Civil Engineering and Development Department

Environmental Monitoring Works at Kai Tak Development

Water, Sediment & Odour Quality Report

January and February 2014

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDIX

EXECUTIVE SUMMARY

Introduction

1. This is the 16th Water, Sediment & Odour Quality Report for Environmental Monitoring Works for Kai Tak Development during construction phase (the Project). This report documents the results and findings of the 11th general water quality monitoring works, 6th odour sampling, 6th sediment monitoring and 14th Odour Patrol conducted for the Project in January and February 2014.

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 11th General Water Quality Monitoring for the Project was performed on 20th February 2014 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 Kwun 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). The 6th Odour Sampling for the Project was performed on 19th February 2014 and the monitoring results were checked and reviewed.

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. The 14th odour patrol was performed on 12th, 13th & 15th February 2014. All 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 and Maintenance Period. The first sediment sampling shall be carried out within the August of 2011 or as agreed with the Engineer. The 6th Sediment Monitoring for the Project was performed on 26th and 27th February 2014 and the monitoring results were also checked and reviewed.

6. In addition, no environmental monitoring works were conducted in January 2014.

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 16th Water, Sediment & Odour Quality Monitoring Reports summarizing the general water quality monitoring works, odour and sediment monitoring works and odour patrol works for the Project in January and February 2014.

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 that 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

***In-situ* Measurement**	**Laboratory Measurement**
Dissolved Oxygen	Suspended Solids (SS)
pH	*E. coli*
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 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 B.**

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	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
E. coli	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 general water quality monitoring was conducted on 20th February 2014.

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 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 C1 and Appendix D1 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 E1**.

Table 2.5 Water Depth of Water Quality Monitoring Stations

Water Quality Monitoring Stations	Water Depth (m)	
	Mid-Ebb	Mid-Flood
AC1	4.0	4.0
AC2	5.0	4.0
AC3	4.0	4.5
AC4	5.0	5.0
AC5	4.5	4.5
AC6	5.5	5.5
AC7	7.0	7.0
KT1	8.0	8.0
IB1	6.0	5.0
IB2	7.0	7.0
IB3	9.0	9.0
OB1	7.0	8.0
VH1	23.0	25.0
VH2	18.0	19.0
KTN	2.0	2.0
JVC	5.0	4.5
WSD Intake at Tai Wan	15.0	15.0
WSD Intake at Cha Kwo Ling	11.0	9.5
WSD Intake at Quarry Bay	12.0	12.0
WSD Intake at Sai Wan Ho	14.0	15.0

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.

3.19 Table 3.2 summarizes the equipment used in the odour monitoring program. Copies of the calibration certificates of the equipment are shown in **Appendix A2**.

Table 3.2 Equipment for Odour Monitoring Program

Equipment	Model and Make	Qty.
Multi-parameter Water Quality System	YSI 6820-C-M	1
mV Meter	TM39	1
Monitoring Position Equipment	"Magellan" Handheld GPS Model GPS-320	1
Thermo-Anemometer	AZ Instrument (Model No. AZ8904)	1
Water Depth Detector	Fishfinder 140	1

Calibration of *In Situ* Instruments

3.20 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.

3.21 The thermo-anemometer was checked and calibrated at yearly intervals.

3.22 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).

3.23 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

3.24 Table 3.3 summarizes the monitoring parameters and frequencies of the odour sampling at each of the measurement locations.

Table 3.3 Odour Sampling Parameters and Frequency

Monitoring Stations	Parameters, unit	Frequency
SA1 SA2 SA3 SA4 SA5 SA6 SA7 SA8 SA9 SA10 SA11 SA12 SA13	• 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.	• Half-yearly
	• 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)

3.25 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.

3.26 The collected odour samples were delivered to the laboratory (PolyU) within 24 hours after collection.

3.27 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 50ppm solution/mixture of certified n-butanol standard gas.

3.28 The olfactometry method was normally used for a source odour concentration analysis with a detection limit of 10ou/m^3.

QA/QC Requirements

3.29 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.

3.30 The olfactometry analysis was conducted by laboratory (PolyU) complying with the European Standard EN13725:2003.

3.31 The results of blank sample was below the threshold of olfactometry measurement, which means the on-site filling gas used in this case had no background odour to interfere the results of real odour samples. The laboratory QA/QC results are provided in the laboratory analysis report.

Results and Observation

3.32 The odour sampling schedule in the reporting period is provided in **Appendix B**. The odour sampling for 13 locations was conducted during the period of low water level.

3.33 The odour sampling was conducted on 19th February 2014.

1.3 The weather during the sampling was cloudy.

3.34 No marine activities were conducted in the vicinity of the stations during the monitoring.

3.35 The following observation near the monitoring stations were recorded during the field works:

- Smell of sewage was noticed during the sampling at SA1, SA2 and SA13.

3.36 The on-site odour sampling and laboratory olfactometry measurement report prepared by PolyU are provided in **Appendix C2**. The calibration records for the dilution apparatus used for olfactometry measurement are provided in **Appendix A2**.

3.37 The in-situ measurement results including dissolved oxygen, water and ambient temperature, water depth, salinity, pH and redox potential are provided in **Appendix E2**.

3.38 The relevant meteorological data including ambient temperature, wind speed and wind direction from the Hong Kong Observatory Station during the measurement/sampling period are provided in **Appendix F**.

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 Mr. Lee Man Hei 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 A5**.

4.4 The odour patrol along with the odour route with 65 sniffing locations was conducted by the 2 qualified odour patrol members in February 2014 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 Sniffing location no. 35 is shifted to the right side about 100m in compare with the EM&A Manual due to the access problem. In addition, sniffing location no. 29 is now situated at the restricted area of Cruise Terminal Building (CTB) and therefore it was revised to the landscape deck of CTB which is considered as ASRs. 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)
12 February 2014	05:29 – 09:01	Low Tide	Within Kai Tak Development and Ma Tau Kok Waterfront	0.9 – 1.3
12 February 2014	16:58 – 20:41	High Tide		1.9 – 2.1
13 February 2014	05:35 – 06:50	Low Tide		0.8 – 1.1
13 February 2014	17:02 – 20:54	High Tide		1.8 – 2.1
15 February 2014	05:15 – 08:18	Low Tide		0.7 – 1.3
15 February 2014	17:05 – 18:00	High Tide		1.4 – 1.6

***** 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 A4**.

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 bechecked 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 65 sniffing locations in February 2014 are summarized in Tables 4.2 for different routes within Kai Tak Development and Ma Tau Kok Waterfront and the field record sheets are attached in **Appendix E4**.

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 F**.

4.17 During the odour patrol investigation, our patrol members identified different types of flavours including seawater smell, sewage, rubbish, fishy smell and pungent 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 65 locations was found to be in a wide range from level 0 up to level 1.

Table 4.2 – Summary of Odour Patrol Results in February 2014

Sniffing Location	Area	Odour Intensity				General On-site Observation	
		Low Tide (Day Time)		High Tide (Evening/ Night time)		Odour nature	Possible source
		OI-1	OI-2	OI-1	OI-2		
1	Kwun Tong Typhoon Shelter	0	0	0	0	N/A	N/A
2		0	0	0	0	N/A	N/A
3		0	0	0	0	N/A	N/A
4		0	0	0	0	N/A	N/A
5		1	1	0	0	sewage	marine water
6	Southern Kai Tak Approach Channel	1	1	0	0	sewage	marine water
7		0	0	0	0	N/A	N/A
8	Northern Kai Tak Approach Channel	0	0	0	0	N/A	N/A
9		0	0	0	0	N/A	N/A
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	1	1	sewage and fishy smell	marine water
14		1	1	1	1	sewage, rubbish and fishy smell	marine water and exposed shores
15		1	1	0	0	sewage	marine water
16		0	0	1	1	sewage	marine water
17		0	0	1	1	sewage	marine water
18		0	0	0	0	N/A	N/A
19		1	1	0	0	sewage	marine water
20		1	1	0	0	sewage	marine water and exposed shores
21	Southern Kai	1	1	0	0	fishy smell	exposed shores

22	Tak Approach Channel	0	0	0	0	N/A	N/A
23		0	0	0	0	N/A	N/A
24		0	0	0	0	N/A	N/A
25		0	0	0	0	N/A	N/A
26		0	0	0	0	N/A	N/A
27	Kai Tak Runway	0	0	0	0	N/A	N/A
28		0	0	0	0	Seawater smell	marine water
29		0	0	0	0	Seawater smell	marine water
30		0	0	0	0	N/A	N/A
31		0	0	0	0	N/A	N/A
32		0	0	0	0	N/A	N/A
33		0	0	0	0	N/A	N/A
34		0	0	0	0	N/A	N/A
35		0	0	0	0	N/A	N/A
36	Ma Tau Kok/To Kwan Wan waterfront	0	0	0	0	N/A	N/A
37		0	0	0	0	N/A	N/A
38		0	0	0	0	N/A	N/A
39		1	1	1	1	sewage	marine water
40		1	1	1	1	sewage and seawater smell	marine water and exposed shores
41	Upstream section of Kai Tak Nullah	0	0	0	0	N/A	N/A
42		1	1	1	1	sewage	water at Kai Tak Nullah
43		0	0	0	0	N/A	N/A
44		0	0	0	0	N/A	N/A
45	Downstream section of Kai Tak Nullah	0	0	0	0	N/A	N/A
46		0	0	0	0	N/A	N/A
47		0	0	0	0	N/A	N/A
48		1	1	0	0	sewage	water at Kai Tak Nullah
49		0	0	0	0	N/A	N/A
50		0	0	0	0	N/A	N/A
51		0	0	0	0	N/A	N/A

52		0	0	0	0	N/A	N/A
53		0	0	1	1	sewage	water at Kai Tak Nullah
54		0	0	0	0	N/A	N/A
55		0	0	0	0	N/A	N/A
56		0	0	0	0	N/A	N/A
57	Upstream section of Kai Tak Nullah	0	0	0	0	N/A	N/A
58		0	0	0	0	N/A	N/A
59		1	1	1	1	sewage	water at Kai Tak Nullah
60		0	0	0	0	N/A	N/A
A1	Kwun Tong Typhoon Shelter	0	0	0	0	N/A	N/A
A2		0	0	0	0	N/A	N/A
A3		0	0	0	0	N/A	N/A
A4		1	1	1	1	sewage and pungent smell	sewage treatment plant
A5		0	0	0	0	N/A	N/A

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	**Laboratory Testing:** • Acid Volatile Sulphides (AVS), (mg/kg dry weight) • Residual Nitrate, (mg NO_3-N/L wet weight) • Reduction – Oxidation (Redox) Potential, (mV)/pH	• 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 were 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.

5.13 Table 5.4 summarizes the equipment used in the sediment monitoring program. Copies of the calibration/performance check records of the equipments used in the sediment monitoring and calibration certificates of mV Meter shown in **Appendix A3**. The equipment of flow injection analyzer and UV/Vis Spectrophotometer were checked/calibrated regularly every six months and three months regularly.

Table 5.4 Equipment for Sediment Monitoring Program

Equipment	Model and Make	Qty.
Monitoring Position Equipment	"Magellan" Handheld GPS Model GPS-320	1
Water Depth Detector	Fishfinder 140	1
mV Meter	TM39	1

Results and Observation

5.14 The sediment monitoring schedule in the reporting period is provided in **Appendix B**.

5.15 The sediment monitoring was conducted on 26th and 27th February 2014.

5.16 The weather during the sampling was cloudy.

5.17 No marine activities were conducted in the vicinity of the stations during the monitoring.

5.18 Sediment core sampling was unable to collect at SA1 as the nature of the seabed is sand / debris. Therefore, grab sampling at SA1 was conducted.

5.19 The laboratory testing report of the collected sediment samples and QC report are provided in **Appendix C3** and **Appendix D2** respectively.

5.20 The sediment sampling data record sheet is provided in **Appendix E3**.

5.21 The depth of water at each of the sediment monitoring stations is shown in Table 5.5.

Table 5.5 Water Depth at Sediment Monitoring Stations

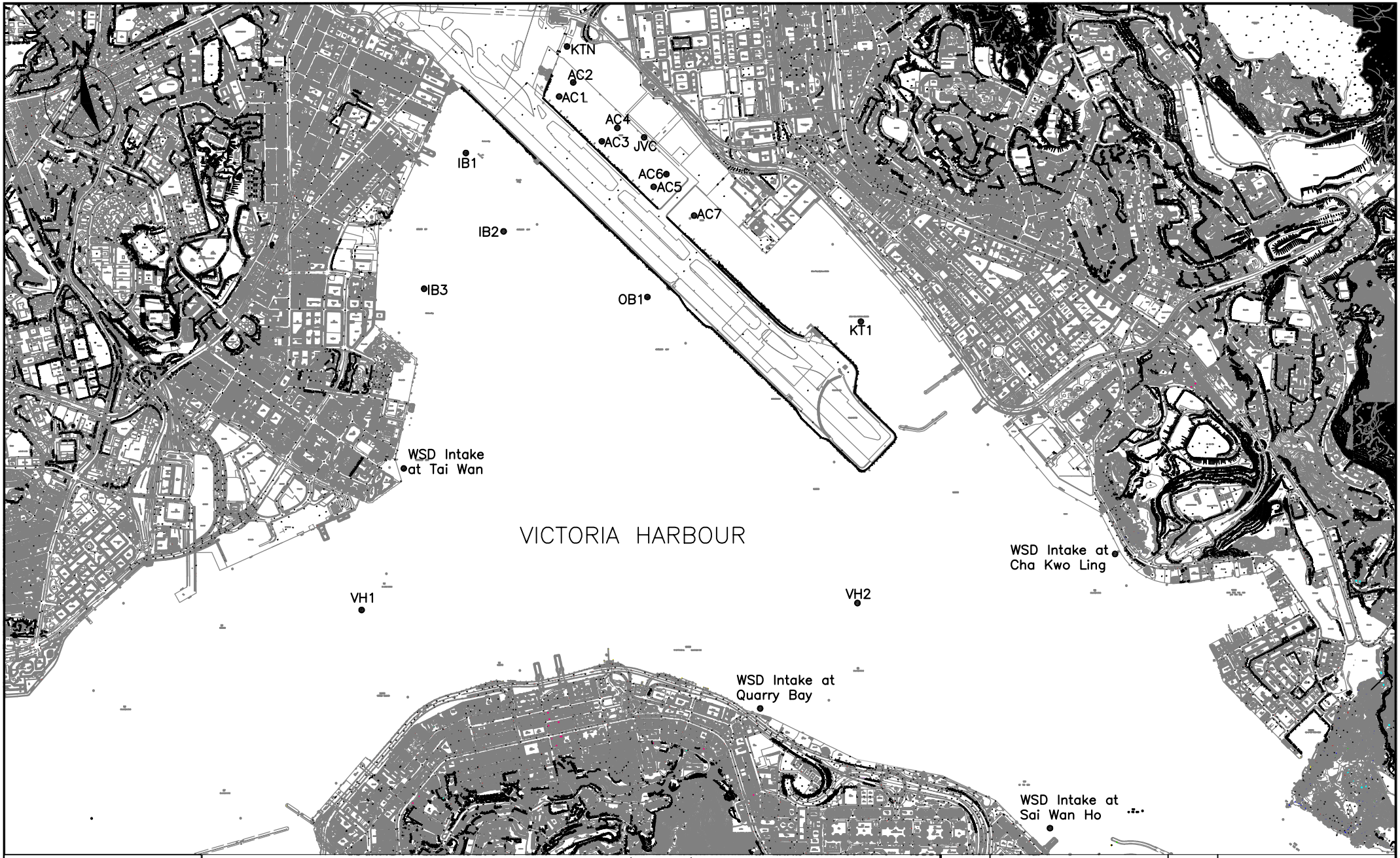
Location ID	Sampling Location	Water Depth, mPD
SA1	Northern KTAC, in the vicinity of Kai Tak Nullah (KTN)	2.4
SA2	Northern KTAC	3.5
SA3	Northern KTAC, in the vicinity of Jordan Valley Culvert (JVC) Outfall	3.5
SA4	Southern KTAC	4.8
SA5		3.3
SA6		5.1
SA7	KTTS	4.6
SA8		5.4
SA9		5.8
SA10	Kowloon Bay (between runway opening and TKWTS)	5.7
SA11	MTK waterfront, at the end of Ma Tau Kok Road	4.7
SA12	TKW waterfront, near Vehicle Examination Centre	4.4
SA13	Hoi Sham Park waterfront	3.4

6. Conclusion

6.1 Environmental monitoring works for water quality, odour and sediment were performed in February 2014 and all monitoring results were checked and reviewed.

6.2 The next general water quality monitoring and odour patrol will be conducted in May 2014 and sediment monitoring and odour sampling will be conducted in August 2014 tentatively.

FIGURES



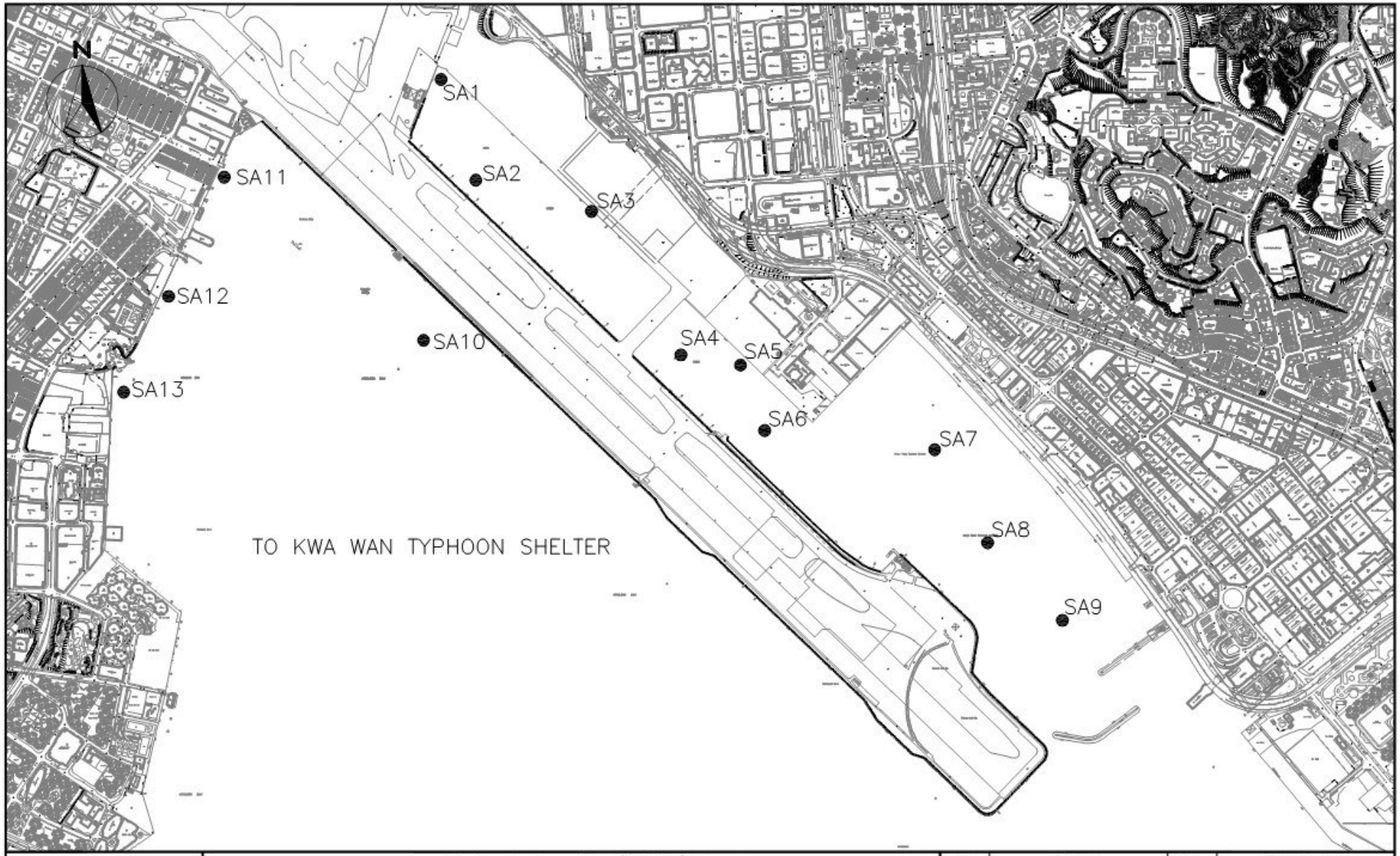
CINOTECH consultants limited

Contract No. KL/2010/02

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

Location Of Water Quality Monitoring Stations

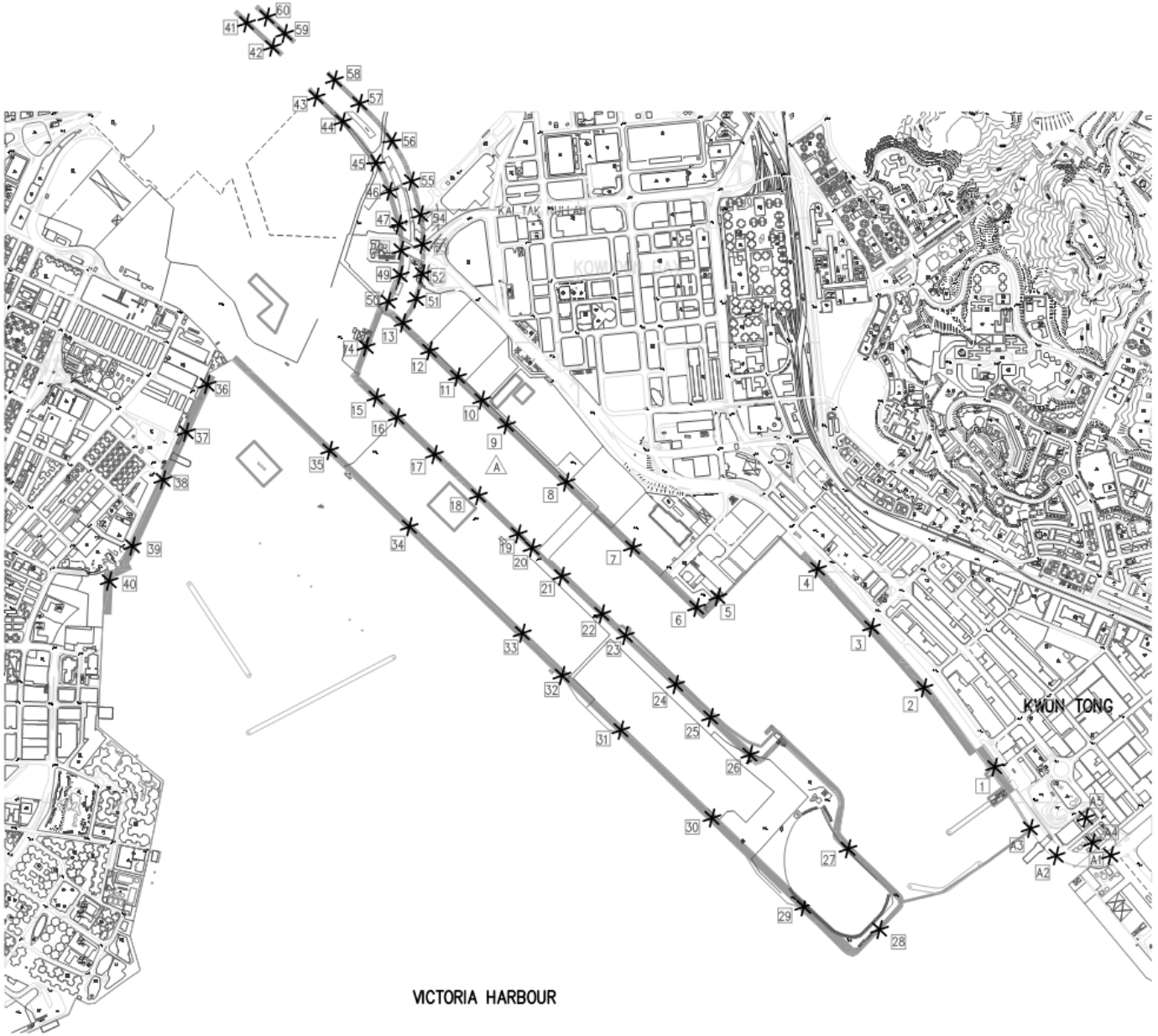
SCALE	N.T.S	DATE	3 AUG 2011
CHECK	IT	DRAWN	TW
PROJECT NO.	MA11017	FIGURE NO.	1
		REV	–



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 N.T.S	Project No. MA11017	CINOTECH
Proposed Odour Patrol Route and Sniffing Locations	Date Nov-13	Figure 3	

APPENDIX A1
COPIES OF CALIBRATION CERTIFICATES FOR WATER QUALITY MONITORING

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/W/131221-1
Date of Issue:	2013-12-21
Date Received:	2013-12-21
Date Tested:	2013-12-21
Date Completed:	2013-12-21
Next Due Date:	2014-03-20
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	: 19 degree Celsius
Relative Humidity	: 49%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 12B100106
1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, L/N: 12A100930
1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 12B100900
1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, L/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
   Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
   Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
   pH (APHA 19th 4500-H+ B)

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

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Website: www.wellab.com.hk

TEST REPORT

Test Report No.:	C/W/131221-1
Date of Issue:	2013-12-21
Date Received:	2013-12-21
Date Tested:	2013-12-21
Date Completed:	2013-12-21
Next Due Date:	2014-03-20

Results:

1. Conductivity performance check

Specific Conductivity, µS/cm		Correction, µS/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	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	0.00	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**********

WELLAB LIMITED
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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
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Shatin, NT, Hong Kong

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/W/131026-3
Date of Issue:	2013-12-21
Date Received:	2013-12-21
Date Tested:	2013-12-21
Date Completed:	2013-12-21
Next Due Date:	2014-03-20
Page:	1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 12B100804
Equipment No.	: W.03.13

Test conditions:

Room Temperature	: 19 degree Celsius
Relative Humidity	: 49%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 12B100055
1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, L/N: 12A100930
1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 12B100645
1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, L/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
   Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
   Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
   pH (APHA 19th 4500-H+ B)

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

PATRICK TSE
Laboratory Manager

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Website: www.wellab.com.hk

TEST REPORT

Test Report No.:	C/W/131026-3
Date of Issue:	2013-12-21
Date Received:	2013-12-21
Date Tested:	2013-12-21
Date Completed:	2013-12-21
Next Due Date:	2014-03-20
Page:	2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, µS/cm		Correction, µS/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	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	0.00	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**********

APPENDIX A2
COPIES OF CALIBRATION CERTIFICATES FOR ODOUR SAMPLING

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/W/131221-2
Date of Issue:	2013-12-21
Date Received:	2013-12-21
Date Tested:	2013-12-21
Date Completed:	2013-12-21
Next Due Date:	2014-03-20
Page:	1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 12B100803
Equipment No.	: W.03.12

Test conditions:

Room Temperature	: 19 degree Celsius
Relative Humidity	: 49%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 12B10055
1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, L/N: 12A100930
1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 12B100644
1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, L/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
   Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
   Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
   pH (APHA 19th 4500-H+ B)

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

Test Report No.:	C/W/131221-2
Date of Issue:	2013-12-21
Date Received:	2013-12-21
Date Tested:	2013-12-21
Date Completed:	2013-12-21
Next Due Date:	2014-03-20
Page:	2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, µS/cm		Correction, µS/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	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	0.00	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**********

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18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

ATTN: **Mr. W.K. Tang**

Test Report No.:	CA/13/130504
Date of Issue:	2013-05-05
Date Received:	2013-05-04
Date Tested:	2013-05-04
Date Completed:	2013-05-05
Next Due Date:	2014-05-04
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description	: Thermo Anemometer
Manufacturer	: Prova Instruments Inc.
Model No.	: AVM-01
Serial No.	:10330172
Equipment No.	: A-03-06

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 62%
Pressure	: 101.2 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	2.0	2.0
Temperature, °C	21.0	21.1

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing & Research

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Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/W/140215-1
Date of Issue:	2014-02-15
Date Received:	2014-02-15
Date Tested:	2014-02-15
Date Completed:	2014-02-15
Next Due Date:	2014-05-14
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description : Portable pH/Temp/Redox TM39 Meter with Redox (ORP) combination electrode for TM39
Model No. : TM39
Serial No. : 020139
Equipment No. : W.06.01, W.06.02

Test conditions:

Room Temperature : 18 degree Celsius
Relative Humidity : 67%

Test Specifications & Methodology:

pH (ISO 10523, Section 9.1 and APHA 19ed 4500-H^+ B)
1. Calibration check with standard pH buffer
Redox electrode (APHA 20ed 2580)
1. Redox performance check with ZoBell's standard solution

****

Results:

1. 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

2. Redox Meter check

Redox, mV		Acceptable range
Instrument Reading	Theoretical Value	
228	229	229±10

****

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

PATRICK TSE
Laboratory Manager

Result of calibration on olfactometer (Date: 18 November 2013)

Setting	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	dilution factor	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**	**dilution factor**
data	21030.5	11243.23	6878.212	3186.093	1882.924	999.3983	497.5728	227.4895	142.4234	81.76895	42.67504	16.72813	10.16779	6.424703	4.913008
	19488.27	12505.84	6720.092	3168.824	1889.008	1008.014	497.5728	229.2737	142.7712	81.76895	42.51985	16.75209	10.16779	6.424703	4.933738
	20658.94	11919.43	6758.936	3239.047	1901.294	999.3983	499.6992	229.7242	142.4234	81.76895	42.21285	16.75209	10.16779	6.424703	4.913008
	20335.58	11463.69	6798.233	3186.093	1895.131	999.3983	501.8438	230.6304	142.7712	81.76895	42.51985	16.70423	10.16779	6.424703	4.933738
	20586.2	11943.78	6837.988	3186.093	1898.208	1008.014	501.8438	230.1764	141.7328	81.76895	42.51985	16.75209	10.16779	6.460199	4.892452
	18951.31	12218.35	6532.38	3186.093	1910.614	1008.014	504.0069	230.1764	143.2961	81.20111	42.67504	16.72813	10.16779	6.424703	4.933738
	19919.86	12079.5	6720.092	3221.201	1910.614	1008.014	501.8438	228.8251	142.5971	81.76895	42.67504	16.75209	10.16779	6.424703	4.913008
	19885.99	12129.63	6532.38	3212.352	1910.614	999.3983	501.8438	230.1764	143.1207	81.76895	42.51985	16.72813	10.16779	6.424703	4.954644
	19919.86	11907.29	6758.936	3203.551	1929.531	1016.779	499.6992	230.6304	143.4719	81.76895	42.67504	16.75209	10.16779	6.424703	4.913008
	20880.29	11895.18	6837.988	3221.201	1910.614	1008.014	501.8438	229.7242	143.2961	81.76895	42.67504	16.75209	10.16779	6.424703	4.831802
	20732.2	11907.29	6798.233	3109.83	1901.294	999.3983	504.0069	228.3781	142.0773	81.76895	42.67504	16.72813	10.16779	6.460199	4.933738
	21030.5	12295.44	6960.095	3177.435	1916.879	1016.779	499.6992	229.7242	142.2501	81.76895	42.67504	16.75209	10.16779	6.424703	4.933738
	19391.31	12695.94	6878.212	3221.201	1898.208	1008.014	504.0069	229.2737	143.2961	81.76895	42.67504	16.75209	10.16779	6.460199	4.933738
	22229.96	11463.69	6643.727	3168.824	1929.531	999.3983	504.0069	230.6304	143.8248	81.76895	42.83136	16.72813	10.16779	6.424703	4.954644
	19520.8	11577.19	6878.212	3160.259	1929.531	1008.014	501.8438	230.6304	142.9457	81.76895	42.67504	16.75209	10.16779	6.424703	4.913008
	21534	11463.69	7043.952	3221.201	1926.353	1008.014	501.8438	230.1764	143.2961	81.76895	42.67504	16.75209	10.16779	6.424703	4.933738
	20992.75	12492.48	6720.092	3177.435	1873.872	1008.014	506.1887	231.0862	143.2961	81.76895	42.67504	16.75209	10.16779	6.424703	4.933738
Average	20416.96	11953.04	6782.221	3190.984	1906.719	1006.004	501.7274	229.8074	142.8759	81.73555	42.62053	16.74223	10.16779	6.430967	4.921676
Standard Deviation (STDEV)	853.9908	414.9944	134.9082	31.17678	16.59709	5.757455	2.340489	0.930722	0.561718	0.137721	0.133199	0.014808	1.83E-15	0.013948	0.028112
Coefficient of Variation (%)	4.182752	3.471874	1.989145	0.977027	0.870453	0.572309	0.466486	0.405001	0.393151	0.168496	0.312523	0.088448	1.8E-14	0.216889	0.571195

Setting	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Final Dilution Factor	**20417**	**11953**	**6782.2**	**3191**	**1906.7**	**1006**	**501.7**	**229.8**	**142.9**	**81.7**	**42.6**	**16.7**	**10.2**	**6.4**	**4.9**

APPENDIX A3
COPIES OF CALIBRATION CERTIFICATES FOR SEDIMENT MONITORING

WELLAB 匯力
Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/W/140215-1
Date of Issue:	2014-02-15
Date Received:	2014-02-15
Date Tested:	2014-02-15
Date Completed:	2014-02-15
Next Due Date:	2014-05-14
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description : Portable pH/Temp/Redox TM39 Meter with Redox (ORP) combination electrode for TM39
Model No. : TM39
Serial No. : 020139
Equipment No. : W.06.01, W.06.02

Test conditions:

Room Temperature : 18 degree Celsius
Relative Humidity : 67%

Test Specifications & Methodology:

pH (ISO 10523, Section 9.1 and APHA 19ed 4500-H^+ B)
1. Calibration check with standard pH buffer
Redox electrode (APHA 20ed 2580)
1. Redox performance check with ZoBell's standard solution

****

Results:

1. 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

2. Redox Meter check

Redox, mV		Acceptable range
Instrument Reading	Theoretical Value	
228	229	229±10

****

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

PATRICK TSE
Laboratory Manager

Calibration/ Performance Check Requested: Flow Injection Analyzer (FIA)
Method Used: CMP 022

I. Pump

Equipment No.: E222 Timer used: E407

Time the pump takes to make 10 revolutions: 50 seconds (Pass/ Fail)

Acceptance Criteria: **50 ±1second for 10 revolutions**

Heating modules

Equipment No.: E223 Thermocouple used: E250 Ch1

Channel No.	Set Temp °C	Measured Temp, °C	Corrected Temp, °C	Difference	Pass/Fail
1	60	59.2	59.4	+0.6	Pass
2	37	36.8	36.7	+0.3	Pass
3	60	59.6	59.8	+0.2	Pass

Acceptance Criteria: **± 2°C for the set temperature**

Analyst : [signature]

Date: 22-1-2014

Checked by: MAN

Date: 22-1-2014 MAN
22/01/2014.

Analyst	: Tonky	Date Analysed	: 3/1/2014
Checked By	: MAN	Date Checked	: 3/1/2014

Performance Check of UV/Vis Spectrophotometer (CMP020)

Equipment No. : E06

Record:

Wavelength check

SRM Band No.	Certified Wavelength, nm	Instrument Reading, nm	Derivation, nm
1	241.13	242.02	0.89
2	249.87	250.04	0.17
3	278.10	278.99	0.89
4	287.18	288.06	0.88
5	333.44	334.15	0.71
6	345.47	346.18	0.71
7	361.31	362.01	0.70
8	385.66	386.46	0.80
9	416.28	417.20	0.92
10	451.30	452.02	0.72
11	467.83	468.72	0.89
12	485.29	486.05	0.76
13	536.64	~~531.56 537~~ 537.56	0.92
14	640.52	~~640.27~~ 641.43	0.91
Criteria: Derivation of λ_{max} for Holmium Oxide solution should be less than ± 1 nm			

Linearity check

Analytical wavelength: 512 nm

Concentration of cobalt chloride solution, N	Absorbance
0.0000	0.0000
0.0050	0.0412
0.0100	0.0838
0.0500	0.4327
0.1000	0.8752
0.2000	1.7315
Regression coefficient:	

Note : Regression coefficient of calibration curve should be at least 0.9999.

Analyst	:	Date Analysed	: 3/1/2014
Checked By	: MAN	Date Checked	: 3/1/2014

Stray radiation

Spectral Range, nm	Test Wavelength, nm	Liquid	Stray radiation, %
210 – 259	220	10g/L aqueous NaI or KI	<1
250 – 320	285	Acetone	<1
300 - 385	350	50g/L aqueous $NaNO_2$	<1
Criteria: less than 1%			

Absorbance accuracy

Wavelength, nm	Expected Absorbance	Measured Absorbance
235	0.747	0.7471
257	0.864	0.8642
313	0.292	0.2920
350	0.640	0.6403
Criteria: ±0.01 Abs		

Zero absorbance line flatness

Maximum value - minimum value = 0.0000 - 0.0000 = 0.0000 (D)

Criteria: D should be less than 0.01 Abs

Status of instrument: Pass

Wavelenght and Absorbance(Visible region) check

Wavelength, nm	Expected Absorbance	Measured Absorbance
600	0.068	0.0716
650	0.224	0.2321
700	0.527	0.5388
750	0.817	0.8405
Criteria: > 2% of expected absorbance		

APPENDIX A4
COPIES OF CALIBRATION CERTIFICATES FOR ODOUR PATROL

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

ATTN: **Mr. W.K. Tang**

Test Report No.:	CA/13/130504
Date of Issue:	2013-05-05
Date Received:	2013-05-04
Date Tested:	2013-05-04
Date Completed:	2013-05-05
Next Due Date:	2014-05-04
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description	: Thermo Anemometer
Manufacturer	: Prova Instruments Inc.
Model No.	: AVM-01
Serial No.	:10330172
Equipment No.	: A-03-06

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 62%
Pressure	: 101.2 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	2.0	2.0
Temperature, °C	21.0	21.1

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

PATRICK TSE
Laboratory Manager

APPENDIX A5
CERTIFICATE FOR QUALIFIED ODOUR PANEL MEMBER

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 1516, 1701 & 1716, Technology Park,
18 On Lai Street, Shatin, N.T., Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Laboratory No.:	19640
Date of Issue:	2014-01-16
Date Tested:	2014-01-10
Date Completed:	2014-01-16

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 olfactomery measurements on three separate sessions on 10th, 14th and 16th January 2014, respectively.

Results:

Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R	Requirement of EN13725	Comment
1.35	<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 January 2014 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 1.35. 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 16th July 2014.
**********END OF REPORT**********

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing & Research

WELLAB LIMITED
Rms 1516, 1701 & 1716, Technology Park,
18 On Lai Street, Shatin, N.T., Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Laboratory No.:	19640A
Date of Issue:	2014-01-16
Date Tested:	2014-01-10
Date Completed:	2014-01-16

ATTN: **Ms Ivy Tam** Page: 1 of 1

Certificate of Qualified Odour Panel Member

Mr. Lee Man-Hei

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 olfactomery measurements on three separate sessions on 10th, 14th and 16th January 2014, respectively.

Results:

Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R	Requirement of EN13725	Comment
1.34	<2.3	Pass

Certification:
This is to certify that **Mr. Lee Man-Hei** participated in a set of n-butanol screening tests in our laboratory in January 2014 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 1.34. 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 16th July 2014.
**********END OF REPORT**********

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

PATRICK TSE
Laboratory Manager

APPENDIX B
ENVIRONMENTAL MONITORING SCHEDULE

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

Odour, Sediment and Water Quality Monitoring Schedule for February 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Feb
2-Feb	3-Feb	4-Feb	5-Feb	6-Feb	7-Feb	8-Feb
9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb
			Odour Patrol Daytime - Low Tide Evening/Night Time - High Tide	Odour Patrol Daytime - Low Tide Evening/Night Time - High Tide		Odour Patrol Daytime - Low Tide Evening/Night Time - High Tide
16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb
			Odour Sampling (6th) Low Tide 17:52	Water Quality Monitoring (11th) Mid-Flood 09:30 Mid-Ebb 15:42		
23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	
			Sediment Monitoring (6th)	Sediment Monitoring (6th)		

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

APPENDIX C1
LABORATORY TESTING REPORT FOR WATER QUALITY MONITORING

WELLAB LIMITED
Rms 1516, 1701 & 1716, Technology Park,
18 On Lai Street, Shatin, N.T., Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	1 of 30

ATTN: **Miss Mei Ling Tang**

Sample Description : 170 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. : MA11017/140220
Sampling Date : 2014-02-20

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	*E. coli*	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

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	AC1-a	AC1-a	AC2-a	AC2-a	AC3-a	AC3-a
Sampling Depth	S	B	S	B	S	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-1	19722-3	19722-4	19722-6	19722-7	19722-9
Suspended Solids (SS), mg/L	8.2	35.4	4.3	7.7	3.6	4.4
E. coli, cfu/100mL	980	240	760	120	420	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	0.28	0.35	0.36	0.29	0.36	0.29
Unionized Ammonia (UIA), mg/L	0.001	0.002	0.003	0.002	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.7	0.8	0.6	0.7	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.062	0.072	0.091	0.048	0.101	0.050
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	2.36	3.11	5.08	2.07	6.10	2.03
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.49	0.68	1.20	0.30	0.73	0.13
Total Phosphorous (TP), mg-P/L	0.55	0.79	1.35	0.38	0.86	0.19
Cadmium (Cd), µg/L	0.4	0.4	0.1	0.4	0.5	0.2
Chromium (Cr), µg/L	2.3	2.6	1.9	2.7	1.4	2.3
Copper (Cu), µg/L	5.7	7.8	7.2	6.2	5.4	5.7
Mercury (Hg), µg/L	0.2	<0.2	0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	2.4	2.6	2.3	1.1	1.3	2.1
Lead (Pb), µg/L	0.7	0.7	0.5	1.0	0.9	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	7.7	9.5	14.3	11.6	16.3	12.8

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	AC4-a	AC4-a	AC5-a	AC5-a	AC6-a	AC6-a
Sampling Depth	S	B	S	B	S	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-10	19722-12	19722-13	19722-15	19722-16	19722-18
Suspended Solids (SS), mg/L	10.2	5.2	4.5	6.4	7.9	13.4
E. coli, cfu/100mL	800	340	380	260	600	100
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	0.36	0.28	0.38	0.31	0.48	0.27
Unionized Ammonia (UIA), mg/L	0.002	0.003	0.002	0.003	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.8	0.5	0.7	0.5	0.9	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.099	0.056	0.110	0.082	0.136	0.053
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	4.84	2.14	3.16	2.30	4.55	10.35
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	1.15	0.30	0.69	0.46	0.94	0.32
Total Phosphorous (TP), mg-P/L	1.31	0.38	0.80	0.52	1.07	0.38
Cadmium (Cd), µg/L	<0.1	<0.1	0.2	0.4	0.4	0.1
Chromium (Cr), µg/L	1.2	2.4	1.1	1.5	2.1	1.3
Copper (Cu), µg/L	5.9	5.6	4.9	7.4	5.5	6.4
Mercury (Hg), µg/L	0.2	<0.2	0.3	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.8	2.9	2.8	3.0	2.9	2.6
Lead (Pb), µg/L	1.0	0.6	1.3	1.1	0.9	0.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	9.2	18.7	10.0	22.5	10.4	15.0

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	AC7-a	AC7-a	AC7-a	KT1-a	KT1-a	KT1-a
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-19	19722-20	19722-21	19722-22	19722-23	19722-24
Suspended Solids (SS), mg/L	6.5	6.1	8.7	22.8	13.2	10.7
E. coli, cfu/100mL	150	140	22	<1	4	100
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	0.38	0.36	0.13	0.18	0.15	0.04
Unionized Ammonia (UIA), mg/L	0.003	0.004	0.001	0.002	0.002	<0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	0.4	0.3	0.4	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.092	0.081	0.027	0.035	0.023	0.024
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	3.52	2.73	0.55	3.63	0.51	0.22
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.65	0.57	0.10	0.22	0.12	0.05
Total Phosphorous (TP), mg-P/L	0.76	0.67	0.16	0.27	0.18	0.10
Cadmium (Cd), µg/L	0.1	0.4	0.5	0.4	0.4	<0.1
Chromium (Cr), µg/L	3.0	2.2	1.2	2.3	2.2	1.5
Copper (Cu), µg/L	6.5	6.9	5.3	6.5	6.3	6.8
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	1.8	1.6	2.8	1.3	3.0	2.3
Lead (Pb), µg/L	0.7	1.4	0.6	1.4	0.8	1.0
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14.8	14.2	16.0	21.6	9.0	11.9

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	IB1-a	IB1-a	IB1-a	IB2-a	IB2-a	IB2-a
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-25	19722-26	19722-27	19722-28	19722-29	19722-30
Suspended Solids (SS), mg/L	13.1	18.6	8.0	9.6	14.9	9.5
E. coli, cfu/100mL	38	28	66	36	38	42
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	0.14	0.13	0.11	0.11	0.10
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.002	0.002	0.002	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.5	0.2	0.2	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.017	0.020	0.018	0.016	0.011	0.016
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.09	0.29	0.17	0.15	2.53	0.19
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.06	0.06	0.07	0.06	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.11	0.12	0.07	0.10	0.09	0.10
Cadmium (Cd), µg/L	0.1	0.4	0.1	0.5	0.1	0.3
Chromium (Cr), µg/L	2.4	1.7	3.0	1.7	1.7	1.7
Copper (Cu), µg/L	5.4	7.9	5.7	5.8	7.9	7.8
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.3	0.2	<0.2
Nickel (Ni), µg/L	2.3	3.0	3.0	1.9	2.5	3.0
Lead (Pb), µg/L	1.2	0.7	0.8	1.4	0.8	1.3
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	16.1	9.2	16.5	21.3	12.0	15.9

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	IB3-a	IB3-a	IB3-a	OB1-a	OB1-a	OB1-a
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-31	19722-32	19722-33	19722-34	19722-35	19722-36
Suspended Solids (SS), mg/L	3.0	3.2	8.0	6.2	6.4	9.7
E. coli, cfu/100mL	50	60	66	24	78	96
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	0.08	0.09	0.09	0.08	0.08	0.08
Unionized Ammonia (UIA), mg/L	0.001	0.001	0.001	0.001	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.2	0.2	0.2	0.1	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.020	0.019	0.016	0.017	0.017	0.013
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.44	0.23	1.65	0.47	3.02	0.48
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	0.09	0.09	0.08	0.09	0.08	0.09
Cadmium (Cd), µg/L	0.3	0.3	0.5	0.1	<0.1	0.4
Chromium (Cr), µg/L	1.2	2.4	3.1	2.0	2.0	1.6
Copper (Cu), µg/L	5.1	5.9	6.9	7.6	8.0	5.8
Mercury (Hg), µg/L	0.3	0.2	0.2	<0.2	<0.2	0.3
Nickel (Ni), µg/L	1.8	1.6	1.1	1.4	3.0	2.4
Lead (Pb), µg/L	0.9	1.4	1.1	1.2	1.2	0.7
Silver (Ag), µg/L	0.2	0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	22.1	17.6	22.1	22.1	12.1	18.2

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	VH1-a	VH1-a	VH1-a	VH2-a	VH2-a	VH2-a
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-37	19722-38	19722-39	19722-40	19722-41	19722-42
Suspended Solids (SS), mg/L	6.0	5.0	5.5	7.5	4.9	11.2
E. coli, cfu/100mL	4,000	2,000	2,500	6	2,800	2,800
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	0.18	0.16	0.12	0.10	0.15	0.09
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.002	0.001	0.002	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.3	0.3	0.2	0.2	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.016	0.016	0.016	0.014	0.017	0.058
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.15	0.53	0.14	0.15	1.00	0.64
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.07	0.05	0.06	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.12	0.10	0.12	0.12	0.09	0.09
Cadmium (Cd), µg/L	0.4	0.5	0.1	0.3	0.4	0.2
Chromium (Cr), µg/L	2.0	1.6	2.2	2.6	2.9	3.0
Copper (Cu), µg/L	5.4	8.0	5.6	7.0	5.5	6.4
Mercury (Hg), µg/L	<0.2	0.2	<0.2	0.3	0.2	<0.2
Nickel (Ni), µg/L	1.3	2.9	2.2	1.8	2.0	1.6
Lead (Pb), µg/L	1.3	0.7	1.4	1.1	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11.6	20.3	20.3	12.3	15.1	11.3

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	KTN-a	JVC-a	JVC-a	WSD Intake at Tai Wan-a	WSD Intake at Cha Kwo Ling-a	WSD Intake at Quarry Bay-a
Sampling Depth	M	S	B	N/A	N/A	N/A
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-44	19722-46	19722-48	19722-49	19722-50	19722-51
Suspended Solids (SS), mg/L	19.2	11.7	7.9	6.7	7.2	11.7
E. coli, cfu/100mL	34,000	14	8	350	2	430
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	0.45	0.51	0.16	0.19	0.06	0.17
Unionized Ammonia (UIA), mg/L	0.001	0.003	0.002	0.003	<0.001	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	1.1	0.9	0.2	0.3	0.1	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	<0.002	0.057	0.034	0.014	0.016	0.017
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	6.35	2.67	0.57	0.14	0.27	0.12
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	2.02	0.52	0.08	0.17	0.05	0.05
Total Phosphorous (TP), mg-P/L	2.34	0.58	0.14	0.21	0.09	0.10
Cadmium (Cd), µg/L	0.4	0.1	0.1	0.3	0.2	0.1
Chromium (Cr), µg/L	1.6	1.4	2.4	1.4	2.9	1.8
Copper (Cu), µg/L	6.3	5.7	6.4	7.4	5.5	7.7
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.2	0.3
Nickel (Ni), µg/L	1.8	2.4	1.0	1.9	2.1	2.7
Lead (Pb), µg/L	0.7	1.3	0.9	1.0	1.4	1.4
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.7	10.6	16.1	8.6	10.0	10.3

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	WSD Intake at Sai Wan Ho-a	AC1-a	AC1-a	AC2-a	AC2-a	AC3-a
Sampling Depth	N/A	S	B	S	B	S
Tide	Mid-Ebb	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-52	19722-53	19722-55	19722-56	19722-58	19722-59
Suspended Solids (SS), mg/L	2.7	8.3	5.0	4.3	4.9	9.6
E. coli, cfu/100mL	18	1,000	680	100	90	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	0.04	0.23	0.28	0.28	0.37	0.28
Unionized Ammonia (UIA), mg/L	<0.001	0.002	0.002	0.002	0.002	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.1	0.3	0.4	0.4	0.5	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.013	0.064	0.032	0.037	0.032	0.043
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.19	1.42	1.33	1.21	2.03	1.38
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.27	0.25	0.24	0.35	0.28
Total Phosphorous (TP), mg-P/L	0.08	0.33	0.32	0.30	0.43	0.36
Cadmium (Cd), µg/L	0.5	0.3	0.2	0.1	0.4	0.2
Chromium (Cr), µg/L	2.0	1.9	2.7	2.0	2.5	3.0
Copper (Cu), µg/L	6.7	6.3	7.2	6.6	7.8	5.6
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	3.1	2.5	2.2	1.9	1.6	1.3
Lead (Pb), µg/L	1.2	1.4	1.4	0.6	1.1	1.0
Silver (Ag), µg/L	<0.2	0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	17.7	17.6	13.2	18.1	11.5	9.8

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	10 of 30

Results:

Sample ID	AC3-a	AC4-a	AC4-a	AC5-a	AC5-a	AC6-a
Sampling Depth	B	S	B	S	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-61	19722-62	19722-64	19722-65	19722-67	19722-68
Suspended Solids (SS), mg/L	8.7	9.3	3.9	2.9	7.8	6.4
E. coli, cfu/100mL	130	48	160	160	180	400
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	0.34	0.25	0.26	0.09	0.31	0.21
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.002	<0.001	0.003	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.3	0.3	0.4	0.4	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.044	0.061	0.063	0.036	0.049	0.040
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.37	1.33	1.30	1.36	1.79	0.98
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.27	0.26	0.27	0.29	0.39	0.20
Total Phosphorous (TP), mg-P/L	0.34	0.33	0.35	0.36	0.47	0.27
Cadmium (Cd), µg/L	0.4	0.1	0.1	0.3	0.2	0.5
Chromium (Cr), µg/L	2.2	2.2	2.6	1.6	1.2	2.7
Copper (Cu), µg/L	5.3	5.3	7.0	6.9	5.2	7.6
Mercury (Hg), µg/L	0.2	<0.2	0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	1.0	2.6	1.8	1.9	1.8	2.9
Lead (Pb), µg/L	1.4	1.3	0.9	1.5	0.9	1.1
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	21.2	20.3	8.3	11.9	15.5	9.1

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TEST REPORT

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Date of Issue:	2014-03-03
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Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	AC6-a	AC7-a	AC7-a	AC7-a	KT1-a	KT1-a
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-70	19722-71	19722-72	19722-73	19722-74	19722-75
Suspended Solids (SS), mg/L	7.5	2.6	13.6	5.0	8.4	19.2
E. coli, cfu/100mL	70	220	280	220	52	60
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	0.21	0.48	0.41	0.27	0.27	0.32
Unionized Ammonia (UIA), mg/L	0.002	0.004	0.004	0.003	0.002	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.6	0.5	0.4	0.4	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.041	0.046	0.043	0.042	0.048	0.052
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.08	1.70	2.29	1.64	1.63	2.07
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.20	0.36	0.33	0.35	0.35	0.43
Total Phosphorous (TP), mg-P/L	0.27	0.44	0.40	0.42	0.42	0.49
Cadmium (Cd), µg/L	0.4	0.5	0.4	0.1	0.3	<0.1
Chromium (Cr), µg/L	1.4	1.3	2.2	1.3	1.6	1.7
Copper (Cu), µg/L	5.1	5.8	7.3	5.5	5.1	6.0
Mercury (Hg), µg/L	0.3	<0.2	0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	1.1	2.8	1.3	2.7	2.2	1.0
Lead (Pb), µg/L	0.6	1.0	1.0	1.4	0.7	1.0
Silver (Ag), µg/L	0.2	<0.2	0.2	0.2	0.2	<0.2
Zinc (Zn), µg/L	21.2	14.1	8.8	13.0	14.8	9.9

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	12 of 30

Results:

Sample ID	KT1-a	IB1-a	IB1-a	IB2-a	IB2-a	IB2-a
Sampling Depth	B	S	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-76	19722-77	19722-79	19722-80	19722-81	19722-82
Suspended Solids (SS), mg/L	4.1	3.2	10.2	5.8	5.3	3.1
E. coli, cfu/100mL	64	12	50	360	160	140
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	0.23	0.15	0.15	0.13	0.12	0.11
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.002	0.002	0.002	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.3	0.3	0.3	0.3	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.034	0.028	0.015	0.017	0.016	0.016
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.20	0.10	2.93	0.16	0.14	0.30
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.23	0.06	0.08	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.29	0.11	0.13	0.10	0.10	0.10
Cadmium (Cd), µg/L	0.3	0.2	0.1	0.3	0.1	0.4
Chromium (Cr), µg/L	1.5	3.0	3.0	2.0	1.6	2.4
Copper (Cu), µg/L	6.5	7.6	6.8	5.0	5.1	6.9
Mercury (Hg), µg/L	<0.2	<0.2	0.3	<0.2	0.3	0.3
Nickel (Ni), µg/L	1.8	2.4	2.2	1.3	1.4	1.8
Lead (Pb), µg/L	0.5	0.9	0.6	0.8	1.0	0.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	15.4	14.0	9.8	18.1	21.3	8.4

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	13 of 30

Results:

Sample ID	IB3-a	IB3-a	IB3-a	OB1-a	OB1-a	OB1-a
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-83	19722-84	19722-85	19722-86	19722-87	19722-88
Suspended Solids (SS), mg/L	11.8	21.2	6.8	6.1	4.5	2.6
E. coli, cfu/100mL	8	24	12	140	130	74
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	0.12	0.13	0.31	0.12	0.11	0.12
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.004	0.002	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.2	0.4	0.2	0.3	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.016	0.008	0.017	0.018	0.016	0.017
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.40	0.36	0.22	0.38	0.16	0.39
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	0.09	0.08	0.09	0.09	0.10	0.09
Cadmium (Cd), µg/L	0.4	<0.1	0.5	0.1	0.4	0.3
Chromium (Cr), µg/L	2.7	1.6	2.1	3.1	2.7	2.1
Copper (Cu), µg/L	7.7	5.1	5.3	5.3	5.7	6.4
Mercury (Hg), µg/L	0.3	<0.2	0.3	0.2	0.3	<0.2
Nickel (Ni), µg/L	1.3	1.7	2.9	1.6	3.0	1.6
Lead (Pb), µg/L	0.8	1.1	0.8	1.2	1.4	0.7
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	14.9	10.1	16.0	22.9	15.4	13.6

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	VH1-a	VH1-a	VH1-a	VH2-a	VH2-a	VH2-a
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-89	19722-90	19722-91	19722-92	19722-93	19722-94
Suspended Solids (SS), mg/L	16.0	10.3	3.3	9.2	8.3	11.9
E. coli, cfu/100mL	10	50	48	22	92	20
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	0.10	0.11	0.10	0.07	0.07	0.08
Unionized Ammonia (UIA), mg/L	0.001	0.002	0.001	0.001	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.1	0.3	0.1	0.1	0.1	0.1
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.015	0.017	0.016	0.022	0.014	0.015
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.23	0.17	0.19	1.20	0.68	0.41
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	0.09	0.10	0.10	0.09	0.09	0.07
Cadmium (Cd), µg/L	0.5	0.1	0.2	<0.1	<0.1	0.4
Chromium (Cr), µg/L	2.1	1.5	1.6	1.1	1.2	2.8
Copper (Cu), µg/L	7.1	6.2	5.4	5.1	5.1	7.5
Mercury (Hg), µg/L	0.3	<0.2	0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	2.6	2.4	3.1	2.9	1.2	2.9
Lead (Pb), µg/L	1.1	1.0	0.8	1.0	0.6	1.1
Silver (Ag), µg/L	0.2	0.2	<0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	9.8	9.1	14.0	10.2	20.7	13.3

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Date of Issue:	2014-03-03
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Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	KTN-a	JVC-a	JVC-a	WSD Intake at Tai Wan-a	WSD Intake at Cha Kwo Ling-a	WSD Intake at Quarry Bay-a
Sampling Depth	M	S	B	N/A	N/A	N/A
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-96	19722-98	19722-100	19722-101	19722-102	19722-103
Suspended Solids (SS), mg/L	5.5	7.9	6.2	5.7	12.3	35.9
E. coli, cfu/100mL	23	100	200	10	260	4
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	0.30	0.31	0.29	0.19	0.10	0.15
Unionized Ammonia (UIA), mg/L	0.002	0.003	0.003	0.003	0.001	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.4	0.3	0.2	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.037	0.041	0.067	0.019	0.022	0.011
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.30	1.50	1.50	0.17	0.12	0.42
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.26	0.33	0.30	0.05	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.30	0.37	0.35	0.10	0.10	0.08
Cadmium (Cd), µg/L	0.3	0.3	0.5	0.5	0.3	0.1
Chromium (Cr), µg/L	3.0	1.0	2.8	1.5	1.8	3.0
Copper (Cu), µg/L	8.2	5.3	7.0	7.4	7.1	7.7
Mercury (Hg), µg/L	0.2	<0.2	0.2	0.2	0.2	<0.2
Nickel (Ni), µg/L	2.5	2.5	1.5	2.2	2.0	2.3
Lead (Pb), µg/L	0.9	1.0	1.5	0.7	0.7	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.7	14.2	8.7	17.8	8.3	22.5

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Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	WSD Intake at Sai Wan Ho-a	AC1-b	AC1-b	AC2-b	AC2-b	AC3-b
Sampling Depth	N/A	S	B	S	B	S
Tide	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-104	19722-105	19722-107	19722-108	19722-110	19722-111
Suspended Solids (SS), mg/L	34.7	8.4	35.7	4.2	7.6	3.6
E. coli, cfu/100mL	210	1,000	250	750	120	430
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	0.29	0.36	0.37	0.28	0.36
Unionized Ammonia (UIA), mg/L	0.001	0.001	0.002	0.003	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.1	0.6	0.7	0.8	0.7	0.7
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.017	0.063	0.072	0.088	0.046	0.100
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.27	2.39	3.10	5.04	2.02	6.03
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.48	0.69	1.18	0.30	0.73
Total Phosphorous (TP), mg-P/L	0.09	0.55	0.79	1.40	0.37	0.87
Cadmium (Cd), µg/L	0.3	0.4	0.4	<0.1	0.4	0.5
Chromium (Cr), µg/L	2.7	2.3	2.6	1.9	2.7	1.4
Copper (Cu), µg/L	5.2	5.7	7.7	7.2	6.2	5.4
Mercury (Hg), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.0	2.4	2.5	2.3	1.1	1.3
Lead (Pb), µg/L	1.1	0.7	0.7	0.5	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	10.2	7.6	9.4	14.9	11.1	16.4

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Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	17 of 30

Results:

Sample ID	AC3-b	AC4-b	AC4-b	AC5-b	AC5-b	AC6-b
Sampling Depth	B	S	B	S	B	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-113	19722-114	19722-116	19722-117	19722-119	19722-120
Suspended Solids (SS), mg/L	4.5	10.2	5.3	4.5	6.4	7.5
E. coli, cfu/100mL	120	830	330	370	270	600
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	0.30	0.36	0.30	0.38	0.31	0.47
Unionized Ammonia (UIA), mg/L	0.003	0.002	0.003	0.002	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.8	0.5	0.7	0.5	0.9
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.051	0.097	0.056	0.109	0.079	0.136
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	2.00	4.78	2.17	3.20	2.30	4.59
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.13	1.13	0.31	0.69	0.45	0.93
Total Phosphorous (TP), mg-P/L	0.18	1.34	0.38	0.83	0.51	1.05
Cadmium (Cd), µg/L	0.2	<0.1	<0.1	0.2	0.4	0.4
Chromium (Cr), µg/L	2.4	1.2	2.3	1.1	1.5	2.1
Copper (Cu), µg/L	5.7	6.0	5.8	4.8	7.4	5.3
Mercury (Hg), µg/L	0.2	0.2	<0.2	0.3	<0.2	<0.2
Nickel (Ni), µg/L	2.1	2.8	3.0	2.8	3.0	2.8
Lead (Pb), µg/L	0.7	1.0	0.6	1.3	1.1	0.9
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	12.3	9.3	18.7	9.8	23.1	10.4

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	18 of 30

Results:

Sample ID	AC6-b	AC7-b	AC7-b	AC7-b	KT1-b	KT1-b
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-122	19722-123	19722-124	19722-125	19722-126	19722-127
Suspended Solids (SS), mg/L	13.7	6.4	6.1	8.7	22.0	12.6
E. coli, cfu/100mL	98	150	130	22	<1	4
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	0.28	0.40	0.36	0.13	0.18	0.15
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.004	0.001	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.6	0.6	0.4	0.3	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.053	0.094	0.082	0.027	0.036	0.022
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	10.85	3.41	2.66	0.57	3.73	0.51
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.32	0.63	0.56	0.11	0.22	0.12
Total Phosphorous (TP), mg-P/L	0.39	0.77	0.70	0.16	0.27	0.17
Cadmium (Cd), µg/L	<0.1	<0.1	0.4	0.5	0.4	0.4
Chromium (Cr), µg/L	1.3	2.9	2.2	1.2	2.2	2.2
Copper (Cu), µg/L	6.3	6.5	6.9	5.3	6.6	6.2
Mercury (Hg), µg/L	<0.2	0.3	0.3	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.6	1.8	1.6	2.9	1.2	2.9
Lead (Pb), µg/L	0.5	0.7	1.4	0.6	1.4	0.8
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.7	15.0	13.9	16.2	22.2	9.0

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Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	19 of 30

Results:

Sample ID	KT1-b	IB1-b	IB1-b	IB1-b	IB2-b	IB2-b
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-128	19722-129	19722-130	19722-131	19722-132	19722-133
Suspended Solids (SS), mg/L	10.5	13.1	18.6	7.9	9.3	15.2
E. coli, cfu/100mL	100	37	27	66	36	36
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	0.04	0.14	0.14	0.13	0.11	0.11
Unionized Ammonia (UIA), mg/L	<0.001	0.002	0.002	0.002	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.3	0.4	0.5	0.2	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.025	0.017	0.020	0.018	0.016	0.011
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.23	1.07	0.30	0.18	0.15	2.47
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.06	0.06	0.07	0.06	0.05
Total Phosphorous (TP), mg-P/L	0.10	0.11	0.12	0.07	0.10	0.09
Cadmium (Cd), µg/L	<0.1	<0.1	0.4	<0.1	0.5	0.1
Chromium (Cr), µg/L	1.5	2.5	1.7	3.0	1.6	1.7
Copper (Cu), µg/L	6.8	5.6	7.6	5.9	5.6	7.9
Mercury (Hg), µg/L	0.2	<0.2	<0.2	0.2	0.3	<0.2
Nickel (Ni), µg/L	2.3	2.4	3.1	3.0	1.9	2.6
Lead (Pb), µg/L	1.0	1.2	0.7	0.8	1.3	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	11.8	15.5	9.5	17.2	20.7	12.5

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Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	IB2-b	IB3-b	IB3-b	IB3-b	OB1-b	OB1-b
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-134	19722-135	19722-136	19722-137	19722-138	19722-139
Suspended Solids (SS), mg/L	9.7	3.0	3.1	7.9	6.6	6.2
E. coli, cfu/100mL	44	51	60	68	24	79
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	0.08	0.09	0.09	0.08	0.08
Unionized Ammonia (UIA), mg/L	0.001	0.001	0.001	0.001	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.2	0.2	0.2	0.2	0.1
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.016	0.020	0.018	0.015	0.017	0.017
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.20	0.41	0.24	1.67	0.47	3.08
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.05	0.04	0.04	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.10	0.09	0.09	0.09	0.09	0.08
Cadmium (Cd), µg/L	0.3	0.3	0.3	0.5	0.1	<0.1
Chromium (Cr), µg/L	1.6	1.2	2.4	3.1	2.0	2.0
Copper (Cu), µg/L	7.5	5.2	5.7	7.0	7.7	8.3
Mercury (Hg), µg/L	<0.2	0.3	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.9	1.8	1.7	1.1	1.3	3.0
Lead (Pb), µg/L	1.3	0.9	1.4	1.1	1.2	1.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	15.6	20.9	18.0	22.8	22.8	11.7

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	21 of 30

Results:

Sample ID	OB1-b	VH1-b	VH1-b	VH1-b	VH2-b	VH2-b
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-140	19722-141	19722-142	19722-143	19722-144	19722-145
Suspended Solids (SS), mg/L	9.9	6.1	5.0	5.5	7.5	4.8
E. coli, cfu/100mL	96	4,000	1,900	2,500	6	2,700
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	0.08	0.18	0.16	0.11	0.09	0.15
Unionized Ammonia (UIA), mg/L	0.001	0.002	0.002	0.002	0.001	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.4	0.3	0.3	0.2	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.013	0.015	0.015	0.016	0.014	0.016
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.46	0.15	0.52	0.14	0.15	0.96
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.07	0.05	0.06	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.09	0.12	0.10	0.12	0.12	0.09
Cadmium (Cd), µg/L	0.4	0.4	0.5	<0.1	0.3	0.4
Chromium (Cr), µg/L	1.6	2.0	1.6	2.2	2.6	2.8
Copper (Cu), µg/L	5.9	5.4	7.6	5.8	6.7	5.4
Mercury (Hg), µg/L	0.3	<0.2	0.2	<0.2	0.3	<0.2
Nickel (Ni), µg/L	2.3	1.3	2.9	2.2	1.8	2.0
Lead (Pb), µg/L	0.7	1.3	0.7	1.3	1.1	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	17.7	11.2	21.3	20.3	12.3	15.1

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TEST REPORT

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Date Completed:	2014-03-03

Results:

Sample ID	VH2-b	KTN-b	JVC-b	JVC-b	WSD Intake at Tai Wan-b	WSD Intake at Cha Kwo Ling-b
Sampling Depth	B	M	S	B	N/A	N/A
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	19722-146	19722-148	19722-150	19722-152	19722-153	19722-154
Suspended Solids (SS), mg/L	11.8	18.8	12.0	8.0	6.6	7.2
E. coli, cfu/100mL	2,800	35,000	14	8	340	2
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	0.44	0.50	0.16	0.19	0.06
Unionized Ammonia (UIA), mg/L	0.002	0.001	0.003	0.002	0.003	<0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	1.1	0.9	0.2	0.3	0.1
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.059	<0.002	0.056	0.032	0.015	0.016
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.64	6.55	2.58	0.54	0.15	0.27
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	2.02	0.52	0.08	0.17	0.05
Total Phosphorous (TP), mg-P/L	0.09	2.31	0.59	0.14	0.20	0.09
Cadmium (Cd), µg/L	0.2	0.4	<0.1	0.1	0.3	0.2
Chromium (Cr), µg/L	3.0	1.6	1.4	2.3	1.4	3.0
Copper (Cu), µg/L	6.7	6.1	5.8	6.3	7.3	5.4
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.3	0.3	<0.2
Nickel (Ni), µg/L	1.7	1.8	2.4	1.0	1.9	2.1
Lead (Pb), µg/L	0.9	0.7	1.3	0.9	1.0	1.4
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11.7	16.1	10.8	16.1	8.6	9.9

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Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	WSD Intake at Quarry Bay-b	WSD Intake at Sai Wan Ho-b	AC1-b	AC1-b	AC2-b	AC2-b
Sampling Depth	N/A	N/A	S	B	S	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-155	19722-156	19722-157	19722-159	19722-160	19722-162
Suspended Solids (SS), mg/L	11.9	2.7	8.4	4.7	4.1	4.9
E. coli, cfu/100mL	410	18	1,000	700	97	93
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	0.16	0.04	0.23	0.29	0.27	0.35
Unionized Ammonia (UIA), mg/L	0.003	<0.001	0.002	0.002	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.1	0.3	0.4	0.4	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.017	0.013	0.062	0.033	0.037	0.033
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.12	0.19	1.41	1.34	1.23	2.02
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.05	0.27	0.25	0.23	0.36
Total Phosphorous (TP), mg-P/L	0.10	0.08	0.33	0.31	0.30	0.44
Cadmium (Cd), µg/L	0.1	0.5	0.3	0.2	<0.1	0.4
Chromium (Cr), µg/L	1.8	2.0	2.0	2.6	2.0	2.5
Copper (Cu), µg/L	7.8	6.7	6.3	7.3	6.8	7.4
Mercury (Hg), µg/L	0.3	<0.2	<0.2	0.2	0.2	<0.2
Nickel (Ni), µg/L	2.7	3.2	2.5	2.1	1.9	1.6
Lead (Pb), µg/L	1.4	1.2	1.4	1.4	0.6	1.1
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.2	18.2	17.2	13.2	18.6	11.3

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Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	AC3-b	AC3-b	AC4-b	AC4-b	AC5-b	AC5-b
Sampling Depth	S	B	S	B	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-163	19722-165	19722-166	19722-168	19722-169	19722-171
Suspended Solids (SS), mg/L	9.7	8.6	9.0	3.9	2.9	7.9
E. coli, cfu/100mL	210	130	46	160	160	180
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	0.28	0.32	0.24	0.27	0.09	0.31
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.002	0.002	<0.001	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.5	0.3	0.3	0.4	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.040	0.042	0.061	0.062	0.037	0.049
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.37	1.35	1.36	1.29	1.34	1.84
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.28	0.27	0.27	0.27	0.28	0.40
Total Phosphorous (TP), mg-P/L	0.35	0.34	0.33	0.35	0.36	0.46
Cadmium (Cd), µg/L	0.2	0.4	0.1	0.1	0.3	0.2
Chromium (Cr), µg/L	3.0	2.2	2.2	2.7	1.6	1.2
Copper (Cu), µg/L	5.4	5.3	5.5	6.9	7.1	5.1
Mercury (Hg), µg/L	<0.2	0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.3	1.0	2.5	1.8	2.0	1.8
Lead (Pb), µg/L	1.0	1.4	1.3	0.9	1.5	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.7	21.8	19.7	8.1	11.7	15.0

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Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	AC6-b	AC6-b	AC7-b	AC7-b	AC7-b	KT1-b
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-172	19722-174	19722-175	19722-176	19722-177	19722-178
Suspended Solids (SS), mg/L	6.6	7.4	2.6	14.1	5.1	8.8
E. coli, cfu/100mL	410	71	220	280	230	51
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	0.21	0.21	0.49	0.39	0.28	0.26
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.004	0.004	0.003	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.3	0.6	0.4	0.4	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.039	0.042	0.046	0.044	0.041	0.047
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.98	1.03	1.75	2.27	1.68	1.60
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.21	0.21	0.35	0.32	0.34	0.33
Total Phosphorous (TP), mg-P/L	0.27	0.27	0.45	0.40	0.43	0.43
Cadmium (Cd), µg/L	0.5	0.4	0.5	0.4	<0.1	0.3
Chromium (Cr), µg/L	2.7	1.4	1.3	2.2	1.3	1.7
Copper (Cu), µg/L	7.5	5.3	5.9	7.2	5.4	5.2
Mercury (Hg), µg/L	0.2	0.3	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.8	1.1	2.8	1.3	2.8	2.2
Lead (Pb), µg/L	1.1	0.6	1.0	1.0	1.4	0.7
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	8.9	21.6	14.1	8.8	12.9	15.4

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Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Page: 26 of 30

Results:

Sample ID	KT1-b	KT1-b	IB1-b	IB1-b	IB2-b	IB2-b
Sampling Depth	M	B	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-179	19722-180	19722-181	19722-183	19722-184	19722-185
Suspended Solids (SS), mg/L	19.6	4.1	3.1	10.2	5.9	5.3
E. coli, cfu/100mL	61	63	12	51	370	160
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	0.22	0.15	0.15	0.13	0.12
Unionized Ammonia (UIA), mg/L	0.003	0.002	0.002	0.002	0.002	0.002
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.3	0.3	0.3	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.053	0.034	0.027	0.015	0.018	0.016
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.98	1.17	0.10	3.03	0.16	0.14
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.43	0.23	0.06	0.08	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.49	0.30	0.12	0.14	0.10	0.10
Cadmium (Cd), µg/L	<0.1	0.3	0.2	0.1	0.3	0.1
Chromium (Cr), µg/L	1.7	1.5	2.9	3.0	1.9	1.6
Copper (Cu), µg/L	6.0	6.5	7.6	6.6	4.9	5.3
Mercury (Hg), µg/L	0.2	<0.2	<0.2	0.3	<0.2	0.3
Nickel (Ni), µg/L	1.0	1.7	2.4	2.2	1.3	1.4
Lead (Pb), µg/L	1.0	0.5	0.9	0.6	0.8	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.2	14.8	14.5	9.5	17.5	22.0

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	IB2-b	IB3-b	IB3-b	IB3-b	OB1-b	OB1-b
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-186	19722-187	19722-188	19722-189	19722-190	19722-191
Suspended Solids (SS), mg/L	3.2	12.1	20.7	6.8	5.9	4.5
E. coli, cfu/100mL	140	8	24	12	140	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	0.12	0.12	0.12	0.29	0.12	0.11
Unionized Ammonia (UIA), mg/L	0.001	0.002	0.002	0.004	0.002	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.2	0.2	0.4	0.2	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.015	0.016	0.008	0.017	0.019	0.016
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.29	1.37	0.37	0.22	0.38	0.16
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.05	0.05	0.04	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.10	0.09	0.08	0.09	0.09	0.10
Cadmium (Cd), µg/L	0.4	0.4	<0.1	0.5	0.1	0.4
Chromium (Cr), µg/L	2.5	2.8	1.6	2.0	3.2	2.7
Copper (Cu), µg/L	7.1	7.6	5.1	5.3	5.3	6.0
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.3	0.2	0.3
Nickel (Ni), µg/L	1.7	1.3	1.7	2.9	1.6	2.9
Lead (Pb), µg/L	0.5	0.8	1.1	0.8	1.2	1.4
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	8.5	15.1	9.7	15.8	22.4	16.2

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	OB1-b	VH1-b	VH1-b	VH1-b	VH2-b	VH2-b
Sampling Depth	B	S	M	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-192	19722-193	19722-194	19722-195	19722-196	19722-197
Suspended Solids (SS), mg/L	2.6	16.4	10.2	3.2	9.1	8.5
E. coli, cfu/100mL	75	10	51	49	22	91
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	0.09	0.11	0.09	0.07	0.07
Unionized Ammonia (UIA), mg/L	0.002	0.001	0.002	0.001	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.1	0.3	0.1	0.1	0.1
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.017	0.016	0.018	0.016	0.021	0.014
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.39	0.24	0.18	0.19	1.22	0.68
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.04	0.05	0.04	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.09	0.09	0.10	0.11	0.08	0.10
Cadmium (Cd), µg/L	0.3	0.5	0.1	0.2	<0.1	<0.1
Chromium (Cr), µg/L	2.1	2.0	1.5	1.6	1.1	1.2
Copper (Cu), µg/L	6.1	6.8	6.1	5.2	5.0	5.2
Mercury (Hg), µg/L	<0.2	0.3	<0.2	<0.2	<0.2	0.3
Nickel (Ni), µg/L	1.6	2.6	2.3	3.2	2.9	1.2
Lead (Pb), µg/L	0.7	1.1	1.0	0.8	1.0	0.6
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	13.7	9.8	9.1	13.7	10.3	20.4

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

Results:

Sample ID	VH2-b	KTN-b	JVC-b	JVC-b	WSD Intake at Tai Wan-b	WSD Intake at Cha Kwo Ling-b
Sampling Depth	B	M	S	B	N/A	N/A
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	19722-198	19722-200	19722-202	19722-204	19722-205	19722-206
Suspended Solids (SS), mg/L	11.7	5.4	8.0	6.1	5.8	12.2
E. coli, cfu/100mL	19	24	97	200	10	250
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	0.08	0.30	0.32	0.29	0.19	0.10
Unionized Ammonia (UIA), mg/L	0.001	0.002	0.002	0.003	0.003	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.1	0.4	0.4	0.4	0.3	0.2
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.014	0.036	0.042	0.066	0.018	0.021
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.41	1.32	1.55	1.45	0.17	0.12
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.25	0.31	0.30	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.08	0.31	0.38	0.36	0.09	0.10
Cadmium (Cd), µg/L	0.4	0.3	0.3	0.5	0.5	0.3
Chromium (Cr), µg/L	2.8	3.1	1.1	2.9	1.5	1.9
Copper (Cu), µg/L	7.6	8.5	5.4	6.9	7.5	7.1
Mercury (Hg), µg/L	0.3	0.2	<0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	3.0	2.6	2.4	1.5	2.2	2.0
Lead (Pb), µg/L	1.1	0.9	1.0	1.5	0.7	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	13.2	13.1	14.0	8.3	17.9	8.2

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	30 of 30

Results:

Sample ID	WSD Intake at Quarry Bay-b	WSD Intake at Sai Wan Ho-b
Sampling Depth	N/A	N/A
Tide	Mid-Flood	Mid-Flood
Sample Number	19722-207	19722-208
Suspended Solids (SS), mg/L	34.9	33.9
E. coli, cfu/100mL	4	220
5-day Biochemical Oxygen Demand (BOD_5), mg-O_2/L	<2	<2
Ammonia Nitrogen (NH_3-N), mg NH_3-N/L	0.16	0.07
Unionized Ammonia (UIA), mg/L	0.003	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.2	0.1
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.010	0.017
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.41	0.26
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.05
Total Phosphorous (TP), mg-P/L	0.08	0.09
Cadmium (Cd), µg/L	0.1	0.3
Chromium (Cr), µg/L	3.0	2.7
Copper (Cu), µg/L	7.4	5.2
Mercury (Hg), µg/L	<0.2	0.2
Nickel (Ni), µg/L	2.4	2.0
Lead (Pb), µg/L	1.0	1.1
Silver (Ag), µg/L	<0.2	<0.2
Zinc (Zn), µg/L	22.3	10.3

Remarks: 1) < = less than

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

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

APPENDIX C2
LABORATORY TESTING REPORT FOR ODOUR SAMPLING

For Cinotech Consultant Limited

Odour Sampling and Olfactometry Measurement for Kai Tak Development

21st February 2014

By Odour Research Laboratory
Department of Civil & Environmental Engineering
The Hong Kong Polytechnic University

On behalf of
PolyU Technology & Consultancy Co. Ltd.

1. Background

A service to collect odour samples within the boundary of Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS) at Kai Tak and then to conduct olfactomerty measurement at PolyU to determine odour concentration was required by Cinotech Consultant Limited.

2. Scope of the Work

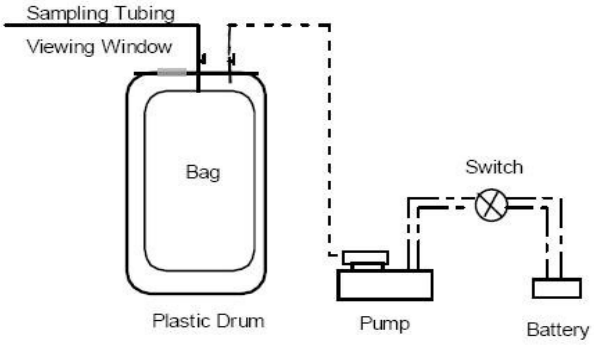
The scope of the work includes:

- to collect a blank sample for quality control
- to collect a total of 13 odour samples from 13 sampling locations identified by the client and to deliver the collected odour samples to the Odour Laboratory of PolyU for analysis;
- to analyze and determine the odour concentration of 13 odour samples by olfactometry measurement at the Odour Laboratory of PolyU;
- to prepare a report.

3. Methodology

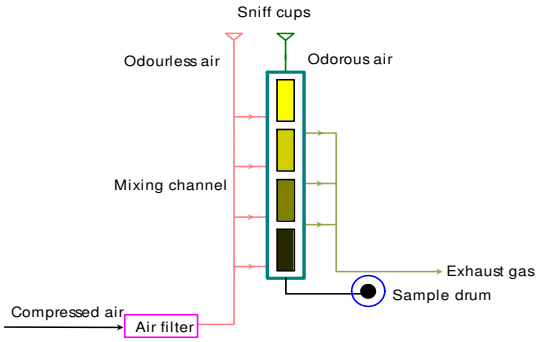
3.1. Odour Sampling

Odour gaseous sample is collected by using an odour sampling system, which includes a battery-operated air pump, a sampling vessel, and an odour bag as shown below. During air sampling, an empty sample bag is placed in the vessel, a rigid plastic container, and the container is then evacuated at a controlled rate and the bag is filled with foul gas. About 60 L of foul gas is collected for each sample.

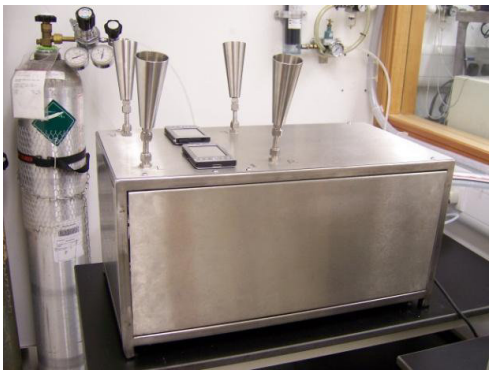


3.2 Odour Measurement by Olfactometry

Odour concentration is determined by a Forced-choice Dynamic Olfactometer (Olfactomat-n2) in accordance with the European Standard Method (EN13725).



A force-choice olfactometer



Olfactometer in PolyU (Olfactomate-n2)

This European Standard specifies a method for the objective determinations of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors. This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor. The unit of measurement is the odour unit per cubic metre: ou/m^3. The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is 1 ou/m^3. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 ou/m^3 to 10^7 ou/m^3.

4. On-site Sampling

4.1 Thirteen sampling locations with relevant sampling methods are summarized in Table 1 and also clearly marked in figure 1.

Table 1: Monitoring locations at the boundary of KTAC and KTTS

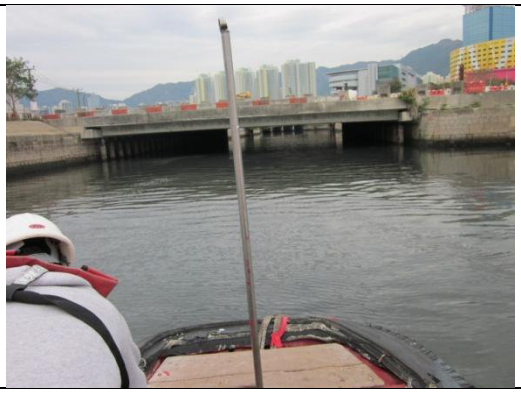
Location ID	Location description	Sampling method
SA1	Northern KTAC, in the vicinity of Kai Tak Nullah (KTN)	Sampling at seawater surface
SA2	Northern KTAC	Sampling at seawater surface
SA3	Northern KTAC, in the vicinity of Jordan Valley Culvert (JVC) Outfall	Sampling at seawater surface
SA4	Southern KTAC	Sampling at seawater surface
SA5	Southern KTAC	Sampling at seawater surface
SA6	Southern KTAC	Sampling at seawater surface
SA7	KTTS	Sampling at seawater surface
SA8	KTTS	Sampling at seawater surface
SA9	KTTS	Sampling at seawater surface

SA10	Kowloon Bay (between runway opening and TKWTS)	Sampling at seawater surface
SA11	MTK waterfront, at the end of Ma Tau Kok Road	Sampling at seawater surface
SA12	TKW waterfront, near Vehicle Examination Centre	Sampling at seawater surface
SA13	Hoi Sham Park waterfront	Sampling at seawater surface

4.2 The odour sampling works were conducted on 19th February 2014. While one odour sample at each location was collected at location SA1, SA2, SA3, SA4, SA5, SA6, SA7, SA8, SA9, SA10, SA11, SA12 and SA13. A total of 13 odour samples were collected on the site and delivered to the Odour Laboratory of PolyU immediately.

4.3 During the odour sampling, relevant weather conditions including ambient temperature, relative humidity, wind speed, and wind direction were recorded on the sites for references.

4.4 Some photos about the on-site sampling activities at the 13 locations are presented below.

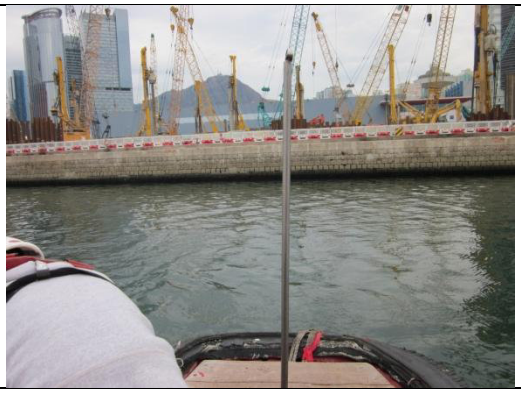
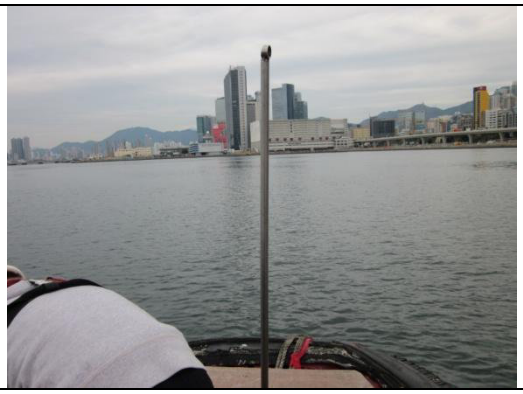
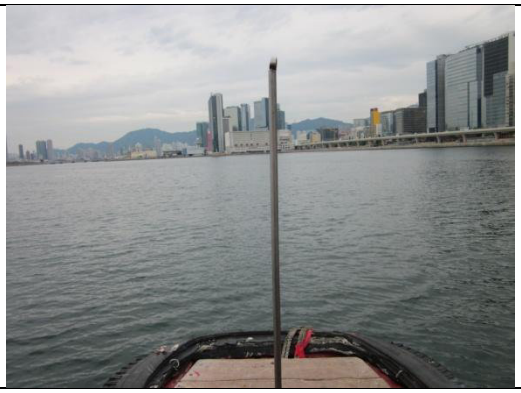
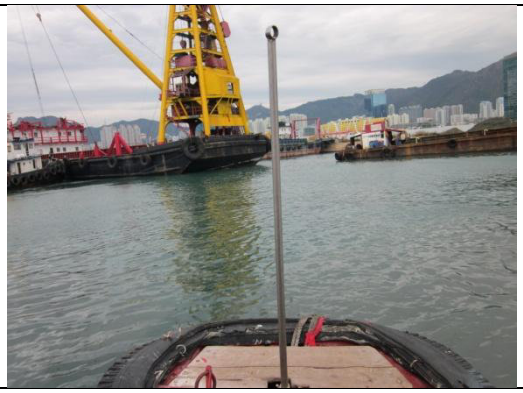


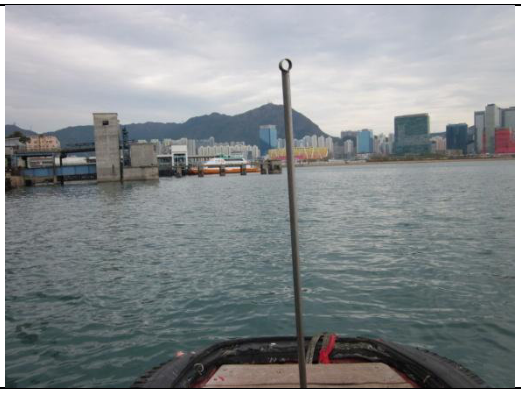
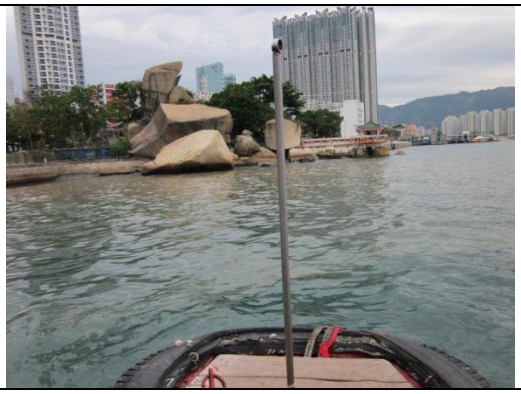
SA1

SA2

SA3

SA4

	
SA5	SA6
	
SA7	SA8
	
SA9	SA10

	
SA11	SA12
	
SA13	

5. Laboratory Analysis

5.1 A total of 13 odour samples were transported to the Odour Laboratory of PolyU immediately after the sampling for olfactometry analysis using a forced-choice dynamic olfactometer within hours in accordance with the European Standard Method (EN 13725). Five qualified panelists participated in the odour testing session, which were previously selected through a screening testing by using a 48ppm of certified n-butanol gas as a standard reference.

5.2 From the odour concentrations determined by olfactometry, the specific emission rates (SOER) at 13 locations were calculated by the following equation and the final results are shown in Table 2:

$$\mathrm{SOER}(\mathrm{ou/m^2/s}) = \frac{\text{Odour concentration}(\mathrm{ou/m^3}) \times \text{Air flow rate inside hood}(\mathrm{m^3/s})}{\text{Covered surface area}(\mathrm{m^2})}$$

Where air flow rate inside hood $= 0.01\,\mathrm{m/s}\,(\text{flow velocity}) \times 0.4\mathrm{m(W)} \times 0.1\mathrm{m(H)} = 0.0004\,\mathrm{m^3/s}$, and covered surface area$= 0.8\mathrm{m(L)} \times 0.4\mathrm{m(W)} = 0.32\mathrm{m^2}$

6. Analytical Results

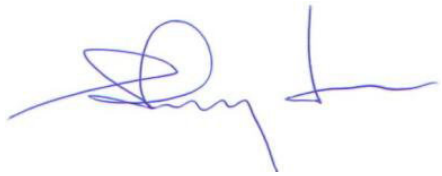
The results of odour concentrations are summarized in Table 2:

Table 2: Summary of analytical results

Location ID	Date	Time	AT (℃)	RH (%)	WD	WS (m/s)	OC (ou/m^3)	SOER ($ou/m^2/s$)
SA1	19/2/2014	17:03	10.5	62.5	E	2.5	40	0.05
SA2	19/2/2014	16:52	10.4	60.3	NE	5.5	36	0.05
SA3	19/2/2014	16:40	10.6	62.2	E	2.4	<10	<0.01
SA4	19/2/2014	16:27	11.0	61.3	NE	2.8	<10	<0.01
SA5	19/2/2014	16:18	10.8	59.0	NE	1.6	<10	<0.01
SA6	19/2/2014	16:06	11.0	62.8	NE	2.5	13	0.02
SA7	19/2/2014	15:54	10.9	59.3	E	1.6	13	0.02
SA8	19/2/2014	15:41	10.8	60.6	NE	2.1	<10	<0.01
SA9	19/2/2014	15:31	11.1	61.4	E	2.0	19	0.02
SA10	19/2/2014	15:06	10.8	60.8	E	3.0	<10	<0.01
SA11	19/2/2014	14:19	11.2	57.1	E	3.2	<10	<0.01
SA12	19/2/2014	14:34	10.8	59.6	E	2.5	17	0.02
SA13	19/2/2014	14:47	11.5	57.8	E	1.5	13	0.02

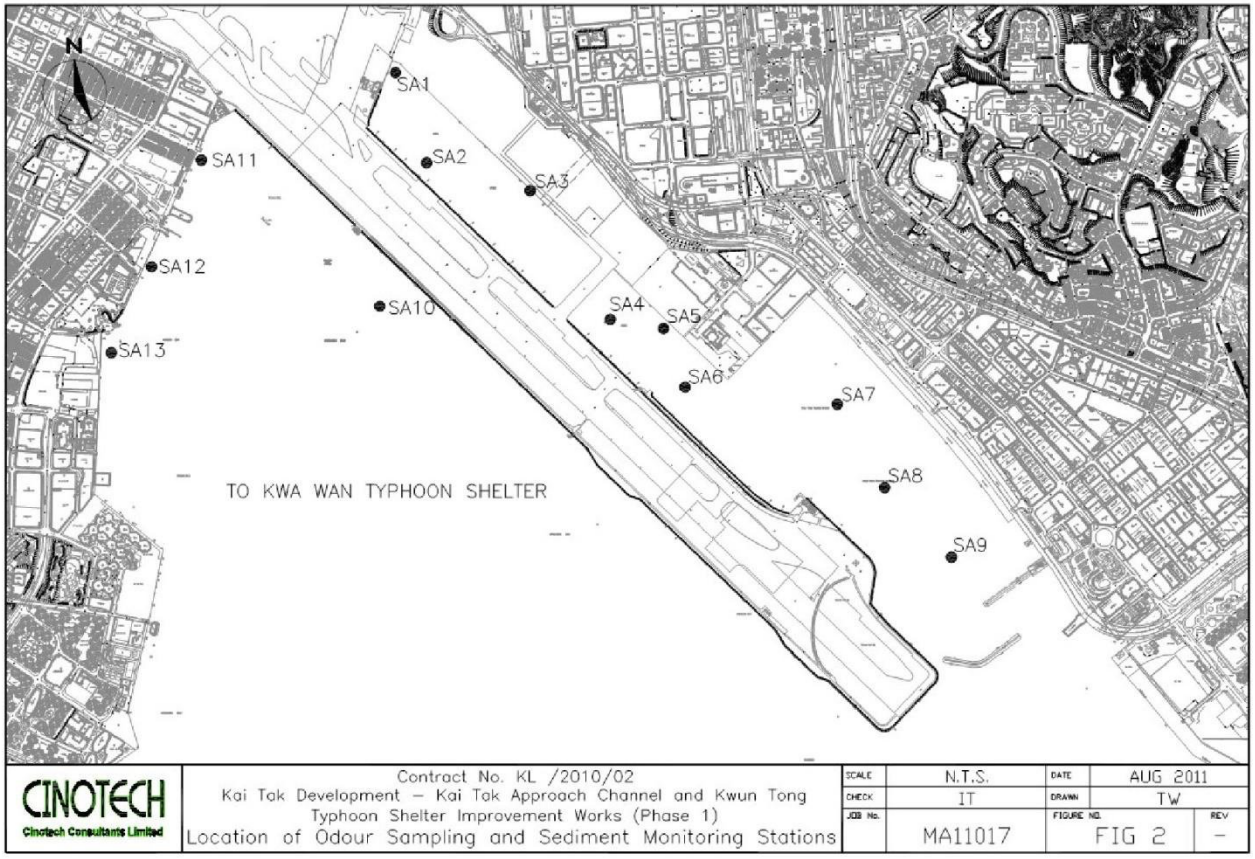
Remark: Time: Sampling time; At: Air temperature; RH: Relative humidity; WD Wind direction; WS: Wind speed; OC: odour concentration; SOER: Specific odour emission rate

Signed:



Prepared by: Professor S. C. LEE

Figure 1: Locations of odour sampling at the boundary of KTAC & KTTS



APPENDIX C3
LABORATORY TESTING REPORT FOR SEDIMENT MONITORING

WELLAB LIMITED
Rms 1516, 1701 & 1716, Technology Park,
18 On Lai Street, Shatin, N.T., Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
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TEST REPORT

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

Laboratory No.:	19807
Date of Issue:	2014-03-04
Date Received:	2014-02-27
Date Tested:	2014-02-27
Date Completed:	2014-03-04

ATTN: **Miss Mei Ling Tang** Page: 1 of 2

Sample Description : 13 samples as received by customer said to be vibrocore
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. : MA11017/140226
Sampling Date: 2014-02-26

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Acid volatile sulphide	EPA 821/R-91-100	2 mg/kg
2	Redox	Instrumental, pH/Redox Meter (electrodemetric)	1 mV
3	pH		pH 2.0 – 12.0
4	Residual Nitrate	In-house method SOP056 (FIA)	0.05 mg NO_3^--N/L [3]

****

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

PATRICK TSE
Laboratory Manager

WELLAB LIMITED
Rms 1516, 1701 & 1716, Technology Park,
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TEST REPORT

Laboratory No.:	19807
Date of Issue:	2014-03-04
Date Received:	2014-02-27
Date Tested:	2014-02-27
Date Completed:	2014-03-04
Page:	2 of 2

Results:

Sample ID	Sample Number	Acid volatile sulphide (mg/kg)[2]	Redox (mV)	pH (pH unit)	Residual Nitrate (mg NO_3^--N/L)[3]
SA1	19807-1	580	-270	7.6	0.12
SA2	19807-2	8,600	-370	7.0	0.05
SA3	19807-3	8,000	-390	7.0	<0.05
SA4	19807-4	4,200	-310	7.4	<0.05
SA5	19807-5	22	-210	7.4	830
SA6	19807-6	3,400	-290	7.6	<0.05
SA7	19807-7	2,700	-290	7.8	0.08
SA8	19807-8	87	-120	7.7	0.07
SA9	19807-9	860	-160	7.6	<0.05
SA10	19807-10	130	-110	7.9	<0.05
SA11	19807-11	280	-210	8.0	0.05
SA12	19807-12	970	-310	7.9	0.06
SA13	19807-13	870	-330	7.9	0.05

Remarks: 1) < = less than

2) Results reported as dry weight basis

3) Results reported in terms of L of wet sediment

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

APPENDIX D1
QUALITY CONTROL REPORT FOR WATER QUALITY MONITORING

WELLAB LIMITED
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TEST REPORT

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

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

ATTN: **Miss Mei Ling Tang**

Page: 1 of 8

QC report:
Method Blank

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
E. coli, 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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

PREPARED AND CHECKED BY:

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

PATRICK TSE
Laboratory Manager

WELLAB LIMITED
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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

QC report:
Method Blank

Parameter	Method Blank 6	Method Blank 7	Method Blank 8	Method Blank 9	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
E. coli, cfu/100mL	<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
Ammonia Nitrogen (NH_3-N), mg NH_3-N/L	<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
Total Kjeldahl Nitrogen (TKN), mg N/L	<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
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	<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
Total Phosphorous (TP), mg-P/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4	<0.4	<0.4

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	3 of 8

QC report:
Method QC

Parameter	MQC1	MQC2	MQC3	MQC4	MQC5	Acceptance
Suspended Solids (SS), %	94	99	100	102	91	80-120
E. coli	N/A	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD_5), mg-O_2/L	198	191	198	195	201	170-220
Ammonia Nitrogen (NH_3-N), %	96	91	92	95	96	80-120
Unionized Ammonia (UIA)	89	91	94	97	91	N/A
Total Kjeldahl Nitrogen (TKN), %	97	99	94	98	93	80-120
Nitrite-nitrogen (NO_2-N), %	94	93	98	88	89	80-120
Nitrate-nitrogen (NO_3-N), %	89	96	95	95	100	80-120
Ortho-phosphate (PO_4), %	91	95	98	92	100	80-120
Total Phosphorous (TP), %	92	92	97	93	101	80-120
Cadmium (Cd), %	100	95	97	96	95	80-120
Chromium (Cr), %	101	95	92	93	96	80-120
Copper (Cu), %	92	101	94	94	91	80-120
Mercury (Hg), %	94	96	90	94	96	80-120
Nickel (Ni), %	97	101	94	100	95	80-120
Lead (Pb), %	90	94	95	100	102	80-120
Silver (Ag), %	94	99	99	96	94	80-120
Zinc (Zn), %	99	98	99	92	93	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

QC report:
Method QC

Parameter	MQC 6	MQC 7	MQC 8	MQC 9	Acceptance
Suspended Solids (SS), %	88	95	97	93	80-120
E. coli	N/A	N/A	N/A	N/A	N/A
5-day Biochemical Oxygen Demand (BOD_5), mg-O_2/L	191	195	197	198	170-220
Ammonia Nitrogen (NH_3-N), %	97	100	94	98	80-120
Unionized Ammonia (UIA)	93	100	88	99	N/A
Total Kjeldahl Nitrogen (TKN), %	91	100	93	89	80-120
Nitrite-nitrogen (NO_2-N), %	97	93	97	97	80-120
Nitrate-nitrogen (NO_3-N), %	93	94	93	94	80-120
Ortho-phosphate (PO_4), %	97	93	97	92	80-120
Total Phosphorous (TP), %	97	95	96	97	80-120
Cadmium (Cd), %	97	96	96	93	80-120
Chromium (Cr), %	91	94	93	102	80-120
Copper (Cu), %	94	92	96	93	80-120
Mercury (Hg), %	96	96	98	95	80-120
Nickel (Ni), %	102	95	95	101	80-120
Lead (Pb), %	99	93	96	99	80-120
Silver (Ag), %	91	91	95	101	80-120
Zinc (Zn), %	93	91	100	91	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

QC report:
Sample Spike

Parameter	19722-1 spk	19722-27 spk	19722-50 spk	19722-76 spk	19722-100 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A	N/A	N/A	N/A
E. coli	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), %	96	91	91	101	98	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	95	98	93	91	92	80-120
Nitrite-nitrogen (NO_2-N), %	91	96	95	95	95	80-120
Nitrate-nitrogen (NO_3-N), %	93	90	96	94	97	80-120
Ortho-phosphate (PO_4), %	95	97	98	97	98	80-120
Total Phosphorous (TP), %	89	100	93	97	97	80-120
Cadmium (Cd), %	99	98	92	95	90	80-120
Chromium (Cr), %	96	97	94	93	98	80-120
Copper (Cu), %	94	99	96	100	98	80-120
Mercury (Hg), %	101	94	101	97	97	80-120
Nickel (Ni), %	99	98	100	95	91	80-120
Lead (Pb), %	90	97	101	98	92	80-120
Silver (Ag), %	98	96	95	97	96	80-120
Zinc (Zn), %	90	93	97	94	97	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	6 of 8

QC report:
Sample Spike

Parameter	19722-126 spk	19722-146 spk	19722-175 spk	19722-196 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A	N/A	N/A
E. coli	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), %	95	101	95	91	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	92	93	94	101	80-120
Nitrite-nitrogen (NO_2-N), %	97	95	96	97	80-120
Nitrate-nitrogen (NO_3-N), %	95	92	92	88	80-120
Ortho-phosphate (PO_4), %	100	98	92	90	80-120
Total Phosphorous (TP), %	90	96	95	92	80-120
Cadmium (Cd), %	94	99	96	101	80-120
Chromium (Cr), %	97	100	97	92	80-120
Copper (Cu), %	88	93	94	99	80-120
Mercury (Hg), %	90	99	95	101	80-120
Nickel (Ni), %	98	100	91	97	80-120
Lead (Pb), %	96	96	96	91	80-120
Silver (Ag), %	91	95	99	96	80-120
Zinc (Zn), %	92	99	94	97	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03

QC report:
Sample Duplicate

Parameter	19722-26 chk	19722-49 chk	19722-75 chk	19722-98 chk	19722-125 chk	Acceptance
Suspended Solids (SS)	4	3	3	4	5	RPD≤20
E. coli	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), %	6	6	4	4	6	RPD≤20
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	8	4	7	3	5	RPD≤20
Nitrite-nitrogen (NO_2-N), %	5	4	5	6	4	RPD≤20
Nitrate-nitrogen (NO_3-N), %	4	5	4	4	5	RPD≤20
Ortho-phosphate (PO_4), %	5	3	6	7	3	RPD≤20
Total Phosphorous (TP), %	6	4	6	6	4	RPD≤20
Cadmium (Cd), %	5	6	N/A	5	5	RPD≤20
Chromium (Cr), %	4	5	4	4	6	RPD≤20
Copper (Cu), %	4	4	4	4	3	RPD≤20
Mercury (Hg), %	N/A	4	3	N/A	N/A	RPD≤20
Nickel (Ni), %	4	5	5	6	4	RPD≤20
Lead (Pb), %	6	5	6	5	3	RPD≤20
Silver (Ag), %	N/A	N/A	N/A	N/A	N/A	RPD≤20
Zinc (Zn), %	4	7	6	4	4	RPD≤20

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

****

WELLAB LIMITED
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TEST REPORT

Laboratory No.:	QC19722
Date of Issue:	2014-03-03
Date Received:	2014-02-20
Date Tested:	2014-02-20
Date Completed:	2014-03-03
Page:	8 of 8

QC report:
Sample Duplicate

Parameter	19722-145 chk	19722-174 chk	19722-195 chk	19722-208 chk	Acceptance
Suspended Solids (SS)	5	5	3	5	RPD≤20
E. coli	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), %	5	3	5	3	RPD≤20
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	6	3	5	5	RPD≤20
Nitrite-nitrogen (NO_2-N), %	3	5	3	5	RPD≤20
Nitrate-nitrogen (NO_3-N), %	5	6	6	5	RPD≤20
Ortho-phosphate (PO_4), %	7	4	6	4	RPD≤20
Total Phosphorous (TP), %	7	3	8	3	RPD≤20
Cadmium (Cd), %	5	3	3	6	RPD≤20
Chromium (Cr), %	6	6	7	3	RPD≤20
Copper (Cu), %	6	5	3	6	RPD≤20
Mercury (Hg), %	N/A	5	N/A	4	RPD≤20
Nickel (Ni), %	5	4	4	7	RPD≤20
Lead (Pb), %	3	4	6	5	RPD≤20
Silver (Ag), %	N/A	3	N/A	N/A	RPD≤20
Zinc (Zn), %	6	4	3	7	RPD≤20

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19722

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

APPENDIX D2
QUALITY CONTROL REPORT FOR SEDIMENT MONITORING

WELLAB 滙力 Testing & Research

WELLAB LIMITED
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18 On Lai Street, Shatin, N.T., Hong Kong.
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TEST REPORT

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

Laboratory No.:	QC19807-V1
Date of Issue:	2014-04-30
Date Received:	2014-02-27
Date Tested:	2014-02-27
Date Completed:	2014-03-04

ATTN: **Miss Mei Ling Tang**

Page: 1 of 1

QC report:

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Acid volatile sulphide, mg/L	<0.016	<0.016	<0.016
Redox, mV	N/A	N/A	N/A
pH, pH unit	N/A	N/A	N/A
Residual Nitrate, mg NO_3^--N/L	<0.01	<0.01	<0.01

Method QC

Parameter	MQC 1	MQC 2	Acceptance
Acid volatile sulphide, %	94	96	80-120
Redox, %	N/A	N/A	N/A
pH, %	N/A	N/A	N/A
Residual Nitrate, %	98	98	80-120

Sample Spike

Parameter	19807-10 spk	19807-13 spk	Acceptance
Acid volatile sulphide, %	103	89	80-120
Redox, %	N/A	N/A	N/A
pH, %	N/A	N/A	N/A
Residual Nitrate, %	102	103	80-120

Sample Duplicate

Parameter	19807-10 chk	19807-13 chk	Acceptance
Acid volatile sulphide, %	7	6	RPD ≤20
Redox, %	N/A	N/A	N/A
pH, %	N/A	N/A	N/A
Residual Nitrate, %	N/A	4	RPD ≤20

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 19807

4) This QC report supersedes the one dated on 2014-03-04 with certificate number QC19807

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

PREPARED AND CHECKED BY:

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

Patrick Tse

PATRICK TSE
Laboratory Manager

APPENDIX E1
IN-SITU MEASUREMENT RESULTS FOR MARINE WATER QUALITY MONITORING

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 AC1 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	15:48	18.3	7.1	16.1	49.5	4.2	4.3
			15:51	18.7	7.0	14.7	50.4	4.3	4.5
1.0	Sunny	Calm	15:48	18.0	7.2	19.8	51.5	4.3	3.7
			15:51	17.1	7.3	19.9	52.8	4.4	3.8
1.5	Sunny	Calm	15:48	17.3	7.4	25.2	52.7	4.4	2.8
			15:51	15.9	7.6	29.7	52.3	4.3	2.8
2.0	Sunny	Calm	15:49	15.6	7.5	32.0	54.0	4.4	2.0
			15:51	15.8	7.6	31.9	53.1	4.3	2.1
2.5	Sunny	Calm	15:49	15.7	7.5	32.2	54.0	4.4	2.3
			15:52	15.7	7.5	32.1	53.8	4.4	2.5
3.0	Sunny	Calm	15:49	15.7	7.4	32.4	52.9	4.3	3.1
			15:52	15.7	7.5	32.3	52.1	4.3	3.2
3.5	Sunny	Calm	15:50	15.7	7.4	32.4	48.6	4.0	5.5
			15:52	15.7	7.4	32.4	49.3	4.0	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	Calm	15:48	18.0	7.2	19.8	51.5	4.3	3.7
			15:51	17.1	7.3	19.9	52.8	4.4	3.8
3.0	Sunny	Calm	15:49	15.7	7.4	32.4	52.9	4.3	3.1
			15:52	15.7	7.5	32.3	52.1	4.3	3.2

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC2 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	16:00	18.5	7.3	17.5	46.6	3.9	3.2
			16:02	18.6	7.1	15.8	45.5	3.9	3.1
1.0	Sunny	Calm	16:00	16.7	7.5	22.2	46.3	3.9	2.9
			16:02	16.9	7.4	22.4	47.8	4.0	2.5
1.5	Sunny	Calm	16:00	16.1	7.5	28.7	46.5	3.9	2.6
			16:03	16.4	7.5	29.8	49.2	4.0	2.7
2.0	Sunny	Calm	16:00	15.9	7.6	30.6	47.2	3.9	2.7
			16:03	15.6	7.6	31.8	49.1	4.0	2.7
2.5	Sunny	Calm	16:01	15.6	7.5	31.8	47.6	3.9	2.7
			16:03	15.6	7.5	32.1	48.6	4.0	2.3
3.0	Sunny	Calm	16:01	15.6	7.6	32.2	47.4	3.9	2.3
			16:03	15.6	7.6	32.3	47.8	3.9	2.3
3.5	Sunny	Calm	16:01	15.5	7.6	32.3	47.2	3.9	2.1
			16:03	15.5	7.6	32.4	47.0	3.9	2.1
4.0	Sunny	Calm	16:01	15.5	7.6	32.4	47.7	3.9	1.8
			16:04	15.5	7.6	32.4	47.4	3.9	1.9
4.5	Sunny	Calm	16:01	15.5	7.6	32.4	47.9	3.9	3.4
			16:04	15.5	7.4	32.4	46.7	3.8	3.5

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	Calm	16:00	16.7	7.5	22.2	46.3	3.9	2.9
			16:02	16.9	7.4	22.4	47.8	4.0	2.5
4.0	Sunny	Calm	16:01	15.5	7.6	32.4	47.7	3.9	1.8
			16:04	15.5	7.6	32.4	47.4	3.9	1.9

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC3 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	15:36	18.3	7.1	17.6	39.5	3.3	2.9
			15:39	17.7	7.4	18.3	37.1	3.2	2.9
1.0	Sunny	Calm	15:37	16.3	7.4	25.7	42.2	3.5	2.5
			15:39	16.0	7.4	26.5	39.3	3.3	2.9
1.5	Sunny	Calm	15:37	16.0	7.6	27.8	43.0	3.6	2.1
			15:39	15.9	7.6	29.0	41.5	3.4	2.3
2.0	Sunny	Calm	15:37	15.8	7.6	31.7	43.6	3.6	2.0
			15:39	15.8	7.6	31.4	41.8	3.4	2.2
2.5	Sunny	Calm	15:37	15.6	7.6	32.0	44.2	3.6	1.7
			15:39	15.5	7.7	32.0	42.9	3.5	1.9
3.0	Sunny	Calm	15:38	15.6	7.5	32.3	45.3	3.7	1.8
			15:40	15.5	7.6	32.3	43.5	3.6	1.7
3.5	Sunny	Calm	15:38	15.6	7.6	32.4	44.9	3.7	1.8
			15:40	15.6	7.6	32.4	44.0	3.6	1.8

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	Calm	15:37	16.3	7.4	25.7	42.2	3.5	2.5
			15:39	16.0	7.4	26.5	39.3	3.3	2.9
3.0	Sunny	Calm	15:38	15.6	7.5	32.3	45.3	3.7	1.8
			15:40	15.5	7.6	32.3	43.5	3.6	1.7

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC4 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	16:15	17.4	7.4	18.3	44.7	3.7	2.5
			16:17	17.9	7.2	18.5	44.9	3.8	2.4
1.0	Sunny	Calm	16:15	16.0	7.4	20.4	46.6	3.9	2.4
			16:18	18.0	7.2	20.2	47.2	4.0	2.4
1.5	Sunny	Calm	16:15	15.9	7.5	29.5	47.9	4.0	1.8
			16:18	16.0	7.4	28.7	48.0	4.0	1.9
2.0	Sunny	Calm	16:16	15.7	7.6	30.8	49.4	4.1	1.7
			16:18	16.1	7.5	28.8	49.6	4.1	1.8
2.5	Sunny	Calm	16:16	15.6	7.6	31.8	50.3	4.1	1.8
			16:18	15.6	7.6	32.1	49.9	4.1	1.9
3.0	Sunny	Calm	16:16	15.5	7.6	32.2	51.1	4.2	1.7
			16:19	15.5	7.6	32.3	50.1	4.1	1.9
3.5	Sunny	Calm	16:16	15.4	7.6	32.4	51.2	4.2	1.5
			16:19	15.5	7.6	32.4	49.5	4.1	1.5
4.0	Sunny	Calm	16:16	15.4	7.7	32.5	52.1	4.3	1.4
			16:19	15.4	7.6	32.4	49.2	4.0	1.5
4.5	Sunny	Calm	16:17	15.4	7.7	32.5	53.0	4.4	2.9
			16:19	15.4	7.7	32.5	49.0	4.0	3.0

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	Calm	16:15	16.0	7.4	20.4	46.6	3.9	2.4
			16:18	18.0	7.2	20.2	47.2	4.0	2.4
4.0	Sunny	Calm	16:16	15.4	7.7	32.5	52.1	4.3	1.4
			16:19	15.4	7.6	32.4	49.2	4.0	1.5

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC5 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	15:23	16.7	7.3	23.4	39.9	3.4	3.4
			15:26	16.7	7.3	23.5	41.8	3.5	3.4
1.0	Sunny	Calm	15:24	16.5	7.3	24.2	41.5	3.5	1.7
			15:26	16.1	7.4	25.9	42.3	3.6	1.7
1.5	Sunny	Calm	15:24	15.8	7.5	26.2	43.2	3.7	1.5
			15:26	15.8	7.5	28.1	43.6	3.7	1.7
2.0	Sunny	Calm	15:24	15.8	7.5	30.0	44.8	3.7	1.3
			15:27	15.6	7.6	30.6	44.1	3.6	1.5
2.5	Sunny	Calm	15:24	15.6	7.6	31.6	46.1	3.8	0.9
			15:27	15.5	7.7	31.7	46.0	3.8	1.1
3.0	Sunny	Calm	15:25	15.6	7.6	32.3	49.5	4.1	1.6
			15:27	15.5	7.6	32.2	47.1	3.9	1.5
3.5	Sunny	Calm	15:25	15.5	7.7	32.4	50.0	4.1	1.4
			15:27	15.5	7.7	32.4	46.9	3.8	1.3
4.0	Sunny	Calm	15:25	15.4	7.7	32.5	51.2	4.2	3.7
			15:27	15.4	7.7	32.5	46.7	3.8	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	Calm	15:24	16.5	7.3	24.2	41.5	3.5	1.7
			15:26	16.1	7.4	25.9	42.3	3.6	1.7
3.5	Sunny	Calm	15:25	15.5	7.7	32.4	50.0	4.1	1.4
			15:27	15.5	7.7	32.4	46.9	3.8	1.3

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC6 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	15:09	16.6	7.3	23.5	40.4	3.4	2.6
			15:11	16.7	7.3	22.6	39.9	3.4	2.5
1.0	Sunny	Calm	15:09	16.1	7.4	26.5	41.4	3.5	1.7
			15:11	16.4	7.4	26.4	39.9	3.3	2.0
1.5	Sunny	Calm	15:09	15.7	7.5	28.2	42.3	3.5	1.6
			15:11	15.8	7.5	28.4	40.3	3.4	1.6
2.0	Sunny	Calm	15:09	15.6	7.5	30.4	44.2	3.7	1.5
			15:12	15.6	7.6	31.2	41.3	3.4	1.4
2.5	Sunny	Calm	15:09	15.5	7.6	31.9	44.5	3.7	1.2
			15:12	15.5	7.7	31.7	42.4	3.5	1.4
3.0	Sunny	Calm	15:10	15.5	7.7	32.2	44.4	3.6	1.3
			15:12	15.5	7.7	32.2	44.1	3.6	1.5
3.5	Sunny	Calm	15:10	15.3	7.7	32.4	47.2	3.9	1.6
			15:12	15.4	7.7	32.3	44.8	3.7	1.5
4.0	Sunny	Calm	15:10	15.3	7.7	32.5	48.4	4.0	1.5
			15:12	15.3	7.7	32.5	45.3	3.7	1.6
4.5	Sunny	Calm	15:10	15.3	7.7	32.5	49.2	4.0	1.6
			15:12	15.3	7.7	32.5	45.8	3.8	1.5
5.0	Sunny	Calm	15:10	15.3	7.7	32.5	50.0	4.1	5.1
			15:12	15.3	7.7	32.5	45.6	3.8	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	Calm	15:09	16.1	7.4	26.5	41.4	3.5	1.7
			15:11	16.4	7.4	26.4	39.9	3.3	2.0
4.5	Sunny	Calm	15:10	15.3	7.7	32.5	49.2	4.0	1.6
			15:12	15.3	7.7	32.5	45.8	3.8	1.5

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC7 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	14:54	15.9	7.5	26.8	51.1	4.3	1.4
			14:57	15.9	7.5	26.6	49.0	4.1	1.2
1.0	Sunny	Calm	14:54	15.8	7.5	27.6	51.9	4.4	1.1
			14:57	15.9	7.5	27.0	47.4	4.0	1.0
1.5	Sunny	Calm	14:55	15.6	7.5	28.1	53.2	4.5	1.2
			14:57	15.6	7.6	30.7	47.2	3.9	1.0
2.0	Sunny	Calm	14:55	15.7	7.5	29.3	53.9	4.5	1.0
			14:57	15.5	7.6	31.5	46.8	3.9	0.8
2.5	Sunny	Calm	14:55	15.6	7.6	31.3	54.5	4.5	1.0
			14:58	15.4	7.7	31.9	47.0	3.9	1.0
3.0	Sunny	Calm	14:55	15.4	7.7	32.0	55.3	4.6	1.1
			14:58	15.4	7.7	32.2	47.8	3.9	1.3
3.5	Sunny	Calm	14:55	15.4	7.7	32.2	56.1	4.6	1.4
			14:58	15.4	7.7	32.3	49.5	4.1	1.4
4.0	Sunny	Calm	14:55	15.3	7.7	32.3	57.1	4.7	1.1
			14:58	15.3	7.7	32.4	48.8	4.0	1.1
4.5	Sunny	Calm	14:56	15.2	7.7	32.4	59.4	4.9	1.3
			14:58	15.2	7.7	32.5	51.4	4.2	1.6
5.0	Sunny	Calm	14:56	15.1	7.7	32.4	60.0	5.0	1.5
			14:59	15.2	7.7	32.5	50.5	4.2	1.4
5.5	Sunny	Calm	14:56	15.1	7.7	32.5	60.6	5.0	1.3
			14:59	15.1	7.7	32.5	50.6	4.2	1.4
6.0	Sunny	Calm	14:56	15.1	7.7	32.5	60.6	5.0	2.1
			14:59	15.1	7.7	32.5	51.2	4.2	2.2
6.5	Sunny	Calm	14:56	15.1	7.7	32.5	60.7	5.0	4.8
			14:59	15.1	7.7	32.4	50.3	4.2	4.9

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	Calm	14:54	15.8	7.5	27.6	51.9	4.4	1.1
			14:57	15.9	7.5	27.0	47.4	4.0	1.0
3.5	Sunny	Calm	14:55	15.4	7.7	32.2	56.1	4.6	1.4
			14:58	15.4	7.7	32.3	49.5	4.1	1.4
6.0	Sunny	Calm	14:56	15.1	7.7	32.5	60.6	5.0	2.1
			14:59	15.1	7.7	32.5	51.2	4.2	2.2

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 JVC - Mid-Ebb Tide

Sampling Date: **20 February 2014**

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	Calm	16:30	17.4	7.3	21.2	48.4	4.1	2.8
			16:34	17.8	7.3	20.3	48.1	4.1	2.9
1.0	Sunny	Calm	16:31	15.9	7.5	27.0	49.9	4.2	1.4
			16:34	16.2	7.4	25.7	48.9	4.1	1.3
1.5	Sunny	Calm	16:31	15.8	7.5	30.6	51.5	4.2	1.4
			16:34	15.9	7.5	30.3	49.6	4.1	1.4
2.0	Sunny	Calm	16:31	15.7	7.6	31.3	52.1	4.3	1.4
			16:34	15.7	7.6	31.3	49.5	4.1	1.3
2.5	Sunny	Calm	16:31	15.5	7.6	32.1	53.3	4.4	1.3
			16:34	15.6	7.6	32.0	48.8	4.0	1.6
3.0	Sunny	Calm	16:31	15.5	7.7	32.3	53.7	4.4	1.7
			16:35	15.4	7.7	32.5	49.8	4.1	1.8
3.5	Sunny	Calm	16:31	15.4	7.7	32.5	54.0	4.4	1.9
			16:35	15.4	7.7	32.5	49.8	4.1	2.0
4.0	Sunny	Calm	16:32	15.4	7.7	32.6	55.7	4.6	2.5
			16:35	15.4	7.6	32.5	49.7	4.1	2.1
4.5	Sunny	Calm	16:33	15.4	7.7	32.6	56.6	4.6	2.5
			16:35	15.4	7.6	32.6	49.4	4.1	2.6

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	Calm	16:31	15.9	7.5	27.0	49.9	4.2	1.4
			16:34	16.2	7.4	25.7	48.9	4.1	1.3
4.0	Sunny	Calm	16:32	15.4	7.7	32.6	55.7	4.6	2.5
			16:35	15.4	7.6	32.5	49.7	4.1	2.1

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 KT1 - Mid-Ebb Tide

Sampling Date: 20 February 2014

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	Calm	14:37	15.7	7.6	30.4	43.0	3.6	1.7
			14:41	15.7	7.6	30.2	43.8	3.6	1.7
1.0	Sunny	Calm	14:38	15.6	7.7	30.6	45.2	3.7	1.3
			14:41	15.7	7.6	30.3	43.7	3.6	1.4
1.5	Sunny	Calm	14:38	15.5	7.7	31.4	46.8	3.9	1.0
			14:42	15.6	7.7	30.6	43.7	3.6	1.1
2.0	Sunny	Calm	14:33	15.4	7.7	31.9	47.8	3.9	0.9
			14:42	15.5	7.7	31.5	43.9	3.6	0.9
2.5	Sunny	Calm	14:39	15.2	7.7	32.1	47.9	4.0	1.0
			14:42	15.5	7.7	31.9	43.9	3.6	1.1
3.0	Sunny	Calm	14:39	15.2	7.7	32.0	48.5	4.0	1.2
			14:42	15.3	7.7	32.0	43.9	3.6	1.2
3.5	Sunny	Calm	14:39	15.0	7.7	32.1	49.2	4.1	1.2
			14:42	15.1	7.7	32.1	44.1	3.7	1.2
4.0	Sunny	Calm	14:39	14.9	7.7	32.2	50.0	4.2	1.3
			14:42	15.0	7.7	32.2	45.0	3.7	1.1
4.5	Sunny	Calm	14:39	14.9	7.7	32.3	50.6	4.2	1.4
			14:42	14.9	7.7	32.2	46.0	3.8	1.3
5.0	Sunny	Calm	14:40	14.9	7.7	32.3	52.5	4.4	1.3
			14:43	14.8	7.7	32.3	46.7	3.9	1.6
5.5	Sunny	Calm	14:40	14.8	7.7	32.4	52.9	4.4	1.4
			14:43	14.8	7.7	32.3	47.7	4.0	1.2
6.0	Sunny	Calm	14:40	14.8	7.7	32.4	53.4	4.4	2.0
			14:43	14.8	7.7	32.4	48.1	4.0	2.1
6.5	Sunny	Calm	14:40	14.8	7.7	32.4	53.6	4.5	2.0
			14:44	14.9	7.7	32.4	48.3	4.0	2.4
7.0	Sunny	Calm	14:40	14.8	7.7	32.4	53.8	4.5	2.6
			14:44	14.9	7.7	32.5	48.4	4.0	2.6
7.5	Sunny	Calm	14:41	14.8	7.7	32.4	54.1	4.5	6.1
			14:44	15.0	7.7	32.5	48.4	4.0	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)
1.0	Sunny	Calm	14:38	15.6	7.7	30.6	45.2	3.7	1.3
			14:41	15.7	7.6	30.3	43.7	3.6	1.4
4.0	Sunny	Calm	14:39	14.9	7.7	32.2	50.0	4.2	1.3
			14:42	15.0	7.7	32.2	45.0	3.7	1.1
7.0	Sunny	Calm	14:40	14.8	7.7	32.4	53.8	4.5	2.6
			14:44	14.9	7.7	32.5	48.4	4.0	2.6

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 KTN - Mid-Ebb Tide

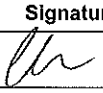
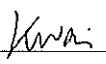
Sampling Date: **20 February 2014**

Secchi Disc Depth: **0.5m**

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	Calm	17:01	18.4	7.1	10.8	86.1	7.6	8.5
			17:02	18.8	7.0	10.7	85.2	7.4	7.0
1.0	Sunny	Calm	17:02	18.5	6.9	14.4	90.5	7.8	9.2
			17:02	18.3	7.0	14.7	91.5	7.9	9.8
1.5	Sunny	Calm	17:02	16.3	7.2	27.9	91.5	7.6	7.8
			17:02	16.5	7.1	26.9	94.7	7.9	7.7

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	Calm	17:02	18.5	6.9	14.4	90.5	7.8	9.2
			17:02	18.3	7.0	14.7	91.5	7.9	9.8

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 IB1 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	17:09	15.1	7.8	33.6	68.2	5.6	2.0
			17:12	15.1	7.8	33.6	68.0	5.6	2.0
1.0	Sunny	Moderate	17:09	15.1	7.8	33.6	68.1	5.6	2.7
			17:13	15.1	7.8	33.6	68.1	5.6	2.6
1.5	Sunny	Moderate	17:09	15.1	7.8	33.6	67.9	5.6	2.8
			17:13	15.1	7.8	33.6	67.8	5.6	2.8
2.0	Sunny	Moderate	17:10	15.1	7.8	33.6	67.8	5.6	2.3
			17:13	15.1	7.8	33.6	67.9	5.6	2.6
2.5	Sunny	Moderate	17:10	15.1	7.8	33.6	67.5	5.5	3.3
			17:13	15.1	7.8	33.6	67.5	5.5	4.1
3.0	Sunny	Moderate	17:10	15.1	7.8	33.6	67.4	5.5	2.0
			17:14	15.1	7.8	33.6	67.4	5.5	2.1
3.5	Sunny	Moderate	17:11	15.1	7.8	33.6	67.4	5.5	2.0
			17:14	15.1	7.8	33.6	67.4	5.5	2.0
4.0	Sunny	Moderate	17:11	15.1	7.8	33.6	67.2	5.5	2.7
			17:14	15.1	7.8	33.6	67.4	5.5	2.6
4.5	Sunny	Moderate	17:11	15.1	7.8	33.6	67.4	5.5	2.8
			17:14	15.1	7.8	33.6	67.3	5.5	2.8
5.0	Sunny	Moderate	17:11	15.1	7.8	33.6	67.2	5.5	2.3
			17:15	15.1	7.8	33.6	67.2	5.5	2.6
5.5	Sunny	Moderate	17:12	15.1	7.8	33.6	67.1	5.5	3.3
			17:15	15.1	7.8	33.6	67.4	5.5	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	17:09	15.1	7.8	33.6	68.1	5.6	2.7
			17:13	15.1	7.8	33.6	68.1	5.6	2.6
3.0	Sunny	Moderate	17:10	15.1	7.8	33.6	67.4	5.5	2.0
			17:14	15.1	7.8	33.6	67.4	5.5	2.1
5.0	Sunny	Moderate	17:11	15.1	7.8	33.6	67.2	5.5	2.3
			17:15	15.1	7.8	33.6	67.2	5.5	2.6

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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: 20 February 2014

Secchi Disc Depth: 3.5m

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	16:55	14.9	7.9	33.7	68.7	5.6	2.1
			16:59	14.9	7.9	33.7	68.7	5.7	2.1
1.0	Sunny	Moderate	16:55	14.9	7.9	33.7	68.6	5.6	2.4
			17:00	14.9	7.9	33.7	68.7	5.6	2.3
1.5	Sunny	Moderate	16:56	14.9	7.9	33.7	68.8	5.7	2.3
			17:00	14.9	7.9	33.7	68.7	5.6	2.3
2.0	Sunny	Moderate	16:56	14.9	7.9	33.7	68.8	5.7	2.3
			17:00	14.9	7.9	33.7	68.8	5.7	2.3
2.5	Sunny	Moderate	16:56	14.9	7.9	33.7	68.8	5.7	2.5
			17:00	14.9	7.9	33.7	68.7	5.7	2.6
3.0	Sunny	Moderate	16:56	14.9	7.9	33.7	68.8	5.7	3.1
			17:01	14.9	7.9	33.7	68.7	5.7	3.2
3.5	Sunny	Moderate	16:57	14.9	7.9	33.7	68.6	5.6	2.6
			17:01	14.9	7.9	33.7	68.6	5.6	2.6
4.0	Sunny	Moderate	16:57	14.9	7.9	33.7	68.7	5.6	2.3
			17:01	14.9	7.9	33.7	68.6	5.6	2.6
4.5	Sunny	Moderate	16:57	14.9	7.9	33.7	68.6	5.6	2.3
			17:02	14.9	7.9	33.7	68.7	5.7	2.6
5.0	Sunny	Moderate	16:58	14.9	7.9	33.7	68.6	5.6	3.0
			17:02	14.9	7.9	33.7	68.6	5.6	2.5
5.5	Sunny	Moderate	16:58	14.9	7.9	33.7	68.6	5.6	3.0
			17:02	14.9	7.9	33.7	68.4	5.6	3.6
6.0	Sunny	Moderate	16:58	14.8	7.9	33.7	68.2	5.6	3.9
			17:02	14.9	7.9	33.7	68.3	5.6	3.7
6.6	Sunny	Moderate	16:59	14.8	7.9	33.7	68.0	5.6	4.1
			17:03	14.8	7.9	33.7	68.1	5.6	4.2

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	16:55	14.9	7.9	33.7	68.6	5.6	2.4
			17:00	14.9	7.9	33.7	68.7	5.6	2.3
3.5	Sunny	Moderate	16:57	14.9	7.9	33.7	68.6	5.6	2.6
			17:01	14.9	7.9	33.7	68.6	5.6	2.6
6.0	Sunny	Moderate	16:58	14.8	7.9	33.7	68.2	5.6	3.9
			17:02	14.9	7.9	33.7	68.3	5.6	3.7

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 IB3 - Mid-Ebb Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 2.5m

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	16:21	14.8	7.9	33.7	69.1	5.7	2.2
			16:25	14.8	7.9	33.7	69.1	5.7	2.1
1.0	Sunny	Moderate	16:21	14.8	7.9	33.7	69.1	5.7	2.0
			16:26	14.8	7.9	33.7	69.1	5.7	2.0
1.5	Sunny	Moderate	16:21	14.8	7.9	33.7	69.2	5.7	2.0
			16:26	14.8	7.9	33.7	69.2	5.7	1.9
2.0	Sunny	Moderate	16:21	14.8	7.9	33.7	69.3	5.7	1.9
			16:26	14.8	7.9	33.7	69.3	5.7	1.9
2.5	Sunny	Moderate	16:22	14.8	7.9	33.7	69.3	5.7	2.1
			16:26	14.8	7.9	33.7	69.4	5.7	2.0
3.0	Sunny	Moderate	16:22	14.8	7.9	33.7	69.3	5.7	1.9
			16:27	14.8	7.9	33.7	69.5	5.7	1.9
3.5	Sunny	Moderate	16:22	14.8	7.9	33.7	69.3	5.7	1.9
			16:27	14.8	7.9	33.7	69.3	5.7	1.9
4.0	Sunny	Moderate	16:22	14.8	7.9	33.7	69.3	5.7	2.0
			16:27	14.8	7.9	33.7	69.3	5.7	1.9
4.5	Sunny	Moderate	16:23	14.8	7.9	33.7	69.2	5.7	2.0
			16:27	14.8	7.9	33.7	69.3	5.7	2.1
5.0	Sunny	Moderate	16:23	14.8	7.9	33.7	68.8	5.7	2.6
			16:28	14.8	7.9	33.7	68.9	5.7	2.2
5.5	Sunny	Moderate	16:23	14.8	7.9	33.7	68.5	5.7	2.7
			16:28	14.7	7.9	33.7	68.4	5.6	3.1
6.0	Sunny	Moderate	16:23	14.7	7.9	33.7	68.4	5.6	2.8
			16:28	14.7	7.9	33.7	68.5	5.6	3.0
6.5	Sunny	Moderate	16:24	14.7	7.9	33.7	68.3	5.6	2.8
			16:28	14.8	7.9	33.7	68.4	5.6	2.8
7.0	Sunny	Moderate	16:24	14.8	7.9	33.7	68.4	5.6	2.6
			16:29	14.8	7.9	33.7	68.3	5.6	2.8
7.5	Sunny	Moderate	16:24	14.8	7.9	33.7	68.5	5.7	2.3
			16:29	14.8	7.9	33.7	68.7	5.7	2.3
8.0	Sunny	Moderate	16:24	14.7	7.9	33.7	68.7	5.7	3.3
			16:29	14.8	7.9	33.7	68.6	5.7	3.0
8.5	Sunny	Moderate	16:25	14.6	7.9	33.7	68.5	5.7	4.1
			16:30	14.6	7.9	33.7	67.8	5.6	3.6

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	16:21	14.8	7.9	33.7	69.1	5.7	2.0
			16:26	14.8	7.9	33.7	69.1	5.7	2.0
4.5	Sunny	Moderate	16:23	14.8	7.9	33.7	69.2	5.7	2.0
			16:27	14.8	7.9	33.7	69.3	5.7	2.1
8.0	Sunny	Moderate	16:24	14.7	7.9	33.7	68.7	5.7	3.3
			16:29	14.8	7.9	33.7	68.6	5.7	3.0

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 OB1 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	16:41	14.9	7.9	33.7	72.7	6.0	1.8
			16:44	14.9	7.9	33.7	72.8	6.0	1.8
1.0	Sunny	Moderate	16:41	14.9	7.9	33.7	73.0	6.0	2.0
			16:45	14.9	7.9	33.7	73.1	6.0	1.9
1.5	Sunny	Moderate	16:41	14.9	7.9	33.7	73.2	6.0	1.8
			16:45	14.9	7.9	33.7	73.1	6.0	1.8
2.0	Sunny	Moderate	16:41	14.9	7.9	33.7	73.1	6.0	1.7
			16:45	14.9	7.9	33.7	73.2	6.0	1.7
2.5	Sunny	Moderate	16:42	14.9	7.9	33.7	73.1	6.0	1.7
			16:45	14.9	7.9	33.7	73.2	6.0	1.7
3.0	Sunny	Moderate	16:42	14.8	7.9	33.7	73.0	6.0	1.6
			16:46	14.8	7.9	33.7	73.0	6.0	1.7
3.5	Sunny	Moderate	16:42	14.8	7.9	33.7	72.8	6.0	1.6
			16:46	14.8	7.9	33.7	72.9	6.0	1.6
4.0	Sunny	Moderate	16:42	14.8	7.9	33.7	72.7	6.0	1.6
			16:46	14.8	7.9	33.7	72.6	6.0	1.6
4.5	Sunny	Moderate	16:43	14.8	7.9	33.7	72.5	6.0	1.5
			16:47	14.8	7.9	33.7	72.5	6.0	1.6
5.0	Sunny	Moderate	16:43	14.8	7.9	33.7	72.3	6.0	1.5
			16:47	14.8	7.9	33.7	72.3	6.0	1.5
5.5	Sunny	Moderate	16:43	14.8	7.9	33.7	72.3	6.0	1.6
			16:47	14.8	7.9	33.7	72.3	6.0	1.6
6.0	Sunny	Moderate	16:43	14.8	7.9	33.7	72.3	6.0	1.7
			16:47	14.8	7.9	33.7	72.3	6.0	1.6
6.5	Sunny	Moderate	16:44	14.8	7.9	33.7	72.2	5.9	1.6
			16:48	14.8	7.9	33.7	72.2	6.0	1.7

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	16:41	14.9	7.9	33.7	73.0	6.0	2.0
			16:45	14.9	7.9	33.7	73.1	6.0	1.9
3.5	Sunny	Moderate	16:42	14.8	7.9	33.7	72.8	6.0	1.6
			16:46	14.8	7.9	33.7	72.9	6.0	1.6
6.0	Sunny	Moderate	16:43	14.8	7.9	33.7	72.3	6.0	1.7
			16:47	14.8	7.9	33.7	72.3	6.0	1.6

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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: **20 February 2014**

Secchi Disc Depth: **3.0m**

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	15:26	15.0	7.8	33.5	58.6	4.8	2.7
			15:38	15.0	7.8	33.5	58.7	4.8	2.6
1.0	Sunny	Moderate	15:26	15.0	7.8	33.5	58.7	4.8	2.9
			15:39	15.0	7.8	33.5	58.7	4.8	2.8
1.5	Sunny	Moderate	15:27	15.0	7.8	33.5	58.6	4.8	3.3
			15:39	15.0	7.8	33.5	58.6	4.8	3.5
2.0	Sunny	Moderate	15:27	14.9	7.8	33.5	58.4	4.8	2.6
			15:39	14.9	7.8	33.5	58.5	4.8	2.6
2.5	Sunny	Moderate	15:27	14.9	7.8	33.5	58.4	4.8	2.6
			15:39	15.0	7.8	33.5	58.5	4.8	2.6
3.0	Sunny	Moderate	15:27	14.9	7.8	33.5	58.5	4.8	2.5
			15:40	14.9	7.8	33.5	58.5	4.8	2.6
3.5	Sunny	Moderate	15:28	14.9	7.8	33.5	58.7	4.8	2.5
			15:40	14.9	7.8	33.5	58.6	4.8	2.7
4.0	Sunny	Moderate	15:28	14.9	7.8	33.5	58.8	4.8	2.4
			15:40	14.8	7.8	33.5	59.1	4.9	2.3
4.5	Sunny	Moderate	15:28	14.8	7.8	33.6	60.3	5.0	2.1
			15:40	14.8	7.8	33.5	59.3	4.9	2.2
5.0	Sunny	Moderate	15:28	14.8	7.8	33.6	60.3	5.0	2.1
			15:41	14.8	7.8	33.6	60.4	5.0	2.1
5.5	Sunny	Moderate	15:29	14.8	7.8	33.6	60.8	5.0	1.7
			15:41	14.8	7.8	33.6	60.5	5.0	1.7
6.0	Sunny	Moderate	15:29	14.8	7.8	33.6	60.9	5.0	1.8
			15:41	14.8	7.8	33.6	61.0	5.0	1.8
6.5	Sunny	Moderate	15:29	14.8	7.8	33.6	61.1	5.0	1.8
			15:42	14.8	7.8	33.6	61.2	5.1	1.8
7.0	Sunny	Moderate	15:29	14.8	7.8	33.6	61.2	5.1	1.8
			15:42	14.8	7.8	33.6	61.4	5.1	1.8
7.5	Sunny	Moderate	15:30	14.7	7.8	33.6	61.4	5.1	1.7
			15:42	14.8	7.8	33.6	61.4	5.1	1.8
8.0	Sunny	Moderate	15:30	14.7	7.8	33.6	61.5	5.1	1.7
			15:42	14.7	7.8	33.6	61.5	5.1	1.7
8.5	Sunny	Moderate	15:30	14.7	7.8	33.6	62.0	5.1	1.6
			15:42	14.7	7.8	33.6	61.7	5.1	1.7
9.0	Sunny	Moderate	15:30	14.7	7.8	33.6	62.3	5.1	1.6
			15:43	14.7	7.8	33.6	62.5	5.2	1.6
9.5	Sunny	Moderate	15:31	14.7	7.9	33.7	62.6	5.2	1.7
			15:43	14.7	7.9	33.6	62.5	5.2	1.7
10.0	Sunny	Moderate	15:31	14.7	7.9	33.7	62.6	5.2	1.6
			15:43	14.7	7.9	33.7	62.8	5.2	1.6
10.5	Sunny	Moderate	15:31	14.7	7.9	33.7	64.6	5.3	1.6
			15:44	14.7	7.9	33.7	64.6	5.3	1.6

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: **20 February 2014**

Secchi Disc Depth: **3.0m**

11.0	Sunny	Moderate	15:32	14.7	7.9	33.7	64.4	5.3	1.5
			15:44	14.7	7.9	33.7	64.4	5.3	1.6
11.5	Sunny	Moderate	15:32	14.7	7.9	33.7	64.4	5.3	1.7
			15:44	14.7	7.9	33.7	64.4	5.3	1.6
12.0	Sunny	Moderate	15:32	14.7	7.9	33.7	64.3	5.3	1.7
			15:44	14.6	7.9	33.7	64.3	5.3	1.7
12.5	Sunny	Moderate	15:32	14.7	7.9	33.7	64.4	5.3	1.8
			15:45	14.7	7.9	33.7	64.3	5.3	1.8
13.0	Sunny	Moderate	15:33	14.6	7.9	33.8	64.4	5.3	2.4
			15:45	14.6	7.9	33.7	64.4	5.3	2.2
13.5	Sunny	Moderate	15:33	14.6	7.9	33.8	64.4	5.3	2.2
			15:45	14.6	7.9	33.8	64.3	5.3	2.2
14.0	Sunny	Moderate	15:33	14.6	7.9	33.8	64.4	5.3	2.3
			15:45	14.6	7.9	33.8	64.4	5.3	2.5
14.5	Sunny	Moderate	15:33	14.6	7.9	33.8	64.4	5.3	2.2
			15:46	14.6	7.9	33.8	64.4	5.3	2.2
15.0	Sunny	Moderate	15:34	14.6	7.9	33.8	64.4	5.3	2.2
			15:46	14.6	7.9	33.8	64.4	5.3	2.1
15.5	Sunny	Moderate	15:34	14.6	7.9	33.8	64.4	5.3	2.2
			15:46	14.6	7.9	33.8	64.5	5.3	2.1
16.0	Sunny	Moderate	15:34	14.6	7.9	33.8	64.4	5.3	2.6
			15:46	14.6	7.9	33.8	64.4	5.3	2.5
16.5	Sunny	Moderate	15:34	14.6	7.9	33.8	64.5	5.3	2.6
			15:47	14.6	7.9	33.8	64.4	5.3	2.3
17.0	Sunny	Moderate	15:35	14.6	7.9	33.8	64.5	5.3	2.4
			15:47	14.6	7.9	33.8	64.5	5.3	2.3
17.5	Sunny	Moderate	15:35	14.6	7.9	33.8	64.5	5.3	2.3
			15:47	14.6	7.9	33.8	64.3	5.3	2.3
18.0	Sunny	Moderate	15:35	14.6	7.9	33.8	64.5	5.3	2.1
			15:47	14.6	7.9	33.8	64.6	5.3	2.2
18.5	Sunny	Moderate	15:35	14.6	7.9	33.8	64.8	5.4	2.1
			15:48	14.6	7.9	33.8	64.5	5.3	2.1
19.0	Sunny	Moderate	15:36	14.6	7.9	33.8	64.6	5.3	2.2
			15:48	14.6	7.9	33.8	64.6	5.3	2.2
19.5	Sunny	Moderate	15:36	14.6	7.9	33.8	64.6	5.3	2.2
			15:48	14.6	7.9	33.8	64.6	5.3	2.2
20.0	Sunny	Moderate	15:36	14.6	7.9	33.8	64.7	5.4	2.2
			15:48	14.6	7.9	33.8	64.7	5.4	2.2
20.5	Sunny	Moderate	15:37	14.6	7.9	33.8	64.6	5.3	2.1
			15:49	14.6	7.9	33.8	64.7	5.4	2.1
21.0	Sunny	Moderate	15:37	14.6	7.9	33.8	64.6	5.3	2.2
			15:49	14.6	7.9	33.8	64.6	5.3	2.6

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: **20 February 2014**

Secchi Disc Depth: **3.0m**

21.5	Sunny	Moderate	15:37	14.6	7.9	33.8	64.5	5.3	2.3
			15:49	14.6	7.9	33.8	64.6	5.3	2.5
22.0	Sunny	Moderate	15:37	14.6	7.9	33.8	64.5	5.3	2.6
			15:50	14.6	7.9	33.8	64.8	5.4	2.4
22.5	Sunny	Moderate	15:38	14.6	7.9	33.8	64.5	5.3	2.3
			15:50	14.6	7.9	33.8	63.9	5.3	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	15:26	15.0	7.8	33.5	58.7	4.8	2.9
			15:39	15.0	7.8	33.5	58.7	4.8	2.8
11.5	Sunny	Moderate	15:32	14.7	7.9	33.7	64.4	5.3	1.7
			15:44	14.7	7.9	33.7	64.4	5.3	1.6
22.0	Sunny	Moderate	15:37	14.6	7.9	33.8	64.5	5.3	2.6
			15:50	14.6	7.9	33.8	64.8	5.4	2.4

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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: 20 February 2014

Secchi Disc Depth: 3.5m

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	14:34	14.9	7.9	33.7	54.9	4.5	1.3
			14:43	14.9	7.9	33.7	55.1	4.5	1.2
1.0	Sunny	Moderate	14:34	14.8	7.9	33.7	55.0	4.5	1.3
			14:44	14.8	7.9	33.7	55.0	4.5	1.2
1.5	Sunny	Moderate	14:34	14.8	7.9	33.7	55.3	4.6	1.3
			14:44	14.8	7.9	33.7	55.2	4.5	1.3
2.0	Sunny	Moderate	14:35	14.8	7.9	33.7	55.5	4.6	1.2
			14:44	14.8	7.9	33.7	55.3	4.6	1.2
2.5	Sunny	Moderate	14:35	14.8	7.9	33.7	55.4	4.6	1.2
			14:44	14.8	7.9	33.7	55.4	4.6	1.2
3.0	Sunny	Moderate	14:35	14.8	7.9	33.7	55.7	4.6	1.2
			14:45	14.8	7.9	33.7	55.7	4.6	1.2
3.5	Sunny	Moderate	14:36	14.8	7.9	33.7	55.9	4.6	1.3
			14:45	14.8	7.9	33.7	55.7	4.6	1.2
4.0	Sunny	Moderate	14:36	14.8	7.9	33.7	56.3	4.6	1.2
			14:45	14.8	7.9	33.7	56.2	4.6	1.2
4.5	Sunny	Moderate	14:36	14.8	7.9	33.7	56.3	4.6	1.3
			14:45	14.8	7.9	33.7	56.4	4.6	1.2
5.0	Sunny	Moderate	14:36	14.8	7.9	33.7	56.5	4.7	1.2
			14:46	14.8	7.9	33.7	56.4	4.6	1.2
5.5	Sunny	Moderate	14:37	14.8	7.9	33.7	56.5	4.7	1.2
			14:46	14.8	7.9	33.7	56.6	4.7	1.2
6.0	Sunny	Moderate	14:37	14.8	7.9	33.8	56.6	4.7	1.2
			14:46	14.8	7.9	33.7	56.5	4.7	1.2
6.5	Sunny	Moderate	14:37	14.8	7.9	33.8	57.0	4.7	1.3
			14:46	14.8	7.9	33.8	56.9	4.7	1.3
7.0	Sunny	Moderate	14:37	14.8	7.9	33.8	57.3	4.7	1.3
			14:47	14.8	7.9	33.7	57.3	4.7	1.3
7.5	Sunny	Moderate	14:38	14.8	7.9	33.7	57.3	4.7	1.2
			14:47	14.8	7.9	33.7	57.4	4.7	1.2
8.0	Sunny	Moderate	14:38	14.7	7.9	33.8	57.6	4.8	1.3
			14:47	14.8	7.9	33.8	57.5	4.7	1.3
8.5	Sunny	Moderate	14:38	14.7	7.9	33.8	57.7	4.8	1.4
			14:47	14.8	7.9	33.8	57.6	4.8	1.4
9.0	Sunny	Moderate	14:38	14.7	7.9	33.8	57.7	4.8	1.4
			14:48	14.7	7.9	33.7	57.8	4.8	1.4
9.5	Sunny	Moderate	14:39	14.7	7.9	33.8	58.1	4.8	1.5
			14:48	14.7	7.9	33.8	58.1	4.8	1.4
10.0	Sunny	Moderate	14:39	14.7	7.9	33.8	58.2	4.8	1.4
			14:48	14.7	7.9	33.8	58.3	4.8	1.5
10.5	Sunny	Moderate	14:39	14.7	7.9	33.8	58.3	4.8	1.4
			14:48	14.7	7.9	33.8	58.4	4.8	1.4

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 VH2 - Mid-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

11.0	Sunny	Moderate	14:39	14.7	7.9	33.8	58.5	4.8	1.8
			14:49	14.7	7.9	33.8	58.4	4.8	1.5
11.5	Sunny	Moderate	14:40	14.7	7.9	33.8	58.6	4.8	1.6
			14:49	14.7	7.9	33.7	58.6	4.8	1.5
12.0	Sunny	Moderate	14:40	14.7	7.9	33.8	58.5	4.8	1.7
			14:49	14.7	7.9	33.8	58.5	4.8	1.9
12.5	Sunny	Moderate	14:40	14.6	7.9	33.8	58.6	4.8	1.5
			14:49	14.6	7.9	33.8	58.6	4.8	1.5
13.0	Sunny	Moderate	14:40	14.6	7.9	33.8	58.7	4.9	1.6
			14:50	14.6	7.9	33.8	58.7	4.9	1.6
13.5	Sunny	Moderate	14:41	14.6	7.9	33.8	58.9	4.9	1.5
			14:50	14.6	7.9	33.8	58.9	4.9	1.4
14.0	Sunny	Moderate	14:41	14.6	7.9	33.8	59.0	4.9	1.3
			14:50	14.6	7.9	33.8	59.0	4.9	1.3
14.5	Sunny	Moderate	14:41	14.6	7.9	33.8	59.0	4.9	1.3
			14:51	14.6	7.9	33.8	59.0	4.9	1.3
15.0	Sunny	Moderate	14:41	14.6	7.9	33.8	59.0	4.9	1.4
			14:51	14.6	7.9	33.8	59.0	4.9	1.3
15.5	Sunny	Moderate	14:42	14.6	7.9	33.8	59.0	4.9	1.4
			14:51	14.6	7.9	33.8	59.0	4.9	1.4
16.0	Sunny	Moderate	14:42	14.6	7.9	33.8	59.1	4.9	1.3
			14:51	14.6	7.9	33.8	59.1	4.9	1.3
16.5	Sunny	Moderate	14:42	14.6	7.9	33.8	59.1	4.9	1.4
			14:52	14.6	7.9	33.8	59.1	4.9	1.4
17.0	Sunny	Moderate	14:43	14.6	7.9	33.8	59.2	4.9	4.6
			14:52	14.6	7.9	33.8	59.1	4.9	4.7
17.5	Sunny	Moderate	14:43	14.6	7.9	33.8	59.1	4.9	2.5
			14:52	14.6	7.9	33.8	59.1	4.9	2.5

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	14:34	14.8	7.9	33.7	55.0	4.5	1.3
			14:44	14.8	7.9	33.7	55.0	4.5	1.2
9.0	Sunny	Moderate	14:38	14.7	7.9	33.8	57.7	4.8	1.4
			14:48	14.7	7.9	33.7	57.8	4.8	1.4
17.0	Sunny	Moderate	14:43	14.6	7.9	33.8	59.2	4.9	4.6
			14:52	14.6	7.9	33.8	59.1	4.9	4.7

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 Cha Kwo Ling - Mid-Ebb Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 2.5m

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	14:19	14.9	7.6	31.9	52.6	4.4	1.5
			14:23	14.9	7.7	32.2	53.4	4.4	1.3
1.0	Sunny	Moderate	14:19	14.9	7.7	32.0	52.1	4.3	1.3
			14:23	14.9	7.7	32.2	53.5	4.4	1.2
1.5	Sunny	Moderate	14:19	14.9	7.7	32.0	52.0	4.3	1.0
			14:23	14.9	7.7	32.2	53.3	4.4	1.0
2.0	Sunny	Moderate	14:19	14.9	7.7	32.1	50.7	4.2	0.8
			14:23	14.9	7.7	32.2	52.8	4.4	0.8
2.5	Sunny	Moderate	14:20	14.9	7.7	32.1	49.2	4.1	1.1
			14:23	14.9	7.7	32.3	52.7	4.4	1.0
3.0	Sunny	Moderate	14:20	14.9	7.7	32.1	49.2	4.1	1.7
			14:23	14.8	7.7	32.3	52.9	4.4	1.6
3.5	Sunny	Moderate	14:20	14.9	7.7	32.1	48.9	4.1	1.1
			14:23	14.8	7.7	32.4	52.9	4.4	1.3
4.0	Sunny	Moderate	14:20	14.8	7.7	32.2	48.7	4.1	1.0
			14:24	14.7	7.7	32.4	53.4	4.4	1.0
4.5	Sunny	Moderate	14:20	14.8	7.7	32.2	48.8	4.1	1.1
			14:24	14.7	7.7	32.4	53.3	4.4	1.0
5.0	Sunny	Moderate	14:20	14.7	7.7	32.2	49.4	4.1	1.3
			14:24	14.7	7.7	32.4	53.6	4.5	1.3
5.5	Sunny	Moderate	14:20	14.7	7.7	32.3	49.1	4.1	1.3
			14:24	14.7	7.7	32.4	54.2	4.5	1.5
6.0	Sunny	Moderate	14:20	14.7	7.7	32.3	49.1	4.1	1.5
			14:24	14.7	7.7	32.4	53.5	4.5	1.4
6.5	Sunny	Moderate	14:20	14.7	7.7	32.3	49.2	4.1	1.4
			14:24	14.7	7.7	32.4	54.2	4.5	1.4
7.0	Sunny	Moderate	14:21	14.7	7.7	32.3	49.6	4.1	1.7
			14:24	14.7	7.7	32.4	54.2	4.5	1.4
7.5	Sunny	Moderate	14:21	14.7	7.7	32.3	49.5	4.1	1.8
			14:24	14.7	7.7	32.4	54.2	4.5	1.7
8.0	Sunny	Moderate	14:21	14.7	7.7	32.3	49.0	4.1	1.6
			14:25	14.7	7.7	32.4	54.1	4.5	1.6
8.5	Sunny	Moderate	14:21	14.7	7.7	32.3	49.0	4.1	1.6
			14:25	14.7	7.7	32.4	54.2	4.5	1.5
9.0	Sunny	Moderate	14:21	14.7	7.7	32.3	49.7	4.1	1.6
			14:25	14.7	7.7	32.5	54.6	4.5	1.7
9.5	Sunny	Moderate	14:21	14.7	7.7	32.3	50.0	4.2	2.0
			14:25	14.7	7.7	32.4	54.8	4.6	1.8
10.0	Sunny	Moderate	14:22	14.7	7.7	32.3	50.1	4.2	1.8
			14:25	14.7	7.7	32.4	54.8	4.6	1.8
10.5	Sunny	Moderate	14:22	14.7	7.7	32.4	50.2	4.2	2.0
			14:25	14.7	7.7	32.4	55.1	4.6	2.0

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	14:20	14.7	7.7	32.3	49.1	4.1	1.3
			14:24	14.7	7.7	32.4	54.2	4.5	1.5

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	15:58	14.9	7.8	33.6	62.7	5.2	2.0
			16:06	14.9	7.8	33.6	62.8	5.2	2.2
1.0	Sunny	Moderate	15:58	14.9	7.8	33.6	62.9	5.2	2.1
			16:06	14.9	7.8	33.6	62.8	5.2	2.1
1.5	Sunny	Moderate	15:59	14.9	7.8	33.6	63.5	5.2	2.1
			16:06	14.9	7.8	33.6	62.6	5.2	2.1
2.0	Sunny	Moderate	15:59	14.8	7.8	33.6	63.3	5.2	1.9
			16:06	14.8	7.9	33.7	63.3	5.2	2.0
2.5	Sunny	Moderate	15:59	14.9	7.8	33.6	63.6	5.2	2.0
			16:07	14.9	7.8	33.6	63.5	5.2	2.4
3.0	Sunny	Moderate	15:59	14.8	7.9	33.7	63.6	5.2	2.0
			16:07	14.8	7.9	33.7	63.4	5.2	2.1
3.5	Sunny	Moderate	16:00	14.8	7.9	33.7	64.1	5.3	2.2
			16:07	14.8	7.9	33.7	64.1	5.3	2.1
4.0	Sunny	Moderate	16:00	14.8	7.9	33.7	64.5	5.3	1.9
			16:08	14.8	7.9	33.7	64.3	5.3	1.9
4.5	Sunny	Moderate	16:00	14.8	7.9	33.7	64.5	5.3	1.8
			16:08	14.8	7.9	33.7	64.8	5.3	1.9
5.0	Sunny	Moderate	16:00	14.7	7.9	33.7	65.6	5.4	1.6
			16:08	14.7	7.9	33.7	65.4	5.4	1.7
5.5	Sunny	Moderate	16:01	14.7	7.9	33.7	66.7	5.5	1.6
			16:08	14.7	7.9	33.7	66.7	5.5	1.5
6.0	Sunny	Moderate	16:01	14.8	7.9	33.7	66.3	5.5	1.6
			16:09	14.8	7.9	33.7	66.2	5.5	1.6
6.5	Sunny	Moderate	16:01	14.7	7.9	33.7	66.0	5.4	1.7
			16:09	14.7	7.9	33.7	66.1	5.5	1.7
7.0	Sunny	Moderate	16:01	14.8	7.9	33.7	66.5	5.5	1.7
			16:09	14.8	7.9	33.7	66.3	5.5	1.6
7.5	Sunny	Moderate	16:02	14.7	7.9	33.7	66.4	5.5	1.6
			16:09	14.7	7.9	33.7	66.2	5.5	1.6
8.0	Sunny	Moderate	16:02	14.7	7.9	33.8	66.7	5.5	1.6
			16:10	14.7	7.9	33.8	66.5	5.5	1.6
8.5	Sunny	Moderate	16:02	14.6	7.9	33.8	67.4	5.6	1.5
			16:10	14.6	7.9	33.8	67.4	5.6	1.6
9.0	Sunny	Moderate	16:02	14.6	7.9	33.8	67.7	5.6	1.8
			16:10	14.6	7.9	33.8	67.7	5.6	1.6
9.5	Sunny	Moderate	16:03	14.6	7.9	33.8	68.2	5.6	1.7
			16:10	14.6	7.9	33.8	67.9	5.6	1.6
10.0	Sunny	Moderate	16:03	14.6	7.9	33.8	68.2	5.6	1.7
			16:11	14.6	7.9	33.8	68.1	5.6	1.7
10.5	Sunny	Moderate	16:03	14.6	7.9	33.8	68.1	5.6	1.6
			16:11	14.6	7.9	33.8	68.1	5.6	1.6

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-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

11.0	Sunny	Moderate	16:04	14.6	7.9	33.8	68.1	5.6	1.6
			16:11	14.6	7.9	33.8	68.2	5.6	1.6
11.5	Sunny	Moderate	16:04	14.6	7.9	33.8	68.0	5.6	1.7
			16:11	14.6	7.9	33.8	68.2	5.6	1.8
12.0	Sunny	Moderate	16:04	14.6	7.9	33.8	68.1	5.6	1.7
			16:12	14.6	7.9	33.8	68.3	5.6	1.7
12.5	Sunny	Moderate	16:04	14.6	7.9	33.8	68.3	5.6	1.7
			16:12	14.6	7.9	33.8	68.4	5.7	1.6
13.0	Sunny	Moderate	16:05	14.6	7.9	33.8	68.3	5.7	1.8
			16:12	14.6	7.9	33.8	68.1	5.6	1.8
13.5	Sunny	Moderate	16:05	14.6	7.9	33.8	68.3	5.6	1.3
			16:13	14.6	7.9	33.8	68.3	5.6	1.6
14.0	Sunny	Moderate	16:05	14.6	7.9	33.8	68.1	5.6	1.8
			16:13	14.6	7.9	33.8	68.1	5.6	1.7
14.5	Sunny	Moderate	16:05	14.6	7.9	33.8	68.2	5.6	2.1
			16:13	14.6	7.9	33.8	68.2	5.6	2.2

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)
7.5	Sunny	Moderate	16:02	14.7	7.9	33.7	66.4	5.5	1.6
			16:09	14.7	7.9	33.7	66.2	5.5	1.6

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 Quarry Bay - Mid-Ebb Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

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	15:05	14.7	7.8	33.7	57.1	4.7	2.7
			15:12	14.7	7.8	33.7	56.6	4.7	2.6
1.0	Sunny	Moderate	15:05	14.7	7.8	33.7	56.5	4.7	2.9
			15:12	14.7	7.8	33.7	56.4	4.7	2.9
1.5	Sunny	Moderate	15:06	14.7	7.8	33.7	56.5	4.7	2.9
			15:12	14.7	7.8	33.7	56.6	4.7	3.0
2.0	Sunny	Moderate	15:06	14.7	7.9	33.7	56.6	4.7	2.7
			15:12	14.7	7.9	33.7	56.6	4.7	2.8
2.5	Sunny	Moderate	15:06	14.7	7.9	33.7	56.7	4.7	2.5
			15:13	14.7	7.9	33.7	56.9	4.7	2.7
3.0	Sunny	Moderate	15:06	14.7	7.9	33.7	57.0	4.7	3.0
			15:13	14.7	7.9	33.7	57.1	4.7	3.2
3.5	Sunny	Moderate	15:07	14.7	7.9	33.7	57.0	4.7	3.1
			15:13	14.7	7.9	33.7	57.2	4.7	3.0
4.0	Sunny	Moderate	15:07	14.7	7.9	33.7	57.6	4.8	2.7
			15:13	14.7	7.9	33.7	57.8	4.8	2.6
4.5	Sunny	Moderate	15:07	14.7	7.9	33.7	57.7	4.8	2.7
			15:14	14.7	7.9	33.7	57.8	4.8	2.6
5.0	Sunny	Moderate	15:07	14.6	7.9	33.8	58.1	4.8	2.4
			15:14	14.6	7.9	33.8	57.8	4.8	2.6
5.5	Sunny	Moderate	15:08	14.6	7.9	33.8	58.2	4.8	2.5
			15:14	14.6	7.9	33.8	58.4	4.8	2.4
6.0	Sunny	Moderate	15:08	14.6	7.9	33.8	58.6	4.8	2.3
			15:14	14.6	7.9	33.8	58.3	4.8	2.3
6.5	Sunny	Moderate	15:08	14.6	7.9	33.8	58.6	4.8	2.3
			15:15	14.6	7.9	33.8	58.7	4.9	2.0
7.0	Sunny	Moderate	15:08	14.6	7.9	33.8	58.9	4.9	2.2
			15:15	14.6	7.9	33.8	58.9	4.9	2.3
7.5	Sunny	Moderate	15:09	14.6	7.9	33.8	58.9	4.9	2.3
			15:15	14.6	7.9	33.8	59.0	4.9	2.3
8.0	Sunny	Moderate	15:09	14.6	7.9	33.8	59.4	4.9	2.2
			15:16	14.6	7.9	33.8	59.3	4.9	2.3
8.5	Sunny	Moderate	15:09	14.6	7.9	33.8	59.4	4.9	2.2
			15:16	14.6	7.9	33.8	59.5	4.9	2.2
9.0	Sunny	Moderate	15:09	14.6	7.9	33.8	59.5	4.9	2.1
			15:16	14.6	7.9	33.8	59.5	4.9	2.2
9.5	Sunny	Moderate	15:10	14.6	7.9	33.8	59.6	4.9	2.2
			15:16	14.6	7.9	33.8	59.9	5.0	2.2
10.0	Sunny	Moderate	15:10	14.6	7.9	33.8	59.9	5.0	2.1
			15:17	14.6	7.9	33.8	59.9	5.0	2.1
10.5	Sunny	Moderate	15:10	14.6	7.9	33.8	60.2	5.0	2.1
			15:17	14.6	7.9	33.8	60.3	5.0	2.1

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 Quarry Bay - Mid-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

11.0	Sunny	Moderate	15:11	14.6	7.9	33.8	60.4	5.0	2.2
			15:17	14.6	7.9	33.8	60.4	5.0	2.2
11.5	Sunny	Moderate	15:11	14.6	7.9	33.8	60.5	5.0	2.1
			15:17	14.6	7.9	33.8	60.8	5.0	2.0

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)
6.0	Sunny	Moderate	15:08	14.6	7.9	33.8	58.6	4.8	2.3
			15:14	14.6	7.9	33.8	58.3	4.8	2.3

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 Sai Wan Ho - Mid-Ebb Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

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	14:12	14.8	7.9	33.7	54.4	4.5	1.2
			14:19	14.8	7.9	33.7	54.6	4.5	1.2
1.0	Sunny	Moderate	14:12	14.8	7.9	33.7	50.0	4.1	1.2
			14:20	14.8	7.9	33.8	49.9	4.1	1.2
1.5	Sunny	Moderate	14:12	14.8	7.9	33.8	49.5	4.1	1.2
			14:20	14.8	7.9	33.7	49.6	4.1	1.2
2.0	Sunny	Moderate	14:12	14.8	7.9	33.8	49.4	4.1	1.2
			14:20	14.8	7.9	33.8	49.2	4.1	1.2
2.5	Sunny	Moderate	14:13	14.8	7.9	33.8	49.2	4.1	1.2
			14:21	14.8	7.9	33.8	49.1	4.0	1.2
3.0	Sunny	Moderate	14:13	14.8	7.9	33.8	49.0	4.0	1.2
			14:21	14.8	7.9	33.8	48.9	4.0	1.2
3.5	Sunny	Moderate	14:13	14.8	7.9	33.8	48.9	4.0	1.2
			14:21	14.8	7.9	33.8	48.8	4.0	1.2
4.0	Sunny	Moderate	14:14	14.7	7.9	33.8	48.6	4.0	1.3
			14:21	14.8	7.9	33.8	48.6	4.0	1.2
4.5	Sunny	Moderate	14:14	14.7	7.9	33.8	48.7	4.0	1.3
			14:22	14.7	7.9	33.8	48.9	4.0	1.3
5.0	Sunny	Moderate	14:14	14.7	7.9	33.8	48.9	4.0	1.3
			14:22	14.7	7.9	33.8	48.9	4.0	1.3
5.5	Sunny	Moderate	14:14	14.7	7.9	33.8	49.0	4.0	1.3
			14:22	14.7	7.9	33.8	48.9	4.0	1.4
6.0	Sunny	Moderate	14:15	14.6	7.9	33.8	49.2	4.1	1.4
			14:22	14.6	7.9	33.8	49.2	4.1	1.4
6.5	Sunny	Moderate	14:15	14.6	7.9	33.8	49.1	4.1	1.4
			14:23	14.6	7.9	33.8	49.1	4.1	1.4
7.0	Sunny	Moderate	14:15	14.6	7.9	33.8	49.3	4.1	1.4
			14:23	14.6	7.9	33.8	49.2	4.1	1.4
7.5	Sunny	Moderate	14:15	14.6	7.9	33.8	49.4	4.1	1.6
			14:23	14.6	7.9	33.8	49.3	4.1	1.4
8.0	Sunny	Moderate	14:16	14.5	7.9	33.8	49.5	4.1	1.5
			14:23	14.5	7.9	33.8	49.5	4.1	1.5
8.5	Sunny	Moderate	14:16	14.5	7.9	33.8	49.6	4.1	1.5
			14:24	14.5	7.9	33.8	49.6	4.1	1.5
9.0	Sunny	Moderate	14:16	14.5	7.9	33.8	49.7	4.1	1.5
			14:24	14.5	7.9	33.8	49.7	4.1	1.4
9.5	Sunny	Moderate	14:16	14.5	7.9	33.8	49.8	4.1	1.5
			14:24	14.5	7.9	33.8	49.8	4.1	1.5
10.0	Sunny	Moderate	14:17	14.5	7.9	33.8	49.9	4.1	1.5
			14:24	14.5	7.9	33.8	49.9	4.1	1.5
10.5	Sunny	Moderate	14:17	14.5	7.9	33.8	50.1	4.2	1.6
			14:25	14.6	7.9	33.8	50.1	4.1	1.7

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 Sai Wan Ho - Mid-Ebb Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

11.0	Sunny	Moderate	14:17	14.5	7.9	33.8	50.1	4.2	1.7
			14:25	14.5	7.9	33.8	50.1	4.2	1.7
11.5	Sunny	Moderate	14:17	14.5	7.9	33.8	50.3	4.2	1.7
			14:25	14.5	7.9	33.8	50.3	4.2	1.7
12.0	Sunny	Moderate	14:18	14.5	7.9	33.8	50.4	4.2	1.6
			14:25	14.5	7.9	33.8	50.5	4.2	1.6
12.5	Sunny	Moderate	14:18	14.5	7.9	33.8	50.5	4.2	1.6
			14:26	14.5	7.9	33.8	50.5	4.2	1.6
13.0	Sunny	Moderate	14:18	14.5	7.9	33.8	50.6	4.2	1.7
			14:26	14.5	7.9	33.8	50.6	4.2	1.8
13.5	Sunny	Moderate	14:19	14.5	7.9	33.8	50.8	4.2	1.7
			14:26	14.5	7.9	33.8	50.7	4.2	1.7

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)
7.0	Sunny	Moderate	14:15	14.6	7.9	33.8	49.3	4.1	1.4
			14:23	14.6	7.9	33.8	49.2	4.1	1.4

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC1 - Mid-Flood Tide

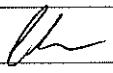
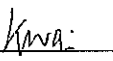
Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	8:36	15.2	7.5	27.6	59.7	4.9	1.8
			8:39	15.2	7.5	28.0	58.9	4.8	1.6
1.0	Sunny	Calm	8:36	15.0	7.6	29.5	59.8	4.9	1.5
			8:39	14.9	7.6	30.0	59.9	4.9	1.6
1.5	Sunny	Calm	8:37	14.7	7.6	30.8	60.6	4.9	1.5
			8:39	14.7	7.6	30.9	61.2	5.0	1.7
2.0	Sunny	Calm	8:37	14.7	7.7	31.4	62.9	5.1	1.6
			8:39	14.6	7.7	31.3	63.2	5.1	1.5
2.5	Sunny	Calm	8:37	14.8	7.6	31.6	63.7	5.1	1.8
			8:39	14.7	7.7	31.5	65.0	5.2	1.9
3.0	Sunny	Calm	8:37	14.9	7.5	31.9	63.5	5.1	4.2
			8:40	14.8	7.6	31.7	66.6	5.4	4.3
3.5	Sunny	Calm	8:38	15.1	7.3	32.0	53.4	4.3	6.2
			8:40	15.0	7.4	31.9	64.0	5.1	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)
1.0	Sunny	Calm	8:36	15.0	7.6	29.5	59.8	4.9	1.5
			8:39	14.9	7.6	30.0	59.9	4.9	1.6
3.0	Sunny	Calm	8:37	14.9	7.5	31.9	63.5	5.1	4.2
			8:40	14.8	7.6	31.7	66.6	5.4	4.3

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC2 - Mid-Flood Tide

Sampling Date: **20 February 2014**

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	Calm	8:26	14.8	7.5	29.3	66.3	5.4	1.2
			8:28	15.0	7.5	29.0	65.4	5.3	1.3
1.0	Sunny	Calm	8:26	14.7	7.6	30.6	66.1	5.4	1.2
			8:28	15.0	7.5	28.8	65.7	5.4	1.2
1.5	Sunny	Calm	8:26	14.7	7.6	31.1	66.6	5.4	1.1
			8:28	14.7	7.6	30.5	66.3	5.4	1.2
2.0	Sunny	Calm	8:26	14.9	7.6	31.4	67.3	5.4	1.1
			8:29	14.8	7.6	31.1	67.5	5.5	1.3
2.5	Sunny	Calm	8:26	14.9	7.5	31.5	67.3	5.4	1.5
			8:29	14.7	7.6	31.3	67.1	5.4	1.5
3.0	Sunny	Calm	8:26	15.0	7.5	31.5	65.8	5.3	1.5
			8:29	14.9	7.5	31.6	68.8	5.5	1.6
3.5	Sunny	Calm	8:26	14.9	7.5	31.7	63.4	5.1	1.9
			8:29	15.0	7.5	31.8	63.5	5.1	1.9

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	Calm	8:26	14.7	7.6	30.6	66.1	5.4	1.2
			8:28	15.0	7.5	28.8	65.7	5.4	1.2
3.0	Sunny	Calm	8:26	15.0	7.5	31.5	65.8	5.3	1.5
			8:29	14.9	7.5	31.6	68.8	5.5	1.6

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC3 - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	8:47	14.0	7.6	29.2	61.9	5.1	1.4
			8:50	14.2	7.6	29.7	60.5	5.0	1.4
1.0	Sunny	Calm	8:47	14.7	7.6	30.9	61.0	4.9	1.3
			8:50	14.6	7.6	30.6	61.9	5.0	1.1
1.5	Sunny	Calm	8:47	14.7	7.7	31.3	61.2	4.9	1.2
			8:51	14.7	7.6	30.9	62.8	5.1	1.2
2.0	Sunny	Calm	8:48	14.8	7.7	31.7	61.5	5.0	1.4
			8:51	14.8	7.6	31.3	63.0	5.1	1.4
2.5	Sunny	Calm	8:48	14.8	7.6	31.8	61.6	5.0	1.6
			8:51	14.8	7.6	31.6	62.7	5.1	1.4
3.0	Sunny	Calm	8:48	14.9	7.6	32.0	60.5	4.9	2.0
			8:51	14.8	7.6	31.8	62.5	5.0	1.7
3.5	Sunny	Calm	8:48	15.0	7.5	32.0	56.7	4.5	1.8
			8:51	14.9	7.5	31.9	61.6	4.9	2.0
4.0	Sunny	Calm	8:49	15.1	7.4	32.1	48.9	3.9	5.3
			8:51	15.0	7.5	32.0	56.6	4.5	5.2

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	Calm	8:47	14.7	7.6	30.9	61.0	4.9	1.3
			8:50	14.6	7.6	30.6	61.9	5.0	1.1
3.5	Sunny	Calm	8:48	15.0	7.5	32.0	56.7	4.5	1.8
			8:51	14.9	7.5	31.9	61.6	4.9	2.0

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC4 - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	9:00	14.7	7.6	29.3	50.9	4.2	2.3
			9:03	14.7	7.6	29.4	47.6	3.9	2.4
1.0	Sunny	Calm	9:01	14.8	7.6	31.1	48.9	4.0	2.5
			9:03	14.8	7.6	31.4	47.6	3.8	2.5
1.5	Sunny	Calm	9:01	14.8	7.6	31.4	47.9	3.9	2.9
			9:03	14.8	7.6	31.7	48.1	3.9	2.8
2.0	Sunny	Calm	9:01	14.8	7.6	31.6	47.4	3.8	2.7
			9:03	14.8	7.7	31.9	48.3	3.9	2.8
2.5	Sunny	Calm	9:01	14.8	7.6	31.7	47.3	3.8	2.8
			9:03	14.8	7.7	32.0	49.1	4.0	2.9
3.0	Sunny	Calm	9:01	14.8	7.6	31.8	47.1	3.8	2.5
			9:03	14.7	7.7	32.0	49.9	4.0	2.5
3.5	Sunny	Calm	9:01	14.8	7.6	32.1	46.8	3.8	2.6
			9:03	14.8	7.7	32.1	50.4	4.1	2.7
4.0	Sunny	Calm	9:01	14.8	7.6	32.1	46.6	3.7	2.8
			9:04	14.9	7.6	32.2	50.4	4.0	2.8
4.5	Sunny	Calm	9:02	14.8	7.6	32.1	45.7	3.7	3.1
			9:04	14.9	7.6	32.2	48.1	3.9	3.2

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	Calm	9:01	14.8	7.6	31.1	48.9	4.0	2.5
			9:03	14.8	7.6	31.4	47.6	3.8	2.5
4.0	Sunny	Calm	9:01	14.8	7.6	32.1	46.6	3.7	2.8
			9:04	14.9	7.6	32.2	50.4	4.0	2.8

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC5 - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	9:32	14.4	7.5	27.9	43.4	3.6	1.5
			9:34	15.2	7.4	25.9	44.8	3.7	1.5
1.0	Sunny	Calm	9:32	14.3	7.6	30.8	43.5	3.6	1.3
			9:34	14.1	7.6	29.9	46.2	3.8	1.3
1.5	Sunny	Calm	9:32	14.6	7.7	31.2	44.1	3.6	1.2
			9:34	14.6	7.6	31.2	47.2	3.8	1.3
2.0	Sunny	Calm	9:33	14.7	7.7	31.6	44.9	3.6	1.4
			9:35	14.7	7.7	31.5	48.1	3.9	1.2
2.5	Sunny	Calm	9:33	14.7	7.7	31.9	45.9	3.7	1.1
			9:35	14.7	7.7	31.8	49.3	4.0	1.3
3.0	Sunny	Calm	9:33	14.8	7.6	32.2	46.7	3.8	1.4
			9:35	14.9	7.6	32.1	50.1	4.0	1.3
3.5	Sunny	Calm	9:33	14.9	7.6	32.3	46.7	3.7	1.5
			9:35	14.9	7.6	32.3	48.8	3.9	1.6
4.0	Sunny	Calm	9:33	14.8	7.6	32.4	44.5	3.6	2.4
			9:35	14.9	7.6	32.4	45.9	3.7	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	Calm	9:32	14.3	7.6	30.8	43.5	3.6	1.3
			9:34	14.1	7.6	29.9	46.2	3.8	1.3
3.5	Sunny	Calm	9:33	14.9	7.6	32.3	46.7	3.7	1.5
			9:35	14.9	7.6	32.3	48.8	3.9	1.6

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC6 - Mid-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 2.5m

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	Calm	9:24	14.1	7.6	28.5	47.8	4.0	3.2
			9:26	14.0	7.6	29.0	46.7	3.9	3.4
1.0	Sunny	Calm	9:24	14.3	7.6	30.4	47.3	3.9	2.0
			9:26	14.3	7.6	30.4	47.0	3.9	2.1
1.5	Sunny	Calm	9:25	14.5	7.7	31.9	47.2	3.8	1.5
			9:27	14.6	7.7	31.6	47.3	3.8	1.6
2.0	Sunny	Calm	9:25	14.7	7.7	32.0	46.7	3.8	1.2
			9:27	14.7	7.7	31.9	48.1	3.9	1.3
2.5	Sunny	Calm	9:25	14.7	7.7	32.1	46.3	3.7	1.2
			9:27	14.7	7.7	32.1	48.5	3.9	1.2
3.0	Sunny	Calm	9:25	14.7	7.7	32.3	45.8	3.7	1.3
			9:27	14.7	7.7	32.3	48.9	3.9	1.4
3.5	Sunny	Calm	9:25	14.7	7.7	32.4	45.8	3.7	1.3
			9:27	14.7	7.7	32.4	48.7	3.9	1.5
4.0	Sunny	Calm	9:25	14.7	7.7	32.4	44.8	3.6	1.3
			9:27	14.7	7.7	32.4	47.5	3.8	1.2
4.5	Sunny	Calm	9:25	14.7	7.7	32.4	44.4	3.6	7.1
			9:28	14.7	7.7	32.5	46.9	3.8	7.0
5.0	Sunny	Calm	9:25	14.7	7.6	32.4	44.2	3.5	13.1
			9:28	14.7	7.7	32.5	46.9	3.8	12.8

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	Calm	9:24	14.3	7.6	30.4	47.3	3.9	2.0
			9:26	14.3	7.6	30.4	47.0	3.9	2.1
4.5	Sunny	Calm	9:25	14.7	7.7	32.4	44.4	3.6	7.1
			9:28	14.7	7.7	32.5	46.9	3.8	7.0

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 AC7 - Mid-Flood Tide

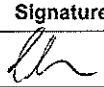
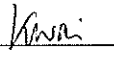
Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	9:41	14.6	7.4	23.3	42.8	3.6	1.8
			9:46	14.2	7.5	25.3	49.4	4.2	1.6
1.0	Sunny	Calm	9:41	14.3	7.6	29.9	41.6	3.4	1.9
			9:46	14.3	7.6	30.4	49.6	4.1	1.9
1.5	Sunny	Calm	9:41	14.7	7.7	30.1	45.1	3.7	1.6
			9:46	14.5	7.7	31.5	50.0	4.1	1.6
2.0	Sunny	Calm	9:42	14.6	7.6	32.3	47.2	3.8	1.7
			9:46	14.7	7.7	31.8	51.2	4.1	1.6
2.5	Sunny	Calm	9:42	14.8	7.7	32.2	47.3	3.8	1.3
			9:46	14.7	7.7	32.2	51.8	4.2	1.4
3.0	Sunny	Calm	9:42	14.8	7.7	32.4	47.9	3.8	1.5
			9:46	14.7	7.7	32.3	52.3	4.2	1.6
3.5	Sunny	Calm	9:42	14.8	7.7	32.5	47.6	3.8	1.8
			9:46	14.8	7.7	32.4	52.5	4.2	1.7
4.0	Sunny	Calm	9:43	14.7	7.7	32.5	47.0	3.8	1.5
			9:47	14.7	7.7	32.5	52.3	4.2	1.6
4.5	Sunny	Calm	9:43	14.7	7.7	32.6	46.6	3.7	1.6
			9:47	14.7	7.7	32.5	52.2	4.2	1.6
5.0	Sunny	Calm	9:43	14.7	7.7	32.6	46.9	3.8	1.7
			9:47	14.7	7.7	32.6	52.1	4.2	1.7
5.5	Sunny	Calm	9:45	14.7	7.7	32.5	47.6	3.8	1.7
			9:47	14.7	7.7	32.6	51.9	4.2	1.8
6.0	Sunny	Calm	9:45	14.7	7.7	32.5	48.8	3.9	1.5
			9:47	14.7	7.7	32.6	51.9	4.2	1.6
6.5	Sunny	Calm	9:45	14.7	7.6	32.6	49.0	3.9	1.7
			9:47	14.7	7.6	32.6	51.8	4.2	1.8

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	Calm	9:41	14.3	7.6	29.9	41.6	3.4	1.9
			9:46	14.3	7.6	30.4	49.6	4.1	1.9
3.5	Sunny	Calm	9:42	14.8	7.7	32.5	47.6	3.8	1.8
			9:46	14.8	7.7	32.4	52.5	4.2	1.7
6.0	Sunny	Calm	9:45	14.7	7.7	32.5	48.8	3.9	1.5
			9:47	14.7	7.7	32.6	51.9	4.2	1.6

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 JVC - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	9:09	14.6	7.5	28.6	49.5	4.1	1.6
			9:11	15.0	7.5	28.0	47.0	3.9	1.6
1.0	Sunny	Calm	9:10	14.3	7.6	30.6	48.3	4.0	1.5
			9:11	14.2	7.6	29.4	47.3	3.9	1.4
1.5	Sunny	Calm	9:10	14.6	7.6	31.6	48.0	3.9	1.4
			9:11	14.4	7.6	31.0	47.9	3.9	1.3
2.0	Sunny	Calm	9:10	14.8	7.7	31.6	47.4	3.8	1.3
			9:11	14.7	7.7	31.3	48.4	3.9	1.2
2.5	Sunny	Calm	9:10	14.8	7.7	31.8	46.8	3.8	1.1
			9:12	14.8	7.7	31.7	49.2	4.0	1.1
3.0	Sunny	Calm	9:10	14.7	7.7	32.1	47.2	3.8	1.1
			9:12	14.8	7.7	32.0	49.5	4.0	1.3
3.5	Sunny	Calm	9:10	14.8	7.7	32.2	47.6	3.8	1.6
			9:12	14.7	7.7	32.2	50.3	4.0	1.3
4.0	Sunny	Calm	9:10	14.8	7.6	32.3	47.1	3.8	1.5
			9:12	14.7	7.7	32.2	50.2	4.0	1.6

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	Calm	9:10	14.3	7.6	30.6	48.3	4.0	1.5
			9:11	14.2	7.6	29.4	47.3	3.9	1.4
3.5	Sunny	Calm	9:10	14.8	7.7	32.2	47.6	3.8	1.6
			9:12	14.7	7.7	32.2	50.3	4.0	1.3

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 KT1 - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	Calm	9:54	14.7	7.6	29.4	45.1	3.7	1.5
			9:57	14.7	7.6	28.8	48.9	4.1	1.5
1.0	Sunny	Calm	9:54	14.9	7.6	30.5	44.2	3.6	0.9
			9:58	14.8	7.6	30.3	48.4	4.0	1.1
1.5	Sunny	Calm	9:54	14.9	7.7	31.2	44.8	3.6	1.3
			9:58	14.9	7.7	31.2	48.0	3.9	1.4
2.0	Sunny	Calm	9:55	14.9	7.7	31.5	45.2	3.7	1.4
			9:58	14.9	7.7	31.6	48.3	3.9	1.4
2.5	Sunny	Calm	9:55	15.0	7.7	31.8	45.8	3.7	1.2
			9:58	14.9	7.7	32.1	49.5	4.0	1.0
3.0	Sunny	Calm	9:55	14.9	7.7	32.0	46.5	3.8	1.0
			9:58	14.8	7.7	32.3	49.9	4.0	1.2
3.5	Sunny	Calm	9:55	14.8	7.7	32.4	47.0	3.8	1.2
			9:59	14.8	7.7	32.5	52.2	4.2	1.4
4.0	Sunny	Calm	9:55	14.7	7.7	32.5	48.0	3.9	1.1
			9:59	14.8	7.7	32.5	52.4	4.2	1.2
4.5	Sunny	Calm	9:56	14.7	7.7	32.5	48.9	4.0	1.3
			9:59	14.8	7.7	32.5	52.6	4.3	1.3
5.0	Sunny	Calm	9:56	14.7	7.7	32.6	49.5	4.0	1.5
			9:59	14.8	7.7	32.5	52.8	4.3	1.4
5.5	Sunny	Calm	9:56	14.7	7.7	32.6	49.7	4.0	2.4
			9:59	14.8	7.7	32.6	53.1	4.3	2.4
6.0	Sunny	Calm	9:56	14.7	7.7	32.6	50.0	4.1	1.8
			9:59	14.7	7.7	32.6	53.3	4.3	1.9
6.5	Sunny	Calm	9:56	14.7	7.7	32.6	50.6	4.1	1.8
			9:59	14.7	7.7	32.7	53.5	4.3	1.7
7.0	Sunny	Calm	9:56	14.7	7.7	32.6	50.9	4.1	1.8
			10:00	14.7	7.7	32.7	53.6	4.3	1.7
7.5	Sunny	Calm	9:57	14.7	7.7	32.6	50.9	4.1	2.3
			10:00	14.7	7.7	32.7	53.8	4.4	2.7

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	Calm	9:54	14.9	7.6	30.5	44.2	3.6	0.9
			9:58	14.8	7.6	30.3	48.4	4.0	1.1
4.0	Sunny	Calm	9:55	14.7	7.7	32.5	48.0	3.9	1.1
			9:59	14.8	7.7	32.5	52.4	4.2	1.2
7.0	Sunny	Calm	9:56	14.7	7.7	32.6	50.9	4.1	1.8
			10:00	14.7	7.7	32.7	53.6	4.3	1.7

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 KTN - Mid-Flood Tide

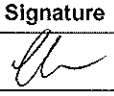
Sampling Date: 20 February 2014

Secchi Disc Depth: 2.5m

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	Calm	8:02	14.9	7.5	29.3	64.4	5.3	1.3
			8:03	14.8	7.6	30.7	67.4	5.5	1.4
1.0	Sunny	Calm	8:02	14.7	7.6	30.5	65.6	5.3	1.4
			8:03	14.8	7.5	29.3	67.1	5.5	1.6
1.5	Sunny	Calm	8:02	14.9	7.5	29.4	67.5	5.5	1.4
			8:03	14.8	7.5	29.3	67.0	5.5	1.4

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	Calm	8:02	14.7	7.6	30.5	65.6	5.3	1.4
			8:03	14.8	7.5	29.3	67.1	5.5	1.6

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 IB1 - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.0m**

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	Calm	8:00	14.3	7.7	33.5	65.2	5.4	3.3
			8:03	14.3	7.7	33.5	65.1	5.4	3.3
1.0	Sunny	Calm	8:00	14.3	7.7	33.5	64.4	5.4	3.0
			8:03	14.3	7.7	33.5	64.4	5.4	3.0
1.5	Sunny	Calm	8:01	14.3	7.7	33.5	76.1	6.3	3.0
			8:03	14.3	7.7	33.5	64.6	5.4	3.0
2.0	Sunny	Calm	8:01	14.2	7.7	33.5	64.1	5.4	3.3
			8:04	14.2	7.7	33.5	63.4	5.3	3.2
2.5	Sunny	Calm	8:01	14.2	7.7	33.5	63.3	5.3	3.8
			8:04	14.2	7.7	33.5	62.9	5.3	3.9
3.0	Sunny	Calm	8:01	14.2	7.7	33.5	62.8	5.2	4.0
			8:04	14.2	7.7	33.5	62.9	5.3	4.0
3.5	Sunny	Calm	8:02	14.1	7.7	33.5	62.5	5.2	3.9
			8:04	14.1	7.7	33.5	62.2	5.2	3.8
4.0	Sunny	Calm	8:02	14.1	7.7	33.5	59.7	5.0	4.4
			8:05	14.1	7.7	33.5	60.0	5.0	4.5
4.5	Sunny	Calm	8:02	14.1	7.7	33.5	58.9	4.9	6.1
			8:05	14.1	7.7	33.5	59.1	4.9	6.1

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	Calm	8:00	14.3	7.7	33.5	64.4	5.4	3.0
			8:03	14.3	7.7	33.5	64.4	5.4	3.0
4.0	Sunny	Calm	8:02	14.1	7.7	33.5	59.7	5.0	4.4
			8:05	14.1	7.7	33.5	60.0	5.0	4.5

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	Calm	8:13	14.5	7.8	33.6	62.6	5.2	1.5
			8:17	14.5	7.8	33.6	62.4	5.2	1.5
1.0	Sunny	Calm	8:13	14.6	7.8	33.6	62.5	5.2	1.5
			8:17	14.6	7.8	33.6	62.6	5.2	1.5
1.5	Sunny	Calm	8:13	14.6	7.8	33.6	62.7	5.2	1.4
			8:18	14.6	7.8	33.6	62.7	5.2	1.4
2.0	Sunny	Calm	8:13	14.6	7.8	33.6	62.8	5.2	1.5
			8:18	14.6	7.8	33.6	62.8	5.2	1.5
2.5	Sunny	Calm	8:14	14.6	7.8	33.6	62.9	5.2	2.4
			8:18	14.6	7.8	33.6	62.9	5.2	2.8
3.0	Sunny	Calm	8:14	14.6	7.8	33.6	63.1	5.2	1.5
			8:19	14.6	7.8	33.6	63.1	5.2	1.5
3.5	Sunny	Calm	8:14	14.6	7.8	33.6	63.2	5.2	1.4
			8:19	14.6	7.8	33.6	63.1	5.2	1.5
4.0	Sunny	Calm	8:15	14.5	7.8	33.6	63.5	5.3	1.6
			8:19	14.5	7.8	33.6	63.5	5.3	1.7
4.5	Sunny	Calm	8:15	14.5	7.8	33.7	63.8	5.3	1.6
			8:20	14.5	7.8	33.6	63.8	5.3	1.6
5.0	Sunny	Calm	8:15	14.5	7.8	33.7	64.0	5.3	1.8
			8:20	14.5	7.8	33.7	64.0	5.3	1.6
5.5	Sunny	Calm	8:15	14.5	7.8	33.7	64.2	5.3	1.9
			8:20	14.5	7.8	33.7	64.1	5.3	2.2
6.0	Sunny	Calm	8:16	14.5	7.8	33.7	64.4	5.3	1.8
			8:20	14.5	7.8	33.7	64.5	5.3	1.7
6.5	Sunny	Calm	8:16	14.5	7.8	33.7	64.7	5.4	2.4
			8:21	14.5	7.8	33.7	64.7	5.4	2.7

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	Calm	8:13	14.6	7.8	33.6	62.5	5.2	1.5
			8:17	14.6	7.8	33.6	62.6	5.2	1.5
3.5	Sunny	Calm	8:14	14.6	7.8	33.6	63.2	5.2	1.4
			8:19	14.6	7.8	33.6	63.1	5.2	1.5
6.0	Sunny	Calm	8:16	14.5	7.8	33.7	64.4	5.3	1.8
			8:20	14.5	7.8	33.7	64.5	5.3	1.7

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 IB3 - Mid-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

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	Calm	8:51	14.5	7.8	33.7	65.2	5.4	2.0
			8:56	14.5	7.8	33.7	65.1	5.4	2.1
1.0	Sunny	Calm	8:51	14.5	7.8	33.7	65.0	5.4	2.2
			8:57	14.5	7.8	33.7	65.0	5.4	2.2
1.5	Sunny	Calm	8:52	14.5	7.8	33.7	64.8	5.4	2.5
			8:57	14.5	7.8	33.7	64.8	5.4	2.3
2.0	Sunny	Calm	8:52	14.5	7.8	33.7	64.9	5.4	2.1
			8:57	14.5	7.8	33.7	64.8	5.4	2.2
2.5	Sunny	Calm	8:52	14.5	7.8	33.7	64.9	5.4	2.2
			8:57	14.5	7.8	33.7	64.9	5.4	2.2
3.0	Sunny	Calm	8:52	14.5	7.8	33.7	64.9	5.4	2.0
			8:58	14.5	7.8	33.7	64.9	5.4	2.0
3.5	Sunny	Calm	8:53	14.5	7.9	33.7	64.8	5.4	1.9
			8:58	14.5	7.8	33.7	64.9	5.4	1.8
4.0	Sunny	Calm	8:53	14.5	7.9	33.7	64.8	5.4	1.8
			8:58	14.4	7.8	33.7	65.1	5.4	1.8
4.5	Sunny	Calm	8:53	14.5	7.9	33.7	65.0	5.4	1.8
			8:58	14.5	7.9	33.7	65.0	5.4	1.7
5.0	Sunny	Calm	8:54	14.5	7.9	33.7	65.0	5.4	2.1
			8:59	14.5	7.9	33.7	64.8	5.4	1.9
5.5	Sunny	Calm	8:54	14.4	7.9	33.7	64.7	5.4	1.8
			8:59	14.5	7.9	33.7	64.8	5.4	1.9
6.0	Sunny	Calm	8:54	14.4	7.9	33.7	64.4	5.3	1.9
			9:00	14.5	7.9	33.7	64.6	5.4	1.8
6.5	Sunny	Calm	8:55	14.4	7.9	33.7	64.4	5.3	2.1
			9:00	14.4	7.9	33.7	64.6	5.4	2.0
7.0	Sunny	Calm	8:55	14.4	7.9	33.7	64.4	5.3	2.1
			9:00	14.4	7.9	33.7	64.4	5.3	2.1
7.5	Sunny	Calm	8:55	14.4	7.8	33.7	64.5	5.4	1.9
			9:00	14.4	7.9	33.7	64.5	5.4	1.9
8.0	Sunny	Calm	8:55	14.4	7.8	33.7	64.3	5.3	2.2
			9:00	14.4	7.9	33.7	64.2	5.3	2.1
8.5	Sunny	Calm	8:56	14.4	7.8	33.7	63.8	5.3	4.8
			9:01	14.4	7.8	33.7	64.0	5.3	4.2

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	Calm	8:51	14.5	7.8	33.7	65.0	5.4	2.2
			8:57	14.5	7.8	33.7	65.0	5.4	2.2
4.5	Sunny	Calm	8:53	14.5	7.9	33.7	65.0	5.4	1.8
			8:58	14.5	7.9	33.7	65.0	5.4	1.7
8.0	Sunny	Calm	8:55	14.4	7.8	33.7	64.3	5.3	2.2
			9:00	14.4	7.9	33.7	64.2	5.3	2.1

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 OB1 - Mid-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

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	Calm	8:26	14.6	7.8	33.6	66.1	5.5	1.5
			8:31	14.6	7.8	33.6	66.0	5.5	1.5
1.0	Sunny	Calm	8:26	14.6	7.8	33.6	65.9	5.5	1.4
			8:31	14.6	7.8	33.6	65.9	5.5	1.4
1.5	Sunny	Calm	8:26	14.6	7.8	33.6	65.9	5.5	1.4
			8:31	14.6	7.8	33.6	65.7	5.4	1.4
2.0	Sunny	Calm	8:27	14.6	7.8	33.6	65.9	5.5	1.4
			8:32	14.6	7.8	33.6	65.8	5.5	1.4
2.5	Sunny	Calm	8:27	14.6	7.8	33.6	65.8	5.5	1.4
			8:32	14.6	7.8	33.6	65.7	5.4	1.4
3.0	Sunny	Calm	8:27	14.6	7.8	33.6	65.6	5.4	1.4
			8:32	14.6	7.8	33.6	65.6	5.4	1.4
3.5	Sunny	Calm	8:27	14.6	7.8	33.6	65.4	5.4	1.5
			8:33	14.6	7.8	33.6	65.2	5.4	1.4
4.0	Sunny	Calm	8:28	14.6	7.8	33.6	64.9	5.4	1.5
			8:33	14.6	7.8	33.6	64.8	5.4	1.5
4.5	Sunny	Calm	8:28	14.6	7.8	33.6	64.7	5.4	1.7
			8:33	14.6	7.8	33.6	65.0	5.4	1.4
5.0	Sunny	Calm	8:28	14.6	7.8	33.6	64.5	5.3	1.5
			8:34	14.6	7.8	33.6	64.4	5.3	1.3
5.5	Sunny	Calm	8:29	14.6	7.8	33.6	64.1	5.3	1.4
			8:34	14.6	7.8	33.6	64.2	5.3	1.4
6.0	Sunny	Calm	8:29	14.6	7.8	33.6	63.9	5.3	1.4
			8:34	14.6	7.8	33.6	63.9	5.3	1.4
6.5	Sunny	Calm	8:29	14.6	7.8	33.6	63.7	5.3	1.5
			8:34	14.6	7.8	33.6	63.7	5.3	1.5
7.0	Sunny	Calm	8:29	14.6	7.8	33.6	63.8	5.3	1.5
			8:35	14.5	7.8	33.6	63.7	5.3	1.4
7.5	Sunny	Calm	8:30	14.6	7.8	33.6	63.9	5.3	4.5
			8:35	14.5	7.8	33.6	63.7	5.3	4.3

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	Calm	8:26	14.6	7.8	33.6	65.9	5.5	1.4
			8:31	14.6	7.8	33.6	65.9	5.5	1.4
4.0	Sunny	Calm	8:28	14.6	7.8	33.6	64.9	5.4	1.5
			8:33	14.6	7.8	33.6	64.8	5.4	1.5
7.0	Sunny	Calm	8:29	14.6	7.8	33.6	63.8	5.3	1.5
			8:35	14.5	7.8	33.6	63.7	5.3	1.4

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	Calm	9:28	14.6	7.9	33.7	67.6	5.6	2.1
			9:41	14.6	7.9	33.7	67.6	5.6	2.1
1.0	Sunny	Calm	9:28	14.6	7.9	33.7	67.7	5.6	1.8
			9:41	14.6	7.9	33.7	67.6	5.6	1.8
1.5	Sunny	Calm	9:28	14.6	7.9	33.7	67.9	5.6	1.9
			9:41	14.6	7.9	33.7	67.8	5.6	2.0
2.0	Sunny	Calm	9:28	14.6	7.9	33.7	67.9	5.6	1.9
			9:41	14.6	7.9	33.7	67.9	5.6	1.9
2.5	Sunny	Calm	9:29	14.6	7.9	33.7	67.9	5.6	1.9
			9:42	14.6	7.9	33.7	67.9	5.6	1.7
3.0	Sunny	Calm	9:29	14.6	7.9	33.7	68.0	5.6	2.0
			9:42	14.6	7.9	33.7	67.9	5.6	1.8
3.5	Sunny	Calm	9:29	14.6	7.9	33.7	68.0	5.6	1.8
			9:42	14.6	7.9	33.7	67.9	5.6	1.8
4.0	Sunny	Calm	9:29	14.6	7.9	33.7	68.0	5.6	1.8
			9:43	14.6	7.9	33.7	68.0	5.6	1.8
4.5	Sunny	Calm	9:30	14.6	7.9	33.7	68.1	5.6	1.8
			9:43	14.6	7.9	33.7	67.9	5.6	1.8
5.0	Sunny	Calm	9:30	14.6	7.9	33.7	68.0	5.6	1.9
			9:43	14.6	7.9	33.7	68.0	5.6	1.8
5.5	Sunny	Calm	9:30	14.6	7.9	33.7	68.0	5.6	1.8
			9:43	14.6	7.9	33.7	67.9	5.6	1.8
6.0	Sunny	Calm	9:30	14.6	7.9	33.7	67.9	5.6	1.7
			9:44	14.6	7.9	33.7	67.9	5.6	1.8
6.5	Sunny	Calm	9:31	14.6	7.9	33.7	67.9	5.6	1.8
			9:44	14.6	7.9	33.7	68.0	5.6	1.8
7.0	Sunny	Calm	9:31	14.6	7.9	33.7	67.6	5.6	2.1
			9:44	14.6	7.9	33.7	67.5	5.6	1.9
7.5	Sunny	Calm	9:31	14.6	7.9	33.7	67.6	5.6	2.0
			9:44	14.6	7.9	33.7	67.5	5.6	2.1
8.0	Sunny	Calm	9:32	14.6	7.9	33.7	67.5	5.6	1.9
			9:45	14.6	7.9	33.7	67.6	5.6	1.9
8.5	Sunny	Calm	9:32	14.6	7.9	33.7	67.6	5.6	1.9
			9:45	14.6	7.9	33.7	67.5	5.6	1.8
9.0	Sunny	Calm	9:32	14.6	7.9	33.7	67.6	5.6	1.9
			9:45	14.6	7.9	33.7	67.5	5.6	2.0
9.5	Sunny	Calm	9:32	14.6	7.9	33.7	67.6	5.6	1.8
			9:45	14.6	7.9	33.7	67.6	5.6	1.9
10.0	Sunny	Calm	9:33	14.6	7.9	33.7	67.6	5.6	1.8
			9:46	14.6	7.9	33.7	67.6	5.6	1.8
10.5	Sunny	Calm	9:33	14.6	7.9	33.7	67.6	5.6	1.7
			9:46	14.6	7.9	33.7	67.6	5.6	1.7

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-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

11.0	Sunny	Calm	9:33	14.6	7.9	33.7	67.5	5.6	1.7
			9:46	14.6	7.9	33.7	67.5	5.6	1.9
11.5	Sunny	Calm	9:33	14.6	7.9	33.7	67.5	5.6	1.8
			9:47	14.6	7.9	33.7	67.5	5.6	1.8
12.0	Sunny	Calm	9:34	14.6	7.9	33.7	67.4	5.6	1.8
			9:47	14.6	7.9	33.7	67.5	5.6	2.1
12.5	Sunny	Calm	9:34	14.6	7.9	33.7	67.6	5.6	2.0
			9:47	14.6	7.9	33.7	67.5	5.6	2.0
13.0	Sunny	Calm	9:34	14.6	7.9	33.7	67.6	5.6	2.0
			9:47	14.6	7.9	33.7	67.7	5.6	2.1
13.5	Sunny	Calm	9:34	14.6	7.9	33.7	67.8	5.6	2.0
			9:48	14.6	7.9	33.7	67.7	5.6	2.0
14.0	Sunny	Calm	9:35	14.6	7.9	33.7	67.8	5.6	1.8
			9:48	14.6	7.9	33.7	67.8	5.6	1.8
14.5	Sunny	Calm	9:35	14.6	7.9	33.7	67.9	5.6	1.9
			9:48	14.6	7.9	33.7	67.9	5.6	1.9
15.0	Sunny	Calm	9:35	14.6	7.9	33.7	67.9	5.6	1.8
			9:48	14.6	7.9	33.7	67.8	5.6	1.7
15.5	Sunny	Calm	9:35	14.6	7.9	33.7	68.0	5.6	1.8
			9:49	14.6	7.9	33.7	67.9	5.6	1.8
16.0	Sunny	Calm	9:36	14.6	7.9	33.7	68.0	5.6	1.8
			9:49	14.6	7.9	33.7	68.1	5.6	1.9
16.5	Sunny	Calm	9:36	14.6	7.9	33.7	68.2	5.6	1.8
			9:49	14.6	7.9	33.7	68.0	5.6	1.8
17.0	Sunny	Calm	9:36	14.6	7.9	33.7	68.2	5.6	1.7
			9:49	14.6	7.9	33.7	68.2	5.6	1.8
17.5	Sunny	Calm	9:37	14.6	7.9	33.7	68.4	5.7	1.7
			9:50	14.6	7.9	33.7	68.3	5.7	1.7
18.0	Sunny	Calm	9:37	14.6	7.9	33.7	68.5	5.7	1.8
			9:50	14.6	7.9	33.7	68.7	5.7	1.8
18.5	Sunny	Calm	9:37	14.6	7.9	33.7	68.6	5.7	1.8
			9:50	14.6	7.9	33.7	68.6	5.7	1.8
19.0	Sunny	Calm	9:37	14.6	7.9	33.7	68.7	5.7	1.8
			9:50	14.6	7.9	33.7	68.9	5.7	1.7
19.5	Sunny	Calm	9:38	14.6	7.9	33.7	68.9	5.7	1.7
			9:51	14.6	7.9	33.7	68.9	5.7	1.8
20.0	Sunny	Calm	9:38	14.6	7.9	33.7	68.9	5.7	2.4
			9:51	14.6	7.9	33.7	68.9	5.7	2.3
20.5	Sunny	Calm	9:38	14.6	7.9	33.7	68.8	5.7	2.0
			9:51	14.6	7.9	33.7	68.8	5.7	2.0
21.0	Sunny	Calm	9:38	14.6	7.9	33.7	68.8	5.7	1.9
			9:51	14.6	7.9	33.7	68.9	5.7	2.0

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-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

21.5	Sunny	Calm	9:39	14.6	7.9	33.7	68.8	5.7	2.0
			9:52	14.6	7.9	33.7	68.8	5.7	2.1
22.0	Sunny	Calm	9:39	14.6	7.9	33.7	68.9	5.7	1.9
			9:52	14.6	7.9	33.7	68.9	5.7	2.0
22.5	Sunny	Calm	9:39	14.6	7.9	33.7	68.9	5.7	2.5
			9:52	14.6	7.9	33.7	68.9	5.7	2.0
23.0	Sunny	Calm	9:39	14.6	7.9	33.7	68.8	5.7	3.4
			9:52	14.6	7.9	33.7	68.9	5.7	3.0
23.5	Sunny	Calm	9:40	14.6	7.9	33.7	68.9	5.7	2.5
			9:53	14.6	7.9	33.7	68.9	5.7	2.6
24.0	Sunny	Calm	9:40	14.6	7.9	33.7	69.0	5.7	3.6
			9:53	14.6	7.9	33.7	69.0	5.7	3.4
24.5	Sunny	Calm	9:40	14.6	7.9	33.7	69.0	5.7	3.5
			9:53	14.6	7.9	33.7	69.0	5.7	3.7

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	Calm	9:28	14.6	7.9	33.7	67.7	5.6	1.8
			9:41	14.6	7.9	33.7	67.6	5.6	1.8
12.5	Sunny	Calm	9:34	14.6	7.9	33.7	67.6	5.6	2.0
			9:47	14.6	7.9	33.7	67.5	5.6	2.0
24.0	Sunny	Calm	9:40	14.6	7.9	33.7	69.0	5.7	3.6
			9:53	14.6	7.9	33.7	69.0	5.7	3.4

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

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	Calm	10:22	14.6	7.9	33.9	76.3	6.3	1.7
			10:31	14.6	7.9	33.9	76.0	6.3	1.7
1.0	Sunny	Calm	10:22	14.6	7.9	33.9	75.9	6.3	1.6
			10:31	14.6	7.9	33.9	76.0	6.3	1.8
1.5	Sunny	Calm	10:22	14.5	7.9	33.9	76.0	6.3	1.5
			10:32	14.5	7.9	33.9	76.0	6.3	1.5
2.0	Sunny	Calm	10:22	14.5	7.9	33.9	75.9	6.3	1.5
			10:32	14.5	7.9	33.9	75.9	6.3	1.5
2.5	Sunny	Calm	10:23	14.6	7.9	33.9	76.0	6.3	1.8
			10:32	14.6	7.9	33.9	76.0	6.3	1.5
3.0	Sunny	Calm	10:23	14.5	7.9	33.9	76.0	6.3	1.4
			10:32	14.5	7.9	33.9	76.0	6.3	1.3
3.5	Sunny	Calm	10:23	14.5	7.9	33.9	76.0	6.3	1.4
			10:33	14.5	7.9	33.9	76.0	6.3	1.4
4.0	Sunny	Calm	10:23	14.5	7.9	33.9	76.0	6.3	1.4
			10:33	14.5	7.9	33.9	76.1	6.3	1.4
4.5	Sunny	Calm	10:24	14.5	7.9	33.9	76.1	6.3	1.5
			10:33	14.5	7.9	33.9	76.1	6.3	1.5
5.0	Sunny	Calm	10:24	14.5	7.9	33.9	76.2	6.3	1.4
			10:33	14.5	7.9	33.9	76.1	6.3	1.4
5.5	Sunny	Calm	10:24	14.5	7.9	33.9	76.2	6.3	1.4
			10:34	14.5	7.9	33.9	76.2	6.3	1.4
6.0	Sunny	Calm	10:24	14.5	7.9	33.9	76.2	6.3	1.4
			10:34	14.5	7.9	33.9	76.2	6.3	1.4
6.5	Sunny	Calm	10:25	14.5	7.9	33.9	76.2	6.3	1.5
			10:34	14.5	7.9	33.9	76.3	6.3	1.5
7.0	Sunny	Calm	10:25	14.5	7.9	33.9	76.2	6.3	1.5
			10:35	14.5	7.9	33.9	76.2	6.3	1.4
7.5	Sunny	Calm	10:25	14.5	7.9	33.9	76.2	6.3	1.4
			10:35	14.5	7.9	33.9	76.2	6.3	1.4
8.0	Sunny	Calm	10:25	14.5	7.9	33.9	76.1	6.3	1.4
			10:35	14.5	7.9	33.9	76.1	6.3	1.4
8.5	Sunny	Calm	10:26	14.5	7.9	33.9	76.1	6.3	1.5
			10:35	14.5	7.9	33.9	76.1	6.3	1.5
9.0	Sunny	Calm	10:26	14.5	7.9	33.9	76.2	6.3	1.5
			10:36	14.5	7.9	33.9	76.1	6.3	1.5
9.5	Sunny	Calm	10:26	14.5	7.9	33.9	76.2	6.3	1.4
			10:36	14.5	7.9	33.9	76.1	6.3	1.5
10.0	Sunny	Calm	10:26	14.5	7.9	33.9	76.1	6.3	1.5
			10:36	14.5	7.9	33.9	76.1	6.3	1.5
10.5	Sunny	Calm	10:27	14.5	7.9	33.9	76.1	6.3	1.5
			10:36	14.5	7.9	33.9	76.2	6.3	1.5

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-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

11.0	Sunny	Calm	10:27	14.5	7.9	33.9	76.2	6.3	1.5
			10:37	14.5	7.9	33.9	76.1	6.3	1.4
11.5	Sunny	Calm	10:27	14.5	7.9	33.9	76.1	6.3	1.4
			10:37	14.5	7.9	33.9	76.2	6.3	1.4
12.0	Sunny	Calm	10:27	14.5	7.9	33.9	76.2	6.3	1.4
			10:37	14.5	7.9	33.9	76.1	6.3	1.4
12.5	Sunny	Calm	10:28	14.5	7.9	33.9	76.2	6.3	1.5
			10:37	14.5	7.9	33.9	76.2	6.3	1.7
13.0	Sunny	Calm	10:28	14.5	7.9	33.9	76.3	6.3	1.5
			10:38	14.5	7.9	33.9	76.2	6.3	1.6
13.5	Sunny	Calm	10:28	14.5	7.9	33.9	75.8	6.3	3.4
			10:38	14.5	7.9	33.9	76.3	6.3	2.8
14.0	Sunny	Calm	10:29	14.5	7.9	33.9	76.0	6.3	1.5
			10:38	14.5	7.9	33.9	76.0	6.3	1.6
14.5	Sunny	Calm	10:29	14.5	7.9	33.9	75.9	6.3	1.5
			10:38	14.5	7.9	33.9	75.9	6.3	1.5
15.0	Sunny	Calm	10:29	14.5	7.9	33.9	76.0	6.3	1.5
			10:39	14.5	7.9	33.9	76.1	6.3	1.5
15.5	Sunny	Calm	10:29	14.5	7.9	33.9	76.0	6.3	1.6
			10:39	14.5	7.9	33.9	76.0	6.3	1.5
16.0	Sunny	Calm	10:30	14.5	7.9	33.9	75.9	6.3	1.5
			10:39	14.5	7.9	33.9	76.0	6.3	1.5
16.5	Sunny	Calm	10:30	14.5	7.9	33.9	76.0	6.3	1.5
			10:40	14.5	7.9	33.9	76.0	6.3	1.5
17.0	Sunny	Calm	10:30	14.5	7.9	33.9	76.0	6.3	1.6
			10:40	14.5	7.9	33.9	75.9	6.3	1.6
17.5	Sunny	Calm	10:30	14.5	7.9	33.9	75.9	6.3	1.6
			10:40	14.5	7.9	33.9	75.9	6.3	1.7
18.0	Sunny	Calm	10:31	14.5	7.9	33.9	75.9	6.3	2.4
			10:40	14.5	7.9	33.9	75.8	6.3	2.5
18.5	Sunny	Calm	10:31	14.5	7.9	33.9	75.7	6.3	21.5
			10:40	14.5	7.9	33.9	75.8	6.3	21.8

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	Calm	10:22	14.6	7.9	33.9	75.9	6.3	1.6
			10:31	14.6	7.9	33.9	76.0	6.3	1.8
9.5	Sunny	Calm	10:26	14.5	7.9	33.9	76.2	6.3	1.4
			10:36	14.5	7.9	33.9	76.1	6.3	1.5
18.0	Sunny	Calm	10:31	14.5	7.9	33.9	75.9	6.3	2.4
			10:40	14.5	7.9	33.9	75.8	6.3	2.5

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 Cha Kwo Ling - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **2.5m**

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	10:12	14.7	7.7	32.9	45.6	3.7	2.5
			10:17	14.7	7.7	32.9	50.7	4.1	2.5
1.0	Sunny	Moderate	10:12	14.7	7.7	32.9	45.8	3.7	1.4
			10:17	14.7	7.7	32.9	50.4	4.1	1.4
1.5	Sunny	Moderate	10:13	14.7	7.7	32.9	45.6	3.7	1.5
			10:17	14.7	7.7	32.9	50.4	4.1	1.5
2.0	Sunny	Moderate	10:13	14.7	7.7	32.9	46.5	3.8	1.2
			10:17	14.7	7.7	32.9	50.6	4.1	1.3
2.5	Sunny	Moderate	10:13	14.6	7.7	32.9	46.7	3.8	1.4
			10:18	14.7	7.7	32.9	50.7	4.1	1.5
3.0	Sunny	Moderate	10:14	14.6	7.8	33.0	47.5	3.8	1.3
			10:18	14.6	7.8	33.0	51.3	4.2	1.4
3.5	Sunny	Moderate	10:14	14.6	7.8	33.0	47.6	3.9	2.0
			10:18	14.6	7.8	33.0	51.2	4.1	2.1
4.0	Sunny	Moderate	10:14	14.6	7.8	33.0	48.0	3.9	1.6
			10:18	14.6	7.8	33.0	51.2	4.1	1.7
4.5	Sunny	Moderate	10:14	14.6	7.8	33.0	48.3	3.9	1.6
			10:18	14.6	7.8	33.0	51.4	4.2	1.3
5.0	Sunny	Moderate	10:14	14.6	7.8	33.0	48.3	3.9	1.4
			10:19	14.6	7.8	33.0	51.3	4.2	1.2
5.5	Sunny	Moderate	10:14	14.6	7.8	33.0	48.8	3.9	1.1
			10:19	14.6	7.8	33.0	51.4	4.2	1.2
6.0	Sunny	Moderate	10:15	14.6	7.8	33.0	49.0	4.0	1.2
			10:19	14.6	7.8	33.0	51.5	4.2	1.0
6.5	Sunny	Moderate	10:15	14.6	7.8	33.0	49.2	4.0	1.2
			10:19	14.6	7.8	33.0	51.6	4.2	1.1
7.0	Sunny	Moderate	10:15	14.6	7.8	33.0	50.0	4.1	1.1
			10:19	14.6	7.8	33.0	51.6	4.2	0.9
7.5	Sunny	Moderate	10:15	14.6	7.8	33.0	50.2	4.1	0.9
			10:19	14.6	7.8	33.0	51.8	4.2	0.9
8.0	Sunny	Moderate	10:16	14.6	7.8	33.0	50.4	4.1	1.0
			10:19	14.6	7.8	33.1	51.7	4.2	1.1
8.5	Sunny	Moderate	10:16	14.6	7.8	33.1	50.2	4.1	1.3
			10:19	14.6	7.8	33.0	51.7	4.2	1.3
9.0	Sunny	Moderate	10:16	14.6	7.8	33.1	50.7	4.1	1.6
			10:19	14.6	7.8	33.1	51.8	4.2	1.5

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)
4.5	Sunny	Moderate	10:14	14.6	7.8	33.0	48.3	3.9	1.6
			10:18	14.6	7.8	33.0	51.4	4.2	1.3

	Name	Signature	Date
Conducted by:	Lam Ho Chun		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	Calm	9:07	14.6	7.8	33.6	64.7	5.4	1.7
			9:15	14.6	7.8	33.6	64.8	5.4	1.7
1.0	Sunny	Calm	9:08	14.6	7.8	33.6	64.9	5.4	1.7
			9:16	14.6	7.8	33.6	64.9	5.4	1.6
1.5	Sunny	Calm	9:08	14.6	7.8	33.6	64.9	5.4	1.7
			9:16	14.6	7.8	33.6	65.0	5.4	1.7
2.0	Sunny	Calm	9:08	14.6	7.8	33.6	65.1	5.4	1.7
			9:16	14.6	7.8	33.6	65.1	5.4	1.7
2.5	Sunny	Calm	9:08	14.6	7.8	33.6	65.1	5.4	1.7
			9:16	14.6	7.8	33.6	65.2	5.4	1.6
3.0	Sunny	Calm	9:09	14.6	7.8	33.6	65.1	5.4	1.8
			9:17	14.6	7.8	33.6	65.1	5.4	1.8
3.5	Sunny	Calm	9:09	14.6	7.8	33.6	65.0	5.4	1.8
			9:17	14.6	7.8	33.6	65.1	5.4	1.7
4.0	Sunny	Calm	9:09	14.6	7.8	33.6	65.0	5.4	1.8
			9:17	14.6	7.8	33.6	65.1	5.4	1.8
4.5	Sunny	Calm	9:09	14.6	7.9	33.6	65.2	5.4	1.7
			9:17	14.6	7.9	33.6	65.2	5.4	1.7
5.0	Sunny	Calm	9:10	14.6	7.9	33.6	65.3	5.4	1.6
			9:18	14.6	7.9	33.6	65.2	5.4	1.6
5.5	Sunny	Calm	9:10	14.6	7.9	33.6	65.2	5.4	2.0
			9:18	14.6	7.9	33.6	65.3	5.4	1.9
6.0	Sunny	Calm	9:10	14.6	7.9	33.6	65.3	5.4	1.9
			9:18	14.6	7.9	33.6	65.2	5.4	1.9
6.5	Sunny	Calm	9:11	14.6	7.9	33.6	65.3	5.4	1.6
			9:19	14.6	7.9	33.6	65.3	5.4	1.6
7.0	Sunny	Calm	9:11	14.6	7.9	33.6	65.3	5.4	1.6
			9:19	14.6	7.9	33.6	65.3	5.4	1.6
7.5	Sunny	Calm	9:11	14.6	7.9	33.6	65.4	5.4	1.7
			9:19	14.6	7.9	33.6	65.3	5.4	1.7
8.0	Sunny	Calm	9:11	14.6	7.8	33.6	65.0	5.4	1.7
			9:19	14.6	7.8	33.6	65.1	5.4	1.7
8.5	Sunny	Calm	9:11	14.6	7.8	33.6	65.1	5.4	1.7
			9:20	14.6	7.8	33.6	65.1	5.4	1.6
9.0	Sunny	Calm	9:12	14.6	7.8	33.6	65.2	5.4	1.6
			9:20	14.6	7.8	33.6	65.1	5.4	1.7
9.5	Sunny	Calm	9:12	14.6	7.8	33.6	65.2	5.4	1.7
			9:20	14.6	7.8	33.6	65.2	5.4	1.7
10.0	Sunny	Calm	9:12	14.6	7.8	33.6	65.5	5.4	1.6
			9:20	14.6	7.8	33.6	65.4	5.4	1.6
10.5	Sunny	Calm	9:13	14.6	7.9	33.6	65.5	5.4	1.9
			9:21	14.6	7.8	33.6	65.4	5.4	1.9

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: **20 February 2014**

Secchi Disc Depth: **3.5m**

11.0	Sunny	Calm	9:13	14.6	7.9	33.6	65.5	5.4	1.7
			9:21	14.6	7.9	33.6	65.4	5.4	1.8
11.5	Sunny	Calm	9:13	14.6	7.9	33.6	65.6	5.4	1.6
			9:21	14.6	7.9	33.6	65.7	5.4	1.7
12.0	Sunny	Calm	9:13	14.6	7.9	33.6	65.7	5.4	1.7
			9:22	14.6	7.9	33.6	65.7	5.4	1.6
12.5	Sunny	Calm	9:14	14.6	7.9	33.6	65.6	5.4	1.8
			9:22	14.6	7.9	33.7	65.9	5.5	1.7
13.0	Sunny	Calm	9:14	14.6	7.9	33.6	65.9	5.5	1.8
			9:22	14.6	7.9	33.6	65.5	5.4	1.6
13.5	Sunny	Calm	9:14	14.6	7.9	33.6	65.8	5.4	1.6
			9:22	14.6	7.9	33.6	65.7	5.4	1.6
14.0	Sunny	Calm	9:14	14.6	7.9	33.7	65.7	5.4	2.1
			9:23	14.6	7.9	33.7	65.7	5.4	1.7
14.5	Sunny	Calm	9:15	14.6	7.9	33.6	65.5	5.4	1.9
			9:23	14.6	7.9	33.6	66.0	5.5	1.8

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)
7.5	Sunny	Calm	9:11	14.6	7.9	33.6	65.4	5.4	1.7
			9:19	14.6	7.9	33.6	65.3	5.4	1.7

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 Quarry Bay - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.5m**

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	Calm	10:02	14.6	7.9	33.9	76.7	6.3	1.8
			10:09	14.6	7.9	33.9	76.9	6.4	1.9
1.0	Sunny	Calm	10:03	14.6	7.9	33.9	76.6	6.3	1.6
			10:09	14.6	7.9	33.9	76.8	6.3	1.6
1.5	Sunny	Calm	10:03	14.6	7.9	33.9	76.6	6.3	1.6
			10:09	14.6	7.9	33.9	76.6	6.3	1.6
2.0	Sunny	Calm	10:03	14.6	7.9	33.9	76.7	6.3	1.6
			10:10	14.6	7.9	33.9	76.6	6.3	1.6
2.5	Sunny	Calm	10:03	14.6	7.9	33.9	76.9	6.4	1.6
			10:10	14.6	7.9	33.9	76.9	6.4	1.7
3.0	Sunny	Calm	10:04	14.6	7.9	33.9	77.0	6.4	1.5
			10:10	14.6	7.9	33.9	77.0	6.4	1.5
3.5	Sunny	Calm	10:04	14.6	7.9	33.9	76.8	6.4	1.7
			10:10	14.6	7.9	33.9	77.2	6.4	1.5
4.0	Sunny	Calm	10:04	14.6	7.9	33.9	77.1	6.4	2.8
			10:11	14.5	7.9	33.9	77.2	6.4	2.4
4.5	Sunny	Calm	10:04	14.6	7.9	33.9	77.1	6.4	1.8
			10:11	14.5	7.9	33.9	77.0	6.4	2.0
5.0	Sunny	Calm	10:05	14.5	7.9	33.9	77.1	6.4	1.6
			10:11	14.5	7.9	33.9	77.1	6.4	1.6
5.5	Sunny	Calm	10:05	14.5	7.9	33.9	77.0	6.4	1.5
			10:11	14.5	7.9	33.9	77.1	6.4	1.6
6.0	Sunny	Calm	10:05	14.5	7.9	33.9	76.9	6.4	1.6
			10:12	14.5	7.9	33.9	77.0	6.4	1.6
6.5	Sunny	Calm	10:05	14.5	7.9	33.9	77.0	6.4	1.5
			10:12	14.5	7.9	33.9	77.1	6.4	1.5
7.0	Sunny	Calm	10:06	14.5	7.9	33.9	77.0	6.4	1.5
			10:12	14.5	7.9	33.9	76.9	6.4	1.5
7.5	Sunny	Calm	10:06	14.5	7.9	33.9	77.0	6.4	1.5
			10:12	14.5	7.9	33.9	76.9	6.4	1.5
8.0	Sunny	Calm	10:06	14.5	7.9	33.9	77.0	6.4	1.5
			10:13	14.5	7.9	33.9	77.0	6.4	1.5
8.5	Sunny	Calm	10:06	14.5	7.9	33.9	77.2	6.4	1.5
			10:13	14.5	7.9	33.9	77.2	6.4	1.5
9.0	Sunny	Calm	10:07	14.5	7.9	33.9	77.1	6.4	3.1
			10:13	14.5	7.9	33.9	77.0	6.4	3.1
9.5	Sunny	Calm	10:07	14.5	7.9	33.9	77.2	6.4	2.1
			10:14	14.5	7.9	33.9	77.0	6.4	2.2
10.0	Sunny	Calm	10:07	14.5	7.9	33.9	76.9	6.4	1.8
			10:14	14.5	7.9	33.9	76.9	6.4	1.9
10.5	Sunny	Calm	10:08	14.5	7.9	33.9	76.9	6.4	1.8
			10:14	14.5	7.9	33.9	76.8	6.4	1.8

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 Quarry Bay - Mid-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.5m

11.0	Sunny	Calm	10:08	14.5	7.9	33.9	76.8	6.4	1.7
			10:14	14.5	7.9	33.9	76.8	6.4	1.9
11.5	Sunny	Calm	10:08	14.5	7.9	33.9	76.9	6.4	1.9
			10:15	14.5	7.9	33.9	76.7	6.4	2.0

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)
6.0	Sunny	Calm	10:05	14.5	7.9	33.9	76.9	6.4	1.6
			10:12	14.5	7.9	33.9	77.0	6.4	1.6

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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 Sai Wan Ho - Mid-Flood Tide

Sampling Date: **20 February 2014**

Secchi Disc Depth: **3.0m**

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	Calm	10:45	14.6	7.9	33.9	78.0	6.5	1.5
			10:53	14.6	7.9	33.9	78.0	6.5	1.5
1.0	Sunny	Calm	10:45	14.6	7.9	33.9	77.9	6.4	1.8
			10:53	14.6	7.9	33.9	77.9	6.4	2.1
1.5	Sunny	Calm	10:46	14.5	7.9	33.9	77.9	6.4	1.9
			10:53	14.5	7.9	33.9	77.8	6.4	1.9
2.0	Sunny	Calm	10:46	14.5	7.9	33.9	77.2	6.4	2.0
			10:53	14.5	7.9	33.9	77.1	6.4	1.9
2.5	Sunny	Calm	10:46	14.6	7.9	33.9	77.3	6.4	1.8
			10:54	14.6	7.9	33.8	77.3	6.4	1.8
3.0	Sunny	Calm	10:46	14.5	7.9	33.8	77.0	6.4	1.9
			10:54	14.5	7.9	33.8	77.0	6.4	1.8
3.5	Sunny	Calm	10:47	14.5	7.9	33.8	76.7	6.4	1.8
			10:54	14.5	7.9	33.8	76.7	6.4	1.7
4.0	Sunny	Calm	10:47	14.5	7.9	33.9	76.6	6.3	2.1
			10:55	14.5	7.9	33.8	76.6	6.3	1.8
4.5	Sunny	Calm	10:47	14.5	7.9	33.8	76.7	6.4	2.0
			10:55	14.5	7.9	33.8	76.7	6.4	1.9
5.0	Sunny	Calm	10:47	14.5	7.9	33.8	77.0	6.4	1.9
			10:55	14.5	7.9	33.8	77.0	6.4	1.9
5.5	Sunny	Calm	10:48	14.5	7.9	33.8	77.1	6.4	1.8
			10:55	14.5	7.9	33.8	76.9	6.4	1.8
6.0	Sunny	Calm	10:48	14.5	7.9	33.9	77.1	6.4	1.7
			10:56	14.5	7.9	33.8	77.2	6.4	1.7
6.5	Sunny	Calm	10:48	14.5	7.9	33.8	77.1	6.4	1.8
			10:56	14.5	7.9	33.8	77.3	6.4	1.8
7.0	Sunny	Calm	10:48	14.5	7.9	33.8	77.3	6.4	2.0
			10:56	14.5	7.9	33.8	77.2	6.4	2.0
7.5	Sunny	Calm	10:49	14.5	7.9	33.8	77.1	6.4	2.0
			10:56	14.5	7.9	33.8	77.3	6.4	1.8
8.0	Sunny	Calm	10:49	14.5	7.9	33.8	77.4	6.4	1.8
			10:57	14.5	7.9	33.8	77.4	6.4	1.9
8.5	Sunny	Calm	10:49	14.5	7.9	33.8	77.3	6.4	1.8
			10:57	14.5	7.9	33.8	77.3	6.4	1.8
9.0	Sunny	Calm	10:49	14.5	7.9	33.8	77.0	6.4	1.7
			10:57	14.5	7.9	33.8	77.1	6.4	1.8
9.5	Sunny	Calm	10:50	14.5	7.9	33.8	77.0	6.4	1.8
			10:57	14.5	7.9	33.8	76.9	6.4	1.8
10.0	Sunny	Calm	10:50	14.5	7.9	33.8	76.6	6.3	1.6
			10:58	14.5	7.9	33.8	76.7	6.4	1.6
10.5	Sunny	Calm	10:50	14.5	7.9	33.8	76.4	6.3	1.5
			10:58	14.5	7.9	33.8	76.6	6.3	1.6

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 Sai Wan Ho - Mid-Flood Tide

Sampling Date: 20 February 2014

Secchi Disc Depth: 3.0m

11.0	Sunny	Calm	10:50	14.5	7.9	33.9	76.2	6.3	1.5
			10:58	14.5	7.9	33.9	76.4	6.3	1.6
11.5	Sunny	Calm	10:51	14.5	7.9	33.8	76.7	6.4	1.5
			10:58	14.5	7.9	33.8	76.7	6.4	1.5
12.0	Sunny	Calm	10:51	14.5	7.9	33.8	76.6	6.3	1.5
			10:59	14.5	7.9	33.8	76.6	6.3	1.5
12.5	Sunny	Calm	10:51	14.5	7.9	33.9	76.5	6.3	1.5
			10:59	14.5	7.9	33.9	76.5	6.3	1.5
13.0	Sunny	Calm	10:51	14.5	7.9	33.9	76.5	6.3	1.5
			10:59	14.5	7.9	33.9	76.3	6.3	1.5
13.5	Sunny	Calm	10:52	14.5	7.9	33.9	76.6	6.3	1.5
			11:00	14.5	7.9	33.9	76.3	6.3	1.5
14.0	Sunny	Calm	10:52	14.5	7.9	33.9	76.2	6.3	3.1
			11:00	14.5	7.9	33.9	76.2	6.3	3.2
14.5	Sunny	Calm	10:52	14.5	7.9	33.8	76.1	6.3	2.2
			11:00	14.5	7.9	33.8	76.1	6.3	2.1

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)
7.5	Sunny	Calm	10:49	14.5	7.9	33.8	77.1	6.4	2.0
			10:56	14.5	7.9	33.8	77.3	6.4	1.8

	Name	Signature	Date
Conducted by:	Law Chun Hong		**20-Feb-14**
Checked by:	W.K. Tang		**20-Feb-14**

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

APPENDIX E2
IN-SITU MEASUREMENT RESULTS FOR ODOUR SAMPLING

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

Odour Monitoring Results on 19 February 2014

Location	Weather Condition	Sea Condition*	Sampling Time	Water Depth (m)	Sampling Depth (m)	Ambient Air Temperature (°C)	Water Temperature (°C)	Redox Potential (mV)	pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average
SA1	Cloudy	Calm	16:59	3.0	2.0	11.5	16.4	-13	7.8	7.8	31.3	31.3	73.0	72.8	5.9	5.9
						11.3	16.4	-12	7.8		31.3		72.5		5.9	
SA2	Cloudy	Calm	16:48	4.0	3.0	11.5	16.6	11	7.8	7.8	31.3	31.3	70.6	70.9	5.7	5.7
						11.4	16.6	17	7.8		31.3		71.2		5.7	
SA3	Cloudy	Calm	16:37	4.3	3.3	12.0	15.7	76	7.9	7.9	31.7	31.6	70.7	80.6	7.4	7.4
						11.9	15.9	54	7.9		31.6		90.4		7.4	
SA4	Cloudy	Calm	16:24	5.0	4.0	11.7	16.2	76	7.9	7.9	31.1	31.1	86.4	85.9	7.0	7.0
						11.8	16.5	75	7.9		31.2		85.3		6.9	
SA5	Cloudy	Calm	16:14	5.1	4.1	11.7	16.1	77	7.9	7.9	31.1	31.1	94.1	93.9	7.7	7.7
						11.6	16.1	78	7.9		31.1		93.6		7.6	
SA6	Cloudy	Calm	16:03	6.8	5.8	11.7	16.0	77	8.0	8.0	31.3	31.3	92.1	92.0	7.5	7.5
						11.9	16.0	77	8.0		31.3		91.8		7.5	
SA7	Cloudy	Calm	15:54	6.6	5.6	12.0	16.0	74	8.0	8.0	31.4	31.4	94.1	93.2	7.7	7.6
						12.0	16.3	76	8.0		31.5		92.3		7.5	
SA8	Cloudy	Calm	15:37	7.0	6.0	12.4	16.2	68	8.0	8.0	31.7	31.7	96.2	96.0	7.8	7.8
						12.4	16.2	70	8.0		31.7		95.7		7.8	
SA9	Cloudy	Calm	15:31	7.2	6.2	12.6	15.9	60	8.0	8.0	31.8	31.7	99.0	97.8	8.1	8.0
						12.6	16.2	62	8.0		31.6		96.5		7.8	
SA10	Cloudy	Calm	15:06	7.5	6.5	12.2	15.8	32	8.0	8.0	31.8	31.8	95.2	94.7	7.8	7.7
						12.4	16.1	31	8.0		31.7		94.1		7.6	
SA11	Cloudy	Calm	14:19	6.2	5.2	11.6	16.1	68	7.9	7.9	32.1	32.1	93.5	93.5	7.6	7.6
						11.6	16.1	63	7.9		32.1		93.5		7.6	
SA12	Cloudy	Calm	14:29	4.8	3.8	12.2	15.8	67	8.0	8.0	31.6	31.7	96.3	95.2	7.9	7.7
						12.3	16.2	67	8.0		31.7		94.0		7.6	
SA13	Cloudy	Calm	14:40	4.5	3.5	12.3	15.7	-40	8.0	8.0	31.9	31.9	97.2	96.4	8.0	7.9
						12.1	16.1	-34	8.0		31.8		95.6		7.8	

	Name	Signature	Date
Conducted by:	Lee Man Hei	hei	19 February 2014
Checked by:	Tang Wing Kwai	Kwai	19 February 2014

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

APPENDIX E3
IN-SITU MEASUREMENT RESULTS FOR SEDIMENT MONITORING

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

Sediment Monitoring Field Record Sheet

Sampling Date: 26 and 27 February 2014

Sampling Location	Weather Condition	Co-ordinate Easting / Northing	Starting Time	Water Depth (m)	Remarks
SA1	Cloudy	838744.13 / 820311.91	03:40	3.0	
SA2	Cloudy	838840.95 / 820030.07	03:10	4.0	
SA3	Cloudy	839163.99 / 819942.90	02:05	4.0	
SA4	Cloudy	839407.66 / 819537.90	11:37	6.0	
SA5	Cloudy	839580.35 / 819512.47	13:00	4.5	
SA6	Cloudy	839647.87 / 819329.45	14:00	6.5	
SA7	Cloudy	840122.60 / 819275.72	15:25	6.5	
SA8	Cloudy	840270.71 / 819015.35	16:35	7.5	
SA9	Cloudy	840479.55 / 818798.14	17:10	8.0	
SA10	Cloudy	838694.90 / 819582.08	18:20	8.0	
SA11	Cloudy	838138.20 / 820038.77	19:00	7.0	
SA12	Cloudy	837892.97 / 819704.84	20:15	6.5	
SA13	Cloudy	837857.15 / 819436.94	21:10	5.2	

	Name	Signature	Date
Conducted by:	Lee Man Hei	Hei	27-Feb-14
Checked by:	Tang Wing Kwai	Kwai	27-Feb-14

APPENDIX E4
ODOUR PATROL RESULT

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: OI-1 / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	06:29	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	0.7	(2)
2	08:47	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	0.8	(2)
3	08:50	~~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)
4	08:52	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	0.5	(2)
5	08:59	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	~~Downwind~~ / Upwind (SW)	1.4	(2)
6	09:01	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / ~~Upwind~~ (NW)	0.7	(2)
7	07:14	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.6	(2)
8	07:30	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	1.1	(2)
9	07:34	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.1	(2)
10	07:37	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (N/A)	0.0	(2)
11	07:39	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	1.3	(2)
12	07:40	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	0.6	(2)
13	08:03	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	0.9	(2)
14	07:59	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage and fishy smell	marine water and exposed shores	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SW)	0.7	(2)
15	07:55	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	1.4	(2)
16	07:53	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	1.0	(2)
17	07:51	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	2.3	(2)
18	07:48	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	1.3	(2)
19	07:46	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	Downwind / ~~Upwind~~ (N)	1.3	(2)
20	06:57	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water and exposed shores	Intermittent / Continuous	~~Downwind~~ / Upwind (NW)	0.9	(4)

#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 conoldered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: OI-1 / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	07:05	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 (1) 2 / 3 / 4	fishy smell	exposed shores	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	0.3	(2)
22	06:54	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SW)	0.7	(2)
23	06:51	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
24	06:49	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	0.2	(2)
25	06:45	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NE)	0.4	(2)
26	06:42	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NW)	1.0	(2)
27	06:48	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NE)	1.1	(4)
28	06:42	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.6	(1) (4)
29	07:06	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.2	(4)
30	07:13	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.4	(4)
31	07:29	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (N)	2.3	(4)
32	07:35	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (N)	2.6	(4)
33	07:41	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.7	(4)
34	05:55	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.8	(4)
35	06:05	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.8	(4)
36	08:00	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.7	(4)
37	05:29	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.1	(2)
38	05:31	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
39	05:37	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
40	05:41	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage and seawater smell	marine water and exposed shores	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.3	(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, 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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: OI-1 / ~~OI-2~~

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	06:32	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	0.4	(4)
42	06:20	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.1	(4)
43	06:50	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	2.5	(3)
44	06:32	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	3.4	(3)
45	05:47	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (N)	2.6	(3)
46	05:38	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.4	(4)
47	05:39	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(4)
48	05:35	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	3.7	(3)
49	05:17	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NW)	1.2	(4)
50	05:20	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	1.3	(4)
51	05:22	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	1.5	(4)
52	05:15	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	1.2	(4)
53	05:37	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	3.6	(3)
54	05:40	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	1.6	(3)
55	05:44	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	0.5	(3)
56	05:50	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	0.9	(3)
57	06:03	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	3.9	(3)
58	06:05	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	1.7	(3)
59	06:21	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.3	(4)
60	06:33	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(4)

#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 12 February 2014 (3) Conducted on 13 February 2014 (4) 15 February 2014

	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: OI-1 / ~~OI-2~~

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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
A1	06:14	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / Upwind (E)	0.6	(2)
A2	06:20	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SW)	1.3	(2)
A3	06:22	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(2)
A4	08:22	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage and pungent smell	sewage treatment plant	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	0.9	(2)
A5	08:18	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (W)	0.6	(4)

#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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

	Name	Signature
Conducted by:	Tang Wing Kwai	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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	06:29	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	0.7	(2)
2	08:47	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	0.8	(2)
3	08:50	~~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)
4	08:52	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	0.5	(2)
5	08:59	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (SW)	1.4	(2)
6	09:01	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	0.7	(2)
7	07:14	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.6	(2)
8	07:30	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	1.1	(2)
9	07:34	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.1	(2)
10	07:37	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
11	07:39	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	1.3	(2)
12	07:40	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	0.6	(2)
13	08:03	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage and fishy smell	marine water	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	0.9	(2)
14	07:59	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage, rubbish and fishy smell	marine water and exposed shores	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SW)	0.7	(2)
15	07:55	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	1.4	(2)
16	07:53	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	1.0	(2)
17	07:51	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (NW)	2.3	(2)
18	07:48	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	1.3	(2)
19	07:46	~~High Tide~~ / Low Tide	Sunny / Fine / (Cloudy) / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	1.3	(2)
20	06:57	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water and exposed shores	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	0.9	(4)

#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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	07:05	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 (1) / 2 / 3 / 4	fishy smell	exposed shores	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	0.3	(2)
22	06:54	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SW)	0.7	(2)
23	06:51	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
24	06:49	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	0.2	(2)
25	06:45	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NE)	0.4	(2)
26	06:42	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NW)	1.0	(2)
27	06:48	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NE)	1.1	(4)
28	06:42	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.6	(4)
29	07:06	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.2	(4)
30	07:13	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.4	(4)
31	07:29	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / Upwind (N)	2.3	(4)
32	07:35	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / Upwind (N)	2.6	(4)
33	07:41	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.7	(4)
34	05:55	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.8	(4)
35	06:05	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.8	(4)
36	08:00	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.7	(4)
37	05:29	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.1	(2)
38	05:31	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
39	05:37	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 (1) / 2 / 3 / 4	sewage	marine water	Intermittent / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
40	05:41	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 (1) / 2 / 3 / 4	sewage and seawater smell	marine water and exposed shores	Intermittent / Continuous	Downwind / ~~Upwind~~ (E)	0.3	(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, 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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	06:32	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	0.4	(4)
42	06:20	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.1	(4)
43	06:50	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	2.5	(3)
44	06:32	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	3.4	(3)
45	05:47	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (N)	2.6	(3)
46	05:38	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.4	(4)
47	05:39	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(4)
48	05:35	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / ~~Upwind~~ (N)	3.7	(3)
49	05:17	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NW)	1.2	(4)
50	05:20	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	1.3	(4)
51	05:22	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	1.5	(4)
52	05:15	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	1.2	(4)
53	05:37	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	3.6	(3)
54	05:40	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	1.6	(3)
55	05:44	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	0.5	(3)
56	05:50	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	0.9	(3)
57	06:03	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	3.9	(3)
58	06:05	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	1.7	(3)
59	06:21	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.3	(4)
60	06:33	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(4)

#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 12 February 2014 (3) Conducted on 13 February 2014 (4) 15 February 2014

	Name	Signature
Conducted by:	Lee Man Hei	Hei
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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
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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
A1	06:14	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	0.6	(2)
A2	06:20	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SW)	1.3	(2)
A3	06:22	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
A4	08:22	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	pungent smell	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NW)	0.9	(2)
A5	08:18	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	0.6	(4)

#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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

	Name	Signature
Conducted by:	Lee Man Hei	
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: OI-1 / ~~OI-2~~

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	18:46	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (S)	2.1	(2)
2	17:45	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (W)	0.9	(2)
3	17:48	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind / Upwind~~ (N/A)	0.0	(2)
4	17:50	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (W)	1.8	(2)
5	18:00	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SE)	1.4	(2)
6	18:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (S)	1.2	(2)
7	19:25	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SW)	1.4	(2)
8	18:59	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (W)	1.5	(2)
9	19:02	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SW)	1.6	(2)
10	19:04	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (W)	1.8	(2)
11	19:06	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SW)	1.4	(2)
12	19:08	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	1.3	(2)
13	17:21	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (N)	1.5	(2)
14	17:17	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (NW)	1.8	(2)
15	17:13	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (N)	0.7	(2)
16	17:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	1.5	(2)
17	17:07	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	2.0	(2)
18	17:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (N)	2.8	(2)
19	16:58	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (N)	2.2	(2)
20	17:20	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (N)	3.9	(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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: OI-1 / ~~OI-2~~

General Information

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Date: 12, 13 and 15 February 2014
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Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	19:58	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.2	(2)
22	19:48	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.4	(2)
23	19:46	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.6	(2)
24	19:42	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NE)	0.4	(2)
25	19:39	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NE)	0.4	(2)
26	19:36	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (S)	0.8	(2)
27	18:28	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	1.9	(3)
28	18:39	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (N)	1.9	(1) (3)
29	18:53	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (W)	0.9	(3)
30	19:01	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	0.5	(3)
31	17:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (N)	3.3	(3)
32	17:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	3.1	(3)
33	17:18	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(3)
34	17:05	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (N)	0.3	(4)
35	17:15	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (N)	0.6	(4)
36	17:35	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.5	(3)
37	20:22	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	0.9	(2)
38	20:25	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	0.8	(2)
39	20:38	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(2)
40	20:41	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	0.4	(2)

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

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***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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: OI-1 / ~~OI-2~~

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	17:58	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / Upwind (S)	0.4	(4)
42	17:38	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.4	(4)
43	20:30	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	0.6	(3)
44	20:28	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	2.1	(3)
45	19:58	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(3)
46	20:10	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	0.7	(3)
47	19:52	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NE)	1.3	(3)
48	19:47	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	1.9	(3)
49	20:48	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (N)	1.5	(3)
50	20:53	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	2.5	(3)
51	20:54	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	2.6	(3)
52	20:50	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(3)
53	19:49	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (NW)	1.3	(3)
54	20:09	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(3)
55	19:56	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (N)	1.4	(3)
56	20:14	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	2.6	(3)
57	20:19	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (W)	1.8	(3)
58	20:21	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / Upwind (N)	5.0	(3)
59	17:39	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / Continuous	Downwind / ~~Upwind~~ (SE)	0.6	(4)
60	18:00	High Tide / ~~Low Tide~~	Sunny / Fine / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind~~ (N/A)	0.0	(4)

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****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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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

Contract No. KL/2010/02
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Odour Intensity Detected by Panel Members: OI-1 / ~~OI-2~~

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A1	18:25	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.1	(2)
A2	18:36	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)
A3	18:39	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)
A4	18:14	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	pungent smell	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	0.6	(2)
A5	17:59	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(3)

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Checked by:	Henry Leung	

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1	18:46	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	2.1	(2)
2	17:45	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	0.9	(2)
3	17:48	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(2)
4	17:50	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	1.8	(2)
5	18:00	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.4	(2)
6	18:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.2	(2)
7	19:25	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.4	(2)
8	18:59	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	1.5	(2)
9	19:02	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.6	(2)
10	19:04	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	1.8	(2)
11	19:06	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.4	(2)
12	19:08	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.3	(2)
13	17:21	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (N)	1.5	(2)
14	17:17	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	1.8	(2)
15	17:13	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	0.7	(2)
16	17:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	1.5	(2)
17	17:07	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	2.0	(2)
18	17:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	2.8	(2)
19	16:58	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	2.2	(2)
20	17:20	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (N)	3.9	(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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	19:58	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (E)	0.2	(2)
22	19:48	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (E)	0.4	(2)
23	19:46	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (E)	0.6	(2)
24	19:42	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (NE)	0.4	(2)
25	19:39	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (NE)	0.4	(2)
26	19:36	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (S)	0.8	(2)
27	18:28	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (N)	1.9	(3)
28	18:39	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (N)	1.9	(1) (3)
29	18:53	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (W)	0.9	(1) (3)
30	19:01	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SW)	0.5	(3)
31	17:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (N)	3.3	(3)
32	17:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (NW)	3.1	(3)
33	17:18	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind / Upwind~~ (N/A)	0.0	(3)
34	17:05	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (N)	0.3	(4)
35	17:15	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	~~Downwind~~ / Upwind (N)	0.6	(4)
36	17:35	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (E)	0.5	(3)
37	20:22	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SE)	0.9	(2)
38	20:25	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (SE)	0.8	(2)
39	20:38	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(2)
40	20:41	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	~~Intermittent /~~ Continuous	Downwind / ~~Upwind~~ (S)	0.4	(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, 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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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	17:58	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (S)	0.4	(4)
42	17:38	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.4	(4)
43	20:30	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	0.6	(3)
44	20:28	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	2.1	(3)
45	19:58	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(3)
46	20:10	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	0.7	(3)
47	19:52	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / Upwind (NE)	1.3	(3)
48	19:47	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	1.9	(3)
49	20:48	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (N)	1.5	(3)
50	20:53	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NW)	2.5	(3)
51	20:54	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NW)	2.6	(3)
52	20:50	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(3)
53	19:49	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (NW)	1.3	(3)
54	20:09	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(3)
55	19:56	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (N)	1.4	(3)
56	20:14	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NW)	2.6	(3)
57	20:19	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (W)	1.8	(3)
58	20:21	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (N)	5.0	(3)
59	17:39	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.6	(4)
60	18:00	High Tide / ~~Low Tide~~	Sunny / ~~Fine~~ / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / ~~Upwind~~ (N/A)	0.0	(4)

#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 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

	Name	Signature
Conducted by:	Lee Man Hei	
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: ~~OI-1~~ / OI-2

General Information

Patrol Locations: Within Kai Tak Development and Ma Tau Kok Waterfront
Date: 12, 13 and 15 February 2014
Temperature: 6.4 - 10.1°C (12 February 2014), 8.0 - 9.8°C (13 February 2014) and 8.9 - 13.3°C (15 February 2014) (King's Park)
Humidity: 75 - 96% (12 February 2014), 74 - 99% (13 February 2014) and 73 - 8% (15 February 2014) (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
A1	18:25	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.1	(2)
A2	18:36	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)
A3	18:39	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)
A4	18:14	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	pungent smell	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	0.6	(2)
A5	17:59	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~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;
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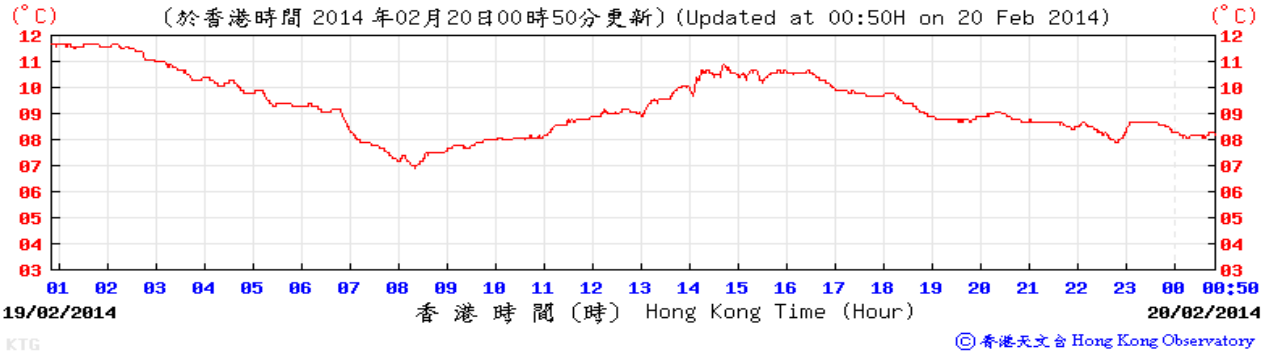
***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, ammonical, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc
****Potential Odour Source:** Exposed sediment, water or sewage; floating debris or material etc
Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 12 February 2014 (3) Conducted on 13 February 2014 (4) Conducted on 15 February 2014

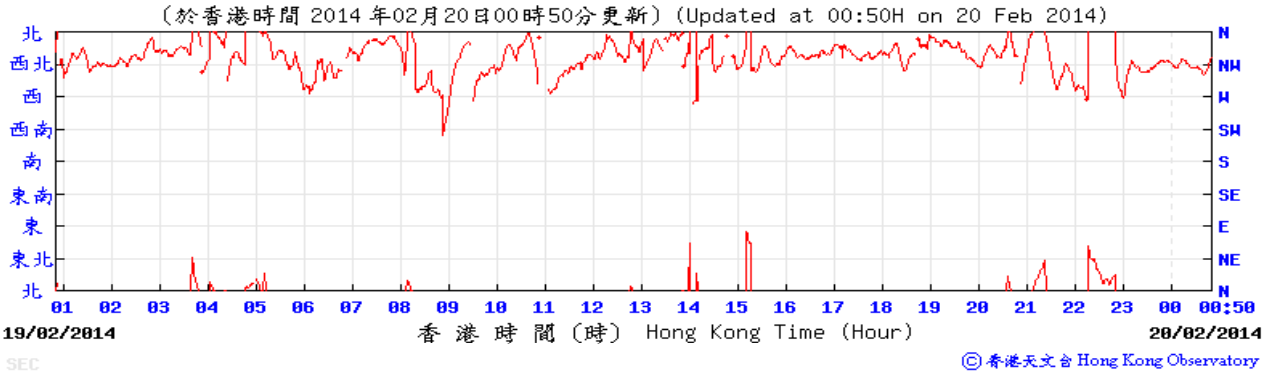
	Name	Signature
Conducted by:	Lee Man Hei	
Checked by:	Henry Leung	

APPENDIX F
METEOROLOGICAL DATA FROM HONG KONG OBSERVATORY STATION DURING ODOUR SAMPLING AND ODOUR PATROL

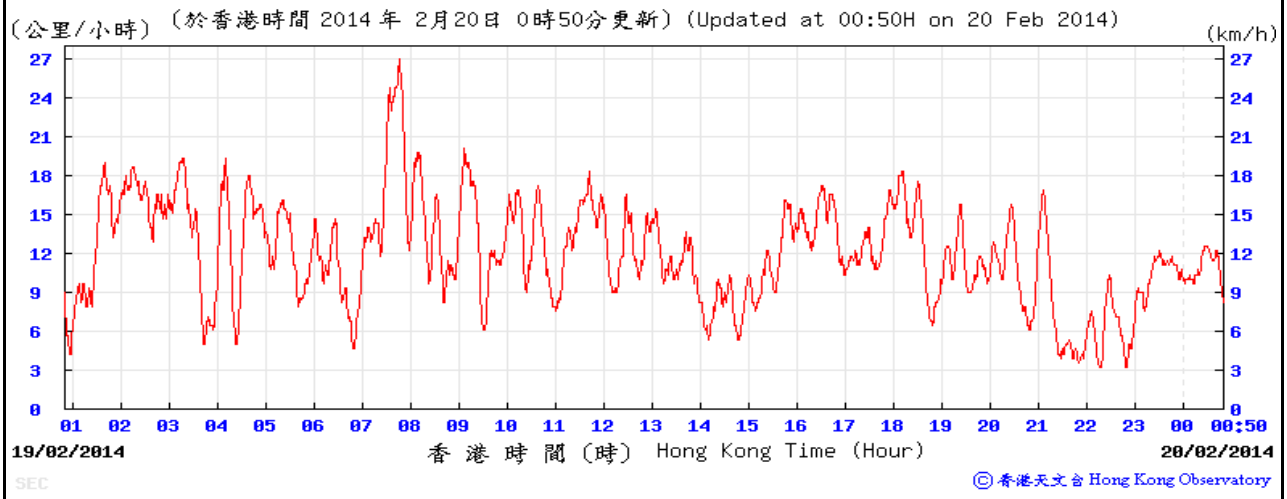
Temperature from Kwun Tong



Wind Speed from Kai Tak



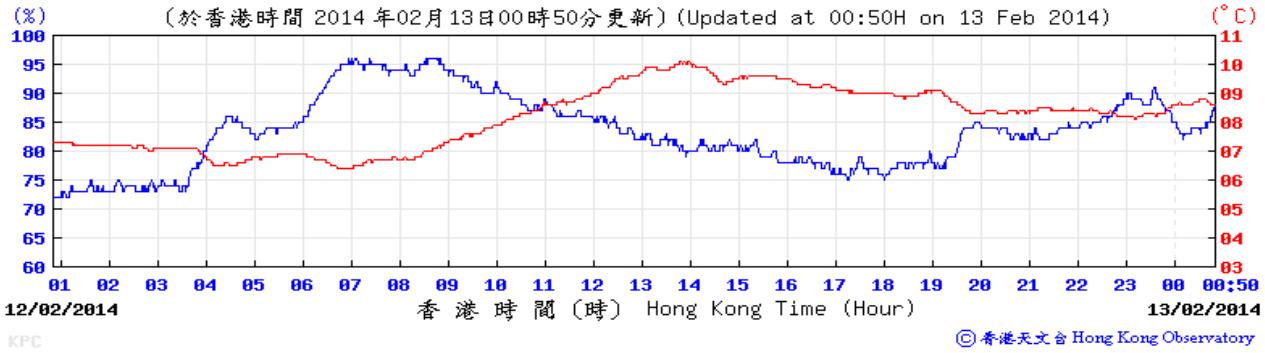
Wind Direction from Kai Tak



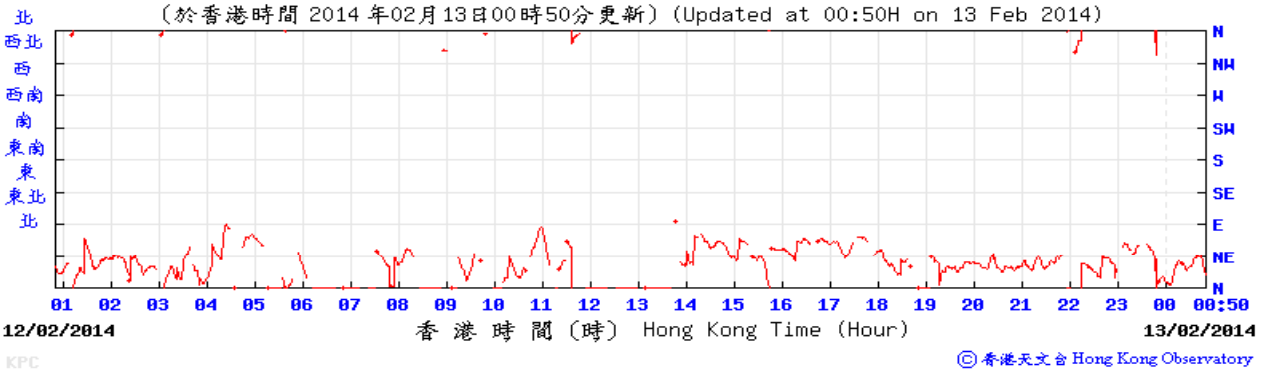
Title: Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Meteorological data from Hong Kong Observatory Station during Odour Sampling	Scale: N.T.S	Project No.: MA11017	CINOTECH
	Date: Feb 14	Appendix: F	

Meteorological Conditions (King's Park)

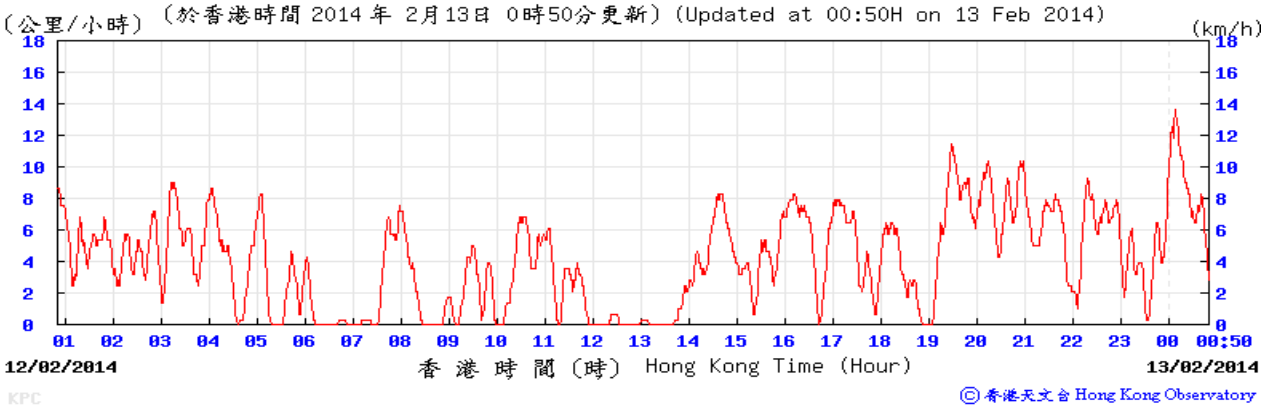
Temperature & Humidity



Wind Direction



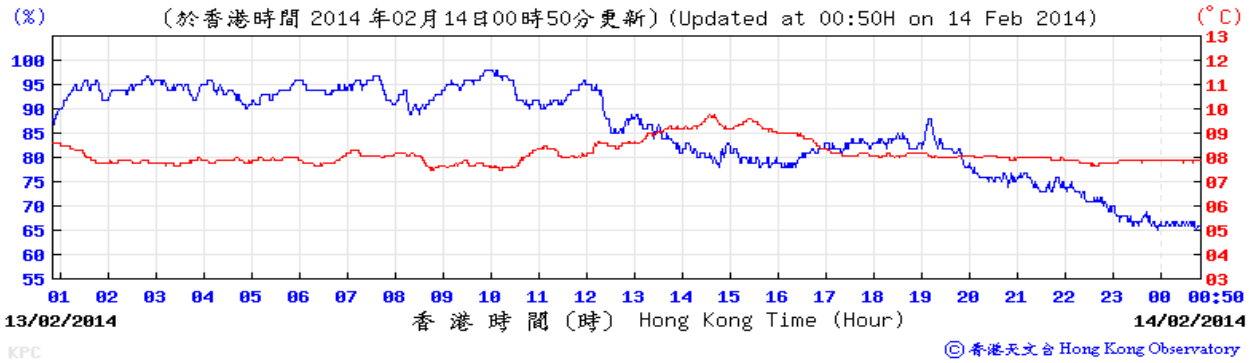
Wind Speed



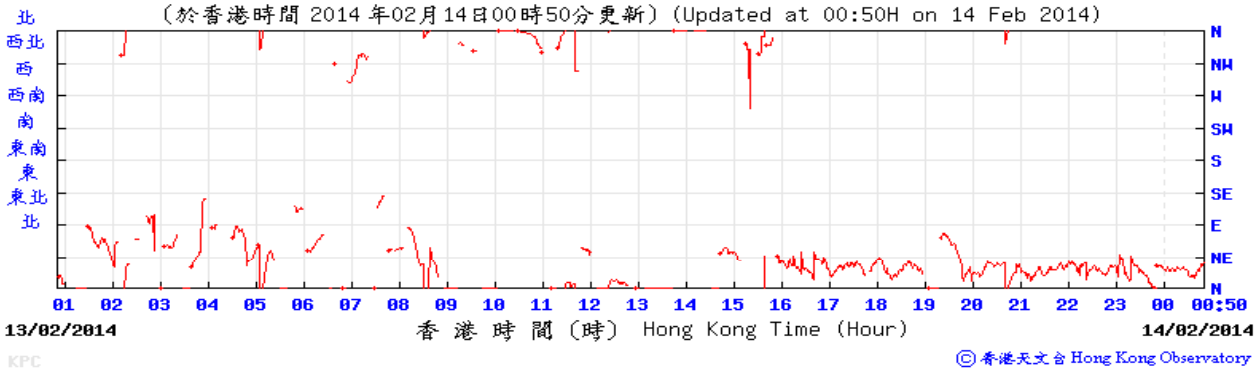
Title: Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station during Odour Patrol	Scale: N.T.S	Project No.: MA11017	CINOTECH
	Date: Feb 14	Appendix: F	

Meteorological Conditions (King's Park)

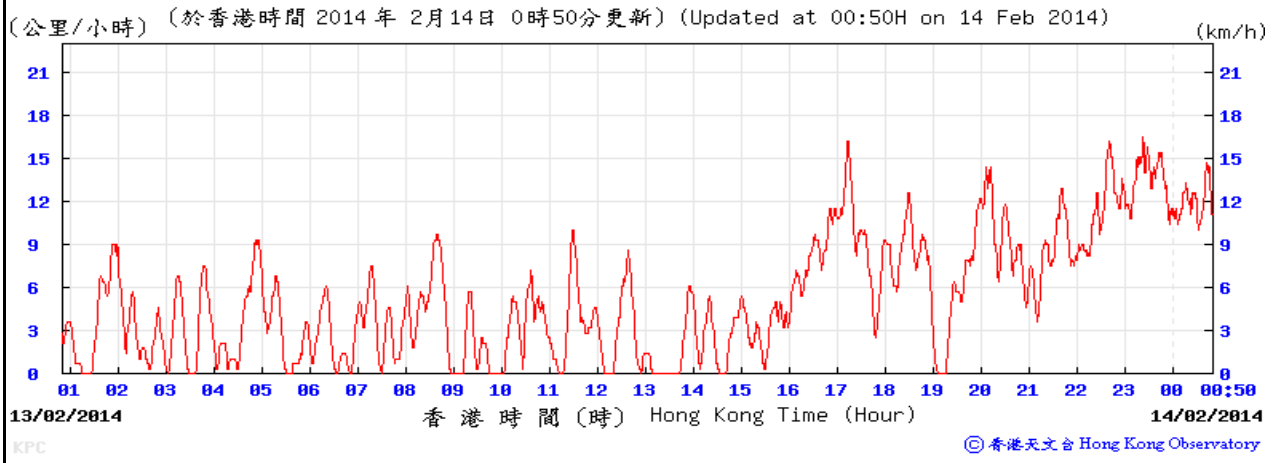
Temperature & Humidity



Wind Direction



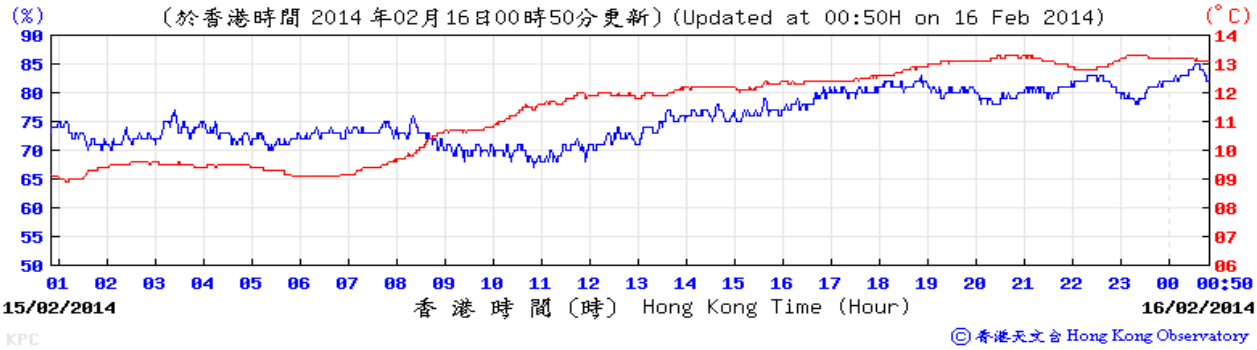
Wind Speed



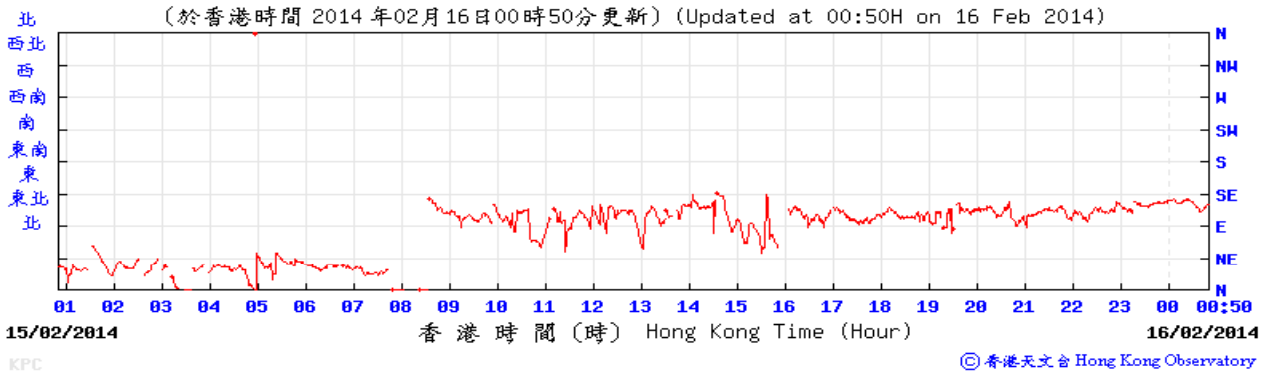
Title: Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station during Odour Patrol	Scale: N.T.S	Project No.: MA11017	CINOTECH
	Date: Feb 14	Appendix: F	

Meteorological Conditions (King's Park)

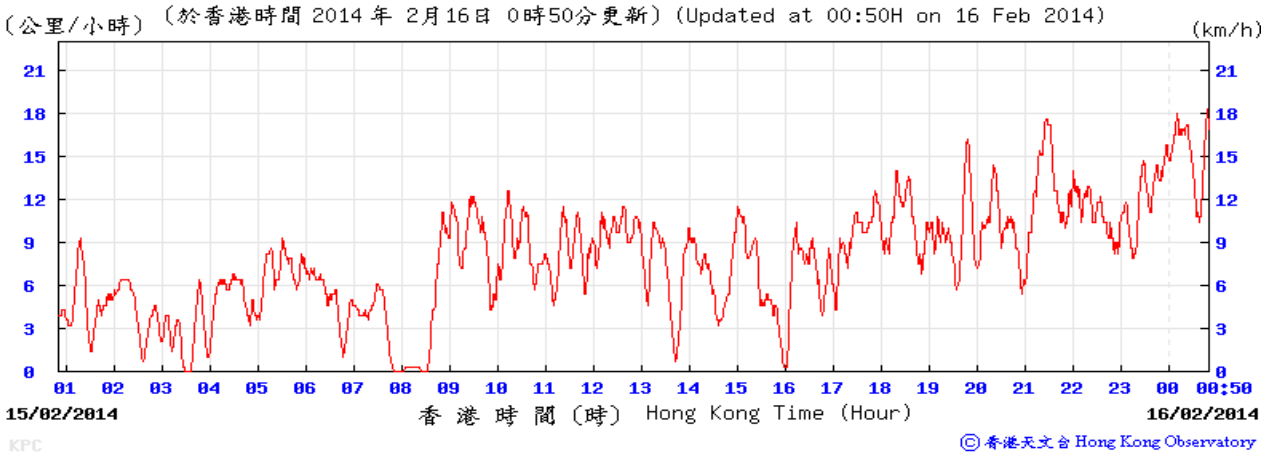
Temperature & Humidity



Wind Direction



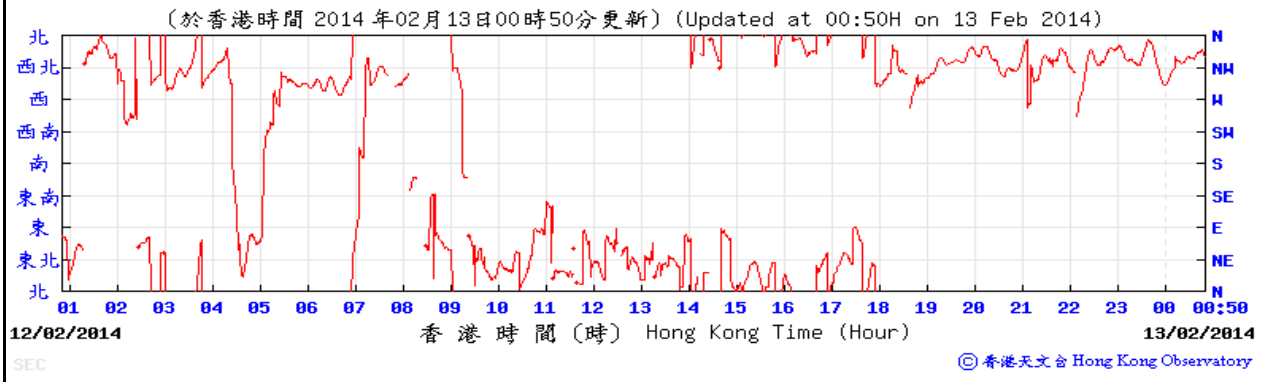
Wind Speed



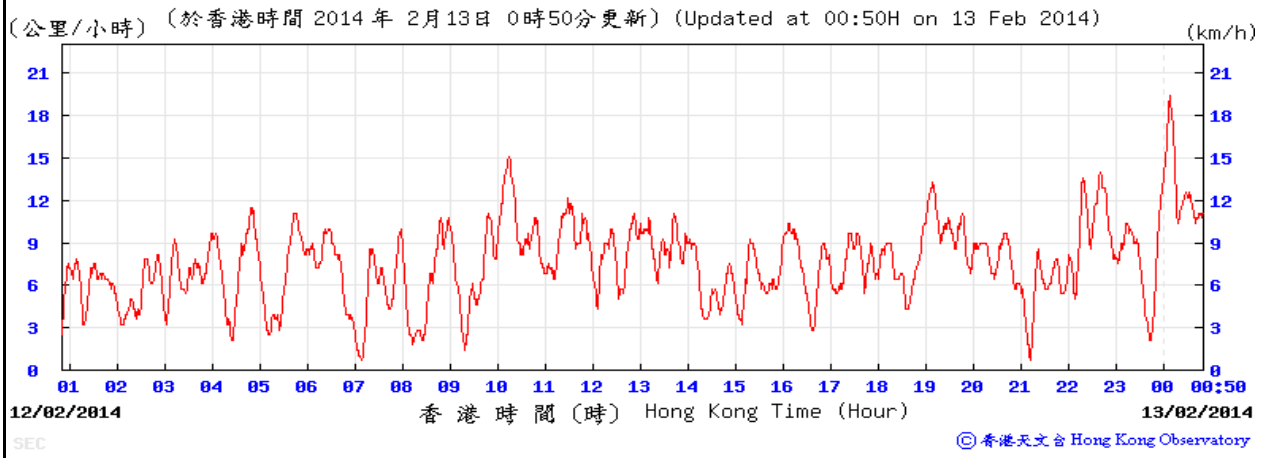
Title: Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station during Odour Patrol	Scale: N.T.S	Project No.: MA11017	CINOTECH
	Date: Feb 14	Appendix: F	

Meteorological Conditions (Kai Tak)

Wind Direction



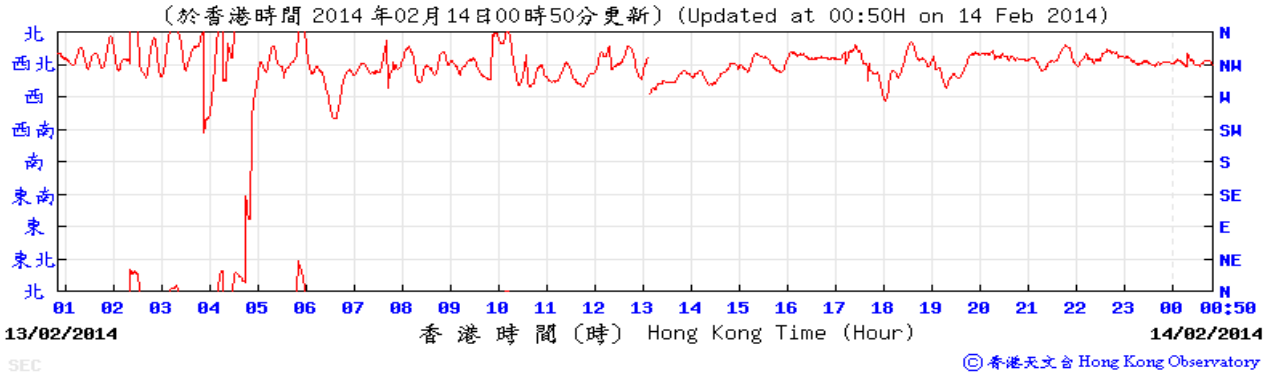
Wind Speed



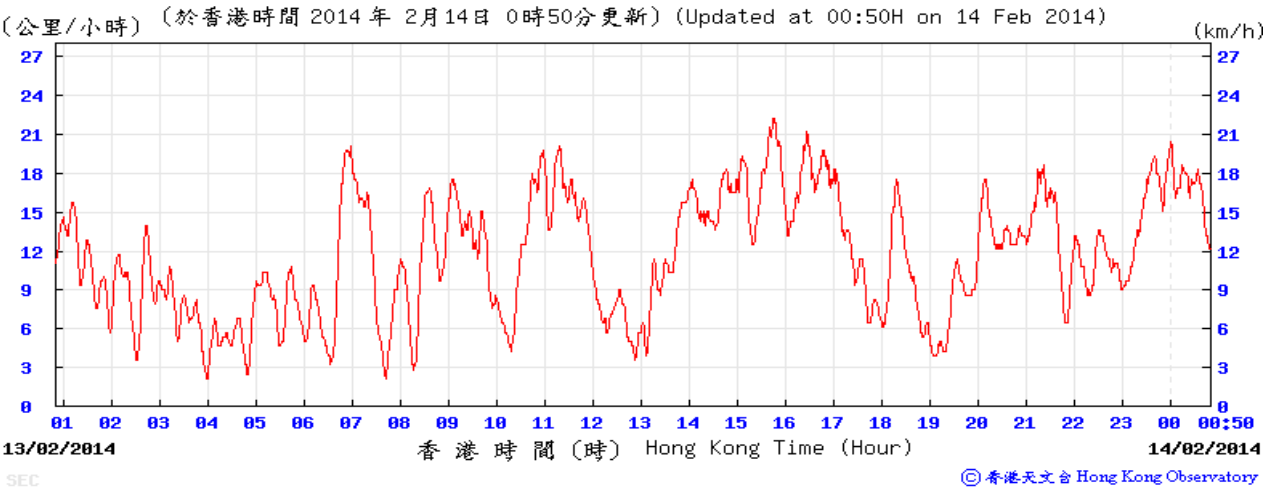
Title	Scale	Project No.	
Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station during Odour Patrol	N.T.S	MA11017	CINOTECH
	Date Feb 14	Appendix F	

Meteorological Conditions (Kai Tak)

Wind Direction



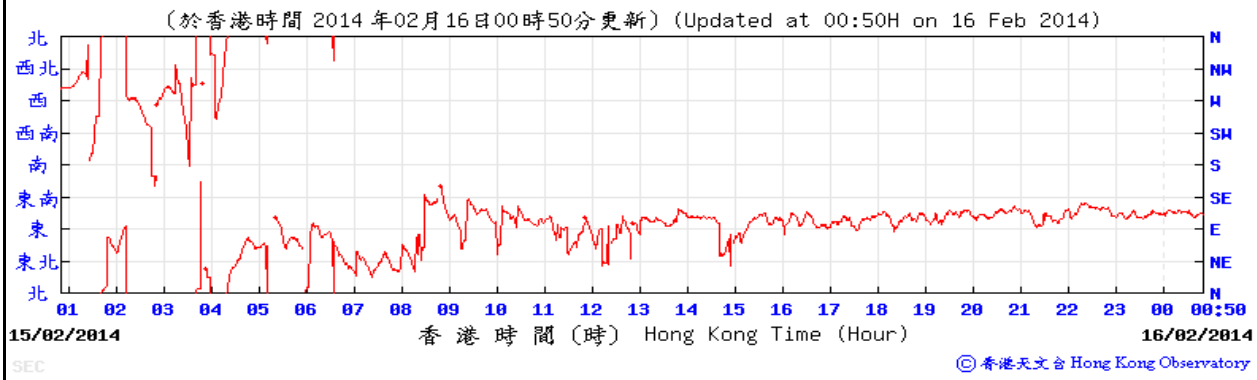
Wind Speed



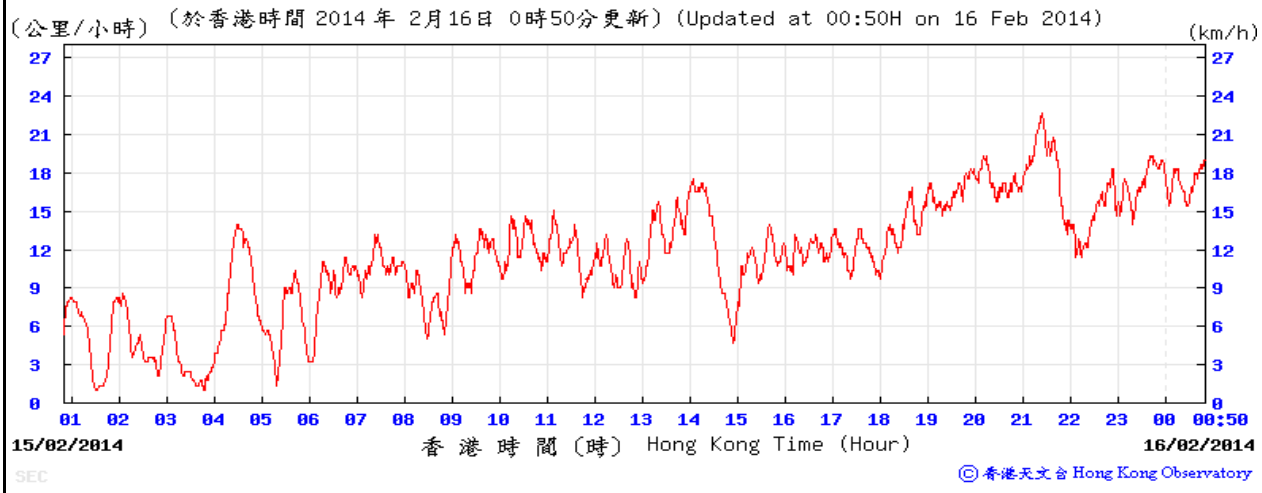
Title: Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station during Odour Patrol	Scale: N.T.S Date: Feb 14	Project No.: MA11017 Appendix: F	CINOTECH

Meteorological Conditions (Kai Tak)

Wind Direction

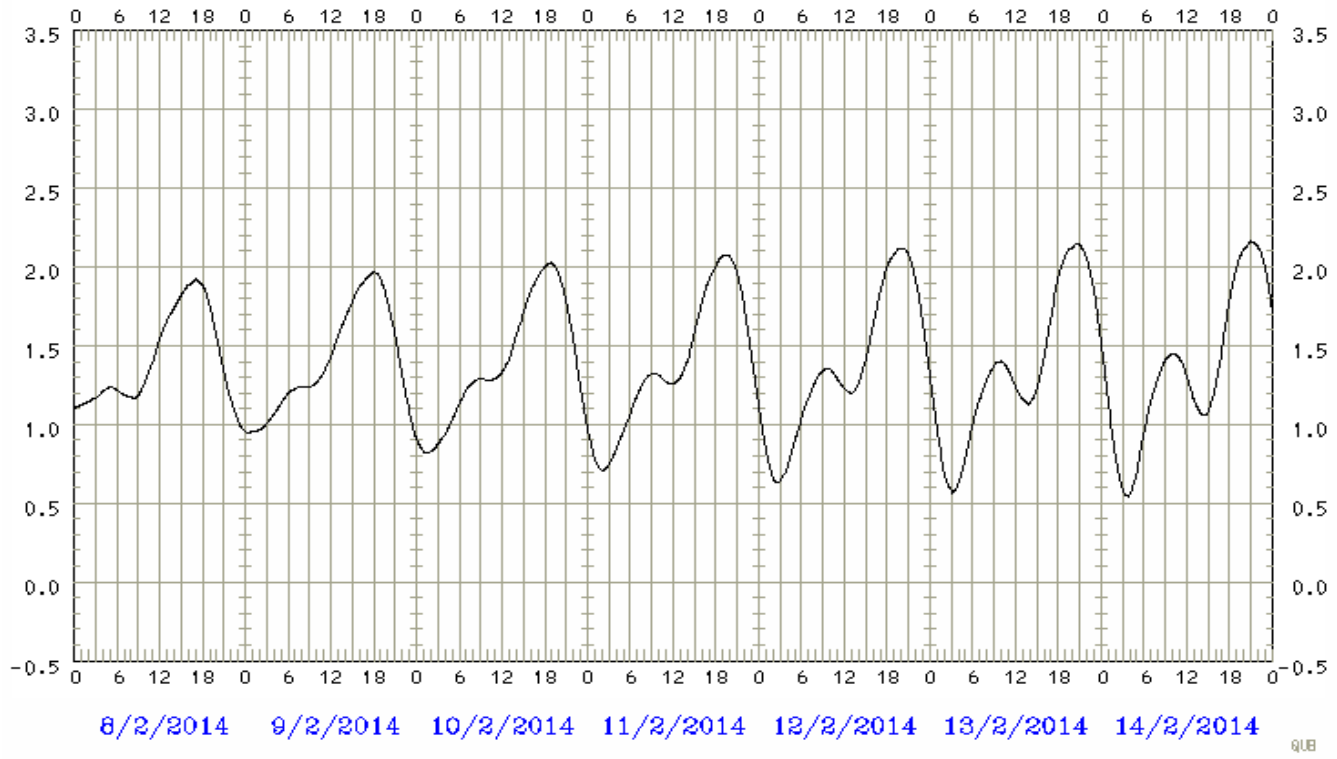


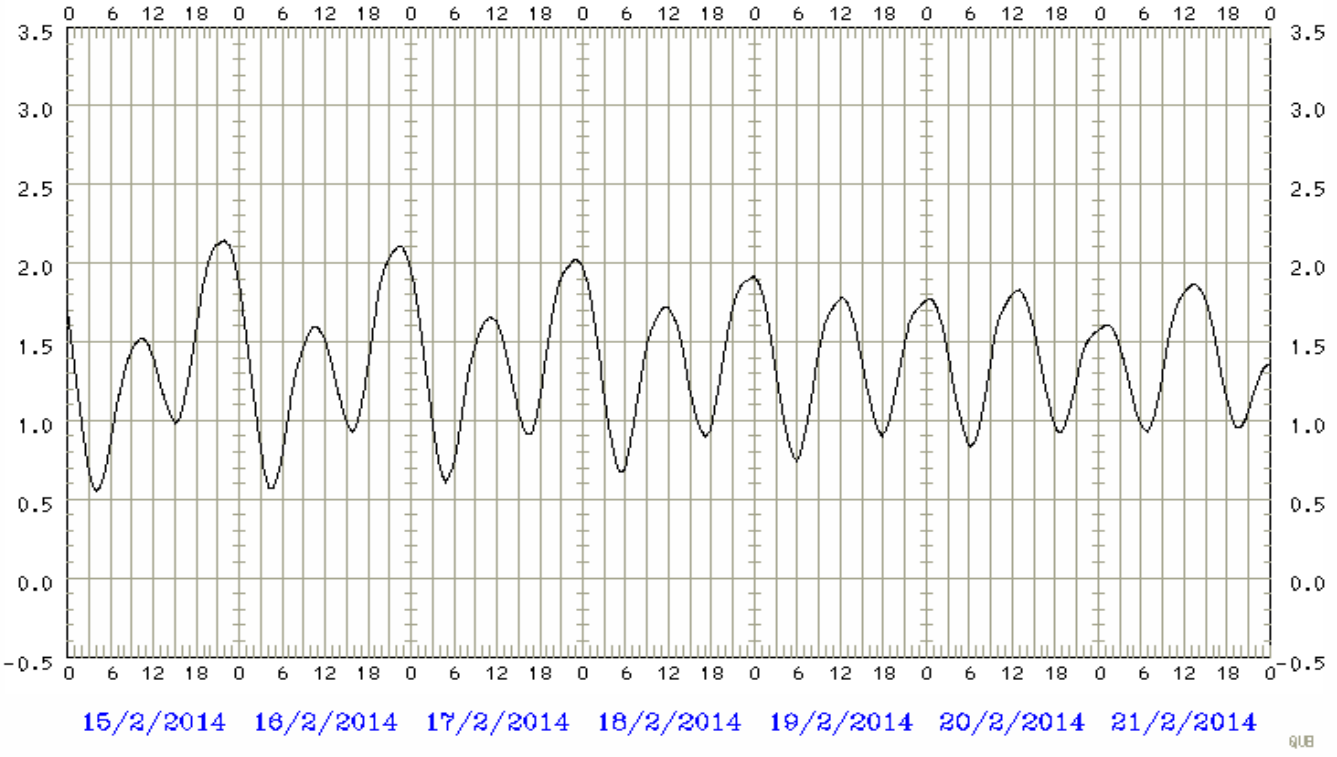
Wind Speed



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 during Odour Patrol	Scale: N.T.S Date: Feb 14	Project No.: MA11017 Appendix: F	CINOTECH

Predicted Tides at Quarry Bay in February 2014





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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 during Odour Patrol	N.T.S	MA11017	CINOTECH
	Date Feb 14	Appendix F	