Mitchell Shire 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 Mitchell Shire and to determine actions to reduce the risk of flooding.

This summary provides a list of studies for towns in Mitchell Shire 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.

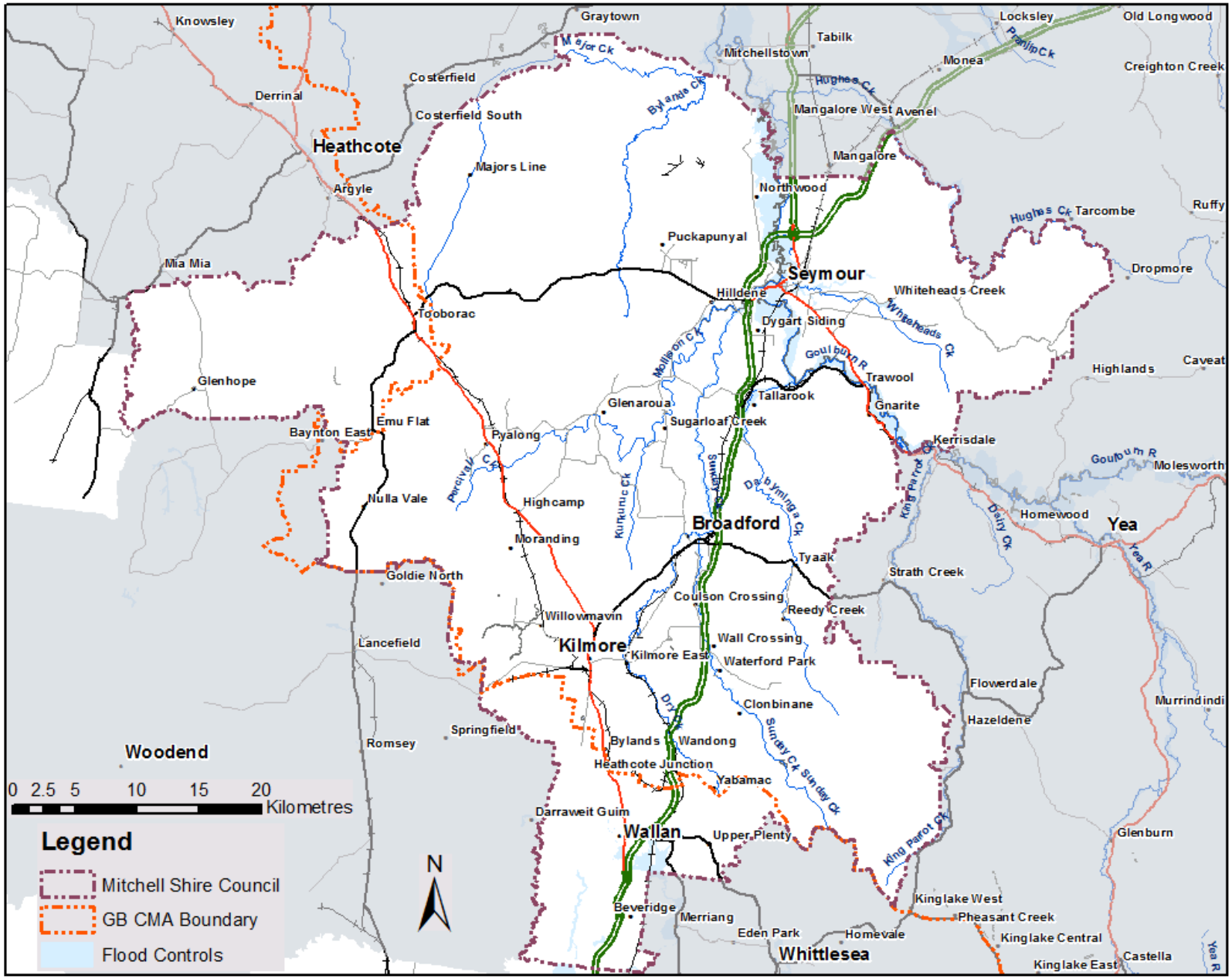

Figure 1. Mitchell Shire Council area showing towns and planning scheme flood overlay controls

Table 1. Mitchell Shire 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 completed activities (Other comments)	Mitigation Works	Total Flood Warning System	Land Use Planning	Municipal Flood Emergency Plans
Broadford	2	• Nil	• Flooding from both Sunday and Dry creeks has some flood impacts on the town as well as overland flooding issues • Requires a flood study (a study could be coupled with other towns and regional areas along Dry and Sunday creeks)	-	M	H	H
Kilmore	0	• Kilmore Flood Study and Intelligence Study (BMT WBM, ongoing)	• Update MFEP • Place flood overlay controls in planning scheme • Flash flood warning services to be considered	L	L	H	H
Kilmore East	0	• Nil	• Dry Creek flows along the eastern side of the town and railway. LiDAR ground information indicates that the town is well above Dry Creek • Several small drainage lines traverse through the town and may have some overland flooding issues • Investigate flooding in a regional approach along Dry and Sunday creeks including its towns	-	L	M	L
Pyalong	0	• Nil	• Approx. 170 buildings have been identified (from 2015 aerial photography) • The town has developed as two distinct areas, namely to the north (Township Zone) and in the south (Rural Living Zone). • Mollisons Creek flows through the northern portion of town • LiDAR ground information indicates that Mollisons Creek is deeply incised and flooding of the urban areas is unlikely • Carry out a desktop study (or scoping study) to confirm or otherwise any flooding issues	-	-	L	L
Reedy Creek	0	• Nil	• Approx. 65 buildings have been identified (from 2015 aerial photography) • Dabyminga Creek flows along the east of the developed areas and commands a catchment area of approx. 38 square kilometres. • LiDAR ground information indicates that Dabyminga Creek is deeply incised and flooding of the urban areas is unlikely • Investigate flooding in a regional approach along Dry and Sunday creeks including its towns • Flood warning rely on BoM flood warning products such as Flood Watch	-	-	H	L

Seymour	5	• Seymour – Report on Flooding from Goulburn River (SR&WSC, 1981) • Appendix F: Lake Eildon – Effect on Flood Frequencies at Eildon (SR&WSC, 1981) • Seymour Floodplain Management Study (SR&WSC, 1984) • Seymour Flood Mapping Study – Final Report (WBM Oceanics Australia, 2001) • Total Flood Warning System–Goulburn River to Seymour • Seymour Flood Mitigation Communication Investigation – Final Consultants Report to Council (WBM Oceanics Australia, 2006) • Seymour Flood Mitigation Project - Preliminary Design Report (John Webb Consulting, 2009) • Seymour Flood Mitigation Project - Draft Report (GHD, 2013) • Letter report on the cost of compensation to landowners for land acquisition (PW Newman P/L, 2013) • Archaeological Assessment of a Proposed Levee at Seymour (Heritage Insight, 2013) • Seymour Flood Mitigation Project – Preliminary Cost Estimate (Flagstaff Consulting Group, 2013) • Letter report on the outcomes of flood modelling (BMT WBM, 2013) • Seymour Flood Mitigation Project – Preliminary Construction Methodology (Flagstaff Consulting Group, 2013) • Letter report on increase in land values from rezoning (PW Newman P/L, 2014) • Memorandum – Seymour Flood Mitigation Cost Benefit Analysis (Aither, 2014) • Terrestrial and aquatic assessment for the proposed Seymour levee – proposed realignment (Ecology and Heritage Partners, 2015) • Proposed Flood Levee, Seymour – Draft Cultural Heritage Management Plan (Heritage Insight, 2014)	• Total Flood Warning System has been delivered • MFEP has been updated to reflect existing conditions without proposed levees • Information Guides prepared in 2001 has been updated with FloodSafe guides by VicSES (2015) • Flood zone and overlay controls have been updated to reflect existing conditions without proposed levees. • Functional levee design is underway • A planning scheme amendment for the levee is in preparation and consideration.	H	M	H	H

Name	AAD	Summary of past and existing studies	Summary of completed activities (Other comments)	Mitigation Works	Total Flood Warning System	Land Use Planning	Municipal Flood Emergency Plans
Tallarook	1	• Tallarook Flood Investigation (GB CMA, 2008)	• Dabyminga Creek flows along the eastern side of town and commends a catchment of some 145 square kilometres. • Approx. 60 buildings have been identified from 2015 aerial photography, with the bulk of them above the 1% AEP flood level • Flood overlay controls require updating • Flood Warning needs to rely of BoM flood products such as Flood Watch • MFEP need to ensure buildings in low-lying land are documented – This can be done using LiDAR and field visits	-	-	M	M
Tyaak	0	• Nil	• Approx. 25 buildings have been identified (from 2015 aerial photography) • Dabyminga Creek flows through the town and commands a catchment area of approx. 60 square kilometres. • LiDAR ground information indicates that Dabyminga Creek is deeply incised and flooding of the urban areas is unlikely • Investigate flooding in a regional approach along Dry and Sunday creeks including its towns	-	-	H	L
Whiteheads Creek	1	• Whiteheads Creek and Overland Flood Mapping Study (Cardno, ongoing)	• Update MFEM • Flood zone and overlay controls required in planning scheme • Flash flood warning services needs consideration – Whitehead Creek Gauge exists	M	H	H	H