

Project update

Elsternwick Main Drain flood mitigation project December 2020

Melbourne Water is progressing the Elsternwick Main Drain flood mitigation project and is pleased to provide an update on the status of this work.

Analysis and preferred option

Melbourne Water identified two technically feasible options to mitigate flooding in this location:

- Option 1 – increasing the capacity of the retarding basin by an additional 60,000m³
- Option 2 – increasing the capacity of the diversion drain.

Melbourne Water has assessed these options and identified increasing the capacity of the diversion drain as the preferred option (option 2).

Our assessment of these options considered:

- the impact on economic damages
- the number of floors and properties protected from flooding
- improvements in safety.

Our analysis showed increasing the capacity of the diversion drain provides better flood mitigation and would have a smaller impact on the park and existing users.

In addition, option two provides a stronger cost to benefit relationship than option one.

Location of existing diversion drain and investigation area



Water quality treatment opportunities

Melbourne Water is continuing to investigate water quality treatment opportunities with Bayside Council. Incorporating water quality wetlands could potentially reduce sediments and pollutants entering Port Phillip Bay and improve the health of the bay. The proposed wetland design could provide:

- significant reduction in Nitrogen entering the bay.
- ongoing liveability benefits to the community.
- an opportunity for increased participation rates by supporting community groups and promoting participation in citizen science and Elster Creek Working Group projects.

Next steps

A detailed investigation into the diversion option is now underway. This will include undertaking:

- further modelling
- investigations into geology, existing infrastructure, services etc.
- design development
- investigations into regulatory permissions
- work to identify the necessary environmental impact assessments and heritage assessments
- consultation and impact studies














We will continue to work closely with the City of Port Phillip, Bayside City Council and other key stakeholders to develop the project.

We will keep you informed as we develop a program of engagement opportunities.

For more information about our other activities please call 131 722 or visit www.melbournewater.com.au.

Melbourne Water Option 2

Legend

-  Primary treatment ponds
-  Chain of Ponds
-  Sediment ponds
-  Open water
-  Aquatic Vegetation
-  Ephemeral zones
-  Water flow path
-  High Flow diversion
-  Infrastructure weir
-  Water diversion point
-  Chain of ponds water flow path
-  Water pumping
-  Head St Diversion

min SL - minimum surface level
ave SL - average surface level
ed - extended detention level
nwl - nominal wetland water level
II - Pipe/pit invert level

0 25 50 75 100m

Wetland North

min SL ~ 0.0m
ave SL ~ 0.7m
ed = 1.2m
nwl = 1.0m

Wetland outlet structure

SL ~ 1.2m
GL ~ 1.3m
II ~ 0.9m

Wetland outlet pipe

II ~ 0.9m

Wetland South

min SL ~ 0.0m
ave SL ~ 0.7m
ed = 1.2m
nwl = 1.0m

Wetland outlet structure gate

SL ~ 1.2m
GL ~ 1.3m
II ~ 0.7m

Wetland inlet flows split to avoid dead zones and short circuiting.

Chain of ponds treatment train

Sediment Basins

Nominal area ~ 1000m² each

0 25 50 75 100m