Cumulus Engineering

FLOOD RISK SPECIALISTS

BARHAM RIVER FLOOD STUDY

CONSULTATION REPORT – ROUND 1

PREPARED FOR COLAC OTWAY SHIRE

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In the spirit of reconciliation, Cumulus Engineering acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea, and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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1 Introduction

Colac Otway Shire (Council) and Corangamite CMA (CCMA) have engaged Cumulus Engineering to undertake the Barham River Flood Study. The study area covers Barham River, Anderson Creek and its tributaries.

The project includes three rounds of community consultation with the purpose of the consultation component of the study to inform the community of the project, gather historical data, obtain ideas for mitigation, and then seek feedback during the public exhibition and planning scheme amendment phase.

This memo summarises feedback received and emerging themes from the Consultation Round 1.

2 Background

Consultation Round 1 formed the initial community and stakeholder engagement. The aim of this phase of consultation was to introduce the project, its purpose, and gather community knowledge on historical flood events and local priorities. Activities conducted as part of this round included:

- An overview of the project and frequently asked questions (FAQs) hosted on council website.
- Online engagement via online mapping and survey from Cumulus Engineering via ArcGIS software.
- Community consultation event to capture local knowledge regarding experience of historic flooding events and identify relevant flooding issues. This event was held at Apollo Bay Bowls Club on the on the 11th of October.

3 Consultation Summary

3.1 Online Engagement

Online engagement was conducted utilising survey and preliminary flood mapping via ArcGIS online portals. A summary of the responses to the survey and online map (exported on 6th November 2025) is outlined in Table 3-1 with respondents' location and details redacted to maintain confidentiality.

3.2 Community Consultation Session

Community Consultation was held in Apollo Bay on the 11th of October 2025 and consisted of two representatives from both Cumulus Engineering and Colac Otway Shire attending. A summary of the information from the consultation is outlined in Table 3-2 with respondents' location and details redacted to maintain confidentiality.

TABLE 3-1 ONLINE COMMUNITY CONSULTATION SURVEY RESPONSES

Location & Name	Question - Have you seen any flooding from the Barham River or its tributaries?	Question - Have you got any ideas to improve flood risk along the Barham River?	Additional Comments
Redacted due to confidentiality	Has lived in the area for 40 years. Has experienced several floods, which can lead to the closure of Barham River Road for long periods.	No response.	No response.
Redacted due to confidentiality	Mariners Carpark has not experienced flooding in the past 20 years. Flooding begins around the Barwon Water intake, across the road and paddocks.	Flooding in the lower section could be solved by raising the paddocks.	No response
Redacted due to confidentiality	Lived within the Barham River Catchment between 1952 - 1980, experienced several floods prior to 1980 which closed Barham River Road from both flooding and landslips. Knows of trees and other debris resulting in blockages and damaging infrastructure. Flood water has reached the bridge in Conn's Lane which was washed away several times. Flooding from Conn's Lane to Great Ocean Road, across several farms.	Don't allow large vegetation close to the river, which could result in blockage. Clear blockages from the Barham River. Stabilise river and road banks to prevent erosion.	Was involved in the process to prevent development of homes on the floodplain.
Redacted due to confidentiality	Apollo Bay & District Historical Society has records of flooding within the Barham River for over 100 years.	Has concerns around the integrity of Anderson Creek weir.	Email - info@apollobaymuseum.com.au
Redacted due to confidentiality	Has lived within the catchment for over 40 years, has experienced flooding in 1983-4, 2006, 2010, 2012, and 2015 floods. Has photography of most of these events. Has a video of the 1976 flood event from a long-term resident.	Removal of logs, and major work to remove all weeds would improve the risks from flooding. Is concerned of damage the logs and vegetation within the river could cause on infrastructure. Recommends improving the roadside drainage along Barham River Road.	Has provided several report references which may aid this investigation.
Redacted due to confidentiality	Tidal levels control flood behaviour.	Increase the frequency which the river mouth is cleared.	No response.
Redacted due to confidentiality	Experienced flooding up to 500 mm, earlier this year.	Recommends to not interfere with natural processes.	No response.
Redacted due to confidentiality	Has experienced flooding after heavy rain around Costerman Terrace Marengo, since 2024.	Keep developments and infrastructure away from flood harm Support appropriate revegetation to reduce landscape damage	No response

TABLE 3-2 COMMUNITY CONSULTATION SUMMARY

Location & Name	Notes
Redacted due to confidentiality	Has lived along the west branch of the Barham River for over 40 years. Provided a significant amount of information on flood behaviour within the Barham River catchment. Provided flood photos for multiple events and a video of the 1976 event. Explained that the 1976 and 1983 events have been the largest events within the catchment, with 1976 been larger than the 1983. Raised concerns around the management of debris and vegetation along the Barham River.
Redacted due to confidentiality	Previously owned a property around the confluence of the east and west branch of the Barham River. Explained that several times flooding resulted in them either been cut-off from Apollo Bay or cut-off from their property. Explained that flood awareness and warning was insufficient resulting in them not been prepared to be cut off.
Unknown	A resident raised concern of the proposed development along Anderson Creek. The resident explained that he had concerns the development was unsuitable due to flooding from Anderson Creek and the landscape of the property. He also raised concerns around the development due to projected climate conditions.
Redacted due to confidentiality	A resident who lives along Wild Dog Creek explained the consequences of the 1952, 1976 and 1983 event, particularly along Wild Dog Creek. He explained that they were significant flood events. In 1976 14 inches of rain fell within 12 hours, in comparison in 1952 this occurred over a couple of days. This resident also explained that the rainfall / storm behaviour of the Barham Catchment is different to his property and then different again to his neighbour property further downstream along Wild Dog Creek. He explained that his rainfall gauge can often receive much more rainfall than his neighbours, and that he commonly witnesses rainfall and storms specific the Barham catchment, from his property.
Redacted due to confidentiality	Advised the Apollo Bay Museum has some historic images and suggested the project team visit the museum on the next visit to Apollo Bay. Mentioned Anderson Creek Weir, there has been some concern in the past about the state of the weir.
Redacted due to confidentiality	Actively involved in Landcare. Keen to use floods maps if available in a display they are putting on next year.
Redacted due to confidentiality	Lives in Ocean Park Drive area, regularly sees water in low-lying areas. Concerned about fill that has been placed on a property near southern end.

4 Emerging Themes

The following section summarises the main themes that emerged from both the online engagement and community consultation sessions which are also summarised in Table 4-1. These findings help guide the next stages of the study, including flood modelling, mitigation planning, and community resilience strategies.

TABLE 4-1 KEY THEMES AND PRIORITIES

Theme	Summary	Key Community Priorities
Flooding Characteristics	Flooding primarily impacts the lower reach of the Barham River downstream on the confluence of the east and west branches.	Manage flooding appropriate to reduce infrastructure damage and impacts to residents.
Property and Access	The Barham River Road is the only formal access route to residents within the upper Barham catchment. This road is cut-off during and after flood events.	Protection of infrastructure along the Barham River to maintain access after floods have receded.
Emergency Management	Limited warning times and no formal evacuation plan have resulted in residents being insufficiently prepared to either evacuate or be isolated.	Improve flood forecasting and early warnings. Develop local flood response and evacuation plans.
Environmental Factors	Concerned around the potential impact of debris to infrastructure and flood behaviour.	Maintain waterways.
Climate Change	Multiple residents are concerned that climate change will not be appropriately planned for leading to consequences to infrastructure and the community.	Climate change to be adequately assessed.
Future Development	Multiple residents expressed their concerns that future development will be located on the floodplains.	Prevent inappropriate development.

4.1 Flooding Characteristics

Flooding within the Barham River catchment is relatively contained to the waterways until the confluence of the eastern and western branches of the Barham River. Many residents explained that downstream of the confluence flooding occurs over the Barham River Road and adjacent paddocks, resulting in residents being cut off from Apollo Bay, sometimes for long periods of times. Flooding upstream of the confluence while relatively confined is known to cause damage to riverbanks and the Barham River Road along the eastern branch. Flood imagery provided by residents has demonstrated key flood behaviour along the Barham River, which will be used throughout this investigation.

4.2 Property and Access Impacts

Multiple residents who live along the Barham River and within Apollo Bay explained that flooding along the Barham River can lead to residents being cut-off from either Apollo Bay or their properties within the catchment. Due to the nature of flooding this can lead to damage to Barham River Road potentially resulting in residents being cut off for long periods.

4.3 Emergency Management and Preparedness

The consultation revealed a lack of structured flood preparedness at the local level. Many participants reported receiving little or no warning prior to previous flood events. This has led residents to either being stranded in Apollo Bay or on their properties, with some residents not being prepared for such occurrences. This investigation will play an important role for emergencies responders to appropriately warn residents prior to flood events.

4.4 Environmental Factors

Several respondents expressed concern about the vegetation and debris along the Barham River. Long term residents explained that during previous flooding debris resulted in river blockages and damages to infrastructure along the waterway. On the other hand, they also raised concern of erosion during flood events to the riverbanks and roads.

4.5 Impact of Climate Change

Some residents were concerned about the consequence of climate change on flood behaviour along the Barham River. Particularly the combination of rising sea levels and increased rainfall intensities and the consequence to the Great Ocean Road and flooding across the river flats.

4.6 Concern over Future Development

Residents explained that currently there are only a few residents and dwellings directly impacted by flooding, however, there is the concern that development will occur on the river flats where flooding is known to be substantial.

5 Conclusions & Recommendations

The first round of community consultation for the Barham River Study successfully captured valuable local knowledge about flood behaviour and community concerns. Residents demonstrated strong awareness of flood risk and provided detailed accounts of recent and historical flood events.

The consultation revealed several recurring issues across the study area. Flooding along the Barham River can lead to several residents in the mid-to-upper catchments isolated from Apollo Bay. While flooding across the River Flats has relatively low consequence today, there is a concern of inappropriate future development. Several members of the community raised concerns of the impacts of Climate Change on flood behaviour and consequence.

Based on these findings, the following recommendations are made to guide the next stages of the flood study and associated mitigation planning:

- Flood Warning and Evacuation Planning: Develop a localised flood emergency plan that incorporates clear evacuation routes, early warning systems, and communication protocols between residents, Council, and emergency services.