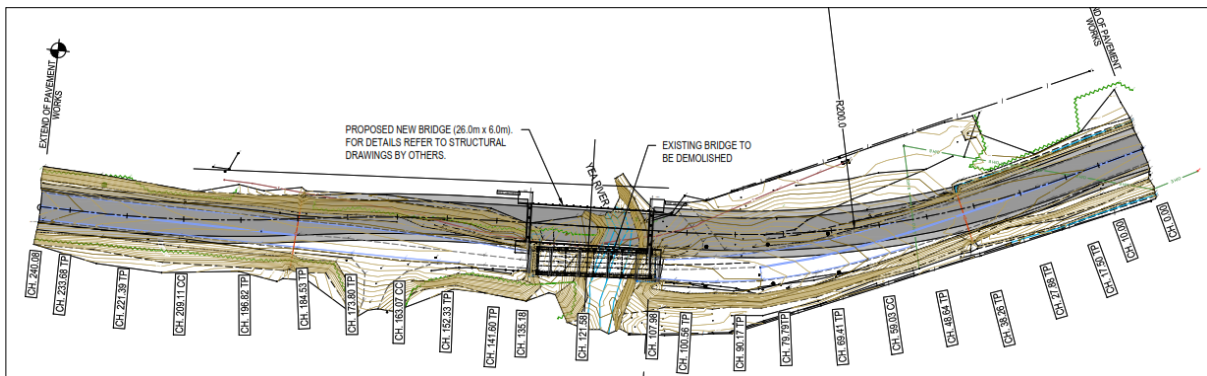
The bridge would follow the existing alignment with the footprint of bridge expanded to allow for a second lane of traffic.

The total project cost for this option is \$1.83 million and this is within the available budget for this project.

### Option 2 – Replace bridge on modified alignment:

Council has investigated another option to replace the bridge, which would see the bridge replaced on a modified alignment that is immediately adjacent to the existing bridge.

This means that the existing bridge would remain open, with traffic management and reduced speed limits in place, while the new bridge is constructed. Disruptions of up to 15 minutes could be expected for road users, with partial closures of up to 8 hours at stages throughout a 16-week construction program.



*Diagram 2: Birds-eye view of Break O'Day Road Bridge design built on modified alignment (North – top of diagram)*

This option would require new piles to be driven on an alternate alignment followed by the construction of the bridge deck structure and pouring of concrete deck slab.

Once these works are complete, the approach slab and road construction would commence, realigning the existing road with the new bridge on either side.

Building the bridge on a modified alignment involves additional road works, the construction of a retaining wall along the northern side of the roadway on the western approach and additional barrier railing. There would also be costs associated with the removal of vegetation, including a large gum tree.

The project cost for this approach is \$2.28 million which is \$450,000 over the available budget for this project. Council would be required to find additional funds to complete these works.

Additional costs for this option include:

- Structural engineering and certification
- Additional road works
- Retaining wall
- Additional precast panels
- Additional traffic barrier railings
- Additional cost for vegetation removal offsets
- Provisional allowance for unfavourable subgrade conditions

This option is significantly more costly and poses significant geotechnical risks. Poor ground conditions on the modified alignment highlight geotechnical risks, including the possibility of higher than anticipated stabilisation/piling costs. The alternate alignment will require removal of native vegetation and require the purchasing of offsets. The modified alignment footprint will further impact into waterway and may create water quality issues during construction.

### **Can Council replace the bridge while retaining a level of access for residents and road users?**

This is the dilemma we face. To retain a level of access for road users and to avoid the expected 6-week bridge closure, this will cost an additional \$450,000 to replace the bridge on a modified alignment.

Council does not have this additional funding. Just like households and businesses, Council is experiencing cost pressures and has limited funding available to deliver services and maintain infrastructure across our large rural Shire.

### **Has Council requested more funding from the Federal and State Government to cover the additional \$450,000 so access can be retained for road users?**

Council has requested additional funding support under the Australian Government's Bridge Renewal Project. Unfortunately, we were unsuccessful in our request.

Council has also requested an additional \$450,000 from the State Minister for Roads and Road Safety, The Hon. Melissa Horne MP, to support replacing the bridge on the modified alignment and retaining a level of access for road users. We have requested a decision on the extra funding by 26 April 2023. Should we receive \$450,000 in funding, Council will

deliver Option 2. This funding is not guaranteed, so we need to plan to deliver this project without it.

### **Why can't Council borrow the extra \$450,000?**

A loan of \$450,000 over 10 years at say 5% interest, would entail annual payments of \$56,753 with a total repayment amount of \$567,530. It is not feasible for a financially constrained small rural shire like Murrindindi to borrow this amount in order to avoid closing access for a six-week period - this equates to \$94,588 for each of the six weeks.

### **Why can't Council wait until additional funds are available to replace the bridge?**

This Project was meant to be delivered by the end of June 2022. We have already requested an extension on the grant funding arrangements, and we cannot request any more extensions.

To meet our grant obligations, we must commence construction by August 2023 and complete the project by November 2023 or we will lose the funding. This would impact our ability to secure funding in the future, as State and Federal Governments assess applications on past track record, amongst a range of other criteria.

### **Is there another approach to retain access for road users? There was talk of using a temporary (Bailey) bridge last year.**

We have considered using a temporary (Bailey) bridge for this project, but this is not a viable solution due to the following factors:

- The cost to install and dismantle a temporary bridge is significant, and similar to constructing a new bridge on a modified alignment.
- Long-term environmental risks are associated with constructing a temporary structure in this area location
- The availability of temporary (Bailey) bridges across the East Coast of Australia, is almost non-existent due to the high demand following recent floods.
- Heavy vehicles would still need to be diverted due to the load limits of this type of bridge.

### **Is there anything else Council will be considering when making its decision?**

#### Geotechnical Factors

Replacing the bridge on a modified alignment (Option 2) poses significant geotechnical risks. An assessment by a specialist geotechnical consultant found that the ground conditions at the site are more challenging for piling and abutment building. The modified alignment would require a more extensive construction footprint, due to the construction of the road to achieve the new alignment and the construction of a retaining wall.

#### Environmental Factors

Option 2 carries an increased environmental risk during the construction process, as the new bridge and road will be built partly on the existing river flats. Silt run off and water turbidity will be prominent risks during the construction period which will affect the river downstream from the bridge site.

## Land Use Impacts

Option 2 requires additional negotiations with the Taungurung Land and Waters Council, due to surrounding impacts of the project under the Land Use Activity Agreement. These discussions could take several months and impact the construction start date and our grant funding obligations.

### **Can the bridge erection timeframe for Option 1 be reduced from 6 weeks?**

A 6-week period will allow Council's contractors to dismantle the existing bridge and erect the new bridge.

A 6-week bridge replacement program is a short time period with respect to bridge construction timelines. The construction period needs to allow for appropriate curing times for the concrete of which will be a minimum of 4 weeks post deck pour, together with all the other bridge construction activities.

### **When is construction likely to start for either option?**

It is anticipated that works for Option 1 (existing alignment) would begin on 15 May 2023 with a full 6-week closure in effect from 22 May 2023. This approach is able to begin quickly as all elements have been precast and are ready to be installed.

Option 2 (modified alignment) would likely begin in June 2023 depending on curing time of additional precast retaining panels and availability of specialised machinery.

### **What will the expected extra time travel if the road is closed?**

We acknowledge that the road closure will add significant time to some residents and road users commute times.

Depending on your route of travel and situation, we understand that long detours may cause significant inconvenience and fuel cost.

Anticipated detours for different scenarios are outlined below: based on speed limits and average driving conditions.

<b>Route</b>	<b>Colour</b>	<b>Current</b>	<b>Detour</b>	<b>Detour Difference</b>	
Break O'Day Road to Castella	Green	11-13 mins/ 15 km	47-56 mins/60 km	36-43 mins	45 km
Break O'Day Road to Yea	Red	22-26 mins/ 33 km	22-26 mins/29 km	0 mins	- 4 km
Break O'Day Road to Glenburn	Blue	3-4 mins/4 km	42-50 mins/ 58 km	39-46 mins	54 km
Flowerdale to Glenburn	Cyan	13-16 mins/ 18 km	39-47 mins/54 km	26-31 mins	36 km



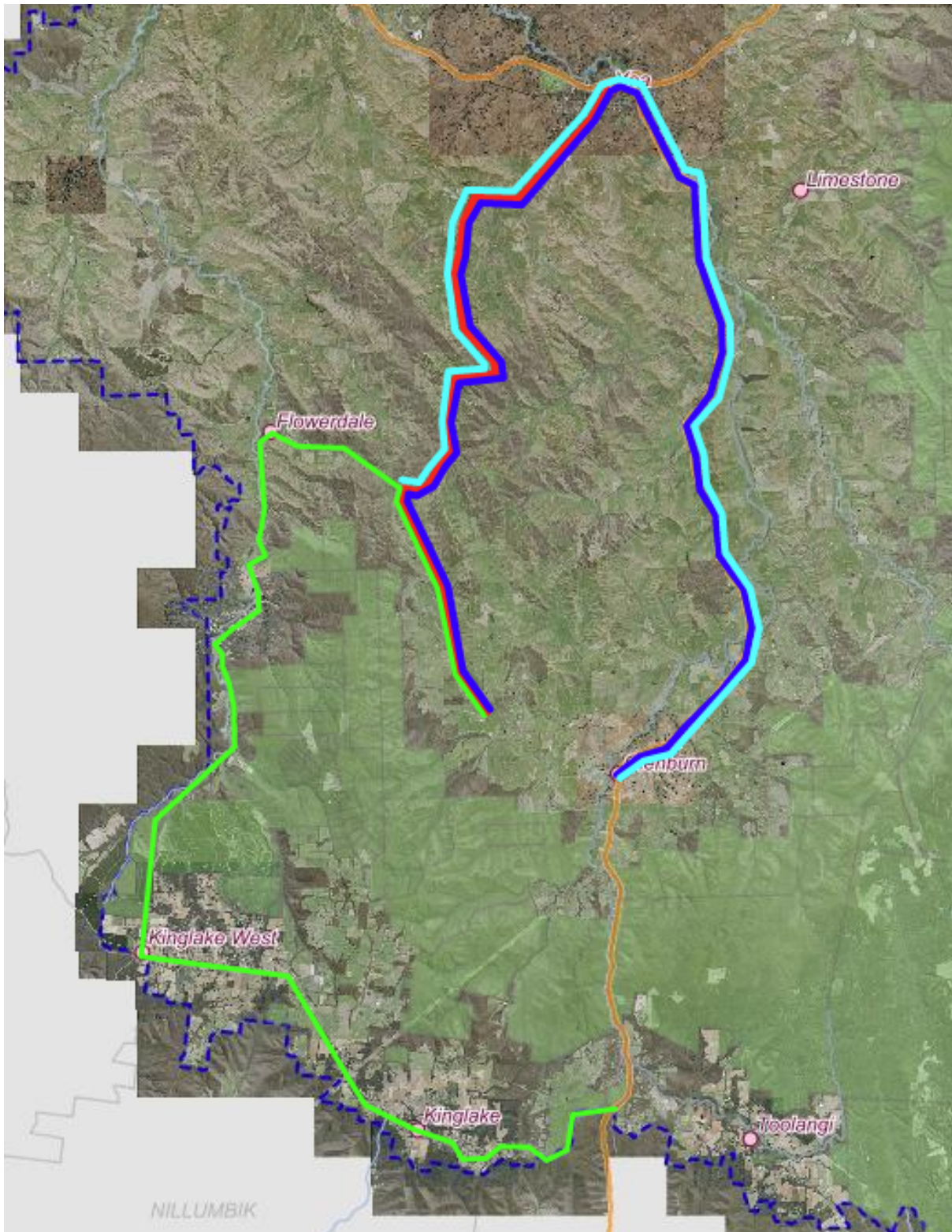


Diagram 3: Break O'Day Road Bridge - Proposed Detour Routes

### **Will there be any impact on emergency services, fire, SES, ambulance, police?**

The Glenburn CFA will have a fire tanker placed on the eastern side of the bridge with emergency services personnel called out accordingly.

With SES, Ambulance and Police services located in Kinglake and Yea, it is unlikely that these services or initial response times will be impacted.

Council will work closely with all emergency services to ensure we can support them to continue to provide services to the Glenburn community.

### **How will the school bus service operate?**

We know Break O'Day Road is an important school bus route.

The road closure would mean parents would need to drop their kids off at the school bus stop on Whittlesea-Yea Road.

This will add extra time to parents' already busy schedules and may cause disruption to students' day-to-day lives.

### **Can officers guarantee the 6-week bridge closure won't extend beyond this time?**

A closure time has been currently estimated as 6 weeks to deliver Option 1. All efforts will be made to replace the bridge within this timeframe, however it should be noted that there are risks outside the control of Council and our contractor. These risks include weather conditions and ground conditions. Officers will work with the contractor to ensure the community is kept up to date as works progress and that you are notified of any significant delays.

### **How will Council decide on the way forward for this Project?**

At the Scheduled Meeting of Council on 26 April, Council will decide on the approach for replacing Break O'Day Road Bridge.

Council officers' preferred outcome is for the State Government to cover the funding shortfall to enable Option 2 to proceed. Should the full \$450,000 not be secured by 26 April 2023, Officers will be recommending Council proceed with Option 1 and replace the bridge on its existing alignment, with a full bridge closure of 6-weeks. This recommendation is based on cost, risks and the environmental impacts associated with both options.

Officers have set the construction start at 15 May 2023 to allow residents to plan for the additional travel time during construction.

### **What is the process from here?**

At the Scheduled Meeting of Council on 26 April, Council will decide on the way forward for the project. Council will consider budget constraints, impact on the community, road users, and the risks associated with each approach.