

Flood Mitigation Measures

Following the completion of the Bungendore Floodplain Risk Management Study and Floodplain Risk Management Plan, Council identified three flood modification measures for further investigation and design, which are as follows:

- Removal of dense vegetation and creek re-shaping where Turallo and Halfway Creeks meet
- Upgrade the existing Turallo Terrace levee
- Construction of an overflow channel across Tarago Road

These flood management options have been identified as the most cost effective solution that will result in a reduction in existing flood damages in Bungendore.

Clearing and creek re-shaping where Turallo and Halfway Creeks meet

This flood mitigation measure includes the removal of vegetation where Turallo and Halfway Creeks meet and the reshaping of the creeks, which would enhance the capacity for floodwaters to escape more rapidly from the village reach of Turallo Creek. Excavation of overbank areas at the confluence would provide additional capacity when floodwaters exceed the channel capacity.

The Plan of the extent of vegetation removal and excavation is shown on **Figure 4-1**.

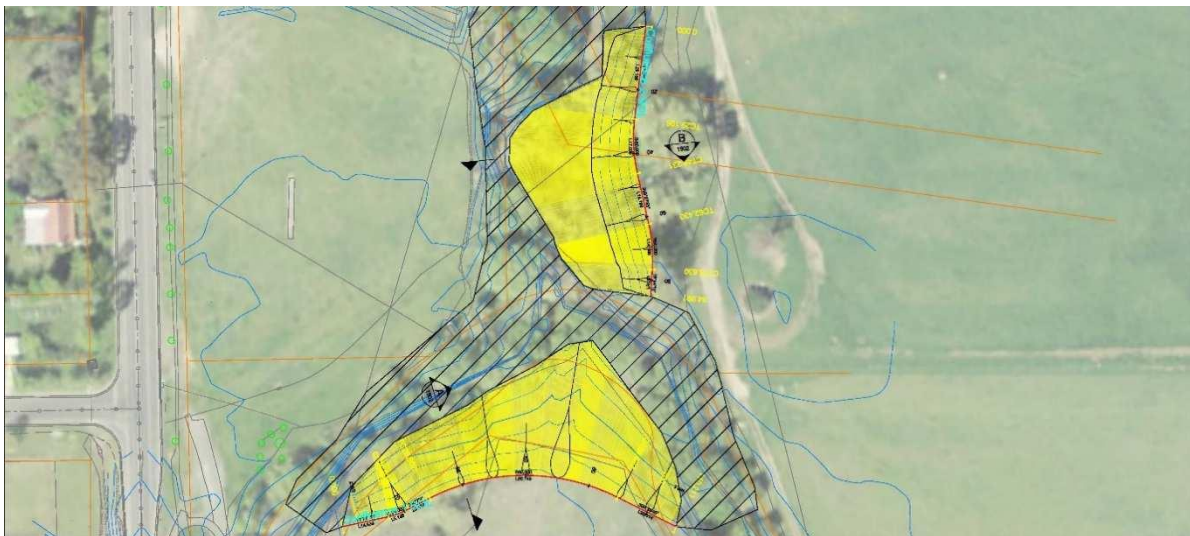


Figure 4-1: Clearing and creek re-shaping concept plan

Re-shaping will involve stripping of vegetation and re-grading the creek's banks. 200mm thick reinforced grass cover has been proposed to prevent future erosion of the excavated areas.

Upgrade of existing Turallo Terrace Levee

This flood damage reduction measure involves upgrading of the earth embankment, the Turallo Terrace Levee. The proposed levee bank upgrade will follow the existing levee alignment; however, there are two sections of the levee where realignments are being

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proposed. These are where the existing levee bank is located within private properties and where significant mature trees are located on the levee batters.

For the deviation around the private properties, the levee will comprise an earthen bank with a concrete retaining wall section where there is limited room between the property fence line and the creek. The other deviation will comprise an earthen bank.

The plan of the proposed levee is shown on **Figure 4-2**.



Figure 4-2: Upgrade of the existing Turallo Terrace levee concept plan

Overflow Channel

This measure would allow floodwaters to bypass the Tarago Road bridge crossing of the creek during major events. The higher flows would be diverted across Tarago Road upstream of the bridge crossing so that they would re-enter the creek downstream of the confluence of Turallo and Halfway Creeks.

The proposed grass lined channel will have a trapezoidal cross section, 4.5m wide floor and with cut batters of 1 (vertical) to 3 (horizontal). The proposed overflow channel passes under the existing Tarago Road where a culvert structure of twin culverts has been proposed.

The plan of the proposed overflow channel is shown on **Figure 4-3**.

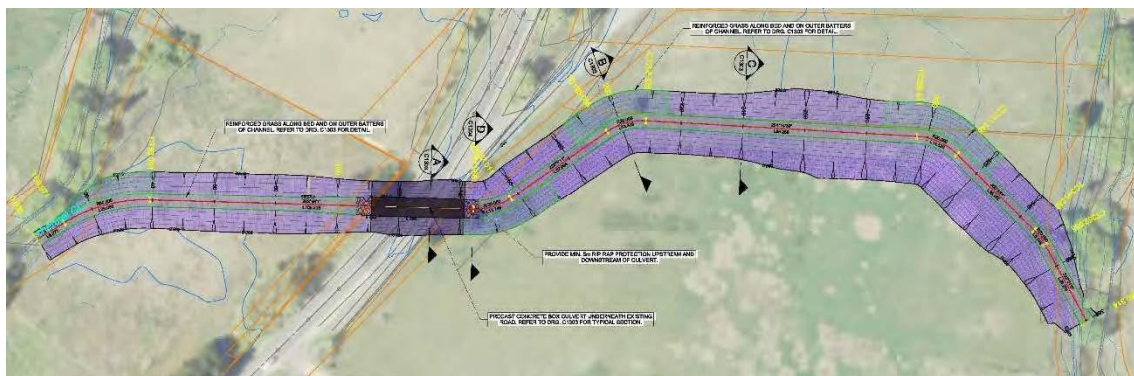


Figure 4-3: Overflow channel across Tarago Road concept plan