

OCEANOGRAPHIC IMPACT ASSESSMENT

PROPOSED DEVELOPMENT OF THE GRANGER BAY PRECINCT AND LAND RECLAMATION AT THE V&A WATERFRONT

BACKGROUND

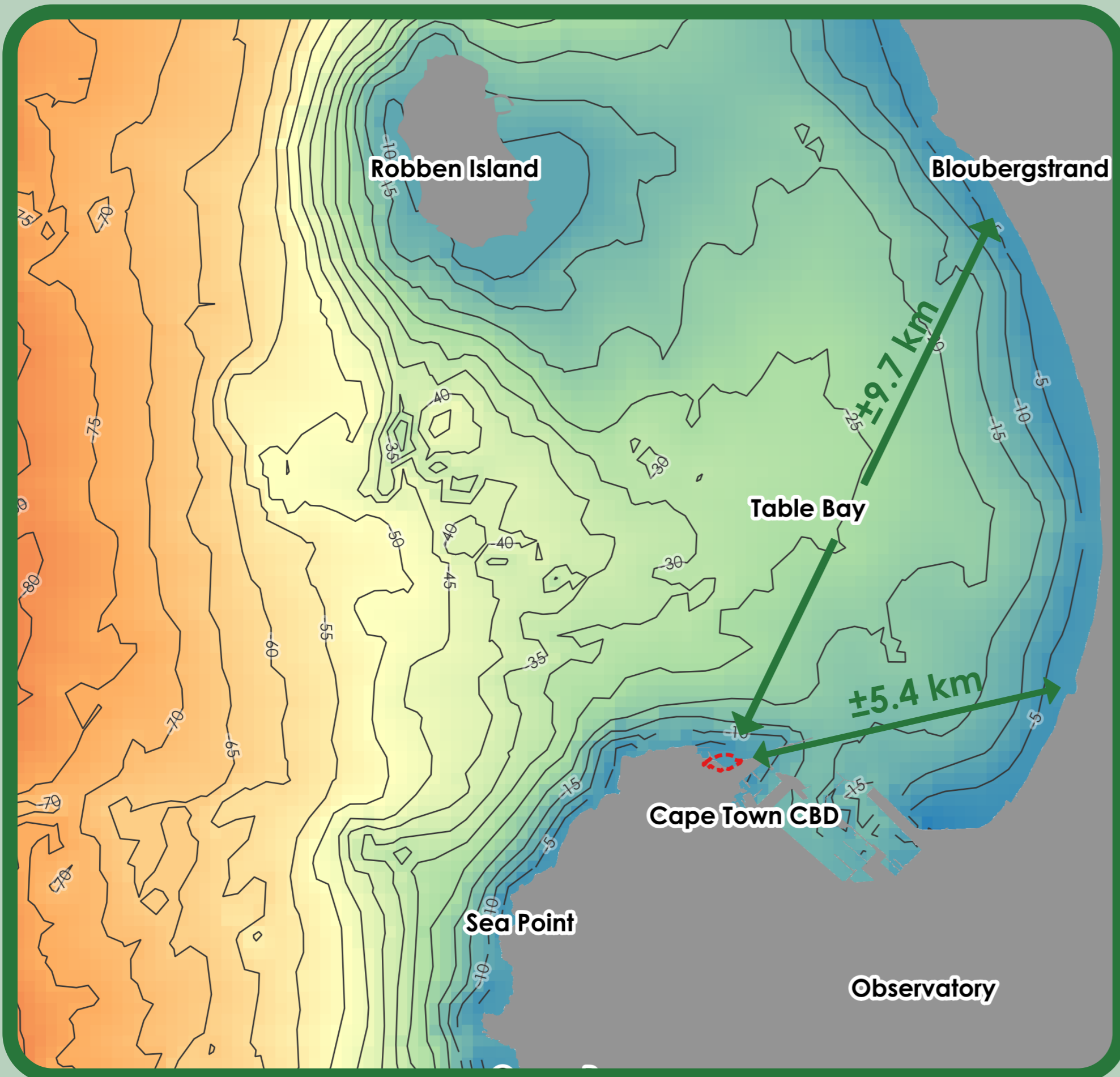


Table Bay, a relatively **shallow bay** with a maximum **depth of 35 m**, is located in the southern Benguela current ecosystem. The seabed mainly consists of exposed bedrock, with thin layers of sand.



Currents in Table Bay are **predominantly wind-driven**, with minor influences from tidal forcing.

An **Oceanographic Impact Assessment** was undertaken by **WML Coast. PRDW Consulting Port and Coastal Engineers** conducted a **Wave and Hydrodynamic Modelling Study** to quantify changes in wave dynamics. WML Coast's independent Impact Assessment was based on PRDW's modelling results, which were deemed acceptable for the purposes of the EIA.



POST-CONSTRUCTION PHASE

IMPACTS

MITIGATION MEASURES

SIGNIFICANCE AFTER MITIGATION

Impacts on coastal dynamics	Not required due to low significance	Low, negative
Longshore sediment transport	Not required due to insignificance	Insignificant negative
Short-wave reflections towards the Granger Bay Marina	Not required due to low significance	Low, negative
Long-wave reflections towards the Granger Bay Marina	Should accentuated long wave action present in the Granger Bay Marina, wave mitigation measures should be investigated and implemented	Very low, negative
Short and long wave reflections into the Granger Bay Marina breakwater	Mitigation can include regular monitoring of the condition of the existing breakwater with rehabilitation when necessary	Very low, negative
Impacts on small craft operations due to the eddy and tidal currents within the new bay	Users made aware of the possible effects that they may encounter, such as appropriate signage near the slipway.	Very low, negative