

Annex B WATER QUALITY MONITORING FOR DREDGING WORKS DURING THE BATHING BEACH SEASON (1 MARCH - 30 OCTOBER INCLUSIVE)

Environmental Permit No.: EP-106/2001/A

MONITORING OBJECTIVES

The contractor will undertake water quality monitoring during the dredging works if the works are undertaken during the bathing beach season (between 1 March to 30 October, inclusive). This will be undertaken to:

- monitor the effectiveness of the control measures employed during the dredging works at Tuen Mun.
- verify that the dredging works are not resulting in any impacts the Butterfly Gazetted Bathing Beach.
- to ensure that appropriate action is undertaken in the event that impacts are identified to sensitive receivers and are found to be associated with the dredging works.

PARAMETERS MEASURED

The parameters to be measured *in situ* are:

- dissolved oxygen (DO) (% saturation and mg L⁻¹)
- temperature
- turbidity (NTU)
- salinity (‰)
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The only parameter to be measured in the laboratory is:

- suspended solids (SS) (mg L⁻¹)
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In addition to the water quality parameters, other relevant data shall also be measured and recorded in field logs, including the time of sampling, water depth, time, weather conditions, sea conditions, tidal state, current direction and speed, special phenomena and dredging work activities undertaken

EQUIPMENT/SAMPLING TESTING PROCEDURES

To be undertaken in accordance with the EPD Guidelines for Development Projects in Hong Kong, EM&A, 1998.

MONITORING LOCATIONS

Six monitoring stations shall be established (inclusive of 2 control stations) for water quality monitoring. The locations of the monitoring stations will be agreed with EPD in advance of the work. Possible indicative locations for these stations are shown in the figure 5a.

MONITORING FREQUENCY

Baseline Monitoring - Baseline Monitoring will comprise sampling on two occasions prior to but no more than one week before dredging work. Samples will be taken at each station, at (1m below surface, mid and 1m above bottom samples) during mid flood and mid ebb tidal state on each sampling occasion.

Impact Monitoring - Impact Monitoring will comprise sampling daily during the dredging works at the same location and sampling depths as the Baseline Monitoring Stations. Samples will be taken during both mid flood and mid ebb tidal states on each sampling occasion.

Post Project Monitoring - Post Project Monitoring will comprise sampling on two occasions (days) within one week after completion of the dredging works at the same location as the Baseline Monitoring Stations during mid flood and mid ebb tides.

COMPLIANCE / ACTION EVENT PLAN

Water quality monitoring results will be evaluated against Action and Limit levels related to the dredging works and agreed with EPD prior to commencement.

REPORTING

A letter report shall be provided to LCSD and EPD on a daily basis during the dredging works, which includes the monitoring results in addition to operating practices of the work and an interpretation of monitoring results in regard to the water quality at the Butterfly Bathing Beach.