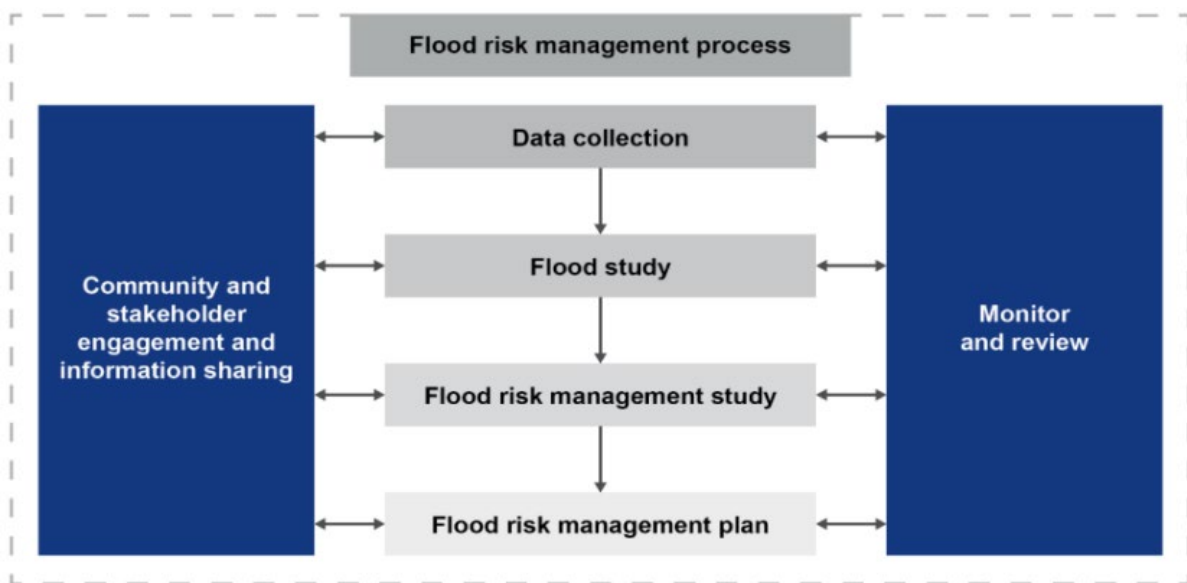


Lower Macleay Flood Risk Management Study and Plan Frequently Asked Questions (FAQ)

1. What is the Lower Macleay Flood Risk Management Study and Plan?

The Lower Macleay Floodplain Risk Management Study and Plan (FRMSP) is a comprehensive strategy to assess flood risks and propose mitigation measures for the Lower Macleay River floodplain. The project was completed in accordance with the Floodplain Development Manual/Flood Risk Management Manual. It aims to reduce flood impacts on the community, infrastructure, and the environment while providing a framework for sustainable development. This process enabled Council to apply for 2:1 funding under the NSW Government Floodplain Management Program.



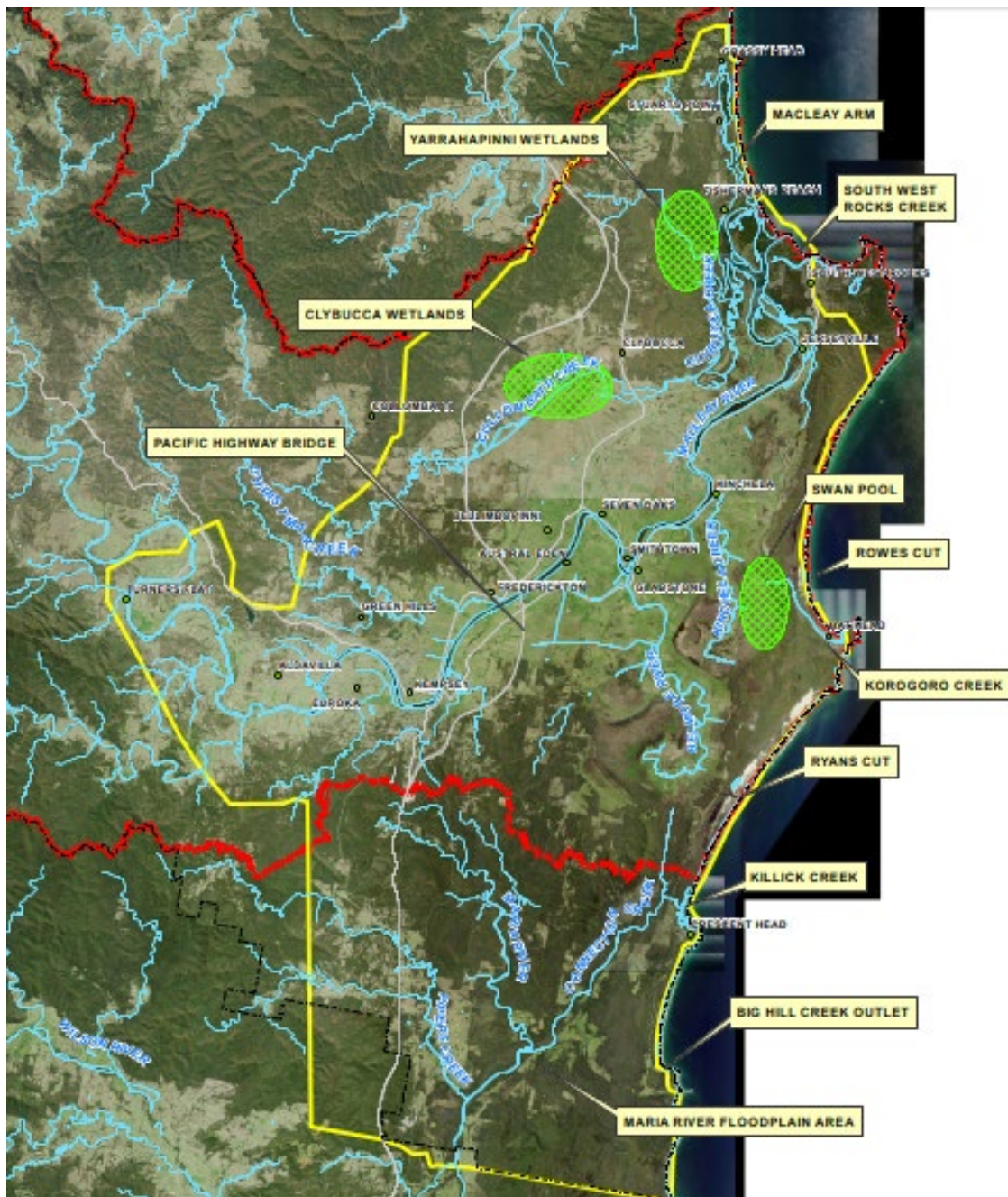
2. Why is this study and Plan being conducted?

Flooding poses significant risks to safety, infrastructure, and the local economy. The FRMSP helps communities prepare for and respond to flooding by providing evidence-

based solutions that improve resilience and reduce long-term costs associated with flood damage.

3. What area does the study cover?

The study focuses on the Lower Macleay floodplain, a 500 km² coastal area downstream of Kempsey, extending to South West Rocks and encompassing Crescent Head, Hat Head, and other nearby towns and villages.



4. What were the main objectives of the study and plan?

Key objectives included:

- Assessing the impacts of flooding on properties, roads, and infrastructure.
 - Developing a prioritised list of flood risk management measures.
 - Assisting with planning controls for future developments on the floodplain.
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5. What types of flooding does the study address?

The study addresses:

- Riverine flooding from the Macleay River.
 - Local flooding from tributaries and minor catchments.
 - Coastal flooding influenced by ocean levels and storm surges.
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6. What is the historical context of flooding in the Lower Macleay?

Significant floods in the area occurred in 1838, 1893, 1949, 1950, 1963, 2001, and 2021. These events caused widespread damage, prompting the development of the Macleay Flood Mitigation Scheme (1955-1970s), which included levees, floodgates, and drainage channels.



7. Will this Study and Plan Impact Flood Levels?

This Study and Plan will not impact flood levels which were revised during the preceding Flood Study Stage. The Plan recommends implementing a Flood Policy which will clarify flood levels for the shire which the community will have a chance to provide input on.

8. What flood mitigation measures were evaluated?

The study assessed seventeen options across three categories:

- **Flood Modification Measures:** Changes to physical infrastructure, such as levees and drainage channels.
 - **Property Modification Measures:** House raising, floodproofing, and voluntary purchase of high-risk properties.
 - **Response Modification Measures:** Enhanced flood warning systems, emergency access improvements, and community education.
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9. What role does climate change play in the study?

The study incorporates climate change scenarios for 2050 and 2100, including:

- Sea level rise of up to 0.9m.
- Increased rainfall intensities by up to 19.7%. Projected changes in flood levels and durations have been integrated into planning recommendations.

The Study has not conducted a detailed analysis into mitigation measures for flood mitigation to Climate Change which would form a subsequent study.

10. How does the plan support community safety?

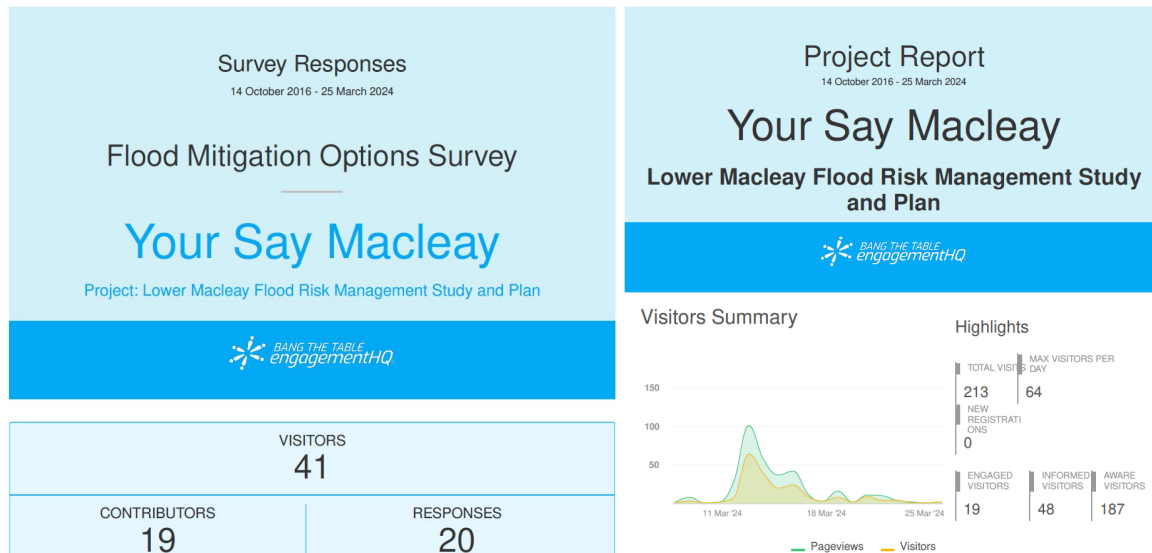
The plan includes:

- Improved flood warning systems for timely evacuation and response.
 - Identification of critical roads and facilities vulnerable to flooding.
 - Recommendations for infrastructure upgrades to maintain access during floods.
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11. How was the community involved in the study?

Community engagement included:

- Workshop and feedback session with residents and stakeholders.
- Public exhibition of the draft plan.
- Consultations with the Flood Reference Group, comprising council officers, agency representatives, and community members.



12. Who is the Flood Risk Reference Group and How were they chosen?

The Flood Risk Reference Group was made up of fifteen community members via Public Expression of Interest (EoI). The list was selected and adopted by Councillors to represent a cross section of the community. The group included Mayor, Councillors, SES, NSW Resilience, Local Farmers and residents with significant shared local knowledge.

13. What are the key outcomes of the study?

- Detailed flood mapping and risk assessments.
- A prioritised list of mitigation measures.
- Recommendations for integrating flood risk into planning controls.
- Identification of funding opportunities for implementation.

14. How will the plan be implemented?

Implementation depends on funding and partnerships. Recommendations include:

- Applications for state and federal grants.
- Collaboration with agencies such as the NSW Reconstruction Authority and the State Emergency Service (SES).

15. How many options were looked at?

17 options including 4 sub options were analysed in the risk management study and plan.

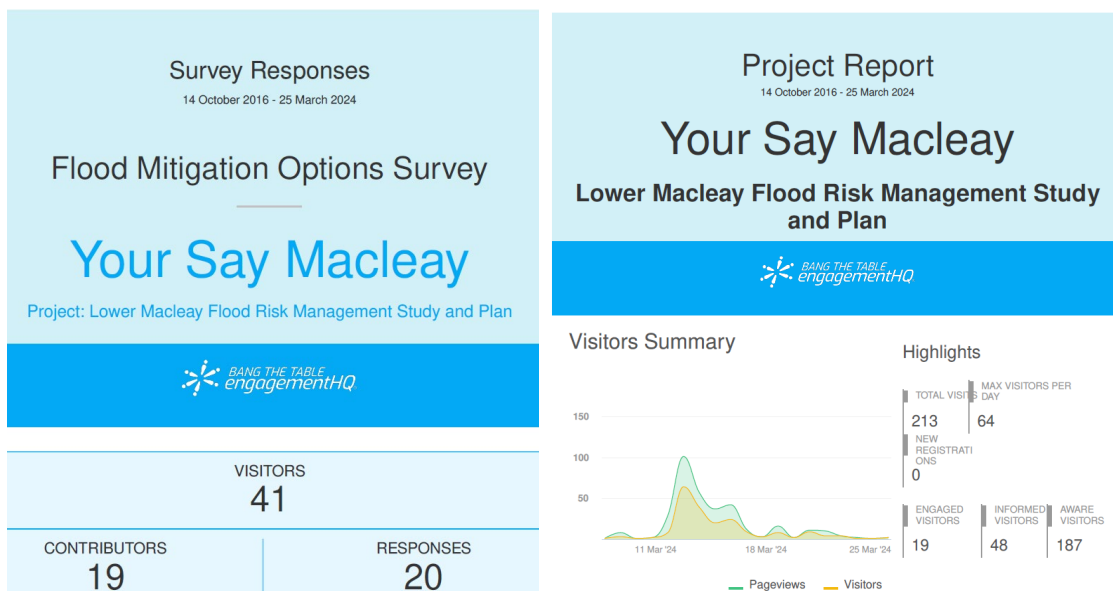
16. Why weren't more options looked at?

The study was limited to how many options could be investigated due to the significant modelling duration of each option. Further investigation would have required more funding such that options were prioritised.

17. How did you choose what options?

Options Assessment was completed in collaboration with the Flood Risk Reference Group and comments via Community Survey.

Twenty responses were received to the Flood Mitigation options survey and nineteen responses to the Public Exhibition of the report.



18. What options are recommended?

FM = Flood Measure, PM = Planning Measure and RM = Response Measure.

Measure Code	Description
FM1	Raise and Extend Smithtown Levee
FM1A	Feasibility Study for FM1
FM2	Emergency flood access ramps at Crescent Head Road/Pacific Highway
FM3	Remediation of existing levees
FM4	Maintenance of existing drainage assets for flood drainage
FM5	Investigation into Hat Head Control Levee increase
FM6	Flood Mitigation Environmental Projects
FM7	Second Bridge Crossing at Kempsey
FM8	Local catchment flood studies and other focussed assessments (Stuarts Point, Grassy Head)
FM9	Replacement of Rudders Lagoon bridge with high level bridge
PM1	Revise Flood Planning Level/Flood Planning Area
PM2	Flood Policy
PM3	Amendments to LEP and Section 10.7 certificates
PM4	Amendments to DCP
PM5	Voluntary purchase of high hazard properties
PM6	Voluntary house raising
RM1	Flood warning systems
RM2	Relocation of emergency services facilities
RM3	Stock refuge mounds and other land shaping
RM4	Flood depth markers and flood signs
RM5	Update of current emergency management planning
RM6	Flood education and awareness program

19. Why were some options investigated but not recommended?

Some options were assessed via Cost Benefit Analysis which looks purely as financial aspects. They were then considered under a Multi Criteria Analysis (MCA) which considers other factors e.g. environment. Options that were not recommended did not demonstrate that they had sufficient benefits.

Other options are subject to further investigation e.g. Stuarts Point & Grassy Head.

20. How often will the plan be reviewed?

The plan will undergo yearly periodic reviews about every 1-2 years as well as major review at 5-10 years to ensure it remains relevant as new data and funding opportunities arise, and as climate change impacts become clearer.

21. How can I access the results of the study?

The final Study and Plan and the supporting data set is available at the SES Website. The exhibited document is available on Councils website with adopted document to be published.

22. Who can I contact for more information?

For further information, please contact Kempsey Shire Council on ksc@Kempsey.nsw.gov.au or 6566 3200.