**Civil Engineering and Development Department**

# Environmental Monitoring Works at Kai Tak Development

## Water, Sediment & Odour Quality Report

## May and June 2013

**TABLE OF CONTENTS**

**Page**

## LIST OF TABLES



## LIST OF FIGURES



## LIST OF APPENDIX

# EXECUTIVE SUMMARY

## Introduction

1. This is the 12th 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 8th general water quality monitoring works and 9th odour patrol works conducted for the Project in May and June 2013.

## 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 8th General Water Quality Monitoring for the Project was performed on 7th May 2013 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 9th odour patrol for the Project was performed on 14th and 15th May 2013 and the monitoring results were checked and reviewed.

## Sediment Monitoring Works

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

6. In addition, no environmental monitoring works were conducted in June 2013.

# 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 12$^{th}$ Water, Sediment & Odour Quality Monitoring Reports summarizing the general water quality monitoring works and odour patrol works for the Project in May and June 2013.

## 2. General Water Quality monitoring

### Monitoring Requirements

2.1 General marine water quality monitoring shall be carried out quarterly at the designated locations to give adequate coverage of different tidal states during both wet and dry seasons.

2.2 The first general marine water quality monitoring during construction phase shall be carried out within the summer season of 2011 or as agreed with the Engineer.

2.3 For all the monitoring stations, sampling was taken 3 water depths, namely 1m below the water surface, mid depth and 1m above the sea bed. For stations that are less than 3m in depth, only the mid depth sample was taken. Mid-depth was omitted in case the water depth is less than 6m. During each survey event, sampling was taken at 2 tide conditions (mid-flood and mid-ebb).

2.4 For the WSD intake points, the monitoring was conducted at the appropriate vertical levels of the abstraction points of these intakes to collect water quality information.

2.5 At each monitoring station, duplicate samples were collected at each water depth.

2.6 Sufficient volume of each water sample (not less than 1 litre) was collected for analysis to achieve the required detection limit. *In-situ* measurements at DO, pH, salinity, temperature and turbidity were taken at 0.5m depth intervals at all the marine water quality monitoring stations.

### Monitoring Locations

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

**Table 2.1 Water Quality Monitoring Stations**

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

**Monitoring Equipment**

**Dissolved Oxygen (DO) and Temperature Measuring Equipment**

2.8 The instrument for measuring dissolved oxygen and temperature was portable and weatherproof complete with cable, sensor, comprehensive operation manuals and use DC power source. It was capable of measuring:

- a dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation; and
- a temperature of 0-45 degree Celsius.

2.9 It has a membrane electrode with automatic temperature compensation complete with a cable.

2.10 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.

2.11 Salinity compensation was built-in in the DO equipment.

**Turbidity**

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

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

**Sampler**

2.13 A water sampler, consisting of a transparent PVC or glass cylinder of a capacity of not less that two litres which can be effectively sealed with cups at both ends was used. The water sampler has a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth.

**Water Depth Detector**

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

**pH**

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

**Salinity**

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

**Position System**

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

**Sample Container and Storage**

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

2.19 For the sample containers for *E. coli*, the water samples were collected in sterile bottles with leakproof lids.

## Calibration of *In Situ* Instruments

2.20 All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring event.

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

2.22 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also being made available so that monitoring can proceed uninterrupted even when some equipment was under maintenance, calibration, etc.

2.23 Table 2.2 summarizes the equipment used in the water quality monitoring program. Copies of the calibration certificates of the equipment are shown in **Appendix A1**.

**Table 2.2 Water Quality Monitoring Equipment**

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

### Monitoring Parameters

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

**Table 2.3 Water Quality Monitoring Parameters**

| ***In-situ* Measurement** | **Laboratory Measurement** |
|---|---|
| Dissolved Oxygen | Suspended Solids (SS) |
| pH | *E. coli* |
| Water Temperature | 5-day Biochemical Oxygen Demand ($BOD_5$) |
| Salinity | Ammonia Nitrogen ($NH_3$-N) |
| Secchi disc depth | Unionized Ammonia (UIA) |
| Turbidity | Total Kjeldahl Nitrogen (TKN) |
| | Nitrite-nitrogen ($NO_2$-N) |
| | Nitrate-nitrogen ($NO_3$-N) |
| | Ortho-phosphate ($PO_4$) |
| | Total Phosphorous (TP) |
| | Cadmium (Cd) |
| | Chromium (Cr) |
| | Copper (Cu) |
| | Mercury (Hg) |
| | Nickel (Ni) |
| | Lead (Pb) |
| | Silver (Ag) |
| | Zinc (Zn) |

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

### Monitoring Frequency

2.26 General marine water quality monitoring shall be carried out quarterly at the designated locations to give adequate coverage of different tidal states during both wet and dry seasons.

2.27 During each survey event, sampling will be taken at 2 tide conditions (mid-flood and mid-ebb) to give adequate coverage of different tidal states during both wet and dry seasons. The water quality 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 8$^{th}$ general water quality monitoring was conducted on 7$^{th}$ May 2013 and the next monitoring will be carried out in August 2013.

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 | 5.0 | 5.5 |
| AC3 | 4.0 | 4.0 |
| AC4 | 4.5 | 4.5 |
| AC5 | 3.5 | 4.0 |
| AC6 | 5.5 | 5.5 |
| AC7 | 5.0 | 5.0 |
| KT1 | 6.0 | 6.0 |
| IB1 | 6.0 | 6.0 |
| IB2 | 8.0 | 7.5 |
| IB3 | 9.5 | 9.5 |
| OB1 | 8.0 | 8.0 |
| VH1 | 21.5 | 19.0 |
| VH2 | 17.0 | 17.5 |
| KTN | 4.5 | 4.0 |
| JVC | 4.0 | 4.0 |
| WSD Intake at Tai Wan | 13.0 | 12.0 |
| WSD Intake at Cha Kwo Ling | 6.0 | 6.0 |
| WSD Intake at Quarry Bay | 11.0 | 11.0 |
| WSD Intake at Sai Wan Ho | 14.0 | 12.0 |

## 3. Odour Sampling

### Sampling Requirements

3.1 The odour sampling shall be carried out within Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS) as well as To Kwa Wan (TKW) and Ma Tau Kok (MTK) waterfront at half-yearly interval to determine the odour emissions from water surface throughout the Contract Period.

3.2 The first odour sampling shall be carried within the August of 2011 or as agreed with the Engineer. One of the sampling events within each calendar year shall be undertaken during summer season (i.e. July or August).

3.3 In order to capture more representative results, measurements and sampling will be conducted during low tide periods with reference to the tidal chart of Hong Kong Observatory for KTAC, KTTS and TKW.

3.4 The relevant meteorological data (e.g. ambient temperature, wind speed and direction, etc.) from the Hong Kong Observatory station during the measurement/sampling period were recorded for reference.

3.5 The odour sample 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 (℃) at depth 1m above seabed;
- Ambient Air Temperature (℃)
- 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<br>SA2<br>SA3<br>SA4<br>SA5<br>SA6<br>SA7<br>SA8<br>SA9<br>SA10<br>SA11<br>SA12<br>SA13 | • Dissolved oxygen (DO) (% saturation) in the water column at depth 1m above seabed;<br>• Dissolved oxygen (DO) (mg/L) in the water column at depth 1m above seabed;<br>• Water Temperature (℃) at depth 1m above seabed;<br>• Ambient Air Temperature (℃)<br>• Water depth (m)<br>• Salinity (parts per thousand) at depth 1m above seabed;<br>• Redox Potential (mV) at depth 1m above seabed; and<br>• 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 2013 and the next monitoring will be carried out in August 2013.

## 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 60 sniffing locations was conducted by the 2 qualified odour patrol members in May 2013 during daytime (high tide condition) and evening/night time (low tide condition). The odour patrol schedule in May 2013 is shown in **Appendix C**.

4.5 In general, the proposed odour patrol route and the proposed sniffing locations is in the vicinity of the planned ASRs within the Kai Tak Development to determine any potential operational odour impacts arising from Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS).

4.6 In addition, sniffing location no. 35 is shifted to the right side about 100m in compare with the baseline patrol route due to the access problem. The final odour patrol route and sniffing locations is shown in **Figure 3.**

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

| Date | Time | Tidal Condition | Patrol Locations | * Height(m) |
|---|---|---|---|---|
| 14 May 2013 | 09:22 – 12:42 | High Tide | Within Kai Tak Development and Ma Tau Kok Waterfront | 2.0 – 2.1 |
| 14 May 2013 | 17:02 – 19:44 | Low Tide | | 0.6 – 0.7 |
| 15 May 2013 | 10:03 – 13:05 | High Tide | | 1.9 – 2.0 |
| 15 May 2013 | 17:18 – 19:53 | Low Tide | | 0.6 – 0.7 |

***** 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 60 sniffing locations in May 2012 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, 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 60 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 2013**

| 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 | | 1 | 1 | 0 | 0 | sewage | marine water |
| 3 | | 0 | 0 | 0 | 0 | N/A | N/A |
| 4 | | 0 | 0 | 0 | 0 | N/A | N/A |
| 5 | | 1 | 1 | 0 | 0 | sewage | marine water |
| 6 | Southern Kai Tak Approach Channel | 1 | 1 | 0 | 0 | sewage | Chemical Toilet at SFK's Site Office |
| 7 | | 1 | 1 | 0 | 0 | sewage | marine water |
| 8 | Northern Kai Tak Approach Channel | 0 | 0 | 0 | 0 | N/A | N/A |
| 9 | | 1 | 1 | 1 | 1 | sewage | marine water |
| 10 | | 0 | 0 | 1 | 1 | sewage | marine water |
| 11 | | 0 | 0 | 1 | 1 | sewage | marine water |
| 12 | | 0 | 0 | 1 | 1 | sewage | marine water |
| 13 | | 1 | 1 | 1 | 1 | sewage | exposed shores and marine water |
| 14 | | 1 | 1 | 1 | 1 | sewage and fishy smell | exposed shores and marine water |
| 15 | | 0 | 0 | 1 | 1 | sewage | exposed shores and marine water |
| 16 | | 0 | 0 | 1 | 1 | sewage | marine water |
| 17 | | 0 | 0 | 0 | 0 | N/A | N/A |
| 18 | | 0 | 0 | 0 | 0 | N/A | N/A |
| 19 | | 1 | 1 | 1 | 1 | sewage | marine water |
| 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 | seawater smell | marine water |
| 25 | | 0 | 0 | 0 | 0 | seawater smell | marine water |
| 26 | | 0 | 0 | 0 | 0 | seawater smell | marine water |
| 27 | Kai Tak Runway | 0 | 0 | 0 | 0 | seawater smell | marine water |
| 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 | | 0 | 0 | 1 | 1 | sewage | marine water |
| 40 | | 1 | 1 | 1 | 1 | sewage | marine water |
| 41 | Upstream section of Kai Tak Nullah | 0 | 0 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 42 | | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 43 | | 0 | 0 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 44 | | 0 | 0 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 45 | Downstream section of Kai Tak Nullah | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 46 | | 0 | 0 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 47 | | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 48 | | 0 | 0 | 0 | 0 | N/A | N/A |
| 49 | | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 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 | | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 54 | | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 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 | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 58 | | 0 | 0 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 59 | | 1 | 1 | 1 | 1 | sewage | water at Kai Tak Nullah |
| 60 | | 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<br>SA2<br>SA3<br>SA4<br>SA5<br>SA6<br>SA7<br>SA8<br>SA9<br>SA10<br>SA11<br>SA12<br>SA13 | **Laboratory Testing:**<br>• Acid Volatile Sulphides (AVS), (mg/kg dry weight)<br>• Residual Nitrate, (mg $NO_3$-N/L wet weight)<br>• 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℃ 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

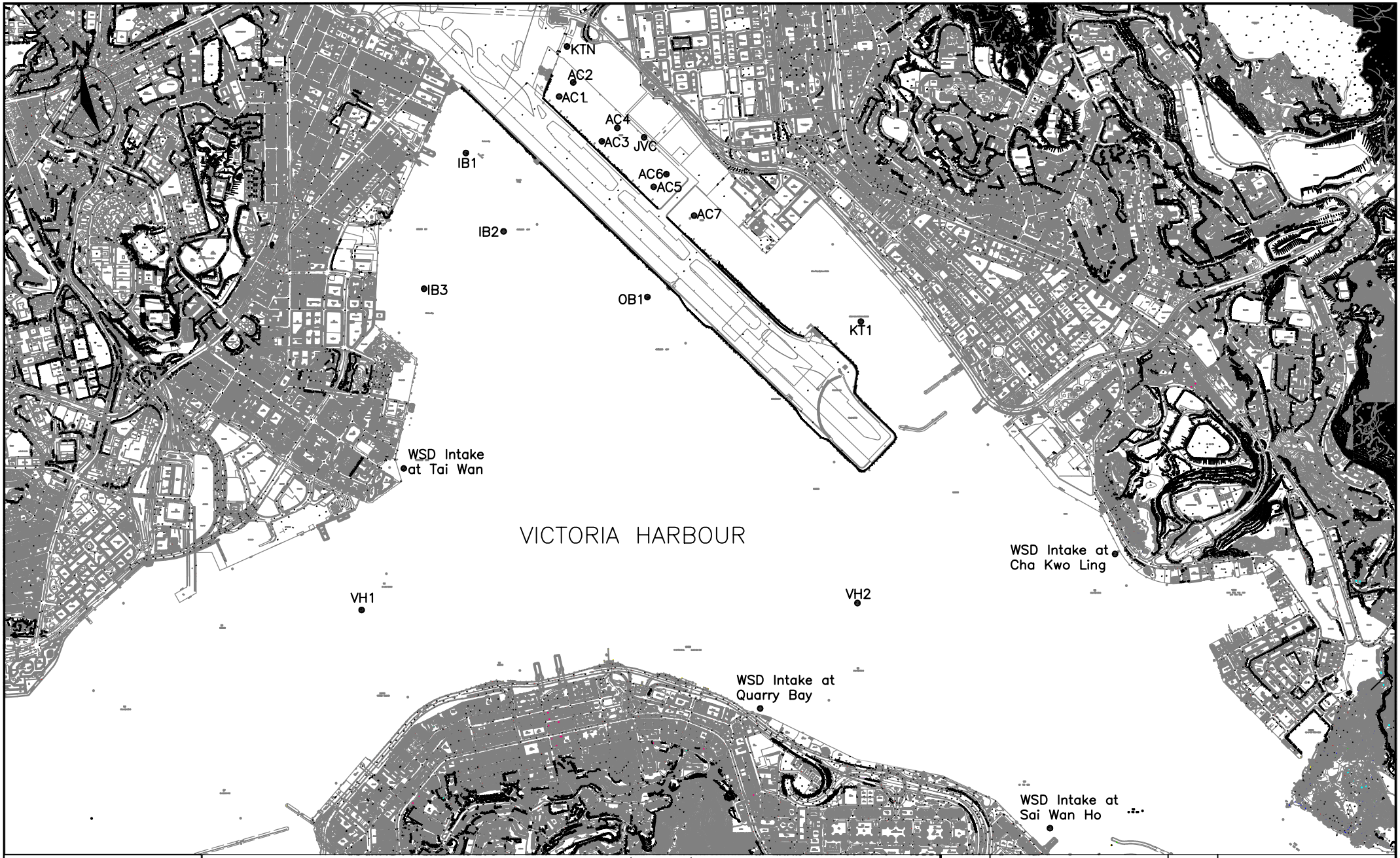
5.13 No sediment monitoring was conducted in the reporting period. The last sediment monitoring was conducted in February 2013 and the next monitoring will be carried out in August 2013.

## 6. Conclusion

6.1 Environmental monitoring works for water quality and odour patrol were performed in May 2013 and all monitoring results were checked and reviewed.

6.2 The next general water quality monitoring, sediment monitoring, odour sampling will be conducted in August 2013 and odour patrol will be conducted in July 2013.

# FIGURES



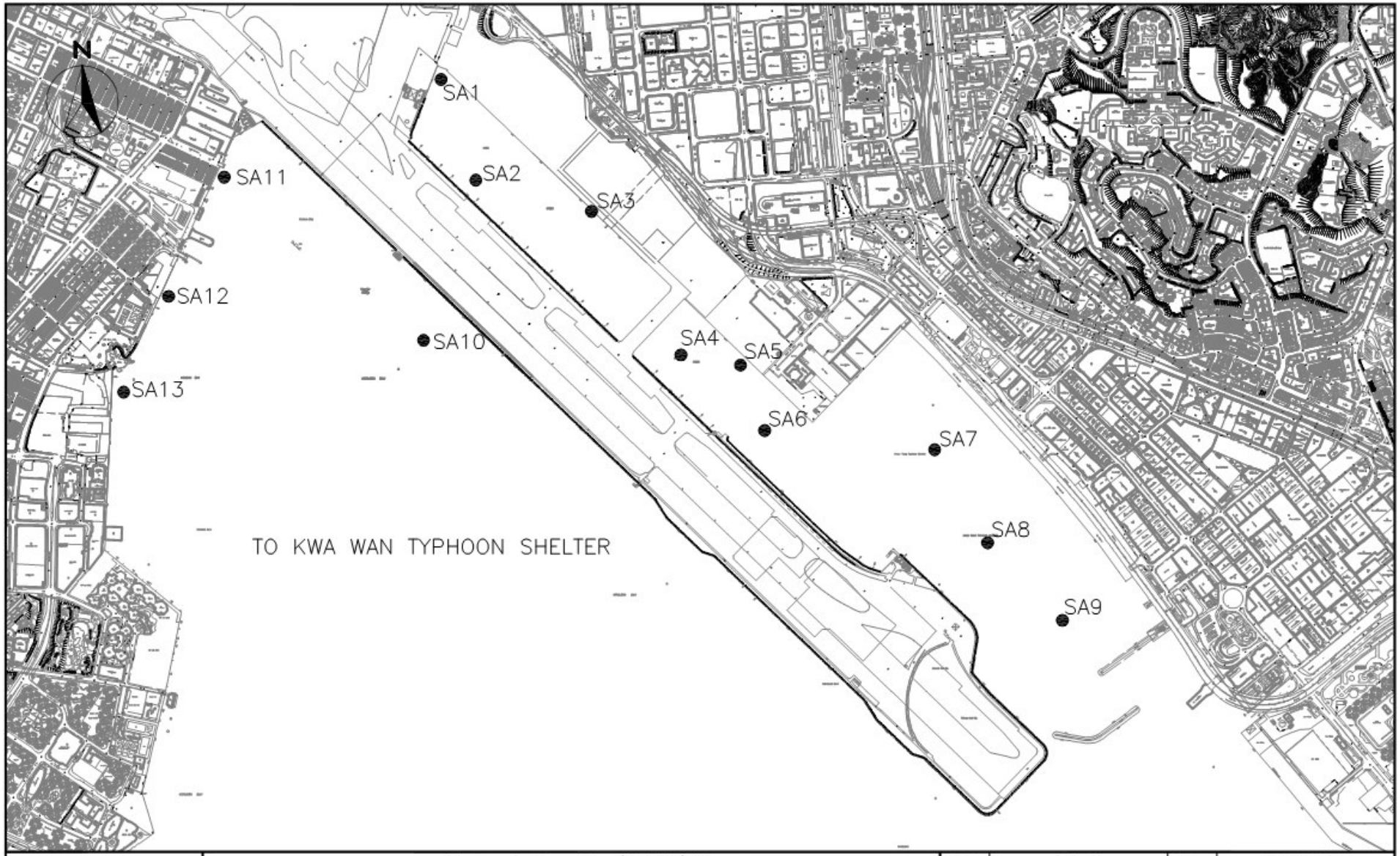

CINOTECH consultants limited

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

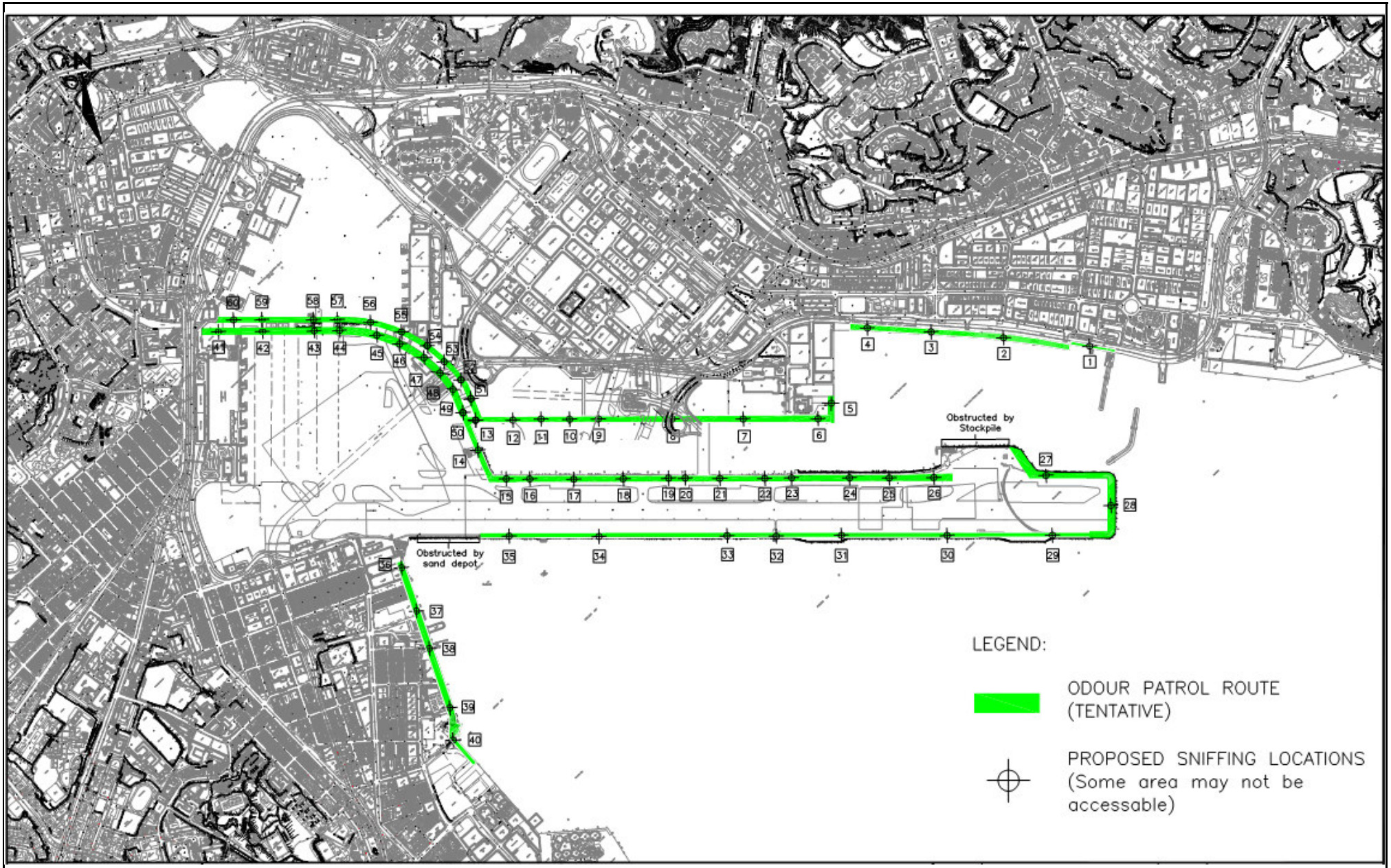
| | | | |
|---|---|---|---|
| SCALE | N.T.S | DATE | 3 AUG 2011 |
| CHECK | IT | DRAWN | TW |
| PROJECT NO. | MA11017 | FIGURE NO. | 1 |
| | | REV | – |




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<br>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-11 | 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/130430-1 |
| Date of Issue: | 2013-04-30 |
| Date Received: | 2013-04-30 |
| Date Tested: | 2013-04-30 |
| Date Completed: | 2013-04-30 |
| Next Due Date: | 2013-07-29 |
| Page: | 1 of 2 |

## Certificate of Calibration

**Item for calibration:**

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

**Test conditions:**

| | |
|---|---|
| Room Temperature | : 20 degree Celsius |
| Relative Humidity | : 64% |

**Test Specifications:**

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

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

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

pH Meter, Model: 6561, L/N: 11H
1. Calibration check with standard pH buffer

Depth Meter
1. Calibration check at 1m water level depth

**Methodologies:**

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
2. In-house method with reference to APHA and ISO standards
   Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
   Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
   pH (APHA 19th 4500-H+ B)

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

**PATRICK TSE**
*Laboratory Manager*

WELLAB 匯力
Testing & Research

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/130430-1 |
| Date of Issue: | 2013-04-30 |
| Date Received: | 2013-04-30 |
| Date Tested: | 2013-04-30 |
| Date Completed: | 2013-04-30 |
| Next Due Date: | 2013-07-29 |



**Results:**

1. Conductivity performance check

| Specific Conductivity, µS/cm | | Correction, µS/cm | Acceptable range |
|---|---|---|---|
| Salinity Meter (C1) | Theoretical Value (C2) | D = C1 - C2 | |
| 1420 | 1420 | 0 | 1420 ± 20 |

2. Salinity Performance check

| Salinity, ppt | | Correction, ppt | Acceptable range |
|---|---|---|---|
| Instrument Reading | Theoretical Value | | |
| 30.0 | 30.0 | 0 | 30.0 ± 3 |

3. Dissolved Oxygen check

| Oxygen level in water at 20°C | Dissolved Oxygen, mg $O_2$/L | | Correction, mg $O_2$/L | Acceptable range |
|---|---|---|---|---|
| | D.O. Meter | Winkler Titration | | |
| Saturated | 9.0 | 9.0 | 0.0 | ± 0.2 |
| Half-saturated | 5.8 | 5.8 | 0.0 | ± 0.2 |
| Zero | 0.0 | 0.0 | 0.0 | ± 0.2 |

4. Turbidity check

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

5. pH Meter check

| Test Parameters | Performance characteristic | Acceptable range |
|---|---|---|
| Liquid junction error $\Delta pH_j$ , pH unit | 0.01 | Less than 0.05 |
| Shift on stirring $\Delta pH_s$ , pH unit | 0.01 | Less than 0.02 |
| Noise $\Delta pH_n$ , 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/130430-3 |
| Date of Issue: | 2013-04-30 |
| Date Received: | 2013-04-30 |
| Date Tested: | 2013-04-30 |
| Date Completed: | 2013-04-30 |
| Next Due Date: | 2013-07-29 |
| Page: | 1 of 2 |

## Certificate of Calibration

**Item for calibration:**

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

**Test conditions:**

| | |
|---|---|
| Room Temperature | : 20 degree Celsius |
| Relative Humidity | : 62% |

**Test Specifications:**

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

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

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

pH Meter, Model: 6561, L/N: 11H
1. Calibration check with standard pH buffer

Depth Meter
1. Calibration check at 1m water level depth

**Methodologies:**

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
2. In-house method with reference to APHA and ISO standards
   Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
   Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
   pH (APHA 19th 4500-H+ B)

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

**PATRICK TSE**
*Laboratory Manager*

WELLAB 匯力
Testing & Research

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

# TEST REPORT

| | |
|---|---|
| Test Report No.: | C/W/130430-3 |
| Date of Issue: | 2013-04-30 |
| Date Received: | 2013-04-30 |
| Date Tested: | 2013-04-30 |
| Date Completed: | 2013-04-30 |
| Next Due Date: | 2013-07-29 |
| Page: | 2 of 2 |

**Results:**

1. Conductivity performance check

| Specific Conductivity, µS/cm | | Correction, µS/cm | Acceptable range |
|---|---|---|---|
| Salinity Meter (C1) | Theoretical Value (C2) | D = C1 - C2 | |
| 1420 | 1420 | 0 | 1420 ± 20 |

2. Salinity Performance check

| Salinity, ppt | | Correction, ppt | Acceptable range |
|---|---|---|---|
| Instrument Reading | Theoretical Value | | |
| 30.0 | 30.0 | 0 | 30.0 ± 3 |

3. Dissolved Oxygen check

| Oxygen level in water at 20°C | Dissolved Oxygen, mg $O_2$/L | | Correction, mg $O_2$/L | Acceptable range |
|---|---|---|---|---|
| | D.O. Meter | Winkler Titration | | |
| Saturated | 9.0 | 9.0 | 0.0 | ± 0.2 |
| Half-saturated | 5.8 | 5.8 | 0.0 | ± 0.2 |
| Zero | 0.0 | 0.0 | 0.0 | ± 0.2 |

4. Turbidity check

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

5. pH Meter check

| Test Parameters | Performance characteristic | Acceptable range |
|---|---|---|
| Liquid junction error $\Delta pH_j$ , pH unit | 0.01 | Less than 0.05 |
| Shift on stirring $\Delta pH_s$ , pH unit | 0.01 | Less than 0.02 |
| Noise $\Delta pH_n$ , 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 匯力 Testing & Research

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

# TEST REPORT

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

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

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

## Certificate of Calibration

**Item for calibration:**

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

**Test conditions:**

| | |
|---|---|
| Room Temperature | : 20 degree Celsius |
| Relative Humidity | : 62% |
| Pressure | : 101.2 kPa |

**Methodology:**

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

**Results:**

| | Reference Set Point | Instrument Readings |
|---|---|---|
| Measuring Air Velocity, m/s | 2.0 | 2.0 |
| Temperature, °C | 21.0 | 21.1 |

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

**PATRICK TSE**
*Laboratory Manager*

# APPENDIX B
# CERTIFICATES FOR QUALIFIED PANEL MEMBER

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**
**RM 1710, Technology Park,**
**18 On Lai Street,**
**Shatin, N.T., Hong Kong**

| | |
|---|---|
| Laboratory No.: | 18464 |
| Date of Issue: | 2013-04-16 |
| Date Tested: | 2013-04-09 |
| Date Completed: | 2013-04-16 |

**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 9th, 11th and 16th April 2013, 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. Tang Wing-Kwai** participated in a set of n-butanol screening tests in our laboratory in April 2013 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 2013.

**********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 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**
**RM 1710, Technology Park,**
**18 On Lai Street,**
**Shatin, N.T., Hong Kong**

| | |
|---|---|
| Laboratory No.: | 18464A |
| Date of Issue: | 2013-04-16 |
| Date Tested: | 2013-04-09 |
| Date Completed: | 2013-04-16 |

**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 9th, 11th and 16th April 2013, respectively.

**Results:**

| Standard deviation of n-butanol thresholds in the range of 20 to 80 ppb/v, R | Requirement of EN13725 | Comment |
|---|---|---|
| 1.25 | <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 2013 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 1.25. 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 2013.

**********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 2013**

| **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 |
| | | Water Quality Monitoring (8th)<br><br>Mid-Ebb 10:50<br>Mid-Flood 17:03 | | | | |
| **12-May** | 13-May | 14-May | 15-May | 16-May | **17-May** | 18-May |
| | | Odour Patrol<br>Daytime - High Tide<br>Evening/Night Time - Low Tide | Odour Patrol<br>Daytime - High Tide<br>Evening/Night Time - Low Tide | | | |
| **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 滙力 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**
**RM 1710, Technology Park,**
**18 On Lai Street,**
**Shatin, N.T., Hong Kong**

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |
| Page: | 1 of 30 |

**ATTN:** **Miss Mei Ling Tang**

**Sample Description** : 172 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. : MA11017/130507
Sampling Date : 2013-05-07

**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

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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 | 18223-1 | 18223-105 | 18223-3 | 18223-107 | 18223-4 | 18223-108 |
| Suspended Solids (SS), mg/L | 6.6 | 6.9 | 11.0 | 11.4 | 13.0 | 13.2 |
| *E. coli*, cfu/100mL | 3100 | 3100 | 1900 | 1900 | 920 | 950 |
| 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 | 0.38 | 0.39 | 0.40 | 0.47 | 0.47 |
| Unionized Ammonia (UIA), mg/L | 0.006 | 0.006 | 0.003 | 0.003 | 0.012 | 0.009 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.9 | 1.0 | 0.9 | 1.0 | 0.7 | 0.7 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.095 | 0.095 | 0.093 | 0.092 | 0.089 | 0.090 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 5.33 | 5.53 | 5.25 | 5.23 | 2.64 | 2.75 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 1.26 | 1.28 | 1.28 | 1.26 | 0.72 | 0.71 |
| Total Phosphorous (TP), mg-P/L | 1.43 | 1.43 | 1.39 | 1.36 | 0.77 | 0.77 |
| Cadmium (Cd), µg/L | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 |
| Chromium (Cr), µg/L | 1.4 | 1.4 | 1.5 | 1.5 | 2.6 | 2.6 |
| Copper (Cu), µg/L | 5.2 | 5.4 | 7.6 | 7.8 | 5.8 | 5.8 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | <0.2 | <0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.5 | 2.5 | 3.1 | 2.9 | 2.3 | 2.3 |
| Lead (Pb), µg/L | 0.5 | 0.5 | 1.4 | 1.4 | 1.0 | 1.0 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 13.0 | 12.7 | 16.5 | 16.0 | 12.2 | 12.3 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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 | 18223-6 | 18223-110 | 18223-7 | 18223-111 | 18223-9 | 18223-113 |
| Suspended Solids (SS), mg/L | 6.9 | 7.1 | 4.4 | 4.2 | 3.4 | 3.2 |
| *E. coli*, cfu/100mL | 1400 | 1400 | 920 | 930 | 900 | 930 |
| 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 | 0.45 | 0.81 | 0.81 | 0.80 | 0.79 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.016 | 0.012 | 0.014 | 0.014 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.6 | 0.6 | 1.4 | 1.4 | 1.7 | 1.7 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.084 | 0.085 | 0.137 | 0.137 | 0.137 | 0.135 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 1.79 | 1.80 | 5.40 | 5.36 | 5.32 | 5.11 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.59 | 0.59 | 1.26 | 1.22 | 1.26 | 1.23 |
| Total Phosphorous (TP), mg-P/L | 0.86 | 0.87 | 1.47 | 1.40 | 1.43 | 1.44 |
| Cadmium (Cd), µg/L | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 2.0 | 2.0 | 1.2 | 1.2 | 1.7 | 1.7 |
| Copper (Cu), µg/L | 6.6 | 6.5 | 6.9 | 6.8 | 5.8 | 6.0 |
| Mercury (Hg), µg/L | 0.2 | <0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.3 | 2.2 | 2.6 | 2.6 | 3.0 | 3.1 |
| Lead (Pb), µg/L | 1.0 | 1.0 | 1.3 | 1.3 | 0.9 | 0.9 |
| Silver (Ag), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Zinc (Zn), µg/L | 11.6 | 11.6 | 22.9 | 22.4 | 17.3 | 17.4 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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 | 18223-10 | 18223-114 | 18223-12 | 18223-116 | 18223-13 | 18223-117 |
| Suspended Solids (SS), mg/L | 8.9 | 9.1 | 2.7 | 2.8 | 5.3 | 5.5 |
| *E. coli*, cfu/100mL | 1300 | 1300 | 1400 | 1400 | 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 | 0.44 | 0.43 | 0.50 | 0.49 | 1.28 | 1.26 |
| Unionized Ammonia (UIA), mg/L | 0.013 | 0.010 | 0.014 | 0.011 | 0.030 | 0.019 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.2 | 1.2 | 0.9 | 0.9 | 1.8 | 1.8 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.102 | 0.098 | 0.098 | 0.098 | 0.227 | 0.230 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 5.46 | 5.53 | 4.07 | 4.26 | 4.88 | 4.95 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 1.35 | 1.33 | 0.79 | 0.78 | 1.19 | 1.23 |
| Total Phosphorous (TP), mg-P/L | 1.40 | 1.38 | 0.86 | 0.87 | 1.41 | 1.43 |
| Cadmium (Cd), µg/L | 0.4 | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 |
| Chromium (Cr), µg/L | 1.0 | 1.0 | 2.7 | 2.8 | 1.4 | 1.4 |
| Copper (Cu), µg/L | 7.7 | 7.8 | 5.3 | 5.2 | 5.1 | 5.2 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 2.5 | 2.6 | 1.9 | 1.9 | 1.1 | 1.1 |
| Lead (Pb), µg/L | 1.2 | 1.3 | 1.4 | 1.4 | 1.5 | 1.5 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 13.3 | 13.0 | 13.1 | 12.9 | 22.0 | 21.8 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | AC5-a | AC5-b | AC6-a | AC6-b | AC6-a | AC6-b |
|---|---|---|---|---|---|---|
| Sampling Depth | B | B | S | S | B | B |
| Tide | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-15 | 18223-119 | 18223-16 | 18223-120 | 18223-18 | 18223-122 |
| Suspended Solids (SS), mg/L | 5.6 | 5.7 | 4.0 | 3.9 | 3.6 | 3.5 |
| *E. coli*, cfu/100mL | 2700 | 2800 | 4200 | 4200 | 2900 | 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 | 0.99 | 0.96 | 1.03 | 1.05 | 1.07 | 1.09 |
| Unionized Ammonia (UIA), mg/L | 0.022 | 0.022 | 0.016 | 0.020 | 0.037 | 0.038 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.5 | 1.5 | 1.7 | 1.7 | 1.5 | 1.5 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.149 | 0.146 | 0.155 | 0.158 | 0.154 | 0.154 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 4.12 | 4.04 | 4.86 | 4.84 | 4.49 | 4.63 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 1.02 | 1.05 | 1.08 | 1.06 | 1.05 | 1.06 |
| Total Phosphorous (TP), mg-P/L | 1.19 | 1.20 | 1.18 | 1.21 | 1.20 | 1.18 |
| Cadmium (Cd), µg/L | 0.2 | 0.2 | 0.4 | 0.4 | 0.5 | 0.5 |
| Chromium (Cr), µg/L | 1.3 | 1.3 | 2.7 | 2.8 | 2.6 | 2.5 |
| Copper (Cu), µg/L | 4.9 | 4.8 | 7.8 | 7.9 | 7.6 | 7.9 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.8 | 2.8 | 3.0 | 3.0 | 2.8 | 2.7 |
| Lead (Pb), µg/L | 1.1 | 1.1 | 1.2 | 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 | 20.3 | 20.8 | 20.4 | 20.4 | 15.3 | 15.1 |

Remark: 1) < = less than

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

**********

WELLAB 滙力
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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | AC7-a | AC7-b | AC7-a | AC7-b | KT1-a | KT1-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | B | B | S | S |
| Tide | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-19 | 18223-123 | 18223-21 | 18223-125 | 18223-22 | 18223-126 |
| Suspended Solids (SS), mg/L | 5.2 | 5.4 | 5.6 | 5.7 | 6.9 | 6.6 |
| *E. coli*, cfu/100mL | 2600 | 2500 | 3200 | 3300 | 2100 | 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 | 1.07 | 1.06 | 1.07 | 1.08 | 0.79 | 0.81 |
| Unionized Ammonia (UIA), mg/L | 0.025 | 0.031 | 0.037 | 0.037 | 0.036 | 0.037 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.8 | 1.9 | 1.8 | 1.8 | 1.3 | 1.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.137 | 0.136 | 0.137 | 0.134 | 0.117 | 0.117 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 5.51 | 5.73 | 5.44 | 5.31 | 4.44 | 4.34 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 1.26 | 1.26 | 1.26 | 1.29 | 1.03 | 1.03 |
| Total Phosphorous (TP), mg-P/L | 1.41 | 1.43 | 1.37 | 1.33 | 1.23 | 1.22 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.4 |
| Chromium (Cr), µg/L | 2.8 | 2.7 | 1.5 | 1.5 | 1.2 | 1.2 |
| Copper (Cu), µg/L | 6.6 | 6.7 | 6.4 | 6.2 | 5.8 | 5.8 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.3 | 0.2 |
| Nickel (Ni), µg/L | 1.3 | 1.2 | 1.1 | 1.0 | 1.7 | 1.7 |
| Lead (Pb), µg/L | 0.6 | 0.6 | 1.6 | 1.6 | 1.2 | 1.2 |
| Silver (Ag), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 14.3 | 13.7 | 17.5 | 16.6 | 20.4 | 19.4 |

Remark: 1) < = less than

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

**********

WELLAB 滙力
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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-23 | 18223-127 | 18223-24 | 18223-128 | 18223-25 | 18223-129 |
| Suspended Solids (SS), mg/L | 5.5 | 5.6 | 7.6 | 7.7 | 7.0 | 7.1 |
| *E. coli*, cfu/100mL | 2200 | 2100 | 1200 | 1200 | 2900 | 2900 |
| 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 | 0.62 | 0.61 | 0.50 | 0.50 | 0.18 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.027 | 0.026 | 0.022 | 0.022 | 0.008 | 0.007 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.0 | 1.0 | 0.9 | 0.9 | 0.3 | 0.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.098 | 0.099 | 0.086 | 0.085 | 0.020 | 0.020 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 3.69 | 3.53 | 2.51 | 2.47 | 0.12 | 0.12 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.80 | 0.81 | 0.64 | 0.65 | 0.10 | 0.10 |
| Total Phosphorous (TP), mg-P/L | 0.89 | 0.86 | 0.68 | 0.68 | 0.10 | 0.10 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.2 | 0.2 | 0.5 | 0.5 |
| Chromium (Cr), µg/L | 2.9 | 2.9 | 2.7 | 2.7 | 2.9 | 2.9 |
| Copper (Cu), µg/L | 6.3 | 6.5 | 6.2 | 6.2 | 6.7 | 6.7 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | <0.2 | <0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.6 | 2.5 | 1.9 | 1.9 | 1.7 | 1.7 |
| Lead (Pb), µg/L | 0.8 | 0.8 | 1.4 | 1.4 | 0.9 | 0.9 |
| Silver (Ag), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Zinc (Zn), µg/L | 16.5 | 16.3 | 11.0 | 10.6 | 14.9 | 15.1 |

Remark: 1) < = less than

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

**********

WELLAB 滙力
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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-26 | 18223-130 | 18223-27 | 18223-131 | 18223-28 | 18223-132 |
| Suspended Solids (SS), mg/L | 6.8 | 6.8 | 11.6 | 12.0 | 7.2 | 7.3 |
| *E. coli*, cfu/100mL | 2400 | 2300 | 2200 | 2200 | 2000 | 2000 |
| 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 | 0.17 | 0.17 | 0.17 | 0.17 | 0.18 | 0.18 |
| Unionized Ammonia (UIA), mg/L | 0.007 | 0.007 | 0.007 | 0.007 | 0.008 | 0.008 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.020 | 0.019 | 0.019 | 0.019 | 0.019 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.11 | 0.11 | 0.11 | 0.10 | 0.11 | 0.11 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.09 | 0.10 | 0.10 | 0.08 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.09 | 0.09 | 0.11 | 0.11 | 0.12 | 0.12 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 | 0.4 |
| Chromium (Cr), µg/L | 3.0 | 2.9 | 2.4 | 2.4 | 2.2 | 2.3 |
| Copper (Cu), µg/L | 7.8 | 8.0 | 6.1 | 6.1 | 5.3 | 5.2 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 2.2 | 2.1 | 2.6 | 2.6 | 1.8 | 1.8 |
| Lead (Pb), µg/L | 1.3 | 1.3 | 1.2 | 1.1 | 0.7 | 0.7 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Zinc (Zn), µg/L | 13.1 | 13.7 | 20.0 | 19.9 | 17.0 | 16.9 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-29 | 18223-133 | 18223-30 | 18223-134 | 18223-31 | 18223-135 |
| Suspended Solids (SS), mg/L | 8.4 | 8.5 | 14.0 | 14.1 | 9.1 | 9.4 |
| *E. coli*, cfu/100mL | 2600 | 2600 | 3000 | 3000 | 240 | 240 |
| 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 | 0.17 | 0.17 | 0.16 | 0.16 | 0.15 | 0.14 |
| Unionized Ammonia (UIA), mg/L | 0.009 | 0.009 | 0.009 | 0.009 | 0.007 | 0.008 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.019 | 0.019 | 0.018 | 0.019 | 0.019 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.11 | 0.11 | 0.11 | 0.11 | 0.12 | 0.12 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.1 | 0.1 | 0.4 | 0.4 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 2.0 | 2.0 | 2.4 | 2.4 | 2.1 | 2.2 |
| Copper (Cu), µg/L | 7.3 | 7.2 | 6.0 | 6.0 | 8.1 | 8.0 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.0 | 1.9 | 1.5 | 1.6 | 1.2 | 1.2 |
| Lead (Pb), µg/L | 1.2 | 1.2 | 0.9 | 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 | 10.6 | 11.0 | 19.6 | 19.9 | 12.0 | 11.7 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-32 | 18223-136 | 18223-33 | 18223-137 | 18223-34 | 18223-138 |
| Suspended Solids (SS), mg/L | 4.7 | 4.6 | 6.4 | 6.2 | 7.9 | 7.5 |
| *E. coli*, cfu/100mL | 420 | 400 | 190 | 200 | 260 | 260 |
| 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 | 0.17 | 0.17 | 0.14 | 0.13 | 0.15 | 0.14 |
| Unionized Ammonia (UIA), mg/L | 0.009 | 0.009 | 0.007 | 0.007 | 0.007 | 0.008 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.018 | 0.018 | 0.018 | 0.018 | 0.018 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.10 | 0.11 | 0.09 | 0.08 | 0.10 | 0.09 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.09 | 0.09 | 0.08 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.10 | 0.10 | 0.11 | 0.11 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.2 | 0.2 | 0.3 | 0.3 | 0.5 | 0.5 |
| Chromium (Cr), µg/L | 2.4 | 2.4 | 1.2 | 1.2 | 1.7 | 1.7 |
| Copper (Cu), µg/L | 6.1 | 6.0 | 7.6 | 7.4 | 7.2 | 7.1 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.2 | 2.1 | 1.5 | 1.5 | 2.9 | 2.8 |
| Lead (Pb), µg/L | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 19.9 | 19.5 | 11.0 | 11.0 | 13.9 | 14.2 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-35 | 18223-139 | 18223-36 | 18223-140 | 18223-37 | 18223-141 |
| Suspended Solids (SS), mg/L | 8.7 | 8.5 | 8.2 | 8.2 | 14.4 | 14.5 |
| *E. coli*, cfu/100mL | 420 | 420 | 1200 | 1200 | 1100 | 1100 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.14 | 0.14 | 0.13 | 0.13 | 0.18 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.007 | 0.007 | 0.007 | 0.007 | 0.008 | 0.007 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.019 | 0.020 | 0.021 | 0.020 | 0.020 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.08 | 0.09 | 0.08 | 0.08 | 0.09 | 0.09 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.12 | 0.12 | 0.13 | 0.13 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.4 | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 1.3 | 1.3 | 1.6 | 1.6 | 2.2 | 2.1 |
| Copper (Cu), µg/L | 6.1 | 6.3 | 5.8 | 5.7 | 5.2 | 4.9 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | <0.2 | <0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.0 | 1.9 | 2.3 | 2.2 | 2.2 | 2.1 |
| Lead (Pb), µg/L | 1.0 | 1.0 | 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 | 16.7 | 16.5 | 9.1 | 9.1 | 11.1 | 11.4 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-38 | 18223-142 | 18223-39 | 18223-143 | 18223-40 | 18223-144 |
| Suspended Solids (SS), mg/L | 8.7 | 8.7 | 9.8 | 9.8 | 14.4 | 15.0 |
| *E. coli*, cfu/100mL | 300 | 310 | 420 | 420 | 130 | 130 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.19 | 0.19 | 0.16 | 0.16 | 0.17 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.010 | 0.010 | 0.009 | 0.009 | 0.007 | 0.007 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.018 | 0.017 | 0.019 | 0.019 | 0.019 | 0.019 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 | 0.10 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.09 | 0.08 | 0.08 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.11 | 0.11 | 0.12 | 0.12 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.4 | 0.4 | <0.1 | <0.1 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 2.8 | 2.7 | 1.8 | 1.7 | 1.2 | 1.2 |
| Copper (Cu), µg/L | 6.2 | 6.1 | 5.8 | 5.9 | 7.0 | 7.2 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 1.1 | 1.1 | 3.0 | 3.1 | 1.9 | 1.9 |
| Lead (Pb), µg/L | 0.9 | 0.9 | 0.8 | 0.8 | 0.6 | 0.6 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 23.0 | 22.3 | 10.0 | 9.5 | 20.9 | 21.7 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | VH2-a | VH2-b | VH2-a | VH2-b | KTN-a | KTN-b |
|---|---|---|---|---|---|---|
| Sampling Depth | M | M | B | B | S | S |
| Tide | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-41 | 18223-145 | 18223-42 | 18223-146 | 18223-43 | 18223-147 |
| Suspended Solids (SS), mg/L | 13.4 | 12.7 | 6.7 | 6.7 | 7.1 | 7.3 |
| *E. coli*, cfu/100mL | 1300 | 1300 | 1100 | 1100 | 3600 | 3700 |
| 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 | 0.17 | 0.17 | 0.13 | 0.12 | 0.42 | 0.42 |
| Unionized Ammonia (UIA), mg/L | 0.009 | 0.009 | 0.007 | 0.006 | 0.008 | 0.008 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.4 | 0.4 | 0.4 | 0.4 | 1.3 | 1.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.019 | 0.020 | 0.020 | 0.095 | 0.093 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.09 | 0.09 | 0.07 | 0.07 | 3.83 | 3.82 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.08 | 0.08 | 1.19 | 1.22 |
| Total Phosphorous (TP), mg-P/L | 0.09 | 0.09 | 0.12 | 0.12 | 1.71 | 1.70 |
| Cadmium (Cd), µg/L | 0.5 | 0.5 | 0.5 | 0.5 | <0.1 | <0.1 |
| Chromium (Cr), µg/L | 1.5 | 1.4 | 1.4 | 1.4 | 2.7 | 2.7 |
| Copper (Cu), µg/L | 8.1 | 7.9 | 6.7 | 6.9 | 6.5 | 6.5 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.0 | 1.9 | 1.4 | 1.4 | 1.7 | 1.6 |
| Lead (Pb), µg/L | 0.8 | 0.8 | 1.1 | 1.1 | 0.5 | 0.5 |
| Silver (Ag), µg/L | 0.2 | 0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 10.2 | 9.9 | 17.8 | 16.9 | 17.5 | 18.0 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | KTN-a | KTN-b | JVC-a | JVC-b | JVC-a | JVC-b |
|---|---|---|---|---|---|---|
| Sampling Depth | B | B | S | S | B | B |
| Tide | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-45 | 18223-149 | 18223-46 | 18223-150 | 18223-48 | 18223-152 |
| Suspended Solids (SS), mg/L | 7.1 | 7.2 | 39.4 | 41.5 | 39.5 | 40.4 |
| *E. coli*, cfu/100mL | 3800 | 3900 | 140000 | 140000 | 120000 | 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 | 0.44 | 0.42 | 6.77 | 6.79 | 5.42 | 5.34 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.124 | 0.125 | 0.151 | 0.186 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.2 | 1.2 | 7.0 | 6.8 | 6.4 | 6.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.095 | 0.093 | 0.013 | 0.013 | 0.015 | 0.014 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 3.82 | 3.88 | 0.04 | 0.04 | 0.01 | 0.01 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 1.20 | 1.21 | 0.57 | 0.57 | 0.70 | 0.69 |
| Total Phosphorous (TP), mg-P/L | 1.39 | 1.40 | 0.71 | 0.71 | 1.46 | 1.46 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.1 | 0.1 | <0.1 | <0.1 |
| Chromium (Cr), µg/L | 1.0 | 1.0 | 2.0 | 1.9 | 3.1 | 3.1 |
| Copper (Cu), µg/L | 6.7 | 6.7 | 6.8 | 6.8 | 7.9 | 7.7 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.4 | 2.3 | 2.6 | 2.7 | 2.4 | 2.4 |
| Lead (Pb), µg/L | 1.4 | 1.3 | 1.0 | 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 | 15.0 | 14.8 | 15.6 | 15.9 | 15.7 | 15.8 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | 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 | WSD Intake at Quarry Bay-a | WSD Intake at Quarry Bay-b |
|---|---|---|---|---|---|---|
| Sampling Depth | N/A | N/A | N/A | N/A | N/A | N/A |
| Tide | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb | Mid-Ebb |
| Sample Number | 18223-49 | 18223-153 | 18223-50 | 18223-154 | 18223-51 | 18223-155 |
| Suspended Solids (SS), mg/L | 8.0 | 8.1 | 6.2 | 6.1 | 11.9 | 12.0 |
| *E. coli*, cfu/100mL | 40 | 41 | 62 | 61 | 3000 | 3000 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.12 | 0.12 | 0.08 | 0.08 | 0.17 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.006 | 0.006 | 0.003 | 0.003 | 0.009 | 0.009 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.1 | 0.1 | 0.4 | 0.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.018 | 0.022 | 0.021 | 0.018 | 0.019 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.09 | 0.10 | 0.06 | 0.06 | 0.09 | 0.09 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.77 | 0.76 | 0.08 | 0.08 |
| Total Phosphorous (TP), mg-P/L | 0.08 | 0.08 | 1.11 | 1.07 | 0.10 | 0.10 |
| Cadmium (Cd), µg/L | 0.4 | 0.4 | 0.1 | 0.1 | 0.3 | 0.3 |
| Chromium (Cr), µg/L | 2.2 | 2.2 | 1.9 | 2.0 | 1.5 | 1.5 |
| Copper (Cu), µg/L | 5.2 | 5.4 | 7.2 | 7.1 | 7.2 | 7.0 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | 0.2 | 0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 3.1 | 3.2 | 2.0 | 1.9 | 1.9 | 1.9 |
| Lead (Pb), µg/L | 0.5 | 0.5 | 1.5 | 1.5 | 1.4 | 1.4 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Zinc (Zn), µg/L | 20.1 | 20.6 | 23.3 | 23.9 | 10.7 | 10.6 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | WSD Intake at Sai Wan Ho-a | WSD Intake at Sai Wan Ho-b | AC1-a | AC1-b | AC1-a | AC1-b |
|---|---|---|---|---|---|---|
| Sampling Depth | N/A | N/A | S | S | B | B |
| Tide | Mid-Ebb | Mid-Ebb | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-52 | 18223-156 | 18223-53 | 18223-157 | 18223-55 | 18223-159 |
| Suspended Solids (SS), mg/L | 12.8 | 13.3 | 3.9 | 3.9 | 4.3 | 4.3 |
| *E. coli*, cfu/100mL | 280 | 280 | 15000 | 15000 | 11000 | 11000 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.10 | 0.10 | 0.47 | 0.48 | 0.52 | 0.52 |
| Unionized Ammonia (UIA), mg/L | 0.005 | 0.005 | 0.006 | 0.008 | 0.004 | 0.004 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.2 | 0.2 | 1.2 | 1.2 | 1.4 | 1.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.021 | 0.022 | 0.072 | 0.070 | 0.073 | 0.072 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.05 | 0.05 | 3.30 | 3.45 | 3.68 | 3.57 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 1.00 | 0.96 | 1.18 | 1.15 |
| Total Phosphorous (TP), mg-P/L | 0.10 | 0.10 | 1.19 | 1.22 | 1.30 | 1.32 |
| Cadmium (Cd), µg/L | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 2.2 | 2.2 | 2.9 | 2.9 | 3.0 | 3.1 |
| Copper (Cu), µg/L | 7.9 | 8.1 | 7.2 | 7.2 | 7.7 | 7.9 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 1.4 | 1.4 | 2.3 | 2.2 | 1.1 | 1.2 |
| Lead (Pb), µg/L | 0.6 | 0.6 | 1.4 | 1.4 | 1.3 | 1.3 |
| Silver (Ag), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 21.9 | 21.4 | 19.2 | 18.5 | 19.1 | 18.9 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | AC2-a | AC2-b | AC2-a | AC2-b | AC3-a | AC3-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | B | B | S | S |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-56 | 18223-160 | 18223-58 | 18223-162 | 18223-59 | 18223-163 |
| Suspended Solids (SS), mg/L | 4.3 | 4.2 | 5.8 | 5.8 | 5.8 | 5.8 |
| *E. coli*, cfu/100mL | 3600 | 3500 | 6600 | 6400 | 5500 | 5700 |
| 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 | 0.52 | 0.51 | 0.58 | 0.57 | 0.60 | 0.59 |
| Unionized Ammonia (UIA), mg/L | 0.007 | 0.008 | 0.010 | 0.013 | 0.008 | 0.006 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.5 | 1.6 | 0.9 | 0.9 | 0.9 | 0.8 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.078 | 0.079 | 0.089 | 0.090 | 0.089 | 0.086 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 3.54 | 3.63 | 0.51 | 0.53 | 0.33 | 0.34 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 1.18 | 1.22 | 0.14 | 0.14 | 0.11 | 0.11 |
| Total Phosphorous (TP), mg-P/L | 1.31 | 1.28 | 0.15 | 0.15 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.5 | 0.5 | 0.2 | 0.2 | 0.3 | 0.3 |
| Chromium (Cr), µg/L | 1.5 | 1.5 | 2.2 | 2.1 | 2.0 | 2.1 |
| Copper (Cu), µg/L | 7.1 | 7.3 | 6.3 | 6.3 | 5.8 | 5.8 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | 0.2 | 0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 1.3 | 1.3 | 2.8 | 2.8 | 1.9 | 1.8 |
| Lead (Pb), µg/L | 1.5 | 1.4 | 1.5 | 1.6 | 1.5 | 1.5 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 8.4 | 8.2 | 9.9 | 10.2 | 14.0 | 14.5 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | AC3-a | AC3-b | AC4-a | AC4-b | AC4-a | AC4-b |
|---|---|---|---|---|---|---|
| Sampling Depth | B | B | S | S | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-61 | 18223-165 | 18223-62 | 18223-166 | 18223-64 | 18223-168 |
| Suspended Solids (SS), mg/L | 7.9 | 7.7 | 11.8 | 11.6 | 7.2 | 7.4 |
| *E. coli*, cfu/100mL | 10000 | 9900 | 170000 | 180000 | 74000 | 76000 |
| 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 | 0.60 | 0.59 | 4.52 | 4.57 | 0.65 | 0.64 |
| Unionized Ammonia (UIA), mg/L | 0.011 | 0.011 | 0.072 | 0.061 | 0.018 | 0.018 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.8 | 0.8 | 5.2 | 5.4 | 1.0 | 1.0 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.089 | 0.089 | 1.161 | 1.208 | 0.075 | 0.077 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.33 | 0.32 | 0.15 | 0.17 | 0.76 | 0.74 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.09 | 1.02 | 1.05 | 0.18 | 0.18 |
| Total Phosphorous (TP), mg-P/L | 0.10 | 0.10 | 1.36 | 1.39 | 0.47 | 0.47 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.1 | 0.1 | 0.5 | 0.5 |
| Chromium (Cr), µg/L | 2.0 | 2.0 | 2.8 | 2.8 | 2.4 | 2.5 |
| Copper (Cu), µg/L | 7.2 | 7.1 | 7.0 | 7.1 | 5.1 | 4.9 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.7 | 2.8 | 2.8 | 2.7 | 3.0 | 3.0 |
| Lead (Pb), µg/L | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Zinc (Zn), µg/L | 20.3 | 19.9 | 10.8 | 10.7 | 20.2 | 20.4 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | AC5-a | AC5-b | AC5-a | AC5-b | AC6-a | AC6-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | B | B | S | S |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-65 | 18223-169 | 18223-67 | 18223-171 | 18223-68 | 18223-172 |
| Suspended Solids (SS), mg/L | 6.8 | 6.8 | 8.2 | 8.0 | 6.7 | 6.8 |
| *E. coli*, cfu/100mL | 3700 | 3600 | 2800 | 2900 | 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 | 0.55 | 0.55 | 0.51 | 0.52 | 1.29 | 1.25 |
| Unionized Ammonia (UIA), mg/L | 0.010 | 0.013 | 0.011 | 0.012 | 0.025 | 0.031 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.8 | 0.8 | 0.9 | 0.9 | 1.8 | 1.8 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.083 | 0.083 | 0.080 | 0.080 | 0.193 | 0.190 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.79 | 0.79 | 0.72 | 0.70 | 1.94 | 1.93 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.16 | 0.16 | 0.13 | 0.14 | 0.66 | 0.64 |
| Total Phosphorous (TP), mg-P/L | 0.16 | 0.16 | 0.23 | 0.23 | 0.71 | 0.70 |
| Cadmium (Cd), µg/L | 0.4 | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 |
| Chromium (Cr), µg/L | 2.6 | 2.6 | 2.5 | 2.4 | 2.9 | 2.9 |
| Copper (Cu), µg/L | 6.1 | 6.1 | 7.9 | 7.9 | 7.6 | 7.5 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.7 | 2.6 | 2.1 | 2.0 | 1.8 | 1.8 |
| Lead (Pb), µg/L | 1.6 | 1.6 | 0.8 | 0.8 | 1.2 | 1.2 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 20.8 | 20.1 | 20.9 | 21.0 | 22.3 | 21.8 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | AC6-a | AC6-b | AC7-a | AC7-b | AC7-a | AC7-b |
|---|---|---|---|---|---|---|
| Sampling Depth | B | B | S | S | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-70 | 18223-174 | 18223-71 | 18223-175 | 18223-73 | 18223-177 |
| Suspended Solids (SS), mg/L | 11.8 | 11.7 | 14.1 | 13.7 | 8.8 | 8.8 |
| *E. coli*, cfu/100mL | 9600 | 9700 | 3300 | 3200 | 2500 | 2500 |
| 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 | 0.88 | 0.87 | 0.75 | 0.75 | 0.62 | 0.62 |
| Unionized Ammonia (UIA), mg/L | 0.031 | 0.030 | 0.022 | 0.022 | 0.022 | 0.022 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 1.3 | 1.3 | 1.1 | 1.1 | 0.9 | 1.0 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.143 | 0.142 | 0.114 | 0.116 | 0.097 | 0.098 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 1.29 | 1.28 | 1.62 | 1.63 | 1.32 | 1.30 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.43 | 0.41 | 0.49 | 0.48 | 0.34 | 0.34 |
| Total Phosphorous (TP), mg-P/L | 0.45 | 0.44 | 0.52 | 0.52 | 0.34 | 0.34 |
| Cadmium (Cd), µg/L | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 |
| Chromium (Cr), µg/L | 1.9 | 1.9 | 2.8 | 2.9 | 1.3 | 1.3 |
| Copper (Cu), µg/L | 5.5 | 5.4 | 6.4 | 6.1 | 7.2 | 7.4 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 1.7 | 1.7 | 1.1 | 1.1 | 2.9 | 2.9 |
| Lead (Pb), µg/L | 0.6 | 0.6 | 0.9 | 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 | 14.1 | 13.8 | 18.8 | 18.6 | 8.3 | 7.9 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | KT1-a | KT1-b | KT1-a | KT1-b | KT1-a | KT1-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-74 | 18223-178 | 18223-75 | 18223-179 | 18223-76 | 18223-180 |
| Suspended Solids (SS), mg/L | 6.7 | 6.5 | 6.6 | 6.4 | 21.8 | 21.8 |
| *E. coli*, cfu/100mL | 1000 | 970 | 960 | 980 | 1200 | 1200 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.32 | 0.31 | 0.08 | 0.09 | 0.29 | 0.29 |
| Unionized Ammonia (UIA), mg/L | 0.018 | 0.018 | 0.003 | 0.004 | 0.012 | 0.012 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.7 | 0.7 | 0.4 | 0.4 | 0.7 | 0.7 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.071 | 0.070 | 0.037 | 0.037 | 0.065 | 0.063 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 1.55 | 1.50 | 0.48 | 0.48 | 1.42 | 1.41 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.34 | 0.33 | 0.12 | 0.12 | 0.37 | 0.37 |
| Total Phosphorous (TP), mg-P/L | 0.35 | 0.35 | 0.15 | 0.15 | 0.38 | 0.38 |
| Cadmium (Cd), µg/L | 0.2 | 0.2 | 0.4 | 0.4 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 1.3 | 1.3 | 3.0 | 3.0 | 2.2 | 2.2 |
| Copper (Cu), µg/L | 7.2 | 7.2 | 7.6 | 7.4 | 7.1 | 6.9 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.3 | 2.3 | 1.5 | 1.5 | 2.2 | 2.2 |
| Lead (Pb), µg/L | 0.7 | 0.7 | 1.6 | 1.5 | 1.6 | 1.6 |
| Silver (Ag), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 13.9 | 14.0 | 19.6 | 18.8 | 15.0 | 15.5 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | IB1-a | IB1-b | IB1-a | IB1-b | IB1-a | IB1-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-77 | 18223-181 | 18223-78 | 18223-182 | 18223-79 | 18223-183 |
| Suspended Solids (SS), mg/L | 9.8 | 10.3 | 7.8 | 8.1 | 12.3 | 11.8 |
| *E. coli*, cfu/100mL | 220 | 220 | 170 | 170 | 180 | 180 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.17 | 0.17 | 0.16 | 0.16 | 0.17 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.023 | 0.024 | 0.022 | 0.023 | 0.021 | 0.021 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.09 | 0.09 | 0.10 | 0.10 | 0.11 | 0.11 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.09 | 0.09 | 0.12 | 0.12 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 |
| Chromium (Cr), µg/L | 2.2 | 2.3 | 1.5 | 1.4 | 1.5 | 1.5 |
| Copper (Cu), µg/L | 8.2 | 8.1 | 6.1 | 6.1 | 7.3 | 7.5 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 1.2 | 1.3 | 2.4 | 2.5 | 2.0 | 2.0 |
| Lead (Pb), µg/L | 1.6 | 1.6 | 0.6 | 0.6 | 1.3 | 1.3 |
| Silver (Ag), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 18.5 | 19.1 | 9.4 | 9.2 | 14.9 | 14.9 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | IB2-a | IB2-b | IB2-a | IB2-b | IB2-a | IB2-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-80 | 18223-184 | 18223-81 | 18223-185 | 18223-82 | 18223-186 |
| Suspended Solids (SS), mg/L | 11.7 | 11.9 | 10.5 | 10.7 | 6.9 | 7.3 |
| *E. coli*, cfu/100mL | 560 | 550 | 540 | 550 | 780 | 780 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Unionized Ammonia (UIA), mg/L | 0.007 | 0.007 | 0.007 | 0.007 | 0.007 | 0.007 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.5 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.024 | 0.024 | 0.019 | 0.019 | 0.025 | 0.024 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.11 | 0.11 | 0.10 | 0.10 | 0.11 | 0.11 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.09 | 0.08 | 0.08 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.09 | 0.09 | 0.11 | 0.11 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | <0.1 | <0.1 | 0.3 | 0.3 | 0.3 | 0.4 |
| Chromium (Cr), µg/L | 2.2 | 2.3 | 1.9 | 1.9 | 2.5 | 2.5 |
| Copper (Cu), µg/L | 6.3 | 6.3 | 5.4 | 5.4 | 5.0 | 5.2 |
| Mercury (Hg), µg/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | <0.2 |
| Nickel (Ni), µg/L | 1.9 | 1.8 | 2.1 | 2.0 | 1.5 | 1.4 |
| Lead (Pb), µg/L | 0.8 | 0.8 | 1.1 | 1.1 | 1.0 | 0.9 |
| Silver (Ag), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 11.9 | 11.9 | 8.5 | 8.7 | 22.6 | 23.0 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | IB3-a | IB3-b | IB3-a | IB3-b | IB3-a | IB3-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-83 | 18223-187 | 18223-84 | 18223-188 | 18223-85 | 18223-189 |
| Suspended Solids (SS), mg/L | 10.0 | 10.0 | 5.8 | 5.7 | 6.6 | 6.4 |
| *E. coli*, cfu/100mL | 120 | 120 | 86 | 87 | 130 | 130 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.17 | 0.17 | 0.15 | 0.15 | 0.17 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.019 | 0.019 | 0.019 | 0.021 | 0.022 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.10 | 0.10 | 0.12 | 0.12 | 0.12 | 0.12 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.10 | 0.10 | 0.11 | 0.11 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | <0.1 | <0.1 | 0.2 | 0.2 |
| Chromium (Cr), µg/L | 1.8 | 1.8 | 2.8 | 2.8 | 2.0 | 2.0 |
| Copper (Cu), µg/L | 5.7 | 5.7 | 6.9 | 6.7 | 7.3 | 7.3 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.9 | 2.9 | 2.4 | 2.3 | 3.0 | 3.0 |
| Lead (Pb), µg/L | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 19.2 | 19.3 | 12.8 | 12.8 | 11.3 | 11.3 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |
| Page: | 25 of 30 |

**Results:**

| Sample ID | OB1-a | OB1-b | OB1-a | OB1-b | OB1-a | OB1-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-86 | 18223-190 | 18223-87 | 18223-191 | 18223-88 | 18223-192 |
| Suspended Solids (SS), mg/L | 9.5 | 9.5 | 7.3 | 7.3 | 5.9 | 6.1 |
| *E. coli*, cfu/100mL | 210 | 200 | 520 | 540 | 260 | 260 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.13 | 0.13 | 0.13 | 0.14 | 0.14 | 0.14 |
| Unionized Ammonia (UIA), mg/L | 0.007 | 0.007 | 0.007 | 0.008 | 0.008 | 0.008 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.020 | 0.020 | 0.022 | 0.023 | 0.022 | 0.022 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.16 | 0.15 | 0.15 | 0.14 | 0.17 | 0.17 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 | 0.10 |
| Total Phosphorous (TP), mg-P/L | 0.11 | 0.11 | 0.12 | 0.12 | 0.13 | 0.13 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.4 | 0.4 | 0.2 | 0.2 |
| Chromium (Cr), µg/L | 1.4 | 1.4 | 1.6 | 1.6 | 1.7 | 1.7 |
| Copper (Cu), µg/L | 6.8 | 6.6 | 6.3 | 6.3 | 5.8 | 5.9 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | 0.2 | 0.2 |
| Nickel (Ni), µg/L | 2.1 | 2.1 | 1.9 | 1.9 | 2.8 | 2.7 |
| Lead (Pb), µg/L | 1.4 | 1.5 | 1.1 | 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 | 9.5 | 9.1 | 12.6 | 12.0 | 16.3 | 16.3 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |
| Page: | 26 of 30 |

**Results:**

| Sample ID | VH1-a | VH1-b | VH1-a | VH1-b | VH1-a | VH1-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-89 | 18223-193 | 18223-90 | 18223-194 | 18223-91 | 18223-195 |
| Suspended Solids (SS), mg/L | 8.8 | 9.0 | 16.7 | 16.0 | 12.5 | 12.2 |
| *E. coli*, cfu/100mL | 820 | 810 | 2500 | 2500 | 520 | 540 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.18 | 0.19 | 0.15 | 0.16 | 0.16 | 0.16 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.008 | 0.007 | 0.007 | 0.009 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.020 | 0.020 | 0.020 | 0.019 | 0.021 | 0.022 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Total Phosphorous (TP), mg-P/L | 0.11 | 0.11 | 0.12 | 0.12 | 0.13 | 0.13 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.5 | 0.5 | 0.1 | 0.1 |
| Chromium (Cr), µg/L | 2.7 | 2.7 | 2.8 | 2.7 | 2.4 | 2.5 |
| Copper (Cu), µg/L | 7.8 | 7.5 | 5.9 | 5.7 | 5.4 | 5.4 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.4 | 2.4 | 1.8 | 1.7 | 1.2 | 1.1 |
| Lead (Pb), µg/L | 1.0 | 1.0 | 1.2 | 1.2 | 0.7 | 0.7 |
| Silver (Ag), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 21.9 | 21.6 | 11.7 | 11.9 | 17.6 | 16.8 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | VH2-a | VH2-b | VH2-a | VH2-b | VH2-a | VH2-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | M | M | B | B |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-92 | 18223-196 | 18223-93 | 18223-197 | 18223-94 | 18223-198 |
| Suspended Solids (SS), mg/L | 9.0 | 8.9 | 11.8 | 11.6 | 14.1 | 14.3 |
| *E. coli*, cfu/100mL | 1800 | 1800 | 390 | 380 | 250 | 250 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.19 | 0.18 | 0.15 | 0.16 | 0.17 | 0.17 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.021 | 0.022 | 0.020 | 0.019 | 0.020 | 0.020 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.09 | 0.09 | 0.09 | 0.08 | 0.08 | 0.08 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Total Phosphorous (TP), mg-P/L | 0.10 | 0.10 | 0.12 | 0.12 | 0.10 | 0.10 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.2 | 0.2 | <0.1 | <0.1 |
| Chromium (Cr), µg/L | 2.1 | 2.1 | 2.2 | 2.1 | 1.7 | 1.7 |
| Copper (Cu), µg/L | 6.5 | 6.6 | 6.9 | 6.8 | 6.5 | 6.3 |
| Mercury (Hg), µg/L | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| Nickel (Ni), µg/L | 2.2 | 2.3 | 1.8 | 1.9 | 2.8 | 2.9 |
| Lead (Pb), µg/L | 1.6 | 1.6 | 1.1 | 1.1 | 0.9 | 0.9 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 9.9 | 9.8 | 10.8 | 11.0 | 11.5 | 11.9 |

Remark: 1) < = less than

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

**********

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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**Results:**

| Sample ID | KTN-a | KTN-b | KTN-a | KTN-b | JVC-a | JVC-b |
|---|---|---|---|---|---|---|
| Sampling Depth | S | S | B | B | S | S |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-95 | 18223-199 | 18223-97 | 18223-201 | 18223-98 | 18223-202 |
| Suspended Solids (SS), mg/L | 8.1 | 8.2 | 8.7 | 9.0 | 9.0 | 9.2 |
| *E. coli*, cfu/100mL | 2600 | 2600 | 500 | 510 | 250000 | 250000 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.36 | 0.35 | 0.54 | 0.54 | 2.68 | 2.77 |
| Unionized Ammonia (UIA), mg/L | 0.009 | 0.009 | 0.012 | 0.010 | 0.064 | 0.053 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.6 | 0.6 | 0.8 | 0.8 | 3.9 | 3.9 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.065 | 0.064 | 0.060 | 0.062 | 0.530 | 0.513 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.61 | 0.63 | 0.33 | 0.32 | 0.02 | 0.05 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.15 | 0.14 | 0.12 | 0.13 | 0.63 | 0.62 |
| Total Phosphorous (TP), mg-P/L | 0.15 | 0.15 | 0.13 | 0.13 | 0.80 | 0.80 |
| Cadmium (Cd), µg/L | 0.4 | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 |
| Chromium (Cr), µg/L | 2.1 | 2.1 | 1.4 | 1.4 | 1.9 | 1.9 |
| Copper (Cu), µg/L | 5.4 | 5.2 | 6.4 | 6.2 | 6.5 | 6.6 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 1.6 | 1.6 | 2.7 | 2.7 | 1.8 | 1.9 |
| Lead (Pb), µg/L | 0.7 | 0.7 | 1.3 | 1.3 | 0.8 | 0.8 |
| Silver (Ag), µg/L | <0.2 | <0.2 | 0.2 | 0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 22.1 | 21.2 | 8.4 | 7.9 | 11.4 | 11.4 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-100 | 18223-204 | 18223-101 | 18223-205 | 18223-102 | 18223-206 |
| Suspended Solids (SS), mg/L | 4.6 | 4.6 | 12.8 | 12.4 | 16.9 | 16.9 |
| *E. coli*, cfu/100mL | 2400 | 2300 | 420 | 420 | 26 | 25 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.34 | 0.33 | 0.18 | 0.18 | 0.14 | 0.14 |
| Unionized Ammonia (UIA), mg/L | 0.009 | 0.009 | 0.008 | 0.008 | 0.006 | 0.006 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.5 | 0.5 | 0.3 | 0.3 | 0.5 | 0.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.047 | 0.048 | 0.023 | 0.023 | 0.019 | 0.019 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.36 | 0.36 | 0.12 | 0.12 | 0.17 | 0.18 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.14 | 0.14 | 0.09 | 0.09 | 0.09 | 0.09 |
| Total Phosphorous (TP), mg-P/L | 0.15 | 0.15 | 0.09 | 0.09 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.5 | 0.5 | 0.2 | 0.2 |
| Chromium (Cr), µg/L | 1.6 | 1.7 | 1.1 | 1.1 | 1.3 | 1.3 |
| Copper (Cu), µg/L | 5.9 | 5.9 | 7.4 | 7.3 | 7.4 | 7.6 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | 0.3 | 0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 2.5 | 2.5 | 2.4 | 2.3 | 1.2 | 1.2 |
| Lead (Pb), µg/L | 1.0 | 1.0 | 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 | 10.3 | 10.3 | 15.7 | 15.6 | 18.9 | 19.0 |

Remark: 1) < = less than

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

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | 18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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 |
|---|---|---|---|---|
| Sampling Depth | N/A | N/A | N/A | N/A |
| Tide | Mid-Flood | Mid-Flood | Mid-Flood | Mid-Flood |
| Sample Number | 18223-103 | 18223-207 | 18223-104 | 18223-208 |
| Suspended Solids (SS), mg/L | 8.4 | 8.3 | 16.5 | 17.3 |
| *E. coli*, cfu/100mL | 1800 | 1800 | 720 | 740 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | <2 | <2 | <2 | <2 |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | 0.15 | 0.15 | 0.16 | 0.16 |
| Unionized Ammonia (UIA), mg/L | 0.008 | 0.008 | 0.007 | 0.007 |
| Total Kjeldahl Nitrogen (TKN), mg N/L | 0.4 | 0.4 | 0.4 | 0.4 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | 0.019 | 0.020 | 0.019 | 0.020 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | 0.08 | 0.08 | 0.08 | 0.08 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | 0.08 | 0.08 | 0.08 | 0.08 |
| Total Phosphorous (TP), mg-P/L | 0.10 | 0.10 | 0.11 | 0.11 |
| Cadmium (Cd), µg/L | 0.3 | 0.3 | 0.2 | 0.2 |
| Chromium (Cr), µg/L | 2.4 | 2.4 | 2.7 | 2.7 |
| Copper (Cu), µg/L | 6.0 | 6.2 | 6.2 | 6.3 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | 1.5 | 1.5 | 3.0 | 3.0 |
| Lead (Pb), µg/L | 1.0 | 1.0 | 1.4 | 1.3 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | 19.3 | 18.3 | 12.0 | 12.0 |

Remark: 1) < = less than

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

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

**APPENDIX D2**
**RESULS FOR ODOUR PATROL SURVEY IN MAY 2013**

**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 and 15 May 2013
**Temporature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 09:22 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( S ) | 0.6 | (2) |
| 2 | 11:31 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 2.9 | (2) |
| 3 | 11:34 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 3.7 | (2) |
| 4 | 11:37 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 3.9 | (2) |
| 5 | 09:32 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 5.4 | (2) |
| 6 | 09:35 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | Chemical Toilet at SFK's Site Office | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.5 | (2) |
| 7 | 10:30 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 3.4 | (2) |
| 8 | 10:35 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( E ) | 3.4 | (2) |
| 9 | 10:37 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( E ) | 2.8 | (2) |
| 10 | 10:44 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 4.1 | (2) |
| 11 | 10:47 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 3.5 | (2) |
| 12 | 16:49 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 5.1 | (2) |
| 13 | 11:10 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.4 | (2) |
| 14 | 11:07 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 2.1 | (2) |
| 15 | 11:03 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 3.2 | (2) |
| 16 | 11:00 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 4.5 | (2) |
| 17 | 10:58 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 3.1 | (2) |
| 18 | 10:56 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 2.1 | (2) |
| 19 | 10:53 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 2.2 | (2) |
| 20 | 12:42 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( S ) | 0.2 | (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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 12:35 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 0.8 | (2) |
| 22 | 12:25 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 2.3 | (2) |
| 23 | 12:23 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 0.5 | (2) |
| 24 | 12:21 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 0.7 | (2) |
| 25 | 12:13 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( E ) | 2.4 | (2) |
| 26 | 12:10 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SE ) | 2.3 | (2) |
| 27 | 12:01 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( E ) | 2.5 | (2) |
| 28 | 11:55 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SE ) | 1.7 | (2) |
| 29 | 11:11 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( S ) | 1.0 | (3) |
| 30 | 11:16 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 1.4 | (3) |
| 31 | 11:20 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( S ) | 1.0 | (3) |
| 32 | 11:25 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 3.8 | (3) |
| 33 | 11:31 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 1.5 | (3) |
| 34 | 11:49 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 4.1 | (3) |
| 35 | 11:54 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( S ) | 2.5 | (3) |
| 36 | 10:29 | 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) |
| 37 | 10:03 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( NW ) | 1.2 | (3) |
| 38 | 10:05 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SE ) | 0.9 | (3) |
| 39 | 10:13 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( NW ) | 1.7 | (3) |
| 40 | 10:17 | High Tide / ~~Low Tide~~ | Sunny / Fine / Cloudy / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.3 | (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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 12:49 | 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) |
| 42 | 12:43 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( W ) | 0.3 | (3) |
| 43 | 12:40 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( E ) | 1.3 | (3) |
| 44 | 12:38 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 2.2 | (3) |
| 45 | 12:28 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 1.2 | (3) |
| 46 | 12:21 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 1.9 | (3) |
| 47 | 12:19 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SE ) | 0.4 | (3) |
| 48 | 12:11 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SW ) | 0.5 | (3) |
| 49 | 13:00 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.9 | (3) |
| 50 | 13:01 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 2.9 | (3) |
| 51 | 13:03 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 1.6 | (3) |
| 52 | 13:05 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 2.0 | (3) |
| 53 | 12:16 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 0.5 | (3) |
| 54 | 12:17 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SW ) | 1.6 | (3) |
| 55 | 12:26 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 4.2 | (3) |
| 56 | 12:31 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 2.3 | (3) |
| 57 | 12:37 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.4 | (3) |
| 58 | 12:39 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( E ) | 1.9 | (3) |
| 59 | 12:44 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | 0 (1) 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.4 | (3) |
| 60 | 12:50 | High Tide / ~~Low Tide~~ | Sunny / Fine (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( E ) | 1.4 | (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 2013 (3) Conducted on 15 May 2013

| | 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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.2 | (2) |
| 2 | 17:25 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 0.7 | (2) |
| 3 | 17:29 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 0.5 | (2) |
| 4 | 17:31 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 0.4 | (2) |
| 5 | 17:42 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 2.8 | (2) |
| 6 | 17:45 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 2.1 | (2) |
| 7 | 18:55 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.9 | (2) |
| 8 | 19:02 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 0.7 | (2) |
| 9 | 19:05 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 0.9 | (2) |
| 10 | 19:13 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.5 | (2) |
| 11 | 19:16 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.0 | (2) |
| 12 | 19:19 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 0.7 | (2) |
| 13 | 19:44 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 2.7 | (2) |
| 14 | 19:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | exposed shores and marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 2.4 | (2) |
| 15 | 19:35 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.4 | (2) |
| 16 | 19:32 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 1.2 | (2) |
| 17 | 19:30 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 0.6 | (2) |
| 18 | 19:28 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.5 | (2) |
| 19 | 19:24 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 1.1 | (2) |
| 20 | 18:48 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.2 | (2) |

#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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 18:39 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.6 | (2) |
| 22 | 18:28 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.3 | (2) |
| 23 | 18:26 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.5 | (2) |
| 24 | 18:23 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 1.8 | (2) |
| 25 | 18:18 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 1.9 | (2) |
| 26 | 18:15 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.7 | (2) |
| 27 | 18:06 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.2 | (2) |
| 28 | 18:01 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SE ) | 4.5 | (2) |
| 29 | 17:16 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.2 | (3) |
| 30 | 17:23 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 0.9 | (3) |
| 31 | 17:30 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 2.2 | (3) |
| 32 | 17:34 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.1 | (3) |
| 33 | 17:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.6 | (3) |
| 34 | 17:53 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.0 | (3) |
| 35 | 17:59 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.2 | (3) |
| 36 | 19:29 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( S ) | 1.6 | (3) |
| 37 | 19:37 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( S ) | 1.5 | (3) |
| 38 | 19:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( S ) | 1.2 | (3) |
| 39 | 19:49 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / Upwind ( SE ) | 2.3 | (3) |
| 40 | 19:53 | ~~High Tide~~ / Low Tide | Sunny / Fine / Cloudy / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / Upwind ( SE ) | 2.6 | (3) |

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:
0 - Not detected, No odour perceived or an odour so weak that it can not be easily characterised or described;
1 - Slight identifiable odour, and slight chance to have odour nuisance;
2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
3 - Strong identifiable, likely to have odour nuisance
4 - Extreme severe odour, and unacceptable odour level.

***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, 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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temporature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Spood (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 18:55 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / Upwind ( NW ) | 0.6 | (3) |
| 42 | 18:49 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SE ) | 1.7 | (3) |
| 43 | 18:44 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.2 | (3) |
| 44 | 18:41 | ~~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 | (3) |
| 45 | 18:29 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / Upwind ( S ) | 1.8 | (3) |
| 46 | 18:18 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.0 | (3) |
| 47 | 18:17 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 0.9 | (3) |
| 48 | 18:09 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SW ) | 0.4 | (3) |
| 49 | 19:10 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / Upwind ( E ) | 1.4 | (3) |
| 50 | 19:03 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 2.2 | (3) |
| 51 | 19:05 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 2.0 | (3) |
| 52 | 19:09 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.2 | (3) |
| 53 | 18:13 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.4 | (3) |
| 54 | 18:15 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SW ) | 1.9 | (3) |
| 55 | 18:20 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SW ) | 1.3 | (3) |
| 56 | 18:32 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 1.0 | (3) |
| 57 | 18:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / Upwind ( SE ) | 1.1 | (3) |
| 58 | 18:43 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.1 | (3) |
| 59 | 18:48 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / Upwind ( SE ) | 1.8 | (3) |
| 60 | 18:57 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 2.3 | (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 2013 (3) Conducted on 15 May 2013

| | 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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 09:22 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( S ) | 0.8 | (2) |
| 2 | 11:31 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 2.9 | (2) |
| 3 | 11:34 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 3.7 | (2) |
| 4 | 11:37 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 3.9 | (2) |
| 5 | 09:32 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 5.4 | (2) |
| 6 | 09:35 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | Chemical Toilet at SFK's Site Office | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 1.5 | (2) |
| 7 | 10:30 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 3.4 | (2) |
| 8 | 10:35 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( E ) | 3.4 | (2) |
| 9 | 10:37 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( E ) | 2.8 | (2) |
| 10 | 10:44 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 4.1 | (2) |
| 11 | 10:47 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 3.5 | (2) |
| 12 | 16:49 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 5.1 | (2) |
| 13 | 11:10 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 1.4 | (2) |
| 14 | 11:07 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage and fishy smell | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( E ) | 2.1 | (2) |
| 15 | 11:03 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 3.2 | (2) |
| 16 | 11:00 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 4.5 | (2) |
| 17 | 10:58 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( E ) | 3.1 | (2) |
| 18 | 10:56 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( E ) | 2.1 | (2) |
| 19 | 10:53 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( E ) | 2.2 | (2) |
| 20 | 12:42 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( S ) | 0.2 | (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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 12:35 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( S ) | 0.8 | (2) |
| 22 | 12:25 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( SE ) | 2.3 | (2) |
| 23 | 12:23 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / ~~Upwind~~ ( S ) | 0.5 | (2) |
| 24 | 12:21 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | seawater smell | marine water | ~~Intermittent~~ / Continuous | ~~Downwind~~ / ~~Upwind~~ ( S ) | 0.7 | (1) (2) |
| 25 | 12:13 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | seawater smell | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 2.4 | (1) (2) |
| 26 | 12:10 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | seawater smell | marine water | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SE ) | 2.3 | (1) (2) |
| 27 | 12:01 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | seawater smell | marine water | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.5 | (1) (2) |
| 28 | 11:55 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | seawater smell | marine water | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SE ) | 1.7 | (1) (2) |
| 29 | 11:11 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / ~~Upwind~~ ( S ) | 1.0 | (3) |
| 30 | 11:16 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 1.4 | (3) |
| 31 | 11:20 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( S ) | 1.0 | (3) |
| 32 | 11:25 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 3.8 | (3) |
| 33 | 11:31 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 1.5 | (3) |
| 34 | 11:49 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SW ) | 4.1 | (3) |
| 35 | 11:54 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( S ) | 2.5 | (3) |
| 36 | 10:29 | 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) |
| 37 | 10:03 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( NW ) | 1.2 | (3) |
| 38 | 10:05 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | Downwind / Upwind ( SE ) | 0.9 | (3) |
| 39 | 10:13 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / ~~Continuous~~ | ~~Downwind~~ / Upwind ( NW ) | 1.7 | (3) |
| 40 | 10:17 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.3 | (3) |

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:
0 - Not detected. No odour perceived or an odour so weak that it can not be easily characterised or described;
1 - Slight identifiable odour, and slight chance to have odour nuisance;
2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
3 - Strong identifiable, likely to have odour nuisance
4 - Extreme severe odour, and unacceptable odour level.

***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, ammoniacal, dischargeable odour, putrefaction, sharp, pungent, fish, irritating, fruit, vinegar, etc
****Potential Odour Source:** Exposed sediment, water or sewage; floating debris or material etc
Remarks: (1) The seawater smell is considered as non-objectionable background smell as quoted in Kai Tak Schedule 3 EIA Report (2) Conducted on 14 May 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 12:49 | 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) |
| 42 | 12:43 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( W ) | 0.3 | (3) |
| 43 | 12:40 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( E ) | 1.3 | (3) |
| 44 | 12:38 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 2.2 | (3) |
| 45 | 12:28 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 1.2 | (3) |
| 46 | 12:21 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 1.9 | (3) |
| 47 | 12:19 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 0.4 | (3) |
| 48 | 12:11 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( SW ) | 0.5 | (3) |
| 49 | 13:00 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.9 | (3) |
| 50 | 13:01 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.9 | (3) |
| 51 | 13:03 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 1.6 | (3) |
| 52 | 13:05 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( SE ) | 2.0 | (3) |
| 53 | 12:16 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 0.5 | (3) |
| 54 | 12:17 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SW ) | 1.6 | (3) |
| 55 | 12:26 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SW ) | 4.2 | (3) |
| 56 | 12:31 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.3 | (3) |
| 57 | 12:37 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.4 | (3) |
| 58 | 12:39 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( E ) | 1.9 | (3) |
| 59 | 12:44 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.4 | (3) |
| 60 | 12:50 | High Tide / ~~Low Tide~~ | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( E ) | 1.4 | (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 2013 (3) Conducted on 15 May 2013

| | Name | Signature |
|---|---|---|
| Conducted by: | Leo 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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:02 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.2 | (2) |
| 2 | 17:25 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 0.7 | (2) |
| 3 | 17:29 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 0.5 | (2) |
| 4 | 17:31 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 0.4 | (2) |
| 5 | 17:42 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 2.8 | (2) |
| 6 | 17:45 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( S ) | 2.1 | (2) |
| 7 | 18:55 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.9 | (2) |
| 8 | 19:02 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 0.7 | (2) |
| 9 | 19:05 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 0.9 | (2) |
| 10 | 19:13 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.5 | (2) |
| 11 | 19:16 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.0 | (2) |
| 12 | 19:19 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( SE ) | 0.7 | (2) |
| 13 | 19:44 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | exposed shores and marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 2.7 | (2) |
| 14 | 19:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | exposed shores and marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 2.4 | (2) |
| 15 | 19:35 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | exposed shores and marine water | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.4 | (2) |
| 16 | 19:32 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 1.2 | (2) |
| 17 | 19:30 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 0.6 | (2) |
| 18 | 19:28 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( E ) | 1.5 | (2) |
| 19 | 19:24 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) 2 / 3 / 4 | sewage | marine water | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 1.1 | (2) |
| 20 | 18:48 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.2 | (2) |

#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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 18:39 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.6 | (2) |
| 22 | 18:28 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.3 | (2) |
| 23 | 18:26 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.5 | (2) |
| 24 | 18:23 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 1.8 | (2) |
| 25 | 18:18 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 1.9 | (2) |
| 26 | 18:15 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.7 | (2) |
| 27 | 18:06 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( E ) | 2.2 | (2) |
| 28 | 18:01 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SE ) | 4.5 | (2) |
| 29 | 17:18 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.2 | (3) |
| 30 | 17:23 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 0.9 | (3) |
| 31 | 17:30 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 2.2 | (3) |
| 32 | 17:34 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.1 | (3) |
| 33 | 17:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.6 | (3) |
| 34 | 17:53 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.0 | (3) |
| 35 | 17:59 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( SW ) | 1.2 | (3) |
| 36 | 19:29 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( S ) | 1.6 | (3) |
| 37 | 19:37 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( S ) | 1.5 | (3) |
| 38 | 19:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / Upwind ( S ) | 1.2 | (3) |
| 39 | 19:49 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / Continuous | Downwind / Upwind ( SE ) | 2.3 | (3) |
| 40 | 19:53 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | marine water | Intermittent / Continuous | Downwind / Upwind ( SE ) | 2.6 | (3) |

#Note: Odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:
0 - Not detected. No odour perceived or an odour so weak that it can not be easily characterised or described;
1 - Slight identifiable odour, and slight chance to have odour nuisance;
2 - Moderate identifiable odour, and moderate chance to have odour nuisance;
3 - Strong identifiable, likely to have odour nuisance
4 - Extreme severe odour, and unacceptable odour level.

***Description of Odour Characteristics:** Sewage or rotten-egg smell, decayed vegetables, 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 2013 (3) Conducted on 15 May 2013

**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 and 15 May 2013
**Temperature:** 24.7 - 29.0°C (14 May 2013) and 25.6 - 31.1°C (15 May 2013) (King's Park)
**Humidity:** 83 - 95 % (14 May 2013) and 78 - 95% (15 May 2013) (General)

| Location | Time of Survey | Tidal Condition | Weather Condition | #Odour Intensity | *Odour Characteristics | **Potential Odour Sources | Duration of Odour | Wind Direction | Wind Speed (m/s) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 18:55 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( NW ) | 0.6 | (3) |
| 42 | 18:49 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.7 | (3) |
| 43 | 18:44 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.2 | (3) |
| 44 | 18:41 | ~~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 | (3) |
| 45 | 18:29 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / Upwind ( S ) | 1.8 | (3) |
| 46 | 18:18 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( SE ) | 1.0 | (3) |
| 47 | 18:17 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 0.9 | (3) |
| 48 | 18:09 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( SW ) | 0.4 | (3) |
| 49 | 19:10 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | Downwind / ~~Upwind~~ ( E ) | 1.4 | (3) |
| 50 | 19:03 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.2 | (3) |
| 51 | 19:05 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.0 | (3) |
| 52 | 19:09 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( SE ) | 1.2 | (3) |
| 53 | 18:13 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( SE ) | 1.4 | (3) |
| 54 | 18:15 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SW ) | 1.9 | (3) |
| 55 | 18:20 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SW ) | 1.3 | (3) |
| 56 | 18:32 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 1.0 | (3) |
| 57 | 18:40 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.1 | (3) |
| 58 | 18:43 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | Intermittent / ~~Continuous~~ | ~~Downwind~~ / Upwind ( SE ) | 1.1 | (3) |
| 59 | 18:48 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | 0 / (1) / 2 / 3 / 4 | sewage | water at Kai Tak Nullah | ~~Intermittent~~ / Continuous | Downwind / ~~Upwind~~ ( SE ) | 1.8 | (3) |
| 60 | 18:57 | ~~High Tide~~ / Low Tide | Sunny / Fine / (Cloudy) / Rainy | (0) / 1 / 2 / 3 / 4 | N/A | N/A | ~~Intermittent~~ / Continuous | ~~Downwind~~ / Upwind ( S ) | 2.3 | (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 2013 (3) Conducted on 15 May 2013

| | Name | Signature |
|---|---|---|
| **Conducted by:** | Lee Man Hei | hei |
| **Checked by:** | Henry Leung | |

**APPENDIX E**
**QUALITY CONTROL REPORT 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**
**RM 1710, Technology Park,**
**18 On Lai Street,**
**Shatin, N.T., Hong Kong**

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |

**ATTN:** **Miss Mei Ling Tang**

Page: 1 of 8

**QC report:**
**Method Blank**

| Parameter | Method Blank 1 | Method Blank 2 | Method Blank 3 | Method Blank 4 | Method Blank 5 | Acceptance |
|---|---|---|---|---|---|---|
| Suspended Solids (SS), mg/L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *E. coli*, cfu/100mL | <1 | <1 | <1 | <1 | <1 | <1 |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | N/A | N/A | N/A | N/A | N/A | N/A |
| Ammonia Nitrogen ($NH_3$-N), mg $NH_3$-N/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Unionized Ammonia (UIA), mg/L | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Kjeldahl Nitrogen (TKN), mg N/L | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrite-nitrogen ($NO_2$-N), mg $NO_2^-$-N/L | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Nitrate-nitrogen ($NO_3$-N), mg $NO_3^-$-N/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Ortho-phosphate ($PO_4$), mg $PO_4^{3-}$-P/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Total Phosphorous (TP), mg-P/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Cadmium (Cd), µg/L | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chromium (Cr), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Copper (Cu), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Mercury (Hg), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel (Ni), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Lead (Pb), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Silver (Ag), µg/L | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Zinc (Zn), µg/L | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

*PREPARED AND CHECKED BY:*

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

**PATRICK TSE**
*Laboratory Manager*

WELLAB 滙力
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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**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 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

WELLAB 滙力 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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**QC report:**
**Method QC**

| Parameter | MQC1 | MQC2 | MQC3 | MQC4 | MQC5 | Acceptance |
|---|---|---|---|---|---|---|
| Suspended Solids (SS), % | 96 | 95 | 94 | 95 | 101 | 80-120 |
| *E. coli* | N/A | N/A | N/A | N/A | N/A | N/A |
| 5-day Biochemical Oxygen Demand ($BOD_5$), mg-$O_2$/L | 198 | 192 | 192 | 189 | 190 | 170-220 |
| Ammonia Nitrogen ($NH_3$-N), % | 99 | 98 | 91 | 98 | 94 | 80-120 |
| Unionized Ammonia (UIA) | 102 | 97 | 88 | 98 | 90 | N/A |
| Total Kjeldahl Nitrogen (TKN), % | 101 | 99 | 96 | 94 | 92 | 80-120 |
| Nitrite-nitrogen ($NO_2$-N), % | 97 | 95 | 94 | 95 | 98 | 80-120 |
| Nitrate-nitrogen ($NO_3$-N), % | 95 | 94 | 93 | 92 | 95 | 80-120 |
| Ortho-phosphate ($PO_4$), % | 94 | 90 | 90 | 97 | 97 | 80-120 |
| Total Phosphorous (TP), % | 91 | 92 | 92 | 98 | 92 | 80-120 |
| Cadmium (Cd), % | 92 | 90 | 96 | 92 | 99 | 80-120 |
| Chromium (Cr), % | 101 | 94 | 95 | 97 | 97 | 80-120 |
| Copper (Cu), % | 91 | 98 | 93 | 97 | 96 | 80-120 |
| Mercury (Hg), % | 95 | 88 | 98 | 90 | 92 | 80-120 |
| Nickel (Ni), % | 101 | 98 | 95 | 91 | 97 | 80-120 |
| Lead (Pb), % | 101 | 95 | 98 | 101 | 93 | 80-120 |
| Silver (Ag), % | 95 | 91 | 91 | 100 | 96 | 80-120 |
| Zinc (Zn), % | 95 | 94 | 97 | 97 | 90 | 80-120 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**QC report:**
**Method QC**

| Parameter | MQC 6 | MQC 7 | MQC 8 | MQC 9 | Acceptance |
|---|---|---|---|---|---|
| Suspended Solids (SS), % | 95 | 91 | 95 | 100 | 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 | 196 | 196 | 200 | 195 | 170-220 |
| Ammonia Nitrogen ($NH_3$-N), % | 97 | 94 | 90 | 99 | 80-120 |
| Unionized Ammonia (UIA) | 95 | 90 | 91 | 98 | N/A |
| Total Kjeldahl Nitrogen (TKN), % | 96 | 90 | 98 | 91 | 80-120 |
| Nitrite-nitrogen ($NO_2$-N), % | 96 | 93 | 96 | 97 | 80-120 |
| Nitrate-nitrogen ($NO_3$-N), % | 92 | 93 | 98 | 92 | 80-120 |
| Ortho-phosphate ($PO_4$), % | 90 | 98 | 90 | 96 | 80-120 |
| Total Phosphorous (TP), % | 95 | 92 | 99 | 100 | 80-120 |
| Cadmium (Cd), % | 98 | 97 | 96 | 98 | 80-120 |
| Chromium (Cr), % | 94 | 92 | 96 | 94 | 80-120 |
| Copper (Cu), % | 98 | 89 | 100 | 98 | 80-120 |
| Mercury (Hg), % | 88 | 93 | 93 | 100 | 80-120 |
| Nickel (Ni), % | 97 | 93 | 90 | 100 | 80-120 |
| Lead (Pb), % | 96 | 94 | 93 | 94 | 80-120 |
| Silver (Ag), % | 101 | 95 | 97 | 95 | 80-120 |
| Zinc (Zn), % | 95 | 93 | 94 | 95 | 80-120 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

WELLAB 滙力
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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**QC report:**
**Sample Spike**

| Parameter | 18223-27 spk | 18223-49 spk | 18223-76 spk | 18223-97 spk | 18223-125 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), % | 100 | 96 | 99 | 95 | 91 | 80-120 |
| Unionized Ammonia (UIA) | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Kjeldahl Nitrogen (TKN), % | 92 | 98 | 96 | 94 | 91 | 80-120 |
| Nitrite-nitrogen ($NO_2$-N), % | 93 | 95 | 96 | 96 | 96 | 80-120 |
| Nitrate-nitrogen ($NO_3$-N), % | 98 | 97 | 94 | 93 | 95 | 80-120 |
| Ortho-phosphate ($PO_4$), % | 95 | 95 | 97 | 94 | 94 | 80-120 |
| Total Phosphorous (TP), % | 98 | 100 | 92 | 90 | 95 | 80-120 |
| Cadmium (Cd), % | 98 | 92 | 91 | 94 | 93 | 80-120 |
| Chromium (Cr), % | 94 | 94 | 92 | 94 | 98 | 80-120 |
| Copper (Cu), % | 90 | 97 | 90 | 99 | 98 | 80-120 |
| Mercury (Hg), % | 97 | 96 | 99 | 95 | 92 | 80-120 |
| Nickel (Ni), % | 95 | 94 | 97 | 95 | 100 | 80-120 |
| Lead (Pb), % | 91 | 89 | 95 | 98 | 95 | 80-120 |
| Silver (Ag), % | 90 | 96 | 97 | 93 | 94 | 80-120 |
| Zinc (Zn), % | 93 | 98 | 90 | 96 | 95 | 80-120 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**QC report:**
**Sample Spike**

| Parameter | 18223-145 spk | 18223-172 spk | 18223-194 spk | 18223-208 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), % | 94 | 93 | 100 | 91 | 80-120 |
| Unionized Ammonia (UIA) | N/A | N/A | N/A | N/A | N/A |
| Total Kjeldahl Nitrogen (TKN), % | 95 | 90 | 93 | 96 | 80-120 |
| Nitrite-nitrogen ($NO_2$-N), % | 93 | 91 | 94 | 98 | 80-120 |
| Nitrate-nitrogen ($NO_3$-N), % | 94 | 95 | 97 | 97 | 80-120 |
| Ortho-phosphate ($PO_4$), % | 96 | 94 | 95 | 95 | 80-120 |
| Total Phosphorous (TP), % | 100 | 94 | 91 | 96 | 80-120 |
| Cadmium (Cd), % | 89 | 99 | 95 | 94 | 80-120 |
| Chromium (Cr), % | 95 | 99 | 95 | 94 | 80-120 |
| Copper (Cu), % | 95 | 90 | 97 | 93 | 80-120 |
| Mercury (Hg), % | 101 | 89 | 95 | 93 | 80-120 |
| Nickel (Ni), % | 93 | 90 | 97 | 102 | 80-120 |
| Lead (Pb), % | 97 | 96 | 96 | 94 | 80-120 |
| Silver (Ag), % | 94 | 95 | 91 | 93 | 80-120 |
| Zinc (Zn), % | 97 | 97 | 94 | 94 | 80-120 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**QC report:**
**Sample Duplicate**

| Parameter | 18223-27 chk | 18223-49 chk | 18223-76 chk | 18223-97 chk | 18223-125 chk | Acceptance |
|---|---|---|---|---|---|---|
| Suspended Solids (SS) | 3 | 4 | 4 | 6 | 5 | RPD≤20 |
| *E. coli* | N/A | N/A | N/A | N/A | N/A | N/A |
| 5-day Biochemical Oxygen Demand ($BOD_5$) | N/A | N/A | N/A | N/A | N/A | RPD≤20 |
| Ammonia Nitrogen ($NH_3$-N), % | 5 | 4 | 4 | 3 | 3 | RPD≤20 |
| Unionized Ammonia (UIA) | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Kjeldahl Nitrogen (TKN), % | 4 | 4 | 3 | 5 | 6 | RPD≤20 |
| Nitrite-nitrogen ($NO_2$-N), % | 6 | 4 | 4 | 5 | 3 | RPD≤20 |
| Nitrate-nitrogen ($NO_3$-N), % | 4 | 3 | 6 | 6 | 4 | RPD≤20 |
| Ortho-phosphate ($PO_4$), % | 5 | 6 | 4 | 4 | 5 | RPD≤20 |
| Total Phosphorous (TP), % | 3 | 3 | 5 | 5 | 6 | RPD≤20 |
| Cadmium (Cd), % | 7 | 3 | 3 | 3 | 5 | RPD≤20 |
| Chromium (Cr), % | 4 | 5 | 5 | 5 | 4 | RPD≤20 |
| Copper (Cu), % | 5 | 3 | 5 | 4 | 6 | RPD≤20 |
| Mercury (Hg), % | N/A | 5 | 5 | N/A | N/A | RPD≤20 |
| Nickel (Ni), % | 3 | 3 | 6 | 4 | 4 | RPD≤20 |
| Lead (Pb), % | 4 | 3 | 5 | 4 | 5 | RPD≤20 |
| Silver (Ag), % | N/A | N/A | N/A | 5 | 4 | RPD≤20 |
| Zinc (Zn), % | 6 | 4 | 6 | 3 | 6 | RPD≤20 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********

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

| | |
|---|---|
| Laboratory No.: | QC18223 |
| Date of Issue: | 2013-05-16 |
| Date Received: | 2013-05-07 |
| Date Tested: | 2013-05-07 |
| Date Completed: | 2013-05-16 |



**QC report:**
**Sample Duplicate**

| Parameter | 18223-145 chk | 18223-172 chk | 18223-194 chk | 18223-208 chk | Acceptance |
|---|---|---|---|---|---|
| Suspended Solids (SS) | 6 | 5 | 5 | 3 | 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), % | 3 | 6 | 3 | 5 | RPD≤20 |
| Unionized Ammonia (UIA) | N/A | N/A | N/A | N/A | N/A |
| Total Kjeldahl Nitrogen (TKN), % | 6 | 4 | 4 | 5 | RPD≤20 |
| Nitrite-nitrogen ($NO_2$-N), % | 5 | 5 | 4 | 6 | RPD≤20 |
| Nitrate-nitrogen ($NO_3$-N), % | 6 | 4 | 3 | 5 | RPD≤20 |
| Ortho-phosphate ($PO_4$), % | 5 | 4 | 4 | 5 | RPD≤20 |
| Total Phosphorous (TP), % | 5 | 6 | 4 | 5 | RPD≤20 |
| Cadmium (Cd), % | 5 | 5 | 6 | 5 | RPD≤20 |
| Chromium (Cr), % | 6 | 3 | 7 | 4 | RPD≤20 |
| Copper (Cu), % | 8 | 4 | 6 | 5 | RPD≤20 |
| Mercury (Hg), % | N/A | 3 | 4 | N/A | RPD≤20 |
| Nickel (Ni), % | 4 | 4 | 3 | 3 | RPD≤20 |
| Lead (Pb), % | 6 | 3 | 4 | 3 | RPD≤20 |
| Silver (Ag), % | 5 | N/A | 5 | N/A | RPD≤20 |
| Zinc (Zn), % | 7 | 4 | 4 | 3 | RPD≤20 |

Remark: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 18223

**********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:** 7 May 2013

**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 | Cloudy | Calm | 10:17 | 25.3 | 7.4 | 20.2 | 30.3 | 2.2 | 4.8 |
| | | | 10:23 | 23.7 | 7.5 | 20.7 | 29.1 | 2.2 | 4.9 |
| 1.0 | Cloudy | Calm | 10:18 | 22.4 | 7.6 | 31.2 | 20.5 | 1.5 | 10.1 |
| | | | 10:23 | 22.7 | 7.6 | 30.2 | 24.0 | 1.7 | 10.2 |
| 1.5 | Cloudy | Calm | 10:19 | 22.3 | 7.6 | 31.9 | 16.0 | 1.2 | 13.1 |
| | | | 10:23 | 22.3 | 7.6 | 32.0 | 17.3 | 1.3 | 12.3 |
| 2.0 | Cloudy | Calm | 10:19 | 22.2 | 7.6 | 32.5 | 12.1 | 0.9 | 13.6 |
| | | | 10:24 | 22.2 | 7.6 | 32.4 | 12.1 | 0.9 | 13.3 |
| 2.5 | Cloudy | Calm | 10:19 | 22.2 | 7.6 | 32.7 | 9.4 | 0.7 | 10.4 |
| | | | 10:24 | 22.2 | 7.6 | 32.7 | 9.3 | 0.7 | 11.3 |
| 3.0 | Cloudy | Calm | 10:20 | 22.2 | 7.5 | 32.8 | 8.9 | 0.6 | 9.8 |
| | | | 10:24 | 22.2 | 7.5 | 32.8 | 8.3 | 0.6 | 8.3 |
| 3.5 | Cloudy | Calm | 10:21 | 22.1 | 7.3 | 32.9 | 8.1 | 0.6 | 10.6 |
| | | | 10:25 | 22.1 | 7.3 | 32.9 | 7.8 | 0.6 | 9.7 |
| 4.0 | Cloudy | Calm | 10:21 | 22.1 | 7.3 | 32.9 | 7.9 | 0.6 | 11.1 |
| | | | 10:25 | 22.1 | 7.3 | 32.9 | 7.5 | 0.5 | 10.9 |

## 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 | Cloudy | Calm | 10:18 | 22.4 | 7.6 | 31.2 | 20.5 | 1.5 | 10.1 |
| | | | 10:23 | 22.7 | 7.6 | 30.2 | 24.0 | 1.7 | 10.2 |
| 3.5 | Cloudy | Calm | 10:21 | 22.1 | 7.3 | 32.9 | 8.1 | 0.6 | 10.6 |
| | | | 10:25 | 22.1 | 7.3 | 32.9 | 7.8 | 0.6 | 9.7 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Calm | 10:05 | 24.6 | 7.3 | 15.3 | 39.0 | 3.0 | 3.0 |
| | | | 10:11 | 24.8 | 7.6 | 14.6 | 38.1 | 2.9 | 3.1 |
| 1.0 | Cloudy | Calm | 10:07 | 23.0 | 7.8 | 27.9 | 46.9 | 3.4 | 2.7 |
| | | | 10:12 | 22.9 | 7.7 | 29.4 | 47.3 | 3.4 | 2.7 |
| 1.5 | Cloudy | Calm | 10:08 | 22.4 | 7.6 | 31.9 | 27.4 | 2.0 | 4.2 |
| | | | 10:12 | 22.4 | 7.6 | 31.9 | 32.7 | 2.4 | 4.2 |
| 2.0 | Cloudy | Calm | 10:08 | 22.3 | 7.6 | 32.5 | 20.5 | 1.5 | 9.3 |
| | | | 10:13 | 22.2 | 7.6 | 32.7 | 17.8 | 1.3 | 9.3 |
| 2.5 | Cloudy | Calm | 10:08 | 22.1 | 7.8 | 32.8 | 18.1 | 1.3 | 2.4 |
| | | | 10:13 | 22.1 | 7.7 | 32.8 | 17.9 | 1.3 | 2.2 |
| 3.0 | Cloudy | Calm | 10:09 | 22.1 | 7.8 | 32.8 | 31.3 | 2.3 | 1.1 |
| | | | 10:13 | 22.1 | 7.8 | 32.8 | 27.6 | 2.0 | 1.2 |
| 3.5 | Cloudy | Calm | 10:09 | 22.1 | 7.7 | 32.9 | 29.1 | 2.1 | 3.6 |
| | | | 10:14 | 22.1 | 7.7 | 32.9 | 27.7 | 2.0 | 3.5 |
| 4.0 | Cloudy | Calm | 10:09 | 22.1 | 7.7 | 32.9 | 20.0 | 1.4 | 2.5 |
| | | | 10:14 | 22.1 | 7.7 | 32.9 | 20.4 | 1.5 | 2.6 |
| 4.5 | Cloudy | Calm | 10:09 | 22.1 | 7.7 | 32.9 | 14.8 | 1.1 | 6.5 |
| | | | 10:15 | 22.1 | 7.2 | 32.9 | 12.5 | 0.9 | 6.9 |

## 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 | Cloudy | Calm | 10:07 | 23.0 | 7.8 | 27.9 | 46.9 | 3.4 | 2.7 |
| | | | 10:12 | 22.9 | 7.7 | 29.4 | 47.3 | 3.4 | 2.7 |
| 4.0 | Cloudy | Calm | 10:09 | 22.1 | 7.7 | 32.9 | 20.0 | 1.4 | 2.5 |
| | | | 10:14 | 22.1 | 7.7 | 32.9 | 20.4 | 1.5 | 2.6 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

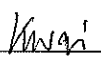
**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 10:39 | 24.6 | 7.4 | 16.3 | 52.7 | 4.0 | 3.1 |
| | | | 10:44 | 24.5 | 7.5 | 14.2 | 53.2 | 4.1 | 3.2 |
| 1.0 | Cloudy | Calm | 10:40 | 22.7 | 7.7 | 28.1 | 49.9 | 3.6 | 1.8 |
| | | | 10:44 | 22.7 | 7.6 | 29.1 | 48.1 | 3.5 | 1.8 |
| 1.5 | Cloudy | Calm | 10:41 | 22.5 | 7.8 | 30.6 | 39.9 | 2.9 | 1.1 |
| | | | 10:44 | 22.5 | 7.7 | 30.6 | 34.3 | 2.5 | 1.1 |
| 2.0 | Cloudy | Calm | 10:42 | 22.3 | 7.7 | 32.2 | 32.0 | 2.3 | 0.4 |
| | | | 10:45 | 22.3 | 7.7 | 32.4 | 31.1 | 2.2 | 0.4 |
| 2.5 | Cloudy | Calm | 10:42 | 22.2 | 7.7 | 32.7 | 29.6 | 2.1 | 0.8 |
| | | | 10:45 | 22.2 | 7.7 | 32.6 | 28.5 | 2.2 | 0.8 |
| 3.0 | Cloudy | Calm | 10:43 | 22.2 | 7.7 | 32.9 | 26.9 | 2.0 | 4.8 |
| | | | 10:45 | 22.2 | 7.7 | 32.8 | 25.4 | 1.8 | 4.0 |
| 3.5 | Cloudy | Calm | 10:43 | 22.2 | 7.6 | 32.9 | 15.2 | 1.1 | 11.1 |
| | | | 10:46 | 22.1 | 7.6 | 33.0 | 14.8 | 1.1 | 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 | Cloudy | Calm | 10:40 | 22.7 | 7.7 | 28.1 | 49.9 | 3.6 | 1.8 |
| | | | 10:44 | 22.7 | 7.6 | 29.1 | 48.1 | 3.5 | 1.8 |
| 3.0 | Cloudy | Calm | 10:43 | 22.2 | 7.7 | 32.9 | 26.9 | 2.0 | 4.8 |
| | | | 10:45 | 22.2 | 7.7 | 32.8 | 25.4 | 1.8 | 4.0 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Calm | 10:30 | 24.6 | 7.3 | 15.8 | 56.7 | 4.3 | 1.5 |
| | | | 10:34 | 24.4 | 7.5 | 17.2 | 48.8 | 3.7 | 1.5 |
| 1.0 | Cloudy | Calm | 10:31 | 22.2 | 7.9 | 31.7 | 54.3 | 3.9 | 1.0 |
| | | | 10:34 | 22.2 | 7.8 | 31.3 | 49.2 | 3.6 | 1.1 |
| 1.5 | Cloudy | Calm | 10:32 | 22.1 | 7.9 | 32.3 | 52.8 | 3.8 | 1.6 |
| | | | 10:35 | 22.2 | 7.8 | 32.3 | 47.1 | 3.4 | 1.4 |
| 2.0 | Cloudy | Calm | 10:32 | 22.1 | 7.9 | 32.6 | 50.5 | 3.7 | 1.7 |
| | | | 10:35 | 22.2 | 7.8 | 32.6 | 43.8 | 3.2 | 1.7 |
| 2.5 | Cloudy | Calm | 10:32 | 22.1 | 7.9 | 32.7 | 50.7 | 3.7 | 1.3 |
| | | | 10:35 | 22.1 | 7.8 | 32.7 | 42.3 | 3.1 | 1.3 |
| 3.0 | Cloudy | Calm | 10:32 | 22.0 | 7.9 | 32.8 | 50.5 | 3.7 | 1.3 |
| | | | 10:36 | 22.1 | 7.8 | 32.9 | 49.1 | 3.5 | 1.2 |
| 3.5 | Cloudy | Calm | 10:33 | 22.0 | 7.9 | 32.9 | 44.7 | 3.2 | 1.7 |
| | | | 10:36 | 22.1 | 7.8 | 32.9 | 42.4 | 3.1 | 1.7 |
| 4.0 | Cloudy | Calm | 10:33 | 22.0 | 7.9 | 32.9 | 32.5 | 2.4 | 2.7 |
| | | | 10:36 | 22.0 | 7.8 | 32.9 | 32.3 | 2.5 | 2.8 |

## Water Quality Monitoring Results (Sampling Depth)

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 10:31 | 22.2 | 7.9 | 31.7 | 54.3 | 3.9 | 1.0 |
| | | | 10:34 | 22.2 | 7.8 | 31.3 | 49.2 | 3.6 | 1.1 |
| 3.5 | Cloudy | Calm | 10:33 | 22.0 | 7.9 | 32.9 | 44.7 | 3.2 | 1.7 |
| | | | 10:36 | 22.1 | 7.8 | 32.9 | 42.4 | 3.1 | 1.7 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Calm | 11:20 | 24.4 | 7.5 | 13.8 | 27.2 | 1.9 | 2.9 |
| | | | 11:23 | 24.3 | 7.6 | 13.9 | 25.9 | 1.9 | 2.9 |
| 1.0 | Cloudy | Calm | 11:21 | 22.6 | 7.8 | 30.3 | 44.6 | 3.2 | 1.1 |
| | | | 11:23 | 22.4 | 7.6 | 30.9 | 36.3 | 2.6 | 1.2 |
| 1.5 | Cloudy | Calm | 11:21 | 22.2 | 7.8 | 32.2 | 45.3 | 3.3 | 1.0 |
| | | | 11:24 | 22.2 | 7.8 | 32.3 | 42.5 | 3.1 | 1.0 |
| 2.0 | Cloudy | Calm | 11:22 | 22.2 | 7.9 | 32.6 | 44.4 | 3.2 | 1.9 |
| | | | 11:24 | 22.2 | 7.9 | 32.6 | 42.6 | 3.1 | 1.9 |
| 2.5 | Cloudy | Calm | 11:22 | 22.1 | 7.8 | 32.7 | 41.1 | 3.0 | 1.7 |
| | | | 11:24 | 22.1 | 7.8 | 32.8 | 41.0 | 3.0 | 1.8 |
| 3.0 | Cloudy | Calm | 11:22 | 22.1 | 7.8 | 32.8 | 33.9 | 2.4 | 4.2 |
| | | | 11:24 | 22.1 | 7.8 | 32.9 | 32.2 | 2.3 | 4.1 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 11:21 | 22.6 | 7.8 | 30.3 | 44.6 | 3.2 | 1.1 |
| | | | 11:23 | 22.4 | 7.6 | 30.9 | 36.3 | 2.6 | 1.2 |
| 2.5 | Cloudy | Calm | 11:22 | 22.1 | 7.8 | 32.7 | 41.1 | 3.0 | 1.7 |
| | | | 11:24 | 22.1 | 7.8 | 32.8 | 41.0 | 3.0 | 1.8 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Calm | 11:06 | 24.3 | 7.2 | 15.6 | 31.8 | 2.4 | 2.4 |
| | | | 11:12 | 24.2 | 7.4 | 13.7 | 34.3 | 2.7 | 2.4 |
| 1.0 | Cloudy | Calm | 11:06 | 22.6 | 7.6 | 29.1 | 42.3 | 3.1 | 1.5 |
| | | | 11:13 | 22.7 | 7.7 | 29.0 | 41.5 | 3.0 | 1.5 |
| 1.5 | Cloudy | Calm | 11:07 | 22.2 | 7.9 | 31.5 | 53.9 | 3.9 | 1.4 |
| | | | 11:13 | 22.4 | 7.8 | 31.0 | 46.6 | 3.4 | 1.3 |
| 2.0 | Cloudy | Calm | 11:07 | 22.1 | 8.0 | 32.4 | 60.1 | 4.4 | 1.3 |
| | | | 11:13 | 22.2 | 7.9 | 32.2 | 48.4 | 3.5 | 1.1 |
| 2.5 | Cloudy | Calm | 11:08 | 22.0 | 8.0 | 32.6 | 66.7 | 4.8 | 1.0 |
| | | | 11:13 | 22.0 | 8.0 | 32.6 | 57.0 | 4.1 | 1.0 |
| 3.0 | Cloudy | Calm | 11:09 | 22.0 | 8.0 | 32.8 | 66.8 | 4.8 | 0.9 |
| | | | 11:14 | 22.0 | 8.0 | 32.8 | 67.6 | 4.9 | 0.9 |
| 3.5 | Cloudy | Calm | 11:09 | 22.0 | 7.8 | 32.9 | 38.0 | 2.8 | 3.3 |
| | | | 11:14 | 22.0 | 7.9 | 32.9 | 41.2 | 3.0 | 3.3 |
| 4.0 | Cloudy | Calm | 11:10 | 21.9 | 7.9 | 32.9 | 59.6 | 4.3 | 2.6 |
| | | | 11:14 | 21.9 | 7.9 | 32.9 | 59.9 | 4.4 | 2.8 |
| 4.5 | Cloudy | Calm | 11:10 | 21.9 | 8.0 | 32.9 | 48.9 | 3.5 | 2.0 |
| | | | 11:14 | 21.9 | 8.0 | 32.9 | 49.8 | 3.6 | 2.4 |
| 5.0 | Cloudy | Calm | 11:11 | 21.9 | 8.0 | 33.0 | 54.9 | 4.0 | 3.2 |
| | | | 11:17 | 21.9 | 7.9 | 32.9 | 60.8 | 4.4 | 3.4 |

## 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 | Cloudy | Calm | 11:06 | 22.6 | 7.6 | 29.1 | 42.3 | 3.1 | 1.5 |
| | | | 11:13 | 22.7 | 7.7 | 29.0 | 41.5 | 3.0 | 1.5 |
| 4.5 | Cloudy | Calm | 11:10 | 21.9 | 8.0 | 32.9 | 48.9 | 3.5 | 2.0 |
| | | | 11:14 | 21.9 | 8.0 | 32.9 | 49.8 | 3.6 | 2.4 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Calm | 11:31 | 24.4 | 7.3 | 14.4 | 35.9 | 2.6 | 1.9 |
| | | | 11:34 | 24.1 | 7.8 | 17.2 | 36.8 | 2.8 | 1.7 |
| 1.0 | Cloudy | Calm | 11:32 | 22.6 | 7.8 | 30.3 | 50.5 | 3.7 | 1.0 |
| | | | 11:35 | 22.4 | 7.9 | 31.3 | 50.8 | 3.7 | 1.0 |
| 1.5 | Cloudy | Calm | 11:32 | 22.1 | 8.0 | 32.2 | 61.5 | 4.5 | 0.5 |
| | | | 11:35 | 22.1 | 8.0 | 32.3 | 57.7 | 4.2 | 0.5 |
| 2.0 | Cloudy | Calm | 11:32 | 22.1 | 8.0 | 32.4 | 67.8 | 4.9 | 0.8 |
| | | | 11:35 | 22.1 | 8.0 | 32.5 | 63.9 | 4.6 | 0.8 |
| 2.5 | Cloudy | Calm | 11:33 | 22.0 | 8.0 | 32.8 | 68.9 | 5.0 | 0.9 |
| | | | 11:35 | 22.0 | 8.0 | 32.7 | 69.1 | 5.0 | 0.9 |
| 3.0 | Cloudy | Calm | 11:33 | 21.9 | 8.0 | 32.8 | 66.4 | 4.8 | 1.2 |
| | | | 11:36 | 21.9 | 8.0 | 32.9 | 65.4 | 4.7 | 1.2 |
| 3.5 | Cloudy | Calm | 11:33 | 21.8 | 8.0 | 32.9 | 67.7 | 4.9 | 1.1 |
| | | | 11:36 | 21.8 | 8.1 | 32.9 | 67.4 | 4.9 | 1.1 |
| 4.0 | Cloudy | Calm | 11:33 | 21.8 | 8.0 | 32.9 | 68.0 | 4.9 | 1.2 |
| | | | 11:36 | 21.8 | 8.0 | 32.9 | 69.1 | 5.0 | 1.3 |
| 4.5 | Cloudy | Calm | 11:34 | 21.9 | 8.0 | 33.0 | 67.3 | 4.9 | 5.7 |
| | | | 11:36 | 21.9 | 8.0 | 33.0 | 66.3 | 4.8 | 5.7 |

## 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 | Cloudy | Calm | 11:32 | 22.6 | 7.8 | 30.3 | 50.5 | 3.7 | 1.0 |
| | | | 11:35 | 22.4 | 7.9 | 31.3 | 50.8 | 3.7 | 1.0 |
| 4.0 | Cloudy | Calm | 11:33 | 21.8 | 8.0 | 32.9 | 68.0 | 4.9 | 1.2 |
| | | | 11:36 | 21.8 | 8.0 | 32.9 | 69.1 | 5.0 | 1.3 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at JVC - Mid-Ebb Tide**

**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 10:52 | 24.0 | 7.1 | 13.6 | 22.2 | 1.7 | 15.5 |
| | | | 10:56 | 23.8 | 7.2 | 13.7 | 27.6 | 2.2 | 15.7 |
| 1.0 | Cloudy | Calm | 10:53 | 22.2 | 7.7 | 31.0 | 29.8 | 2.2 | 7.2 |
| | | | 10:57 | 22.2 | 7.7 | 30.8 | 27.4 | 2.0 | 7.2 |
| 1.5 | Cloudy | Calm | 10:53 | 22.1 | 8.0 | 32.2 | 50.1 | 3.6 | 6.9 |
| | | | 10:57 | 22.1 | 7.8 | 31.9 | 49.9 | 3.6 | 6.7 |
| 2.0 | Cloudy | Calm | 10:54 | 22.0 | 8.0 | 32.4 | 65.5 | 4.8 | 3.5 |
| | | | 10:58 | 22.0 | 7.9 | 32.6 | 64.8 | 4.7 | 3.6 |
| 2.5 | Cloudy | Calm | 10:55 | 21.9 | 7.9 | 32.7 | 54.8 | 4.0 | 4.2 |
| | | | 10:58 | 21.9 | 7.9 | 32.8 | 44.8 | 3.2 | 3.9 |
| 3.0 | Cloudy | Calm | 10:55 | 21.9 | 7.9 | 32.8 | 51.7 | 3.7 | 3.9 |
| | | | 10:58 | 21.9 | 8.0 | 32.8 | 46.9 | 3.4 | 3.9 |
| 3.5 | Cloudy | Calm | 10:56 | 21.9 | 7.9 | 32.9 | 43.9 | 3.2 | 3.4 |
| | | | 10:59 | 21.9 | 7.9 | 32.9 | 43.6 | 3.2 | 3.5 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 10:53 | 22.2 | 7.7 | 31.0 | 29.8 | 2.2 | 7.2 |
| | | | 10:57 | 22.2 | 7.7 | 30.8 | 27.4 | 2.0 | 7.2 |
| 3.0 | Cloudy | Calm | 10:55 | 21.9 | 7.9 | 32.8 | 51.7 | 3.7 | 3.9 |
| | | | 10:58 | 21.9 | 8.0 | 32.8 | 46.9 | 3.4 | 3.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at KT1 - Mid-Ebb Tide**

**Sampling Date: 7 May 2013**

**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 | Cloudy | Calm | 11:45 | 23.1 | 7.9 | 23.6 | 70.6 | 5.3 | 1.0 |
| | | | 11:50 | 24.0 | 7.7 | 23.2 | 63.4 | 4.8 | 0.9 |
| 1.0 | Cloudy | Calm | 11:46 | 22.5 | 8.1 | 30.1 | 86.5 | 6.3 | 0.5 |
| | | | 11:51 | 22.4 | 8.1 | 30.6 | 80.0 | 5.8 | 0.5 |
| 1.5 | Cloudy | Calm | 11:47 | 22.1 | 8.1 | 32.0 | 90.3 | 6.6 | 0.9 |
| | | | 11:51 | 22.1 | 8.1 | 32.0 | 87.0 | 6.3 | 0.8 |
| 2.0 | Cloudy | Calm | 11:47 | 21.9 | 8.1 | 32.3 | 90.3 | 6.6 | 0.4 |
| | | | 11:52 | 21.9 | 8.1 | 32.5 | 89.2 | 6.5 | 0.4 |
| 2.5 | Cloudy | Calm | 11:47 | 21.8 | 8.1 | 32.7 | 87.8 | 6.4 | 0.8 |
| | | | 11:52 | 21.8 | 8.1 | 32.7 | 85.9 | 6.2 | 0.8 |
| 3.0 | Cloudy | Calm | 11:47 | 21.8 | 8.1 | 32.7 | 85.7 | 6.2 | 0.7 |
| | | | 11:52 | 21.8 | 8.1 | 32.7 | 83.4 | 6.1 | 0.7 |
| 3.5 | Cloudy | Calm | 11:48 | 21.8 | 8.1 | 32.8 | 83.3 | 6.0 | 0.7 |
| | | | 11:52 | 21.8 | 8.1 | 32.8 | 82.1 | 6.0 | 0.7 |
| 4.0 | Cloudy | Calm | 11:48 | 21.8 | 8.1 | 32.9 | 79.5 | 5.8 | 0.7 |
| | | | 11:52 | 21.8 | 8.1 | 32.9 | 80.7 | 5.9 | 0.8 |
| 4.5 | Cloudy | Calm | 11:48 | 21.8 | 8.1 | 32.9 | 78.3 | 5.7 | 1.1 |
| | | | 11:52 | 21.8 | 8.1 | 32.9 | 79.6 | 5.8 | 1.2 |
| 5.0 | Cloudy | Calm | 11:49 | 21.8 | 8.1 | 32.9 | 78.0 | 5.7 | 1.0 |
| | | | 11:53 | 21.8 | 8.1 | 32.9 | 78.6 | 5.7 | 0.9 |
| 5.5 | Cloudy | Calm | 11:49 | 21.8 | 8.1 | 33.0 | 76.7 | 5.6 | 0.9 |
| | | | 11:53 | 21.8 | 8.1 | 32.9 | 77.9 | 5.7 | 0.9 |

**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 | Cloudy | Calm | 11:46 | 22.5 | 8.1 | 30.1 | 86.5 | 6.3 | 0.5 |
| | | | 11:51 | 22.4 | 8.1 | 30.6 | 80.0 | 5.8 | 0.5 |
| 3.0 | Cloudy | Calm | 11:47 | 21.8 | 8.1 | 32.7 | 85.7 | 6.2 | 0.7 |
| | | | 11:52 | 21.8 | 8.1 | 32.7 | 83.4 | 6.1 | 0.7 |
| 5.0 | Cloudy | Calm | 11:49 | 21.8 | 8.1 | 32.9 | 78.0 | 5.7 | 1.0 |
| | | | 11:53 | 21.8 | 8.1 | 32.9 | 78.6 | 5.7 | 0.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at KTN - Mid-Ebb Tide**

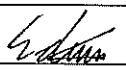
**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 9:41 | 24.2 | 7.3 | 18.6 | 55.3 | 4.2 | 3.2 |
| | | | 9:49 | 24.8 | 7.3 | 18.9 | 59.6 | 4.5 | 3.3 |
| 1.0 | Cloudy | Calm | 9:42 | 22.5 | 7.7 | 30.8 | 41.8 | 3.0 | 3.5 |
| | | | 9:50 | 22.8 | 7.7 | 29.7 | 41.8 | 3.0 | 3.5 |
| 1.5 | Cloudy | Calm | 9:43 | 22.2 | 7.7 | 32.1 | 36.6 | 2.7 | 4.4 |
| | | | 9:51 | 22.4 | 7.8 | 31.7 | 35.4 | 2.6 | 4.5 |
| 2.0 | Cloudy | Calm | 9:44 | 22.1 | 7.8 | 32.5 | 46.1 | 3.3 | 3.2 |
| | | | 9:52 | 22.1 | 7.9 | 32.5 | 43.3 | 3.1 | 3.2 |
| 2.5 | Cloudy | Calm | 9:44 | 22.1 | 7.8 | 32.6 | 40.0 | 2.9 | 1.5 |
| | | | 9:54 | 22.1 | 7.8 | 32.7 | 44.0 | 3.2 | 1.5 |
| 3.0 | Cloudy | Calm | 9:45 | 22.1 | 7.8 | 32.7 | 41.2 | 3.0 | 1.0 |
| | | | 9:55 | 22.1 | 7.8 | 32.8 | 40.2 | 2.9 | 1.0 |
| 3.5 | Cloudy | Calm | 9:46 | 22.1 | 7.7 | 32.8 | 32.8 | 2.3 | 11.8 |
| | | | 9:55 | 22.1 | 7.7 | 32.8 | 29.0 | 2.1 | 11.9 |
| 4.0 | Cloudy | Calm | 9:47 | 22.1 | 7.6 | 32.8 | 12.4 | 0.9 | 12.3 |
| | | | 9:56 | 22.1 | 7.7 | 32.9 | 13.0 | 0.9 | 12.1 |

**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 | Cloudy | Calm | 9:42 | 22.5 | 7.7 | 30.8 | 41.8 | 3.0 | 3.5 |
| | | | 9:50 | 22.8 | 7.7 | 29.7 | 41.8 | 3.0 | 3.5 |
| 3.5 | Cloudy | Calm | 9:46 | 22.1 | 7.7 | 32.8 | 32.8 | 2.3 | 11.8 |
| | | | 9:55 | 22.1 | 7.7 | 32.8 | 29.0 | 2.1 | 11.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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

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

**Water Quality Monitoring Results at IB1 - Mid-Ebb Tide**

**Sampling Date: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 9:22 | 21.9 | 8.1 | 32.3 | 74.8 | 5.4 | 1.5 |
| | | | 9:25 | 22.0 | 8.1 | 32.3 | 73.6 | 5.3 | 1.7 |
| 1.0 | Cloudy | Moderate | 9:23 | 21.9 | 8.1 | 32.4 | 74.4 | 5.4 | 1.8 |
| | | | 9:25 | 21.9 | 8.1 | 32.3 | 73.8 | 5.4 | 1.7 |
| 1.5 | Cloudy | Moderate | 9:23 | 21.9 | 8.1 | 32.4 | 74.2 | 5.4 | 1.8 |
| | | | 9:25 | 21.9 | 8.1 | 32.4 | 73.9 | 5.4 | 1.7 |
| 2.0 | Cloudy | Moderate | 9:23 | 21.9 | 8.1 | 32.4 | 74.2 | 5.4 | 1.7 |
| | | | 9:26 | 21.9 | 8.1 | 32.4 | 73.8 | 5.4 | 1.8 |
| 2.5 | Cloudy | Moderate | 9:23 | 21.9 | 8.1 | 32.4 | 74.2 | 5.4 | 1.7 |
| | | | 9:26 | 21.9 | 8.1 | 32.5 | 73.8 | 5.4 | 1.9 |
| 3.0 | Cloudy | Moderate | 9:24 | 21.9 | 8.1 | 32.4 | 74.0 | 5.4 | 1.9 |
| | | | 9:26 | 21.9 | 8.1 | 32.5 | 73.5 | 5.3 | 2.1 |
| 3.5 | Cloudy | Moderate | 9:24 | 21.9 | 8.1 | 32.5 | 73.7 | 5.4 | 2.0 |
| | | | 9:26 | 21.9 | 8.1 | 32.5 | 73.1 | 5.3 | 2.5 |
| 4.0 | Cloudy | Moderate | 9:24 | 21.9 | 8.1 | 32.5 | 73.2 | 5.3 | 2.5 |
| | | | 9:26 | 21.9 | 8.1 | 32.5 | 72.0 | 5.2 | 3.0 |
| 4.5 | Cloudy | Moderate | 9:24 | 21.9 | 8.1 | 32.5 | 72.6 | 5.3 | 2.9 |
| | | | 9:26 | 21.8 | 8.1 | 32.5 | 70.3 | 5.1 | 3.1 |
| 5.0 | Cloudy | Moderate | 9:24 | 21.8 | 8.1 | 32.5 | 71.2 | 5.2 | 3.0 |
| | | | 9:26 | 21.8 | 8.1 | 32.5 | 69.8 | 5.1 | 3.0 |
| 5.5 | Cloudy | Moderate | 9:24 | 21.8 | 8.1 | 32.5 | 70.9 | 5.2 | 2.9 |
| | | | 9:26 | 21.8 | 8.1 | 32.6 | 71.3 | 5.2 | 3.1 |

**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 | Cloudy | Moderate | 9:23 | 21.9 | 8.1 | 32.4 | 74.4 | 5.4 | 1.8 |
| | | | 9:25 | 21.9 | 8.1 | 32.3 | 73.8 | 5.4 | 1.7 |
| 3.0 | Cloudy | Moderate | 9:24 | 21.9 | 8.1 | 32.4 | 74.0 | 5.4 | 1.9 |
| | | | 9:26 | 21.9 | 8.1 | 32.5 | 73.5 | 5.3 | 2.1 |
| 5.0 | Cloudy | Moderate | 9:24 | 21.8 | 8.1 | 32.5 | 71.2 | 5.2 | 3.0 |
| | | | 9:26 | 21.8 | 8.1 | 32.5 | 69.8 | 5.1 | 3.0 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at IB2 - Mid-Ebb Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 9:41 | 21.9 | 8.1 | 32.4 | 76.9 | 5.6 | 3.0 |
| | | | 9:43 | 21.9 | 8.1 | 32.4 | 78.8 | 5.7 | 2.8 |
| 1.0 | Cloudy | Moderate | 9:41 | 21.9 | 8.1 | 32.4 | 76.8 | 5.6 | 2.4 |
| | | | 9:43 | 21.9 | 8.1 | 32.4 | 78.4 | 5.7 | 2.9 |
| 1.5 | Cloudy | Moderate | 9:41 | 21.9 | 8.1 | 32.5 | 76.9 | 5.6 | 2.5 |
| | | | 9:43 | 21.9 | 8.1 | 32.5 | 77.5 | 5.6 | 3.0 |
| 2.0 | Cloudy | Moderate | 9:41 | 21.9 | 8.1 | 32.5 | 76.9 | 5.6 | 2.5 |
| | | | 9:44 | 21.9 | 8.1 | 32.5 | 77.1 | 5.6 | 3.0 |
| 2.5 | Cloudy | Moderate | 9:41 | 21.8 | 8.1 | 32.5 | 77.0 | 5.6 | 2.4 |
| | | | 9:44 | 21.9 | 8.1 | 32.5 | 77.0 | 5.6 | 2.8 |
| 3.0 | Cloudy | Moderate | 9:41 | 21.8 | 8.2 | 32.5 | 77.2 | 5.6 | 2.1 |
| | | | 9:44 | 21.8 | 8.2 | 32.5 | 76.9 | 5.6 | 2.5 |
| 3.5 | Cloudy | Moderate | 9:41 | 21.8 | 8.2 | 32.5 | 77.5 | 5.6 | 2.0 |
| | | | 9:44 | 21.8 | 8.2 | 32.5 | 77.0 | 5.6 | 2.2 |
| 4.0 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.5 | 77.9 | 5.7 | 1.9 |
| | | | 9:44 | 21.8 | 8.2 | 32.5 | 77.2 | 5.6 | 2.1 |
| 4.5 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 78.0 | 5.7 | 2.2 |
| | | | 9:44 | 21.8 | 8.2 | 32.5 | 77.3 | 5.6 | 2.0 |
| 5.0 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 78.0 | 5.7 | 2.3 |
| | | | 9:44 | 21.8 | 8.2 | 32.6 | 77.4 | 5.6 | 2.3 |
| 5.5 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 78.0 | 5.7 | 2.5 |
| | | | 9:44 | 21.8 | 8.2 | 32.6 | 77.5 | 5.6 | 2.5 |
| 6.0 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 77.7 | 5.7 | 2.5 |
| | | | 9:45 | 21.8 | 8.2 | 32.6 | 77.4 | 5.6 | 2.6 |
| 6.5 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 77.5 | 5.6 | 3.8 |
| | | | 9:45 | 21.8 | 8.2 | 32.6 | 77.3 | 5.6 | 3.9 |
| 7.0 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 77.2 | 5.6 | 5.8 |
| | | | 9:45 | 21.8 | 8.2 | 32.6 | 77.2 | 5.6 | 5.8 |
| 7.5 | Cloudy | Moderate | 9:43 | 21.8 | 8.2 | 32.6 | 76.6 | 5.6 | 8.1 |
| | | | 9:45 | 21.8 | 8.2 | 32.6 | 76.6 | 5.6 | 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 | Cloudy | Moderate | 9:41 | 21.9 | 8.1 | 32.4 | 76.8 | 5.6 | 2.4 |
| | | | 9:43 | 21.9 | 8.1 | 32.4 | 78.4 | 5.7 | 2.9 |
| 4.0 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.5 | 77.9 | 5.7 | 1.9 |
| | | | 9:44 | 21.8 | 8.2 | 32.5 | 77.2 | 5.6 | 2.1 |
| 7.0 | Cloudy | Moderate | 9:42 | 21.8 | 8.2 | 32.6 | 77.2 | 5.6 | 5.8 |
| | | | 9:45 | 21.8 | 8.2 | 32.6 | 77.2 | 5.6 | 5.8 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at IB3 - Mid-Ebb Tide**

**Sampling Date: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 10:17 | 21.9 | 8.1 | 32.4 | 79.8 | 5.8 | 2.4 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 86.9 | 6.3 | 2.3 |
| 1.0 | Cloudy | Moderate | 10:18 | 21.9 | 8.1 | 32.4 | 79.5 | 5.8 | 1.8 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 84.3 | 6.1 | 2.0 |
| 1.5 | Cloudy | Moderate | 10:18 | 21.9 | 8.1 | 32.4 | 78.9 | 5.7 | 1.7 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 81.6 | 5.9 | 1.7 |
| 2.0 | Cloudy | Moderate | 10:18 | 21.9 | 8.1 | 32.4 | 78.3 | 5.7 | 1.8 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 80.0 | 5.8 | 1.7 |
| 2.5 | Cloudy | Moderate | 10:18 | 21.9 | 8.1 | 32.4 | 78.0 | 5.7 | 1.6 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 79.2 | 5.7 | 1.8 |
| 3.0 | Cloudy | Moderate | 10:18 | 21.9 | 8.1 | 32.4 | 78.0 | 5.7 | 1.7 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 78.5 | 5.7 | 1.8 |
| 3.5 | Cloudy | Moderate | 10:18 | 21.9 | 8.2 | 32.5 | 77.9 | 5.7 | 1.9 |
| | | | 10:21 | 21.8 | 8.2 | 32.6 | 78.2 | 5.7 | 1.9 |
| 4.0 | Cloudy | Moderate | 10:18 | 21.8 | 8.2 | 32.6 | 77.5 | 5.6 | 2.0 |
| | | | 10:22 | 21.8 | 8.2 | 32.6 | 77.5 | 5.6 | 2.0 |
| 4.5 | Cloudy | Moderate | 10:18 | 21.8 | 8.2 | 32.6 | 77.3 | 5.6 | 2.2 |
| | | | 10:22 | 21.8 | 8.2 | 32.7 | 77.3 | 5.6 | 2.0 |
| 5.0 | Cloudy | Moderate | 10:19 | 21.7 | 8.2 | 32.7 | 77.5 | 5.6 | 2.4 |
| | | | 10:22 | 21.8 | 8.2 | 32.7 | 77.3 | 5.6 | 2.4 |
| 5.5 | Cloudy | Moderate | 10:19 | 21.7 | 8.2 | 32.7 | 78.5 | 5.7 | 2.1 |
| | | | 10:22 | 21.8 | 8.2 | 32.7 | 77.3 | 5.6 | 2.5 |
| 6.0 | Cloudy | Moderate | 10:19 | 21.7 | 8.2 | 32.7 | 79.4 | 5.8 | 2.5 |
| | | | 10:22 | 21.7 | 8.2 | 32.7 | 77.5 | 5.6 | 2.4 |
| 6.5 | Cloudy | Moderate | 10:19 | 21.7 | 8.2 | 32.8 | 79.9 | 5.8 | 2.6 |
| | | | 10:22 | 21.7 | 8.2 | 32.7 | 78.2 | 5.7 | 2.4 |
| 7.0 | Cloudy | Moderate | 10:19 | 21.7 | 8.2 | 32.8 | 80.6 | 5.9 | 2.8 |
| | | | 10:22 | 21.7 | 8.2 | 32.8 | 78.8 | 5.7 | 2.7 |
| 7.5 | Cloudy | Moderate | 10:19 | 21.7 | 8.2 | 32.8 | 81.4 | 5.9 | 2.8 |
| | | | 10:23 | 21.7 | 8.2 | 32.8 | 79.9 | 5.8 | 3.2 |
| 8.0 | Cloudy | Moderate | 10:20 | 21.7 | 8.2 | 32.8 | 83.2 | 6.1 | 3.8 |
| | | | 10:23 | 21.7 | 8.2 | 32.8 | 81.0 | 5.9 | 3.8 |
| 8.5 | Cloudy | Moderate | 10:20 | 21.7 | 8.2 | 32.8 | 83.1 | 6.0 | 4.1 |
| | | | 10:23 | 21.7 | 8.2 | 32.9 | 82.7 | 6.0 | 4.0 |
| 9.0 | Cloudy | Moderate | 10:20 | 21.7 | 8.2 | 32.8 | 83.1 | 6.1 | 4.4 |
| | | | 10:23 | 21.6 | 8.2 | 32.9 | 83.0 | 6.0 | 4.2 |

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

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

**Water Quality Monitoring Results at IB3 - Mid-Ebb Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Moderate | 10:18 | 21.9 | 8.1 | 32.4 | 79.5 | 5.8 | 1.8 |
| | | | 10:21 | 21.9 | 8.2 | 32.5 | 84.3 | 6.1 | 2.0 |
| 4.75 | Cloudy | Moderate | 10:18 | 21.8 | 8.2 | 32.7 | 83.3 | 6.1 | 3.1 |
| | | | 10:22 | 21.8 | 8.2 | 32.7 | 80.5 | 5.9 | 2.7 |
| 8.5 | Cloudy | Moderate | 10:20 | 21.7 | 8.2 | 32.8 | 83.1 | 6.0 | 4.1 |
| | | | 10:23 | 21.7 | 8.2 | 32.9 | 82.7 | 6.0 | 4.0 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at OB1 - Mid-Ebb Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 10:01 | 21.9 | 8.1 | 32.5 | 81.4 | 5.9 | 3.2 |
| | | | 10:04 | 22.0 | 8.2 | 32.5 | 80.9 | 5.9 | 3.2 |
| 1.0 | Cloudy | Moderate | 10:01 | 21.9 | 8.1 | 32.5 | 80.1 | 5.8 | 2.5 |
| | | | 10:04 | 21.9 | 8.2 | 32.5 | 79.7 | 5.8 | 2.6 |
| 1.5 | Cloudy | Moderate | 10:01 | 21.9 | 8.1 | 32.5 | 78.7 | 5.7 | 2.2 |
| | | | 10:04 | 21.9 | 8.2 | 32.6 | 79.3 | 5.8 | 2.2 |
| 2.0 | Cloudy | Moderate | 10:02 | 21.8 | 8.2 | 32.6 | 78.2 | 5.7 | 2.3 |
| | | | 10:04 | 21.9 | 8.2 | 32.6 | 78.5 | 5.7 | 2.3 |
| 2.5 | Cloudy | Moderate | 10:02 | 21.8 | 8.2 | 32.6 | 77.8 | 5.7 | 3.1 |
| | | | 10:05 | 21.8 | 8.2 | 32.7 | 78.0 | 5.7 | 3.0 |
| 3.0 | Cloudy | Moderate | 10:02 | 21.8 | 8.2 | 32.7 | 78.0 | 5.7 | 3.1 |
| | | | 10:06 | 21.8 | 8.2 | 32.7 | 77.4 | 5.6 | 3.2 |
| 3.5 | Cloudy | Moderate | 10:02 | 21.7 | 8.2 | 32.7 | 78.6 | 5.7 | 3.2 |
| | | | 10:06 | 21.7 | 8.2 | 32.7 | 78.1 | 5.7 | 3.6 |
| 4.0 | Cloudy | Moderate | 10:02 | 21.7 | 8.2 | 32.7 | 79.4 | 5.8 | 3.2 |
| | | | 10:06 | 21.7 | 8.2 | 32.7 | 78.5 | 5.7 | 3.6 |
| 4.5 | Cloudy | Moderate | 10:02 | 21.7 | 8.2 | 32.7 | 80.5 | 5.9 | 3.1 |
| | | | 10:06 | 21.7 | 8.2 | 32.7 | 78.8 | 5.7 | 3.3 |
| 5.0 | Cloudy | Moderate | 10:02 | 21.7 | 8.2 | 32.7 | 81.1 | 5.9 | 3.0 |
| | | | 10:06 | 21.7 | 8.2 | 32.8 | 79.9 | 5.8 | 3.0 |
| 5.5 | Cloudy | Moderate | 10:03 | 21.7 | 8.2 | 32.8 | 81.5 | 5.9 | 3.1 |
| | | | 10:06 | 21.7 | 8.2 | 32.8 | 80.5 | 5.9 | 3.0 |
| 6.0 | Cloudy | Moderate | 10:03 | 21.7 | 8.2 | 32.8 | 82.0 | 6.0 | 3.4 |
| | | | 10:06 | 21.7 | 8.2 | 32.8 | 81.1 | 5.9 | 3.2 |
| 6.5 | Cloudy | Moderate | 10:03 | 21.7 | 8.2 | 32.8 | 82.6 | 6.0 | 3.7 |
| | | | 10:07 | 21.7 | 8.2 | 32.8 | 81.9 | 6.0 | 3.6 |
| 7.0 | Cloudy | Moderate | 10:03 | 21.7 | 8.2 | 32.8 | 82.9 | 6.0 | 4.0 |
| | | | 10:07 | 21.7 | 8.2 | 32.8 | 82.1 | 6.0 | 3.8 |
| 7.5 | Cloudy | Moderate | 10:03 | 21.7 | 8.2 | 32.8 | 83.1 | 6.0 | 4.1 |
| | | | 10:07 | 21.7 | 8.2 | 32.8 | 82.3 | 6.0 | 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 | Cloudy | Moderate | 10:01 | 21.9 | 8.1 | 32.5 | 80.1 | 5.8 | 2.5 |
| | | | 10:04 | 21.9 | 8.2 | 32.5 | 79.7 | 5.8 | 2.6 |
| 4.0 | Cloudy | Moderate | 10:02 | 21.7 | 8.2 | 32.7 | 79.4 | 5.8 | 3.2 |
| | | | 10:06 | 21.7 | 8.2 | 32.7 | 78.5 | 5.7 | 3.6 |
| 7.0 | Cloudy | Moderate | 10:03 | 21.7 | 8.2 | 32.8 | 82.9 | 6.0 | 4.0 |
| | | | 10:07 | 21.7 | 8.2 | 32.8 | 82.1 | 6.0 | 3.8 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 10:54 | 21.9 | 8.1 | 32.5 | 78.5 | 5.7 | 3.2 |
| | | | 11:09 | 22.1 | 8.1 | 32.5 | 76.8 | 5.5 | 3.3 |
| 1.0 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 78.2 | 5.7 | 3.1 |
| | | | 11:09 | 22.1 | 8.1 | 32.5 | 76.9 | 5.6 | 3.0 |
| 1.5 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 77.9 | 5.7 | 3.3 |
| | | | 11:09 | 22.0 | 8.1 | 32.5 | 77.0 | 5.6 | 2.8 |
| 2.0 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 77.7 | 5.6 | 3.2 |
| | | | 11:09 | 22.0 | 8.1 | 32.5 | 76.8 | 5.6 | 2.9 |
| 2.5 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 77.4 | 5.6 | 3.3 |
| | | | 11:09 | 21.9 | 8.1 | 32.5 | 76.6 | 5.6 | 3.0 |
| 3.0 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 77.1 | 5.6 | 3.4 |
| | | | 11:09 | 21.9 | 8.1 | 32.5 | 76.3 | 5.5 | 3.1 |
| 3.5 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 76.9 | 5.6 | 3.4 |
| | | | 11:09 | 21.9 | 8.1 | 32.5 | 76.1 | 5.5 | 3.2 |
| 4.0 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 76.8 | 5.6 | 3.5 |
| | | | 11:09 | 21.9 | 8.1 | 32.5 | 75.9 | 5.5 | 3.2 |
| 4.5 | Cloudy | Moderate | 11:00 | 21.9 | 8.2 | 32.5 | 83.9 | 6.1 | 3.8 |
| | | | 11:10 | 21.9 | 8.1 | 32.6 | 75.8 | 5.5 | 3.1 |
| 5.0 | Cloudy | Moderate | 11:01 | 21.9 | 8.2 | 32.5 | 79.3 | 5.8 | 4.1 |
| | | | 11:10 | 21.9 | 8.1 | 32.6 | 75.7 | 5.5 | 3.6 |
| 5.5 | Cloudy | Moderate | 11:01 | 21.9 | 8.2 | 32.5 | 78.6 | 5.7 | 4.1 |
| | | | 11:10 | 21.9 | 8.1 | 32.6 | 75.6 | 5.5 | 3.6 |
| 6.0 | Cloudy | Moderate | 11:02 | 21.9 | 8.1 | 32.5 | 78.3 | 5.7 | 3.6 |
| | | | 11:10 | 21.9 | 8.1 | 32.6 | 75.6 | 5.5 | 3.5 |
| 6.5 | Cloudy | Moderate | 11:02 | 21.9 | 8.1 | 32.5 | 78.1 | 5.7 | 3.6 |
| | | | 11:10 | 21.9 | 8.1 | 32.6 | 75.6 | 5.5 | 3.4 |
| 7.0 | Cloudy | Moderate | 11:02 | 21.9 | 8.1 | 32.5 | 77.9 | 5.7 | 3.8 |
| | | | 11:10 | 21.9 | 8.1 | 32.6 | 75.6 | 5.5 | 3.1 |
| 7.5 | Cloudy | Moderate | 11:02 | 21.9 | 8.1 | 32.5 | 77.8 | 5.6 | 3.7 |
| | | | 11:10 | 21.9 | 8.2 | 32.6 | 75.7 | 5.5 | 3.6 |
| 8.0 | Cloudy | Moderate | 11:02 | 21.9 | 8.1 | 32.6 | 77.7 | 5.6 | 3.6 |
| | | | 11:11 | 21.9 | 8.1 | 32.6 | 75.9 | 5.5 | 3.4 |
| 8.5 | Cloudy | Moderate | 11:02 | 21.9 | 8.2 | 32.6 | 77.7 | 5.6 | 3.5 |
| | | | 11:11 | 21.9 | 8.2 | 32.6 | 75.8 | 5.5 | 3.6 |
| 9.0 | Cloudy | Moderate | 11:02 | 21.9 | 8.2 | 32.6 | 77.7 | 5.6 | 3.3 |
| | | | 11:11 | 21.8 | 8.2 | 32.6 | 75.8 | 5.5 | 3.5 |
| 9.5 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 77.8 | 5.7 | 3.3 |
| | | | 11:11 | 21.9 | 8.2 | 32.6 | 76.1 | 5.5 | 3.4 |
| 10.0 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 77.8 | 5.7 | 3.3 |
| | | | 11:11 | 21.9 | 8.2 | 32.6 | 76.1 | 5.5 | 3.6 |
| 10.5 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 78.4 | 5.7 | 3.3 |
| | | | 11:11 | 21.9 | 8.2 | 32.6 | 76.1 | 5.5 | 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 VH1 - Mid-Ebb Tide**

**Sampling Date: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 78.8 | 5.7 | 3.3 |
| | | | 11:11 | 21.9 | 8.2 | 32.6 | 76.1 | 5.5 | 3.3 |
| 11.5 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 79.0 | 5.7 | 3.2 |
| | | | 11:11 | 21.8 | 8.2 | 32.6 | 76.3 | 5.5 | 3.3 |
| 12.0 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 79.1 | 5.7 | 3.2 |
| | | | 11:12 | 21.8 | 8.2 | 32.6 | 76.6 | 5.6 | 3.4 |
| 12.5 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 79.2 | 5.8 | 3.1 |
| | | | 11:12 | 21.8 | 8.2 | 32.6 | 76.8 | 5.6 | 3.3 |
| 13.0 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 79.2 | 5.8 | 3.1 |
| | | | 11:12 | 21.8 | 8.2 | 32.6 | 76.8 | 5.6 | 3.3 |
| 13.5 | Cloudy | Moderate | 11:04 | 21.8 | 8.2 | 32.6 | 79.2 | 5.8 | 3.4 |
| | | | 11:12 | 21.8 | 8.2 | 32.6 | 76.7 | 5.6 | 3.2 |
| 14.0 | Cloudy | Moderate | 11:04 | 21.8 | 8.2 | 32.6 | 79.2 | 5.8 | 3.4 |
| | | | 11:12 | 21.8 | 8.2 | 32.6 | 76.8 | 5.6 | 3.4 |
| 14.5 | Cloudy | Moderate | 11:04 | 21.8 | 8.2 | 32.6 | 79.3 | 5.8 | 3.8 |
| | | | 11:12 | 21.8 | 8.2 | 32.7 | 77.0 | 5.6 | 3.3 |
| 15.0 | Cloudy | Moderate | 11:04 | 21.8 | 8.2 | 32.6 | 79.2 | 5.8 | 3.4 |
| | | | 11:12 | 21.8 | 8.2 | 32.7 | 77.6 | 5.6 | 3.3 |
| 15.5 | Cloudy | Moderate | 11:04 | 21.8 | 8.2 | 32.6 | 79.1 | 5.7 | 3.3 |
| | | | 11:12 | 21.8 | 8.2 | 32.7 | 78.0 | 5.7 | 3.4 |
| 16.0 | Cloudy | Moderate | 11:05 | 21.8 | 8.2 | 32.7 | 79.3 | 5.8 | 3.6 |
| | | | 11:13 | 21.8 | 8.2 | 32.7 | 78.3 | 5.7 | 3.5 |
| 16.5 | Cloudy | Moderate | 11:05 | 21.8 | 8.2 | 32.7 | 79.7 | 5.8 | 3.6 |
| | | | 11:13 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 3.6 |
| 17.0 | Cloudy | Moderate | 11:05 | 21.8 | 8.2 | 32.7 | 79.7 | 5.8 | 3.5 |
| | | | 11:13 | 21.8 | 8.2 | 32.7 | 78.6 | 5.7 | 3.5 |
| 17.5 | Cloudy | Moderate | 11:05 | 21.8 | 8.2 | 32.7 | 80.0 | 5.8 | 3.6 |
| | | | 11:13 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 3.6 |
| 18.0 | Cloudy | Moderate | 11:06 | 21.8 | 8.2 | 32.7 | 79.8 | 5.8 | 3.9 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 78.2 | 5.7 | 3.5 |
| 18.5 | Cloudy | Moderate | 11:06 | 21.8 | 8.2 | 32.7 | 79.8 | 5.8 | 3.8 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 78.2 | 5.7 | 3.7 |
| 19.0 | Cloudy | Moderate | 11:06 | 21.8 | 8.2 | 32.7 | 80.0 | 5.8 | 3.5 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 78.1 | 5.7 | 3.7 |
| 19.5 | Cloudy | Moderate | 11:06 | 21.7 | 8.2 | 32.7 | 80.3 | 5.8 | 3.8 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 78.1 | 5.7 | 3.8 |
| 20.0 | Cloudy | Moderate | 11:06 | 21.7 | 8.2 | 32.7 | 80.5 | 5.9 | 4.0 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 78.0 | 5.7 | 3.6 |
| 20.5 | Cloudy | Moderate | 11:06 | 21.7 | 8.2 | 32.8 | 80.7 | 5.9 | 4.0 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 77.9 | 5.7 | 3.9 |
| 21.0 | Cloudy | Moderate | 11:06 | 21.7 | 8.2 | 32.8 | 80.9 | 5.9 | 4.0 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 77.9 | 5.7 | 4.0 |

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:** **7 May 2013**

**Secchi Disc Depth:** **2.5m**

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Moderate | 10:55 | 21.9 | 8.1 | 32.5 | 78.2 | 5.7 | 3.1 |
| | | | 11:09 | 22.1 | 8.1 | 32.5 | 76.9 | 5.6 | 3.0 |
| 10.75 | Cloudy | Moderate | 11:03 | 21.8 | 8.2 | 32.6 | 79.3 | 5.8 | 3.8 |
| | | | 11:11 | 21.8 | 8.2 | 32.6 | 77.5 | 5.6 | 3.9 |
| 20.5 | Cloudy | Moderate | 11:06 | 21.7 | 8.2 | 32.8 | 80.7 | 5.9 | 4.0 |
| | | | 11:14 | 21.8 | 8.2 | 32.7 | 77.9 | 5.7 | 3.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 11:42 | 22.0 | 8.1 | 32.4 | 88.2 | 6.4 | 3.1 |
| | | | 11:59 | 22.1 | 8.1 | 32.5 | 78.7 | 5.7 | 2.7 |
| 1.0 | Cloudy | Moderate | 11:43 | 22.0 | 8.1 | 32.5 | 82.8 | 6.0 | 2.8 |
| | | | 11:59 | 22.1 | 8.1 | 32.5 | 77.9 | 5.6 | 2.7 |
| 1.5 | Cloudy | Moderate | 11:43 | 22.0 | 8.1 | 32.5 | 79.6 | 5.8 | 3.0 |
| | | | 11:59 | 22.0 | 8.1 | 32.5 | 75.8 | 5.5 | 2.7 |
| 2.0 | Cloudy | Moderate | 11:43 | 21.9 | 8.2 | 32.5 | 77.8 | 5.6 | 3.0 |
| | | | 11:59 | 22.0 | 8.1 | 32.6 | 75.6 | 5.5 | 2.8 |
| 2.5 | Cloudy | Moderate | 11:43 | 21.9 | 8.2 | 32.6 | 76.7 | 5.6 | 2.9 |
| | | | 11:59 | 22.0 | 8.2 | 32.6 | 75.3 | 5.5 | 2.8 |
| 3.0 | Cloudy | Moderate | 11:53 | 21.9 | 8.2 | 32.6 | 83.8 | 6.1 | 3.4 |
| | | | 12:00 | 21.9 | 8.2 | 32.6 | 75.2 | 5.5 | 3.5 |
| 3.5 | Cloudy | Moderate | 11:53 | 21.9 | 8.2 | 32.6 | 81.4 | 5.9 | 3.4 |
| | | | 12:00 | 21.9 | 8.2 | 32.6 | 75.3 | 5.5 | 3.1 |
| 4.0 | Cloudy | Moderate | 11:53 | 21.9 | 8.2 | 32.6 | 79.6 | 5.8 | 3.1 |
| | | | 12:00 | 21.9 | 8.2 | 32.7 | 75.5 | 5.5 | 3.1 |
| 4.5 | Cloudy | Moderate | 11:53 | 21.9 | 8.2 | 32.6 | 78.7 | 5.7 | 3.0 |
| | | | 12:00 | 21.8 | 8.2 | 32.7 | 76.0 | 5.5 | 3.6 |
| 5.0 | Cloudy | Moderate | 11:53 | 21.9 | 8.2 | 32.6 | 78.6 | 5.7 | 3.2 |
| | | | 12:00 | 21.8 | 8.2 | 32.7 | 76.4 | 5.5 | 3.2 |
| 5.5 | Cloudy | Moderate | 11:54 | 21.8 | 8.2 | 32.7 | 78.4 | 5.7 | 3.4 |
| | | | 12:00 | 21.8 | 8.2 | 32.7 | 76.6 | 5.6 | 3.2 |
| 6.0 | Cloudy | Moderate | 11:54 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 3.4 |
| | | | 12:00 | 21.8 | 8.2 | 32.7 | 76.7 | 5.6 | 3.1 |
| 6.5 | Cloudy | Moderate | 11:54 | 21.8 | 8.2 | 32.7 | 78.7 | 5.7 | 3.4 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 76.9 | 5.6 | 3.2 |
| 7.0 | Cloudy | Moderate | 11:54 | 21.8 | 8.2 | 32.7 | 78.8 | 5.7 | 3.3 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 77.2 | 5.6 | 3.3 |
| 7.5 | Cloudy | Moderate | 11:54 | 21.8 | 8.2 | 32.7 | 79.8 | 5.8 | 3.1 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 77.3 | 5.6 | 3.2 |
| 8.0 | Cloudy | Moderate | 11:54 | 21.8 | 8.2 | 32.7 | 79.7 | 5.8 | 3.4 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 78.0 | 5.7 | 3.1 |
| 8.5 | Cloudy | Moderate | 11:55 | 21.8 | 8.2 | 32.7 | 79.6 | 5.8 | 3.4 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 3.2 |
| 9.0 | Cloudy | Moderate | 11:55 | 21.8 | 8.2 | 32.8 | 79.8 | 5.8 | 3.4 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 79.0 | 5.7 | 3.3 |
| 9.5 | Cloudy | Moderate | 11:55 | 21.8 | 8.2 | 32.7 | 80.9 | 5.9 | 3.1 |
| | | | 12:02 | 21.8 | 8.2 | 32.7 | 79.2 | 5.8 | 3.2 |
| 10.0 | Cloudy | Moderate | 11:55 | 21.8 | 8.2 | 32.8 | 80.8 | 5.9 | 3.1 |
| | | | 12:02 | 21.8 | 8.2 | 32.7 | 79.3 | 5.8 | 3.2 |
| 10.5 | Cloudy | Moderate | 11:55 | 21.8 | 8.2 | 32.7 | 80.9 | 5.9 | 3.2 |
| | | | 12:02 | 21.8 | 8.2 | 32.7 | 79.5 | 5.8 | 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 VH2 - Mid-Ebb Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 11:56 | 21.8 | 8.2 | 32.7 | 80.7 | 5.9 | 3.1 |
| | | | 12:02 | 21.8 | 8.2 | 32.8 | 79.6 | 5.8 | 3.5 |
| 11.5 | Cloudy | Moderate | 11:56 | 21.8 | 8.2 | 32.7 | 80.6 | 5.9 | 3.2 |
| | | | 12:02 | 21.8 | 8.2 | 32.8 | 79.7 | 5.8 | 3.5 |
| 12.0 | Cloudy | Moderate | 11:56 | 21.8 | 8.2 | 32.8 | 80.7 | 5.9 | 3.5 |
| | | | 12:02 | 21.8 | 8.2 | 32.8 | 79.9 | 5.8 | 3.3 |
| 12.5 | Cloudy | Moderate | 11:56 | 21.8 | 8.2 | 32.8 | 81.0 | 5.9 | 3.2 |
| | | | 12:02 | 21.8 | 8.2 | 32.8 | 80.0 | 5.8 | 3.2 |
| 13.0 | Cloudy | Moderate | 11:56 | 21.8 | 8.2 | 32.8 | 81.2 | 5.9 | 3.3 |
| | | | 12:02 | 21.8 | 8.2 | 32.8 | 80.0 | 5.8 | 3.3 |
| 13.5 | Cloudy | Moderate | 11:57 | 21.8 | 8.2 | 32.8 | 81.2 | 5.9 | 3.9 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 80.0 | 5.8 | 4.0 |
| 14.0 | Cloudy | Moderate | 11:57 | 21.8 | 8.2 | 32.8 | 81.1 | 5.9 | 3.8 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.9 | 5.8 | 4.1 |
| 14.5 | Cloudy | Moderate | 11:57 | 21.8 | 8.2 | 32.8 | 81.2 | 5.9 | 4.1 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.8 | 5.8 | 4.2 |
| 15.0 | Cloudy | Moderate | 11:57 | 21.8 | 8.2 | 32.8 | 81.3 | 5.9 | 4.0 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.7 | 5.8 | 4.1 |
| 15.5 | Cloudy | Moderate | 11:57 | 21.8 | 8.2 | 32.8 | 81.3 | 5.9 | 3.9 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.7 | 5.8 | 4.0 |
| 16.0 | Cloudy | Moderate | 11:57 | 21.7 | 8.2 | 32.8 | 81.2 | 5.9 | 4.6 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.7 | 5.8 | 4.5 |
| 16.5 | Cloudy | Moderate | 11:58 | 21.7 | 8.2 | 32.8 | 81.3 | 5.9 | 9.9 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.6 | 5.8 | 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 | Cloudy | Moderate | 11:43 | 22.0 | 8.1 | 32.5 | 82.8 | 6.0 | 2.8 |
| | | | 11:59 | 22.1 | 8.1 | 32.5 | 77.9 | 5.6 | 2.7 |
| 8.5 | Cloudy | Moderate | 11:55 | 21.8 | 8.2 | 32.7 | 79.6 | 5.8 | 3.4 |
| | | | 12:01 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 3.2 |
| 16.0 | Cloudy | Moderate | 11:57 | 21.7 | 8.2 | 32.8 | 81.2 | 5.9 | 4.6 |
| | | | 12:03 | 21.8 | 8.2 | 32.8 | 79.7 | 5.8 | 4.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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**

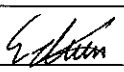
**Sampling Date: 7 May 2013**

**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 | Cloudy | Moderate | 12:11 | 21.9 | 8.1 | 33.1 | 86.3 | 6.2 | 1.8 |
| | | | 12:14 | 22.3 | 8.1 | 33.1 | 83.8 | 6.0 | 1.7 |
| 1.0 | Cloudy | Moderate | 12:11 | 21.8 | 8.1 | 33.1 | 85.4 | 6.2 | 2.4 |
| | | | 12:14 | 21.8 | 8.1 | 33.2 | 84.2 | 6.1 | 2.3 |
| 1.5 | Cloudy | Moderate | 12:11 | 21.8 | 8.1 | 33.1 | 84.5 | 6.1 | 2.8 |
| | | | 12:14 | 21.8 | 8.1 | 33.2 | 83.9 | 6.1 | 2.7 |
| 2.0 | Cloudy | Moderate | 12:12 | 21.8 | 8.1 | 33.1 | 84.1 | 6.1 | 2.9 |
| | | | 12:14 | 21.8 | 8.1 | 33.2 | 83.8 | 6.1 | 2.8 |
| 2.5 | Cloudy | Moderate | 12:12 | 21.8 | 8.1 | 33.1 | 84.1 | 6.1 | 2.8 |
| | | | 12:15 | 21.7 | 8.1 | 33.2 | 83.6 | 6.1 | 2.8 |
| 3.0 | Cloudy | Moderate | 12:12 | 21.7 | 8.1 | 33.2 | 83.9 | 6.1 | 3.2 |
| | | | 12:15 | 21.7 | 8.1 | 33.2 | 83.7 | 6.1 | 3.0 |
| 3.5 | Cloudy | Moderate | 12:12 | 21.7 | 8.1 | 33.2 | 83.6 | 6.1 | 3.8 |
| | | | 12:15 | 21.7 | 8.1 | 33.2 | 83.6 | 6.1 | 3.4 |
| 4.0 | Cloudy | Moderate | 12:12 | 21.7 | 8.1 | 33.2 | 83.5 | 6.1 | 4.1 |
| | | | 12:15 | 21.7 | 8.1 | 33.2 | 83.6 | 6.1 | 4.0 |
| 4.5 | Cloudy | Moderate | 12:12 | 21.7 | 8.1 | 33.2 | 83.5 | 6.1 | 4.2 |
| | | | 12:15 | 21.7 | 8.1 | 33.2 | 83.5 | 6.1 | 3.8 |
| 5.0 | Cloudy | Moderate | 12:13 | 21.7 | 8.1 | 33.2 | 83.4 | 6.1 | 4.2 |
| | | | 12:16 | 21.7 | 8.1 | 33.2 | 83.4 | 6.1 | 3.6 |
| 5.5 | Cloudy | Moderate | 12:13 | 21.7 | 8.1 | 33.2 | 83.2 | 6.0 | 3.7 |
| | | | 12:16 | 21.7 | 8.1 | 33.2 | 83.5 | 6.1 | 3.1 |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 3.0 | Cloudy | Moderate | 12:12 | 21.7 | 8.1 | 33.2 | 83.9 | 6.1 | 3.2 |
| | | | 12:15 | 21.7 | 8.1 | 33.2 | 83.7 | 6.1 | 3.0 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 10:34 | 21.9 | 8.1 | 32.6 | 84.1 | 6.1 | 1.6 |
| | | | 10:40 | 21.9 | 8.2 | 32.6 | 82.3 | 6.0 | 1.8 |
| 1.0 | Cloudy | Moderate | 10:35 | 21.9 | 8.2 | 32.6 | 79.8 | 5.8 | 1.7 |
| | | | 10:40 | 22.0 | 8.2 | 32.6 | 79.8 | 5.8 | 2.0 |
| 1.5 | Cloudy | Moderate | 10:35 | 21.9 | 8.2 | 32.6 | 79.4 | 5.8 | 1.7 |
| | | | 10:40 | 22.0 | 8.2 | 32.6 | 79.3 | 5.7 | 2.1 |
| 2.0 | Cloudy | Moderate | 10:35 | 21.9 | 8.2 | 32.6 | 79.2 | 5.7 | 1.8 |
| | | | 10:40 | 22.0 | 8.2 | 32.6 | 78.4 | 5.7 | 2.2 |
| 2.5 | Cloudy | Moderate | 10:35 | 21.9 | 8.2 | 32.6 | 79.1 | 5.7 | 2.1 |
| | | | 10:40 | 22.0 | 8.2 | 32.6 | 77.6 | 5.6 | 2.2 |
| 3.0 | Cloudy | Moderate | 10:36 | 21.9 | 8.2 | 32.6 | 79.1 | 5.7 | 2.1 |
| | | | 10:40 | 21.9 | 8.2 | 32.6 | 76.9 | 5.6 | 2.0 |
| 3.5 | Cloudy | Moderate | 10:36 | 21.9 | 8.2 | 32.6 | 79.0 | 5.7 | 2.1 |
| | | | 10:40 | 21.9 | 8.2 | 32.6 | 76.3 | 5.5 | 2.0 |
| 4.0 | Cloudy | Moderate | 10:36 | 21.9 | 8.2 | 32.6 | 79.1 | 5.7 | 2.1 |
| | | | 10:41 | 21.9 | 8.2 | 32.6 | 75.9 | 5.5 | 2.2 |
| 4.5 | Cloudy | Moderate | 10:36 | 21.9 | 8.2 | 32.6 | 79.0 | 5.7 | 2.1 |
| | | | 10:41 | 21.9 | 8.2 | 32.6 | 75.6 | 5.5 | 2.1 |
| 5.0 | Cloudy | Moderate | 10:36 | 22.0 | 8.2 | 32.7 | 78.8 | 5.7 | 2.2 |
| | | | 10:41 | 21.9 | 8.2 | 32.6 | 75.6 | 5.5 | 2.2 |
| 5.5 | Cloudy | Moderate | 10:36 | 22.0 | 8.2 | 32.7 | 78.5 | 5.7 | 2.4 |
| | | | 10:41 | 21.9 | 8.2 | 32.6 | 75.6 | 5.5 | 2.5 |
| 6.0 | Cloudy | Moderate | 10:36 | 22.0 | 8.2 | 32.7 | 77.7 | 5.6 | 2.0 |
| | | | 10:41 | 21.9 | 8.2 | 32.6 | 75.9 | 5.5 | 2.1 |
| 6.5 | Cloudy | Moderate | 10:36 | 21.9 | 8.2 | 32.7 | 77.1 | 5.6 | 2.3 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.9 | 5.5 | 2.5 |
| 7.0 | Cloudy | Moderate | 10:37 | 21.9 | 8.2 | 32.7 | 76.5 | 5.5 | 2.4 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.6 | 5.5 | 2.6 |
| 7.5 | Cloudy | Moderate | 10:37 | 21.9 | 8.2 | 32.7 | 76.1 | 5.5 | 2.5 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.4 | 5.5 | 2.5 |
| 8.0 | Cloudy | Moderate | 10:37 | 21.9 | 8.2 | 32.7 | 76.1 | 5.5 | 2.9 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.4 | 5.5 | 2.8 |
| 8.5 | Cloudy | Moderate | 10:37 | 21.9 | 8.2 | 32.7 | 76.2 | 5.5 | 3.0 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.5 | 5.5 | 2.5 |
| 9.0 | Cloudy | Moderate | 10:37 | 21.8 | 8.2 | 32.7 | 76.2 | 5.5 | 2.9 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.5 | 5.5 | 2.6 |
| 9.5 | Cloudy | Moderate | 10:37 | 21.8 | 8.2 | 32.7 | 76.7 | 5.6 | 3.0 |
| | | | 10:42 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.7 |
| 10.0 | Cloudy | Moderate | 10:38 | 21.8 | 8.2 | 32.7 | 76.7 | 5.6 | 3.1 |
| | | | 10:42 | 21.8 | 8.2 | 32.7 | 76.0 | 5.5 | 3.2 |
| 10.5 | Cloudy | Moderate | 10:38 | 21.8 | 8.2 | 32.7 | 76.7 | 5.6 | 3.2 |
| | | | 10:43 | 21.8 | 8.2 | 32.8 | 76.2 | 5.5 | 3.3 |

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-Ebb Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 10:38 | 21.8 | 8.2 | 32.7 | 77.1 | 5.6 | 3.1 |
| | | | 10:43 | 21.7 | 8.2 | 32.8 | 78.0 | 5.7 | 3.5 |
| 11.5 | Cloudy | Moderate | 10:38 | 21.8 | 8.2 | 32.8 | 77.7 | 5.6 | 3.2 |
| | | | 10:43 | 21.7 | 8.2 | 32.8 | 79.0 | 5.7 | 3.5 |
| 12.0 | Cloudy | Moderate | 10:38 | 21.7 | 8.2 | 32.8 | 78.6 | 5.7 | 3.6 |
| | | | 10:43 | 21.7 | 8.2 | 32.8 | 79.7 | 5.8 | 4.0 |
| 12.5 | Cloudy | Moderate | 10:38 | 21.7 | 8.2 | 32.8 | 79.0 | 5.7 | 3.5 |
| | | | 10:43 | 21.7 | 8.2 | 32.8 | 80.0 | 5.8 | 3.8 |

**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 | Cloudy | Moderate | 10:36 | 21.9 | 8.2 | 32.7 | 77.1 | 5.6 | 2.3 |
| | | | 10:42 | 21.9 | 8.2 | 32.6 | 75.9 | 5.5 | 2.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 11:26 | 21.9 | 8.1 | 32.1 | 81.2 | 5.9 | 3.7 |
| | | | 11:30 | 21.9 | 8.2 | 32.3 | 75.9 | 5.5 | 4.4 |
| 1.0 | Cloudy | Moderate | 11:27 | 21.9 | 8.2 | 32.2 | 78.1 | 5.7 | 3.6 |
| | | | 11:30 | 21.9 | 8.2 | 32.4 | 74.7 | 5.4 | 4.2 |
| 1.5 | Cloudy | Moderate | 11:27 | 21.9 | 8.2 | 32.4 | 76.6 | 5.6 | 4.2 |
| | | | 11:30 | 21.9 | 8.2 | 32.6 | 74.2 | 5.4 | 4.3 |
| 2.0 | Cloudy | Moderate | 11:27 | 21.9 | 8.2 | 32.6 | 76.2 | 5.5 | 4.0 |
| | | | 11:31 | 21.9 | 8.2 | 32.6 | 74.3 | 5.4 | 5.0 |
| 2.5 | Cloudy | Moderate | 11:27 | 21.9 | 8.2 | 32.6 | 76.2 | 5.5 | 4.7 |
| | | | 11:31 | 21.8 | 8.2 | 32.6 | 74.4 | 5.4 | 4.8 |
| 3.0 | Cloudy | Moderate | 11:27 | 21.9 | 8.2 | 32.6 | 76.1 | 5.5 | 4.3 |
| | | | 11:31 | 21.8 | 8.2 | 32.6 | 74.5 | 5.4 | 5.1 |
| 3.5 | Cloudy | Moderate | 11:27 | 21.8 | 8.2 | 32.6 | 76.1 | 5.5 | 4.8 |
| | | | 11:31 | 21.8 | 8.2 | 32.6 | 74.7 | 5.4 | 4.7 |
| 4.0 | Cloudy | Moderate | 11:27 | 21.8 | 8.2 | 32.6 | 76.0 | 5.5 | 4.9 |
| | | | 11:31 | 21.8 | 8.2 | 32.6 | 74.7 | 5.4 | 4.8 |
| 4.5 | Cloudy | Moderate | 11:27 | 21.8 | 8.2 | 32.6 | 76.3 | 5.5 | 4.6 |
| | | | 11:31 | 21.8 | 8.2 | 32.7 | 75.0 | 5.5 | 5.2 |
| 5.0 | Cloudy | Moderate | 11:28 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 4.7 |
| | | | 11:31 | 21.8 | 8.2 | 32.7 | 75.5 | 5.5 | 4.6 |
| 5.5 | Cloudy | Moderate | 11:28 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 4.5 |
| | | | 11:32 | 21.8 | 8.2 | 32.7 | 75.8 | 5.5 | 4.7 |
| 6.0 | Cloudy | Moderate | 11:28 | 21.7 | 8.2 | 32.7 | 76.9 | 5.6 | 4.5 |
| | | | 11:32 | 21.7 | 8.2 | 32.7 | 76.0 | 5.5 | 4.5 |
| 6.5 | Cloudy | Moderate | 11:28 | 21.7 | 8.2 | 32.7 | 77.2 | 5.6 | 4.5 |
| | | | 11:32 | 21.7 | 8.2 | 32.7 | 76.4 | 5.6 | 5.4 |
| 7.0 | Cloudy | Moderate | 11:28 | 21.7 | 8.2 | 32.7 | 77.6 | 5.6 | 4.3 |
| | | | 11:32 | 21.7 | 8.2 | 32.8 | 76.7 | 5.6 | 5.0 |
| 7.5 | Cloudy | Moderate | 11:28 | 21.7 | 8.2 | 32.8 | 78.1 | 5.7 | 4.1 |
| | | | 11:32 | 21.7 | 8.2 | 32.8 | 77.2 | 5.6 | 4.6 |
| 8.0 | Cloudy | Moderate | 11:28 | 21.7 | 8.2 | 32.8 | 78.7 | 5.7 | 4.1 |
| | | | 11:32 | 21.7 | 8.2 | 32.8 | 77.7 | 5.6 | 4.3 |
| 8.5 | Cloudy | Moderate | 11:28 | 21.7 | 8.2 | 32.8 | 79.1 | 5.8 | 4.1 |
| | | | 11:32 | 21.7 | 8.2 | 32.7 | 77.6 | 5.6 | 5.1 |
| 9.0 | Cloudy | Moderate | 11:29 | 21.7 | 8.2 | 32.8 | 79.2 | 5.8 | 4.8 |
| | | | 11:33 | 21.8 | 8.2 | 32.7 | 77.5 | 5.6 | 4.6 |
| 9.5 | Cloudy | Moderate | 11:29 | 21.7 | 8.2 | 32.8 | 79.4 | 5.8 | 4.8 |
| | | | 11:33 | 21.7 | 8.2 | 32.8 | 77.4 | 5.6 | 5.5 |
| 10.0 | Cloudy | Moderate | 11:29 | 21.7 | 8.2 | 32.8 | 79.6 | 5.8 | 5.2 |
| | | | 11:33 | 21.8 | 8.2 | 32.7 | 77.4 | 5.6 | 4.6 |
| 10.5 | Cloudy | Moderate | 11:29 | 21.7 | 8.2 | 32.8 | 79.5 | 5.8 | 4.9 |
| | | | 11:33 | 21.8 | 8.2 | 32.7 | 77.5 | 5.6 | 5.0 |

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 WSD Intake at Quarry Bay - Mid-Ebb Tide

Sampling Date: 7 May 2013

Secchi Disc Depth: 2.5m

## Water Quality Monitoring Results (Sampling Depth)

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 5.5 | Cloudy | Moderate | 11:28 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 4.5 |
| | | | 11:32 | 21.8 | 8.2 | 32.7 | 75.8 | 5.5 | 4.7 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 12:11 | 21.9 | 8.2 | 32.6 | 88.3 | 6.4 | 1.8 |
| | | | 12:15 | 21.9 | 8.2 | 32.7 | 86.6 | 6.3 | 2.1 |
| 1.0 | Cloudy | Moderate | 12:11 | 21.9 | 8.2 | 32.7 | 86.6 | 6.3 | 1.9 |
| | | | 12:15 | 21.9 | 8.2 | 32.7 | 84.4 | 6.1 | 2.1 |
| 1.5 | Cloudy | Moderate | 12:11 | 21.9 | 8.2 | 32.7 | 86.1 | 6.2 | 2.1 |
| | | | 12:15 | 21.9 | 8.2 | 32.7 | 83.8 | 6.1 | 2.1 |
| 2.0 | Cloudy | Moderate | 12:11 | 21.8 | 8.2 | 32.7 | 85.6 | 6.2 | 2.2 |
| | | | 12:15 | 21.9 | 8.2 | 32.7 | 83.4 | 6.0 | 2.1 |
| 2.5 | Cloudy | Moderate | 12:11 | 21.8 | 8.2 | 32.7 | 85.5 | 6.2 | 2.3 |
| | | | 12:15 | 21.9 | 8.2 | 32.7 | 83.2 | 6.0 | 2.1 |
| 3.0 | Cloudy | Moderate | 12:11 | 21.8 | 8.2 | 32.7 | 85.2 | 6.2 | 2.4 |
| | | | 12:15 | 21.9 | 8.2 | 32.8 | 83.1 | 6.0 | 2.1 |
| 3.5 | Cloudy | Moderate | 12:11 | 21.8 | 8.2 | 32.7 | 85.1 | 6.2 | 2.4 |
| | | | 12:16 | 21.9 | 8.2 | 32.8 | 83.1 | 6.0 | 2.1 |
| 4.0 | Cloudy | Moderate | 12:12 | 21.8 | 8.2 | 32.7 | 84.9 | 6.2 | 3.1 |
| | | | 12:16 | 21.9 | 8.2 | 32.8 | 83.1 | 6.0 | 3.2 |
| 4.5 | Cloudy | Moderate | 12:12 | 21.8 | 8.2 | 32.8 | 84.8 | 6.2 | 2.4 |
| | | | 12:16 | 21.8 | 8.2 | 32.8 | 83.1 | 6.0 | 2.7 |
| 5.0 | Cloudy | Moderate | 12:12 | 21.8 | 8.2 | 32.8 | 84.8 | 6.2 | 2.7 |
| | | | 12:16 | 21.8 | 8.2 | 32.8 | 82.9 | 6.0 | 2.8 |
| 5.5 | Cloudy | Moderate | 12:12 | 21.8 | 8.2 | 32.8 | 84.8 | 6.2 | 2.7 |
| | | | 12:16 | 21.8 | 8.2 | 32.8 | 82.9 | 6.0 | 2.7 |
| 6.0 | Cloudy | Moderate | 12:12 | 21.7 | 8.2 | 32.8 | 84.7 | 6.2 | 2.7 |
| | | | 12:16 | 21.8 | 8.2 | 32.8 | 82.7 | 6.0 | 2.6 |
| 6.5 | Cloudy | Moderate | 12:12 | 21.7 | 8.2 | 32.8 | 84.7 | 6.2 | 2.7 |
| | | | 12:16 | 21.8 | 8.2 | 32.8 | 82.6 | 6.0 | 2.9 |
| 7.0 | Cloudy | Moderate | 12:12 | 21.7 | 8.2 | 32.8 | 84.7 | 6.2 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.5 | 6.0 | 2.7 |
| 7.5 | Cloudy | Moderate | 12:12 | 21.7 | 8.2 | 32.8 | 84.6 | 6.2 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.5 | 6.0 | 2.7 |
| 8.0 | Cloudy | Moderate | 12:13 | 21.7 | 8.2 | 32.8 | 84.6 | 6.1 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.5 | 6.0 | 2.7 |
| 8.5 | Cloudy | Moderate | 12:13 | 21.7 | 8.2 | 32.8 | 84.6 | 6.1 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.5 | 6.0 | 2.6 |
| 9.0 | Cloudy | Moderate | 12:13 | 21.7 | 8.2 | 32.8 | 84.5 | 6.1 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.6 | 6.0 | 2.6 |
| 9.5 | Cloudy | Moderate | 12:13 | 21.7 | 8.2 | 32.8 | 84.4 | 6.1 | 3.0 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.5 | 6.0 | 3.0 |
| 10.0 | Cloudy | Moderate | 12:13 | 21.7 | 8.2 | 32.8 | 84.3 | 6.1 | 2.9 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.7 | 6.0 | 2.8 |
| 10.5 | Cloudy | Moderate | 12:13 | 21.7 | 8.2 | 32.8 | 84.3 | 6.1 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.7 | 6.0 | 2.9 |

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 Sai Wan Ho - Mid-Ebb Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 12:14 | 21.7 | 8.2 | 32.8 | 84.2 | 6.1 | 2.8 |
| | | | 12:18 | 21.7 | 8.2 | 32.8 | 83.0 | 6.0 | 2.8 |
| 11.5 | Cloudy | Moderate | 12:14 | 21.7 | 8.2 | 32.8 | 84.2 | 6.1 | 2.7 |
| | | | 12:18 | 21.7 | 8.2 | 32.8 | 83.0 | 6.0 | 2.7 |
| 12.0 | Cloudy | Moderate | 12:14 | 21.7 | 8.2 | 32.8 | 84.2 | 6.1 | 2.8 |
| | | | 12:18 | 21.7 | 8.2 | 32.8 | 83.1 | 6.0 | 2.7 |
| 12.5 | Cloudy | Moderate | 12:14 | 21.7 | 8.2 | 32.8 | 84.2 | 6.1 | 3.2 |
| | | | 12:18 | 21.7 | 8.2 | 32.9 | 83.2 | 6.0 | 3.3 |
| 13.0 | Cloudy | Moderate | 12:14 | 21.7 | 8.2 | 32.8 | 84.1 | 6.1 | 4.0 |
| | | | 12:18 | 21.7 | 8.2 | 32.9 | 83.0 | 6.0 | 4.5 |
| 13.5 | Cloudy | Moderate | 12:14 | 21.7 | 8.2 | 32.9 | 83.8 | 6.1 | 5.2 |
| | | | 12:19 | 21.7 | 8.2 | 32.9 | 82.1 | 6.0 | 5.8 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 7.0 | Cloudy | Moderate | 12:12 | 21.7 | 8.2 | 32.8 | 84.7 | 6.2 | 2.8 |
| | | | 12:17 | 21.8 | 8.2 | 32.8 | 82.5 | 6.0 | 2.7 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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**

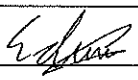
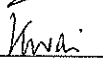
**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 17:25 | 25.8 | 7.4 | 11.8 | 43.3 | 3.3 | 2.7 |
| | | | 17:30 | 25.8 | 7.5 | 12.2 | 43.6 | 3.3 | 2.8 |
| 1.0 | Cloudy | Calm | 17:26 | 25.0 | 7.4 | 15.2 | 48.8 | 3.7 | 2.9 |
| | | | 17:30 | 25.2 | 7.5 | 13.6 | 47.6 | 3.6 | 3.1 |
| 1.5 | Cloudy | Calm | 17:27 | 22.7 | 7.5 | 31.4 | 29.1 | 2.1 | 3.2 |
| | | | 17:31 | 22.6 | 7.6 | 31.8 | 35.3 | 2.5 | 3.2 |
| 2.0 | Cloudy | Calm | 17:27 | 22.4 | 7.6 | 32.2 | 20.6 | 1.5 | 4.7 |
| | | | 17:31 | 22.4 | 7.6 | 32.3 | 20.9 | 1.5 | 4.7 |
| 2.5 | Cloudy | Calm | 17:27 | 22.2 | 7.4 | 32.9 | 11.7 | 0.8 | 8.4 |
| | | | 17:32 | 22.2 | 7.3 | 32.9 | 12.5 | 0.9 | 8.4 |
| 3.0 | Cloudy | Calm | 17:28 | 22.2 | 7.3 | 32.9 | 7.1 | 0.5 | 9.0 |
| | | | 17:32 | 22.2 | 7.3 | 32.9 | 6.7 | 0.5 | 10.1 |
| 3.5 | Cloudy | Calm | 17:29 | 22.2 | 7.4 | 33.0 | 5.2 | 0.4 | 10.9 |
| | | | 17:33 | 22.2 | 7.4 | 33.0 | 5.8 | 0.4 | 10.7 |

**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 | Cloudy | Calm | 17:26 | 25.0 | 7.4 | 15.2 | 48.8 | 3.7 | 2.9 |
| | | | 17:30 | 25.2 | 7.5 | 13.6 | 47.6 | 3.6 | 3.1 |
| 3.0 | Cloudy | Calm | 17:28 | 22.2 | 7.3 | 32.9 | 7.1 | 0.5 | 9.0 |
| | | | 17:32 | 22.2 | 7.3 | 32.9 | 6.7 | 0.5 | 10.1 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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

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

**Water Quality Monitoring Results at AC2 - Mid-Flood Tide**

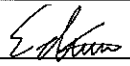
**Sampling Date: 7 May 2013**

**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 | Cloudy | Calm | 17:37 | 25.9 | 7.4 | 12.3 | 68.8 | 5.2 | 1.8 |
| | | | 17:42 | 25.8 | 7.5 | 12.3 | 68.5 | 5.2 | 1.9 |
| 1.0 | Cloudy | Calm | 17:38 | 24.0 | 7.5 | 23.3 | 42.9 | 3.2 | 1.9 |
| | | | 17:43 | 23.4 | 7.6 | 27.1 | 42.5 | 3.1 | 1.7 |
| 1.5 | Cloudy | Calm | 17:39 | 22.6 | 7.6 | 31.7 | 25.1 | 1.8 | 1.8 |
| | | | 17:44 | 22.6 | 7.6 | 31.9 | 25.5 | 1.8 | 1.8 |
| 2.0 | Cloudy | Calm | 17:40 | 22.4 | 7.6 | 32.4 | 9.0 | 0.6 | 7.3 |
| | | | 17:45 | 22.3 | 7.6 | 32.5 | 10.3 | 0.7 | 6.4 |
| 2.5 | Cloudy | Calm | 17:40 | 22.2 | 7.8 | 32.7 | 26.8 | 1.9 | 1.5 |
| | | | 17:45 | 22.1 | 7.8 | 32.8 | 27.4 | 2.0 | 1.6 |
| 3.0 | Cloudy | Calm | 17:40 | 22.1 | 7.8 | 32.9 | 27.0 | 2.0 | 1.4 |
| | | | 17:46 | 22.1 | 7.8 | 32.9 | 32.1 | 2.3 | 1.5 |
| 3.5 | Cloudy | Calm | 17:40 | 22.1 | 7.8 | 32.9 | 31.1 | 2.2 | 1.6 |
| | | | 17:46 | 22.1 | 7.8 | 32.9 | 32.1 | 2.3 | 1.6 |
| 4.0 | Cloudy | Calm | 17:41 | 22.1 | 7.8 | 33.0 | 31.5 | 2.3 | 1.5 |
| | | | 17:47 | 22.1 | 7.8 | 33.0 | 29.6 | 2.1 | 1.5 |
| 4.5 | Cloudy | Calm | 17:41 | 22.1 | 7.7 | 33.0 | 23.0 | 1.7 | 1.0 |
| | | | 17:47 | 22.1 | 7.8 | 33.0 | 26.7 | 1.9 | 1.1 |
| 5.0 | Cloudy | Calm | 17:41 | 22.1 | 7.7 | 33.0 | 18.0 | 1.3 | 3.5 |
| | | | 17:47 | 22.1 | 7.7 | 33.0 | 15.8 | 1.1 | 3.4 |

**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 | Cloudy | Calm | 17:38 | 24.0 | 7.5 | 23.3 | 42.9 | 3.2 | 1.9 |
| | | | 17:43 | 23.4 | 7.6 | 27.1 | 42.5 | 3.1 | 1.7 |
| 4.5 | Cloudy | Calm | 17:41 | 22.1 | 7.7 | 33.0 | 23.0 | 1.7 | 1.0 |
| | | | 17:47 | 22.1 | 7.8 | 33.0 | 26.7 | 1.9 | 1.1 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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

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

## Water Quality Monitoring Results at AC3 - Mid-Flood Tide

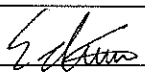
**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 16:56 | 25.3 | 7.2 | 13.8 | 28.8 | 2.1 | 8.7 |
| | | | 16:59 | 25.4 | 7.3 | 13.4 | 27.2 | 2.0 | 8.1 |
| 1.0 | Cloudy | Calm | 16:56 | 23.5 | 7.5 | 27.1 | 20.7 | 1.5 | 2.9 |
| | | | 17:00 | 23.8 | 7.4 | 25.8 | 20.6 | 1.5 | 3.0 |
| 1.5 | Cloudy | Calm | 16:57 | 22.5 | 7.6 | 31.9 | 20.2 | 1.5 | 2.3 |
| | | | 17:00 | 22.6 | 7.6 | 31.4 | 19.5 | 1.4 | 2.3 |
| 2.0 | Cloudy | Calm | 16:57 | 22.3 | 7.6 | 32.7 | 14.3 | 1.1 | 1.7 |
| | | | 17:00 | 22.4 | 7.6 | 32.5 | 14.0 | 1.1 | 1.8 |
| 2.5 | Cloudy | Calm | 16:57 | 22.2 | 7.7 | 32.8 | 16.1 | 1.2 | 1.1 |
| | | | 17:01 | 22.2 | 7.7 | 32.8 | 17.7 | 1.3 | 1.1 |
| 3.0 | Cloudy | Calm | 16:58 | 22.2 | 7.7 | 32.9 | 18.1 | 1.3 | 1.4 |
| | | | 17:01 | 22.2 | 7.7 | 32.9 | 19.2 | 1.4 | 1.5 |
| 3.5 | Cloudy | Calm | 16:58 | 22.1 | 7.7 | 33.0 | 12.7 | 0.9 | 4.1 |
| | | | 17:01 | 22.2 | 7.7 | 33.0 | 14.1 | 1.0 | 4.0 |

## Water Quality Monitoring Results (Sampling Depth)

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 16:56 | 23.5 | 7.5 | 27.1 | 20.7 | 1.5 | 2.9 |
| | | | 17:00 | 23.8 | 7.4 | 25.8 | 20.6 | 1.5 | 3.0 |
| 3.0 | Cloudy | Calm | 16:58 | 22.2 | 7.7 | 32.9 | 18.1 | 1.3 | 1.4 |
| | | | 17:01 | 22.2 | 7.7 | 32.9 | 19.2 | 1.4 | 1.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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

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

**Water Quality Monitoring Results at AC4 - Mid-Flood Tide**

**Sampling Date:** **7 May 2013**

**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 | Cloudy | Calm | 17:12 | 25.0 | 7.4 | 12.9 | 32.7 | 2.5 | 8.3 |
| | | | 17:16 | 25.0 | 7.4 | 13.0 | 32.4 | 2.5 | 8.5 |
| 1.0 | Cloudy | Calm | 17:13 | 23.0 | 7.6 | 26.8 | 23.2 | 1.7 | 5.5 |
| | | | 17:17 | 23.5 | 7.5 | 26.0 | 19.1 | 1.4 | 5.6 |
| 1.5 | Cloudy | Calm | 17:13 | 22.3 | 7.8 | 31.8 | 34.9 | 2.5 | 1.4 |
| | | | 17:17 | 22.3 | 7.8 | 31.7 | 35.9 | 2.6 | 1.5 |
| 2.0 | Cloudy | Calm | 17:13 | 22.1 | 7.9 | 32.3 | 46.5 | 3.4 | 0.6 |
| | | | 17:18 | 22.1 | 8.0 | 32.4 | 47.1 | 3.4 | 0.6 |
| 2.5 | Cloudy | Calm | 17:14 | 22.1 | 7.9 | 32.7 | 50.1 | 3.6 | 1.1 |
| | | | 17:18 | 22.1 | 7.9 | 32.6 | 52.6 | 3.8 | 1.0 |
| 3.0 | Cloudy | Calm | 17:15 | 22.0 | 7.9 | 32.8 | 48.5 | 3.5 | 1.0 |
| | | | 17:18 | 22.0 | 7.9 | 32.8 | 49.0 | 3.5 | 1.1 |
| 3.5 | Cloudy | Calm | 17:15 | 22.0 | 7.9 | 32.9 | 47.9 | 3.5 | 1.9 |
| | | | 17:19 | 22.0 | 7.9 | 32.9 | 45.3 | 3.3 | 1.9 |
| 4.0 | Cloudy | Calm | 17:15 | 22.0 | 7.9 | 33.0 | 48.4 | 3.5 | 2.1 |
| | | | 17:19 | 22.0 | 7.9 | 32.9 | 44.4 | 3.2 | 2.1 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 17:13 | 23.0 | 7.6 | 26.8 | 23.2 | 1.7 | 5.5 |
| | | | 17:17 | 23.5 | 7.5 | 26.0 | 19.1 | 1.4 | 5.6 |
| 3.5 | Cloudy | Calm | 17:15 | 22.0 | 7.9 | 32.9 | 47.9 | 3.5 | 1.9 |
| | | | 17:19 | 22.0 | 7.9 | 32.9 | 45.3 | 3.3 | 1.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

## Water Quality Monitoring Results at AC5 - Mid-Flood Tide

**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 16:19 | 24.7 | 7.2 | 17.4 | 16.5 | 1.3 | 6.7 |
| | | | 16:22 | 24.9 | 7.4 | 14.4 | 17.0 | 1.3 | 6.8 |
| 1.0 | Cloudy | Calm | 16:19 | 22.5 | 7.7 | 31.3 | 30.2 | 2.2 | 2.2 |
| | | | 16:23 | 22.5 | 7.8 | 31.3 | 37.1 | 2.7 | 2.3 |
| 1.5 | Cloudy | Calm | 16:20 | 22.4 | 7.8 | 31.9 | 35.7 | 2.6 | 1.9 |
| | | | 16:23 | 22.3 | 7.8 | 32.2 | 34.0 | 2.5 | 1.8 |
| 2.0 | Cloudy | Calm | 16:20 | 22.3 | 7.8 | 32.5 | 33.5 | 2.4 | 1.0 |
| | | | 16:24 | 22.3 | 7.8 | 32.5 | 31.4 | 2.3 | 1.0 |
| 2.5 | Cloudy | Calm | 16:20 | 22.2 | 7.8 | 32.7 | 30.4 | 2.2 | 0.9 |
| | | | 16:24 | 22.2 | 7.8 | 32.7 | 28.2 | 2.0 | 1.0 |
| 3.0 | Cloudy | Calm | 16:21 | 22.1 | 7.8 | 32.9 | 28.5 | 2.1 | 3.1 |
| | | | 16:25 | 22.1 | 7.8 | 32.9 | 27.9 | 2.0 | 3.0 |
| 3.5 | Cloudy | Calm | 16:21 | 22.1 | 7.8 | 33.0 | 30.1 | 2.2 | 3.8 |
| | | | 16:25 | 22.0 | 7.9 | 33.0 | 31.7 | 2.3 | 3.7 |

## Water Quality Monitoring Results (Sampling Depth)

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 16:19 | 22.5 | 7.7 | 31.3 | 30.2 | 2.2 | 2.2 |
| | | | 16:23 | 22.5 | 7.8 | 31.3 | 37.1 | 2.7 | 2.3 |
| 3.0 | Cloudy | Calm | 16:21 | 22.1 | 7.8 | 32.9 | 28.5 | 2.1 | 3.1 |
| | | | 16:25 | 22.1 | 7.8 | 32.9 | 27.9 | 2.0 | 3.0 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at AC6 - Mid-Flood Tide**

**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 16:29 | 24.9 | 7.3 | 14.8 | 34.5 | 2.6 | 7.5 |
| | | | 16:35 | 25.0 | 7.3 | 14.3 | 34.6 | 2.6 | 7.2 |
| 1.0 | Cloudy | Calm | 16:30 | 22.9 | 7.7 | 28.6 | 39.7 | 2.9 | 2.4 |
| | | | 16:36 | 23.0 | 7.8 | 28.6 | 39.1 | 2.9 | 2.4 |
| 1.5 | Cloudy | Calm | 16:30 | 22.3 | 8.0 | 31.6 | 57.0 | 4.1 | 1.0 |
| | | | 16:36 | 22.4 | 7.9 | 31.4 | 45.8 | 3.3 | 1.0 |
| 2.0 | Cloudy | Calm | 16:31 | 22.0 | 8.0 | 32.5 | 63.8 | 4.6 | 0.4 |
| | | | 16:37 | 22.2 | 8.0 | 32.3 | 58.8 | 4.3 | 0.4 |
| 2.5 | Cloudy | Calm | 16:31 | 22.0 | 8.0 | 32.7 | 67.0 | 4.9 | 0.6 |
| | | | 16:37 | 22.0 | 8.0 | 32.6 | 63.4 | 4.6 | 0.6 |
| 3.0 | Cloudy | Calm | 16:31 | 21.9 | 8.0 | 32.8 | 68.9 | 5.0 | 0.8 |
| | | | 16:38 | 21.9 | 8.0 | 32.8 | 66.5 | 4.8 | 0.8 |
| 3.5 | Cloudy | Calm | 16:32 | 21.9 | 8.0 | 32.9 | 65.4 | 4.7 | 1.1 |
| | | | 16:38 | 21.9 | 8.0 | 32.9 | 66.1 | 4.8 | 1.1 |
| 4.0 | Cloudy | Calm | 16:32 | 21.8 | 8.0 | 32.9 | 66.0 | 4.8 | 1.2 |
| | | | 16:39 | 21.8 | 8.0 | 32.9 | 65.6 | 4.8 | 1.3 |
| 4.5 | Cloudy | Calm | 16:33 | 21.9 | 8.0 | 33.0 | 62.3 | 4.5 | 2.9 |
| | | | 16:39 | 21.9 | 8.0 | 33.0 | 65.0 | 4.7 | 2.9 |
| 5.0 | Cloudy | Calm | 16:33 | 21.9 | 7.9 | 33.0 | 55.3 | 4.0 | 3.4 |
| | | | 16:39 | 21.9 | 8.0 | 33.0 | 58.0 | 4.2 | 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 | Cloudy | Calm | 16:30 | 22.9 | 7.7 | 28.6 | 39.7 | 2.9 | 2.4 |
| | | | 16:36 | 23.0 | 7.8 | 28.6 | 39.1 | 2.9 | 2.4 |
| 4.5 | Cloudy | Calm | 16:33 | 21.9 | 8.0 | 33.0 | 62.3 | 4.5 | 2.9 |
| | | | 16:39 | 21.9 | 8.0 | 33.0 | 65.0 | 4.7 | 2.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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

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

## Water Quality Monitoring Results at AC7 - Mid-Flood Tide

**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 16:06 | 24.7 | 7.3 | 16.3 | 21.1 | 1.6 | 2.9 |
| | | | 16:11 | 24.8 | 7.4 | 15.2 | 23.9 | 1.8 | 3.1 |
| 1.0 | Cloudy | Calm | 16:07 | 22.5 | 7.9 | 30.1 | 49.8 | 3.6 | 1.0 |
| | | | 16:11 | 22.4 | 7.9 | 31.2 | 41.2 | 3.0 | 1.0 |
| 1.5 | Cloudy | Calm | 16:07 | 22.2 | 8.0 | 32.3 | 56.3 | 4.1 | 0.8 |
| | | | 16:12 | 22.4 | 7.9 | 31.2 | 64.5 | 4.7 | 0.8 |
| 2.0 | Cloudy | Calm | 16:08 | 22.1 | 8.0 | 32.4 | 61.4 | 4.4 | 0.6 |
| | | | 16:13 | 22.0 | 8.1 | 32.4 | 73.2 | 5.3 | 0.6 |
| 2.5 | Cloudy | Calm | 16:08 | 22.1 | 8.0 | 32.6 | 65.0 | 4.7 | 0.6 |
| | | | 16:13 | 22.0 | 8.0 | 32.8 | 72.3 | 5.2 | 0.6 |
| 3.0 | Cloudy | Calm | 16:09 | 22.0 | 8.0 | 32.8 | 62.6 | 4.5 | 0.4 |
| | | | 16:13 | 21.9 | 8.0 | 32.8 | 69.7 | 5.0 | 0.5 |
| 3.5 | Cloudy | Calm | 16:09 | 22.0 | 8.0 | 32.9 | 61.6 | 4.5 | 1.2 |
| | | | 16:14 | 22.0 | 8.0 | 32.9 | 60.9 | 4.4 | 1.3 |
| 4.0 | Cloudy | Calm | 16:10 | 21.9 | 8.0 | 32.9 | 56.5 | 4.1 | 2.6 |
| | | | 16:14 | 21.9 | 8.0 | 32.9 | 57.1 | 4.1 | 2.5 |
| 4.5 | Cloudy | Calm | 16:10 | 21.9 | 8.0 | 33.0 | 58.3 | 4.2 | 2.9 |
| | | | 16:14 | 21.9 | 8.0 | 33.0 | 61.2 | 4.4 | 2.8 |

## Water Quality Monitoring Results (Sampling Depth)

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 16:07 | 22.5 | 7.9 | 30.1 | 49.8 | 3.6 | 1.0 |
| | | | 16:11 | 22.4 | 7.9 | 31.2 | 41.2 | 3.0 | 1.0 |
| 4.0 | Cloudy | Calm | 16:10 | 21.9 | 8.0 | 32.9 | 56.5 | 4.1 | 2.6 |
| | | | 16:14 | 21.9 | 8.0 | 32.9 | 57.1 | 4.1 | 2.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at JVC - Mid-Flood Tide**

**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 16:44 | 24.9 | 7.3 | 13.1 | 27.1 | 2.2 | 7.4 |
| | | | 16:48 | 24.6 | 7.4 | 14.1 | 27.6 | 2.1 | 7.3 |
| 1.0 | Cloudy | Calm | 16:45 | 22.6 | 7.8 | 29.2 | 36.8 | 2.7 | 3.3 |
| | | | 16:49 | 22.7 | 7.7 | 29.4 | 32.0 | 2.3 | 3.3 |
| 1.5 | Cloudy | Calm | 16:46 | 22.3 | 7.9 | 31.6 | 47.2 | 3.4 | 1.2 |
| | | | 16:49 | 22.4 | 7.9 | 31.2 | 44.5 | 3.2 | 1.2 |
| 2.0 | Cloudy | Calm | 16:46 | 22.1 | 8.0 | 32.4 | 55.7 | 4.0 | 1.3 |
| | | | 16:50 | 22.2 | 7.9 | 31.8 | 52.6 | 3.8 | 1.5 |
| 2.5 | Cloudy | Calm | 16:47 | 22.0 | 7.9 | 32.7 | 55.1 | 4.0 | 2.0 |
| | | | 16:51 | 22.0 | 8.0 | 32.7 | 55.0 | 4.0 | 2.0 |
| 3.0 | Cloudy | Calm | 16:47 | 21.9 | 7.9 | 32.9 | 47.5 | 3.4 | 3.0 |
| | | | 16:51 | 21.9 | 7.9 | 32.8 | 52.1 | 3.8 | 3.1 |
| 3.5 | Cloudy | Calm | 16:47 | 21.9 | 7.9 | 32.9 | 42.7 | 3.1 | 4.5 |
| | | | 16:51 | 21.9 | 7.9 | 32.9 | 49.3 | 3.6 | 4.2 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 16:45 | 22.6 | 7.8 | 29.2 | 36.8 | 2.7 | 3.3 |
| | | | 16:49 | 22.7 | 7.7 | 29.4 | 32.0 | 2.3 | 3.3 |
| 3.0 | Cloudy | Calm | 16:47 | 21.9 | 7.9 | 32.9 | 47.5 | 3.4 | 3.0 |
| | | | 16:51 | 21.9 | 7.9 | 32.8 | 52.1 | 3.8 | 3.1 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Calm | 15:51 | 24.1 | 7.7 | 29.2 | 72.8 | 5.5 | 0.9 |
| | | | 15:57 | 23.0 | 8.0 | 28.6 | 70.8 | 5.2 | 1.1 |
| 1.0 | Cloudy | Calm | 15:53 | 22.6 | 8.2 | 30.6 | 103.2 | 7.5 | 0.7 |
| | | | 15:57 | 22.6 | 8.2 | 30.4 | 86.3 | 6.3 | 0.7 |
| 1.5 | Cloudy | Calm | 15:53 | 22.2 | 8.2 | 31.8 | 102.8 | 7.5 | 0.4 |
| | | | 15:58 | 22.4 | 8.2 | 31.2 | 102.3 | 7.4 | 0.4 |
| 2.0 | Cloudy | Calm | 15:54 | 22.0 | 8.2 | 32.2 | 96.8 | 7.0 | 0.5 |
| | | | 15:58 | 22.1 | 8.2 | 32.1 | 101.5 | 7.4 | 0.4 |
| 2.5 | Cloudy | Calm | 15:55 | 21.9 | 8.1 | 32.6 | 91.1 | 6.6 | 0.5 |
| | | | 15:59 | 22.0 | 8.2 | 32.3 | 94.8 | 6.9 | 0.5 |
| 3.0 | Cloudy | Calm | 15:55 | 21.8 | 8.1 | 32.7 | 89.2 | 6.5 | 0.5 |
| | | | 15:59 | 21.9 | 8.1 | 32.5 | 92.1 | 6.7 | 0.6 |
| 3.5 | Cloudy | Calm | 15:55 | 21.8 | 8.1 | 32.8 | 86.0 | 6.2 | 0.8 |
| | | | 15:59 | 21.8 | 8.1 | 32.7 | 89.2 | 6.5 | 0.9 |
| 4.0 | Cloudy | Calm | 15:55 | 21.9 | 8.1 | 32.8 | 81.3 | 5.9 | 0.8 |
| | | | 16:00 | 21.9 | 8.1 | 32.8 | 85.2 | 6.2 | 0.8 |
| 4.5 | Cloudy | Calm | 15:56 | 21.8 | 8.1 | 32.9 | 73.7 | 5.3 | 1.5 |
| | | | 16:00 | 21.9 | 8.1 | 32.9 | 78.5 | 5.7 | 1.3 |
| 5.0 | Cloudy | Calm | 15:56 | 21.8 | 8.1 | 32.9 | 73.1 | 5.3 | 1.2 |
| | | | 16:00 | 21.8 | 8.1 | 32.9 | 75.2 | 5.5 | 1.2 |
| 5.5 | Cloudy | Calm | 15:56 | 21.8 | 8.0 | 33.0 | 70.6 | 5.1 | 1.5 |
| | | | 16:00 | 21.8 | 8.0 | 33.0 | 72.9 | 5.3 | 1.5 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Calm | 15:53 | 22.6 | 8.2 | 30.6 | 103.2 | 7.5 | 0.7 |
| | | | 15:57 | 22.6 | 8.2 | 30.4 | 86.3 | 6.3 | 0.7 |
| 3.0 | Cloudy | Calm | 15:55 | 21.8 | 8.1 | 32.7 | 89.2 | 6.5 | 0.5 |
| | | | 15:59 | 21.9 | 8.1 | 32.5 | 92.1 | 6.7 | 0.6 |
| 5.0 | Cloudy | Calm | 15:56 | 21.8 | 8.1 | 32.9 | 73.1 | 5.3 | 1.2 |
| | | | 16:00 | 21.8 | 8.1 | 32.9 | 75.2 | 5.5 | 1.2 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

## Water Quality Monitoring Results at KTN - Mid-Flood Tide

**Sampling Date:** 7 May 2013

**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 | Cloudy | Calm | 17:50 | 25.7 | 7.5 | 12.2 | 60.2 | 4.6 | 2.6 |
| | | | 17:53 | 25.7 | 7.5 | 11.9 | 59.7 | 4.6 | 2.5 |
| 1.0 | Cloudy | Calm | 17:51 | 22.8 | 7.8 | 30.4 | 54.7 | 4.0 | 0.9 |
| | | | 17:54 | 23.0 | 7.8 | 29.2 | 54.9 | 4.0 | 0.9 |
| 1.5 | Cloudy | Calm | 17:51 | 22.4 | 7.9 | 31.8 | 50.7 | 3.7 | 0.5 |
| | | | 17:54 | 22.4 | 7.9 | 31.7 | 46.9 | 3.4 | 0.5 |
| 2.0 | Cloudy | Calm | 17:51 | 22.3 | 7.9 | 32.2 | 50.3 | 3.6 | 0.5 |
| | | | 17:55 | 22.2 | 7.8 | 32.6 | 41.8 | 3.0 | 0.5 |
| 2.5 | Cloudy | Calm | 17:52 | 22.2 | 7.8 | 32.8 | 32.6 | 2.4 | 1.6 |
| | | | 17:55 | 22.1 | 7.8 | 32.8 | 36.0 | 2.6 | 1.5 |
| 3.0 | Cloudy | Calm | 17:52 | 22.2 | 7.8 | 32.9 | 15.9 | 1.2 | 8.7 |
| | | | 17:56 | 22.2 | 7.7 | 32.9 | 15.7 | 1.1 | 8.5 |
| 3.5 | Cloudy | Calm | 17:52 | 22.2 | 7.7 | 33.0 | 15.5 | 1.1 | 16.9 |
| | | | 17:56 | 22.2 | 7.7 | 33.0 | 15.4 | 1.1 | 17.8 |

## 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 | Cloudy | Calm | 17:51 | 22.8 | 7.8 | 30.4 | 54.7 | 4.0 | 0.9 |
| | | | 17:54 | 23.0 | 7.8 | 29.2 | 54.9 | 4.0 | 0.9 |
| 3.0 | Cloudy | Calm | 17:52 | 22.2 | 7.8 | 32.9 | 15.9 | 1.2 | 8.7 |
| | | | 17:56 | 22.2 | 7.7 | 32.9 | 15.7 | 1.1 | 8.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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**

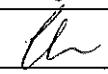
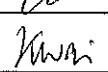
**Sampling Date: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 18:15 | 22.3 | 8.1 | 32.4 | 83.9 | 6.0 | 3.7 |
| | | | 18:17 | 22.3 | 8.1 | 32.5 | 76.9 | 5.5 | 3.6 |
| 1.0 | Cloudy | Moderate | 18:15 | 22.3 | 8.1 | 32.4 | 80.0 | 5.8 | 5.7 |
| | | | 18:17 | 22.3 | 8.1 | 32.5 | 75.4 | 5.4 | 5.4 |
| 1.5 | Cloudy | Moderate | 18:15 | 22.3 | 8.1 | 32.5 | 77.2 | 5.6 | 4.7 |
| | | | 18:17 | 22.2 | 8.1 | 32.5 | 74.3 | 5.4 | 4.5 |
| 2.0 | Cloudy | Moderate | 18:15 | 22.2 | 8.1 | 32.5 | 76.9 | 5.5 | 4.7 |
| | | | 18:17 | 22.2 | 8.1 | 32.6 | 74.0 | 5.3 | 4.8 |
| 2.5 | Cloudy | Moderate | 18:15 | 22.2 | 8.1 | 32.5 | 76.7 | 5.5 | 4.5 |
| | | | 18:17 | 22.2 | 8.1 | 32.6 | 74.2 | 5.4 | 4.9 |
| 3.0 | Cloudy | Moderate | 18:16 | 22.2 | 8.1 | 32.6 | 76.8 | 5.6 | 4.9 |
| | | | 18:17 | 22.2 | 8.1 | 32.6 | 74.4 | 5.4 | 5.1 |
| 3.5 | Cloudy | Moderate | 18:16 | 22.2 | 8.1 | 32.6 | 77.1 | 5.6 | 5.2 |
| | | | 18:17 | 22.1 | 8.1 | 32.6 | 74.6 | 5.4 | 5.2 |
| 4.0 | Cloudy | Moderate | 18:16 | 22.1 | 8.1 | 32.6 | 77.4 | 5.6 | 5.4 |
| | | | 18:18 | 22.1 | 8.1 | 32.6 | 74.9 | 5.4 | 5.7 |
| 4.5 | Cloudy | Moderate | 18:16 | 22.1 | 8.1 | 32.6 | 77.8 | 5.6 | 6.1 |
| | | | 18:18 | 22.1 | 8.1 | 32.6 | 75.2 | 5.4 | 5.9 |
| 5.0 | Cloudy | Moderate | 18:16 | 22.1 | 8.1 | 32.6 | 78.3 | 5.7 | 5.9 |
| | | | 18:18 | 22.1 | 8.1 | 32.6 | 75.2 | 5.4 | 6.1 |
| 5.5 | Cloudy | Moderate | 18:16 | 22.1 | 8.1 | 32.6 | 78.8 | 5.7 | 6.2 |
| | | | 18:18 | 22.1 | 8.1 | 32.6 | 75.5 | 5.5 | 6.0 |

**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 | Cloudy | Moderate | 18:15 | 22.3 | 8.1 | 32.4 | 80.0 | 5.8 | 5.7 |
| | | | 18:17 | 22.3 | 8.1 | 32.5 | 75.4 | 5.4 | 5.4 |
| 3.0 | Cloudy | Moderate | 18:16 | 22.2 | 8.1 | 32.6 | 76.8 | 5.6 | 4.9 |
| | | | 18:17 | 22.2 | 8.1 | 32.6 | 74.4 | 5.4 | 5.1 |
| 5.0 | Cloudy | Moderate | 18:16 | 22.1 | 8.1 | 32.6 | 78.3 | 5.7 | 5.9 |
| | | | 18:18 | 22.1 | 8.1 | 32.6 | 75.2 | 5.4 | 6.1 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 17:43 | 22.1 | 8.1 | 32.4 | 80.5 | 5.8 | 1.7 |
| | | | 17:46 | 22.1 | 8.1 | 32.5 | 71.8 | 5.2 | 1.9 |
| 1.0 | Cloudy | Moderate | 17:44 | 22.1 | 8.1 | 32.5 | 74.2 | 5.4 | 2.2 |
| | | | 17:46 | 22.1 | 8.1 | 32.6 | 71.8 | 5.2 | 2.2 |
| 1.5 | Cloudy | Moderate | 17:44 | 22.1 | 8.1 | 32.5 | 73.5 | 5.3 | 2.0 |
| | | | 17:46 | 22.1 | 8.1 | 32.6 | 71.9 | 5.2 | 2.1 |
| 2.0 | Cloudy | Moderate | 17:44 | 22.1 | 8.1 | 32.5 | 72.8 | 5.3 | 2.0 |
| | | | 17:46 | 22.1 | 8.1 | 32.6 | 72.0 | 5.2 | 2.3 |
| 2.5 | Cloudy | Moderate | 17:44 | 22.1 | 8.1 | 32.5 | 72.6 | 5.3 | 2.2 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.9 | 5.2 | 2.7 |
| 3.0 | Cloudy | Moderate | 17:44 | 22.0 | 8.1 | 32.6 | 72.4 | 5.2 | 2.5 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 2.9 |
| 3.5 | Cloudy | Moderate | 17:44 | 22.0 | 8.1 | 32.6 | 72.2 | 5.2 | 3.0 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.7 | 5.2 | 3.2 |
| 4.0 | Cloudy | Moderate | 17:44 | 22.0 | 8.1 | 32.6 | 72.0 | 5.2 | 3.1 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.6 | 5.2 | 3.4 |
| 4.5 | Cloudy | Moderate | 17:45 | 22.0 | 8.1 | 32.6 | 71.9 | 5.2 | 3.3 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.6 | 5.2 | 3.6 |
| 5.0 | Cloudy | Moderate | 17:45 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 3.4 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.6 | 5.2 | 3.7 |
| 5.5 | Cloudy | Moderate | 17:45 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 3.8 |
| | | | 17:47 | 22.0 | 8.1 | 32.6 | 71.7 | 5.2 | 3.9 |
| 6.0 | Cloudy | Moderate | 17:45 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 3.9 |
| | | | 17:47 | 22.0 | 8.1 | 32.6 | 71.7 | 5.2 | 4.1 |
| 6.5 | Cloudy | Moderate | 17:45 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 4.0 |
| | | | 17:47 | 22.1 | 8.1 | 32.6 | 71.7 | 5.2 | 4.5 |
| 7.0 | Cloudy | Moderate | 17:45 | 22.1 | 8.1 | 32.6 | 71.8 | 5.2 | 7.4 |
| | | | 17:47 | 22.1 | 8.1 | 32.6 | 71.8 | 5.2 | 7.3 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Moderate | 17:44 | 22.1 | 8.1 | 32.5 | 74.2 | 5.4 | 2.2 |
| | | | 17:46 | 22.1 | 8.1 | 32.6 | 71.8 | 5.2 | 2.2 |
| 3.75 | Cloudy | Moderate | 17:44 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 4.2 |
| | | | 17:46 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 4.1 |
| 6.5 | Cloudy | Moderate | 17:45 | 22.0 | 8.1 | 32.6 | 71.8 | 5.2 | 4.0 |
| | | | 17:47 | 22.1 | 8.1 | 32.6 | 71.7 | 5.2 | 4.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

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

**Water Quality Monitoring Results at IB3 - Mid-Flood Tide**

**Sampling Date: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 17:58 | 22.3 | 8.0 | 32.3 | 85.6 | 6.2 | 2.0 |
| | | | 18:01 | 22.4 | 8.1 | 32.3 | 71.6 | 5.2 | 2.0 |
| 1.0 | Cloudy | Moderate | 17:58 | 22.3 | 8.1 | 32.4 | 80.5 | 5.8 | 3.1 |
| | | | 18:01 | 22.4 | 8.1 | 32.3 | 70.7 | 5.1 | 3.2 |
| 1.5 | Cloudy | Moderate | 17:58 | 22.3 | 8.1 | 32.4 | 78.7 | 5.7 | 1.9 |
| | | | 18:01 | 22.4 | 8.1 | 32.4 | 70.3 | 5.1 | 2.3 |
| 2.0 | Cloudy | Moderate | 17:59 | 22.3 | 8.1 | 32.4 | 76.3 | 5.5 | 2.0 |
| | | | 18:01 | 22.3 | 8.1 | 32.4 | 70.4 | 5.1 | 2.1 |
| 2.5 | Cloudy | Moderate | 17:59 | 22.3 | 8.1 | 32.4 | 75.6 | 5.4 | 2.0 |
| | | | 18:01 | 22.3 | 8.1 | 32.5 | 70.6 | 5.1 | 2.2 |
| 3.0 | Cloudy | Moderate | 17:59 | 22.3 | 8.1 | 32.4 | 74.5 | 5.4 | 1.9 |
| | | | 18:01 | 22.3 | 8.1 | 32.5 | 71.6 | 5.2 | 2.0 |
| 3.5 | Cloudy | Moderate | 17:59 | 22.3 | 8.1 | 32.5 | 74.2 | 5.4 | 1.9 |
| | | | 18:01 | 22.3 | 8.1 | 32.5 | 72.1 | 5.2 | 2.1 |
| 4.0 | Cloudy | Moderate | 17:59 | 22.2 | 8.1 | 32.5 | 74.0 | 5.3 | 1.9 |
| | | | 18:02 | 22.2 | 8.1 | 32.5 | 72.4 | 5.2 | 2.2 |
| 4.5 | Cloudy | Moderate | 17:59 | 22.2 | 8.1 | 32.5 | 73.6 | 5.3 | 2.9 |
| | | | 18:02 | 22.1 | 8.2 | 32.6 | 72.9 | 5.3 | 2.8 |
| 5.0 | Cloudy | Moderate | 17:59 | 22.2 | 8.1 | 32.5 | 73.4 | 5.3 | 3.0 |
| | | | 18:02 | 22.1 | 8.2 | 32.6 | 73.1 | 5.3 | 3.1 |
| 5.5 | Cloudy | Moderate | 17:59 | 22.1 | 8.1 | 32.6 | 73.3 | 5.3 | 3.5 |
| | | | 18:02 | 22.1 | 8.2 | 32.6 | 73.3 | 5.3 | 3.4 |
| 6.0 | Cloudy | Moderate | 17:59 | 22.1 | 8.1 | 32.6 | 73.4 | 5.3 | 3.1 |
| | | | 18:02 | 22.0 | 8.2 | 32.7 | 73.6 | 5.3 | 3.2 |
| 6.5 | Cloudy | Moderate | 17:59 | 22.0 | 8.2 | 32.7 | 73.5 | 5.3 | 3.8 |
| | | | 18:02 | 22.0 | 8.2 | 32.7 | 73.8 | 5.3 | 3.7 |
| 7.0 | Cloudy | Moderate | 18:00 | 22.0 | 8.2 | 32.7 | 73.7 | 5.3 | 4.4 |
| | | | 18:02 | 22.0 | 8.2 | 32.7 | 73.7 | 5.3 | 3.7 |
| 7.5 | Cloudy | Moderate | 18:00 | 21.9 | 8.2 | 32.7 | 73.7 | 5.3 | 4.9 |
| | | | 18:02 | 21.9 | 8.2 | 32.7 | 73.8 | 5.3 | 5.2 |
| 8.0 | Cloudy | Moderate | 18:00 | 21.9 | 8.2 | 32.7 | 73.6 | 5.3 | 5.3 |
| | | | 18:03 | 21.9 | 8.2 | 32.7 | 73.7 | 5.3 | 5.3 |
| 8.5 | Cloudy | Moderate | 18:00 | 21.9 | 8.2 | 32.7 | 73.5 | 5.3 | 5.5 |
| | | | 18:03 | 21.9 | 8.2 | 32.7 | 73.3 | 5.3 | 5.3 |
| 9.0 | Cloudy | Moderate | 18:00 | 21.9 | 8.2 | 32.7 | 72.4 | 5.3 | 6.0 |
| | | | 18:03 | 21.9 | 8.2 | 32.7 | 72.6 | 5.3 | 5.5 |

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

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

**Water Quality Monitoring Results at IB3 - Mid-Flood Tide**

**Sampling Date:** **7 May 2013**

**Secchi Disc Depth:** **2.5m**

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | Cloudy | Moderate | 17:58 | 22.3 | 8.1 | 32.4 | 80.5 | 5.8 | 3.1 |
| | | | 18:01 | 22.4 | 8.1 | 32.3 | 70.7 | 5.1 | 3.2 |
| 4.75 | Cloudy | Moderate | 17:59 | 22.1 | 8.2 | 32.6 | 72.4 | 5.2 | 4.4 |
| | | | 18:02 | 22.1 | 8.2 | 32.6 | 72.8 | 5.3 | 4.1 |
| 8.5 | Cloudy | Moderate | 18:00 | 21.9 | 8.2 | 32.7 | 73.5 | 5.3 | 5.5 |
| | | | 18:03 | 21.9 | 8.2 | 32.7 | 73.3 | 5.3 | 5.3 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 17:27 | 22.0 | 8.2 | 32.4 | 79.7 | 5.8 | 3.0 |
| | | | 17:29 | 22.0 | 8.2 | 32.5 | 76.7 | 5.6 | 2.9 |
| 1.0 | Cloudy | Moderate | 17:27 | 22.0 | 8.2 | 32.5 | 78.4 | 5.7 | 2.8 |
| | | | 17:29 | 22.0 | 8.2 | 32.5 | 76.8 | 5.6 | 3.1 |
| 1.5 | Cloudy | Moderate | 17:27 | 22.0 | 8.2 | 32.5 | 77.6 | 5.6 | 2.8 |
| | | | 17:29 | 22.0 | 8.2 | 32.5 | 76.9 | 5.6 | 3.2 |
| 2.0 | Cloudy | Moderate | 17:27 | 22.0 | 8.2 | 32.5 | 77.4 | 5.6 | 2.6 |
| | | | 17:29 | 22.0 | 8.2 | 32.5 | 77.0 | 5.6 | 2.6 |
| 2.5 | Cloudy | Moderate | 17:27 | 22.0 | 8.2 | 32.5 | 77.2 | 5.6 | 2.9 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 77.0 | 5.6 | 3.0 |
| 3.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 77.1 | 5.6 | 2.9 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 77.0 | 5.6 | 3.2 |
| 3.5 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 77.0 | 5.6 | 3.1 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 77.1 | 5.6 | 3.3 |
| 4.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.9 | 5.6 | 3.2 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 77.1 | 5.6 | 3.3 |
| 4.5 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.9 | 5.6 | 3.5 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 76.9 | 5.6 | 3.6 |
| 5.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.8 | 5.6 | 3.5 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 76.7 | 5.6 | 3.6 |
| 5.5 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.8 | 5.6 | 3.7 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 76.4 | 5.5 | 3.6 |
| 6.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.8 | 5.6 | 3.9 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 76.3 | 5.5 | 3.8 |
| 6.5 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.7 | 5.6 | 3.9 |
| | | | 17:31 | 22.0 | 8.2 | 32.5 | 76.3 | 5.5 | 3.6 |
| 7.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.6 | 5.6 | 3.8 |
| | | | 17:31 | 22.0 | 8.2 | 32.5 | 76.1 | 5.5 | 3.8 |
| 7.5 | Cloudy | Moderate | 17:29 | 22.0 | 8.2 | 32.5 | 76.5 | 5.5 | 8.8 |
| | | | 17:31 | 22.0 | 8.2 | 32.5 | 75.9 | 5.5 | 9.4 |

**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 | Cloudy | Moderate | 17:27 | 22.0 | 8.2 | 32.5 | 78.4 | 5.7 | 2.8 |
| | | | 17:29 | 22.0 | 8.2 | 32.5 | 76.8 | 5.6 | 3.1 |
| 4.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.9 | 5.6 | 3.2 |
| | | | 17:30 | 22.0 | 8.2 | 32.5 | 77.1 | 5.6 | 3.3 |
| 7.0 | Cloudy | Moderate | 17:28 | 22.0 | 8.2 | 32.5 | 76.6 | 5.6 | 3.8 |
| | | | 17:31 | 22.0 | 8.2 | 32.5 | 76.1 | 5.5 | 3.8 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 16:34 | 21.8 | 8.1 | 32.6 | 84.4 | 6.1 | 4.3 |
| | | | 16:41 | 21.9 | 8.1 | 32.6 | 73.0 | 5.3 | 5.1 |
| 1.0 | Cloudy | Moderate | 16:34 | 21.9 | 8.1 | 32.6 | 80.0 | 5.8 | 3.8 |
| | | | 16:41 | 21.9 | 8.1 | 32.6 | 72.9 | 5.3 | 4.3 |
| 1.5 | Cloudy | Moderate | 16:34 | 21.9 | 8.1 | 32.6 | 77.6 | 5.6 | 3.5 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.8 | 5.3 | 4.0 |
| 2.0 | Cloudy | Moderate | 16:35 | 21.8 | 8.1 | 32.6 | 76.1 | 5.5 | 4.1 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.7 | 5.3 | 4.2 |
| 2.5 | Cloudy | Moderate | 16:35 | 21.8 | 8.1 | 32.6 | 75.6 | 5.5 | 4.6 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.6 | 5.3 | 3.7 |
| 3.0 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 74.7 | 5.4 | 4.6 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.5 | 5.3 | 3.7 |
| 3.5 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 74.4 | 5.4 | 4.6 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.4 | 5.3 | 3.9 |
| 4.0 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 73.9 | 5.4 | 3.6 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.1 | 5.2 | 3.9 |
| 4.5 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 73.6 | 5.3 | 4.1 |
| | | | 16:42 | 21.9 | 8.1 | 32.6 | 72.0 | 5.2 | 4.2 |
| 5.0 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 73.4 | 5.3 | 4.3 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.8 | 5.2 | 4.0 |
| 5.5 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 73.4 | 5.3 | 4.6 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.8 | 5.2 | 4.0 |
| 6.0 | Cloudy | Moderate | 16:35 | 21.8 | 8.2 | 32.7 | 73.3 | 5.3 | 5.0 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.7 | 5.2 | 4.3 |
| 6.5 | Cloudy | Moderate | 16:36 | 21.8 | 8.2 | 32.7 | 73.2 | 5.3 | 4.5 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.6 | 5.2 | 4.2 |
| 7.0 | Cloudy | Moderate | 16:36 | 21.8 | 8.2 | 32.7 | 73.2 | 5.3 | 4.2 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.8 | 5.2 | 3.8 |
| 7.5 | Cloudy | Moderate | 16:36 | 21.8 | 8.2 | 32.7 | 73.2 | 5.3 | 4.2 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.7 | 5.2 | 3.8 |
| 8.0 | Cloudy | Moderate | 16:36 | 21.9 | 8.2 | 32.7 | 73.1 | 5.3 | 3.9 |
| | | | 16:43 | 21.9 | 8.1 | 32.6 | 71.8 | 5.2 | 4.1 |
| 8.5 | Cloudy | Moderate | 16:36 | 21.8 | 8.2 | 32.7 | 73.1 | 5.3 | 4.0 |
| | | | 16:44 | 21.9 | 8.1 | 32.6 | 71.9 | 5.2 | 4.1 |
| 9.0 | Cloudy | Moderate | 16:36 | 21.8 | 8.2 | 32.7 | 73.0 | 5.3 | 4.7 |
| | | | 16:44 | 21.9 | 8.1 | 32.6 | 72.0 | 5.2 | 4.0 |
| 9.5 | Cloudy | Moderate | 16:37 | 21.8 | 8.2 | 32.7 | 72.4 | 5.3 | 4.9 |
| | | | 16:44 | 21.9 | 8.1 | 32.6 | 72.0 | 5.2 | 5.0 |
| 10.0 | Cloudy | Moderate | 16:38 | 21.8 | 8.2 | 32.7 | 72.1 | 5.2 | 5.3 |
| | | | 16:44 | 21.9 | 8.1 | 32.6 | 71.8 | 5.2 | 5.1 |
| 10.5 | Cloudy | Moderate | 16:38 | 21.9 | 8.2 | 32.7 | 72.2 | 5.2 | 5.1 |
| | | | 16:44 | 21.9 | 8.1 | 32.6 | 71.6 | 5.2 | 5.0 |

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

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

**Water Quality Monitoring Results at VH1 - Mid-Flood Tide**

**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 16:38 | 21.9 | 8.2 | 32.7 | 72.2 | 5.2 | 6.3 |
| | | | 16:45 | 21.9 | 8.1 | 32.6 | 70.2 | 5.1 | 6.2 |
| 11.5 | Cloudy | Moderate | 16:38 | 21.8 | 8.1 | 32.7 | 72.2 | 5.2 | 6.6 |
| | | | 16:45 | 21.9 | 8.1 | 32.6 | 70.2 | 5.1 | 6.7 |
| 12.0 | Cloudy | Moderate | 16:38 | 21.8 | 8.1 | 32.7 | 72.1 | 5.2 | 6.5 |
| | | | 16:45 | 21.9 | 8.1 | 32.6 | 70.3 | 5.1 | 6.6 |
| 12.5 | Cloudy | Moderate | 16:38 | 21.9 | 8.1 | 32.7 | 71.5 | 5.2 | 6.3 |
| | | | 16:45 | 21.9 | 8.1 | 32.6 | 70.3 | 5.1 | 7.3 |
| 13.0 | Cloudy | Moderate | 16:39 | 21.9 | 8.1 | 32.7 | 71.3 | 5.2 | 6.2 |
| | | | 16:45 | 21.9 | 8.1 | 32.6 | 70.5 | 5.1 | 6.3 |
| 13.5 | Cloudy | Moderate | 16:39 | 21.9 | 8.1 | 32.6 | 71.0 | 5.2 | 7.9 |
| | | | 16:46 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 6.9 |
| 14.0 | Cloudy | Moderate | 16:39 | 21.9 | 8.1 | 32.6 | 71.0 | 5.2 | 7.9 |
| | | | 16:46 | 21.9 | 8.1 | 32.6 | 71.1 | 5.2 | 7.6 |
| 14.5 | Cloudy | Moderate | 16:39 | 21.9 | 8.1 | 32.6 | 71.0 | 5.2 | 8.5 |
| | | | 16:46 | 21.9 | 8.2 | 32.7 | 71.2 | 5.2 | 7.8 |
| 15.0 | Cloudy | Moderate | 16:39 | 21.9 | 8.1 | 32.6 | 71.0 | 5.2 | 8.6 |
| | | | 16:46 | 21.9 | 8.2 | 32.7 | 71.4 | 5.2 | 7.6 |
| 15.5 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 71.0 | 5.2 | 8.1 |
| | | | 16:46 | 21.9 | 8.2 | 32.7 | 71.9 | 5.2 | 7.7 |
| 16.0 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 71.0 | 5.2 | 8.1 |
| | | | 16:46 | 21.9 | 8.2 | 32.7 | 72.3 | 5.2 | 8.2 |
| 16.5 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 7.8 |
| | | | 16:47 | 21.9 | 8.2 | 32.7 | 72.6 | 5.3 | 9.0 |
| 17.0 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 7.5 |
| | | | 16:47 | 21.9 | 8.2 | 32.7 | 72.6 | 5.3 | 8.9 |
| 17.5 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 7.5 |
| | | | 16:47 | 21.9 | 8.2 | 32.7 | 72.7 | 5.3 | 9.2 |
| 18.0 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 11.8 |
| | | | 16:47 | 21.9 | 8.2 | 32.7 | 72.6 | 5.3 | 11.9 |
| 18.5 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 15.5 |
| | | | 16:47 | 21.9 | 8.2 | 32.7 | 72.6 | 5.3 | 15.3 |

**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 | Cloudy | Moderate | 16:34 | 21.9 | 8.1 | 32.6 | 80.0 | 5.8 | 3.8 |
| | | | 16:41 | 21.9 | 8.1 | 32.6 | 72.9 | 5.3 | 4.3 |
| 9.5 | Cloudy | Moderate | 16:37 | 21.8 | 8.2 | 32.7 | 72.4 | 5.3 | 4.9 |
| | | | 16:44 | 21.9 | 8.1 | 32.6 | 72.0 | 5.2 | 5.0 |
| 18.0 | Cloudy | Moderate | 16:40 | 21.9 | 8.1 | 32.6 | 70.9 | 5.1 | 11.8 |
| | | | 16:47 | 21.9 | 8.2 | 32.7 | 72.6 | 5.3 | 11.9 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 15:57 | 22.0 | 8.1 | 32.3 | 88.8 | 6.4 | 2.6 |
| | | | 16:02 | 21.9 | 8.1 | 32.6 | 76.8 | 5.6 | 2.6 |
| 1.0 | Cloudy | Moderate | 15:57 | 22.0 | 8.1 | 32.5 | 79.1 | 5.7 | 2.5 |
| | | | 16:02 | 21.9 | 8.1 | 32.6 | 76.0 | 5.5 | 2.6 |
| 1.5 | Cloudy | Moderate | 15:57 | 21.9 | 8.1 | 32.5 | 77.0 | 5.6 | 2.4 |
| | | | 16:02 | 21.9 | 8.1 | 32.6 | 75.4 | 5.5 | 2.6 |
| 2.0 | Cloudy | Moderate | 15:57 | 21.9 | 8.1 | 32.6 | 76.0 | 5.5 | 2.5 |
| | | | 16:03 | 21.9 | 8.1 | 32.6 | 75.2 | 5.5 | 2.5 |
| 2.5 | Cloudy | Moderate | 15:57 | 21.9 | 8.1 | 32.6 | 75.8 | 5.5 | 2.5 |
| | | | 16:03 | 21.9 | 8.1 | 32.6 | 75.1 | 5.4 | 2.6 |
| 3.0 | Cloudy | Moderate | 15:57 | 21.9 | 8.2 | 32.6 | 75.8 | 5.5 | 3.1 |
| | | | 16:03 | 21.9 | 8.1 | 32.6 | 74.9 | 5.4 | 2.8 |
| 3.5 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.6 | 76.0 | 5.5 | 3.0 |
| | | | 16:03 | 21.9 | 8.2 | 32.7 | 75.0 | 5.4 | 2.6 |
| 4.0 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.6 | 76.3 | 5.5 | 3.0 |
| | | | 16:03 | 21.8 | 8.2 | 32.7 | 75.1 | 5.5 | 2.6 |
| 4.5 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.6 | 76.3 | 5.5 | 3.0 |
| | | | 16:03 | 21.8 | 8.2 | 32.7 | 75.2 | 5.5 | 2.7 |
| 5.0 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.0 |
| | | | 16:03 | 21.8 | 8.2 | 32.7 | 75.5 | 5.5 | 2.8 |
| 5.5 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 2.9 |
| | | | 16:03 | 21.8 | 8.2 | 32.7 | 75.4 | 5.5 | 2.8 |
| 6.0 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.7 | 76.6 | 5.6 | 2.8 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.5 | 5.5 | 2.7 |
| 6.5 | Cloudy | Moderate | 15:58 | 21.8 | 8.2 | 32.7 | 76.6 | 5.6 | 2.9 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.7 |
| 7.0 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 2.8 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.7 |
| 7.5 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.4 | 5.6 | 2.8 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.7 |
| 8.0 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.4 | 5.5 | 3.4 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.8 |
| 8.5 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.3 | 5.5 | 3.3 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.9 |
| 9.0 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.4 | 5.5 | 3.0 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.6 |
| 9.5 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.4 | 5.5 | 3.1 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 75.6 | 5.5 | 2.6 |
| 10.0 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.4 | 5.6 | 3.1 |
| | | | 16:05 | 21.8 | 8.2 | 32.7 | 75.7 | 5.5 | 3.1 |
| 10.5 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.1 |
| | | | 16:05 | 21.8 | 8.2 | 32.7 | 75.8 | 5.5 | 3.2 |

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:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.3 |
| | | | 16:05 | 21.8 | 8.2 | 32.7 | 75.9 | 5.5 | 3.2 |
| 11.5 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.2 |
| | | | 16:05 | 21.8 | 8.2 | 32.7 | 76.0 | 5.5 | 3.2 |
| 12.0 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.6 | 5.6 | 3.4 |
| | | | 16:05 | 21.8 | 8.2 | 32.7 | 76.0 | 5.5 | 3.5 |
| 12.5 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.2 |
| | | | 16:05 | 21.8 | 8.2 | 32.7 | 75.9 | 5.5 | 3.5 |
| 13.0 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.3 |
| | | | 16:05 | 21.7 | 8.2 | 32.7 | 75.9 | 5.5 | 4.1 |
| 13.5 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.5 | 5.6 | 3.4 |
| | | | 16:06 | 21.7 | 8.2 | 32.7 | 75.9 | 5.5 | 4.0 |
| 14.0 | Cloudy | Moderate | 16:00 | 21.8 | 8.2 | 32.7 | 76.4 | 5.6 | 3.8 |
| | | | 16:06 | 21.7 | 8.2 | 32.7 | 75.9 | 5.5 | 3.9 |
| 14.5 | Cloudy | Moderate | 16:01 | 21.8 | 8.2 | 32.7 | 76.4 | 5.6 | 4.0 |
| | | | 16:06 | 21.7 | 8.2 | 32.7 | 75.8 | 5.5 | 3.9 |
| 15.0 | Cloudy | Moderate | 16:01 | 21.8 | 8.2 | 32.7 | 76.3 | 5.5 | 3.5 |
| | | | 16:06 | 21.7 | 8.2 | 32.7 | 75.8 | 5.5 | 4.3 |
| 15.5 | Cloudy | Moderate | 16:01 | 21.8 | 8.2 | 32.7 | 76.3 | 5.5 | 3.7 |
| | | | 16:06 | 21.7 | 8.2 | 32.8 | 75.8 | 5.5 | 4.2 |
| 16.0 | Cloudy | Moderate | 16:01 | 21.7 | 8.2 | 32.7 | 76.2 | 5.5 | 4.3 |
| | | | 16:06 | 21.7 | 8.2 | 32.8 | 75.8 | 5.5 | 4.2 |
| 16.5 | Cloudy | Moderate | 16:01 | 21.7 | 8.2 | 32.7 | 76.2 | 5.5 | 4.3 |
| | | | 16:06 | 21.7 | 8.2 | 32.7 | 75.8 | 5.5 | 4.1 |
| 17.0 | Cloudy | Moderate | 16:01 | 21.7 | 8.2 | 32.8 | 76.2 | 5.5 | 4.3 |
| | | | 16:07 | 21.7 | 8.2 | 32.7 | 75.7 | 5.5 | 5.1 |

**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 | Cloudy | Moderate | 15:57 | 22.0 | 8.1 | 32.5 | 79.1 | 5.7 | 2.5 |
| | | | 16:02 | 21.9 | 8.1 | 32.6 | 76.0 | 5.5 | 2.6 |
| 8.75 | Cloudy | Moderate | 15:59 | 21.8 | 8.2 | 32.7 | 76.1 | 5.5 | 5.3 |
| | | | 16:04 | 21.8 | 8.2 | 32.7 | 76.1 | 5.5 | 4.6 |
| 16.5 | Cloudy | Moderate | 16:01 | 21.7 | 8.2 | 32.7 | 76.2 | 5.5 | 4.3 |
| | | | 16:06 | 21.7 | 8.2 | 32.7 | 75.8 | 5.5 | 4.1 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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:** 7 May 2013

**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 | Cloudy | Moderate | 15:37 | 22.3 | 8.0 | 32.5 | 95.9 | 6.9 | 2.4 |
| | | | 15:40 | 22.2 | 8.1 | 32.7 | 87.6 | 6.3 | 2.4 |
| 1.0 | Cloudy | Moderate | 15:37 | 22.2 | 8.0 | 32.6 | 93.3 | 6.7 | 2.3 |
| | | | 15:41 | 22.1 | 8.1 | 32.7 | 87.3 | 6.3 | 2.3 |
| 1.5 | Cloudy | Moderate | 15:38 | 22.1 | 8.1 | 32.6 | 91.6 | 6.6 | 2.2 |
| | | | 15:41 | 22.1 | 8.1 | 32.7 | 86.9 | 6.3 | 2.1 |
| 2.0 | Cloudy | Moderate | 15:38 | 22.1 | 8.1 | 32.6 | 90.3 | 6.5 | 2.4 |
| | | | 15:41 | 22.0 | 8.1 | 32.7 | 86.5 | 6.3 | 2.7 |
| 2.5 | Cloudy | Moderate | 15:38 | 22.1 | 8.1 | 32.7 | 89.7 | 6.5 | 2.0 |
| | | | 15:42 | 22.0 | 8.1 | 32.8 | 86.3 | 6.2 | 2.1 |
| 3.0 | Cloudy | Moderate | 15:39 | 22.0 | 8.1 | 32.7 | 88.8 | 6.4 | 2.2 |
| | | | 15:42 | 22.0 | 8.1 | 32.8 | 86.2 | 6.2 | 2.2 |
| 3.5 | Cloudy | Moderate | 15:39 | 22.0 | 8.1 | 32.7 | 88.3 | 6.4 | 2.4 |
| | | | 15:42 | 22.0 | 8.1 | 32.8 | 86.0 | 6.2 | 2.3 |
| 4.0 | Cloudy | Moderate | 15:39 | 22.0 | 8.1 | 32.7 | 88.1 | 6.4 | 2.1 |
| | | | 15:42 | 22.0 | 8.1 | 32.8 | 85.7 | 6.2 | 2.0 |
| 4.5 | Cloudy | Moderate | 15:39 | 22.0 | 8.1 | 32.7 | 88.1 | 6.4 | 1.9 |
| | | | 15:42 | 22.0 | 8.1 | 32.8 | 85.4 | 6.2 | 1.6 |
| 5.0 | Cloudy | Moderate | 15:40 | 22.0 | 8.1 | 32.7 | 88.1 | 6.4 | 1.9 |
| | | | 15:43 | 22.0 | 8.1 | 32.8 | 85.3 | 6.2 | 2.1 |
| 5.5 | Cloudy | Moderate | 15:40 | 22.0 | 8.1 | 32.7 | 87.8 | 6.4 | 2.3 |
| | | | 15:43 | 22.0 | 8.1 | 32.8 | 85.3 | 6.2 | 2.0 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 3.0 | Cloudy | Moderate | 15:39 | 22.0 | 8.1 | 32.7 | 88.8 | 6.4 | 2.2 |
| | | | 15:42 | 22.0 | 8.1 | 32.8 | 86.2 | 6.2 | 2.2 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lee Kwan Yun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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: 7 May 2013**

**Secchi Disc Depth: 2.5m**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 0.5 | Cloudy | Moderate | 16:54 | 22.1 | 8.1 | 32.3 | 81.5 | 5.9 | 3.8 |
| | | | 17:03 | 22.0 | 8.1 | 32.5 | 92.5 | 6.7 | 3.8 |
| 1.0 | Cloudy | Moderate | 16:54 | 22.1 | 8.1 | 32.4 | 77.6 | 5.6 | 3.0 |
| | | | 17:04 | 22.0 | 8.1 | 32.4 | 82.7 | 6.0 | 3.1 |
| 1.5 | Cloudy | Moderate | 16:54 | 22.1 | 8.1 | 32.4 | 76.1 | 5.5 | 2.7 |
| | | | 17:04 | 22.0 | 8.1 | 32.5 | 79.1 | 5.7 | 2.7 |
| 2.0 | Cloudy | Moderate | 16:55 | 22.1 | 8.1 | 32.4 | 73.8 | 5.3 | 2.9 |
| | | | 17:04 | 22.0 | 8.1 | 32.5 | 75.2 | 5.5 | 2.8 |
| 2.5 | Cloudy | Moderate | 16:57 | 22.0 | 8.1 | 32.5 | 78.6 | 5.7 | 2.9 |
| | | | 17:04 | 22.0 | 8.1 | 32.5 | 73.8 | 5.3 | 3.0 |
| 3.0 | Cloudy | Moderate | 16:57 | 22.0 | 8.1 | 32.6 | 76.0 | 5.5 | 2.8 |
| | | | 17:04 | 22.0 | 8.1 | 32.6 | 73.2 | 5.3 | 3.2 |
| 3.5 | Cloudy | Moderate | 16:57 | 22.0 | 8.1 | 32.6 | 74.5 | 5.4 | 2.8 |
| | | | 17:04 | 22.0 | 8.1 | 32.6 | 72.7 | 5.3 | 3.2 |
| 4.0 | Cloudy | Moderate | 16:57 | 22.0 | 8.1 | 32.6 | 73.6 | 5.3 | 2.9 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.5 | 5.3 | 3.0 |
| 4.5 | Cloudy | Moderate | 16:58 | 22.0 | 8.1 | 32.6 | 73.4 | 5.3 | 3.3 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.5 | 5.2 | 3.3 |
| 5.0 | Cloudy | Moderate | 16:58 | 22.0 | 8.1 | 32.6 | 73.2 | 5.3 | 3.1 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.6 | 5.3 | 3.3 |
| 5.5 | Cloudy | Moderate | 16:58 | 22.0 | 8.1 | 32.6 | 72.8 | 5.3 | 3.0 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.7 | 5.3 | 3.6 |
| 6.0 | Cloudy | Moderate | 16:58 | 22.0 | 8.1 | 32.6 | 72.8 | 5.3 | 3.1 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.7 | 5.3 | 3.5 |
| 6.5 | Cloudy | Moderate | 16:58 | 22.1 | 8.1 | 32.6 | 73.0 | 5.3 | 3.2 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.8 | 5.3 | 3.7 |
| 7.0 | Cloudy | Moderate | 16:58 | 22.1 | 8.1 | 32.6 | 73.0 | 5.3 | 3.2 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.9 | 5.3 | 3.7 |
| 7.5 | Cloudy | Moderate | 16:59 | 22.1 | 8.1 | 32.5 | 73.0 | 5.3 | 3.5 |
| | | | 17:06 | 22.0 | 8.1 | 32.6 | 73.0 | 5.3 | 3.5 |
| 8.0 | Cloudy | Moderate | 16:59 | 22.1 | 8.1 | 32.5 | 72.9 | 5.3 | 3.5 |
| | | | 17:06 | 22.0 | 8.1 | 32.6 | 73.1 | 5.3 | 3.6 |
| 8.5 | Cloudy | Moderate | 16:59 | 22.1 | 8.1 | 32.5 | 72.8 | 5.3 | 3.8 |
| | | | 17:06 | 22.0 | 8.1 | 32.6 | 73.4 | 5.3 | 3.9 |
| 9.0 | Cloudy | Moderate | 16:59 | 22.1 | 8.1 | 32.5 | 72.8 | 5.3 | 3.8 |
| | | | 17:06 | 22.0 | 8.1 | 32.6 | 73.5 | 5.3 | 3.9 |
| 9.5 | Cloudy | Moderate | 16:59 | 22.1 | 8.1 | 32.6 | 72.8 | 5.3 | 4.3 |
| | | | 17:06 | 22.1 | 8.1 | 32.6 | 73.5 | 5.3 | 4.6 |
| 10.0 | Cloudy | Moderate | 17:00 | 22.0 | 8.1 | 32.6 | 72.9 | 5.3 | 4.6 |
| | | | 17:06 | 22.1 | 8.1 | 32.6 | 73.5 | 5.3 | 4.7 |
| 10.5 | Cloudy | Moderate | 17:00 | 22.0 | 8.1 | 32.6 | 72.8 | 5.3 | 3.9 |
| | | | 17:07 | 22.1 | 8.1 | 32.6 | 73.4 | 5.3 | 4.0 |

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 WSD Intake at Tai Wan - Mid-Flood Tide**

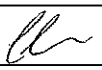
**Sampling Date:** 7 May 2013

**Secchi Disc Depth:** 2.5m

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 17:00 | 22.0 | 8.1 | 32.6 | 72.6 | 5.3 | 3.8 |
| | | | 17:07 | 22.1 | 8.1 | 32.6 | 73.3 | 5.3 | 3.9 |
| 11.5 | Cloudy | Moderate | 17:00 | 22.0 | 8.1 | 32.6 | 72.6 | 5.3 | 3.8 |
| | | | 17:07 | 22.1 | 8.1 | 32.6 | 73.3 | 5.3 | 3.8 |

**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 | Cloudy | Moderate | 16:58 | 22.0 | 8.1 | 32.6 | 72.8 | 5.3 | 3.1 |
| | | | 17:05 | 22.0 | 8.1 | 32.6 | 72.7 | 5.3 | 3.5 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun |  | **7-May-13** |
| **Checked by:** | W.K. Tang |  | **7-May-13** |

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: 7 May 2013**

**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 | Cloudy | Moderate | 16:13 | 22.0 | 8.1 | 32.5 | 90.7 | 6.6 | 2.2 |
| | | | 16:19 | 21.9 | 8.2 | 32.6 | 78.4 | 5.7 | 2.6 |
| 1.0 | Cloudy | Moderate | 16:13 | 21.9 | 8.2 | 32.6 | 82.6 | 6.0 | 2.2 |
| | | | 16:19 | 21.9 | 8.2 | 32.6 | 76.7 | 5.6 | 2.7 |
| 1.5 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.6 | 79.8 | 5.8 | 2.5 |
| | | | 16:19 | 21.9 | 8.2 | 32.6 | 76.2 | 5.5 | 2.6 |
| 2.0 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.6 | 78.2 | 5.7 | 2.7 |
| | | | 16:19 | 21.9 | 8.2 | 32.6 | 75.5 | 5.5 | 2.4 |
| 2.5 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.7 | 77.6 | 5.6 | 3.0 |
| | | | 16:19 | 21.9 | 8.2 | 32.6 | 75.3 | 5.5 | 2.5 |
| 3.0 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.7 | 77.3 | 5.6 | 2.8 |
| | | | 16:20 | 21.9 | 8.2 | 32.6 | 74.8 | 5.4 | 2.9 |
| 3.5 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.7 | 77.1 | 5.6 | 2.8 |
| | | | 16:20 | 21.9 | 8.2 | 32.6 | 74.6 | 5.4 | 2.8 |
| 4.0 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.7 | 76.9 | 5.6 | 3.1 |
| | | | 16:21 | 21.9 | 8.2 | 32.6 | 82.1 | 6.0 | 2.9 |
| 4.5 | Cloudy | Moderate | 16:14 | 21.9 | 8.2 | 32.7 | 76.5 | 5.5 | 3.4 |
| | | | 16:22 | 21.9 | 8.2 | 32.6 | 80.5 | 5.8 | 3.1 |
| 5.0 | Cloudy | Moderate | 16:15 | 21.9 | 8.2 | 32.7 | 76.2 | 5.5 | 3.5 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 79.2 | 5.7 | 3.1 |
| 5.5 | Cloudy | Moderate | 16:15 | 21.9 | 8.2 | 32.7 | 76.2 | 5.5 | 3.3 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 78.3 | 5.7 | 3.1 |
| 6.0 | Cloudy | Moderate | 16:15 | 21.9 | 8.2 | 32.7 | 76.1 | 5.5 | 3.2 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 76.6 | 5.6 | 3.0 |
| 6.5 | Cloudy | Moderate | 16:15 | 21.9 | 8.2 | 32.7 | 76.2 | 5.5 | 3.5 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 76.0 | 5.5 | 3.2 |
| 7.0 | Cloudy | Moderate | 16:15 | 21.9 | 8.2 | 32.7 | 76.5 | 5.5 | 3.8 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 75.8 | 5.5 | 3.2 |
| 7.5 | Cloudy | Moderate | 16:16 | 21.9 | 8.2 | 32.7 | 76.6 | 5.6 | 3.7 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 75.5 | 5.5 | 3.2 |
| 8.0 | Cloudy | Moderate | 16:16 | 21.9 | 8.2 | 32.7 | 76.4 | 5.5 | 3.7 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 75.4 | 5.5 | 3.2 |
| 8.5 | Cloudy | Moderate | 16:16 | 21.9 | 8.2 | 32.7 | 76.5 | 5.5 | 3.8 |
| | | | 16:23 | 21.9 | 8.2 | 32.7 | 75.3 | 5.5 | 3.2 |
| 9.0 | Cloudy | Moderate | 16:17 | 21.9 | 8.2 | 32.7 | 76.5 | 5.5 | 4.1 |
| | | | 16:23 | 21.9 | 8.2 | 32.7 | 75.2 | 5.5 | 4.1 |
| 9.5 | Cloudy | Moderate | 16:17 | 21.9 | 8.2 | 32.7 | 76.5 | 5.5 | 4.8 |
| | | | 16:23 | 21.9 | 8.2 | 32.7 | 75.1 | 5.4 | 4.1 |
| 10.0 | Cloudy | Moderate | 16:17 | 21.9 | 8.2 | 32.7 | 77.7 | 5.6 | 4.0 |
| | | | 16:23 | 21.9 | 8.2 | 32.7 | 75.1 | 5.4 | 3.8 |
| 10.5 | Cloudy | Moderate | 16:17 | 21.9 | 8.2 | 32.7 | 77.1 | 5.6 | 4.0 |
| | | | 16:23 | 21.9 | 8.2 | 32.7 | 75.1 | 5.4 | 3.8 |

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

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

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

Sampling Date: 7 May 2013

Secchi Disc Depth: 2.0m

## Water Quality Monitoring Results (Sampling Depth)

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 5.5 | Cloudy | Moderate | 16:15 | 21.9 | 8.2 | 32.7 | 76.2 | 5.5 | 3.3 |
| | | | 16:22 | 21.9 | 8.2 | 32.7 | 78.3 | 5.7 | 3.1 |

| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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: 7 May 2013**

**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 | Cloudy | Moderate | 15:39 | 21.9 | 8.1 | 32.5 | 83.8 | 6.1 | 2.5 |
| | | | 15:43 | 21.9 | 8.1 | 32.6 | 78.2 | 5.7 | 2.6 |
| 1.0 | Cloudy | Moderate | 15:39 | 21.9 | 8.1 | 32.6 | 82.0 | 6.0 | 2.6 |
| | | | 15:43 | 21.9 | 8.1 | 32.6 | 78.1 | 5.7 | 2.6 |
| 1.5 | Cloudy | Moderate | 15:39 | 21.9 | 8.1 | 32.6 | 80.8 | 5.9 | 2.6 |
| | | | 15:43 | 21.9 | 8.1 | 32.6 | 78.0 | 5.7 | 2.6 |
| 2.0 | Cloudy | Moderate | 15:39 | 21.9 | 8.1 | 32.6 | 80.1 | 5.8 | 2.8 |
| | | | 15:44 | 21.9 | 8.1 | 32.6 | 77.9 | 5.7 | 2.5 |
| 2.5 | Cloudy | Moderate | 15:40 | 21.9 | 8.1 | 32.6 | 78.4 | 5.7 | 2.7 |
| | | | 15:44 | 21.9 | 8.1 | 32.6 | 77.9 | 5.7 | 2.6 |
| 3.0 | Cloudy | Moderate | 15:40 | 21.9 | 8.1 | 32.6 | 78.4 | 5.7 | 2.5 |
| | | | 15:44 | 21.9 | 8.1 | 32.6 | 77.9 | 5.7 | 2.5 |
| 3.5 | Cloudy | Moderate | 15:40 | 21.9 | 8.1 | 32.6 | 78.4 | 5.7 | 2.5 |
| | | | 15:44 | 21.9 | 8.1 | 32.6 | 77.9 | 5.6 | 2.5 |
| 4.0 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.6 | 78.4 | 5.7 | 2.7 |
| | | | 15:44 | 21.9 | 8.1 | 32.6 | 77.8 | 5.6 | 2.6 |
| 4.5 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.6 | 78.3 | 5.7 | 2.7 |
| | | | 15:44 | 21.9 | 8.1 | 32.7 | 77.8 | 5.6 | 2.7 |
| 5.0 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.6 | 78.2 | 5.7 | 2.5 |
| | | | 15:44 | 21.9 | 8.1 | 32.6 | 77.7 | 5.6 | 2.6 |
| 5.5 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.7 | 78.2 | 5.7 | 2.5 |
| | | | 15:44 | 21.9 | 8.1 | 32.7 | 77.7 | 5.6 | 2.5 |
| 6.0 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.7 | 78.1 | 5.7 | 2.5 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.7 | 5.6 | 2.6 |
| 6.5 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.7 | 78.1 | 5.7 | 2.6 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.6 | 5.6 | 2.5 |
| 7.0 | Cloudy | Moderate | 15:42 | 21.9 | 8.1 | 32.7 | 78.1 | 5.7 | 2.6 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.6 | 5.6 | 2.5 |
| 7.5 | Cloudy | Moderate | 15:42 | 21.9 | 8.1 | 32.7 | 78.1 | 5.7 | 2.6 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.6 | 5.6 | 2.7 |
| 8.0 | Cloudy | Moderate | 15:42 | 21.9 | 8.1 | 32.7 | 78.0 | 5.7 | 2.6 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.6 | 5.6 | 2.6 |
| 8.5 | Cloudy | Moderate | 15:42 | 21.8 | 8.1 | 32.7 | 78.0 | 5.7 | 3.1 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.6 | 5.6 | 2.6 |
| 9.0 | Cloudy | Moderate | 15:42 | 21.8 | 8.2 | 32.7 | 78.4 | 5.7 | 2.6 |
| | | | 15:45 | 21.8 | 8.2 | 32.7 | 77.6 | 5.6 | 2.5 |
| 9.5 | Cloudy | Moderate | 15:42 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 2.8 |
| | | | 15:46 | 21.8 | 8.2 | 32.7 | 78.1 | 5.7 | 2.6 |
| 10.0 | Cloudy | Moderate | 15:42 | 21.8 | 8.2 | 32.7 | 78.7 | 5.7 | 2.8 |
| | | | 15:46 | 21.8 | 8.2 | 32.7 | 78.2 | 5.7 | 2.5 |
| 10.5 | Cloudy | Moderate | 15:42 | 21.8 | 8.2 | 32.7 | 78.9 | 5.7 | 2.9 |
| | | | 15:46 | 21.8 | 8.2 | 32.7 | 78.3 | 5.7 | 2.7 |

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:** **7 May 2013**

**Secchi Disc Depth:** **2.0m**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.0 | Cloudy | Moderate | 15:42 | 21.8 | 8.2 | 32.7 | 78.9 | 5.7 | 3.4 |
| | | | 15:46 | 21.8 | 8.2 | 32.7 | 78.5 | 5.7 | 3.2 |
| 11.5 | Cloudy | Moderate | 15:43 | 21.8 | 8.2 | 32.7 | 79.0 | 5.7 | 3.2 |
| | | | 15:46 | 21.8 | 8.2 | 32.8 | 78.6 | 5.7 | 3.2 |

**Water Quality Monitoring Results (Sampling Depth)**

| Water Depth (m) | Weather Condition | Sea Condition* | Sampling Time | Water Temperature (°C) | pH | Salinity ppt | DO Saturation (%) | Dissolved Oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|---|
| 6.0 | Cloudy | Moderate | 15:41 | 21.9 | 8.1 | 32.7 | 78.1 | 5.7 | 2.5 |
| | | | 15:45 | 21.9 | 8.1 | 32.7 | 77.7 | 5.6 | 2.6 |

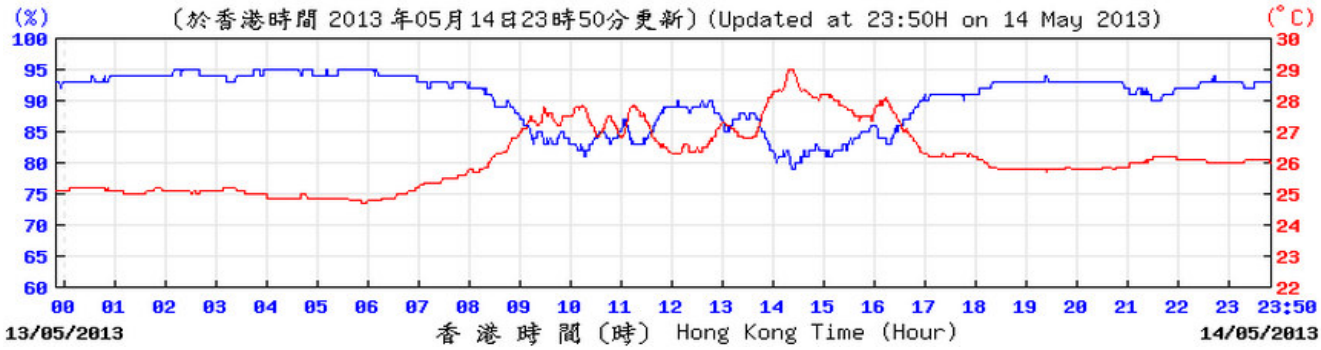
| | Name | Signature | Date |
|---|---|---|---|
| **Conducted by:** | Lam Ho Chun | | **7-May-13** |
| **Checked by:** | W.K. Tang | | **7-May-13** |

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

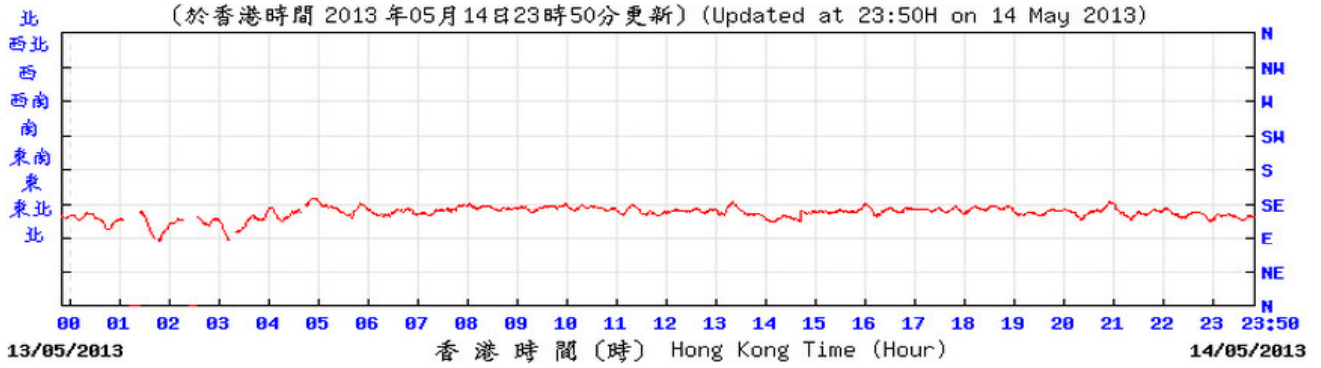
# APPENDIX G
# METEOROLOGICAL DATA FROM HONG KONG OBSERVATORY STATION DURING ODOUR PATROL

## Meteorological Conditions (King's Park)

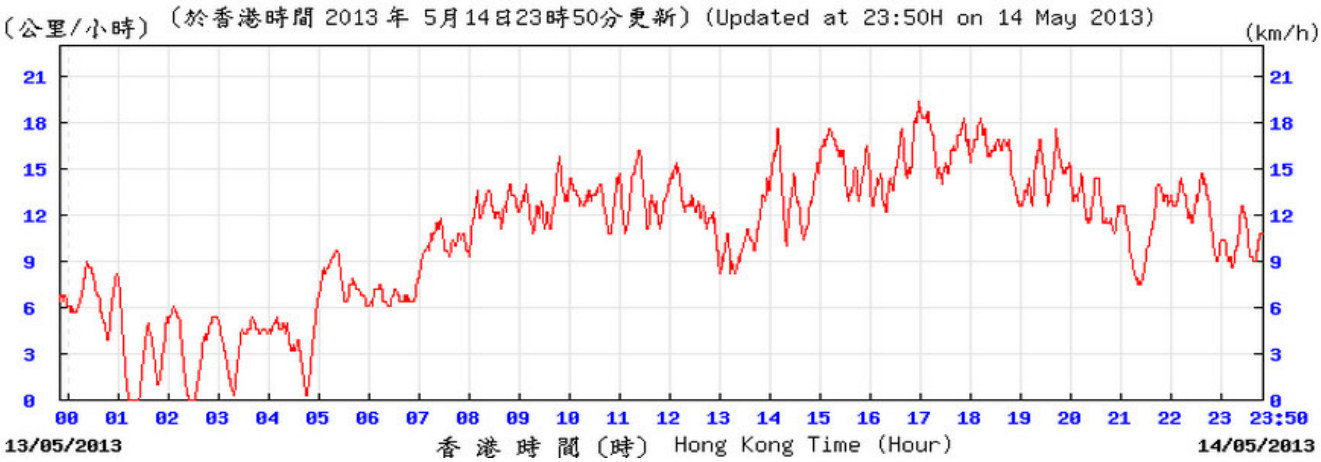
### Temperature & Humidity




### Wind Direction

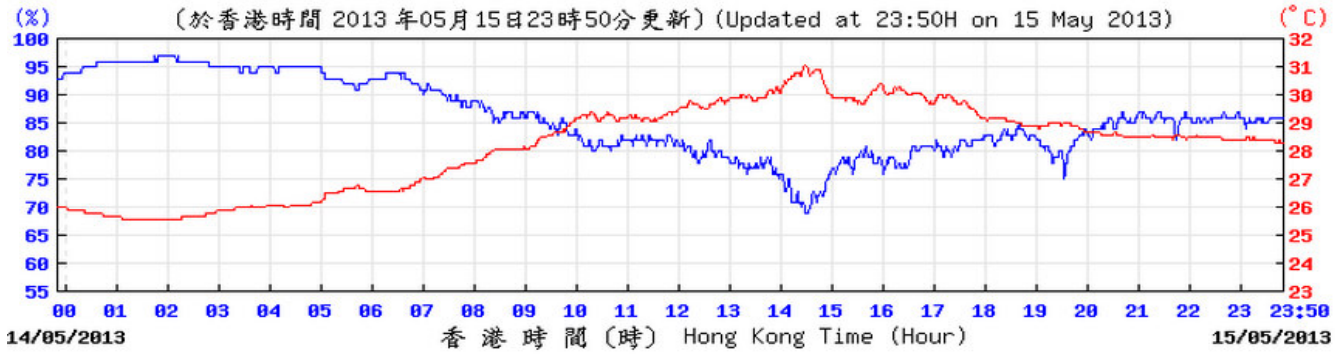



### Wind Speed

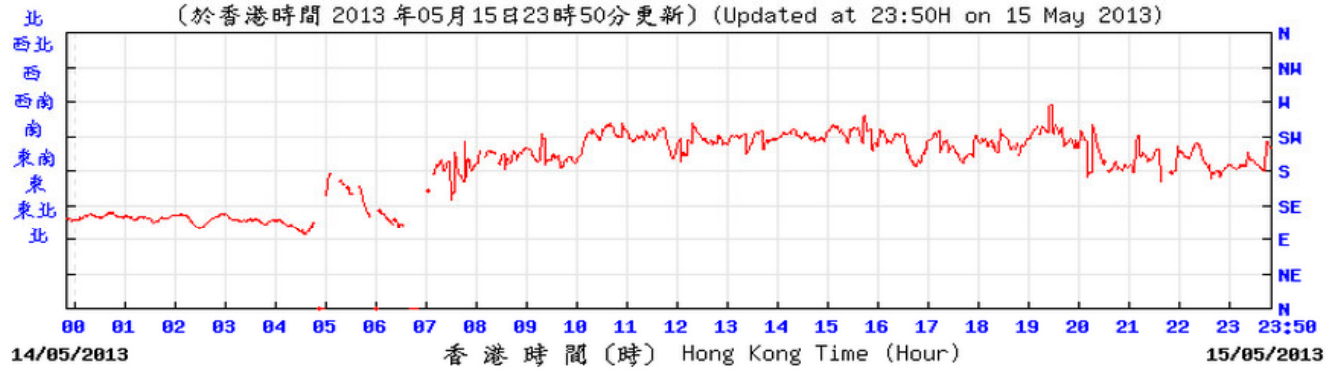



| Title | Scale | Project No. | |
|---|---|---|---|
| Contract No. KL/2010/02<br>Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works<br><br>Meteorological data from Hong Kong Observatory Station | N.T.S | MA11017 | CINOTECH |
| | Date<br>May 13 | Appendix<br>G | |

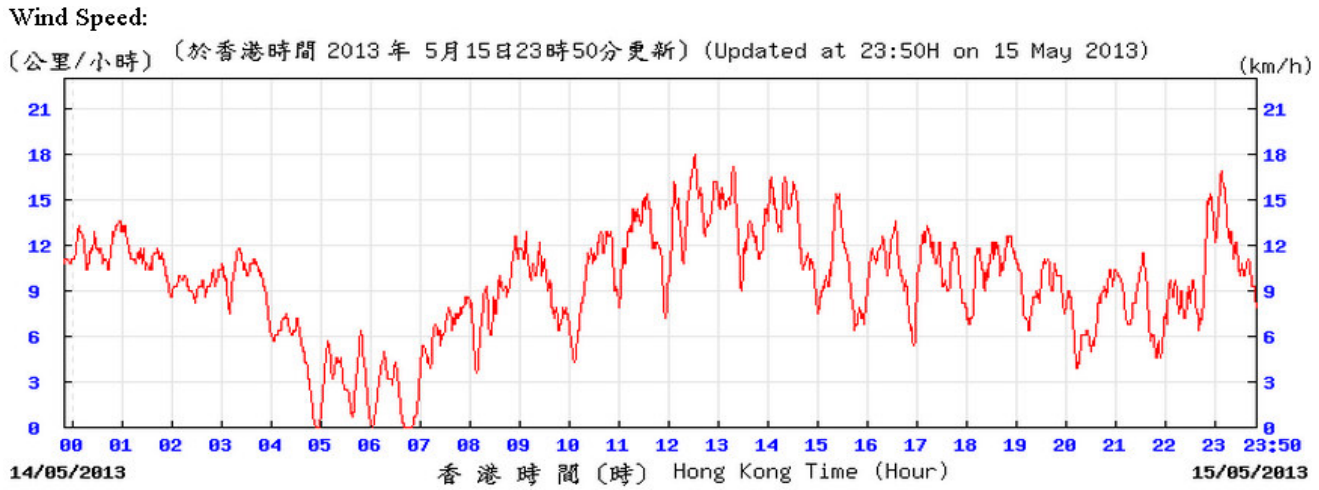
## Meteorological Conditions (King's Park)




## Wind Direction




## Wind Speed



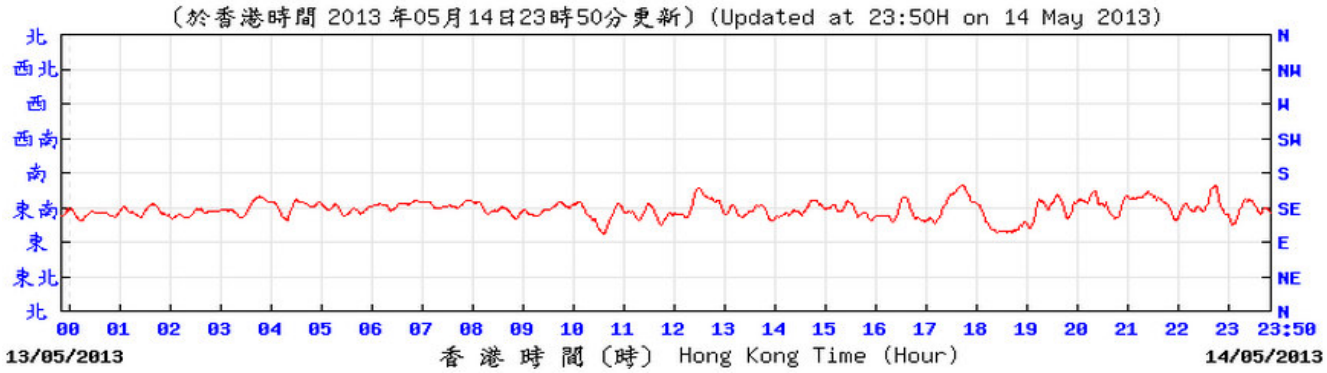

| Title | Scale | Project No. |
|---|---|---|
| Contract No. KL/2010/02<br>Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works<br><br>Meteorological data from Hong Kong Observatory Station | N.T.S | MA11017 |
| | Date<br>May 13 | Appendix<br>G |

CINOTECH

# Meteorological Conditions (Kai Tak)

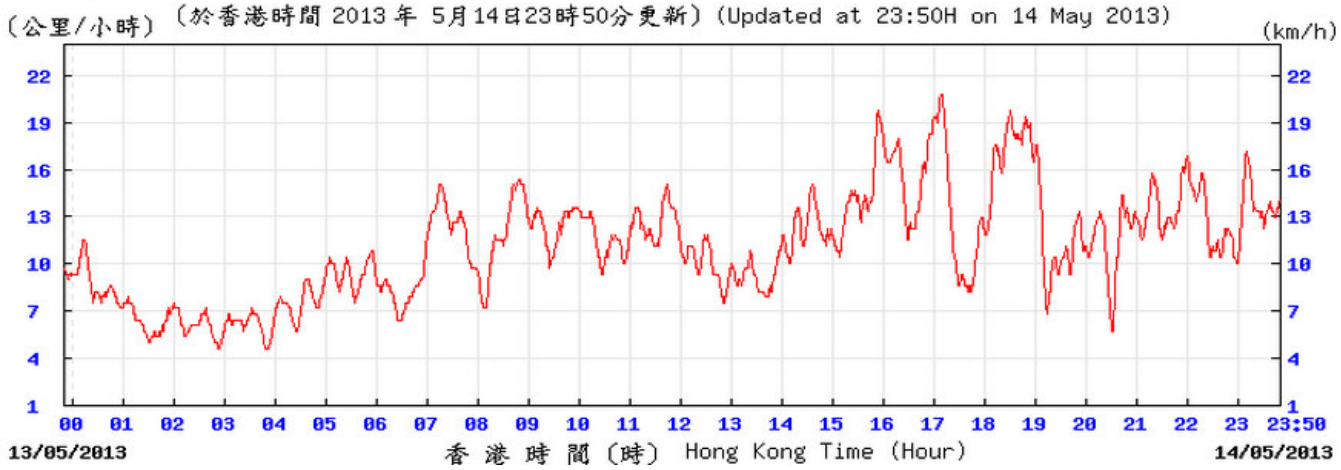
## Wind Direction

Wind Direction:




## Wind Speed

Wind Speed:



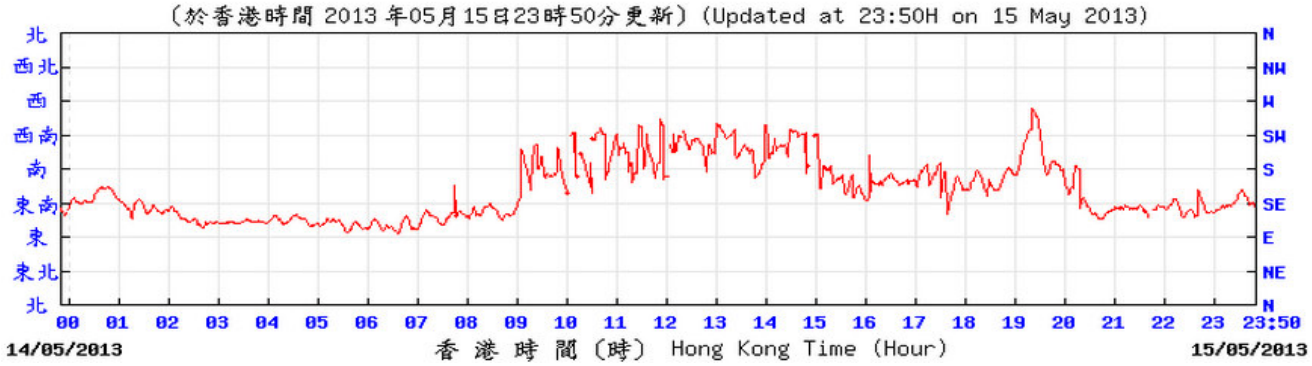

| Title | Scale | Project No. |
|---|---|---|
| Contract No. KL/2010/02<br>Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works<br><br>Meteorological data from Hong Kong Observatory Station | N.T.S | MA11017 |
| | Date<br>Nov 12 | Appendix<br>G |

CINOTECH

# Meteorological Conditions (Kai Tak)

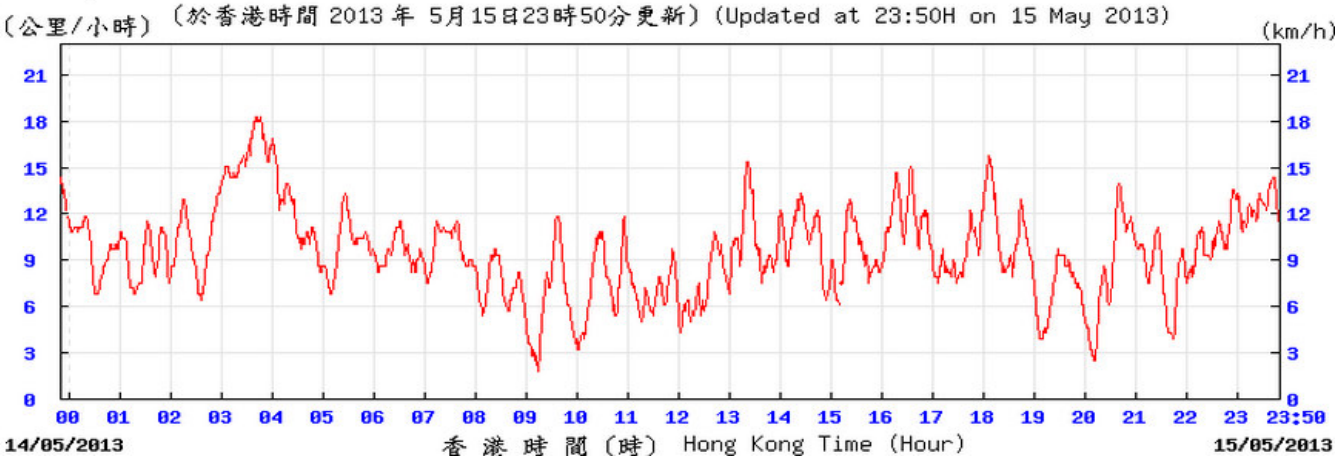
## Wind Direction

Wind Direction:



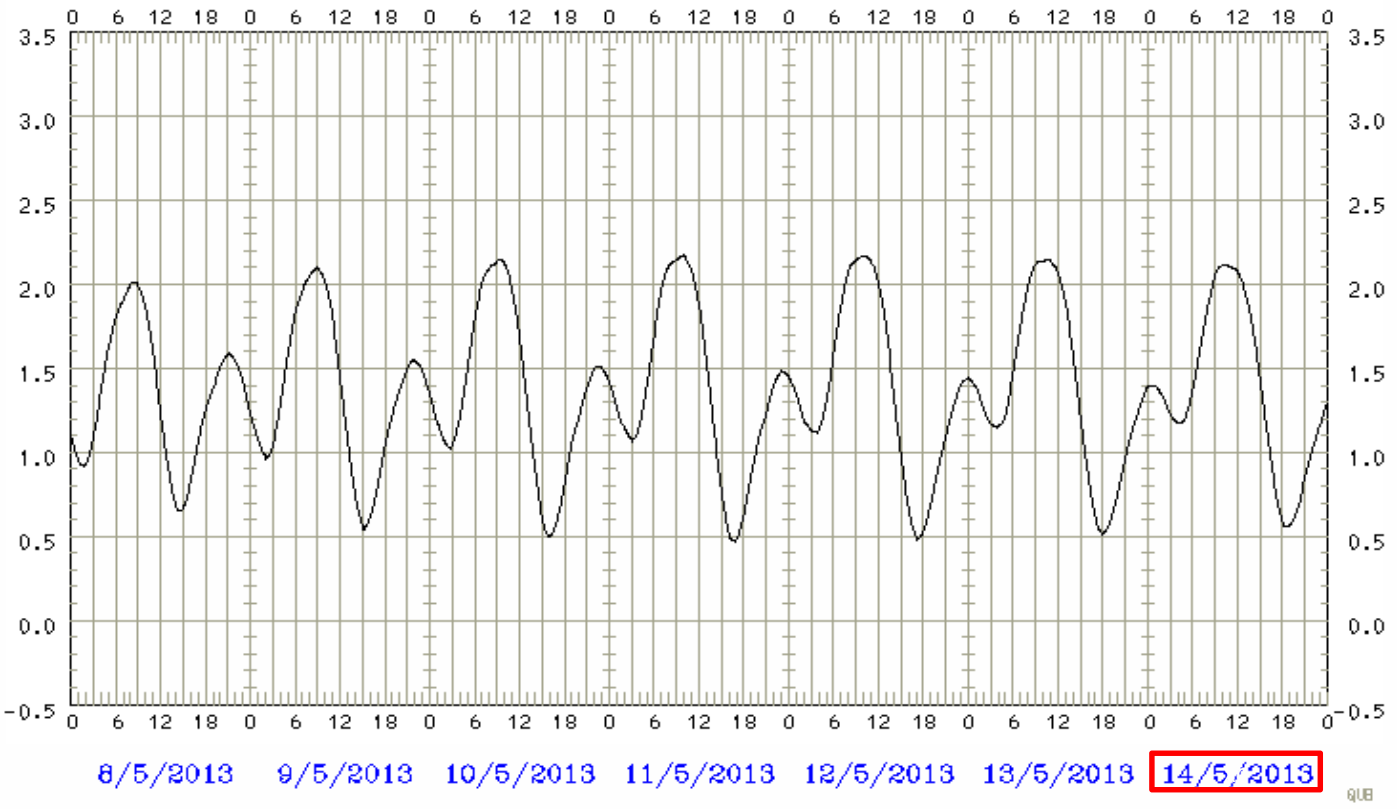

## Wind Speed

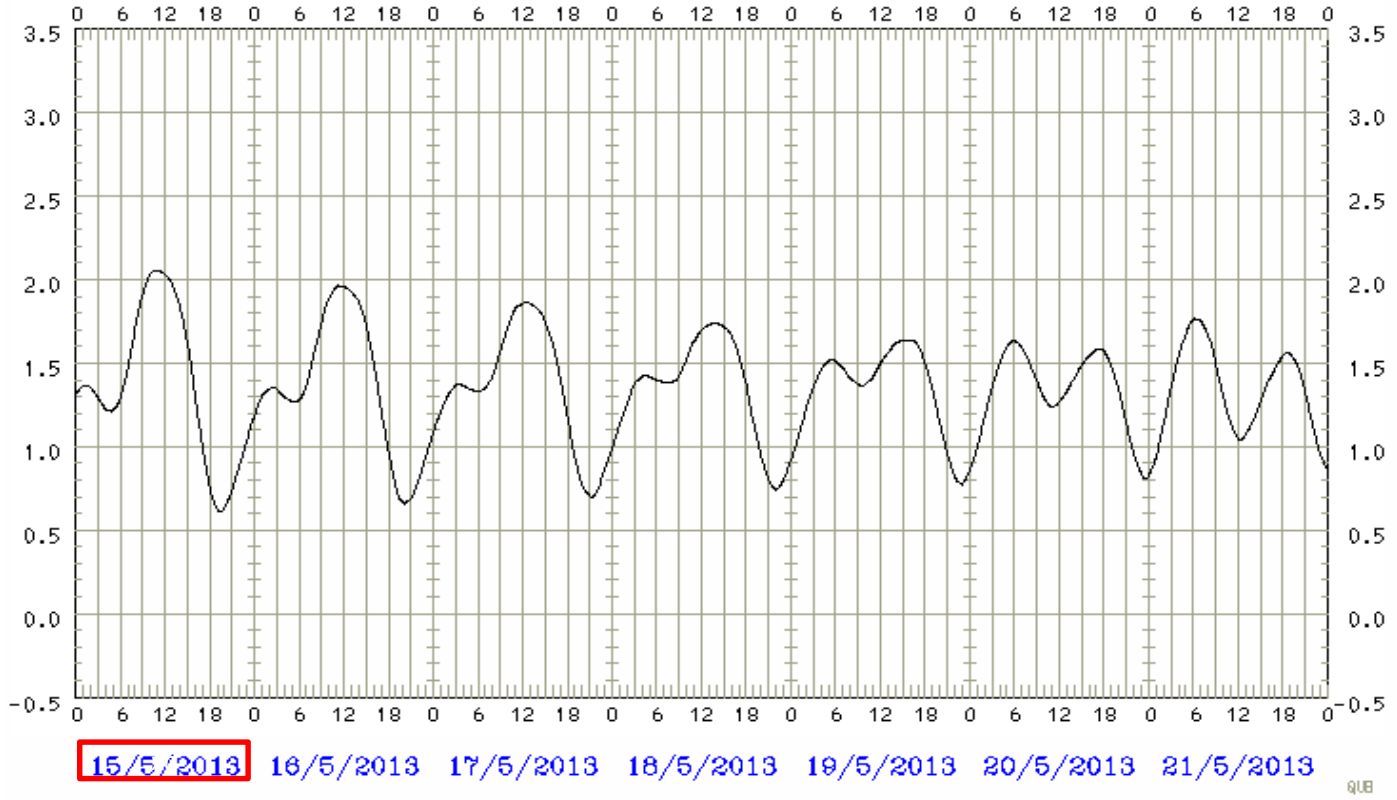
Wind Speed:




| Title | Scale | Project No. | |
|---|---|---|---|
| Contract No. KL/2010/02<br>Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works<br><br>Meteorological data from Hong Kong Observatory Station | N.T.S | MA11017 | CINOTECH |
| | Date<br>May 13 | Appendix<br>G | |

# Predicted Tides at Quarry Bay in May 2013




| Title | Scale | Project No. |
|---|---|---|
| Contract No. KL/2010/02<br>Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works<br><br>Meteorological data from Hong Kong Observatory Station | N.T.S | MA11017 |
| | Date<br>May 13 | Appendix<br>G |

CINOTECH