



# Capability Statement

## Dredge Monitoring and Impact Identification

Client : Transnet Capital Projects/HMG Joint Venture



### REQUIREMENTS

- Assessment of the impacts associated with construction of the container berth in Ben Schoeman Dock in the Port of Cape Town, on the marine ecology in the Table Bay region.
- Environmental monitoring of sediment and water quality characteristics at the dredge site at the Ben Schoeman Dock, as well as at the dredge spoil dump site further offshore.

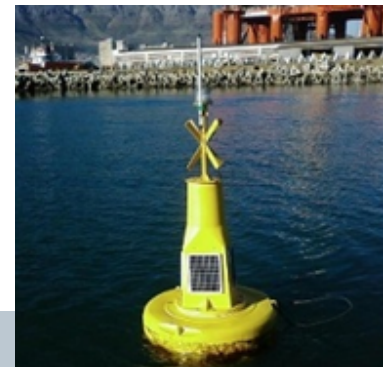
### WORK DONE

- Assessment of the impacts associated with construction of the Ben Schoeman Dock in the Port of Cape Town on the marine ecology in the Table Bay region.
- Grab sampling to measure detailed sediment properties in the proposed dredge area
- A detailed survey of sediment properties and macrofauna distribution at two candidate dredge dump sites
- Simulation modelling of the dredging induced turbidity plumes
- Environmental monitoring of sediment and water quality characteristics at the dredge site at the Ben Schoeman Dock, as well as at the dump site further offshore, which involved:

- Continuous monitoring of water quality in the area immediately adjacent to the dredge area using a moored data buoy with real time data transmission
- Measurements of near field turbidity distributions around the operating Trailer Suction Hopper Dredger (TSHD)
- Water quality profiling at the dredge spoil dump site
- A survey of dumped sediment plume behaviour at the dredge spoil dump site
- Continuation of the sediment monitoring programmes at the dredge spoil dump site including monitoring of the distribution of sediment particle sizes, heavy metals and macrobenthos through grab sampling

### OUTCOMES:

Lwandle provided good quality, robust data to the client which allowed for the successful completion of the construction phase of the project, and compliance with the environmental management plan.



**“Identification and monitoring of the marine impacts associated with capital dredging of the Ben Schoeman Dock at the Cape Town Port”**