

FACT SHEET ON WATER QUALITY



Artist impression of Ocean Reef Marina when complete

Water quality monitoring at Ocean Reef Marina

Water quality monitoring at Ocean Reef Marina began in December 2020, prior to the construction of the breakwaters. This monitoring is part of the project's approved environmental review.

To ensure high environmental standards, the Minister for Water approved a Marine Environmental Monitoring and Management Plan (MCMMP). Developed with the Department of Water and Environmental Regulation (DWER), this plan outlines how water quality is monitored before, during, and after marine works to protect the local environment.

You can find the MCMMP on the Ocean Reef Marina [website here](#). It includes details on water quality checks, marine habitat monitoring, contingency actions, and reporting requirements.

How is water quality tested at Ocean Reef Marina?

Monitoring frequency:

Water quality monitoring began in December 2020, before construction started, and continues regularly (typically fortnightly). Depending on the stage of marine construction, testing occurs weekly, fortnightly, or monthly. All results are reported to the Department of Water and Environmental Regulation (DWER).

Testing sites:

Water quality is monitored at six locations along the breakwaters and at additional sites north of the development. This helps track any potential impacts during construction.

Details of these locations are available in the approved [MCMMP here](#).

What is Tested?

Monitoring measures several key indicators, including:

- Total Suspended Solids (TSS): Checks for visible sediment like limestone or sand.
- Dissolved oxygen: Ensures oxygen levels are safe for marine life.
- pH and temperature: Monitors water acidity and temperature.

More details can be found in the approved [MCMMP here](#).



Boat facilitating water sampling

How are water quality results assessed?

Water quality at Ocean Reef Marina is assessed using Total Suspended Solids (TSS) levels, measured against two criteria:

1. Environmental Quality Guideline (EQG):

This lower threshold is set at 2 mg/L above the average TSS level at selected reference sites in and around the marina. It's a conservative limit designed to detect any potential impacts early. TSS at this level is not expected to harm underwater habitats or communities.

2. Environmental Quality Standard (EQS):

This higher threshold is set at 10 mg/L above the average TSS level at reference sites in and around the marina. If TSS levels reach or exceed this point, a detailed investigation is triggered. Environmental consultants, coastal engineers, and contractors contracted by DevelopmentWA assess the situation and agree on actions to reduce TSS levels, reporting their findings to the Department of Water and Environmental Regulation (DWER). Short-term TSS levels at this threshold (up to 28 days) are unlikely to cause significant harm to marine habitats.

These thresholds were established by DWER and the Environmental Protection Authority (EPA) as part of the project's environmental approval process. All water quality results are regularly reported to DWER.

Why is it important to conduct water quality testing?

Testing helps us monitor and manage any environmental impacts from construction at Ocean Reef Marina. It ensures the local ecosystem stays healthy, protects public safety, and maintains the

area's recreational value. This monitoring also helps us meet the project's environmental standards (Environmental Protection Outcomes) of the project.

What have tests shown about construction at Ocean Reef Marina?

- **Sediment Levels:** Sediment levels have stayed well below amounts that could affect marine life, public health, or activities like abalone diving.
- **Sediment Plumes:** These can occur during construction, such as when limestone rocks are placed for breakwaters. They were closely monitored and managed, to reduce any impact on surrounding waters.

Compliance with environmental standards:

As the graph in Figure 1 demonstrates, the sediment levels from the marina have remained significantly lower than the allowed thresholds, ensuring the protection of the local environment and keeping the area safe for recreational use.

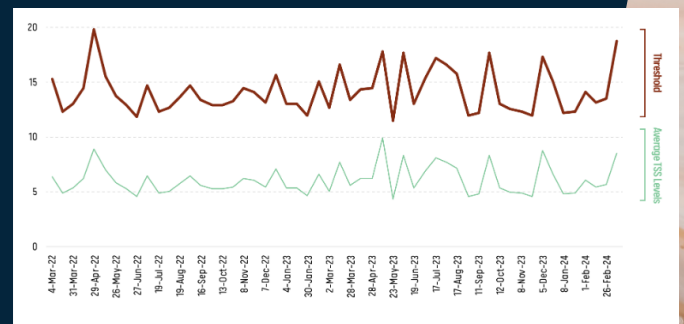


Figure 2 Average sediment levels across testing stations

How can I stay informed about the water quality and construction progress?

You can stay informed through regular updates shared on the Ocean Reef Marina [website here](#).



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