



Proposed 132kV Submarine Cable
Route for Airport "A" to Castle Peak
Power Station Cable Circuit

*Twenty - First & Twenty - Second Weekly
Impact Monitoring Report -
14th April to 27th April 2008*

2nd May 2008

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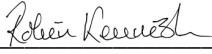
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CLP Power

Proposed 132kV Submarine Cable
Route for Airport "A" to Castle
Peak Power Station Cable Circuit:
*Twenty-First and Twenty-Second
Weekly Impact Monitoring Report –
14th April 2008 – 27th April 2008*

May 2008

Reference 0072833

For and on behalf of ERM-Hong Kong, Limited
Approved by: <u>Dr Robin Kennish</u>
Signed: <u></u>
Position: <u>Director</u>
Date: <u>2 May 2008</u>

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CONTENTS

	EXECUTIVE SUMMARY	I
1	INTRODUCTION	1
1.1	PURPOSE OF THE REPORT	1
1.2	STRUCTURE OF THE REPORT	1
2	PROJECT INFORMATION	3
2.1	BACKGROUND	3
2.2	SITE DESCRIPTION	4
2.3	MARINE CONSTRUCTION WORKS UNDERTAKEN DURING REPORTING WEEKS	4
2.4	PROJECT ORGANISATION	4
2.5	STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS	4
3	ENVIRONMENTAL MONITORING REQUIREMENT	6
3.1	MONITORING LOCATIONS	6
3.2	MONITORING PARAMETERS AND FREQUENCY	7
3.3	MONITORING EQUIPMENT AND METHODOLOGY	8
4	IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES	12
4.1	RECOMMENDED MITIGATION MEASURES	12
4.2	IMPLEMENTATION STATUS OF MITIGATION MEASURES	12
5	MONITORING RESULTS	14
5.1	IMPACT MONITORING RESULTS	14
5.2	DOLPHIN MONITORING	15
5.3	TIDAL FLOW DIRECTION MONITORING	16
6	ENVIRONMENTAL NON-CONFORMANCES	17
6.1	SUMMARY OF ENVIRONMENTAL EXCEEDANCE	17
6.2	SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE	24
6.3	SUMMARY OF ENVIRONMENTAL COMPLAINT	24
6.4	SUMMARY OF ENVIRONMENTAL SUMMONS AND PROSECUTION	24
7	FUTURE KEY ISSUES	25
7.1	KEY ISSUES FOR THE COMING MONTH	25
7.2	MONITORING SCHEDULE FOR THE COMING MONTHS	25
8	REVIEW OF THE EM&A AND IMPACT ASSESSEMENT PREDICTIONS	26
9	CONCLUSIONS	27

LIST OF TABLES

<i>Table 2.1</i>	<i>Summary of Environmental Licensing, Notification, Permit and Reporting Status</i>
<i>Table 3.1</i>	<i>Co-ordinates of Water Quality Monitoring Stations (HK Grid)</i>
<i>Table 3.2</i>	<i>Action and Limit Levels for Water Quality for the Tuen Mun Landing Site</i>
<i>Table 3.2</i>	<i>Action and Limit Levels for Water Quality for the Airport Landing Site</i>
<i>Table 3.3</i>	<i>Event and Action Plan for Water Quality</i>
<i>Figure 5.1</i>	<i>Monthly Mean and Depth-averaged Dissolved Oxygen at EPD Routine Monitoring Station NM3 (1998-2006)</i>
<i>Table 6.1</i>	<i>Exceedances of the Action and Limit Levels of Dissolved Oxygen, Bottom (mg/L), Dissolved Oxygen, Surface and Middle (mg/L), depth-averaged Turbidity (NTU) and SS (mg/L) during Mid-ebb and Mid-flood Tides on 21 April 2008</i>
<i>Table 6.2</i>	<i>Exceedances of Action Levels of Dissolved Oxygen, Bottom (mg/L), Dissolved Oxygen, Surface and Middle (mg/L), depth-averaged Suspended Solids (mg/L) during Mid-ebb Tide and Mid-flood Tide on 23 April 2008</i>
<i>Table 6.3</i>	<i>Exceedance of Limit Levels of Depth-averaged Turbidity (NTU) and Suspended Solids (mg/L) during Mid-ebb Tide on 24 April 2008</i>
<i>Table 6.4</i>	<i>Exceedances of Action Levels of Dissolved Oxygen, Bottom (mg/L) and Dissolved Oxygen, Surface and Middle (mg/L) during Mid-ebb Tide and Mid-flood Tide on 25 April 2008</i>
<i>Table 6.5</i>	<i>Exceedances of Limit Levels of depth-averaged Turbidity (NTU) and Suspended Solids (mg/L) during Mid-ebb Tide on 26 April 2008</i>

LIST OF ANNEXES

Annex A	Works Programme of the period between 14 April and 11 May 2008
Annex B	Project Organisation Chart (with Contact Details)
Annex C	Tentative Monitoring Schedule
Annex D	QA/QC Results of Laboratory Testing for Suspended Solids
Annex E	Impact Water Quality Monitoring Results
Annex F	Dolphin Observation Recording Forms
Annex G	Current Flow Data (provided on CD-ROM only)

EXECUTIVE SUMMARY

The construction works for the Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit (Application No. DIR-143/2006) commenced on 10 November 2007. This is the combined 21st and 22nd weekly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 14 April to 27 April 2008 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Period

No marine works were conducted during the first reporting week (ie 14 April to 20 April 2008), except the preparation works on the cable lay barges. Hence, the Impact Water Quality Monitoring at both the Airport and Tuen Mun sides was suspended for a week.

During the second reporting week (ie 21 April to 27 April 2008), preparation works on the cable lay barges were continued on 21 April 2008. Then, cable laying (jetting) operations were carried out between the Airport and the Tuen Mun landing sites on 22 April and 23 April 2008. Following this, cable landing works were performed near the Airport side on 24 April 2008. The Contractor confirmed that all jetting operations were completed on 23 April 2008 and demobilisation of the cable laying plants was subsequently undertaken on 25 April and 26 April 2008.

Water Quality

Six monitoring events were scheduled between 21 April and 27 April 2008 at the Airport and Tuen Mun landing sites. All monitoring events at all designated monitoring stations were performed on schedule, ie on 22 April, 24 April and 26 April 2008 at Tuen Mun, and on 21 April, 23 April and 25 April 2008 at the Airport.

All measured dissolved oxygen levels complied with the Action and Limit (AL) Levels with exception of 21 April, 23 April and 25 April 2008. Besides, all measured Turbidity and Suspended Solids (SS) levels were below AL Levels with exception of 21 April, 23 April, 24 April and 26 April 2008.

Environmental Non-conformance

Fifty-two exceedances of Action and Limit Levels were recorded on five monitoring days, ie 21 April 2008 and 23 to 26 April 2008 in the reporting weeks. The exceedances were examined against the construction works. It was concluded that they were isolated cases and unlikely related to the Project.

No non-compliance event was recorded during the reporting weeks.

No complaint and summons/prosecution was received during the reporting weeks.

Future Key Issues

During the following week (ie 28 April to 4 May 2008), no marine works will be conducted from 28 April to 30 April 2008. Transfer of concrete slabs and blackfill materials to the barge will be undertaken on 1 May 2008 and 2 May 2008, respectively. Then, backfilling works followed by manual installation of articulating pipes will be carried out near the Airport side. Since there will be no marine works at Tuen Mun side, the Impact Water Quality Monitoring for Tuen Mun side will be suspended until the resumption of marine works near the Tuen Mun landing site.

1 INTRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by CLP Power (CLP) as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit (thereinafter called the ('Project')).

1.1 PURPOSE OF THE REPORT

This is the combined 21st and 22nd weekly EM&A report, which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 14 April to 27 April 2008.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : Introduction

Details the background, purpose and structure of the report.

Section 2 : Project Information

Summarises background and scope of the project, site description, project organisation and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3 : Environmental Monitoring Requirement

Summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, Event / Action Plans, environmental mitigation measures as recommended in the EIA report and relevant environmental requirements.

Section 4 : Implementation Status on Environmental Mitigation Measures

Summarises the implementation of environmental protection measures during the reporting period.

Section 5 : Monitoring Results

Summarises the monitoring results obtained in the reporting period.

Section 6 : Environmental Non-conformance

Summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

Section 7 : Future Key Issues

Summarises the monitoring schedule for the next week.

Section 8 : Review of EM&A Data and Impact Assessment Predictions

Compares and contrasts the EM&A data in the reporting period with the impact assessment predictions and annotates with explanations of discrepancies.

Section 9 : Conclusions

Presents the key findings of the impact monitoring results.

2.1 BACKGROUND

CLP will install a 132 kV submarine cable circuit to connect Castle Peak Power Station and Hong Kong International Airport in order to meet the electricity load growth at the Airport.

The proposed cable route will start from Tuen Mun and extend southward crossing the Urmston Road to the Airport. The cable landing sites will be located to the west of Butterfly Beach, Tuen Mun and at the northern part of the platform of the Airport (see *Figure 2.1*).

In September 2006, a Project Profile (PP) for the proposed 132kV Cable Route for Airport "A" to Castle Peak CCTS (thereinafter called the 'Project') was prepared and submitted to the Environmental Protection Department (EPD) under the *Environmental Impact Assessment Ordinance (EIAO)* for application for Permission to apply directly for Environmental Permit (EP) (Application No. *DIR-143/2006*).

An Environmental Permit (*EP-267/2007*) for the works was granted on 29 March 2007. Under the requirements of *Condition 2.12* of the EP, an EM&A programme as set out in the *Environmental Monitoring and Audit Manual (EM&A Manual)* is required to be implemented. In accordance with the *EM&A Manual*, impact monitoring of water quality is required for the Project.

Baseline Monitoring was conducted at Tuen Mun landing site between 18 October and 28 October 2007. Through communications with EPD, a silt curtain at the water intake of the Airport should already be in place during the baseline monitoring. EPD hence advised the baseline monitoring (thereinafter called *Baseline Environmental Monitoring Part B*) for the Airport East section of works should be postponed until a silt curtain is ready. The baseline monitoring for Tuen Mun section of the Project and sediment quality testing were hence undertaken first (thereinafter called *Baseline Environmental Monitoring Part A*) and the results were presented in *Part A* of the report which was submitted to EPD.

The silt curtains were installed at the Airport seawater intake on 20 December 2007 and *Baseline Environmental Monitoring Part B* was then carried out between 22 December 2007 and 2 January 2008.

Impact Monitoring has been carried out at Tuen Mun landing site since 10 November 2007 and at Airport landing site since 16 January 2008. This report, therefore, presents results of the data from monitoring stations around the Tuen Mun and Airport landing sites (*Figure 2.1*). Results of the impact monitoring data will therefore be compared against the results of the *Baseline Environmental Monitoring Part A* and *Part B*.

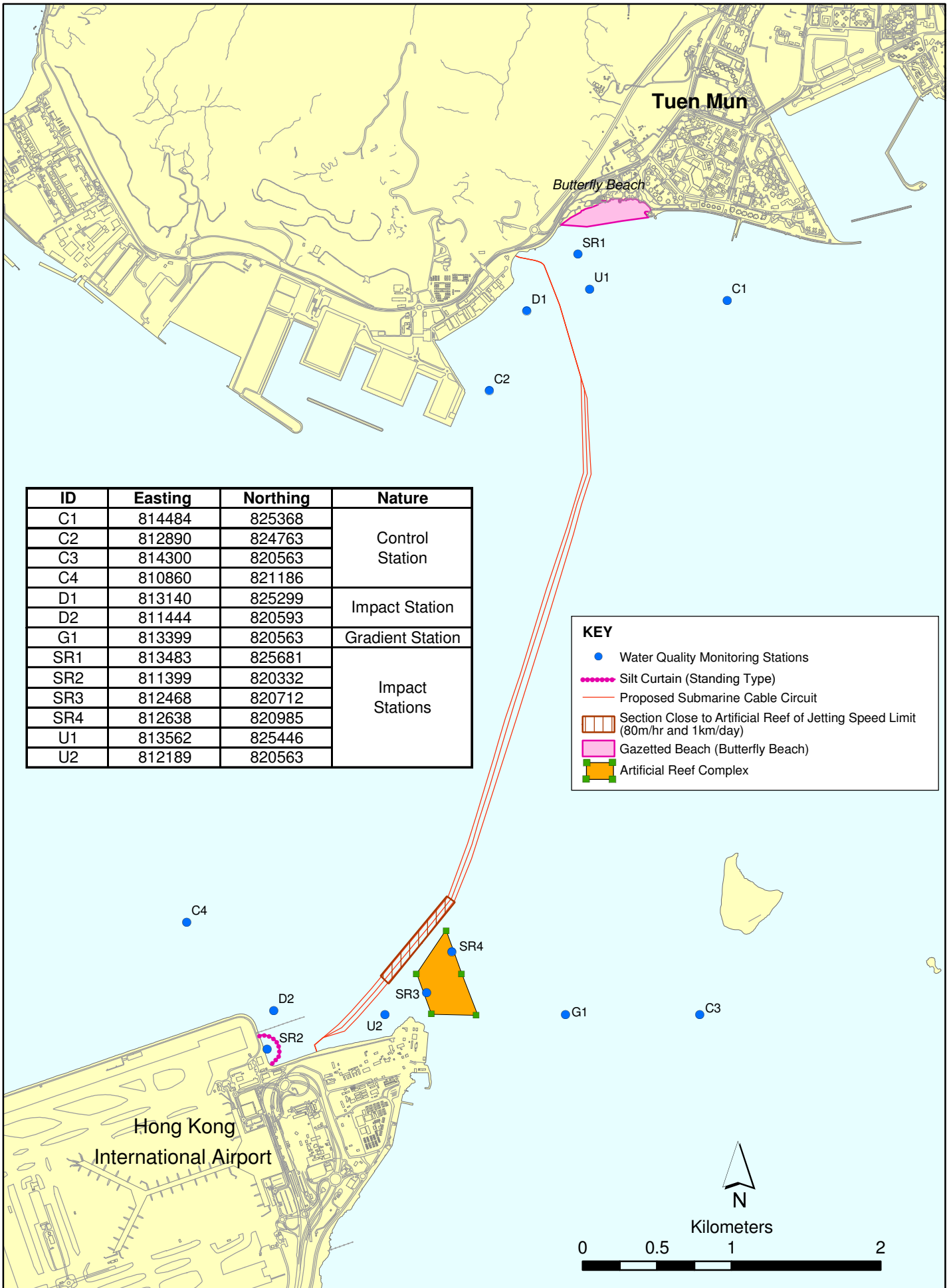


FIGURE 2.1

Location of Water Quality Monitoring Stations

2.2 *SITE DESCRIPTION*

The proposed 132kV cable is located in-between Tuen Mun and the Hong Kong International Airport. The alignment of the cable is illustrated in *Figure 2.1*.

2.3 *MARINE CONSTRUCTION WORKS UNDERTAKEN DURING REPORTING WEEKS*

No marine works were conducted during the first reporting week (ie 14 April to 20 April 2008), except the preparation works on the cable lay barges. Hence, the Impact Water Quality Monitoring at both the Airport and Tuen Mun sides was suspended for a week. It should be noted that the Contractor originally planned to resume the marine works on 19 April 2008 but it was cancelled due to the adverse weather conditions under the effect of Typhoon Neoguri.

During the second reporting week (ie 21 April to 27 April 2008), preparation works on the cable lay barges were continued on 21 April 2008. Then, cable laying (jetting) operations were carried out between the Airport and the Tuen Mun landing sites on 22 April and 23 April 2008. Following this, cable landing works were performed near the Airport side on 24 April 2008. The Contractor confirmed that all jetting operations were completed on 23 April 2008 and demobilisation of the cable laying plants was subsequently undertaken on 25 April and 26 April 2008.

The works programmes of the period between 14 April and 27 April 2008 are presented in *Annex A*.

2.4 *PROJECT ORGANISATION*

The Project Organisation chart and contact details are shown in *Annex B*.

2.5 *STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS*

A summary of the relevant permits, licences, notifications and/or reports on environmental protection for this Project is presented in *Table 2.1*.

Table 2.1 *Summary of Environmental Licensing, Notification, Permit and Reporting Status*

Permit / Licence / Notification / Report	Reference	Validity Period	Remarks
EM&A Manual	-	Throughout the construction period	submitted on 25 January 2007
Environmental Permit	EP-267/2007	Throughout the construction period	granted on 29 March 2007

Permit / Licence / Notification / Report	Reference	Validity Period	Remarks
Baseline Environmental Monitoring Report (Part A)	-	Throughout the construction period for Tuen Mun Section	approved by EPD on 8 November 2007
Baseline Environmental Monitoring Report (Part B)	-	Throughout the construction period for Airport Section	approved by EPD on 16 January 2008

3.1 MONITORING LOCATIONS

In accordance with the *EM&A Manual*, prior to the installation of the cable, water quality sampling was undertaken at stations situated around the cable laying works area at Tuen Mun and the Airport. The locations of the sampling stations are shown in *Figure 2.1*.

- C1 and C2 are Control Stations located over 1 km away from the Tuen Mun landing point and hence are not expected to be influenced by the construction works due to their remoteness;
- U1 and D1 are Gradient Stations situated approximately 300 m either side of the cable alignment for monitoring the effect of dredging at the Tuen Mun landing point and for identifying the source of impact; and,
- SR1 is a Sensitive Receiver used to monitor the effect of the construction works on Butterfly Beach.
- C3 and C4 are Control Stations near the Airport, which are not expected to be influenced by the construction works due to their remoteness from the construction works.
- U2 and D2 are Impact Stations located approximately 300 m either from the cable alignment for monitoring the effect of dredging at the Airport landing point.
- SR2 is Impact Station (sensitive receiver) used to monitor the effect of the construction works to the Seawater Intake at the Airport.
- SR3 and SR4 are Impact Stations (sensitive receivers) used to verify the predictions concerning sediment plume dispersion during dredging at the areas close to the Artificial Reef (AR) and at the landing sites.
- G1 is Gradient Station which is situated in between C3 and the AR. It is used to determine the source of pollutants by comparing the monitoring results with those recorded at C3, SR3 and SR4. Since G1 is located between C3 and the construction work alignment, it serves the gradient function with C3 during flood tide, but has no relationship and function with C4 during ebb tide.

The co-ordinates of these monitoring stations are listed in *Table 3.1*.

Table 3.1 *Co-ordinates of Water Quality Monitoring Stations (HK Grid)*

Station	Nature	Easting	Northing
C1	Control Station	814483	825367
C2	Control Station	812890	824763
C3	Control Station	814300	820563
C4	Control Station	810860	821186
U1	Impact Station	813561	825446
U2	Impact Station	812189	820563
D1	Impact Station	813140	825298
D2	Impact Station	811444	820593
SR1	Impact Station	813483	825681
SR2	Impact Station	811399	820332
SR3	Impact Station	812468	820712
SR4	Impact Station	812638	820985
G1	Gradient Station	813399	820563

3.2 *MONITORING PARAMETERS AND FREQUENCY*

The impact water quality monitoring was conducted in accordance with the requirements stated in the *EM&A Manual*. These are presented below.

3.2.1 *Monitoring Parameters*

Parameters measured *in situ* were:

- dissolved oxygen (DO) (% saturation and mg L⁻¹);
- temperature (°C);
- turbidity (NTU); and
- salinity (‰).

The only parameter measured in the laboratory was:

- suspended solids (SS) (mg L⁻¹).

In addition to the water quality parameters, other relevant data were measured and recorded in field logs, including the location of the sampling stations, water depth, time, weather conditions, sea conditions, tidal state, special phenomena and work activities undertaken around the monitoring and works area that may influence the monitoring results.

3.2.2 *Monitoring Frequency*

Impact water quality monitoring was carried out three times a week. The interval between two sets of monitoring was not less than 36 hours. The monitoring was undertaken at 13 locations (eight impact monitoring stations D1, D2, U1, U2, SR1, SR2, SR3 and SR4, one gradient station G1, and four control monitoring stations C1, C2, C3 and C4), as shown on *Figure 2.1*.

Samples were taken during mid-flood and mid-ebb tidal state on each sampling occasion.

3.3 *MONITORING EQUIPMENT AND METHODOLOGY*

3.3.1 *Monitoring Equipment*

Dissolved Oxygen, Temperature, Salinity, Turbidity Measuring Equipment

The instrument was a portable, weatherproof multi-parameter measuring instrument (YSI 6820) complete with cables, multi-probe sensor, comprehensive operation manuals, and was operable from a DC power source. It was capable of measuring:

- dissolved oxygen levels in the range of 0 – 50 mg L⁻¹; and 0-500% saturation;
- temperature of -5 to 50 °C;
- turbidity levels between 0-1000 NTU (response of the sensor was checked with certified standard turbidity solutions before the start of measurement); and,
- salinity in the range of 0-40 ppt (checked with 30 ppt Salinity solutions before the start of the measurement).

Water Depth Gauge

The water depth gauge affixed to the bottom of the water quality monitoring vessel was used.

Current Velocity and Direction

Current velocity and direction was estimated by conducting float tracking.

Positioning Device

A Global Positioning System (GPS) was used (C-Navigator World DGPS, GPS 72A) during monitoring to ensure the accurate recording of the position of the monitoring vessel before taking measurements. The use of DGPS was used for positioning device, which was well calibrated at appropriate checkpoint.

Water Sampling Equipment

Water samples for suspended solids measurement were collected by the use of a multi-bottle water sampling system (General Oceanics Inc., Rosette Sampler ROS02), consisting of PVC bottles of more than two litres, which could be effectively sealed with cups at both ends. The water sampler had a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth.

Monitoring Methodology

Timing & Frequency

The water quality sampling was undertaken within a 3 hour window of 1.5 hours before and 1.5 hours after mid-flood and mid-ebb tides. Tidal range for flood and ebb tides was not less than 0.5 m for capturing representative tides.

Reference was made to the predicted tides at Lok On Pai, which is the tidal station nearest to the Project site, published on the website of Hong Kong Observatory⁽¹⁾. Based on the predicted water levels at Lok On Pai, the impact water quality monitoring was conducted following the schedule presented in *Annex C*.

Duplicate samples were collected from each of the monitoring events for *in situ* measurements and laboratory analysis.

Depths

Each station was sampled and measurements were taken at three depths, 1 m below the sea surface, mid depth and 1m above the sea bed.

Protocols

The multi-parameter measuring instrument (YSI 6820) was checked and calibrated by an HOKLAS accredited laboratory before use. Onsite calibration was also carried out to check the responses of sensors and electrodes using certified standard solutions before each use. Sufficient stocks of spare parts were maintained for replacements when necessary, and backup monitoring equipment was made available.

Water samples for SS measurements were collected in high density polythene bottles, packed in ice (cooled to 4° C without being frozen), and delivered to an HOKLAS accredited laboratory as soon as possible after collection.

Laboratory Analysis

All laboratory work was carried out by an HOKLAS accredited laboratory. Water samples of about 1,000 mL were collected at the monitoring and control stations for carrying out the laboratory determinations. The determination work started within the next working day after collection of the water samples. The analyses followed the standard methods as described in *APHA Standard Methods for the Examination of Water and Wastewater*, 19th Edition, unless otherwise specified (APHA 2540D for SS).

The QA/QC details were in accordance with requirements of HOKLAS or another internationally accredited scheme (for details refer to *Annex D*).

(1) Hong Kong Observatory (2007) <http://www.hko.gov.hk/tide/eLOPtide.htm> [Accessed on 13 October 2007]

3.3.3 Action and Limit Levels

Two sets of the Action and Limit levels, which were established based on the results of *Baseline Environmental Monitoring Part A* and *Part B*, are presented in *Tables 3.2* and *3.3* respectively.

Table 3.2 *Action and Limit Levels for Water Quality for the Tuen Mun Landing Site*

Parameter	Unit	Tide	Depth	Action Level	Limit Level
Suspended Solids (SS)	mg L ⁻¹	Mid-Ebb	Depth-averaged	12.8	13.3
		Mid-Flood	Depth-averaged	23.6	28.3
Dissolved Oxygen (DO)	mg L ⁻¹	Mid-Ebb	Surface and Middle	5.2	4.0
			Bottom	5.3	2.0
		Mid-Flood	Surface and Middle	5.5	4.0
			Bottom	5.5	2.0
Turbidity	NTU	Mid-Ebb	Depth-averaged	7.0	8.3
		Mid-Flood	Depth-averaged	14.8	18.9

Table 3.2 *Action and Limit Levels for Water Quality for the Airport Landing Site*

Parameter	Unit	Tide	Depth	Action Level	Limit Level
Suspended Solids (SS)	mg L ⁻¹	Mid-Ebb	Depth-averaged	21.6	29.8
		Mid-Flood	Depth-averaged	30.8	34.3
Dissolved Oxygen (DO)	mg L ⁻¹	Mid-Ebb	Surface and Middle	6.6	4.0
			Bottom	6.9	2.0
		Mid-Flood	Surface and Middle	6.8	4.0
			Bottom	6.8	2.0
Turbidity	NTU	Mid-Ebb	Depth-averaged	17.4	25.9
		Mid-Flood	Depth-averaged	22.9	27.9

Notes:

- (1) The results recorded at the gradient station during the mid-flood period will be used to decide whether any exceedance being recorded during mid-flood are arising from the marine works of this Project.
- (2) Turbidity and SS levels will make reference to 120% and 130% of value recorded at the upstream control station during the same tidal conditions to assess the compliance of Action and Limit Levels respectively.

3.3.4 Event and Action Plan

The Event and Action Plan for water quality monitoring which was stipulated in the *EM&A Manual* is presented in *Table 3.3*.

Table 3.3 *Event and Action Plan for Water Quality*

Event	Action
Action Level Exceedance	<p>Step 1 - repeat sampling event;</p> <p>Step 2 – identify source(s) of impact and confirm whether exceedance was due to the construction works;</p> <p>Step 3 – inform EPD and LCSD and confirm notification of the non-compliance in writing;</p> <p>Step 4 - discuss with cable installation contractor the most appropriate method of reducing suspended solids during cable installation (e.g. reduce cable laying speed/volume of water used during installation, increase effectiveness of silt curtain).</p> <p>Step 5 - repeat measurements after implementation of mitigation for confirmation of compliance.</p> <p>Step 6 - if non compliance continues - increase measures in Step 3 and repeat measurements in Step 3. If non compliance occurs a third time, suspend cable laying operations.</p>
Limit Level Exceedance	<p>Undertake Steps 1-5 immediately, if further non compliance continues at the Limit Level, suspend cable laying operations until an effective solution is identified.</p>

4 *IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES*

4.1 *RECOMMENDED MITIGATION MEASURES*

Mitigation measures for water quality control have been recommended in the Project Profile and the Environmental Permit. The Contractor is responsible for the design and implementation of the following measures.

During cable laying the following will be undertaken:

- Although the sediment loss during both grab dredging and suction dredging is expected to be quite small, the Contractor will be employing a silt curtain around the dredgers to reduce the dispersion of sediments from the landing points.
- Closed grab dredgers will be used to avoid dispersion of suspended solids into the sea.
- The maximum dredging rate at Tuen Mun shore approach will be limited to 1,500 m³ day⁻¹ for working 10 hours per day, i.e., 150 m³ hr⁻¹.
- The maximum dredging rates of grab dredgers and suction method, whichever to be deployed by the contractor, at the Airport shore approach will be limited to 650 m³ day⁻¹ and 1,600 m³ day⁻¹ for working 16 hours per day, i.e., 41 m³ hr⁻¹ and 100 m³ hr⁻¹.
- All barges used for the transport of dredged materials will be fitted with tight bottom seals in order to prevent leakage of material during loading and transport.
- All barges will be filled to a level, to ensure that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.
- The forward speed of the jetting machine will be limited to a maximum of 80 m hr⁻¹ and 24 hours operation.

4.2 *IMPLEMENTATION STATUS OF MITIGATION MEASURES*

In addition to the regulatory requirements as mentioned in *Section 4.1* above, the Contractor has implemented a precautionary measure for the works undertaken at the inshore area. As a precautionary measure, a silt curtain has been installed at the Airport seawater intake and five silt curtains have been installed at the five AR blocks along the direction facing the cable alignment during construction of the Project. In addition, the cable laying

works undertaken in the vicinity of the ARs will be restricted to periods when the tidal current is moving away from the artificial reef towards the works area.

5.1 IMPACT MONITORING RESULTS

The monitoring data and graphical presentations of the results are included in *Annex E*. These are summarised below.

Six monitoring events were scheduled between 21 April and 27 April 2008 at the Airport and Tuen Mun landing sites. All monitoring events at all designated monitoring stations were performed on schedule, ie on 22 April, 24 April and 26 April 2008 at Tuen Mun, and on 21 March, 23 April and 25 April 2008 at the Airport.

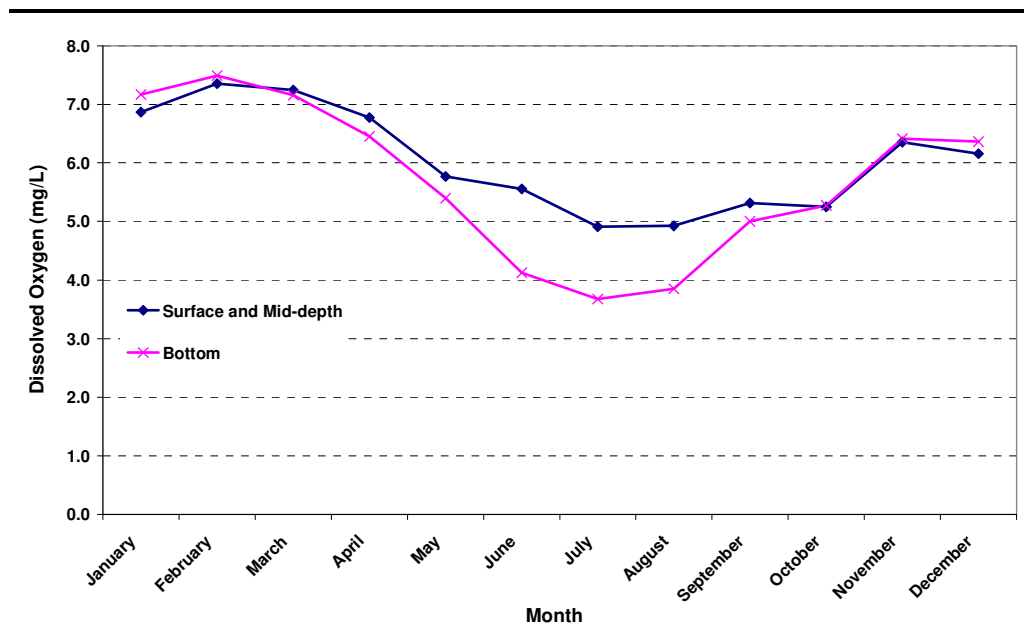
No major activities influencing the water quality were identified between 21 April and 27 April 2008.

All measured dissolved oxygen levels complied with the Action and Limit (AL) Levels with exception of 21 April, 23 April and 25 April 2008. Besides, all measured Turbidity and Suspended Solids (SS) levels were below AL Levels with exception of 21 April, 23 April, 24 April and 26 April 2008.

As discussed in the previous weekly reports, dissolved oxygen levels at all the monitoring stations at both Tuen Mun and Airport sides have started to decrease since the end of Week 15 (ie 3 to 9 March 2008). As seen in *Figures E1 to E4*, decreasing trends of DO levels continued in the reporting period. In overall, DO concentrations measured at the Tuen Mun monitoring stations dropped close to the Action Levels whereas DO levels recorded at the Airport side declined below the Action Levels. Similar to the results of previous weeks, exceedances of DO were observed at both the control and the impact stations located either upstream or downstream of the project site. This implies that the low DO levels were unlikely to be caused by the project works and may be due to natural fluctuation.

In order to further investigate whether the natural phenomenon was affecting the monitoring results, the monitoring results were compared against those recorded in EPD's routine monitoring programme. The water quality monitoring stations at both Tuen Mun and Airport sides fall within the North Western Water Control Zone (WCZ). EPD routine monitoring station NM3 is located in-between the Airport and Tuen Mun landing sites and, hence, it can be used as a reference station in this study. Based on EPD's marine water quality data for the years 1998 – 2006, the monthly mean and depth averaged dissolved oxygen level at the reference station NM3 is reviewed and shown in *Figure 5.1*. It should be noted that the dissolved oxygen trend varies with seasons, especially for the bottom DO. The DO levels measured in June, July and August were relatively lower than those recorded in the other months. This is probably due to water stratification occurred during the summer.

Figure 5.1 *Monthly Mean and Depth-averaged Dissolved Oxygen at EPD Routine Monitoring Station NM3 (1998-2006)*



For DO, critical conditions usually occur within the bottom waters during the summer months when the water column is stratified, with a warmer surface layer separated from deeper water by a pycnocline, or density gradient. When the density gradient within the pycnocline is high, transport of oxygen from the aerated surface waters to the lower waters by mixing is significantly reduced. In addition, warmer water temperatures during the summer speed up the uptake of oxygen through respiration by living organisms and decomposition of organic matter in the water column and sediments. As a result, the replenishment of dissolved oxygen is less than the DO consumption leading to depletion in dissolved oxygen concentrations.

When comparing the baseline and impact monitoring results as shown in *Figures E1 to E4* with the monthly mean depth-averaged DO at EPD monitoring station NM3 (see *Figure 5.1*), it can be seen that their trends are similar of which high dissolved oxygen concentrations were recorded in the dry season while the lowest measured of dissolved oxygen were observed in the wet season. This explains the recent declining trends of dissolved oxygen starting from early March 2008 may be due to seasonal variations.

5.2 DOLPHIN MONITORING

In accordance with the EM&A Manual, dolphin monitoring has been conducted during the cable laying (jetting) operations on 22 April and 23 April 2008. During the reporting period, no dolphin sightings were recorded. The dolphin observation recording forms are included in *Annex F*.

Cable laying works were carried out, in accordance with the EM&A Manual, only during periods when the tidal current was moving away from the artificial reef towards the works near the Airport.

To monitor the tidal flow direction, two flow meters were installed, one on the burial machine to record the current direction near the seabed and one on the lay barge to record the current direction near the water surface. The current direction was logged by computer on board.

The cable laying operations across the AR restricted zone were conducted in the evening of 22 April 2008 (ie 6:07 pm to 18:33 pm and 8:23 pm to 9:15 pm). The current flow and direction data during that specific period are presented in *Annex G*. It should be noted that the tidal current was moving towards the flood direction opposite to the artificial reef most of the time and the current speed ranged from 0.1 to 1.9 km hr⁻¹.

6.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

6.1.1 Exceedance on 21 April 2008

Exceedances of the Action and Limit Levels of Dissolved Oxygen, Bottom (mg/L), Dissolved Oxygen, Surface and Middle (mg/L), depth-averaged Turbidity (NTU) and SS (mg/L) were recorded at Stations D2, SR2 and SR4 during both mid-ebb and mid-flood tides on 21 April 2008 (Table 6.1).

Table 6.1 *Exceedances of the Action and Limit Levels of Dissolved Oxygen, Bottom (mg/L), Dissolved Oxygen, Surface and Middle (mg/L), depth-averaged Turbidity (NTU) and SS (mg/L) during Mid-ebb and Mid-flood Tides on 21 April 2008*

Exceedance Log No.	0072833_21 April 08_SS_E_Station D2 0072833_21 April 08_DOB_E_Station SR2 0072833_21 April 08_DO_E_Station SR2 0072833_21 April 08_DOB_F_Station D2 0072833_21 April 08_Turb_F_Station D2 0072833_21 April 08_SS_F_Station D2 0072833_21 April 08_DO_F_Station SR2 0072833_21 April 08_DOB_F_Station SR2 0072833_21 April 08_DOB_F_Station SR4	
Sampling date	21 April 2008	
Monitoring station	D2, SR2 and SR4	
Parameter	Dissolved Oxygen, Bottom (mg/L) Dissolved Oxygen, Surface and Middle (mg/L) Depth-averaged Turbidity (NTU) Depth-averaged Suspended Solids (SS, mg/L)	
Action Levels	Mid-ebb	DO, Bottom = 6.9 DO, Surface and Middle = 6.6 Turbidity = 17.4 SS = 21.6
	Mid-flood	DO, Bottom = 6.8 DO, Surface and Middle = 6.8 Turbidity = 22.9 SS = 30.8
Limit Levels	Mid-ebb	DO, Bottom = 2.0 DO, Surface and Middle = 4.0 Turbidity = 25.9 SS = 29.8
	Mid-flood	DO, Bottom = 2.0 DO, Surface and Middle = 4.0 Turbidity = 27.4 SS = 34.3
Measured Levels at Station D2	Mid-Ebb	DO, Bottom = 7.16 DO, Surface and Middle = 7.28 Turbidity = 9.23 SS = 23.17 (exceeds Action Level)

	Mid-Flood	DO, Bottom = 6.71 (exceeds Action Level) DO, Surface and Middle = 7.06 Turbidity = 32.19 (exceeds Limit Level) SS = 39.67 (exceeds Limit Level)
Measured Levels at Station SR2	Mid-Ebb	DO, Bottom = 5.83 (exceeds Action Level) DO, Surface and Middle = 5.87 (exceeds Action Level) Turbidity = 15.72 SS = 13.50
	Mid-Flood	DO, Bottom = 6.20 (exceeds Action Level) DO, Surface and Middle = 6.44 (exceeds Action Level) Turbidity = 15.45 SS = 18.75
Measured Levels at Station SR4	Mid-Ebb	DO, Bottom = 6.94 DO, Surface and Middle = 6.98 Turbidity = 5.72 SS = 6.50
	Mid-Flood	DO, Bottom = 6.71 (exceeds Action Level) DO, Surface and Middle = 6.97 Turbidity = 14.57 SS = 18.33

According to the work programme provided by the Contractor (*Annex A*), only preparation works for the burial machine were conducted on 21 April 2008 and no jetting operations were undertaken.

During mid-ebb tidal and mid-flood tidal conditions, DO levels at the concerned stations were in similar magnitude to or higher magnitude than the DO levels recorded at the Control Stations C3 and C4 (see *Figures 6.1* and *6.2*). This suggests that the exceedances may be due to seasonal changes as discussed in *Section 5.1*.

As mentioned above, during mid-ebb, there were no jetting operations undertaken whereas relatively high SS levels were measured at both upstream station (D2) and downstream station (G1). This implies the exceedance observed at Station D2 may be due to a high background level of SS. However, high turbidity and SS levels were also observed at D2 during mid-flood in the absence of jetting. The exceedances may be caused by some localised activities in the vicinity of D2 which were not related to the project. No action was required.

The exceedance incident has been notified to EPD and LCSD.

6.1.2 *Exceedance on 23 April 2008*

Exceedances of the Action Levels of Dissolved Oxygen, Bottom (mg/L), Dissolved Oxygen, Surface and Middle (mg/L) and depth-averaged Suspended Solids (mg/L) were recorded at Stations D2, U2, SR2, SR3 and SR4 during mid-ebb tide and mid-flood tide on 23 April 2008 (*Table 6.2*).

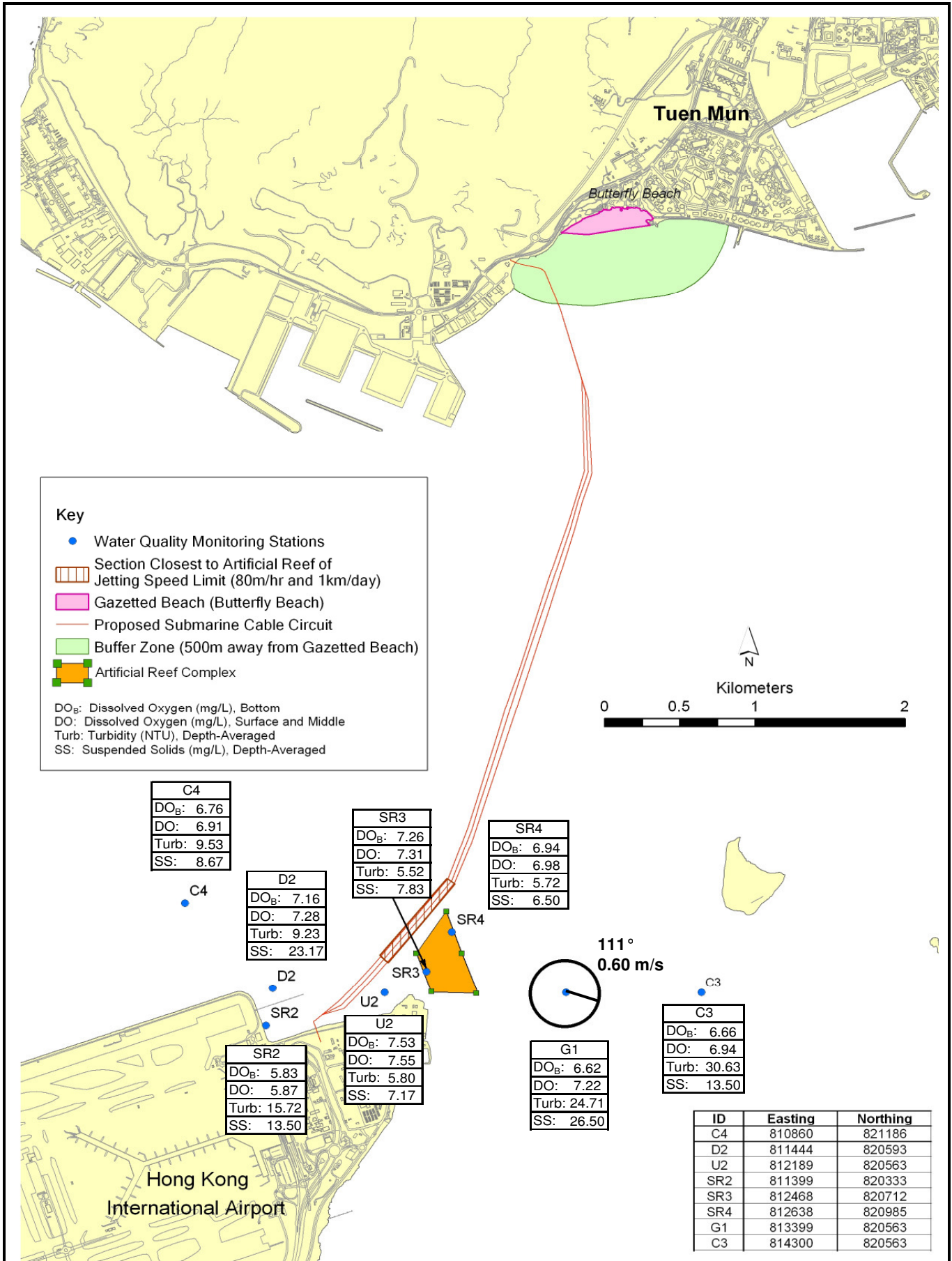


Figure 6.1

Mid Ebb Water Quality Monitoring
(21 April 2008)

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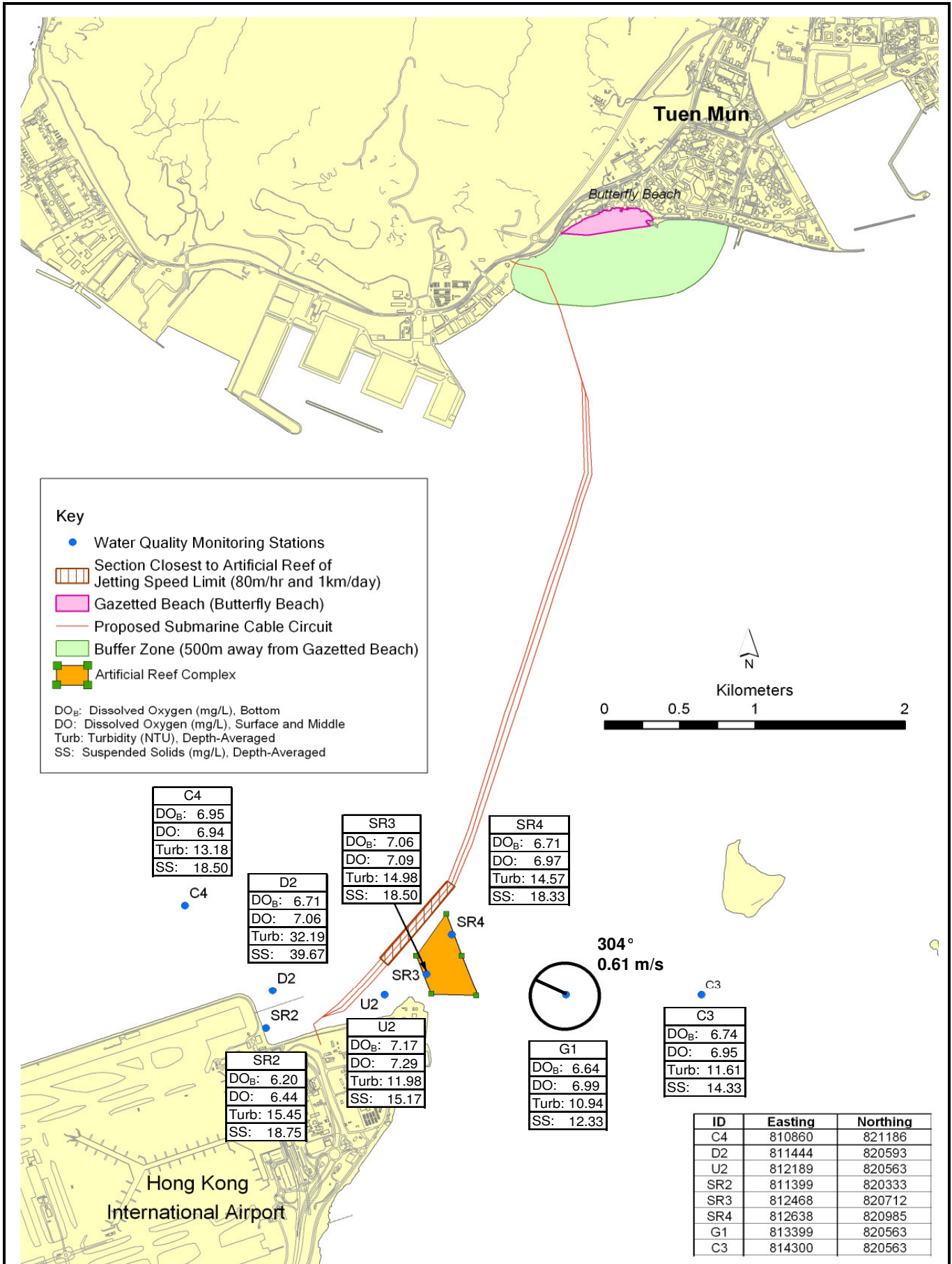


Figure 6.2

Mid Flood Water Quality Monitoring
(21 April 2008)

Table 6.2 Exceedances of Action Levels of Dissolved Oxygen, Bottom (mg/L), Dissolved Oxygen, Surface and Middle (mg/L), depth-averaged Suspended Solids (mg/L) during Mid-ebb Tide and Mid-flood Tide on 23 April 2008

Exceedance Log No.	0072833_23 April 08_DOB_E_Station D2 0072833_23 April 08_DOB_E_Station U2 0072833_23 April 08_DO_E_Station U2 0072833_23 April 08_DOB_E_Station SR2 0072833_23 April 08_DO_E_Station SR2 0072833_23 April 08_DOB_E_Station SR3 0072833_23 April 08_DO_E_Station SR3 0072833_23 April 08_SS_E_Station SR3 0072833_23 April 08_DOB_E_Station SR4 0072833_23 April 08_DO_E_Station SR4 0072833_23 April 08_DOB_F_Station D2 0072833_23 April 08_DO_F_Station D2 0072833_23 April 08_DOB_F_Station U2 0072833_23 April 08_DO_F_Station U2 0072833_23 April 08_DOB_F_Station SR2 0072833_23 April 08_DO_F_Station SR2 0072833_23 April 08_DOB_F_Station SR3 0072833_23 April 08_DO_F_Station SR3 0072833_23 April 08_DOB_F_Station SR4 0072833_23 April 08_DO_F_Station SR4
Sampling date	23 April 2008
Monitoring station	Stations D2, U2, SR2, SR3 and SR4
Parameter	Dissolved Oxygen, Bottom (mg/L) Dissolved Oxygen, Surface and Middle (mg/L) Depth-averaged Suspended Solids (SS, mg/L)
Action Levels	Mid-ebb DO, Bottom = 6.9 DO, Surface and Middle = 6.6 SS = 21.6 Mid-flood DO, Bottom = 6.8 DO, Surface and Middle = 6.8 SS = 30.8
Limit Levels	Mid-ebb DO, Bottom = 2.0 DO, Surface and Middle = 4.0 SS = 29.8 Mid-flood DO, Bottom = 2.0 DO, Surface and Middle = 4.0 SS = 34.3
Measured Levels at D2	Mid-ebb DO, Bottom = 6.64 (exceeds Action Level) DO, Surface and Middle = 6.61 SS = 8.50 Mid-flood DO, Bottom = 5.83 (exceeds Action Level) DO, Surface and Middle = 6.05 (exceeds Action Level) SS = 27.33
Measured Levels at U2	Mid-ebb DO, Bottom = 6.48 (exceeds Action Level) DO, Surface and Middle = 6.52 (exceeds Action Level) SS = 7.50 Mid-flood DO, Bottom = 5.82 (exceeds Action Level) DO, Surface and Middle = 5.65 (exceeds Action Level) SS = 13.75
Measured Levels at SR2	Mid-ebb DO, Bottom = 6.12 (exceeds Action Level) DO, Surface and Middle = 6.18 (exceeds Action Level) SS = 9.50

	Mid-flood	DO, Bottom = 5.82 (exceeds Action Level) DO, Surface and Middle = 5.65 (exceeds Action Level) SS = 13.75
Measured Levels at SR3	Mid-ebb	DO, Bottom = 6.15 (exceeds Action Level) DO, Surface and Middle = 6.47 (exceeds Action Level) SS = 25.67 (exceeds Action Level)
	Mid-flood	DO, Bottom = 6.42 (exceeds Action Level) DO, Surface and Middle = 6.53 (exceeds Action Level) SS = 11.17
Measured Levels at SR4	Mid-ebb	DO, Bottom = 6.11 (exceeds Action Level) DO, Surface and Middle = 6.43 (exceeds Action Level) SS = 14.00
	Mid-flood	DO, Bottom = 6.40 (exceeds Action Level) DO, Surface and Middle = 6.54 (exceeds Action Level) SS = 10.83

The Contractor confirmed that cable laying works were conducted near the Airport landing site on 23 April 2008.

During mid-ebb and mid-flood tidal conditions, DO levels at the concerned stations were in similar magnitude to or higher magnitude than the DO levels recorded at the Control Stations C3 and C4 (see *Figures 6.3 and 6.4*). This implies the ambient level of DO may be lower than the baseline conditions (recorded during January 2008 for the Airport side) because of seasonal variations as mentioned in *Section 5.1*.

In addition, impact stations SR3, SR4 and U2 were located upstream of the project site during mid-flood, at where they were not expected to be influenced by the project works. Moreover, the contractor confirmed that the marine works were started at 8:30 am and completed at 4:35 pm. Hence, the downstream concern stations D2 and SR2 were not expected to be influenced by the construction works as the water samples of those two stations were taken before 8:30 am.

It should be noted that U2 was located closer to the project site compared to SR3 but no exceedance of SS was recorded during mid-ebb. This implied the SS exceedance observed at station SR3 may be caused by some localised activities in the vicinity which were not related to the project. Furthermore, SS levels of all Impact Stations did not show non-compliance during the preceding mid-flood tidal conditions.

Based on the above, the exceedances during mid-ebb and mid-flood were considered unlikely to be caused by the project and therefore, no action was necessary.

The exceedance incident has been notified to EPD and LCSD.

6.1.3

Exceedance on 24 April 2008

Exceedance of the Limit Levels of depth-averaged Turbidity (NTU) and Suspended Solids (mg/L) were recorded at Stations D1 and U1 during mid-ebb tide on 24 April 2008 (*Table 6.3*).

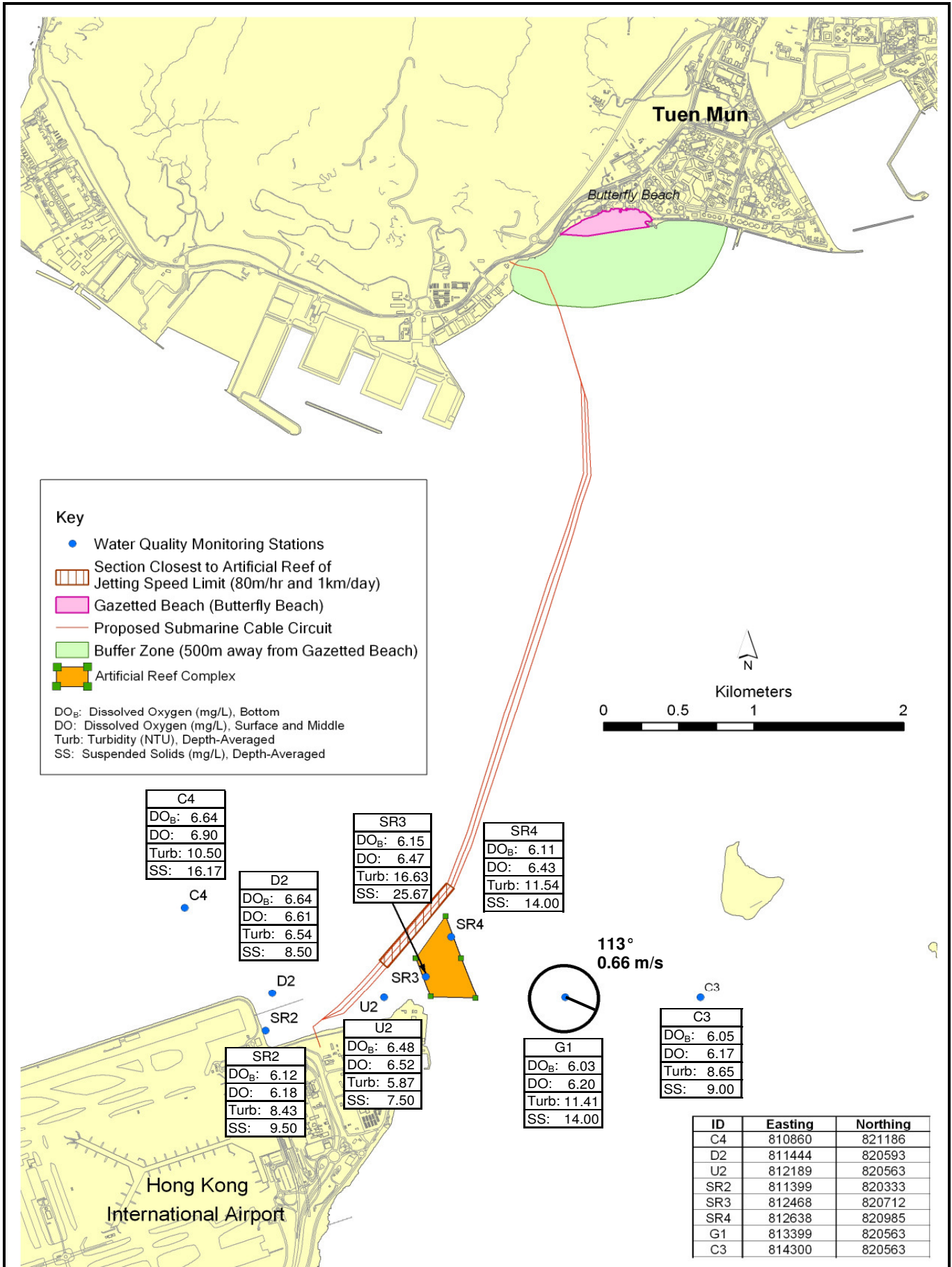


Figure 6.3

Mid Ebb Water Quality Monitoring
 (23 April 2008)

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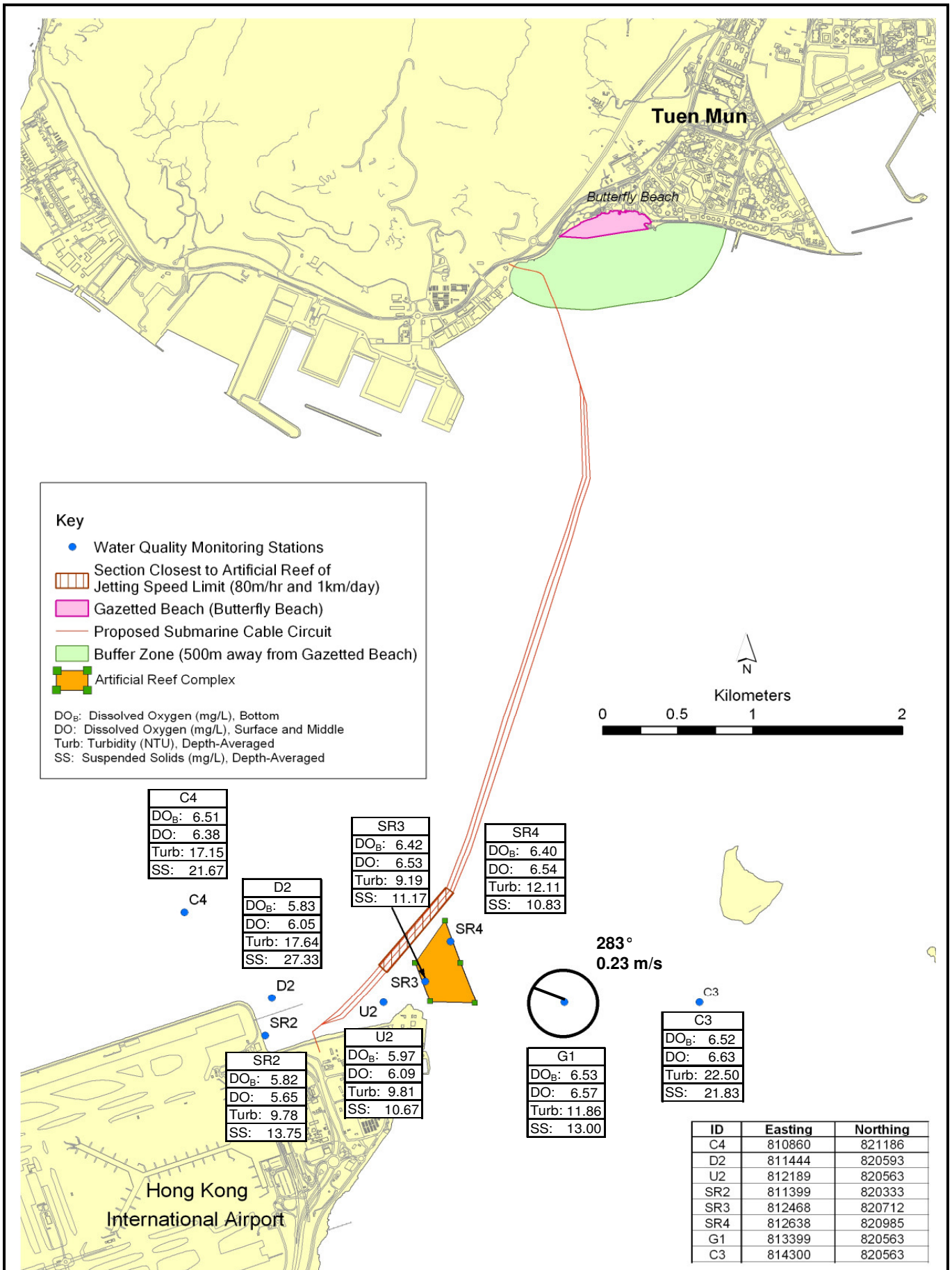


Figure 6.4

Mid Flood Water Quality Monitoring
 (23 April 2008)

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Table 6.3 *Exceedance of Limit Levels of Depth-averaged Turbidity (NTU) and Suspended Solids (mg/L) during Mid-ebb Tide on 24 April 2008*

Exceedance Log No.	0072833_24 April 08_Turb_E_Station D1 0072833_24 April 08_SS_E_Station D1 0072833_24 April 08_Turb_E_Station U1 0072833_24 April 08_SS_E_Station U1	
Sampling date	24 April 2008	
Monitoring station	D1 and U1	
Parameter	Turbidity (NTU) Depth-averaged Suspended Solids (SS, mg/L)	
Action Levels	Mid-ebb	Turbidity = 7.0 ; SS = 12.8
	Mid-flood	Turbidity = 14.8 ; SS = 23.6
Limit Levels	Mid-ebb	Turbidity = 8.3 ; SS = 13.3
	Mid-flood	Turbidity = 18.9 ; SS = 28.3
Measured Levels at D1	Mid-ebb	Turbidity = 10.40 (exceeds Limit Level) SS = 15.83 (exceeds Limit Level)
	Mid-flood	Turbidity = 4.52 SS = 5.17
Measured Levels at U1	Mid-ebb	Turbidity = 8.38 (exceeds Limit Level) SS = 14.00 (exceeds Limit Level)
	Mid-flood	Turbidity = 6.05 SS = 8.17

The Contractor confirmed cable landing operations were conducted near the Airport landing site, ie not in close proximity to the monitoring stations. The cable landing works involved the relocation of the cable into a pre-dredged trench which was not expected to disturb the seabed.

It was observed that the levels of turbidity and SS recorded at the upstream stations C2 and D1 were generally higher than those measured at the downstream stations (see *Figure 6.5*). This suggests that there would be influence from the upstream activities. Moreover, turbidity and SS levels of all Impact Stations did not show non-compliance during the preceding mid-flood tidal conditions. This implies that there may be temporarily tidal influence at the area and the exceedance may be caused by natural fluctuation. No action was therefore required.

The exceedance incident has been notified to EPD and LCSD.

6.1.4 *Exceedance on 25 April 2008*

Exceedances of the Action Levels of Dissolved Oxygen, Bottom (mg/L) and Dissolved Oxygen, Surface and Middle (mg/L) were recorded at Stations D2, U2, SR2, SR3 and SR4 during mid-ebb tide and mid-flood tide on 25 April 2008 (*Table 6.4*).

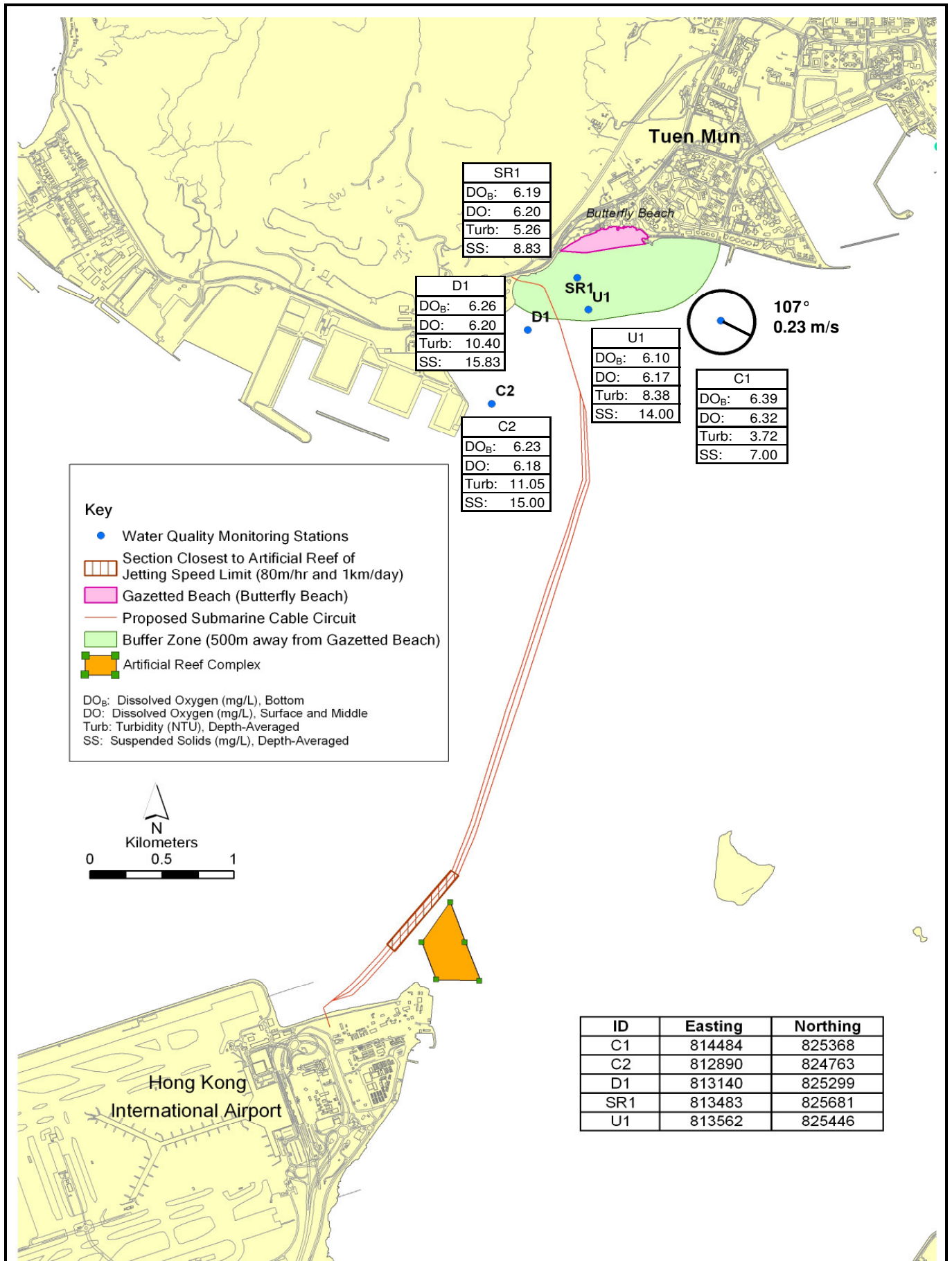


Figure 6.5

Mid Ebb Water Quality Monitoring
 (24 April 2008)

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Table 6.4 Exceedances of Action Levels of Dissolved Oxygen, Bottom (mg/L) and Dissolved Oxygen, Surface and Middle (mg/L) during Mid-ebb Tide and Mid-flood Tide on 25 April 2008

Exceedance Log No.	0072833_25 April 08_DOB_E_Station D2 0072833_25 April 08_DOB_E_Station U2 0072833_25 April 08_DOB_E_Station SR2 0072833_25 April 08_DO_E_Station SR2 0072833_25 April 08_DOB_E_Station SR3 0072833_25 April 08_DOB_E_Station SR4 0072833_25 April 08_DO_E_Station SR4 0072833_25 April 08_DO_F_Station D2 0072833_25 April 08_DOB_F_Station U2 0072833_25 April 08_DO_F_Station U2 0072833_25 April 08_DOB_F_Station SR2 0072833_25 April 08_DO_F_Station SR2 0072833_25 April 08_DOB_F_Station SR3 0072833_25 April 08_DO_F_Station SR3 0072833_25 April 08_DOB_F_Station SR4 0072833_25 April 08_DO_F_Station SR4	
Sampling date	25 April 2008	
Monitoring station	Stations D2, U2, SR2, SR3 and SR4	
Parameter	Dissolved Oxygen, Bottom (mg/L) Dissolved Oxygen, Surface and Middle (mg/L)	
Action Levels	Mid-ebb	DO, Bottom = 6.9 DO, Surface and Middle = 6.6
	Mid-flood	DO, Bottom = 6.8 DO, Surface and Middle = 6.8
Limit Levels	Mid-ebb	DO, Bottom = 2.0 DO, Surface and Middle = 4.0
	Mid-flood	DO, Bottom = 2.0 DO, Surface and Middle = 4.0
Measured Levels at D2	Mid-ebb	DO, Bottom = 6.68 (exceeds Action Level) DO, Surface and Middle = 6.68
	Mid-flood	DO, Bottom = 6.85 DO, Surface and Middle = 6.67 (exceeds Action Level)
Measured Levels at U2	Mid-ebb	DO, Bottom = 6.70 (exceeds Action Level) DO, Surface and Middle = 6.68
	Mid-flood	DO, Bottom = 6.62 (exceeds Action Level) DO, Surface and Middle = 6.60 (exceeds Action Level)
Measured Levels at SR2	Mid-ebb	DO, Bottom = 5.83 (exceeds Action Level) DO, Surface and Middle = 5.79 (exceeds Action Level)
	Mid-flood	DO, Bottom = 6.24 (exceeds Action Level) DO, Surface and Middle = 6.25 (exceeds Action Level)
Measured Levels at SR3	Mid-ebb	DO, Bottom = 6.73 (exceeds Action Level) DO, Surface and Middle = 6.73
	Mid-flood	DO, Bottom = 6.54 (exceeds Action Level) DO, Surface and Middle = 6.57 (exceeds Action Level)
Measured Levels at SR4	Mid-ebb	DO, Bottom = 6.69 (exceeds Action Level) DO, Surface and Middle = 6.59 (exceeds Action Level)
	Mid-flood	DO, Bottom = 6.50 (exceeds Action Level) DO, Surface and Middle = 6.50 (exceeds Action Level)

The Contractor confirmed that only diving inspection was conducted near the Airport side on 25 April 2008. No jetting operations were undertaken.

During mid-ebb tidal and mid-flood tidal conditions, DO levels at the concerned stations were in similar or higher magnitude to DO level recorded at the Control Stations C3 and C4 (see *Figures 6.6 and 6.7*). This suggests that the exceedances may be due to a low background level of DO which was caused by the seasonal changes as above discussed in *Section 5.1*. Hence, the exceedances were unlikely to be caused by the Project works and therefore considered to be an isolated case. No action was required.

The exceedance incident has been notified to EPD and LCSD.

6.1.5 *Exceedance on 26 April 2008*

Exceedances of the Limit Levels of depth-averaged Turbidity (NTU) and Suspended Solids (mg/L) were recorded at Stations D1 and U1 during mid-ebb tide on 26 April 2008 (*Table 6.5*).

Table 6.5 *Exceedances of Limit Levels of depth-averaged Turbidity (NTU) and Suspended Solids (mg/L) during Mid-ebb Tide on 26 April 2008*

Exceedance Log No.	0072833_26 April 08_Turb_E_Station D1 0072833_26 April 08_SS_E_Station D1 0072833_26 April 08_Turb_E_Station U1	
Sampling date	26 April 2008	
Monitoring station	D1, U1	
Parameter	Turbidity (NTU) Suspended Solids (SS, mg/L)	
Action Levels	Mid-Ebb	Turbidity = 7.0 ; SS = 12.8
	Mid-Flood	Turbidity = 14.8 ; SS = 23.6
Limit Levels	Mid-Ebb	Turbidity = 8.3 ; SS = 13.3
	Mid-Flood	Turbidity = 18.9 ; SS = 28.3
Measured Levels at D1	Mid-Ebb	Turbidity = 11.00 (exceeds Limit Level) SS = 27.50 (exceeds Limit Level)
	Mid-Flood	Turbidity = 4.75 SS = 6.33
Measured Levels at U1	Mid-Ebb	Turbidity = 8.53 (exceeds Limit Level) SS = 11.17
	Mid-Flood	Turbidity = 4.86 SS = 5.50

The Contractor confirmed that no marine works were undertaken at the Tuen Mun landing site on 26 April 2008.

Relatively high turbidity and SS levels were recorded at the downstream Control Station C1 and upstream Control Station C2 (see *Figure 6.8*). This implies the exceedances may be due to high background levels of turbidity and SS. Also, no non-compliance of turbidity and SS was recorded at all the impact stations during the preceding mid-flood tidal conditions. No action was hence required.

The exceedance incident has been notified to EPD and LCSD.

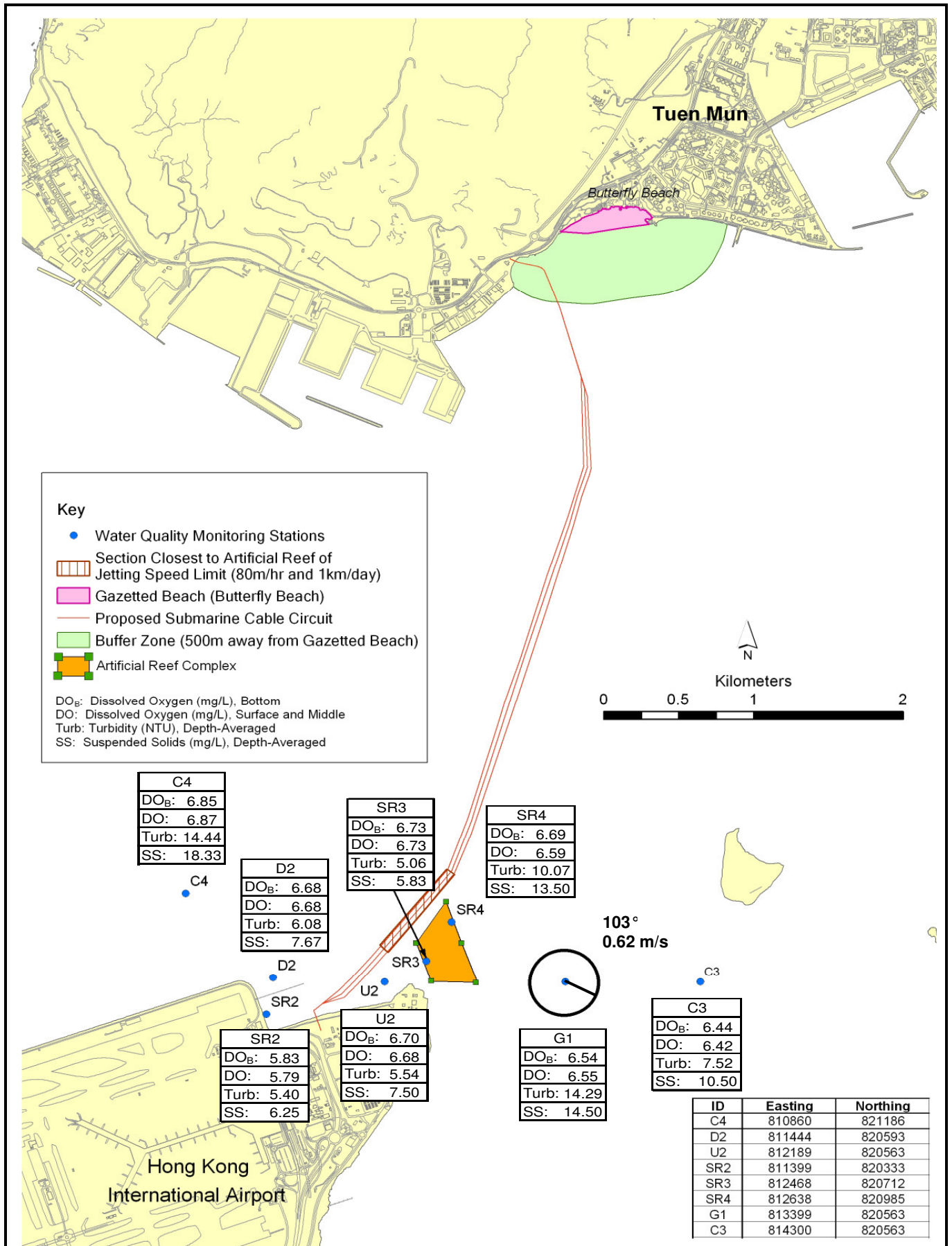


Figure 6.6

Mid Ebb Water Quality Monitoring

(25 April 2008)

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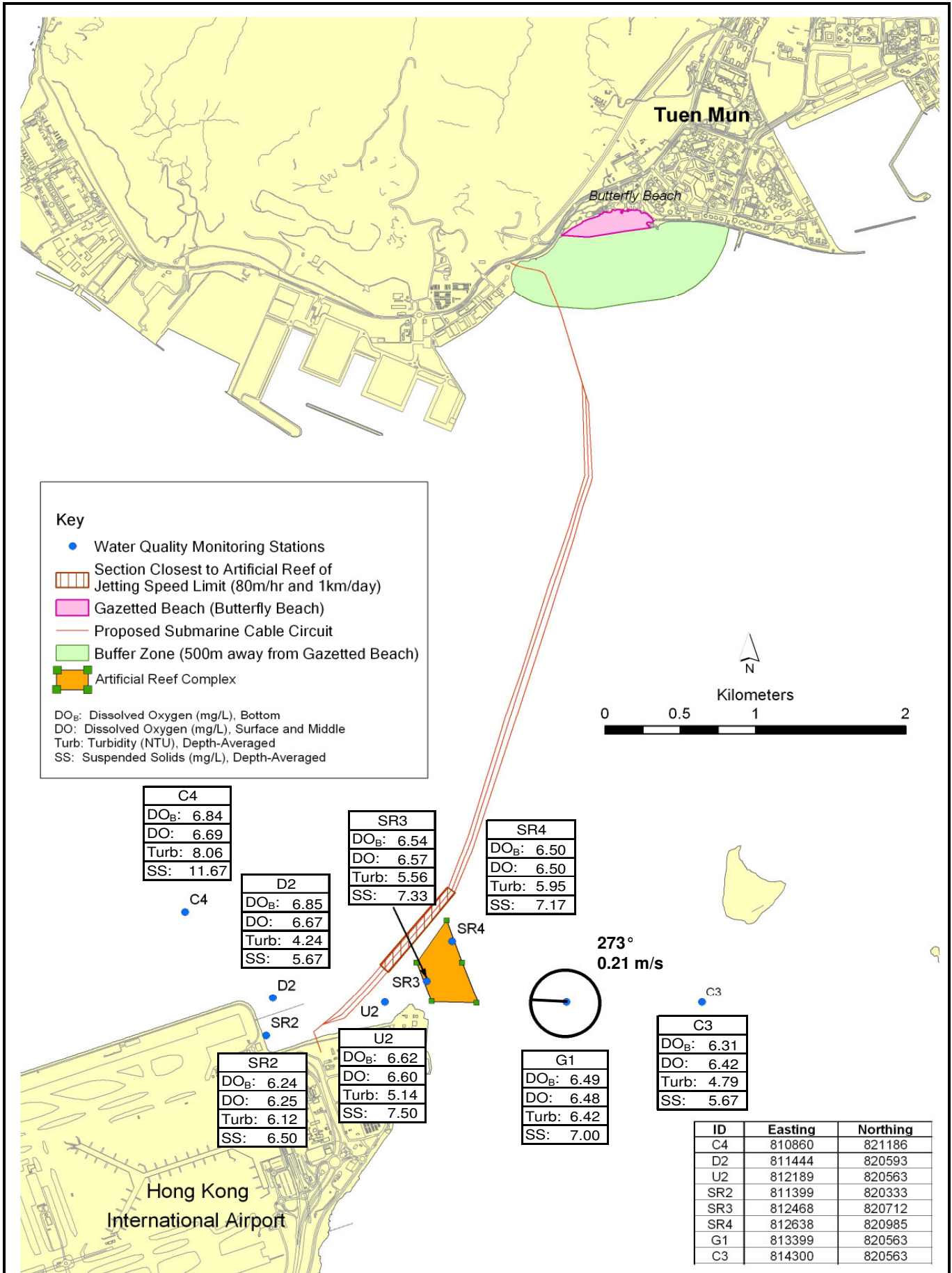


Figure 6.7

Mid Flood Water Quality Monitoring
 (25 April 2008)

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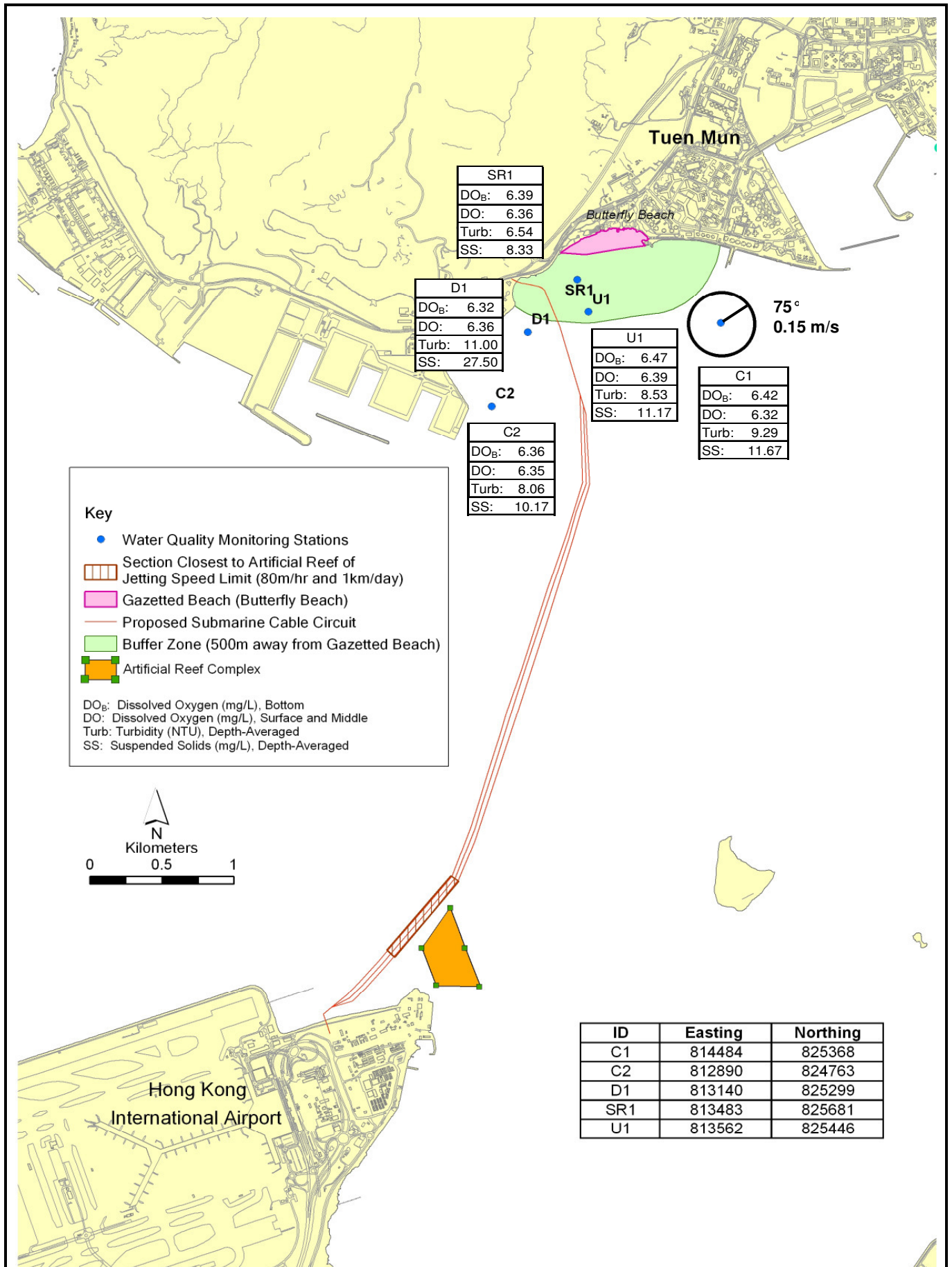


Figure 6.8

Mid Ebb Water Quality Monitoring

(26 April 2008)

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6.2 *SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE*

No non-compliance event was recorded during the reporting period.

6.3 *SUMMARY OF ENVIRONMENTAL COMPLAINT*

No complaint was received during the reporting period.

6.4 *SUMMARY OF ENVIRONMENTAL SUMMONS AND PROSECUTION*

No summons or prosecution on environmental matters was received during the reporting period.

7.1 KEY ISSUES FOR THE COMING MONTH

During the following week (ie 28 April to 4 May 2008), no marine works will be conducted from 28 April to 30 April 2008. Transfer of concrete slabs and blackfill materials to the barge will be undertaken on 1 May 2008 and 2 May 2008, respectively. Then, backfilling works followed by manual installation of articulating pipes will be carried out near the Airport side. Since there will be no marine works at Tuen Mun side, the Impact Water Quality Monitoring for Tuen Mun side will be suspended until the resumption of marine works near the Tuen Mun landing site.

The expected construction programme is enclosed in *Annex A*.

7.2 MONITORING SCHEDULE FOR THE COMING MONTHS

The tentative schedule of impact water quality monitoring in April and May 2008 is presented in *Annex C*. The environmental monitoring will be conducted at the same monitoring locations as those for the reporting period.

Cable laying (jetting) operations and landing works were carried out between the Airport and Tuen Mun land sites on 22 April and 23 April 2008. The monitoring data collected are therefore compared with the impact assessment predictions in the Project Profile.

It should be noted that exceedances of Action and Limit Levels were recorded when there were no cable laying (jetting) operations undertaken. The exceedances were investigated (see *Section 6.1*) and considered unlikely due to the Project. The impact water quality monitoring results are in line with the conclusions made in the water quality impact assessment in the Project Profile.

This Weekly Impact Monitoring Report presents the EM&A works undertaken during the period from 14 April to 27 April 2008 in accordance with the EM&A Manual and the requirements under *EP-267/2007*.

All measured dissolved oxygen levels complied with the Action and Limit (AL) Levels with exception of 21 April, 23 April and 25 April 2008. Besides, all measured Turbidity and Suspended Solids (SS) levels were below AL Levels with exception of 21 April, 23 April, 24 April and 26 April 2008. The exceedances were examined against the construction works. It was concluded that they were isolated cases and unlikely related to the Project. Moreover, investigation on the decreasing trend of DO concentrations will continue in the upcoming weekly report.

No non-compliance event was recorded during the reporting week.

No complaint and summons/prosecution was received during the reporting week.

The ET will keep track of the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Annex A

Works Programmes of the
Period between 14 April
and 11 May 2008

Marine Work of 132kV Submarine Cable Installation between Airport to Tuen Mun

Item Date	Workdone for Last Week							Plan for This Week							Anticipate Plan for Next Week							
	14/4	15/4	16/4	17/4	18/4	19/4	20/4	21/4	22/4	23/4	24/4	25/4	26/4	27/4	28/4	29/4	30/4	1/5	2/5	3/5	4/5	
1 Mobilization of Plants																						
2 Utilities Detection																						
3 Mobilization of Marine Plant																						
4 Site Setting Out																						
5 Site Clearance																						
6 Installation of Silt Curtain																						
5 Rock Breaking (Land Portion)																						
6 Rock Breaking (Marine Portion)																						
7 Dredging (Tuen Mun)																						
8 Mobilization of Marine Plant																						
9 Dredging (Airport)																						
10 Mobilization of Cable Laying Barges																						
11 Cable Lay Barges Preparation Work																						
12 Installation of Silt Curtain (AR)																						
13 Cable Burial Machine Testing																						
14 Cable Laying																						
15 Cable Landing Work (Tuen Mun)																						
16 Cable Landing Work (Airport)																						
17 Backfill and Installation of Concrete Slabs (Tuen Mun) * inside the restriction zone.																						
18 Backfill and Installation of Concrete Slabs (Tuen Mun) * outside the restriction zone.																						

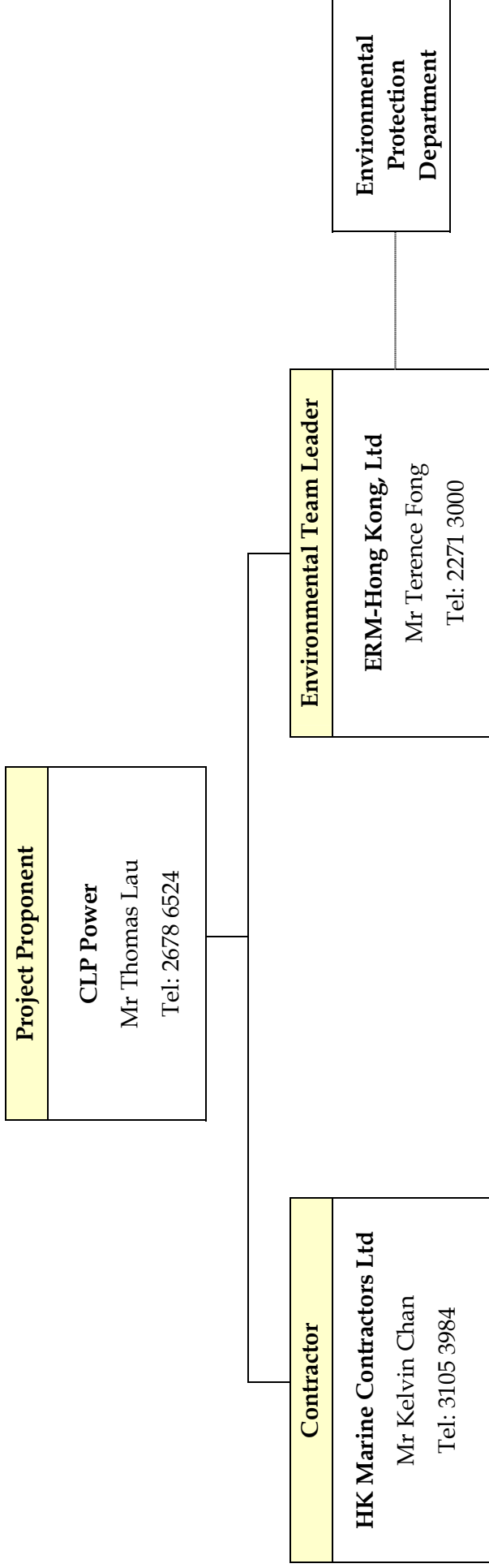
Marine Work of 132kV Submarine Cable Installation between Airport to Tuen Mun

Item Date	Workdone for Last Week							Plan for This Week							Anticipate Plan for Next Week							
	21/4	22/4	23/4	24/4	25/4	26/4	27/4	28/4	29/4	30/4	1/5	2/5	3/5	4/5	5/5	6/5	7/5	8/5	9/5	10/5	11/5	
1 Mobilization of Plants																						
2 Utilities Detection																						
3 Mobilization of Marine Plant																						
4 Site Setting Out																						
5 Site Clearance																						
6 Installation of Silt Curtain																						
5 Rock Breaking (Land Portion)																						
6 Rock Breaking (Marine Portion)																						
7 Dredging (Tuen Mun)																						
8 Mobilization of Marine Plant																						
9 Dredging (Airport)																						
10 Mobilization of Cable Laying Barges																						
11 Cable Lay Barges Preparation Work																						
12 Installation of Silt Curtain (AR)																						
13 Cable Burial Machine Testing																						
14 Cable Laying																						
15 Cable Landing Work (Tuen Mun)																						
16 Cable Landing Work (Airport)																						
17 Backfill and Installation of Concrete Slabs (Tuen Mun) * inside the restriction zone.																						
18 Backfill and Installation of Concrete Slabs (Tuen Mun) * outside the restriction zone.																						

Annex B

Project Organisation Chart (with Contact Details)

ANNEX B - PROJECT ORGANIZATION (WITH CONTACT DETAILS)



_____ Line of Project Management Responsibility

..... Communication Channel

Annex C

Tentative Monitoring Schedule

**Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit
Tentative Water Quality Monitoring Schedule at Tuen Mun and Airport landing site - April 2008**

Reference Tidal Station: Lok On Pai (source: HK Observatory Department)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Apr	2-Apr	3-Apr	4-Apr	5-Apr
		Mid-Flood 14:29 Mid-Ebb 20:00 <i>Impact Monitoring (Tuen Mun)</i>	Mid-Ebb 10:59 Mid-Flood 15:54 <i>Impact Monitoring (Airport)</i>	Mid-Ebb 11:31 Mid-Flood 16:53 <i>Impact Monitoring (Tuen Mun)</i>	Mid-Ebb 12:00 Mid-Flood 17:45 <i>Impact Monitoring (Airport)</i>	Mid-Ebb 12:30 Mid-Flood 18:34 <i>Impact Monitoring (Tuen Mun)</i>
6-Apr	7-Apr	8-Apr	9-Apr	10-Apr	11-Apr	12-Apr
	Mid-Ebb 13:42 Mid-Flood 20:00 <i>Impact Monitoring (Airport)</i>	Mid-Flood 8:00 Mid-Ebb 14:23 <i>Impact Monitoring (Tuen Mun)</i>	Mid-Flood 8:18 Mid-Ebb 15:09 <i>Impact Monitoring (Airport)</i>	Mid-Flood 8:50 Mid-Ebb 16:00 <i>Impact Monitoring (Tuen Mun)</i>	Mid-Flood 9:22 Mid-Ebb 16:55 <i>Impact Monitoring (Airport)</i>	
13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr
Mid-Flood 9:00 Mid-Ebb 19:25 <i>Impact Monitoring (Tuen Mun)</i>	No marine works to be carried out at both the Tuen Mun and Airport sides and hence no impact water quality monitoring					Mid-Ebb 12:28 Mid-Flood 18:50 <i>Impact Monitoring (Airport)</i>
						<small>Note: Marine works and impact monitoring cancelled due to adverse weather conditions (ie Typhoon Neoguri).</small>
20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr
	Mid-Ebb 13:29 Mid-Flood 20:00 <i>Impact Monitoring (Airport)</i>	Mid-Ebb 14:00 Mid-Flood 20:00 <i>Impact Monitoring (Tuen Mun)</i>	Mid-Flood 8:00 Mid-Ebb 14:33 <i>Impact Monitoring (Airport)</i>	Mid-Flood 8:07 Mid-Ebb 15:08 <i>Impact Monitoring (Tuen Mun)</i>	Mid-Flood 8:27 Mid-Ebb 15:46 <i>Impact Monitoring (Airport)</i>	Mid-Flood 8:43 Mid-Ebb 16:30 <i>Impact Monitoring (Tuen Mun)</i>
27-Apr	28-Apr	29-Apr	30-Apr			
	Mid-Flood 8:00 Mid-Ebb 18:11 <i>Impact Monitoring (Airport)</i>		Mid-Ebb 9:36 Mid-Flood 14:10 <i>Impact Monitoring (Airport)</i>			

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

**Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit
Tentative Water Quality Monitoring Schedule at Tuen Mun and Airport landing site - May 2008**

Reference Tidal Station: Lok On Pai (source: HK Observatory Department)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-May	2-May	3-May
					Mid-Ebb 10:52 Mid-Flood 16:34 <i>Impact Monitoring (Airport)</i>	
4-May	5-May	6-May	7-May	8-May	9-May	10-May
	Mid-Ebb 12:41 Mid-Flood 19:22 <i>Impact Monitoring (Airport)</i>		Mid-Ebb 14:13 Mid-Flood 20:30 <i>Impact Monitoring (Airport)</i>		Mid-Flood 8:28 Mid-Ebb 15:52 <i>Impact Monitoring (Airport)</i>	
11-May	12-May	13-May	14-May	15-May	16-May	17-May
	Mid-Flood 11:27 Mid-Ebb 19:05 <i>Impact Monitoring (Airport)</i>		Mid-Ebb 9:39 Mid-Flood 15:01 <i>Impact Monitoring (Airport)</i>		Mid-Ebb 10:59 Mid-Flood 17:10 <i>Impact Monitoring (Airport)</i>	
18-May	19-May	20-May	21-May	22-May	23-May	24-May
	Mid-Ebb 12:38 Mid-Flood 19:36 <i>Impact Monitoring (Airport)</i>		Mid-Ebb 13:45 Mid-Flood 20:30 <i>Impact Monitoring (Airport)</i>		Mid-Flood 7:36 Mid-Ebb 14:56 <i>Impact Monitoring (Airport)</i>	
25-May	26-May	27-May	28-May	29-May	30-May	31-May
	Mid-Flood 9:08 Mid-Ebb 16:59 <i>Post-Project Monitoring (Airport)</i>	Mid-Flood 8:00 Mid-Ebb 17:49 <i>Post-Project Monitoring (Tuen Mun)</i>	Mid-Flood 11:53 Mid-Ebb 18:48 <i>Post-Project Monitoring (Airport)</i>	Mid-Flood 13:41 Mid-Ebb 19:58 <i>Post-Project Monitoring (Tuen Mun)</i>	Mid-Ebb 9:27 Mid-Flood 15:04 <i>Post-Project Monitoring (Airport)</i>	Mid-Ebb 10:10 Mid-Flood 16:18 <i>Post-Project Monitoring (Tuen Mun)</i>

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

Annex D

QA/QC Results of Laboratory Testing for Suspended Solids



CERTIFICATE OF ANALYSIS

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Project : EM&A FOR THE PROPOSED 132KV
SUBMARINE CABLE ROUTE FOR AIRPORT "A"
TO CASTLE PEAK CCTS

Laboratory : ALS Technichem (HK) Pty Ltd
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Quote number : ----

Page : 1 of 9
Work Order : HK0806198

Date received : 22 Apr 2008

Order number : ----
C-O-C number : ----
Site : ----
Date of issue : 24 Apr 2008
No. of samples - Received : 92
- Analysed : 92

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806198 supersedes any previous reports with this reference. The completion date of analysis is 23 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806198 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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Signatory
Fung Lim Chee, Richard

Position
General Manager

Authorised results for:-
Inorganics



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER									
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate (DUP) Results	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 641448)									
HK0806198-001	2008/04/21/1533/C4/B/E/ REPL. 1	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	10	0.0
HK0806198-011	2008/04/21/1504/SR3/M/E/ REPL. 2	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	6	18.0
EA/ED: Physical and Aggregate Properties (QC Lot: 641449)									
HK0806198-021	2008/04/21/1522/D2/T/E/ REPL. 1	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	7	0.0
HK0806198-032	2008/04/21/1447/SR4/M/E/ REPL. 1	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 641450)									
HK0806198-041	2008/04/21/1433/G1/M/E/ REPL. 2	EA025: Suspended Solids (SS)	----	1	mg/L	19	19	21	12.3
HK0806198-051	2008/04/21/2016/C4/M/F/ REPL. 2	EA025: Suspended Solids (SS)	----	1	mg/L	22	22	21	7.1
EA/ED: Physical and Aggregate Properties (QC Lot: 641451)									
HK0806198-061	2008/04/21/1947/U2/T/F/ REPL. 1	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	9	19.0
HK0806198-071	2008/04/21/1836/C3/B/F/ REPL. 1	EA025: Suspended Solids (SS)	----	1	mg/L	17	17	18	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 641452)									
HK0806198-081	2008/04/21/1930/SR4/M/F/ REPL. 2	EA025: Suspended Solids (SS)	----	1	mg/L	11	11	11	0.0
HK0806198-091	2008/04/21/1852/SR2/B/F/ REPL. 2	EA025: Suspended Solids (SS)	----	1	mg/L	20	20	20	0.0

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results



Page Number : 9 of 9
 Client : ERM HONG KONG
 Work Order : HK0806198

Matrix Type: WATER

Method: Analysis Description	CAS number	Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
		LOR	Units	Result	Spike Concentration	SCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)	Control Limit
EA/ED: Physical and Aggregate Properties (QC:Lot: 641448)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	99.5	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 641449)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	90.0	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 641450)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	102	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 641451)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	98.0	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 641452)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	102	-----	-----	85	115	-----	-----



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SUBMARINE CABLE ROUTE FOR AIRPORT "A"
TO CASTLE PEAK CCTS

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Page : 1 of 6
Work Order : HK0806275

Date received : 23 Apr 2008

Order number : ----
C-O-C number : ----
Site : ----
Date of issue : 25 Apr 2008
No. of samples - Received : 60
- Analysed : 60

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806275 supersedes any previous reports with this reference. The completion date of analysis is 24 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806275 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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Signatory : **Fung Lim Chee, Richard**
Position : **General Manager**
Authorised results for:- **Inorganics**



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER		Method: Analysis Description		Duplicate (DUP) Results		
Laboratory Sample ID	Client Sample ID	CAS number	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 642566)						
HK0806275-001	2008/04/22/1447/C1/B/E/ REPL. 1	-----	mg/L	10	10	0.0
HK0806275-011	2008/04/22/1503/SR1/M/E/ REPL. 2	-----	mg/L	9	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 642567)						
HK0806275-021	2008/04/22/1517/D1/T/E/ REPL. 1	-----	mg/L	4	5	0.0
HK0806275-031	2008/04/22/1841/C1/B/F/ REPL. 1	-----	mg/L	25	23	6.8
EA/ED: Physical and Aggregate Properties (QC Lot: 642568)						
HK0806275-041	2008/04/22/1857/SR1/M/F/ REPL. 2	-----	mg/L	9	10	11.0
HK0806275-051	2008/04/22/1914/D1/T/F/ REPL. 1	-----	mg/L	6	6	0.0

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results		Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Recovery Limits (%)		Value	Control Limit	
						SCS	DCS			Low
EA/ED: Physical and Aggregate Properties (QC Lot: 642566)										
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	92.0	-----	85	115	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 642567)										
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	89.5	-----	85	115	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 642568)										
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	100	-----	85	115	-----



CERTIFICATE OF ANALYSIS

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SUBMARINE CABLE ROUTE FOR AIRPORT "A"
TO CASTLE PEAK CCTS

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Page : 1 of 10
Work Order : HK0806346

Date received : 24 Apr 2008

Order number : ----
C-O-C number : ----
Site : ----
Date of issue : 25 Apr 2008
No. of samples - Received : 116
- Analysed : 116

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806346 supersedes any previous reports with this reference. The completion date of analysis is 25 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806346 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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Signatory
Fung Lim Chee, Richard

Position
General Manager

Authorised results for:-
Inorganics



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER		Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Duplicate (DUP) Results		RPD (%)
Laboratory Sample ID	Original Result						Duplicate Result		
EAI/ED: Physical and Aggregate Properties (QC Lot: 643176)									
HK0806346-001	2008/04/23/1350/C4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	27	24	11.7	
	REPL. 1								
HK0806346-011	2008/04/23/1419/SR3/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	18	17	0.0	
	REPL. 2								
EAI/ED: Physical and Aggregate Properties (QC Lot: 643181)									
HK0806346-021	2008/04/23/1406/D2/T/E/	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0	
	REPL. 1								
HK0806346-031	2008/04/23/1429/SR4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	24	26	9.6	
	REPL. 1								
EAI/ED: Physical and Aggregate Properties (QC Lot: 643185)									
HK0806346-041	2008/04/23/1448/G1/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	16	17	0.0	
	REPL. 2								
HK0806346-051	2008/04/23/1624/M1/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0	
	REPL. 2								
EAI/ED: Physical and Aggregate Properties (QC Lot: 643189)									
HK0806346-061	2008/04/23/0918/C4/T/F/	EA025: Suspended Solids (SS)	----	1	mg/L	18	17	0.0	
	REPL. 1								
HK0806346-071	2008/04/23/0746/U2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	19	19	0.0	
	REPL. 1								
EAI/ED: Physical and Aggregate Properties (QC Lot: 643193)									
HK0806346-081	2008/04/23/0818/D2/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	29	28	0.0	
	REPL. 2								
HK0806346-091	2008/04/23/0844/SR4/T/F/	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0	
	REPL. 1								
EAI/ED: Physical and Aggregate Properties (QC Lot: 643197)									
HK0806346-101	2008/04/23/0726/SR2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	16	15	9.1	
	REPL. 1								
HK0806346-111	2008/04/23/0734/M2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	9.7	
	REPL. 1								

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results



Matrix Type: WATER

Method: Analysis Description	CAS number	Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
		LOR	Units	Result	Spike Concentration	SCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)	Control Limit
EA/ED: Physical and Aggregate Properties (QC:Lot: 643176)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	94.0	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 643181)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	102	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 643185)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	112	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 643189)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	95.5	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 643193)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	93.0	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC:Lot: 643197)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	94.0	-----	-----	85	115	-----	-----



CERTIFICATE OF ANALYSIS

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Page : 1 of 6
Work Order : HK0806446

Date received : 24 Apr 2008

Order number : ----
C-O-C number : ----
Site : ----
Date of issue : 28 Apr 2008
No. of samples - Received : 60
- Analysed : 60

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806446 supersedes any previous reports with this reference. The completion date of analysis is 28 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806446 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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Signatory
Fung Lim Chee, Richard

Position
General Manager

Authorised results for:-
Inorganics



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER		Method: Analysis Description		Duplicate (DUP) Results		
Laboratory Sample ID	Client Sample ID	CAS number	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 643674)						
HK0806446-001	2008/04/24/1342/C1/B/E/ REPL. 1	-----	mg/L	11	11	0.0
HK0806446-011	2008/04/24/1357/SR1/M/E/ REPL. 2	-----	mg/L	8	10	18.6
EA/ED: Physical and Aggregate Properties (QC Lot: 643675)						
HK0806446-021	2008/04/24/1415/D1/T/E/ REPL. 1	-----	mg/L	10	10	0.0
HK0806446-031	2008/04/24/0804/C1/B/F/ REPL. 1	-----	mg/L	20	19	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 643676)						
HK0806446-041	2008/04/24/0816/SR1/M/F/ REPL. 2	-----	mg/L	8	8	0.0
HK0806446-051	2008/04/24/0832/D1/T/F/ REPL. 1	-----	mg/L	5	5	0.0

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results		Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Recovery Limits (%)		Value	Control Limit	
						SCS	DCS			Low
EA/ED: Physical and Aggregate Properties (QC Lot: 643674)										
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	100	-----	85	115	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 643675)										
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	104	-----	85	115	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 643676)										
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	102	-----	85	115	-----



CERTIFICATE OF ANALYSIS

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SUBMARINE CABLE ROUTE FOR AIRPORT "A"
TO CASTLE PEAK CCTS
Order number : ----
C-O-C number : ----
Site : ----

Laboratory : ALS Technichem (HK) Pty Ltd
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Quote number : ----

Page : 1 of 9
Work Order : HK0806553

Date received : 26 Apr 2008

Date of issue : 29 Apr 2008
No. of samples - Received : 92
- Analysed : 92

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806553 supersedes any previous reports with this reference. The completion date of analysis is 29 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806553 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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Signatory : **Fung Lim Chee, Richard** Position : **General Manager**
Authorised results for:- **Inorganics**



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER		Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Duplicate (DUP) Results		RPD (%)
Laboratory Sample ID	Original Result						Duplicate Result		
EA/ED: Physical and Aggregate Properties (QC Lot: 644340)									
HK0806553-001	2008/04/25/1543/C4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	33	33	0.0	
	REPL. 1								
HK0806553-011	2008/04/25/1514/SR3/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0	
	REPL. 2								
EA/ED: Physical and Aggregate Properties (QC Lot: 644341)									
HK0806553-021	2008/04/25/1530/D2/T/E/	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0	
	REPL. 1								
HK0806553-031	2008/04/25/1458/SR4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	22	19	15.3	
	REPL. 1								
EA/ED: Physical and Aggregate Properties (QC Lot: 644342)									
HK0806553-041	2008/04/25/1450/G1/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	15	13	14.5	
	REPL. 2								
HK0806553-051	2008/04/25/0808/C4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	13	14	0.0	
	REPL. 2								
EA/ED: Physical and Aggregate Properties (QC Lot: 644343)									
HK0806553-062	2008/04/25/0743/U2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	12	14	16.2	
	REPL. 2								
HK0806553-073	2008/04/25/0652/C3/T/F/	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0	
	REPL. 1								
EA/ED: Physical and Aggregate Properties (QC Lot: 644344)									
HK0806553-081	2008/04/25/0722/SR4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0	
	REPL. 2								
HK0806553-091	2008/04/25/0831/SR2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0	
	REPL. 2								

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results



Page Number : 9 of 9
 Client : ERM HONG KONG
 Work Order : HK0806553

Matrix Type: WATER

Method: Analysis Description	CAS number	Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
		LOR	Units	Result	Spike Concentration	SCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 644340)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	94.0	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 644341)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	91.5	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 644342)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	94.5	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 644343)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	109	-----	-----	85	115	-----	-----
EA/ED: Physical and Aggregate Properties (QC Lot: 644344)												
EA025: Suspended Solids (SS)	-----	2	mg/L	<2	20 mg/L	102	-----	-----	85	115	-----	-----



CERTIFICATE OF ANALYSIS

Client : ERM HONG KONG
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Project : EM&A FOR THE PROPOSED 132KV
SUBMARINE CABLE ROUTE FOR AIRPORT "A"
TO CASTLE PEAK CCTS

Laboratory : ALS Technichem (HK) Pty Ltd
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Quote number : ----

Page : 1 of 6
Work Order : HK0806569

Date received : 28 Apr 2008

Order number : ----
C-O-C number : ----
Site : ----
Date of issue : 30 Apr 2008
No. of samples - Received : 60
- Analysed : 60

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806569 supersedes any previous reports with this reference. The completion date of analysis is 29 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806569 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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Signatory
Fung Lim Chee, Richard

Position
General Manager

Authorised results for:-
Inorganics



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER		Method: Analysis Description		Duplicate (DUP) Results		
Laboratory Sample ID	Client Sample ID	CAS number	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 645340)						
HK0806569-001	2008/04/26/1605/C1/B/E/ REPL. 1	----	mg/L	15	14	0.0
HK0806569-013	2008/04/26/1544/U1/B/E/ REPL. 1	----	mg/L	18	20	11.2
EA/ED: Physical and Aggregate Properties (QC Lot: 645341)						
HK0806569-021	2008/04/26/1525/D1/T/E/ REPL. 1	----	mg/L	7	7	0.0
HK0806569-031	2008/04/26/0814/C1/B/F/ REPL. 1	----	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 645342)						
HK0806569-041	2008/04/26/0835/SR1/M/F/ REPL. 2	----	mg/L	4	4	0.0
HK0806569-051	2008/04/26/0855/D1/T/F/ REPL. 1	----	mg/L	6	6	0.0

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results		Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	SCS	DCS	Recovery Limits (%)	Value	RPDs (%)	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 645340)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 645341)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 645342)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----

Annex E

Impact Water Quality Monitoring Results

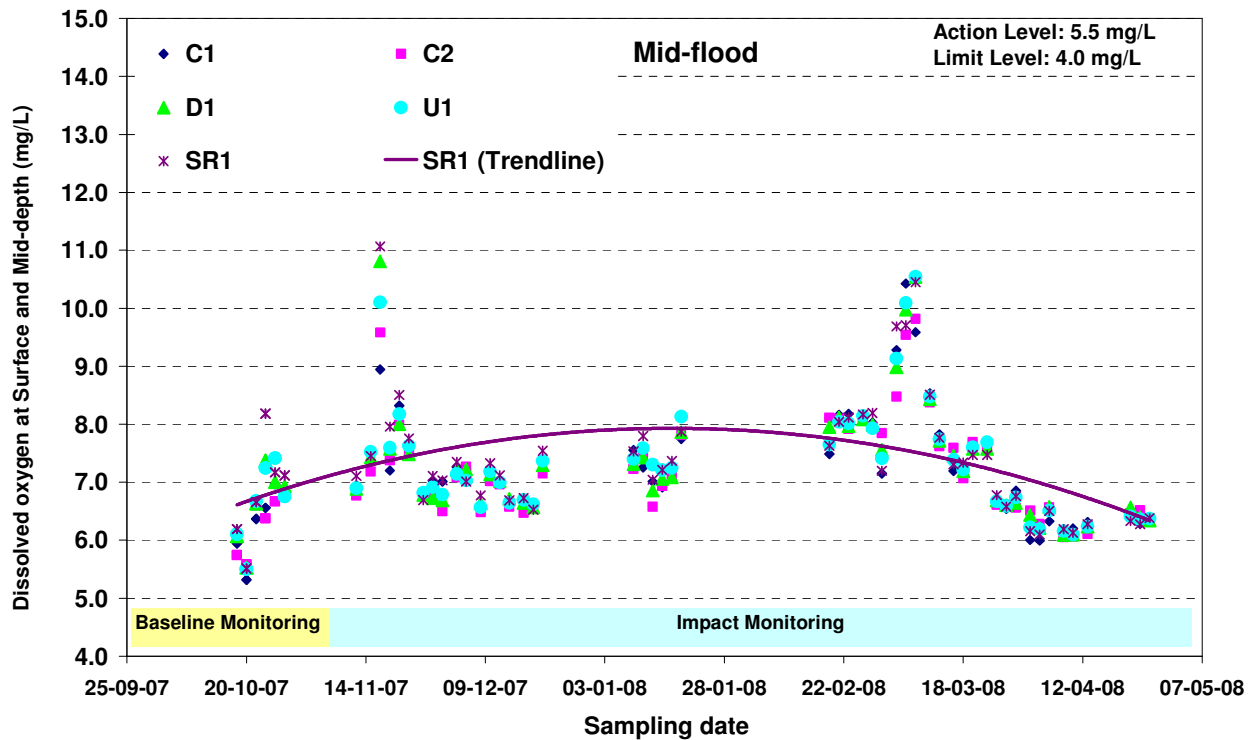
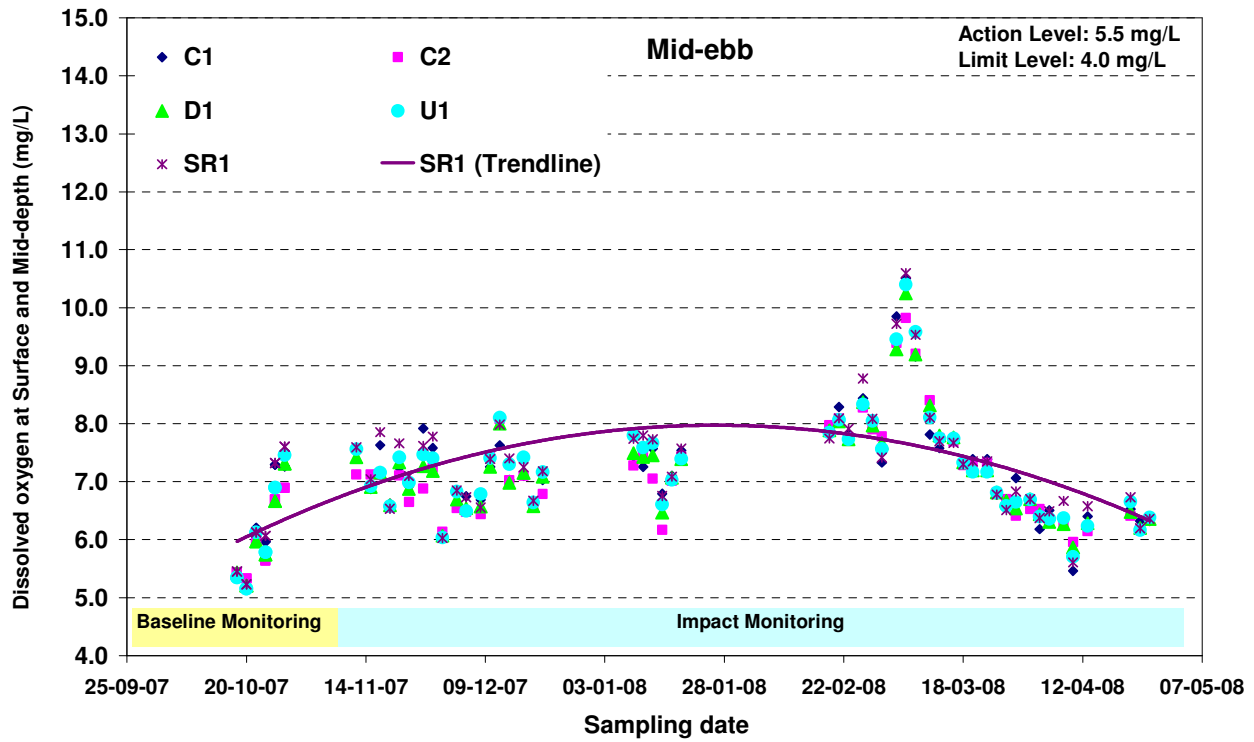


Figure E1 Dissolved oxygen concentration (mean of surface and mid-depth) (mg/L) of water samples from the five sampling locations near Tuen Mun at mid-ebb and mid-flood between 10 October 2007 and 26 April 2008



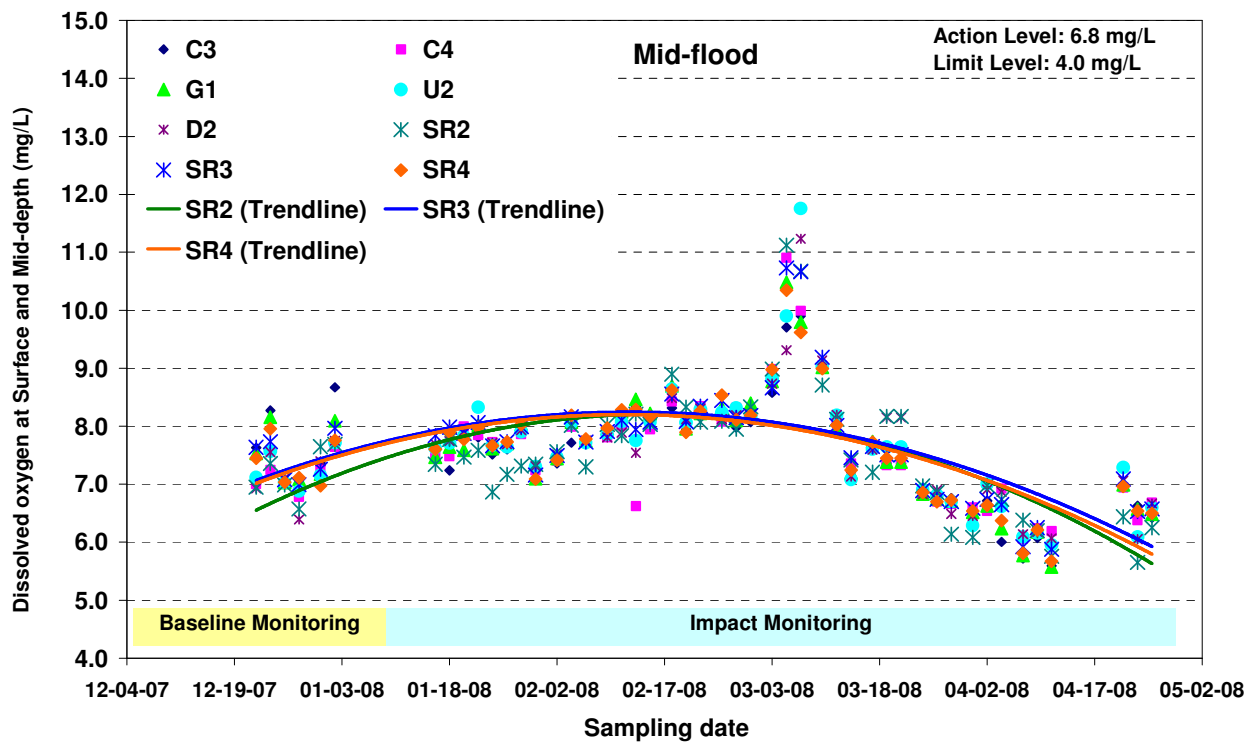
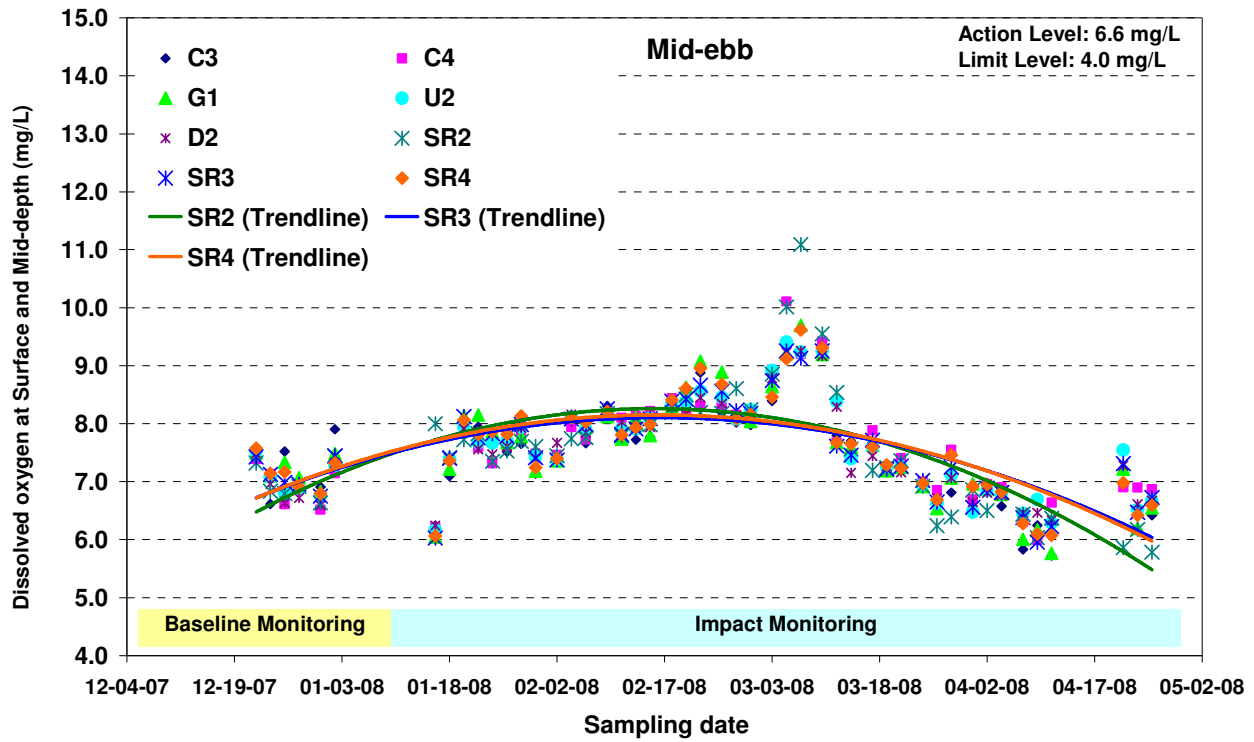


Figure E2 Dissolved oxygen concentration (mean of surface and mid-depth) (mg/L) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 22 December 2007 and 25 April 2008



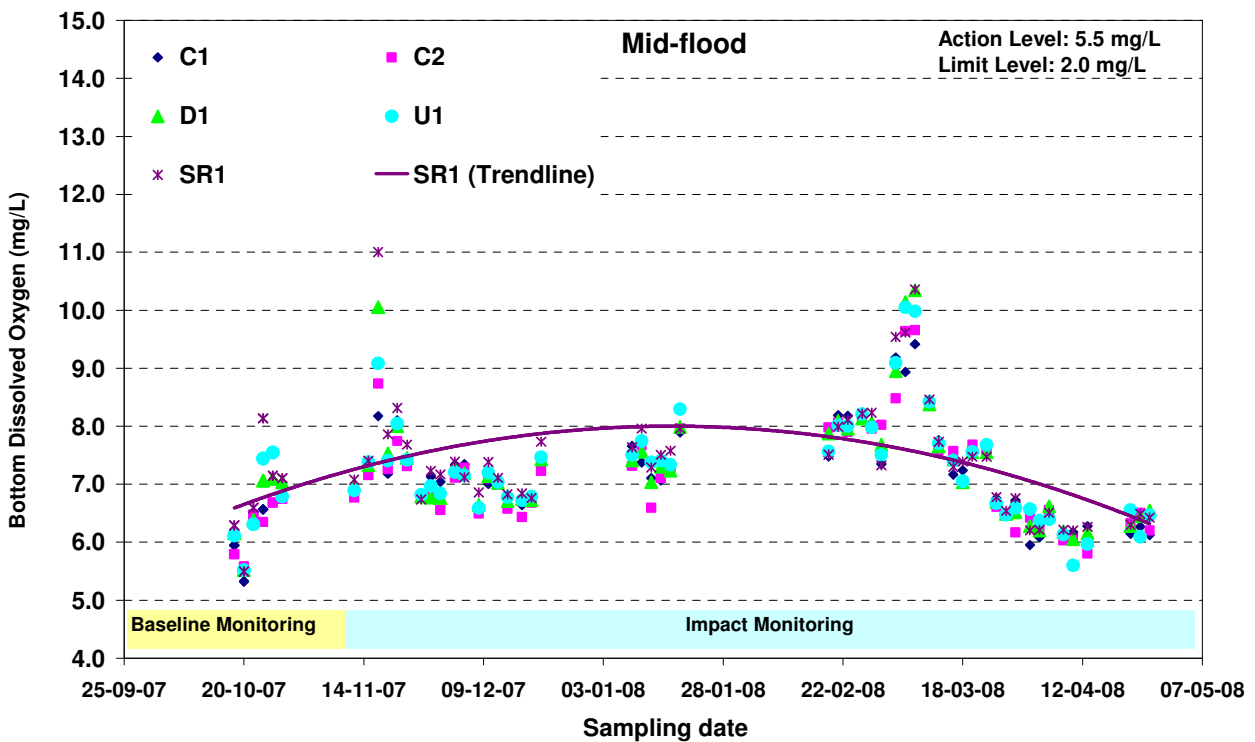
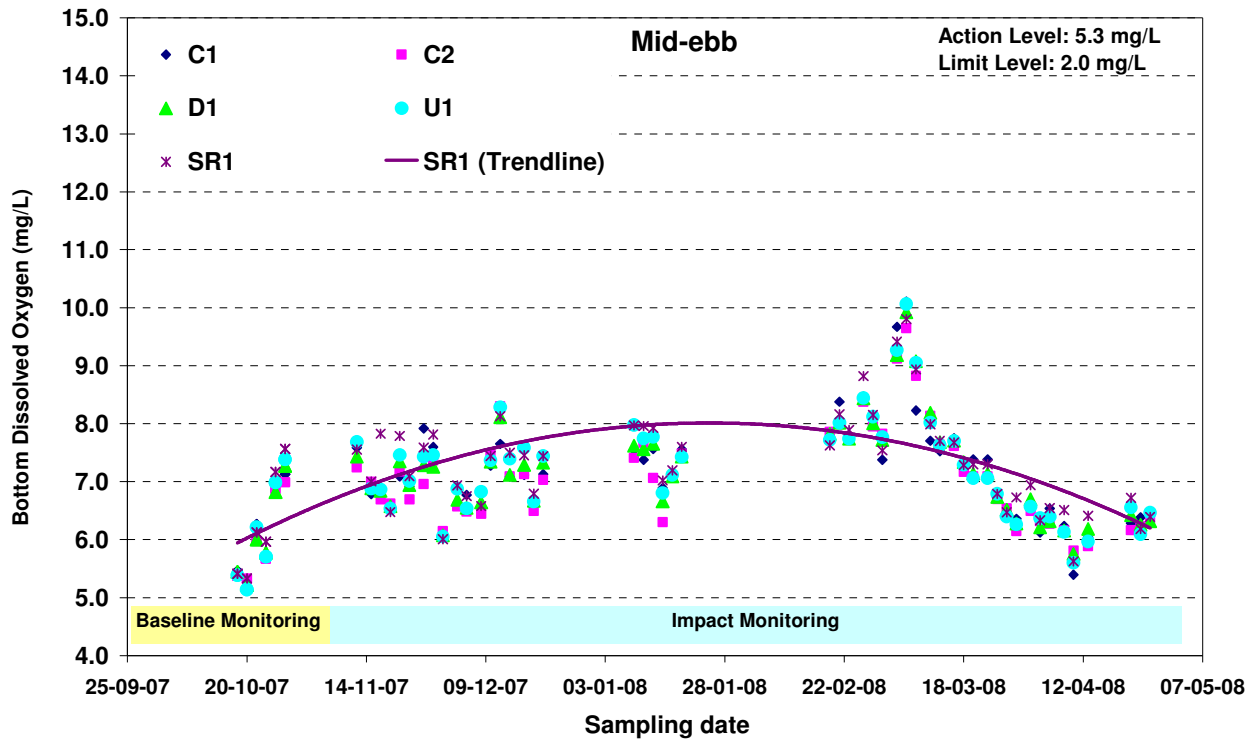


Figure E3 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the five sampling locations near Tuen Mun at mid-ebb and mid-flood between 18 October 2007 and 26 April 2008



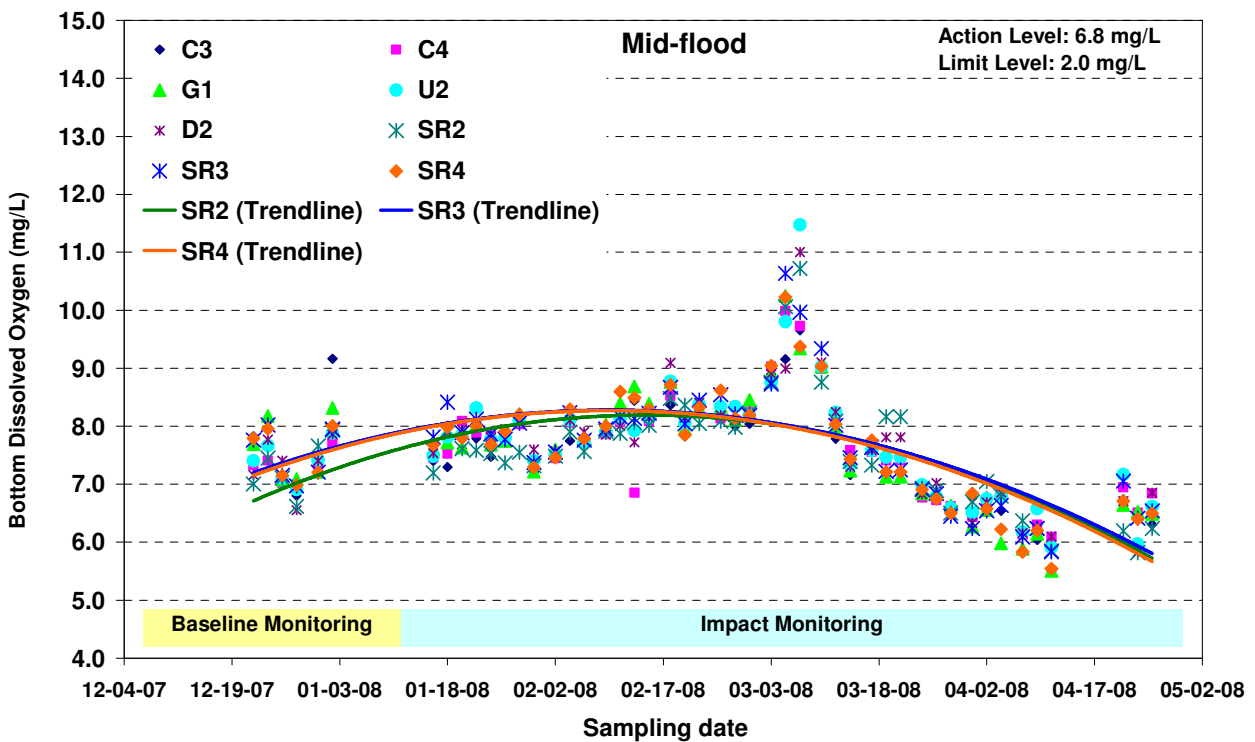
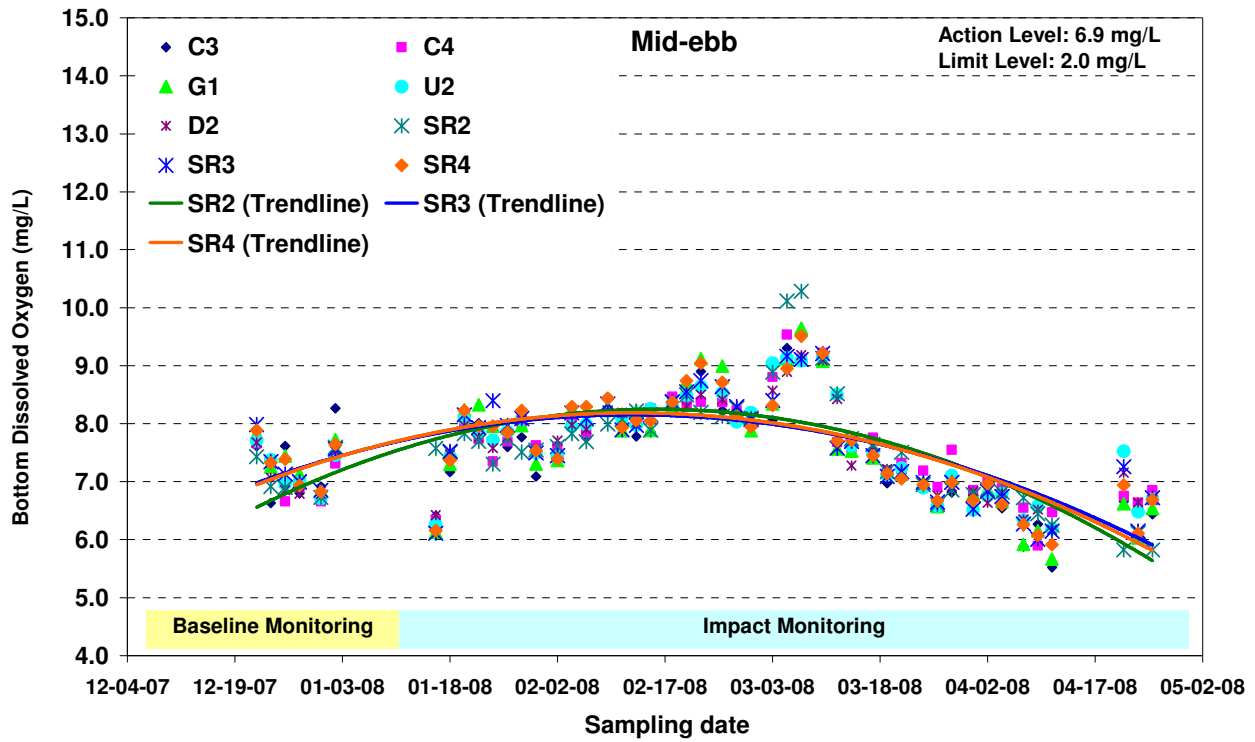


Figure E4 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 22 December 2007 and 25 April 2008



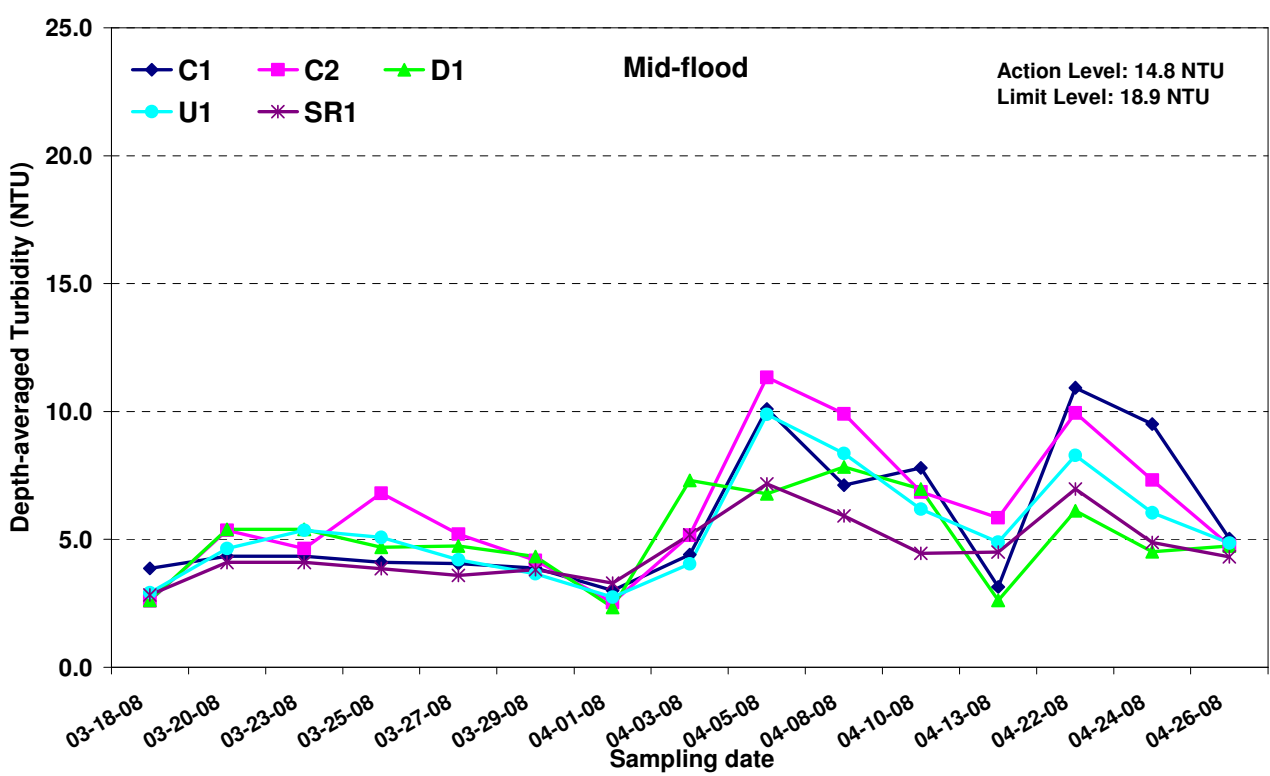
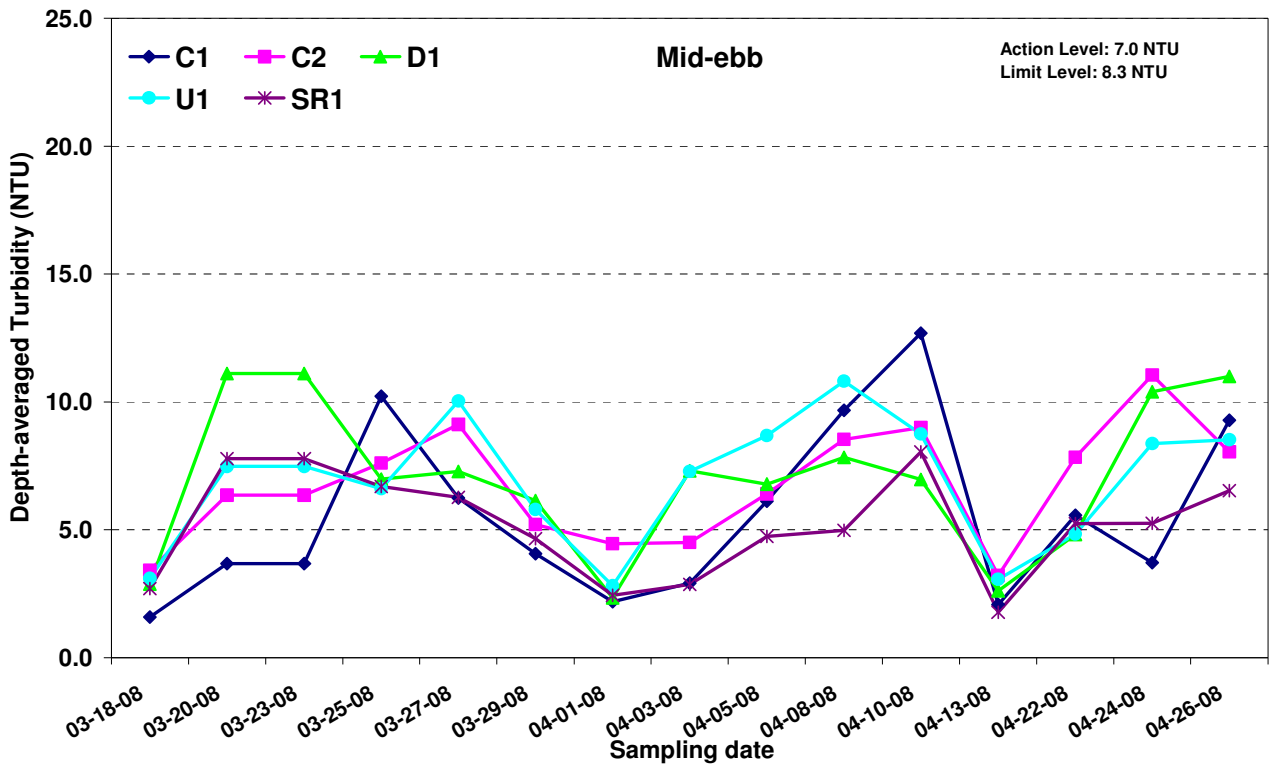


Figure E5 Depth-averaged turbidity (NTU) of water samples from the five sampling locations near Tuen Mun at mid-ebb and mid-flood between 118March and 26 April 2008



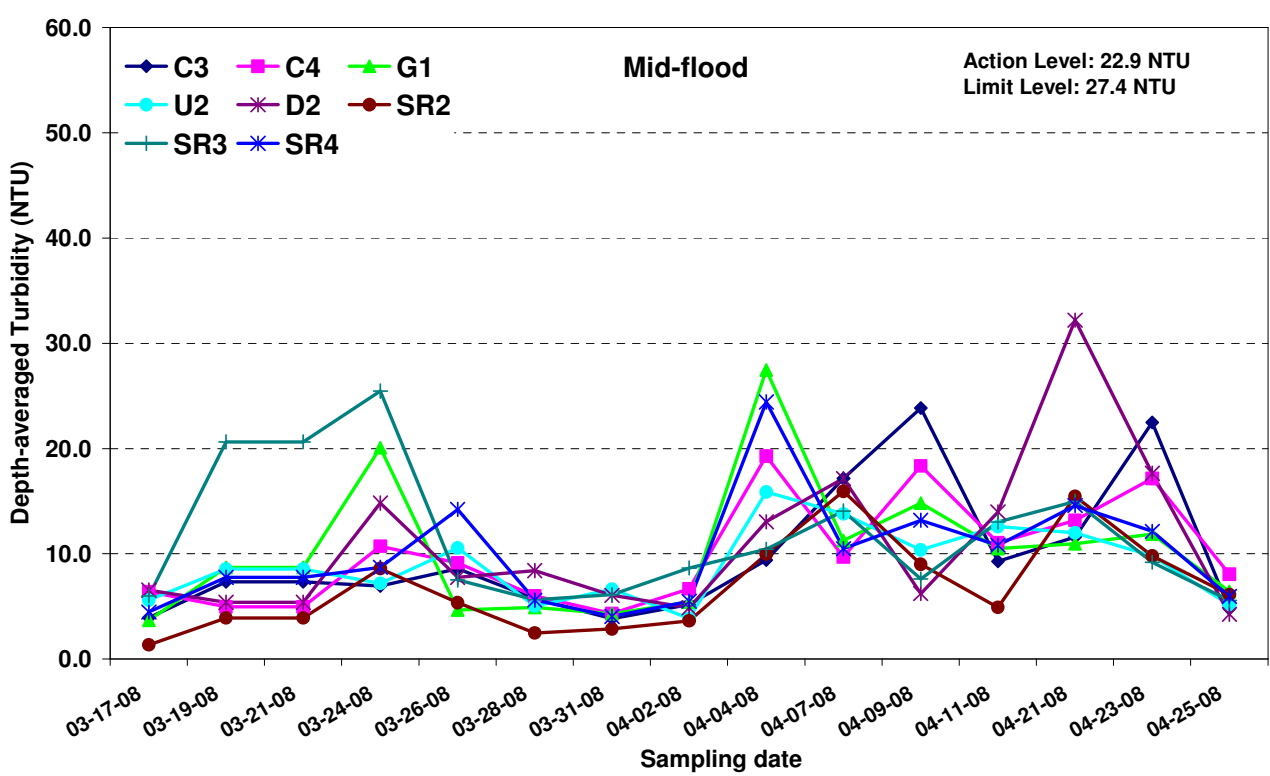
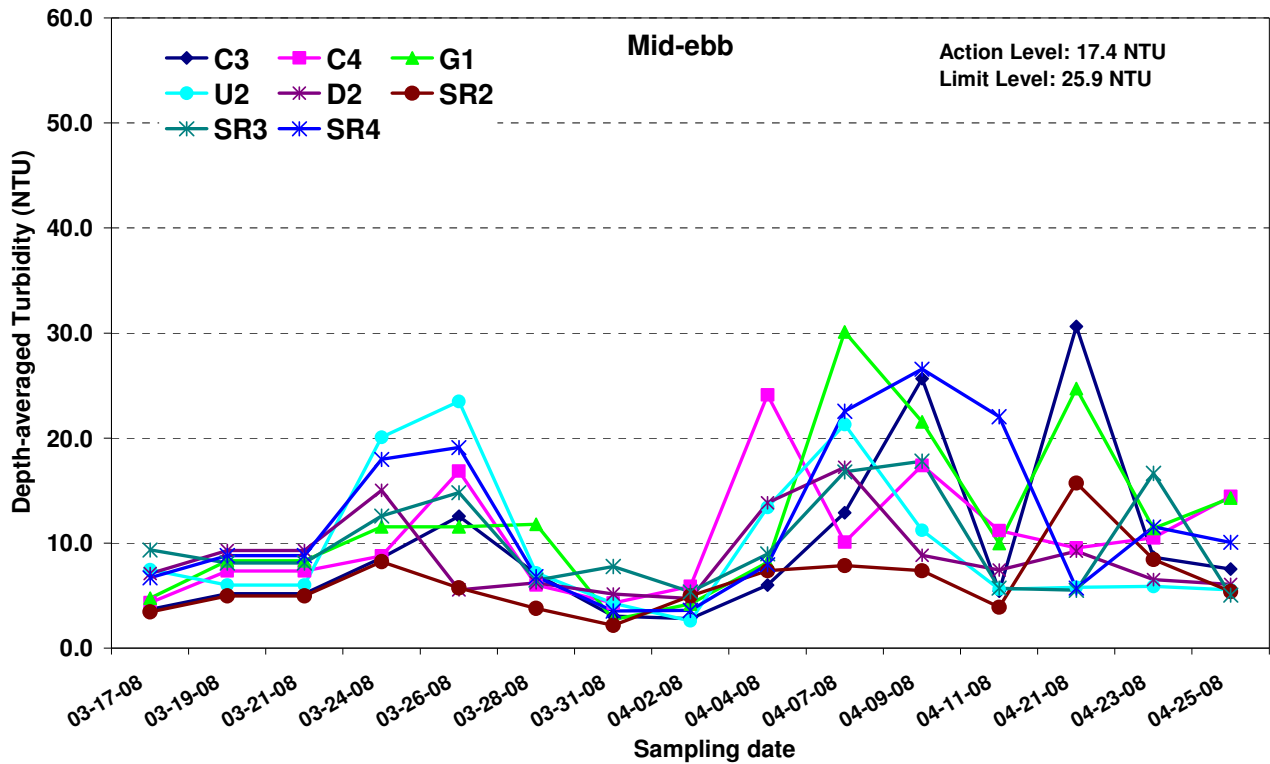


Figure E6 Depth-averaged turbidity (NTU) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 17 March and 25 April 2008



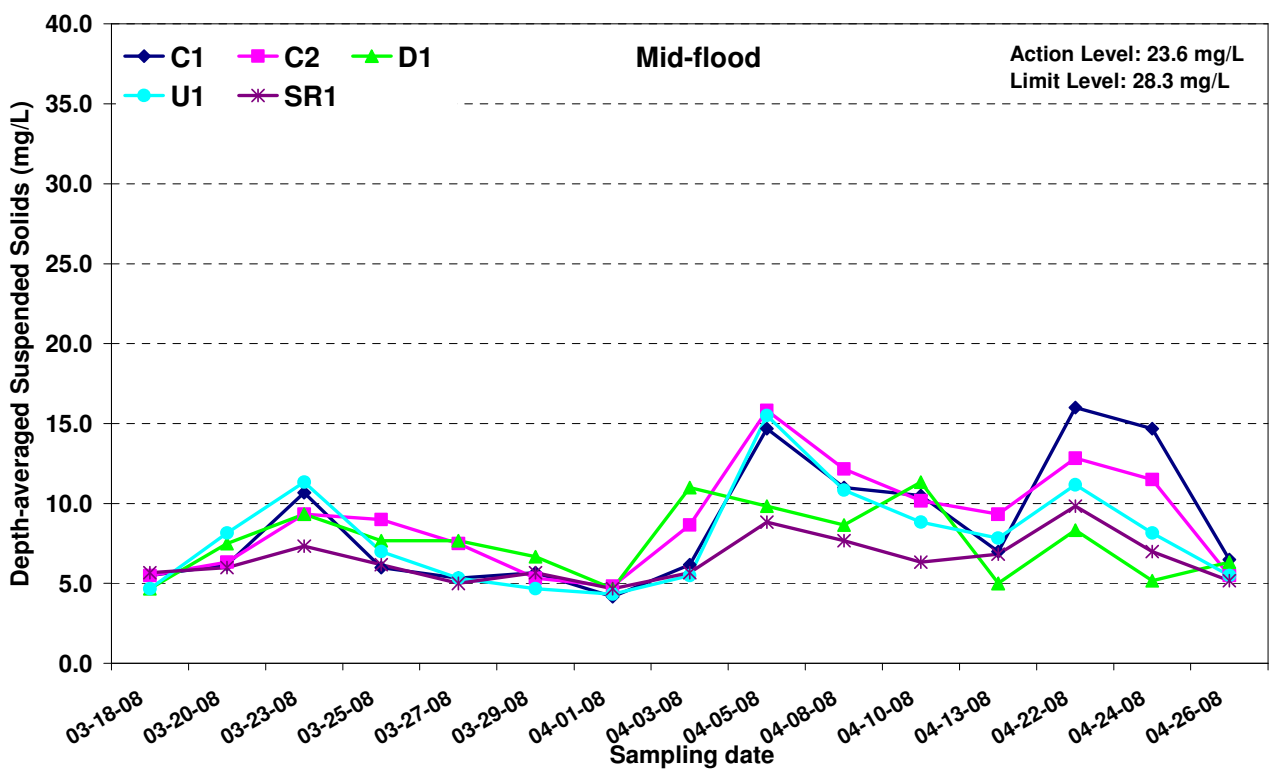
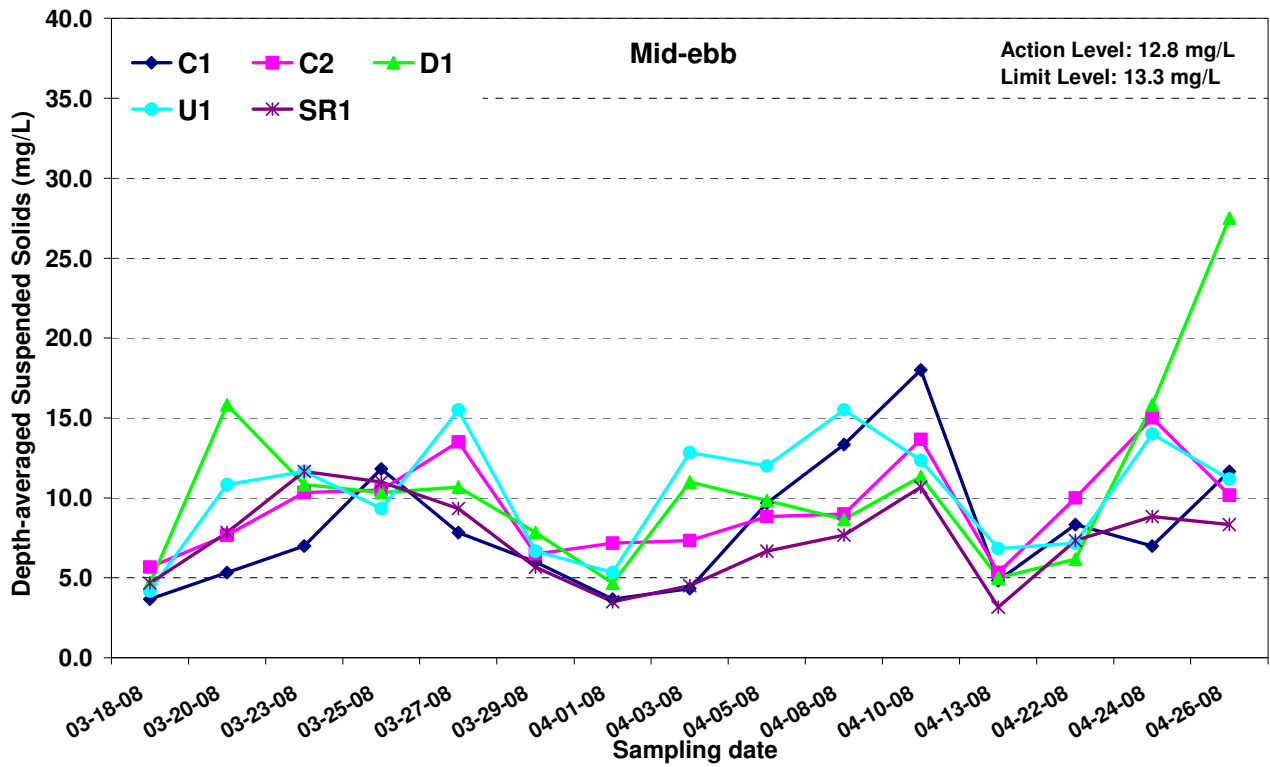


Figure E7 Depth-averaged suspended solids concentration (mg/L) of water samples from the five sampling locations near Tuen Mun at mid-ebb and mid-flood between 18 March and 26 April 2008



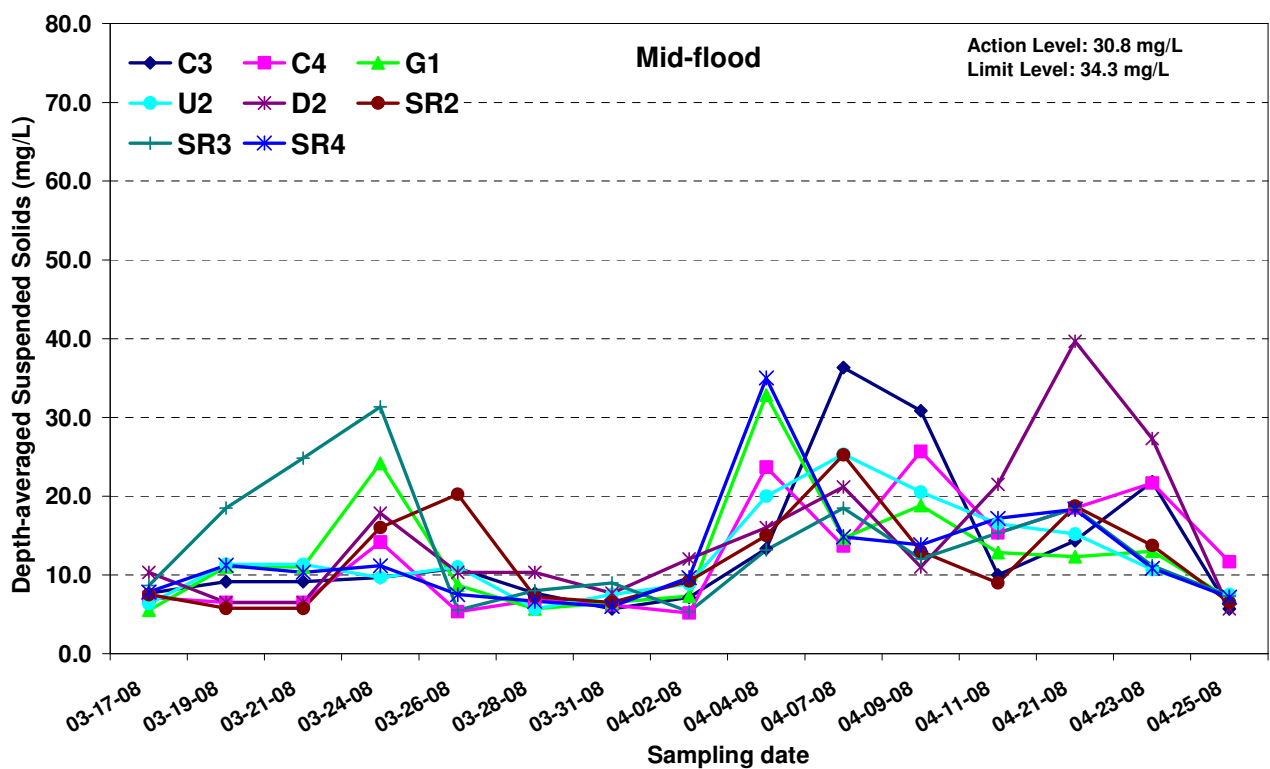
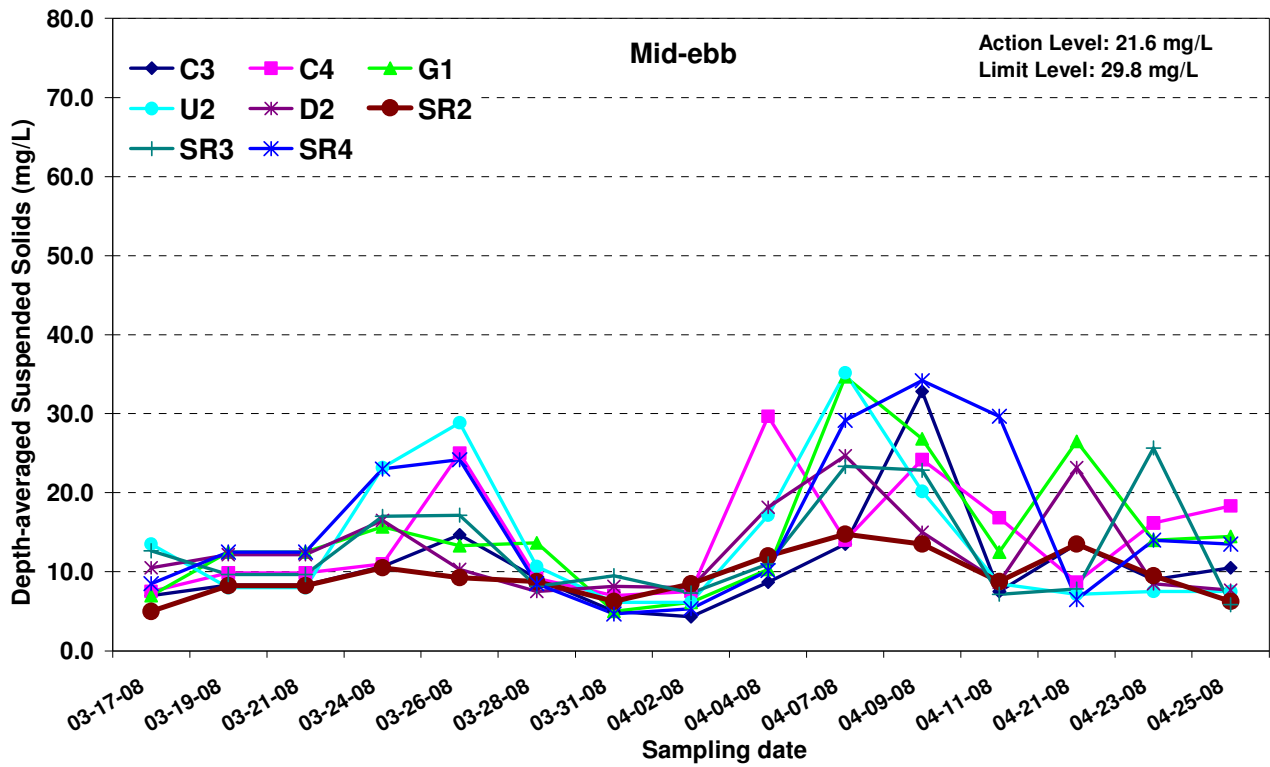


Figure E8 Depth-averaged suspended solids concentration (mg/L) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 17 March and 25 April 2008



Annex E1 - Water Quality Results at Airport during mid-ebb tide for 21 April 2008

Mid-Ebb

Sampling Date	4/21/2008
Weather & Ambient Temperature	Sunny, 24C

Station	C3		8.90	
	Time (hh:mm)	14:09-14:18	Trial 1	Trial 2
Water Depth (m)		11.60		
Monitoring Depth (m)		0.80		
Trial			Trial 1	Trial 2
Water Temperature (°C)	24.4	24.9	24.2	23.7
Salinity (ppt)	23.1	21.7	26.1	27.2
pH	7.9	7.9	7.9	8.0
D.O. Saturation (%)	94.9	98.9	91.9	92.4
D.O. (mg/L)	6.95	7.24	6.67	6.69
Turbidity (NTU)	9.30	5.70	30.00	12.40
SS (mg/L)	5.0	7.0	16.0	12.0
Remarks				

Station	U2		5.90	
	Time (hh:mm)	15:10-15:13	Trial 1	Trial 2
Water Depth (m)		6.70		
Monitoring Depth (m)		0.90		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.6	25.5	25.1	25.0
Salinity (ppt)	20.3	20.5	21.9	22.2
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	104.4	104.0	102.9	103.5
D.O. (mg/L)	7.60	7.58	7.50	7.54
Turbidity (NTU)	4.80	4.90	5.90	6.60
SS (mg/L)	6.0	5.0	7.0	6.0
Remarks				

Station	C4		9.00	
	Time (hh:mm)	15:33-15:42	Trial 1	Trial 2
Water Depth (m)		10.50		
Monitoring Depth (m)		1.10		
Trial			Trial 1	Trial 2
Water Temperature (°C)	24.5	24.4	24.1	24.1
Salinity (ppt)	22.3	23.0	23.9	24.2
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	93.9	95.1	94.0	92.9
D.O. (mg/L)	6.90	6.97	6.88	6.71
Turbidity (NTU)	8.30	7.60	8.50	8.60
SS (mg/L)	6.0	5.0	9.0	11.0
Remarks				

Station	SR2		1.90	
	Time (hh:mm)	13:14-13:26	Trial 1	Trial 2
Water Depth (m)		4.20		
Monitoring Depth (m)		2.80		
Trial			Trial 1	Trial 2
Water Temperature (°C)	24.5	24.6	24.5	24.6
Salinity (ppt)	25.6	25.4	25.8	25.6
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	81.7	81.1	80.8	80.9
D.O. (mg/L)	5.89	5.84	5.82	5.83
Turbidity (NTU)	12.00	14.80	22.90	13.10
SS (mg/L)	11.0	11.0	17.0	15.0
Remarks				

Station	D2		7.00	
	Time (hh:mm)	15:21-15:23	Trial 1	Trial 2
Water Depth (m)		7.80		
Monitoring Depth (m)		0.90		
Trial			Trial 1	Trial 2
Water Temperature (°C)	24.9	24.9	24.7	24.7
Salinity (ppt)	22.0	22.0	22.5	23.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	100.0	100.3	99.4	98.4
D.O. (mg/L)	7.31	7.33	7.25	7.14
Turbidity (NTU)	6.00	6.10	9.90	11.50
SS (mg/L)	7.0	11.0	14.0	46.0
Remarks				

Station	SR3		6.80	
	Time (hh:mm)	15:00-15:05	Trial 1	Trial 2
Water Depth (m)		8.10		
Monitoring Depth (m)		1.00		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.5	25.4	24.8	24.7
Salinity (ppt)	20.6	20.4	21.8	22.4
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	104.0	97.5	100.3	98.5
D.O. (mg/L)	7.57	7.13	7.34	7.21
Turbidity (NTU)	5.20	5.30	5.10	5.40
SS (mg/L)	8.0	8.0	6.0	8.0
Remarks				

Station	G1		9.50	
	Time (hh:mm)	14:23-14:34	Trial 1	Trial 2
Water Depth (m)		10.90		
Monitoring Depth (m)		0.80		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.3	25.2	24.2	23.8
Salinity (ppt)	20.6	21.1	25.1	26.4
pH	7.9	7.9	7.9	8.0
D.O. Saturation (%)	102.3	104.7	94.8	90.2
D.O. (mg/L)	7.48	7.65	6.89	6.71
Turbidity (NTU)	6.20	6.90	20.10	20.70
SS (mg/L)	5.0	4.0	18.0	19.0
Remarks				

Station	SR4		7.90	
	Time (hh:mm)	07:46-07:50	Trial 1	Trial 2
Water Depth (m)		8.80		
Monitoring Depth (m)		1.00		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.1	25.7	24.5	24.6
Salinity (ppt)	20.7	20.5	22.3	23.2
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	99.6	92.8	93.2	95.4
D.O. (mg/L)	7.31	6.75	6.85	7.00
Turbidity (NTU)	5.40	5.80	5.90	5.70
SS (mg/L)	7.0	5.0	7.0	7.0
Remarks				

Station	U2		5.90	
	Time (hh:mm)	15:10-15:13	Trial 1	Trial 2
Water Depth (m)		6.70		
Monitoring Depth (m)		0.90		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.6	25.5	25.1	25.0
Salinity (ppt)	20.3	20.5	21.9	22.2
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	104.4	104.0	102.9	103.5
D.O. (mg/L)	7.60	7.58	7.50	7.54
Turbidity (NTU)	4.80	4.90	5.90	6.60
SS (mg/L)	6.0	5.0	7.0	6.0
Remarks				

Station	SR2		1.90	
	Time (hh:mm)	13:14-13:26	Trial 1	Trial 2
Water Depth (m)		4.20		
Monitoring Depth (m)		2.80		
Trial			Trial 1	Trial 2
Water Temperature (°C)	24.5	24.6	24.5	24.6
Salinity (ppt)	25.6	25.4	25.8	25.6
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	81.7	81.1	80.8	80.9
D.O. (mg/L)	5.89	5.84	5.82	5.83
Turbidity (NTU)	12.00	14.80	22.90	13.10
SS (mg/L)	11.0	11.0	17.0	15.0
Remarks				

Station	SR3		6.80	
	Time (hh:mm)	15:00-15:05	Trial 1	Trial 2
Water Depth (m)		8.10		
Monitoring Depth (m)		1.00		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.5	25.4	24.8	24.7
Salinity (ppt)	20.6	20.4	21.8	22.4
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	104.0	97.5	100.3	98.5
D.O. (mg/L)	7.57	7.13	7.34	7.21
Turbidity (NTU)	5.20	5.30	5.10	5.40
SS (mg/L)	8.0	8.0	6.0	8.0
Remarks				

Station	SR4		7.90	
	Time (hh:mm)	07:46-07:50	Trial 1	Trial 2
Water Depth (m)		8.80		
Monitoring Depth (m)		1.00		
Trial			Trial 1	Trial 2
Water Temperature (°C)	25.1	25.7	24.5	24.6
Salinity (ppt)	20.7	20.5	22.3	23.2
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	99.6	92.8	93.2	95.4
D.O. (mg/L)	7.31	6.75	6.85	7.00
Turbidity (NTU)	5.40	5.80	5.90	5.70
SS (mg/L)	7.0	5.0	7.0	7.0
Remarks				

Annex E2 - Water Quality Results at Airport during mid-flood tide for 21 April 2008

Mid-Flood

Sampling Date	4/21/2008
Weather & Ambient Temperature	Sunny, 25C

Station	C3		U2	
	Time (hh:mm)	18:36-18:40	Time (hh:mm)	19:45-19:49
Water Depth (m)	8.90		8.10	
Monitoring Depth (m)	4.50		4.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.5	24.6	24.7	24.4
Salinity (ppt)	23.0	22.3	23.0	23.3
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	96.0	96.9	101.2	100.7
D.O. (mg/L)	7.03	7.11	7.40	7.32
Turbidity (NTU)	5.90	5.40	6.50	7.60
SS (mg/L)	8.0	7.0	8.0	10.0
Remarks				

Station	C4		SR2	
	Time (hh:mm)	20:12-20:17	Time (hh:mm)	18:48-18:54
Water Depth (m)	8.90		4.20	
Monitoring Depth (m)	4.50		1.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.5	24.6	25.4	25.4
Salinity (ppt)	23.4	23.3	21.7	21.7
pH	7.9	7.9	7.8	7.8
D.O. Saturation (%)	97.0	96.7	88.9	88.7
D.O. (mg/L)	7.08	7.05	6.43	6.43
Turbidity (NTU)	6.90	10.60	11.60	12.50
SS (mg/L)	8.0	12.0	12.0	14.0
Remarks				

Station	D2		SR3	
	Time (hh:mm)	19:59-20:05	Time (hh:mm)	19:35-19:41
Water Depth (m)	7.20		12.10	
Monitoring Depth (m)	3.60		6.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.7	24.6	24.5
Salinity (ppt)	23.8	23.9	23.1	23.4
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	99.3	99.3	100.0	98.4
D.O. (mg/L)	7.20	7.20	7.29	7.18
Turbidity (NTU)	14.70	15.00	7.00	7.40
SS (mg/L)	16.0	18.0	7.0	9.0
Remarks				

Station	G1		SR4	
	Time (hh:mm)	18:48-18:52	Time (hh:mm)	19:06-19:31
Water Depth (m)	11.00		12.20	
Monitoring Depth (m)	5.50		6.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.5	24.5	24.7	24.7
Salinity (ppt)	22.7	22.7	23.2	22.3
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	97.8	97.4	98.9	98.5
D.O. (mg/L)	7.17	7.14	7.21	7.21
Turbidity (NTU)	6.40	6.70	6.20	5.90
SS (mg/L)	9.0	8.0	8.0	8.0
Remarks				

Station	C3		U2	
	Time (hh:mm)	18:36-18:40	Time (hh:mm)	19:45-19:49
Water Depth (m)	8.90		8.10	
Monitoring Depth (m)	4.50		4.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.5	24.6	24.7	24.4
Salinity (ppt)	23.0	22.3	23.0	23.3
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	96.0	96.9	101.2	100.7
D.O. (mg/L)	7.03	7.11	7.40	7.32
Turbidity (NTU)	5.90	5.40	6.50	7.60
SS (mg/L)	8.0	7.0	8.0	10.0
Remarks				

Station	C4		SR2	
	Time (hh:mm)	20:12-20:17	Time (hh:mm)	18:48-18:54
Water Depth (m)	8.90		4.20	
Monitoring Depth (m)	4.50		1.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.5	24.6	25.4	25.4
Salinity (ppt)	23.4	23.3	21.7	21.7
pH	7.9	7.9	7.8	7.8
D.O. Saturation (%)	97.0	96.7	88.9	88.7
D.O. (mg/L)	7.08	7.05	6.43	6.43
Turbidity (NTU)	6.90	10.60	11.60	12.50
SS (mg/L)	8.0	12.0	12.0	14.0
Remarks				

Station	D2		SR3	
	Time (hh:mm)	19:59-20:05	Time (hh:mm)	19:35-19:41
Water Depth (m)	7.20		12.10	
Monitoring Depth (m)	3.60		6.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.7	24.6	24.5
Salinity (ppt)	23.8	23.9	23.1	23.4
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	99.3	99.3	100.0	98.4
D.O. (mg/L)	7.20	7.20	7.29	7.18
Turbidity (NTU)	14.70	15.00	7.00	7.40
SS (mg/L)	16.0	18.0	7.0	9.0
Remarks				

Station	G1		SR4	
	Time (hh:mm)	18:48-18:52	Time (hh:mm)	19:06-19:31
Water Depth (m)	11.00		12.20	
Monitoring Depth (m)	5.50		6.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.5	24.5	24.7	24.7
Salinity (ppt)	22.7	22.7	23.2	22.3
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	97.8	97.4	98.9	98.5
D.O. (mg/L)	7.17	7.14	7.21	7.21
Turbidity (NTU)	6.40	6.70	6.20	5.90
SS (mg/L)	9.0	8.0	8.0	8.0
Remarks				

Annex E3 - Water Quality Results at Tuen Mun during mid-ebb tide for 22 April 2008

Date	04/22/2008					
Station	C1					
Time (hh:mm)	14:47 - 14:52					
Ambient Temperature (°C)	25					
Weather	Sunny					
Water Depth (m)	6.50			5.90		
Monitoring Depth (m)	1.10			3.30		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.9	24.3	23.7	23.7	23.3	23.3
Salinity (ppt)	27.3	26.7	28.2	28.1	29.6	28.6
pH	7.9	7.9	7.9	7.9	7.9	7.94
D.O. Saturation (%)	91.0	93.1	88.9	89.3	87.4	87.1
D.O. (mg/L)	6.56	6.70	6.41	6.44	6.30	6.27
Turbidity (NTU)	5.30	3.90	5.20	4.90	7.10	6.90
SS (mg/L)	8.0	7.0	9.0	5.0	10.0	11.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	25.1	25.1	23.5	23.5	23.3	23.3
Salinity (ppt)	25.5	25.5	28.7	28.7	29.7	29.7
pH	8.0	8.0	8.0	8.0	8.0	8.0
D.O. Saturation (%)	97.3	98.3	88.0	87.9	90.5	91.8
D.O. (mg/L)	6.94	7.01	6.34	6.33	6.51	6.60
Turbidity (NTU)	3.60	3.60	5.20	5.10	6.30	5.10
SS (mg/L)	7.0	4.0	7.0	8.0	9.0	8.0
Remarks						

Date	04/22/2008					
Station	C2					
Time (hh:mm)	15:28 - 15:34					
Ambient Temperature (°C)	25					
Weather	Sunny					
Water Depth (m)	11.60			11.20		
Monitoring Depth (m)	1.20			5.80		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.2	24.5	23.5	23.5	23.2	23.2
Salinity (ppt)	27.4	27.1	29.0	28.8	30.0	30.1
pH	7.9	7.9	8.0	8.0	8.0	8.0
D.O. Saturation (%)	90.7	93.0	86.5	87.1	85.6	85.9
D.O. (mg/L)	6.50	6.65	6.22	6.27	6.15	6.18
Turbidity (NTU)	7.70	4.40	7.80	7.60	10.40	9.10
SS (mg/L)	9.0	7.0	8.0	9.0	14.0	13.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.5	24.3	24.3	24.0	23.9
Salinity (ppt)	26.0	26.3	26.5	26.7	27.3	27.7
pH	8.0	7.9	8.0	8.0	7.9	8.0
D.O. Saturation (%)	96.9	94.5	91.1	92.7	93.9	92.8
D.O. (mg/L)	6.94	6.78	6.55	6.66	6.76	6.68
Turbidity (NTU)	3.90	4.60	5.60	5.10	6.40	5.70
SS (mg/L)	7.0	6.0	7.0	9.0	5.0	10.0
Remarks						

Date	04/22/2008					
Station	D1					
Time (hh:mm)	15:16 - 15:19					
Ambient Temperature (°C)	25					
Weather	Sunny					
Water Depth (m)	6.80			5.90		
Monitoring Depth (m)	1.30			3.40		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.4	24.6	23.8	23.9	23.4	23.6
Salinity (ppt)	26.3	26.2	27.3	27.2	29.0	28.4
pH	7.9	7.9	7.9	7.9	8.0	8.0
D.O. Saturation (%)	92.5	88.6	89.3	89.5	89.5	88.7
D.O. (mg/L)	6.65	6.36	6.45	6.46	6.45	6.39
Turbidity (NTU)	4.10	4.70	4.90	4.60	5.20	5.30
SS (mg/L)	4.0	6.0	7.0	7.0	7.0	6.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.5	24.3	24.3	24.0	23.9
Salinity (ppt)	26.0	26.3	26.5	26.7	27.3	27.7
pH	8.0	7.9	8.0	8.0	7.9	8.0
D.O. Saturation (%)	96.9	94.5	91.1	92.7	93.9	92.8
D.O. (mg/L)	6.94	6.78	6.55	6.66	6.76	6.68
Turbidity (NTU)	3.90	4.60	5.60	5.10	6.40	5.70
SS (mg/L)	7.0	6.0	7.0	9.0	5.0	10.0
Remarks						

Date	04/22/2008					
Station	U1					
Time (hh:mm)	15:07 - 15:11					
Ambient Temperature (°C)	25					
Weather	Sunny					
Water Depth (m)	7.60			7.00		
Monitoring Depth (m)	1.20			3.80		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	25.1	25.1	23.5	23.5	23.3	23.3
Salinity (ppt)	25.5	25.5	28.7	28.7	29.7	29.7
pH	8.0	8.0	8.0	8.0	8.0	8.0
D.O. Saturation (%)	97.3	98.3	88.0	87.9	90.5	91.8
D.O. (mg/L)	6.94	7.01	6.34	6.33	6.51	6.60
Turbidity (NTU)	3.60	3.60	5.20	5.10	6.30	5.10
SS (mg/L)	7.0	4.0	7.0	8.0	9.0	8.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.5	24.3	24.3	24.0	23.9
Salinity (ppt)	26.0	26.3	26.5	26.7	27.3	27.7
pH	8.0	7.9	8.0	8.0	7.9	8.0
D.O. Saturation (%)	96.9	94.5	91.1	92.7	93.9	92.8
D.O. (mg/L)	6.94	6.78	6.55	6.66	6.76	6.68
Turbidity (NTU)	3.90	4.60	5.60	5.10	6.40	5.70
SS (mg/L)	7.0	6.0	7.0	9.0	5.0	10.0
Remarks						

Date	04/22/2008					
Station	SRI					
Time (hh:mm)	14:59 - 15:03					
Ambient Temperature (°C)	25					
Weather	Sunny					
Water Depth (m)	3.90			3.10		
Monitoring Depth (m)	1.10			2.00		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.5	24.3	24.3	24.0	23.9
Salinity (ppt)	26.0	26.3	26.5	26.7	27.3	27.7
pH	8.0	7.9	8.0	8.0	7.9	8.0
D.O. Saturation (%)	96.9	94.5	91.1	92.7	93.9	92.8
D.O. (mg/L)	6.94	6.78	6.55	6.66	6.76	6.68
Turbidity (NTU)	3.90	4.60	5.60	5.10	6.40	5.70
SS (mg/L)	7.0	6.0	7.0	9.0	5.0	10.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.5	24.3	24.3	24.0	23.9
Salinity (ppt)	26.0	26.3	26.5	26.7	27.3	27.7
pH	8.0	7.9	8.0	8.0	7.9	8.0
D.O. Saturation (%)	96.9	94.5	91.1	92.7	93.9	92.8
D.O. (mg/L)	6.94	6.78	6.55	6.66	6.76	6.68
Turbidity (NTU)	3.90	4.60	5.60	5.10	6.40	5.70
SS (mg/L)	7.0	6.0	7.0	9.0	5.0	10.0
Remarks						

Flow Tracking Data						
Position	Easting	Northing	Depth	Time	Speed	Direction
C1	814478.63	825374.3	0	154659	0	0
C1	814442.92	825396.19	0	155230	0.1265	301.5
C1	814393.83	825398.16	0	155809	0.1449	272.3
C1	814399.04	825407.56	0	160330	0.1732	279.7
						20080422
						20080422
						20080422

Annex E4 - Water Quality Results at Tuen Mun during mid-flood tide for 22 April 2008

Date	04/22/2008			
Station	C1			
Time (hh:mm)	18:41 - 18:47			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	7.20			
Monitoring Depth (m)	1.20	3.60	6.00	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.6	24.0	23.5
Salinity (ppt)	26.2	26.3	27.8	28.7
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	93.0	93.3	87.3	85.3
D.O. (mg/L)	6.66	6.69	6.27	6.14
Turbidity (NTU)	4.60	5.10	6.90	13.30
SS (mg/L)	5.0	6.0	10.0	22.0
Remarks	-			

Date	04/22/2008			
Station	C2			
Time (hh:mm)	19:24 - 19:30			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	11.90			
Monitoring Depth (m)	1.30	6.00	11.20	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.6	24.4	23.9	23.8
Salinity (ppt)	26.3	26.6	27.8	28.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	90.0	93.0	89.0	88.3
D.O. (mg/L)	6.45	6.67	6.40	6.35
Turbidity (NTU)	5.90	4.50	7.80	7.90
SS (mg/L)	5.0	6.0	10.0	14.0
Remarks	-			

Date	04/22/2008			
Station	D1			
Time (hh:mm)	19:12 - 19:18			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	6.70			
Monitoring Depth (m)	1.30	3.40	6.30	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.4	24.5	24.1	24.2
Salinity (ppt)	26.6	26.3	27.3	27.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	91.8	92.6	90.5	90.8
D.O. (mg/L)	6.59	6.65	6.50	6.52
Turbidity (NTU)	4.80	4.90	5.60	5.30
SS (mg/L)	6.0	8.0	7.0	7.0
Remarks	-			

Date	04/22/2008			
Station	U1			
Time (hh:mm)	19:02 - 19:08			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	7.30			
Monitoring Depth (m)	1.30	3.70	6.10	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.6	24.6	23.6	23.6
Salinity (ppt)	26.2	26.2	28.5	28.2
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	91.9	92.3	85.6	87.0
D.O. (mg/L)	6.60	6.62	6.17	6.26
Turbidity (NTU)	4.90	4.80	9.30	6.80
SS (mg/L)	9.0	6.0	12.0	11.0
Remarks	-			

Date	04/22/2008			
Station	SR1			
Time (hh:mm)	18:53 - 18:58			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	4.20			
Monitoring Depth (m)	1.20	2.10	3.20	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.2	24.2	24.1	23.8
Salinity (ppt)	27.0	26.9	27.2	27.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	88.0	88.4	87.2	88.3
D.O. (mg/L)	6.33	6.36	6.28	6.35
Turbidity (NTU)	7.00	7.20	6.30	7.00
SS (mg/L)	10.0	10.0	7.0	9.0
Remarks	-			

Date	04/22/2008			
Station	SR1			
Time (hh:mm)	18:53 - 18:58			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	4.20			
Monitoring Depth (m)	1.20	2.10	3.20	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.2	24.2	24.1	23.8
Salinity (ppt)	27.0	26.9	27.2	27.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	88.0	88.4	87.2	88.3
D.O. (mg/L)	6.33	6.36	6.28	6.35
Turbidity (NTU)	7.00	7.20	6.30	7.00
SS (mg/L)	10.0	10.0	7.0	9.0
Remarks	-			

Flow Tracking Data						
Position	Easting	Northing	Depth	Time	Speed	Direction
C1	814473.78	825368.87	0	194041	0	0
C1	814294.55	825363.51	0	194532	0.6162	268.3
C1	814090.69	825362.03	0	195051	0.6391	269.6
C1	813895.59	825357.3	0	195504	0.7556	268.6
						20080422
						20080422
						20080422

Date	04/22/2008			
Station	C1			
Time (hh:mm)	18:41 - 18:47			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	7.20			
Monitoring Depth (m)	1.20	3.60	6.00	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.7	24.6	24.0	23.5
Salinity (ppt)	26.2	26.3	27.8	28.7
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	93.0	93.3	87.3	85.3
D.O. (mg/L)	6.66	6.69	6.27	6.14
Turbidity (NTU)	4.60	5.10	6.90	13.30
SS (mg/L)	5.0	6.0	10.0	22.0
Remarks	-			

Date	04/22/2008			
Station	C2			
Time (hh:mm)	19:24 - 19:30			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	11.90			
Monitoring Depth (m)	1.30	6.00	11.20	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.6	24.4	23.9	23.8
Salinity (ppt)	26.3	26.6	27.8	28.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	90.0	93.0	89.0	88.3
D.O. (mg/L)	6.45	6.67	6.40	6.35
Turbidity (NTU)	5.90	4.50	7.80	7.90
SS (mg/L)	5.0	6.0	10.0	14.0
Remarks	-			

Date	04/22/2008			
Station	D1			
Time (hh:mm)	19:12 - 19:18			
Ambient Temperature (°C)	24			
Weather	Sunny			
Water Depth (m)	6.70			
Monitoring Depth (m)	1.30	3.40	6.30	
Tide	Mid-Flood			
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.4	24.5	24.1	24.2
Salinity (ppt)	26.6	26.3	27.3	27.0
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	91.8	92.6	90.5	90.8
D.O. (mg/L)	6.59	6.65	6.50	6.52
Turbidity (NTU)	4.80	4.90	5.60	5.30
SS (mg/L)	6.0	8.0	7.0	7.0
Remarks	-			

Annex E5 - Water Quality Results at Airport during mid-ebb tide for 23 April 2008

Mid-Ebb

Sampling Date	04/23/2008
Weather & Ambient Temperature	Sunny, 23C

Station	C3			
	15:20-15:24			
Time (hh:mm)	10:30			
Water Depth (m)	8.80			
Monitoring Depth (m)	1.20		8.80	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.9	23.8	23.5	23.4
Salinity (ppt)	24.9	24.6	28.9	29.6
pH	8.0	8.0	8.0	8.0
D.O. Saturation (%)	85.9	88.6	83.0	82.1
D.O. (mg/L)	6.28	6.50	5.97	5.94
Turbidity (NTU)	7.00	5.90	10.20	9.40
SS (mg/L)	5.0	6.0	12.0	13.0
Remarks				

Station	U2			
	14:11-14:18			
Time (hh:mm)	7:20			
Water Depth (m)	3.60			
Monitoring Depth (m)	1.20		6.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.1	24.1	24.1	24.1
Salinity (ppt)	24.9	24.8	25.1	25.1
pH	8.0	8.0	8.0	8.0
D.O. Saturation (%)	89.3	90.6	89.1	88.9
D.O. (mg/L)	6.51	6.61	6.49	6.48
Turbidity (NTU)	5.40	5.40	5.20	6.80
SS (mg/L)	6.0	8.0	7.0	6.0
Remarks				

Station	C4			
	13:50-13:58			
Time (hh:mm)	9:20			
Water Depth (m)	8.00			
Monitoring Depth (m)	1.00		8.00	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.9	23.8	23.7	23.5
Salinity (ppt)	24.1	24.6	25.7	29.1
pH	7.9	8.0	7.9	8.0
D.O. Saturation (%)	94.6	95.3	92.5	91.7
D.O. (mg/L)	6.95	7.00	6.74	6.59
Turbidity (NTU)	5.70	5.40	7.40	14.60
SS (mg/L)	6.0	6.0	8.0	9.0
Remarks				

Station	SR2			
	13:48-13:53			
Time (hh:mm)	4:20			
Water Depth (m)	2.90			
Monitoring Depth (m)	1.20		2.90	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.1	24.1	24.1	24.1
Salinity (ppt)	24.7	24.7	25.0	24.8
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	85.0	84.3	83.8	84.0
D.O. (mg/L)	6.20	6.15	6.13	6.15
Turbidity (NTU)	7.70	7.40	9.90	8.60
SS (mg/L)	7.0	6.0	15.0	10.0
Remarks				

Station	D2			
	14:04-14:08			
Time (hh:mm)	7:40			
Water Depth (m)	5.90			
Monitoring Depth (m)	1.00		5.90	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.1	24.1	24.0	24.0
Salinity (ppt)	24.9	24.7	25.0	26.1
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	91.5	90.9	91.0	89.0
D.O. (mg/L)	6.67	6.64	6.63	6.45
Turbidity (NTU)	5.30	5.10	5.50	9.80
SS (mg/L)	8.0	8.0	6.0	13.0
Remarks				

Station	SR3			
	14:14-14:20			
Time (hh:mm)	12:40			
Water Depth (m)	6.20			
Monitoring Depth (m)	1.20		10.90	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.0	24.0	23.9	23.5
Salinity (ppt)	25.1	25.2	25.3	29.4
pH	7.9	7.9	7.9	8.0
D.O. Saturation (%)	90.6	89.4	89.3	83.3
D.O. (mg/L)	6.60	6.51	6.50	5.98
Turbidity (NTU)	4.30	5.40	6.50	15.10
SS (mg/L)	8.0	7.0	5.0	18.0
Remarks				

Station	G1			
	14:43-14:49			
Time (hh:mm)	11:00			
Water Depth (m)	5.50			
Monitoring Depth (m)	1.20		10.20	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.0	24.0	23.5	23.4
Salinity (ppt)	25.2	25.2	29.4	29.8
pH	7.9	7.9	8.0	8.0
D.O. Saturation (%)	88.3	88.8	83.0	83.7
D.O. (mg/L)	6.43	6.47	5.96	5.93
Turbidity (NTU)	4.90	4.60	13.60	12.80
SS (mg/L)	21.0	7.0	14.0	16.0
Remarks				

Station	SR4			
	14:29-14:33			
Time (hh:mm)	13:90			
Water Depth (m)	7.00			
Monitoring Depth (m)	1.10		12.00	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.9	23.9	23.9	23.5
Salinity (ppt)	24.5	24.5	26.5	29.5
pH	8.0	8.0	8.0	8.0
D.O. Saturation (%)	91.0	89.7	86.2	85.9
D.O. (mg/L)	6.67	6.58	6.25	6.17
Turbidity (NTU)	5.20	5.30	7.50	10.90
SS (mg/L)	7.0	5.0	10.0	9.0
Remarks				

Station	U2			
	14:11-14:18			
Time (hh:mm)	7:20			
Water Depth (m)	3.60			
Monitoring Depth (m)	1.20		6.10	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.1	24.1	24.0	24.1
Salinity (ppt)	24.9	24.8	25.1	25.1
pH	8.0	8.0	8.0	8.0
D.O. Saturation (%)	89.3	90.6	89.1	88.9
D.O. (mg/L)	6.51	6.61	6.49	6.48
Turbidity (NTU)	5.40	5.40	5.20	6.80
SS (mg/L)	6.0	8.0	7.0	6.0
Remarks				

Station	SR2			
	13:48-13:53			
Time (hh:mm)	4:20			
Water Depth (m)	2.90			
Monitoring Depth (m)	1.20		2.90	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.1	24.1	24.1	24.1
Salinity (ppt)	24.7	24.7	25.0	24.8
pH	7.9	7.9	7.9	7.9
D.O. Saturation (%)	85.0	84.3	83.8	84.0
D.O. (mg/L)	6.20	6.15	6.13	6.15
Turbidity (NTU)	7.70	7.40	9.90	8.60
SS (mg/L)	7.0	6.0	15.0	10.0
Remarks				

Station	SR3			
	14:14-14:20			
Time (hh:mm)	12:40			
Water Depth (m)	6.20			
Monitoring Depth (m)	1.20		10.90	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	24.0	24.0	23.9	23.5
Salinity (ppt)	25.1	25.2	25.3	29.4
pH	7.9	7.9	7.9	8.0
D.O. Saturation (%)	90.6	89.4	89.3	83.3
D.O. (mg/L)	6.60	6.51	6.50	5.98
Turbidity (NTU)	4.30	5.40	6.50	15.10
SS (mg/L)	8.0	7.0	5.0	18.0
Remarks				

Station	SR4			
	14:29-14:33			
Time (hh:mm)	13:90			
Water Depth (m)	7.00			
Monitoring Depth (m)	1.10		12.00	
Trial	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.9	23.9	23.9	23.5
Salinity (ppt)	24.5	24.5	26.5	29.5
pH	8.0	8.0	8.0	8.0
D.O. Saturation (%)	91.0	89.7	86.2	85.9
D.O. (mg/L)	6.67	6.58	6.25	6.17
Turbidity (NTU)	5.20	5.30	7.50	10.90
SS (mg/L)	7.0	5.0	10.0	9.0
Remarks				

Annex E6 - Water Quality Results at Airport during mid-flood tide for 23 April 2008

Sampling Date	04/23/2008
Weather & Ambient Temperature	Sunny, 22C

Mid-Flood

Station		C3	
Time (hh:mm)	08:11-08:16		
Water Depth (m)	11.20		
Monitoring Depth (m)	10.00		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.2	24.3	23.5
Salinity (ppt)	22.5	22.7	29.4
pH	7.9	7.9	8.0
D.O. Saturation (%)	91.5	91.4	89.8
D.O. (mg/L)	6.74	6.73	6.45
Turbidity (NTU)	4.70	5.00	55.70
SS (mg/L)	4.0	9.0	55.0
Remarks			

Station		U2	
Time (hh:mm)	07:46-07:57		
Water Depth (m)	7.10		
Monitoring Depth (m)	5.90		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.4	24.6	24.2
Salinity (ppt)	21.3	21.2	25.2
pH	7.8	7.8	7.9
D.O. Saturation (%)	81.5	82.4	82.0
D.O. (mg/L)	6.02	6.08	5.99
Turbidity (NTU)	5.40	5.10	14.90
SS (mg/L)	6.0	6.0	18.0
Remarks			

Station		C4	
Time (hh:mm)	09:16-09:23		
Water Depth (m)	8.80		
Monitoring Depth (m)	8.40		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.4	24.2	23.7
Salinity (ppt)	23.8	25.0	28.0
pH	7.9	7.9	8.0
D.O. Saturation (%)	89.0	87.5	88.0
D.O. (mg/L)	6.49	6.36	6.35
Turbidity (NTU)	9.60	12.00	24.70
SS (mg/L)	18.0	10.0	26.0
Remarks			

Station		SR2	
Time (hh:mm)	07:26-07:33		
Water Depth (m)	4.30		
Monitoring Depth (m)	3.10		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.6	24.5	24.4
Salinity (ppt)	21.6	22.4	23.8
pH	7.7	7.8	7.9
D.O. Saturation (%)	76.1	77.7	81.3
D.O. (mg/L)	5.60	5.70	5.74
Turbidity (NTU)	6.90	8.90	12.40
SS (mg/L)	12.0	11.0	16.0
Remarks			

Station		D2	
Time (hh:mm)	08:09-08:20		
Water Depth (m)	7.20		
Monitoring Depth (m)	6.10		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.4	24.4	23.8
Salinity (ppt)	22.8	22.7	27.5
pH	7.8	7.8	7.9
D.O. Saturation (%)	83.8	83.9	81.6
D.O. (mg/L)	6.15	6.15	5.89
Turbidity (NTU)	6.40	6.80	17.64
SS (mg/L)	7.0	8.0	27.33
Remarks			

Station		SR3	
Time (hh:mm)	08:54-09:01		
Water Depth (m)	12.10		
Monitoring Depth (m)	11.10		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.5	24.4	24.0
Salinity (ppt)	23.0	23.9	26.8
pH	7.9	7.9	8.0
D.O. Saturation (%)	91.0	89.4	88.9
D.O. (mg/L)	6.66	6.52	6.43
Turbidity (NTU)	6.80	10.80	13.00
SS (mg/L)	7.0	14.0	15.0
Remarks			

Station		G1	
Time (hh:mm)	08:22-08:30		
Water Depth (m)	12.50		
Monitoring Depth (m)	11.20		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.3	24.3	23.6
Salinity (ppt)	22.6	23.4	28.9
pH	7.9	7.9	8.0
D.O. Saturation (%)	90.9	90.6	89.5
D.O. (mg/L)	6.68	6.63	6.44
Turbidity (NTU)	4.70	5.10	18.80
SS (mg/L)	5.0	7.0	21.0
Remarks			

Station		SR4	
Time (hh:mm)	08:43-08:49		
Water Depth (m)	13.20		
Monitoring Depth (m)	11.30		
Trial	Trial 1	Trial 2	Trial 1
Water Temperature (°C)	24.3	24.3	23.7
Salinity (ppt)	22.9	23.6	28.3
pH	7.9	7.9	8.0
D.O. Saturation (%)	90.1	89.6	89.2
D.O. (mg/L)	6.62	6.56	6.47
Turbidity (NTU)	4.70	5.20	25.80
SS (mg/L)	5.0	5.0	14.0
Remarks			

Annex E7 - Water Quality Results at Tuen Mun during mid-ebb tide for 24 April 2008

Date	04/24/2008					
Station	C1					
Time (hh:mm)	13:42 - 13:46					
Ambient Temperature (°C)	23					
Weather	Cloudy					
Water Depth (m)	8.10					
Monitoring Depth (m)	7.20					
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	23.1	23.1	23.1	23.1	23.12	-
Salinity (ppt)	30.1	30.3	30.3	30.3	30.30	-
pH	8.0	8.0	8.0	7.9	7.97	-
D.O. Saturation (%)	88.0	87.9	88.4	91.4	88.28	-
D.O. (mg/L)	6.33	6.32	6.36	6.28	6.34	6.39
Turbidity (NTU)	3.10	3.20	3.50	4.00	3.72	-
SS (mg/L)	4.0	7.0	6.0	5.0	7.00	-
Remarks						

Date	04/24/2008					
Station	U1					
Time (hh:mm)	14:02 - 14:06					
Ambient Temperature (°C)	23					
Weather	Cloudy					
Water Depth (m)	9.10					
Monitoring Depth (m)	8.10					
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	23.2	23.2	23.1	23.1	23.1	23.12
Salinity (ppt)	30.4	30.4	31.4	31.6	31.4	31.14
pH	8.0	8.0	8.0	8.0	8.0	8.01
D.O. Saturation (%)	86.9	86.5	85.6	85.4	85.5	86.87
D.O. (mg/L)	6.24	6.21	6.11	6.10	6.09	6.14
Turbidity (NTU)	3.90	4.60	9.30	11.10	9.60	8.38
SS (mg/L)	11.0	8.0	13.0	18.0	16.0	14.00
Remarks						

Date	04/24/2008					
Station	C2					
Time (hh:mm)	14:26 - 14:32					
Ambient Temperature (°C)	23					
Weather	Cloudy					
Water Depth (m)	13.20					
Monitoring Depth (m)	11.90					
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	23.1	23.1	23.1	23.1	23.11	-
Salinity (ppt)	30.9	31.1	31.6	31.8	31.7	-
pH	8.0	8.0	8.0	8.0	8.00	-
D.O. Saturation (%)	86.8	86.7	86.2	85.9	86.71	-
D.O. (mg/L)	6.22	6.20	6.15	6.13	6.19	6.23
Turbidity (NTU)	6.60	8.30	12.00	11.00	13.90	-
SS (mg/L)	10.0	10.0	16.0	19.0	15.00	-
Remarks						

Date	04/24/2008					
Station	SR1					
Time (hh:mm)	13:54 - 13:57					
Ambient Temperature (°C)	23					
Weather	Cloudy					
Water Depth (m)	4.90					
Monitoring Depth (m)	3.90					
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	23.2	23.2	23.2	23.2	23.1	23.17
Salinity (ppt)	30.1	30.3	30.7	30.3	30.9	30.51
pH	8.0	8.0	8.0	8.0	8.0	8.00
D.O. Saturation (%)	86.6	86.1	86.6	86.0	85.9	86.35
D.O. (mg/L)	6.22	6.18	6.21	6.17	6.22	6.19
Turbidity (NTU)	4.50	4.60	5.10	4.90	5.80	5.26
SS (mg/L)	6.0	7.0	12.0	8.0	8.0	8.83
Remarks						

Date	04/24/2008					
Station	D1					
Time (hh:mm)	14:13 - 14:18					
Ambient Temperature (°C)	23					
Weather	Cloudy					
Water Depth (m)	9.10					
Monitoring Depth (m)	8.10					
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	23.2	23.1	23.1	23.1	23.12	-
Salinity (ppt)	30.6	30.8	31.2	31.4	31.21	-
pH	8.0	8.0	8.0	8.0	8.01	-
D.O. Saturation (%)	86.8	86.7	86.4	86.6	86.99	-
D.O. (mg/L)	6.23	6.21	6.18	6.19	6.22	6.26
Turbidity (NTU)	4.60	6.80	9.30	11.90	10.40	-
SS (mg/L)	10.0	11.0	14.0	18.0	15.83	-
Remarks						

Date	04/24/2008					
Station	U1					
Time (hh:mm)	14:02 - 14:06					
Ambient Temperature (°C)	23					
Weather	Cloudy					
Water Depth (m)	9.10					
Monitoring Depth (m)	8.10					
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	23.2	23.2	23.1	23.1	23.1	23.12
Salinity (ppt)	30.6	30.8	31.2	31.4	31.6	-
pH	8.0	8.0	8.0	8.0	8.01	-
D.O. Saturation (%)	86.8	86.7	86.4	86.6	86.99	-
D.O. (mg/L)	6.23	6.21	6.18	6.19	6.22	6.26
Turbidity (NTU)	4.60	6.80	9.30	11.90	10.40	-
SS (mg/L)	10.0	11.0	14.0	18.0	15.83	-
Remarks						

Annex E8 - Water Quality Results at Tuen Mun during mid-flood tide for 24 April 2008

Date	04/24/2008					
Station	C1					
Time (hh:mm)	08:04 - 08:08					
Ambient Temperature (°C)	21					
Weather	Sunny					
Water Depth (m)	8.20			6.90		
Monitoring Depth (m)	1.20					
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.2	23.2	23.2	23.2	23.18
Salinity (ppt)	29.4	29.4	30.7	30.5	31.1	30.35
pH	8.0	8.0	8.0	8.0	8.0	7.98
D.O. Saturation (%)	87.5	87.0	87.7	87.2	88.5	87.47
D.O. (mg/L)	6.32	6.28	6.28	6.25	6.33	6.27
Turbidity (NTU)	3.90	3.10	13.00	10.30	13.90	9.51
SS (mg/L)	5.0	8.0	16.0	18.0	20.0	14.67
Remarks						

Date	04/24/2008					
Station	C2					
Time (hh:mm)	08:40 - 08:47					
Ambient Temperature (°C)	21					
Weather	Sunny					
Water Depth (m)	13.20			12.10		
Monitoring Depth (m)	1.10					
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.1	23.2	23.1	23.3	23.17
Salinity (ppt)	29.0	29.1	29.3	29.3	30.4	29.57
pH	8.0	8.0	8.0	8.0	8.0	8.01
D.O. Saturation (%)	90.8	90.9	89.0	89.8	90.0	90.34
D.O. (mg/L)	6.58	6.58	6.43	6.49	6.56	6.52
Turbidity (NTU)	3.00	3.10	4.30	3.30	18.40	7.32
SS (mg/L)	3.0	5.0	4.0	4.0	35.0	11.50
Remarks						

Date	04/24/2008					
Station	D1					
Time (hh:mm)	08:30 - 08:34					
Ambient Temperature (°C)	21					
Weather	Sunny					
Water Depth (m)	9.20			7.90		
Monitoring Depth (m)	1.10					
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.3	23.3	23.3	23.3	23.27
Salinity (ppt)	29.5	29.5	29.6	29.7	30.3	29.83
pH	8.0	8.0	8.0	8.0	8.0	8.00
D.O. Saturation (%)	89.1	89.1	89.0	88.3	92.4	89.26
D.O. (mg/L)	6.42	6.42	6.40	6.35	6.63	6.42
Turbidity (NTU)	4.00	3.70	3.90	4.10	4.80	4.52
SS (mg/L)	5.0	4.0	5.0	6.0	6.0	5.17
Remarks						

Date	04/24/2008					
Station	U1					
Time (hh:mm)	08:20 - 08:26					
Ambient Temperature (°C)	21					
Weather	Sunny					
Water Depth (m)	8.50			8.10		
Monitoring Depth (m)	1.30					
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.2	23.2	23.2	23.2	23.21
Salinity (ppt)	29.6	29.6	30.2	30.2	30.6	30.07
pH	8.0	8.0	8.0	8.0	8.0	8.01
D.O. Saturation (%)	88.2	88.4	88.2	88.6	90.5	89.18
D.O. (mg/L)	6.36	6.38	6.34	6.36	6.48	6.41
Turbidity (NTU)	3.40	3.70	4.10	5.50	10.40	6.05
SS (mg/L)	4.0	6.0	8.0	5.0	13.0	8.17
Remarks						

Date	04/24/2008					
Station	SR1					
Time (hh:mm)	08:14 - 08:17					
Ambient Temperature (°C)	21					
Weather	Sunny					
Water Depth (m)	5.30			3.80		
Monitoring Depth (m)	1.30					
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.3	23.3	23.3	23.3	23.3	23.30
Salinity (ppt)	29.8	29.7	30.0	30.1	29.9	29.92
pH	8.0	8.0	8.0	8.0	8.0	8.00
D.O. Saturation (%)	87.5	87.0	88.4	86.6	94.0	88.41
D.O. (mg/L)	6.29	6.26	6.34	6.21	6.75	6.35
Turbidity (NTU)	4.70	4.10	5.10	5.10	5.10	4.88
SS (mg/L)	5.0	6.0	8.0	8.0	6.0	7.00
Remarks						

Annex E9 - Water Quality Results at Airport during mid-ebb tide for 25 April 2008

Sampling Date	4/25/2008
Weather & Ambient Temperature	Cloudy, 23C

Mid-Ebb

Station		C3		U2		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		
Time (hh:mm)	Water Depth (m)	07:05-07:10		11:40		1.20		10.10		1.10		7.10		4.20		8.40		7.10		
Monitoring Depth (m)	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.0	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.0	23.0	23.0	23.0	22.9	22.9	22.9	22.9	22.9	22.9
Salinity (ppt)	29.7	30.4	30.7	30.8	30.9	30.9	30.9	30.9	30.9	30.9	29.2	29.2	29.2	29.2	29.6	29.5	29.6	29.6	29.6	29.6
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
D.O. Saturation (%)	91.3	89.0	88.7	88.3	89.6	89.6	90.1	89.50	90.1	91.1	92.5	92.4	91.8	91.7	94.7	94.7	94.7	94.7	94.7	94.7
D.O. (mg/L)	6.60	6.40	6.36	6.33	6.42	6.42	6.46	6.43	6.44	6.42	6.71	6.70	6.65	6.64	6.83	6.83	6.83	6.83	6.83	6.83
Turbidity (NTU)	4.00	5.10	7.60	8.90	9.20	10.30	7.52	7.52	7.52	6.87	4.40	4.10	5.90	4.90	6.40	7.40	5.54	5.54	5.54	5.54
SS (mg/L)	7.0	6.0	9.0	14.0	11.0	16.0	10.50	10.50	10.50	6.87	4.0	8.0	7.0	8.0	8.0	10.0	7.50	7.50	7.50	7.50
Remarks																				

Station		C4		SR2		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		
Time (hh:mm)	Water Depth (m)	08:04-08:07		9:20		1.00		8.00		1.00		3.00		1.00		3.00		1.00		
Monitoring Depth (m)	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.0	23.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	23.0	23.0	23.0	23.0	23.1	23.1	23.1	23.1	23.1	23.1
Salinity (ppt)	29.0	28.9	29.9	30.3	32.1	32.1	30.38	30.38	30.38	30.38	28.9	28.9	28.9	28.9	29.1	29.2	29.00	29.00	29.00	29.00
pH	8.0	8.0	8.1	8.1	8.1	8.1	8.06	8.06	8.06	8.06	7.9	8.0	8.0	7.9	8.0	8.0	7.95	7.95	7.95	7.95
D.O. Saturation (%)	94.3	93.8	95.7	95.6	95.8	96.0	95.17	95.17	95.17	95.17	79.2	80.3	80.3	80.3	80.6	80.6	80.09	80.09	80.09	80.09
D.O. (mg/L)	6.85	6.82	6.92	6.90	6.84	6.86	6.87	6.87	6.85	6.87	5.75	5.82	5.82	5.82	5.83	5.83	5.81	5.81	5.81	5.81
Turbidity (NTU)	3.90	3.90	7.50	9.50	34.10	14.44	14.44	14.44	14.44	14.44	5.20	5.10	5.10	5.70	5.50	5.50	5.40	5.40	5.40	5.40
SS (mg/L)	3.0	8.0	15.0	11.0	33.0	40.0	18.33	18.33	18.33	18.33	8.0	8.0	8.0	4.0	4.0	5.0	6.25	6.25	6.25	6.25
Remarks																				

Station		D2		SR3		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		
Time (hh:mm)	Water Depth (m)	07:54-07:58		7:40		1.10		6.20		1.10		10.80		1.20		6.30		1.20		
Monitoring Depth (m)	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	22.9	23.0	23.0	22.93	22.93	22.93	22.93	23.0	22.9	23.0	23.0	22.9	22.9	22.94	22.94	22.94	22.94
Salinity (ppt)	29.2	29.2	29.5	29.3	30.3	30.5	29.65	29.65	29.65	29.65	29.4	29.3	29.5	29.5	30.9	30.8	29.5	29.5	29.5	29.5
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02	8.02	8.02	8.02	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
D.O. Saturation (%)	93.0	92.9	91.4	90.8	94.2	91.3	92.27	92.27	92.27	92.27	93.2	93.1	92.6	92.5	93.9	93.2	93.2	93.2	93.2	93.2
D.O. (mg/L)	6.75	6.74	6.62	6.59	6.79	6.57	6.68	6.68	6.68	6.68	6.76	6.75	6.71	6.69	6.75	6.70	6.73	6.73	6.73	6.73
Turbidity (NTU)	4.10	4.00	6.00	5.30	8.20	8.70	6.08	6.08	6.08	6.08	3.90	3.80	4.40	4.30	7.10	6.70	5.06	5.06	5.06	5.06
SS (mg/L)	5.0	6.0	8.0	6.0	10.0	11.0	7.67	7.67	7.67	7.67	4.0	4.0	5.0	4.0	9.0	9.0	5.83	5.83	5.83	5.83
Remarks																				

Station		G1		SR4		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		Bottom		Depth-averaged		Surface & Middle		
Time (hh:mm)	Water Depth (m)	07:17-07:20		12:40		1.20		11.10		1.30		12.00		1.30		6.60		1.30		
Monitoring Depth (m)	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.0	23.0	23.0	23.0	22.9	22.9	22.98	22.98	22.98	22.98	23.0	23.0	23.0	23.0	22.9	22.9	22.98	22.98	22.98	22.98
Salinity (ppt)	29.4	29.8	30.8	30.9	31.5	31.5	30.65	30.65	30.65	30.65	29.5	29.4	30.3	30.2	31.7	31.7	30.46	30.46	30.46	30.46
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.99	7.99	7.99	7.99	8.0	8.0	8.0	8.0	8.1	8.1	8.02	8.02	8.02	8.02
D.O. Saturation (%)	92.3	91.1	89.7	90.6	90.6	91.9	91.03	91.03	91.03	91.03	91.5	91.6	91.2	90.9	93.7	93.1	92.01	92.01	92.01	92.01
D.O. (mg/L)	6.68	6.58	6.44	6.50	6.49	6.58	6.55	6.55	6.54	6.55	6.62	6.63	6.57	6.55	6.71	6.67	6.63	6.63	6.63	6.63
Turbidity (NTU)	4.20	4.10	11.10	16.90	23.20	26.20	14.29	14.29	14.29	14.29	3.90	3.50	7.40	6.70	20.00	18.80	10.07	10.07	10.07	10.07
SS (mg/L)	4.0	7.0	18.0	15.0	19.0	24.0	14.50	14.50	14.50	14.50	5.0	7.0	14.0	7.0	22.0	26.0	13.50	13.50	13.50	13.50
Remarks																				

Annex E11 - Water Quality Results at Tuen Mun during mid-ebb tide for 26 April 2008

Date	04/26/2008					
Station	C1					
Time (hh:mm)	16:05 - 16:09					
Ambient Temperature (°C)	22					
Weather	Sunny					
Water Depth (m)	9.00			7.80		
Monitoring Depth (m)	1.10			4.50		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.0	23.1	23.0	23.0	23.0
Salinity (ppt)	31.1	31.3	31.2	31.3	31.3	31.3
pH	7.9	7.9	7.9	7.9	7.9	7.9
D.O. Saturation (%)	89.4	87.9	88.3	87.8	89.4	89.9
D.O. (mg/L)	6.39	6.29	6.32	6.29	6.40	6.44
Turbidity (NTU)	6.80	9.30	8.30	10.30	10.50	10.60
SS (mg/L)	6.0	8.0	13.0	12.0	15.0	16.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.0	23.0	23.0	23.0	23.0
Salinity (ppt)	31.1	31.3	31.2	31.3	31.3	31.3
pH	7.9	7.9	7.9	7.9	7.9	7.9
D.O. Saturation (%)	89.4	87.9	88.3	87.8	89.4	89.9
D.O. (mg/L)	6.39	6.29	6.32	6.29	6.40	6.44
Turbidity (NTU)	6.80	9.30	8.30	10.30	10.50	10.60
SS (mg/L)	6.0	8.0	13.0	12.0	15.0	16.0
Remarks						

Date	04/26/2008					
Station	C2					
Time (hh:mm)	15:04 - 15:10					
Ambient Temperature (°C)	22					
Weather	Sunny					
Water Depth (m)	12.60			11.90		
Monitoring Depth (m)	0.80			6.30		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.0	23.0	23.0	23.0	23.0
Salinity (ppt)	30.8	30.8	31.2	31.4	31.4	31.4
pH	7.9	7.9	7.9	7.9	7.9	7.9
D.O. Saturation (%)	89.0	89.1	88.2	88.1	89.2	88.3
D.O. (mg/L)	6.38	6.38	6.32	6.31	6.39	6.32
Turbidity (NTU)	5.90	5.50	8.20	8.50	10.00	10.10
SS (mg/L)	13.0	13.0	12.0	10.0	5.0	8.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.0	23.0	23.0	23.0	23.0
Salinity (ppt)	30.8	30.8	31.2	31.4	31.4	31.4
pH	7.9	7.9	7.9	7.9	7.9	7.9
D.O. Saturation (%)	89.0	89.1	88.2	88.1	89.2	88.3
D.O. (mg/L)	6.38	6.38	6.32	6.31	6.39	6.32
Turbidity (NTU)	5.90	5.50	8.20	8.50	10.00	10.10
SS (mg/L)	13.0	13.0	12.0	10.0	5.0	8.0
Remarks						

Date	04/26/2008					
Station	D1					
Time (hh:mm)	15:23 - 15:38					
Ambient Temperature (°C)	22					
Weather	Sunny					
Water Depth (m)	9.10			8.00		
Monitoring Depth (m)	1.00			4.60		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.2	23.0	23.0	23.0	23.0
Salinity (ppt)	30.8	30.8	31.3	31.3	31.5	31.5
pH	7.9	7.9	7.9	7.9	7.9	7.9
D.O. Saturation (%)	89.5	89.8	87.6	88.1	87.4	89.2
D.O. (mg/L)	6.41	6.43	6.27	6.31	6.26	6.38
Turbidity (NTU)	6.40	5.50	11.40	11.40	16.80	14.40
SS (mg/L)	7.0	7.0	15.0	13.0	62.0	61.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.2	23.0	23.0	23.0	23.0
Salinity (ppt)	30.8	30.8	31.3	31.3	31.5	31.5
pH	7.9	7.9	7.9	7.9	7.9	7.9
D.O. Saturation (%)	89.5	89.8	87.6	88.1	87.4	89.2
D.O. (mg/L)	6.41	6.43	6.27	6.31	6.26	6.38
Turbidity (NTU)	6.40	5.50	11.40	11.40	16.80	14.40
SS (mg/L)	7.0	7.0	15.0	13.0	62.0	61.0
Remarks						

Date	04/26/2008					
Station	U1					
Time (hh:mm)	15:44 - 15:48					
Ambient Temperature (°C)	22					
Weather	Sunny					
Water Depth (m)	9.70			8.00		
Monitoring Depth (m)	1.00			4.90		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.2	23.0	23.0	23.0	23.0
Salinity (ppt)	30.8	30.7	31.3	31.3	31.4	31.5
pH	8.0	8.0	8.0	8.0	8.0	8.0
D.O. Saturation (%)	90.4	90.1	88.1	88.1	91.4	89.3
D.O. (mg/L)	6.47	6.45	6.31	6.31	6.54	6.39
Turbidity (NTU)	4.60	4.70	8.50	8.60	12.20	12.40
SS (mg/L)	5.0	5.0	10.0	13.0	18.0	16.0
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.2	23.2	23.0	23.0	23.0	23.0
Salinity (ppt)	30.8	30.7	31.3	31.3	31.4	31.5
pH	8.0	8.0	8.0	8.0	8.0	8.0
D.O. Saturation (%)	90.4	90.1	88.1	88.1	91.4	89.3
D.O. (mg/L)	6.47	6.45	6.31	6.31	6.54	6.39
Turbidity (NTU)	4.60	4.70	8.50	8.60	12.20	12.40
SS (mg/L)	5.0	5.0	10.0	13.0	18.0	16.0
Remarks						

Date	04/26/2008					
Station	SR1					
Time (hh:mm)	15:53 - 15:57					
Ambient Temperature (°C)	22					
Weather	Sunny					
Water Depth (m)	5.00			4.10		
Monitoring Depth (m)	0.90			2.50		
Tide	Mid-Ebb					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.2	23.1	23.1	23.0	23.0
Salinity (ppt)	30.9	30.7	31.0	31.0	31.1	30.97
pH	7.9	7.9	7.9	7.9	7.9	7.94
D.O. Saturation (%)	88.6	90.1	88.2	88.1	90.1	88.4
D.O. (mg/L)	6.35	6.45	6.32	6.31	6.45	6.37
Turbidity (NTU)	5.90	4.20	7.00	7.20	7.10	6.54
SS (mg/L)	4.0	6.0	12.0	10.0	8.0	8.33
Remarks						

Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	23.1	23.2	23.1	23.1	23.0	23.0
Salinity (ppt)	30.9	30.7	31.0	31.0	31.1	30.97
pH	7.9	7.9	7.9	7.9	7.9	7.94
D.O. Saturation (%)	88.6	90.1	88.2	88.1	90.1	88.4
D.O. (mg/L)	6.35	6.45	6.32	6.31	6.45	6.37
Turbidity (NTU)	5.90	4.20	7.00	7.20	7.10	6.54
SS (mg/L)	4.0	6.0	12.0	10.0	8.0	8.33
Remarks						

Annex E12 - Water Quality Results at Tuen Mun during mid-flood tide for 26 April 2008

Date	04/26/2008					
Station	CI					
Time (hh:mm)	08:14 - 08:21					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	8.10					
Monitoring Depth (m)	1.00	Mid-Flood				7.70
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	23.0	23.0	23.0
Salinity (ppt)	30.3	30.3	30.5	30.8	30.8	30.8
pH	7.7	7.8	7.7	7.6	7.8	7.74
D.O. Saturation (%)	88.0	88.4	86.7	84.5	86.2	86.83
D.O. (mg/L)	6.35	6.38	6.25	6.06	6.19	6.13
Turbidity (NTU)	3.90	4.00	4.40	4.30	7.30	5.03
SS (mg/L)	6.0	4.0	7.0	6.0	8.0	6.50
Remarks						

Date	04/26/2008					
Station	CI					
Time (hh:mm)	08:14 - 08:21					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	8.10					
Monitoring Depth (m)	1.00	Mid-Flood				7.70
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	23.0	23.0	23.0
Salinity (ppt)	30.3	30.3	30.5	30.8	30.8	30.8
pH	7.7	7.8	7.7	7.6	7.8	7.74
D.O. Saturation (%)	88.0	88.4	86.7	84.5	86.2	86.83
D.O. (mg/L)	6.35	6.38	6.25	6.06	6.19	6.13
Turbidity (NTU)	3.90	4.00	4.40	4.30	7.30	5.03
SS (mg/L)	6.0	4.0	7.0	6.0	8.0	6.50
Remarks						

Date	04/26/2008					
Station	CZ					
Time (hh:mm)	09:05 - 09:11					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	13.20					
Monitoring Depth (m)	1.00	Mid-Flood				12.10
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	23.0	22.9	23.0	23.0	22.93
Salinity (ppt)	30.4	30.4	30.7	30.6	31.0	30.64
pH	8.0	8.0	8.0	8.0	8.0	7.98
D.O. Saturation (%)	89.4	89.2	87.4	87.1	86.8	86.0
D.O. (mg/L)	6.45	6.43	6.28	6.27	6.23	6.31
Turbidity (NTU)	3.50	3.70	4.40	4.70	6.20	4.76
SS (mg/L)	6.0	4.0	4.0	6.0	7.0	6.0
Remarks						

Date	04/26/2008					
Station	CZ					
Time (hh:mm)	09:05 - 09:11					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	13.20					
Monitoring Depth (m)	1.00	Mid-Flood				12.10
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	23.0	22.9	23.0	23.0	22.93
Salinity (ppt)	30.4	30.4	30.7	30.6	31.0	30.64
pH	8.0	8.0	8.0	8.0	8.0	7.98
D.O. Saturation (%)	89.4	89.2	87.4	87.1	86.8	86.0
D.O. (mg/L)	6.45	6.43	6.28	6.27	6.23	6.31
Turbidity (NTU)	3.50	3.70	4.40	4.70	6.20	4.76
SS (mg/L)	6.0	4.0	4.0	6.0	7.0	6.0
Remarks						

Date	04/26/2008					
Station	DI					
Time (hh:mm)	08:53 - 09:00					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	9.10					
Monitoring Depth (m)	1.00	Mid-Flood				8.20
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	23.0	23.0	22.92
Salinity (ppt)	30.4	30.4	30.6	30.5	30.8	30.58
pH	8.0	8.0	8.0	7.9	8.0	7.96
D.O. Saturation (%)	89.3	88.2	87.1	92.6	89.6	88.99
D.O. (mg/L)	6.44	6.36	6.27	6.28	6.66	6.41
Turbidity (NTU)	3.60	4.10	5.00	5.10	6.00	4.60
SS (mg/L)	6.0	3.0	6.0	5.0	9.0	6.33
Remarks						

Date	04/26/2008					
Station	DI					
Time (hh:mm)	08:53 - 09:00					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	9.10					
Monitoring Depth (m)	1.00	Mid-Flood				8.20
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	23.0	23.0	22.92
Salinity (ppt)	30.4	30.4	30.6	30.5	30.8	30.58
pH	8.0	8.0	8.0	7.9	8.0	7.96
D.O. Saturation (%)	89.3	88.2	87.1	92.6	89.6	88.99
D.O. (mg/L)	6.44	6.36	6.27	6.28	6.66	6.41
Turbidity (NTU)	3.60	4.10	5.00	5.10	6.00	4.60
SS (mg/L)	6.0	3.0	6.0	5.0	9.0	6.33
Remarks						

Date	04/26/2008					
Station	UI					
Time (hh:mm)	08:42 - 08:48					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	8.80					
Monitoring Depth (m)	0.90	Mid-Flood				8.00
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	22.9	22.9	22.89
Salinity (ppt)	30.4	30.3	30.4	30.4	30.8	30.53
pH	7.9	7.9	7.9	7.9	7.9	7.93
D.O. Saturation (%)	89.0	89.0	87.9	87.4	84.2	87.11
D.O. (mg/L)	6.42	6.43	6.34	6.30	6.06	6.28
Turbidity (NTU)	3.90	3.80	4.10	4.10	6.30	4.86
SS (mg/L)	4.0	4.0	4.0	6.0	7.0	5.50
Remarks						

Date	04/26/2008					
Station	UI					
Time (hh:mm)	08:42 - 08:48					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	8.80					
Monitoring Depth (m)	0.90	Mid-Flood				8.00
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	22.9	22.9	22.89
Salinity (ppt)	30.4	30.3	30.4	30.4	30.8	30.53
pH	7.9	7.9	7.9	7.9	7.9	7.93
D.O. Saturation (%)	89.0	89.0	87.9	87.4	84.2	87.11
D.O. (mg/L)	6.42	6.43	6.34	6.30	6.06	6.28
Turbidity (NTU)	3.90	3.80	4.10	4.10	6.30	4.86
SS (mg/L)	4.0	4.0	4.0	6.0	7.0	5.50
Remarks						

Date	04/26/2008					
Station	SR1					
Time (hh:mm)	08:30 - 08:36					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	5.20					
Monitoring Depth (m)	0.90	Mid-Flood				4.20
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	22.9	22.9	22.86
Salinity (ppt)	30.4	30.4	30.4	30.4	30.5	30.39
pH	7.9	7.9	7.9	7.9	7.9	7.90
D.O. Saturation (%)	88.7	88.4	88.3	88.3	89.1	88.63
D.O. (mg/L)	6.40	6.38	6.37	6.37	6.42	6.40
Turbidity (NTU)	3.80	4.00	4.20	4.10	5.20	4.50
SS (mg/L)	5.0	5.0	5.0	4.0	7.0	5.17
Remarks						

Date	04/26/2008					
Station	SR1					
Time (hh:mm)	08:30 - 08:36					
Ambient Temperature (°C)	20					
Weather	Sunny					
Water Depth (m)	5.20					
Monitoring Depth (m)	0.90	Mid-Flood				4.20
Tide	Mid-Flood					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2
Water Temperature (°C)	22.9	22.9	22.9	22.9	22.9	22.86
Salinity (ppt)	30.4	30.4	30.4	30.4	30.5	30.39
pH	7.9	7.9	7.9	7.9	7.9	7.90
D.O. Saturation (%)	88.7	88.4	88.3	88.3	89.1	88.63
D.O. (mg/L)	6.40	6.38	6.37	6.37	6.42	6.40
Turbidity (NTU)	3.80	4.00	4.20	4.10	5.20	4.50
SS (mg/L)	5.0	5.0	5.0	4.0	7.0	5.17
Remarks						

Annex F

Dolphin Observation Recording Forms

HONG KONG MARINE CONTRACTORS LIMITED

DOLPHIN OBSERVATION RECORDING FORM

Date: (dd/mm/yyyy): 22/04/2008 Vessel Name: CHL Weather: Fair & Foggy
 Observer's name: Karin Chan Start Time: 17:30 End Time: 18:00 Total Time: 0:30
 Observer's Height Above Sea Level (m) 10 Field of View 180 degree FWD / 90 degree L / 90 degree R

Time	Easting	Northing	Speed	Sea State	Swell Height	Visibility	Boat Activity	Sighting Ref.
17:30	612435	821138	0.0 knot	4	MOD	1-5km	CLB	N/A
17:45	812455	821138	0.0 knot	4	MID	1-5km	CLB	N/A
17:00	812435	821138	0.0 knot	4	MID	1-5km	CLB	N/A

DATA DEFINITIONS:

Time: 24hrs clock. Location: Record Easting & Northing (HK80 GRID) Speed: Record in knots. Sea State: 0 = mirror calm; 1 = slight ripples, no foam crest; 2 = small wavelets, glassy crests, but no whitecaps; 3 = large wavelets, crest begin to break, few whitecaps; 4 = longer waves, many whitecaps; 5 = moderate waves of longer form, some spray; 6 = large waves, whitecaps everywhere, frequent spray; 7 = sea heaps up, white foam lows in streaks; 8 = long, high waves edges breaking, foam blows in streaks; 9 = high waves, sea begin to roll, dense foam streaks. Swell Height: Light = 0-1m; Moderate = 1-2m; Heavy = > 2m. Visibility: < 1km; 1-5km; 6-10km; >10km. Boat Activity: TB = Tugboat; CLB = Cable Lay Barge Sighting Reference: Refer to number(s) on Sighting Record Form



HONG KONG MARINE CONTRACTORS LIMITED

DOLPHIN OBSERVATION RECORDING FORM

Date: (dd/mm/yyyy): 23/04/2008 Vessel Name: CHI Weather = Cloudy
 Observer's name: Kevin Chan
 Start Time: 8:30 End Time: 9:00 Total Time: 0:30
 Observer's Height Above Sea Level (m) 10 Field of View 180 degree FWD / 90 degree L / 90 degree R

Time	Easting	Northing	Speed	Sea State	Swell Height	Visibility	Boat Activity	Sighting Ref.
8:30	812116	820751	0.0 knot	3	LLG	6-10 km	CLB	NIL
8:45	812116	820751	0.0 knot	3	LLG	6-10 km	CLB	NIL
9:00	812116	820751	0.0 knot	3	LLG	6-10 km	CLB	NIL

DATA DEFINITIONS:

Time: 24hrs clock. Location: Record Easting & Northing (HK80 GRID) Speed: Record in knots. Sea State: 0 = mirror calm; 1 = slight ripples, no foam crest; 2 = small wavelets, glassy crests, but no whitecaps; 3 = large wavelets, crest begin to break, few whitecaps; 4 = longer waves, many whitecaps; 5 = moderate waves of longer form, some spray; 6 = large waves, whitecaps everywhere, frequent spray; 7 = sea heaps up, white foam lows in streaks; 8 = long, high waves edges breaking, foam blows in streaks; 9 = high waves, sea begin to roll, dense foam streaks. Swell Height: Light = 0-1m; Moderate = 1-2m; Heavy = > 2m. Visibility: < 1km; 1-5km; 6-10km; >10km. Boat Activity: TB = Tugboat; CLB = Cable Lay Barge Sighting Reference: Refer to number(s) on Sighting Record Form

Annex G

Current Flow Data

(provided on CD-ROM
only)

