

Civil Engineering and Development Department

**Environmental Monitoring Works at
Kai Tak Development
Water, Sediment & Odour Quality Report
November and December 2011**

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EXECUTIVE SUMMARY

Introduction

1. This is the 3rd Water, Sediment & Odour Report for Environmental Monitoring Works for Kai Tak Development during construction phase (the Project). This report documents the results and findings of the 2nd general water quality monitoring works and 1st odour patrol works conducted for the Project in November and December 2011.

General water quality monitoring works

2. General marine water quality monitoring shall be carried out quarterly at the designated locations to give adequate coverage of different tidal states during both wet and dry seasons. During each survey event, sampling shall be taken at 2 tide conditions (mid-flood and mid-ebb). The 2nd General Water Quality Monitoring for the Project was performed on 22nd November 2011 and the monitoring results were checked and reviewed.

Odour Sampling Works

3. Odour sampling shall be carried out within Kai Tak Approach Channel (KTAC) and Kowloon Tong Typhoon Shelter (KTTS) as well as along To Kwa Wan (TKW) and Ma Tau Kok (MTK) waterfront half-yearly interval to determine the odour emissions from water surface throughout the Contract and Maintenance Period. The first odour sampling shall be carried within the August of 2011 or as agreed with the Engineer. One of the sampling events within each calendar year shall be undertaken during summer season (i.e. July or August). No Odour Sampling for the Project was performed in the reporting period.

Odour Patrol Works

4. Odour patrol shall be carried out in the month of February, May, July, August, September and November along the same odour route and at the same sniffing locations. The first odour patrol shall be carried out within November 2011. Therefore, the 1st odour patrol for the Project was performed on 29th and 30th November 2011 and the monitoring results were checked and reviewed.

Sediment Monitoring Works

5. Sediment monitoring shall be carried out at the same locations of the odour sampling stations half-yearly interval throughout the Contract Period. The first sediment sampling shall be carried out within the August of 2011 or as agreed with the Engineer. No Sediment Monitoring for the Project was performed in the reporting period.
6. In addition, no environmental monitoring works were conducted in December 2011.

1. Introduction

Background

- 1.1 In accordance with the approved Kai Tak Development (KTD) Schedule 3 EIA, improvements works have been proposed to alleviate the potential odour impact from Kai Tak Approach Channel (KTAC) and Kwan Tong Typhoon Shelter (KTTS). In order to monitor the effectiveness and impacts of the proposed works, environmental monitoring works of water, sediment and odour quality were conducted for Kai Tak Development (the Project).
- 1.2 This is the 3rd Water, Sediment & Odour Quality Monitoring Reports summarizing the general water quality monitoring works, odour and sediment monitoring works for the Project in November and December 2011.

2. General Water Quality monitoring

Monitoring Requirements

- 2.1 General marine water quality monitoring shall be carried out quarterly at the designated locations to give adequate coverage of different tidal states during both wet and dry seasons.
- 2.2 The first general marine water quality monitoring during construction phase shall be carried out within the summer season of 2011 or as agreed with the Engineer.
- 2.3 For all the monitoring stations, sampling was taken 3 water depths, namely 1m below the water surface, mid depth and 1m above the sea bed. For stations that are less than 3m in depth, only the mid depth sample was taken. Mid-depth was omitted in case the water depth is less than 6m. During each survey event, sampling was taken at 2 tide conditions (mid-flood and mid-ebb).
- 2.4 For the WSD intake points, the monitoring was conducted at the appropriate vertical levels of the abstraction points of these intakes to collect water quality information.
- 2.5 At each monitoring station, duplicate samples were collected at each water depth.
- 2.6 Sufficient volume of each water sample (not less than 1 litre) was collected for analysis to achieve the required detection limit. *In-situ* measurements at DO, pH, salinity, temperature and turbidity were taken at 0.5m depth intervals at all the marine water quality monitoring stations.

Monitoring Locations

- 2.7 The monitoring locations include seven stations within the approach channel (AC1-7), one station at the KTTS (KT1), three stations at inner Kowloon Bay (IB1-3), one station at outer Kowloon Bay (OB1), two stations in the Victoria Harbour adjacent to the Kowloon Bay (VH1-2), one station in the vicinity of Jordan Valley Culvert (JVC), one station Kai Tak Nullah (KTN) and four stations at the WSD flushing water intakes. The locations are also summarized in Table 2.1 and shown on **Figure 1**.

Table 2.1 Water Quality Monitoring Stations

Monitoring Stations	Coordinates	
	Northing	Easting
AC1	820147.04	838736.55
AC2	820218.32	838807.83
AC3	819920.71	838952.22
AC4	819988.82	839030.88
AC5	819690.85	839214.12
AC6	819755.00	839278.27
AC7	819545.62	839418.24
KT1	819010.57	840260.66
IB1	819861.53	838265.60
IB2	819465.93	838456.29
IB3	819176.01	838054.63
OB1	819134.25	839182.22
VH1	817553.42	837739.09
VH2	817588.53	840243.13
KTN	820399.67	838776.18
JVC	819940.86	839165.73
WSD Intake at Tai Wan	818268.40	837952.00
WSD Intake at Cha Kwo Ling	817836.40	841544.20
WSD Intake at Quarry Bay	817056.00	839752.00
WSD Intake at Sai Wan Ho	816451.38	841215.41

Monitoring Equipment

Dissolved Oxygen (DO) and Temperature Measuring Equipment

- 2.8 The instrument for measuring dissolved oxygen and temperature was portable and weatherproof complete with cable, sensor, comprehensive operation manuals and use DC power source. It was capable of measuring:
- a dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation; and
 - a temperature of 0-45 degree Celsius.
- 2.9 It has a membrane electrode with automatic temperature compensation complete with a cable.
- 2.10 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.
- 2.11 Salinity compensation was built-in in the DO equipment.

Turbidity

- 2.12 Turbidity was measured *in situ* by the nephelometric method. The instrument was portable and weatherproof using a DC power source complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity

between 0-1000 NTU. The probe cable was not less than 25m in length. The meter was calibrated in order to establish the relationship between NTU units and the levels of suspended solids. The turbidity measurement was carried out on split water sample collected from the same depths of suspended solids samples.

Sampler

- 2.13 A water sampler, consisting of a transparent PVC or glass cylinder of a capacity of not less than two litres which can be effectively sealed with cups at both ends was used. The water sampler has 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.

Water Depth Detector

- 2.14 A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

pH

- 2.15 The instrument was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

Salinity

- 2.16 A portable salinometer capable of recording salinity within the range of 0-40 ppt was used for salinity measurements.

Position System

- 2.17 A hand held differential Global Positioning System (GPS) was used during water quality monitoring to ensure the monitoring vessel is at the correct location before taking measurements. GPS was calibrated at checkpoint (Quarry Bay Survey Nail at Easting 840683.49 and Northing 816709.55) to ensure the monitoring station was at the correct position before taking measurement and water samples.

Sample Container and Storage

- 2.18 Following collection, water samples for laboratory analysis were stored in high density polythene bottles with appropriate preservatives added, packed in ice (cooled to 4°C without being frozen), delivered to the laboratory and analysed as soon as possible. Sufficient volume of samples was collected to achieve the detection limit.
- 2.19 For the sample containers for *E. coli*, the water samples were collected in sterile bottles with leakproof lids.

Calibration of *In Situ* Instruments

- 2.20 All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring event.
- 2.21 For the on site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, "Guide to on-site test methods for the analysis of waters" was observed.
- 2.22 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also being made available so that monitoring can proceed uninterrupted even when some equipment was under maintenance, calibration, etc.
- 2.23 Table 2.2 summarizes the equipment used in the water quality monitoring program. Copies of the calibration certificates of the equipment are shown in **Appendix A1**.

Table 2.2 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Water Sampler	Kahlsico Water-Bottle Model 135DW 150	2
Multi-parameter Water Quality System	YSI 6820-C-M	2
Monitoring Position Equipment	"Magellan" Handheld GPS Model GPS-320	2
Water Depth Detector	Fishfinder 140	2

Monitoring Parameters

- 2.24 The monitoring parameters to be measured *in-situ* and in laboratory are summarized in Table 2.3.

Table 2.3 Water Quality Monitoring Parameters

<i>In-situ</i> Measurement	Laboratory Measurement
Dissolved Oxygen	Suspended Solids (SS)
pH	<i>E. coli</i>
Water Temperature	5-day Biochemical Oxygen Demand (BOD ₅)
Salinity	Ammonia Nitrogen (NH ₃ -N)
Secchi disc depth	Unionized Ammonia (UIA)
Turbidity	Total Kjeldahl Nitrogen (TKN)
	Nitrite-nitrogen (NO ₂ -N)
	Nitrate-nitrogen (NO ₃ -N)
	Ortho-phosphate (PO ₄)
	Total Phosphorous (TP)
	Cadmium (Cd)
	Chromium (Cr)
	Copper (Cu)
	Mercury (Hg)
	Nickel (Ni)
	Lead (Pb)
	Silver (Ag)
	Zinc (Zn)

- 2.25 Monitoring location/position, time, water depth, sampling depth, pH, salinity, DO saturation, water temperature, tidal stages, weather conditions and any special phenomena or work underway nearby were recorded.

Monitoring Frequency

- 2.26 General marine water quality monitoring shall be carried out quarterly at the designated locations to give adequate coverage of different tidal states during both wet and dry seasons.
- 2.27 During each survey event, sampling will be taken at 2 tide conditions (mid-flood and mid-ebb) to give adequate coverage of different tidal states during both wet and dry seasons. 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. The monitoring period had covered the mid-flood tide and/or mid-ebb tide.

- 2.28 The monitoring will be ceased in the events of any emergency sewage discharges from the preliminary treatment works (PTWs) on both sides of the Victoria Harbour. Monitoring will be avoided during and after any storm events where sewage overflow may be anticipated from the PTWs. There will not be any marine construction activities in the vicinity of the stations during the monitoring.
- 2.29 The water quality monitoring schedule in the reporting period is provided in **Appendix C**.

Monitoring Methodology

- 2.30 The monitoring stations were accessed using survey boat to within 3 m by the guide of a hand-held Global Positioning System (GPS). The depth of the monitoring location was measured using depth meter in order to determine the sampling depths. Afterwards, the probes of the in-situ measurement equipment were lowered to the predetermined depths (1 m below water surface, mid-depth and 1 m above seabed) and the measurements were carried out accordingly. The in-situ measurements at predetermined depths were carried out in duplicate. In case the difference in the duplicate in-situ measurement results was larger than 25%, the third set of in-situ measurement would be carried out for result confirmation purpose.
- 2.31 Water sampler was lowered into the water to the required depths of sampling. Upon reaching the pre-determined depth, a messenger to activate the sampler was then released to travel down the wire. The water sample was sealed within the sampler before retrieving. At each station, water samples at three depths (1 m below water surface, mid-depth and 1 m above seabed) were collected accordingly. Water samples were stored in a cool box and kept at less than 4°C but without frozen and sent to the laboratory as soon as possible. In addition, field information as described in Section 2.25 was also recorded.

Laboratory Analytical Methods

- 2.32 The testing of all parameters was conducted by Wellab Ltd. (HOKLAS Registration No.083) and comprehensive quality assurance and control procedures in place in order to ensure quality and consistency in results. The testing method, lowest detection limit and limit of reporting are provided in Table 2.4.

Table 2.4 Methods for Laboratory Analysis for Water Samples

Determinant	Proposed Method	Limit of Reporting	Lowest Detection Limit
Cadmium (Cd)	In-house Method SOP 053 (ICP-ES) and SOP 076 (ICP-MS) [Ref. Method: APHA 19e 3030F 3b and 3120B, USEPA 3005A & 6020A]	0.1 µg/L	0.1 µg/L
Chromium (Cr)		0.2 µg/L	0.2 µg/L
Copper (Cu)		0.2 µg/L	0.2 µg/L
Silver (Ag)		0.2 µg/L	0.2 µg/L
Nickel (Ni)		0.2 µg/L	0.2 µg/L
Zinc (Zn)		0.4 µg/L	0.4 µg/L
Lead (Pb)		0.2 µg/L	0.2 µg/L
Mercury (Hg)		0.2 µg/L	0.2 µg/L
Suspended Solids (SS)		APHA 17ed 2540 D	0.5 mg/L
5-day Biochemical Oxygen Demand (BOD ₅)	APHA 19ed 5210 B	2 mg-O ₂ /L	0.4 mg-O ₂ /L
Ammonia Nitrogen (NH ₃ -N)	In-house method SOP057 (FIA) [Ref. Method: APHA 20e 4500-NH ₃ H (FIA)]	0.01mg NH ₃ -N/L	0.01mg NH ₃ -N/L
Unionized Ammonia (UIA)	By Calculation	0.001mg/L	-
Total Kjeldahl Nitrogen (TKN)	In-house method SOP058(FIA) [Ref. Method: APHA 20e 4500-Norg A,B,D (FIA)]	0.1mg N/L	0.1mg N/L
Nitrite-nitrogen (NO ₂ -N)	In-house Method SOP068 (FIA) [Ref. Method: APHA 20e 4500-NO ₂ ⁻ B (FIA)]	0.002 mg NO ₂ ⁻ -N/L	0.002 mg NO ₂ ⁻ -N/L
Nitrate-nitrogen (NO ₃ -N)	In-house Method SOP056 (FIA) [Ref. Method: APHA 20e 4500-NO ₃ ⁻ F (FIA)]	0.01 mg NO ₃ ⁻ -N/L	0.01 mg NO ₃ ⁻ -N/L
<i>E. coli</i>	In-house method SOP069 (Membrane Filtration Method by CHROMagar) [Ref. Method: APHA 20e 9221E & 9222D]	1 cfu/100mL	1 cfu/100mL
Ortho-phosphate (PO ₄)	In-house Method SOP054 (FIA) [Ref. Method: APHA 20e 4500-P A,F,G (FIA)]	0.01mg PO ₄ ³⁻ -P/L	0.01mg PO ₄ ³⁻ -P/L
Total Phosphorous (TP)	In-house Method SOP 055 (FIA) [Ref. Method: APHA 20e 4500-P B,E,F,H (FIA)]	0.01 mg-P/L	0.01 mg-P/L

2.33 To calculate the amount of unionized ammonia present (UIA), the Total Ammonia Nitrogen (TAN) must be multiplied by the appropriate factor based on the pH and temperature from the water sample. The calculation is in accordance with Ambient Water Quality Criteria for Ammonia published by United States Environmental Protection Agency. The lowest reporting limit of UIA is 0.001mg/L.

QA/QC Requirements

Decontamination Procedures

- 2.34 Water sampling equipment used during the course of the monitoring programme was decontaminated by manual washing and rinsed clean seawater/distilled water after each sampling event. All disposal equipment was discarded after sampling.

Sampling Management and Supervision

- 2.35 Water samples were dispatched to the testing laboratory for analysis as soon as possible after the sampling. All samples were stored in a cool box and kept at less than 4°C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.

Quality Control Measures for Sample Testing

- 2.36 The samples testing were performed by HOKLAS accredited laboratories. The following quality control programme was performed by the laboratories for each batch of samples:
- ✧ Method blank;
 - ✧ Sample duplicate (at 5% level i.e. one for every 20 samples);
 - ✧ Sample spike (at 5% level i.e. one for every 20 samples); and
 - ✧ Quality control samples.

Results and Observation

- 2.37 The 2nd general water quality monitoring was conducted on 22nd November 2011 and the next monitoring will be carried out in February 2012.
- 2.38 No notification of emergency sewage discharges from the preliminary treatment works (PTWs) on both sides of the Victoria Harbour and marine construction activities in the vicinity of the stations during the monitoring works. No Monitoring was conducted during and after any storm events where sewage overflow may be anticipated from the PTWs.
- 2.39 The weather during the sampling at mid-ebb tide and mid-flood tide was mainly sunny.
- 2.40 No special phenomena near the monitoring stations were observed during the monitoring works.
- 2.41 No marine activities were conducted in the vicinity of the stations during the monitoring.

- 2.42 The laboratory testing report and QC report are provided in **Appendix D1 and Appendix E respectively**.
- 2.43 The water depth of each monitoring station at mid-ebb and mid flood tide is shown in Table 2.5 and the *in-situ* measurement results including dissolved oxygen, turbidity, salinity, pH, secchi disc depth and temperature of the general water quality monitoring are provided in **Appendix F**.

Table 2.5 Water Depth of Water Quality Monitoring Stations

Water Quality Monitoring Stations	Water Depth (m)	
	Mid-Ebb	Mid-Flood
AC1	2.0	3.0
AC2	5.0	5.0
AC3	2.5	2.5
AC4	4.5	5.0
AC5	3.0	3.0
AC6	5.0	6.0
AC7	6.0	6.0
KT1	7.0	7.0
IB1	7.5	8.0
IB2	8.0	8.0
IB3	9.0	9.0
OB1	8.5	7.0
VH1	21.0	22.0
VH2	18.0	17.0
KTN	2.5	2.5
JVC	4.0	5.0
WSD Intake at Tai Wan	12.0	11.0
WSD Intake at Cha Kwo Ling	11.0	11.0
WSD Intake at Quarry Bay	6.5	7.0
WSD Intake at Sai Wan Ho	14.0	14.0

3. Odour Sampling

Sampling Requirements

- 3.1 The odour sampling shall be carried out within Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS) as well as To Kwa Wan (TKW) and Ma Tau Kok (MTK) waterfront at half-yearly interval to determine the odour emissions from water surface throughout the Contract Period.
- 3.2 The first odour sampling shall be carried within the August of 2011 or as agreed with the Engineer. One of the sampling events within each calendar year shall be undertaken during summer season (i.e. July or August).
- 3.3 In order to capture more representative results, measurements and sampling will be conducted during low tide periods with reference to the tidal chart of Hong Kong Observatory for KTAC, KTTS and TKW.
- 3.4 The relevant meteorological data (e.g. ambient temperature, wind speed and direction, etc.) from the Hong Kong Observatory station during the measurement/sampling period were recorded for reference.
- 3.5 The odour sample was not contaminated, lost, or altered during storage. In this regard, the odour sampling bag was:
- Odour-free, i.e. they will not add odours to the sample;
 - Made of materials which does not absorb or react with odorous samples;
 - Sufficiently impervious to prevent any significant loss of odour components;
 - Reasonably robust;
 - Leak-free;
 - Equipped with leak-free fittings, compatible with olfactometer and other sampling equipment; and
 - Of sufficient capacity to enable the completion of the tests.
- 3.6 Exposure of samples to direct sunlight was avoided to minimize photochemical reactions.

Monitoring Requirements

- 3.7 The following parameters were also monitored at each of the measurement locations.
- Dissolved oxygen (DO) (% saturation) in the water column at depth 1m above seabed;
 - Dissolved oxygen (DO) (mg/L) in the water column at depth 1m above seabed;
 - Water Temperature (°C) at depth 1m above seabed;
 - Ambient Air Temperature (°C)
 - Water depth (m)
 - Salinity (parts per thousand) at depth 1m above seabed;
 - Redox Potential (mV) at depth 1m above seabed; and

- pH at depth 1m above seabed.

Monitoring Locations

3.8 Thirteen monitoring stations are proposed for the odour sampling. The locations are also summarized in Table 3.1 and shown on **Figure 2**.

Table 3.1 Odour Sampling Stations

Location ID	Sampling Location	Coordinates	
		Easting	Northing
SA1	Northern KTAC, in the vicinity of Kai Tak Nullah (KTN)	838744.13	820311.91
SA2	Northern KTAC	838840.95	820030.07
SA3	Northern KTAC, in the vicinity of Jordan Valley Culvert (JVC) Outfall	839163.99	819942.90
SA4	Southern KTAC	839407.66	819537.90
SA5		839580.35	819512.47
SA6		839647.87	819329.45
SA7	KTTS	840122.60	819275.72
SA8		840270.71	819015.35
SA9		840479.55	818798.14
SA10	Kowloon Bay (between runway opening and TKWTS)	838694.90	819582.080
SA11	MTK waterfront, at the end of Ma Tau Kok Road	838138.20	820038.77
SA12	TKW waterfront, near Vehicle Examination Centre	837982.97	819704.84
SA13	Hoi Sham Park waterfront	837857.15	819436.94

Monitoring Equipment

Dissolved Oxygen (DO) and Temperature Measuring Equipment

- 3.9 The instrument for measuring dissolved oxygen and temperature was portable and weatherproof complete with cable, sensor, comprehensive operation manuals and use DC power source. It was capable of measuring:
- a dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation; and
 - a temperature of 0-45 degree Celsius.
- 3.10 It has a membrane electrode with automatic temperature compensation complete with a cable.
- 3.11 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.
- 3.12 Salinity compensation is built-in in the DO equipment.

Water Depth Detector

- 3.13 A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

pH

- 3.14 The instrument was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

TM39 (mV meter)

- 3.15 The meter features high accuracy, rugged plastic enclosure, microprocessor controlled evaluation and operation with pH or redox combination electrodes. The measuring range was from -1999 to 1999 mV.

Thermo-Anemometer

- 3.16 The meter capable of record up to 2-hour air velocity averaging for measurements and temperature measurement via built-in thermistor.

Salinity

- 3.17 A portable salinometer capable of recording salinity within the range of 0-40 ppt was be used for salinity measurements.

Position System

- 3.18 A hand held differential Global Positioning System (GPS) was used during odour sampling to ensure the monitoring vessel is at the correct location before taking measurements. GPS was calibrated at checkpoint (Quarry Bay Survey Nail at Easting 840683.49 and Northing 816709.55) to ensure the monitoring station was at the correct position before taking measurement and odour samples.

Calibration of *In Situ* Instruments

- 3.19 All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring event.
- 3.20 The thermo-anemometer was checked and calibrated at yearly intervals.
- 3.21 The BS 1427:2009, "Guide to on-site test methods for the analysis of waters" was observed for the on site calibration of field equipment (Multi-parameter Water Quality System).
- 3.22 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also made available so that monitoring can proceed uninterrupted even when some equipment was under maintenance, calibration, etc.

Monitoring Parameters and Frequency

- 3.23 Table 3.2 summarizes the monitoring parameters and frequencies of the odour sampling at each of the measurement locations.

Table 3.2 Odour Sampling Parameters and Frequency

Monitoring Stations	Parameters, unit	Frequency
SA1 SA2 SA3 SA4 SA5 SA6 SA7 SA8 SA9 SA10 SA11 SA12 SA13	<ul style="list-style-type: none"> • Dissolved oxygen (DO) (% saturation) in the water column at depth 1m above seabed; • Dissolved oxygen (DO) (mg/L) in the water column at depth 1m above seabed; • Water Temperature (°C) at depth 1m above seabed; • Ambient Air Temperature (°C) • Water depth (m) • Salinity (parts per thousand) at depth 1m above seabed; • Redox Potential (mV) at depth 1m above seabed; and • pH at depth 1m above seabed. 	<ul style="list-style-type: none"> • Half-yearly
	<ul style="list-style-type: none"> • One odour sample was collected at each measurement location for olfactometry analysis in laboratory 	

Laboratory Analytical Methods

Olfactometry Analysis in Laboratory (The Hong Kong Polytechnic University)

- 3.24 The odour samples were collected using a hood method such as a wind tunnel system with the inflow rate with speed of 0.01 m/s and the odour concentration of the collected air samples were determined by a forced-choice dynamic olfactometer with a panel of human assessors being the sensor in accordance with the European Standard Method: Air Quality – Determination of Odour Concentration by Dynamic Olfactometry (EN13725) within 24 hours after collection. About 60L of gas sample was collected at the selected sampling location.
- 3.25 The collected odour samples were delivered to the laboratory (PolyU) within 24 hours after collection.
- 3.26 The odour laboratory was ventilated to maintain an odour-free environment and to provide fresh air to the panel members. Each odour testing session comprised at least five qualified panelists. All of the panelists were screened beforehand by using 48ppm solution/mixture of certified n-butanol standard gas.
- 3.27 The olfactometry method was normally used for a source odour concentration analysis with a detection limit of 10ou/m³.

QA/QC Requirements

- 3.28 During each odour sampling day, one blank sample was collected for quality control. The sample was taken by purging pure nitrogen gas into odour sampling bag directly on site as a blank sample.
- 3.29 The olfactometry analysis was conducted by laboratory (PolyU) complying with the European Standard EN13725:2003.

Results and Observation

- 3.30 No odour sampling was conducted in the reporting period. The first odour sampling was conducted in August 2011 and the next monitoring will be carried out in February 2012.

4. Odour Patrol

Monitoring Methodology

- 4.1 During the patrol, the patrol members shall conduct the odour intensity analysis. The sequence shall generally start from less odorous locations to stronger odorous locations. The independent trained personnel/competent persons shall use their nose (olfactory sensors) to sniff odours at different locations. The main odour emission sources and the areas to be affected by the odour nuisance shall be identified. No odour patrol shall be conducted during rainy days.
- 4.2 The odour intensity should be determined at 5 different levels according to the criteria below:
- 0 - Not detected. No odour perceived or an odour so weak that it cannot be easily characterised or described;
 - 1 - Slight Identifiable odour, and slight chance to have odour nuisance;
 - 2 - Moderate Identifiable odour, and moderate chance to have odour nuisance;
 - 3 - Strong Identifiable, likely to have odour nuisance;
 - 4 - Extreme Severe odour, and unacceptable odour level.

Odour Patrol Survey

- 4.3 Two qualified odour patrol members, Mr. Tang Wing Kwai and Ms. Tang Mei Ling were selected for conducting odour patrol. The qualified odour patrol members have their individual n-butanol thresholds complied with the requirement of European Standard Method (EN13725) in the range of 20 to 80 ppb. The certificates for the qualified odour panel members are shown in **Appendix B**.
- 4.4 The odour patrol along with the odour route with 60 sniffing locations was conducted by the 2 qualified odour patrol members in November 2011 during daytime (low tide condition) and evening/night time (high tide condition).
- 4.5 In general, the proposed odour patrol route and the proposed sniffing locations is in the vicinity of the planned ASRs within the Kai Tak Development to determine any potential operational odour impacts arising from Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS).
- 4.6 In addition, sniffing location no. 35 is shifted to the right side about 100m in compare with the baseline patrol route due to the access problem. The final odour patrol route and sniffing locations is shown in **Figure 3**.

4.7 The duration of the odour patrol works are shown in the following table:-

Date	Time	Tidal Condition	Patrol Locations	* Height(m)
29 November 2011	16:06 – 18:25	High Tide	Within Kai Tak Development and Ma Tau Kok Waterfront	1.4 – 1.6
29 November 2011	07:18 – 10:12	Low Tide		0.6 – 0.9
30 November 2011	16:01 – 18:52	High Tide		1.4 – 1.7
30 November 2011	07:10 – 10:52	Low Tide		0.6 – 1.0

* Heights of High/Low Tides obtained from The Hong Kong Observatory (Predicted Tides at Quarry Bay)

4.8 During the odour patrol survey, the following findings shall be recorded:

- the prevailing weather condition (sunny, fine, cloudy and rainy);
- the wind direction;
- the local wind speed;
- odour intensity;
- any odour detected during sampling and the flavors of odour with detail description of characteristics (e.g. sewage or rotten egg smell, decayed vegetables, ammonical, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc);
- potential odour source (exposed sediment, water or sewage; floating debris or material, others (to be specified));
- downwind or upwind direction from the odour source;
- duration of odour (intermittent or continuous) during sampling;
- tidal conditions; and
- time of survey.

4.9 Odour intensity at each location shall be assessed by the 2 odour patrol members, respectively, and all locations are shown in **Figure 3**.

Monitoring Equipment

Thermo-Anemometer

4.10 The meter capable of record up to 2-hour air velocity averaging for measurements and temperature measurement via built-in thermistor.

4.11 Table 4.1 summarizes the equipment used in the odour patrol survey. Copies of the calibration certificates of the equipment are shown in **Appendix A2**.

Table 4.1 Equipment for Odour Monitoring Program

Equipment	Model and Make	Qty.
Thermo-Anemometer	AZ Instrument (Model No. AZ8904)	1

Calibration of In Situ Instruments

- 4.12 All in situ monitoring instruments shall be checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use.
- 4.13 The thermo-anemometer shall be checked and calibrated at yearly intervals.
- 4.14 Backup monitoring equipment shall be available so that monitoring can proceed uninterrupted even when some equipment was under maintenance, calibration, etc.

Odour Patrol Results and On-Site Observations

- 4.15 All results of odour patrol survey for 60 sniffing locations in November 2011 are summarized in Table 4.2 for different routes within Kai Tak Development and Ma Tau Kok Waterfront and the field record sheets are attached in **Appendix D2**.
- 4.16 In addition, meteorological conditions (including temperature, wind speed, wind direction, relative humidity) from the nearest Hong Kong Observatory's Weather Station including King's Park and Kai Tak meteorological stations during the monitoring are provided in **Appendix G**.
- 4.17 During the odour patrol investigation, our patrol members identified different types of flavours including gas exhaust, engine oil, seawater smell, sewage and fishy smell. It is identified by the odour patrol members that these types of flavours mainly result from marine water, water at Kai Tak Nullah, exposed shores and other activities near the sniffing locations.
- 4.18 According to Kai Tak Schedule 3 EIA Report, the seawater smell is considered as non-objectionable background smell.
- 4.19 The odour intensity detected at 60 locations was found to be in a wide range from level 0 up to level 2.

Table 4.2 – Summary of Odour Patrol Results in November 2011

Sniffing Location	Area	Odour Intensity				General On-site Observation	
		High Tide (Evening/ Night Time)		Low Tide (Daytime)		Odour nature	Possible source
		OI-1	OI-2	OI-1	OI-2		
1	Kwun Tong Typhoon Shelter	0	0	0	1	sewage and seawater smell	marine water
2		1	1	1	1	sewage	marine water
3		1	1	1	1	sewage	marine water
4		1	1	1	1	sewage	marine water
5		1	1	0	0	sewage	marine water
6	Southern Kai Tak Approach Channel	0	0	1	0	sewage	marine water
7		0	0	0	0	N/A	N/A
8	Northern Kai Tak Approach Channel	0	1	0	0	sewage	marine water
9		0	1	1	1	sewage	marine water
10		0	0	0	0	N/A	N/A
11		0	0	0	0	N/A	N/A
12		0	0	0	0	N/A	N/A
13		1	1	0	1	sewage	marine water
14		1	1	2	1	sewage	marine water
15		1	1	1	1	sewage	marine water
16		1	1	1	1	sewage	marine water
17		1	1	1	1	sewage	marine water
18		1	0	2	2	sewage	marine water
19		0	0	1	1	Engine oil	Construction site nearby
20		0	0	0	0	seawater smell	marine water

21	Southern Kai Tak Approach Channel	0	0	1	1	sewage and seawater smell	marine water
22		0	0	0	0	seawater smell	marine water
23		0	0	1	1	sewage and seawater smell	marine water
24		0	0	1	1	sewage and seawater smell	marine water
25		0	0	1	1	sewage and seawater smell	marine water
26		0	0	0	1	sewage	marine water
27	Kai Tak Runway	0	0	1	1	sewage and seawater smell	marine water
28		0	0	0	0	seawater smell	marine water
29		0	0	0	0	seawater smell	marine water
30		0	0	0	0	seawater smell	marine water
31		1	1	0	0	fishy smell and seawater smell	marine water
32		0	0	0	1	fishy smell and seawater smell	marine water and exposed shores
33		0	0	0	0	seawater smell	marine water
34		0	0	1	1	fishy smell and seawater smell	marine water and exposed shores
35		0	0	0	0	seawater smell	marine water
36		Ma Tau	1	1	0	1	Sewage, fishy smell and seawater smell
37	Kok/To Kwan Wan waterfront	1	1	1	1	gas exhaust	ferry at Ma Tau Kok Ferry Pier
38		1	1	0	0	sewage	marine water
39		0	0	0	1	sewage and seawater smell	marine water
40		0	0	1	1	fishy smell and seawater smell	marine water
41	Upstream section of Kai Tak Nullah	0	1	1	1	sewage	water at Kai Tak Nullah
42		1	1	1	1	sewage	water at Kai Tak Nullah
43		1	1	1	1	sewage	water at Kai Tak Nullah
44		1	1	0	0	sewage	water at Kai Tak Nullah
45	Downstream section of Kai Tak Nullah	1	1	0	0	sewage	water at Kai Tak Nullah
46		1	1	1	1	sewage	water at Kai Tak Nullah
47		1	1	1	1	sewage	water at Kai Tak Nullah
48		1	1	2	2	sewage	water at Kai Tak Nullah
49		1	1	0	1	sewage	water at Kai Tak Nullah
50		0	0	0	0	N/A	N/A

51		0	0	0	1	sewage	water at Kai Tak Nullah
52		0	0	0	0	N/A	N/A
53		1	1	0	0	sewage	water at Kai Tak Nullah
54		1	1	1	1	sewage	water at Kai Tak Nullah
55		0	0	1	1	sewage	water at Kai Tak Nullah
56		0	0	1	0	sewage	water at Kai Tak Nullah
57	Upstream section of Kai Tak Nullah	1	1	0	0	sewage	water at Kai Tak Nullah
58		1	1	1	1	sewage	water at Kai Tak Nullah
59		1	1	1	1	sewage	water at Kai Tak Nullah
60		1	1	0	0	sewage	water at Kai Tak Nullah

5. Sediment monitoring

Monitoring Locations

5.1 Thirteen monitoring stations are proposed for the sediment monitoring. The locations are also summarized in Table 5.1 and shown on **Figure 2**.

Table 5.1 Sediment Monitoring Stations

Location ID	Sampling Location	Coordinates	
		Easting	Northing
SA1	Northern KTAC, in the vicinity of Kai Tak Nullah (KTN)	838744.13	820311.91
SA2	Northern KTAC	838840.95	820030.07
SA3	Northern KTAC, in the vicinity of Jordan Valley Culvert (JVC) Outfall	839163.99	819942.90
SA4	Southern KTAC	839407.66	819537.90
SA5		839580.35	819512.47
SA6		839647.87	819329.45
SA7	KTTS	840122.60	819275.72
SA8		840270.71	819015.35
SA9		840479.55	818798.14
SA10	Kowloon Bay (between runway opening and TKWTS)	838694.90	819582.08
SA11	MTK waterfront, at the end of Ma Tau Kok Road	838138.20	820038.77
SA12	TKW waterfront, near Vehicle Examination Centre	837892.97	819704.84
SA13	Hoi Sham Park waterfront	837857.15	819436.94

Monitoring Parameters and Frequency

5.2 Table 5.2 summarizes the monitoring parameters and frequencies of the sediment monitoring.

Table 5.2 Sediment Monitoring Parameters and Frequency

Monitoring Stations	Parameters, unit	Frequency
SA1 SA2 SA3 SA4 SA5 SA6 SA7 SA8 SA9 SA10 SA11 SA12 SA13	<p>Laboratory Testing:</p> <ul style="list-style-type: none"> • Acid Volatile Sulphides (AVS), (mg/kg dry weight) • Residual Nitrate, (mg NO₃-N/L wet weight) • Reduction – Oxidation (Redox) Potential, (mV)/pH 	<ul style="list-style-type: none"> • Half-yearly

Sampling Procedure

5.3 A hand held differential Global Positioning System (GPS) was used during the sediment monitoring to ensure the sampling and monitoring are at the correct location. The depth of water, in metres below the Principal datum (mPD), was measured.

5.4 At each designated monitoring station, the undisturbed surface sediment core samples were collected by manual or gravity pushing the corer into the sediment. Care was taken in collecting the core to prevent contact with air or excessive mixing of the sample. The core was at least 0.8m in length. Core recovery was at least 60% and the core was immediately sealed after collection to prevent leakage of odour and liquids. Care was taken in sealing the core in order to prevent any gas leakage and to minimize the amount of air inside the core.

5.5 The core was properly labeled with information such as sampling ID, sample length, diameter and depth as well as sampling date and time.

Decontamination Procedures

5.6 Sampling equipment used during the course of the investigation programme was decontaminated by manual washing and fresh water rinsing after each sampling event. All disposable equipment was discarded after each use.

Method of Sample Handling Storage and Transportation

5.7 The core samples were immediately stored, transported and maintained at 4°C or lower without being frozen in dark prior to any laboratory testing. All core samples were packed and transported in such a manner as to avoid shock, vibration or any other

disturbance of the samples. Core samples were delivered to Wellab Ltd. (HOKLAS Registration No.083) after collection on the same day. All samples were handled under chain of custody protocols, delivered to Wellab Ltd.

Details of Testing

- 5.8 The collected sediment core samples with diameter of 100mm (from top to approximately 10cm in depth) were tested. The reporting limit, preparation method, determination method and the parameters to be tested are shown in Table 5.3.

Table 5.3 Testing Parameters, Reporting Limit and Analytical Method

Parameters, unit	Reporting Limit	Preparation Method USEPA Method	Determination Method USEPA Method
Acid Volatile Sulphides (mg/kg dry weight)	1	N/A	Draft Analytical Method for Determination of Acid Volatile Sulfide in Sediment. Office of Water Regulations and Standards (1991), (USEPA 821-R-91-100)
Redox (mV)	1	N/A	WTW pH/redox meter (or equivalent) calibrated to ISO9002 Standards
pH	0.1	N/A	
Residual Nitrate (mg NO ₃ -N/L wet weight)	0.05	N/A	APHA 4500 NO ₃ -E and 4500 NO ₂ -B

QA/QC Requirements

- 5.9 All laboratory tests will be conducted by laboratory accredited by Hong Kong Laboratory Accreditation Scheme (HOKLAS) - Wellab Ltd. (HOKLAS Registration No.083).
- 5.10 The following quality control programme was performed for laboratory testing:
- ✧ Method blank;
 - ✧ Duplicate (at 5% level i.e. one for every 20 samples); and
 - ✧ Matrix Spike (at 5% level i.e. one for every 20 samples).

Quality Controls	Acceptance Criteria
Method Blank	Less than method detection limit (MDL)
Duplicate	Confine within $\pm 25\%$ of the mean of duplicated results
Matrix Spike	Confine within $\pm 25\%$ of the recovery of spike concentration

Monitoring Equipment

Water Depth Detector

- 5.11 A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

Position System

- 5.12 A hand held differential Global Positioning System (GPS) was used during sediment monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

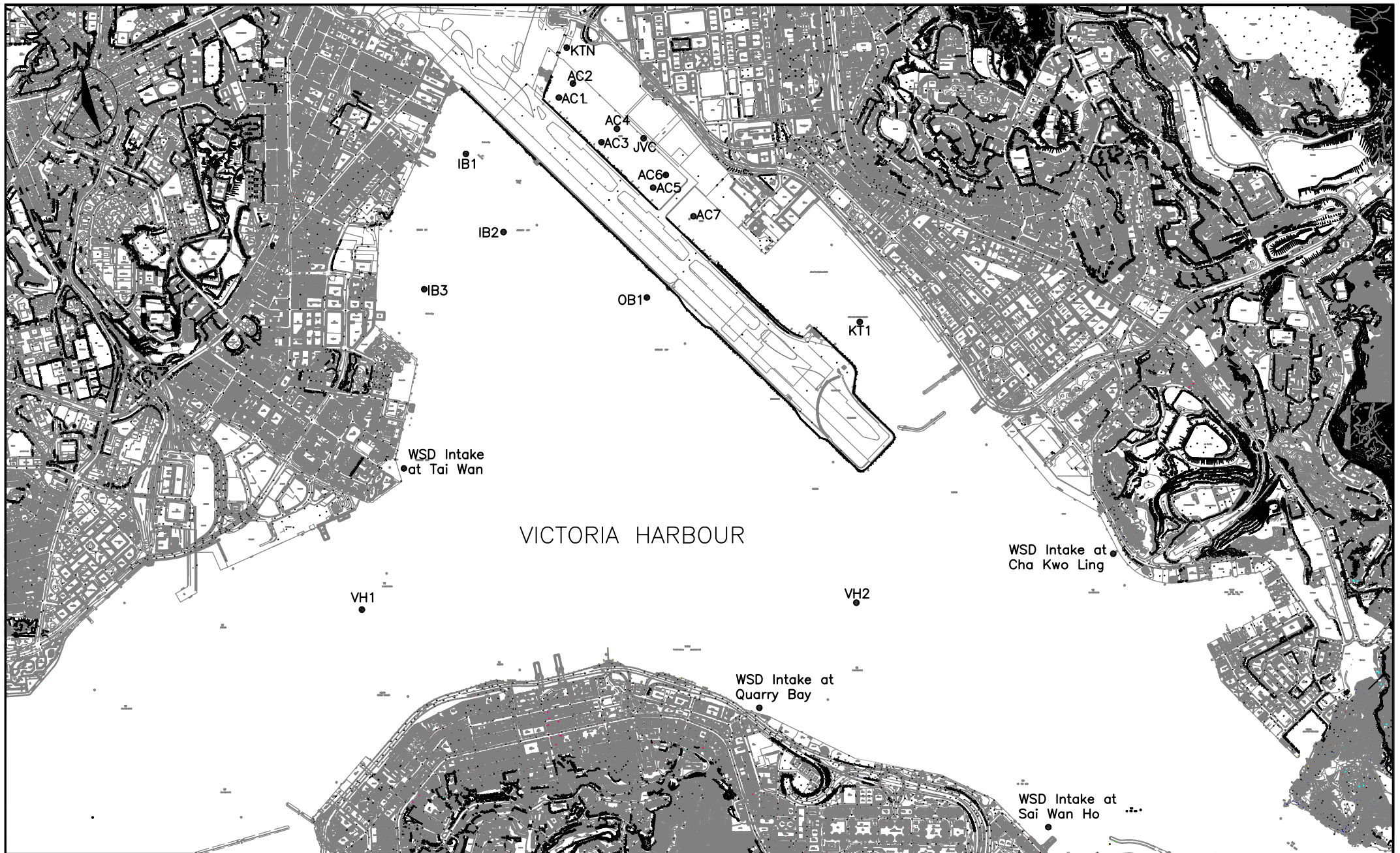
Results and Observation

- 5.13 No sediment monitoring was conducted in the reporting period. The 1st sediment monitoring was conducted in August 2011 and the next monitoring will be carried out in February 2012.

6. Conclusion

- 6.1 Environmental monitoring works for water quality and odour patrol were performed in November 2011 and all monitoring results were checked and reviewed.
- 6.2 The next general water quality monitoring, sediment monitoring, odour sampling and odour patrol will be conducted in February 2012.

FIGURES



Contract No. KL/2010/02

Kai Tak Development – Kai Tak Approach Channel and Kwun Tong
 Typhoon Shelter Improvement Works (Phase 1)
 Location Of Water Quality Monitoring Stations



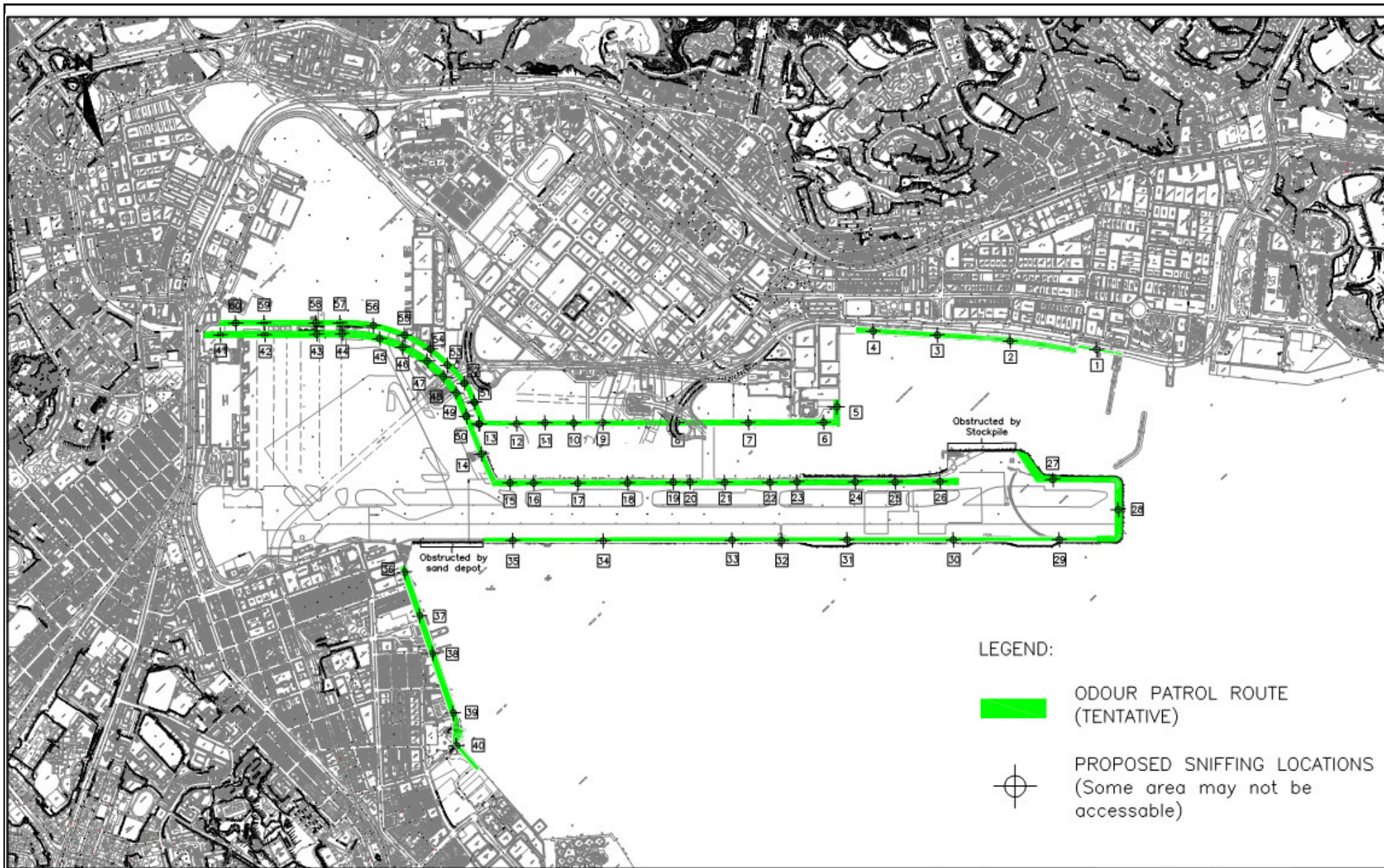
SCALE	N.T.S	DATE	3 AUG 2011	
CHECK	IT	DRAWN	TW	
PROJECT NO.	MA11017	FIGURE NO.	1	REV —



CINOTECH
Cinotech Consultants Limited

Contract No. KL /2010/02
 Kai Tak Development – Kai Tak Approach Channel and Kwun Tong
 Typhoon Shelter Improvement Works (Phase 1)
 Location of Odour Sampling and Sediment Monitoring Stations

SCALE	N.T.S.	DATE	AUG 2011	
CHECK	IT	DRAWN	TW	
JOB No.	MA11017	FIGURE NO.	FIG 2	REV
				–



Contract No. KL/2010/02 Kai Tak Development-Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (Phase 1)	Scale	Project No.	
	N.T.S	MA11017	
Proposed Odour Patrol Route and Sniffing Locations	Date	Figure	
	Nov-11	3	

**APPENDIX A1
COPIES OF CALIBRATION
CERTIFICATES FOR WATER
QUALITY MONITORING**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/W/111005-1
Date of Issue:	2011-10-05
Date Received:	2011-10-05
Date Tested:	2011-10-05
Date Completed:	2011-10-05
Next Due Date:	2012-01-04

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 02D0126AA
Equipment No.	: W.03.01

Test conditions:

Room Temperature	: 25 degree Celsius
Relative Humidity	: 58%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, S/N: 11J100025

1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, S/N: 07E100029

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 11J1000475

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, S/N: 11H

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
2. In-house method with reference to APHA and ISO standards

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Test Report No.:	C/W/111005-1
Date of Issue:	2011-10-05
Date Received:	2011-10-05
Date Tested:	2011-10-05
Date Completed:	2011-10-05
Next Due Date:	2012-01-04

Page: 2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, $\mu\text{S}/\text{cm}$		Correction, $\mu\text{S}/\text{cm}$	Acceptable range
Salinity Meter (C1)	Theoretical Value (C2)	$D = C1 - C2$	
1420	1420	0	1420 ± 20

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.0	30.0	0.0	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O ₂ /L		Correction, mg O ₂ /L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.1	9.1	0.0	± 0.2
Half-saturated	5.6	5.6	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 ± 0.05
100	100	0	100 ± 5
1000	1000	0	1000 ± 100

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_j , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.00	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 ± 0.05

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/W/111005-2
Date of Issue:	2011-10-05
Date Received:	2011-10-05
Date Tested:	2011-10-05
Date Completed:	2011-10-05
Next Due Date:	2012-01-04

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 02D0293AA
Equipment No.	: W.03.02

Test conditions:

Room Temperature	: 24 degree Celsius
Relative Humidity	: 56%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, S/N: 11J100025

1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, S/N: 04A0146

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 11J100476

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, S/N: 10E

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
2. In-house method with reference to APHA and ISO standards

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Laboratory Manager

TEST REPORT

Test Report No.:	C/W/111005-2
Date of Issue:	2011-10-05
Date Received:	2011-10-05
Date Tested:	2011-10-05
Date Completed:	2011-10-05
Next Due Date:	2012-01-04

Page: 2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, $\mu\text{S}/\text{cm}$		Correction, $\mu\text{S}/\text{cm}$	Acceptable range
Salinity Meter (C1)	Theoretical Value (C2)	$D = C1 - C2$	
1421	1420	1	1420 ± 20

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.1	30.0	0.1	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O ₂ /L		Correction, mg O ₂ /L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.0	9.0	0.0	± 0.2
Half-saturated	5.8	5.8	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 ± 0.05
100	100	0	100 ± 5
1000	1000	0	1000 ± 100

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_j , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.01	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 ± 0.05

*****END OF REPORT*****

**APPENDIX A2
COPIES OF CALIBRATION
CERTIFICATES FOR ODOUR
PATROL**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/11/110503
Date of Issue:	2011-05-03
Date Received:	2011-04-29
Date Tested:	2011-04-29
Date Completed:	2011-05-03
Next Due Date:	2012-05-02

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description : RS232 Integral Vane Digital Anemometer
Manufacturer : AZ Instrument
Model No. : AZ8904
Serial No. : 974835
Equipment No. : A-03-03

Test conditions:

Room Temperature : 23 degree Celsius
Relative Humidity : 65%
Pressure : 101.3 kPa

Methodology:

The anemometer has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

	Reference Set Point	Instrument Readings
Measuring Air Velocity, m/s	2.00	2.00
Temperature, °C	21.0	21.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

**APPENDIX B
CERTIFICATES FOR QUALIFIED
PANEL MEMBER**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	14524
Date of Issue:	2011-11-04
Date Tested:	2011-10-17
Date Completed:	2011-10-21

ATTN: Ms Ivy Tam

Page: 1 of 1

Certificate of Qualified Odour Panel Member

Mr. Tang Wing-Kwai

Test Requested & Methodology:

An odour screening test was conducted for odour panel applicants at Wellab Ltd. to determine the thresholds of odour panel candidate according to the requirement of European Standard Method (EN13725). Standard n-butanol gas with a certified concentration of 50 ppm/v was applied as reference material and the n-butanol thresholds in the range of 20 to 80 ppb/v was determined by the olfactometry measurements on three separate sessions on 17th, 19th and 21st October 2011, respectively.

Results:

Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R	Requirement of EN13725	Comment
1.21	<2.3	Pass

Certification:

This is to certify that **Mr. Tang Wing-Kwai** participated in a set of n-butanol screening tests in our laboratory in October 2011 and the odour threshold of n-butanol in nitrogen gas was found to be in the range of 20 – 80 ppb/v with a standard deviation of R is 1.21. According to the requirement of the European Standard Method of Air Quality – Determination of Odour Concentration by Dynamic Olfactometry (EN13725), he is qualified to participate in olfactometry analysis to determine odour concentration for a valid period of six months until 17th April 2012.

*****END OF REPORT*****

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	14524A
Date of Issue:	2011-11-04
Date Tested:	2011-10-17
Date Completed:	2011-10-21

ATTN: Ms Ivy Tam

Page: 1 of 1

Certificate of Qualified Odour Panel Member

Ms. Tang Mei-Ling

Test Requested & Methodology:

An odour screening test was conducted for odour panel applicants at Wellab Ltd. to determine the thresholds of odour panel candidate according to the requirement of European Standard Method (EN13725). Standard n-butanol gas with a certified concentration of 50 ppm/v was applied as reference material and the n-butanol thresholds in the range of 20 to 80 ppb/v was determined by the olfactometry measurements on three separate sessions on 17th, 19th and 21st October 2011, respectively.

Results:

Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R	Requirement of EN13725	Comment
1.28	<2.3	Pass

Certification:

This is to certify that **Ms. Tang Mei-Ling** participated in a set of n-butanol screening tests in our laboratory in October 2011 and the odour threshold of n-butanol in nitrogen gas was found to be in the range of 20 – 80 ppb/v with a standard deviation of R is 1.28. According to the requirement of the European Standard Method of Air Quality – Determination of Odour Concentration by Dynamic Olfactometry (EN13725), she is qualified to participate in olfactometry analysis to determine odour concentration for a valid period of six months until 17th April 2012.

*****END OF REPORT*****

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

**APPENDIX C
ENVIRONMENTAL MONITORING
SCHEDULE**

Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

General Water Quality Monitoring and Odour Patrol Schedule for November 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Nov	2-Nov	3-Nov	4-Nov	5-Nov
6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov	12-Nov
13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov	19-Nov
20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov	26-Nov
		<u>Water Quality Monitoring (2nd)</u> Mid-Ebb 09:35 Mid-Flood 15:37				
27-Nov	28-Nov	29-Nov	30-Nov			
		Odour Patrol	Odour Patrol			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Remark: Reference was made to the tidal information of Hong Kong Observatory

**APPENDIX D1
LABORATORY TESTING REPORT
FOR WATER QUALITY
MONITORING**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

ATTN: Miss Mei Ling Tang

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Sample Description : 168 liquid samples as received by customer said to be water
Project No. : MA11017
Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Custody No. : MA11017/111122
Sampling Date : 2011-11-22

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	<i>E. coli</i>	In-house method SOP069 (Membrane Filtration Method by CHROMagar)	1 cfu/100mL
3	5-day Biochemical Oxygen Demand (BOD ₅)	APHA 19ed 5210 B	2 mg-O ₂ /L
4	Ammonia Nitrogen (NH ₃ -N)	In-house method SOP057 (FIA)	*0.01 mg NH ₃ -N/L
5	Unionized Ammonia (UIA)	By Calculation	0.001 mg/L
6	Total Kjeldahl Nitrogen (TKN)	In-house Method SOP058 (FIA)	*0.1 mg N/L
7	Nitrite-nitrogen (NO ₂ -N)	In-house Method SOP068 (FIA)	*0.002 mg NO ₂ ⁻ -N/L
8	Nitrate-nitrogen (NO ₃ -N)	In-house Method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
9	Ortho-phosphate (PO ₄)	In-house Method SOP054 (FIA)	*0.01 mg PO ₄ ³⁻ -P/L
10	Total Phosphorous (TP)	In-house Method SOP 055 (FIA)	*0.01 mg-P/L
11	Cadmium (Cd)	In-house Method SOP 053 (ICP-ES) and SOP 076 (ICP-MS)	*0.1 µg/L
12	Chromium (Cr)		*0.2 µg/L
13	Copper (Cu)		*0.2 µg/L
14	Mercury (Hg)		*0.2 µg/L
15	Nickel (Ni)		*0.2 µg/L
16	Lead (Pb)		*0.2 µg/L
17	Silver (Ag)		*0.2 µg/L
18	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:
For and On Behalf of WELLAB Ltd.


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	AC1-a	AC1-b	AC2-a	AC2-b	AC2-a	AC2-b
Sampling Depth	M	M	S	S	B	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-1	14649-85	14649-2	14649-86	14649-3	14649-87
Suspended Solids (SS), mg/L	5.8	6.0	5.1	5.1	4.4	4.4
<i>E. coli</i> , cfu/100mL	89,000	89000	63,000	62000	42,000	43000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	5	5	6	6	6	6
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.5	1.5	1.9	1.9	1.9	1.8
Unionized Ammonia (UIA), mg/L	0.017	0.017	0.019	0.025	0.030	0.030
Total Kjeldahl Nitrogen (TKN), mg N/L	3.4	3.4	3.2	3.1	3.0	3.0
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.26	0.25	0.26	0.27	0.25	0.24
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	4.4	4.4	4.4	4.6	7.3	7.3
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.5	1.5	1.5	1.5	1.4	1.4
Total Phosphorous (TP), mg-P/L	2.0	2.1	2.2	2.2	2.2	2.3
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.4	4.2	4.9	4.8	3.2	3.8
Copper (Cu), µg/L	3.6	3.8	6.6	6.8	3.3	6.9
Mercury (Hg), µg/L	<0.2	0.6	<0.2	<0.2	0.3	<0.2
Nickel (Ni), µg/L	6.2	6.2	7.7	7.4	8.8	6.2
Lead (Pb), µg/L	0.8	1.0	1.1	1.0	0.9	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.8	10	16	15	14	13

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	AC3-a	AC3-b	AC4-a	AC4-b	AC4-a	AC4-b
Sampling Depth	M	M	S	S	B	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-4	14649-88	14649-5	14649-89	14649-6	14649-90
Suspended Solids (SS), mg/L	6.5	6.4	6.5	6.5	3.2	3.3
<i>E. coli</i> , cfu/100mL	38,000	37000	41,000	42000	54,000	53000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	7	7	4	4
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.6	1.5	1.2	1.1	1.6	1.6
Unionized Ammonia (UIA), mg/L	0.009	0.009	0.016	0.015	0.034	0.035
Total Kjeldahl Nitrogen (TKN), mg N/L	3.2	3.1	2.6	2.6	3.3	3.2
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.24	0.24	0.17	0.17	0.35	0.35
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	3.5	3.6	1.3	1.4	4.2	4.4
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.5	1.5	0.69	0.71	1.6	1.6
Total Phosphorous (TP), mg-P/L	1.6	1.6	0.78	0.80	1.9	2.0
Cadmium (Cd), µg/L	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.5	4.7	4.1	3.9	3.7	3.4
Copper (Cu), µg/L	3.8	3.4	5.5	2.4	4.4	3.8
Mercury (Hg), µg/L	0.5	0.2	0.4	0.2	0.6	0.4
Nickel (Ni), µg/L	6.9	6.2	8.3	7.2	6.5	8.8
Lead (Pb), µg/L	1.0	0.9	0.8	1.1	1.0	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12	14	12	11	13	16

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
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Results:

Sample ID	AC5-a	AC5-b	AC5-a	AC5-b	AC6-a	AC6-b
Sampling Depth	S	S	B	B	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-7	14649-91	14649-8	14649-92	14649-9	14649-93
Suspended Solids (SS), mg/L	4.7	4.8	6.0	5.8	3.9	3.9
<i>E. coli</i> , cfu/100mL	70,000	70000	51,000	51000	57,000	56000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	8	8	5	5	5	5
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	2.8	2.8	1.7	1.7	2.0	2.0
Unionized Ammonia (UIA), mg/L	0.026	0.027	0.029	0.030	0.017	0.017
Total Kjeldahl Nitrogen (TKN), mg N/L	2.8	2.8	2.2	2.1	3.1	3.1
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.38	0.38	0.28	0.27	0.43	0.42
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.6	1.6	0.41	0.42	1.9	1.8
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.2	1.2	1.1	1.0	1.5	1.5
Total Phosphorous (TP), mg-P/L	1.5	1.5	1.5	1.5	1.6	1.6
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.5	4.1	3.5	3.4	3.6	4.8
Copper (Cu), µg/L	2.9	5.4	2.9	2.4	5.0	3.7
Mercury (Hg), µg/L	0.4	0.4	0.4	0.4	0.4	<0.2
Nickel (Ni), µg/L	8.6	6.8	8.1	6.5	8.7	8.9
Lead (Pb), µg/L	1.1	0.9	1.0	0.9	1.0	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11	13	11	13	8.7	9.1

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
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Date Completed:	2011-12-01

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Results:

Sample ID	AC6-a	AC6-b	AC7-a	AC7-b	AC7-a	AC7-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-10	14649-94	14649-11	14649-95	14649-12	14649-96
Suspended Solids (SS), mg/L	4.3	4.4	4.8	4.8	4.7	4.7
<i>E. coli</i> , cfu/100mL	35,000	35000	110,000	110000	230,000	230000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	6	6	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	2.0	2.0	0.74	0.76	0.59	0.56
Unionized Ammonia (UIA), mg/L	0.061	0.061	0.008	0.010	0.016	0.015
Total Kjeldahl Nitrogen (TKN), mg N/L	2.9	3.0	2.3	2.3	1.6	1.6
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.46	0.46	0.080	0.080	0.050	0.051
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.5	1.5	0.77	0.76	0.20	0.20
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.5	1.5	0.34	0.34	0.17	0.18
Total Phosphorous (TP), mg-P/L	1.9	1.9	0.78	0.78	0.34	0.34
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Chromium (Cr), µg/L	4.1	3.2	3.2	3.7	4.8	3.2
Copper (Cu), µg/L	4.4	5.9	5.6	4.3	4.1	3.1
Mercury (Hg), µg/L	<0.2	0.8	0.4	0.2	0.5	0.4
Nickel (Ni), µg/L	6.4	6.8	8.2	9.3	7.5	6.5
Lead (Pb), µg/L	0.9	0.9	1.0	1.0	0.8	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15	15	9.5	12	12	10.0

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	AC7-a	AC7-b	KT1-a	KT1-b	KT1-a	KT1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-13	14649-97	14649-14	14649-98	14649-15	14649-99
Suspended Solids (SS), mg/L	6.6	6.7	6.2	6.1	4.4	4.4
<i>E. coli</i> , cfu/100mL	14,000	14000	5,000	4900	5,300	5400
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.1	1.1	0.97	0.94	1.5	1.5
Unionized Ammonia (UIA), mg/L	0.042	0.042	0.033	0.032	0.054	0.052
Total Kjeldahl Nitrogen (TKN), mg N/L	3.4	3.5	2.9	2.9	3.3	3.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.16	0.16	0.21	0.21	0.29	0.29
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.8	1.8	2.7	2.8	3.1	3.1
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.70	0.71	0.63	0.63	1.1	1.1
Total Phosphorous (TP), mg-P/L	1.8	1.8	0.95	0.95	1.6	1.5
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.2	4.7	4.9	3.3	3.5	3.7
Copper (Cu), µg/L	6.9	6.4	3.2	6.7	2.7	2.4
Mercury (Hg), µg/L	0.8	0.8	0.6	0.6	0.2	<0.2
Nickel (Ni), µg/L	7.3	7.6	7.3	9.7	7.7	8.3
Lead (Pb), µg/L	0.9	0.9	1.1	0.8	0.8	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14	12	12	9.6	9.7	9.5

Remark: 1) < = less than

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TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	KT1-a	KT1-b	IB1-a	IB1-b	IB1-a	IB1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-16	14649-100	14649-17	14649-101	14649-18	14649-102
Suspended Solids (SS), mg/L	4.8	4.8	6.3	6.2	12	12
<i>E. coli</i> , cfu/100mL	7,200	7500	900	890	1,400	1500
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.5	1.6	0.15	0.15	0.13	0.13
Unionized Ammonia (UIA), mg/L	0.072	0.073	0.006	0.007	0.006	0.006
Total Kjeldahl Nitrogen (TKN), mg N/L	3.1	3.1	0.5	0.5	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.30	0.31	0.074	0.075	0.070	0.071
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	3.1	3.1	0.07	0.06	0.07	0.07
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.1	1.1	<0.01	<0.01	<0.01	<0.01
Total Phosphorous (TP), mg-P/L	1.2	1.2	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.4	4.3	3.0	4.3	3.6	3.3
Copper (Cu), µg/L	5.1	4.8	2.5	3.7	6.8	5.2
Mercury (Hg), µg/L	0.2	0.4	0.3	0.5	<0.2	0.3
Nickel (Ni), µg/L	7.1	6.7	6.8	6.7	8.7	6.9
Lead (Pb), µg/L	1.1	0.9	0.9	0.9	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13	13	10	8.3	14	13

Remark: 1) < = less than

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TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
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Date Completed:	2011-12-01

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Results:

Sample ID	IB1-a	IB1-b	IB2-a	IB2-b	IB2-a	IB2-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-19	14649-103	14649-20	14649-104	14649-21	14649-105
Suspended Solids (SS), mg/L	22	22	2.7	2.7	15	16
<i>E. coli</i> , cfu/100mL	1,600	1600	1,600	1600	1,200	1200
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.15	0.15	0.11	0.11	0.13	0.14
Unionized Ammonia (UIA), mg/L	0.006	0.007	0.005	0.005	0.006	0.007
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.5	0.4	0.4	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.075	0.076	0.071	0.072	0.076	0.077
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.07	0.07	0.06	0.05	0.08	0.08
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	<0.01	<0.01	<0.01	<0.01	0.05	0.05
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	<0.01	<0.01	0.09	0.10
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.9	4.5	3.8	4.2	5.0	3.9
Copper (Cu), µg/L	2.3	2.2	2.7	2.2	5.5	6.6
Mercury (Hg), µg/L	0.3	0.4	0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	7.4	9.7	6.5	6.5	7.6	6.1
Lead (Pb), µg/L	0.9	1.0	1.1	0.9	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.4	8.0	10	13	8.2	8.3

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TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	IB2-a	IB2-b	IB3-a	IB3-b	IB3-a	IB3-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-22	14649-106	14649-23	14649-107	14649-24	14649-108
Suspended Solids (SS), mg/L	9.6	9.8	4.2	4.2	4.5	4.4
<i>E. coli</i> , cfu/100mL	1,400	1300	890	870	6,300	6300
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.14	0.14	0.11	0.12	0.11	0.11
Unionized Ammonia (UIA), mg/L	0.007	0.007	0.005	0.006	0.006	0.006
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.3	0.3	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.080	0.082	0.077	0.079	0.077	0.078
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.07	0.08	0.07	0.07	0.07	0.07
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	<0.01	0.05	<0.01
Total Phosphorous (TP), mg-P/L	0.06	0.06	0.03	0.03	0.03	0.03
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.4	3.4	3.3	3.2	3.6	4.2
Copper (Cu), µg/L	3.4	4.2	5.6	4.5	4.3	5.8
Mercury (Hg), µg/L	0.3	0.2	0.5	0.6	0.2	0.3
Nickel (Ni), µg/L	9.1	6.4	8.5	6.8	7.7	6.0
Lead (Pb), µg/L	0.9	0.9	1.0	1.1	1.0	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11	12	10.0	13	13	11

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Results:

Sample ID	IB3-a	IB3-b	OBI-a	OBI-b	OBI-a	OBI-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-25	14649-109	14649-26	14649-110	14649-27	14649-111
Suspended Solids (SS), mg/L	4.7	4.8	8.5	8.9	10	10
<i>E. coli</i> , cfu/100mL	1,200	1200	430	420	390	380
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.09	0.09	0.10	0.10	0.12	0.12
Unionized Ammonia (UIA), mg/L	0.005	0.005	0.005	0.005	0.006	0.006
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.4	0.4	0.4	0.5
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.084	0.083	0.080	0.080	0.078	0.076
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.06	0.07	0.07	0.07	0.08	0.08
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Total Phosphorous (TP), mg-P/L	0.03	0.03	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.5	4.7	4.2	4.0	4.6	3.8
Copper (Cu), µg/L	3.5	2.0	4.7	4.2	3.9	6.3
Mercury (Hg), µg/L	0.2	0.4	0.2	<0.2	0.2	<0.2
Nickel (Ni), µg/L	9.1	6.3	9.1	8.3	6.8	6.7
Lead (Pb), µg/L	0.9	1.0	0.8	0.9	0.9	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	8.4	11	12	12	15	16

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Results:

Sample ID	OBI-a	OBI-b	VH1-a	VH1-b	VH1-a	VH1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-28	14649-112	14649-29	14649-113	14649-30	14649-114
Suspended Solids (SS), mg/L	9.3	9.4	10	10	17	16
<i>E. coli</i> , cfu/100mL	210	220	290	300	1,100	1100
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.11	0.10	0.12	0.13	0.13	0.13
Unionized Ammonia (UIA), mg/L	0.005	0.005	0.005	0.006	0.006	0.006
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.5	0.5	0.3	0.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.075	0.078	0.082	0.082	0.078	0.077
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.08	0.07	0.08	0.07	0.09	0.09
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	5.0	3.4	4.6	3.7	4.2	3.1
Copper (Cu), µg/L	4.6	6.5	2.6	3.6	4.0	3.9
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	7.2	7.3	6.8	8.2	6.3	5.9
Lead (Pb), µg/L	0.9	1.0	0.9	0.8	1.0	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12	13	11	15	8.5	8.3

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Results:

Sample ID	VH1-a	VH1-b	VH2-a	VH2-b	VH2-a	VH2-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-31	14649-115	14649-32	14649-116	14649-33	14649-117
Suspended Solids (SS), mg/L	42	41	4.3	4.2	6.1	6.0
<i>E. coli</i> , cfu/100mL	1,900	1900	460	470	540	530
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.13	0.13	0.07	0.07	0.06	0.06
Unionized Ammonia (UIA), mg/L	0.006	0.006	0.004	0.002	0.003	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.3	0.3	0.2	0.2
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.083	0.084	0.084	0.087	0.082	0.084
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.08	0.08	0.06	0.06	0.09	0.08
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.1	3.8	3.0	4.2	3.5	4.3
Copper (Cu), µg/L	6.0	5.5	3.4	2.4	4.6	4.5
Mercury (Hg), µg/L	0.5	0.4	<0.2	0.2	0.4	0.3
Nickel (Ni), µg/L	6.6	6.9	8.8	9.2	8.7	6.9
Lead (Pb), µg/L	1.0	0.9	0.8	1.0	0.9	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15	13	14	13	16	14

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Sample ID	VH2-a	VH2-b	KTN-a	KTN-b	JVC-a	JVC-b
Sampling Depth	B	B	M	M	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-34	14649-118	14649-35	14649-119	14649-36	14649-120
Suspended Solids (SS), mg/L	4.4	4.3	8.8	8.5	3.4	3.5
<i>E. coli</i> , cfu/100mL	450	460	5,500	5500	5,800	5800
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.07	0.07	2.2	2.2	0.75	0.76
Unionized Ammonia (UIA), mg/L	0.004	0.002	0.035	0.035	0.005	0.005
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	5.8	5.7	4.6	4.6
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.076	0.079	0.26	0.26	0.046	0.046
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.06	0.06	3.9	4.0	0.16	0.15
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	<0.01	<0.01	1.3	1.3	0.21	0.21
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	1.8	1.8	1.9	2.0
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Chromium (Cr), µg/L	4.3	3.1	3.2	4.2	4.7	4.4
Copper (Cu), µg/L	5.9	4.8	3.6	3.7	4.4	4.3
Mercury (Hg), µg/L	0.3	0.2	0.4	0.4	0.2	0.3
Nickel (Ni), µg/L	8.0	7.2	7.7	9.3	8.3	6.3
Lead (Pb), µg/L	0.9	0.8	0.9	0.9	0.9	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15	15	15	16	15	14

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Results:

Sample ID	JVC-a	JVC-b	WSD Intake at Tai Wan-a	WSD Intake at Tai Wan-b	WSD Intake at Cha Kwo Ling-a	WSD Intake at Cha Kwo Ling-b
Sampling Depth	B	B	N/A	N/A	N/A	N/A
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	14649-37	14649-121	14649-38	14649-122	14649-39	14649-123
Suspended Solids (SS), mg/L	6.4	6.6	8.4	8.5	14	14
<i>E. coli</i> , cfu/100mL	73,000	73000	320	320	210	210
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.19	0.20	0.07	0.07	0.05	0.05
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.004	0.004	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	4.8	4.7	0.3	0.2	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.049	0.049	0.080	0.080	0.085	0.088
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	5.1	5.1	0.07	0.07	0.04	0.04
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.0	1.0	0.05	<0.01	0.05	<0.01
Total Phosphorous (TP), mg-P/L	2.0	2.0	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.8	3.7	4.4	4.6	3.4	4.1
Copper (Cu), µg/L	6.0	6.1	6.3	3.8	5.6	5.3
Mercury (Hg), µg/L	0.4	<0.2	0.2	0.3	0.7	0.5
Nickel (Ni), µg/L	7.3	8.2	8.0	6.4	8.0	6.0
Lead (Pb), µg/L	1.0	1.1	1.0	0.8	1.0	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	8.3	9.5	15	15	12	15

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Sample ID	WSD Intake at Quarry Bay-a	WSD Intake at Quarry Bay-b	WSD Intake at Sai Wan Ho-a	WSD Intake at Sai Wan Ho-b	ACI-a	ACI-b
Sampling Depth	N/A	N/A	N/A	N/A	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	14649-40	14649-124	14649-41	14649-125	14649-42	14649-126
Suspended Solids (SS), mg/L	6.0	5.9	6.8	6.9	11	11
<i>E. coli</i> , cfu/100mL	600	600	1,400	1400	16,000	16000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.07	0.07	0.07	0.07	1.2	1.2
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.004	0.004	0.021	0.021
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	0.6	0.6	3.5	3.5
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.087	0.084	0.087	0.085	0.25	0.26
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.06	0.06	0.05	0.05	3.1	3.1
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	<0.01	0.05	<0.01	1.1	1.1
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	<0.01	<0.01	1.5	1.5
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.6	4.8	3.7	4.5	4.9	4.3
Copper (Cu), µg/L	6.7	5.3	4.8	4.8	4.1	6.2
Mercury (Hg), µg/L	0.5	0.4	0.8	0.8	0.6	0.6
Nickel (Ni), µg/L	8.3	6.9	7.8	8.9	7.1	6.3
Lead (Pb), µg/L	0.9	0.9	1.0	1.1	0.8	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.5	11	13	13	8.0	9.3

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Results:

Sample ID	AC1-a	AC1-b	AC2-a	AC2-b	AC2-a	AC2-b
Sampling Depth	B	B	S	S	B	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-43	14649-127	14649-44	14649-128	14649-45	14649-129
Suspended Solids (SS), mg/L	4.9	5.0	5.4	5.3	4.0	3.8
<i>E. coli</i> , cfu/100mL	15,000	15000	21,000	21000	45,000	44000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.4	1.3	1.6	1.7	1.7	1.6
Unionized Ammonia (UIA), mg/L	0.020	0.019	0.029	0.031	0.032	0.032
Total Kjeldahl Nitrogen (TKN), mg N/L	2.8	2.8	3.6	3.7	3.9	3.9
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.28	0.27	0.43	0.43	0.43	0.43
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	4.1	4.1	2.5	2.4	3.3	3.1
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.2	1.2	1.3	1.3	1.4	1.4
Total Phosphorous (TP), mg-P/L	1.7	1.7	1.4	1.4	1.6	1.6
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.2	4.9	4.9	3.1	3.2	4.9
Copper (Cu), µg/L	3.5	6.4	3.2	2.1	3.2	4.1
Mercury (Hg), µg/L	0.2	1.0	0.5	0.2	0.4	0.3
Nickel (Ni), µg/L	8.6	6.2	6.0	7.4	7.8	9.2
Lead (Pb), µg/L	1.0	1.0	1.0	0.9	1.1	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	16	13	8.7	9.1	8.2	10.0

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Sample ID	AC3-a	AC3-b	AC4-a	AC4-b	AC4-a	AC4-b
Sampling Depth	M	M	S	S	B	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-46	14649-130	14649-47	14649-131	14649-48	14649-132
Suspended Solids (SS), mg/L	8.2	8.1	3.5	3.5	7.0	6.9
<i>E. coli</i> , cfu/100mL	17,000	17000	4,900	5000	6,400	6300
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.2	1.2	1.6	1.6	1.8	1.8
Unionized Ammonia (UIA), mg/L	0.014	0.014	0.025	0.027	0.036	0.037
Total Kjeldahl Nitrogen (TKN), mg N/L	2.8	2.8	2.8	2.7	4.1	4.0
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.31	0.31	0.42	0.42	0.50	0.49
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	4.0	4.0	0.84	0.84	3.9	3.9
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.3	1.3	1.3	1.3	1.4	1.5
Total Phosphorous (TP), mg-P/L	1.7	1.8	1.9	1.9	1.8	1.8
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.3	3.5	4.8	3.2	3.1	4.8
Copper (Cu), µg/L	4.6	3.4	2.1	2.6	2.9	4.1
Mercury (Hg), µg/L	0.2	1.0	0.3	0.5	0.4	0.3
Nickel (Ni), µg/L	6.2	7.5	6.5	6.5	7.8	7.6
Lead (Pb), µg/L	1.1	1.0	1.0	0.9	1.0	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14	13	11	14	12	12

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

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Results:

Sample ID	AC5-a	AC5-b	AC5-a	AC5-b	AC6-a	AC6-b
Sampling Depth	S	S	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-49	14649-133	14649-50	14649-134	14649-51	14649-135
Suspended Solids (SS), mg/L	3.7	3.6	3.2	3.2	5.5	5.5
<i>E. coli</i> , cfu/100mL	2,700	2700	3,200	3200	5,200	5100
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.4	1.4	0.54	0.54	0.85	0.84
Unionized Ammonia (UIA), mg/L	0.017	0.018	0.011	0.011	0.009	0.011
Total Kjeldahl Nitrogen (TKN), mg N/L	4.3	4.3	4.2	4.3	2.0	2.0
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.36	0.37	0.058	0.057	0.16	0.16
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.8	2.8	0.04	0.04	0.56	0.57
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.5	1.4	0.15	0.14	0.33	0.33
Total Phosphorous (TP), mg-P/L	1.8	1.7	1.7	1.7	0.40	0.38
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.9	3.9	4.3	3.2	3.4	4.4
Copper (Cu), µg/L	6.0	5.4	6.8	5.3	4.6	4.7
Mercury (Hg), µg/L	0.8	1.0	0.3	0.2	<0.2	0.3
Nickel (Ni), µg/L	9.4	7.5	7.4	8.1	6.7	7.6
Lead (Pb), µg/L	1.0	1.0	0.9	0.9	1.1	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11	14	8.6	8.9	9.5	11

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Results:

Sample ID	AC6-a	AC6-b	AC6-a	AC6-b	AC7-a	AC7-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-52	14649-136	14649-53	14649-137	14649-54	14649-138
Suspended Solids (SS), mg/L	4.3	4.4	4.8	4.7	6.3	6.3
<i>E. coli</i> , cfu/100mL	7,800	8200	7,900	8100	33,000	32000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.5	1.5	0.82	0.78	2.0	2.1
Unionized Ammonia (UIA), mg/L	0.049	0.050	0.030	0.029	0.050	0.051
Total Kjeldahl Nitrogen (TKN), mg N/L	3.4	3.4	2.2	2.3	5.3	5.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.42	0.41	0.15	0.14	0.48	0.49
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.6	2.5	0.41	0.40	3.6	3.4
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.0	1.1	0.31	0.31	1.4	1.4
Total Phosphorous (TP), mg-P/L	1.3	1.2	0.43	0.43	1.8	1.8
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	5.0	4.8	4.2	3.7	3.6	4.2
Copper (Cu), µg/L	6.3	5.5	3.1	4.1	3.0	3.6
Mercury (Hg), µg/L	0.2	0.4	0.2	0.3	0.5	0.4
Nickel (Ni), µg/L	6.7	6.6	6.7	6.6	9.0	9.7
Lead (Pb), µg/L	0.8	0.9	0.9	1.0	1.0	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13	14	15	16	9.9	13

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Results:

Sample ID	AC7-a	AC7-b	AC7-a	AC7-b	KT1-a	KT1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-55	14649-139	14649-56	14649-140	14649-57	14649-141
Suspended Solids (SS), mg/L	4.5	4.3	7.0	7.2	8.8	8.8
<i>E. coli</i> , cfu/100mL	33,000	33000	31,000	32000	1,700	1700
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	2.0	2.1	2.0	2.0	1.1	1.1
Unionized Ammonia (UIA), mg/L	0.063	0.065	0.083	0.082	0.045	0.047
Total Kjeldahl Nitrogen (TKN), mg N/L	5.0	4.9	4.8	4.9	1.2	1.2
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.49	0.48	0.48	0.48	0.29	0.29
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	3.2	3.1	3.0	3.0	0.27	0.25
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.4	1.3	1.4	1.4	0.86	0.87
Total Phosphorous (TP), mg-P/L	1.7	1.8	1.7	1.6	1.2	1.2
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.0	4.1	3.4	3.4	4.7	3.6
Copper (Cu), µg/L	6.8	2.2	3.4	4.1	4.4	3.7
Mercury (Hg), µg/L	0.2	0.2	0.2	<0.2	0.4	0.5
Nickel (Ni), µg/L	6.2	8.8	9.9	7.8	6.5	7.3
Lead (Pb), µg/L	0.8	0.9	0.9	1.0	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15	15	11	11	12	12

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Results:

Sample ID	KT1-a	KT1-b	KT1-a	KT1-b	IB1-a	IB1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-58	14649-142	14649-59	14649-143	14649-60	14649-144
Suspended Solids (SS), mg/L	5.3	5.2	1.9	1.8	9.7	9.7
<i>E. coli</i> , cfu/100mL	2,500	2500	2,100	2100	130	130
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.32	0.33	0.31	0.31	0.13	0.13
Unionized Ammonia (UIA), mg/L	0.012	0.013	0.014	0.014	0.006	0.006
Total Kjeldahl Nitrogen (TKN), mg N/L	1.1	1.1	1.1	1.1	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.12	0.12	0.12	0.12	0.081	0.081
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.45	0.45	0.46	0.45	0.07	0.06
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.18	0.18	0.16	0.16	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.23	0.22	0.22	0.23	0.08	0.08
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.6	4.3	4.1	3.2	3.6	3.9
Copper (Cu), µg/L	5.0	3.2	4.8	6.1	3.3	2.8
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	0.4	0.5
Nickel (Ni), µg/L	6.7	7.4	8.9	8.1	9.7	9.4
Lead (Pb), µg/L	1.1	1.0	0.9	1.0	1.0	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15	14	11	8.9	9.0	8.7

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Results:

Sample ID	IB1-a	IB1-b	IB1-a	IB1-b	IB2-a	IB2-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-61	14649-145	14649-62	14649-146	14649-63	14649-147
Suspended Solids (SS), mg/L	12	12	10	10	24	25
<i>E. coli</i> , cfu/100mL	120	120	160	160	120	120
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.13	0.13	0.12	0.12	0.08	0.08
Unionized Ammonia (UIA), mg/L	0.006	0.006	0.006	0.006	0.004	0.004
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.4	0.4	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.091	0.090	0.088	0.087	0.089	0.087
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.06	0.05	0.06	0.07	0.06	0.07
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.08	0.08	0.08	0.08	0.07	0.07
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.4	3.4	4.7	3.8	3.6	4.4
Copper (Cu), µg/L	6.2	5.2	3.8	4.8	6.8	6.1
Mercury (Hg), µg/L	<0.2	<0.2	0.2	<0.2	0.2	0.3
Nickel (Ni), µg/L	6.8	7.5	7.6	6.3	6.2	6.4
Lead (Pb), µg/L	1.1	0.8	0.9	1.1	0.8	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15	10	11	12	15	14

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Results:

Sample ID	IB2-a	IB2-b	IB2-a	IB2-b	IB3-a	IB3-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-64	14649-148	14649-65	14649-149	14649-66	14649-150
Suspended Solids (SS), mg/L	41	41	39	39	7.5	7.5
<i>E. coli</i> , cfu/100mL	130	130	110	110	3,300	3200
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.09	0.09	0.10	0.10	0.15	0.15
Unionized Ammonia (UIA), mg/L	0.005	0.005	0.005	0.005	0.007	0.008
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.4	0.3	0.5	0.5
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.093	0.094	0.095	0.097	0.084	0.082
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.06	0.06	0.06	0.06	0.07	0.07
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.08	0.08	0.10	0.10	0.18	0.18
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Chromium (Cr), µg/L	3.3	4.0	4.4	4.4	4.9	3.8
Copper (Cu), µg/L	2.4	3.7	5.9	6.3	4.6	5.4
Mercury (Hg), µg/L	0.4	0.6	<0.2	0.2	0.3	<0.2
Nickel (Ni), µg/L	6.7	7.4	6.6	6.4	8.7	7.4
Lead (Pb), µg/L	1.0	1.0	0.9	1.0	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14	14	9.5	10	11	9.3

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Results:

Sample ID	IB3-a	IB3-b	IB3-a	IB3-b	OB1-a	OB1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-67	14649-151	14649-68	14649-152	14649-69	14649-153
Suspended Solids (SS), mg/L	12	12	17	17	11	11
<i>E. coli</i> , cfu/100mL	1,400	1400	460	470	190	190
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.13	0.12	0.11	0.12	0.08	0.07
Unionized Ammonia (UIA), mg/L	0.007	0.006	0.006	0.006	0.004	0.004
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.6	0.6	0.4	0.4
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.083	0.080	0.091	0.087	0.094	0.097
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.07	0.07	0.06	0.05	0.06	0.06
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.04	0.04	0.05	0.04	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.09	0.09	0.14	0.14	0.08	0.08
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.8	3.3	4.2	4.9	3.4	3.4
Copper (Cu), µg/L	6.3	5.6	6.8	6.7	6.4	5.0
Mercury (Hg), µg/L	0.2	<0.2	0.5	0.3	0.3	0.3
Nickel (Ni), µg/L	6.3	6.7	7.2	7.9	6.8	7.4
Lead (Pb), µg/L	0.8	0.8	1.0	1.0	1.1	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12	16	15	15	15	12

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Results:

Sample ID	OBI-a	OBI-b	OBI-a	OBI-b	VH1-a	VH1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-70	14649-154	14649-71	14649-155	14649-72	14649-156
Suspended Solids (SS), mg/L	13	13	13	12	9.0	9.0
<i>E. coli</i> , cfu/100mL	210	220	150	150	1,500	1500
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.07	0.07	0.09	0.09	0.07	0.07
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.005	0.005	0.004	0.004
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.3	0.3	0.3	0.3	0.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.093	0.097	0.092	0.095	0.094	0.094
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.07	0.07	0.07	0.07	0.05	0.05
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.08	0.09	0.09	0.09	0.08	0.08
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.3	4.7	3.4	4.6	3.0	4.6
Copper (Cu), µg/L	2.5	4.3	2.7	2.9	2.1	2.5
Mercury (Hg), µg/L	0.2	<0.2	0.4	0.5	0.4	0.6
Nickel (Ni), µg/L	6.1	7.7	8.7	9.6	8.8	8.5
Lead (Pb), µg/L	1.1	1.0	1.0	1.0	0.9	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14	15	15	8.7	13	14

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Results:

Sample ID	VH1-a	VH1-b	VH1-a	VH1-b	VH2-a	VH2-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-73	14649-157	14649-74	14649-158	14649-75	14649-159
Suspended Solids (SS), mg/L	7.4	7.2	6.9	6.8	6.1	6.0
<i>E. coli</i> , cfu/100mL	860	870	870	860	300	290
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.06	0.06	0.06	0.06	0.06	0.06
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.003	0.003	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.2	0.2	0.3	0.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.099	0.099	0.091	0.091	0.089	0.087
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.04	0.04	0.05	0.05	0.04	0.05
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.10	0.10	0.09	0.09	0.09	0.08
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.7	4.2	3.6	4.2	3.7	4.6
Copper (Cu), µg/L	2.1	2.8	2.6	2.3	5.3	5.1
Mercury (Hg), µg/L	0.3	0.5	0.3	0.5	0.6	0.4
Nickel (Ni), µg/L	8.2	8.6	9.0	8.7	6.2	6.4
Lead (Pb), µg/L	0.8	1.1	0.9	1.0	0.9	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12	13	15	14	12	11

Remark: 1) <= less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	VH2-a	VH2-b	VH2-a	VH2-b	KTN-a	KTN-b
Sampling Depth	M	M	B	B	M	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-76	14649-160	14649-77	14649-161	14649-78	14649-162
Suspended Solids (SS), mg/L	15	15	9.4	9.3	7.4	7.2
<i>E. coli</i> , cfu/100mL	300	300	490	510	21,000	20000
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.06	0.06	0.05	0.05	1.2	1.2
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.003	0.003	0.023	0.024
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.3	0.3	0.3	2.1	2.1
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.087	0.085	0.085	0.085	0.20	0.19
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.04	0.05	0.04	0.04	1.0	1.0
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	0.05	0.66	0.64
Total Phosphorous (TP), mg-P/L	0.09	0.09	0.09	0.09	1.4	1.4
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	3.4	3.2	3.7	4.4	3.9	3.5
Copper (Cu), µg/L	4.5	4.1	2.2	3.7	2.4	2.6
Mercury (Hg), µg/L	0.3	0.2	0.5	0.4	0.4	0.3
Nickel (Ni), µg/L	6.7	7.8	7.6	6.2	8.1	6.5
Lead (Pb), µg/L	1.0	0.9	0.9	0.8	1.0	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14	14	12	9.5	13	16

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TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
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Results:

Sample ID	JVC-a	JVC-b	JVC-a	JVC-b	WSD Intake at Tai Wan-a	WSD Intake at Tai Wan-b
Sampling Depth	S	S	B	B	N/A	N/A
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-79	14649-163	14649-80	14649-164	14649-81	14649-165
Suspended Solids (SS), mg/L	8.1	8.1	15	14	11	11
<i>E. coli</i> , cfu/100mL	5,200	5100	4,000	4000	200	200
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	1.7	1.8	1.4	1.4	0.10	0.10
Unionized Ammonia (UIA), mg/L	0.022	0.024	0.035	0.035	0.005	0.005
Total Kjeldahl Nitrogen (TKN), mg N/L	3.8	3.7	3.7	3.8	0.3	0.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.46	0.46	0.26	0.25	0.091	0.088
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.8	2.7	1.9	1.8	0.08	0.08
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	1.3	1.3	0.64	0.64	0.05	0.05
Total Phosphorous (TP), mg-P/L	1.5	1.5	1.8	1.7	0.25	0.26
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.3	4.0	4.6	3.3	4.1	4.9
Copper (Cu), µg/L	5.3	4.5	3.4	4.2	3.2	2.9
Mercury (Hg), µg/L	0.3	0.3	0.2	0.2	0.7	0.6
Nickel (Ni), µg/L	6.8	6.5	6.7	6.6	8.1	9.9
Lead (Pb), µg/L	0.8	1.1	1.0	0.8	1.1	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13	13	13	8.3	15	13

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

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Results:

Sample ID	WSD Intake at Cha Kwo Ling-a	WSD Intake at Cha Kwo Ling-b	WSD Intake at Quarry Bay-a	WSD Intake at Quarry Bay-b	WSD Intake at Sai Wan Ho-a	WSD Intake at Sai Wan Ho-b
Sampling Depth	N/A	N/A	N/A	N/A	N/A	N/A
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	14649-82	14649-166	14649-83	14649-167	14649-84	14649-168
Suspended Solids (SS), mg/L	9.4	9.3	14	14	10	10
<i>E. coli</i> , cfu/100mL	230	230	660	660	710	700
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	0.07	0.07	0.07	0.07	0.05	0.06
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.004	0.004	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.2	0.2	0.2	0.3	0.3
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	0.085	0.084	0.094	0.093	0.089	0.087
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.05	0.05	0.04	0.04	0.05	0.05
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	0.05	0.05	0.05	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.11	0.10	0.11	0.11	0.09	0.09
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	4.1	3.7	4.9	3.7	4.2	3.7
Copper (Cu), µg/L	4.1	5.1	5.8	5.5	5.8	6.1
Mercury (Hg), µg/L	0.3	0.4	<0.2	<0.2	0.7	0.5
Nickel (Ni), µg/L	8.3	9.4	6.4	7.0	8.7	9.5
Lead (Pb), µg/L	0.9	1.1	1.0	1.0	0.9	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14	16	15	11	12	11

Remark: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

**APPENDIX D2
RESULTS FOR ODOUR PATROL
SURVEY IN NOVEMBER 2011**

Contract No. KLN/2009/10

Odour, Sediment and Water Quality Monitoring Works for Improvement Works at Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS)

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: OL-1 / OL-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
1	16:06	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (N)	0.8	(1) (2)
2	16:13	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (S)	3.1	(2)
3	16:17	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(2)
4	16:20	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (S)	1.7	(2)
5	16:32	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.8	(2)
6	16:35	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.5	(2)
7	16:38	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(2)
8	16:45	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	4.0	(2)
9	16:49	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	2.1	(2)
10	16:52	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	0.2	(2)
11	16:54	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	0.6	(2)
12	16:58	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SW)	0.4	(2)
13	16:59	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SW)	0.7	(2)
14	18:25	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	2.3	(2)
15	18:23	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	1.4	(2)
16	18:21	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(2)
17	18:19	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	5.7	(2)
18	18:14	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.5	(2)
19	18:09	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SW)	2.5	(2)
20	18:00	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	0.6	(1) (2)

#Note: Odour Intensity is to be divided into 5 levels which are ranked in the descending order as follows:

- 0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterized or described;
- 1 - Slight identifiable odour, and slight chance to have odour nuisance;
- 2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
- 3 - Strong identifiable, likely to have odour nuisance
- 4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KLN/2009/10

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Odour Intensity Detected by Panel Members: OL-1 / OL-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
21	17:58	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.5	(1) (2)
22	17:44	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.1	(1) (2)
23	17:42	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.4	(1) (2)
24	17:39	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(1) (2)
25	17:36	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.2	(1) (2)
26	17:32	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	2.1	(2)
27	17:18	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	0.7	(1) (2)
28	17:12	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	2.9	(1) (2)
29	16:45	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.5	(1) (3)
30	17:00	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.4	(1) (3)
31	17:10	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	fishy smell and seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (NE)	4.2	(1) (3)
32	17:15	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	0.8	(1) (3)
33	17:18	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.8	(1) (3)
34	17:30	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.4	(1) (3)
35	17:35	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.7	(1) (3)
36	16:01	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(1) (3)
37	16:10	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	gas exhaust	ferry at Ma Tau Kok Ferry Pier	Intermittent / Continuous	Downwind / Upwind (E)	1.8	(3)
38	16:13	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	1.7	(3)
39	16:16	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(1) (3)
40	16:21	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.5	(1) (3)

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

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Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

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Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
41	18:49	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	0.8	(3)
42	18:46	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (SE)	2.5	(3)
43	18:39	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	0.4	(3)
44	18:38	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.5	(3)
45	18:29	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (SE)	1.4	(3)
46	18:25	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	2.4	(3)
47	18:24	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	0.8	(3)
48	18:17	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	1.7	(3)
49	18:03	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	1.8	(3)
50	18:05	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	2.9	(3)
51	18:06	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	0.8	(3)
52	18:08	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SW)	1.7	(3)
53	18:18	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	2.4	(3)
54	18:22	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	2.3	(3)
55	18:27	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(3)
56	18:34	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	0.5	(3)
57	18:37	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.2	(3)
58	18:40	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	2.6	(3)
59	18:43	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	2.1	(3)
60	18:52	High Tide / Low-Tide	Sunny (Fine) Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(3)

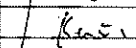
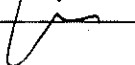
#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

- 0 - Not detected, no odour perceived or an odour so weak that it can not be easily characterised or described;
- 1 - Slight identifiable odour, and slight chance to have odour nuisance;
- 2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
- 3 - Strong identifiable, likely to have odour nuisance
- 4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

	Name	Signature
Conducted by:	Tang Wing Kwai	
Checked by:	Henry Loung	

Contract No. KLN/2009/10

Odour, Sediment and Water Quality Monitoring Works for Improvement Works at Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS)

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: 01-1 / 01-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
1	15:06	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (N)	0.8	(2)
2	16:13	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	3.1	(2)
3	16:17	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(2)
4	16:20	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	1.7	(2)
5	16:32	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	2.8	(2)
6	16:35	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.6	(2)
7	16:38	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(2)
8	16:45	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	4.0	(2)
9	16:49	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	2.1	(2)
10	16:52	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	0.2	(2)
11	16:54	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(S)	0.6	(2)
12	16:58	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(SW)	0.4	(2)
13	16:59	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(SW)	0.7	(2)
14	18:25	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(SE)	2.3	(2)
15	18:23	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(SE)	1.4	(2)
16	18:21	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	2.0	(2)
17	18:19	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	5.7	(2)
18	18:14	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(E)	2.5	(2)
19	18:09	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(SW)	2.5	(2)
20	18:00	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	0.6	(1) (2)

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

- 0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterized or described;
- 1 - Slight identifiable odour, and slight chance to have odour nuisance;
- 2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
- 3 - Strong identifiable, likely to have odour nuisance
- 4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KLN/2009/10

Odour, Sediment and Water Quality Monitoring Works for Improvement Works at Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS)

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: 01-4 / 01-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
21	17:58	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.5	(1) (2)
22	17:44	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.1	(1) (2)
23	17:42	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.4	(1) (2)
24	17:39	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(1) (2)
25	17:36	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.2	(1) (2)
26	17:32	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	2.1	(2)
27	17:18	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	0.7	(1) (2)
28	17:12	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	2.9	(1) (2)
29	16:45	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.5	(1) (3)
30	17:00	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.4	(1) (3)
31	17:10	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 ① 2 / 3 / 4	fishy smell	marine water	Intermittent / Continuous	Downwind / Upwind (NE)	4.2	(3)
32	17:15	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	0.8	(1) (3)
33	17:18	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.8	(1) (3)
34	17:30	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.4	(1) (3)
35	17:35	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.7	(1) (3)
36	16:01	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(3)
37	16:10	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 ① 2 / 3 / 4	gas exhaust	ferry at Ma Tau Kok Ferry Pier	Intermittent / Continuous	Downwind / Upwind (E)	1.8	(3)
38	16:13	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	0 ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	1.7	(3)
39	16:16	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(1) (3)
40	16:21	High Tide / Low-Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.5	(1) (3)

#Note: Odour Intensity is to be divided into 5 levels which are ranked in the descending order as follows:

0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterised or described;

1 - Slight identifiable odour, and slight chance to have odour nuisance;

2 - Moderate identifiable odour, and moderate chance to have odour nuisance;

3 - Strong identifiable, likely to have odour nuisance

4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KLN/2009/10

Odour, Sediment and Water Quality Monitoring Works for Improvement Works at Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS)

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: 01-1 / 01-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
41	18:49	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	0.8	(3)
42	18:46	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (SE)	2.5	(3)
43	18:39	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	0.4	(3)
44	18:38	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.5	(3)
45	18:29	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (SE)	1.4	(3)
46	18:25	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	2.4	(3)
47	18:24	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	0.8	(3)
48	18:17	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	1.7	(3)
49	18:03	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	1.8	(3)
50	18:05	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	<u>1</u> 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	2.9	(3)
51	18:06	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	<u>1</u> 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	0.8	(3)
52	18:08	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	<u>1</u> 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SW)	1.7	(3)
53	18:18	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	2.4	(3)
54	18:22	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	2.3	(3)
55	18:27	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	<u>1</u> 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(3)
56	18:34	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	<u>1</u> 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	0.5	(3)
57	18:37	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.2	(3)
58	18:40	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	2.6	(3)
59	18:43	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	2.1	(3)
60	18:52	High Tide / Low Tide	Sunny <u>(Fine)</u> Cloudy / Rainy	0 / <u>1</u> 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(3)



#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

- 0 - Not detected, no odour perceived or an odour so weak that it can not be easily characterized or described;
- 1 - Slight identifiable odour, and slight chance to have odour nuisance;
- 2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
- 3 - Strong identifiable, likely to have odour nuisance
- 4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

	Name	Signature
Conducted by:	Tang Mei Ling	
Checked by:	Henry Loung	

Contract No. KL/2010/02
 Kai Tak Development - Kai Tak Approach Channel and
 Kwun Tong Typhoon Shelter Improvement Works

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: 01-1 / 01-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
1	07:18	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	2.2	(2)
2	07:25	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (S)	1.8	(2)
3	07:30	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (S)	1.9	(2)
4	07:34	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (S)	1.2	(2)
5	08:10	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	5.6	(2)
6	08:11	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	1.3	(2)
7	08:19	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	1.9	(2)
8	08:25	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NE)	4.8	(2)
9	08:30	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(2)
10	08:32	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	0.7	(2)
11	08:35	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.0	(2)
12	08:37	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	0.2	(2)
13	08:39	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.3	(2)
14	10:12	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	4.3	(2)
15	10:07	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(2)
16	10:04	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	5.3	(2)
17	10:03	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	5.0	(2)
18	09:58	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	4.4	(2)
19	09:54	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	Engine oil	construction site nearby	Intermittent / Continuous	Downwind / Upwind (E)	1.5	(2)
20	09:47	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.9	(2)

#Note: Odour Intensity is to be divided into 5 levels which are ranked in the descending order as follows:

0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterised or described;

1 - Slight identifiable odour, and slight chance to have odour nuisance;

2 - Moderate identifiable odour, and moderate chance to have odour nuisance;

3 - Strong identifiable, likely to have odour nuisance

4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KL/2010/02

Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: OL-1 / OL-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
21	09:43	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.6	(2)
22	09:28	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	4.2	(1) (2)
23	09:27	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.6	(2)
24	09:24	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.1	(2)
25	09:21	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(2)
26	09:17	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	3.7	(2)
27	09:04	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.3	(2)
28	08:58	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	3.9	(2)
29	08:37	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	0.5	(3)
30	08:41	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	0.9	(3)
31	08:51	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (NE)	0.9	(1) (3)
32	08:59	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (S)	0.4	(1) (3)
33	09:11	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (NS)	0.6	(1) (3)
34	09:47	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	fishy smell	marine water and exposed shores	Intermittent / Continuous	Downwind / Upwind (S)	1.6	(3)
35	09:44	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	2.1	(3)
36	07:31	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.1	(1) (3)
37	07:10	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	gas exhaust	ferry at Ma Tau Kok Ferry Pier	Intermittent / Continuous	Downwind / Upwind (E)	2.3	(3)
38	07:12	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	1.3	(3)
39	07:19	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.8	(1) (3)
40	07:21	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	fishy smell	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	0.6	(3)

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterised or described;

1 - Slight identifiable odour, and slight chance to have odour nuisance;

2 - Moderate identifiable odour, and moderate chance to have odour nuisance;

3 - Strong identifiable, likely to have odour nuisance

4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammonia, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KL/2010/02
 Kai Tak Development - Kai Tak Approach Channel and
 Kwun Tong Typhoon Shelter Improvement Works

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: Ol-1 / Ol-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66 - 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
41	10:50	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.4	(3)
42	10:45	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (SE)	1.5	(3)
43	10:39	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NW)	0.9	(3)
44	10:38	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NW)	0.7	(3)
45	10:29	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	0.8	(3)
46	10:25	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NE)	0.4	(3)
47	10:24	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NE)	0.2	(3)
48	10:17	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / ② 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	1.1	(3)
49	10:03	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	3.1	(3)
50	10:05	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	2.9	(3)
51	10:06	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NE)	0.9	(3)
52	10:08	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(3)
53	10:18	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	1.6	(3)
54	10:22	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	0.6	(3)
55	10:27	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NW)	0.4	(3)
56	10:34	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	1.3	(3)
57	10:37	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NW)	0.9	(3)
58	10:40	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	0.4	(3)
59	10:43	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NW)	0.2	(3)
60	10:52	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.2	(3)



#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

- 0 - Not detected, no odour perceived or an odour so weak that it can not be easily characterised or described;
- 1 - Slight identifiable odour, and slight chance to have odour nuisance;
- 2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
- 3 - Strong identifiable, likely to have odour nuisance
- 4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

	Name	Signature
Conducted by:	Tang Wing Kwai	
Checked by:	Henry Leung	

Contract No. KL/2010/02

Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: 0-1 / 0-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
1	07:18	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	2.2	(2)
2	07:25	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	1.8	(2)
3	07:30	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	1.9	(2)
4	07:34	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(S)	1.2	(2)
5	08:10	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(E)	5.6	(2)
6	08:11	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	1.3	(2)
7	08:19	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	1.9	(2)
8	08:25	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NE)	4.8	(2)
9	08:30	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.7	(2)
10	08:32	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	0.7	(2)
11	08:35	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.0	(2)
12	08:37	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(S)	0.2	(2)
13	08:39	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.3	(2)
14	10:12	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	4.3	(2)
15	10:07	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	3.6	(2)
16	10:04	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	5.3	(2)
17	10:03	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	5.0	(2)
18	09:58	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / ② 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind-(E)	4.4	(2)
19	09:54	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	Engine oil	construction site nearby	Intermittent / Continuous	Downwind / Upwind-(E)	1.5	(2)
20	09:47	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① 1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind-(E)	1.9	(2)

#Note: Odour Intensity is to be divided into 5 levels which are ranked in the descending order as follows:

- 0 - Not detected. No odour perceived or an odour so weak that it can not be easily characterised or described;
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*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KL/2010/02

Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: Ol-1 / Ol-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
21	09:43	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.6	(2)
22	09:28	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	seawater smell	marine water	Intermittent / Continuous	Downwind / Upwind (E)	4.2	(1) (2)
23	09:27	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.6	(2)
24	09:24	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.1	(2)
25	09:21	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	3.6	(2)
26	09:17	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	3.7	(2)
27	09:04	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	2.3	(2)
28	08:58	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	3.9	(2)
29	08:37	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	0.5	(3)
30	08:41	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	0.9	(3)
31	08:51	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NE)	0.9	(3)
32	08:59	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	fishy smell	exposed shores	Intermittent / Continuous	Downwind / Upwind (S)	0.4	(3)
33	09:11	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NS)	0.6	(3)
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35	09:44	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	2.1	(3)
36	07:31	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	fishy smell	exposed shores	Intermittent / Continuous	Downwind / Upwind (E)	1.1	(3)
37	07:10	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	gas exhaust	ferry at Ma Tau Kok Ferry Pier	Intermittent / Continuous	Downwind / Upwind (E)	2.3	(3)
38	07:12	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	① / 1 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (SE)	1.3	(3)
39	07:19	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / Upwind (E)	1.8	(3)
40	07:21	High Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / ① 2 / 3 / 4	fishy smell	marine water	Intermittent / Continuous	Downwind / Upwind (SE)	0.6	(3)

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4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 9 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

Contract No. KL/2010/02
 Kai Tak Development - Kai Tak Approach Channel and
 Kwun Tong Typhoon Shelter Improvement Works

Odour Patrol Record Sheet

Odour Intensity Detected by Panel Members: Ol-1 / Ol-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront

Date: 29 November 2011 and 30 November 2011

Temperature: 21.0 - 26.1 °C (29 November 2011) and 20.8 - 26.8 °C (30 November 2011) (King's Park)

Humidity: 65 - 85 % (29 November 2011) and 66- 87% (30 November 2011) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed (m/s)	Remarks
41	10:50	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	1.4	(3)
42	10:45	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (SE)	1.5	(3)
43	10:39	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NW)	0.9	(3)
44	10:38	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NW)	0.7	(3)
45	10:29	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	0.8	(3)
46	10:25	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NE)	0.4	(3)
47	10:24	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NE)	0.2	(3)
48	10:17	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (W)	1.1	(3)
49	10:03	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (E)	3.1	(3)
50	10:05	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (S)	2.9	(3)
51	10:06	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NE)	0.9	(3)
52	10:08	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	2.0	(3)
53	10:18	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	1.6	(3)
54	10:22	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	0.6	(3)
55	10:27	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NW)	0.4	(3)
56	10:34	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (W)	1.3	(3)
57	10:37	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (NW)	0.9	(3)
58	10:40	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (N)	0.4	(3)
59	10:43	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	0 / 1 / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / Upwind (NW)	0.2	(3)
60	10:52	High-Tide / Low Tide	Sunny / Fine / Cloudy / Rainy	1 / 2 / 3 / 4	N/A	N/A	Intermittent / Continuous	Downwind / Upwind (E)	1.2	(3)

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:

0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterised or described;

1 - Slight identifiable odour, and slight chance to have odour nuisance;

2 - Moderate identifiable odour, and moderate chance to have odour nuisance;

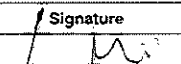
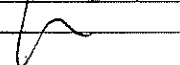
3 - Strong identifiable, likely to have odour nuisance

4 - Extreme severe odour, and unacceptable odour level.

*Description of Odour Characteristics: Sewage or rotten-egg smell, decayed vegetables, ammonical, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc

**Potential Odour Source: Exposed sediment, water or sewage; floating debris or material etc

Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 29 November 2011 (3) Conducted on 30 November 2011

	Name	Signature
Conducted by:	Tang Mei Ling	
Checked by:	Henry Leung	

APPENDIX E
QUALITY CONTROL REPORT FOR
WATER QUALITY MONITORING

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 8

Parameter	Method Blank 1	Method Blank 2	Method Blank 3	Method Blank 4	Method Blank 5	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<i>E. coli</i> , cfu/100mL	<1	<1	<1	<1	<1	<1
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen (NH ₃ -N), mg NH ₃ -N/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Unionized Ammonia (UIA), mg/L	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), mg N/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite-nitrogen (NO ₂ -N), mg NO ₂ ⁻ -N/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ortho-phosphate (PO ₄), mg PO ₄ ³⁻ -P/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE

Laboratory Manager

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

Page: 2 of 8

**QC report:
Method Blank**

Parameter	Method Blank 6	Method Blank 7	Method Blank 8	Method Blank 9	Acceptance
Total Suspended Solids, mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
<i>E. coli</i> , cfu/100mL	<1	<1	<1	<1	<1
Biochemical Oxygen Demand, mg-O ₂ /L	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen, mg NH ₃ -N/L	<0.01	<0.01	<0.01	<0.01	<0.01
Unionized Ammonia, mg/L	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen, mg N/L	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite Content, mg NO ₂ ⁻ -N/L	<0.002	<0.002	<0.002	<0.002	<0.002
Nitrate Content, mg NO ₃ ⁻ -N/L	<0.01	<0.01	<0.01	<0.01	<0.01
Ortho-phosphate, mg PO ₄ ³⁻ -P/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Phosphorus, mg-P/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium, µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium, µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Copper, µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury, µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel, µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Lead, µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Silver, µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc, µg/L	<0.4	<0.4	<0.4	<0.4	<0.4

Remark: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

Page: 3 of 8

**QC report:
Method QC**

Parameter	MQC1	MQC2	MQC3	MQC4	MQC5	Acceptance
Suspended Solids (SS), %	89	96	89	90	95	80-120
<i>E. coli</i>	N/A	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	203	202	192	209	216	170-220
Ammonia Nitrogen (NH ₃ -N), %	95	93	91	96	90	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	98	94	93	94	91	80-120
Nitrite-nitrogen (NO ₂ -N), %	99	95	93	95	95	80-120
Nitrate-nitrogen (NO ₃ -N), %	94	95	96	93	97	80-120
Ortho-phosphate (PO ₄), %	92	99	96	93	89	80-120
Total Phosphorous (TP), %	95	96	97	99	87	80-120
Cadmium (Cd), %	95	94	92	100	89	80-120
Chromium (Cr), %	93	98	93	94	88	80-120
Copper (Cu), %	94	89	89	92	95	80-120
Mercury (Hg), %	93	98	100	95	98	80-120
Nickel (Ni), %	99	92	90	94	97	80-120
Lead (Pb), %	94	97	96	99	88	80-120
Silver (Ag), %	93	89	90	91	97	80-120
Zinc (Zn), %	96	87	97	92	99	80-120

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

Page: 4 of 8

**QC report:
Method QC**

Parameter	MQC6	MQC7	MQC8	MQC9	Acceptance
Suspended Solids (SS), %	95	95	95	90	80-120
<i>E. coli</i>	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD ₅), mg-O ₂ /L	202	197	198	193	170-220
Ammonia Nitrogen (NH ₃ -N), %	89	91	101	88	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	96	89	95	95	80-120
Nitrite-nitrogen (NO ₂ -N), %	93	100	93	93	80-120
Nitrate-nitrogen (NO ₃ -N), %	93	95	91	95	80-120
Ortho-phosphate (PO ₄), %	97	92	95	93	80-120
Total Phosphorous (TP), %	98	96	94	89	80-120
Cadmium (Cd), %	99	90	87	98	80-120
Chromium (Cr), %	98	96	98	95	80-120
Copper (Cu), %	99	92	93	95	80-120
Mercury (Hg), %	93	94	99	96	80-120
Nickel (Ni), %	98	93	90	95	80-120
Lead (Pb), %	97	95	100	95	80-120
Silver (Ag), %	90	95	100	96	80-120
Zinc (Zn), %	92	96	90	89	80-120

Remark: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

Page: 5 of 8

**QC report:
Sample Spike**

Parameter	14649-1 spk	14649-21 spk	14649-41 spk	14649-61 spk	14649-81 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A	N/A	N/A	N/A
<i>E. coli</i>	N/A	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD ₅)	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen (NH ₃ -N), %	98	93	94	90	101	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	93	87	92	97	96	80-120
Nitrite-nitrogen (NO ₂ -N), %	102	91	90	95	93	80-120
Nitrate-nitrogen (NO ₃ -N), %	86	88	96	97	93	80-120
Ortho-phosphate (PO ₄), %	92	95	102	94	98	80-120
Total Phosphorous (TP), %	87	88	92	86	91	80-120
Cadmium (Cd), %	101	98	96	99	96	80-120
Chromium (Cr), %	91	87	98	99	94	80-120
Copper (Cu), %	91	94	93	87	99	80-120
Mercury (Hg), %	94	93	101	89	91	80-120
Nickel (Ni), %	96	91	96	95	91	80-120
Lead (Pb), %	96	93	87	98	96	80-120
Silver (Ag), %	88	89	103	98	97	80-120
Zinc (Zn), %	90	91	85	97	88	80-120

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

Page: 6 of 8

**QC report:
Sample Spike**

Parameter	14649-101 spk	14649-121 spk	14649-141 spk	14649-161 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A	N/A	N/A
<i>E. coli</i>	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD ₅)	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen (NH ₃ -N), %	92	94	97	97	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	89	93	91	97	80-120
Nitrite-nitrogen (NO ₂ -N), %	90	94	94	94	80-120
Nitrate-nitrogen (NO ₃ -N), %	96	91	99	85	80-120
Ortho-phosphate (PO ₄), %	95	92	100	92	80-120
Total Phosphorous (TP), %	91	91	94	100	80-120
Cadmium (Cd), %	94	100	94	101	80-120
Chromium (Cr), %	87	86	95	98	80-120
Copper (Cu), %	84	93	95	93	80-120
Mercury (Hg), %	89	95	98	93	80-120
Nickel (Ni), %	97	87	98	96	80-120
Lead (Pb), %	100	98	97	97	80-120
Silver (Ag), %	95	96	94	89	80-120
Zinc (Zn), %	96	94	100	99	80-120

Remark: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01
Page:	7 of 8

QC report:
Sample Duplicate

Parameter	14649-20 chk	14649-40 chk	14649-60 chk	14649-80 chk	14649-100 chk	Acceptance
Suspended Solids (SS), %	4	7	4	5	5	RPD _≤ 20
<i>E. coli</i> , %	N/A	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD ₅), %	N/A	N/A	N/A	N/A	N/A	RPD _≤ 20
Ammonia Nitrogen (NH ₃ -N), %	4	8	6	8	7	RPD _≤ 20
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	5	5	7	5	5	RPD _≤ 20
Nitrite-nitrogen (NO ₂ -N), %	6	5	5	4	6	RPD _≤ 20
Nitrate-nitrogen (NO ₃ -N), %	4	7	5	6	7	RPD _≤ 20
Ortho-phosphate (PO ₄), %	N/A	6	5	6	6	RPD _≤ 20
Total Phosphorous (TP), %	N/A	N/A	7	5	5	RPD _≤ 20
Cadmium (Cd), %	N/A	N/A	N/A	N/A	N/A	RPD _≤ 20
Chromium (Cr), %	5	6	5	8	7	RPD _≤ 20
Copper (Cu), %	6	4	4	6	6	RPD _≤ 20
Mercury (Hg), %	8	5	5	7	6	RPD _≤ 20
Nickel (Ni), %	5	4	7	6	5	RPD _≤ 20
Lead (Pb), %	5	5	6	5	5	RPD _≤ 20
Silver (Ag), %	N/A	N/A	N/A	N/A	N/A	RPD _≤ 20
Zinc (Zn), %	6	8	9	4	6	RPD _≤ 20

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

TEST REPORT

Laboratory No.:	QC14649
Date of Issue:	2011-12-01
Date Received:	2011-11-22
Date Tested:	2011-11-22
Date Completed:	2011-12-01

Page: 8 of 8

QC report:
Sample Duplicate

Parameter	14649-120 chk	14649-140 chk	14649-160 chk	14649-168 chk	Acceptance
Suspended Solids (SS), %	5	5	6	6	RPD _≤ 20
<i>E. coli</i> , %	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD ₅), %	N/A	N/A	N/A	N/A	RPD _≤ 20
Ammonia Nitrogen (NH ₃ -N), %	7	8	8	5	RPD _≤ 20
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	8	5	8	5	RPD _≤ 20
Nitrite-nitrogen (NO ₂ -N), %	5	6	6	8	RPD _≤ 20
Nitrate-nitrogen (NO ₃ -N), %	6	6	5	7	RPD _≤ 20
Ortho-phosphate (PO ₄), %	5	5	7	7	RPD _≤ 20
Total Phosphorous (TP), %	4	7	5	4	RPD _≤ 20
Cadmium (Cd), %	7	4	N/A	N/A	RPD _≤ 20
Chromium (Cr), %	7	4	8	8	RPD _≤ 20
Copper (Cu), %	7	5	6	5	RPD _≤ 20
Mercury (Hg), %	5	N/A	8	4	RPD _≤ 20
Nickel (Ni), %	5	5	4	4	RPD _≤ 20
Lead (Pb), %	5	4	7	6	RPD _≤ 20
Silver (Ag), %	N/A	N/A	N/A	N/A	RPD _≤ 20
Zinc (Zn), %	8	7	4	5	RPD _≤ 20

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 14649

*****END OF REPORT*****

**APPENDIX F
IN-SITU MEASUREMENT RESULTS
FOR MARINE WATER QUALITY
MONITORING**

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC1 - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:40	26.1	7.2	12.7	66.5	5.0	13.0
			10:42	26.1	7.2	12.7	66.4	5.0	13.2
1.0	Sunny	Moderate	10:41	26.0	7.3	18.1	58.1	4.3	29.3
			10:43	26.0	7.3	18.3	57.6	4.2	26.6
1.5	Sunny	Moderate	10:41	25.0	7.6	31.0	45.8	3.2	14.0
			10:43	25.0	7.6	31.0	45.3	3.1	13.7

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	10:41	26.0	7.3	18.1	58.1	4.3	29.3
			10:43	26.0	7.3	18.3	57.6	4.2	26.6

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC2 - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:46	25.5	7.1	12.4	66.2	5.1	3.7
			10:51	25.5	7.1	12.3	66.1	5.1	3.6
1.0	Sunny	Moderate	10:47	25.6	7.3	28.8	49.3	3.4	34.5
			10:52	25.6	7.4	28.4	48.8	3.4	37.7
1.5	Sunny	Moderate	10:47	25.0	7.6	31.9	45.8	3.2	19.1
			10:52	25.0	7.6	31.9	45.2	3.1	21.6
2.0	Sunny	Moderate	10:48	24.8	7.5	32.1	43.3	3.0	6.1
			10:53	24.8	7.5	32.1	43.1	3.0	6.4
2.5	Sunny	Moderate	10:48	24.8	7.5	32.2	42.8	3.0	5.2
			10:53	24.8	7.5	32.2	42.9	3.0	4.9
3.0	Sunny	Moderate	10:49	24.7	7.6	32.3	42.8	3.0	8.9
			10:54	24.7	7.7	32.3	42.7	3.0	9.2
3.5	Sunny	Moderate	10:49	24.7	7.7	32.3	42.6	3.0	11.4
			10:54	24.7	7.7	32.3	42.4	2.9	11.7
4.0	Sunny	Moderate	10:50	24.7	7.6	32.3	41.8	2.9	9.5
			10:55	24.7	7.6	32.3	41.7	2.9	9.5
4.5	Sunny	Moderate	10:50	24.8	7.4	32.4	41.4	2.9	4.2
			10:55	24.8	7.4	32.4	41.5	2.9	4.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	10:47	25.6	7.3	28.8	49.3	3.4	34.5
			10:52	25.6	7.4	28.4	48.8	3.4	37.7
4.0	Sunny	Moderate	10:50	24.7	7.6	32.3	41.8	2.9	9.5
			10:55	24.7	7.6	32.3	41.7	2.9	9.5

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC3 - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:14	25.8	7.1	12.2	24.5	1.9	6.0
			10:17	25.8	7.1	12.2	22.7	1.7	6.0
1.0	Sunny	Moderate	10:14	25.8	7.1	12.2	21.5	1.6	6.0
			10:18	25.8	7.1	12.2	19.4	1.5	5.9
1.5	Sunny	Moderate	10:15	25.3	7.7	31.0	13.2	0.9	47.6
			10:18	25.3	7.7	30.9	12.6	0.9	48.7
2.0	Sunny	Moderate	10:16	24.9	7.1	30.3	14.6	1.0	53.0
			10:19	24.9	7.2	30.2	13.8	1.0	52.4

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.25	Sunny	Moderate	10:15	25.8	7.0	12.2	18.4	1.4	5.8
			10:18	25.8	7.0	12.2	18.3	1.4	5.8

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC4 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:27	25.7	7.3	12.7	3.5	0.3	6.8
			10:32	25.8	7.2	12.5	3.7	0.3	6.5
1.0	Sunny	Moderate	10:27	25.5	7.4	21.9	14.7	1.1	3.9
			10:32	25.5	7.4	22.5	15.2	1.1	3.8
1.5	Sunny	Moderate	10:28	25.1	7.7	31.4	10.6	0.7	41.1
			10:33	25.1	7.7	31.4	10.0	0.7	42.1
2.0	Sunny	Moderate	10:28	24.7	7.7	32.0	7.0	0.5	14.2
			10:33	24.7	7.7	32.0	6.3	0.4	12.3
2.5	Sunny	Moderate	10:29	24.6	7.7	32.2	4.9	0.3	9.7
			10:34	24.6	7.7	32.2	4.8	0.3	9.3
3.0	Sunny	Moderate	10:30	24.6	7.7	32.2	4.8	0.3	9.3
			10:35	24.6	7.7	32.2	5.1	0.4	9.1
3.5	Sunny	Moderate	10:30	24.6	7.7	32.3	4.9	0.3	10.3
			10:35	24.6	7.7	32.3	5.1	0.4	10.4
4.0	Sunny	Moderate	10:31	24.6	7.7	32.3	5.4	0.4	9.8
			10:36	24.6	7.7	32.3	5.5	0.4	9.5

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	10:27	25.5	7.4	21.9	14.7	1.1	3.9
			10:32	25.5	7.4	22.5	15.2	1.1	3.8
3.5	Sunny	Moderate	10:30	24.6	7.7	32.3	4.9	0.3	10.3
			10:35	24.6	7.7	32.3	5.1	0.4	10.4

	Name	Signature	Date
Conducted by:	Lee Man Hei	<i>Hei</i>	22-Nov-11
Checked by:	W.K. Tang	<i>W.K. Tang</i>	22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

– Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC5 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	9:30	25.6	7.1	12.1	27.1	2.1	5.4
			9:35	25.6	7.1	12.1	27.3	2.1	5.4
1.0	Sunny	Moderate	9:31	25.0	7.3	24.5	17.8	1.3	14.8
			9:36	25.0	7.3	26.6	18.2	1.3	15.4
1.5	Sunny	Moderate	9:31	24.8	7.6	31.5	16.0	1.1	13.7
			9:36	24.7	7.6	31.6	15.7	1.1	13.3
2.0	Sunny	Moderate	9:33	24.8	7.6	32.0	15.7	1.1	9.6
			9:37	24.8	7.6	32.0	15.1	1.0	9.4
2.5	Sunny	Moderate	9:34	24.7	7.7	32.1	22.2	1.5	10.9
			9:37	24.7	7.7	32.1	21.6	1.5	11.1

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	9:31	25.0	7.3	24.5	17.8	1.3	14.8
			9:36	25.0	7.3	26.6	18.2	1.3	15.4
2.0	Sunny	Moderate	9:33	24.8	7.6	32.0	15.7	1.1	9.6
			9:37	24.8	7.6	32.0	15.1	1.0	9.4

	Name	Signature	Date
Conducted by:	Lee Man Hei	<i>Lee Man Hei</i>	22-Nov-11
Checked by:	W.K. Tang	<i>W.K. Tang</i>	22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC6 - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	9:46	25.4	7.1	12.1	22.5	1.7	6.2
			9:50	25.4	7.1	12.1	22.0	1.7	6.2
1.0	Sunny	Moderate	9:47	25.3	7.2	13.7	19.7	1.5	26.3
			9:50	25.3	7.2	13.1	19.5	1.5	23.7
1.5	Sunny	Moderate	9:47	24.9	7.6	29.2	12.6	0.9	16.0
			9:51	25.0	7.6	28.6	13.0	0.9	16.8
2.0	Sunny	Moderate	9:47	24.7	7.7	32.0	10.7	0.7	9.9
			9:51	24.7	7.7	32.0	10.3	0.7	10.0
2.5	Sunny	Moderate	9:48	24.6	7.8	32.1	28.1	2.0	1.3
			9:51	24.6	7.8	32.1	28.3	2.0	1.4
3.0	Sunny	Moderate	9:48	24.5	7.8	32.3	40.8	2.8	1.5
			9:52	24.5	7.8	32.3	40.8	2.8	1.4
3.5	Sunny	Moderate	9:48	24.5	7.8	32.3	52.6	3.7	1.9
			9:52	24.5	7.8	32.3	52.4	3.6	1.9
4.0	Sunny	Moderate	9:49	24.5	7.9	32.3	54.5	3.8	1.9
			9:52	24.5	7.9	32.3	54.8	3.8	1.8
4.5	Sunny	Moderate	9:49	24.4	7.9	32.3	57.5	4.0	2.3
			9:53	24.4	7.9	32.3	57.8	4.0	2.4

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	9:47	25.3	7.2	13.7	19.7	1.5	26.3
			9:50	25.3	7.2	13.1	19.5	1.5	23.7
4.0	Sunny	Moderate	9:49	24.5	7.9	32.3	54.5	3.8	1.9
			9:52	24.5	7.9	32.3	54.8	3.8	1.8

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC7 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	9:10	25.3	7.2	13.9	35.7	2.7	5.1
			9:17	25.4	7.2	13.8	35.2	2.7	5.1
1.0	Sunny	Moderate	9:11	24.9	7.4	31.0	24.3	1.7	4.8
			9:18	24.9	7.5	31.0	24.1	1.7	4.7
1.5	Sunny	Moderate	9:11	24.8	7.6	31.6	23.1	1.6	4.6
			9:18	24.8	7.7	31.6	23.4	1.6	4.7
2.0	Sunny	Moderate	9:12	24.6	7.7	32.1	26.3	1.8	3.1
			9:19	24.6	7.7	32.1	26.8	1.9	3.2
2.5	Sunny	Moderate	9:13	24.6	7.8	32.2	40.8	2.8	2.0
			9:19	24.6	7.8	32.2	41.3	2.9	2.0
3.0	Sunny	Moderate	9:14	24.5	7.8	32.2	45.5	3.2	1.8
			9:20	24.5	7.8	32.2	45.3	3.1	1.8
3.5	Sunny	Moderate	9:15	24.4	7.9	32.3	65.7	4.6	1.5
			9:20	24.4	7.9	32.3	66.2	4.6	1.4
4.0	Sunny	Moderate	9:15	24.4	7.9	32.3	81.6	5.7	1.3
			9:20	24.4	7.9	32.3	82.8	5.8	1.3
4.5	Sunny	Moderate	9:16	24.3	8.0	32.3	87.6	6.1	1.3
			9:21	24.3	8.0	32.3	88.3	6.1	1.6
5.0	Sunny	Moderate	9:16	24.3	8.0	32.3	89.2	6.2	2.0
			9:21	24.3	8.0	32.3	89.3	6.2	2.0
5.5	Sunny	Moderate	9:17	24.3	8.0	32.3	88.3	6.2	2.4
			9:22	24.3	8.0	32.3	88.3	6.2	2.4

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	9:11	24.9	7.4	31.0	24.3	1.7	4.8
			9:18	24.9	7.5	31.0	24.1	1.7	4.7
3.0	Sunny	Moderate	9:14	24.5	7.8	32.2	45.5	3.2	1.8
			9:20	24.5	7.8	32.2	45.3	3.1	1.8
5.0	Sunny	Moderate	9:16	24.3	8.0	32.3	89.2	6.2	2.0
			9:21	24.3	8.0	32.3	89.3	6.2	2.0

	Name	Signature	Date
Conducted by:	Lee Man Hei	<i>Lee Man Hei</i>	22-Nov-11
Checked by:	W.K. Tang	<i>W.K. Tang</i>	22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at KT1 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	8:53	23.7	7.8	26.8	74.9	5.4	1.2
			8:57	23.9	7.8	24.0	73.4	5.4	1.2
1.0	Sunny	Moderate	8:54	24.7	7.9	30.8	79.0	5.5	0.9
			8:58	24.7	7.9	30.8	78.6	5.5	1.0
1.5	Sunny	Moderate	8:54	24.6	7.9	31.2	77.1	5.4	0.9
			8:58	24.6	7.9	31.1	77.3	5.4	0.9
2.0	Sunny	Moderate	8:55	24.5	7.9	32.1	76.0	5.3	0.8
			8:58	24.5	7.9	32.1	75.9	5.3	0.9
2.5	Sunny	Moderate	8:55	24.5	7.9	31.9	77.4	5.4	0.9
			8:58	24.5	7.9	31.9	77.1	5.4	0.9
3.0	Sunny	Moderate	8:55	24.5	7.9	32.2	75.3	5.2	0.8
			8:59	24.5	7.9	32.2	74.6	5.2	0.8
3.5	Sunny	Moderate	8:55	24.4	8.0	32.2	84.6	5.9	1.0
			8:59	24.4	8.0	32.2	85.1	5.9	0.9
4.0	Sunny	Moderate	8:56	24.4	8.0	32.2	85.6	6.0	1.0
			8:59	24.4	8.0	32.2	85.9	6.0	1.0
4.5	Sunny	Moderate	8:56	24.3	8.0	32.3	90.3	6.3	1.2
			9:00	24.3	8.0	32.3	90.2	6.3	1.1
5.0	Sunny	Moderate	8:56	24.1	8.0	32.2	97.3	6.8	1.4
			9:00	24.1	8.0	32.3	97.4	6.8	1.6
5.5	Sunny	Moderate	8:56	23.9	8.1	32.4	103.6	7.3	2.0
			9:00	23.9	8.1	32.4	103.3	7.2	2.0
6.0	Sunny	Moderate	8:56	23.9	8.1	32.4	104.1	7.3	2.2
			9:00	23.9	8.1	32.4	103.9	7.3	2.3
6.5	Sunny	Moderate	8:57	23.8	8.1	32.4	103.1	7.2	4.2
			9:01	23.9	8.1	32.4	102.8	7.2	3.9

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	8:54	24.7	7.9	30.8	79.0	5.5	0.9
			8:58	24.7	7.9	30.8	78.6	5.5	1.0
3.5	Sunny	Moderate	8:55	24.4	8.0	32.2	84.6	5.9	1.0
			8:59	24.4	8.0	32.2	85.1	5.9	0.9
6.0	Sunny	Moderate	8:56	23.9	8.1	32.4	104.1	7.3	2.2
			9:00	23.9	8.1	32.4	103.9	7.3	2.3

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at IB1 - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	8:04	23.6	8.0	32.5	85.5	6.0	11.2
			8:11	23.6	8.1	32.5	77.1	5.4	10.7
1.0	Sunny	Moderate	8:05	23.6	8.0	32.5	81.5	5.7	6.6
			8:12	23.6	8.1	32.5	76.5	5.4	6.5
1.5	Sunny	Moderate	8:06	23.6	8.0	32.5	79.9	5.6	6.9
			8:12	23.6	8.1	32.5	71.7	5.1	6.8
2.0	Sunny	Moderate	8:06	23.6	8.0	32.5	79.4	5.6	6.9
			8:13	23.6	8.1	32.5	70.9	5.0	6.8
2.5	Sunny	Moderate	8:07	23.6	8.0	32.5	78.5	5.2	7.9
			8:13	23.6	8.1	32.5	70.6	5.0	8.3
3.0	Sunny	Moderate	8:08	23.6	8.0	32.5	76.5	5.4	9.4
			8:13	23.6	8.1	32.5	70.2	4.9	9.4
3.5	Sunny	Moderate	8:08	23.7	8.1	32.5	69.7	4.9	5.4
			8:14	23.7	8.1	32.5	69.7	4.9	4.4
4.0	Sunny	Moderate	8:08	23.6	8.0	32.5	76.0	5.4	4.2
			8:15	23.7	8.1	32.5	69.6	4.9	3.8
4.5	Sunny	Moderate	8:09	23.7	8.1	32.5	69.5	4.9	4.0
			8:15	23.7	8.1	32.5	69.5	4.9	4.0
5.0	Sunny	Moderate	8:09	23.6	8.0	32.5	74.9	5.3	7.5
			8:15	23.7	8.1	32.5	69.1	4.9	7.6
5.5	Sunny	Moderate	8:10	23.6	8.1	32.5	74.1	5.2	8.6
			8:16	23.6	8.1	32.5	69.1	4.9	7.4
6.0	Sunny	Moderate	8:10	23.6	8.1	32.5	73.3	5.2	11.3
			8:16	23.6	8.1	32.5	68.6	4.8	11.2
6.5	Sunny	Moderate	8:11	23.6	8.0	32.5	72.6	5.1	13.8
			8:16	23.6	8.1	32.5	67.2	4.7	13.4
7.0	Sunny	Moderate	8:11	23.6	8.0	32.5	72.4	5.1	16.7
			8:16	23.6	8.1	32.5	67.5	4.8	18.7

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	8:05	23.6	8.0	32.5	81.5	5.7	6.6
			8:12	23.6	8.1	32.5	76.5	5.4	6.5
3.75	Sunny	Moderate	8:08	23.7	8.1	32.5	69.7	4.9	5.0
			8:15	23.7	8.1	32.5	69.6	4.9	4.6
6.5	Sunny	Moderate	8:11	23.6	8.0	32.5	72.6	5.1	13.8
			8:16	23.6	8.1	32.5	67.2	4.7	13.4

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Remark: * Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at IB2 - Mid-Ebb Tide


Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	8:24	23.6	8.1	32.4	89.0	6.3	2.6
			8:31	23.6	8.1	32.5	83.4	5.9	2.4
1.0	Sunny	Moderate	8:25	23.6	8.1	32.5	80.5	5.7	2.4
			8:31	23.6	8.1	32.4	86.4	6.1	2.3
1.5	Sunny	Moderate	8:26	23.6	8.1	32.4	77.6	5.5	3.4
			8:31	23.6	8.1	32.4	87.5	6.2	3.4
2.0	Sunny	Moderate	8:27	23.6	8.1	32.5	76.5	5.4	3.0
			8:32	23.6	8.1	32.5	77.6	5.5	3.7
2.5	Sunny	Moderate	8:27	23.6	8.1	32.5	76.2	5.4	3.4
			8:32	23.6	8.1	32.5	74.1	5.2	3.2
3.0	Sunny	Moderate	8:27	23.6	8.1	32.5	76.1	5.4	3.9
			8:32	23.6	8.1	32.5	72.7	5.1	4.1
3.5	Sunny	Moderate	8:27	23.6	8.1	32.5	76.4	5.4	4.8
			8:32	23.6	8.1	32.5	72.4	5.1	4.6
4.0	Sunny	Moderate	8:28	23.6	8.1	32.5	76.0	5.4	4.8
			8:32	23.6	8.1	32.5	71.9	5.1	5.6
4.5	Sunny	Moderate	8:28	23.6	8.1	32.5	75.8	5.3	4.9
			8:33	23.6	8.1	32.5	71.6	5.0	5.0
5.0	Sunny	Moderate	8:28	23.6	8.1	32.5	75.6	5.3	4.9
			8:33	23.6	8.1	32.5	71.2	5.0	4.7
5.5	Sunny	Moderate	8:29	23.6	8.1	32.5	75.3	5.3	5.0
			8:33	23.6	8.1	32.5	71.5	5.0	4.1
6.0	Sunny	Moderate	8:29	23.6	8.1	32.5	74.8	5.3	4.4
			8:34	23.6	8.1	32.5	70.9	5.0	4.5
6.5	Sunny	Moderate	8:29	23.6	8.1	32.5	74.8	5.3	5.1
			8:34	23.6	8.1	32.5	70.7	5.0	5.3
7.0	Sunny	Moderate	8:29	23.7	8.1	32.5	74.7	5.3	5.5
			8:34	23.6	8.1	32.5	71.3	5.0	5.0
7.5	Sunny	Moderate	8:30	23.7	8.1	32.5	75.1	5.3	20.9
			8:34	23.7	8.1	32.5	71.1	5.0	18.4

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	8:25	23.6	8.1	32.5	80.5	5.7	2.4
			8:31	23.6	8.1	32.4	86.4	6.1	2.3
4.0	Sunny	Moderate	8:28	23.6	8.1	32.5	76.0	5.4	4.8
			8:32	23.6	8.1	32.5	71.9	5.1	5.6
7.0	Sunny	Moderate	8:29	23.7	8.1	32.5	74.7	5.3	5.5
			8:34	23.6	8.1	32.5	71.3	5.0	5.0

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at IB3 - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
0.5	Sunny	Moderate	9:12	23.7	8.1	32.5	90.7	6.4	2.6
			9:20	23.7	8.1	32.5	80.3	5.6	2.9
1.0	Sunny	Moderate	9:13	23.7	8.1	32.5	87.9	6.2	2.7
			9:20	23.7	8.1	32.5	78.3	5.5	2.7
1.5	Sunny	Moderate	9:13	23.7	8.1	32.5	87.4	6.2	2.7
			9:20	23.7	8.1	32.5	77.4	5.4	2.7
2.0	Sunny	Moderate	9:14	23.7	8.1	32.5	87.0	6.1	2.7
			9:20	23.7	8.1	32.5	77.1	5.4	2.7
2.5	Sunny	Moderate	9:14	23.7	8.1	32.5	86.2	6.1	2.7
			9:21	23.7	8.1	32.5	77.1	5.4	2.6
3.0	Sunny	Moderate	9:14	23.7	8.1	32.5	85.8	6.0	3.0
			9:21	23.7	8.1	32.5	76.2	5.4	2.8
3.5	Sunny	Moderate	9:14	23.7	8.1	32.5	85.5	6.0	2.7
			9:21	23.7	8.1	32.5	75.6	5.3	2.7
4.0	Sunny	Moderate	9:15	23.7	8.1	32.5	84.6	6.0	2.9
			9:22	23.7	8.1	32.5	76.3	5.4	2.7
4.5	Sunny	Moderate	9:15	23.7	8.1	32.5	85.2	6.0	2.8
			9:22	23.7	8.1	32.5	75.6	5.3	2.8
5.0	Sunny	Moderate	9:16	23.7	8.1	32.5	84.4	5.9	2.7
			9:22	23.7	8.1	32.5	75.7	5.3	2.9
5.5	Sunny	Moderate	9:16	23.7	8.1	32.5	83.9	5.9	2.8
			9:22	23.7	8.1	32.5	75.5	5.3	3.0
6.0	Sunny	Moderate	9:16	23.7	8.1	32.5	83.6	5.9	2.9
			9:23	23.7	8.1	32.5	75.7	5.3	3.1
6.5	Sunny	Moderate	9:16	23.7	8.1	32.6	84.4	5.9	2.9
			9:23	23.7	8.1	32.5	75.7	5.3	3.0
7.0	Sunny	Moderate	9:17	23.7	8.1	32.6	84.6	6.0	3.8
			9:23	23.7	8.1	32.5	75.4	5.3	3.1
7.5	Sunny	Moderate	9:17	23.7	8.1	32.6	84.8	6.0	3.4
			9:23	23.7	8.1	32.5	75.2	5.3	3.2
8.0	Sunny	Moderate	9:19	23.7	8.1	32.6	82.9	5.8	4.8
			9:24	23.7	8.1	32.6	75.5	5.3	4.4
8.5	Sunny	Moderate	9:19	23.7	8.1	32.6	82.1	5.8	4.8
			9:24	23.7	8.1	32.6	75.7	5.3	4.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
1.0	Sunny	Moderate	9:13	23.7	8.1	32.5	87.9	6.2	2.7
			9:20	23.7	8.1	32.5	78.3	5.5	2.7
4.5	Sunny	Moderate	9:15	23.7	8.1	32.5	85.2	6.0	2.8
			9:22	23.7	8.1	32.5	75.6	5.3	2.8
8.0	Sunny	Moderate	9:19	23.7	8.1	32.6	82.9	5.8	4.8
			9:24	23.7	8.1	32.6	75.6	5.3	4.4

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at OB1 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	8:45	23.7	8.1	32.5	90.9	6.4	5.9
			8:51	23.7	8.1	32.5	82.5	5.8	5.6
1.0	Sunny	Moderate	8:46	23.7	8.1	32.5	90.0	6.3	4.2
			8:51	23.7	8.1	32.5	79.7	5.6	4.1
1.5	Sunny	Moderate	8:46	23.7	8.1	32.5	89.8	6.3	4.2
			8:52	23.7	8.1	32.5	78.3	5.5	3.6
2.0	Sunny	Moderate	8:46	23.7	8.1	32.5	90.3	6.3	3.8
			8:52	23.7	8.1	32.5	77.5	5.4	3.7
2.5	Sunny	Moderate	8:47	23.7	8.1	32.5	89.3	6.3	4.4
			8:54	23.7	8.1	32.5	78.6	5.5	4.6
3.0	Sunny	Moderate	8:47	23.7	8.1	32.5	88.6	6.2	4.0
			8:54	23.7	8.1	32.5	77.9	5.5	4.7
3.5	Sunny	Moderate	8:47	23.7	8.1	32.5	87.6	6.2	3.9
			8:54	23.7	8.1	32.5	76.9	5.4	4.5
4.0	Sunny	Moderate	8:48	23.7	8.1	32.5	87.2	6.1	3.6
			8:55	23.7	8.1	32.5	76.7	5.4	4.4
4.5	Sunny	Moderate	8:48	23.7	8.1	32.5	85.7	6.0	3.7
			8:55	23.7	8.1	32.5	74.8	5.3	4.2
5.0	Sunny	Moderate	8:48	23.7	8.1	32.5	86.3	6.1	3.7
			8:56	23.7	8.1	32.5	75.8	5.3	4.1
5.5	Sunny	Moderate	8:49	23.7	8.1	32.5	84.6	6.0	3.5
			8:56	23.7	8.1	32.5	75.1	5.3	4.3
6.0	Sunny	Moderate	8:49	23.7	8.1	32.5	83.5	5.9	3.7
			8:56	23.7	8.1	32.5	74.5	5.2	4.4
6.5	Sunny	Moderate	8:50	23.7	8.1	32.5	82.1	5.8	4.0
			8:57	23.7	8.1	32.5	74.0	5.2	4.4
7.0	Sunny	Moderate	8:50	23.7	8.1	32.5	81.7	5.7	4.9
			8:57	23.7	8.1	32.5	74.1	5.2	4.4
7.5	Sunny	Moderate	8:50	23.7	8.1	32.5	81.5	5.7	5.0
			8:57	23.7	8.1	32.5	74.0	5.2	5.2
8.0	Sunny	Moderate	8:51	23.7	8.1	32.5	81.3	5.7	19.9
			8:58	23.7	8.1	32.5	74.0	5.2	18.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	8:46	23.7	8.1	32.5	90.0	6.3	4.2
			8:51	23.7	8.1	32.5	79.7	5.6	4.1
4.25	Sunny	Moderate	8:48	23.7	8.1	32.5	85.3	6.1	3.6
			8:55	23.7	8.1	32.5	75.6	5.3	4.1
7.5	Sunny	Moderate	8:50	23.7	8.1	32.5	81.5	5.7	5.0
			8:57	23.7	8.1	32.5	74.0	5.2	5.2

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

– Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH1 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	9:50	23.9	8.0	32.4	80.8	5.7	3.6
			10:00	23.8	8.1	32.5	74.4	5.2	3.7
1.0	Sunny	Moderate	9:50	23.8	8.1	32.5	78.1	5.5	3.3
			10:00	23.8	8.1	32.5	75.6	5.3	4.1
1.5	Sunny	Moderate	9:50	23.8	8.1	32.5	77.2	5.4	3.4
			10:00	23.8	8.1	32.5	74.3	5.2	4.0
2.0	Sunny	Moderate	9:51	23.8	8.1	32.5	77.1	5.4	3.2
			10:00	23.8	8.1	32.4	73.4	5.1	3.5
2.5	Sunny	Moderate	9:51	23.8	8.1	32.5	77.2	5.4	3.4
			10:00	23.8	8.1	32.4	72.9	5.1	3.4
3.0	Sunny	Moderate	9:51	23.8	8.1	32.5	77.2	5.4	3.1
			10:01	23.8	8.1	32.4	71.9	5.0	3.5
3.5	Sunny	Moderate	9:51	23.8	8.1	32.4	73.5	5.2	3.1
			10:01	23.8	8.1	32.4	72.3	5.1	3.3
4.0	Sunny	Moderate	9:51	23.8	8.1	32.5	76.8	5.4	3.1
			10:01	23.8	8.1	32.4	72.2	5.1	3.4
4.5	Sunny	Moderate	9:52	23.9	8.1	32.4	75.5	5.3	3.2
			10:01	23.8	8.1	32.4	72.1	5.1	3.2
5.0	Sunny	Moderate	9:52	23.9	8.1	32.4	75.6	5.3	3.2
			10:01	23.8	8.1	32.4	71.9	5.0	3.2
5.5	Sunny	Moderate	9:52	23.8	8.1	32.5	75.7	5.3	3.2
			10:01	23.8	8.1	32.4	71.2	5.0	3.0
6.0	Sunny	Moderate	9:52	23.8	8.1	32.5	75.4	5.3	3.1
			10:01	23.8	8.1	32.4	72.1	5.1	2.9
6.5	Sunny	Moderate	9:53	23.8	8.1	32.5	75.4	5.3	3.3
			10:02	23.8	8.1	32.4	71.6	5.0	3.4
7.0	Sunny	Moderate	9:53	23.8	8.1	32.5	75.3	5.3	3.3
			10:02	23.8	8.1	32.5	71.6	5.0	3.5
7.5	Sunny	Moderate	9:53	23.8	8.1	32.5	74.8	5.2	3.4
			10:02	23.8	8.1	32.4	71.3	5.0	3.7
8.0	Sunny	Moderate	9:53	23.8	8.1	32.5	74.5	5.2	3.6
			10:02	23.8	8.1	32.5	70.6	5.0	4.0
8.5	Sunny	Moderate	9:53	23.8	8.1	32.5	74.2	5.2	3.6
			10:02	23.8	8.1	32.5	70.7	5.0	4.1
9.0	Sunny	Moderate	9:53	23.8	8.1	32.5	74.7	5.2	4.1
			10:02	23.8	8.1	32.5	71.0	5.0	4.4
9.5	Sunny	Moderate	9:54	23.8	8.1	32.5	74.6	5.2	3.7
			10:03	23.8	8.1	32.5	70.7	5.0	3.6
10.0	Sunny	Moderate	9:54	23.8	8.1	32.5	73.8	5.2	4.0
			10:03	23.8	8.1	32.5	70.3	4.9	4.9
10.5	Sunny	Moderate	9:54	23.8	8.1	32.5	74.5	5.2	5.2
			10:03	23.8	8.1	32.5	70.4	4.9	5.3
11.0	Sunny	Moderate	9:54	23.8	8.1	32.5	73.9	5.2	5.4
			10:04	23.8	8.1	32.5	69.8	4.9	5.4

Remark: * Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH1 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

11.5	Sunny	Moderate	9:54	23.8	8.1	32.5	74.2	5.2	4.9
			10:04	23.8	8.1	32.5	70.3	4.9	5.2
12.0	Sunny	Moderate	9:55	23.8	8.1	32.5	74.0	5.2	5.1
			10:04	23.8	8.1	32.5	69.6	4.9	5.5
12.5	Sunny	Moderate	9:55	23.8	8.1	32.5	73.2	5.1	6.5
			10:05	23.8	8.1	32.5	69.5	4.9	6.1
13.0	Sunny	Moderate	9:55	23.8	8.1	32.5	73.0	5.1	6.8
			10:05	23.8	8.1	32.5	69.6	4.9	7.3
13.5	Sunny	Moderate	9:56	23.8	8.1	32.5	72.5	5.1	6.5
			10:06	23.8	8.1	32.5	69.6	4.9	7.3
14.0	Sunny	Moderate	9:56	23.8	8.1	32.5	72.6	5.1	6.5
			10:06	23.8	8.1	32.5	69.6	4.9	7.4
14.5	Sunny	Moderate	9:56	23.8	8.1	32.5	72.2	5.1	6.0
			10:07	23.8	8.1	32.5	69.6	4.9	7.5
15.0	Sunny	Moderate	9:56	23.8	8.1	32.5	71.9	5.1	6.3
			10:08	23.8	8.1	32.5	69.2	4.9	7.5
15.5	Sunny	Moderate	9:57	23.8	8.1	32.5	71.8	5.0	6.6
			10:08	23.8	8.1	32.5	69.2	4.9	7.5
16.0	Sunny	Moderate	9:57	23.8	8.1	32.5	72.0	5.1	6.9
			10:08	23.8	8.1	32.5	69.2	4.9	8.4
16.5	Sunny	Moderate	9:58	23.8	8.1	32.5	71.8	5.0	7.9
			10:08	23.8	8.1	32.5	69.2	4.9	8.4
17.0	Sunny	Moderate	9:58	23.8	8.1	32.5	71.5	5.0	8.1
			10:09	23.8	8.1	32.5	69.2	4.9	8.5
17.5	Sunny	Moderate	9:58	23.8	8.1	32.5	71.5	5.0	9.1
			10:09	23.8	8.1	32.5	69.2	4.9	8.7
18.0	Sunny	Moderate	9:59	23.8	8.1	32.5	71.5	5.0	9.9
			10:09	23.8	8.1	32.5	69.1	4.9	8.9
18.5	Sunny	Moderate	9:58	23.8	8.1	32.5	71.0	5.0	9.5
			10:09	23.8	8.1	32.5	69.1	4.9	9.1
19.0	Sunny	Moderate	9:58	23.8	8.1	32.5	71.3	5.0	9.4
			10:09	23.8	8.1	32.5	69.1	4.9	9.3
19.5	Sunny	Moderate	9:58	23.8	8.1	32.5	71.3	5.0	9.4
			10:09	23.8	8.1	32.5	69.1	4.9	9.7
20.0	Sunny	Moderate	9:59	23.8	8.1	32.5	70.8	5.0	10.6
			10:10	23.8	8.1	32.5	69.1	4.9	10.7
20.5	Sunny	Moderate	9:59	23.8	8.1	32.5	70.7	5.0	18.5
			10:10	23.8	8.1	32.5	69.1	4.9	20.4

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	9:50	23.8	8.1	32.5	78.1	5.5	3.3
			10:00	23.8	8.1	32.5	75.6	5.3	4.1
10.5	Sunny	Moderate	9:54	23.8	8.1	32.5	74.5	5.2	5.2
			10:03	23.8	8.1	32.5	70.4	4.9	5.3
20.0	Sunny	Moderate	9:59	23.8	8.1	32.5	70.8	5.0	10.6
			10:10	23.8	8.1	32.5	69.1	4.9	10.7

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Remark: * Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH2 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:17	23.7	8.1	32.5	96.4	6.8	2.7
			10:33	23.4	7.8	32.2	91.5	6.4	3.0
1.0	Sunny	Moderate	10:17	23.7	8.1	32.5	92.6	6.5	2.9
			10:33	23.4	7.8	32.2	87.9	6.2	3.2
1.5	Sunny	Moderate	10:18	23.7	8.1	32.5	89.1	6.3	2.9
			10:33	23.4	7.8	32.2	84.6	5.9	3.2
2.0	Sunny	Moderate	10:18	23.7	8.1	32.5	88.4	6.2	2.9
			10:33	23.4	7.8	32.2	83.9	5.9	3.2
2.5	Sunny	Moderate	10:18	23.7	8.1	32.5	89.6	6.2	3.2
			10:33	23.4	7.8	32.2	84.1	5.9	3.5
3.0	Sunny	Moderate	10:18	23.7	8.1	32.6	88.2	6.2	3.2
			10:34	23.4	7.8	32.3	83.7	5.9	3.5
3.5	Sunny	Moderate	10:19	23.7	8.1	32.5	88.0	6.2	3.1
			10:34	23.4	7.8	32.2	83.6	5.9	3.4
4.0	Sunny	Moderate	10:19	23.7	8.1	32.6	87.4	6.1	3.1
			10:34	23.4	7.8	32.3	83.0	5.8	3.4
4.5	Sunny	Moderate	10:19	23.7	8.1	32.6	87.0	6.1	3.2
			10:34	23.4	7.8	32.3	82.6	5.8	3.5
5.0	Sunny	Moderate	10:19	23.7	8.2	32.6	86.7	6.1	3.2
			10:34	23.4	7.9	32.3	82.3	5.8	3.5
5.5	Sunny	Moderate	10:19	23.6	8.2	32.6	87.0	6.1	3.5
			10:34	23.3	7.9	32.3	82.6	5.8	3.8
6.0	Sunny	Moderate	10:20	23.6	8.2	32.6	86.6	6.1	3.3
			10:35	23.3	7.9	32.3	82.2	5.8	3.6
6.5	Sunny	Moderate	10:20	23.6	8.2	32.6	86.1	6.1	3.3
			10:35	23.3	7.9	32.3	81.7	5.8	3.6
7.0	Sunny	Moderate	10:20	23.6	8.2	32.6	86.4	6.1	3.2
			10:35	23.3	7.9	32.3	82.0	5.8	3.5
7.5	Sunny	Moderate	10:20	23.6	8.2	32.6	85.8	6.0	3.2
			10:35	23.3	7.9	32.3	81.5	5.7	3.5
8.0	Sunny	Moderate	10:20	23.6	8.2	32.6	85.0	6.0	3.2
			10:35	23.3	7.9	32.3	80.7	5.7	3.5
8.5	Sunny	Moderate	10:21	23.6	8.2	32.6	85.4	6.0	3.2
			10:36	23.3	7.9	32.3	81.1	5.7	3.5
9.0	Sunny	Moderate	10:21	23.6	8.2	32.6	84.9	6.0	3.4
			10:36	23.3	7.9	32.3	80.6	5.7	3.7
9.5	Sunny	Moderate	10:21	23.6	8.2	32.6	88.7	6.2	3.5
			10:36	23.3	7.9	32.3	84.2	5.9	3.8
10.0	Sunny	Moderate	10:21	23.6	8.2	32.6	79.5	5.6	3.4
			10:36	23.3	7.9	32.3	75.5	5.3	3.7
10.5	Sunny	Moderate	10:21	23.6	8.1	32.6	79.3	5.6	3.4
			10:36	23.3	7.8	32.3	75.3	5.3	3.7

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 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH2 - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

11.0	Sunny	Moderate	10:22	23.6	8.1	32.2	84.9	6.0	3.5
			10:36	23.3	7.8	32.9	80.6	5.7	3.8
11.5	Sunny	Moderate	10:22	23.6	8.1	32.6	88.7	6.2	3.7
			10:36	23.3	7.8	32.3	84.2	5.9	4.0
12.0	Sunny	Moderate	10:24	23.6	8.1	32.6	79.5	5.6	3.6
			10:36	23.3	7.8	32.3	75.5	5.3	3.9
12.5	Sunny	Moderate	10:24	23.6	8.1	32.6	79.3	5.6	4.3
			10:36	23.3	7.8	32.3	75.3	5.3	4.6
13.0	Sunny	Moderate	10:30	23.6	8.1	32.6	88.5	6.2	4.2
			10:37	23.3	7.8	32.3	84.0	5.9	4.5
13.5	Sunny	Moderate	10:31	23.6	8.1	32.6	88.5	6.2	4.2
			10:38	23.3	7.8	32.3	84.0	5.9	4.5
14.0	Sunny	Moderate	10:31	23.6	8.1	32.6	89.1	6.2	4.3
			10:38	23.3	7.8	32.3	83.6	5.9	4.6
14.5	Sunny	Moderate	10:31	23.6	8.1	32.6	89.2	6.3	4.4
			10:38	23.3	7.8	32.3	84.7	6.0	4.7
15.0	Sunny	Moderate	10:31	23.6	8.1	32.6	88.9	6.3	5.1
			10:38	23.3	7.8	32.3	84.4	5.9	5.4
15.5	Sunny	Moderate	10:31	23.6	8.1	32.6	88.8	6.2	5.2
			10:38	23.3	7.8	32.3	84.3	5.9	5.5
16.0	Sunny	Moderate	10:31	23.6	8.1	32.6	89.9	6.3	6.2
			10:38	23.3	7.8	32.3	85.4	6.0	6.5
16.5	Sunny	Moderate	10:31	23.6	8.1	32.6	89.9	6.3	6.2
			10:38	23.3	7.8	32.3	85.4	6.0	6.5
17.0	Sunny	Moderate	10:32	23.6	8.1	32.6	90.1	6.3	10.2
			10:39	23.3	7.8	32.3	85.5	6.0	10.5
17.5	Sunny	Moderate	10:32	23.6	8.1	32.6	90.1	6.3	16.2
			10:39	23.3	7.8	32.3	85.5	6.0	16.5

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	10:17	23.7	8.1	32.5	92.6	6.5	2.9
			10:33	23.4	7.8	32.2	87.9	6.2	3.2
9.0	Sunny	Moderate	10:21	23.6	8.2	32.6	84.9	6.0	3.4
			10:36	23.3	7.9	32.3	80.6	5.7	3.7
17.0	Sunny	Moderate	10:32	23.6	8.1	32.6	90.1	6.3	10.2
			10:39	23.3	7.8	32.3	85.5	6.0	10.5

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at KTN - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:59	26.6	7.2	12.9	95.1	7.1	27.8
			11:01	26.5	7.2	13.4	93.1	7.0	29.3
1.0	Sunny	Moderate	10:59	25.8	7.3	17.7	86.0	6.3	6.4
			11:02	25.8	7.3	18.1	87.7	6.5	6.2
1.5	Sunny	Moderate	11:00	25.0	7.6	31.2	47.3	3.3	16.2
			11:03	25.0	7.6	31.3	46.2	3.2	16.0
2.0	Sunny	Moderate	11:01	24.8	7.6	32.0	45.1	3.1	10.2
			11:03	24.8	7.6	32.0	44.9	3.1	9.7

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.25	Sunny	Moderate	11:00	25.2	7.5	29.2	54.3	3.8	13.6
			11:02	25.2	7.6	29.4	52.8	3.7	14.3

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at JVC - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	9:59	25.1	7.2	13.1	17.6	1.3	8.1
			10:02	25.1	7.2	13.0	17.4	1.3	7.9
1.0	Sunny	Moderate	9:59	25.0	7.2	13.8	16.9	1.3	10.7
			10:03	25.0	7.1	13.8	17.0	1.3	11.3
1.5	Sunny	Moderate	10:00	24.8	7.6	31.1	12.0	0.8	9.2
			10:03	24.8	7.6	31.3	12.1	0.8	8.9
2.0	Sunny	Moderate	10:00	24.7	7.7	31.7	11.4	0.8	12.1
			10:03	24.7	7.7	31.7	11.0	0.8	12.5
2.5	Sunny	Moderate	10:00	24.6	7.7	32.0	10.7	0.7	12.1
			10:04	24.6	7.7	32.1	10.9	0.8	11.8
3.0	Sunny	Moderate	10:01	24.6	7.7	32.2	14.2	1.0	11.2
			10:04	24.6	7.7	32.2	14.3	1.0	11.0
3.5	Sunny	Moderate	10:01	24.6	7.7	32.3	15.8	1.1	7.6
			10:05	24.6	7.7	32.2	15.6	1.1	7.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	9:59	25.0	7.2	13.8	16.9	1.3	10.7
			10:03	25.0	7.1	13.8	17.0	1.3	11.3
3.0	Sunny	Moderate	10:01	24.6	7.7	32.2	14.2	1.0	11.2
			10:04	24.6	7.7	32.2	14.3	1.0	11.0

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Tai Wan - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	9:30	23.8	8.1	32.5	92.0	6.5	3.0
			9:38	23.8	8.1	32.5	75.8	5.3	3.1
1.0	Sunny	Moderate	9:30	23.8	8.1	32.5	88.8	6.2	3.2
			9:38	23.8	8.1	32.5	75.4	5.3	3.2
1.5	Sunny	Moderate	9:31	23.8	8.1	32.5	87.1	6.1	3.2
			9:39	23.8	8.1	32.5	74.7	5.2	3.1
2.0	Sunny	Moderate	9:31	23.8	8.1	32.5	85.2	6.0	3.3
			9:39	23.8	8.1	32.6	74.3	5.2	3.3
2.5	Sunny	Moderate	9:32	23.8	8.1	32.6	84.0	5.9	3.4
			9:39	23.8	8.1	32.6	74.2	5.2	3.3
3.0	Sunny	Moderate	9:32	23.8	8.1	32.6	83.3	5.9	3.5
			9:39	23.8	8.1	32.6	74.1	5.2	3.1
3.5	Sunny	Moderate	9:33	23.8	8.1	32.6	82.4	5.8	3.7
			9:40	23.8	8.1	32.6	73.9	5.2	3.0
4.0	Sunny	Moderate	9:33	23.7	8.1	32.6	81.5	5.7	3.9
			9:40	23.8	8.1	32.6	74.1	5.2	3.2
4.5	Sunny	Moderate	9:33	23.7	8.1	32.6	81.0	5.7	4.5
			9:40	23.8	8.1	32.6	73.7	5.2	3.6
5.0	Sunny	Moderate	9:33	23.7	8.1	32.6	81.1	5.7	4.4
			9:40	23.8	8.1	32.6	73.7	5.2	4.0
5.5	Sunny	Moderate	9:34	23.7	8.1	32.6	80.2	5.6	4.1
			9:41	23.8	8.1	32.6	73.6	5.2	4.2
6.0	Sunny	Moderate	9:34	23.7	8.1	32.6	79.9	5.6	4.2
			9:41	23.8	8.1	32.6	73.6	5.2	4.0
6.5	Sunny	Moderate	9:34	23.7	8.1	32.6	79.2	5.6	4.2
			9:41	23.8	8.1	32.6	73.4	5.2	3.7
7.0	Sunny	Moderate	9:34	23.7	8.1	32.6	79.0	5.6	4.5
			9:41	23.7	8.1	32.6	73.3	5.2	4.2
7.5	Sunny	Moderate	9:35	23.7	8.1	32.6	78.7	5.6	4.2
			9:42	23.7	8.1	32.6	73.4	5.2	4.2
8.0	Sunny	Moderate	9:35	23.7	8.1	32.6	77.8	5.5	4.5
			9:42	23.7	8.1	32.6	73.2	5.1	4.1
8.5	Sunny	Moderate	9:35	23.7	8.1	32.6	77.2	5.4	4.5
			9:42	23.7	8.1	32.6	73.1	5.1	4.1
9.0	Sunny	Moderate	9:35	23.7	8.1	32.6	77.5	5.4	4.6
			9:42	23.7	8.1	32.6	73.0	5.1	4.1
9.5	Sunny	Moderate	9:36	23.7	8.1	32.6	77.4	5.4	4.3
			9:42	23.7	8.1	32.6	72.7	5.1	4.2
10.0	Sunny	Moderate	9:36	23.7	8.1	32.6	77.7	5.5	4.3
			9:43	23.7	8.1	32.6	72.8	5.1	4.1
10.5	Sunny	Moderate	9:36	23.7	8.1	32.6	77.4	5.4	3.9
			9:43	23.7	8.1	32.6	72.7	5.1	4.2
11.0	Sunny	Moderate	9:36	23.7	8.1	32.6	77.7	5.5	4.4
			9:43	23.7	8.1	32.6	72.4	5.1	4.1
11.5	Sunny	Moderate	9:37	23.7	8.1	32.6	77.2	5.4	4.4
			9:43	23.7	8.1	32.6	72.7	5.1	4.0

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

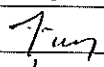

Water Quality Monitoring Results at WSD Intake at Tai Wan - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
6.0	Sunny	Moderate	9:34	23.7	8.1	32.6	79.9	5.6	4.2
			9:41	23.8	8.1	32.6	73.6	5.2	4.0

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Cha Kwo Ling - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	8:25	23.7	8.1	32.4	125.4	8.8	2.7
			8:35	23.7	8.1	32.4	125.1	8.8	2.7
1.0	Sunny	Moderate	8:25	23.7	8.1	32.4	123.8	8.7	2.7
			8:35	23.7	8.1	32.4	123.9	8.7	2.8
1.5	Sunny	Moderate	8:25	23.7	8.1	32.4	122.4	8.6	3.0
			8:35	23.7	8.1	32.4	122.1	8.6	2.9
2.0	Sunny	Moderate	8:27	23.7	8.1	32.4	121.7	8.6	3.0
			8:37	23.7	8.1	32.4	121.4	8.5	3.0
2.5	Sunny	Moderate	8:27	23.7	8.1	32.4	121.2	8.5	2.9
			8:37	23.7	8.1	32.4	120.9	8.5	2.9
3.0	Sunny	Moderate	8:27	23.7	8.1	32.4	119.9	8.4	3.0
			8:37	23.7	8.1	32.4	119.9	8.4	2.9
3.5	Sunny	Moderate	8:28	23.6	8.1	32.5	119.4	8.4	3.0
			8:38	23.6	8.1	32.5	119.7	8.4	3.0
4.0	Sunny	Moderate	8:28	23.7	8.1	32.5	119.1	8.4	3.0
			8:38	23.7	8.1	32.5	119.0	8.4	3.1
4.5	Sunny	Moderate	8:29	23.6	8.1	32.5	118.6	8.3	3.5
			8:39	23.6	8.1	32.5	118.7	8.4	3.7
5.0	Sunny	Moderate	8:29	23.6	8.1	32.5	118.2	8.3	4.3
			8:39	23.6	8.1	32.5	118.1	8.3	4.1
5.5	Sunny	Moderate	8:30	23.6	8.1	32.5	117.0	8.2	3.9
			8:40	23.6	8.1	32.5	116.9	8.2	3.9
6.0	Sunny	Moderate	8:30	23.6	8.1	32.5	116.5	8.2	4.5
			8:40	23.6	8.1	32.5	116.3	8.2	4.3
6.5	Sunny	Moderate	8:31	23.6	8.1	32.5	115.9	8.2	4.3
			8:41	23.6	8.1	32.5	115.6	8.1	4.4
7.0	Sunny	Moderate	8:31	23.6	8.1	32.5	114.9	8.1	5.2
			8:41	23.6	8.1	32.5	114.8	8.1	5.4
7.5	Sunny	Moderate	8:31	23.6	8.1	32.5	114.3	8.0	5.1
			8:42	23.6	8.1	32.5	114.1	8.0	5.0
8.0	Sunny	Moderate	8:32	23.6	8.1	32.5	113.5	8.0	5.2
			8:42	23.6	8.1	32.5	113.3	8.0	5.2
8.5	Sunny	Moderate	8:32	23.6	8.1	32.5	112.6	7.9	5.2
			8:43	23.6	8.1	32.5	112.3	7.9	5.4
9.0	Sunny	Moderate	8:33	23.6	8.1	32.5	111.6	7.9	5.5
			8:43	23.6	8.1	32.5	111.5	7.9	5.7
9.5	Sunny	Moderate	8:33	23.6	8.1	32.5	111.0	7.8	5.9
			8:43	23.6	8.1	32.5	111.0	7.8	5.9
10.0	Sunny	Moderate	8:33	23.6	8.1	32.5	110.7	7.8	5.8
			8:44	23.6	8.1	32.5	110.4	7.8	6.0
10.5	Sunny	Moderate	8:34	23.6	8.1	32.5	109.1	7.7	6.4
			8:44	23.6	8.1	32.5	108.9	7.7	6.2

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
5.5	Sunny	Moderate	8:30	23.6	8.1	32.5	117.0	8.2	3.9
			8:40	23.6	8.1	32.5	116.9	8.2	3.9

	Name	Signature	Date
Conducted by:	Lee Man Hel		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Quarry Bay - Mid-Ebb Tide

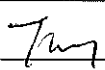

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:42	23.8	8.1	32.4	85.5	6.0	4.2
			10:45	23.8	8.1	32.4	86.5	6.1	4.8
1.0	Sunny	Moderate	10:42	23.7	8.1	32.4	85.6	6.0	4.4
			10:45	23.8	8.1	32.4	83.5	5.9	4.7
1.5	Sunny	Moderate	10:42	23.7	8.1	32.5	85.6	6.0	4.4
			10:45	23.8	8.1	32.4	83.5	5.9	4.7
2.0	Sunny	Moderate	10:43	23.7	8.1	32.5	85.6	6.0	4.4
			10:45	23.7	8.1	32.5	82.4	5.8	4.7
2.5	Sunny	Moderate	10:43	23.7	8.1	32.5	85.5	6.0	4.7
			10:45	23.7	8.1	32.5	82.3	5.8	4.7
3.0	Sunny	Moderate	10:43	23.7	8.1	32.5	85.4	6.0	4.7
			10:45	23.7	8.1	32.5	81.8	5.8	4.9
3.5	Sunny	Moderate	10:43	23.7	8.1	32.5	85.2	6.0	4.6
			10:45	23.7	8.1	32.5	81.8	5.8	5.0
4.0	Sunny	Moderate	10:43	23.7	8.1	32.5	84.9	6.0	4.6
			10:46	23.7	8.1	32.5	81.8	5.8	4.9
4.5	Sunny	Moderate	10:44	23.7	8.1	32.5	84.8	6.0	4.7
			10:46	23.7	8.1	32.5	82.0	5.8	4.9
5.0	Sunny	Moderate	10:44	23.7	8.1	32.5	84.2	5.9	4.7
			10:46	23.7	8.1	32.5	82.0	5.8	5.0
5.5	Sunny	Moderate	10:44	23.7	8.1	32.5	83.9	5.9	6.2
			10:46	23.7	8.1	32.5	81.0	5.7	6.4
6.0	Sunny	Moderate	10:44	23.7	8.1	32.5	83.2	5.8	7.0
			10:46	23.7	8.1	32.5	80.7	5.7	7.3

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
3.25	Sunny	Moderate	10:43	23.7	8.1	32.5	85.3	6.0	4.6
			10:45	23.7	8.1	32.5	81.8	5.8	5.0

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Sai Wan Ho - Mid-Ebb Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	10:55	23.7	8.1	32.5	83.1	6.3	4.9
			11:00	23.7	8.1	32.5	81.8	5.8	5.0
1.0	Sunny	Moderate	10:58	23.7	8.1	32.5	91.7	6.5	4.0
			11:00	23.7	8.1	32.5	81.8	5.7	4.1
1.5	Sunny	Moderate	10:56	23.7	8.1	32.6	83.1	6.3	3.2
			11:00	23.7	8.1	32.5	80.8	5.7	3.5
2.0	Sunny	Moderate	10:56	23.7	8.1	32.6	83.4	6.2	3.5
			11:00	23.8	8.1	32.5	80.2	5.6	3.5
2.5	Sunny	Moderate	10:56	23.7	8.1	32.6	83.3	6.2	2.8
			11:01	23.8	8.1	32.5	78.8	5.5	2.7
3.0	Sunny	Moderate	10:57	23.7	8.1	32.6	83.8	6.2	2.0
			11:01	23.8	8.1	32.5	78.1	5.5	2.3
3.5	Sunny	Moderate	10:57	23.7	8.1	32.6	83.8	6.2	3.4
			11:01	23.7	8.1	32.5	78.3	5.5	3.2
4.0	Sunny	Moderate	10:57	23.7	8.1	32.6	83.6	6.2	3.6
			11:01	23.7	8.1	32.5	77.7	5.5	3.1
4.5	Sunny	Moderate	10:57	23.6	8.1	32.6	83.1	6.2	3.5
			11:01	23.7	8.1	32.5	77.7	5.5	3.1
5.0	Sunny	Moderate	10:57	23.6	8.1	32.6	83.5	6.2	3.4
			11:01	23.7	8.1	32.5	78.8	5.5	3.1
5.5	Sunny	Moderate	10:57	23.6	8.1	32.6	87.6	6.2	3.2
			11:02	23.7	8.1	32.6	79.5	5.5	3.1
6.0	Sunny	Moderate	10:57	23.6	8.1	32.6	87.8	6.2	3.0
			11:02	23.7	8.1	32.6	78.2	5.5	3.2
6.5	Sunny	Moderate	10:58	23.6	8.1	32.6	87.6	6.2	3.1
			11:02	23.7	8.1	32.6	79.1	5.6	3.5
7.0	Sunny	Moderate	10:58	23.6	8.1	32.6	86.8	6.1	3.2
			11:02	23.6	8.1	32.6	79.2	5.6	3.6
7.5	Sunny	Moderate	10:58	23.6	8.1	32.6	87.0	6.1	3.9
			11:02	23.6	8.1	32.6	78.7	5.5	3.5
8.0	Sunny	Moderate	10:58	23.6	8.1	32.6	86.6	6.1	3.9
			11:02	23.6	8.1	32.6	78.2	5.5	3.5
8.5	Sunny	Moderate	10:58	23.6	8.1	32.6	86.1	6.1	3.6
			11:02	23.6	8.1	32.6	78.2	5.5	3.6
9.0	Sunny	Moderate	10:58	23.6	8.1	32.6	86.3	6.1	3.8
			11:02	23.6	8.1	32.6	78.7	5.5	3.7
9.5	Sunny	Moderate	10:58	23.6	8.1	32.6	86.0	6.0	3.5
			11:03	23.6	8.1	32.6	78.2	5.5	3.8
10.0	Sunny	Moderate	10:58	23.6	8.1	32.6	85.3	6.0	3.2
			11:03	23.6	8.1	32.6	77.5	5.5	3.8

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Sai Wan Ho - Mid-Ebb Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Time	Weather	Sea Condition	10:59	23.6	8.1	32.6	85.3	6.0	3.5
			11:03	23.6	8.1	32.6	79.3	5.5	3.8
11.0	Sunny	Moderate	10:59	23.6	8.1	32.6	85.0	6.0	3.9
			11:03	23.6	8.1	32.6	77.8	5.5	4.5
11.5	Sunny	Moderate	10:59	23.6	8.1	32.6	85.0	6.0	4.5
			11:03	23.6	8.1	32.6	77.3	5.4	5.1
12.0	Sunny	Moderate	10:59	23.6	8.1	32.6	84.8	6.0	4.6
			11:03	23.6	8.1	32.6	78.4	5.5	4.5
12.5	Sunny	Moderate	10:59	23.6	8.1	32.6	84.2	5.9	5.1
			11:03	23.6	8.1	32.6	78.2	5.5	4.9
13.0	Sunny	Moderate	10:59	23.6	8.1	32.6	83.9	5.9	5.0
			11:04	23.6	8.2	32.6	77.5	5.5	5.8
13.5	Sunny	Moderate	10:59	23.6	8.1	32.6	84.2	5.9	6.1
			11:04	23.6	8.2	32.6	77.5	5.5	5.5

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
7.0	Sunny	Moderate	10:53	23.6	8.1	32.6	86.8	6.1	3.2
			11:02	23.6	8.1	32.6	79.2	5.6	3.6

	Name	Signature	Date
Conducted by:	Ting Ka Wal		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC1 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:26	26.3	7.3	14.4	111.9	8.3	3.9
			16:29	26.3	7.3	14.6	113.3	8.4	4.0
1.0	Sunny	Moderate	16:26	25.6	7.6	26.6	74.3	5.2	11.5
			16:29	25.6	7.5	25.5	72.4	5.1	12.1
1.5	Sunny	Moderate	16:27	25.0	7.6	31.7	62.9	4.3	20.4
			16:30	25.0	7.6	31.7	61.7	4.3	21.0
2.0	Sunny	Moderate	16:27	24.9	7.5	32.0	59.4	4.1	12.1
			16:30	24.9	7.5	32.0	59.0	4.1	10.4
2.5	Sunny	Moderate	16:28	24.8	7.4	32.3	57.5	4.0	7.8
			16:30	24.8	7.4	32.3	57.4	4.0	8.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	16:26	25.6	7.6	26.6	74.3	5.2	11.5
			16:29	25.6	7.5	25.5	72.4	5.1	12.1
2.0	Sunny	Moderate	16:27	24.9	7.5	32.0	59.4	4.1	12.1
			16:30	24.9	7.5	32.0	59.0	4.1	10.4

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC2 - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:40	26.1	7.4	17.2	107.3	7.9	3.5
			16:44	26.2	7.4	18.1	107.2	7.8	3.3
1.0	Sunny	Moderate	16:40	25.8	7.6	23.7	89.2	6.4	8.6
			16:44	25.8	7.6	23.9	91.2	6.5	8.2
1.5	Sunny	Moderate	16:41	25.0	7.7	31.4	67.2	4.6	26.4
			16:45	25.0	7.7	31.4	65.3	4.5	30.8
2.0	Sunny	Moderate	16:41	24.9	7.6	32.0	57.1	3.9	11.2
			16:45	24.9	7.6	32.0	56.5	3.9	10.6
2.5	Sunny	Moderate	16:42	24.8	7.5	32.1	55.4	3.8	7.7
			16:46	24.8	7.5	32.1	55.0	3.8	7.0
3.0	Sunny	Moderate	16:42	24.7	7.6	32.2	54.5	3.8	6.5
			16:46	24.7	7.6	32.2	54.4	3.8	6.3
3.5	Sunny	Moderate	16:42	24.7	7.6	32.3	54.1	3.7	8.5
			16:46	24.7	7.6	32.3	54.0	3.7	8.6
4.0	Sunny	Moderate	16:43	24.6	7.7	32.3	53.8	3.7	7.0
			16:47	24.6	7.7	32.3	53.7	3.7	6.7
4.5	Sunny	Moderate	16:43	24.7	7.5	32.3	53.3	3.7	5.2
			16:47	24.7	7.5	32.3	53.3	3.7	5.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	16:40	25.8	7.6	23.7	89.2	6.4	8.6
			16:44	25.8	7.6	23.9	91.2	6.5	8.2
4.0	Sunny	Moderate	16:43	24.6	7.7	32.3	53.8	3.7	7.0
			16:47	24.6	7.7	32.3	53.7	3.7	6.7

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC3 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:13	26.2	7.2	15.0	99.9	7.4	4.0
			16:15	26.1	7.3	12.4	98.3	7.4	3.8
1.0	Sunny	Moderate	16:13	25.2	7.4	25.5	49.6	3.5	5.8
			16:16	25.2	7.4	25.6	46.7	3.3	6.2
1.5	Sunny	Moderate	16:14	24.9	7.5	31.3	39.5	2.7	13.8
			16:16	24.9	7.6	31.4	38.1	2.6	13.8
2.0	Sunny	Moderate	16:14	24.8	7.6	30.1	35.9	2.5	15.0
			16:16	24.8	7.6	30.1	35.2	2.5	14.3

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.25	Sunny	Moderate	16:13	25.2	7.4	28.1	44.6	3.0	8.7
			16:16	25.2	7.4	28.7	43.6	3.0	9.0

	Name	Signature	Date
Conducted by:	Lee Man Hei	<i>Lee Man Hei</i>	22-Nov-11
Checked by:	W.K. Tang	<i>W.K. Tang</i>	22-Nov-11

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC4 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:56	26.2	7.2	13.8	40.9	3.1	4.1
			16:01	26.2	7.2	13.7	41.4	3.1	4.1
1.0	Sunny	Moderate	15:57	25.4	7.5	18.6	36.9	2.7	5.6
			16:01	25.6	7.5	16.5	36.8	2.7	5.5
1.5	Sunny	Moderate	15:57	24.8	7.6	31.2	38.2	2.7	7.7
			16:02	24.8	7.6	31.2	37.0	2.6	7.5
2.0	Sunny	Moderate	15:58	24.7	7.7	32.0	32.4	2.2	14.0
			16:02	24.7	7.7	31.9	31.8	2.2	15.3
2.5	Sunny	Moderate	15:58	24.6	7.7	32.1	31.2	2.2	14.9
			16:02	24.6	7.7	32.1	31.1	2.2	15.6
3.0	Sunny	Moderate	15:59	24.6	7.7	32.2	31.3	2.2	15.0
			16:02	24.6	7.7	32.3	31.2	2.2	15.5
3.5	Sunny	Moderate	15:59	24.6	7.6	32.3	30.7	2.1	13.9
			16:02	24.7	7.6	32.3	30.7	2.1	13.4
4.0	Sunny	Moderate	15:59	24.5	7.7	32.3	30.7	2.1	16.4
			16:03	24.5	7.7	32.3	30.8	2.1	16.1
4.5	Sunny	Moderate	16:00	24.5	7.8	32.3	31.4	2.2	23.1
			16:03	24.5	7.8	32.3	31.4	2.2	23.3

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	15:57	25.4	7.5	18.6	36.9	2.7	5.6
			16:01	25.6	7.5	16.5	36.8	2.7	5.5
4.0	Sunny	Moderate	15:59	24.5	7.7	32.3	30.7	2.1	16.4
			16:03	24.5	7.7	32.3	30.8	2.1	16.1

	Name	Signature	Date
Conducted by:	Lee Man Hei	<i>hi</i>	22-Nov-11
Checked by:	W.K. Tang	<i>W.K. Tang</i>	22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC5 - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:09	26.2	7.3	12.5	64.7	4.9	4.8
			15:11	26.2	7.3	12.5	64.3	4.9	5.1
1.0	Sunny	Moderate	15:09	25.0	7.4	29.2	47.5	3.3	7.4
			15:11	25.0	7.5	29.0	46.9	3.3	7.6
1.5	Sunny	Moderate	15:10	24.9	7.6	31.4	44.4	3.1	14.3
			15:12	24.9	7.7	31.4	44.3	3.1	15.0
2.0	Sunny	Moderate	15:10	24.8	7.7	31.5	44.0	3.1	16.2
			15:12	24.8	7.7	31.5	43.8	3.0	17.3
2.5	Sunny	Moderate	15:10	24.7	7.7	31.9	43.7	3.0	11.6
			15:12	24.7	7.7	31.9	44.9	3.1	11.3

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	15:09	25.0	7.4	29.2	47.5	3.3	7.4
			15:11	25.0	7.5	29.0	46.9	3.3	7.6
2.0	Sunny	Moderate	15:10	24.8	7.7	31.5	44.0	3.1	16.2
			15:12	24.8	7.7	31.5	43.8	3.0	17.3

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC6 - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:21	26.0	7.3	12.7	48.1	3.6	4.5
			15:26	26.0	7.2	12.8	47.7	3.6	4.5
1.0	Sunny	Moderate	15:21	25.0	7.4	29.7	40.5	2.8	4.5
			15:26	25.0	7.5	29.5	41.3	2.9	4.9
1.5	Sunny	Moderate	15:22	24.7	7.7	31.8	47.4	3.3	3.2
			15:26	24.7	7.7	31.8	48.6	3.4	3.0
2.0	Sunny	Moderate	15:22	24.5	7.8	32.2	61.7	4.3	2.4
			15:26	24.5	7.8	32.2	63.1	4.4	2.5
2.5	Sunny	Moderate	15:23	24.4	7.9	32.2	78.0	5.4	2.0
			15:27	24.4	7.9	32.2	78.8	5.5	1.8
3.0	Sunny	Moderate	15:23	24.4	7.9	32.3	83.5	5.8	1.9
			15:27	24.4	7.9	32.3	84.6	5.9	1.9
3.5	Sunny	Moderate	15:23	24.3	7.9	32.3	87.4	6.1	2.1
			15:28	24.3	7.9	32.3	89.0	6.2	2.1
4.0	Sunny	Moderate	15:24	24.3	7.9	32.3	95.1	6.6	2.2
			15:28	24.3	7.9	32.3	96.3	6.7	2.2
4.5	Sunny	Moderate	15:24	24.3	7.9	32.3	98.0	6.8	2.2
			15:28	24.3	7.9	32.3	98.6	6.9	2.3
5.0	Sunny	Moderate	15:24	24.2	8.0	32.3	99.7	7.0	2.4
			15:29	24.2	8.0	32.3	100.1	7.0	2.3
5.5	Sunny	Moderate	15:25	24.2	8.0	32.3	100.9	7.0	2.4
			15:29	24.2	8.0	32.3	101.4	7.1	2.3

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	15:21	25.0	7.4	29.7	40.5	2.8	4.5
			15:26	25.0	7.5	29.5	41.3	2.9	4.9
3.0	Sunny	Moderate	15:23	24.4	7.9	32.3	83.5	5.8	1.9
			15:27	24.4	7.9	32.3	84.6	5.9	1.9
5.0	Sunny	Moderate	15:24	24.2	8.0	32.3	99.7	7.0	2.4
			15:29	24.2	8.0	32.3	100.1	7.0	2.3

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at AC7 - Mid-Flood Tide

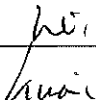

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	14:50	25.6	7.2	15.3	41.5	3.1	5.7
			14:56	25.6	7.2	15.3	42.1	3.2	5.8
1.0	Sunny	Moderate	14:51	24.9	7.8	31.1	71.0	4.9	2.4
			14:56	24.9	7.8	31.0	71.4	5.0	2.2
1.5	Sunny	Moderate	14:51	24.7	7.7	32.0	63.5	4.4	1.9
			14:57	24.7	7.7	32.0	61.9	4.3	1.8
2.0	Sunny	Moderate	14:52	24.7	7.7	32.0	55.7	3.9	1.9
			14:57	24.7	7.7	32.0	55.0	3.8	1.8
2.5	Sunny	Moderate	14:52	24.6	7.8	32.2	56.5	3.9	1.6
			14:57	24.6	7.8	32.2	58.0	4.0	1.5
3.0	Sunny	Moderate	14:53	24.5	7.9	32.3	80.1	5.6	1.2
			14:58	24.5	7.9	32.3	80.5	5.6	1.3
3.5	Sunny	Moderate	14:54	24.4	7.9	32.3	90.3	6.3	1.3
			14:59	24.4	7.9	32.3	91.4	6.4	1.3
4.0	Sunny	Moderate	14:54	24.3	8.0	32.3	98.2	6.8	1.3
			14:59	24.3	8.0	32.3	99.6	6.9	1.3
4.5	Sunny	Moderate	14:55	24.3	8.0	32.3	104.4	7.3	1.7
			15:00	24.3	8.0	32.3	104.9	7.3	1.7
5.0	Sunny	Moderate	14:55	24.1	8.0	32.4	110.2	7.7	2.5
			15:00	24.1	8.0	32.4	111.7	7.8	2.5
5.5	Sunny	Moderate	14:55	24.1	8.0	32.4	117.0	8.2	2.7
			15:00	24.1	8.0	32.4	117.3	8.2	2.8

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	14:51	24.9	7.8	31.1	71.0	4.9	2.4
			14:56	24.9	7.8	31.0	71.4	5.0	2.2
3.0	Sunny	Moderate	14:53	24.5	7.9	32.3	80.1	5.6	1.2
			14:58	24.5	7.9	32.3	80.5	5.6	1.3
5.0	Sunny	Moderate	14:55	24.1	8.0	32.4	110.2	7.7	2.5
			15:00	24.1	8.0	32.4	111.7	7.8	2.5

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at KT1 - Mid-Flood Tide


Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	14:26	24.2	7.8	24.6	93.5	6.8	1.6
			14:33	24.2	7.8	24.6	93.5	6.8	1.6
1.0	Sunny	Moderate	14:27	24.6	8.0	30.3	94.6	6.6	1.1
			14:34	24.6	8.0	30.4	95.2	6.7	1.0
1.5	Sunny	Moderate	14:27	24.7	8.0	31.6	92.4	6.4	1.0
			14:34	24.7	8.0	31.5	91.3	6.3	1.0
2.0	Sunny	Moderate	14:28	24.5	8.0	32.1	78.4	5.4	0.9
			14:35	24.5	8.0	32.1	78.3	5.4	0.8
2.5	Sunny	Moderate	14:28	24.5	8.0	32.1	78.3	5.4	0.9
			14:35	24.5	8.0	32.1	78.4	5.4	0.8
3.0	Sunny	Moderate	14:29	24.5	7.9	32.2	68.5	4.8	0.8
			14:36	24.5	7.9	32.2	68.2	4.7	0.8
3.5	Sunny	Moderate	14:29	24.4	8.0	32.3	83.2	5.8	0.9
			14:36	24.4	8.0	32.3	83.6	5.8	1.0
4.0	Sunny	Moderate	14:30	24.3	8.0	32.3	91.0	6.3	1.0
			14:37	24.3	8.0	32.3	91.5	6.4	1.1
4.5	Sunny	Moderate	14:30	24.2	8.0	32.3	93.3	6.5	1.3
			14:37	24.2	8.0	32.3	93.9	6.6	1.3
5.0	Sunny	Moderate	14:31	24.0	8.0	32.4	98.2	6.9	2.0
			14:38	24.0	8.0	32.4	98.5	6.9	2.1
5.5	Sunny	Moderate	14:31	24.0	8.1	32.4	100.4	7.0	2.4
			14:38	24.0	8.1	32.4	100.9	7.1	2.4
6.0	Sunny	Moderate	14:32	23.9	8.1	32.4	104.0	7.3	2.7
			14:39	23.9	8.1	32.4	104.4	7.3	2.7
6.5	Sunny	Moderate	14:32	23.8	8.1	32.4	104.8	7.3	4.0
			14:39	23.8	8.1	32.4	104.7	7.3	4.1

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	14:27	24.6	8.0	30.3	94.6	6.6	1.1
			14:34	24.6	8.0	30.4	95.2	6.7	1.0
3.5	Sunny	Moderate	14:29	24.4	8.0	32.3	83.2	5.8	0.9
			14:36	24.4	8.0	32.3	83.6	5.8	1.0
6.0	Sunny	Moderate	14:32	23.9	8.1	32.4	104.0	7.3	2.7
			14:39	23.9	8.1	32.4	104.4	7.3	2.7

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at IB1 - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 2.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:58	23.7	8.1	31.1	83.8	6.3	6.6
			17:02	23.8	8.1	32.5	83.4	5.9	6.5
1.0	Sunny	Moderate	16:58	23.7	8.1	32.5	86.2	6.1	6.6
			17:02	23.7	8.1	32.5	84.0	5.9	6.5
1.5	Sunny	Moderate	16:58	23.8	8.1	31.1	85.4	6.0	6.6
			17:02	23.7	8.1	32.5	84.0	5.9	6.5
2.0	Sunny	Moderate	16:58	23.7	8.1	32.5	85.0	6.0	6.5
			17:02	23.7	8.1	32.5	84.0	5.9	6.9
2.5	Sunny	Moderate	16:58	23.7	8.1	32.5	84.6	5.9	6.3
			17:03	23.7	8.1	31.1	83.9	5.9	6.5
3.0	Sunny	Moderate	16:59	23.7	8.1	32.5	84.5	5.9	6.3
			17:03	23.7	8.1	32.5	83.9	5.9	6.3
3.5	Sunny	Moderate	16:59	23.7	8.1	32.5	84.3	5.9	6.5
			17:03	23.7	8.1	32.5	83.9	5.9	6.3
4.0	Sunny	Moderate	17:00	23.7	8.1	32.5	84.3	5.9	6.0
			17:03	23.7	8.1	32.5	83.9	5.9	6.2
4.5	Sunny	Moderate	17:00	23.7	8.1	32.5	84.3	5.9	6.1
			17:03	23.7	8.1	32.5	83.8	5.9	6.1
5.0	Sunny	Moderate	17:00	23.7	8.1	32.5	84.4	5.9	6.2
			17:03	23.7	8.1	32.5	83.8	5.9	6.1
5.5	Sunny	Moderate	17:00	23.7	8.1	32.5	84.5	5.9	6.3
			17:04	23.7	8.1	32.5	83.9	5.9	6.6
6.0	Sunny	Moderate	17:01	23.7	8.1	31.2	84.6	6.0	6.6
			17:04	23.7	8.1	32.5	83.9	5.9	6.4
6.5	Sunny	Moderate	17:01	23.7	8.1	31.2	84.8	6.0	6.5
			17:04	23.7	8.1	31.3	84.1	6.4	6.4
7.0	Sunny	Moderate	17:01	23.7	8.1	32.5	85.2	6.0	6.9
			17:04	23.7	8.1	32.5	84.3	5.9	6.0
7.5	Sunny	Moderate	17:01	23.7	8.1	30.9	85.6	6.1	15.8
			17:05	23.7	8.1	31.1	84.6	6.0	16.2

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	16:58	23.7	8.1	32.5	85.2	6.1	6.6
			17:02	23.7	8.1	32.5	84.0	5.9	6.5
4.0	Sunny	Moderate	17:00	23.7	8.1	32.5	84.3	5.9	6.0
			17:03	23.7	8.1	32.5	83.9	5.9	6.2
7.0	Sunny	Moderate	17:01	23.7	8.1	32.5	85.2	6.0	6.9
			17:04	23.7	8.1	32.5	84.3	5.9	6.0

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at IB2 - Mid-Flood Tide

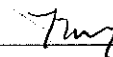

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:23	23.7	8.1	31.0	110.2	7.8	4.7
			16:27	23.8	8.1	32.6	95.9	6.7	4.8
1.0	Sunny	Moderate	16:23	23.8	8.1	32.5	104.3	7.3	5.2
			16:27	23.8	8.1	31.2	98.2	7.0	4.9
1.5	Sunny	Moderate	16:23	23.8	8.1	32.5	100.1	7.0	5.2
			16:28	23.8	8.1	32.6	100.4	7.0	5.2
2.0	Sunny	Moderate	16:23	23.8	8.1	32.5	96.4	6.8	5.5
			16:28	23.8	8.1	32.5	100.5	7.1	5.3
2.5	Sunny	Moderate	16:24	23.8	8.1	32.6	95.3	6.7	5.8
			16:28	23.8	8.1	32.5	100.9	7.1	5.7
3.0	Sunny	Moderate	16:24	23.8	8.1	31.1	94.0	6.7	6.2
			16:28	23.8	8.1	31.1	101.8	7.2	6.0
3.5	Sunny	Moderate	16:25	23.8	8.1	32.5	93.7	6.6	6.4
			16:28	23.8	8.1	32.6	102.4	7.2	5.8
4.0	Sunny	Moderate	16:25	23.8	8.1	32.6	93.5	6.6	6.9
			16:29	23.8	8.1	32.5	103.9	7.3	6.5
4.5	Sunny	Moderate	16:25	23.8	8.1	32.6	93.4	6.6	7.0
			16:29	23.8	8.1	32.5	100.9	7.1	6.2
5.0	Sunny	Moderate	16:25	23.8	8.1	32.6	93.3	6.5	7.0
			16:29	23.8	8.1	32.5	96.7	6.8	6.2
5.5	Sunny	Moderate	16:25	23.8	8.1	32.5	93.2	6.5	6.8
			16:29	23.8	8.1	32.5	95.3	6.7	5.8
6.0	Sunny	Moderate	16:25	23.8	8.1	32.5	93.1	6.5	7.0
			16:30	23.8	8.1	32.5	94.3	6.6	7.2
6.5	Sunny	Moderate	16:26	23.8	8.1	32.6	93.0	6.5	6.5
			16:30	23.8	8.1	32.5	93.2	6.5	6.5
7.0	Sunny	Moderate	16:26	23.8	8.1	32.5	93.1	6.5	6.3
			16:30	23.8	8.1	32.5	92.6	6.5	6.5
7.5	Sunny	Moderate	16:26	23.8	8.1	31.2	93.0	6.6	6.0
			16:30	23.8	8.1	31.2	92.2	6.5	6.7

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	16:23	23.8	8.1	32.5	104.3	7.3	5.2
			16:27	23.8	8.1	31.2	93.2	7.0	4.9
4.0	Sunny	Moderate	16:25	23.8	8.1	32.6	93.5	6.6	6.9
			16:29	23.8	8.1	32.5	103.9	7.3	6.5
7.0	Sunny	Moderate	16:26	23.8	8.1	32.5	93.1	6.5	6.3
			16:30	23.8	8.1	32.5	92.6	6.5	6.5

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at IB3 - Mid-Flood Tide

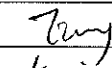
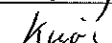
Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
0.5	Sunny	Moderate	16:10	23.7	8.1	32.3	104.3	7.3	4.8
			16:15	23.7	8.1	32.5	96.0	6.7	5.0
1.0	Sunny	Moderate	16:11	23.7	8.1	32.5	98.2	6.9	5.1
			16:15	23.7	8.1	32.5	93.4	6.6	5.3
1.5	Sunny	Moderate	16:11	23.7	8.1	32.5	95.7	6.7	5.2
			16:15	23.7	8.1	32.5	92.0	6.5	5.4
2.0	Sunny	Moderate	16:11	23.7	8.1	32.5	94.2	6.6	5.5
			16:15	23.7	8.1	32.5	91.3	6.4	5.5
2.5	Sunny	Moderate	16:11	23.7	8.1	32.5	91.8	6.5	5.6
			16:16	23.7	8.1	32.5	90.8	6.4	5.9
3.0	Sunny	Moderate	16:12	23.7	8.1	32.5	91.2	6.4	5.7
			16:16	23.7	8.1	32.5	90.5	6.4	5.9
3.5	Sunny	Moderate	16:12	23.7	8.1	31.1	90.7	6.4	5.9
			16:16	23.7	8.1	32.5	90.0	6.3	6.1
4.0	Sunny	Moderate	16:12	23.7	8.1	32.5	90.3	6.3	6.4
			16:16	23.7	8.1	32.5	89.8	6.3	6.2
4.5	Sunny	Moderate	16:12	23.7	8.1	32.5	89.7	6.3	6.9
			16:16	23.7	8.1	32.5	89.4	6.3	6.8
5.0	Sunny	Moderate	16:12	23.7	8.1	32.5	89.3	6.3	7.0
			16:16	23.7	8.1	32.5	89.6	6.3	6.9
5.5	Sunny	Moderate	16:13	23.7	8.1	32.5	88.9	6.2	7.4
			16:17	23.7	8.1	32.5	89.3	6.3	7.2
6.0	Sunny	Moderate	16:13	23.7	8.1	32.5	88.8	6.2	7.4
			16:17	23.7	8.1	32.5	89.2	6.3	7.2
6.5	Sunny	Moderate	16:13	23.7	8.1	32.5	88.7	6.2	7.4
			16:17	23.7	8.1	31.2	89.2	6.3	7.3
7.0	Sunny	Moderate	16:14	23.7	8.1	32.5	89.0	6.3	6.9
			16:17	23.7	8.1	31.2	89.4	6.3	7.2
7.5	Sunny	Moderate	16:14	23.7	8.1	32.5	89.3	6.3	7.4
			16:17	23.7	8.1	32.5	89.3	6.3	7.3
8.0	Sunny	Moderate	16:14	23.7	8.1	32.5	90.9	6.4	8.3
			16:17	23.7	8.1	32.5	89.3	6.3	8.5
8.5	Sunny	Moderate	16:14	23.7	8.1	32.5	89.3	6.2	8.3
			16:17	23.7	8.1	32.5	89.4	6.3	8.8

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
1.0	Sunny	Moderate	16:11	23.7	8.1	32.5	98.2	6.9	5.1
			16:15	23.7	8.1	32.5	93.4	6.6	5.3
4.5	Sunny	Moderate	16:12	23.7	8.1	32.5	89.7	6.3	6.9
			16:16	23.7	8.1	32.5	89.4	6.3	6.8
8.0	Sunny	Moderate	16:14	23.7	8.1	32.5	90.9	6.4	8.3
			16:17	23.7	8.1	32.5	89.3	6.3	8.5

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at OB1 - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 2.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:41	23.7	8.2	32.5	105.1	7.4	5.8
			16:45	23.7	8.2	32.5	93.2	6.6	5.9
1.0	Sunny	Moderate	16:42	23.7	8.2	31.1	99.8	7.1	6.4
			16:45	23.7	8.2	31.1	93.1	6.6	6.3
1.5	Sunny	Moderate	16:42	23.7	8.2	32.5	95.1	6.7	5.5
			16:45	23.7	8.2	32.5	93.1	6.5	5.3
2.0	Sunny	Moderate	16:42	23.7	8.2	32.5	94.5	6.6	5.4
			16:46	23.7	8.2	32.5	93.1	6.5	5.5
2.5	Sunny	Moderate	16:43	23.7	8.2	32.5	94.2	6.6	5.2
			16:46	23.7	8.2	32.5	93.2	6.5	5.0
3.0	Sunny	Moderate	16:43	23.7	8.2	32.5	94.0	6.6	5.2
			16:46	23.7	8.2	32.5	93.1	6.5	5.0
3.5	Sunny	Moderate	16:43	23.7	8.2	32.5	93.8	6.6	5.0
			16:46	23.7	8.2	32.5	93.1	6.5	5.3
4.0	Sunny	Moderate	16:43	23.7	8.2	32.5	93.8	6.6	5.1
			16:46	23.7	8.2	32.5	93.1	6.5	5.3
4.5	Sunny	Moderate	16:43	23.7	8.2	32.5	93.7	6.6	5.0
			16:47	23.7	8.2	32.5	93.1	6.5	5.4
5.0	Sunny	Moderate	16:44	23.7	8.2	32.5	93.6	6.6	4.9
			16:47	23.7	8.2	32.5	93.1	6.5	4.9
5.5	Sunny	Moderate	16:44	23.7	8.2	31.1	93.5	6.6	5.1
			16:47	23.7	8.2	32.5	93.1	6.5	5.1
6.0	Sunny	Moderate	16:44	23.7	8.2	32.5	93.4	6.6	5.2
			16:47	23.7	8.2	32.5	93.0	6.5	5.1
6.5	Sunny	Moderate	16:44	23.7	8.2	32.5	93.3	7.5	5.2
			16:47	23.7	8.2	32.5	93.0	6.5	5.6

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	16:42	23.7	8.2	31.1	99.8	7.1	6.4
			16:45	23.7	8.2	31.1	93.1	6.6	6.3
3.5	Sunny	Moderate	16:43	23.7	8.2	32.5	93.8	6.6	5.0
			16:46	23.7	8.2	32.5	93.1	6.5	5.3
6.0	Sunny	Moderate	16:44	23.7	8.2	32.5	93.4	6.6	5.2
			16:47	23.7	8.2	32.5	93.0	6.5	5.1

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH1 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:24	23.7	8.2	32.6	107.4	7.6	5.1
			15:37	23.7	8.2	32.6	100.1	7.0	5.1
1.0	Sunny	Moderate	15:25	23.7	8.2	32.6	105.8	7.4	5.3
			15:37	23.7	8.2	32.6	99.7	7.0	5.4
1.5	Sunny	Moderate	15:25	23.7	8.2	31.2	105.9	7.5	4.9
			15:38	23.7	8.2	32.6	99.6	7.0	5.5
2.0	Sunny	Moderate	15:25	23.7	8.2	32.6	106.2	7.5	5.3
			15:38	23.7	8.2	31.2	99.5	7.1	5.4
2.5	Sunny	Moderate	15:26	23.7	8.2	32.6	106.7	7.5	5.3
			15:38	23.7	8.2	32.6	99.5	7.0	5.7
3.0	Sunny	Moderate	15:26	23.7	8.2	32.6	107.1	7.5	5.3
			15:38	23.7	8.2	32.6	99.4	7.0	5.5
3.5	Sunny	Moderate	15:26	23.7	8.2	31.2	107.7	7.6	5.2
			15:39	23.7	8.2	32.6	99.4	7.0	5.4
4.0	Sunny	Moderate	15:26	23.7	8.2	32.6	108.2	7.6	5.4
			15:39	23.7	8.2	32.6	99.3	7.0	5.4
4.5	Sunny	Moderate	15:27	23.7	8.2	31.2	108.6	7.7	5.6
			15:39	23.7	8.2	31.2	99.3	7.0	5.4
5.0	Sunny	Moderate	15:27	23.7	8.2	32.5	106.7	7.5	5.1
			15:39	23.7	8.2	32.6	99.3	7.0	5.3
5.5	Sunny	Moderate	15:27	23.7	8.2	32.5	105.8	7.4	5.2
			15:39	23.7	8.2	31.2	99.2	7.0	5.6
6.0	Sunny	Moderate	15:27	23.7	8.2	32.6	104.0	7.3	5.2
			15:40	23.7	8.2	32.6	99.2	7.0	5.6
6.5	Sunny	Moderate	15:27	23.7	8.2	31.2	102.8	7.3	5.4
			15:40	23.7	8.2	32.6	99.2	7.0	5.0
7.0	Sunny	Moderate	15:27	23.7	8.2	32.6	102.3	7.2	5.8
			15:40	23.7	8.2	31.2	99.2	7.0	6.5
7.5	Sunny	Moderate	15:28	23.7	8.2	32.6	102.0	7.2	5.8
			15:40	23.7	8.2	32.5	99.0	7.0	6.1
8.0	Sunny	Moderate	15:28	23.7	8.2	32.6	101.8	7.2	5.9
			15:41	23.7	8.2	32.6	99.0	7.0	6.1
8.5	Sunny	Moderate	15:28	23.7	8.2	32.5	101.8	7.2	5.7
			15:41	23.7	8.2	32.6	99.9	7.0	5.8
9.0	Sunny	Moderate	15:28	23.7	8.2	32.6	101.5	7.1	5.8
			15:41	23.7	8.2	32.6	98.9	7.0	6.1
9.5	Sunny	Moderate	15:28	23.7	8.2	32.6	101.2	7.1	5.7
			15:41	23.7	8.2	32.5	98.8	7.0	5.8
10.0	Sunny	Moderate	15:29	23.7	8.2	32.6	100.8	7.1	5.7
			15:42	23.7	8.2	32.6	98.8	6.9	5.7
10.5	Sunny	Moderate	15:29	23.7	8.2	32.6	100.4	7.1	4.8
			15:42	23.7	8.2	32.6	98.8	6.9	4.8

Remark: * Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Contract No. KL/2010/02
 Kal Tak Development
 – Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH1 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

11.0	Sunny	Moderate	15:30	23.7	8.2	31.2	100.3	7.1	5.6
			15:42	23.7	8.2	32.6	98.8	6.9	6.1
11.5	Sunny	Moderate	15:30	23.7	8.2	32.6	100.2	7.0	5.6
			15:42	23.7	8.2	32.6	98.8	6.9	5.4
12.0	Sunny	Moderate	15:30	23.7	8.2	32.6	100.2	7.0	5.6
			15:42	23.7	8.1	31.2	98.8	7.0	5.6
12.5	Sunny	Moderate	15:31	23.7	8.2	32.6	100.2	7.0	5.5
			15:42	23.7	8.1	31.2	98.7	7.0	6.5
13.0	Sunny	Moderate	15:31	23.7	8.2	31.2	100.1	7.1	5.8
			15:43	23.7	8.2	32.6	98.7	6.9	6.0
13.5	Sunny	Moderate	15:31	23.7	8.2	32.6	100.1	7.0	6.0
			15:43	23.7	8.2	32.6	98.7	6.9	5.8
14.0	Sunny	Moderate	15:31	23.7	8.2	32.5	100.1	7.0	6.4
			15:43	23.7	8.2	32.6	98.7	6.9	6.7
14.5	Sunny	Moderate	15:31	23.7	8.2	32.6	100.2	7.0	5.2
			15:44	23.7	8.2	32.6	98.6	6.9	5.8
15.0	Sunny	Moderate	15:32	23.7	8.2	32.5	100.1	7.0	5.2
			15:44	23.7	8.2	32.6	98.6	6.9	5.1
15.5	Sunny	Moderate	15:32	23.7	8.2	32.6	100.0	7.0	5.6
			15:44	23.7	8.1	32.6	98.7	6.9	6.1
16.0	Sunny	Moderate	15:32	23.7	8.2	32.6	99.9	7.0	5.6
			15:44	23.7	8.1	32.6	98.3	6.9	5.7
16.5	Sunny	Moderate	15:33	23.7	8.1	32.6	99.3	7.0	6.9
			15:44	23.7	8.2	32.5	98.4	6.9	6.5
17.0	Sunny	Moderate	15:33	23.7	8.1	32.6	99.2	7.0	7.0
			15:45	23.7	8.1	32.6	98.4	6.9	6.4
17.5	Sunny	Moderate	15:34	23.7	8.1	32.6	99.1	7.0	7.8
			15:45	23.7	8.1	32.6	98.4	6.9	7.4
18.0	Sunny	Moderate	15:34	23.7	8.1	32.6	99.1	7.0	7.3
			15:45	23.7	8.1	32.6	98.3	6.9	7.5
18.5	Sunny	Moderate	15:34	23.7	8.1	31.2	99.1	7.0	7.1
			15:45	23.7	8.2	32.5	98.3	6.9	7.2
19.0	Sunny	Moderate	15:35	23.7	8.1	32.6	99.1	7.0	7.0
			15:45	23.7	8.1	32.6	98.3	6.9	7.2
19.5	Sunny	Moderate	15:35	23.7	8.1	32.6	99.1	7.0	7.5
			15:46	23.7	8.2	32.6	98.3	6.9	7.3
20.0	Sunny	Moderate	15:35	23.7	8.1	32.5	98.9	7.0	7.4
			15:46	23.7	8.2	32.6	98.3	6.9	7.3
20.5	Sunny	Moderate	15:35	23.7	8.1	31.2	98.9	7.0	7.0
			15:46	23.7	8.1	31.2	98.3	7.0	7.5
21.0	Sunny	Moderate	15:36	23.7	8.1	32.6	98.9	7.0	7.0
			15:46	23.7	8.1	32.6	98.2	6.9	7.5
21.5	Sunny	Moderate	15:36	23.7	8.1	32.6	98.9	7.0	7.6
			15:46	23.7	8.1	32.6	98.1	6.9	7.6

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

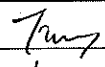

Water Quality Monitoring Results at VH1 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	15:25	23.7	8.2	32.6	105.8	7.4	5.3
			15:37	23.7	8.2	32.6	99.7	7.0	5.4
11.0	Sunny	Moderate	15:30	23.7	8.2	31.2	100.3	7.1	5.6
			15:42	23.7	8.2	32.6	99.8	6.9	6.1
21.0	Sunny	Moderate	15:36	23.7	8.1	32.6	98.9	7.0	7.0
			15:46	23.7	8.1	32.6	98.2	6.9	7.5

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kal Tak Development
 – Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH2 - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	14:37	23.7	8.2	32.6	126.3	8.9	4.4
			14:46	23.6	8.2	32.6	112.9	7.9	4.7
1.0	Sunny	Moderate	14:37	23.6	8.2	31.3	121.1	8.6	4.9
			14:46	23.6	8.2	31.3	112.7	8.0	5.2
1.5	Sunny	Moderate	14:38	23.7	8.2	32.6	119.5	8.4	5.1
			14:46	23.6	8.2	32.6	112.4	7.9	5.4
2.0	Sunny	Moderate	14:39	23.6	8.2	32.6	118.3	8.3	5.2
			14:46	23.6	8.2	32.6	112.1	7.9	5.0
2.5	Sunny	Moderate	14:39	23.6	8.2	32.6	117.4	8.3	5.6
			14:46	23.6	8.2	32.6	111.8	7.9	5.9
3.0	Sunny	Moderate	14:39	23.6	8.2	32.6	115.8	8.1	5.6
			14:47	23.6	8.2	32.6	111.7	7.9	6.0
3.5	Sunny	Moderate	14:39	23.6	8.2	32.6	115.6	8.1	6.0
			14:47	23.6	8.2	32.6	111.4	7.8	6.0
4.0	Sunny	Moderate	14:39	23.6	8.2	32.6	115.5	8.1	5.8
			14:47	23.6	8.2	32.6	111.1	7.8	6.3
4.5	Sunny	Moderate	14:39	23.7	8.2	32.6	115.1	8.1	5.8
			14:47	23.6	8.2	32.6	110.7	7.8	6.4
5.0	Sunny	Moderate	14:39	23.6	8.2	32.6	114.6	8.1	6.2
			14:48	23.6	8.2	32.6	110.6	7.8	6.8
5.5	Sunny	Moderate	14:40	23.6	8.2	32.6	114.1	8.0	5.1
			14:48	23.6	8.2	31.3	110.4	7.8	6.4
6.0	Sunny	Moderate	14:40	23.6	8.2	32.6	113.9	8.0	6.1
			14:48	23.6	8.2	32.6	110.3	7.8	6.3
6.5	Sunny	Moderate	14:40	23.6	8.2	32.6	113.7	8.0	6.1
			14:48	23.6	8.2	32.6	110.3	7.8	6.3
7.0	Sunny	Moderate	14:40	23.6	8.2	32.6	113.8	8.0	6.3
			14:49	23.6	8.2	31.3	109.9	7.8	6.5
7.5	Sunny	Moderate	14:41	23.6	8.2	32.6	113.6	8.0	6.0
			14:49	23.6	8.2	32.6	109.7	7.7	6.1
8.0	Sunny	Moderate	14:41	23.6	8.2	32.6	113.6	8.0	5.9
			14:49	23.6	8.2	32.6	109.5	7.7	6.0
8.5	Sunny	Moderate	14:41	23.6	8.2	32.6	113.5	8.0	6.3
			14:50	23.6	8.2	32.6	109.2	7.7	6.5
9.0	Sunny	Moderate	14:41	23.6	8.2	32.6	113.3	8.0	6.7
			14:50	23.6	8.2	31.2	109.1	7.7	7.1
9.5	Sunny	Moderate	14:41	23.6	8.2	32.6	112.9	7.9	7.4
			14:51	23.6	8.2	32.6	108.9	7.7	7.0
10.0	Sunny	Moderate	14:42	23.6	8.2	32.6	112.5	7.9	7.3
			14:51	23.6	8.2	32.6	109.0	7.7	6.8
10.5	Sunny	Moderate	14:42	23.6	8.2	32.6	112.4	7.9	6.9
			14:51	23.6	8.2	32.6	109.0	7.7	7.1

Remark: * Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Contract No. KL/2010/02

Kal Tak Development

- Kal Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at VH2 - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

11.0	Sunny	Moderate	14:42	23.6	8.2	32.6	112.3	7.9	7.4
			14:51	23.6	8.2	32.6	108.9	7.7	7.6
11.5	Sunny	Moderate	14:42	23.6	8.2	32.6	112.2	7.9	6.9
			14:51	23.6	8.2	32.6	108.8	7.7	6.8
12.0	Sunny	Moderate	14:43	23.6	8.2	32.6	112.1	7.9	6.7
			14:52	23.6	8.2	31.3	108.7	7.7	6.8
12.5	Sunny	Moderate	14:43	23.6	8.2	32.6	112.0	7.9	6.9
			14:52	23.6	8.2	31.3	108.5	7.7	6.8
13.0	Sunny	Moderate	14:43	23.6	8.2	32.6	111.9	7.9	6.8
			14:52	23.6	8.2	32.6	108.2	7.6	6.8
13.5	Sunny	Moderate	14:43	23.6	8.2	32.6	111.8	7.9	7.4
			14:53	23.6	8.2	32.6	108.2	7.6	7.0
14.0	Sunny	Moderate	14:43	23.6	8.2	31.3	111.7	7.9	7.3
			14:54	23.6	8.2	32.6	109.2	7.7	7.2
14.5	Sunny	Moderate	14:43	23.6	8.2	32.6	111.7	7.9	8.2
			14:54	23.6	8.2	32.6	107.6	7.6	7.9
15.0	Sunny	Moderate	14:44	23.6	8.2	32.6	111.3	7.8	8.5
			14:54	23.6	8.2	32.6	107.6	7.6	8.6
15.5	Sunny	Moderate	14:44	23.6	8.2	32.6	111.1	7.8	8.6
			14:54	23.6	8.2	32.6	107.8	7.6	8.8
16.0	Sunny	Moderate	14:44	23.6	8.2	32.5	110.7	7.8	18.6
			14:54	23.6	8.2	32.6	107.8	8.3	18.2
16.5	Sunny	Moderate	14:44	23.6	8.2	32.5	110.7	7.8	29.6
			14:54	23.6	8.2	32.6	107.8	8.3	29.4

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	14:37	23.6	8.2	31.3	121.1	8.6	4.9
			14:46	23.6	8.2	31.3	112.7	8.0	5.2
8.5	Sunny	Moderate	14:41	23.6	8.2	32.6	113.5	8.0	6.3
			14:50	23.6	8.2	32.6	109.2	7.7	6.5
16.0	Sunny	Moderate	14:44	23.6	8.2	32.5	110.7	7.8	18.6
			14:54	23.6	8.2	32.6	107.8	8.3	18.2

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at KTN - Mid-Flood Tide


Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	16:55	26.7	7.4	13.2	151.9	11.3	4.2
			16:58	26.7	7.4	12.1	151.8	11.4	4.2
1.0	Sunny	Moderate	16:55	25.9	7.5	20.4	104.5	7.6	4.5
			16:58	25.9	7.5	19.0	103.9	7.6	4.3
1.5	Sunny	Moderate	16:56	25.2	7.6	31.3	58.6	4.0	33.1
			16:59	25.2	7.6	31.3	58.7	4.0	34.2
2.0	Sunny	Moderate	16:57	24.9	7.6	31.9	52.0	3.6	17.4
			17:00	24.9	7.6	32.0	51.6	3.6	15.2

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.25	Sunny	Moderate	16:55	25.2	7.6	29.4	70.6	5.2	26.3
			16:59	25.2	7.6	29.4	71.4	5.3	25.7

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

– Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at JVC - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:37	25.7	7.4	15.8	55.6	4.2	6.4
			15:42	25.8	7.3	17.1	55.1	4.1	6.5
1.0	Sunny	Moderate	15:37	25.0	7.4	26.4	45.7	3.3	16.4
			15:42	25.0	7.5	26.6	45.2	3.2	16.7
1.5	Sunny	Moderate	15:38	24.7	7.6	30.6	41.3	2.9	25.7
			15:43	24.7	7.6	30.4	40.4	2.8	26.3
2.0	Sunny	Moderate	15:38	24.6	7.6	31.4	38.5	2.7	28.3
			15:43	24.6	7.6	31.5	38.8	2.7	28.6
2.5	Sunny	Moderate	15:38	24.5	7.7	32.0	44.6	3.1	22.2
			15:43	24.5	7.7	32.0	45.4	3.2	21.8
3.0	Sunny	Moderate	15:39	24.5	7.7	32.0	48.3	3.4	20.3
			15:44	24.5	7.7	32.0	48.7	3.4	20.3
3.5	Sunny	Moderate	15:39	24.5	7.7	32.1	48.5	3.4	19.4
			15:44	24.5	7.7	32.1	48.6	3.4	18.6
4.0	Sunny	Moderate	15:40	24.5	7.8	32.2	52.2	3.6	13.8
			15:45	24.5	7.8	32.2	53.0	3.7	13.1
4.5	Sunny	Moderate	15:41	24.4	7.8	32.3	61.9	4.3	7.9
			15:45	24.4	7.8	32.3	62.0	4.3	7.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Sunny	Moderate	15:37	25.0	7.4	26.4	45.7	3.3	16.4
			15:42	25.0	7.5	26.6	45.2	3.2	16.7
4.0	Sunny	Moderate	15:40	24.5	7.8	32.2	52.2	3.6	13.8
			15:45	24.5	7.8	32.2	53.0	3.7	13.1

	Name	Signature	Date
Conducted by:	Lee Man Hei	<i>Lee</i>	22-Nov-11
Checked by:	W.K. Tang	<i>W.K. Tang</i>	22-Nov-11

Remark: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Contract No. KL/2010/02
 Kai Tak Development
 - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Tai Wan - Mid-Flood Tide

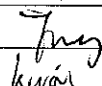
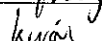
Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:55	23.8	8.1	32.4	111.2	7.8	6.6
			16:01	23.8	8.1	32.4	94.3	6.6	6.4
1.0	Sunny	Moderate	15:55	23.8	8.1	32.4	100.9	7.1	6.4
			16:01	23.8	8.1	32.4	94.2	6.6	6.4
1.5	Sunny	Moderate	15:55	23.8	8.1	32.4	93.9	6.9	6.2
			16:01	23.8	8.1	32.4	94.1	6.6	6.4
2.0	Sunny	Moderate	15:55	23.8	8.1	32.4	97.6	6.9	6.2
			16:01	23.8	8.1	32.4	94.0	6.6	6.4
2.5	Sunny	Moderate	15:56	23.8	8.1	32.4	97.6	6.9	6.2
			16:01	23.8	8.1	31.0	93.9	6.6	6.4
3.0	Sunny	Moderate	15:56	23.8	8.1	32.4	96.2	6.8	6.4
			16:02	23.8	8.1	32.4	93.8	6.6	6.3
3.5	Sunny	Moderate	15:56	23.8	8.1	31.1	95.1	6.8	6.6
			16:02	23.8	8.1	32.4	93.8	6.6	6.4
4.0	Sunny	Moderate	15:55	23.8	8.1	32.4	95.1	6.7	6.7
			16:02	23.8	8.1	32.4	94.1	6.6	6.4
4.5	Sunny	Moderate	15:55	23.8	8.1	32.4	96.0	6.7	6.7
			16:02	23.8	8.1	32.4	94.2	6.6	6.4
5.0	Sunny	Moderate	15:57	23.8	8.1	32.4	95.9	6.7	6.8
			16:02	23.8	8.1	32.4	94.2	6.6	6.6
5.5	Sunny	Moderate	15:57	23.8	8.1	32.4	95.8	6.7	6.6
			16:03	23.8	8.1	32.4	94.4	6.6	6.5
6.0	Sunny	Moderate	15:57	23.8	8.1	32.4	95.6	6.7	6.7
			16:03	23.8	8.1	32.4	94.5	6.6	6.4
6.5	Sunny	Moderate	15:57	23.8	8.1	32.4	95.4	6.7	6.8
			16:03	23.8	8.1	32.4	94.0	6.6	6.4
7.0	Sunny	Moderate	15:57	23.8	8.1	32.4	95.4	6.7	6.8
			16:03	23.8	8.1	32.4	93.8	6.6	6.3
7.5	Sunny	Moderate	15:58	23.8	8.1	31.1	95.2	6.7	6.6
			16:03	23.8	8.1	31.1	93.5	6.5	6.3
8.0	Sunny	Moderate	15:58	23.8	8.1	32.4	94.9	6.7	6.4
			16:04	23.8	8.1	32.4	93.5	6.6	6.4
8.5	Sunny	Moderate	15:58	23.8	8.1	32.4	94.9	6.7	6.4
			16:04	23.8	8.1	32.4	93.4	6.6	6.4
9.0	Sunny	Moderate	15:58	23.8	8.1	32.4	94.3	6.8	6.2
			16:04	23.8	8.1	32.4	93.3	6.6	6.4
9.5	Sunny	Moderate	15:59	23.8	8.1	32.4	94.2	6.6	6.2
			16:04	23.7	8.1	32.5	93.3	6.6	6.4
10.0	Sunny	Moderate	15:59	23.8	8.1	31.1	94.0	6.6	6.5
			16:04	23.8	8.1	32.4	93.0	6.5	6.5
10.5	Sunny	Moderate	16:00	23.8	8.1	31.0	93.5	6.6	6.9
			16:04	23.8	8.1	32.4	92.9	6.5	6.7

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
5.5	Sunny	Moderate	15:57	23.8	8.1	32.4	95.8	6.7	6.6
			16:03	23.8	8.1	32.4	94.4	6.6	6.5

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Cha Kwo Ling - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 2.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	14:02	23.7	8.1	32.5	151.3	10.6	3.2
			14:10	23.7	8.1	32.5	153.8	10.6	3.1
1.0	Sunny	Moderate	14:02	23.7	8.1	32.5	146.4	10.3	3.2
			14:11	23.7	8.1	32.5	145.8	10.2	3.2
1.5	Sunny	Moderate	14:03	23.7	8.1	32.5	143.1	10.1	3.2
			14:12	23.7	8.1	32.5	142.7	10.0	3.2
2.0	Sunny	Moderate	14:03	23.7	8.1	32.5	140.6	9.9	3.1
			14:12	23.7	8.1	32.5	140.3	9.9	3.3
2.5	Sunny	Moderate	14:04	23.7	8.1	32.5	133.3	9.7	3.2
			14:13	23.7	8.1	32.5	133.1	9.7	3.3
3.0	Sunny	Moderate	14:05	23.7	8.1	32.5	135.6	9.5	4.1
			14:13	23.7	8.1	32.5	135.2	9.5	3.7
3.5	Sunny	Moderate	14:05	23.7	8.1	32.5	134.8	9.5	4.1
			14:14	23.7	8.1	32.5	134.4	9.5	4.1
4.0	Sunny	Moderate	14:05	23.7	8.1	32.5	133.5	9.4	3.9
			14:14	23.7	8.1	32.5	133.4	9.4	3.8
4.5	Sunny	Moderate	14:06	23.7	8.1	32.5	132.5	9.3	4.1
			14:14	23.7	8.1	32.5	132.1	9.3	4.3
5.0	Sunny	Moderate	14:06	23.7	8.1	32.5	131.4	9.2	4.4
			14:15	23.7	8.1	32.5	131.2	9.2	4.3
5.5	Sunny	Moderate	14:06	23.7	8.1	32.5	130.4	9.2	4.8
			14:15	23.7	8.1	32.5	130.1	9.2	4.7
6.0	Sunny	Moderate	14:07	23.7	8.1	32.5	129.7	9.1	5.2
			14:15	23.7	8.1	32.5	129.4	9.1	5.2
6.5	Sunny	Moderate	14:07	23.7	8.1	32.5	128.9	9.1	4.8
			14:16	23.7	8.1	32.5	128.7	9.1	4.9
7.0	Sunny	Moderate	14:07	23.7	8.1	32.5	128.2	9.0	5.1
			14:16	23.7	8.1	32.5	128.1	9.0	5.1
7.5	Sunny	Moderate	14:07	23.7	8.1	32.5	127.5	9.0	5.1
			14:16	23.7	8.1	32.5	127.2	9.0	4.9
8.0	Sunny	Moderate	14:08	23.7	8.1	32.5	126.5	8.9	5.0
			14:17	23.7	8.1	32.5	126.3	8.9	5.6
8.5	Sunny	Moderate	14:08	23.7	8.1	32.5	125.6	8.8	6.0
			14:17	23.7	8.1	32.5	125.4	8.8	6.2
9.0	Sunny	Moderate	14:09	23.7	8.1	32.5	124.9	8.8	6.8
			14:17	23.7	8.1	32.5	124.7	8.8	6.8
9.5	Sunny	Moderate	14:09	23.7	8.1	32.5	124.1	8.7	6.7
			14:18	23.7	8.1	32.5	124.0	8.7	7.0
10.0	Sunny	Moderate	14:09	23.7	8.1	32.5	123.4	8.7	8.1
			14:18	23.7	8.1	32.5	123.3	8.7	8.2
10.5	Sunny	Moderate	14:10	23.7	8.1	32.5	122.5	8.6	9.6
			14:18	23.7	8.1	32.5	122.3	8.6	10.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
5.5	Sunny	Moderate	14:06	23.7	8.1	32.5	130.4	9.2	4.8
			14:15	23.7	8.1	32.5	130.1	9.2	4.7

	Name	Signature	Date
Conducted by:	Lee Man Hei		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02

Kai Tak Development

- Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Quarry Bay - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 1.5m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	15:01	23.7	8.2	32.6	112.1	7.9	8.6
			15:08	23.7	8.2	32.6	107.4	7.6	8.4
1.0	Sunny	Moderate	15:02	23.7	8.2	32.6	107.7	7.6	8.2
			15:08	23.7	8.2	32.6	106.6	7.5	8.4
1.5	Sunny	Moderate	15:02	23.7	8.2	32.6	106.5	7.5	8.5
			15:08	23.7	8.2	32.6	106.1	7.5	8.6
2.0	Sunny	Moderate	15:03	23.7	8.2	32.6	105.7	7.4	8.1
			15:08	23.7	8.2	32.6	105.5	7.4	8.2
2.5	Sunny	Moderate	15:03	23.7	8.2	32.6	105.4	7.4	8.7
			15:08	23.7	8.2	32.6	105.1	7.4	8.2
3.0	Sunny	Moderate	15:03	23.7	8.2	32.6	105.4	7.4	8.6
			15:09	23.7	8.2	32.6	104.9	7.4	8.5
3.5	Sunny	Moderate	15:03	23.7	8.2	32.6	105.3	7.4	8.7
			15:09	23.7	8.2	32.5	104.8	7.4	8.3
4.0	Sunny	Moderate	15:04	23.7	8.2	32.6	105.3	7.4	8.6
			15:09	23.7	8.2	32.6	104.9	7.4	8.7
4.5	Sunny	Moderate	15:04	23.7	8.2	32.6	105.4	7.4	8.6
			15:10	23.7	8.2	32.6	104.9	7.4	8.0
5.0	Sunny	Moderate	15:04	23.7	8.2	32.5	105.2	7.4	8.6
			15:10	23.7	8.2	32.6	105.0	7.4	8.5
5.5	Sunny	Moderate	15:04	23.7	8.2	32.6	105.5	7.4	7.9
			15:10	23.7	8.2	32.6	105.0	7.4	8.3
6.0	Sunny	Moderate	15:05	23.7	8.2	31.2	105.8	7.5	8.1
			15:10	23.7	8.2	32.6	104.9	7.4	8.4
6.5	Sunny	Moderate	15:05	23.7	8.2	32.6	105.9	7.4	9.6
			15:11	23.7	8.2	32.6	104.9	7.4	8.9

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
3.5	Sunny	Moderate	15:03	23.7	8.2	32.6	105.3	7.4	8.7
			15:09	23.7	8.2	32.5	104.8	7.4	8.3

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Sai Wan Ho - Mid-Flood Tide

Sampling Date: 22 November 2011

Secchi Disc Depth: 2.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Sunny	Moderate	14:06	23.7	8.1	32.5	125.7	8.8	3.9
			14:23	23.7	8.2	31.4	116.8	8.3	4.0
1.0	Sunny	Moderate	14:06	23.7	8.1	32.5	121.8	8.6	3.8
			14:23	23.7	8.2	32.6	116.7	8.2	4.1
1.5	Sunny	Moderate	14:07	23.7	8.2	32.5	121.3	8.5	4.0
			14:23	23.7	8.2	32.6	116.8	8.2	4.5
2.0	Sunny	Moderate	14:07	23.7	8.2	32.5	121.3	8.5	4.1
			14:23	23.7	8.2	32.6	117.0	8.2	4.5
2.5	Sunny	Moderate	14:07	23.7	8.2	32.5	121.2	8.5	3.9
			14:24	23.7	8.2	32.6	117.3	8.3	4.4
3.0	Sunny	Moderate	14:08	23.7	8.2	32.5	121.3	8.5	4.0
			14:24	23.7	8.2	31.4	117.5	8.3	4.2
3.5	Sunny	Moderate	14:08	23.7	8.2	32.6	121.0	8.5	4.3
			14:24	23.7	8.2	32.6	117.6	8.3	4.1
4.0	Sunny	Moderate	14:09	23.7	8.2	32.6	120.8	8.5	4.6
			14:24	23.7	8.2	32.6	116.8	8.2	4.1
4.5	Sunny	Moderate	14:09	23.7	8.2	32.6	120.2	8.4	4.5
			14:24	23.7	8.2	32.6	117.7	8.3	4.1
5.0	Sunny	Moderate	14:09	23.4	8.2	32.8	121.6	8.6	4.7
			14:24	23.7	8.2	31.4	117.9	8.4	5.0
5.5	Sunny	Moderate	14:16	23.6	8.2	32.6	119.7	8.4	5.2
			14:24	23.6	8.2	32.6	117.9	8.3	5.2
6.0	Sunny	Moderate	14:17	23.6	8.2	32.5	119.2	8.4	4.9
			14:25	23.6	8.2	32.6	118.1	8.3	5.2
6.5	Sunny	Moderate	14:17	23.6	8.2	32.5	118.2	8.3	5.1
			14:25	23.6	8.2	32.6	118.3	8.3	5.6
7.0	Sunny	Moderate	14:18	23.6	8.2	32.6	118.1	8.3	5.2
			14:25	23.6	8.2	32.6	118.0	8.3	5.5
7.5	Sunny	Moderate	14:18	23.6	8.2	32.6	118.1	8.3	5.9
			14:25	23.6	8.2	32.6	117.8	8.3	5.5
8.0	Sunny	Moderate	14:18	23.6	8.2	32.5	118.2	8.3	5.9
			14:25	23.6	8.2	32.6	117.8	8.3	5.6
8.5	Sunny	Moderate	14:18	23.6	8.2	32.5	118.3	8.3	5.6
			14:25	23.6	8.2	32.6	117.4	8.3	5.7
9.0	Sunny	Moderate	14:19	23.6	8.2	32.5	118.4	8.3	5.8
			14:26	23.6	8.2	32.6	117.4	8.3	5.8
9.5	Sunny	Moderate	14:19	23.6	8.2	32.5	118.9	8.3	5.5
			14:26	23.6	8.2	32.6	117.3	8.3	5.8
10.0	Sunny	Moderate	14:20	23.6	8.2	32.5	117.3	8.3	5.2
			14:26	23.6	8.2	32.6	117.1	8.2	5.8
10.5	Sunny	Moderate	14:20	23.6	8.2	32.5	117.1	8.2	5.5
			14:26	23.6	8.2	32.6	116.9	8.2	5.8

Contract No. KL/2010/02
 Kai Tak Development
 – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Water Quality Monitoring Results at WSD Intake at Sai Wan Ho - Mid-Flood Tide



Sampling Date: 22 November 2011

Secchi Disc Depth: 2.0m

11.0	Sunny	Moderate	14:20	23.6	8.2	32.5	117.0	8.2	5.9
			14:26	23.6	8.2	32.6	116.7	8.2	5.9
11.5	Sunny	Moderate	14:20	23.6	8.2	32.5	117.0	8.2	6.5
			14:27	23.6	8.2	32.6	116.8	8.2	6.5
12.0	Sunny	Moderate	14:21	23.6	8.2	32.5	117.2	8.3	6.6
			14:27	23.6	8.2	32.6	116.7	8.2	6.9
12.5	Sunny	Moderate	14:21	23.6	8.2	32.6	117.3	8.3	7.1
			14:27	23.6	8.2	32.6	116.6	8.2	6.9
13.0	Sunny	Moderate	14:21	23.6	8.2	32.6	117.3	8.3	8.2
			14:27	23.6	8.2	32.6	116.4	8.2	8.5
13.5	Sunny	Moderate	14:22	23.6	8.2	32.6	117.1	8.2	8.1
			14:27	23.6	8.2	32.6	116.3	8.2	8.1

Water Quality Monitoring Results (Sampling Depth)

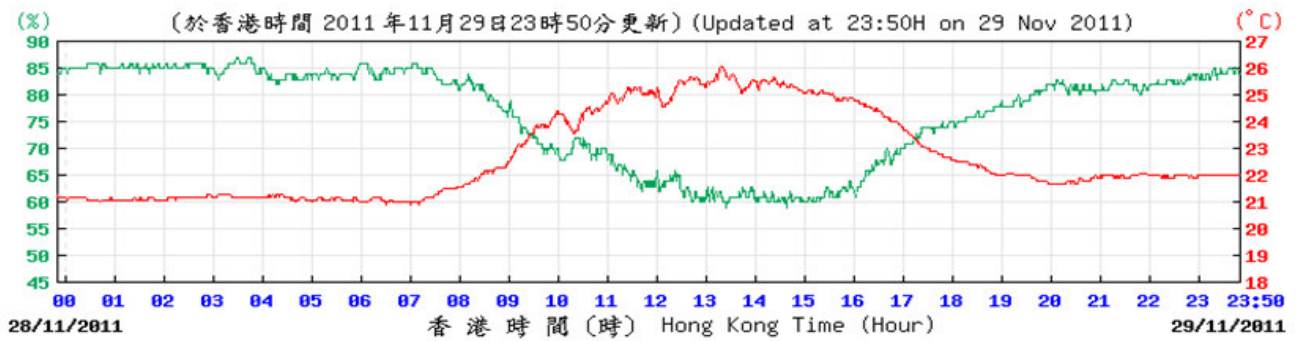
Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
7.0	Sunny	Moderate	14:18	23.6	8.2	32.6	118.1	8.3	5.2
			14:25	23.6	8.2	32.6	118.0	8.3	5.5

	Name	Signature	Date
Conducted by:	Ting Ka Wai		22-Nov-11
Checked by:	W.K. Tang		22-Nov-11

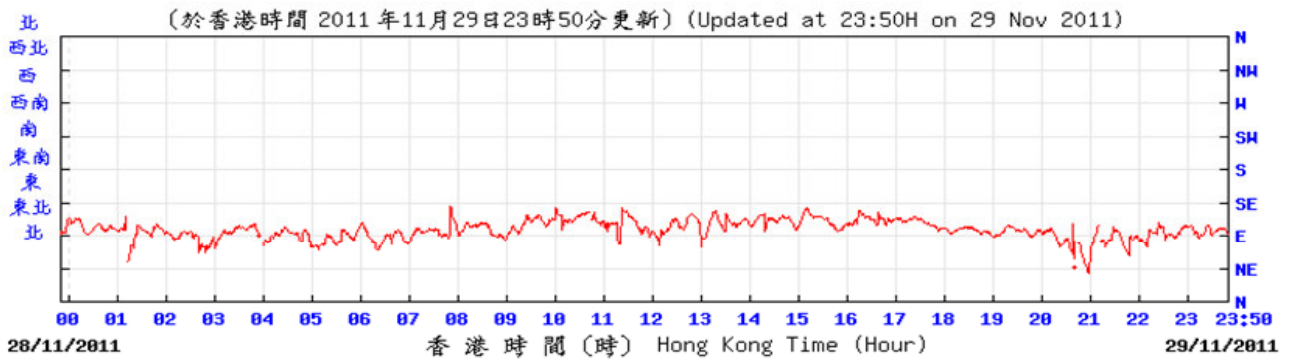
**APPENDIX G
METEOROLOGICAL DATA FROM
HONG KONG OBSERVATORY
STATION DURING ODOUR PATROL**

Meteorological Conditions (King's Park)

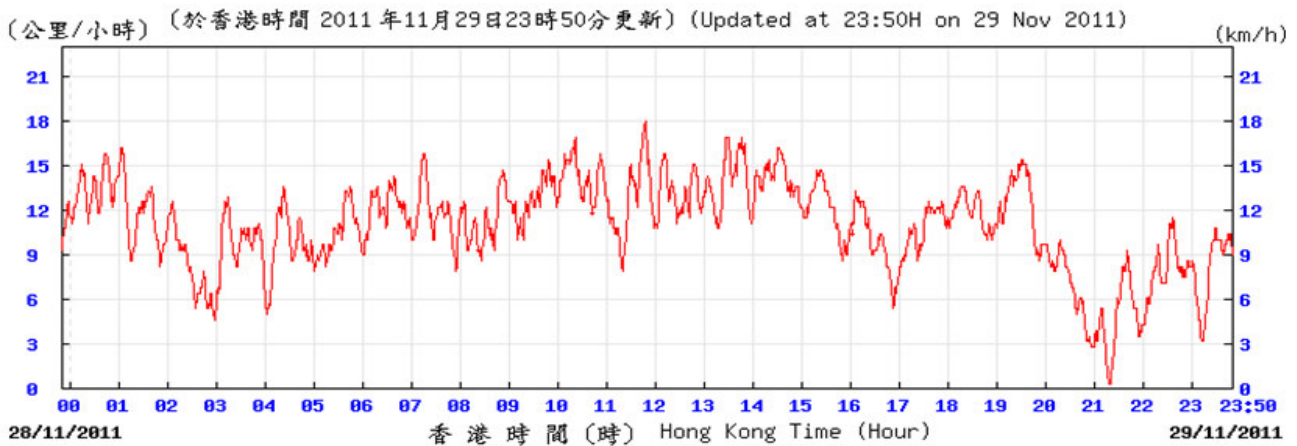
Temperature & Humidity



Wind Direction



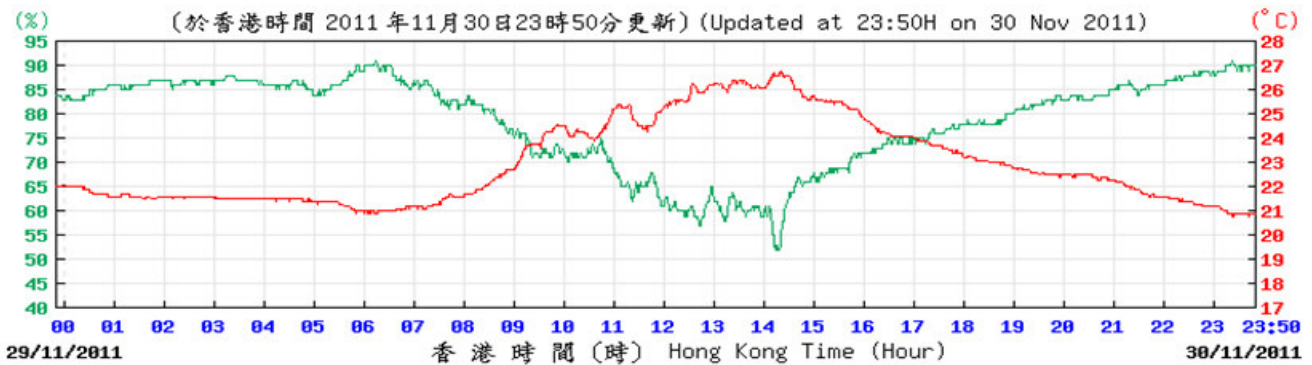
Wind Speed



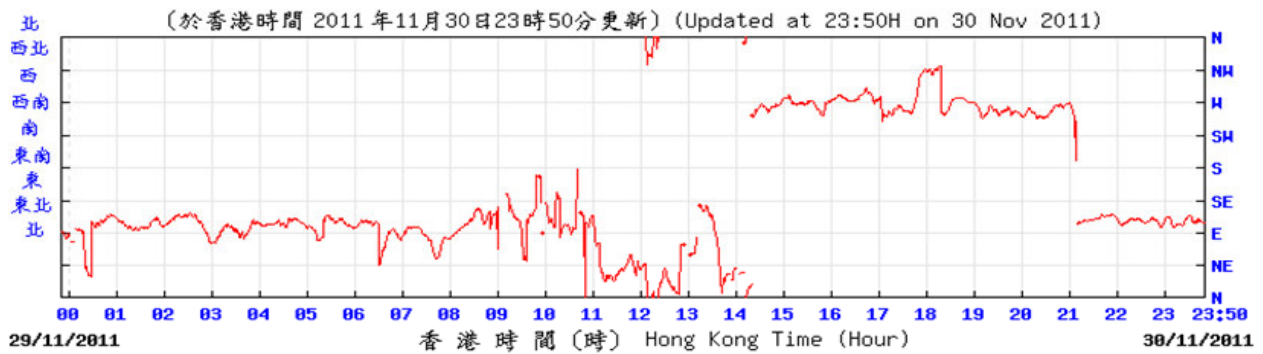
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	Scale N.T.S	Project No. MA11017	CINOTECH
	Date Nov 11	Appendix G	

Meteorological Conditions (King's Park)

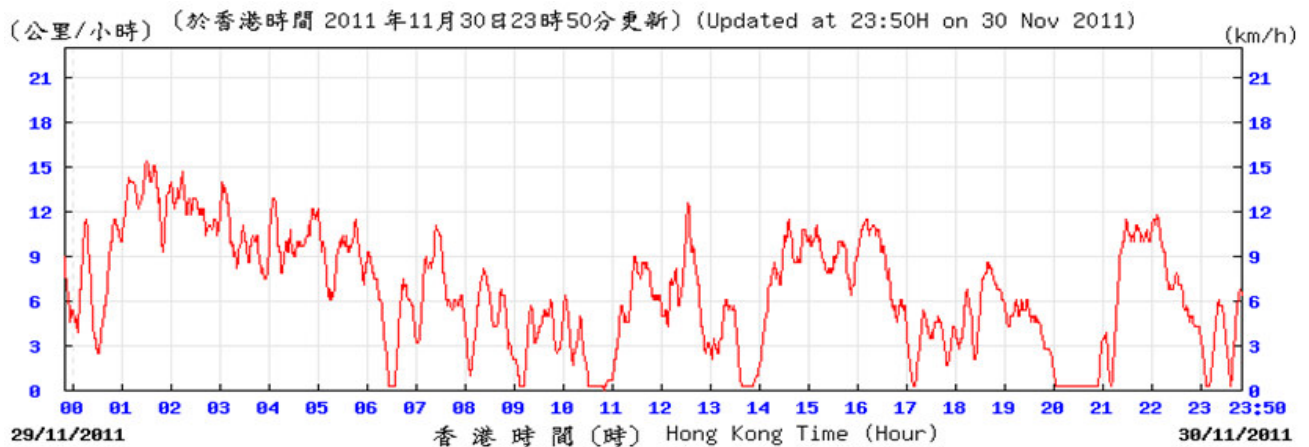
Temperature & Humidity



Wind Direction



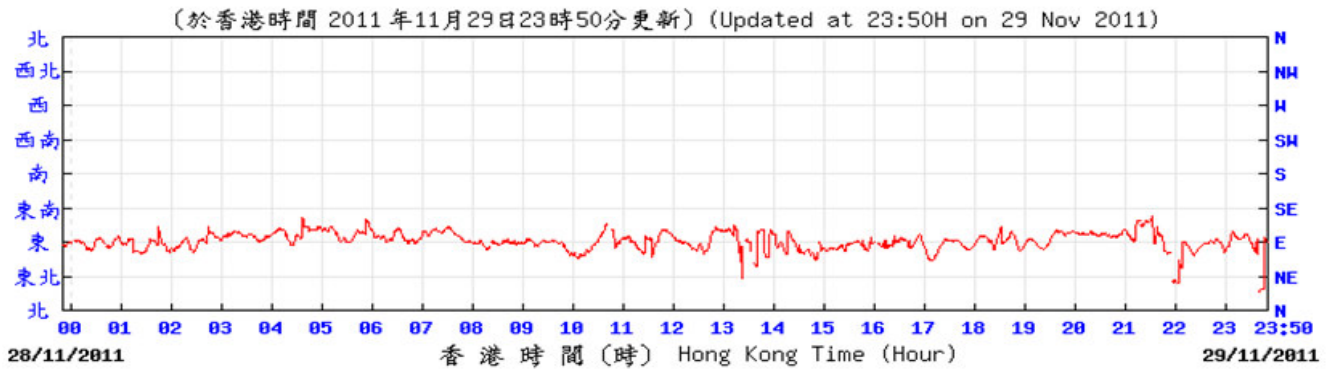
Wind Speed



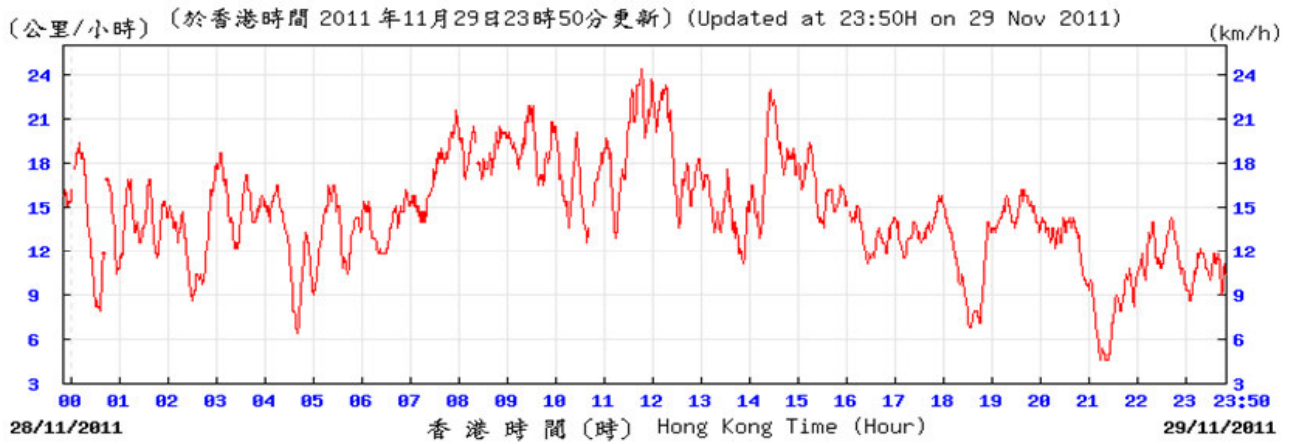
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	Scale N.T.S	Project No. MA11017	CINOTECH
	Date Nov 11	Appendix G	

Meteorological Conditions (Kai Tak)

Wind Direction



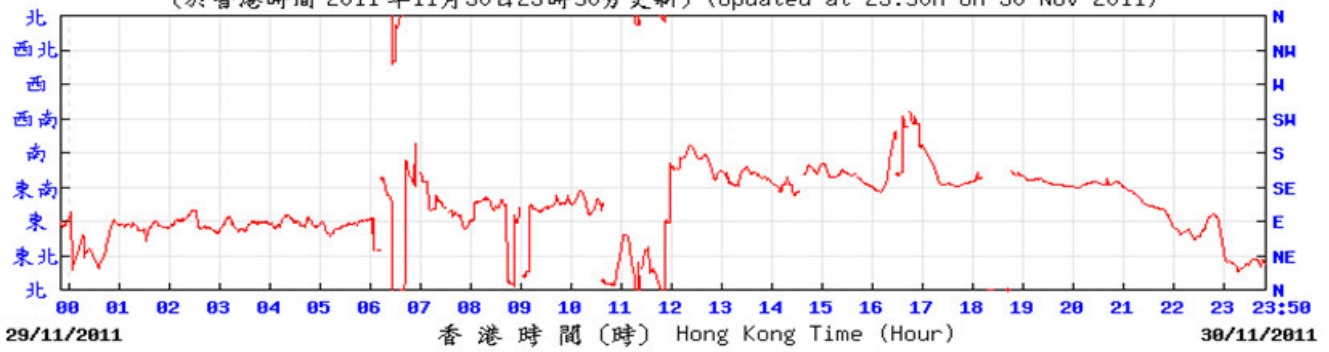
Wind Speed



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	Scale N.T.S	Project No. MA11017	CINOTECH
	Date Nov 11	Appendix G	

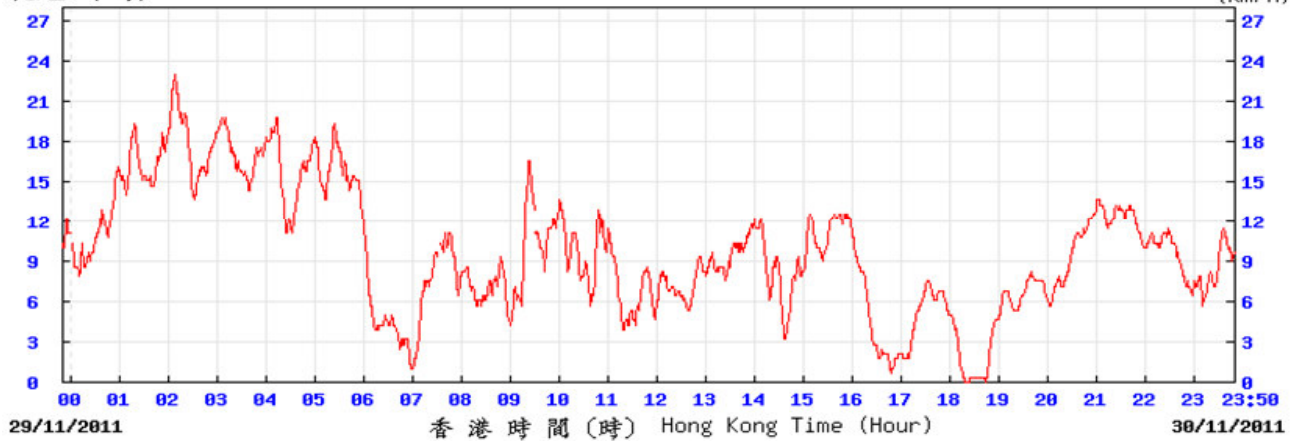
Meteorological Conditions (Kai Tak)


(於香港時間 2011 年11月30日23時50分更新) (Updated at 23:50H on 30 Nov 2011)



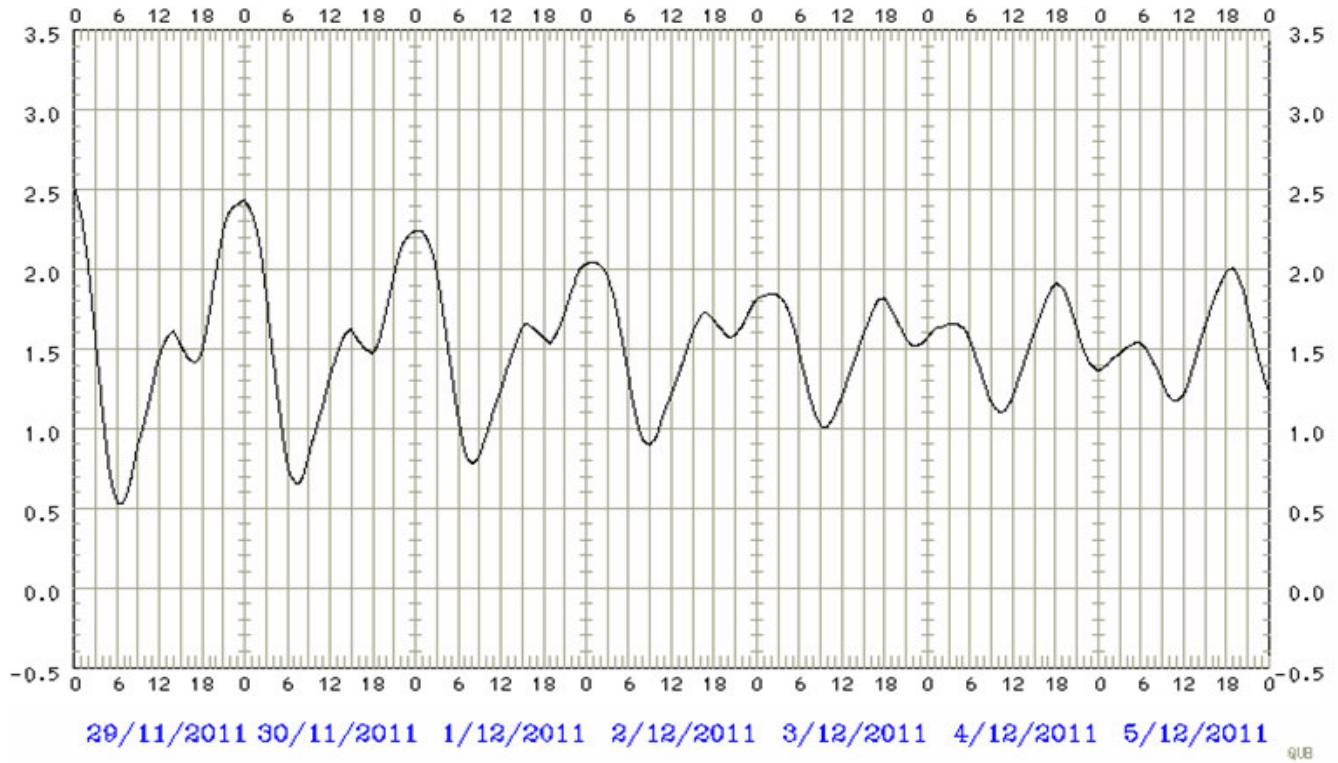
Wind Speed

(公里/小時) (於香港時間 2011 年11月30日23時50分更新) (Updated at 23:50H on 30 Nov 2011)



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	Scale	Project No.	
	Date	Appendix	
	N.T.S	MA11017	
	Nov 11	G	

Predicted Tides at Quarry Bay in November 2011



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	Scale N.T.S	Project No. MA11017	<h1 style="margin: 0;">CINOTECH</h1>
	Date Nov 11	Appendix G	