

# Ryans Road Retarding Basin

## Project introduction

### November 2017

Melbourne Water is upgrading the Ryans Road retarding basin in Diamond Creek to ensure it continues to reduce the risk of flooding to the community.

These works will begin in early 2018, weather permitting.

The Ryans Road retarding basin plays a crucial role in managing stormwater in the local area. Recent assessments have shown the embankment and outlet filters need to be upgraded to ensure the continued integrity and stability of the retarding basin.

### Timing of works

Work will be undertaken from 7am to 6pm Monday to Friday and 7am to 1pm Saturday, if required.

### What is happening?

Aqua Metro Services is delivering these works on behalf of Melbourne Water.

Work will be undertaken primarily on the embankment and in the road reserve on the downstream side of the retarding basin.

The upgrade involves:

- Closure of the road reserve and the shared user path. A majority of the construction works will be occurring here. A detour route will be clearly marked for users of the shared path.
- Hardening of the embankment, to ensure the continued integrity and stability of the retarding basin.
- A new filter trench along the embankment in the retarding basin.
- Removal of trees and vegetation along the embankment in the road reserve.
- Revegetation after construction work. This is a standard practice on all Melbourne Water retarding basin upgrade projects that require tree removal.

Once construction is complete, the grassed areas will be reinstated with topsoil and hydroseed. Hydroseed is a mixture of seed, water and mulch that produces grass growth at a much faster pace than regular seeding.

Melbourne Water is working with Nillumbik Shire Council to develop a reinstatement plan for planting trees elsewhere.

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## Background

The Ryans Road retarding basin plays a crucial role in managing stormwater in the local area. The basin was first constructed in 1997, and is owned by Nillumbik Shire Council.

## Location and access

The Ryans Road retarding basin is located in the road reserve on the downstream side of the basin, off Ryans Road, and in between Juane Park Drive and Ryans Road.

Construction crews and traffic will access the site via Juane Park Drive and also off Ryans Road. The work area will be contained to the embankment, located both within the retarding basin and the road reserve. The works area will be fenced off during construction. Public access to the park will be maintained at all times during construction. The shared user path in the road reserve will be closed during construction works and a detour route will be clearly marked.

We'll continue to work with local residents and other users of the basin to inform them of the works schedule and any associated impacts that may take place.



Figure 1: Ryans Road retarding basin safety upgrade - project area (highlighted in orange)

## What to expect

As this project is taking place in a residential area, we anticipate our neighbours may notice:

- Large trucks and machinery working in the basin and road reserve
- Site shed and worker amenities installed in the basin
- An increase in traffic in the area, particularly along Juane Park Drive and Ryans Road
- Closed shared path through the road reserve area of works. A shared path detour route will be in operation and clearly signed during construction.
- Removal of trees and vegetation from the embankment in the road reserve.
- Some noise, dust and vibration from construction activities, mitigation measures will be in place.

## Working with the community

We're committed to reducing the impact of construction works on the local community.

We will be speaking with local residents in late 2017 and early 2018 about the upcoming works.

We'll continue to keep you updated as the project progresses.

## Why we are doing these works

Melbourne Water have over 200 retarding basins that we regularly assess for risks and conduct maintenance and upgrade works as necessary. Melbourne Water has been directed by the Minister for Water to ensure all of retarding basins comply with the Australian National Committee on Large Dams (ANCOLD) guidelines. The ANCOLD guidelines represent the best Australian and international engineering practice in the safe design, management and operation of dams.

Ryans Road retarding basin has recently been assessed against the ANCOLD guidelines. The assessment has shown that upgrade works are necessary to ensure the retarding basin continues to reduce flood risk and operate safely for the community. The upgrade is occurring to further lower the risk profile and to ensure the risk is as low as reasonably practicable.

## Tree removal

Under the ANCOLD guidelines trees must be removed from the whole length of the embankment to ensure its integrity and provide the best possible level of dam safety. In the past, it was common practice to have trees on retarding basin embankments. However, as understanding of dam engineering has improved, it has become evident that trees significantly weaken embankments and increase the risk of failure in a high rainfall event. Ryans Road retarding basin will require approximately 25 trees and/or vegetation to be removed as part of this safety upgrade project.

During a large rain event, trees on the embankment increase the chances of embankment failure. They do this by increasing the risk of:

- soil erosion and displacement – when a tree dies its roots decompose and offer open water passages through the embankment
- trees uprooting and taking part of the embankment with them
- water speeding up around tree trunks and causing accelerated embankment erosion.

We understand the emotional and environmental importance of trees to the local community and are committed to working closely with Nillumbik Shire Council to develop an appropriate plan for reinstatement of trees elsewhere.

### Contact us

If you have any questions please call Melbourne Water on 1800 571 926 or email [RBupgrades@melbournewater.com.au](mailto:RBupgrades@melbournewater.com.au)



Interpreter

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## Frequently Asked Questions

### What is a retarding basin?

A retarding basin is a low lying area that acts as an urban dam to temporarily store stormwater during high rainfall events. Retarding basins also control the outflow of the stormwater into the drainage system, which reduces flood risk to the local community and also protects our natural waterways.

Melbourne Water currently manages over 200 retarding basins across Greater Melbourne.

### Why are you carrying out work on so many retarding basins?

Melbourne Water has been directed by the Minister for Water to ensure all of retarding basins comply with the Australian National Committee on Large Dams (ANCOLD) guidelines. The ANCOLD guidelines represent the best Australian and international engineering practice in the safe design, management and operation of dams. Each retarding basin is assessed individually so each will have different upgrade requirements to ensure they are compliant with the ANCOLD guidelines and continue to operate safely.

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### Why is tree removal required?

Under the ANCOLD guidelines trees must be removed from the whole length of a retarding basin embankment to ensure its integrity and provide the best possible level of dam safety. In the past, it was common practice to have trees on retarding basin embankments. However, as understanding of dam engineering has improved it has become evident that trees significantly weaken embankments and increase the risk of failure in a high rainfall event. Ryans Road retarding basin will require approx. 25 trees and/or vegetation to be removed as part of this safety upgrade project.

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