### CONTRACT NO: HK/2011/07

# WANCHAI DEVELOPMENT PHASE II AND CENTRAL WANCHAI BYPASS SAMPLING, FIELD MEASUREMENT AND TESTING WORKS (STAGE 2)

ENVIRONMENTAL PERMIT NO. EP-356/2009, FURTHER EVIRONMENTAL PERMIT NOS. FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009 ,FEP-05/356/2009, FEP-06/356/2009 AND FEP-07/356/2009

#### MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- JULY 2013 -

CLIENTS:

Civil Engineering and Development Department

and

**Highways Department** 

PREPARED BY:

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**CERTIFIED BY:** 

Raymond Dai

**Environmental Team Leader** 

DATE:

15 August 2013



Ref.: AACWBIECEM00 0 4242L.13

15 August 2013

By Post and Fax (2691 2649)

**AECOM Asia Company Limited** 11/F, Tower 2 Grand Central Plaza 138 Shatin Rural Committee Road Shatin, New Territories Hong Kong

Attention: Mr. Conrad Ng

Dear Sir,

Re: Wan Chai Development Phase II and Central-Wan Chai Bypass Monthly Environmental Monitoring and Audit Report (July 2013) for EP-356/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009, FEP-05/356/2009, FEP-06/356/2009 and FEP-07/356/2009

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for July 2013 received by email on 12 July 2013.

Please be informed that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 3.4 in the captioned Environmental Permits.

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

David Yeung

Independent Environmental Checker

c.c. HyD Mr. Jones Lai

by fax: 2714 5289

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Lam

Mr. Raymond Dai

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Mr. Francis Leong / Mr. Stephen Lai



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Contract No. HK/2011/07

#### Lam Geotechnics Limited

### **EXECUTIVE SUMMARY**

This is the Environmental Monitoring and Audit (EM&A) Monthly Report -July 2013 for the Project of Wan Chai Development Phase II and Central-Wanchai Bypass under Environmental Permit no. EP-356/2009 and Further Environmental permit nos. FEP-02/356/2009, FEP-04/356/2009, FEP-05/356/2009, FEP-03/356/2009, FEP-06/356/2009 FEP-07/356/2009. This report presents the environmental monitoring findings and information recorded during the period June 2013 to July 2013. The cut-off date of reporting is at 27th of each reporting month.

#### Construction Activities for the Reported Period

- ii. During this reporting period, the major work activities for Contract no. HK/2009/01 included: Marine Works (at Wan Chai)
  - Rockfilling at the northern part of HKCEC3E (East of HKCEC) between CH290 and CH385.
  - Structural blinding for construction of proposed box culvert Bay 8 and Bay 9 was poured and dewatering and grouting curtain wall.
  - Pre-drilling work for steel bridge on the top of temporary open channel along Convention Avenue.
  - 4 nos. of drill holes for D-wall and pre-bored H-piles in stage 3.
  - Mitigation measures such as widening the waterway at reclamation area "HKCEC3E", installation of pumps and water pipe for pumping seawater from Victoria Harbour to temporary water channel to enhance the seawater circulation for lower the seawater temperature at the temporary water channel.
  - Dumping of ice blocks into temporary water channel to cool down the seawater at the temporary water channel.

#### Cross-Harbour Watermains Installation (CHA & CHB) and Marine Works (at TST)

- Minor defect rectification works for submarine pipeline A and B (removal of silt). WSD accepted the rectification work.
- Testing of ICCP monitoring system and SCADA for new provided cross harbour watermain was carried out with WSD. Damaged isolation joints would be delivered to HK in mid Aug 2013.

#### XHWM, Cooling Watermains, Salt Watermains and Sewer (On Land)

- XHWM-Stage 1 connection. Stage 2 and 3 would be connected.
- Pipework for Additional Washout Chamber at VIP drop-off and the excavation and shoring for the structure.
- Reinstatement works at B6-2B at Northwest of HKCEC.
- Planter reinstatement, kerbworks, hard paving at West Foyer of HKCEC.
- Sewer laying works in Zone B6-2A, B6-4, B6-6 B6-5C & B6-6 at west of HKCEC



- Cooling main works in Zone C1-2.
- Salt watermain laying works in Zone A1-5C.
- Salt watermain laying works in Zone A3-5C.
- Salt watermain laying works in Zone A3-1, A5-2 and A1-5C.
- Salt watermain laying works in A4-1B, 2B.
- Temporary ducting and cabling works at junction between Expo Drive East and Expo Drive Central. Another work front at night.

#### **Tunnel Works**

- Installation of pre-bored H-pile in CWB Stage 1 underneath Atrium Link (from CH80 to CH120).
- Installation of pre-bored H-pile in CWB Stage 2 Atrium Link (from CH120 to CH220).
- Construction of bulkhead wall at CH3129 (18 panels).
- Filling of the existing open water channel at CH260.
- Construction of the Common D-wall.
- Demolition of the Promenade Deck.
- Installation of dewatering wells, observation wells and piezometers at CWB Stage 1.

#### E&M

- Operation attendance of 60 day.
- Switchover for cooling system P5.
- The old pumping house for EMSD and CP.
- iii. During this reporting period, the major work activities for Contract no. HK/2009/02 included:
  - Modification work of PTI at Expo Drive East.
  - Modification of existing covered walkway along Expo Drive East.
  - The first and second attempt of full commissioning of P9 cooling water system.
  - Minor remedial works for commissioning for both P7 and P8 cooling water system.-
  - The wall and top slab at Salt Water Intake Culvert Bay 1B.
  - Installation of guide rails for preliminary screens of Salt Water Intake Chamber No.1 at Bay 2A.
  - The leakage test of stoplogs..
  - The base slab of proposed wash out chamber near CHS8A160.
  - The pipe laying work near the proposed connection point.
  - The remaining ABWF works in WSD Salt Water Pumping Station, including maintenance platform and external finishes.
  - Dry tests at WSD Salt Water Pumping Station. Wet test after completion of the proposed intake culvert.

- Sheet pile cutting works at Bay5 / Bay 6 interface and excavation down to the formation level for subsequent construction of water plug.
- The diver works between Bay 5 and the installed precast unit (Bay 6).
- The modification work for both east and west wings of staircase ST-01 landing.
- Counterweight installation for movable ramp.
- Installation of landing door for the disabled lift and glass installation.
- Last panel (BHC12) of Eastern Bulkhead Wall.
- Interface coring and shear pin installation for the Eastern Bulkhead Wall.
- The road modification works along Wan Shing Street for HHR Flyover Diversion (Stage 1).
- Placing wearing course along in fount of Gammon Entrance No. 1 and road making.
- Breaking up the existing pavement and disposal for extract sheetpile next to ECO gas filling station.
- Rockfilling by Grade 400 at WCR4 and Grade 200 rockfilling works...
- Placing geotextile at TWCR4.
- Seawall blocks installation at WCR4 & TWCR4.
- iv. During this reporting period, the major work activities for Contract no. HY/2009/15 included:
  - · Construction of EVA
- v. During this reporting period, the major work activities for Contract no. HK/2010/06 included:
  - · Sheet piling works
  - Utility diversion works
  - Road resurfacing works
- vi. During this reporting period, the major work activities for Contract no. HY/2009/19 included:
  - D-wall and Barrette Construction
  - Construction works for Box Culvert T1
  - Construction works for Culvert U1
  - Demolition of parapet at IEC Link
  - Construction of dewatering well for Cut & Cover Tunnel
  - Removal of marine platform
  - Construction of pile cap, column & cross head (Marine)
  - ELS for Cut & Cover Tunnel
  - Laying of 1500φ pipe
  - Launching of segments
  - Unloading segments from derrick
  - Extraction of temporary pile from marine section

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- vii. During this reporting period, the major work activities for Contract no. HK/2012/08 included:
  - · Site preparation works
  - Site survey
  - Marine ground investigation
  - ELS for box culvert La at Lung King Street
  - Dredging
  - Demolition of the existing Expo Drive West Bridge
- viii. During this reporting period, the no major work activities for Contract no. HY/2010/08 was conducted

#### **Noise Monitoring**

- ix. Noise monitoring during daytime and restricted hour were conducted at the stations M1a, M2b, M3a, M4b, M5b and M6 on a weekly basis in the reporting month.
- x. No action and 2 limit level exceedances at M6 HK Baptist Church Henrietta Secondary School were recorded on 9 and 16 July 2013 in this reporting month. The exceedances were concluded as non-project related.

#### Real-time Noise Monitoring

- xi. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.
- xii. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- xiii. 24-hour real time noise monitoring was conducted at RTN2a Hong Kong Electric Centre. Limit level exceedance was recorded was recorded in the reporting month. After checking with contractor, no construction work was conducted at the concerned location during the recorded period. As such, the exceedances were considered to be contributed by near by IEC traffic.

#### Air Quality Monitoring

- xiv. Due to the interruption of electricity supply, the 24hr TSP monitoring at CMA5a was rescheduled from 3 July 2013 to 4 July 2013.
- xv. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 9 and 23 July 2012 at the concerned hours (afternoon for higher daily temperature). No Action and Limit Level was recorded during this reporting month.

- xvi. Due to extension of site boundary by contractor of HY/2009/19, location of air monitoring station CMA1b Oil Street Community Liaison Centre has been finely adjusted on 21 April 2012.
- xvii. The location ID of air monitoring station CMA1b was updated as Oil Street Site Office in April 2013.
- xviii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted at CMA1b Oil Street Site Office; CMA2a Causeway Bay Community Center; CMA3a CWB PRE Site Office Area; CMA4a Society for the Prevention of Cruelty to Animals; CMA5a Children Garden opposite to Pedestrian Plaza; MA1e and MA1w International Finance Centre eastern and western wing on every six days basis.

#### Water Quality Monitoring

- xix. Due to the Strong wind signal no.3 was hoisted on 2 July 2013, water quality monitoring at flood tide was cancelled.
- xx. As confirmed by CWB RSS, the marine pilling works under contract HY/2009/19 was confirmed completed by 4 March 2013. The water quality monitoring at the respective monitoring stations C8 and C9 were temporarily suspended since 30 March 2013.
- xxi. WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended. Upon confirmation with WDII RSS and the IEC, water quality monitoring at relocated intakes monitoring location P1, P3, P4 and P5 were commenced since 24 April 2013.
- xxii. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others were remains unchanged.
- xxiii. Based on the joint inspection on 4 Jan 2012 for the NPR area, the 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 to confirm no water deterioration with respect to NPR was commenced since 7 Jan 2012 and was completed on 6 Feb 2012 water quality monitoring.
- xxiv. Water quality monitoring at WSD10 and WSD15 will be temporary suspended while water quality monitoring at WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 12 onwards;
- xxv. Water quality monitoring at C8 and C9 have been implemented with respect to HY/2009/19 since the marine bore piling work started on 28 Jan 12.
- xxvi. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.
- xxvii. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine

- adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.
- xxviii. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.
- xxix. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui-DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7 and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration.
- xxx. Water quality monitoring at 14 monitoring stations was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in *Table I*.

Table I Summary of Water Quality Monitoring Exceedances in Reporting Month

	Water	Mid-flood				Mid-ebb							
Contract no.	Monitoring	D	0	Turb	idity	S	S	D	0	Turb	idity	S	S
	Station	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01	WSD19	0	0	0	0	0	0	0	0	1	0	0	0
	C1	0	0	0	0	0	0	0	0	0	0	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	C5e	0	0	0	0	0	0	0	0	0	0	0	0
	C5w	0	0	0	0	0	0	0	0	0	0	0	0
Monitoring started on	WSD21	0	0	0	0	0	0	0	0	0	0	0	0
8 Feb 2012	WSD9	0	0	0	0	0	0	0	0	0	0	0	0
	WSD17	0	0	0	0	0	0	0	0	0	0	0	1
HY/2009/15	C7	1	0	0	0	0	0	1	0	0	1	0	0
Total		1	0	0	0	0	0	1	0	1	1	0	1

Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.

- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
- 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8 and C9 were completed on 6 Feb 2012.
- C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
- C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
- WSD7 and WSD20 water quality monitoring were temporarily suspended from 27 Apr 2012.
- xxxi. Investigation found that the exceedances were not project-related. The details of the recorded exceedances can be referred to the **Section 6.4**.

xxxii. Enhanced DO monitoring at 4 monitoring stations in Causeway Bay Typhoon Shelter and Ex-Public Cargo Works Area was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in *Table II*.

Table II Summary of Enhanced Dissolved Oxygen Monitoring Exceedances in Reporting Month

		Mid-f	lood	Mid-ebb		
Contract no.	Water Monitoring Station	D	0	DO		
	Clamon	AL	LL	AL	LL	
	C6	0	0	0	0	
HY/2009/15	C7	1	0	1	0	
111/2009/13	Ex-WPCWA SW	0	4	0	2	
	Ex-WPCWA SE		4	2	0	
Total		6	8	3	2	

xxxiii. There were 9 action level exceedances and 10 limit level exceedances of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedances are not related to the Project works. The details of the recorded exceedances can be referred to the **Section 6.4**.

xxxiv. In response to the Condition 2.18 of the Environmental Permit no. EP-356/2009 requiring that a silt curtain / impermeable barrier system be installed to channel water discharge flow from Culvert L to locations outside the embayment area, a proposed replacement of the requirement with additional dissolved oxygen monitoring has been conducted at three monitoring stations, namely A, B and C between the eastern seawall of Central Reclamation Phase III and the HKCEC Extension since November 2011 under EP-356/2009 so that DO level between the eastern seawall of Central Reclamation Phase II and the HKCEC extension could be continuously monitored.

xxxv. With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit, the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013.

#### Complaints, Notifications of Summons and Successful Prosecutions

xxxvi. There was no environmental complaint received in this reporting month.

#### Site Inspections and Audit

xxxvii. The Environmental Team (ET) conducted weekly site inspections for Contract nos. HK/2009/01, HK/2009/02, HY/2009/15 HK/2010/06, HY/2009/19, HK/2012/08 and HY/2010/08 under EP no. EP-356/2009 in the reporting month. Major observations and recommendations

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made during the audit sessions were rectified by the Contractors. No non-conformance was identified during the site inspections.

#### Future Key Issues

xxxviii. In co

In coming reporting month, the principal work activities of individual contracts are anticipated as follows:

# Contract no. HK/2009/01 - Wan Chai Development Phase II - Central -Wanchai Bypass at HKCEC

#### Marine Works

- Filling works up to +4.0mPD between CH290 to CH370.
- Pre-bored H-pile footing at north side for construction of steel bridge over temporary open channel between CH220 and CH260.
- Reinstatement of existing seawall at Expo Drive East.
- Construction of RC structure proposed box culvert Bay 8 and Bay 9.
- Backfilling to temporary water channel for subsequent demolition of promenade deck and pumping station at HKCEC Water Channel.

Cross-Harbour Watermains Installation (CHA & CHB) and Marine Works at TST

- Connection of pipeline D to existing mains at Wan Chai.
- Connection of Pipeline C to exiting mains at Wan Chai.
- · Connection of Pipeline F to exiting mains at TST.
- Disconnection and capping to existing mains at TST.

#### Cooling Watermains, Salt Watermains and Sewer (On Land)

- XHWM-Stage 4.
- Additional Washout Chamber at VIP drop-off.
- Reinstatement works at B6-2A and B6-3 at Northwest of HKCEC.
- Reinstatement of roadworks at B6-4 West Foyer of HKCEC.
- Works at Zone A1-5C, A1-5A2 and A3-5C.
- Mainlaying works at A1-5C.
- Mainlaying works at Zone A5-5, A5-2, A4-2B, A1-5A2.
- Advance works for mainlaying works in Zone C1-2.
- Mainlaying works at Zone X2-1 when instruction from the Engineer had been received.
- Temporary ducting and cabling works at junction between Expo Drive East and Expo Drive Central.
- Temporary ducting and cabling works at junction between Convention Avenue and Fleming Road.



#### **Tunnel Works**

- Installation of pre-bored H-pile in CWB Stage 2 Atrium, Link.
- Filling of the existing open water channel and Dome.
- Construction of the south Common D-wall.
- Demolition of the Promenade Deck.
- Installation of dewatering wells, observation wells and piezometers at CWB stage 1.
- ELS for Stage 1 CWB.

#### E&M Works

Operation attendance of 60 day for P5.

# Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East

- Full commissioning for P7 cooling water system.
- Full commissioning for P9 cooling water system.
- Remedial works for P8 discharge pipe at WCR1 area.
- Remaining DN800 salt watermins (CHS8A) installation and backfilling works inside Ex-pet Garden.
- All mainlaying works and prepare for connection with the existing DN600 salt watermains at Hung Hing Road.
- All civil works of SWIC and commence wet test of the Pumping Station.
- Facade works for the external wall of WSD Salt Water Pumping Station.
- Construction of Bay 5 Box Culvert N1.
- ABWF works in Ferry Pier.
- Installation of moveable ramp system and disabled lift installation.
- Canopy installation and waterproofing works on Observation Deck.
- Curtain wall (glass) installation.
- Site delivery of critical E&M equipment especially the switchboard.
- LV cable ducting laying for subsequent cable installation by HEC.
- Rockfilling and evelling stone installation for seawall construction at both WCR4 & TWCR4.
- Geotextile installation for temporary reclamation at TWCR4 and commence filing works.
- Precast concrete seawall installation at WCR4 & TWCR4.
- Backfilling and road reinstatement works at Hung Hing Road & Wan Shing Street for successful implementation of HHR Flyover Diversion (Stage 1).

Contract no. HY/2009/15 - Central-Wanchai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)

Construction of EVA

# <u>Contract no. HK/2010/06 – Wan Chai Development Phase II – Central – Wan Chai Bypass over MTR Tsuen Wan Line</u>

- Sheet piling works
- Utility diversion works

# Contract no. HY/2009/19- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

- · D-wall and Barrette Construction
- Construction works for Box Culvert T1
- · Demolition of parapet at IEC Link
- Construction of dewatering well for Cut & Cover Tunnel
- Removal of marine platform
- Construction of pile cap, column & cross head (Marine)
- ELS for Cut & Cover Tunnel
- Installation of dewatering well
- Laying of 1500φ pipe
- · Launching of segments
- · Unloading segments from derrick
- · Extraction of temporary pile from marine section

# Contract no. HK/2012/08 - Wan Chai Development Phase II - Central- Wan Chai Bypass at Wan Chai West

- · Site survey
- Marine ground investigation
- Dredging
- Demolition of the existing Expo Drive West Bridge
- ELS for box culvert La at Lung King Street

### Contract no. HY/2010/08 - Central - Wan Chai Bypass (CWB) - Tunnel (Slip Road 8)

Nil



#### 1 Introduction

### 1.1 Scope of the Report

- 1.1.1. Lam Geotechnics Limited (LGL) has been appointed to work as the Environmental Team (ET) under Environmental Permit no. EP-356/2009 and Further Environmental permit nos. FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009, FEP-05/356/2009, FEP-06/356/2009 and FEP-07/356/2009 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for Wan Chai Development phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008) and in the EM&A Manual of the approved EIA Report for Central-Wan Chai Bypass and Island Eastern Corridor Link (Register No. AEIAR-014/2001).
- 1.1.2. This report presents the environmental monitoring and auditing work carried out in accordance to the Section 10.3 of EM&A Manual and "Environmental Monitoring and Audit Requirements" under Particular Specification Section 27.
- 1.1.3. This report documents the finding of EM&A works for Environmental Permit no. EP-356/2009, Further Environmental Permit no. FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009, FEP-05/356/2009, FEP-06/356/2009 and FEP-07/356/2009 during the period of June 2013 to July 2013. The cut-off date of reporting is at 27<sup>th</sup> of each reporting month.

#### 1.2 Structure of the Report

- **Section 1** *Introduction* details the scope and structure of the report.
- **Section 2 Project Background** summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- **Section 3 Status of Regulatory Compliance** summarizes the status of valid Environmental Permits / Licenses during the reporting period.
- **Section 4** *Monitoring Requirements* summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.
- **Section 5** *Monitoring Results* summarizes the monitoring results obtained in the reporting period.
- **Section 6 Compliance Audit** summarizes the auditing of monitoring results, all exceedances environmental parameters.
- Section 7 Cumulative Construction Impact due to the Concurrent Projects summarizes the relevant cumulative construction impact due to the concurrent activities of the concurrent Projects.

Contract No. HK/2011/07 Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and testing Works (Stage 2) Monthly EM&A Report (July 2013)

**Section 8 Site Inspection** – summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.

**Section 9** *Complaints, Notification of summons and Prosecution* – summarizes the cumulative statistics on complaints, notification of summons and prosecution

Section 10 Conclusion



### 2 Project Background

### 2.1 Background

- 2.1.1. "Wan Chai Development phase II and Central-Wan Chai Bypass" and "Central-Wan Chai Bypass and Island Eastern Corridor Link" (hereafter called "the Project") are Designed Project (DP) under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). The Environmental Impact Assessment (EIA) Reports for Central-Wan Chai Bypass and Island Eastern Corridor Link (Register No. AEIAR-041/2001) and Wan Chai Development phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008) have been approved on 31 August 2001 and 11 December 2008 respectively.
- 2.1.2. The key purpose of Wan Chai Development Phase II (WDII) is to provide land at Wan Chai North and North Point for construction of the Central-Wan Chai Bypass and Island Eastern Corridor Link (CWB). Land formed under the project will be developed as a world-class waterfront promenade joining that at the new Central waterfront for public enjoyment.
- 2.1.3. There is a compelling and present need for the CWB to provide relief to the very congested east-west Connaught Road Central/Harcourt Road / Gloucester Road Corridor (the Corridor) which is currently operating beyond its capacity. The CWB will provide relief to the existing congestion along the Corridor and cater for the anticipated growth of traffic on Hong Kong Island. Without the CWB and its access roads, there will not be sufficient capacity to serve the heavy traffic demands at both strategic and local levels.

### 2.2 Scope of the Project and Site Description

- 2.2.1. The Project is located mainly in Wan Chai North, Causeway Bay and North Point, and is demarcated by Gloucester Road and Victoria Park Road to the south, Fenwick Pier Street to the west and Tong Shui Road Interchange to the east, as shown in *Figure 2.1*.
- 2.2.2. The study area encompasses existing developments along the Wan Chai, Causeway Bay and North Point shorelines. Major land uses include the Hong Kong Convention & Exhibition Centre (HKCEC) Extension, the Wan Chai Ferry Pier, the ex-Wan Chai Public Cargo Working Area (ex-PCWA), the Royal Hong Kong Yacht Club (RHKYC), the Police Officers' Club, the Causeway Bay Typhoon Shelter (CBTS) and commercial and residential developments.

#### 2.2.3. The scope of the Project comprises:

- Land formation for key transport infrastructure and facilities, including the Trunk Road
   (i.e. CWB) and the associated slip roads for connection to the Trunk Road and for
   through traffic from Central to Wan Chai and Causeway Bay. The land formed for the
   above transport infrastructure will provide opportunities for the development of an
   attractive waterfront promenade for the enjoyment of the public
- Reprovisioning / protection of the existing facilities and structures affected by the land formation works mentioned above
- Extension, modification, reprovisioning or protection of existing storm water drainage outfalls, sewerage outfalls and watermains affected by the revised land use and land formation works mentioned above

#### Lam Geotechnics Limited

- Upgrading of hinterland storm water drainage system and sewerage system, which would be rendered insufficient by the land formation works mentioned above
- Provision of the ground level roads, flyovers, footbridges, necessary transport facilities and the associated utility services
- Construction of the new waterfront promenade, landscape works and the associated utility services
- The Trunk Road (i.e. CWB) within the study area and the associated slip roads for connection to the Trunk Road.
- 2.2.4. The project also contains various Schedule 2 DPs that, under the EIAO, require Environmental Permits (Eps) to be granted by the DEP before they may be either constructed or operated. *Table 2.1* summarises the five individual DPs under this Project. *Figure 2.1* shows the locations of these Schedule 2 DPs.

Table 2.1 Schedule 2 Designated Projects under this Project

Item	Designated Project	EIAO Reference	Reason for inclusion
DP1	Central-Wanchai Bypass (CWB) including its road tunnel and slip roads	Schedule 2, Part I, A.1 and A.7	Trunk road and road tunnel more than 800 m in length
DP2	Road P2 and other roads which are classified as primary/district distributor roads	Schedule 2, Part I, A.1	Primary / district distributor roads
DP3	Reclamation works including associated dredging works	Schedule 2, Part I, C.1 and C.12	Reclamation more than 5 ha in size and a dredging operation less than 100 m from a seawater intake point
DP5	Wan Chai East Sewage Outfall	Schedule 2, Part I, F.5 and F.6	Submarine sewage pipelines with a total diameter more than 1,200 mm and include a submarine sewage outfall
DP6	Dredging for the Cross-harbour Water Mains from Wan Chai to Tsim Sha Tsui	Schedule 2, Part I, C.12	A dredging operation less than 100 m from a seawater intake point

#### 2.3 Division of the Project Responsibility

- 2.3.1. Due to the multi-contract nature of the Project, there are a number of contracts sub-dividing the whole works area into different work areas to be commenced. Contractors of individual contracts will be required by the EP holder to apply Further Environmental Permits (FEP) such that the impact monitoring stations are sub-divided accordingly to facilitate the implementation of EM&A programme and to streamline the EM&A reporting for individual FEP holders correspondingly.
- 2.3.2. The details of individual contracts are summarized in *Table 2.2*.

Table 2.2 Details of Individual Contracts under the Project

Contract No.	Contract Title	Associated DP(s)	Construction Commencement Date	
HK/2009/01	HK/2009/01 Wan Chai Development Phase II – Central –Wanchai Bypass at Hong		23 July 2010	
	Kong Convention and Exhibition Centre	DP1, DP2	25 August 2011	
HK/2009/02 Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai		DP3, DP5	5 July 2010	
	East	DP1	26 April 2011	
HY/2009/11	Wan Chai Development Phase II and Central – Wan Chai Bypass – North Point Reclamation	DP3	17 March 2010	
HY/2009/15 Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)		DP3	10 November 2010	
		DP1	13 July 2011	
HK/2010/06	Wan Chai Development Phase II-Central-Wan Chai Bypass over MTR Tsuen Wan Line	DP3	22 March 2011	
04/HY/2006	Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street	DP1	September 2010	
HY/2009/17	Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works.	DP1	5 October 2010	
HY/2009/18	Central – Wan Chai Bypass (CWB) – Central Interchange	DP1	21 April 2011	
HY/2009/19	Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link	DP1	24 March 2011	
HK/2012/08	Wan Chai Development Phase II Central- Wan Chai Bypass at Wan Chai West	DP1,DP2, DP3	March 2013	

### 2.4 Project Organization and Contact Personnel

- 2.4.1. Civil Engineering and Development Department and Highways Department are the overall project controllers for the Wan Chai Development Phase II and Central-Wan Chai Bypass respectively. For the construction phase of the Project, Project Engineer, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.
- 2.4.2. The proposed project organization and lines of communication with respect to environmental protection works are shown in *Figure 2.2*. Key personnel and contact particulars are summarized in *Table 2.3*:

Table 2.3 Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.	Contact Fax
AECOM	Engineer's Representative for WDII	Principal Resident Engineer	Mr. Frankie Fan	2587 1778	2587 1877



Party	Role	Post	Name	Contact No.	Contact Fax
	Engineer's Representative for CWB	Principal Resident Engineer	Mr. Peter Poon	3912 3388	3912 3010
Chun Wo – Leader Joint	Contractor under Contract no. HK/2009/01	Joint Venture Board Representative	Mr. PL Yue	2162 9909	2587 1878
Venture		Deputy Site Agent	Mr Andy Yu	9648 4896	
		Construction Manager	Mr Terry Wong	9757 9846	
		Construction Manager	Mr. Wyman Wong	9627 2467	
		Construction Manager	Mr. Jack Chu	9775 3008	
		Environmental Officer (Compliance Manager)	Mr. Andy Mak	9103 2370	
		Environmental Supervisor	Kwong Weng Kit	6253 3356	
CRGL Contrac	Contractor under Contract no.	Deputy Project Manager	Mr. Chan Sing Cho	3658 3002	2827 9996
Venture	Joint HK/2009/02 Venture	Quality & Environmental Manager	Mr. C.P. Ho	9191 8856	
China	Contractor under	Project Director	K C Cheung	3557 6399	2566 2192
State Constructi on Engineerin g (HK) Ltd.	Contract no. HY/2009/15	Site Manager	J H Chen	3557 6368	
		Contractor's Representative	Andrew Wong	3557 6358	
		Head of Construction Manager	Roger Cheung	3557 6371	
		Senior Construction Manager	Gene Cheung	3557 6395	
		Environmental Officer	Mr. Daniel Sin	3557 6347	
Gammon	Contractor under	Project Manager	Mr. Paul Lui	9095 7922	2529 2880
-Leader JV	Contract no. HK/2010/06	Site Agent	Mr. Keith Tse	2529 2068	
		Environmental Officer	Clement Pang	9735 9200	
		Environmental Supervisor	Jacky Cheung	9779 2292	
Chun Wo – CRGL –	Contractor under Contract no.	Project Manager	Mr. Rayland Lee	3758 8879	



Party	Role	Post	Name	Contact No.	Contact Fax
MBEC_ Joint	HY/2009/19	Site Agent	Paul Yu	9456 9819	
Venture		Environmental Engineer	Mr. Calvin Leung	9286 9208	
		Environmental Manager /	Mr. M.H. Isa	9884 0810	
		Environmental Officer			
		Construction Manager (Marine)	William Luk	9610 1101	
		Construction Manager (Land)	Patrick Cheung	9643 3012	
		Construction Manager (Land)	Eric Fong	6191 9337	
		Operation Manager (Land)	Yung Kwok Wah	9834 1010	
China State-	Contractor	Project Director	Andrew Tse	9137 1811	2877 1522
Leader JV	under Contract no. HK/2012/08	Project Manager	Victor Wu	9193 8871	
		Deputy Project Manager	George Cheung	9268 1918	
		Site Agent	Paul Lui	9095 7922	
		Environmental Officer	James Ma	9130 9549	
		Environmental Supervisor	Ching Man, Chan	6050 4919	
China State	Contractor under Contract no. HY/2010/08	Project Director	Cheung Kit Cheung	3557 6399	2566 8061
		Project Manager	Chan Ying Lun	9812 0592	
		Deputy Project Manager	Chris Leung	3467 4299	
		Site Agent	Dave Chan	3467 4277	
		Environmental Officer	C.M. Wong	3557 6464	
		Environmental Supervisor	Louis Lam Tsz Kwan	3557 6470	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3465 2888	3465 2899
Lam Geotechni cs Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331



- 2.4.3. For Contract no. HK/2009/01, the principal work activities in this reporting month included:
  - Marine Works (at Wan Chai)
    - Rockfilling at the northern part of HKCEC3E (East of HKCEC) between CH290 and CH385.
    - Structural blinding for construction of proposed box culvert Bay 8 and Bay 9 was poured and dewatering and grouting curtain wall.
    - Pre-drilling work for steel bridge on the top of temporary open channel along Convention Avenue.
    - 4 nos. of drill holes for D-wall and pre-bored H-piles in stage 3.
    - Mitigation measures such as widening the waterway at reclamation area "HKCEC3E", installation of pumps and water pipe for pumping seawater from Victoria Harbour to temporary water channel to enhance the seawater circulation for lower the seawater temperature at the temporary water channel.
    - Dumping of ice blocks into temporary water channel to cool down the seawater at the temporary water channel.

#### Cross-Harbour Watermains Installation (CHA & CHB) and Marine Works (at TST)

- Minor defect rectification works for submarine pipeline A and B (removal of silt). WSD
  accepted the rectification work.
- Testing of ICCP monitoring system and SCADA for new provided cross harbour watermain was carried out with WSD. Damaged isolation joints would be delivered to HK.

#### XHWM, Cooling Watermains, Salt Watermains and Sewer (On Land)

- XHWM-Stage 1 connection. Stage 2 and 3 would be connected.
- Pipework for Additional Washout Chamber at VIP drop-off and the excavation and shoring for the structure.
- Reinstatement works at B6-2B at Northwest of HKCEC.
- Planter reinstatement, kerbworks, hard paving at West Foyer of HKCEC.
- Sewer laying works in Zone B6-2A, B6-4, B6-6 B6-5C & B6-6 at west of HKCEC area.
- Cooling main works in Zone C1-2.
- Salt watermain laying works in Zone A1-5C.
- Salt watermain laying works in Zone A3-5C.
- Salt watermain laying works in Zone A3-1, A5-2 and A1-5C.
- Salt watermain laying works in A4-1B, 2B.
- Temporary ducting and cabling works at junction between Expo Drive East and Expo Drive Central. Another work front at night.



#### **Tunnel Works**

- Installation of pre-bored H-pile in CWB Stage 1 underneath Atrium Link (from CH80 to CH120).
- Installation of pre-bored H-pile in CWB Stage 2 Atrium Link (from CH120 to CH220).
- Construction of bulkhead wall at CH3129 (18 panels).
- Filling of the existing open water channel at CH260.
- Construction of the Common D-wall.
- Demolition of the Promenade Deck.
- Installation of dewatering wells, observation wells and piezometers at CWB Stage 1.

#### E & M

- Operation attendance of 60 day.
- Switchover for cooling system P5.
- · The old pumping house for EMSD and CP.
- 2.4.4. For Contract no. HK/2009/02, the principal work activities in this reporting month included:
  - Modification work of PTI at Expo Drive East.
  - Modification of existing covered walkway along Expo Drive East.
  - The first and second attempt of full commissioning of P9 cooling water system.
  - Minor remedial works for commissioning for both P7 and P8 cooling water system.-
  - The wall and top slab at Salt Water Intake Culvert Bay 1B.
  - Installation of guide rails for preliminary screens of Salt Water Intake Chamber No.1 at Bay 2A.
  - The leakage test of stoplogs..
  - The base slab of proposed wash out chamber near CHS8A160.
  - The pipe laying work near the proposed connection point.
  - The remaining ABWF works in WSD Salt Water Pumping Station, including maintenance platform and external finishes.
  - Dry tests at WSD Salt Water Pumping Station. Wet test after completion of the proposed intake culvert.
  - Sheet pile cutting works at Bay5 / Bay 6 interface and excavation down to the formation level for subsequent construction of water plug.
  - The diver works between Bay 5 and the installed precast unit (Bay 6).
  - The modification work for both east and west wings of staircase ST-01 landing.
  - Counterweight installation for movable ramp.
  - Installation of landing door for the disabled lift and glass installation.
  - Last panel (BHC12) of Eastern Bulkhead Wall.
  - Interface coring and shear pin installation for the Eastern Bulkhead Wall.



- The road modification works along Wan Shing Street for HHR Flyover Diversion (Stage 1).
- Placing wearing course along in fount of Gammon Entrance No. 1 and road making.
- Breaking up the existing pavement and disposal for extract sheetpile next to ECO gas filling station.
- Rockfilling by Grade 400 at WCR4 and Grade 200 rockfilling works...
- · Placing geotextile at TWCR4.
- Seawall blocks installation at WCR4 & TWCR4.
- 2.4.5. For Contract no. HY/2009/15, the principal work activities in this reporting month included:
  - Construction of EVA
- 2.4.6. For Contract no. HK/2010/06, the principal work activities in this reporting month included:
  - Sheet piling works
  - · Utility diversion works
  - Road resurfacing works
- 2.4.7. For Contract no. HY/2009/19, the principal work activity in this reporting month included:
  - D-wall and Barrette Construction
  - Construction works for Box Culvert T1
  - Construction works for Culvert U1
  - Demolition of parapet at IEC Link
  - Construction of dewatering well for Cut & Cover Tunnel
  - Removal of marine platform
  - Construction of pile cap, column & cross head (Marine)
  - ELS for Cut & Cover Tunnel
  - Laying of 1500φ pipe
  - Launching of segments
  - Unloading segments from derrick
  - Extraction of temporary pile from marine section
- 2.4.8. For Contract no. HK/2012/08, the principal work activity in this reporting month included:
  - · Site preparation works
  - Site survey
  - · Marine ground investigation
  - ELS for box culvert La at Lung King Street
  - Dredging



- Demolition of the existing Expo Drive West Bridge
- 2.4.9. During this reporting period, the no major work activities for Contract no. HY/2010/08 was conducted
- 2.4.10. In coming reporting month, the principal work activities of individual contracts are anticipated as follows:

# Contract no. HK/2009/01 - Wan Chai Development Phase II - Central -Wanchai Bypass at HKCEC

#### Marine Works

- Filling works up to +4.0mPD between CH290 to CH370.
- Pre-bored H-pile footing at north side for construction of steel bridge over temporary open channel between CH220 and CH260.
- Reinstatement of existing seawall at Expo Drive East.
- Construction of RC structure proposed box culvert Bay 8 and Bay 9.
- Backfilling to temporary water channel for subsequent demolition of promenade deck and pumping station at HKCEC Water Channel.

Cross-Harbour Watermains Installation (CHA & CHB) and Marine Works at TST

- Connection of pipeline D to existing mains at Wan Chai.
- Connection of Pipeline C to exiting mains at Wan Chai.
- Connection of Pipeline F to exiting mains at TST.
- Disconnection and capping to existing mains at TST.

Cooling Watermains, Salt Watermains and Sewer (On Land)

- XHWM-Stage 4.
- Additional Washout Chamber at VIP drop-off.
- Reinstatement works at B6-2A and B6-3 at Northwest of HKCEC.
- Reinstatement of roadworks at B6-4 West Foyer of HKCEC.
- Works at Zone A1-5C, A1-5A2 and A3-5C.
- Mainlaying works at A1-5C.
- Mainlaying works at Zone A5-5, A5-2, A4-2B, A1-5A2.
- Advance works for mainlaying works in Zone C1-2.
- Mainlaying works at Zone X2-1 when instruction from the Engineer had been received.
- Temporary ducting and cabling works at junction between Expo Drive East and Expo Drive Central.
- Temporary ducting and cabling works at junction between Convention Avenue and

Fleming Road.

#### **Tunnel Works**

- Installation of pre-bored H-pile in CWB Stage 2 Atrium, Link.
- Filling of the existing open water channel and Dome.
- · Construction of the south Common D-wall.
- Demolition of the Promenade Deck.
- Installation of dewatering wells, observation wells and piezometers at CWB stage 1.
- ELS for Stage 1 CWB.

#### **E&M Works**

Operation attendance of 60 day for P5.

# <u>Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East</u>

- Full commissioning for P7 cooling water system.
- Full commissioning for P9 cooling water system.
- Remedial works for P8 discharge pipe at WCR1 area.
- Remaining DN800 salt watermins (CHS8A) installation and backfilling works inside Ex-pet Garden.
- All mainlaying works and prepare for connection with the existing DN600 salt watermains at Hung Hing Road.
- All civil works of SWIC and commence wet test of the Pumping Station.
- Facade works for the external wall of WSD Salt Water Pumping Station.
- Construction of Bay 5 Box Culvert N1.
- ABWF works in Ferry Pier.
- Installation of moveable ramp system and disabled lift installation.
- Canopy installation and waterproofing works on Observation Deck.
- · Curtain wall (glass) installation.
- Site delivery of critical E&M equipment especially the switchboard.
- LV cable ducting laying for subsequent cable installation by HEC.
- Rockfilling and evelling stone installation for seawall construction at both WCR4 & TWCR4.
- Geotextile installation for temporary reclamation at TWCR4 and commence filing works.
- Precast concrete seawall installation at WCR4 & TWCR4.
- Backfilling and road reinstatement works at Hung Hing Road & Wan Shing Street for successful implementation of HHR Flyover Diversion (Stage 1).

# <u>Contract no. HY/2009/15 - Central-Wanchai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)</u>

Construction of EVA

# Contract no. HK/2010/06 - Wan Chai Development Phase II - Central - Wan Chai Bypass over MTR Tsuen Wan Line

- · Sheet piling works
- · Utility diversion works

## Contract no. HY/2009/19 – Central- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

- D-wall and Barrette Construction
- Construction works for Box Culvert T1
- Demolition of parapet at IEC Link
- Construction of dewatering well for Cut & Cover Tunnel
- Removal of marine platform
- Construction of pile cap, column & cross head (Marine)
- ELS for Cut & Cover Tunnel
- Installation of dewatering well
- Laying of 1500φ pipe
- Launching of segments
- · Unloading segments from derrick
- · Extraction of temporary pile from marine section

# Contract no. HK/2012/08 - Wan Chai Development Phase II - Central- Wan Chai Bypass at Wan Chai West

- Site survey
- Marine ground investigation
- Dredging
- Demolition of the existing Expo Drive West Bridge
- ELS for box culvert La at Lung King Street

#### Contract no. HY/2010/08 - Central - Wan Chai Bypass (CWB) - Tunnel (Slip Road 8)

Nil

### 3 Status of Regulatory Compliance

### 3.1 Status of Environmental Licensing and Permitting under the Project

3.1.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in *Table 3.1*.

Table 3.1 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project

Permits and/or Licences	Reference No.	Issued Date	Status
Environmental Permit	EP-356/2009	30 Jul 2009	Valid
Environmental Permit	EP-364/2009/A	4 Aug 2010	Superseded
Environmental Permit	EP-364/2009/B	20 Sep 2012	Valid
Environmental Permit	EP-364/2009	17 Aug 2009	Superseded
Environmental Permit	EP-376/2009	13 Nov 2010	Valid
Further Environmental Permit	FEP-01/356/2009	18 Feb 2010	Surrendered
Further Environmental Permit	FEP-02/356/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	Valid
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	Valid
Further Environmental Permit	FEP-01/364/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-02/364/2009	21 Apr 2010	Valid
Further Environmental Permit	FEP-03/364/2009	12 Jul 2010	Surrendered
Further Environmental Permit	FEP-04/364/2009/A	14 Oct 2010	Surrendered
Further Environmental Permit	FEP-05/364/2009/A	15 Nov 2010	Valid
Further Environmental Permit	FEP-06/364/2009/A	22 Nov 2010	Valid
Further Environmental Permit	FEP-07/364/2009/B	20 Sep 2012	Valid
Further Environmental Permit	FEP-08/364/2009/A	15 Jun 2012	Valid
Further Environmental Permit	FEP-06/356/2009	5 Mar 2013	Valid
Further Environmental Permit	FEP-07/356/2009	26 July 2013	Valid
Further Environmental Permit	FEP-10/364/2009/B	26 July 2013	Valid



- 3.1.2. Due to the multi-contract nature of the Project, the status of permits and/or licences under the individual contract(s) are presented as below:
  - Contract no. HK/2009/01 Wan Chai Development Phase II Central -Wanchai Bypass at HKCEC
- 3.1.3. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2009/01 under FEP-02/356/2009 are shown in *Table 3.4* and *Table 3.5*.

Table 3.4 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/01

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-02/356/2009	24 Mar 2010	N/A	Valid
	FEP-02/364/2009	21 Apr 2010	N/A	Valid
Notification of Works Under APCO	313088	06 Jan 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0166-13	14 Feb 2013	16 Feb 2013 to 13 Aug 2013	Valid
	GW-RS0274-13	19 Mar 2013	25 Mar 2013 to 24 Sept 2013	Valid
	GW-RS0310-13	25 Mar 2013	27 Mar 2013 to 25 Sept 2013	Valid
	GW-RE0274-13	26 Mar 2013	30 Mar 2013 to 29 Sept 2013	Valid
	GW-RS-0052-13	18 Jan 2013	20 Jan 2013 to 19 July 2013	Expired
	GW-RE0371-13	9 Apr 2013	13 Arp 2013 to 12 Oct 2013	Valid
	GW-RS0368-13	11 Apr 2013	13 Apr 2013 to 7 Oct 2013	Valid
	GW-RS0372-13	12 Apr 2013	15 Apr 2013 to 7 Oct 2013	Valid
	GW-RS0470-13	29 Apr 2013	9 May 2013 to 24 Oct 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0501-13	9 May 2013	11 May 2013 to 8 Nov 2013	Valid
	GW-RS0510-13	14 May 2013	15 May 2013 to 13 Nov 2013	Valid
	GW-RS0579-13	29 May 2013	29 May 2013 to 26 Nov 2013	Replace by GW-RS0797-13
	GW-RS0797-13	16 Jul 2013	18 Jul 2013 to 15 Jan 2014	Valid
	GW-RS0626-13	13 Jun 2013	15 Jun 2013 to 12 Dec 2013	Valid
	GW-RS0631-13	14 Jun 2013	14 Jun 2013 to 13 Dec 2013	Valid
	GW-RS0651-13	21 Jun 2013	22 Jun 2013 to 20 Dec 2013	Valid
	GW-RS0773-13	16 Jul 2013	20 July 2013 to 19 Jan 2014	Valid
	GW-RS0807-13	24 Jul 2013	25 Jul 2013 to 21 Jan 2014	Valid
	GW-RE0757-13	23 Jul 2013	25 Jul 2013 to 31 Aug 2013	Valid
Discharge Licence	WT00006220-2010	18 Mar 2010	31 Mar 2015	Valid
	WT00009641-2011	24 Jul 2011	31 Jul 2016	Valid
Billing account under Waste Disposal Ordinance	7010069	21 Jan 2010	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Registration as a Chemical Waste Producer	WPN5213-134-C3585-01	21 Jan 2010	N/A	Valid

Table 3.5 Summary of submission status under FEP-02/356/2009 Condition

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	13 Apr 2010
Condition 2.7	Works Schedule and Location Plan	8 Apr 2010
	Silt Curtain Deployment Plan (Rev. 5)	24 Aug 2012
Condition 2.8	Silt Curtain Deployment Plan (Rev. 4)	12 July 2012
Condition 2.8	Silt Curtain Deployment Plan (Rev. 3)	27 June 2012
	Silt Curtain Deployment Plan	19 Apr 2010
Condition 2.9	Silt Screen Deployment Plan (Rev.4)	15 Nov 2012
Condition 2.9	Silt Screen Deployment Plan	19 Apr 2010
Canalitiana 0.0	Supplementary Document on Silt Curtain and Silt Screen Deployment Plan	19 Jul 2010
Conditions 2.8 and 2.9	Report on Field Testing for Silt Curtain	26 Aug 2010
	Report on Field Testing for Silt Curtain (Rev. A)	15 Nov 2010
Condition 2.12(d)	Alternative Proposal on Concurrent Dredging for Sewage Pipeline and Cross Harbour Water Mains	15 Apr 2011
Condition 2.17	Noise Management Plan	23 Apr 2010
Condition 2.18	Landscape Plan (Erection of Decorative Screen Hoarding along Construction Site around Hong Kong Exhibition and Convention Centre)	15 May 2010
	Landscape Plan (Night-time Lighting)	22 Oct 2010
	Landscape Plan (Rev. B)	15 Nov 2010
Condition 1.12	Notification of Commencement Date	20 Jun 2011
Condition 2.6 to 2.8	Management Organization, Works Schedule and Location Plan	18 May 2011
Condition 2.9	Noise Management Plan	10 Jun 2011

# Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at WanChai East

3.1.4. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2009/02 under FEP-03/356/2009 are shown in *Table 3.6* and *Table 3.7*.

Table 3.6 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/02

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	N/A	Valid
	FEP-01/364/2009	24 Mar 2010	N/A	Valid
Notification of Works Under APCO	313962	2 Feb 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS1381-12	31 Dec 2012	9 Jan 2013 to 7 July 2013	Expired
	GW-RS1384-12	31 Dec 2012	17 Jan 2013 to 6 July 2013	Expired
	GW-RS0062-13	17 Jan 2013	21 Jan 2013 to 15 July 2013	Expired
	GW-RS0155-13	15 Feb 2013	16 Feb 2013 to 14 Aug 2013	Valid
	GW-RS0241-13	11 Mar 2013	13 Mar 2013 to 10 Sept 2013	Valid
	GW-RS0251-13	11 Mar 2013	26 Mar 2013 to 24 Sept 2013	Valid
	GW-RS0206-13	22 Feb 2013	24 Feb 2013 to 19 Aug 2013	Valid
	GW-RS0269-13	23 Mar 2013	23 Mar 2013 to 19 Sept 2013	Valid
	GW-RS0340-13	28 Mar 2013	10 Apr 2013 to 8 Oct 2013	Valid
	GW-RS0373-13	9 Apr 2013	19 Apr 2013 to 17 Oct 2013	Valid
	GW-RS0437-13	26 Apr 2013	1 May 2013 to 29 Oct 2013	Valid
	GW-RS0467-13	6/5/2013	17 May 2013 to 16 Nov 2013	Valid
	GW-RS0517-13	20/5/2013	27 May 2013 to 26 Nov 2013	Valid
	GW-RS0521-13	20/5/2013	22 May 2013 to 21 Nov 2013	Valid
	GW-RS0530-13	20/5/2013	28 May 2013 to 27 Nov 2013	Valid
	GW-RE0508-13	21/5/2013	30 May 2013 to 29 Nov 2013	Valid
	GW-RS0525-13	21/5/2013	30 May 2013 to 29 Nov 2013	Valid
	GW-RS0538-13	21/5/2013	30 May 2013 to 29 Nov 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0539-13	23/5/2013	6 June 2013 to 5 Dec 2013	Valid
	GW-RS0554-13	23/5/2013	6 June 2013 to 5 Dec 2013	Valid
	GW-RS0586-13	27/5/2013	28 May 2013 to 22 Nov 2013	Valid
	GW-RS0633-13	14/6/2013	16 June 2013 to 13 Dec 2013	Valid
	GW-RS0739-13	09/07/2013	17 July 2013 to 16 Jan 2014	Valid
	GW-RS0708-13	03/07/2013	03 July 2013 to 01 Jan 2014	Valid
	WT00006249-2010	22 Mar 2010	31 Mar 2015	Valid
	WT00006436-2010	15 Apr 2010	30 Apr 2015	Valid
Discharge Licence	WT00006673-2010	14 May 2010	31 Mar 2015	Cancelled
	WT00006757-2010	28 May 2010	31 May 2015	Valid
	WT00007129-2010	28 July 2010	31 Jul 2015	Valid
	WT00008982-2011	26 April 2011	30 April 2016	Valid
	WT00009691-2011	1 Aug 2011	31 July 2016	Valid
Billing Account under Waste Disposal Ordinance (Land)	7010255	10 Feb 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance (Marine)	7011496	6 Oct 2010	N/A	Valid
Registration as Chemical Waste Producer (Wan Chai)	WPN5213-135-C3 593-01	10 Mar 2010	N/A	Valid
Registration as Chemical Waste Producer (TKO 137)	WPN5213-839-C3 593-02	22 Sep 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/14-014	20 May 2013	29 May 2013 to 28 Nov 2013	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/14-033	28 June 2013	6 July 2013 to 5 August 2013	Valid

Table 3.7 Summary of submission status under FEP-03/356/2009 Condition

EP Condition	Submission	Date of Submission
Condition 1.12	Commencement Date of Construction of Marine Works	8 April 2010
Condition 2.6	Management Organization of Main Construction Companies	10 April 2010
Condition 2.7	Works Schedule and Location Plans	8 April 2010
Condition 2.8	Silt Curtain Deployment Plan (Revision A)	20 April 2010
	Silt Curtain Deployment Plan (Revision B)	25 May 2010
	Silt Curtain Deployment Plan (Revision C)	14 Jun 2010



EP Condition	Submission	Date of Submission
	Silt Curtain Deployment Plan (Revision H)	15 Feb 2011
	Silt Curtain Deployment Plan (Revision I)	17 Nov 2011
	Silt Curtain Deployment Plan (Revision J)	15 Feb 2012
	Silt Curtain Deployment Plan (Revision K)	3 May 2012
	Silt Curtain Deployment Plan (Revision L)	25 Oct 2012
	Silt Curtain Deployment Plan (Revision M)	30 Nov 2012
	Silt Screen Deployment Plan	21 April 2010
	Supplementary Information for Existing WSD Salt Water Intakes at Quarry Bay and Sai Wan Ho	5 Oct 2010
	Silt Screen Deployment Plan (Revision B)	15 Feb 2012
	Silt Screen Deployment Plan (Revision C)	3 May 2012
	Silt Screen Deployment Plan (Revision D)	10 Dec 2012
Condition 2.17	Noise Management Plan	6 May 2010
	Landscape Plan (Decorative Screen Hoarding)	11 May 2010
Condition 2.18	Landscape Plan (Control of Night Time Lighting)	2 June 2010
Condition 2.16	Landscape Plan (Combined Version)	20 July 2011
	Landscape Plan (Combined Version)	5 Aug 2011
	Acknowledge of Submission	22 Aug 2011

# <u>Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)</u>

3.1.5. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HY/2009/15 under EP-356/2009 are shown in *Table* 3.8 and *Table* 3.9.

Table 3.8 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/15

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	N/A	Valid
Notification of Works Under APCO	321822	24 Sep 2010	N/A	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Construction Noise Permit (CNP) for breakwater removal works at Eastern Breakwater of CBTS	GW-RS0325-13	27 Mar 2013	29 Mar 2013 to 27 Sep 2013	Cancelled
	GW-RS0798-13	18 Jul 2013	19 Jul 2013 to 18 Jan 2014	Valid
Construction Noise Permit (CNP) for ELS and rock breaking works at TS4/ME4	GW-RS0276-13	19 Mar 2013	19 Mar 2013 to 7 Sep 2013	Cancelled
Construction Noise Permit (CNP) for Pre-treatment, ELS and rock breaking works at TS4/ME4	GW-RS0434-13	23 Apr 2013	23 Apr 2013 to 16 Oct 2013	Cancelled
	GW-RS0705-13	28 Jun 2013	02 Jul 2013 to 31 Dec 2013	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C116 9-35	15 Nov 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7011553	30 Sep 2010	27 Sep 2010 to 27 Jan 2016	Valid
Billing Account under Waste Disposal Ordinance (Dumping by Vessel)	7011761	25 Mar 2013	17 Apr 2013 to 16 Jul 2013	Expired
	7011761	21 Jun 2013	17 Jul 2013 to 16 Oct 2013	Valid
Dumping Permit (Type 1 –	EP/MD/13-113	22 Jan 2013	24 Jan 2013 to 23 Jul 2013	Expired
Open Sea Disposal)	EP/MD/14-034	16 Jul 2013	24 Jul 2013 to 23 Jan 2014	Valid
Dumping Permit (Type 1 – Open Sea Disposal and Type 2 – Confined Marine Disposal)	EP/MD/14-035	16 Jul 2013	24 Jul 2013 to 23 Aug 2013	Valid

Table 3.9 Summary of submission status under FEP-04/356/2009 Condition

FEP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	30 Sep 2010
	Amendment for Management Organization of Main Construction Companies	16 May 2011
Condition 2.7	Works Schedule and Location Plans	27 Oct 2010
	Amendment for Works Schedule and Location Plans	12 Nov 2010
Condition 2.8	Silt Curtain Deployment Plan	30 Nov 2010
	Amendment for Silt Curtain Deployment Plan	24 Feb 2011
	Amendment for Silt Curtain Deployment Plan	11 May 2011
	Amendment for Silt Curtain Deployment Plan	11 Sep 2012
	Amendment for Silt Curtain Deployment Plan	30 Oct 2012



FEP Condition	Submission	Date of Submission
Condition 2.9	dition 2.9 Silt Screen Deployment Plan	
	Amendment for Silt Screen Deployment Plan	18 Feb 2011
	Amendment for Silt Screen Deployment Plan	15 Jun 2011
Condition 2.18	Condition 2.18 Proposal for the Removal of Odorous Sediment and Slime	
	Amendment for Proposal for the Removal of Odorous Sediment and Slime	8 Mar 2011
	Amendment for Proposal for the Removal of Odorous Sediment and Slime	2 Aug 2011
Condition 2.21	Landscape Plan	18 Feb 2011
Condition 2.23	Noise Management Plan	20 Oct 2010
Condition 2.23	Amendment for Noise Management Plan	27 Jan 2011

3.1.6. Implementation status of the recommended mitigation measures during this reporting period is presented in *Appendix 3.1*.

<u>Contract no. HK/2010/06 – Wan Chai Development Phase II – Central –Wanchai Bypass over MTR Tsuen Wan Line</u>

3.1.7. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2010/06 under EP-356/2009 are shown in *Table 3.10* and *Table 3.11*.

Table 3.10 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2010/06

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	N/A	Valid
r druier Environmentar r ennit	FEP-08/364//2009/A	15 June 2012	N/A	Valid
Notification of Works Under APCO	326344	18 Jan 2011	N/A	Valid
Construction Noise Permit (CNP) for piling equipment	PP-RS0001-13	3 Jan 2013	6 Jan 2013 to 5 Jul 2013	Expired
	PP-RS0017-13	19 June 2013	6 Jul 2013 to 5 Jan 2014	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0056-13	14 Jan 2013	16 Jan 2013 to 12 Jul 2013	Expired
	GW-RS0444-13	30 Apr 2013	12 May 2013 to 3 Nov 2013	Valid
	GW-RS0531-13	24 May 2013	26 May 2013 to 19 Nov 2013	Valid
Billing Account under Waste Disposal Ordinance	7012338	16 Feb 2011	N/A	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Registration as Chemical Waste Producer	WPN5213-134-G25 33-01	11 Feb 2011	N/A	Valid
Water Discharge Licence	WT00010905-2011	4 Nov 2011	31 July 2016	Valid`

Table 3.11 Summary of submission status under EP-356/2009 and FEP-05/356/2009 Condition

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	29 April 2013
Condition 2.7	Works Schedule and Location Plans	11 March 2011
Condition 2.8	Revised Silt Curtain Deployment Plan	31 August 2011
	Revised Silt Curtain Deployment Plan	22 October 2012
	Revised Silt Curtain Deployment Plan	26 November 2012
	Full Silt Curtain Deployment Plan	28 January 2013
Condition 2.9	Silt Screen Deployment Plan	11 April 2011
Condition 2.23	Noise Management Plan	11 March 2011

# Contract no. HY/2009/19 - Central- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

3.1.8. Summary of the current status on licences and/or permits on environmental protection pertinent for contract no. HY/2009/19 is shown in *Table 3.12*.

<u>Table 3.12</u> Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/19

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
Further Environmental Permit	FEP-07/364/2009/B	20 Sep 2012	Granted	Valid
Notification of Works Under APCO	326160	24 Jan 2011	Notified	Valid
Construction Noise Permit (CNP) (For D-wall construction) (Portion I, VII, VIII & IX)	GW-RS0286-13	15-Mar-12	14-Sep-13	Cancelled



Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
	GW-RS0503-13	21-May-12	20-Nov-13	Valid
Construction Noise Permit (CNP) (For Bored pile construction at Portion III)	GW-RS0013-13	08-Jan-13	07-Jul-13	Expired
	GW-RS0767-13	11-Jul-13	10-Jan-14	Valid
Construction Noise Permit (CNP) (For Watson Road)	GW-RS0528-12	26-May-13	24-Nov-13	Valid
Construction Noise Permit (CNP) (For IEC)	GW-RS0046-13	18-Jan-13	10-Jul-13	Expired
	GW-RS0706-13	11-Jul-13	10-Jan-14	Valid
Construction Noise Permit (CNP) (For IEC Parapet Removal – Loading/Unloading)	GW-RS0365-13	21-Apr-13	20-Oct-13	Valid
Construction Noise Permit (CNP)	GW-RS0010-13	08-Jan-13	07-Jul-13	Cancelled
(For Portion Vi Marine)	GW-RS0337-13	05-May-13	01-Oct-13	Cancelled
	GW-RS0724-13	08-Jul-13	07-Jan-14	Valid
Discharge Licence (Land)	WT00010093-2011	17 Aug 2012	30-Sept-16	Valid
Discharge Licence (Sea)	WT00010865-2011	03 Nov 2011	30-Nov-16	Valid
C&D Waste Disposal	7012306	10 Feb 2011	Registered	-
Vessel Disposal	7013285	21 July 2011	Registered	-
Registration as Chemical Waste Producer	5213-151-C3654-01	24 Mar 2011	Registered	-
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/14-013	20 May 2013	29 Jun 2013	Expired
Dumping Permit (Tunnel) (Type 1 – Open Sea Disposal)	EP/MD/14-019	10 Jun 2013	09 Dec 2013	Valid
Dumping Permit (Tunnel) (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/14-018	10 Jun 2013	09 Jul 2013	Expired
	EP/MD/14-036	16 Jul 2013	15 Aug 2013	Valid



# <u>Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West</u>

3.1.9. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2012/08 under EP-356/2009 are shown in *Table* 3.13 and *Table* 3.14.

<u>Table 3.1</u>3 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2012/08

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-06/356/2009	5 Mar 2013	N/A	Valid
Notification of Works Under APCO	355439	4 Feb 2013	N/A	Valid
Registration as a Chemical Waste Producer	5213-134-C3790-01	8 Mar 2013	N/A	Valid
Billing Account under Waste Disposal Ordinance	7016883	18 Feb 2013	18 Jul 2017	Valid
Construction Noise Permit	GW-RS0703-13	3 Jul 2013	4 Jul 2013 to 2 Jan 2014	Valid
Construction Noise Permit	GW-RS0824-13	29 Jul 2013	30 Jul 2013 to 28 Jan 2014	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/14-008	23 May 2013	24 Nov 2013	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) &	EP/MD/14-025	23 Jun 2013	24 Jul 2013	Expired
Type 2 – Confined Marine disposal)	EP/MD/14-038	22 Jul 2013	24 Aug 2013	Valid

Table 3.14 Summary of submission status under EP-356/2009 and FEP-06/356/2009 Condition

FEP Condition	Submission	Date of Submission
Condition 2.8	Silt Curtain Deployment Plan	Deposited to EPD on 13 May 2013
Condition 2.9	Silt Screen Deployment Plan	Deposited to EPD on 16 May 2013
Condition 2.23	Noise Management Plan	Deposited to EPD on 22 Apr 2013
Condition 2.24	Landscape Plan	Deposited to EPD on 31 May 2013

## Contract no. HY/2010/08 - Central - Wan Chai Bypass (CWB) - Tunnel (Slip Road 8)

3.1.10. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HY/2010/08 under EP-356/2009 are shown in Table 3.15.

Table 3.15 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2010/08

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-07/356/2009	26 Jul 2013	NA	Valid
	FEP-10/364/2009/B	26 Jul 2013	NA	Valid
Notification of Works Under APCO	357176	2 Apr 2013	NIL	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C11 69-44	27 Mar 2013	NIL	Valid
Billing Account under Waste Disposal Ordinance	7017170	27 Mar 2013	NIL	Valid
Water Discharge Licence	WT0001651-2013	26 Apr 2013	NIL	Valid



## **Monitoring Requirements**

#### 4.1 Noise Monitoring

#### NOISE MONITORING STATIONS

4.1.1. The noise monitoring stations for the Project are listed and shown in *Table 4.1* and *Figure 4.1*. *Appendix 4.1* shows the established Action/Limit Levels for the monitoring works.

**Table 4.1 Noise Monitoring Station** 

Station	Description
M1a	Harbour Road Sports Centre
M2b	Noon Gun Area
МЗа	Tung Lo Wan Fire Station
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School

#### REAL-TIME NOISE MONITORING STATIONS

- 4.1.2. The real-time noise monitoring stations for the Project are listed and shown in *Table 4.2* and *Figure 4.1*. *Appendix 4.1* shows the established Action/Limit Levels for the monitoring works.
- 4.1.3. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- 4.1.4. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.

Table 4.2 Real Time Noise Monitoring Station

District	Station	Description
Tin Hau	RTN1	FEHD Hong Kong Transport Section Whitfield Depot
North Point	RTN2	Oil Street Community Liaison Centre
North Point	RTN2a	Electric Centre

#### NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

4.1.5. The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level (L<sub>eq</sub>). L<sub>eq (30 minutes)</sub> shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time





- periods,  $L_{eq~(5~minutes)}$  shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. Supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.
- 4.1.6. Noise monitoring shall be carried out at all the designated monitoring stations. The monitoring frequency shall depend on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities are underway:
  - one set of measurements between 0700 and 1900 hours on normal weekdays.
- 4.1.7. If construction works are extended to include works during the hours of 1900 0700 as well as public holidays and Sundays, additional weekly impact monitoring shall be carried out during respective restricted hours periods. Applicable permits under NCO shall be obtained by the Contractor.

#### MONITORING EQUIPMENT

- 4.1.8. As referred to in the Technical Memorandum ™ issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.
- 4.1.9. Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

#### 4.2 Air Monitoring

#### AIR QUALITY MONITORING STATIONS

4.2.1. The air monitoring stations for the Project are listed and shown in *Table 4.3* and *Figure 4.1*. *Appendix 4.1* shows the established Action/Limit Levels for the monitoring works.

Table 4.3 Air Monitoring Station

Station ID	Monitoring Location	Description
CMA1b	Oil Street Community Liaison Centre	North Point
CMA2a	Causeway Bay Community Centre	Causeway Bay
CMA3a	CWB PRE Site Office *	Causeway Bay
CMA4a	Society for the Prevention of Cruelty to Animals	Wan Chai
CMA5a	Children Playgrounds opposite to Pedestrian Plaza	Wan Chai
CMA6a	WDII PRE Site Office *	Wan Chai



Remarks: As per the ENPC meeting in January 2011, the monitoring stations CMA3a – Future CWB site office at Wanchai Waterfront Promenade and CMA6a – Future AECOM site office at Work Area were renamed as remark.

#### AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.2.2. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality. The 24-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.
- 4.2.3. All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any other local atmospheric factors affecting or affected by site conditions, etc., shall be recorded down in detail.
- 4.2.4. For regular impact monitoring, the sampling frequency of at least once in every six-days, shall be strictly observed at all the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs.

#### SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.5. High volume samplers (HVSs) in compliance with the following specifications shall be used for carrying out the 1-hour and 24-hour TSP monitoring:
  - 0.6 1.7 m3 per minute adjustable flow range;
  - equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
  - installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
  - capable of providing a minimum exposed area of 406 cm2;
  - flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
  - equipped with a shelter to protect the filter and sampler;
  - incorporated with an electronic mass flow rate controller or other equivalent devices;
  - equipped with a flow recorder for continuous monitoring;
  - provided with a peaked roof inlet;
  - incorporated with a manometer;
  - able to hold and seal the filter paper to the sampler housing at horizontal position;
  - easily changeable filter; and
  - capable of operating continuously for a 24-hour period.
- 4.2.6. Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. The concern parties such as IEC shall properly document the calibration data for future reference. All the data should be converted into standard temperature and pressure condition.

#### LABORATORY MEASUREMENT / ANALYSIS



- 4.2.7. A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.
- 4.2.8. An alternative non-HOKLAS accredited laboratory was set-up for carrying out the laboratory analysis, the laboratory equipment was approved by the ER on 8 February 2011 and the measurement procedures were witnessed by the IEC. Any measurement performed by the laboratory was be demonstrated to the satisfaction of the ER and IEC. IEC shall regularly audit to the measurement performed by the laboratory to ensure the accuracy of measurement results.
- 4.2.9. Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24-hours and be pre-weighed before use for the sampling.
- 4.2.10. After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.
- 4.2.11. All the collected samples shall be kept in a good condition for 6 months before disposal.

#### IMPACT MONITORING FOR ODOUR PATROL

- 4.2.12. Odour patrols along the shorelines of Causeway Bay Typhoon Shelter and ex-Wan Chai Public Cargo Working Area when there is temporary reclamation in Causeway Bay Typhoon Shelter and/or in the ex-Wan Chai Public Cargo Working Area, or when there is dredging of the odorous sediment and slime at the south-western corner of the Causeway Bay Typhoon Shelter. Odour patrols will be carried out at bi-weekly intervals during July, August and September by a qualified person of the ET who shall:
  - · be at least 16 years of age;
  - · be free from any respiratory illnesses; and
  - not be allowed to smoke, eat, drink (except water) or use chewing gum or sweets 30 min
  - before and during odour patrol
- 4.2.13. Odour patrol shall be conducted by independent trained personnel / competent persons patrolling and sniffing around the shore as shown in *Figure 4.1* to detect any odour at the concerned hours (afternoon is preferred for higher daily temperature).
- 4.2.14. The qualified person will use the nose (olfactory sensor) to sniff odours at different locations. The main odour emission sources and the areas to be affected by the odour nuisance will be identified.
- 4.2.15. The perceived 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 cannot be easily characterized or described;
  - 1 Slight Identifiable odour, and slight chance to have odour nuisance;



- 2 Moderate Identifiable odour, and moderate chance to have odour nuisance;
- 3 Strong Identifiable, likely to have odour nuisance;
- 4 Extreme Severe odour, and unacceptable odour level.
- 4.2.16. The findings including odour intensity, odour nature and possible odour sources, and also the local wind speed and direction at each location will be recorded. In addition, some relevant meteorological and tidal data such as daily average temperature, and daily average humidity, on that surveyed day will be obtained from the Hong Kong Observatory Station for reference. The Action and Limit levels for odour patrol are shown in *Appendix 6.1*.
- 4.2.17. The qualified odour patrol member has individual n-butanol thresholds complied with the requirement of European Standard Method of Air Quality Determination of Odour Concentration by Dynamic Olfactometry (EN13725) in the range of 20 to 80 ppb.

#### 4.3 Water Quality Monitoring

- 4.3.1. The EIA Report has identified that the key water quality impact would be associated with the dredging works during the construction phase. Marine water quality monitoring for dissolved oxygen (DO), suspended solid (SS) and turbidity is therefore recommended to be carried out at selected WSD flushing water intakes. The impact monitoring should be carried out during the proposed dredging works to ensure the compliance with the water quality standards.
- 4.3.2. The updated EM&A Manual for EP-356/2009 (Version in March 2011) is approval by EPD on 29 April 2011. As such, the Action Level and Limit Level for the wet season (April September) will be effected and applied to the water quality monitoring data from 30 April 2011.

#### Water Quality Monitoring Stations

4.3.3. It is proposed to monitor the water quality at 9 WSD salt water intakes and 14 cooling water intakes along the seafront of the Victoria Harbour. The proposed water quality monitoring stations of the Project are shown in *Table 4.4* and *Figure 4.1*. *Appendix 4.1* shows the established Action/Limit Levels for the monitoring works.

Table 4.4 Marine Water Quality Stations for Water Quality Monitoring

Station Ref.	Location Easting Northing		Northing
WSD Salt Water Int	WSD Salt Water Intake		
WSD7	Kowloon South 834150.0 818300.3		818300.3
WSD9	Tai Wan	837921.0	818330.0
WSD10	Cha Kwo Ling	841900.9	817700.1
WSD15	Sai Wan Ho 841110.4 816450.1		816450.1
WSD17	Quarry Bay 839790.3 817032.2		817032.2
WSD19	Sheung Wan	eung Wan 833415.0 816771.0	
WSD20	Kennedy Town	830750.6	816030.3
WSD21	Wan Chai	836220.8	815940.1
RW1	Wan Chai (Reprovision)	ai (Reprovision) 836188.8 815911.1	
Cooling Water Inta	Cooling Water Intake		
C1	HKCEC Extension	835885.6	816223.0



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Station Ref.	Location	Easting	Northing
C2	Telecom House	835647.9 815864.4	
C3	HKCEC Phase I	835836.2	815910.0
C4e	Great Eagle Centre	835932.8	815888.2
C4w	Wan Chai Tower	835629.8	815889.2
C5e	Sun Hung Kai Centre (Eastern)	836250.1	815932.2
C5w	Sun Hung Kai Centre (Western)	836248.1	815933.2
C6	Excelsior Hotel	837009.6	815999.3
C7	Windsor House	837193.7 816150.0	
C8	City Garden	837970.6 816957.3	
C9	Provident Garden	838355.0	817116.6
RC1	Proposed HKAPA Extension	835487.7	815987.7
RC5	Sun Hung Kai Centre (Reprovision)	836291.4	816029.7
RC7	Windsor House (Temporary Dilution)	837245.2	816156.6
P1	HKCEC Phase I	835774.7	816179.4
P3	The Academy of performing Arts	835824.6 816212.0	
P4	Shui on Centre	835865.6	816220.0
P5	Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)	835895.2	816215.2

#### **WATER QUALITY PARAMETERS**

- 4.3.4. Monitoring of dissolved oxygen (DO), turbidity and suspended solids (SS) shall be carried out at WSD flushing water intakes and cooling water intakes. DO and Turbidity are measured in-situ while SS is determined in laboratory.
- 4.3.5. In association with the water quality parameters, other relevant data shall also be measured, such as monitoring location/position, time, sampling depth, water temperature, pH, salinity, dissolved oxygen (DO) saturation, weather conditions, sea conditions, tidal stage, and any special phenomena and work underway at the construction site etc.

## SAMPLING PROCEDURES AND MONITORING EQUIPMENT

4.3.6. The interval between two sets of monitoring should not be less than 36 hours except where there are exceedances of Action and/or Limit Levels, in which case the monitoring frequency will be increased. *Table 4.5* shows the proposed monitoring frequency and water quality parameters. Duplicate in-situ measurements and water sampling should be carried out in each sampling event. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides should be not less than 0.5m.

Table 4.5 Marine Water Quality Monitoring Frequency and Parameters

Activities	Monitoring Frequency <sup>1</sup>	Parameters <sup>2</sup>
During the 4-week baseline monitoring period	Three days per week, at mid-flood and mid-ebb tides	Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity

Activities	Monitoring Frequency <sup>1</sup>	Parameters <sup>2</sup>
During marine construction works	Three days per week, at mid-flood and mid-ebb tides	Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity
After completion of marine construction works	Three days per week, at mid-flood and mid-ebb tides	Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity

#### Notes:

- 1. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides should be not less than 0.5m.
- 2. Turbidity should be measured in situ whereas SS should be determined by laboratory. DISSOLVED OXYGEN AND TEMPERATURE MEASURING EQUIPMENT
- 4.3.7. The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
  - a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
  - a temperature of 0-45 degree Celsius
- 4.3.8. It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).
- 4.3.9. Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

## TURBIDITY MEASUREMENT INSTRUMENT

4.3.10. The instrument should be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment should use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and be complete with a cable (e.g. Hach model 2100P or an approved similar instrument).

#### **SAMPLER**

4.3.11. A water sampler comprises a transparent PVC cylinder, with a capacity of not less than 2 litres, and can be effectively sealed with latex cups at both ends. The sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth (e.g. Kahlsico Water Sampler or an approved similar instrument).

#### SAMPLE CONTAINER AND STORAGE

4.3.12. Water samples for suspended solids measurement should be collected in high-density polythene bottles, packed in ice (cooled to 4°C without being frozen), and delivered to ALS Technichem (HK) Pty Ltd. as soon as possible after collection for analysis.

#### WATER DEPTH DETECTOR

4.3.13. A portable, battery-operated echo sounder shall be used for the determination of water depth at each designated monitoring station. This unit can either be handheld or affixed to the bottom of the workboat, if the same vessel is to be used throughout the monitoring programme.



#### **SALINITY**

4.3.14. A portable salinometer capable of measuring salinity in the range of 0-40 ppt shall be provided for measuring salinity of the water at each of monitoring location.

#### MONITORING POSITION EQUIPMENT

4.3.15. A hand-held or boat-fixed type digital Global Positioning System (GPS) with waypoint bearing indication or other equivalent instrument of similar accuracy shall be provided and used during monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

#### **CALIBRATION OF IN-SITU INSTRUMENTS**

- 4.3.16. All in-situ monitoring instrument shall be checked, calibrated and certified by a laboratory accredited under HOKLAS or equivalent before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes should 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 location.
- 4.3.17. For the on site calibration of field equipment by the ET, the BS 127:1993, "Guide to Field and on-site test methods for the analysis of waters" should be observed.
- 4.3.18. Sufficient stocks of spare parts should be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 4.3.19. Current calibration certificates of equipments are presented in Appendix 4.2.

#### LABORATORY MEASUREMENT / ANALYSIS

4.3.20. Analysis of suspended solids has been carried out in a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd. Water samples of about 1L shall be collected at the monitoring stations for carrying out the laboratory SS determination. The SS determination work shall start within 24 hours after collection of the water samples. The SS determination shall follow APHA 19ed or equivalent methods subject to the approval of IEC and EPD.

## ENHANCED WATER QUALITY MONITORING IN THE EX-WAN CHAI PUBLIC CARGO WORKING AREA AND THE CAUSEWAY BAY TYPHOON SHELTER

- 4.3.21. The enhanced water quality monitoring and audit programme is to avoid aggravation of odour nuisance from seawater arising from temporary reclamation in the ex-Wan Chai Public Cargo Working Area and the Causeway Bay Typhoon Shelter.
- 4.3.22. Dissolved oxygen monitoring at the intakes C6 and C7 in Causeway Bay Typhoon Shelter when there is temporary reclamation in Causeway Bay Typhoon Shelter and at the south-western and south-eastern corners of the ex-Wan Chai Public Cargo Working Area. The proposed water quality monitoring stations of the Project are shown in *Table 4.6* and *Figure 4.1*.

Table 4.6 Marine Water Quality Stations for Enhanced Water Quality Monitoring

Station	Location
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Station	Location	
C6	Excelsior Hotel	
C7	Windsor House	
Ex-WPCWA-SW	South-western of the ex-Wan Chai Public Cargo Working Area	
Ex-WPCWA-SE	South-eastern of the ex-Wan Chai Public Cargo Working Area	

4.3.23. The monitoring of dissolved oxygen are to be carried out 3 days per week, at mid-flood and mid-ebb tides for 3 water depths (1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth may be omitted. If the water depth be equal to or less than 3m, only the mid-depth will be monitored).

#### DAILY SS MONITORING AND 24 HOURS TURBIDITY MONITORING SYSTEM

- 4.3.24. During dredging of the sediment at the south-western corner of the Causeway Bay Typhoon Shelter, daily monitoring of suspended solids and 24 hour monitoring of turbidity at the cooling water intakes (C6 and C7) shall be conducted.
- 4.3.25. The 24 hours monitoring of turbidty at the cooling water intakes (C6 and C7) shall be established by setting up a continuous water quality monitoring station in front of the intakes during the dredging activities. The monitoring system include the turbidity sensor and data logger which is capable of data capturing at every 5 minutes. The data sahll be downloaded daily and compared with the Action and Limit level determined during the baseline water quality monitoring at the cooling water intake locations.

## ADDITIONAL DISSOVLED OXYGEN MONITORING FOR CULVERT L WATER DISCHARGE FLOW

- 4.3.26. In response to the Condition 2.18 of the Environmental Permit no. EP-356/2009 requiring that a silt curtain / impermeable barrier system be installed to channel water discharge flow from Culvert L to locations outside the embayment area, a proposed replacement of the requirement with additional dissolved oxygen monitoring has been conducted at three monitoring stations, namely A, B and C between the eastern seawall of Central Reclamation Phase III and the HKCEC Extension since November 2011 under EP-356/2009 so that DO level between the eastern seawall of Central Reclamation Phase II and the HKCEC extension could be continuously monitored.
- 4.3.27. With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit, the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013
- 4.3.28. The proposed DO monitoring stations of the Project are shown in *Table 4.7* and *Figure 4.1*.

Table 4.7 Marine Water Quality Stations for Additional DO Monitoring

Station	Easting Northing	
А	835468	815857
В	835572	815961
С	835659	816271

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4.3.29. The monitoring of dissolved oxygen are to be carried out once per week, at mid-flood and mid-ebb tides for 3 water depths (1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth may be omitted. If the water depth be equal to or less than 3m, only the mid-depth will be monitored).



#### 5. Monitoring Results

- 5.0.1. The environmental monitoring will be implemented based on the division of works areas of each designed project managed under different contracts with separate FEP applied by individual contractors. Overall layout showing work areas of various contracts, latest status of work commencement and monitoring stations is shown in <u>Figure 2.1</u> and <u>Figure 4.1</u>. The monitoring results are presented in according to the Individual Contract(s).
- 5.0.2. In the reporting month, the concurrent contracts are as follows:
  - Contract no. HK/2009/01 Wan Chai Development Phase II Central-Wan Chai Bypass at Hong Kong Convention and Exhibition Centre; and
  - Contract no. HK/2009/02 Wan Chai Development Phase II Central-Wan Chai Bypass at Wan Chai East
  - Contract no. HY/2009/15 Central-Wanchai Bypass Tunnel (Causeway Bay Typhoon Shelter Section)
  - Contract no. HK/2010/06 Wan Chai Development Phase II Central-Wan Chai Bypass over MTR Tsuen Wan Line
  - Contract no. HY/2009/19- Cental- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link
  - Contract no. HK/2012/08 Wan Chai Development Phase II Central- Wan Chai Bypass at Wan Chai West
- 5.0.3. The environment monitoring schedules for reporting month and coming month are presented in *Appendix 5.1.*

## 5.1 Noise Monitoring Results

Contract no. HK/2009/01 - Wan Chai Development Phase II - Central -Wanchai Bypass at HKCEC, Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at WanChai East and Contract no. HK/2010/06 Wan Chai Development Phase II - Central-Wan Chai Bypass over MTR Tsuen Wan Line

5.1.1. The proposed division of noise monitoring stations are summarized in *Table 5.2* below.

Table 5.2 Noise Monitoring Station for Contract nos. HK/2009/01, HK/2009/02 and HK/2010/06

Station	Description	
M1a	Harbour Road Sports Centre	

- **5.1.2.** Daytime and evening period noise monitoring was conducted at the Harbour Road Sport Centre in the reporting month.
- 5.1.3. No exceedance was recorded in this reporting period. Details of noise monitoring results and graphical presentation can be referred in *Appendix 5.2*

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)</u>



5.1.4. The noise monitoring for HY/2009/15 was commenced on 10 November 2010. The proposed division of noise monitoring stations are summarized in *Table 5.3* below.

Table 5.3 Noise Monitoring Station for Contract no. HY/2009/15

Station	Description	
M2b	Noon Gun Area	
МЗа	Tung Lo Wan Fire Station	

5.1.5. Noise monitoring results measured in the period of daytime and restricted hour are reviewed and summarized. No exceedance was recorded in this reporting period. Details of noise monitoring results and graphical presentation can be referred in <u>Appendix 5.2</u>

Contract no. HY/2009/19- Wan Chai Bypass Tunnal (North Point Section) and Island Eastern Corridor Link

5.1.6. The proposed division of noise monitoring stations are summarized in *Table 5.4* below.

Table 5.4 Noise Monitoring Station for Contract no. HY/2009/19

Station	Description	
МЗа	Tung Lo Wan Fire Station	
M4b	Victoria Centre	
M5b	City Garden	
M6	HK Baptist Church Henrietta Secondary School	

- 5.1.7. Two limit level exceedances were recorded on 9 and 16 July 2013 at M6 HK Baptist Church Henrietta Secondary School in the reporting month.
- 5.1.8. Major traffic noise observed during monitoring on 9 and 16 July 2013 and it was considered as the major noise contribution. As such, the limit level exceedances were concluded as non-project related.
- 5.1.9. Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in <u>Appendix</u> 5.2.

#### 5.2 Real-time Noise Monitoring

<u>Contract no. HY/2009/19 – Central- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link</u>

5.2.1 As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.



- 5.2.2 The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- 5.2.3 The major work activities for Contract no. HY/2009/11 was confirmed substantial complete by RSS on 4 January 2012. The construction site was handed over to contractor HY/2009/19 on 31 December 2011 and the FEP-01/356/2009 was surrendered on 22 Oct 2012.
- 5.2.4 Limit level exceedance was recorded at RTN2a-Electric Centre during restricted hours on 14 July 2013. After checking with contractor, no construction work was conducted at the concerned location during the recorded period. As such, the exceedances were considered to be contributed by near by IEC traffic.
- 5.2.5 Real-time noise monitoring at FEHD Hong Kong Transport Section Whitfield Depot commenced external wall renovation since 1 June 2012

Table 5.5 Real Time Noise Monitoring Station for Contract no. HY/2009/19

District	Station	Description
Tin Hau	RTN1	FEHD Hong Kong Transport Section Whitfield Depot
North Point	RTN2	Oil Street Community Liaison Centre
North Point	RTN2a	Electric Centre

- Real time noise monitoring results and graphical presentation during night time period are for information only.
- RTN2 had been relocated to RTN2a since 5 Oct 2012
- RTN1 monitoring had been finished on 28 Nov 2012
- 5.2.6 Details of real time noise monitoring results and graphical presentation can be referred to *Appendix 5.5.*

## 5.3 Air Monitoring Results

5.3.1 Due to interruption of electricity supply, the 24hr TSP monitoring at CMA5a was rescheduled from 3 July 2013 to 4 July 2013.

<u>Contract no. HK/2009/01 - Wan Chai Development Phase II - Central -Wanchai Bypass at HKCEC</u>

5.3.1. Air monitoring was commenced on 1 April 2011 in response to the commencement of the land-filling work for Contract no. HK/2009/01. The proposed divisions of air monitoring stations are summarized in *Table 5.7* below. No exceedance was recorded in the reporting month.

Table 5.7 Air Monitoring Stations for Contract no. HK/2009/01

Station	Description
CMA5a	Children Playgrounds opposite to Pedestrian Plaza
CMA6a	WDII PRE Site Office



5.3.2 No exceedance was recorded in the reporting month. Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in *Appendix 5.3*.

<u>Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at WanChai East</u>

5.3.2. Air monitoring was commenced in mid-January 2011 for the land-filling work for Contract no. HK/2009/02. The proposed division of air monitoring stations are summarized in *Table 5.8* below. No exceedance was recorded in the reporting month.

Table 5.8 Air Monitoring Station for Contract no. HK/2009/02

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)</u>

5.3.3. Air monitoring was commenced on 15 March 2011 for the land filling work for Contract no. HY/2009/15. The proposed division of air monitoring stations are summarized in *Table 5.9* below.

Table 5.9 Air Monitoring Station for Contract no. HY/2009/15

Station	Description
CMA3a	CWB PRE Site Office

- 5.3.3 No exceedance was recorded in the reporting month. Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in *Appendix 5.3*.
- 5.3.4 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 9 and 27 July 2012 at the concerned hours (afternoon for higher daily temperature). No Action and Limit Level was recorded during this reporting month. The details of the odour patrol results and meteorological conditions and on the date of odour patrol are shown in *Appendix 5.3.*

Contract no. HY/2009/19- Wan Chai Bypass Tunnal (North Point Section) and Island Eastern Corridor Link

5.3.4. The proposed division of air monitoring stations are summarized in Table 5.10 below. No exceedance was recorded in the reporting month.

Table 5.10 Air Monitoring Stations for Contract no. HY/2009/19

Station	Description
CMA1b	Oil Street Site Office



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CMA2a	Causeway Bay Community Centre
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5.3.5 No exceedance was recorded in the reporting month. Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in *Appendix 5.3*.

#### 5.4 Water Monitoring Results.

- 5.4.1. Due to the Strong wind signal no.3 was hoisted on 2 July 2013, water quality monitoring at flood tide were cancelled.
- 5.4.2. With respect to status of cooling intakes relocation, WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended to confirm the commissioning status of the relocated pump stations with the WDII RSS and the IEC for preparation of relocation of the WQM stations to the relocated cooling intake pump stations
- 5.4.3. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others remain unchanged.
- 5.4.4. Based on the joint inspection on 4 Jan 2012 for the NPR area, the 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 to confirm no water deterioration with respect to NPR was commenced since 7 Jan 2012 and it was completed on 6 February 2012.
- 5.4.5. Water quality monitoring at WSD10 and WSD15 was temporary suspended while water quality monitoring at WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 12 onwards;
- 5.4.6. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.
- 5.4.7. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 to the closest accessible point prior to the completion of the external façade refurbishment work.
- 5.4.8. With respect to the trial dredging at WCR2 was scheduled on 20, 22, 24, 25 March and 1, 3, 11, 13, 15, 17, 19, 20 Apr and 3 May 2012, on-going water quality monitoring results at WSD21 during this period was checked and indicated that there was no contribution due to the trial dredging operation. Enhanced review of water quality around WCR2 was also implemented and no deterioration in the water quality was observed.
- 5.4.9. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land



- and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.
- 5.4.10. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui-DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7 and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration.
- 5.4.11. Due to the presence of obstacle within the inner silt curtain frame at sampling point, water quality point at C7 was finely adjusted to the outside of the inner silt curtain frame since 29 Dec 2012.
- 5.4.12. As confirmed by CWB RSS, the marine pilling works under contract HY/2009/19 was confirmed completed by 4 March 2013. The water quality monitoring at the respective monitoring stations C8 and C9 were temporarily suspended since 30 March 2013.
- 5.4.13. With respect to status of cooling intakes relocation, WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended to confirm the commissioning status of the relocated pump stations with the WDII RSS and the IEC for preparation of relocation of the WQM stations to the relocated cooling intake pump stations.
- 5.4.14. Upon confirmation with WDII RSS and the IEC, water quality monitoring at relocated intakes monitoring location P1, P3, P4 and P5 were commenced since 24 April 2013.

Table 5.11 Water Monitoring Stations for contracts with respect to remaining DP3 work areas after the completion of DP5 & DP6 in 2012 and intake diversion in 2013

Contract No.	Remaining DP3 and work area(s)			work area(s)  Monitoring Stations,  W.r.t tentar commence	
HK/2009/01	WCR3	C1 <sup>1</sup>	Apr 2013		
HK/2009/02	WCR3, WCR4, TWCR4	RW21-P789 <sup>1</sup>	Apr 2013		
HK/2012/08	HKCEC2W, HKCEC2E	WSD19, P1 <sup>3</sup> , P3 <sup>3</sup> , P4 <sup>3</sup> , P5 <sup>3</sup>	Aug 2013		
HY/2009/15	TCBR2, TCBR3, TCBR1W, TPCWAE, TPCWAW	C6 <sup>4</sup> , C7, Ex-WPCWA SW, Ex-WPCWA SE (plus enhanced DO monitoring described in 4.6.3)	Nov 2010		
HY/2010/08	TCBR3, TCBR4	C6 <sup>4</sup> , C7 (plus enhanced DO monitoring described in 4.6.3)	Mar 2014		

#### Remarks:

- -The water monitoring stations for WSD19, P1, P3, P4, P5 shall be associated with Contract No. HK/2009/01 prior to their transition to Contract HK/2012/08.
- -4 intakes (re-provisioned Wanchai WSD intake, Great Eagle Centre, China Resources Centre & Sun Hung Kai Centre constructed adjacent to each other) taken as a single group for silt screen protection and monitoring.
- -Re-provisioned intake reference: P1: HKCEC Phase 1; P3: APA, P4: Shui On; P5: Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)
- -Enhanced DO Monitoring at C6 since the intake abandon in May 2011.

<u>Contract no. HK/2009/01 - Wan Chai Development Phase II - Central -Wanchai Bypass at HKCEC</u>

5.4.15. Water monitoring for Contract no. HK/2009/01 was commenced on 23 July 2010. The proposed division of water monitoring stations are summarized in *Table 5.12* below.

Table 5.12 Water Monitoring Stations for Contract no. HK/2009/01

Station Ref.	Location	Easting	Northing
WSD Salt Water In	ntake		<u> </u>
WSD7	Kowloon South	834150.0	818300.3
WSD19	Sheung Wan	833415.0	816771.0
WSD20	Kennedy Town	830750.6	816030.3
Cooling Water Int	ake	•	•
C1	HKCEC Extension	835885.6	816223.0
C2	Telecom House	835647.9	815864.4
C3	HKCEC Phase I	835836.2	815910.0
C4e	Great Eagle Centre	835932.8	815888.2
C4w	Wan Chai Tower	835629.8	815889.2
P1	HKCEC Phase I	835774.7	816179.4
P3	The Academy of performing Arts	835824.6	816212.0
P4	Shui on Centre	835865.6	816220.0
P5	Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)	835895.2	816215.2

#### Remarks:

- The water monitoring stations for the dredging works under Contract No. HK/2009/01 should also include WSD9, WSD17, WSD 21 and C5 if water quality monitoring at these locations have not been carried out by others. Similarly, the water monitoring stations for the dredging works under Contract No. HK/2009/02 should also include WSD7, WSD9, WSD17, WSD 19, C1, C2, C3 and C4 if water quality monitoring at these locations have not been carried out by others.
- WSD7 and WSD20 water quality monitoring were temporarily suspended since 27 Apr 2012.

<u>Contract no. HK/2009/02 - Wan Chai Development Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East</u>

5.4.16. Water monitoring for Contract no. HK/2009/02 was commenced on 8 July 2010. The proposed division of water monitoring stations are summarized in *Table 5.13* below.

Table 5.13 Water Monitoring Stations for Contract no. HK/2009/02

Station Ref.	Location	Easting	Northing		
WSD Salt Water In	ntake				
WSD21	Wan Chai	836220.8	815940.1		
WSD9	Tai Wan	837921.0	818330.0		
WSD17	Quarry Bay	839790.3	817032.2		
Cooling Water Intake					

Station Ref.	Location	Easting	Northing		
C5e	Sun Hung Kai Centre (Eastern)	836250.1	815932.2		
C5w	Sun Hung Kai Centre (Western)	836248.1	815933.2		

#### Remarks:

- The water monitoring stations for the dredging works under Contract No. HK/2009/01 should also include WSD9, WSD17, WSD 21 and C5 if water quality monitoring at these locations have not been carried out by others. Similarly, the water monitoring stations for the dredging works under Contract No. HK/2009/02 should also include WSD7, WSD9, WSD17, WSD 19, C1, C2, C3 and C4 if water quality monitoring at these locations has not been carried out by others.
- Water quality monitoring at WSD9 and WSD 17 was implemented with respect to HK/2009/02 from 8
   Feb 2012.

Contract no. HK/2010/06 - Wan Chai Development Phase II - Central -Wanchai Bypass over MTR Tsuen Wan Line

5.4.17. Water monitoring for Contract no. HK/2010/06 was commenced on 8 March 2011. The proposed division of water monitoring stations are summarized in *Table 5.14* below.

Table 5.14 Water Monitoring Stations for Contract no. HK/2010/06

Station Ref.	Location	Easting	Northing				
Cooling Water Intake							
C2	Telecom House	835647.9	815864.4				
P1	HKCEC Phase I	835774.7	816179.4				

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)</u>

- 5.4.18. As the removal of reclamation work of TS1 at CBTS has been completed, all procedures have been rectified and complied with the conditions set in EP-356/2009 and FEP-04/356/2009.
- 5.4.19. Due to the commencement of the maintenance dredging on 10 November 2010, water quality monitoring for Contract no. HY/2009/15 was commenced on 9 November 2010. The proposed division of water monitoring stations are summarized in Table 5.15 below.
- 5.4.20. Due to the presence of obstacle within the inner silt curtain frame at sampling point, water quality point at C7 was finely adjusted to the outside of the inner silt curtain frame since 29 Dec 2012.

Table 5.15 Water Monitoring Stations for Contract no. HY/2009/15

Station Ref.	Location	Easting	Northing				
Cooling Water Intake							
C6	Excelsior Hotel	837009.6	815999.3				
C7	Windsor House	837193.7	816150.0				

Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.

<u>Contract no. HY/2009/19 – Central- Wan Chai Bypass Tunnel (North Point Section) and Island</u> Eastern Corridor Link



- 5.4.21. Due to the commencement of the marine bored piling on 28 Jan 2012, water quality monitoring for Contract no. HY/2009/19 was commenced on 28 Jan 2012. The proposed division of water monitoring stations are summarized in *Table 5.16* below.
- 5.4.22. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.

Table 5.16 Water Monitoring Stations for Contract no. HY/2009/19

Station Ref.	Location	Easting	Northing				
Cooling Water Intake							
C8	City Garden	837970.6	816957.3				
C9	Provident Garden	838355.0	817116.6				

Remarks: C8 and C9 monitoring commenced on 28 Jan 2012 and suspended on 30 March 2013.

- 5.4.23. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Center (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.
- 5.4.24. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.
- 5.4.25. As per the meeting with the representative of Excelsior Hotel and World Trade Centre on 17 May 2011, they confirmed that the seawater intake for The Excelsior was no longer in use and replaced by the connected permanent water supply from WSD pipelines since 11 January 2011. Thus, the impact water quality monitoring for the cooling intake C6 was terminated effective from 26 May 2011.
- 5.4.26. 24 hours monitoring of turbidity at the cooling water intakes at C7 was conducted. With respect to the seawall collapsing at TS4 on 17 November 2011, the 24 hours turbidity monitoring and was kept in November 2011. Since the reinstating the seawall was completed on 13 January 2012 and no any water deterioration was performed, 24 hour turbidity monitoring was then suspended on 27 January 2012.
- 5.4.27. Water monitoring results measured in this reporting period are reviewed and summarized. Details of water quality monitoring results and graphical presentation can be referred in Appendix 5.4.



## Table 5.17 Summary of Water Quality Monitoring Exceedances in Reporting Month

	Water	Mid-flood					Mid-ebb						
Contract no.	Monitoring	D	0	Turb	idity	S	S	D	0	Turb	idity	S	S
	Station	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01	WSD19	0	0	0	0	0	0	0	0	1	0	0	0
	C1	0	0	0	0	0	0	0	0	0	0	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	C5e	0	0	0	0	0	0	0	0	0	0	0	0
	C5w	0	0	0	0	0	0	0	0	0	0	0	0
Monitoring started on	WSD21	0	0	0	0	0	0	0	0	0	0	0	0
8 Feb 2012	WSD9	0	0	0	0	0	0	0	0	0	0	0	0
	WSD17	0	0	0	0	0	0	0	0	0	0	0	1
HY/2009/15	C7	1	0	0	0	0	0	1	0	0	1	0	0
Total		1	0	0	0	0	0	1	0	1	1	0	1

- Remarks: The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
  - WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
  - 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 were completed on 6 Feb 2012.
  - C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
  - C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
  - WSD7 and WSD20 were temporarily suspended from 27 Apr 2012
- 5.4.28. Investigation found that the exceedances were not project-related. The details of the recorded exceedances can be referred to the **Section 6.4**.
- 5.4.29. Enhanced DO monitoring at 4 monitoring stations in Causeway Bay Typhoon Shelter and Ex-Public Cargo Works Area was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in *Table* 5.18.



Table 5.18 Summary of Enhanced Dissolved Oxygen Monitoring Exceedances in Reporting Month

	not Water Menitoring		lood	Mid-ebb	
Contract no.	Water Monitoring Station	DO		DO	
	Station Station		LL	AL	LL
	C6	0	0	0	0
HY/2009/15	C7	1	0	1	0
111/2009/13	Ex-WPCWA SW	0	4	0	2
	Ex-WPCWA SE	5	4	2	0
Total		6	8	3	2

- 5.4.30. There were 9 action level exceedances and 10 limit level exceedances of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedances are not related to the Project works. The details of the recorded exceedances can be referred to the Section 6.4.
- 5.4.31. In response to the Condition 2.18 of the Environmental Permit no. EP-356/2009 requiring that a silt curtain / impermeable barrier system be installed to channel water discharge flow from Culvert L to locations outside the embayment area, a proposed replacement of the requirement with additional dissolved oxygen monitoring has been conducted at three monitoring stations, namely A, B and C between the eastern seawall of Central Reclamation Phase III and the HKCEC Extension since November 2011 under EP-356/2009 so that DO level between the eastern seawall of Central Reclamation Phase II and the HKCEC extension could be continuously monitored. Details of additional DO monitoring results can be referred in Appendix 5.4a.
- 5.4.32. With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit, the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013

## 5.5 Waste Monitoring Results

Contract no. HK/2009/01 - Wan Chai Development Phase II - Central -Wanchai Bypass at HKCEC

5.5.1. Inert C&D waste was disposed and no non- inert C&D waste was recycled of in this reporting month. Details of the waste flow table are summarized in *Table 5.19*.

Table 5.19 Details of Waste Disposal for Contract no. HK/2009/01

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	306.77	29661.085	TKO137, TM38
Inert C&D materials recycled, m <sup>3</sup>	0	5104.5	N/A
Non-inert C&D materials disposed,	29.00	1373.64	SENT Landfill



Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
m <sup>3</sup>			
Non-inert C&D materials recycled, kg	0	151143	N/A
Chemical waste disposed, kg	200	9850	N/A
*Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0 (Bulk Volume)	97428.2 (Bulk Volume)	South of Cheung Chau
* Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0 (Bulk Volume)	52250 (Bulk Volume)	East of Cha Chau
Dredged Sediment Requiring Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers	0 (Bulk Volume)	6773 (Bulk Volume)	East of Cha Chau

5.5.2. There were no marine sediment Type 1- Open Sea Disposal and no marine sediments Type 1 - Open Sea Disposal (Dedicate Sites) & Type 2 - Confined Marine Disposal disposed in this reporting month.

<u>Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at Wan Chai East</u>

5.5.3. Inert C&D waste and Non-inert C&D waste were disposed of in this reporting month. Details of the waste flow table are summarized in *Table 5.20*.

Table 5.20 Details of Waste Disposal for Contract no. HK/2009/02

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	557.075	234295.885	TKO137 / TM 38
Inert C&D materials recycled, m <sup>3</sup>	NIL	18161	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	52.76	996.82	SENT Landfill
Non-inert C&D materials recycled, m <sup>3</sup>	N/A	N/A	N/A
Chemical waste disposed, kg	0	7436	SENT Landfill
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0	184167 (Bulk volume)	South of Cheung Chau
Marine Sediment	0	129320	East of Sha Chau

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
(Type 1 – Open Sea		(Bulk volume)	
Disposal (Dedicate			
Sites) & Type 2 –			
Confined Marine			
Disposal), m <sup>3</sup>			

5.5.4. There are no marine Sediment Type1- Open Sea Disposal and there are no Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal was disposed of in this reporting month.

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass - Tunnel (Causeway Bay Typhoon Shelter Section)</u>

5.5.5. No Inert C&D waste and no non- inert C&D waste were disposed of in this reporting month.

Details of the waste flow table are summarized in *Table 5.21* 

Table 5.21 Details of Waste Disposal for Contract no. HY/2009/15

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed,	NIL	141579.2	Tuen Mun Area 38
m <sup>3</sup>	NIL	65216	TKO137 FB
Ingrt C&D materials recycled,	NIL	304	ex-PCWA
m <sup>3</sup>	NIL	111.9	TS4
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	252.2	SENT Landfill
Non-inert C&D materials recycled, kg	NIL	299361.5	N/A
Chemical waste disposed, kg	NIL	8,200	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0 (Bulk Volume)	100208 (Bulk Volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0 (Bulk Volume)	218665 (Bulk Volume)	East of Sha Chau
Marine Sediment (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers)	NIL	7,050 (Bulk Volume)	East of Sha Chau
Marine Sediment (Type 2 – Confined Marine Disposal), m3	0 (Bulk Volume)	9350 (Bulk Volume)	East of Sha Chau

5.5.6. There was no marine sediment Type 2 – Confined Marine Disposal was disposed of in this reporting month.

<u>Contract no. HK/2010/06 - Wan Chai Development Phase II - Central - Wan Chai Bypass</u> <u>over MTR Tsuen Wan Line</u> 5.5.7. Inert C&D waste was disposed and no non-Inert C&D waste was recycled in this reporting month. Details of the waste flow table are summarized in *Table 5.22*.

Table 5.22 Details of Waste Disposal for Contract no. HK/2010/06

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	229.78	12567.88	TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	267	HK/2009/01
Non-inert C&D materials disposed, m <sup>3</sup>	29.8	317.01	SENT/TKO137SF
Non-inert C&D materials recycled, T	0	60.58	Recyclers
Chemical waste disposed, L	0	2200	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0	3,891 (Bulk Volume)	South Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0	12,586 (Bulk Volume)	East Sha Chau

5.5.8. There were no marine sediments Type1- Open Sea Disposal and no Type 1 - Open Sea Disposal (Dedicate Sites) & Type 2 - Confined Marine Disposal was deposed of in this reporting month.

Contract no. HY/2009/19 - Central- WanChai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

5.5.9. Inert C&D waste was disposed of and non-inert C&D waste were disposed in this reporting month. Details of the waste flow table are summarized in *Table 5.23*.

Table 5.23 Details of Waste Disposal for Contract no. HY/2009/19

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	23190.35	210855.77	TM38
Inert C&D materials recycled, m <sup>3</sup>	0	45605.35	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	20.86	388.53	N/A
Non-inert C&D materials recycled, kg	0	254.71	N/A
Chemical waste disposed, L	0	0.46	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0	162	South Cheung Chau
Marine Sediment (Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0	681	East Sha Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate	825.00	4976.00	

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Sites) & Type 2 – Confined Marine Disposal) , m3			

5.5.10. There was no marine sediment Type1- Open Sea Disposal and there was Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal generated were disposed in this reporting month.

<u>Contract no. HK/2012/08 –Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West</u>

5.5.11. Inert C&D waste was disposed and non-inert C&D waste were disposed in this reporting month. Details of the waste flow table are summarized in *Table 5.24*.

Table 5.24 Details of Waste Disposal for Contract no. HK/2012/08

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	162	330	TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	5	10	N/A
Non-inert C&D materials recycled, kg	NIL	NIL	N/A
Chemical waste disposed, L	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m3	2289	3447	East of Sha Chau

5.5.12. There was marine sediment Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal generated were disposed in this reporting month.

## Contract no. HY/2010/08 - Central - Wan Chai Bypass (CWB) - Tunnel (Slip Road 8)

5.5.13. No Inert C&D waste and non-inert C&D waste were disposed in this reporting month. Details of the waste flow table are summarized in *Table 5.25* 

Table 5.25 Details of Waste Disposal for Contract no. HY/2010/08

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	Nil	Nil	N/A
Inert C&D materials recycled, m <sup>3</sup>	NII	NIL	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	Nil	Nil	N/A
Non-inert C&D materials recycled, kg	NIL	NIL	N/A

## **Lam Geotechnics Limited**

Contract No. HK/2011/07 Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and testing Works (Stage 2) Monthly EM&A Report (July 2013)

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Chemical waste disposed, L	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m3	Nil	Nil	N/A



#### 6. Compliance Audit

6.0.1. The Event Action Plan for construction noise, air quality and water quality are presented in *Appendix 6.1*.

#### 6.1 Noise Monitoring

<u>Contract no. HK/2009/01 - Wan Chai Development Phase II – Central –Wanchai Bypass at HKCEC</u>

6.1.1 No exceedance was recorded in the reporting month.

Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at WanChai East

6.1.2 No exceedance was recorded in the reporting month.

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)</u>

6.1.3 No exceedance was recorded in the reporting month.

<u>Contract no. HK/2010/06 - Wan Chai Development Phase II – Central – Wanchai Bypass over MTR Tsuen Wan Line</u>

6.1.4 No exceedance was recorded in the reporting month.

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

6.1.5 Two limit level exceedances were recorded on 9 and 16 July 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month. Investigations found that on 9 and 16 July 2013, major traffic noise was contributed in the noise monitoring and exceedances were not related to the Project.

#### 6.2 Real-time noise Monitoring

Contract no. HY/2009/19 - Central - Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

6.2.1 Non project related limit level exceedance was recorded at RTN2a- Electric Centre on 14 July 2013. Investigation found that exceedances were contributed by IEC traffic.

## 6.3 Air Monitoring

<u>Contract no. HK/2009/01 - Wan Chai Development Phase II – Central – Wanchai Bypass at HKCEC</u>

6.3.1 No exceedance was recorded in the reporting month.

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)</u>

- 6.3.2 No exceedance was recorded in the reporting month.
- 6.3.3 No Action and Limit Level was recorded for odour patrol during this reporting month.



## <u>Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link</u>

6.3.4 No exceedance was recorded in the reporting month.

#### 6.4 Water Quality Monitoring

Contract no. HK/2009/01 - Wan Chai Development Phase II - Central - Wanchai Bypass at HKCEC

6.4.1 There was SS exceedance recorded at WSD19 on 10 July 2013 during ebb tide, confirmed with Contractor, there was no marine work conducted during the water quality monitoring. In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.

Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at WanChai East

6.4.2 There was turbidity exceedance recorded at WSD17 on 26 July 2013 during Ebb tide. Confirmed with Contractor, there was no marine work conducted during the water quality monitoring. In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.

<u>Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)</u>

- 6.4.3 There were occasionally DO exceedances at Ex-WPCWA SE and Ex-WPCWA SW recorded in this reporting month. No odour nuisance was noted during DO monitoring. After checking with Contractor, there was no marine work undertaken at ex-WPCWA. The exceedances were possible in relation to the accumulation of organic particles discharge from culvert near monitoring station and considered not related to the Projects works.
- 6.4.4 There was occasionally DO exceedance at C7 recorded in this reporting month. No odour nuisance was noted during DO monitoring. After checking with Contractor, there was no marine work undertaken at C7. The exceedance was possible in relation to the low flow near the intake and considered not related to the Projects works.
- 6.4.5 There was DO and turbidity exceedance recorded at C7 on 15 and 20 July 2013. Confirmed with Contractor, there was no marine work conducted during the water quality monitoring. The exceedance was considered as natural variation or changes of water quality in the vicinity of the water quality monitoring station and not project related.

#### Lam Geotechnics Limited

Contract No. HK/2011/07 Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and testing Works (Stage 2) Monthly EM&A Report (July 2013)

<u>Contract no. HK/2010/06 - Wan Chai Development Phase II – Central – Wanchai Bypass over MTR Tsuen Wan Line</u>

6.4.6 No exceedance was recorded in this reporting month.

Contract no. HY/2009/19- Central- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

6.4.7 No exceedance was recorded in this reporting month.

#### 6.5 Review of the Reasons for and the Implications of Non-compliance

- 6.5.1 There was no non-compliance from the site audits in the reporting period. The observations and recommendations made in each individual site audit session were presented in Section 8.
- 6.5.2 No project-related non-compliance from monitoring was recorded in the reporting month.
- 6.6 Summary of action taken in the event of and follow-up on non-compliance
- 6.6.1 There was no particular action taken since no non-compliance was recorded from the site audits in the reporting period.

## 7. Cumulative Construction Impact due to the Concurrent Projects

- 7.0.1. According to Condition 3.4 of the EP-356/2009, this section addresses the relevant cumulative construction impact due to the concurrent activities of the current projects including the Central Reclamation Phase III, Central-Wanchai Bypass and Island Eastern Corridor Link projects.
- 7.0.2. According to the Monthly EM&A report (June 2013) of Central Reclamation Phase III (CRIII), Underground drainage and footpath construction, modification to the junction of Road D8 and Road P2 and modification of timber decks at advance promenade were performed in the July 2013 reporting month. The water quality monitoring was completed in October 2011 and no Project-related exceedance was recorded for air and noise monitoring. It can be concluded that cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was insignificant
- 7.0.3. According to the construction programme of Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects, the major construction activity under Wan Chai Development Phase II were marine works at HKCEC areas, cross-harbour Watermains, Fresh Watermains and Cooling Watermains Installations, tunnel works at Wan Chai East, ELS work and pipe roofing works at TS4 and cut and cover tunnel construction at TPCWAE. Excavation and tunnel works at Central Interchange, ELS and box culvert construction at North Point area. The major environmental impact was water quality impact at Causeway Bay and Wan Chai. Land-based construction activities were diaphragm wall construction at TS2, ELS work and pipe roofing works at TS4, cut and cover tunnel construction at TPCWAE, tunnel works at Central and ELS work at North Point and tunnel works at Wan Chai East in the reporting month.
- 7.0.4. The major environmental impacts generated from tunnel works at Central and tunnel works at Wan Chai East, IECL and Causeway Bay Typhoon Shelter were undertaken in the reporting month.. As no project related exceedance was recorded in the Project, it was considered no adverse environmental impact caused by the Project works. Thus, it is evaluated the cumulative construction impact was insignificant.



#### 8. Environmental Site Audit

- 8.0.1. During this reporting month, weekly environmental site audits were conducted for Contracts no. HK/2009/01, HK/2009/02, HY/2009/15, HK/2010/06, HY/2009/19 and HK/2012/08. No non-conformance was identified during the site audits.
- 8.0.2. Four site inspections for Contract no. HK/2009/01 was carried out on 3, 10, 18 and 24 July 2013 in reporting month. Results of these inspections and outcomes are summarized in Table 8.1.

Table 8.1 Summary of Environmental Inspections for Contract no. HK/2009/01

Item	Date	Observations	Action taken by Contractor	Outcome
130703_01	3-Jul-13	3	Oil stain was removed.	Completion as observed on 10 July 2013
130718_01	18-Jul-13		Oil stain was removed.	Completion as observed on 24 July 2013
130724_01	24-Jul-13	•	No further spillage was observed.	Completino as observed on 31 July 2013

8.0.3. Four site inspections for Contract no. HK/2009/02 was carried out on 4, 11, 17 and 25 July 2013 in reporting month. Results of these inspections and outcomes are summarized in Table 8.2.

Table 8.2 Summary of Environmental Inspections for Contract no. HK/2009/02

	Date	Observations	Action taken by	Outcome
Item			Contractor	
130704_01		covered (Hung Hing Road)	provided to the	Completion as observed on 11 July 2013
130725_01	25-Jul-13	Chemical container should be properly stored or cleared as chemical waste		Completion as observed on 1 Aug 2013

8.0.4. Four site inspections for Contract no. HY/2009/15 was carried out on 2, 9, 16 and 23 July 2013 in reporting month. The results of these inspections and outcomes are summarized in *Table* 8.3.

Table 8.3 Summary of Environmental Inspections for Contract no. HY/2009/15

Item	Date		Action taken by Contractor	Outcome
	2 1.1 12	The contractor should critically review the wastewater treatment procedure	No further muddy	Completion
130702_01	2-Jul-13	the wastewater treatment procedure	discharge was	as observed 9



Item	Date	Observations		Outcome
			Contractor	
		to avoid muddy discharge (TS2 Eastern Side)	observed	July 2013
			Three sides and	
	2 1.1 42	Provide three side and top side	top side	Completion
	2-Jul-13	enclosure for mixing station	enclosure was	as observed 9
130702_01		(Ex-PWCA)	provided	July 2013
				Completion
				as observed
		Oil Stain should be cleared as	Oil stain was	on 16 July
130709_01	9-Jul-13	chemical waste (TS1)	cleared	2013
		, ,		Completion
				as observed
			Drip trays were	on 16 July
130709_02	9-Jul-13	Provide drip tray to oil drums	provided	2013
		Drip tray should be provided to oil		Completion
		drums and used chemical container		as observed
		should be properly stored as	Drip tray was	on 23 July
130716_01	16-Jul-13	chemical waste (TS4)	provided	2013
				Completion
		Review the wastewater treatment	No further milky	as observed
		process to avoid milky discharge	discharge was	on 23 July
130716_02	16-Jul-13	(TS2)	observed	2013
				Completion
			Leaked oil was	as observed
			cleared as	on 30 July
130723_01	23-Jul-13	Clear leaked oil as chemical waste	chemical waste.	2013

- 8.0.5. Four site inspections for Contract no. HK/2010/06 was carried out on 2, 8, 18 and 22 July 2013 in reporting month. No observation is found in the reporting month.
- 8.0.6. Five site inspections for Contract no. HY/2009/19 was carried out on 3, 10, 17, 24 and 31 July 2013 in reporting month. No observation is found in the reporting month.
- 8.0.7. Four site inspections for Contract no. HK/2012/08 was carried out on 2, 9, 16 and 23 July 2013 in this reporting period. The results of these inspections and outcomes are summarized in *Table 8.4*.

Table 8.4 Summary of Environmental Inspections for Contract no. HK/2012/08

Item	Date		Action taken by Contractor	Outcome
130723_01		Refuse floating on the sea should be	Floating refuses were cleared	Completion as observed
		cleared more frequently		on 30 July 2013

8.0.8. Four site inspections for Contract no. HY/2010/08 was carried out on 4, 11, 18 and 25 July 2013 in this reporting period. No observation is found in the reporting month.

### 9. Complaints, Notification of Summons and Prosecution

- 9.0.1. No environmental complaint was received in the reporting period.
- 9.0.2. The details of cumulative complaint log and updated summary of complaints are presented in *Appendix 9.1*
- 9.0.3. Cumulative statistic on complaints and successful prosecutions are summarized in *Table 9.1* and *Table 9.2* respectively.

**Table 9.1 Cumulative Statistics on Complaints** 

Reporting Period	No. of Complaints
Commencement works (Mar 2010) to last reporting month	28
July 2013	0
Project-to-Date	28

Table 9.2 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	-	0	0
Noise	-	0	0
Water	-	0	0
Waste	-	0	0
Total	-	0	0

#### 10. Conclusion

- 10.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 10.0.2. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others were remains unchanged.
- 10.0.3. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.
- 10.0.4. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- 10.0.5. Water quality monitoring at WSD10 and WSD15 will be temporary suspended while water quality monitoring at WSD9 and WSD17 were implemented with respect to HK/2009/02 for the water quality monitoring scheduled on 8 Feb 12 onwards;
- 10.0.6. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.
- 10.0.7. Water quality monitoring at C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013, and conclude if any water deterioration had been identified during the 4-week water quality monitoring.
- 10.0.8. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.
- 10.0.9. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.

### Lam Geotechnics Limited



- 10.0.10. With respect to the trial dredging at WCR2 was scheduled on 20, 22, 24, 25 March and 1, 3, 11, 13, 15, 17, 19, 20 Apr and 3 May 2012, on-going water quality monitoring results at WSD21 during this period was checked and indicated that there was no contribution due to the trial dredging operation. Enhanced review of water quality around WCR2 was also implemented and no deterioration in the water quality was observed.
- 10.0.11. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui- DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7 and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration.
- 10.0.12. The scheduled construction activities and the recommended mitigation measures for the coming month are listed in *Table 10.1*.

Table 10.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting Month

Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2009/01	<ul> <li>Filling works up to +4.0mPD between CH290 to CH370.</li> <li>Pre-bored H-pile footing at north side for construction of steel bridge over temporary open channel between CH220 and CH260.</li> <li>Reinstatement of existing seawall at Expo Drive East.</li> <li>Construction of RC structure proposed box culvert Bay 8 and Bay 9.</li> <li>Backfilling to temporary water channel for subsequent demolition of promenade deck and pumping station at HKCEC Water Channel.</li> </ul>	<ul> <li>To conform the installation and setting as in the silt screen deployment plan</li> <li>Frequency spray water on the dry dusty road and on the surface of concrete breaking</li> <li>To cover the dusty material or stockpile by impervious sheet</li> <li>To space out noisy equipment and position as far as possible from sensitive receiver.</li> <li>To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance.</li> <li>Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum</li> <li>Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> </ul>
	Cross-Harbour Watermains Installation (CHA & CHB) and Marine Works at TST  Connection of pipeline D to existing mains at Wan Chai.	





Contract No.	Key Construction Works	Recommended Mitigation Measures
	Connection of Pipeline C to	
	exiting mains at Wan Chai.	
	Connection of Pipeline F to	
	exiting mains at TST.	
	Disconnection and capping to	
	existing mains at TST.	
	XHWM, Cooling Watermains, Salt	
	Watermains and Sewer (On Land)	
	XHWM-Stage 4.	
	Additional Washout Chamber at	
	VIP drop-off.	
	Reinstatement works at B6-2A	
	and B6-3 at Northwest of	
	HKCEC.	
	Reinstatement of roadworks at	
	B6-4 West Foyer of HKCEC.	
	Works at Zone A1-5C, A1-5A2	
	and A3-5C.	
	Mainlaying works at A1-5C.	
	Mainlaying works at Zone A5-5,	
	A5-2, A4-2B, A1-5A2.	
	Advance works for mainlaying	
	works in Zone C1-2.	
	Mainlaying works at Zone X2-1	
	when instruction from the	
	Engineer had been received.	
	Temporary ducting and cabling	
	works at junction between Expo	
	Drive East and Expo Drive	
	Central.	
	Temporary ducting and cabling	
	works at junction between	
	Convention Avenue and Fleming Road.	
	Tunnel Works	



Contract No.	Key Construction Works	Recommended Mitigation Measures
Contract No.	<ul> <li>Key Construction Works</li> <li>Installation of pre-bored H-pile in CWB Stage 2 Atrium, Link.</li> <li>Filling of the existing open water channel and Dome.</li> <li>Construction of the south Common D-wall.</li> <li>Demolition of the Promenade Deck.</li> <li>Installation of dewatering wells, observation wells and piezometers at CWB stage 1.</li> <li>ELS for Stage 1 CWB.</li> </ul>	Recommended Mitigation Measures
	<ul><li>E&amp;M Works</li><li>Operation attendance of 60 day for P5.</li></ul>	
HK/2009/02	<ul> <li>Full commissioning for P7 cooling water system.</li> <li>Full commissioning for P9 cooling water system.</li> <li>Remedial works for P8 discharge pipe at WCR1 area.</li> <li>Remaining DN800 salt watermins (CHS8A) installation and backfilling works inside Ex-pet Garden.</li> <li>All mainlaying works and prepare for connection with the existing DN600 salt watermains at Hung Hing Road.</li> <li>All civil works of SWIC and commence wet test of the Pumping Station.</li> <li>Facade works for the external wall of WSD Salt Water Pumping Station.</li> <li>Construction of Bay 5 Box</li> </ul>	<ul> <li>To cover the dusty material or stockpile by impervious sheet;</li> <li>Frequency spray water on the dry dusty road and on the surface of concrete breaking</li> <li>To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance and dark smoke emission</li> <li>To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> <li>Movable noise barrier shall be deployed for demolition works</li> <li>Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> <li>Review silt screen deployment and silt curtain deployment and resubmit associate plans to EPD</li> <li>Implement silt screen and silt curtain in accordance with the associated plans submitted to EPD.</li> </ul>



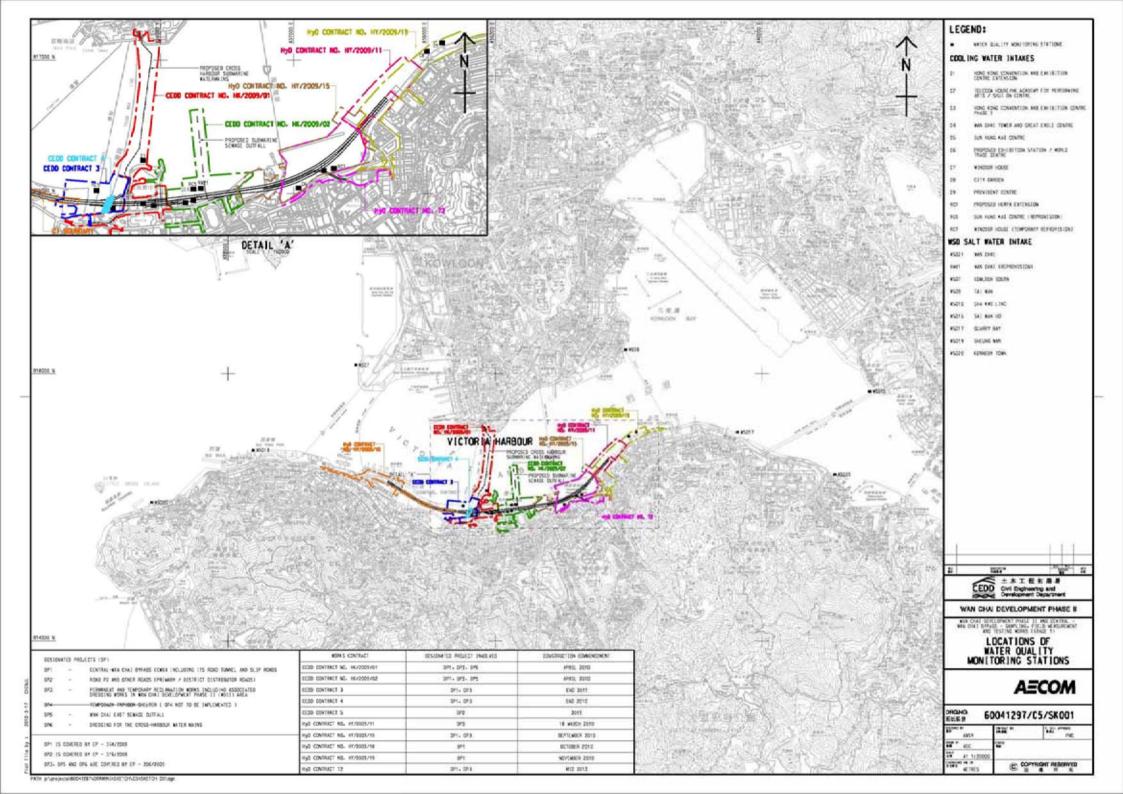


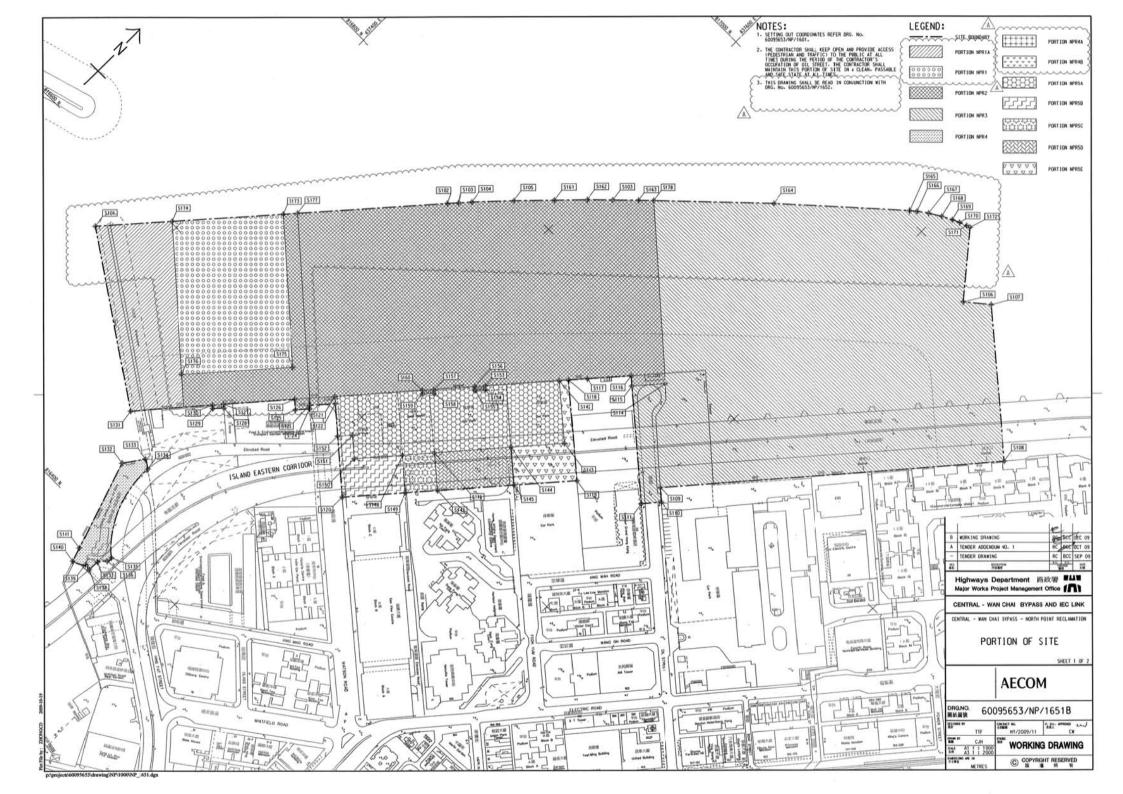
Contract No.	Key Construction Works	Recommended Mitigation Measures
	Culvert N1.	
	ABWF works in Ferry Pier.	
	Installation of moveable ramp	
	system and disabled lift	
	installation.	
	Canopy installation and	
	waterproofing works on	
	Observation Deck.	
	Curtain wall (glass) installation.	
	Site delivery of critical E&M	
	equipment especially the	
	switchboard.	
	LV cable ducting laying for	
	subsequent cable installation by	
	HEC.	
	Rockfilling and leveling stone	
	installation for seawall	
	construction at both WCR4 &	
	TWCR4.	
	Geotextile installation for	
	temporary reclamation at	
	TWCR4 and commence filing	
	works.	
	Precast concrete seawall	
	installation at WCR4 & TWCR4.	
	Backfilling and road	
	reinstatement works at Hung	
	Hing Road & Wan Shing Street	
	for successful implementation of	
	HHR Flyover Diversion (Stage	
	1).	
HY/2009/15	Construction of EVA	Daily visual inspection of silt screen and silt curtain to ensure its operation properly
		<ul> <li>Implement silt screen and silt curtain in accordance with the associated plans submitted to EPD.</li> </ul>

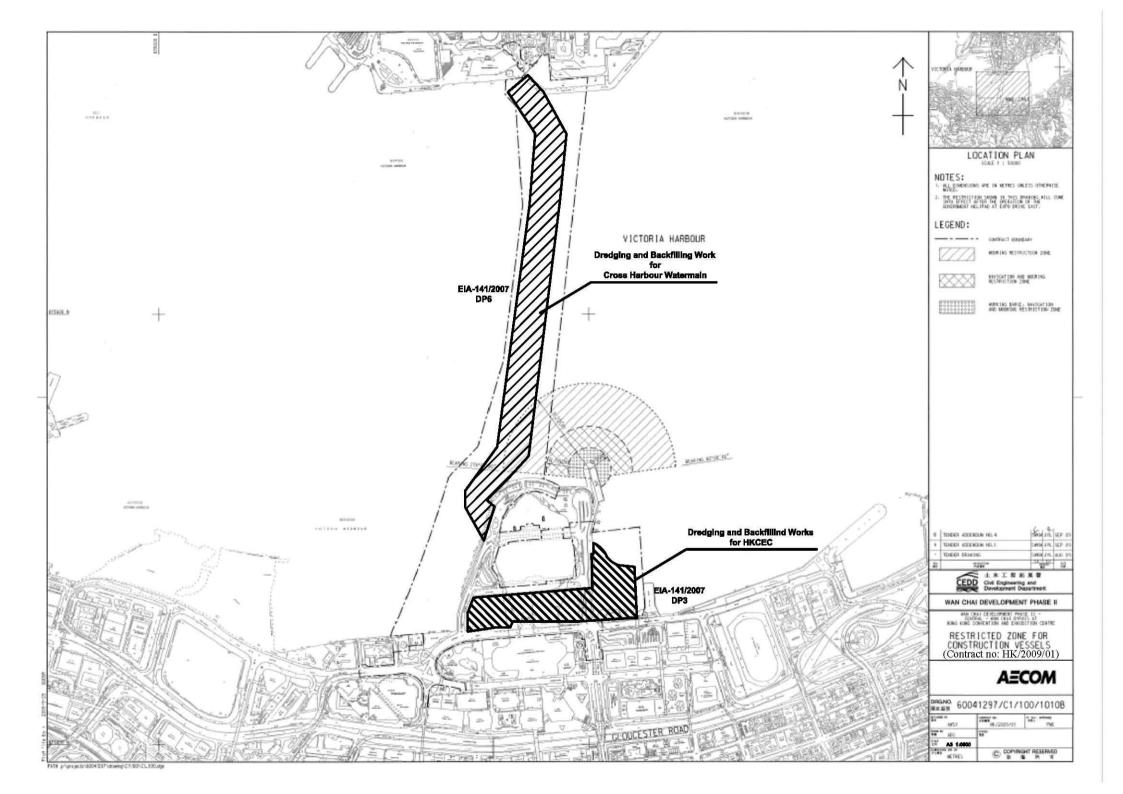
Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2010/06  HY/2009/19	<ul> <li>Sheet piling works</li> <li>Utility diversion works</li> <li>D-wall and Barrette Construction</li> <li>Construction works for Box         Culvert T1</li> <li>Demolition of parapet at IEC Link</li> <li>Construction of dewatering well         for Cut &amp; Cover Tunnel</li> <li>Removal of marine platform</li> <li>Construction of pile cap, column         &amp; cross head (Marine)</li> <li>ELS for Cut &amp; Cover Tunnel</li> <li>Installation of dewatering well</li> <li>Laying of 1500         pipe</li> <li>Launching of segments</li> <li>Unloading segments from derrick</li> <li>Extraction of temporary pile from marine section</li> </ul>	<ul> <li>To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> <li>To space out noisy equipment and position as far as possible from sensitive receiver.</li> <li>Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> <li>To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> </ul>
HK/2012/08	<ul> <li>Site survey</li> <li>Marine ground investigation</li> <li>Dredging</li> <li>Demolition of the existing Expo Drive West Bridge</li> <li>ELS for box culvert La at Lung King Street</li> </ul>	<ul> <li>To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> <li>To space out noisy equipment and position as far as possible from sensitive receiver.</li> </ul>
HY/2009/08	Dredging works	To conform the installation and setting as in the silt screen and silt curtain deployment plan

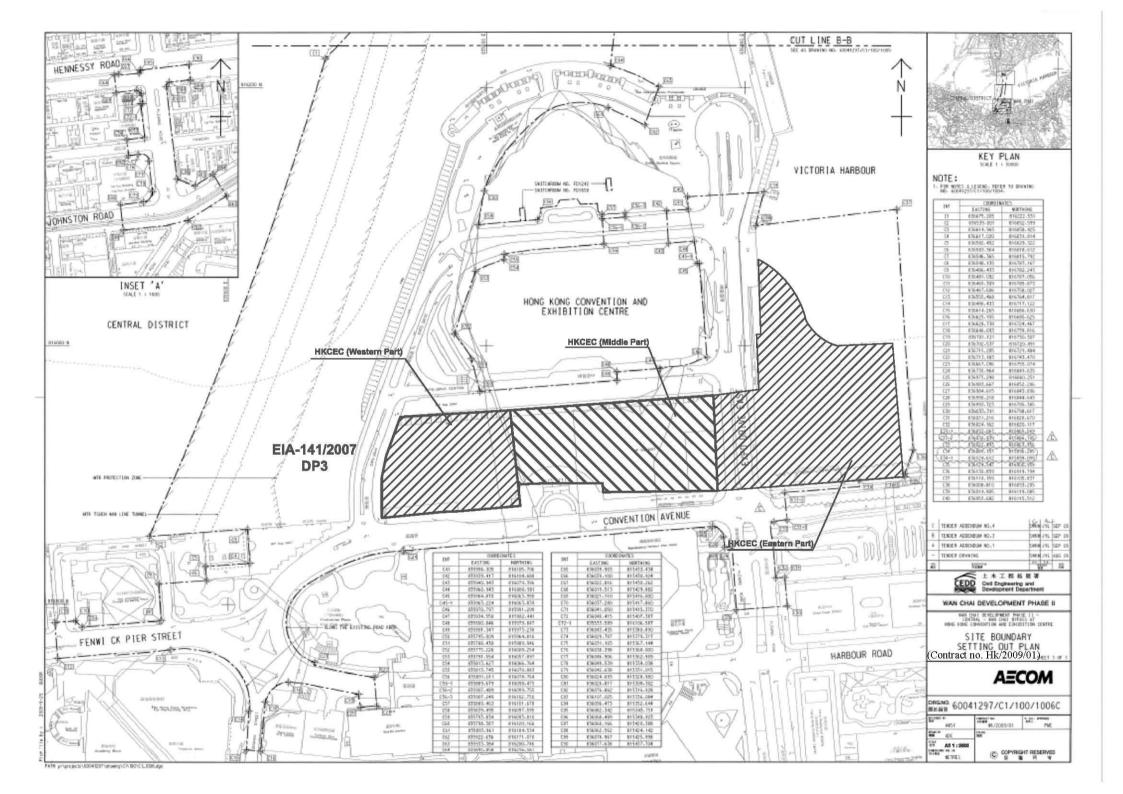
Figure 2.1

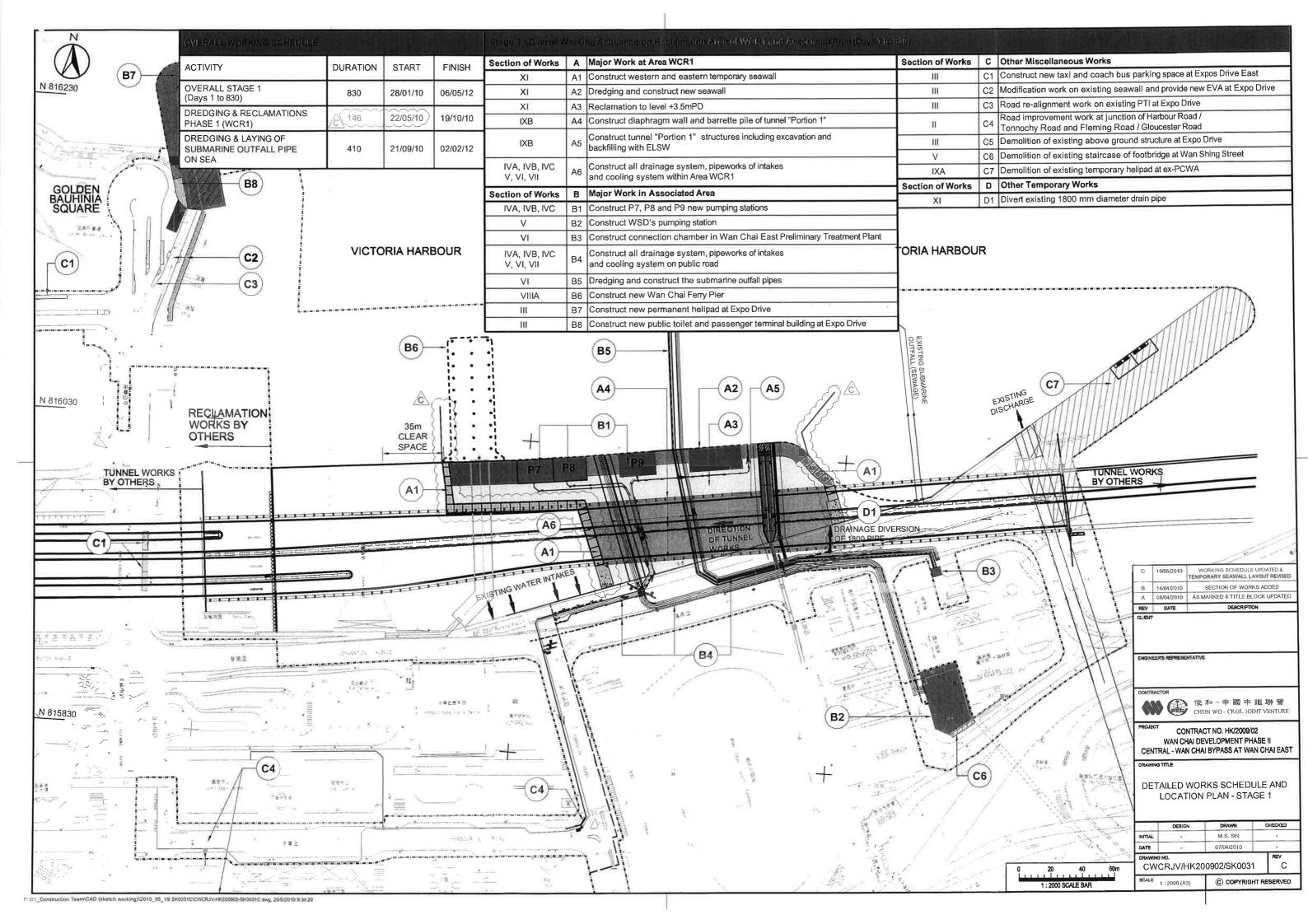
Project Layout

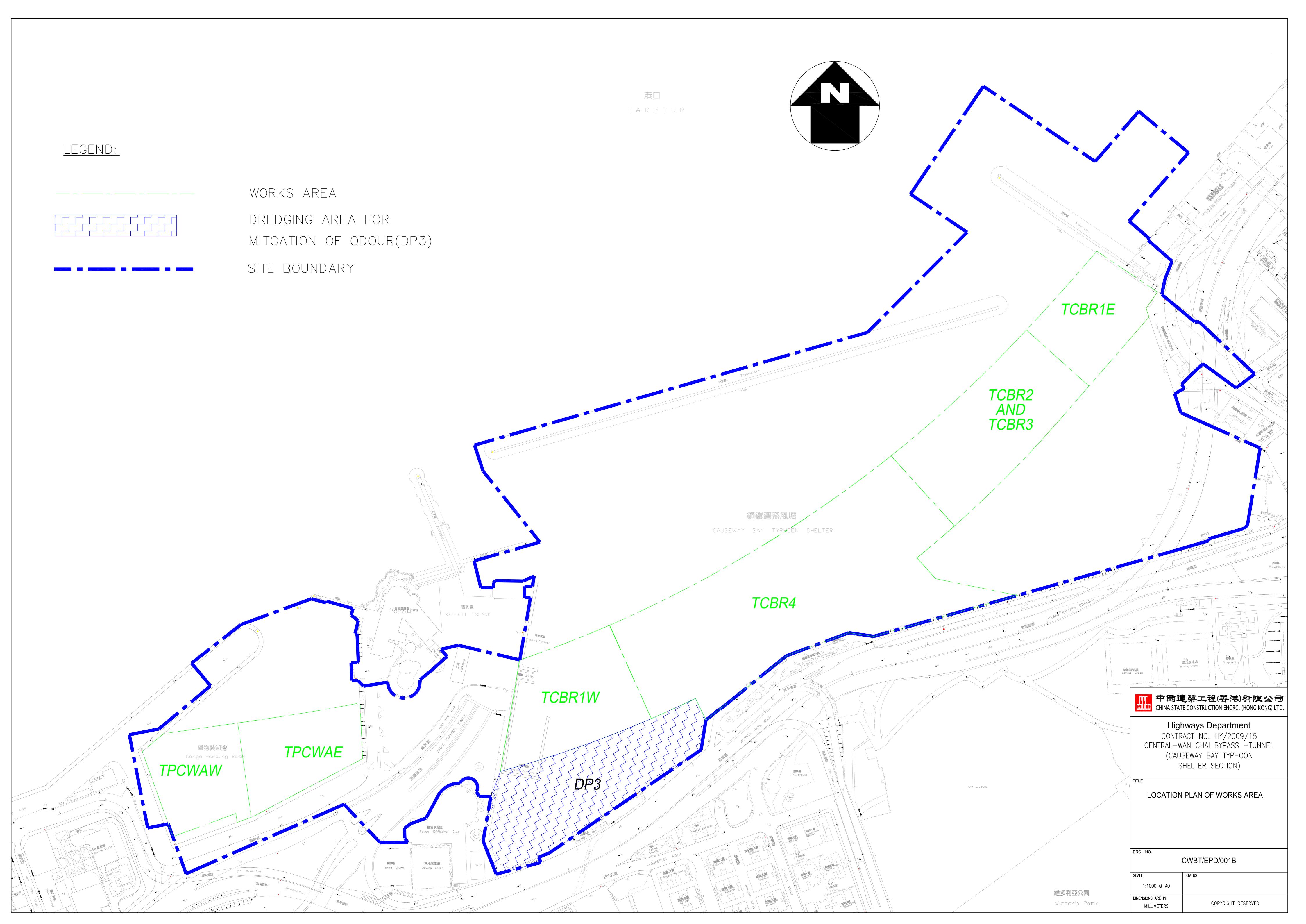


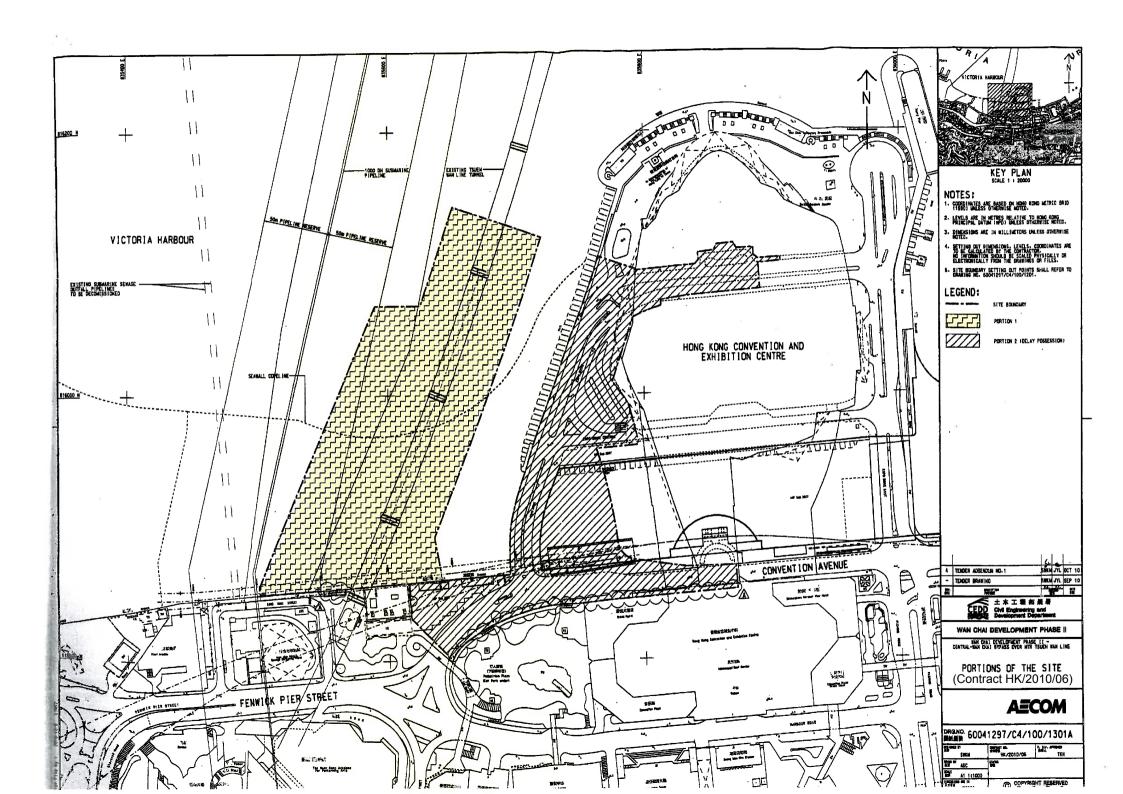






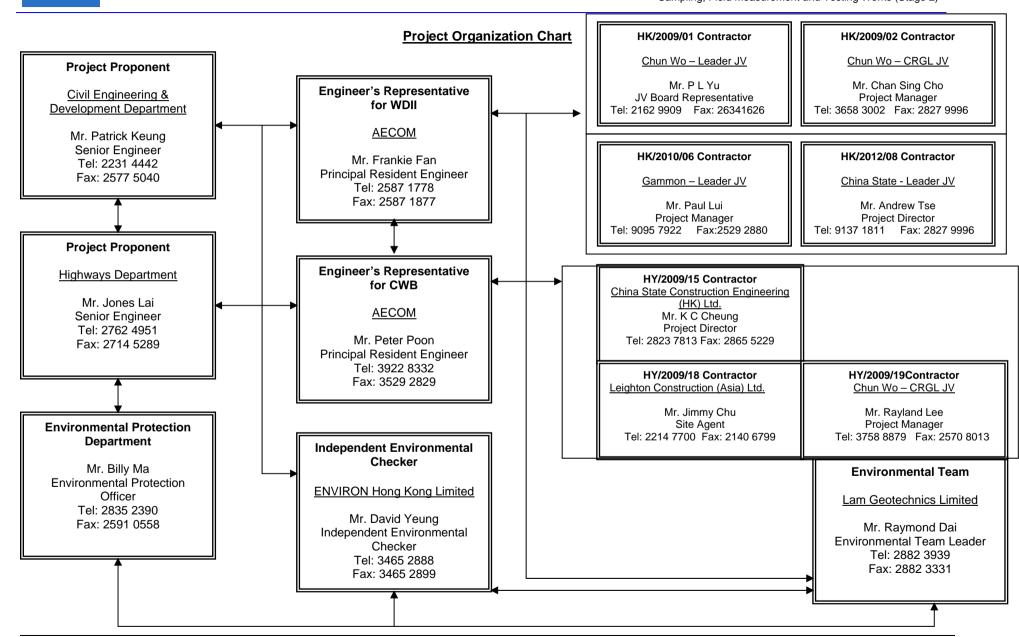






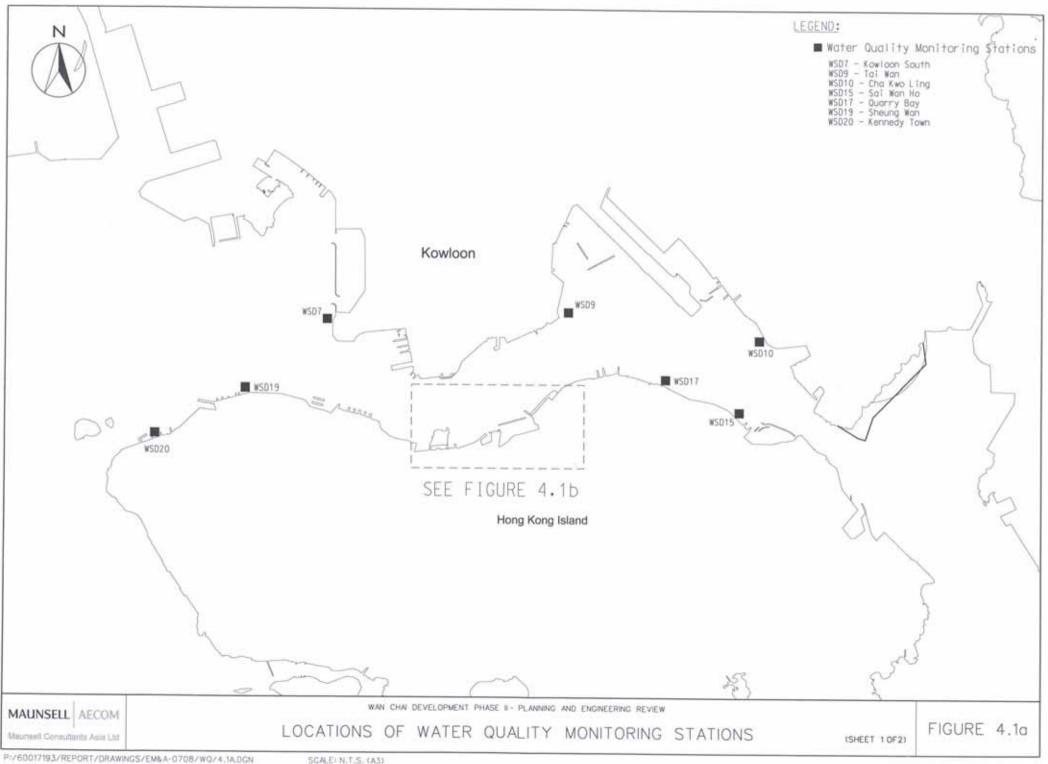
# Figure 2.2

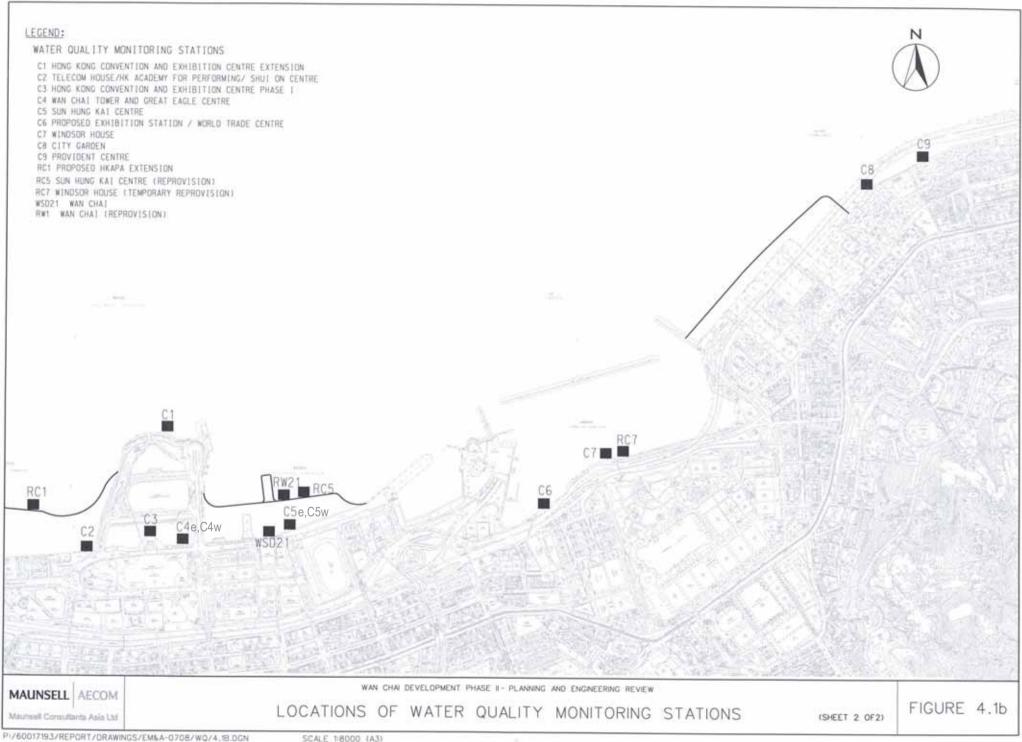
**Project Organization Chart** 

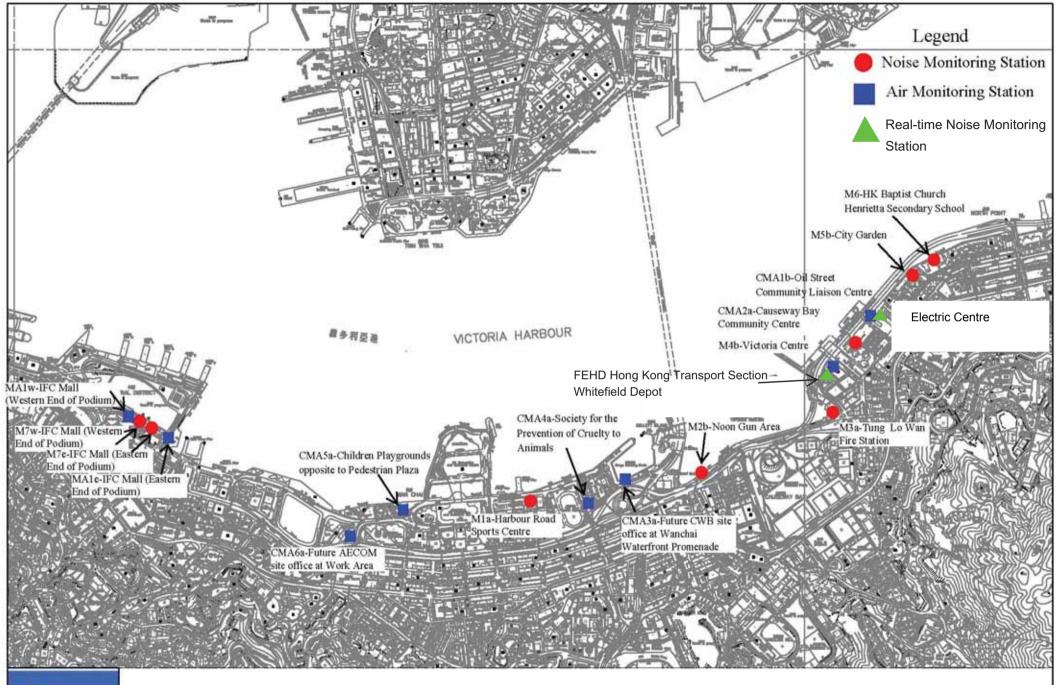


# Figure 4.1

**Locations of Monitoring Stations** 

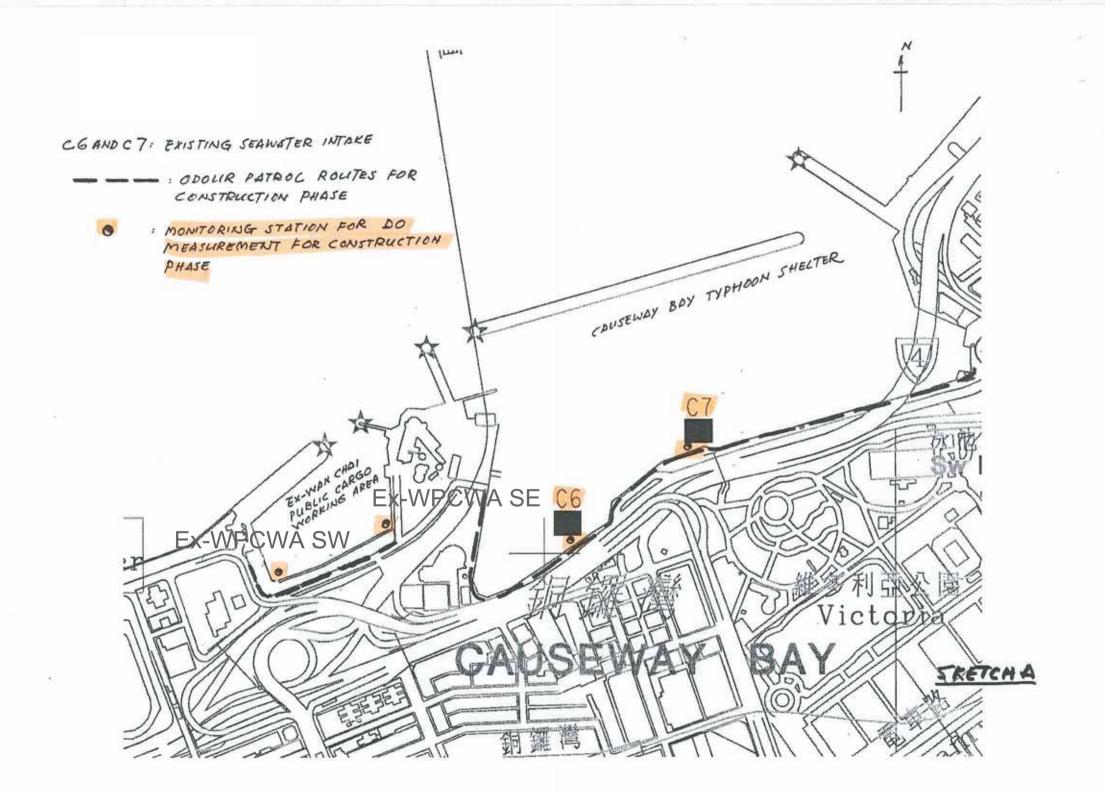


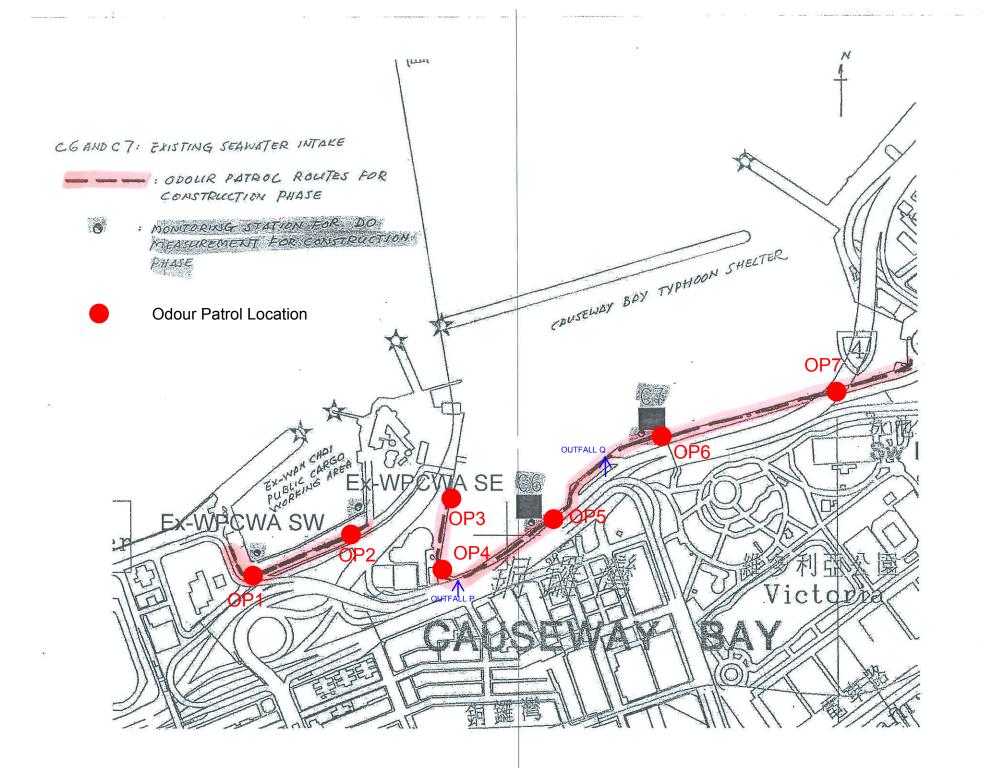


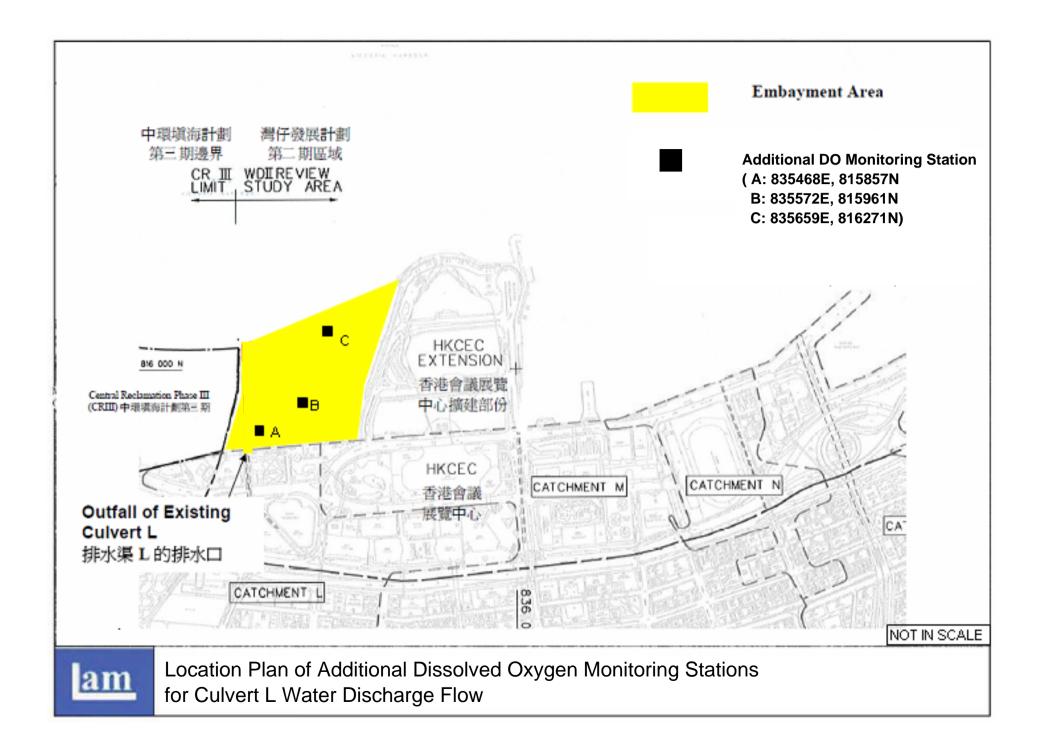


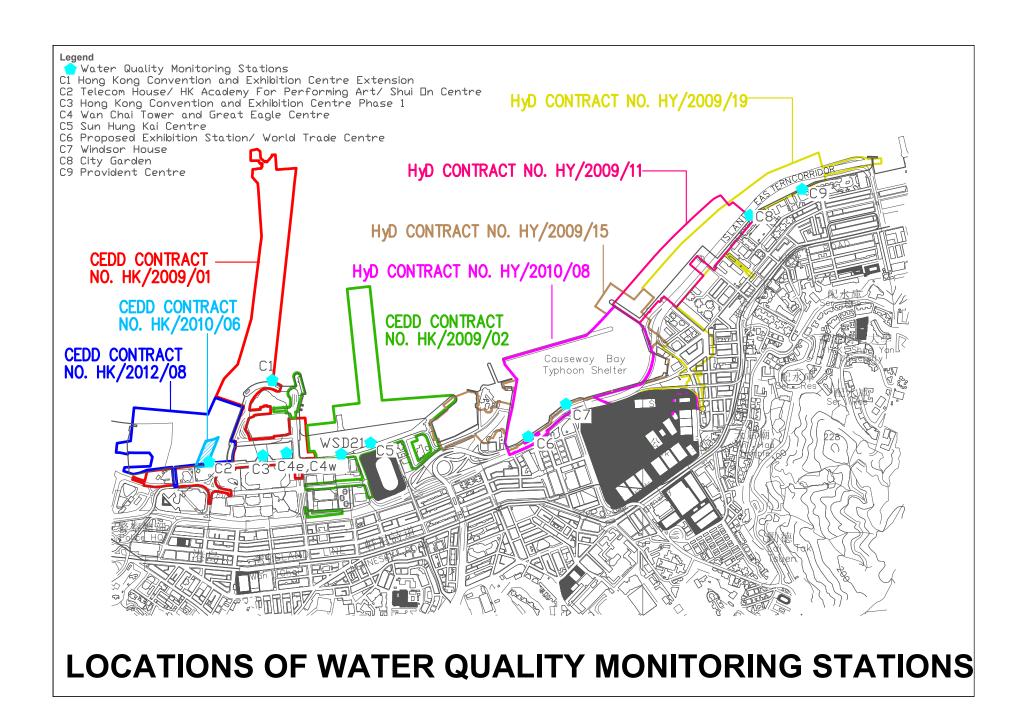
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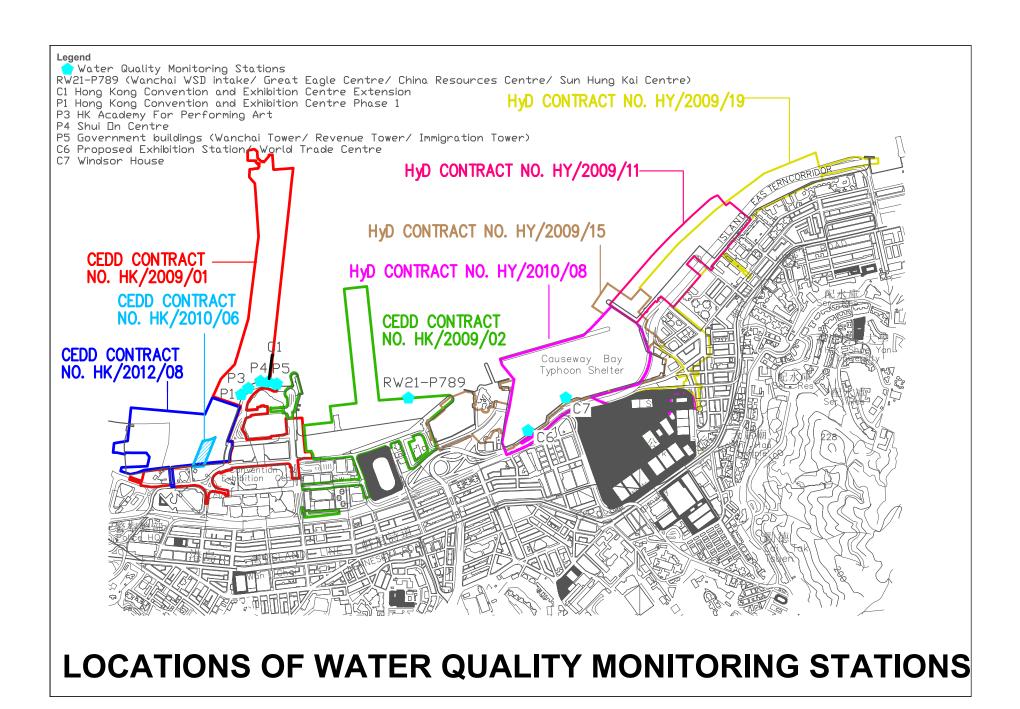
Location plan of Environmental Monitoring Stations

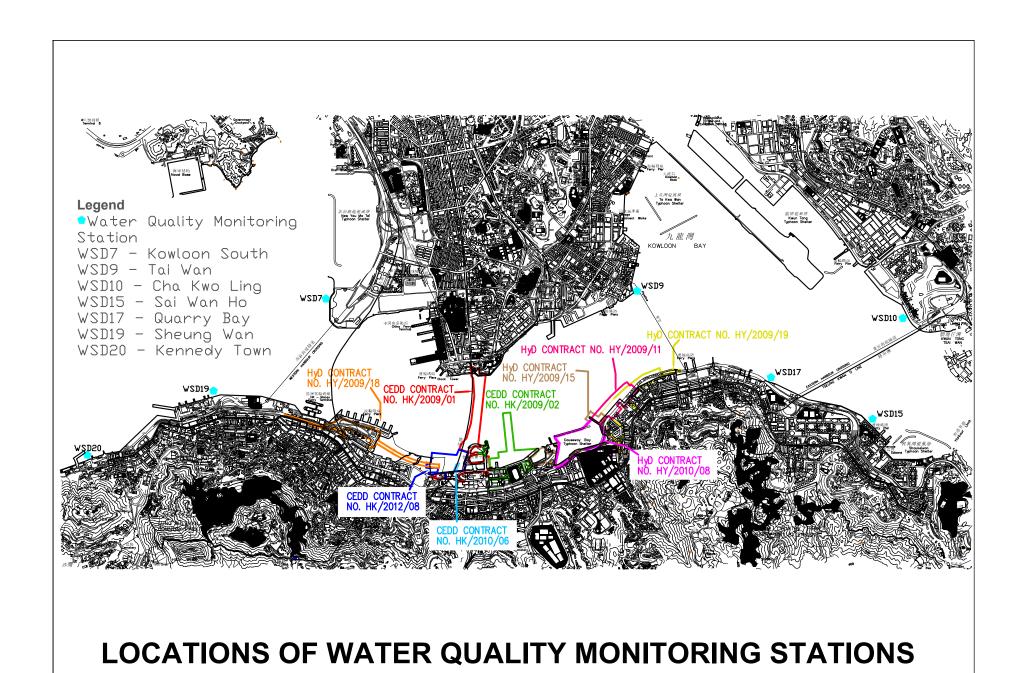


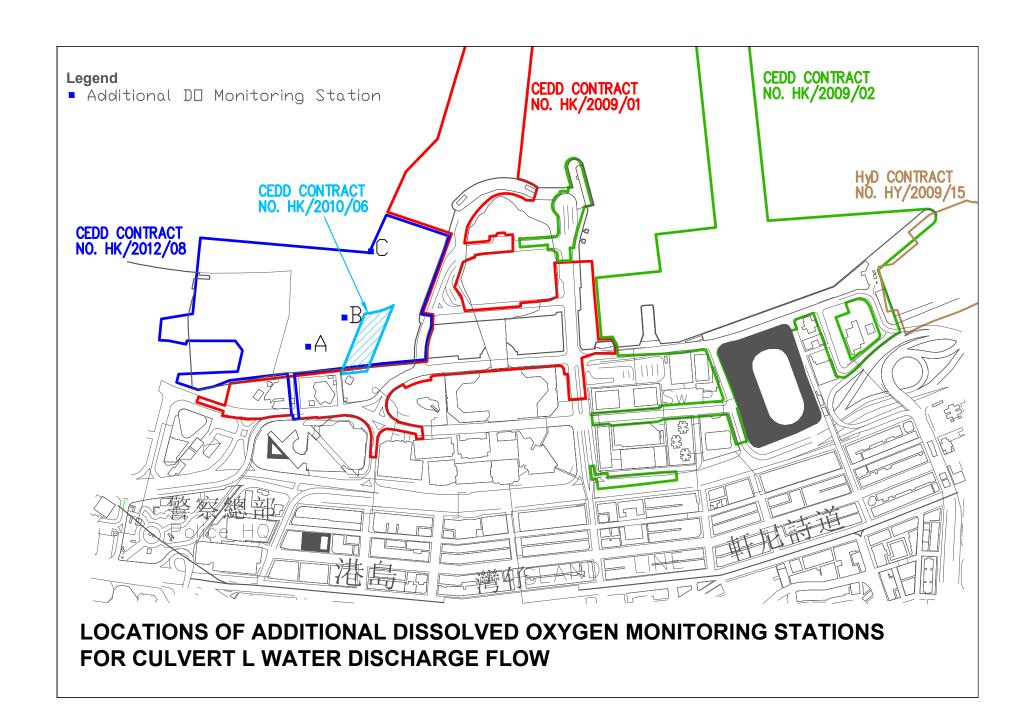












## Appendix 3.1

**Environmental Mitigation Implementation Schedule** 

Wan Chai Development Phase II and Central-Wanchai Bypass

- Sampling, Field Measurement and Testing Works (Stage 2)

Environmental Mitigation Implementation Schedule

### Implementation Schedule for Air Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	Implementation Stages*			on	Relevant Legislation
		8	Agent	Des	C	o	Dec	and Guidelines
Constructio								
For the Who	ole Project							
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		V			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts.  Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition;  Watering during excavation and material handling;  Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and  Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	Work site / during construction	Contractor		٨			

Appendix 3.1

Contract no. HK/2011/07

Wan Chai Development Phase II and Central-Wanchai Bypass

- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	Implementation Stages*			on	Relevant Legislation
2111111	Zava omnestina i roccioni svenom co / svaniganion svenom co	Doewion, Timing	Agent	Des	C	0	Dec	and Guidelines
\$3.5.6	For the dredging activities carried out in the vicinity of Police Officers' Club, the dredging operation will be restricted to only 1 small close grab dredger to minimise the odour impact during the dredging activity. The dredging rate should be reduced as much as practicable for the area in close proximity to the Police Officers' Club. The sediments contain highly contaminated mud which may be disposed with the use of geosynthetic containers (details shall refer to Section 6), grab dredger has to be used for filling up the geosynthetic containers on barges. the dredging rate for the removal of the sediments at the south-west corner of the typhoon shelter shall be slowed down or restricted to specific non-popular hours in weekdays when it is necessary during construction.	Corner of CBTS/implementation of harbour-front enhancement	CEDD <u>1</u>		√			EIAO-TM
S3.8.8	Carry out dredging at the corner of CBTS to remove the sediment and clean the slime attached on the CBTS shoreline seawall	Corner of CBTS & CBTS shoreline seawall/implementation of harbour-front enhancement	CEDD <sup>2</sup>		√			EIAO-TM
Operation I	Phase	I	I	l	1	1	1	
For the Who	ole Project		·					·

<sup>&</sup>lt;sup>1</sup> CEDD will identify an implementation agent.

 $<sup>^{\</sup>rm 2}$  CEDD will identify an implementation agent.

Wan Chai Development Phase II and Central-Wanchai Bypass

- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	Implementation Stages*			Relevant Legislation
		Location, Timing	Agent	Des	C	0	Dec	and Guidelines
S3.10.2	Monthly (from July to September) monitoring of odour impacts, for a period of 5 years, is proposed during the operational phase of the Project to ascertain the effectiveness of the Enhancement Package over time, and to monitor any ongoing odour impacts at the ASRs.	Planned ASRs (CBTS Breakwater)/First 5-year period of operation phase	CEDD <sup>1</sup>			√		EIAO-TM
For DP1 - 0	CWB (Within the Project Boundary)							
S3.6.53 -	The design parameters of the East and Central Ventilation	East and Central	HyD			1		
S3.6.54	Buildings as set in Tables 3.10 and 3.11	Ventilation Buildings / During operation of the Trunk Road						
S3.10.2	Air quality monitoring for the operation performance of the East Ventilation Building and associated East Vent Shaft will be conducted.	East Vent Shaft / During operation of the East Ventilation Building and associated East Vent Shaft	HyD			1		EIAO-TM

• Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Appendix 3.1

Contract no. HK/2011/07

 $\label{thm:chain} \mbox{Wan Chai Development Phase II and Central-Wanchai Bypass}$ 

- Sampling, Field Measurement and Testing Works (Stage 2)

Monthly EM&A Report

#### Table A13.2 Implementation Schedule for Noise Control

Construction Phase	EIA Ref	<b>Environmental Protection Measures / Mitigation Measures</b>	Location / Timing	Implementation Agent	Des	1 .	entati ges* O	on Dec	Relevant Legislation and Guidelines			
Construction I hase	Construction Phase											

- Sampling, Field Measurement and Testing Works (Stage 2)

Monthly EM&A Report

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	In		entati ges*	Relevant Legislation	
	Zivi oznacima 11000000 izanom oz viniginom izanom oz	Location / Timing		Des	C	0	Dec	and Guidelines
S4.9.4	<ul> <li>Good Site Practice:</li> <li>Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.</li> <li>Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.</li> <li>Mobile plant, if any, shall be sited as far away from NSRs as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.</li> <li>Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from onsite construction activities.</li> </ul>	Work Sites / During Construction	Contractor		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			EIAO-TM, NCO
For DP1 –	CWB (Within the Project Boundary)							

Appendix 3.1

Contract no. HK/2011/07

Wan Chai Development Phase II and Central-Wanchai Bypass

- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	nplem Sta	entati ges*	on	Relevant Legislation
		g	Agent	Des	C	О	Dec	and Guidelines
S4.8.5 S4.8.5	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:  Slip road 8 tunnel  Construction of diaphragm wall and substructures of the tunnel approach ramp  Excavation  Construction of slabs  Backfill  Demolition and construction of substructures for the IEC  Demolition works of existing piers and crossheads of the marine section of the existing IEC  Use of PME grouping for the following tasks:  At-grade road construction  Substructure for IECL connection	Work Sites / During Construction	Contractor		V			EIAO-TM, NCO
	WDII Major Roads (Road P2)							
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:  Temporary road diversion Resurfacing At-grade roadwork	Work Sites / During Construction	Contractor		V			EIAO-TM, NCO
For DP3 -	Reclamation Works							
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following task:  Filling behind seawall Seawall construction	Work Sites / During Construction	Contractor		V			EIAO-TM, NCO

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	Ir	nplem Sta	entati ges*	Relevant Legislation	
22.7.10.7	Zirirominini 11000000 izonom osy iriniganom izonom os	zoemon / Timing	Agent	Des	C	0	Dec	and Guidelines
For DP5 –	Wan Chai East Sewage Outfall							
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks:  • Submarine pipelines (marine section)  Use of quiet powered mechanical equipment and movable noise barrier for the following tasks:  • Installation of a new pipeline (land section)	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP6 –	Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui							
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks:  • Submarine pipelines (marine section) •	Work Sites / During Construction	Contractor		V			EIAO-TM, NCO

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In		entati ges*	Relevant Legislation	
			Agent	Des	C	0	Dec	and Guidelines
Operation 1	Phase							
For DP1 –	CWB (Within the Project Boundary)							

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	nplem Sta	entati ges*	Relevant Legislation		
			Agent	Des	C	О	Dec	and Guidelines	
S4.8.14 – S4.8.18	<ul> <li>For Existing NSRs</li> <li>about 235m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC</li> <li>about 230m length of noise semi-enclosure with transparent panel covering the main carriageways (eastbound and westbound) of the CWB and IEC</li> <li>about 135m length of 5.5m high cantilevered noise barrier with 3m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC</li> <li>about 95m length of 5.5m high cantilevered noise barrier with 1m cantilever inclined at 45° with transparent panel</li> </ul>	Near North Point / Before commencement of operation of road project	HyD	V	√	√		EIAO-TM	
	on the eastbound slip road to the IEC  about 350m length of 3.5m high vertical noise barrier with transparent panel on the eastbound slip road to the IEC  low noise road surfacing for the trunk road (except tunnel section and beneath the landscaped deck at the eastern portal area) with speed limit of 70 km/hour  For Future/Planned NSRs  about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC	In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.	HyD	√	√#				

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				Des	C	О	Dec	
	• The openable windows of the temple, if any, should be	Near Causeway Bay Fire	Project					
	orientated so as to avoid direct line of sight to the existing	Station / During detailed	Proponent for					
	Victoria Park Road as far as practicable.	design of the re-	the					
		provisioned Tin Hau	re-provisioned					
		Temple	Tin Hau Temple					ļ

<sup>\*</sup> Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

<sup>#</sup> Only the steel frame for this section of noise semi-enclosure would be erected in advance during the construction of the westbound slip road.

Table A13.3 Implementation Schedule for Water Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation Agent	In	•	entati ges*	Relevant Legislation	
Listics	Environmental Protection Measures / Mitigation Measures	Timing		Des	C	0	Dec	and Guidelines
Construction	on Phase							
For DP3 - Boundary)	Reclamation Works, DP5 (Wan Chai East Sewage Outfall), DP6 (Cross-Harbo	our Water Mains	from Wan Chai to T	sim Sh	a Tsu	i), DP	1 – CW	B (within the Project
S5.8	A phased reclamation approach is planned for the WDII. Containment of fill within each of the reclamation phases by seawalls is proposed, with the seawall constructed first (above high water mark) with filling carried out behind the completed seawalls. Any gaps that may need to be provided for marine access will be shielded by silt curtains to control sediment plume dispersion away from the site. Filling for seawall construction should be carried out behind the silt curtain	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8	Dredging shall be carried out by closed grab dredger for the following works:  Seawall construction in all the reclamation areas;  Construction of the CWB Tunnel  Construction of the proposed WSD water mains; and  Construction of the proposed Wan Chai East sewage outfall pipelines.	Work site / During the construction period	Contractor		1			EIAO-TM, WPCO
S5.8, Figure 5.3	Dredging for the Wan Chai East sewage outfall pipelines shall not be carried out concurrently with the following activities:  Dredging along the proposed cross-harbour water mains;  Dredging along the seawall in the Wan Chai Reclamation (WCR) zone (area between HKCEC Extension and PCWA).	Work site / During the construction period	Contractor		1			EIAO-TM, WPCO

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EIA Ref	Environmental Prot	Environmental Protection Measures / Mitigation Measures			Location /	Implementation	Ir	nplem Sta	entati ges*	ion	Relevant Legislation	
		Ü				Timing	Agent	Des	C	О	Dec	and Guidelines
S5.8	The water body behind the temporary reclamations within the Causeway Bay typhoon shelter shall not be fully enclosed.				Work site / During the construction period	Contractor		√			EIAO-TM, WPCO	
S5.8	As a mitigation measure, to avoid the accumulation of water borne pollutants within the temporary embayment between CRIII and HKCEC1, an impermeable barrier, suspended from a floating boom on the water surface					Work site / During the construction	Contractor		<b>√</b>			EIAO-TM, WPCO
	and extending down to the seabed, will be erected by the contractor before the HKCEC1 commences. The barrier will channel the stormwater discharge flows from Culvert L to the outside of the embayment. The contractor will maintain this barrier until the reclamation works in HKCEC2W are carried out and the new Culvert L extension is constructed.					period						
S5.8, Figure 5.3	The total dredging rates in each of the marine works zones shall not be more than the maximum production rates stated in the table below. These are the production rates without considering the effect of silt curtain.			Work site / During the construction period	Contractor		<b>V</b>			EIAO-TM, WPCO		
	Reclama	tion Area		m Dredging Rate m³ per hour (for 16 hrs	Maximum Dredging Rate (m³ per week)							
	per day)											
	North Point Shoreline Zone (NPR) 6,000 375 42,000											
	Causeway Bay			10,500								
	Shoreline Zone	TCBR	6,000	375	42,000							
	PCWA Zone											

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation	In		entati ges*	on	Relevant Legislation
21.1.10.	Zinyi olimetikii 1 (veettoi iliteriori oo / iliteriori oo / iliteriori oo	Timing	Agent	Des	C	0	Dec	and Guidelines
	Wan Chai Shoreline Zone (WCR)   6,000   375   42,000     HKCEC Shoreline Zone   HKCEC Stage 1 & 3   1,500   94   10,500     (HKCEC)   HKCEC Stage 2   6,000   375   42,000     Cross Harbour Water Mains   1,500   94   10,500     Wan Chai East Submarine Sewage Pipeline   1,500   94   10,500     Note: 1,500   m³ per day shall be applied for construction of the western seawall of WCR1.							
S5.8, Figure 5.3	Dredging along the seawall at WCR1 shall be undertaken initially at 1,500m <sup>3</sup> per day for construction of the western seawall (which is in close proximity of the WSD intake), followed by partial seawall construction at the western seawall (above high water mark) to protect the adjacent intakes as much as possible from further dredging activities.	Work site / During the construction period	Contractor		V			EIAO-TM, WPCO
S5.8, Figure 5.3	For dredging within the Causeway Bay typhoon shelter, seawall shall be partially constructed to protect the nearby seawater intakes from further dredging activities. For example, at TCBR1W, the southern and eastern seawalls shall be constructed first (above high water mark) so that the seawater intakes at the inner water would be protected from the impacts from the remaining dredging activities along the northern boundary.	Work site / During the construction period	Contractor		<b>V</b>			EIAO-TM, WPCO
S5.8, Figure 5.3	Silt curtains shall be deployed around the closed grab dredgers during seawall dredging and seawall trench filling in the areas of HKCEC, WCR, TCBR and NP.	Work site / During the construction period	Contractor		V			EIAO-TM, WPCO
S5.8, Figure 5.3	Silt screens shall be applied to seawater intakes at interim construction stages as stated below:    Interim Construction   Location of Applications	Work site / During the construction period	Contractor		V			EIAO-TM, WPCO

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation	In		entati ges*	on	Relevant Legislation
2111101	Zini o mio mio mio mio mio mio mio mio mio	Timing	Agent	Des	C	0	Dec	and Guidelines
	TBW, NP and Water Mains Zone  To Scenario 2B in late 2009/2010 with concurrent activities at Sewage Pipelines Zone and TCBR.  Convention and Exhibition Centre Phase I, Telecom House / HK Academy for Performing Arts / Shun On Centre, Wan Chai Tower / Revenue Tower / Immigration Tower and Sun Hung Kai Centre  WSD saltwater intakes at Sheung Wan, Wan Chai Cooling water intakes for Queensway Government Offices, Excelsior Hotel, World Trade Centre and Windsor House.							
	Scenario 2C in 2011 with concurrent dredging activities at HKCEC and TCBR.  WSD saltwater intakes at Sheung Wan and Reprovisioned WSD Wan Chai saltwater intake.  Cooling water intakes for MTR South, Excelsior Hotel & World Trade Centre and reprovisioned Windsor House.							
S5.8	Other mitigation measures include:  • mechanical grabs, if used, shall be designed and maintained to avoid spillage and sealed tightly while being lifted. For dredging of any contaminated mud, closed watertight grabs must be used;  • all vessels shall be sized so that adequate clearance is maintained between	construction period	Contractor		1			ProPECC PN 1/94; WPCO (TM-DSS)
	vessels and the seabed in all tide conditions, to ensure that undu- turbidity is not generated by turbulence from vessel movement o propeller wash;	r						
	<ul> <li>all hopper barges and dredgers shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li> </ul>							
	construction activities shall not cause foam, oil, grease, scum, litter o other objectionable matter to be present on the water within the site o dumping grounds;							
	loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water. Barges or hoppers shall not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; and	t						

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation Agent	In		entati ges*	on	Relevant Legislation
		Timing		Des	C	О	Dec	and Guidelines
	before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.							
S5.8	Silt screens are recommended to be deployed at the seawater intakes during the reclamation works period. Installation of silt screens at the seawater intake points may cause a potential for accumulation and trapping of pollutants, floating debris and refuse behind the silt screens and may lead to potential water quality deterioration at the seawater intake points. Major sources of pollutants and floating refuse include the runoff and storm water discharges from the nearby coastal areas. As a mitigation measure to avoid the pollutant and refuse entrapment problems and to ensure that the impact monitoring results are representative, regular maintenance of the silt screens and refuse collection shall be performed at the monitoring stations at regular intervals on a daily basis. The Contractor shall be responsible for keeping the water behind the silt screen free from floating rubbish and debris during the impact monitoring period.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation	Stages			on	Relevant Legislation
		Timing	Agent	Des	C	o	Dec	and Guidelines
S5.8	Dredging of contaminated mud is recommended as a mitigation measures for control of operational odour impact from the Causeway Bay typhoon shelter. In recognition of the potential impacts caused by dredging activities close to the seawater intakes, only I small close grab dredger shall be operated within the typhoon shelter (for the dredging to mitigate odour impact) at any time to minimize the potential impact. Double silt curtains shall be deployed to fully enclose the closed grab dredger during the dredging operation. In addition, an impermeable barrier, suspended from a floating boom on the water surface and extended down to the seabed, shall be erected to isolate the adjacent intakes as much as possible from dredging activities. For example, if dredging is to be carried out at the southwest corner of the typhoon shelter, physical barriers shall be erected to west of the cooling water intake for Excelsior Hotel so that the intake would be shielded from most of the SS generated from the dredging operation to the west of the intake. For area in close proximity of the cooling water intake point, the dredging rate shall be reduced as much as practicable. Site audit and water quality monitoring shall be carried out at the seawater intakes during the dredging operations. Daily monitoring of SS at the cooling water intake shall be carried out, and 24 hour monitoring of turbidity at the intakes shall be implemented during the dredging activities. If the monitoring results indicate that the dredging operation has caused significant changes in water quality conditions at the seawater intakes, appropriate actions shall be taken to stop the dredging and mitigation measures such as slowing down the dredging rate shall be implemented.	Causeway Bay typhoon shelter/Imple mentation of harbour-front enhancement.	CEDD <u>*</u>		7			WPCO

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EIA Ref	Fr	Environmental Protection Measures / Mitigation Measures	Location /	Implementation	In		entati ges*	on	Relevant Legislation
LIA KU	Li	ivitolimental Protection (vicasures / ivitigation (vicasures	Timing	Agent	Des	C	0	Dec	and Guidelines
For the Wh	ole .	Project					•		
S5.8	•	Construction Runoff and Drainage	Work site	Contractor		<b>V</b>			ProPECC PN 1/94; WPCO (TM-DSS)
	•	use of sediment traps, wheel washing facilities for vehicles leaving the site, and adequate maintenance of drainage systems to prevent flooding and overflow;	/ During the constructi on period						wico (im-bss)
	•	Permanent drainage channels shall incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94;							
	•	a sediment tank constructed from pre-formed individual cells of approximately 6 - 8 m3 capacity can be used for settling ground water prior to disposal;							
	•	oil interceptors shall be provided in the drainage system for the tunnels and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor shall have a bypass to prevent flushing during periods of heavy rain;							
	•	precautions and actions to be taken when a rainstorm is imminent or forecast, and during or after rainstorms. Particular attention shall be paid to the control of any silty surface runoff during storm events;							
	•	on-site drainage system shall be installed prior to the commencement of other construction activities. Sediment traps shall be installed in order to minimise the sediment loading of the effluent prior to discharge;							
	•	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge shall be adequately designed for the controlled release of storm flows. All sediment control measures shall be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage shall be reinstated to its original condition when the construction work is finished or the temporary diversion is no longer							

 $<sup>^{\</sup>rm 3}$  CEDD will identify an implementation agent.

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation	In		entati ges*	on	Relevant Legislation
		Timing	Agent	Des	C	O	Dec	and Guidelines
	required.							
	<ul> <li>All fuel tanks and store areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity.</li> </ul>							
	Minimum distances of 100 m shall be maintained between the storm water discharges and the existing or planned WSD flushing water intakes during construction phase.							
S5.8	Sewage from Construction Work Force  Construction work force sewage discharges on site shall be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage shall be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Work site / During the construction period	Contractor		1			ProPECC PN 1/94; WPCO (TM-DSS)
S5.8	Floating Debris and Refuse  Collection and removal of floating refuse shall be performed at regular intervals on a daily basis. The contractor shall be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.	Work site and adjacent water / During the construction period.	Contractor		V			WPCO

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location /	Implementation	Implementation Stages*				Relevant Legislation
	8	Timing	Agent	Des	C	o	Dec	and Guidelines
\$5.8	Storm Water Discharges  Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned WSD flushing water intakes.	Work site and adjacent water / During the design and construction period.	Contractor	√	√			WPCO
Operation	Phase							
DP1 – CW	B (within the Project Boundary)							
\$5.8	For the operation of CWB, a surface water drainage system would be provided to collect road runoff. The following operation stage mitigation measures are recommended to ensure road runoff would comply with the TM under the WPCO:  The drainage from tunnel sections shall be directed through petrol interceptors to remove oil and grease before being discharged to the nearby foul water manholes.	CWB/During design and operational period	HyD/TD <sup>3</sup>	√		√		WPCO
	Petrol interceptors shall be regularly cleaned and maintained in good working condition.							
	Oily contents of the petrol interceptors shall be properly handled and disposed of, in compliance with the requirements of the Waste Disposal Ordinance.							
	Sewage arising from ancillary facilities of CWB (for examples, car park,							

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	Zana omitoria a control a	Timing	Agent	Des	C	О	Dec	and Guidelines
	control room, ventilation and administration buildings and tunnel portals) shall be connected to public sewerage system. Sufficient capacity in public sewerage shall be made available to the proposed facilities.  • Road drainage shall also be provided with adequately designed silt trap to minimize discharge of silty runoff.  • The design of the operational stage mitigation measures for CWB shall take into account the guidelines published in ProPECC PN 5/93 "Drainage Plans subject to Comment by the EPD." All operational discharges from the CWB into drainage or sewerage systems are required to be licensed by EPD under the WPCO.							

<sup>\*</sup> Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

 $<sup>^{3}\,\</sup>mathrm{if}$  employ Management, Operation and Maintenance (MOM) Contract

Table A13.4 Implementation Schedule for Waste Management

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	Ir	nplem Sta	entati ges*	Relevant Legislation and Guidelines	
			Agent	Des	C	О	Dec	and Guidelines
Construction	on Phase							
For DP3 -	Reclamation Works							
	Marine Sediments	Work site / During the construction period	Contractor		1			ETWB TCW No. 34/2002
S6.7.2	The dredged marine sediments would be loaded onto barges, transported to and disposed of at the designated disposal sites at South of Cheung Chau, East of Ninepin, East of Tung Lung Chau, South of Tsing Yi or East of Sha Chau to be allocated by the MFC depending on their level of contamination or at other disposal sites after consultation with the MFC and EPD. In accordance with the ETWB TCW No. 34/2002, the contaminated material must be dredged and transported with great care. The mitigation measures recommended in Section 5 of the EIA Report shall be incorporated. The dredged contaminated sediment must be effectively isolated from the environment upon final disposal and shall be disposed of at the Type 2 confined marine disposal contaminated mud pit.							
S6.7.3	Based on the biological screening results, the Category H (>10xLCEL) sediment which failed the biological testing would require Type 3 special disposal. The volume of Category H sediment from the Causeway Bay typhoon shelter which would require special disposal arrangements is estimated to be approximately 0.05 Mm³. A feasible containment method is proposed whereby the dredged sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal.							

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In		entati ges*	Relevant Legislation	
	23. To same that I receive the same of the same as	Economy 1 mmng	Agent	Des	C	0	Dec	and Guidelines
S6.7.5	It will be the responsibility of the Contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, at least 3 months prior to the dredging contract being tendered							
S6.7.6	During transportation and disposal of the dredged marine sediments requiring Type 1 and Type 2 disposal, the following measures shall be taken to minimise potential impacts on water quality:  • Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.							

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	nplem Sta	entati ges*	Relevant Legislation	
		g	Agent	Des	C	o	Dec	and Guidelines
	Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.      Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.							
S6.6.12	Floating Refuse During the construction phase, the project proponent's contractor will be responsible for the collection of any refuse within their works area. Floating booms will be provided on the water surface to confine the refuse from the working barges as well as to avoid the accumulation of pollutants within temporary embayment as mentioned in Table 13.3.	Work site / During the construction period	Contractor		√			

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In		entati ges*	on	Relevant Legislation
Ent itel	Environmental Protection Measures / Mitigation Measures	Document Timing	Agent	Des	C	О	Dec	and Guidelines
S6.7.7	Recommendations for good site practices during the construction activities include:  nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; training of site personnel in proper waste management and chemical waste handling procedures; provision of sufficient waste disposal points and regular collection for disposal; appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and a recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	Work site / During the construction period	Contractor		1			Waste Disposal Ordinance (Cap.354)

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	Implementation Stages*				Relevant Legislation
		g	Agent	Des	C	О	Dec	and Guidelines
S6.7.8	Waste Reduction Measures  Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:  • segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;  • to encourage collection of aluminium cans, PET bottles and paper, separate labelled bins shall be provided to segregate these wastes from other general refuse generated by the work force;  • any unused chemicals or those with remaining functional capacity shall be recycled;  • use of reusable non-timber formwork, such as in casting the tunnel box sections, to reduce the amount of C&D material.  • prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill;  • proper storage and site practices to minimise the potential for damage or contamination of construction materials; and  • plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	Work site / During planning and design stage, and construction stage	Contractor	7	7			

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		_	Agent	Des	C	0	Dec	and Guidennes
S6.7.10	General Refuse  General refuse shall be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D material.  A collection area shall be provided where wastes can be stored and loaded prior to removal from site. An enclosed and covered area is recommended to reduce the occurrence of 'wind blow' light material.	Work site / During the construction period	Contractor		V			Public Health and Municipal Services Ordinance (Cap. 132)
S6.7.11	Chemical Wastes  After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals shall be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work site / During the construction period	Contractor		V			Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
\$6.7.12	Construction and Demolition Material  C&D material shall be sorted on-site into inert C&D material (that is, public fill) and C&D waste. All the suitable inert C&D material shall be broken down to 250 mm in size for reuse as public fill in the WDII reclamation. C&D waste, such as wood, glass, plastic, steel and other metals shall be reused or recycled and, as a last resort, disposed of to landfill. A suitable area shall be designated to facilitate the sorting process and a temporary stockpiling area will be required for the separated materials.	Work site / During the construction period	Contractor		1			ETWB TCW No. 33/2002, 31/2004, 19/2005

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In		entati ges*	on	Relevant Legislation
		g	Agent	Des	C	О	Dec	and Guidelines
S6.7.13	In order to monitor the disposal of public fill and C&D waste at public filling facilities and landfills, respectively, and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team undertaking the environmental monitoring and audit work. An Independent Environment Checker shall be responsible for auditing the results of the system.	Work site / During the construction period	Contractor and Independent Environmental Checker		1			ETWB TCW No. 31/2004
S6.7.14	Bentonite Slurry  The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage" and listed as follows:	Work site / During the construction period	Contractor		<b>V</b>			ProPECC PN 1/94
	If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.							
	If the used bentonite slurry is intended to be disposed of through the public drainage system, it shall be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the Technical Memorandum of Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.							
	If the used bentonite slurry is intended to be disposed to public fill reception facilities, it will be mixed with dry soil on site before disposal.							

<sup>\*</sup> Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

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- Sampling, Field Measurement and Testing Works (Stage 2)

Table A13.5 Implementation Schedule for Land Contamination

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In		entati ges*	on	Relevant Legislation	
21.1101	23. To office the control of the con	Economy 11mmig	Agent	Des	C	0	Dec	and Guidelines	
Construction	on Phase								
For the Wh	ole Project								
S.12.6	The contaminated site shall be cleaned up before commencement of site clearance and construction work at the concerned area which may disturb the ground.	A King Marine / Before commencement of construction activities at A King Marine.	Project proponent for the re- provisioned Tin Hau Temple	<b>V</b>				"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops" published by EPD, HKSAR  EPD ProPECC Note No. 3/94	
S7.10	During soil remediation works, the Contractor for the excavation works shall take note of the following points for excavation:  • Excavation profiles must be properly designed and executed;  • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means;  • Quantities of soil to be excavated must be estimated;  • It maybe necessary to split quantities of soil according to soil type, degree and nature of contamination.  • Temporary storage of soil at intermediate depot or on-site	A King Marine / During soil remediation works	Contractor	<b>V</b>				Air Pollution Control Ordinance Noise Control Ordinance Waste Disposal Ordinance Waste Disposal (Chemical Waste) (General) Regulation	

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	nplem Sta	entati ges*	on	Relevant Legislation and Guidelines
			Agent	Des	C	o	Dec	
	maybe required. The storage site shall include protection facilities for leaching into the ground. eg. Liner maybe required.							
	Supply of suitable clean backfill materials is needed after excavation.     Care must be taken of existing buildings and utilities.     Precautions must be taken to control of ground settlement     Speed controls for vehicles shall be imposed on dusty site areas.     Vehicle wheel and body washing facilities at the site's exit points shall be established and used.  The following environmental mitigation measures shall be strictly followed during the operation and/or maintenance of the CS/S facilities:							Water Pollution Control Ordinance

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	nplem Sta	entati ges*	on	Relevant Legislation
2111101	Zarra olimontala i i socciola rizonsales, rizonsales	Document Timing	Agent	Des	C	O	Dec	and Guidelines
	Air Quality Mitigation Measures     The loading, unloading, handling, transfer or storage of cement shall be carried out in an enclosed system.     The loading, unloading, handling, transfer or storage of other materials which may generate airborne dust emissions such as untreated soil and oversize materials sorted out from the screening plant and stabilized soil stockpiled in the designated handling area, shall be carried out in such a manner to prevent or minimise dust emissions. These materials shall be adequately wetted prior to and during the loading, unloading and handling operations.     All practicable measures, including speed controls for vehicles, shall be taken to prevent or minimize the dust emission caused by vehicle movement.     Tarpaulin or low permeable sheet shall be put on dusty vehicle loads transported between site locations.							
	Noise Mitigation Measures  The mixing facilities shall be sited as far as practicable to the nearby noise sensitive receivers.  Simultaneous operation of mixing facilities and other equipment shall be avoided.  Mixing process and other associated material handling activities shall be properly scheduled to minimise potential cumulative noise impact on the nearby noise sensitive receivers.  Construction Noise Permit shall be applied for the operation of powered mechanical equipment during restricted hours (if any).							

EIA Ref	Environmental Protection Measures / Mitigation Measures Location / Timing Implementation Agent	Implementation	In	nplem Sta	entati ges*	Relevant Legislation		
			Agent	Des	C	0	Dec	and Guidelines
	Water Quality Mitigation Measures  Stockpile of untreated soil shall be covered as far as practicable to prevent the contaminated material from leaching out. The leachate shall be discharged following the requirements of WPCO.  Waste Mitigation Measures  Treated oversize materials will be used as filling material for backfilling within the site. Sorted materials of size smaller than 5 cm will be collected and transferred to the mixing plant for further decontamination treatment.							
	<ul> <li>Stabilized soils shall be broken into suitable size for backfilling or reuse on site.</li> <li>A high standard of housekeeping shall be maintained within the mixing plant area.</li> <li>If necessary, there shall be clear and separated areas for</li> </ul>							

<sup>\*</sup> Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

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- Sampling, Field Measurement and Testing Works (Stage 2)

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#### Table A13.6 Implementation Schedule for Marine Ecology

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In	nplem Sta	entati ges*	on	Relevant Legislation
			Agent	Des	C	O	Dec	and Guidelines
Construction	on Phase							
For the Wh	ole Project - Schedule 3 DP							
S.9.7.2	Alternative design of the Trunk Road constructed in tunnel shall be adopted to avoid permanent reclamation in CBTS and ex-PWCA Basin.	-	CEDD/HyD	<b>√</b>				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
For DP3 -	Reclamation Works							
S.9.7.3	Translocation of those potentially affected coral colonies to the nearby suitable habitats such as Junk Bay is recommended. A detailed translocation plan (including translocation methodology, monitoring of transplanted corals, etc.) should be drafted and approval by AFCD during the detailed design stage of the Project.	Ex-PCWA Basin and along seawall next to a public pier which is about 250 m away from the CBTS	CEDD/HyD	1				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	In		entati ges*	on	Relevant Legislation
	Zivi oimona 1 Tottottoi Natala 1	Bookin, 1mmg	Agent	Des C O D		Dec	and Guidelines	
S.9.7.4	During dredging and filling operations, a number of mitigation measures to control water quality shall be adopted to confine sediment plume within reclamation area and protect marine fauna in proximity to the reclamation. The mitigation measures include the following:  Installation of silt curtains during dredging activities  Use of tightly-closed grab dredger  Reduction of dredging rate  Control of grab descending speed  Construction of leading edges of seawall in the early stages of the reclamation works	Work site / during construction phase	Contractor		√ 			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
_	Adoption of multiple-phase construction schedule							

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- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation	Iı	Implementation Stages*			Relevant Legislation
2111101	Zaria ominera i rottotton i zenom co / riangunon i zenom co	Location / Timing	Agent	Des	C	О	Dec	and Guidelines
8.9.7.6	To minimize potential disturbance impacts on the foraging ardeid population in the CBTS, particularly in the area near the A King Shipyard, appropriate mitigation measures shall be adopted particularly during the construction phase. The following measures are recommended:  • Use of Quiet Mechanical Plant during the construction phase shall be adopted wherever possible.  • Adoption of multiple-phase construction schedule.  • General measures to reduce noise generated during the construction phase (see noise impact assessment) shall be	Work site / during construction phase	Contractor		√ 			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.7	effectively implemented.  Seawalls shall be constructed in advance around the reclamation areas within the area of the CBTS to screen adjacent feeding ground from construction phase activities, reduce noise disturbance to the associated seabirds and also to restrict access to this habitat adjacent to works areas by ship traffic.	Work site / during construction phase	Contractor		<b>√</b>			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.8	Loss of artificial seawall habitats shall be reinstated by the construction of about 1 km vertical wave absorbing seawall along the coastlines of the new reclamation around the HKCEC and at North Point. The new seawalls are expected to provide large area of hard substrata for settlement and recruitment of intertidal fauna similar to those previously recorded from existing intertidal habitats.	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

<sup>\*</sup>Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Table A13.7 Implementation Schedule for Landscape and Visual

EIA Ref	Envir	onmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Ir		entati ges*	on	Relevant Legislation and Guidelines
					Des	C	О	Dec	
Construction	Phase			•					•
For the Whole	Project								
Table 10.5	CM1	Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	√	1			EIAO TM
Table 10.5	CM2	Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	<b>√</b>			EIAO TM
Table 10.5	CM3	Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	<b>√</b>			EIAO TM
Table 10.5	CM4	Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	<b>√</b>	<b>√</b>			EIAO TM
Table 10.5	CM5	Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6	Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DP1 - CV	VB (With	in the Project Boundary)	1						
Table 10.5	CM1	Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor		V			EIAO TM
Table 10.5	CM2	Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	<b>V</b>	<b>√</b>			EIAO TM
Table 10.5	CM3	Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	<b>V</b>	1			EIAO TM
Table 10.5	CM4	Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	1	1			EIAO TM
Table 10.5	CM5	Control of night-time lighting.	Work site / During Construction Phase	Contractor		1			EIAO TM

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Wan Chai Development Phase II and Central-Wanchai Bypass

- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Environmental Protection Measures / Mitigation Measures L		Location / Timing	Implementation Agent	Stages*				Relevant Legislation and Guidelines
					Des	C	О	Dec	
Table 10.5	CM6	Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		V			EIAO TM
For DP2 – WD	II Maio	or Roads (Road P2)							
Table 10.5		Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	1	V			EIAO TM
Table 10.5	CM2	Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	V	V			EIAO TM
Table 10.5	CM3	Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	1	V			EIAO TM
Table 10.5	CM4	Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	1	V			EIAO TM
Table 10.5	CM5	Control of night-time lighting.	Work site / During Construction Phase	Contractor		V			EIAO TM
Table 10.5	CM6	Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		V			EIAO TM
For DP3 - Rec	lamatio	n Works							
Table 10.5	CM5	Control of night-time lighting.	Work site / During Construction Phase	Contractor		V			EIAO TM
Table 10.5	CM6	Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		V			EIAO TM
For DP5 - War	n Chai I	East Sewage Outfall							
Refer to EIA- 058/2001 Table 10.13	CM2	Minimisation of works areas.	Work site / During Construction Phase	Contractor		1			EIAO TM
Refer to EIA- 058/2001 Table 10.13	СМЗ	Erection of decorative hoardings.	Work site / During Construction Phase	Contractor		V			EIAO TM

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- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Envir	onmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	In		entati ges*	on	Relevant Legislation and Guidelines
					Des	C	О	Dec	
Refer to EIA- 058/2001 Table 10.13	CM4	Control night-time lighting.	Work site / During Construction Phase	Contractor		V			EIAO TM
Refer to EIA- 058/2001 Table 10.13	CM5	Minimisation of disruption to public by effective programming of the works.	Work site / During Construction Phase	Contractor		√			EIAO TM
	ss-Harb	our Water Mains from Wan Chai to Tsim Sha Tsui							
Refer to EIA- 058/2001 Table 10.13		Minimisation of works areas.	Work site / During Construction Phase	Contractor		1			EIAO TM
Refer to EIA- 058/2001 Table 10.13	CM3	Erection of decorative hoardings.	Work site / During Construction Phase	Contractor		V			EIAO TM
Refer to EIA- 058/2001 Table 10.13	CM4	Control night-time lighting.	Work site / During Construction Phase	Contractor		V			EIAO TM
Refer to EIA- 058/2001 Table 10.13	CM5	Minimisation of disruption to public by effective programming of the works.	Work site / During Construction Phase	Contractor		V			EIAO TM
Operation Pha	se					-			
For the Whole	Project	- Schedule 3 DP							
Table 10.6, Figure 10.5.1- 10.5.5	OM1	Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	CEDD/HyD	1	1	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM2	Shrub and Climbing Plants to soften proposed structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD	<b>V</b>	1	1		ETWB TCW 2/2004

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- Sampling, Field Measurement and Testing Works (Stage 2)

EIA Ref	Enviro	Environmental Protection Measures / Mitigation Measures L		Implementation Agent	In	nplem Sta	entat ges*	ion	Relevant Legislation and Guidelines
					Des	C	0	Dec	
Table 10.6,	OM3	Buffer Tree and Shrub Planting to screen proposed roads	Work site / During	CEDD/HyD/	<b>√</b>	√	√		ETWB TCW 2/2004
Figure 10.5.1- 10.5.5		and associated structures.	Design Stage and Operation Phases						
Table 10.6, Figure 10.5.1- 10.5.5	OM4	Aesthetic design of proposed waterfront promenade.	Work site / During Design Stage and Operation Phases	CEDD <u></u>	V	1	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM5	Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	CEDD/HyD	√	√	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM6	Aesthetic design of roadside amenity areas.	Work site / During Design Stage and Operation Phases	CEDD/HyD	1	1	1		ETWB TCW 2/2004
For DP1 - CW	B (Withi	in the Project Boundary)							
Table 10.6,	OM1	Aesthetic design of buildings and road-related structures,	Work site / During	HyD	√		√		ETWB TCW 2/2004
Figure 10.5.1- 10.5.5		including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Design Stage and Operation Phases						
Table 10.6, Figure 10.5.1- 10.5.5	OM2	Shrub and Climbing Plants to soften proposed structures	Work site / During Design Stage and Operation Phases	HyD	<b>V</b>	1	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM3	Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	HyD	1	1	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM5	Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	HyD	1	1	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM6	Aesthetic design of roadside amenity areas.  *Roads (Road P2)	Work site / During Design Stage and Operation Phases	HyD	√	V	1		ETWB TCW 2/2004

<sup>&</sup>lt;sup>4</sup> CEDD will identify an implementation agent

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EIA Ref	Envir	onmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	In	nplem Sta	entati ges*	on	Relevant Legislation and Guidelines
					Des	C	0	Dec	
Table 10.6, Figure 10.5.1- 10.5.5	OM1	Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	CEDD/HyD		V	V		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM3	Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD		1	1		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM5	Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1- 10.5.5	OM6	Aesthetic design of roadside amenity areas	Work site / During Design Stage and Operation Phases	CEDD/HyD		V	1		ETWB TCW 2/2004
For DP3 - Rec	lamatio	n Works							
Table 10.6, Figure 10.5.1- 10.5.5	OM4	Aesthetic design of proposed waterfront promenade.	Work site / During Design Stage and Operation Phases	CEDD⁵_	√	V	<b>√</b>		ETWB TCW 2/2004

<sup>\*</sup>Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

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 $<sup>^{\</sup>rm 5}$  CEDD will identify an implementation agent

## Appendix 4.1

Action and Limit Level

#### **Lam Geotechnics Limited**

### **Action and Limit Level**

### Action and Limit Level for Noise Monitoring

Time Period	Action Level	Limit Level
07:00 – 19:00 hours on normal weekdays	When one documented complaint is received.	75 dB(A) <sup>Note 1</sup>

#### Note 1:

- 70dB(A) and 65 dB(A) for schools during normal teaching periods and school examination periods, respectively.
- If works are to be carried out during the restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

#### Action and Limit Level for Air Monitoring

Monitoring Location	1-hour TSP Leve	l in $\mu$ g/m $^3$	24-hour TSP Le	evel in $\mu$ g/m $^3$
	Action Level	Limit Level	Action Level	Limit Level
CMA1b Note 2	320.1	500	176.7	260
CMA2a	323.4	500	169.5	260
CMA3a Note 2	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5a Note 2	332.0	500	181.0	260
CMA6a Note 2	300.1	500	187.3	260

#### Note 2:

- As per facing owner's rejection in allowing the implementation of long-term air quality impact monitoring at their premises, alternative monitoring stations and justification were proposed for IEC verification and EPD approval.
- The established Action and Limit Levels from the baseline air monitoring will be adopted to the alternative monitoring stations

#### Action and Limit Level for Water Monitoring

Parameters	Dry S	eason	Wet S	Season					
r ai ailletei s	Action	Limit	Action	Limit					
WSD Salt Water Intake									
SS in mg L <sup>-1</sup>	13.00	14.43	16.26	19.74					
Turbidity in NTU	8.04	9.49	10.01	11.54					
DO in mg/L	3.66	3.28	3.17	2.63					
<b>Cooling Water Inta</b>	ke								
SS in mg L <sup>-1</sup>	15.00	22.13	18.42	27.54					
Turbidity in NTU	9.10	10.25	11.35	12.71					
DO in mg/L	3.36	2.73	3.02	2.44					

#### Remarks:

 Action and Limit Level for the wet season are applied after the EPD approval of Updated EM&A Manual on 29 April 2011.

#### Action and Limit Levels for Odour Patrol

Parameters	Action	Limit
Odour Nuisance (from odour intensity analysis or odour patrol)	<ul> <li>When two documented complaint are received; or</li> <li>Odour Intensity of 2 is measured from odour intensity analysis.</li> </ul>	<ul> <li>Five or more consecutive genuine documented complaints within a week; or</li> <li>Odour Intensity of 3 or above is measured from odour intensity analysis.</li> </ul>

## Appendix 4.2

Copies of Calibration Certificates



33624 Certificate No.

Page

4 Pages

Customer: Lam Geotechnics Limited

Address: 11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong.

Order No.: Q31494

Date of receipt

30-May-13

Item Tested

Description : Digital Sound Level Meter

Manufacturer: B&K

Model

: Type 2236

Serial No.

: 2100736

**Test Conditions** 

Date of Test:

3-Jun-13

Supply Voltage : --

Ambient Temperature :

 $(23 \pm 3)^{\circ}C$ 

Relative Humidity: (50 ± 25) %

**Test Specifications** 

Calibration check.

Ref. Document/Procedure: Z01.

**Test Results** 

All results were within the IEC 651 Type 1, IEC 804 Type 1 & IEC 1260 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No. Description

Cert. No.

Traceable to

S017

Multi-Function Generator

C127181

SCL-HKSAR

S024

Sound Level Calibrator

30620

NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

Calibrated by

Liam Wong

3-Jun-13

Date:

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

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Certificate No. 33624

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#### Results:

### 1. SPL Accuracy

	J	JUT Setting			
Range	Parameter	Frequency Wt.	Freq. Response	Applied Value (dB)	UUT Reading (dB)
20 - 100	SPL	dBA	F	94.0	93.8
			S		93.8
		dBC	F		93.8
		dBL	F		93.9
		1 kHz	F		93.8
40 - 120	SPL	dBA	F	94.0	93.9
		1 kHz	F		93.9
	SPL	dBA	F	114.0	113.8
			S		113.8
		dBC	F		113.9
		dBL	F		113.9
		1 kHz	F		113.8

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty: ± 0.1 dB

2. Level Stability: 0.0 dB

IEC 651 Type 1 Spec. :  $\pm$  0.3 dB

Uncertainty: ± 0.1 dB

## 3. Linearity

## 3.1 Level Linearity

UUT Range	Applied	UUT Reading	Variation	IEC 651 Type 1 Spec.
(dB)	Value (dB)	(dB)	(dB)	(Primary Indicator Range)
140	114.0	113.9	0.0	± 0.7 dB
130	104.0	103.9	0.0	
120	94.0	93.9 (Ref.)	Care Ann	
110	84.0	83.9	0.0	
100	74.0	73.9	0.0	
100	64.0	63.9	0.0	
100	54.0	53.9	0.0	

Uncertainty:  $\pm 0.1 \text{ dB}$ 



Certificate No. 33624

Page 3 of 4 Pages

## 3.2 Differential level linearity

UUT Range	Applied	UUT Reading		
(dB)	Value (dB)	(dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)	- :=:	
	95.0	94.9	0.0	± 0.2 dB

Uncertainty: ± 0.1 dB

## 4. Frequency Weighting

A weighting

Frequen	су	Attenuation (dF	3)	IEC 651 Type 1 Spec.
31.5 H	Z	-39.6		$-39.4 \text{ dB}, \pm 1.5 \text{ dB}$
63 H	Z	-26.4		$-26.2 \text{ dB}, \pm 1.5 \text{ dB}$
125 H	Z	-16.3		- 16.1 dB, ± 1 dB
250 H	Z	-8.8		- 8.6 dB, ± 1 dB
500 H	Z	-3.3		- $3.2  dB, \pm 1  dB$
1 kH	Z	0.0	(Ref)	0 dB, ± 1 dB
2 kH	Z	+1.2		+ 1.2 dB, ± 1 dB
4 kH	[z	+0.9		+ 1.0 dB, ± 1 dB
8 kH	[z	-1.2		- $1.1 \text{ dB}$ , $+ 1.5 \text{ dB} \sim -3 \text{ dB}$
16 kH	[z	-6.8		- 6.6 dB, + 3 dB $\sim$ - $\infty$

Uncertainty: ± 0.1 dB

## 5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	
1/10	40.0	39.9	± 0.5 dB
$1/10^2$	40.0	39.8	
$1/10^{3}$	40.0	39.7	± 1.0 dB
1/104	40.0	39.5	

Uncertainty:  $\pm 0.1 \text{ dB}$ 



Certificate No. 33624

Page 4 of 4 Pages

## 6. Filter Response

Filter	Setting	Attenuation (dB)	IEC 1260 Class 1 Spec.
125	Hz	-63.6	<- 61
250	Hz	-44.8	<- 42
500	Hz	-21.0	< - 17.5
707	Hz	-3.7	- 2 ~ - 5
1	kHz (Ref.)	0.0 (Ref.)	
1.41	4 kHz	-4.1	- 2 ~ - 5
2	kHz	-21.4	< - 17.5
4	kHz	-45.0	< - 42
8	kHz	-63.9	< - 61

Uncertainty: ± 0.2 dB

Remark: 1. UUT: Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric Pressure: 996 hPa
- 4. The UUT was adjusted with the laboratory's sound calibrator at the reference sound pressure level before the calibration.

----- END -----



25144 Certificate No.

Page

2 Pages

Customer: Lam Geotechnics Limited

Address: 11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong.

Order No.: Q22033

Date of receipt

2-Aug-12

Item Tested

**Description**: Sound Level Calibrator

Manufacturer: B & K

Modei

: Type 4230

Serial No.

: 1411076

**Test Conditions** 

Date of Test: 10-Aug-12

Supply Voltage

**Ambient Temperature:** 

 $(23 \pm 3)^{\circ}C$ 

Relative Humidity: (50 ± 25) %

**Test Specifications** 

Calibration check.

Ref. Document/Procedure: F21, Z02.

#### **Test Results**

All results were within the IEC 942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S014	Spectrum Analyzer	13535	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR
S041	Universal Counter	15610	SCL-HKSAR
S191	6½ dgt. Multimeter	20033	NIM-PRC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI). The test results apply to the above Unit-Under-Test only

Calibrated by :

10-Aug-12

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

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Certificate No. 25144

Page 2 of 2 Pages

Results:

### 1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	93.96	± 0.3 dB

Uncertainty: ± 0.2 dB

### 2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	1.000 kHz	± 2 %

Uncertainty:  $\pm 3.6 \times 10^{-6}$ 

3. Level Stability: 0.0 dB

IEC 942 Class 1 Spec. :  $\pm$  0.1 dB

Uncertainty: ± 0.01 dB

4. Total Harmonic Distortion : < 1.5 %

IEC 942 Class 1 Spec. : < 3 % Uncertainty : ± 2.3 % of reading

Remark: 1. UUT: Unit-Under-Test

- 2. The above measured values are the mean of 3 measurement.
- 3. The uncertainty claimed is for a confidence probability of not less than 95%.
- 4. Atmospheric Pressure: 995 hPa.

----- END -----



CONTACT:

MS EMILY KONG

CLIENT:

LAM GEOTECHNICS LIMITED

ADDRESS:

11/F., CENTRE POINT,

181-185 GLOUCESTER ROAD,

WAN CHAI, HONG KONG

PROIECT:

WORK ORDER:

HK1312557

LABORATORY:

HONG KONG

DATE RECEIVED:

09/05/2013

DATE OF ISSUE:

20/05/2013

#### **COMMENTS**

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:

Equipment Type:

**Turbidity** Turbidimeter

Brand Name:

XIN RUI

Model No.:

WG7-3B 1203006

Serial No.: Equipment No.:

Date of Calibration: 15 May, 2013

#### **NOTES**

This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

#### ISSUING LABORATORY: HONG KONG

#### Address

ALS Technichem (HK) Pty Ltd

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Email:

hongkong@alsglobal.com

Mr. Fung Lim Chee, Richard

General Manager -

Greater China & Hong Kong

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Page 1 of 2

Work Order: Date of Issue: HK1312557

20/05/2013

Client:

LAM GEOTECHNICS LIMITED



Equipment Type:

Turbidimeter

Brand Name:

XIN RUI

Model No.: Serial No.:

WGZ-3B 1203006

Equipment No.:

Date of Calibration:

15 May, 2013

Date of next Calibration:

15 August, 2013

Parameters:

**Turbidity** 

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
Expected Reading (NTO)	Displayed Reading (NTO)	TOTEL ALICE (70)
0	0.00	==
4	4.09	2.3
40	37.38	-6.5
80	74.38	-7.0
400	370.5	-7.4
800	795.6	-0.5
	Tolerance Limit (±%)	10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

> Mr. Fung Lim Chee, Richard General Manager -

> Greater China & Hong Kong



CONTACT:

MS EMILY KONG

CLIENT:

LAM GEOTECHNICS LIMITED

ADDRESS:

11/F., CENTRE POINT,

181-185 GLOUCESTER ROAD,

WAN CHAI, HONG KONG

PROJECT:

WORK ORDER:

HK1316903

LABORATORY:

HONG KONG

DATE RECEIVED:

25/06/2013

DATE OF ISSUE:

03/07/2013

### **COMMENTS**

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:

Turbidity

Equipment Type:

Turbidimeter

Brand Name:

XIN RUI

Model No.:

WGZ-3B 1203008

Serial No .: Equipment No.:

Date of Calibration: 03 July, 2013

#### **NOTES**

This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

### ISSUING LABORATORY: HONG KONG

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Mr. Fung Lim Chee, Richard

General Manager -

Greater Chipa & Hong Kong

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Page 1 of 2

Work Order: Date of Issue: HK1316903

Client:

03/07/2013 LAM GEOTECHNICS LIMITED



Equipment Type:

Turbidimeter

Brand Name:

XIN RUI

Model No.:

WGZ-3B

Serial No.:

1203008

Equipment No.:

Date of Calibration:

03 July, 2013

Date of next Calibration: 03 October, 2013

Parameters:

**Turbidity** 

Method Ref: APHA 21st Fd 2130R

Methou Rel. APHA 21st Eu. 21sob			
Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)	
0	0.13		
4	3.82	-4.5	
40	38.37	-4.1	
80	80.45	0.6	
400	383.8	-4.1	
800	840.4	5.1	
	Tolerance Limit (±%)	10.0	

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

> Mr. Fung Lim Chee General Manager

Greater China & Hong Kong



CONTACT: MS EMILY KONG

CLIENT: LAM GEOTECHNICS LIMITED
ADDRESS: 11/F CENTRE POINT

11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD,

MANICHAL HONC KONC

WAN CHAI, HONG KONG

PROJECT:

WORK ORDER: HK1311692 LABORATORY: HONG KONG DATE RECEIVED: 02/05/2013

**DATE OF ISSUE:** 09/05/2013

#### **COMMENTS**

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test: Equipment Type: Turbidity Turbidimeter

Brand Name:

XIN RUI

Model No.: Serial No.: WGZ-3B 1203015

Equipment No.:

--

Date of Calibration: 07 May, 2013

### **NOTES**

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

#### ISSUING LABORATORY: HONG KONG

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General Manager

Greater China & Hong Kong

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Page 1 of 2

Work Order: Date of Issue: HK1311692 09/05/2013

Client:

LAM GEOTECHNICS LIMITED



Equipment Type:

Turbidimeter

Brand Name:

XIN RUI

Model No.: Serial No.: WGZ-3B 1203015

Equipment No.:

--

Date of Calibration:

07 May, 2013

Date of next Calibration:

07 August, 2013

Parameters:

**Turbidity** 

Method Ref: APHA 21st Ed. 2130B

Method Ref. Al HA 213t Edi 21305			
Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)	
0	0.00		
4	4.23	5.8	
40	42.67	6.7	
80	81.85	2.3	
400	395.3	-1.2	
800	814.2	1.8	
	Tolerance Limit (±%)	10.0	

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard General Manager

Greater China & Hong Kong



## ALS Technichem (HK) Pty Ltd

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

MS EMILY KONG

CLIENT:

LAM GEOTECHNICS LIMITED

ADDRESS:

11/F., CENTRE POINT,

181-185 GLOUCESTER ROAD,

WAN CHAI, HONG KONG

PROJECT:

-

WORK ORDER:

HK1316245

LABORATORY:

HONG KONG

DATE RECEIVED:

18/06/2013

DATE OF ISSUE:

26/06/2013

#### **COMMENTS**

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:

Dissolved Oxygen, pH, Salinity and Temperature

Equipment Type:

Multimeter

Brand Name:

YSI

Model No.:

Professional plus 11F100420

Serial No.:

Equipment No.:

Date of Calibration: 25 June, 2013

#### **NOTES**

This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

#### ISSUING LABORATORY: HONG KONG

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Greater China & Hong Kong

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Page 1 of 2

Work Order: Date of Issue: HK1316245 26/06/2013

Client:

LAM GEOTECHNICS LIMITED



Equipment Type:

Multimeter

Brand Name:

YSI

Model No.:

Professional plus

Serial No.:

11F100420

Equipment No.:

--

Date of Calibration:

25 June, 2013

Date of next Calibration:

25 September, 2013

Parameters:

**Dissolved Oxygen** 

Method Ref: APHA (21st edition), 45000: G

indenda italiya ibi (==== amaion), isasas s			
Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	
2.85	2.99	0.14	
6.09	5.94	-0.15	
7.37	7.47	0.10	
	Tolerance Limit (±mg/L)	0.20	

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	3.89	-0.11
7.0	6.99	-0.01
10.0	9.97	-0.03
	Tolerance Limit (±pH unit)	0.20

**Salinity** 

Method Ref: APHA (21st edition). 2520B

Method Ref. Al The (21st cartion), 25205			
Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)	
0	0.01		
10	10.33	3.3	
20	20.96	4.8	
30	32.22	7.4	
	Tolerance Limit (±%)	10.0	

**Temperature** 

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C )	Tolerance (°C )
9.0	9.8	0.8
25.0	25.2	0.2
41.0	41.4	0.4
	Tolerance Limit (±°C)	2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard

General Manager -

Greater China & Hong Kong

ALS Technichem (HK) Pty Ltd ALS Environmental

Page 2 of 2



## ALS Technichem (HK) Pty Ltd

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

MS EMILY KONG

CLIENT:

LAM GEOTECHNICS LIMITED

ADDRESS:

11/F., CENTRE POINT,

181-185 GLOUCESTER ROAD,

WAN CHAI, HONG KONG

PROJECT:

WORK ORDER:

HK1314154

LABORATORY:

HONG KONG

DATE RECEIVED:

27/05/2013

DATE OF ISSUE:

04/06/2013

### COMMENTS

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:

Dissolved Oxygen, pH, Salinity and Temperature

Equipment Type:

Multimeter

Brand Name:

YSI

Model No.:

Professional Plus

Serial No.:

13A100242

Equipment No.:

Date of Calibration: 31 May, 2013

#### **NOTES**

This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

### ISSUING LABORATORY: HONG KONG

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Mr. Fung Lim Chee General Manager

Greater China & Hong Kong

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Page 1 of 2

Work Order: Date of Issue: HK1314154 04/06/2013

Client:

LAM GEOTECHNICS LIMITED



Equipment Type:

Multimeter

Brand Name:

YSI

Model No.:

Professional Plus

Serial No.:

13A100242

Equipment No.:

--

Date of Calibration:

31 May, 2013

Date of next Calibration:

31 August, 2013

Parameters:

**Dissolved Oxygen** 

Method Ref: APHA (21st edition), 45000: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	
2.22	2.24	0.02 -0.11	
5.76	5.65		
7.90	8.00	0.10	
		20 2000	
	Tolerance Limit (±mg/L)	0.20	

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)	
4.0	3.97	-0.03	
7.0	7.05	0.05	
10.0	9.95	-0.05	
	Tolerance Limit (±pH unit)	0.20	

Salinity

Method Ref: APHA (21st edition), 2520B

7.00.000					
Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)			
0	0.00				
10	9.60	-4.0			
20	19.49	-2.6			
30	30.05	0.2			
	Tolerance Limit (±%)	10.0			

**Temperature** 

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	ed Reading (°C ) Displayed Reading (°C )	
10.5	9.7	-0.8
20.0	19.4	-0.6
38.0	38.3	0.3
	Tolerance Limit (±°C)	2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless

of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard

General Manager

Greater China & Hong Kong



# ALS Technichem (HK) Pty Ltd

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

MS EMILY KONG

CLIENT:

LAM GEOTECHNICS LIMITED

ADDRESS:

11/F., CENTRE POINT,

181-185 GLOUCESTER ROAD,

WAN CHAI, HONG KONG

PROJECT:

(2)

WORK ORDER:

HK1317591

LABORATORY:

HONG KONG

DATE RECEIVED:

03/07/2013

DATE OF ISSUE:

12/07/2013

#### **COMMENTS**

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:

Dissolved Oxygen, pH, Salinity and Temperature

Equipment Type:

Sonde Environmental Monitoring System

Brand Name:

YS

Model No.:

Professional plus

Serial No.:

11F100597

Equipment No.:

--

Date of Calibration: 10 July, 2013

#### NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

#### ISSUING LABORATORY: HONG KONG

#### Address

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Mr. Fung Lim Chee, Richard General Manager -

Greater China & Hong Kong

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Page 1 of 2

Work Order: Date of Issue: HK1317591

Cliant

12/07/2013

Client:

LAM GEOTECHNICS LIMITED



Equipment Type:

Sonde Environmental Monitoring System

Brand Name:

YSI

Model No.:

Professional plus

Serial No.:

11F100597

Equipment No.: Date of Calibration:

--

101

10 July, 2013

Date of next Calibration:

10 October, 2013

Parameters:

**Dissolved Oxygen** 

Method Ref: APHA (21st edition), 45000: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	
4.52	4.63	0.11 -0.19	
6.72	6.53		
7.80	7.71	-0.09	
	Tolerance Limit (±mg/L)	0.20	

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)	
4.0	3.92	-0.08	
7.0	7.08	0.08	
10.0	10.07	0.07	
	Tolerance Limit (±pH unit)	0.20	

Salinity

Method Ref: APHA (21st edition), 2520B

Method Ref. Al TIA (21st edition), 25200						
Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)				
0	0.00					
10	9.49	-5.1				
20	19.02	-4.9				
30	29.29	-2.4				
	Tolerance Limit (+%)	10.0				

**Temperature** 

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C )	Tolerance (°C )
10.0	11.2	1.2
22.5	23.6	1.1
39.0	38.8	-0.2
	Tolerance Limit (±°C)	2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard

General Manager -

Greater China & Hong Kong



TISCH ENVIROMENTAL, INC. 145 SOUTH MIAMI AVE. VILLAGE OF CLEVES, OH 45002 513.467.9000 877.263.7610 TOLL FREE 513.467.9009 FAX WWW.TISCH-ENV.COM

#### AIR POLLUTION MONITORING EQUIPMENT

# ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

	l 19, 2012 Tisch	Rootsmeter Orifice I.I	D / = .	138320 0005	Ta (K) - Pa (mm) -	298 751.84
PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1 2 3 4 5	NA NA NA NA NA	NA NA NA NA NA	1.00 1.00 1.00 1.00	1.3840 0.9760 0.8730 0.8340 0.6890	3.2 6.4 7.9 8.8 12.7	2.00 4.00 5.00 5.50 8.00

## DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9850 0.9809 0.9788 0.9777 0.9725	0.7117 1.0050 1.1212 1.1723 1.4115	1.4066 1.9892 2.2240 2.3326 2.8132		0.9957 0.9915 0.9894 0.9883 0.9831	0.7194 1.0159 1.1333 1.1850 1.4268	0.8903 1.2591 1.4078 1.4765 1.7807
Qstd slo intercep coeffici	t (b) =	2.01145 -0.02803 0.99995		Qa slop intercep coeffici	t (b) = ent (r) =	1.25953 -0.01774 0.99995
v axis =	SORT[H2O(	- Pa/760)(298/	Ta)]	'y axis =	SQRT [H20 (	[a/Pa)]

## CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]

Qa = Va/Time

For subsequent flow rate calculations:

Qstd =  $1/m\{[SQRT(H2O(Pa/760)(298/Ta))] - b\}$ Qa =  $1/m\{[SQRT H2O(Ta/Pa)] - b\}$ 



Date

### Lam Geotechincs Limited

Location :		CMA1b			Calbra	tion Date	:	1-Jun-13
Equipment no.		EL452			Calbra	tion Due Dat	:	1-Aug-13
CALIBRATION OF COM	NTINUOUS	S FLOW RI	ECORDER					
			А	mbient Condition				
Temperature, T <sub>a</sub>		304		Kelvin Pressure, P	a		1008	mmHg
			Orifice Trai	nsfer Standard Inform	ation			
Equipment No.		EL086		<b>Slope, m</b> <sub>c</sub> 2.011	45	Intercept, be	c	-0.02803
Last Calibration Date				(Hx	P <sub>a</sub> / 101	3.3 x 298	/ T <sub>a</sub> )	1/2
Next Calibration Date		19-Jul-13	3	=	$m_c x$	$Q_{std} + b_c$		
			С	alibration of RSP				
Calibration	Mar	nometer Re	eading	Q <sub>std</sub>	Continu	ious Flow		IC
Point	Н (і	inches of v	vater)	(m <sup>3</sup> / min.)	Reco	rder, W	(W(P <sub>a</sub> /10	13.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(C	CFM)		Y-axis
1	6.2	6.2	12.4	1.7427		60		59.2494
2	5.1	5.1	10.2	1.5819	:	53		52.3370
3	4.1	4.1	8.2	1.4198		45		44.4370
4	2.5	2.5	5.0	1.1117	;	32		31.5997
5	1.5	1.5	3.0	0.8643		22		21.7248
By Linear Regression of  Correlation C  Calibration	Slope, m	= =	42.8/ 0.99 Yes/F	995	ercept, b	= -1	5.7434	
* if Correlation Coefficien  ** Delete as appropriate  Remarks:		, check and	recalibration	n again.				
Calibrated by		Sam			Checke	ed by	:	Derek Lo
Calibrated by		1-Jun-13			Date		:	1-Jun-13



		CMA2a	2 101 THE	jii volume oa		tion Date	pic.	1-Jun-13
		EL449				ition Due Dat	. <del>-</del>	1-Aug-13
CALIBRATION OF CON	ITINUOUS	S FLOW R	ECORDER				_	·
			A	mbient Condition				
Temperature, T <sub>a</sub>		304		Kelvin Pressure,	P <sub>a</sub>	Т	1008	mmHg
			Orifice Tra	nsfer Standard Infor	mation			
Equipment No.		EL086		Slope, m <sub>c</sub> 2.01	1145	Intercept, b	С	-0.02803
Last Calibration Date		19-Jul-1	2	(H)	(P <sub>a</sub> / 10	13.3 x 298	/T <sub>a</sub>	) 1/2
Next Calibration Date		19-Jul-1	3		$= m_c x$	$Q_{std} + b_{c}$	:	
			C	alibration of RSP				
Calibration	Mar	nometer R	eading	Q <sub>std</sub>	Contin	uous Flow		IC
Point	Н (	inches of	water)	(m <sup>3</sup> / min.)	Reco	order, W	(W(Pa	/1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(0	CFM)		Y-axis
1	6.0	6.0	12.0	1.7146		59		58.2619
2	5.0	5.0	10.0	1.5664		50		49.3745
3	4.1	4.1	8.2	1.4198		42		41.4746
4	2.5	2.5	5.0	1.1117		26		25.6747
5	1.5	1.5	3.0	0.8643		14		13.8249
By Linear Regression of  Correlation Co  Calibration  * if Correlation Coefficier	Slope, m pefficient* Accepted	=	751.9 0.99 Yes/l	993 	ntercept, b	=<	31.671	6
** Delete as appropriate.  Remarks :								
Calibrated by		Sam			Check	ed by	:	Derek Lo
Date :		1-Jun-13			Date		:	1-Jun-13



Location :		CMA3a				Calbra	ation Date	:	25-Jun-13
Equipment no.		EL333				Calbra	ation Due Dat	: :	25-Aug-13
								-	
CALIBRATION OF CON	ITINUOUS	S FLOW RE	CORDER						
				mbient Co	ndition				
Temperature, T <sub>a</sub>		304		Kelvin	Pressure, P	a	Т	101	12 mmHg
			Orifice Tra	nsfer Stan	dard Informa	ation			
Equipment No.		EL086		Slope, m <sub>c</sub>	2.011	45	Intercept, b	С	-0.02803
Last Calibration Date	ast Calibration Date 19-Jul-12					P <sub>a</sub> / 10	13.3 x 298	/ 7	a) 1/2
Next Calibration Date	Calibration Date 19-Jul-13						$(Q_{std} + b_{c})$		
			c	Calibration	of RSP				
Calibration	Mar	nometer R	eading	C	l <sub>std</sub>	Contin	uous Flow		IC
Point	Н (	inches of	water)	(m <sup>3</sup>	/ min.)	Rec	order, W	(W	(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-	axis	(	CFM)		Y-axis
1	5.8	5.8	11.6	1.6	6893		58		57.3879
2	4.8	4.8	9.6	1.5	5381		49		48.4829
3	4.0	4.0	8.0	1.4	4053		41		40.5673
4	2.4	2.4	4.8	1.0	0917		25		24.7362
5	1.5	1.5	3.0	0.8	3659		14		13.8523
By Linear Regression of	Y on X								
	Slope, m	=	52.6	106	Int	ercept, b	=	32.3	377
Correlation C	oefficient*	=	0.99	991					
Calibration	Accepted	=	Yes/l	No**					
* if Correlation Coefficier	nt < 0.990,	check and	recalibration	again.					
** Delete as appropriate.									
Remarks :									
alibrated by : Henry						Check	ked by	:	Derek Lo
Date :	. 25-Jun-13					Date		:	25-Jun-13



Location :		CMA4a			Calbration Date	e :	1-Jun-13
Equipment no.		EL390			Calbration Due	Dat :	1-Aug-13
CALIBRATION OF CON	ITINUOUS	S FLOW R	ECORDER				
			А	mbient Condition			
Temperature, T <sub>a</sub>		304		Kelvin Pressure, F	P <sub>a</sub>	10	008 mmHg
			Orifice Tra	nsfer Standard Inform	ation		
Equipment No.		EL086		<b>Slope, m</b> <sub>c</sub> 2.011	45 Interce	pt, bc	-0.02803
Last Calibration Date		19-Jul-1	2	(Hx	P <sub>a</sub> / 1013.3 x 2	298 /	$T_a)^{1/2}$
Next Calibration Date		19-Jul-1	3	=	$m_c \times Q_{std}$ +	- b <sub>c</sub>	
			C	alibration of RSP			
Calibration	Mar	nometer R	eading	Q <sub>std</sub>	Continuous Flo	w	IC
Point	Н (і	inches of	water)	(m <sup>3</sup> / min.)	Recorder, W	(W	/(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)		Y-axis
1	6.1	6.1	12.2	1.7287	61		60.2369
2	5.0	5.0	10.0	1.5664	54		53.3244
3	4.1	4.1	8.2	1.4198	46		45.4245
4	2.5	2.5	5.0	1.1117	31		30.6122
5	1.5	1.5	3.0	0.8643	20		19.7498
By Linear Regression of  Correlation Co	Slope, m		47.4 0.99 Yes/A	996	tercept, b =	-21.0	6122
* if Correlation Coefficier  ** Delete as appropriate.  Remarks:		, check and	d recalibratio	n again.			
Calibrated by		Sam			Checked by	:	Derek Lo
Date :	1	1-Jun-13			Date	:	1-Jun-13



### **Calibration Data for High Volume Sampler (TSP Sampler)**

Location :		CMA5a				Calbra	ation Date	:	1-Jun-13
Equipment no.		EL380				Calbra	ation Due Dat	. : _	1-Aug-13
CALIBRATION OF CON	ITINUOUS	S FLOW R	ECORDER					_	
			A	mbient Co	ndition				
Temperature, T <sub>a</sub>		304		Kelvin	Pressure, P	a		1008	3 mmHg
			Orifice Tra	nsfer Stand	dard Inform	ation			
Equipment No.		EL086		Slope, m <sub>c</sub>	2.0114	45	Intercept, b	С	-0.02803
Last Calibration Date		19-Jul-1	2		(HxH	P <sub>a</sub> / 10	13.3 x 298	/ T,	a) <sup>1/2</sup>
Next Calibration Date		19-Jul-1	3		=	m <sub>c</sub> x	$Q_{std} + b_{c}$	:	
			C	alibration	of RSP				
Calibration	Calibration Manometer Reading				std	Contin	uous Flow		
Point	Point H (inches of water)		water)	(m <sup>3</sup> /	min.)	Rec	order, W	(W(P	<sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-:	axis	(	CFM)		Y-axis
1	6.1	6.1	12.2	1.7	'287		62		61.2244
2	5.0	5.0	10.0	1.5	6664		53		52.3370
3	4.0	4.0	8.0	1.4	025		46		45.4245
4	2.4	2.4	4.8	1.0	1895		31		30.6122
5	1.5	1.5	3.0	0.8	8643		21		20.7373
By Linear Regression of  Correlation Co  Calibration  * if Correlation Coefficier  ** Delete as appropriate.  Remarks:	Slope, m pefficient* Accepted  at < 0.990,	= = =	46.4 0.99 Yes/h	995 Ne**	Int	ercept, b	=	19.75	75
Calibrated by		Sam				Check	ked by	:	Derek Lo

Date

1-Jun-13

1-Jun-13

Date



Location :		CMA6a			Calbration	- Date	: 1-Jun-13
Equipment no.		EL448			Calbration	Due Dat	: 1-Aug-13
CALIBRATION OF COM	ITINUOUS	S FLOW R	ECORDER				
			A	mbient Condition			
Temperature, T <sub>a</sub>		304		Kelvin <b>Pressure, F</b>	Pa	1	1008 mmHg
			Orifice Tra	nsfer Standard Inform	nation		
Equipment No.		EL086		Slope, m <sub>c</sub> 2.011	145 Inte	rcept, bc	-0.02803
Last Calibration Date		19-Jul-1	2	(Hx	P <sub>a</sub> / 1013.3	x 298 /	$(T_a)^{1/2}$
Next Calibration Date		19-Jul-1	3		$m_c x Q_{st}$		
			C	alibration of RSP			
Calibration	Mar	nometer R	eading	Q <sub>std</sub>	Continuous	Flow	IC
Point	H (i	inches of	water)	(m <sup>3</sup> / min.)	Recorder	, <b>w</b>	/W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)		Y-axis
1	6.1	6.1	12.2	1.7287	60		59.2494
2	5.0	5.0	10.0	1.5664	52		51.3495
3	4.0	4.0	8.0	1.4025	44		43.4495
4	2.5	2.5	5.0	1.1117	31		30.6122
5	1.5	1.5	3.0	0.8643	20		19.7498
By Linear Regression of  Correlation Co  Calibration  * if Correlation Coefficier	Slope, m pefficient* Accepted	=	45.5 0.99 Yes/A	997 Ne**	tercept, b =	-19	9.9030
** Delete as appropriate.  Remarks :							
Calibrated by		Sam			Checked by	,	: Derek Lo
Date	1	1-Jun-13			Date		: 1-Jun-13

### Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

#### Contract No. HK/2011/07 Wan Chai Development Phase II and Central-Wan Chai Bypass Sampling, Field Measurement and Testing Works (Stage 2)

#### Environmental Monitoring Schedule July 2013

Sunday	Monday	Tuesday	July 201 Wednesday	Thursday	Friday	Saturday
Gunday	monday	rucsuuy	Wednesday	Thursday	28-Jun	29-Jun
					1hr TSP	
					Impact WQM	
					Mid-ebb: 16:03	
					Mid-Flood: 23:05	
30-Jun	1-Ju	2-Jul	3-Jul	I 4-Jul	5-Jul	6-Jul
			700			
			24hr TSP	24hr TSP(CMA5a) 1hr TSP		
		min to the co	Noise (Daytime)	IIII ISP		
			(==,)			
		Impact WQM		Impact WQM		Impact WQM
		1		Mid-ebb 10:16		Mid-ebb 11:29
		Mid-ebb 8:31		Mid-flood 17:04		Mid-flood 18:32
7-Jul	8-Ju	9-Jul	10-Jul	I 11-Jul	12-Jul	13-Jul
		24hr TSP				
			1hr TSP			
	r	Noise (Daytime)				
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb 12:35		Mid-ebb 13:39		Mid-ebb 14:45	
44.1.4	Mid-flood 19:35 15-Jul		Mid-flood 20:30 17-Jul		Mid-flood 21:35 19-Jul	20-Jul
14-Jul	15-Ju	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul
	24hr TSP					24hr TSP
		1hr TSP				
		Noise (Daytime) (M6)	Noise (Daytime)			
		(MO)	(M1a,M2b,M3a,M4b,M5b)			
	Impact WQM Mid-flood 10:19		Impact WQM	Impact WQM		Impact WQM Mid-ebb 10:09
	Mid-ebb 16:38		Mid-ebb 7:08	Mid-flood 1:08		Mid-flood 17:27
21-Jul	)1		24-Jul			27-Jul
	1hr TSP			1	24hr TSP	1hr TSP
	1111101	Noise (Daytime)				1111 101
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb 11:52		Mid-ebb 13:27	•	Mid-ebb 14:51	
	Mid-flood 19:01		Mid-flood 20:23	,	Mid-flood 21:40	

Remark: Due to the interruption of electricity supply, the 24hr TSP monitoring at CMA5a was rescheduled from 3 July 2013 to 4 July 2013

#### Contract No. HK/2011/07 Wan Chai Development Phase II and Central-Wan Chai Bypass Sampling, Field Measurement and Testing Works (Stage 2)

## Tentative Environmental Monitoring Schedule August 2013

			August 2			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Jul	29-Ju	II 30-Ji	ıl 31-Ju	I 1-Aug	2-Aug	3-Aug
				24hr TSP		
					1hr TSP	
	Noise (Daytime)	Noise (Daytime)				
	,					
	Impact WQM			Impact WQM		Impact WQM
	Mid-ebb 16:5	6		Mid-ebb 9:05		Mid-ebb 10:32
	Mid-flood 23:4	1		Mid-flood 21:28		Mid-flood 17:48
4-Aug	5-Au	g 6-Au	g 7-Auç	8-Aug	9-Aug	10-Aug
			24hr TSP			
				1hr TSP		
	Noise (Daytime)	Noise (Daytime)				
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb 11:4		Mid-ebb 12:45		Mid-ebb 13:52	
	Mid-flood 18:4		Mid-flood 19:25		Mid-flood 20:19	
11-Aug	12-Au	g 13-Au	g 14-Aug	15-Aug	16-Aug	17-Aug
		24hr TSP				
			1hr TSP			
		Noise (Daytime)	Noise (Daytime)			
	Impact WQM		Impact WQM	Impact WQM		Impact WQM
	Mid-flood 9:3	1				Mid-ebb 9:01
	Mid-ebb 15:4	3	Mid-flood 23:30	Mid-ebb 6:35		Mid-flood 16:29
18-Aug	19-Au	g 20-Au	g 21-Auç	22-Aug	23-Aug	24-Aug
	24hr TSP					24hr TSP
		1hr TSP				
		Noise (Daytime)	Noise (Daytime)			
	I		1		1	
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb 10:4 Mid-flood 17:5		Mid-ebb 12:23 Mid-flood 19:10		Mid-ebb 13:47 Mid-flood 20:17	
25-Aug	17:5 26-Au			,	MIG-11000 20:17	
zo-Aug	20-Au	27-Au	9			
	1hr TSP					
		Noise (Daytime)				
		IVOISE (Dayunie)				
	Impact WQM					
	Mid-flood 9:4.	,				
	Mid-ribbd 5.4 Mid-ebb 15:3					
	IVIIG-650 15.3	1	1	1		

### Appendix 5.2

Noise Monitoring Results and Graphical Presentations



#### Noise Monitoring Result

#### Day Time (0700 - 1900hrs on normal weekdays)

Location: M1a - Harbour Road Sports Centre

Ī				Measure	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level
	Date	Time	Weather	Leq	L10	L90	Leq	Leq	Leq
L									
ſ	03/07/13	9:10	Fine	74.0	76.5	69.0	72	69	75
	09/07/13	9:00	Fine	73.9	76.5	68.5	72	69	75
	17/07/13	10:10	Fine	72.7	75.5	67.0	72	63	75
	23/07/13	11:10	Fine	72.4	75.4	67.0	72	59	75

Location: M2b - Noon-day gun area

			Meacur	ement Noi	امريم ا مع	Baseline Level	Construction Noise Level	Limit Level
D-4-	T:	10/						
Date	Time	Weather	Leq	L10	L90	Leq	Leq (A), (30-min)	Leq
03/07/13	10:00	Fine	71.4	72.5	69.5	68	69	75
09/07/13	9:50	Fine	70.2	71.0	68.5	68	67	75
17/07/13	11:00	Fine	71.6	72.5	68.5	68	69	75
23/07/13	13:00	Cloudy	75.1	76.5	72.5	68	74	75

Location: M3a - Tung Lo Wan Fire Station

			Measur	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level		
Date	Time	Weather	Leq	L10	L90	Leq	Leq	Leq		
					Unit: dB(A), (30-min)					
03/07/13	10:45	Fine	69.7	76.0	66.0	69	62	75		
09/07/13	10:30	Fine	66.3	68.0	64.0	69	66	75		
17/07/13	13:00	Fine	66.9	67.5	63.5	69	67	75		
23/07/13	13.50	Cloudy	66.2	68.0	63.5	69	66	75		

Location: M4b - Victoria Centre

			Measure	ement Noi	se Level	Baseline Noise Level	Construction Noise Level	Limit Level
Date	Time	Weather	Leq	L10	L90	Leq	Leq	Leq
03/07/13	11:25	Fine	70.0	71.5	68.5	67	67	75
09/07/13	11:15	Fine	70.9	72.0	68.5	67	68	75
17/07/13	13:45	Fine	70.8	71.5	69.0	67	68	75
23/07/13	14:45	Fine	70.7	72.0	69.0	67	68	75

Location: M5b - City Garden

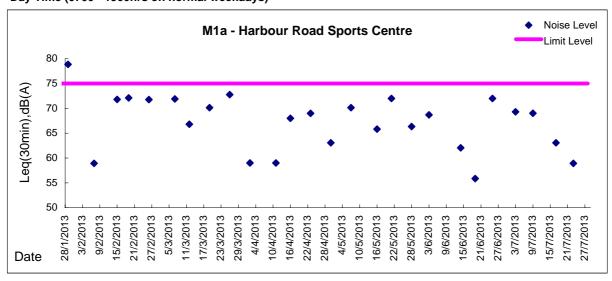
			Measure	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level
Date	Time	Weather	Leq	L10	L90	Leq	Leq	Leq
						Unit: dE	3(A), (30min)	
03/07/13	13:10	Fine	70.7 71.5 69.0		69.0	68	67	75
09/07/13	13:00	Fine	69.9	71.0	68.0	68	65	75
17/07/13	14:30	Cloudy	72.3	72.0	68.5	68	70	75
23/07/13	15:35	Cloudy	71.9	72.5	70.5	68	70	75

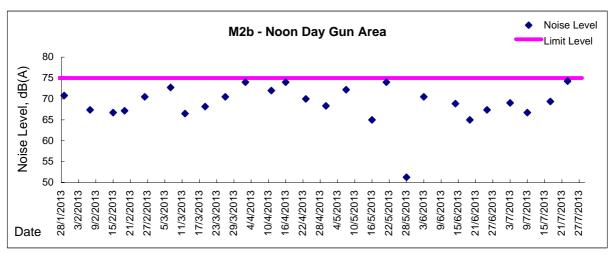
Location: M6 - HK Baptist Church Henrietta Secondary School

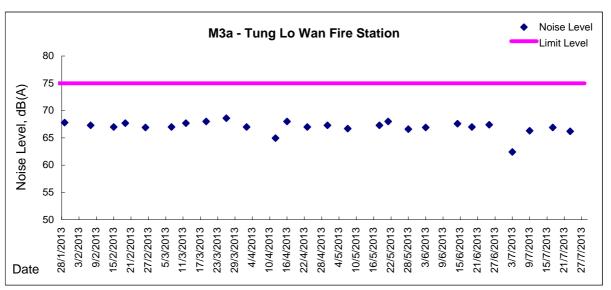
			Measure	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level
Date	Time	Weather	Leq	L10	L90	Leq	Leq	Leq
						Unit: dB	8(A), (30-min)	
03/07/13	13:55	Fine	73.0 74.0		71.0	71	69	70
09/07/13	13:45	Fine	74.9	76.0	72.5	71	73	70
16/07/13	15:50	Cloudy	74.4	75.0	72.5	71	72	70
23/07/13	14:20	Cloudy	73.5	75.0	72.0	71	70	70



Graphic Presentation of Noise Monitoring Result Day Time (0700 - 1900hrs on normal weekdays)

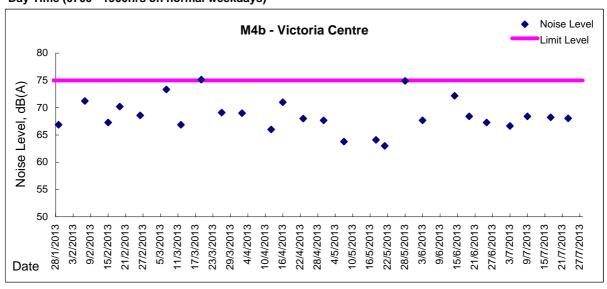


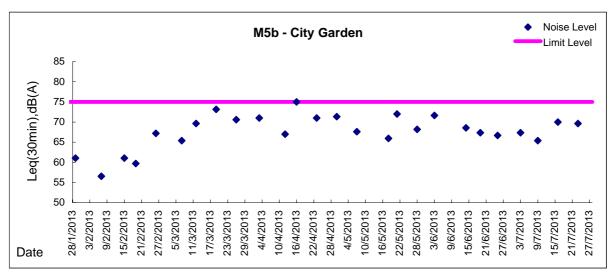


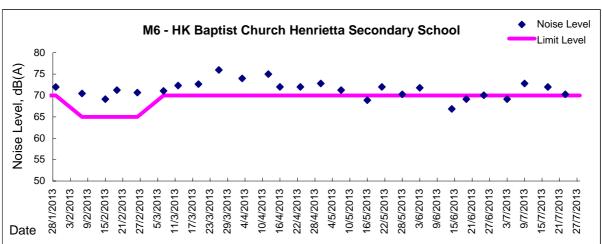




Graphic Presentation of Noise Monitoring Result Day Time (0700 - 1900hrs on normal weekdays)







## Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations, and odour Patrol Results



Location: CMA1b - Oil Street Site Office

Report on 24-hour TSP monitoring Action Level (  $\mu$  g/m3) - 176.7 Limit Level (  $\mu$  g/m3) - 260

Date	Sampling	Weather	Filter	Filter Weight,	g	Elapse Tim	e, hr	Sampling	Flo	w Rate, m <sup>3</sup> /	min	Total	TSP Level,
	Time	Condition	paper no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
3-Jul-13	8:00	Fine	006509	2.7049	2.7671	3058.22	3082.22	24.00	1.17	1.17	1.17	1679	37
9-Jul-13	8:00	Fine	006911	2.6292	2.7083	3085.22	3109.22	24.00	1.48	1.48	1.48	2130	37
15-Jul-13	8:00	Rainy	006524	2.6432	2.7680	3112.22	3136.22	24.00	1.48	1.48	1.48	2130	59
20-Jul-13	8:00	Rainy	006617	2.6388	2.7046	3139.22	3163.22	24.00	1.38	1.38	1.38	1988	33
26-Jul-13	8:00	Rainy	006523	2.6539	2.7212	3166.35	3190.35	24.00	1.27	1.27	1.27	1830	37

Action Level (  $\mu$  g/m3) - 320.1 Limit Level (  $\mu$  g/m3) - 500

Date	Sampling	Weather	Filter	Filter Weight,	g	Elapse Tim	ie, hr	Sampling	Flo	w Rate, m <sup>3</sup> /	min	Total	TSP Level,
	Time	Condition	paper no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
4-Jul-13	8:06	Fine	006908	2.6396	2.6424	3082.22	3083.22	1.00	1.48	1.48	1.48	89	32
4-Jul-13	9:09	Fine	006909	2.6407	2.6449	3083.22	3084.22	1.00	1.48	1.48	1.48	89	47
4-Jul-13	10:35	Fine	006910	2.6214	2.6250	3084.22	3085.22	1.00	1.48	1.48	1.48	89	41
10-Jul-13	8:03	Rainy	006536	2.6595	2.6654	3109.22	3110.22	1.00	1.48	1.48	1.48	89	66
10-Jul-13	9:18	Rainy	006517	2.6605	2.6671	3110.22	3111.22	1.00	1.48	1.48	1.48	89	74
10-Jul-13	10:32	Rainy	005672	2.7304	2.7344	3111.22	3112.22	1.00	1.37	1.37	1.37	82	49
16-Jul-13	8:35	Rainy	006626	2.6202	2.6265	3136.22	3137.22	1.00	1.48	1.48	1.48	89	71
16-Jul-13	9:36	Rainy	006623	2.6110	2.6166	3137.22	3138.22	1.00	1.44	1.44	1.44	86	65
16-Jul-13	10:43	Rainy	006620	2.6365	2.6418	3138.22	3139.22	1.00	1.19	1.19	1.19	71	74
22-Jul-13	10:02	Rainy	006615	2.6168	2.6250	3163.22	3164.22	1.00	1.25	1.25	1.25	75	110
22-Jul-13	13:06	Rainy	006521	2.6587	2.6651	3164.22	3165.22	1.00	1.47	1.47	1.47	88	73
22-Jul-13	14:20	Rainy	006629	2.6195	2.6221	3165.22	3166.22	1.00	1.47	1.47	1.47	88	30
27-Jul-13	8:06	Rainy	006612	2.6211	2.6291	3190.35	3191.35	1.00	1.34	1.34	1.34	80	100
27-Jul-13	9:09	Rainy	007412	2.6231	2.6281	3191.35	3192.35	1.00	1.40	1.40	1.40	84	59
27-Jul-13	10:13	Rainy	007382	2.6777	2.6830	3192.35	3193.35	1.00	1.47	1.47	1.47	88	60



Location: CMA2a - Causeway Bay Community Centre

Report on 24-hour TSP monitoring Action Level (µg/m3) - 169.5 Limit Level (µg/m3) - 260

Date	Sampling	Weather	Filter paper	Filter Weigh	ıt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/ı	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
3-Jul-13	8:00	Fine	006508	2.7458	2.8196	12794.66	12818.65	23.99	1.52	1.52	1.52	2194	34
9-Jul-13	8:00	Fine	006915	2.6377	2.7108	12821.66	12845.66	24.00	1.38	1.38	1.38	1987	37
15-Jul-13	8:00	Rainy	006934	2.6496	2.7236	12848.67	12872.67	24.00	1.42	1.42	1.42	2040	36
20-Jul-13	8:00	Rainy	006618	2.6568	2.7035	12875.67	12899.67	24.00	1.16	1.16	1.16	1668	28
26-Jul-13	8:00	Rainy	007362	2.6163	2.6964	12902.69	12926.69	24.00	1.38	1.38	1.38	1986	40

Report on 1-hour TSP monitoring Action Level (µg/m3) - 323.4 Limit Level (µg/m3) - 500

Date	Sampling	Weather	Filter paper	Filter Weigh	ıt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/r	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μ <b>g</b> /m <sup>3</sup>
4-Jul-13	8:07	Fine	006912	2.6299	2.6369	12818.65	12819.65	1.00	1.41	1.41	1.41	85	82
4-Jul-13	9:14	Fine	006913	2.6209	2.6232	12819.65	12820.65	1.00	1.19	1.19	1.19	72	32
4-Jul-13	10:29	Fine	006914	2.6395	2.6414	12820.65	12821.65	1.00	1.41	1.41	1.41	85	22
10-Jul-13	8:09	Rainy	006516	2.6551	2.6627	12845.66	12846.66	1.00	1.38	1.38	1.38	83	92
10-Jul-13	9:19	Rainy	006518	2.6612	2.6672	12846.66	12847.66	1.00	1.27	1.25	1.26	76	79
10-Jul-13	10:24	Rainy	006537	2.6647	2.6717	12847.66	12848.66	1.00	1.20	1.20	1.20	72	97
16-Jul-13	8:12	Rainy	006627	2.6322	2.6365	12872.67	12873.67	1.00	1.42	1.42	1.42	85	51
16-Jul-13	9:23	Rainy	006624	2.6346	2.6386	12873.67	12874.67	1.00	1.42	1.42	1.42	85	47
16-Jul-13	10:35	Rainy	006621	2.6277	2.6345	12874.67	12875.67	1.00	1.42	1.42	1.42	85	80
22-Jul-13	10:03	Rainy	006616	2.6466	2.6499	12899.67	12900.67	1.00	1.34	1.32	1.33	80	41
22-Jul-13	13:05	Rainy	007354	2.6519	2.6545	12900.69	12901.69	1.00	1.34	1.32	1.33	80	33
22-Jul-13	14:10	Rainy	007363	2.6275	2.6296	12901.69	12902.69	1.00	1.21	1.49	1.35	81	26
27-Jul-13	8:03	Rainy	007413	2.6451	2.6510	12926.69	12927.69	1.00	1.40	1.40	1.40	84	70
27-Jul-13	9:06	Rainy	007413	2.6619	2.6725	12927.69	12928.69	1.00	1.38	1.38	1.38	83	128
27-Jul-13	10:09	Rainy	007387	2.6535	2.6644	12928.69	12929.69	1.00	1.38	1.38	1.38	83	132



Location: CMA3a - CWB PRE Site Office Area

Report on 24-hour TSP monitoring Action Level (µg/m3) - 171 Limit Level (µg/m3) - 260

Date	Sampling	Weather	Filter paper	Filter Weigh	ıt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/ı	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μ <b>g</b> /m³
3-Jul-13	8:00	Fine	006899	2.6162	2.6896	31.66	55.66	24.00	1.41	1.41	1.41	2030	36
9-Jul-13	8:00	Fine	006634	2.6472	2.7562	58.66	82.66	24.00	1.41	1.41	1.41	2033	54
15-Jul-13	8:00	Rainy	006983	2.6260	2.7036	85.66	109.66	24.00	1.41	1.41	1.41	2033	38
20-Jul-13	8:00	Rainy	006851	2.6357	2.7461	112.66	136.66	24.00	1.41	1.41	1.41	2035	54
26-Jul-13	8:00	Rainy	007353	2.6450	2.7295	139.66	163.66	24.00	1.41	1.41	1.41	2035	42

Action Level ( $\mu$ g/m3) - 311.3 Limit Level ( $\mu$ g/m3) - 500

Date	Sampling	Weather	Filter paper	Filter Weigh	nt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/ı	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, $Q_{sf}$	Average	Volume, m <sup>3</sup>	μ <b>g</b> /m³
4-Jul-13	9:20	Fine	004958	2.7657	2.7750	55.66	56.66	1.00	1.41	1.41	1.41	85	110
4-Jul-13	10:45	Fine	006633	2.6555	2.6572	56.66	57.66	1.00	1.41	1.41	1.41	85	20
4-Jul-13	15:10	Fine	006631	2.6191	2.6211	57.66	58.66	1.00	1.41	1.41	1.41	85	24
10-Jul-13	8:06	Rainy	006984	2.6339	2.6390	82.66	83.66	1.00	1.41	1.41	1.41	85	60
10-Jul-13	9:13	Rainy	006916	2.6363	2.6404	83.66	84.66	1.00	1.41	1.41	1.41	85	48
10-Jul-13	10:26	Rainy	006917	2.6560	2.6601	84.66	85.66	1.00	1.41	1.41	1.41	85	48
16-Jul-13	8:09	Rainy	006848	2.6115	2.6194	109.66	110.66	1.00	1.41	1.41	1.41	85	93
16-Jul-13	9:16	Rainy	006849	2.6191	2.6276	110.66	111.66	1.00	1.41	1.41	1.41	85	100
16-Jul-13	10:28	Rainy	006850	2.6346	2.6385	111.66	112.66	1.00	1.41	1.41	1.41	85	46
22-Jul-13	8:15	Rainy	007366	2.6665	2.6739	136.66	137.66	1.00	1.41	1.41	1.41	85	87
22-Jul-13	9:35	Rainy	007364	2.6439	2.6522	137.66	138.66	1.00	1.41	1.41	1.41	85	98
22-Jul-13	10:40	Rainy	007351	2.6373	2.6448	138.66	139.66	1.00	1.41	1.41	1.41	85	89
27-Jul-13	8:05	Rainy	006575	2.6642	2.6700	163.66	164.66	1.00	1.41	1.41	1.41	85	68
27-Jul-13	9:13	Rainy	006577	2.6526	2.6564	164.66	165.66	1.00	1.34	1.38	1.36	81	47
27-Jul-13	10:21	Rainy	006581	2.6593	2.6652	165.66	166.66	1.00	1.70	1.70	1.70	102	58



Location: CMA4a - SPCA

Report on 24-hour TSP monitoring Action Level ( $\mu$ g/m3) - 171.2 Limit Level ( $\mu$ g/m3) - 260

Date	Sampling	Weather	Filter paper	Filter Weigh	ıt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/ı	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
3-Jul-13	8:00	Fine	006883	2.6322	2.7641	16971.37	16995.37	24.00	1.26	1.26	1.26	1811	73
9-Jul-13	8:00	Fine	006635	2.6374	2.6835	16998.38	17022.38	24.00	1.26	1.26	1.26	1813	25
15-Jul-13	8:00	Rainy	006895	2.6340	2.6860	17025.86	17049.86	24.00	1.28	1.28	1.28	1842	28
20-Jul-13	8:00	Rainy	006855	2.6212	2.7135	17052.86	17076.86	24.00	1.28	1.28	1.28	1848	50
26-Jul-13	8:00	Rainy	007352	2.6281	2.6927	17079.86	17103.86	24.00	1.30	1.30	1.30	1876	34

 $\begin{array}{lll} \text{Action Level ($\mu g/m3$) -} & 312.5 \\ \text{Limit Level ($\mu g/m3$) -} & 500 \end{array}$ 

Date	Sampling	Weather	Filter paper	Filter Weigh	nt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/ı	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
4-Jul-13	9:02	Fine	004957	2.7531	2.7600	16995.37	16996.37	1.00	1.26	1.26	1.26	75	91
4-Jul-13	10:28	Fine	006632	2.6333	2.6363	16996.37	16997.37	1.00	1.26	1.26	1.26	75	40
4-Jul-13	14:45	Fine	006630	2.6227	2.6247	16997.37	16998.37	1.00	1.26	1.26	1.26	75	27
10-Jul-13	8:16	Rainy	006892	2.6025	2.6048	17022.38	17023.38	1.00	1.26	1.26	1.26	76	30
10-Jul-13	9:23	Rainy	006893	2.6164	2.6186	17023.38	17024.38	1.00	1.26	1.26	1.26	76	29
10-Jul-13	10:35	Rainy	006894	2.6458	2.6489	17024.38	17025.38	1.00	1.26	1.26	1.26	76	41
16-Jul-13	8:23	Rainy	006857	2.6570	2.6592	17049.86	17050.86	1.00	1.28	1.28	1.28	77	29
16-Jul-13	9:32	Rainy	006853	2.6435	2.6485	17050.86	17051.86	1.00	1.28	1.28	1.28	77	65
16-Jul-13	10:42	Rainy	006854	2.6388	2.6406	17051.86	17052.86	1.00	1.28	1.28	1.28	77	23
22-Jul-13	8:03	Rainy	007367	2.6525	2.6564	17076.86	17077.86	1.00	1.30	1.30	1.30	78	50
22-Jul-13	9:20	Rainy	007365	2.6610	2.6661	17077.86	17078.86	1.00	1.30	1.30	1.30	78	65
22-Jul-13	10:30	Rainy	007350	2.6578	2.6626	17078.86	17079.86	1.00	1.30	1.30	1.30	78	61
27-Jul-13	8:22	Rainy	006576	2.6540	2.6571	17103.86	17104.86	1.00	1.03	1.30	1.17	70	44
27-Jul-13	9:25	Rainy	006578	2.6558	2.6613	17104.86	17105.86	1.00	1.22	1.30	1.26	76	73
27-Jul-13	10:33	Rainy	006580	2.6496	2.6554	17105.86	17106.86	1.00	1.32	1.30	1.31	79	74



Location: CMA5a - Children Garden opposite to Pedestrian Plaza

Report on 24-hour TSP monitoring Action Level (µg/m3) - 181 Limit Level (µg/m3) - 260

Date	Sampling	Weather	Filter paper	Filter Weigh	nt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/r	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
4-Jul-13	17:00	Fine	006515	2.6489	2.7043	17972.95	17996.95	24.00	1.33	1.33	1.33	1908	29
9-Jul-13	8:00	Fine	006935	2.6577	2.7595	17996.95	18020.95	24.00	1.35	1.35	1.35	1941	52
15-Jul-13	8:00	Rainy	007373	2.6595	2.7296	18036.73	18060.73	24.00	1.45	1.45	1.45	2088	34
20-Jul-13	8:00	Rainy	005674	2.6772	2.8157	18060.73	18084.73	24.00	1.33	1.33	1.33	1921	72
26-Jul-13	8:00	Rainy	006572	2.6933	2.7474	18087.73	18111.73	24.00	1.33	1.33	1.33	1921	28

<sup>\*</sup>Due to lack of electricity supply, the 24hr TSP monitoring was rescheduled from 3 July 2013 to 4 July 2013.

Report on 1-hour TSP monitoring Action Level (µg/m3) - 332 Limit Level (µg/m3) - 500

Date	Sampling	Weather	Filter paper	Filter Weigh	t, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/r	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
4-Jul-13	8:05	Fine	006959	2.6494	2.6553	17969.95	17970.95	1.00	1.33	1.33	1.33	80	74
4-Jul-13	9:10	Fine	006961	2.6314	2.6345	17970.95	17971.95	1.00	1.24	1.24	1.24	75	42
4-Jul-13	10:21	Fine	006514	2.6576	2.6617	17971.95	17972.95	1.00	1.24	1.24	1.24	75	55
10-Jul-13	8:30	Rainy	006554	2.6352	2.6389	18020.95	18021.95	1.00	1.29	1.29	1.29	77	48
10-Jul-13	9:32	Rainy	006717	2.6617	2.6640	18021.95	18022.95	1.00	1.33	1.33	1.33	80	29
10-Jul-13	10:36	Rainy	006597	2.6175	2.6255	18022.95	18023.95	1.00	1.33	1.33	1.33	80	100
16-Jul-13	8:30	Rainy	006594	2.6363	2.6413	18060.73	18061.73	1.00	1.20	1.20	1.20	72	69
16-Jul-13	9:32	Rainy	006562	2.6346	2.6375	18061.73	18062.73	1.00	1.25	1.25	1.25	75	39
16-Jul-13	10:36	Rainy	006564	2.6731	2.6750	18062.73	18063.73	1.00	1.25	1.25	1.25	75	25
22-Jul-13	8:31	Rainy	006569	2.6786	2.6834	18084.73	18085.73	1.00	1.33	1.29	1.31	79	61
22-Jul-13	9:35	Rainy	006568	2.6568	2.6658	18085.73	18086.73	1.00	1.33	1.33	1.33	80	113
22-Jul-13	10:40	Rainy	006571	2.6536	2.6579	18086.73	18087.73	1.00	1.21	1.21	1.21	73	59
27-Jul-13	13:01	Rainy	007378	2.6829	2.6871	18111.73	18112.73	1.00	1.33	1.33	1.33	80	52
27-Jul-13	14:25	Rainy	007411	2.6449	2.6502	18112.73	18113.73	1.00	1.35	1.35	1.35	81	65
27-Jul-13	15:31	Rainy	006936	2.6406	2.6466	18113.73	18114.73	1.00	1.33	1.33	1.33	80	75



Location: CMA6a - WD2 PRE Office

 $\begin{array}{ccc} \text{Report on 24-hour TSP monitoring} \\ \text{Action Level -} & 187.3 & \mu\text{g/m3} \\ \text{Limit Level -} & 260 & \mu\text{g/m3} \end{array}$ 

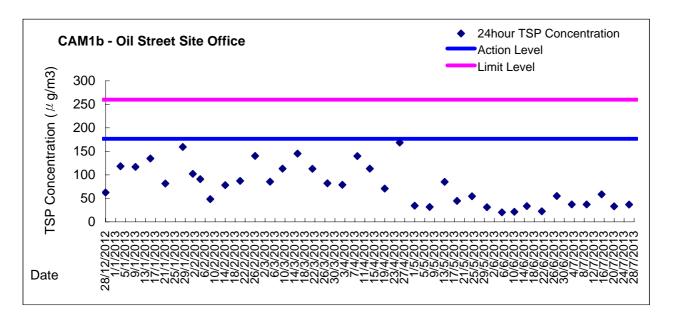
Date	Sampling	Weather	Filter paper	Filter Weigh	nt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m³/ı	Total	TSP Level,	
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
3-Jul-13	8:00	Fine	006958	2.6452	2.7200	16257.74	16281.74	24.00	1.27	1.27	1.27	1832	41
9-Jul-13	8:00	Fine	006962	2.6475	2.7214	16284.75	16308.75	24.00	1.27	1.27	1.27	1835	40
15-Jul-13	8:00	Rainy	006557	2.6110	2.6713	16311.75	16335.75	24.00	1.23	1.23	1.23	1774	34
20-Jul-13	8:00	Rainy	006565	2.6889	2.7548	16338.75	16362.75	24.00	1.25	1.25	1.25	1797	37
26-Jul-13	8:00	Rainy	006573	2.6575	2.6990	16365.77	16389.77	24.00	1.33	1.33	1.33	1914	22

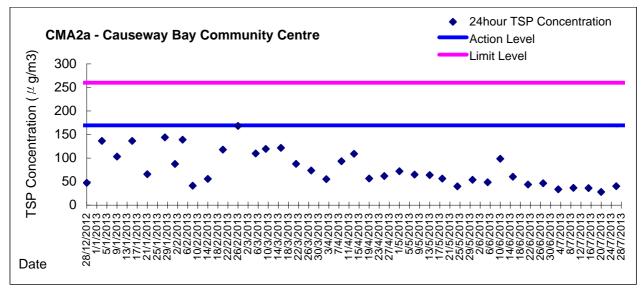
Report on 1-hour TSP monitoring Action Level - 300.1  $\mu$  g/m³ Limit Level - 500  $\mu$  g/m3

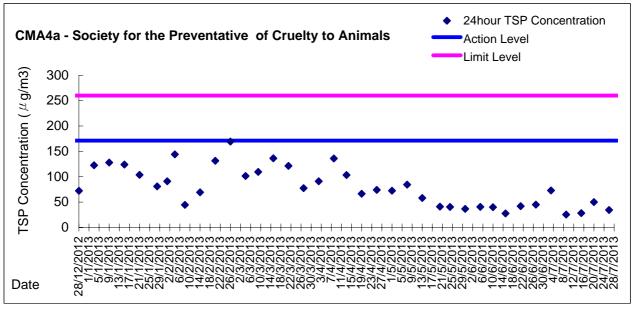
Date	Sampling	Weather	Filter paper	Filter Weigh	Filter Weight, g Eli		e, hr	Sampling	Flo	w Rate, m³/ı	min	Total	TSP Level,
	Time	Condition	no.	Initial	Final	Initial	Final	Time, hr	Initial, Q <sub>si</sub>	Final, Q <sub>sf</sub>	Average	Volume, m <sup>3</sup>	μg/m³
4-Jul-13	8:06	Fine	006528	2.6460	2.6518	16281.74	16282.74	1.00	1.27	1.27	1.27	76	76
4-Jul-13	9:16	Fine	006960	2.6525	2.6582	16282.74	16283.74	1.00	1.27	1.27	1.27	76	75
4-Jul-13	10:25	Fine	006938	2.6517	2.6584	16283.74	16284.74	1.00	1.27	1.27	1.27	76	88
10-Jul-13	8:10	Rainy	006715	2.6634	2.6660	16308.75	16309.75	1.00	1.40	1.40	1.40	84	31
10-Jul-13	9:20	Rainy	006716	2.6272	2.6286	16309.75	16310.75	1.00	1.32	1.32	1.32	79	18
10-Jul-13	10:22	Rainy	006718	2.6570	2.6625	16310.75	16311.75	1.00	1.48	1.48	1.48	89	62
16-Jul-13	8:10	Rainy	006560	2.6426	2.6462	16335.75	16336.75	1.00	1.23	1.23	1.23	74	49
16-Jul-13	9:20	Rainy	006561	2.6321	2.6377	16336.75	16337.75	1.00	1.57	1.57	1.57	94	60
16-Jul-13	10:22	Rainy	006563	2.6288	2.6324	16337.75	16338.75	1.00	1.25	1.25	1.25	75	48
22-Jul-13	8:20	Rainy	006567	2.6827	2.6869	16362.75	16363.75	1.00	1.29	1.29	1.29	77	54
22-Jul-13	9:25	Rainy	006596	2.6408	2.6507	16363.75	16364.75	1.00	1.74	1.74	1.74	104	95
22-Jul-13	10:30	Rainy	006570	2.6381	2.6425	16364.75	16365.75	1.00	1.29	1.29	1.29	77	57
27-Jul-13	13:00	Rainy	007377	2.6493	2.6541	16389.77	16390.77	1.00	1.27	1.27	1.27	76	63
27-Jul-13	14:10	Rainy	007355	2.6421	2.6467	16390.77	16391.77	1.00	1.29	1.29	1.29	77	60
27-Jul-13	15:15	Rainy	007329	2.6766	2.6775	16391.77	16392.77	1.00	1.29	1.29	1.29	77	12



**Graphic Presentation of 24 hour TSP Result** 

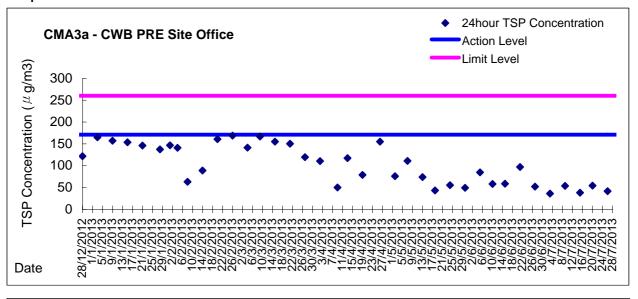


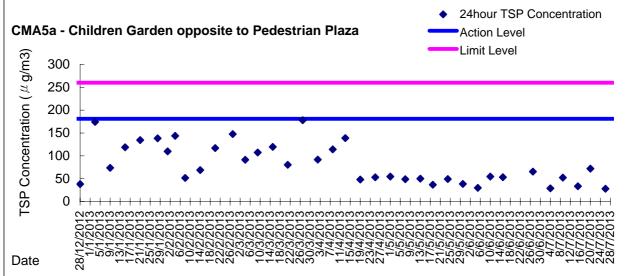


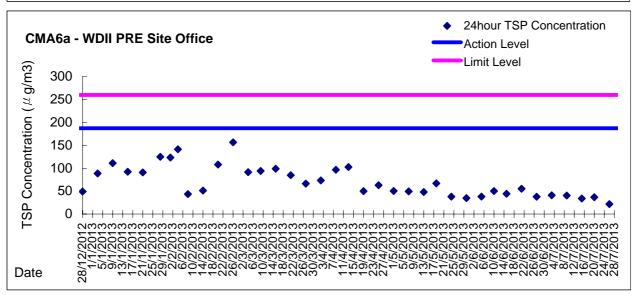




**Graphic Presentation of 24 hour TSP Result** 







Contract No. HK/2011/07 Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and testing Works (Stage 2) Proposal on Impact Monitoring for Odour Patrol along the shorelines of CBTS and ex-PCWA

Monitoring	9 July 2013	Weather Condition:	Fine	Tidal	<u>Ebb</u>	
Date:				Condition:		

Temperature: 32.7°C Relative Humidity: 62.1%

Location	Time	Temperature (°C)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:11	32.7	62.1	0				0.5	NW	
OP6	13:21	32.7	62.1	0				2.6	NE	
OP5	13:25	32.7	62.1	0-1	Rotten Egg	Sea	Intermittent	3.8	NE	
OP4	13:30	32.7	62.1	0-1	Rubbish	Rubbish	Intermittent	2.8	NE	
OP3	13:35	32.7	62.1	0				1.8	NE	
OP2	13:43	32.7	62.1	0-1	Construction waste	Construction Site	Intermittent	0		
OP1	13:48	32.7	62.1	0-1	Sea	Sea	Intermittent	1.2	NE	

Remarks for Odour Intensity:

The perceived 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 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 level

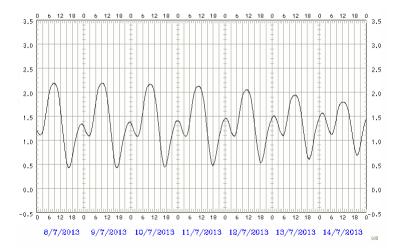
### **Meteorological Conditions on 9 July 2013**

Hong Kong Observatory Weather Station at Hong Kong Observatory
Air Temperature: 26.8 -31.5 °C Relative humidity: 80%

Hong Kong Observatory Weather Station at Hong Kong Park
Air Temperature: 29 °C

The tidal data at Quarry Bay Station

Tide Time	Tide Height (m)
02:37	1.1
09:28	2.2
16:47	0.4
23:18	1.4



Contract No. HK/2011/07 Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and testing Works (Stage 2) Proposal on Impact Monitoring for Odour Patrol along the shorelines of CBTS and ex-PCWA

## **Field Data Record Sheet**

Monitoring	23 July 2013	Weather Condition:	<u> Drizzle / Overcast</u>	Tidal	<u>Ebb</u>
Date:				Condition:	

Temperature:  $27^{\circ}\text{C} - 31.7^{\circ}\text{C}$  Relative Humidity: 72.6 - 86.2

Location	Time	Temperature (°C)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:24	27.1	86.2	0				0.4	NW	
OP6	13:31	27.3	87.4	0				0		
OP5	13:37	30.1	79.5	0-1	Rotten Egg	Sea	Intermittent	0.6	E	
OP4	13:42	31.6	73.5	0-1	Rubbish/ soil dust	Construction Site	Intermittent	2.5	NE	
OP3	13:48	31.5	76.1	0				0.2	N	
OP2	13:53	32.3	78.9	0		Construction Site	Intermittent	0.3	SE	
OP1	13:57	31.7	72.6	1	Rubbish	Sea	Intermittent	2.1	NE	

Remarks for Odour Intensity:

The perceived 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 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 level



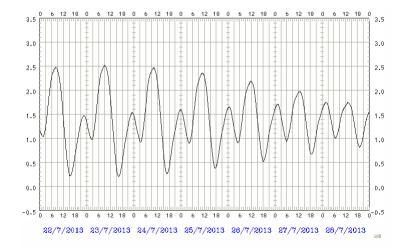
### **Meteorological Conditions on 23 July 2013**

Hong Kong Observatory Weather Station at Hong Kong Observatory
Air Temperature: 28.0 - 29.5 °C Relative humidity: 80%

Hong Kong Observatory Weather Station at Hong Kong Park
Air Temperature: 29 °C

The tidal data at Quarry Bay Station

Tide Time	Tide Height (m)
02:31	1.0
09:09	2.5
16:12	0.2
23:14	1.5



## Appendix 5.4

Water Quality Monitoring Results and Graphical Presentations



## Water Monitoring Result at WSD9 - Tai Wan Mid-Flood Tide

Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp °C	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L	-		Turbid NTU			ded Solids
				11	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	22:35	Cloudy	Middle	2.0	28.50	28.50	28.55	8.06	8.06	8.06	27.53	27.53	27.53	80.1	80.0	78.9	5.32	5.31	5.24	2.94	2.88	2.97	4	3.00
20/0/2010	22:36	Cioday	Middle	2.0	28.60	28.60	20.00	8.05	8.05	0.00	27.53	27.53	27.00	79.1	76.3	7 0.0	5.25	5.07	0.2.	2.99	3.08	2.01	2	0.00
2/7/2013	-	Strong Wind	Middle	-	-	-	_	-	-	_	-	-	_	-	-	_	-	-	_	-	-	_	-	
211/2010	-	Signal No.3	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
4/7/2013	17:35	Fine	Middle	2.5	28.68	28.68	28.73	7.85	7.85	7.85	27.29	27.29	27.28	84.0	83.7	83.4	5.58	5.56	5.47	2.60	2.60	2.60	<2	<2
4/1/2013	17:37	11116	Middle	2.5	28.77	28.77	20.73	7.84	7.84	7.00	27.26	27.26	27.20	83.1	82.8	00.4	5.52	5.20	5.47	2.60	2.59	2.00	<2	~2
6/7/2013	16:53	Cloudy	Middle	2.0	28.70	28.70	28.70	8.23	8.23	8.23	26.28	26.28	26.27	85.6	85.2	85.1	5.72	5.69	5.68	1.92	1.95	1.88	3	3.50
0/1/2013	16:54	Cloudy	Middle	2.0	28.70	28.70	20.70	8.22	8.22	6.23	26.26	26.26	20.21	84.7	84.7	65.1	5.66	5.66	5.00	1.81	1.84	1.00	4	3.30
8/7/2013	17:45	Cloudy	Middle	2.0	29.00	29.00	29.00	8.21	8.21	8.22	25.55	25.55	25.57	91.6	92.3	91.6	6.13	6.17	6.12	2.95	2.67	2.76	4	4.00
0/1/2013	17:46	Cloudy	Middle	2.0	29.00	29.00	29.00	8.23	8.24	0.22	25.58	25.58	20.01	91.1	91.3	91.0	6.09	6.10	0.12	2.60	2.80	2.70	4	4.00
10/7/2013	18:22	Cloudy	Middle	2.0	28.00	28.00	28.00	8.23	8.23	8.23	27.00	27.00	27.00	85.9	86.7	86.9	5.78	5.34	5.46	1.82	1.49	1.57	2	2.50
10/1/2013	18:23	Cloudy	Middle	2.0	28.00	28.00	20.00	8.23	8.23	0.23	27.00	27.00	27.00	87.3	87.5	00.9	5.38	5.35	3.40	1.53	1.44	1.07	3	2.50
12/7/2013	19:40	Cloudy	Middle	2.0	28.90	28.90	28.95	8.17	8.17	8.19	28.79	28.79	28.79	87.3	88.6	88.2	5.71	5.81	5.78	3.23	3.00	3.26	7	7.50
12//2010	19:41	Cloudy	Middle	2.0	29.00	29.00	20.50	8.21	8.21	0.10	28.79	28.79	20.73	89.1	87.8	00.2	5.82	5.76	0.70	3.45	3.36	0.20	8	7.00
15/7/2013	8:45	Cloudy	Middle	3.0	26.67	26.67	26.67	7.97	7.97	7.97	29.36	29.36	29.37	80.8	79.7	79.5	5.49	5.42	5.40	1.75	1.84	1.81	3	3.00
13/1/2013	8:47	Cloudy	Middle	3.0	26.66	26.66	20.07	7.97	7.97	1.51	29.37	29.37	29.31	79.2	78.2	19.5	5.38	5.32	3.40	1.84	1.79	1.01	3	3.00
18/7/2013	0:42	Cloudy	Middle	2.5	26.10	26.10	26.10	8.02	8.02	8.04	29.50	29.50	29.50	71.2	74.6	73.1	4.95	5.11	5.03	1.59	1.52	1.56	3	3.00
10/1/2013	0:43	Cloudy	Middle	2.5	26.10	26.10	20.10	8.05	8.05	0.04	29.50	29.50	29.50	74.2	72.5	75.1	5.09	4.97	3.03	1.63	1.50	1.50	3	3.00
20/7/2013	18:02	Fine	Middle	2.5	26.10	26.20	26.18	8.11	8.11	8.12	32.21	32.21	32.23	80.5	79.0	79.3	5.43	5.33	5.35	3.78	3.77	3.75	5	4.50
20/7/2010	18:04	1 1110	Middle	2.5	26.20	26.20	20.10	8.12	8.12	0.12	32.25	32.25	02.20	78.9	78.9	70.0	5.32	5.32	0.00	3.75	3.71	0.70	4	4.00
22/7/2013	18:05	Cloudy	Middle	2.0	27.20	27.20	27.20	8.06	8.06	8.08	30.62	30.62	30.62	80.6	80.2	79.8	5.39	5.36	5.33	3.76	3.87	3.80	4	5.00
22//2013	18:06	Jioudy	Middle	2.0	27.20	27.20	21.20	8.09	8.09	0.00	30.62	30.62	30.02	79.1	79.2	73.0	5.29	5.29	3.33	3.88	3.67	3.00	6	3.00
24/7/2013	18:30	Cloudy	Middle	2.0	26.30	26.30	26.30	7.99	7.99	8.02	30.96	30.96	30.96	77.1	77.4	77.7	5.22	5.24	5.26	4.05	4.26	4.11	6	5.00
22010	18:31	J.Judy	Middle	2.0	26.30	26.30	20.00	8.04	8.04	3.02	30.95	30.96	00.00	78.0	78.2	,	5.28	5.30	3.20	4.22	3.92		4	3.00
26/7/2013	19:14	Cloudy	Middle	2.0	26.80	26.80	26.80	7.90	7.90	7.92	29.82	29.84	29.84	69.1	68.4	68.8	4.67	4.62	4.65	4.18	4.08	4.05	4	3.00
20/1/2010	19:15	Jioudy	Middle	2.0	26.80	26.80	20.00	7.93	7.93	1.02	29.84	29.84	20.04	69.0	68.8	00.0	4.67	4.65	4.00	3.96	3.99	4.00	2	0.00

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at WSD17 - Quarry Bay Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L	-		Turbid NTU		Suspend	led Solids g/L
			r	n	Va	llue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	0:50	Cloudy	Middle	2.5	27.90	27.90	27.95	7.98	7.98	8.00	26.58	26.59	26.59	77.8	78.1	76.7	5.26	5.27	5.18	2.77	2.64	2.68	4	4.00
20/0/2013	0:51	Oloudy	Middle	2.5	28.00	28.00	21.93	8.02	8.02	0.00	26.59	26.59	20.53	76.2	74.7	70.7	5.15	5.05	5.10	2.69	2.61	2.00	4	4.00
2/7/2013	-	Strong Wind	Middle	·	-	-		1	-		•	-		-	-		1	1		-	-		ı	_
2/1/2013	-	Signal No.3	Middle	-	-	-		-	-		-	-		-	-			-		-	-	_	-	
4/7/2013	16:15	Fine	Middle	2.5	30.17	30.17	30.13	7.77	7.77	7.78	25.49	25.49	25.50	78.1	78.0	77.8	5.12	5.11	5.09	1.47	1.52	1.52	5	5.50
4/1/2013	16:17	Tille	Middle	2.5	30.09	30.09	30.13	7.78	7.78	7.70	25.51	25.51	25.50	77.6	77.3	77.0	5.09	5.03	3.03	1.53	1.54	1.02	6	5.50
6/7/2013	18:00	Cloudy	Middle	2.5	28.50	28.50	28.50	8.21	8.21	8.21	26.47	26.47	26.47	79.0	82.5	81.0	5.29	5.32	5.36	1.87	1.40	1.54	4	4.00
0/1/2013	18:01	Cloudy	Middle	2.5	28.50	28.50	26.50	8.20	8.20	0.21	26.47	26.47	20.47	82.3	80.2	61.0	5.51	5.33	5.30	1.49	1.41	1.54	4	4.00
8/7/2013	18:50	Cloudy	Middle	2.5	28.10	28.10	28.05	8.20	8.20	8.21	26.12	26.12	26.13	87.5	88.0	87.0	5.92	5.95	5.88	1.92	1.90	1.91	3	3.50
0/1/2013	18:51	Cloudy	Middle	2.5	28.00	28.00	20.03	8.21	8.21	0.21	26.13	26.13	20.13	86.3	86.0	07.0	5.84	5.80	3.00	1.81	2.00	1.91	4	5.50
10/7/2013	19:25	Cloudy	Middle	2.5	28.10	28.10	28.10	8.14	8.14	8.16	27.08	27.08	27.10	88.9	89.2	89.2	5.97	5.99	5.99	1.80	1.61	1.65	2	2.50
10/1/2013	19:26	Cloudy	Middle	2.5	28.10	28.10	20.10	8.17	8.17	0.10	27.12	27.12	27.10	89.6	89.1	03.2	6.02	5.99	5.55	1.58	1.60	1.03	3	2.50
12/7/2013	20:30	Cloudy	Middle	2.5	28.80	28.80	28.85	8.26	8.26	8.27	28.52	28.52	28.52	93.1	93.5	92.2	6.13	6.15	6.06	2.87	2.85	2.91	6	6.00
12//2010	20:31	Oloudy	Middle	2.5	28.90	28.90	20.00	8.27	8.27	U.E.I	28.51	28.51	20.02	92.3	90.0	02.2	6.07	5.90	0.00	3.03	2.89	2.01	6	0.00
15/7/2013	10:20	Cloudy	Middle	3.0	27.04	27.04	27.05	7.93	7.93	7.93	29.23	29.23	29.23	88.5	86.9	86.2	5.98	5.87	5.82	2.89	2.85	2.84	3	3.00
13/1/2013	10:22	Cloudy	Middle	3.0	27.06	27.06	21.03	7.92	7.92	7.55	29.23	29.23	29.25	83.9	85.3	00.2	5.67	5.77	3.02	2.82	2.81	2.04	3	3.00
18/7/2013	3:33	Cloudy	Middle	3.0	25.70	25.70	25.70	8.14	8.14	8.14	31.48	31.48	31.48	75.6	75.3	75.6	5.16	5.14	5.16	2.18	2.12	2.07	4	3.50
10/7/2010	3:34	Oloudy	Middle	3.0	25.70	25.70	20.70	8.14	8.14	0.14	31.48	31.48	01.40	75.9	75.7	70.0	5.18	5.17	0.10	2.02	1.97	2.07	3	0.00
20/7/2013	16:27	Fine	Middle	3.5	26.50	26.50	26.55	7.95	7.95	7.96	29.71	29.71	29.70	70.5	69.9	70.2	4.79	4.75	4.77	3.26	3.28	3.27	4	4.00
20/7/2010	16:29	Tillo	Middle	3.5	26.60	26.60	20.00	7.97	7.97	7.50	29.69	29.69	20.70	70.1	70.1	70.2	4.77	4.77	4.77	3.29	3.25	0.27	4	4.00
22/7/2013	19:17	Cloudy	Middle	2.5	26.90	26.90	26.93	8.11	8.11	8.12	31.47	31.47	31.47	73.8	75.7	74.6	4.92	5.05	4.98	6.18	6.33	6.29	8	8.00
22112010	19:18	Oloudy	Middle	2.5	27.00	26.90	20.00	8.12	8.12	0.12	31.47	31.47	01.47	74.7	74.3	74.0	4.98	4.96	4.00	6.38	6.25	0.20	8	0.00
24/7/2013	19:45	Cloudy	Middle	2.5	26.40	26.40	26.40	8.16	8.16	8.16	31.12	31.12	31.12	76.1	76.8	76.7	5.16	5.20	5.19	8.82	8.92	8.77	11	10.50
22010	19:46	o.cuuy	Middle	2.5	26.40	26.40	20.40	8.15	8.15	3.10	31.12	31.12	J12	76.7	77.3		5.18	5.23	3.10	8.72	8.62	5.77	10	
26/7/2013	20:15	Cloudy	Middle	2.5	26.50	26.50	26.55	7.95	7.95	7.97	30.02	30.02	30.02	73.1	72.3	72.2	4.96	4.91	4.90	8.44	8.47	8.33	9	8.50
20/1/2010	20:16	Oloudy	Middle	2.5	26.60	26.60	20.00	7.99	7.99	7.07	30.02	30.02	00.02	72.1	71.2	12.2	4.89	4.83	4.00	8.22	8.18	0.00	8	0.00

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



## Water Monitoring Result at C7 - Windsor House Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L			Turbidi NTU			ded Solids
			r	n	Va	llue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	23:40	Cloudy	Middle	1.0	28.60	28.60	28.60	7.92	7.92	7.92	23.72	23.72	23.72	63.1	65.6	64.5	4.34	4.47	4.40	2.88	2.84	2.85	4	4.00
20/0/2013	23:41	Cloudy	Middle	1.0	28.60	28.60	20.00	7.91	7.91	1.32	23.72	23.72	25.72	64.6	64.5	04.5	4.39	4.38	4.40	2.89	2.78	2.00	4	4.00
2/7/2013	-	Strong Wind	Middle	·	-	-		•	-		•	-		-	-		1	-		1	1		ı	_
2/1/2013	-	Signal No.3	Middle	-	-	-		-	-		-	-		-	-			-		-		_	-	
4/7/2013	15:50	Fine	Middle	1.5	30.12	30.12	30.14	7.40	7.40	7.39	24.79	24.79	24.79	70.9	70.7	70.5	4.07	4.65	4.49	3.18	3.15	3.17	3	2.50
4/1/2013	15:52	Tille	Middle	1.5	30.15	30.15	30.14	7.38	7.38	7.55	24.79	24.79	24.73	69.9	70.3	70.5	4.60	4.63	4.43	3.16	3.17	5.17	2	2.50
6/7/2013	17:25	Cloudy	Middle	1.0	28.80	28.80	28.80	8.06	8.06	8.04	23.96	23.96	23.96	56.8	59.8	58.6	3.87	4.06	3.98	3.84	3.87	3.79	3	3.50
0/1/2013	17:26	Cloudy	Middle	1.0	28.80	28.80	20.00	8.02	8.02	8.04	23.95	23.95	23.90	59.2	58.6	36.0	4.01	3.96	3.90	3.76	3.68	3.79	4	3.50
8/7/2013	18:17	Cloudy	Middle	1.0	28.90	28.90	28.90	7.82	7.86	7.92	24.55	24.55	24.55	83.0	83.6	83.3	5.59	5.63	5.61	4.59	4.49	4.46	6	6.00
0/1/2013	18:18	Cloudy	Middle	1.0	28.90	28.90	20.30	7.99	7.99	7.32	24.55	24.55	24.00	83.5	83.0	00.0	5.61	5.59	5.01	4.37	4.39	4.40	6	0.00
10/7/2013	19:00	Cloudy	Middle	1.0	27.70	27.70	27.70	8.11	8.11	8.11	25.83	25.83	25.83	79.9	80.4	79.8	5.44	5.48	5.44	2.18	1.96	1.95	3	3.50
10/1/2013	19:01	Cloudy	Middle	1.0	27.70	27.70	21.10	8.11	8.11	0.11	25.83	25.83	25.05	79.2	79.8	79.0	5.39	5.44	5.44	1.86	1.79	1.95	4	3.30
12/7/2013	20:03	Cloudy	Middle	1.0	28.60	28.60	28.65	8.12	8.12	8.11	27.12	27.12	27.12	75.4	76.5	74.4	5.01	5.08	4.93	1.59	1.49	1.50	4	3.00
12/1/2013	20:04	Cloudy	Middle	1.0	28.70	28.70	20.00	8.10	8.10	0.11	27.12	27.12	27.12	73.0	72.7	74.4	4.85	4.78	4.93	1.45	1.47	1.50	2	3.00
15/7/2013	11:47	Cloudy	Middle	1.5	27.74	27.74	27.76	7.68	7.68	7.67	27.13	27.13	27.13	69.8	69.0	68.8	4.72	4.66	4.65	0.92	0.93	0.94	4	4.00
10/7/2010	11:49	Oloudy	Middle	1.5	27.77	27.77	27.70	7.66	7.66	7.07	27.12	27.12	27.10	68.6	67.8	00.0	4.63	4.59	4.00	0.94	0.95	0.54	4	4.00
18/7/2013	3:00	Cloudy	Middle	1.5	25.90	25.90	25.90	7.86	7.86	7.86	23.47	23.47	23.47	56.0	57.0	56.3	3.98	4.06	4.01	3.46	3.45	3.50	4	4.50
10/7/2010	3:01	Oloudy	Middle	1.5	25.90	25.90	20.00	7.86	7.86	7.00	23.47	23.47	20.47	56.7	55.5	00.0	4.03	3.95	4.01	3.55	3.52	0.00	5	4.00
20/7/2013	16:10	Fine	Middle	1.5	26.80	26.80	26.80	7.81	7.81	7.81	28.71	28.71	28.71	44.8	43.9	43.8	3.05	2.99	2.98	5.85	5.92	5.92	7	7.50
20/7/2010	16:12	Tillo	Middle	1.5	26.80	26.80	20.00	7.81	7.81	7.01	28.70	28.70	20.71	43.4	43.0	40.0	2.95	2.93	2.50	5.96	5.93	0.02	8	7.00
22/7/2013	18:32	Cloudy	Middle	1.0	27.00	27.00	27.05	8.12	8.12	8.11	27.68	27.68	27.67	65.3	66.0	65.2	4.45	4.51	4.45	4.52	4.69	4.58	6	5.50
22112010	18:33	Oloudy	Middle	1.0	27.10	27.10	27.00	8.09	8.09	0.11	27.66	27.66	21.01	64.3	65.0	00.2	4.39	4.43	7.70	4.59	4.50	4.00	5	0.00
24/7/2013	19:15	Cloudy	Middle	1.0	26.30	26.30	26.30	8.00	8.00	8.00	27.24	27.23	27.23	66.3	66.6	66.3	4.59	4.60	4.59	2.83	2.85	2.77	2	2.00
22010	19:16	o.cuuy	Middle	1.0	26.30	26.30	20.00	7.99	8.00	3.50	27.23	27.23	220	66.3	66.1	55.5	4.59	4.57	50	2.76	2.65	2.77	2	2.00
26/7/2013	19:40	Cloudy	Middle	1.0	26.70	26.70	26.70	7.91	7.91	7.91	27.09	27.09	27.09	66.6	67.0	66.9	4.58	4.61	4.60	2.57	2.31	2.34	3	3.00
20/1/2010	19:41	Oloudy	Middle	1.0	26.70	26.70	20.70	7.90	7.90	7.01	27.09	27.09	21.00	67.2	66.8	00.0	4.62	4.60	4.00	2.21	2.25	2.07	3	0.00

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at C1 - HKCEC Extension Mid-Flood Tide

Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp	erature		рН			Salinit	ty	D	O Satur	ation		DO mg/L			Turbid	ity	Suspend	
		Condition	r	n	Va	lue	Average	Va	lue	Average	Va	ppt lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
00/0/0040	23:25	01 1	Middle	2.0	28.10	28.10	00.45	8.04	8.04	2.24	24.48	24.48	04.40	75.0	74.9	74.7	5.11	5.11	5.40	3.81	3.77	3.77	4	4.00
28/6/2013	23:27	Cloudy	Middle	2.0	28.20	28.20	28.15	8.04	8.04	8.04	24.49	24.49	24.49	74.7	74.2	74.7	5.10	5.07	5.10	3.76	3.73	3.77	4	4.00
2/7/2013	-	Strong Wind	Middle	-	-	-			-		-	-		-	-		-			-	-		1	
2/1/2013	-	Signal No.3	Middle	-	-	-	_		-			-	_	-	-	_	-		_	-	-	_	-	
4/7/2013	15:25	Fine	Middle	2.5	29.40	29.40	29.70	8.16	8.16	8.16	26.33	26.33	26.33	97.7	97.3	96.8	6.40	6.40	6.35	1.90	1.89	1.90	2	2.50
4/1/2010	15:27	1 1110	Middle	2.5	30.00	30.00	20.70	8.15	8.15	0.10	26.33	26.33	20.00	96.1	96.2	56.6	6.31	6.30	0.00	1.90	1.91	1.50	3	2.00
6/7/2013	18:39	Cloudy	Middle	2.5	28.00	28.00	28.05	8.01	8.01	8.02	27.22	27.22	27.67	75.8	75.4	75.2	5.08	5.06	5.05	3.17	3.15	3.13	4	3.50
0/1/2013	18:41	Cloudy	Middle	2.5	28.10	28.10	20.03	8.02	8.02	0.02	28.11	28.11	21.01	75.0	74.7	75.2	5.04	5.01	5.05	3.11	3.09	3.13	3	5.50
8/7/2013	19:49	Cloudy	Middle	2.0	28.10	28.10	28.15	8.15	8.15	8.17	26.20	26.20	26.23	84.0	83.9	83.8	5.59	5.59	5.58	0.38	0.35	0.33	2	2.00
3,772010	19:51	Cioudy	Middle	2.0	28.20	28.20	20.10	8.18	8.18	0	26.25	26.25	20.20	83.6	83.5	00.0	5.57	5.57	0.00	0.31	0.29	0.00	2	2.00
10/7/2013	19:50	Cloudy	Middle	2.0	27.40	27.40	27.60	8.14	8.14	8.14	28.97	28.97	29.03	80.4	80.2	80.1	5.41	5.40	5.39	1.42	1.40	1.38	6	5.00
10/1/2010	19:52	Cidady	Middle	2.0	27.80	27.80	27.00	8.14	8.14	0	29.08	29.08	20.00	80.0	79.7	00.1	5.39	5.37	0.00	1.35	1.33	1.00	4	0.00
12/7/2013	21:19	Cloudy	Middle	2.0	27.70	27.70	27.70	8.15	8.15	8.15	30.40	30.42	30.37	85.0	84.7	84.6	5.64	5.62	5.62	1.29	1.29	1.26	3	3.50
12172010	21:21	Cioday	Middle	2.0	27.70	27.70	21.110	8.15	8.15	0.10	30.32	30.32	00.07	84.5	84.2	01.0	5.61	5.59	0.02	1.24	1.21	1.20	4	0.00
15/7/2013	9:53	Cloudy	Middle	2.5	27.10	27.10	27.10	8.05	8.05	8.05	29.78	29.78	29.78	82.8	82.7	82.5	5.57	5.56	5.55	0.14	0.13	0.13	<2	<2
	9:55		Middle	2.5	27.10	27.10		8.05	8.05		29.78	29.78		82.5	82.0		5.54	5.52		0.11	0.12		<2	
18/7/2013	0:41	Cloudy	Middle	3.0	26.00	26.00	26.00	7.97	7.97	7.96	31.28	31.28	31.28	66.2	65.8	65.8	4.52	4.50	4.50	0.20	0.18	0.17	4	5.00
	0:43		Middle	3.0	26.00	26.00		7.95	7.95		31.28	31.28		65.6	65.4		4.49	4.48		0.17	0.13		6	
20/7/2013	15:05	Fine	Middle	2.0	27.00	27.00	27.00	8.13	8.13	8.13	31.82	31.82	31.84	74.4	74.0	73.9	4.95	4.92	4.91	4.72	4.71	4.80	3	3.00
	15:07		Middle	2.0	27.00	27.00		8.13	8.13		31.86	31.86		74.0	73.0		4.93	4.85		4.87	4.88		3	
22/7/2013	19:14	Cloudy	Middle	2.0	26.30	26.30	26.35	7.96	7.96	7.96	30.13	30.13	30.14	65.3	65.1	65.1	4.44	4.43	4.43	7.30	7.30	7.27	11	11.50
	19:16		Middle	2.0	26.40	26.40		7.95	7.95		30.14	30.14		65.0	64.8		4.43	4.41		7.26	7.21		12	
24/7/2013	20:28	Cloudy	Middle	2.0	26.40	26.40	26.40	7.88	7.88	7.88	29.89	28.89	29.65	62.4	62.2	62.1	4.25	4.24	4.23	4.50	4.43	4.44	9	9.00
	24/7/2013 20:30	,	Middle	2.0	26.40	26.40		7.88	7.88		29.90	29.90		61.9	61.7		4.22	4.21		4.43	4.40		9	
26/7/2013	21:08	Cloudy	Middle	2.0	26.70	26.70	26.70	7.85	7.85	7.85	28.63	28.63	28.64	63.2	63.0	62.9	4.31	4.30	4.29	5.20	5.20	5.17	8	7.50
	21:11	,	Middle	2.0	26.70	26.70		7.84	7.84		28.64	28.64		62.8	62.5		4.29	4.27		5.14	5.12		7	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at P3 - APA Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L			Turbidi NTU			led Solids g/L
			Ţ.	n	Va	llue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	23:51	Cloudy	Middle	2.5	28.00	28.00	28.05	8.06	8.06	8.06	24.43	24.43	24.44	76.8	76.6	76.5	5.24	5.23	5.23	4.10	4.04	4.04	4	4.50
20/0/2013	23:52	Cloudy	Middle	2.5	28.10	28.10	20.03	8.06	8.06	0.00	24.44	24.44	24.44	76.4	76.2	70.5	5.22	5.21	5.25	4.01	3.99	4.04	5	4.50
2/7/2013	1	Strong Wind	Middle	·	-	-		·	-		•	-		-	-		1	-		1	1		ı	_
2///2013	-	Signal No.3	Middle	-	-	-			-		-	-		-	-			-		-		_	-	
4/7/2013	14:55	Fine	Middle	2.5	29.10	29.10	29.25	8.17	8.17	8.17	26.24	26.24	26.26	94.1	94.2	94.1	6.23	6.24	6.23	2.03	2.03	2.04	<2	<2
4/1/2010	14:57	Tillo	Middle	2.5	29.40	29.40	20.20	8.16	8.16	0.17	26.27	26.27	20.20	94.0	94.1	04.1	6.22	6.22	0.20	2.04	2.06	2.04	<2	1,2
6/7/2013	19:06	Cloudy	Middle	2.5	27.70	27.70	27.75	7.98	7.98	7.99	27.89	27.89	28.15	70.2	70.1	69.9	4.76	4.76	4.75	2.64	2.62	2.60	6	5.50
0/1/2010	19:08	Oloudy	Middle	2.5	27.80	27.80	210	7.99	7.99	7.00	28.41	28.41	20.10	69.8	69.6	00.0	4.74	4.73	0	2.59	2.55	2.00	5	0.00
8/7/2013	20:40	Cloudy	Middle	2.5	27.50	27.50	27.50	7.95	7.95	7.96	28.72	28.72	28.71	61.8	61.5	61.5	4.27	4.25	4.24	0.27	0.25	0.23	2	2.00
	20:42	5.000,	Middle	2.5	27.50	27.50		7.96	7.96		28.70	28.70		61.6	60.9		4.23	4.22		0.22	0.19		<2	
10/7/2013	19:15	Cloudy	Middle	2.5	27.80	27.80	27.90	8.14	8.14	8.14	28.14	28.14	28.09	81.3	80.9	80.8	5.47	5.45	5.45	0.47	0.51	0.46	5	4.50
	19:17	5.000,	Middle	3.0	28.00	28.00		8.14	8.14		28.04	28.04		80.7	80.3		5.44	5.42		0.44	0.41		4	
12/7/2013	22:09	Cloudy	Middle	2.5	28.30	28.30	28.40	8.12	8.12	8.12	30.41	30.41	30.40	86.5	86.4	86.2	5.67	5.67	5.66	0.48	0.46	0.45	3	3.00
	22:11	,	Middle	2.5	28.50	28.50		8.12	8.12		30.38	30.38		86.1	85.8		5.65	5.63		0.43	0.42		3	
15/7/2013	9:25	Cloudy	Middle	2.5	27.10	27.10	27.10	8.06	8.06	8.06	28.57	28.57	28.57	77.9	78.7	78.9	5.46	5.53	5.56	0.42	0.43	0.45	3	3.00
	9:27	,	Middle	2.5	27.10	27.10		8.06	8.06		28.57	28.57		79.0	79.9		5.55	5.69		0.46	0.47		3	
18/7/2013	0:13	Cloudy	Middle	3.0	26.10	26.10	26.05	8.02	8.02	8.02	31.34	31.34	31.35	79.8	79.7	79.5	5.44	5.44	5.43	0.72	0.71	0.69	5	4.50
	0:15	·	Middle	3.0	26.00	26.00		8.02	8.02		31.35	31.35		79.4	79.2		5.42	5.41		0.66	0.67		4	
20/7/2013	15:30	Fine	Middle	2.5	26.70	26.70	26.85	8.12	8.12	8.12	32.04	32.04	32.01	73.0	73.3	73.2	4.87	4.88	4.87	4.30	4.31	4.30	3	3.00
	15:32		Middle	2.5	27.00	27.00		8.11	8.11		31.98	31.98		73.3	73.0		4.87	4.85		4.36	4.24		3	
22/7/2013	18:44	Cloudy	Middle	2.0	26.30	26.30	26.30	7.93	7.93	7.93	29.88	29.88	29.88	62.6	62.4	62.3	4.27	4.26	4.25	4.78	4.79	4.77	7	7.00
	18:46	-	Middle	2.0	26.30	26.30		7.93	7.93		29.88	29.88		62.1	61.9		4.24	4.23		4.77	4.72		7	<u> </u>
24/7/2013	19:53	Cloudy	Middle	2.0	26.40	26.40	26.40	7.80	7.80	7.82	29.56	29.56	29.60	62.2	61.8	61.7	4.24	4.22	4.21	4.83	4.84	4.81	8	8.50
	19:55		Middle	2.0	26.40	26.40		7.83	7.83		29.63	29.63		61.5	61.1		4.20	4.18		4.79	4.76		9	
26/7/2013	20:44	Cloudy	Middle	2.0	26.80	26.80	26.75	7.87	7.87	7.87	28.34	28.34	28.34	69.7	69.5	69.4	4.76	4.75	4.74	3.28	3.23	3.24	6	6.00
	26/7/2013		Middle	2.0	26.70	26.70		7.87	7.87		28.34	28.34		69.2	69.1		4.73	4.73		3.24	3.22		6	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at P1 - HKCEC Phase I Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp °C	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspend	led Solids g/L
			ı	n	Va	lue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	llue	Average	Value	Average
28/6/2013	0:02	Cloudy	Middle	2.5	28.20	28.20	28.20	8.03	8.03	8.02	24.36	24.36	24.37	77.6	77.4	77.3	5.28	5.27	5.26	4.30	4.27	4.25	3	3.00
20/0/2010	0:04	Oloudy	Middle	2.5	28.20	28.20	20.20	8.01	8.01	0.02	24.37	24.37	2 1.07	77.1	76.9		5.25	5.24	0.20	4.24	4.20	20	3	0.00
2/7/2013	-	Strong Wind	Middle	-	-	-	-	-	-	_	-	-	_	-	-	_	-	-	_	-	-	-	-	_
2112010	-	Signal No.3	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
4/7/2013	14:50	Fine	Middle	2.5	29.40	29.40	29.55	8.20	8.20	8.20	26.11	26.11	26.11	94.0	92.2	92.8	6.20	6.08	6.11	2.08	2.07	2.09	3	3.00
4/1/2010	14:52	Tillo	Middle	2.5	29.70	29.70	20.00	8.20	8.20	0.20	26.10	26.10	20.11	92.2	92.7	02.0	6.07	6.10	0.11	2.10	2.12	2.00	3	0.00
6/7/2013	19:15	Cloudy	Middle	2.5	27.80	27.80	27.80	7.97	7.97	7.98	28.31	28.31	28.34	73.8	73.6	73.5	4.97	4.96	4.95	2.33	2.29	2.29	5	5.00
3//2010	19:17	Oloudy	Middle	2.5	27.80	27.80	27.00	7.98	7.98	7.00	28.36	28.36	20.01	73.3	73.2	7 0.0	4.93	4.92		2.28	2.26	2.20	5	0.00
8/7/2013	20:24	Cloudy	Middle	2.5	28.00	28.00	28.00	8.03	8.03	8.04	27.60	27.60	27.59	73.2	73.0	73.0	4.91	4.90	4.90	0.51	0.49	0.47	<2	<2
	20:26	5.000	Middle	2.5	28.00	28.00		8.04	8.04		27.57	27.57		72.9	72.8		4.90	4.89		0.47	0.42	• • • • • • • • • • • • • • • • • • • •	<2	
10/7/2013	19:05	Cloudy	Middle	2.5	27.70	27.70	27.75	8.13	8.13	8.13	28.05	28.05	28.05	84.9	84.5	84.4	5.70	5.68	5.67	1.05	1.01	1.01	4	4.00
	19:07	5.000	Middle	2.5	27.80	27.80		8.13	8.13		28.04	28.04		84.2	83.9	•	5.66	5.64		0.99	0.97		4	
12/7/2013	21:59	Cloudy	Middle	2.5	27.70	27.70	27.80	8.14	8.14	8.14	30.47	30.47	30.48	88.1	87.7	87.6	5.83	5.81	5.80	0.68	0.64	0.63	3	3.50
	22:01	,	Middle	2.5	27.90	27.90		8.14	8.14		30.48	30.48		87.3	87.1		5.79	5.78		0.62	0.59		4	
15/7/2013	9:33	Cloudy	Middle	2.5	27.10	27.10	27.10	8.07	8.07	8.07	29.75	29.75	29.75	82.6	82.0	83.2	5.55	5.51	5.58	0.31	0.30	0.31	2	2.00
	9:35	,	Middle	2.5	27.10	27.10		8.07	8.07		29.75	29.75		84.1	84.2		5.60	5.65		0.31	0.32		2	
18/7/2013	0:02	Cloudy	Middle	3.0	25.90	25.90	25.85	8.00	8.00	8.01	31.27	31.27	31.40	77.7	77.3	77.3	5.30	5.28	5.28	1.43	1.40	1.39	2	3.00
	0:04	·	Middle	3.0	25.80	25.80		8.01	8.01		31.52	31.52		77.1	76.9		5.27	5.26		1.37	1.34		4	
20/7/2013	15:40	Fine	Middle	2.5	26.70	26.70	26.60	8.04	8.04	8.05	31.58	31.58	31.58	98.8	99.2	97.7	7.00	7.02	6.92	2.78	2.77	2.73	4	3.50
	15:42		Middle	2.5	26.50	26.50		8.06	8.06		31.58	31.58		96.6	96.0		6.84	6.80		2.65	2.70		3	
22/7/2013	18:31	Cloudy	Middle	2.0	25.90	25.90	25.95	7.93	7.93	7.93	29.75	29.75	29.75	60.2	60.1	60.0	4.13	4.13	4.12	3.51	3.54	3.49	4	4.50
	18:33	-	Middle	2.0	26.00	26.00		7.93	7.93		29.74	29.74		59.9	59.7		4.12	4.11		3.47	3.45		5	
24/7/2013	19:43	Cloudy	Middle	2.0	26.30	26.30	26.30	7.78	7.78	7.78	29.46	29.46	29.50	62.5	62.2	62.1	4.27	4.25	4.25	2.41	2.40	2.41	3	3.50
	7/2013		Middle	2.0	26.30	26.30		7.78	7.78		29.46	29.60		61.9	61.8		4.23	4.23		2.42	2.39		4	
26/7/2013	20:35	Cloudy	Middle	2.0	26.50	26.50	26.50	7.83	7.83	7.85	28.34	28.34	28.33	71.0	70.8	70.7	4.87	4.86	4.85	3.69	3.65	3.65	3	4.00
	26/7/2013		Middle	2.0	26.50	26.50		7.86	7.86		28.32	28.32		70.7	70.3		4.85	4.83		3.63	3.61		5	

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at P5 - WCT / RT / IT Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp	erature		pH -			Salinit	ty	D	OO Satur	ation		DO mg/L			Turbid NTU			led Solids g/L
			r	n	Va	llue	Average	Va	llue	Average	Va	lue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	23:40	Cloudy	Middle	2.0	28.10	28.10	28.10	8.04	8.04	8.05	24.48	24.48	24.48	76.6	76.4	76.2	5.22	5.21	5.19	3.31	3.30	3.28	3	3.00
20/0/2013	23:42	Cloudy	Middle	2.0	28.10	28.10	20.10	8.05	8.05	0.00	24.48	24.48	24.40	76.1	75.7	70.2	5.19	5.15	5.19	3.27	3.22	3.20	3	3.00
2/7/2013	-	Strong Wind	Middle	·	-	-		·	-		1	-		-	-		1	-		1	-		ı	_
2//2013	-	Signal No.3	Middle	-	-	-			-		-	-		-	-			-		-	-	_	-	
4/7/2013	15:05	Fine	Middle	2.0	29.60	29.60	29.60	8.17	8.17	8.17	26.27	26.27	26.28	98.1	98.3	97.9	6.50	6.49	6.46	2.10	2.11	2.12	<2	<2
4/1/2010	15:07	Tillo	Middle	2.0	29.60	29.60	20.00	8.17	8.17	0.17	26.28	26.28	20.20	97.7	97.6	07.0	6.44	6.42	0.40	2.12	2.14	2.12	<2	
6/7/2013	18:54	Cloudy	Middle	2.5	27.90	27.90	27.90	8.00	8.00	8.01	27.64	27.64	27.95	76.2	76.0	75.9	5.11	5.10	5.10	2.85	2.82	2.81	5	5.00
0/7/2010	18:55	Oloudy	Middle	2.5	27.90	27.90	27.00	8.01	8.01	0.01	28.25	28.25	27.00	75.8	75.7	7 0.0	5.09	5.09	0.10	2.80	2.77	2.01	5	0.00
8/7/2013	20:15	Cloudy	Middle	2.5	28.00	28.00	28.05	8.14	8.14	8.14	27.46	27.46	27.45	85.3	85.1	85.0	5.75	5.74	5.73	0.29	0.26	0.25	<2	<2
	20:17	5.000,	Middle	2.5	28.10	28.10		8.14	8.14		27.43	27.43		84.9	84.6		5.72	5.70		0.23	0.20		<2	
10/7/2013	19:27	Cloudy	Middle	2.0	27.40	27.40	27.50	8.14	8.14	8.14	29.01	29.01	29.02	77.5	77.1	77.1	5.20	5.18	5.18	0.99	0.96	0.94	5	4.00
	19:29	5.000	Middle	2.0	27.60	27.60		8.14	8.14		29.03	29.03		76.9	76.7		5.17	5.16		0.93	0.89		3	
12/7/2013	21:38	Cloudy	Middle	2.5	27.60	27.60	27.65	8.12	8.12	8.12	30.59	30.59	30.57	84.6	84.4	84.3	5.61	5.60	5.60	0.82	0.79	0.77	3	3.50
	21:40	,	Middle	2.5	27.70	27.70		8.11	8.11	_	30.55	30.55		84.3	84.0		5.60	5.58		0.74	0.74		4	
15/7/2013	9:40	Cloudy	Middle	2.5	27.10	27.10	27.10	8.07	8.07	8.07	29.59	29.59	29.59	81.3	81.6	81.9	5.40	5.49	5.49	0.33	0.35	0.36	3	3.00
	9:42	,	Middle	2.5	27.10	27.10		8.07	8.07		29.59	29.59		82.1	82.5		5.51	5.55		0.36	0.40		3	
18/7/2013	0:24	Cloudy	Middle	3.0	26.00	26.00	25.90	7.98	7.98	7.99	31.35	31.35	31.45	70.8	70.4	70.5	4.83	4.81	4.81	0.25	0.23	0.21	3	3.00
	0:22	·	Middle	3.0	25.80	25.80		7.99	7.99		31.54	31.54		70.4	70.2		4.81	4.80		0.19	0.16		3	
20/7/2013	15:20	Fine	Middle	2.0	26.70	26.70	26.70	8.12	8.12	8.12	30.80	30.80	30.28	73.6	73.9	73.5	4.92	4.94	4.93	3.05	3.04	3.04	4	4.00
	15:22		Middle	2.0	26.70	26.70		8.12	8.12		29.75	29.75		72.9	73.4		4.94	4.90		3.06	3.00		4	
22/7/2013	18:55	Cloudy	Middle	2.0	26.30	26.30	26.35	7.93	7.93	7.93	29.93	29.93	29.93	62.9	62.7	62.6	4.28	4.27	4.27	4.83	4.83	4.80	8	8.00
	18:57	-	Middle	2.0	26.40	26.40		7.93	7.93		29.93	29.93		62.5	62.3		4.26	4.25		4.77	4.75		8	<u> </u>
24/7/2013	20:04	Cloudy	Middle	2.0	26.40	26.40	26.40	7.85	7.85	7.85	29.66	29.66	29.67	61.5	61.3	61.2	4.16	4.15	4.15	4.59	4.59	4.56	6	6.50
	20:06		Middle	2.0	26.40	26.40		7.85	7.85		29.67	29.67		61.2	60.9		4.15	4.13		4.53	4.51		7	
26/7/2013	20:51	Cloudy	Middle	2.0	26.90	26.90	26.85	7.84	7.84	7.84	28.40	28.40	28.40	67.0	66.9	66.7	4.56	4.56	4.54	2.84	2.82	2.81	4	4.00
	26/7/2013 20:53		Middle	2.0	26.80	26.80		7.84	7.84		28.40	28.40		66.5	66.2		4.53	4.51		2.80	2.76		4	

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at P4 - SOC Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L			Turbidi NTU			led Solids g/L
			r	n	Va	llue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	23:33	Cloudy	Middle	2.0	28.20	28.20	28.20	8.04	8.04	8.04	24.46	24.46	24.46	77.6	77.4	77.3	5.28	5.27	5.26	3.15	3.12	3.10	3	3.00
20/0/2010	23:35	Cioudy	Middle	2.0	28.20	28.20	20.20	8.04	8.04	0.01	24.46	24.46	20	77.1	76.9		5.25	5.23	0.20	3.10	3.04	0.10	3	0.00
2/7/2013	-	Strong Wind	Middle	-	-	-		-	-	_	-	-	_	-	-	_	-	-	_	-	-	_	-	_
2112010	-	Signal No.3	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
4/7/2013	15:15	Fine	Middle	2.0	29.60	29.60	29.60	8.14	8.14	8.14	26.85	26.85	26.85	88.7	88.7	88.5	5.85	5.84	5.81	2.11	2.12	2.12	2	2.00
4/1/2010	15:17	1 1110	Middle	2.0	29.60	29.60	25.00	8.14	8.14	0.14	26.85	26.85	20.00	87.7	88.7	00.0	5.77	5.79	0.01	2.11	2.12	2.12	<2	2.00
6/7/2013	18:47	Cloudy	Middle	2.5	27.90	27.90	27.90	8.01	8.01	8.01	27.93	27.93	27.99	80.1	79.8	79.7	5.38	5.37	5.36	5.38	5.36	5.34	4	5.00
0/7/2013	18:49	Cloudy	Middle	2.5	27.90	27.90	27.30	8.01	8.01	0.01	28.05	28.05	21.33	79.5	79.3	13.1	5.35	5.34	5.50	5.31	5.30	3.54	6	5.00
8/7/2013	20:00	Cloudy	Middle	2.0	28.20	28.20	28.25	8.14	8.14	8.14	26.17	26.17	26.19	84.6	84.4	84.2	5.66	5.65	5.64	1.33	1.31	1.29	3	3.50
0/1/2010	20:02	Cioudy	Middle	2.0	28.30	28.30	20.20	8.14	8.14	0	26.20	26.20	20.10	84.1	83.8	01.2	5.63	5.61	0.01	1.29	1.24	1120	4	0.00
10/7/2013	19:38	Cloudy	Middle	2.0	27.50	27.50	27.60	8.11	8.11	8.12	29.01	29.01	29.00	76.8	76.4	76.4	5.18	5.16	5.16	0.54	0.52	0.51	4	4.00
10/1/2010	19:40	Oloudy	Middle	2.0	27.70	27.70	27.00	8.12	8.12	0.12	28.99	28.99	20.00	76.3	76.1	70.4	5.16	5.15	0.10	0.52	0.47	0.01	4	4.00
12/7/2013	21:38	Cloudy	Middle	2.0	27.70	27.70	27.75	8.12	8.12	8.12	30.64	30.64	30.61	84.1	83.7	83.7	5.58	5.56	5.56	1.01	1.03	0.99	2	2.50
	21:30		Middle	2.0	27.80	27.80		8.12	8.12	• • •	30.57	30.57		83.5	83.3		5.55	5.54		0.99	0.94		3	
15/7/2013	9:44	Cloudy	Middle	2.5	27.10	27.10	27.10	8.08	8.08	8.08	29.82	29.82	29.82	82.6	82.2	82.5	5.51	5.52	5.54	1.17	1.18	1.19	4	4.00
	9:46		Middle	2.5	27.10	27.10		8.08	8.08		29.82	29.82		82.5	82.7		5.55	5.56		1.19	1.20		4	
18/7/2013	0:33	Cloudy	Middle	3.0	25.90	25.90	25.90	7.96	7.96	7.96	31.61	31.61	31.61	72.2	72.0	71.9	4.91	4.90	4.89	0.86	0.82	0.82	4	3.00
	0:35	,	Middle	3.0	25.90	25.90		7.96	7.96		31.61	31.61		71.7	71.5		4.88	4.87		0.80	0.79		2	
20/7/2013	15:15	Fine	Middle	2.0	27.00	27.00	27.05	8.14	8.14	8.14	31.84	31.84	31.81	74.1	75.0	74.5	4.94	5.00	4.97	3.51	3.41	3.38	3	3.50
	15:17		Middle	2.0	27.10	27.10		8.13	8.13		31.78	31.78		74.0	75.0		4.93	4.99		3.30	3.29		4	
22/7/2013	19:05	Cloudy	Middle	2.0	26.40	26.40	26.40	7.94	7.94	7.94	29.98	29.98	29.99	64.3	64.1	63.9	4.37	4.36	4.35	5.02	5.00	4.99	9	9.00
	19:07	Í	Middle	2.0	26.40	26.40		7.93	7.93		29.99	29.99		63.8	63.5		4.34	4.32		4.99	4.95		9	
24/7/2013	20:15	Cloudy	Middle	2.0	26.50	26.50	26.45	7.87	7.87	7.86	29.71	29.71	29.72	65.3	65.1	64.8	4.45	4.44	4.42	3.93	3.92	3.89	6	6.50
	20:17		Middle	2.0	26.40	26.40		7.85	7.85		29.72	29.72		64.6	64.3		4.41	4.39		3.87	3.84		7	
26/7/2013	20:59	Cloudy	Middle	2.0	26.80	26.80	26.80	7.85	7.85	7.85	28.42	28.42	28.43	74.0	73.8	73.8	5.05	5.04	5.04	2.94	2.91	2.90	4	3.50
	26/7/2013 21:02	•	Middle	2.0	26.80	26.80		7.84	7.84		28.44	28.44		73.7	73.5		5.04	5.02		2.90	2.86		3	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at C5e - Sun Hung Kai Centre Mid-Flood Tide

Date	Time	Weater Condition		ng Depth	Wat	er Temp	erature		pH -			Salinit	ty	С	O Satura	ation		DO mg/L			Turbid NTL			led Solids a/L
			ı	m	Va	llue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	llue	Average	Value	Average
28/6/2013	1:50	Cloudy	Middle	1.5	28.40	28.40	28.35	8.00	8.00	8.00	26.57	26.57	26.57	78.2	79.8	78.5	5.24	5.35	5.26	1.95	1.90	1.89	4	3.50
20/0/2013	1:51	Cloudy	Middle	1.5	28.30	28.30	20.33	7.99	8.00	8.00	26.56	26.57	20.57	79.4	76.5	76.5	5.32	5.13	5.20	1.88	1.84	1.09	3	3.30
2/7/2013	-	Strong Wind	Middle	-	-	-		-	-	_	-	-		-	-		-	-	_	-	-		1	
2///2013	-	Signal No.3	Middle	-	-	-		-	-		-	-		1	-			-	-	-	-		•	
4/7/2013	15:30	Fine	Middle	1.5	30.75	30.75	30.75	7.49	7.49	7.49	25.99	25.99	25.98	78.9	78.4	78.2	5.14	5.11	5.10	2.96	2.89	2.89	<2	<2
4/7/2013	15:31	Fille	Middle	1.5	30.75	30.75	30.73	7.49	7.49	7.49	25.97	25.97	25.96	77.9	77.7	70.2	5.09	5.06	5.10	2.86	2.84	2.09	<2	
6/7/2013	18:55	Cloudy	Middle	1.0	28.20	28.20	28.20	7.82	7.82	7.85	26.79	26.79	26.84	73.1	73.4	72.9	4.94	4.96	4.92	2.87	2.61	2.63	3	3.50
0/7/2013	18:56	Cloudy	Middle	1.0	28.20	28.20	20.20	7.88	7.88	7.05	26.89	26.89	20.04	72.8	72.1	72.5	4.92	4.87	4.32	2.53	2.49	2.03	4	3.50
8/7/2013	19:33	Cloudy	Middle	1.0	28.60	28.60	28.60	8.14	8.14	8.13	25.89	25.89	25.89	77.3	76.3	76.6	5.18	5.12	5.14	2.37	2.21	2.11	6	5.00
0/7/2013	19:34	Cloudy	Middle	1.0	28.60	28.60	20.00	8.12	8.12	0.13	25.88	25.88	25.03	76.1	76.5	70.0	5.11	5.13	5.14	1.90	1.94	2.11	4	3.00
10/7/2013	20:02 Clou	Cloudy	Middle	1.0	27.80	27.80	27.80	7.89	7.89	7.93	25.99	25.99	25.99	78.0	79.7	80.0	5.30	5.44	5.45	6.43	6.32	6.29	4	4.50
10/1/2013	20:03	Cloudy	Middle	1.0	27.80	27.80	27.00	7.97	7.97	7.95	25.99	25.99	20.99	81.2	81.2	00.0	5.52	5.52	5.45	6.25	6.15	0.23	5	4.50
12/7/2013	21:08	Cloudy	Middle	1.0	28.70	28.70	28.73	8.07	8.07	8.07	27.69	27.75	27.80	78.7	79.2	78.5	5.19	5.22	5.17	4.13	4.00	3.91	4	4.00
12/1/2013	21:09	Cloudy	Middle	1.0	28.70	28.80	20.73	8.06	8.06	0.07	27.86	27.89	27.00	78.3	77.8	70.5	5.14	5.12	5.17	3.86	3.66	5.91	4	4.00
15/7/2013	11:00	Cloudy	Middle	1.5	27.47	27.47	27.46	7.70	7.70	7.70	29.15	29.15	29.16	76.6	76.1	75.8	5.14	5.11	5.09	1.58	1.54	1.53	3	3.50
10/1/2010	11:02	Oloddy	Middle	1.5	27.45	27.45	27.40	7.70	7.70	7.70	29.17	29.17	20.10	75.6	74.7	70.0	5.08	5.02	0.00	1.51	1.49	1.00	4	0.50
18/7/2013	2:18	Cloudy	Middle	1.5	26.00	26.00	26.00	7.95	7.95	7.95	29.09	29.09	29.09	79.7	80.3	79.1	5.49	5.52	5.45	1.43	1.40	1.35	4	3.50
10/1/2010	2:19	Cicacy	Middle	1.5	26.00	26.00	20.00	7.95	7.95	7.00	29.09	29.09	20.00	78.9	77.6		5.43	5.34	0.10	1.30	1.25	1.00	3	0.00
20/7/2013	15:34	Fine	Middle	1.5	27.00	27.00	27.05	7.84	7.84	7.82	27.02	27.02	27.02	51.4	51.4	51.9	3.51	3.52	3.55	2.83	2.89	2.85	2	2.00
	15:36		Middle	1.5	27.10	27.10		7.80	7.80		27.01	27.01		52.4	52.2		3.59	3.57		2.84	2.82		2	
22/7/2013	20:15	Cloudy	Middle	1.0	27.10	27.10	27.10	8.11	8.11	8.09	25.90	25.88	25.88	67.1	67.3	67.4	4.61	4.61	4.55	4.68	4.78	4.74	<2	<2
	20:16	,	Middle	1.0	27.10	27.10		8.06	8.06		25.87	25.87		67.4	67.6		4.64	4.35		4.72	4.76		<2	
24/7/2013	20:39	Cloudy	Middle	1.0	26.40	26.40	26.40	8.13	8.13	8.13	22.28	22.28	22.28	56.5	56.8	57.1	4.02	4.04	4.06	7.66	7.62	7.58	2	3.00
	24/7/2013 20:40	,	Middle	1.0	26.40	26.40		8.13	8.13		22.28	22.28		57.5	57.7	-	4.08	4.10		7.56	7.47		4	
26/7/2013	21:08	Cloudy	Middle	1.0	26.70	26.70	26.75	8.06	8.06	8.06	23.78	23.78	23.78	52.1	52.0	52.0	3.64	3.64	3.64	3.12	3.08	3.15	3	3.00
	26/7/2013 21:09	,	Middle	1.0	26.80	26.80		8.06	8.04		23.78	23.78		52.0	52.0		3.64	3.64		3.24	3.14		3	

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



### Water Monitoring Result at C5w - Sun Hung Kai Centre Mid-Flood Tide

Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp	erature		рН			Salinit	у	D	O Satur	ation		DO mg/L			Turbidi	ity	Suspend	
		Condition	r	n	Va	lue	Average	Va	lue	Average	Va	ppt lue	Average	Va	lue	Average	Va		Average	Va	lue	Average	mo Value	g/L Average
	1:57		Middle	1.5	28.00	28.00		7.72	7.72		26.06	26.06		65.3	67.4		4.45	4.56		2.71	2.61		3	
28/6/2013	1:58	Cloudy	Middle	1.5	28.00	28.00	28.00	7.74	7.74	7.73	26.09	26.09	26.08	67.7	67.7	67.0	4.57	4.57	4.54	2.55	2.31	2.55	4	3.50
2/7/2013	-	Strong Wind	Middle	-	-	-	_	-	-	_	-	-	_	-	-	_	-	-	_	-	-	_	-	_
	-	Signal No.3	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
4/7/2013	15:32	Fine	Middle	1.5	30.46	30.46	30.49	7.44	7.44	7.44	25.96	25.96	25.96	74.0	73.8	73.6	4.81	4.80	4.79	2.72	2.72	2.69	2	2.00
4/1/2010	15:33	Tillo	Middle	1.5	30.51	30.51	00.40	7.44	7.44	7.44	25.96	25.96	20.00	73.4	73.2	70.0	4.77	4.76	4.70	2.69	2.63	2.00	2	2.00
6/7/2013	19:05	Cloudy	Middle	1.0	28.20	28.20	28.20	7.97	7.97	7.97	26.00	26.00	26.00	67.1	66.9	66.1	4.53	4.53	4.47	2.20	2.23	2.15	3	3.00
6/7/2013	19:06	Cloudy	Middle	1.0	28.20	28.20	20.20	7.97	7.97	7.97	26.00	26.00	26.00	66.0	64.4	00.1	4.46	4.35	4.47	2.05	2.10	2.15	3	3.00
8/7/2013	19:42	Cloudy	Middle	1.0	28.60	28.60	28.60	8.07	8.07	8.07	25.84	25.84	25.84	83.6	83.6	83.0	5.63	5.63	5.58	2.85	2.41	2.60	5	6.00
0/7/2010	19:43	Cloudy	Middle	1.0	28.60	28.60	20.00	8.06	8.06	0.07	25.84	25.84	20.04	81.1	83.6	00.0	5.44	5.61	0.00	2.61	2.53	2.00	7	0.00
10/7/2013	20:10	Cloudy	Middle	1.0	27.70	27.70	27.70	7.99	7.99	7.99	27.02	27.02	27.02	72.1	75.2	73.8	4.88	5.08	4.99	2.41	2.59	2.40	3	4.00
10/1/2010	20:11	Cloudy	Middle	1.0	27.70	27.70	27.70	7.99	7.99	7.00	27.02	27.02	27.02	71.8	75.9	70.0	4.86	5.14	4.00	2.31	2.28	2.40	5	4.00
12/7/2013	21:15	Cloudy	Middle	1.0	28.40	28.40	28.40	8.01	8.01	8.01	28.42	28.42	28.42	73.5	74.1	74.1	4.86	4.90	4.90	2.42	2.02	2.14	4	3.50
12/1/2013	21:16	Oloudy	Middle	1.0	28.40	28.40	20.40	8.01	8.01	0.01	28.42	28.42	20.42	74.4	74.5	74.1	4.92	4.93	4.50	2.19	1.92	2.14	3	3.30
15/7/2013	11:05	Cloudy	Middle	1.5	27.04	27.04	27.08	7.72	7.72	7.71	28.99	28.99	28.98	89.1	88.8	88.7	6.03	6.01	6.00	2.43	2.40	2.33	3	3.00
10/1/2010	11:07	Oloudy	Middle	1.5	27.11	27.11	27.00	7.70	7.70	7.71	28.96	28.96	20.00	88.6	88.2	00.7	6.00	5.97	0.00	2.26	2.23	2.00	3	0.00
18/7/2013	2:30	Cloudy	Middle	1.5	26.10	26.10	26.10	7.91	7.91	7.92	29.16	29.16	29.16	66.9	68.2	67.4	4.66	4.69	4.65	1.34	1.32	1.24	3	3.00
	2:31	,	Middle	1.5	26.10	26.10		7.92	7.92		29.16	29.16		68.1	66.5		4.68	4.58		1.16	1.12		3	
20/7/2013	15:30	Fine	Middle	1.5	27.10	27.10	27.15	7.88	7.88	7.88	28.37	28.37	28.37	71.9	71.2	70.4	4.88	4.83	4.78	2.28	2.32	2.32	<2	2.00
25/1/2010	15:32	0	Middle	1.5	27.20	27.20	21110	7.87	7.87	7.00	28.36	28.36	20.07	70.0	68.6		4.75	4.65	0	2.34	2.35	2.02	2	2.00
22/7/2013	20:26	Cloudy	Middle	1.0	26.90	26.90	26.95	8.00	8.00	8.00	25.81	25.81	25.81	70.7	71.3	71.4	4.88	4.92	4.93	3.45	3.36	3.34	5	5.50
22172010	20:27	Oloudy	Middle	1.0	27.00	27.00	20.00	7.99	8.00	0.00	25.81	25.81	20.01	71.7	71.9	71.4	4.95	4.96	4.50	3.29	3.26	0.04	6	0.00
24/7/2013	20:47	Cloudy	Middle	1.0	26.20	26.20	26.20	809	8.09	8.08	17.97	17.97	17.97	62.8	62.8	63.0	4.59	4.58	4.60	5.33	5.47	5.27	3	2.50
2 1/1/2010	20:48	0.000,	Middle	1.0	26.20	26.20	20.20	8.08	8.08	5.55	17.96	17.96		63.1	63.3	00.0	4.61	4.62		5.19	5.08	0.2.	2	2.00
26/7/2013	21:16	Cloudy	Middle	1.0	26.60	26.60	26.60	7.95	7.95	7.95	23.71	23.71	23.72	49.2	48.9	49.1	3.44	3.43	3.44	3.39	3.24	3.38	4	4.00
	21:17	,	Middle	1.0	26.60	26.60		7.95	7.95		23.72	23.72		49.2	49.1		3.45	3.45	****	3.44	3.46		4	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



### Water Monitoring Result at WSD21 - Wan Chai Mid-Flood Tide

Date	Time	Weater Condition		ng Depth	Wat	er Temp	erature		pH -			Salinit	ty	D	O Satura	ation		DO mg/L			Turbid			led Solids a/L
			·	m	Va	llue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	22:56	Cloudy	Middle	2.0	28.70	28.70	28.70	7.94	7.94	7.95	24.32	24.32	24.33	66.9	66.8	66.7	4.52	4.52	4.51	3.24	3.22	3.19	4	3.50
20/0/2013	22:58	Cloudy	Middle	2.0	28.70	28.70	20.70	7.95	7.95	7.95	24.33	24.33	24.33	66.6	66.3	00.7	4.50	4.48	4.51	3.17	3.14	3.19	3	3.30
2/7/2013	-	Strong Wind	Middle	-	-	-	_	-	-	_	-	-	_	,	-		-	-	_	-	-	_	•	
2///2013	-	Signal No.3	Middle	-	-	-		-	-		-	-		•	-			-	-	-	-		•	
4/7/2013	15:40	Fine	Middle	1.0	30.20	30.20	30.45	7.92	7.92	7.92	26.94	26.94	26.95	60.8	59.6	59.9	3.92	3.84	3.86	3.85	3.82	3.83	15	14.50
4/7/2013	15:42	Fille	Middle	1.0	30.70	30.70	30.43	7.92	7.92	7.92	26.95	26.95	20.93	59.1	60.1	39.9	3.80	3.87	3.00	3.82	3.82	3.03	14	14.50
6/7/2013	18:21	Cloudy	Middle	2.0	28.00	28.00	28.00	7.89	7.89	7.90	27.40	27.40	27.40	70.2	70.0	69.9	4.80	4.79	4.79	7.91	7.88	7.88	4	4.00
0/7/2013	18:23	Cloudy	Middle	2.0	28.00	28.00	20.00	7.90	7.90	7.90	27.40	27.40	27.40	69.8	69.6	03.3	4.78	4.77	4.73	7.87	7.84	7.00	4	4.00
8/7/2013	19:29	Cloudy	Middle	2.0	28.40	28.40	28.40	8.01	8.01	8.01	28.72	28.72	28.71	66.7	66.5	66.4	4.53	4.52	4.51	0.97	0.95	0.94	3	3.50
0/7/2013	19:31	Cloudy	Middle	2.0	28.40	28.40	20.40	8.01	8.01	0.01	28.70	28.70	20.71	66.3	66.0	00.4	4.51	4.49	4.51	0.94	0.89	0.54	4	3.50
10/7/2013	21:39	Cloudy	Middle	2.0	27.20	27.20	27.20	7.98	7.98	7.98	29.42	29.42	29.41	66.2	66.0	66.0	4.47	4.46	4.46	1.53	1.54	1.54	3	3.00
10/1/2013	21:41	Cloudy	Middle	2.0	27.20	27.20	21.20	7.98	7.98	7.90	29.40	29.40	23.41	65.9	65.7	00.0	4.46	4.45	4.40	1.54	1.54	1.04	3	3.00
12/7/2013	20:57	Cloudy	Middle	2.0	28.00	28.00	28.00	8.01	8.01	8.01	30.45	30.45	30.46	73.5	73.3	73.2	4.85	4.84	4.84	3.80	3.77	3.77	5	5.00
12,7,2010	20:59	Cicacy	Middle	2.0	28.00	28.00	20.00	8.01	8.01	0.01	30.47	30.47	00.10	73.1	72.9	. 0.2	4.83	4.82		3.76	3.73	0.11	5	0.00
15/7/2013	10:12	Cloudy	Middle	2.0	27.10	27.10	27.10	7.94	7.94	7.94	30.36	30.36	30.36	57.0	57.1	57.3	3.83	3.83	3.85	8.80	8.68	8.71	14	14.00
10,772010	10:14	oloudy	Middle	2.0	27.10	27.10	21110	7.94	7.94	7.01	30.36	30.36	00.00	57.3	57.6	07.0	3.85	3.88	0.00	8.67	8.70	0.11	14	1 1100
18/7/2013	1:22	Cloudy	Middle	2.0	26.00	26.00	25.95	7.91	7.91	7.92	30.68	30.68	30.64	54.2	54.0	53.9	3.70	3.69	3.69	0.93	0.91	0.88	3	3.50
	1:24	5.63.5)	Middle	2.0	25.90	25.90		7.92	7.92		30.59	30.59		53.8	53.6		3.68	3.67		0.85	0.84		4	
20/7/2013	14:40	Fine	Middle	1.0	26.50	26.50	26.50	8.01	8.01	8.00	31.38	31.38	31.31	47.6	47.2	48.6	3.21	3.18	3.28	9.07	9.06	9.11	13	12.50
	14:42		Middle	1.0	26.50	26.50		7.98	7.98		31.23	31.23		50.5	48.9		3.40	3.33		9.14	9.15		12	
22/7/2013	19:54	Cloudy	Middle	1.5	26.70	26.70	26.70	7.80	7.80	7.83	29.71	29.71	29.71	56.8	56.6	56.5	3.84	3.83	3.82	2.17	2.15	2.14	4	4.50
	19:56	,	Middle	1.5	26.70	26.70		7.86	7.86		29.71	29.71		56.3	56.1		3.81	3.80		2.13	2.09		5	
24/7/2013	21:04	Cloudy	Middle	1.5	26.70	26.70	26.70	7.85	7.85	7.85	27.58	27.58	27.57	60.9	60.7	60.6	4.21	4.20	4.20	3.63	3.61	3.60	8	7.50
	21:06		Middle	1.5	26.70	26.70		7.85	7.85		27.56	27.56		60.5	60.3		4.19	4.18		3.60	3.54		7	
26/7/2013	21:54	Cloudy	Middle	2.0	27.00	27.00	27.00	7.78	7.78	7.79	28.10	28.10	28.11	56.3	56.1	56.1	3.83	3.82	3.82	4.41	4.39	4.38	5	5.00
	21:56	,	Middle	2.0	27.00	27.00		7.79	7.79	-	28.12	28.12		56.0	55.8		3.82	3.80		4.37	4.34		5	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



### Water Monitoring Result at WSD19 - Sheung Wan Mid-Flood Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L	-		Turbidi NTU			led Solids g/L
			ı	n	Va	llue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	2:28	Cloudy	Middle	2.0	28.30	28.30	28.30	8.02	8.02	8.03	24.16	24.16	24.16	81.9	82.4	81.4	5.57	5.60	5.55	2.54	2.58	2.59	3	3.00
20/0/2013	2:29	Cloudy	Middle	2.0	28.30	28.30	20.30	8.04	8.04	0.00	24.16	24.16	24.10	81.3	80.0	01.4	5.53	5.50	3.33	2.60	2.62	2.55	3	3.00
2/7/2013	-	Strong Wind	Middle	·	-	-		·	-		•	-		-	-		1	-		1	1		-	_
2//2013	-	Signal No.3	Middle	-	-	-			-		-	-		-	-			-		-			-	
4/7/2013	14:30	Fine	Middle	2.5	30.77	30.77	30.82	7.48	7.48	7.48	25.92	25.92	25.90	75.1	74.4	74.1	4.83	4.81	4.78	4.73	4.72	4.72	10	11.00
4/1/2013	14:32	Tille	Middle	2.5	30.87	30.87	30.02	7.48	7.48	7.40	25.88	25.88	20.30	73.5	73.4	74.1	4.75	4.73	4.70	4.71	4.72	4.72	12	11.00
6/7/2013	19:35	Cloudy	Middle	2.0	28.00	28.00	28.00	8.18	8.18	8.18	26.64	26.64	26.63	74.9	76.1	75.2	5.05	5.13	5.07	1.79	1.86	1.78	4	4.00
0/7/2013	19:36	Cloudy	Middle	2.0	28.00	28.00	28.00	8.17	8.17	6.16	26.61	26.61	20.03	75.1	74.7	75.2	5.06	5.04	5.07	1.72	1.75	1.76	4	4.00
8/7/2013	20:17	Cloudy	Middle	2.0	27.90	27.90	27.90	8.12	8.12	8.12	26.01	26.01	26.01	80.5	80.7	80.1	5.45	5.44	5.40	1.92	1.86	1.85	2	2.00
0/7/2013	20:18	Cloudy	Middle	2.0	27.90	27.90	21.30	8.12	8.12	0.12	26.00	26.00	20.01	80.3	78.7	00.1	5.39	5.33	3.40	1.79	1.81	1.00	2	2.00
10/7/2013	20:58	Cloudy	Middle	2.0	27.20	27.20	27.20	8.07	8.07	8.08	27.42	27.42	27.41	75.5	77.7	77.1	5.13	5.28	5.24	2.64	2.69	2.58	2	3.00
10/1/2013	20:59	Oloudy	Middle	2.0	27.20	27.20	21.20	8.09	8.09	0.00	27.39	27.39	27.41	77.8	77.2	77.1	5.29	5.25	3.24	2.53	2.47	2.30	4	3.00
12/7/2013	21:53	Cloudy	Middle	2.0	29.00	29.00	28.95	8.16	8.16	8.16	28.54	28.54	28.54	84.2	86.9	85.4	5.52	5.71	5.59	2.31	2.46	2.48	6	6.00
12/1/2010	21:54	Oloudy	Middle	2.0	28.90	28.90	20.00	8.16	8.16	0.10	28.54	28.54	20.04	85.4	85.0	00.4	5.60	5.53	0.00	2.62	2.53	2.40	6	0.00
15/7/2013	10:45	Cloudy	Middle	3.0	27.13	27.13	27.13	7.85	7.85	7.85	28.75	28.75	28.76	101.7	100.0	99.9	6.89	6.77	6.77	1.75	1.84	1.81	4	3.50
10/1/2010	10:47	Oloudy	Middle	3.0	27.13	27.13	27.10	7.85	7.85	7.00	28.76	28.76	20.70	99.3	98.7	55.5	6.72	6.68	0.77	1.87	1.78	1.01	3	0.00
18/7/2013	4:28	Cloudy	Middle	2.0	26.00	26.00	26.00	7.99	7.99	8.01	29.56	29.56	29.56	75.6	76.3	74.5	5.18	5.21	5.11	1.85	1.71	1.73	4	3.50
10,172010	4:29	Oloudy	Middle	2.0	26.00	26.00	20.00	8.02	8.02	0.01	29.56	29.56	20.00	73.6	72.6	7 1.0	5.05	4.98	0	1.65	1.69	0	3	0.00
20/7/2013	15:09	Fine	Middle	2.5	27.40	27.40	27.45	8.00	8.00	8.01	29.23	29.23	29.20	77.4	76.9	76.6	5.20	5.17	5.14	6.46	6.40	6.50	10	9.50
	15:11		Middle	2.5	27.50	27.50	_	8.02	8.02		29.17	29.17		76.2	75.7		5.12	5.08		6.42	6.71		9	
22/7/2013	21:04	Cloudy	Middle	2.0	26.60	26.60	26.60	7.97	7.98	7.98	30.55	30.55	30.55	66.6	66.3	66.6	4.50	4.49	4.52	5.48	5.45	5.46	6	5.00
	21:05	,	Middle	2.0	26.60	26.60		7.99	7.99		30.55	30.55		67.0	66.4		4.61	4.48		5.41	5.49		4	
24/7/2013	21:30	Cloudy	Middle	2.0	26.30	26.30	26.35	7.81	7.82	7.85	30.39	30.40	30.40	55.6	55.9	56.0	3.77	3.79	3.80	9.53	9.50	9.49	12	13.00
	21:31	Í	Middle	2.0	26.40	26.40		7.89	7.89		30.41	30.41		56.0	56.4		3.80	3.82		9.57	9.34		14	
26/7/2013	22:02	Cloudy	Middle	2.0	26.70	26.70	26.75	7.92	7.92	7.95	29.24	29.24	29.25	50.9	51.5	51.5	3.45	3.50	3.50	5.79	6.02	5.82	7	6.50
	22:03	Í	Middle	2.0	26.80	26.80		7.98	7.98		29.25	29.25		51.6	51.8		3.51	3.52		5.70	5.75		6	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at WSD9 - Tai Wan Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salini	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspende	led Solids g/L
			n	n	Va	lue	Average	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	llue	Average		Average
28/6/2013	17:45	Sunnv	Middle	2.5	28.42	28.42	28.45	7.76	7.76	7.76	26.56	26.56	26.56	86.1	85.9	85.7	5.77	5.73	5.73	1.89	1.97	1.96	4	4.00
20/0/2010	17:47	Curry	Middle	2.5	28.48	28.48	20.40	7.75	7.75	7.70	26.55	26.55	20.00	85.6	85.3	00.7	5.71	5.69	0.70	1.98	2.01	1.00	4	4.00
2/7/2013	7:30	Fine	Middle	3.0	27.68	27.68	27.73	7.87	7.87	7.87	27.62	27.62	27.62	91.8	91.7	91.7	6.19	6.18	6.17	1.66	1.66	1.66	2	2.00
2/1/2010	7:32	Tine	Middle	3.0	27.77	27.77	27.70	7.86	7.86	7.07	27.62	27.62	27.02	91.5	91.8	01	6.17	6.14	0.17	1.65	1.67	1.00	2	2.00
4/7/2013	7:50	Fine	Middle	2.5	28.87	28.87	28.91	8.05	8.05	8.05	26.66	26.66	26.67	95.6	95.4	95.4	6.35	6.34	6.34	1.21	1.21	1.21	2	2.00
4/1/2010	7:52	Tine	Middle	2.5	28.94	28.94	20.01	8.04	8.04	0.00	26.67	26.67	20.07	95.3	95.1	00.4	6.34	6.32	0.04	1.21	1.20	1.21	2	2.00
6/7/2013	9:30	Fine	Middle	3.0	28.63	28.63	28.68	7.91	7.91	7.91	27.25	27.25	27.51	76.4	75.7	75.5	5.08	5.02	5.02	1.64	1.66	1.66	3	3.00
3/1/2010	9:32	Tine	Middle	3.0	28.73	28.73	20.00	7.90	7.90	7.01	27.76	27.76	27.01	75.3	74.7	70.0	5.00	4.96	0.02	1.65	1.68	1.00	3	0.00
8/7/2013	9:45	Fine	Middle	3.0	28.29	28.29	28.31	7.93	7.93	7.92	27.54	27.54	27.54	78.9	78.2	77.6	5.27	5.22	5.18	0.75	0.78	0.79	4	4.00
3/1/2010	9:47	Tine	Middle	3.0	28.33	28.33	20.01	7.91	7.91	7.02	27.53	27.53	27.04	76.9	76.2	77.0	5.14	5.09	0.10	0.81	0.82	0.70	4	4.00
10/7/2013	15:45	Fine	Middle	2.5	27.56	27.56	27.61	7.79	7.79	7.78	28.30	28.30	28.29	91.8	91.2	90.7	6.18	6.14	6.10	0.48	0.46	0.48	4	3.50
10/7/2013	15:47	Tille	Middle	2.5	27.65	27.65	27.01	7.77	7.77	7.70	28.27	28.27	20.23	90.5	89.2	30.7	6.09	6.00	0.10	0.48	0.49	0.40	3	3.30
12/7/2013	11:40	Fine	Middle	3.5	28.23	28.23	28.31	7.67	7.67	7.65	32.39	32.39	32.41	67.9	67.5	67.2	4.42	4.39	4.37	1.38	1.37	1.38	5	4.50
12/1/2010	11:42	Tine	Middle	3.5	28.38	28.38	20.01	7.63	7.63	7.00	32.42	32.42	02.41	67.1	66.3	07.2	4.34	4.31	4.07	1.38	1.40	1.00	4	4.00
15/7/2013	17:20	Rainv	Middle	2.5	26.06	26.06	26.06	7.95	7.95	7.95	29.24	29.24	29.24	73.2	72.7	72.3	5.03	5.00	4.99	1.71	1.69	1.68	4	4.00
10,77,2010	17:22	. tally	Middle	2.5	26.06	26.06	20.00	7.95	7.95	7.00	29.24	29.24	20.2	71.8	71.4	. 2.0	4.94	4.97		1.67	1.66	1100	4	
17/7/2013	5:19	Cloudy	Middle	2.5	26.80	26.80	26.85	8.15	8.15	8.15	30.08	30.08	30.08	75.9	78.7	78.7	5.12	5.31	5.28	2.60	2.38	2.34	4	3.50
17772010	5:20	Oloudy	Middle	2.5	26.90	26.90	20.00	8.14	8.14	0.10	30.08	30.08	00.00	80.7	79.5	70.7	5.34	5.36	0.20	2.17	2.19	2.04	3	0.50
20/7/2013	8:20	Fine	Middle	4.0	26.30	26.30	26.35	7.96	7.96	7.96	29.88	29.88	29.88	73.4	73.8	73.1	5.00	5.03	4.98	0.61	0.54	0.53	<2	2.00
20/1/2010	8:22	Tine	Middle	4.0	26.40	26.40	20.00	7.96	7.96	7.50	29.88	29.88	20.00	72.7	72.6	70.1	4.95	4.93	4.00	0.53	0.42	0.00	2	2.00
22/7/2013	8:30	Fine	Middle	3.5	26.90	26.90	27.00	8.14	8.14	8.14	33.66	33.66	33.67	86.7	87.3	86.9	5.70	5.74	5.71	3.56	3.58	3.57	4	3.50
22,1,20.0	8:32		Middle	3.5	27.10	27.10	2	8.14	8.14	5	33.67	33.67	00.0.	86.4	87.2		5.68	5.72		3.57	3.57	0.0.	3	
24/7/2013	10:30	Cloudy	Middle	3.5	26.40	26.40	26.45	8.16	8.16	8.16	34.01	34.01	34.01	77.4	77.6	77.3	5.14	5.16	5.14	3.81	3.89	3.86	5	5.00
	10:32		Middle	3.5	26.50	26.50		8.16	8.16		34.00	34.00		77.0	77.1		5.12	5.13	****	3.90	3.83		5	
26/7/2013	17:35	Cloudy	Middle	2.5	26.80	26.80	26.80	8.00	8.00	8.00	30.77	30.77	30.77	82.4	81.5	82.1	5.51	5.45	5.49	6.20	6.31	6.29	3	3.00
20/1/2010	17:37	Cioday	Middle	2.5	26.80	26.80	20.00	8.00	8.00	0.00	30.77	30.77	00.77	81.5	83.1	<u> </u>	5.44	5.54	0.40	6.31	6.32	0.20	3	0.00

Remarks:

Single underline denotes exceedance over Action Level.



# Water Monitoring Result at WSD17 - Quarry Bay Mid-Ebb Tide

Date	Time	Weater Condition		ng Depth	Wat	er Temp °C	erature		pH -			Salinit	у	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspende	
			ı	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	15:15	Sunny	Middle	4	28.30	28.30	28.36	7.60	7.60	7.59	28.22	28.22	28.20	86.4	86.4	86.1	5.75	5.74	5.73	5.35	5.31	5.21	6	5.00
	15:17		Middle	4	28.42	28.42		7.58	7.58		28.17	28.17		85.9	85.7		5.71	5.70		5.10	5.09		4	<u> </u>
2/7/2013	8:45	Fine	Middle	3	27.52	27.52	27.53	7.83	7.83	7.83	27.40	27.40	27.40	83.6	83.5	83.5	5.66	5.66	5.66	1.67	1.66	1.66	5	4.50
	8:47		Middle	3	27.54	27.54		7.83	7.83		27.39	27.39		83.5	83.5		5.66	5.66		1.66	1.66		4	<u> </u>
4/7/2013	9:30	Fine	Middle	3	28.39	28.39	28.45	7.76	7.76	7.76	27.33	27.33	27.32	76.3	76.1	76.0	5.09	5.08	5.07	1.16	1.13	1.13	<2	<2
	9:32		Middle	3	28.51	28.51		7.75	7.75		27.31	27.31		75.9	75.7		5.06	5.05		1.11	1.11		<2	<u> </u>
6/7/2013	10:45	Fine	Middle	3	28.08	28.08	28.08	7.72	7.72	7.72	28.14	28.14	28.15	61.6	61.4	61.4	4.12	4.10	4.10	1.22	1.22	1.23	2	2.00
	10:47		Middle	3	28.08	28.08		7.71	7.71		28.16	28.16		61.6	60.9		4.09	4.07		1.23	1.24		2	
8/7/2013	11:10	Fine	Middle	4	27.20	27.20	27.24	7.70	7.70	7.69	29.34	29.34	29.33	73.7	73.2	72.8	4.96	4.93	4.90	0.22	0.22	0.22	4	4.00
	11:12		Middle	4	27.28	27.28		7.68	7.68		29.32	29.32		72.4	72.0		4.87	4.84		0.21	0.23		4	<u> </u>
10/7/2013	15:00	Fine	Middle Middle	3	27.08	27.08	27.12	7.72	7.71	7.69	30.46	30.46	30.44	82.5	81.4	80.9	5.55	5.46	5.43	3.95	3.97	4.01	24	24.00
	15:02 12:30		Middle	3	27.16	27.16		7.66 7.62	7.66 7.62		30.42	30.42		79.3 99.5	80.3 98.7		5.32 6.72	5.38 6.67		4.07 2.16	4.05		24	
12/7/2013	12:32	Fine	Middle	4	27.25	27.25	27.24	7.57	7.57	7.60	28.78	28.78	28.78	98.0	96.6	98.2	6.61	6.52	6.63	2.10	2.14	2.14	5	4.50
	16:15		Middle	4	25.41	25.41		7.86	7.86		31.00	31.00		97.2	96.6		6.69	6.64		4.53	4.46		3	
15/7/2013	16:17	Rainy	Middle	4	25.45	5.45	20.43	7.86	7.86	7.86	30.98	30.98	30.99	95.5	94.5	96.0	6.57	6.50	6.60	4.45	4.44	4.47	3	3.00
	7:30		Middle	3	26.70	26.70		8.13	8.13		30.12	30.12		70.5	71.3		4.77	4.82		1.58	1.61		4	
17/7/2013	7:31	Cloudy	Middle	3	26.70	26.70	26.70	8.13	8.13	8.13	30.12	30.12	30.12	70.7	69.7	70.6	4.78	4.71	4.77	1.76	1.51	1.62	4	4.00
	9:30		Middle	4	26.10	26.20		7.93	7.93		30.14	30.14		66.9	65.9		4.57	4.50		2.09	2.09		2	
20/7/2013	9:32	Fine	Middle	4	26.20	26.20	26.18	7.94	7.94	7.94	30.13	30.13	30.14	64.6	63.8	65.3	4.41	4.35	4.46	2.08	2.08	2.09	3	2.50
	9:40		Middle	4	26.60	26.60		8.12	8.12		33.96	33.96		81.9	83.4		5.42	5.52		2.96	2.94		4	
22/7/2013	9:42	Fine	Middle	4	26.80	26.80	26.70	8.12	8.12	8.12	33.97	33.97	33.97	83.4	81.6	82.6	5.52	5.40	5.47	3.02	3.02	2.99	4	4.00
24/7/2012	11:40	Cloudy	Middle	4	26.30	26.30	26.30	8.12	8.12	0.10	33.87	33.87	22.00	75.8	75.9	76 F	5.08	5.06	F 10	7.75	7.75	7 75	4	4.00
24/7/2013	11:42	Cloudy	Middle	4	26.30	26.30	20.30	8.12	8.12	8.12	33.89	33.89	33.88	76.5	77.7	76.5	5.10	5.17	5.10	7.75	7.74	7.75	4	4.00
26/7/2013	15:30	Cloudy	Middle	3	26.70	26.70	26.75	8.01	8.01	8.01	30.95	30.95	30.95	64.7	64.7	64.9	4.35	4.35	4.35	7.54	7.70	7.55	8	7.00
20/1/2013	15:32	Cioudy	Middle	3	26.80	26.80	20.70	8.01	8.01	0.01	30.95	30.95	30.93	64.9	65.2	04.8	4.36	4.34	4.33	7.72	7.23	7.33	6	7.00

Remarks:

Single underline denotes exceedance over Action Level.



#### Water Monitoring Result at C1 - HKCEC Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salinit	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspende	
			n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average		Average
28/6/2013	15:06	Sunnv	Middle	2.5	28.60	28.60	28.70	8.08	8.08	8.09	23.76	23.76	23.76	74.1	75.0	74.8	5.01	5.09	5.07	3.67	3.66	3.65	4	3.50
	15:08		Middle	2.5	28.80	28.80		8.09	8.09		23.75	23.75		73.3	76.8		4.97	5.20		3.64	3.64		3	
2/7/2013	9:59	Fine	Middle	2.5	28.60	28.60	28.60	8.28	8.28	8.28	24.69	24.69	24.69	99.4	99.2	98.9	6.70	6.69	6.67	3.73	3.72	3.72	3	3.50
2///2010	10:01	0	Middle	2.5	28.60	28.60	20.00	8.28	8.28	0.20	24.69	24.69	21100	98.7	98.3	00.0	6.65	6.63	0.07	3.71	3.70	02	4	0.00
4/7/2013	10:25	Fine	Middle	2.5	28.80	28.80	28.90	8.15	8.15	8.15	26.30	26.30	26.30	90.2	88.4	88.3	6.01	5.89	5.88	1.93	1.93	1.93	<2	<2
1,772010	10:27	0	Middle	2.5	29.00	29.00	20.00	8.14	8.14	5.10	26.29	26.29	20.00	87.4	87.1		5.82	5.79	0.00	1.93	1.93	1.00	<2	
6/7/2013	10:32	Fine	Middle	2.5	28.20	28.20	28.20	8.03	8.03	8.03	27.24	27.24	27.24	80.2	80.8	80.4	5.39	5.40	5.40	2.97	2.96	2.98	2	2.00
5/1/2010	10:34	0	Middle	2.5	28.20	28.20	20.20	8.03	8.03	0.00	27.24	27.24	27.2	80.5	80.2		5.37	5.44	0.10	2.98	3.01	2.00	2	2.00
8/7/2013	14:13	Fine	Middle	2.5	29.10	29.10	29.10	8.16	8.16	8.16	26.21	26.21	26.21	91.4	92.4	91.9	6.05	6.12	6.09	2.32	2.30	2.28	4	4.50
3/1/2010	14:15	0	Middle	2.5	29.10	29.10	20.10	8.16	8.16	0.10	26.21	26.21	20.21	91.8	92.1	01.0	6.08	6.09	0.00	2.26	2.25	2.20	5	
10/7/2013	-	Fine	Middle	-	-	-	-	-	-		-	-	-	-	-	<u>-</u>	-	-	-	-	-	-	-	-
10/1/2010	-	Tine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
12/7/2013	14:40	Fine	Middle	2.5	28.20	28.20	28.20	8.28	8.28	8.28	29.78	29.78	29.78	106.3	106.2	106.8	6.98	6.97	7.01	0.94	0.87	0.87	7	6.00
12,7,2010	14:42	0	Middle	2.5	28.20	28.20	20:20	8.28	8.28	0.20	29.78	29.78	20.10	107.2	107.3		7.03	7.04		0.84	0.83	0.07	5	0.00
15/7/2013	16:20	Rainv	Middle	2.5	26.70	26.70	26.70	8.15	8.15	8.15	29.33	29.33	29.33	90.5	89.7	90.0	6.17	6.15	6.15	0.78	0.77	0.73	4	3.50
10,7,2010	16:22		Middle	2.5	26.70	26.70	20.10	8.15	8.15	5.10	29.33	29.33	20.00	89.2	90.6		6.10	6.18	0.10	0.68	0.67	00	3	0.00
17/7/2013	7:20	Cloudy	Middle	2.5	26.20	26.20	26.20	8.03	8.03	8.03	31.00	31.00	31.01	74.4	74.3	74.1	5.05	5.05	5.04	0.22	0.20	0.19	3	3.50
,,,2010	7:22	Cicaay	Middle	2.5	26.20	26.20	20:20	8.03	8.03	0.00	31.02	31.02	01101	74.0	73.8		5.03	5.02	0.0 .	0.18	0.17	0.10	4	0.00
20/7/2013	10:30	Fine	Middle	2.5	26.80	26.80	26.75	8.10	8.10	8.11	32.10	32.10	32.10	56.7	54.6	58.7	3.78	3.64	3.92	4.04	4.08	4.10	5	4.00
20,7,2010	10:32	0	Middle	2.5	26.70	26.70	20.10	8.11	8.11	5.11	32.10	32.10	02.10	62.4	61.1		4.18	4.09	0.02	4.12	4.14	0	3	
22/7/2013	11:52	Fine	Middle	2.5	26.90	26.90	26.90	7.98	7.98	7.97	30.12	30.12	30.12	69.2	68.1	68.0	4.67	4.59	4.58	3.52	3.47	3.48	3	3.50
22,1,20.0	11:54		Middle	2.5	26.90	26.90	20.00	7.96	7.96		30.12	30.12	002	67.8	66.7		4.57	4.50		3.44	3.47	00	4	0.00
24/7/2013	14:29	Cloudy	Middle	2.0	26.60	26.60	26.60	7.97	7.97	7.97	29.75	29.75	29.75	68.8	68.7	68.6	4.67	4.66	4.66	7.37	7.35	7.34	5	6.00
	14:30	,	Middle	2.0	26.60	26.60		7.97	7.97		29.75	29.75		68.6	68.4		4.65	4.64		7.32	7.30		7	
26/7/2013	14:40	Cloudy	Middle	2.5	26.80	26.80	26.80	7.91	7.91	7.91	29.06	29.06	29.07	46.0	45.5	45.4	3.13	3.09	3.08	5.98	5.99	5.97	7	6.50
20/1/2010	14:42	Cioday	Middle	2.5	26.80	26.80	20.00	7.90	7.90	7.01	29.07	29.07	20.01	45.1	44.8		3.06	3.04	0.00	5.95	5.95	0.07	6	0.00

Remarks:

Single underline denotes exceedance over Action Level.



### Water Monitoring Result at C7 - Windsor House Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	<u> </u>	Wat	er Temp °C	erature		pН			Salini	ty	D	O Satur	ation		DO mg/L			Turbid NTU		Suspend	led Solids
		Condition	n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va		Average	Va	llue	Average	Value	Average
28/6/2013	14:54	Suppy	Middle	2	28.91	28.91	28.92	7.44	7.44	7.44	24.51	24.51	24.52	69.7	69.6	69.6	4.69	4.68	4.68	4.49	4.43	4.45	3	3.00
20/0/2013	14:56	Sunny	Middle	2	28.93	28.93	20.92	7.44	7.44	7.44	24.53	24.53	24.52	69.4	69.7	09.0	4.67	4.66	4.00	4.43	4.43	4.45	3	3.00
2/7/2013	10:37	Fine	Middle	2	28.71	28.71	28.72	7.56	7.56	7.56	26.24	26.24	26.26	76.4	76.3	76.3	5.10	5.10	5.10	2.16	2.31	2.33	4	4.00
2/1/2013	10:39	rille	Middle	2	28.73	28.73	20.72	7.55	7.55	7.50	26.27	26.27	20.20	76.2	76.1	70.3	5.09	5.09	5.10	2.37	2.48	2.33	4	4.00
4/7/2013	11:25	Fine	Middle	2	29.40	29.40	29.43	7.63	7.63	7.63	25.27	25.27	25.28	52.2	52.0	52.0	3.47	3.46	3.46	2.38	2.38	2.38	2	2.50
4/7/2013	11:27	rille	Middle	2	29.46	29.46	29.43	7.62	7.62	7.03	25.28	25.28	25.26	52.0	51.8	32.0	3.45	3.44	3.40	2.38	2.38	2.30	3	2.50
6/7/2013	12:30	Fine	Middle	2	29.00	29.00	29.01	7.58	7.58	7.58	25.52	25.52	25.52	55.0	54.8	54.6	3.68	3.65	3.65	2.52	3.41	2.68	2	2.50
0/1/2013	12:32	i iiie	Middle	2	29.01	29.01	29.01	7.58	7.58	7.50	25.52	25.52	25.52	54.4	54.3	34.0	3.64	3.62	3.03	2.39	2.38	2.00	3	2.30
8/7/2013	12:35	Fine	Middle	2	28.90	28.90	28.92	7.55	7.55	7.55	25.82	25.82	25.82	58.9	58.7	58.6	3.93	3.92	3.91	1.66	1.66	1.66	2	2.50
0/1/2013	12:37	Tille	Middle	2	28.93	28.93	20.32	7.55	7.55	7.55	25.82	25.82	20.02	58.5	58.3	30.0	3.91	3.89	0.01	1.67	1.65	1.00	3	2.50
10/7/2013	14:37	Fine	Middle	2	27.84	27.84	27.86	7.72	7.72	7.72	26.81	26.81	26.81	81.2	80.1	79.9	5.49	5.42	5.40	2.50	2.55	2.47	3	3.00
10/1/2013	14:39	Tille	Middle	2	27.87	27.87	27.00	7.71	7.71	1.12	26.80	26.80	20.01	79.6	78.7	75.5	5.38	5.32	5.40	2.42	2.41	2.47	3	3.00
12/7/2013	15:25	Fine	Middle	2	28.61	28.61	28.64	7.14	7.14	7.14	27.55	27.55	27.56	55.5	55.4	55.4	3.69	3.18	3.56	1.32	1.31	1.37	4	4.00
12/1/2010	15:27	Tine	Middle	2	28.66	28.66	20.04	7.14	7.14	7.1-4	27.57	27.57	27.00	55.4	55.4	00.4	3.68	3.67	0.00	1.40	1.45	1.07	4	4.00
15/7/2013	15:37	Rainy	Middle	2	26.60	26.60	26.60	7.90	7.90	7.90	20.03	20.03	20.03	56.0	55.8	55.8	4.01	4.00	4.00	14.48	14.47	14.47	14	13.50
	15:39		Middle	2	26.59	26.59		7.90	7.90		20.03	20.03		55.8	55.7		4.00	4.00		14.47	14.47		13	
17/7/2013	6:35	Cloudy	Middle	2	26.80	26.80	26.80	8.00	8.00	8.00	27.75	27.75	27.75	63.2	63.2	62.6	4.33	4.32	4.28	1.16	1.22	1.16	4	3.50
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	6:36		Middle	2	26.80	26.80	20.00	7.99	7.99	0.00	27.75	27.75	27.110	61.9	61.9	02.0	4.23	4.24	20	1.18	1.08	0	3	0.00
20/7/2013	11:10	Fine	Middle	2	26.80	26.80	26.85	7.79	7.79	7.79	28.32	28.32	28.31	41.4	41.7	41.7	2.82	2.84	2.84	1.45	1.45	1.45	<2	<2
25/1/2010	11:12		Middle	2	26.90	26.90	20.00	7.79	7.79	0	28.30	28.30	20.01	41.9	41.7		2.85	2.84		1.45	1.44		<2	
22/7/2013	12:20	Fine	Middle	2	27.00	27.00	27.05	7.89	7.89	7.89	30.85	30.85	30.99	53.8	52.5	54.9	3.56	3.51	3.68	2.25	2.23	2.22	2	2.50
	12:22		Middle	2	27.10	27.10	00	7.89	7.89	50	31.13	31.13		55.6	57.5	20	3.78	3.87	2.30	2.21	2.20		3	
24/7/2013	14:32	Cloudy	Middle	2	26.70	26.70	26.70	7.92	7.92	7.92	29.39	29.39	29.39	58.3	58.9	58.2	3.96	4.00	3.95	3.77	3.90	3.90	3	3.00
_ ,,,,	14:34		Middle	2	26.70	26.70	===	7.92	7.92		29.39	29.39		57.6	57.8		3.91	3.92		3.96	3.97		3	
26/7/2013	15:07	Cloudy	Middle	2	27.00	27.00	27.00	7.90	7.90	7.90	25.54	25.54	25.63	62.4	62.9	62.0	4.31	4.34	4.27	6.35	6.39	6.40	3	3.00
25,.,,2010	15:09		Middle	2	27.00	27.00	200	7.90	7.90		25.71	25.71	20.00	60.5	62.2	02.0	4.15	4.28		6.42	6.44	0.40	3	0.00

Remarks:

Single underline denotes exceedance over Action Level.



### Water Monitoring Result at P3 - APA Mid-Ebb Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp °C	erature		pН			Salini	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspend	led Solids
		Condition	n	n	Va	llue	Average	Va	lue	Average	Va	alue	Average	Va	lue	Average	Va		Average	Va	llue	Average	Value	Average
28/6/2013	15:36	Sunny	Middle	2.5	28.30	28.30	28.40	8.11	8.11	8.10	23.90	23.90	23.90	75.1	75.3	75.4	5.11	5.12	5.13	3.53	3.52	3.54	4	4.50
20/0/2013	15:38	Suring	Middle	2.5	28.50	28.50	20.40	8.09	8.09	6.10	23.90	23.90	23.90	76.3	74.8	73.4	5.19	5.08	5.15	3.64	3.48	3.54	5	4.50
2/7/2013	10:25	Fine	Middle	2.5	28.90	28.90	28.90	8.40	8.40	8.40	24.55	24.55	24.55	104.3	104.2	103.8	6.97	6.96	6.93	4.02	4.01	3.99	3	3.00
2/1/2013	10:27	rine	Middle	2.5	28.90	28.90	20.90	8.40	8.40	0.40	24.55	24.55	24.55	103.1	103.5	103.0	6.89	6.91	0.93	3.97	3.96	3.33	3	3.00
4/7/2013	9:51	Fine	Middle	2.5	29.10	29.10	29.15	8.17	8.17	8.17	26.12	26.12	26.11	86.4	87.6	87.5	5.74	5.81	5.80	2.57	2.59	2.59	<2	<2
4/1/2013	9:53	i iiie	Middle	2.5	29.20	29.20	29.13	8.17	8.17	0.17	26.10	26.10	20.11	87.8	88.0	07.5	5.82	5.84	3.00	2.61	2.59	2.59	<2	
6/7/2013	11:00	Fine	Middle	2.5	28.00	28.00	28.00	8.03	8.03	8.03	26.23	26.23	26.23	74.9	74.7	74.6	5.07	5.04	5.04	2.97	2.96	2.89	4	3.50
0/1/2013	11:02	Tille	Middle	2.5	28.00	28.00	20.00	8.03	8.03	0.03	26.23	26.23	20.23	74.3	74.5	74.0	5.00	5.04	5.04	2.82	2.80	2.03	3	3.30
8/7/2013	13:48	Fine	Middle	2.5	28.90	28.90	28.90	8.21	8.21	8.21	28.10	28.10	28.10	89.1	89.3	89.4	5.90	5.92	5.93	2.57	2.58	2.59	3	3.00
0/1/2013	13:50	Tille	Middle	2.5	28.90	28.90	20.30	8.21	8.21	0.21	28.10	28.10	20.10	89.4	89.6	03.4	5.93	5.95	0.00	2.59	2.62	2.00	3	3.00
10/7/2013	14:00	Fine	Middle	2.5	27.50	27.50	27.50	8.18	8.18	8.18	28.43	28.43	28.43	89.1	88.4	87.8	6.02	6.11	5.97	1.04	1.05	1.04	4	3.50
10/1/2013	14:02	Tille	Middle	2.5	27.50	27.50	27.50	8.18	8.18	0.10	28.43	28.43	20.43	86.0	87.5	07.0	5.93	5.83	0.01	1.03	1.02	1.04	3	3.30
12/7/2013	14:16	Fine	Middle	2.5	29.00	29.00	29.00	8.29	8.28	8.28	29.75	29.75	29.75	107.0	107.1	106.8	7.01	7.06	7.01	0.78	0.77	0.78	5	5.00
12/1/2010	14:18	1 1110	Middle	2.5	29.00	29.00	20.00	8.28	8.28	0.20	29.75	29.75	20.70	106.4	106.6	100.0	6.98	6.99	7.01	0.76	0.81	0.70	5	0.00
15/7/2013	15:47	Rainy	Middle	2.5	26.60	26.60	26.60	8.17	8.17	8.17	28.61	28.61	28.61	90.0	90.6	90.8	6.12	6.18	6.20	1.04	1.16	1.12	3	3.50
10/1/2010	15:49	··ay	Middle	2.5	26.60	26.60	20.00	8.17	8.17	0	28.61	28.61	20.01	91.5	91.2	00.0	6.25	6.24	0.20	1.17	1.09	2	4	0.00
17/7/2013	6:50	Cloudy	Middle	3.0	26.10	26.10	26.10	8.04	8.04	8.05	30.95	30.95	30.95	75.0	74.8	74.8	5.10	5.09	5.09	0.21	0.20	0.18	3	3.00
11/1/2010	6:52	Oloudy	Middle	3.0	26.10	26.10	20.10	8.06	8.06	0.00	30.95	30.95	00.00	74.7	74.5	74.0	5.09	5.08	0.00	0.17	0.15	0.10	3	0.00
20/7/2013	10:55	Fine	Middle	2.5	26.50	26.50	26.50	8.12	8.12	8.13	32.23	32.23	32.17	84.7	83.8	83.6	5.67	5.60	5.60	3.09	3.05	3.07	3	3.00
25/1/2515	10:57		Middle	2.5	26.50	26.50	20.00	8.14	8.14	0.10	32.11	32.11	02.11	83.7	82.1		5.62	5.51	0.00	3.05	3.08	0.01	3	0.00
22/7/2013	11:40	Fine	Middle	3.0	26.40	26.40	26.45	8.01	8.01	8.01	30.16	30.16	30.17	62.2	61.2	60.5	4.22	4.15	4.11	4.80	4.83	4.81	6	6.00
	11:42		Middle	3.0	26.50	26.50		8.00	8.00		30.17	30.17		60.4	58.1		4.10	3.95		4.76	4.83		6	
24/7/2013	14:02	Cloudy	Middle	2.5	26.50	26.50	26.50	7.95	7.95	7.96	29.79	29.79	29.77	66.9	66.8	68.6	4.55	4.54	4.67	5.63	5.62	5.66	6	5.50
	14:04		Middle	2.5	26.50	26.50		7.97	7.97		29.74	29.74		70.2	70.4		4.79	4.79		5.69	5.70		5	
26/7/2013	15:00	Cloudy	Middle	2.5	26.80	26.80	26.80	7.94	7.94	7.94	28.83	28.83	28.84	52.2	53.1	52.5	3.56	3.62	3.58	4.49	4.50	4.51	5	5.50
20/1/2010	15:02	Cloudy	Middle	2.5	26.80	26.80	20.00	7.94	7.94	7.04	28.84	28.84	20.04	52.9	51.7	02.0	3.60	3.52	0.00	4.50	4.54	7.01	6	0.00

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at P1 - HKCEC Phase I Mid-Ebb Tide

Date	Time	Weater Condition	Samplin		Wat	er Temp °C	erature		pН			Salini	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspend	led Solids
		Condition	n	n	Va	llue	Average	Va	lue	Average	Va	alue	Average	Va	lue	Average	Va		Average	Va	llue	Average	Value	Average
28/6/2013	15:44	Sunny	Middle	2.5	28.40	28.40	28.45	8.11	8.11	8.10	23.89	23.89	23.89	71.2	73.7	74.0	4.84	5.01	5.03	3.88	3.82	3.95	4	4.00
20/0/2013	15:46	Guilly	Middle	2.5	28.50	28.50	20.40	8.09	8.09	0.10	23.88	23.88	25.05	75.2	75.7	74.0	5.11	5.14	5.05	4.00	4.10	5.55	4	4.00
2/7/2013	10:38	Fine	Middle	2.5	29.20	29.20	29.20	8.40	8.40	8.40	24.50	24.50	24.50	106.0	106.1	106.6	7.03	7.04	7.07	3.60	3.59	3.58	2	2.00
2/1/2013	10:40	Tille	Middle	2.5	29.20	29.20	25.20	8.40	8.40	0.40	24.50	24.50	24.50	106.9	107.3	100.0	7.09	7.12	7.07	3.57	3.56	5.50	2	2.00
4/7/2013	9:40	Fine	Middle	2.5	28.30	28.30	28.35	8.18	8.18	8.18	26.08	26.08	26.08	90.6	89.2	89.0	6.10	6.01	6.01	3.21	3.21	3.20	<2	2.00
4/1/2013	9:42	Tille	Middle	2.5	28.40	28.40	20.55	8.18	8.18	0.10	26.07	26.07	20.00	88.1	88.2	03.0	5.97	5.94	0.01	3.19	3.17	5.20	2	2.00
6/7/2013	11:09	Fine	Middle	2.5	28.10	28.10	28.10	8.09	8.09	8.09	27.36	27.36	27.36	85.2	85.5	85.3	5.70	5.73	5.71	2.43	2.42	2.42	<2	<2
0/1/2010	11:11	Tine	Middle	2.5	28.10	28.10	20.10	8.09	8.09	0.00	27.36	27.36	27.00	85.3	85.1	00.0	5.71	5.70	0.71	2.40	2.41	2.72	<2	
8/7/2013	13:38	Fine	Middle	2.5	28.70	28.70	28.75	8.18	8.18	8.18	25.93	25.93	25.93	94.2	94.0	94.6	6.25	6.23	6.28	3.10	3.11	3.12	4	3.50
6/1/2010	13:40	0	Middle	2.5	28.80	28.80	20.10	8.18	8.18	0.10	25.93	25.93	20.00	95.0	95.1	00	6.32	6.33	0.20	3.12	3.16	0.12	3	0.00
10/7/2013	13:48	Fine	Middle	2.5	27.30	27.30	27.30	8.11	8.11	8.11	28.37	28.37	28.37	86.1	86.3	86.6	5.81	5.83	5.84	0.58	0.59	0.60	2	2.50
10/1/2010	13:50	Tine	Middle	2.5	27.30	27.30	27.00	8.11	8.11	0.11	28.37	28.37	20.07	85.7	88.1	00.0	5.78	5.95	0.04	0.60	0.63	0.00	3	2.00
12/7/2013	14:21	Fine	Middle	2.5	28.90	28.90	28.90	8.29	8.29	8.29	29.75	29.75	29.75	109.0	109.2	108.3	7.15	7.16	7.13	0.26	0.27	0.27	7	6.00
12/1/2010	14:23		Middle	2.5	28.90	28.90	20.00	8.29	8.29	0.20	29.75	29.75	20.70	107.6	107.4		7.11	7.10	0	0.28	0.25	0.27	5	0.00
15/7/2013	15:54	Rainy	Middle	2.5	26.70	26.70	26.70	8.17	8.17	8.17	30.71	30.71	30.71	94.0	94.8	94.6	6.60	6.53	6.54	3.03	3.10	3.10	4	3.00
	15:56		Middle	2.5	26.70	26.70		8.17	8.17		30.71	30.71		95.0	94.4		6.50	6.54		3.12	3.14		2	
17/7/2013	6:39	Cloudy	Middle	3.0	26.00	26.00	26.00	8.04	8.04	8.05	31.05	31.05	31.06	79.3	79.1	79.0	5.40	5.39	5.38	0.48	0.45	0.43	4	4.00
	6:41		Middle	3.0	26.00	26.00		8.05	8.05		31.06	31.06		78.8	78.6		5.37	5.36		0.41	0.39		4	
20/7/2013	11:05	Fine	Middle	2.5	26.60	26.60	26.55	8.16	8.16	8.16	32.11	32.11	32.08	74.6	76.4	73.5	4.99	5.11	4.92	3.03	3.04	3.03	4	4.00
	11:07		Middle	2.5	26.50	26.50		8.15	8.15		32.05	32.05		71.2	71.7		4.78	4.81		3.03	3.02		4	
22/7/2013	11:35	Fine	Middle	3.0	26.20	26.20	26.25	8.22	8.21	8.21	30.32	30.32	30.31	60.2	60.5	60.0	4.10	4.14	4.09	5.24	5.31	5.32	5	4.50
	11:37		Middle	3.0	26.30	26.30		8.21	8.21	¥	30.30	30.30	*****	60.1	59.3		4.09	4.04		5.38	5.33		4	
24/7/2013	13:50	Cloudy	Middle	2.5	26.30	26.30	26.30	7.86	7.86	7.87	29.78	29.78	29.79	75.7	75.3	75.3	5.16	5.14	5.14	6.52	6.53	6.49	4	4.00
	13:52		Middle	2.5	26.30	26.30		7.88	7.88		29.79	29.79		75.1	75.0		5.13	5.13		6.45	6.44		4	
26/7/2013	15:05	Cloudy	Middle	2.5	26.80	26.80	26.80	7.95	7.95	7.94	28.85	28.85	28.87	64.9	60.7	60.6	4.41	4.12	4.14	5.05	5.02	4.96	4	4.50
	15:07		Middle	2.5	26.80	26.80		7.93	7.93		28.88	28.88		57.6	59.3		3.92	4.09		4.91	4.85	50	5	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at P4 - SOC Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salini	,	D	OO Satur	ation		DO mg/L			Turbidi NTU		Suspende	ed Solids g/L
			n	n	Va	lue	Average	Va	lue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Value	Average
28/6/2013	15:22	Sunnv	Middle	2.5	28.40	28.40	28.50	8.12	8.12	8.11	23.92	23.92	23.91	74.4	73.9	74.5	5.06	5.02	5.07	4.29	4.15	4.18	4	3.00
	15:24		Middle	2.5	28.60	28.60		8.09	8.09		23.89	23.89		74.9	74.9		5.09	5.09		4.12	4.14		2	
2/7/2013	10:20	Fine	Middle	2.5	28.50	28.50	28.50	8.37	8.37	8.37	24.49	24.49	24.49	101.5	101.4	101.3	6.85	6.84	6.83	3.47	3.45	3.47	2	2.50
2,1,72010	10:22	0	Middle	2.5	28.50	28.50	20.00	8.37	8.37	0.01	24.49	24.49	20	101.2	101.0		6.82	6.81	0.00	3.44	3.52	0	3	2.00
4/7/2013	10:04	Fine	Middle	2.5	28.50	28.50	28.55	8.16	8.16	8.16	26.15	26.15	26.16	84.1	83.3	83.9	5.63	5.58	5.62	2.48	2.51	2.53	3	3.50
1,772010	10:06		Middle	2.5	28.60	28.60	20.00	8.16	8.16	0.10	26.17	26.17	20.10	83.7	84.6		5.61	5.67	0.02	2.56	2.57	2.00	4	0.00
6/7/2013	10:52	Fine	Middle	2.5	28.30	28.30	28.30	8.05	8.05	8.05	27.67	27.67	27.67	81.5	81.4	81.6	5.43	5.42	5.43	2.34	2.35	2.36	2	2.50
3,1,120.10	10:54		Middle	2.5	28.30	28.30	20.00	8.05	8.05	0.00	27.67	27.67	27.01	81.8	81.7	01.0	5.44	5.44	0.10	2.37	2.38	2.00	3	2.00
8/7/2013	13:58	Fine	Middle	2.5	29.20	29.20	29.20	8.20	8.20	8.20	26.10	26.10	26.10	89.3	89.2	89.7	5.91	5.90	5.93	2.62	2.61	2.70	4	4.50
3,1,2010	14:00	0	Middle	2.5	29.20	29.20	20.20	8.20	8.20	0.20	26.10	26.10	20.10	90.3	90.0		5.97	5.95	0.00	2.60	2.96	20	5	
10/7/2013	14:09	Fine	Middle	2.5	27.50	27.50	27.50	8.17	8.17	8.17	27.87	27.87	27.87	87.6	88.7	88.4	5.89	5.97	5.96	1.16	1.17	1.18	3	3.00
10/7/2010	14:11	Tine	Middle	2.5	27.50	27.50	27.00	8.17	8.17	0.17	27.87	27.87	27.07	89.0	88.4	00.4	5.98	5.99	0.00	1.19	1.20	1.10	3	0.00
12/7/2013	14:30	Fine	Middle	2.5	28.40	28.40	28.40	8.29	8.29	8.29	29.77	29.77	29.77	109.4	109.9	109.3	7.18	7.21	7.17	1.51	1.52	1.53	5	5.50
12/1/2010	14:32		Middle	2.5	28.40	28.40	20.10	8.29	8.29	0.20	29.77	29.77	20	108.9	109.1		7.14	7.15		1.54	1.56	1.00	6	0.00
15/7/2013	16:01	Rainv	Middle	2.5	26.60	26.60	26.60	8.17	8.17	8.17	28.52	28.52	28.52	90.3	91.5	91.4	6.17	6.23	6.22	1.45	1.44	1.43	4	3.50
10/1/2010	16:03		Middle	2.5	26.60	26.60	20.00	8.17	8.17	0	28.52	28.52	20.02	91.6	92.0	• • • • • • • • • • • • • • • • • • • •	6.23	6.26	0.22	1.41	1.40		3	0.00
17/7/2013	7:01	Cloudy	Middle	3.0	26.10	26.10	26.10	8.04	8.04	8.04	30.97	30.97	30.99	78.8	78.6	78.4	5.36	5.35	5.34	0.44	0.43	0.42	3	3.00
11/1/2010	7:03		Middle	3.0	26.10	26.10	20.10	8.04	8.04	0.0 .	31.00	31.00	00.00	78.2	77.9		5.33	5.31	0.0 .	0.43	0.38	02	3	0.00
20/7/2013	10:45	Fine	Middle	2.5	26.40	26.40	26.35	8.11	8.11	8.11	32.15	32.15	32.17	80.2	80.4	80.1	5.37	5.40	5.37	2.03	2.03	2.06	4	4.00
20,7,2010	10:47		Middle	2.5	26.30	26.30	20.00	8.10	8.10	0	32.19	32.19	02	80.0	79.6		5.37	5.34	0.07	2.05	2.11	2.00	4	
22/7/2013	11:44	Fine	Middle	3.0	26.50	26.50	26.55	8.00	8.00	8.00	30.15	30.15	30.14	65.9	64.5	65.9	4.47	4.38	4.47	3.35	3.40	3.37	4	5.00
22,1,20.0	11:46		Middle	3.0	26.60	26.60	20.00	8.00	8.00	0.00	30.12	30.12		67.8	65.4		4.59	4.43		3.39	3.34	0.0.	6	0.00
24/7/2013	14:10	Cloudy	Middle	2.5	26.50	26.50	26.50	7.97	7.97	7.97	29.72	29.72	29.72	65.1	65.8	66.0	4.44	4.58	4.52	4.79	4.80	4.71	4	4.00
	14:12		Middle	2.5	26.50	26.50		7.97	7.97		29.72	29.72		67.0	66.0		4.56	4.49		4.62	4.64	*** *	4	
26/7/2013	14:54	Cloudy	Middle	2.5	26.80	26.80	26.80	7.92	7.92	7.92	28.93	28.93	28.94	53.0	51.0	51.0	3.60	3.47	3.47	4.34	4.36	4.35	6	6.00
20,172010	14:56	2.2449	Middle	2.5	26.80	26.80	20.00	7.92	7.92		28.94	28.94	20.04	49.9	50.1	J	3.39	3.41	J. 17	4.35	4.36	50	6	0.00

Remarks:

Single underline denotes exceedance over Action Level.



#### Water Monitoring Result at P5 - WCT / RT / IT Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salini	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspende	
			n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average		Average
28/6/2013	15:16	Sunnv	Middle	2.5	28.50	28.50	28.50	8.09	8.09	8.09	23.82	23.82	23.82	72.7	73.6	73.2	4.81	5.01	4.95	4.15	4.06	4.09	4	4.50
	15:18	,	Middle	2.5	28.50	28.50		8.09	8.09		23.82	23.82		74.0	72.5		5.03	4.93		4.03	4.11		5	
2/7/2013	10:08	Fine	Middle	2.5	28.60	28.60	28.60	8.35	8.35	8.35	24.62	24.62	24.62	95.8	96.2	96.3	6.45	6.49	6.50	3.67	3.66	3.65	3	3.00
2///2010	10:10		Middle	2.5	28.60	28.60	20.00	8.35	8.35	0.00	24.62	24.62	21102	96.4	96.7	00.0	6.51	6.55	0.00	3.64	3.63	0.00	3	0.00
4/7/2013	10:14	Fine	Middle	2.5	28.70	28.70	28.75	8.16	8.16	8.16	26.25	26.25	26.25	95.8	95.8	95.4	6.40	6.39	6.37	2.29	2.30	2.32	2	2.00
1,772010	10:16		Middle	2.5	28.80	28.80	20.10	8.16	8.16	0.10	26.25	26.25	20.20	95.0	94.9		6.34	6.34	0.07	2.32	2.37	2.02	2	2.00
6/7/2013	10:43	Fine	Middle	2.5	28.30	28.30	28.30	8.04	8.04	8.04	27.49	27.49	27.49	78.1	78.0	78.2	5.21	5.20	5.22	2.41	2.40	2.39	2	2.00
5/1/2010	10:45		Middle	2.5	28.30	28.30	20.00	8.04	8.04	0.01	27.49	27.49	277.10	78.4	78.3	. 0.2	5.23	5.22	0.22	2.39	2.37	2.00	2	2.00
8/7/2013	14:03	Fine	Middle	2.5	28.90	28.90	28.90	8.20	8.20	8.20	26.11	26.11	26.11	91.4	91.6	91.6	6.08	6.09	6.09	2.18	2.16	2.18	6	5.50
3/1/2010	14:05		Middle	2.5	28.90	28.90	20.00	8.20	8.20	0.20	26.11	26.11	20111	91.4	91.8	01.0	6.07	6.10	0.00	2.17	2.21	20	5	0.00
10/7/2013	14:13	Fine	Middle	2.5	27.60	27.60	27.60	8.16	8.16	8.16	27.85	27.85	27.85	89.8	89.2	89.5	6.07	6.00	6.04	0.83	0.82	0.80	3	3.00
10/1/2010	14:15	Tille	Middle	2.5	27.60	27.60	27.00	8.16	8.16	0.10	27.85	27.85	27.00	90.0	88.8	00.0	6.11	5.96	0.04	0.76	0.78	0.00	3	0.00
12/7/2013	14:36	Fine	Middle	2.5	28.40	28.40	28.40	8.28	8.28	8.28	29.75	29.75	29.75	108.5	109.4	108.8	7.16	7.16	7.14	0.69	0.70	0.71	5	6.00
12,7,2010	14:38	0	Middle	2.5	28.40	28.40	20.10	8.28	8.28	0.20	29.75	29.75	20.10	109.5	107.9		7.17	7.06		0.72	0.73	0	7	0.00
15/7/2013	6:13	Rainv	Middle	2.5	26.60	26.60	26.60	8.16	8.16	8.16	29.33	29.33	29.33	87.5	87.6	87.8	5.92	5.95	5.95	0.95	0.93	0.94	5	5.00
10,7,2010	16:15		Middle	2.5	26.60	26.60	20.00	8.16	8.16	5.10	29.33	29.33	20.00	87.7	88.2	01.0	5.97	5.94	0.00	0.92	0.94	0.0 .	5	0.00
17/7/2013	7:10	Cloudy	Middle	2.5	26.20	26.20	26.20	8.03	8.03	8.03	31.00	31.00	31.00	77.8	77.6	77.5	5.28	5.27	5.27	0.35	0.30	0.30	3	3.00
,,,2010	7:12	Cicaay	Middle	2.5	26.20	26.20	20:20	8.03	8.03	0.00	31.00	31.00	01100	77.4	77.3		5.26	5.26	0.2.	0.29	0.27	0.00	3	0.00
20/7/2013	10:40	Fine	Middle	2.5	26.70	26.70	26.65	8.11	8.11	8.11	30.65	30.65	31.39	69.4	69.7	68.9	4.68	4.69	4.62	3.02	2.93	2.89	5	4.50
	10:42		Middle	2.5	26.60	26.60		8.11	8.11		32.12	32.12		68.1	68.2		4.56	4.56		2.80	2.79		4	
22/7/2013	11:48	Fine	Middle	3.0	26.70	26.70	26.70	7.97	7.97	7.97	29.97	29.97	29.99	64.3	65.0	64.6	4.36	4.40	4.37	3.51	3.53	3.53	4	4.00
	11:50		Middle	3.0	26.70	26.70		7.96	7.96		30.00	30.00		65.2	63.8		4.41	4.32		3.55	3.51		4	
24/7/2013	14:20	Cloudy	Middle	2.5	26.50	26.50	26.50	7.98	7.98	7.98	29.72	29.72	29.72	69.8	70.2	70.2	4.75	4.78	4.77	5.13	5.14	5.15	6	5.00
	14:22	,	Middle	2.5	26.50	26.50		7.98	7.98		29.72	29.72		70.3	70.4		4.77	4.79		5.15	5.16	****	4	
26/7/2013	14:50	Cloudy	Middle	2.5	26.80	26.80	26.80	7.93	7.93	7.93	29.00	29.00	29.01	50.3	50.4	50.9	3.42	3.42	3.45	4.47	4.44	4.44	4	5.00
20/1/2010	14:52	Cioday	Middle	2.5	26.80	26.80	20.00	7.92	7.92	7.00	29.01	29.01	20.01	51.5	51.2		3.48	3.46	0.40	4.43	4.42	7.77	6	0.00

Remarks:

Single underline denotes exceedance over Action Level.



#### Water Monitoring Result at C5e - Sun Hung Kai Centre Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salini	ty	D	O Satura	ation		DO mg/L			Turbidi NTU		Suspende	
			n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average		Average
28/6/2013	14:05	Sunnv	Middle	1.5	29.58	29.58	29.60	7.45	7.45	7.45	26.52	26.52	26.52	81.6	80.4	80.4	5.37	5.29	5.29	1.56	1.56	1.57	3	3.00
	14:07		Middle	1.5	29.61	29.61		7.44	7.44		26.52	26.52		79.9	79.5		5.26	5.23		1.56	1.58		3	
2/7/2013	9:50	Fine	Middle	1.5	28.54	28.54	28.56	7.75	7.75	7.74	26.48	26.48	26.47	81.4	81.1	81.0	5.45	5.43	5.42	3.80	3.76	3.79	4	4.50
2,1,2010	9:52	0	Middle	1.5	28.57	28.57	20.00	7.72	7.72		26.46	26.46	20	80.7	80.6	01.0	5.40	5.39	0. 12	3.79	3.80	00	5	
4/7/2013	10:40	Fine	Middle	1.5	28.84	28.84	28.84	7.63	7.63	7.63	25.80	25.80	25.80	69.8	69.3	69.2	4.67	4.63	4.63	2.41	2.20	2.34	5	4.50
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10:42		Middle	1.5	28.84	28.84	20.01	7.63	7.63	7.00	25.80	25.80	20.00	68.9	68.7	00.2	4.61	4.59		2.39	2.35	2.0 .	4	1.00
6/7/2013	11:35	Fine	Middle	1.5	28.74	28.74	28.74	7.66	7.66	7.65	26.49	26.49	26.49	79.8	78.8	78.8	5.32	5.26	5.25	3.73	3.73	3.78	4	3.50
6/1/2010	11:37		Middle	1.5	28.74	28.74	20	7.63	7.63	7.00	26.48	26.48	20110	78.4	78.0	7 0.0	5.23	5.20	0.20	3.75	3.89	00	3	0.00
8/7/2013	12:00	Fine	Middle	1.5	29.02	29.02	29.03	7.63	7.63	7.63	26.69	26.69	26.69	74.0	73.0	73.0	4.91	4.84	4.84	1.67	1.66	1.67	8	8.00
3/1/2010	12:02	0	Middle	1.5	29.04	29.04	20.00	7.62	7.62	7.00	26.68	26.68	20.00	72.6	72.2	70.0	4.82	4.79		1.66	1.68		8	0.00
10/7/2013	13:55	Fine	Middle	1.5	28.29	28.29	28.37	7.53	7.53	7.53	27.55	27.55	27.54	71.7	70.8	70.7	4.79	4.73	4.72	2.40	2.23	2.24	6	5.50
10/1/2010	13:57	Tine	Middle	1.5	28.45	28.45	20.01	7.52	7.52	7.00	27.53	27.53	27.04	70.4	70.0	70.7	4.70	4.67	7.72	2.18	2.14	2.24	5	0.00
12/7/2013	14:45	Fine	Middle	1.5	28.98	28.98	29.10	7.26	7.26	7.26	29.05	29.05	29.01	77.3	76.2	75.7	5.06	4.96	4.94	1.78	1.78	1.81	6	5.50
12,7,2010	14:46		Middle	1.5	29.21	29.21	20.10	7.25	7.25	7.120	28.97	28.97	20.01	75.1	74.1		4.91	4.84		1.79	1.89		5	0.00
15/7/2013	14:50	Rainv	Middle	1.5	25.47	25.47	25.49	7.79	7.79	7.79	27.23	27.23	27.23	78.1	76.7	76.5	5.48	5.36	5.35	2.07	2.11	2.11	3	3.50
10,7,2010	14:52		Middle	1.5	25.50	25.50	20.10	7.78	7.78		27.22	27.22	27.20	76.1	74.9	7 0.0	5.30	5.26	0.00	2.12	2.12	2	4	0.00
17/7/2013	6:05	Cloudy	Middle	1.5	26.70	26.70	26.70	7.98	7.98	7.98	29.00	29.00	29.00	77.4	77.6	76.9	5.27	5.28	5.23	1.81	1.73	1.75	4	4.00
11/1/2010	6:06		Middle	1.5	26.70	26.70	20.10	7.98	7.98	7.00	29.00	29.00	20.00	75.9	76.6	7 0.0	5.16	5.21	0.20	1.76	1.71	0	4	
20/7/2013	10:34	Fine	Middle	1.5	26.70	26.70	26.75	7.88	7.88	7.88	28.33	28.33	28.33	64.3	64.8	64.3	4.41	4.42	4.38	1.66	1.66	1.66	2	3.00
20,7,20.10	10:36		Middle	1.5	26.80	26.80	20.10	7.88	7.88	7.00	28.32	28.32	20.00	64.4	63.5	0 1.0	4.39	4.30		1.66	1.67	1.00	4	0.00
22/7/2013	12:14	Fine	Middle	1.5	27.20	27.20	27.30	7.93	7.93	7.93	29.54	29.54	29.56	71.8	73.3	73.2	4.82	4.91	4.91	3.12	3.11	3.11	3	3.50
22,1,20.0	12:15		Middle	1.5	27.40	27.40	200	7.93	7.93		29.57	29.57	20.00	73.8	73.9		4.94	4.95		3.10	3.09	· · · · ·	4	0.00
24/7/2013	13:40	Cloudy	Middle	1.5	26.50	26.50	26.50	7.88	7.88	7.88	29.01	29.01	29.02	70.6	70.9	71.2	4.82	4.84	4.86	4.38	4.37	4.39	<2	<2
	13:42		Middle	1.5	26.50	26.50		7.88	7.88		29.02	29.02		70.8	72.4		4.83	4.95		4.42	4.40		<2	
26/7/2013	14:15	Cloudy	Middle	1.5	26.40	26.40	26.45	8.06	8.06	8.06	14.89	14.89	14.89	82.2	79.8	80.6	6.08	5.91	5.96	2.78	2.80	2.80	3	3.50
20/1/2010	14:17	Cioday	Middle	1.5	26.50	26.50	20.40	8.06	8.06	0.00	14.88	14.88	14.00	80.0	80.2		5.92	5.94	0.00	2.81	2.82	2.00	4	0.00

Remarks:

Single underline denotes exceedance over Action Level.



# Water Monitoring Result at C5w - Sun Hung Kai Centre Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salini	ty	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspende	
			n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average		Average
28/6/2013	14:10	Sunnv	Middle	1.5	30.33	30.33	30.33	7.47	7.47	7.47	26.58	26.58	26.57	79.0	78.4	78.3	5.13	5.10	5.09	1.89	1.88	1.86	2	3.00
20/0/2010	14:12	Curry	Middle	1.5	30.32	30.32	00.00	7.46	7.46	7.47	26.56	26.56	20.07	78.1	77.7	70.0	5.08	5.05	0.00	1.85	1.82	1.00	4	0.00
2/7/2013	9:57	Fine	Middle	1.5	28.59	28.59	28.61	7.70	7.70	7.70	26.47	26.47	26.48	79.1	79.1	79.1	5.29	5.29	5.29	2.08	2.06	2.03	2	2.00
2/1/2010	9:59	Tine	Middle	1.5	28.62	28.62	20.01	7.69	7.69	7.70	26.49	26.49	20.40	79.0	79.1	70.1	5.28	5.29	0.20	2.01	1.97	2.00	2	2.00
4/7/2013	10:45	Fine	Middle	1.5	28.62	28.62	28.63	7.69	7.69	7.68	25.77	25.77	25.77	86.1	85.9	85.0	5.78	5.70	5.69	2.71	2.66	2.62	<2	<2
4/1/2010	10:47	Tine	Middle	1.5	28.64	28.64	20.00	7.66	7.66	7.00	25.76	25.76	20.77	84.4	83.4	00.0	5.66	5.60	0.00	2.59	2.51	2.02	<2	
6/7/2013	11:40	Fine	Middle	1.5	28.29	28.29	28.32	7.57	7.57	7.56	25.17	25.17	25.16	52.8	52.6	52.5	3.57	3.56	3.55	1.76	1.78	1.79	<2	2.00
3/1/2010	11:42	Tine	Middle	1.5	28.35	28.35	20.02	7.54	7.54	7.00	25.14	25.14	20.10	52.4	52.1	02.0	3.55	3.51	0.00	1.79	1.81	1.70	2	2.00
8/7/2013	12:05	Fine	Middle	1.5	29.13	29.13	29.15	7.73	7.73	7.71	25.09	25.09	25.09	86.8	85.0	84.8	5.80	5.68	5.66	2.07	2.14	2.15	3	3.50
3/1/2010	12:07	Tine	Middle	1.5	29.16	29.16	20.10	7.69	7.69	7.7	25.09	25.09	20.00	84.3	82.9	04.0	5.63	5.54	0.00	2.18	2.19	2.10	4	0.00
10/7/2013	13:50	Fine	Middle	1.5	28.92	28.92	28.86	7.69	7.69	7.63	27.36	27.36	27.36	86.0	84.4	84.2	5.69	5.59	5.57	2.14	2.13	2.13	4	4.00
10/7/2013	13:52	Tille	Middle	1.5	28.80	28.80	20.00	7.56	7.56	7.00	27.36	27.36	27.50	83.8	82.4	04.2	5.55	5.46	0.07	2.13	2.13	2.10	4	4.00
12/7/2013	14:49	Fine	Middle	1.5	29.09	29.09	29.16	7.32	7.32	7.30	29.03	29.03	29.01	80.1	78.7	78.5	5.24	5.14	5.13	1.67	1.67	1.67	4	4.00
12/1/2010	14:50	Tine	Middle	1.5	29.22	29.22	20.10	7.28	7.28	7.00	28.99	28.99	20.01	78.1	77.0	70.0	5.10	5.03	0.10	1.66	1.66	1.07	4	4.00
15/7/2013	14:45	Rainv	Middle	1.5	25.84	25.84	25.85	7.81	7.81	7.80	27.71	27.71	27.71	91.2	89.7	89.3	6.34	6.24	6.21	2.50	2.42	2.44	3	3.50
10/7/2010	14:47	ramy	Middle	1.5	25.85	25.85	20.00	7.79	7.79	7.00	27.71	27.71	27.71	88.5	87.9	00.0	6.15	6.12	0.21	2.41	2.42	2.44	4	0.00
17/7/2013	6:12	Cloudy	Middle	1.5	27.00	27.00	27.05	8.02	8.02	8.04	29.66	29.66	29.61	76.8	75.2	76.6	5.18	5.11	5.18	1.80	1.60	1.61	4	3.50
17/7/2013	6:13	Cloudy	Middle	1.5	27.10	27.10	27.00	8.06	8.06	0.04	29.55	29.55	23.01	76.5	78.0	70.0	5.16	5.26	5.10	1.50	1.55	1.01	3	3.30
20/7/2013	10:38	Fine	Middle	1.5	26.70	26.70	26.80	7.91	7.91	7.90	28.46	28.46	28.45	80.3	78.3	78.6	5.48	5.34	5.36	2.06	2.07	2.07	3	3.50
20/1/2010	10:39	Tine	Middle	1.5	26.90	26.90	20.00	7.89	7.89	7.00	28.44	28.44	20.40	77.6	78.0	70.0	5.29	5.31	0.00	2.07	2.08	2.07	4	0.00
22/7/2013	12:22	Fine	Middle	1.5	27.00	27.00	27.05	7.80	7.80	7.81	31.70	31.70	31.31	67.8	68.3	68.4	4.53	4.57	4.57	2.98	2.97	2.97	2	2.00
22,172010	12:24	1 1110	Middle	1.5	27.10	27.10	27.00	7.81	7.81	7.01	30.92	30.92	01.01	68.4	69.1		4.56	4.62	7.07	2.97	2.94	2.07	2	2.00
24/7/2013	13:45	Cloudy	Middle	1.5	26.70	26.70	26.75	7.79	7.79	7.80	30.72	30.72	30.71	50.9	50.7	50.9	3.43	3.41	3.43	2.12	2.12	2.11	2	2.00
24/1/2010	13:47	Cioday	Middle	1.5	26.80	26.80	20.70	7.80	7.80	7.00	30.70	30.70	00.7 1	51.0	51.0		3.44	3.43	0.40	2.10	2.10	2.11	2	2.00
26/7/2013	14:20	Cloudy	Middle	1.5	26.60	26.60	26.60	7.90	7.90	7.90	21.72	21.72	21.72	70.9	71.3	70.9	5.04	5.06	5.04	8.40	8.59	8.53	3	3.00
20/1/2013	14:22	Cioudy	Middle	1.5	26.60	26.60	20.00	7.90	7.90	1.30	21.72	21.72	21.12	70.7	70.8	10.9	5.02	5.02	J.U4	8.59	8.55	0.33	3	3.00

Remarks

Single underline denotes exceedance over Action Level.



#### Water Monitoring Result at WSD 21 - Wan Chai Mid-Ebb Tide

Date	Time	Weater Condition	Samplin	•	Wat	er Temp °C	erature		pH -			Salini	,	D	O Satur	ation		DO mg/L			Turbidi NTU		Suspende	led Solids g/L
			n	n	Va	lue	Average	Va	lue	Average	Va	alue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average		Average
28/6/2013	14:42	Sunnv	Middle	2.0	28.90	28.90	28.80	7.65	7.65	7.66	24.98	24.98	24.99	52.3	51.9	52.2	3.52	3.50	3.52	3.42	3.38	3.40	3	3.50
20/0/2010	14:44	Curry	Middle	2.0	28.70	28.70	20.00	7.66	7.66	7.00	24.99	24.99	24.00	52.2	52.3	02.2	3.52	3.52	0.02	3.38	3.41	0.40	4	0.00
2/7/2013	9:25	Fine	Middle	1.5	27.70	27.70	27.70	8.02	8.02	8.02	25.25	25.25	25.25	66.1	67.1	67.1	4.52	4.59	4.58	3.94	3.80	3.86	3	3.00
2///2015	9:27	Tille	Middle	1.5	27.70	27.70	21.10	8.02	8.02	0.02	25.25	25.25	20.20	67.9	67.3	07.1	4.61	4.60	4.50	3.86	3.84	5.00	3	3.00
4/7/2013	10:51	Fine	Middle	1.0	29.20	29.20	29.25	7.91	7.91	7.91	26.68	26.68	26.68	62.0	61.6	63.2	4.10	4.07	4.18	3.42	3.39	3.47	12	12.50
4/1/2013	10:53	Tille	Middle	1.0	29.30	29.30	25.25	7.90	7.90	7.51	26.67	26.67	20.00	64.1	65.2	03.2	4.24	4.31	4.10	3.51	3.56	5.47	13	12.50
6/7/2013	9:45	Fine	Middle	2.0	28.30	28.30	28.30	7.86	7.86	7.86	27.85	27.85	27.85	53.5	53.6	53.7	3.58	3.59	3.61	3.19	3.20	3.21	3	3.50
0/1/2013	9:47	Tille	Middle	2.0	28.30	28.30	20.50	7.86	7.86	7.00	27.85	27.85	27.00	53.8	54.0	55.7	3.61	3.65	5.01	3.21	3.23	J.Z1	4	3.30
8/7/2013	14:30	Fine	Middle	1.0	29.60	29.60	29.60	7.97	7.97	7.97	27.13	27.13	27.13	63.5	63.4	63.6	4.15	4.14	4.16	3.35	3.36	3.34	9	9.50
3/1/2010	14:32	Tine	Middle	1.0	29.60	29.60	20.00	7.97	7.97	7.07	27.13	27.13	27.10	63.8	63.7	00.0	4.17	4.16	4.10	3.34	3.30	0.04	10	0.00
10/7/2013	14:40	Fine	Middle	1.0	28.20	28.20	28.20	7.92	7.92	7.92	27.84	27.84	27.84	59.7	58.6	59.4	3.98	3.91	3.97	2.55	2.54	2.54	6	6.50
10/7/2013	14:42	Tille	Middle	1.0	28.20	28.20	20.20	7.92	7.92	1.52	27.84	27.84	27.04	59.2	60.2	55.4	3.95	4.02	5.57	2.53	2.52	2.54	7	0.50
12/7/2013	14:55	Fine	Middle	1.0	28.70	28.70	28.70	8.03	8.03	8.03	30.41	30.41	30.41	70.6	70.9	70.5	4.59	4.64	4.59	2.04	2.05	2.04	9	8.50
12/1/2010	14:57	Tine	Middle	1.0	28.70	28.70	20.70	8.03	8.03	0.00	30.41	30.41	00.41	70.2	70.1	70.0	4.57	4.56	4.00	2.03	2.02	2.04	8	0.00
15/7/2013	15:24	Rainv	Middle	1.5	26.70	26.70	26.70	8.01	8.01	8.01	28.65	28.65	28.65	63.2	63.0	63.1	4.38	4.31	4.33	7.64	7.63	7.62	7	7.00
10,7,2010	15:26		Middle	1.5	26.70	26.70	20.10	8.01	8.01	0.0.	28.65	28.65	20.00	63.1	62.9		4.31	4.30		7.60	7.59	7.102	7	1.00
17/7/2013	7:45	Cloudy	Middle	1.5	26.20	26.20	26.20	7.90	7.90	7.91	30.62	30.62	30.64	52.8	52.7	52.5	3.59	3.59	3.57	0.94	0.92	0.89	3	2.50
11/1/2010	7:47		Middle	1.5	26.20	26.20	20:20	7.91	7.91		30.65	30.65	00.01	52.3	52.0	02.0	3.56	3.54	0.07	0.86	0.84	0.00	2	2.00
20/7/2013	10:05	Fine	Middle	1.5	26.60	26.60	26.35	7.96	7.96	7.95	30.88	30.88	31.53	50.6	51.4	50.5	3.40	3.46	3.36	3.98	3.96	4.00	12	11.50
	10:07		Middle	1.5	26.10	26.10		7.94	7.94		32.17	32.17		49.7	50.1		3.20	3.38		4.01	4.03		11	
22/7/2013	12:30	Fine	Middle	1.5	26.70	26.70	26.75	7.87	7.87	7.86	29.89	29.89	29.89	50.4	50.8	51.2	3.41	3.44	3.47	5.62	5.60	5.57	9	9.50
	12:32		Middle	1.5	26.80	26.80		7.84	7.84		29.88	29.88		51.7	52.0		3.50	3.51	****	5.53	5.53	****	10	
24/7/2013	14:45	Cloudy	Middle	1.5	26.90	26.90	26.90	7.92	7.92	7.87	27.21	27.21	27.22	46.5	46.3	46.8	3.56	3.54	3.58	4.07	4.06	4.04	7	7.00
	14:47		Middle	1.5	26.90	26.90		7.81	7.81		27.23	27.23		47.3	47.0		3.61	3.59		4.02	4.01		7	
26/7/2013	14:05	Cloudy	Middle	1.5	26.80	26.80	26.80	7.79	7.79	7.80	27.07	27.07	27.11	51.0	50.8	51.1	3.50	3.49	3.50	2.42	2.53	2.51	5	5.00
20,1,20.0	14:07		Middle	1.5	26.80	26.80	20.00	7.80	7.80		27.14	27.14		51.1	51.3	• • • • • • • • • • • • • • • • • • • •	3.50	3.52	0.00	2.53	2.54	2.0.	5	0.00

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



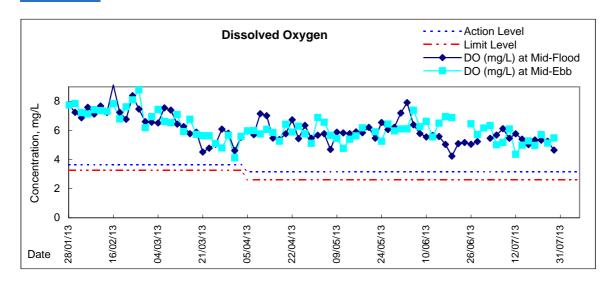
#### Water Monitoring Result at WSD19 - Sheung Wan Mid-Ebb Tide

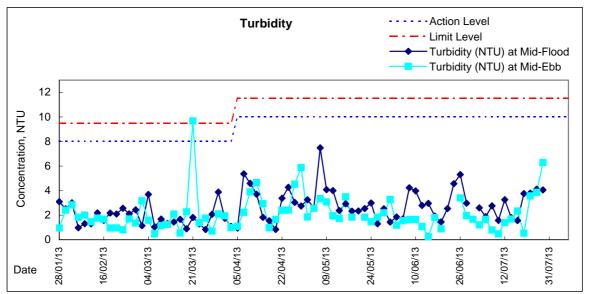
Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp	erature		рН			Salini	ty	D	O Satur	ation		DO mg/L			Turbidi		Suspend	
		Condition	n	n	Va	llue	Average	Va	lue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average	Va	ilue	Average	Value	Average
28/6/2013	13:45	Cummu	Middle	4.0	29.50	29.50	29.60	7.95	7.95	7.95	26.17	26.17	26.19	57.6	56.3	56.3	3.80	3.73	3.72	7.67	7.72	7.55	6	5.50
20/0/2013	13:47	Sunny	Middle	4.0	29.70	29.70	29.00	7.94	7.94	7.95	26.21	26.21	20.19	55.8	55.6	50.5	3.68	3.67	5.72	7.51	7.31	7.55	5	5.50
2/7/2013	9:30	Fine	Middle	2.5	28.41	28.41	28.42	7.99	7.99	7.98	26.04	26.04	26.04	96.9	95.3	94.6	6.52	6.41	6.36	3.36	3.33	3.33	8	8.00
2/1/2013	9:32	Tille	Middle	2.5	28.42	28.42	20.42	7.97	7.97	7.50	26.04	26.04	20.04	94.0	92.2	34.0	6.32	6.20	0.50	3.32	3.31	0.00	8	0.00
4/7/2013	10:10	Fine	Middle	3.0	28.38	28.38	28.41	7.84	7.84	7.84	24.95	24.95	24.95	78.5	78.2	78.0	5.31	5.29	5.27	1.60	1.66	1.65	5	5.50
1,7,2010	10:12		Middle	3.0	28.43	28.43	20	7.84	7.84	7.01	24.94	24.94	2 1100	77.7	77.4	7 0.0	5.25	5.24	0.2.	1.66	1.66	1100	6	0.00
6/7/2013	11:15	Fine	Middle	3.0	28.77	28.77	28.84	7.78	7.78	7.78	25.76	25.76	25.74	70.3	70.0	69.7	4.70	4.68	4.66	0.84	0.84	0.84	2	2.00
	11:17		Middle	3.0	28.91	28.91		7.77	7.77		25.71	25.71		69.3	69.0		4.63	4.61		0.84	0.84		2	
8/7/2013	11:40	Fine	Middle	3.5	28.62	28.62	28.62	7.97	7.97	7.97	24.88	24.88	24.89	67.9	67.2	66.8	4.56	4.53	4.50	2.49	2.41	2.33	6	6.00
	11:42		Middle	3.5	28.62	28.62		7.97	7.97		24.89	24.89		66.8	65.2		4.51	4.40		2.23	2.18		6	
10/7/2013	12:15	Fine	Middle	1.5	29.34	29.34	29.38	7.73	7.73	7.73	27.55	27.55	27.54	74.8	73.6	73.4	4.91	4.83	4.81	1.04	1.03	1.05	2	2.50
	12:17		Middle	1.5	29.42	29.42		7.73	7.73		27.53	27.53		73.1	72.0		4.79	4.70		1.06	1.07		3	
12/7/2013	14:20	Fine	Middle	4.0	29.37	29.37	29.45	7.59	7.59	7.58	28.47	28.47	28.46	75.8	75.4	74.9	4.92	4.90	4.88	1.90	1.98	1.59	9	8.50
	14:22		Middle	4.0	29.53	29.53		7.57	7.57		28.44	28.44		74.4	74.1		4.85	4.83		1.26	1.23		8	
15/7/2013	14:25	Rainy	Middle	3.0	26.76	26.76	27.02	7.92	7.92	7.92	29.02	29.02	29.02	90.5	88.4	88.0	6.15	6.01	5.98	1.30	1.30	1.31	5	4.50
	14:27		Middle	3.0	27.78	26.78		7.91	7.91		29.02	29.02		87.4	85.6		5.94	5.82		1.31	1.31		4	
17/7/2013	5:45	Cloudy	Middle	2.0	26.70	26.70	26.75	7.96	7.97	8.01	28.71	28.71	28.72	69.4	71.9	72.8	4.72	4.90	4.96	1.30	1.44	1.29	3	3.00
	5:46		Middle	2.0	26.80	26.80		8.05	8.05		28.72	28.72		75.7	74.2		5.15	5.05		1.18	1.24		3	
20/7/2013	10:06	Fine	Middle	2.0	27.50	27.50	27.55	8.04	8.04	8.06	29.04	29.04	29.04	84.3	83.1	83.1	5.66	5.57	5.58	2.50	2.41	2.42	3	3.50
	10:08		Middle	2.0	27.60	27.60		8.08	8.08		29.04	29.04		81.8	83.2		5.49	5.58		2.39	2.39		4	
22/7/2013	10:30	Fine	Middle	4.0	26.80	26.80	26.85	8.10	8.10	8.10	32.99	32.99	33.02	81.6	82.1	82.0	5.41	5.45	5.44	3.43	3.54	3.50	4	4.50
	10:32		Middle	4.0	26.90	26.90		8.10	8.10		33.05	33.05		82.2	82.1		5.46	5.45		3.55	3.46		5	<u> </u>
24/7/2013	12:10	Cloudy	Middle	4.0	26.40	26.40	26.40	8.10	8.10	8.11	32.79	32.79	32.79	76.3	77.5	77.2	5.11	5.19	5.17	8.66	8.65	8.65	8	7.00
	12:12		Middle	4.0	26.40	26.40		8.11	8.11		32.79	32.79		77.3	77.7		5.18	5.20		8.65	8.63		6	
26/7/2013	13:45	Cloudy	Middle	3.5	27.00	27.00	27.00	8.01	8.01	8.01	31.80	31.80	31.80	71.3	71.2	71.1	4.75	4.74	4.74	10.01	10.02	10.03	11	11.00
	13:47		Middle	3.5	27.00	27.00		8.01	8.01		31.80	31.80		70.9	70.9		4.73	4.73		10.08	10.02		11	

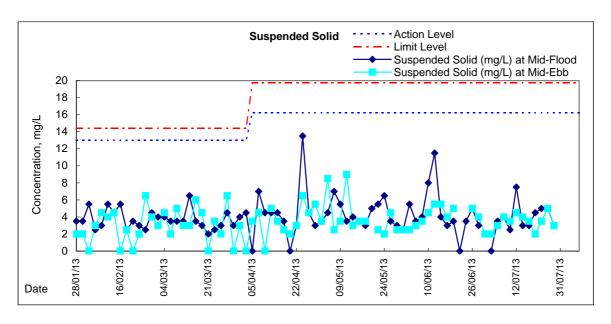
Remarks:

Single underline denotes exceedance over Action Level.

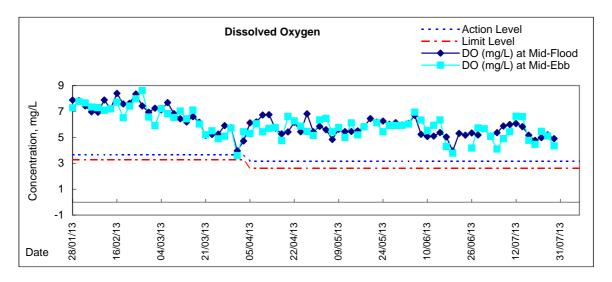
#### Graphic Presentation of Water Quality Result of WSD9 - Tai Wan

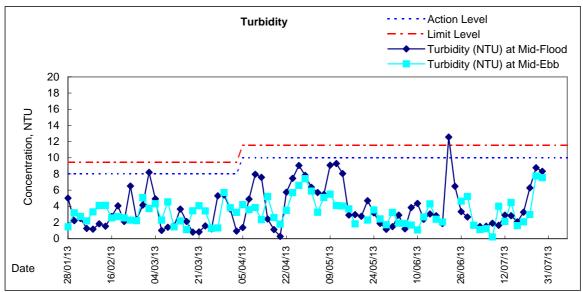


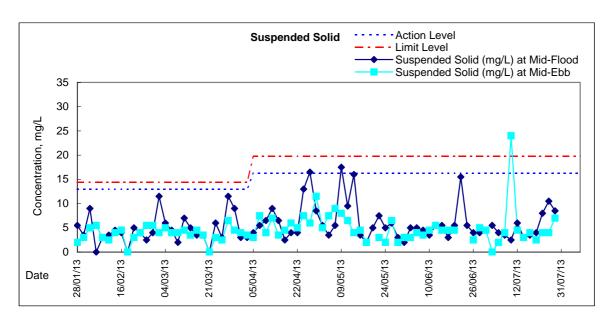




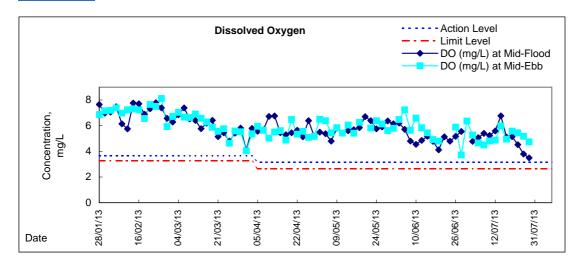
#### Graphic Presentation of Water Quality Result of WSD17 - Quarry Bay

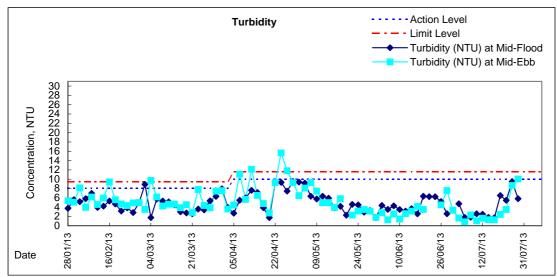


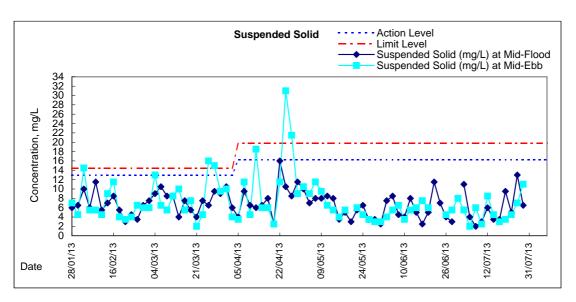




#### Graphic Presentation of Water Quality Result of WSD19 - Sheung Wan

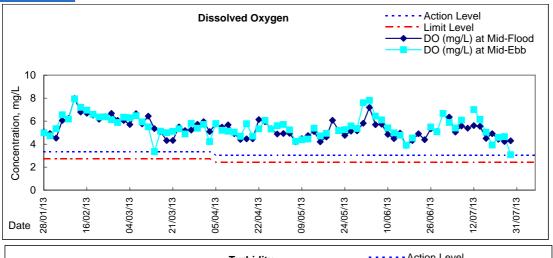


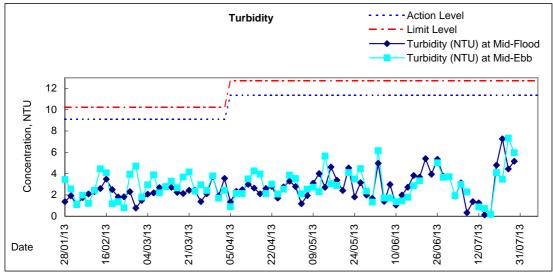


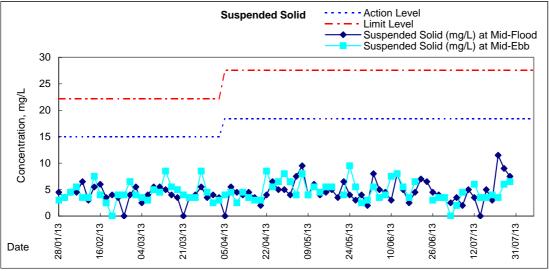


### am

#### Graphic Presentation of Water Quality Result of C1 - HKCEC

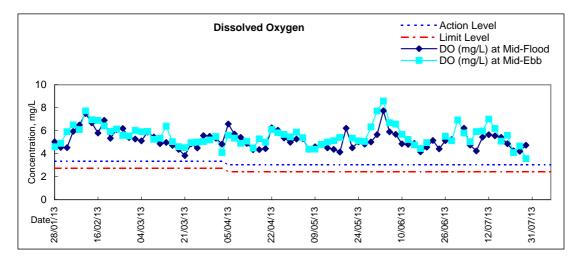


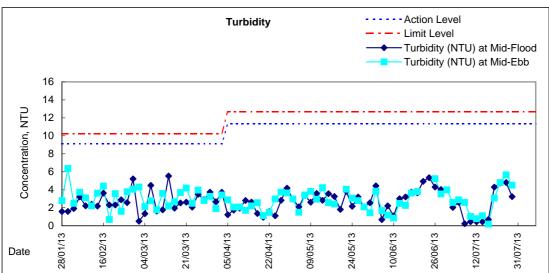


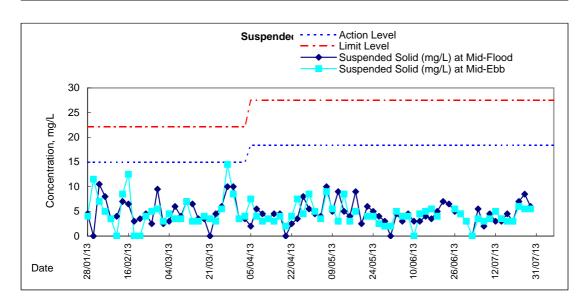


Remarks: Due to the blockage of road access to C1 on 15 Dec 2012 during mid-flood, the water quality monitoring was cancelled at C1 on 15 Dec 2012 during mid-flood.

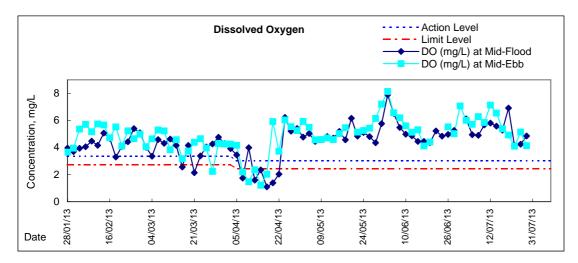
#### Graphic Presentation of Water Quality Result of P3 - APA

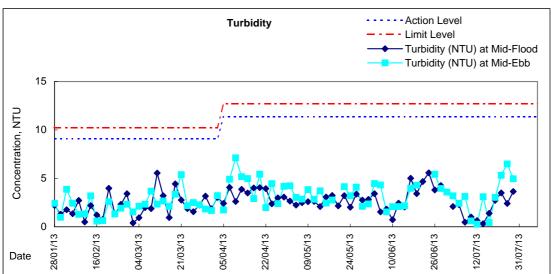


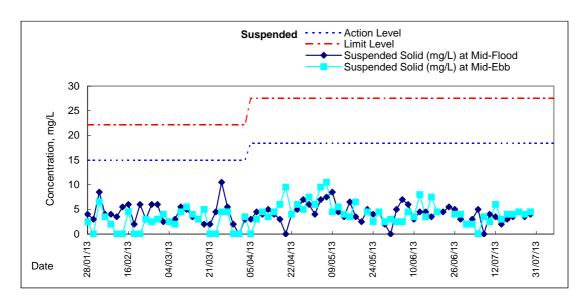




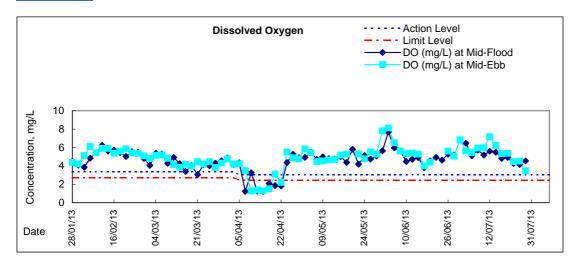
#### Graphic Presentation of Water Quality Result of P1 - HKCEC Phase I

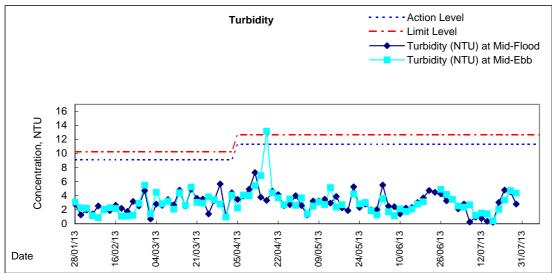


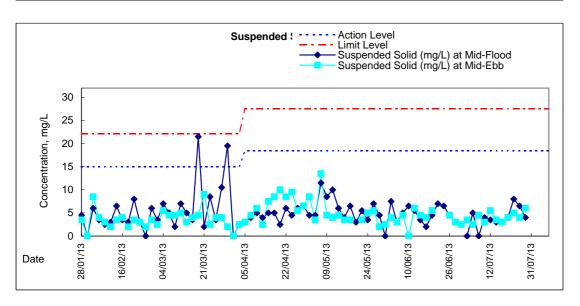




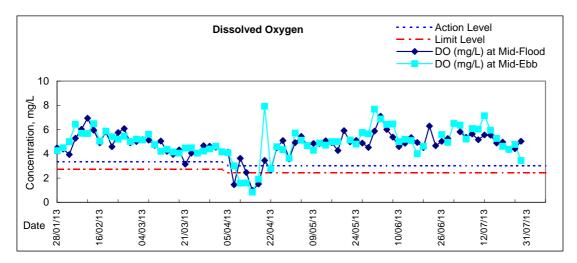
#### Graphic Presentation of Water Quality Result of P4 - SOC

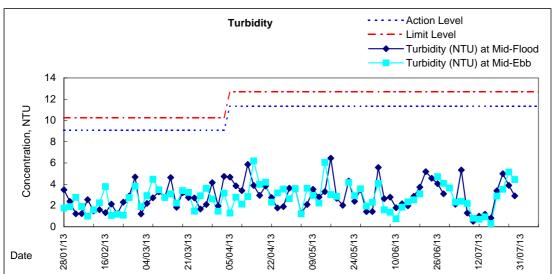


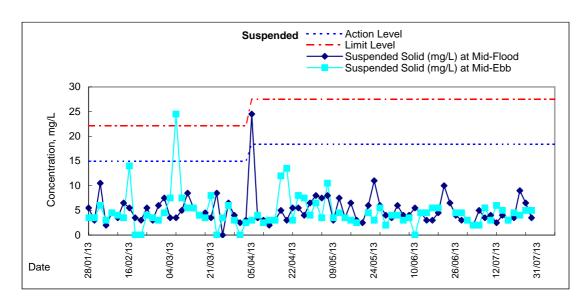




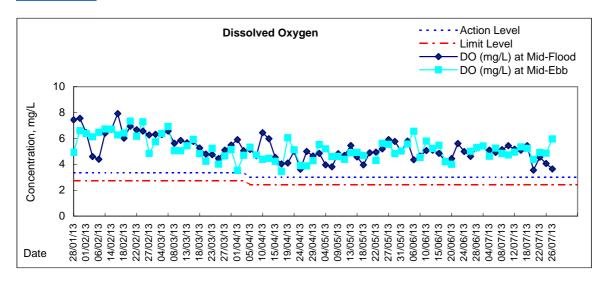
#### Graphic Presentation of Water Quality Result of P5 - WCT / RT / IT

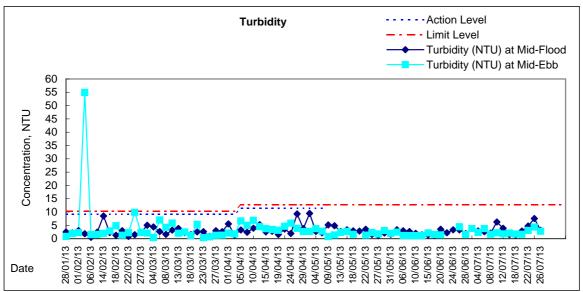


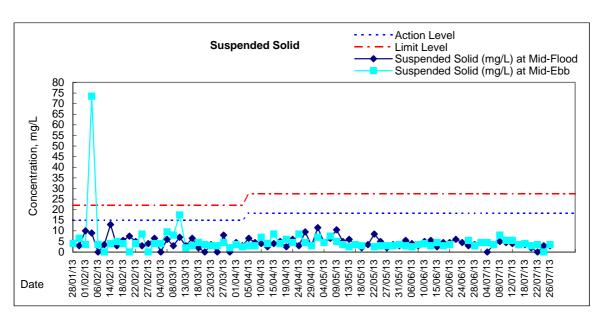




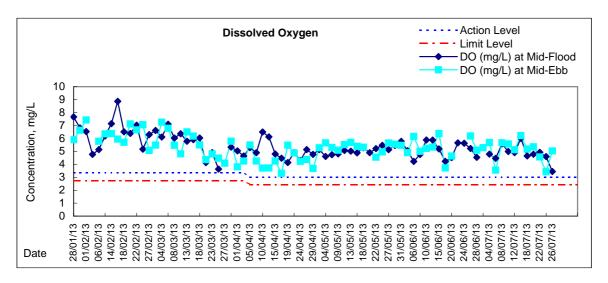
#### **Graphic Presentation of Water Quality Result of C5e - SHKC (Eastern)**

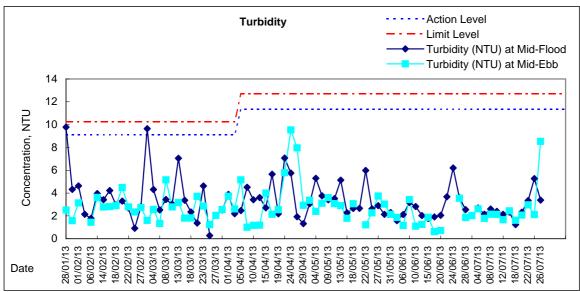


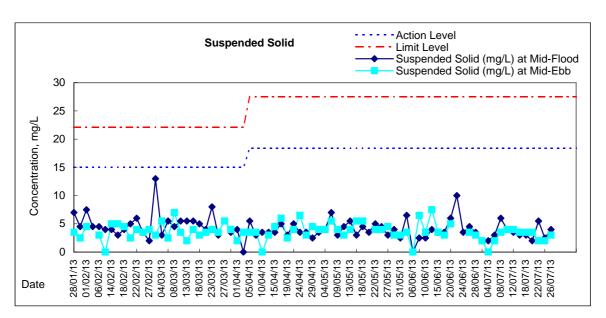




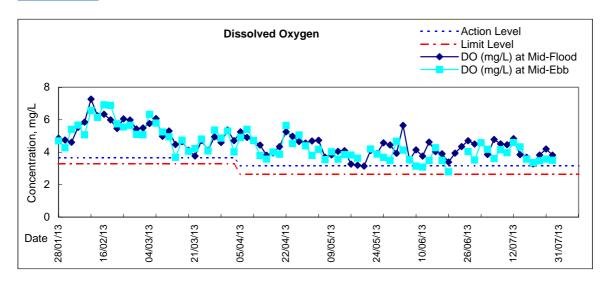
#### Graphic Presentation of Water Quality Result of C5w - SHKC (Western)

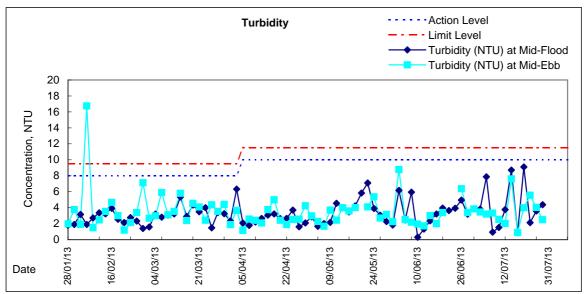


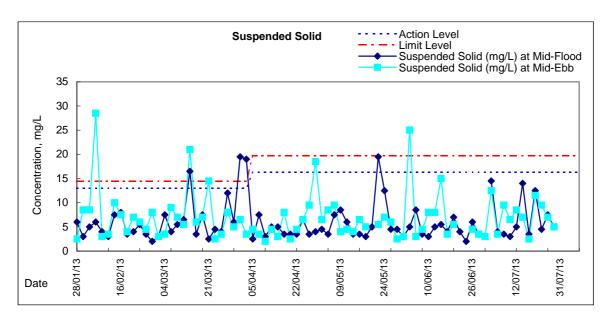




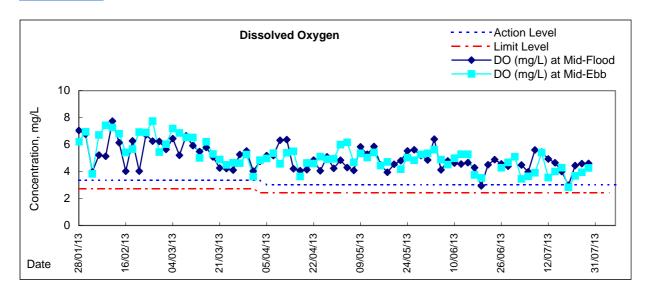
#### Graphic Presentation of Water Quality Result of WSD21 - Wan Chai

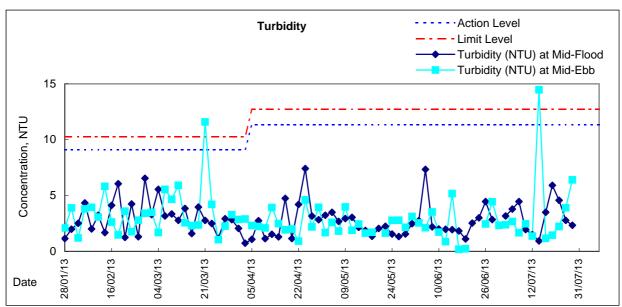


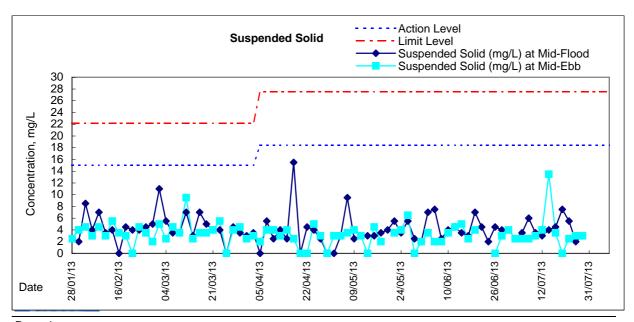




#### **Graphic Presentation of Water Quality Result of C7 - Windsor House**







Remarks:

\*Due to the Strong Wind Signal No.3 was hoisted on 2 Jul 13 at flood tide, the water qulity monitoring was cancelled.



#### Water Monitoring Result at C6 - Excelsior Hotel Mid-Flood Tide

Date	Time	Weater	Samplin	g Depth	Wat		perature		рН			Salini	ty	D	O Satur	ation		DO	
Date		Condition	r	n	Va	<u>°C</u> lue	Average	Va	lue	Average	Va	ppt lue	Average	Va	lue	Average	Va	mg/L lue	Average
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28/6/2013	0:03	Cloudy	Middle	1.0	28.50	28.50	28.5	7.97	7.97	8.0	23.96	23.96	24.0	62.8	65.0	63.9	4.27	4.42	4.35
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	-	ropical Storm	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	15:44	Fine	Middle	1.5	29.75	29.75	29.8	7.68	7.68	7.7	25.32	25.32	25.3	92.9	90.9	91.9	6.13	6.00	6.07
	-		Bottom	-	-	-	-	-	-	-	-	-	-	<u>-</u>	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	17:35	Cloudy	Middle	1.0	28.70	28.70	28.7	8.18	8.18	8.2	25.18	25.18	25.2	75.4	75.6	75.5	5.07	5.09	5.08
	-		Bottom	-	-	-	-   -	-	-	-	-	-	-	-	-	-	-	-	- -
8/7/2013		Cloudy	Surface	- 1.0							24.32	24.41			- 05.6			- 5 70	
6/7/2013	18:26	Cloudy	Middle Bottom	1.0	28.60	28.60	28.6	7.52	7.52	7.5	-	-	24.4	85.0	85.6	85.3	5.75	5.79	5.77
	-		Surface	_	_	_	_	_	_	_	_	_	_	_	_			_	-
10/7/2013	19:09	Cloudy	Middle	1.0	27.90	27.90	27.9	8.14	8.14	8.1	25.98	25.98	26.0	80.3	81.6	81.0	5.45	5.54	5.50
	-	,	Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/7/2013	20:10	Cloudy	Middle	1.0	28.70	28.70	28.7	8.25	8.25	8.3	27.60	27.60	27.6	84.2	85.9	85.1	5.60	5.70	5.65
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	11:35	Cloudy	Middle	1.5	27.58	27.58	27.6	7.81	7.81	7.8	27.06	27.06	27.1	65.1	64.2	64.7	4.41	4.33	4.37
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	,	-	-
18/7/2013	3:10	Cloudy	Middle	1.5	26.00	26.00	26.0	8.06	8.06	8.1	26.73	26.73	26.7	60.6	62.4	61.5	4.22	4.35	4.29
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	15:59	Fine	Middle	1.5	26.40	26.40	26.4	7.81	7.81	7.8	28.38	28.38	28.4	44.1	44.2	44.2	3.02	3.02	3.02
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
00-10-1	- 40.50		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	18:50	Cloudy	Middle	1.0	27.00	27.00	27.0	7.99	7.99	8.0	29.51	29.51	29.5	78.2	79.4	78.8	5.28	5.36	5.32
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/7/2013	19:23	Cloudy	Surface Middle	1.0	26.40	26.40	26.4	8.16	8.16	8.2	25.85	25.84	25.8	65.6	66.4	66.0	4.57	4.62	4.60
27/1/2013	19:23	Cloudy	Bottom	-	20.40	20.40	20.4	-	-	- 0.2	20.80	20.84	25.8	65.6	- 00.4	-	4.57	4.02	4.60
	-		Surface	-	_	_	<u> </u>	_	_	-	-	-	-	_	_	-	_	_	-
26/7/2013	19:48	Cloudy	Middle	1.0	26.70	26.70	26.7	8.00	8.00	8.0	27.80	27.80	27.8	68.8	68.9	68.9	4.72	4.72	4.72
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		<u> </u>	_ 33111			<u> </u>	<u> </u>		<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at C7 - Windsor House Mid-Flood Tide

Date	Time	Weater	Samplin	g Depth	Wat		perature		рН			Salini	ty	D	O Satur	ation		DO	
Date		Condition	r	n	Va	lue °C	Average	Va	lue	Average	Va	ppt lue	Average	Va	% lue	Average	Va	mg/L lue	Average
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28/6/2013	23:40	Cloudy	Middle	1.0	28.60	28.60	28.6	7.92	7.92	7.9	23.72	23.72	23.7	63.1	65.6	64.4	4.34	4.47	4.41
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	-	ropical Storm	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	15:50	Fine	Middle	1.5	30.09	30.09	30.1	7.46	7.46	7.5	24.80	24.80	24.8	75.6	74.9	75.3	4.98	4.94	4.96
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	17:25	Cloudy	Middle	1.0	28.80	28.80	28.8	8.06	8.06	8.1	23.96	23.96	24.0	56.8	59.8	58.3	3.87	4.06	3.97
	-		Bottom	-	-	-	-   -	-	-	-	-	-	-	-	-	-	-	-	- -
8/7/2013		Cloudy	Surface Middle	- 1.0		28.90	28.9	7.82			24.55	24.55		83.0	- 02.6		5.59		5.61
6/7/2013	18:17	Cloudy	Bottom	1.0	28.90	28.90	28.9	-	7.86	7.8	24.55	-	24.6	- 63.0	83.6	83.3	5.59	5.63	5.01
	-		Surface	_	_	_	_	_	_		_	_	_		_			_	-
10/7/2013	19:00	Cloudy	Middle	1.0	27.70	27.70	27.7	8.11	8.11	8.1	25.83	25.83	25.8	79.9	80.4	80.2	5.44	5.48	5.46
	-	,	Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/7/2013	20:03	Cloudy	Middle	1.0	28.60	28.60	28.6	8.12	8.12	8.1	27.12	27.12	27.1	75.4	76.5	76.0	5.01	5.08	5.05
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	11:45	Cloudy	Middle	1.5	27.69	27.89	27.8	7.71	7.71	7.7	27.15	27.15	27.2	78.0	76.0	77.0	6.23	5.14	5.69
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	,	-	-	-	-	•	•	-	,	-	-
18/7/2013	3:00	Cloudy	Middle	1.5	25.90	25.90	25.9	7.86	7.86	7.9	23.47	23.47	23.5	56.0	57.0	56.5	3.98	4.06	4.02
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	16:08	Fine	Middle	1.5	26.70	26.70	26.7	7.84	7.84	7.8	28.71	28.71	28.7	46.7	46.2	46.5	3.18	3.15	<u>3.17</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
00 = 100 11	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	18:32	Cloudy	Middle	1.0	27.00	27.00	27.0	8.12	8.12	8.1	27.68	27.68	27.7	65.3	66.0	65.7	4.45	4.51	4.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/7/2013	10:15	Cloudy	Surface Middle	1.0	26.30	26.30	26.3	8.00	8.00	8.0	27.24	27.23	27.2	- 66.3	- 66.6	66.5	4.59	4.60	4.60
24/1/2013	19:15	Cioudy	Bottom	1.0	26.30	26.30	26.3	8.00	8.00	0.0	-	-	-	66.3	66.6	56.5	4.59	4.60	4.60
	-		Surface	_	_	_	<u> </u>	_	_	-	-	-	-	-	-	-	_	-	-
26/7/2013	19:40	Cloudy	Middle	1.0	26.70	26.70	26.7	7.91	7.91	7.9	27.09	27.09	27.1	66.6	67.0	66.8	4.58	4.61	4.60
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		<u> </u>	2300111	<u> </u>		<u> </u>	<u> </u>	<u> </u>						<u> </u>	<u> </u>				

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area Mid-Flood Tide

Data	Time	Weater	Samplin	ng Depth	Wat		perature		рН			Salinit	у	D	O Satur	ation		DO	
Date		Condition	r	n	Va	°C llue	Average	Va	- lue	Average	Va	ppt lue	Average	Va	% lue	Average	Va	mg/L ilue	Average
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28/6/2013	2:07	Cloudy	Middle	1.5	28.00	28.10	28.1	7.93	7.90	7.9	19.43	19.43	19.4	24.2	23.9	24.1	1.70	1.57	<u>1.64</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	-	ropical Storm	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	15:22	Fine	Middle	1.5	29.74	29.74	29.7	7.50	7.50	7.5	23.20	23.20	23.2	78.1	77.6	77.9	5.23	5.19	5.21
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	19:12	Cloudy	Middle	1.0	28.20	28.20	28.2	8.16	8.13	8.1	19.75	19.73	19.7	27.1	25.3	26.2	1.86	1.77	1.82
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0/7/2012	- 40.54	Claudu	Surface	-	-	-	-	-	- 0.40	-	-	-	-	-	- 07.0	- 07.7	-	-	-
8/7/2013	19:54	Cloudy	Middle Bottom	1.0	28.10	28.10	28.1	8.18	8.18	8.2	15.95	15.95	16.0	28.0	27.3	27.7	2.00	1.95	<u>1.98</u>
	_		Surface	_				-	-			-		_		_	_		-
10/7/2013	20:20	Cloudy	Middle	1.0	27.60	27.60	27.6	7.94	7.94	7.9	20.70	20.70	20.7	25.9	26.3	26.1	1.82	1.85	1.84
10/1/2010	-	Cloudy	Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	_	-	-	_	-	-
12/7/2013	21:25	Cloudy	Middle	1.0	28.70	28.70	28.7	8.09	8.09	8.1	24.31	24.31	24.3	58.5	58.0	58.3	3.93	3.91	3.92
	-	·	Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	11:22	Cloudy	Middle	1.5	27.29	27.29	27.3	7.76	7.76	7.8	26.99	26.99	27.0	89.7	89.0	89.4	6.11	6.07	6.09
	-		Bottom	-	-	-	-	-	-	-	-	-	ı	-		-	1	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
18/7/2013	2:42	Cloudy	Middle	1.5	26.00	26.00	26.0	8.16	8.16	8.2	22.39	22.39	22.4	48.3	48.9	48.6	3.45	3.50	3.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	15:47	Fine	Middle	1.5	26.50	26.50	26.5	7.82	7.82	7.8	23.15	23.15	23.2	48.8	48.2	48.5	3.44	3.40	3.42
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	20:39	Cloudy	Middle	1.0	26.80	26.80	26.8	8.13	8.13	8.1	21.19	21.19	21.2	45.9	47.4	46.7	3.28	3.35	3.32
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/7/2013	20:57	Cloudy	Middle	1.0	26.50	26.50	26.5	7.95	7.95	8.0	18.75	18.75	18.8	45.9	45.7	45.8	3.31	3.30	3.31
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	_	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/7/2013	21:25	Cloudy	Middle	1.0	26.70	26.70	26.7	7.97	7.97	8.0	20.91	20.91	20.9	45.7	46.0	45.9	3.26	3.28	3.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

#### Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area Mid-Flood Tide

	Date	Time	Weater	Samplin	g Depth	Wat		erature		рН			Salini	ty	D	O Satur	ation		DO	
2006/2013   1.7   Chount   C	Date		Condition	n	n	Va	llue °C	Average	Va	lue	Average	Va	ppt llue	Average	Va	lue %	Average	Va	mg/L ilue	Average
Section   Sect		-		Surface	-	-	-	-			-	-		-	-	-	-	-	-	-
2-772013   Corporal Signer   Model   Color	28/6/2013	2:12	Cloudy	Middle	1.5	28.10	28.10	28.1	7.62	7.62	7.6	19.23	19.23	19.2	25.1	24.4	24.8	1.75	1.71	<u>1.73</u>
Part		-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottom   Color   Bottom   Color   Co		-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Authority   Auth	2/7/2013	-	ropical Storm	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1520   Fire   Midde   1.5   30.06   30.06   30.1   7.65   7.75   24.58   24.58   24.6   86.0   86.5   86.5   5.81   5.82   5.72		-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottom   Color   Bottom   Color   Co		-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface   Color   Surface   Color   Color   Middle   Color	4/7/2013	15:20	Fine	Middle	1.5	30.06	30.06	30.1	7.65	7.65	7.7	24.58	24.58	24.6	88.0	85.0	86.5	5.81	5.62	5.72
B67/2013   19-17   Cloudy   Middle   1.0   28-30   28-30   28-30   28-30   7-76   7-78   7-8   19-52   19-52   19-55   23-7   24-1   23-9   1-65   1-85		-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Botton   County   Surface   County   Surface   County   Middle   1.0   28.10		-			-	-		-	-	-	-						-	-	-	-
Surface   Cloudy   Middle   1.0   28.10   28.10   28.11   7.82   7.82   7.82   7.82   7.82   7.82   7.82   7.82   7.82   7.83   7.82   7.82   7.83   7.82   7.83   7.82   7.83	6/7/2013		Cloudy					28.3			7.8			19.5	23.7	24.1		1.65	1.68	
B6772013   20.00   Cloudy   Middle   1.0   28.10   28.11   7.82   7.82   7.82   7.82   7.8   15.67   15.77   27.77   28.4   28.11   1.98   2.03   2.01   2			<u> </u>												-			-		
Bottom   Surface   Surfa															-					
10/7/2013   20.25   Cloudy   Middle   1.0   27.40	8/7/2013		Cloudy															1.98	2.03	
1077/2013   20.25   Cloudy   Middle   1.0   27.40   27.40   27.40   27.4   7.65   7.65   7.7   20.52   20.52   20.5   27.6   28.0   27.8   1.93   1.97   1.95															-			-	-	
Solton   S															-					
1277/2013   21:31   Cloudy   Middle   1.0   28.60   28.60   28.60   28.60   8.00   7.98   8.0   24.23   24.24   24.2   56.3   57.5   56.9   3.86   3.88   3.87	10/7/2013		Cloudy															1.93	1.97	
12/7/2013   21:31   Cloudy   Middle   1.0   28.60   28.60   28.60   28.60   7.98   8.0   24.23   24.24   24.2   56.3   57.5   56.9   3.86   3.88   3.87		<u> </u>												]	-			-	-	
Bottom   Surface   Surfa	10/7/0010														-			-		
15/7/2013   11:20   Cloudy   Middle   1.5   27.44	12///2013		Cloudy															3.86	3.88	
15/7/2013   11:20   Cloudy   Middle   1.5   27.44   27.44   27.4   7.81   7.81   7.8   24.65   24.65   24.7   102.2   99.0   100.6   7.04   6.82   6.93		<u> </u>												]	_			_		
Bottom   Coloudy   Bottom   Coloudy   Bottom   Coloudy   Coloudy	15/7/2013	11:20	Cloudy		1.5	27.44	27.44	27.4	7.81	7.81	7.8	24.65	24.65	24.7	102.2	99.0	100.6	7.04	6.82	6.93
18/7/2013   2:49   Cloudy   Middle   1.5   26.10   26.10   26.1   7.92   7.91   7.9   22.13   22.13   22.1   47.8   48.8   48.3   3.42   3.49   3.46			·															-	-	
Bottom   Surface   Surfa		-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013   15:43   Fine	18/7/2013	2:49	Cloudy	Middle	1.5	26.10	26.10	26.1	7.92	7.91	7.9	22.13	22.13	22.1	47.8	48.8	48.3	3.42	3.49	3.46
20/7/2013 Fine Middle 1.5 26.40 26.40 26.4 7.84 7.84 7.8 26.05 26.05 26.1 51.3 50.5 50.9 3.56 3.51 3.54    - Bottom		-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottom   -   -   Surface   -   -   -   -   -   -   -   -   -		-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	20/7/2013	15:43	Fine	Middle	1.5	26.40	26.40	26.4	7.84	7.84	7.8	26.05	26.05	26.1	51.3	50.5	50.9	3.56	3.51	3.54
22/7/2013   20:47   Cloudy   Middle   1.0   26.90   26.90   26.90   7.96   7.96   8.0   20.86   20.86   20.9   45.0   45.3   45.2   3.19   3.22   3.21		-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottom   -   -   Surface   -   -   -   -   -   -   -   -   -				Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/7/2013	22/7/2013	20:47	Cloudy	Middle	1.0	26.90	26.90	26.9	7.96	7.96	8.0	20.86	20.86	20.9	45.0	45.3	45.2	3.19	3.22	<u>3.21</u>
24/7/2013 Cloudy Middle 1.0 26.50 26.50 26.5 7.88 7.88 7.9 18.76 18.76 18.8 45.0 44.9 45.0 3.26 3.24 3.25  - Surface				Bottom	-		_	-			-			-			-	_	_	-
- Bottom		-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Surface	24/7/2013	21:03	Cloudy	Middle	1.0	26.50	26.50	26.5	7.88	7.88	7.9	18.76	18.76	18.8	45.0	44.9	45.0	3.26	3.24	3.25
		-		Bottom	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-
26/7/2013 21:32 Cloudy Middle 1.0 26.70 26.70 26.7 7.93 7.93 7.9 20.83 20.83 20.8 46.8 46.4 46.6 3.32 3.31 3.32		-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	26/7/2013	21:32	Cloudy	Middle	1.0	26.70	26.70	26.7	7.93	7.93	7.9	20.83	20.83	20.8	46.8	46.4	46.6	3.32	3.31	3.32
- Bottom		-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at C6 - Excelsior Hotel Mid-Ebb Tide

1)2†0	Time	Weater	Samplin	g Depth	Wat		erature		рН			Salini	ty	D	O Satur	ation		DO	
Date		Condition	n	n	Va	<u>°C</u> lue	Average	Va	lue -	Average	Va	ppt llue	Average	Va	% lue	Average	Va	mg/L ilue	Average
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28/6/2013	14:45	Sunny	Middle	2	28.69	28.69	28.7	7.40	7.40	7.4	25.09	25.09	25.1	77.8	76.6	77.2	5.24	5.15	5.20
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	10:25	Fine	Middle	2	28.07	28.07	28.1	7.66	7.66	7.7	26.42	26.42	26.4	100.5	94.1	97.3	6.77	6.33	6.55
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	11:10	Fine	Middle	2	29.11	29.11	29.1	7.79	7.79	7.8	25.40	25.40	25.4	85.7	83.7	84.7	5.72	5.58	5.65
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
_	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	12:20	Fine	Middle	2	28.75	28.75	28.8	7.73	7.73	7.7	25.99	25.99	26.0	81.4	77.8	79.6	5.44	5.20	5.32
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-
8/7/2013	12:25	Fine	Middle	2	29.14	29.14	29.1	7.50	7.50	7.5	23.59	23.59	23.6	63.9	63.6	63.8	4.29	4.28	4.29
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-
10/7/2013	14:25	Cloudy	Middle	2	27.59	27.59	27.6	7.78	7.78	7.8	27.07	27.07	27.1	92.8	90.7	91.8	6.29	6.15	6.22
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/7/2013	15:35	Fine	Middle	2	29.00	29.00	29.0	7.21	7.21	7.2	28.29	28.29	28.3	53.1	53.0	53.1	3.48	3.48	3.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ţ	-		Surface	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	15:30	Rainy	Middle	2	26.61	26.61	26.6	7.86	7.86	7.9	20.06	20.06	20.1	61.0	60.6	60.8	4.37	4.35	4.36
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2013	6:47	Cloudy	Middle	2	26.60	26.60	26.6	8.11	8.11	8.1	27.38	27.38	27.4	76.2	77.3	76.8	5.24	5.32	5.28
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ţ	-		Surface	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	11:00	Cloudy	Middle	2	26.10	26.10	26.1	7.84	7.84	7.8	29.01	29.01	29.0	50.6	50.0	50.3	3.47	3.42	3.45
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-
22/7/2013	12:10	Fine	Middle	2	26.90	26.90	26.9	7.90	7.90	7.9	32.02	32.02	32.0	59.7	60.3	60.0	3.99	4.02	4.01
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/7/2013	14:18	Cloudy	Middle	2	26.90	26.90	26.9	7.92	7.92	7.9	28.91	28.91	28.9	59.0	58.3	58.7	4.00	3.85	3.93
	-		Bottom	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-
26/7/2013	14:55	Cloudy	Middle	2	26.70	26.70	26.7	7.91	7.91	7.9	28.43	28.43	28.4	78.8	78.3	78.6	5.38	5.34	5.36
	-		Bottom	1	ı	•	-	1	-	-	-	-	-	ı	1	-	•	-	-

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



# Water Monitoring Result at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area Mid-Ebb Tide

	Time	Weater	Samplin	ng Depth	Wat	er Temr	erature		pН			Salini	tv	D	O Satur	ration		DO	
Date		Condition		n		°C	Average	Va	lue	Average	\/a	ppt	Average		% lue	Average	\/a	mg/L llue	Average
	-		Surface	-	- va	-		-	-	- Average	-	-	- Average	-	-	- Average	-	-	- Average
28/6/2013	14:37	Sunny	Middle	1.5	28.60	28.60	28.6	7.35	7.35	7.4	22.77	22.77	22.8	85.9	85.3	85.6	5.86	5.82	5.84
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	10:17	Fine	Middle	1.5	28.57	28.57	28.6	7.52	7.52	7.5	21.52	21.52	21.5	77.0	76.6	76.8	5.30	5.28	5.29
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	11:02	Fine	Middle	1.5	28.57	28.57	28.6	7.62	7.62	7.6	24.18	24.18	24.2	80.0	79.5	79.8	5.42	5.35	5.39
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	12:07	Fine	Middle	1.5	28.30	28.30	28.3	7.57	7.57	7.6	23.52	23.52	23.5	73.1	72.7	72.9	5.00	4.97	4.99
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2013	12:12	Fine	Middle	1.5	28.86	28.86	28.9	7.58	7.58	7.6	23.54	23.54	23.5	79.1	78.6	78.9	5.36	5.32	5.34
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/2/00/10	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2013	14:11	Cloudy	Middle	1.5	27.29	27.29	27.3	7.28	7.28	7.3	19.85	19.85	19.9	49.3	49.4	49.4	3.50	3.50	3.50
	_		Bottom Surface		_		_		_					-					_
12/7/2013	15:27	Fine	Middle	1.5	29.48	29.48	29.5	7.32	7.32	7.3	24.88	24.88	24.9	85.0	83.3	84.2	5.64	5.53	5.59
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	15:13	Rainy	Middle	1.5	26.25	26.25	26.3	8.25	8.25	8.3	3.27	3.27	3.3	97.0	96.0	96.5	7.69	7.61	7.65
	-		Bottom	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2013	6:19	Cloudy	Middle	1.5	26.80	26.80	26.8	8.01	8.00	8.0	22.31	22.31	22.3	35.7	36.4	36.1	2.52	2.57	<u>2.55</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	10:47	Cloudy	Middle	1.5	26.00	26.00	26.0	7.69	7.69	7.7	25.37	25.37	25.4	41.4	41.1	41.3	2.89	2.88	<u>2.89</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	12:02	Fine	Middle	1.5	27.00	27.00	27.0	7.60	7.60	7.6	20.27	20.27	20.3	47.5	47.3	47.4	3.34	3.31	3.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:06		Surface	1.0	26.40	26.40	26.4	7.86	7.86	7.9	29.80	29.80	29.8	75.6	75.5	75.6	5.15	5.14	5.15
24/7/2013	-	Cloudy	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:08		Bottom	3.0	26.40	26.40	26.4	7.86	7.86	7.9	29.78	29.78	29.8	68.8	68.9	68.9	4.68	4.69	4.69
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/7/2013	14:37	Cloudy	Middle	1.5	26.30	26.30	26.3	7.84	7.84	7.8	18.15	18.15	18.2	79.5	80.1	79.8	5.79	5.83	5.81
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at C7 - Windsor House Mid-Ebb Tide

	Time	Mostor	Complia	a Denth	10/64	or Tow	oratura		nL!	· <u> </u>		Salini	h.	7	O Satur	ration		DO	
Date	Time	Weater Condition	Samplin	ig Depth n		°C	Derature	Va	pH -	Averege	Va	ppt	•		%		Va	mg/L	
	_		Surface	_	va -	lue -	Average	va -	lue -	Average -	- va	lue -	Average	- va	lue -	Average	- Va	lue -	Average -
28/6/2013	14:50	Sunny	Middle	2	28.83	28.83	28.8	7.45	7.45	7.5	24.53	24.53	24.5	71.8	71.6	71.7	4.83	4.82	4.83
	-	,	Bottom	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	10:35	Fine	Middle	2	28.51	28.51	28.5	7.60	7.60	7.6	26.29	26.29	26.3	79.9	79.3	79.6	5.35	5.31	5.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	,	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	11:20	Fine	Middle	2	29.33	29.33	29.3	7.63	7.63	7.6	25.24	25.24	25.2	54.5	54.0	54.3	3.62	3.59	3.61
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	·	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	12:25	Fine	Middle	2	28.94	28.94	28.9	7.50	7.50	7.5	25.54	25.54	25.5	56.3	55.6	56.0	3.76	3.71	3.74
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2013	12:30	Fine	Middle	2	28.86	28.86	28.9	7.55	7.55	7.6	25.85	25.85	25.9	61.3	61.0	61.2	4.10	4.08	4.09
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	·	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2013	14:35	Cloudy	Middle	2	27.78	27.78	27.8	7.74	7.74	7.7	26.82	26.82	26.8	89.2	88.1	88.7	6.03	5.96	6.00
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/7/2013	15:37	Fine	Middle	2	28.49	28.49	28.5	7.14	7.14	7.1	27.54	27.54	27.5	55.8	55.7	55.8	3.71	3.70	3.71
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	15:35	Rainy	Middle	2	26.59	26.59	26.6	7.90	7.90	7.9	20.03	20.03	20.0	56.2	56.1	56.2	4.03	4.02	4.03
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2013	6:35	Cloudy	Middle	2	26.80	26.80	26.8	8.00	8.00	8.0	27.75	27.75	27.8	63.2	63.2	63.2	4.33	4.32	4.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	11:08	Cloudy	Middle	2	26.70	26.70	26.7	7.82	7.82	7.8	28.33	28.33	28.3	40.0	39.5	39.8	2.72	2.69	2.71
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	•	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	12:15	Fine	Middle	2	26.80	26.80	26.8	7.89	7.89	7.9	31.05	31.05	31.1	54.2	54.2	54.2	3.68	3.63	3.66
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	,	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/7/2013	14:30	Cloudy	Middle	2	26.70	26.70	26.7	7.92	7.92	7.9	29.37	29.37	29.4	57.6	58.2	57.9	3.91	3.95	3.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	,	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/7/2013	15:05	Cloudy	Middle	2	27.20	27.20	27.2	7.90	7.90	7.9	27.71	27.71	27.7	66.0	65.1	65.6	4.52	4.48	4.50
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

Single underline denotes exceedance over Action Level. Double underline denotes exceedance over Limit Level.



#### Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area Mid-Ebb Tide

	Time	Weater	Samplin	ng Depth	Wat	er Temr	erature		pН			Salini	tv	D	O Satur	ation		DO	
Date		Condition	n			°C	Average	Va	- lue	Average	\/a	ppt lue	Average		% lue		\/a	mg/L lue	Average
	-		Surface	-	- va	-		- va	-	Average -	-	-	-	va -	-	Average -	- va	iue -	Average -
28/6/2013	14:35	Sunny	Middle	1.5	28.86	28.86	28.9	7.46	7.46	7.5	17.87	17.87	17.9	68.6	67.4	68.0	4.78	4.70	4.74
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2013	10:15	Fine	Middle	1.5	28.40	28.40	28.4	7.56	7.56	7.6	21.45	21.45	21.5	79.2	78.7	79.0	5.44	5.41	5.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2013	11:00	Fine	Middle	1.5	28.71	28.71	28.7	7.65	7.65	7.7	22.73	22.73	22.7	90.5	87.7	89.1	6.17	5.97	6.07
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2013	12:05	Fine	Middle	1.5	28.45	28.45	28.5	7.64	7.64	7.6	25.04	25.04	25.0	77.3	74.3	75.8	5.22	5.02	5.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2013	12:10	Fine	Middle	1.5	28.70	28.70	28.7	7.61	7.61	7.6	23.49	23.49	23.5	85.2	83.2	84.2	5.77	5.63	5.70
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2013	14:09	Cloudy	Middle	1.5	27.51	27.51	27.5	7.54	7.54	7.5	25.54	25.54	25.5	57.7	56.9	57.3	3.95	3.90	3.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/7/2013	15:25	Fine	Middle Bottom	1.5	28.67	28.67	28.7	7.24	7.24	7.2	28.10	28.10	28.1	89.0	88.8	88.9	5.89	5.88	5.89
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2013	15:15	Rainy	Middle	1.5	26.22	26.22	26.2	7.99	7.99	8.0	12.17	12.17	12.2	97.6	95.9	96.8	7.37	7.24	7.31
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2013	6:25	Cloudy	Middle	1.5	27.00	26.90	27.0	7.86	7.86	7.9	22.00	22.00	22.0	44.5	45.0	44.8	3.13	3.17	<u>3.15</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2013	10:43	Cloudy	Middle	1.5	26.30	26.30	26.3	7.81	7.81	7.8	23.21	23.21	23.2	47.8	47.1	47.5	3.38	3.33	<u>3.36</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2013	12:00	Fine	Middle	1.5	27.00	27.00	27.0	7.86	7.86	7.9	26.12	26.12	26.1	69.7	70.4	70.1	4.79	4.84	4.82
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:02		Surface	1.0	26.40	26.40	26.4	7.92	7.92	7.9	20.34	20.34	20.3	74.9	74.0	74.5	5.39	5.31	5.35
24/7/2013	-	Cloudy	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:04		Bottom	3.0	26.40	26.40	26.4	7.90	7.90	7.9	20.31	20.31	20.3	73.7	73.5	73.6	5.29	5.27	5.28
	-		Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/7/2013	14:35	Cloudy	Middle	1.5	26.50	26.50	26.5	7.81	7.81	7.8	26.62	26.62	26.6	54.9	54.9	54.9	3.80	3.86	3.83
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

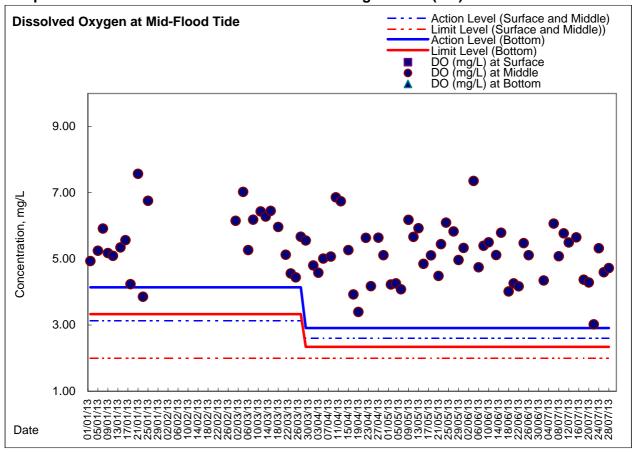
Remarks

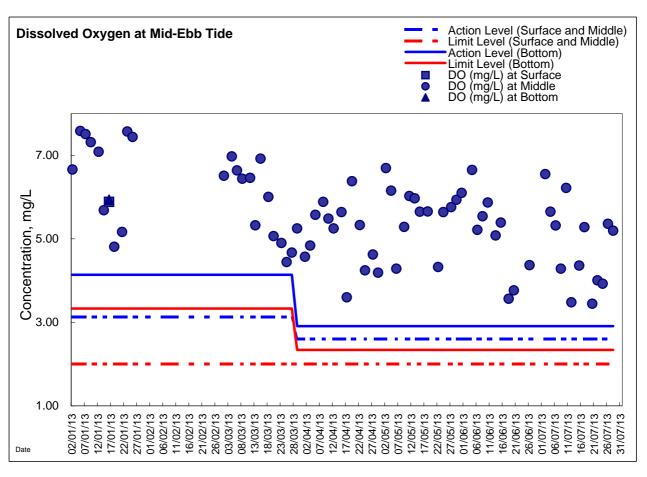
Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.

# am

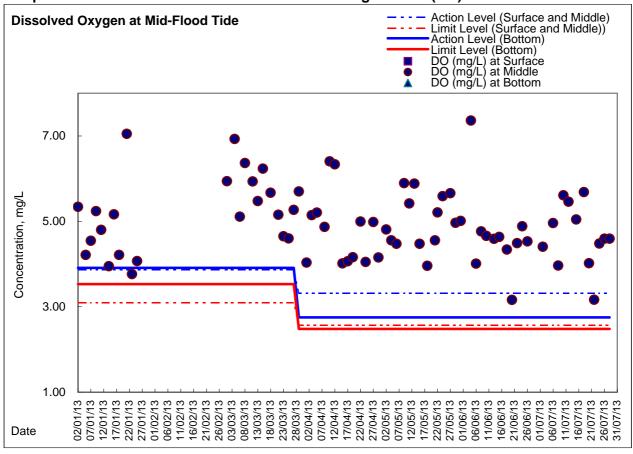
#### Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel

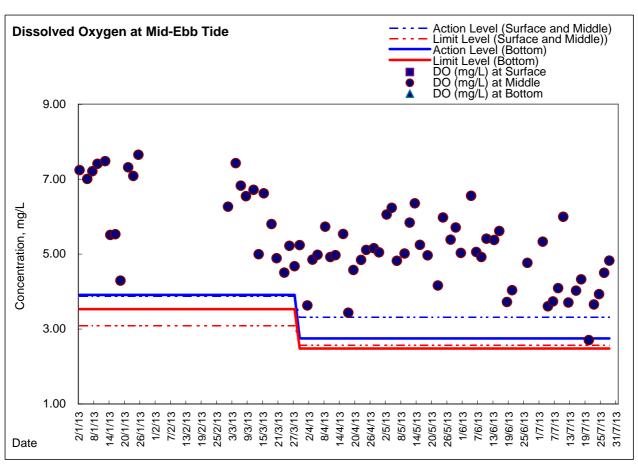




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### Graphic Presentation of Enhanced Water Monitoring Results (DO) at C7 - Windsor House

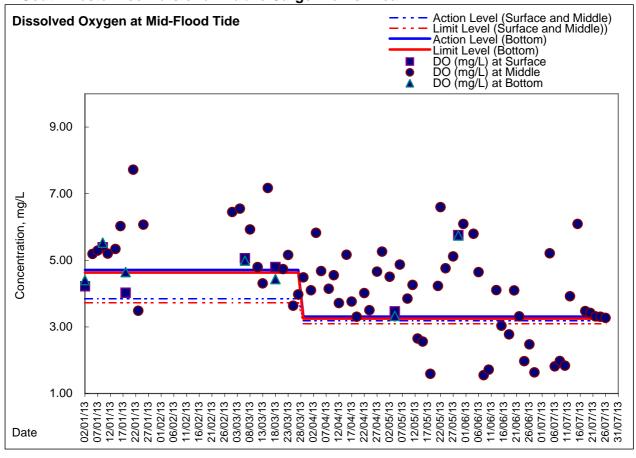


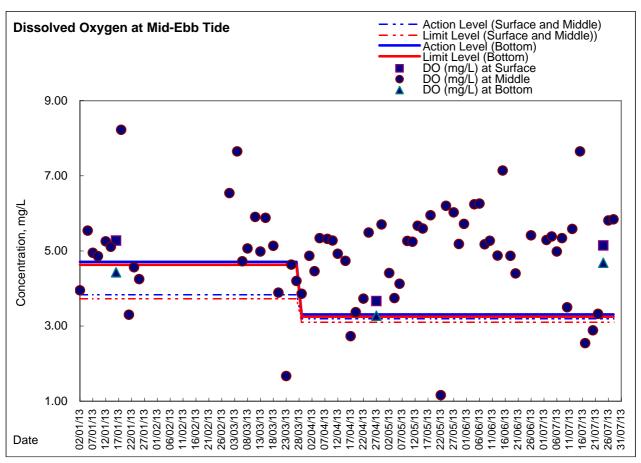




### Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW

- South-western corners of ex-Public Cargo Works Area

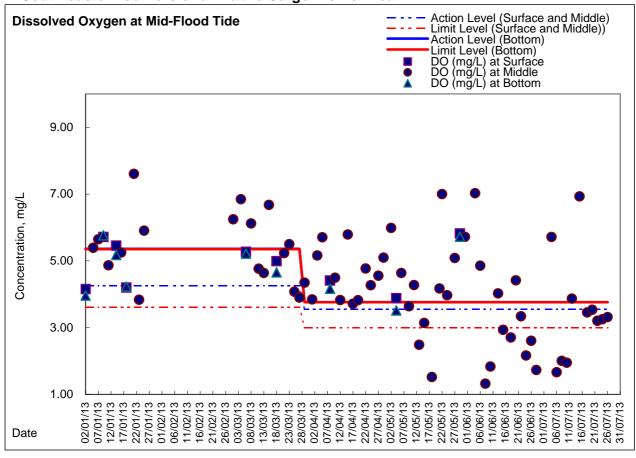


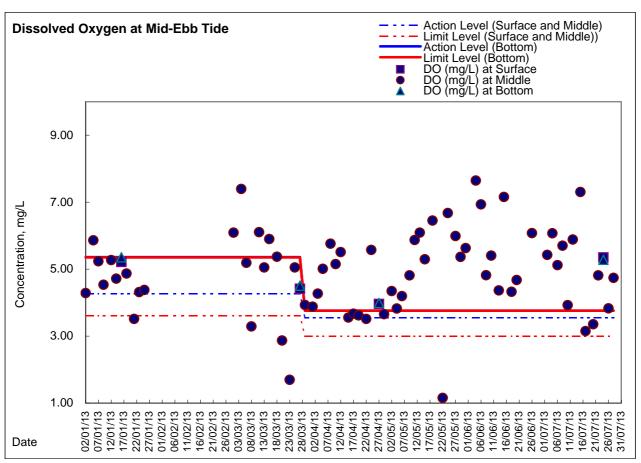




### Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SE

- South-eastern corners of ex-Public Cargo Works Area





# Appendix 5.4a

Additional Dissolved Oxygen Monitoring Results

Location: Station A

Coordinate: 835468E, 815857N

Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp	erature		pН			Salinit	у	D	O Satur	ration		DO mg/L	
		Condition	n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average
	14:41		Surface	1.0	28.70	28.70	28.70	8.16	8.16	8.16	26.37	26.37	26.37	92.9	92.3	92.60	6.13	6.09	6.11
4-Jul-13	-	Fine	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:43		Bottom	3.0	29.40	29.40	29.40	8.15	8.15	8.15	26.71	26.71	26.71	87.8	88.3	88.05	5.78	5.82	5.80
	20:43		Surface	1.0	27.50	27.50	27.50	8.13	8.13	8.13	30.37	30.37	30.37	83.9	83.0	83.45	5.60	5.53	5.57
12-Jul-13	-	Fine	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:45		Bottom	5.0	26.60	26.60	26.60	8.06	8.06	8.06	31.37	31.33	31.35	60.4	59.4	59.90	4.20	3.99	4.10
	9:18		Surface	1.0	27.10	27.10	27.10	8.07	8.07	8.07	28.25	28.25	28.25	80.3	80.7	80.50	5.44	5.47	5.46
15-Jul-13	-	Cloudy / Rainy	Middle	ı	-	-	-	-	-	-	-	-		1	-	-	-	-	-
	9:19		Bottom	4.0	26.80	26.80	26.80	8.04	8.04	8.04	31.04	31.04	31.04	74.1	74.2	74.15	4.98	4.98	4.98

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.
With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit

the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013

Location: Station B

Coordinate: 835572E, 815961N

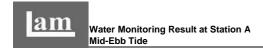
Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp	erature		pН			Salinit	у	D	O Satur %	ation		DO mg/L	
		Condition	n	n	Va	llue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average
	14:35		Surface	1.0	28.60	28.60	28.60	8.20	8.20	8.20	26.10	26.10	26.10	94.5	94.8	94.65	6.32	6.34	6.33
4-Jul-13	14:36	Fine	Middle	5.0	28.30	28.30	28.30	8.21	8.21	8.21	26.24	26.24	26.24	92.9	93.1	93.00	6.24	6.26	6.25
	14:37		Bottom	9.0	27.70	27.70	27.70	8.08	8.08	8.08	27.70	27.71	27.71	74.8	73.7	74.25	5.03	4.96	5.00
	22:37		Surface	1.0	27.50	27.50	27.50	8.15	8.15	8.15	30.49	30.49	30.49	88.5	88.1	88.30	5.91	5.88	5.90
12-Jul-13	22:39	Fine	Middle	5.0	27.30	27.30	27.30	8.14	8.14	8.14	30.66	30.66	30.66	85.0	84.6	84.80	5.68	5.65	5.67
	22:41		Bottom	9.0	27.10	27.10	27.10	8.11	8.11	8.11	31.03	31.03	31.03	74.1	74.0	74.05	4.97	4.96	4.97
	9:10		Surface	1.0	26.80	26.80	26.80	8.04	8.04	8.04	30.14	30.14	30.14	80.2	80.6	80.40	5.40	5.42	5.41
15-Jul-13	9:12	Cloudy / Rainy	Middle	5.0	26.70	26.70	26.70	8.04	8.04	8.04	30.87	30.87	30.87	71.4	72.0	71.70	4.82	4.84	4.83
	9:13		Bottom	9.0	26.30	26.30	26.30	8.03	8.03	8.03	30.16	30.16	30.16	67.6	68.0	67.80	4.58	4.60	4.59

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.
With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013

Location: Station C Coordinate: 835659E, 816271N

Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp	erature		pH -			Salinit	у	D	O Satur	ation		DO mg/L	
		Condition	n	n	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average	Va	lue	Average
	14:27		Surface	1.0	28.40	28.40	28.40	8.21	8.21	8.21	26.11	26.11	26.11	99.0	98.6	98.80	6.66	6.63	6.65
4-Jul-13	14:28	Fine	Middle	6.0	28.20	28.20	28.20	8.18	8.18	8.18	26.53	26.53	26.53	87.8	87.4	87.60	5.91	5.89	5.90
	14:29		Bottom	11.0	28.00	28.00	28.00	8.15	8.15	8.15	26.82	26.82	26.82	86.9	86.6	86.75	5.84	5.82	5.83
	22:29		Surface	1.0	27.20	27.20	27.20	8.17	8.17	8.17	30.50	30.51	30.51	89.2	88.3	88.75	5.97	5.91	5.94
12-Jul-13	22:31	Fine	Middle	6.5	27.10	27.10	27.10	8.16	8.16	8.16	30.60	30.60	30.60	85.6	86.4	86.00	5.73	5.78	5.76
	22:33		Bottom	12.0	26.80	26.80	26.80	8.10	8.10	8.10	31.51	31.50	31.51	83.3	84.2	83.75	5.58	5.63	5.61
	9:04		Surface	1.0	27.60	27.60	27.60	8.03	8.03	8.03	27.86	27.86	27.86	80.8	80.4	80.60	5.56	5.52	5.54
15-Jul-13	9:05	Cloudy / Rainy	Middle	6.5	26.60	26.60	26.60	8.01	8.01	8.01	30.76	30.76	30.76	73.8	74.3	74.05	4.98	5.01	5.00
	9:06		Bottom	12.0	26.50	26.50	26.50	8.00	8.00	8.00	31.61	31.61	31.61	70.0	68.4	69.20	4.73	4.62	4.68

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.
With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013



Location: Station A Coordinate: 835468E, 815857N

Date	Time	Weater	Samplin	g Depth	Wat		oerature		рН			Salini	ty	С	O Satu	ration		DO	
24.0		Condition	n	n	\/a	°C llue	Average	\/a	lue -	Average	V	ppt alue	Average	\/a	llue %	Average	Ve	mg/L alue	Average
	+				Ve	I	Average	Ve	lue	Average	V C	liue	Average	Ve	liue	Average	V	luc	Average
	9:23		Surface	1.0	28.70	28.70	28.70	8.13	8.13	8.13	26.96	26.96	26.96	90.8	89.9	90.35	6.04	5.97	6.01
4-Jul-13	-	Fine	Middle	1	-	-	-	-		-	-	-	-	-	-	-	-	-	-
	9:25		Bottom	4.0	28.50	28.50	28.50	8.15	8.15	8.15	28.97	28.97	28.97	89.7	87.9	88.80	5.97	5.88	5.93
	14:05		Surface	1.0	27.80	27.80	27.80	8.24	8.24	8.24	29.81	29.81	29.81	97.1	97.3	97.20	6.45	6.47	6.46
12-Jul-13	-	Fine	Middle	i	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
	14:06		Bottom	3.0	27.70	27.70	27.70	8.24	8.24	8.24	29.92	29.92	29.92	96.7	96.9	96.80	6.40	6.45	6.43
	16:57		Surface	1.0	27.20	27.20	27.20	8.11	8.11	8.11	29.04	29.04	29.04	83.5	82.7	83.10	5.64	5.59	5.62
15-Jul-13	-	Rainy	Middle	ı	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:59		Bottom	3.0	27.00	27.00	27.00	8.10	8.10	8.10	30.51	30.51	30.51	80.8	79.2	80.00	5.42	5.31	5.37

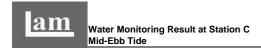
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.
With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013



Location: Station B Coordinate: 835572E, 815961N

Date	Time	Weater Condition	Samplin	g Depth		°C	erature		pH -			Salini ppt	ty		O Satur	ration		DO mg/L	-
			l ''		Va	lue	Average	Va	lue	Average	Va	alue	Average	Va	lue	Average	Va	lue	Average
	9:17		Surface	1.0	28.00	28.00	28.00	8.16	8.16	8.16	26.73	26.73	26.73	85.1	85.1	85.10	5.75	5.74	5.75
4-Jul-13	9:18	Fine	Middle	5.0	28.00	28.00	28.00	8.15	8.15	8.15	26.83	26.83	26.83	87.6	87.7	87.65	5.91	5.91	5.91
	9:19		Bottom	9.0	27.30	27.30	27.30	8.02	8.02	8.02	28.77	28.77	28.77	72.3	71.1	71.70	4.87	4.79	4.83
	13:59		Surface	1.0	27.70	27.70	27.70	8.24	8.24	8.24	30.04	30.04	30.04	99.5	95.8	97.65	6.58	6.37	6.48
12-Jul-13	14:00	Fine	Middle	5.0	27.50	27.50	27.50	8.24	8.24	8.24	29.97	29.97	29.97	94.0	93.8	93.90	6.27	6.25	6.26
	14:01		Bottom	9.0	27.40	27.40	27.40	8.22	8.22	8.22	30.03	30.03	30.03	91.8	92.6	92.20	6.13	6.19	6.16
	16:45		Surface	1.0	26.40	26.40	26.40	8.14	8.14	8.14	29.95	29.95	29.95	80.5	82.2	81.35	5.46	5.57	5.52
15-Jul-13	16:47	Rainy	Middle	5.0	26.40	26.40	26.40	8.11	8.11	8.11	30.60	30.60	30.60	74.7	76.1	75.40	5.06	5.16	5.11
	16:49		Bottom	9.0	26.10	26.10	26.10	8.09	0.09	4.09	32.64	32.64	32.64	69.3	70.5	69.90	4.70	4.78	4.74

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.
With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013



Location: Station C Coordinate: 835659E, 816271N

Date	Time	Weater Condition	Samplin	g Depth	Wat	er Temp °C	erature		pН			Salini	ty	С	O Satu	ration		DO ma/l	
		Condition	n	n	Va	llue	Average	Va	lue -	Average	Va	ppt alue	Average	Va	ilue	Average	Va	mg/L alue	Average
	9:08		Surface	1.0	27.80	27.80	27.80	8.16	8.16	8.16	26.45	26.45	26.45	83.3	83.4	83.35	5.66	5.67	5.67
4-Jul-13	9:09	Fine	Middle	6.5	27.60	27.60	27.60	8.08	8.08	8.08	27.84	27.84	27.84	72.3	72.7	72.50	4.89	4.90	4.90
	9:10		Bottom	12.0	27.10	27.10	27.10	8.00	8.00	8.00	29.31	29.31	29.31	61.1	60.8	60.95	4.12	4.10	4.11
	13:52		Surface	1.0	27.50	27.50	27.50	8.23	8.23	8.23	28.90	28.90	28.90	111.0	110.7	110.85	7.48	7.46	7.47
12-Jul-13	13:53	Fine	Middle	6.5	27.40	27.40	27.40	8.24	8.24	8.24	29.77	29.77	29.77	97.8	94.4	96.10	6.55	6.32	6.44
	13:54		Bottom	12.0	27.30	27.30	27.30	8.23	8.23	8.23	29.71	29.71	29.71	92.1	94.3	93.20	6.17	6.32	6.25
	16:30		Surface	1.0	26.80	26.80	26.80	8.18	8.18	8.18	28.36	28.36	28.36	86.9	87.8	87.35	5.91	5.99	5.95
15-Jul-13	16:31	Rainy	Middle	6.5	26.70	26.70	26.70	8.15	8.15	8.15	29.84	29.84	29.84	86.6	85.3	85.95	5.87	5.29	5.58
	16:33		Bottom	12.0	26.20	26.20	26.20	8.10	8.10	8.10	31.21	31.21	31.21	72.6	71.8	72.20	4.92	4.87	4.90

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.
With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013

# Appendix 5.5

Real-time Noise Monitoring Results and Graphical Presentations

Deal time Naise Date	DTN2s /Llans Kons Floatris Contr	-)			
Real-time Noise Data	RTN2a (Hong Kong Electric Centr 4/7/2013 12:31 66.5	10/7/2013 7:01 65.7	15/7/2013 13:31 63.8	20/7/2013 8:01 58.0	25/7/2013 14:31 59.2
Normal Day 07:00-19:00	4/7/2013 13:01 66.9	10/7/2013 7:31 66.2	15/7/2013 14:01 64.7	20/7/2013 8:31 61.2	25/7/2013 15:01 61.5
	4/7/2013 13:31 67.0	10/7/2013 8:01 66.3	15/7/2013 14:31 66.4	20/7/2013 9:01 52.8	25/7/2013 15:31 53.3
28/6/2013 7:01 65.0	4/7/2013 14:01 66.7	10/7/2013 8:31 66.9	15/7/2013 15:01 59.0	20/7/2013 9:31 52.2	25/7/2013 16:01 60.8
28/6/2013 7:31 65.6	4/7/2013 14:31 66.6	10/7/2013 9:01 66.9	15/7/2013 15:31 66.6	20/7/2013 10:01 55.6	25/7/2013 16:31 60.2
28/6/2013 8:01 65.7	4/7/2013 15:01 66.9	10/7/2013 9:31 61.2	15/7/2013 16:01 67.5	20/7/2013 10:31 57.3	25/7/2013 17:01 60.1
28/6/2013 8:31 66.3	4/7/2013 15:31 55.1	10/7/2013 10:01 63.2	15/7/2013 16:31 64.2	20/7/2013 11:01 67.1	25/7/2013 17:31 58.7
28/6/2013 9:01 66.8	4/7/2013 16:01 51.5	10/7/2013 10:31 63.6	15/7/2013 17:01 62.9	20/7/2013 11:31 66.8	25/7/2013 18:01 57.6
28/6/2013 9:31 66.5	4/7/2013 16:31 67.1	10/7/2013 11:01 62.6	15/7/2013 17:31 61.1	20/7/2013 12:01 67.2	25/7/2013 18:31 49.0
28/6/2013 10:01 66.7	4/7/2013 17:01 52.1	10/7/2013 11:31 67.0	15/7/2013 18:01 48.6	20/7/2013 12:31 67.0	26/7/2013 7:01 66.6
28/6/2013 10:31 66.6	4/7/2013 17:31 67.1	10/7/2013 12:01 66.9	15/7/2013 18:31 51.0	20/7/2013 13:01 60.2	26/7/2013 7:31 63.5
28/6/2013 11:01 67.8	4/7/2013 18:01 66.8	10/7/2013 12:31 66.6	16/7/2013 7:01 66.4	20/7/2013 13:31 62.3	26/7/2013 8:01 61.1
28/6/2013 12:01 66.3	4/7/2013 18:31 66.3	10/7/2013 13:01 51.3	16/7/2013 7:31 67.2	20/7/2013 14:01 62.4	26/7/2013 8:31 53.9
28/6/2013 12:31 66.8	5/7/2013 7:01 65.3	10/7/2013 13:31 49.8	16/7/2013 8:01 57.4	20/7/2013 14:31 59.2	26/7/2013 9:01 67.2
28/6/2013 13:01 59.9	5/7/2013 7:31 66.4	10/7/2013 14:01 52.5	16/7/2013 8:31 61.4	20/7/2013 15:01 59.4	26/7/2013 9:31 62.5
28/6/2013 13:31 57.7	5/7/2013 8:01 66.6	10/7/2013 14:31 59.0	16/7/2013 9:01 62.0	20/7/2013 15:31 54.7	26/7/2013 10:01 57.9
28/6/2013 14:01 59.1	5/7/2013 8:31 66.9	10/7/2013 15:01 66.8	16/7/2013 9:31 64.2	20/7/2013 16:01 59.1	26/7/2013 10:31 59.2
28/6/2013 14:31 59.5	5/7/2013 9:01 66.8	10/7/2013 15:31 66.1	16/7/2013 10:01 62.4	20/7/2013 16:31 61.8	26/7/2013 11:01 55.3
28/6/2013 15:01 55.3	5/7/2013 9:31 66.5	10/7/2013 16:01 59.9	16/7/2013 10:31 64.6	20/7/2013 17:01 67.1	26/7/2013 11:31 67.1
28/6/2013 15:31 49.7	5/7/2013 10:01 66.6	10/7/2013 16:31 51.7	16/7/2013 11:01 64.4	20/7/2013 17:31 67.1	26/7/2013 12:01 54.0
28/6/2013 16:01 67.2	5/7/2013 10:31 66.8	10/7/2013 17:01 67.1	16/7/2013 11:31 57.5	20/7/2013 18:01 67.0	26/7/2013 12:31 58.5
28/6/2013 16:31 58.0	5/7/2013 11:01 66.4	10/7/2013 17:31 67.0	16/7/2013 12:01 66.9	20/7/2013 18:31 66.4	26/7/2013 13:01 58.9
28/6/2013 17:01 46.2	5/7/2013 11:31 66.1	10/7/2013 18:01 66.5	16/7/2013 12:31 67.0	22/7/2013 7:01 66.1	26/7/2013 13:31 62.5 26/7/2013 14:01 60.7
28/6/2013 18:01 66.3	5/7/2013 12:01 66.0 5/7/2013 12:31 65.4	11/7/2013 7:01 66.4	16/7/2013 13:01 62.8 16/7/2013 13:31 64.3	22/7/2013 7:31 67.0 22/7/2013 8:01 59.0	26/7/2013 14:31 61.2
28/6/2013 18:31 65.7	5/7/2013 13:01 67.0	11/7/2013 7:31 67.2	16/7/2013 14:01 64.8	22/7/2013 8:31 57.1	26/7/2013 15:01 61.0
29/6/2013 7:01 65.3	5/7/2013 13:31 66.7	11/7/2013 8:01 67.2	16/7/2013 14:31 65.5	22/7/2013 9:01 52.6	26/7/2013 15:31 62.6
29/6/2013 7:31 65.9	5/7/2013 14:01 66.5	11/7/2013 8:31 59.2	16/7/2013 15:01 66.7	22/7/2013 9:31 59.5	26/7/2013 16:01 58.5
29/6/2013 8:01 52.4	5/7/2013 14:31 66.9	11/7/2013 9:01 59.3	16/7/2013 15:31 59.4	22/7/2013 10:01 57.7	26/7/2013 16:31 61.3
29/6/2013 8:31 51.8	5/7/2013 15:01 66.8	11/7/2013 9:31 66.0	16/7/2013 16:01 64.0	22/7/2013 10:31 60.5	26/7/2013 17:01 57.3
29/6/2013 9:01 47.2	5/7/2013 15:31 67.1	11/7/2013 10:01 68.0	16/7/2013 16:31 62.1	22/7/2013 11:01 60.5	26/7/2013 17:31 56.3
29/6/2013 9:31 50.3	5/7/2013 16:01 29.3	11/7/2013 10:31 70.3	16/7/2013 17:01 56.8	22/7/2013 11:31 56.5	26/7/2013 18:01 67.1
29/6/2013 10:01 66.8	5/7/2013 16:31 43.7	11/7/2013 11:01 68.8	16/7/2013 17:31 54.7	22/7/2013 12:01 61.9	26/7/2013 18:31 66.4
29/6/2013 10:31 66.8	5/7/2013 17:01 66.9	11/7/2013 11:31 59.3	16/7/2013 18:01 56.4	22/7/2013 12:31 56.9	27/7/2013 7:01 65.9
29/6/2013 11:01 66.8	5/7/2013 17:31 67.1	11/7/2013 12:01 55.7	16/7/2013 18:31 52.9	22/7/2013 13:01 62.8	27/7/2013 7:31 66.5
29/6/2013 11:31 52.8	5/7/2013 18:01 66.9	11/7/2013 12:31 67.0	17/7/2013 7:01 65.4	22/7/2013 13:31 63.3	27/7/2013 8:01 55.8
29/6/2013 12:01 63.7	5/7/2013 18:31 65.9	11/7/2013 13:01 62.8	17/7/2013 7:31 66.9	22/7/2013 14:01 61.1	27/7/2013 8:31 59.5
29/6/2013 12:31 66.8	6/7/2013 7:01 65.0	11/7/2013 13:31 67.3	17/7/2013 8:01 55.6	22/7/2013 14:31 62.8	27/7/2013 9:01 60.4
29/6/2013 13:01 66.5	6/7/2013 7:31 66.0	11/7/2013 14:01 68.5	17/7/2013 8:31 58.5	22/7/2013 15:01 62.2	27/7/2013 9:31 58.1
29/6/2013 13:31 66.5 29/6/2013 14:01 66.9	6/7/2013 8:01 67.0	11/7/2013 14:31 67.0 11/7/2013 15:01 60.6	17/7/2013 9:01 60.5 17/7/2013 9:31 67.1	22/7/2013 15:31 59.0	27/7/2013 10:01 56.9 27/7/2013 10:31 60.2
29/6/2013 14:31 66.6	6/7/2013 8:31 66.9 6/7/2013 9:01 66.8	11/7/2013 15:31 66.8	17/7/2013 10:01 73.2	22/7/2013 16:01 61.4 22/7/2013 16:31 63.3	27/7/2013 11:01 61.5
29/6/2013 15:01 66.7	6/7/2013 9:31 66.6	11/7/2013 16:01 63.7	17/7/2013 10:31 70.9	22/7/2013 17:01 63.0	27/7/2013 11:31 57.1
29/6/2013 15:31 66.7	6/7/2013 10:01 66.4	11/7/2013 16:31 61.6	17/7/2013 11:01 69.8	22/7/2013 17:31 60.4	27/7/2013 12:01 66.9
29/6/2013 16:01 66.5	6/7/2013 10:31 66.5	11/7/2013 17:01 63.9	17/7/2013 11:31 55.6	22/7/2013 18:01 58.4	27/7/2013 12:31 66.7
29/6/2013 16:31 66.6	6/7/2013 11:01 66.9	11/7/2013 17:31 56.5	17/7/2013 12:01 66.9	22/7/2013 18:31 66.6	27/7/2013 13:01 47.5
29/6/2013 17:01 66.9	6/7/2013 11:31 66.2	11/7/2013 18:01 67.2	17/7/2013 12:31 66.4	23/7/2013 7:01 66.1	27/7/2013 13:31 62.6
29/6/2013 17:31 66.4	6/7/2013 12:01 65.9	11/7/2013 18:31 42.7	17/7/2013 13:01 58.9	23/7/2013 7:31 66.9	27/7/2013 14:01 62.4
29/6/2013 18:01 66.1	6/7/2013 12:31 65.9	12/7/2013 7:01 66.3	17/7/2013 13:31 68.9	23/7/2013 8:01 67.2	27/7/2013 14:31 54.9
29/6/2013 18:31 65.9	6/7/2013 13:01 66.8	12/7/2013 7:31 43.9	17/7/2013 14:01 71.8	23/7/2013 8:31 57.6	27/7/2013 15:01 66.9
2/7/2013 7:01 66.1	6/7/2013 13:31 66.9	12/7/2013 8:01 56.4	17/7/2013 14:31 68.6	23/7/2013 9:01 59.4	27/7/2013 15:31 49.5
2/7/2013 7:31 67.0	6/7/2013 14:01 66.8	12/7/2013 8:31 60.6	17/7/2013 15:01 63.8	23/7/2013 9:31 62.7	27/7/2013 16:01 61.7
2/7/2013 8:31 66.7	6/7/2013 15:01 66.2	12/7/2013 9:31 59.4	17/7/2013 15:31 67.1 17/7/2013 16:01 50.2	23/7/2013 10:31 59.0	27/7/2013 17:01 56.4
2/7/2013 9:01 66.7	6/7/2013 15:31 66.9	12/7/2013 10:01 62.2	17/7/2013 16:31 53.5	23/7/2013 11:01 60.8	27/7/2013 17:31 66.8
2/7/2013 9:31 43.2	6/7/2013 16:01 51.5	12/7/2013 10:31 66.6	17/7/2013 17:01 65.3	23/7/2013 11:31 62.0	27/7/2013 18:01 66.8
2/7/2013 10:01 55.6	6/7/2013 16:31 59.3	12/7/2013 11:01 66.3	17/7/2013 17:31 67.1	23/7/2013 12:01 61.2	27/7/2013 18:31 66.8
2/7/2013 10:31 60.6	6/7/2013 17:01 55.1	12/7/2013 11:31 60.3	17/7/2013 18:01 67.1	23/7/2013 12:31 66.5	
2/7/2013 11:01 58.9	6/7/2013 17:31 67.0	12/7/2013 12:01 66.9	17/7/2013 18:31 67.2	23/7/2013 13:01 63.9	Normal Day 19:00-23:00,
2/7/2013 11:31 67.1	6/7/2013 18:01 66.9	12/7/2013 12:31 66.9	18/7/2013 7:01 66.1	23/7/2013 13:31 64.2	<u>Sunday &amp; Holiday</u>
2/7/2013 12:01 66.5	6/7/2013 18:31 66.6	12/7/2013 13:01 62.9	18/7/2013 7:31 47.9	23/7/2013 14:01 62.8	<u>07:00-23:00</u>
2/7/2013 12:31 66.7	8/7/2013 7:01 66.1	12/7/2013 13:31 69.0	18/7/2013 8:01 55.2	23/7/2013 14:31 62.6	28/6/2013 19:01 62.4
2/7/2013 13:01 54.4	8/7/2013 7:31 66.8	12/7/2013 14:01 68.8	18/7/2013 8:31 59.8	23/7/2013 15:01 62.6	
2/7/2013 13:31 59.2	8/7/2013 8:01 66.9	12/7/2013 14:31 66.3	18/7/2013 9:01 53.0	23/7/2013 15:31 55.0	28/6/2013 19:06 63.0
2/7/2013 14:01 61.0	8/7/2013 8:31 66.9	12/7/2013 15:01 59.6	18/7/2013 9:31 66.8	23/7/2013 16:01 61.5	28/6/2013 19:11 63.4
2/7/2013 14:31 59.2	8/7/2013 9:01 67.2	12/7/2013 15:31 66.2	18/7/2013 10:01 66.8	23/7/2013 16:31 62.4	28/6/2013 19:16 63.5
2/7/2013 15:01 60.0	8/7/2013 9:31 57.2	12/7/2013 16:01 60.9	18/7/2013 10:31 67.1	23/7/2013 17:01 59.6	28/6/2013 19:21 63.2
2/7/2013 15:31 67.1	8/7/2013 10:01 60.7	12/7/2013 16:31 67.1	18/7/2013 11:01 64.0	23/7/2013 17:31 48.1	28/6/2013 19:26 62.8
2/7/2013 16:01 59.3	8/7/2013 10:31 61.3	12/7/2013 17:01 66.6	18/7/2013 11:31 64.6	23/7/2013 18:01 57.3	28/6/2013 19:31 63.0
2/7/2013 16:31 58.1	8/7/2013 11:01 59.8	12/7/2013 17:31 66.5	18/7/2013 12:01 67.0	23/7/2013 18:31 58.6	28/6/2013 19:36 62.9
2/7/2013 17:01 56.7	8/7/2013 11:31 57.6	12/7/2013 18:01 66.5	18/7/2013 12:31 67.2	24/7/2013 7:01 66.0	28/6/2013 19:41 62.3
2/7/2013 17:31 66.9	8/7/2013 12:01 66.8	12/7/2013 18:31 66.7	18/7/2013 13:01 64.7	24/7/2013 7:31 47.1	28/6/2013 19:46 62.3
2/7/2013 18:01 67.0	8/7/2013 12:31 66.9	13/7/2013 7:01 64.8	18/7/2013 13:31 68.2	24/7/2013 8:01 59.4	28/6/2013 19:51 63.3
2/7/2013 18:31 66.8	8/7/2013 13:01 58.1	13/7/2013 7:31 65.7	18/7/2013 14:01 65.9	24/7/2013 8:31 51.8	28/6/2013 19:56 63.4
3/7/2013 7:01 65.3	8/7/2013 13:31 59.4	13/7/2013 8:01 66.7	18/7/2013 14:31 64.5	24/7/2013 9:01 66.9	28/6/2013 20:01 63.6
3/7/2013 7:31 65.7	8/7/2013 14:01 54.8	13/7/2013 8:31 47.4	18/7/2013 15:01 55.9	24/7/2013 9:31 60.0	28/6/2013 20:06 64.2
3/7/2013 8:01 66.3	8/7/2013 14:31 67.1	13/7/2013 9:01 56.7	18/7/2013 15:31 71.1	24/7/2013 10:01 61.3	28/6/2013 20:11 64.3
3/7/2013 8:31 66.8	8/7/2013 15:01 41.1	13/7/2013 9:31 62.4	18/7/2013 16:01 64.0	24/7/2013 10:31 61.6	28/6/2013 20:16 64.3
3/7/2013 9:01 66.6	8/7/2013 15:31 66.9	13/7/2013 10:01 70.6	18/7/2013 16:31 57.2	24/7/2013 11:01 61.6	28/6/2013 20:21 64.7
3/7/2013 9:31 66.5	8/7/2013 16:01 50.8	13/7/2013 10:31 72.7	18/7/2013 17:01 63.5	24/7/2013 11:31 62.1	28/6/2013 20:26 64.2
3/7/2013 10:01 66.3	8/7/2013 16:31 55.4	13/7/2013 11:01 66.4	18/7/2013 17:31 55.8	24/7/2013 12:01 55.6	28/6/2013 20:31 64.5
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Real-time Noise Data	RTN2a (Hong Kong Electric Centre	<u>e)</u>			
28/6/2013 22:56 63.2	30/6/2013 12:01 63.7	30/6/2013 21:06 63.9	1/7/2013 14:11 62.9	2/7/2013 19:16 63.9	4/7/2013 20:21 63.3
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29/6/2013 19:26 63.8 29/6/2013 19:31 63.8	30/6/2013 12:31 64.9	30/6/2013 21:36 63.5 30/6/2013 21:41 63.7	1/7/2013 14:41 62.9 1/7/2013 14:46 66.6	2/7/2013 19:46 64.9 2/7/2013 19:51 64.1	4/7/2013 20:51 62.7 4/7/2013 20:56 63.1
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Real-time Noise Data 24/7/2013 22:26 64.4	RTN2a (Hong Kong Electric Centre 27/7/2013 19:31 64.6	r <u>e)</u> 28/6/2013 5:21 59.4	29/6/2013 6:26 63.0	30/6/2013 23:31 63.5	2/7/2013 0:36 62.5
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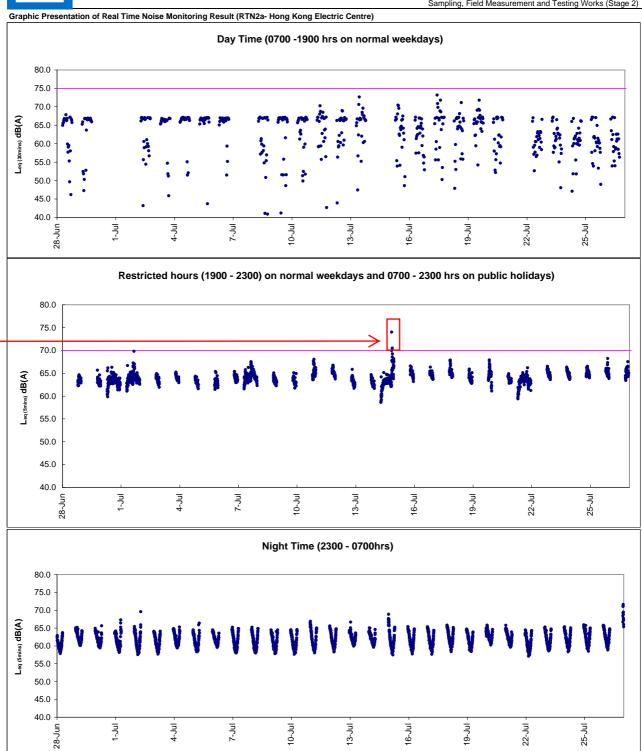
Real-time Noise 3/7/2013 1:41	Data 61.0	RTN2a (Hong Kong Electric Centre 4/7/2013 2:46 60.3	r <u>e)</u> 5/7/2013 3:51 59.3	6/7/2013 4:56 60.1	7/7/2013 6:01 61.8	8/7/2013 23:06 63.8
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Real-time Noise Data 23/7/2013 5:11 60.3	RTN2a (Hong Kong Electric Centre 24/7/2013 6:16 62.1	r <u>e)</u> 25/7/2013 23:21 65.2	27/7/2013 0:26 65.1
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23/7/2013 6:01 61.5	24/7/2013 23:06 65.5	26/7/2013 0:11 64.5	27/7/2013 1:16 63.9
23/7/2013 6:06 62.1	24/7/2013 23:11 65.7	26/7/2013 0:16 64.8	27/7/2013 1:21 63.8
23/7/2013 6:11 61.8	24/7/2013 23:16 65.2	26/7/2013 0:21 64.3	27/7/2013 1:26 63.9
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23/7/2013 6:21 62.2	24/7/2013 23:26 64.9	26/7/2013 0:31 64.3	27/7/2013 1:36 64.0
23/7/2013 6:26 62.7	24/7/2013 23:31 65.2	26/7/2013 0:36 63.5	27/7/2013 1:41 64.1
23/7/2013 6:31 63.2	24/7/2013 23:36 65.4	26/7/2013 0:41 63.5	27/7/2013 1:46 63.2
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23/7/2013 6:41 63.2	24/7/2013 23:46 64.6	26/7/2013 0:51 63.7	27/7/2013 1:56 63.2
23/7/2013 6:46 64.3	24/7/2013 23:51 64.9	26/7/2013 0:56 63.4	27/7/2013 2:01 63.6
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23/7/2013 23:01 65.2	25/7/2013 0:06 64.7	26/7/2013 1:11 63.1	27/7/2013 2:16 62.7
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24/7/2013 4:36 58.9	25/7/2013 5:41 60.9	26/7/2013 6:46 64.5	27/7/2013 23:51 65.1
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24/7/2013 4:51 59.6	25/7/2013 5:56 62.0	26/7/2013 23:01 66.7	
24/7/2013 4:56 60.0	25/7/2013 6:01 62.1	26/7/2013 23:06 68.4	
24/7/2013 5:01 59.5	25/7/2013 6:06 62.4	26/7/2013 23:11 69.2	
24/7/2013 5:06 60.5	25/7/2013 6:11 62.8	26/7/2013 23:16 71.1	
24/7/2013 5:11 59.5	25/7/2013 6:16 62.8	26/7/2013 23:21 71.6	
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24/7/2013 6:01 60.0	25/7/2013 23:06 65.4	27/7/2013 0:11 65.3	
24/7/2013 6:06 62.1	25/7/2013 23:11 65.6	27/7/2013 0:16 65.7	
24/7/2013 6:11 62.3	25/7/2013 23:16 65.2	27/7/2013 0:21 65.5	





After checking with contractor HY/2009/19, no construction works were conducted at the concerned location during the recorded period. As such, the exceedances were considered to be contributed by nearby IEC traffic

# Appendix 6.1

**Event Action Plans** 

### **Event/Action Plan for Construction Noise**

EVENT		ACTION								
	ET	IEC	ER	CONTRACTOR						
Action Level being exceeded	<ol> <li>Notify ER, IEC and Contractor;</li> <li>Carry out investigation;</li> <li>Report the results of investigation to the IEC, ER and Contractor;</li> <li>Discuss with the IEC and Contractor on remedial measures required;</li> <li>Increase monitoring frequency to check mitigation effectiveness.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures.  (The above actions should be taken within 2 working days after the exceedance is identified)	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Supervise the implementation of remedial measures.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	Submit noise mitigation proposals to IEC and ER;     Implement noise mitigation proposals.     (The above actions should be taken within 2 working days after the exceedance is identified)						

am	Lam Geotechnics Limit

EVENT	ACTION												
	ET	IEC	ER	CONTRACTOR									
Limit Level being exceeded	<ol> <li>Inform IEC, ER, Contractor and EPD;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency;</li> <li>4. Identify source and investigate the cause of exceedance;</li> <li>5. Carry out analysis of Contractor's working procedures;</li> <li>6. Discuss with the IEC, Contractor and ER on remedial measures required;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	Discuss amongst ER, ET, and Contractor on the potential remedial actions;     Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.  (The above actions should be taken within 2 working days after the exceedance is identified)	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Supervise the implementation of remedial measures;</li> <li>If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.</li> <li>The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC and ER within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Submit further proposal if problem still not under control;</li> <li>Stop the relevant portion of works as instructed by the ER until the exceedance is abated.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>									

Event / Action Dian for Construction Air Quality

EVENT		ACTION		
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures;     Inform IEC and ER;     Repeat measurement to confirm finding;     Increase monitoring frequency to daily.  (The above actions should be taken within 2 working days after the exceedance is identified)	Check monitoring data submitted by ET;     Check Contractor's working method.  (The above actions should be taken within 2 working days after the exceedance is identified)	Notify Contractor. (The above actions should be taken within 2 working days after the exceedance is identified)	Rectify any unacceptable practice;     Amend working methods if appropriate (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	Identify source;     Inform IEC and ER;     Advise the ER on the effectiveness of the proposed remedial measures;     Repeat measurements to confirm findings;     Increase monitoring frequency to daily;     Discuss with IEC and Contractor on remedial actions required;     If exceedance continues, arrange meeting with IEC and ER;     If exceedance stops, cease additional monitoring.     (The above actions should be taken within 2 working days after the exceedance is identified)	Check monitoring data submitted by ET;     Check Contractor's working method;     Discuss with ET and Contractor on possible remedial measures;     Advise the ET on the effectiveness of the proposed remedial measures;     Supervise Implementation of remedial measures.  (The above actions should be taken within 2 working days after the exceedance is identified)	Confirm receipt of notification of failure in writing;     Notify Contractor;     Ensure remedial measures properly implemented.  (The above actions should be taken within 2 working days after the exceedance is identified)	Submit proposals for remedial to ER within 3 working days of notification;     Implement the agreed proposals;     Amend proposal if appropriate.  (The above actions should be taken within 2 working days after the exceedance is identified)
LIMIT LEVEL				
Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures;     Inform ER, Contractor and EPD;     Repeat measurement to confirm finding;     Increase monitoring frequency to daily;     Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.  (The above actions should be taken within 2 working days after the exceedance is identified)	Check monitoring data submitted by ET;     Check Contractor's working method;     Discuss with ET and Contractor on possible remedial measures;     Advise the ER on the effectiveness of the proposed remedial measures;     Supervise implementation of remedial measures.  (The above actions should be taken within 2 working days after the exceedance is identified)	Confirm receipt of notification of failure in writing;     Notify Contractor;     Ensure remedial measures properly implemented.  (The above actions should be taken within 2 working days after the exceedance is identified)	Take immediate action to avoid further exceedance;     Submit proposals for remedial actions IEC within 3 working days of notificatio 3. Implement the agreed proposals;     Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
Exceedance for two or more consecutive samples	Notify IEC, ER, Contractor and EPD;     Identify source;     Repeat measurement to confirm findings;     Increase monitoring frequency to daily;     Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;     Arrange meeting with IEC and ER to discuss the remedial actions to be taken;     Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;     If exceedance stops, cease additional monitoring.     (The above actions should be taken within 2 working days after the exceedance is identified)	Discuss amongst ER, ET, and Contractor on the potential remedial actions;     Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;     Supervise the implementation of remedial measures.	Confirm receipt of notification of failure in writing;     Notify Contractor;     In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;     Ensure remedial measures properly implemented;     If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)	Take immediate action to avoid further exceedance;     Submit proposals for remedial actions to IEC within 3 working days of notification and Implement the agreed proposals;     Resubmit proposals if problem still not under control;     Stop the relevant portion of works as determined by the ER until the exceedance is abated. (The above actions should be taken within 2 workind days after the exceedance is identified)



**Event and Action Plan for Marine Water Quality** 

EVENT		ACTION		
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; (The above actions should be taken within 1 working day after the exceedance is identified) Repeat measurement on next day of exceedance.	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and ER; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)
Action level being exceeded by more than one consecutive sampling days	Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; (The above actions should be taken within 1 working day after the exceedance is identified) Repeat measurement on next working day of exceedance.	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)

EVENT	ACTION									
	ET	IEC	ER	CONTRACTOR						
Limit level being exceeded by one sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform IEC, contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)						
Limit level being exceeded by more than one consecutive sampling days	Identify source(s) of impact; Inform IEC, contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3working days; Implement the agreed mitigation measures; As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities. (The above actions should be taken within 1 working day after the exceedance is identified)						

### **Event and Action Plan for Odour Patrol**

Event	ACTION						
	Person-in-charge of Odour Monitoring	Implementation Agent Identified by CEDD					
Action Level							
Exceedance of Action Level	Identify source/reason of exceedance;     Repeat odour patrol to confirm finding.	<ol> <li>Carry out investigation to identify the source/reason of exceedance;</li> <li>Rectify any unacceptable practice</li> <li>Implement more mitigation measures if necessary;</li> <li>Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.</li> </ol>					
Limit Level							
Exceedance of Limit Level	Identify source / reason of exceedance;     Repeat odour patrol to confirm findings;     Increase odour patrol frequency;     If exceedance stops, cease additional odour patrol.	<ol> <li>Carry out investigation to identify the source/reason of exceedance. Investigation shall be completed within 2 weeks;</li> <li>Rectify any unacceptable practice;</li> <li>Formulate remedial actions;</li> <li>Ensure remedial actions properly implemented;</li> <li>If exceedance continues, consider what more/enhanced mitigation measures shall be implemented;</li> <li>Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.</li> </ol>					

# Appendix 6.2

Summary for Notification of Exceedance



Ref. No.	Date	Time	Location	Construction Noise Level	Unit	Action Level	Limit Level	Follow-up action	
X_10N134	9-Jul-13	13:45	M6 - HK Baptist Church Henrietta Secondary School	73	Leq(30-min)	when one documented complaint was received.	70	Possible reason:  Action taken / to be taken:	Traffic nearby and external renovation at City Garden was observed during monitoring and was considered as the major noise contribution.  Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of
									contractor's working procedure.  Road works on IEC for Contract HY/2009/19 was conducted during the measurement. It was observed
									that traffic noise and externall renovation works conducted at City Garden were major noise contribution during the monitoring period. It is concluded that the exceedance was not due to project.



Ref. No.	Date	Time	Location	Construction Noise Level	Unit	Action Level	Limit Level	Follow-up action	
X_10N135	16-Jul-13	15:50	M6 - HK Baptist Church Henrietta Secondary School	72	Leq(30-min)	when one documented complaint was received.	70	Possible reason:	Traffic nearby was observed during monitoring and was considered as the major noise contribution.
								Remarks / Other Obs:	Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.  Installation of formwork and falsework for Contract HY/2009/19 was conducted during the measurement. It was observed that traffic noise was a major noise source during monitoring. It is concluded that the exceedance was not due to project but to traffic noise nearby.



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Leve	Limit Level	Follow-up action	
X_W435		Mid-Ebb	WSD17	DO(mg/L)	5.43			Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	4.01	10.01	11.54	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works on 10 July 2013, no marine work was conducted on that day.
				ss	24.00	16.26	19.74	Remarks / Other Obs:	In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.
X_W436	26-Jul-13	Mid-Ebb	WSD19	DO(mg/L)	4.74	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	10.03	10.01	11.54	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works on 26 July 2013 armour rock backfilling at Victoria Harbour was conducted on that day.
				ss	11.00	16.26	19.74	Remarks / Other Obs:	In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit	Measured	Action Leve	Limit Level	Follow-up action	
X_10D258		Mid-Flood	Ex-WPCWA SW		DO(mg/l)	1.64	3.19		Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 28 June 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D259	28-Jun-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	1.73	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 28 June 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D260	6-Jul-13	Mid-Flood	Ex-WPCWA SW	Middle	DO(mg/l)	1.82	3.19	3.10	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 6 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D261	6-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	1.67	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 6 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D262	8-Jul-13	Mid-Flood	Ex-WPCWA SW	Middle	DO(mg/l)	1.98	3.19	3.10	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 8 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit	Measured	Action Leve	Limit Level	Follow-up action	
X_10D263				Middle	DO(mg/l)	2.01	3.55		Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 8 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D264	10-Jul-13	Mid-Flood	Ex-WPCWA SW	Middle	DO(mg/l)	1.84	3.19	3.10	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 10 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D265	10-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	1.95	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 10 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D266	17-Jul-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.55	3.19	3.10	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 17 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D267	17-Jul-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	3.15	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 17 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.

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Ref no.	Date	Tidal	L
X_10D268	18-Jul-13	Mid-Flood	E

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit	Measured	Action Leve	Limit Level	Follow-up action	
X_10D268	18-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	3.46	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 18 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D269	20-Jul-13	Mid-Flood	C7	Middle	DO(mg/l)	3.17	3.31	2.57	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Immediate repeated measurements had conducted to confirm the exceedances. No odour nuisance was detected during the DO monitoring. Checked with Contractor works, there were no marine activities conducted on 20 July 2013. Checking with the Contractor's dail records, silt screen at C7 was in proper condition in their daily
									Remarks / Other Obs:	inspection. In view that there was no marine activities at C7, it was considered not related to Project works.
X_10D270	20-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	3.54	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 20 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D271	20-Jul-13	Mid-Ebb	C7	Middle	DO(mg/l)	2.71	3.31	2.57	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Immediate repeated measurements had conducted to confirm the exceedances. No odour nuisance was detected during the DO monitoring. Checked with Contractor works, there were no marine activities conducted on 20 July 2013. Checking with the Contractor's dail records, silt screen at C7 was in proper condition in their daily
									Remarks / Other Obs:	inspection. In view that there was no marine activities at C7, it was considered not related to Project works.
X_10D272	20-Jul-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.89	3.19	3.10	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 20 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit	Measured	Action Leve	Limit Level	Follow-up action	
X_10D273	20-Jul-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	3.36	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 20 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D274	22-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	3.21	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 22 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D275	24-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	3.25	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 24 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.
X_10D276	26-Jul-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	3.32	3.55	3.00	Possible reason:	Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station
									Action taken / to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works, there was no marine works undertaken at ex-WPCWA on 26 July 2013.
									Remarks / Other Obs:	In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.



Ref no.	Date	Tidal	Location	Parameters (Unit)	/leasured	Action Leve L	imit Level	Follow-up action	
X_10C575	15-Jul-13	Mid-Ebb	C7	DO(mg/L)	4.00	3.02	2.44	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	14.47	11.35		Action taken / to be	Immediate repeated in-situ measurements had conducted to confirm the exceedances.
								taken:	Checking with contractor's works on 15 July 2013, no marine works was conducted on that day.
									Checking with contractor's inspection record, the silt screen and silt curtain were in
				ss	13.50	18.42	27 54	Remarks / Other Obs:	proper condition on that day.  No further exceedance was recorded in the next consecutive monitoring. In view that the
					10.00	10.12	27.01	Remarks / Other Obs.	silt screen and silt curtain for filling were in proper condition, the exceedance was
									considered not project related.
X_10C576	20-Jul-13	Mid-flood	C7	DO(mg/L)	2.98	3.02	2.44	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	5.92	11.35		Action taken / to be	Immediate repeated in-situ measurements had conducted to confirm the exceedances.
								taken:	Checking with contractor's works on 20 July 2013, no marine works was conducted on that day.
									Checking with contractor's inspection record, the silt screen and silt curtain were in
				ss	7.50	18.42	27.54	Remarks / Other Obs:	proper condition on that day.  No further exceedance was recorded in the next consecutive monitoring. In view that the
					7.50	10.42	27.54	Remarks / Other Obs.	silt screen and silt curtain for filling were in proper condition, the exceedance was considered not project related.
X_10C577	20-Jul-13	Mid-Ebb	C7	DO(mg/L)	2.84	3.02	2.44	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	1.45	11.35	12.71	Action taken / to be	Immediate repeated in-situ measurements had conducted to confirm the exceedances.
								taken:	Checking with contractor's works on 20 July 2013, no marine works was conducted on
									that day. Checking with contractor's inspection record, the silt screen and silt curtain were in
									proper condition on that day.
				SS	<2	18.42	27.54	Remarks / Other Obs:	No further exceedance was recorded in the next consecutive monitoring. In view that the silt screen and silt curtain for filling were in proper condition, the exceedance was considered not project related.

Appendix 9.1

Complaint Log

### Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outco	ome	Status
100321a	21/3/2010	ICC Case no. 1-224618029, Ms. Tsang	Location near Tin Hau	Complaint regarding the loud noise and dark smoke in the course of dredging works on 21 March 2010 (Sunday).	v d	A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18 <sup>th</sup> Feb. 2010 for the dredging works which carry out at area for North Point Reclamation.	Closed
						Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.	
					o s C	The Contractor (CHEC-CRBC JV) strictly comply all the conditions in CNP and take all mitigation measures in order to minimize the potential impacts to surrounding sensitive receivers. A formal letter was issued out by CHEC-CRBC JV and to explain the status of the recent construction activities.	
					n n n	No limit level exceedance was recorded on the noise measurement during day time and evening time noise measurement on 23 March 2010. Additional restrict hours noise monitoring at Causeway Bay Community and City Garden was conducted on 5 April 2010 (Public Holiday). No limit level exceedance was recorded in the monitoring.	
						No further complaints were received from Mr. Tsang in the reporting month. The complaint is considered closed.	
100321b	21/3/2010	Unknown	breakwater of the	regarding loud noises emanated from dredging activities on 21/3/2010 (Sunday) until 2220 hours and between 1920-1946 hours in the evening of 22 March	y d g h	A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18 <sup>th</sup> Feb. 2010 for the dredging works at area for North Point Reclamation during general holidays including Sunday between 0700-2300 nours and any day not being a general holiday between 1900-2300hours. It is complied with the condition of CNP.	Closed
				2010(Monday).		Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.	
					n n	No limit level exceedance was recorded on the noise measurement during day time and evening time noise measurement on 23 March 2010. Additional restrict hours noise monitoring at Causeway Bay Community and City Garden was conducted on 5 April 2010 (Public Holiday). No limit level exceedance was recorded in the monitoring.	
						No further complaints were received in the reporting month. The complaint is considered closed.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	tcome	Status
100504	4/5/2010	Public complainant received by ICC (ICC case: 1-233384048)	Watson Road	Complaint on the noise nuisance due to the large scale of dredging machine (face to Island East Corridor) in particular the	1)	Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0119-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230.	Closed
				hours 1900 to 0800 and request to reduce the noise level.	2)	According to RSS 's record, no more daytime and night time dredging since the departure of the split hopper barge from the workplace on 29 April 2010 at 1900 hrs to 5 May 2010.	
					3)	No further complaints were received in the reporting month. The complaint is considered closed.	
100731	31/7/2010	by ICC (CC Case:	Oil Street to Watson Road	due to the dredging works.	1)	Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works.	Closed
		1-250702681)	1)	operated concurrently.	2)	There was only 1 grab dredger operated by Contractor within NPR project site area for dredging works.	
					3)	No noise exceedance was recorded at noise monitoring station at Victoria Centre on 27 July and 3 August 2010 during daytime and evening time period.	
					4)	It is considered as invalid from the EP and CNP point of view. $ \\$	
100812	12/8/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the dredging works at the marine	1)	Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230.	Closed
				works area adjacent to the Harbour Height during the period from 0700 to 2200.	2)	No noise exceedance was recorded at noise monitoring station at Victoria Centre on 10 and 17 August 2010 during daytime and evening time period.	
					3)	It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	tcome	Status
101108	8/11/2010	Mr. Nip received by ICC (CC Case)	Sai Wan Ho	Visual concern around the seaside silt screen outside the WSD freshwater intake pump at Sai Wan Ho (Monitoring station ref no WSD15)	1)	Contractor for HY/2009/11has been regular checked of condition and removal of trapped rubbish before the dismantling of the floating silt screen to be replaced by wall mount silt screen.  Follow-up action had been immediately carried out to	Closed
					2)	check and clear the floating refuse around the seaside silt screen after receipt of the complaint.	
					3)	Removal of seaside silt screen outside the WSD freshwater intake (WSD15) by contractor HY/2009/11 was checked and confirmed dated 9 November 2010. Silt screen has been deployed into the existing steel frame at WSD15 for the protection of WSD salt water intake.	
101110	10/11/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the power mechanical equipment during the 0700 to 2200hrs		Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0870-10 for their dredging works during evening time. Contractor has implemented mitigation measures to reduce the working hour not later than 2230.	Closed
					2)	No noise exceedance was recorded at noise monitoring station at Victoria Centre on 4 and 10 November 2010 during daytime and evening time period.	
					3)	It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	
101203	3/12/2010, 01:45a.m.	The resident of Block 11, City Garden by ICC referral from Marine	North Point	Bad odour was generated from the dredging plant off North Point	1)	The first investigation was carried out by Marine Department patrol in the morning on 3 Dec 2010 at around 10:00 and revealed that a few working barges were anchoring in the vicinity without carrying out dredging work.	Closed
		Department			2)	A further specific investigation inspection on contractor's backhoe barge in the vicinity of City Garden was jointly conducted with Engineer Representatives (AECOM/RSS), and ET on 8 Dec 2010 at 11:30. No bad odour was noted during the investigation.	
					3)	Routine dredging operation of the backhoe barge was performed during the jointed investigation inspection and it was revealed that no bad odour was attributed by the dredged materials inspected.	
101206	6/12/2010	Ms Lui, the resident of 27/F, Block 10, City	City Garden, North Point	Two barges were generating noise at 22:00 on 6 December 2010 in which the noise from	1)	ET confirmed the following information with resident site staff on the complaint:  • It was referred to the filling operation at North Point	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
	•	Garden by ICC (ICC case: 1- 266039336)	•	filling operation was louder than the traffic noise & visual impact was generated due to the spotlight pointing directly to the complainant flat, suspected the filling operation was part of Wanchai Development Phase II;  Complainant also raised the same complaint to District Councillor, Mr. Hui on 7 Dec 2010 regarding the night-time noise and suspected earlier start of work at 06:30. Complaint also requested for limiting the plant operating hours from 09:00-21:00.	<ul> <li>Two derrick barges were in operation at the time of complaint for placing 400 rockfill onto the excavation trench and for levelling the formation level to receive the pre-cast caisson seawall;</li> <li>Flood light on the control mast of derrick barge have no lighting shields for the prevention of glare of flood lights;</li> <li>No starting work on 7 Dec 2010 at 0630hours.</li> <li>PME used in restricted hours were checked and confirmed compliant with valid CNP no. GW-RS0870-10. The noise level recorded on 6 Dec 2010 was complied with the noise criteria during restricted hour;</li> </ul>	
110415	15/04/2011	The resident, Mr Law at Victoria Centre by ICC (ICC#1- 281451236)	North Point	A dust generation and a concern of mosquitoes breeding complaint in which suspected the filling operation was part of North Point Reclamation.	<ol> <li>The concerned stockpile was a working stockpile under Contract HY/209/15 and was covered at night time after work.</li> <li>Water spraying on the haul road and potential dust generating material at least 4 times a day was conducted by contractor that complies with the requirement.</li> <li>It is considered invalid but preventive actions can be taken because the stockpile is relatively large and easily visible by complainant.</li> <li>It was recommended that increasing the frequency of water spraying shall be conducted to all potential dust generating materials and activities. Besides, Contractor should consider to cover the idle part of the stockpile</li> <li>The concern of mosquitoes breeding is out the scope of EM&amp;A, the follow-up action is not reported in this monthly EM&amp;A report.</li> </ol>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	come	Status
110419	19/04/2011	Ms Chiu at Victoria Centre at Victoria Centre by ICC (ICC# 1- 272874759)	North Point	The episode of night noise on 19/4/11 and 20/4/11 at 2:50 am and the noise lasted for 30 minutes per night.	1) 2) 3)	According to the RSS's record, there was no construction works undertaken under the EP-356/2009 during the concern time period.  There was no abnormal real-time noise monitoring data recorded in RTN1 - FEHD Hong Kong Transport Section Whitefield Depot which is next to the Victoria Centre.  It is considered as invalid complaint under this Project.	Closed
110617	9/06/2011	Mr. Law from Victoria Centre Management Office	North Point	An odour nuisance suspected generating from the discharge point – Channel T at Watson Road in part of the site area was related to CWB under Contract no. HY/2009/11	0)	The complaint was received by ET on 13 Jun 2011. During the weekly site inspection on 7 and 17 June 2011, there was no any odour impact detected in the site area.  According to the site record, there was muddy water discharged from the unknown source at upstream of Channel T during heavy rainstorm. No any site surface runoff to the Channel T and out of site boundary was observed in the inspection.	Closed
					3)	In order to prevent muddy water washing out to the water body under heavy rainstorm, a silt curtain was installed at the outfall of the channel by Contractor. ET confirmed with the Resident Site Staff that a silt curtain was installed at the outfall of the channel to prevent muddy water washing out to the water body under heavy rainstorm. Besides, regular cleaning of refuse in the channel has been conducted by Contractor.	
					4)	A further site investigation on 28 June 2011 revealed that no odour nuisance was detected at the upstream of the Channel T and no source of odour nuisance was identified at site. As such, it was concluded that the source of odour nuisance was not related to the Project works.	
					5)	Although no source of odour nuisance was identified at site, the muddy water and dirt from the unknown source at upstream of Channel T may cause a potential smell during low tide and low water flow. Contractor was reminded to remove the silt curtain at the channel on non-rainy day so as to avoid the accumulation of the sediment and dirt in the water channel.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	come	Status
110709	09/07/2011	Mr. Au from City Garden Management Office	North Point	A complaint letter to Contractor HY/2009/11 was raised by Cayley Property Management Limit on 9 July 2011 regarding a series of pump breakdown events at seawater intake of City Garden on 4, 6, 7 and 8 July 2011. A lot of rubbish such as plastic bags, nylon bags, nylonwire mesh was observed sucking from the seawater intake at the seawater front of Block 7 of City Garden affecting the operation of seawater pump plant.	2)	Contractor conducted formation works for installation of caisson seawall at C27, C28, C29 and C30 on 4, 6, 7 and 8 July 2011 and no dredging work was conducted during this time period  Water mitigation measures of an 80m long silt curtain at the site boundary in front of City Garden Relocation of silt curtain and silt curtain at the outfall of the channel were provided and maintained to accommodate the site works. All vessels are equipped with rubbish collection facilities and disposed the rubbish regularly. Also, daily cleaning actions had been taken by contractor to minimize floating refuse within the site boundary.  Moreover, it has been reported several times that discharged from outfall pipeline outside the site boundary near the intake of the pump maybe considered as another source of rubbish generation.	Closed
					4)	Referring to the record provided by Cayley Property Management Limit, the trapped rubbish was unlikely generated from the construction works. It was considered that complaint is invalid and not related to project.	
110710	09/07/2011	Complainant by ICC (ICC no. 1-301520309	North Point	It was received at 00:56 on 10 July 2011. There was complained a derrick barge unloading rockfill material off the shore facing the Harbour Grant HK Hotel causing noise nuisance.	,	ET confirmed with the Resident Site Staff that the complaint was referred to Contract HY/2009/15 for the loading and unloading of fill material at two barges operation in the sea at around 300m adjacent to Island Eastern Corridor (Oil Street Chainage) where is outside the Site of HY/2009/15 in the period of around 19:45 on 9 July to 1:00 on 10 July 2011.	Closed
					2)	The material loading and unloading operation processed in restricted hours was checked without a valid CNP. It was found that the operation was due to an unexpected water leakage of the hopper barge and considered an incident.	
					3)	According to the incident report provided from RSS on 20 July 2011, around 7:30 pm the barge S22 was inclined slightly and slightly water leakage might occur. Due to marine safety concern, the hopper barge would open the hopper to release the contained materials in order to reduce the weight and stabilize the barge. In consider of slight water leakage, the operator decided to use the nearby Derrick Barge ST32 to help for unload the general fill materials first and the unloading operation was started at around 7:45pm, and end at around 1:00 am. Contractor was reminder to provide frequent check of vessel condition	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	tcome	Status
						so as to prevent recurrent by barge defect	
110723a	23/07/2011	Ms. Law at Victoria Centre by ICC no. 1- 303887687	North Point	She concerned that Highways Department published a notice in their Management Office about construction works will be conducted from 0700 hours to 2300 hours during July to December 2011 including Saturday, Sunday and public holiday.	1) 2) 3)	It was referred by AECOM to ET on 28 July 2011  RSS confirmed that the notice was prepared by Victoria Centre's Management office to their resident and the advice was only given on the extension construction works (for Contract HY/2009/15) to 7am-9pm from Monday to Saturday except Public Holidays and Sundays.  As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be	
				noliday.	4)	started at 8am and is expected to be completed by mid-August 2011.  No noise exceedance was recorded at construction noise monitoring station at Victoria Centre on 19 and 25 July 2011 during daytime while breaking and excavation works were undertaken during monitoring.	Closed
				5	5)	In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. The complainant was satisfied with the arrangement and no further complaint was received after proposed measures.	
110723b	23/07/2011	Ms. Yau at Block	North Point	Reclamation work was conducted at Causeway Bay	1)	It was referred by AECOM to ET on 8 August 2011	
		2, Victoria Centre by ICC no. 1- 304013959		Typhoon Shelter at 7am on 23 July 2011. She complained that the works shall be started later to minimize the noise nuisance	2)	With reference to the construction noise monitoring at Vitoria Centre, no exceedance was recorded on 19 and 25 July 2011 during daytime while breaking and excavation works were undertaken during monitoring	
				to the vicinity of the residents in early morning	3)	As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am and is expected to be completed by mid- August 2011.	Closed
					4)	In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. The complainant was satisfied with the arrangement and no further complaint was received after proposed measures.	
110727a	27/07/2011	Mr. Law from Victoria Centre Management Office by ICC no. 1-304616162	North Point	It was complained by Mr. Law from Victoria Centre Management Office on 27 July 2011 regarding construction noise generated by the construction operations of	1) 2) 3)	It was referred by AECOM to ET on 28 July 2011  RSS confirmed to start the rock breaking activities for Contract HY/2009/15 at 8am as a mitigation measure to minimize the noise nuisance in the vicinity of the residents.  No noise exceedance was recorded at construction noise	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
				Central-Wanchai Bypass at noon rather than in morning at 7am.	monitoring station at Victoria Centre on 25 July and 4 August 2011 during daytime while breaking and excavation works were undertaken during monitoring.	
					<ol> <li>In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. No further complaint from complainant was received after proposed the mitigation measure.</li> </ol>	
110727b	27/07/2011	Ms. Chiu by ICC	North Point	Noise nuisance from the excavation works for the	1) It was referred by AECOM to ET on 28 July 2011	
		no.1-304615409		Highways Department adjacent to the Victoria Centre was conducted from 7am	With reference to the construction noise monitoring at Vitoria Centre, no exceedance was recorded on 25 July and 4 and 10 August 2011 during daytime while breaking and excavation works were undertaken during monitoring.	
					<ol> <li>As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am.</li> </ol>	
	08/08/2011				4) However, complainant did not satisfy with the response on the noise nuisance from the rock-breaking during morning in front of Victoria Centre and then further complaint via 1823 on 7 August 2011.	Closed
					5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed.	
					Remarks: There will be counted as two complaints in this complaint log.	
110810	10/08/2011	Mr. Yip by ICC	North Point	Muddy water was discharged from work site to the seafront	It was referred by AECOM to ET on 17 August 2011.  (	Closed
		no. 1 – 306740207		near Oil Street during heavy rain. The environmental protection measures were not good enough and are needed to rectify.	2) Confirmed with RE, Muddy water was caused by a heap of earth being washed to the sea by heavy rain. The heap of earth was referred as a small stockpile placed close to the seafront in front of Oil Street within the site area under handover transition period from contract HY/2009/11 to contract HY/2009/19. The necessary mitigation measures to protect the small stockpile against rainfall were missing at the time of complaint.	
					<ol> <li>Due to the missing of mitigation measures to protect the small stockpile during handover transition period, loose material was washed into the harbour when heavy rain came. Muddy water was formed and dispersed in the sea that caused the water quality and visual concern to the public. The complaint was considered as valid.</li> <li>Contractors were advised to relocate the loose materials</li> </ol>	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	come	Status
						away from the coastline as far as practicable. Any loose material placed which needed to be placed near the coastline shall be properly compacted or covered as appropriate. To avoid any further environmental deficiency, Contractors shall ensure all necessary environmental mitigation measures will not be missing during site area handover.	
110826	26/08/2011	Grand Hyatt and a complainant by ICC	Wan Chai	Construction noise and vibration nuisance generated from the works at Convention Avenue and inside the HKCEC1 reclamation area.	1)	Confirmed with the Resident Site Staff that the construction works were referred to the Contractor HK/2009/01.  The Excavator mounted breaker at Convention Avenue and Drilling rig at HKCEC1 reclamation area were the description of the project.	
					3)	dominant construction noise source during this period.  The drilling rig at HKCEC1 reclamation area and excavator mounted breaker at Convention Avenue were then temporary suspended after received the complaint.	
					4)	Investigation revealed that the erected noise barrier (4m cantilevered movable noise barrier for the drilling rig and 1m movable noise barrier for the excavator mounted breaker) were not located close to the plants to provide adequate noise screening.	Closed
					5)	Contractor was advised to avoid concurrent operation of construction plants at site. Further enhancement of movable noise barriers at HKCEC1 and providing noise enclosure for the excavator mounted breaker at Convention Avenue are needed.	
					6)	Further site investigation and checking on 31 August and 7 September 2011 revealed that the implemented noise mitigation measures were in proper and minimize the noise impact.	
110826A	26/08/2011	A complaint letter from Mr. Au of Cayley Property of City Garden	North Point	Harbor front adjacent to their cooling water intake suction which caused 3 times of system breakdown of the sea water pump on 9, 22 and 25 August 2011.	1)	It was referred by AECOM to ET on 29 August 2011. Confirmed with the Resident Site Staff that the  • construction works were referred to the Contractors HY/2009/11 and HY/2009/19.  • The pump is located on the site area of HY/2009/19  • A temporary garbage defender was installed on 23 July 2011 by HY/2009/11 and the shape of the defender was adjusted on 8 August 2011 in order to excluse the outfall.	Closed
						An ad hoc inspection of the effectiveness of garbage defender was conducted with RSS (CWB project)	

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome Stat	atus
					team), contractor of HY/200911 and HY/2009/19 and IECon 29 August 2011. Inspection report of it was submitted to RSS on 19 September 2011.	
					<ul> <li>Daily cleaning near the water intake was conducted twice a day by contractor HY/2009/19.</li> </ul>	
					In response to City Garden request, the contractors have set up the temporary garbage defender in function and collect the floating refuses, but cannot eliminate all refuses, in particular the refuse coming from the seabed	
					<ol> <li>According to the complaint letter from Cayley Property, the outcomes of the preventive measures were not complying wih their expectation.</li> </ol>	
					3) During on-site inspection, floating refuses observed occasionally outside the garbage defender. No conclusion could be made for the source of these floating refuses. On the other hand, some of the refuses were observed floating behind the garbage defender during investigation.	
					All daily cleaning actions had been taken by contractor to minimize floating refuse inside the construction site.	
					5) It was noted that the cooling water intake was accessible to the public. As such, fish breeding and fishing activities were observed even though a notice has already hoisted. Also, tripping of rubbish by the passers-by could result in a lot of rubbish accumulated around the intake point.	
					Referring to the record provided by CPML, there were a lot of nylon/ plastic bags and nylon wire mesh that matched those rubbishes generated from the public activities.	
					7) Contractors have fulfilled the requirement of site cleanness and no exceedance was recorded during Water Quality Monitoring. It is consider the cause of this complaint is not related to project and environmental issue in this project as well. No more complaint received after ad-hoc inspection	
111014	14/10/2011	The complainant, Ms. Tam complained via hotline 1823	Wan Chai	The polluted fumes and exhaust from the excavation by sub-contractor of CEDD on pedestrian way outside no.25 Harbour Road (in front of the Harbour Centre)	RSS notified ET to carry out investigation on 17 October 2011.  ET confirmed with the Resident Site Staff that the location of the excavator was within site area of Contract no. HK/2009/02 undertaking the water cooling main reprovision works along the Harbour Road. The plants including the excavator have been checked before using	osed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					at the site. However, the polluted fumes and exhausted from the excavator was caused due to insufficient maintenance of the plant after using at site.  3) After receiving the complaint, the excavator was then removal off-site for checking and maintenance works on 17 October 2011.  4) Contractor was reminded to enhance regular checking and maintenance to all plants at site.  5) RSS has replied to the complainant on the arrangement of the measures taken on 17 October 2011. Complainant was satisfied with the response and follow-up action taken by the Contractor.	
111104	04/11/2011	Mr. Liu from LCSD complained via Contractor Complaint Hotline	Wan Chai	Complain about a tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road, the status is not healthy and roof ball of two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue were half cut.	<ol> <li>ET confirmed with the Resident Site Staff that         <ul> <li>A tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road is the Tree no. TA1122 under Contract no. HK/2009/02. Leaves of a branch of this tree were shrivelled.</li> <li>Two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue are the tree nos. A160 and A161 under Contract no. HK/2009/01. Part of roof ball of these two trees was covered by the metal plate.</li> </ul> </li> <li>Independent Tree Specialists for these two inspected the trees. Contractor HK/2009/01 has taken the measure as recommend downgrading the soil level around the trunk base. Reinstating of the ground works will be conducted in mid-December 2011. For the tree no. TA1122 under Contract no. HK/2009/02, the brown leaves were removed and fenced the tree with orange net is provided to prevent damage of tree trunk by construction works. The distance between the tree and the edge of the trench is kept approximate 2m. Two Contractors were reminded to carry out regular watering to the trees within their site area.</li> </ol>	Waiting RSS respond
111106	06/11/2011	Police officer	Wan Chai	Construction noise generated from the site at about 6:30 a.m on 6 November 2011 and require to stop the machine operation	According to the information reported by Contractor, one BC cutter and hoist were operated for Diaphragm Wall construction of Shatin-Central Link to inspect bentonite pipes and ensure no damages and all the joints are tightened in good position. Then, the subcontractor for Diaphragm wall, SAMBO Korean foreman stopped the engine of the BC cutter immediately. The police officer recorded the details and HKID number of the foreman and then left. Due to the different language communication between the police officer and the Korean foreman, no	Keep in view for three months from the date of complaint recevied



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	come	Status
-					2)	CNP was checked by the police officer.  ET confirmed with the Resident Site Staff that same issue was also raised out by RSS at about 7:00a.m on the same day. Besides, it was confirmed that there is no valid Construction Noise Permit for the conducted construction works in the period between 2300 and 0700.	
					3)	Due to insufficient communication between Contractor HK/2009/01 and their Korean Sub-contractor, Korean Sub-contractor had not notified to Contractor before carrying out the inspection of the BC cutter, hoists and bentonite pipes at about 6:00a.m to ensure no damages and all the pipe joints should be tightened and in good position.	
					4)	Contractor was advised to enhance the communication between Contractor and sub-contractor and provide sufficient environmental training to all foreman and operators on restricted hour operation. Futhermore, Construction Noise Permit should be checked and in place for the construction works during restricted hour	
					5)	This complaint was considered in relation to the conducted construction works during restricted hours without valid Construction Noise Permit. No more construction works were conducted during night time period. The construction works will be conducted in accordance with the time period stated in valid CNP. This complaint will be kept in view of any follow-up action from the relevant government activities.	
120405	05/04/2012	N/A	North Point	A complaint regarding excessive noise from construction sites of CBTS was observed daily before 7:30am except on public holidays, and the noise source was mainly from piling works. The complainant requested that construction works should start after 8:30am to avoid nuisance to nearby residents and a speedy follow-up and reply.	2)	RSS notified ET on 5 April 2012. ET confirmed with the Resident Site Staff that no piling works were performed during the concerned period. After reviewing the results of noise monitoring (M2b and M3a), no exceedance was recorded during daytime period and the noise level was below 75dB(A). Site inspection for HY/2009/15 was conducted on 10 April 2012. The condition of noise mitigation measures around CBTS was found satisfactory. RSS confirmed that no pilings were performed during the concerned period. The major works included drilling, diaphragm wall construction and excavations.  HyD made a reply to the complainant on 16 April 2012 via 1823. HyD replied that the current works at CBTS were drilling, diaphragm wall construction and deep excavations. In order to minimize the noise generated	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					from the above works, the Contractor had erected temporary noise barriers and provided noise blankets on plants. RSS would continue to work with the Contractor on the effectiveness of the environmental mitigation measures implemented on site. No further complaint was received after the response.	
130308	06/03/2013	ICC Case#1- 407181502	Tin Hau	A complaint regarding the dropping of fine rock material into surrounding waterbody was observed during rock breaking operation with two excavators in active operation at the Eastern Breakwater of Causeway Bay Typhoon Shelter near the North Point lighthouse.	<ol> <li>RSS notified ET on 8 March 2013</li> <li>ET confirmed with RSS that excavation works, installation of buoy, flashing light and silt curtain and dredging works were undertaken at Eastern Breakwater during the concerned period on 6 March 2013. One backhoe equipped with breaker and one derrick barge were confirmed in operation while another backhoe was at idle during the concerned period on 6 March 2013.</li> <li>Reviewing the photo record provided by RSS, the condition of the silt curtain deployed around the Eastern Breakwater on 6 March 2013 was found to be in good condition. It is considered that the silt curtain was properly in place during the concerned period and the concerned act of dropping of fine rock material was confined within the silt curtain boundary without adverse impact to the nearby water quality.</li> <li>Further follow up was conducted on 12 March 2013 during weekly environmental audit inspection, the silt curtain deployed around the concerned area was found to be maintained in good condition and the water quality at the concerned work area was generally satisfactory. No violation of the Environmental Permit condition was found.</li> <li>The contracotr was advised and committed to implement preventive meaures to miminize the potential impact of work including conducting regular diver check to ensure the integrity and the extend of silt curtain deployment and to provide adequtae back up stock of silt curtain for emergency use.</li> </ol>	Closed

### Appendix 10.1

**Construction Programme of Individual Contracts** 

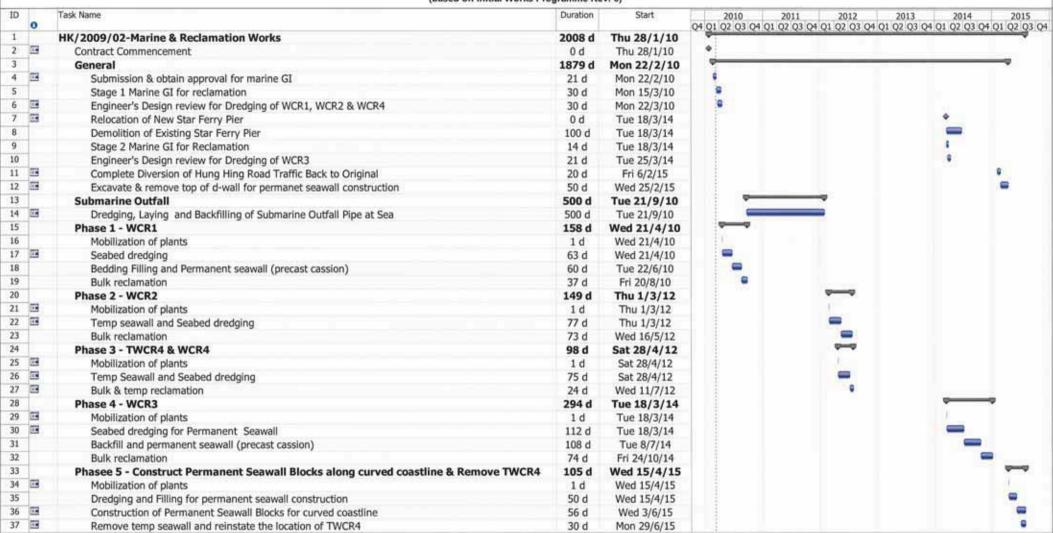
Contract No. HK/2009/01

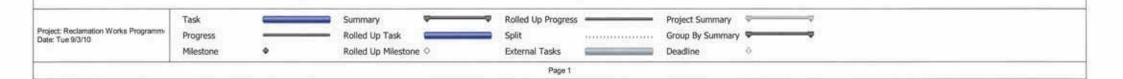
Contract Title: Wan Chai Development Phase II - Central - Wan Chai Bypass at HKCEC

Working Programme for Marine Works (Dredging and Backfilling)

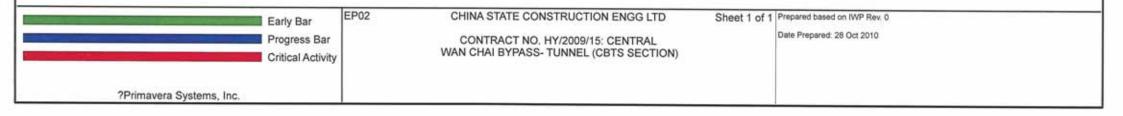
ACTIVITY	START	FINISH	2010	2011	2012	2013
ACTIVITI	SIAKI	FIMSH	Feb Mar Apr Mar Jun Jul Aur Sep Oct No De	Jan Feb MarApaMa Jun Jul Au Sep Oct No De	Jan Feb Ma ApaMa Jun Jul Au Sep Oct No De	Jan Feb Mai AprMai Jun Jul Aus Sep Oct No Dec
Submissions before Works Commencement						
Submit silt curtain deployment plan	31/3/10	31/3/10	•			
Submit silt screen deployment plan	31/3/10	31/3/10	•			
Submit measures to mitigate noise impact	31/3/10	31/3/10	•			
Cross Harbour Watermains from WCN to TST (DP6)						
Trench dredging for marine watermains installation	29/4/10	28/10/10				
Backfilling for watermain	28/1/11	14/12/11				
Reclamation Works at HKCEC Water Channel (DP3)						
Dredging at HKCEC Water Channel (Western Part)	1/6/10	1/8/10				
Backfilling to +3.5mPD (Western Part)	17/8/10	6/2/11		200		
Dredging at HKCEC Water Channel (Middle Part)	2/8/10	6/1/11				
Backfilling to +3.5mPD (Middle Part)	21/2/11	1/6/11				
Dredging at HKCEC Water Channel (Eastern Part)	1/12/12	31/12/12				
Backfilling to +3.5mPD (Eastern Part)	16/1/13	30/4/13				

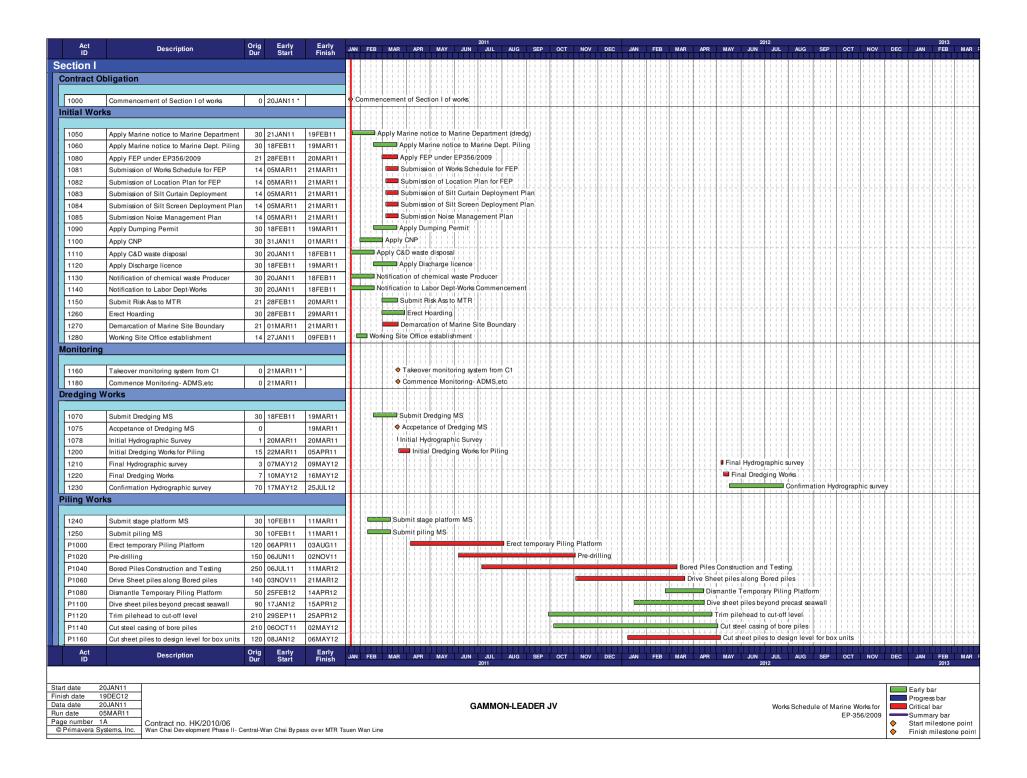
#### Dredging & Reclamation Works Programme Summary (based on Initial Works Programme Rev. 0)

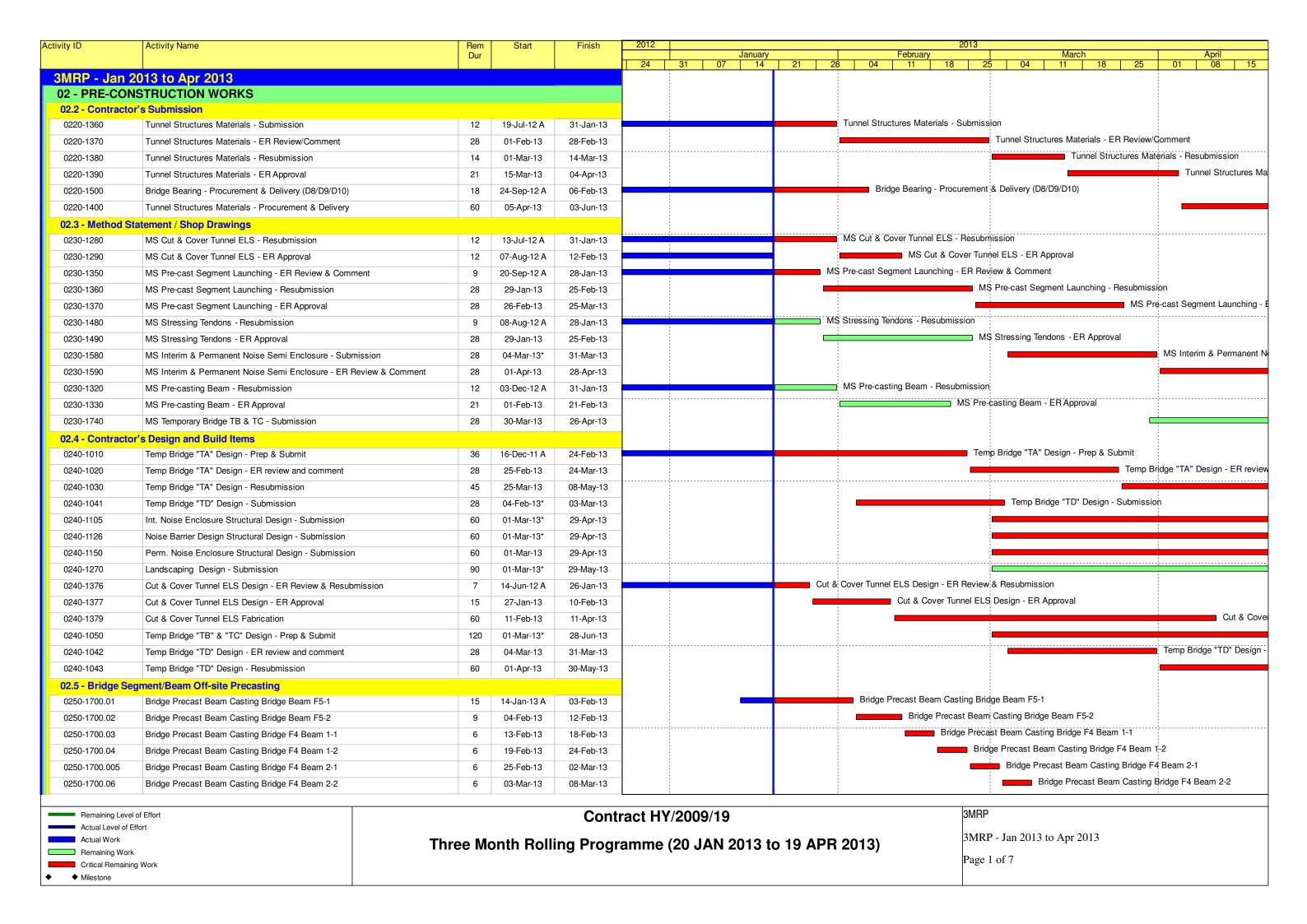


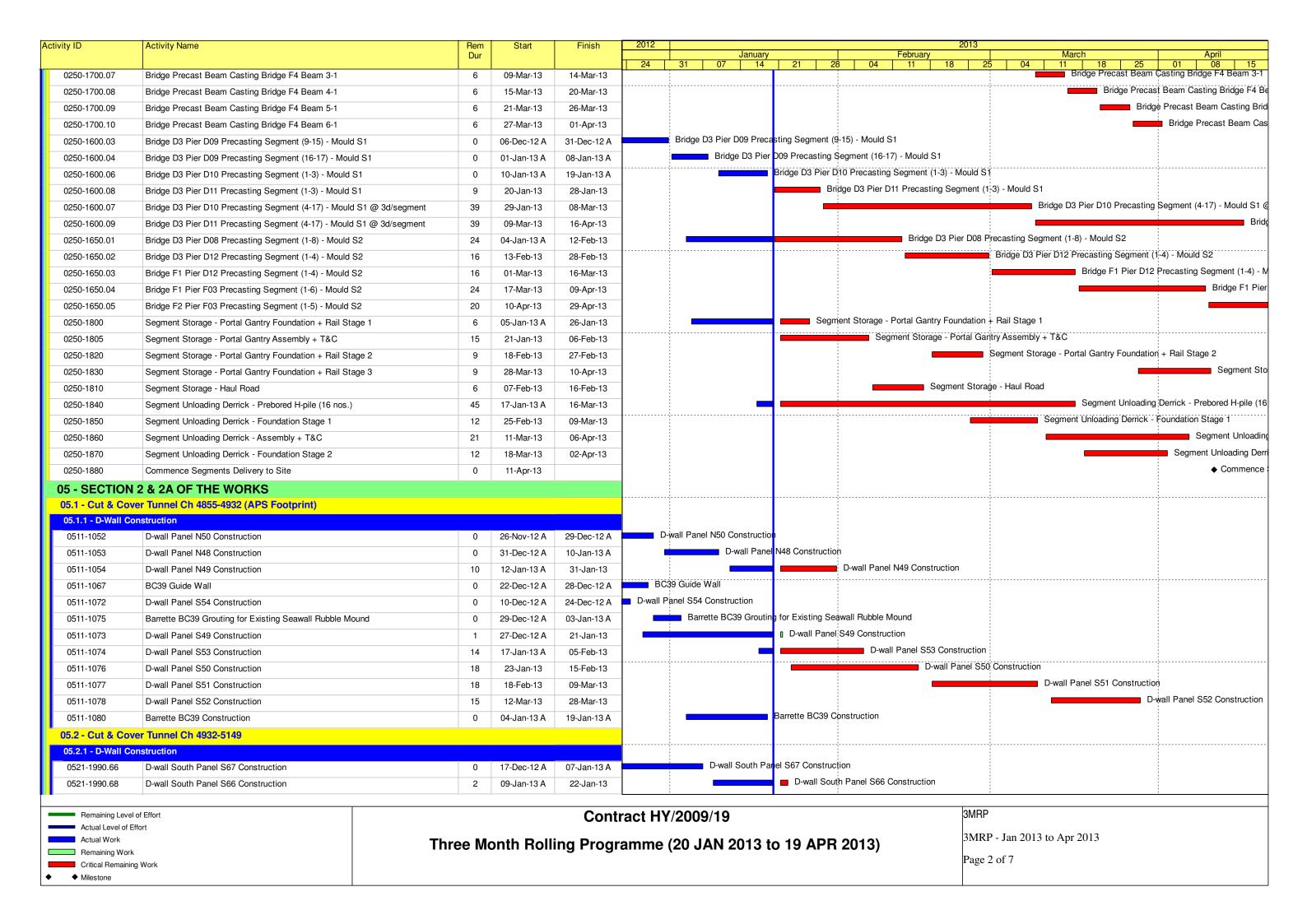


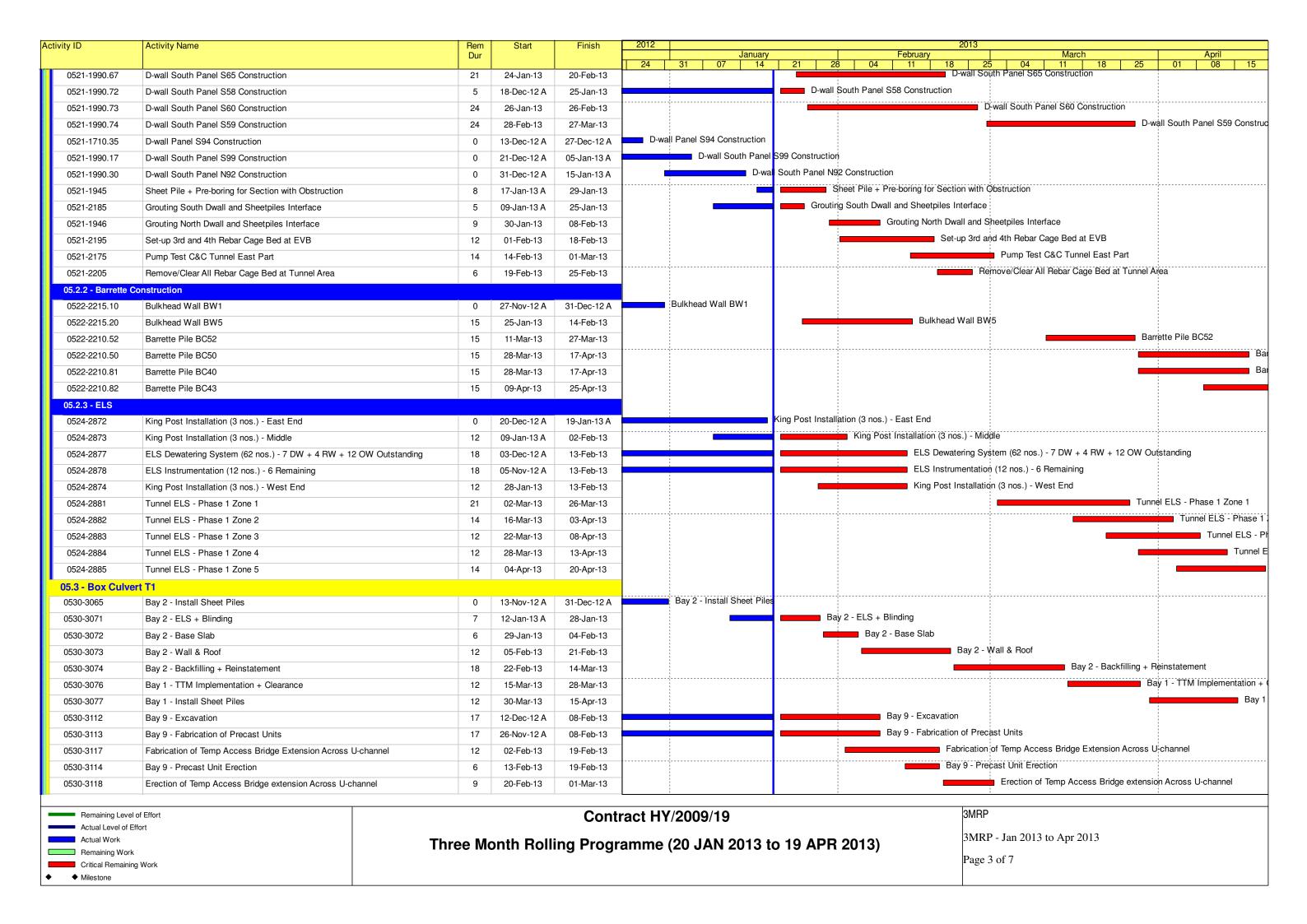
Activity ID	Cal	Activity Description	Orig	Early Start	Early Finish	2010 2011	2012	2013	2014	2015	2016	2017
CBR1E (T	S1 Area		501	Ottare	Timon							
105	1	TCBR1E(TS1)-dredging+rockfill(prep. for seawall)	86	03DEC10*	26FEB11	TCBR1E(TS	1)-dredging+rock	fill(prep. for se	awall)			
110	1	TCBR1E (TS1)-temporary reclamation	69	28JAN11*	06APR11		TS1)-temporary re	And the second second second second				
155	1	TCBR1E (TS1)- removal of temporary reclamation	27	30JAN12*	25FEB12				emporary reclama	ation		
CBR4					**				porcirj redidina			
100	1	Maintenance dredging for navigation safety for	7	20NOV10*	26NOV10	Maintenance dre	edging for naviga	tion safety for i	relocation of RHK	YC mooring at	Area B	
CBR2 + TO	CBR3 (	TS2 Area)								y a mooning at		
115	1	TCBR2&TCBR3(TS2)- Maintenance dredging for	5	15NOV10*	19NOV10	ITCBR2&TCBR3(	TS2)- Maintenand	e dredging for	navigation safety	at Area A for r	elocation of com	mercial ve
117	1	TCBR2&TCBR3(TS2)-dredge+rockfill seabed	64	16DEC11*	17FEB12				+rockfill seabed			
120	1	TCBR2&TCBR3(TS2)temporary reclamation	115	26FEB12*	19JUN12				temporary reclam			
160	1	TCBR2&TCBR3(TS2-removal temporary reclamation	57	18AUG13*	13OCT13				BR2&TCBR3(TS		orary reclamatio	n
CBR1W (T	S4 Are	a)							•		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CO.
125	1	TCBR1W(TS4)-dredging+rockfill(prep. for seawall)	40	19DEC10*	27JAN11	■TCBR1W(TS4	)-dredging+rockt	fill(prep. for sea	wall)			
130	1	TCBR1W(TS4)temporary reclamation	68	28JAN11	05APR11	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	S4)temporary					
165	1	TCBR1W(TS4)removal temporary reclamation	26	27OCT13*	21NOV13			E I	CBR1W(TS4)re	moval tempora	ry reclamation	
PCWAE										*	•	
135	1	TPCWAE-dredging+rockfill(prep. for seawall)	55 (	03DEC10*	26JAN11	TPCWAE-dree	dging+rockfill(pre	ep. for seawall)				
140	1	TPCWAEtemporary reclamation	77	27JAN11	13APR11	TPCWAE -	temporary recla	mation				
170	1	TPCWAEremoval temporary reclamation	28	28SEP13*	25OCT13			BTE	CWAEremoval	temporary recla	amation	
PCWAW					***							
145	1	TPCWAW-dredging+rockfill(prep. for seawall)	47	28OCT13*	13DEC13				TPCWAW-dredgin	ng+rockfill(prep	o. for seawall)	
150	1	TPCWAWtemporary reclamation	83	14DEC13	06MAR14				TPCWAWte			
175	1	TPCWAWremoval temporary reclamation	50 (	02JUL15*	20AUG15		TP		I temporary recla			

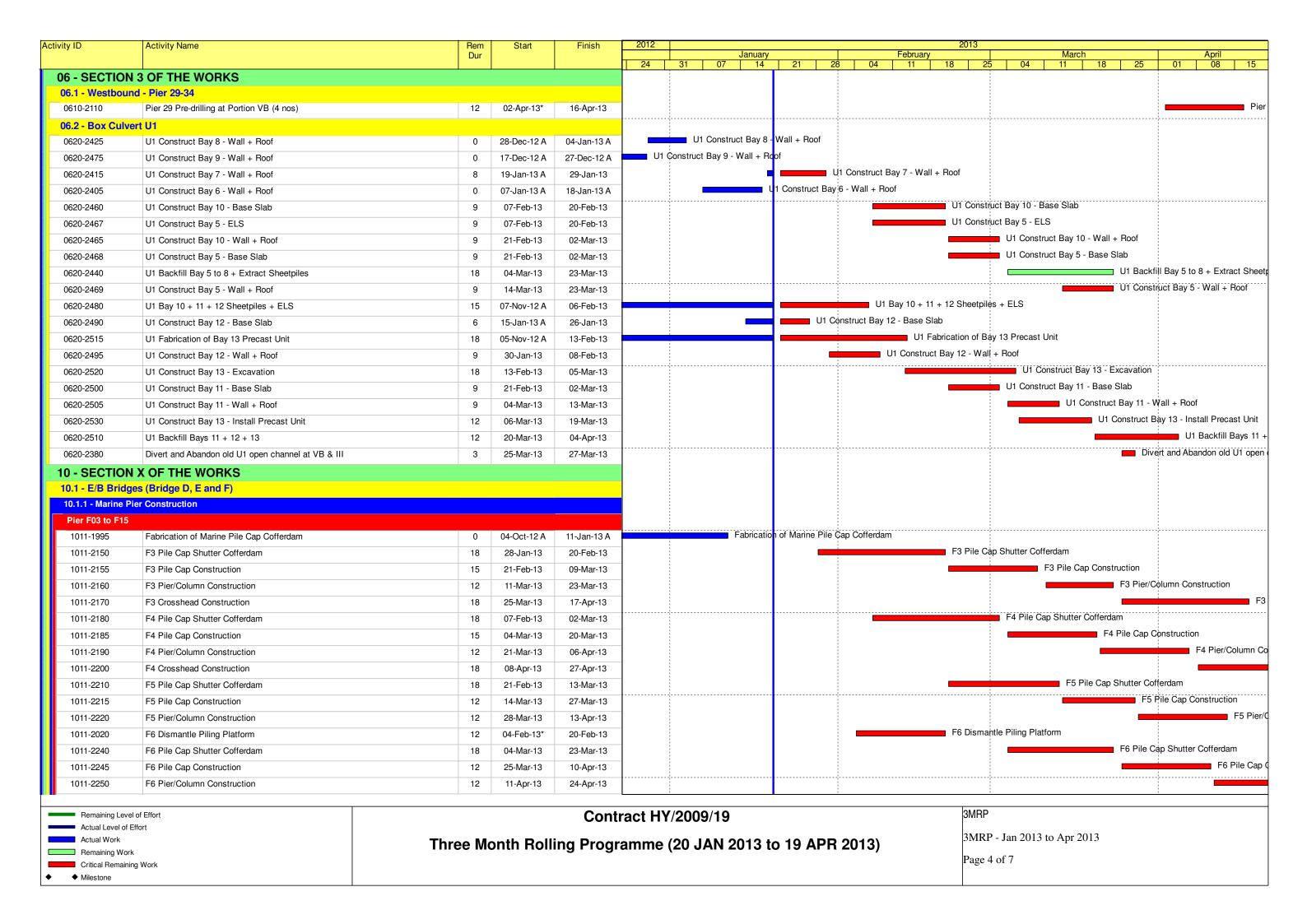


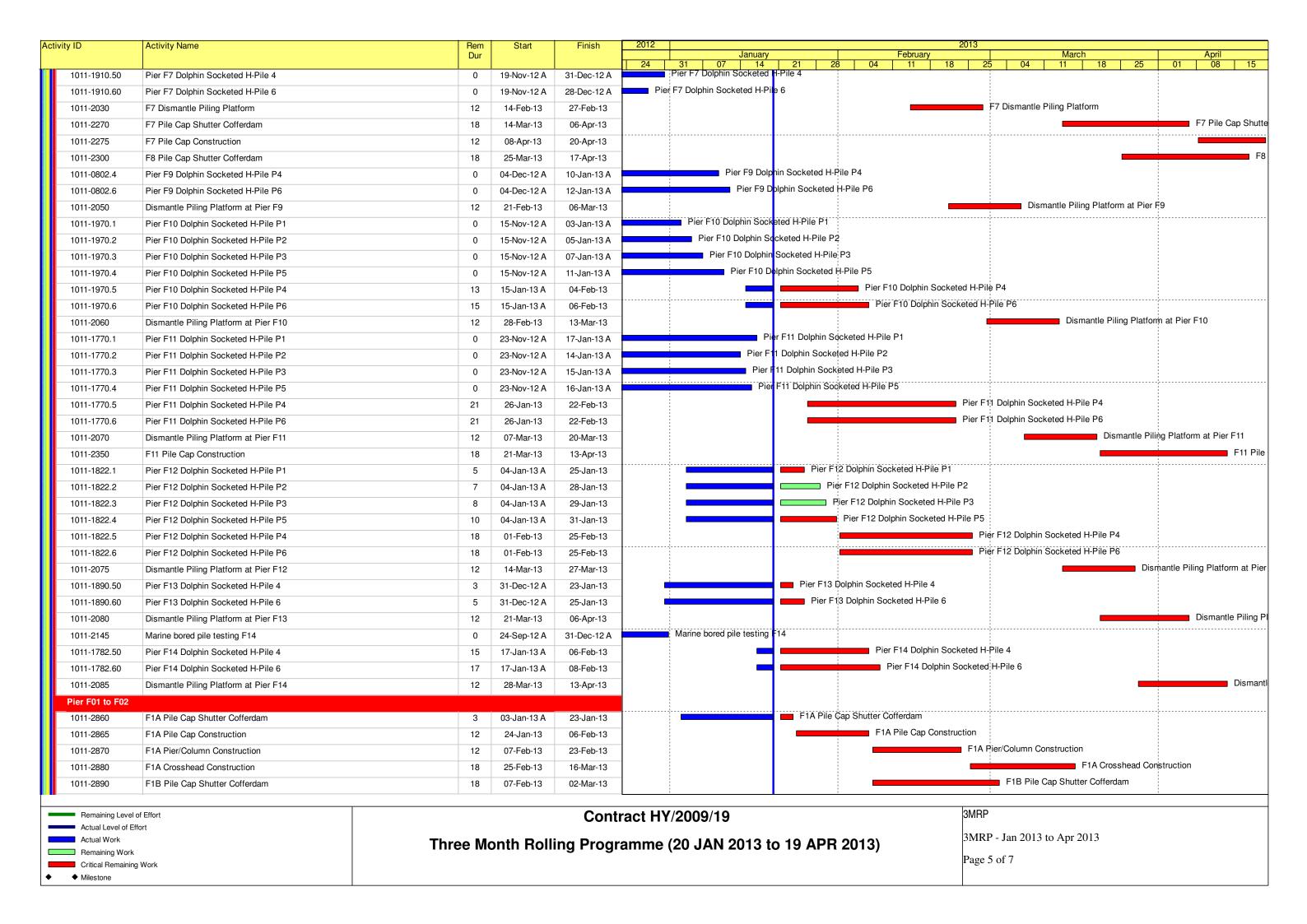


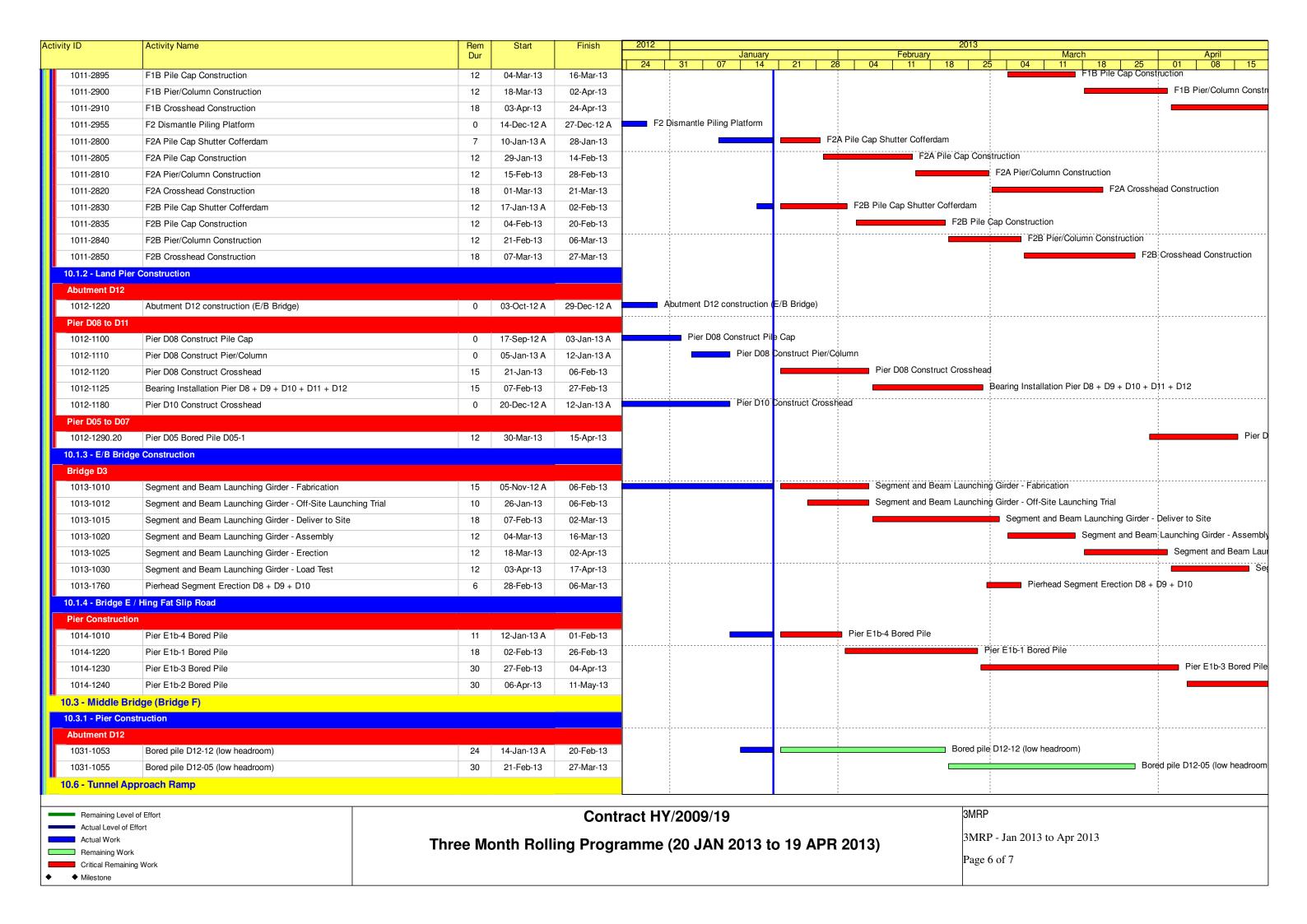












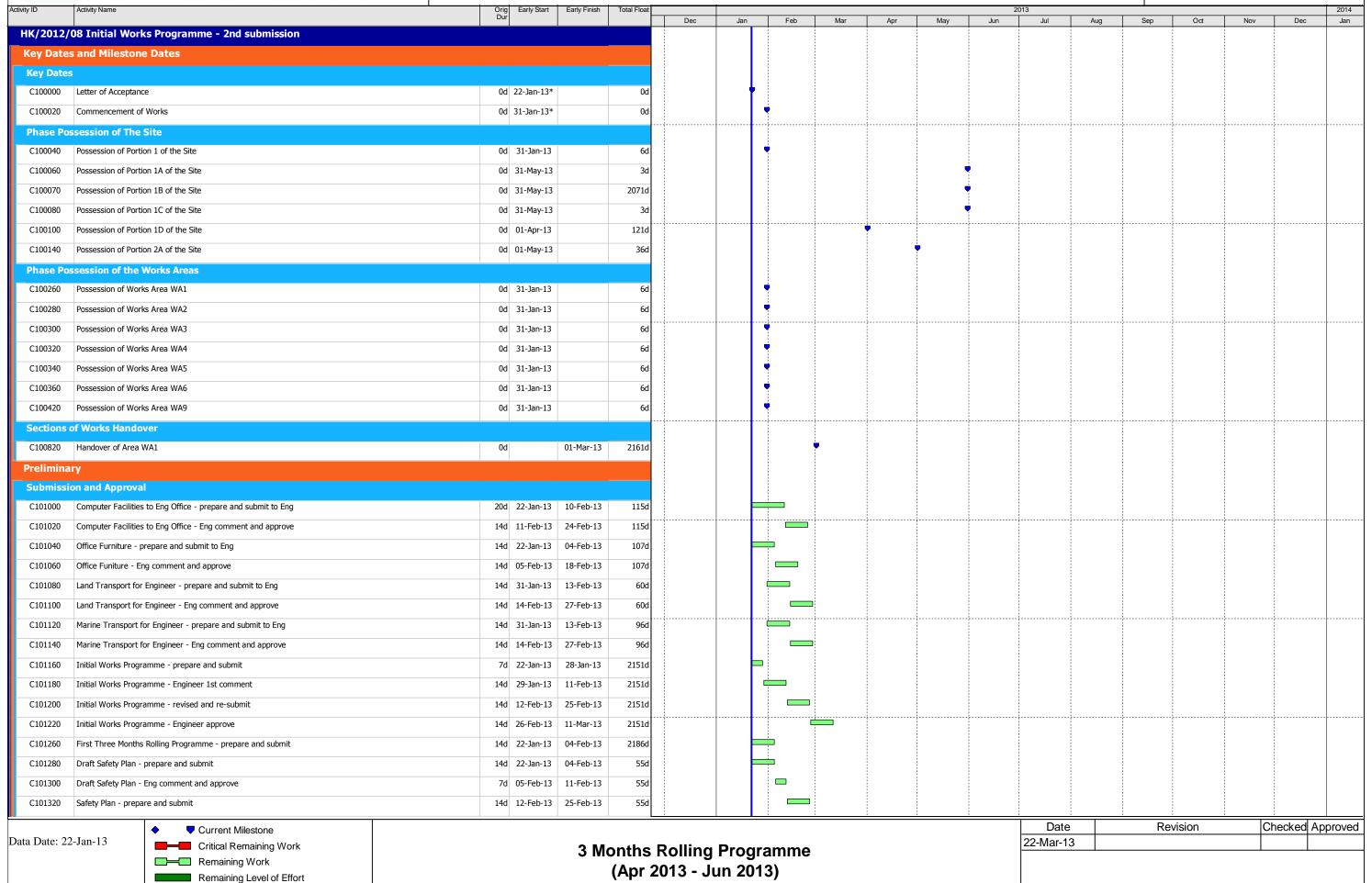
ity ID	Activity Name	Rem	Start	Finish	2012 2013
		Dur			January         February         March         April           24         31         07         14         21         28         04         11         18         25         04         11         18         25         01         08
10.6.1 - Approac	h Ramp (Excluding Portion IIB)				24 31 07 14 21 28 04 11 18 25 04 11 18 25 01 08
Bored Piles					
1061-1051	Bored Pile Ramp - BN42	0	10-Dec-12 A	02-Jan-13 A	Bored Pile Ramp - BN42
1061-1490	Bored Pile Ramp - BN40	0	03-Jan-13 A	12-Jan-13 A	Bored Pile Ramp - BN40
1061-1500	Bored Pile Ramp - BN41	4	14-Jan-13 A	24-Jan-13	Bored Pile Ramp - BN41
1061-1510	Bored Pile Ramp - BN44	15	25-Jan-13	14-Feb-13	Bored Pile Ramp - BN44
1061-1520	Bored Pile Ramp - BN01	15	15-Feb-13	04-Mar-13	Bored Pile Ramp - BN01
1061-1530	Bored Pile Ramp - BN02	15	05-Mar-13	21-Mar-13	Bored Pile Ramp - BN02
1061-1540	Bored Pile Ramp - BN03	15	22-Mar-13	11-Apr-13	Bore
1061-1550	Bored Pile Ramp - BN04	15	12-Apr-13	29-Apr-13	

Contract HY/2009/19 Remaining Level of Effort Actual Level of Effort Three Month Rolling Programme (20 JAN 2013 to 19 APR 2013) Remaining Work Page 7 of 7 Critical Remaining Work

3MRP - Jan 2013 to Apr 2013



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Activity ID Activity Name	Orig Early Start	Early Finish	Total Float								013					_	2014
C101340 Safety Plan - Eng comment and approve	14d 26-Feb-13	11-Mar-13	55d	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
C101360 Subcontractor Management Plan - Prepare and submit	30d 22-Jan-13	20-Feb-13	60d														
C101380 Subcontractor Management Plan - Eng comment and approve	14d 21-Feb-13		60d			_											
C101400 Draft Environmental Management Plan - prepare and submit	21d 22-Jan-13		43d														
C101420 Draft Environment Manangement PLan - Eng comment and appro			43d				ı										
C101440 Environmental Management Plan - prepare and submit	12d 26-Feb-13		43d									 					
C101460 Environmental Management Plan - Eng comment and approve	14d 10-Mar-13		43d														
C101462 Further Environmental Permit - prepare and submit to EPD	20d 22-Jan-13		9d														
C101464 Further Environmental Permit - EPD issue permit	14d 11-Feb-13		94														
C101470 Dumping Permit - prepare and submit to EPD	30d 24-Jan-13		131d														
C101472 Dumping Permit - EPD issue permit	28d 23-Feb-13		131d				<u> </u>						} 		-		
C101480 Staff Organization Plan - prepare and submit	30d 31-Jan-13		96d														
C101500 Staff Organization Plan - Eng comment and approve	28d 02-Mar-13		96d														
C101580 Submit Holding Nursery Site Plan - prepare and submit	30d 01-Apr-13	·	5d														
C101590 Submit Holding Nursery Site Plan - Eng comment and approve	28d 01-May-13		5d											ļ -			
C101600 structural condition survey - submit survey programme	60d 25-Feb-13	25-Apr-13	7d														
C101620 structural condition survey - conduct survey	60d 06-Apr-13	04-Jun-13	7d														
C101640 structural condition survey - prepare and submit report	30d 26-May-13	24-Jun-13	7d														
Design and Engineering																	
C101660 Weather Protection Scheme - prepare and submit	30d 31-Jan-13	01-Mar-13	5d														
C101680 Weather Protection Scheme - Eng comment and approve	30d 02-Mar-13	31-Mar-13	5d					i I									
Procurement																	
C101700 Computer Facilities to Eng Office - Supply	14d 25-Feb-13	10-Mar-13	115d			ı											
C101720 Office Funiture - Supply	28d 19-Feb-13	18-Mar-13	107d			_											
C101740 Land Transport for Engineer - supply and delivery	7d 28-Feb-13	06-Mar-13	60d														
C101760 Marine Transport for Engineer - supply and delivery	30d 28-Feb-13	29-Mar-13	96d											-} 			
Construction																	
C101800 Initial Survey	63d 07-Feb-13	02-May-13	12d						<b>•</b>								
C101820 Site Clearance	62d 21-Feb-13	09-May-13	93d			_	1	!	<del>-</del>								
C101840 Erect Fencing / Hoarding	60d 15-Feb-13	30-Apr-13	47d			_			•								
C101860 Erect Project Sign Board	21d 15-Mar-13	09-Apr-13	47d									}		-} !			
C101880 Erect Contractor Accommodation	77d 22-Feb-13	29-May-13	77d			_	1	1	<del></del>								
C101900 Tree Survey	55d 01-Mar-13	09-May-13	5d						-								
C101920 prepare and submit Tree Survey Report	14d 10-May-13	27-May-13	5d														
Dredging and Reclamation																	
Design and Engineering							-										·
C101702 Marine - temp work design and MS of demolish Expro Drive Bridg	e - Prepare and submit to ICE 48d 31-Jan-13	19-Mar-13	40d				<u>i</u>										
C101704 Marine - temp work design and MS of demolish Expro Drive Bridg	je - ICE comment and issue cert 14d 20-Mar-13	02-Apr-13	40d					÷									
C101706 Marine - temp work design and MS of demolish Expro Drive Bridg	je - Eng comment and approve 28d 03-Apr-13	30-Apr-13	40d						•								
C101802 Marine - MS for diversion of ex. cooling water main - prepare and		09-Mar-13	106d														
C101804 Marine - MS for diversion of ex. cooling water main - ICE check &			106d	-								 			ļ		<del> </del>
C101806 Marine - MS for diversion of ex. cooling water main - Eng comme			106d				_										
C102000 Marine - MS for marine SI - prepare and submit to Eng	30d 01-Apr-13	·	36d														
C102010 Marine - MS for marine SI - Eng comment and approve	14d 01-May-13		36d														
C102010 Planne Plo for marine 31 Ling comment and approve	בדיעם יידים טדידים	1 r-indy-13	300						_					!	!		

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	CHINA STATE - LEADER JOINT VENTURE		Ochic	ai vvaii	Ona	Бураос	at wan Chai west	•							
Activity ID	Activity Name	Orig Early Start Early Finish To	otal Float	Dec	Jan	Feb	Mar Apr	May	2013 Jun	ul Aug	Sep	Oct	Nov	Dec	2014 Jan
C102020	Marine - MS and design for fabrication of precast seawall - prepare and submit to ICE	60d 01-Apr-13 30-May-13	38d										7.27		
C102040	Marine - MS and design for fabrication of precast seawall - ICE check & issue cert	30d 31-May-13 29-Jun-13	61d								 				-
C102080	Marine - Silt Curtain deployment plan - prepare and submit	60d 11-Apr-13 09-Jun-13	12d			; ; ; ;			•						
C102090	Marine - Silt Curtain deployment plan - Eng comment and approve	28d 10-Jun-13 07-Jul-13	12d			1 1 1 1									
C102100	Marine - MS of Dredging - prepare and submit for ICE check	60d 11-Apr-13 09-Jun-13	10d			1			•						
C102120	Marine - MS of Dredging- ICE check & issue cert.	14d 10-Jun-13 23-Jun-13	10d			; ; ;									
C102160	Marine - MS of Dredging - Eng / MTR comment and approve	28d 24-Jun-13 21-Jul-13	10d			 				_	 				
C102320	Marine - MS for install caisson seawall - prepare and submit	60d 31-May-13 29-Jul-13	17d			1 1 1 1		<u> </u>							
C102342	Marine - MS for install seawall block - prepare and submit	60d 31-May-13 29-Jul-13	107d					<u> </u>	<u> </u>						
C103360	Marine - MS for launching, storage, mooring & transportation of caisson seawall - prepare and submit	60d 31-May-13 29-Jul-13	38d			1		<b>=</b>	:						
C103402	Marine - MS for temp seawall for advance reclamation- prepare and submit	60d 01-May-13 29-Jun-13	17d			1 1 1 1 1	_								
C103420	Marine - MS of placing fill - prepare and submit	60d 21-May-13 19-Jul-13	17d			: 			······································	_	 				
C103470	Marine - MS for Seawall Removal/Modification - prepare and submit	60d 21-May-13 19-Jul-13	48d			1 1 1 1				_					
C105000	Marine - design of temporary pile wave wall - prepare and submit to ICE	30d 31-May-13 29-Jun-13	170d			! ! ! !									
C105100	Marine - assessment report on impact to MTR-TWL tunnel - prepare and submit to ICE	60d 01-Apr-13 30-May-13	20d												
C105120	Marine - assessment report on impact to MTR-TWL tunnel - ICE check and issue ICE cert	14d 31-May-13 13-Jun-13	20d					<u> </u>	_						
C105140	Marine - assessment report on impact to MTR - TWL tunnel - Eng comment and approve	28d 14-Jun-13 11-Jul-13	20d			    					 				
	on and Approval					1 1 1 1									
	Marine - Marine Notice to Marine Dept (Dredging) - prepare and submit	14d 31-Jan-13 13-Feb-13	249d												
	Marine - Marine Notice to Marine Dept (Dredging) - MD comment & accept	30d 14-Feb-13 15-Mar-13	249d												
Construct						1									
	ork for Marine Work					 					 				
	Marine - Initial Hydrographic Survey and submit survey report (Portion 1)	14d 06-May-13 22-May-13	48d				_								
	Marine - Initial Hydrographic Survey and submit survey report (Portion 1C)	14d 31-May-13 17-Jun-13	2d			1									
	Marine - Initial Hydrographic Survey and submit survey report (Portion 1A, 1B)	14d 31-May-13 17-Jun-13	6d			1 1 1 1									
	Marine - Vibrocore - Area C	4d 18-Jun-13 21-Jun-13	2d												
	Marine - Vibrocore - Area B	3d 22-Jun-13 25-Jun-13	2d			 					 				-
	Marine - Vibrocore - Area A1	3d 26-Jun-13 28-Jun-13	2d			1 1 1 1			П						
	Marine - Continous Piezocone Penetration Test (CPPT) - Area C	10d 29-Jun-13 11-Jul-13	2d 2d			1 1 1 1									
	emolish Expo Drive West Bridge	10u 25-3ui-13 11-3ui-13	Zu												
	Area C - Expo Drive - remove street funiture and asphalt surface	10d 30-May-13 10-Jun-13	64			! ! !			_						
	Area C - Expo Drive - remove street funiture and aspnait surface  Area C - Expo Drive - erect temporary support frame for demolition work	20d 03-Jun-13 26-Jun-13	6d 6d								 				-
	Area C LAPO Drive - erect temporary Support frame for demonstroll Work	700 02-JUII-12 20-JUII-13	ou			1 1 1 1 1									
Zone A2	Area A2 - Complete discommissioning of Submarine Sewage Outfall (by others)	0d 21-May-12	1244			! ! ! !									
	· · · · · · · · · · · · · · · · · · ·	0d 31-May-13	124d			1									
	Area A2 - Remove Submarine Sewage Outfall	20d 31-May-13 24-Jun-13	124d			 									
	Area A2 - Complete discommissioning of Cross Harbour Watermains (by others)	0d 31-May-13	124d			 					 				
	Area A2 - Remove Cross Harbour Watermains	20d 31-May-13 24-Jun-13	124d			1									
CRIII Area						1		<u> </u>							
	CRIII - Temp. Diversion of 5 Existing Cooling Mains	66d 30-May-13 16-Aug-13	55d			1 1 1 1									
	Section Completion					1 1 1 1									
Construct											 				
Box Culver	rt / Structure														
	Box Culvert L and Temporary Diversion of Culvert L														
Z12280	Culvt - Stage 1 - LKS - TTA, Exc & ELS, ug utilities diversion [lighting & cable TV]	135d 03-May-13 12-Oct-13	12d												
Z12280	Culvt - Stage 1 - LKS - TTA, Exc & ELS, ug utilities diversion [lighting & cable TV]	135d 03-May-13 12-Oct-13	12d			 									

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	ayc	•	7	1

ivity ID	Activity Name	Orig Early Start	Early Finish	Total Float								2013						2014
		Dur			Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ja
Section I	- Interim Landing Steps and EVA																	
Permit /	Method Statement			_														
S010030	Sec I - ILS - issue FEP	0d	05-Mar-13*	0d				•		ļ								
S010050	Sec I - ILS - application for marine notice	0d	23-Feb-13*	0d			•											
S010070	Sec I - ILS - Marine Department process and issue marine notice	60d 24-Feb-13	24-Apr-13	11d														
S010130	Sec I - ILS - prepare and submit method statement	30d 28-Feb-13	03-Apr-13	2d					<u></u>									
S010150	Sec I - ILS - Eng comment and approve method statement	28d 04-Apr-13	01-May-13	4d						<u>.</u>								
Seawall	Demolition	,						-		‡								
S011000	Sec I - ILS - plant mobilization and ug cable detection	5d 02-May-13	07-May-13	3d						_								
S011020	Sec I - ILS - open cut behind existing seawall to 2.3mPD	4d 08-May-13	11-May-13	3d														
S011030	Sec I - ILS - demolish ex. L-wall tie beam	3d 13-May-13	15-May-13	3d						•								
S011040	Sec I - ILS - open cut behind existing seawall to 0.0mPD	4d 16-May-13	21-May-13	3d						_								
S011060	Sec I - ILS - slope protection	4d 22-May-13	25-May-13	3d				-										
S011065	Sec I - ILS - remove L-wall, and concree block	12d 27-May-13	08-Jun-13	3d						_	<u> </u>							
Precast	Concrete Element Construction	<u>'</u>	1															
S011070	Sec I - ILS - establish precast fabrication yard	7d 16-Apr-13	23-Apr-13	7d														
S011080	Sec I - ILS - fabricate precast mass concrete block units (standard)	20d 22-Apr-13	15-May-13	7d						:								
S011120	Sec I - ILS - fabricate precast mass concrete block (special)	16d 16-May-13	04-Jun-13	7d														
Interim l	Landing Steps Construction	<u> </u>	1															
S011130	Sec I - ILS - install precast concrete blocks and steps below +2.5mPD	2d 10-Jun-13	11-Jun-13	3d							0							
S012000	Sec I - ILS - construct cast insitu concrete blocks and steps above +2.5mPD	24d 13-Jun-13	11-Jul-13	3d														
Section V	I C - Area 3, 6, 8A & 8C			<u> </u>														
Soft Land	dscaping Works									†				-				
S6C2300	0 Sec VI C - RdW - Tree Felling/Transplanting at Area 8A	48d 31-May-13	27-Jul-13	2d								:						