Stage 2 of the Bundaberg flood protection study involves assessing 11 flood mitigation options, including those identified through consultation with the Bundaberg community in late 2015.

The following provides an overview of the assessment of Option I.

### Viability

A key step in the options assessment involves identifying issues that may mean construction or implementation of the option is not viable. These relate to matters such as:

- The likelihood of obtaining environmental approvals, due to unacceptable environmental impacts
- Significant or unaffordable costs of construction or ongoing maintenance
- Potential for unacceptable impacts on other areas.

An option is considered to be unviable where the assessment identifies one or more of these matters are ‘unlikely to be achieved’.

The assessment of Option I found that this option is unviable with significant issues identified in all matters considered.

### Costs and benefits

Initial cost estimates indicate that construction and maintenance of this option would be approximately $1300 million. This is based on the unit costs (i.e. cost per megalitre of volume) to construct other dams in Queensland.

The estimated reduction in flood damages (i.e. the tangible benefits) for this option is around $90 million.

### Summary of assessment against key criteria

- This option would temporarily detain floodwater from the Burnett River and could reduce flood levels from the 1% AEP flood event to the 5% AEP flood event level.
- This would reduce flooding for about 3000 properties in the 1% AEP flood event and prevent over-floor flooding in 1450 properties in the 1% AEP flood event.
- Environmental approval of this option would be unlikely due to the environmental impacts in the impounded area.
- The temporary impounding of floodwaters would require the acquisition of large areas of agricultural and forested land.
- The costs would be very high ($1300 million) and more than 14 times the benefits realised through reduced damages.
- Benefits (in terms of reduced flood damages) would be in the order of $90 million.
- There is a risk that people downstream of the dam become complacent about flood risk and become less resilient during events which overtop/exceed the dam wall.

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1% AEP flood is the name given to a flood event which has a 1 in 100 or 1% chance of occurring in any year. It would be similar to the January 2013 flood.
Option overview
Option I aims to protect properties on the lower Burnett River floodplain by constructing dams in the upper catchment, somewhere upstream of Mundubbera. No specific dam location has been investigated at this stage. This assessment has been carried out to determine whether dams in the upper catchment could provide enough flood mitigation to create significant benefits for the Bundaberg township.

Dams in the upper catchment could mitigate flood flows from the Upper Burnett, Auburn and/or Boyne catchments. This option could lower flood levels for a range of AEP events for all properties downstream of the dam. It would involve construction of a large 1.7 million megalitre dam built across the Burnett River floodplain or a number of smaller dams located in each of the Upper Burnett, Auburn and Boyne catchments. The aim would be to reduce the 1% AEP flood flow in Bundaberg from 17,000 m$^3$/s to 9,500 m$^3$/s which is similar to a 5% AEP flood event.

This option would require acquisition of land inundated by the dam and immediately downstream of the spillway.

Find out more about this option
Community consultation on the flood mitigation options and the findings of the options assessment will take place from 24 October to 20 November 2016. To find out more about the flood mitigation options and to provide your feedback:

Visit the website
www.qld.gov.au/bundabergfloodstudy
Interactive mapping is available on the website so that you can see how the flood mitigation options would change flooding in your area.

Contact the project team
Email: bundabergfloodprotection@jacobs.com
Telephone: 1800 994 015 (during business hours)

Next steps
The Bundaberg flood protection study is due to be completed later this year. Engagement on the 10-year action plan will occur in 2017. It is important to note that the flood mitigation options have not yet been considered by the State government and are not government policy. No commitment will be made on any of the options until the State government has consulted with the community and stakeholders on the 10-year action plan.

The Queensland Government will continue to engage with the Bundaberg community as the action plan develops.