

Q. How are revetment walls designed?

➤A. There are 14 different revetment wall designs, depending on the development stage for which they were designed and constructed.

Q. What is the expected life of revetment walls?

➤A. Revetment walls have a life expectancy of approximately 75 years.

Q. How are revetment walls repaired?

➤A. The type of repair required depends on the type of fault or failure, but often involves stabilising the ground supporting the wall's footing.

Q. What did the 2016-2017 revetment wall trial involve?

➤A. The trial involved the repair of 3 sections of revetment wall using 3 different methods, each of which typically involved stabilising the ground supporting the wall's footing. Council has installed monitoring devices and these will be monitored for 12 months. The goal behind these trials is to evaluate different methods for repairing the walls, which would deliver savings and efficiency in revetment wall repair, thereby allowing more proactive works which, over time, should result in fewer wall failures and even more savings.

Q. What was the outcome of the revetment wall trial?

➤A. The trial will be finalised after the post works monitoring period, over which trial sites are monitored for a year to assess performance of the different methods in stabilising the ground and revetment walls.

Q. How are depths monitored?

➤A. Depths are monitored through completion of Bathymetric Surveys (or high detail sonar scan) of the canal floor that typically occurs every 4 years, unless otherwise required.

Q. How is it decided that repairs are required?

➤A. A process (devised by consulting engineers involving trigger levels) dictates when walls need repair. The triggers and associated actions are:

- Movement of 0-50mm: Monitor
- Movement of 50-100mm: Proactive repair with revetment trial methods
- Movement of 100mm+: Full replacement, or revetment wall repair using screw piles

Q. What would happen if revetment wall repair work was not carried out?

➤A. The condition of the walls would deteriorate and significantly affect their expected life, and canals would silt up reducing service levels for customers.

Q. What is the current condition of the canals and lake?

- A. • The canals and lake depths and navigability are monitored in accordance with their design specifications, for which each estate is different:
- Aquatic Paradise is maintained for a maximum vessel draft of 1.5m.
 - Raby Bay is maintained for a maximum vessel draft of 2.2m.
 - Sovereign Waters Lake is not considered a navigable water way. Depths are maintained to ensure correct operation of the lake's water quality system.

Q. How often is dredging and bed levelling required?

- A. • Raby Bay dredging / bed-levelling is typically required and undertaken on a 4 year program,
- Once the current 5 year dredging program at Aquatic Paradise is finished, it is scheduled to be dredged at 4 year intervals.
 - As no vessels use the lake at Sovereign Waters, there is no dredging cycle.

Q&As – Engineering

- Funding of canals and lake waterways

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Q. Where does the sediment come from?

➤A. The main source of sediment is from Moreton Bay, with stormwater outlets and upstream catchments contributing minor amounts.

Q. What would happen if ongoing maintenance work was substantially scaled back?

➤A. Council is committed to maintaining technical service levels.

Q. What is the environmental impact, if any, of repair and maintenance works?

➤A. Council meets all environmental standards required under law and takes every precaution to ensure any works do not adversely affect the environment. Impacts are considered prior to works commencing and managed on a project by project basis to minimise and mitigate environmental impacts. eg turbidity is monitored during dredging works, and silt curtains often used during revetment wall repairs.

Q. Will required works be completed?

➤A. The completion dates are dependent on the nature of the maintenance work. Council will continue to undertake maintenance of the canals and lake in the 17/18 FY.

Q. Who does the maintenance work?

➤A. The maintenance work is completed by specialist external contractors. Council follows a stringent procurement process, typically involving an open tender and imposes strict standards on these contractors to deliver the works to a high standard.

