GOVERNMENT OF WESTERN AUSTRALIA

OCEAN REEF MARINA

# FACT SHEET ON FUTURE COASTAL POOL

## Water Quality, Safety and Environmental Management

*Caption - Artist impression only.*

## OVERVIEW

The Ocean Reef Marina coastal pool is being designed to provide a safe, high-quality swimming environment supported by robust environmental management, long-term monitoring and State regulatory oversight. This fact sheet outlines how water quality and safety will be managed for the future coastal pool and operating marina.

## WATER QUALITY MONITORING

Water quality at Ocean Reef Marina has been continuously monitored since December 2020, prior to construction of the marina breakwaters, in accordance with the Minister for Environment approved Marine Construction Monitoring and Management Plan (MCMMP), developed in consultation with the Department of Water and Environmental Regulation (DWER) under Western Australia's Environmental Quality Management Framework (EQMF).

Monitoring includes fortnightly sampling during construction, dredging and reclamation works, post construction monitoring, and direct reporting of results to DWER.

## WHAT IS MONITORED?

The monitoring program assesses a range of indicators including total suspended solids, chlorophyll-a (nutrient proxy), toxicants such as metals and hydrocarbons, water clarity, dissolved oxygen, salinity, pH and temperature.

Results are assessed under a State-mandated tiered trigger system to identify and manage any unusual trends early.

You can read more about water quality management at Ocean Reef Marina in our Water Quality Fact Sheet here.

## OPERATIONAL MANAGEMENT

A Marina Operations Management Plan (MOMP) is being developed in consultation with relevant State agencies, including the Department of Water and Environmental Regulation (DWER), the Department of Transport and Major Infrastructure (DTMI), the Department of Primary Industries and Regional Development (DPIRD), the Department of Biodiversity, Conservation and Attractions (DBCA), and the Department of Health (DoH), to guide water quality management for the operational marina and coastal pool.

The MOMP will outline ongoing water quality monitoring requirements to be implemented prior to opening and throughout operations, including sampling for bacteria, metals and hydrocarbons, to ensure marina waters continue to meet the State's EQMF requirements and remain safe for primary and secondary recreational use.

*Figure 1 Artist impression of the future coastal pool and family beach at Ocean Reef Marina.*

## COASTAL POOL DESIGN

Some community members have asked why the future coastal pool will not follow a traditional ocean pool design used on the east coast, such as Icebergs in Sydney. These designs are not suited to Western Australian conditions due to differences in tidal exchange and seagrass wrack accumulation.

**1. Reduced tidal exchange**

Because Perth has a smaller tidal range and predominantly diurnal tides, an Icebergs style pool would experience limited tidal flushing. Extended periods without sufficient water exchange could lead to poor water quality, including elevated levels of potentially harmful bacteria.

The proposed Ocean Reef Marina coastal pool is a floating pool that enables water exchange beneath the structure under all tidal conditions. Water movement is driven by tides, wind and local currents, supporting continual flushing of pool waters.

**2. Seagrass wrack (seaweed) accumulation**

Perth's coastline experiences much larger and more frequent accumulations of seagrass wrack compared to Sydney, due to extensive offshore seagrass meadows along the Western Australian coast. A coastal pool located directly on the beach would be prone to significant wrack build up, requiring frequent removal and creating water quality, maintenance and safety challenges.

The Ocean Reef Marina coastal pool is being designed specifically to respond to these local environmental conditions. As a result, an in marina pool design was selected over an Icebergs style coastal pool to ensure consistent water quality, improved user safety and significantly reduced maintenance demands.

A comparable example is Hillarys Boat Harbour, where a public swimming beach is located within the marina and in proximity to boat pens.

## CONTAMINANT AND POLLUTION CONTROLS

Water quality management during marina operations includes ongoing monitoring for toxicants, such as copper, zinc, lead and petroleum hydrocarbons, to ensure the coastal pool and surrounding marine environment remain safe for public use.

As part of the future linking jetty to be delivered by DevelopmentWA, the design includes both a shark protection barrier and an oil-contaminate boom. The boom will act as a barrier to prevent hydrocarbons from vessel pens entering the coastal pool and family beach. A similar system is successfully used at Port Coogee Marina to protect a public swimming beach located near the marina's fuelling jetty.

These operational measures complement EPA approved environmental conditions, which require ongoing monitoring and contingency actions if levels of concern are ever approached.

## MICROBIAL & CHEMICAL WASTE

Discharge of sewage from vessels within marinas is strictly prohibited under Western Australian legislation. As part of the development, a dedicated Service Jetty is proposed to be constructed which will provide facilities for the proper and environmentally sustainable disposal of wastewater generated by vessels, including sullage and bilge water.

DTMI will be the future marina manager of the facility, and for all boat pens leased within the facility, DTMI requires its customers to comply with its conditions regarding waste prevention and pollution control.

In the event of an accidental spill occurring within the adjacent marina waterways, the oil-contaminate boom will provide a physical barrier for the purposes of preventing floating contaminants from entering the coastal pool and nearby public beach.

The City of Joondalup will manage the day-to-day activities in the coastal pool, including lifesaving services, and will remove debris from the pool area while reporting any suspected contaminants to DWER.

DTMI also offers comprehensive guidance and resources to assist vessel owners in managing pollution and safeguarding the marine environment. This information is publicly available at the following website here.

## ELECTRICAL AND USER SAFETY

All electrical infrastructure must comply with Australian Standards for marine electrical installations.

The future coastal pool will undergo independently verified electrical safety risk assessment prior to opening.

## ENVIRONMENTAL OVERSIGHT

The Ocean Reef Marina project was assessed through a Public Environmental Review by the Environmental Protection Authority.

Environmental safeguards include EPA-approved conditions, ongoing environmental monitoring and compliance reporting, and long-term habitat and seabed monitoring.

## SUMMARY

The Ocean Reef Marina coastal pool is being carefully designed and assessed to ensure it is safe, swimmable and environmentally responsible.

Long-term monitoring, continuous water exchange and strong regulatory oversight will support a high-quality recreational experience for the community.

Delivery of the coastal pool is subject to planning and building approvals.

To be kept in the loop with the progress of the project, you can sign up to our **construction updates** here: Home - DevelopmentWA - Shaping our State's future

And **project updates** here:
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City of Joondalup

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