



Capability Statement

Harmful Algal Bloom Monitoring

Client: City of Cape Town



REQUIREMENTS

- The investigation of the background conditions associated with the potentially toxic *Prymnesium parvum* blooms in Zandvlei estuary, Western Cape
- Provide a method of monitoring the potential development of the blooms, and to assist with determining whether the implemented interventions were indeed proving successful.

WORK DONE

- The implementation of a two week monitoring program which included the deployment of three fixed moorings to continuously measure dissolved oxygen, salinity and temperature at five minute intervals as well as the daily deployment of a handheld multi-probe CTD at six sites to measure salinity, temperature, depth, fluorescence, pH and dissolved oxygen.
- The processing and analysis of the data collected by both the fixed moorings and the daily CTDs using the Python platform to identify any potential patterns associated with the algal blooms.

OUTCOMES:

The monitoring methods were deployed at short notice and were successful in describing background water column conditions for the Zandvlei Estuary.

Lwandle delivered a report highlighting the possible early warning indicators for a potentially toxic *Prymnesium parvum* bloom.

Using this information, a system capable of continuously monitoring these parameters could be installed during periods where the estuary is thought to be most at risk to algal blooms in order to effectively implement a management plan for to prevent potential blooms from occurring.



“Investigation of the background conditions associated with the potentially toxic *Prymnesium parvum* blooms in Zandvlei estuary”

