

Pembroke Retarding Basin Upgrade

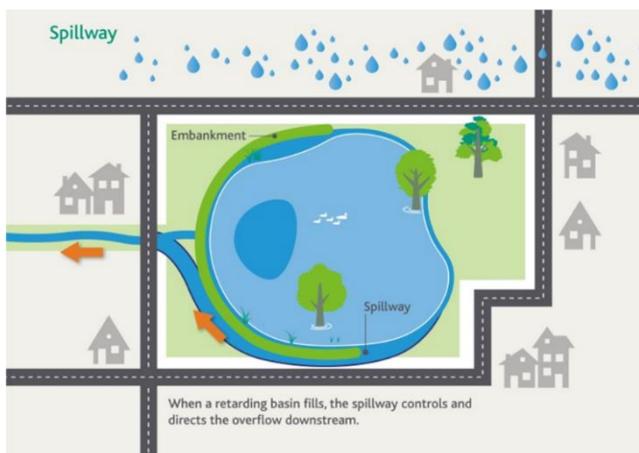
Start of works – July 2019

From July 2019, Aqua Metro Services (AMS) will deliver upgrade works to the Pembroke Retarding Basin at Mooroolbark, on behalf of Melbourne Water. The upgrade works will ensure the retarding basin continues to reduce the risk of flooding to the community.

Why are we doing these works?

Melbourne Water has over 200 retarding basins that we regularly assess for risks, conduct maintenance on, and upgrade as necessary. The Australian National Committee on Large Dams (ANCOLD) guidelines represents the best Australian and international engineering practice in the safe design, management and operation of dams. We use these guidelines to manage our retarding basins. The Pembroke retarding basin has recently been assessed against the ANCOLD guidelines. This assessment has shown that upgrade works are necessary to ensure the retarding basin continues to reduce flood risk and operate safely for the community.

What is a retarding basin?



A retarding basin is an area of land used for stormwater to drain into during high rainfall events. When a retarding basin fills, the embankment acts like a dam holding back stormwater.

The stored water is then released slowly into the downstream drain or waterway helping to protect homes and businesses from flooding. Retarding basins can often be used by the public as parks or sporting ovals when not full of stormwater.

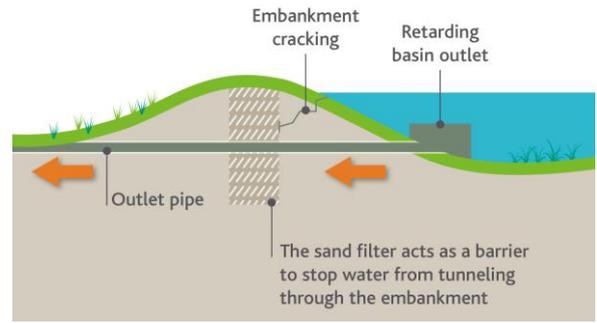
How we upgrade retarding basins

Upgrade works to the retarding basins can include embankment hardening and installing filter trenches. Hardening the embankment protects it from erosion when the water overtops. Embankments can be hardened through reinforcing the top soil, laying concrete or installing geoweb or other structures. Installing a sand filter or filter trench can prevent water destabilising the embankment by flowing through it.

Embankment hardening



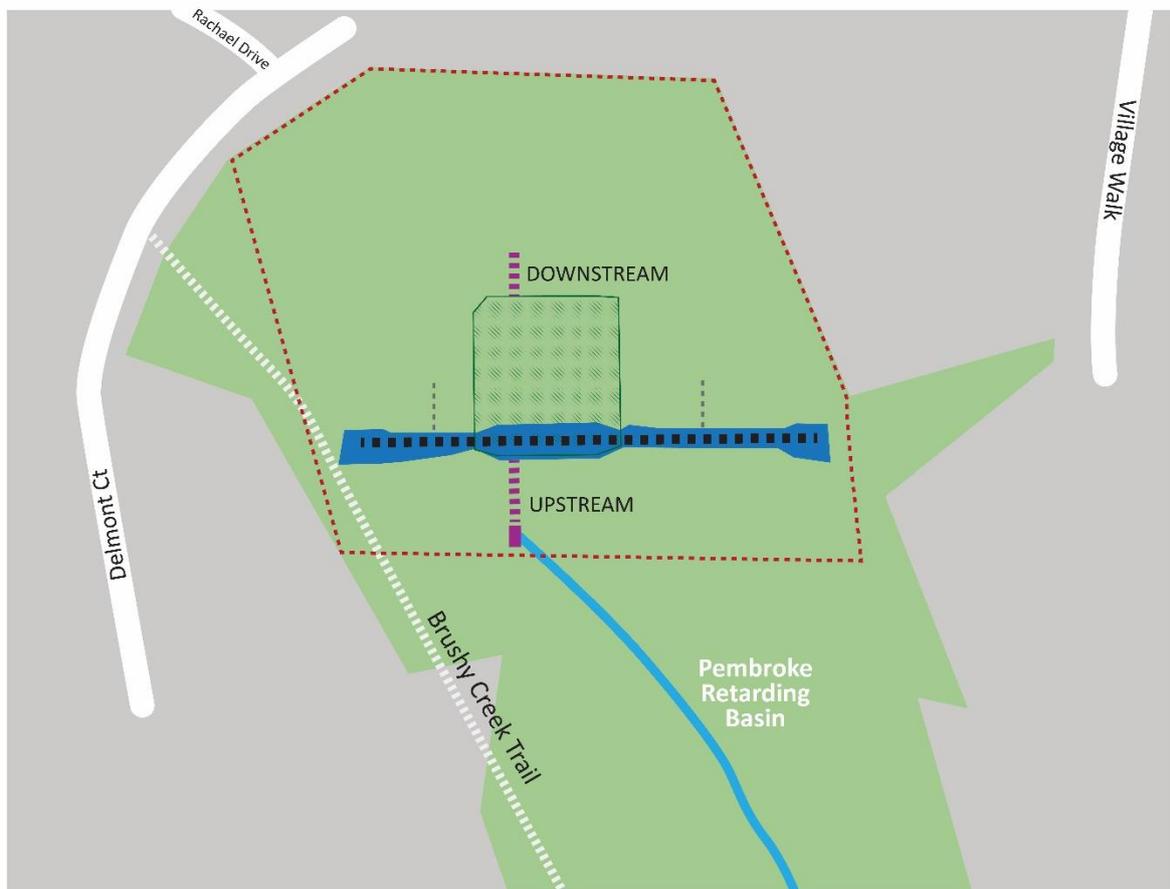
Sand Filter



Construction works at Pembroke Retarding Basin

AMS will be undertaking these works on behalf of Melbourne Water. Works will include:

- Removal of trees that are a risk
- Filter trench on embankment to increase strength
- Crest capping on embankment
- Construction of a concrete cut off wall
- Replace spillway
- Installation of erosion control matting



▬▬▬▬	Crest Filter Trench	▬▬▬▬	Outlet Pipe	■	Spillway
▬▬▬▬	Filter Trench Outlet	■	Intake Structure	▬▬▬▬	Extent of Works
▬▬▬▬	Bank Stabilisation Works				

Timing of works

Works will commence in July 2019 and take approximately five months to complete (weather permitting). Construction hours will be Monday to Friday 7am to 6pm and Saturdays from 7am to 1pm in accordance with EPA regulations.

We will do everything possible to minimise disruption during construction, however it is likely that nearby residents will notice:

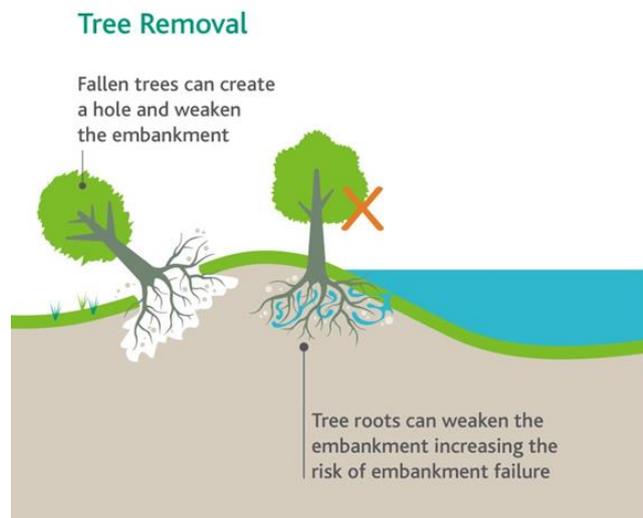
- large trucks and machinery working around the retarding basin
- worker amenities set up within the construction area
- some noise, dust and vibration from construction works
- removal of trees and vegetation from the retarding basin embankment – trees and vegetation in other parts of the reserve will be retained
- construction traffic and equipment will enter and exit the site via Delmont Court (off Rachael Drive)
- Pedestrian access will be maintained where possible.

Tree removal

To ensure the retarding basin continues to operate safely and complies with the ANCOLD guidelines, trees and vegetation on the embankment will need to be removed as part of the works.

Having trees on the embankment increases the chance that the embankment may fail in the event of a large rain event. They do this by increasing the risk of:

- internal erosion and displacement of soil– tree roots create erosion pathways through the embankment which are worsened when the tree dies and its decaying roots leave voids through the embankment
- trees uprooting and taking part of the embankment with them
- water speeding up around tree trunks and causing faster erosion.



We understand the importance of trees to the local community and are committed to an extensive revegetation plan to compensate for the loss of trees.

Handling wildlife

The project team have hired a qualified wildlife handler, with 25 years' experience in zoology and ecology, as a precaution and to put community concerns at ease.

They have a permit under the Wildlife Act 1975 and we are operating under this Act. The wildlife handler will remain onsite for the duration of the tree removal works (if required).

Wildlife Management process

- A Flora and Fauna assessment was completed in the design phase.
- A wildlife pre clearance check will be completed prior to construction, including checking the site for fauna and marking trees likely to have habitat. If fauna is found the wildlife handler will be on site for the duration of the tree removal works.
- The wildlife handler will complete a walk through on the day of the tree removal and again check all hollows to ensure no wildlife has moved in, including checking higher location via a boom (cherry picker).
- If fauna is found in a tree, the wildlife handler will attempt to catch it (without chasing or causing it distress). If it can't be caught the wildlife handler will encourage the fauna to move. If this isn't possible the contractors will move to the next tree and return to try again.
- To check for micro bats, the wildlife handlers will lift the bark and check in hollows and cracks. If any micro bats are found they will be bagged, put in a dark, quiet, cool area and released at dusk, preferably on a mirror image tree.
- Nest boxes will be installed on site as they create more habitat.
- Nests in trees that are being removed will be relocated. If they are intact, they will be put next to the nest box and if not, the remnants are strategically placed in the nest boxes in trees to encourage the fauna into other trees.
- Any hollow trees will be retained for fauna habitat.
- A fauna ladder is being considered for connectivity for arboreal species.
- Flowering eucalyptus tree branches are being retained as a food source for birds and some mammals (and being donated to wildlife shelters).
- Seeds are being collected from Eucalypt and Melaleuca trees and being extracted, cleaned and processed to use for propagation for the local area. They will be donated to local indigenous nurseries.

Have questions? Community Pop Out sessions

The project team will be in the area to answer your questions from 17/6/19 to 27/6/19. Just call us and we will 'pop out' and see you.

Keep up to date with what's happening

For more information about this project or if you have any questions or feedback, please visit us at our Community Pop Out sessions or call **1800 932 121** (Option: 5 Pembroke retarding basin) or email **rbupgrades@melbournewater.com.au** or visit **www.melbournewater.com**



Interpreter

For an interpreter, please call the Translating and Interpreting Service (TIS National) on 13 14 50



Like us

facebook.com/melbournewater



Follow us

@MelbourneWater



Visit us

www.melbournewater.com.au