Civil Engineering and Development Department

Environmental Monitoring Works at Kai Tak Development

Water, Sediment & Odour Quality Report

May and June 2014

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EXECUTIVE SUMMARY

Introduction

1. This is the 18th Water, Sediment & Odour Report for Environmental Monitoring Works for Kai Tak Development during construction phase (the Project). This report documents the results and findings of the 12th general water quality monitoring works and 15th odour patrol works conducted for the Project in May and June 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 12th General Water Quality Monitoring for the Project was performed on 13th May 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 Kowloon Tong Typhoon Shelter (KTTS) as well as along To Kwa Wan (TKW) and Ma Tau Kok (MTK) waterfront half-yearly interval to determine the odour emissions from water surface throughout the Contract and Maintenance Period. The first odour sampling shall be carried within the August of 2011 or as agreed with the Engineer. One of the sampling events within each calendar year shall be undertaken during summer season (i.e. July or August). No Odour Sampling for the Project was performed in the reporting period.

Odour Patrol Works

4. Odour patrol shall be carried out in the month of February, May, July, August, September and November along the same odour route and at the same sniffing locations. The first odour patrol shall be carried out within November 2011. The 15th odour patrol for the Project was performed on 14th, 15th and 17th May 2014 and the monitoring results were checked and reviewed.

Sediment Monitoring Works

5. Sediment monitoring shall be carried out at the same locations of the odour sampling stations half-yearly interval throughout the Contract Period and Maintenance Period. The first sediment sampling shall be carried out within the August of 2011 or as agreed with the Engineer. No Sediment Monitoring for the Project was performed in the reporting period.

6. In addition, no environmental monitoring works were conducted in June 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 18th Water, Sediment & Odour Quality Monitoring Reports summarizing the general water quality monitoring works and odour patrol works for the Project in May and June 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	1
	YSI 6920-M	1
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 sampling was undertaken within a 3 hour window of 1.5

hours before and 1.5 hours after mid-flood and mid-ebb tides. The monitoring period had covered the mid-flood tide and/or mid-ebb tide.

2.28 The monitoring will be ceased in the events of any emergency sewage discharges from the preliminary treatment works (PTWs) on both sides of the Victoria Harbour. Monitoring will be avoided during and after any storm events where sewage overflow may be anticipated from the PTWs. There will not be any marine construction activities in the vicinity of the stations during the monitoring.

2.29 The water quality monitoring schedule in the reporting period is provided in **Appendix C.**

Monitoring Methodology

2.30 The monitoring stations were accessed using survey boat to within 3 m by the guide of a hand-held Global Positioning System (GPS). The depth of the monitoring location was measured using depth meter in order to determine the sampling depths. Afterwards, the probes of the in-situ measurement equipment were lowered to the predetermined depths (1 m below water surface, mid-depth and 1 m above seabed) and the measurements were carried out accordingly. The in-situ measurements at predetermined depths were carried out in duplicate. In case the difference in the duplicate in-situ measurement results was larger than 25%, the third set of in-situ measurement would be carried out for result confirmation purpose.

2.31 Water sampler was lowered into the water to the required depths of sampling. Upon reaching the pre-determined depth, a messenger to activate the sampler was then released to travel down the wire. The water sample was sealed within the sampler before retrieving. At each station, water samples at three depths (1 m below water surface, mid-depth and 1 m above seabed) were collected accordingly. Water samples were stored in a cool box and kept at less than 4°C but without frozen and sent to the laboratory as soon as possible. In addition, field information as described in Section 2.25 was also recorded.

Laboratory Analytical Methods

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

Table 2.4 Methods for Laboratory Analysis for Water Samples

Determinant	Proposed Method	Limit of Reporting	Lowest Detection Limit
Cadmium (Cd)	In-house Method SOP 053 (ICP-ES) and SOP 076 (ICP-MS) [Ref. Method: APHA 19e 3030F 3b and 3120B, USEPA 3005A & 6020A]	0.1 μg/L	0.1 μg/L
Chromium (Cr)		0.2 μg/L	0.2 μg/L
Copper (Cu)		0.2 μg/L	0.2 μg/L
Silver (Ag)		0.2 μg/L	0.2 μg/L
Nickel (Ni)		0.2 μg/L	0.2 μg/L
Zinc (Zn)		0.4 μg/L	0.4 μg/L
Lead (Pb)		0.2 μg/L	0.2 μg/L
Mercury (Hg)		0.2 μg/L	0.2 μg/L
Suspended Solids (SS)	APHA 17ed 2540 D	0.5 mg/L	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 12th general water quality monitoring was conducted on 13th May 2014 and the next monitoring will be carried out in August 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 cloudy.

2.40 No special phenomena near the monitoring stations were observed during the monitoring works.

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

2.42 The laboratory testing report and QC report are provided in **Appendix D1 and Appendix E respectively**.

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

Table 2.5 Water Depth of Water Quality Monitoring Stations

Water Quality Monitoring Stations	Water Depth (m)	
	Mid-Ebb	Mid-Flood
AC1	4.5	4.0
AC2	4.5	4.5
AC3	5.0	5.0
AC4	5.0	4.5
AC5	5.0	5.0
AC6	6.0	5.5
AC7	7.0	7.0
KT1	8.0	8.0
IB1	6.0	7.0
IB2	7.0	8.0
IB3	9.0	9.0
OB1	8.0	9.0
VH1	23.0	23.0
VH2	17.0	17.0
KTN	1.0	1.5
JVC	4.5	4.5
WSD Intake at Tai Wan	13.0	13.0
WSD Intake at Cha Kwo Ling	10.0	8.0
WSD Intake at Quarry Bay	13.0	12.0
WSD Intake at Sai Wan Ho	13.0	13.0

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 and Maintenance 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 shall not contaminated, lost, or altered during storage. In this regard, the odour sampling bag shall:

- 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 shall be avoided to minimize photochemical reactions.

Monitoring Requirements

3.7 The following parameters shall also be 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 shall be 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 shall be 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 shall be used for the determination of water depth at each designated monitoring station.

pH

3.14 The instrument shall be consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It shall be readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 shall be 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 shall be 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 shall be used for salinity measurements.

Position System

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

Calibration of *In Situ* Instruments

3.19 All *in situ* monitoring instruments shall be 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 shall be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring event.

3.20 The thermo-anemometer shall be checked and calibrated at yearly intervals.

3.21 The BS 1427:2009, "Guide to on-site test methods for the analysis of waters" shall be observed for the on site calibration of field equipment (Multi-parameter Water Quality System).

3.22 Sufficient stocks of spare parts shall be maintained for replacements when necessary. Backup monitoring equipment shall be available so that monitoring can proceed uninterrupted even when some equipment was under maintenance, calibration, etc.

Monitoring Parameters and Frequency

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

Table 3.2 Odour Sampling Parameters and Frequency

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

3.24 The odour samples shall be 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 shall be 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 shall be collected at the selected sampling location.

3.25 The collected odour samples will be delivered to the laboratory (PolyU) within 24 hours after collection.

3.26 The odour laboratory shall be 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 shall be screened beforehand by using 48ppm solution/mixture of certified n-butanol standard gas.

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

QA/QC Requirements

3.28 During each odour sampling day, one blank sample shall be collected for quality control. The sample shall be taken by purging pure nitrogen gas into odour sampling bag directly on site as a blank sample.

3.29 The olfactometry analysis will be conducted by laboratory (PolyU) complying with the European Standard EN13725:2003.

Results and Observation

3.30 No odour sampling was conducted in the reporting period. The last odour sampling was conducted in February 2014 and the next monitoring will be carried out in August 2014.

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 B**.

4.4 The odour patrol along with the odour route with 65 sniffing locations was conducted by the 2 qualified odour patrol members in May 2014 during daytime (high tide condition) and evening/night time (low 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 baseline patrol route 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)
14 May 2014	08:40 – 10:04	High Tide	Within Kai Tak Development and Ma Tau Kok Waterfront	2.1 – 2.2
14 May 2014	16:00 – 17:50	Low Tide		0.6 – 0.9
15 May 2014	08:43 – 09:47	High Tide		2.2 – 2.3
17 May 2014	09:06 – 13:50	High Tide		1.5 – 2.3
17 May 2014	16:00 – 22:25	Low Tide		0.3 – 1.1

***** 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 were recorded:

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

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

Monitoring Equipment

Thermo-Anemometer

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

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

Table 4.1 Equipment for Odour Monitoring Program

Equipment	Model and Make	Qty.
Thermo-Anemometer	Prova Instruments Inc. (Model No. AVM-01)	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 May 2014 are summarized in Table 4.2 for different routes within Kai Tak Development and Ma Tau Kok Waterfront and the field record sheets are attached in **Appendix D2**.

4.16 In addition, meteorological conditions (including temperature, wind speed, wind direction, relative humidity) from the nearest Hong Kong Observatory's Weather Station including King's Park and Kai Tak meteorological stations during the monitoring are provided in **Appendix G**.

4.17 During the odour patrol investigation, our patrol members identified different types of flavours including seawater smell, sewage and fishy smell. It is identified by the odour patrol members that these types of flavours mainly result from marine water, water at Kai Tak Nullah and exposed shores 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 May 2014

Sniffing Location	Area	Odour Intensity				General On-site Observation	
		High Tide (Day Time)		Low 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		0	0	0	0	N/A	N/A
6	Southern Kai Tak Approach Channel	0	0	0	1	fishy smell	exposed shores
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	marine water
14		0	0	1	1	sewage	exposed shores and marine water
15		0	0	0	0	N/A	N/A
16		0	0	0	0	N/A	N/A
17		0	0	0	0	N/A	N/A
18		0	0	0	0	N/A	N/A
19		0	0	0	0	N/A	N/A
20		0	0	0	0	N/A	N/A

21	Southern Kai Tak Approach Channel	0	0	0	0	N/A	N/A
22		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	N/A	N/A
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	0	1	1	sewage and seawater smell	exposed shores and marine water
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	0	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	0	0	N/A	N/A
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) shall be 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), shall be measured.

5.4 At each designated monitoring station, the undisturbed surface sediment core samples shall be collected by manual or gravity pushing the corer into the sediment. Care shall be taken in collecting the core to prevent contact with air or excessive mixing of the sample. The core shall be at least 0.8m in length. Core recovery shall be at least 60% and the core shall be immediately sealed after collection to prevent leakage of odour and liquids. Care shall be 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 shall be 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 shall be 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 shall be immediately stored, transported and maintained at 4°C or lower without being frozen in dark prior to any laboratory testing. All core samples shall be 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 shall be handled under chain of custody protocols, delivered to Wellab Ltd.

Details of Testing

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

Table 5.3 Testing Parameters, Reporting Limit and Analytical Method

Parameters, unit	Reporting Limit	Preparation Method USEPA Method	Determination Method USEPA Method
Acid Volatile Sulphides (mg/kg dry weight)	1	N/A	Draft Analytical Method for Determination of Acid Volatile Sulfide in Sediment. Office of Water Regulations and Standards (1991), (USEPA 821-R-91-100)
Redox (mV)	1	N/A	WTW pH/redox meter (or equivalent) calibrated to ISO9002 Standards
pH	0.1	N/A	
Residual Nitrate (mg NO_3-N/L wet weight)	0.05	N/A	APHA 4500 NO_3-E and 4500 NO_2-B

QA/QC Requirements

5.9 All laboratory tests will be conducted by laboratory accredited by Hong Kong Laboratory Accreditation Scheme (HOKLAS) - Wellab Ltd. (HOKLAS Registration No.083).

5.10 The following quality control programme was performed for laboratory testing:

- ✧ Method blank;
- ✧ Duplicate (at 5% level i.e. one for every 20 samples); and
- ✧ Matrix Spike (at 5% level i.e. one for every 20 samples).

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

Monitoring Equipment

Water Depth Detector

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

Position System

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

Results and Observation

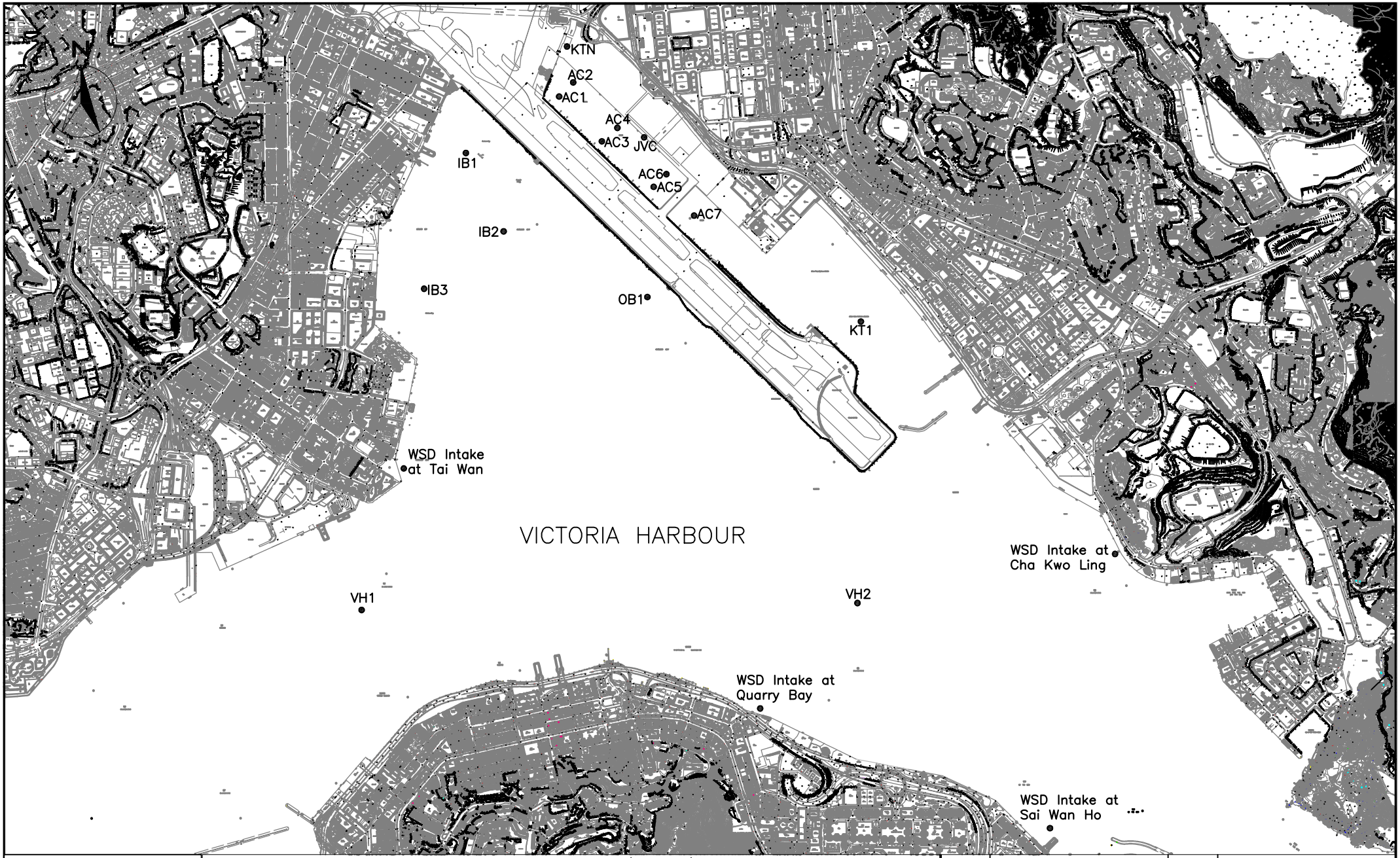
5.13 No sediment monitoring was conducted in the reporting period. The last sediment monitoring was conducted in February 2014 and the next monitoring will be carried out in August 2014.

6. Conclusion

6.1 Environmental monitoring works for water quality and odour patrol were performed in May 2014 and all monitoring results were checked and reviewed.

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

FIGURES



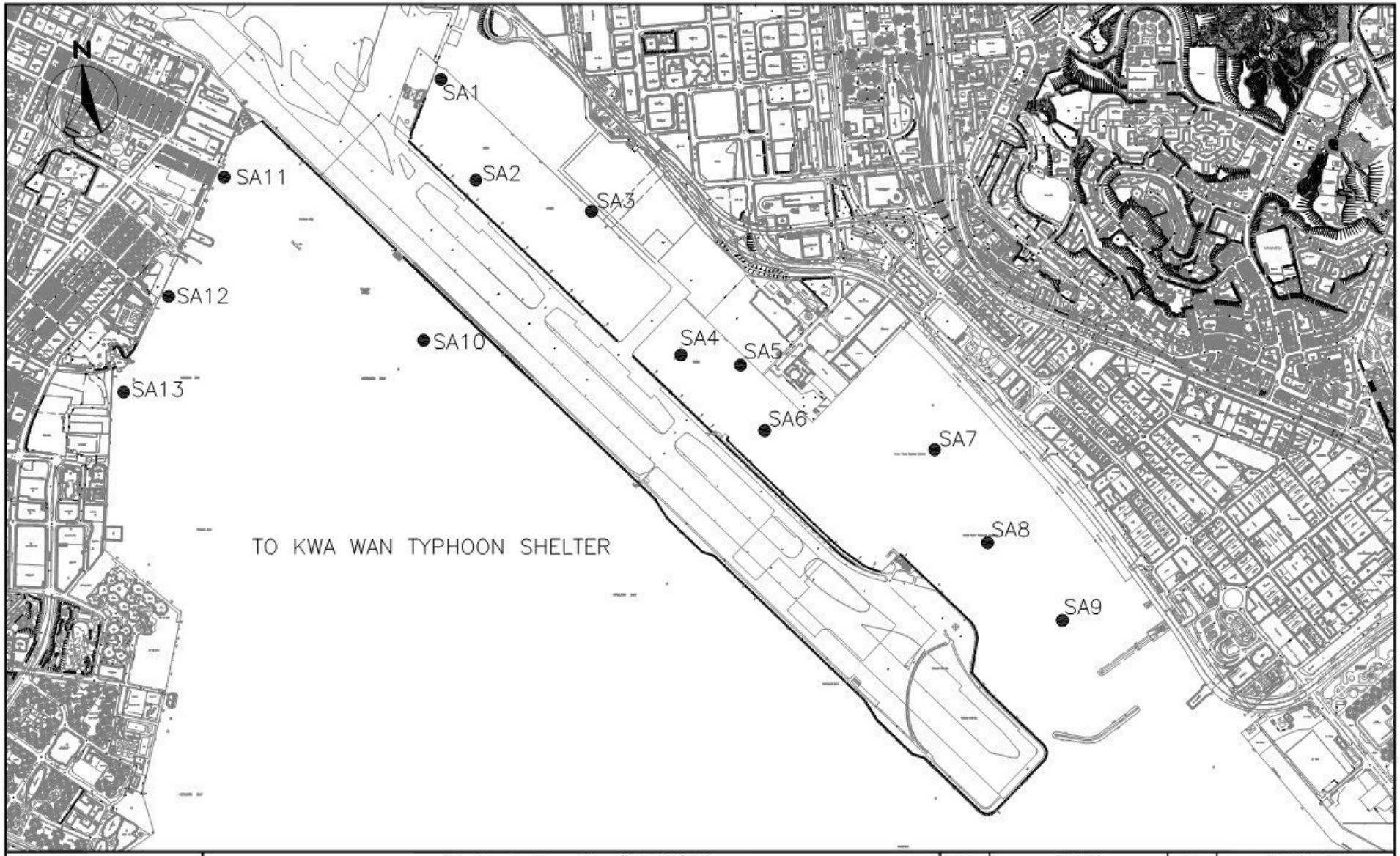
CINOTECH consultants limited

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

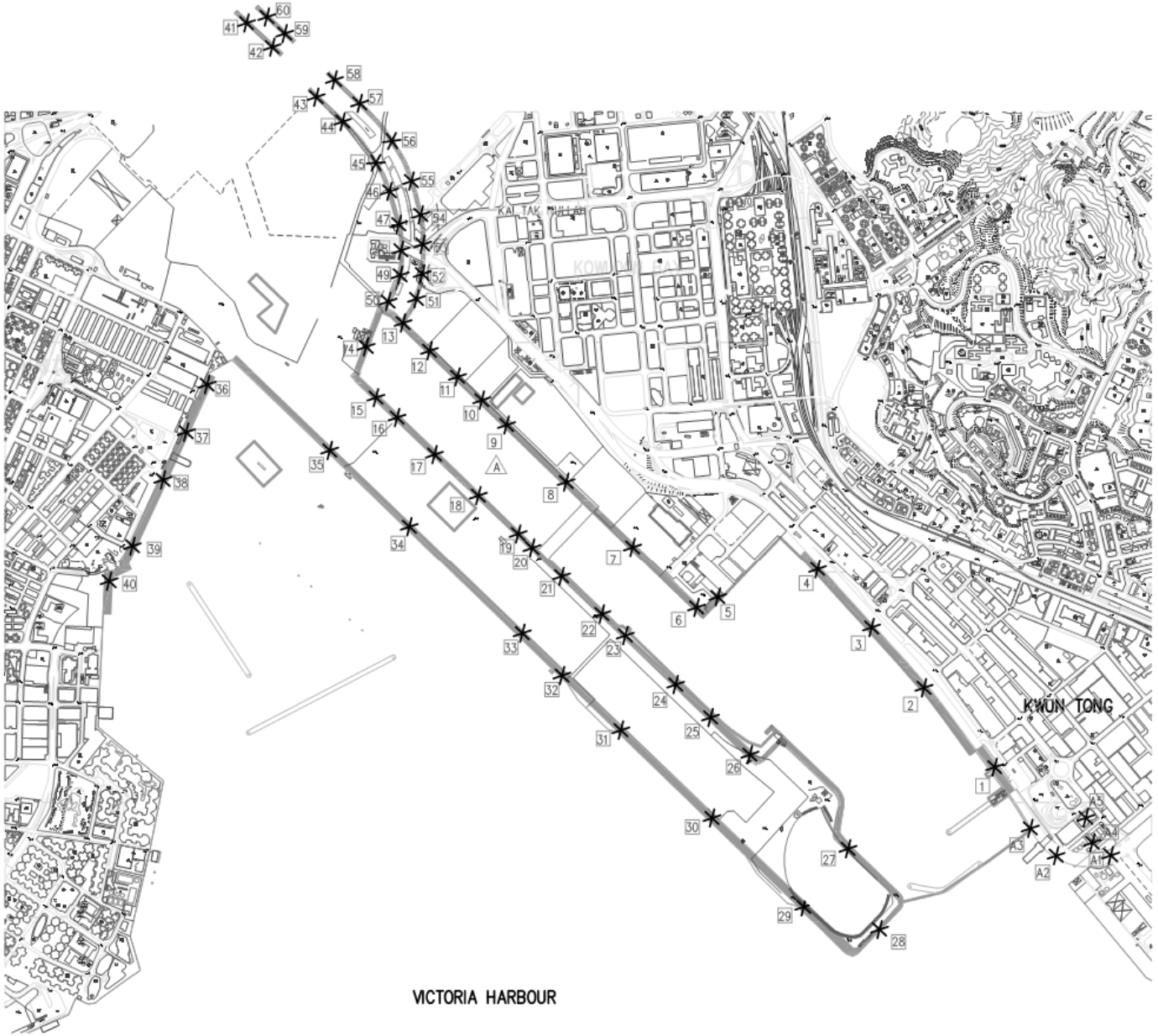
SCALE	N.T.S	DATE	3 AUG 2011
CHECK	IT	DRAWN	TW
PROJECT NO.	MA11017	FIGURE NO. 1	REV –



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/140505-1
Date of Issue:	2014-05-05
Date Received:	2014-05-05
Date Tested:	2014-05-05
Date Completed:	2014-05-05
Next Due Date:	2014-08-06
Page:	1 of 2

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room Temperature	: 23 degree Celsius
Relative Humidity	: 57%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 11J100025
1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

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

PATRICK TSE
Laboratory Manager

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/140505-1
Date of Issue:	2014-05-05
Date Received:	2014-05-05
Date Tested:	2014-05-05
Date Completed:	2014-05-05
Next Due Date:	2014-08-06

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	0.0	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O_2/L		Correction, mg O_2/L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.1	9.1	0.0	± 0.2
Half-saturated	5.6	5.6	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

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

5. pH Meter check

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

6. Depth Meter check

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

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

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/140505-2
Date of Issue:	2014-05-05
Date Received:	2014-05-05
Date Tested:	2014-05-05
Date Completed:	2014-05-05
Next Due Date:	2014-08-06
Page:	1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6920-M
Serial No.	: 03H1764AA
Equipment No.	: W.03.03

Test conditions:

Room Temperature	: 23 degree Celsius
Relative Humidity	: 57%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 03H1461
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: 08C100610
1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 09M100672
1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, L/N: 07E
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.
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Website: www.wellab.com.hk

TEST REPORT

Test Report No.:	C/W/140505-2
Date of Issue:	2014-05-05
Date Received:	2014-05-05
Date Tested:	2014-05-05
Date Completed:	2014-05-05
Next Due Date:	2014-08-06
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	0.0	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O_2/L		Correction, mg O_2/L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.1	9.1	0.0	± 0.2
Half-saturated	5.6	5.6	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

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

5. pH Meter check

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

6. Depth Meter check

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

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

APPENDIX A2
COPIES OF CALIBRATION CERTIFICATES FOR ODOUR PATROL

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/140503
Date of Issue:	2014-05-04
Date Received:	2014-05-03
Date Tested:	2014-05-03
Date Completed:	2014-05-04
Next Due Date:	2015-05-03
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	: 22 degree Celsius
Relative Humidity	: 68%
Pressure	: 101.0 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 B
CERTIFICATES FOR QUALIFIED 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.:	20459
Date of Issue:	2014-04-16
Date Tested:	2014-04-11
Date Completed:	2014-04-16

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 11th, 14th and 16th April 2014, respectively.

Results:

Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R	Requirement of EN13725	Comment
1.41	<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 April 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 1.41. 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 October 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.:	20459A
Date of Issue:	2014-04-16
Date Tested:	2014-04-11
Date Completed:	2014-04-16

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 11th, 14th and 16th April 2014, respectively.

Results:

Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R	Requirement of EN13725	Comment
1.33	<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 April 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 1.33. 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 October 2014.

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

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

PATRICK TSE
Laboratory Manager

APPENDIX C
ENVIRONMENTAL MONITORING SCHEDULE

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

Odour Patrol and Water Quality Monitoring Schedule for May 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-May	2-May	3-May
4-May	5-May	**6-May**	7-May	8-May	9-May	10-May
11-May	12-May	13-May	14-May	15-May	16-May	17-May
		Water Quality Monitoring (12th) Mid-Ebb 11:19 Mid-Flood 17:57	Odour Patrol Daytime - High Tide Evening/Night Time - Low Tide	Odour Patrol Daytime - High Tide Evening/Night Time - Low Tide		Odour Patrol Daytime - High Tide Evening/Night Time - Low Tide
18-May	19-May	20-May	21-May	22-May	23-May	24-May
25-May	26-May	27-May	28-May	29-May	30-May	31-May

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

APPENDIX D1
LABORATORY TESTING REPORT FOR WATER QUALITY MONITORING

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 1516, 1701 & 1716, Technology Park,
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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.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

ATTN: **Miss Mei Ling Tang** Page: 1 of 30

Sample Description : 174 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. : MA11017/140513
Sampling Date : 2014-05-13

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

WELLAB 匯力 Testing & Research

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Website: www.wellab.com.hk

TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22
Page:	2 of 30

Results:

Sample ID	AC1-a	AC1-b	AC1-a	AC1-b	AC2-a	AC2-b
Sampling Depth	S	S	B	B	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-1	20260-105	20260-3	20260-107	20260-4	20260-108
Suspended Solids (SS), mg/L	47.8	50.2	19.5	18.5	21.1	21.1
E. coli, cfu/100mL	46000	45000	5200	5400	36000	36000
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	0.35	0.34	0.24	0.25	0.55	0.53
Unionized Ammonia (UIA), mg/L	0.005	0.005	0.001	0.001	0.007	0.007
Total Kjeldahl Nitrogen (TKN), mg N/L	0.9	0.8	0.6	0.6	0.6	0.6
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.067	0.064	0.050	0.050	0.057	0.059
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.43	1.40	0.50	0.52	1.30	1.26
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.20	0.19	0.09	0.09	0.19	0.19
Total Phosphorous (TP), mg-P/L	0.27	0.28	0.13	0.13	0.20	0.20
Cadmium (Cd), µg/L	0.5	0.5	0.3	0.3	0.4	0.4
Chromium (Cr), µg/L	2.3	2.3	3.0	2.9	2.1	2.0
Copper (Cu), µg/L	6.4	6.6	6.6	6.6	6.3	6.4
Mercury (Hg), µg/L	<0.2	<0.2	0.3	0.3	<0.2	<0.2
Nickel (Ni), µg/L	2.4	2.4	2.1	2.1	1.9	1.9
Lead (Pb), µg/L	1.0	1.0	1.1	1.0	0.9	0.9
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	11.9	12.2	12.2	12.7	18.9	18.5

Remarks: 1) < = less than

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

****

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Website: www.wellab.com.hk

TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22
Page:	3 of 30

Results:

Sample ID	AC2-a	AC2-b	AC3-a	AC3-b	AC3-a	AC3-b
Sampling Depth	B	B	S	S	B	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-6	20260-110	20260-7	20260-111	20260-9	20260-113
Suspended Solids (SS), mg/L	3.6	3.6	33.2	33.7	24.9	24.7
E. coli, cfu/100mL	1500	1500	79000	79000	6800	7000
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	0.29	0.29	0.46	0.48	0.37	0.37
Unionized Ammonia (UIA), mg/L	0.001	0.001	0.006	0.006	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.9	0.9	0.9	0.9	0.7	0.7
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.047	0.047	0.063	0.067	0.061	0.061
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.45	0.43	1.14	1.19	0.75	0.74
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.08	0.08	0.23	0.23	0.15	0.15
Total Phosphorous (TP), mg-P/L	0.11	0.10	0.25	0.25	0.18	0.18
Cadmium (Cd), µg/L	0.4	0.4	0.4	0.4	0.5	0.5
Chromium (Cr), µg/L	1.7	1.8	2.4	2.3	2.9	2.7
Copper (Cu), µg/L	7.1	6.8	5.2	5.1	5.3	5.4
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	1.1	1.2	1.2	1.2	1.5	1.4
Lead (Pb), µg/L	1.0	1.1	1.0	1.0	0.6	0.6
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	21.7	21.6	20.8	20.9	14.4	14.2

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Page: 4 of 30

Results:

Sample ID	AC4-a	AC4-b	AC4-a	AC4-b	AC5-a	AC5-b
Sampling Depth	S	S	B	B	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-10	20260-114	20260-12	20260-116	20260-13	20260-117
Suspended Solids (SS), mg/L	16.0	16.3	10.1	10.1	22.1	22.2
E. coli, cfu/100mL	26000	24000	5600	5600	56000	53000
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	0.55	0.52	0.32	0.31	0.47	0.44
Unionized Ammonia (UIA), mg/L	0.008	0.007	0.001	<0.001	0.006	0.006
Total Kjeldahl Nitrogen (TKN), mg N/L	0.9	0.9	0.7	0.7	0.9	0.9
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.059	0.061	0.053	0.050	0.072	0.067
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.39	1.35	0.62	0.59	1.22	1.25
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.19	0.19	0.11	0.10	0.26	0.26
Total Phosphorous (TP), mg-P/L	0.23	0.23	0.13	0.13	0.27	0.27
Cadmium (Cd), µg/L	0.4	0.4	0.5	0.5	<0.1	<0.1
Chromium (Cr), µg/L	2.8	2.7	3.0	2.9	1.8	1.8
Copper (Cu), µg/L	6.1	6.3	6.4	6.3	5.2	5.3
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.2	0.2
Nickel (Ni), µg/L	1.2	1.1	2.6	2.7	1.7	1.7
Lead (Pb), µg/L	1.1	1.1	1.1	1.1	0.6	0.6
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	14.9	15.2	14.6	14.6	19.9	20.6

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC5-a	AC5-b	AC6-a	AC6-b	AC6-a	AC6-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-15	20260-119	20260-16	20260-120	20260-17	20260-121
Suspended Solids (SS), mg/L	17.6	17.0	34.5	33.8	8.1	8.3
E. coli, cfu/100mL	6300	6200	35000	34000	10000	9500
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	0.47	0.48	0.33	0.34
Unionized Ammonia (UIA), mg/L	0.001	0.002	0.006	0.007	0.004	0.004
Total Kjeldahl Nitrogen (TKN), mg N/L	0.7	0.7	1.0	1.0	2.6	2.7
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.055	0.053	0.060	0.060	0.042	0.039
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.68	0.67	0.95	0.95	0.57	0.59
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.14	0.14	0.19	0.20	0.08	0.08
Total Phosphorous (TP), mg-P/L	0.15	0.15	0.26	0.26	0.10	0.09
Cadmium (Cd), µg/L	0.3	0.3	0.5	0.4	0.3	0.3
Chromium (Cr), µg/L	2.0	2.0	3.0	2.9	1.7	1.6
Copper (Cu), µg/L	6.4	6.4	7.1	6.9	5.4	5.3
Mercury (Hg), µg/L	0.2	0.2	<0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	2.0	2.1	2.3	2.3	1.0	1.0
Lead (Pb), µg/L	1.0	1.0	1.3	1.2	1.3	1.3
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	13.8	14.0	16.6	16.7	14.3	13.7

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC6-a	AC6-b	AC7-a	AC7-b	AC7-a	AC7-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-18	20260-122	20260-19	20260-123	20260-20	20260-124
Suspended Solids (SS), mg/L	13.7	13.3	23.4	23.4	12.5	12.5
E. coli, cfu/100mL	65000	64000	44000	47000	9200	9300
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	0.29	0.27	0.56	0.57	0.25	0.23
Unionized Ammonia (UIA), mg/L	0.001	0.001	0.007	0.009	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	1.0	1.0	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.055	0.052	0.067	0.067	0.032	0.032
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.39	0.40	1.24	1.29	0.69	0.67
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.07	0.07	0.24	0.24	0.06	0.06
Total Phosphorous (TP), mg-P/L	0.09	0.08	0.26	0.31	0.08	0.07
Cadmium (Cd), µg/L	0.1	0.1	0.3	0.3	0.4	0.4
Chromium (Cr), µg/L	2.5	2.3	3.1	3.1	2.0	2.0
Copper (Cu), µg/L	6.0	5.7	6.3	6.2	7.9	8.0
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.9	2.9	2.0	2.0	1.9	1.9
Lead (Pb), µg/L	0.8	0.8	0.6	0.6	1.0	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	16.7	16.5	23.1	22.4	16.6	15.9

Remarks: 1) < = less than

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****

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC7-a	AC7-b	KT1-a	KT1-b	KT1-a	KT1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-21	20260-125	20260-22	20260-126	20260-23	20260-127
Suspended Solids (SS), mg/L	9.3	9.3	11.0	10.9	24.9	25.6
E. coli, cfu/100mL	4200	4300	19000	18000	36000	36000
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	0.42	0.43	0.51	0.53
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.006	0.007	0.007	0.008
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	0.7	0.8	3.2	3.0
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.039	0.039	0.070	0.066	0.055	0.056
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.41	0.41	1.16	1.14	1.24	1.18
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.07	0.07	0.19	0.19	0.21	0.21
Total Phosphorous (TP), mg-P/L	0.09	0.09	0.21	0.20	0.22	0.21
Cadmium (Cd), µg/L	0.3	0.3	0.1	0.1	0.1	0.1
Chromium (Cr), µg/L	1.8	1.8	2.6	2.4	2.1	2.1
Copper (Cu), µg/L	5.6	5.7	5.5	5.5	5.5	5.6
Mercury (Hg), µg/L	0.3	0.3	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.2	2.2	1.2	1.2	2.7	2.7
Lead (Pb), µg/L	0.8	0.9	0.8	0.9	1.1	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	8.4	8.9	22.4	22.3	11.7	11.7

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	KT1-a	KT1-b	IB1-a	IB1-b	IB1-a	IB1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-24	20260-128	20260-25	20260-129	20260-26	20260-130
Suspended Solids (SS), mg/L	16.9	16.3	11.5	11.5	9.1	8.8
E. coli, cfu/100mL	2400	2400	6800	6600	600	590
5-day Biochemical Oxygen Demand (BOD_5), mg-O_2/L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH_3-N), mg NH_3-N/L	0.19	0.18	0.27	0.26	0.20	0.19
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.004	0.004	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	2.9	2.8	0.6	0.6	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.039	0.039	0.027	0.028	0.203	0.212
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.30	0.29	0.20	0.21	0.03	0.06
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.06	0.04	0.05	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.10	0.10	0.07	0.07	0.06	0.06
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	<0.1	0.4	0.4
Chromium (Cr), µg/L	2.1	2.2	2.0	2.0	1.1	1.1
Copper (Cu), µg/L	6.1	6.1	6.5	6.6	5.3	5.1
Mercury (Hg), µg/L	0.2	0.3	<0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	1.6	1.6	2.0	2.0	2.7	2.8
Lead (Pb), µg/L	0.5	0.5	0.8	0.8	0.7	0.7
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.3	11.4	19.1	18.0	23.1	23.3

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
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Results:

Sample ID	IB1-a	IB1-b	IB2-a	IB2-b	IB2-a	IB2-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-27	20260-131	20260-28	20260-132	20260-29	20260-133
Suspended Solids (SS), mg/L	3.6	3.6	14.0	14.2	6.6	6.8
E. coli, cfu/100mL	720	690	2300	2200	100	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	0.27	0.27	0.20	0.20	0.22	0.22
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.003	0.003	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.6	0.6	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.024	0.024	0.034	0.032	0.023	0.023
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.14	0.14	0.24	0.25	0.17	0.17
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.05	0.05	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.06	0.06	0.07	0.07	0.07	0.07
Cadmium (Cd), µg/L	0.3	0.3	0.4	0.4	0.1	<0.1
Chromium (Cr), µg/L	1.9	1.9	1.2	1.2	1.6	1.6
Copper (Cu), µg/L	7.7	7.6	7.1	7.2	6.4	6.3
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.9	1.9	1.7	1.8	2.3	2.3
Lead (Pb), µg/L	1.6	1.5	0.6	0.7	1.2	1.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13.2	13.3	18.6	18.6	19.9	19.1

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
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Date Completed:	2014-05-22

Results:

Sample ID	IB2-a	IB2-b	IB3-a	IB3-b	IB3-a	IB3-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-30	20260-134	20260-31	20260-135	20260-32	20260-136
Suspended Solids (SS), mg/L	14.1	14.1	9.3	8.9	13.4	13.4
E. coli, cfu/100mL	540	510	43000	42000	1600	1600
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	0.27	0.28	0.39	0.40	0.17	0.17
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.006	0.006	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	0.8	0.8	0.3	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.037	0.037	0.032	0.032	0.019	0.019
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.18	0.18	0.25	0.26	0.12	0.12
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.06	0.06	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.10	0.10	0.06	0.06
Cadmium (Cd), µg/L	0.3	0.2	0.1	0.1	0.4	0.3
Chromium (Cr), µg/L	2.0	2.0	3.0	2.9	1.1	1.1
Copper (Cu), µg/L	5.9	6.0	5.3	5.2	5.9	6.0
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.8	1.7	2.0	1.9	2.1	2.1
Lead (Pb), µg/L	1.4	1.4	1.2	1.2	1.4	1.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	17.1	17.5	19.9	19.1	16.9	17.4

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TEST REPORT

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Date Completed:	2014-05-22

Results:

Sample ID	IB3-a	IB3-b	OB1-a	OB1-b	OB1-a	OB1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-33	20260-137	20260-34	20260-138	20260-35	20260-139
Suspended Solids (SS), mg/L	6.4	6.5	8.1	7.8	9.3	9.4
E. coli, cfu/100mL	820	790	1700	1700	1000	1000
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	0.20	0.22	0.29	0.28	0.22	0.22
Unionized Ammonia (UIA), mg/L	0.003	0.004	0.005	0.004	0.004	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.4	0.5	0.5	0.3	0.3
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.034	0.033	0.027	0.028	0.026	0.028
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.14	0.15	0.20	0.19	0.15	0.14
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.07	0.07	0.06	0.06
Cadmium (Cd), µg/L	0.2	0.2	0.4	0.4	0.4	0.4
Chromium (Cr), µg/L	2.9	2.9	2.6	2.6	1.7	1.7
Copper (Cu), µg/L	7.4	7.5	6.8	6.7	6.9	6.5
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.2	0.3
Nickel (Ni), µg/L	2.2	2.2	1.2	1.2	1.7	1.7
Lead (Pb), µg/L	0.6	0.6	1.3	1.3	1.1	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	19.3	19.1	18.8	18.7	10.4	10.9

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TEST REPORT

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Results:

Sample ID	OB1-a	OB1-b	VH1-a	VH1-b	VH1-a	VH1-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-36	20260-140	20260-37	20260-141	20260-38	20260-142
Suspended Solids (SS), mg/L	9.5	10.1	8.1	8.1	15.8	15.4
E. coli, cfu/100mL	1600	1700	670	670	2300	2300
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	0.71	0.66	0.32	0.34	0.29	0.29
Unionized Ammonia (UIA), mg/L	0.012	0.011	0.005	0.005	0.004	0.005
Total Kjeldahl Nitrogen (TKN), mg N/L	0.8	0.8	0.6	0.6	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.032	0.031	0.037	0.037	0.038	0.038
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.87	0.87	0.23	0.22	0.22	0.23
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.06	0.06	0.07	0.07	0.07	0.07
Cadmium (Cd), µg/L	0.1	0.1	0.2	0.2	0.1	0.1
Chromium (Cr), µg/L	2.2	2.1	2.9	3.0	2.0	2.1
Copper (Cu), µg/L	6.6	6.6	6.2	6.0	5.5	5.6
Mercury (Hg), µg/L	0.3	0.3	<0.2	<0.2	0.3	0.3
Nickel (Ni), µg/L	1.9	2.0	2.6	2.6	2.4	2.3
Lead (Pb), µg/L	1.2	1.2	0.7	0.7	0.8	0.8
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14.4	14.1	11.1	11.1	10.1	9.4

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
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Date Completed:	2014-05-22

Results:

Sample ID	VH1-a	VH1-b	VH2-a	VH2-b	VH2-a	VH2-b
Sampling Depth	B	B	S	S	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-39	20260-143	20260-40	20260-144	20260-41	20260-145
Suspended Solids (SS), mg/L	19.4	19.6	18.6	18.8	9.2	8.9
E. coli, cfu/100mL	2400	2500	520	510	2200	2100
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	0.25	0.25	0.33	0.32	0.28	0.26
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.005	0.005	0.004	0.004
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.4	0.8	0.8	0.5	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.032	0.031	0.031	0.033	0.031	0.031
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.24	0.24	0.21	0.21	0.17	0.17
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.08	0.08	0.07	0.07
Cadmium (Cd), µg/L	<0.1	<0.1	0.4	0.4	0.3	0.3
Chromium (Cr), µg/L	1.8	1.7	2.1	2.1	1.0	0.9
Copper (Cu), µg/L	7.3	7.5	5.3	5.2	6.3	6.6
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.8	1.7	2.6	2.5	2.4	2.5
Lead (Pb), µg/L	0.7	0.7	0.9	0.9	1.0	1.0
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.1	9.2	16.6	16.0	8.8	8.6

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Results:

Sample ID	VH2-a	VH2-b	KTN-a	KTN-b	JVC-a	JVC-b
Sampling Depth	B	B	M	M	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-42	20260-146	20260-44	20260-148	20260-46	20260-150
Suspended Solids (SS), mg/L	13.1	13.8	41.0	42.1	10.0	10.7
E. coli, cfu/100mL	2400	2400	54000	55000	9600	9600
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	0.27	0.26	0.33	0.33	0.38	0.38
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.003	0.003	0.005	0.005
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	1.0	1.1	0.6	0.6
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.028	0.030	<0.002	<0.002	0.049	0.048
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.25	0.25	2.68	2.70	0.62	0.62
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.48	0.47	0.12	0.11
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.50	0.49	0.14	0.13
Cadmium (Cd), µg/L	0.4	0.4	0.1	0.1	0.3	0.3
Chromium (Cr), µg/L	1.6	1.6	1.8	1.9	1.3	1.3
Copper (Cu), µg/L	7.3	6.8	5.0	5.0	7.1	7.2
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.3	0.3
Nickel (Ni), µg/L	2.2	2.2	1.8	1.9	3.0	2.8
Lead (Pb), µg/L	1.2	1.2	0.9	0.9	1.4	1.3
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.8	15.5	10.5	10.7	19.1	19.1

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Results:

Sample ID	JVC-a	JVC-b	WSD Intake at Tai Wan-a	WSD Intake at Tai Wan-b	WSD Intake at Cha Kwo Ling-a	WSD Intake at Cha Kwo Ling-b
Sampling Depth	B	B	N/A	N/A	N/A	N/A
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	20260-48	20260-152	20260-49	20260-153	20260-50	20260-154
Suspended Solids (SS), mg/L	6.9	7.1	8.6	8.7	11.9	11.6
E. coli, cfu/100mL	9800	9500	2200	2100	7800	7900
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	0.43	0.44	0.25	0.24	0.28	0.30
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.004	0.004	0.005	0.005
Total Kjeldahl Nitrogen (TKN), mg N/L	0.7	0.8	0.4	0.4	0.4	0.4
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.052	0.055	0.026	0.026	0.027	0.029
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.81	0.81	0.18	0.20	0.36	0.38
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.14	0.14	0.04	0.04	0.06	0.06
Total Phosphorous (TP), mg-P/L	0.16	0.15	0.07	0.07	0.08	0.08
Cadmium (Cd), µg/L	0.4	0.4	0.4	0.4	0.5	0.5
Chromium (Cr), µg/L	1.7	1.8	1.7	1.8	2.3	2.4
Copper (Cu), µg/L	6.2	6.6	5.5	5.5	5.2	5.2
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.2	0.2
Nickel (Ni), µg/L	2.3	2.3	1.1	1.1	1.5	1.6
Lead (Pb), µg/L	0.5	0.5	1.5	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	13.0	12.8	8.7	8.9	14.4	15.1

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
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Date Completed:	2014-05-22

Results:

Sample ID	WSD Intake at Quarry Bay-a	WSD Intake at Quarry Bay-b	WSD Intake at Sai Wan Ho-a	WSD Intake at Sai Wan Ho-b	AC1-a	AC1-b
Sampling Depth	N/A	N/A	N/A	N/A	S	S
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	20260-51	20260-155	20260-52	20260-156	20260-53	20260-157
Suspended Solids (SS), mg/L	12.1	12.1	8.7	8.9	19.6	19.8
E. coli, cfu/100mL	2300	2200	11000	11000	10000	10000
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	0.22	0.22	0.31	0.33	0.32	0.33
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.005	0.005	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.3	0.3	0.5	0.4	0.6	0.6
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.025	0.025	0.034	0.034	0.061	0.059
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.25	0.25	0.25	0.25	1.19	1.20
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.05	0.05	0.20	0.21
Total Phosphorous (TP), mg-P/L	0.06	0.06	0.08	0.08	0.31	0.32
Cadmium (Cd), µg/L	0.4	0.4	0.2	0.2	0.5	0.4
Chromium (Cr), µg/L	1.4	1.4	1.2	1.2	1.4	1.4
Copper (Cu), µg/L	6.4	6.4	7.4	7.6	6.5	6.5
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.3	1.3	1.2	1.3	2.1	2.0
Lead (Pb), µg/L	1.3	1.4	0.6	0.5	1.3	1.3
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.0	16.2	14.3	13.4	13.6	13.6

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC1-a	AC1-b	AC2-a	AC2-b	AC2-a	AC2-b
Sampling Depth	B	B	S	S	B	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-54	20260-159	20260-56	20260-160	20260-58	20260-162
Suspended Solids (SS), mg/L	21.6	20.7	12.0	11.5	15.3	15.1
E. coli, cfu/100mL	11000	11000	23000	22000	18000	18000
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	0.43	0.44	0.32	0.33	0.38	0.39
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.003	0.003	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.7	0.7	0.7	0.7	0.7	0.7
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.075	0.076	0.109	0.108	0.062	0.064
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.58	1.51	1.00	1.01	0.86	0.86
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.26	0.27	0.20	0.21	0.17	0.16
Total Phosphorous (TP), mg-P/L	0.28	0.28	0.23	0.23	0.20	0.19
Cadmium (Cd), µg/L	0.5	0.5	0.5	0.5	0.3	0.2
Chromium (Cr), µg/L	1.6	1.5	1.3	1.3	2.7	2.6
Copper (Cu), µg/L	6.7	7.0	7.8	7.7	7.1	7.2
Mercury (Hg), µg/L	<0.2	<0.2	0.3	0.3	0.2	0.2
Nickel (Ni), µg/L	2.8	2.7	1.8	1.9	1.5	1.5
Lead (Pb), µg/L	1.4	1.4	1.1	1.1	0.6	0.6
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13.6	14.0	22.4	22.5	17.9	16.9

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
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Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC3-a	AC3-b	AC3-a	AC3-b	AC4-a	AC4-b
Sampling Depth	S	S	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-59	20260-163	20260-61	20260-165	20260-62	20260-166
Suspended Solids (SS), mg/L	15.5	15.2	12.2	11.5	13.6	13.3
E. coli, cfu/100mL	140000	140000	11000	11000	42000	42000
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	0.46	0.46	0.35	0.34	0.46	0.46
Unionized Ammonia (UIA), mg/L	0.005	0.005	<0.001	<0.001	0.001	<0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.8	0.8	0.6	0.6	0.8	0.8
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.073	0.074	0.055	0.053	0.080	0.082
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.98	2.03	0.58	0.57	1.81	1.80
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.32	0.34	0.12	0.13	0.28	0.26
Total Phosphorous (TP), mg-P/L	0.33	0.35	0.15	0.15	0.30	0.31
Cadmium (Cd), µg/L	0.4	0.4	0.3	0.3	0.1	0.1
Chromium (Cr), µg/L	1.7	1.8	3.0	3.0	2.7	2.8
Copper (Cu), µg/L	6.0	5.9	4.8	4.8	5.9	5.8
Mercury (Hg), µg/L	0.3	0.3	<0.2	<0.2	0.3	0.3
Nickel (Ni), µg/L	2.3	2.2	2.2	2.2	2.6	2.6
Lead (Pb), µg/L	1.2	1.2	0.6	0.6	0.7	0.7
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	14.9	14.3	12.9	12.3	13.7	14.1

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
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Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC4-a	AC4-b	AC5-a	AC5-b	AC5-a	AC5-b
Sampling Depth	B	B	S	S	B	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-64	20260-168	20260-65	20260-169	20260-67	20260-171
Suspended Solids (SS), mg/L	12.2	11.8	10.8	11.0	12.5	13.2
E. coli, cfu/100mL	7200	7000	65000	66000	12000	12000
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	0.37	0.43	0.43	0.39	0.39
Unionized Ammonia (UIA), mg/L	<0.001	<0.001	0.005	0.005	<0.001	<0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.8	0.9	0.6	0.6
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.049	0.047	0.071	0.070	0.058	0.062
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.53	0.50	1.89	1.76	0.70	0.72
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.11	0.11	0.31	0.30	0.14	0.14
Total Phosphorous (TP), mg-P/L	0.13	0.14	0.33	0.34	0.15	0.14
Cadmium (Cd), µg/L	0.1	0.1	0.2	0.2	0.5	0.5
Chromium (Cr), µg/L	1.3	1.2	2.0	2.0	2.9	2.9
Copper (Cu), µg/L	5.5	5.7	7.0	6.7	6.5	6.5
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	1.8	1.9	2.9	2.9	2.4	2.4
Lead (Pb), µg/L	1.5	1.5	0.9	1.0	1.5	1.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.1	10.2	14.1	13.7	17.2	17.6

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TEST REPORT

Laboratory No.:	20260
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Results:

Sample ID	AC6-a	AC6-b	AC6-a	AC6-b	AC7-a	AC7-b
Sampling Depth	S	S	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-68	20260-172	20260-70	20260-174	20260-71	20260-175
Suspended Solids (SS), mg/L	11.5	12.0	10.8	10.8	12.3	12.0
E. coli, cfu/100mL	58000	54000	4400	4300	2800	2800
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	0.43	0.41	0.30	0.31	0.60	0.61
Unionized Ammonia (UIA), mg/L	0.005	0.005	<0.001	<0.001	0.007	0.007
Total Kjeldahl Nitrogen (TKN), mg N/L	0.7	0.7	0.5	0.5	0.9	1.0
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.067	0.066	0.040	0.041	0.078	0.079
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.38	1.39	0.57	0.59	1.18	1.17
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.26	0.26	0.08	0.08	0.53	0.55
Total Phosphorous (TP), mg-P/L	0.27	0.28	0.11	0.10	0.71	0.69
Cadmium (Cd), µg/L	0.4	0.4	0.5	0.4	0.3	0.3
Chromium (Cr), µg/L	1.5	1.5	2.9	2.9	2.8	2.8
Copper (Cu), µg/L	7.5	7.4	7.4	7.8	8.0	7.8
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.2	0.2
Nickel (Ni), µg/L	1.2	1.3	1.1	1.1	3.0	2.9
Lead (Pb), µg/L	0.6	0.6	1.4	1.3	1.6	1.6
Silver (Ag), µg/L	0.2	0.2	0.2	0.2	0.2	0.2
Zinc (Zn), µg/L	22.8	22.2	10.3	10.5	7.9	7.6

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TEST REPORT

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Date of Issue:	2014-05-22
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Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	AC7-a	AC7-b	AC7-a	AC7-b	KT1-a	KT1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-72	20260-176	20260-73	20260-177	20260-74	20260-178
Suspended Solids (SS), mg/L	13.5	13.3	6.6	6.3	11.2	11.5
E. coli, cfu/100mL	5400	5200	4000	4000	74000	74000
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	0.23	0.30	0.31	0.47	0.48
Unionized Ammonia (UIA), mg/L	0.002	0.002	0.001	0.001	0.007	0.007
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.5	0.5	0.8	0.8
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.045	0.046	0.050	0.048	0.071	0.069
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.39	0.37	0.36	0.35	1.44	1.38
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.07	0.08	0.08	0.07	0.27	0.28
Total Phosphorous (TP), mg-P/L	0.10	0.10	0.10	0.10	0.28	0.28
Cadmium (Cd), µg/L	0.1	0.1	0.1	0.1	0.4	0.4
Chromium (Cr), µg/L	1.9	1.8	2.8	2.8	3.0	3.1
Copper (Cu), µg/L	7.6	8.0	7.4	7.4	6.9	7.1
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.5	1.4	1.1	1.1	2.6	2.6
Lead (Pb), µg/L	0.7	0.7	1.2	1.2	1.3	1.3
Silver (Ag), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.0	11.9	10.9	10.7	18.8	18.8

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Results:

Sample ID	KT1-a	KT1-b	KT1-a	KT1-b	IB1-a	IB1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-75	20260-179	20260-76	20260-180	20260-77	20260-181
Suspended Solids (SS), mg/L	6.4	6.5	4.3	4.3	12.7	12.9
E. coli, cfu/100mL	6000	6000	1100	1100	1600	1700
5-day Biochemical Oxygen Demand (BOD_5), mg-O_2/L	<2	<2	<2	<2	<2	<2
Ammonia Nitrogen (NH_3-N), mg NH_3-N/L	0.21	0.22	0.16	0.15	0.21	0.20
Unionized Ammonia (UIA), mg/L	0.003	0.003	<0.001	<0.001	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.5	0.5	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.038	0.039	0.043	0.044	0.025	0.026
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.34	0.35	0.36	0.35	0.20	0.21
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.06	0.06	0.05	0.05	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.10	0.10	0.09	0.09	0.07	0.08
Cadmium (Cd), µg/L	0.1	0.1	<0.1	<0.1	0.3	0.3
Chromium (Cr), µg/L	1.5	1.6	1.2	1.3	2.4	2.3
Copper (Cu), µg/L	5.2	5.1	6.1	6.3	7.2	7.6
Mercury (Hg), µg/L	0.3	0.3	0.3	0.3	<0.2	<0.2
Nickel (Ni), µg/L	2.9	3.0	2.7	2.9	2.8	2.7
Lead (Pb), µg/L	0.5	0.5	0.8	0.8	1.4	1.4
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	0.2	0.2
Zinc (Zn), µg/L	12.6	12.4	18.6	19.5	21.5	20.6

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Results:

Sample ID	IB1-a	IB1-b	IB1-a	IB1-b	IB2-a	IB2-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-78	20260-182	20260-79	20260-183	20260-80	20260-184
Suspended Solids (SS), mg/L	8.4	8.7	12.4	12.4	11.3	11.5
E. coli, cfu/100mL	1800	1700	1100	1100	720	740
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	0.24	0.25	0.21	0.21	0.21	0.21
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.003	0.003	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.5	0.5	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.029	0.030	0.029	0.029	0.054	0.053
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.19	0.18	0.20	0.20	0.23	0.22
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.07	0.08	0.08	0.09	0.07	0.07
Cadmium (Cd), µg/L	0.1	0.1	0.1	0.1	0.2	0.2
Chromium (Cr), µg/L	2.6	2.5	2.5	2.6	1.7	1.7
Copper (Cu), µg/L	6.5	6.4	7.2	7.0	5.2	5.0
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	1.6	1.6	3.1	3.0	1.7	1.8
Lead (Pb), µg/L	0.7	0.7	1.0	1.0	0.9	1.0
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.5	16.3	16.5	15.9	18.9	19.1

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Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	IB2-a	IB2-b	IB2-a	IB2-b	IB3-a	IB3-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-81	20260-185	20260-82	20260-186	20260-83	20260-187
Suspended Solids (SS), mg/L	8.0	8.1	8.1	8.4	10.7	10.9
E. coli, cfu/100mL	1000	1000	1600	1600	1300	1300
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	0.27	0.28	0.21	0.21	0.22	0.21
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.003	0.003	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.4	0.4	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.028	0.028	0.033	0.035	0.030	0.029
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.20	0.21	0.21	0.22	0.35	0.33
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.08	0.08	0.07	0.08	0.08	0.08
Cadmium (Cd), µg/L	0.5	0.5	0.1	0.1	0.1	0.1
Chromium (Cr), µg/L	2.8	2.6	2.7	2.7	1.6	1.6
Copper (Cu), µg/L	6.3	6.5	6.6	6.4	7.0	6.8
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	0.2	0.2
Nickel (Ni), µg/L	2.3	2.3	2.5	2.6	2.3	2.3
Lead (Pb), µg/L	0.6	0.6	1.0	0.9	1.5	1.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14.7	14.7	12.2	12.2	21.9	22.1

Remarks: 1) < = less than

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

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	IB3-a	IB3-b	IB3-a	IB3-b	OB1-a	OB1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-84	20260-188	20260-85	20260-189	20260-86	20260-190
Suspended Solids (SS), mg/L	9.8	9.8	20.1	20.1	8.5	8.6
E. coli, cfu/100mL	1200	1200	1200	1200	860	890
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	0.30	0.16	0.16	0.35	0.37
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.002	0.002	0.005	0.005
Total Kjeldahl Nitrogen (TKN), mg N/L	0.5	0.5	0.4	0.4	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	<0.002	<0.002	0.037	0.035	0.031	0.031
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.20	0.19	0.20	0.21	0.21	0.22
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.05	0.05	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.08	0.08	0.07	0.07	0.08	0.07
Cadmium (Cd), µg/L	0.5	0.5	0.3	0.3	0.1	0.1
Chromium (Cr), µg/L	1.2	1.2	3.1	3.1	2.7	2.7
Copper (Cu), µg/L	6.7	6.5	7.8	8.3	6.2	6.6
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	1.9	1.9	1.2	1.2	2.3	2.3
Lead (Pb), µg/L	1.2	1.2	1.3	1.3	0.6	0.6
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	13.3	13.4	15.7	15.1	16.5	16.5

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22
Page:	26 of 30

Results:

Sample ID	OB1-a	OB1-b	OB1-a	OB1-b	VH1-a	VH1-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-87	20260-191	20260-88	20260-192	20260-89	20260-193
Suspended Solids (SS), mg/L	5.1	5.1	12.3	11.8	4.0	4.2
E. coli, cfu/100mL	1600	1600	1800	1800	2000	2100
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	0.24	0.25	0.27	0.25	0.24
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.004	0.004	0.004	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.8	0.8	0.5	0.5	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.031	0.032	0.034	0.033	0.027	0.027
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.21	0.20	0.20	0.20	0.19	0.21
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.08	0.09	0.08	0.08	0.07	0.07
Cadmium (Cd), µg/L	0.3	0.3	0.2	0.2	0.5	0.4
Chromium (Cr), µg/L	1.2	1.2	3.1	3.1	1.3	1.3
Copper (Cu), µg/L	6.7	6.6	7.1	7.5	7.2	7.1
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.3	0.3
Nickel (Ni), µg/L	3.0	2.9	2.0	2.1	1.3	1.3
Lead (Pb), µg/L	0.6	0.6	0.9	0.9	1.0	1.1
Silver (Ag), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.2	15.0	20.0	19.6	15.5	15.0

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	VH1-a	VH1-b	VH1-a	VH1-b	VH2-a	VH2-b
Sampling Depth	M	M	B	B	S	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-90	20260-194	20260-91	20260-195	20260-92	20260-196
Suspended Solids (SS), mg/L	8.2	8.1	4.5	4.6	8.2	8.2
E. coli, cfu/100mL	3200	3400	2700	2700	4300	4200
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	0.23	0.22	0.20	0.20
Unionized Ammonia (UIA), mg/L	0.003	0.003	0.004	0.003	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.5	0.5	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.025	0.027	0.031	0.033	0.031	0.031
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.18	0.18	0.21	0.19	0.23	0.23
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.07	0.08	0.08	0.08
Cadmium (Cd), µg/L	0.3	0.3	0.2	0.2	0.5	0.5
Chromium (Cr), µg/L	1.3	1.3	2.1	2.1	1.3	1.3
Copper (Cu), µg/L	6.3	6.4	7.0	6.7	8.0	7.7
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	2.9	2.8	2.3	2.3	1.6	1.6
Lead (Pb), µg/L	0.5	0.5	1.3	1.3	1.2	1.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	16.8	16.0	10.4	10.6	9.0	9.4

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	VH2-a	VH2-b	VH2-a	VH2-b	KTN-a	KTN-b
Sampling Depth	M	M	B	B	M	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-93	20260-197	20260-94	20260-198	20260-96	20260-200
Suspended Solids (SS), mg/L	10.7	10.6	3.3	3.3	46.9	47.4
E. coli, cfu/100mL	1700	1700	2100	2200	130000	120000
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	0.26	0.27	0.27	0.27	0.29	0.29
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.005	0.005	0.001	0.001
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	0.4	0.4	1.0	1.0
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.038	0.037	0.030	0.031	0.121	0.125
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.17	0.16	0.20	0.20	4.26	4.01
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.67	0.66
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.07	0.07	0.67	0.66
Cadmium (Cd), µg/L	0.2	0.2	0.2	0.2	0.3	0.3
Chromium (Cr), µg/L	2.4	2.4	2.0	2.1	2.2	2.2
Copper (Cu), µg/L	7.9	7.6	7.0	7.1	6.1	6.1
Mercury (Hg), µg/L	<0.2	<0.2	0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.6	1.6	2.1	2.2	1.3	1.4
Lead (Pb), µg/L	1.2	1.2	1.5	1.5	0.9	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.7	15.8	20.2	20.6	12.3	12.3

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	JVC-a	JVC-b	JVC-a	JVC-b	WSD Intake at Tai Wan-a	WSD Intake at Tai Wan-b
Sampling Depth	S	S	B	B	N/A	N/A
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-98	20260-202	20260-100	20260-204	20260-101	20260-205
Suspended Solids (SS), mg/L	14.7	14.1	10.1	10.4	7.7	7.8
E. coli, cfu/100mL	110000	110000	6100	6300	3000	3100
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	0.47	0.48	0.26	0.27	0.25	0.25
Unionized Ammonia (UIA), mg/L	0.001	0.001	<0.001	<0.001	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.6	0.6	0.5	0.5	0.5	0.5
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.071	0.070	0.045	0.044	0.033	0.031
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	1.58	1.52	0.52	0.52	0.31	0.31
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.25	0.24	0.10	0.10	0.05	0.05
Total Phosphorous (TP), mg-P/L	0.30	0.31	0.13	0.13	0.43	0.43
Cadmium (Cd), µg/L	0.4	0.4	0.1	0.1	0.4	0.5
Chromium (Cr), µg/L	2.3	2.3	2.8	2.7	2.3	2.5
Copper (Cu), µg/L	6.8	6.5	7.6	7.7	5.7	6.0
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	3.0	3.0	2.9	3.0	1.1	1.1
Lead (Pb), µg/L	0.7	0.6	1.2	1.2	1.5	1.5
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.1	12.5	9.0	9.3	16.0	15.6

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

Results:

Sample ID	WSD Intake at Cha Kwo Ling-a	WSD Intake at Cha Kwo Ling-b	WSD Intake at Quarry Bay-a	WSD Intake at Quarry Bay-b	WSD Intake at Sai Wan Ho-a	WSD Intake at Sai Wan Ho-b
Sampling Depth	N/A	N/A	N/A	N/A	N/A	N/A
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	20260-102	20260-206	20260-103	20260-207	20260-104	20260-208
Suspended Solids (SS), mg/L	7.8	7.7	17.2	17.1	3.3	3.2
E. coli, cfu/100mL	1200	1200	3500	3600	1300	1400
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	0.14	0.15	0.25	0.23
Unionized Ammonia (UIA), mg/L	0.004	0.004	0.002	0.002	0.003	0.003
Total Kjeldahl Nitrogen (TKN), mg N/L	0.4	0.4	1.5	1.6	0.7	0.7
Nitrite-nitrogen (NO_2-N), mg NO_2^--N/L	0.039	0.040	0.028	0.026	0.028	0.028
Nitrate-nitrogen (NO_3-N), mg NO_3^--N/L	0.18	0.17	0.16	0.17	0.21	0.21
Ortho-phosphate (PO_4), mg PO_4^{3-}-P/L	0.04	0.04	0.04	0.04	0.04	0.04
Total Phosphorous (TP), mg-P/L	0.07	0.07	0.09	0.09	0.09	0.09
Cadmium (Cd), µg/L	<0.1	<0.1	0.2	0.2	0.1	0.1
Chromium (Cr), µg/L	1.3	1.4	1.7	1.7	1.3	1.4
Copper (Cu), µg/L	6.5	6.6	6.7	7.0	7.1	6.9
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.3	2.4	2.5	2.4	1.8	1.8
Lead (Pb), µg/L	0.7	0.7	0.5	0.5	1.5	1.5
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	17.9	17.8	20.9	21.0	8.3	8.0

Remarks: 1) < = less than

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

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

APPENDIX D2
RESULS FOR ODOUR PATROL SURVEY IN MAY 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
1	09:25	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (W)	1.4	(2)
2	09:43	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.9	(2)
3	09:48	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NW)	0.7	(2)
4	09:52	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	2.3	(2)
5	10:01	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)
6	10:04	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	2.6	(2)
7	09:06	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.1	(4)
8	09:32	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	0.9	(4)
9	09:27	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.7	(4)
10	09:31	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.2	(4)
11	09:33	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.2	(4)
12	09:35	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.3	(4)
13	10:01	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.5	(4)
14	09:58	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2.1	(4)
15	09:53	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	0.7	(4)
16	09:50	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.5	(4)
17	09:48	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.2	(4)
18	09:45	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.4	(4)
19	09:42	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.8	(4)
20	11:25	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
21	11:21	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.5	(4)
22	11:10	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	2.3	(4)
23	11:07	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.9	(4)
24	11:04	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.9	(4)
25	11:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NE)	1.4	(4)
26	10:59	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (NE)	1.7	(4)
27	10:51	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	2.0	(4)
28	10:42	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	4.2	(1) (4)
29	10:27	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)
30	10:31	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	1.5	(4)
31	09:47	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	5.3	(3)
32	09:43	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	0.5	(3)
33	11:29	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	2.4	(4)
34	11:43	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	3.2	(4)
35	11:48	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.5	(4)
36	09:09	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.6	(3)
37	08:43	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (NW)	4.4	(3)
38	08:46	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)
39	08:54	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	3.8	(3)
40	08:57	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.7	(3)

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

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

***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, 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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
41	13:48	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	13:32	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	Sewage	water at Kai Tak Nullah	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.9	(4)
43	13:11	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.8	(4)
44	13:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	2.0	(4)
45	12:28	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	2.2	(4)
46	12:36	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)
47	12:34	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.5	(4)
48	12:09	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)
49	11:59	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	0.5	(4)
50	12:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (S)	1.4	(4)
51	12:03	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	1.6	(4)
52	11:57	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)
53	12:11	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.3	(4)
54	12:15	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.1	(4)
55	11:25	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.1	(4)
56	12:43	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (S)	0.8	(4)
57	12:49	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)
58	12:51	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.8	(4)
59	13:30	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	Sewage	water at Kai Tak Nullah	Intermittent ~~/ Continuous~~	Downwind / ~~Upwind~~ (E)	0.6	(4)
60	13:50	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	0.2	(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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
A1	09:05	High Tide / ~~Low Tide~~	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2.6	(2)
A2	09:15	High Tide / ~~Low Tide~~	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	0.5	(2)
A3	09:17	High Tide / ~~Low Tide~~	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	1.1	(2)
A4	08:40	High Tide / ~~Low Tide~~	Sunny (Fine) Cloudy / Rainy	0 / (1) / 2 / 3 / 4	pungent smell	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.7	(2)
A5	08:52	High Tide / ~~Low Tide~~	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.9	(2)

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

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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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
1	09:25	High Tide / ~~Low Tide~~	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (W)	1.4	(2)
2	09:43	High Tide / ~~Low Tide~~	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.9	(2)
3	09:48	High Tide / ~~Low Tide~~	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NW)	0.7	(2)
4	09:52	High Tide / ~~Low Tide~~	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2.3	(2)
5	10:01	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)
6	10:04	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2.6	(2)
7	09:06	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.1	(4)
8	09:32	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	0.9	(4)
9	09:27	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	1.7	(4)
10	09:31	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.2	(4)
11	09:33	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.2	(4)
12	09:35	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.3	(4)
13	10:01	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.5	(4)
14	09:58	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	2.1	(4)
15	09:53	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	0.7	(4)
16	09:50	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.5	(4)
17	09:48	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.2	(4)
18	09:45	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.4	(4)
19	09:42	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.8	(4)
20	11:25	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	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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1 - Slight identifiable odour, and slight chance to have odour nuisance;
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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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
21	11:21	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.5	(4)
22	11:10	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	2.3	(4)
23	11:07	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.9	(4)
24	11:04	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.9	(4)
25	11:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	1.4	(4)
26	10:59	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	1.7	(4)
27	10:51	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	2.0	(4)
28	10:42	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	4.2	(1) (4)
29	10:27	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)
30	10:31	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	1.5	(4)
31	09:47	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	5.3	(3)
32	09:43	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	0.5	(3)
33	11:29	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2.4	(4)
34	11:43	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	3.2	(4)
35	11:48	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.5	(4)
36	09:09	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.6	(3)
37	08:43	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (NW)	4.4	(3)
38	08:46	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)
39	08:54	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	3.8	(3)
40	08:57	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.7	(3)

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

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

***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, 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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
41	13:48	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	13:32	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SE)	0.9	(4)
43	13:11	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	1.8	(4)
44	13:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	2.0	(4)
45	12:28	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2.2	(4)
46	12:36	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)
47	12:34	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.5	(4)
48	12:09	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	1.3	(4)
49	11:59	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (NE)	0.5	(4)
50	12:02	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (S)	1.4	(4)
51	12:03	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (SE)	1.6	(4)
52	11:57	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)
53	12:11	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	1.3	(4)
54	12:15	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	1.1	(4)
55	11:25	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	1.1	(4)
56	12:43	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (S)	0.8	(4)
57	12:49	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)
58	12:51	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	0.8	(4)
59	13:30	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	0 / (1) / 2 / 3 / 4	Sewage	water at Kai Tak Nullah	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.6	(4)
60	13:50	High Tide / ~~Low Tide~~	Sunny / Fine / (Cloudy) / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / Continuous	~~Downwind~~ / Upwind (E)	0.2	(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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
A1	09:05	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2.6	(2)
A2	09:15	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	0.5	(2)
A3	09:17	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	1.1	(2)
A4	08:40	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	pungent smell	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SW)	1.7	(2)
A5	08:52	High Tide / ~~Low Tide~~	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.9	(2)

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

0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterised or described;
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***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, 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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
1	17:22	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	0.3	(2)
2	17:31	~~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)
3	17:35	~~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)
4	17:37	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2.9	(2)
5	17:47	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (W)	1.7	(2)
6	17:50	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.3	(2)
7	20:23	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SW)	2	(4)
8	20:40	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.7	(4)
9	20:47	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.5	(4)
10	20:51	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	0.9	(4)
11	20:53	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.4	(4)
12	20:55	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.5	(4)
13	21:27	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.7	(4)
14	21:25	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water and exposed shore	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2	(4)
15	21:18	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.6	(4)
16	21:14	~~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)
17	21:08	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.4	(4)
18	21:05	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.6	(4)
19	21:03	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	2	(4)
20	21:11	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	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;
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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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
21	20:08	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.1	(4)
22	19:58	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.2	(4)
23	19:56	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.1	(4)
24	19:53	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	0.9	(4)
25	19:52	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.4	(4)
26	19:49	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.8	(4)
27	19:40	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.9	(4)
28	19:32	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	3.7	(1) (4)
29	19:20	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	0.7	(4)
30	19:16	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	0.9	(4)
31	16:04	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1	(4)
32	16:00	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.3	(4)
33	16:13	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	2.1	(4)
34	16:27	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	2	(4)
35	16:33	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	2.3	(4)
36	18:06	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.1	(4)
37	18:13	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	2.2	(4)
38	18:16	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.9	(4)
39	18:27	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 (1) / 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2.6	(4)
40	18:31	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 (1) / 2 / 3 / 4	sewage and seawater smell	marine water and exposed shore	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2.1	(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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
41	17:47	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	0.2	(4)
42	17:32	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.8	(4)
43	17:12	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.3	(4)
44	17:10	~~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)
45	22:25	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.7	(4)
46	22:17	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.9	(4)
47	22:19	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.7	(4)
48	21:53	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (S)	0.8	(4)
49	21:37	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (S)	0.5	(4)
50	21:40	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.5	(4)
51	21:41	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.9	(4)
52	21:35	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	0.2	(4)
53	21:55	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.4	(4)
54	21:59	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.2	(4)
55	22:05	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.0	(4)
56	16:42	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	0.5	(4)
57	16:48	~~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)
58	16:52	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(4)
59	17:30	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	0.9	(4)
60	17:50	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind (—)~~	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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
A1	16:29	~~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)
A2	16:40	~~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)
A3	16:44	~~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)
A4	16:00	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.2	(2)
A5	16:15	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1	(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
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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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
1	17:22	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	0.3	(2)
2	17:31	~~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)
3	17:35	~~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)
4	17:37	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	2.9	(2)
5	17:47	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	~~Downwind~~ / Upwind (W)	1.7	(2)
6	17:50	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	fishy smell	exposed shores	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.3	(2)
7	20:23	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SW)	2	(4)
8	20:40	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.7	(4)
9	20:47	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.5	(4)
10	20:51	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	0.9	(4)
11	20:53	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.4	(4)
12	20:55	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.5	(4)
13	21:27	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	1.7	(4)
14	21:25	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 (1) 2 / 3 / 4	sewage	marine water and exposed shore	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2	(4)
15	21:18	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.6	(4)
16	21:14	~~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)
17	21:08	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.4	(4)
18	21:05	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.6	(4)
19	21:03	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	2	(4)
20	21:11	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	0.9	(4)

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

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1 - Slight identifiable odour, and slight chance to have odour nuisance;
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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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
21	20:08	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.1	(4)
22	19:58	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.2	(4)
23	19:56	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.1	(4)
24	19:53	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.9	(4)
25	19:52	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.4	(4)
26	19:49	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	1.8	(4)
27	19:40	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.9	(4)
28	19:32	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	seawater smell	marine water	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	3.7	(1) (4)
29	19:20	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	0.7	(4)
30	19:16	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	0.9	(4)
31	16:04	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1	(4)
32	16:00	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.3	(4)
33	16:13	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	2.1	(4)
34	16:27	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	2	(4)
35	16:33	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	2.3	(4)
36	18:06	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (S)	1.1	(4)
37	18:13	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	2.2	(4)
38	18:16	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent~~ / ~~Continuous~~	Downwind / ~~Upwind~~ (SE)	1.9	(4)
39	18:27	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2.6	(4)
40	18:31	~~High Tide~~ / Low Tide	Sunny (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	marine water and exposed shore	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (SE)	2.1	(4)

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

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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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014

Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)

Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
A1	16:29	~~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)
A2	16:40	~~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)
A3	16:44	~~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)
A4	16:00	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	sewage treatment plant	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (S)	1.2	(2)
A5	16:15	~~High Tide~~ / Low Tide	Sunny / (Fine) / Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1	(2)

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

0 - Not detected. No odour perceived or an odour so weak that it can not be easily 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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 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: 14, 15 and 17 May 2014
Temperature: 26.9 - 30.5°C (14 May 2044), 27.2 - 31.1°C (15 May 2014) and 26.1 - 30.7°C (17 May 2014) (King's Park)
Humidity: 75 - 88% (14 May 2014), 74 - 90% (15 May 2014) and 78 - 98% (17 May 2014) (General)

Location	Time of Survey	Tidal Condition	Weather Condition	#Odour Intensity	*Odour Characteristics	**Potential Odour Sources	Duration of Odour	Wind Direction	Wind Speed	Remarks
41	17:47	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (NE)	0.2	(4)
42	17:32	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	Intermittent / ~~Continuous~~	Downwind / ~~Upwind~~ (E)	0.8	(4)
43	17:12	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.3	(4)
44	17:10	~~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)
45	22:25	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (E)	1.7	(4)
46	22:17	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	1.9	(4)
47	22:19	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (S)	1.7	(4)
48	21:53	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (S)	0.8	(4)
49	21:37	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (S)	0.5	(4)
50	21:40	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.5	(4)
51	21:41	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (SE)	0.9	(4)
52	21:35	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	0.2	(4)
53	21:55	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.4	(4)
54	21:59	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.2	(4)
55	22:05	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	1.0	(4)
56	16:42	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind~~ / Upwind (E)	0.5	(4)
57	16:48	~~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)
58	16:52	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	Downwind / ~~Upwind~~ (SE)	0.6	(4)
59	17:30	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	0 / (1) / 2 / 3 / 4	sewage	water at Kai Tak Nullah	~~Intermittent~~ / Continuous	Downwind / ~~Upwind~~ (E)	0.9	(4)
60	17:50	~~High Tide~~ / Low Tide	Sunny (Fine) Cloudy / Rainy	(0) / 1 / 2 / 3 / 4	N/A	N/A	~~Intermittent / Continuous~~	~~Downwind / Upwind (—)~~	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 14 May 2004 (3) Conducted on 15 May 2014 (4) Conducted on 17 May 2014

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

APPENDIX E
QUALITY CONTROL REPORT FOR WATER QUALITY MONITORING

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.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

ATTN: **Miss Mei Ling Tang**

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 20260

****

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

PATRICK TSE
Laboratory Manager

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

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

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 20260

****

WELLAB 匯力 Testing & Research

WELLAB LIMITED
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Website: www.wellab.com.hk

TEST REPORT

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

QC report:
Method QC

Parameter	MQC1	MQC2	MQC3	MQC4	MQC5	Acceptance
Suspended Solids (SS), %	92	91	95	92	94	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	195	199	196	195	196	170-220
Ammonia Nitrogen (NH_3-N), %	95	91	99	93	94	80-120
Unionized Ammonia (UIA)	96	93	94	97	91	N/A
Total Kjeldahl Nitrogen (TKN), %	97	96	94	93	93	80-120
Nitrite-nitrogen (NO_2-N), %	98	91	92	100	96	80-120
Nitrate-nitrogen (NO_3-N), %	98	98	96	95	96	80-120
Ortho-phosphate (PO_4), %	94	98	102	100	92	80-120
Total Phosphorous (TP), %	99	94	94	97	95	80-120
Cadmium (Cd), %	90	97	99	90	101	80-120
Chromium (Cr), %	95	92	98	96	92	80-120
Copper (Cu), %	94	94	100	96	96	80-120
Mercury (Hg), %	95	101	97	94	98	80-120
Nickel (Ni), %	97	90	90	96	95	80-120
Lead (Pb), %	100	100	99	99	96	80-120
Silver (Ag), %	95	92	95	96	95	80-120
Zinc (Zn), %	96	99	95	99	96	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 20260

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TEST REPORT

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

QC report:
Method QC

Parameter	MQC 6	MQC 7	MQC 8	MQC 9	Acceptance
Suspended Solids (SS), %	95	97	97	91	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	194	200	189	193	170-220
Ammonia Nitrogen (NH_3-N), %	96	91	99	95	80-120
Unionized Ammonia (UIA)	97	94	93	93	N/A
Total Kjeldahl Nitrogen (TKN), %	90	91	97	94	80-120
Nitrite-nitrogen (NO_2-N), %	97	100	95	99	80-120
Nitrate-nitrogen (NO_3-N), %	97	95	92	89	80-120
Ortho-phosphate (PO_4), %	91	98	100	93	80-120
Total Phosphorous (TP), %	88	92	95	93	80-120
Cadmium (Cd), %	100	93	88	95	80-120
Chromium (Cr), %	96	95	93	93	80-120
Copper (Cu), %	92	97	96	97	80-120
Mercury (Hg), %	95	100	91	93	80-120
Nickel (Ni), %	96	96	93	98	80-120
Lead (Pb), %	93	97	94	93	80-120
Silver (Ag), %	90	93	95	96	80-120
Zinc (Zn), %	100	92	101	95	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 20260

****

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TEST REPORT

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

QC report:
Sample Spike

Parameter	20260-1 spk	20260-26 spk	20260-49 spk	20260-75 spk	20260-96 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), %	94	96	94	98	92	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	99	99	93	94	99	80-120
Nitrite-nitrogen (NO_2-N), %	96	93	96	99	93	80-120
Nitrate-nitrogen (NO_3-N), %	98	94	91	91	101	80-120
Ortho-phosphate (PO_4), %	94	94	94	93	98	80-120
Total Phosphorous (TP), %	95	93	94	93	100	80-120
Cadmium (Cd), %	97	102	97	99	97	80-120
Chromium (Cr), %	94	95	90	93	95	80-120
Copper (Cu), %	94	96	94	95	94	80-120
Mercury (Hg), %	99	95	90	91	99	80-120
Nickel (Ni), %	98	98	89	90	94	80-120
Lead (Pb), %	95	91	95	101	96	80-120
Silver (Ag), %	96	93	94	96	99	80-120
Zinc (Zn), %	101	98	92	99	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 20260

****

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Website: www.wellab.com.hk

TEST REPORT

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

QC report:
Sample Spike

Parameter	20260-123 spk	20260-143 spk	20260-171 spk	20260-192 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	97	93	97	80-120
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	92	97	98	93	80-120
Nitrite-nitrogen (NO_2-N), %	94	93	91	96	80-120
Nitrate-nitrogen (NO_3-N), %	97	91	94	93	80-120
Ortho-phosphate (PO_4), %	91	94	92	101	80-120
Total Phosphorous (TP), %	94	96	93	96	80-120
Cadmium (Cd), %	98	95	100	96	80-120
Chromium (Cr), %	93	98	97	95	80-120
Copper (Cu), %	94	92	93	98	80-120
Mercury (Hg), %	90	95	94	99	80-120
Nickel (Ni), %	100	99	96	94	80-120
Lead (Pb), %	96	93	90	101	80-120
Silver (Ag), %	97	95	99	97	80-120
Zinc (Zn), %	99	98	99	96	80-120

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 20260

****

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Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

QC report:
Sample Duplicate

Parameter	20260-25 chk	20260-48 chk	20260-74 chk	20260-94 chk	20260-122 chk	Acceptance
Suspended Solids (SS)	3	4	4	3	4	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), %	7	5	4	5	4	RPD≤20
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	4	6	4	4	5	RPD≤20
Nitrite-nitrogen (NO_2-N), %	3	6	4	6	4	RPD≤20
Nitrate-nitrogen (NO_3-N), %	4	6	5	6	5	RPD≤20
Ortho-phosphate (PO_4), %	5	3	5	5	5	RPD≤20
Total Phosphorous (TP), %	5	4	5	4	4	RPD≤20
Cadmium (Cd), %	N/A	6	5	3	5	RPD≤20
Chromium (Cr), %	6	4	6	3	3	RPD≤20
Copper (Cu), %	5	7	5	7	5	RPD≤20
Mercury (Hg), %	N/A	4	6	7	5	RPD≤20
Nickel (Ni), %	4	4	7	5	6	RPD≤20
Lead (Pb), %	3	5	7	4	6	RPD≤20
Silver (Ag), %	5	N/A	N/A	N/A	N/A	RPD≤20
Zinc (Zn), %	6	5	4	3	3	RPD≤20

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 20260

****

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Website: www.wellab.com.hk

TEST REPORT

Laboratory No.:	QC20260
Date of Issue:	2014-05-22
Date Received:	2014-05-13
Date Tested:	2014-05-13
Date Completed:	2014-05-22

QC report:
Sample Duplicate

Parameter	20260-142 chk	20260-169 chk	20260-191 chk	20260-208 chk	Acceptance
Suspended Solids (SS)	4	4	3	4	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	7	3	RPD≤20
Unionized Ammonia (UIA)	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen (TKN), %	4	6	5	6	RPD≤20
Nitrite-nitrogen (NO_2-N), %	5	4	3	4	RPD≤20
Nitrate-nitrogen (NO_3-N), %	7	4	4	4	RPD≤20
Ortho-phosphate (PO_4), %	3	6	3	4	RPD≤20
Total Phosphorous (TP), %	3	5	6	7	RPD≤20
Cadmium (Cd), %	7	5	4	3	RPD≤20
Chromium (Cr), %	4	5	3	5	RPD≤20
Copper (Cu), %	3	5	4	4	RPD≤20
Mercury (Hg), %	5	3	8	N/A	RPD≤20
Nickel (Ni), %	5	5	4	4	RPD≤20
Lead (Pb), %	3	7	3	4	RPD≤20
Silver (Ag), %	N/A	N/A	5	N/A	RPD≤20
Zinc (Zn), %	5	3	3	5	RPD≤20

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 20260

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

APPENDIX F
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: **13 May 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	Rainy	Calm	11:37	23.0	7.7	7.4	62.3	5.1	19.5
			11:39	23.0	7.7	7.1	67.2	5.5	19.7
1.0	Rainy	Calm	11:37	22.4	7.6	18.3	50.2	3.9	12.1
			11:39	22.4	7.6	18.2	53.2	4.2	13.1
1.5	Rainy	Calm	11:38	22.0	7.5	27.4	46.9	3.5	6.7
			11:40	22.0	7.5	27.3	46.5	3.5	6.9
2.0	Rainy	Calm	11:38	21.8	7.5	29.1	30.5	2.3	7.3
			11:40	21.8	7.5	29.1	34.4	2.6	7.5
2.5	Rainy	Calm	11:38	21.8	7.3	29.6	27.2	2.0	9.9
			11:40	21.8	7.4	29.6	27.1	2.0	10.6
3.0	Rainy	Calm	11:38	21.8	7.2	29.9	14.9	1.1	16.9
			11:40	21.8	7.2	30.0	14.5	1.1	16.1
3.5	Rainy	Calm	11:39	21.8	7.1	30.4	18.8	1.4	21.8
			11:40	21.8	7.1	30.3	21.3	1.6	22.2
4.0	Rainy	Calm	11:39	21.8	7.1	30.4	40.1	3.0	40.6
			11:40	21.8	7.1	30.4	40.3	3.0	43.7

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	Rainy	Calm	11:37	22.4	7.6	18.3	50.2	3.9	12.1
			11:39	22.4	7.6	18.2	53.2	4.2	13.1
3.5	Rainy	Calm	11:39	21.8	7.1	30.4	18.8	1.4	21.8
			11:40	21.8	7.1	30.3	21.3	1.6	22.2

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:46	23.2	7.7	6.0	69.6	5.7	14.3
			11:49	23.2	7.6	5.9	73.5	6.1	16.1
1.0	Rainy	Calm	11:46	22.3	7.5	21.0	55.1	4.2	2.9
			11:49	22.1	7.5	21.4	52.7	4.1	3.0
1.5	Rainy	Calm	11:46	21.9	7.5	28.2	49.8	3.7	2.3
			11:49	21.9	7.5	28.4	50.6	3.8	2.2
2.0	Rainy	Calm	11:46	21.8	7.5	29.1	47.5	3.5	1.9
			11:49	21.8	7.5	29.1	47.0	3.5	2.3
2.5	Rainy	Calm	11:47	21.8	7.4	29.5	47.4	3.5	1.7
			11:49	21.8	7.4	29.6	44.9	3.3	1.9
3.0	Rainy	Calm	11:47	21.8	7.3	30.0	14.9	1.1	3.6
			11:49	21.8	7.3	29.9	15.7	1.2	3.0
3.5	Rainy	Calm	11:48	21.8	7.2	30.5	10.6	0.8	7.2
			11:50	21.8	7.1	30.6	10.9	0.8	7.5
4.0	Rainy	Calm	11:48	21.8	7.0	30.8	12.9	1.0	16.7
			11:50	21.8	7.0	30.8	12.3	0.9	17.2

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	Rainy	Calm	11:46	22.3	7.5	21.0	55.1	4.2	2.9
			11:49	22.1	7.5	21.4	52.7	4.1	3.0
3.5	Rainy	Calm	11:48	21.8	7.2	30.5	10.6	0.8	7.2
			11:50	21.8	7.1	30.6	10.9	0.8	7.5

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:28	22.8	7.6	8.0	65.8	5.4	16.1
			11:30	22.9	7.6	7.8	68.3	5.6	17.0
1.0	Rainy	Calm	11:28	22.4	7.5	20.9	66.8	5.1	12.9
			11:30	22.3	7.5	18.3	69.1	5.4	12.4
1.5	Rainy	Calm	11:29	21.9	7.5	27.5	49.9	3.7	6.7
			11:30	21.9	7.5	27.2	52.2	3.9	7.1
2.0	Rainy	Calm	11:29	21.9	7.5	28.8	44.6	3.3	5.5
			11:31	21.9	7.5	29.0	40.6	3.0	5.5
2.5	Rainy	Calm	11:29	21.8	7.4	29.4	31.1	2.3	5.3
			11:31	21.8	7.4	29.4	36.0	2.7	5.7
3.0	Rainy	Calm	11:29	21.8	7.3	29.8	17.2	1.3	6.9
			11:31	21.8	7.3	29.9	14.5	1.1	7.0
3.5	Rainy	Calm	11:29	21.8	7.2	30.2	17.0	1.3	13.2
			11:32	21.8	7.1	30.3	15.4	1.1	12.3
4.0	Rainy	Calm	11:29	21.8	6.9	30.7	28.9	2.1	21.7
			11:32	21.8	6.9	30.7	29.3	2.2	20.6
4.5	Rainy	Calm	11:30	21.8	6.9	30.6	38.7	2.8	37.0
			11:32	21.8	6.9	30.6	33.5	2.6	35.5

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	Rainy	Calm	11:28	22.4	7.5	20.9	66.8	5.1	12.9
			11:30	22.3	7.5	18.3	69.1	5.4	12.4
4.0	Rainy	Calm	11:29	21.8	6.9	30.7	28.9	2.1	21.7
			11:32	21.8	6.9	30.7	29.3	2.2	20.6

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:54	23.1	7.7	6.3	68.2	5.5	12.8
			11:56	23.2	7.6	6.3	73.1	6.0	14.0
1.0	Rainy	Calm	11:54	22.7	7.5	17.1	61.1	4.8	7.8
			11:57	22.4	7.5	19.5	64.2	5.0	6.4
1.5	Rainy	Calm	11:54	22.0	7.5	25.9	55.6	4.2	3.5
			11:57	22.0	7.5	26.0	56.1	4.2	3.5
2.0	Rainy	Calm	11:54	21.9	7.5	29.4	48.7	3.6	1.6
			11:50	21.9	7.5	29.4	47.5	3.5	1.8
2.5	Rainy	Calm	11:55	21.8	7.5	29.7	44.7	3.3	2.5
			11:50	21.8	7.5	29.6	41.6	3.1	2.4
3.0	Rainy	Calm	11:55	21.8	7.4	30.0	30.0	2.2	5.7
			11:50	21.8	7.4	30.0	30.4	2.2	6.2
3.5	Rainy	Calm	11:55	21.8	7.3	30.3	13.9	1.0	12.2
			11:50	21.8	7.3	30.3	14.5	1.1	12.8
4.0	Rainy	Calm	11:56	21.8	7.0	30.3	51.6	3.8	35.3
			11:50	21.8	6.8	30.7	52.0	3.8	31.1
4.5	Rainy	Calm	11:56	21.8	6.9	30.1	44.5	3.3	37.9
			11:51	21.8	6.9	30.5	39.1	2.9	32.1

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	Rainy	Calm	11:54	22.7	7.5	17.1	61.1	4.8	7.8
			11:57	22.4	7.5	19.5	64.2	5.0	6.4
4.0	Rainy	Calm	11:56	21.8	7.0	30.3	51.6	3.8	35.3
			11:50	21.8	6.8	30.7	52.0	3.8	31.1

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:20	22.8	7.5	12.0	56.7	4.6	14.8
			11:22	22.9	7.5	11.6	59.6	4.8	17.5
1.0	Rainy	Calm	11:20	22.3	7.5	21.9	52.1	4.0	4.9
			11:22	22.3	7.5	20.3	50.8	3.9	4.9
1.5	Rainy	Calm	11:21	22.0	7.5	25.6	47.2	3.6	3.1
			11:22	22.0	7.5	25.2	48.6	3.7	3.5
2.0	Rainy	Calm	11:21	21.9	7.5	28.4	44.4	3.3	2.0
			11:22	21.9	7.5	28.4	42.4	3.2	1.8
2.5	Rainy	Calm	11:21	21.9	7.5	29.3	28.1	2.1	3.0
			11:22	21.9	7.5	29.1	32.1	2.4	2.9
3.0	Rainy	Calm	11:21	21.8	7.4	29.8	22.2	1.6	4.7
			11:22	21.8	7.4	29.8	21.8	1.6	4.4
3.5	Rainy	Calm	11:21	21.8	7.2	30.1	16.7	1.2	11.7
			11:22	21.8	7.2	30.1	15.7	1.2	12.8
4.0	Rainy	Calm	11:21	21.8	7.0	30.2	19.3	1.4	26.0
			11:23	21.8	7.1	30.3	18.6	1.4	23.9
4.5	Rainy	Calm	11:22	21.9	7.0	30.0	18.4	1.2	35.1
			11:23	21.9	6.9	30.1	17.9	1.3	31.6

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	Rainy	Calm	11:20	22.3	7.5	21.9	52.1	4.0	4.9
			11:22	22.3	7.5	20.3	50.8	3.9	4.9
4.0	Rainy	Calm	11:21	21.8	7.0	30.2	19.3	1.4	26.0
			11:23	21.8	7.1	30.3	18.6	1.4	23.9

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:08	22.8	7.5	10.3	65.1	5.3	13.9
			11:11	22.8	7.5	10.3	66.6	5.4	14.6
1.0	Rainy	Calm	11:09	22.6	7.5	14.9	63.4	5.0	9.8
			11:11	22.6	7.5	13.7	60.4	4.8	8.6
1.5	Rainy	Calm	11:09	22.1	7.6	24.2	58.0	4.4	1.9
			11:11	22.0	7.6	25.8	57.6	4.3	1.9
2.0	Rainy	Calm	11:09	21.9	7.6	28.3	57.5	4.3	1.0
			11:11	21.9	7.6	28.7	57.7	4.3	1.2
2.5	Rainy	Calm	11:09	21.9	7.6	29.5	53.9	4.0	1.5
			11:11	21.9	7.6	29.5	50.2	3.7	1.5
3.0	Rainy	Calm	11:09	21.9	7.5	29.7	38.2	2.8	3.3
			11:11	21.9	7.5	29.8	42.4	3.1	3.2
3.5	Rainy	Calm	11:09	21.8	7.5	29.9	24.3	1.8	5.2
			11:11	21.8	7.5	29.8	23.3	1.7	4.9
4.0	Rainy	Calm	11:09	21.8	7.2	30.1	10.0	0.7	15.2
			11:12	21.8	7.3	30.1	10.6	0.8	15.2
4.5	Rainy	Calm	11:10	21.8	7.1	30.3	9.8	0.7	15.4
			11:12	21.8	7.1	30.3	9.2	0.7	17.4
5.0	Rainy	Calm	11:10	21.8	7.0	30.4	9.8	0.7	30.3
			11:12	21.8	7.0	30.4	9.5	0.7	27.0
5.5	Rainy	Calm	11:10	21.8	7.0	30.4	10.6	0.8	20.7
			11:12	21.8	7.0	30.4	11.2	0.8	24.5

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	Rainy	Calm	11:09	22.6	7.5	14.9	63.4	5.0	9.8
			11:11	22.6	7.5	13.7	60.4	4.8	8.6
3.0	Rainy	Calm	11:09	21.9	7.5	29.7	38.2	2.8	3.3
			11:11	21.9	7.5	29.8	42.4	3.1	3.2
5.0	Rainy	Calm	11:10	21.8	7.0	30.4	9.8	0.7	30.3
			11:12	21.8	7.0	30.4	9.5	0.7	27.0

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	10:55	23.1	7.6	5.4	69.9	5.8	14.7
			11:01	23.1	7.6	5.4	74.0	6.1	16.3
1.0	Rainy	Calm	10:57	22.8	7.5	15.8	65.3	5.1	5.2
			11:02	22.5	7.6	13.8	63.8	5.1	5.0
1.5	Rainy	Calm	10:57	22.2	7.6	25.2	65.2	4.9	0.8
			11:02	22.1	7.6	23.7	65.2	5.0	0.8
2.0	Rainy	Calm	10:58	22.0	7.6	28.2	64.8	4.8	1.2
			11:02	22.0	7.6	28.3	65.6	4.9	1.2
2.5	Rainy	Calm	10:58	21.9	7.6	29.1	63.7	4.7	0.7
			11:02	21.9	7.6	29.1	63.0	4.7	0.6
3.0	Rainy	Calm	10:58	21.9	7.6	29.5	59.0	4.4	0.6
			11:02	21.9	7.6	29.5	59.7	4.4	0.5
3.5	Rainy	Calm	10:58	21.8	7.6	29.7	43.6	3.2	1.8
			11:02	21.8	7.5	29.8	40.0	3.0	1.8
4.0	Rainy	Calm	10:59	21.8	7.5	29.9	32.7	2.4	3.5
			11:03	21.8	7.5	29.9	33.8	2.5	3.4
4.5	Rainy	Calm	10:59	21.8	7.3	30.2	17.9	1.3	10.1
			11:03	21.8	7.3	30.1	20.5	1.5	10.1
5.0	Rainy	Calm	11:00	21.8	7.3	30.0	13.7	1.0	14.6
			11:03	21.8	7.3	30.0	14.4	1.1	12.9
5.5	Rainy	Calm	11:00	21.8	7.2	30.3	13.2	1.0	14.8
			11:03	21.8	7.2	30.3	14.5	1.1	14.9
6.0	Rainy	Calm	11:01	21.8	7.2	30.2	17.8	1.3	16.8
			11:03	21.8	7.2	30.2	16.6	1.2	15.3
6.5	Rainy	Calm	11:01	21.8	7.2	30.2	14.8	1.1	26.4
			11:03	21.8	7.2	30.1	15.6	1.2	26.4

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	Rainy	Calm	10:57	22.8	7.5	15.8	65.3	5.1	5.2
			11:02	22.5	7.6	13.8	63.8	5.1	5.0
3.5	Rainy	Calm	10:58	21.8	7.6	29.7	43.6	3.2	1.8
			11:02	21.8	7.5	29.8	40.0	3.0	1.8
6.0	Rainy	Calm	11:01	21.8	7.2	30.2	17.8	1.3	16.8
			11:03	21.8	7.2	30.2	16.6	1.2	15.3

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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

Water Quality Monitoring Results at JVC - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	11:58	22.6	7.5	12.5	57.9	4.7	7.7
			11:59	22.3	7.5	12.5	59.6	4.8	9.1
1.0	Rainy	Calm	11:58	22.0	7.5	19.7	56.1	4.4	4.2
			11:59	22.4	7.5	19.8	55.9	4.3	4.1
1.5	Rainy	Calm	11:58	21.9	7.5	26.4	53.5	4.0	2.2
			12:00	22.0	7.5	26.4	53.1	4.0	2.3
2.0	Rainy	Calm	11:59	21.9	7.5	28.1	46.9	3.5	2.6
			12:00	21.9	7.5	28.2	48.7	3.6	2.9
2.5	Rainy	Calm	11:59	21.8	7.5	29.0	40.2	3.0	3.6
			12:00	21.9	7.5	29.1	37.0	2.7	3.6
3.0	Rainy	Calm	11:59	21.8	7.4	29.9	20.7	1.5	9.8
			12:00	21.8	7.4	29.9	21.3	1.6	8.3
3.5	Rainy	Calm	11:59	21.8	7.2	30.2	16.0	1.2	19.8
			12:00	21.8	7.2	30.2	18.5	1.4	18.2
4.0	Rainy	Calm	11:59	22.7	6.9	30.5	52.7	3.8	20.4
			12:00	21.8	7.0	30.7	54.8	4.0	20.3

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	Rainy	Calm	11:58	22.0	7.5	19.7	56.1	4.4	4.2
			11:59	22.4	7.5	19.8	55.9	4.3	4.1
3.5	Rainy	Calm	11:59	21.8	7.2	30.2	16.0	1.2	19.8
			12:00	21.8	7.2	30.2	18.5	1.4	18.2

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

Contract No. KL/2010/02
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Water Quality Monitoring Results at KT1 - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	10:41	23.1	7.5	8.4	63.0	5.1	8.0
			10:44	23.2	7.4	8.6	66.5	5.4	7.9
1.0	Rainy	Calm	10:41	22.4	7.6	19.1	63.9	5.0	1.8
			10:44	22.4	7.6	17.4	66.8	5.2	1.8
1.5	Rainy	Calm	10:42	22.1	7.6	27.3	66.9	5.0	0.7
			10:44	22.1	7.6	27.3	67.4	5.0	0.7
2.0	Rainy	Calm	10:42	22.0	7.6	28.1	68.2	5.1	0.8
			10:45	22.1	7.6	28.9	67.7	5.0	0.9
2.5	Rainy	Calm	10:42	22.0	7.6	29.4	68.3	5.0	0.9
			10:45	21.9	7.6	29.9	68.3	5.0	0.9
3.0	Rainy	Calm	10:42	21.9	7.6	30.3	67.5	5.0	1.3
			10:45	21.9	7.6	30.2	67.8	5.0	1.3
3.5	Rainy	Calm	10:42	21.8	7.6	30.7	64.6	4.7	0.9
			10:46	21.8	7.6	30.7	64.0	4.7	0.9
4.0	Rainy	Calm	10:42	21.8	7.6	30.9	63.2	4.6	0.7
			10:46	21.8	7.6	31.0	63.1	4.6	0.8
4.5	Rainy	Calm	10:42	21.7	7.6	31.2	64.1	4.7	1.2
			10:46	21.7	7.6	31.2	64.8	4.8	1.1
5.0	Rainy	Calm	10:43	21.7	7.6	31.3	66.0	4.8	0.9
			10:46	21.7	7.6	31.3	65.5	4.8	0.9
5.5	Rainy	Calm	10:43	21.7	7.6	31.5	66.5	4.9	2.1
			10:46	21.7	7.6	31.5	67.3	4.9	2.3
6.0	Rainy	Calm	10:43	21.7	7.6	31.6	66.8	4.9	2.9
			10:46	21.7	7.6	31.5	67.2	4.9	3.0
6.5	Rainy	Calm	10:43	21.7	7.6	31.6	66.6	4.9	3.5
			10:47	21.7	7.6	31.6	65.8	4.8	3.8
7.0	Rainy	Calm	10:43	21.7	7.6	31.6	65.1	4.8	7.3
			10:47	21.7	7.6	31.6	65.6	4.8	7.6
7.5	Rainy	Calm	10:44	21.7	7.6	31.6	64.6	4.7	7.6
			10:47	21.7	7.6	31.6	64.3	4.7	8.2

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	Rainy	Calm	10:41	22.4	7.6	19.1	63.9	5.0	1.8
			10:44	22.4	7.6	17.4	66.8	5.2	1.8
4.0	Rainy	Calm	10:42	21.8	7.6	30.9	63.2	4.6	0.7
			10:46	21.8	7.6	31.0	63.1	4.6	0.8
7.0	Rainy	Calm	10:43	21.7	7.6	31.6	65.1	4.8	7.3
			10:47	21.7	7.6	31.6	65.6	4.8	7.6

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at KTN - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	12:24	23.6	7.3	2.9	110.2	9.2	14.7
			12:25	23.7	7.3	2.9	110.6	9.2	14.4

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)
0.5	Rainy	Calm	12:24	23.6	7.3	2.9	110.2	9.2	14.7
			12:25	23.7	7.3	2.9	110.6	9.2	14.4

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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

Water Quality Monitoring Results at IB1 - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	9:55	21.6	7.7	30.6	66.4	4.9	2.3
			9:59	21.6	7.7	30.7	65.3	4.8	2.2
1.0	Rainy	Calm	9:56	21.6	7.7	30.9	64.5	4.8	2.1
			9:59	21.6	7.7	30.8	64.4	4.8	2.0
1.5	Rainy	Calm	9:56	21.6	7.7	31.0	64.1	4.7	1.9
			10:00	21.6	7.7	31.0	64.1	4.7	1.9
2.0	Rainy	Calm	9:56	21.4	7.7	31.1	63.8	4.7	2.0
			10:00	21.4	7.6	31.1	63.5	4.7	2.0
2.5	Rainy	Calm	9:56	21.3	7.6	31.4	63.1	4.7	2.2
			10:00	21.3	7.6	31.4	62.7	4.6	2.4
3.0	Rainy	Calm	9:57	21.3	7.6	31.5	61.5	4.5	2.3
			10:01	21.3	7.6	31.5	61.4	4.5	2.5
3.5	Rainy	Calm	9:57	21.1	7.6	31.8	60.4	4.5	2.9
			10:01	21.2	7.6	31.7	60.4	4.5	2.9
4.0	Rainy	Calm	9:57	21.2	7.6	31.8	60.1	4.4	3.1
			10:01	21.2	7.6	31.8	60.1	4.4	3.0
4.5	Rainy	Calm	9:57	21.0	7.7	32.4	60.4	4.5	3.6
			10:02	21.0	7.7	32.4	60.4	4.5	3.7
5.0	Rainy	Calm	9:58	21.1	7.7	32.4	61.1	4.5	4.3
			10:02	21.1	7.7	32.4	61.0	4.5	4.2
5.5	Rainy	Calm	9:58	21.0	7.7	32.5	61.4	4.5	4.9
			10:02	20.9	7.7	32.5	61.5	4.6	4.6

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	Rainy	Calm	9:56	21.5	7.7	30.9	64.5	4.8	2.1
			9:59	21.5	7.7	30.8	64.4	4.8	2.0
3.0	Rainy	Calm	9:57	21.3	7.6	31.5	61.5	4.5	2.3
			10:01	21.3	7.6	31.5	61.4	4.5	2.5
5.0	Rainy	Calm	9:58	21.1	7.7	32.4	61.1	4.5	4.3
			10:02	21.1	7.7	32.4	61.0	4.5	4.2

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

Contract No. KL/2010/02
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Water Quality Monitoring Results at IB2 - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	10:09	21.6	7.6	30.5	63.0	4.7	3.1
			10:12	21.6	7.6	30.9	61.1	4.5	3.1
1.0	Rainy	Calm	10:09	21.5	7.6	31.0	61.0	4.5	3.0
			10:12	21.6	7.6	31.0	60.3	4.4	2.9
1.5	Rainy	Calm	10:09	21.5	7.6	31.2	60.2	4.4	3.4
			10:13	21.5	7.6	31.2	59.8	4.4	3.5
2.0	Rainy	Calm	10:10	21.5	7.6	31.4	59.4	4.4	5.1
			10:13	21.5	7.6	31.4	59.4	4.4	5.6
2.5	Rainy	Calm	10:10	21.5	7.6	31.5	59.2	4.4	5.0
			10:13	21.5	7.6	31.5	59.2	4.4	5.0
3.0	Rainy	Calm	10:10	21.4	7.6	31.7	58.5	4.3	3.9
			10:13	21.4	7.6	31.8	57.3	4.2	4.1
3.5	Rainy	Calm	10:10	21.4	7.6	31.8	58.2	4.3	4.5
			10:13	21.3	7.6	32.1	56.9	4.2	4.4
4.0	Rainy	Calm	10:10	21.3	7.6	32.0	57.4	4.2	4.6
			10:14	21.3	7.6	32.3	56.6	4.2	5.0
4.5	Rainy	Calm	10:11	21.3	7.7	32.3	57.1	4.2	5.2
			10:14	21.3	7.6	32.4	57.6	4.2	4.9
5.0	Rainy	Calm	10:11	21.2	7.7	32.4	58.3	4.3	5.9
			10:14	21.2	7.6	32.5	58.7	4.3	5.5
5.5	Rainy	Calm	10:11	21.2	7.7	32.5	59.0	4.3	6.7
			10:14	21.2	7.6	32.5	59.1	4.3	7.0
6.0	Rainy	Calm	10:11	21.2	7.7	32.5	59.5	4.4	7.3
			10:14	21.2	7.7	32.5	59.7	4.4	7.4
6.5	Rainy	Calm	10:11	21.2	7.7	32.5	59.9	4.4	7.6
			10:14	21.2	7.7	32.6	59.8	4.4	8.1

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Rainy	Calm	10:09	21.5	7.6	31.0	61.0	4.5	3.0
			10:12	21.6	7.6	31.0	60.3	4.4	2.9
3.5	Rainy	Calm	10:10	21.4	7.6	31.8	58.2	4.3	4.5
			10:13	21.3	7.6	32.1	56.9	4.2	4.4
6.0	Rainy	Calm	10:11	21.2	7.7	32.5	59.5	4.4	7.3
			10:14	21.2	7.7	32.5	59.7	4.4	7.4

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at IB3 - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	10:42	21.9	7.6	27.4	65.9	4.9	3.0
			10:47	22.1	7.6	26.3	65.2	4.9	3.1
1.0	Rainy	Calm	10:43	21.8	7.6	28.7	63.6	4.7	2.3
			10:48	21.8	7.6	28.7	63.5	4.7	2.3
1.5	Rainy	Calm	10:44	21.7	7.6	31.0	62.9	4.6	2.1
			10:48	21.6	7.6	31.1	63.0	4.6	1.9
2.0	Rainy	Calm	10:44	21.5	7.6	31.3	61.6	4.5	1.8
			10:48	21.5	7.6	31.3	59.3	4.4	1.9
2.5	Rainy	Calm	10:44	21.5	7.6	31.7	58.8	4.3	2.0
			10:49	21.4	7.6	31.7	59.1	4.3	2.1
3.0	Rainy	Calm	10:44	21.4	7.6	31.7	58.1	4.3	2.3
			10:49	21.4	7.6	31.7	58.8	4.3	2.2
3.5	Rainy	Calm	10:45	21.4	7.7	31.8	59.1	4.3	2.3
			10:49	21.4	7.7	31.7	59.2	4.4	2.3
4.0	Rainy	Calm	10:45	21.3	7.7	32.1	59.8	4.4	2.3
			10:49	21.3	7.7	32.0	60.9	4.5	2.4
4.5	Rainy	Calm	10:45	21.3	7.7	32.2	60.8	4.5	2.3
			10:49	21.3	7.7	32.2	61.5	4.5	2.2
5.0	Rainy	Calm	10:45	21.2	7.7	32.4	64.1	4.7	2.2
			10:50	21.3	7.7	32.4	64.8	4.8	2.2
5.5	Rainy	Calm	10:45	21.2	7.7	32.7	67.2	4.9	2.1
			10:50	21.2	7.7	32.7	67.2	4.9	2.2
6.0	Rainy	Calm	10:45	21.2	7.7	32.7	69.2	5.1	2.3
			10:50	21.2	7.7	32.7	68.9	5.1	2.2
6.5	Rainy	Calm	10:46	21.2	7.7	32.8	69.2	5.1	2.2
			10:50	21.2	7.7	32.8	69.4	5.1	2.2
7.0	Rainy	Calm	10:46	21.1	7.7	32.8	69.6	5.1	2.4
			10:50	21.1	7.7	32.8	69.4	5.1	2.5
7.5	Rainy	Calm	10:46	21.1	7.7	32.9	69.5	5.1	2.4
			10:51	21.1	7.7	32.9	69.5	5.1	2.4
8.0	Rainy	Calm	10:46	21.1	7.7	32.9	68.6	5.0	3.3
			10:51	21.1	7.7	32.9	68.4	5.0	3.2
8.5	Rainy	Calm	10:46	21.1	7.7	33.0	67.9	5.0	5.5
			10:51	21.1	7.7	33.0	68.0	5.0	5.4

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	Rainy	Calm	10:43	21.8	7.6	28.7	63.6	4.7	2.3
			10:48	21.8	7.6	28.7	63.5	4.7	2.3
4.5	Rainy	Calm	10:45	21.3	7.7	32.2	60.8	4.5	2.3
			10:49	21.3	7.7	32.2	61.5	4.5	2.2
8.0	Rainy	Calm	10:46	21.1	7.7	32.9	68.6	5.0	3.3
			10:51	21.1	7.7	32.9	68.4	5.0	3.2

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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

Water Quality Monitoring Results at OB1 - Mid-Ebb Tide

Sampling Date: 13 May 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	Rainy	Calm	10:26	21.7	7.7	30.3	72.0	5.3	1.7
			10:29	21.6	7.7	30.5	68.7	5.1	2.0
1.0	Rainy	Calm	10:26	21.6	7.7	30.3	69.8	5.2	1.8
			10:29	21.6	7.6	30.6	67.9	5.0	2.0
1.5	Rainy	Calm	10:26	21.6	7.7	30.5	69.4	5.1	1.8
			10:29	21.6	7.6	30.8	67.6	5.0	1.9
2.0	Rainy	Calm	10:26	21.5	7.7	30.9	68.4	5.0	1.9
			10:29	21.5	7.6	31.1	67.5	5.0	2.1
2.5	Rainy	Calm	10:27	21.5	7.7	31.1	67.6	5.0	1.9
			10:30	21.6	7.7	31.3	65.9	4.9	2.1
3.0	Rainy	Calm	10:27	21.5	7.7	31.2	66.6	4.9	2.0
			10:30	21.4	7.7	31.5	65.5	4.8	2.2
3.5	Rainy	Calm	10:27	21.4	7.7	31.5	65.4	4.8	2.6
			10:30	21.4	7.7	31.6	65.7	4.8	2.3
4.0	Rainy	Calm	10:27	21.4	7.7	31.6	65.3	4.8	2.5
			10:30	21.4	7.7	31.7	65.2	4.8	2.6
4.5	Rainy	Calm	10:27	21.4	7.7	31.7	65.1	4.8	2.6
			10:30	21.4	7.7	31.8	65.4	4.8	2.6
5.0	Rainy	Calm	10:27	21.4	7.7	31.8	65.0	4.8	2.6
			10:30	21.4	7.7	31.9	64.8	4.8	2.4
5.5	Rainy	Calm	10:28	21.4	7.7	32.0	65.1	4.8	2.5
			10:31	21.3	7.7	32.0	64.9	4.8	2.3
6.0	Rainy	Calm	10:28	21.3	7.7	32.1	64.7	4.8	2.6
			10:31	21.3	7.7	32.2	64.9	4.8	2.6
6.5	Rainy	Calm	10:28	21.3	7.7	32.1	64.9	4.8	3.2
			10:31	21.3	7.7	32.2	65.0	4.8	2.9
7.0	Rainy	Calm	10:28	21.3	7.7	32.1	64.8	4.8	3.8
			10:31	21.3	7.7	32.2	65.1	4.8	3.5
7.5	Rainy	Calm	10:28	21.3	7.7	32.1	64.9	4.8	4.2
			10:31	21.3	7.7	32.2	65.1	4.8	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	Rainy	Calm	10:26	21.6	7.7	30.3	69.8	5.2	1.8
			10:29	21.6	7.6	30.6	67.9	5.0	2.0
4.0	Rainy	Calm	10:27	21.4	7.7	31.6	65.3	4.8	2.5
			10:30	21.4	7.7	31.7	65.2	4.8	2.6
7.0	Rainy	Calm	10:28	21.3	7.7	32.1	64.8	4.8	3.8
			10:31	21.3	7.7	32.2	65.1	4.8	3.5

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:25	21.8	7.7	30.8	72.6	5.3	2.0
			11:33	21.7	7.7	30.9	71.5	5.3	2.1
1.0	Rainy	Calm	11:25	21.7	7.7	31.0	69.4	5.1	2.2
			11:34	21.7	7.7	31.0	68.2	5.0	2.3
1.5	Rainy	Calm	11:25	21.7	7.7	30.9	67.7	5.0	2.1
			11:34	21.7	7.7	30.9	68.1	5.0	2.1
2.0	Rainy	Calm	11:25	21.7	7.6	31.1	67.9	5.0	2.4
			11:34	21.6	7.6	31.1	67.7	5.0	2.6
2.5	Rainy	Calm	11:26	21.6	7.6	31.2	65.7	4.8	2.7
			11:34	21.6	7.6	31.2	65.2	4.8	2.7
3.0	Rainy	Calm	11:26	21.6	7.6	31.2	63.2	4.6	2.9
			11:34	21.6	7.6	31.2	63.2	4.6	2.9
3.5	Rainy	Calm	11:26	21.6	7.6	31.2	63.2	4.6	2.9
			11:34	21.6	7.6	31.3	62.2	4.6	3.2
4.0	Rainy	Calm	11:26	21.6	7.6	31.3	62.3	4.6	3.1
			11:35	21.6	7.6	31.3	61.3	4.5	3.2
4.5	Rainy	Calm	11:26	21.6	7.6	31.3	62.2	4.6	3.2
			11:35	21.6	7.6	31.3	60.7	4.5	3.5
5.0	Rainy	Calm	11:27	21.6	7.6	31.3	61.4	4.5	3.2
			11:35	21.6	7.6	31.3	60.3	4.4	3.2
5.5	Rainy	Calm	11:27	21.6	7.6	31.3	61.3	4.5	3.2
			11:35	21.6	7.6	31.4	60.0	4.4	3.5
6.0	Rainy	Calm	11:27	21.6	7.6	31.3	60.7	4.5	3.2
			11:36	21.5	7.6	31.5	59.9	4.4	4.0
6.5	Rainy	Calm	11:27	21.6	7.6	31.3	60.7	4.5	3.5
			11:36	21.5	7.6	31.6	59.4	4.4	4.1
7.0	Rainy	Calm	11:28	21.6	7.6	31.4	60.3	4.4	3.3
			11:36	21.5	7.6	31.6	59.0	4.3	4.0
7.5	Rainy	Calm	11:28	21.6	7.6	31.3	60.3	4.4	3.2
			11:36	21.5	7.6	31.7	58.8	4.3	3.4
8.0	Rainy	Calm	11:28	21.6	7.6	31.4	60.0	4.4	4.3
			11:36	21.4	7.6	31.8	58.7	4.3	4.7
8.5	Rainy	Calm	11:28	21.6	7.6	31.4	60.0	4.4	3.5
			11:36	21.4	7.6	31.9	58.7	4.3	3.7
9.0	Rainy	Calm	11:28	21.5	7.6	31.4	59.9	4.4	4.7
			11:37	21.4	7.8	32.0	58.6	4.3	4.8
9.5	Rainy	Calm	11:28	21.5	7.6	31.5	59.9	4.4	4.0
			11:37	21.3	7.7	32.5	60.1	4.4	3.9
10.0	Rainy	Calm	11:29	21.5	7.6	31.6	59.5	4.4	4.0
			11:37	21.3	7.7	32.5	59.6	4.4	4.2
10.5	Rainy	Calm	11:29	21.5	7.6	31.6	59.4	4.4	4.1
			11:37	21.3	7.7	32.5	59.6	4.4	4.1

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 VH1 - Mid-Ebb Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.5m

11.0	Rainy	Calm	11:29	21.5	7.6	31.6	59.1	4.3	4.0
			11:37	21.3	7.7	32.6	59.7	4.4	4.4
11.5	Rainy	Calm	11:29	21.5	7.6	31.6	59.0	4.3	4.0
			11:37	21.2	7.7	32.6	59.8	4.4	4.6
12.0	Rainy	Calm	11:29	21.5	7.6	31.7	58.8	4.3	4.2
			11:37	21.2	7.7	32.6	59.8	4.4	4.6
12.5	Rainy	Calm	11:29	21.5	7.6	31.7	58.8	4.3	4.3
			11:38	21.2	7.7	32.6	59.9	4.4	4.5
13.0	Rainy	Calm	11:29	21.4	7.6	31.8	58.7	4.3	4.6
			11:38	21.2	7.7	32.6	59.9	4.4	4.6
13.5	Rainy	Calm	11:30	21.4	7.6	31.8	58.7	4.3	4.7
			11:38	21.2	7.7	32.7	60.5	4.4	4.4
14.0	Rainy	Calm	11:30	21.4	7.6	31.9	58.6	4.3	4.6
			11:38	21.2	7.7	32.7	60.5	4.4	4.4
14.5	Rainy	Calm	11:30	21.4	7.6	31.9	58.7	4.3	4.7
			11:38	21.2	7.7	32.7	60.5	4.4	4.4
15.0	Rainy	Calm	11:30	21.4	7.6	32.0	58.4	4.3	4.8
			11:38	21.2	7.7	32.7	60.5	4.4	4.4
15.5	Rainy	Calm	11:30	21.4	7.6	32.0	58.6	4.3	4.8
			11:38	21.2	7.7	32.7	60.7	4.5	4.5
16.0	Rainy	Calm	11:30	21.4	7.6	32.1	57.8	4.2	5.1
			11:38	21.2	7.7	32.7	60.9	4.5	4.6
16.5	Rainy	Calm	11:31	21.3	7.7	32.5	60.1	4.4	5.2
			11:39	21.2	7.7	32.7	60.9	4.5	5.3
17.0	Rainy	Calm	11:31	21.3	7.7	32.4	59.7	4.4	5.3
			11:39	21.2	7.7	32.7	60.9	4.5	5.4
17.5	Rainy	Calm	11:31	21.3	7.7	32.5	59.6	4.4	6.2
			11:39	21.2	7.7	32.7	61.0	4.5	5.4
18.0	Rainy	Calm	11:31	21.3	7.7	32.5	59.6	4.4	6.1
			11:39	21.2	7.7	32.7	60.9	4.5	5.3
18.5	Rainy	Calm	11:31	21.3	7.7	32.5	59.6	4.4	6.1
			11:39	21.2	7.7	32.7	61.0	4.5	5.6
19.0	Rainy	Calm	11:31	21.3	7.7	32.5	59.7	4.4	6.3
			11:39	21.2	7.7	32.8	61.0	4.5	5.4
19.5	Rainy	Calm	11:32	21.3	7.7	32.6	59.7	4.4	6.4
			11:40	21.2	7.7	32.8	61.8	4.5	5.8
20.0	Rainy	Calm	11:32	21.2	7.7	32.6	59.7	4.4	6.6
			11:40	21.2	7.7	32.8	61.8	4.5	6.1
20.5	Rainy	Calm	11:32	21.2	7.7	32.6	59.8	4.4	7.6
			11:40	21.2	7.7	32.8	60.0	4.4	6.7
21.0	Rainy	Calm	11:32	21.2	7.7	32.6	59.9	4.4	7.6
			11:40	21.2	7.7	32.8	60.0	4.4	7.0

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-Ebb Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.5m

21.5	Rainy	Calm	11:32	21.2	7.7	32.6	59.9	4.4	7.5
			11:40	21.2	7.7	32.8	60.7	4.5	6.8
22.0	Rainy	Calm	11:32	21.2	7.7	32.7	60.3	4.4	7.4
			11:40	21.2	7.7	32.8	60.7	4.5	7.5
22.5	Rainy	Calm	11:32	21.2	7.7	32.7	60.3	4.4	7.3
			11:40	21.2	7.7	32.8	61.1	4.5	7.5

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	Rainy	Calm	11:25	21.7	7.7	31.0	69.4	5.1	2.2
			11:34	21.7	7.7	31.0	68.2	5.0	2.3
11.5	Rainy	Calm	11:29	21.5	7.6	31.6	59.0	4.3	4.0
			11:37	21.2	7.7	32.6	59.8	4.4	4.6
22.0	Rainy	Calm	11:32	21.2	7.7	32.7	60.3	4.4	7.4
			11:40	21.2	7.7	32.8	60.7	4.5	7.5

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	12:11	21.7	7.6	31.0	65.8	4.8	3.8
			12:18	21.7	7.6	31.0	65.2	4.8	3.8
1.0	Rainy	Calm	12:12	21.5	7.6	31.5	64.3	4.7	3.5
			12:18	21.5	7.6	31.6	64.7	4.8	3.5
1.5	Rainy	Calm	12:12	21.4	7.6	31.8	62.4	4.6	3.5
			12:18	21.4	7.6	31.9	62.1	4.6	3.4
2.0	Rainy	Calm	12:12	21.4	7.6	31.9	60.9	4.5	3.8
			12:19	21.4	7.6	31.9	60.9	4.5	3.8
2.5	Rainy	Calm	12:12	21.4	7.6	31.9	60.3	4.4	4.0
			12:19	21.4	7.6	31.9	60.3	4.4	3.9
3.0	Rainy	Calm	12:12	21.4	7.6	32.0	60.1	4.4	3.9
			12:19	21.4	7.6	32.0	60.1	4.4	3.8
3.5	Rainy	Calm	12:13	21.4	7.6	32.0	59.9	4.4	3.9
			12:19	21.4	7.6	32.0	59.7	4.4	3.8
4.0	Rainy	Calm	12:13	21.4	7.6	32.0	59.8	4.4	3.6
			12:19	21.4	7.6	32.0	60.1	4.4	3.7
4.5	Rainy	Calm	12:13	21.4	7.6	32.0	59.8	4.4	3.9
			12:20	21.4	7.6	32.0	59.9	4.4	3.8
5.0	Rainy	Calm	12:13	21.4	7.6	32.0	59.9	4.4	4.0
			12:20	21.4	7.6	32.0	59.9	4.4	3.7
5.5	Rainy	Calm	12:14	21.4	7.6	32.0	59.9	4.4	3.6
			12:20	21.4	7.6	32.0	59.8	4.4	3.7
6.0	Rainy	Calm	12:14	21.4	7.6	32.0	59.8	4.4	3.6
			12:20	21.4	7.6	32.0	59.9	4.4	3.8
6.5	Rainy	Calm	12:14	21.4	7.6	32.0	60.0	4.4	3.9
			12:21	21.4	7.6	32.0	60.0	4.4	4.1
7.0	Rainy	Calm	12:14	21.4	7.6	32.0	59.9	4.4	4.0
			12:21	21.4	7.6	32.0	61.2	4.5	4.0
7.5	Rainy	Calm	12:14	21.4	7.6	32.0	59.8	4.4	4.1
			12:21	21.4	7.6	32.0	59.8	4.4	4.2
8.0	Rainy	Calm	12:14	21.4	7.6	32.0	59.9	4.4	4.3
			12:21	21.4	7.6	32.0	59.9	4.4	4.3
8.5	Rainy	Calm	12:15	21.4	7.6	32.0	60.0	4.4	4.1
			12:21	21.4	7.6	32.0	60.0	4.4	4.1
9.0	Rainy	Calm	12:15	21.4	7.6	32.0	60.0	4.4	4.0
			12:21	21.4	7.6	32.0	59.9	4.4	4.3
9.5	Rainy	Calm	12:15	21.4	7.6	32.0	59.9	4.4	4.0
			12:22	21.4	7.6	32.0	60.1	4.4	3.9
10.0	Rainy	Calm	12:15	21.4	7.6	32.0	60.1	4.4	3.9
			12:22	21.4	7.6	32.0	60.1	4.4	4.0
10.5	Rainy	Calm	12:15	21.4	7.6	32.0	60.1	4.4	4.0
			12:22	21.4	7.6	32.0	60.0	4.4	4.4

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: 13 May 2014

Secchi Disc Depth: 2.0m

11.0	Rainy	Calm	12:15	21.4	7.6	32.1	60.0	4.4	4.4
			12:22	21.4	7.6	32.1	60.1	4.4	4.4
11.5	Rainy	Calm	12:15	21.4	7.6	32.1	60.1	4.4	4.4
			12:22	21.4	7.6	32.1	60.1	4.4	4.4
12.0	Rainy	Calm	12:16	21.4	7.6	32.1	60.1	4.4	4.3
			12:22	21.4	7.6	32.1	60.2	4.4	4.1
12.5	Rainy	Calm	12:16	21.4	7.6	32.1	60.1	4.4	4.1
			12:22	21.4	7.6	32.1	60.2	4.4	4.3
13.0	Rainy	Calm	12:16	21.4	7.6	32.2	60.2	4.4	4.2
			12:23	21.4	7.6	32.2	60.2	4.4	4.1
13.5	Rainy	Calm	12:16	21.3	7.6	32.3	60.4	4.4	3.9
			12:23	21.3	7.6	32.3	60.4	4.4	4.1
14.0	Rainy	Calm	12:16	21.3	7.6	32.4	60.8	4.5	4.3
			12:23	21.3	7.6	32.4	60.8	4.5	4.5
14.5	Rainy	Calm	12:16	21.3	7.6	32.3	61.1	4.5	4.7
			12:23	21.3	7.6	32.3	61.1	4.5	4.6
15.0	Rainy	Calm	12:17	21.3	7.6	32.3	61.1	4.5	4.7
			12:23	21.3	7.6	32.3	61.1	4.5	4.5
15.5	Rainy	Calm	12:17	21.3	7.6	32.4	61.2	4.5	4.5
			12:24	21.3	7.6	32.4	61.2	4.5	4.4
16.0	Rainy	Calm	12:17	21.3	7.6	32.5	61.2	4.5	4.2
			12:24	21.3	7.6	32.6	61.4	4.5	4.4
16.5	Rainy	Calm	12:17	21.2	7.7	32.8	61.8	4.5	4.3
			12:24	21.2	7.7	32.9	61.9	4.5	4.5

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	Rainy	Calm	12:12	21.5	7.6	31.5	64.3	4.7	3.5
			12:18	21.5	7.6	31.6	64.7	4.8	3.5
8.5	Rainy	Calm	12:15	21.4	7.6	32.0	60.0	4.4	4.1
			12:21	21.4	7.6	32.0	60.0	4.4	4.1
16.0	Rainy	Calm	12:17	21.3	7.6	32.5	61.2	4.5	4.2
			12:24	21.3	7.6	32.6	61.4	4.5	4.4

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 2014

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Rainy	Calm	10:20	22.2	7.7	26.4	77.0	5.8	5.4
			10:28	22.2	7.7	26.5	77.3	5.8	4.9
1.0	Rainy	Calm	10:21	22.2	7.7	26.6	76.8	5.7	4.3
			10:28	22.2	7.7	26.6	76.8	5.7	4.3
1.5	Rainy	Calm	10:21	22.2	7.7	27.9	76.2	5.7	3.3
			10:28	22.2	7.7	27.7	76.7	5.7	3.5
2.0	Rainy	Calm	10:21	22.1	7.7	28.5	75.6	5.6	2.6
			10:28	22.1	7.7	28.6	76.0	5.6	2.6
2.5	Rainy	Calm	10:21	22.1	7.7	28.8	75.6	5.6	3.0
			10:28	22.1	7.7	28.8	75.8	5.6	3.0
3.0	Rainy	Calm	10:21	22.1	7.7	29.2	76.2	5.6	3.0
			10:28	22.1	7.7	29.2	76.0	5.6	3.0
3.5	Rainy	Calm	10:22	22.1	7.7	29.3	76.4	5.6	2.5
			10:29	22.0	7.7	29.4	76.6	5.6	2.7
4.0	Rainy	Calm	10:22	22.0	7.7	29.6	75.4	5.6	2.4
			10:29	22.0	7.7	29.6	75.1	5.5	2.9
4.5	Rainy	Calm	10:22	22.0	7.7	29.7	75.8	5.6	2.8
			10:29	22.0	7.7	29.6	75.9	5.6	2.6
5.0	Rainy	Calm	10:23	22.0	7.7	29.7	76.8	5.7	2.7
			10:30	22.0	7.7	29.7	76.7	5.6	2.9
5.5	Rainy	Calm	10:23	22.0	7.7	29.8	77.1	5.7	2.7
			10:30	22.0	7.7	29.7	76.8	5.7	2.8
6.0	Rainy	Calm	10:23	22.0	7.7	29.9	76.7	5.6	2.9
			10:30	22.0	7.7	29.9	76.6	5.6	2.6
6.5	Rainy	Calm	10:25	22.0	7.7	30.1	76.9	5.7	1.4
			10:30	22.0	7.7	30.1	77.0	5.7	1.7
7.0	Rainy	Calm	10:25	21.9	7.7	30.1	77.0	5.7	2.1
			10:30	22.0	7.7	30.1	76.6	5.6	2.1
7.5	Rainy	Calm	10:25	21.9	7.7	30.0	76.7	5.6	3.1
			10:30	21.9	7.7	30.0	77.1	5.7	3.3
8.0	Rainy	Calm	10:26	21.9	7.7	30.1	77.7	5.7	3.1
			10:31	21.9	7.7	30.1	77.5	5.7	3.2
8.5	Rainy	Calm	10:26	21.9	7.7	30.2	78.6	5.8	4.4
			10:31	21.9	7.7	30.2	78.9	5.8	4.1
9.0	Rainy	Calm	10:26	21.8	7.7	30.6	80.6	5.9	10.9
			10:31	21.8	7.7	30.6	80.1	5.9	10.3
9.5	Rainy	Calm	10:27	21.8	7.7	30.6	81.2	6.0	15.9
			10:32	21.8	7.7	30.5	81.8	6.0	14.5

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)
5.0	Rainy	Calm	10:23	22.0	7.7	29.7	76.8	5.7	2.7
			10:30	22.0	7.7	29.7	76.7	5.6	2.9

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	11:01	21.5	7.7	31.4	64.7	4.8	1.7
			11:07	21.5	7.7	31.4	64.1	4.7	1.7
1.0	Rainy	Calm	11:02	21.6	7.7	31.2	61.9	4.6	1.6
			11:08	21.6	7.7	31.2	61.8	4.5	1.6
1.5	Rainy	Calm	11:02	21.5	7.7	31.3	61.5	4.5	1.6
			11:08	21.5	7.7	31.3	61.5	4.5	1.5
2.0	Rainy	Calm	11:02	21.5	7.7	31.4	61.0	4.5	1.6
			11:08	21.5	7.6	31.4	61.4	4.5	1.6
2.5	Rainy	Calm	11:02	21.5	7.6	31.5	60.7	4.5	1.5
			11:08	21.5	7.6	31.5	60.7	4.5	1.6
3.0	Rainy	Calm	11:02	21.5	7.7	31.7	60.6	4.5	1.9
			11:08	21.4	7.7	31.7	60.6	4.5	1.9
3.5	Rainy	Calm	11:03	21.4	7.7	31.7	60.8	4.5	1.9
			11:09	21.4	7.7	31.7	61.0	4.5	1.9
4.0	Rainy	Calm	11:03	21.4	7.7	31.8	61.0	4.5	2.1
			11:09	21.4	7.7	31.8	61.1	4.5	2.1
4.5	Rainy	Calm	11:03	21.4	7.7	31.8	61.5	4.5	2.0
			11:09	21.4	7.7	31.8	61.2	4.5	2.1
5.0	Rainy	Calm	11:03	21.4	7.7	32.1	62.7	4.6	2.6
			11:09	21.4	7.6	32.1	63.0	4.6	2.8
5.5	Rainy	Calm	11:03	21.4	7.6	32.1	61.6	4.5	3.1
			11:09	21.4	7.6	32.1	61.1	4.5	3.3
6.0	Rainy	Calm	11:04	21.4	7.6	32.2	59.7	4.4	3.7
			11:10	21.4	7.6	32.2	59.5	4.4	3.7
6.5	Rainy	Calm	11:04	21.3	7.6	32.2	59.4	4.4	3.5
			11:10	21.3	7.6	32.2	59.8	4.4	3.7
7.0	Rainy	Calm	11:04	21.3	7.7	32.2	59.4	4.4	3.8
			11:10	21.3	7.7	32.2	59.8	4.4	3.6
7.5	Rainy	Calm	11:04	21.3	7.7	32.3	60.1	4.4	3.7
			11:10	21.3	7.7	32.3	60.2	4.4	3.9
8.0	Rainy	Calm	11:04	21.3	7.7	32.3	61.3	4.5	3.4
			11:10	21.3	7.7	32.3	61.7	4.5	3.8
8.5	Rainy	Calm	11:05	21.3	7.7	32.3	61.9	4.5	3.7
			11:11	21.3	7.7	32.3	62.0	4.6	4.0
9.0	Rainy	Calm	11:05	21.3	7.7	32.3	62.3	4.6	3.9
			11:11	21.3	7.7	32.3	62.4	4.6	4.1
9.5	Rainy	Calm	11:05	21.3	7.7	32.4	62.3	4.6	3.7
			11:11	21.3	7.7	32.4	62.3	4.6	3.6
10.0	Rainy	Calm	11:05	21.3	7.7	32.5	62.6	4.6	3.5
			11:11	21.3	7.7	32.4	62.7	4.6	3.5
10.5	Rainy	Calm	11:05	21.3	7.7	32.5	62.6	4.6	3.7
			11:11	21.3	7.7	32.5	62.4	4.6	3.6

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: 13 May 2014

Secchi Disc Depth: 1.5m

11.0	Rainy	Calm	11:05	21.3	7.7	32.5	62.4	4.6	4.0
			11:12	21.3	7.7	32.5	62.8	4.6	4.1
11.5	Rainy	Calm	11:06	21.3	7.7	32.5	63.1	4.6	3.9
			11:12	21.3	7.7	32.5	63.1	4.6	3.8
12.0	Rainy	Calm	11:06	21.2	7.7	32.5	63.4	4.7	3.6
			11:12	21.2	7.7	32.5	63.4	4.7	3.4
12.5	Rainy	Calm	11:08	21.2	7.7	32.6	63.8	4.7	3.2
			11:12	21.2	7.7	32.6	63.8	4.7	4.0

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
6.5	Rainy	Calm	11:04	21.3	7.6	32.2	59.4	4.4	3.5
			11:10	21.3	7.6	32.2	59.8	4.4	3.7

	Name	Signature	Date
Conducted by:	Lee Man Hei	hei	**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 2014

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Rainy	Calm	11:53	21.5	7.8	29.9	63.7	4.7	4.1
			11:58	21.5	7.8	29.7	63.4	4.7	4.2
1.0	Rainy	Calm	11:53	21.5	7.8	30.3	62.6	4.6	4.1
			11:58	21.5	7.8	30.4	62.2	4.6	4.0
1.5	Rainy	Calm	11:54	21.4	7.7	31.0	61.1	4.5	4.1
			11:59	21.5	7.7	30.9	60.6	4.5	4.0
2.0	Rainy	Calm	11:54	21.4	7.7	31.4	59.7	4.4	3.9
			11:59	21.4	7.7	31.6	59.4	4.4	3.8
2.5	Rainy	Calm	11:54	21.3	7.7	31.8	58.9	4.3	3.8
			11:59	21.3	7.7	31.8	58.9	4.3	3.8
3.0	Rainy	Calm	11:54	21.3	7.7	32.0	58.2	4.3	3.9
			11:59	21.3	7.7	32.0	58.9	4.3	3.8
3.5	Rainy	Calm	11:55	21.3	7.7	32.1	59.3	4.4	3.7
			12:00	21.3	7.7	32.1	59.5	4.4	4.0
4.0	Rainy	Calm	11:55	21.3	7.7	32.1	59.6	4.4	4.2
			12:00	21.3	7.7	32.1	59.6	4.4	4.2
4.5	Rainy	Calm	11:55	21.3	7.7	32.1	59.9	4.4	4.0
			12:00	21.3	7.7	32.2	59.8	4.4	4.0
5.0	Rainy	Calm	11:55	21.3	7.7	32.3	60.5	4.4	3.7
			12:00	21.3	7.7	32.3	61.3	4.5	4.1
5.5	Rainy	Calm	11:55	21.3	7.7	32.2	59.8	4.4	4.0
			12:01	21.3	7.7	32.4	60.9	4.5	4.3
6.0	Rainy	Calm	11:55	21.3	7.7	32.3	60.5	4.4	3.7
			12:01	21.2	7.7	32.6	61.2	4.5	4.2
6.5	Rainy	Calm	11:56	21.3	7.7	32.4	60.8	4.5	4.2
			12:01	21.2	7.7	32.7	61.5	4.5	4.2
7.0	Rainy	Calm	11:56	21.2	7.7	32.6	60.5	4.4	4.2
			12:01	21.2	7.7	32.8	61.2	4.5	4.4
7.5	Rainy	Calm	11:56	21.2	7.7	32.7	61.2	4.5	4.1
			12:01	21.2	7.7	32.8	62.5	4.6	4.5
8.0	Rainy	Calm	11:56	21.2	7.7	32.8	62.0	4.6	4.4
			12:01	21.2	7.7	32.9	61.9	4.5	5.3
8.5	Rainy	Calm	11:56	21.2	7.7	32.8	61.2	4.5	4.5
			12:02	21.2	7.7	32.9	62.0	4.6	5.3
9.0	Rainy	Calm	11:57	21.2	7.7	32.8	62.5	4.6	4.5
			12:02	21.2	7.7	32.9	62.3	4.6	5.2
9.5	Rainy	Calm	11:57	21.2	7.7	32.8	61.2	4.5	4.9
			12:02	21.1	7.7	33.0	62.7	4.6	4.6
10.0	Rainy	Calm	11:57	21.2	7.7	32.9	62.0	4.6	5.4
			12:02	21.1	7.7	33.0	62.7	4.6	4.6
10.5	Rainy	Calm	11:57	21.2	7.7	32.9	62.3	4.6	5.0
			12:02	21.1	7.7	33.0	63.3	4.6	4.7

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 Quarry Bay - Mid-Ebb Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.0m

11.0	Rainy	Calm	11:57	21.1	7.7	33.0	62.7	4.6	4.8
			12:02	21.1	7.7	33.0	63.3	4.6	4.7
11.5	Rainy	Calm	11:57	21.1	7.7	33.0	63.0	4.6	5.0
			12:03	21.1	7.7	33.1	64.4	4.7	4.6
12.0	Rainy	Calm	11:58	21.1	7.7	33.1	63.2	4.6	4.4
			12:03	21.1	7.7	33.1	64.4	4.7	4.8
12.5	Rainy	Calm	11:58	21.1	7.7	33.0	63.3	4.6	4.7
			12:03	21.1	7.7	33.0	63.3	4.6	4.8

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)
6.5	Rainy	Calm	11:56	21.3	7.7	32.4	60.8	4.5	4.2
			12:01	21.2	7.7	32.7	61.5	4.5	4.2

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	12:35	21.8	7.7	29.0	75.9	5.6	4.6
			12:42	21.8	7.7	29.0	74.0	5.5	4.6
1.0	Rainy	Calm	12:35	21.8	7.7	29.1	71.5	5.3	4.7
			12:42	21.8	7.7	29.2	70.7	5.2	4.8
1.5	Rainy	Calm	12:35	21.7	7.7	29.5	68.3	5.1	4.4
			12:42	21.7	7.7	29.5	68.1	5.0	4.4
2.0	Rainy	Calm	12:35	21.6	7.7	30.2	67.5	5.0	4.1
			12:42	21.6	7.7	30.2	67.1	5.0	4.0
2.5	Rainy	Calm	12:36	21.6	7.7	30.5	65.9	4.9	4.1
			12:43	21.6	7.7	30.5	65.7	4.9	4.0
3.0	Rainy	Calm	12:36	21.6	7.6	30.5	65.0	4.8	3.9
			12:43	21.6	7.6	30.5	64.7	4.8	3.8
3.5	Rainy	Calm	12:36	21.5	7.6	30.6	64.4	4.8	4.1
			12:43	21.5	7.6	30.7	64.4	4.8	4.3
4.0	Rainy	Calm	12:36	21.5	7.6	30.7	64.1	4.7	3.9
			12:43	21.5	7.6	30.7	64.0	4.7	3.7
4.5	Rainy	Calm	12:37	21.5	7.6	30.8	63.7	4.7	3.6
			12:44	21.5	7.6	30.8	64.0	4.7	3.5
5.0	Rainy	Calm	12:37	21.5	7.6	31.0	63.6	4.7	3.5
			12:44	21.5	7.6	31.0	63.3	4.7	3.5
5.5	Rainy	Calm	12:37	21.4	7.6	31.3	63.0	4.6	3.4
			12:44	21.4	7.6	31.3	63.0	4.6	3.4
6.0	Rainy	Calm	12:37	21.4	7.6	31.4	62.9	4.6	3.2
			12:44	21.4	7.6	31.4	63.0	4.6	3.2
6.5	Rainy	Calm	12:38	21.4	7.6	31.5	63.0	4.6	3.1
			12:45	21.4	7.6	31.5	63.2	4.7	3.2
7.0	Rainy	Calm	12:38	21.4	7.7	31.7	63.2	4.7	3.2
			12:45	21.4	7.7	31.7	63.3	4.7	2.8
7.5	Rainy	Calm	12:38	21.3	7.7	31.9	63.2	4.7	2.8
			12:45	21.3	7.7	31.9	63.4	4.7	2.8
8.0	Rainy	Calm	12:38	21.3	7.7	31.9	63.2	4.7	3.6
			12:45	21.3	7.7	32.0	63.4	4.7	3.6
8.5	Rainy	Calm	12:39	21.3	7.7	32.0	63.1	4.6	3.4
			12:46	21.3	7.7	32.0	63.5	4.7	3.3
9.0	Rainy	Calm	12:39	21.3	7.7	32.1	62.9	4.6	3.0
			12:46	21.3	7.7	32.1	63.8	4.7	3.0
9.5	Rainy	Calm	12:39	21.3	7.7	32.2	63.3	4.7	3.2
			12:46	21.3	7.7	32.2	63.1	4.6	3.1
10.0	Rainy	Calm	12:39	21.3	7.7	32.2	63.0	4.6	3.0
			12:46	21.3	7.7	32.2	63.0	4.6	3.1
10.5	Rainy	Calm	12:39	21.2	7.7	32.4	63.2	4.6	3.5
			12:46	21.2	7.7	32.5	63.1	4.6	3.4

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 WSD Intake at Sai Wan Ho - Mid-Ebb Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.5m

11.0	Rainy	Calm	12:40	21.2	7.7	32.6	63.1	4.6	3.5
			12:47	21.2	7.7	32.6	63.3	4.7	3.9
11.5	Rainy	Calm	12:40	21.2	7.7	32.6	63.3	4.7	3.7
			12:47	21.2	7.7	32.6	63.4	4.7	3.8
12.0	Rainy	Calm	12:40	21.2	7.7	32.7	63.6	4.7	3.9
			12:47	21.2	7.7	32.7	63.6	4.7	3.9
12.5	Rainy	Calm	12:40	21.2	7.7	32.7	63.9	4.7	4.1
			12:47	21.2	7.7	32.7	63.9	4.7	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)
6.5	Rainy	Calm	12:38	21.4	7.6	31.5	63.0	4.6	3.1
			12:45	21.4	7.6	31.5	63.2	4.7	3.2

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	17:11	23.3	7.4	10.9	53.9	4.3	11.5
			17:12	23.3	7.3	11.2	57.0	4.6	11.8
1.0	Rainy	Calm	17:11	22.4	7.4	20.7	49.3	3.8	6.1
			17:12	22.4	7.4	20.7	48.6	3.7	5.7
1.5	Rainy	Calm	17:11	22.2	7.4	23.4	42.4	3.2	4.7
			17:12	22.2	7.4	23.5	43.4	3.3	4.6
2.0	Rainy	Calm	17:11	22.0	7.4	26.7	35.4	2.7	3.8
			17:13	22.0	7.4	26.5	31.2	2.3	4.5
2.5	Rainy	Calm	17:11	21.9	7.3	28.1	20.7	1.5	8.7
			17:13	21.9	7.3	28.3	23.4	1.7	7.8
3.0	Rainy	Calm	17:12	21.9	7.2	28.7	20.9	1.6	20.8
			17:13	21.9	7.1	28.7	24.8	1.8	22.8
3.5	Rainy	Calm	17:12	21.9	6.7	28.7	51.0	3.8	28.3
			17:13	21.9	6.7	28.9	41.3	3.1	29.7

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	Rainy	Calm	17:11	22.4	7.4	20.7	49.3	3.8	6.1
			17:12	22.4	7.4	20.7	48.6	3.7	5.7
3.0	Rainy	Calm	17:12	21.9	7.2	28.7	20.9	1.6	20.8
			17:13	21.9	7.1	28.7	24.8	1.8	22.8

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at AC2 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	17:02	23.3	7.3	8.7	59.4	4.8	10.4
			17:04	23.5	7.3	7.7	60.4	4.9	11.3
1.0	Rainy	Calm	17:02	22.4	7.4	21.3	44.3	3.4	5.2
			17:04	22.4	7.4	21.3	45.7	3.5	5.0
1.5	Rainy	Calm	17:02	22.2	7.3	24.0	41.9	3.2	5.2
			17:04	22.1	7.3	24.7	43.3	3.3	4.4
2.0	Rainy	Calm	17:02	22.0	7.4	26.4	41.2	3.1	3.4
			17:04	22.0	7.4	26.5	42.2	3.2	3.4
2.5	Rainy	Calm	17:02	22.0	7.4	27.4	33.2	2.5	3.8
			17:04	22.0	7.4	27.4	30.4	2.3	3.9
3.0	Rainy	Calm	17:03	21.9	7.1	29.3	11.2	0.8	17.1
			17:05	21.9	7.1	28.8	10.9	0.8	16.9
3.5	Rainy	Calm	17:03	21.9	6.9	29.7	13.7	1.0	18.7
			17:05	21.8	6.9	29.7	14.2	1.1	20.4
4.0	Rainy	Calm	17:03	21.9	6.6	30.0	34.1	2.5	13.3
			17:05	21.9	6.6	29.7	30.9	2.3	13.4

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	Rainy	Calm	17:02	22.4	7.4	21.3	44.3	3.4	5.2
			17:04	22.4	7.4	21.3	45.7	3.5	5.0
3.5	Rainy	Calm	17:03	21.9	6.9	29.7	13.7	1.0	18.7
			17:05	21.8	6.9	29.7	14.2	1.1	20.4

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at AC3 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	17:18	22.6	7.4	15.9	55.5	4.4	5.5
			17:20	22.6	7.4	16.2	55.4	4.4	6.4
1.0	Rainy	Calm	17:18	22.3	7.4	22.9	54.0	4.1	3.2
			17:20	22.3	7.4	23.9	54.0	4.1	3.7
1.5	Rainy	Calm	17:18	22.2	7.5	24.9	50.7	3.8	2.3
			17:20	22.2	7.5	25.0	52.4	4.0	2.4
2.0	Rainy	Calm	17:18	22.1	7.5	26.4	47.7	3.6	2.2
			17:21	22.1	7.5	26.2	46.6	3.5	2.0
2.6	Rainy	Calm	17:19	22.0	7.4	27.0	34.1	2.6	4.1
			17:21	22.0	7.4	27.0	36.5	2.7	3.6
3.0	Rainy	Calm	17:19	21.9	7.2	29.3	16.8	1.2	22.1
			17:21	21.9	7.2	29.3	16.2	1.2	26.2
3.5	Rainy	Calm	17:19	21.8	6.9	29.8	13.0	1.0	7.6
			17:21	21.8	7.0	29.9	11.5	0.9	7.2
4.0	Rainy	Calm	17:19	21.9	6.6	29.3	16.6	1.2	11.1
			17:22	21.9	6.6	29.5	19.4	1.4	10.8
4.5	Rainy	Calm	17:20	21.9	6.7	30.0	51.5	3.8	12.2
			17:22	21.9	6.6	30.1	52.7	3.9	11.2

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	Rainy	Calm	17:18	22.3	7.4	22.9	54.0	4.1	3.2
			17:20	22.3	7.4	23.9	54.0	4.1	3.7
4.0	Rainy	Calm	17:19	21.9	6.6	29.3	16.6	1.2	11.1
			17:22	21.9	6.6	29.5	19.4	1.4	10.8

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at AC4 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	16:52	23.1	6.7	6.3	66.2	5.5	12.8
			16:54	23.2	6.7	6.3	73.1	6.0	14.0
1.0	Rainy	Calm	16:52	22.7	6.7	17.1	61.1	4.8	7.8
			16:55	22.4	6.7	19.5	64.2	5.0	6.4
1.5	Rainy	Calm	16:52	21.9	6.7	29.4	48.7	3.6	3.0
			16:55	22.0	6.7	25.9	55.6	4.2	3.1
2.0	Rainy	Calm	16:52	21.9	6.7	29.4	47.5	3.5	1.8
			16:55	21.8	6.7	29.7	44.7	3.3	1.5
2.5	Rainy	Calm	16:53	21.8	6.7	30.0	44.0	3.2	4.3
			16:55	21.8	6.7	29.6	41.6	3.1	4.3
3.0	Rainy	Calm	16:53	21.8	6.7	30.3	13.9	1.0	12.2
			16:55	21.8	6.7	30.3	14.5	1.1	12.8
3.5	Rainy	Calm	16:53	21.8	6.7	30.7	34.3	2.5	31.1
			16:55	21.8	6.7	30.5	39.1	2.9	32.1
4.0	Rainy	Calm	16:54	21.8	6.8	30.3	51.6	3.8	35.3
			16:56	21.8	6.8	30.1	44.5	3.3	37.9

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	Rainy	Calm	16:52	22.7	6.7	17.1	61.1	4.8	7.8
			16:55	22.4	6.7	19.5	64.2	5.0	6.4
3.5	Rainy	Calm	16:53	21.8	6.7	30.7	34.3	2.5	31.1
			16:55	21.8	6.7	30.5	39.1	2.9	32.1

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at AC5 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	17:27	22.8	7.4	12.6	56.7	4.5	6.9
			17:29	22.9	7.4	13.3	58.4	4.7	7.3
1.0	Rainy	Calm	17:27	22.5	7.4	20.6	55.5	4.3	2.9
			17:29	22.5	7.4	20.5	56.0	4.3	2.8
1.5	Rainy	Calm	17:27	22.2	7.5	24.6	53.9	4.1	2.0
			17:30	22.2	7.5	24.8	55.6	4.2	1.7
2.0	Rainy	Calm	17:28	22.1	7.5	27.3	46.0	3.4	2.1
			17:30	22.0	7.5	27.2	43.2	3.2	1.7
2.5	Rainy	Calm	17:28	21.9	7.4	28.8	26.4	2.0	2.8
			17:30	21.9	7.4	28.7	29.8	2.2	2.8
3.0	Rainy	Calm	17:28	21.9	7.3	29.4	17.1	1.3	9.9
			17:30	21.9	7.3	29.4	15.4	1.1	10.5
3.5	Rainy	Calm	17:28	21.8	7.0	30.1	11.0	0.8	11.1
			17:31	21.8	7.0	30.1	10.5	0.8	11.4
4.0	Rainy	Calm	17:29	21.8	6.6	30.0	13.6	1.0	17.2
			17:31	21.8	6.7	30.0	13.6	1.0	17.8
4.5	Rainy	Calm	17:29	21.9	6.7	30.0	17.8	1.3	20.2
			17:31	21.8	6.6	30.2	18.3	1.4	20.1

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	Rainy	Calm	17:27	22.5	7.4	20.6	55.5	4.3	2.9
			17:29	22.5	7.4	20.5	56.0	4.3	2.8
4.0	Rainy	Calm	17:29	21.8	6.6	30.0	13.6	1.0	17.2
			17:31	21.8	6.7	30.0	13.6	1.0	17.8

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

Contract No. KL/2010/02
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Water Quality Monitoring Results at AC6 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	17:37	22.8	7.5	14.9	55.8	4.4	5.1
			17:40	22.8	7.5	15.5	55.7	4.4	5.8
1.0	Rainy	Calm	17:37	22.3	7.5	22.9	56.1	4.3	1.9
			17:41	22.4	7.5	22.9	57.2	4.4	2.2
1.5	Rainy	Calm	17:37	22.2	7.5	24.8	56.4	4.3	1.5
			17:41	22.2	7.5	25.0	56.7	4.3	1.5
2.0	Rainy	Calm	17:37	22.1	7.6	27.6	51.3	3.8	1.6
			17:41	22.1	7.6	27.6	49.3	3.7	1.4
2.5	Rainy	Calm	17:38	21.9	7.5	29.0	39.4	2.9	1.3
			17:41	21.9	7.5	28.9	40.5	3.0	1.1
3.0	Rainy	Calm	17:38	21.9	7.4	29.6	34.8	2.6	2.1
			17:41	21.9	7.4	29.6	34.0	2.5	2.2
3.5	Rainy	Calm	17:38	21.8	7.2	30.0	9.6	0.7	14.4
			17:41	21.8	7.3	30.0	9.5	0.7	12.0
4.0	Rainy	Calm	17:39	21.8	7.0	30.4	8.2	0.6	12.2
			17:42	21.8	7.0	30.4	8.4	0.6	12.8
4.5	Rainy	Calm	17:39	21.8	6.9	30.6	9.5	0.7	26.1
			17:42	21.8	6.9	30.6	9.3	0.7	27.0
5.0	Rainy	Calm	17:39	21.8	6.9	30.7	11.2	0.8	26.8
			17:42	21.8	6.9	30.7	12.0	0.9	26.2

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	Rainy	Calm	17:37	22.3	7.5	22.9	56.1	4.3	1.9
			17:41	22.4	7.5	22.9	57.2	4.4	2.2
4.5	Rainy	Calm	17:39	21.8	6.9	30.6	9.5	0.7	26.1
			17:42	21.8	6.9	30.6	9.3	0.7	27.0

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at AC7 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	17:47	22.8	7.5	13.6	55.5	4.4	5.7
			17:48	22.9	7.5	13.6	56.2	4.5	6.4
1.0	Rainy	Calm	17:47	22.4	7.5	21.7	56.2	4.3	3.0
			17:49	22.5	7.5	20.8	58.9	4.5	2.6
1.5	Rainy	Calm	17:47	22.3	7.6	24.4	59.9	4.5	2.5
			17:49	22.3	7.6	22.9	59.7	4.6	2.4
2.0	Rainy	Calm	17:47	22.1	7.6	26.8	55.9	4.2	1.2
			17:49	22.1	7.6	26.8	54.4	4.1	1.2
2.5	Rainy	Calm	17:47	21.9	7.5	29.1	28.1	2.1	1.8
			17:49	22.0	7.5	29.0	32.9	2.4	1.8
3.0	Rainy	Calm	17:47	21.9	7.4	29.3	17.2	1.3	3.3
			17:49	21.9	7.4	29.4	15.8	1.2	4.1
3.5	Rainy	Calm	17:47	21.8	7.3	29.7	13.4	1.0	6.2
			17:49	21.8	7.3	29.8	15.2	1.1	6.3
4.0	Rainy	Calm	17:47	21.8	7.2	30.3	6.5	0.5	7.7
			17:50	21.8	7.2	30.3	6.8	0.5	7.7
4.5	Rainy	Calm	17:48	21.8	7.2	30.5	7.3	0.5	13.2
			17:50	21.8	7.2	30.5	7.1	0.5	13.1
5.0	Rainy	Calm	17:48	21.8	7.1	30.9	7.6	0.6	11.8
			17:50	21.8	7.2	30.9	8.0	0.6	11.2
5.5	Rainy	Calm	17:48	21.8	7.1	31.0	13.2	1.0	14.1
			17:50	21.8	7.1	31.0	12.4	0.9	15.6
6.0	Rainy	Calm	17:48	21.8	7.1	31.0	14.3	1.1	11.8
			17:50	21.8	7.1	31.0	15.5	1.1	11.9
6.5	Rainy	Calm	17:48	21.8	7.1	31.1	17.6	1.3	15.4
			17:51	21.8	7.1	30.9	17.3	1.3	15.9

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	Rainy	Calm	17:47	22.4	7.5	21.7	56.2	4.3	3.0
			17:49	22.5	7.5	20.8	58.9	4.5	2.6
3.5	Rainy	Calm	17:47	21.8	7.3	29.7	13.4	1.0	6.2
			17:49	21.8	7.3	29.8	15.2	1.1	6.3
6.0	Rainy	Calm	17:48	21.8	7.1	31.0	14.3	1.1	11.8
			17:50	21.8	7.1	31.0	15.5	1.1	11.9

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at JVC - Mid-Flood Tide

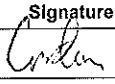
Sampling Date: **13 May 2014**

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	Rainy	Calm	16:39	23.4	6.8	12.5	44.6	3.5	8.2
			16:42	23.4	6.8	12.6	42.9	3.4	7.1
1.0	Rainy	Calm	16:40	22.4	6.8	19.7	45.3	3.5	7.7
			16:43	22.4	6.8	19.8	42.2	3.3	9.1
1.5	Rainy	Calm	16:40	22.2	6.8	26.4	42.5	3.2	4.2
			16:43	22.1	6.8	26.4	41.3	3.1	4.1
2.0	Rainy	Calm	16:40	22.0	6.8	28.1	42.6	3.2	3.0
			16:43	22.0	6.8	28.2	44.1	3.3	2.9
2.5	Rainy	Calm	16:41	22.0	6.8	29.0	33.5	2.5	5.4
			16:43	21.9	6.8	29.1	34.0	2.5	5.5
3.0	Rainy	Calm	16:41	21.9	6.7	29.9	30.9	2.3	3.3
			16:44	21.9	6.7	29.9	26.9	2.0	3.2
3.5	Rainy	Calm	16:41	21.9	6.7	30.3	14.3	1.1	3.6
			16:44	21.8	6.7	30.2	13.7	1.0	3.8
4.0	Rainy	Calm	16:42	21.9	6.8	30.5	11.3	0.8	8.2
			16:44	21.9	6.7	30.6	11.0	0.8	8.9

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
1.0	Rainy	Calm	16:40	22.4	6.8	19.7	45.3	3.5	7.7
			16:43	22.4	6.8	19.8	42.2	3.3	9.1
3.5	Rainy	Calm	16:41	21.9	6.7	30.3	14.3	1.1	3.6
			16:44	21.8	6.7	30.2	13.7	1.0	3.8

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 2014

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Rainy	Calm	18:03	22.9	7.5	14.9	59.5	4.7	4.2
			18:05	22.9	7.4	16.3	58.4	4.6	4.1
1.0	Rainy	Calm	18:03	22.7	7.6	21.9	59.0	4.5	3.9
			18:05	22.6	7.6	21.8	58.2	4.4	3.8
1.5	Rainy	Calm	18:03	22.2	7.6	27.6	59.2	4.4	1.8
			18:06	22.2	7.6	27.6	58.9	4.4	2.0
2.0	Rainy	Calm	18:03	22.1	7.6	28.1	61.0	4.5	1.7
			18:06	22.1	7.6	28.0	60.4	4.5	1.8
2.5	Rainy	Calm	18:03	22.1	7.6	29.5	60.4	4.4	1.5
			18:06	22.1	7.6	29.5	61.1	4.5	1.7
3.0	Rainy	Calm	18:03	22.0	7.6	30.2	60.1	4.4	3.0
			18:06	22.0	7.6	30.1	58.7	4.3	2.6
3.5	Rainy	Calm	18:03	22.0	7.6	30.3	56.2	4.1	2.6
			18:06	22.0	7.6	30.3	57.0	4.2	2.6
4.0	Rainy	Calm	18:03	22.0	7.6	30.3	54.2	4.0	2.3
			18:07	21.9	7.6	30.3	52.9	3.9	2.3
4.5	Rainy	Calm	18:04	21.9	7.6	30.6	48.9	3.6	2.2
			18:07	21.8	7.5	30.7	50.4	3.7	2.1
5.0	Rainy	Calm	18:04	21.8	7.5	30.8	49.2	3.6	2.5
			18:07	21.8	7.5	30.8	49.3	3.6	2.2
5.5	Rainy	Calm	18:04	21.7	7.6	31.0	46.7	3.4	4.4
			18:07	21.7	7.6	31.0	48.2	3.5	4.4
6.0	Rainy	Calm	18:04	21.7	7.5	31.3	44.9	3.3	10.2
			18:07	21.7	7.5	31.3	43.9	3.2	10.3
6.5	Rainy	Calm	18:04	21.7	7.5	31.4	43.2	3.2	11.7
			18:08	21.7	7.5	31.4	43.5	3.2	10.9
7.0	Rainy	Calm	18:05	21.7	7.2	31.3	48.8	3.6	19.1
			18:08	21.7	7.2	31.3	47.4	3.5	18.7
7.5	Rainy	Calm	18:05	21.7	7.2	31.3	50.6	3.7	20.2
			18:08	21.7	7.2	31.2	52.5	3.9	20.1

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	Rainy	Calm	18:03	22.7	7.6	21.9	59.0	4.5	3.9
			18:05	22.6	7.6	21.8	58.2	4.4	3.8
4.0	Rainy	Calm	18:03	22.0	7.6	30.3	54.2	4.0	2.3
			18:07	21.9	7.6	30.3	52.9	3.9	2.3
7.0	Rainy	Calm	18:05	21.7	7.2	31.3	48.8	3.6	19.1
			18:08	21.7	7.2	31.3	47.4	3.5	18.7

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

Contract No. KL/2010/02
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Water Quality Monitoring Results at KTN - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	16:30	24.0	7.1	3.7	74.2	6.1	8.3
			16:31	24.0	7.2	3.6	74.8	6.2	8.2
1.0	Rainy	Calm	16:30	22.9	6.8	17.4	65.9	5.1	9.6
			16:31	22.8	6.9	18.2	71.8	5.6	9.5

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.75	Rainy	Calm	16:30	23.3	7.1	11.8	73.2	5.8	8.1
			16:31	23.2	7.0	11.5	73.3	5.9	8.2

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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

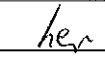
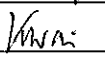
Sampling Date: 13 May 2014

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	Rainy	Calm	19:14	21.9	7.6	30.7	70.0	5.1	2.9
			19:18	20.9	7.6	31.6	66.7	5.0	3.1
1.0	Rainy	Calm	19:14	21.5	7.6	32.0	69.9	5.1	3.1
			19:18	20.8	7.6	32.7	69.7	5.2	3.0
1.5	Rainy	Calm	19:14	21.2	7.6	31.3	69.3	5.1	3.3
			19:18	21.6	7.6	31.8	68.4	5.0	3.1
2.0	Rainy	Calm	19:15	21.2	7.6	32.3	68.5	5.0	3.1
			19:18	21.2	7.6	32.4	68.4	5.0	3.1
2.5	Rainy	Calm	19:15	21.4	7.6	31.1	67.3	5.0	3.1
			19:19	21.4	7.6	30.6	66.8	4.9	3.0
3.0	Rainy	Calm	19:15	21.9	7.6	29.8	66.0	4.9	3.1
			19:19	22.0	7.6	29.8	65.5	4.8	3.3
3.5	Rainy	Calm	19:15	22.2	7.6	30.5	66.2	4.8	3.3
			19:19	22.2	7.6	30.5	66.1	4.8	3.3
4.0	Rainy	Calm	19:15	22.3	7.6	30.4	65.9	4.8	4.1
			19:19	22.4	7.6	30.4	65.7	4.8	4.0
4.5	Rainy	Calm	19:16	22.0	7.6	30.7	64.3	4.7	4.3
			19:20	21.9	7.6	30.8	64.0	4.7	4.4
5.0	Rainy	Calm	19:16	22.0	7.6	30.7	64.3	4.7	4.3
			19:20	21.9	7.6	30.8	64.0	4.7	4.4
5.5	Rainy	Calm	19:16	22.1	7.5	30.6	62.3	4.6	6.0
			19:20	22.1	7.5	30.6	61.4	4.5	6.1
6.0	Rainy	Calm	19:16	22.1	7.5	30.6	62.3	4.6	6.0
			19:20	22.1	7.5	30.6	61.4	4.5	6.1
6.5	Rainy	Calm	19:17	21.9	7.5	29.0	56.3	4.2	7.5
			19:21	21.9	7.5	29.0	56.3	4.2	7.5

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	Rainy	Calm	19:14	21.5	7.6	32.0	69.9	5.1	3.1
			19:18	20.8	7.6	32.7	69.7	5.2	3.0
3.5	Rainy	Calm	19:15	22.2	7.6	30.5	66.2	4.8	3.3
			19:19	22.2	7.6	30.5	66.1	4.8	3.3
6.0	Rainy	Calm	19:16	22.1	7.5	30.6	62.3	4.6	6.0
			19:20	22.1	7.5	30.6	61.4	4.5	6.1

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	19:00	21.7	7.7	30.9	68.1	5.0	2.2
			19:05	21.3	7.6	31.0	68.7	5.1	2.2
1.0	Rainy	Calm	19:00	21.8	7.6	30.7	68.2	5.0	2.0
			19:06	21.1	7.6	31.1	68.2	5.1	2.0
1.5	Rainy	Calm	19:00	21.5	7.6	30.9	67.3	5.0	1.9
			19:06	21.0	7.6	30.9	67.3	5.0	1.9
2.0	Rainy	Calm	19:00	21.7	7.6	30.3	67.1	5.0	1.9
			19:06	20.9	7.6	31.0	66.7	5.0	1.9
2.5	Rainy	Calm	19:01	21.4	7.6	31.0	66.8	4.9	1.9
			19:06	21.0	7.6	31.1	66.9	5.0	1.8
3.0	Rainy	Calm	19:01	21.3	7.6	30.7	66.6	4.9	1.8
			19:07	21.5	7.6	30.9	66.9	4.9	1.8
3.5	Rainy	Calm	19:01	21.2	7.6	30.8	66.5	4.9	1.8
			19:07	21.4	7.6	31.1	67.6	5.0	1.9
4.0	Rainy	Calm	19:01	21.4	7.6	30.5	66.6	4.9	2.1
			19:07	21.5	7.6	31.8	66.1	4.9	2.2
4.5	Rainy	Calm	19:02	21.2	7.6	31.0	66.4	4.9	2.3
			19:07	21.3	7.6	31.4	65.9	4.9	2.3
5.0	Rainy	Calm	19:02	20.9	7.6	31.0	66.4	5.0	2.3
			19:08	21.2	7.6	32.1	66.8	4.9	2.3
5.5	Rainy	Calm	19:02	21.0	7.6	30.8	66.4	4.9	2.3
			19:08	21.2	7.6	32.1	66.3	4.9	2.4
6.0	Rainy	Calm	19:02	21.0	7.6	31.2	66.3	4.9	2.3
			19:08	21.3	7.6	32.1	66.0	4.9	2.3
6.5	Rainy	Calm	19:03	21.1	7.6	31.2	66.3	4.9	2.3
			19:08	21.1	7.6	32.0	66.9	4.9	2.3
7.0	Rainy	Calm	19:03	22.0	7.6	31.0	66.4	4.9	2.5
			19:09	21.0	7.6	32.6	66.5	4.9	2.5
7.5	Rainy	Calm	19:03	21.6	7.6	30.6	66.8	4.9	2.9
			19:09	20.9	7.6	32.7	65.9	4.9	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	Rainy	Calm	19:00	21.8	7.6	30.7	68.2	5.0	2.0
			19:06	21.1	7.6	31.1	68.2	5.1	2.0
4.0	Rainy	Calm	19:01	21.4	7.6	30.5	66.6	4.9	2.1
			19:07	21.5	7.6	31.8	66.1	4.9	2.2
7.0	Rainy	Calm	19:03	22.0	7.6	31.0	66.4	4.9	2.5
			19:09	21.0	7.6	32.6	66.5	4.9	2.5

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-14**

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

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Water Quality Monitoring Results at IB3 - Mid-Flood Tide

Sampling Date: 13 May 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	Rainy	Calm	18:25	22.0	7.6	30.9	74.2	5.4	6.3
			18:30	22.0	7.6	30.9	72.8	5.3	5.9
1.0	Rainy	Calm	18:25	21.9	7.6	31.0	70.1	5.1	8.4
			18:30	21.9	7.6	31.0	69.6	5.1	9.3
1.5	Rainy	Calm	18:25	21.9	7.6	31.0	68.7	5.0	11.2
			18:30	21.9	7.6	31.0	68.4	5.0	11.4
2.0	Rainy	Calm	18:26	21.9	7.6	31.0	68.0	5.0	12.0
			18:31	21.9	7.6	31.0	67.8	5.0	12.0
2.5	Rainy	Calm	18:26	21.9	7.6	31.0	67.5	4.9	12.4
			18:31	21.9	7.6	31.0	67.5	4.9	11.9
3.0	Rainy	Calm	18:26	21.9	7.6	31.0	67.3	4.9	13.0
			18:31	21.9	7.6	31.0	67.3	4.9	13.6
3.5	Rainy	Calm	18:26	21.9	7.6	31.0	67.1	4.9	11.9
			18:31	21.9	7.6	31.0	67.1	4.9	12.0
4.0	Rainy	Calm	18:27	21.8	7.6	31.0	67.1	4.9	13.9
			18:32	21.8	7.6	31.1	67.0	4.9	14.9
4.5	Rainy	Calm	18:27	21.8	7.6	31.1	66.7	4.9	13.6
			18:32	21.8	7.6	31.1	66.6	4.9	13.0
5.0	Rainy	Calm	18:27	21.8	7.6	31.1	66.0	4.8	12.7
			18:32	21.8	7.6	31.1	65.9	4.8	12.7
5.5	Rainy	Calm	18:27	21.8	7.6	31.2	65.6	4.8	12.5
			18:33	21.8	7.6	31.2	65.5	4.8	12.3
6.0	Rainy	Calm	18:28	21.7	7.6	31.2	65.1	4.8	13.9
			18:33	21.7	7.6	31.2	64.8	4.8	14.1
6.5	Rainy	Calm	18:28	21.7	7.6	31.3	64.4	4.7	13.0
			18:33	21.7	7.6	31.3	64.4	4.7	13.1
7.0	Rainy	Calm	18:28	21.7	7.6	31.4	63.9	4.7	10.1
			18:33	21.7	7.6	31.4	63.8	4.7	10.1
7.5	Rainy	Calm	18:29	21.7	7.6	31.5	63.8	4.7	9.4
			18:34	21.6	7.6	31.5	63.8	4.7	8.8
8.0	Rainy	Calm	18:29	21.6	7.6	31.7	63.4	4.7	8.0
			18:34	21.5	7.6	31.7	63.1	4.6	7.6
8.5	Rainy	Calm	18:29	21.5	7.6	31.8	62.4	4.6	7.5
			18:34	21.5	7.6	31.9	62.2	4.6	7.4

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	Rainy	Calm	18:25	21.9	7.6	31.0	70.1	5.1	8.4
			18:30	21.9	7.6	31.0	69.6	5.1	9.3
4.5	Rainy	Calm	18:27	21.8	7.6	31.1	66.7	4.9	13.6
			18:32	21.8	7.6	31.1	66.6	4.9	13.0
8.0	Rainy	Calm	18:29	21.6	7.6	31.7	63.4	4.7	8.0
			18:34	21.5	7.6	31.7	63.1	4.6	7.6

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	18:45	21.7	7.6	31.0	78.9	5.8	2.5
			18:49	21.7	7.6	31.0	78.9	5.8	2.3
1.0	Rainy	Calm	18:45	21.7	7.6	31.0	78.9	5.8	2.2
			18:50	21.7	7.6	32.0	79.3	5.8	2.1
1.5	Rainy	Calm	18:45	21.7	7.6	31.1	71.2	5.2	2.0
			18:50	21.7	7.6	30.9	71.8	5.3	2.0
2.0	Rainy	Calm	18:45	21.6	7.6	31.2	66.1	4.9	2.2
			18:50	21.8	7.6	31.0	66.0	4.8	2.2
2.5	Rainy	Calm	18:45	21.6	7.6	31.6	66.0	4.8	2.2
			18:50	21.7	7.6	30.9	64.8	4.8	2.1
3.0	Rainy	Calm	18:46	21.7	7.6	30.9	66.1	4.9	2.1
			18:50	21.6	7.6	31.1	64.8	4.8	2.1
3.5	Rainy	Calm	18:46	21.7	7.6	31.1	64.8	4.8	2.2
			18:51	21.5	7.6	31.1	65.7	4.8	2.2
4.0	Rainy	Calm	18:46	21.7	7.6	30.8	64.1	4.7	2.3
			18:51	21.5	7.6	31.3	62.7	4.6	2.3
4.5	Rainy	Calm	18:46	21.6	7.6	31.2	63.3	4.7	2.7
			18:51	21.4	7.6	31.5	63.4	4.7	3.1
5.0	Rainy	Calm	18:47	21.6	7.6	31.1	62.9	4.6	3.1
			18:52	21.6	7.6	32.0	63.8	4.7	3.1
5.5	Rainy	Calm	18:47	21.6	7.6	31.0	63.2	4.7	3.1
			18:52	21.7	7.6	31.8	62.3	4.6	3.3
6.0	Rainy	Calm	18:47	21.6	7.6	31.3	63.4	4.7	3.3
			18:52	21.5	7.6	30.7	64.7	4.8	3.2
6.5	Rainy	Calm	18:47	21.6	7.6	31.2	63.3	4.7	3.2
			18:52	21.6	7.6	31.0	64.9	4.8	3.2
7.0	Rainy	Calm	18:48	21.7	7.6	30.8	63.5	4.7	3.5
			18:52	21.7	7.6	30.9	62.9	4.6	3.4
7.5	Rainy	Calm	18:48	21.7	7.6	31.2	63.6	4.7	3.3
			18:53	21.5	7.6	31.4	62.6	4.6	3.2
8.0	Rainy	Calm	18:48	21.7	7.6	31.1	63.7	4.7	3.6
			18:53	21.8	7.6	31.5	62.4	4.6	3.6
8.5	Rainy	Calm	18:48	21.7	7.6	31.1	63.9	4.7	3.8
			18:53	21.5	7.6	31.8	62.6	4.6	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	Rainy	Calm	18:45	21.7	7.6	31.0	78.9	5.8	2.2
			18:50	21.7	7.6	32.0	79.3	5.8	2.1
4.5	Rainy	Calm	18:46	21.6	7.6	31.2	63.3	4.7	2.7
			18:51	21.4	7.6	31.5	63.4	4.7	3.1
8.0	Rainy	Calm	18:48	21.7	7.6	31.1	63.7	4.7	3.6
			18:53	21.8	7.6	31.5	62.4	4.6	3.6

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: **13 May 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	Rainy	Calm	17:39	21.7	7.6	30.8	65.7	4.8	2.5
			17:52	22.4	7.6	31.5	64.8	4.7	2.3
1.0	Rainy	Calm	17:39	22.1	7.6	31.0	64.3	4.7	2.2
			17:52	22.2	7.6	31.6	63.7	4.6	2.1
1.5	Rainy	Calm	17:39	21.9	7.6	31.2	61.9	4.5	2.0
			17:52	21.7	7.6	31.6	61.9	4.5	2.0
2.0	Rainy	Calm	17:40	22.1	7.6	31.2	60.8	4.4	2.2
			17:52	21.6	7.6	31.5	60.8	4.5	2.2
2.5	Rainy	Calm	17:40	22.0	7.6	31.7	60.4	4.4	2.2
			17:52	21.5	7.6	31.6	60.3	4.4	2.1
3.0	Rainy	Calm	17:40	22.2	7.6	31.4	59.8	4.3	2.1
			17:53	21.7	7.6	31.5	60.1	4.4	2.1
3.5	Rainy	Calm	17:40	21.9	7.6	31.3	59.5	4.4	2.2
			17:53	21.4	7.6	31.8	59.2	4.4	2.2
4.0	Rainy	Calm	17:41	21.8	7.6	32.2	59.0	4.3	2.3
			17:53	22.0	7.6	32.1	59.0	4.3	2.3
4.5	Rainy	Calm	17:41	21.3	7.6	32.5	58.8	4.3	2.7
			17:54	22.0	7.6	32.2	58.5	4.3	3.1
5.0	Rainy	Calm	17:41	21.7	7.6	30.9	58.5	4.3	3.1
			17:54	22.1	7.6	32.9	58.6	4.2	3.1
5.5	Rainy	Calm	17:41	21.5	7.6	31.0	58.3	4.3	3.1
			17:54	21.7	7.6	33.3	58.3	4.2	3.3
6.0	Rainy	Calm	17:42	21.8	7.6	31.2	58.0	4.3	3.3
			17:54	21.5	7.6	33.0	58.2	4.2	3.2
6.5	Rainy	Calm	17:42	21.7	7.6	31.3	57.6	4.2	3.2
			17:55	21.6	7.6	32.9	57.9	4.2	3.2
7.0	Rainy	Calm	17:42	21.9	7.6	31.6	57.8	4.2	3.5
			17:55	21.8	7.6	33.4	58.0	4.2	3.4
7.5	Rainy	Calm	17:43	21.7	7.6	31.6	57.8	4.2	3.3
			17:55	21.6	7.6	33.3	57.6	4.2	3.2
8.0	Rainy	Calm	17:43	22.4	7.6	31.6	57.7	4.2	3.6
			17:56	21.6	7.6	33.1	57.3	4.2	3.6
8.5	Rainy	Calm	17:43	22.0	7.6	32.0	57.1	4.2	3.8
			17:56	21.2	7.6	33.2	57.2	4.2	3.9
9.0	Rainy	Calm	17:43	22.1	7.6	32.0	57.3	4.2	4.4
			17:56	21.2	7.6	33.4	56.9	4.2	4.8
9.5	Rainy	Calm	17:44	22.0	7.6	31.3	57.0	4.2	5.6
			17:56	21.3	7.6	33.1	56.8	4.2	5.8
10.0	Rainy	Calm	17:44	22.1	7.6	31.6	57.0	4.1	8.5
			17:56	21.2	7.6	33.1	56.6	4.1	8.3
10.5	Rainy	Calm	17:44	22.0	7.6	30.8	56.7	4.2	8.3
			17:57	21.9	7.6	33.2	56.6	4.1	8.1

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 VH1 - Mid-Flood Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.5m

11.0	Rainy	Calm	17:44	22.0	7.6	31.3	56.8	4.1	8.0
			17:57	22.0	7.6	33.3	56.6	4.1	7.8
11.5	Rainy	Calm	17:45	22.1	7.6	31.2	56.6	4.1	8.4
			17:57	21.9	7.6	30.9	56.6	4.2	8.2
12.0	Rainy	Calm	17:45	21.6	7.6	31.6	56.2	4.1	8.7
			17:57	21.7	7.6	30.7	56.3	4.1	8.5
12.5	Rainy	Calm	17:45	21.9	7.6	31.8	56.2	4.1	8.9
			17:58	22.2	7.6	31.1	56.0	4.1	8.7
13.0	Rainy	Calm	17:45	21.9	7.6	31.6	55.9	4.1	9.2
			17:58	22.0	7.6	31.3	55.8	4.1	9.0
13.5	Rainy	Calm	17:46	21.9	7.6	31.9	55.5	4.0	8.8
			17:58	21.7	7.6	31.7	55.1	4.0	8.6
14.0	Rainy	Calm	17:46	21.9	7.6	32.2	54.9	4.0	9.0
			17:59	21.6	7.6	31.7	55.1	4.0	8.8
14.5	Rainy	Calm	17:46	21.9	7.6	32.4	55.0	4.0	9.1
			17:59	21.8	7.6	31.0	55.0	4.0	8.9
15.0	Rainy	Calm	17:47	21.5	7.6	32.1	54.9	4.0	8.9
			17:59	21.5	7.6	31.5	54.7	4.0	8.7
15.5	Rainy	Calm	17:47	21.5	7.6	32.4	54.5	4.0	8.6
			18:00	21.1	7.6	31.4	54.4	4.0	8.4
16.0	Rainy	Calm	17:47	21.7	7.6	31.2	54.5	4.0	8.8
			18:00	21.4	7.6	31.3	54.4	4.0	8.6
16.5	Rainy	Calm	17:47	21.8	7.6	30.9	54.5	4.0	9.1
			18:00	21.6	7.6	31.9	54.3	4.0	9.3
17.0	Rainy	Calm	17:47	22.1	7.6	30.9	54.4	4.0	9.5
			18:00	21.9	7.6	31.7	54.3	4.0	9.7
17.5	Rainy	Calm	17:48	22.0	7.6	31.0	54.3	4.0	9.8
			18:01	21.9	7.6	31.8	54.3	4.0	10.0
18.0	Rainy	Calm	17:48	21.7	7.6	30.9	54.3	4.0	9.4
			18:01	22.0	7.6	32.0	54.2	3.9	9.7
18.5	Rainy	Calm	17:48	22.0	7.6	32.0	54.4	4.0	9.2
			18:01	21.4	7.6	30.8	54.2	4.0	9.5
19.0	Rainy	Calm	17:48	22.0	7.6	32.0	54.4	4.0	9.7
			18:01	22.0	7.6	30.9	54.2	4.0	9.8
19.5	Rainy	Calm	17:49	22.3	7.6	31.7	54.4	3.9	9.5
			18:02	21.9	7.6	31.0	54.1	4.0	9.6
20.0	Rainy	Calm	17:49	21.7	7.6	32.0	54.1	4.0	9.2
			18:02	21.9	7.6	31.1	53.8	3.9	9.4
20.5	Rainy	Calm	17:49	21.4	7.6	32.1	54.0	4.0	9.8
			18:02	21.6	7.6	30.9	53.8	4.0	10.0
21.0	Rainy	Calm	17:50	21.5	7.6	32.2	53.7	3.9	10.1
			18:02	21.6	7.6	31.4	53.5	3.9	10.3

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: 13 May 2014

Secchi Disc Depth: 1.5m

21.5	Rainy	Calm	17:50	21.8	7.6	32.2	53.5	3.9	10.3
			18:03	21.9	7.6	31.7	53.3	3.9	10.6
22.0	Rainy	Calm	17:50	21.9	7.6	32.4	53.4	3.9	10.6
			18:03	22.2	7.6	30.5	53.3	3.9	10.9
22.5	Rainy	Calm	17:50	21.9	7.6	31.9	53.3	3.9	10.8
			18:03	22.1	7.6	31.0	53.3	3.9	11.5

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	Rainy	Calm	17:39	22.1	7.6	31.0	64.3	4.7	2.2
			17:52	22.2	7.6	31.6	63.7	4.6	2.1
11.5	Rainy	Calm	17:45	22.1	7.6	31.2	56.6	4.1	8.4
			17:57	21.9	7.6	30.9	56.6	4.2	8.2
22.0	Rainy	Calm	17:50	21.9	7.6	32.4	53.4	3.9	10.6
			18:03	22.2	7.6	30.5	53.3	3.9	10.9

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 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	Rainy	Calm	16:51	21.7	7.6	30.9	64.5	4.7	3.2
			17:01	21.8	7.6	30.8	63.5	4.7	3.0
1.0	Rainy	Calm	16:52	21.7	7.6	30.9	61.8	4.5	2.7
			17:01	21.8	7.6	30.9	61.1	4.5	2.7
1.5	Rainy	Calm	16:52	21.7	7.6	31.0	59.4	4.4	2.6
			17:01	21.8	7.6	30.9	59.0	4.3	3.1
2.0	Rainy	Calm	16:52	21.7	7.6	31.3	58.3	4.3	2.3
			17:01	21.8	7.6	31.2	58.0	4.3	2.5
2.5	Rainy	Calm	16:52	21.7	7.6	31.4	57.3	4.2	2.2
			17:01	21.7	7.6	31.3	57.0	4.2	2.3
3.0	Rainy	Calm	16:53	21.6	7.6	31.4	56.3	4.1	2.2
			17:02	21.7	7.6	31.4	56.2	4.1	2.2
3.5	Rainy	Calm	16:53	21.6	7.6	31.5	56.1	4.1	2.4
			17:02	21.7	7.6	31.4	56.0	4.1	2.3
4.0	Rainy	Calm	16:53	21.6	7.6	31.6	55.9	4.1	2.3
			17:02	21.7	7.6	31.5	55.8	4.1	2.4
4.5	Rainy	Calm	16:53	21.6	7.6	31.6	55.7	4.1	2.3
			17:03	21.6	7.6	31.5	55.7	4.1	2.3
5.0	Rainy	Calm	16:54	21.6	7.6	31.6	55.6	4.1	2.3
			17:03	21.6	7.6	31.6	55.5	4.1	2.4
5.5	Rainy	Calm	16:54	21.6	7.6	31.6	55.4	4.1	2.2
			17:03	21.7	7.6	31.6	55.4	4.1	2.2
6.0	Rainy	Calm	16:54	21.4	7.6	32.0	55.2	4.1	2.3
			17:03	21.5	7.6	32.0	55.2	4.0	2.4
6.5	Rainy	Calm	16:54	21.3	7.6	32.5	55.1	4.0	2.5
			17:04	21.4	7.6	32.5	55.1	4.0	2.5
7.0	Rainy	Calm	16:55	21.3	7.6	32.5	55.0	4.0	2.7
			17:04	21.4	7.6	32.5	54.9	4.0	2.7
7.5	Rainy	Calm	16:55	21.2	7.6	32.8	54.8	4.0	2.6
			17:04	21.3	7.6	32.7	54.8	4.0	2.6
8.0	Rainy	Calm	16:55	21.2	7.6	32.8	54.8	4.0	2.7
			17:04	21.3	7.6	32.7	54.7	4.0	2.7
8.5	Rainy	Calm	16:56	21.2	7.6	32.7	54.7	4.0	2.7
			17:05	21.3	7.6	32.7	54.6	4.0	2.6
9.0	Rainy	Calm	16:56	21.2	7.7	32.8	54.6	4.0	2.7
			17:05	21.3	7.7	32.7	54.5	4.0	2.7
9.5	Rainy	Calm	16:56	21.2	7.7	32.8	54.5	4.0	2.8
			17:05	21.3	7.7	32.7	54.5	4.0	3.0
10.0	Rainy	Calm	16:56	21.2	7.7	32.8	54.4	4.0	3.3
			17:06	21.3	7.7	32.7	54.4	4.0	3.9
10.5	Rainy	Calm	16:57	21.2	7.7	32.8	54.3	4.0	4.4
			17:06	21.3	7.7	32.7	54.3	4.0	4.8

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 VH2 - Mid-Flood Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.5m

11.0	Rainy	Calm	16:57	21.2	7.7	32.8	54.3	4.0	5.8
			17:06	21.3	7.7	32.7	54.3	4.0	5.7
11.5	Rainy	Calm	16:57	21.2	7.7	32.9	54.2	4.0	6.0
			17:06	21.3	7.7	32.8	54.2	4.0	6.0
12.0	Rainy	Calm	16:57	21.2	7.7	32.9	54.2	4.0	6.3
			17:06	21.3	7.7	32.8	54.1	4.0	6.3
12.5	Rainy	Calm	16:57	21.2	7.7	32.9	54.0	4.0	6.7
			17:07	21.3	7.7	32.8	54.0	4.0	7.4
13.0	Rainy	Calm	16:58	21.2	7.7	33.0	54.0	4.0	8.3
			17:07	21.3	7.7	33.0	53.9	3.9	8.1
13.5	Rainy	Calm	16:58	21.2	7.7	33.2	53.9	4.0	7.7
			17:07	21.2	7.7	33.1	53.9	3.9	8.1
14.0	Rainy	Calm	16:58	21.2	7.7	33.2	53.8	3.9	7.8
			17:07	21.2	7.7	33.1	53.8	3.9	8.0
14.5	Rainy	Calm	16:58	21.1	7.7	33.2	53.8	3.9	8.3
			17:08	21.2	7.7	33.2	53.7	3.9	8.5
15.0	Rainy	Calm	16:59	21.1	7.7	33.2	53.7	3.9	9.2
			17:08	21.2	7.7	33.2	53.7	3.9	9.7
15.5	Rainy	Calm	16:59	21.1	7.7	33.2	53.7	3.9	9.9
			17:08	21.2	7.7	33.2	53.7	3.9	9.9
16.0	Rainy	Calm	16:59	21.1	7.7	33.2	53.5	3.9	10.0
			17:09	21.2	7.7	33.2	53.4	3.9	10.0
16.5	Rainy	Calm	17:00	21.1	7.7	33.2	53.4	3.9	10.1
			17:09	21.2	7.7	33.2	53.4	3.9	9.8

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	Rainy	Calm	16:52	21.7	7.6	30.9	61.8	4.5	2.7
			17:01	21.8	7.6	30.9	61.1	4.5	2.7
8.5	Rainy	Calm	16:56	21.2	7.6	32.7	54.7	4.0	2.7
			17:05	21.3	7.6	32.7	54.6	4.0	2.6
16.0	Rainy	Calm	16:59	21.1	7.7	33.2	53.5	3.9	10.0
			17:09	21.2	7.7	33.2	53.4	3.9	10.0

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 2014

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Rainy	Calm	18:18	22.0	7.7	30.4	64.0	4.7	2.8
			18:30	22.0	7.7	30.4	63.7	4.7	2.7
1.0	Rainy	Calm	18:18	21.9	7.7	30.6	64.8	4.8	2.7
			18:30	21.9	7.7	30.6	65.1	4.8	2.4
1.5	Rainy	Calm	18:18	21.9	7.7	30.7	65.0	4.8	2.3
			18:30	21.9	7.7	30.7	64.7	4.7	2.1
2.0	Rainy	Calm	18:18	21.9	7.7	30.8	64.6	4.7	2.4
			18:31	21.9	7.7	30.8	64.4	4.7	2.7
2.5	Rainy	Calm	18:18	21.9	7.7	30.8	64.7	4.7	2.7
			18:31	21.9	7.7	30.8	64.7	4.7	2.7
3.0	Rainy	Calm	18:18	21.9	7.7	30.8	64.7	4.7	2.0
			18:31	21.9	7.7	30.8	64.8	4.8	2.3
3.5	Rainy	Calm	18:19	21.9	7.7	30.8	65.2	4.8	2.1
			18:31	21.9	7.7	30.7	65.2	4.8	2.5
4.0	Rainy	Calm	18:19	21.9	7.7	30.8	66.7	4.9	4.7
			18:31	21.9	7.7	30.8	66.3	4.9	4.7
4.5	Rainy	Calm	18:19	21.9	7.6	30.6	60.2	4.4	2.6
			18:31	21.9	7.6	30.6	60.2	4.4	2.6
5.0	Rainy	Calm	18:19	21.9	7.6	30.6	60.3	4.4	3.4
			18:32	21.9	7.6	30.6	60.6	4.4	3.1
5.5	Rainy	Calm	18:19	21.9	7.6	30.8	61.0	4.5	3.0
			18:32	21.9	7.6	30.7	60.8	4.5	3.2
6.0	Rainy	Calm	18:19	21.8	7.7	30.9	61.8	4.5	2.9
			18:32	21.8	7.7	30.9	61.7	4.5	2.7
6.5	Rainy	Calm	18:20	21.8	7.7	31.0	62.4	4.6	3.2
			18:32	21.8	7.7	31.0	62.9	4.6	3.1
7.0	Rainy	Calm	18:20	21.7	7.7	31.2	64.0	4.7	3.9
			18:32	21.7	7.7	31.3	63.6	4.7	3.6
7.5	Rainy	Calm	18:20	21.7	7.7	31.3	64.6	4.7	4.2
			18:33	21.7	7.7	31.3	66.7	4.8	4.5

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)
4.0	Rainy	Calm	18:19	21.9	7.7	30.8	66.7	4.9	4.7
			18:31	21.9	7.7	30.8	66.3	4.9	4.7

	Name	Signature	Date
Conducted by:	Siu Ming Kuen		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 2014

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Rainy	Calm	18:08	21.7	7.6	31.2	76.6	5.6	2.8
			18:14	21.7	7.6	31.1	73.8	5.4	2.9
1.0	Rainy	Calm	18:08	21.8	7.6	31.1	70.0	5.1	2.9
			18:14	21.8	7.6	31.0	68.7	5.0	2.9
1.5	Rainy	Calm	18:08	21.7	7.6	31.1	66.5	4.9	3.0
			18:15	21.7	7.6	31.1	66.1	4.9	3.0
2.0	Rainy	Calm	18:09	21.7	7.6	31.2	65.3	4.8	3.0
			18:15	21.7	7.6	31.2	65.2	4.8	3.0
2.5	Rainy	Calm	18:09	21.7	7.6	31.2	64.9	4.8	3.0
			18:15	21.7	7.6	31.2	64.9	4.8	3.0
3.0	Rainy	Calm	18:09	21.7	7.6	31.2	64.7	4.8	2.8
			18:15	21.7	7.6	31.2	64.7	4.8	2.9
3.5	Rainy	Calm	18:09	21.7	7.6	31.3	64.8	4.8	2.8
			18:15	21.7	7.6	31.3	64.8	4.8	2.9
4.0	Rainy	Calm	18:10	21.6	7.6	31.3	64.9	4.8	2.7
			18:16	21.6	7.6	31.3	65.0	4.8	2.7
4.5	Rainy	Calm	18:10	21.8	7.6	31.2	64.8	4.8	2.7
			18:16	21.8	7.6	31.2	64.8	4.7	2.7
5.0	Rainy	Calm	18:10	21.8	7.6	31.2	64.7	4.7	2.5
			18:16	21.8	7.6	31.2	64.7	4.7	2.6
5.5	Rainy	Calm	18:10	21.8	7.6	31.2	64.6	4.7	2.7
			18:16	21.7	7.6	31.3	64.6	4.7	2.8
6.0	Rainy	Calm	18:11	21.6	7.6	31.4	64.1	4.7	3.2
			18:17	21.6	7.6	31.4	63.9	4.7	3.4
6.5	Rainy	Calm	18:11	21.7	7.6	31.4	63.6	4.7	3.7
			18:17	21.7	7.6	31.4	63.4	4.7	3.8
7.0	Rainy	Calm	18:11	21.7	7.6	31.4	63.2	4.6	3.9
			18:17	21.7	7.6	31.4	63.2	4.6	4.1
7.5	Rainy	Calm	18:11	21.7	7.6	31.4	63.2	4.6	4.3
			18:17	21.7	7.6	31.4	63.1	4.6	4.5
8.0	Rainy	Calm	18:11	21.6	7.6	31.5	63.0	4.6	4.8
			18:17	21.6	7.6	31.6	62.9	4.6	5.2
8.5	Rainy	Calm	18:12	21.5	7.6	31.8	62.4	4.6	6.1
			18:18	21.5	7.6	31.8	61.9	4.5	6.2
9.0	Rainy	Calm	18:12	21.5	7.6	31.7	61.3	4.5	6.6
			18:18	21.5	7.6	31.7	61.2	4.5	6.5
9.5	Rainy	Calm	18:12	21.5	7.6	31.8	61.1	4.5	6.6
			18:18	21.5	7.6	31.7	60.8	4.5	6.7
10.0	Rainy	Calm	18:12	21.5	7.6	31.8	60.3	4.4	7.2
			18:18	21.5	7.6	31.8	60.3	4.4	7.4
10.5	Rainy	Calm	18:13	21.5	7.6	31.8	60.3	4.4	7.6
			18:19	21.5	7.6	31.8	60.4	4.4	7.3

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: 13 May 2014

Secchi Disc Depth: 1.0m

11.0	Rainy	Calm	18:13	21.5	7.6	31.8	60.2	4.4	7.0
			18:19	21.5	7.6	31.8	60.2	4.4	6.8
11.5	Rainy	Calm	18:13	21.5	7.6	31.7	60.1	4.4	6.6
			18:19	21.5	7.6	31.7	60.2	4.4	6.4
12.0	Rainy	Calm	18:13	21.5	7.6	31.7	60.3	4.4	6.5
			18:19	21.5	7.6	31.8	60.7	4.5	6.3
12.5	Rainy	Calm	18:13	21.5	7.6	31.9	60.6	4.4	6.7
			18:19	21.5	7.6	31.9	60.3	4.4	6.7

Water Quality Monitoring Results (Sampling Depth)

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
6.5	Rainy	Calm	18:11	21.7	7.6	31.4	63.6	4.7	3.7
			18:17	21.7	7.6	31.4	63.4	4.7	3.8

	Name	Signature	Date
Conducted by:	Lee Man Hei		**13-May-14**
Checked by:	W.K. Tang		**13-May-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: 13 May 2014

Secchi Disc Depth: 1.0m

Water Depth (m)	Weather Condition	Sea Condition*	Sampling Time	Water Temperature (°C)	pH	Salinity ppt	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0.5	Rainy	Calm	17:16	21.6	7.6	30.9	71.9	5.3	2.5
			17:22	21.6	7.6	30.9	71.9	5.3	2.5
1.0	Rainy	Calm	17:16	21.6	7.6	30.9	71.7	5.3	2.4
			17:22	21.5	7.6	31.9	72.3	5.3	2.4
1.5	Rainy	Calm	17:16	21.5	7.6	31.1	64.2	4.7	2.4
			17:22	21.6	7.6	30.8	64.8	4.8	2.4
2.0	Rainy	Calm	17:16	21.5	7.6	31.2	59.1	4.4	2.5
			17:22	21.6	7.6	31.0	59.0	4.3	2.5
2.5	Rainy	Calm	17:16	21.5	7.6	31.5	59.0	4.3	2.7
			17:23	21.5	7.6	30.9	57.8	4.3	2.9
3.0	Rainy	Calm	17:17	21.5	7.6	30.8	59.1	4.4	3.1
			17:23	21.4	7.6	31.1	57.8	4.3	3.2
3.5	Rainy	Calm	17:17	21.5	7.6	31.1	57.8	4.3	3.3
			17:23	21.3	7.6	31.0	58.7	4.3	3.8
4.0	Rainy	Calm	17:17	21.5	7.6	30.7	57.1	4.2	3.7
			17:24	21.4	7.6	31.3	55.7	4.1	3.6
4.5	Rainy	Calm	17:17	21.6	7.6	31.1	58.3	4.2	3.7
			17:24	21.3	7.6	31.5	56.4	4.2	3.9
5.0	Rainy	Calm	17:18	21.5	7.6	31.1	55.9	4.1	4.2
			17:24	21.4	7.6	32.0	56.8	4.2	4.2
5.5	Rainy	Calm	17:18	21.5	7.6	30.9	56.2	4.2	4.3
			17:24	21.6	7.6	31.8	55.3	4.1	4.3
6.0	Rainy	Calm	17:18	21.5	7.6	31.2	56.4	4.2	4.8
			17:24	21.3	7.6	30.6	57.7	4.3	5.0
6.5	Rainy	Calm	17:18	21.5	7.6	31.1	56.3	4.2	5.2
			17:25	21.4	7.6	30.9	57.9	4.3	5.3
7.0	Rainy	Calm	17:19	21.5	7.6	30.7	56.5	4.2	5.7
			17:25	21.5	7.6	30.9	55.9	4.1	5.8
7.5	Rainy	Calm	17:19	21.5	7.6	31.1	56.6	4.2	6.8
			17:25	21.4	7.6	31.4	55.6	4.1	7.0
8.0	Rainy	Calm	17:19	21.5	7.7	31.1	56.7	4.2	7.7
			17:25	21.6	7.7	31.4	55.4	4.1	8.1
8.5	Rainy	Calm	17:19	21.5	7.7	31.0	56.9	4.2	8.4
			17:25	21.3	7.7	31.7	55.6	4.1	8.5
9.0	Rainy	Calm	17:20	21.5	7.7	31.0	56.3	4.2	9.4
			17:26	21.5	7.7	31.4	56.6	4.2	9.6
9.5	Rainy	Calm	17:20	21.5	7.7	31.0	56.0	4.1	10.3
			17:26	21.6	7.7	31.6	56.6	4.2	10.6
10.0	Rainy	Calm	17:20	21.5	7.7	31.2	55.8	4.1	11.6
			17:26	21.4	7.7	31.6	55.4	4.1	11.9
10.5	Rainy	Calm	17:20	21.5	7.7	30.8	55.7	4.1	13.3
			17:27	21.7	7.7	31.7	55.4	4.1	14.9

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 Quarry Bay - Mid-Flood Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.0m

11.0	Rainy	Calm	17:21	21.5	7.7	30.8	55.5	4.1	15.8
			17:27	21.2	7.7	32.1	55.5	4.1	16.8
11.5	Rainy	Calm	17:21	21.5	7.7	31.1	55.4	4.1	15.8
			17:27	21.4	7.7	32.3	55.1	4.0	16.8

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)
6.0	Rainy	Calm	17:18	21.5	7.6	31.2	56.4	4.2	4.8
			17:24	21.3	7.6	30.6	57.7	4.3	5.0

	Name	Signature	Date
Conducted by:	Lee Man Hei	hei	**13-May-14**
Checked by:	W.K. Tang	Kwai	**13-May-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: 13 May 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	Rainy	Calm	16:30	21.7	7.6	30.9	59.6	4.4	2.9
			16:36	21.7	7.5	30.7	57.4	4.2	3.0
1.0	Rainy	Calm	16:30	21.7	7.6	30.9	59.2	4.4	2.5
			16:36	21.7	7.5	30.9	56.1	4.1	2.5
1.5	Rainy	Calm	16:31	21.7	7.6	31.0	59.0	4.3	2.2
			16:36	21.6	7.5	31.1	55.0	4.0	2.7
2.0	Rainy	Calm	16:31	21.7	7.6	31.3	59.0	4.3	2.2
			16:36	21.6	7.5	31.2	53.6	3.9	2.2
2.5	Rainy	Calm	16:31	21.7	7.6	31.4	59.1	4.3	2.2
			16:36	21.6	7.5	31.2	53.0	3.9	2.3
3.0	Rainy	Calm	16:31	21.6	7.6	31.4	59.0	4.3	2.3
			16:37	21.6	7.5	31.2	52.5	3.9	2.5
3.5	Rainy	Calm	16:31	21.6	7.6	31.5	58.7	4.3	2.4
			16:37	21.6	7.5	31.3	52.2	3.8	2.4
4.0	Rainy	Calm	16:32	21.6	7.6	31.6	58.4	4.3	2.2
			16:37	21.6	7.5	31.3	52.1	3.8	2.4
4.5	Rainy	Calm	16:32	21.6	7.6	31.6	58.2	4.3	2.2
			16:37	21.5	7.5	31.4	51.9	3.8	2.7
5.0	Rainy	Calm	16:32	21.6	7.6	31.6	58.0	4.3	2.3
			16:37	21.4	7.6	31.6	51.6	3.8	2.3
5.5	Rainy	Calm	16:32	21.6	7.6	31.6	57.7	4.2	4.1
			16:37	21.3	7.6	32.0	50.9	3.7	4.2
6.0	Rainy	Calm	16:32	21.4	7.6	32.0	57.7	4.2	3.4
			16:37	21.2	7.6	32.3	50.7	3.7	3.5
6.5	Rainy	Calm	16:32	21.3	7.6	32.5	57.4	4.2	3.8
			16:37	21.1	7.6	32.3	50.4	3.7	3.9
7.0	Rainy	Calm	16:33	21.2	7.6	32.7	57.5	4.2	3.3
			16:38	21.1	7.6	32.4	50.3	3.7	4.1
7.5	Rainy	Calm	16:33	21.2	7.6	32.8	57.8	4.2	3.7
			16:38	21.1	7.6	32.5	50.5	3.7	3.7
8.0	Rainy	Calm	16:33	21.2	7.6	32.8	57.9	4.2	3.6
			16:38	21.1	7.6	32.5	50.6	3.7	3.8
8.5	Rainy	Calm	16:33	21.2	7.6	32.8	58.0	4.3	3.3
			16:38	21.0	7.6	32.7	50.8	3.7	3.8
9.0	Rainy	Calm	16:33	21.2	7.6	32.8	58.0	4.3	3.1
			16:38	21.0	7.6	32.7	51.1	3.8	3.1
9.5	Rainy	Calm	16:33	21.2	7.6	32.9	57.8	4.2	3.9
			16:38	21.0	7.6	32.7	51.8	3.8	3.9
10.0	Rainy	Calm	16:33	21.2	7.6	32.9	57.9	4.2	3.1
			16:38	21.0	7.6	32.7	52.0	3.8	3.7
10.5	Rainy	Calm	16:34	21.2	7.6	33.0	57.9	4.2	3.2
			16:38	20.9	7.6	32.8	52.2	3.9	3.7

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-Flood Tide

Sampling Date: 13 May 2014

Secchi Disc Depth: 1.5m

11.0	Rainy	Calm	16:34	21.2	7.6	33.2	58.3	4.3	3.8
			16:38	20.9	7.6	33.0	52.5	3.9	4.0
11.5	Rainy	Calm	16:34	21.1	7.6	33.2	58.5	4.3	4.6
			16:38	20.8	7.6	33.1	53.0	3.9	4.1
12.0	Rainy	Calm	16:34	21.1	7.6	33.2	58.2	4.3	4.9
			16:39	20.6	7.6	33.2	53.6	4.0	5.0
12.5	Rainy	Calm	16:35	21.1	7.6	33.2	54.5	4.0	5.4
			16:39	20.6	7.6	33.3	53.8	4.0	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)
6.5	Rainy	Calm	16:32	21.3	7.6	32.5	57.4	4.2	3.8
			16:37	21.1	7.6	32.3	50.4	3.7	3.9

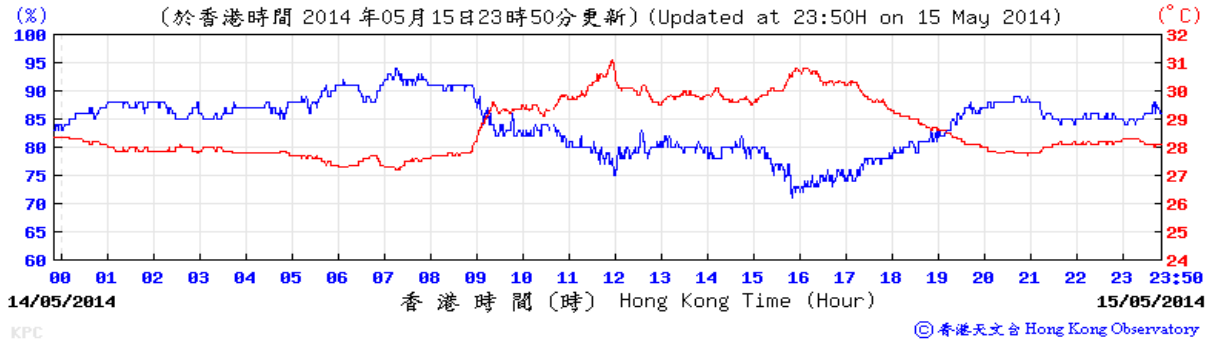
	Name	Signature	Date
Conducted by:	Lee Man Hei	hei	**13-May-14**
Checked by:	W.K. Tang	Kwai	**13-May-14**

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

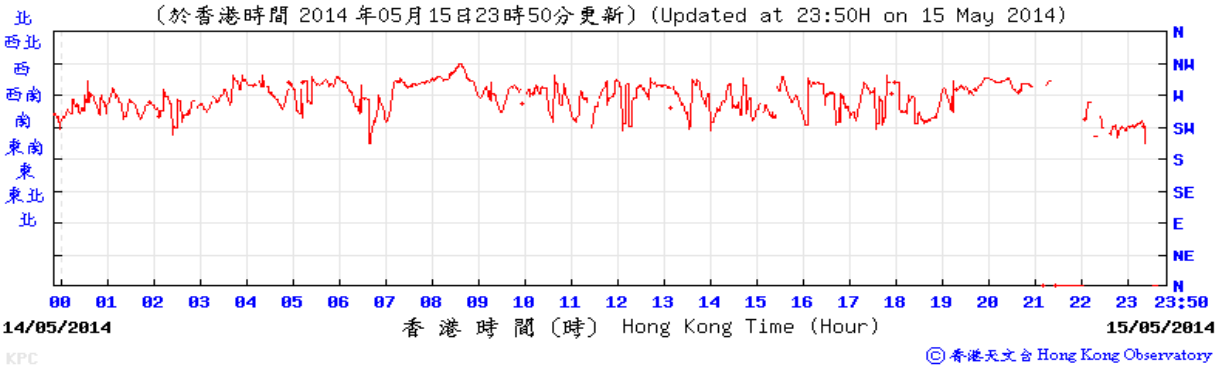
APPENDIX G
METEOROLOGICAL DATA FROM HONG KONG OBSERVATORY STATION DURING ODOUR PATROL

Meteorological Conditions (King's Park)

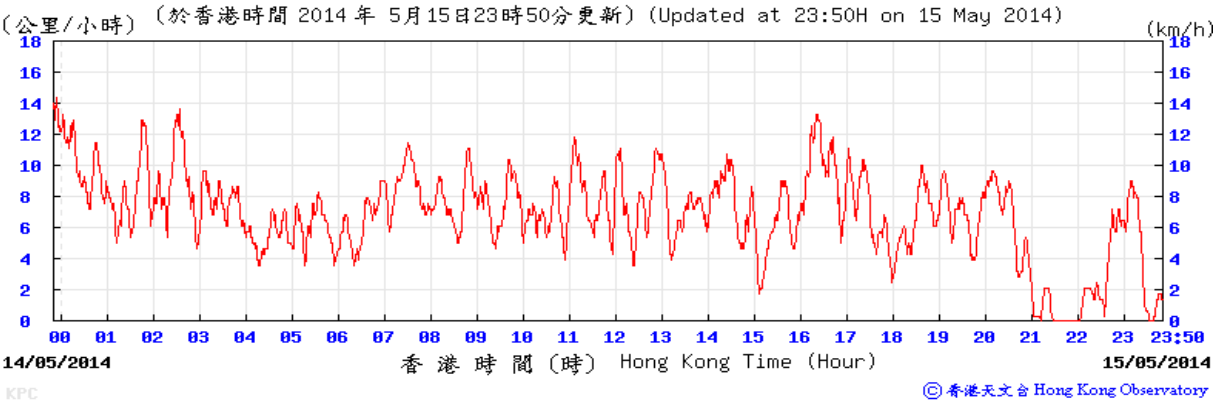
Temperature & Humidity



Wind Direction



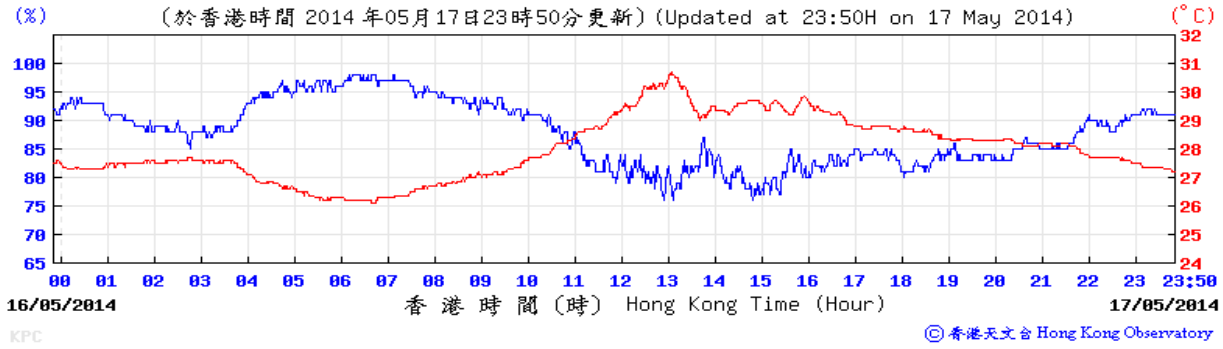
Wind Speed



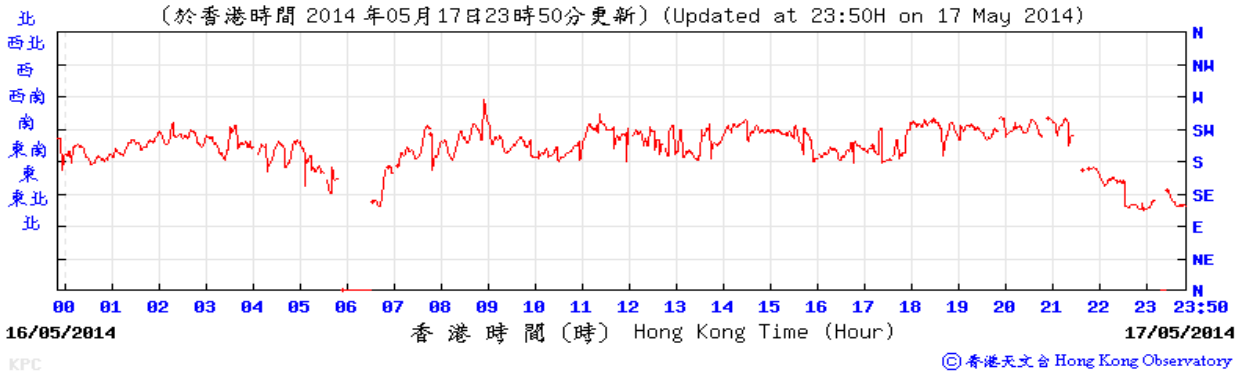
Title	Scale	Project No.	
Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	N.T.S	MA11017	CINOTECH
	Date: May 14	Appendix: G	

Meteorological Conditions (King's Park)

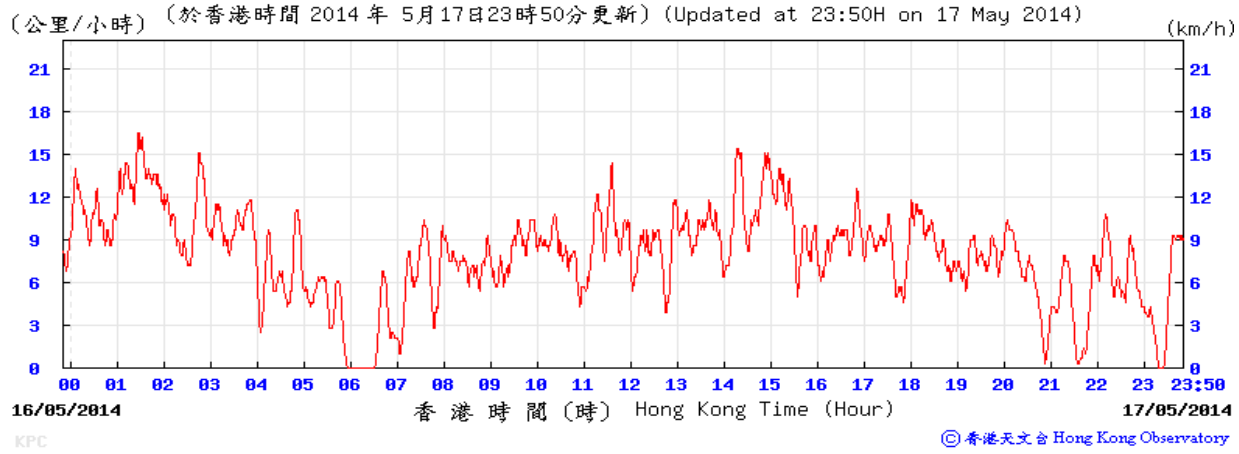
Temperature & Humidity



Wind Direction



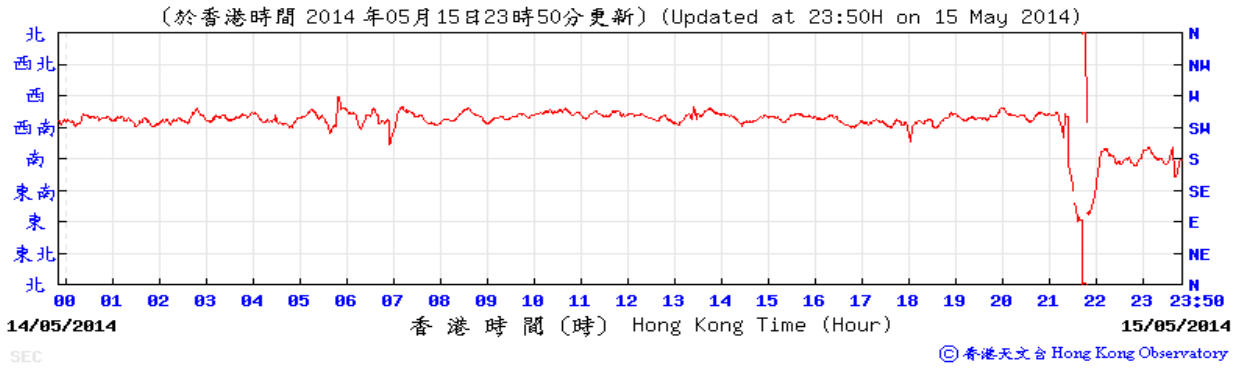
Wind Speed



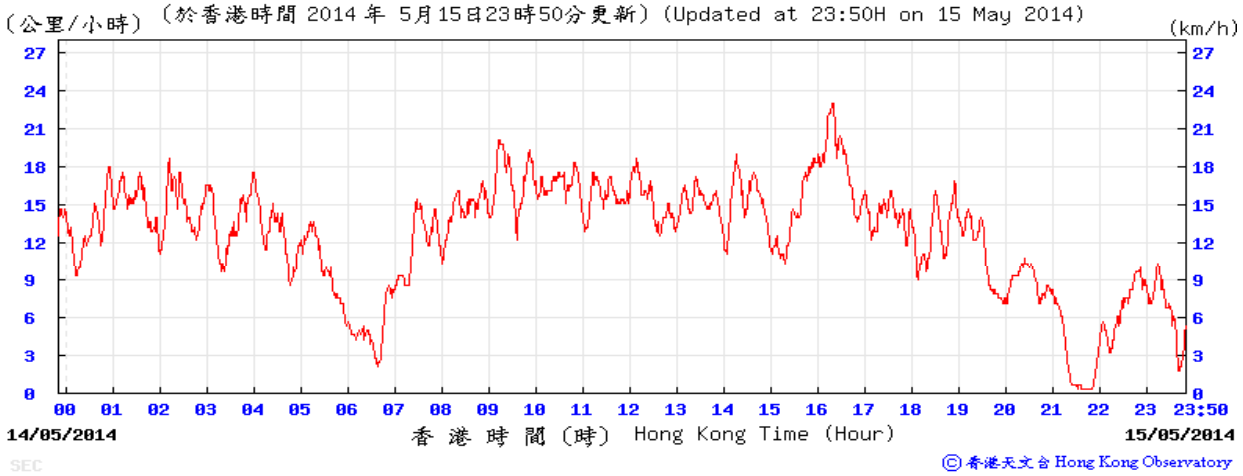
Title	Scale	Project No.	
Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	N.T.S	MA11017	CINOTECH
	Date: May 14	Appendix: G	

Meteorological Conditions (Kai Tak)

Wind Direction



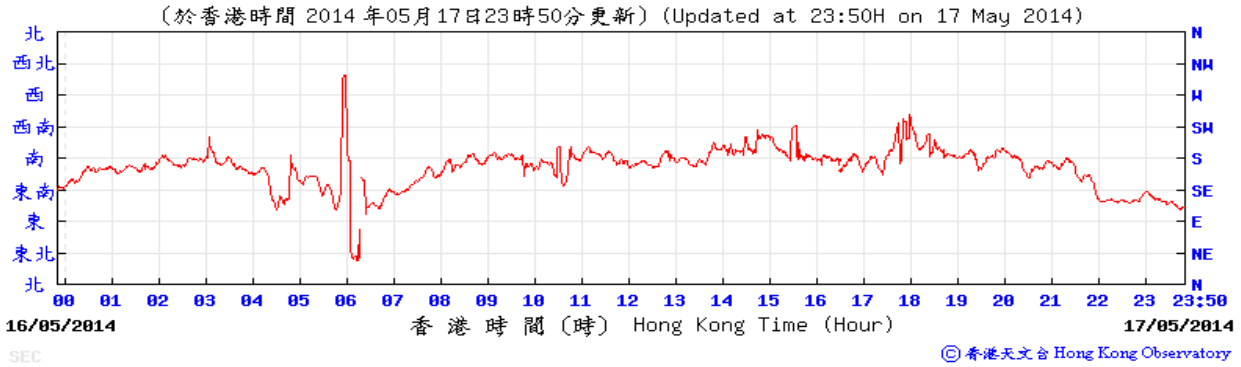
Wind Speed



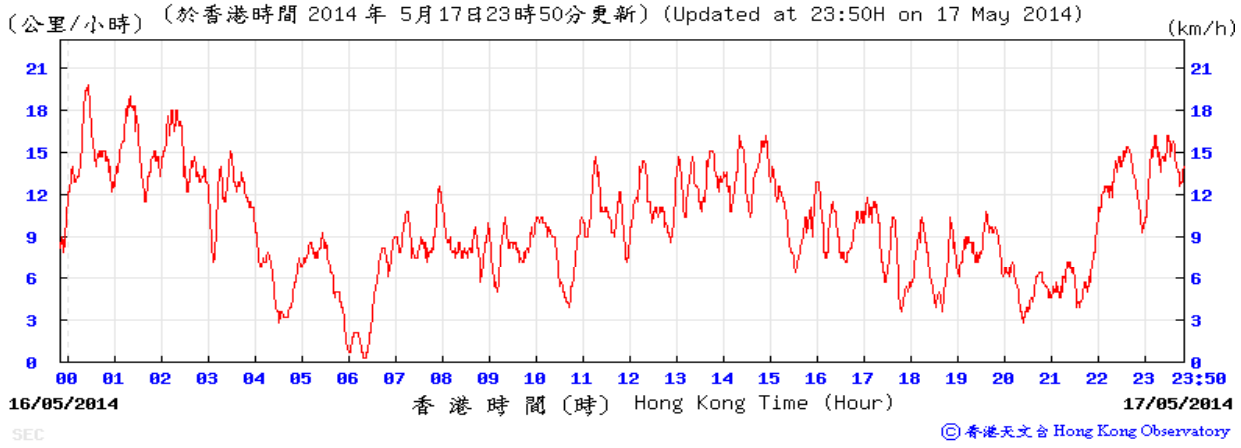
Title: Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works Meteorological data from Hong Kong Observatory Station	Scale: N.T.S	Project No.: MA11017	CINOTECH
	Date: May 14	Appendix: G	

Meteorological Conditions (Kai Tak)

Wind Direction

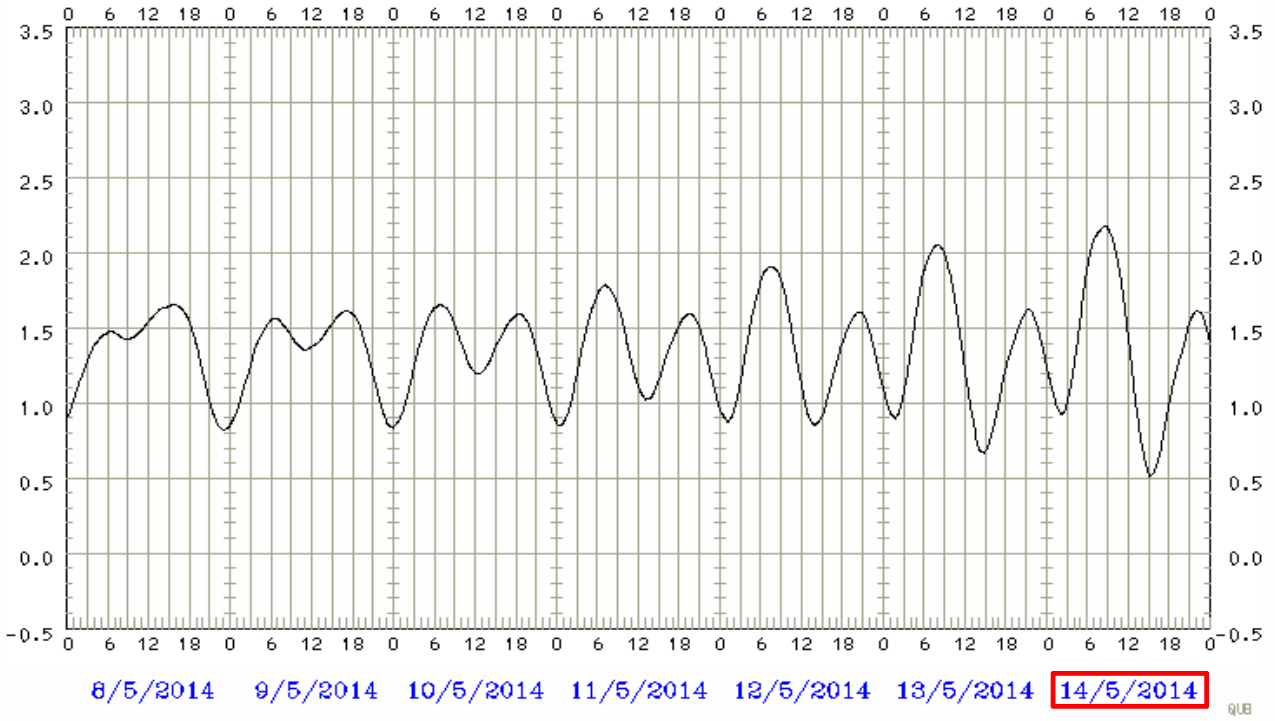


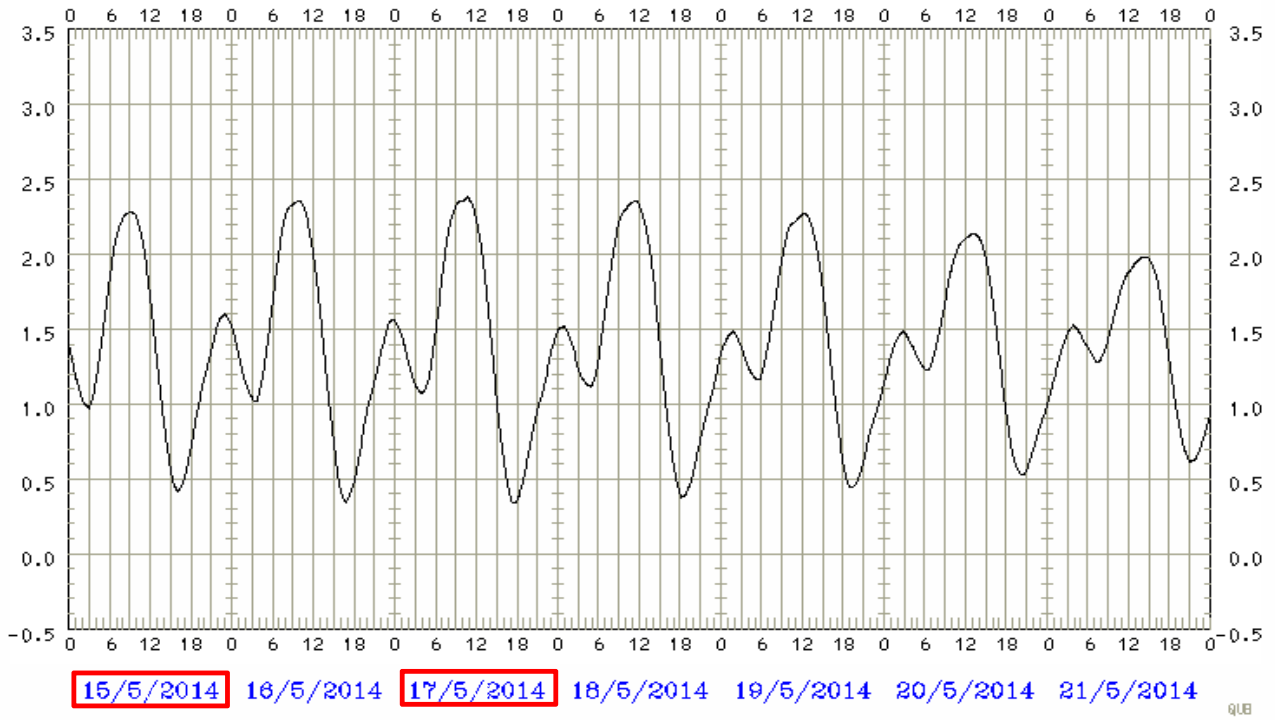
Wind Speed



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

Predicted Tides at Quarry Bay in May 2014





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	Date: May 14	Appendix: G	