Community Webinar FAQs

Maribyrnong River catchment flood mitigation study

Wednesday 19 February 2025

Please note, any pre-submitted questions that are not related to the Mitigation Study have been referred onto the customer service team to provide a response.

Pre-submitted and in-session questions

Mitigation study

What does the study involve?

Together with the community, we're exploring mitigation options in the lower Maribyrnong River catchment to help reduce flood risk in the lower catchment.

The study forms part of the work needed to identify, develop and implement flood mitigation options which will help reduce flood risk, while also reflecting the values of those in our communities as much as possible.

Your feedback and insights will be key to the success of the study.

The study started in early 2025 and is expected to finish by mid-2026.

Mitigation options

What mitigation options will be investigated?

The study will investigate flood mitigation options which aim to support a reduction in future flood risk and which will prioritise the safety of communities in the catchment area. These could include:

- Structural flood mitigations
  - Traditional options: for example, reservoirs, dams and retarding basins – for example, Arundel.

  - Innovative options: for example, nature-based solutions, such as restoring wetlands or creating 'spongy' catchment areas where the hard surfaces of urban areas are cleared to allow the landscape to absorb water.

- Non-structural flood mitigations
  - Traditional options: for example, zoning and development restrictions, flood warning systems, community education or emergency management plans.
  - Innovative options: for example flood resilient homes and improved preparedness through community response rehearsals.

Given the size and diversity of the Maribyrnong River Catchment, it is unlikely that just one flood mitigation option will be identified.

The study is likely to identify a number of options which could be implemented by Melbourne Water and other delivery partners in the short term, medium term (a minimum of 5 years) and others which will take considerable time to implement (a minimum of 10-15 years).

What mitigation options are on/off the table?

We're keeping the scope of mitigation options as broad as possible.

The mitigation study will look at feasible options that prioritise the safety and resilience of communities within the catchment and have the greatest impact on reducing flood risk impacted by 1% annual exceedance probability (AEP) flood events in the current year and/or year 2100 scenario.

Melbourne Water is aiming to identify flood mitigation options focusing on structural and non-structural solutions, such as levees, retarding basins, improved flood warning systems, water and flood risk management strategies and flood-resilient building and design features, as well as awareness and preparedness flood education.

This important process will take time and is essential to get right.

Will the stormwater system managed by Melbourne City Council be included in the review? Significant flooding in Kensington was via the stormwater drains rather than across land from the river?

For this study we consider flooding from waterways. Stormwater drainage systems managed by Local Council are included where these are important to flooding from the Maribyrnong River. There are separate studies looking at stormwater systems.

How will the public know that the 'long-list' options are exhaustive?

The long list of mitigation options will use feedback from the community, local knowledge, and input from local and international technical experts on flood mitigation measures.

As part of the study, we will provide the full long list of all mitigation options, which the team has started to collate from multiple sources of information. To date (March 2025), the following sources have been looked at, including:

- past studies (including various historic Melbourne Water Board of Works reports) and past engagement activities
- Parliamentary Review submissions
- suggestions received during the recently closed Let's Talk engagement activity.

Jacobs will complement the initial long list with:

- ideas and suggestions raised by the community during Phase 1 engagement events
- meeting with various Melbourne Water experts to review the initial long list and ensure to capture any additional knowledge they have of the Maribyrnong River and options that they know have been considered in the past, or indeed ideas they may have
- Advice from local and global advisors who will challenge us, and seek their ideas based on best practice, innovation and experience with mitigation options implemented elsewhere.

The long list will contain references to the source of the option/idea, state the study/report conclusion(s) on the option, and other metrics that could be of relevance for the analysis we will carry out in this study.

We will share the long list online via our Let's Talk page and at our Community Events.

How will you ensure that any mitigation works will stand up to future events and climate change models?

Our flood mitigation study will consider all options and identify the most feasible flood mitigation options that prioritise the safety and resilience of the communities within the catchment. We will consider which options have the greatest impact on reducing the flood risk of sites impacted by 1% annual exceedance probability (AEP) flood events in the current day and/or year 2100 scenario which takes into consideration climate change.

The aim of this study is to find a range of mitigation options that will better protect people and property from the impact of flooding from the river, but there will always be the chance of a flood that is larger than the one that has been designed for. We have adopted an adaptive planning framework is for this project, so that implementation of the flood mitigations can progress under the uncertainty associated with changing climate and future weather events.

Once any mitigation solutions are implemented, we will evaluate any need to re-model the flood risk.

When will the list of mitigation options be made available?

Phase 1 (now to mid-2025) is about working in collaboration with the community and other stakeholders to explore potential flood mitigation options through seeking your involvement in defining evaluation criteria.

These will help us screen the 'long-list' of options into a 'shorter list' of options. Phase 2 (mid to late 2025) is about seeking your feedback and inputs to assist with reviewing and refining the 'short-list' of options.

Are there any short-term protection works planned prior to the major solution being selected? How are you going to protect my assets short term?

It is likely that a mitigation scheme will be recommended from the study, that would be comprised of a suite of mitigation options of varying scales.

But first we'll need to go through the process of the study to actually identify what the mitigation options are. The outcomes of the study will inform the implementation pathway.

For example, we can consider smaller, easier options to implement earlier on and then look at the pathway to implementing larger scale options.

Which tools do you propose to use to model the effectiveness and benefit of mitigation options?

We're looking to identify what's important to the community and translate those into values. Some of them will be monetary, some of them won't be.

There will be a combination of different types of criteria that we will be developing to evaluate the various options identified by the study.

There will be several analyses used to assess the efficacy and benefits of mitigation options, such as cost benefit analysis. Often referred to as a CBA, it is a best-practice evaluation method which is widely used to estimate and compare total costs and benefits of a project in economic terms. Usually expressed as a dollar value, the result of the CBA helps to understand if a mitigation option, or combination of mitigation options, offers value for money.

In addition, in order to evaluate and optimise flood mitigation schemes across the scale and type of mitigation options (structural and non-structural etc), we will assess different combinations of the mitigation options that might work together to best reduce the riverine flood risk in the lower Maribyrnong catchment.

The overall approach to reducing flood risk in the Lower Maribyrnong catchment is based on a well-established risk-based process that has been practiced in Australia for many decades. In fact, this process is similar to what is done around the world including the United Kingdom, Europe, the US and New Zealand.

The process involves establishing what the flood risk is, developing and testing options to reduce flood risk and repeating until flood risk has been reduced to an acceptable level.

What are the primary option selection drivers?

Some of the primary selection drivers we'll consider are:

- Feasibility

- Flood risk reduction (expressed in for example Annual Average Damages, number of properties impacted)
- Number/type of critical and social infrastructure impacted
- Economic assessment
- Community values
- Social values
- Environmental values & impact
- Cultural values.

Funding

At what point in the process does cost-benefit evaluation come into this work?

There are four phases of community engagement for this project, the cost benefit analysis evaluation will come in phase three. In phase three we will have identified what the community value in the catchment and then we'll move to the list of mitigation options identified in the study.

A cost-benefit analysis will be a part of the process to develop alternative schemes with suitable mitigation options.

A cost-benefit analysis will be a part of the process to develop alternative schemes with suitable mitigation options. Can a mitigation option be seen as being too expensive?

No funding for implementation has been confirmed at this stage of the project. We will need to finalise our mitigation study, with community input, before we can determine a budget for the implementation of any works.

Floodplain management is complex and the different solutions will require different opportunities for funding, as they could be delivered by a range of organisations, including Melbourne Water, councils and other partner organisations. So, we're making sure that is part of our consideration to ensure that the outcomes of this project will support partner organisations to seek appropriate funding sources for implementation. Once we know the solution, that will enable us to seek appropriate funding sources.

Mitigation options that are too expensive and offer little to no improvement or increase flood risk to others on flood risk reduction will not be considered.

How do we ensure that there is enough budget to reflect the economic and social impact of flooding?

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How will you be using the NEMA resilience fund to position a long term flood mitigation solution to Maribyrnong river?

The Australian Government's flagship initiative for disaster resilience and risk reduction is the Disaster Ready Fund (DRF), which is administered by NEMA. With the Emergency Management Victoria as the state's Lead Agency, we are currently exploring opportunities and are in discussion with the EMV on the eligibility and suitability of the Maribyrnong River Flood Mitigation Study to be put forward as a candidate project.

Kensington Banks

How will you protect The Banks area of Kensington from future flooding? What will be put in place to effect that?

We'll consider all flood mitigation solutions for Kensington Banks as part of our flood mitigation study.

It's important to note that mitigation measures cannot be progressed in isolation for just one area, as adverse impacts on other areas neighbouring or upstream will also need to be considered, within a total catchment context.

How much input will the Kensington Banks residents have in the process?

Community engagement begins shortly and will continue throughout each of the mitigation study phases. There will be a number of ways community,

including residents of Kensington Banks can get involved in the project, including:

- Drop-in information sessions held at accessible locations throughout the Maribyrnong Catchment
- Information pop-ups at local parks, shops and community events to ensure we are reaching people where they are, and;
- Letter box drops, media and social media campaigns, supported by Melbourne Water's digital engagement platform and tools.
- Community Partnership Panels – take part in decisions on assessing and refining options. Expressions of interest were open from March to April. You can click FOLLOW at the top of the Let's Talk page to be kept up to date with progress, and opportunities to contribute.

Tender and procurement

Is there a conflict of interest given Jacobs updated the flood model for Melbourne Water, and now they're undertaking the flood mitigation study?

During the procurement process for this study, Melbourne Water have undertaken due diligence to check for conflict of interest of all submissions as part of tender evaluation.

In the procurement of the services for the Maribyrnong River flood mitigation study, we conducted a rigorous process, which involved:

- engaging an external probity advisor to ensure the process was fair and in line with government policies
- seeking independent subject matter expertise and advice during the technical evaluation of the submissions.

With respect to the flood modelling work was independently peer reviewed by HARC consulting at key milestones of development. The work of both Jacobs and HARC was also informed through access to an independent and deeply experienced expert panel (two leading hydrologists) enabling an additional layer of review and challenge to ensure a robust modelling outcome. HARC had no contact with the expert panel as is appropriate for an independent peer reviewer.

It is important to note that the Mitigation Study is not designed to interrogate the Maribyrnong River flood model; but rather, we will use the Maribyrnong model to inform the Mitigation Study.

How were Jacobs selected as consultants to complete this study? How many other tender applications were there other than Jacobs?

We went through an extensive, three phase procurement process that began in June 2024. The process started with an expression of interest (EOI) and a two-phase request for proposal (RFP) stage.

The EOI helped Melbourne Water to understand the capacity, capability and availability within the market prior to issuing the two-stage request for proposal stage, which represented the main part of the tender process.

During the RFP process, we received 10 submissions, nine of them that went through to detailed development and tender evaluation. Following that, we shortlisted the top three applicants and who were invited to clarification interviews before the preferred consultant was selected.

We also have an independent technical advisor for the whole process to help inform the assessment as well as engaged independent probity throughout the process to ensure that we are in line with government policies.