



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 (March 2013)

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 ENVIRONMENTAL PERMIT NOS. FEP-02/356/2009,
FEP-03/356/2009, FEP-04/356/2009, FEP-05/356/2009 AND
FEP-06/356/2009

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- MARCH 2013 -

CLIENTS:

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and

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DATE:

15 April 2013

Ref.: AACWBIECEM00_0_3805L.13

15 April 2013

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Shatin, New Territories
Hong Kong

By Post and Fax (2691 2649)

Attention: Mr. Conrad Ng

Dear Sir,

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

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

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
1. INTRODUCTION.....	13
1.1 Scope of the Report	14
1.2 Structure of the Report.....	14
2. PROJECT BACKGROUND.....	16
2.1 Background	16
2.2 Scope of the Project and Site Description	16
2.3 Division of the Project Responsibility	17
2.4 Project Organization and Contact Personnel.....	18
3. STATUS OF REGULATORY COMPLIANCE	26
3.1 Status of Environmental Licensing and Permitting under the Project.....	27
4. MONITORING REQUIREMENTS.....	37
4.1 Noise Monitoring	39
4.2 Air Monitoring	40
4.3 Water Quality Monitoring.....	43
5. MONITORING RESULTS.....	48
5.1 Noise Monitoring Results	48
5.2 Real-time Noise Monitoring.....	50
5.3 Air Monitoring Results	50
5.4 Water Monitoring Results.....	51
5.5 Waste Monitoring Results	57
6. COMPLIANCE AUDIT	60
6.1 Noise Monitoring	61
6.2 Real-time noise Monitoring	61
6.3 Air Monitoring	61
6.4 Water Quality Monitoring.....	61
6.5 Review of the Reasons for and the Implications of Non-compliance.....	63
6.6 Summary of action taken in the event of and follow-up on non-compliance	63
7. CUMULATIVE CONSTRUCTION IMPACT DUE TO THE CONCURRENT PROJECTS	65
8. ENVIRONMENTAL SITE AUDIT.....	65
9. COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION	66
10. CONCLUSION	70

LIST OF TABLES

Table I	Summary of Water Quality Monitoring Exceedances in Reporting Month
Table II	Summary of Enhanced Dissolved Oxygen Monitoring Exceedances in Reporting Month
Table 2.1	Schedule 2 Designated Projects under this Project
Table 2.2	Details of Individual Contracts under the Project
Table 2.3	Contact Details of Key Personnel
Table 3.1	Summary of the current status on licences and/or permits on environmental protection pertinent to the Project
Table 3.4	Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/01
Table 3.5	Summary of submission status under FEP-02/356/2009 Condition
Table 3.6	Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/02
Table 3.7	Summary of submission status under FEP-03/356/2009 Condition
Table 3.8	Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/15
Table 3.9	Summary of submission status under FEP-04/356/2009 Condition
Table 3.10	Cumulative Summary of Valid Licences and Permits under Contract no. HK/2010/06
Table 3.11	Summary of submission status under EP-356/2009 and FEP-05/356/2009 Condition
Table 3.12	Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/19
Table 4.1	Noise Monitoring Station
Table 4.2	Real Time Noise Monitoring Station
Table 4.3	Air Monitoring Station
Table 4.4	Marine Water Quality Stations for Water Quality Monitoring
Table 4.5	Marine Water Quality Monitoring Frequency and Parameters
Table 4.6	Marine Water Quality Stations for Enhanced Water Quality Monitoring
Table 4.7	Marine Water Quality Stations for Additional DO Monitoring
Table 5.2	Noise Monitoring Station for Contract nos. HK/2009/01, HK/2009/02 and HK/2010/06
Table 5.3	Noise Monitoring Station for Contract no. HY/2009/15
Table 5.4	Noise Monitoring Station for Contract no. HY/2009/19
Table 5.5	Real Time Noise Monitoring Station for Contract no. HY/2009/19
Table 5.8	Air Monitoring Station for Contract no. HK/2009/02
Table 5.9	Air Monitoring Station for Contract no. HY/2009/15
Table 5.10	Air Monitoring Stations for Contract no. HY/2009/19
Table 5.12	Water Monitoring Stations for Contract no. HK/2009/01
Table 5.13	Water Monitoring Stations for Contract no. HK/2009/02
Table 5.14	Water Monitoring Stations for Contract no. HK/2010/06
Table 5.15	Water Monitoring Stations for Contract no. HY/2009/15
Table 5.16	Water Monitoring Stations for Contract no. HY/2009/19
Table 5.17	Summary of Water Quality Monitoring Exceedances in Reporting Month
Table 5.18	Summary of Enhanced Dissolved Oxygen Monitoring Exceedances in Reporting Month
Table 5.19	Details of Waste Disposal for Contract no. HK/2009/01
Table 5.20	Details of Waste Disposal for Contract no. HK/2009/02
Table 5.21	Details of Waste Disposal for Contract no. HY/2009/15
Table 5.22	Details of Waste Disposal for Contract no. HK/2010/06
Table 5.23	Details of Waste Disposal for Contract no. HY/2009/19
Table 8.1	Summary of Environmental Inspections for Contract no. HK/2009/01
Table 8.2	Summary of Environmental Inspections for Contract no. HK/2009/02
Table 8.3	Summary of Environmental Inspections for Contract no. HY/2009/15
Table 8.4	Summary of Environmental Inspections for Contract no. HK/2010/06
Table 8.5	Summary of Environmental Inspections for Contract no. HY/2009/19
Table 9.1	Cumulative Statistics on Complaints
Table 9.2	Cumulative Statistics on Successful Prosecutions

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

LIST OF FIGURES

- Figure 2.1** *Project Layout*
Figure 2.2 *Project Organization Chart*
Figure 2.3 *Locations of Environmental Monitoring Stations*

LIST OF APPENDICES

- Appendix 3.1** *Environmental Mitigation Implementation Schedule*
Appendix 4.1 *Action and Limit Level*
Appendix 4.2 *Copies of Calibration Certificates*
Appendix 5.1 *Monitoring Schedule for Reporting Month and Coming month*
Appendix 5.2 *Noise Monitoring Results and Graphical Presentations*
Appendix 5.3 *Air Quality Monitoring Results and Graphical Presentations*
Appendix 5.4 *Water Quality Monitoring Results and Graphical Presentations*
Appendix 5.4a *Additional Dissolved Oxygen Monitoring Results*
Appendix 5.5 *Real-time Noise Monitoring Results and Graphical Presentations*
Appendix 6.1 *Event Action Plans*
Appendix 6.2 *Summary for Notification of Exceedance*
Appendix 7.1 *Complaint Log*
Appendix 8.1 *Construction Programme of Individual Contracts*

EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report –March 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-03/356/2009, FEP-04/356/2009, FEP-05/356/2009 and FEP-06/356/2009. This report presents the environmental monitoring findings and information recorded during the period February 2013 to March 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.
 - Installation of sheet pile wall for temporary open channel between CH290 and CH385.
 - Construction of mass concrete coping for new seawall.
 - Installation of ELS for construction of proposed box culvert Bay 8 and Bay 9.

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

- Rockfilling and rock protection to cross-harbour watermains.
- Final inspection for the CHWM (TST section) by WSD.
- Installation of interim connecting pipe between existing main and the proposed pipeline.
- CCTV inspection for cross-harbour water main (including CHA, CHB, CHE & CHF).

Fresh Watermains, Cooling Watermains and Salt Watermains (On Land)

- Mainlaying works at Zone B6-1A, B6-3, B6-4, B6-5B, A2-3A, A3-2B, A3-3C, C1-2 and X2-1.
- Reinstatement works in combined Zone A1-2A & A1-3A.
- Mainlaying works in Zone A2-3A and A3-2B.
- Mainlaying works at Zone A3-3C .
- Mainlaying works at Zone C1-2.
- Reinstatement works in Zone B6-5 and subsequent mainlaying works in Zone B6-4 and B6-5B.
- Mainlaying works in Zone B6-1A and Zone B6-3 (previously named B1-5A).
- Final cleaning, CCTV inspection and pressure test for the 9 nos. cooling watermains.
- Pressure test for cross harbour watermains (whole length of land pipes in Wan Chai).
- HEC and PCCW cabling works in Zone A1-1 which connected to the proposed transformer rectifier at new reclaimed area.

- Mainlaying works in Zone X2-1 of Convention Avenue.

Tunnel Works

- Pre-drilling works for CWB (Stage 2).
- Diaphragm wall construction works at Stage 2 (North).
- 1st Piling rig for pre-bored H piling works under atrium was mobilized to Site.

E & M

- Full commissioning test for Cooling Water Pumping Station P3 & P4.
- Full commissioning test for Cooling Water Pumping Station P5.
- FSD inspection for Cooling Water Pumping Stations P3 & P4.
- FSD inspection for Cooling Water Pumping Station P5.

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.
- Pressure tests for both intake main of GE/HC and SHK in the whole WCR1 area.
- Pressure tests within northern part of WCR1 for both intake main of CRB and discharge main of SHK.
- Owing to the substantial settlement in the thrust blocks embedding the completed intake pipelines near to their corresponding P7 & P8 Cooling Water Pumping Station recorded, the flexible joints connecting with the structure had been detached and the subsided pipeline would be re-installed. Site investigation was being carried out.
- The defeated cable joint box near the proposed combined access chamber had been rectified.
- Major E&M works and their T&C in Cooling Water Pumping Stations P7, P8 and P9.
- Footpath reinstatement for the trenches near Harbour Centre.
- Dry tests at WSD Salt Water Pumping Station. Wet test after completion of the proposed intake culvert.
- Drilling hole and installation of pipe bracket for aeration and chlorination pipe inside salt water intake culvert between Bay 8 and Bay 11.
- Installation of stoplog at Bay 2A of the proposed intake culvert
- Diver work at Bay 1B of the proposed intake culvert followed by concrete plug.
- The stability check to the proposed sheet pile removal works at Bay 2B.
- Mainlaying works for DN800 salt watermain (CHS8A) at Ex-Pet Garden.
- The ABWF works in WSD Salt Water Pumping Station, including maintenance platform and external finishes.
- The second T&C
- The trial period for the Outfall B.

- Switching over works for sewage to WCE PTW.
 - Backfilling for the receiving pit adjacent to WCE PTW at Hung Hing Road.
 - Saw cutting D-wall for 1050 dia. concrete pipe installation between Bay 1 and the existing drainage. The associated platform for pipe laying and manhole MH1 construction.
 - Proposed precast caisson seawall 2X ; infilling works.
 - Concreting of top-slab for PT2 & PT3 at Level 1 (+4.15mPD).
 - Concreting of eastern concrete staircase (ST1) from Level 1 to Observation Deck Level.
 - Construction of Feature Tower on Observation Deck.
 - Concreting of base slab with stem wall for PT4 & PT5 at Level 1 (under +4.15mPD).
 - Installation of concrete block and plastering works wall for Stair-03 (2nos.) on Level 1 to Observation Deck Level.
 - ABWF including brickworks and E&M cable tray at 1/F, 2/F and M/F.
 - Planter wall and parapet wall construction on the Observation Deck.
 - Installation of winch & pulley system of proposed moveable ramp. Formwork erection for the late cast roof slab.
 - Eastern Bulkhead Wall, Panel BHP5 and BHP8 were concreted. Excavation for Panel BHP1 and BHP6.
 - Dredging works at TWCR4 after passing the 1-month T&C period of the completed sewage outfall.
- iv. During this reporting period, the major work activities for Contract no. HY/2009/15 included:
- Removal of eastern breakwater of CBTS
- v. During this reporting period, the major work activities for Contract no. HK/2010/06 included:
- Pile Casing Cutting
 - Sheet Piling Works
 - Utility Diversion Works
 - Precast Unit Box Construction (mainland China)
- vi. During this reporting period, the major work activities for Contract no. HY/2009/19 included:
- D-wall Construction (North & South Section)
 - Guide wall construction for D-wall / Barrette at North side
 - Construction works for Box Culvert T1
 - Marine Piling
 - Construction of socket-H pile
 - Construction works for Culvert U1
 - Construction of Pile caps & columns (Land)
 - Dismantling of marine platform

- Demolition of parapet at IEC Link
 - Construction of Pile caps & columns (Marine)
 - Construction of dewatering well for Cut & Cover Tunnel
 - D8-D9 Gantry Fabrication for precast segment
 - ELS for Cut & Cover Tunnel
- vii. During this reporting period, the major work activities for Contract no. HK/2012/08 included:
- Site preparation works
 - Site survey

Noise Monitoring

- viii. 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.
- ix. No action and 4 limit level exceedances at M6 – HK Baptist Church Henrietta Secondary School were recorded on 7, 12, 19 and 26 March 2013 in this reporting month. Exceedances on 7, 12 and 19 March 2013 were concluded as non-project related and exceedance on 26 March 2013 was concluded as Project related.

Real-time Noise Monitoring

- x. 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.
- xi. 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.
- xii. 24-hour real time noise monitoring was conducted at RTN2a – Hong Kong Electric Centre. No project related exceedance was recorded in the reporting month.

Air Quality Monitoring

- xiii. 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.
- xiv. Due to lack of electricity supply, the 24-hr TSP monitoring at the following stations were rescheduled:
CMA2a: from 4 Mar 2013 to 5 Mar 2013
- xv. No exceedance was recorded in the reporting month.

Water Quality Monitoring

- xvi. Due to the blockage of the road access to C5e and C5w on 27 Mar 2013 during mid-flood tide the sample was taken under contingency C5 on 27 Mar 2013 during mid-flood.
- xvii. 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.
- xviii. 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.
- xix. 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;
- xx. 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.
- xxi. 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.
- xxii. 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.
- xxiii. 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.
- xxiv. 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

Contract no.	Water Monitoring Station	Mid-flood						Mid-ebb					
		DO		Turbidity		SS		DO		Turbidity		SS	
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01	WSD19	0	0	1	0	0	0	0	0	0	1	0	2
	C1	0	0	0	0	0	0	1	0	0	0	0	0
	C3	1	2	0	0	0	0	1	1	0	0	0	0
	C4e	1	0	0	0	1	0	0	0	0	0	0	0
	C4w	1	0	0	0	0	0	0	0	0	0	0	1
Monitoring finished on 27 April 2012	WSD20	0	0	0	0	0	0	0	0	0	0	0	0
	WSD7	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/01 & HK/2010/06	C2	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02 Monitoring started on 8 Feb 2012	C5e	0	0	0	0	0	0	0	0	0	0	1	0
	C5w	0	0	1	0	0	0	0	0	0	0	0	0
	WSD21	0	0	0	0	0	1	0	0	0	0	0	2
	WSD9	0	0	0	0	0	0	0	0	0	1	0	0
	WSD17	0	0	1	0	0	0	0	0	0	0	0	0
HY/2009/15	C7	0	0	0	0	0	0	0	0	0	1	0	0
HY/2009/19 Monitoring started on 28 Jan 2012	C8	0	0	0	0	0	0	0	0	0	0	0	0
	C9	0	0	0	1	0	0	0	0	0	0	0	0
Total		3	2	3	1	1	1	2	1	0	3	1	5

- 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.
 - WSD7 and WSD20 water quality monitoring were temporarily suspended from 27 Apr 2012.

- xxv. Investigation found that the exceedances were not project-related. The details of the recorded exceedances can be referred to the Section 6.4.
- xxvi. 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

Contract no.	Water Monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15	C6	0	0	0	0
	C7	0	0	0	0
	Ex-WPCWA SW	0	2	0	1
	Ex-WPCWA SE	2	2	0	4
Total		2	4	0	5

- xxvii. There were 2 action level exceedances and 9 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.
- xxviii. 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.

Complaints, Notifications of Summons and Successful Prosecutions

- xxix. One environmental complaint was received on 6 March 2013.
- xxx. A water quality complaint was received by ET on 6 March 2013 (ICC Ref. No: 1-407481502 dated 8 March 2013, forwarded by RSS). The complainant reported that dropping of fine rock material into surrounding waterbody was observed during rock breaking operation..
- xxxi. 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.
- xxxii. 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. 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.
- xxxiii. The contractor was advised and committed to implement preventive measures to minimize the potential impact of work including conducting regular diver check to ensure the integrity and the extend of silt curtain deployment and to provide adequate back up stock of silt curtain for

emergency use. The details of cumulative complaint log and updated summary of complaints are presented in Appendix 9.1.

Site Inspections and Audit

- xxxiv. 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 and HK/2012/08 under EP no. EP-356/2009 in the reporting month. Major observations and recommendations made during the audit sessions were rectified by the Contractors. No non-conformance was identified during the site inspections.

Future Key Issues

- xxxv. 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

- Rockfilling at east of HKCEC (up to -4.0mPD). Filling works up to +4.0mPD would be postponed due to the condition of maintaining the intakes of cooling system at HKCEC water channel (Portion 2).
- Installation of additional sheet pile wall for temporary open channel between CH220 and CH260.
- Shoring system for temporary open channel between CH290 and CH385. Subsequent steel bridge construction over the temporary open channel.
- Construction of mass concrete coping for new seawall.
- Installation of ELS for construction of proposed box culvert Bay 8 and Bay 9.
- Rockfilling and rock armour protection works to cross-harbour watermain.
- Installation of interim connecting pipe between existing main and the proposed pipeline.
- CCTV inspection for cross harbour watermain (including CHA, CHB, CHE & CHF) .
- Reinstatement works including demolition of existing chamber, ABWF and further tree transplantation would be commenced upon completion of testing and commissioning of proposed cross-harbour watermain and disconnection of existing watermain.

Fresh Watermain, Cooling Watermain and Salt Watermain (On Land)

- Works at Zone B6-1A, B6-3, B6-4, B6-5B, A2-3A, A3-2B, A3-3C, C1-2 and X2-1.
- Mainlaying works at Zone A2-3A and A3-2B.
- Mainlaying works at Zone A3-3C.

- Mainlaying works in Zone C1-2.
- Mainlaying works for proposed sewerage system in Zone B6-1A.
- Mainlaying works and substantially reinstatements in Zone B6-3 (previously named B1-5A).
- Final cleaning and sterilization for cross harbour watermain.
- Final inspection for CHWM (Wan Chai section) by WSD.
- Mainlaying works at Zone X2-1.

Tunnel Works

- Installation of pre-bored H-pile in CWB Stage 2 under the atrium link (from Ch120 to Ch220) .
- CWB diaphragm wall construction under the atrium link was currently.
- Trench cutter mobilizes to Site.
- Bulkhead Wall at Ch120.

E&M Works

- Full commissioning for Cooling Water Pumping Station P5.

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

- Footpath reinstatement works of cooling mains near Harbour Centre / Great Eagle Centre.
- T&C and switch-over for the proposed cooling water intake system to CRB (P9)..
- Construct mini-piles and pile cap for rectifying the subsided intake pipes for both GE/HC and SHK.
- DN800 salt watermain (CHS8A) installation works inside Ex-pet Garden.
- Construction of Bay 1B and Bay 2B intake culvert.
- Installation for the proposed stoplog at Bay 2A.
- Excavation and prepare for connection with the existing DN600 salt watermain at Hung Hing Road.
- Reinstatement works of DSD receiving pit at Hung Hing Road.
- Decommissioning of the abandoned sewage outfall.
- Construction of Drain FRP-N (1050 dia. pipe) from the proposed Box Culvert N1 with the existing drainage system.
- Construction of Bay 4 of the proposed Box Culvert N1.
- ABWF, brickworks and parapet/planter wall construction in Ferry Pier.
- Installation of moveable ramp system.
- Civil works above the caisson seawall 2X including staircase ST-1 and the plant

room underneath the staircase.

- Construction of Eastern Bulkhead wall.
- Dredging of TWCR4 dredging works.

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

- Removal of eastern breakwater of CBTS
- Installation of temporary wave protection barrier at eastern breakwater

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
- Precast Unit Box Construction (mainland China)

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

- D-wall Construction (North & South Section)
- Construction works for Box Culvert T1
- Construction works for Culvert U1
- Construction of Pile caps & columns (Land)
- Dismantling of marine platform
- Demolition of parapet at IEC Link
- Construction of Pile caps & columns (Marine)
- D8-D9 Gantry Fabrication for precast segment
- ELS for Cut & Cover Tunnel

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

- Hoarding erection
- Marine GI

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 and FEP-06/356/2009 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 and FEP-05/356/2009 and during the period of February 2013 to March 2013. The cut-off date of reporting is at 27th 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.

- 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 watermain affected by the revised land use and land formation works mentioned above

- 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	Wan Chai Development Phase II – Central – Wanchai Bypass at Hong Kong Convention and Exhibition Centre	DP3, DP6	23 July 2010
		DP1, DP2	25 August 2011
HK/2009/02	Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East	DP3, DP5	5 July 2010
		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 IICentral-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 Venture	Contractor under Contract no. HK/2009/01	Joint Venture Board Representative	Mr. PL Yue	2162 9909	2587 1878
		Site Agent	Mr. Paul Yu	9456 9819	
		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	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Deputy Project Manager	Mr. Chan Sing Cho	3658 3002	2827 9996
		Quality & Environmental Manager	Mr. C.P. Ho	9191 8856	
China State Construction Engineering (HK) Ltd.	Contractor under Contract no. HY/2009/15	Project Director	Chan Wai Hung	2823 7813	2865 5229
		Site Manager	P J Fan	3557 6368	
		Contractor's Representative	Mr. David Lau	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 -Leader JV	Contractor under Contract no. HK/2010/06	Project Manager	Mr. Paul Lui	9095 7922	2529 2880
		Site Agent	Mr. Keith Tse	2529 2068	
		Environmental Officer	Mr. Lee Wai Man	9481 6024	

Party	Role	Post	Name	Contact No.	Contact Fax
		Environmental Supervisor	Clement Pang	9735 9200	
Chun Wo - CRGL - MBEC Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	Mr. Rayland Lee	3758 8879	
		Site Agent	Mr. Cheung Kit Cheung	6909 1555	
		Environmental Engineer	Mr. Calvin Leung	9286 9208	
		Environmental Manager / Environmental Officer	Mr. M.H. Isa	9884 0810	
		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-Leader JV	Contractor under Contract no. HK/2012/08	Project Director	Andrew TSE	9137 1811	2877 1522
		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	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3465 2888	3465 2899
Lam Geotechnics 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.
- Installation of sheet pile wall for temporary open channel between CH290 and CH385.
- Construction of mass concrete coping for new seawall.

- Installation of ELS for construction of proposed box culvert Bay 8 and Bay 9.

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

- Rockfilling and rock protection to cross-harbour watermains.
- Final inspection for the CHWM (TST section) by WSD.
- Installation of interim connecting pipe between existing main and the proposed pipeline.
- CCTV inspection for cross-harbour water main (including CHA, CHB, CHE & CHF).

Fresh Watermains, Cooling Watermains and Salt Watermains (On Land)

- Mainlaying works at Zone B6-1A, B6-3, B6-4, B6-5B, A2-3A, A3-2B, A3-3C, C1-2 and X2-1.
- Reinstatement works in combined Zone A1-2A & A1-3A.
- Mainlaying works in Zone A2-3A and A3-2B.
- Mainlaying works at Zone A3-3C .
- Mainlaying works at Zone C1-2.
- Reinstatement works in Zone B6-5 and subsequent mainlaying works in Zone B6-4 and B6-5B.
- Mainlaying works in Zone B6-1A and Zone B6-3 (previously named B1-5A).
- Final cleaning, CCTV inspection and pressure test for the 9 nos. cooling watermains.
- Pressure test for cross harbour watermains (whole length of land pipes in Wan Chai).
- HEC and PCCW cabling works in Zone A1-1 which connected to the proposed transformer rectifier at new reclaimed area.
- Mainlaying works in Zone X2-1 of Convention Avenue.

Tunnel Works

- Pre-drilling works for CWB (Stage 2).
- Diaphragm wall construction works at Stage 2 (North).
- 1st Piling rig for pre-bored H piling works under atrium was mobilized to Site.

E & M

- Full commissioning test for Cooling Water Pumping Station P3 & P4.
- Full commissioning test for Cooling Water Pumping Station P5.
- FSD inspection for Cooling Water Pumping Stations P3 & P4.
- FSD inspection for Cooling Water Pumping Station P5.
-

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.
- Pressure tests for both intake main of GE/HC and SHK in the whole WCR1 area.
- Pressure tests within northern part of WCR1 for both intake main of CRB and discharge main of SHK.
- Owing to the substantial settlement in the thrust blocks embedding the completed intake pipelines near to their corresponding P7 & P8 Cooling Water Pumping Station recorded, the flexible joints connecting with the structure had been detached and the subsided pipeline would be re-installed. Site investigation was being carried out.
- The defeated cable joint box near the proposed combined access chamber had been rectified.
- Major E&M works and their T&C in Cooling Water Pumping Stations P7, P8 and P9.
- Footpath reinstatement for the trenches near Harbour Centre.
- Dry tests at WSD Salt Water Pumping Station. Wet test after completion of the proposed intake culvert.
- Drilling hole and installation of pipe bracket for aeration and chlorination pipe inside salt water intake culvert between Bay 8 and Bay 11.
- Installation of stoplog at Bay 2A of the proposed intake culvert
- Diver work at Bay 1B of the proposed intake culvert followed by concrete plug.
- The stability check to the proposed sheet pile removal works at Bay 2B.
- Mainlaying works for DN800 salt watermain (CHS8A) at Ex-Pet Garden.
- The ABWF works in WSD Salt Water Pumping Station, including maintenance platform and external finishes.
- The second T&C
- The trial period for the Outfall B.
- Switching over works for sewage to WCE PTW.
- Backfilling for the receiving pit adjacent to WCE PTW at Hung Hing Road.
- Saw cutting D-wall for 1050 dia. concrete pipe installation between Bay 1 and the existing drainage. The associated platform for pipe laying and manhole MH1 construction.
- Proposed precast caisson seawall 2X ; infilling works.
- Concreting of top-slab for PT2 & PT3 at Level 1 (+4.15mPD).
- Concreting of eastern concrete staircase (ST1) from Level 1 to Observation Deck Level.
- Construction of Feature Tower on Observation Deck.
- Concreting of base slab with stem wall for PT4 & PT5 at Level 1 (under +4.15mPD).
- Installation of concrete block and plastering works wall for Stair-03 (2nos.) on Level 1 to Observation Deck Level.
- ABWF including brickworks and E&M cable tray at 1/F, 2/F and M/F.

- Planter wall and parapet wall construction on the Observation Deck.
- Installation of winch & pulley system of proposed moveable ramp. Formwork erection for the late cast roof slab.
- Eastern Bulkhead Wall, Panel BHP5 and BHP8 were concreted. Excavation for Panel BHP1 and BHP6.
- Dredging works at TWCR4 after passing the 1-month T&C period of the completed sewage outfall.

2.4.5. For Contract no. HY/2009/15, the principal work activities in this reporting month included:

- Removal of eastern breakwater of CBTS

2.4.6. For Contract no. HK/2010/06, the principal work activities in this reporting month included:

- Pile Casing Cutting
- Sheet Piling Works
- Utility Diversion Works
- Precast Unit Box Construction (mainland China)

2.4.7. For Contract no. HY/2009/19, the principal work activity in this reporting month included:

- D-wall Construction (North & South Section)
- Guide wall construction for D-wall / Barrette at North side
- Construction works for Box Culvert T1
- Marine Piling
- Construction of socket-H pile
- Construction works for Culvert U1
- Construction of Pile caps & columns (Land)
- Dismantling of marine platform
- Demolition of parapet at IEC Link
- Construction of Pile caps & columns (Marine)
- Construction of dewatering well for Cut & Cover Tunnel
- D8-D9 Gantry Fabrication for precast segment
- ELS for Cut & Cover Tunnel

2.4.8. For Contract no. HY/2009/19, the principal work activity in this reporting month included:

- Site preparation works
- Site survey

2.4.9. 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

- Rockfilling at east of HKCEC (up to -4.0mPD). Filling works up to +4.0mPD would be postponed due to the condition of maintaining the intakes of cooling system at HKCEC water channel (Portion 2).
- Installation of additional sheet pile wall for temporary open channel between CH220 and CH260.
- Shoring system for temporary open channel between CH290 and CH385. Subsequent steel bridge construction over the temporary open channel.
- Construction of mass concrete coping for new seawall.
- Installation of ELS for construction of proposed box culvert Bay 8 and Bay 9.
- Rockfilling and rock armour protection works to cross-harbour watermains.
- Installation of interim connecting pipe between existing main and the proposed pipeline.
- CCTV inspection for cross harbour watermains (including CHA, CHB, CHE & CHF) .
- Reinstatement works including demolition of existing chamber, ABWF and further tree transplantation would be commenced upon completion of testing and commissioning of proposed cross-harbour watermains and disconnection of existing watermain.

Fresh Watermains, Cooling Watermains and Salt Watermains (On Land)

- Works at Zone B6-1A, B6-3, B6-4, B6-5B, A2-3A, A3-2B, A3-3C, C1-2 and X2-1.
- Mainlaying works at Zone A2-3A and A3-2B.
- Mainlaying works at Zone A3-3C.
- Mainlaying works in Zone C1-2.
- Mainlaying works for proposed sewerage system in Zone B6-1A.
- Mainlaying works and substantially reinstatements in Zone B6-3 (previously named B1-5A).
- Final cleaning and sterilization for cross harbour watermains.
- Final inspection for CHWM (Wan Chai section) by WSD.
- Mainlaying works at Zone X2-1.

Tunnel Works

- Installation of pre-bored H-pile in CWB Stage 2 under the atrium link (from Ch120 to Ch220) .
- CWB diaphragm wall construction under the atrium link was currently.
- Trench cutter mobilizes to Site.
- Bulkhead Wall at Ch120.

E&M Works

- Full commissioning for Cooling Water Pumping Station P5.

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

- Footpath reinstatement works of cooling mains near Harbour Centre / Great Eagle Centre.
- T&C and switch-over for the proposed cooling water intake system to CRB (P9)..
- Construct mini-piles and pile cap for rectifying the subsided intake pipes for both GE/HC and SHK.
- DN800 salt watermins (CHS8A) installation works inside Ex-pet Garden.
- Construction of Bay 1B and Bay 2B intake culvert.
- Installation for the proposed stoplog at Bay 2A.
- Excavation and prepare for connection with the existing DN600 salt watermins at Hung Hing Road.
- Reinstatement works of DSD receiving pit at Hung Hing Road.
- Decommissioning of the abandoned sewage outfall.
- Construction of Drain FRP-N (1050 dia. pipe) from the proposed Box Culvert N1 with the existing drainage system.
- Construction of Bay 4 of the proposed Box Culvert N1.
- ABWF, brickworks and parapet/planter wall construction in Ferry Pier.
- Installation of moveable ramp system.
- Civil works above the caisson seawall 2X including staircase ST-1 and the plant room underneath the staircase.
- Construction of Eastern Bulkhead wall.
- Dredging of TWCR4 dredging works.

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

- Removal of eastern breakwater of CBTS
- Installation of temporary wave protection barrier at eastern breakwater

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
- Precast Unit Box Construction (mainland China)

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

- D-wall Construction (North & South Section)
- Construction works for Box Culvert T1
- Construction works for Culvert U1
- Construction of Pile caps & columns (Land)
- Dismantling of marine platform
- Demolition of parapet at IEC Link
- Construction of Pile caps & columns (Marine)
- D8-D9 Gantry Fabrication for precast segment
- ELS for Cut & Cover Tunnel

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

- Hoarding erection
- Marine GI

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	17 Aug 2009	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	Valid
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/A	25 Feb 2011	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-09/364/2009/B	5 Mar 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-RS-1293-12	10 Dec 2012	10 Dec 2012 to 9 June 2013	Valid
	GW-RS0949-12	12 Sep 2012	16 Sep 2012 to 15 Mar 2013	Cancelled
	GW-RS1011-12	26 Sep 2012	30 Sep 2012 to 29 Mar 2013	Cancelled
	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-RS1017-12	27 Sep 2012	30 Sep 2012 to 24 Mar 2013	Expired
	GW-RE0793-12	21 Sep 2012	30 Sep 2012 to 29 Mar 2013	Expired

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS1040-12	10 Oct 2012	13 Oct 2012 to 12 Apr 2013	Valid
	GW-RS1177-12	15 Nov 2012	17 Nov 2012 to 10 May 2013	Valid
	GW-RS1184-12	15 Nov 2012	17 Nov 2012 to 8 May 2013	Valid
	GW-RS1185-12	19 Nov 2012	21 Nov 2012 to 8 May 2013	Valid
	GW-RS1179-12	20 Nov 2012	22 Nov 2012 to 21 May 2013	Valid
	GW-RS1187-12	20 Nov 2012	27 Nov 2012 to 26 May 2013	Valid
	GW-RS1199-12	20 Nov 2012	26 Nov 2012 to 25 May 2013	Valid
	GW-RS-0052-13	18 Jan 2013	20 Jan 2013 to 19 July 2013	Valid
Discharge Licence	WT00006220-2010	18 Mar 2010	31 Mar 2015	Expired
	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
Registration as a Chemical Waste Producer	WPN5213-134-C3585-01	21 Jan 2010	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/13-096	3 Dec 2012	4 Dec 2012 to 3 June 2013	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
Condition 2.8	Silt Curtain Deployment Plan (Rev. 5)	24 Aug 2012
	Silt Curtain Deployment Plan (Rev. 4)	12 July 2012
	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
	Silt Screen Deployment Plan	19 Apr 2010
Conditions 2.8 and 2.9	Supplementary Document on Silt Curtain and Silt Screen Deployment Plan	19 Jul 2010
	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

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-RS1038-12	10 Oct 2012	10 Oct 2012 to 9 Apr 2013	Valid
	GW-RS1069-12	17 Oct 2012	19 Oct 2012 to 18 Apr 2013	Valid
	GW-RS1076-12	25 Oct 2012	1 Nov 2012 to 30 Apr 2013	Valid
	GW-RS1084-12	25 Oct 2012	1 Nov 2012 to 30 Apr 2013	Valid
	GW-RS1086-12	25 Oct 2012	28 Oct 2012 to 16 Apr 2013	Valid
	GW-RS1174-12	9 Nov 2012	11 Nov 2012 to 10 May 2013	Valid
	GW-RS1158-12	16 Nov 2012	18 Nov 2012 to 16 May 2013	Valid
	GW-RS1167-12	16 Nov 2012	23 Nov 2012 to 21 May 2013	Valid
	GW-RS1204-12	9 Nov 2012	29 Nov 2012 to 23 May 2013	Valid
	GW-RS1272-12	5 Dec 2012	5 Dec 2012 to 26 May 2013	Valid
	GW-RS1223-12	27 Nov 2012	7 Dec 2012 to 5 June 2013	Valid
	GW-RS1228-12	30 Nov 2012	30 Nov 2012 to 29 May 2013	Valid
	GW-RE1055-12	30 Nov 2012	3 Dec 2012 to 29 May 2013	Valid
	GW-RS1243-12	3 Dec 2012	5 Dec 2012 to 29 May 2013	Valid
	GW-RS1245-12	5 Dec 2012	6 Dec 2012 to 5 June 2013	Valid
	GW-RS1381-12	31 Dec 2012	9 Jan 2013 to 7 July 2013	Valid
	GW-RS1384-12	31 Dec 2012	17 Jan 2013 to 6 July 2013	Valid
	GW-RS0062-13	17 Jan 2013	21 Jan 2013 to 15 July 2013	Valid
	GW-RS0155-13	15 Feb 2013	16 Feb 2013 to 14 Aug 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	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
Discharge Licence	WT00006249-2010	22 Mar 2010	31 Mar 2015	Valid
	WT00006436-2010	15 Apr 2010	30 Apr 2015	Valid
	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/13-095	19 Nov 2012	29 Nov 2012 to 28 May 2013	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/13-121	31 Jan 2013	6 Feb 2013 to 5 Mar 2013	Valid
	EP/MD/13-127	4 Mar 2013	6 Mar 2013 to 5 Apr 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
	Silt Curtain Deployment Plan (Revision H)	15 Feb 2011
	Silt Curtain Deployment Plan (Revision I)	17 Nov 2011

EP Condition	Submission	Date of Submission
	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
Condition 2.9	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
Condition 2.18	Landscape Plan (Decorative Screen Hoarding)	11 May 2010
	Landscape Plan (Control of Night Time Lighting)	2 June 2010
	Landscape Plan (Combined Version)	20 July 2011
	Landscape Plan (Combined Version)	5 Aug 2011
-----	Acknowledge of Submission	22 Aug 2011

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

- 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
Construction Noise Permit (CNP) for Filling and Diaphragm Wall Works at TS4/ME4	GW-RS1191-12	26 Nov 2012	26 Nov 2012 to 11 May 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Construction Noise Permit (CNP) for bored pile construction at Eastern Breakwater of CBTS	GW-RS1009-12	03 Oct 2012	03 Oct 2012 to 25 Mar 2013	Expired
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	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	03 Oct 2012	17 Oct 2012 to 16 Jan 2013	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/13-097	28 Nov 2012	6 Dec 2012 to 5 Jun 2013	Cancelled
	EP/MD/13-113	22 Jan 2013	24 Jan 2013 to 23 Jul 2013	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/13-124	19 Feb 2013	24 Feb 2013 to 23 Mar 2013	Expired
Dumping Permit (Type 2 – Confined Marine Disposal)	EP/MD/13-130	20 Mar 2013	20 Mar 2013 to 19 Apr 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
Condition 2.9	Silt Screen Deployment Plan	19 Oct 2010
	Amendment for Silt Screen Deployment Plan	18 Feb 2011
	Amendment for Silt Screen Deployment Plan	15 Jun 2011

FEP Condition	Submission	Date of Submission
Condition 2.18	Proposal for the Removal of Odorous Sediment and Slime	13 Jan 2011
	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
	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**.

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

- 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
	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	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0923-12	4 Sept 2012	15 Oct 2012 to 14 Apr 2013	Replaced by GW-RS0056-13
	GW-RS0989-12	21 Sept 2012	6 Oct 2012 to 5 Apr 2013	Valid
	GW-RS0056-13	14 Jan 2013	16 Jan 2013 – 12 Jul 2013	Valid
Billing Account under Waste Disposal Ordinance	7012338	16 Feb 2011	N/A	Valid
Registration as Chemical Waste Producer	WPN5213-134-G25 33-01	11 Feb 2011	N/A	Valid
Water Discharge Licence	WT00010905-2011	4 November 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	24 October 2011
Condition 2.7	Works Schedule and Location Plans	11 March 2011
Condition 2.8	Revised Silt Curtain Deployment Plan	31 Aug 2011
	Revised Silt Curtain Deployment Plan	22 Oct 2012
	Revised Silt Curtain Deployment Plan	26 Nov 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**.

Table 3.12 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	GW-RS0286-13
Construction Noise Permit (CNP) (For Bored pile construction at Portion III)	GW-RS0013-13	08-Jan-13	07-Jul-13	Valid
Construction Noise Permit (CNP) (For Watson Road)	GW-RS1230-12	28-Nov-12	25-May-13	Valid
Construction Noise Permit (CNP) (For IEC)	GW-RS0953-12	17-Sep-12	20-Mar-13	Cancelled
	GW-RS1210-12	29-Nov-12	28-May-13	Cancelled
	GW-RS0046-13	18-Jan-13	10-Jul-13	Valid

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
Construction Noise Permit (CNP) (For IEC Parapet Removal – Loading/Unloading)	GW-RS1065-12	16-Oct-12	20-Apr-13	Valid
Construction Noise Permit (CNP) (For Portion Vi Marine)	GW-RS0010-13	08-Jan-13	07-Jul-13	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/13-101	24 Dec 2012	23 May 2013	Valid
Dumping Permit (Type 2 – Confined Marine Disposal)	EP/MD/13-126	06 Mar 2013	05 Apr 2013	Valid

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

- 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**.

Table 3.13 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

Table 3.11 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	Under preparation
Condition 2.9	Silt Screen Deployment Plan	Under preparation
Condition 2.23	Noise Management Plan	Under review by ET and IEC
Condition 2.24	Landscape Plan	Under preparation

4. 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
M3a	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_{eq}). L_{eq} (30 minutes) 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 TM 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 demonstrated to the satisfaction of the ER and IEC. IEC shall regularly audit 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
WSD Salt Water Intake			
WSD7	Kowloon South	834150.0	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
WSD17	Quarry Bay	839790.3	817032.2
WSD19	Sheung Wan	833415.0	816771.0
WSD20	Kennedy Town	830750.6	816030.3
WSD21	Wan Chai	836220.8	815940.1
RW1	Wan Chai (Reprovision)	836188.8	815911.1
Cooling Water Intake			
C1	HKCEC Extension	835885.6	816223.0

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

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 ¹	Parameters ²
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
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
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 turbidity 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 shall 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 DISSOLVED 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. 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
A	835468	815857
B	835572	815961
C	835659	816271

- 4.3.28. 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 **Figure 2.1** and **Figure 4.1**. 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**

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

- 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
M3a	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 **Appendix 5.2**

Contract no. HY/2009/19- Wan Chai Bypass Tunnel (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
M3a	Tung Lo Wan Fire Station
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School

- 5.1.7. Four limit level exceedances were recorded on 7, 12, 19 and 26 March 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month.
- 5.1.8. Major traffic noise observed during monitoring on 7, 12 and 19 March 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. Breaking works for pile head under HY/2009/19 were observed during monitoring on 26 March 2013. Despite nearby traffic was observed, it was considered that the breaking operation was the major noise contribution. As such, the limit level exceedance was concluded as project related. The temporary noise blanket at marine platform was confirmed in place and rectification measures including provision of additional noise screen for breakers and reduction in the number of breakers in parallel use were implemented by the contractor after exceedance was identified
- 5.1.10. Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**.

5.2 Real-time Noise Monitoring

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

- 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 No limit level exceedance was recorded at RTN2a-Electric Centre in this reporting month.
- 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 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.

- 5.3.2. Due to lack of electricity supply, the 24hr-TSP monitoring at the following stations were rescheduled:

CMA2a: from 4 Mar 2013 to 5 Mar 2013

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

- 5.3.3. 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

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

- 5.3.4. 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

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

- 5.3.5. 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. No exceedance was recorded in the reporting month.

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

Station	Description
CMA3a	CWB PRE Site Office

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

- 5.3.6. 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 St Community Liaison Centre
CMA2a	Causeway Bay Community Centre

5.4 Water Monitoring Results.

- 5.4.1. Due to the blockage of the road access to C5e and C5w on 27 Mar 2013 during mid-flood tide and the sample was taken under contingency C5 on 27 Mar 2013 during mid-flood.
- 5.4.2. 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 remain unchanged.
- 5.4.3. 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.
 - 5.4.4. 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;
 - 5.4.5. 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.
 - 5.4.6. 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.
 - 5.4.7. 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.
 - 5.4.8. 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.
 - 5.4.9. 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.
 - 5.4.10. 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.

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

5.4.11. 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 Intake			
WSD7	Kowloon South	834150.0	818300.3
WSD19	Sheung Wan	833415.0	816771.0
WSD20	Kennedy Town	830750.6	816030.3
Cooling Water Intake			
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

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.

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

5.4.12. 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.

5.4.13. Due to the blockage of the road access to C5e and C5w on 27 Mar 2013 during mid-flood tide and the sample was taken under contingency C5 on 27 Mar 2013 during mid-flood.

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

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

- 5.4.14. 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

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

- 5.4.15. 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.
- 5.4.16. 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.
- 5.4.17. 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.

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

- 5.4.18. 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.

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.

- 5.4.19. 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.
- 5.4.20. 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.
- 5.4.21. 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.
- 5.4.22. 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.
- 5.4.23. 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

Contract no.	Water Monitoring Station	Mid-flood						Mid-ebb					
		DO		Turbidity		SS		DO		Turbidity		SS	
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01	WSD19	0	0	1	0	0	0	0	0	0	1	0	2
	C1	0	0	0	0	0	0	1	0	0	0	0	0
	C3	1	2	0	0	0	0	1	1	0	0	0	0
	C4e	1	0	0	0	1	0	0	0	0	0	0	0
	C4w	1	0	0	0	0	0	0	0	0	0	0	1
Monitoring finished on 27 April 2012	WSD20	0	0	0	0	0	0	0	0	0	0	0	0
	WSD7	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/01 & HK/2010/06	C2	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02 Monitoring started on 8 Feb 2012	C5e	0	0	0	0	0	0	0	0	0	0	1	0
	C5w	0	0	1	0	0	0	0	0	0	0	0	0
	WSD21	0	0	0	0	0	1	0	0	0	0	0	2
	WSD9	0	0	0	0	0	0	0	0	0	1	0	0
	WSD17	0	0	1	0	0	0	0	0	0	0	0	0
HY/2009/15	C7	0	0	0	0	0	0	0	0	0	1	0	0
HY/2009/19 Monitoring started on 28 Jan 2012	C8	0	0	0	0	0	0	0	0	0	0	0	0
	C9	0	0	0	1	0	0	0	0	0	0	0	0
Total		3	2	3	1	1	1	2	1	0	3	1	5

- 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.
 - WSD7 and WSD20 were temporarily suspended from 27 Apr 2012

5.4.24. Investigation found that no exceedance was related to project works. The details of the recorded exceedances can be referred to the Section 6.4.

5.4.25. 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

Contract no.	Water Monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15	C6	0	0	0	0
	C7	0	0	0	0
	Ex-WPCWA SW	0	2	0	1
	Ex-WPCWA SE	2	2	0	4
Total		2	4	0	5

5.4.26. There were 2 action level exceedances and 9 limit level exceedances recorded in enhanced dissolved oxygen monitoring in this reporting period.

5.4.27. 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**.

5.5 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 ³	16.4	22261.815	TKO137, TM38
Inert C&D materials recycled, m ³	0	5104.5	N/A
Non-inert C&D materials disposed, m ³	29.16	1263.64	SENT Landfill
Non-inert C&D materials recycled, kg	0	151143	N/A
Chemical waste disposed, kg	200	9200	N/A
*Marine Sediment (Type 1 – Open Sea Disposal), m ³	0 (Bulk Volume)	97428.2 (Bulk Volume)	South of Cheung Chau

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
* Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m ³	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 marine sediments Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal disposed in this reporting month.

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

- 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 ³	1510.9	230892.98	TKO137 / TM 38
Inert C&D materials recycled, m ³	NIL	18161	N/A
Non-inert C&D materials disposed, m ³	23.265	832.12	SENT Landfill
Non-inert C&D materials recycled, m ³	N/A	N/A	N/A
Chemical waste disposed, kg	NIL	6036	SENT Landfill
Marine Sediment (Type 1 – Open Sea Disposal), m ³	NIL	154,827 (Bulk volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m ³	6884	124304 (Bulk volume)	East of Sha Chau

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

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

- 5.5.4. 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, m ³	NIL	141579.2	Tuen Mun Area 38
	NIL	65216	TKO137 FB
Inert C&D materials recycled, m ³	NIL	304	ex-PCWA
	NIL	111.9	TS4
Non-inert C&D materials disposed, m ³	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 ³	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 ³	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), m ³	860 (Bulk Volume)	860 (Bulk Volume)	East of Sha Chau

There was no marine sediment Type 1 Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal was disposed of in this reporting month.

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

- 5.5.5. 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 ³	43.4	11916.4	TM38
Inert C&D materials recycled, m ³	NIL	267	HK/2009/01

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Non-inert C&D materials disposed, m ³	86.33	136.48	SENT/TKO137SF
Non-inert C&D materials recycled, T	NIL	60.58	Recyclers
Chemical waste disposed, L	0	2200	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m ³	0	3,891 (Bulk Volume)	South Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m ³	0	12,586 (Bulk Volume)	East Sha Chau

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

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

- 5.5.6. Inert C&D waste was disposed of and non-inert C&D waste were disposed and recycled 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 ³	14613.19	168528.12	TM38
Inert C&D materials recycled, m ³	NIL	1323	N/A
Non-inert C&D materials disposed, m ³	41.55	299.91	N/A
Non-inert C&D materials recycled, kg	5.57	187.45	N/A
Chemical waste disposed, L	0.17	0.46	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m ³	NIL	83	South Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m ³	17	681	East Sha Chau

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

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

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

- 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.

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

- 6.1.3 No exceedance was recorded in the reporting month.

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

- 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 under FEP-07/364/2009/A

- 6.1.5 Four limit level exceedances were recorded on 7, 12, 19 and 26 March 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month. Investigations found that on 7, 12 and 19 March 2013, major traffic noise was contributed in the noise monitoring and exceedances were not related to the Project. On 26 March 2013, investigation found that breaking works operation was the major noise contribution despite nearby IEC traffic and the exceedance was considered as Project-related.

6.2 Real-time noise Monitoring

- 6.2.1 No limit level exceedance was recorded at RTN2a-Electric Centre in this reporting month.

6.3 Air Monitoring

- 6.3.1. No exceedance was recorded in 1-hr TSP and 24-hrs TSP monitoring 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 at C4w recorded during ebb tide on 6 Mar 2013 in this reporting month. According to the information reported by Contractor HK/2009/01 on 6 Mar 2013, rock filling work on east bridge was conducted on that day. Checking with contractor's inspection record, the silt screen and silt curtain were in proper condition on that day. In the view that the silt screen and silt curtain were in proper condition, it was considered not related to Project works.

- 6.4.2 There was DO exceedence at C1 recorded during ebb tide on 13 Mar 2013 in this reporting month. According to the information reported by Contractor HK/2009/01 on 13 Mar 2013, rock filling work on east bridge and backfilling on CHWM were conducted on that day. Checking with contractor's inspection record, the silt screen and silt curtain were in proper condition on that day. In the view that the silt screen and silt curtain were in proper condition, it was considered not related to Project works.
- 6.4.3 There was DO exceedence at C3 recorded during both flood and ebb tide on 15 Mar 2013 in this reporting month. According to the information reported by Contractor HK/2009/01 on 15 Mar 2013, backfilling on CHWM was conducted on that day. Checking with contractor's inspection record, the silt screen and silt curtain were in proper condition on that day. In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the silt screen and silt curtain were in proper condition, it was considered not related to Project works.
- 6.4.4 There was SS exceedence at C4e recorded during flood tide on 18 Mar 2013 in this reporting month. According to the information reported by Contractor HK/2009/01 on 18 Mar 2013, rock filling at East of HKCEC was conducted was conducted on that day. Checking with contractor's inspection record, the silt screen and silt curtain were in proper condition on that day. In the view that the silt screen and silt curtain were in proper condition, it was considered not related to Project works.
- 6.4.5 There was DO exceedence at C3, C4e, C4w recorded during flood tide on 21 Mar 2013 in this reporting month. According to the information reported by Contractor HK/2009/01 on 21 Mar 2013, rock filling at East of HKCEC was conducted was conducted on that day. Checking with contractor's inspection record, the silt screen and silt curtain were in proper condition on that day. In view that the silt screen and silt curtain were in proper condition during monitoring, and the overall water quality at other monitoring stations under HKCEC are exceed the Action Level as it is at the interchange period of Wet and Dry Season, the exceedence was considered not project related.
- 6.4.6 There were turbidity exceedences at WSD19 recorded during Ebb tide on 4, 25, 27 Mar 2013. In view that the water quality at monitoring stations located nearest the marine work site were well below Action Level and the silt screen was in proper condition, the exceedences were possible in relation to the changes of water quality in the vicinity of the water quality monitoring station and not project related.

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

- 6.4.7 There was turbidity exceedence at C5w recorded during flood tide on 1 Mar 2013 in this reporting month. Confirmed with Contractor, there was no work conducted during the water quality monitoring. The exceedence was considered as natural variation or changes of water quality in the vicinity of the water quality monitoring station and not project related.
- 6.4.8 There was SS exceedence at C5w recorded during ebb tide on 11 Mar 2013 in this reporting month. Confirmed with Contractor, there was no 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.

- 6.4.9 There were SS exceedance recorded at WSD21 on 13 Mar 2013 during both flood and ebb tide. Confirmed with Contractor, there was no 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.

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

- 6.4.10 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.

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

- 6.4.11 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

- 6.4.12 There were occasionally turbidity and SS exceedances at C8 recorded in this reporting month. Confirmed with Contractor, there was no marine work conducted near C8 and C9. The exceedances were possible in relation to the accumulation of particles discharged from outfalls near monitoring stations and not related to project.
- 6.4.13 Summary for notification of exceedances can be referred to **Appendix 6.2.**

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 One project-related exceedance at M6 during noise monitoring on 26 Mar 2013 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.

- 6.6.2 There was one limit level exceedances of noise monitoring recorded on 26 March 2013 at M6-HK Henrietta Secondary School that was considered in relation to pile head breaking works conducted during monitoring.
- 6.6.3 Following the Event and Action Plan, additional noise monitoring was conducted on 27 March 2013 and a proposal for remediation measures was submitted by the contractor after the exceedance was identified.
- 6.6.4 The temporary noise blanket at marine platform was confirmed in place and rectification measures including provision of additional noise screen for breakers and reduction in the number of breakers in parallel use were implemented by the contractor.

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 (February 2013) of Central Reclamation Phase III (CRIII), filling works, road works, landscape works, building construction works and drainage works were performed in the March 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 at TS4 and deep excavation at TPCWAE TCBR1W. Excavation and tunnel works at Central Interchange, and marine pilling and box culvert construction at North Point area. The major environmental impact was water quality impact at Causeway Bay and Wan Chai.
- 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. No significant air impact was anticipated in the reporting month. Besides, no project-related exceedances were recorded during the air environmental monitoring events in the reporting month. There was one project related limit level exceedances during noise monitoring event in the reporting month and rectification measures have been implemented by contractor. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Wan Chai Development Phase II 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 6, 13, 21 and 27 March 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
130306_01	6-Mar-13	Oil leakage should be prevented and oil stain should be cleaned and removed as chemical waste(A2-2)	Equipment which have leakage have been removed, oil stain have been cleaned and removed	Completion as observed on 13 Mar 21
130313_01	13-Mar-13	Fences should be provided to tree in works area and construction material should be avoid resting on tree roots. (Box culvert M)	Construction material was removed	Completion as observed on 21 Mar 13
130321_01	21-Mar-13	Floating refuse should be cleaned and removed more frequently(West Ferry Pier)	The refuse was cleared	Completion as observed on 27 Mar 13
130327_01	27-Mar-13	Silt curtain should be properly deployed(Wst Ferry Pier)	Silt curtain was properly deployed	Completion as observed on 3 April 13

- 8.0.3. Three site inspections for Contract no. HK/2009/02 was carried out on 7, 14, 20 2013 during this reporting period. No observation is found in the reporting month.
- 8.0.4. Four site inspections for Contract no. HY/2009/15 was carried out on 2013, 5, 12, 19 and 26 March 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	Observations	Action taken by Contractor	Outcome
130305_01	5-Mar-13	Muddy dispersion was found at Eastern Breakwater. Silt curtain deployed around the boulder removal works area was found to be insufficient (TS1 Eastern Breakwater)	Additional silt curtain was provided at the concerned area.	Completion as observed on 12 March 2013
130305_02	5-Mar-13	Tarpaulin sheet between barges should be properly maintained to prevent dropping of mud during transfer and silt curtain should be provided around the barges.(TS2)	No transfer of mud was observed and tarpaulin sheet was placed at the concerned area.	Completion as observed on 12 March 2013
130305_03	5-Mar-13	Drip tray should be provided for oil drums. (TS4)	Drip tray was provided	Completion as observed on 12 March 2013

Item	Date	Observations	Action taken by Contractor	Outcome
130305_04	5-Mar-13	oil leaked from the damaged oil drum should be cleared and removed. (TS4)	Oil stain found was removed	Completion as observed on 12 March 2013
130312_01	12-Mar-13	Water spraying should be provided during excavation and excavated material handling. (Eastern Breakwater)	Water spraying was provided	Completion as observed on 19 March 2013
130312_02	12-Mar-13	Drip trays should be provided to oil drums (TS1 near Hing Fat Street, TS4)	Drip trays were provided.	Completion as observed on 19 March 2013
130319_01	19-Mar-13	Remove the mud resting at the edge of the seawall (TS2)	Mud observed were cleared	Completion as observed on 26 March 2013.
130319_02	19-Mar-13	Collect floating refuse accumulated at the Eastern Breakwater (TS1 Eastern Breakwater)	Floating refuses were cleared	Completion as observed on 26 March 2013.
130319_03	19-Mar-13	Contractor should ensure the wheel washing effluent is properly connected and collect to wastewater treatment plan.(TS2)	Wheel washing point and effluent collection system was provided	Completion as observed on 26 March 2013.
130326_01	26-Mar-13	Floating refuse should be collected more regularly (Ex-pcwa, TS1 Landing step)	Floating refuses were cleared	Completion as observed on 2 Apr 2013
130326_02	26-Mar-13	Perimeter drainage channel should be tidied up and keep clear of construction material (TS4)	Construction material placed near the drainage channel was moved.	Completion as observed on 2 Apr 2013

8.0.5. Four site inspections for Contract no. HK/2010/06 was carried out on 4, 11, 21 and 25 March 2013 in reporting month. The results of these inspections and outcomes are summarized in Table 8.4.

Table 8.4 Summary of Environmental Inspections for Contract no. HK/2010/06

Item	Date	Observations	Action taken by Contractor	Outcome
130304_01	4-Mar-13	Oil stain should be removed and cleaned as chemical waste(flat top barge - Leader55)	Oil stain was removed as chemical waste.	Completion as observed on 11-Mar-13
130311_01	11-Mar-13	Drip tray should be provided for oil container (Section 2)	Oil container have been removed	Completion as observed on 21-Mar-13

8.0.6. Four site inspections for Contract no. HY/2009/19 was carried out on 6, 13, 20 and 27 March 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 5, 12, 19 and 26 March 2013 in this reporting period. No observation is found in the reporting month.

9. Complaints, Notification of Summons and Prosecution

- 9.0.1. One environmental complaint was received on 6 March 2013.
- 9.0.2. A water quality complaint was received by ET on 8 March 2013 (ICC Ref. No: 1-407481502 dated 8 March 2013, forwarded by RSS). The complainant reported that dropping of fine rock material into surrounding waterbody was observed during rock breaking operation..
- 9.0.3. 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.
- 9.0.4. 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. 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.
- 9.0.5. The contractor was advised and committed to implement preventive measures to minimize the potential impact of work including conducting regular diver check to ensure the integrity and the extend of silt curtain deployment and to provide adequate back up stock of silt curtain for emergency use. The details of cumulative complaint log and updated summary of complaints are presented in **Appendix 9.1**.
- 9.0.6. 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	27
March 2013	1
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. 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 January 2012.
- 10.0.7. 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.
- 10.0.8. 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.
- 10.0.9. 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.
- 10.0.10. 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.

10.0.11. 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	<p>Marine Works</p> <ul style="list-style-type: none"> Rockfilling at east of HKCEC (up to -4.0mPD). Filling works up to +4.0mPD would be postponed due to the condition of maintaining the intakes of cooling system at HKCEC water channel (Portion 2). Installation of additional sheet pile wall for temporary open channel between CH220 and CH260. Shoring system for temporary open channel between CH290 and CH385. Subsequent steel bridge construction over the temporary open channel. Construction of mass concrete coping for new seawall. Installation of ELS for construction of proposed box culvert Bay 8 and Bay 9. Rockfilling and rock armour protection works to cross-harbour watermain. Installation of interim connecting pipe between existing main and the proposed pipeline. CCTV inspection for cross harbour watermain (including CHA, CHB, CHE & CHF) . 	<ul style="list-style-type: none"> To conform the installation and setting as in the silt screen deployment plan Frequency spray water on the dry dusty road and on the surface of concrete breaking To cover the dusty material or stockpile by impervious sheet To space out noisy equipment and position as far as possible from sensitive receiver. To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance. Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum Daily visual inspection of silt screen and silt curtain to ensure its operation properly

Contract No.	Key Construction Works	Recommended Mitigation Measures
	<ul style="list-style-type: none"> Reinstatement works including demolition of existing chamber, ABWF and further tree transplantation would be commenced upon completion of testing and commissioning of proposed cross-harbour watermains and disconnection of existing watermain. <p>Fresh Watermains, Cooling Watermains and Salt Watermains (On Land)</p> <ul style="list-style-type: none"> Works at Zone B6-1A, B6-3, B6-4, B6-5B, A2-3A, A3-2B, A3-3C, C1-2 and X2-1. Mainlaying works at Zone A2-3A and A3-2B. Mainlaying works at Zone A3-3C. Mainlaying works in Zone C1-2. Mainlaying works for proposed sewerage system in Zone B6-1A. Mainlaying works and substantially reinstatements in Zone B6-3 (previously named B1-5A). Final cleaning and sterilization for cross harbour watermains. Final inspection for CHWM (Wan Chai section) by WSD. Mainlaying works at Zone X2-1. <p>Tunnel Works</p> <ul style="list-style-type: none"> Installation of pre-bored H-pile in CWB Stage 2 under the atrium link (from Ch120 to Ch220) . CWB diaphragm wall construction under the atrium link 	

Contract No.	Key Construction Works	Recommended Mitigation Measures
	<p>was currently.</p> <ul style="list-style-type: none"> Trench cutter mobilizes to Site. Bulkhead Wall at Ch120. <p>E&M Works</p> <ul style="list-style-type: none"> Full commissioning for Cooling Water Pumping Station P5. 	
HK/2009/02	<ul style="list-style-type: none"> Modification work of PTI at Expo Drive East . Modification of existing covered walkway along Expo Drive East. Pressure tests for both intake main of GE/HC and SHK in the whole WCR1 area. Pressure tests within northern part of WCR1 for both intake main of CRB and discharge main of SHK. Owing to the substantial settlement in the thrust blocks embedding the completed intake pipelines near to their corresponding P7 & P8 Cooling Water Pumping Station recorded, the flexible joints connecting with the structure had been detached and the subsided pipeline would be re-installed. Site investigation was being carried out. The defeated cable joint box near the proposed combined access chamber had been rectified. Major E&M works and their T&C in Cooling Water Pumping Stations P7, P8 and P9. Footpath reinstatement for the 	<ul style="list-style-type: none"> To cover the dusty material or stockpile by impervious sheet; Frequency spray water on the dry dusty road and on the surface of concrete breaking To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance and dark smoke emission To conform the installation and setting as in the silt screen and silt curtain deployment plan Movable noise barrier shall be deployed for demolition works Daily visual inspection of silt screen and silt curtain to ensure its operation properly Review silt screen deployment and silt curtain deployment and resubmit associate plans to EPD Implement silt screen and silt curtain in accordance with the associated plans submitted to EPD.

Contract No.	Key Construction Works	Recommended Mitigation Measures
	<p>trenches near Harbour Centre.</p> <ul style="list-style-type: none"> • Dry tests at WSD Salt Water Pumping Station. Wet test after completion of the proposed intake culvert. • Drilling hole and installation of pipe bracket for aeration and chlorination pipe inside salt water intake culvert between Bay 8 and Bay 11. • Installation of stoplog at Bay 2A of the proposed intake culvert • Diver work at Bay 1B of the proposed intake culvert followed by concrete plug. • The stability check to the proposed sheet pile removal works at Bay 2B. • Mainlaying works for DN800 salt watermain (CHS8A) at Ex-Pet Garden. • The ABWF works in WSD Salt Water Pumping Station, including maintenance platform and external finishes. • The second T&C • The trial period for the Outfall B. • Switching over works for sewage to WCE PTW. • Backfilling for the receiving pit adjacent to WCE PTW at Hung Hing Road. • Saw cutting D-wall for 1050 dia. concrete pipe installation between Bay 1 and the existing drainage. The associated platform for pipe laying and 	

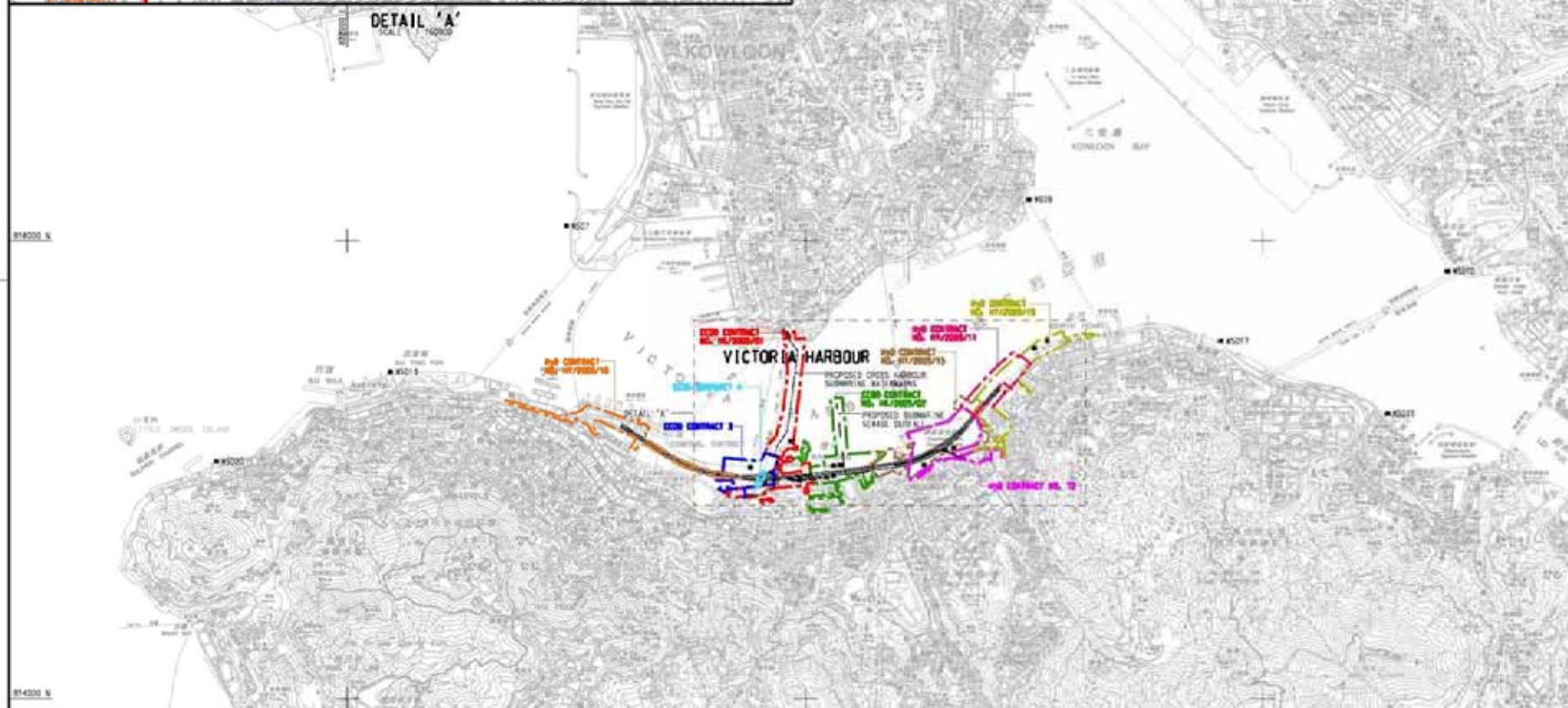
Contract No.	Key Construction Works	Recommended Mitigation Measures
	<p>manhole MH1 construction.</p> <ul style="list-style-type: none"> Proposed precast caisson seawall 2X ; infilling works. Concreting of top-slab for PT2 & PT3 at Level 1 (+4.15mPD). Concreting of eastern concrete staircase (ST1) from Level 1 to Observation Deck Level. Construction of Feature Tower on Observation Deck. Concreting of base slab with stem wall for PT4 & PT5 at Level 1 (under +4.15mPD). Installation of concrete block and plastering works wall for Stair-03 (2nos.) on Level 1 to Observation Deck Level. ABWF including brickworks and E&M cable tray at 1/F, 2/F and M/F. Planter wall and parapet wall construction on the Observation Deck. Installation of winch & pulley system of proposed moveable ramp. Formwork erection for the late cast roof slab. Eastern Bulkhead Wall, Panel BHP5 and BHP8 were concreted. Excavation for Panel BHP1 and BHP6. Dredging of TWCR4 dredging works. 	
HY/2009/15	<ul style="list-style-type: none"> Removal of eastern breakwater of CBTS Installation of temporary wave protection barrier at eastern 	<ul style="list-style-type: none"> Daily visual inspection of silt screen and silt curtain to ensure its operation properly Implement silt screen and silt curtain in accordance with the associated plans submitted to

Contract No.	Key Construction Works	Recommended Mitigation Measures
	breakwater	EPD.
HK/2010/06	<ul style="list-style-type: none"> • Sheet Piling Works • Utility Diversion Works • Precast Unit Box Construction (mainland China) 	<ul style="list-style-type: none"> • To conform the installation and setting as in the silt screen and silt curtain deployment plan • To space out noisy equipment and position as far as possible from sensitive receiver. • Daily visual inspection of silt screen and silt curtain to ensure its operation properly
HY/2009/19	<ul style="list-style-type: none"> • D-wall Construction (North & South Section) • Construction works for Box Culvert T1 • Construction works for Culvert U1 • Construction of Pile caps & columns (Land) • Dismantling of marine platform • Demolition of parapet at IEC Link • Construction of Pile caps & columns (Marine) • D8-D9 Gantry Fabrication for precast segment • ELS for Cut & Cover Tunnel 	<ul style="list-style-type: none"> • To conform the installation and setting as in the silt screen and silt curtain deployment plan
HK/2012/08	<ul style="list-style-type: none"> • Hoarding erection • Marine GI 	To conform the installation and setting as in the silt screen and silt curtain deployment plan



Figure 2.1

Project Layout

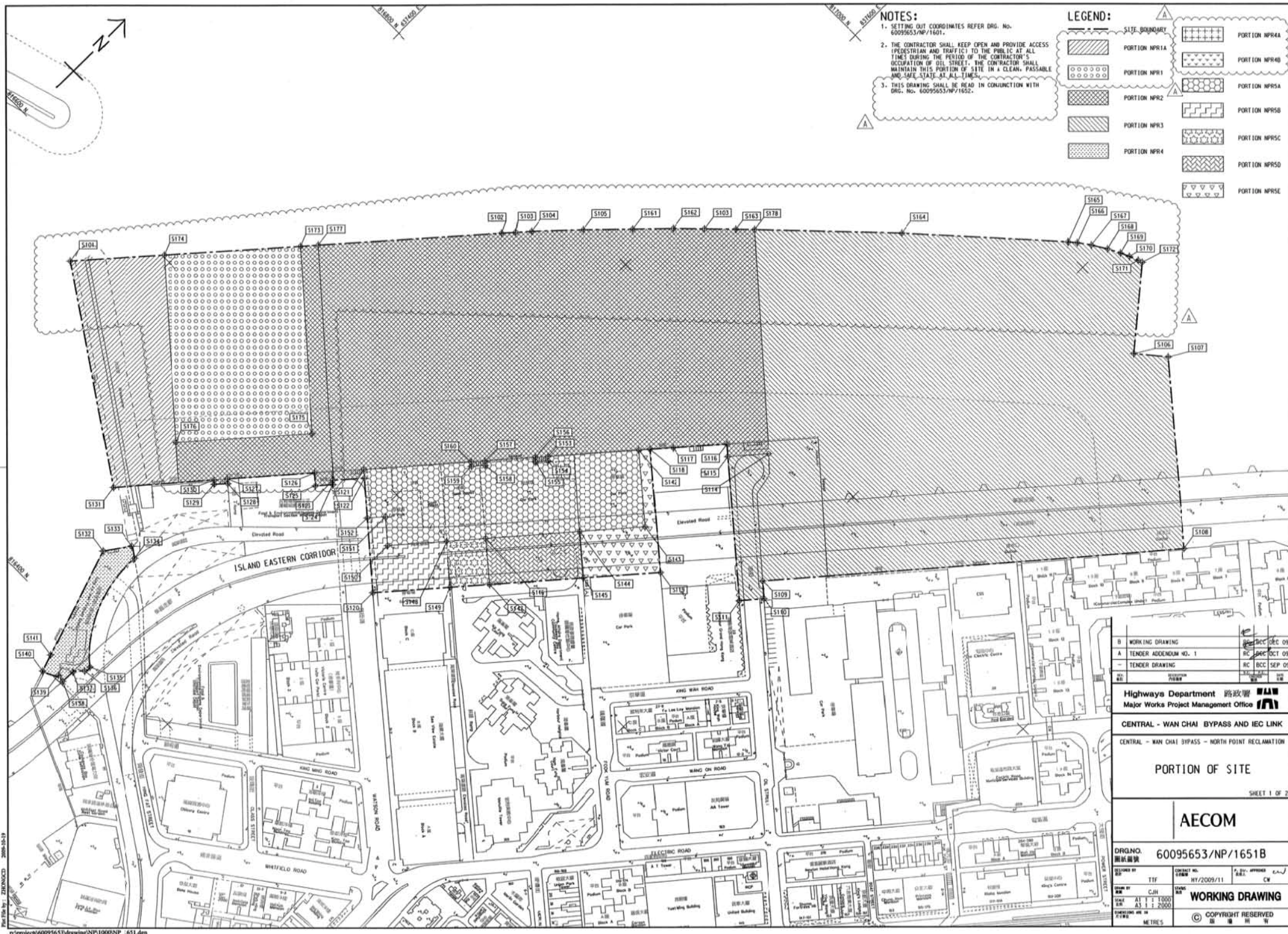


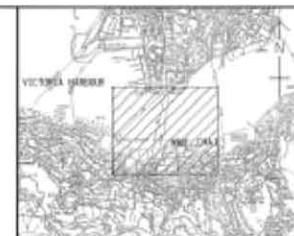
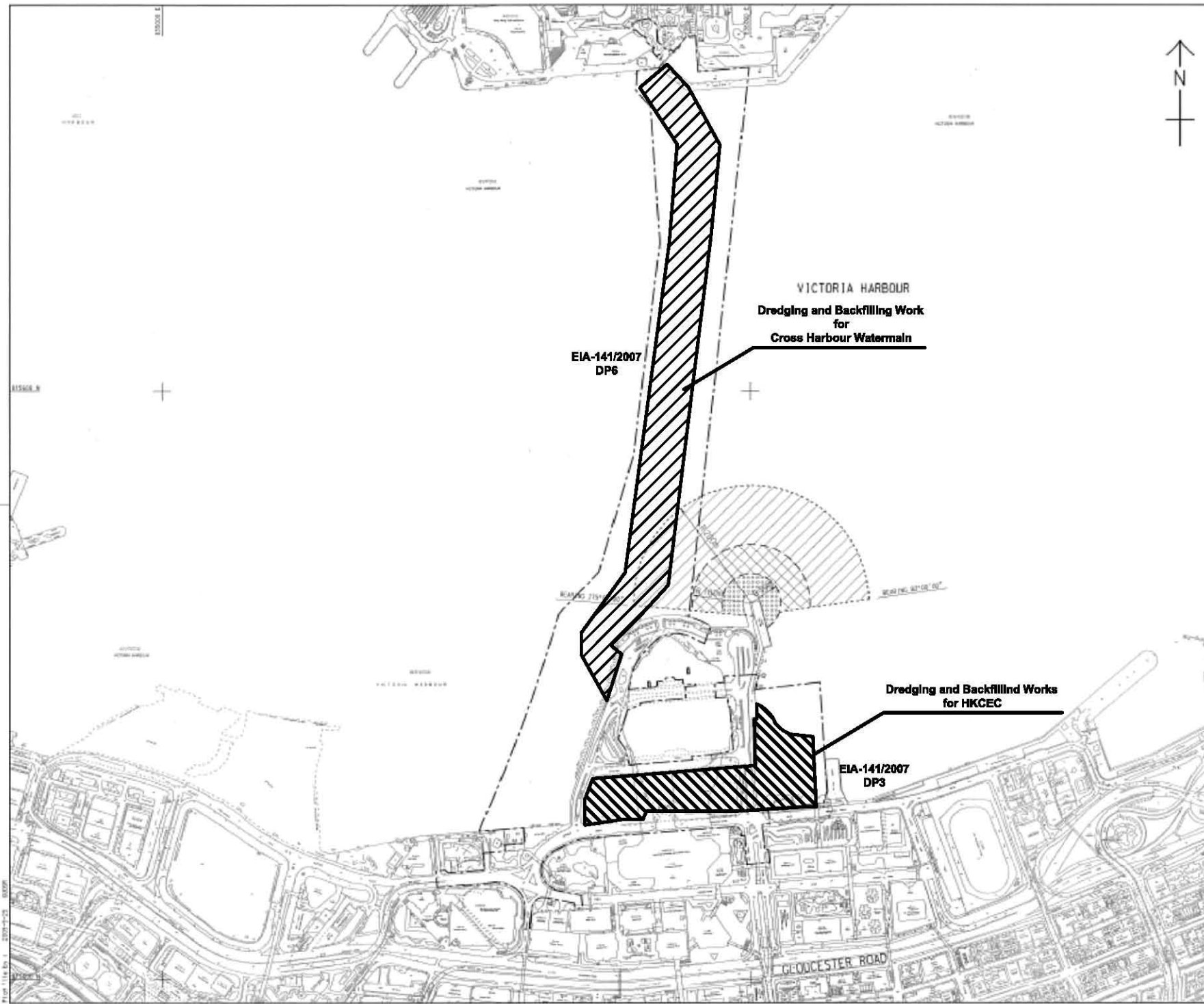
DESIGNATED PROJECTS (DP)	WORKS CONTRACT	DESIGNATED PROJECT PHASES	CONSTRUCTION COMMENCEMENT
DP1 - CENTRAL MAIN CHAL BYPASS (EWS) INCLUDING ITS ROAD TUNNEL AND SLIP ROADS	ECDD CONTRACT NO. HK/2005/V01	DP1, DP2, DP6	APRIL 2010
DP2 - ROAD P2 AND OTHER ROADS (EPHIMERY / DISTRICT DISTRIBUTOR ROADS)	ECDD CONTRACT NO. HK/2005/V02	DP1, DP2, DP6	APRIL 2010
DP3 - PERMANENT AND TEMPORARY RECLAMATION WORKS INCLUDING ASSOCIATED DESIGN WORKS IN MAIN CHAL DEVELOPMENT PHASE II (MOTI) AREA	ECDD CONTRACT 3	DP1, DP3	END 2011
DP4 - TEMPORARY-PROVISION SHELTER 1 DP4 NOT TO BE IMPLEMENTED	ECDD CONTRACT 4	DP1, DP3	END 2010
DP5 - MAIN CHAL EAST SIDEWALK OUTFALL	ECDD CONTRACT 5	DP3	2011
DP6 - DREDGING FOR THE CROSS-HARBOR WATER MAINS	HYD CONTRACT NO. HY/2005/11	DP3	18 MARCH 2010
	HYD CONTRACT NO. HY/2005/15	DP1, DP3	SEPTEMBER 2010
	HYD CONTRACT NO. HY/2005/16	DP1	DECEMBER 2010
	HYD CONTRACT NO. HY/2005/19	DP1	NOVEMBER 2010
	HYD CONTRACT 12	DP1, DP3	MID 2012
DP1 IS COVERED BY EP - 314/2008			
DP2 IS COVERED BY EP - 316/2008			
DP3, DP5 AND DP6 ARE COVERED BY EP - 356/2008			

#5201	MAN CHIE
#5202	MAN CHIE, REPROVES (D)
#5203	COMBON SCOUR
#5204	SA: MAN
#5205	CHAI KHE LING
#5206	SA: MAN HD
#5207	CLARRY BAY
#5208	SHUNG MAN
#5209	GENESEE TOWN

ISSUANCE BY B-0	ISSUED BY A-006	C. DATE APPROVED 8-1-79
GRADE BY B-0	EXPIRATION N/A	
SERIAL #1	#1	7/10/2000
EXPIRATION DATE 8-1-79		

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LOCATION PLAN
SCALE 1 : 5000

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
2. THE RESTRICTION ZONE IS THIS DRAWING WILL COME INTO EFFECT AFTER THE OPERATION OF THE GOVERNMENT HULLING AT 10:00 DRIVE EAST.

LEGEND:

- CONTRACT BOUNDARY
- [Hatched Box] WORKING RESTRICTION ZONE
- [Cross-hatched Box] NAVIGATION AND WORKING RESTRICTION ZONE
- [Dotted Box] WORKING BARGE, NAVIGATION AND WORKING RESTRICTION ZONE

9	TENDER ADDENDUM NO. 4	10/09/09	SEP-09
8	TENDER ADDENDUM NO. 1	09/09/09	SEP-09
7	TENDER DRAWING	08/09/09	AUG-09
6		07/09/09	SEP-09

土木工務局
CEDD
Civil Engineering and Development Department

WAN CHAI DEVELOPMENT PHASE II

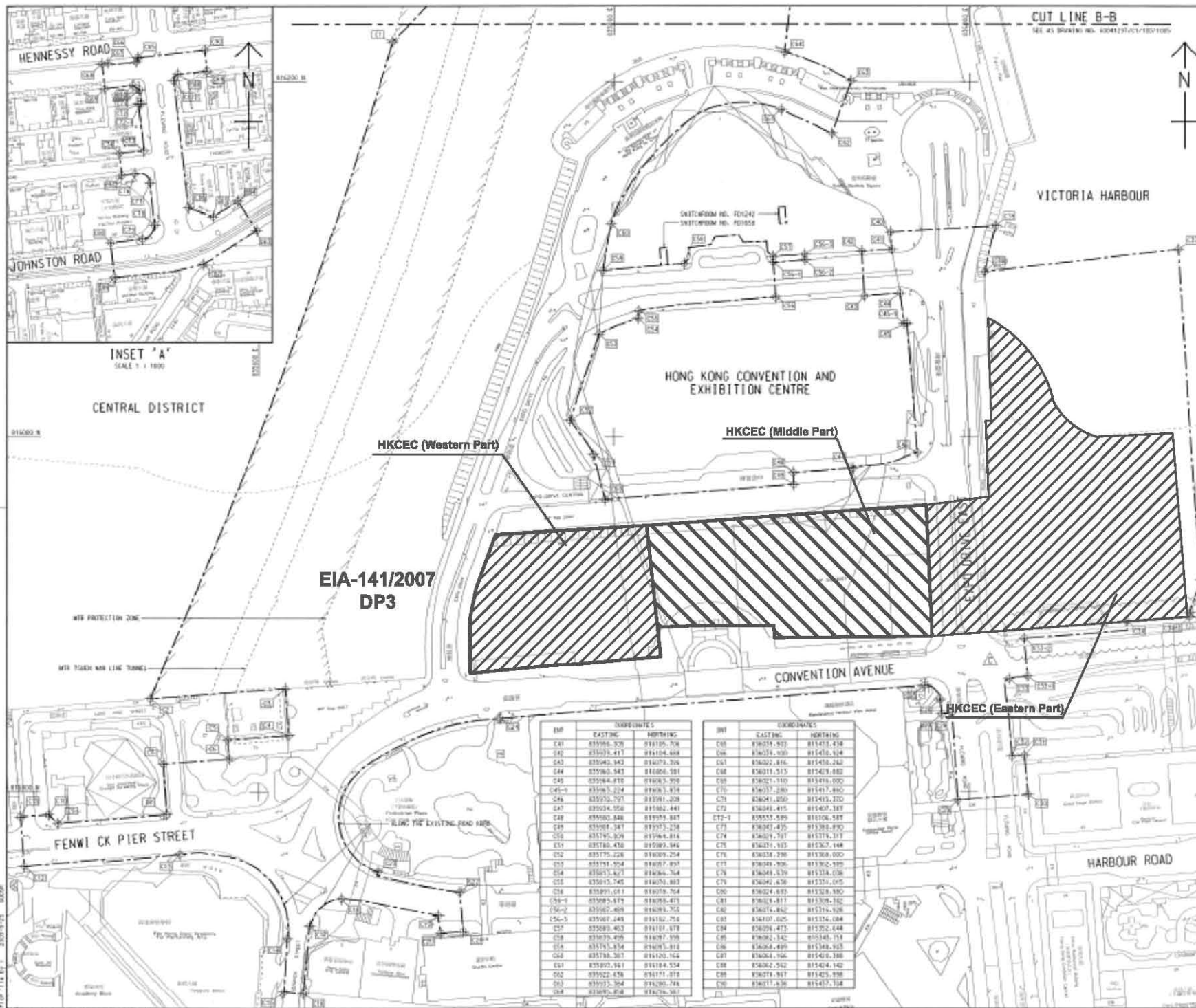
WAN CHAI DEVELOPMENT PHASE II -
CONCRETE - PAVEMENT (WORKS) -
KONG KONG CONSTRUCTION AND EXHIBITION CENTRE

RESTRICTED ZONE FOR
CONSTRUCTION VESSELS
(Contract no: HK/2009/01)

AECOM

DRAWING NO. 60041297/C1/100/10108

DATE	10/09/09	DATE	10/09/09
BY	AP/2	BY	AP/2
CHK	AP/2	CHK	AP/2
APP	AP/2	APP	AP/2
SCALE	A3 1:5000	SCALE	A3 1:5000
COPYRIGHT	RESERVED	COPYRIGHT	RESERVED



KEY PLAN
SCALE 1:1000

NOTE:

1. FOR NOTES & LEGEND, REFER TO DRAWING NO. 60041297/C1/100/1006C.

INT	COORDINATES	
	EASTING	NORTHING
C1	836875.205	816222.551
C2	836875.207	816222.549
C3	836874.361	816222.525
C4	836874.020	816222.514
C5	836874.402	816222.522
C6	836875.564	816222.512
C7	836875.565	816222.510
C8	836874.435	816222.517
C9	836874.435	816222.517
C10	836874.435	816222.517
C11	836874.435	816222.517
C12	836874.435	816222.517
C13	836874.435	816222.517
C14	836874.435	816222.517
C15	836874.435	816222.517
C16	836874.435	816222.517
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C36	836874.435	816222.517
C37	836874.435	816222.517
C38	836874.435	816222.517
C39	836874.435	816222.517
C40	836874.435	816222.517

C	TENDER ADDENDUM NO.4	SHEN YU SEP 08
E	TENDER ADDENDUM NO.2	SHEN YU SEP 08
A	TENDER ADDENDUM NO.1	SHEN YU SEP 08
-	TENDER DRAWING	SHEN YU SEP 08

土水工程發展
Civil Engineering and
Development Department

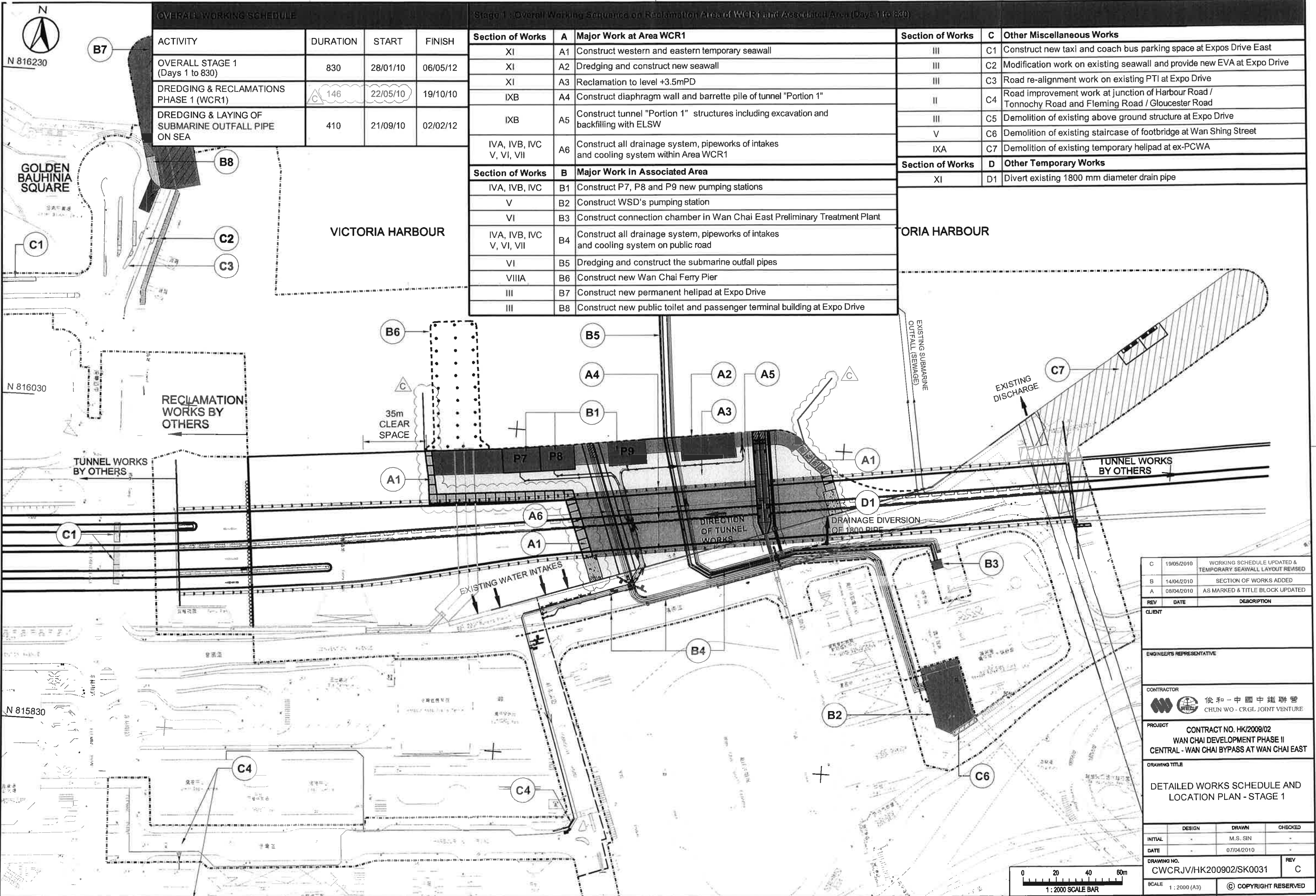
WAN CHAI DEVELOPMENT PHASE II
HONG KONG CONVENTION AND EXHIBITION CENTRE

SITE BOUNDARY
SETTING OUT PLAN
(Contract no. HK/2009/01)

AECOM

DRAWING NO. 60041297/C1/100/1006C

DATE: 11/11/2009
BY: [Signature]
CHECKED BY: [Signature]
DATE: 11/11/2009
BY: [Signature]
DATE: 11/11/2009
BY: [Signature]



OVERALL WORKING SCHEDULE			
ACTIVITY	DURATION	START	FINISH
OVERALL STAGE 1 (Days 1 to 830)	830	28/01/10	06/05/12
DREDGING & RECLAMATIONS PHASE 1 (WCR1)	146	22/05/10	19/10/10
DREDGING & LAYING OF SUBMARINE OUTFALL PIPE ON SEA	410	21/09/10	02/02/12

Stage 1 : Overall Working Sequence on Reclamation Area of WCR1 and Associated Area (Days 1 to 830)					
Section of Works	A	Major Work at Area WCR1	Section of Works	C	Other Miscellaneous Works
XI	A1	Construct western and eastern temporary seawall	III	C1	Construct new taxi and coach bus parking space at Expos Drive East
XI	A2	Dredging and construct new seawall	III	C2	Modification work on existing seawall and provide new EVA at Expo Drive
XI	A3	Reclamation to level +3.5mPD	III	C3	Road re-alignment work on existing PTI at Expo Drive
IXB	A4	Construct diaphragm wall and barrette pile of tunnel "Portion 1"	II	C4	Road improvement work at junction of Harbour Road / Tonnochy Road and Fleming Road / Gloucester Road
IXB	A5	Construct tunnel "Portion 1" structures including excavation and backfilling with ELSW	III	C5	Demolition of existing above ground structure at Expo Drive
IVA, IVB, IVC V, VI, VII	A6	Construct all drainage system, pipeworks of intakes and cooling system within Area WCR1	V	C6	Demolition of existing staircase of footbridge at Wan Shing Street
			IXA	C7	Demolition of existing temporary heliport at ex-PCWA
Section of Works	B	Major Work in Associated Area	Section of Works	D	Other Temporary Works
IVA, IVB, IVC	B1	Construct P7, P8 and P9 new pumping stations	XI	D1	Divert existing 1800 mm diameter drain pipe
V	B2	Construct WSD's pumping station			
VI	B3	Construct connection chamber in Wan Chai East Preliminary Treatment Plant			
IVA, IVB, IVC V, VI, VII	B4	Construct all drainage system, pipeworks of intakes and cooling system on public road			
VI	B5	Dredging and construct the submarine outfall pipes			
VIIIA	B6	Construct new Wan Chai Ferry Pier			
III	B7	Construct new permanent heliport at Expo Drive			
III	B8	Construct new public toilet and passenger terminal building at Expo Drive			

ORIA HARBOUR

C	19/05/2010	WORKING SCHEDULE UPDATED & TEMPORARY SEAWALL LAYOUT REVISED
B	14/04/2010	SECTION OF WORKS ADDED
A	08/04/2010	AS MARKED & TITLE BLOCK UPDATED
REV	DATE	DESCRIPTION
CLIENT		
ENGINEER'S REPRESENTATIVE		
CONTRACTOR		
PROJECT		
DRAWING TITLE		
DESIGN		
DRAWN		
CHECKED		
DATE		
DRAWING NO.		
SCALE		
© COPYRIGHT RESERVED		

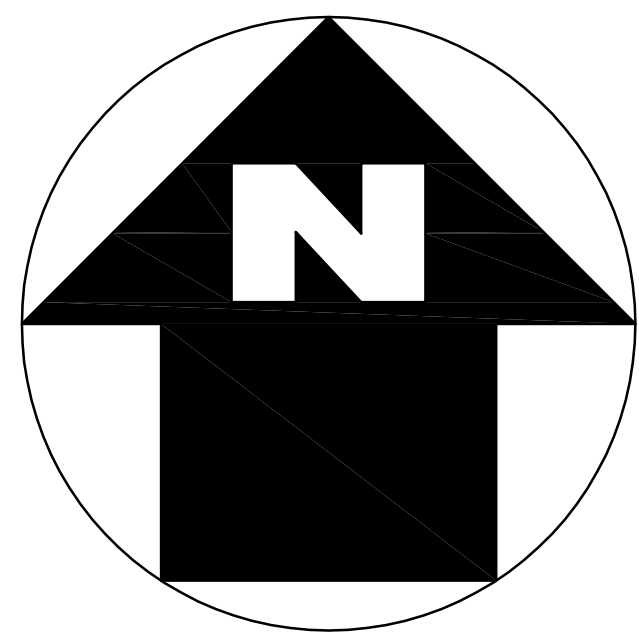
LEGEND:

WORKS AREA

DREDGING AREA FOR
MITGATION OF ODOUR(DP3)

SITE BOUNDARY

港口
HARBOUR



TCBR1E

TCBR2
AND
TCBR3

TCBR4

TCBR1W

TPCWAW

TPCWAE

DP3

中圖建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGRG. (HONG KONG) LTD.

Highways Department
CONTRACT NO. HY/2009/15
CENTRAL-WAN CHAI BYPASS -TUNNEL
(CAUSEWAY BAY TYPHOON
SHELTER SECTION)

TITLE
LOCATION PLAN OF WORKS AREA

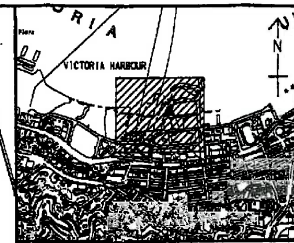
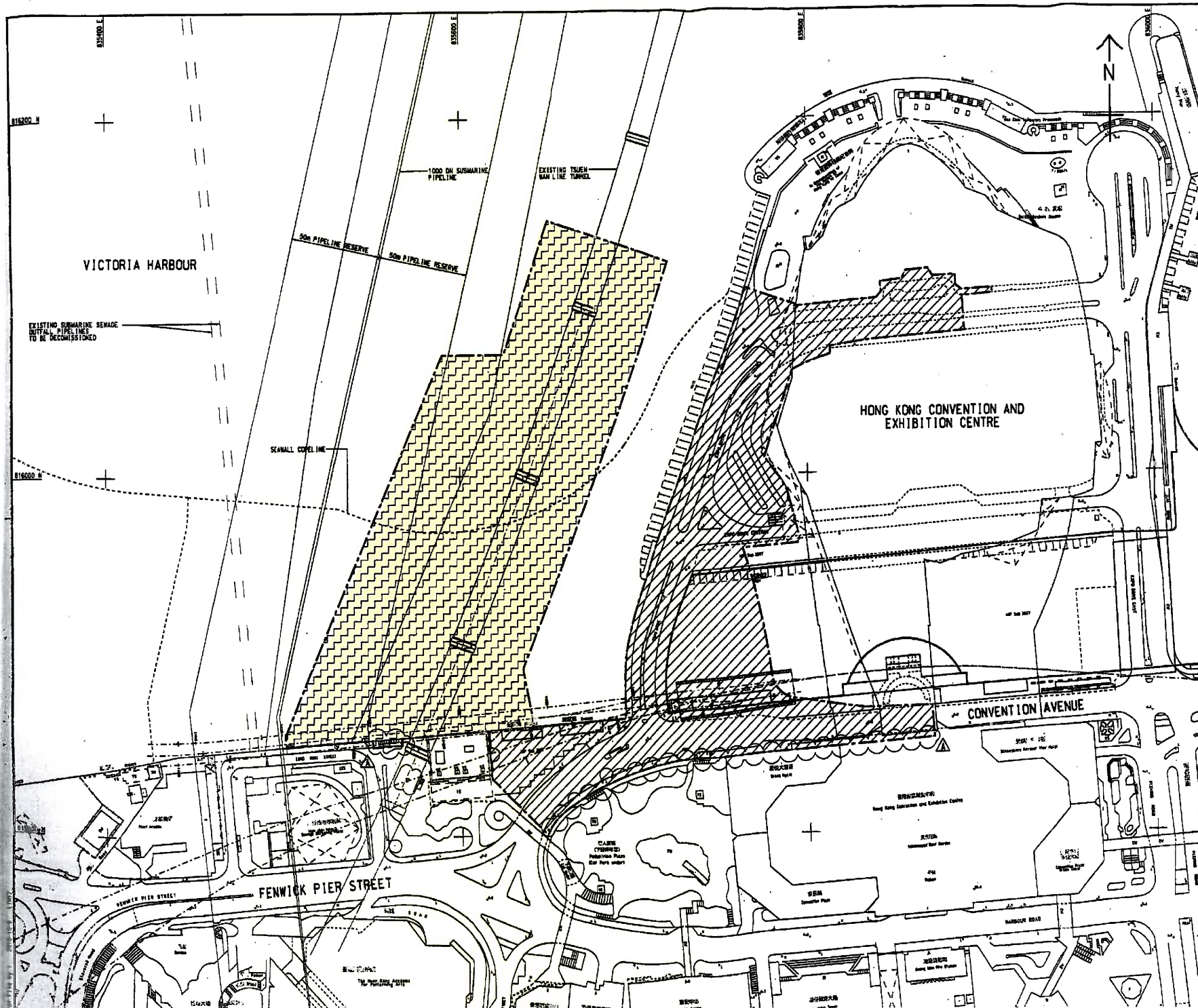
DRG. NO.
CWBT/EPD/001B

SCALE
1:1000 @ A0

DIMENSIONS ARE IN
MILLIMETERS

STATUS

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KEY PLAN
SCALE 1 : 20000

NOTES:

1. COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.
2. LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (1985) UNLESS OTHERWISE NOTED.
3. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
4. SETTING OUT DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRONICALLY FROM THE DRAWINGS OR FILES.
5. SITE BOUNDARY SETTING OUT POINTS SHALL REFER TO DRAWING NO. 60041297/C4/100/1301A.

LEGEND:

- SYMBOLS TO BE USED
- SITE BOUNDARY
 - PORTION 1
 - PORTION 2 (DELAY POSSESSION)

TENDER ADDENDUM NO. 1	SHK JYL OCT 10
TENDER DRAWING	SHK JYL SEP 10

土木工務發展局
Civil Engineering and
Development Department

WAN CHAI DEVELOPMENT PHASE II

WAN CHAI DEVELOPMENT PHASE II -
CENTRAL-WAN CHAI BYPASS OVER MTR TSUEN WAN LINE

PORTIONS OF THE SITE
(Contract HK/2010/06)

AECOM

DRAWING NO. 60041297/C4/100/1301A

DESIGNED BY	SHK	CHECKED BY	SHK	DATE	10/2010/06
DRAWN BY	ABC	DATE	11/2010	SCALE	AS SHOWN

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Figure 2.2

Project Organization Chart



Project Organization Chart

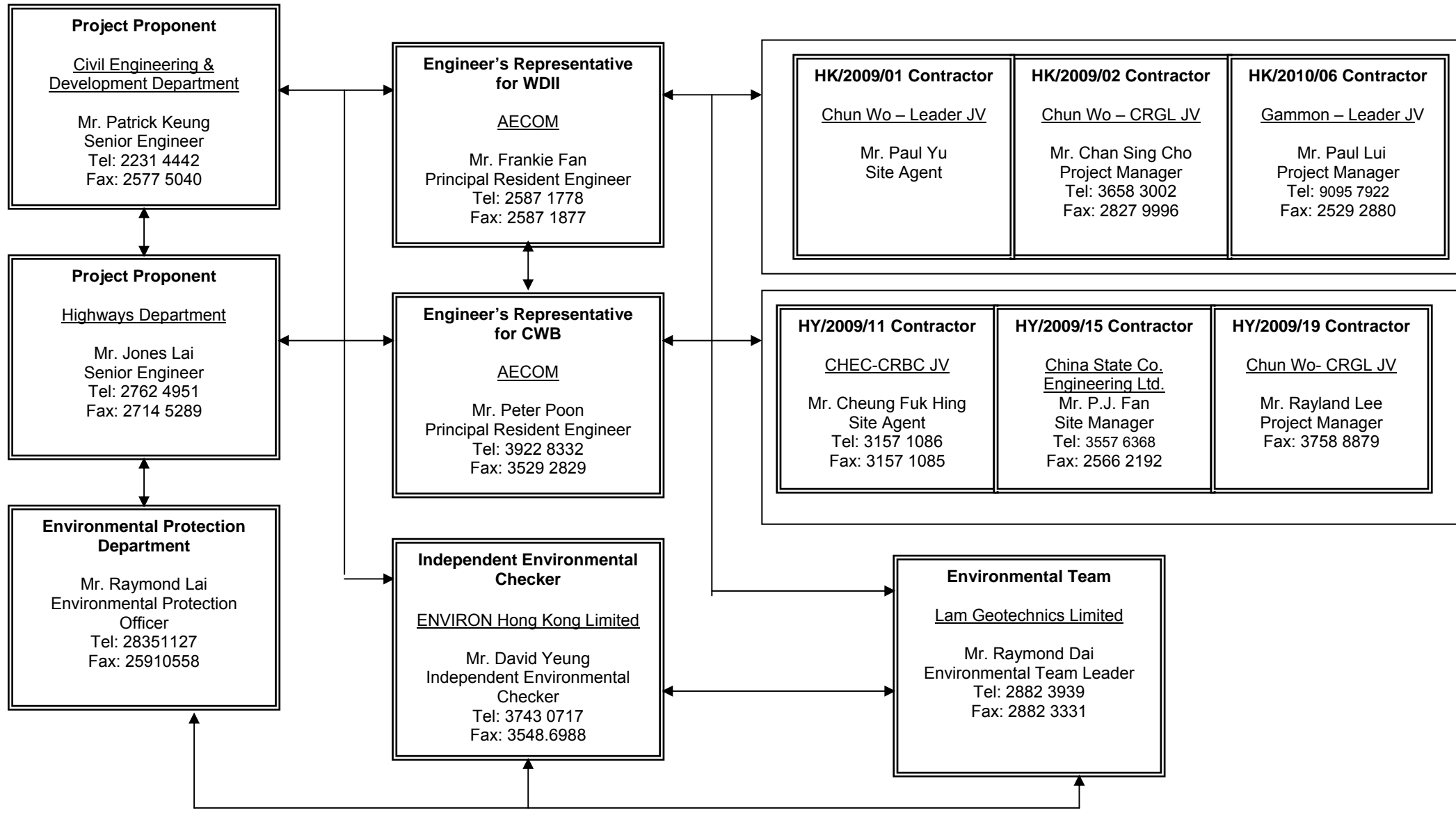
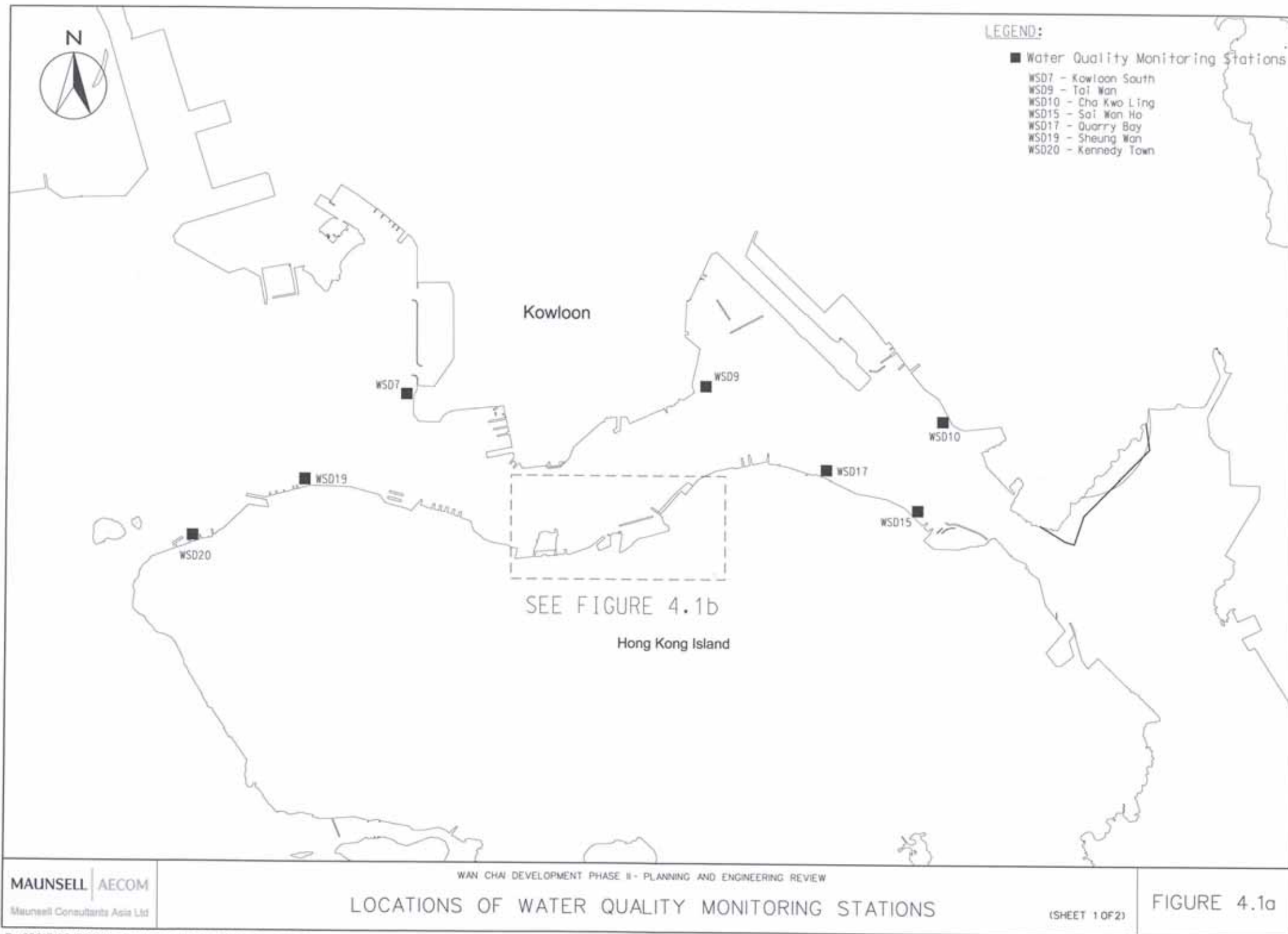




Figure 4.1

Locations of Monitoring Stations

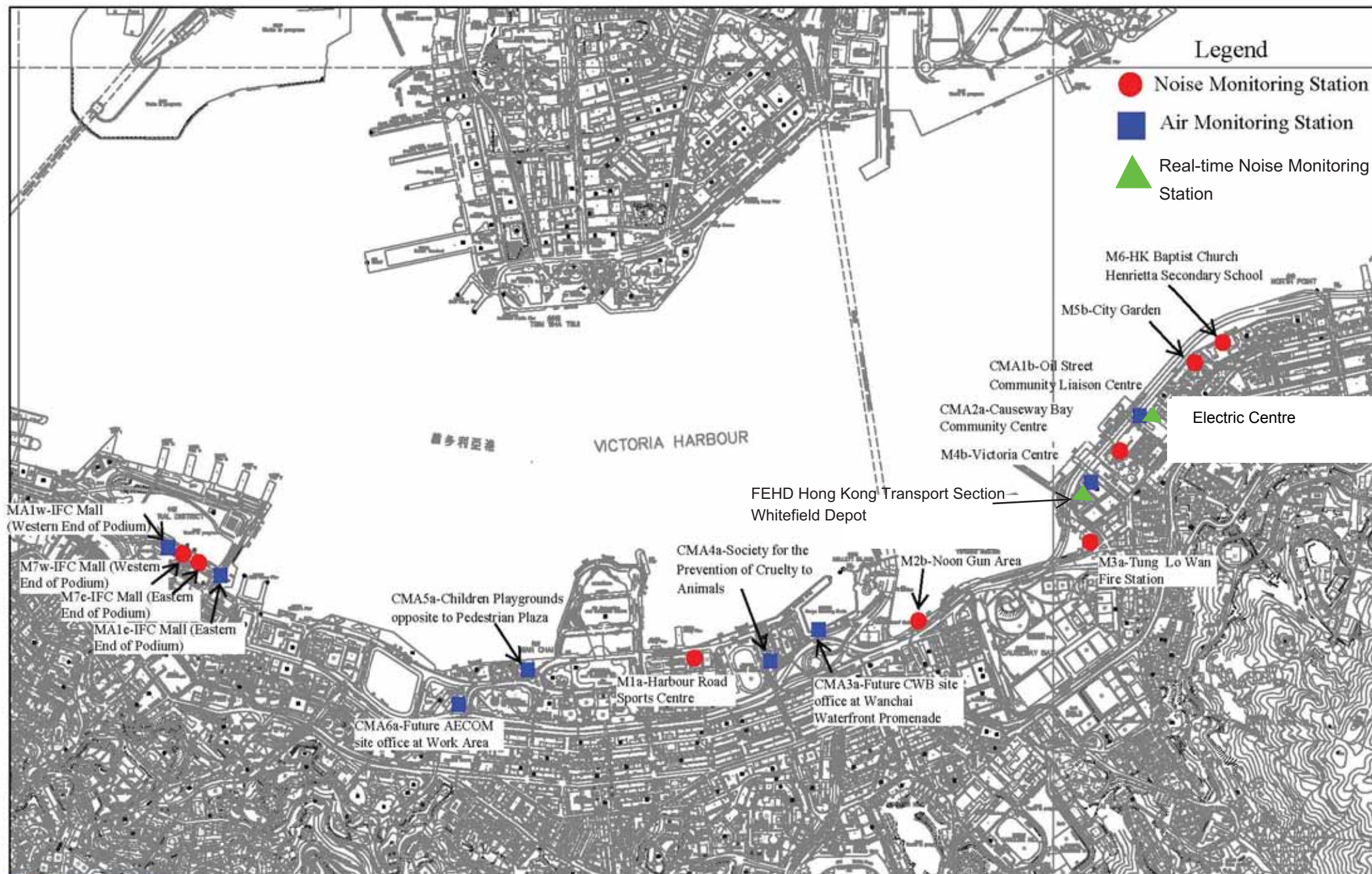


LEGEND:

WATER QUALITY MONITORING STATIONS

- C1 HONG KONG CONVENTION AND EXHIBITION CENTRE EXTENSION
- C2 TELECOM HOUSE/HK ACADEMY FOR PERFORMING/ SHUI ON CENTRE
- C3 HONG KONG CONVENTION AND EXHIBITION CENTRE PHASE I
- C4 WAN CHAI TOWER AND GREAT EAGLE CENTRE
- C5 SUN HUNG KAI CENTRE
- C6 PROPOSED EXHIBITION STATION / WORLD TRADE CENTRE
- C7 WINDSOR HOUSE
- C8 CITY GARDEN
- C9 PROVIDENT CENTRE
- RC1 PROPOSED HKAPA EXTENSION
- RC5 SUN HUNG KAI CENTRE (REPROVISION)
- RC7 WINDSOR HOUSE (TEMPORARY REPROVISION)
- WSD21 WAN CHAI
- RW1 WAN CHAI (REPROVISION)

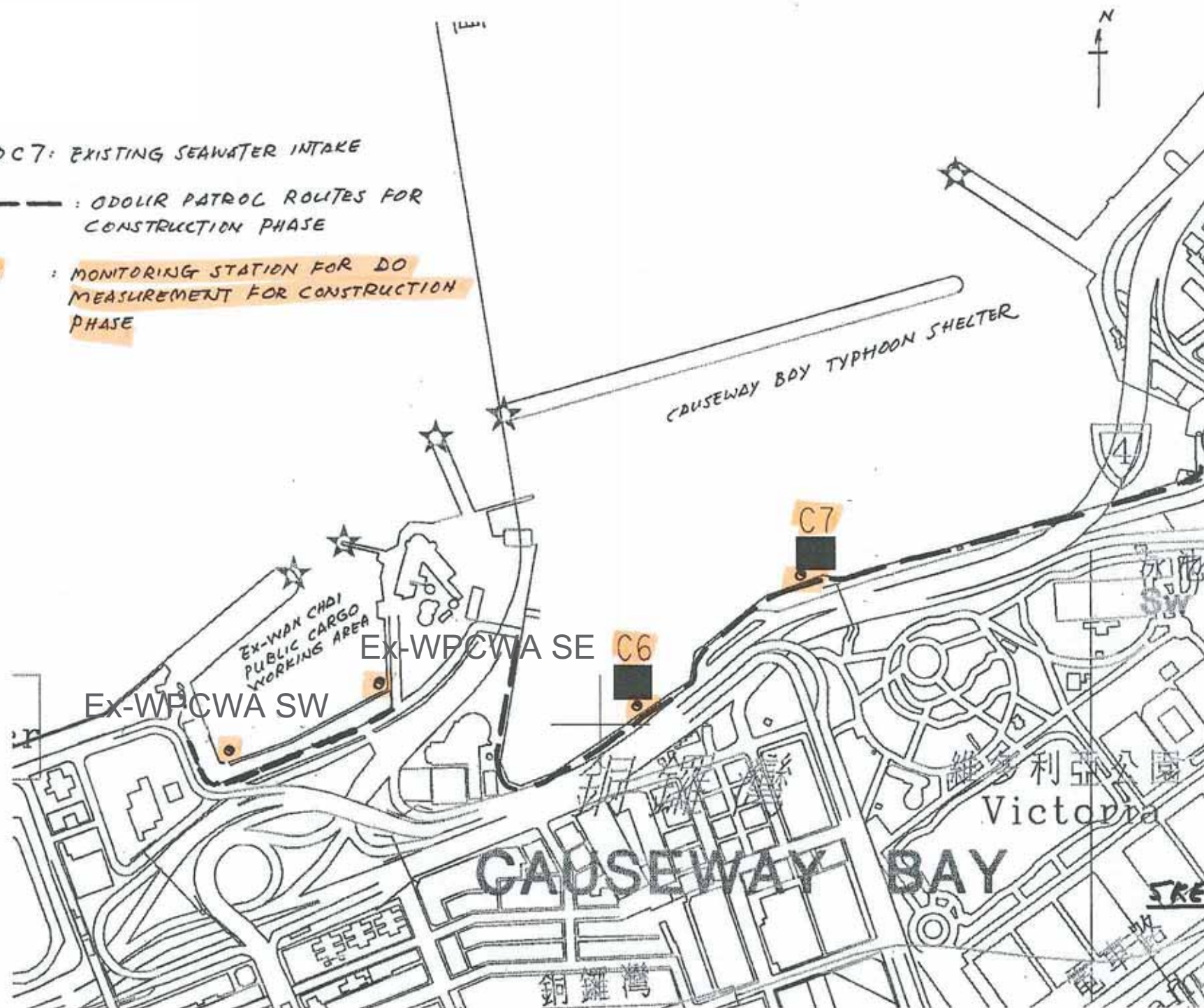




C6 AND C7: EXISTING SEAWATER INTAKE

— — — : ODOLIR PATROL ROUTES FOR CONSTRUCTION PHASE

● : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE



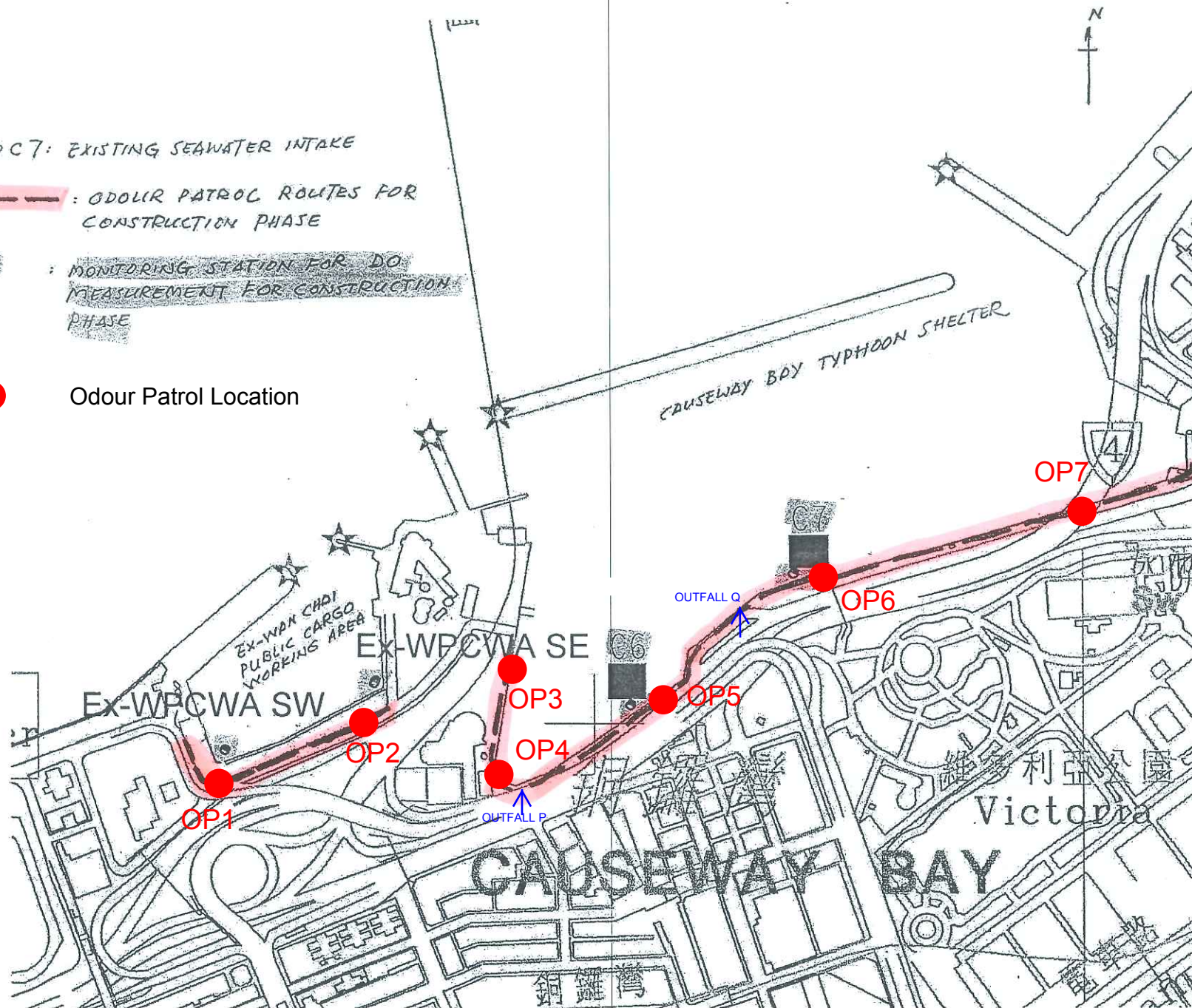
SKETCH A

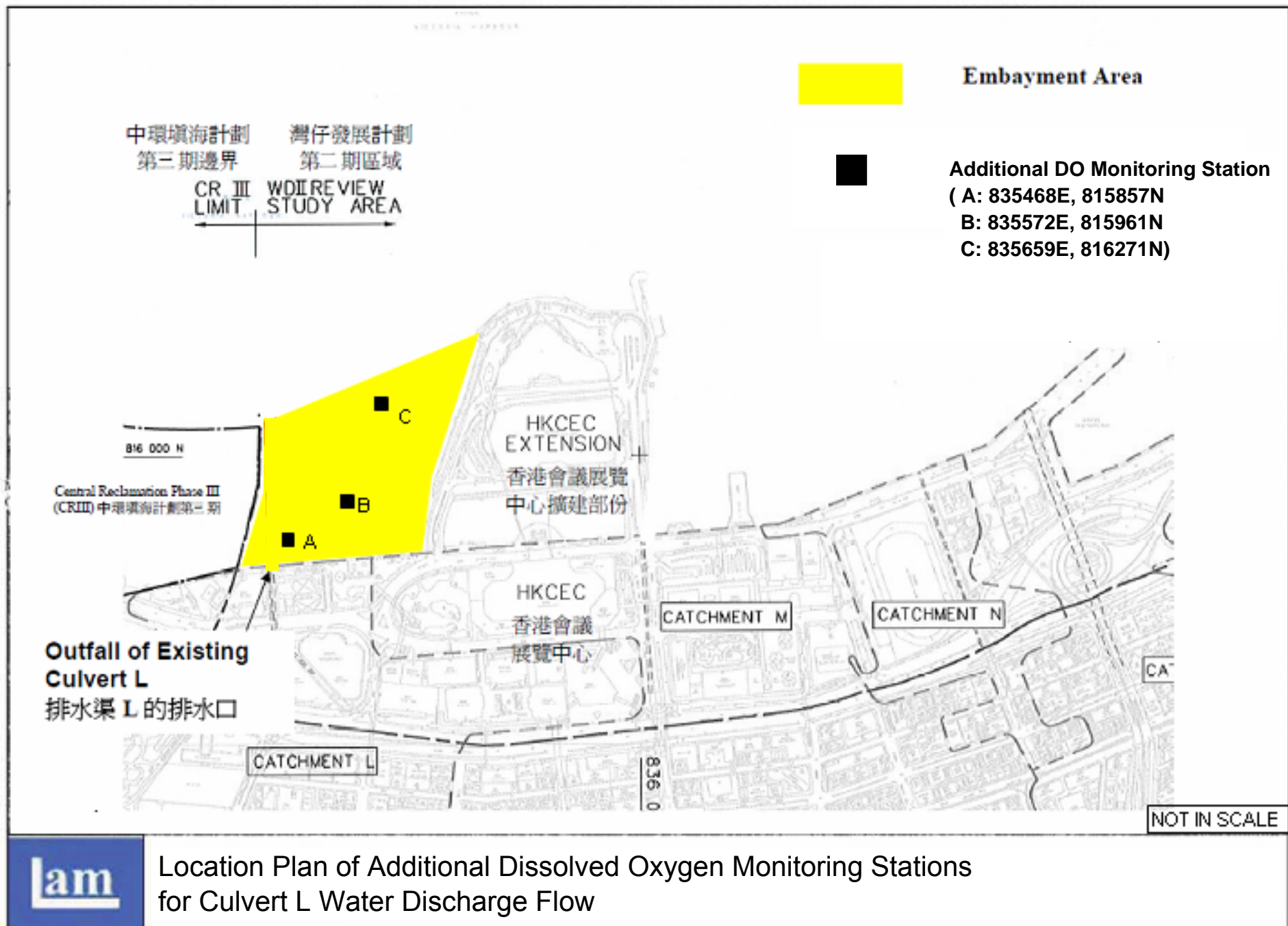
C6 AND C7: EXISTING SEAWATER INTAKE

--- : ODOR PATROL ROUTES FOR CONSTRUCTION PHASE

○ : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE

● Odour Patrol Location







Appendix 3.1

Environmental Mitigation Implementation Schedule

Environmental Mitigation Implementation Schedule

Implementation Schedule for Air Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			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. <ul style="list-style-type: none">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; andTarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	Work site / during construction	Contractor		√			

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.5.6	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 ¹		√			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 ²		√			EIAO-TM
Operation Phase								
For the Whole Project								

¹ CEDD will identify an implementation agent.² CEDD will identify an implementation agent.

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
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 on-going odour impacts at the ASRs.	Planned ASRs (CBTS Breakwater)/First 5-year period of operation phase	CEDD ¹			√		EIAO-TM
For DP1 – CWB (Within the Project Boundary)								
S3.6.53 – S3.6.54	The design parameters of the East and Central Ventilation Buildings as set in Tables 3.10 and 3.11	East and Central Ventilation Buildings / During operation of the Trunk Road	HyD			√		
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			√		EIAO-TM

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

Appendix 3.1

Table A13.2 Implementation Schedule for Noise Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.9.4	<p>Good Site Practice:</p> <ul style="list-style-type: none"> Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program. Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program. Mobile plant, if any, shall be sited as far away from NSRs as possible. 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. 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. Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP1 – CWB (Within the Project Boundary)								

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.3 – S4.8.5	<p>Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:</p> <ul style="list-style-type: none"> 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 <p>Use of PME grouping for the following tasks:</p> <ul style="list-style-type: none"> At-grade road construction Substructure for IECL connection 	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP2 – WDI Major Roads (Road P2)								
S4.8.3 – S4.8.4	<p>Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:</p> <ul style="list-style-type: none"> Temporary road diversion Resurfacing At-grade roadwork 	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP3 – Reclamation Works								
S4.8.3 – S4.8.4	<p>Use of quiet powered mechanical equipment for the following task:</p> <ul style="list-style-type: none"> Filling behind seawall Seawall construction 	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
For DP5 – Wan Chai East Sewage Outfall								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: <ul style="list-style-type: none">Submarine pipelines (marine section) Use of quiet powered mechanical equipment and movable noise barrier for the following tasks: <ul style="list-style-type: none">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: <ul style="list-style-type: none">Submarine pipelines (marine section)	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

Appendix 3.1

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.14 – S4.8.18	<ul style="list-style-type: none"> For Existing NSRs about 235m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC about 230m length of noise semi-enclosure with transparent panel covering the main carriageways (eastbound and westbound) of the CWB and IEC 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 about 95m length of 5.5m high cantilevered noise barrier with 1m cantilever inclined at 45° with transparent panel 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 <p>For Future/Planned NSRs</p> <ul style="list-style-type: none"> about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC 	<p>Near North Point / Before commencement of operation of road project</p> <p>In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.</p>	HyD	√	√	√		EIAO-TM
			HyD	√	√ [#]			

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> The openable windows of the temple, if any, should be orientated so as to avoid direct line of sight to the existing Victoria Park Road as far as practicable. 	Near Causeway Bay Fire Station / During detailed design of the re-provisioned Tin Hau Temple	Project Proponent for the re-provisioned Tin Hau Temple	√				

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

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

Appendix 3.1

Table A13.3 Implementation Schedule for Water Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For DP3 – Reclamation Works, DP5 (Wan Chai East Sewage Outfall), DP6 (Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui), DP1 – CWB (within the Project Boundary)								
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: <ul style="list-style-type: none">Seawall construction in all the reclamation areas;Construction of the CWB TunnelConstruction of the proposed WSD water mains; andConstruction of the proposed Wan Chai East sewage outfall pipelines.	Work site / During the construction period	Contractor		√			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: <ul style="list-style-type: none">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		√			EIAO-TM, WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																															
				Des	C	O	Dec																																
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 CR11 and HKCEC1, an impermeable barrier, suspended from a floating boom on the water surface 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.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																															
S5.8, Figure 5.3	<p>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.</p> <table><tr><th colspan="2" rowspan="2">Reclamation Area</th><th colspan="2">Maximum Dredging Rate</th><th rowspan="2">Maximum Dredging Rate (m³ per week)</th></tr><tr><th>m³ per day</th><th>m³ per hour (for 16 hrs per day)</th></tr><tr><td colspan="5">Dredging along seawall or breakwater</td></tr><tr><td colspan="2">North Point Shoreline Zone (NPR)</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td>Causeway Bay Shoreline Zone</td><td>TBW</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td></td><td>TCBR</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td colspan="2">PCWA Zone</td><td>5,000</td><td>313</td><td>35,000</td></tr></table>	Reclamation Area		Maximum Dredging Rate		Maximum Dredging Rate (m³ per week)	m³ per day	m³ per hour (for 16 hrs per day)	Dredging along seawall or breakwater					North Point Shoreline Zone (NPR)		6,000	375	42,000	Causeway Bay Shoreline Zone	TBW	1,500	94	10,500		TCBR	6,000	375	42,000	PCWA Zone		5,000	313	35,000	Work site / During the construction period	Contractor		√		EIAO-TM, WPCO
Reclamation Area				Maximum Dredging Rate			Maximum Dredging Rate (m³ per week)																																
		m³ per day	m³ per hour (for 16 hrs per day)																																				
Dredging along seawall or breakwater																																							
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Causeway Bay Shoreline Zone	TBW	1,500	94	10,500																																			
	TCBR	6,000	375	42,000																																			
PCWA Zone		5,000	313	35,000																																			

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures				Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																							
							Des	C	O	Dec																								
	<table border="1"><tr><td colspan="2">Wan Chai Shoreline Zone (WCR)</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td rowspan="2">HKCEC Shoreline Zone (HKCEC)</td><td>HKCEC Stage 1 & 3</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td>HKCEC Stage 2</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td colspan="2">Cross Harbour Water Mains</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td colspan="2">Wan Chai East Submarine Sewage Pipeline</td><td>1,500</td><td>94</td><td>10,500</td></tr></table> <p>Note: 1,500 m³ per day shall be applied for construction of the western seawall of WCR1.</p>				Wan Chai Shoreline Zone (WCR)		6,000	375	42,000	HKCEC Shoreline Zone (HKCEC)	HKCEC Stage 1 & 3	1,500	94	10,500	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						
Wan Chai Shoreline Zone (WCR)		6,000	375	42,000																														
HKCEC Shoreline Zone (HKCEC)	HKCEC Stage 1 & 3	1,500	94	10,500																														
	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																														
S5.8, Figure 5.3	Dredging along the seawall at WCR1 shall be undertaken initially at 1,500m ³ 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		√			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 TCBRIW, 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		√			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		√			EIAO-TM, WPCO																							
S5.8, Figure 5.3	Silt screens shall be applied to seawater intakes at interim construction stages as stated below: <table border="1"><thead><tr><th>Interim Construction Stage</th><th>Location of Applications</th></tr></thead><tbody><tr><td>Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA.</td><td>WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong</td></tr></tbody></table>				Interim Construction Stage	Location of Applications	Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA.	WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																			
Interim Construction Stage	Location of Applications																																	
Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA.	WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong																																	

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures		Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
					Des	C	O	Dec	
	TBW, NP and Water Mains Zone	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							
	Scenario 2B in late 2009/2010 with concurrent dredging activities at Sewage Pipelines Zone and TCBR.	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: <ul style="list-style-type: none">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 vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;all hopper barges and dredgers shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material;construction activities shall not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or 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		Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> 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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
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 1 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/Implementation of harbour-front enhancement.	CEDD ³		√			WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
For the Whole Project								
S5.8	<ul style="list-style-type: none">Construction Runoff and Drainageuse of sediment traps, wheel washing facilities for vehicles leaving the site, and adequate maintenance of drainage systems to prevent flooding and overflow;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	<ul style="list-style-type: none">Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)

³ CEDD will identify an implementation agent.

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	required.							
	<ul style="list-style-type: none"> 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. 							
	<ul style="list-style-type: none"> 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	<i>Sewage from Construction Work Force</i> 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		√			ProPECC PN 1/94; WPCO (TM-DSS)
S5.8	<i>Floating Debris and Refuse</i> 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		√			WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	<p><i>Storm Water Discharges</i></p> <p>Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned WSD flushing water intakes.</p>	Work site and adjacent water / During the design and construction period.	Contractor	√	√			WPCO
Operation Phase								
DPI – CWB (within the Project Boundary)								
S5.8	<p>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:</p> <ul style="list-style-type: none"> 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. 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, 	CWB/During design and operational period	HyD/TD ³	√		√		WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>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.</p> <ul style="list-style-type: none"> 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. 							

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

³ if employ Management, Operation and Maintenance (MOM) Contract

Appendix 3.1

Table A13.4 Implementation Schedule for Waste Management

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For DP3 – Reclamation Works								
S6.7.2	<p>Marine Sediments</p> <p>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.</p>	Work site / During the construction period	Contractor		√			ETWB TCW No. 34/2002
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 Mm ³ . 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.							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
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	<p>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:</p> <ul style="list-style-type: none"> 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. 							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> 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	<p>Floating Refuse</p> <p>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.</p>	Work site / During the construction period	Contractor		√			
For the Whole Project								

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.7	<p>Good Site Practices</p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> 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		√			Waste Disposal Ordinance (Cap.354)

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.8	<p><i>Waste Reduction Measures</i></p> <p>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:</p> <ul style="list-style-type: none"> • 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	√	√			

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.10	<p><i>General Refuse</i></p> <p>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.</p> <p>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.</p>	Work site / During the construction period	Contractor		√			Public Health and Municipal Services Ordinance (Cap. 132)
S6.7.11	<p><i>Chemical Wastes</i></p> <p>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.</p>	Work site / During the construction period	Contractor		√			Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
S6.7.12	<p><i>Construction and Demolition Material</i></p> <p>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.</p>	Work site / During the construction period	Contractor		√			ETWB TCW No. 33/2002, 31/2004, 19/2005

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
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		√			ETWB TCW No. 31/2004
S6.7.14	<p><i>Bentonite Slurry</i></p> <p>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:</p> <ul style="list-style-type: none"> 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. 	Work site / During the construction period	Contractor		√			ProPECC PN 1/94

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

Appendix 3.1

Table A13.5 Implementation Schedule for Land Contamination

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								
S.12.6	<ul style="list-style-type: none">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	√				<p>“Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops” published by EPD, HKSAR</p> <p>EPD ProPECC Note No. 3/94</p>
S7.10	<p>During soil remediation works, the Contractor for the excavation works shall take note of the following points for excavation:</p> <ul style="list-style-type: none">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	√				<p>Air Pollution Control Ordinance</p> <p>Noise Control Ordinance</p> <p>Waste Disposal Ordinance</p> <p>Waste Disposal (Chemical Waste) (General) Regulation</p>

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	maybe required. The storage site shall include protection facilities for leaching into the ground. eg. Liner maybe required.							
	<ul style="list-style-type: none"> 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. <p>The following environmental mitigation measures shall be strictly followed during the operation and/or maintenance of the CS/S facilities:</p>							Water Pollution Control Ordinance

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<u>Air Quality Mitigation Measures</u> <ul style="list-style-type: none"> 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. 							
	<u>Noise Mitigation Measures</u> <ul style="list-style-type: none"> 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). 							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p><u>Water Quality Mitigation Measures</u></p> <ul style="list-style-type: none"> 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. <p><u>Waste Mitigation Measures</u></p> <ul style="list-style-type: none"> 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. Stabilized soils shall be broken into suitable size for backfilling or reuse on site. A high standard of housekeeping shall be maintained within the mixing plant area. If necessary, there shall be clear and separated areas for stockpiling of untreated and treated materials. 							

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

Appendix 3.1

Table A13.6 Implementation Schedule for Marine Ecology

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole 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	√				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	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
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: <ul style="list-style-type: none"> • 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							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.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: <ul style="list-style-type: none"> • 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 effectively implemented. 	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.7	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		√			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.

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

Appendix 3.1

Table A13.7 Implementation Schedule for Landscape and Visual

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	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	√	√			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	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			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 – CWB (Within the Project Boundary)								
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		√			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	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DP2 – WDII Major Roads (Road P2)								
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	√	√			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	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			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 DP3 – Reclamation Works								
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 DP5 – Wan Chai East Sewage Outfall								
Refer to EIA-058/2001 Table 10.13	CM2 Minimisation of works areas.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM3 Erection of decorative hoardings.	Work site / During Construction Phase	Contractor		√			EIAO TM

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Refer to EIA-058/2001 Table 10.13	CM4 Control night-time lighting.	Work site / During Construction Phase	Contractor		√			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
For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui								
Refer to EIA-058/2001 Table 10.13	CM2 Minimisation of works areas.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM3 Erection of decorative hoardings.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM4 Control night-time lighting.	Work site / During Construction Phase	Contractor		√			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
Operation Phase								
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	√	√	√		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	√	√	√		ETWB TCW 2/2004

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
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/	√	√	√		ETWB TCW 2/2004
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 ⁴	√	√	√		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	√	√	√		ETWB TCW 2/2004
For DP1 – CWB (Within the Project Boundary)								
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	HyD	√	√	√		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	HyD	√	√	√		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	√	√	√		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	√	√	√		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	HyD	√	√	√		ETWB TCW 2/2004
For DP2 – WDII Major Roads (Road P2)								

⁴ CEDD will identify an implementation agent

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	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		√	√		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		√	√		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		√	√		ETWB TCW 2/2004
For DP3 – Reclamation 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	CEDD ⁵	√	√	√		ETWB TCW 2/2004

*Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

⁵ CEDD will identify an implementation agent



Appendix 4.1

Action and Limit Level

**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) ^{Note 1}

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 Level in $\mu\text{g}/\text{m}^3$		24-hour TSP Level in $\mu\text{g}/\text{m}^3$	
	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 Season		Wet Season	
	Action	Limit	Action	Limit
WSD Salt Water Intake				
SS in mg L^{-1}	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
Cooling Water Intake				
SS in mg L^{-1}	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.

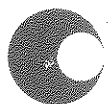
Action and Limit Levels for Odour Patrol

Parameters	Action	Limit
Odour Nuisance (from odour intensity analysis or odour patrol)	<ul style="list-style-type: none"> When two documented complaint are received; or Odour Intensity of 2 is measured from odour intensity analysis. 	<ul style="list-style-type: none"> Five or more consecutive genuine documented complaints within a week; or Odour Intensity of 3 or above is measured from odour intensity analysis.



Appendix 4.2

Copies of Calibration Certificates



Calibration Certificate

Certificate No. **23551**

Page **1** of **4** Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q21462

Date of receipt : 11-Jun-12

Item Tested

Description : Digital Sound Level Meter

Manufacturer : B&K

Model : Type 2236

Serial No. : 2100736

Test Conditions

Date of Test : 12-Jun-12

Supply Voltage : --

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

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:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	15136	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 : 

P. F. Wong

Approved by : 

Dorothy Cheuk

Date: 12-Jun-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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Calibration Certificate

Certificate No. 23551

Page 2 of 4 Pages

Results :

1. SPL Accuracy

UUT Setting				Applied Value (dB)	UUT Reading (dB)
Range	Parameter	Frequency Wt.	Freq. Response		
20 - 100	SPL	dBA	F	94.0	93.8
			S		93.8
		dBC	F		93.9
		dBL	F		93.9
		1 kHz	F		93.9
40 - 120	SPL	dBA	F	94.0	93.9
		1 kHz	F		94.0
	SPL	dBA	F	114.0	114.0
			S		114.0
		dBC	F		114.0
		dBL	F		114.1
		1 kHz	F		114.0

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
140	114.0	113.8	-0.1	± 0.7 dB
130	104.0	103.9	0.0	
120	94.0	93.9 (Ref.)	--	
110	84.0	83.9	0.0	
100	74.0	73.9	0.0	
90	64.0	63.9	0.0	
90	54.0	53.9	0.0	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. **23551**

Page 3 of 4 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (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	94.8	-0.1	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.4	- 39.4 dB, ± 1.5 dB
63 Hz	-26.1	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1 dB
250 Hz	-8.6	- 8.6 dB, ± 1 dB
500 Hz	-3.2	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.3	+ 1.2 dB, ± 1 dB
4 kHz	+1.0	+ 1.0 dB, ± 1 dB
8 kHz	-1.1	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-6.7	- 6.6 dB, + 3 dB ~ - ∞

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
1/10 ⁴	40.0	39.5	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 23551

Page 4 of 4 Pages

6. Filter Response

Filter Setting		Attenuation (dB)	IEC 1260 Class 1 Spec.
125	Hz	-63.5	< - 61
250	Hz	-44.7	< - 42
500	Hz	-20.8	< - 17.5
707	Hz	-3.5	- 2 ~ - 5
1	kHz (Ref.)	0.0 (Ref.)	--
1.414	kHz	-3.9	- 2 ~ - 5
2	kHz	-21.2	< - 17.5
4	kHz	-44.9	< - 42
8	kHz	-63.7	< - 61

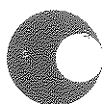
Uncertainty : ± 0.2 dB

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 992 hPa

----- END -----



Calibration Certificate

Certificate No. **25144**

Page 1 of 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

Model : Type 4230

Serial No. : 1411076

Test Conditions

Date of Test : 10-Aug-12

Supply Voltage : --

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

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:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
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.

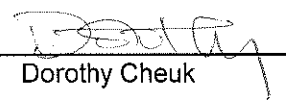
The test equipment used for calibration are traceable to International System of Units (SI).

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

Calibrated by :


Stephen Chu

Approved by :


Dorothy Cheuk

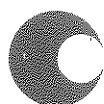
Date: 10-Aug-12

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



Calibration Certificate

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. : ± 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 -----



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: HK1303067
AMENDMENT NO.: 1
LABORATORY: HONG KONG
DATE RECEIVED: 04/02/2013
DATE OF ISSUE: 14/02/2013

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 acceptance criteria of ALS will be followed.

Scope of Test: Turbidity
Description: Turbidimeter
Brand Name: XINRUI
Model No.: WGZ-3B
Serial No.: 1203006
Equipment No.: --
Date of Calibration: 05 February, 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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11/F Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
Fax: 852-2610 2021
Email: hongkong@alsglobal.com


Mr. Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

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Page 1 of 2

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1303067
Amendment No.: 1
Date of Issue: 14/02/2013
Client: LAM GEOTECHNICS LIMITED



Description: Turbidimeter
Brand Name: XINRUI
Model No.: WGZ-3B
Serial No.: 1203006
Equipment No.: --

Date of Calibration: 05 February, 2013

Date of next Calibration:

05 May, 2013

Parameters:

Turbidity

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0	--
4	3.89	-2.8
40	40.84	2.1
80	74.15	-7.3
400	380.2	-5.0
800	805.2	0.7
Tolerance Limit ($\pm\%$)		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: HK1232007
LABORATORY: HONG KONG
DATE RECEIVED: 05/12/2012
DATE OF ISSUE: 13/12/2012

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 acceptance criteria of ALS will be followed.

Scope of Test: Turbidity
Description: Turbidimeter
Brand Name: WTW TURBIDMETER
Model No.: TURB 430T
Serial No.: 12110692
Equipment No.: --
Date of Calibration: 05 December, 2012

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. Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1232007
Date of Issue: 13/12/2012
Client: LAM GEOTECHNICS LIMITED



Description: Turbidimeter
Brand Name: WTW TURBIDMETER
Model No.: TURB 430T
Serial No.: 12110692
Equipment No.: --
Date of Calibration: 05 December, 2012

Date of next Calibration: 05 March, 2013

Parameters:

Turbidity

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0	--
4	4.31	7.7
40	39.7	-0.7
80	80.1	0.1
400	395	-1.3
800	792	-1.0
Tolerance Limit (±%)		10.0


Mr Chan Kwok Fai, Godfrey
Laboratory Manager - 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

WORK ORDER: HK1305626
LABORATORY: HONG KONG
DATE RECEIVED: 01/03/2013
DATE OF ISSUE: 08/03/2013

PROJECT: --

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 acceptance criteria of ALS will be followed.

Scope of Test: Turbidity
Description: Turbidimeter
Brand Name: WTW
Model No.: TURB 430T
Serial No.: 12110692
Equipment No.: --
Date of Calibration: 08 March, 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 China & Hong Kong

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Page 1 of 2

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1305626
Date of Issue: 08/03/2013
Client: LAM GEOTECHNICS LIMITED



Description: Turbidimeter
Brand Name: WTW
Model No.: TURB 430T
Serial No.: 12110692
Equipment No.: --

Date of Calibration: 08 March, 2013 **Date of next Calibration:** 08 June, 2013

Parameters:

Turbidity

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.06	--
4	4.20	5.0
40	38.00	-5.0
80	78.90	-1.4
400	379	-5.3
800	756	-5.5
Tolerance Limit ($\pm\%$)		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

WORK ORDER: HK1306339
LABORATORY: HONG KONG
DATE RECEIVED: 08/03/2013
DATE OF ISSUE: 15/03/2013

PROJECT: --

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 acceptance criteria of ALS will be followed.

Scope of Test: Turbidity
Equipment Type: Turbidimeter
Brand Name: WTW
Model No.: TURB 430T
Serial No.: 12220419
Equipment No.: --
Date of Calibration: 15 March, 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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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1306339
Date of Issue: 15/03/2013
Client: LAM GEOTECHNICS LIMITED



Equipment Type: Turbidimeter
Brand Name: WTW
Model No.: TURB 430T
Serial No.: 12220419
Equipment No.: --

Date of Calibration: 15 March, 2013

Date of next Calibration:

15 June, 2013

Parameters:

Turbidity

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.20	--
4	4.05	1.3
40	37.8	-5.5
80	75.4	-5.7
400	380	-5.0
800	772	-3.5
Tolerance Limit ($\pm\%$)		10.0

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



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

WORK ORDER: HK1303923
LABORATORY: HONG KONG
DATE RECEIVED: 14/02/2013
DATE OF ISSUE: 21/02/2013

PROJECT: --

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 acceptance criteria of ALS will be followed.

Scope of Test: Turbidity
Description: Turbidimeter
Brand Name: HACH
Model No.: 2100P HACH
Serial No.: 93100000 3861
Equipment No.: --
Date of Calibration: 21 February, 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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1-3 Wing Yip Street
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Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1303923
Date of Issue: 21/02/2013
Client: LAM GEOTECHNICS LIMITED



Description: Turbidimeter
Brand Name: HACH
Model No.: 2100P HACH
Serial No.: 93100000 3861
Equipment No.: --

Date of Calibration: 21 February, 2013

Date of next Calibration:

21 May, 2013

Parameters:

Turbidity

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0	--
4	3.8	-5.0
40	39.9	-0.3
80	75.4	-5.7
400	373	-6.8
800	814	1.8
Tolerance Limit ($\pm\%$)		10.0

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


Mr Chan Kwok Fai, Godfrey
Laboratory Manager - 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

WORK ORDER: HK1303068
LABORATORY: HONG KONG
DATE RECEIVED: 04/02/2013
DATE OF ISSUE: 14/02/2013

PROJECT: --

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 acceptance criteria of ALS will be followed.

Scope of Test: Dissolved Oxygen, pH, Salinity and Temperature
Description: YSI SONDE
Brand Name: YSI
Model No.: YSI Professional Plus
Serial No.: 11F100420
Equipment No.: --
Date of Calibration: 05 February, 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 Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1303068
 Date of Issue: 14/02/2013
 Client: LAM GEOTECHNICS LIMITED



Description: YSI SONDE
 Brand Name: YSI
 Model No.: YSI Professional Plus
 Serial No.: 11F100420
 Equipment No.: --
 Date of Calibration: 05 February, 2013

Date of next Calibration: 05 May, 2013

Parameters:

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.57	2.47	-0.10
4.14	4.08	-0.06
8.21	8.23	0.02
Tolerance Limit (\pm 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	4.01	0.01
7.0	7.08	0.08
10.0	9.95	-0.05
Tolerance Limit (\pm pH unit)		0.20

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0	--
10	9.66	-3.4
20	19.19	-4.0
30	28.36	-5.5
Tolerance Limit (\pm %)		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 ($^{\circ}$ C)	Displayed Reading ($^{\circ}$ C)	Tolerance ($^{\circ}$ C)
12.0	11.6	-0.4
21.0	21.6	0.6
40.0	40.5	0.5
Tolerance Limit (\pm $^{\circ}$ C)		2.0

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

Mr Chan Kwok Fai, Godfrey
 Laboratory Manager - 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: HK1304562
LABORATORY: HONG KONG
DATE RECEIVED: 20/02/2013
DATE OF ISSUE: 11/03/2013

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 acceptance criteria of ALS will be followed.

Scope of Test: Dissolved Oxygen, Salinity and Temperature
Equipment Type: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: YSI Professional plus
Serial No.: 11F100597
Equipment No.: --
Date of Calibration: 27 February, 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 China & Hong Kong

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Page 1 of 2

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1304562
Date of Issue: 11/03/2013
Client: LAM GEOTECHNICS LIMITED



Equipment Type: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: YSI Professional plus
Serial No.: 11F100597
Equipment No.: --
Date of Calibration: 27 February, 2013

Date of next Calibration: 27 May, 2013

Parameters:

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.47	3.44	-0.03
5.86	5.82	-0.04
7.74	7.89	0.15
	Tolerance Limit (\pm mg/L)	0.20

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0	--
10	9.55	-4.5
20	19.88	-0.6
30	29.42	-1.9
	Tolerance Limit (\pm %)	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 ($^{\circ}$ C)	Displayed Reading ($^{\circ}$ C)	Tolerance ($^{\circ}$ C)
10.0	8.3	-1.7
23.0	22.2	-0.8
39.0	39.3	0.3
	Tolerance Limit (\pm $^{\circ}$ C)	2.0

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



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: HK1300029
LABORATORY: HONG KONG
DATE RECEIVED: 02/01/2013
DATE OF ISSUE: 09/01/2013

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 acceptance criteria of ALS will be followed.

Scope of Test: Dissolved Oxygen, pH, Salinity and Temperature
Description: YSI SONDE
Brand Name: YSI
Model No.: YSI 600XL
Serial No.: 05C1607
Equipment No.: --
Date of Calibration: 08 January, 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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Page 1 of 2

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1300029
Date of Issue: 15/01/2013
Client: LAM GEOTECHNICS LIMITED



Description: YSI SONDE
Brand Name: YSI
Model No.: YSI 600XL
Serial No.: 05C1607
Equipment No.: --

Date of Calibration: 08 January, 2013

Date of next Calibration:

08 April, 2013

Parameters:

Dissolved Oxygen Method Ref: APHA (21st edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
4.05	4.25	0.2
6.10	6.26	0.16
8.60	8.56	-0.04
Tolerance Limit (\pm 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	4.16	0.16
7.0	7.15	0.15
10.0	9.82	-0.18
Tolerance Limit (\pm pH Unit)		0.20

Salinity

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

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0	--
10	9.98	-0.20
20	20.13	0.65
30	30.63	2.10
Tolerance Limit (\pm %)		10.0

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical

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

Reading of Ref. thermometer ($^{\circ}$ C)	Displayed Reading ($^{\circ}$ C)	Tolerance ($^{\circ}$ C)
13.5	13.16	-0.3
21.0	19.97	-1.0
36.0	35.31	-0.7
Tolerance Limit (\pm $^{\circ}$ C)		2.0

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



TISCH ENVIRONMENTAL, INC.
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AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jul 19, 2012 Rootmeter S/N 0438320 Ta (K) - 298
 Operator Tisch Orifice I.D. - 0005 Pa (mm) - 751.84

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER	ORFICE
					DIFF Hg (mm)	DIFF H2O (in.)
1	NA	NA	1.00	1.3840	3.2	2.00
2	NA	NA	1.00	0.9760	6.4	4.00
3	NA	NA	1.00	0.8730	7.9	5.00
4	NA	NA	1.00	0.8340	8.8	5.50
5	NA	NA	1.00	0.6890	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9850	0.7117	1.4066	0.9957	0.7194	0.8903
0.9809	1.0050	1.9892	0.9915	1.0159	1.2591
0.9788	1.1212	2.2240	0.9894	1.1333	1.4078
0.9777	1.1723	2.3326	0.9883	1.1850	1.4765
0.9725	1.4115	2.8132	0.9831	1.4268	1.7807
Qstd slope (m) = 2.01145			Qa slope (m) = 1.25953		
intercept (b) = -0.02803			intercept (b) = -0.01774		
coefficient (r) = 0.99995			coefficient (r) = 0.99995		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

$$Vstd = \text{Diff. Vol}[(Pa - \text{Diff. Hg})/760] (298/Ta)$$

$$Qstd = Vstd/Time$$

$$Va = \text{Diff Vol} [(Pa - \text{Diff Hg})/Pa]$$

$$Qa = Va/Time$$

For subsequent flow rate calculations:

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

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



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA1b **Calibration Date** : 7-Feb-13
Equipment no. : EL452 **Calibration Due Date** : 7-Apr-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294	Kelvin	Pressure, P _a	1018	mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.)	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	H (inches of water)					
	(up)	(down)	(difference)	X-axis	Y-axis	
1	6.0	6.0	12.0	1.7518	61	61.5558
2	5.1	5.1	10.2	1.6162	55	55.5012
3	4.0	4.0	8.0	1.4329	46	46.4191
4	2.5	2.5	5.0	1.1357	35	35.3189
5	1.4	1.4	2.8	0.8534	23	23.2096

By Linear Regression of Y on X

Slope, m = 42.3139 Intercept, b = -13.0619

Correlation Coefficient* = 0.9991

Calibration Accepted = Yes/No**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam **Checked by** : Derek Lo
Date : 7-Feb-13 **Date** : 7-Feb-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA2a **Calibration Date** : 7-Feb-13
Equipment no. : EL449 **Calibration Due Date** : 7-Apr-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294		Kelvin	Pressure, P _a	1018 mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.0	6.0	12.0	1.7518	57	57.5194
2	5.0	5.0	10.0	1.6004	49	49.4465
3	4.0	4.0	8.0	1.4329	42	42.3827
4	2.5	2.5	5.0	1.1357	27	27.2460
5	1.5	1.5	3.0	0.8829	16	16.1458

By Linear Regression of Y on X

Slope, m = 47.6298 Intercept, b = -26.2640
 Correlation Coefficient* = 0.9995
 Calibration Accepted = Yes/No**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam **Checked by** : Derek Lo
Date : 7-Feb-13 **Date** : 7-Feb-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA3a Calibration Date : 7-Feb-13
 Equipment no. : EL888 Calibration Due Date : 7-Apr-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294		Kelvin	Pressure, P _a	1018 mmHg	

Orifice Transfer Standard Information						
Equipment No.	EL086		Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12		$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13					

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7662	54	54.4920
2	4.8	4.8	9.6	1.5683	44	44.4009
3	4.0	4.0	8.0	1.4329	39	39.3554
4	2.4	2.4	4.8	1.1131	25	25.2278
5	1.4	1.4	2.8	0.8534	15	15.1367

By Linear Regression of Y on X

Slope, m = 42.8245 Intercept, b = -21.9533

Correlation Coefficient* = 0.9991

Calibration Accepted = Yes/No**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Checked by : Derek Lo
 Date : 7-Feb-13 Date : 7-Feb-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA4a

Equipment no. : EL390

Calibration Date : 7-Feb-13

Calibration Due Date : 7-Apr-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	294	Kelvin	Pressure, P _a
			1018 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	H (inches of water) (up)	(down)	(difference)			
1	6.0	6.0	12.0	1.7518	62	62.5649
2	5.0	5.0	10.0	1.6004	54	54.4920
3	4.0	4.0	8.0	1.4329	46	46.4191
4	2.5	2.5	5.0	1.1357	32	32.2916
5	1.5	1.5	3.0	0.8829	21	21.1914

By Linear Regression of Y on X

Slope, m = 47.4825 Intercept, b = -21.2199

Correlation Coefficient* = 0.9995

Calibration Accepted = Yes/No**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam

Date : 7-Feb-13

Checked by : Derek Lo

Date : 7-Feb-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5a **Calibration Date** : 7-Feb-13
Equipment no. : EL380 **Calibration Due Date** : 7-Apr-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294	Kelvin	Pressure, P _a	1018	mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7662	60	60.5467
2	5.1	5.1	10.2	1.6162	53	53.4829
3	4.0	4.0	8.0	1.4329	46	46.4191
4	2.4	2.4	4.8	1.1131	33	33.3007
5	1.5	1.5	3.0	0.8829	22	22.2005

By Linear Regression of Y on X

Slope, m = 42.6630 Intercept, b = -14.9280

Correlation Coefficient* = 0.9994

Calibration Accepted = Yes/No**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam **Checked by** : Derek Lo
Date : 7-Feb-13 **Date** : 7-Feb-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA6a **Calibration Date** : 7-Feb-13
Equipment no. : EL448 **Calibration Due Date** : 7-Apr-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294		Kelvin	Pressure, P _a	1018 mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7662	60	60.5467
2	5.0	5.0	10.0	1.6004	52	52.4738
3	4.1	4.1	8.2	1.4505	45	45.4100
4	2.6	2.6	5.2	1.1580	34	34.3098
5	1.5	1.5	3.0	0.8829	23	23.2096

By Linear Regression of Y on X

Slope, m = 41.7210 Intercept, b = -14.0346
 Correlation Coefficient* = 0.9987
 Calibration Accepted = Yes/No**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam **Checked by** : Derek Lo
Date : 7-Feb-13 **Date** : 7-Feb-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
March 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				28-Feb	1-Mar	2-Mar
		Noise (Daytime)			Impact WQM Mid-flood: 8:30 Mid-ebb: 14:38	
3-Mar	4-Mar	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar
	24hr TSP Impact WQM Mid-flood: 10:23 Mid-ebb: 17:15	1hr TSP	Impact WQM Mid-flood: 12:29 Mid-ebb: 20:16	Noise (Daytime)	Impact WQM Mid-flood: 15:17 Mid-ebb: 22:17	24hr TSP
10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar
	1hr TSP Impact WQM Mid-ebb: 12:17 Mid-flood: 18:03	Noise (Daytime)	Impact WQM Mid-ebb: 13:25 Mid-flood: 19:30		24hr TSP Impact WQM Mid-flood: 8:16 Mid-ebb: 14:35	1hr TSP
17-Mar	18-Mar	19-Mar	20-Mar	21-Mar	22-Mar	23-Mar
		Noise (Daytime)		24hr TSP	1hr TSP	
	Impact WQM Mid-flood: 9:27 Mid-ebb: 16:42		Impact WQM Mid-ebb: 19:26	Impact WQM Mid-flood: 8:02		Impact WQM Mid-flood: 15:07 Mid-ebb: 22:06
24-Mar	25-Mar	26-Mar	27-Mar	28-Mar	29-Mar	30-Mar
		Noise (Daytime)	24hr TSP			
	Impact WQM Mid-ebb: 11:11 Mid-flood: 17:02		Impact WQM Mid-ebb: 12:18 Mid-flood: 18:36			

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
April 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				28-Mar	29-Mar	30-Mar
				1hr TSP	Impact WQM Mid-ebb: 13:36 Mid-flood: 20:07	
31-Mar	1-Apr	2-Apr	3-Apr	4-Apr	5-Apr	6-Apr
	Impact WQM Mid-flood: 9:10 Mid-ebb: 15:54	24hr TSP Noise (Daytime)	1hr TSP Impact WQM Mid-flood: 10:54 Mid-ebb: 18:23		Impact WQM Mid-flood: 13:57 Mid-ebb: 20:56	
7-Apr	8-Apr	9-Apr	10-Apr	11-Apr	12-Apr	13-Apr
	24hr TSP Impact WQM Mid-ebb: 11:15 Mid-flood: 17:09	1hr TSP	Impact WQM Mid-ebb: 12:25 Mid-flood: 18:40	Noise (Daytime)	Impact WQM Mid-ebb: 13:33 Mid-flood: 20:00	24hr TSP
14-Apr	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr	20-Apr
	1hr TSP Impact WQM Mid-flood: 8:11 Mid-ebb: 15:14	Noise (Daytime)	Impact WQM Mid-flood: 8:42 Mid-ebb: 16:33		24hr TSP Impact WQM Mid-flood: 6:41 Mid-ebb: 19:13	1hr TSP
21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr	27-Apr
	Impact WQM Mid-ebb: 10:02 Mid-flood: 15:49	Noise (Daytime)	Impact WQM Mid-ebb: 11:13 Mid-flood: 17:38	24hr TSP	1hr TSP	Impact WQM Mid-ebb: 13:17 Mid-flood: 20:05



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

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
07/03/13	10:20	Fine	71.9	74.5	67.5	72	72	75
12/03/13	10:10	Fine	73.3	76.0	68.5	72	67	75
19/03/13	10:00	Fine	74.3	77.0	70.0	72	70	75
26/03/13	10:00	Cloudy	75.5	79.0	69.5	72	73	75

Location: M2b - Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
07/03/13	11:05	Fine	73.9	77.0	70.0	68	73	75
12/03/13	10:50	Fine	70.1	70.5	67.5	68	67	75
19/03/13	10:45	Fine	70.9	72.0	69.0	68	68	75
26/03/13	10:45	Cloudy	72.3	74.6	70.3	68	71	75

Location: M3a - Tung Lo Wan Fire Station

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
07/03/13	13:00	Fine	67.0	68.5	64.5	69	67	75
12/03/13	11:30	Fine	67.7	69.5	69.0	69	68	75
19/03/13	13:10	Fine	68.0	68.5	65.0	69	68	75
26/03/13	11:28	Cloudy	68.6	69.5	66.0	69	69	75

Location: M4b - Victoria Centre

Date	Time	Weather	Measurement Noise Level			Baseline Noise Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
07/03/13	13:45	Fine	74.3	76.0	71.0	67	73	75
12/03/13	13:00	Fine	70.1	71.5	68.0	67	67	75
19/03/13	13:50	Fine	75.8	77.5	70.5	67	75	75
26/03/13	13:00	Cloudy	71.3	73.0	68.0	67	69	75

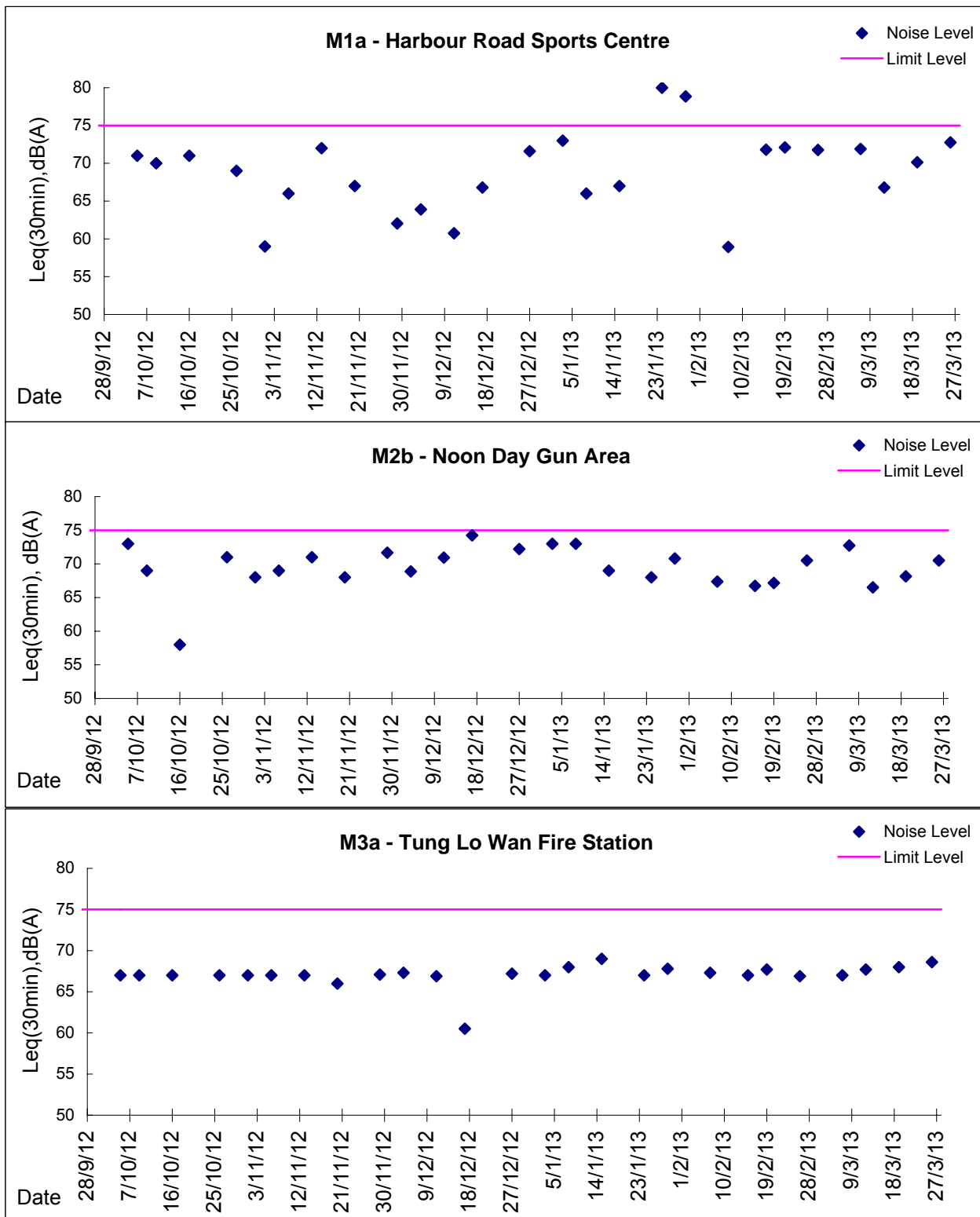
Location: M5b - City Garden

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
07/03/13	14:30	Fine	69.9	73.0	66.5	68	65	75
12/03/13	13:45	Fine	71.9	73.5	67.5	68	70	75
19/03/13	14:35	Fine	74.3	75.5	71.5	68	73	75
26/03/13	14:45	Cloudy	72.5	75.5	69.0	68	71	75

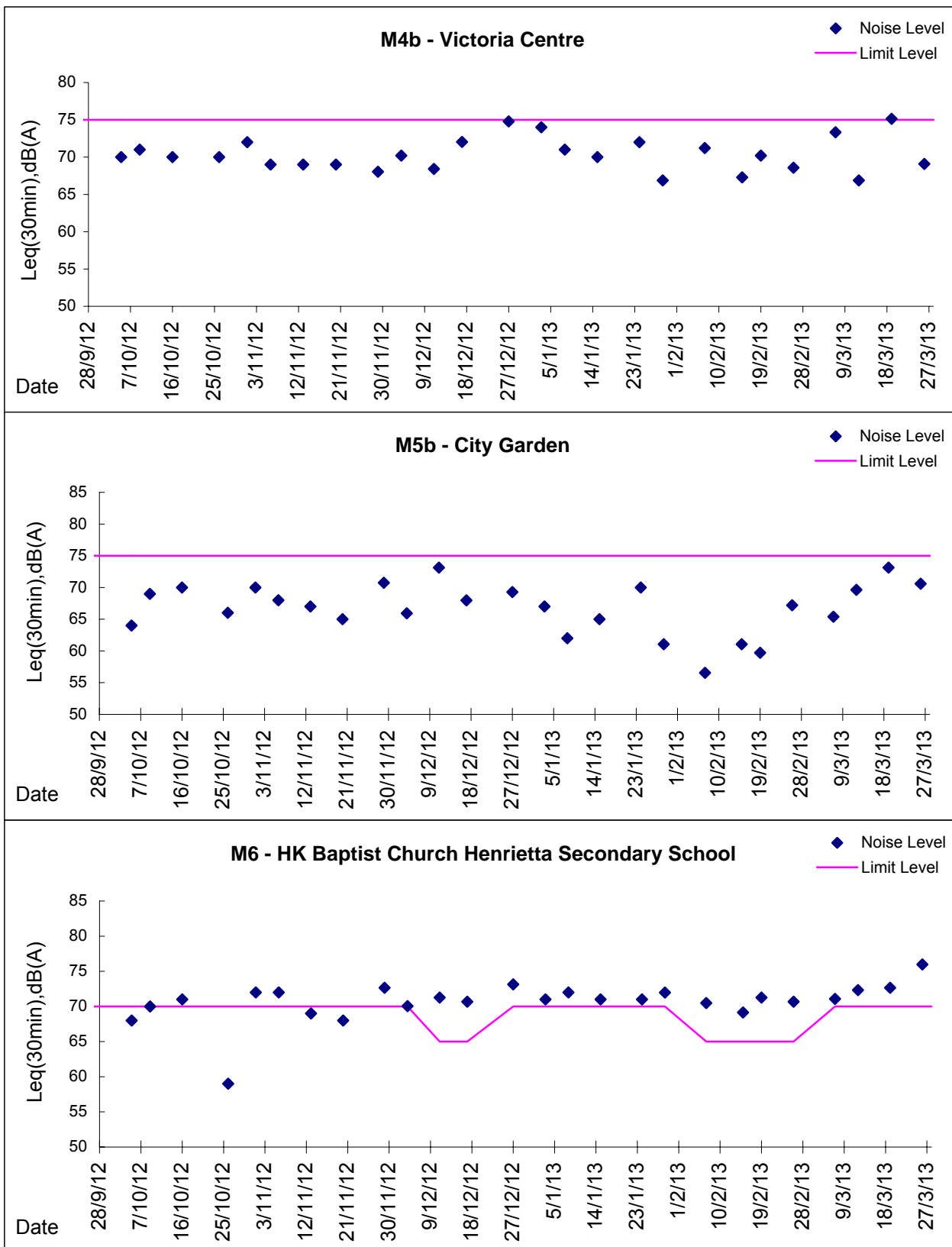
Location: M6 - HK Baptist Church Henrietta Secondary School

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
07/03/13	15:10	Fine	73.9	75.0	72.0	71	71	70
12/03/13	14:25	Fine	74.6	76.0	72.5	71	72	70
19/03/13	15:20	Cloudy	74.8	75.5	73.0	71	73	70
26/03/13	15:15	Cloudy	77.1	78.3	75.9	71	76	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 St Community Liaison Centre

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 176.7

Limit Level ($\mu\text{g}/\text{m}^3$) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
4-Mar-13	8:00	Cloudy	002922	2.7823	2.9055	2464.15	2488.16	24.01	1.00	1.00	1.00	1441	85
9-Mar-13	8:00	Fine	004646	2.7256	2.9024	2491.16	2515.16	24.00	1.08	1.08	1.08	1562	113
15-Mar-13	8:00	Fine	004106	2.8062	3.0630	2518.16	2542.16	24.00	1.23	1.23	1.23	1768	145
21-Mar-13	8:00	Cloudy	004703	2.6980	2.8893	2545.15	2569.16	24.01	1.18	1.18	1.18	1694	113
27-Mar-13	8:00	Cloudy	004755	2.8324	2.9717	2572.16	2596.16	24.00	1.18	1.18	1.18	1696	82

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 320.1

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	8:37	Cloudy	004489	2.6877	2.7026	2488.16	2489.16	1.00	1.09	1.00	1.05	63	238
5-Mar-13	9:41	Cloudy	004492	2.6872	2.7044	2489.16	2490.16	1.00	0.95	0.95	0.95	57	301
5-Mar-13	10:46	Cloudy	004643	2.7151	2.7384	2490.16	2491.16	1.00	1.23	1.23	1.23	74	316
11-Mar-13	8:12	Cloudy	004680	2.7284	2.7459	2515.16	2516.16	1.00	1.23	1.23	1.23	74	238
11-Mar-13	9:20	Cloudy	004509	2.6954	2.7092	2516.16	2517.16	1.00	1.23	1.23	1.23	74	188
11-Mar-13	10:44	Cloudy	004902	2.7609	2.7731	2517.16	2518.16	1.00	1.04	1.04	1.04	63	195
16-Mar-13	8:12	Fine	004675	2.7521	2.7729	2542.16	2543.16	1.00	1.25	1.25	1.25	75	277
16-Mar-13	9:20	Fine	004677	2.7222	2.7327	2543.16	2544.16	1.00	1.20	1.20	1.20	72	145
16-Mar-13	10:44	Fine	004506	2.6853	2.6987	2544.16	2545.16	1.00	1.04	1.04	1.04	63	214
22-Mar-13	8:03	Fine	004764	2.8487	2.8608	2569.16	2570.16	1.00	1.04	1.04	1.04	62	194
22-Mar-13	9:05	Fine	004759	2.8291	2.8427	2570.16	2571.16	1.00	1.27	1.22	1.24	75	182
22-Mar-13	10:12	Fine	004756	2.8134	2.8253	2571.16	2572.16	1.00	1.18	1.18	1.18	71	169
28-Mar-13	8:05	Rainy	004667	2.7034	2.7139	2596.16	2597.16	1.00	1.04	1.06	1.05	63	166
28-Mar-13	9:09	Rainy	004665	2.7181	2.7301	2597.16	2598.16	1.00	1.27	1.27	1.27	76	158
28-Mar-13	10:15	Rainy	004663	2.7147	2.7264	2598.16	2599.16	1.00	1.18	1.18	1.18	71	166

Location: CMA2a - Causeway Bay Community Centre

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 169.5

Limit Level ($\mu\text{g}/\text{m}^3$) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	12:00	Cloudy	004645	2.7345	2.9579	12230.67	12254.67	24.00	1.41	1.41	1.41	2033	110
9-Mar-13	8:00	Fine	004648	2.6990	2.9404	12254.67	12278.67	24.00	1.40	1.40	1.40	2020	119
15-Mar-13	8:00	Fine	004244	2.6924	2.9355	12281.67	12305.67	24.00	1.39	1.39	1.39	1999	122
21-Mar-13	8:00	Cloudy	004672	2.7051	2.8644	12308.67	12332.67	24.00	1.26	1.26	1.26	1816	88
27-Mar-13	8:00	Cloudy	004754	2.8244	2.9753	12335.67	12359.67	24.00	1.43	1.43	1.43	2052	74

*Due to lack of electricity supply, the 24hr TSP monitoring was rescheduled from 4 Mar 2013 to 5 Mar 2013.

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 323.4

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	8:26	Cloudy	004455	2.6744	2.6924	12227.67	12228.67	1.00	1.45	1.45	1.45	87	207
5-Mar-13	9:31	Cloudy	004491	2.6817	2.7084	12228.67	12229.67	1.00	1.43	1.43	1.43	86	311
5-Mar-13	10:35	Cloudy	004642	2.7345	2.7620	12229.67	12230.67	1.00	1.43	1.43	1.43	86	320
11-Mar-13	8:05	Cloudy	004699	2.7169	2.7284	12278.67	12279.67	1.00	1.43	1.43	1.43	86	134
11-Mar-13	9:18	Cloudy	004507	2.6720	2.6856	12279.67	12280.67	1.00	1.43	1.43	1.43	86	159
11-Mar-13	10:31	Cloudy	004901	2.7527	2.7597	12280.67	12281.67	1.00	1.22	1.22	1.22	73	95
16-Mar-13	8:04	Fine	004674	2.7461	2.7588	12305.67	12306.67	1.00	1.41	1.41	1.41	84	150
16-Mar-13	9:10	Fine	004676	2.7229	2.7416	12306.67	12307.67	1.00	1.43	1.43	1.43	86	218
16-Mar-13	10:14	Fine	004679	2.7206	2.7328	12307.67	12308.67	1.00	1.18	1.18	1.18	71	172
22-Mar-13	8:04	Fine	004763	2.8509	2.8665	12332.67	12333.67	1.00	1.44	1.44	1.44	87	180
22-Mar-13	9:10	Fine	004758	2.8299	2.8532	12333.67	12334.67	1.00	1.36	1.36	1.36	82	285
22-Mar-13	10:15	Fine	004757	2.8224	2.8376	12334.67	12335.67	1.00	1.40	1.40	1.40	84	181
28-Mar-13	8:05	Rainy	004668	2.7118	2.7203	12359.67	12360.67	1.00	1.40	1.40	1.40	84	101
28-Mar-13	9:12	Rainy	004665	2.7181	2.7199	12360.67	12361.67	1.00	1.40	1.40	1.40	84	21
28-Mar-13	10:16	Rainy	004664	2.7298	2.7409	12361.67	12362.67	1.00	1.40	1.40	1.40	84	132



Location: CMA3a - CWB PRE Site Office Area

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 171

Limit Level ($\mu\text{g}/\text{m}^3$) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
4-Mar-13	8:00	Cloudy	002868	2.7911	3.1273	12981.93	13005.93	24.00	1.65	1.65	1.65	2379	141
9-Mar-13	8:00	Fine	004498	2.7096	3.0712	13008.93	13032.93	24.00	1.50	1.50	1.50	2167	167
15-Mar-13	8:00	Fine	004909	2.7587	3.1267	13035.93	13059.93	24.00	1.65	1.65	1.65	2372	155
21-Mar-13	8:00	Cloudy	004800	2.8223	3.1579	13062.93	13086.94	24.01	1.55	1.55	1.55	2233	150
27-Mar-13	8:00	Cloudy	004745	2.8263	3.1011	13115.08	13139.09	24.01	1.60	1.60	1.60	2301	119

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 311.3

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	8:21	Cloudy	004510	2.6856	2.7131	13005.93	13006.93	1.00	1.60	1.60	1.60	96	286
5-Mar-13	9:27	Cloudy	004494	2.6751	2.7029	13006.93	13007.93	1.00	1.60	1.60	1.60	96	289
5-Mar-13	10:35	Cloudy	004496	2.6822	2.7074	13007.93	13008.93	1.00	1.60	1.60	1.60	96	262
11-Mar-13	10:00	Cloudy	004903	2.7580	2.7723	13032.93	13033.93	1.00	1.55	1.55	1.55	93	153
11-Mar-13	13:23	Cloudy	004905	2.7651	2.7919	13033.93	13034.93	1.00	1.55	1.55	1.55	93	287
11-Mar-13	15:04	Cloudy	004907	2.7413	2.7656	13034.93	13035.93	1.00	1.55	1.55	1.55	93	261
16-Mar-13	8:27	Fine	004654	2.7050	2.7265	13059.93	13060.93	1.00	1.65	1.65	1.65	99	218
16-Mar-13	9:36	Fine	004656	2.7497	2.7683	13060.93	13061.93	1.00	1.65	1.65	1.65	99	188
16-Mar-13	10:39	Fine	004803	2.8178	2.8341	13061.93	13062.93	1.00	1.65	1.65	1.65	99	165
22-Mar-13	8:24	Fine	004795	2.8381	2.8626	13086.94	13087.94	1.00	1.57	1.57	1.57	94	260
22-Mar-13	9:28	Fine	004793	2.8347	2.8588	13087.94	13088.94	1.00	1.57	1.57	1.57	94	256
22-Mar-13	10:33	Fine	004791	2.8372	2.8627	13088.94	13089.94	1.00	1.57	1.57	1.57	94	270
28-Mar-13	8:26	Rainy	004787	2.8380	2.8481	13139.09	13140.09	1.00	1.55	1.55	1.55	93	108
28-Mar-13	9:30	Rainy	004785	2.8379	2.8508	13140.09	13141.09	1.00	1.55	1.55	1.55	93	139
28-Mar-13	10:35	Rainy	004746	2.8265	2.8402	13141.09	13142.09	1.00	1.55	1.55	1.55	93	147



Location: CMA4a - SPCA

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 171.2

Limit Level ($\mu\text{g}/\text{m}^3$) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
4-Mar-13	8:00	Cloudy	002894	2.7909	2.9763	16377.33	16401.33	24.00	1.27	1.27	1.27	1827	101
9-Mar-13	8:00	Fine	004497	2.7081	2.9133	16404.37	16428.37	24.00	1.30	1.30	1.30	1874	110
15-Mar-13	8:00	Fine	004908	2.7562	3.0047	16431.37	16455.37	24.00	1.27	1.26	1.27	1823	136
21-Mar-13	8:00	Cloudy	004801	2.8195	3.0396	16458.37	16482.37	24.00	1.26	1.26	1.26	1815	121
27-Mar-13	8:00	Cloudy	004789	2.8128	2.9537	16485.37	16509.37	24.00	1.26	1.26	1.26	1818	78

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 312.5

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	8:10	Cloudy	004502	2.6869	2.7092	16401.33	16402.33	1.00	1.31	1.31	1.31	79	284
5-Mar-13	9:16	Cloudy	004493	2.6864	2.7041	16402.33	16403.33	1.00	1.23	1.23	1.23	74	241
5-Mar-13	10:23	Cloudy	004495	2.6648	2.6869	16403.33	16404.33	1.00	1.27	1.27	1.27	76	291
11-Mar-13	9:52	Cloudy	004904	2.7453	2.7517	16428.37	16429.37	1.00	1.26	1.26	1.26	76	84
11-Mar-13	13:11	Cloudy	002867	2.7959	2.8096	16429.37	16430.37	1.00	1.30	1.30	1.30	78	175
11-Mar-13	14:52	Cloudy	004906	2.7730	2.7844	16430.37	16431.37	1.00	1.30	1.30	1.30	78	146
16-Mar-13	8:41	Fine	004655	2.7263	2.7388	16455.37	16456.37	1.00	1.26	1.26	1.26	76	165
16-Mar-13	9:47	Fine	004804	2.8238	2.8385	16456.37	16457.37	1.00	1.26	1.26	1.26	76	194
16-Mar-13	10:50	Fine	004802	2.8073	2.8216	16457.37	16458.37	1.00	1.26	1.26	1.26	76	188
22-Mar-13	8:36	Fine	004794	2.8373	2.8501	16482.37	16483.37	1.00	1.26	1.26	1.26	76	169
22-Mar-13	9:41	Fine	004792	2.8088	2.8226	16483.37	16484.37	1.00	1.26	1.26	1.26	76	183
22-Mar-13	10:44	Fine	004790	2.8173	2.8314	16484.37	16485.37	1.00	1.26	1.26	1.26	76	187
28-Mar-13	8:40	Rainy	004786	2.8458	2.8534	16509.37	16510.37	1.00	1.26	1.26	1.26	76	100
28-Mar-13	9:45	Rainy	004784	2.8197	2.8283	16510.37	16511.37	1.00	1.26	1.26	1.26	76	114
28-Mar-13	10:50	Rainy	004747	2.8050	2.8133	16511.37	16512.37	1.00	1.26	1.26	1.26	76	110



Location: CMA5a - Children Garden opposite to Pedestrian Plaza

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 181
Limit Level ($\mu\text{g}/\text{m}^3$) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
4-Mar-13	8:00	Cloudy	004326	2.7136	2.8893	17376.53	17400.55	24.02	1.33	1.33	1.33	1922	91
9-Mar-13	8:00	Fine	004647	2.7329	2.9132	17403.55	17427.55	24.00	1.16	1.16	1.16	1677	107
15-Mar-13	8:00	Fine	004771	2.8205	3.0576	17430.55	17454.55	24.00	1.38	1.37	1.38	1980	120
21-Mar-13	8:00	Cloudy	004797	2.8147	2.9498	17457.55	17481.55	24.00	1.17	1.16	1.17	1678	81
27-Mar-13	8:00	Cloudy	004776	2.7944	3.1281	17484.56	17508.56	24.00	1.30	1.30	1.30	1876	178

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 332
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	13:00	Cloudy	004499	2.6901	2.7076	17400.55	17401.55	1.00	1.35	1.35	1.35	81	215
5-Mar-13	14:10	Cloudy	004500	2.6966	2.7115	17401.55	17402.55	1.00	1.24	1.24	1.24	74	200
5-Mar-13	15:20	Cloudy	004698	2.7267	2.7428	17402.55	17403.55	1.00	1.38	1.38	1.38	83	195
11-Mar-13	8:32	Cloudy	004650	2.7102	2.7303	17427.55	17428.55	1.00	1.37	1.37	1.37	82	244
11-Mar-13	9:35	Cloudy	004652	2.7124	2.7260	17428.55	17429.55	1.00	1.37	1.37	1.37	82	165
11-Mar-13	13:00	Cloudy	004508	2.6802	2.6964	17430.55	17431.55	1.00	1.37	1.37	1.37	82	197
16-Mar-13	13:00	Fine	004673	2.7382	2.7527	17454.55	17455.55	1.00	1.37	1.37	1.37	82	176
16-Mar-13	14:06	Fine	004781	2.8102	2.8267	17455.55	17456.55	1.00	1.37	1.37	1.37	82	200
16-Mar-13	15:16	Fine	004799	2.7974	2.8098	17456.55	17457.55	1.00	1.33	1.33	1.33	80	156
22-Mar-13	13:00	Fine	004753	2.8095	2.8347	17481.55	17482.55	1.00	1.35	1.35	1.35	81	312
22-Mar-13	14:08	Fine	004777	2.8378	2.8630	17482.55	17483.55	1.00	1.35	1.35	1.35	81	312
22-Mar-13	15:15	Fine	004952	2.7684	2.7816	17483.55	17484.55	1.00	1.35	1.35	1.35	81	164
28-Mar-13	13:00	Rainy	004659	2.7141	2.7260	17508.56	17509.56	1.00	1.35	1.35	1.35	81	147
28-Mar-13	14:04	Rainy	004733	2.8361	2.8432	17509.56	17510.56	1.00	1.39	1.39	1.39	84	85
28-Mar-13	15:08	Rainy	004735	2.8420	2.8538	17510.56	17511.56	1.00	1.37	1.37	1.37	82	143



Location: CMA6a - WD2 PRE Office

Report on 24-hour TSP monitoring

Action Level - 187.3 $\mu\text{g}/\text{m}^3$

Limit Level - 260 $\mu\text{g}/\text{m}^3$

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
4-Mar-13	8:00	Cloudy	004485	2.6761	2.8373	15690.76	15714.76	24.00	1.23	1.22	1.23	1764	91
9-Mar-13	8:00	Fine	004501	2.6826	2.8566	15717.77	15741.77	24.00	1.29	1.29	1.29	1851	94
15-Mar-13	8:00	Fine	004772	2.8160	2.9932	15744.77	15768.77	24.00	1.25	1.24	1.25	1793	99
21-Mar-13	8:00	Cloudy	004796	2.8087	2.9600	15771.77	15795.78	24.01	1.24	1.24	1.24	1785	85
27-Mar-13	8:00	Cloudy	004775	2.8296	2.9504	15798.77	15822.77	24.00	1.26	1.26	1.26	1821	66

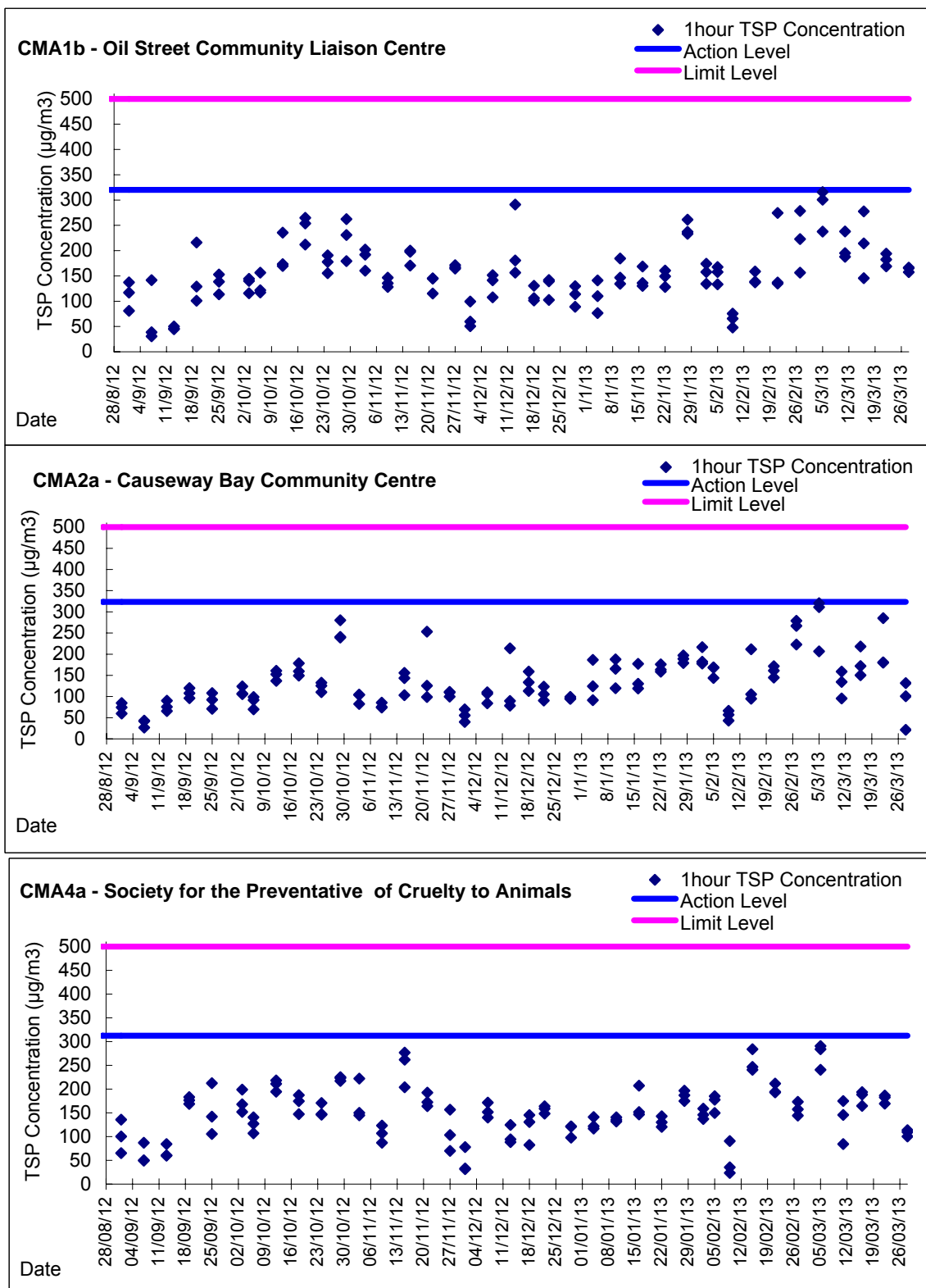
Report on 1-hour TSP monitoring

Action Level - 300.1 $\mu\text{g}/\text{m}^3$

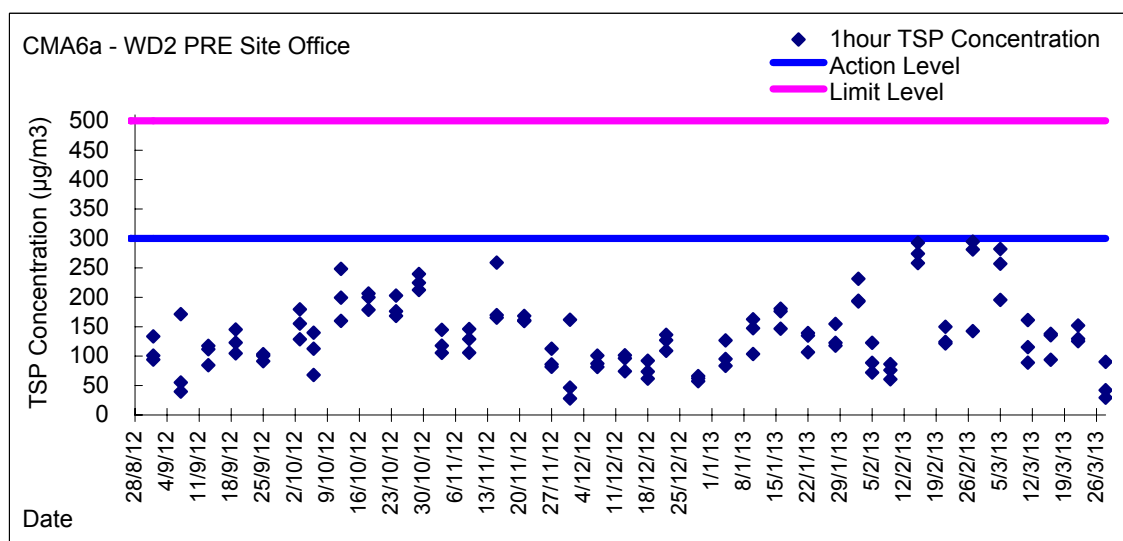
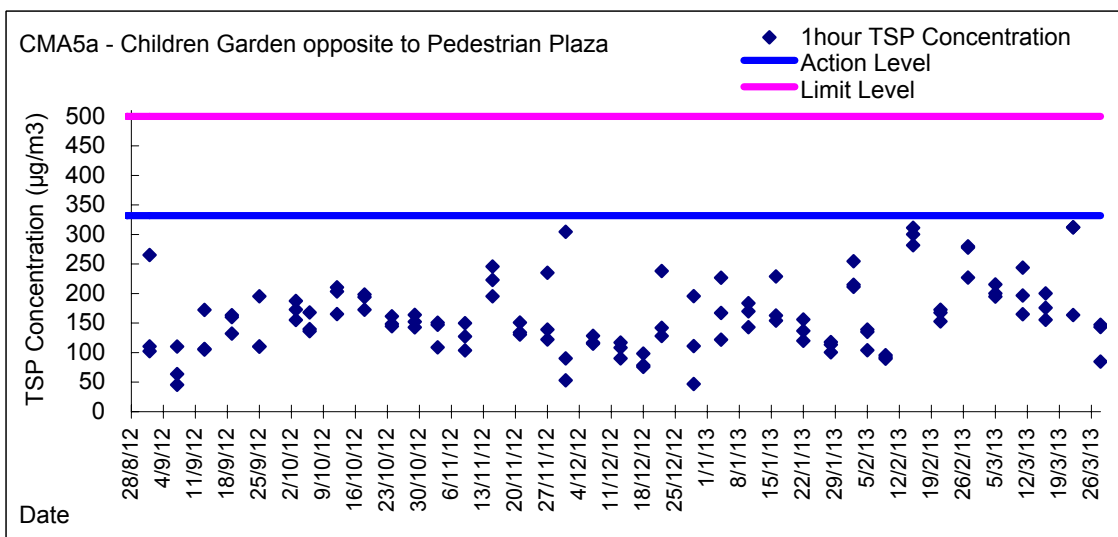
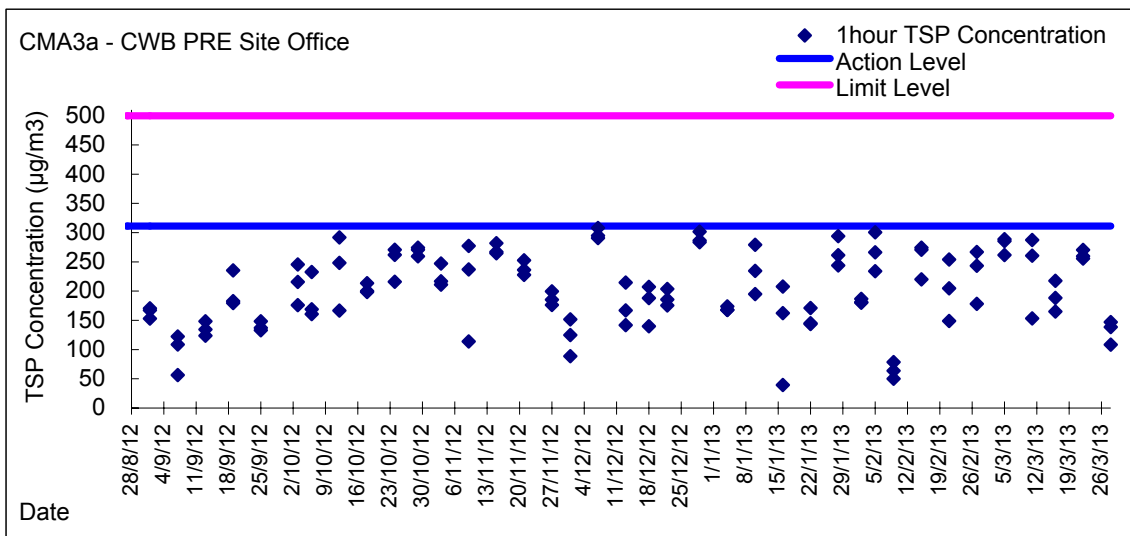
Limit Level - 500 $\mu\text{g}/\text{m}^3$

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
5-Mar-13	9:25	Cloudy	004702	2.7060	2.7256	15714.76	15715.76	1.00	1.27	1.27	1.27	76	257
5-Mar-13	10:46	Cloudy	004701	2.6875	2.7090	15715.76	15716.76	1.00	1.27	1.27	1.27	76	282
5-Mar-13	13:00	Cloudy	004700	2.6997	2.7146	15716.76	15717.76	1.00	1.27	1.27	1.27	76	195
11-Mar-13	8:22	Cloudy	004649	2.7059	2.7124	15741.77	15742.77	1.00	1.22	1.22	1.22	73	89
11-Mar-13	9:30	Cloudy	004651	2.7321	2.7407	15742.77	15743.77	1.00	1.24	1.24	1.24	75	115
11-Mar-13	13:00	Cloudy	004653	2.6848	2.6966	15743.77	15744.77	1.00	1.22	1.22	1.22	73	161
16-Mar-13	13:00	Fine	004671	2.7240	2.7310	15768.77	15769.77	1.00	1.24	1.24	1.24	75	94
16-Mar-13	14:10	Fine	004780	2.8035	2.8138	15769.77	15770.77	1.00	1.24	1.24	1.24	75	138
16-Mar-13	15:26	Fine	004798	2.7887	2.7988	15770.77	15771.77	1.00	1.24	1.24	1.24	75	135
22-Mar-13	13:00	Fine	004761	2.8331	2.8429	15795.78	15796.78	1.00	1.26	1.26	1.26	76	129
22-Mar-13	14:10	Fine	004760	2.8283	2.8398	15796.78	15797.78	1.00	1.26	1.26	1.26	76	152
22-Mar-13	15:26	Fine	004774	2.8456	2.8551	15797.78	15798.78	1.00	1.26	1.26	1.26	76	126
28-Mar-13	13:00	Rainy	004658	2.7084	2.7116	15822.77	15823.77	1.00	1.26	1.26	1.26	76	42
28-Mar-13	14:15	Rainy	006061	2.6105	2.6128	15823.77	15824.77	1.00	1.31	1.31	1.31	79	29
28-Mar-13	15:18	Rainy	004736	2.8457	2.8528	15824.77	15825.77	1.00	1.31	1.31	1.31	79	90

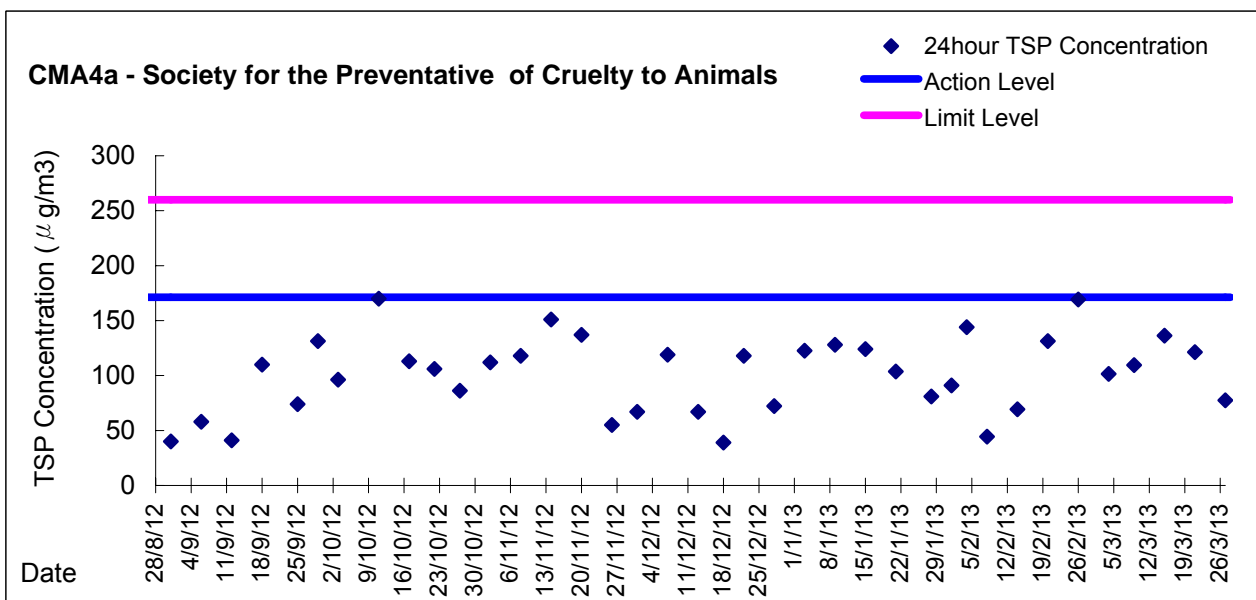
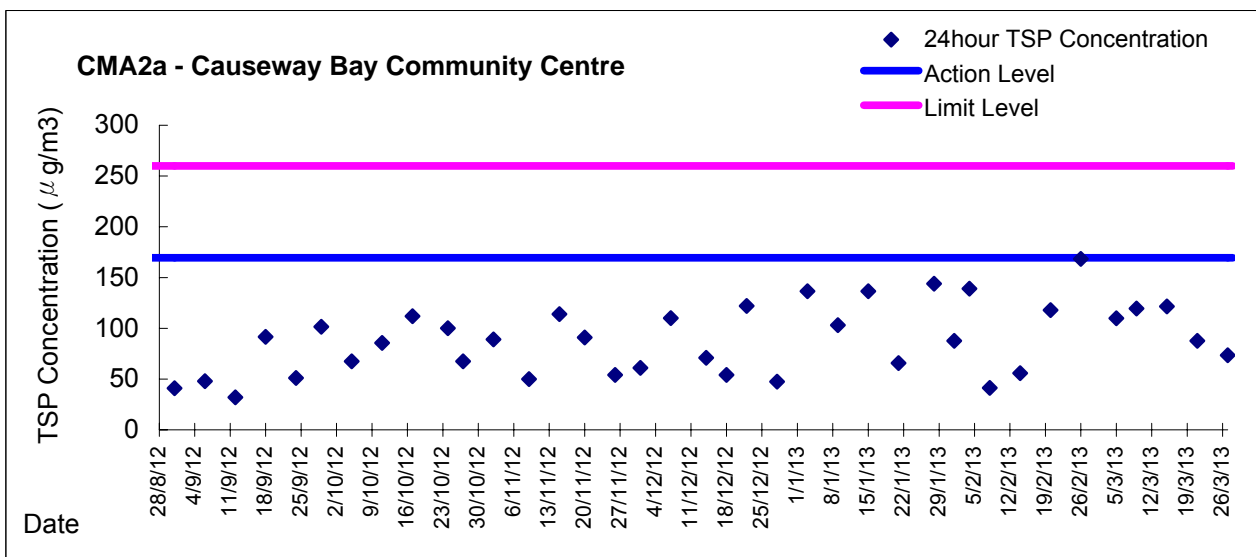
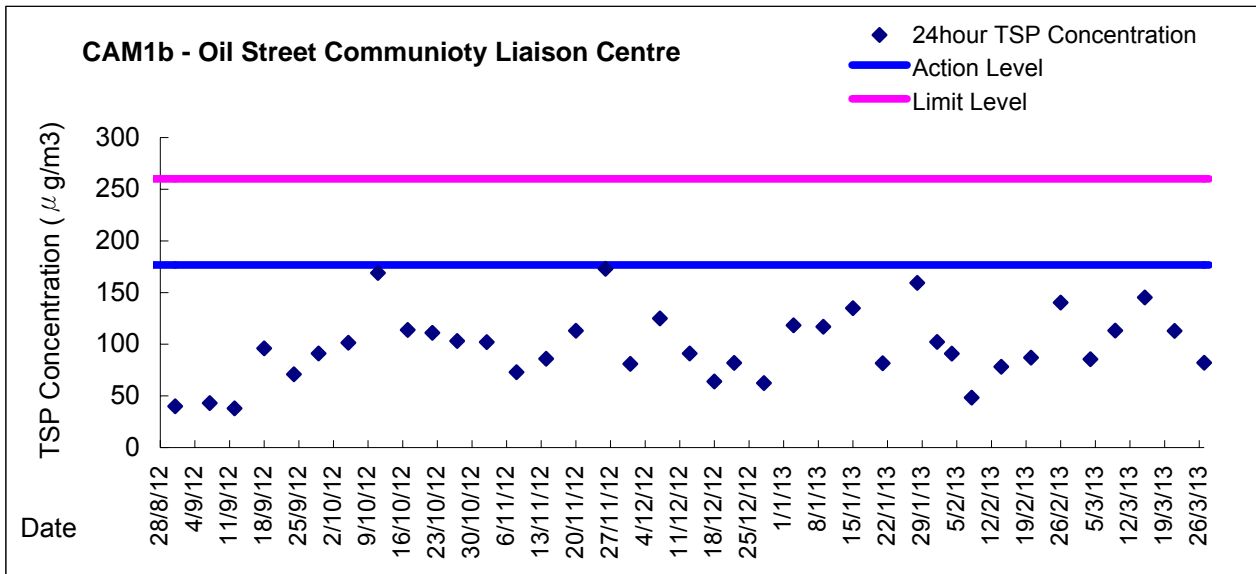
Graphic Presentation of 1 hour TSP Result



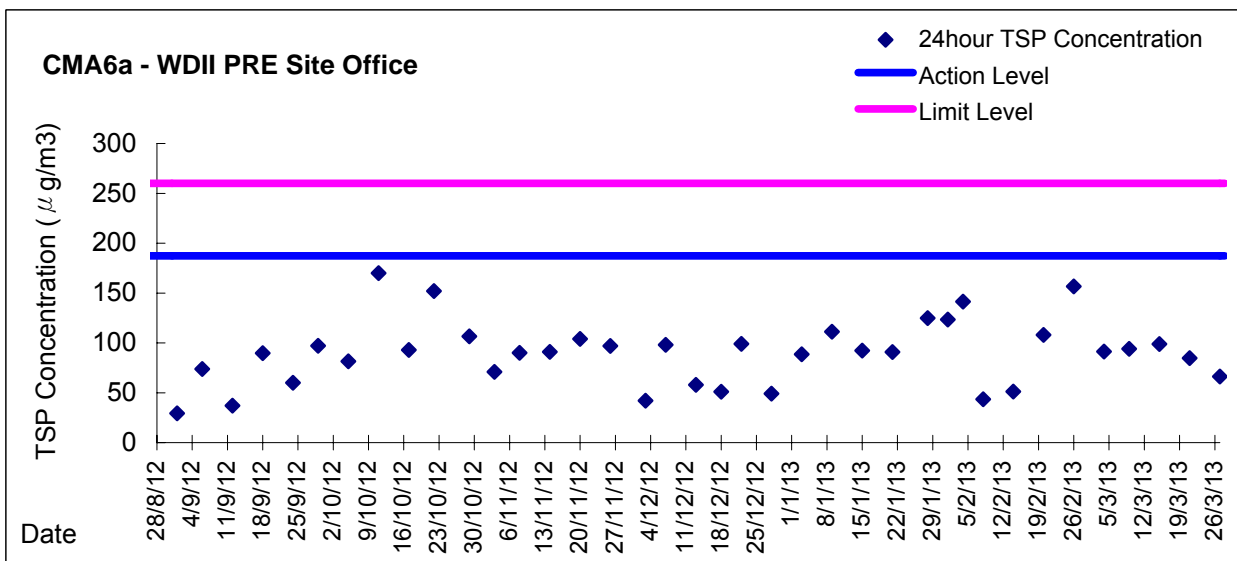
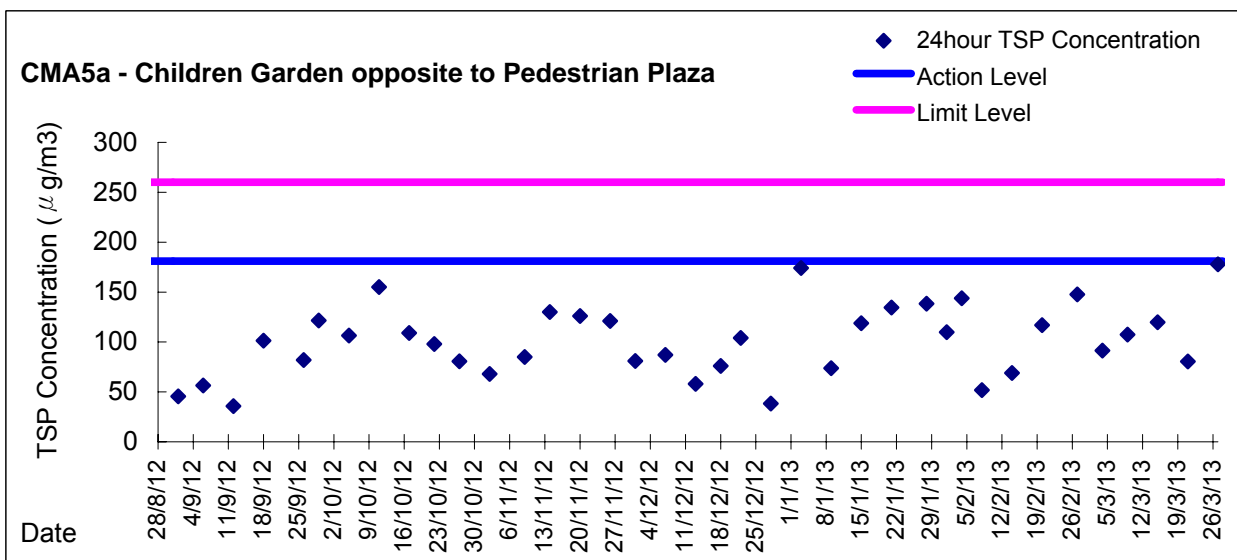
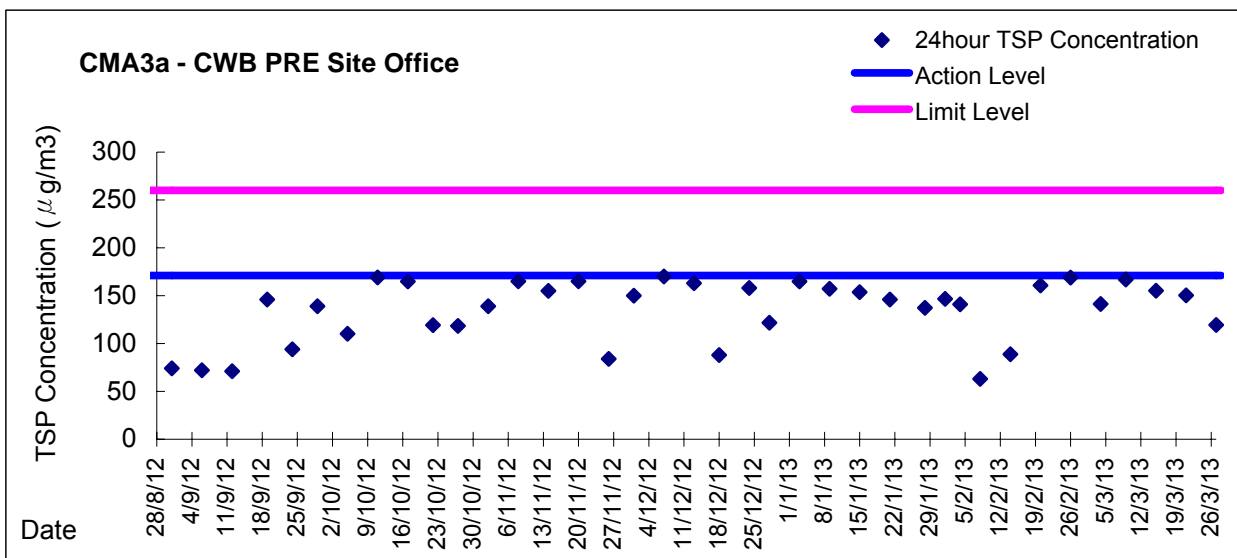
Graphic Presentation of 1 hour TSP Result



Graphic Presentation of 24 hour TSP Result



Graphic Presentation of 24 hour TSP Result





Appendix 5.4

Water Quality Monitoring Results and Graphical Presentations



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids							
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
1/3/2013	6:30	Fine	Middle	2.5	20.64	20.64	20.56	7.96	7.96	7.96	33.20	33.20	33.26	88.9	88.8	88.8	6.58	6.57	6.57	1.07	1.12	1.14	4	4.00
	6:32		Middle	2.5	20.48	20.48		7.96	7.96		33.31	33.31		88.7	88.7		6.57	6.57		1.16	1.21		4	
4/3/2013	8:50	Fine	Middle	2.5	16.69	16.69	16.72	8.20	8.20	8.19	34.18	34.18	34.15	82.4	82.4	82.4	6.52	6.52	6.52	3.72	3.71	3.69	5	4.00
	8:52		Middle	2.5	16.75	16.75		8.19	8.16		34.12	34.12		82.3	82.3		6.52	6.51		3.67	3.66		3	
6/3/2013	10:00	Fine	Middle	2.5	17.91	17.91	17.92	8.16	8.16	8.16	33.72	33.72	33.72	97.6	97.5	97.5	7.56	7.56	7.55	1.03	1.04	1.04	4	3.50
	10:02		Middle	2.5	17.93	17.93		8.16	8.16		33.71	33.71		97.4	97.3		7.55	7.54		1.05	1.05		3	
8/3/2013	13:52	Fine	Middle	2.5	19.20	19.20	19.25	8.01	8.01	8.01	33.68	33.68	33.70	98.5	98.2	97.9	7.45	7.43	7.40	1.80	1.67	1.69	3	3.50
	13:54		Middle	2.5	19.30	19.30		8.01	8.01		33.71	33.71		97.3	97.5		7.35	7.37		1.64	1.63		4	
11/3/2013	16:48	Misty	Middle	2.5	19.90	19.90	19.93	8.04	8.04	8.04	32.64	32.64	32.64	85.0	85.1	85.9	6.38	6.38	6.44	1.34	1.32	1.33	4	3.50
	16:49		Middle	2.5	20.00	19.90		8.04	8.04		32.64	32.64		86.3	87.0		6.47	6.52		1.28	1.38		3	
13/3/2013	17:00	Cloudy	Middle	2.0	21.80	21.80	21.85	8.07	8.07	8.08	32.88	32.88	32.84	85.5	86.1	86.7	6.19	6.22	6.27	1.64	1.62	1.44	6	6.50
	17:01		Middle	2.0	21.90	21.90		8.08	8.08		32.80	32.80		87.5	87.6		6.33	6.34		1.31	1.20		7	
15/3/2013	6:30	Fine	Middle	2.5	18.76	18.76	18.75	8.13	8.13	8.14	33.74	33.74	33.75	75.9	75.8	75.8	5.79	5.78	5.78	1.63	1.78	1.66	4	3.50
	6:32		Middle	2.5	18.74	18.74		8.14	8.14		33.75	33.75		75.8	75.7		5.78	5.77		1.57	1.66		3	
18/3/2013	7:10	Fine	Middle	2.5	20.58	20.58	20.59	8.03	8.03	8.03	33.79	33.79	33.80	80.2	79.9	79.8	5.91	5.89	5.88	0.91	0.90	0.89	3	3.00
	7:12		Middle	2.5	20.59	20.59		8.03	8.03		33.81	33.81		79.6	79.3		5.87	5.85		0.84	0.90		3	
21/3/2013	6:15	Cloudy	Middle	2.5	20.87	20.87	20.88	7.99	7.99	7.99	33.45	33.45	33.46	61.9	61.8	61.6	4.55	4.52	4.52	1.82	1.82	1.81	2	2.00
	6:17		Middle	2.5	20.88	20.88		7.99	7.99		33.46	33.46		61.4	61.3		4.51	4.50		1.84	1.76		2	
23/3/2013	13:15	Fine	Middle	2.5	21.09	21.09	21.10	8.04	8.04	8.04	33.87	33.87	33.86	65.8	65.8	65.6	4.80	4.80	4.79	1.19	1.39	1.29	3	2.50
	13:17		Middle	2.5	21.10	21.10		8.03	8.03		33.85	33.85		65.5	65.3		4.78	4.76		1.27	1.30		2	
25/3/2013	18:47	Cloudy	Middle	2.5	20.00	20.00	20.01	8.02	8.02	8.02	34.01	34.01	34.01	68.3	68.1	68.0	5.08	5.06	5.06	0.75	0.85	0.83	3	3.00
	18:49		Middle	2.5	20.01	20.01		8.01	8.01		34.00	34.00		67.9	67.7		5.05	5.03		0.80	0.91		3	
27/3/2013	16:52	Cloudy	Middle	2.5	20.30	20.30	20.30	8.06	8.06	8.07	32.67	32.67	32.67	81.5	81.4	81.7	6.08	6.07	6.09	2.15	2.05	2.07	5	4.50
	16:53		Middle	2.5	20.30	20.30		8.07	8.07		32.67	32.67		81.7	82.1		6.09	6.13		2.09	1.98		4	

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	Sampling Depth		Water Temperature °C		pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU				Suspended Solids mg/L	
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
1/3/2013	9:02	Fine	Middle	2.5	19.58	19.58	19.60	7.91	7.91	7.93	33.33	33.33	33.36	97.0	96.7	96.5	7.28	7.27	7.26	8.48	8.15	8.20	11	11.50
	9:04		Middle	2.5	19.62	19.62		7.94	7.94		33.38	33.38		96.3	96.1		7.24	7.23		8.09	8.06		12	
4/3/2013	9:55	Fine	Middle	2.5	17.66	17.66	17.67	8.16	8.16	8.16	33.77	33.77	33.77	91.6	91.5	91.5	7.13	7.12	7.12	5.00	4.91	4.93	6	6.00
	9:57		Middle	2.5	17.67	17.67		8.16	8.16		33.76	33.76		91.5	91.3		7.12	7.11		4.90	4.89		6	
6/3/2013	11:35	Fine	Middle	2.5	18.09	18.09	18.12	8.10	8.10	8.10	33.82	33.82	33.81	99.8	99.7	99.6	7.70	7.69	7.69	1.11	1.07	1.02	4	4.50
	11:37		Middle	2.5	18.15	18.15		8.09	8.09		33.80	33.80		99.5	99.5		7.68	7.67		0.96	0.95		5	
8/3/2013	14:25	Fine	Middle	2.0	19.13	19.13	19.16	7.93	7.93	7.93	33.59	33.59	33.58	90.5	90.3	90.1	6.86	6.84	6.83	1.48	1.41	1.42	2	2.00
	14:27		Middle	2.0	19.19	19.19		7.92	7.92		33.57	33.57		89.9	89.7		6.81	6.80		1.39	1.38		2	
11/3/2013	18:25	Misty	Middle	3.0	19.00	19.00	19.00	8.16	8.16	8.16	33.37	33.37	33.37	83.5	84.3	84.6	6.35	6.41	6.44	1.63	1.79	1.56	7	7.00
	18:26		Middle	3.0	19.00	19.00		8.16	8.16		33.37	33.37		85.3	85.3		6.50	6.48		1.42	1.38		7	
13/3/2013	18:32	Cloudy	Middle	3.0	21.10	21.10	21.15	8.06	8.06	8.07	32.72	32.72	32.73	85.1	84.9	84.3	6.24	6.23	6.18	3.55	3.60	3.66	6	5.00
	18:33		Middle	3.0	21.20	21.20		8.07	8.07		32.74	32.74		83.4	83.8		6.12	6.14		3.92	3.58		4	
15/3/2013	7:38	Fine	Middle	3.5	18.95	18.95	18.93	8.15	8.15	8.15	33.97	33.97	33.98	87.2	86.9	86.9	6.62	6.60	6.60	2.07	2.03	2.13	3	3.50
	7:40		Middle	3.5	18.90	18.90		8.15	8.15		33.98	33.98		86.7	86.6		6.58	6.58		2.17	2.23		4	
18/3/2013	8:45	Fine	Middle	3.5	20.30	20.30	20.28	8.01	8.01	8.01	33.58	33.58	33.57	83.5	83.2	83.1	6.20	6.18	6.17	0.77	0.84	0.81	4	3.50
	8:47		Middle	3.5	20.25	20.25		8.01	8.01		33.56	33.56		83.0	82.5		6.16	6.13		0.84	0.78		3	
21/3/2013	7:34	Cloudy	Middle	3.5	20.69	20.69	20.71	7.95	7.95	7.95	33.17	33.17	33.16	70.1	69.8	69.8	5.16	5.15	5.15	0.96	0.80	0.84	<2	<2
	7:36		Middle	3.5	20.72	20.72		7.94	7.94		33.14	33.14		69.6	69.5		5.14	5.13		0.74	0.85		<2	
23/3/2013	14:02	Fine	Middle	3.5	20.86	20.86	20.88	8.01	8.01	8.01	33.92	33.92	33.92	71.5	71.3	71.3	5.24	5.22	5.22	1.55	1.54	1.58	6	6.00
	14:04		Middle	3.5	20.89	20.89		8.01	8.01		33.92	33.92		71.3	71.1		5.22	5.21		1.60	1.63		6	
25/3/2013	17:02	Cloudy	Middle	3.5	20.19	20.19	20.20	8.05	8.05	8.05	34.18	34.18	34.16	71.4	71.4	71.0	5.29	5.27	5.25	1.23	1.17	1.22	3	3.00
	17:04		Middle	3.5	20.20	20.20		8.05	8.05		34.14	34.14		70.6	70.4		5.23	5.21		1.31	1.16		3	
27/3/2013	18:30	Cloudy	Middle	3.0	20.10	20.10	20.10	8.16	8.16	8.16	33.43	33.43	33.43	78.9	79.2	79.3	5.87	5.90	5.90	5.36	5.47	5.30	12	11.50
	18:31		Middle	3.0	20.10	20.10		8.16	8.16		33.43	33.43		80.1	79.0		5.96	5.88		5.35	5.02		11	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at C9 - Provident Centre
Mid-Flood Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		Suspended Solids mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
1/3/2013	11:10	Fine	Middle	2.5	19.26	19.26	19.31	7.94	7.94	7.96	33.22	33.22	33.21	90.0	89.8	89.6	6.81	6.78	6.77	6.57	6.58	6.52	8	7.50
	11:12		Middle	2.5	19.35	19.35		7.97	7.97		33.19	33.19		89.4	89.3		6.77	6.73		6.48	6.44		7	
4/3/2013	12:20	Fine	Middle	2.5	17.84	17.84	17.95	8.06	8.06	8.06	33.65	33.65	33.59	102.4	102.2	102.1	7.94	7.93	7.92	7.81	7.82	7.82	9	8.50
	12:22		Middle	2.5	18.06	18.06		8.05	8.05		33.53	33.53		102.0	101.9		7.90	7.89		7.81	7.82		8	
6/3/2013	13:06	Fine	Middle	2.5	18.20	18.20	18.15	8.37	8.37	8.35	34.75	34.75	34.73	84.5	84.4	83.3	6.49	6.48	6.40	5.82	5.96	5.71	6	6.50
	13:08		Middle	2.5	18.10	18.10		8.32	8.32		34.70	34.70		82.1	82.3		6.30	6.32		5.66	5.39		7	
8/3/2013	16:30	Fine	Middle	2.5	19.21	19.21	19.38	7.91	7.91	7.89	33.70	33.70	33.59	98.8	98.1	98.0	7.44	7.40	7.40	4.71	4.71	4.68	8	7.00
	16:32		Middle	2.5	19.54	19.54		7.86	7.86		33.47	33.47		97.7	97.2		7.37	7.39		4.68	4.63		6	
11/3/2013	18:03	Misty	Middle	2.0	19.50	19.50	19.50	8.06	8.06	8.06	32.65	32.65	32.65	84.9	86.0	85.2	6.42	6.51	6.44	5.59	5.53	5.49	10	10.00
	18:04		Middle	2.0	19.50	19.50		8.06	8.06		32.65	32.65		85.2	84.7		6.41	6.41		5.43	5.41		10	
13/3/2013	18:10	Cloudy	Middle	2.0	21.40	21.40	21.40	8.03	8.03	8.04	32.39	32.30	32.34	85.6	85.0	85.0	6.25	6.22	6.21	13.17	12.98	<u>13.01</u>	12	12.00
	18:11		Middle	2.0	21.40	21.40		8.04	8.04		32.33	32.33		85.2	84.1		6.22	6.14		12.95	12.92		12	
15/3/2013	9:35	Fine	Middle	2.0	19.17	19.17	19.17	8.08	8.08	8.08	33.84	33.84	33.84	89.1	88.9	88.7	6.74	6.71	6.71	4.58	4.04	4.31	6	6.50
	9:37		Middle	2.0	19.17	19.17		8.08	8.08		33.83	33.83		88.6	88.3		6.70	6.68		4.29	4.33		7	
18/3/2013	11:10	Fine	Middle	2.0	20.81	20.81	20.91	7.93	7.93	7.92	33.65	33.65	33.62	90.2	89.3	88.6	6.62	6.55	6.48	4.51	4.72	4.73	6	5.50
	11:12		Middle	2.0	21.01	21.02		7.90	7.90		33.59	33.59		87.7	87.0		6.43	6.30		4.88	4.81		5	
21/3/2013	9:25	Cloudy	Middle	2.0	20.90	20.90	20.93	7.89	7.89	7.89	33.05	33.05	33.04	73.5	72.7	72.6	5.41	5.35	5.34	2.86	3.12	2.84	4	4.00
	9:27		Middle	2.0	20.95	20.95		7.88	7.88		33.02	33.02		72.3	71.7		5.32	5.27		3.24	2.12		4	
23/3/2013	16:10	Fine	Middle	2.0	21.21	21.21	21.38	7.88	7.88	7.86	34.08	34.08	33.99	75.4	74.0	73.9	4.58	5.37	5.14	6.66	6.59	6.54	9	9.00
	16:12		Middle	2.0	21.55	21.55		7.83	7.83		33.89	33.89		73.5	72.5		5.33	5.26		6.54	6.36		9	
25/3/2013	16:37	Cloudy	Middle	2.0	20.30	20.30	20.32	7.99	7.99	7.99	33.89	33.89	33.89	67.5	67.0	66.9	5.00	4.96	4.95	7.07	6.96	7.00	10	10.00
	16:39		Middle	2.0	20.34	20.34		7.98	7.98		33.88	33.88		66.8	66.3		4.94	4.91		6.88	7.10		10	
27/3/2013	18:07	Cloudy	Middle	2.0	20.40	20.40	20.40	8.09	8.09	8.09	33.09	33.09	33.09	82.0	81.6	81.6	6.09	6.06	6.55	7.54	7.33	7.34	10	10.00
	18:08		Middle	2.0	20.40	20.40		8.09	8.09		33.08	33.08		81.3	81.3		6.03	8.03		7.29	7.19		10	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at C8 - City Garden
Mid-Flood Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-		ppt		%		mg/L		NTU		mg/L						
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	10:55	Fine	Middle	2.0	19.15	19.15	19.15	7.97	7.97	7.97	33.26	33.26	33.21	90.2	89.9	89.6	6.84	6.81	6.79	7.81	7.72	7.74	11	11.50
	10:57		Middle	2.0	19.15	19.15		7.96	7.96		33.16	33.16		89.3	89.0		6.77	6.73		7.65	7.79		12	
4/3/2013	12:05	Fine	Middle	2.0	17.90	17.90	17.97	8.05	8.05	8.04	33.64	33.64	33.60	97.2	96.8	96.5	7.53	7.50	7.47	4.14	4.14	4.12	5	5.50
	12:07		Middle	2.0	18.03	18.03		8.03	8.03		33.56	33.56		96.2	95.6		7.45	7.41		4.12	4.09		6	
6/3/2013	13:11	Fine	Middle	2.0	17.90	17.90	17.85	7.96	7.96	7.96	34.70	34.70	34.70	80.1	80.1	80.2	6.18	6.18	6.18	5.39	5.08	5.08	9	9.00
	13:13		Middle	2.0	17.80	17.80		7.96	7.96		34.70	34.70		80.5	80.0		6.20	6.17		4.86	4.97		9	
8/3/2013	16:13	Fine	Middle	2.0	19.96	19.96	19.98	7.82	7.82	7.81	33.38	33.38	33.36	89.3	88.7	88.6	6.66	6.62	6.60	6.09	6.11	6.12	10	10.00
	16:15		Middle	2.0	19.99	19.99		7.80	7.80		33.34	33.34		88.4	88.1		6.59	6.52		6.13	6.13		10	
11/3/2013	17:51	Misty	Middle	2.0	19.60	19.60	19.60	8.06	8.06	8.06	32.30	32.30	32.32	79.0	79.1	79.3	5.98	5.99	6.00	6.23	6.51	6.28	8	8.00
	17:52		Middle	2.0	19.60	19.60		8.05	8.05		32.34	32.34		79.7	79.3		6.03	6.00		6.20	6.16		8	
13/3/2013	17:56	Cloudy	Middle	2.0	21.10	21.10	21.15	8.03	8.03	8.03	32.33	32.33	32.34	79.5	81.9	81.5	5.94	6.08	6.03	8.87	8.51	8.59	10	9.50
	17:57		Middle	2.0	21.20	21.20		8.03	8.03		32.34	32.34		82.6	81.8		6.07	6.01		8.57	8.39		9	
15/3/2013	9:20	Fine	Middle	2.0	19.23	19.23	19.24	8.07	8.07	8.07	33.87	33.87	33.85	93.8	91.8	91.4	7.09	6.93	6.91	3.01	2.99	2.99	5	5.00
	9:22		Middle	2.0	19.24	19.24		8.07	8.07		33.82	33.82		90.8	89.3		6.86	6.74		3.07	2.87		5	
18/3/2013	10:55	Fine	Middle	2.0	20.72	20.72	20.86	7.89	7.89	7.88	33.50	33.50	33.42	84.2	82.4	82.2	6.19	6.06	6.04	4.53	4.46	4.54	8	8.00
	10:57		Middle	2.0	21.00	21.00		7.86	7.86		33.33	33.33		81.7	80.4		6.00	5.90		4.71	4.46		8	
21/3/2013	9:15	Cloudy	Middle	2.0	20.99	20.99	21.03	7.88	7.88	7.88	33.10	33.10	33.07	71.6	70.8	70.6	5.26	5.20	5.19	4.15	4.19	4.07	4	4.00
	9:17		Middle	2.0	21.07	21.07		7.87	7.87		33.03	33.03		69.7	70.4		5.11	5.17		4.06	3.89		4	
23/3/2013	15:57	Fine	Middle	2.0	21.47	21.47	21.58	7.80	7.80	7.79	33.83	33.83	33.79	70.3	69.8	69.4	5.09	5.05	5.02	4.73	4.57	4.63	7	7.50
	15:59		Middle	2.0	21.69	21.69		7.77	7.77		33.75	33.75		68.9	68.5		4.99	4.96		4.61	4.59		8	
25/3/2013	16:20	Cloudy	Middle	1.5	20.45	20.45	20.46	7.98	7.98	7.98	33.79	33.79	33.79	69.9	69.3	68.8	5.17	5.12	5.09	3.17	3.16	3.18	6	5.50
	16:22		Middle	1.5	20.46	20.46		7.97	7.97		33.78	33.78		68.3	67.8		5.05	5.01		3.15	3.25		5	
27/3/2013	17:57	Cloudy	Middle	2.0	20.70	20.70	20.70	8.05	8.05	8.05	32.88	32.88	32.88	75.9	77.0	76.7	5.61	5.69	5.67	7.61	7.59	7.58	7	7.50
	17:58		Middle	2.0	20.70	20.70		8.05	8.05		32.88	32.88		77.0	76.8		5.69	5.68		7.53	7.57		8	

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	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	10:35	Fine	Middle	1.5	19.23	19.23	19.24	7.86	7.86	7.86	32.89	32.89	32.89	74.8	74.4	74.4	5.68	5.65	5.65	3.29	3.29	3.29	10	11.00
	10:37		Middle	1.5	19.25	19.25		7.85	7.85		32.89	32.89		74.2	74.0		5.63	5.62		3.29	3.29		12	
4/3/2013	11:56	Fine	Middle	1.5	18.49	18.49	18.50	7.94	7.94	7.94	32.84	32.84	32.84	84.7	84.4	83.8	6.52	6.50	6.45	5.57	5.55	5.56	5	5.50
	11:58		Middle	1.5	18.51	18.51		7.94	7.94		32.83	32.83		83.0	82.9		6.39	6.38		5.56	5.55		6	
6/3/2013	12:55	Fine	Middle	1.5	19.40	19.40	19.40	7.86	7.86	7.86	34.00	34.00	34.02	68.2	69.3	69.4	5.17	5.21	5.21	3.17	3.23	3.17	4	3.50
	12:57		Middle	1.5	19.40	19.40		7.85	7.85		34.03	34.03		69.8	70.3		5.25	5.19		3.11	3.17		3	
8/3/2013	16:02	Fine	Middle	1.5	19.74	19.74	19.76	7.79	7.79	7.78	32.48	32.48	32.49	88.7	88.3	88.2	6.69	6.66	6.65	3.40	3.30	3.35	4	3.50
	16:03		Middle	1.5	19.78	19.78		7.77	7.77		32.49	32.49		88.0	87.6		6.63	6.60		3.30	3.38		3	
11/3/2013	17:15	Misty	Middle	1.5	20.10	20.10	20.15	7.93	7.93	7.92	31.72	31.72	31.72	79.1	78.8	78.8	5.95	5.92	5.93	2.90	2.85	2.78	8	7.00
	17:16		Middle	1.5	20.20	20.20		7.91	7.91		31.72	31.72		78.8	78.5		5.93	5.90		2.69	2.66		6	
13/3/2013	17:26	Cloudy	Middle	1.5	21.00	21.00	21.03	7.97	7.97	7.97	31.73	31.73	31.73	74.0	74.2	74.2	5.46	5.49	5.48	3.91	3.87	3.84	3	3.00
	17:27		Middle	1.5	21.10	21.00		7.97	7.97		31.73	31.73		74.5	74.2		5.50	5.48		3.66	3.92		3	
15/3/2013	9:02	Fine	Middle	1.5	19.38	19.38	19.38	7.98	7.98	7.98	33.31	33.31	33.32	77.1	76.7	76.6	5.83	5.80	5.79	1.65	1.60	1.59	8	7.00
	9:04		Middle	1.5	19.37	19.37		7.97	7.97		33.32	33.32		76.5	76.0		5.78	5.74		1.52	1.58		6	
18/3/2013	10:45	Fine	Middle	1.5	21.39	21.39	21.41	7.82	7.82	7.82	32.85	32.85	32.85	70.7	70.1	69.7	5.16	5.12	5.09	4.00	3.94	3.96	5	5.00
	10:47		Middle	1.5	21.43	21.43		7.81	7.81		32.84	32.84		69.0	68.8		5.04	5.02		3.95	3.96		5	
21/3/2013	9:00	Cloudy	Middle	1.5	21.10	21.10	21.11	7.76	7.76	7.76	32.44	32.44	32.45	58.6	58.0	57.9	4.31	4.27	4.26	2.72	2.75	2.77	4	4.00
	9:02		Middle	1.5	21.11	21.11		7.75	7.75		32.45	32.45		57.7	57.4		4.24	4.22		2.84	2.76		4	
23/3/2013	15:47	Fine	Middle	1.5	22.07	22.07	22.13	7.63	7.63	7.63	33.10	33.10	33.10	59.2	59.0	58.9	4.26	4.20	4.22	2.48	2.47	2.49	4	4.00
	15:49		Middle	1.5	22.19	22.19		7.62	7.62		33.10	33.10		58.7	58.5		4.22	4.21		2.49	2.53		4	
25/3/2013	16:07	Cloudy	Middle	1.5	20.67	20.67	20.66	7.81	7.81	7.81	33.06	33.06	33.07	56.0	55.6	55.5	4.14	4.11	4.11	1.17	1.25	1.18	<2	<2
	16:09		Middle	1.5	20.65	20.65		7.80	7.80		33.07	33.07		55.4	55.1		4.10	4.07		1.19	1.09		<2	
27/3/2013	17:30	Cloudy	Middle	1.5	20.40	20.40	20.45	7.98	7.98	7.98	32.46	32.46	32.47	70.9	70.9	70.8	5.27	5.27	5.26	3.05	2.95	2.93	5	4.50
	17:31		Middle	1.5	20.50	20.50		7.98	7.98		32.47	32.47		71.0	70.2		5.29	5.22		2.83	2.88		4	

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	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	8:23	Fine	Middle	2.0	18.80	18.80	18.80	7.87	7.87	7.87	34.13	34.13	34.14	79.8	78.4	79.7	6.06	5.96	6.06	1.47	1.55	1.49	5	5.50
	8:25		Middle	2.0	18.80	18.80		7.87	7.87		34.14	34.14		80.8	79.9		6.14	6.07		1.47	1.45		6	
4/3/2013	10:00	Fine	Middle	1.5	18.00	18.00	18.00	7.83	7.83	7.83	34.33	34.33	34.33	74.5	73.0	74.0	5.75	5.61	5.70	2.06	1.99	2.08	3	2.50
	10:02		Middle	1.5	18.00	18.00		7.83	7.83		34.32	34.32		75.0	73.6		5.79	5.66		2.15	2.10		2	
6/3/2013	11:53	Fine	Middle	2.0	18.60	18.60	18.60	7.93	7.93	7.93	34.50	34.50	34.50	87.7	87.4	87.4	6.67	6.65	6.65	2.24	2.23	2.19	4	4.00
	11:55		Middle	2.0	18.60	18.60		7.93	7.93		34.50	34.50		87.5	87.1		6.66	6.63		2.26	2.04		4	
8/3/2013	14:45	Fine	Middle	2.5	19.80	19.80	19.80	7.91	7.91	7.91	34.35	34.35	34.35	78.1	77.9	77.7	5.80	5.78	5.76	2.50	2.74	2.69	6	5.50
	14:47		Middle	2.5	19.80	19.80		7.91	7.91		34.35	34.35		77.5	77.1		5.75	5.72		2.65	2.86		5	
11/3/2013	18:48	Misty	Middle	2.5	18.90	18.90	18.85	7.87	7.87	7.87	34.55	34.55	34.55	79.7	79.6	79.4	6.45	6.45	6.44	2.80	2.76	2.76	5	5.50
	18:50		Middle	2.5	18.80	18.80		7.87	7.87		34.54	34.54		79.3	79.1		6.43	6.42		2.75	2.73		6	
13/3/2013	21:26	Cloudy	Middle	2.5	21.00	21.00	21.00	7.91	7.91	7.91	34.04	34.04	34.04	73.4	73.2	73.1	5.36	5.35	5.35	2.75	2.73	2.71	5	5.00
	21:28		Middle	2.5	21.00	21.00		7.91	7.91		34.04	34.04		73.0	72.8		5.34	5.33		2.69	2.68		5	
15/3/2013	8:13	Fine	Middle	1.5	18.90	18.90	18.85	7.86	7.86	7.86	34.41	34.41	34.40	67.1	66.7	66.9	5.09	5.06	5.09	2.38	2.13	2.24	4	4.00
	8:14		Middle	1.5	18.80	18.80		7.86	7.86		34.39	34.39		67.0	66.9		5.10	5.09		2.18	2.26		4	
18/3/2013	9:20	Fine	Middle	3.0	20.30	20.30	20.30	7.86	7.86	7.86	34.13	34.13	34.13	58.7	58.5	58.6	4.32	4.30	4.31	2.06	2.15	2.14	4	3.50
	9:22		Middle	3.0	20.30	20.30		7.86	7.86		34.13	34.13		58.2	58.8		4.28	4.33		2.18	2.16		3	
21/3/2013	8:02	Cloudy	Middle	2.0	20.70	20.70	20.75	7.77	7.77	7.76	33.87	33.87	33.88	58.7	58.4	58.8	4.31	4.28	4.32	2.51	2.33	2.44	<2	<2
	8:04		Middle	2.0	20.80	20.80		7.75	7.75		33.88	33.88		59.5	58.6		4.37	4.31		2.47	2.44		<2	
23/3/2013	14:08	Fine	Middle	2.0	21.10	21.10	21.02	7.91	7.91	7.91	34.59	34.59	34.59	76.1	76.5	76.2	5.52	5.55	5.50	2.50	2.35	2.43	3	3.50
	14:10		Middle	2.0	20.77	21.10		7.91	7.91		34.59	34.59		76.3	75.7		5.52	5.40		2.46	2.40		4	
25/3/2013	17:10	Cloudy	Middle	2.0	20.40	20.40	20.40	7.84	7.84	7.84	34.55	34.55	34.55	70.5	70.1	70.2	5.20	5.17	5.18	1.38	1.31	1.37	4	4.00
	17:12		Middle	2.0	20.40	20.40		7.84	7.84		34.55	34.55		70.2	70.0		5.18	5.16		1.37	1.43		4	
27/3/2013	18:27	Cloudy	Middle	2.5	20.30	20.30	20.30	7.83	7.83	7.83	34.83	34.83	34.83	71.4	71.1	70.9	5.26	5.24	5.23	2.16	2.13	2.12	5	5.50
	18:29		Middle	2.5	20.30	20.30		7.83	7.83		34.83	34.83		70.7	70.3		5.21	5.19		2.11	2.08		6	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C2 - TH / APA / SOC
Mid-Flood Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
1/3/2013	8:08	Fine	Middle	1.5	19.20	19.20	19.25	7.81	7.81	7.81	34.08	34.08	34.09	70.4	69.3	70.1	5.30	5.22	5.28	0.56	0.47	0.51	3	2.50
	8:10		Middle	1.5	19.30	19.30		7.80	7.80		34.10	34.10		70.9	69.8		5.34	5.26		0.57	0.44		2	
4/3/2013	9:45	Fine	Middle	2.0	17.90	17.90	17.85	7.72	7.72	7.74	34.34	34.34	34.35	66.8	66.0	66.3	5.16	5.10	5.12	1.39	1.33	1.35	3	3.00
	9:47		Middle	2.0	17.80	17.80		7.76	7.76		34.36	34.36		67.1	65.4		5.19	5.03		1.36	1.30		3	
6/3/2013	10:55	Fine	Middle	2.0	18.50	18.50	18.50	7.89	7.89	7.89	34.53	34.53	34.53	77.4	77.2	77.5	5.87	5.87	5.89	4.49	4.54	4.49	6	6.00
	10:57		Middle	2.0	18.50	18.50		7.89	7.89		34.53	34.53		77.3	77.9		5.88	5.93		4.35	4.59		6	
8/3/2013	14:28	Fine	Middle	1.5	20.20	20.20	20.20	7.91	7.91	7.91	34.42	34.42	34.42	74.2	74.0	74.3	5.45	5.43	5.46	1.83	1.53	1.63	5	4.00
	14:30		Middle	1.5	20.20	20.20		7.91	7.91		34.42	34.42		74.6	74.4		5.48	5.46		1.56	1.60		3	
11/3/2013	17:11	Misty	Middle	2.0	19.50	19.50	19.40	7.72	7.72	7.73	34.09	34.09	34.10	64.3	64.2	64.1	4.89	4.88	4.88	1.82	1.78	1.77	7	7.00
	17:13		Middle	2.0	19.30	19.30		7.73	7.73		34.10	34.10		64.0	63.9		4.87	4.86		1.75	1.73		7	
13/3/2013	16:38	Cloudy	Middle	1.5	21.20	21.20	21.15	7.86	7.86	7.86	34.36	4.36	26.86	68.6	68.5	68.4	4.99	4.99	4.98	5.59	5.55	5.54	6	6.50
	16:40		Middle	1.5	21.10	21.10		7.85	7.85		34.35	34.35		68.3	68.1		4.98	4.97		5.51	5.50		7	
15/3/2013	7:58	Fine	Middle	1.5	19.30	19.30	19.35	7.77	7.77	7.78	34.30	34.30	34.30	63.3	62.4	63.0	4.76	4.69	4.73	2.02	1.88	1.96	3	3.50
	8:00		Middle	1.5	19.40	19.40		7.79	7.79		34.30	34.30		63.6	62.5		4.78	4.69		1.94	1.99		4	
18/3/2013	9:00	Fine	Middle	2.0	20.40	20.40	20.40	7.91	7.91	7.91	34.18	34.18	34.18	59.0	59.4	59.6	4.33	4.36	4.37	2.70	2.37	2.54	4	3.50
	9:02		Middle	2.0	20.40	20.40		7.91	7.91		34.18	34.18		59.9	60.0		4.40	4.40		2.65	2.42		3	
21/3/2013	7:48	Cloudy	Middle	1.5	21.10	21.10	21.15	7.74	7.74	7.72	33.70	33.70	33.70	52.2	52.7	52.6	3.81	3.84	3.84	2.59	2.71	2.62	<2	<2
	7:50		Middle	1.5	21.20	21.20		7.69	7.69		33.70	33.70		52.9	52.7		3.86	3.84		2.54	2.65		<2	
23/3/2013	13:50	Fine	Middle	2.0	20.80	20.80	20.80	7.96	7.96	7.96	34.67	34.67	34.67	66.1	66.3	66.3	4.82	4.83	4.85	2.10	2.07	2.07	4	4.50
	13:52		Middle	2.0	20.80	20.80		7.96	7.96		34.67	34.67		66.7	65.9		4.96	4.80		2.04	2.07		5	
25/3/2013	15:50	Cloudy	Middle	1.5	20.50	20.50	20.50	7.74	7.74	7.74	34.52	34.52	34.52	61.8	61.5	61.2	4.55	4.53	4.50	3.45	3.54	3.50	6	6.00
	15:52		Middle	1.5	20.50	20.50		7.74	7.74		34.52	34.52		60.9	60.7		4.45	4.47		3.57	3.42		6	
27/3/2013	16:41	Cloudy	Middle	2.5	20.50	20.50	20.55	7.86	7.86	7.86	34.80	34.80	34.81	76.1	75.9	75.8	5.59	5.58	5.58	2.91	2.90	2.89	10	10.00
	16:43		Middle	2.5	20.60	20.60		7.85	7.85		34.81	34.81		75.7	75.5		5.57	5.56		2.88	2.87		10	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at C3 - HKCEC Phase I
Mid-Flood Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C						ppt		%		mg/L		NTU		mg/L					
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	9:25	Fine	Middle	3.0	19.10	19.10	19.10	7.89	7.89	7.88	33.56	33.56	33.56	52.6	52.4	52.5	4.02	4.01	4.02	0.38	0.37	0.40	3	2.50
	9:27		Middle	3.0	19.10	19.10		7.87	7.87		33.56	33.56		52.8	52.3		4.04	4.01		0.44	0.41		2	
4/3/2013	11:14	Fine	Middle	3.0	17.90	17.90	17.85	7.83	7.83	7.82	34.20	34.20	34.21	42.7	43.1	43.2	3.31	3.35	3.36	1.01	0.92	0.93	3	2.50
	11:16		Middle	3.0	17.80	17.80		7.80	7.80		34.21	34.21		43.7	43.2		3.41	3.36		0.85	0.94		2	
6/3/2013	11:20	Fine	Middle	3.0	17.80	17.80	17.80	7.87	7.87	7.87	34.16	34.16	34.16	59.2	59.1	59.2	4.59	4.58	4.59	1.83	2.19	1.99	3	3.00
	11:22		Middle	3.0	17.80	17.80		7.87	7.87		34.16	34.16		59.0	59.3		4.58	4.60		1.93	1.99		3	
8/3/2013	15:45	Fine	Middle	3.0	18.70	18.70	18.70	7.80	7.80	7.80	33.82	33.82	33.82	56.3	56.2	56.5	4.29	4.28	4.31	1.92	1.83	1.87	6	5.50
	15:47		Middle	3.0	18.70	18.70		7.80	7.80		33.82	33.82		56.6	56.8		4.32	4.34		2.02	1.72		5	
11/3/2013	17:25	Misty	Middle	2.5	18.90	18.90	18.85	7.76	7.76	7.76	33.91	33.91	33.91	60.7	60.5	60.4	4.64	4.63	4.63	5.59	5.57	5.55	5	5.00
	17:27		Middle	2.5	18.80	18.80		7.76	7.76		33.91	33.91		60.4	60.1		4.63	4.61		5.53	5.50		5	
13/3/2013	18:07	Cloudy	Middle	2.5	20.60	20.60	20.55	7.83	7.83	7.83	33.76	3.76	26.26	56.7	56.4	56.4	4.18	4.16	4.16	3.26	3.22	3.21	3	3.50
	18:09		Middle	2.5	20.50	20.50		7.82	7.82		33.76	33.76		56.3	56.1		4.16	4.15		3.19	3.17		4	
15/3/2013	8:56	Fine	Middle	3.0	18.80	18.80	18.70	7.76	7.76	7.76	33.98	33.98	33.96	33.5	33.3	33.4	2.56	2.55	<u>2.56</u>	0.98	0.92	0.95	3	3.00
	8:58		Middle	3.0	18.60	18.60		7.75	7.75		33.94	33.94		33.7	33.1		2.58	2.54		0.94	0.95		3	
18/3/2013	10:35	Fine	Middle	3.0	20.20	20.20	20.20	7.81	7.81	7.81	33.32	33.32	33.32	51.3	51.2	51.6	4.13	4.12	4.15	4.39	4.52	4.43	2	2.00
	10:37		Middle	3.0	20.20	20.20		7.81	7.81		33.32	33.32		51.8	51.9		4.17	4.19		4.34	4.46		2	
21/3/2013	9:22	Cloudy	Middle	3.0	21.20	21.20	21.15	7.65	7.65	7.64	32.76	32.76	32.77	28.9	27.7	29.1	2.12	2.04	<u>2.14</u>	2.87	2.65	2.76	2	2.00
	9:24		Middle	3.0	21.10	21.10		7.63	7.63		32.78	32.78		30.4	29.2		2.24	2.16		2.74	2.78		2	
23/3/2013	15:19	Fine	Middle	3.0	20.60	20.60	20.60	7.77	7.77	7.77	34.31	34.31	34.31	45.6	45.7	46.2	3.34	3.35	3.38	1.98	2.16	1.88	4	4.50
	15:21		Middle	3.0	20.60	20.60		7.77	7.77		34.31	34.31		46.5	46.8		3.41	3.43		1.73	1.63		5	
25/3/2013	16:10	Cloudy	Middle	3.0	20.60	20.60	20.60	7.78	7.78	7.78	34.33	34.33	34.33	54.4	54.6	54.6	4.02	4.03	4.04	1.53	1.59	1.56	11	10.50
	16:12		Middle	3.0	20.60	20.60		7.78	7.78		34.33	34.33		54.5	54.7		4.05	4.07		1.53	1.57		10	
27/3/2013	17:11	Cloudy	Middle	3.0	20.50	20.50	20.45	7.78	7.78	7.77	34.14	34.14	34.14	58.0	57.7	57.7	4.28	4.26	4.26	2.29	2.27	2.25	6	5.50
	17:13		Middle	3.0	20.40	20.40		7.76	7.76		34.14	34.14		57.6	57.4		4.26	4.25		2.23	2.21		5	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C4e - WCT / GEC
Mid-Flood Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
					°C			-		ppt		%		mg/L		NTU		mg/L							
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	9:02	Fine	Middle	1.5	19.00	19.00	19.00	7.80	7.80	7.79	32.97	32.97	32.98	53.3	52.5	53.2	4.07	4.00	4.06	0.72	0.62	0.68	3	3.50	
	9:04		Middle	1.5	19.00	19.00		7.77	7.77		32.98	32.98		53.9	53.2		4.11	4.06		0.77	0.62		4		
4/3/2013	10:37	Fine	Middle	1.5	18.10	18.10	18.05	7.87	7.87	7.87	34.25	34.25	34.25	69.5	69.8	69.8	5.36	5.38	5.38	3.01	2.71	2.80	7	7.00	
	10:39		Middle	1.5	18.00	18.00		7.87	7.87		34.25	34.25		70.3	69.4		5.43	5.36		2.75	2.74		7		
6/3/2013	11:10	Fine	Middle	1.5	18.60	18.60	18.60	7.93	7.93	7.93	34.24	34.24	34.24	70.1	69.9	69.8	5.31	5.29	5.28	2.87	2.39	2.63	5	5.00	
	11:12		Middle	1.5	18.60	18.60		7.93	7.93		34.24	34.24		69.7	69.4		5.27	5.26		2.66	2.58		5		
8/3/2013	15:25	Fine	Middle	2.0	19.30	19.30	19.25	7.86	7.86	7.85	33.87	33.87	33.87	56.6	56.8	56.6	4.28	4.29	4.28	3.86	3.47	3.44	2	2.00	
	15:27		Middle	2.0	19.20	19.20		7.80	7.86		33.87	33.87		56.7	56.1		4.29	4.24		3.26	3.18		2		
11/3/2013	17:58	Misty	Middle	2.0	19.40	19.40	19.30	7.80	7.80	7.82	34.06	34.06	34.01	65.4	65.2	65.1	4.94	4.93	4.93	2.72	2.69	2.68	7	7.00	
	18:00		Middle	2.0	19.20	19.20		7.84	7.84		33.96	33.96		65.0	64.8		4.92	4.91		2.66	2.63		7		
13/3/2013	17:45	Cloudy	Middle	2.0	20.90	20.90	20.90	7.90	7.90	7.89	33.75	33.75	33.76	58.0	57.9	57.8	4.24	4.24	4.24	4.83	4.80	4.79	5	5.00	
	17:48		Middle	2.0	20.90	20.90		7.87	7.87		33.76	33.76		57.7	57.6		4.23	4.23		4.77	4.75		5		
15/3/2013	8:40	Fine	Middle	1.5	19.00	19.00	18.90	7.85	7.85	7.84	34.10	34.10	34.10	44.5	44.3	44.8	3.37	3.36	3.40	2.51	2.60	2.53	4	3.50	
	8:42		Middle	1.5	18.80	18.80		7.83	7.83		34.10	34.10		45.1	45.2		3.42	3.44		2.44	2.56		3		
18/3/2013	10:15	Fine	Middle	2.0	21.00	21.00	21.00	7.95	7.95	7.95	34.01	34.01	34.01	55.3	55.2	55.1	4.07	4.06	4.05	4.90	4.78	4.91	21	21.50	
	10:17		Middle	2.0	21.00	21.00		7.95	7.95		34.01	34.01		55.0	54.7		4.05	4.02		4.76	5.19		22		
21/3/2013	9:02	Cloudy	Middle	1.5	21.00	21.00	21.05	7.81	7.81	7.79	33.39	33.39	33.40	41.2	41.4	41.7	3.01	3.03	3.05	3.57	3.67	3.61	2	2.00	
	9:04		Middle	1.5	21.10	21.10		7.77	7.77		33.40	33.40		42.1	42.0		3.08	3.07		3.64	3.55		2		
23/3/2013	14:58	Fine	Middle	2.0	21.00	21.00	21.00	7.83	7.83	7.83	34.08	34.08	34.08	56.4	56.0	56.9	4.10	4.06	4.13	3.73	3.36	3.53	8	8.50	
	15:00		Middle	2.0	21.00	21.00		7.83	7.83		34.08	34.08		57.1	58.0		4.14	4.20		3.42	3.59		9		
25/3/2013	16:30	Cloudy	Middle	1.5	21.10	21.10	21.10	7.74	7.74	7.74	34.18	34.18	34.18	55.0	54.9	54.5	4.02	4.01	4.02	1.65	1.38	1.40	3	3.50	
	16:32		Middle	1.5	21.10	21.10		7.74	7.74		34.18	34.18		53.2	54.7		4.03	4.00		1.26	1.32		4		
27/3/2013	16:56	Cloudy	Middle	2.0	21.00	21.00	21.00	7.82	7.82	7.82	34.34	34.34	34.34	59.0	58.7	58.7	4.31	4.29	4.29	3.38	3.36	3.34	10	10.50	
	16:58		Middle	2.0	21.00	21.00		7.81	7.81		34.34	34.34		58.6	58.5		4.29	4.28		3.33	3.30		11		

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C4w - WCT / GEC
Mid-Flood Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		Suspended Solids mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
1/3/2013	9:12	Fine	Middle	1.5	18.90	18.90	18.90	7.92	7.92	7.91	33.98	33.98	33.98	66.6	65.5	66.1	5.05	4.97	5.02	1.20	1.18	1.21	8	7.50
	9:14		Middle	1.5	18.90	18.90		7.90	7.90		33.98	33.98		66.3	65.8		5.04	5.00		1.22	1.23		7	
4/3/2013	11:03	Fine	Middle	1.5	18.10	18.10	18.05	7.95	7.95	7.95	34.27	34.27	34.27	67.1	66.8	66.9	5.18	5.15	5.18	2.20	2.23	2.20	3	3.50
	11:05		Middle	1.5	18.00	18.00		7.94	7.94		34.26	34.26		67.4	66.4		5.23	5.14		2.14	2.22		4	
6/3/2013	11:15	Fine	Middle	1.5	18.30	18.30	18.25	7.93	7.93	7.93	34.31	34.31	34.31	67.0	66.7	66.8	5.15	5.12	5.13	2.59	2.73	2.73	4	3.50
	11:17		Middle	1.5	18.20	18.20		7.93	7.93		34.31	34.31		66.9	66.4		5.14	5.11		2.78	2.81		3	
8/3/2013	15:35	Fine	Middle	2.0	18.90	18.90	18.90	8.09	8.09	8.09	34.11	34.11	34.11	62.2	62.0	61.9	4.73	4.70	4.70	3.42	3.43	3.29	4	5.00
	15:37		Middle	2.0	18.90	18.90		8.09	8.09		34.11	34.11		61.7	61.8		4.68	4.69		3.05	3.27		6	
11/3/2013	17:48	Misty	Middle	2.0	19.30	19.30	19.30	7.75	7.75	7.75	33.94	33.94	33.95	66.3	66.1	66.0	5.07	5.06	5.06	2.80	2.77	2.76	8	8.50
	17:50		Middle	2.0	19.30	19.30		7.75	7.75		33.95	33.95		65.8	65.7		5.05	5.05		2.73	2.72		9	
13/3/2013	17:58	Cloudy	Middle	2.0	20.90	20.90	20.90	7.84	7.84	7.84	33.76	33.76	33.77	57.5	57.3	57.2	4.22	4.21	4.21	4.68	4.64	4.63	6	5.50
	18:00		Middle	2.0	20.90	20.90		7.83	7.83		33.77	33.77		57.1	56.8		4.20	4.19		4.60	4.59		5	
15/3/2013	8:46	Fine	Middle	1.5	19.00	19.00	18.85	7.82	7.82	7.82	34.21	34.21	34.22	51.8	51.0	51.8	3.99	3.91	3.95	1.80	1.84	1.83	4	4.00
	8:47		Middle	1.5	18.70	18.70		7.81	7.81		34.22	34.22		51.6	52.8		3.93	3.98		1.88	1.79		4	
18/3/2013	10:22	Fine	Middle	2.0	20.40	20.40	20.40	7.99	7.99	7.99	33.96	33.96	33.96	58.5	58.3	58.2	4.35	4.33	4.33	3.34	3.23	3.21	4	4.50
	10:24		Middle	2.0	20.40	20.40		7.99	7.99		33.96	33.96		58.2	57.8		4.32	4.30		3.17	3.08		5	
21/3/2013	9:12	Cloudy	Middle	1.5	20.80	20.80	20.80	7.75	7.75	7.74	33.77	33.77	33.77	37.7	38.0	38.4	3.10	3.12	<u>3.15</u>	2.76	2.71	2.75	3	3.50
	9:14		Middle	1.5	20.80	20.80		7.73	7.73		33.77	33.77		39.3	38.4		3.22	3.16		2.78	2.74		4	
23/3/2013	15:08	Fine	Middle	1.5	20.60	20.60	20.60	7.86	7.86	7.86	34.47	34.47	34.47	55.4	55.7	55.9	4.04	4.01	4.06	2.96	2.49	2.71	8	8.50
	15:10		Middle	1.5	20.60	20.60		7.86	7.86		34.47	34.47		56.1	56.2		4.09	4.10		2.78	2.62		9	
25/3/2013	16:23	Cloudy	Middle	1.5	20.90	20.90	20.90	7.77	7.77	7.77	34.25	34.25	34.25	54.9	55.3	55.4	4.02	4.05	4.06	1.77	1.59	1.67	<2	<2
	16:25		Middle	1.5	20.90	20.90		7.77	7.77		34.25	34.25		55.1	56.1		4.04	4.11		1.68	1.65		<2	
27/3/2013	17:04	Cloudy	Middle	2.0	20.70	20.70	20.70	7.84	7.84	7.85	34.63	34.63	34.64	64.0	64.0	63.8	4.68	4.68	4.67	2.12	2.10	2.09	7	6.50
	17:06		Middle	2.0	20.70	20.70		7.85	7.85		34.64	34.64		63.7	63.6		4.66	4.66		2.08	2.06		6	

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	Sampling Depth		Water Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		Suspended Solids mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	9:50	Fine	Middle	1.5	19.50	19.50	19.51	7.86	7.86	7.86	33.04	33.04	33.04	83.7	83.7	83.7	6.32	6.32	6.32	5.01	4.95	5.04	6	6.50
	9:52		Middle	1.5	19.51	19.51		7.86	7.86		33.03	33.03		83.7	83.6		6.32	6.31		5.06	5.13		7	
4/3/2013	11:21	Fine	Middle	1.5	18.59	18.59	18.58	8.02	8.02	8.01	33.28	33.28	33.30	82.6	82.5	82.1	6.34	6.33	6.30	4.45	4.42	4.43	<2	<2
	11:23		Middle	1.5	18.57	18.57		8.00	8.00		33.31	33.31		81.7	81.6		6.27	6.26		4.42	4.43		<2	
6/3/2013	13:09	Fine	Middle	1.5	19.06	19.06	19.10	7.99	7.99	7.99	33.54	33.54	33.53	88.6	88.0	87.7	6.70	6.68	6.57	2.75	2.66	2.68	7	6.00
	13:11		Middle	1.5	19.14	19.14		7.98	7.98		33.51	33.51		87.3	87.0		6.30	6.60		2.65	2.64		5	
8/3/2013	15:31	Fine	Middle	1.5	20.05	20.05	20.04	7.72	7.72	7.73	33.22	33.22	33.22	77.3	75.8	75.3	5.77	5.66	5.63	1.67	1.61	1.62	3	3.00
	15:33		Middle	1.5	20.02	20.02		7.73	7.73		33.22	33.22		74.6	73.6		5.57	5.50		1.56	1.64		3	
11/3/2013	19:23	Misty	Middle	1.5	19.40	19.40	19.40	8.02	8.02	8.02	32.55	32.55	32.57	76.3	76.9	77.0	5.79	5.84	5.85	3.20	3.47	3.22	8	7.00
	19:24		Middle	1.5	19.40	19.40		8.02	8.02		32.58	32.58		77.4	77.3		5.88	5.87		3.13	3.09		6	
13/3/2013	19:30	Cloudy	Middle	1.5	21.10	21.10	21.20	8.01	8.01	8.01	32.48	32.48	32.47	77.2	77.5	77.3	5.66	5.68	5.67	3.91	3.85	3.86	4	3.00
	19:31		Middle	1.5	21.30	21.30		8.01	8.01		32.45	32.45		77.5	77.1		5.68	5.65		3.87	3.81		2	
15/3/2013	8:32	Fine	Middle	1.5	19.04	19.04	19.05	8.08	8.08	8.08	33.51	33.51	33.52	76.9	76.0	76.0	5.84	5.77	5.77	2.33	2.19	2.30	7	6.50
	8:34		Middle	1.5	19.05	19.05		8.08	8.08		33.52	33.52		75.7	75.4		5.75	5.72		2.36	2.30		6	
18/3/2013	10:09	Fine	Middle	1.5	20.90	20.90	20.91	7.90	7.90	7.90	33.29	33.29	33.30	73.0	72.0	71.7	5.36	5.29	5.27	1.61	1.58	1.54	2	2.00
	10:11		Middle	1.5	20.92	20.92		7.89	7.89		33.30	33.30		71.2	70.5		5.23	5.18		1.45	1.50		2	
21/3/2013	8:20	Cloudy	Middle	1.5	21.24	21.24	21.25	7.87	7.87	7.87	32.94	32.94	32.93	66.3	65.5	65.5	4.85	4.80	4.79	2.62	2.67	2.55	<2	<2
	8:22		Middle	1.5	21.25	21.25		7.86	7.86		32.91	32.91		65.2	64.9		4.77	4.75		2.54	2.36		<2	
23/3/2013	15:15	Fine	Middle	1.5	21.90	21.90	21.91	7.88	7.88	7.88	33.64	33.64	33.64	66.5	66.1	65.9	4.79	4.76	4.74	2.55	2.69	2.64	3	3.50
	15:17		Middle	1.5	21.91	21.91		7.87	7.87		33.63	33.63		65.6	65.3		4.72	4.70		2.56	2.76		4	
25/3/2013	15:25	Cloudy	Middle	1.5	20.89	20.89	20.88	7.89	7.89	7.89	33.57	33.57	33.58	61.6	61.4	60.6	4.52	4.49	4.45	0.88	0.99	0.86	<2	<2
	15:27		Middle	1.5	20.87	20.87		7.88	7.88		33.58	33.58		60.0	59.5		4.40	4.37		0.70	0.86		<2	
* 27/3/2013	17:31	Cloudy	Middle	1.5	20.60	20.60	20.60	7.85	7.85	7.86	34.84	34.84	34.84	69.7	69.5	69.4	5.11	5.10	5.10	3.05	3.01	3.00	8	8.00
	17:33		Middle	1.5	20.60	20.60		7.86	7.86		34.84	34.84		69.4	69.1		5.10	5.08		2.98	2.97		8	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.

*Due to blockage of the road access to C5e on 27 Mar 2013 during flood tide,

the water quality monitoring was cancelled at C5e 4 Feb 2013 during flood tide.

The sample taken at temporary water quality monitoring location C5a and present as C5e



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
			m		°C		-		ppt		%		mg/L		NTU		mg/L							
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average						
1/3/2013	9:53	Fine	Middle	1.5	19.36	19.36	19.36	7.90	7.90	7.90	33.07	33.07	33.07	87.5	87.5	87.5	6.62	6.62	6.62	9.69	9.70	<u>9.65</u>	12	13.00
	9:55		Middle	1.5	19.36	19.36		7.90	7.90		33.07	33.07		87.4	87.4		6.61	6.61		9.65	9.54		14	
4/3/2013	11:25	Fine	Middle	1.5	18.57	18.57	18.58	8.01	8.01	8.01	33.32	33.32	33.32	79.9	79.8	79.6	6.13	6.12	6.11	4.34	4.32	4.31	3	3.00
	11:27		Middle	1.5	18.59	18.59		8.01	8.01		33.32	33.32		79.4	79.4		6.09	6.09		4.30	4.29		3	
6/3/2013	13:04	Fine	Middle	1.5	19.26	19.26	19.34	8.01	8.01	8.01	33.60	33.60	33.61	95.1	94.3	94.0	7.19	7.13	7.10	2.52	2.52	2.52	6	5.50
	13:06		Middle	1.5	19.41	19.41		8.00	8.00		33.62	33.62		93.6	93.0		7.07	7.02		2.52	2.51		5	
8/3/2013	15:27	Fine	Middle	1.5	20.52	20.52	20.53	7.85	7.85	7.84	33.44	33.44	33.42	82.7	82.1	81.8	6.10	6.05	6.03	3.45	3.46	3.44	4	4.50
	15:29		Middle	1.5	20.53	20.53		7.83	7.83		33.40	33.40		81.5	81.0		6.01	5.97		3.43	3.42		5	
11/3/2013	19:30	Misty	Middle	1.5	19.40	19.40	19.40	8.01	8.01	8.01	32.45	32.45	32.45	83.8	83.9	83.8	6.36	6.37	6.37	3.00	3.27	3.02	6	5.50
	19:31		Middle	1.5	19.40	19.40		8.01	8.01		32.45	32.45		83.9	83.7		6.37	6.36		2.94	2.88		5	
13/3/2013	19:36	Cloudy	Middle	1.5	21.30	21.30	21.35	8.01	8.01	8.01	32.48	32.48	32.45	78.4	78.9	78.9	5.75	5.80	5.78	7.53	6.89	7.05	6	5.50
	19:37		Middle	1.5	21.40	21.40		8.01	8.01		32.41	32.41		80.0	78.3		5.85	5.73		7.02	6.76		5	
15/3/2013	8:29	Fine	Middle	1.5	19.19	19.19	19.18	8.07	8.07	8.07	33.50	33.50	33.50	78.4	78.1	77.9	5.94	5.92	5.91	3.38	3.58	3.37	6	5.50
	8:31		Middle	1.5	19.16	19.16		8.06	8.06		33.50	33.50		77.6	77.4		5.89	5.87		3.31	3.20		5	
18/3/2013	10:05	Fine	Middle	1.5	20.95	20.95	20.96	7.95	7.95	7.94	33.38	33.38	33.36	83.7	82.8	82.3	6.14	6.07	6.04	2.41	2.29	2.34	6	5.00
	10:07		Middle	1.5	20.96	20.96		7.90	7.94		33.33	33.33		82.0	80.7		6.01	5.92		2.36	2.30		4	
21/3/2013	8:25	Cloudy	Middle	1.5	21.13	21.13	21.14	7.80	7.80	7.80	32.89	32.89	32.90	56.8	56.4	56.3	4.17	4.14	4.13	1.41	1.35	1.37	4	4.00
	8:27		Middle	1.5	21.14	21.14		7.79	7.79		32.90	32.90		56.1	55.8		4.12	4.10		1.37	1.33		4	
23/3/2013	15:10	Fine	Middle	1.5	21.76	21.76	21.77	7.88	7.88	7.88	33.70	33.70	33.68	68.8	68.3	68.0	4.97	4.92	4.91	4.62	4.63	4.62	8	8.00
	15:12		Middle	1.5	21.78	21.78		7.87	7.87		33.66	33.66		67.7	67.2		4.88	4.85		4.63	4.61		8	
25/3/2013	15:30	Cloudy	Middle	1.5	20.77	20.77	20.76	7.81	7.81	7.81	33.40	33.40	33.40	50.0	49.5	49.3	3.68	3.64	3.63	0.22	0.31	0.27	3	3.00
	15:32		Middle	1.5	20.78	20.70		7.80	7.80		33.39	33.39		49.0	48.8		3.60	3.59		0.24	0.32		3	
★ 27/3/2013	-	Cloudy	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.

*Due to blockage of the road access to C5w on 27 Mar 2013 during flood tide, the water quality monitoring was cancelled at C5w 4 Feb 2013 during flood tide.

The sample taken at temporary water quality monitoring location C5a and present as C5e



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-		ppt		%		mg/L		NTU			mg/L					
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	8:42	Fine	Middle	2.0	18.90	18.90	18.90	7.96	7.96	7.93	34.14	34.14	34.14	72.8	71.6	72.4	5.52	5.43	5.49	1.54	1.67	1.59	3	3.00
	8:44		Middle	2.0	18.90	18.90		7.90	7.90		34.13	34.13		73.2	72.1		5.55	5.47		1.56	1.60		3	
4/3/2013	10:20	Fine	Middle	1.5	17.80	17.80	17.75	7.90	7.90	7.91	34.36	34.36	34.37	75.6	73.5	74.4	5.84	5.70	5.77	3.22	3.20	3.21	7	7.50
	10:22		Middle	1.5	17.70	17.70		7.92	7.92		34.37	34.37		74.4	73.9		5.78	5.74		3.17	3.25		8	
6/3/2013	11:33	Fine	Middle	1.5	18.10	18.10	18.10	8.22	8.22	8.22	34.50	34.50	34.50	78.6	78.8	78.8	6.05	6.06	6.07	2.74	2.80	2.82	3	4.00
	11:35		Middle	1.5	18.10	18.10		8.22	8.22		34.50	34.50		79.0	78.9		6.09	6.08		3.02	2.71		5	
8/3/2013	15:02	Fine	Middle	1.5	19.50	19.50	19.50	7.98	7.98	7.98	34.34	34.34	34.34	66.9	66.4	66.6	5.00	4.96	4.98	3.09	2.97	3.08	5	5.50
	15:04		Middle	1.5	19.50	19.50		7.98	7.98		34.34	34.34		66.5	66.6		4.97	4.97		3.35	2.89		6	
11/3/2013	18:31	Misty	Middle	2.0	19.30	19.30	19.25	7.83	7.83	7.83	34.23	34.23	34.23	70.6	70.4	70.3	5.32	5.31	5.31	3.27	3.23	3.23	7	6.50
	18:33		Middle	2.0	19.20	19.20		7.82	7.82		34.23	34.23		70.3	70.0		5.31	5.29		3.21	3.19		6	
13/3/2013	17:28	Cloudy	Middle	1.0	21.00	21.00	21.00	7.84	7.84	7.84	34.24	34.24	34.24	61.6	61.3	61.3	4.49	4.47	4.47	5.40	5.38	5.36	16	16.50
	17:30		Middle	1.0	21.00	21.00		7.84	7.84		34.24	34.24		61.2	61.0		4.47	4.46		5.33	5.31		17	
15/3/2013	9:19	Fine	Middle	2.0	18.90	18.90	18.85	7.86	7.86	7.87	34.44	34.44	34.44	61.2	61.0	61.3	4.64	4.63	4.65	2.97	2.88	2.91	3	3.50
	9:21		Middle	2.0	18.80	18.80		7.87	7.87		34.44	34.44		61.8	61.1		4.69	4.64		2.82	2.95		4	
18/3/2013	9:43	Fine	Middle	2.0	20.50	20.50	20.50	7.95	7.95	7.95	34.15	34.15	34.15	56.5	56.4	56.3	4.14	4.13	4.12	4.51	4.43	4.35	7	7.50
	9:45		Middle	2.0	20.50	20.50		7.95	7.95		34.15	34.15		56.0	56.2		4.10	4.12		4.09	4.35		8	
21/3/2013	8:43	Cloudy	Middle	2.0	21.00	21.00	21.05	7.79	7.79	7.77	33.81	33.81	33.81	51.1	51.5	51.5	3.74	3.76	3.76	3.53	3.43	3.50	2	2.50
	8:45		Middle	2.0	21.10	21.10		7.75	7.75		33.81	33.81		51.5	51.9		3.76	3.79		3.48	3.55		3	
23/3/2013	14:25	Fine	Middle	1.5	21.00	21.00	21.00	7.95	7.95	7.95	34.57	34.57	34.57	66.9	67.0	67.2	4.55	4.56	4.72	4.08	4.10	4.01	4	4.50
	14:27		Middle	1.5	21.00	21.00		7.95	7.95		34.57	34.57		67.6	67.2		4.90	4.88		3.92	3.94		5	
25/3/2013	16:43	Cloudy	Middle	1.5	20.80	20.80	20.80	7.75	7.75	7.75	34.47	34.47	34.47	55.6	55.7	56.0	4.07	4.08	4.12	1.57	1.48	1.48	4	4.00
	16:45		Middle	1.5	20.80	20.80		7.75	7.75		34.47	34.47		56.0	56.8		4.16	4.16		1.45	1.43		4	
27/3/2013	17:42	Cloudy	Middle	1.5	20.60	20.60	20.60	7.84	7.84	7.84	34.73	34.73	34.73	67.8	67.5	67.4	4.97	4.95	4.95	3.45	3.42	3.41	12	12.00
	17:45		Middle	1.5	20.60	20.60		7.84	7.84		34.73	34.73		67.3	67.1		4.94	4.93		3.38	3.37		12	

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	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids	
					°C		-		ppt		%		mg/L		NTU		mg/L	
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1/3/2013	9:30	Fine	Middle	2.5	19.40	19.40	7.87	7.87	33.11	33.11	83.8	83.4	6.34	6.29	8.96	8.85	8	7.50
	9:32		Middle	2.5	19.41	19.41	7.87	7.87	33.10	33.10	83.0	82.7	6.27	6.26	8.85	8.87	7	7.50
4/3/2013	10:45	Fine	Middle	3.0	18.38	18.38	7.99	7.99	33.37	33.37	90.5	89.4	6.96	6.88	1.80	1.75	9	9.00
	10:47		Middle	3.0	18.49	18.49	7.99	7.99	33.36	33.36	88.6	88.2	6.81	6.78	1.72	1.72	9	9.00
6/3/2013	12:05	Fine	Middle	3.0	18.88	18.88	7.99	7.99	33.58	33.58	98.7	97.2	7.51	7.40	5.75	5.74	11	10.50
	12:07		Middle	3.0	18.89	18.89	7.99	7.99	33.55	33.55	96.6	95.6	7.35	7.28	5.74	5.73	10	10.50
8/3/2013	15:01	Fine	Middle	2.5	20.01	20.01	7.83	7.83	33.42	33.42	87.8	87.6	6.55	6.54	5.32	5.31	9	8.50
	15:03		Middle	2.5	20.03	20.03	7.82	7.82	33.41	33.39	87.5	87.3	6.53	6.51	5.30	5.29	8	8.50
11/3/2013	20:05	Misty	Middle	2.0	19.10	19.10	8.00	8.00	32.37	32.37	83.9	84.0	6.40	6.41	5.31	5.21	8	8.50
	20:06		Middle	2.0	19.10	19.10	8.01	8.01	32.37	32.37	84.2	84.0	6.42	6.41	5.03	4.98	9	8.50
13/3/2013	20:12	Cloudy	Middle	2.0	20.60	20.60	8.05	8.05	32.35	32.35	77.9	77.9	5.79	5.78	4.36	4.28	4	4.00
	20:13		Middle	2.0	20.70	20.70	8.05	8.05	32.33	32.33	77.7	77.1	5.77	5.73	4.85	4.37	4	4.00
15/3/2013	8:00	Fine	Middle	3.0	18.92	18.92	8.05	8.05	33.29	33.29	82.1	81.8	6.25	6.24	2.83	3.03	8	7.50
	8:02		Middle	3.0	18.91	18.91	8.05	8.05	33.30	33.30	81.6	81.5	6.22	6.10	2.92	3.21	7	7.50
18/3/2013	9:35	Fine	Middle	2.5	20.68	20.68	7.95	7.95	33.09	33.09	87.4	87.0	6.46	6.43	2.69	2.79	6	5.50
	9:37		Middle	2.5	20.67	20.67	7.94	7.94	33.11	33.11	86.6	86.2	6.40	6.37	2.66	2.84	5	5.50
21/3/2013	8:02	Cloudy	Middle	2.5	21.07	21.07	7.87	7.87	32.98	32.98	70.5	70.2	5.17	5.15	2.59	2.58	3	4.00
	8:04		Middle	2.5	21.06	21.06	7.86	7.86	32.98	32.98	70.0	69.7	5.14	5.12	2.57	2.67	5	4.00
23/3/2013	14:48	Fine	Middle	2.5	21.83	21.83	7.95	7.95	33.56	33.56	76.1	75.7	5.49	5.46	3.69	3.62	8	7.50
	14:50		Middle	2.5	21.88	21.88	7.94	7.94	33.54	33.54	75.4	75.2	5.44	5.42	3.63	3.46	7	7.50
25/3/2013	15:00	Cloudy	Middle	2.5	20.49	20.49	7.91	7.91	33.47	33.47	65.5	65.2	4.85	4.82	3.48	3.80	7	6.50
	15:02		Middle	2.5	20.50	20.50	7.91	7.91	33.44	33.44	64.5	64.1	4.77	4.74	3.24	3.08	6	6.50
27/3/2013	20:00	Cloudy	Middle	2.0	20.20	20.20	8.05	8.05	33.00	33.00	72.2	72.6	5.38	5.40	5.47	5.51	10	9.50
	20:01		Middle	2.0	20.30	20.30	8.06	8.05	33.00	33.00	73.3	73.3	5.46	5.45	5.38	5.10	9	9.50

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	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
					°C				ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	16:50	Fine	Middle	2.0	19.86	19.86	19.86	8.00	8.00	8.00	33.35	33.35	33.30	93.2	93.1	93.1	6.96	6.95	6.95	3.17	3.16	3.17	3	3.00
	16:52		Middle	2.0	19.86	19.86		8.00	8.00		33.24	33.24		93.0	93.0		6.94	6.95		3.17	3.18		3	
4/3/2013	19:38	Fine	Middle	2.5	17.52	17.52	17.50	8.05	8.05	8.05	33.60	33.60	33.60	95.6	95.3	95.1	7.48	7.46	7.44	1.51	1.54	1.58	4	4.50
	19:40		Middle	2.5	17.48	17.48		8.05	8.05		33.60	33.60		94.9	94.7		7.42	7.41		1.62	1.66		5	
6/3/2013	18:08	Fine	Middle	2.0	18.70	18.70	18.70	8.16	8.16	8.16	32.94	32.94	32.94	85.5	85.5	86.4	6.55	6.55	6.62	0.55	0.46	0.47	2	2.00
	18:09		Middle	2.0	18.70	18.70		8.16	8.16		32.94	32.94		87.5	87.2		6.70	6.68		0.38	0.48		2	
8/3/2013	21:53	Fine	Middle	2.0	19.80	19.80	19.80	8.01	8.01	8.02	32.59	32.59	32.65	86.6	87.0	86.8	6.52	6.55	6.54	1.29	1.37	1.14	6	5.00
	21:54		Middle	2.0	19.80	19.80		8.02	8.02		32.70	32.70		87.3	86.3		6.57	6.50		0.97	0.93		4	
11/3/2013	11:37	Fine	Middle	2.0	19.22	19.22	19.23	8.03	8.03	8.03	33.63	33.63	33.64	94.0	93.8	93.8	7.11	7.10	7.10	1.22	1.23	1.24	3	3.00
	11:39		Middle	2.0	19.23	19.23		8.03	8.03		33.64	33.64		93.7	93.6		7.09	7.08		1.26	1.26		3	
13/3/2013	10:45	Fine	Middle	2.5	20.64	20.64	20.72	8.10	8.10	8.10	34.05	34.05	34.04	81.2	80.9	80.8	5.96	5.94	5.93	2.13	2.09	2.09	3	3.00
	10:46		Middle	2.5	20.80	20.80		8.09	8.09		34.02	34.02		80.6	80.4		5.91	5.90		2.06	2.07		3	
15/3/2013	16:37	Fine	Middle	2.5	19.34	19.34	19.32	8.05	8.05	8.05	33.83	33.83	33.82	90.1	89.9	89.9	6.79	6.78	6.78	0.54	0.56	0.54	6	6.00
	16:39		Middle	2.5	19.30	19.30		8.04	8.04		33.81	33.81		89.8	89.7		6.77	6.76		0.56	0.51		6	
18/3/2013	18:37	Fine	Middle	2.0	21.51	21.51	21.52	7.86	7.86	7.86	33.50	33.50	33.52	79.2	79.1	78.9	5.75	5.74	5.73	2.35	2.25	2.27	4	4.50
	18:39		Middle	2.0	21.53	21.53		7.85	7.85		33.53	33.53		78.8	78.6		5.72	5.71		2.29	2.18		5	
20/3/2013	16:38	Cloudy	Middle	2.0	21.90	21.90	21.90	7.98	7.98	7.98	31.92	31.92	31.92	76.2	78.1	77.5	5.61	5.69	5.65	10.08	9.55	<u>9.68</u>	<2	<2
	16:39		Middle	2.0	21.90	21.90		7.98	7.98		31.92	31.93		78.0	77.5		5.66	5.63		9.48	9.59		<2	
23/3/2013	1:39	Cloudy	Middle	2.0	21.20	21.20	21.20	7.97	7.97	7.97	32.82	32.82	32.82	77.9	77.0	77.0	5.71	5.63	5.64	1.35	1.42	1.39	4	3.50
	1:40		Middle	2.0	21.20	21.20		7.97	7.97		32.82	32.82		76.4	76.8		5.59	5.62		1.37	1.40		3	
25/3/2013	9:15	Cloudy	Middle	2.5	20.69	20.69	20.70	8.13	8.13	8.12	34.16	34.16	34.16	70.5	70.5	69.7	5.17	5.17	5.11	1.70	1.83	1.76	2	2.00
	9:17		Middle	2.5	20.70	20.70		8.10	8.10		34.15	34.15		69.6	68.0		5.10	4.99		1.76	1.74		2	
27/3/2013	9:50	Fine	Middle	2.5	20.06	20.06	20.07	8.17	8.17	8.17	34.31	34.31	34.30	65.3	64.9	64.7	4.84	4.82	4.80	0.64	0.71	0.70	6	6.50
	9:52		Middle	2.5	20.08	20.08		8.16	8.16		34.29	34.29		64.3	64.2		4.77	4.76		0.73	0.72		7	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids	
			m		°C		-		ppt		%		mg/L		NTU		mg/L	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1/3/2013	14:55	Fine	Middle	3	19.50	19.50	8.02	8.02	33.26	33.26	79.3	79.5	5.94	5.95	3.72	3.72	4	4.00
	14:57		Middle	3	19.26	19.26	8.00	8.00	33.64	33.64	78.8	78.3	5.91	5.83	3.72	3.72	4	4.00
4/3/2013	17:50	Fine	Middle	2	17.99	17.99	8.08	8.08	33.65	33.65	93.7	93.5	7.25	7.22	4.48	4.29	5	5.00
	17:52		Middle	2	17.99	17.99	8.08	8.08	33.63	33.63	93.1	92.9	7.19	7.18	4.28	4.25	5	5.00
6/3/2013	19:32	Fine	Middle	3	18.30	18.30	8.16	8.16	32.88	32.88	89.0	88.5	6.88	6.84	2.45	2.21	4	4.00
	19:33		Middle	3	18.30	18.30	8.16	8.16	32.91	32.91	87.9	88.1	6.78	6.80	2.22	2.31	4	4.00
8/3/2013	23:45	Fine	Middle	3	19.20	19.20	8.03	8.03	32.66	32.66	85.8	86.4	6.54	6.58	4.70	4.87	4	4.00
	23:46		Middle	3	19.20	19.20	8.02	8.02	32.64	32.64	86.3	85.1	6.56	6.47	4.37	4.27	4	4.00
11/3/2013	10:05	Fine	Middle	3	18.87	18.87	8.06	8.06	33.98	33.98	93.0	92.8	7.06	7.05	1.34	1.35	4	4.50
	10:07		Middle	3	18.91	18.91	8.06	8.06	33.96	33.96	92.5	92.2	7.01	7.00	1.56	1.61	5	4.50
13/3/2013	14:40	Fine	Middle	3	20.84	20.84	7.86	7.86	33.57	33.57	88.0	87.6	6.46	6.43	2.15	2.20	4	3.50
	14:42		Middle	3	20.93	20.93	7.85	7.85	33.54	33.54	87.5	87.0	6.42	6.40	2.21	2.21	3	3.50
15/3/2013	15:09	Fine	Middle	3	19.54	19.54	8.06	8.06	34.23	34.23	95.1	95.1	7.12	7.12	1.13	1.14	5	4.50
	15:11		Middle	3	19.55	19.55	8.05	8.50	34.18	34.18	94.7	94.2	7.09	7.05	1.02	1.17	4	4.50
18/3/2013	16:45	Fine	Middle	3	21.25	21.25	7.85	7.85	33.52	33.52	83.9	83.0	6.11	6.04	3.56	3.55	3	3.50
	16:47		Middle	3	21.44	21.44	7.83	7.83	33.42	33.42	82.6	81.9	6.01	5.96	3.45	3.20	4	3.50
20/3/2013	18:15	Cloudy	Middle	3	22.10	22.10	7.95	7.95	32.08	32.08	71.6	71.7	5.18	5.19	4.06	4.02	<2	<2
	18:16		Middle	3	22.20	22.20	7.96	7.96	32.06	32.06	71.9	71.8	5.20	5.20	4.12	4.10	<2	<2
23/3/2013	23:35	Cloudy	Middle	3	21.40	21.40	7.99	7.99	32.94	32.94	75.3	75.2	5.50	5.56	3.37	3.66	3	3.00
	23:36		Middle	3	21.40	21.40	7.99	7.99	32.93	32.93	75.4	74.9	5.50	5.46	3.46	3.23	3	3.00
25/3/2013	10:45	Cloudy	Middle	3	20.34	20.34	8.04	8.04	33.76	33.76	66.3	66.2	4.91	4.90	1.42	1.26	3	2.50
	10:47		Middle	3	20.35	20.35	8.04	8.04	33.76	33.76	65.9	65.7	4.88	4.86	1.20	1.28	2	2.50
27/3/2013	11:15	Fine	Middle	3	20.25	20.25	8.11	8.11	34.21	34.21	69.1	68.9	5.11	5.10	1.19	1.38	7	6.50
	11:17		Middle	3	20.27	20.27	8.11	8.11	34.20	34.20	68.7	68.6	5.08	5.07	1.36	1.37	6	6.50

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at C9 - Provident Centre
Mid-Ebb Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
1/3/2013	14:35	Fine	Middle	2	19.60	19.60	19.63	8.01	8.01	8.01	33.24	33.24	33.23	87.5	87.1	87.0	6.59	6.56	6.55	3.61	3.60	3.60	6	6.00
	14:37		Middle	2	19.66	19.66		8.00	8.00		33.21	33.21		86.8	86.5		6.53	6.51		3.60	3.59		6	
4/3/2013	17:35	Fine	Middle	2	18.04	18.04	18.07	8.04	8.04	8.03	33.47	33.47	33.46	96.1	95.7	95.5	7.44	7.41	7.39	5.62	5.57	5.59	7	7.50
	17:38		Middle	2	18.09	18.09		8.02	8.02		33.44	33.44		95.4	94.8		7.38	7.34		5.56	5.59		8	
6/3/2013	19:15	Fine	Middle	2	18.80	18.80	18.80	8.13	8.13	8.13	32.74	32.74	32.77	86.1	86.0	86.3	6.59	6.59	6.61	3.68	3.70	3.64	5	5.00
	19:16		Middle	2	18.80	18.80		8.12	8.12		32.80	32.80		86.6	86.5		6.63	6.62		3.62	3.56		5	
8/3/2013	23:25	Fine	Middle	2	19.00	19.00	19.00	7.97	7.97	7.97	32.57	32.57	32.57	82.2	82.5	82.8	6.28	6.30	6.33	5.08	5.03	4.89	7	8.00
	23:26		Middle	2	19.00	19.00		7.97	7.97		32.57	32.57		83.4	83.1		6.37	6.35		4.75	4.70		9	
11/3/2013	14:00	Fine	Middle	2	19.69	19.69	19.73	7.95	7.95	7.95	33.62	33.62	33.60	95.0	94.2	94.3	7.12	7.06	7.06	6.16	6.13	6.09	9	9.00
	14:02		Middle	2	19.77	19.77		7.94	7.94		33.57	33.57		94.0	93.8		7.04	7.03		6.04	6.03		9	
13/3/2013	15:43	Fine	Middle	2	20.20	20.20	20.30	8.14	8.14	8.14	34.50	34.50	34.51	65.0	64.8	64.8	4.88	4.87	4.87	3.30	3.33	3.32	4	4.50
	15:45		Middle	2	20.40	20.40		8.13	8.13		34.52	34.52		64.7	64.5		4.87	4.86		3.36	3.30		5	
15/3/2013	14:48	Fine	Middle	2	19.96	19.96	19.98	8.02	8.02	8.02	33.94	33.94	33.92	89.0	88.9	88.7	6.63	6.62	6.60	1.60	1.65	1.66	3	4.00
	14:50		Middle	2	19.99	19.99		8.01	8.01		33.90	33.90		88.5	88.2		6.59	6.57		1.65	1.72		5	
18/3/2013	16:30	Fine	Middle	2	21.43	21.43	21.54	7.84	7.84	7.82	33.55	33.55	33.58	90.6	88.9	88.6	6.58	6.45	6.43	3.99	4.11	4.07	5	5.50
	16:32		Middle	2	21.64	21.64		7.79	7.79		33.60	33.60		88.1	86.9		6.38	6.30		4.20	3.98		6	
20/3/2013	17:57	Cloudy	Middle	2	22.10	22.10	22.15	7.94	7.94	7.94	32.20	32.24	32.23	72.1	72.5	72.6	5.21	5.24	5.25	5.27	5.21	5.13	6	5.50
	17:58		Middle	2	22.20	22.20		7.93	7.93		32.23	32.23		73.0	72.7		5.28	5.26		5.02	5.00		5	
23/3/2013	23:03	Cloudy	Middle	2	21.50	21.50	21.50	8.03	8.03	8.03	32.99	32.99	32.98	76.8	77.1	76.8	5.69	5.71	5.64	6.67	6.84	6.72	8	8.00
	23:04		Middle	2	21.50	21.50		8.03	8.03		32.97	32.97		77.3	76.0		5.63	5.53		6.70	6.68		8	
25/3/2013	12:43	Cloudy	Middle	2	20.68	20.68	20.73	7.98	7.98	7.98	33.80	33.80	33.79	72.7	71.2	70.9	5.34	5.25	5.21	2.62	2.57	2.56	4	4.50
	12:45		Middle	2	20.77	20.77		7.97	7.97		33.77	33.77		70.0	69.5		5.15	5.11		2.53	2.53		5	
27/3/2013	12:20	Fine	Middle	2	20.10	20.10	20.15	7.92	7.92	7.93	34.94	34.94	34.94	74.4	74.1	74.7	5.49	5.47	5.51	5.81	5.74	5.76	8	8.00
	12:22		Middle	2	20.20	20.20		7.93	7.93		34.93	34.93		74.9	75.2		5.53	5.56		5.72	5.78		8	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C8 - City Garden
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids	
			m		°C		-		ppt		%		mg/L		NTU		mg/L	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1/3/2013	14:17	Fine	Middle	2	19.40	19.40	7.98	7.98	33.27	33.27	84.7	84.4	6.40	6.37	4.09	4.10	5	5.00
	14:19		Middle	2	19.46	19.46	7.98	7.98	33.23	33.23	83.9	84.2	6.34	6.35	4.09	4.09	5	5.00
4/3/2013	17:25	Fine	Middle	2	18.17	18.17	8.03	8.03	33.27	33.27	94.7	94.3	7.32	7.29	5.19	5.12	7	6.50
	17:27		Middle	2	18.19	18.19	8.02	8.02	33.26	33.26	93.6	93.3	7.24	7.22	5.10	5.09	6	6.50
6/3/2013	19:07	Fine	Middle	2	18.60	18.60	8.08	8.08	32.36	32.40	81.4	81.5	6.27	6.27	5.24	5.31	4	4.50
	19:08		Middle	2	18.60	18.60	8.07	8.07	32.40	32.40	81.7	81.6	6.29	6.28	5.33	5.20	5	4.50
8/3/2013	23:10	Fine	Middle	2	19.10	19.10	7.97	7.97	32.53	32.53	79.9	80.6	6.10	6.15	7.96	7.83	9	8.50
	23:11		Middle	2	19.10	19.10	7.97	7.97	32.53	32.53	80.8	80.4	6.17	6.13	7.40	7.31	8	8.50
11/3/2013	13:45	Fine	Middle	2	19.70	19.70	7.96	7.96	33.66	33.66	95.3	94.1	7.14	7.05	5.93	5.89	11	11.50
	13:47		Middle	2	19.94	19.94	7.95	7.95	33.55	33.55	93.6	93.1	7.00	6.97	5.84	5.85	12	11.50
13/3/2013	15:49	Fine	Middle	2	20.20	20.20	7.91	7.91	34.39	34.39	65.1	65.2	4.88	4.89	4.26	4.39	5	4.50
	15:51		Middle	2	20.50	20.50	7.90	7.90	34.35	34.36	66.0	65.3	4.94	4.89	4.49	4.53	4	4.50
15/3/2013	14:33	Fine	Middle	2	20.48	20.48	8.00	8.00	33.83	33.83	89.3	89.1	6.59	6.57	2.19	2.18	5	4.50
	14:35		Middle	2	20.63	20.63	7.99	7.99	33.72	33.72	88.6	88.4	6.53	6.52	2.09	2.10	4	4.50
18/3/2013	16:15	Fine	Middle	2	21.43	21.43	7.81	7.81	33.54	33.54	88.6	87.0	6.43	6.31	3.66	3.84	6	6.00
	16:17		Middle	2	21.63	21.63	7.77	7.77	33.49	33.49	86.4	85.8	6.27	6.22	3.77	3.56	6	6.00
20/3/2013	17:45	Cloudy	Middle	2	22.80	22.80	7.87	7.87	31.52	31.52	63.3	63.4	4.54	4.55	7.32	7.50	6	6.50
	17:46		Middle	2	22.80	22.80	7.86	7.86	31.52	31.52	64.6	64.2	4.64	4.60	7.30	7.09	7	6.50
23/3/2013	22:42	Cloudy	Middle	2	21.50	21.50	7.99	7.99	32.72	32.72	70.5	70.5	5.14	5.14	7.52	7.97	8	8.50
	22:43		Middle	2	21.50	21.50	7.99	7.99	32.72	32.72	68.7	68.7	5.01	5.01	7.17	7.24	9	8.50
25/3/2013	12:30	Cloudy	Middle	2	20.85	20.85	7.94	7.94	33.44	33.44	65.1	67.1	4.78	4.93	3.39	3.39	4	4.50
	12:32		Middle	2	20.89	20.88	7.93	7.93	33.42	33.42	66.7	65.8	4.90	4.83	3.41	3.36	5	4.50
27/3/2013	12:25	Fine	Middle	2	20.30	20.30	7.95	7.95	34.88	34.88	76.4	75.6	5.57	5.52	4.95	4.91	13	13.50
	12:26		Middle	2	20.40	20.40	7.95	7.95	34.91	34.91	75.1	76.2	5.52	5.60	4.84	4.88	14	13.50

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
			m		°C		-		ppt		%		mg/L		NTU		mg/L							
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average						
1/3/2013	14:00	Fine	Middle	2	19.46	19.46	19.49	7.92	7.92	7.92	32.95	32.95	32.95	80.1	80.0	79.9	6.05	6.04	6.03	3.49	3.49	3.49	5	5.00
	14:02		Middle	2	19.51	19.51		7.92	7.92		32.95	32.95		79.8	79.6		6.03	6.01		3.49	3.49		5	
4/3/2013	17:05	Fine	Middle	2	17.87	17.87	17.87	7.95	7.95	7.95	33.12	33.12	33.11	92.6	92.4	92.4	7.21	7.19	7.19	1.68	1.68	1.68	3	2.50
	17:07		Middle	2	17.87	17.87		7.95	7.95		33.09	33.09		92.3	92.1		7.18	7.16		1.68	1.68		2	
6/3/2013	18:44	Fine	Middle	1	18.60	18.60	18.65	8.01	8.01	8.01	31.82	31.82	31.82	88.2	88.5	88.8	6.81	6.84	6.86	5.51	5.56	5.55	4	4.50
	18:45		Middle	1	18.70	18.70		8.01	8.01		31.82	31.82		89.3	89.3		6.90	6.90		5.53	5.58		5	
8/3/2013	22:39	Fine	Middle	1	19.30	19.30	19.30	7.85	7.85	7.85	31.18	31.18	31.19	85.6	85.3	85.4	6.56	6.53	6.54	4.40	4.86	4.66	3	3.50
	22:40		Middle	1	19.30	19.30		7.85	7.85		31.19	31.19		85.5	85.3		6.55	6.53		4.77	4.61		4	
11/3/2013	13:27	Fine	Middle	2	19.78	19.78	19.80	7.85	7.85	7.85	32.77	32.77	32.78	87.0	86.9	86.9	6.54	6.53	6.53	5.90	5.91	5.91	10	9.50
	13:29		Middle	2	19.81	19.81		7.84	7.84		32.78	32.78		86.8	86.7		6.53	6.52		5.92	5.92		9	
13/3/2013	15:35	Fine	Middle	2	21.50	21.50	21.50	7.80	7.80	7.81	33.31	33.32	33.32	67.1	67.2	67.3	5.00	5.01	5.01	2.50	2.50	2.56	2	2.50
	15:37		Middle	2	21.50	21.50		7.81	7.81		33.32	33.32		67.3	67.5		5.01	5.02		2.68	2.55		3	
15/3/2013	14:22	Fine	Middle	2	20.35	20.35	20.35	7.95	7.95	7.95	33.29	33.29	33.29	84.0	83.5	83.6	6.24	6.20	6.21	2.28	2.24	2.30	4	3.50
	14:24		Middle	2	20.35	20.35		7.94	7.94		33.29	33.29		83.5	83.3		6.20	6.18		2.34	2.34		3	
18/3/2013	16:02	Fine	Middle	2	21.93	21.93	21.98	7.71	7.71	7.70	32.72	32.72	32.74	73.6	73.2	73.2	5.33	5.30	5.30	2.16	2.37	2.36	3	3.50
	16:04		Middle	2	22.02	22.02		7.68	7.68		32.75	32.75		73.0	72.8		5.28	5.29		2.54	2.36		4	
20/3/2013	17:13	Cloudy	Middle	1	22.10	22.10	22.10	7.81	7.81	7.81	30.94	30.94	30.94	67.1	67.4	67.2	4.88	4.90	4.89	12.10	11.70	<u>11.59</u>	4	4.00
	17:14		Middle	1	22.10	22.10		7.81	7.81		30.94	30.94		67.4	66.9		4.91	4.87		11.30	11.26		4	
23/3/2013	21:40	Cloudy	Middle	1	21.70	21.70	21.70	7.74	7.74	7.74	31.36	31.36	31.36	61.4	61.6	61.3	4.49	4.52	4.49	4.35	4.23	4.21	6	5.50
	21:41		Middle	1	21.70	21.70		7.73	7.73		31.36	31.36		62.0	60.3		4.54	4.42		4.17	4.09		5	
25/3/2013	12:03	Cloudy	Middle	2	21.03	21.03	21.04	7.83	7.83	7.82	33.20	33.20	33.19	64.0	63.4	63.3	4.69	4.65	4.65	0.99	1.00	1.05	<2	<2
	12:05		Middle	2	21.05	21.05		7.81	7.81		33.18	33.18		63.2	62.7		4.64	4.60		1.05	1.14		<2	
27/3/2013	12:09	Fine	Middle	2	20.20	20.20	20.15	7.84	7.84	7.84	33.74	33.74	33.75	62.8	62.0	62.2	4.67	4.61	4.63	2.22	2.21	2.26	4	4.00
	12:10		Middle	2	20.10	20.10		7.83	7.83		33.75	33.75		62.6	61.4		4.65	4.57		2.34	2.25		4	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C1 - HKCEC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids							
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
1/3/2013	14:49	Fine	Middle	2.0	19.50	19.50	19.50	7.96	7.96	7.97	34.33	34.33	34.33	85.3	84.4	84.7	6.39	6.32	6.34	1.81	1.85	1.79	4	4.00
	14:51		Middle	2.0	19.50	19.50		7.97	7.97		34.33	34.33		84.6	84.3		6.33	6.31		1.77	1.74		4	
4/3/2013	16:13	Fine	Middle	1.5	18.10	18.10	18.05	7.90	7.90	7.90	34.55	34.55	34.56	82.3	81.9	81.9	6.33	6.30	6.30	2.91	2.88	2.95	4	3.50
	16:15		Middle	1.5	18.00	18.00		7.89	7.89		34.56	34.56		81.9	81.3		6.31	6.25		3.05	2.94		3	
6/3/2013	21:20	Fine	Middle	2.5	18.10	18.10	18.05	7.97	7.97	7.96	34.78	34.78	34.79	84.4	84.3	84.2	6.48	6.48	6.47	3.92	3.89	3.88	3	3.00
	21:22		Middle	2.5	18.00	18.00		7.95	7.95		34.79	34.79		84.1	83.9		6.47	6.46		3.87	3.85		3	
8/3/2013	22:29	Fine	Middle	2.0	18.20	18.20	18.10	7.84	7.84	7.84	34.42	34.42	34.43	77.3	77.1	77.0	5.95	5.94	5.94	2.24	2.21	2.19	4	5.00
	22:31		Middle	2.0	18.00	18.00		7.84	7.84		34.43	34.43		76.8	76.6		5.93	5.92		2.19	2.13		6	
11/3/2013	12:00	Fine	Middle	2.0	19.00	19.00	19.00	8.06	8.06	8.06	34.41	34.41	34.41	72.6	72.9	72.8	5.49	5.51	5.50	2.82	2.96	2.78	5	4.50
	12:02		Middle	2.0	19.00	19.00		8.05	8.05		34.41	34.41		73.0	72.6		5.52	5.49		2.79	2.56		4	
13/3/2013	14:30	Fine	Middle	1.5	20.40	20.40	20.55	7.96	7.96	7.95	34.36	34.36	34.34	45.9	45.6	45.6	3.38	3.35	<u>3.35</u>	3.26	3.51	3.29	8	8.50
	14:32		Middle	1.5	20.70	20.70		7.93	7.93		34.32	34.32		45.4	45.3		3.33	3.32		3.31	3.09		9	
15/3/2013	14:30	Fine	Middle	1.5	19.60	19.60	19.60	7.91	7.91	7.92	34.55	34.55	34.56	68.8	68.2	68.9	5.14	5.09	5.13	2.71	2.61	2.67	5	5.50
	14:32		Middle	1.5	19.60	19.60		7.92	7.92		34.57	34.57		70.0	68.4		5.17	5.10		2.69	2.66		6	
18/3/2013	15:50	Fine	Middle	1.5	21.00	21.00	21.00	8.00	8.00	8.00	34.25	34.25	34.25	69.2	69.4	68.9	5.02	5.04	4.99	3.70	3.86	3.68	5	5.00
	15:52		Middle	1.5	21.00	21.00		8.00	8.00		34.25	34.25		68.4	68.6		4.95	4.96		3.54	3.62		5	
20/3/2013	19:07	Cloudy	Middle	2.5	20.90	20.90	20.80	7.79	7.79	7.80	33.90	33.90	33.91	70.3	70.1	70.0	5.13	5.12	5.11	4.20	4.17	4.16	4	4.00
	19:09		Middle	2.5	20.70	20.70		7.80	7.80		33.91	33.91		69.8	69.7		5.10	5.08		4.15	4.11		4	
23/3/2013	22:20	Cloudy	Middle	2.5	20.60	20.60	20.60	7.80	7.80	7.80	34.74	34.74	34.74	73.7	73.5	73.4	5.35	5.34	5.34	2.38	2.37	2.35	3	3.50
	22:22		Middle	2.5	20.60	20.60		7.80	7.80		34.73	34.73		73.3	73.1		5.33	5.32		2.34	2.29		4	
25/3/2013	11:00	Cloudy	Middle	2.0	20.60	20.60	20.60	7.84	7.84	7.84	34.58	34.58	34.58	66.4	66.6	66.6	4.87	4.88	4.88	3.01	2.95	2.95	4	3.50
	11:02		Middle	2.0	20.60	20.60		7.84	7.84		34.58	34.58		66.5	66.8		4.87	4.90		2.93	2.90		3	
27/3/2013	11:07	Fine	Middle	1.5	20.20	20.20	20.20	7.90	7.90	7.90	34.92	34.92	34.93	79.6	78.0	78.9	5.87	5.74	5.81	2.40	2.47	2.42	8	8.50
	11:09		Middle	1.5	20.20	20.20		7.90	7.90		34.93	34.93		79.4	78.5		5.85	5.78		2.38	2.44		9	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C2 - TH / APA / SOC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C		-		ppt		%		mg/L		NTU		mg/L							
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
1/3/2013	13:13	Fine	Middle	2.0	19.20	19.20	19.25	8.00	8.00	7.99	34.27	34.27	34.27	80.9	80.0	80.3	6.08	6.00	6.03	4.27	4.29	4.31	3	3.00
	13:15		Middle	2.0	19.30	19.30		7.97	7.97		34.27	34.27		80.7	79.7		6.05	5.98		4.31	4.35		3	
4/3/2013	16:00	Fine	Middle	1.5	18.30	18.30	18.35	7.94	7.94	7.93	34.54	34.54	34.55	77.7	76.2	77.4	5.94	5.82	5.92	2.12	2.26	2.13	5	4.50
	16:02		Middle	1.5	18.40	18.40		7.91	7.91		34.55	34.55		78.2	77.5		5.98	5.92		2.04	2.11		4	
6/3/2013	16:33	Fine	Middle	2.5	18.90	18.90	18.90	7.89	7.89	7.89	34.67	34.67	34.68	78.9	78.7	78.6	5.95	5.94	5.94	2.82	2.80	2.78	3	3.50
	16:35		Middle	2.5	18.90	18.90		7.88	7.88		34.69	34.69		78.5	78.4		5.93	5.93		2.77	2.74		4	
8/3/2013	20:49	Fine	Middle	2.0	18.60	18.60	18.60	7.81	7.81	7.81	34.36	34.36	34.36	69.5	69.3	69.2	5.27	5.26	5.25	1.81	1.78	1.77	4	3.50
	20:51		Middle	2.0	18.60	18.60		7.80	7.80		34.36	34.36		69.1	68.8		5.25	5.23		1.75	1.74		3	
11/3/2013	10:40	Fine	Middle	2.0	19.20	19.20	19.25	8.08	8.06	8.06	33.98	33.98	33.98	71.7	71.8	70.8	5.41	5.41	5.34	3.75	3.73	3.60	7	7.00
	10:42		Middle	2.0	19.30	19.30		8.05	8.05		33.98	33.98		70.6	69.2		5.33	5.22		3.52	3.38		7	
13/3/2013	13:20	Fine	Middle	1.5	20.40	20.40	20.40	7.59	7.59	7.59	33.53	33.53	33.53	77.6	77.4	77.3	6.43	6.41	6.40	2.26	2.16	2.20	3	3.00
	13:22		Middle	1.5	20.40	20.40		7.59	7.59		33.53	33.53		77.2	77.0		6.39	6.38		2.13	2.23		3	
15/3/2013	13:20	Fine	Middle	1.5	19.70	19.70	19.70	7.91	7.91	7.91	34.65	34.65	34.63	67.2	68.0	67.8	5.01	5.07	5.05	2.66	2.70	2.66	2	3.00
	13:22		Middle	1.5	19.70	19.70		7.91	7.91		34.61	34.61		68.4	67.4		5.10	5.02		2.61	2.68		4	
18/3/2013	15:30	Fine	Middle	1.0	21.80	21.80	21.80	7.87	7.87	7.87	34.31	34.31	34.31	64.8	64.2	64.7	4.65	4.60	4.61	3.69	3.72	3.69	4	4.00
	15:32		Middle	1.0	21.80	21.80		7.87	7.87		34.31	34.31		64.3	65.3		4.61	4.57		3.83	3.53		4	
20/3/2013	18:52	Cloudy	Middle	2.0	20.90	20.90	20.85	7.71	7.71	7.71	33.34	33.34	33.35	62.1	61.8	61.7	4.55	4.53	4.53	4.23	4.21	4.20	3	3.50
	18:53		Middle	2.0	20.80	20.80		7.70	7.70		33.36	33.36		61.6	61.3		4.52	4.50		4.19	4.18		4	
23/3/2013	20:28	Cloudy	Middle	2.0	20.20	20.20	20.15	7.73	7.73	7.74	34.63	34.63	34.64	67.3	67.1	67.0	4.98	4.97	4.97	2.53	2.51	2.49	3	3.00
	20:30		Middle	2.0	20.10	20.10		7.74	7.74		34.64	34.64		66.8	66.6		4.96	4.95		2.47	2.46		3	
25/3/2013	10:40	Cloudy	Middle	1.5	20.40	20.40	20.40	7.96	7.96	7.96	34.43	34.43	34.43	67.3	67.7	67.9	4.98	4.99	5.01	4.01	3.87	3.96	6	5.50
	10:42		Middle	1.5	20.40	20.40		7.96	7.96		34.43	34.43		68.0	68.6		5.01	5.05		4.03	3.92		5	
27/3/2013	10:13	Fine	Middle	2.0	20.10	20.10	20.10	7.82	7.82	7.83	34.85	34.85	34.86	68.6	67.8	68.4	5.07	5.01	5.06	2.81	2.80	2.80	14	14.50
	10:15		Middle	2.0	20.10	20.10		7.84	7.84		34.86	34.86		69.0	68.1		5.10	5.04		2.76	2.84		15	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C3 - HKCEC Phase I
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids							
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
1/3/2013	13:26	Fine	Middle	3.0	19.30	19.30	19.30	7.76	7.76	7.74	33.66	33.66	33.66	52.4	52.2	53.1	4.06	4.05	4.06	1.55	1.47	1.53	4	4.00
	13:28		Middle	3.0	19.30	19.30		7.72	7.72		33.65	33.65		55.7	52.1		4.08	4.05		1.57	1.54		4	
4/3/2013	17:16	Fine	Middle	3.0	17.80	17.80	17.70	7.85	7.85	7.84	34.28	34.28	34.28	59.8	59.2	59.7	4.64	4.60	4.64	2.10	2.11	2.12	3	2.50
	17:18		Middle	3.0	17.60	17.60		7.83	7.83		34.28	34.28		60.3	59.4		4.69	4.62		2.07	2.18		2	
6/3/2013	17:39	Fine	Middle	2.5	17.70	17.70	17.50	7.89	7.89	7.89	34.49	34.49	34.48	68.1	67.9	67.8	5.31	5.30	5.30	2.36	2.34	2.32	2	2.00
	17:42		Middle	2.5	17.30	17.30		7.88	7.88		34.47	34.47		67.7	67.5		5.29	5.28		2.30	2.28		2	
8/3/2013	21:05	Fine	Middle	2.0	18.70	18.70	18.65	7.87	7.87	7.86	34.16	34.16	34.16	68.6	68.5	68.4	5.23	5.23	5.22	3.71	3.69	3.68	5	4.50
	21:07		Middle	2.0	18.60	18.60		7.85	7.85		34.16	34.16		68.3	68.1		5.22	5.21		3.66	3.64		4	
11/3/2013	10:54	Fine	Middle	2.5	18.90	18.90	18.90	7.98	7.98	7.99	33.64	33.64	33.64	50.3	50.7	50.4	3.83	3.86	3.84	2.42	2.28	2.34	5	5.50
	10:56		Middle	2.5	18.90	18.90		7.99	7.99		33.64	33.64		50.5	50.1		3.84	3.81		2.31	2.36		6	
13/3/2013	13:32	Fine	Middle	3.0	20.00	20.00	20.00	7.82	7.82	7.82	34.22	34.22	34.22	62.2	61.8	62.0	4.59	4.56	4.57	2.67	2.67	2.66	4	4.00
	13:34		Middle	3.0	20.00	20.00		7.82	7.82		34.22	34.22		61.9	62.0		4.57	4.57		2.49	2.82		4	
15/3/2013	13:33	Fine	Middle	3.0	19.60	19.60	19.55	7.81	7.81	7.80	34.09	34.09	34.08	42.0	42.2	42.3	3.15	3.17	3.18	2.14	2.04	2.11	3	3.00
	13:34		Middle	3.0	19.50	19.50		7.78	7.78		34.07	34.07		42.8	42.1		3.22	3.16		2.07	2.18		3	
18/3/2013	16:51	Fine	Middle	2.5	20.70	20.70	20.70	7.84	7.84	7.84	34.06	34.06	34.06	50.8	51.2	51.2	3.71	3.74	3.74	3.23	3.42	3.35	5	5.00
	16:53		Middle	2.5	20.70	20.70		7.84	7.84		34.06	34.06		51.1	51.6		3.73	3.76		3.37	3.39		5	
20/3/2013	20:27	Cloudy	Middle	2.5	21.20	21.20	21.15	7.58	7.58	7.58	32.09	32.09	32.11	60.8	60.5	60.4	4.40	4.38	4.38	5.42	5.40	5.38	<2	<2
	20:29		Middle	2.5	21.10	21.10		7.58	7.58		32.13	32.13		60.3	60.1		4.37	4.36		5.36	5.35		<2	
23/3/2013	20:40	Cloudy	Middle	2.5	20.60	20.60	20.65	7.64	7.64	7.65	34.21	34.21	34.22	63.8	63.5	63.4	4.68	4.66	4.65	2.22	2.20	2.18	<2	<2
	20:42		Middle	2.5	20.70	20.70		7.65	7.65		34.22	34.22		63.2	63.1		4.64	4.63		2.16	2.12		<2	
25/3/2013	12:10	Cloudy	Middle	3.0	20.50	20.50	20.50	7.74	7.74	7.74	34.21	34.21	34.21	49.8	50.3	50.4	3.92	3.95	3.96	2.73	2.35	2.50	5	4.50
	12:12		Middle	3.0	20.50	20.50		7.74	7.74		34.21	34.21		50.5	51.0		3.96	4.00		2.42	2.49		4	
27/3/2013	10:27	Fine	Middle	3.0	20.50	20.50	20.45	7.72	7.72	7.70	33.42	33.42	33.42	29.9	29.8	30.2	2.22	2.20	2.23	2.07	2.90	2.27	4	4.50
	10:29		Middle	3.0	20.40	20.40		7.67	7.67		33.41	33.41		30.4	30.5		2.25	2.26		2.01	2.11		5	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C4e - WCT / GEC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average		
1/3/2013	13:47	Fine	Middle	1.5	19.40	19.40	19.40	7.84	7.84	7.83	33.66	33.66	33.66	63.4	63.7	63.7	4.78	4.80	4.80	1.37	1.46	1.43	3	2.50
	13:48		Middle	1.5	19.40	19.40		7.82	7.82		33.65	33.65		64.2	63.5		4.83	4.78		1.42	1.45		2	
4/3/2013	16:47	Fine	Middle	1.5	18.50	18.50	18.40	7.88	7.88	7.87	34.11	34.11	34.11	67.1	66.6	67.2	5.14	5.11	5.16	4.45	4.54	4.48	6	5.50
	16:49		Middle	1.5	18.30	18.30		7.86	7.86		34.10	34.10		67.7	67.2		5.20	5.17		4.42	4.49		5	
6/3/2013	17:30	Fine	Middle	2.5	18.30	18.30	18.25	7.88	7.88	7.87	34.54	34.54	34.50	67.6	67.4	67.4	5.20	5.19	5.19	2.88	2.86	2.85	5	4.50
	17:32		Middle	2.5	18.20	18.20		7.86	7.86		34.46	34.46		67.3	67.2		5.19	5.18		2.85	2.82		4	
8/3/2013	21:28	Fine	Middle	2.0	18.50	18.50	18.40	7.81	7.81	7.82	34.12	34.12	34.13	63.3	63.1	63.0	4.85	4.84	4.83	3.23	3.21	3.20	5	4.50
	21:30		Middle	2.0	18.30	18.30		7.82	7.82		34.13	34.13		62.8	62.7		4.82	4.82		3.19	3.17		4	
11/3/2013	11:12	Fine	Middle	1.5	19.20	19.10	19.13	8.11	8.11	8.11	33.78	33.78	33.80	56.5	55.2	54.9	4.27	4.18	4.16	2.00	2.04	2.07	5	5.00
	11:14		Middle	1.5	19.10	19.10		8.10	8.10		33.82	33.82		54.0	53.8		4.09	4.08		2.09	2.16		5	
13/3/2013	13:54	Fine	Middle	1.5	20.70	20.70	20.80	7.90	7.90	7.88	33.56	33.56	33.55	53.0	52.7	52.3	3.90	3.87	3.85	4.44	4.45	4.42	3	3.00
	13:56		Middle	1.5	20.90	20.90		7.86	7.86		33.54	33.54		52.0	51.6		3.82	3.79		4.51	4.29		3	
15/3/2013	14:52	Fine	Middle	1.5	19.90	19.90	19.80	7.90	7.90	7.90	34.41	34.41	34.42	56.5	55.2	55.9	4.22	4.12	4.17	2.61	2.66	2.61	4	4.00
	14:54		Middle	1.5	19.70	19.70		7.90	7.90		34.42	34.42		56.5	55.3		4.22	4.13		2.54	2.63		4	
18/3/2013	16:35	Fine	Middle	1.5	21.30	21.30	21.25	7.80	7.80	7.80	34.32	34.32	34.32	48.8	49.0	49.2	3.96	3.97	3.98	5.19	5.33	5.23	5	4.50
	16:37		Middle	1.5	21.20	21.20		7.80	7.80		34.32	34.32		49.3	49.6		3.99	4.01		5.24	5.16		4	
20/3/2013	20:14	Cloudy	Middle	2.0	20.90	20.90	20.80	7.68	7.68	7.69	33.69	33.69	33.69	61.6	61.3	61.3	4.49	4.47	4.47	3.09	3.06	3.05	9	9.00
	20:16		Middle	2.0	20.70	20.70		7.69	7.69		33.69	33.69		61.2	61.0		4.46	4.45		3.02	3.01		9	
23/3/2013	21:04	Cloudy	Middle	2.0	20.70	20.70	20.70	7.68	7.68	7.69	34.33	34.33	34.34	57.2	57.1	57.0	4.20	4.20	4.19	2.98	2.96	2.95	3	2.50
	21:06		Middle	2.0	20.70	20.70		7.70	7.70		34.34	34.34		56.9	56.7		4.19	4.18		2.94	2.91		2	
25/3/2013	11:50	Cloudy	Middle	2.0	21.10	21.10	21.10	7.78	7.78	7.78	34.36	34.36	34.36	53.8	54.3	54.2	4.41	4.45	4.46	3.67	3.84	3.83	4	4.00
	11:52		Middle	2.0	21.10	21.10		7.78	7.78		34.36	34.36		54.2	54.5		4.49	4.47		3.91	3.88		4	
27/3/2013	10:43	Fine	Middle	1.5	20.40	20.40	20.40	7.82	7.82	7.82	33.80	33.80	33.81	51.4	51.5	51.8	3.80	3.81	3.83	3.28	3.48	3.42	4	4.00
	10:45		Middle	1.5	20.40	20.40		7.81	7.81		33.81	33.81		52.3	51.9		3.87	3.84		3.44	3.48		4	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at C4w - WCT / GEC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	13:35	Fine	Middle	1.5	19.00	19.00	19.05	7.83	7.83	7.84	34.16	34.16	34.16	69.0	68.0	69.0	5.22	5.14	5.21	1.89	1.94	1.90	5	4.50
	13:37		Middle	1.5	19.10	19.10		7.85	7.85		34.16	34.16		69.2	69.6		5.23	5.26		1.92	1.85		4	
4/3/2013	16:57	Fine	Middle	1.5	18.00	18.00	18.00	7.87	7.87	7.87	34.38	34.38	34.39	66.8	66.1	66.6	5.16	5.11	5.15	2.96	2.88	2.93	8	7.50
	16:59		Middle	1.5	18.00	18.00		7.87	7.87		34.39	34.39		67.1	66.2		5.19	5.12		2.91	2.96		7	
6/3/2013	17:41	Fine	Middle	2.5	18.00	18.00	17.85	7.89	7.89	7.89	34.54	3.54	26.80	72.4	72.1	72.1	5.61	5.69	5.61	4.49	4.48	4.47	31	24.50
	17:43		Middle	2.5	17.70	17.70		7.89	7.89		34.55	34.55		71.9	71.8		5.57	5.57		4.46	4.44		18	
8/3/2013	21:17	Fine	Middle	2.0	18.80	18.80	18.75	7.79	7.79	7.79	34.11	34.11	34.11	62.6	62.4	62.3	4.77	4.76	4.76	3.51	3.49	3.48	8	7.50
	21:19		Middle	2.0	18.70	18.70		7.79	7.79		34.11	34.11		62.3	62.0		4.76	4.74		3.47	3.43		7	
11/3/2013	11:04	Fine	Middle	1.5	18.90	18.90	18.85	8.01	8.01	8.01	33.97	33.97	33.98	56.1	55.5	55.3	4.27	4.22	4.21	2.59	2.77	2.76	6	5.50
	11:06		Middle	1.5	18.80	18.80		8.00	8.00		33.99	33.99		54.9	54.7		4.17	4.16		2.79	2.88		5	
13/3/2013	13:43	Fine	Middle	1.5	20.40	20.40	20.40	7.95	7.95	7.95	33.90	33.90	33.91	60.4	59.6	59.3	4.46	4.39	4.37	3.28	3.04	3.10	6	5.50
	13:45		Middle	1.5	20.40	20.40		7.94	7.94		33.92	33.92		58.8	58.2		4.34	4.30		3.00	3.07		5	
15/3/2013	13:42	Fine	Middle	1.5	19.30	19.30	19.25	7.87	7.87	7.88	34.59	34.59	34.60	55.3	54.9	55.2	4.16	4.13	4.15	2.29	2.16	2.23	4	4.00
	13:44		Middle	1.5	19.20	19.20		7.89	7.89		34.60	34.60		55.4	55.1		4.17	4.15		2.20	2.27		4	
18/3/2013	16:45	Fine	Middle	1.5	21.20	21.20	21.20	7.84	7.84	7.84	33.97	33.97	33.97	49.2	50.0	50.0	3.98	4.05	4.05	3.38	3.43	3.40	4	3.50
	16:47		Middle	1.5	21.20	21.20		7.84	7.84		33.97	33.97		50.2	50.5		4.07	4.10		3.47	3.33		3	
20/3/2013	20:21	Cloudy	Middle	2.0	20.90	20.90	20.90	7.70	7.70	7.70	33.75	33.75	33.75	61.4	61.1	61.0	4.50	4.48	4.48	3.27	3.24	3.23	9	8.00
	20:23		Middle	2.0	20.90	20.90		7.69	7.69		33.75	33.75		60.9	60.7		4.47	4.46		3.22	3.20		7	
23/3/2013	20:52	Cloudy	Middle	2.5	20.60	20.60	20.60	7.63	7.63	7.64	34.40	34.40	34.41	61.7	61.5	61.3	4.52	4.51	4.50	1.52	1.47	1.47	<2	<2
	20:54		Middle	2.5	20.60	20.60		7.65	7.65		34.41	34.41		61.2	60.8		4.49	4.46		1.45	1.43		<2	
25/3/2013	12:00	Cloudy	Middle	2.0	20.90	20.90	20.90	7.85	7.85	7.85	34.19	34.19	34.19	54.4	55.0	55.3	3.98	4.03	4.05	3.16	2.69	2.91	4	3.50
	12:02		Middle	2.0	20.90	20.90		7.85	7.85		34.19	34.19		55.8	55.9		4.09	4.10		2.89	2.90		3	
27/3/2013	10:34	Fine	Middle	1.5	20.20	20.20	20.20	7.79	7.79	7.81	34.32	34.32	34.32	57.0	55.8	57.0	4.22	4.13	4.22	4.30	3.46	3.62	6	6.00
	10:36		Middle	1.5	20.20	20.20		7.83	7.83		34.32	34.32		57.4	57.9		4.25	4.29		3.37	3.33		6	

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-Ebb Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids							
			m		°C		-		ppt		%		mg/L		NTU		mg/L							
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average						
1/3/2013	13:28	Fine	Middle	1.5	19.69	19.69	19.70	7.93	7.93	7.93	33.16	33.16	33.16	77.7	77.2	76.4	5.84	5.80	5.74	2.18	2.14	2.13	5	4.00
	13:30		Middle	1.5	19.70	19.70		7.93	7.93		33.16	33.16		75.4	75.2		5.67	5.65		2.10	2.09		3	
4/3/2013	16:05	Fine	Middle	1.5	18.44	18.44	18.46	7.95	7.95	7.95	33.45	33.45	33.44	84.7	83.4	83.2	6.50	6.41	6.39	0.46	0.43	0.43	4	4.00
	16:07		Middle	1.5	18.47	18.47		7.95	7.95		33.43	33.43		82.8	81.9		6.36	6.29		0.42	0.42		4	
6/3/2013	20:05	Fine	Middle	1.0	18.70	18.70	18.70	8.17	8.17	8.18	32.11	32.11	32.11	90.0	89.2	89.9	6.93	6.86	6.92	7.08	7.06	7.04	10	9.50
	20:06		Middle	1.0	18.70	18.70		8.19	8.19		32.11	32.11		90.2	90.2		6.94	6.94		7.00	7.02		9	
8/3/2013	0:35	Fine	Middle	1.0	19.00	19.00	19.00	7.90	7.90	7.90	31.82	31.82	31.82	64.9	65.9	65.8	4.98	5.06	5.05	4.39	4.24	4.25	8	8.00
	0:36		Middle	1.0	19.00	19.00		7.90	7.90		31.82	31.82		66.3	66.2		5.09	5.08		4.34	4.03		8	
11/3/2013	12:41	Fine	Middle	1.5	19.74	19.74	19.75	7.80	7.80	7.80	32.90	32.90	32.90	67.5	67.1	67.1	5.08	5.05	5.05	5.90	5.88	5.86	18	17.50
	12:43		Middle	1.5	19.76	19.76		7.80	7.80		32.90	32.90		67.0	66.7		5.04	5.02		5.87	5.78		17	
13/3/2013	14:05	Fine	Middle	1.5	22.46	22.40	22.52	7.79	7.79	7.78	33.41	33.41	33.37	74.3	73.4	73.2	5.31	5.24	5.43	2.02	2.05	2.04	2	2.00
	14:07		Middle	1.5	22.60	22.60		7.76	7.76		33.33	33.33		72.9	72.2		5.21	5.95		2.03	2.07		2	
15/3/2013	14:14	Fine	Middle	1.5	20.36	20.36	20.37	7.97	7.97	7.98	33.69	33.69	33.69	80.2	80.1	80.0	5.93	5.93	5.92	2.51	2.43	2.49	3	3.00
	14:16		Middle	1.5	20.38	20.38		7.98	7.98		33.69	33.69		80.0	79.8		5.92	5.91		2.50	2.52		3	
18/3/2013	15:28	Fine	Middle	1.5	22.14	22.14	22.13	7.74	7.74	7.74	33.33	33.33	33.32	67.9	67.1	67.1	4.89	4.83	4.83	1.28	1.13	1.20	4	4.50
	15:30		Middle	1.5	22.11	22.11		7.73	7.73		33.31	33.31		66.9	66.5		4.81	4.78		1.19	1.19		5	
20/3/2013	19:16	Cloudy	Middle	1.0	22.40	22.40	22.45	7.85	7.85	7.85	31.44	31.44	31.44	58.3	58.8	58.6	4.24	4.25	4.24	5.45	5.50	5.37	3	3.50
	19:17		Middle	1.0	22.50	22.50		7.85	7.85		31.43	31.43		58.6	58.6		4.23	4.23		5.52	5.00		4	
23/3/2013	0:17	Cloudy	Middle	1.0	21.30	21.30	21.35	7.84	7.84	7.84	32.50	32.50	32.50	70.8	71.9	71.6	5.18	5.25	5.24	0.41	0.33	0.38	3	3.00
	0:18		Middle	1.0	21.40	21.40		7.84	7.84		32.50	32.50		72.0	71.7		5.27	5.24		0.40	0.38		3	
25/3/2013	11:44	Cloudy	Middle	1.5	21.08	21.08	21.10	7.83	7.83	7.83	33.52	33.52	33.54	55.6	55.2	54.9	4.07	4.03	4.02	0.67	0.67	0.68	3	3.00
	11:46		Middle	1.5	21.12	21.12		7.83	7.83		33.56	33.56		54.7	54.2		4.00	3.96		0.72	0.65		3	
27/3/2013	12:15	Fine	Middle	1.5	20.81	20.81	20.85	7.97	7.97	7.97	33.82	33.82	33.79	64.7	63.6	63.4	4.75	4.67	4.65	1.11	1.31	1.26	4	4.50
	12:17		Middle	1.5	20.88	20.88		7.97	7.97		33.76	33.76		63.1	62.2		4.63	4.56		1.36	1.24		5	

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-Ebb Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids	
			m		°C		-		ppt		%		mg/L		NTU		mg/L	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1/3/2013	13:32	Fine	Middle	1.5	19.66	19.66	7.92	7.92	33.19	33.19	73.6	73.4	5.54	5.52	1.78	1.60	3	3.00
	13:34		Middle	1.5	19.66	19.66	7.91	7.91	33.18	33.18	72.5	72.3	5.45	5.44	1.53	1.51	3	3.00
4/3/2013	16:10	Fine	Middle	1.5	18.73	18.73	8.01	8.01	33.41	33.41	96.1	95.2	7.34	7.27	2.60	2.55	6	5.50
	16:12		Middle	1.5	18.87	18.87	8.00	8.00	33.34	33.34	94.5	94.2	7.21	7.19	2.54	2.54	5	5.50
6/3/2013	20:10	Fine	Middle	1.0	18.70	18.70	8.11	8.11	32.02	32.05	88.2	88.2	6.80	6.79	1.48	1.31	2	2.50
	20:11		Middle	1.0	18.70	18.70	8.09	8.09	32.05	32.05	88.1	87.8	6.79	6.76	1.32	1.23	3	2.50
8/3/2013	0:43	Fine	Middle	1.0	19.00	19.00	7.87	7.87	31.89	31.89	69.1	71.4	5.30	5.48	5.33	5.29	7	7.00
	0:44		Middle	1.0	19.00	19.00	7.87	7.87	31.89	31.89	72.6	72.4	5.57	5.55	5.02	4.97	7	7.00
11/3/2013	12:45	Fine	Middle	1.5	19.86	19.86	7.79	7.79	32.70	32.70	67.8	66.0	5.09	4.49	2.82	2.79	3	3.50
	12:47		Middle	1.5	19.93	19.93	7.78	7.78	32.69	32.69	64.7	64.1	4.86	4.81	2.77	2.75	4	3.50
13/3/2013	14:10	Fine	Middle	1.5	21.84	21.84	7.76	7.76	33.08	33.08	89.8	89.9	6.50	6.50	3.17	3.16	2	2.00
	14:12		Middle	1.5	21.93	21.93	7.75	7.75	33.05	33.05	90.0	90.1	6.51	6.51	3.17	3.17	2	2.00
15/3/2013	14:20	Fine	Middle	1.5	20.15	20.15	7.97	7.97	33.78	33.78	83.9	83.4	6.23	6.20	1.89	1.83	4	4.00
	14:22		Middle	1.5	20.14	20.14	7.96	7.96	33.79	3.79	82.9	82.5	6.16	6.13	1.83	1.67	4	4.00
18/3/2013	15:25	Fine	Middle	1.5	22.43	22.43	7.80	7.80	33.42	33.42	78.5	77.8	5.59	5.54	1.94	1.77	3	3.00
	15:27		Middle	1.5	22.45	22.45	7.78	7.78	33.40	33.40	76.6	76.5	5.45	5.42	1.80	1.78	3	3.00
20/3/2013	19:25	Cloudy	Middle	1.0	23.00	23.00	7.83	7.83	31.14	31.14	60.5	60.9	4.34	4.36	3.81	4.10	3	3.50
	19:26		Middle	1.0	23.00	23.00	7.83	7.83	31.15	31.15	61.1	60.6	4.38	4.35	3.34	3.58	4	3.50
23/3/2013	0:26	Cloudy	Middle	1.0	21.40	21.40	7.85	7.85	32.18	32.18	66.4	66.2	4.86	4.86	3.15	3.04	4	4.00
	0:27		Middle	1.0	21.40	21.40	7.85	7.85	32.19	32.19	65.1	64.2	4.77	4.70	2.69	2.57	4	4.00
25/3/2013	11:40	Cloudy	Middle	1.5	21.08	21.08	7.89	7.89	33.50	33.50	62.0	61.5	4.54	4.50	1.20	1.24	3	3.50
	11:42		Middle	1.5	21.09	21.09	7.88	7.88	33.49	33.49	61.0	60.5	4.46	4.42	1.26	1.21	4	3.50
27/3/2013	12:20	Fine	Middle	1.5	21.13	21.13	7.98	7.98	33.58	33.58	56.3	56.0	4.12	4.09	1.97	2.03	5	5.50
	12:22		Middle	1.5	21.12	21.12	7.98	7.98	33.57	33.57	55.8	55.5	4.08	4.06	2.06	2.13	6	5.50

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity			Suspended Solids					
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
1/3/2013	14:00	Fine	Middle	2.0	19.50	19.50	19.55	7.84	7.84	7.83	33.90	33.90	33.90	68.1	67.4	67.7	5.11	5.05	5.08	2.66	2.73	2.69	3	3.00
	14:02		Middle	2.0	19.60	19.60		7.82	7.82		33.90	33.90		68.0	67.3		5.10	5.05		2.67	2.69		3	
4/3/2013	16:30	Fine	Middle	1.5	18.60	18.60	18.55	7.95	7.95	7.94	34.25	34.25	34.25	84.0	82.0	83.0	6.41	6.26	6.33	2.95	2.96	2.99	3	3.50
	16:32		Middle	1.5	18.50	18.50		7.93	7.93		34.25	34.25		83.7	82.2		6.39	6.27		3.09	2.97		4	
6/3/2013	17:18	Fine	Middle	2.0	17.90	17.90	17.85	7.92	7.92	7.92	34.67	34.67	34.67	75.2	75.0	74.9	5.81	5.80	5.80	5.94	5.92	5.91	8	9.00
	17:20		Middle	2.0	17.80	17.80		7.91	7.91		34.67	34.67		74.8	74.6		5.79	5.78		5.89	5.87		10	
8/3/2013	22:07	Fine	Middle	2.0	18.80	18.80	18.65	7.80	7.80	7.80	33.96	33.96	33.96	68.8	68.6	68.5	5.27	5.26	5.25	3.16	3.12	3.11	7	7.00
	22:09		Middle	2.0	18.50	18.50		7.80	7.80		33.96	33.96		68.3	68.1		5.24	5.23		3.09	3.08		7	
11/3/2013	11:30	Fine	Middle	1.5	19.20	19.20	19.20	8.00	8.00	7.99	34.15	34.15	34.16	65.3	65.4	65.6	4.92	4.93	4.95	3.47	3.67	3.55	6	5.50
	11:32		Middle	1.5	19.20	19.20		7.98	7.98		34.16	34.16		65.8	65.8		4.97	4.96		3.55	3.49		5	
13/3/2013	14:15	Fine	Middle	1.0	20.90	20.90	20.90	8.11	8.11	8.12	33.46	33.46	33.47	50.8	50.2	50.2	3.72	3.68	3.68	5.83	5.69	5.81	21	21.00
	14:17		Middle	1.0	20.90	20.90		8.12	8.12		33.47	33.47		50.0	49.8		3.66	3.65		5.99	5.73		21	
15/3/2013	14:07	Fine	Middle	1.5	19.90	19.90	19.85	7.91	7.91	7.91	34.51	34.51	34.51	63.8	62.8	63.6	4.75	4.68	4.74	2.37	2.44	2.40	5	6.00
	14:08		Middle	1.5	19.80	19.80		7.90	7.90		34.51	34.51		64.2	63.6		4.78	4.74		2.36	2.42		7	
18/3/2013	16:10	Fine	Middle	1.5	21.90	21.90	21.90	7.93	7.93	7.93	34.05	34.05	34.05	56.0	56.6	56.7	4.01	4.05	4.06	4.43	4.91	4.55	7	7.00
	16:12		Middle	1.5	21.90	21.90		7.93	7.93		34.05	34.05		56.9	57.4		4.06	4.10		4.53	4.34		7	
20/3/2013	19:48	Cloudy	Middle	1.5	21.00	21.00	21.00	7.60	7.60	7.60	32.97	32.97	33.03	57.5	57.3	57.2	4.24	4.23	4.22	4.13	4.12	4.10	14	14.50
	19:50		Middle	1.5	21.00	21.00		7.59	7.59		33.08	33.08		57.1	57.0		4.21	4.21		4.10	4.06		15	
23/3/2013	21:49	Cloudy	Middle	1.5	20.80	20.80	20.80	7.72	7.72	7.72	34.53	34.53	34.53	65.9	65.7	65.7	4.82	4.81	4.81	2.46	2.46	2.44	3	2.50
	21:51		Middle	1.5	20.80	20.80		7.72	7.72		34.53	34.53		65.6	65.4		4.81	4.80		2.42	2.40		2	
25/3/2013	11:20	Cloudy	Middle	1.5	21.00	21.00	21.00	7.94	7.94	7.94	34.35	34.35	34.35	55.5	55.8	55.7	4.08	4.09	4.08	4.34	4.38	4.37	4	3.50
	11:22		Middle	1.5	21.00	21.00		7.94	7.94		34.35	34.35		55.4	56.1		4.04	4.09		4.20	4.55		3	
27/3/2013	10:53	Fine	Middle	2.0	20.40	20.40	20.40	7.90	7.90	7.91	34.77	34.77	34.78	74.2	72.3	72.9	5.46	5.32	5.36	3.53	3.61	3.55	8	8.00
	10:54		Middle	2.0	20.40	20.40		7.92	7.92		34.78	34.78		72.7	72.4		5.35	5.32		3.49	3.55		8	

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



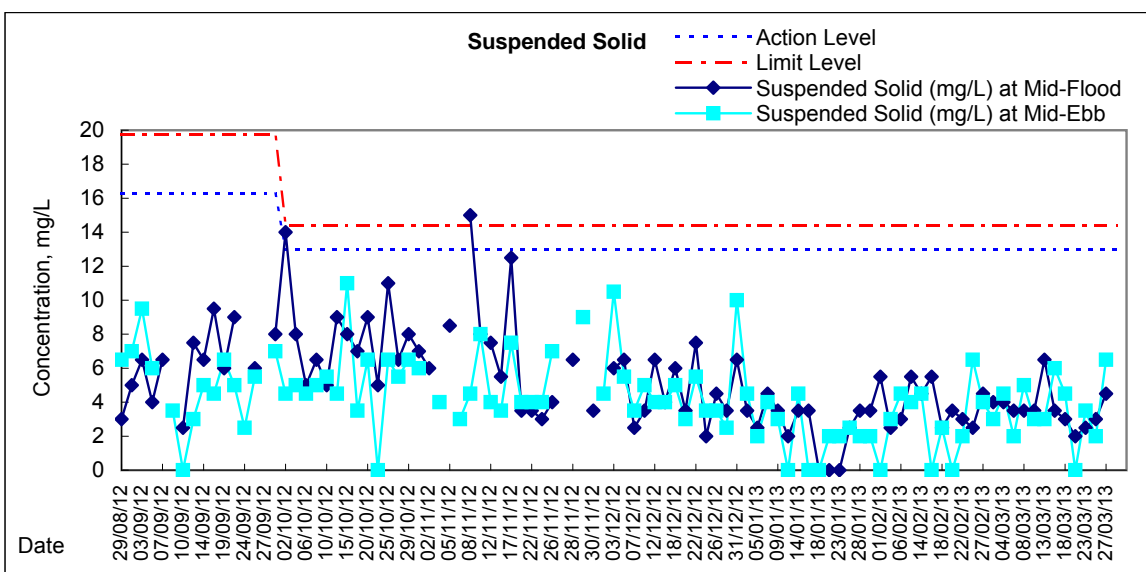
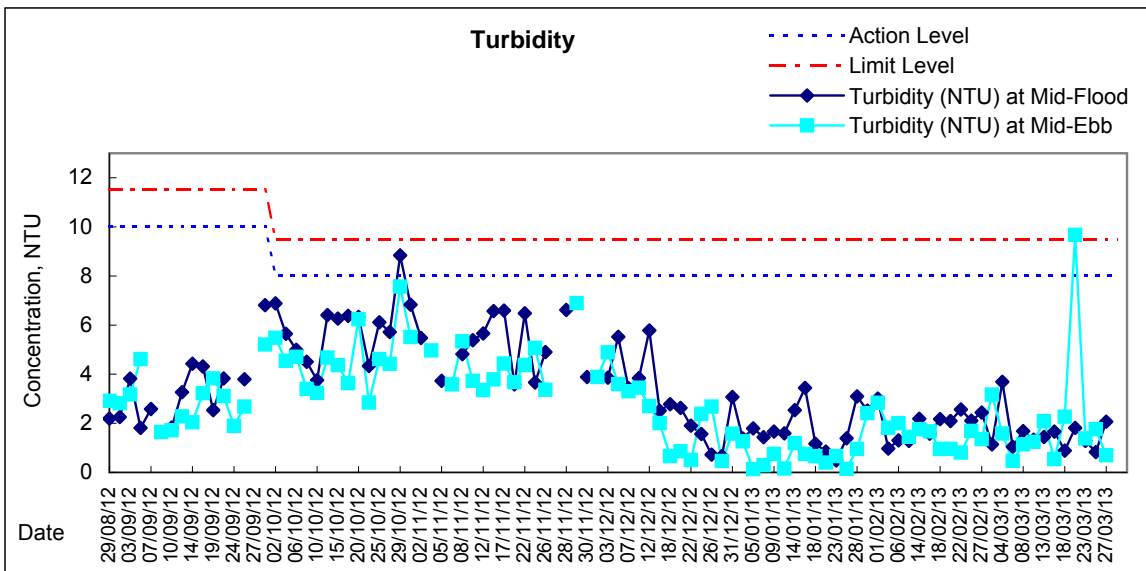
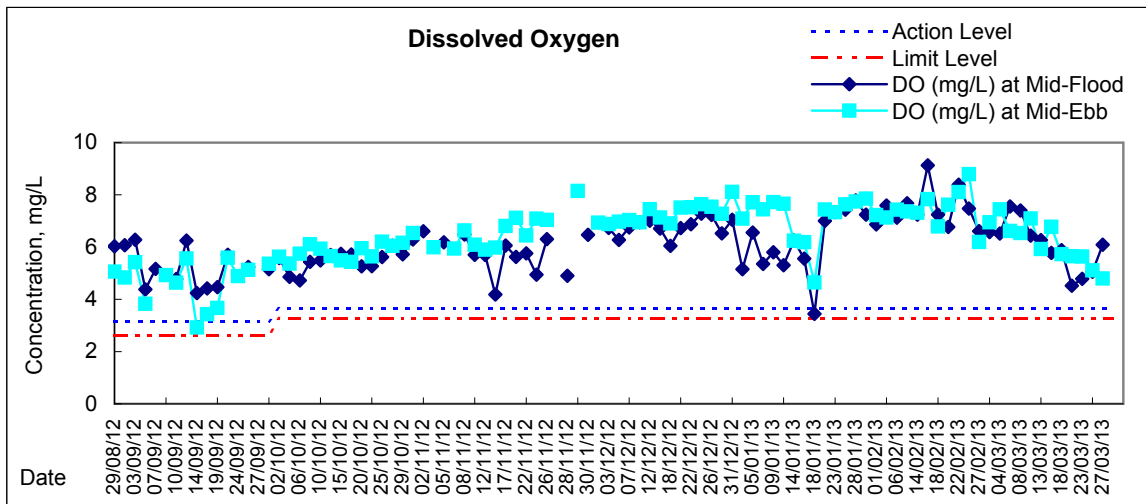
Water Monitoring Result at WSD19 - Sheung Wan
Mid-Ebb Tide

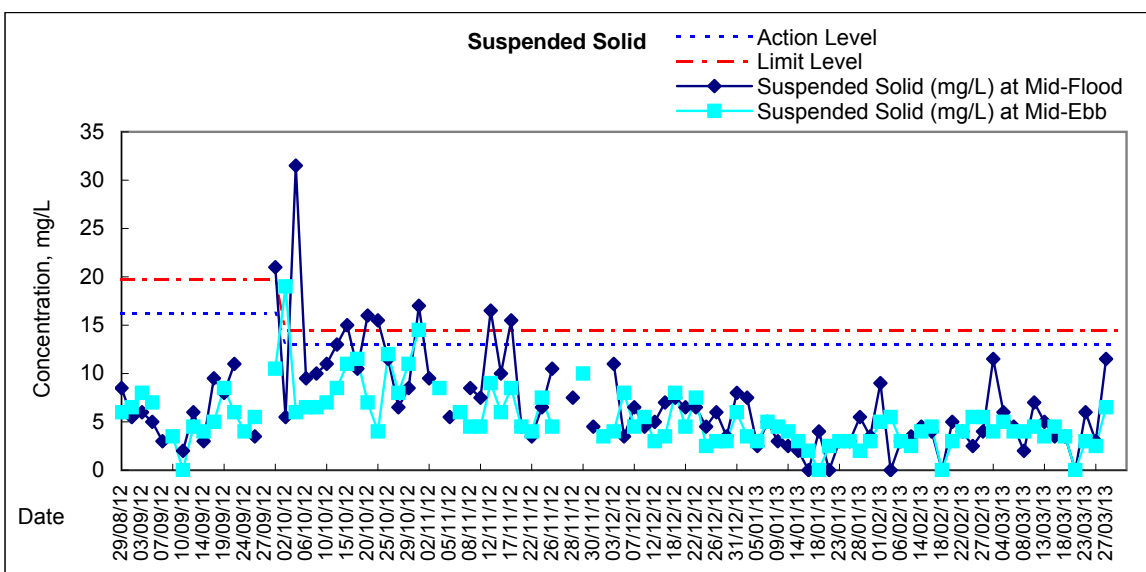
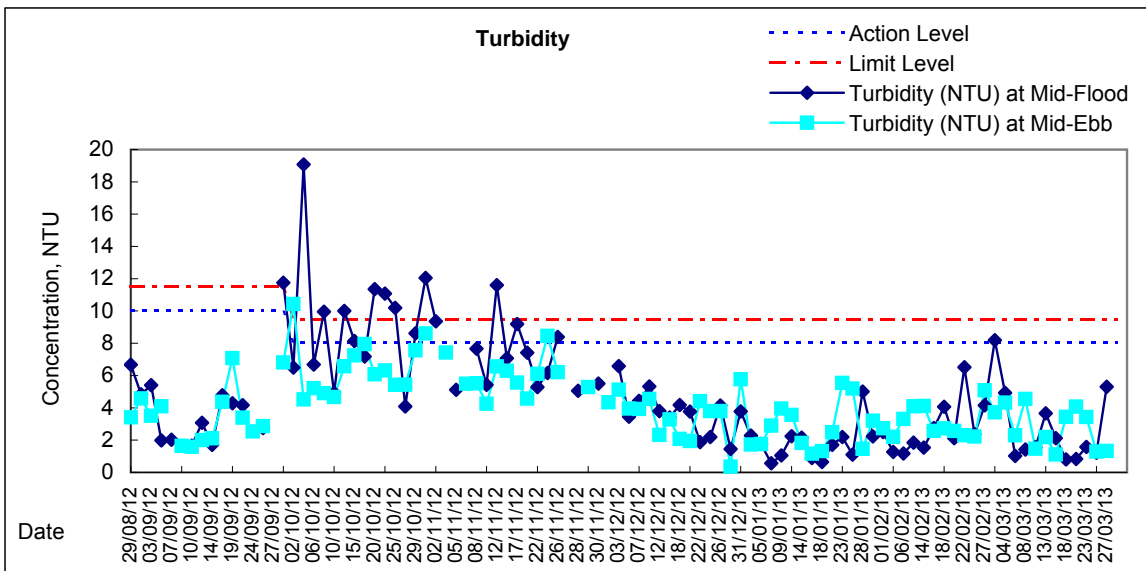
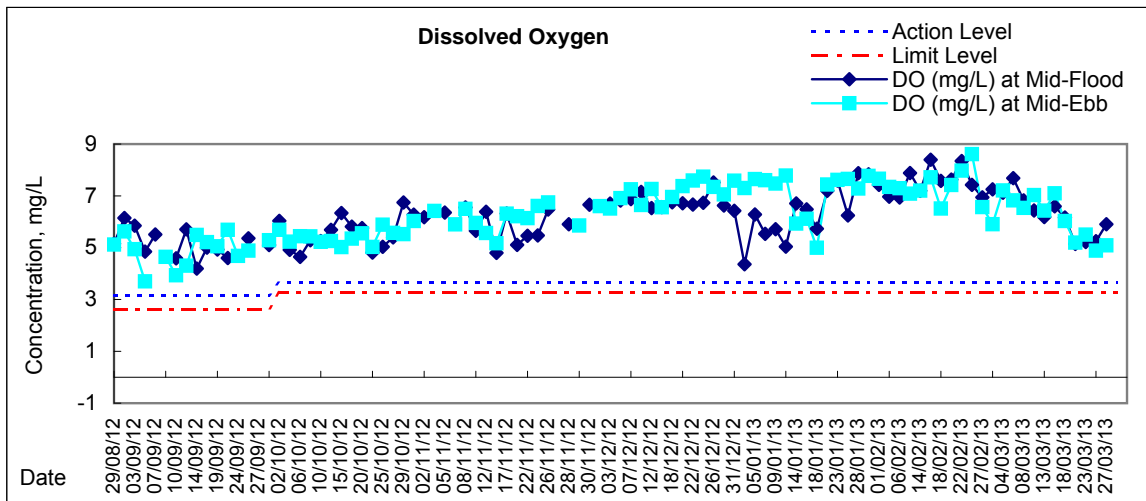
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C		-		ppt		%		mg/L		NTU		mg/L							
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
1/3/2013	13:00	Fine	Middle	2.5	19.73	19.73	19.74	8.01	8.01	8.01	33.08	33.08	33.07	89.6	89.4	89.4	6.73	6.72	6.72	3.55	3.44	3.50	6	6.00
	13:02		Middle	2.5	19.75	19.75		8.00	8.00		33.05	33.05		89.4	89.2		6.72	6.71		3.43	3.58		6	
4/3/2013	15:40	Fine	Middle	2.5	19.14	19.14	19.17	7.98	7.98	7.98	33.52	33.52	33.49	93.8	93.1	92.8	7.11	7.06	7.03	9.92	9.89	<u>9.74</u>	13	13.00
	15:42		Middle	2.5	19.19	19.19		7.97	7.97		33.45	33.45		92.6	91.7		7.02	6.94		9.60	9.53		13	
6/3/2013	20:48	Fine	Middle	1.5	18.50	18.50	18.55	8.07	8.07	8.08	32.61	32.61	32.61	86.1	86.1	86.6	6.63	6.63	6.67	6.32	6.04	6.18	6	6.50
	20:49		Middle	1.5	18.60	18.60		8.09	8.09		32.61	32.61		87.4	86.9		6.72	6.68		6.15	6.21		7	
8/3/2013	1:20	Fine	Middle	1.5	18.90	18.90	18.93	7.89	7.89	7.94	31.57	31.57	31.57	86.1	86.5	86.5	6.61	6.64	6.64	4.34	4.25	4.24	5	5.50
	1:21		Middle	1.5	19.00	18.90		7.98	7.98		31.57	31.57		86.9	86.4		6.67	6.63		4.20	4.18		6	
11/3/2013	12:05	Fine	Middle	3.0	19.58	19.58	19.61	7.99	7.99	7.98	33.33	33.33	33.31	93.2	92.4	91.8	7.01	6.95	6.91	4.67	4.67	4.63	9	8.50
	12:07		Middle	3.0	19.63	19.63		7.97	7.97		33.29	33.29		91.0	90.5		6.85	6.81		4.58	4.59		8	
13/3/2013	13:31	Fine	Middle	2.0	21.73	21.73	21.72	7.88	7.88	7.88	33.24	33.24	33.25	91.7	91.3	91.0	6.64	6.61	6.58	4.64	4.66	4.63	10	10.00
	13:33		Middle	2.0	21.70	21.70		7.87	7.87		33.26	33.26		91.4	89.6		6.61	6.46		4.61	4.62		10	
15/3/2013	13:20	Fine	Middle	2.5	20.00	20.00	20.01	7.95	7.95	7.95	33.61	33.61	33.61	84.8	84.6	84.4	6.32	6.31	6.29	4.05	3.69	3.89	6	5.50
	13:22		Middle	2.5	20.02	20.02		7.94	7.94		33.60	33.60		84.3	84.0		6.28	6.24		3.98	3.84		5	
18/3/2013	14:57	Fine	Middle	2.0	21.38	21.38	21.39	7.76	7.76	7.75	33.38	33.39	33.36	81.0	81.4	80.6	5.90	5.93	5.87	4.70	4.60	4.52	7	7.50
	14:59		Middle	2.0	21.40	21.40		7.74	7.74		33.33	33.33		80.9	79.2		5.89	5.77		4.53	4.23		8	
20/3/2013	20:13	Cloudy	Middle	1.5	21.80	21.80	21.90	8.04	8.04	8.05	31.91	31.91	31.90	75.8	76.2	76.3	5.52	5.56	5.56	2.97	3.05	2.83	2	2.00
	20:14		Middle	1.5	22.00	22.00		8.06	8.06		31.88	31.88		76.6	76.6		5.57	5.57		2.89	2.42		2	
23/3/2013	0:58	Cloudy	Middle	1.5	21.20	21.20	21.20	8.00	8.00	8.00	32.34	32.34	32.34	78.7	79.4	78.6	5.77	5.83	5.76	7.93	7.78	7.78	5	4.50
	0:59		Middle	1.5	21.20	21.20		8.00	8.00		32.33	32.33		78.0	78.1		5.72	5.73		7.70	7.72		4	
25/3/2013	11:21	Cloudy	Middle	2.5	20.61	20.61	20.62	7.93	7.93	7.93	33.45	33.45	33.46	63.2	62.9	62.8	4.67	4.64	4.63	4.44	4.32	4.34	28	<u>16.00</u>
	11:23		Middle	2.5	20.62	20.62		7.93	7.93		33.46	33.46		62.6	62.4		4.62	4.60		4.33	4.28		4	
27/3/2013	11:50	Fine	Middle	2.5	20.62	20.62	20.62	8.02	8.02	8.02	33.96	33.96	33.95	77.7	76.7	76.0	5.71	5.64	5.58	3.80	3.79	3.83	14	<u>15.00</u>
	11:52		Middle	2.5	20.62	20.62		8.01	8.01		33.94	33.94		75.1	74.4		5.52	5.46		3.86	3.87		16	

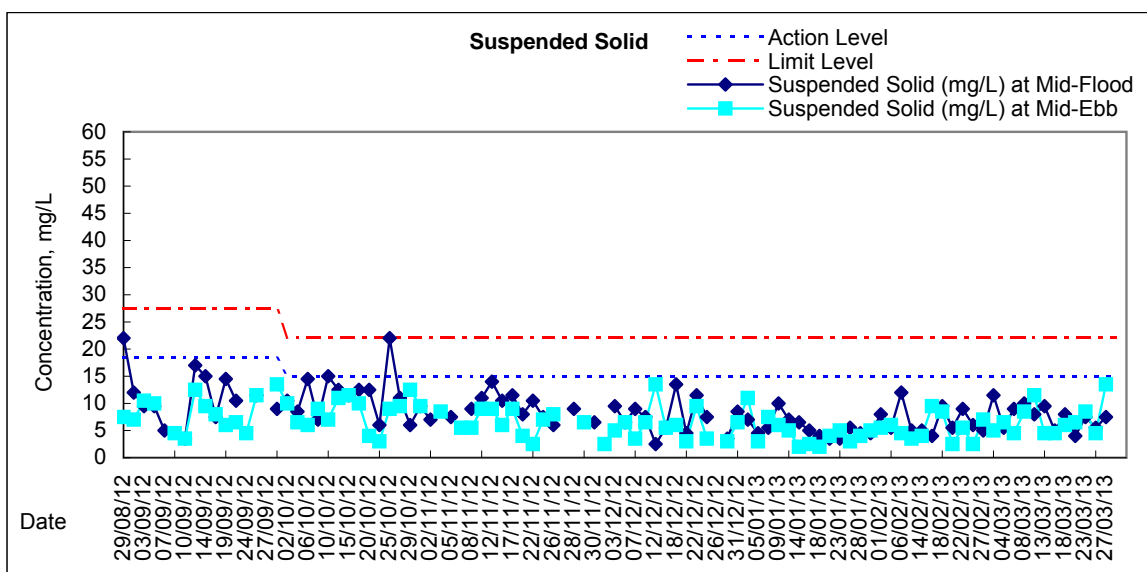
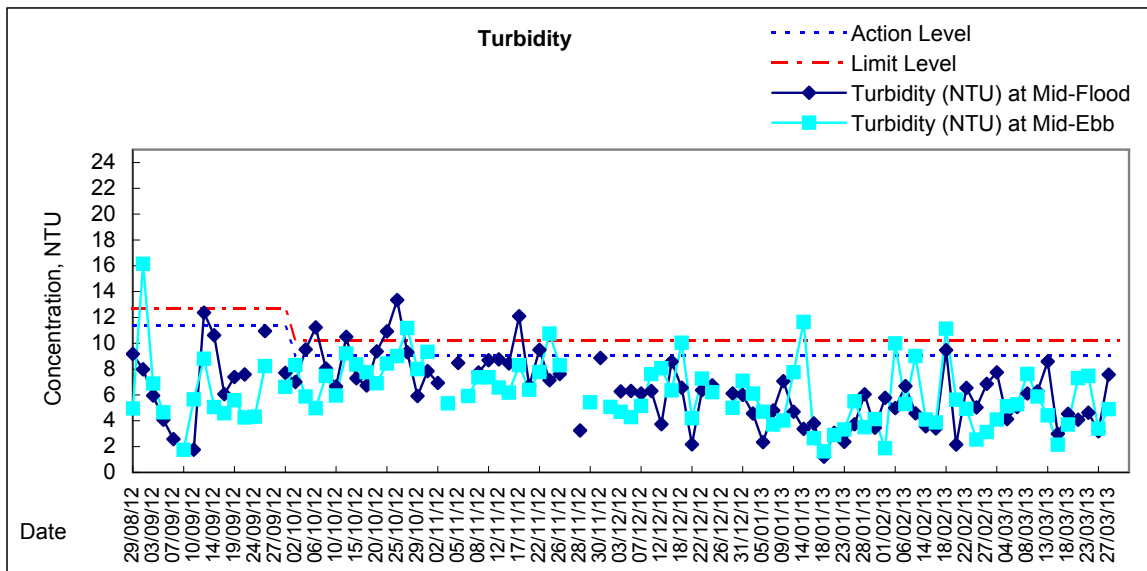
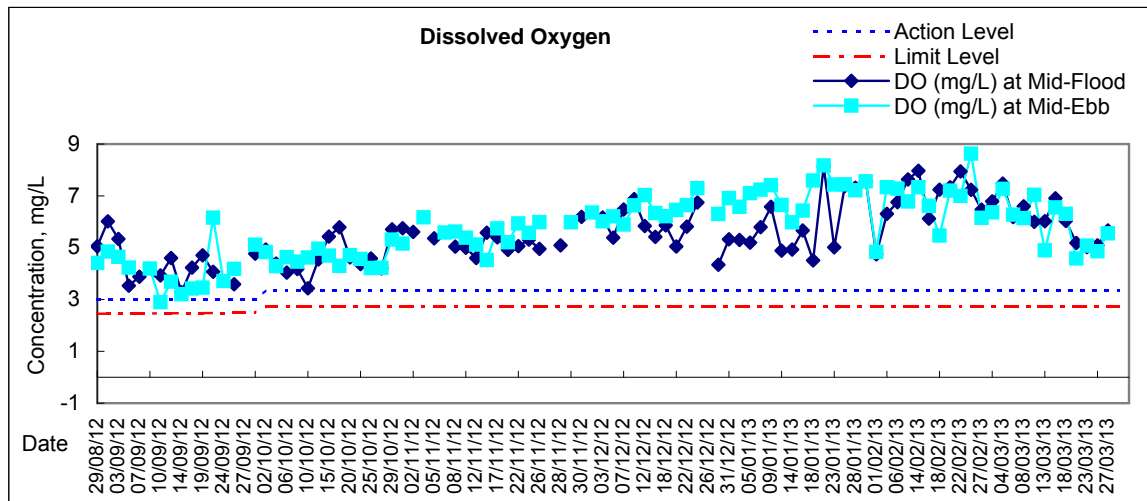
Remarks:

Single underline denotes exceedance over Action Level.

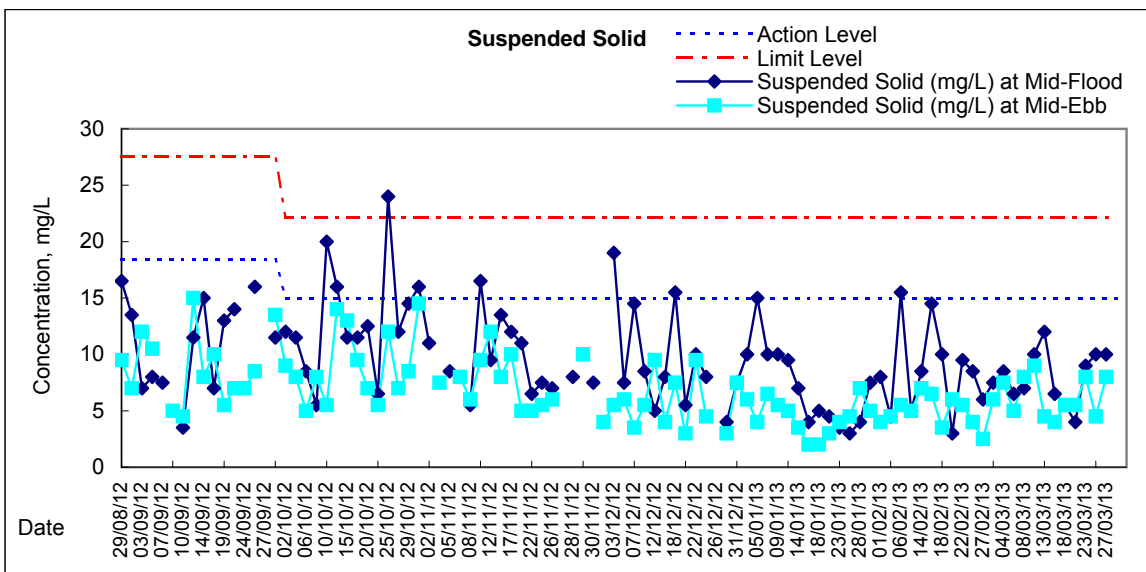
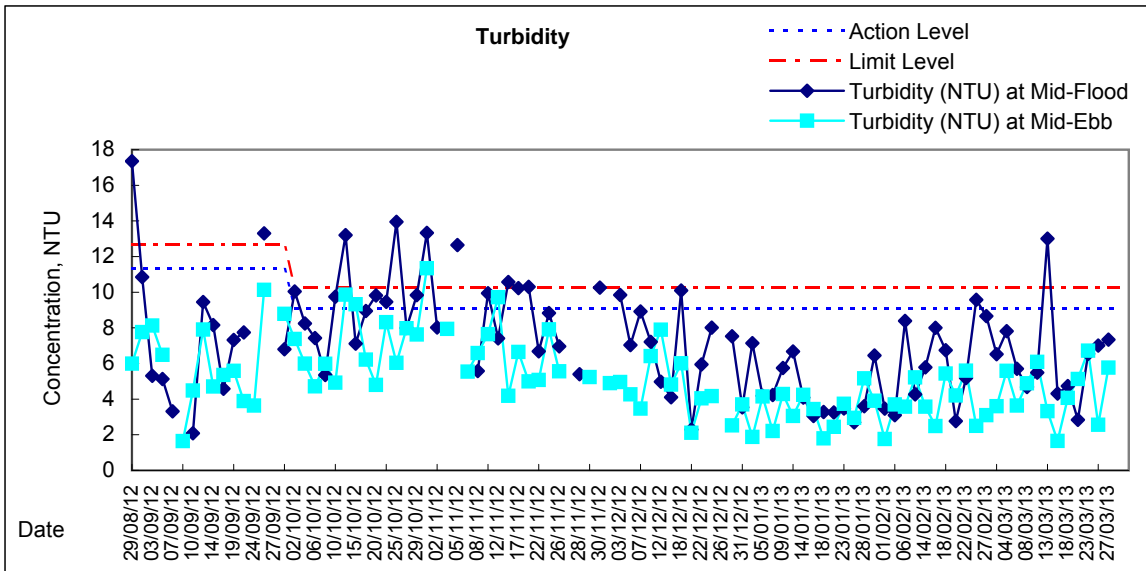
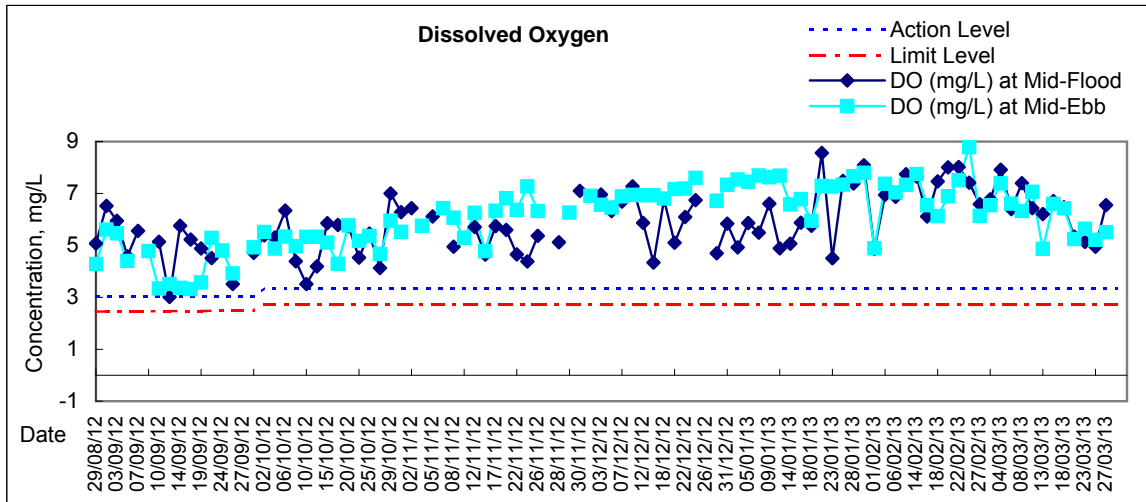
Double underline denotes exceedance over Limit Level.



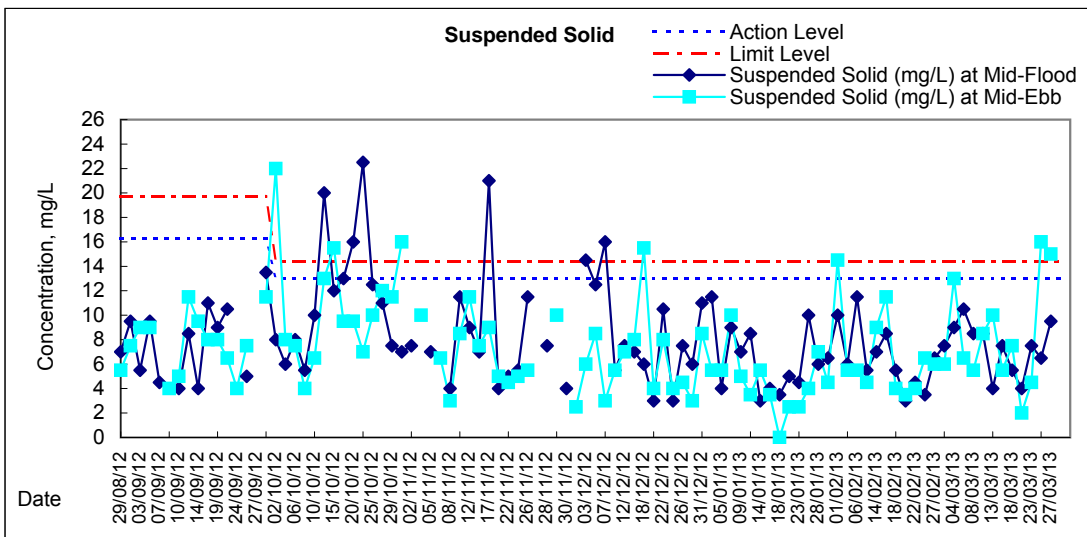
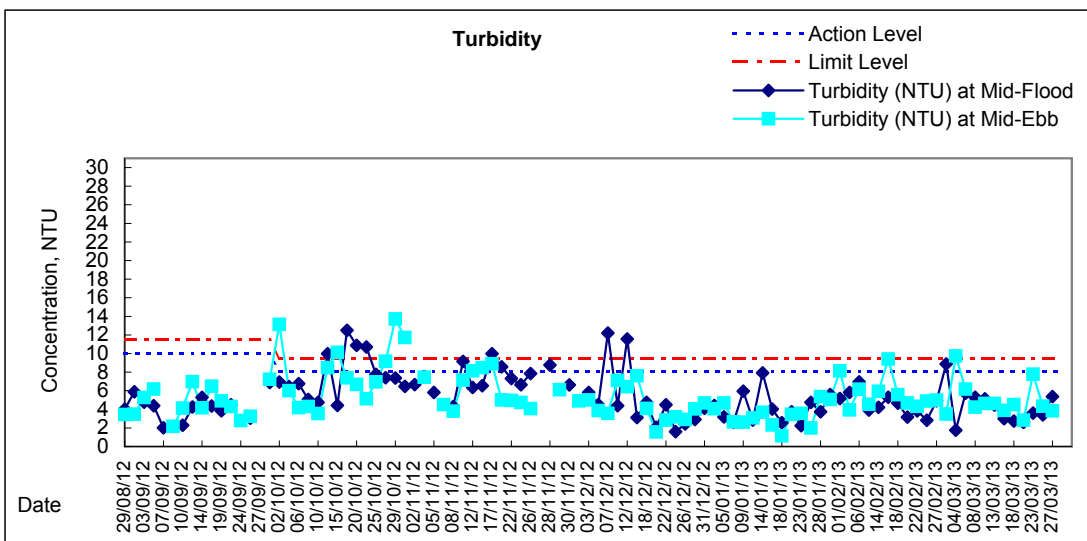
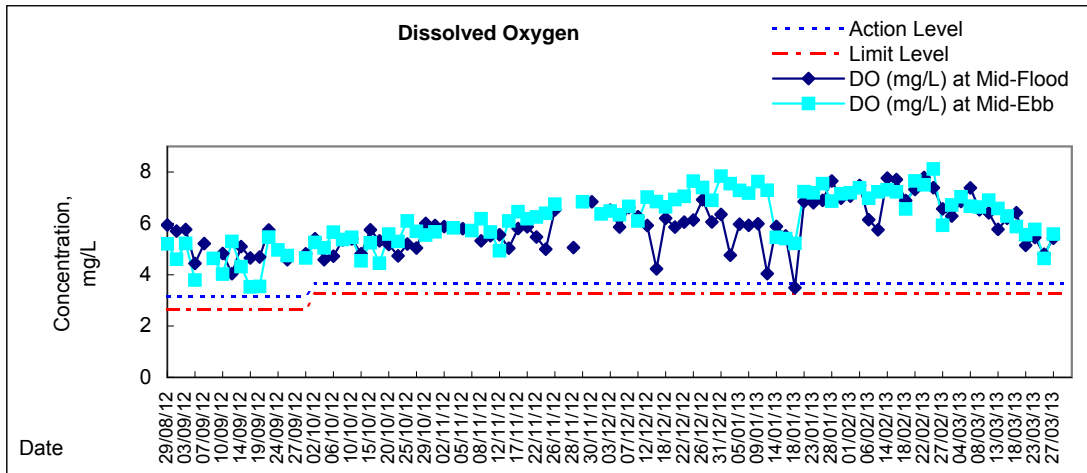




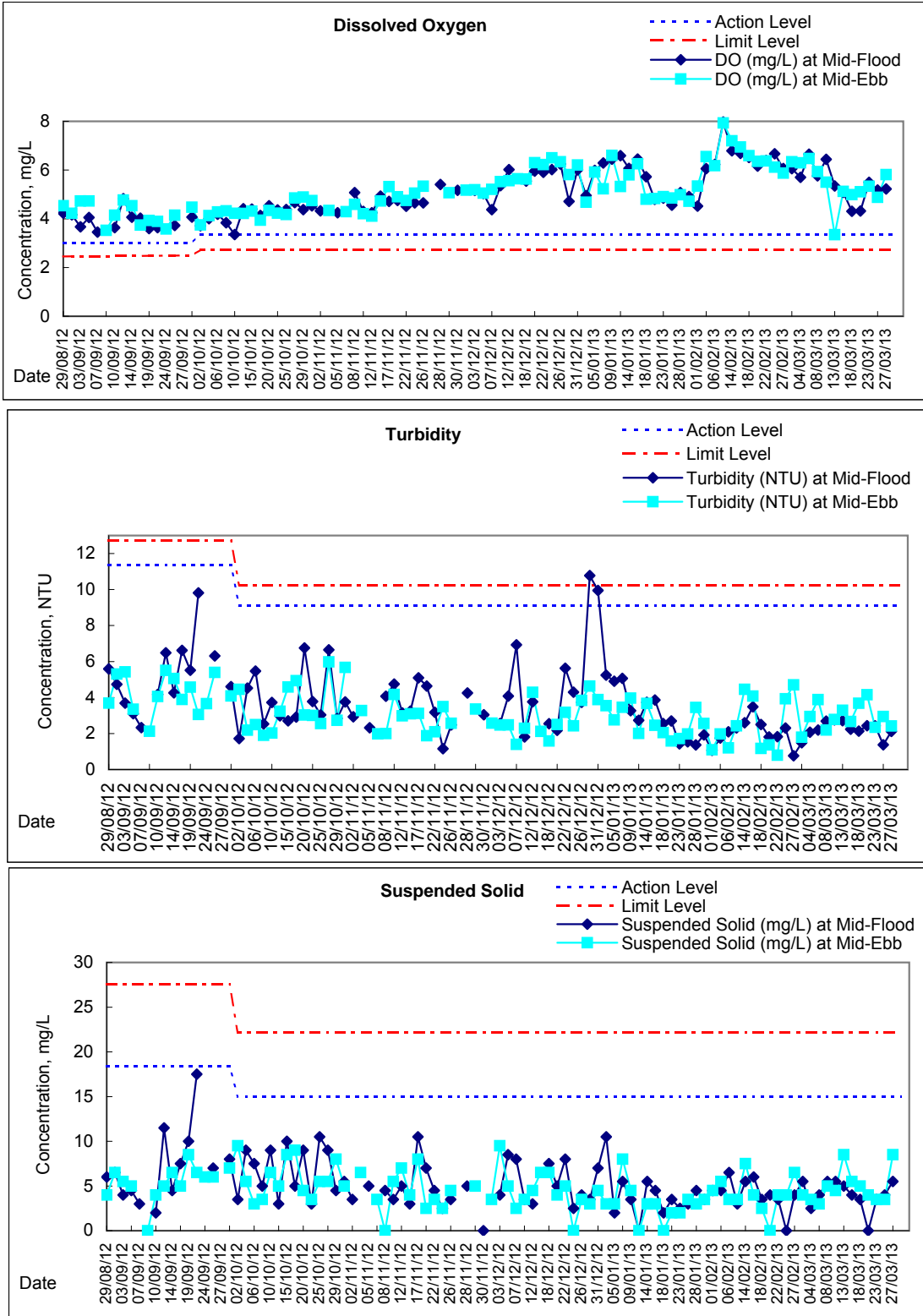
Remarks: As confirmed by HY/2009/19 contractor, there was no marine work to be conducted on 26 December 2012, water quality monitoring at C8 was temporary suspended on 26 December 2012 during mid-ebb and mid-flood.



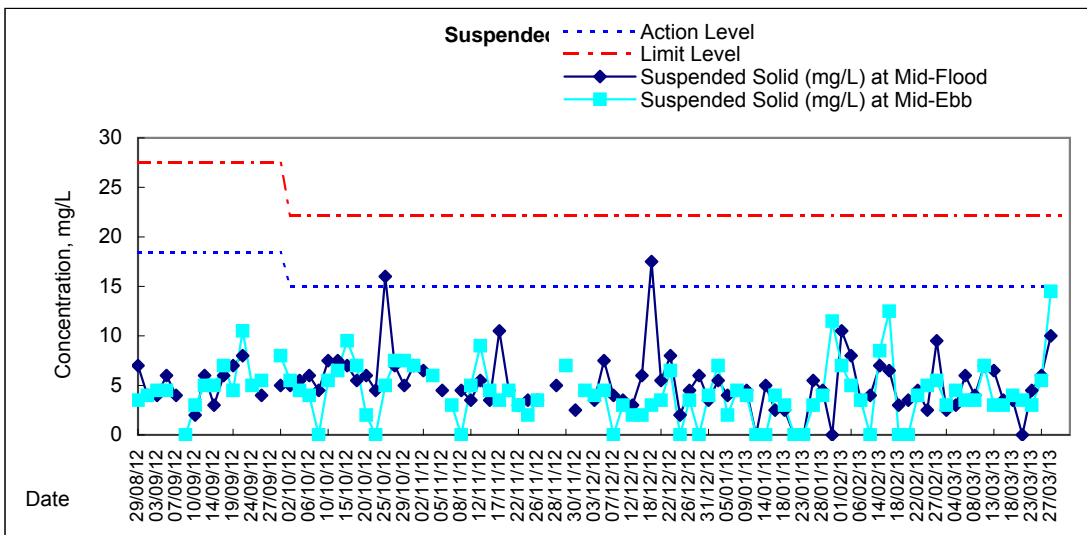
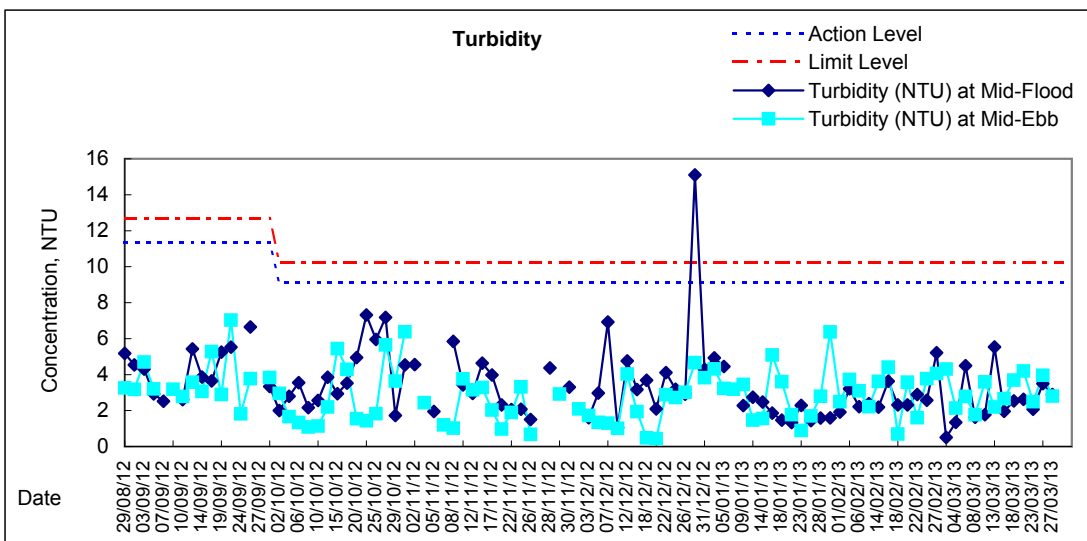
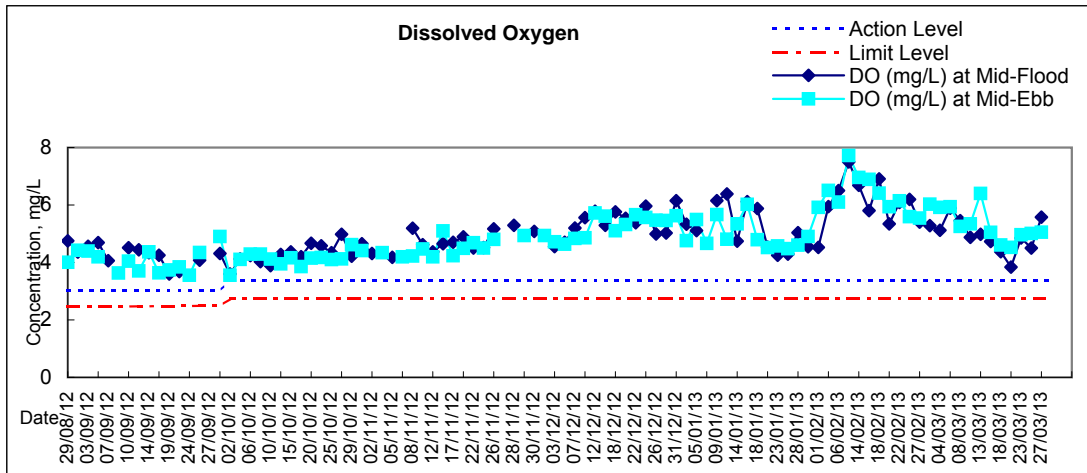
Remarks: As confirmed by HY/2009/19 contractor, there was no marine work to be conducted on 26 December 2012, water quality monitoring at C9 was temporary suspended on 26 December 2012 during mid-ebb and mid-flood.

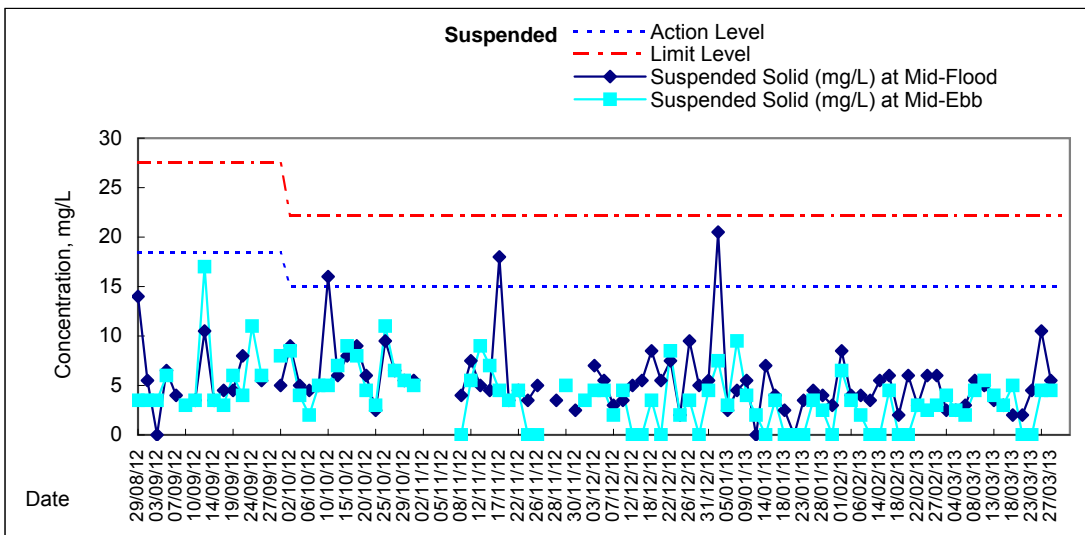
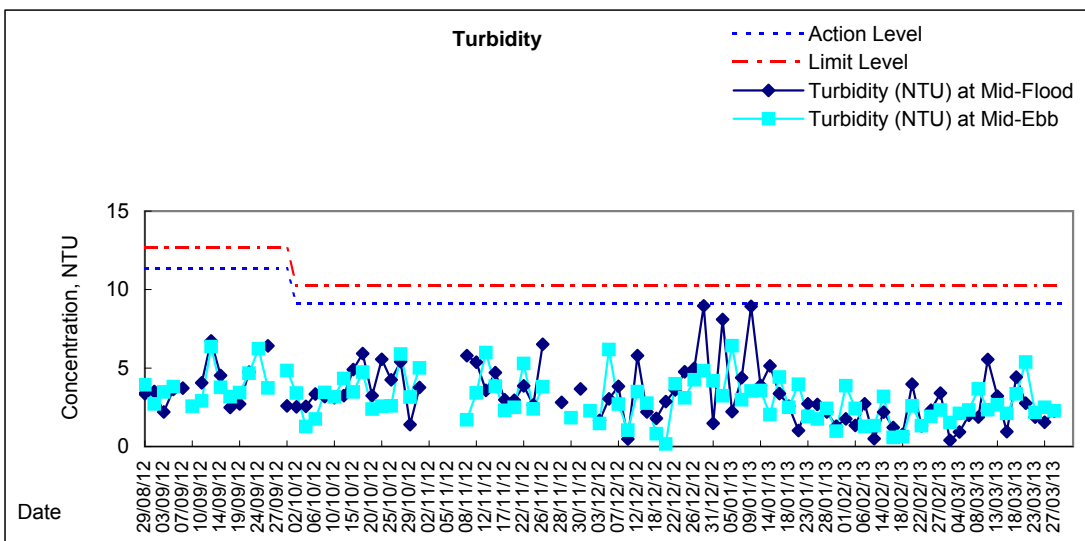
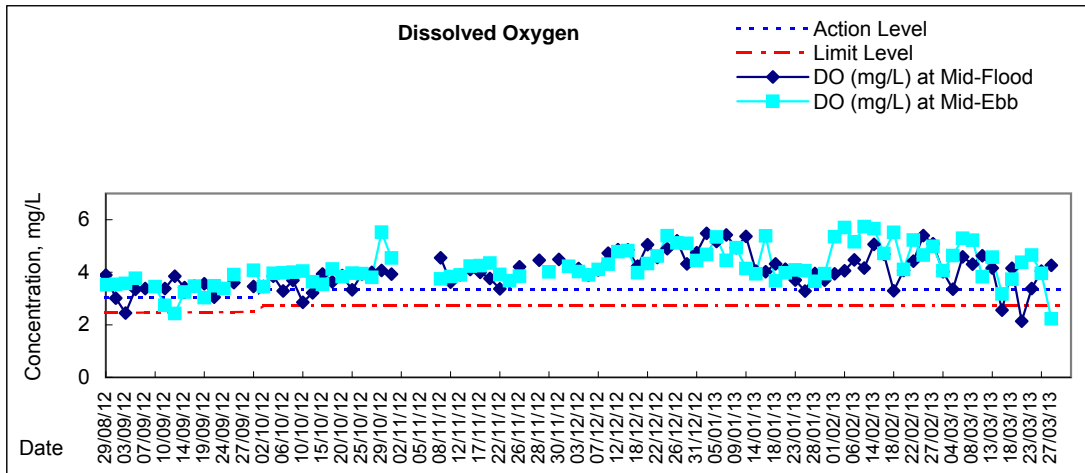


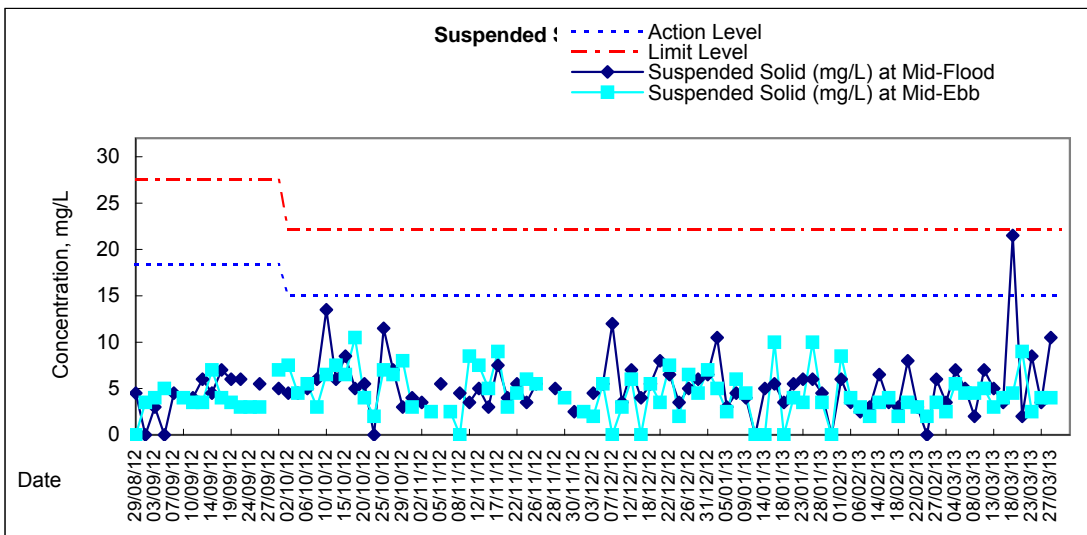
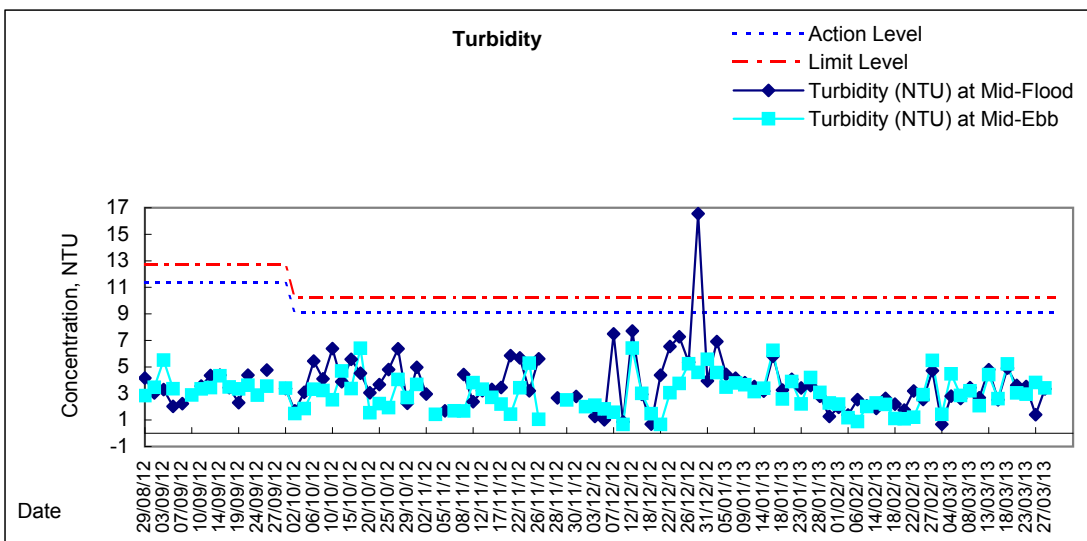
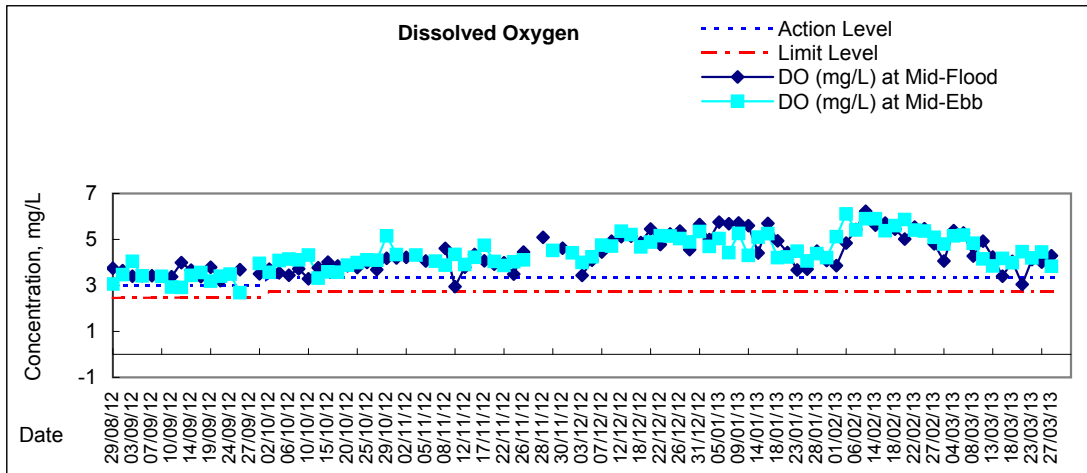
Graphic Presentation of Water Quality Result of C1 - HKCEC

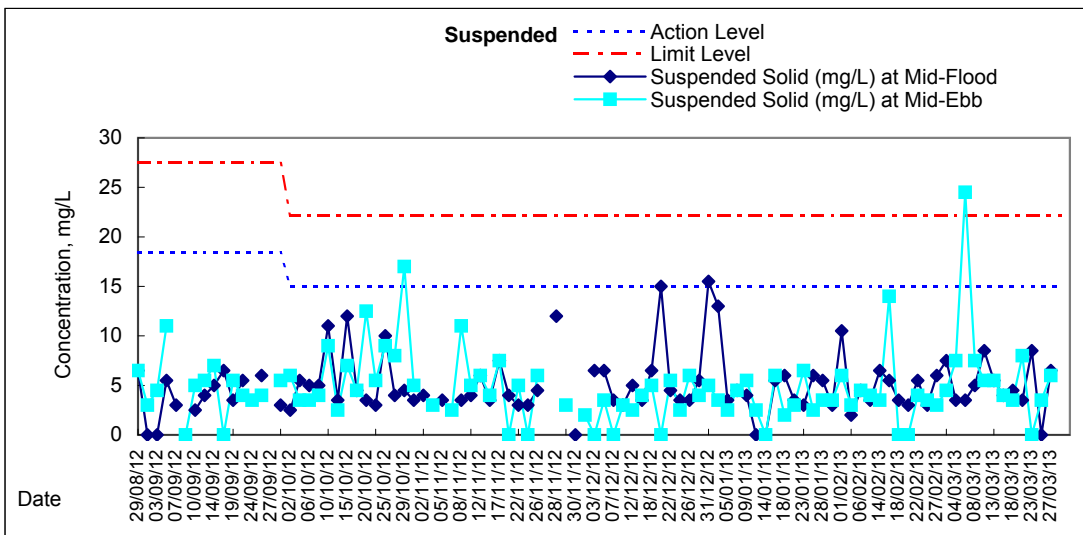
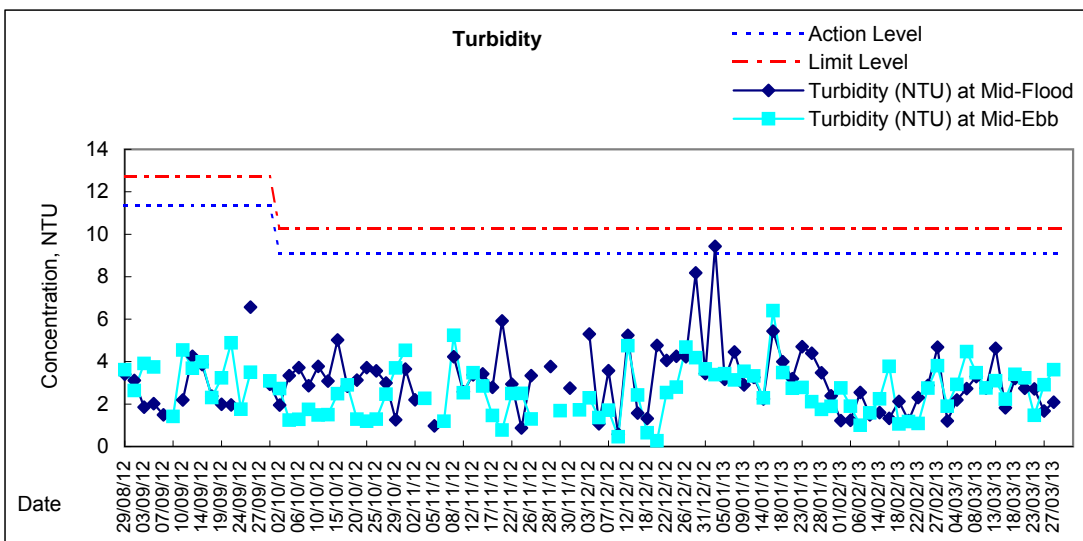
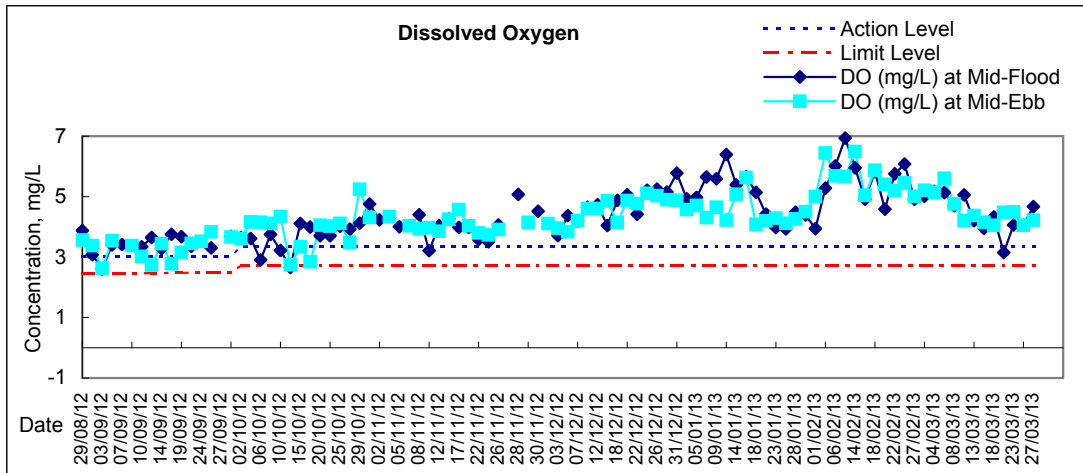


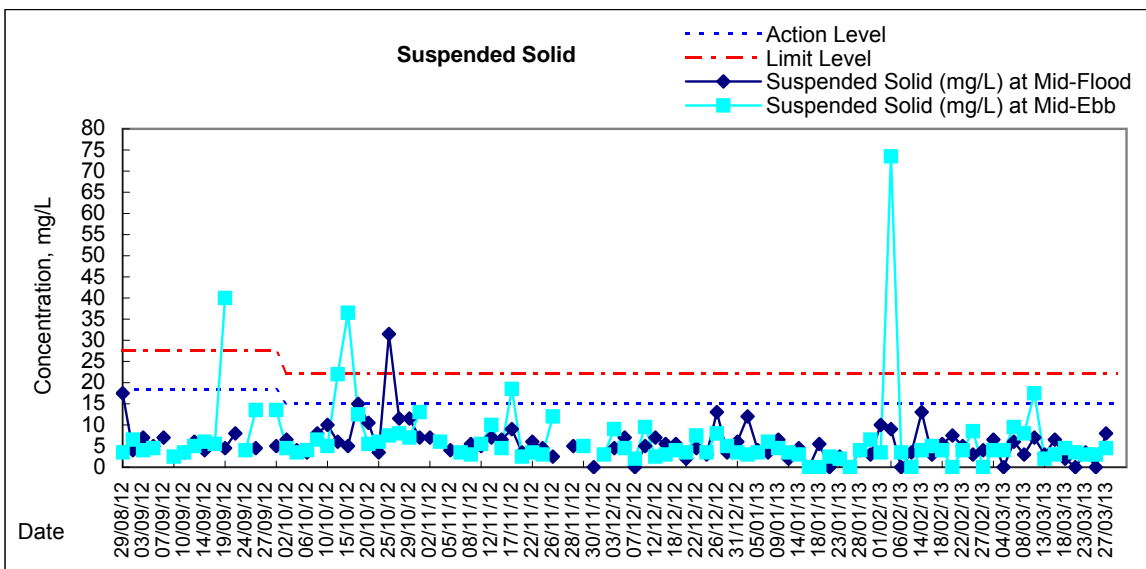
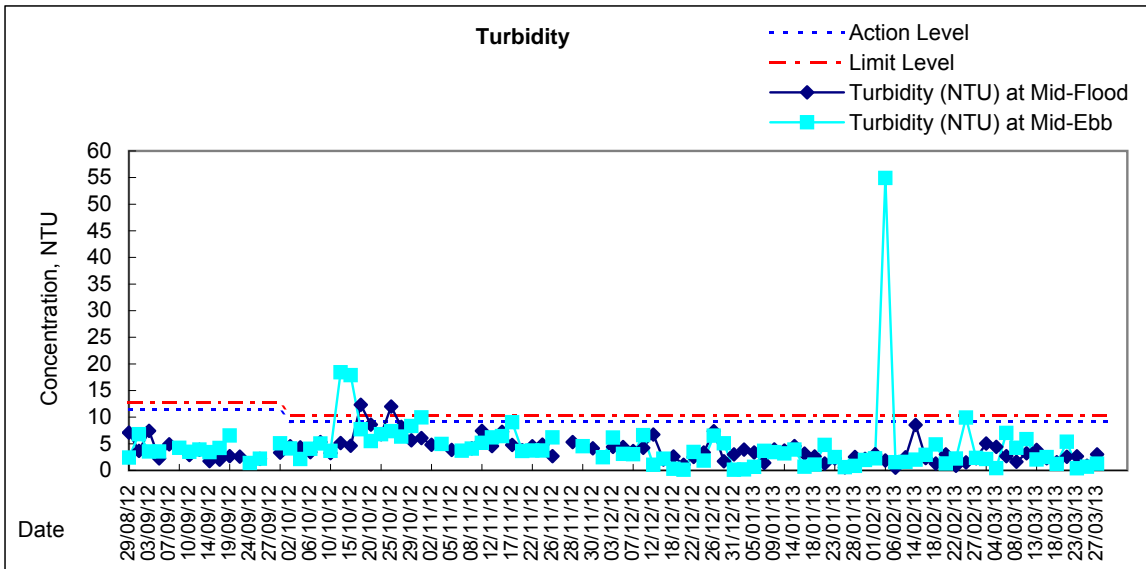
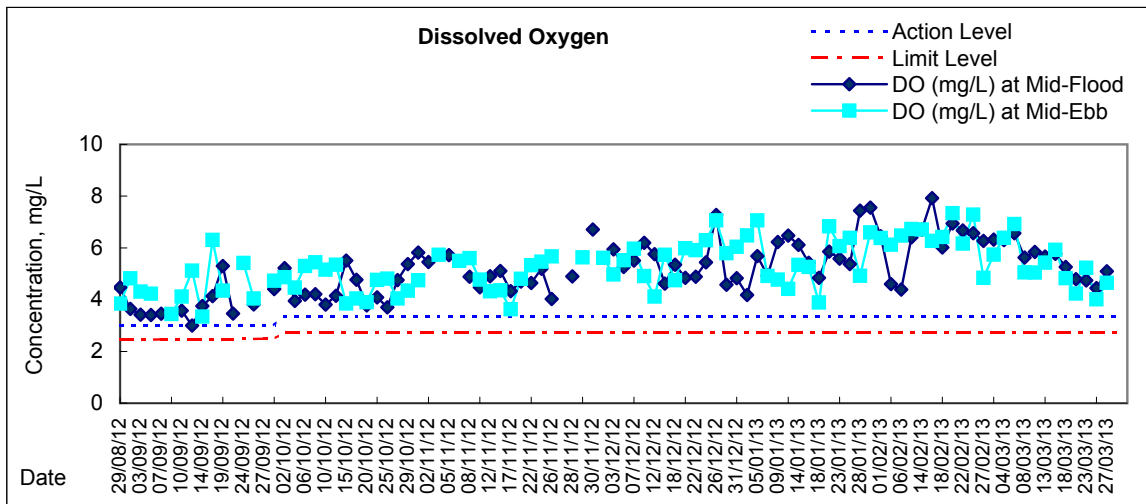
Remarks: Due to the blockage of road access to C1 on 15 Dec 2012 during mid-flood, the water quality monitoring was cancelled at C1 on 15 Dec 2012 during mid-flood.

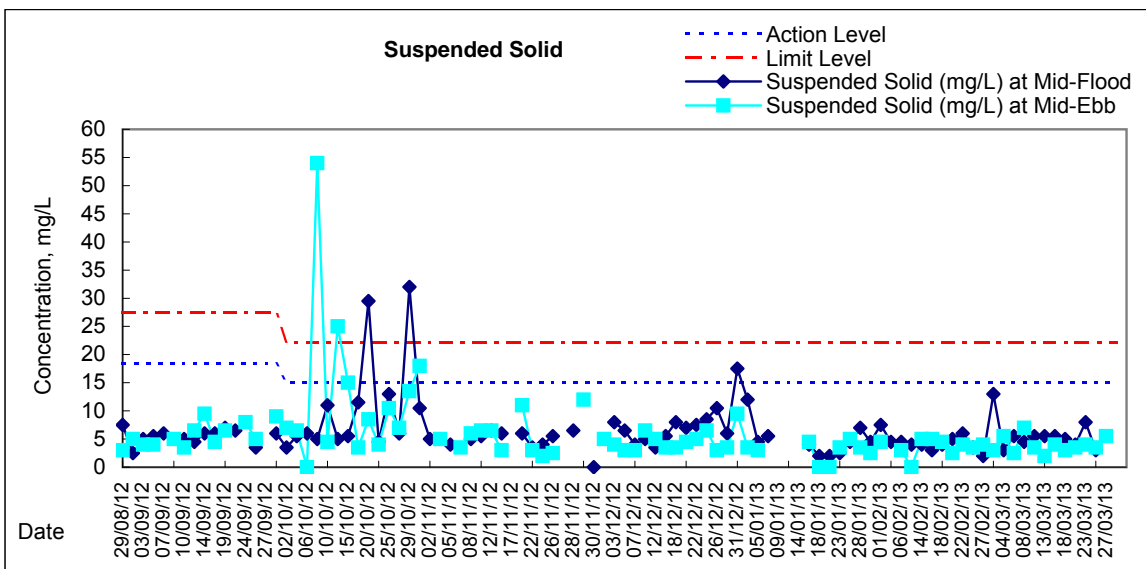
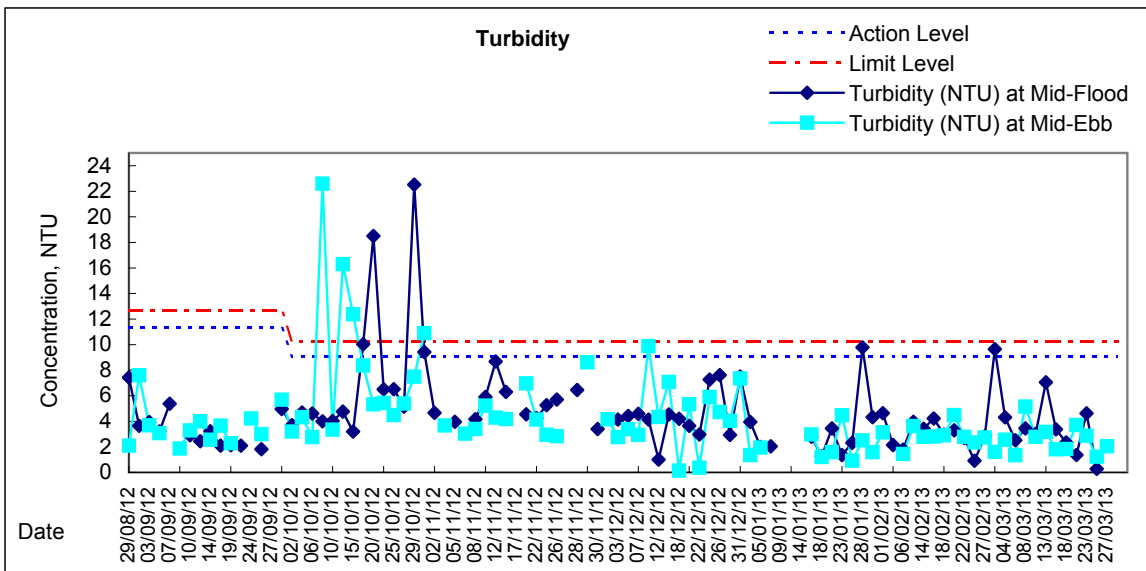
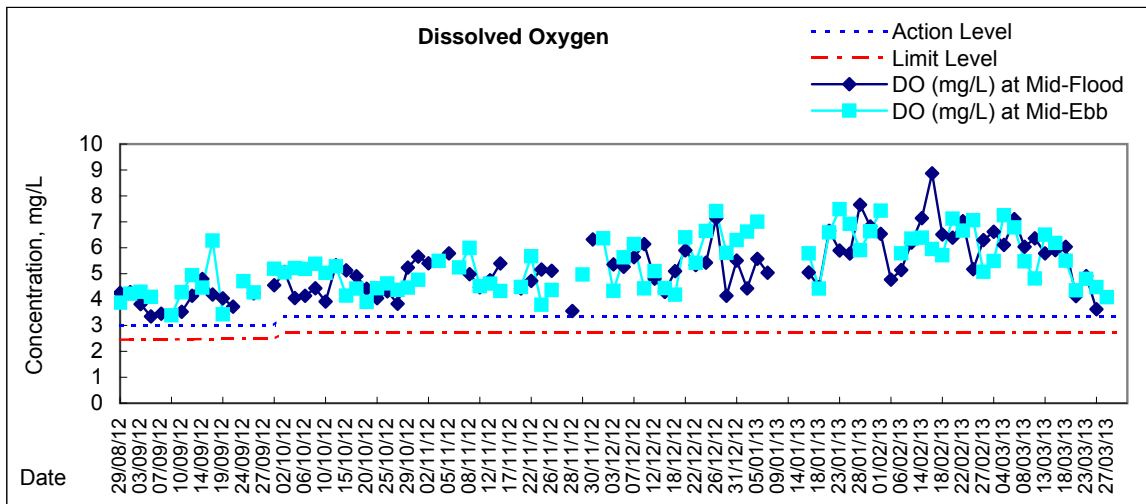


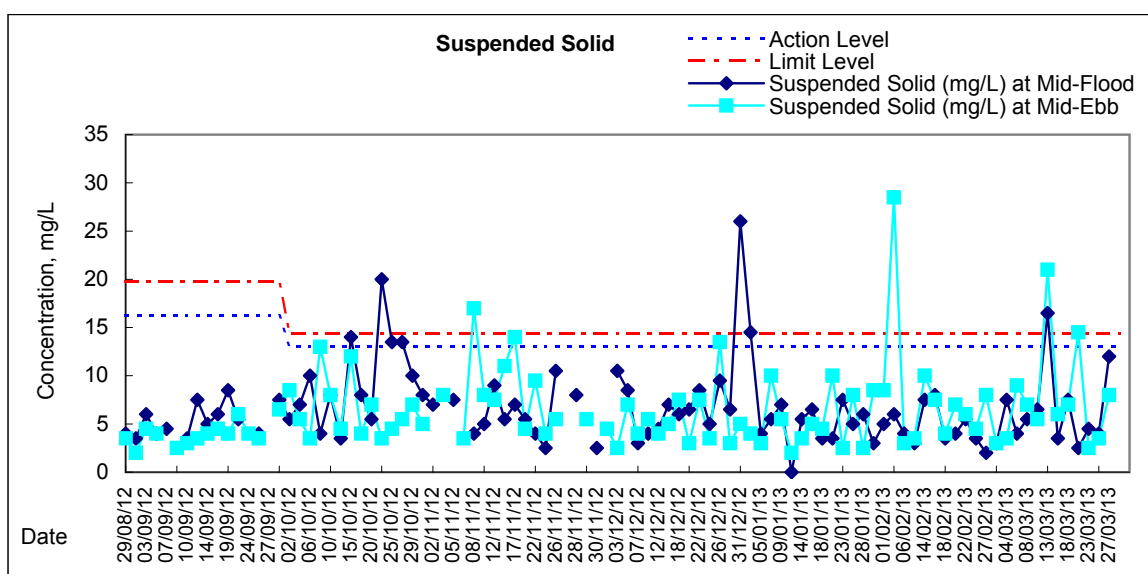
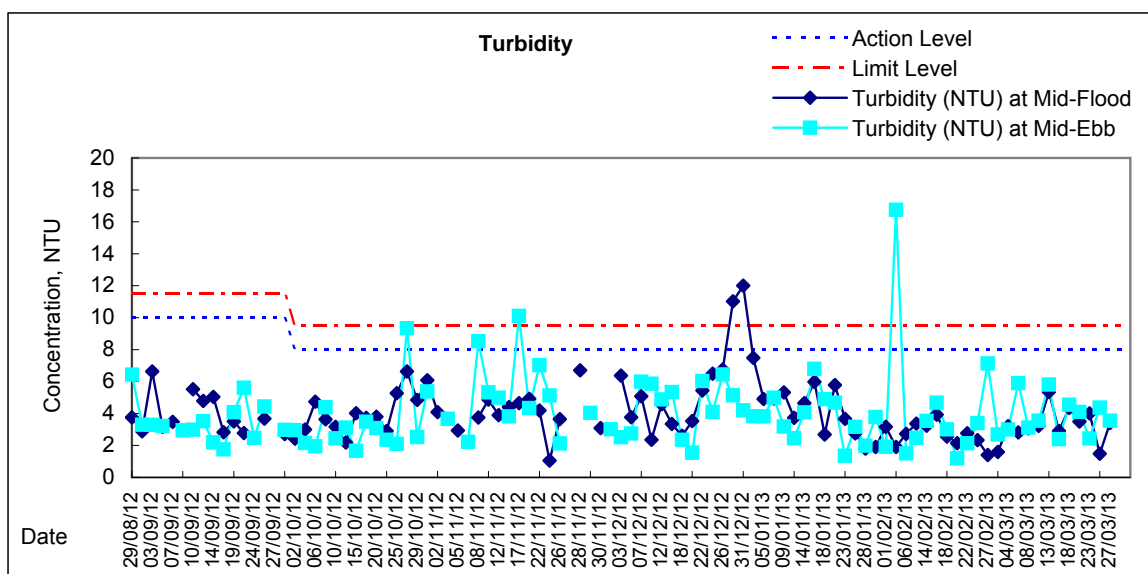
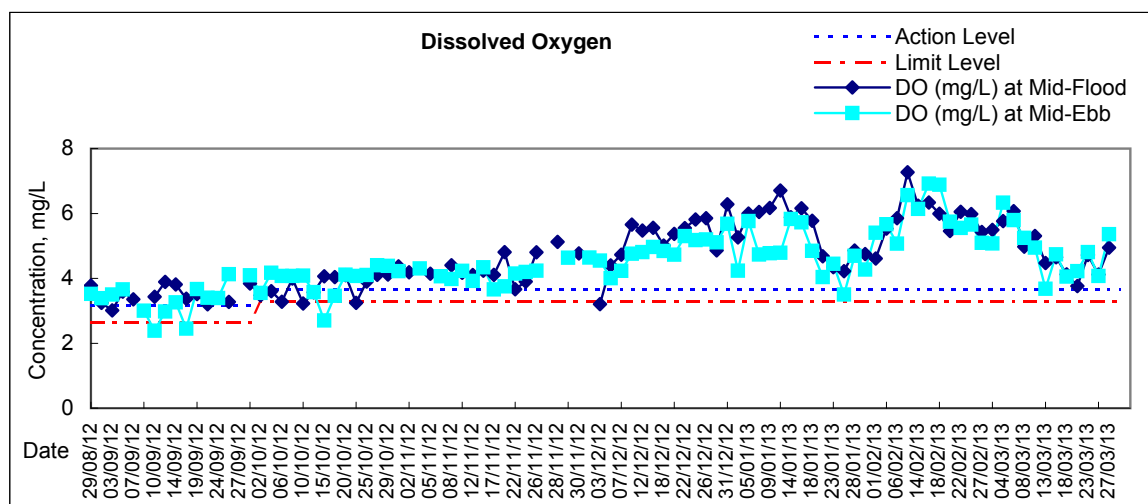












**Water Monitoring Result at C6 - Excelsior Hotel
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C			-			ppt			%			mg/L		
			m		Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:30		Middle	1.5	19.08	19.08	19.1	7.88	7.88	7.9	32.74	32.74	32.7	80.9	80.4	80.7	6.17	6.13	6.15
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:45		Middle	1.5	18.35	18.35	18.4	7.97	7.97	8.0	32.90	32.90	32.9	91.4	90.6	91.0	7.06	6.99	7.03
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:45		Middle	1.5	18.70	18.70	18.7	8.25	8.25	8.3	34.09	34.09	34.1	69.1	69.2	69.2	5.26	5.27	5.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:50		Middle	1.5	19.27	19.26	19.3	7.83	7.83	7.8	32.91	32.91	32.9	80.0	83.0	81.5	6.07	6.30	6.19
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Misty	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:25		Middle	1.5	19.90	19.90	19.9	7.86	7.87	7.9	31.46	31.46	31.5	85.5	85.0	85.3	6.45	6.42	6.44
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:35		Middle	1.5	20.70	20.70	20.7	8.01	8.01	8.0	32.35	32.35	32.4	84.7	84.9	84.8	6.28	6.28	6.28
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:50		Middle	1.5	19.19	19.19	19.2	8.02	8.02	8.0	33.30	33.30	33.3	85.5	84.6	85.1	6.49	6.41	6.45
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:36		Middle	1.5	20.49	20.49	20.5	7.87	7.87	7.9	33.14	33.14	33.1	80.9	80.0	80.5	6.00	5.93	5.97
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:47		Middle	1.5	21.03	21.03	21.0	7.79	7.79	7.8	32.46	32.46	32.5	70.8	68.5	69.7	5.22	5.03	5.13
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:35		Middle	1.5	21.63	21.63	21.6	7.70	7.70	7.7	33.35	33.35	33.4	63.3	62.6	63.0	4.59	4.53	4.56
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:03		Middle	1.5	20.56	20.56	20.6	7.85	7.85	7.9	32.97	32.97	33.0	61.2	58.7	60.0	4.53	4.35	4.44
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:39		Middle	1.5	20.40	20.40	20.4	8.04	8.04	8.0	32.73	32.73	32.7	75.9	76.6	76.3	5.64	5.70	5.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C			-			ppt			%			mg/L		
			m		Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:37		Middle	1.5	19.21	19.21	19.2	7.87	7.87	7.9	32.90	32.90	32.9	78.7	77.6	78.2	5.98	5.90	5.94
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:56		Middle	1.5	18.47	18.47	18.5	7.96	7.96	8.0	32.84	32.84	32.8	90.8	89.0	89.9	7.00	6.86	6.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:54		Middle	1.5	19.30	19.30	19.3	7.88	7.88	7.9	34.16	34.16	34.2	68.0	67.8	67.9	5.12	5.10	5.11
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:04		Middle	1.5	19.83	19.83	19.8	7.75	7.75	7.8	32.48	32.48	32.5	84.6	84.5	84.6	6.37	6.36	6.37
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Misty	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:15		Middle	1.5	20.10	20.10	20.1	7.93	7.93	7.9	31.72	31.72	31.7	79.1	78.8	79.0	5.95	5.92	5.94
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:26		Middle	1.5	21.00	21.00	21.0	7.97	7.97	8.0	31.73	31.73	31.7	74.0	74.2	74.1	5.46	5.49	5.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:00		Middle	1.5	19.39	19.39	19.4	7.98	7.98	8.0	33.30	33.30	33.3	83.3	81.8	82.6	6.29	6.18	6.24
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:43		Middle	1.5	21.31	21.31	21.3	7.84	7.84	7.8	32.89	32.89	32.9	78.0	76.4	77.2	5.70	5.64	5.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:00		Middle	1.5	21.08	21.08	21.1	7.79	7.79	7.8	32.44	32.44	32.4	70.7	69.2	70.0	5.21	5.10	5.16
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:45		Middle	1.5	21.94	21.94	21.9	7.68	7.68	7.7	33.12	33.12	33.1	65.1	64.6	64.9	4.70	4.60	4.65
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:05		Middle	1.5	20.72	20.72	20.7	7.82	7.82	7.8	33.03	33.03	33.0	62.6	62.0	62.3	4.62	4.58	4.60
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:30		Middle	1.5	20.40	20.40	20.4	7.98	7.98	8.0	32.46	32.46	32.5	70.9	70.9	70.9	5.27	5.27	5.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C			-			ppt			%			mg/L		
			m		Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:04		Middle	1.5	19.10	19.10	19.1	7.84	7.84	7.8	32.53	32.53	32.5	84.7	84.5	84.6	6.46	6.44	6.45
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:37		Middle	1.5	17.92	17.92	17.9	7.96	7.96	8.0	33.04	33.04	33.0	84.8	83.8	84.3	6.59	6.51	6.55
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	12:38	Fine	Surface	1.0	18.60	18.60	18.6	7.90	7.90	7.9	32.01	32.01	32.0	65.9	65.3	65.6	5.10	5.02	5.06
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:39		Bottom	3.0	18.30	18.30	18.3	7.87	7.87	7.9	33.64	33.64	33.6	65.6	64.1	64.9	5.05	4.93	4.99
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:42		Middle	1.5	18.83	18.83	18.8	7.72	7.72	7.7	32.84	32.84	32.8	77.8	77.0	77.4	5.96	5.89	5.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Misty	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:42		Middle	1.5	19.40	19.40	19.4	7.91	7.91	7.9	31.50	31.50	31.5	62.8	62.9	62.9	4.79	4.80	4.80
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:47		Middle	1.5	20.70	20.70	20.7	7.93	7.93	7.9	29.74	29.74	29.7	57.2	57.4	57.3	4.30	4.31	4.31
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:45		Middle	1.5	18.93	18.93	18.9	8.03	8.03	8.0	33.38	33.38	33.4	94.4	93.8	94.1	7.19	7.15	7.17
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	10:23	Fine	Surface	1.0	20.10	20.10	20.1	7.78	7.78	7.8	32.83	32.83	32.8	64.4	63.8	64.1	4.82	4.77	4.80
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:24		Bottom	3.0	20.13	20.13	20.1	7.78	7.78	7.8	32.98	32.98	33.0	59.7	58.8	59.3	4.47	4.40	<u>4.44</u>
21/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:42		Middle	1.5	20.98	20.98	21.0	7.78	7.78	7.8	32.85	32.85	32.9	64.8	64.3	64.6	4.77	4.70	4.74
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:32		Middle	1.5	21.33	21.33	21.3	7.86	7.86	7.9	33.49	33.49	33.5	71.0	70.7	70.9	5.17	5.15	5.16
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:52		Middle	1.5	20.51	20.51	20.5	7.78	7.78	7.8	32.71	32.71	32.7	48.5	49.4	49.0	3.60	3.67	<u>3.64</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:17		Middle	1.5	20.40	20.40	20.4	7.93	7.93	7.9	30.93	30.93	30.9	52.8	52.9	52.9	3.97	3.98	3.98
	-		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	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C			-			ppt			%			mg/L		
			m		Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:02		Middle	1.5	19.17	19.17	19.2	7.87	7.87	7.9	32.89	32.89	32.9	82.2	82.0	82.1	6.25	6.24	6.25
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:35		Middle	1.5	18.17	18.17	18.2	7.99	7.99	8.0	33.30	33.30	33.3	89.5	87.6	88.6	6.92	6.77	6.85
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	12:34	Fine	Surface	1.0	18.20	18.20	18.2	8.04	8.04	8.0	34.00	34.00	34.0	69.2	68.4	68.8	5.30	5.24	5.27
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:35		Bottom	3.0	18.40	18.40	18.4	7.95	7.95	8.0	33.68	33.68	33.7	67.4	68.5	68.0	5.17	5.26	<u>5.22</u>
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:37		Middle	1.5	19.02	19.03	19.0	7.77	7.77	7.8	33.22	33.22	33.2	80.6	80.2	80.4	6.14	6.10	6.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Misty	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:48		Middle	1.5	19.40	19.40	19.4	7.89	7.89	7.9	31.44	31.44	31.4	62.5	62.6	62.6	4.77	4.76	4.77
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:53		Middle	1.5	20.80	20.80	20.8	7.89	7.89	7.9	29.45	29.45	29.5	62.2	61.1	61.7	4.68	4.59	4.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:47		Middle	1.5	18.91	18.91	18.9	8.01	8.01	8.0	32.92	32.92	32.9	86.1	85.6	85.9	6.85	6.50	6.68
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	10:17	Fine	Surface	1.0	20.33	20.33	20.3	7.83	7.83	7.8	32.48	32.48	32.5	67.6	66.2	66.9	5.04	4.94	4.99
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:18		Bottom	3.0	20.02	20.02	20.0	7.81	7.81	7.8	33.07	33.07	33.1	62.5	62.0	62.3	4.67	4.64	<u>4.66</u>
21/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:40		Middle	1.5	21.11	21.11	21.1	7.82	7.82	7.8	32.60	32.60	32.6	71.8	70.7	71.3	5.27	5.19	5.23
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:30		Middle	1.5	21.57	21.57	21.6	7.90	7.90	7.9	33.67	33.67	33.7	76.9	75.1	76.0	5.57	5.43	5.50
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:48		Middle	1.5	20.51	20.51	20.5	7.81	7.81	7.8	33.05	33.05	33.1	55.5	54.6	55.1	4.11	4.04	<u>4.08</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:25		Middle	1.5	20.30	20.30	20.3	7.88	7.88	7.9	30.72	30.72	30.7	51.9	51.6	51.8	3.91	3.89	<u>3.90</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO	
					°C			-			ppt			%			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:50		Middle	1.5	19.37	19.37	19.4	7.96	7.96	8.0	32.86	32.86	32.9	87.4	85.3	86.4	6.62	6.40
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:45		Middle	1.5	18.27	18.27	18.3	7.96	7.96	8.0	32.92	32.92	32.9	90.8	89.6	90.2	7.02	6.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:52		Middle	1.0	18.90	18.90	18.9	8.08	8.08	8.1	32.52	32.52	32.5	85.8	87.7	86.8	6.57	6.71
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:51		Middle	1.0	19.10	19.10	19.1	7.83	7.83	7.8	31.96	31.96	32.0	83.6	84.6	84.1	6.40	6.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:15		Middle	1.5	19.47	19.47	19.5	7.85	7.85	7.9	33.03	33.03	33.0	85.9	85.1	85.5	6.49	6.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:21		Middle	1.5	20.10	20.10	20.1	7.83	7.83	7.8	34.05	34.05	34.1	69.1	68.5	68.8	5.34	5.31
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:09		Middle	1.5	19.89	19.89	19.9	8.00	8.00	8.0	33.41	33.41	33.4	93.3	92.7	93.0	6.98	6.86
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:54		Middle	1.5	20.94	20.94	20.9	7.79	7.79	7.8	33.35	33.35	33.4	82.5	81.3	81.9	6.05	5.96
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:25		Middle	1.0	21.70	21.70	21.7	7.87	7.87	7.9	31.78	31.78	31.8	69.1	69.8	69.5	5.04	5.09
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:05		Middle	1.0	21.60	21.60	21.6	7.83	7.83	7.8	31.76	31.76	31.8	66.6	67.0	66.8	4.89	4.91
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:05		Middle	1.5	20.93	20.93	20.9	7.85	7.85	7.9	33.10	33.10	33.1	60.7	60.2	60.5	4.46	4.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:01		Middle	1.5	20.20	20.20	20.2	7.83	7.83	7.8	34.40	34.40	34.4	63.2	62.9	63.1	4.68	4.66
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO	
			m		°C			-			ppt			%			mg/L	
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:00		Middle	1.5	19.44	19.44	19.4	7.94	7.94	7.9	32.97	32.97	33.0	83.0	82.6	82.8	6.28	6.25
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:04		Middle	1.5	17.93	17.93	17.9	7.96	7.96	8.0	33.09	33.09	33.1	95.5	95.2	95.4	7.44	7.41
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:44		Middle	1.0	18.60	18.60	18.6	8.01	8.01	8.0	31.82	31.82	31.8	88.2	88.5	88.4	6.81	6.84
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:39		Middle	1.0	19.30	19.30	19.3	7.85	7.85	7.9	31.18	31.18	31.2	85.6	85.3	85.5	6.56	6.53
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:25		Middle	1.5	19.76	19.76	19.8	7.86	7.86	7.9	32.77	32.77	32.8	89.4	89.0	89.2	6.73	6.70
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:34		Middle	1.5	20.90	20.90	20.9	7.89	7.89	7.9	33.34	33.34	33.3	67.0	66.9	67.0	5.00	4.99
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:22		Middle	1.5	20.32	20.32	20.3	7.97	7.96	8.0	33.31	33.31	33.3	89.5	88.7	89.1	6.65	6.59
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:00		Middle	1.5	21.84	21.84	21.8	7.74	7.74	7.7	32.91	32.91	32.9	80.1	79.2	79.7	5.81	5.79
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:13		Middle	1.0	22.10	22.10	22.1	7.81	7.81	7.8	30.94	30.94	30.9	67.1	67.4	67.3	4.88	4.90
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:40		Middle	1.0	21.70	21.70	21.7	7.74	7.74	7.7	31.36	31.36	31.4	61.4	61.6	61.5	4.49	4.52
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:09		Middle	1.5	21.00	21.00	21.0	7.85	7.85	7.9	33.22	33.22	33.2	71.7	70.6	71.2	5.26	5.18
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:08		Middle	1.5	20.20	20.20	20.2	7.85	7.85	7.9	33.71	33.71	33.7	63.1	62.8	63.0	4.68	4.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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**

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO	
			m		°C			-			ppt			%			mg/L	
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:45		Middle	1.5	19.43	19.43	19.4	7.92	7.92	7.9	32.70	32.70	32.7	86.7	86.3	86.5	6.56	6.52
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	z	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:37		Middle	1.5	18.13	18.13	18.1	8.00	8.01	8.0	33.30	33.31	33.3	99.0	98.7	98.9	7.66	7.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:22		Middle	1.0	19.00	19.00	19.0	7.87	7.87	7.9	28.14	28.14	28.1	60.2	60.1	60.2	4.73	4.72
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:55		Middle	1.0	19.00	19.00	19.0	7.75	7.75	7.8	26.16	26.16	26.2	65.7	62.5	64.1	5.18	4.95
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:07		Middle	1.5	19.53	19.53	19.5	7.73	7.73	7.7	33.19	33.19	33.2	78.8	77.7	78.3	5.95	5.86
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:15		Middle	1.5	20.30	20.30	20.3	7.85	7.85	7.9	32.38	32.38	32.4	66.6	66.8	66.7	4.98	4.99
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:59		Middle	1.5	19.46	19.46	19.5	7.95	7.95	8.0	33.76	33.76	33.8	78.5	77.8	78.2	5.91	5.85
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:42		Middle	1.5	20.34	20.34	20.3	7.72	7.72	7.7	33.20	33.20	33.2	69.9	68.5	69.2	5.19	5.08
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:40		Middle	1.0	21.50	21.50	21.5	7.73	7.73	7.7	28.66	28.66	28.7	53.2	51.3	52.3	3.96	3.82
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:37		Middle	1.0	21.80	21.80	21.8	7.42	7.42	7.4	25.58	25.58	25.6	21.8	22.6	22.2	1.64	1.70
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:02		Middle	1.5	20.87	20.87	20.9	7.81	7.81	7.8	33.05	33.05	33.1	63.2	63.0	63.1	4.66	4.61
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:58		Middle	1.5	20.40	20.40	20.4	7.80	7.80	7.8	33.99	33.99	34.0	56.8	56.5	56.7	4.21	4.19
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

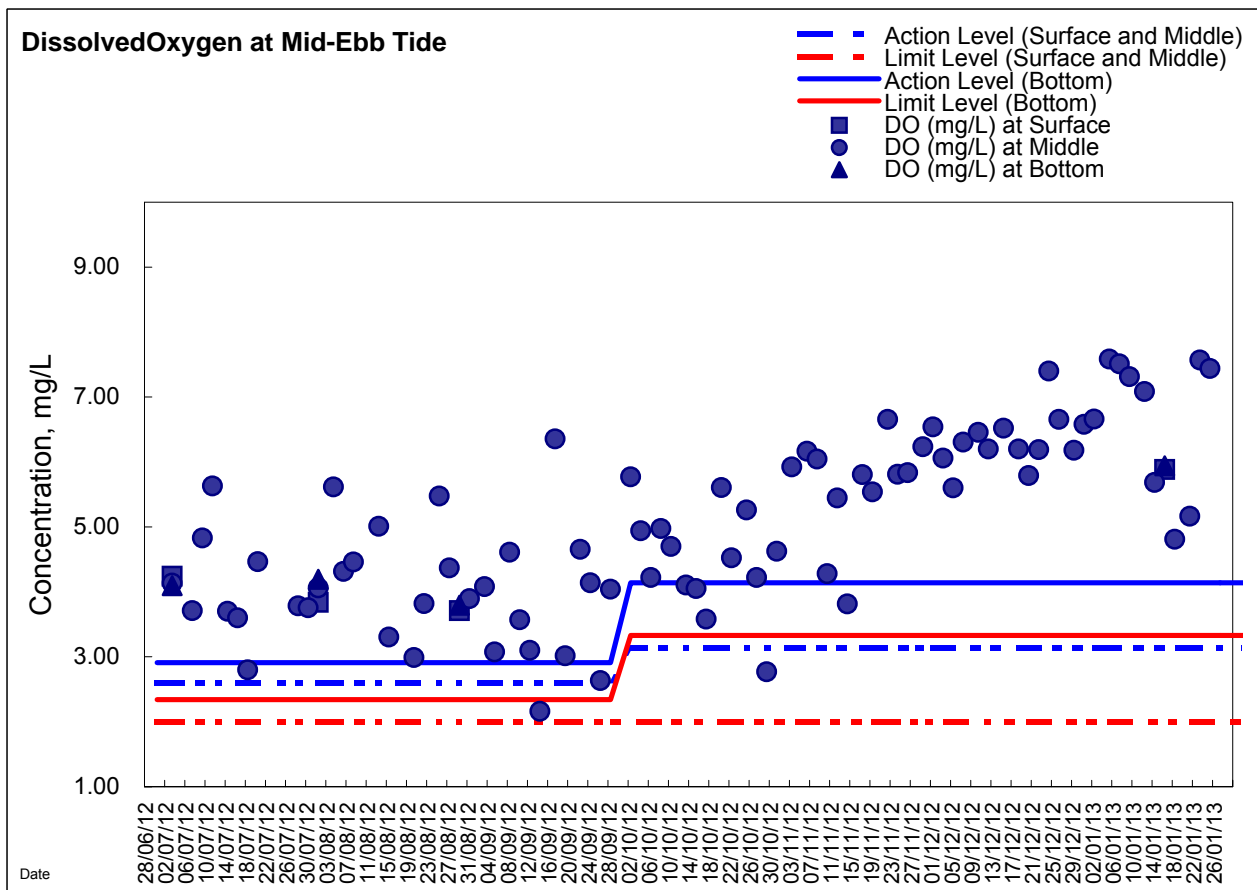
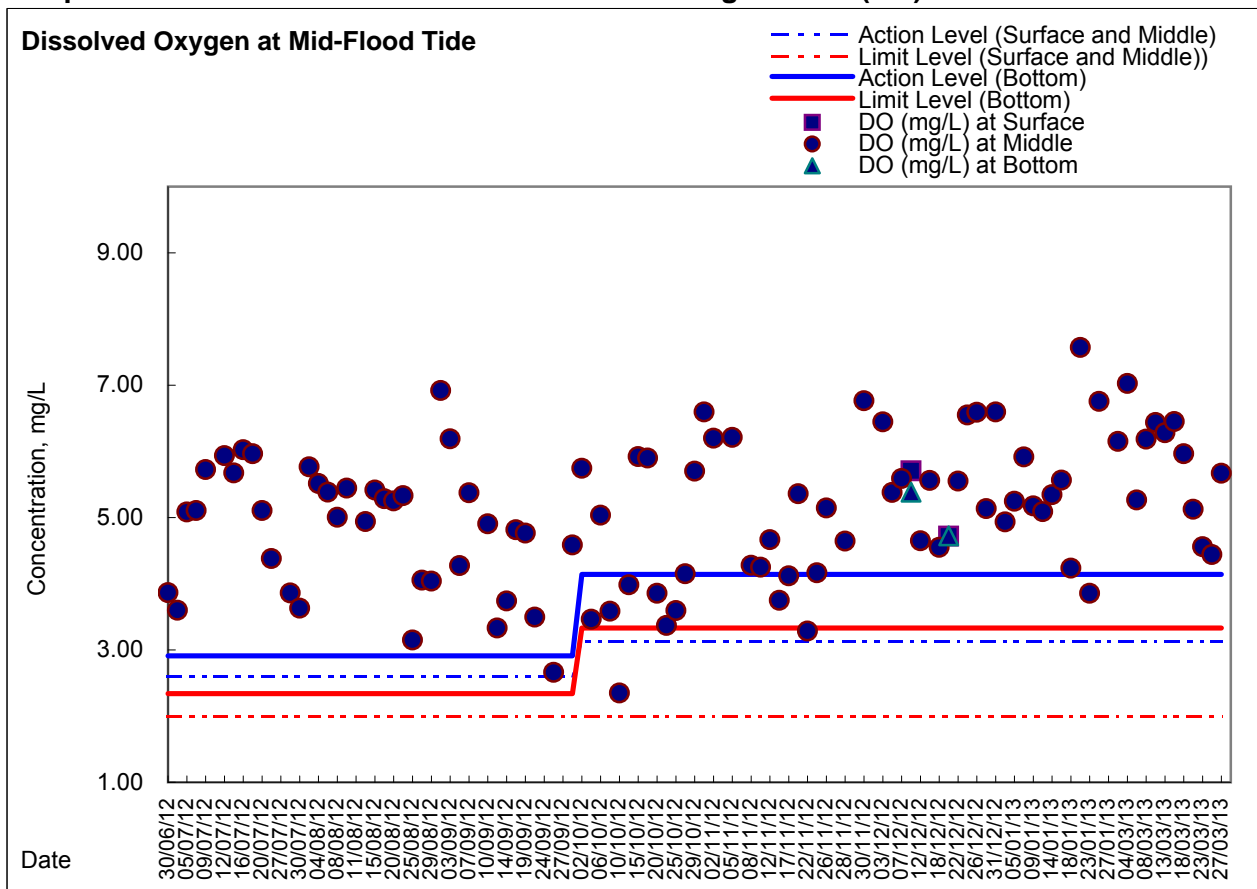
Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO	
			m		°C			-			ppt			%			mg/L	
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
1/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:47		Middle	1.5	19.47	19.47	19.5	7.91	7.91	7.9	32.15	32.15	32.2	80.5	79.6	80.1	6.12	6.06
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:33		Middle	1.5	18.30	18.30	18.3	7.99	7.99	8.0	33.33	33.33	33.3	96.2	95.5	95.9	7.42	7.37
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:27		Middle	1.0	18.90	18.90	18.9	7.77	7.77	7.8	27.87	27.89	27.9	66.1	65.9	66.0	5.20	5.18
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1:00		Middle	1.0	19.00	19.00	19.0	7.65	7.65	7.7	25.83	25.83	25.8	41.7	41.1	41.4	3.31	3.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:05		Middle	1.5	19.94	19.94	19.9	7.74	7.74	7.7	29.63	29.63	29.6	80.3	79.6	80.0	6.13	6.08
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:11		Middle	1.5	20.30	20.30	20.3	7.93	7.93	7.9	32.30	32.30	32.3	67.7	67.2	67.5	5.06	5.04
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:53		Middle	1.5	19.68	19.69	19.7	7.95	7.95	8.0	33.79	33.79	33.8	79.4	78.1	78.8	5.95	5.85
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2013	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:38		Middle	1.5	20.46	20.47	20.5	7.76	7.75	7.8	33.28	33.28	33.3	73.4	71.5	72.5	5.44	5.30
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:46		Middle	1.0	21.50	21.50	21.5	7.71	7.71	7.7	28.60	28.60	28.6	38.3	38.6	38.5	2.86	2.88
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:42		Middle	1.0	21.80	21.80	21.8	7.49	7.49	7.5	26.19	26.19	26.2	22.5	22.6	22.6	1.69	1.70
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2013	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:00		Middle	1.5	21.01	21.01	21.0	7.86	7.86	7.9	32.76	32.76	32.8	69.0	68.3	68.7	5.08	5.02
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/3/2013	11:54	Fine	Surface	1.0	20.20	20.20	20.2	7.93	7.93	7.9	34.77	34.77	34.8	60.2	59.3	59.8	4.45	4.38
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:56		Bottom	3.0	20.10	20.10	20.1	7.90	7.90	7.9	34.86	34.86	34.9	61.0	60.9	61.0	4.51	4.50

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

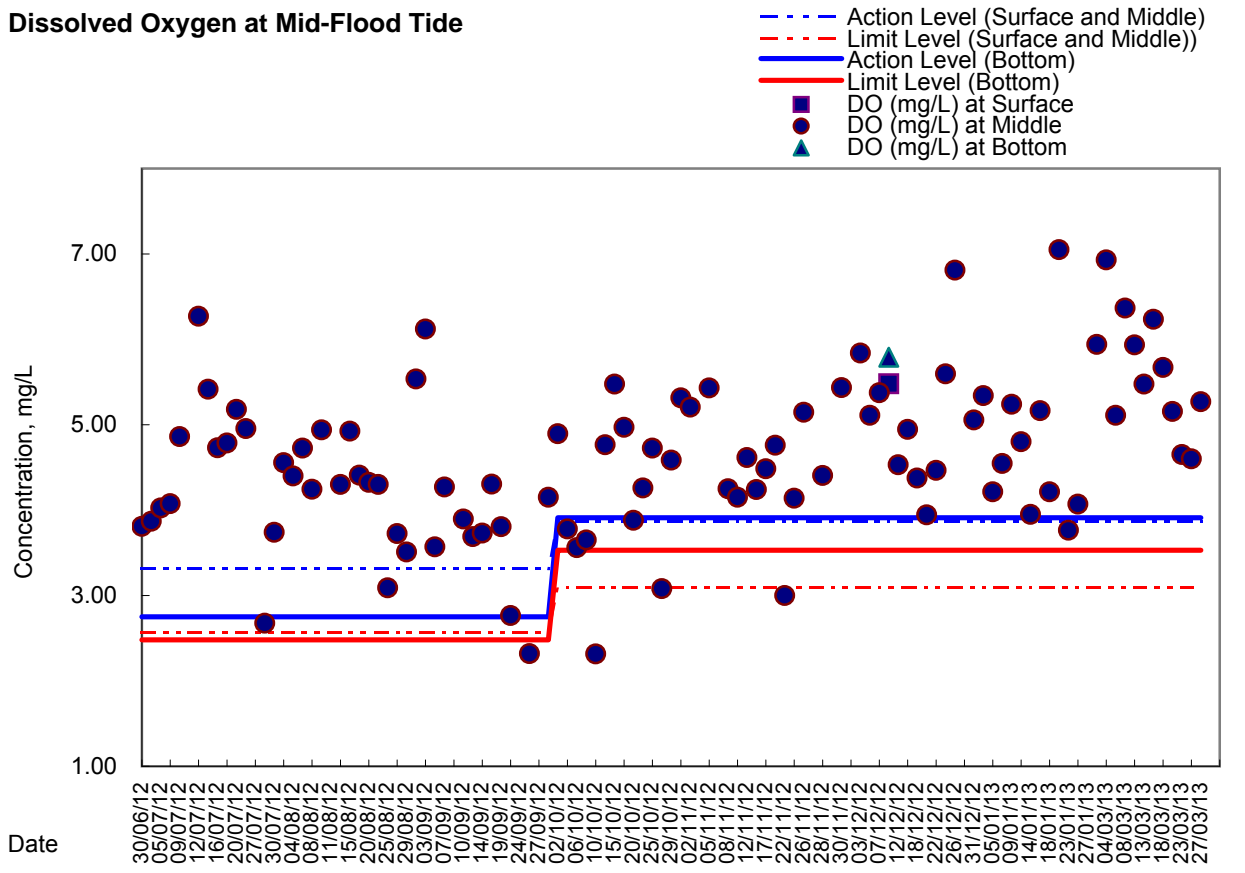


Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel

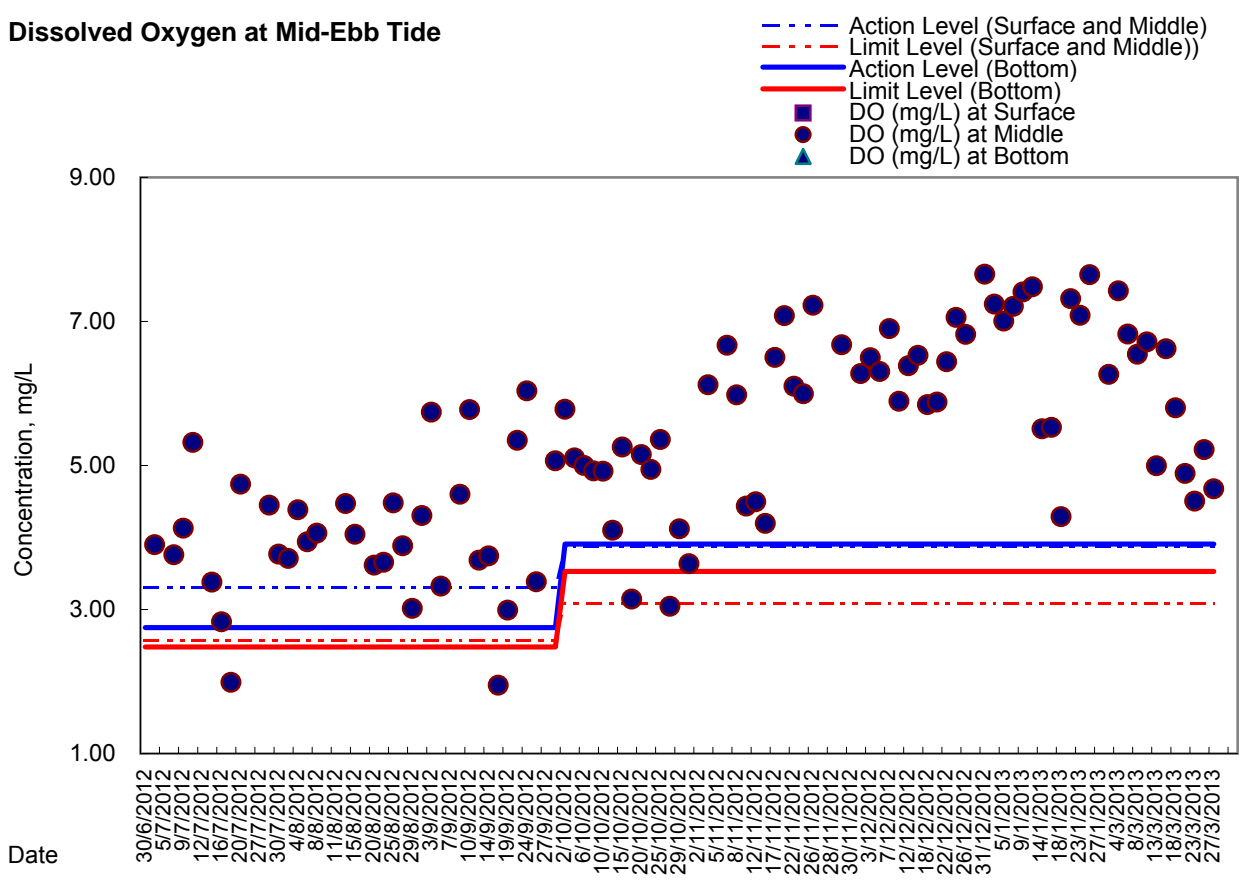


Graphic Presentation of Enhanced Water Monitoring Results (DO) at C7 - Windsor House

Dissolved Oxygen at Mid-Flood Tide

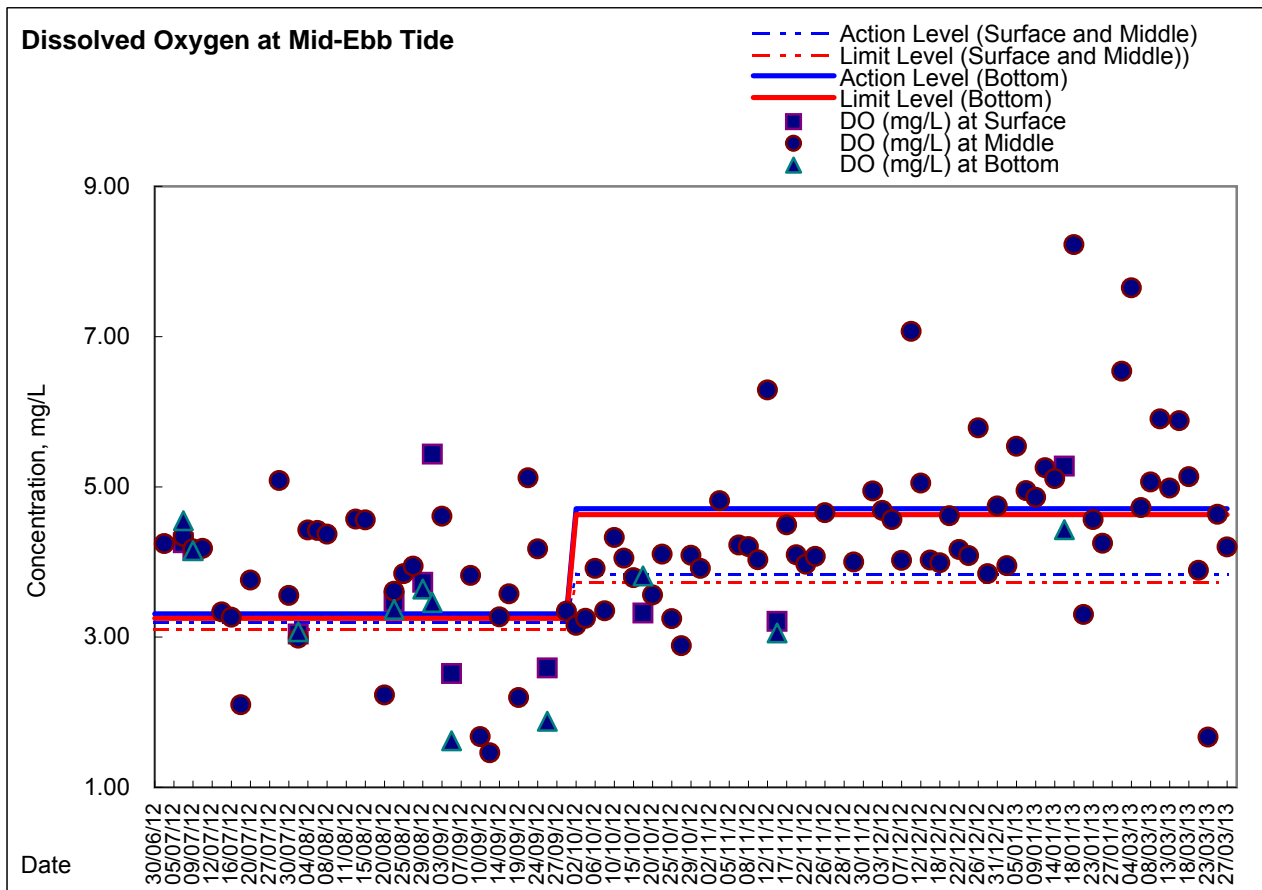
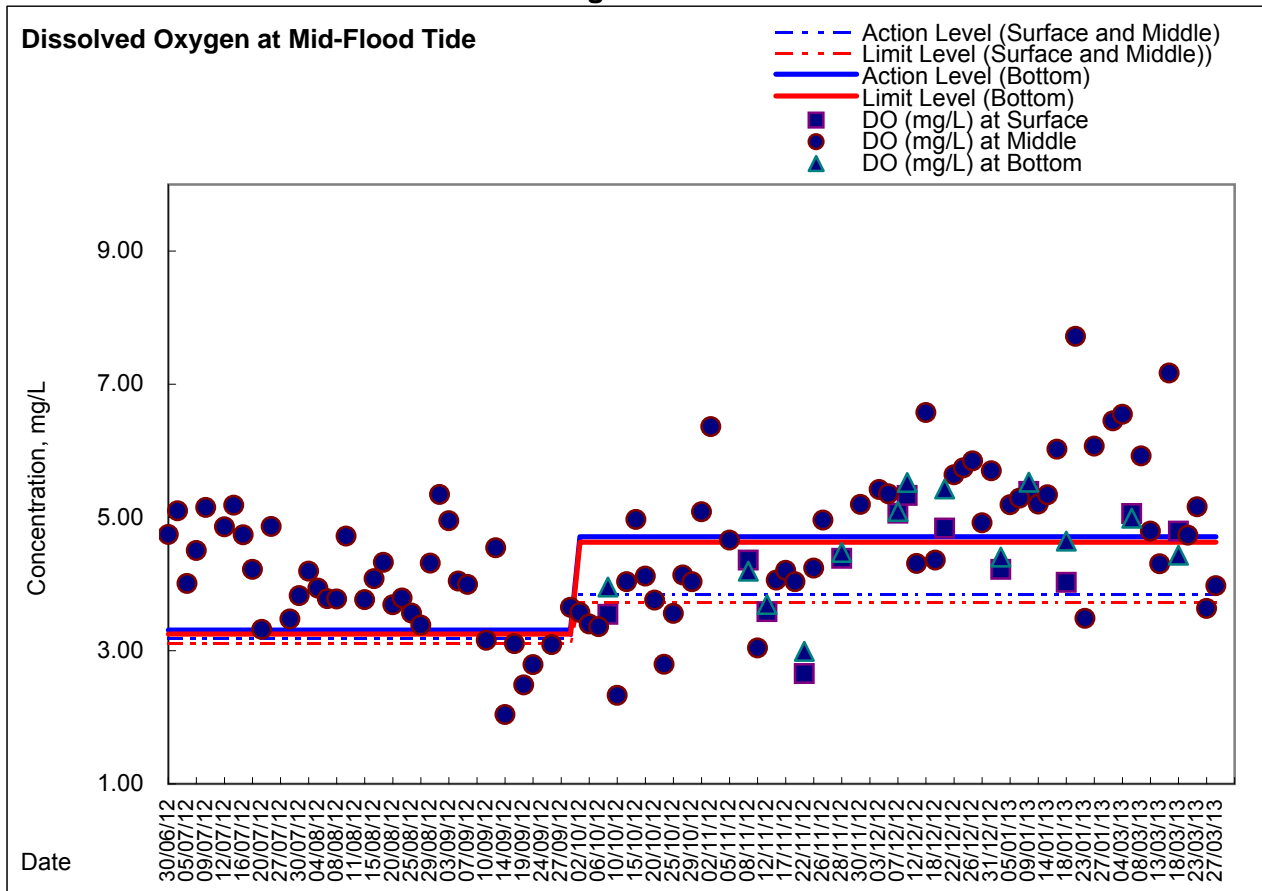


Dissolved Oxygen at Mid-Ebb Tide



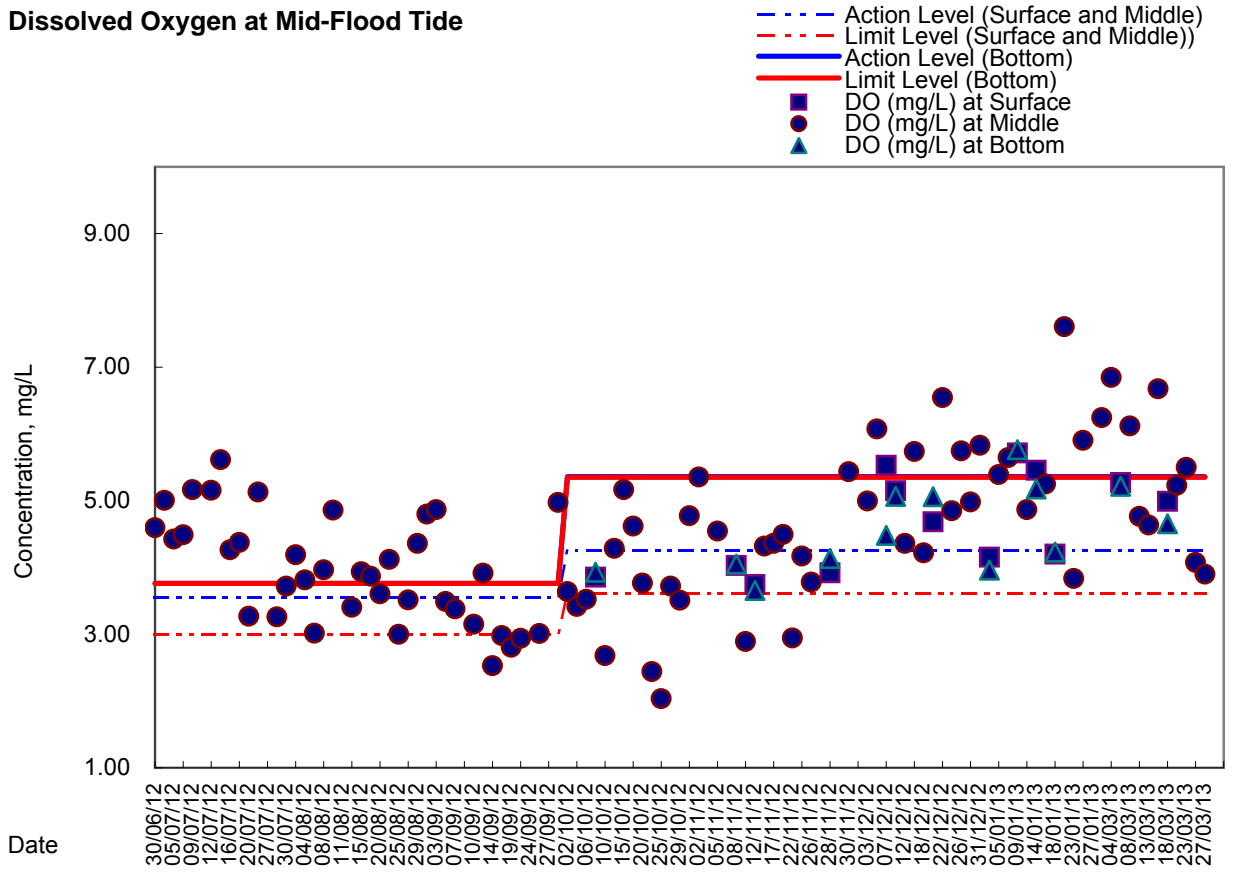


Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW
- South-western corners of ex-Public Cargo Works Area

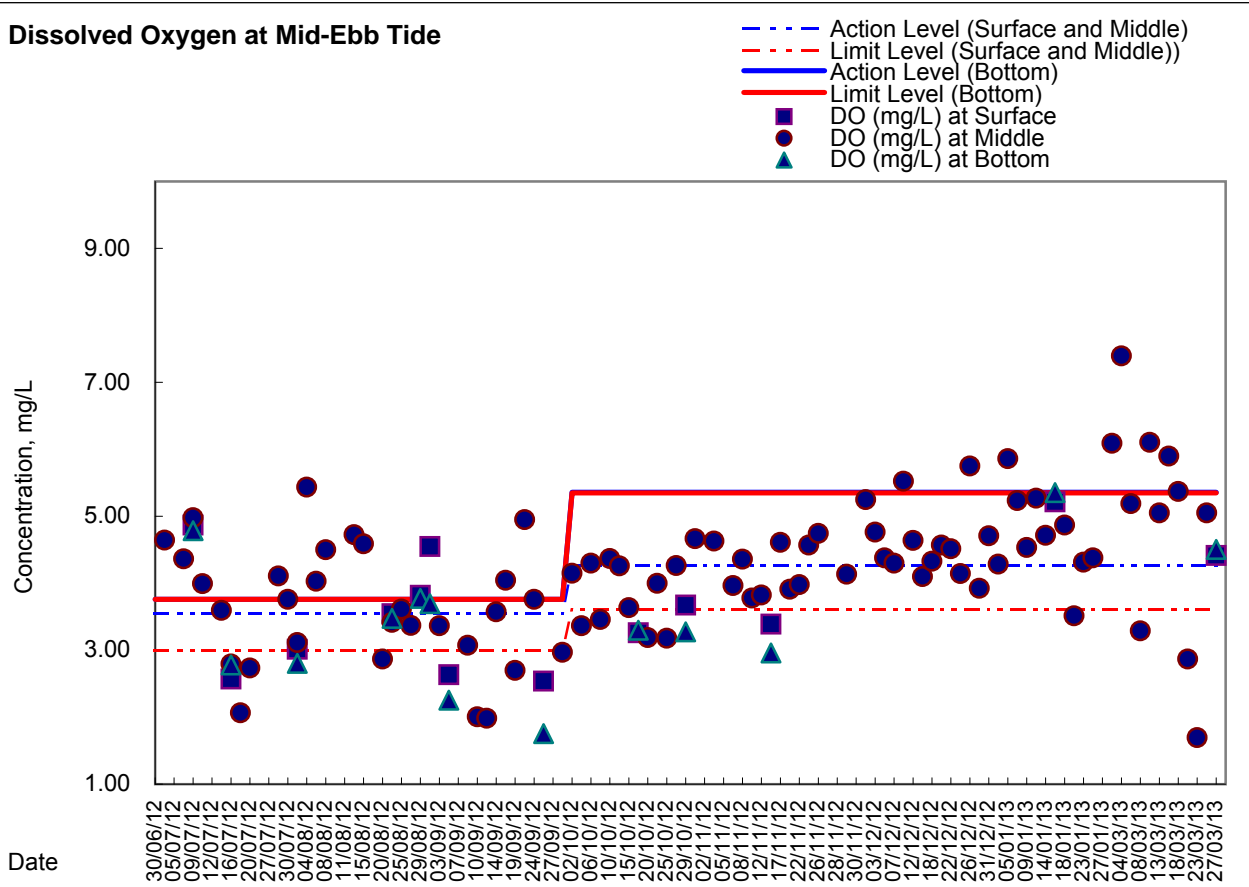


Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area

Dissolved Oxygen at Mid-Flood Tide



Dissolved Oxygen at Mid-Ebb Tide





Appendix 5.4a

Additional Dissolved Oxygen Monitoring Results



Water Monitoring Result at Station A
Mid-Flood Tide

Location: Station A

Coordinate: 835468E, 815857N

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
6-Mar-13	12:09	Fine	Surface	1.0	17.80	17.80	17.80	7.96	7.96	7.96	34.38	34.38	34.38	86.6	85.8	86.20	6.67	6.58	6.63
	12:10		Middle	7.5	17.90	17.90	17.90	7.97	7.97	7.97	34.43	34.43	34.43	84.1	85.2	84.65	6.52	6.58	6.55
	12:11		Bottom	12.0	18.20	18.20	18.20	8.05	8.05	8.05	34.42	34.42	34.42	86.3	86.7	86.50	6.62	6.65	6.64
13-Mar-13	21:39	Cloudy	Surface	1.0	19.80	19.80	19.80	7.88	7.89	7.89	33.99	33.99	33.99	67.8	67.6	67.70	5.06	5.05	5.06
	21:40		Middle	3.5	19.80	19.80	19.80	7.90	7.89	7.90	34.02	34.05	34.04	64.9	64.6	64.75	4.82	4.80	4.81
	21:41		Bottom	6.0	19.80	19.80	19.80	7.87	7.87	7.87	34.03	34.03	34.03	57.4	57.3	57.35	4.29	4.29	4.29
21-Mar-13	8:27	Cloudy	Surface	1.0	20.70	20.70	20.70	7.81	7.81	7.81	33.52	33.52	33.52	52.9	53.2	53.05	3.90	3.93	3.92
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:28		Bottom	3.0	20.60	20.60	20.60	7.79	7.79	7.79	33.67	33.67	33.67	52.3	52.0	52.15	3.85	3.83	3.84
27-Mar-13	18:38	Cloudy	Surface	1.0	20.40	20.40	20.40	7.85	7.85	7.85	34.78	34.77	34.78	73.2	72.7	72.95	5.39	5.35	5.37
	18:39		Middle	3.5	20.30	20.30	20.30	7.85	7.85	7.85	34.80	34.80	34.80	72.2	72.1	72.15	5.31	5.31	5.31
	18:40		Bottom	6.0	20.30	20.30	20.30	7.84	7.84	7.84	34.79	34.79	34.79	69.9	69.7	69.80	5.15	5.14	5.15

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



Water Monitoring Result at Station B
Mid-Flood Tide

Location: Station B

Coordinate: 835572E, 815961N

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
6-Mar-13	12:16	Fine	Surface	1.0	17.70	17.70	17.70	7.95	7.95	7.95	34.54	34.54	34.54	78.8	78.8	78.80	6.07	6.07	6.07
	12:17		Middle	5.0	17.60	17.60	17.60	7.94	7.94	7.94	34.45	34.45	34.45	79.2	79.9	79.55	6.12	6.17	6.15
	12:18		Bottom	9.0	17.60	17.60	17.60	7.93	7.93	7.93	34.51	34.51	34.51	76.8	77.5	77.15	5.93	5.98	5.96
13-Mar-13	21:35	Cloudy	Surface	1.0	19.80	19.80	19.80	7.90	7.91	7.91	34.03	34.03	34.03	70.1	69.7	69.90	5.22	5.20	5.21
	21:36		Middle	5.0	19.80	19.80	19.80	7.92	7.92	7.92	34.22	34.22	34.22	70.0	69.8	69.90	5.22	5.21	5.22
	21:37		Bottom	9.0	19.70	19.70	19.70	7.90	7.90	7.90	34.36	34.36	34.36	69.8	69.6	69.70	5.21	5.19	5.20
21-Mar-13	8:20	Cloudy	Surface	1.0	20.70	20.70	20.70	7.80	7.80	7.80	33.76	33.76	33.76	57.1	56.8	56.95	4.20	4.18	4.19
	8:22		Middle	5.0	20.50	20.50	20.50	7.81	7.81	7.81	33.78	33.78	33.78	57.8	57.4	57.60	4.26	4.23	4.25
	8:24		Bottom	9.0	20.40	20.40	20.40	7.80	7.80	7.80	33.72	33.72	33.72	56.3	57.1	56.70	4.14	4.20	4.17
27-Mar-13	18:35	Cloudy	Surface	1.0	20.30	20.30	20.30	7.87	7.87	7.87	34.82	34.81	34.82	73.4	73.5	73.45	5.41	5.42	5.42
	18:36		Middle	5.0	20.30	20.30	20.30	7.88	7.88	7.88	34.80	34.80	34.80	74.1	73.7	73.90	5.46	5.43	5.45
	18:37		Bottom	9.0	20.30	20.30	20.30	7.90	7.91	7.91	34.81	34.80	34.81	73.7	73.3	73.50	5.42	5.40	5.41

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



Water Monitoring Result at Station C Mid-Flood Tide

Location: Station C

Coordinate: 835659E, 816271N

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
6-Mar-13	12:21	Fine	Surface	1.0	18.10	18.10	18.10	7.92	7.92	7.92	34.09	34.09	34.09	68.7	70.6	69.65	5.26	5.41	5.34
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:22		Bottom	3.0	18.40	18.40	18.40	7.89	7.89	7.89	33.90	33.90	33.90	68.9	67.6	68.25	5.28	5.18	5.23
13-Mar-13	21:29	Cloudy	Surface	1.0	19.80	19.80	19.80	7.95	7.95	7.95	34.18	34.18	34.18	70.2	70.1	70.15	5.24	5.23	5.24
	21:30		Middle	7.0	19.60	19.60	19.60	7.97	7.97	7.97	34.48	34.46	34.47	71.2	70.6	70.90	5.32	5.28	5.30
	21:32		Bottom	13.0	19.40	19.40	19.40	7.99	7.99	7.99	34.75	34.75	34.75	73.6	73.4	73.50	5.51	5.49	5.50
21-Mar-13	8:13	Cloudy	Surface	1.0	21.00	21.00	21.00	7.79	7.79	7.79	33.64	33.64	33.64	59.8	59.6	59.70	4.38	4.37	4.38
	8:15		Middle	6.0	20.70	20.70	20.70	7.80	7.80	7.80	33.75	33.75	33.75	57.9	57.6	57.75	4.26	4.24	4.25
	8:17		Bottom	11.0	20.50	20.50	20.50	7.81	7.81	7.81	33.84	33.84	33.84	56.2	55.8	56.00	4.14	4.11	4.13
27-Mar-13	18:31	Cloudy	Surface	1.0	20.30	20.30	20.30	7.88	7.88	7.88	34.81	34.80	34.81	75.3	74.8	75.05	5.55	5.51	5.53
	18:33		Middle	7.0	20.30	20.30	20.30	7.92	7.91	7.92	34.81	34.81	34.81	73.1	73.4	73.25	5.38	5.41	5.40
	18:34		Bottom	13.0	20.20	20.20	20.20	7.99	7.97	7.98	34.82	34.82	34.82	73.9	74.0	73.95	5.44	5.45	5.45

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



Water Monitoring Result at Station A
Mid-Ebb Tide

Location: Station A

Coordinate: 835468E, 815857N

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
6-Mar-13	21:41	Fine	Surface	1	18.20	18.20	18.20	7.87	7.86	7.87	34.54	34.56	34.55	81.3	80.8	81.05	6.24	6.21	6.23
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:42		Bottom	5	18.10	18.10	18.10	7.90	7.91	7.91	34.64	34.64	34.64	78.4	78.1	78.25	6.01	6.00	6.01
13-Mar-13	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:02		Middle	1.5	20.10	20.10	20.10	7.89	7.89	7.89	33.33	33.32	33.33	34.7	34.5	34.60	2.58	2.57	2.58
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20-Mar-13	21:57	Fine	Surface	1.0	20.80	20.80	20.80	7.78	7.79	7.79	33.76	33.76	33.76	63.0	62.7	62.85	4.63	4.61	4.62
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:59		Bottom	5.0	20.80	20.80	20.80	7.80	7.80	7.80	33.76	33.76	33.76	62.3	62.1	62.20	4.57	4.56	4.57
27-Mar-13	11:46	Fine	Surface	1.0	20.30	20.30	20.30	7.87	7.87	7.87	34.18	34.18	34.18	67.0	66.6	66.80	4.95	4.93	4.94
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:47		Bottom	3.0	20.20	20.20	20.20	7.88	7.88	7.88	34.17	34.17	34.17	66.6	67.3	66.95	4.92	4.97	4.95

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at Station B
Mid-Ebb Tide

Location: Station B

Coordinate: 835572E, 815961N

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
6-Mar-13	21:36	Fine	Surface	1.0	18.20	18.20	18.20	7.91	7.91	7.91	34.61	34.61	34.61	79.7	79.3	79.50	6.22	6.07	6.15
	21:38		Middle	4.5	18.20	18.20	18.20	7.92	7.90	7.91	34.62	34.62	34.62	79.2	79.0	79.10	6.08	6.06	6.07
	21:40		Bottom	8.0	18.10	18.10	18.10	7.93	7.93	7.93	34.65	34.65	34.65	79.4	79.0	79.20	6.09	6.07	6.08
13-Mar-13	14:53	Fine	Surface	1.0	20.30	20.30	20.30	7.92	7.92	7.92	34.34	34.34	34.34	60.0	60.1	60.05	4.41	4.42	4.42
	14:54		Middle	5.0	20.10	20.10	20.10	7.92	7.92	7.92	34.33	34.33	34.33	51.5	50.9	51.20	3.82	3.78	3.80
	14:55		Bottom	9.0	20.30	20.30	20.30	7.92	7.92	7.92	33.90	33.90	33.90	35.4	34.9	35.15	2.62	2.58	2.60
20-Mar-13	21:45	Fine	Surface	1.0	20.90	20.90	20.90	7.79	7.79	7.79	33.73	33.73	33.73	59.3	59.0	59.15	4.34	4.32	4.33
	21:48		Middle	4.5	20.80	20.80	20.80	7.78	7.78	7.78	33.80	33.80	33.80	58.2	57.9	58.05	4.27	4.25	4.26
	21:49		Bottom	8.0	20.80	20.80	20.80	7.77	7.77	7.77	33.82	33.82	33.82	57.6	57.3	57.45	4.23	4.21	4.22
27-Mar-13	11:40	Fine	Surface	1.0	20.20	20.20	20.20	7.90	7.90	7.90	34.61	34.61	34.61	71.4	72.4	71.90	5.27	5.35	5.31
	11:42		Middle	5.5	20.10	20.10	20.10	7.91	7.91	7.91	34.88	34.88	34.88	72.5	73.3	72.90	5.35	5.41	5.38
	11:43		Bottom	10.0	20.10	20.10	20.10	7.95	7.95	7.95	34.88	34.88	34.88	73.2	72.6	72.90	5.41	5.36	5.39

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Water Monitoring Result at Station C
Mid-Ebb Tide

Location: Station C

Coordinate: 835659E, 816271N

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
6-Mar-13	21:32	Fine	Surface	1.0	18.10	18.10	18.10	7.96	7.96	7.96	34.64	34.64	34.64	82.7	82.4	82.55	6.35	6.33	6.34
	21:33		Middle	6.5	18.10	18.10	18.10	8.00	8.00	8.00	34.65	34.65	34.65	83.1	82.8	82.95	6.38	6.36	6.37
	21:34		Bottom	12.0	18.10	18.10	18.10	7.99	7.99	7.99	34.67	34.67	34.67	83.3	83.2	83.25	6.39	6.39	6.39
13-Mar-13	14:47	Fine	Surface	1.0	20.20	20.20	20.20	7.94	7.94	7.94	34.07	34.07	34.07	40.6	40.9	40.75	3.00	2.99	3.00
	14:48		Middle	6.5	20.00	20.00	20.00	7.95	7.95	7.95	34.12	34.12	34.12	38.6	38.2	38.40	2.87	2.84	2.86
	14:49		Bottom	12.0	19.90	19.90	19.90	7.93	7.93	7.93	34.23	34.23	34.23	34.4	34.2	34.30	2.56	2.54	2.55
20-Mar-13	21:41	Fine	Surface	1.0	20.70	20.70	20.70	7.92	7.90	7.91	33.62	33.63	33.63	72.7	72.3	72.50	5.34	5.32	5.33
	21:42		Middle	6.5	20.70	20.70	20.70	7.91	7.91	7.91	33.69	33.69	33.69	69.3	69.1	69.20	5.12	5.11	5.12
	21:43		Bottom	12.0	20.70	20.70	20.70	7.82	7.86	7.84	33.70	33.70	33.70	67.2	67.0	67.10	4.91	4.90	4.91
27-Mar-13	11:33	Fine	Surface	1.0	20.10	20.10	20.10	7.95	7.95	7.95	34.86	34.86	34.86	76.6	76.2	76.40	5.66	5.63	5.65
	11:35		Middle	6.0	20.00	20.00	20.00	7.93	7.93	7.93	34.87	34.87	34.87	74.7	73.8	74.25	5.52	5.45	5.49
	11:37		Bottom	11.0	19.80	19.80	19.80	7.93	7.93	7.93	34.87	34.87	34.87	76.1	75.4	75.75	5.62	5.57	5.60

Remarks:

Single underline denotes exceedance over Action Level.

Double underline denotes exceedance over Limit Level.



Appendix 5.5

Real-time Noise Monitoring Results and Graphical Presentations

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
Normal Day 07:00-19:00		5/3/2013 12:01	66.1	9/3/2013 18:31	66.1	15/3/2013 13:01	64.9	21/3/2013 7:31	66.5	26/3/2013 14:01	60.4		
		5/3/2013 12:31	65.9	11/3/2013 7:01	64.5	15/3/2013 13:31	64.3	21/3/2013 8:01	67.0	26/3/2013 14:31	61.7		
		5/3/2013 13:01	52.3	11/3/2013 7:31	64.1	15/3/2013 14:01	62.7	21/3/2013 8:31	55.6	26/3/2013 15:01	62.2		
28/2/2013 7:01	64.9	5/3/2013 13:31	50.0	11/3/2013 8:01	65.1	15/3/2013 14:31	60.4	21/3/2013 9:01	67.1	26/3/2013 15:31	63.7		
28/2/2013 7:31	65.8	5/3/2013 14:01	57.5	11/3/2013 8:31	65.4	15/3/2013 15:01	62.7	21/3/2013 9:31	66.6	26/3/2013 16:01	63.2		
28/2/2013 8:01	67.2	5/3/2013 14:31	57.1	11/3/2013 9:01	65.8	15/3/2013 15:31	64.1	21/3/2013 10:01	66.7	26/3/2013 16:31	62.8		
28/2/2013 8:31	59.3	5/3/2013 15:01	57.8	11/3/2013 9:31	65.7	15/3/2013 16:01	62.4	21/3/2013 10:31	67.1	26/3/2013 17:01	62.1		
28/2/2013 9:01	61.2	5/3/2013 15:31	52.7	11/3/2013 10:01	65.6	15/3/2013 16:31	63.9	21/3/2013 11:01	62.7	26/3/2013 17:31	63.4		
28/2/2013 9:31	60.9	5/3/2013 16:01	67.1	11/3/2013 10:31	63.4	15/3/2013 17:01	55.9	21/3/2013 11:31	47.5	26/3/2013 18:01	53.3		
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28/2/2013 10:31	61.4	5/3/2013 17:01	54.2	11/3/2013 11:31	56.9	15/3/2013 18:01	66.9	21/3/2013 12:31	66.8	27/3/2013 7:01	66.8		
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1/3/2013 17:31	59.2	7/3/2013 12:01	66.1	12/3/2013 18:31	66.6	18/3/2013 13:01	59.3	23/3/2013 7:31	65.8	28/2/2013 19:46	64.4		
1/3/2013 18:01	66.6	7/3/2013 12:31	66.1	13/3/2013 7:01	65.5	18/3/2013 13:31	61.6	23/3/2013 8:01	67.0	28/2/2013 19:51	63.5		
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2/3/2013 7:31	66.3	7/3/2013 14:01	63.6	13/3/2013 8:31	56.0	18/3/2013 15:01	51.7	23/3/2013 9:31	67.2	28/2/2013 20:06	63.7		
2/3/2013 8:01	59.0	7/3/2013 14:31	63.1	13/3/2013 9:01	54.0	18/3/2013 15:31	50.9	23/3/2013 10:01	67.0	28/2/2013 20:11	63.6		
2/3/2013 8:31	62.5	7/3/2013 15:01	61.3	13/3/2013 9:31	63.2	18/3/2013 16:01	63.4	23/3/2013 10:31	56.5	28/2/2013 20:16	63.8		
2/3/2013 9:01	63.6	7/3/2013 15:31	57.9	13/3/2013 10:01	64.0	18/3/2013 16:31	66.2	23/3/2013 11:01	58.0	28/2/2013 20:21	63.3		
2/3/2013 9:31	63.2	7/3/2013 16:01	64.8	13/3/2013 10:31	63.2	18/3/2013 17:01	61.2	23/3/2013 11:31	46.3	28/2/2013 20:26	63.8		
2/3/2013 10:01	65.1	7/3/2013 16:31	63.4	13/3/2013 11:01	63.8	18/3/2013 17:31	66.5	23/3/2013 12:01	66.5	28/2/2013 20:31	63.0		
2/3/2013 10:31	66.2	7/3/2013 17:01	61.4	13/3/2013 11:31	43.4	18/3/2013 18:01	66.2	23/3/2013 12:31	66.1	28/2/2013 20:36	63.1		
2/3/2013 11:01	66.9	7/3/2013 17:31											

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)							
1/3/2013 20:51	63.4	3/3/2013 9:56	63.1	3/3/2013 19:01	63.0	5/3/2013 20:06	63.9	7/3/2013 21:11	63.8
1/3/2013 20:56	62.5	3/3/2013 10:01	64.0	3/3/2013 19:06	62.9	5/3/2013 20:11	63.6	7/3/2013 21:16	63.1
1/3/2013 21:01	63.2	3/3/2013 10:06	61.6	3/3/2013 19:11	62.6	5/3/2013 20:16	63.5	7/3/2013 21:21	64.0
1/3/2013 21:06	63.0	3/3/2013 10:11	61.3	3/3/2013 19:16	62.7	5/3/2013 20:21	64.1	7/3/2013 21:26	63.6
1/3/2013 21:11	64.5	3/3/2013 10:16	62.4	3/3/2013 19:21	63.2	5/3/2013 20:26	63.6	7/3/2013 21:31	63.9
1/3/2013 21:16	62.8	3/3/2013 10:21	62.6	3/3/2013 19:26	63.2	5/3/2013 20:31	64.1	7/3/2013 21:36	63.5
1/3/2013 21:21	63.3	3/3/2013 10:26	63.8	3/3/2013 19:31	63.7	5/3/2013 20:36	64.1	7/3/2013 21:41	63.2
1/3/2013 21:26	62.6	3/3/2013 10:31	63.1	3/3/2013 19:36	63.4	5/3/2013 20:41	64.0	7/3/2013 21:46	63.3
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1/3/2013 21:36	63.1	3/3/2013 10:41	63.0	3/3/2013 19:46	62.9	5/3/2013 20:51	62.5	7/3/2013 21:56	63.3
1/3/2013 21:41	62.6	3/3/2013 10:46	63.3	3/3/2013 19:51	63.1	5/3/2013 20:56	62.8	7/3/2013 22:01	63.1
1/3/2013 21:46	63.0	3/3/2013 10:51	63.6	3/3/2013 19:56	62.7	5/3/2013 21:01	63.0	7/3/2013 22:06	62.9
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1/3/2013 22:21	63.3	3/3/2013 11:26	64.0	3/3/2013 20:31	62.8	5/3/2013 21:36	63.1	7/3/2013 22:41	62.3
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2/3/2013 22:36	63.4	3/3/2013 15:41	64.6	4/3/2013 20:46	64.1	6/3/2013 21:51	62.0	8/3/2013 22:56	63.2
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3/3/2013 7:21	64.7	3/3/2013 16:26	63.6	4/3/2013 21:31	63.0	6/3/2013 22:36	62.9	9/3/2013 19:41	64.2
3/3/2013 7:26	60.5	3/3/2013 16:31	64.2	4/3/2013 21:36	63.5	6/3/2013 22:41	62.4	9/3/2013 19:46	63.6
3/3/2013 7:31	58.5	3/3/2013 16:36	63.3	4/3/2013 21:41	62.9	6/3/2013 22:46	63.0	9/3/2013 19:51	64.0
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3/3/2013 7:51	59.4	3/3/2013 16:56	64.8						

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)							
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10/3/2013 20:41	62.6	12/3/2013 21:46	62.6	14/3/2013 22:51	63.3	17/3/2013 7:56	61.2	17/3/2013 17:01	63.9
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10/3/2013 22:01	62.1	13/3/2013 19:06	63.3	15/3/2013 20:11	64.7	17/3/2013 9:16	62.6	17/3/2013 18:21	66.9
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Real-time Noise Data		RTN2a (Hong Kong Electric Centre)															
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19/3/2013 22:06	64.0	22/3/2013 19:11	62.7	24/3/2013 8:16	62.8	24/3/2013 17:21	63.8	25/3/2013 22:26	63.3	28/2/2013 0:21	62.8						
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19/3/2013 22:16	64.6	22/3/2013 19:21	63.2	24/3/2013 8:26	62.8	24/3/2013 17:31	64.3	25/3/2013 22:36	63.3	28/2/2013 0:31	63.6						
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19/3/2013 22:41	64.2	22/3/2013 19:46	63.1	24/3/2013 8:51	63.1	24/3/2013 17:56	63.5	26/3/2013 19:01	64.3	28/2/2013 0:56	62.3						
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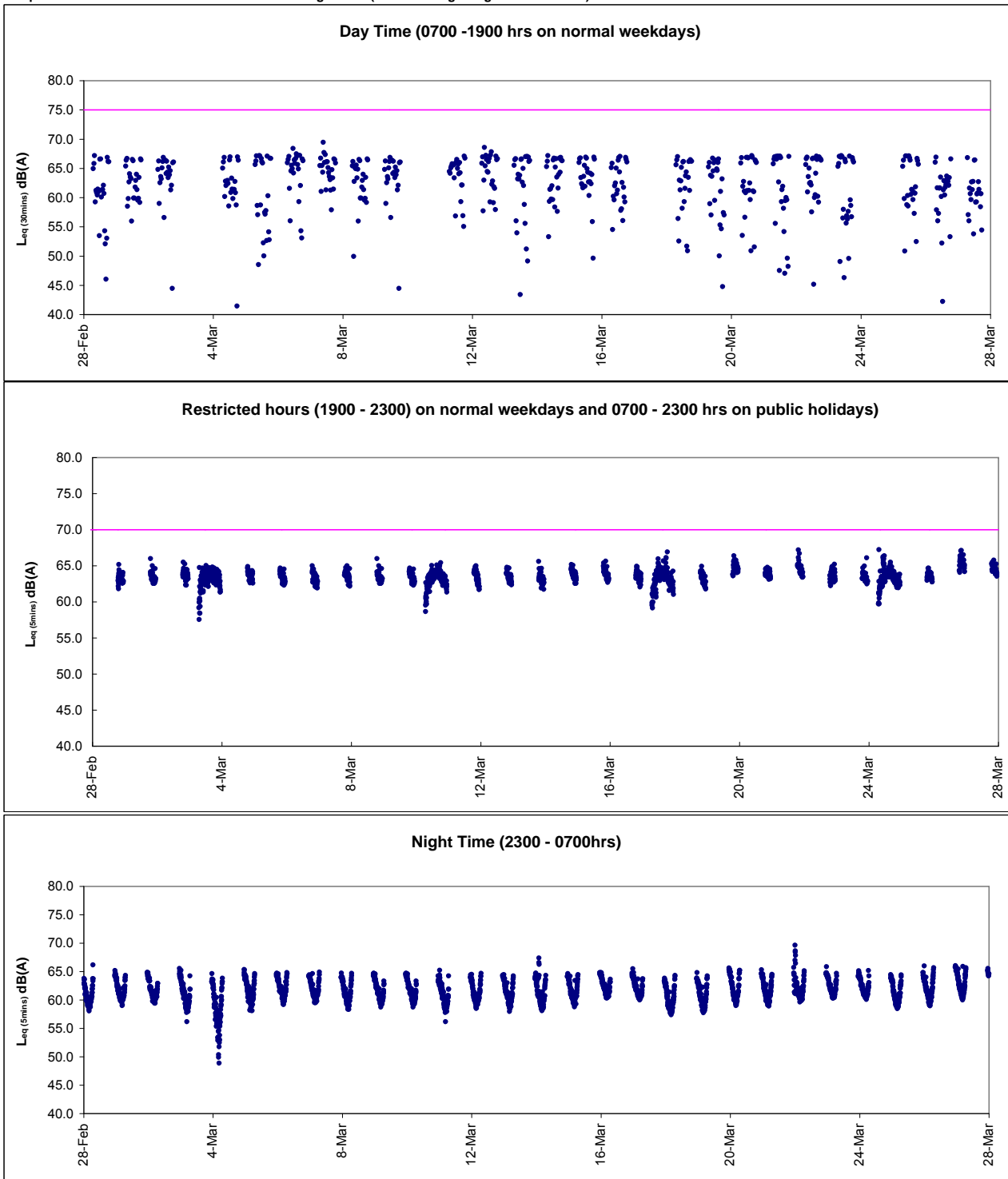
Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
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1/3/2013 5:26	61.0	2/3/2013 6:31	61.3	3/3/2013 23:36	62.9	5/3/2013 0:41	63.2	6/3/2013 1:46	62.0	7/3/2013 2:51	61.2		
1/3/2013 5:31	60.6	2/3/2013 6:36	61.9	3/3/2013 23:41	63.0	5/3/2013 0:46	62.7	6/3/2013 1:51	61.7	7/3/2013 2:56	60.4		
1/3/2013 5:36	61.0	2/3/2013 6:41	61.9	3/3/2013 23:46	63.4	5/3/2013 0:51	62.8	6/3/2013 1:56	62.2	7/3/2013 3:01	61.3		
1/3/2013 5:41	60.6	2/3/2013 6:46	62.4	3/3/2013 23:51	63.6	5/3/2013 0:56	63.2	6/3/2013 2:01	61.8	7/3/2013 3:06	60.8		
1/3/2013 5:46	61.1	2/3/2013 6:51	62.9	3/3/2013 23:56	62.1	5/3/2013 1:01	62.7	6/3/2013 2:06	61.6	7/3/2013 3:11	61.8		
1/3/2013 5:51	61.2	2/3/2013 6:56	62.9	4/3/2013 0:01	62.8	5/3/2013 1:06	62.7	6/3/2013 2:11	62.3	7/3/2013 3:16	59.5		
1/3/2013 5:56	61.2	2/3/2013 23:01	65.6	4/3/2013 0:06	62.7	5/3/2013 1:11	62.8	6/3/2013 2:16	61.3	7/3/2013 3:21	60.9		
1/3/2013 6:01	60.8	2/3/2013 23:06	64.6	4/3/2013 0:11	62.5	5/3/2013 1:16	62.9	6/3/2013 2:21	62.3	7/3/2013 3:26	59.6		
1/3/2013 6:06	61.3	2/3/2013 23:11	64.2	4/3/2013 0:16	62.3	5/3/2013 1:21	62.1	6/3/2013 2:26	61.7	7/3/2013 3:31	60.4		
1/3/2013 6:11	61.6	2/3/2013 23:16	65.1	4/3/2013 0:21	62.1	5/3/2013 1:26	61.6	6/3/2013 2:31	61.8	7/3/2013 3:36	59.9		
1/3/2013 6:16	61.4	2/3/2013 23:21	64.0	4/3/2013 0:26	61.7	5/3/2013 1:31	61.8	6/3/2013 2:36	62.4	7/3/2013 3:41	61.1		
1/3/2013 6:21	62.3	2/3/2013 23:26	64.0	4/3/2013 0:31	61.0	5/3/2013 1:36	62.2	6/3/2013 2:41	61.2	7/3/2013 3:46	60.0		
1/3/2013 6:26	61.9	2/3/2013 23:31	64.5	4/3/2013 0:36	60.4	5/3/2013 1:41	61.3	6/3/2013 2:46	61.3	7/3/2013 3:51	60.2		
1/3/2013 6:31	62.5	2/3/2013 23:36	64.3	4/3/2013 0:41	61.0	5/3/2013 1:46	60.4	6/3/2013 2:51	61.7	7/3/2013 3:56	60.9		
1/3/2013 6:36	63.4	2/3/2013 23:41	64.9	4/3/2013 0:46	60.5	5/3/2013 1:51	61.5	6/3/2013 2:56	61.7	7/3/2013 4:01	60.3		
1/3/2013 6:41	63.5	2/3/2013 23:46	64.3	4/3/2013 0:51	58.7	5/3/2013 1:56	61.3	6/3/2013 3:01	62.0	7/3/2013 4:06	59.5		
1/3/2013 6:46	63.9	2/3/2013 23:51	63.7	4/3/2013 0:56	59.2	5/3/2013 2:01	61.0	6/3/2013 3:06	61.1	7/3/2013 4:11	60.2		
1/3/2013 6:51	64.0	2/3/2013 23:56	63.6	4/3/2013 1:01	60.7	5/3/2013 2:06	61.4	6/3/2013 3:11	61.6	7/3/2013 4:16	61.6		
1/3/2013 6:56	64.3	3/3/2013 0:01											

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
7/3/2013 23:41	64.0	9/3/2013 0:46	62.7	10/3/2013 1:51	62.3	11/3/2013 2:56	60.4	12/3/2013 4:01	59.2	13/3/2013 5:06	59.5		
7/3/2013 23:46	63.4	9/3/2013 0:51	62.2	10/3/2013 1:56	61.8	11/3/2013 3:01	60.8	12/3/2013 4:06	59.7	13/3/2013 5:11	60.2		
7/3/2013 23:51	63.3	9/3/2013 0:56	62.8	10/3/2013 2:01	62.0	11/3/2013 3:06	61.4	12/3/2013 4:11	59.9	13/3/2013 5:16	58.8		
7/3/2013 23:56	63.3	9/3/2013 1:01	63.0	10/3/2013 2:06	61.1	11/3/2013 3:11	60.4	12/3/2013 4:16	59.6	13/3/2013 5:21	59.9		
8/3/2013 0:01	64.0	9/3/2013 1:06	62.2	10/3/2013 2:11	61.3	11/3/2013 3:16	59.4	12/3/2013 4:21	59.6	13/3/2013 5:26	60.6		
8/3/2013 0:06	63.6	9/3/2013 1:11	62.3	10/3/2013 2:16	61.2	11/3/2013 3:21	60.0	12/3/2013 4:26	59.6	13/3/2013 5:31	59.7		
8/3/2013 0:11	63.2	9/3/2013 1:16	62.7	10/3/2013 2:21	62.1	11/3/2013 3:26	60.4	12/3/2013 4:31	59.2	13/3/2013 5:36	59.9		
8/3/2013 0:16	63.1	9/3/2013 1:21	62.6	10/3/2013 2:26	61.6	11/3/2013 3:31	59.1	12/3/2013 4:36	60.3	13/3/2013 5:41	60.4		
8/3/2013 0:21	63.6	9/3/2013 1:26	62.4	10/3/2013 2:31	61.6	11/3/2013 3:36	60.6	12/3/2013 4:41	59.8	13/3/2013 5:46	60.3		
8/3/2013 0:26	63.1	9/3/2013 1:31	62.0	10/3/2013 2:36	61.3	11/3/2013 3:41	58.6	12/3/2013 4:46	59.9	13/3/2013 5:51	60.7		
8/3/2013 0:31	63.3	9/3/2013 1:36	61.9	10/3/2013 2:41	61.4	11/3/2013 3:46	59.0	12/3/2013 4:51	59.7	13/3/2013 5:56	60.8		
8/3/2013 0:36	62.6	9/3/2013 1:41	62.2	10/3/2013 2:46	61.5	11/3/2013 3:51	58.7	12/3/2013 4:56	59.8	13/3/2013 6:01	61.3		
8/3/2013 0:41	63.2	9/3/2013 1:46	62.3	10/3/2013 2:51	60.9	11/3/2013 3:56	59.4	12/3/2013 5:01	59.9	13/3/2013 6:06	60.9		
8/3/2013 0:46	62.6	9/3/2013 1:51	62.3	10/3/2013 2:56	61.1	11/3/2013 4:01	58.4	12/3/2013 5:06	60.9	13/3/2013 6:11	60.7		
8/3/2013 0:51	61.9	9/3/2013 1:56	61.8	10/3/2013 3:01	61.1	11/3/2013 4:06	58.4	12/3/2013 5:11	60.6	13/3/2013 6:16	61.0		
8/3/2013 0:56	62.3	9/3/2013 2:01	62.0	10/3/2013 3:06	61.2	11/3/2013 4:11	59.3	12/3/2013 5:16	60.2	13/3/2013 6:21	62.1		
8/3/2013 1:01	62.3	9/3/2013 2:06	61.1	10/3/2013 3:11	60.8	11/3/2013 4:16	60.4	12/3/2013 5:21	60.1	13/3/2013 6:26	62.2		
8/3/2013 1:06	61.6	9/3/2013 2:11	61.3	10/3/2013 3:16	60.1	11/3/2013 4:21	60.4	12/3/2013 5:26	60.6	13/3/2013 6:31	62.8		
8/3/2013 1:11	62.2	9/3/2013 2:16	61.2	10/3/2013 3:21	62.0	11/3/2013 4:26	57.8	12/3/2013 5:31	60.3	13/3/2013 6:36	62.9		
8/3/2013 1:16	62.0	9/3/2013 2:21	62.1	10/3/2013 3:26	60.7	11/3/2013 4:31	56.2	12/3/2013 5:36	60.4	13/3/2013 6:41	63.1		
8/3/2013 1:21	62.2	9/3/2013 2:26	61.6	10/3/2013 3:31	60.4	11/3/2013 4:36	59.4	12/3/2013 5:41	61.2	13/3/2013 6:46	63.6		
8/3/2013 1:26	61.0	9/3/2013 2:31	61.6	10/3/2013 3:36	61.1	11/3/2013 4:41	58.6	12/3/2013 5:46	61.2	13/3/2013 6:51	64.0		
8/3/2013 1:31	61.3	9/3/2013 2:36	61.3	10/3/2013 3:41	59.9	11/3/2013 4:46	58.1	12/3/2013 5:51	61.1	13/3/2013 6:56	64.2		
8/3/2013 1:36	60.7	9/3/2013 2:41	61.4	10/3/2013 3:46	60.0	11/3/2013 4:51	59.1	12/3/2013 5:56	61.3	13/3/2013 7:01	63.9		
8/3/2013 1:41	61.7	9/3/2013 2:46	61.5	10/3/2013 3:51	59.8	11/3/2013 4:56	59.1	12/3/2013 6:01	61.2	13/3/2013 7:06	63.7		
8/3/2013 1:46	60.6	9/3/2013 2:51	60.9	10/3/2013 3:56	59.9	11/3/2013 5:01	60.0	12/3/2013 6:06	61.9	13/3/2013 7:11	64.2		
8/3/2013 1:51	61.2	9/3/2013 2:56	61.1	10/3/2013 4:01	59.4	11/3/2013 5:06	58.9	12/3/2013 6:11	61.5	13/3/2013 7:16	63.8		
8/3/2013 1:56	62.0	9/3/2013 3:01	61.1	10/3/2013 4:06	59.7	11/3/2013 5:11	58.0	12/3/2013 6:16	61.7	13/3/2013 7:21	64.6		
8/3/2013 2:01	61.1	9/3/2013 3:06	61.2	10/3/2013 4:11	60.1	11/3/2013 5:16	60.2	12/3/2013 6:21	62.6	13/3/2013 7:26	64.2		
8/3/2013 2:06	61.9	9/3/2013 3:11	60.8	10/3/2013 4:16	60.5	11/3/2013 5:21	58.6	12/3/2013 6:26	62.9	13/3/2013 7:31	64.1		
8/3/2013 2:11	61.3	9/3/2013 3:16	60.1	10/3/2013 4:21	60.3	11/3/2013 5:26	58.9	12/3/2013 6:31	62.7	13/3/2013 7:36	64.7		
8/3/2013 2:16	61.1	9/3/2013 3:21	62.0	10/3/2013 4:26	59.2	11/3/2013 5:31	58.0	12/3/2013 6:36	63.4	13/3/2013 7:41	63.8		
8/3/2013 2:21	60.7	9/3/2013 3:26	60.7	10/3/2013 4:31	58.7	11/3/2013 5:36	58.6	12/3/2013 6:41	63.5	13/3/2013 7:46	63.9		
8/3/2013 2:26	61.1	9/3/2013 3:31	60.4	10/3/2013 4:36	60.1	11/3/2013 5:41	58.8	12/3/2013 6:46	64.1	13/3/2013 7:51	63.7		
8/3/2013 2:31	61.9	9/3/2013 3:36	61.1	10/3/2013 4:41	59.3	11/3/2013 5:46	60.6	12/3/2013 6:51	64.2	13/3/2013 7:56	63.1		
8/3/2013 2:36	60.6	9/3/2013 3:41	59.9	10/3/2013 4:46	60.0	11/3/2013 5:51	59.3	12/3/2013 6:56	64.7	14/3/2013 0:01	62.8		
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8/3/2013 2:46	60.6	9/3/2013 3:51	59.8	10/3/2013 4:56	60.4	11/3/2013 6:01	59.3	12/3/2013 7:06	64.4	14/3/2013 0:11	62.9		
8/3/2013 2:51	60.3	9/3/2013 3:56	59.9	10/3/2013 5:01	60.2	11/3/2013 6:06	59.5	12/3/2013 7:11	64.1	14/3/2013 0:16	63.0		
8/3/2013 2:56	59.9	9/3/2013 4:01	59.4	10/3/2013 5:06	59.8	11/3/2013 6:11	60.4	12/3/2013 7:16	64.3	14/3/2013 0:21	62.4		
8/3/2013 3:01	59.3	9/3/2013 4:06	59.7	10/3/2013 5:11	59.2	11/3/2013 6:16	59.7	12/3/2013 7:21	64.0	14/3/2013 0:26	62.4		
8/3/2013 3:06	59.8	9/3/2013 4:11	60.1	10/3/2013 5:16	60.4	11/3/2013 6:21	59.8	12/3/2013 7:26	64.1	14/3/2013 0:31	62.5		
8/3/2013 3:11	59.6	9/3/2013 4:16	60.5	10/3/2013 5:21	59.6	11/3/2013 6:26	60.8	12/3/2013 7:31	64.2	14/3/2013 0:36	61.7		
8/3/2013 3:16	60.3	9/3/2013 4:21	60.3	10/3/2013 5:26	59.8	11/3/2013 6:31	60.8	12/3/2013 7:36	63.5	14/3/2013 0:41	62.4		
8/3/2013 3:21	59.7	9/3/2013 4:26	59.2	10/3/2013 5:31	59.3	11/3/2013 6:36	60.7	12/3/2013 7:41	64.0	14/3/2013 0:46	64.2		
8/3/2013 3:26	60.4	9/3/2013 4:31	58.7	10/3/2013 5:36	59.8	11/3/2013 6:41	60.5	12/3/2013 7:46	63.6	14/3/2013 0:51	63.5		
8/3/2013 3:31	59.1	9/3/2013 4:36	60.1	10/3/2013 5:41	59.7	11/3/2013 6:46	64.2	12/3/2013 7:51	63.9	14/3/2013 0:56	61.4		
8/3/2013 3:36	59.4	9/3/2013 4:41	59.3	10/3/2013 5:46	60.6	11/3/2013 6:51	61.9	12/3/2013 7:56	64.5	14/3/2013 1:01	60.8		
8/3/2013 3:41	59.6	9/3/2013 4:46	60.0	10/3/2013 5:51	60.2	11/3/2013 6:56	61.9	13/3/2013 0:01	63.7	14/3/2013 1:06	61.1		
8/3/2013 3:46	59.9	9/3/2013 4:51	59.6	10/3/2013 5:56	59.9	11/3/2013 7:01	64.0	13/3/2013 0:06	63.6	14/3/2013 1:11	61.0		
8/3/2013 3:51	59.5	9/3/2013 4:56	60.4	10/3/2013 6:01	60.2	11/3/2013 7:06	64.0	13/3/2013 0:11	63.7	14/3/2013 1:16	61.4		
8/3/2013 3:56	59.5	9/3/2013 5:01	60.2	10/3/2013 6:06	60.2	11/3/2013 7:11	63.9	13/3/2013 0:16	63.5	14/3/2013 1:21	61.1		
8/3/2013 4:01	60.1	9/3/2013 5:06	59.8	10/3/2013 6:11	60.8	11/3/2013 7:16	64.4	13/3/2013 0:21	63.3	14/3/2013 1:26	60.5		
8/3/2013 4:06	58.4	9/3/2013 5:11	59.2	10/3/2013 6:16	60.3	11/3/2013 7:21	63.8	13/3/2013 0:26	63.8	14/3/2013 1:31	60.9		
8/3/2013 4:11	58.8	9/3/2013 5:16	60.4	10/3/2013 6:21	60.5	11/3/2013 7:26	64.3	13/3/2013 0:31	62.8	14/3/2013 1:36	60.8		
8/3/2013 4:16	58.7	9/3/2013 5:21	59.6	10/3/2013 6:26	61.3	11/3/2013 7:31	63.5	13/3/2013 0:36	62.4	14/3/2013 1:41	60.9		
8/3/2013 4:21	58.6	9/3/2013 5:26	59.8	10/3/2013 6:31	61.2	11/3/2013 7:36	63.3	13/3/2013 0:41	62.4	14/3/2013 1:46	63.9		
8/3/2013 4:26	58.7	9/3/2013 5:31	59.3	10/3/2013 6:36	61.7	11/3/2013 7:41	63.9	13/3/2013 0:46	62.0	14/3/2013 1:51	66.6		
8/3/2013 4:31	59.0	9/3/2013 5:36	59.8	10/3/2013 6:41	61.4	11/3/2013 7:46	63.2	13/3/2013 0:51	61.9	14/3/2013 1:56	67.4		
8/3/2013 4:36	59.3	9/3/2013 5:41	59.7	10/3/2013 6:46	63.3	11/3/2013 7:51	63.6	13/3/2013 0:56	62.2	14/3/2013 2:01	66.2		
8/3/2013 4:41	59.2	9/3/2013 5:46	60.6	10/3/2013 6:51	62.7	11/3/2013 7:56	64.5	13/3/2013 1:01	62.7	14/3/2013 2:06	64.3		
8/3/2013 4:46	58.3	9/3/2013 5:51	60.2	10/3/2013 6:56	62.8	12/3/2013 0:01	63.8	13/3/2013 1:06	61.4	14/3/2013 2:11	61.5		
8/3/2013 4:51	59.1	9/3/2013 5:56	59.9	10/3/2013 7:01	63.3	12/3/2013 0:06	63.0	13/3/2013 1:11	62.1	14/3/2013 2:16	61.1		
8/3/2013 4:56	59.0	9/3/2013 6:01	60.2	10/3/2013 7:06	64.2	12/3/2013 0:11	63.5	13/3/2013 1:16	61.8	14/3/2013 2:21	60.8		
8/3/2013 5:01	58.9	9/3/2013 6:06	60.2	10/3/2013 7:11	63.3	12/3/2013 0:16	63.5	13/3/2013 1:21	62.4	14/3/2013 2:26	61.0		
8/3/2013 5:06	59.9	9/3/2013 6:11	60.8	10/3/2013 7:16	63.5	12/3/2013 0:21	63.3	13/3/2013 1:26	62.5	14/3/2013 2:31	60.3		
8/3/2013 5:11	59.9	9/3/2013 6:16	60.3	10/3/2013 7:21	63.5	12/3/2013 0:26	62.8	13/3/2013 1:31	61.2	14/3/2013 2:36	59.7		
8/3/2013 5:16	60.5	9/3/2013 6:21	60.5	10/3/2013 7:26	63.1	12/3/2013 0:31	62.7	13/3/2013 1:36	61.7	14/3/2013 2:41	59.8		
8													

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
14/3/2013 6:11	60.8	15/3/2013 23:16	64.7	17/3/2013 0:21	63.5	18/3/2013 1:26	60.6	19/3/2013 2:31	60.4	20/3/2013 3:36	60.2		
14/3/2013 6:16	62.3	15/3/2013 23:21	64.7	17/3/2013 0:26	64.2	18/3/2013 1:31	59.0	19/3/2013 2:36	60.1	20/3/2013 3:41	60.4		
14/3/2013 6:21	62.0	15/3/2013 23:26	64.5	17/3/2013 0:31	64.0	18/3/2013 1:36	59.4	19/3/2013 2:41	59.0	20/3/2013 3:46	59.7		
14/3/2013 6:26	62.7	15/3/2013 23:31	64.7	17/3/2013 0:36	63.1	18/3/2013 1:41	59.5	19/3/2013 2:46	59.1	20/3/2013 3:51	60.0		
14/3/2013 6:31	62.6	15/3/2013 23:36	64.4	17/3/2013 0:41	63.7	18/3/2013 1:46	60.0	19/3/2013 2:51	59.6	20/3/2013 3:56	59.6		
14/3/2013 6:36	63.0	15/3/2013 23:41	64.8	17/3/2013 0:46	62.8	18/3/2013 1:51	59.7	19/3/2013 2:56	59.4	20/3/2013 4:01	59.3		
14/3/2013 6:41	63.4	15/3/2013 23:46	64.2	17/3/2013 0:51	62.3	18/3/2013 1:56	58.8	19/3/2013 3:01	58.8	20/3/2013 4:06	59.4		
14/3/2013 6:46	63.5	15/3/2013 23:51	64.4	17/3/2013 0:56	63.1	18/3/2013 2:01	59.2	19/3/2013 3:06	58.9	20/3/2013 4:11	59.0		
14/3/2013 6:51	63.6	15/3/2013 23:56	64.5	17/3/2013 1:01	63.3	18/3/2013 2:06	59.2	19/3/2013 3:11	59.0	20/3/2013 4:16	60.2		
14/3/2013 6:56	64.3	16/3/2013 0:01	63.9	17/3/2013 1:06	62.8	18/3/2013 2:11	59.3	19/3/2013 3:16	58.2	20/3/2013 4:21	60.0		
14/3/2013 23:01	64.1	16/3/2013 0:06	64.8	17/3/2013 1:11	62.7	18/3/2013 2:16	58.5	19/3/2013 3:21	58.7	20/3/2013 4:26	59.6		
14/3/2013 23:06	64.2	16/3/2013 0:11	64.8	17/3/2013 1:16	62.5	18/3/2013 2:21	59.1	19/3/2013 3:26	60.3	20/3/2013 4:31	59.1		
14/3/2013 23:11	64.2	16/3/2013 0:16	64.1	17/3/2013 1:21	62.8	18/3/2013 2:26	59.4	19/3/2013 3:31	58.1	20/3/2013 4:36	59.8		
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15/3/													

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
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22/3/2013 0:21	67.8	23/3/2013 1:26	62.5	24/3/2013 2:31	61.8	25/3/2013 3:36	60.3	26/3/2013 4:41	60.0	27/3/2013 5:46	61.7
22/3/2013 0:26	66.4	23/3/2013 1:31	62.7	24/3/2013 2:36	61.3	25/3/2013 3:41	58.7	26/3/2013 4:46	59.7	27/3/2013 5:51	62.8
22/3/2013 0:31	63.9	23/3/2013 1:36	62.7	24/3/2013 2:41	61.5	25/3/2013 3:46	58.8	26/3/2013 4:51	59.8	27/3/2013 5:56	62.1
22/3/2013 0:36	61.1	23/3/2013 1:41	62.8	24/3/2013 2:46	61.6	25/3/2013 3:51	59.1	26/3/2013 4:56	59.8	27/3/2013 6:01	62.6
22/3/2013 0:41	61.6	23/3/2013 1:46	62.2	24/3/2013 2:51	61.6	25/3/2013 3:56	59.3	26/3/2013 5:01	60.7	27/3/2013 6:06	62.4
22/3/2013 0:46	62.3	23/3/2013 1:51	62.7	24/3/2013 2:56	61.0	25/3/2013 4:01	58.5	26/3/2013 5:06	61.6	27/3/2013 6:11	63.2
22/3/2013 0:51	62.8	23/3/2013 1:56	62.1	24/3/2013 3:01	60.9	25/3/2013 4:06	58.6	26/3/2013 5:11	60.4	27/3/2013 6:16	63.8
22/3/2013 0:56	63.1	23/3/2013 2:01	62.5	24/3/2013 3:06	61.5	25/3/2013 4:11	58.7	26/3/2013 5:16	60.4	27/3/2013 6:21	64.5
22/3/2013 1:01	62.9	23/3/2013 2:06	62.3	24/3/2013 3:11	61.3	25/3/2013 4:16	58.9	26/3/2013 5:21	61.1	27/3/2013 6:26	64.2
22/3/2013 1:06	63.2	23/3/2013 2:11	61.7	24/3/2013 3:16	61.1	25/3/2013 4:21	59.5	26/3/2013 5:26	60.5	27/3/2013 6:31	64.5
22/3/2013 1:11	62.4	23/3/2013 2:16	62.4	24/3/2013 3:21	61.6	25/3/2013 4:26	58.6	26/3/2013 5:31	60.7	27/3/2013 6:36	64.4
22/3/2013 1:16	62.5	23/3/2013 2:21	62.7	24/3/2013 3:26	61.2	25/3/2013 4:31	59.0	26/3/2013 5:36	61.2	27/3/2013 6:41	64.9
22/3/2013 1:21	62.7	23/3/2013 2:26	61.7	24/3/2013 3:31	60.9	25/3/2013 4:36	59.4	26/3/2013 5:41	61.6	27/3/2013 6:46	65.3
22/3/2013 1:26	62.2	23/3/2013 2:31	62.1	24/3/2013 3:36	60.9	25/3/2013 4:41	59.3	26/3/2013 5:46	61.5	27/3/2013 6:51	65.4
22/3/2013 1:31	63.0	23/3/2013 2:36	61.7	24/3/2013 3:41	60.7	25/3/2013 4:46	58.8	26/3/2013 5:51	62.0	27/3/2013 6:56	65.7
22/3/2013 1:36	61.8	23/3/2013 2:41	62.2	24/3/2013 3:46	61.1	25/3/2013 4:51	59.7	26/3/2013 5:56	62.1	27/3/2013 23:01	65.2
22/3/2013 1:41	62.3	23/3/2013 2:46	61.9	24/3/2013 3:51	61.0	25/3/2013 4:56	59.4	26/3/2013 6:01	61.9	27/3/2013 23:06	65.2
22/3/2013 1:46	61.9	23/3/2013 2:51	61.6	24/3/2013 3:56	60.6	25/3/2013 5:01	59.4	26/3/2013 6:06	63.0	27/3/2013 23:11	65.6
22/3/2013 1:51	62.1	23/3/2013 2:56	61.3	24/3/2013 4:01	60.6	25/3/2013 5:06	60.3	26/3/2013 6:11	62.3	27/3/2013 23:16	64.8
22/3/2013 1:56	62.1	23/3/2013 3:01	61.6	24/3/2013 4:06	60.8	25/3/2013 5:11	59.7	26/3/2013 6:16	63.5	27/3/2013 23:21	64.7
22/3/2013 2:01	61.9	23/3/2013 3:06	61.4	24/3/2013 4:11	60.8	25/3/2013 5:16	59.5	26/3/2013 6:21	63.1	27/3/2013 23:26	64.6
22/3/2013 2:06	61.7	23/3/2013 3:11	61.6	24/3/2013 4:16	60.3	25/3/2013 5:21	60.0	26/3/2013 6:26	64.1	27/3/2013 23:31	64.8
22/3/2013 2:11	62.2	23/3/2013 3:16	61.1	24/3/2013 4:21	61.1	25/3/2013 5:26	60.5	26/3/2013 6:31	63.8	27/3/2013 23:36	64.3
22/3/2013 2:16	61.5	23/3/2013 3:21	61.1	24/3/2013 4:26	60.7	25/3/2013 5:31	61.1	26/3/2013 6:36	64.2	27/3/2013 23:41	64.7
22/3/2013 2:21	61.6	23/3/2013 3:26	61.6	24/3/2013 4:31	61.2	25/3/2013 5:36	61.0	26/3/2013 6:41	64.5	27/3/2013 23:46	64.2
22/3/2013 2:26	61.6	23/3/2013 3:31	61.3	24/3/2013 4:36	61.0	25/3/2013 5:41	61.0	26/3/2013 6:46	64.8	27/3/2013 23:51	64.5
22/3/2013 2:31	61.3	23/3/2013 3:3									

Graphic Presentation of Real Time Noise Monitoring Result (RTN2a- Hong Kong Electric Centre)





Appendix 6.1

Event Action Plans



Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	<ol style="list-style-type: none">1. Notify ER, IEC and Contractor;2. Carry out investigation;3. Report the results of investigation to the IEC, ER and Contractor;4. Discuss with the IEC and Contractor on remedial measures required;5. Increase monitoring frequency to check mitigation effectiveness. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none">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. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none">1. Confirm receipt of notification of failure in writing;2. Notify Contractor;3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;4. Supervise the implementation of remedial measures. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none">1. Submit noise mitigation proposals to IEC and ER;2. Implement noise mitigation proposals. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>



EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit Level being exceeded	<ol style="list-style-type: none">1. Inform IEC, ER, Contractor and EPD;2. Repeat measurements to confirm findings;3. Increase monitoring frequency;4. Identify source and investigate the cause of exceedance;5. Carry out analysis of Contractor's working procedures;6. Discuss with the IEC, Contractor and ER on remedial measures required;7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;8. If exceedance stops, cease additional monitoring. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none">1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none">1. Confirm receipt of notification of failure in writing;2. Notify Contractor;3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;4. Supervise the implementation of remedial measures;5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none">1. Take immediate action to avoid further exceedance;2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification;3. Implement the agreed proposals;4. Submit further proposal if problem still not under control;5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated. <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>

**Event / Action Plan for Construction Air Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; 2. Repeat measurement to confirm finding; 3. Increase monitoring frequency to daily. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Check monitoring data submitted by ET; 2. Check Contractor's working method. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Notify Contractor. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Rectify any unacceptable practice; 2. 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	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
LIMIT LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and EPD; 2. Repeat measurement to confirm finding; 3. Increase monitoring frequency to daily; 4. 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)	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal 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	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. 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)	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated. (The above actions should be taken within 2 working 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 3 working 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	1. Identify source/reason of exceedance; 2. Repeat odour patrol to confirm finding.	1. Carry out investigation to identify the source/reason of exceedance; 2. Rectify any unacceptable practice 3. Implement more mitigation measures if necessary; 4. Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.
Limit Level		
Exceedance of Limit Level	1. Identify source / reason of exceedance; 2. Repeat odour patrol to confirm findings; 3. Increase odour patrol frequency; 4. If exceedance stops, cease additional odour patrol.	1. Carry out investigation to identify the source/reason of exceedance. Investigation shall be completed within 2 weeks; 2. Rectify any unacceptable practice; 3. Formulate remedial actions; 4. Ensure remedial actions properly implemented; 5. If exceedance continues, consider what more/enhanced mitigation measures shall be implemented; 6. Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.



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_10N120	7-Mar-13	15:10	M6 - HK baptist Church henrietta Secondary School	71	Leq(30-min)	when one documented complaint was received.	70	<p>Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution.</p> <p>Action taken / to be taken: Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.</p> <p>Remarks / Other Obs: No work 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 is not due to project but to traffic noise nearby.</p>
X_10N121	12-Mar-13	14:25	M6 - HK baptist Church henrietta Secondary School	72	Leq(30-min)	when one documented complaint was received.	70	<p>Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution.</p> <p>Action taken / to be taken: Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.</p> <p>Remarks / Other Obs: No work 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 is not due to project but to traffic noise nearby.</p>
X_10N122	19-Mar-13	15:20	M6 - HK baptist Church henrietta Secondary School	73	Leq(30-min)	when one documented complaint was received.	70	<p>Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution.</p> <p>Action taken / to be taken: Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.</p> <p>Remarks / Other Obs: No work 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 is not due to project but to traffic noise nearby.</p>
X_10N123	26-Mar-13	15:15	M6 - HK baptist Church henrietta Secondary School	76	Leq(30-min)	when one documented complaint was received.	70	<p>Possible reason: Several breakers were found to be in operation at marine platform during measurement. No noise screen was provided to the breaker in-use.</p> <p>Action taken / to be taken: Immediate repeat measurement was conducted to confirm result at the same location . The construction noise level of repeat measurement at the same location on the same date was: 26 March 2013 at 16:00 71 dB(A) During the repeat measurement, the breaker was not operating and nearby IEC traffic was observed and considered as the major noise contribution.</p> <p>Additional monitoring was conducted on 27 March 2013. The breaker was operating during measurement and nearby IEC traffic was observed, the construction noise level measured was: 27 March 2013 at 16:34 74 dB(A). (Measured Noise level : 75.8 dB(A)) Further exceedances was still recorded. The temporary noise blanket at marine work platform was confirmed in place and addition noise screen was provided to the breakers. In addition, the number of breakers operating in parallel was reduced. Further repeat measurement was then conducted and the construction noise level measured was as: 27 March 2013 at 17:05 73 dB(A). (Measured Noise level: 75.3dB(A))</p> <p>No breaking operation was observed during the repeat measurement and the measured noise level was remained at the similar level (within 1 dB(A)). For investigation purpose, the measured noise level of 75.3 dB(A) (without breaker operation) was taken as the background noise level on that day and by calculation, the construction noise level was found to be 66.1 dB(A) which is below the stipulated limit level. As such, the background IEC traffic was considered as the major noise contribution after rectification measures implemented by the contractor and the rectified measures provided by the contractor was considered to be effective. It is considered that the major noise contribution was found to be the IEC traffic after rectification measures have been implemented by the contractor.</p> <p>Remarks / Other Obs: Breaking works for Contract HY/2009/19 was conducted during the measurement on 26 March 2013, it was observed that breaking operation was the major noise contribution during measurement. It is concluded that the exceedance is project related and the contractor was requested to submit a proposal for remediation measures following Event and Action Plan.</p>



Ref no	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_W410	1-Mar-13	Mid-Flood	WSD17	DO(mg/L)	7.26	3.66	3.28	Possible reason:
				Turbidity	8.20	8.04	9.49	Action taken / to be taken:
				SS	11.50	13.00	14.43	Remarks / Other Obs:
X_W411	1-Mar-13	Mid-Flood	WSD19	DO(mg/L)	6.29	3.66	3.28	Possible reason:
				Turbidity	8.88	8.04	9.49	Action taken / to be taken:
				SS	7.50	13.00	14.43	Remarks / Other Obs:
X_W412	4-Mar-13	Mid-Ebb	WSD19	DO(mg/L)	7.03	3.66	3.28	Possible reason:
				Turbidity	9.74	8.04	9.49	Action taken / to be taken:
				SS	13.00	13.00	14.43	Remarks / Other Obs:
X_W413	13-Mar-13	Mid-Flood	WSD21	DO(mg/L)	4.47	3.66	3.28	Possible reason:
				Turbidity	5.36	8.04	9.49	Action taken / to be taken:
				SS	16.50	13.00	14.43	Remarks / Other Obs:
X_W414	13-Mar-13	Mid-Ebb	WSD21	DO(mg/L)	3.68	3.66	3.28	Possible reason:
				Turbidity	5.81	8.04	9.49	Action taken / to be taken:
				SS	21.00	13.00	14.43	Remarks / Other Obs:
X_W415	20-Mar-13	Mid-Ebb	WSD9	DO(mg/L)	5.65	3.66	3.28	Possible reason:
				Turbidity	9.68	8.04	9.49	Action taken / to be taken:
				SS	<2	13.00	14.43	Remarks / Other Obs:
X_W416	20-Mar-13	Mid-Ebb	WSD21	DO(mg/L)	4.22	3.66	3.28	Possible reason:
				Turbidity	4.10	8.04	9.49	Action taken / to be taken:
				SS	14.50	13.00	14.43	Remarks / Other Obs:



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_W417	25-Mar-13	Mid-Ebb	WSD19	DO(mg/L)	4.63	3.66	3.28	Possible reason:
				Turbidity	4.34	8.04	9.49	Action taken / to be taken:
				SS	16.00	13.00	14.43	Remarks / Other Obs:
X_W418	27-Mar-13	Mid-Ebb	WSD19	DO(mg/L)	5.58	3.66	3.28	Possible reason:
				Turbidity	3.83	8.04	9.49	Action taken / to be taken:
				SS	15.00	13.00	14.43	Remarks / Other Obs:



Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10D224	6-Mar-13	Mid-Flood	Ex-WPCWA SE	Bottom	DO(mg/l)	5.22	5.36	5.35	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D225	8-Mar-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	3.29	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D226	18-Mar-13	Mid-Flood	Ex-WPCWA SW	Bottom	DO(mg/l)	4.44	4.71	4.63	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D227	18-Mar-13	Mid-Flood	Ex-WPCWA SE	Bottom	DO(mg/l)	4.66	5.36	5.35	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D228	20-Mar-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	2.87	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D229	23-Mar-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	1.70	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 23 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>



Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10D230	23-Mar-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	1.67	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 23 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D231	25-Mar-13	Mid-Flood	Ex-WPCWA SW	Middle	DO(mg/l)	3.64	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 25 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D232	25-Mar-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	4.08	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 25 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D232	27-Mar-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	3.90	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 27 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D232	27-Mar-13	Mid-Ebb	Ex-WPCWA SE	Bottom	DO(mg/l)	4.51	5.36	5.35	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>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 27 Mar 2013.</p> <p>Remarks / Other Obs: In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C530	1-Mar-13	Mid-Flood	C5w	DO(mg/L)	6.62	3.36	2.73	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	9.65	9.10	10.25	Action taken / to be taken:	Repeated the measurement to confirm the result. Checking with Contractor's records, no marine works was conducted on that day. Checking with the Contractor and RSS daily records, the silt screen and silt curtain were in proper condition.
				SS	13.00	15.00	22.13	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.
X_10C531	6-Mar-13	Mid-Ebb	C4w	DO(mg/L)	5.61	3.36	2.73	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	4.47	9.10	10.25	Action taken / to be taken:	Immediate repeated measurement was conducted to confirm the exceedances. Checking with contractor's works on 6 Mar 2013, Rock filling work on east bridge was conducted during monitoring. Checking with contractor's inspection record, the silt screen and silt curtain were in proper condition on that day.
				SS	24.50	15.00	22.13	Remarks / Other Obs:	No further exceedance was recorded in the next consecutive monitoring. In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the silt screen and silt curtain were in proper condition, it was considered not related to Project works.
X_10C532	11-Mar-13	Mid-Ebb	C5e	DO(mg/L)	5.05	3.36	2.73	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	5.86	9.10	10.25	Action taken / to be taken:	Repeated the measurement to confirm the result. Checking with Contractor's records, no marine works was conducted on that day. Checking with the Contractor and RSS daily records, the silt screen and silt curtain were in proper condition.
				SS	17.50	15.00	22.13	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.
X_10C533	13-Mar-13	Mid-Flood	C9	DO(mg/L)	6.21	3.36	2.73	Possible reason:	Accumulation of unknown particles from nearby outfall
				Turbidity	13.01	9.10	10.25	Action taken / to be taken:	Immediate repeated measurement was conducted to confirm the exceedances. Confirmed with Contractor that no marine works were performed that day.
				SS	12.00	15.00	22.13	Remarks / Other Obs:	No further exceedance was recorded in the next consecutive monitoring. Contractor of HY/2009/19 confirmed that no related marine work was performed during time of monitoring, the exceedance was considered to be caused from the accumulation of particles discharged from the outfalls near monitoring station and not related to the Project works.



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10C534	13-Mar-13	Mid-Ebb	C1	DO(mg/L)	3.35	3.36	2.73	Possible reason:
				Turbidity	3.29	9.10	10.25	Action taken / to be taken:
				SS	8.50	15.00	22.13	Remarks / Other Obs:
X_10C535	15-Mar-13	Mid-Flood	C3	DO(mg/L)	2.56	3.36	2.73	Possible reason:
				Turbidity	0.95	9.10	10.25	Action taken / to be taken:
				SS	3.00	15.00	22.13	Remarks / Other Obs:
X_10C536	15-Mar-13	Mid-Ebb	C3	DO(mg/L)	3.18	3.36	2.73	Possible reason:
				Turbidity	2.11	9.10	10.25	Action taken / to be taken:
				SS	3.00	15.00	22.13	Remarks / Other Obs:
X_10C537	18-Mar-13	Mid-Flood	C4e	DO(mg/L)	4.05	3.36	2.73	Possible reason:
				Turbidity	4.91	9.10	10.25	Action taken / to be taken:
				SS	21.50	15.00	22.13	Remarks / Other Obs:



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10C538	20-Mar-13	Mid-Ebb	C7	DO(mg/L)	4.89	3.36	2.73	Possible reason:
				Turbidity	11.59	9.10	10.25	Action taken / to be taken:
				SS	4.00	15.00	22.13	Remarks / Other Obs:
X_10C539	21-Mar-13	Mid-Flood	C3	DO(mg/L)	2.14	3.36	2.73	Possible reason:
				Turbidity	2.76	9.10	10.25	Action taken / to be taken:
				SS	2.00	15.00	22.13	Remarks / Other Obs:
X_10C540	21-Mar-13	Mid-Flood	C4e	DO(mg/L)	3.05	3.36	2.73	Possible reason:
				Turbidity	3.61	9.10	10.25	Action taken / to be taken:
				SS	2.00	15.00	22.13	Remarks / Other Obs:
X_10C541	21-Mar-13	Mid-Flood	C4w	DO(mg/L)	3.15	3.36	2.73	Possible reason:
				Turbidity	2.75	9.10	10.25	Action taken / to be taken:



Lam Geotechnics Limited

Contract No. HK/2011/07
Wanchai Development Phase II and Central Wanchai Bypass
Sampling, Field Measurement and Testing Work (Stage 2)
Summary for Notification of Exceedance

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action Remarks / Other Obs:	
				SS	3.50	15.00	22.13	No further exceedance was observed in the next consecutive monitoring. In view that the silt screen and silt curtain were in proper condition during monitoring, and the overall water quality at other monitoring stations under HKCEC are exceed the Action Level as it is at the interchange period of Wet and Dry Season, the exceedance was considered not project related.	



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C542	27-Mar-13	Mid-Ebb	C3	DO(mg/L)	2.23	3.36	2.73	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	2.27	9.10	10.25	Action taken / to be taken:	Immediate repeated measurement was conducted to confirm the exceedances. No odour nuisance was detected during DO monitoring. Checking with contractor's works on 27 Mar 2013, rock filling at East of HKCEC was conducted on that day.
				SS	4.50	15.00	22.13	Remarks / Other Obs:	Checking with the Contractor and RSS daily records, the silt screen and silt curtain were observed in proper condition.
									No further exceedance was recorded in the next consecutive monitoring. In view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the silt screen and silt curtain were in proper condition, it was considered not related to Project works.



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	Outcome	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).	<ol style="list-style-type: none">1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18th Feb. 2010 for the dredging works which carry out at area for North Point Reclamation.2) Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.3) 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.4) 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.5) No further complaints were received from Mr. Tsang in the reporting month. The complaint is considered closed.	Closed
100321b	21/3/2010	Unknown	Near the eastern breakwater of the Causeway Bay Typhoon Shelter	A public complaint and enquiry 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 2010(Monday).	<ol style="list-style-type: none">1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18th Feb. 2010 for the dredging works at area for North Point Reclamation during general holidays including Sunday between 0700-2300 hours and any day not being a general holiday between 1900-2300hours. It is complied with the condition of CNP.2) Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.3) 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.4) No further complaints were received in the reporting month. The complaint is considered closed.	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	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 hours 1900 to 0800 and request to reduce the noise level.	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. 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.	Closed
100731	31/7/2010	Mr. Lee received by ICC (CC Case: 1-250702681)	Oil Street to Watson Road	Complaint on the noise nuisance due to the dredging works. Three construction plants were operated concurrently.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. 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.	Closed
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 works area adjacent to the Harbour Height during the period from 0700 to 2200.	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. 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.	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	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)	<ol style="list-style-type: none"> 1) Contractor for HY/2009/11 has 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. 2) Follow-up action had been immediately carried out to 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. 	Closed
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	<ol style="list-style-type: none"> 1) 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. 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. 	Closed
101203	3/12/2010, 01:45a.m.	The resident of Block 11, City Garden by ICC referral from Marine Department	North Point	Bad odour was generated from the dredging plant off North Point	<ol style="list-style-type: none"> 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. 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. 	Closed
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	<ol style="list-style-type: none"> 1) ET confirmed the following information with resident site staff on the complaint: <ul style="list-style-type: none"> • 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)		<p>filling operation was louder than the traffic noise & visual impact was generated due to the spot-light pointing directly to the complainant flat, suspected the filling operation was part of Wanchai Development Phase II;</p> <p>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.</p>	<p>Reclamation of Central Wan Chai Bypass site area instead of part of Wanchai Development Phase II;</p> <ul style="list-style-type: none"> 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; Flood light on the control mast of derrick barge have no lighting shields for the prevention of glare of flood lights; No starting work on 7 Dec 2010 at 0630hours. <p>2) 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;</p> <p>3) It was found that the occasional noise nuisance might be caused by the hitting or scratching onto the rock surface during loading down the grab onto the Grade 400 rockfill;</p> <p>4) The absence of the lighting shields at flood light results in visual glare to the complainant at night-time.</p> <p>5) Contractor was advised to minimize the finishing time of placing Grade 400 rockfill at 2100hrs and switch off all unnecessary flood lights apart from the light for the safety and security purpose;</p> <p>6) No further complaint was received after implementation of proposed measures</p>	
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.	<p>1) The concerned stockpile was a working stockpile under Contract HY/209/15 and was covered at night time after work.</p> <p>2) 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.</p> <p>3) It is considered invalid but preventive actions can be taken because the stockpile is relatively large and easily visible by complainant.</p> <p>4) 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</p> <p>5) The concern of mosquitoes breeding is out the scope of EM&A, the follow-up action is not reported in this monthly EM&A report.</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	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.	<ol style="list-style-type: none">1) According to the RSS's record, there was no construction works undertaken under the EP-356/2009 during the concern time period.2) 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.3) 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	<ol style="list-style-type: none">1) 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.2) 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.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.	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	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, nylon-wire 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.	<ol style="list-style-type: none"> 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. 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. 	Closed
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.	<ol style="list-style-type: none"> 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. 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. 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 	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	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.	<ol style="list-style-type: none"> 1) It was referred by AECOM to ET on 28 July 2011 2) 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. 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. 4) 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. 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. 	Closed
110723b	23/07/2011	Ms. Yau at Block 2, Victoria Centre by ICC no. 1-304013959	North Point	Reclamation work was conducted at Causeway Bay Typhoon Shelter at 7am on 23 July 2011. She complained that the works shall be started later to minimize the noise nuisance to the vicinity of the residents in early morning	<ol style="list-style-type: none"> 1) It was referred by AECOM to ET on 8 August 2011 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 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. 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. 	Closed
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	<ol style="list-style-type: none"> 1) It was referred by AECOM to ET on 28 July 2011 2) 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. 3) 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.	<p>monitoring station at Victoria Centre on 25 July and 4 August 2011 during daytime while breaking and excavation works were undertaken during monitoring.</p> <p>4) 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.</p>	
110727b	27/07/2011	Ms. Chiu by ICC no.1-304615409	North Point	Noise nuisance from the excavation works for the Highways Department adjacent to the Victoria Centre was conducted from 7am	<p>1) It was referred by AECOM to ET on 28 July 2011</p> <p>2) 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.</p> <p>3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am.</p>	Closed
	08/08/2011				<p>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.</p> <p>5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed.</p> <p><i>Remarks: There will be counted as two complaints in this complaint log.</i></p>	
110810	10/08/2011	Mr. Yip by ICC no. 1 - 306740207	North Point	Muddy water was discharged from work site to the seafront near Oil Street during heavy rain. The environmental protection measures were not good enough and are needed to rectify.	<p>1) It was referred by AECOM to ET on 17 August 2011.</p> <p>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.</p> <p>3) 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.</p> <p>4) Contractors were advised to relocate the loose materials</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	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.	<ol style="list-style-type: none"> 1) Confirmed with the Resident Site Staff that the construction works were referred to the Contractor HK/2009/01. 2) The Excavator mounted breaker at Convention Avenue and Drilling rig at HKCEC1 reclamation area were the dominant construction noise source during this period. 3) 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. 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. 	Closed
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.	<ol style="list-style-type: none"> 1) It was referred by AECOM to ET on 29 August 2011. Confirmed with the Resident Site Staff that the <ul style="list-style-type: none"> • 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 exclude the outfall. • An ad hoc inspection of the effectiveness of garbage defender was conducted with RSS (CWB project 	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>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.</p> <ul style="list-style-type: none">• Daily cleaning near the water intake was conducted twice a day by contractor HY/2009/19.• 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 <p>2) According to the complaint letter from Cayley Property, the outcomes of the preventive measures were not complying with their expectation.</p> <p>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.</p> <p>4) All daily cleaning actions had been taken by contractor to minimize floating refuse inside the construction site.</p> <p>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.</p> <p>6) 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.</p> <p>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</p>	
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)	<p>1) RSS notified ET to carry out investigation on 17 October 2011.</p> <p>2) 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</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>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.</p> <p>3) After receiving the complaint, the excavator was then removal off-site for checking and maintenance works on 17 October 2011.</p> <p>4) Contractor was reminded to enhance regular checking and maintenance to all plants at site.</p> <p>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.</p>	
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.	<p>1) ET confirmed with the Resident Site Staff that</p> <ul style="list-style-type: none"> 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. 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. <p>2) 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.</p>	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	<p>1) 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</p>	Keep in view for three months from the date of complaint received



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>CNP was checked by the police officer.</p> <p>2) 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.</p> <p>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.</p> <p>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. Furthermore, Construction Noise Permit should be checked and in place for the construction works during restricted hour</p> <p>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.</p>	
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.	<p>1) RSS notified ET on 5 April 2012.</p> <p>2) ET confirmed with the Resident Site Staff that no piling works were performed during the concerned period.</p> <p>3) 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.</p> <p>4) 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</p>	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.	<p>1) RSS notified ET on 8 March 2013</p> <p>2) 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.</p> <p>3) 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.</p> <p>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.</p> <p>The contractor was advised and committed to implement preventive measures to minimize the potential impact of work including conducting regular diver check to ensure the integrity and the extend of silt curtain deployment and to provide adequate back up stock of silt curtain for emergency use.</p>	Closed



Appendix 10.1

Construction Programme of Individual Contracts

Reclamation in NPR3 ver.9.5 2011_11_21			Executive Summary			Data Date: 21-Nov-11				
Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float	2011			
							Sep	Oct	Nov	Dec
Reclamation in NPR3 ver.9.5 2011_11_21		115	23	21-Jul-11 A	19-Dec-11	-39				
Landside		115	23	05-Aug-11 A	19-Dec-11	-39				
Installation Seawall Blocks to B6 and B7		55	0	13-Aug-11 A	18-Oct-11 A					
Construct the Concrete Coping at B6 and B7		82	0	13-Aug-11 A	07-Nov-11 A					
Laying Geotextile & Filter Material		86	0	05-Aug-11 A	14-Nov-11 A					
Construct Open Channel U under IEC		33	0	23-Sep-11 A	30-Oct-11 A					
Construct Open Channel U outside IEC		32	20	30-Sep-11 A	15-Dec-11	-36				
Construct the Drainage Pipeline at West of Open Channel U		34	0	30-Sep-11 A	31-Oct-11 A					
Construct the Drainage Pipeline at East of Open Channel U		28	17	01-Nov-11 A	15-Dec-11	-31				
Unloading Sorted Public Fill behind new seawall		53	0	15-Aug-11 A	20-Nov-11 A					
Reclamation		98	23	13-Aug-11 A	19-Dec-11	-39				
Seaside		100	23	21-Jul-11 A	19-Dec-11	-39				
Construction of Outlet Pipe from City Garden		54	20	12-Oct-11 A	19-Dec-11	-34				
Construction of B8		13	13	15-Nov-11 A	09-Dec-11	-31				
<div><div><div></div> Actual Work</div><div><div></div> Critical Remaining Work</div><div><div></div> Summary</div><div><div></div> Remaining Work</div><div><div></div> Milestone</div></div> <div>Page 1 of 1</div> <div>TASK filter: All Activities</div> <div>Primavera Systems, Inc.</div>										

Working Programme for Marine Works (Dredging and Backfilling)

[illegible]

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

ID	Task Name	Duration	Start	2010	2011	2012	2013	2014	2015
				Q4 Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
1	HK/2009/02-Marine & Reclamation Works	2008 d	Thu 28/1/10						
2	Contract Commencement	0 d	Thu 28/1/10						
3	General	1879 d	Mon 22/2/10						
4	Submission & obtain approval for marine GI	21 d	Mon 22/2/10						
5	Stage 1 Marine GI for reclamation	30 d	Mon 15/3/10						
6	Engineer's Design review for Dredging of WCR1, WCR2 & WCR4	30 d	Mon 22/3/10						
7	Relocation of New Star Ferry Pier	0 d	Tue 18/3/14						
8	Demolition of Existing Star Ferry Pier	100 d	Tue 18/3/14						
9	Stage 2 Marine GI for Reclamation	14 d	Tue 18/3/14						
10	Engineer's Design review for Dredging of WCR3	21 d	Tue 25/3/14						
11	Complete Diversion of Hung Hing Road Traffic Back to Original	20 d	Fri 6/2/15						
12	Excavate & remove top of d-wall for permanet seawall construction	50 d	Wed 25/2/15						
13	Submarine Outfall	500 d	Tue 21/9/10						
14	Dredging, Laying and Backfilling of Submarine Outfall Pipe at Sea	500 d	Tue 21/9/10						
15	Phase 1 - WCR1	158 d	Wed 21/4/10						
16	Mobilization of plants	1 d	Wed 21/4/10						
17	Seabed dredging	63 d	Wed 21/4/10						
18	Bedding Filling and Permanent seawall (precast cassion)	60 d	Tue 22/6/10						
19	Bulk reclamation	37 d	Fri 20/8/10						
20	Phase 2 - WCR2	149 d	Thu 1/3/12						
21	Mobilization of plants	1 d	Thu 1/3/12						
22	Temp seawall and Seabed dredging	77 d	Thu 1/3/12						
23	Bulk reclamation	73 d	Wed 16/5/12						
24	Phase 3 - TWCR4 & WCR4	98 d	Sat 28/4/12						
25	Mobilization of plants	1 d	Sat 28/4/12						
26	Temp Seawall and Seabed dredging	75 d	Sat 28/4/12						
27	Bulk & temp reclamation	24 d	Wed 11/7/12						
28	Phase 4 - WCR3	294 d	Tue 18/3/14						
29	Mobilization of plants	1 d	Tue 18/3/14						
30	Seabed dredging for Permanent Seawall	112 d	Tue 18/3/14						
31	Backfill and permanent seawall (precast cassion)	108 d	Tue 8/7/14						
32	Bulk reclamation	74 d	Fri 24/10/14						
33	Phase 5 - Construct Permanent Seawall Blocks along curved coastline & Remove TWCR4	105 d	Wed 15/4/15						
34	Mobilization of plants	1 d	Wed 15/4/15						
35	Dredging and Filling for permanent seawall construction	50 d	Wed 15/4/15						
36	Construction of Permanent Seawall Blocks for curved coastline	56 d	Wed 3/6/15						
37	Remove temp seawall and reinstate the location of TWCR4	30 d	Mon 29/6/15						

Project: Reclamation Works Programme
Date: Tue 9/3/10

Task		Summary		Rolled Up Progress		Project Summary	
Progress		Rolled Up Task		Split		Group By Summary	
Milestone		Rolled Up Milestone		External Tasks		Deadline	

Activity ID	Cal ID	Activity Description	Orig Dur	Early Start	Early Finish	2010	2011	2012	2013	2014	2015	2016	2017
TCBR1E (TS1 Area)													
105	1	TCBR1E(TS1)-dredging+rockfill(pre. for seawall)	86	03DEC10*	26FEB11								
110	1	TCBR1E (TS1)-temporary reclamation	69	28JAN11*	06APR11								
155	1	TCBR1E (TS1)- removal of temporary reclamation	27	30JAN12*	25FEB12								
TCBR4													
100	1	Maintenance dredging for navigation safety for	7	20NOV10*	26NOV10								
TCBR2 + TCBR3 (TS2 Area)													
115	1	TCBR2&TCBR3(TS2)- Maintenance dredging for	5	15NOV10*	19NOV10								
117	1	TCBR2&TCBR3(TS2)-dredge+rockfill seabed	64	16DEC11*	17FEB12								
120	1	TCBR2&TCBR3(TS2) --temporary reclamation	115	26FEB12*	19JUN12								
160	1	TCBR2&TCBR3(TS2-removal temporary reclamation	57	18AUG13*	13OCT13								
TCBR1W (TS4 Area)													
125	1	TCBR1W(TS4)-dredging+rockfill(pre. for seawall)	40	19DEC10*	27JAN11								
130	1	TCBR1W(TS4) --temporary reclamation	68	28JAN11	05APR11								
165	1	TCBR1W(TS4)--removal temporary reclamation	26	27OCT13*	21NOV13								
TPCWAE													
135	1	TPCWAE-dredging+rockfill(pre. for seawall)	55	03DEC10*	26JAN11								
140	1	TPCWAE --temporary reclamation	77	27JAN11	13APR11								
170	1	TPCWAE--removal temporary reclamation	28	28SEP13*	25OCT13								
TPCWAW													
145	1	TPCWAW-dredging+rockfill(pre. for seawall)	47	28OCT13*	13DEC13								
150	1	TPCWAW --temporary reclamation	83	14DEC13	06MAR14								
175	1	TPCWAW--removal temporary reclamation	50	02JUL15*	20AUG15								

■ TCBR1E(TS1)-dredging+rockfill(pre. for seawall)

■ TCBR1E (TS1)-temporary reclamation

■ TCBR1E (TS1)- removal of temporary reclamation

■ Maintenance dredging for navigation safety for relocation of RHKYC mooring at Area B

■ TCBR2&TCBR3(TS2)- Maintenance dredging for navigation safety at Area A for relocation of commercial vessels

■ TCBR2&TCBR3(TS2)-dredge+rockfill seabed (preparation for seawall)

■ TCBR2&TCBR3(TS2) --temporary reclamation

■ TCBR2&TCBR3(TS2-removal temporary reclamation

■ TCBR1W(TS4)-dredging+rockfill(pre. for seawall)

■ TCBR1W(TS4) --temporary reclamation

■ TCBR1W(TS4)--removal temporary reclamation

■ TPCWAE-dredging+rockfill(pre. for seawall)

■ TPCWAE --temporary reclamation

■ TPCWAE--removal temporary reclamation

■ TPCWAW-dredging+rockfill(pre. for seawall)

■ TPCWAW --temporary reclamation

TPCWAW--removal temporary reclamation ■

■ Early Bar
■ Progress Bar
■ Critical Activity

EP02

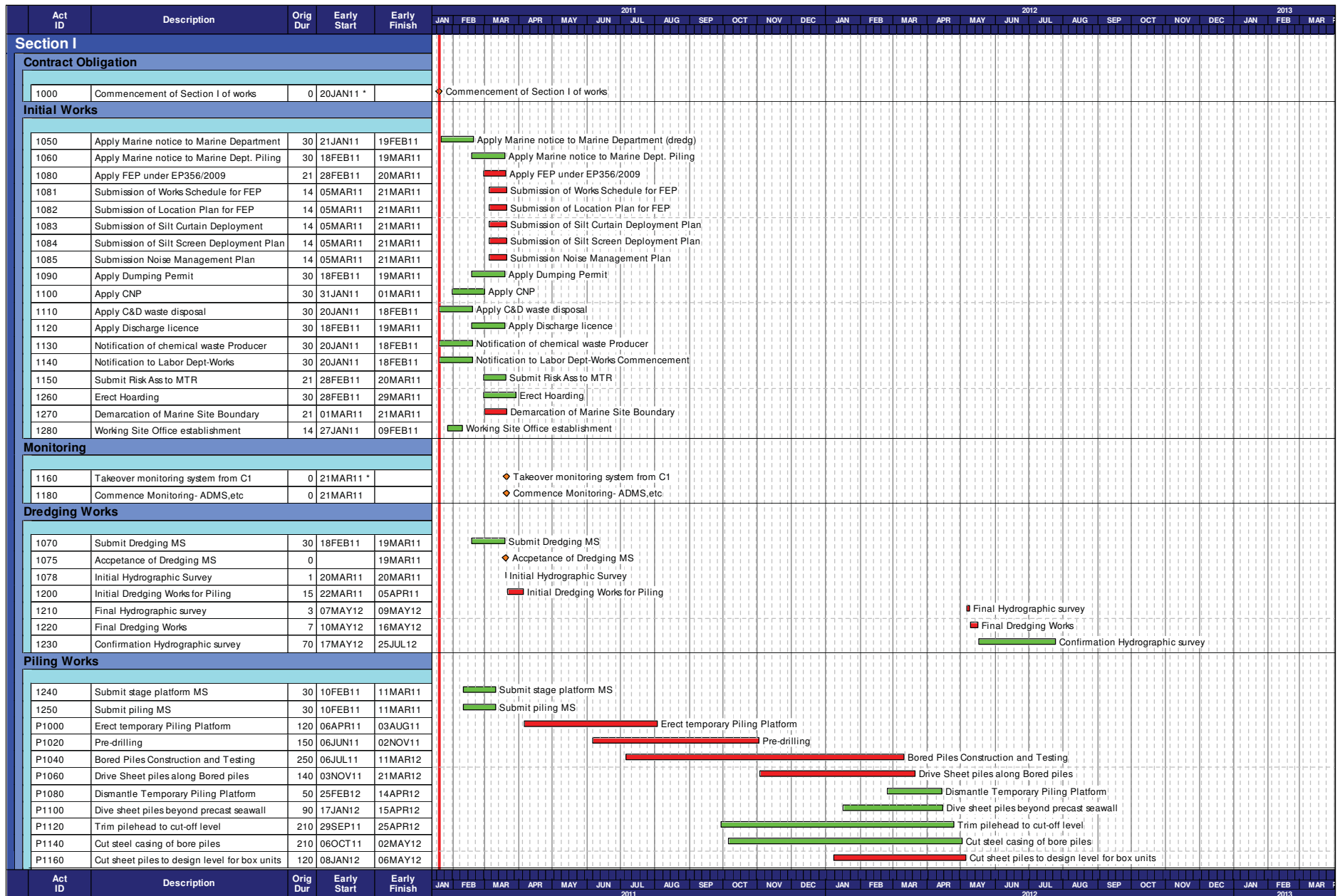
CHINA STATE CONSTRUCTION ENGG LTD

Sheet 1 of 1

Prepared based on IWP Rev. 0

CONTRACT NO. HY/2009/15: CENTRAL
WAN CHAI BYPASS- TUNNEL (CBTS SECTION)

Date Prepared: 28 Oct 2010



Start date 20JAN11
 Finish date 19DEC12
 Data date 20JAN11
 Run date 05MAR11
 Page number 1A
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Contract no. HK/2010/06
 Wan Chai Development Phase II- Central-Wan Chai By pass over MTR Tsuen Wan Line

GAMMON-LEADER JV

Works Schedule of Marine Works for
 EP-356/2009

- Early bar
- Progress bar
- Critical bar
- Summary bar
- ◆ Start milestone point
- ◆ Finish milestone point

Activity ID	Activity Name	Rem Dur	Start	Finish	2012		2013																	
					January					February					March					April				
					24	31	07	14	21	28	04	11	18	25	04	11	18	25	01	08	15			
3MRP - Jan 2013 to Apr 2013																								
02 - PRE-CONSTRUCTION WORKS																								
02.2 - Contractor's Submission																								
0220-1360	Tunnel Structures Materials - Submission	12	19-Jul-12 A	31-Jan-13																				
0220-1370	Tunnel Structures Materials - ER Review/Comment	28	01-Feb-13	28-Feb-13																				
0220-1380	Tunnel Structures Materials - Resubmission	14	01-Mar-13	14-Mar-13																				
0220-1390	Tunnel Structures Materials - ER Approval	21	15-Mar-13	04-Apr-13																				
0220-1500	Bridge Bearing - Procurement & Delivery (D8/D9/D10)	18	24-Sep-12 A	06-Feb-13																				
0220-1400	Tunnel Structures Materials - Procurement & Delivery	60	05-Apr-13	03-Jun-13																				
02.3 - Method Statement / Shop Drawings																								
0230-1280	MS Cut & Cover Tunnel ELS - Resubmission	12	13-Jul-12 A	31-Jan-13																				
0230-1290	MS Cut & Cover Tunnel ELS - ER Approval	12	07-Aug-12 A	12-Feb-13																				
0230-1350	MS Pre-cast Segment Launching - ER Review & Comment	9	20-Sep-12 A	28-Jan-13																				
0230-1360	MS Pre-cast Segment Launching - Resubmission	28	29-Jan-13	25-Feb-13																				
0230-1370	MS Pre-cast Segment Launching - ER Approval	28	26-Feb-13	25-Mar-13																				
0230-1480	MS Stressing Tendons - Resubmission	9	08-Aug-12 A	28-Jan-13																				
0230-1490	MS Stressing Tendons - ER Approval	28	29-Jan-13	25-Feb-13																				
0230-1580	MS Interim & Permanent Noise Semi Enclosure - Submission	28	04-Mar-13*	31-Mar-13																				
0230-1590	MS Interim & Permanent Noise Semi Enclosure - ER Review & Comment	28	01-Apr-13	28-Apr-13																				
0230-1320	MS Pre-casting Beam - Resubmission	12	03-Dec-12 A	31-Jan-13																				
0230-1330	MS Pre-casting Beam - ER Approval	21	01-Feb-13	21-Feb-13																				
0230-1740	MS Temporary Bridge TB & TC - Submission	28	30-Mar-13	26-Apr-13																				
02.4 - Contractor's Design and Build Items																								
0240-1010	Temp Bridge "TA" Design - Prep & Submit	36	16-Dec-11 A	24-Feb-13																				
0240-1020	Temp Bridge "TA" Design - ER review and comment	28	25-Feb-13	24-Mar-13																				
0240-1030	Temp Bridge "TA" Design - Resubmission	45	25-Mar-13	08-May-13																				
0240-1041	Temp Bridge "TD" Design - Submission	28	04-Feb-13*	03-Mar-13																				
0240-1105	Int. Noise Enclosure Structural Design - Submission	60	01-Mar-13*	29-Apr-13																				
0240-1126	Noise Barrier Design Structural Design - Submission	60	01-Mar-13*	29-Apr-13																				
0240-1150	Perm. Noise Enclosure Structural Design - Submission	60	01-Mar-13	29-Apr-13																				
0240-1270	Landscaping Design - Submission	90	01-Mar-13*	29-May-13																				
0240-1376	Cut & Cover Tunnel ELS Design - ER Review & Resubmission	7	14-Jun-12 A	26-Jan-13																				
0240-1377	Cut & Cover Tunnel ELS Design - ER Approval	15	27-Jan-13	10-Feb-13																				
0240-1379	Cut & Cover Tunnel ELS Fabrication	60	11-Feb-13	11-Apr-13																				
0240-1050	Temp Bridge "TB" & "TC" Design - Prep & Submit	120	01-Mar-13*	28-Jun-13																				
0240-1042	Temp Bridge "TD" Design - ER review and comment	28	04-Mar-13	31-Mar-13																				
0240-1043	Temp Bridge "TD" Design - Resubmission	60	01-Apr-13	30-May-13																				
02.5 - Bridge Segment/Beam Off-site Precasting																								
0250-1700.01	Bridge Precast Beam Casting Bridge Beam F5-1	15	14-Jan-13 A	03-Feb-13																				
0250-1700.02	Bridge Precast Beam Casting Bridge Beam F5-2	9	04-Feb-13	12-Feb-13																				
0250-1700.03	Bridge Precast Beam Casting Bridge F4 Beam 1-1	6	13-Feb-13	18-Feb-13																				
0250-1700.04	Bridge Precast Beam Casting Bridge F4 Beam 1-2	6	19-Feb-13	24-Feb-13																				
0250-1700.005	Bridge Precast Beam Casting Bridge F4 Beam 2-1	6	25-Feb-13	02-Mar-13																				
0250-1700.06	Bridge Precast Beam Casting Bridge F4 Beam 2-2	6	03-Mar-13	08-Mar-13																				

Activity ID		Activity Name	Rem Dur	Start	Finish
<div>2012<div>2431071421280411182504111825010815</div></div>					
0250-1700.07	Bridge Precast Beam Casting Bridge F4 Beam 3-1	6	09-Mar-13	14-Mar-13	
0250-1700.08	Bridge Precast Beam Casting Bridge F4 Beam 4-1	6	15-Mar-13	20-Mar-13	
0250-1700.09	Bridge Precast Beam Casting Bridge F4 Beam 5-1	6	21-Mar-13	26-Mar-13	
0250-1700.10	Bridge Precast Beam Casting Bridge F4 Beam 6-1	6	27-Mar-13	01-Apr-13	
0250-1600.03	Bridge D3 Pier D09 Precasting Segment (9-15) - Mould S1	0	06-Dec-12 A	31-Dec-12 A	
0250-1600.04	Bridge D3 Pier D09 Precasting Segment (16-17) - Mould S1	0	01-Jan-13 A	08-Jan-13 A	
0250-1600.06	Bridge D3 Pier D10 Precasting Segment (1-3) - Mould S1	0	10-Jan-13 A	19-Jan-13 A	
0250-1600.08	Bridge D3 Pier D11 Precasting Segment (1-3) - Mould S1	9	20-Jan-13	28-Jan-13	
0250-1600.07	Bridge D3 Pier D10 Precasting Segment (4-17) - Mould S1 @ 3d/segment	39	29-Jan-13	08-Mar-13	
0250-1600.09	Bridge D3 Pier D11 Precasting Segment (4-17) - Mould S1 @ 3d/segment	39	09-Mar-13	16-Apr-13	
0250-1650.01	Bridge D3 Pier D08 Precasting Segment (1-8) - Mould S2	24	04-Jan-13 A	12-Feb-13	
0250-1650.02	Bridge D3 Pier D12 Precasting Segment (1-4) - Mould S2	16	13-Feb-13	28-Feb-13	
0250-1650.03	Bridge F1 Pier D12 Precasting Segment (1-4) - Mould S2	16	01-Mar-13	16-Mar-13	
0250-1650.04	Bridge F1 Pier F03 Precasting Segment (1-6) - Mould S2	24	17-Mar-13	09-Apr-13	
0250-1650.05	Bridge F2 Pier F03 Precasting Segment (1-5) - Mould S2	20	10-Apr-13	29-Apr-13	
0250-1800	Segment Storage - Portal Gantry Foundation + Rail Stage 1	6	05-Jan-13 A	26-Jan-13	
0250-1805	Segment Storage - Portal Gantry Assembly + T&C	15	21-Jan-13	06-Feb-13	
0250-1820	Segment Storage - Portal Gantry Foundation + Rail Stage 2	9	18-Feb-13	27-Feb-13	
0250-1830	Segment Storage - Portal Gantry Foundation + Rail Stage 3	9	28-Mar-13	10-Apr-13	
0250-1810	Segment Storage - Haul Road	6	07-Feb-13	16-Feb-13	
0250-1840	Segment Unloading Derrick - Prebored H-pile (16 nos.)	45	17-Jan-13 A	16-Mar-13	
0250-1850	Segment Unloading Derrick - Foundation Stage 1	12	25-Feb-13	09-Mar-13	
0250-1860	Segment Unloading Derrick - Assembly + T&C	21	11-Mar-13	06-Apr-13	
0250-1870	Segment Unloading Derrick - Foundation Stage 2	12	18-Mar-13	02-Apr-13	
0250-1880	Commence Segments Delivery to Site	0	11-Apr-13		
05 - SECTION 2 & 2A OF THE WORKS					
05.1 - Cut & Cover Tunnel Ch 4855-4932 (APS Footprint)					
05.1.1 - D-Wall Construction					
0511-1052	D-wall Panel N50 Construction	0	26-Nov-12 A	29-Dec-12 A	
0511-1053	D-wall Panel N48 Construction	0	31-Dec-12 A	10-Jan-13 A	
0511-1054	D-wall Panel N49 Construction	10	12-Jan-13 A	31-Jan-13	
0511-1067	BC39 Guide Wall	0	22-Dec-12 A	28-Dec-12 A	
0511-1072	D-wall Panel S54 Construction	0	10-Dec-12 A	24-Dec-12 A	
0511-1075	Barrette BC39 Grouting for Existing Seawall Rubble Mound	0	29-Dec-12 A	03-Jan-13 A	
0511-1073	D-wall Panel S49 Construction	1	27-Dec-12 A	21-Jan-13	
0511-1074	D-wall Panel S53 Construction	14	17-Jan-13 A	05-Feb-13	
0511-1076	D-wall Panel S50 Construction	18	23-Jan-13	15-Feb-13	
0511-1077	D-wall Panel S51 Construction	18	18-Feb-13	09-Mar-13	
0511-1078	D-wall Panel S52 Construction	15	12-Mar-13	28-Mar-13	
0511-1080	Barrette BC39 Construction	0	04-Jan-13 A	19-Jan-13 A	
05.2 - Cut & Cover Tunnel Ch 4932-5149					
05.2.1 - D-Wall Construction					
0521-1990.66	D-wall South Panel S67 Construction	0	17-Dec-12 A	07-Jan-13 A	
0521-1990.68	D-wall South Panel S66 Construction	2	09-Jan-13 A	22-Jan-13	

Contract HY/2009/19

Three Month Rolling Programme (20 JAN 2013 to 19 APR 2013)

3MRP

3MRP - Jan 2013 to Apr 2013

Page 2 of 7

Activity ID	Activity Name	Rem Dur	Start	Finish	2012	2013																	
					January				February				March				April						
					24	31	07	14	21	28	04	11	18	25	04	11	18	25	01	08	15		
0521-1990.67	D-wall South Panel S65 Construction	21	24-Jan-13	20-Feb-13		D-wall South Panel S65 Construction																	
0521-1990.72	D-wall South Panel S58 Construction	5	18-Dec-12 A	25-Jan-13					D-wall South Panel S58 Construction														
0521-1990.73	D-wall South Panel S60 Construction	24	26-Jan-13	26-Feb-13					D-wall South Panel S60 Construction														
0521-1990.74	D-wall South Panel S59 Construction	24	28-Feb-13	27-Mar-13					D-wall South Panel S59 Construc														
0521-1710.35	D-wall Panel S94 Construction	0	13-Dec-12 A	27-Dec-12 A	D-wall Panel S94 Construction																		
0521-1990.17	D-wall South Panel S99 Construction	0	21-Dec-12 A	05-Jan-13 A	D-wall South Panel S99 Construction																		
0521-1990.30	D-wall South Panel N92 Construction	0	31-Dec-12 A	15-Jan-13 A	D-wall South Panel N92 Construction																		
0521-1945	Sheet Pile + Pre-boring for Section with Obstruction	8	17-Jan-13 A	29-Jan-13	Sheet Pile + Pre-boring for Section with Obstruction																		
0521-2185	Grouting South Dwall and Sheetpiles Interface	5	09-Jan-13 A	25-Jan-13	Grouting South Dwall and Sheetpiles Interface																		
0521-1946	Grouting North Dwall and Sheetpiles Interface	9	30-Jan-13	08-Feb-13	Grouting North Dwall and Sheetpiles Interface																		
0521-2195	Set-up 3rd and 4th Rebar Cage Bed at EVB	12	01-Feb-13	18-Feb-13	Set-up 3rd and 4th Rebar Cage Bed at EVB																		
0521-2175	Pump Test C&C Tunnel East Part	14	14-Feb-13	01-Mar-13	Pump Test C&C Tunnel East Part																		
0521-2205	Remove/Clear All Rebar Cage Bed at Tunnel Area	6	19-Feb-13	25-Feb-13	Remove/Clear All Rebar Cage Bed at Tunnel Area																		
05.2.2 - Barrette Construction																							
0522-2215.10	Bulkhead Wall BW1	0	27-Nov-12 A	31-Dec-12 A	Bulkhead Wall BW1																		
0522-2215.20	Bulkhead Wall BW5	15	25-Jan-13	14-Feb-13	Bulkhead Wall BW5																		
0522-2210.52	Barrette Pile BC52	15	11-Mar-13	27-Mar-13	Barrette Pile BC52																		
0522-2210.50	Barrette Pile BC50	15	28-Mar-13	17-Apr-13	Barrette Pile BC50																		
0522-2210.81	Barrette Pile BC40	15	28-Mar-13	17-Apr-13	Barrette Pile BC40																		
0522-2210.82	Barrette Pile BC43	15	09-Apr-13	25-Apr-13	Barrette Pile BC43																		
05.2.3 - ELS																							
0524-2872	King Post Installation (3 nos.) - East End	0	20-Dec-12 A	19-Jan-13 A	King Post Installation (3 nos.) - East End																		
0524-2873	King Post Installation (3 nos.) - Middle	12	09-Jan-13 A	02-Feb-13	King Post Installation (3 nos.) - Middle																		
0524-2877	ELS Dewatering System (62 nos.) - 7 DW + 4 RW + 12 OW Outstanding	18	03-Dec-12 A	13-Feb-13	ELS Dewatering System (62 nos.) - 7 DW + 4 RW + 12 OW Outstanding																		
0524-2878	ELS Instrumentation (12 nos.) - 6 Remaining	18	05-Nov-12 A	13-Feb-13	ELS Instrumentation (12 nos.) - 6 Remaining																		
0524-2874	King Post Installation (3 nos.) - West End	12	28-Jan-13	13-Feb-13	King Post Installation (3 nos.) - West End																		
0524-2881	Tunnel ELS - Phase 1 Zone 1	21	02-Mar-13	26-Mar-13	Tunnel ELS - Phase 1 Zone 1																		
0524-2882	Tunnel ELS - Phase 1 Zone 2	14	16-Mar-13	03-Apr-13	Tunnel ELS - Phase 1 Zone 2																		
0524-2883	Tunnel ELS - Phase 1 Zone 3	12	22-Mar-13	08-Apr-13	Tunnel ELS - Phase 1 Zone 3																		
0524-2884	Tunnel ELS - Phase 1 Zone 4	12	28-Mar-13	13-Apr-13	Tunnel ELS - Phase 1 Zone 4																		
0524-2885	Tunnel ELS - Phase 1 Zone 5	14	04-Apr-13	20-Apr-13	Tunnel ELS - Phase 1 Zone 5																		
05.3 - Box Culvert T1																							
0530-3065	Bay 2 - Install Sheet Piles	0	13-Nov-12 A	31-Dec-12 A	Bay 2 - Install Sheet Piles																		
0530-3071	Bay 2 - ELS + Blinding	7	12-Jan-13 A	28-Jan-13	Bay 2 - ELS + Blinding																		
0530-3072	Bay 2 - Base Slab	6	29-Jan-13	04-Feb-13	Bay 2 - Base Slab																		
0530-3073	Bay 2 - Wall & Roof	12	05-Feb-13	21-Feb-13	Bay 2 - Wall & Roof																		
0530-3074	Bay 2 - Backfilling + Reinstatement	18	22-Feb-13	14-Mar-13	Bay 2 - Backfilling + Reinstatement																		
0530-3076	Bay 1 - TTM Implementation + Clearance	12	15-Mar-13	28-Mar-13	Bay 1 - TTM Implementation +																		
0530-3077	Bay 1 - Install Sheet Piles	12	30-Mar-13	15-Apr-13	Bay 1																		
0530-3112	Bay 9 - Excavation	17	12-Dec-12 A	08-Feb-13	Bay 9 - Excavation																		
0530-3113	Bay 9 - Fabrication of Precast Units	17	26-Nov-12 A	08-Feb-13	Bay 9 - Fabrication of Precast Units																		
0530-3117	Fabrication of Temp Access Bridge Extension Across U-channel	12	02-Feb-13	19-Feb-13	Fabrication of Temp Access Bridge Extension Across U-channel																		
0530-3114	Bay 9 - Precast Unit Erection	6	13-Feb-13	19-Feb-13	Bay 9 - Precast Unit Erection																		
0530-3118	Erection of Temp Access Bridge extension Across U-channel	9	20-Feb-13	01-Mar-13	Erection of Temp Access Bridge extension Across U-channel																		

Activity ID	Activity Name	Rem Dur	Start	Finish	2012		2013																
					January					February					March					April			
					24	31	07	14	21	28	04	11	18	25	04	11	18	25	01	08	15		
06 - SECTION 3 OF THE WORKS																							
06.1 - Westbound - Pier 29-34																							
0610-2110	Pier 29 Pre-drilling at Portion VB (4 nos)	12	02-Apr-13*	16-Apr-13	Pier 29 Pre-drilling at Portion VB (4 nos)																		
06.2 - Box Culvert U1																							
0620-2425	U1 Construct Bay 8 - Wall + Roof	0	28-Dec-12 A	04-Jan-13 A	U1 Construct Bay 8 - Wall + Roof																		
0620-2475	U1 Construct Bay 9 - Wall + Roof	0	17-Dec-12 A	27-Dec-12 A	U1 Construct Bay 9 - Wall + Roof																		
0620-2415	U1 Construct Bay 7 - Wall + Roof	8	19-Jan-13 A	29-Jan-13	U1 Construct Bay 7 - Wall + Roof																		
0620-2405	U1 Construct Bay 6 - Wall + Roof	0	07-Jan-13 A	18-Jan-13 A	U1 Construct Bay 6 - Wall + Roof																		
0620-2460	U1 Construct Bay 10 - Base Slab	9	07-Feb-13	20-Feb-13	U1 Construct Bay 10 - Base Slab																		
0620-2467	U1 Construct Bay 5 - ELS	9	07-Feb-13	20-Feb-13	U1 Construct Bay 5 - ELS																		
0620-2465	U1 Construct Bay 10 - Wall + Roof	9	21-Feb-13	02-Mar-13	U1 Construct Bay 10 - Wall + Roof																		
0620-2468	U1 Construct Bay 5 - Base Slab	9	21-Feb-13	02-Mar-13	U1 Construct Bay 5 - Base Slab																		
0620-2440	U1 Backfill Bay 5 to 8 + Extract Sheetpiles	18	04-Mar-13	23-Mar-13	U1 Backfill Bay 5 to 8 + Extract Sheetpiles																		
0620-2469	U1 Construct Bay 5 - Wall + Roof	9	14-Mar-13	23-Mar-13	U1 Construct Bay 5 - Wall + Roof																		
0620-2480	U1 Bay 10 + 11 + 12 Sheetpiles + ELS	15	07-Nov-12 A	06-Feb-13	U1 Bay 10 + 11 + 12 Sheetpiles + ELS																		
0620-2490	U1 Construct Bay 12 - Base Slab	6	15-Jan-13 A	26-Jan-13	U1 Construct Bay 12 - Base Slab																		
0620-2515	U1 Fabrication of Bay 13 Precast Unit	18	05-Nov-12 A	13-Feb-13	U1 Fabrication of Bay 13 Precast Unit																		
0620-2495	U1 Construct Bay 12 - Wall + Roof	9	30-Jan-13	08-Feb-13	U1 Construct Bay 12 - Wall + Roof																		
0620-2520	U1 Construct Bay 13 - Excavation	18	13-Feb-13	05-Mar-13	U1 Construct Bay 13 - Excavation																		
0620-2500	U1 Construct Bay 11 - Base Slab	9	21-Feb-13	02-Mar-13	U1 Construct Bay 11 - Base Slab																		
0620-2505	U1 Construct Bay 11 - Wall + Roof	9	04-Mar-13	13-Mar-13	U1 Construct Bay 11 - Wall + Roof																		
0620-2530	U1 Construct Bay 13 - Install Precast Unit	12	06-Mar-13	19-Mar-13	U1 Construct Bay 13 - Install Precast Unit																		
0620-2510	U1 Backfill Bays 11 + 12 + 13	12	20-Mar-13	04-Apr-13	U1 Backfill Bays 11 + 12 + 13																		
0620-2380	Divert and Abandon old U1 open channel at VB & III	3	25-Mar-13	27-Mar-13	Divert and Abandon old U1 open channel at VB & III																		
10 - SECTION X OF THE WORKS																							
10.1 - E/B Bridges (Bridge D, E and F)																							
10.1.1 - Marine Pier Construction																							
Pier F03 to F15																							
1011-1995	Fabrication of Marine Pile Cap Cofferdam	0	04-Oct-12 A	11-Jan-13 A	Fabrication of Marine Pile Cap Cofferdam																		
1011-2150	F3 Pile Cap Shutter Cofferdam	18	28-Jan-13	20-Feb-13	F3 Pile Cap Shutter Cofferdam																		
1011-2155	F3 Pile Cap Construction	15	21-Feb-13	09-Mar-13	F3 Pile Cap Construction																		
1011-2160	F3 Pier/Column Construction	12	11-Mar-13	23-Mar-13	F3 Pier/Column Construction																		
1011-2170	F3 Crosshead Construction	18	25-Mar-13	17-Apr-13	F3 Crosshead Construction																		
1011-2180	F4 Pile Cap Shutter Cofferdam	18	07-Feb-13	02-Mar-13	F4 Pile Cap Shutter Cofferdam																		
1011-2185	F4 Pile Cap Construction	15	04-Mar-13	20-Mar-13	F4 Pile Cap Construction																		
1011-2190	F4 Pier/Column Construction	12	21-Mar-13	06-Apr-13	F4 Pier/Column Construction																		
1011-2200	F4 Crosshead Construction	18	08-Apr-13	27-Apr-13	F4 Crosshead Construction																		
1011-2210	F5 Pile Cap Shutter Cofferdam	18	21-Feb-13	13-Mar-13	F5 Pile Cap Shutter Cofferdam																		
1011-2215	F5 Pile Cap Construction	12	14-Mar-13	27-Mar-13	F5 Pile Cap Construction																		
1011-2220	F5 Pier/Column Construction	12	28-Mar-13	13-Apr-13	F5 Pier/Column Construction																		
1011-2020	F6 Dismantle Piling Platform	12	04-Feb-13*	20-Feb-13	F6 Dismantle Piling Platform																		
1011-2240	F6 Pile Cap Shutter Cofferdam	18	04-Mar-13	23-Mar-13	F6 Pile Cap Shutter Cofferdam																		
1011-2245	F6 Pile Cap Construction	12	25-Mar-13	10-Apr-13	F6 Pile Cap Construction																		
1011-2250	F6 Pier/Column Construction	12	11-Apr-13	24-Apr-13	F6 Pier/Column Construction																		

Activity ID	Activity Name	Rem Dur	Start	Finish	2012	2013																	
					January					February					March					April			
					24	31	07	14	21	28	04	11	18	25	04	11	18	25	01	08	15		
1011-1910.50	Pier F7 Dolphin Socketed H-Pile 4	0	19-Nov-12 A	31-Dec-12 A	<div></div>	Pier F7 Dolphin Socketed H-Pile 4																	
1011-1910.60	Pier F7 Dolphin Socketed H-Pile 6	0	19-Nov-12 A	28-Dec-12 A	<div></div>	Pier F7 Dolphin Socketed H-Pile 6																	
1011-2030	F7 Dismantle Piling Platform	12	14-Feb-13	27-Feb-13		F7 Dismantle Piling Platform																	
1011-2270	F7 Pile Cap Shutter Cofferdam	18	14-Mar-13	06-Apr-13		F7 Pile Cap Shutter Cofferdam																	
1011-2275	F7 Pile Cap Construction	12	08-Apr-13	20-Apr-13		F7 Pile Cap Construction																	
1011-2300	F8 Pile Cap Shutter Cofferdam	18	25-Mar-13	17-Apr-13		F8 Pile Cap Shutter Cofferdam																	
1011-0802.4	Pier F9 Dolphin Socketed H-Pile P4	0	04-Dec-12 A	10-Jan-13 A	<div></div>	Pier F9 Dolphin Socketed H-Pile P4																	
1011-0802.6	Pier F9 Dolphin Socketed H-Pile P6	0	04-Dec-12 A	12-Jan-13 A	<div></div>	Pier F9 Dolphin Socketed H-Pile P6																	
1011-2050	Dismantle Piling Platform at Pier F9	12	21-Feb-13	06-Mar-13		Dismantle Piling Platform at Pier F9																	
1011-1970.1	Pier F10 Dolphin Socketed H-Pile P1	0	15-Nov-12 A	03-Jan-13 A	<div></div>	Pier F10 Dolphin Socketed H-Pile P1																	
1011-1970.2	Pier F10 Dolphin Socketed H-Pile P2	0	15-Nov-12 A	05-Jan-13 A	<div></div>	Pier F10 Dolphin Socketed H-Pile P2																	
1011-1970.3	Pier F10 Dolphin Socketed H-Pile P3	0	15-Nov-12 A	07-Jan-13 A	<div></div>	Pier F10 Dolphin Socketed H-Pile P3																	
1011-1970.4	Pier F10 Dolphin Socketed H-Pile P5	0	15-Nov-12 A	11-Jan-13 A	<div></div>	Pier F10 Dolphin Socketed H-Pile P5																	
1011-1970.5	Pier F10 Dolphin Socketed H-Pile P4	13	15-Jan-13 A	04-Feb-13	<div></div>	Pier F10 Dolphin Socketed H-Pile P4																	
1011-1970.6	Pier F10 Dolphin Socketed H-Pile P6	15	15-Jan-13 A	06-Feb-13	<div></div>	Pier F10 Dolphin Socketed H-Pile P6																	
1011-2060	Dismantle Piling Platform at Pier F10	12	28-Feb-13	13-Mar-13		Dismantle Piling Platform at Pier F10																	
1011-1770.1	Pier F11 Dolphin Socketed H-Pile P1	0	23-Nov-12 A	17-Jan-13 A	<div></div>	Pier F11 Dolphin Socketed H-Pile P1																	
1011-1770.2	Pier F11 Dolphin Socketed H-Pile P2	0	23-Nov-12 A	14-Jan-13 A	<div></div>	Pier F11 Dolphin Socketed H-Pile P2																	
1011-1770.3	Pier F11 Dolphin Socketed H-Pile P3	0	23-Nov-12 A	15-Jan-13 A	<div></div>	Pier F11 Dolphin Socketed H-Pile P3																	
1011-1770.4	Pier F11 Dolphin Socketed H-Pile P5	0	23-Nov-12 A	16-Jan-13 A	<div></div>	Pier F11 Dolphin Socketed H-Pile P5																	
1011-1770.5	Pier F11 Dolphin Socketed H-Pile P4	21	26-Jan-13	22-Feb-13		Pier F11 Dolphin Socketed H-Pile P4																	
1011-1770.6	Pier F11 Dolphin Socketed H-Pile P6	21	26-Jan-13	22-Feb-13		Pier F11 Dolphin Socketed H-Pile P6																	
1011-2070	Dismantle Piling Platform at Pier F11	12	07-Mar-13	20-Mar-13		Dismantle Piling Platform at Pier F11																	
1011-2350	F11 Pile Cap Construction	18	21-Mar-13	13-Apr-13		F11 Pile Cap Construction																	
1011-1822.1	Pier F12 Dolphin Socketed H-Pile P1	5	04-Jan-13 A	25-Jan-13	<div></div>	Pier F12 Dolphin Socketed H-Pile P1																	
1011-1822.2	Pier F12 Dolphin Socketed H-Pile P2	7	04-Jan-13 A	28-Jan-13	<div></div>	Pier F12 Dolphin Socketed H-Pile P2																	
1011-1822.3	Pier F12 Dolphin Socketed H-Pile P3	8	04-Jan-13 A	29-Jan-13	<div></div>	Pier F12 Dolphin Socketed H-Pile P3																	
1011-1822.4	Pier F12 Dolphin Socketed H-Pile P5	10	04-Jan-13 A	31-Jan-13	<div></div>	Pier F12 Dolphin Socketed H-Pile P5																	
1011-1822.5	Pier F12 Dolphin Socketed H-Pile P4	18	01-Feb-13	25-Feb-13		Pier F12 Dolphin Socketed H-Pile P4																	
1011-1822.6	Pier F12 Dolphin Socketed H-Pile P6	18	01-Feb-13	25-Feb-13		Pier F12 Dolphin Socketed H-Pile P6																	
1011-2075	Dismantle Piling Platform at Pier F12	12	14-Mar-13	27-Mar-13		Dismantle Piling Platform at Pier F12																	
1011-1890.50	Pier F13 Dolphin Socketed H-Pile 4	3	31-Dec-12 A	23-Jan-13	<div></div>	Pier F13 Dolphin Socketed H-Pile 4																	
1011-1890.60	Pier F13 Dolphin Socketed H-Pile 6	5	31-Dec-12 A	25-Jan-13	<div></div>	Pier F13 Dolphin Socketed H-Pile 6																	
1011-2080	Dismantle Piling Platform at Pier F13	12	21-Mar-13	06-Apr-13		Dismantle Piling Platform at Pier F13																	
1011-2145	Marine bored pile testing F14	0	24-Sep-12 A	31-Dec-12 A	<div></div>	Marine bored pile testing F14																	
1011-1782.50	Pier F14 Dolphin Socketed H-Pile 4	15	17-Jan-13 A	06-Feb-13	<div></div>	Pier F14 Dolphin Socketed H-Pile 4																	
1011-1782.60	Pier F14 Dolphin Socketed H-Pile 6	17	17-Jan-13 A	08-Feb-13	<div></div>	Pier F14 Dolphin Socketed H-Pile 6																	
1011-2085	Dismantle Piling Platform at Pier F14	12	28-Mar-13	13-Apr-13		Dismantle Piling Platform at Pier F14																	
Pier F01 to F02																							
1011-2860	F1A Pile Cap Shutter Cofferdam	3	03-Jan-13 A	23-Jan-13	<div></div>	F1A Pile Cap Shutter Cofferdam																	
1011-2865	F1A Pile Cap Construction	12	24-Jan-13	06-Feb-13		F1A Pile Cap Construction																	
1011-2870	F1A Pier/Column Construction	12	07-Feb-13	23-Feb-13		F1A Pier/Column Construction																	
1011-2880	F1A Crosshead Construction	18	25-Feb-13	16-Mar-13		F1A Crosshead Construction																	
1011-2890	F1B Pile Cap Shutter Cofferdam	18	07-Feb-13	02-Mar-13		F1B Pile Cap Shutter Cofferdam																	

Activity ID	Activity Name	Rem Dur	Start	Finish	2012		2013																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	1011-2895	F1B Pile Cap Construction	12	04-Mar-13	16-Mar-13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

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

[illegible]

Data Date: 22-Jan-13

- ◆ Current Milestone
- Critical Remaining Work
- Remaining Work
- Remaining Level of Effort

3 Months Rolling Programme (Apr 2013 - Jun 2013)

Date	Revision	Checked	Approved
22-Mar-13			

Activity ID	Activity Name		Orig Dur	Early Start	Early Finish	Total Float	2013													2014
							Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
C101340	Safety Plan - Eng comment and approve	14d	26-Feb-13	11-Mar-13	55d															
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	06-Mar-13	60d															
C101400	Draft Environmental Management Plan - prepare and submit	21d	22-Jan-13	11-Feb-13	43d															
C101420	Draft Environment Manangement PLAN - Eng comment and approve	14d	12-Feb-13	25-Feb-13	43d															
C101440	Environmental Management Plan - prepare and submit	12d	26-Feb-13	09-Mar-13	43d															
C101460	Environmental Management Plan - Eng comment and approve	14d	10-Mar-13	23-Mar-13	43d															
C101462	Further Environmental Permit - prepare and submit to EPD	20d	22-Jan-13	10-Feb-13	9d															
C101464	Further Environmental Permit - EPD issue permit	14d	11-Feb-13	24-Feb-13	9d															
C101470	Dumping Permit - prepare and submit to EPD	30d	24-Jan-13	22-Feb-13	131d															
C101472	Dumping Permit - EPD issue permit	28d	23-Feb-13	22-Mar-13	131d															
C101480	Staff Organization Plan - prepare and submit	30d	31-Jan-13	01-Mar-13	96d															
C101500	Staff Organization Plan - Eng comment and approve	28d	02-Mar-13	29-Mar-13	96d															
C101580	Submit Holding Nursery Site Plan - prepare and submit	30d	01-Apr-13	30-Apr-13	5d															
C101590	Submit Holding Nursery Site Plan - Eng comment and approve	28d	01-May-13	28-May-13	5d															
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															
Procurement																				
C101700	Computer Facilities to Eng Office - Supply	14d	25-Feb-13	10-Mar-13	115d															
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															
C101820	Site Clearance	62d	21-Feb-13	09-May-13	93d															
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															
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 Bridge - Prepare and submit to ICE	48d	31-Jan-13	19-Mar-13	40d															
C101704	Marine - temp work design and MS of demolish Expro Drive Bridge - ICE comment and issue cert	14d	20-Mar-13	02-Apr-13	40d															
C101706	Marine - temp work design and MS of demolish Expro Drive Bridge - Eng comment and approve	28d	03-Apr-13	30-Apr-13	40d															
C101802	Marine - MS for diversion of ex. cooling water main - prepare and submit to ICE	38d	31-Jan-13	09-Mar-13	106d															
C101804	Marine - MS for diversion of ex. cooling water main - ICE check & issue cert	14d	10-Mar-13	23-Mar-13	106d															
C101806	Marine - MS for diversion of ex. cooling water main - Eng comment and approve	28d	24-Mar-13	20-Apr-13	106d															
C102000	Marine - MS for marine SI - prepare and submit to Eng	30d	01-Apr-13	30-Apr-13	36d															
C102010	Marine - MS for marine SI - Eng comment and approve	14d	01-May-13	14-May-13	36d															

Activity ID		Activity Name				Orig Dur	Early Start	Early Finish	Total Float	2013												2014
			Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan						
C102020	Marine - MS and design for fabrication of precast seawall - prepare and submit to ICE	60d	01-Apr-13	30-May-13	38d																	
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																	
C102100	Marine - MS of Dredging - prepare and submit for ICE check	60d	11-Apr-13	09-Jun-13	10d																	
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																	
C102342	Marine - MS for install seawall block - prepare and submit	60d	31-May-13	29-Jul-13	107d																	
C103360	Marine - MS for launching, storage, mooring & transportation of caisson seawall - prepare and submit	60d	31-May-13	29-Jul-13	38d																	
C103402	Marine - MS for temp seawall for advance reclamation- prepare and submit	60d	01-May-13	29-Jun-13	17d																	
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																	
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																	
C105140	Marine - assessment report on impact to MTR - TWL tunnel - Eng comment and approve	28d	14-Jun-13	11-Jul-13	20d																	
Submission and Approval																						
C102400	Marine - Marine Notice to Marine Dept (Dredging) - prepare and submit	14d	31-Jan-13	13-Feb-13	249d																	
C102420	Marine - Marine Notice to Marine Dept (Dredging) - MD comment & accept	30d	14-Feb-13	15-Mar-13	249d																	
Construction																						
General Work for Marine Work																						
W0001500	Marine - Initial Hydrographic Survey and submit survey report (Portion 1)	14d	06-May-13	22-May-13	48d																	
W0001505	Marine - Initial Hydrographic Survey and submit survey report (Portion 1C)	14d	31-May-13	17-Jun-13	2d																	
W0001510	Marine - Initial Hydrographic Survey and submit survey report (Portion 1A, 1B)	14d	31-May-13	17-Jun-13	6d																	
W0001522	Marine - Vibrocore - Area C	4d	18-Jun-13	21-Jun-13	2d																	
W0001524	Marine - Vibrocore - Area B	3d	22-Jun-13	25-Jun-13	2d																	
W0001526	Marine - Vibrocore - Area A1	3d	26-Jun-13	28-Jun-13	2d																	
W0001530	Marine - Continous Piezocone Penetration Test (CPPT) - Area C	10d	29-Jun-13	11-Jul-13	2d																	
Zone C - Demolish Expo Drive West Bridge																						
A10136	Area C - Expo Drive - remove street funiture and asphalt surface	10d	30-May-13	10-Jun-13	6d																	
A10140	Area C - Expo Drive - erect temporary support frame for demolition work	20d	03-Jun-13	26-Jun-13	6d																	
Zone A2																						
W0001160	Area A2 - Complete discomissioning of Submarine Sewage Outfall (by others)	0d	31-May-13		124d																	
W0001170	Area A2 - Remove Submarine Sewage Outfall	20d	31-May-13	24-Jun-13	124d																	
W0001180	Area A2 - Complete discomissioning of Cross Harbour Watermains (by others)	0d	31-May-13		124d																	
W0001190	Area A2 - Remove Cross Harbour Watermains	20d	31-May-13	24-Jun-13	124d																	
CRIII Area																						
W0001095	CRIII - Temp. Diversion of 5 Existing Cooling Mains	66d	30-May-13	16-Aug-13	55d																	
Works for Section Completion																						
Construction																						
Box Culvert / Structure																						
Area A1 - 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																	

<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>利達</div><div>LEADER</div></div><div>中國建築 - 利達聯營</div><div>CHINA STATE - LEADER JOINT VENTURE</div></div>					CEDD Contract No. HK/2012/08 Wan Chai Development Phase II Central - Wan Chai Bypass at Wan Chai West										Page : 4 / 4					
Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	2013														2014
						Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
Section I - Interim Landing Steps and EVA																				
Permit / Method Statement																				
S010030	Sec I - ILS - issue FEP	0d		05-Mar-13*	0d															
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															
S010150	Sec I - ILS - Eng comment and approve method statement	28d	04-Apr-13	01-May-13	4d															
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															
Precast Concrete Element Construction																				
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 Landing Steps Construction																				
S011130	Sec I - ILS - install precast concrete blocks and steps below +2.5mPD	2d	10-Jun-13	11-Jun-13	3d															
S012000	Sec I - ILS - construct cast insitu concrete blocks and steps above +2.5mPD	24d	13-Jun-13	11-Jul-13	3d															
Section VI C - Area 3, 6, 8A & 8C																				
Soft Landscaping Works																				
S6C23000	Sec VI C - RdW - Tree Felling/Transplanting at Area 8A	48d	31-May-13	27-Jul-13	2d															

