

Benalla Rural City flood risk assessment and draft priority rankings for stakeholder discussion (urban centres)

Community input is needed to prioritise where flood knowledge needs to be improved through flood studies and flood mapping in Benalla Rural City and to determine actions to reduce the risk of flooding.

This summary provides a list of studies for towns in Benalla Rural City and draft priorities for flood mitigation actions.

How to read the table below

The column to the left ranks flood risks (1: low, and 5: high), taking into account the possible damage from different sized floods and how often they are expected to happen. The measure of the yearly average cost of floods is known as Annual Average Damage (AAD).

The two columns in the centre of the table show:

- Flood studies that have been (or soon will be) completed for towns in your local government area.
- Recommendations from these studies that have been implemented (or are under way) and other relevant comments or observations.

The columns to the right of the table show DRAFT priority rankings [Low (L), Medium (M), High (H) and No Action (-)] for actions that reduce risk of flooding such as:

- Mitigation works (e.g. levees, retardation basin, and floodways)
- Flood warning systems (e.g. flood watch, flood warning broadcasts and action plans)
- Land use planning (e.g. flood overlay control in planning schemes)
- Municipal flood emergency plans (developed by council, VICSES and other agencies with flood-management responsibilities)

Please review this summary and provide feedback by:

- attending one of the community sessions being held across the catchment during February; or
- completing the feedback form on the website www.gbcma.vic.gov.au

Terminology

Annual Average Damage (AAD), expressed in dollar terms, is the average damage per year that would occur in a particular area from flooding over a very long period of time. This provides a basis for comparing the economic effectiveness of different projects. For more information on risk assessment methodology, please see the Regional Floodplain Management Strategy section of the website.

Annual Exceedance Probability (AEP) is the likelihood of occurrence of a flood of given size or larger occurring in any one year.

FloodSafe is a whole community program designed to prepare and empower the community with the skills and knowledge to appropriately prepare for, respond to, and recover from floods.

Municipal Flood Emergency Plan (MFEP) is a plan prepared and maintained by each municipal council, under the *Emergency Management Act 1986*, which identifies the municipal resources available, and how they are to be used, for flood prevention, response and recovery.

Regional Floodplain Management Strategy (RFMS) (under development) will replace the previous regional strategy (2002) and aims to help manage flood risk by seeking community input to prioritise where flood knowledge needs to be improved. The priorities will be detailed in a rolling three-year regional work plan that can be used by local communities to secure funding for various flood management activities.

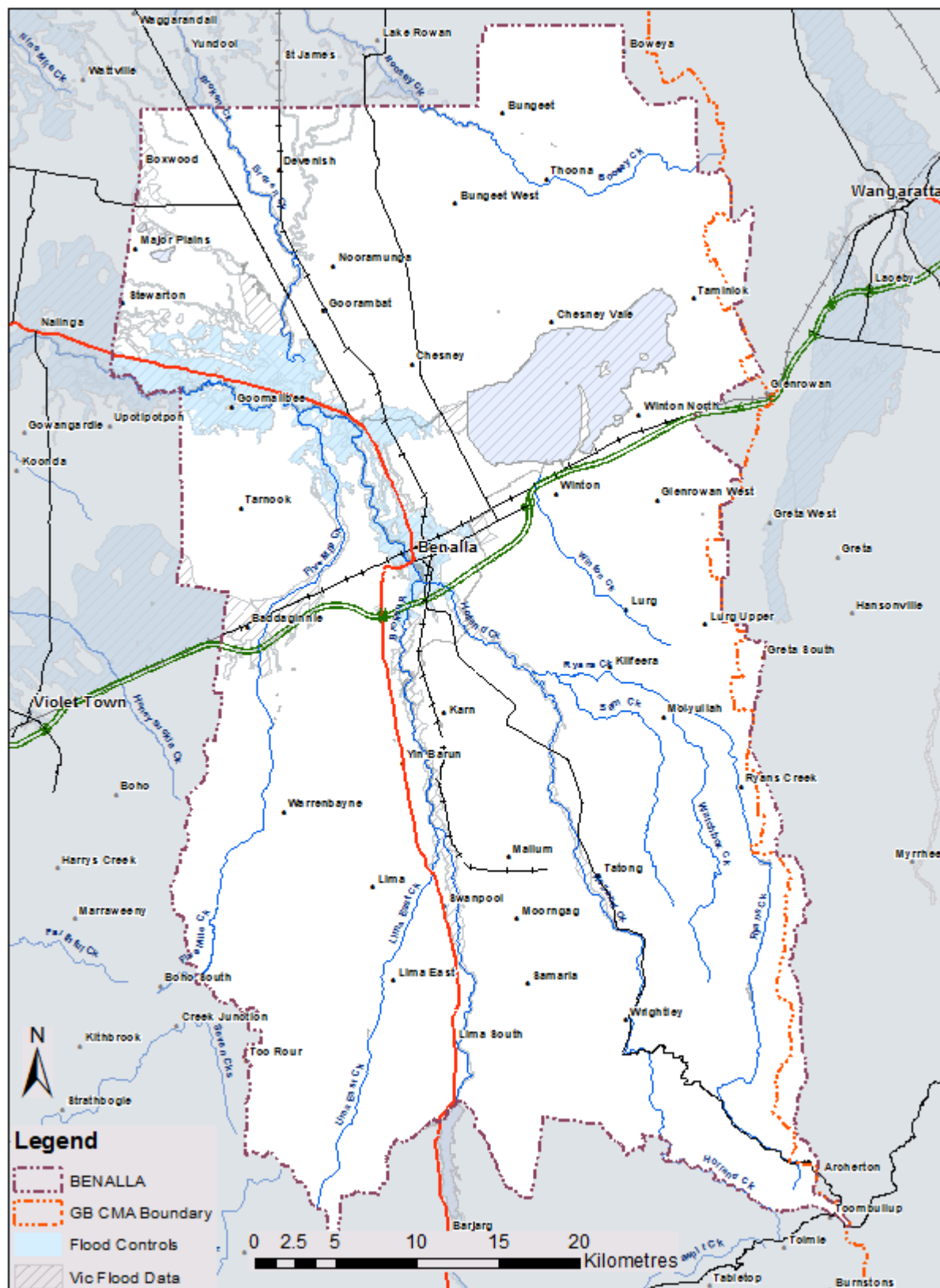


Table 1. Benalla Rural City risk assessment (ranking 1: low, and 5: high)
Draft priority rankings for stakeholder discussion: Low (L), Medium (M), High (H) and No Action (-) (for urban centres)

Name	AAD	Summary of past and existing studies	Summary of implemented study recommendations (Other comments)	Mitigation Works	Total Flood Warning System	Land Use Planning	Municipal Flood Emergency Plans
Baddaginnie	2	<ul style="list-style-type: none"> Documentation & Review of the 1993 Victorian Floods Volume 4 Broken River Catchment Floods (Hydro Technology, 1995) Granite Creek Regional Flood Study (Water Technology, nearing completion) 	<ul style="list-style-type: none"> No flood zone or overlay controls exist Upload mapping products from study into planning scheme Prepared 1% flood contour in Flood Atlas online Update MFEP Consider possible flood warning arrangements. Likely to rely on BoM flood warning products such as Flood Watch 	-	L	H	H
Benalla	5	<ul style="list-style-type: none"> Benalla Floodplain Management Study (SR&WSC, 1984) Benalla Flooding Investigation: Flood of 3-4 October 1993 (Willing & Partners, 1994) Documentation & Review of the 1993 Victorian Floods Volume 4 Broken River Catchment Floods (Hydro Technology, 1995) Total Flood Warning System (CT Management, 1997) Flood Response Guidelines, Benalla Township and Surrounds (Delatite Shire (1997) Benalla Floodplain Management Study (Cardno Willing, 2002). Benalla Waterway Management Scheme (Benalla Steering Committee, 2004) Benalla Floodplain Management Study – Flood Study (Willing & Partners, 2005) Lake Nillahcootie Flood Study (Cardno, 2008) Benalla: Review of Floodplain Management Works (Cardno, 2009) Benalla Flood Risk Review of Flood Cut Option (Cardno 2009) Benalla Flood Information Portal Report (Cardno, 2016) 	<ul style="list-style-type: none"> 1% AEP flood levels declared Total Flood Warning System implemented Benalla Water Management Scheme Implemented including vegetation thinning. Additional installation of railway culverts proved ineffective and impracticable and on hold indefinitely Flood Smart property information rolled out in 2009. Benalla Flood Information System web portal (Cardno, 2016) is being developed FloodSafe Guide drafted Property Information Statements prepared Need new flood zone and overlay controls for planning scheme Council remains commitment to manage water management scheme 	-	-	H	H
Devenish	0	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> Approx. 60 buildings identified (from 2015 aerial photography) 	-	-	M	M

Name	AAD	Summary of past and existing studies	Summary of implemented study recommendations (Other comments)	Mitigation Works	Total Flood Warning System	Land Use Planning	Municipal Flood Emergency Plans
			<ul style="list-style-type: none"> Flood overlay controls are required as evident by captured 2012 peak flood levels Suspect that flooding occurs from Broken Creek overflow Scoping Study is required to at least to provide flood mapping No LiDAR or detailed ground information exists 				
Glenrowan (Rural City of Wangaratta)	0	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> Town has a number of deeply incised waterways commending very small catchments in the order of 100 ha. There may be some overland drainage issues beyond the scope of this RFMS 	-	-	-	-
Swanpool	1	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> LiDAR shows that the town is on a significant high terrace above the floodplain by some three to four metres No further action 	-	-	-	-
Tatong	1	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> LiDAR shows that the bulk of the town is several metres above the adjacent floodplain. Town has two localised waterways Dwellings located west of town are relatively low Consider scoping flood study to improve flood mapping. This will assist to identify any further work 	-	-	M	L
Thoona	0	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> The bulk of the buildings are on land significantly above the Boosey Creek floodplain Several buildings could be exposed to flood risk Desktop investigation required to prepare flood overlay controls to safeguard from flood risk for new buildings 	-	L	M	L