IMPACT MONITORING REPORT

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

Twenty - Third Weekly Impact Monitoring Report -28th April to 4th May 2008

9th May 2008

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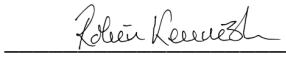
CLP Power

Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit: *Twenty-Third Weekly Impact Monitoring Report – 28th April 2008 to 4th May 2008*

May 2008

Reference 0072833

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Dr Robin Kennish
Signed:	
Position:	Director
Date:	9 May 2008

CONTENTS

LIST OF TABLES

LIST OF ANNEXES

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 23rd weekly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 28 April to 4 May 2008 in accordance with the *EM&A Manual*.

Summary of Construction Works undertaken during the Reporting Period

During the reporting week, no marine works were conducted from 28 April to 30 April 2008. Transfers of concrete slabs and blackfill materials to the barge were undertaken on 1 May 2008 and 2 May 2008, respectively. Subsequently, backfilling works followed by manual installation of articulating pipes were carried out near the Airport landing site.

Water Quality

Six monitoring events were scheduled between 28 April and 4 May 2008 at the Airport landing site. All monitoring events at all designated monitoring stations were performed on schedule, ie on 28 April, 30 April and 2 May 2008.

All measured Dissolved Oxygen (DO), Surface and Middle, levels complied with the Action and Limit (AL) Levels with exception of 28 April 2008. Besides, all measured Turbidity and Suspended Solids (SS) levels were below AL Levels.

It should be noted that, on all three monitoring days, the Dissolved Oxygen (DOB), Bottom, levels measured at some of the impact stations were found lower than the Action level even when there were no marine works (ie 28 April and 30 April 2008). This phenomenon was examined in *Section 5.1* and the exceednaces were considered to be caused by natural fluctuation and not the Project works.

Environmental Non-conformance

Twenty-nine exceedances of Action Levels were recorded on three monitoring days, ie 28 April, 30 April and 2 May 2008 in the reporting week. 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 week.

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

Future Key Issues

During the following week (ie 5 May to 11 May 2008), installation of articulating pipes near the Airport side will be continued until 8 May 2008 and then concrete slab installation will be undertaken.

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 23rd weekly EM&A report, which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 28 April to 4 May 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 PROJECT INFORMATION

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*).

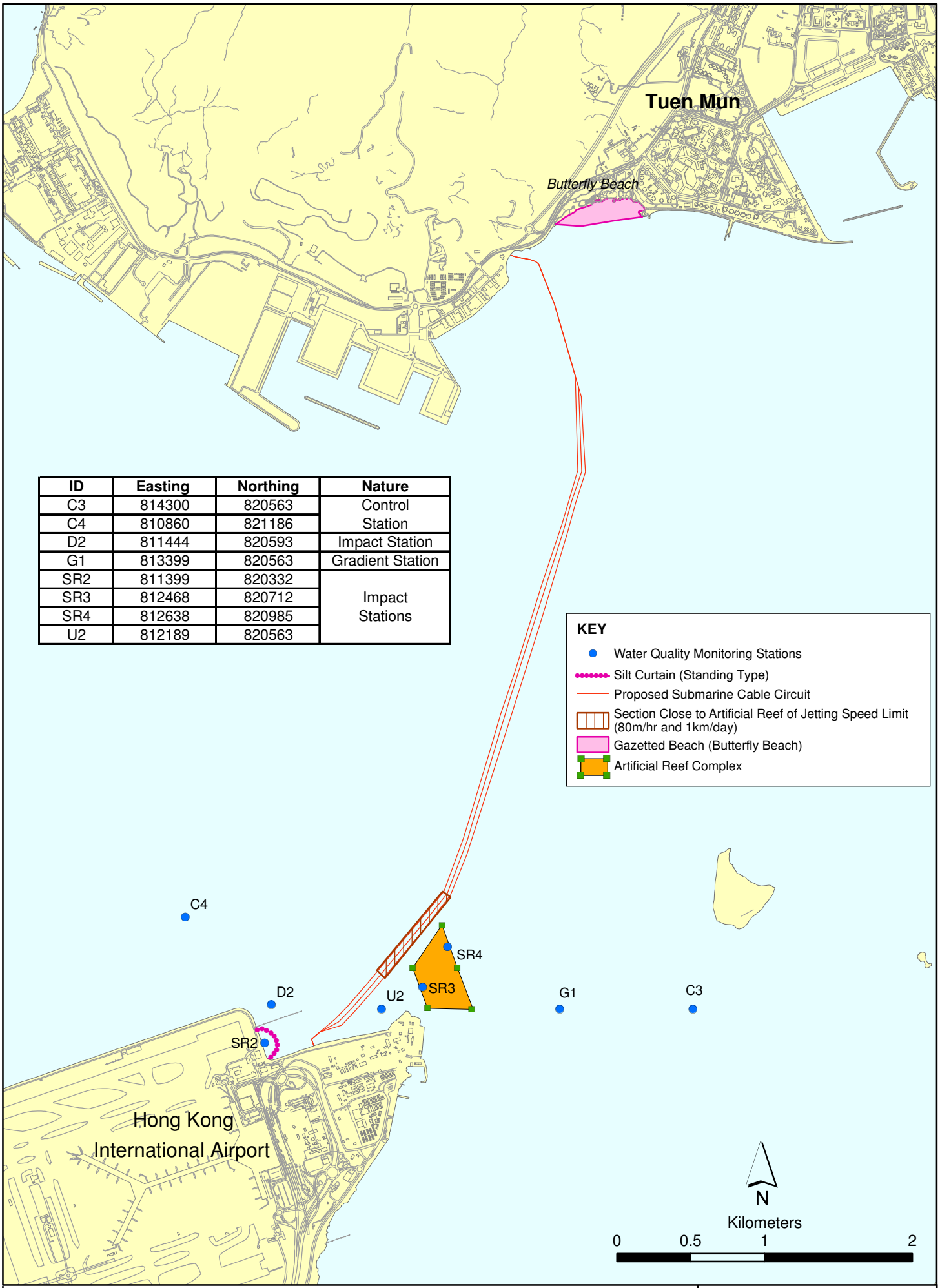
In September 2006, a Project Profile (PP) for the proposed 132kV Cable Route for Airport "A" to Castle Peak CCTS (thereinafter called the 'Project') was prepared and submitted to the Environmental Protection Department (EPD) under the *Environmental Impact Assessment Ordinance (EIAO)* for application 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 presents results of the data from monitoring stations around the Airport landing site (*Figure 2.1)*. Results of the impact monitoring data will therefore be compared against the results of the *Baseline Environmental Monitoring Part B*.



ID	Easting	Northing	Nature
C3	814300	820563	Control Station
C4	810860	821186	
D2	811444	820593	Impact Station
G1	813399	820563	Gradient Station
SR2	811399	820332	Impact Stations
SR3	812468	820712	
SR4	812638	820985	
U2	812189	820563	

FIGURE 2.1

Location of Water Quality Monitoring Stations
(at Airport Landing Site)

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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 WEEK

During the reporting week, no marine works were conducted from 28 April to 30 April 2008. Transfers of concrete slabs and blackfill materials to the barge were undertaken on 1 May 2008 and 2 May 2008, respectively. Subsequently, backfilling works followed by manual installation of articulating pipes were carried out near the Airport landing site.

The works programme of the period between 28 April and 4 May 2008 is 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
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 near the Airport are shown in *Figure 2.1*.

- 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
C3	Control Station	814300	820563
C4	Control Station	810860	821186
U2	Impact Station	812189	820563
D2	Impact Station	811444	820593
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 8 locations (five impact monitoring stations D2, U2, SR2, SR3 and SR4, one gradient station G1, and two control monitoring stations 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.

3.3.2 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*

The Action and Limit levels for the Airport landing site, which were established based on the results of *Baseline Environmental Monitoring Part B*, are presented in *Tables 3.2*.

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	**Step 1** - repeat sampling event; **Step 2** – identify source(s) of impact and confirm whether exceedance was due to the construction works; **Step 3** – inform EPD and LCSD and confirm notification of the non-compliance in writing; **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). **Step 5** - repeat measurements after implementation of mitigation for confirmation of compliance. **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.
Limit Level Exceedance	Undertake **Steps 1-5** immediately, if further non compliance continues at the Limit Level, suspend cable laying operations until an effective solution is identified.

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 m^3 day^{-1} for working 10 hours per day, i.e., 150 m^3 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 m^3 day^{-1} and 1,600 m^3 day^{-1} for working 16 hours per day, i.e., 41 m^3 hr^{-1} and 100 m^3 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 28 April and 4 May 2008 at the Airport landing site. All monitoring events at all designated monitoring stations were performed on schedule, ie on 28 April, 30 April and 2 May 2008.

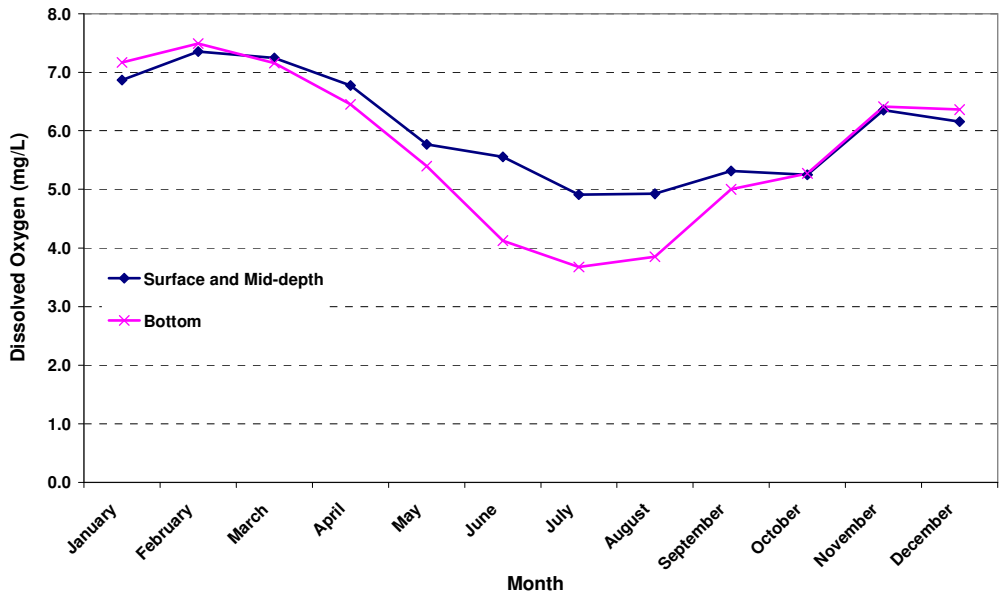
No major activities influencing the water quality were identified between 28 April and 4 May 2008.

All measured Dissolved Oxygen (DO), Surface and Middle, levels complied with the Action and Limit (AL) Levels with exception of 28 April 2008. Besides, all measured Turbidity and Suspended Solids (SS) levels were below AL Levels. However, on all three monitoring days, the Dissolved Oxygen (DOB), Bottom, levels measured at some of the impact stations were found lower than the Action level even when there were no marine works (ie 28 April and 30 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* and *E2*, decreasing trends of DO levels continued in the reporting week. It was observed that DO concentrations recorded at the Airport side dropped 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 picnocline, or density gradient. When the density gradient within the picnocline 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* and *E2* 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 measured 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

The Contractor confirmed that all jetting operations were completed on 23 April 2008. Hence, dolphin monitoring was not required during the reporting week.

5.3 TIDAL FLOW DIRECTION MONITORING

The Contractor confirmed that all jetting operations were completed on 23 April 2008 and therefore, no current flow data were reported.

6 ENVIRONMENTAL NON-CONFORMANCES

6.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

6.1.1 Exceedance on 28 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 both mid-ebb and mid-flood tides on 28 April 2008 (*Table 6.1*).

Table 6.1 Exceedances of the Action Levels of Dissolved Oxygen, Bottom (mg/L) and Dissolved Oxygen, Surface and Middle (mg/L) during Mid-ebb and Mid-flood Tides on 28 April 2008

Exceedance Log No.	0072833_28 April 08_DOB_E_Station D2 0072833_28 April 08_DOB_E_Station U2 0072833_28 April 08_DOB_E_Station SR2 0072833_28 April 08_DO_E_Station SR2 0072833_28 April 08_DOB_E_Station SR3 0072833_28 April 08_DOB_E_Station SR4 0072833_28 April 08_DO_E_Station SR4 0072833_28 April 08_DO_F_Station D2 0072833_28 April 08_DOB_F_Station D2 0072833_28 April 08_DOB_F_Station U2 0072833_28 April 08_DO_F_Station U2 0072833_28 April 08_DOB_F_Station SR2 0072833_28 April 08_DO_F_Station SR2 0072833_28 April 08_DOB_F_Station SR3 0072833_28 April 08_DO_F_Station SR3 0072833_28 April 08_DOB_F_Station SR4 0072833_28 April 08_DO_F_Station SR4	
Sampling date	28 April 2008	
Monitoring station	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 Station D2	Mid-Ebb	DO, Bottom = 6.49 (exceeds Action Level) DO, Surface and Middle = 6.62
	Mid-Flood	DO, Bottom = 6.44 (exceeds Action Level) DO, Surface and Middle = 6.54 (exceeds Action Level)
Measured Levels at Station U2	Mid-Ebb	DO, Bottom = 6.59 (exceeds Action Level) DO, Surface and Middle = 6.90
	Mid-Flood	DO, Bottom = 6.41 (exceeds Action Level) DO, Surface and Middle = 6.52 (exceeds Action Level)
Measured Levels at Station SR2	Mid-Ebb	DO, Bottom = 5.96 (exceeds Action Level) DO, Surface and Middle = 5.65 (exceeds Action Level)

	Mid-Flood	DO, Bottom = 6.34 (exceeds Action Level) DO, Surface and Middle = 6.40 (exceeds Action Level)
Measured Levels at Station SR3	Mid-Ebb	DO, Bottom = 6.62 (exceeds Action Level) DO, Surface and Middle = 6.77
	Mid-Flood	DO, Bottom = 6.07 (exceeds Action Level) DO, Surface and Middle = 6.30 (exceeds Action Level)
Measured Levels at Station SR4	Mid-Ebb	DO, Bottom = 6.40 (exceeds Action Level) DO, Surface and Middle = 6.51 (exceeds Action Level)
	Mid-Flood	DO, Bottom = 6.19 (exceeds Action Level) DO, Surface and Middle = 6.44 (exceeds Action Level)

According to the work programme provided by the Contractor (*Annex A*), the Contractor confirmed marine works were carried out at the Airport landing site on 28 April 2008.

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 level recorded at the Control Station C3 and the Gradient Station G1 (see *Figures 6.1* and *6.2*). This indicates that the exceedances may be due to seasonal changes as discussed in *Section 5.1*. No action was required.

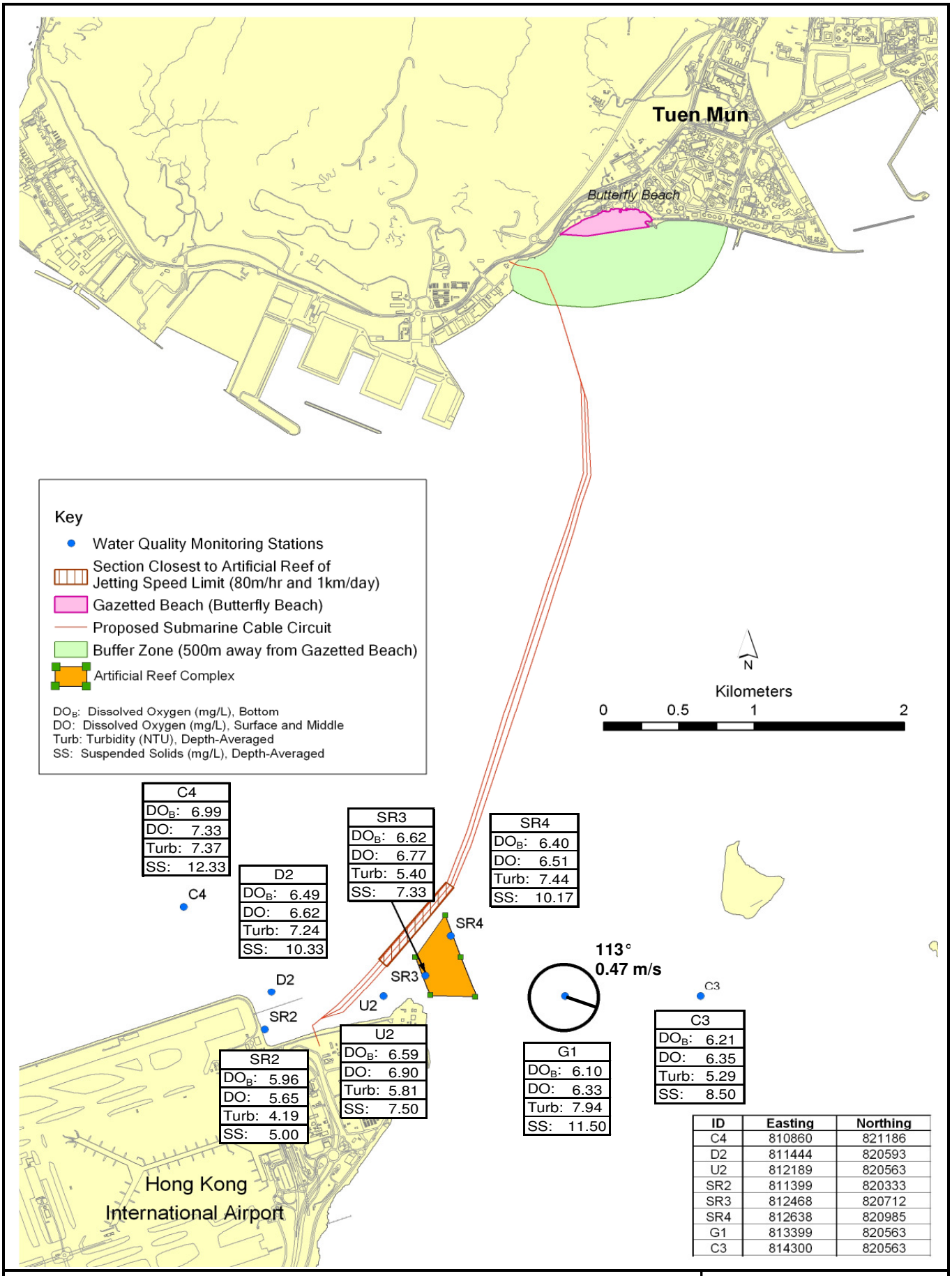
The exceedance incident has been notified to EPD and LCSD.

6.1.2 Exceedance on 30 April 2008

Exceedances of the Action Levels of Dissolved Oxygen, Bottom (mg/L) were recorded at Stations D2, U2, SR2, SR3 and SR4 during mid-ebb tide and mid-flood tide on 30 April 2008 (*Table 6.2*).

Table 6.2 Exceedances of Action Levels of Dissolved Oxygen, Bottom (mg/L) during Mid-ebb Tide and Mid-flood Tide on 30 April 2008

Exceedance Log No.	0072833_30 April 08_DOB_E_Station D2 0072833_30 April 08_DOB_E_Station U2 0072833_30 April 08_DOB_E_Station SR2 0072833_30 April 08_DOB_E_Station SR3 0072833_30 April 08_DOB_E_Station SR4 0072833_30 April 08_DOB_F_Station SR3 0072833_30 April 08_DOB_F_Station SR4	
Sampling date	30 April 2008	
Monitoring station	Stations D2, U2, SR2, SR3 and SR4	
Parameter	Dissolved Oxygen, Bottom (mg/L)	
Action Levels	Mid-ebb	DO, Bottom = 6.9
	Mid-flood	DO, Bottom = 6.8
Limit Levels	Mid-ebb	DO, Bottom = 2.0
	Mid-flood	DO, Bottom = 2.0
Measured Levels at D2	Mid-ebb	6.74 (exceeds Action Level)
	Mid-flood	7.03
Measured Levels at U2	Mid-ebb	6.83 (exceeds Action Level)
	Mid-flood	7.09
Measured Levels at SR2	Mid-ebb	6.55 (exceeds Action Level)
	Mid-flood	7.02
Measured Levels at SR3	Mid-ebb	6.72 (exceeds Action Level)
	Mid-flood	6.76 (exceeds Action Level)
Measured Levels at SR4	Mid-ebb	6.72 (exceeds Action Level)



ID	Easting	Northing
C4	810860	821186
D2	811444	820593
U2	812189	820563
SR2	811399	820333
SR3	812468	820712
SR4	812638	820985
G1	813399	820563
C3	814300	820563

Figure 6.1

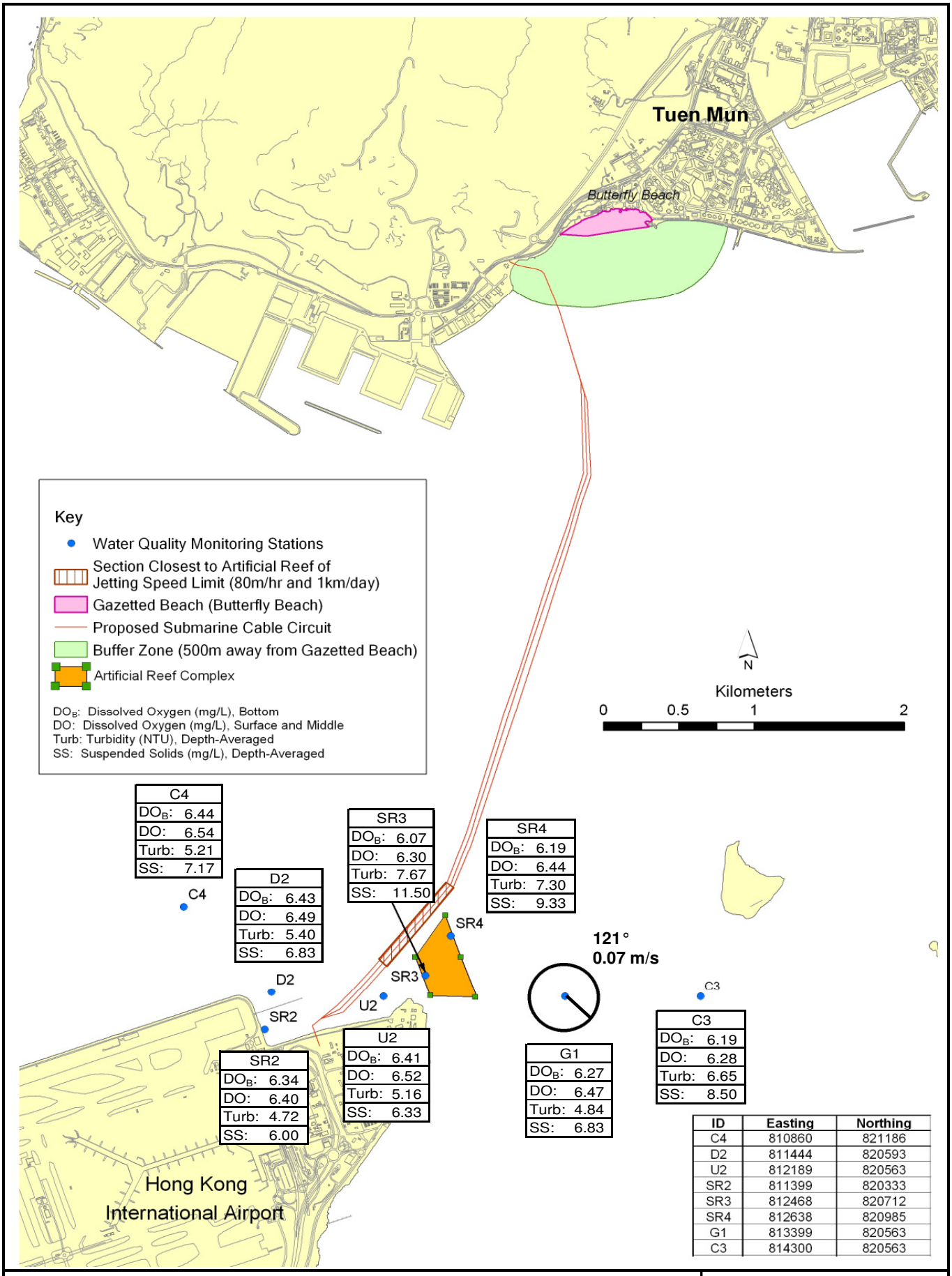
Mid Ebb Water Quality Monitoring

(28 April 2008)

Environmental Resources Management

ERM

Ref: 0072833_NOE_graphs_week23



ID	Easting	Northing
C4	810860	821186
D2	811444	820593
U2	812189	820563
SR2	811399	820333
SR3	812468	820712
SR4	812638	820985
G1	813399	820563
C3	814300	820563

Figure 6.2

Mid Flood Water Quality Monitoring

(28 April 2008)

Environmental Resources Management

ERM

Ref: 0072833_NOE_graphs_week23

	Mid-flood	6.75 (exceeds Action Level)

The Contractor confirmed that no marine works were conducted on 30 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 Station C3 and Gradient Station G1 (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 the seasonal variations as mentioned in *Section 5.1*.

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 2 May 2008

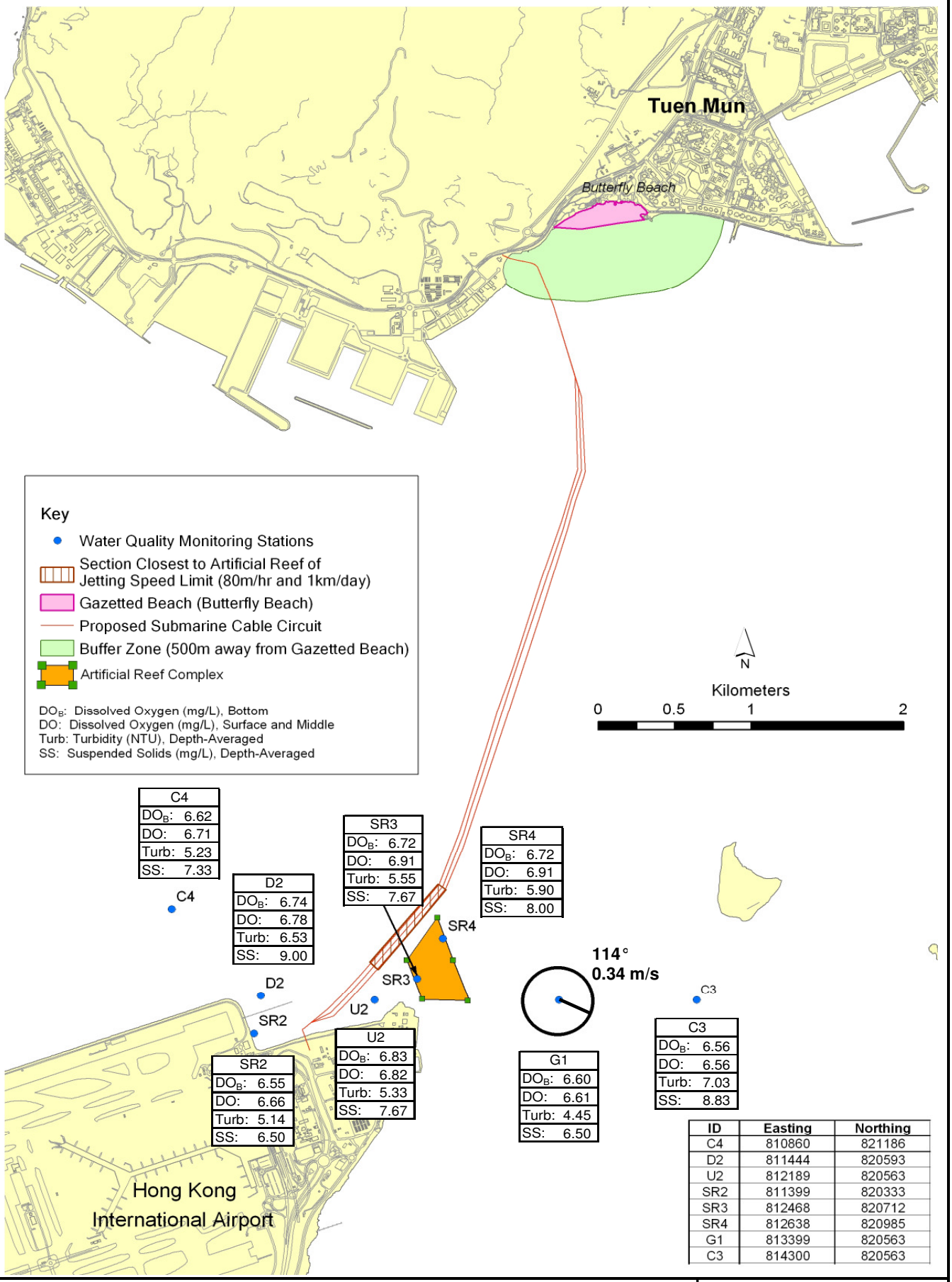
Exceedances of the Action Levels of Dissolved Oxygen, Bottom (mg/L) were recorded at Stations D2, SR2, SR3 and SR4 during mid-ebb tide and mid-flood tide on 2 May 2008 (*Table 6.3*).

Table 6.3 Exceedances of Action Levels of Dissolved Oxygen, Bottom (mg/L) during Mid-ebb Tide and Mid-flood Tide on 2 May 2008

Exceedance Log No.	0072833_02 May 08_DOB_E_Station D2 0072833_02 May 08_DOB_E_Station SR2 0072833_02 May 08_DOB_F_Station SR2 0072833_02 May 08_DOB_E_Station SR3 0072833_02 May 08_DOB_E_Station SR4	
Sampling date	2 May 2008	
Monitoring station	Stations D2, SR2, SR3 and SR4	
Parameter	Dissolved Oxygen, Bottom (mg/L)	
Action Levels	Mid-ebb	DO, Bottom = 6.9
	Mid-flood	DO, Bottom = 6.8
Limit Levels	Mid-ebb	DO, Bottom = 2.0
	Mid-flood	DO, Bottom = 2.0
Measured Levels at D2	Mid-ebb	6.86 (exceeds Action Level)
	Mid-flood	6.82
Measured Levels at SR2	Mid-ebb	6.42 (exceeds Action Level)
	Mid-flood	6.73 (exceeds Action Level)
Measured Levels at SR3	Mid-ebb	6.79 (exceeds Action Level)
	Mid-flood	7.09
Measured Levels at SR4	Mid-ebb	6.70 (exceeds Action Level)
	Mid-flood	6.81

The Contractor confirmed that only preparation works were conducted on the barge near the Airport side. 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



ID	Easting	Northing
C4	810860	821186
D2	811444	820593
U2	812189	820563
SR2	811399	820333
SR3	812468	820712
SR4	812638	820985
G1	813399	820563
C3	814300	820563

Figure 6.3

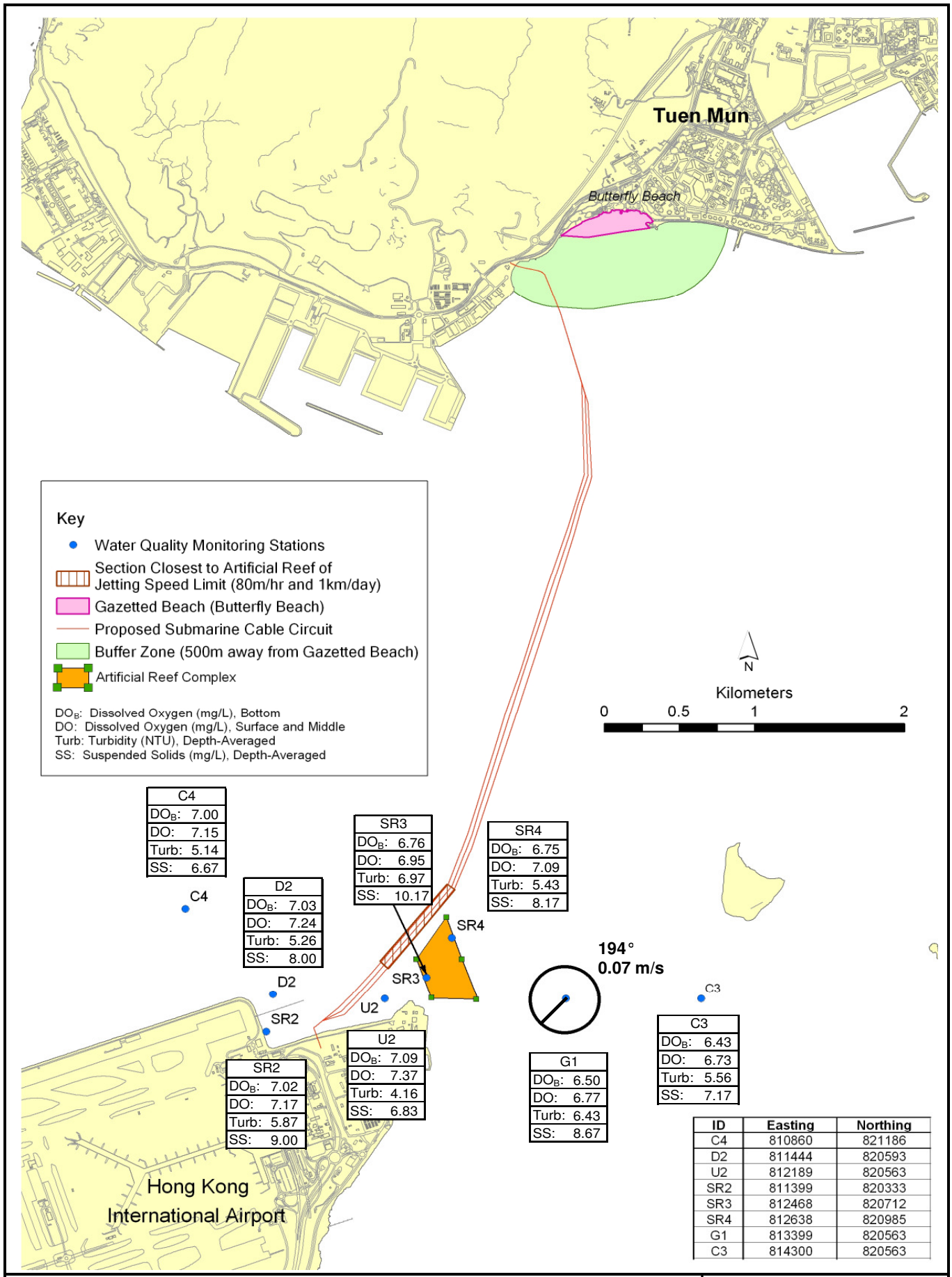
Mid Ebb Water Quality Monitoring

(30 April 2008)

Environmental Resources Management

ERM

Ref: 0072833_NOE_graphs_week23



ID	Easting	Northing
C4	810860	821186
D2	811444	820593
U2	812189	820563
SR2	811399	820333
SR3	812468	820712
SR4	812638	820985
G1	813399	820563
C3	814300	820563

Figure 6.4

Mid Flood Water Quality Monitoring

(30 April 2008)

Environmental Resources Management

ERM

Ref: 0072833_NOE_graphs_week23

at the Control Station C3 and the Gradient Station G1 (see *Figures 6.5* and *6.6*). In addition, exceedances were recorded at both upstream and downstream stations. This suggests that the exceedances may be due to a low background level of bottom DO which was caused by the seasonal changes as above discussed in *Section 5.1*.

The exceedance incident has been notified to EPD and LCSD.

6.2 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

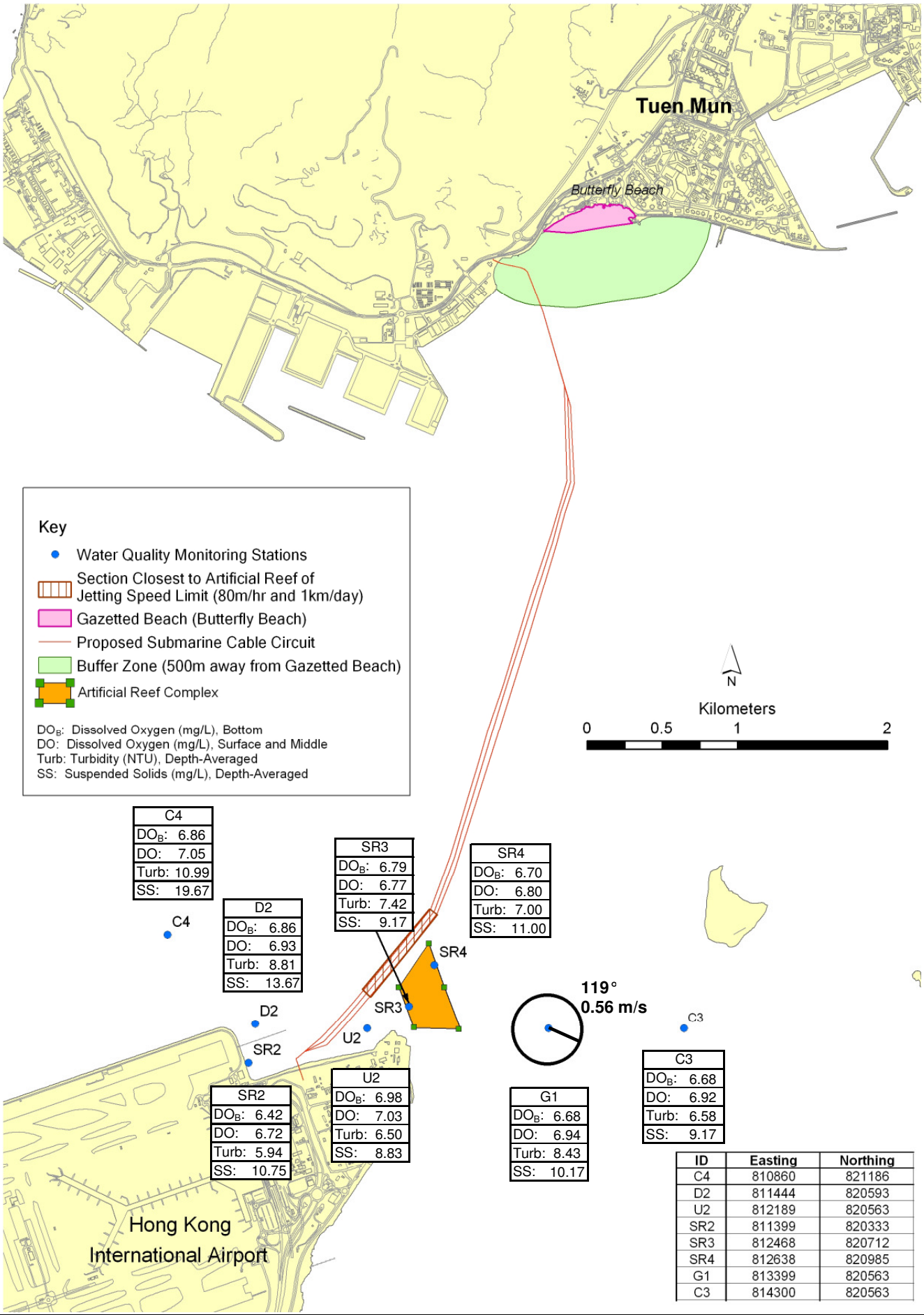
No non-compliance event was recorded during the reporting period.

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.



ID	Easting	Northing
C4	810860	821186
D2	811444	820593
U2	812189	820563
SR2	811399	820333
SR3	812468	820712
SR4	812638	820985
G1	813399	820563
C3	814300	820563

Figure 6.5

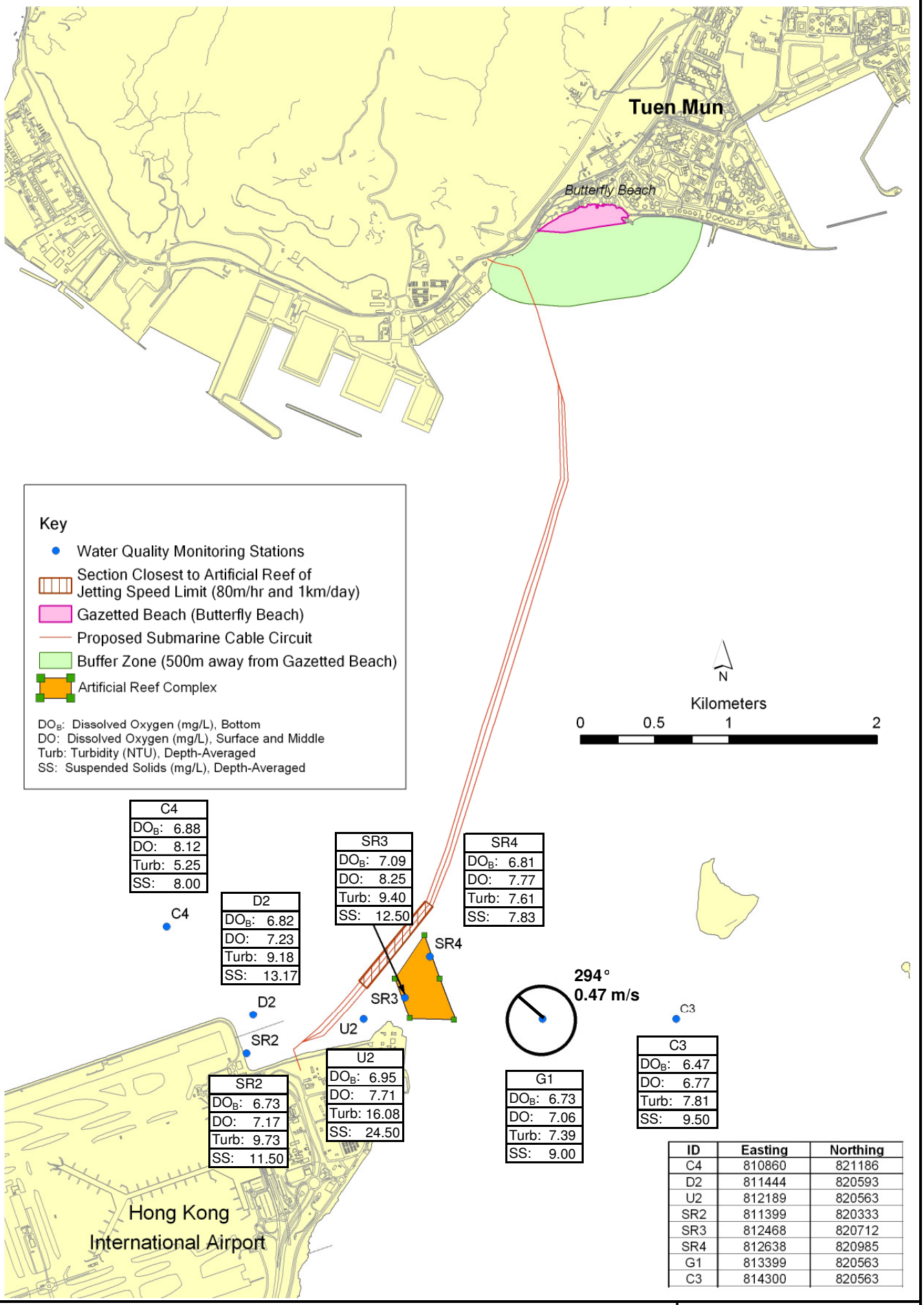
Mid Ebb Water Quality Monitoring

(2 May 2008)

Environmental Resources Management

ERM

Ref: 0072833_NOE_graphs_week23.doc



ID	Easting	Northing
C4	810860	821186
D2	811444	820593
U2	812189	820563
SR2	811399	820333
SR3	812468	820712
SR4	812638	820985
G1	813399	820563
C3	814300	820563

Figure 6.6

Mid Flood Water Quality Monitoring

(2 May 2008)

Environmental Resources Management

ERM

Ref: 0072833_NOE_graphs_week23.doc

7 FUTURE KEY ISSUES

7.1 KEY ISSUES FOR THE COMING MONTH

During the following week (ie 5 May to 11 May 2008), installation of articulating pipes near the Airport side will be continued until 8 May 2008 and then concrete slab installation will be undertaken.

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 May 2008 is presented in *Annex C*. The environmental monitoring will be conducted at the same monitoring locations as those for this reporting week.

The Contractor confirmed that all jetting operations were completed on 23 April 2008. Since there were no jetting operations at the Project site during the reporting week, it was not necessary to compare the monitoring data with the impact assessment predictions in the Project Profile.

9 CONCLUSIONS

This Weekly Impact Monitoring Report presents the EM&A works undertaken during the period from 28 April to 4 May 2008 in accordance with the EM&A Manual and the requirements under *EP-267/2007*.

All measured Dissolved Oxygen (DO), Surface and Middle, levels complied with the Action and Limit (AL) Levels with exception of 28 April 2008. Besides, all measured Turbidity and Suspended Solids (SS) levels were below AL Levels. The exceedances were examined against the construction works. It was concluded that they were isolated cases and unlikely related to the Project.

It should be noted that, on all three monitoring days, the Dissolved Oxygen (DOB), Bottom, levels measured at some of the impact stations were found lower than the Action level even when there were no marine works (ie 28 April and 30 April 2008). This phenomenon was examined in *Section 5.1* and the exceedances were considered to be caused by natural fluctuation and not the Project works. However, 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

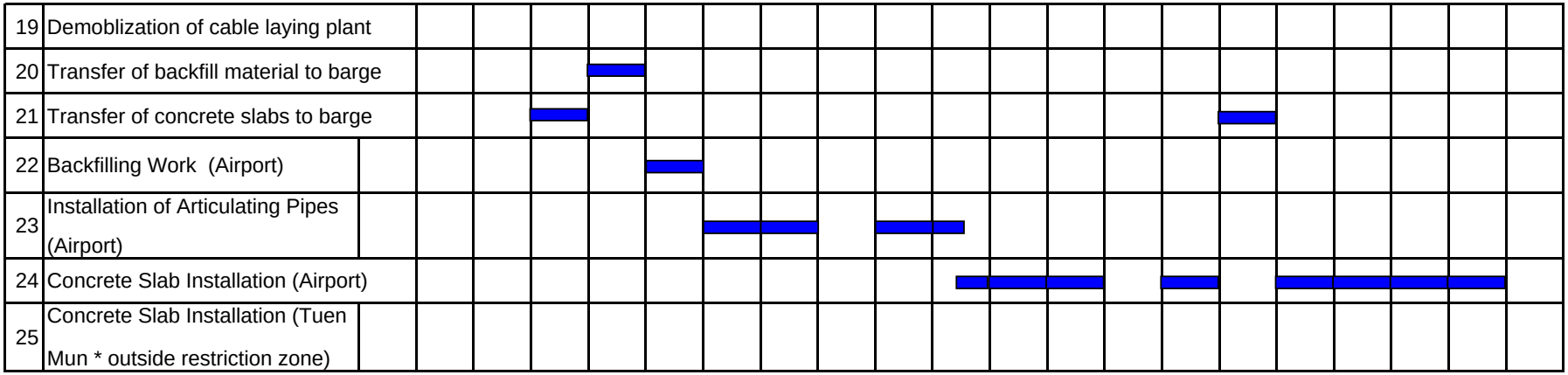
Works Programme of the Period between 28 April and 18 May 2008

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

		Workdone for Last Week							Plan for This Week							Anticipate Plan for Next Week						
	Item Date	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	12/5	13/5	14/5	15/5	16/5	17/5	18/5
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.																					

Prepared by: Hong Kong Marine Contractors Ltd.
Ref. No. MCERM-132AIRPORTTM-00105-08
Date: 07/05/2008

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

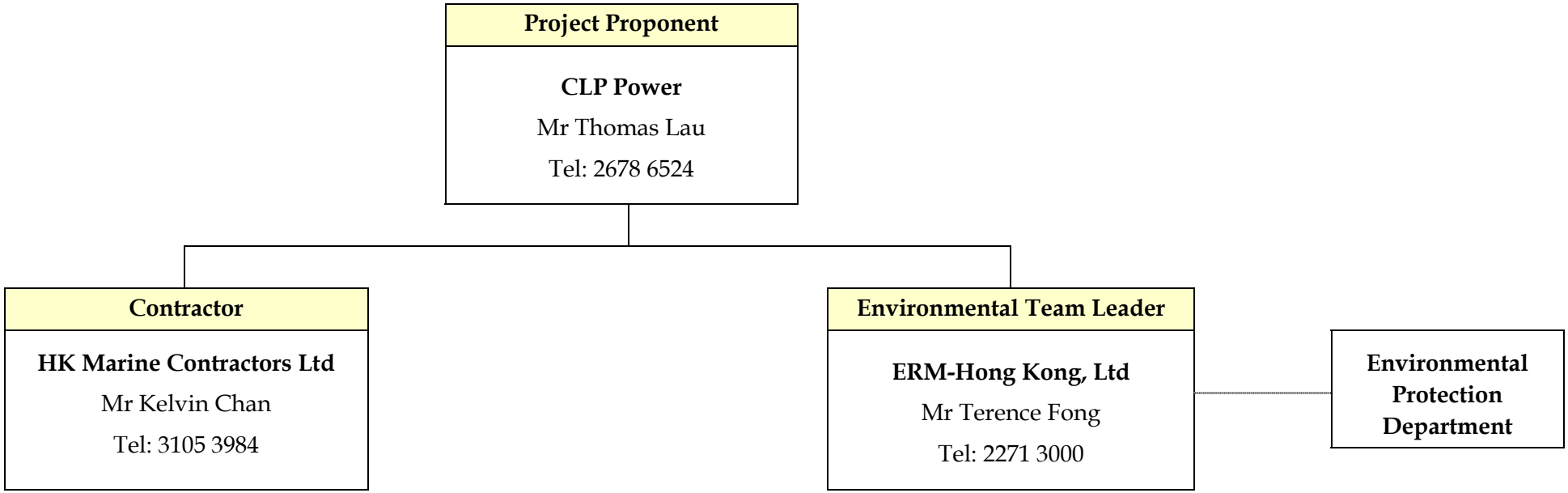


Prepared by: Hong Kong Marine Contractors Ltd.
Ref. No. MCERM-132AIRPORTTM-00105-08
Date: 07/05/2008

Annex B

Project Organisation Chart (with Contact Details)

ANNEX B - PROJECT ORGANIZATION (WITH CONTACT DETAILS)



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 - 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 *Impact Monitoring (Airport)*	
4-May	5-May	6-May	7-May	8-May	9-May	10-May
	Mid-Ebb 12:41 Mid-Flood 19:22 *Impact Monitoring (Airport)*		Mid-Ebb 14:13 Mid-Flood 20:30 *Impact Monitoring (Airport)*		Mid-Flood 8:28 Mid-Ebb 15:52 *Impact Monitoring (Airport)*	
11-May	12-May	13-May	14-May	15-May	16-May	17-May
	Mid-Flood 11:27 Mid-Ebb 19:05 *Impact Monitoring (Airport)*		Mid-Ebb 9:39 Mid-Flood 15:01 *Impact Monitoring (Airport)*		Mid-Ebb 10:59 Mid-Flood 17:10 *Impact Monitoring (Airport)*	
18-May	19-May	20-May	21-May	22-May	23-May	24-May
	Mid-Ebb 12:38 Mid-Flood 19:36 *Impact Monitoring (Airport)*		Mid-Ebb 13:45 Mid-Flood 20:30 *Impact Monitoring (Airport)*		Mid-Flood 7:36 Mid-Ebb 14:56 *Impact Monitoring (Airport)*	
25-May	26-May	27-May	28-May	29-May	30-May	31-May
	Mid-Flood 9:08 Mid-Ebb 16:59 *Post-Project Monitoring (Airport)*	Mid-Flood 8:00 Mid-Ebb 17:49 *Post-Project Monitoring (Tuen Mun)*	Mid-Flood 11:53 Mid-Ebb 18:48 *Post-Project Monitoring (Airport)*	Mid-Flood 13:41 Mid-Ebb 19:58 *Post-Project Monitoring (Tuen Mun)*	Mid-Ebb 9:27 Mid-Flood 15:04 *Post-Project Monitoring (Airport)*	Mid-Ebb 10:10 Mid-Flood 16:18 *Post-Project Monitoring (Tuen Mun)*

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

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9		
Contact	: MS JOANNA KWAN	Contact	: Alice Wong	Work Order	: HK0806637		
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: Joanna.kwan@erm.com	E-mail	: Alice.Wong@alsenviro.com				
Telephone	: 2271 3000	Telephone	: +852 2610 1044				
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021				
Project	: EM&A FOR THE PROPOSED 132kV SUBMARINE CABLE ROUTE FOR AIRPORT "A" TO CASTLE PEAK CCTS	Quote number	: ----	Date received	: 29 Apr 2008		
Order number	: ----			Date of issue	: 2 May 2008		
C-O-C number	: ----			No. of samples	- Received	:	92
Site	: ----				- Analysed	:	92

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806637 supersedes any previous reports with this reference. The completion date of analysis is 30 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 HK0806637 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

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

Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 646401)								
HK0806637-001	2008/04/28/1801/C4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	21	19	10.0
	REPL.1							
HK0806637-011	2008/04/28/1734/SR3/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL.2							
EA/ED: Physical and Aggregate Properties (QC Lot: 646402)								
HK0806637-021	2008/04/28/1750/D2/T/E/	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
	REPL.1							
HK0806637-031	2008/04/28/1724/SR4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	15	13	14.2
	REPL.1							
EA/ED: Physical and Aggregate Properties (QC Lot: 646403)								
HK0806637-041	2008/04/28/1717/G1/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	13	11	12.6
	REPL.2							
HK0806637-051	2008/04/28/0816/C4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL.2							
EA/ED: Physical and Aggregate Properties (QC Lot: 646404)								
HK0806637-061	2008/04/28/0757/U2/T/F/	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
	REPL.1							
HK0806637-071	2008/04/28/0711/C3/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	15	17	9.2
	REPL.1							
EA/ED: Physical and Aggregate Properties (QC Lot: 646405)								
HK0806637-081	2008/04/28/0736/SR4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
	REPL.2							
HK0806637-091	2008/04/28/0822/SR2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL.2							

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***						
					Spike	***Spike Recovery (%)***		***Recovery Limits (%)***		***RPDs (%)***	
Method: Analysis Description	***CAS number***	***LOR***	***Units***	***Result***	***Concentration***	***SCS***	***DCS***	***Low***	***High***	***Value***	***Control Limit***
EA/ED: Physical and Aggregate Properties (QCLot: 646401)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	89.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 646402)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 646403)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 646404)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 646405)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----

CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9		
Contact	: MS JOANNA KWAN	Contact	: Alice Wong	Work Order	: HK0806759		
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: Joanna.kwan@erm.com	E-mail	: Alice.Wong@alsenviro.com				
Telephone	: 2271 3000	Telephone	: +852 2610 1044				
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021				
Project	: EM&A FOR THE PROPOSED 132kV SUBMARINE CABLE ROUTE FOR AIRPORT "A" TO CASTLE PEAK CCTS	Quote number	: ----	Date received	: 30 Apr 2008		
Order number	: ----			Date of issue	: 5 May 2008		
C-O-C number	: ----			No. of samples	- Received	:	92
Site	: ----				- Analysed	:	92

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806759 supersedes any previous reports with this reference. The completion date of analysis is 5 May 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 HK0806759 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

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

Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 648436)								
HK0806759-001	2008/04/30/0927/C4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
	REPL.1							
HK0806759-012	2008/04/30/0906/SR3/T/E/	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	17.4
	REPL.2							
EA/ED: Physical and Aggregate Properties (QC Lot: 648437)								
HK0806759-021	2008/04/30/0919/D2/T/E/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL.1							
HK0806759-031	2008/04/30/0854/SR4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	11.8
	REPL.1							
EA/ED: Physical and Aggregate Properties (QC Lot: 648438)								
HK0806759-043	2008/04/30/0921/SR2/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL.1							
HK0806759-054	2008/04/30/1317/SR3/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	11.6
	REPL.1							
EA/ED: Physical and Aggregate Properties (QC Lot: 648440)								
HK0806759-061	2008/04/30/1325/U2/T/F/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL.1							
HK0806759-071	2008/04/30/1252/C3/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	12.8
	REPL.1							
EA/ED: Physical and Aggregate Properties (QC Lot: 648441)								
HK0806759-081	2008/04/30/1313/SR4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
	REPL.2							
HK0806759-091	2008/04/30/1321/SR2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
	REPL.2							

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***						
					Spike	***Spike Recovery (%)***		***Recovery Limits (%)***		***RPDs (%)***	
Method: Analysis Description	***CAS number***	***LOR***	***Units***	***Result***	***Concentration***	***SCS***	***DCS***	***Low***	***High***	***Value***	***Control Limit***
EA/ED: Physical and Aggregate Properties (QCLot: 648436)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 648437)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 648438)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 648440)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 648441)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	85	115	----	----

CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9		
Contact	: MS JOANNA KWAN	Contact	: Alice Wong	Work Order	: HK0806906		
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: Joanna.kwan@erm.com	E-mail	: Alice.Wong@alsenviro.com				
Telephone	: 2271 3000	Telephone	: +852 2610 1044				
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021				
Project	: EM&A FOR THE PROPOSED 132kV SUBMARINE CABLE ROUTE FOR AIRPORT "A" TO CASTLE PEAK CCTS	Quote number	: ----	Date received	: 3 May 2008		
Order number	: ----			Date of issue	: 6 May 2008		
C-O-C number	: ----			No. of samples	- Received	:	92
Site	: ----				- Analysed	:	92

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806906 supersedes any previous reports with this reference. The completion date of analysis is 6 May 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 HK0806906 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

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

Quality Control - Laboratory Duplicate (DUP) Results

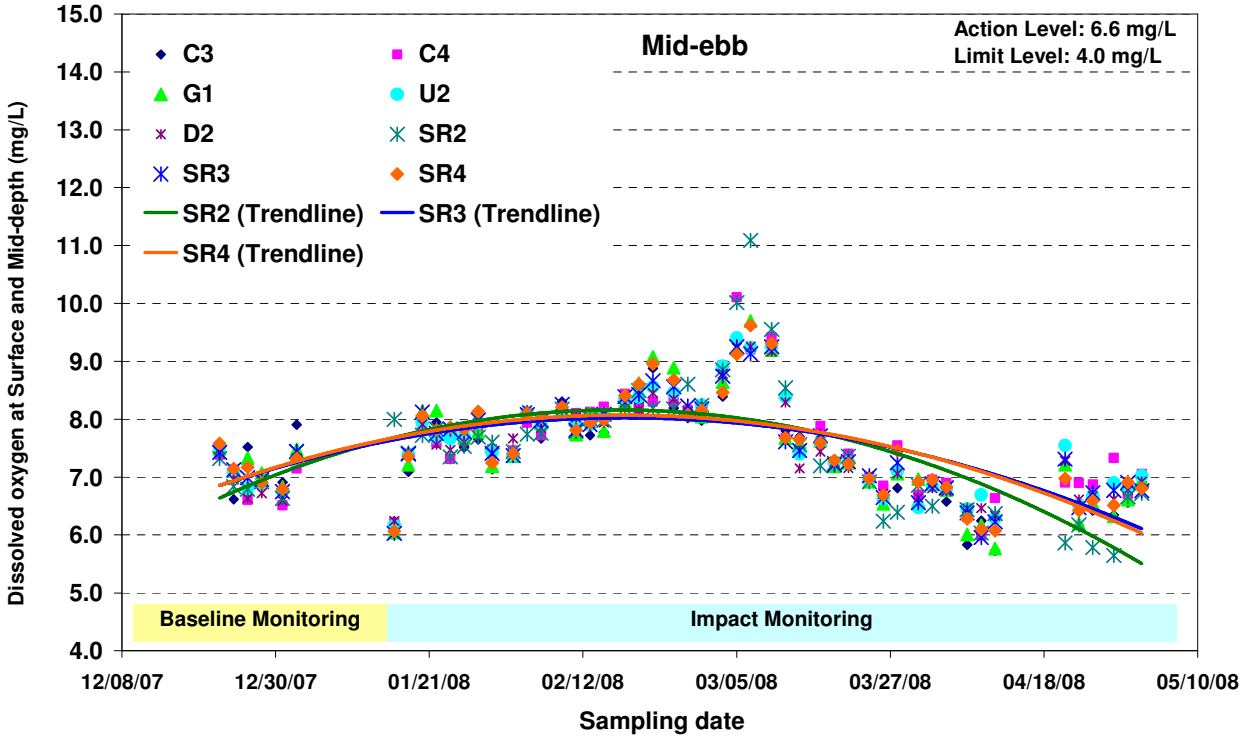
Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 649901)								
HK0806906-001	2008/05/02/1110/C4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	27	24	14.0
	REPL. 1							
HK0806906-011	2008/05/02/1035/SR3/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
	REPL. 2							
EA/ED: Physical and Aggregate Properties (QC Lot: 649902)								
HK0806906-021	2008/05/02/1049/D2/T/E/	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
	REPL. 1							
HK0806906-031	2008/05/02/1025/SR4/B/E/	EA025: Suspended Solids (SS)	----	1	mg/L	15	13	14.5
	REPL. 1							
EA/ED: Physical and Aggregate Properties (QC Lot: 649903)								
HK0806906-041	2008/05/02/1018/G1/M/E/	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	11.4
	REPL. 2							
HK0806906-051	2008/05/02/1619/C4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
	REPL. 2							
EA/ED: Physical and Aggregate Properties (QC Lot: 649904)								
HK0806906-061	2008/05/02/1553/U2/T/F/	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
	REPL. 1							
HK0806906-071	2008/05/02/1516/C3/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	13	14	8.1
	REPL. 1							
EA/ED: Physical and Aggregate Properties (QC Lot: 649905)								
HK0806906-081	2008/05/02/1537/SR4/M/F/	EA025: Suspended Solids (SS)	----	1	mg/L	8	10	22.8
	REPL. 2							
HK0806906-091	2008/05/02/1553/SR2/B/F/	EA025: Suspended Solids (SS)	----	1	mg/L	18	17	0.0
	REPL. 2							

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***						
					Spike	***Spike Recovery (%)***		***Recovery Limits (%)***		***RPDs (%)***	
Method: Analysis Description	***CAS number***	***LOR***	***Units***	***Result***	***Concentration***	***SCS***	***DCS***	***Low***	***High***	***Value***	***Control Limit***
EA/ED: Physical and Aggregate Properties (QCLot: 649901)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 649902)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 649903)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 649904)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 649905)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----

Annex E

Impact Water Quality Monitoring Results



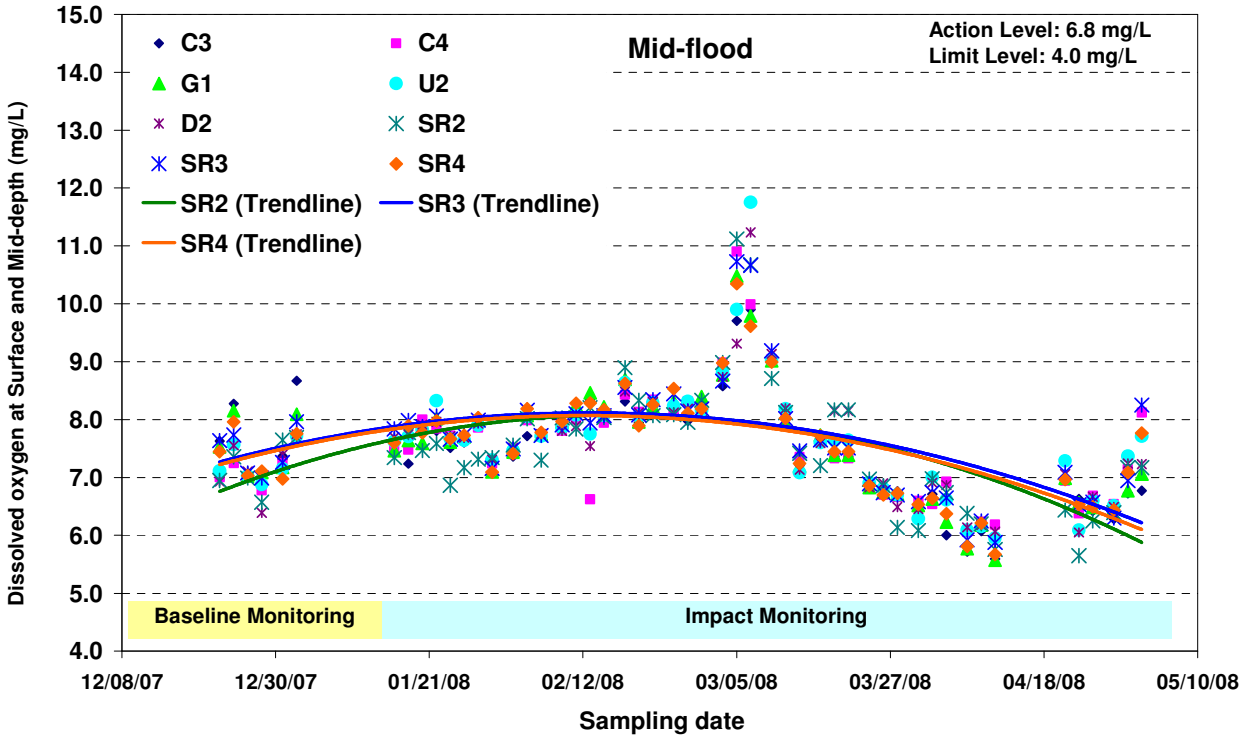
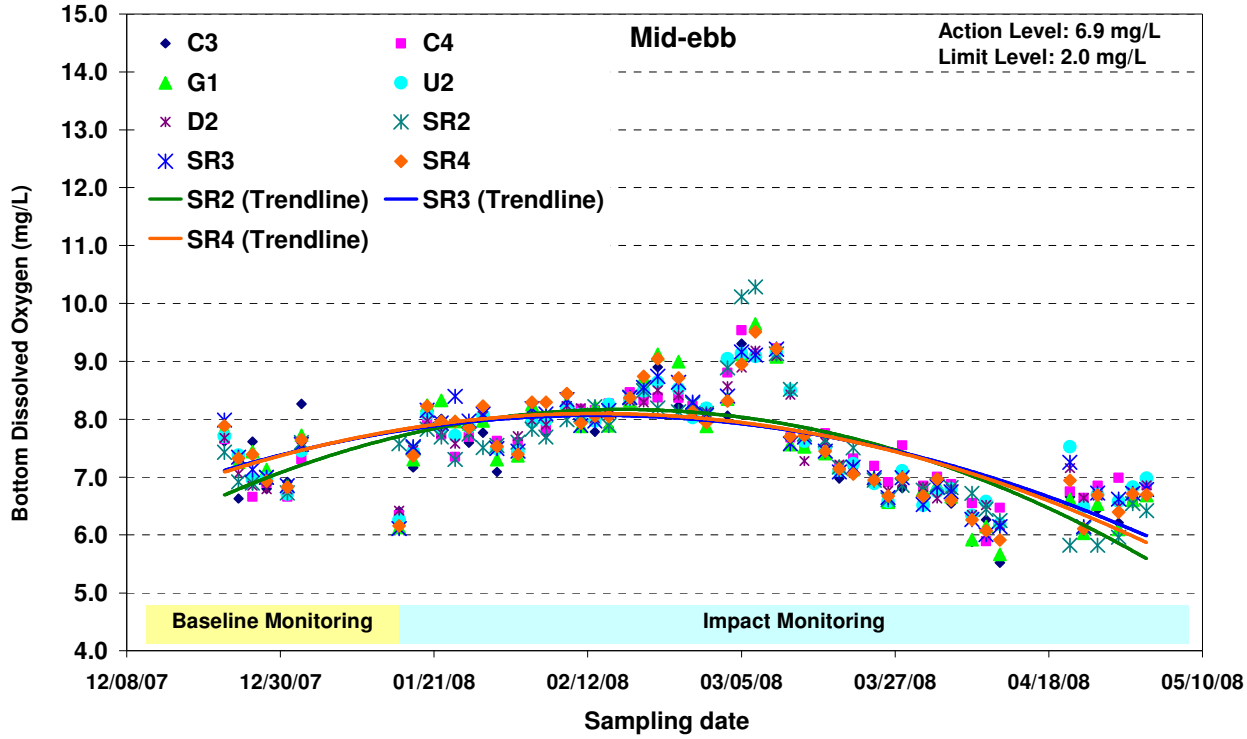


Figure E1 Dissolved oxygen concentration (mean of surface and mid-depth) (mg/L) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 22 December 2007 and 2 May 2008



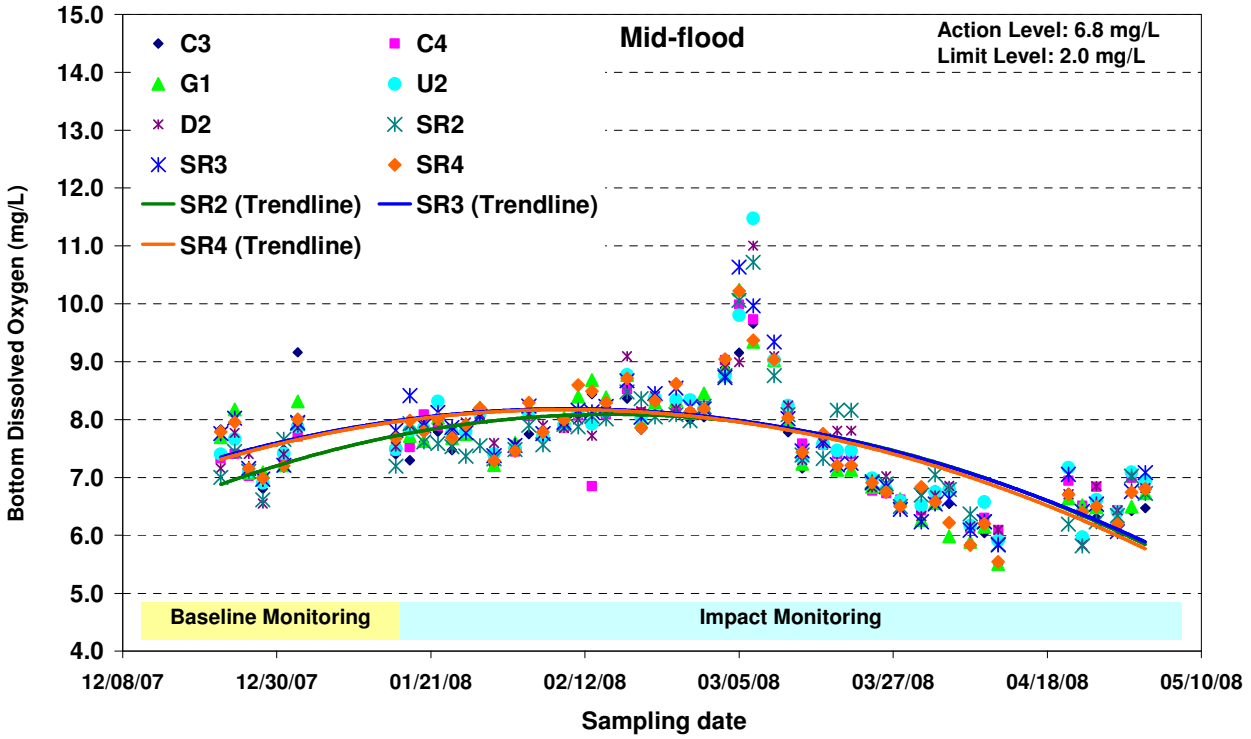
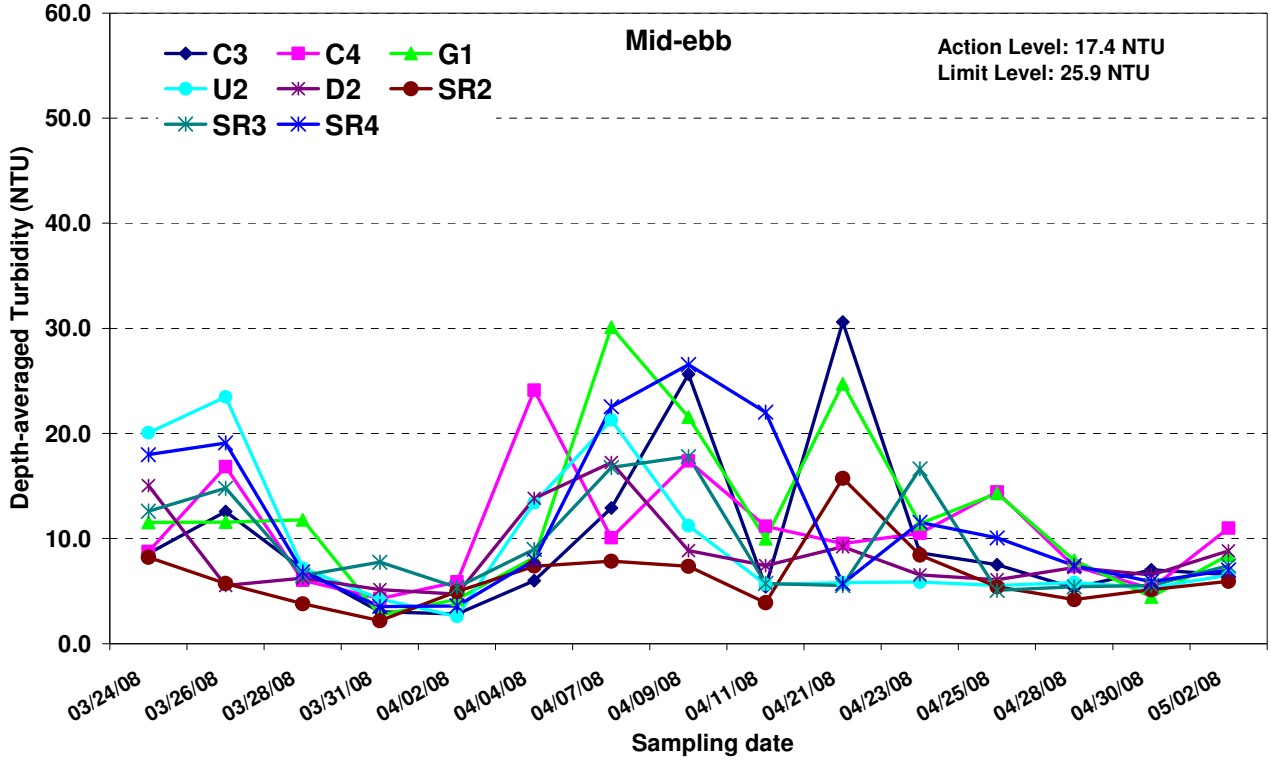


Figure E2 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 22 December 2007 and 2 May 2008



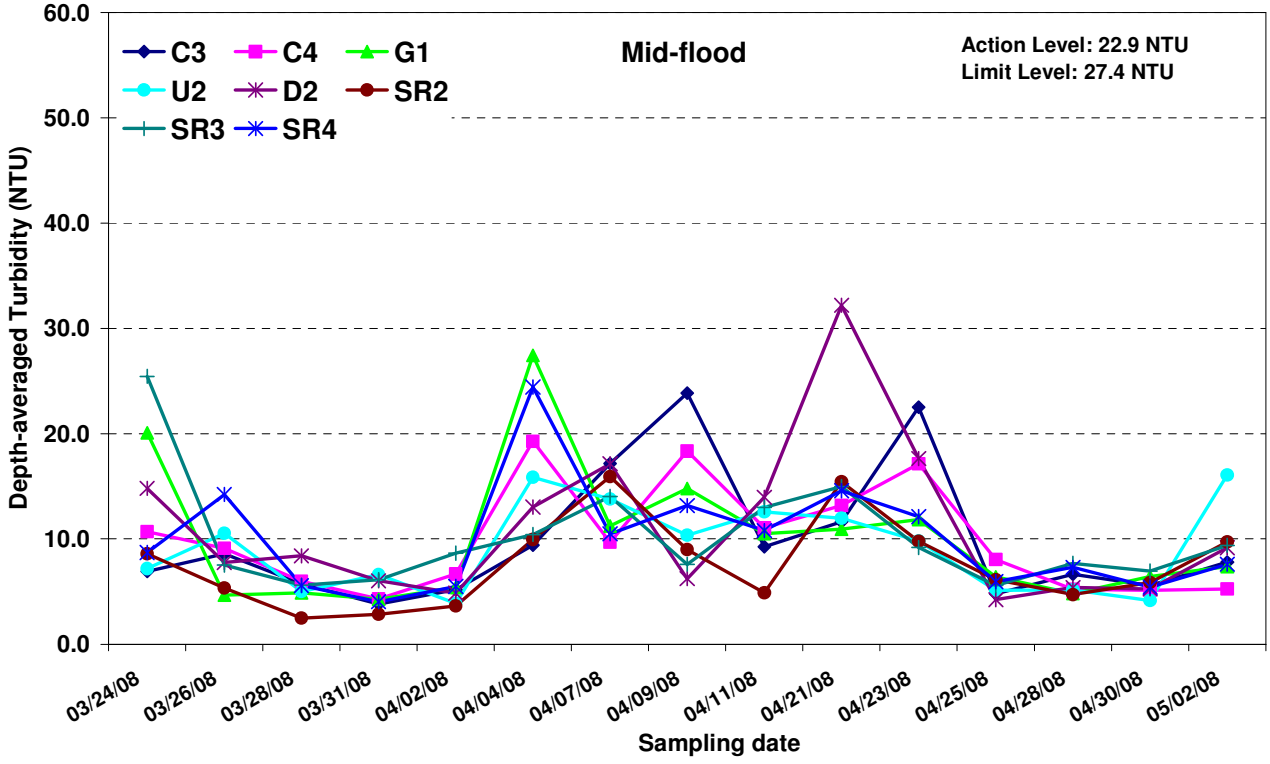
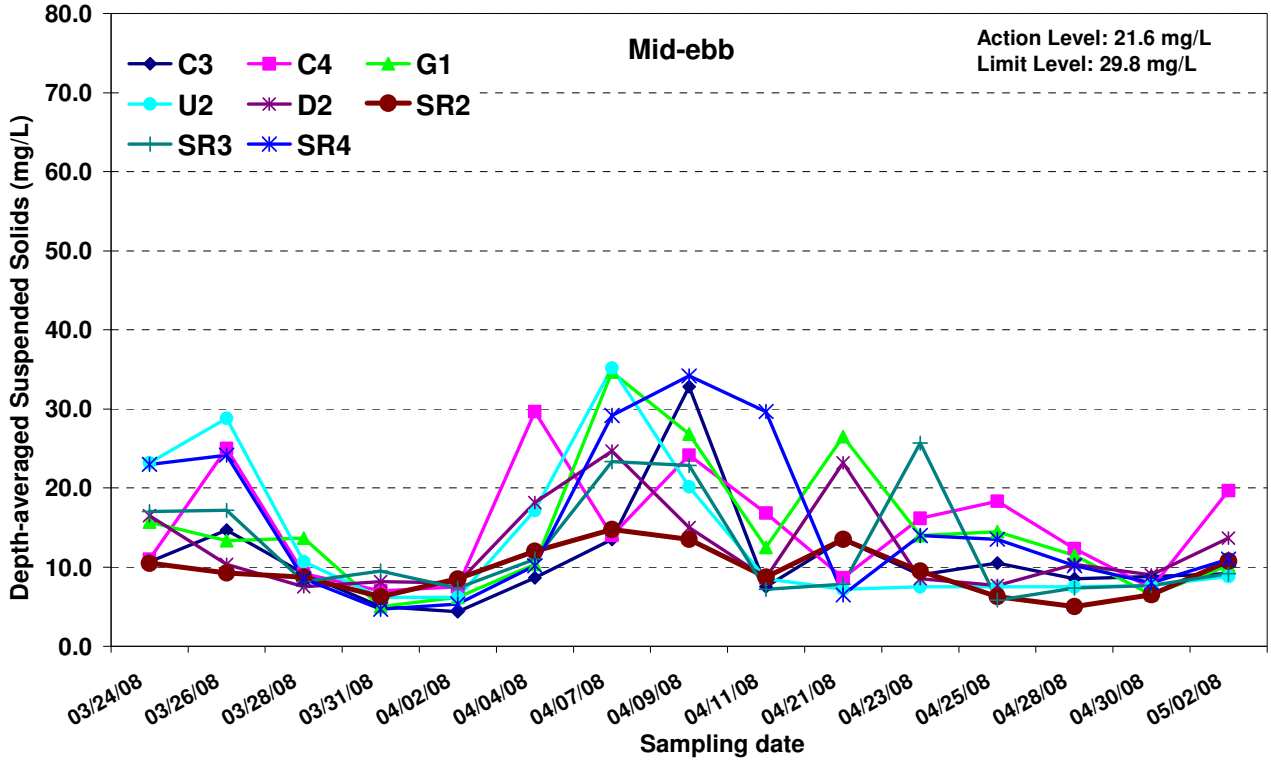


Figure E3 Depth-averaged turbidity (NTU) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 24 March and 2 May 2008

ERM



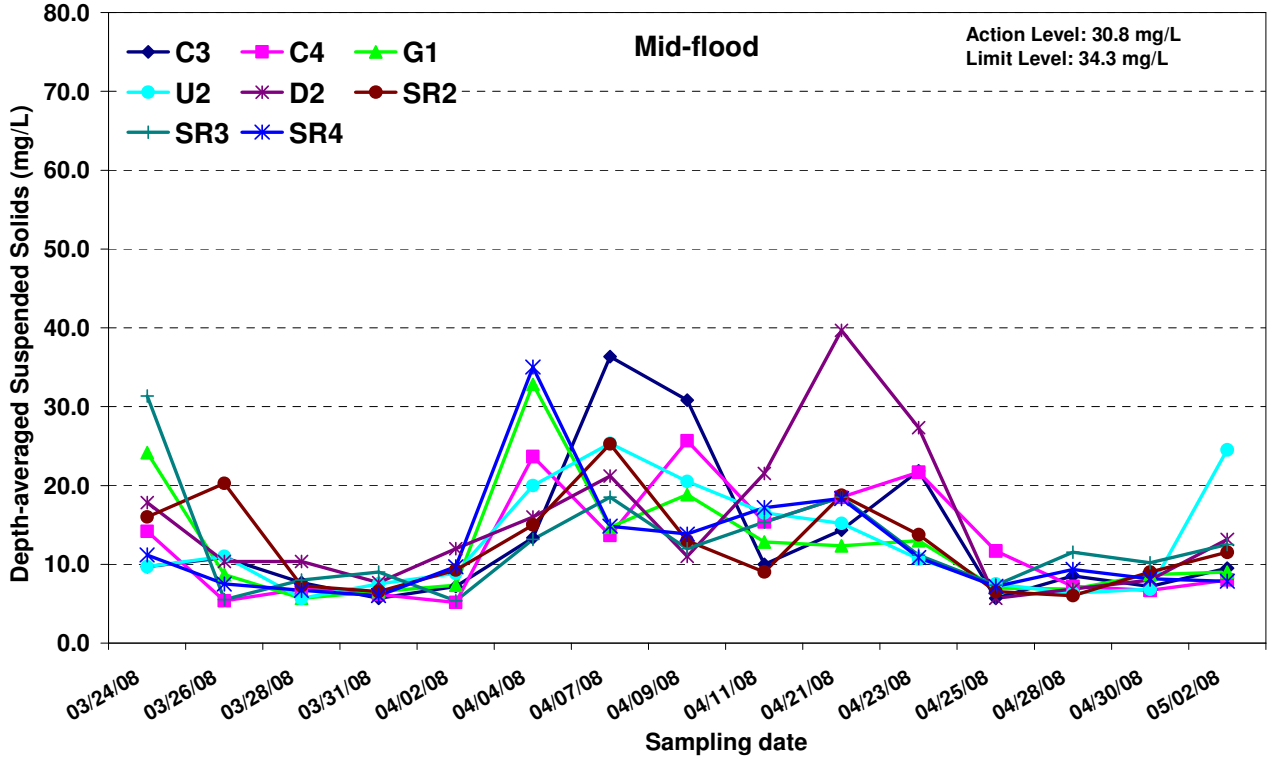


Figure E4 Depth-averaged suspended solids concentration (mg/L) of water samples from the eight sampling locations near the airport at mid-ebb and mid-flood between 24 March and 2 May 2008

ERM

Annex E1 - Water Quality Results at Airport during mid-ebb tide for 28 April 2008

Sampling Date	28/4/2008
Weather & Ambient Temperature	Sunny

Mid-Ebb

Station	C3								
Time (hh:mm)	17:02-17:06								
Water Depth (m)									
Monitoring Depth (m)	1.10		4.10		9.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.0	23.1	23.1	23.1	23.1	23.09	-	
Salinity (ppt)	30.3	30.2	31.6	31.6	31.9	31.9	31.23	-	
pH	8.0	8.0	7.9	8.0	7.9	8.0	7.95		
D.O. Saturation (%)	90.5	92.3	85.9	85.4	88.4	85.9	88.07	-	
D.O. (mg/L)	6.51	6.65	6.13	6.09	6.30	6.12	6.30	6.21	6.35
Turbidity (NTU)	3.00	2.60	6.70	5.60	6.80	6.90	5.29	-	
SS (mg/L)	8.0	4.0	6.0	10.0	13.0	10.0	8.50	-	
Remarks									

Station	U2								
Time (hh:mm)	17:39-17:42								
Water Depth (m)									
Monitoring Depth (m)	1.20		3.90		6.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.2	23.2	23.2	23.1	23.1	23.15	-	
Salinity (ppt)	29.5	29.5	30.0	29.8	31.4	31.5	30.26	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03		
D.O. Saturation (%)	96.6	96.3	94.7	95.3	92.0	92.4	94.56	-	
D.O. (mg/L)	6.97	6.95	6.81	6.86	6.57	6.60	6.79	6.59	6.90
Turbidity (NTU)	2.90	2.90	3.90	3.90	9.70	11.60	5.81	-	
SS (mg/L)	5.0	4.0	5.0	7.0	10.0	14.0	7.50	-	
Remarks									

Station	C4								
Time (hh:mm)	17:59-18:02								
Water Depth (m)									
Monitoring Depth (m)	1.20		3.90		6.80				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.09	-	
Salinity (ppt)	29.4	29.3	29.7	29.6	31.5	31.3	30.13	-	
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.06		
D.O. Saturation (%)	102.1	102.2	100.8	101.0	97.3	98.4	100.30	-	
D.O. (mg/L)	7.38	7.39	7.27	7.29	6.95	7.03	7.22	6.99	7.33
Turbidity (NTU)	3.10	3.30	5.00	4.60	17.60	10.60	7.37	-	
SS (mg/L)	4.0	9.0	12.0	8.0	21.0	20.0	12.33	-	
Remarks									

Station	SR2								
Time (hh:mm)	17:26-17:31								
Water Depth (m)									
Monitoring Depth (m)	0.90				2.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.2			23.2	23.2	23.22	-	
Salinity (ppt)	28.7	28.7			29.8	29.4	29.13	-	
pH	7.8	7.9			7.9	7.9	7.87		
D.O. Saturation (%)	77.3	78.6			81.1	84.3	80.33	-	
D.O. (mg/L)	5.60	5.69			5.84	6.08	5.80	5.96	5.65
Turbidity (NTU)	2.60	2.80			5.80	5.50	4.19	-	
SS (mg/L)	7.0	5.0			4.0	4.0	5.00	-	
Remarks									

Station	D2								
Time (hh:mm)	17:49-17:53								
Water Depth (m)									
Monitoring Depth (m)	0.80		3.40		5.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.2	23.3	23.2	23.1	23.1	23.18	-	
Salinity (ppt)	29.5	29.5	30.1	30.3	31.3	31.3	30.34	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.01		
D.O. Saturation (%)	93.5	93.2	91.0	90.3	91.3	90.2	91.57	-	
D.O. (mg/L)	6.74	6.72	6.53	6.47	6.53	6.45	6.57	6.49	6.62
Turbidity (NTU)	3.40	3.40	5.90	5.70	13.40	11.60	7.24	-	
SS (mg/L)	3.0	3.0	11.0	13.0	16.0	16.0	10.33	-	
Remarks									

Station	SR3								
Time (hh:mm)	17:31-17:35								
Water Depth (m)									
Monitoring Depth (m)	1.20		5.40		10.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.2	23.1	23.1	23.2	23.1	23.14	-	
Salinity (ppt)	29.6	29.6	30.5	30.5	30.7	31.3	30.36	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03		
D.O. Saturation (%)	95.5	95.5	92.9	92.5	93.2	91.8	93.55	-	
D.O. (mg/L)	6.89	6.88	6.67	6.64	6.68	6.56	6.72	6.62	6.77
Turbidity (NTU)	3.00	3.10	3.90	4.50	4.40	13.40	5.40	-	
SS (mg/L)	4.0	4.0	7.0	7.0	5.0	17.0	7.33	-	
Remarks									

Station	G1								
Time (hh:mm)	17:14-17:17								
Water Depth (m)									
Monitoring Depth (m)	1.30		5.30		10.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.11	-	
Salinity (ppt)	30.5	30.4	31.3	31.4	31.7	31.7	31.17	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00		
D.O. Saturation (%)	90.8	91.3	85.9	85.2	85.7	85.3	87.37	-	
D.O. (mg/L)	6.52	6.57	6.14	6.08	6.11	6.08	6.25	6.10	6.33
Turbidity (NTU)	4.50	3.90	9.10	9.80	10.40	10.10	7.94	-	
SS (mg/L)	6.0	7.0	9.0	13.0	14.0	20.0	11.50	-	
Remarks									

Station	SR4								
Time (hh:mm)	17:24-17:28								
Water Depth (m)									
Monitoring Depth (m)	1.10		5.80		11.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.12	-	
Salinity (ppt)	30.8	30.7	30.9	31.1	31.4	31.4	31.03	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02		
D.O. Saturation (%)	91.4	91.1	90.9	90.1	90.1	89.0	90.42	-	
D.O. (mg/L)	6.55	6.53	6.51	6.45	6.43	6.36	6.47	6.40	6.51
Turbidity (NTU)	4.40	4.80	5.50	7.40	11.60	10.90	7.44	-	
SS (mg/L)	5.0	8.0	7.0	8.0	15.0	18.0	10.17	-	
Remarks									

Annex E2 - Water Quality Results at Airport during mid-flood tide for 28 April 2008

Sampling Date	28/4/2008
Weather & Ambient Temperature	Sunny

Mid-Flood

Station	C3								
Time (hh:mm)	07:11-07:15								
Water Depth (m)									
Monitoring Depth (m)	1.00		5.50		10.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.0	23.0	23.1	23.1	23.1	23.1	23.09	-	
Salinity (ppt)	30.6	30.6	31.4	31.4	31.6	31.6	31.20	-	
pH	8.0	8.0	8.0	8.0	7.9	8.0	7.97		
D.O. Saturation (%)	89.4	89.1	86.5	86.1	87.3	86.2	87.39	-	
D.O. (mg/L)	6.42	6.40	6.17	6.14	6.22	6.15	6.25	6.19	6.28
Turbidity (NTU)	2.90	3.10	7.00	7.40	10.40	9.10	6.65	-	
SS (mg/L)	3.0	4.0	6.0	9.0	15.0	14.0	8.50	-	
Remarks									

Station	U2								
Time (hh:mm)	07:55-07:59								
Water Depth (m)									
Monitoring Depth (m)	1.10		3.90		7.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.2	23.3	23.3	23.2	23.2	23.23	-	
Salinity (ppt)	27.1	26.8	30.0	29.7	30.7	30.7	29.16	-	
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.97		
D.O. Saturation (%)	90.1	89.8	90.0	89.2	90.4	88.7	89.70	-	
D.O. (mg/L)	6.59	6.58	6.47	6.42	6.47	6.35	6.48	6.41	6.52
Turbidity (NTU)	3.20	3.30	4.10	4.50	8.10	7.60	5.16	-	
SS (mg/L)	3.0	3.0	5.0	8.0	10.0	9.0	6.33	-	
Remarks									

Station	C4								
Time (hh:mm)	08:13-08:17								
Water Depth (m)									
Monitoring Depth (m)	1.20		3.90		7.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.3	23.2	23.2	23.2	23.2	23.21	-	
Salinity (ppt)	28.7	28.1	30.6	30.6	30.7	30.7	29.91	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00		
D.O. Saturation (%)	91.4	91.7	90.1	90.0	90.0	89.9	90.48	-	
D.O. (mg/L)	6.62	6.65	6.45	6.44	6.44	6.43	6.51	6.44	6.54
Turbidity (NTU)	4.10	3.40	5.80	5.80	6.10	5.90	5.21	-	
SS (mg/L)	6.0	4.0	7.0	7.0	8.0	11.0	7.17	-	
Remarks									

Station	SR2								
Time (hh:mm)	08:17-08:23								
Water Depth (m)									
Monitoring Depth (m)	0.90				3.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.4	23.4			23.3	23.3	23.36	-	
Salinity (ppt)	28.2	28.2			29.9	30.0	29.08	-	
pH	7.8	7.9			7.8	7.9	7.84		
D.O. Saturation (%)	87.5	89.3			88.5	88.0	88.30	-	
D.O. (mg/L)	6.33	6.46			6.36	6.32	6.37	6.34	6.40
Turbidity (NTU)	3.40	3.50			5.20	6.70	4.72	-	
SS (mg/L)	5.0	5.0			7.0	7.0	6.00	-	
Remarks									

Station	D2								
Time (hh:mm)	08:04-08:07								
Water Depth (m)									
Monitoring Depth (m)	1.20		3.50		6.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.3	23.2	23.2	23.2	23.2	23.23	-	
Salinity (ppt)	27.4	29.3	30.4	30.3	30.9	30.9	29.88	-	
pH	7.9	8.0	8.0	8.0	8.0	8.0	7.99		
D.O. Saturation (%)	90.0	90.1	90.3	89.6	90.3	89.5	90.00	-	
D.O. (mg/L)	6.56	6.49	6.48	6.43	6.46	6.40	6.47	6.43	6.49
Turbidity (NTU)	3.60	4.50	5.40	5.40	7.20	6.10	5.40	-	
SS (mg/L)	5.0	6.0	6.0	8.0	8.0	8.0	6.83	-	
Remarks									

Station	SR3								
Time (hh:mm)	07:48-07:52								
Water Depth (m)									
Monitoring Depth (m)	1.00		6.00		11.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.3	23.2	23.1	23.1	23.1	23.17	-	
Salinity (ppt)	27.2	27.3	31.0	30.9	31.0	31.0	29.72	-	
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.97		
D.O. Saturation (%)	89.6	88.9	85.4	84.6	84.2	85.2	86.29	-	
D.O. (mg/L)	6.54	6.48	6.11	6.06	6.03	6.10	6.22	6.07	6.30
Turbidity (NTU)	3.60	3.90	7.80	7.70	11.20	11.80	7.67	-	
SS (mg/L)	8.0	6.0	8.0	12.0	21.0	14.0	11.50	-	
Remarks									

Station	G1								
Time (hh:mm)	07:22-07:27								
Water Depth (m)									
Monitoring Depth (m)	1.10		6.10		11.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.10	-	
Salinity (ppt)	28.8	28.8	30.6	30.6	31.2	31.2	30.18	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98		
D.O. Saturation (%)	91.5	90.9	87.9	88.1	88.5	86.9	88.97	-	
D.O. (mg/L)	6.64	6.60	6.31	6.33	6.33	6.21	6.40	6.27	6.47
Turbidity (NTU)	3.30	3.20	4.80	3.70	6.60	7.30	4.84	-	
SS (mg/L)	3.0	6.0	8.0	5.0	8.0	11.0	6.83	-	
Remarks									

Station	SR4								
Time (hh:mm)	07:32-07:37								
Water Depth (m)									
Monitoring Depth (m)	1.00		6.50		12.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.3	23.2	23.1	23.1	23.1	23.1	23.16	-	
Salinity (ppt)	27.7	27.8	30.6	30.6	31.1	31.1	29.80	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98		
D.O. Saturation (%)	90.5	90.3	88.4	87.0	87.9	85.1	88.23	-	
D.O. (mg/L)	6.59	6.58	6.34	6.24	6.29	6.09	6.36	6.19	6.44
Turbidity (NTU)	3.40	3.50	4.30	4.90	14.90	12.80	7.30	-	
SS (mg/L)	3.0	6.0	7.0	8.0	17.0	15.0	9.33	-	
Remarks									

Annex E3 - Water Quality Results at Airport during mid-ebb tide for 30 April 2008

Sampling Date	4/30/2008
Weather & Ambient Temperature	Sunny, 21C

Mid-Ebb

Station	C3								
Time (hh:mm)	08:36-08:40								
Water Depth (m)	10.60								
Monitoring Depth (m)	1.10		5.30		10.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.07	-	
Salinity (ppt)	31.5	31.4	31.6	31.6	31.7	31.8	31.60	-	
pH	7.9	8.0	7.9	7.9	7.8	7.9	7.90		
D.O. Saturation (%)	92.7	93.5	91.0	90.5	93.9	89.9	91.89	-	
D.O. (mg/L)	6.62	6.68	6.49	6.46	6.70	6.41	6.56	6.56	6.56
Turbidity (NTU)	5.70	4.90	7.40	6.90	8.30	8.80	7.03	-	
SS (mg/L)	7.0	8.0	9.0	8.0	9.0	12.0	8.83	-	
Remarks									

Station	U2								
Time (hh:mm)	09:10-09:13								
Water Depth (m)	8.10								
Monitoring Depth (m)	1.20		4.10		6.80				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.10	-	
Salinity (ppt)	30.9	31.2	31.2	31.3	31.3	31.2	31.16	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98		
D.O. Saturation (%)	96.7	94.8	95.3	94.4	96.1	94.9	95.34	-	
D.O. (mg/L)	6.93	6.78	6.82	6.75	6.87	6.78	6.82	6.83	6.82
Turbidity (NTU)	4.40	5.50	5.10	5.70	5.40	5.70	5.33	-	
SS (mg/L)	5.0	8.0	9.0	6.0	9.0	9.0	7.67	-	
Remarks									

Station	C4								
Time (hh:mm)	09:27-09:30								
Water Depth (m)	8.90								
Monitoring Depth (m)	1.30		4.50		8.30				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.3	23.1	23.1	23.1	23.1	23.14	-	
Salinity (ppt)	30.7	30.6	31.5	31.4	31.5	31.5	31.20	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.97		
D.O. Saturation (%)	95.7	96.4	91.1	91.8	93.6	91.7	93.36	-	
D.O. (mg/L)	6.85	6.90	6.51	6.56	6.68	6.55	6.68	6.62	6.71
Turbidity (NTU)	3.40	3.10	6.10	5.30	6.40	6.90	5.23	-	
SS (mg/L)	6.0	4.0	6.0	10.0	8.0	10.0	7.33	-	
Remarks									

Station	SR2								
Time (hh:mm)	09:21-09:27								
Water Depth (m)	4.20								
Monitoring Depth (m)	0.80				3.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.3	23.3			23.2	23.2	23.28	-	
Salinity (ppt)	30.9	30.9			31.1	31.0	30.99	-	
pH	7.9	8.0			7.9	8.0	7.96		
D.O. Saturation (%)	91.9	94.7			90.8	92.3	92.44	-	
D.O. (mg/L)	6.56	6.76			6.49	6.60	6.60	6.55	6.66
Turbidity (NTU)	4.60	4.60			5.90	5.40	5.14	-	
SS (mg/L)	5.0	8.0			7.0	6.0	6.50	-	
Remarks									

Station	D2								
Time (hh:mm)	09:18-09:21								
Water Depth (m)	7.10								
Monitoring Depth (m)	1.10		3.60		6.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.2	23.2	23.1	23.1	23.1	23.16	-	
Salinity (ppt)	30.8	30.7	30.9	31.2	31.3	31.3	31.04	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98		
D.O. Saturation (%)	95.5	95.7	94.7	93.3	94.7	93.7	94.59	-	
D.O. (mg/L)	6.83	6.85	6.77	6.67	6.77	6.70	6.77	6.74	6.78
Turbidity (NTU)	4.80	4.40	5.90	7.00	9.20	7.80	6.53	-	
SS (mg/L)	7.0	6.0	8.0	9.0	11.0	13.0	9.00	-	
Remarks									

Station	SR3								
Time (hh:mm)	09:02-09:06								
Water Depth (m)	12.20								
Monitoring Depth (m)	1.00		6.10		10.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.2	23.1	23.1	23.1	23.1	23.1	23.10	-	
Salinity (ppt)	30.6	30.8	31.2	31.2	31.4	31.4	31.08	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98		
D.O. Saturation (%)	98.4	97.6	95.2	94.4	94.4	93.7	95.61	-	
D.O. (mg/L)	7.05	7.00	6.82	6.75	6.75	6.69	6.84	6.72	6.91
Turbidity (NTU)	3.30	3.90	5.40	5.90	7.90	6.70	5.55	-	
SS (mg/L)	7.0	9.0	5.0	8.0	10.0	7.0	7.67	-	
Remarks									

Station	G1								
Time (hh:mm)	08:45-08:49								
Water Depth (m)	12.10								
Monitoring Depth (m)	1.00		6.10		10.80				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.0	23.0	23.0	23.0	23.05	-	
Salinity (ppt)	31.5	31.5	31.5	31.5	31.5	31.5	31.52	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.96		
D.O. Saturation (%)	93.3	93.0	92.2	91.6	92.6	92.0	92.45	-	
D.O. (mg/L)	6.66	6.64	6.59	6.54	6.62	6.58	6.61	6.60	6.61
Turbidity (NTU)	4.50	4.60	4.10	4.30	4.50	4.60	4.45	-	
SS (mg/L)	6.0	6.0	6.0	7.0	8.0	6.0	6.50	-	
Remarks									

Station	SR4								
Time (hh:mm)	08:54-08:58								
Water Depth (m)	12.70								
Monitoring Depth (m)	1.30		6.40		12.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.1	23.1	23.1	23.1	23.1	23.1	23.09	-	
Salinity (ppt)	30.6	30.8	31.4	31.3	31.7	31.7	31.22	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98		
D.O. Saturation (%)	99.4	98.5	93.8	94.2	94.5	93.7	95.68	-	
D.O. (mg/L)	7.13	7.06	6.70	6.74	6.74	6.69	6.84	6.72	6.91
Turbidity (NTU)	3.40	3.80	5.90	6.30	8.20	7.60	5.90	-	
SS (mg/L)	8.0	3.0	9.0	8.0	10.0	10.0	8.00	-	
Remarks									

Annex E4 - Water Quality Results at Airport during mid-flood tide for 30 April 2008

Sampling Date	4/30/2008
Weather & Ambient Temperature	Sunny, 20C

Mid-Flood

Station	C3								
Time (hh:mm)	12:52-12:56								
Water Depth (m)	11.20								
Monitoring Depth (m)	1.20		5.60		10.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.6	23.5	23.1	23.1	23.0	23.0	23.22	-	
Salinity (ppt)	31.0	31.1	31.3	31.4	31.4	31.4	31.27	-	
pH	8.0	8.0	7.9	8.0	7.8	7.9	7.94		
D.O. Saturation (%)	101.3	97.6	89.9	89.2	89.4	90.3	92.95	-	
D.O. (mg/L)	7.19	6.93	6.43	6.37	6.40	6.45	6.63	6.43	6.73
Turbidity (NTU)	4.00	4.30	5.40	5.30	7.30	6.90	5.56	-	
SS (mg/L)	6.0	6.0	6.0	9.0	8.0	8.0	7.17	-	
Remarks									

Station	U2								
Time (hh:mm)	13:23-13:27								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.20		4.00		7.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.7	23.9	23.7	23.8	23.3	23.3	23.60	-	
Salinity (ppt)	30.5	30.3	30.6	30.4	31.0	31.0	30.64	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03		
D.O. Saturation (%)	105.3	104.6	101.7	103.7	99.4	99.3	102.33	-	
D.O. (mg/L)	7.48	7.42	7.22	7.36	7.09	7.09	7.28	7.09	7.37
Turbidity (NTU)	3.60	3.30	4.30	3.60	5.10	4.90	4.16	-	
SS (mg/L)	7.0	7.0	10.0	4.0	5.0	8.0	6.83	-	
Remarks									

Station	C4								
Time (hh:mm)	13:41-13:45								
Water Depth (m)	7.90								
Monitoring Depth (m)	1.20		4.00		8.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.6	23.6	23.3	23.3	23.2	23.1	23.35	-	
Salinity (ppt)	30.0	30.1	30.5	30.7	31.5	31.5	30.72	-	
pH	8.0	8.0	8.0	8.0	8.1	8.1	8.04		
D.O. Saturation (%)	100.6	100.6	100.3	98.5	98.3	97.8	99.36	-	
D.O. (mg/L)	7.18	7.18	7.18	7.04	7.01	6.98	7.10	7.00	7.15
Turbidity (NTU)	3.90	3.70	4.40	5.40	6.70	6.60	5.14	-	
SS (mg/L)	7.0	5.0	5.0	8.0	8.0	7.0	6.67	-	
Remarks									

Station	SR2								
Time (hh:mm)	13:17-13:22								
Water Depth (m)	4.20								
Monitoring Depth (m)	1.00				3.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.9	24.0			23.6	23.8	23.82	-	
Salinity (ppt)	31.0	30.8			31.1	31.0	30.95	-	
pH	7.9	8.0			7.9	8.0	7.94		
D.O. Saturation (%)	101.5	101.6			98.2	100.0	100.31	-	
D.O. (mg/L)	7.17	7.17			6.97	7.07	7.10	7.02	7.17
Turbidity (NTU)	5.60	4.70			7.20	5.90	5.87	-	
SS (mg/L)	5.0	8.0			12.0	11.0	9.00	-	
Remarks									

Station	D2								
Time (hh:mm)	13:33-13:36								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.20		4.00		7.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.7	23.8	23.7	23.7	23.6	23.4	23.65	-	
Salinity (ppt)	30.2	30.2	30.7	30.3	30.8	31.0	30.54	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03		
D.O. Saturation (%)	102.3	103.5	100.1	101.6	99.9	97.6	100.83	-	
D.O. (mg/L)	7.28	7.36	7.11	7.22	7.10	6.95	7.17	7.03	7.24
Turbidity (NTU)	3.90	3.80	5.20	4.30	6.20	8.00	5.26	-	
SS (mg/L)	5.0	6.0	10.0	5.0	11.0	11.0	8.00	-	
Remarks									

Station	SR3								
Time (hh:mm)	13:17-13:21								
Water Depth (m)	12.00								
Monitoring Depth (m)	1.10		6.00		11.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.5	23.8	23.2	23.2	23.1	23.1	23.33	-	
Salinity (ppt)	30.9	30.7	31.1	31.1	31.2	31.2	31.04	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02		
D.O. Saturation (%)	101.1	102.5	93.7	93.0	94.8	94.2	96.54	-	
D.O. (mg/L)	7.19	7.26	6.69	6.64	6.78	6.74	6.88	6.76	6.95
Turbidity (NTU)	4.40	3.90	7.90	8.60	8.10	8.70	6.97	-	
SS (mg/L)	6.0	8.0	11.0	14.0	12.0	10.0	10.17	-	
Remarks									

Station	G1								
Time (hh:mm)	13:01-13:05								
Water Depth (m)	12.10								
Monitoring Depth (m)	1.10		6.10		11.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.5	23.5	23.1	23.1	23.1	23.1	23.22	-	
Salinity (ppt)	31.0	31.0	31.4	31.5	31.5	31.5	31.33	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00		
D.O. Saturation (%)	98.7	99.3	91.7	90.4	91.0	90.9	93.67	-	
D.O. (mg/L)	7.02	7.06	6.55	6.46	6.50	6.49	6.68	6.50	6.77
Turbidity (NTU)	5.40	5.30	6.00	6.80	7.50	7.40	6.43	-	
SS (mg/L)	9.0	6.0	7.0	10.0	11.0	9.0	8.67	-	
Remarks									

Station	SR4								
Time (hh:mm)	13:10-13:13								
Water Depth (m)	13.20								
Monitoring Depth (m)	1.00		6.60		11.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.7	23.6	23.1	23.1	23.1	23.1	23.28	-	
Salinity (ppt)	30.8	30.8	31.2	31.1	31.5	31.5	31.14	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02		
D.O. Saturation (%)	102.9	103.0	95.1	96.9	93.6	95.4	97.80	-	
D.O. (mg/L)	7.31	7.31	6.80	6.93	6.68	6.81	6.97	6.75	7.09
Turbidity (NTU)	3.80	3.70	5.10	5.00	8.30	6.50	5.43	-	
SS (mg/L)	7.0	5.0	6.0	6.0	17.0	8.0	8.17	-	
Remarks									

Annex E5 - Water Quality Results at Airport during mid-ebb tide for 2 May 2008

Sampling Date	5/2/2008
Weather & Ambient Temperature	Rainy

Mid-Ebb

Station	C3								
Time (hh:mm)	10:04-10:08								
Water Depth (m)	11.00								
Monitoring Depth (m)	1.20		5.50		10.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.8	23.8	23.5	23.5	23.4	23.4	23.56	-	
Salinity (ppt)	28.0	28.0	30.8	30.9	31.1	31.1	29.99	-	
pH	7.9	8.0	7.9	7.9	7.9	7.9	7.93		
D.O. Saturation (%)	99.1	98.8	94.9	93.7	94.1	93.6	95.69	-	
D.O. (mg/L)	7.13	7.11	6.76	6.67	6.69	6.66	6.84	6.68	6.92
Turbidity (NTU)	4.30	4.70	7.90	8.30	8.00	6.10	6.58	-	
SS (mg/L)	7.0	6.0	11.0	13.0	10.0	8.0	9.17	-	
Remarks									

Station	U2								
Time (hh:mm)	10:39-10:43								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.30		4.10		7.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.8	23.8	23.9	23.9	23.6	23.6	23.77	-	
Salinity (ppt)	26.0	26.0	26.9	26.6	29.8	29.8	27.49	-	
pH	7.9	7.9	7.9	7.9	8.0	8.0	7.94		
D.O. Saturation (%)	95.7	95.9	98.2	97.2	98.4	97.1	97.10	-	
D.O. (mg/L)	6.96	6.98	7.11	7.05	7.03	6.93	7.01	6.98	7.03
Turbidity (NTU)	3.90	3.80	8.50	4.60	9.20	8.90	6.50	-	
SS (mg/L)	7.0	4.0	12.0	7.0	11.0	12.0	8.83	-	
Remarks									

Station	C4								
Time (hh:mm)	11:10-11:14								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.20		4.10		7.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.8	23.8	23.6	23.6	23.6	23.6	23.66	-	
Salinity (ppt)	25.2	24.9	29.3	29.0	29.8	29.8	28.00	-	
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.95		
D.O. Saturation (%)	97.8	98.0	96.9	96.6	96.0	96.0	96.89	-	
D.O. (mg/L)	7.15	7.18	6.94	6.94	6.86	6.86	6.99	6.86	7.05
Turbidity (NTU)	4.00	3.60	8.80	10.30	20.00	19.20	10.99	-	
SS (mg/L)	6.0	10.0	24.0	16.0	27.0	35.0	19.67	-	
Remarks									

Station	SR2								
Time (hh:mm)	10:43-10:51								
Water Depth (m)	4.00								
Monitoring Depth (m)	1.00				3.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.0	24.0			24.0	24.0	23.99	-	
Salinity (ppt)	26.6	26.7			28.3	28.2	27.43	-	
pH	7.9	7.9			7.8	7.9	7.85		
D.O. Saturation (%)	93.7	92.2			89.3	90.1	91.31	-	
D.O. (mg/L)	6.78	6.66			6.39	6.45	6.57	6.42	6.72
Turbidity (NTU)	3.90	5.30			6.80	7.70	5.94	-	
SS (mg/L)	5.0	6.0			18.0	14.0	10.75	-	
Remarks									

Station	D2								
Time (hh:mm)	10:48-10:51								
Water Depth (m)	7.00								
Monitoring Depth (m)	1.30		3.60		6.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.8	23.8	23.7	23.6	23.6	23.6	23.70	-	
Salinity (ppt)	25.9	26.4	28.9	29.8	30.0	30.0	28.50	-	
pH	7.9	7.9	7.9	8.0	8.0	8.0	7.94		
D.O. Saturation (%)	94.5	94.5	97.3	97.9	97.4	94.9	96.08	-	
D.O. (mg/L)	6.88	6.86	6.97	6.99	6.95	6.77	6.90	6.86	6.93
Turbidity (NTU)	4.60	5.00	9.10	13.10	11.50	9.70	8.81	-	
SS (mg/L)	7.0	13.0	14.0	18.0	16.0	14.0	13.67	-	
Remarks									

Station	SR3								
Time (hh:mm)	10:33-10:36								
Water Depth (m)	12.00								
Monitoring Depth (m)	1.30		5.90		11.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.7	23.7	23.7	23.7	23.5	23.6	23.64	-	
Salinity (ppt)	26.6	26.7	28.9	28.9	30.4	30.3	28.61	-	
pH	7.9	7.9	8.0	7.9	8.0	8.0	7.94		
D.O. Saturation (%)	92.8	92.5	95.2	94.4	95.0	95.4	94.19	-	
D.O. (mg/L)	6.74	6.71	6.84	6.77	6.77	6.80	6.77	6.79	6.77
Turbidity (NTU)	4.80	4.70	8.60	6.70	11.00	8.60	7.42	-	
SS (mg/L)	4.0	8.0	12.0	8.0	11.0	12.0	9.17	-	
Remarks									

Station	G1								
Time (hh:mm)	10:14-10:18								
Water Depth (m)	12.00								
Monitoring Depth (m)	1.00		6.00		11.30				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.8	23.8	23.5	23.5	23.4	23.4	23.58	-	
Salinity (ppt)	26.0	28.0	30.6	30.7	31.0	31.0	29.56	-	
pH	7.9	8.0	8.0	8.0	8.0	8.0	7.95		
D.O. Saturation (%)	98.2	99.3	95.3	94.1	94.6	93.2	95.77	-	
D.O. (mg/L)	7.14	7.14	6.79	6.70	6.73	6.63	6.86	6.68	6.94
Turbidity (NTU)	5.30	6.30	9.20	9.20	10.00	10.70	8.43	-	
SS (mg/L)	10.0	6.0	9.0	10.0	13.0	13.0	10.17	-	
Remarks									

Station	SR4								
Time (hh:mm)	10:25-10:28								
Water Depth (m)	13.00								
Monitoring Depth (m)	1.30		6.50		12.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.7	23.7	23.5	23.5	23.4	23.4	23.55	-	
Salinity (ppt)	26.0	26.1	30.3	30.6	30.9	30.9	29.15	-	
pH	7.9	7.9	8.0	8.0	7.9	7.9	7.93		
D.O. Saturation (%)	94.6	94.4	94.8	93.5	96.1	91.9	94.23	-	
D.O. (mg/L)	6.90	6.88	6.77	6.66	6.84	6.55	6.77	6.70	6.80
Turbidity (NTU)	3.70	4.10	7.10	8.40	8.20	10.40	7.00	-	
SS (mg/L)	9.0	5.0	9.0	16.0	15.0	12.0	11.00	-	
Remarks									

Annex E6 - Water Quality Results at Airport during mid-flood tide for 2 May 2008

Sampling Date	5/2/2008
Weather & Ambient Temperature	Rainy

Mid-Flood

Station	C3								
Time (hh:mm)	15:16-15:20								
Water Depth (m)	10.00								
Monitoring Depth (m)	1.20		5.70		10.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	23.9	24.0	23.6	23.6	23.5	23.5	23.68	-	
Salinity (ppt)	27.5	27.4	29.2	29.3	30.6	30.6	29.10	-	
pH	8.0	8.0	7.9	8.0	7.7	8.0	7.94		
D.O. Saturation (%)	96.1	96.6	91.2	93.1	91.1	90.5	93.09	-	
D.O. (mg/L)	6.92	6.95	6.54	6.67	6.49	6.45	6.67	6.47	6.77
Turbidity (NTU)	4.10	4.40	7.70	8.00	11.60	11.00	7.81	-	
SS (mg/L)	7.0	6.0	7.0	10.0	13.0	14.0	9.50	-	
Remarks									

Station	U2								
Time (hh:mm)	15:51-15:57								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.10		4.10		7.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.2	24.2	23.9	24.2	23.7	23.7	23.99	-	
Salinity (ppt)	27.1	27.2	28.9	27.7	29.8	29.7	28.41	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02		
D.O. Saturation (%)	109.0	110.0	103.1	108.4	98.8	96.1	104.23	-	
D.O. (mg/L)	7.83	7.89	7.36	7.77	7.04	6.86	7.46	6.95	7.71
Turbidity (NTU)	4.50	4.90	17.10	8.30	23.30	38.30	16.08	-	
SS (mg/L)	6.0	9.0	21.0	23.0	30.0	58.0	24.50	-	
Remarks									

Station	C4								
Time (hh:mm)	16:16-16:20								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.10		4.10		7.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.3	24.4	24.1	24.2	23.6	23.6	24.03	-	
Salinity (ppt)	27.3	27.3	27.3	27.3	29.5	28.9	27.96	-	
pH	8.1	8.1	8.0	8.0	8.0	8.0	8.02		
D.O. Saturation (%)	114.7	119.0	107.5	112.0	95.1	96.7	107.49	-	
D.O. (mg/L)	8.21	8.51	7.73	8.04	6.81	6.95	7.71	6.88	8.12
Turbidity (NTU)	3.10	2.90	3.90	3.20	13.20	5.10	5.25	-	
SS (mg/L)	8.0	6.0	4.0	6.0	18.0	6.0	8.00	-	
Remarks									

Station	SR2								
Time (hh:mm)	15:49-15:54								
Water Depth (m)	4.00								
Monitoring Depth (m)	1.00				3.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.6	24.6			23.8	23.9	24.23	-	
Salinity (ppt)	26.2	26.1			27.9	27.5	26.94	-	
pH	8.0	8.0			7.9	7.9	7.94		
D.O. Saturation (%)	100.4	99.5			93.3	93.4	96.66	-	
D.O. (mg/L)	7.20	7.14			6.72	6.73	6.95	6.73	7.17
Turbidity (NTU)	6.40	5.90			11.80	14.70	9.73	-	
SS (mg/L)	6.0	5.0			17.0	18.0	11.50	-	
Remarks									

Station	D2								
Time (hh:mm)	16:05-16:10								
Water Depth (m)	8.00								
Monitoring Depth (m)	1.30		4.30		7.20				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.1	24.1	23.8	23.8	23.6	23.6	23.85	-	
Salinity (ppt)	26.6	27.2	28.4	29.3	30.0	30.0	28.57	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.99		
D.O. Saturation (%)	101.0	104.2	96.2	101.6	95.2	95.9	99.02	-	
D.O. (mg/L)	7.28	7.49	6.91	7.25	6.79	6.85	7.10	6.82	7.23
Turbidity (NTU)	3.80	4.30	7.50	7.20	15.20	17.00	9.18	-	
SS (mg/L)	3.0	9.0	10.0	10.0	20.0	27.0	13.17	-	
Remarks									

Station	SR3								
Time (hh:mm)	15:43-15:48								
Water Depth (m)	12.00								
Monitoring Depth (m)	1.20		6.30		11.10				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.4	24.5	24.0	24.0	23.7	23.7	24.04	-	
Salinity (ppt)	27.2	27.2	28.7	28.7	29.6	29.6	28.49	-	
pH	8.1	8.1	8.1	8.0	8.0	8.0	8.06		
D.O. Saturation (%)	123.0	120.7	111.7	106.6	97.5	100.8	110.05	-	
D.O. (mg/L)	8.79	8.63	7.98	7.61	6.97	7.20	7.86	7.09	8.25
Turbidity (NTU)	3.20	3.30	8.40	10.10	12.50	18.90	9.40	-	
SS (mg/L)	3.0	5.0	6.0	18.0	19.0	24.0	12.50	-	
Remarks									

Station	G1								
Time (hh:mm)	15:25-15:29								
Water Depth (m)	11.00								
Monitoring Depth (m)	1.10		5.60		10.00				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.1	24.1	23.6	23.6	23.6	23.6	23.76	-	
Salinity (ppt)	26.9	26.9	29.4	29.6	30.0	29.9	28.78	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02		
D.O. Saturation (%)	104.5	101.7	93.9	93.1	93.9	94.5	96.93	-	
D.O. (mg/L)	7.53	7.32	6.73	6.66	6.71	6.75	6.95	6.73	7.06
Turbidity (NTU)	3.90	3.30	8.90	9.20	9.80	9.30	7.39	-	
SS (mg/L)	6.0	4.0	10.0	10.0	12.0	12.0	9.00	-	
Remarks									

Station	SR4								
Time (hh:mm)	15:34-15:38								
Water Depth (m)	12.00								
Monitoring Depth (m)	1.20		6.10		10.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	*Depth-averaged*	*Bottom*	*Surface&Middle*
Water Temperature (℃)	24.3	24.4	23.8	23.7	23.5	23.6	23.89	-	
Salinity (ppt)	27.3	27.3	29.0	29.1	30.3	29.9	28.84	-	
pH	8.1	8.1	8.0	8.0	8.0	8.0	8.05		
D.O. Saturation (%)	118.2	118.2	99.1	98.6	91.6	98.9	104.10	-	
D.O. (mg/L)	8.46	8.45	7.09	7.06	6.54	7.07	7.45	6.81	7.77
Turbidity (NTU)	3.10	3.20	6.90	6.90	16.20	9.30	7.61	-	
SS (mg/L)	5.0	4.0	8.0	8.0	12.0	10.0	7.83	-	
Remarks									