Maribyrnong River Flood Review

Melbourne Water’s response to Independent Review Panel’s recommendations

**Progress update – April 2024**

A copy of the report of the independent Review Panel (August 2023) and addendum issued by the Panel (October 2023) can be found here [yoursay.melbournewater.com.au/maribyrnong-river-flood-review](https://yoursay.melbournewater.com.au/maribyrnong-river-flood-review)

A six month update on Melbourne Water’s progress in implementing the Panel’s recommendations is set out below.

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| **#** | **Panel recommendation** | **6 month progress update (April 2024)** |
| 1 | *Melbourne Water should review flood models every five years and update them every 10 years and after the occurrence of a major flood.* | **Met** - embedded as Melbourne Water standard practice.  Melbourne Water has committed to updating all flood modelling across the Port Phillip and Westernport catchments by 2026 and has adopted the Panel’s recommendation to update our flood models every 10 years and after the occurrence of a major flood. |
| 2 | *Melbourne Water needs to ensure that rainfall runoff and flood models are calibrated to observed flood information.* | **Met** - embedded as Melbourne Water standard practice.  Melbourne Water’s technical specifications for flood modelling require models to be calibrated to observed flood information, in line with Australian Rainfall and Runoff Guidelines 2019 (ARR 2019). Therefore all current and future modelling will be calibrated to observed flood information. |
| 3 | *Melbourne Water should ensure that their rating curves, which represent the relationships between river levels and corresponding river flows, extend also to rare and extreme flood events and have been derived using established best practice.* | **On track –** The update to the Keilor gauge was completed in Oct 2023 and the remaining 29 rating tables where MW provides a flood forecasting and warning service are scheduled to be complete by mid-year. |
| 4 | *Melbourne Water should take account of the best estimates of the impact of climate change when setting flood levels for planning and development and the application of the Land Subject to Inundation Overlay.* | **Met** - embedded as Melbourne Water standard practice, reflecting the requirements of the Victorian planning framework.  Flood levels for planning and development and the application of the Land Subject to Inundation Overlay (LSIO) are set in accordance with State legislation, policy and guidelines, and based on Melbourne Water’s flood modelling, which, as stated above is undertaken in accordance with Australian Rainfall and Runoff Guidelines 2019 (ARR 2019).  ARR 2019 sets out best practice for flood modelling in Australia, including the incorporation of climate change assumptions. Melbourne Water has adopted the most conservative climate change assumptions for rainfall intensity recommended by ARR 2019.  The Flood Management Strategy for Port Phillip and Westernport (2016) commits Melbourne Water to applying best practice climate change flood modelling in all future flood-related planning scheme amendments and emerging greenfield development schemes.  The Victorian Planning provisions guide land use and development and include objectives to ‘adapt to the impacts of climate change through risk-based planning and use the best available data and climate change science’. |
| 5 | *Melbourne Water should adopt forecasting tools which enable forecasts to be made within a total of no more than 60 minutes.* | **On track -** Transition of the flood forecasting service from Melbourne Water to the Bureau is underway. |
| 6 | *Melbourne Water should use the hydraulic model developed (expected April 2024) to determine (and be subjected to independent peer review) the impact of the Flemington Flood Wall and the efficacy of the associated downstream compensatory works.* | **On track –** Theindependent Pagone Panel has reconvened to finalise its independent assessment of the Flemington racecourse wall and efficacy of the associated mitigation works, using the new flood model. The report of the Panel is expected to be released in May. |
| 7 | *Melbourne Water should commission an independent expert review and audit of their forecasting system with the aim of identifying areas where forecast accuracy, warning times and model run times could be improved.* | **On track** - Refer Recommendation 5 above |
| 8 | *Melbourne Water should take account of the change in land use and projected changes to land use when setting flood levels for planning and development and the application of the Land Subject to Inundation Overlay.*  *Note. In October 2023, the Panel issued an addendum to its Report and elaborated on the intent of this recommendation, which includes that MW should play a more proactive role in influencing future development and zoning to minimise future flood risk.* | **On track –** Work is underway exploring opportunities where Melbourne Water can work with State and Local Government to ensure flood risk is considered in planning policy directions and potential land use and zoning changes. Melbourne Water’s current focus is on the Victorian Government’s Housing Statement and refresh of Plan Melbourne / Plan Victoria, to ensure areas earmarked for more intensive development and growth are informed by early consideration of flood risk. |
| 9 | *Melbourne Water should immediately update the Mid Maribyrnong model with a modern two dimensional flood model developed in accordance with Melbourne Water guidelines and use this model to set new design flood levels.* | **On track** - the new Maribyrnong River flood model (covering the mid and lower region of the River) is now complete. The next step is to work with State and Local Government to translate the model into planning scheme controls to ensure new development is designed in accordance with the new flood levels. |
| 10 | *Melbourne Water should have a protocol that enables flood forecasting at intervals at less than two hours when prudent to do so by reason of responsiveness of the catchment for significant events.* | **On track** - Refer Recommendation 5 above |
| 11 | *Melbourne Water should consult with BoM to develop rainfall forecasts more frequently than 6 hours.* | **On track** - Refer Recommendation 5 above |
| 12 | *Melbourne Water should seek the approval of the Minister for Planning to apply the interim planning controls designating the LSIO in locations where flooding occurred, pending the update to the Mid Maribyrnong flood model.* | **On track** – Melbourne Water submitteda request to the Minister for Planning to apply the interim LSIO on 6 December 2023, and has subsequently been working with the Department of Transport and Planning (DTP) to support processing of the request. |
| 13 | *Melbourne Water should investigate how it came to be satisfied with the reduction of the flood levels and finished floors levels at the Rivervue Retirement Village as specified in the endorsed plans dated 2 June 2009.* | Melbourne Water has been investigating the reduction of flood levels and finished floor levels at Rivervue to the extent possible based on the information available to it. Melbourne Water is only one of the many parties involved in the decisions relating to the site and only has access to its own information. There are things that we still don’t know and we accept that we may never know given that these are historical events. |
| 14 | *Melbourne Water should investigate the feasibility of installing one way valves on the outlets from the street and yard drainage from Evergreen Avenue (Rivervue Retirement Village).* | **Complete** - The investigation into one-way valves at Rivervue was referred to Rivervue Management who are responsible for the onsite drainage. The investigation concluded that one-way valves would provide no reduction in flood risk on their own, but would be required as part of other structural mitigation measures such as barriers or levees. Assessment of other structural mitigation measures will be considered in the context of investigating broader long term sustainable mitigation solutions for the river (refer to Recommendation 15 below).  Melbourne Water also supported Rivervue Management to develop a Flood Risk Management Plan for the site which was completed and operationalised in March this year.  Melbourne Water also worked with VicSES and Moonee Valley Council to complete updates to the Moonee Valley Storm and Flood Emergency Plan and Local Flood Guide to ensure Rivervue is included in the event of any future flood emergency. These updates were completed late last year and communicated with Rivervue residents. |
| 15 | Melbourne Water should investigate long term sustainable flood mitigation options for the Maribyrnong River. | **On track –** A desk top review of previous mitigation proposals was completed in June 2023 and is available on Melbourne Water’s website (Water for Good, June 2023).  Now the new Maribyrnong River flood model has been completed, detailed assessment of mitigation options can be progressed. The scope of this work will be developed in the coming months and the community and stakeholders will be invited to participate in the development and assessment of options. |