CONTRACT NO: HK/2009/05

WANCHAI DEVELOPMENT PHASE II AND CENTRAL WANCHAI BYPASS SAMPLING, FIELD MEASUREMENT AND TESTING WORK (STAGE 1)

ENVIRONMENTAL PERMIT NO. EP-356/2009, FURTHER EVIRONMENTAL PERMIT NOS. FEP-01/356/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009 AND FEP-05/356/2009

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- MARCH 2011 -

CLIENTS:

Civil Engineering and Development Department

and

Highways Department

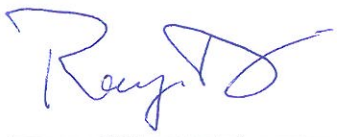
PREPARED BY:

Lam Geotechnics Limited

11/F Centre Point
181-185 Gloucester Road,
Wanchai, H.K.

Telephone: (852) 2882-3939
Facsimile: (852) 2882-3331
E-mail: info@lamenviro.com
Website: http://www.lamenviro.com

CERTIFIED BY:



Raymond Dai
Environmental Team Leader

DATE:

11 April 2011

ENVIRON

Ref.: AACWBIECEM00_0_1218L.11 11 April 2011

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

By Post and Fax (2691 2649)

Attention: Mr. Kelvin CHENG

Dear Sir,

Re: Wan Chai Development Phase II and Central-Wan Chai Bypass Monthly Environmental Monitoring and Audit Report (March 2011) for EP-356/2009, FEP-01/356/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009 and FEP-05/356/2009

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for March 2011 dated 11 April 2011.

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

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

Yours sincerely,

David Yeung
Independent Environmental Checker

c.c.	HyD	Mr. Jones Lai	by fax: 2714 5289
	CEDD	Mr. Patrick Keung	by fax: 2577 5040
	AECOM	Mr. Francis Leong / Mr. Stephen Lai	by fax: 2691 2649
	Lam	Mr. Raymond Dai	by fax: 2882 3331

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EXECUTIVE SUMMARY

i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – March 2011 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-01/356/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009 and FEP-05/356/2009. This report presents the environmental monitoring findings and information recorded during the period 28th February 2011 to 27th March 2011. 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. HY/2009/11 included:

- Dredging works,
- Reclamation works,
- Construction & installation of Seawall Block; and
- Drainage Construction works

iii. During this reporting period, the major work activities for Contract no. HK/2009/01 included:

- Dredging of marine sediments for the open cut trench of cross harbour water mains and final trimming for pipe trench (From CHA 450 to 970);
- Removal of existing rock-fill material at west side sloping seawall of HKCEC extension for trench dredging of cross harbour water mains;
- Excavation and installation of shoring system for pipe laying work at Wan Chai (Zone A2-2);
- For transplanting 29 nos. of trees at Tsim Sha Tsui Salisbury Garden (South Portion) and 7 nos. of trees at along Expo Drive (for jetty access construction), transplanting of 11 more tress at Tsim Sha Tsui Salisbury (North Portion) shall either be transplanted or felled prior to the pipe laying work as per the updated pipe layout;
- Pipe laying at TST was commenced on early February and trench excavation;
- After receiving the latest as-built information from WSD, trial pit excavation for Wan Chai connection points at Fenwick Pier Street footpath;
- Routine maintenance and clearance works for silt screens;
- Coring works (Stage 1: 42 nos. under 350mm diameter openings) at Pump House P1, P3, P4, and P5;
- Installation of cooling main pipelines at HKCEC VIP Drop-Off Area (Zone B1-1) and reinstatement works;
- Installation of cooling main pipelines at HKCEC Golden Bauhinia Garden (Zone B4-1), area were backfilled and reinstatement to be commenced;
- Installation of cooling main pipelines at HKCEC West Wing (Zone B1-2) is on-going (approx. 140m pipe length completed). Portion of area A were reinstated and cleared on 18 Mar. 2011;

- Due to construction of SCL works, trial trench construction for temporary diversion of Convention Plaza discharge mains;
- Excavation for connection points for Shui On (AE & BE) at Convention Avenue (Zone A2-2) have to be enlarged for tentative pipe connection work;
- Installation of another 6 pipe piles;
- Demolition of staging platform; and
- Removal of rock armour along north shore of HKCEC water channel

iv. During this reporting period, the major work activities for Contract no. HK/2009/02 included:

- No sorted fill produce at Tseung Kwan O public fill sorting facility;
- Finishing works and remedial works for new public toilet was completed;
- Internal decoration for new public toilet was commenced;
- External decoration for new public toilet was commenced;
- Partial demolition of existing ferry pier at Expo Drive East was completed;
- Existing jetty pier at Expo Drive East was relocated;
- Preparation works for seawall modification at Expo Drive East was completed;
- Modification of existing seawall at Expo Drive East was commenced;
- Excavation at Harbour Road and Harbour Centre for cooling mains;
- 24m cooling water mains was laid at Harbour Road;
- Sun Hung Kai tee connection was carried out;
- China Resource Building tee connection was carried out;
- Driving remaining sheet-piles for excavation and lateral support at WSD Salt Water Pumping Station was completed;
- Curtain grout works at WSD Salt Water Pumping Station was carried out;
- Excavation and lateral support;
- Driving sheet-piles at Wan Shing Street for WSD Intake Culvert;
- Dredging for submarine outfall pipe was ongoing;
- Installation of T6 & T7 seawall blocks was commenced;
- Curtain grout for jacking pit at ex-pet garden was carried out;
- Excavation and lateral support for jacking pit at ex-pet garden was commenced
- Tunnel bored pile works;
- Guide wall for diaphragm wall construction;
- Establishment of desander and silo for diaphragm wall construction was commenced;
- Pre-drilling of bored pile and diaphragm wall;
- 1800 diameter drainage diversion was completed; and
- Road work for Hung Hing Road traffic diversion was completed.

v. During this reporting period, the major work activities for Contract no. HY/2009/15 included:

- Rock removal at TS4 and TPCWA;
- Seawall block construction at TS1 and TPCWAE;
- Night time protection works at CHT;
- Ground investigation and trial pit excavation; and
- Drainage works at PRE office

vi. During this reporting period, the major work activities for Contract no. HK/2010/06 included:

- Installation of Silt Curtain for Dredging Works;
- Dredging over the MTR Tsuen Wan Line; and
- Pre-construction Condition Survey inside MTR tunnel

Noise Monitoring

vii. Noise monitoring during daytime and restricted hour were conducted at the stations M1a, M2b, M3a, M4b and M5b on a weekly basis in the reporting month. Two limit level exceedances were recorded at M1a - Harbour Road Sports Centre on 15 and 24 March 2011 during restricted hour. Investigation found that major traffic noise was contributed in the noise monitoring and not related to the Project.

Real-time Noise Monitoring

viii. Real-time noise monitoring at FEHD Hong Kong Transport Section Whitefield Depot and Oil Street Community Centre have been commenced on 5 October 2010 for the filling works of Contract no. HY/2009/11. All monitoring results were below limit level in the reporting month.

Air Quality Monitoring

ix. Air quality monitoring has been conducted at stations CMA1b – Oil Street Community Liaison Centre, CMA2a – Causeway Bay Community Centre, CMA3a – CWB PRE Site Office and CMA4a - SPCA. No exceedance was recorded in the reporting month.

Water Quality Monitoring

x. Water quality monitoring at 19 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***. Investigations were found that the most of exceedances are not related to the Project works.

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
HY/2009/11	WSD9	0	0	0	0	0	0	0	0	0	0	0	0
	WSD10	0	0	0	0	0	0	0	0	0	0	0	0
	WSD15	0	0	0	0	0	0	0	0	0	0	0	0

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
	WSD17	0	0	0	0	0	0	0	0	0	0	0	0
	C8	0	0	1	1	1	0	0	0	0	3	2	0
	C9	0	0	0	0	1	0	0	0	0	1	1	0
HK/2009/01	WSD19	0	0	0	0	0	2	0	0	1	0	2	0
	WSD20	0	0	0	1	1	0	0	0	0	0	0	0
	WSD7	0	0	1	0	0	0	0	0	0	0	0	0
	C1	0	0	0	0	0	0	0	0	0	0	0	0
	C2	0	0	0	0	0	0	0	0	0	0	0	0
	C3	0	0	1	0	1	0	0	0	0	0	0	0
	C4e	0	0	0	0	0	0	0	0	0	0	0	0
	C4w	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	C5e	0	0	0	0	0	0	0	0	0	0	0	0
	C5w	0	0	0	0	0	0	0	0	0	0	0	0
	WSD21	0	0	0	0	0	1	0	0	0	0	0	0
HY/2009/15	C6	0	0	0	0	0	0	0	0	0	0	0	0
Total		**0**	**0**	**3**	**2**	**4**	**3**	**0**	**0**	**1**	**4**	**5**	**0**

Remarks: - Station C2 is related to the Contract no. HK/2010/06 which was commenced on 23 March 2011;

- Considering the absence of intake pump operation at Windsor House intake (C7), this sensitive receiver was apparently not exist during this period so that no water quality monitoring at C7 for compliance checking was undertaken in this reporting month.

Complaints, Notifications of Summons and Successful Prosecutions

xi. There were no environmental complaint recorded in the reporting month.

Site Inspections and Audit

xii. The Environmental Team (ET) conducted weekly site inspections for Contract nos. HY/2009/11, HK/2009/01, HK/2009/02 HY/2009/15 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.

xiii. The site inspection for Contract HK/2010/06 will be commenced on 29 March 2011.

Future Key Issues

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

Contract no. HY/2009/11- North Point Reclamation

- Dredging works;
- Reclamation works;
- Construction & installation of Seawall Block;
- Drainage Construction works;
- Floating out of Caisson seawall;
- Construction of coping; and
- Installation of Caisson Seawall

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

- Dredging for the cross harbour water mains from Wan Chai side
- Pipe line installation for the cross harbour water mains from Wan Chai side;
- Removal and reinstatement of sloping seawall at Wan Chai;
- Implementation of TTM scheme at Convention Avenue, Harbour Road and Expo Drive (HKCEC area);
- Pipe laying works for cooling mains, harbour main & fresh water mains at Zone A1, A4, A5, B1 & B4;
- Tree transplantation at Wan Chai and Tsim Sha Tsui;
- Additional wall openings penetration and construction work (over dimension 350mm x350mm) for pipe sleeves and puddle flanges openings at Pump Station P1, 3, 4 & 5;
- Equipment concrete plinths construction inside pumping station;
- E & M first fixing work at HKCEC-II and pumping station P1, 3, 4, 5.
- Removal of armour rock at north side of HKCEC water channel (CH0 to CH160);
- Laying geotextile in the seawall slope at north side of HKCEC;
- Reclamation works at HKCEC water channel (CH0 to CH80);
- Installation of the sheet piling works for temporary water channel at the promenade pump house;
- Dredging works at HKCEC water channel(CH160 to CH250);
- Installation of conveyor belt for filling works at HKCEC water channel(CH0 to CH80);
- Demolition of promenade deck; and
- Preparation, excavation and pipe laying works at Convention Avenue and Harbour Road (Zones A2-2, A4-1, A5-1, A5-5).

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

- Operating Tseung Kwan O Public Fill Sorting Facility;
- Internal and external decoration for new public toilet at Expo Drive East;
- Commence E&M works for new public toilet at Expo Drive East;
- Construction of passenger terminal at Expo Drive East;

- Modification of existing seawall at Expo Drive East;
- Trench excavation and pipe laying works for cooling mains;
- Excavation and lateral support for construction of WSD Salt Water Pumping Station;
- Sheet-piling for construction of salt water intake culvert at Wan Shing Street;
- Construction of submarine outfall extension chamber;
- Dredging and pipe welding for submarine outfall pipe;
- Marine piling works for new ferry pier construction;
- Complete excavation and lateral support for jacking pit at ex-pet garden;
- Driving sheet-piles for receiving pit for DSD pipes;
- Reclamation at WCR1 area;
- Pre-drilling for bored piles and diaphragm wall at WCR1 area;
- Guide wall construction for diaphragm wall construction at WCR1 area;
- Bored pile construction (alternative design); and
- Establish plants for diaphragm wall construction

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

- Rock removal at TS4;
- Filling at TS1 and TPCWAE;
- Utility and preparation work at CHT;
- Alignment works at Portion VII; and
- Drainage works at PRE office

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

- Dredging over the MTR Tsuen Wan Line;
- Disposal of Type 1 Marine Sediment; and
- Mobilization for the Construction of Temp. Platform of Piling Works

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-01/356/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009 and FEP-05/356/2009 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-01/356/2009, FEP-02/356/2009, FEP-03/356/2009 and FEP-04/356/2009 during the period 28th February to 27th March 2011. 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 watermains 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	Pending
HK/2009/02	Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East	DP3, DP5	5 July 2010
		DP1	Pending
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
HK/2010/06	Wan Chai Development Phase II-Central-Wan Chai Bypass over MTR Tsuen Wan Line	DP3	22 March 2011

2.3.3. Contract no. HK/2010/06 – Wan Chai Development Phase II-Central-Wan Chai Bypass over MTR Tsuen Wan Line was commenced on 20 January 2011. The commencement of construction was on 22 March 2011.

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 for WDII	Principal Resident Engineer	Mr. Frankie Fan	2587 1778	2587 1877
	Engineer for CWB	Principal Resident Engineer	Mr. Peter Poon	3916 1818	3529 2829
China Harbour-CRBC Joint Venture	Contractor under Contract no. HY/2009/11	Project Director	Mr. Cho Yu Fun	3157 1086	3157 1085
		Project Manager	Mr. Gregory Wong	3157 1086	
		Site Agent	Mr. Daniel Cheung	3157 1086	
		Environmental Officer	Mr. C. M. Wong	3157 1086	

Party	Role	Post	Name	Contact No.	Contact Fax
Chun Wo – Leader Joint Venture	Contractor under Contract no. HK/2009/01	Project Director	Simon Tong	9124 2471	2634 1626
		Site Agent	Paul Yu	9456 9819	
		Operation Manager	Lau Yee Ching	9466 3918	
		Construction Manager	David Wong	9653 8635	
		Construction Manager	Wilson Lau	5183 1270	
		Construction Manager	Chan Mui Sang	9864 8615	
		Environmental Officer (Compliance Manager)	Brian Wan	9312 2827	
		Environmental Engineer	Shelton Chan	5395 5470	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Project Manager	Mr. Chan Sing Cho	3658 3002	2827 9996
		Site Agent	Mr. Eric Lam	3658-3048	
		Environmental Officer (Compliance Manager)	Mr. Barry Leung	3658 3031	
		Environmental Engineer	Ms. Flora Ng	3658-3064	
China State Construction Engineering (HK) Ltd.	Contractor under Contract no. HY/2009/15	Project Manager	Mr. M Y Wong	2823 7879	2528 5651
		Site Agent	Mr. K Y Leung	9026 8808	2566 2192
		Construction Manager	Mr. C K Kwok	9779 2162	
		Assistant Construction Manager (East)	Mr. Gene Cheung	6105 4880	
		Assistant Construction Manager (West)	Mr. Tony Chiu	9090 0606	
		Section Agent (East)	Mr. Jason Chan	9254 1635	
		Section Agent (West)	Mr. Tang Ka Tung	9473 4771	
		Environmental Manager	Ms. Anna Yu	9473 1945	
Gammon	Contractor under Contract	Project Manager	Mr. Simon Tong	9124 2471	2529 2880

Party	Role	Post	Name	Contact No.	Contact Fax
-Leader JV	no. HK/2010/06	Site Agent	Mr. Book Kin Man	9193 8680	
		Environmental Officer	Mr. Lee Wai Man	9481 6024	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3743 0788	3548 6988
Lam Geotechnics Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331

2.4.3. For Contract no. HY/2009/11, the principal work activities in this reporting month included:

- Dredging works,
- Reclamation works,
- Construction & installation of Seawall Block; and
- Drainage Construction works.

2.4.4. For Contract no. HK/2009/01, the principal work activities in this reporting month included:

- Dredging of marine sediments for the open cut trench of cross harbour water mains and final trimming for pipe trench (From CHA 450 to 970);
- Removal of existing rock-fill material at west side sloping seawall of HKCEC extension for trench dredging of cross harbour water mains;
- Excavation and installation of shoring system for pipe laying work at Wan Chai (Zone A2-2);
- For transplanting 29 nos. of trees at Tsim Sha Tsui Salisbury Garden (South Portion) and 7 nos. of trees at along Expo Drive (for jetty access construction), transplanting of 11 more tress at Tsim Sha Tsui Salisbury (North Portion) shall either be transplanted or felled prior to the pipe laying work as per the updated pipe layout;
- Pipe laying at TST was commenced on early February and trench excavation;
- After receiving the latest as-built information from WSD, trial pit excavation for Wan Chai connection points at Fenwick Pier Street footpath;
- Routine maintenance and clearance works for silt screens;
- Coring works (Stage 1: 42 nos. under 350mm diameter openings) at Pump House P1, P3, P4, and P5;
- Installation of cooling main pipelines at HKCEC VIP Drop-Off Area (Zone B1-1) and reinstatement works;
- Installation of cooling main pipelines at HKCEC Golden Bauhinia Garden (Zone B4-1), area were backfilled and reinstatement to be commenced;
- Installation of cooling main pipelines at HKCEC West Wing (Zone B1-2) is on-going

(approx. 140m pipe length completed). Portion of area A were reinstated and cleared on 18 Mar. 2011;

- Due to construction of SCL works, trial trench construction for temporary diversion of Convention Plaza discharge mains;
- Excavation for connection points for Shui On (AE & BE) at Convention Avenue (Zone A2-2) have to be enlarged for tentative pipe connection work;
- Installation of another 6 pipe piles;
- Demolition of staging platform; and
- Removal of rock armour along north shore of HKCEC water channel

2.4.5. For Contract no. HK/2009/02, the principal work activities in this reporting month included:

- No sorted fill produce at Tseung Kwan O public fill sorting facility;
- Finishing works and remedial works for new public toilet was completed;
- Internal decoration for new public toilet was commenced;
- External decoration for new public toilet was commenced;
- Partial demolition of existing ferry pier at Expo Drive East was completed;
- Existing jetty pier at Expo Drive East was relocated;
- Preparation works for seawall modification at Expo Drive East was completed;
- Modification of existing seawall at Expo Drive East was commenced;
- Excavation at Harbour Road and Harbour Centre for cooling mains;
- 24m cooling water mains was laid at Harbour Road;
- Sun Hung Kai tee connection was carried out;
- China Resource Building tee connection was carried out;
- Driving remaining sheet-piles for excavation and lateral support at WSD Salt Water Pumping Station was completed;
- Curtain grout works at WSD Salt Water Pumping Station was carried out;
- Excavation and lateral support;
- Driving sheet-piles at Wan Shing Street for WSD Intake Culvert;
- Dredging for submarine outfall pipe was ongoing;
- Installation of T6 & T7 seawall blocks was commenced;
- Curtain grout for jacking pit at ex-pet garden was carried out;
- Excavation and lateral support for jacking pit at ex-pet garden was commenced
- Tunnel bored pile works;
- Guide wall for diaphragm wall construction;
- Establishment of desander and silo for diaphragm wall construction was commenced;
- Pre-drilling of bored pile and diaphragm wall;
- 1800 diameter drainage diversion was completed; and
- Road work for Hung Hing Road traffic diversion was completed.

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

- Rock removal at TS4 and TPCWA;
- Seawall block construction at TS1 and TPCWAE;
- Night time protection works at CHT;
- Ground investigation and trial pit excavation; and
- Drainage works at PRE office

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

- Installation of Silt Curtain for Dredging Works;
- Dredging over the MTR Tsuen Wan Line; and
- Pre-construction Condition Survey inside MTR tunnel

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

Contract no. HY/2009/11- North Point Reclamation

- Dredging works;
- Reclamation works;
- Construction & installation of Seawall Block;
- Drainage Construction works;
- Floating out of Caisson seawall;
- Construction of coping; and
- Installation of Caisson Seawall

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

- Fabrication of the pipe strings in factory;
- Dredging for the cross harbour water mains from Wan Chai side;
- Pipe line installation for the cross harbour water mains from Wan Chai side;
- Removal and reinstatement of sloping seawall at Wan Chai;
- Cooling Water Pumping Station and Associated Intake and Discharge Pipelines;
- Implementation of TTM scheme at Convention Avenue, Harbour Road and Expo Drive (HKCEC area);
- Pipe laying works for cooling mains, harbour main & fresh water mains at Zone A1, A4, A5, B1 & B4;
- Tree transplantation at Wan Chai;
- Additional wall openings penetration snd construction work (over diamension 350mm x350mm)for pipe sleeves and puddle flanges openings at Pump Station P1,3, 4 & 5;
- Equipment concrete plinths construction inside pumping station;
- E & M first fixing work at HKCEC-II and pumping station P1, 3, 4, 5;
- Central-Wan Chai Bypass (CWB) Tunnel and Associated Slip Roads 2 & 3

- Installation of pipe pile wall P1;
- Removal of armour rock at north side (CH0 to CH160) of HKCEC;
- Laying geotextile in the seawall slope at north side of HKCEC;
- Reclamation works at HKCEC water channel (CH 0 to CH160);
- Installation of the sheet piling works for temporary water channel at the promenade pump house;
- Dredging works at HKCEC water channel (CH160 to CH250);
- Installation of conveyor belt for filling works at HKCEC water channel;
- Demolition of promenade deck;
- The WSD DN450mm & DN800mm Salt Water Mains; and
- Preparation, excavation and pipe laying works at Convention Avenue and Harbour Road (Zones A2-2, A4-1, A5-1, A5-5).

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

- Operating Tseung Kwan O Public Fill Sorting Facility;
- Internal and external decoration for new public toilet at Expo Drive East;
- Commence E&M works for new public toilet at Expo Drive East;
- Construction of passenger terminal at Expo Drive East;
- Modification of existing seawall at Expo Drive East;
- Trench excavation and pipe laying works for cooling mains;
- Excavation and lateral support for construction of WSD Salt Water Pumping Station;
- Sheet-piling for construction of salt water intake culvert at Wan Shing Street;
- Construction of submarine outfall extension chamber;
- Dredging and pipe welding for submarine outfall pipe;
- Marine piling works for new ferry pier construction;
- Complete excavation and lateral support for jacking pit at ex-pet garden;
- Driving sheet-piles for receiving pit for DSD pipes;
- Reclamation at WCR1 area;
- Pre-drilling for bored piles and diaphragm wall at WCR1 area;
- Guide wall construction for diaphragm wall construction at WCR1 area;
- Bored pile construction (alternative design); and
- Establish plants for diaphragm wall construction

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

- Rock removal at TS4;
- Filling at TS1 and TPCWAE;
- Utility and preparation work at CHT;

- Alignment works at Portion VII; and
- Drainage works at PRE office

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

- Dredging over the MTR Tsuen Wan Line;
- Disposal of Type 1 Marine Sediment; and
- Mobilization for the Construction of Temp. Platform of Piling Works

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	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	Valid
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	Valid
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

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. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

3.1.3. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-01/356/2009 for contract no. HY/2009/11 are shown in ***Table 3.2*** and ***Table 3.3***.

Table 3.2 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/11

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-01/356/2009	18 Feb 2010	N/A	Valid
Notification of Works Under APCO	314911	9 Mar 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0870-10	6 Oct 2010	1 Nov 2010 to 30 Apr 2011	Valid
Registration as a Chemical Waste Producer	WPN: 5213-151-C3631-02	12 Oct 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7010037	13 Jan 2010	N/A	Valid
Discharge Licence	WT00007942-2010	29 Nov 2010	30 Nov 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/10-055	26 Aug 2010	10 Sep 2010 to 30 Dec 2010	Expired
	EP/MD/11-116	29 Dec 2010	31 Dec 2010 to 28 Jun 2011	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/11-124	24 Jan 2011	31 Jan to 27 Feb 2011	Expired
	EP/MD/11-137	24 Feb 2011	28 Feb 2011 to 30 Mar 2011	Valid

Table 3.3 Summary of submission status under FEP-01/356/2009 Condition

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	18 Dec 2009
Condition 2.7	Submission of works schedule and location plan	8 Feb 2010
Condition 2.8	Silt Curtain Deployment Plan	25 Feb 2010
	Revised Silt Curtain Deployment Plan (Rev. 3)	4 Dec 2010
Condition 2.9	Silt Screen Deployment Plan	25 Feb 2010
	Revised Silt Screen Deployment Plan	10 May 2010
	Silt Screen Deployment Plan (Rev. 4)	1 Nov 2010
	Silt Screen Deployment Plan (Rev. 5)	18 Mar 2011
Condition 2.10	Coral Translocation Plan	20 Nov 2009
Condition 2.16	Noise Management Plan	1 Mar 2010
	Revised Noise Management Plan	28 Sep 2010

EP Condition	Submission	Date of Submission
	Revised Noise Management Plan (Rev 5)	19 Feb 2011
Condition 2.17	Landscape Plan	12 May 2010
	Revised landscape Plan	30 Jun 2010
	Submission of Supplementary Information - Revised Management & Maintenance Schedule for Submitted Revised Landscape Plan	25 Aug 2010

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

3.1.4. 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	6 Jan 2010	N/A	Valid
Construction Noise Permit (CNP) for piling equipment	PP-RS0045-10	21 Dec 2010	21 Dec 2010 to 20 Jun 2011	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0763-10	1 Sep 2010	14 Sep 2010 to 14 Mar 2011	Superseded
	GW-RS0771-10	1 Sep 2010	1 Sep 2010 to 28 Feb 2011	Expired
	GW-RS0772-10	3 Sep 2010	15 Sep 2010 to 14 Mar 2011	Superseded
	GW-RS0819-10	15 Sep 2010	16 Sep 2010 to 15 Mar 2011	Expired
	GW-RS0900-10	20 Oct 2010	27 Oct 2010 to 26 Mar 2011	Superseded
	GW-RS0965-10	8 Nov 2010	22 Nov 2010 to 21 May 2011	Valid
	GW-RS1034-10	26 Nov 2010	27 Nov 2010 to 26 May 2011	Valid
	GW-RS1074-10	3 Dec 2010	09 Dec 2010 to 08 Jun 2011	Valid
	GW-RS1119-10	23 Dec 2010	23 Dec 2010 to 22 Jun 2011	Superseded
	GS-RS0022-11	12 Jan 2011	23 Jan 2011 to 22 Jul 2011	Valid
	GW-RS0107-11	8 Feb 2011	16 Mar 2011 to 15 Sep 2011	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0111-11	11 Feb 2011	28 Feb 2011 to 31 Aug 2011	Valid
	GW-RS0233-11	17 Mar 2011	25 Mar 2011 to 25 Apr 2011	Valid
Discharge Licence	WT00006220-2010	18 Mar 2010	31 Mar 2015	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
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/11-083	23 Nov 2010	24 Nov 2010 to 23 May 2011	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/11-131	31 Jan 2011	8 Feb 2011 to 7 Mar 2011	Valid
	EP/MD/11-147	1 Mar 2011	8 Mar to 7 Apr 2011	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	19 Apr 2010
Condition 2.9	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 2.17	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

3.1.5. 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 piling equipment	PP-RS0037-10	3 Nov 2010	1 Dec 2010 to 31 May 2011	Valid
	PP-RS0041-10	26 Nov 2010	1 Dec 2010 to 28 Feb 2011	Superseded
	PP-RS0046/10	24 Dec 2010	3 Jan to 31 May 2011	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0653-10	30 July 2010	1 Aug 2010 to 31 Jan 2011	Expired
	GW-RS0777-10	13 Sept 2010	01 Oct 2010 to 31 Mar 2011	Superseded
	GW-RS0910-10	22 Oct 2010	25 Oct 2010 to 24 Apr 2011	Superseded
	GW-RS0934-10	22 Oct 2010	25 Oct 2010 to 24 Apr 2011	Valid
	GW-RS0961-10	5 Nov 2010	6 Nov 2010 to 5 May 2011	Superseded
	GW-RS1011-10	15 Nov 2010	18 Nov 2010 to 17 May 2011	Valid
	GW-RS1023-10	25 Nov 2010	1 Dec 2010 to 30 Apr 2011	Valid
	GW-RS1033-10	22 Nov 2010	23 Nov 2010 to 21 May 2011	Valid
	GW-RS0033-11	19 Jan 2011	01 Feb to 31 Jul 2011	Valid
	GW-RS0096-11	1 Feb 2011	5 Feb 2011 to 5 Mar 2011	Expired
	GW-RS0074-11	28 Jan 2011	1 Feb 2011 to 7 Jun 2011	Valid
	GW-RS0093-11	2 Feb 2011	17 Feb 2011 to 16 Jul 2011	Valid
	GW-RS0127-11	11 Feb 2011	11 Feb 2011 to 31 Mar 2011	Valid
	GW-RS0116-11	11 Feb 2011	15 Feb 2011 to 14 Jul 2011	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0182-11	3 Mar 2011	6 Mar 2011 to 6 April 2011	Valid
	GW-RS0225-11	17 Mar 2011	31 Mar 2011 to 30 Sept 2011	Valid
	GW-RS0235-11	23 Mar 2011	31 Mar 2011 to 20 Jun 2011	Valid
	GW-RS0269-11	29 Mar 2011	31 Mar 2011 to 31 May 2011	Valid
	GW-RS0280-11	30 Mar 2011	31 Mar 2011 to 31 Sept 2011	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	Valid
	WT00006757-2010	28 May 2010	31 May 2015	Valid
	WT00007129-2010	28 July 2010	31 Jul 2015	Valid
Billing Account under Waste Disposal Ordinance	7010255	10 Feb 2010	N/A	Valid
Registration as Chemical Waste Producer	WPN5213-135-C3 593-01	10 Mar 2010	N/A	Valid
	WPN5213-839-C3 593-02	22 Sep 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/10-093	25 Nov 2010	29 Nov 2010 to 28 May 2011	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/11-130	7 Feb 2011	10 Feb 2010 to 9 Mar 2010	Expired
	EP/MD/11-146	1 Mar 2011	10 Mar 2011 to 9 April 2011	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 Rev. A	20 April 2010
	Silt Curtain Deployment Plan Rev. B	25 May 2010
	Silt Curtain Deployment Plan Rev. C	14 Jun 2010

EP Condition	Submission	Date of Submission
	Silt Curtain Deployment Plan Rev. H	15 Feb 2011
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
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

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

3.1.6. 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
	FEP-06/364/2009/A	22 Nov 2010	N/A	Valid
Notification of Works Under APCO	321822	24 Sep 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS1099-10	9 Dec 2010	15 Dec 2010 to 14 Mar 2011	Expired
	GW-RS0141-11	14 Feb 2011	15 Feb to 14 Aug 2011	Valid
	GW-RS0168-11	21 Feb 2011	24 Feb to 23 Aug 2011	Valid
	GW-RS0220-11	16 Mar 2011	16 Mar to 15 Sep 2011	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C1169-35	15 Nov 2010	N/A	Valid
Water Discharge Licence	WT00008780-2011	22 Mar 2011	22 Mar 2011 to 27 Jan 2016	Valid
Billing Account under Waste Disposal Ordinance	7011553	30 Sep 2010	27 Sep 2010 to 27 Jan 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/11-120	17 Jan 2011	18 Jan 2011 to 17 Jul 2011	Valid
Dumping Permit (Type 1 – Open	EP/MD/11-132	28 Jan 2011	7 Feb 2011 to 6 March 2011	Expired

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/11-139	22 Feb 2011	1 Mar 2011 to 31 Mar 2011	Expired
	EP/MD/11-161	18 Mar 2011	1 Apr 2011 to 31 Apr 2011	Valid

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

EP Condition	Submission	Date of Submission
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	27 Oct 2010
	Amendment for Silt Curtain Deployment Plan	24 Feb 2011
Condition 2.9	Silt Screen Deployment Plan	27 Oct 2010
	Silt Screen Deployment Plan (Rev1)	5 Jan 2011
Condition 2.18	A Proposal for the Removal of Odorous Sediment and Slime	10 Jan 2011
	Amendment for Proposal for the Removal of Odorous Sediment and Slime	8 Mar 2011
Condition 2.23	Noise Management Plan	27 Oct 2010
	Amendment for Noise Management Plan	27 Jan 2011

3.1.7. 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

3.1.8. 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
Environmental Permit	EP-356/2009	30 Jul 2009	N/A	Valid
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	N/A	Valid
Notification of Works Under APCO	326344	18 Jan 2011	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Billing Account under Waste Disposal Ordinance	7012338	16 Feb 2011	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/11-148	15 March 2011	22 Mar 2011 to 21 Sept 2011	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/11-149	15 March 2011	22 March 2011 to 21 April 2011	Valid

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

EP Condition	Submission	Date of Submission
Condition 2.7	Works Schedule and Location Plans	11 March 2011
Condition 2.8	Silt Curtain Deployment Plan	11 March 2011
Condition 2.9	Silt Screen Deployment Plan	11 March 2011
Condition 2.23	Noise Management Plan	11 March 2011

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.

Table 4.2 Real Time Noise Monitoring Station

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

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

4.1.3. 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.

4.1.4. 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.

4.1.5. 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

4.1.6. As referred to in the Technical Memorandum ™ issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

4.1.7. 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 and the measurement procedures were witnessed by the IEC. Any measurement performed by the laboratory was be demonstrated to the satisfaction of the ER and IEC. IEC shall regularly audit to the measurement performed by the laboratory to ensure the accuracy of measurement results.

4.2.9. Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24-hours and be pre-weighed before use for the sampling.

4.2.10. After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.

4.2.11. All the collected samples shall be kept in a good condition for 6 months before disposal.

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.

Water Quality Monitoring Stations

4.3.2. It is proposed to monitor the water quality at 9 WSD salt water intakes and 12 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
RW21	Wan Chai (Reprovision)	836188.8	815911.1
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	Wan Chai Tower and Great Eagle Centre (Eastern)	835932.8	815888.2
C4w	Wan Chai Tower and Great Eagle Centre (Western)	835629.8	815889.2
C5e	Sun Hung Kai Centre (Eastern)	836250.1	815932.2
C5w	Sun Hung Kai Centre (Western)	836248.1	815933.2

Station Ref.	Location	Easting	Northing
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

4.3.3. 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.

4.3.4. 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

4.3.5. 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

4.3.6. 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

4.3.7. 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).

4.3.8. 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

4.3.9. 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

4.3.10. 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

4.3.11. 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

4.3.12. 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

4.3.13. 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

4.3.14. 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

4.3.15. 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.

4.3.16. 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.

4.3.17. 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.

4.3.18. Current calibration certificates of equipments are presented in ***Appendix 4.2***.

LABORATORY MEASUREMENT / ANALYSIS

4.3.19. 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

4.3.20. 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.

4.3.21. 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

4.3.22. 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 less than 3m, only the mid-depth will be monitored).

DAILY SS MONITORING AND 24 HOURS TURBIDITY MONITORING SYSTEM

4.3.23. 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.

4.3.24. The 24 hours monitoring of turbidty at the cooling water intakes (C6 and C7) shall be established by setting up a continuous water quality monitoring station in front of the intakes during the dredging activities. The monitoring system include the turbidity sensor and data logger which is capable of data capturing at every 5 minutes. The data sahll be downloaded daily and compared with the Action and Limit level determined during the baseline water qualtiy monitoring at the cooling water intake locations.

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. HY/2009/11 Central - Wan Chai Bypass - North Point Reclamation;
- 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

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. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

5.1.1. The proposed division of noise monitoring stations for Contract no. HY/2009/11 are summarized in ***Table 5.1*** below:

Table 5.1 Noise Monitoring Stations for Contract no. HY/2009/11

Station	Description
M4b	Victoria Centre
M5b	City Garden

5.1.2. Day time and evening period noise monitoring was conducted at the City Garden and Victoria Centre in the reporting month.

5.1.3. Noise monitoring results measured in this reporting period are reviewed and summarized. No exceedance was recorded in the reporting month. Details of noise monitoring results and graphical presentation can be referred in ***Appendix 5.2***.

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

5.1.4. 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

5.1.5. Daytime and evening period noise monitoring was conducted at the Harbour Road Sport Centre in the reporting month.

5.1.6. Two limit level exceedances were recorded at M1a - Harbour Road Sports Centre on 15 and 24 March 2011 during restricted hour. Major noise source was contributed from Tonnochy Road and water sport competition at Wan Chai Training Swimming Pool.

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

5.1.7. 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 nos. HY/2009/15

Station	Description
M2b	Noon Gun Area
M3a	Tung Lo Wan Fire Station

5.1.8. Noise monitoring results measured in the period of daytime and restricted hour are reviewed and summarized. No exceedance was recorded in reporting month. Details of noise monitoring results and graphical presentation can be referred in ***Appendix 5.2***.

5.2 Real-time Noise Monitoring

Contract no. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

5.2.1. The proposed division of real-time noise monitoring stations are summarized in ***Table 5.4*** below. Real time noise monitoring for the filling works under contract no. HY/2009/11 was commenced on 5 October 2010.

Table 5.4 Real Time Noise Monitoring Station for Contract no. HY/2009/15

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

5.2.2. All monitoring results were below limit level in the reporting month. Details of real time noise monitoring results and graphical presentation can be referred to **Appendix 5.5 .**

5.3 Air Monitoring Results

Contract no. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

5.3.1. The major construction activities of Contract no. HY/2009/11 were dredging works and filling works in the reporting month. Air monitoring had been commenced on 11 August 2010. The proposed division of air monitoring stations are summarized in ***Table 5.5*** below.

Table 5.5 Air Monitoring Stations for Contract no. HY/2009/11

Station	Description
CMA1b	Oil Street Community Liaison Centre
CMA2a	Causeway Bay Community Centre

5.3.2. No exceedance was recorded in the reporting month. Details of air monitoring results and graphical presentation can be referred in ***Appendix 5.3***.

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

5.3.3. Air monitoring will be commenced from the land-filling work for Contract no. HK/2009/01. The proposed division of air monitoring stations are summarized in ***Table 5.6*** below. Air monitoring will be commenced upon the commencement of the filling works.

Table 5.6 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 5.7*** below. No exceedance was recorded in the reporting month.

5.3.5. Due to the malfunction of the electricity connection at CMA4a on 9 March 2011, 24hour TSP monitoring is re-scheduled to 10 March 2011.

Table 5.7 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)

5.3.6. 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 5.8*** below. No exceedance was recorded in the reporting month.

5.3.7. Due to the malfunction of the electricity connection at CMA3a on 26 March 2011, 24hour TSP monitoring is re-scheduled to 28 March 2011.

Table 5.8 Air Monitoring Station for Contract no. HY/2009/15

Station	Description
CMA3a	CWB PRE Site Office

5.4 Water Monitoring Results

Contract no. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

5.4.1. The proposed division of water monitoring stations for Contract no. HY/2009/11 are summarized in ***Table 5.9*** below:

Table 5.9 Water Monitoring Stations for Contract no. HY/2009/11

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

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

5.4.2. 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 5.10*** below.

Table 5.10 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

Station Ref.	Location	Easting	Northing
C4e	Wan Chai Tower and Great Eagle Centre (Eastern)	835932.8	815888.2
C4w	Wan Chai Tower and Great Eagle Centre (Western)	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.

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

5.4.3. 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 5.11*** below.

Table 5.11 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
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.

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

5.4.4. 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 5.12*** below.

Table 5.12 Water Monitoring Stations for Contract no. HK/2009/02

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)

5.4.5. 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 5.13*** below.

Table 5.13 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

5.4.6. The enhanced water quality monitoring at C6, C7, Ex-WPCWA-SW and Ex-WPCWA-SE was commenced on 13 January 2011. No dissolved oxygen exceedance was recorded in the reporting month.

5.4.7. As no dredging of the sediment at the south-western corner of the Causeway Bay Typhoon Shelter, no daily monitoring of suspended solids and 24 hours monitoring of turbidity at the cooling water intakes at C6 and C7 were required.

5.4.8. The maintenance works and testing of flush water pump system at Windsor House intake (C7) have been carried out in the reporting month. The silt screen at C7 was then removed on 15 February 2011 and then reinstated on 29 March 2011 to facilitate their maintenance works as per the intake owner's request. Considering the absence of intake pump operation at Windsor House intake (C7), this sensitive receiver was apparently not exist during this period so that no water quality monitoring at C7 for compliance checking was undertaken in this reporting month.

5.4.9. Water quality monitoring at station C3 was not available to proceed on 18 March 2011 during ebb tide. The contractor was notified and rectifications were undertaken immediately on the same day, consecutive monitoring at flood tide was conducted afterwards.

5.4.10. 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 5.14 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
HY/2009/11	WSD9	0	0	0	0	0	0	0	0	0	0	0	0
	WSD10	0	0	0	0	0	0	0	0	0	0	0	0
	WSD15	0	0	0	0	0	0	0	0	0	0	0	0
	WSD17	0	0	0	0	0	0	0	0	0	0	0	0
	C8	0	0	1	1	1	0	0	0	0	3	2	0
	C9	0	0	0	0	1	0	0	0	0	1	1	0
HK/2009/01	WSD19	0	0	0	0	0	2	0	0	1	0	2	0
	WSD20	0	0	0	1	1	0	0	0	0	0	0	0

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
	WSD7	0	0	1	0	0	0	0	0	0	0	0	0
	C1	0	0	0	0	0	0	0	0	0	0	0	0
	C2	0	0	0	0	0	0	0	0	0	0	0	0
	C3	0	0	1	0	1	0	0	0	0	0	0	0
	C4e	0	0	0	0	0	0	0	0	0	0	0	0
	C4w	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	C5e	0	0	0	0	0	0	0	0	0	0	0	0
	C5w	0	0	0	0	0	0	0	0	0	0	0	0
	WSD21	0	0	0	0	0	1	0	0	0	0	0	0
HY/2009/15	C6	0	0	0	0	0	0	0	0	0	0	0	0
Total		**0**	**0**	**3**	**2**	**4**	**3**	**0**	**0**	**1**	**4**	**5**	**0**

Remarks: - Station C2 is related to the Contract no. HK/2010/06 which was commenced on 23 March 2011;

- Considering the absence of intake pump operation at Windsor House intake (C7), this sensitive receiver was apparently not exist during this period so that no water quality monitoring at C7 for compliance checking was undertaken in this reporting month.

5.4.11. Investigations revealed that all exceedances were not works-related under the Project. The details of the recorded excedances can be referred to the Section 6.3.

5.5 Waste Monitoring Results

Contract no. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

5.5.1. No inert and non-inert C&D waste was disposed of in the reporting month. Details of the waste flow table are summarized in ***Table 5.15***.

Table 5.15 Details of Waste Disposal for Contract no. HY/2009/11

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m^3	NIL	NIL	N/A
Inert C&D materials recycled, m^3	NIL	NIL	N/A
Non-inert C&D materials disposed, m^3	NIL	NIL	N/A
Non-inert C&D materials recycled, m^3	NIL	NIL	N/A
Chemical waste disposed, kg	N/A	N/A	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m^3	0 (Bulk Volume)	89,500 (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	1,800 (Bulk Volume)	127,100 (Bulk Volume)	East of Sha Chau

5.5.2. Contractor clarified that the quantity of Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) in December 2010 shall be 4,800m3 and cumulative quantity of this type sediment up to February 2011 is 125,300m3.

5.5.3. There were marine sediments Type 1 – Open Sea Disposal and Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal marine sediment disposed in the reporting month. The maximum dredging rates in North Point Reclamation (NPR) Shoreline Zone is below 500m^3 per day in the reporting month, which is complied with the recommended maximum dredging rate, 6000m^3 listed in Table 2 of FEP-01/356/2009.

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

5.5.4. Inert and non- inert C&D waste were disposed of in this reporting month. Details of the waste flow table are summarized in ***Table 5.16.***

Table 5.16 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	1,444.28	5144.17	TKO134
Inert C&D materials recycled, m^3	0	0	N/A
Non-inert C&D materials disposed, m^3	17.66	184.16	SENT Landfill
Non-inert C&D materials recycled, kg	33090	47768	N/A
Chemical waste disposed, kg	600	2,430	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m^3	572 (Bulk Volume)	67951.2 (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)	12,461 (Bulk Volume)	East of Cha Chau

5.5.5. Contractor clarified that the cumulative of chemical waste disposed up to February 2011 is 1,830m^3. The details of the quantity in the past months can be referred to the Quarterly EM&A Report (December 2010 – February 2011).

5.5.6. There were marine sediments Type 1 – Open Sea Disposal disposed in the reporting month. The maximum dredging rate in HKCEC3w are 572m^3 per day respectively, which are complied with the recommended maximum dredging rate, 1500m^3 per day listed in Table 2 of FEP-02/356/2009.

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

5.5.7. Inert and non- inert C&D waste were disposed of in this reporting month. Details of the waste flow table are summarized in ***Table 5.17.***

Table 5.17 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	3,918	8,914	TKO137
Inert C&D materials recycled, m^3	NIL	NIL	N/A
Non-inert C&D materials disposed, m^3	13.3	77	SENT Landfill
Non-inert C&D materials recycled, m^3	NIL	NIL	N/A
Chemical waste disposed, kg	1011	1011	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m^3	0 (Bulk Volume)	82,257 (Bulk Volume)	N/A
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m^3	0 (Bulk Volume)	87,565 (Bulk Volume)	East of Sha Chau

5.5.8. There were no marine sediment disposed in the reporting month.

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

5.5.9. Non- inert C&D waste was disposed of in this reporting month. Details of the waste flow table are summarized in ***Table 5.18.***

Table 5.18 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	0	3.5	Tuen Mun Area 38
Inert C&D materials recycled, m^3	NIL	184.0	To Contract HY/2009/11
Non-inert C&D materials	1.3	31.5	SENT Landfill

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
disposed, m^3			
Non-inert C&D materials recycled, kg	95	13,625	N/A
Chemical waste disposed, kg	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m^3	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m^3	1805 (Bulk Volume)	121,682 (Bulk Volume)	East of Sha Chau
Marine Sediment (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers)	0 (Bulk Volume)	2,750 (Bulk Volume)	East of Sha Chau

5.5.10. In the reporting month, there were marine sediment Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal marine sediment disposed from the dredging works at TCBR1W. The maximum dredging rate, 1,415m^3 per day in the reporting month is complied with the recommended maximum dredging rate as stipulated in EP-356/2009 within the marine zones at TCBR and TPCWA.

5.5.11. No waste was disposed under Contract HK/2010/06 in the 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. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

6.1.1. No exceedance was recorded in the reporting month.

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

6.1.2. 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

6.1.3. Two limit level exceedances were recorded at M1a - Harbour Road Sports Centre on 15 and 24 March 2011 during restricted hour. Major noise source was contributed from Tonnochy Road and water sport competition at Wan Chai Training Swimming Pool. The dredging work was complied with the conditions under valid Construction Noise Permit no. GW-RS0021-11 during the measurement.

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

6.1.4. 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

6.1.5. No exceedance was recorded in the reporting month.

6.2 Real-time noise Monitoring

Contract no. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

6.2.1. All monitoring results were below limit level in the reporting month.

6.3 Air Monitoring

6.3.1. No exceedance was recorded in the reporting month.

6.4 Water Quality Monitoring

Contract no. HY/2009/11 – Central – Wanchai Bypass, North Point Reclamation

6.4.1. Referring to the exceedances shown in ***Table 5.9***, the occasionally action and limit level exceedances of turbidity and suspended solid were recorded at C8 and C9. Stations Since there were numerous unknown outfalls from the nearby coastal area closed to the cooling intakes C8 and C9, it causes the potential for accumulation of pollutants near the intakes and may lead to potential water quality deterioration at the seawater intake points. The recorded turbidity and SS exceedances were concluded as not project related.

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

6.4.2. Referring to all exceedances recorded at WSD7, WSD19 and WSD20, there was no exceedance recorded at the monitoring stations nearer the marine work area for Contract HK/2009/01. Those exceedances were considered as not related to the Project works.

6.4.3. Turbidity and SS level at C3 exceeded the Action Level on 28 February 2011 at flood tide. Investigation found that the condition of silt screen and silt curtain was in proper condition and daily dredging rate was complied with EP condition. Investigation found that no abnormal observation was recorded during the monitoring and the exceedance was concluded not due to the Project works.

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

6.4.4. One SS Limit Level exceedance was recorded at WSD21 on 16 March 2011 at flood tide. Investigation found that the condition of silt screen and silt curtain was in proper condition and no dredging works was undertaken. Besides, the additional measure of additional silt curtain is deployed to protect the monitoring stations WSD21. Thus, the exceedance was considered due to natural variation and not related to the Project.

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

6.4.5. 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

6.1.6. No exceedance was recorded in the reporting month.

6.4.6. 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. No project-related non-compliance from monitoring was recorded in the reporting month.

6.6 Summary of action taken in the event of and follow-up on non-compliance

6.6.1. There was no particular action taken since no project-related non-compliance was recorded from the site audits and environmental monitoring in the reporting period.

7. Cumulative Construction Impact due to the Concurrent Projects

7.0.1. According to Condition 3.4 of the EP-356/2009, this section addresses the relevant cumulative construction impact due to the concurrent activities of the current projects including the Central Reclamation Phase III, Central-Wanchai Bypass and Island Eastern Corridor Link projects.

7.0.2. From the Monthly EM&A report (February 2011) of Central Reclamation Phase III (CRIII) the key works in March 2011 are as follows:

- Type A filling in FRAW and FRAE above +2.5mPD;
- General filling works above +2.5mPD in IRAE;
- Surcharging in FRAW and FRAE;
- Construction of cantilever slab at caisson;
- Base slab, wall and roof construction at Culvert F;
- Construction of storm and foul drainage and gullies in hinterlands for Road P2, Road D7, and Road D9;
- Construction of GPO boundary wall;
- Construction of PLA boundary wall;
- Construction of Promenade enhancement works;
- Construction of buildings at PLA berth;
- Road P2 Underpass ramp structures;
- Precasting for retaining wall (offsite);
- Installation of cooling mains discharge pipes in FRAE and FRAW;
- Bulk excavation to formation level at CWB works;
- Construction of CWB structure;
- Disposal of material off-site to Government fill banks; and
- Strengthening of Man Yiu Street Footbridge

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 activities under Wan Chai Development Phase II were the dredging and filling works at North Point Reclamation Shoreline Subzone (NPR2E) and (NPR1& NPR2W) respectively, the filling at Wan Chai Reclamation Shoreline Subzone (Submarine sewage pipeline) respectively, dredging at HKCEC3W and dredging at TCBR and filling at TPCEAE in the reporting month. The major environmental impact was water quality impact at North Point and Wan Chai.

7.0.4. The major environmental impacts generated from the filling work at Central Reclamation Phase III were only located along the coastline of Central and Admiralty. As no project-related exceedance was recorded, it is evaluated the cumulative construction impact from the concurrent projects including Wan Chai Development Phase II and Central Reclamation Phase III was insignificant.

8. Environmental Site Audit

8.0.1. During this reporting month, weekly environmental site audits were conducted for Contracts no. HY/2009/11, HK/2009/01, HK/2009/02 and HY/2009/15. No non-conformance was identified during the site audits.

8.0.2. Four site inspections for Contract no. HY/2009/11 were carried out on 1, 8, 16 and 22 March 2011. The results of these inspections and outcomes are summarized in ***Table 8.1***.

Table 8.1 Summary of Environmental Inspections for Contract no. HY/2009/11

Item	Date	Observations	Action taken by Contractor	Outcome
110301_01	1-Mar-11	Silty water was observed discharged directly to the sea from barge B21598V. The contractor was reminded to prohibit it	prohibit direct discharge silty water	Completion as observed on 8-Mar-11
110301_02	1-Mar-11	Floating refuse shall be collected at sea wall type 3 and near the oil street site area	collect floating refuse	Completion as observed on 8-Mar-11
110301_03	1-Mar-11	All dust generating material, if idle, shall be covered well	Cover stockpile by tarpaulin	Completion as observed on 8-Mar-11
110308_01	8-Mar-11	Drip tray and chemical label/ MSDS shall be provide to store oil drums and stick on the oil drums	provide drip tray for oil drum and stick chemical label on it	Completion as observed on 16-Mar-11
110308_02	8-Mar-11	Idle stockpile shall be covered by tarpaulin. If its not practicable, water spraying shall be conducted	water spraying for idle stockpile	Completion as observed on 16-Mar-11
110316_01	16-Mar-11	Drip tray and chemical label shall be provided for oil drums.	Drip tray and chemical label were provided.	Completion as observed on 22-Mar-11
110316_02	16-Mar-11	General refuse shall be regular cleared. It is recommended to provide sufficient rubbish bin onsite.	General refuse was cleared up.	Completion as observed on 22-Mar-11
110316_03	16-Mar-11	It is reminded to keep the fill material wet or covering with tarpaulin sheet for dust suppression.	Water spraying for idle stockpile	Completion as observed on 22-Mar-11
110322_01	22-Mar-11	Silt curtain for the dredging works adjacent to Oil Street CLC shall be maintained to keep in vertical position.	Maintenance of the silt curtain in proper condition	Completion as observed on 29-Mar-11
110322_02	22-Mar-11	Washing vehicle wheel shall be provided before leaving the site so as to ensure no sand is brought away from the site entrance.	Washing vehicle before leaving the site	Completion as observed on 29-Mar-11
110322_03	22-Mar-11	All idling stockpiles of C&D material shall be sprayed with water and/or covered with tarpaulin sheet for dust suppression.	Water spraying for idle stockpile	Completion as observed on 29-Mar-11

8.0.3. Four site inspections for Contract no. HK/2009/01 were carried out on 2, 9, 17 and 23 March 2011. The results of these inspections and outcomes are summarized in Table 8.2.

Table 8.2 Summary of Environmental Inspections for Contract no. HK/2009/01

Item	Date	Observations	Action taken by Contractor	Outcome
110302_01	2-Mar-11	Sand in U-channel at Tsui Sha	Clearance of	Completion as

Item	Date	Observations	Action taken by Contractor	Outcome
		Tsui shall be cleared up so as to maintain the temporary drainage system in proper condition.	U-channel.	observed on 9-Mar-11
110309_01	9-Mar-11	Sedimentation tank is needed to be placed at VIP drop off area for the wastewater treatment before discharge.	Contractor ensured no wastewater discharge at VIP drop off area. The sedimentation tank will be in place when necessary.	Completion as observed on 17-Mar-11
110309_02	9-Mar-11	Survival rate of Tree no. TST027 at Tsim Sha Tsui shall be checked and inspected.	Condition and survival rate of trees at Tsim Sha Tsui will kept to check by Contractor's ITS.	Completion as observed on 17-Mar-11
110317_01	17-Mar-11	The trees at VIP site entrance shall be fenced-off so as to avoid the accumulation of C&D material storage near trees.	The tree protection zone was enlarged.	Completion as observed on 30-Mar-11
110317_02	17-Mar-11	Exposed slope at western HKCEC channel shall be covered with tarpaulin sheet against wind erosion and rainfall.	Covered the slope with tarpaulin sheet.	Completion as observed on 23-Mar-11
110317_03	17-Mar-11	Debris screened by geotextile in gullies shall be regular cleared-up.	The debris and geotextile were removed.	Completion as observed on 23-Mar-11
110323_01	23-Mar-11	The fence-off area for tree protection zone shall be enlarged.	The tree protection zone was enlarged.	Completion as observed on 30-Mar-11

8.0.4. Four site inspections for Contract no. HK/2009/02 were carried out during this reporting period. The results of these inspections and outcomes are summarized in ***Table 8.3***.

Table 8.3 Summary of Environmental Inspections for Contract no. HK/2009/02

Item	Date	Observations	Action taken by Contractor	Outcome
110301_01	1-Mar-11	It is reminded to keep clearing the vehicle wheel before leave the site at finger pier.	Contractor keeps clearing the vehicle wheel before leaving the site with clean site entrance.	Completion as observed on 10-Mar-11
110310_01	10-Mar-11	Silt curtain was observed below sea level. It shall be maintained to ensure proper functioning.	Maintenance the silt curtain in proper condition.	Completion as observed on 16-Mar-11
110310_02	10-Mar-11	Accumulation of cement bags at site area of new public toilet shall be covered with tarpaulin sheet.	Covering the cement bags with tarpaulin sheet	Completion as observed on 16-Mar-11
110310_03	10-Mar-11	The sediment on the walkway of derrick barge shall be cleared-up before leave the site.	Keeping clearing the sediment on walkway before leaving the site.	Completion as observed on 16-Mar-11
110316_01	16-Mar-11	Arrangement for site wastewater control at bore piling area in WCR1 need to be prepared and enhanced.	Improved the arrangement of site wastewater control at bore piling area.	Completion as observed on 24-Mar-11
110316_02	16-Mar-11	Drip trays were missing for several plants in the ex-pet garden.	The plants without drip trays are idling until provided drip trays.	Completion as observed on 24-Mar-11

Item	Date	Observations	Action taken by Contractor	Outcome
110316_03	16-Mar-11	Protection of stockpile against rainfall for those stored adjacent to the seafront.	Minimized the size of stockpile.	Completion as observed on 24-Mar-11
110324_01	24-Mar-11	Stagnant water and oil on the drip trays shall be cleared up with proper procedure.	Drip trays were provided.	Completion as observed on 1-Mar-11
110324_02	24-Mar-11	It is reminded that construction runoff shall be treated by sedimentation tank before discharge to public drains.	Contractor is reviewing the temporary drainage system	Follow-up action is needed in the next reporting month.

8.0.5. Four site inspections for Contract no. HY/2009/15 were carried out 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. HY/2009/15

Item	Date	Observations	Action taken by Contractor	Outcome
110301_01	1-Mar-11	The contractor was reminded to inspect the plants for any oil leakage on the barges	inspect any oil leakage of plants	Completion as observed on 8-Mar-11
110308_01	8-mar-11	floating rubbish should be cleared more frequently neat the site office and at PCWA	collect refuse frequently	Completion as observed on 15-Mar-11
110315_01	15-Mar-11	It is reminded that the rock and sand on the walkway of derrick barge should be cleared before leaving the site.	Clearance of the C&D material on the barge	Completion as observed on 22-Mar-11
110322_01	22-Mar-11	Drip tray and proper label shall be provided to the oil container at derrick barge.	Provide the drip tray	Completion as observed on 29-Mar-11
110322_02	22-Mar-11	It is reminded to provide the silt curtain for the seawall gap at TCPWA.	Silt curtain between the seawall gap was observed during site inspection	Completion as observed on 29-Mar-11

8.0.6. The site inspection for Contract HK/2010/06 will be conducted on 29 March 2011.

9. Complaints, Notification of Summons and Prosecution

9.0.1. There is no environmental complaint received in this reporting month.

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

9.0.3. Cumulative statistic on complaints and successful prosecutions are summarized in ***Table 9.1*** and ***Table 9.2*** respectively.

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works (Mar 2010) to last reporting month	9
March 2011	0
Project-to-Date	**9**

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. 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

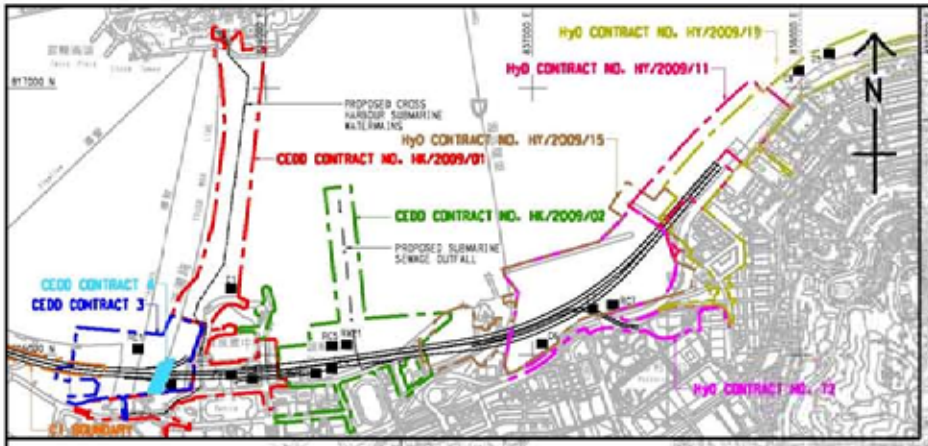
Contract No.	Key Construction Works	Recommended Mitigation Measures
HY/2009/11	• Dredging works, • Reclamation works, • Construction & installation of Seawall Block, • Drainage Construction works, • Floating out of Caisson seawall • Construction of coping; and • Installation of Caisson Seawall.	• To avoid concurrent noisy operation • To locate the plant and equipments far away to the noise sensitive receivers • Daily visual inspection of silt screen and silt curtain to ensure its operation properly • Daily clearance of floating debris behind the silt screen • Installation of frame type silt screen at City Garden
HK/2009/01	• Dredging for the cross harbour water mains from Wan Chai side • Pipe line installation for the cross harbour water mains from Wan Chai side; • Removal and reinstatement of sloping seawall at Wan Chai; • Implementation of TTM scheme at Convention Avenue, Harbour Road and Expo Drive (HKCEC area); • Pipe laying works for cooling mains, harbour main & fresh water mains at Zone A1, A4, A5, B1 & B4; • Tree transplantation at Wan Chai and Tsim Sha Tsui; • Additional wall openings penetration and construction work (over dimension 350mm x350mm) for pipe sleeves and puddle flanges openings at Pump Station P1, 3, 4 & 5; • Equipment concrete plinths construction inside pumping station; • E & M first fixing work at HKCEC-II and pumping station P1, 3, 4, 5. • Removal of armour rock at north side of HKCEC water channel (CH0 to CH160); • Laying geotextile in the seawall	• 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

	slope at north side of HKCEC; • Reclamation works at HKCEC water channel (CH0 to CH80); • Installation of the sheet piling works for temporary water channel at the promenade pump house; • Dredging works at HKCEC water channel(CH160 to CH250); • Installation of conveyor belt for filling works at HKCEC water channel(CH0 to CH80); • Demolition of promenade deck; and • Preparation, excavation and pipe laying works at Convention Avenue and Harbour Road (Zones A2-2, A4-1, A5-1, A5-5).	
HK/2009/02	• Operating Tseung Kwan O Public Fill Sorting Facility; • Internal and external decoration for new public toilet at Expo Drive East; • Commence E&M works for new public toilet at Expo Drive East; • Construction of passenger terminal at Expo Drive East; • Modification of existing seawall at Expo Drive East; • Trench excavation and pipe laying works for cooling mains; • Excavation and lateral support for construction of WSD Salt Water Pumping Station; • Sheet-piling for construction of salt water intake culvert at Wan Shing Street; • Construction of submarine outfall extension chamber; • Dredging and pipe welding for submarine outfall pipe; • Marine piling works for new ferry pier construction; • Complete excavation and lateral support for jacking pit at ex-pet garden; • Driving sheet-piles for receiving pit for DSD pipes; • Reclamation at WCR1 area; • Pre-drilling for bored piles and diaphragm wall at WCR1 area; • Guide wall construction for diaphragm wall construction at WCR1 area;	• 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

	• Bored pile construction (alternative design); and • Establish plants for diaphragm wall construction	
HY/2009/15	• Rock removal at TS4; • Filling at TS1 and TPCWAE; • Utility and preparation work at CHT; • Alignment works at Portion VII; and • Drainage works at PRE office	• To conform the installation and setting as in the silt screen and silt curtain 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. • Daily visual inspection of silt screen and silt curtain to ensure its operation properly
HK/2010/06	• Dredging over the MTR Tsuen Wan Line • Disposal of Type 1 Marine Sediment • Mobilization for the Construction of Temp. Platform of Piling Works	• 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

Figure 2.1

Project Layout



DETAIL 'A'

LEGEND:

- WATER QUALITY MONITORING STATIONS

COOLING WATER INTAKES

- C1 HONG KONG CONVENTION AND EXHIBITION CENTRE EXTENSION
- C2 TELECOM HOUSE/THE ACADEMY FOR PERFORMING ARTS / GOLF ON CENTRE
- C3 HONG KONG CONVENTION AND EXHIBITION CENTRE PHASE II
- 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 HUKFA EXTENSION
- RC5 SUN HUNG KAI CENTRE (REPROVISION)
- RC7 WINDSOR HOUSE (TEMPORARY REPROVISION)

WSD SALT WATER INTAKE

- #S021 WAN CHAI
- #W07 WAN CHAI (REPROVISION)
- #S07 KOWLOON SOUTH
- #S09 TAI WAN
- #S21C CHA KWO LING
- #S21S SAI WAN HO
- #S21T QUARRY BAY
- #S21V SHEUNG WAN
- #S22S KENNEDY TOWN

DESIGNATED PROJECTS (DP)

- DP1 - CENTRAL-WAN CHAI BYPASS ECWB (INCLUDING ITS ROAD TUNNEL AND SLIP ROADS
- DP2 - ROAD P2 AND OTHER ROADS (PRIMARY / DISTRICT DISTRIBUTOR ROADS)
- DP3 - PERMANENT AND TEMPORARY RECLAMATION WORKS INCLUDING ASSOCIATED DREDGING WORKS IN WAN CHAI DEVELOPMENT PHASE II (WDII) AREA
- ~~DP4 - TEMPORARY TYPHOON SHELTER (DP4 NOT TO BE IMPLEMENTED)~~
- DP5 - WAN CHAI EAST SEWAGE OUTFALL
- DP6 - DREDGING FOR THE CROSS-HARBOUR WATER MAINS

DP1 IS COVERED BY EP - 314/2009
DP2 IS COVERED BY EP - 376/2009
DP3, DP5 AND DP6 ARE COVERED BY EP - 356/2005

WORKS CONTRACT	DESIGNATED PROJECT (PROJECTS)	CONSTRUCTION COMMENCEMENT
CEDD CONTRACT NO. HK/2009/01	DP1, DP3, DP6	APRIL 2010
CEDD CONTRACT NO. HK/2009/02	DP1, DP3, DP5	APRIL 2010
CEDD CONTRACT 3	DP1, DP3	END 2011
CEDD CONTRACT 4	DP1, DP3	END 2012
CEDD CONTRACT 5	DP2	2013
HyD CONTRACT NO. HY/2009/11	DP3	18 MARCH 2010
HyD CONTRACT NO. HY/2009/15	DP1, DP3	SEPTEMBER 2010
HyD CONTRACT NO. HY/2009/19	DP1	OCTOBER 2010
HyD CONTRACT NO. HY/2009/19	DP1	NOVEMBER 2010
HyD CONTRACT 12	DP1, DP3	MID 2013

CEDD 土木工程拓展署 Civil Engineering and Development Department

WAN CHAI DEVELOPMENT PHASE II

WAN CHAI DEVELOPMENT PHASE II AND CENTRAL - WAN CHAI BYPASS - SAMPLING, FIELD MEASUREMENT AND TESTING WORKS (STAGE 1)

LOCATIONS OF WATER QUALITY MONITORING STATIONS

AECOM

DRG.NO. 60041297/C5/SK001

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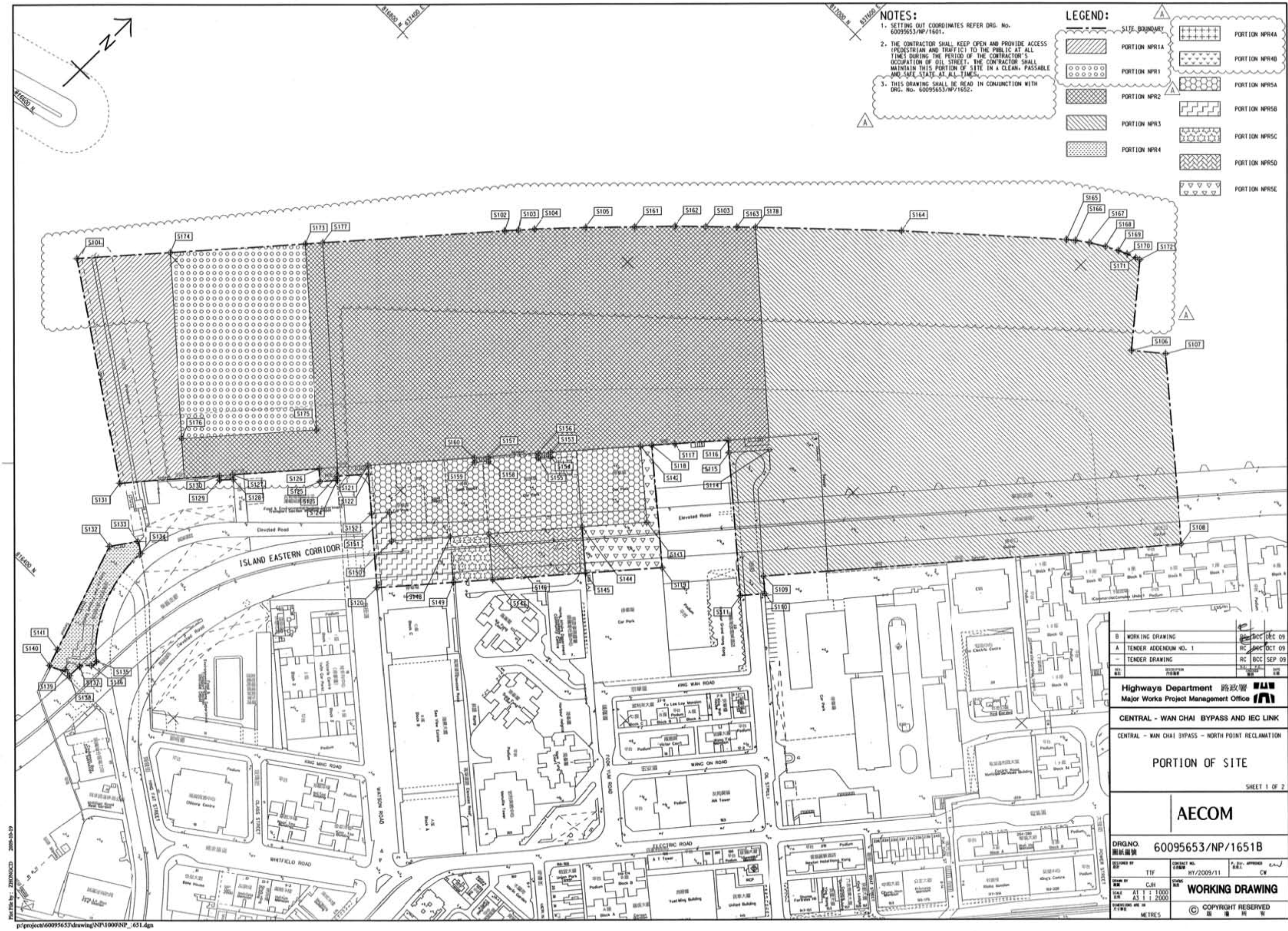
Plot Title by : 2009-3-17 CENAL

PATH: p:\projects\60041297\DRAWINGS\SETCH\C3\SKETCH 001.dgn



NOTES:

1. SETTING OUT COORDINATES REFER DRG. No. 60095653/NP/1601.
2. THE CONTRACTOR SHALL KEEP OPEN AND PROVIDE ACCESS (PEDESTRIAN AND TRAFFIC) TO THE PUBLIC AT ALL TIMES DURING THE PERIOD OF THE CONTRACTOR'S OCCUPATION OF OIL STREET. THE CONTRACTOR SHALL MAINTAIN THIS PORTION OF SITE IN A CLEAN, PASSABLE AND SAFE STATE AT ALL TIMES.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. No. 60095653/NP/1652.

LEGEND:

- SITE BOUNDARY
- PORTION NPR1A
- PORTION NPR1
- PORTION NPR2
- PORTION NPR3
- PORTION NPR4
- PORTION NPR4A
- PORTION NPR4B
- PORTION NPR5A
- PORTION NPR5B
- PORTION NPR5C
- PORTION NPR5D
- PORTION NPR5E

REV.	DESCRIPTION			DATE
B	WORKING DRAWING	RC	BCC	DEC 09
A	TENDER ADDENDUM NO. 1	RC	BCC	OCT 09
–	TENDER DRAWING	RC	BCC	SEP 09

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK

CENTRAL - WAN CHAI BYPASS - NORTH POINT RECLAMATION

PORTION OF SITE

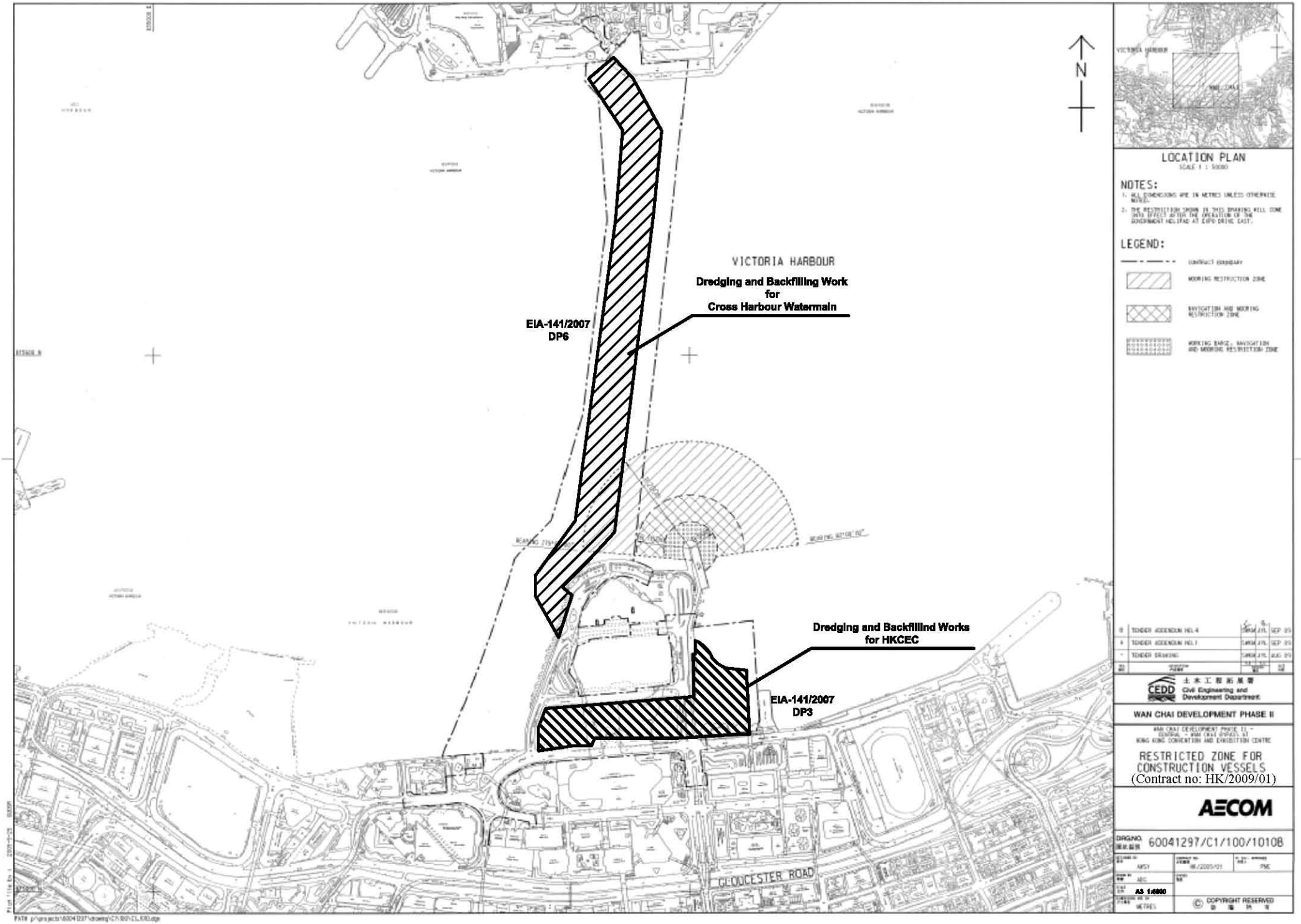
SHEET 1 OF 2

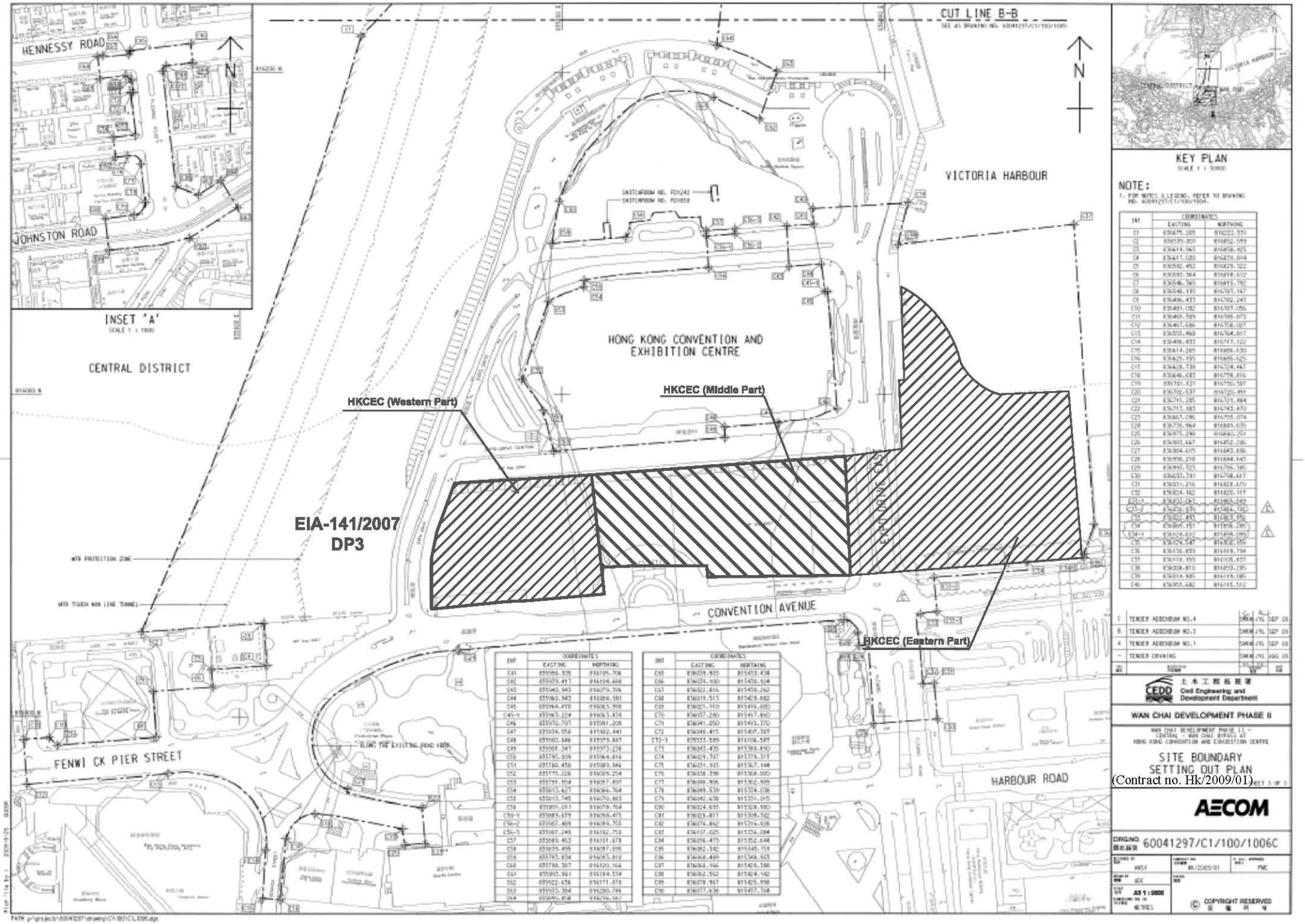
AECOM

DRG.NO. 60095653/NP/1651B

DESIGNED BY: TTF	CONTRACT NO.: HY/2009/11	APPROVED: CW
DRAWN BY: CJH	STATUS: **WORKING DRAWING**	
SCALE: A1 1 : 1000, A3 1 : 2000		
DIMENSIONS ARE IN METRES		

p:\project\60095653\drawing\NP\1000\NP_1651.dgn


VICTORIA HARBOUR
Dredging and Backfilling Work
for
Cross Harbour Watermain
EIA-141/2007
DP6
Dredging and Backfillind Works
for HKCEC
EIA-141/2007
DP3
GLOUCESTER ROAD
N
LOCATION PLAN
SCALE 1 : 50000
NOTES:
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
2. THE RESTRICTION SHOWN IN THIS DRAWING WILL CEASE TO HAVE EFFECT AFTER THE OPERATION OF THE GOVERNMENT HELIPAD AT EASTERN DRIVE EAST.
LEGEND:
CONTRACT BOUNDARY
MOORING RESTRICTION ZONE
NAVIGATION AND MOORING RESTRICTION ZONE
WORKING BARGE, NAVIGATION AND MOORING RESTRICTION ZONE
B TENDER ADDENDUM NO.4 SEP 09
A TENDER ADDENDUM NO.1 SEP 09
- TENDER DRAWING AUG 09
CEDD
土木工程拓展署
Civil Engineering and Development Department
WAN CHAI DEVELOPMENT PHASE II
WAN CHAI DEVELOPMENT PHASE II - EXTERNAL WORKS AT HONG KONG CONVENTION AND EXHIBITION CENTRE
RESTRICTED ZONE FOR CONSTRUCTION VESSELS
(Contract no: HK/2009/01)
AECOM
DRG.NO. 60041297/C1/100/10108
AS 1:6000
METRES
© COPYRIGHT RESERVED


HENNESSY ROAD
JOHNSTON ROAD
INSET 'A'
SCALE 1 : 1000
CENTRAL DISTRICT
CUT LINE B-B
SEE A3 DRAWING NO. 60041297/C1/100/1005
VICTORIA HARBOUR
HONG KONG CONVENTION AND EXHIBITION CENTRE
HKCEC (Western Part)
HKCEC (Middle Part)
HKCEC (Eastern Part)
EIA-141/2007
DP3
MTR PROTECTION ZONE
MTR TSUEN WAN LINE TUNNEL
CONVENTION AVENUE
FENWI CK PIER STREET
HARBOUR ROAD
KEY PLAN
SCALE 1 : 50000
NOTE:
1. FOR NOTES & LEGEND, REFER TO DRAWING NO. 60041297/C1/100/1004.
WAN CHAI DEVELOPMENT PHASE II
WAN CHAI DEVELOPMENT PHASE II - CENTRAL - WAN CHAI BYPASS AT HONG KONG CONVENTION AND EXHIBITION CENTRE
SITE BOUNDARY SETTING OUT PLAN
(Contract no. Hk/2009/01)
Civil Engineering and Development Department
AECOM
DRG.NO. 60041297/C1/100/1006C
AS 1:2000
METRES
© COPYRIGHT RESERVED

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 (C)	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
XI	A1	Construct western and eastern temporary seawall
XI	A2	Dredging and construct new seawall
XI	A3	Reclamation to level +3.5mPD
IXB	A4	Construct diaphragm wall and barrette pile of tunnel "Portion 1"
IXB	A5	Construct tunnel "Portion 1" structures including excavation and backfilling with ELSW
IVA, IVB, IVC V, VI, VII	A6	Construct all drainage system, pipeworks of intakes and cooling system within Area WCR1

Section of Works	B	Major Work in Associated Area
IVA, IVB, IVC	B1	Construct P7, P8 and P9 new pumping stations
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 helipad at Expo Drive
III	B8	Construct new public toilet and passenger terminal building at Expo Drive

Section of Works	C	Other Miscellaneous Works
III	C1	Construct new taxi and coach bus parking space at Expos Drive East
III	C2	Modification work on existing seawall and provide new EVA at Expo Drive
III	C3	Road re-alignment work on existing PTI at Expo Drive
II	C4	Road improvement work at junction of Harbour Road / Tonnochy Road and Fleming Road / Gloucester Road
III	C5	Demolition of existing above ground structure at Expo Drive
V	C6	Demolition of existing staircase of footbridge at Wan Shing Street
IXA	C7	Demolition of existing temporary helipad at ex-PCWA

Section of Works	D	Other Temporary Works
XI	D1	Divert existing 1800 mm diameter drain pipe

N

N 816230

N 816030

N 815830

GOLDEN BAUHINIA SQUARE

VICTORIA HARBOUR

RECLAMATION WORKS BY OTHERS

TUNNEL WORKS BY OTHERS

35m CLEAR SPACE

P7 P8 P9

DIRECTION OF TUNNEL WORKS

EXISTING WATER INTAKES

EXISTING SUBMARINE OUTFALL (SEWAGE)

EXISTING DISCHARGE

DRAINAGE DIVERSION OF 1800 PIPE

B1 B2 B3 B4 B5 B6 B7 B8

A1 A2 A3 A4 A5 A6

C1 C2 C3 C4 C6 C7

D1

0 20 40 60m

1 : 2000 SCALE BAR

REV	DATE	DESCRIPTION
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

CLIENT

ENGINEER'S REPRESENTATIVE

CONTRACTOR

俊和－中國中鐵聯營
CHUN WO - CRGL JOINT VENTURE

PROJECT

CONTRACT NO. HK/2009/02
WAN CHAI DEVELOPMENT PHASE II
CENTRAL - WAN CHAI BYPASS AT WAN CHAI EAST

DRAWING TITLE

DETAILED WORKS SCHEDULE AND LOCATION PLAN - STAGE 1

	DESIGN	DRAWN	CHECKED
INITIAL	-	M.S. SIN	-
DATE	-	07/04/2010	-

DRAWING NO. CWCRJV/HK200902/SK0031

REV C

SCALE 1 : 2000 (A3)

P:\01_Construction Team\CAD (sketch working)\2010_05_19 SK0031C\CWCRJV-HK200902-SK0031C.dwg, 20/5/2010 9:34:20

LEGEND:

WORKS AREA

DREDGING AREA FOR
MITGATION OF ODOUR(DP3)

SITE BOUNDARY

TCBR1E

TCBR2
AND
TCBR3

TCBR4

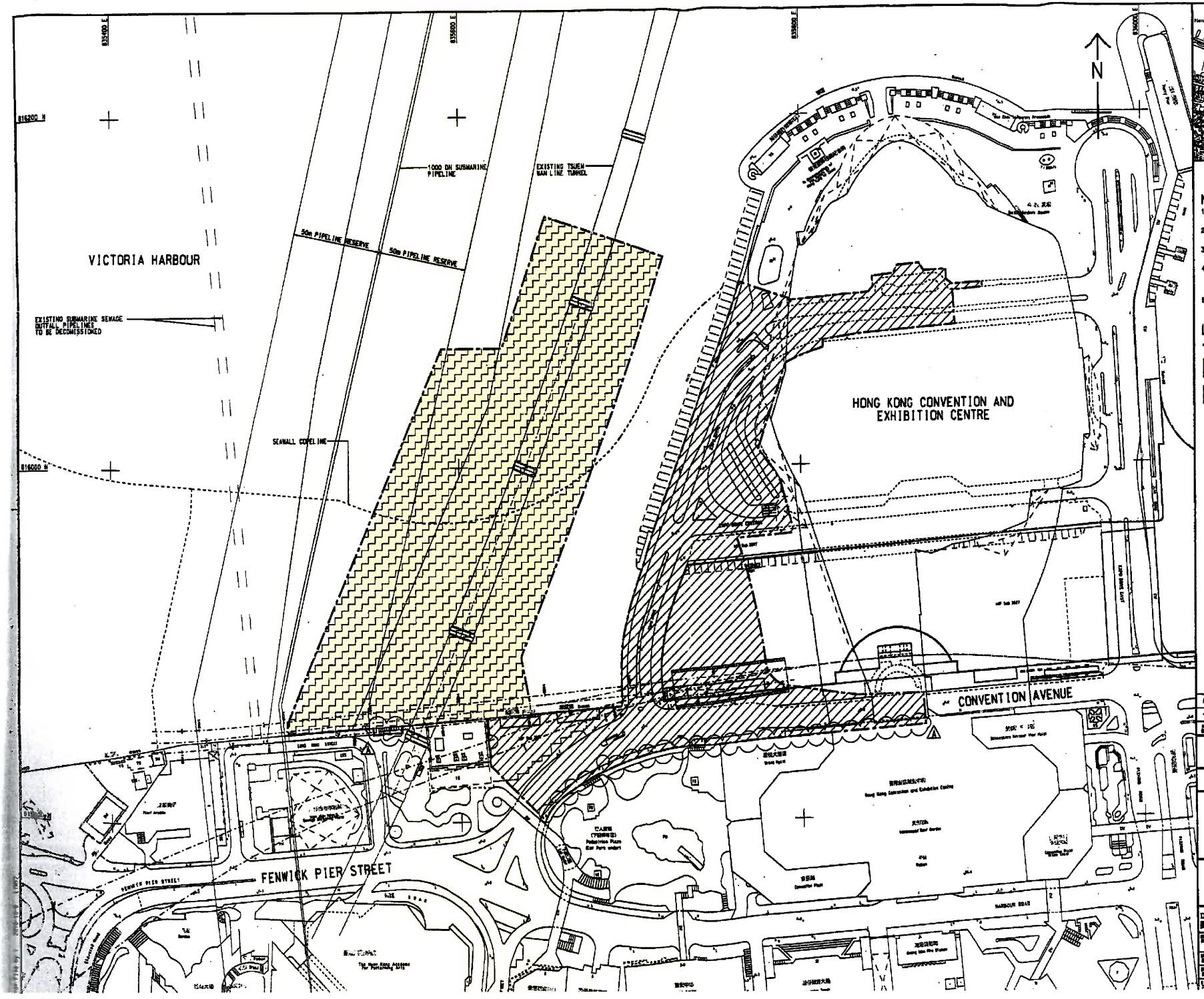
TCBR1W

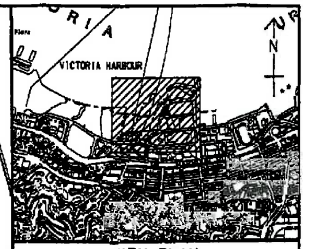
TPCWAE

TPCWAW

DP3

中國建築工程(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	STATUS
DIMENSIONS ARE IN MILLIMETERS	COPYRIGHT RESERVED





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 (HPD) 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/C4/100/1201.

LEGEND:

- SITE BOUNDARY
- PORTION 1
- PORTION 2 (DELAY POSSESSION)

REV	DESCRIPTION	BY	CHK	DATE
A	TENDER ADDENDUM NO.1	SWKM	JYL	OCT 10
-	TENDER DRAWING	SWKM	JYL	SEP 10

CEDD 土木工程拓展署 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

DRG.NO. 60041297/C4/100/1301A

DESIGNED BY	SWKM	CONTRACT NO.	HK/2010/06
CHECKED BY	ADC	SCALE	A1 1:1000
APPROVED	TKH		

Figure 2.2

Project Organization Chart

Project Organization Chart

Project Proponent

Civil Engineering & Development Department

Mr. Patrick Keung
Senior Engineer
Tel: 2231 4442
Fax: 2577 5040

Project Proponent

Highways Department

Mr. Jones Lai
Senior Engineer
Tel: 2762 4951
Fax: 2714 5289

Environmental Protection Department

Mr. Raymond Lai
Environmental Protection Officer
Tel: 28351127
Fax: 25910558

Engineer's Representative for WDII

AECOM

Mr. Frankie Fan
Principal Resident Engineer
Tel: 2587 1778
Fax: 2587 1877

Engineer's Representative for CWB

AECOM

Mr. Peter Poon
Principal Resident Engineer
Tel: 3916 1818
Fax: 3529 2829

Independent Environmental Checker

ENVIRON Hong Kong Limited

Mr. David Yeung
Independent Environmental Checker
Tel: 3743 0717
Fax: 3548.6988

HK/2009/01 Contractor

Chun Wo – Leader JV

Mr. Paul Yu
Site Agent

HK/2009/02 Contractor

Chun Wo – CRGL JV

Mr. Chan Sing Cho
Project Manager
Tel: 3658 3002
Fax: 2827 9996

HK/2010/06 Contractor

Gamme – Leader JV

Mr. Simon Tong
Project Manager
Tel: 9124 2471
Fax: 2529 2880

HY/2009/11 Contractor

CHEC-CRBC JV

Mr. Cheung Fuk Hing
Site Agent
Tel: 3157 1086
Fax: 3157 1085

HY/2009/15 Contractor

China State Co. Engineering Ltd.

Mr. Leung Kwok Yiu
Site Agent
Tel: 9026 8808
Fax: 2566 2192

Environmental Team

Lam Geotechnics Limited

Mr. Raymond Dai
Environmental Team Leader
Tel: 2882 3939
Fax: 2882 3331

Figure 4.1

Locations of Monitoring Stations

N

LEGEND:

■ Water Quality Monitoring Stations

WSD7 - Kowloon South
WSD9 - Tai Wan
WSD10 - Cha Kwo Ling
WSD15 - Sai Wan Ho
WSD17 - Quarry Bay
WSD19 - Sheung Wan
WSD20 - Kennedy Town

Kowloon

WSD7

WSD9

WSD10

WSD19

WSD17

WSD15

WSD20

SEE FIGURE 4.1b

Hong Kong Island

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Maunsell Consultants Asia Ltd

WAN CHAI DEVELOPMENT PHASE II - PLANNING AND ENGINEERING REVIEW

LOCATIONS OF WATER QUALITY MONITORING STATIONS

(SHEET 1 OF 2)

FIGURE 4.1a

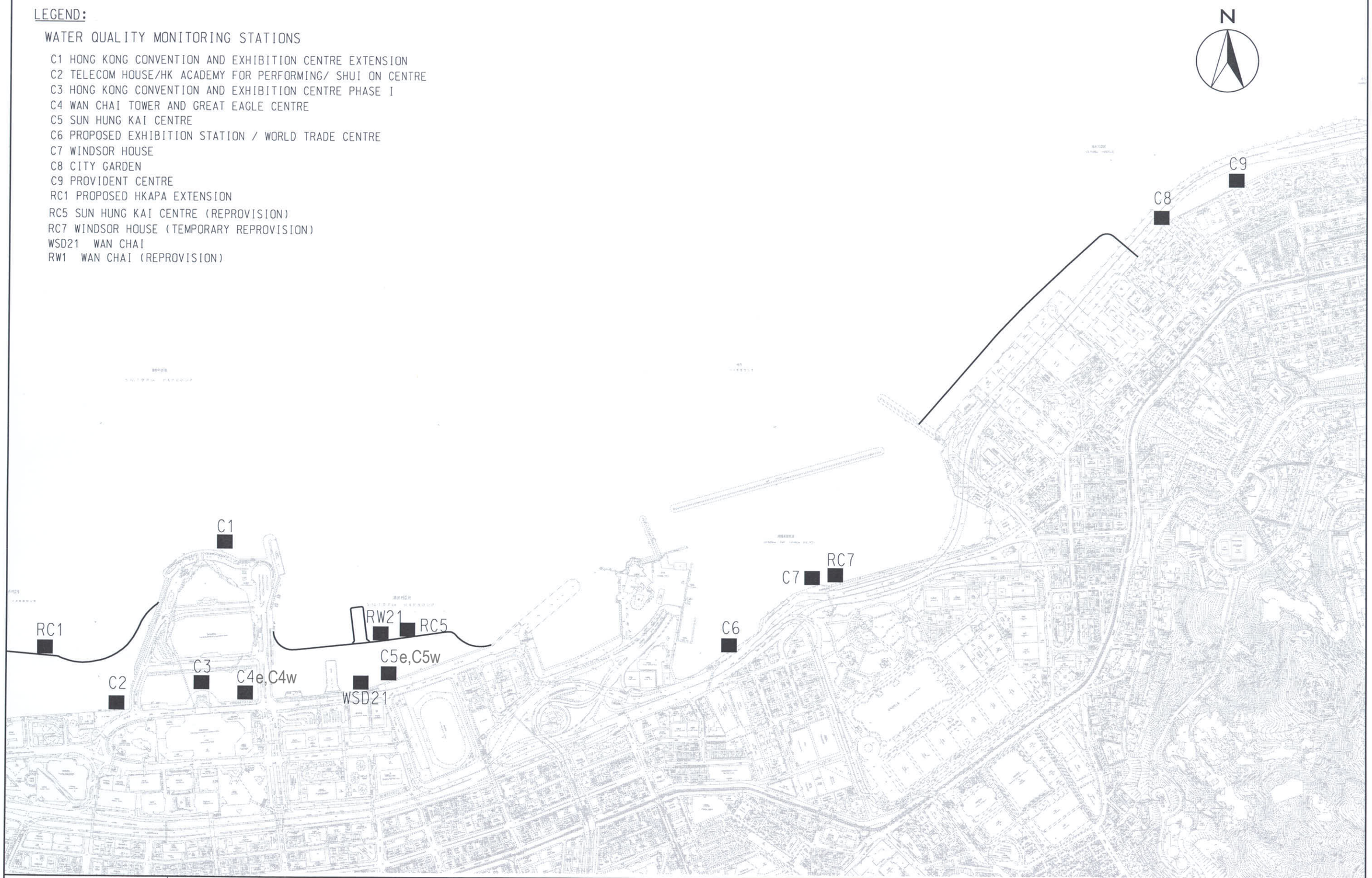
P:/60017193/REPORT/DRAWINGS/EM&A-0708/WQ/4.1A.DGN

SCALE: N.T.S. (A3)

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)



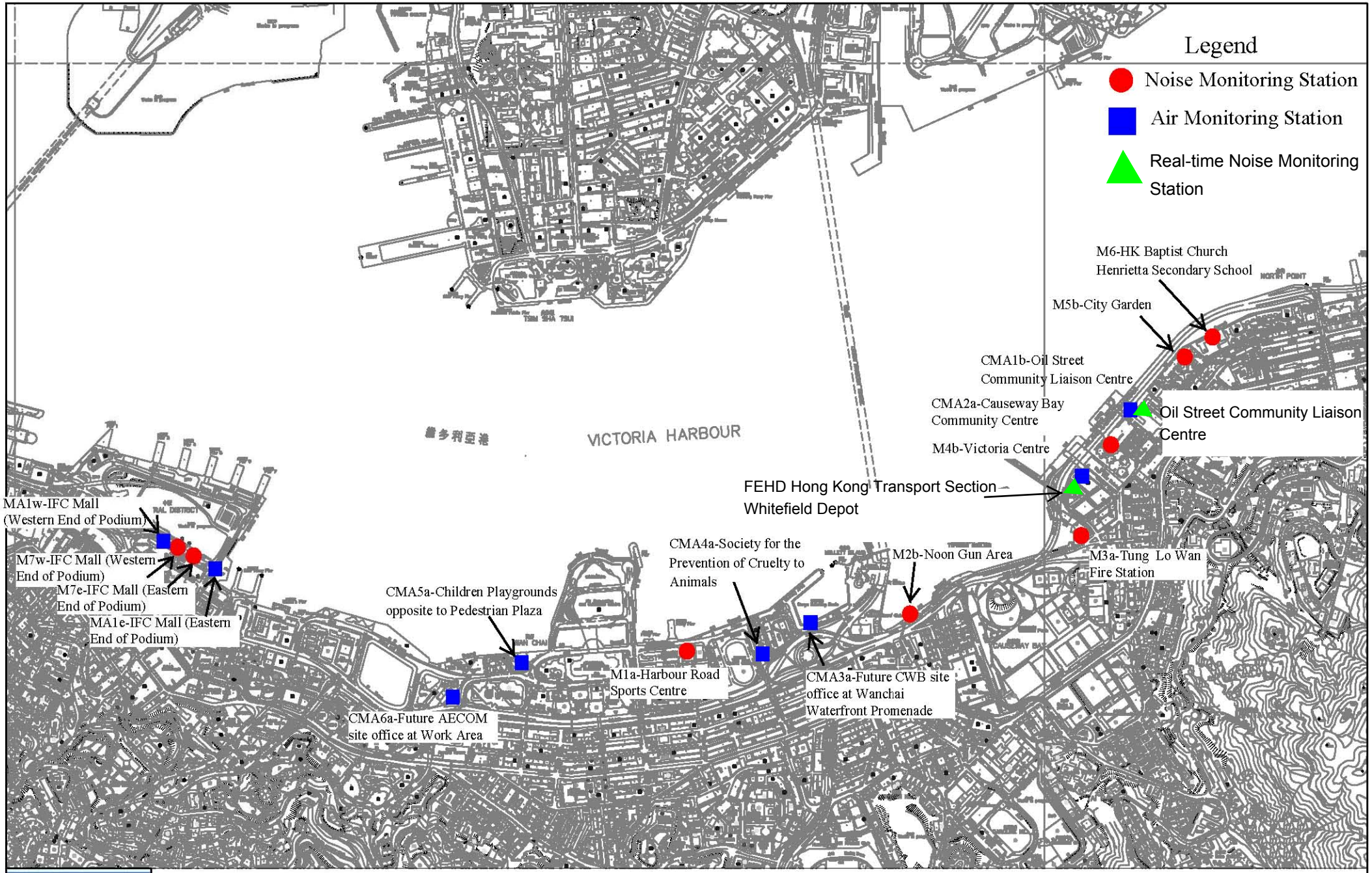
MAUNSELL AECOM
Maunsell Consultants Asia Ltd

WAN CHAI DEVELOPMENT PHASE II - PLANNING AND ENGINEERING REVIEW

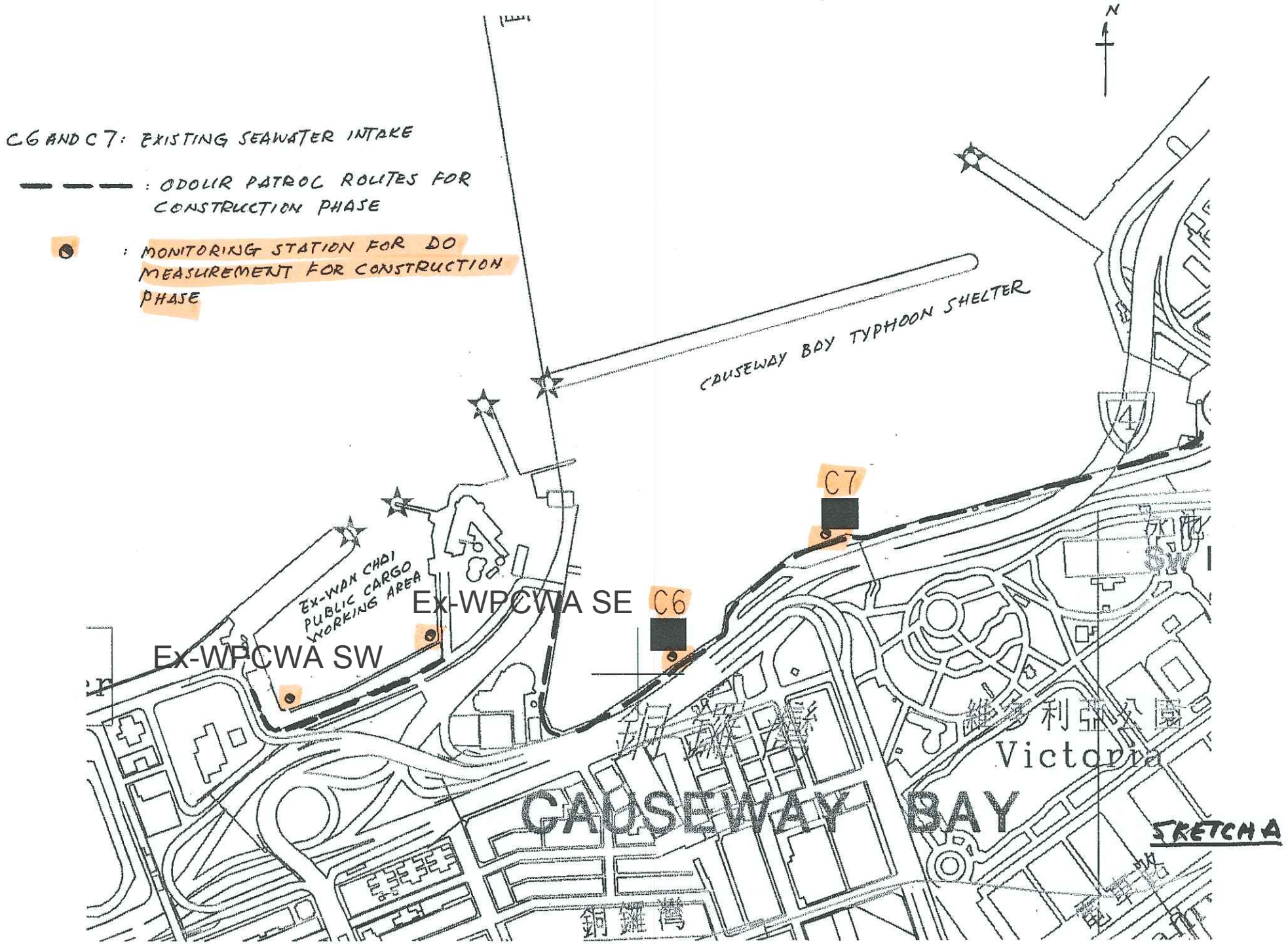
LOCATIONS OF WATER QUALITY MONITORING STATIONS (SHEET 2 OF2)

FIGURE 4.1b

P:/60017193/REPORT/DRAWINGS/EM&A-0708/WQ/4.1B.DGN SCALE 1:8000 (A3)



Location plan of Environmental Monitoring Stations


C6 AND C7: EXISTING SEAWATER INTAKE
: ODOUR PATROL ROUTES FOR CONSTRUCTION PHASE
: MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE
N
CAUSEWAY BAY TYPHOON SHELTER
C7
C6
Ex-WAN CHAI PUBLIC CARGO WORKING AREA
Ex-WPCWA SE
Ex-WPCWA SW
CAUSEWAY BAY
銅鑼灣
Victoria
SKETCH A

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. • Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition; • Watering during excavation and material handling; • Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	Work site / during construction	Contractor		√			

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.

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

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								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.9.4	Good Site Practice: • 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)								

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	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks: • Slip road 8 tunnel • Construction of diaphragm wall and substructures of the tunnel approach ramp • Excavation • Construction of slabs • Backfill • Demolition and construction of substructures for the IEC • Demolition works of existing piers and crossheads of the marine section of the existing IEC Use of PME grouping for the following tasks: • At-grade road construction • Substructure for IECL connection	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP2 – WDII Major Roads (Road P2)								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks: • Temporary road diversion • Resurfacing • At-grade roadwork	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP3 – Reclamation Works								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following task: • Filling behind seawall • Seawall construction	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

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: • Submarine pipelines (marine section) Use of quiet powered mechanical equipment and movable noise barrier for the following tasks: • Installation of a new pipeline (land section)	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: • Submarine pipelines (marine section) •	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

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)								

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	• 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	Near North Point / Before commencement of operation of road project	HyD	√	√	√		EIAO-TM
	For Future/Planned NSRs • about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC	In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.	HyD	√	√ #			

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	• 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.

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: • Seawall construction in all the reclamation areas; • Construction of the CWB Tunnel • Construction of the proposed WSD water mains; and • Construction of the proposed Wan Chai East sewage outfall pipelines.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	Dredging for the Wan Chai East sewage outfall pipelines shall not be carried out concurrently with the following activities: • Dredging along the proposed cross-harbour water mains; • Dredging along the seawall in the Wan Chai Reclamation (WCR) zone (area between HKCEC Extension and PCWA).	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

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 CRIII 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	The total dredging rates in each of the marine works zones shall not be more than the maximum production rates stated in the table below. These are the production rates without considering the effect of silt curtain.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

Reclamation Area		Maximum Dredging Rate		Maximum Dredging Rate (m^3 per week)
		m^3 per day	m^3 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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<table><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> Note: 1,500 m^3 per day shall be applied for construction of the western seawall of WCR1.							
S5.8, Figure 5.3	Dredging along the seawall at WCR1 shall be undertaken initially at 1,500m^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 TCBR1W, the southern and eastern seawalls shall be constructed first (above high water mark) so that the seawater intakes at the inner water would be protected from the impacts from the remaining dredging activities along the northern boundary.	Work site / During the construction period	Contractor		√			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><tr><th>Interim Construction Stage</th><th>Location of Applications</th></tr><tr><td>**Scenario 2A** in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA, TBW, NP and Water Mains Zone</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 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</td></tr><tr><td>**Scenario 2B** in late 2009/2010 with concurrent dredging activities at Sewage Pipelines Zone and TCBR.</td><td>**WSD saltwater intakes** at Sheung Wan, Wan Chai **Cooling water intakes** for Queensway Government Offices, Excelsior Hotel, World Trade Centre and Windsor House.</td></tr><tr><td>**Scenario 2C** in 2011 with concurrent dredging activities at HKCEC and TCBR.</td><td>**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.</td></tr></table>	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

Contract No: HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass -
Sampling, Field Measurement and Testing Works (Stage 1)
Monthly EM&A Report

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	Other mitigation measures include: • mechanical grabs, if used, shall be designed and maintained to avoid spillage and sealed tightly while being lifted. For dredging of any contaminated mud, closed watertight grabs must be used; • all vessels shall be sized so that adequate clearance is maintained between 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)

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	• 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

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

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	• Construction Runoff and Drainage • use 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	• Work site / During the constructi on period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)

[3] CEDD will identify an implementation agent.

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	*Storm Water Discharges* Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned WSD flushing water intakes.	Work site and adjacent water / During the design and construction period.	Contractor	√	√			WPCO
Operation Phase								
DP1 – CWB (within the Project Boundary)								
S5.8	For the operation of CWB, a surface water drainage system would be provided to collect road runoff. The following operation stage mitigation measures are recommended to ensure road runoff would comply with the TM under the WPCO: • The drainage from tunnel sections shall be directed through petrol interceptors to remove oil and grease before being discharged to the nearby foul water manholes. • 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

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

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

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

Table A13.4 Implementation Schedule for Waste Management

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For DP3 – Reclamation Works								
S6.7.2	***Marine Sediments*** 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.	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.							

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	During transportation and disposal of the dredged marine sediments requiring Type 1 and Type 2 disposal, the following measures shall be taken to minimise potential impacts on water quality: • Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.							

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.10	*General Refuse* General refuse shall be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D material. A collection area shall be provided where wastes can be stored and loaded prior to removal from site. An enclosed and covered area is recommended to reduce the occurrence of 'wind blow' light material.	Work site / During the construction period	Contractor		√			Public Health and Municipal Services Ordinance (Cap. 132)
S6.7.11	*Chemical Wastes* After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals shall be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work site / During the construction period	Contractor		√			Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
S6.7.12	*Construction and Demolition Material* C&D material shall be sorted on-site into inert C&D material (that is, public fill) and C&D waste. All the suitable inert C&D material shall be broken down to 250 mm in size for reuse as public fill in the WDII reclamation. C&D waste, such as wood, glass, plastic, steel and other metals shall be reused or recycled and, as a last resort, disposed of to landfill. A suitable area shall be designated to facilitate the sorting process and a temporary stockpiling area will be required for the separated materials.	Work site / During the construction period	Contractor		√			ETWB TCW No. 33/2002, 31/2004, 19/2005

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	*Bentonite Slurry* The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage" and listed as follows: • 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

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	• 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	√				"*Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops*" published by EPD, HKSAR EPD ProPECC Note No. 3/94
S7.10	During soil remediation works, the Contractor for the excavation works shall take note of the following points for excavation: • Excavation profiles must be properly designed and executed; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; • Quantities of soil to be excavated must be estimated; • It maybe necessary to split quantities of soil according to soil type, degree and nature of contamination. • Temporary storage of soil at intermediate depot or on-site	A King Marine / During soil remediation works	Contractor	√				Air Pollution Control Ordinance Noise Control Ordinance Waste Disposal Ordinance Waste Disposal (Chemical Waste) (General) Regulation

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.							
	• Supply of suitable clean backfill materials is needed after excavation. • Care must be taken of existing buildings and utilities. • Precautions must be taken to control of ground settlement • Speed controls for vehicles shall be imposed on dusty site areas. • Vehicle wheel and body washing facilities at the site's exit points shall be established and used. The following environmental mitigation measures shall be strictly followed during the operation and/or maintenance of the CS/S facilities:							Water Pollution Control Ordinance

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	Water Quality Mitigation Measures • Stockpile of untreated soil shall be covered as far as practicable to prevent the contaminated material from leaching out. The leachate shall be discharged following the requirements of WPCO. *Waste Mitigation Measures* • Treated oversize materials will be used as filling material for backfilling within the site. Sorted materials of size smaller than 5 cm will be collected and transferred to the mixing plant for further decontamination treatment. • 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

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.

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: • 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							

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: • 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

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

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

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

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

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

Note 2:

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

Action and Limit Level for Water Monitoring

Parameter	Action Level	Limit Level
WSD Salt Water Intakes		
SS in mg/L	13.00	14.43
Turbidity in NTU	8.04	9.49
DO in mg/L	3.66	3.28
Cooling Water Intakes		
SS in mg/L	15.00	22.13
Turbidity in NTU	9.10	10.25
DO in mg/L	3.36	2.73

Appendix 4.2

Copies of Calibration Certificates

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 06680 Page 1 of 4 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q02553 **Date of receipt :** 18-Nov-10

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : ACO

Model : Type 6224 **Serial No. :** 050112

Test Conditions

Date of Test : 19-Nov-10 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z01.

Test Results

All results were within the IEC 651 Type 1 & 804 Type I Specification.

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

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S017A	Multi-Function Generator	00804	SCL-HKSAR
S024	Sound Level Calibrator	04062	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: 23-Nov-10

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 66, 24/F., Wah Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

Calibration Certificate

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Time Const.		
20 – 100	L_A	Fast	94.0	94.3
		Slow		94.3
	L_C	Fast		94.3
30 – 120	L_A	Fast	94.0	94.4
		Slow		94.4
	L_C	Fast		94.4
30 – 120	L_A	Fast	114.0	94.3
		Slow		94.3
	L_C	Fast		94.3

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 Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
140	114.0	114.5	+0.1	± 0.7 dB
130	104.0	104.4	0.0	
120	94.0	94.4 (Ref.)	- -	
110	84.0	84.1	-0.3	
100	74.0	74.2	-0.2	
90	64.0	64.1	-0.3	
80	54.0	54.1	-0.3	

Uncertainty : ± 0.1 dB

Calibration Certificate

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.1	-0.3	± 0.4
	94.0	94.4 (Ref.)	- -	
	95.0	95.4	0.0	± 0.2

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.3	- 39.4 dB, ± 1.5 dB
63 Hz	-26.2	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 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	+0.9	+ 1.0 dB, ± 1 dB
8 kHz	-1.2	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-5.8	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB

Calibration Certificate

4. 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	39.9	
$1/10^3$	40.0	40.3	± 1.0 dB
$1/10^4$	40.0	40.3	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1 009 hPa.

---------- END ----------

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 06681

Customer : Lam Geotechnics Limited

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

Order No. : Q02553 **Date of receipt :** 18-Nov-10

Item Tested

Description : Sound Level Calibrator (EL469)

Manufacturer : ACO

Model : -- **Serial No. :** 050213

Test Conditions

Date of Test : 19-Nov-10 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: F21, Z02.

Test Results

All results were within the IEC 942 Class 1 specification.

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

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S014	Spectrum Analyzer	03926	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR
S041	Universal Counter	04461	SCL-HKSAR
S206	Sound Level Meter	04462	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: 23-Nov-10

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 6B, 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

Results :

1. Level

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	94.22	± 0.3 dB

The above measured values are the mean of 3 measurements.
Uncertainty : ± 0.1 dB

2. Frequency

UUT Nominal Value	Measured Value		IEC 942 Class 1 Spec.
1 kHz	0.9834	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 : < 0.2 %
IEC 942 Class 1 Spec. : < 3 %
Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1 009 hPa.

---------- END ----------

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 03250A

Customer : Lam Geotechnics Limited

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

Order No. : Q01282 **Date of receipt :** 14-Jun-10

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : ONO SOKKI

Model : LA-5110 **Serial No. :** 72302293

Test Conditions

Date of Test : 21-Jun-10 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z01.

Test Results

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

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

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	93758	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: 8-Oct-10

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

Results :

1. SPL Accuracy

UUT Setting				Applied Value (dB)	UUT Reading (dB)
Level Range	Filter	Frequency Weighting	Dynamic Characteristic		
40 - 100 dB	OFF	A	FAST	94.03	94.0
			SLOW		94.0
		C	FAST		94.0
60 - 120 dB	OFF	A	FAST	94.03	94.0
			SLOW		94.0
		C	FAST		94.0
60 - 120 dB	OFF	A	FAST	113.97	113.9
			SLOW		113.9
		C	FAST		113.9

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)
130	114.0	114.1	+0.1	± 0.7 dB
130	104.0	104.1	+0.1	
120	94.0	94.0 (Ref.)	- -	
110	84.0	84.0	0.0	
100	74.0	74.1	+0.1	
90	64.0	64.1	+0.1	
80	54.0	54.0	0.0	

Uncertainty : ± 0.1 dB

Calibration Certificate

3.2 Differential level linearity

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

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-40.5	- 39.4 dB, ± 1.5 dB
63 Hz	-26.9	- 26.2 dB, ± 1.5 dB
125 Hz	-16.9	- 16.1 dB, ± 1 dB
250 Hz	-9.1	- 8.6 dB, ± 1 dB
500 Hz	-3.5	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.5	+ 1.2 dB, ± 1 dB
5 kHz	+1.2	+ 1.0 dB ,± 1 dB
8 kHz	-1.0	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-7.0	- 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	40.0	± 0.5 dB
$1/10^2$	40.0	40.0	
$1/10^3$	40.0	40.1	± 1.0 dB
$1/10^4$	40.0	39.9	

Uncertainty : ± 0.1 dB

Remarks : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1 000 hPa.
4. This certificate is supersede our former certificate no. 03250.

---------- END ----------

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 03445

Customer : Lam Geotechnics Limited

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

Order No. : Q01282 **Date of receipt :** 14-Jun-10

Item Tested

Description : Sound Level Calibrator (EL078)

Manufacturer : ONO SOKKI

Model : SC-2110 **Serial No. :** 00393

Test Conditions

Date of Test : 21-Jun-10 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z02.

Test Results

All results were within the IEC 942 Class 2 specification.

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

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S024	Sound Level Calibrator	93758	16-Jul-10	NIM-PRC & SCL-HKSAR
S041	Universal Counter	94005	6-Aug-10	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: 25-Jun-10

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

Results :

1. **Level Accuracy (at 1 kHz)**

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 2 Spec.
94	94.05	± 0.5 dB

Uncertainty : ± 0.2 dB

2. **Frequency Accuracy**

UUT Nominal Value (kHz)	Measured Value (kHz)	IEC 942 Class 2 Spec.
1	0.998	± 4 %

Uncertainty : ± 0.1 %

3. **Level Stability** : 0.0 dB
IEC 942 Class 2 Spec. : ± 1.2 dB
Uncertainty : ± 0.01 dB

4. **Total Harmonic Distortion** : < 1.2 %
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 measurements.
3. The uncertainty claimed is for a confidence probability of not less than 95%.
4. Atmospheric Pressure : 1 000 hPa.

--------- END ---------

Brüel & Kjær

SPECTRIS CHINA LIMITED
思百吉中國有限公司

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-7 **Page** 1 **of** 2

Calibration of :

Description	:	Sound Level Meter	,	Microphone
Manufacture	:	Brüel & Kjær		
Type No.	:	2250	,	4950
Serial No.	:	2722310		2698702

Client :

Lam Geotechnics Limited
11/F, Centre Point
181-185 Gloucester Road
Wanchai
Hong Kong

Calibration Conditions :

Air Temperature	:	23	**°C**
Air Pressure	:	101.9	**kPa**
Relative Humidity	:	62	**%**

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 22 July, 2010
Calibrated By :

Dai Bin

Certificate issued : 22 July, 2010
Approved signatory :

Jacky Leung

Unit 706 7/F., Miramar Tower, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong
香港九龍尖沙咀彌敦道132號美麗華大廈7樓706室
Tel : (852) 2548 7486
Fax : (852) 2858 1168

spectris

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-7 **Page 2 of 2**

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999

Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSCL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

Calibrated By : Date : 22 July 2010

Checked By : Date : 22 July, 2010

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100705-2 **Page** 1 **of** 2

Calibration of :

Description	:	Sound Level Meter	,	Microphone
Manufacture	:	Brüel & Kjær		
Type No.	:	2250	,	4950
Serial No.	:	2722311		2698703

Client :

Lam Geotechnics Limited
11/F, Centre Point
181-185 Gloucester Road
Wanchai
Hong Kong

Calibration Conditions :

Air Temperature	:	23	**°C**
Air Pressure	:	101.9	**kPa**
Relative Humidity	:	62	**%**

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 03 Aug, 2010
Calibrated By :

Dai Bin

Certificate issued : 03 Aug, 2010
Approved signatory :

Jacky Leung

spectris

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100705-2

Results :

List of performed (sub) test with test status:
"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.
" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999

Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSCL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

Calibrated By : Dai Kin
Date : 03 Aug 2010

Checked By :
Date : 03 Aug, 2010

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MS CHERRY MAK	**WORK ORDER:**	HK1031088
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG	**DATE RECEIVED:**	30/12/2010
		DATE OF ISSUE:	04/01/2011
		SAMPLE TYPE:	EQUIPMENT
PROJECT:	--	**No. of SAMPLES:**	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

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@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Work Order: HK1031088
Date of Issue: 04/01/2011
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Multimeter

Item : Sonde
ALS Lab ID: HK1031088 -001
Date of Calibration: 31 December, 2010

Model No.: YSI Sonde 600XL
Equipment No.: EL424
Serial No.: 05C1607

Testing Results :

pH

Expected Reading	Recording Reading
4.00	3.88
7.00	7.07
10.0	9.90
Allowing Deviation	± 0.2 unit

Testing Method:
APHA (20th edition), 4500-H^+B

Conductivity

Expected Reading	Recording Reading
146.9 uS/cm	146.0 uS/cm
6667 uS/cm	6230 uS/cm
12890 uS/cm	12473 uS/cm
58670 uS/cm	54244 uS/cm
Allowing Deviation	± 10%

Testing Method:
APHA (20th edition), 2510B

Temperature

Expected Reading	Recording Reading
14.5 °C	14.9 °C
22.5 °C	22.3 °C
34.0 °C	34.3 °C
Allowing Deviation	±2.0°C

Testing Method:
In-House Method

Salinity

Expected Reading	Recording Reading
0 g/L	0 g/L
10.0 g/L	9.61 g/L
20.0 g/L	19.8 g/L
30.0 g/L	29.9 g/L
Allowing Deviation	± 10%

Testing Method:
APHA (20th edition), 2520 A and B

Dissolved Oxygen

Expected Reading	Recording Reading
6.61 mg/L	6.65 mg/L
7.94 mg/L	8.03 mg/L
8.69 mg/L	8.61 mg/L
Allowing Deviation	± 0.2 mg/L

Testing Method:
APHA (20th edition), 4500-OC & G

Mr Chan Kwok Fai, Godfrey
Laboratory Manager – Hong Kong

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MS CHERRY MAK	**WORK ORDER:**	HK1100487
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG	**DATE RECEIVED:**	06/01/2011
		DATE OF ISSUE:	11/01/2011
		SAMPLE TYPE:	EQUIPMENT
PROJECT:	--	**No. of SAMPLES:**	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

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@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

ADDRESS 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong PHONE +852 2610 1044 FAX +852 2610 2021
ALS TECHNICHEM (HK) PTY LTD Part of the ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

Work Order: HK1100487
Date of Issue: 11/01/2011
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Multimeter

Item : Sonde
ALS Lab ID: HK1100487-001
Date of Calibration: 07 January, 2011

Model No.: YSI Professional Plus
Equipment No.: --
Serial No.: 10E100385

Testing Results :

pH

Expected Reading	Recording Reading
4.00	3.99
7.00	7.04
10.0	9.97
Allowing Deviation	± 0.2 unit

Testing Method:
APHA (20th edition), 4500-H^+B

Temperature

Expected Reading	Recording Reading
12.5 °C	12.4 °C
20.5 °C	20.3 °C
37.0 °C	36.9 °C
Allowing Deviation	±2.0°C

Testing Method:
In-House Method

Salinity

Expected Reading	Recording Reading
0 g/L	0 g/L
10.0 g/L	10.3 g/L
20.0 g/L	20.5 g/L
30.0 g/L	30.7 g/L
Allowing Deviation	± 10%

Testing Method:
APHA (20th edition), 2520 A and B

Dissolved Oxygen

Expected Reading	Recording Reading
6.35 mg/L	6.41 mg/L
7.29 mg/L	7.32 mg/L
9.44 mg/L	9.35 mg/L
Allowing Deviation	± 0.2 mg/L

Testing Method:
APHA (20th edition), 4500-OC & G

Mr. Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MS CHERRY MAK	**WORK ORDER:**	HK1027605
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT,	**DATE RECEIVED:**	20/11/2010
	181-185 GLOUCESTER ROAD,	**DATE OF ISSUE:**	24/11/2010
	WAN CHAI, HONG KONG.	**SAMPLE TYPE:**	EQUIPMENT
		No. of SAMPLES:	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

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@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Work Order: HK1027605
Date of Issue: 24/11/2010
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Turbidimeter

Item : TURBIDIMETER
ALS Lab ID: HK1027605-001
Date of Calibration: 22 November, 2010

Model No.: HACH 2100P
Equipment No.: EL148
Serial No.: 931000003861

Testing Results :

Turbidity

Expected Reading	Recording Reading
0.00 NTU	0.27 NTU
4.00 NTU	4.24 NTU
40.0 NTU	38.7 NTU
80.0 NTU	76.1 NTU
400 NTU	392 NTU
Allowing Deviation	± 10%

Testing Method:

APHA (19th edition), 2130B

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MS CHERRY MAK	**WORK ORDER:**	HK1105017
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG	**DATE RECEIVED:**	03/03/2011
		DATE OF ISSUE:	10/03/2011
PROJECT:	--	**SAMPLE TYPE:**	EQUIPMENT
		No. of SAMPLES:	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

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@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Work Order: HK1105017
Date of Issue: 10/03/2011
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Multimeter

Item : HACH Turbidimeter
ALS Lab ID: HK1105017 -001
Date of Calibration: 08 March, 2011

Model No.: 2100P
Equipment No.: EL148
Serial No.: 931000003861

Testing Results :

Turbidity

Expected Reading	Recording Reading
0.00 NTU	0.35 NTU
4.00 NTU	3.82 NTU
40.0 NTU	41.5 NTU
80.0 NTU	78.8 NTU
400 NTU	416 NTU
Allowing Deviation	± 10%

Testing Method:

APHA (19th edition), 2130B

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MS CHERRY MAK	**WORK ORDER:**	HK1104129
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG	**DATE RECEIVED:**	21/02/2011
		DATE OF ISSUE:	25/02/2011
		SAMPLE TYPE:	EQUIPMENT
PROJECT:	--	**No. of SAMPLES:**	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

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@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Work Order: HK1104129
Date of Issue: 25/02/2011
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Multimeter

Item : HACH Turbidimeter
ALS Lab ID: HK1104129-001
Date of Calibration: 25 February, 2011

Model No.: 2100P
Equipment No.: --
Serial No.: 930300002705

Testing Results :

Turbidity

Expected Reading	Recording Reading
0.00 NTU	0.27 NTU
4.00 NTU	4.35 NTU
40.0 NTU	37.0 NTU
80.0 NTU	81.9 NTU
400 NTU	432 NTU
Allowing Deviation	± 10%

Testing Method:

APHA (19th edition), 2130B

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MS CHERRY MAK	**WORK ORDER:**	HK1103015
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT,	**DATE RECEIVED:**	09/02/2011
	181-185 GLOUCESTER ROAD,	**DATE OF ISSUE:**	14/02/2011
	WAN CHAI, HONG KONG	**SAMPLE TYPE:**	EQUIPMENT
PROJECT:	--	**No. of SAMPLES:**	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

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@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Work Order: HK1103015
Date of Issue: 14/02/2011
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Multimeter

Item : Turbidimeter
ALS Lab ID: HK1103015 -001
Date of Calibration: 09 February, 2011

Model No.: 2100P
Equipment No.: EN06
Serial No.: 1000032935

Testing Results :

Turbidity

Expected Reading	Recording Reading
0.00 NTU	0.25 NTU
4.00 NTU	4.17 NTU
40.0 NTU	40.7 NTU
80.0 NTU	78.3 NTU
400 NTU	396 NTU
800 NTU	828 NTU
Allowing Deviation	± 10%

Testing Method:

APHA (19th edition), 2130B

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jun 28, 2010 Rootsmeter S/N 9833620 Ta (K) - 298
Operator Tisch Orifice I.D. - 0005 Pa (mm) - 745.49

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3860	3.2	2.00
2	NA	NA	1.00	0.9740	6.4	4.00
3	NA	NA	1.00	0.8730	7.9	5.00
4	NA	NA	1.00	0.8320	8.8	5.50
5	NA	NA	1.00	0.6850	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9767	0.7047	1.4006		0.9957	0.7184	0.8941
0.9725	0.9985	1.9808		0.9914	1.0179	1.2645
0.9704	1.1116	2.2146		0.9893	1.1332	1.4137
0.9693	1.1650	2.3227		0.9882	1.1877	1.4828
0.9641	1.4075	2.8013		0.9829	1.4349	1.7883
Qstd slope (m) =		1.99628		Qa slope (m) =		1.25003
intercept (b) =		-0.00699		intercept (b) =		-0.00446
coefficient (r) =		0.99995		coefficient (r) =		0.99995
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

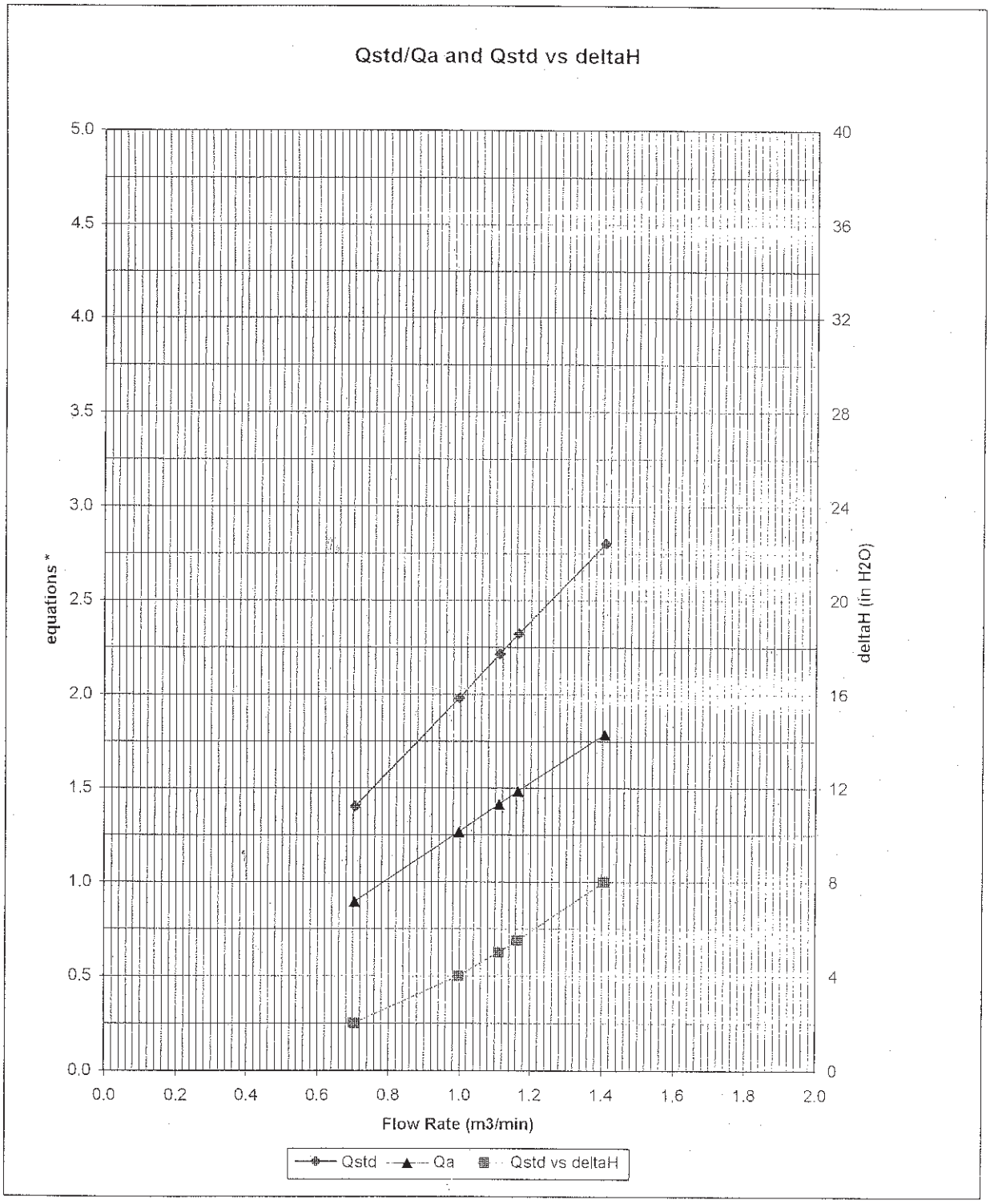
Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

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

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

AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

Qstd series: $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$

Qa series: $\sqrt{(\Delta H\ (Ta\ /\ Pa))}$

#0005

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA1b	**Calbration Date**	:	28-Feb-11
Equipment no.	:	EL452	**Calbration Due Date**	:	28-Apr-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	290	Kelvin	**Pressure, P_a**	1019	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.00300	**Intercept, bc**	-0.00500
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	28-Jun-11	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ **Y-axis**
	(up)	(down)	(difference)			
1	6.2	6.2	12.4	1.7896	61	62.0093
2	5.2	5.4	10.6	1.6509	52	52.8604
3	4.7	4.3	9	1.5250	48	48.7942
4	2.4	2.4	4.8	1.1144	35	35.5791
5	1.5	1.7	3.2	0.9104	25	25.4137

By Linear Regression of Y on X

Slope, m	=	38.7059	Intercept, b	=	-9.1823
Correlation Coefficient*	=	0.9932			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks :

Calibrated by	:	Derek Lo	**Checked by**	:	Cherry Mak
Date	:	28-Feb-11	**Date**	:	01-Mar-11

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA1b	**Calbration Date**	:	05-Mar-11
Equipment no.	:	EL452	**Calbration Due Date**	:	05-May-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	290	Kelvin	**Pressure, P_a**	1019	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.00300	**Intercept, bc**	-0.00500
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	28-Jun-11	$= m_c \times Q_{std} + b_c$			

Calibration of RSP

Calibration Point	**Manometer Reading H (inches of water)** (up)	(down)	(difference)	**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ **Y-axis**
1	6.3	6.2	12.5	1.7968	60	60.9928
2	5.1	5.4	10.5	1.6470	53	53.8770
3	4.6	4.3	8.9	1.5165	47	47.7777
4	2.5	2.4	4.9	1.1259	36	36.5957
5	1.5	1.7	3.2	0.9104	26	26.4302

By Linear Regression of Y on X

Slope, m	=	37.0414	Intercept, b	=	-6.6987
Correlation Coefficient*	=	0.9952			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks :

Calibrated by	:	Derek Lo	**Checked by**	:	Cherry Mak
Date	:	05-Mar-11	**Date**	:	06-Mar-11

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA2a	**Calbration Date**	:	28-Feb-11
Equipment no.	:	EL449	**Calbration Due Date**	:	28-Apr-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	290	Kelvin	**Pressure, P_a**	1019	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.00300	**Intercept, bc**	-0.00500
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	28-Jun-11	$= m_c \times Q_{std} + b_c$			

Calibration of RSP

Calibration Point	**Manometer Reading H (inches of water)** (up)	(down)	(difference)	**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ **Y-axis**
1	6.6	6.2	12.8	1.8182	52	52.8604
2	5.3	5.4	10.7	1.6626	47	47.7777
3	4.1	4.3	8.4	1.4734	41	41.6784
4	2.6	2.4	5	1.1373	32	32.5295
5	1.7	1.7	3.4	0.9383	23	23.3806

By Linear Regression of Y on X

Slope, m	=	32.3583	Intercept, b	=	-5.8496
Correlation Coefficient*	=	0.9966			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks :

Calibrated by	:	Derek Lo	**Checked by**	:	Cherry Mak
Date	:	28-Feb-11	**Date**	:	28-Feb-11

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA3a	**Calbration Date**	:	14-Mar-11
Equipment no.	:	EL888	**Calbration Due Date**	:	14-May-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	295	Kelvin	**Pressure, P_a**	1009	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.00300	**Intercept, bc**	-0.00500
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	28-Jun-11	$= m_c \times Q_{std} + b_c$			

Calibration of RSP

Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.)	**Continuous Flow Recorder, W**	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$
	(up)	(down)	(difference)	**X-axis**	(CFM)	**Y-axis**
1	5.9	5.9	11.8	1.7225	41	41.1204
2	4.8	4.8	9.6	1.5539	36	36.1057
3	3.6	3.6	7.2	1.3461	33	33.0969
4	2.4	2.4	4.8	1.0995	27	27.0793
5	1.5	1.5	3.0	0.8698	21	21.0617

By Linear Regression of Y on X

Slope, m	=	22.7581	Intercept, b	=	1.6896
Correlation Coefficient*	=	0.9962			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks :

Calibrated by	:	Derek Lo	**Checked by**	:	Cherry Mak
Date	:	14-Mar-11	**Date**	:	14-Mar-11

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	Calbration Date	:	11-Jan-11
Equipment no.	:	EL390	Calbration Due Date	:	11-Mar-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	297	Kelvin	Pressure, P_a	1008	mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m_c	1.99628	Intercept, bc	-0.06990
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	28-Jun-11	$= m_c \times Q_{std} + b_c$			

Calibration of RSP

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3\times298/T_a)^{1/2}/35.31)$ Y-axis
1	6.3	6.3	12.6	1.8115	60	59.9435
2	5.0	5	10.0	1.6176	52	51.9511
3	3.9	3.9	7.8	1.4327	44	43.9586
4	2.5	2.5	5	1.1541	32	31.9699
5	1.5	1.5	3.0	0.9018	22	21.9793

By Linear Regression of Y on X

Slope, m = 41.9976 Intercept, b = -16.1451

Correlation Coefficient* = 0.9999

Calibration Accepted = Yes/~~No~~**

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

** Delete as appropriate.

Remarks : _____

Calibrated by	:	Derek Lo	Checked by	:	Cherry Mak
Date	:	11-Jan-11	Date	:	14-Jan-11

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	**Calbration Date**	:	11-Mar-11
Equipment no.	:	EL390	**Calbration Due Date**	:	11-May-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	293	Kelvin	**Pressure, P_a**	1016	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.00300	**Intercept, bc**	-0.00500
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	28-Jun-11	$= m_c \times Q_{std} + b_c$			

Calibration of RSP

Calibration Point	**Manometer Reading H (inches of water)** (up)	(down)	(difference)	**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ **Y-axis**
1	5.8	5.8	11.6	1.7196	57	57.5608
2	4.7	4.7	9.4	1.5482	50	50.4920
3	3.6	3.6	7.2	1.3553	43	43.4231
4	2.4	2.4	4.8	1.1071	31	31.3050
5	1.4	1.4	2.8	0.8461	21	21.2066

By Linear Regression of Y on X

Slope, m	=	42.0637	Intercept, b	=	-14.5276
Correlation Coefficient*	=	0.9991			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks :

Calibrated by	:	Derek Lo	**Checked by**	:	Cherry Mak
Date	:	11-Mar-11	**Date**	:	11-Mar-11

Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)

Environmental Monitoring Schedule
March 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Feb	28-Feb	1-Mar	2-Mar	3-Mar	4-Mar	5-Mar
				24hr TSP	1hr TSP x 3	
		Noise (Day time)				
		Noise (Restricted hr) 1900-2300				
	Impact WQM	Impact WQM	Impact WQM		Impact WQM	
	Mid-flood: 14:41		Mid-flood: 16:41		Mid-ebb: 12:29	
	Mid-ebb: 22:17		Mid-ebb: 23:32		Mid-flood: 18:06	
6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar	12-Mar
			24hr TSP	1hr TSP x 3		
		Noise (Day time)		24hr TSP		
		Noise (Restricted hr) 1900-2300				
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb: 13:53		Mid-flood: 8:27		Mid-flood: 8:53	
	Mid-flood: 19:58		Mid-ebb: 14:53		Mid-ebb: 15:58	
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
		24hr TSP	1hr TSP x 3			
		Noise (Day time)				
		Noise (Restricted hr) 1900-2300				
Impact WQM			Impact WQM		Impact WQM	
Mid-flood: 9:51			Mid-flood: 14:55		Mid-ebb: 11:20	
Mid-ebb: 18:31			Mid-ebb: 22:05		Mid-flood: 17:11	
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
	24hr TSP	1hr TSP x 3				24hr TSP
				Noise (Day time)		
				Noise (Restricted hr) 1900-2300		
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb: 13:22		Mid-flood: 8:22		Mid-flood: 9:34	
	Mid-flood: 19:48		Mid-ebb: 14:50		Mid-ebb: 16:48	
27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	1-Apr	2-Apr

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)

Tentative Environmental Monitoring Schedule
April 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Mar	28-Mar 1hr TSP x 3 24hr TSP	29-Mar Impact WQM Mid-flood: 14:32 Mid-ebb: 21:36	30-Mar Noise (Day time) Noise (Restricted hr) 1900-2300	31-Mar Impact WQM Mid-ebb: 11:00 Mid-flood: 16:32	1-Apr 24hr TSP	2-Apr 1hr TSP x 3 Impact WQM Mid-ebb: 11:59 Mid-flood: 17:57
3-Apr	4-Apr Impact WQM Mid-ebb: 12:53 Mid-flood: 19:12	**5-Apr**	6-Apr Impact WQM Mid-ebb: 13:51 Mid-flood: 20:29	7-Apr 24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2300	8-Apr 1hr TSP x 3 Impact WQM Mid-ebb: 14:32 Mid-flood: 22:00	9-Apr
10-Apr	11-Apr Impact WQM Mid-flood: 9:22 Mid-ebb: 17:46	12-Apr Noise (Day time) Noise (Restricted hr) 1900-2300	13-Apr 24hr TSP Impact WQM Mid-flood: 13:12 Mid-ebb: 20:33	14-Apr 1hr TSP x 3	15-Apr Impact WQM Mid-flood: 16:05 Mid-ebb: 22:29	16-Apr
17-Apr	18-Apr Impact WQM Mid-ebb: 12:19 Mid-flood: 18:54	19-Apr 24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2300	20-Apr 1hr TSP x 3 Impact WQM Mid-ebb: 13:47 Mid-flood: 20:43	21-Apr	**22-Apr** Impact WQM Mid-ebb: 15:26 Mid-flood: 22:45	**23-Apr**
24-Apr	**25-Apr** 24hr TSP	26-Apr 1hr TSP x 3 Impact WQM Mid-ebb: 19:34	27-Apr Noise (Day time) Noise (Restricted hr) 1900-2300 Impact WQM Mid-flood: 3:19	28-Apr	29-Apr	30-Apr

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)

Tentative Environmental Monitoring Schedule
May 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
24-Apr	25-Apr	26-Apr	27-Apr	28-Apr Impact WQM Mid-flood: 15:19 Mid-ebb: 21:35	29-Apr	30-Apr 24hr TSP Impact WQM Mid-ebb: 11:02 Mid-flood: 17:00
1-May	**2-May**	3-May 1hr TSP x 3 Impact WQM Mid-ebb: 12:25 Mid-flood: 19:03	4-May Noise (Day time) Noise (Restricted hr) 1900-2300	5-May Impact WQM Mid-ebb: 13:18 Mid-flood: 20:22	6-May 24hr TSP	7-May 1hr TSP x 3 Impact WQM Mid-ebb: 14:15 Mid-flood: 21:58
8-May	9-May Impact WQM Mid-ebb 16:01	**10-May** Impact WQM Mid-flood: 0:07	11-May Noise (Day time) Noise (Restricted hr) 1900-2300	12-May 24hr TSP Impact WQM Mid-flood: 13:17 Mid-ebb: 20:01	13-May 1hr TSP x 3	14-May Impact WQM Mid-ebb: 9:46 Mid-flood: 16:00
15-May	16-May Impact WQM Mid-ebb: 11:16 Mid-flood: 18:01	17-May Noise (Day time) Noise (Restricted hr) 1900-2300	18-May 24hr TSP Impact WQM Mid-ebb: 12:47 Mid-flood: 19:53	19-May 1hr TSP x 3	20-May Impact WQM Mid-ebb: 14:22 Mid-flood: 21:39	21-May
22-May	23-May Impact WQM Mid-ebb: 16:41	24-May 24hr TSP Impact WQM Mid-flood: 0:22	25-May 1hr TSP x 3 Noise (Day time) Noise (Restricted hr) 1900-2300 Impact WQM Mid-ebb: 18:21	26-May Impact WQM Mid-flood: 1:59	27-May	28-May Impact WQM Mid-flood: 3:08 Mid-ebb: 9:59

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)

Remarks (Water)

1. Cut-off date is at the 27th of each reporting month.
2. Actual monitoring will subject to change due to any safety concern or adverse weather condition.
3. Water Quality Monitoring Stations corresponding to active contracts are sub-divided below:
   - Contract HY/2009/11: WSD9, WSD10, WSD15, WSD17, C8, C9 (Commenced on 23 March 2010)
   - Contract HY/2009/15: C6, C7 (Commenced on 9 Nov 2010)
   - Contract HK/2009/01: WSD7, WSD19, WSD20, C1, C2, C3, C4 (Commenced on 8 July 2010); Contract HK/2010/06 share the station C2 from 23 Mar 2011
   - Contract HK/2009/02: WSD21, C5 (Commenced on 8 July 2010)

Remarks (Air)

1. Cut-off date is at the 27th of each reporting month.
2. Actual monitoring will subject to change due to any safety concern or adverse weather condition.
3. Air Quality Monitoring Stations corresponding to active contracts are sub-divided below:
   - Contract HK/2009/01: CMA5a (Commenced on 11 May 2010) and CMA6a (1hr TSP was commenced on 11 May 2010, 24hr TSP to be commenced after set-up permanent electricity supply)
   - Contract HK/2009/02: CMA4a (Commenced on 30 Mar 2010)
   - Contract HY/2009/11: CMA1b (Commenced on 15 June 2010) and CMA2a (Commenced on 12 May 2010)
   - Contract HY/2009/15: CMA3a (To be commenced after set-up permanent electricity supply)
   - Central Interchange works - IFC (Eastern and Western End of Podium) (Anticipated to be commenced in mid-July 2010)

Remarks (Noise)

1. Cut-off date is at the 27th of each reporting month.
2. Actual monitoring will subject to change due to any safety concern or adverse weather condition.
3. Noise Monitoring Stations corresponding to active contracts are sub-divided below:
   - Contract HK/2009/01 and HK/2009/02: M1a (Commenced on 30 Mar 2010); Contract HK/2010/06 share station M1a from 23 Mar 2011
   - Contract HY/2009/11: M4a, M5b (Commenced on 23 Mar 2010); M3a and M6 (Commenced on 1 June 2010)
   - Contract HY/2009/15: M2b (Contract to be commenced in Sep 2010)
   - Additional noise monitoring at Victoria Centre was commenced on 1 June 2010.
   - Additional noise monitoring at IFC east wing and west wing were commenced on 14 June 2010.
4. Day time noise will be monitored for Leq(30min) during the period between 07:00 and 19:00 for active contract(s).
5. Restricted hours noise (i.e. outside 07:00-19:00 of normal weekday) will be monitored for 3 nos. Leq(5min) as per the relevant Construction Noise Permit(s) in force for the following contract(s): Contract HY/2009/11

For any enquiry on day-to-day monitoring matters, please feel free to contact our Environmental Engineer, Mr. Derek Lo at 9108 0531.
For any enquiry on monitoring matters, please feel free to contact our Assistant Environmental Engineer, Ms. Cherry Mak at 2919 0288.

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)					
1/3/2011	9:56	Fine	74.6	77.2	69.4	69.2	73	75
8/3/2011	11:00	Cloudy	72.9	75.5	69.2	69.2	70	75
15/3/2011	9:45	Hazy	73.2	75.8	69.5	69.2	71	75
24/3/2011	10:50	Cloudy	72.6	75.4	68.7	69.2	70	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)					
1/3/2011	10:44	Cloudy	67.3	68.9	65.3	-	67	75
8/3/2011	13:30	Cloudy	68.2	70.0	65.0	-	68	75
15/3/2011	10:33	Hazy	67.5	69.3	65.2	-	68	75
24/3/2011	11:30	Cloudy	67.9	69.9	65.8	-	68	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)					
1/3/2011	14:41	Sunny	67.0	68.8	64.7	-	67	75
8/3/2011	14:22	Cloudy	69.0	70.7	64.5	-	69	75
15/3/2011	13:41	Cloudy	66.9	68.8	64.6	-	67	75
24/3/2011	13:05	Cloudy	66.9	68.7	65.0	-	67	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)					
1/3/2011	14:00	Fine	67.9	69.3	65.9	-	68	75
8/3/2011	15:08	Cloudy	68.1	69.5	66.4	-	68	75
15/3/2011	14:22	Cloudy	73.0	73.8	72.0	-	73	75
24/3/2011	13:45	Cloudy	73.2	74.3	72.1	-	73	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)					
1/3/2011	11:26	Cloudy	68.0	69.5	66.2	-	68	75
8/3/2011	16:43	Cloudy	68.2	69.6	66.6	-	68	75
15/3/2011	15:52	Cloudy	66.5	68.0	64.8	-	67	75
24/3/2011	15:14	Cloudy	67.2	68.5	65.7	-	67	75

Noise Monitoring Result

Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)

Location: M4b - Victoria Centre

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Noise Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)						
1/3/2011	20:51	Fine	68.9	71.8	65.2	67.5	-	67	70
	20:56		66.8	68.6	64.4				
	21:01		66.7	68.9	64.3				
8/3/2011	20:46	FIne	66.1	67.8	63.9	66.0	-	66	70
	20:51		65.6	67.6	62.9				
	20:56		66.2	67.9	63.7				
15/3/2011	20:50	Fine	66.4	68.2	63.8	66.2	-	66	70
	20:55		66.2	68.5	63.5				
	21:00		66.1	67.6	63.4				
24/3/2011	20:54	Fine	65.4	66.9	63.0	65.5	-	66	70
	20:59		65.4	67.0	63.4				
	21:04		65.7	67.6	63.1				

Location: M5b - City Garden

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)						
1/3/2011	21:18	Fine	67.4	69.0	65.0	66.1	-	66	70
	21:23		65.8	66.7	64.0				
	21:28		65.1	66.1	63.7				
8/3/2011	21:16	FIne	66.7	67.6	65.3	66.2	-	66	70
	21:21		65.9	67.0	64.5				
	21:26		65.9	67.1	64.7				
15/3/2011	21:17	Fine	65.7	66.6	64.6	66.3	-	66	70
	21:22		66.9	68.3	65.1				
	21:27		66.2	67.2	65.1				
24/3/2011	21:25	Fine	65.7	66.7	64.5	65.6	-	66	70
	21:30		65.5	66.6	64.3				
	21:35		65.6	66.8	63.7				

Location: M1a - Harbour Road Sports Center

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)						
1/3/2011	19:00	Fine	71.8	75.2	67.2	70.8	61.1	70	70
	19:05		71.5	73.6	67.3				
	19:10		69.2	71.2	65.6				
8/3/2011	19:02	Fine	70.9	74.4	65.7	70.7	61.1	70	70
	19:07		70.7	73.4	66.8				
	19:12		70.4	74.6	66.3				
15/3/2011	19:13	Fine	72.4	75.2	68.9	72.5	61.1	72	70
	19:18		72.4	74.7	68.4				
	19:23		72.7	75.6	67.8				
24/3/2011	19:21	Fine	71.2	75.2	68.3	71.4	61.1	71	70
	19:26		71.5	75.8	68.5				
	19:31		71.4	74.9	68.1				

Location: M2b -Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)						
1/3/2011	19:58	Fine	68.7	71.2	66.0	67.8	-	68	70
	20:04		67.3	68.6	65.7				
	20:09		67.4	68.7	65.6				
8/3/2011	19:51	Fine	66.6	68.0	65.0	66.8	-	67	70
	19:56		67.7	70.1	64.8				
	20:01		66.1	67.6	64.5				
15/3/2011	19:56	Fine	67.3	69.1	65.1	67.0	-	67	70
	20:01		66.3	67.8	64.7				
	20:06		67.3	68.9	65.4				
24/3/2011	20:28	Fine	65.3	67.8	62.6	65.0	-	65	70
	20:33		64.8	66.5	62.7				
	20:38		65.0	67.1	62.5				

Noise Monitoring Result

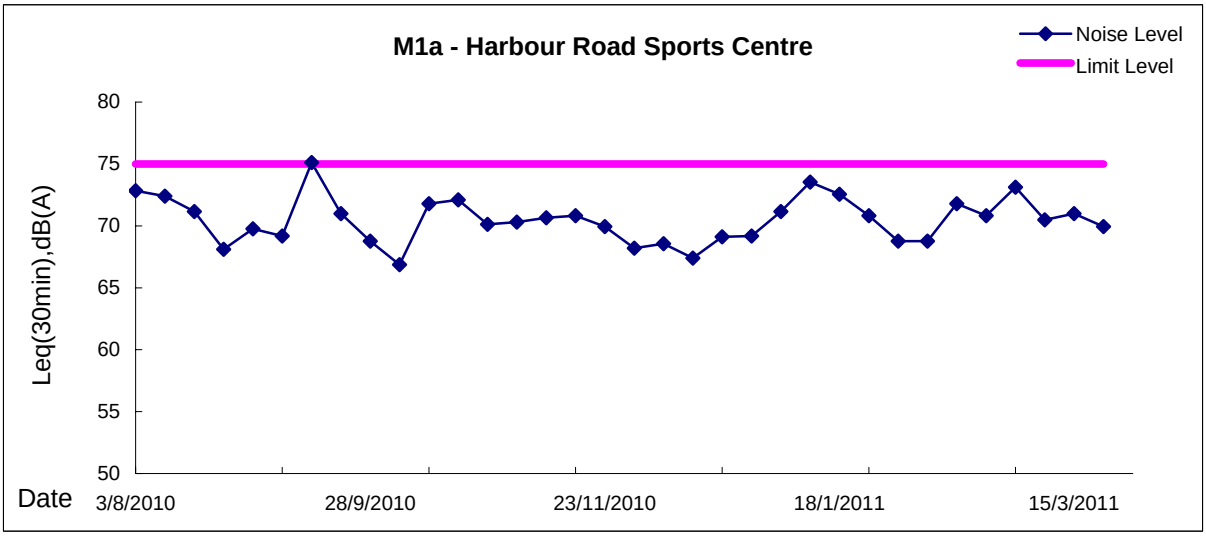
Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)

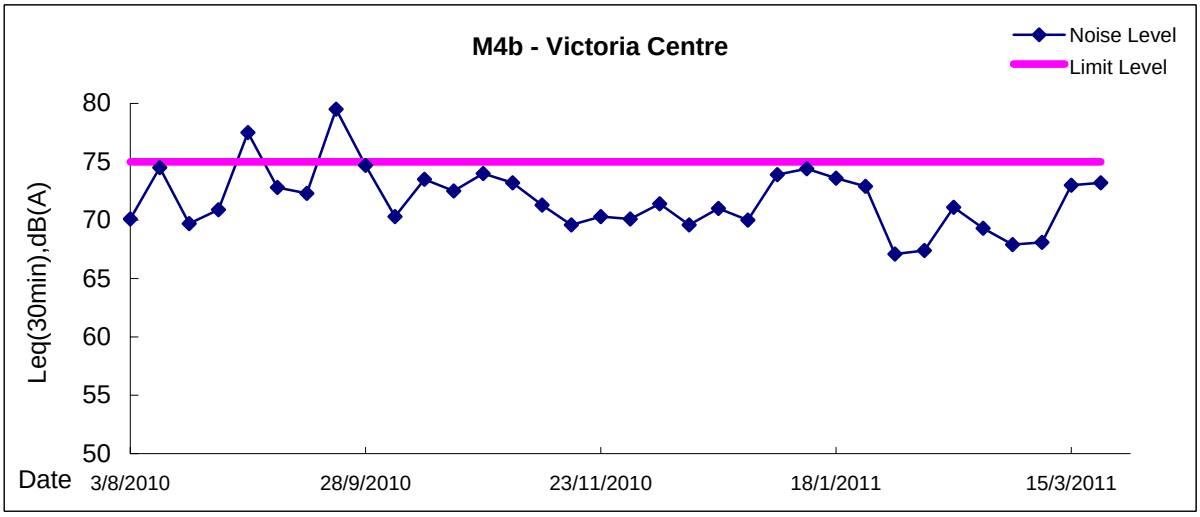
Location: M3a - Tung Lo Wan Fire Station

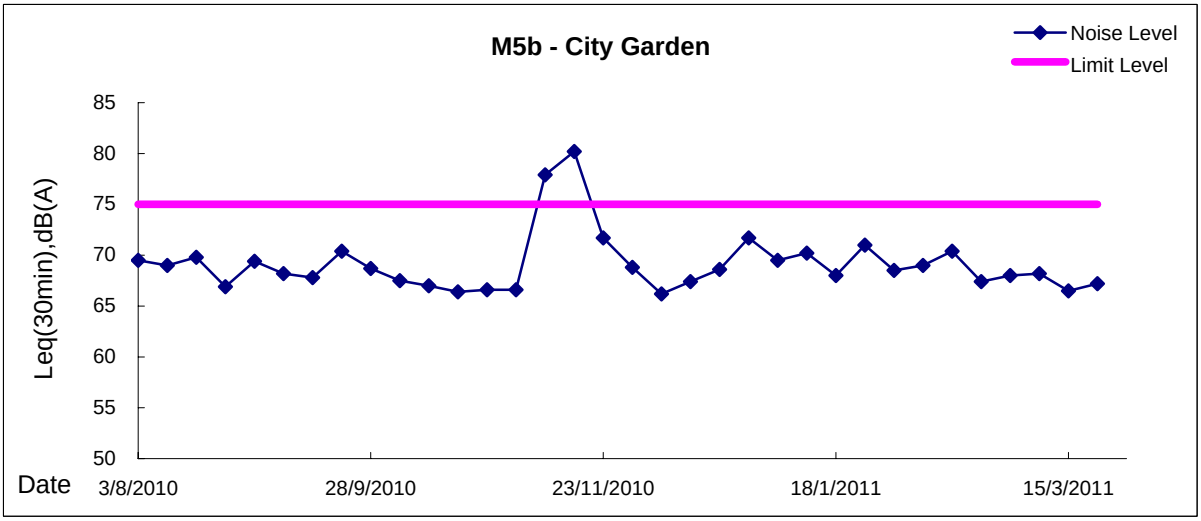
Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)						
1/3/2011	20:24	Fine	66.2	68.2	63.7	65.6	-	66	70
	20:29		65.0	66.7	62.8				
	20:34		65.6	67.1	63.8				
8/3/2011	20:21	Fine	65.7	67.8	63.1	65.6	-	66	70
	20:26		66.0	68.6	62.3				
	20:31		65.0	67.0	62.7				
15/3/2011	20:22	Fine	65.7	67.9	62.9	65.1	-	65	70
	20:27		64.3	65.8	62.1				
	20:32		65.2	67.8	62.0				
24/3/2011	19:57	Fine	67.2	68.5	65.8	67.5	-	67	70
	20:02		67.9	69.6	66.2				
	20:07		67.3	68.5	65.5				

Graphic Presentation of Noise Monitoring Result

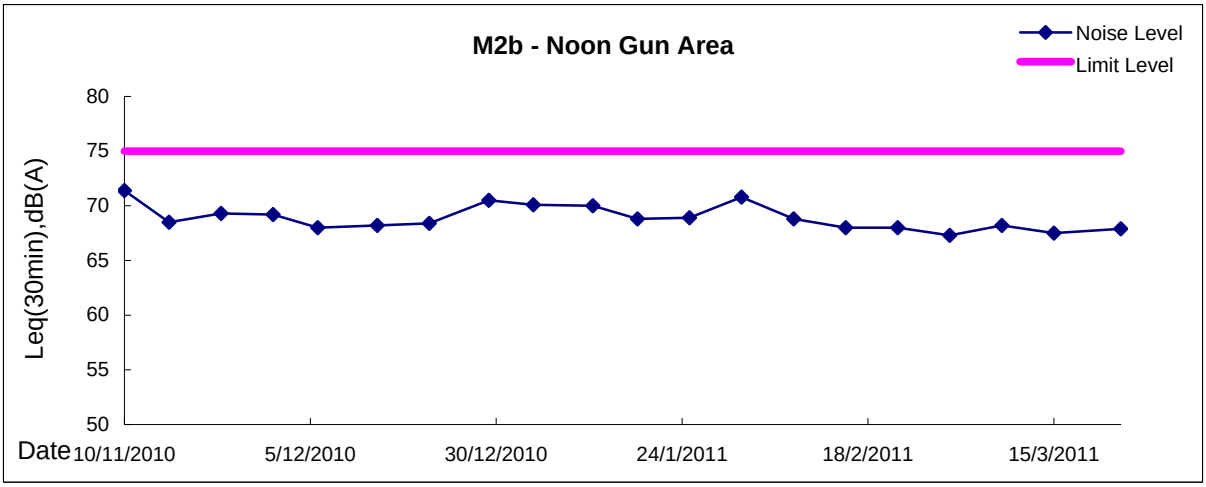
Day Time (0700 - 1900hrs on normal weekdays)

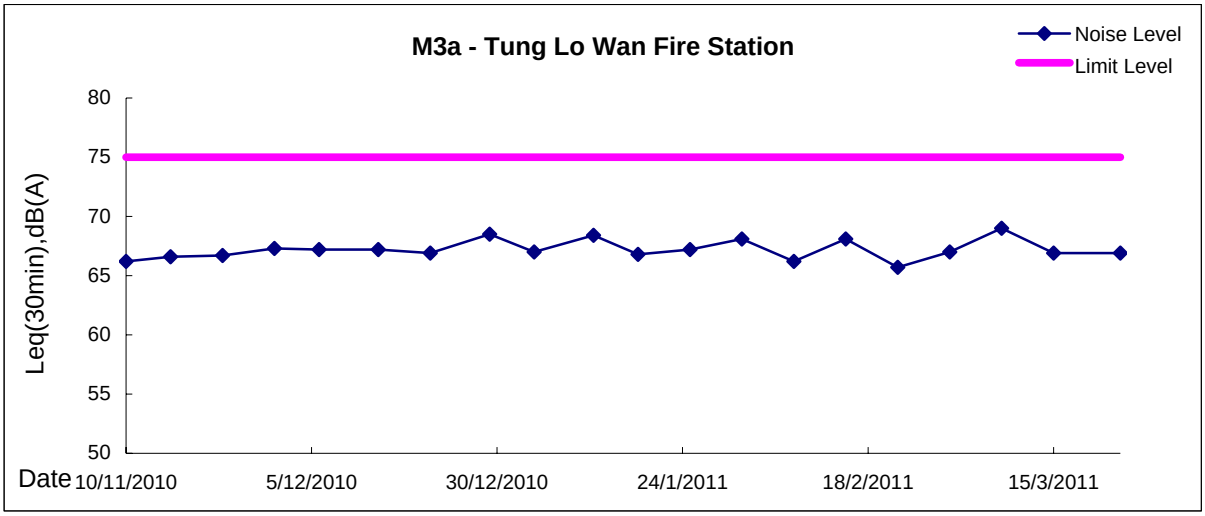






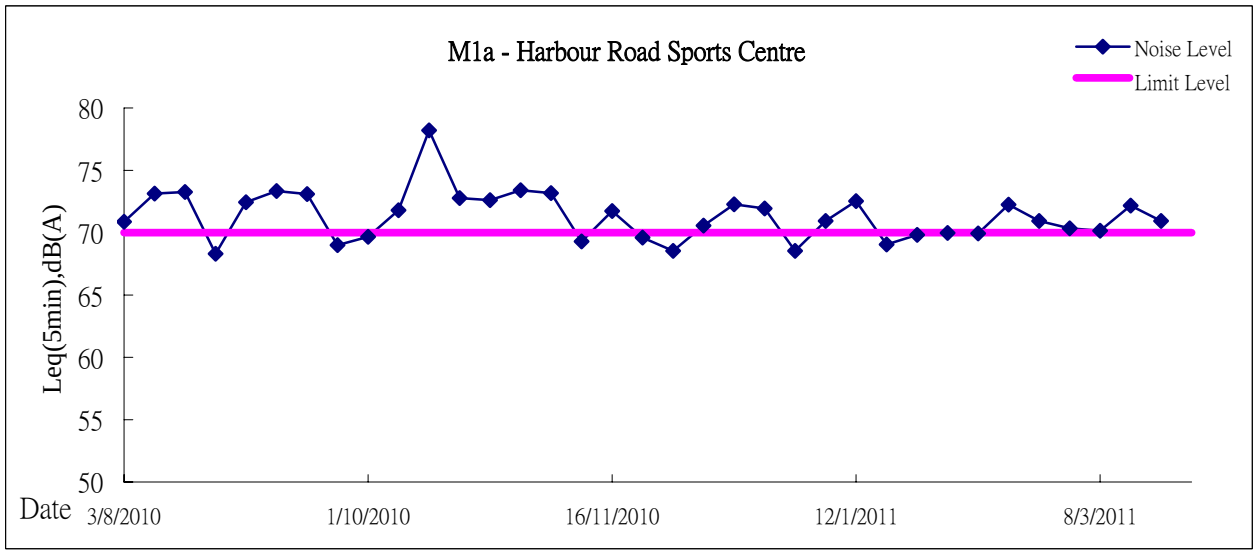
Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)

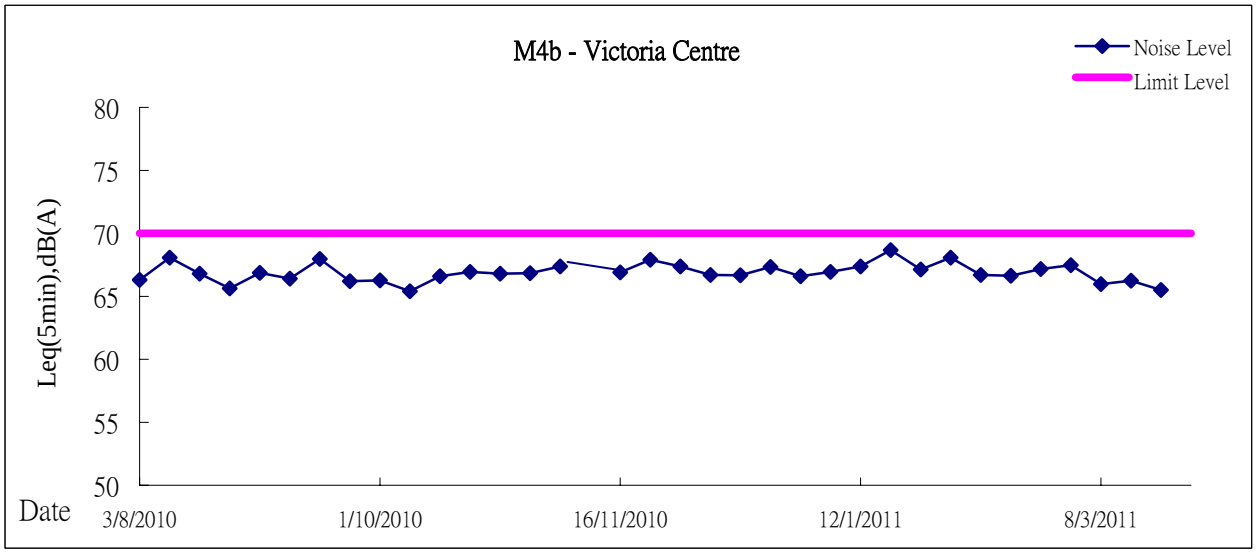


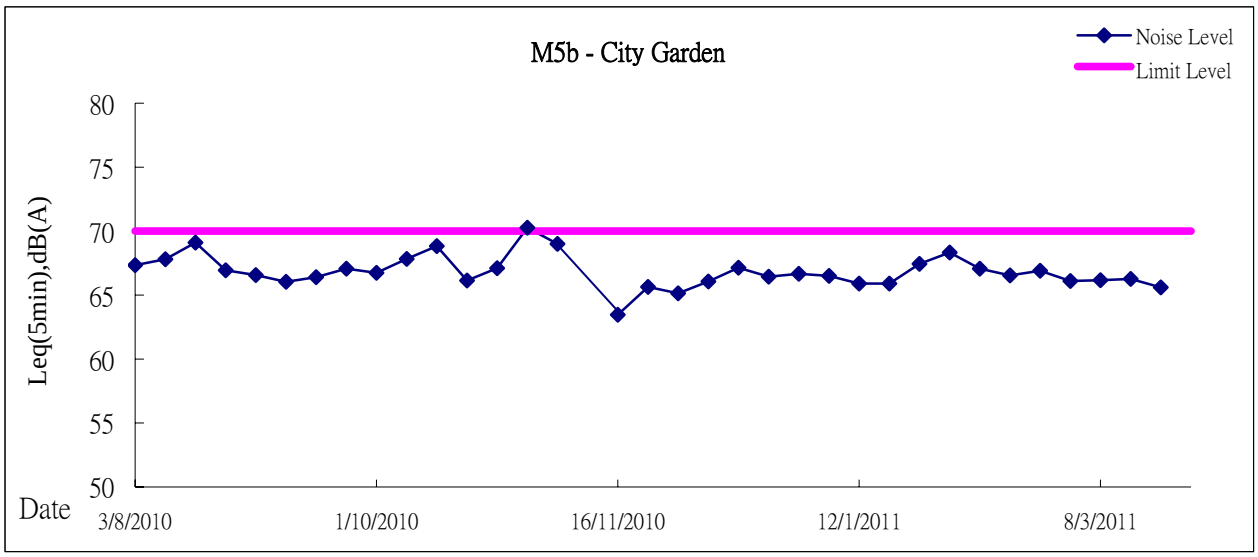


Graphic Presentation of Noise Monitoring Result

Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)

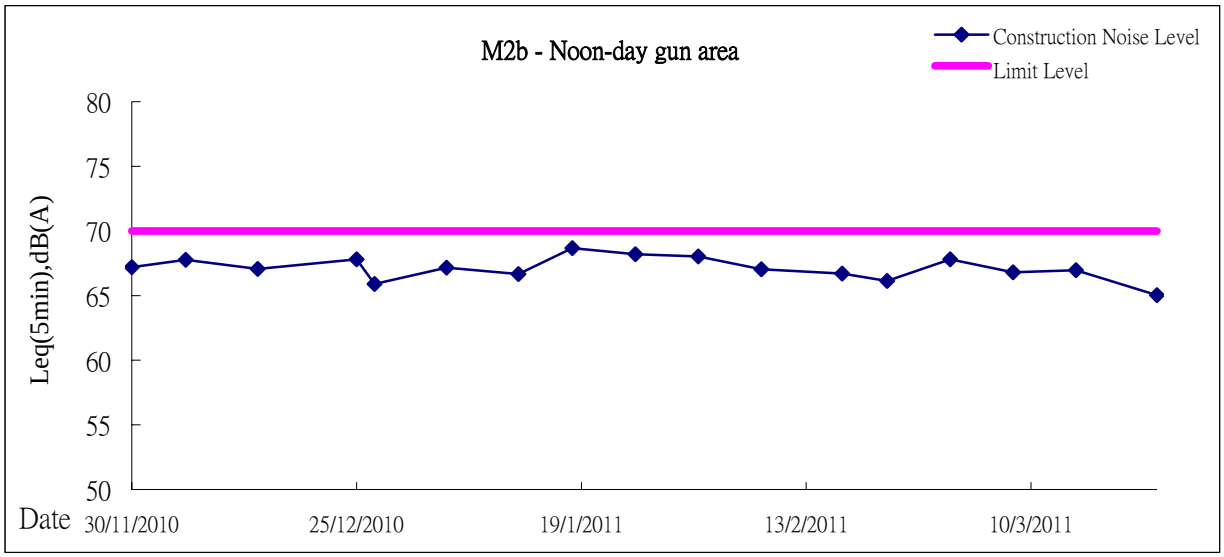


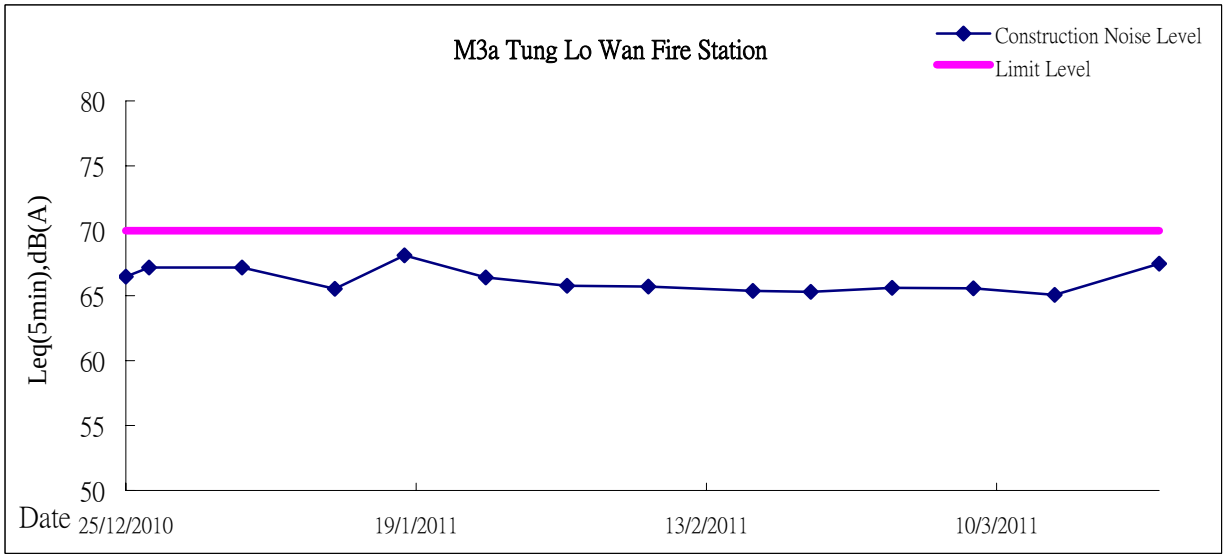




Graphic Presentation of Noise Monitoring Result

Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)





Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations

Location: CMA1b - Oil St Community Liaison Centre

Report on 24-hour TSP monitoring

Action Level (μg/m3) - 176.7

Limit Level (μg/m3) - 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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
03-Mar-11	08:00	Fine	202243	2.7850	2.9998	9289.43	9313.43	24.00	1.20	1.20	1.20	1725	125
09-Mar-11	08:00	Cloudy	000025	2.6203	2.8322	8964.80	8988.80	24.00	1.21	1.21	1.21	1738	122
15-Mar-11	08:00	Cloudy	000146	2.7432	2.9632	8991.80	9015.79	23.99	1.25	1.26	1.25	1805	122
21-Mar-11	08:00	Sunny	000148	2.7673	2.9066	9018.79	9042.79	24.00	1.24	1.24	1.24	1790	78
26-Mar-11	08:00	Hazy	000042	2.6357	2.8773	9045.79	9069.79	24.00	0.99	0.99	0.99	1419	170

Report on 1-hour TSP monitoring

Action Level (μg/m3) - 320.1

Limit Level (μg/m3) - 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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
04-Mar-11	15:00	Fine	000056	2.7805	2.7949	9313.43	9314.43	1.00	1.20	1.20	1.20	72	200
04-Mar-11	16:00	Fine	000057	2.7916	2.8044	9314.43	9315.43	1.00	1.20	1.20	1.20	72	178
04-Mar-11	17:00	Fine	000058	2.8005	2.8101	9315.43	9316.43	1.00	1.20	1.20	1.20	72	134
10-Mar-11	08:15	Cloudy	000028	2.6246	2.6338	8988.80	8989.80	1.00	1.20	1.20	1.20	72	127
10-Mar-01	09:50	Cloudy	000112	2.8032	2.8169	8989.80	8990.80	1.00	1.20	1.20	1.20	72	190
10-Mar-11	13:00	Cloudy	000142	2.7654	2.7747	8990.80	8991.80	1.00	1.12	1.12	1.12	67	139
16-Mar-11	10:32	Sunny	000196	2.7545	2.7675	9015.79	9016.79	1.00	1.21	1.21	1.21	73	179
16-Mar-11	15:35	Sunny	000069	2.7969	2.8087	9016.79	9017.79	1.00	1.20	1.21	1.20	72	163
16-Mar-11	16:48	Sunny	000070	2.7969	2.8103	9017.79	9018.79	1.00	1.21	1.21	1.21	72	185
22-Mar-11	08:30	Hazy	000076	2.7778	2.7899	9042.79	9043.79	1.00	1.19	1.19	1.19	72	169
22-Mar-11	09:35	Hazy	000074	2.7876	2.8089	9043.79	9044.79	1.00	1.19	1.19	1.19	72	298
22-Mar-11	10:40	Hazy	000072	2.7859	2.8001	9044.79	9045.79	1.00	1.19	1.19	1.19	72	199

Location: CMA2a - Causeway Bay Community Centre

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

Date	Sampling 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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
03-Mar-11	08:00	Fine	202233	2.7699	3.0450	13419.99	13443.99	24.00	1.50	1.50	1.50	2163	127
09-Mar-11	08:00	Cloudy	000062	2.7861	2.9776	13446.99	13470.99	24.00	1.54	1.54	1.54	2212	87
15-Mar-11	08:00	Cloudy	000145	2.7597	2.9951	13475.00	13499.00	24.00	1.47	1.50	1.49	2143	110
21-Mar-11	08:00	Sunny	000136	2.7861	2.9120	13502.00	13526.00	24.00	1.44	1.43	1.43	2065	61
26-Mar-11	08:00	Hazy	000041	2.6362	2.8994	13529.00	13553.00	24.00	1.44	1.44	1.44	2072	127

Report on 1-hour TSP monitoring
Action Level (μg/m3) - 323.4
Limit Level (μg/m3) - 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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
04-Mar-11	14:42	Fine	000065	2.7814	2.7959	13443.99	13444.99	1.00	1.50	1.50	1.50	90	161
04-Mar-11	15:28	Fine	000064	2.7873	2.8015	13444.99	13445.99	1.00	1.50	1.50	1.50	90	157
04-Mar-11	16:34	Fine	000063	2.7887	2.7999	13445.99	13446.99	1.00	1.50	1.50	1.50	90	124
10-Mar-11	08:00	Cloudy	000113	2.8153	2.8254	13470.99	13471.99	1.00	1.51	1.51	1.51	91	112
10-Mar-11	10:00	Cloudy	000111	2.8063	2.8194	13471.99	13472.99	1.00	1.51	1.51	1.51	91	145
10-Mar-11	13:00	Cloudy	000143	2.7617	2.7702	13474.00	13475.00	1.00	1.51	1.51	1.51	90	94
16-Mar-11	10:28	Sunny	000195	2.7350	2.7583	13499.00	13500.00	1.00	1.46	1.46	1.46	88	266
16-Mar-11	15:45	Sunny	000135	2.8116	2.8238	13500.00	13501.00	1.00	1.45	1.46	1.45	87	140
16-Mar-11	16:57	Sunny	000139	2.8168	2.8307	13501.00	13502.00	1.00	1.46	1.46	1.46	87	159
22-Mar-11	08:40	Hazy	000075	2.7930	2.8064	13526.00	13527.00	1.00	1.44	1.44	1.44	87	155
22-Mar-11	09:48	Hazy	000073	2.7942	2.8184	13527.00	13528.00	1.00	1.44	1.44	1.44	87	279
22-Mar-11	10:50	Hazy	000071	2.8010	2.8122	13528.00	13529.00	1.00	1.44	1.44	1.44	87	129

Location: CMA3a - CWB PRE Site Office Area

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

Date	Sampling 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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
15-Mar-11	08:00	Cloudy	000087	2.8087	3.0709	9273.59	9297.59	24.00	1.24	1.25	1.24	1786	147
21-Mar-11	08:00	Sunny	000082	2.8254	2.9682	9300.59	9324.59	24.00	1.43	1.43	1.43	2058	69

Report on 1-hour TSP monitoring
Action Level (μg/m3) - 311.3
Limit Level (μg/m3) - 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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
16-Mar-11	08:00	Sunny	000089	2.8047	2.8190	9297.59	9298.59	1.00	1.46	1.46	1.46	88	163
16-Mar-11	09:15	Sunny	000102	2.7910	2.8061	9298.59	9299.59	1.00	1.32	1.32	1.32	79	190
16-Mar-11	10:30	Sunny	000083	2.8047	2.8190	9299.59	9300.59	1.00	1.51	1.56	1.54	92	155
22-Mar-11	09:35	Hazy	000204	2.7465	2.7724	9324.59	9325.59	1.00	1.47	1.47	1.47	88	294
22-Mar-11	10:51	Hazy	000029	2.6326	2.6431	9325.59	9326.59	1.00	1.47	1.47	1.47	88	119
22-Mar-11	13:00	Hazy	000060	2.7860	2.7971	9326.59	9327.59	1.00	1.47	1.47	1.47	88	126

Location: CMA4a - SPCA

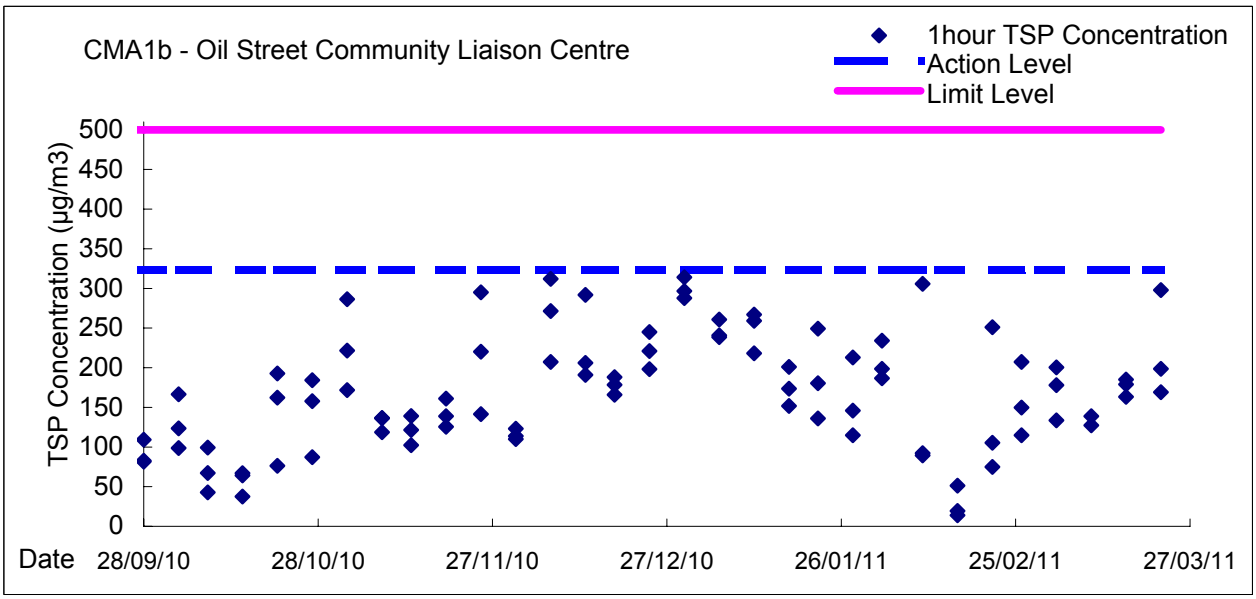
Report on 24-hour TSP monitoring
Action Level (μg/m3) - 171.2
Limit Level (μg/m3) - 260

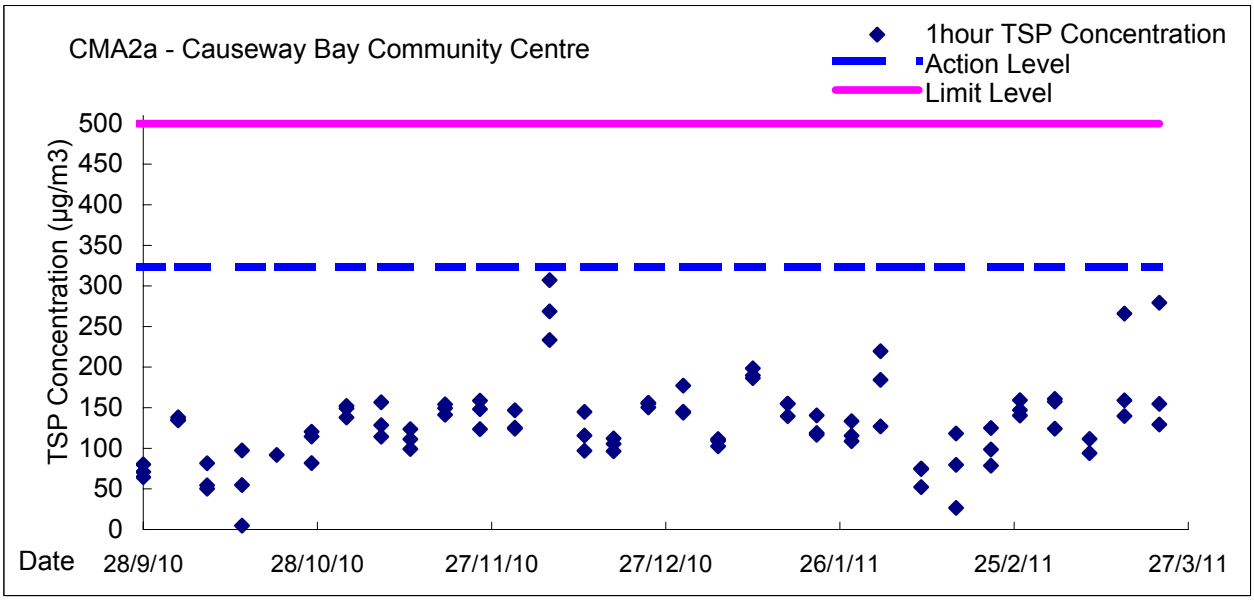
Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
03-Mar-11	08:00	Fine	202210	2.7919	3.0694	12766.86	12790.86	24.00	1.45	1.45	1.45	2091	133
10-Mar-11	16:30	Cloudy	000147	2.7722	2.9986	12815.10	12839.09	23.99	1.38	1.38	1.38	1988	114
15-Mar-11	08:00	Cloudy	000109	2.8252	3.0296	12838.49	12862.49	24.00	1.37	1.39	1.38	1986	103
21-Mar-11	08:00	Hazy	000077	2.8109	2.9173	12889.49	12913.49	24.00	1.34	1.34	1.34	1933	55
26-Mar-11	08:00	Hazy	000040	2.6284	2.8694	12916.49	12940.49	24.00	1.41	1.41	1.41	2034	118

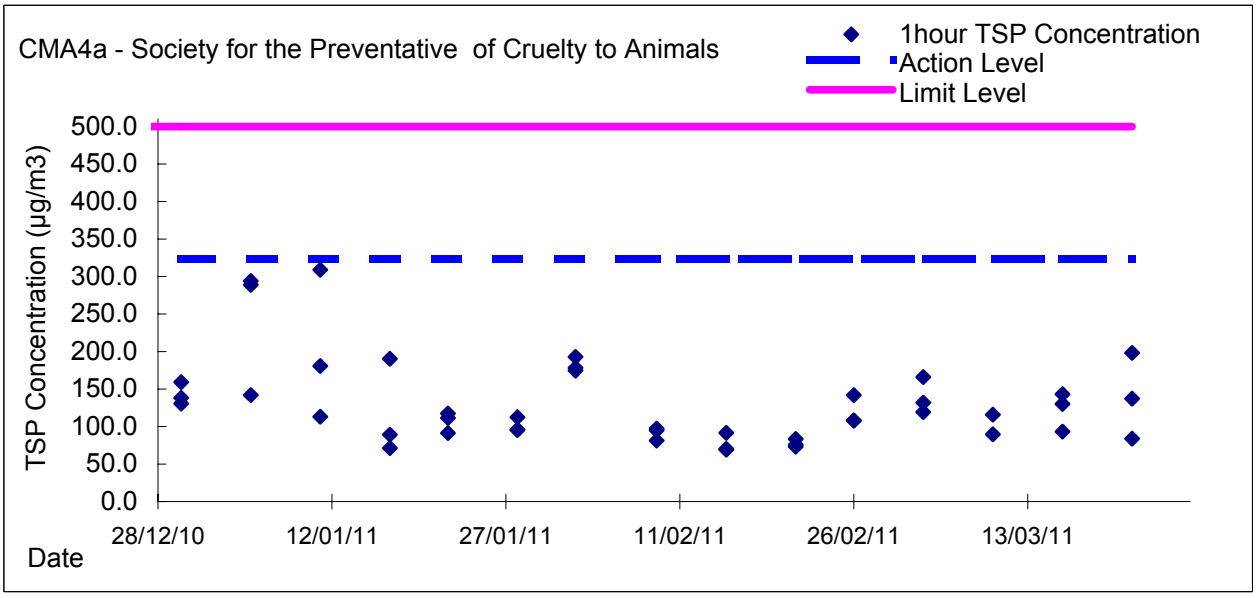
Report on 1-hour TSP monitoring
Action Level (μg/m3) - 312.5
Limit Level (μg/m3) - 500

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, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
04-Mar-11	14:00	Fine	000066	2.8076	2.8170	12790.86	12791.86	1.00	1.31	1.31	1.31	79	119
04-Mar-11	16:00	Fine	000067	2.7960	2.8091	12791.86	12792.86	1.00	1.31	1.31	1.31	79	166
04-Mar-11	17:00	Fine	000068	2.7907	2.8011	12792.86	12793.86	1.00	1.31	1.31	1.31	79	132
10-Mar-11	10:38	Cloudy	000110	2.8441	2.8537	12812.07	12813.07	1.00	1.38	1.38	1.38	83	116
10-Mar-11	13:00	Cloudy	000140	2.8130	2.8225	12813.07	12814.07	1.00	1.38	1.38	1.38	83	115
10-Mar-11	14:19	Cloudy	000108	2.8345	2.8419	12814.07	12815.07	1.00	1.38	1.38	1.38	83	90
16-Mar-11	08:15	Sunny	000088	2.7900	2.7976	12862.49	12863.49	1.00	1.36	1.36	1.36	82	93
16-Mar-11	09:35	Sunny	000086	2.8367	2.8477	12863.49	12864.49	1.00	1.41	1.41	1.41	85	130
16-Mar-11	10:45	Sunny	000084	2.7927	2.8048	12864.49	12865.49	1.00	1.41	1.41	1.41	84	143
22-Mar-11	09:20	Hazy	000203	2.7377	2.7533	12913.49	12914.49	1.00	1.31	1.31	1.31	79	198
22-Mar-11	10:37	Hazy	000207	2.7480	2.7588	12914.49	12915.49	1.00	1.31	1.31	1.31	79	137
22-Mar-11	13:00	Hazy	000061	2.7889	2.7955	12915.49	12916.49	1.00	1.31	1.31	1.31	79	84

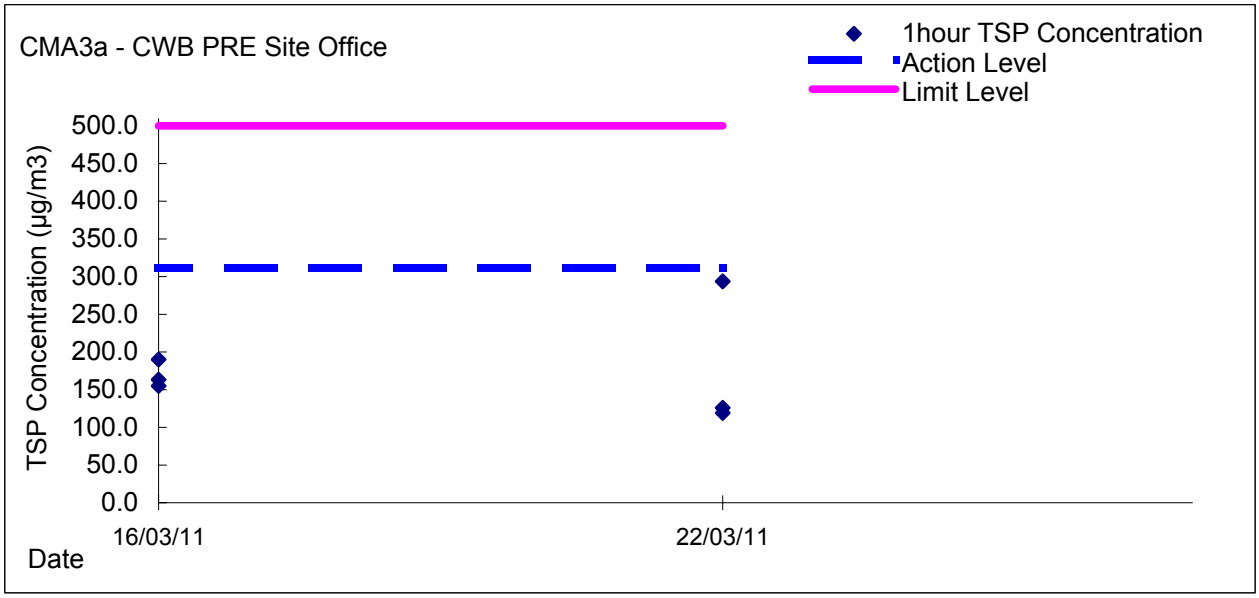
Graphic Presentation of 1 hour TSP Result



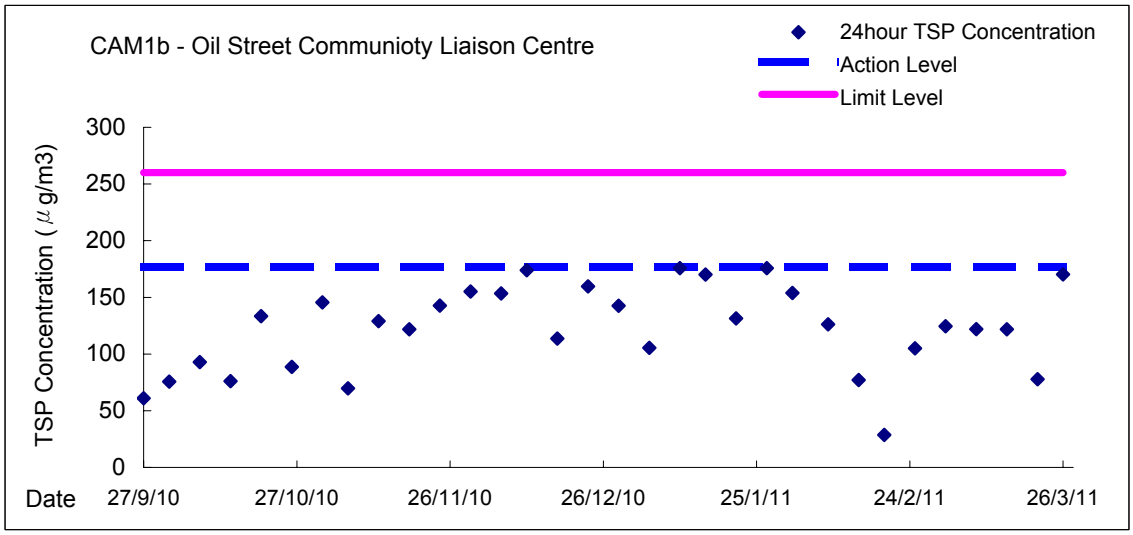


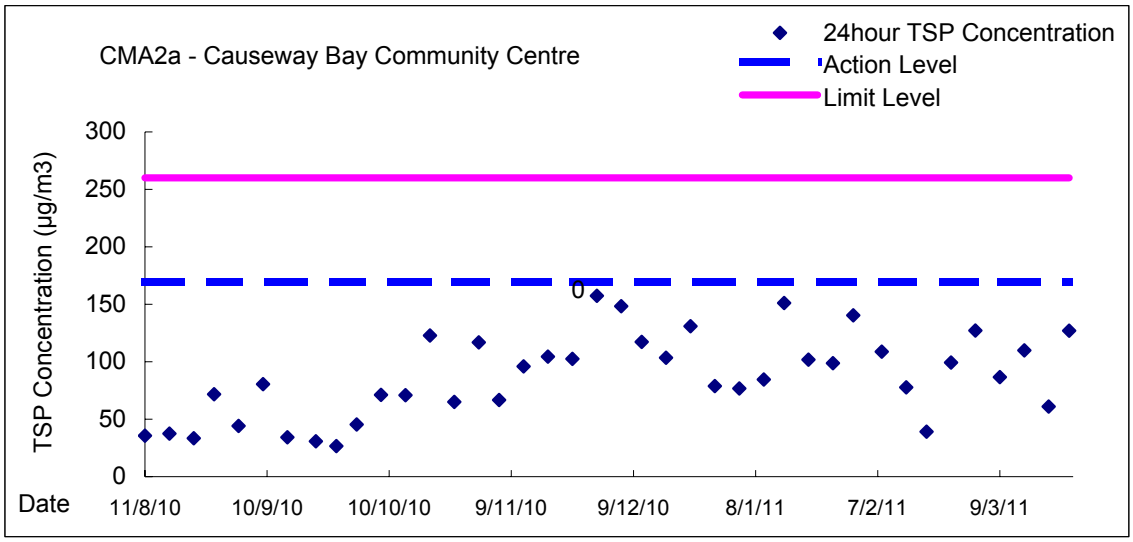


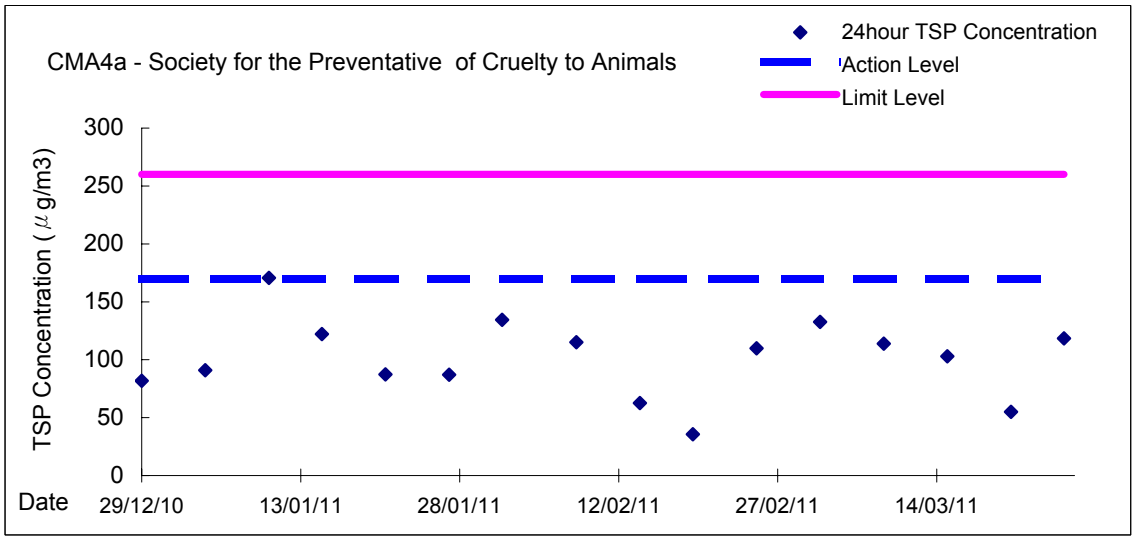
Graphic Presentation of 1 hour TSP Result



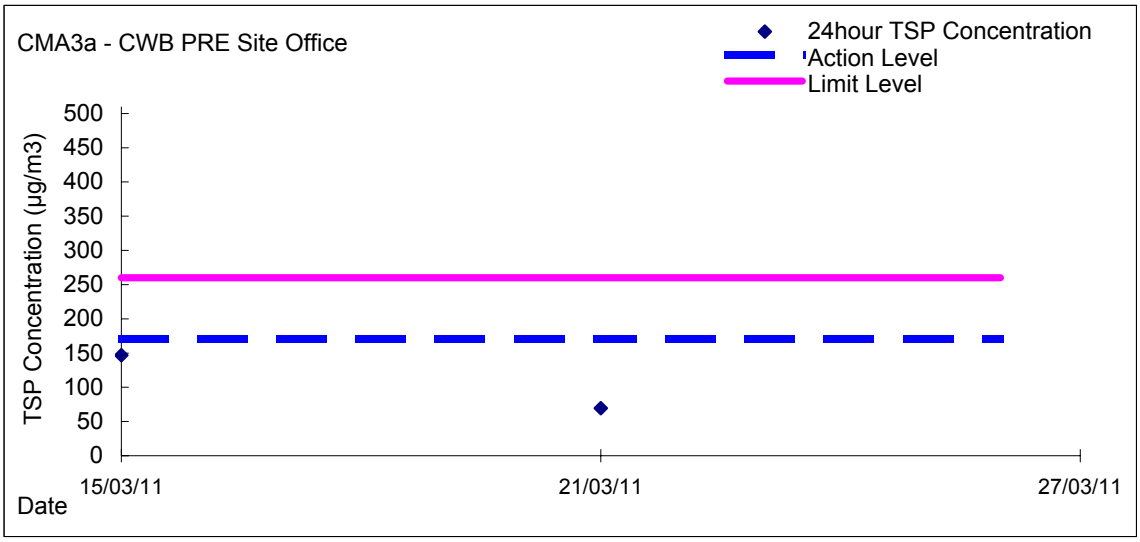
Graphic Presentation of 24 hour TSP Result







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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	14:03	Fine	Middle	3.0	18.30	18.30	18.55	8.04	8.04	8.05	31.77	31.77	31.77	101.5	100.5	100.9	7.77	7.68	7.70	2.30	2.46	2.24	2	2.50
	14:06		Middle	3.0	18.80	18.80		8.05	8.05		31.76	31.76		101.2	100.2		7.71	7.63		1.99	2.20		3	
2/3/2011	14:33	Fine	Middle	3.0	17.10	17.10	17.30	7.97	7.97	8.00	31.70	31.70	31.64	96.2	95.7	96.0	7.61	7.57	7.59	1.91	2.23	2.09	3	3.50
	14:37		Middle	3.0	17.50	17.50		8.03	8.03		31.57	31.57		96.5	95.6		7.63	7.56		2.40	1.83		4	
4/3/2011	17:03	Cloudy	Middle	2.5	16.94	16.94	16.95	8.37	8.37	8.38	30.94	30.94	30.94	86.8	88.9	89.6	6.97	7.13	7.17	2.38	2.06	2.22	3	3.00
	17:07		Middle	2.5	16.96	16.96		8.38	8.38		30.94	30.94		89.7	92.9		7.10	7.46		2.21	2.24		3	
7/3/2011	18:05	Cloudy	Middle	2.0	17.59	17.59	17.67	7.71	7.71	7.70	30.91	30.91	30.88	86.5	82.9	87.1	6.85	6.56	6.89	2.50	2.42	2.63	3	4.00
	18:08		Middle	2.0	17.74	17.74		7.69	7.69		30.85	30.85		89.6	89.4		7.09	7.07		2.72	2.87		5	
9/3/2011	6:26	Cloudy	Middle	2.5	15.42	15.42	15.43	8.35	8.35	8.35	29.72	29.72	29.72	87.3	83.5	88.1	7.23	6.95	7.32	2.09	2.34	2.24	3	4.00
	6:28		Middle	2.5	15.43	15.43		8.35	8.36		29.72	29.72		90.7	90.7		7.55	7.55		2.31	2.21		5	
11/3/2011	6:36	Cloudy	Middle	2.5	16.80	16.80	16.80	7.99	7.99	7.98	32.08	32.08	32.08	85.8	88.9	87.3	6.95	7.10	7.01	2.36	2.29	2.46	3	4.00
	6:40		Middle	2.5	16.80	16.80		7.96	7.96		32.08	32.08		88.1	86.5		7.03	6.95		2.44	2.76		5	
13/3/2011	7:15	Sunny	Middle	2.5	20.00	20.00	20.05	7.74	7.74	7.74	32.06	32.06	32.06	81.7	81.4	81.8	6.06	6.03	6.08	1.75	1.73	1.92	3	3.00
	7:18		Middle	2.5	20.10	20.10		7.74	7.74		32.06	32.06		80.0	84.2		5.96	6.26		2.07	2.13		3	
16/3/2011	14:07	Fine	Middle	3.0	17.90	17.90	17.90	8.10	8.10	8.09	32.77	32.77	32.77	95.1	94.3	94.5	7.42	7.36	7.38	2.33	2.77	2.38	4	4.00
	14:12		Middle	3.0	17.90	17.90		8.08	8.08		32.76	32.76		94.4	94.2		7.37	7.35		2.22	2.21		4	
18/3/2011	15:47	Cloudy	Middle	2.5	17.40	17.40	17.45	8.12	8.12	8.11	32.95	32.95	32.95	89.9	89.2	89.7	7.12	7.07	7.11	2.59	2.83	2.90	5	4.50
	15:50		Middle	2.5	17.50	17.50		8.10	8.10		32.95	32.95		90.2	89.4		7.17	7.09		3.18	2.98		4	
21/3/2011	18:20	Cloudy	Middle	2.0	20.00	20.00	20.00	7.87	7.87	7.87	32.61	32.61	32.61	83.2	79.0	80.9	6.20	5.93	6.05	3.21	2.88	3.23	5	5.50
	18:24		Middle	2.0	20.00	20.00		7.86	7.86		32.61	32.62		80.7	80.6		6.05	6.03		3.67	3.16		6	
23/3/2011	6:24	Cloudy	Middle	2.5	17.40	17.40	17.40	7.84	7.84	7.84	32.74	32.74	32.74	74.1	75.7	75.0	5.84	5.97	5.92	2.50	2.27	2.51	4	4.00
	6:26		Middle	2.5	17.40	17.40		7.84	7.84		32.74	32.74		76.0	74.3		6.00	5.86		2.81	2.47		4	
25/3/2011	7:16	Cloudy	Middle	2.0	17.10	17.10	17.10	7.92	7.92	7.92	32.82	32.82	32.82	84.2	85.0	84.1	6.43	6.74	6.58	3.05	2.62	2.88	3	3.50
	7:18		Middle	2.0	17.10	17.10		7.92	7.92		32.82	32.82		83.7	83.6		6.63	6.53		2.73	3.12		4	

Water Monitoring Result at WSD10 - Cha Kwo Ling
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
28/2/2011	14:27	Fine	Middle	3.0	17.50	17.50	17.65	8.09	8.09	8.09	31.76	31.76	31.76	102.1	101.1	101.2	8.00	7.90	7.89	2.46	2.38	2.40	6	5.00
	14:30		Middle	3.0	17.80	17.80		8.09	8.09		31.76	31.76		101.2	100.4		7.87	7.80		2.49	2.27		4	
2/3/2011	15:00	Fine	Middle	3.0	17.00	17.00	17.20	8.09	8.09	8.09	31.89	31.89	31.81	99.8	99.1	99.5	7.87	7.79	7.81	1.66	1.55	1.64	4	4.00
	15:03		Middle	3.0	17.40	17.40		8.09	8.09		31.73	31.73		99.6	99.4		7.80	7.78		1.64	1.70		4	
4/3/2011	16:31	Cloudy	Middle	2.5	16.84	16.84	16.84	8.46	8.46	8.46	31.02	31.02	31.02	91.2	85.5	89.4	7.33	6.88	7.19	1.87	1.84	2.10	7	7.00
	16:34		Middle	2.5	16.84	16.84		8.46	8.46		31.02	31.02		93.9	87.0		7.55	7.00		2.28	2.41		7	
7/3/2011	17:18	Cloudy	Middle	2.0	17.33	17.33	17.33	7.68	7.68	7.68	30.90	30.90	30.91	89.9	88.2	90.9	7.07	7.03	7.24	3.92	4.01	3.86	10	9.00
	17:21		Middle	2.0	17.32	17.32		7.67	7.67		30.91	30.91		90.6	94.8		7.22	7.65		3.77	3.73		8	
9/3/2011	5:29	Cloudy	Middle	2.5	15.31	15.31	15.37	8.35	8.34	8.35	30.55	30.55	30.66	97.5	98.1	97.5	7.91	7.96	7.92	2.36	2.29	2.49	5	5.00
	5:32		Middle	2.5	15.43	15.43		8.35	8.35		30.77	30.77		98.6	95.9		8.00	7.79		2.69	2.63		5	
11/3/2011	5:56	Cloudy	Middle	2.5	16.70	16.70	16.70	7.94	7.94	7.94	32.36	32.36	32.37	84.4	89.0	88.4	6.67	7.11	7.03	2.42	2.38	2.29	4	3.50
	6:00		Middle	2.5	16.70	16.70		7.94	7.94		32.37	32.37		91.1	89.2		7.22	7.13		2.12	2.23		3	
13/3/2011	6:57	Sunny	Middle	2.5	19.50	19.50	19.50	7.84	7.84	7.84	32.38	32.38	32.38	82.0	81.2	82.2	6.19	6.13	6.22	2.05	2.50	2.33	5	5.50
	7:00		Middle	2.5	19.50	19.50		7.84	7.84		32.38	32.38		82.5	83.2		6.23	6.31		2.44	2.31		6	
16/3/2011	15:32	Fine	Middle	3.0	18.20	18.20	18.20	7.99	7.99	7.99	33.17	33.17	33.15	94.3	93.7	94.1	7.36	7.32	7.35	2.22	2.41	2.36	4	3.50
	15:37		Middle	3.0	18.20	18.20		7.99	7.99		33.12	33.12		94.6	93.8		7.39	7.33		2.45	2.34		3	
18/3/2011	16:19	Cloudy	Middle	2.5	17.40	17.40	17.40	8.06	8.06	8.06	33.12	33.12	33.12	94.2	93.0	93.3	7.42	7.33	7.36	2.82	2.78	2.74	5	6.00
	16:23		Middle	2.5	17.40	17.40		8.05	8.05		33.12	33.12		93.2	92.9		7.35	7.33		2.70	2.67		7	
21/3/2011	17:03	Cloudy	Middle	2.0	20.90	20.90	20.90	7.89	7.89	7.89	32.24	32.24	32.24	81.3	81.9	80.5	6.01	6.03	5.69	4.90	4.58	4.63	9	8.50
	17:06		Middle	2.0	20.90	20.90		7.89	7.89		32.24	32.24		79.2	79.4		5.35	5.36		4.32	4.72		8	
23/3/2011	5:27	Cloudy	Middle	2.0	18.10	18.10	18.10	7.77	7.77	7.78	32.82	32.82	32.82	78.1	77.9	79.6	6.07	6.05	6.18	2.70	2.62	2.70	5	5.50
	5:29		Middle	2.0	18.10	18.10		7.79	7.79		32.82	32.82		80.9	81.4		6.28	6.32		2.73	2.74		6	
25/3/2011	6:40	Cloudy	Middle	2.0	17.60	17.60	17.60	7.67	7.67	7.70	32.46	32.46	32.46	84.9	85.1	84.6	7.02	6.73	6.82	3.50	3.21	3.45	3	3.50
	6:43		Middle	2.0	17.60	17.60		7.67	7.77		32.46	32.46		84.4	84.0		6.86	6.66		3.54	3.53		4	

Water Monitoring Result at WSD15 - Sai Wan Ho
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
28/2/2011	14:52	Fine	Middle	3.0	18.90	18.90	19.00	8.08	8.08	8.08	31.69	31.69	31.65	100.5	99.3	99.7	7.70	7.60	7.62	1.54	1.47	1.49	5	4.00
	14:55		Middle	3.0	19.10	19.10		8.07	8.07		31.60	31.60		100.0	99.0		7.63	7.56		1.39	1.54		3	
2/3/2011	15:25	Fine	Middle	3.0	16.80	16.80	16.90	8.11	8.11	8.11	31.71	31.71	31.71	96.5	95.1	95.9	7.71	7.59	7.65	2.27	2.09	2.22	6	5.50
	15:28		Middle	3.0	17.00	17.00		8.10	8.10		31.71	31.71		96.6	95.2		7.70	7.58		2.50	2.02		5	
4/3/2011	20:36	Cloudy	Middle	3.0	16.09	16.09	16.11	8.46	8.46	8.46	31.16	31.16	31.16	87.2	90.9	88.8	7.11	7.41	7.24	3.61	3.76	3.69	4	5.00
	20:39		Middle	3.0	16.12	16.12		8.46	8.46		31.16	31.16		88.8	88.4		7.23	7.19		3.58	3.79		6	
7/3/2011	22:16	Cloudy	Middle	2.5	16.44	16.44	16.44	8.26	8.25	8.26	31.27	31.27	31.27	98.5	90.0	91.8	7.97	7.25	7.42	3.80	3.74	3.62	6	7.00
	22:19		Middle	2.5	16.44	16.44		8.26	8.26		31.27	31.27		90.6	88.0		7.33	7.12		3.55	3.37		8	
9/3/2011	10:05	Cloudy	Middle	3.0	15.63	15.63	15.61	8.33	8.33	8.33	31.51	31.51	31.55	83.0	84.8	85.2	6.82	6.97	7.05	4.70	4.50	4.68	8	7.00
	10:08		Middle	3.0	15.59	15.59		8.33	8.33		31.58	31.58		80.7	92.4		6.80	7.60		4.98	4.55		6	
11/3/2011	10:24	Cloudy	Middle	3.0	17.00	17.00	17.00	7.95	7.95	7.95	32.56	32.56	32.56	90.2	84.1	87.1	7.15	6.72	6.92	3.86	3.84	4.17	5	6.00
	10:28		Middle	3.0	17.00	17.00		7.95	7.95		32.56	32.56		88.3	85.6		7.01	6.78		4.46	4.50		7	
13/3/2011	12:00	Sunny	Middle	3.5	19.30	19.30	19.20	7.78	7.78	7.79	32.16	32.16	32.16	82.8	84.5	82.8	6.33	6.46	6.33	2.07	1.83	1.78	4	4.00
	12:04		Middle	3.5	19.10	19.10		7.79	7.79		32.16	32.16		83.0	81.0		6.32	6.19		1.54	1.68		4	
16/3/2011	15:07	Fine	Middle	3.0	18.00	18.00	18.00	7.97	7.97	7.98	32.98	32.98	33.00	94.2	93.2	93.9	7.31	7.23	7.29	2.18	1.99	2.03	4	3.50
	15:10		Middle	3.0	18.00	18.00		7.98	7.98		33.02	33.02		94.5	93.8		7.34	7.28		1.92	2.01		3	
18/3/2011	16:43	Cloudy	Middle	2.5	17.40	17.40	17.30	7.99	7.99	8.04	33.19	33.19	33.19	90.8	90.0	90.5	7.16	7.10	7.15	5.41	5.32	5.07	6	6.50
	16:47		Middle	2.5	17.20	17.20		8.08	8.08		33.18	33.18		91.1	90.2		7.19	7.13		4.69	4.84		7	
21/3/2011	21:25	Cloudy	Middle	3.0	19.70	19.70	19.70	7.91	7.91	7.91	33.02	33.02	33.02	86.0	83.6	85.2	6.45	6.28	6.39	7.72	6.95	7.32	6	6.50
	21:28		Middle	3.0	19.70	19.70		7.91	7.91		33.02	33.01		86.1	85.0		6.47	6.34		7.14	7.46		7	
23/3/2011	10:27	Cloudy	Middle	3.5	17.60	17.60	17.60	7.97	7.97	7.97	33.15	33.15	33.15	82.1	82.8	82.9	6.43	6.48	6.49	5.52	5.06	5.36	9	8.50
	10:30		Middle	3.5	17.60	17.60		7.97	7.97		33.14	33.14		82.2	84.4		6.44	6.61		5.17	5.69		8	
25/3/2011	11:49	Cloudy	Middle	3.0	18.70	18.70	18.70	7.94	7.94	7.94	33.26	33.26	33.26	84.6	86.8	84.8	6.48	6.65	6.52	4.19	4.22	4.16	7	8.00
	11:52		Middle	3.0	18.70	18.70		7.94	7.94		33.26	33.26		85.1	82.6		6.52	6.43		4.14	4.07		9	

Water Monitoring Result at WSD17 - Quarry Bay
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
28/2/2011	15:18	Fine	Middle	3.0	18.20	18.20	18.25	8.03	8.03	8.03	31.50	31.50	31.50	94.8	93.8	94.3	7.39	7.31	7.35	2.24	2.36	2.32	5	4.00
	15:21		Middle	3.0	18.30	18.30		8.03	8.03		31.49	31.49		95.0	93.6		7.40	7.29		2.37	2.31		3	
2/3/2011	15:48	Fine	Middle	3.0	16.80	16.80	16.95	8.06	8.06	8.06	31.74	31.74	31.68	93.2	92.1	92.7	7.44	7.34	7.38	2.72	3.00	2.82	4	4.00
	15:54		Middle	3.0	17.10	17.10		8.06	8.06		31.61	31.61		93.0	92.5		7.40	7.34		2.55	3.00		4	
4/3/2011	20:17	Cloudy	Middle	3.5	16.53	16.53	16.64	8.48	8.48	8.48	31.05	31.05	31.05	97.1	98.4	96.2	7.82	7.92	7.74	2.41	2.07	2.45	5	5.50
	20:20		Middle	3.5	16.74	16.74		8.47	8.47		31.05	31.05		98.1	91.0		7.90	7.33		2.61	2.70		6	
7/3/2011	21:54	Cloudy	Middle	2.5	16.86	16.86	16.86	8.19	8.19	8.19	31.21	31.21	31.21	90.9	97.9	95.8	7.00	7.85	7.61	4.13	3.82	3.97	11	10.00
	21:56		Middle	2.5	16.86	16.86		8.19	8.19		31.20	31.20		97.1	97.1		7.79	7.79		3.96	3.95		9	
9/3/2011	9:12	Cloudy	Middle	3.0	15.81	15.81	15.81	8.33	8.33	8.31	31.62	31.62	31.62	93.0	92.7	92.3	7.60	7.58	7.49	4.77	4.44	4.65	10	9.50
	9:14		Middle	3.0	15.80	15.80		8.29	8.29		31.61	31.61		95.3	88.0		7.59	7.20		4.71	4.69		9	
11/3/2011	9:49	Cloudy	Middle	2.5	16.50	16.50	16.53	7.94	7.94	7.94	32.45	32.45	32.45	82.7	84.5	86.1	6.58	6.76	6.94	5.08	4.63	4.74	8	9.00
	9:52		Middle	2.5	16.50	16.60		7.94	7.94		32.45	32.45		89.1	88.1		7.31	7.11		4.60	4.64		10	
13/3/2011	11:31	Sunny	Middle	3.5	18.80	18.80	18.80	7.81	7.82	7.82	32.01	32.01	32.01	82.2	87.3	83.8	6.31	6.68	6.41	2.30	2.29	2.41	5	5.00
	11:33		Middle	3.5	18.80	18.80		7.82	7.82		32.01	32.01		84.1	81.7		6.40	6.26		2.64	2.42		5	
16/3/2011	14:45	Fine	Middle	3.0	17.80	17.80	17.80	7.96	7.96	7.96	32.70	32.70	32.77	92.3	91.2	91.9	7.20	7.12	7.18	2.15	2.04	2.01	7	6.00
	14:48		Middle	3.0	17.80	17.80		7.96	7.96		32.83	32.83		92.7	91.5		7.23	7.16		1.95	1.89		5	
18/3/2011	17:07	Cloudy	Middle	2.5	17.30	17.30	17.30	8.06	8.06	8.06	33.13	33.13	33.13	93.7	93.6	93.4	7.48	7.28	7.37	6.65	6.99	6.70	10	11.00
	17:12		Middle	2.5	17.30	17.30		8.05	8.05		33.12	33.12		93.5	92.7		7.42	7.28		6.33	6.84		12	
21/3/2011	20:57	Cloudy	Middle	3.0	19.40	19.40	19.40	7.91	7.91	7.91	33.01	33.01	33.01	80.5	79.6	79.6	6.08	6.06	6.02	3.79	3.92	3.89	5	5.50
	20:59		Middle	3.0	19.40	19.40		7.91	7.91		33.00	33.00		77.4	80.7		5.86	6.09		3.92	3.92		6	
23/3/2011	9:57	Cloudy	Middle	2.5	17.70	17.70	17.70	7.93	7.93	7.93	33.02	33.02	33.02	83.3	84.3	83.0	6.58	6.60	6.52	3.86	3.63	3.77	5	6.00
	10:00		Middle	2.5	17.70	17.70		7.93	7.93		33.02	33.03		83.2	81.3		6.51	6.37		3.78	3.80		7	
25/3/2011	11:17	Cloudy	Middle	3.0	18.60	18.60	18.55	8.20	8.20	8.18	33.22	33.22	33.22	90.8	89.3	88.8	6.98	6.85	6.81	4.71	4.79	4.86	7	6.50
	11:19		Middle	3.0	18.50	18.50		8.15	8.15		33.22	33.22		86.3	88.6		6.62	6.79		5.06	4.86		6	

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	16:41	Fine	Middle	2.0	17.40	17.40	17.55	7.98	7.99	7.99	31.52	31.52	31.49	88.0	87.5	88.0	6.95	6.91	6.94	5.15	4.15	4.30	10	10.50
	16:44		Middle	2.0	17.70	17.70		7.99	7.99		31.46	31.46		88.5	88.0		6.97	6.92		4.09	3.80		11	
2/3/2011	17:45	Fine	Middle	2.0	16.40	16.40	16.45	8.09	8.09	8.09	31.49	31.49	31.45	85.7	84.4	85.3	6.97	6.80	6.87	8.46	7.72	7.61	8	7.50
	17:48		Middle	2.0	16.50	16.50		8.08	8.08		31.40	31.40		85.9	85.0		6.90	6.82		7.57	6.70		7	
4/3/2011	20:00	Cloudy	Middle	2.0	16.78	16.78	16.78	8.37	8.36	8.36	30.79	30.79	30.80	93.8	92.7	91.3	7.56	7.47	7.36	4.90	4.98	4.95	8	8.00
	20:03		Middle	2.0	16.77	16.77		8.35	8.35		30.80	30.80		89.2	89.6		7.19	7.22		5.04	4.89		8	
7/3/2011	21:25	Cloudy	Middle	2.0	17.51	17.51	17.48	8.02	8.02	8.03	30.51	30.51	30.58	76.7	77.1	74.8	6.10	6.14	5.96	4.38	4.24	4.37	6	6.50
	21:28		Middle	2.0	17.45	17.45		8.03	8.03		30.65	30.65		74.1	71.4		5.90	5.68		4.67	4.19		7	
9/3/2011	8:45	Cloudy	Middle	2.0	15.87	15.81	15.75	8.51	8.51	8.49	31.14	31.14	31.14	90.4	91.6	88.2	7.41	7.49	7.21	5.92	5.72	5.75	6	6.50
	8:47		Middle	2.0	15.62	15.70		8.46	8.46		31.14	31.14		87.3	83.3		7.14	6.81		5.78	5.59		7	
11/3/2011	9:22	Cloudy	Middle	2.0	16.60	16.60	16.65	7.90	7.90	7.87	31.87	31.87	31.87	79.1	80.6	78.4	6.35	6.46	6.29	6.47	6.07	6.37	8	9.00
	9:25		Middle	2.0	16.70	16.70		7.83	7.83		31.87	31.87		78.7	75.1		6.31	6.02		6.27	6.67		10	
13/3/2011	11:08	Sunny	Middle	2.0	18.90	18.90	18.90	7.67	7.67	7.68	31.79	31.79	31.81	69.5	72.8	71.1	5.45	5.69	5.51	8.58	8.02	7.98	14	13.00
	11:10		Middle	2.0	18.90	18.90		7.69	7.69		31.83	31.83		70.9	71.1		5.43	5.46		7.89	7.44		12	
16/3/2011	14:20	Fine	Middle	2.0	17.90	17.90	17.90	7.86	7.86	7.86	32.75	32.75	32.74	80.5	79.7	80.8	6.27	6.21	6.30	8.22	7.86	8.02	16	**17.00**
	14:23		Middle	2.0	17.90	17.90		7.86	7.86		32.73	32.73		82.0	81.0		6.40	6.33		7.90	8.10		18	
18/3/2011	17:45	Cloudy	Middle	2.0	17.40	17.40	17.40	7.92	7.92	7.93	32.92	32.92	32.93	87.1	86.6	87.2	6.85	6.82	6.84	6.15	6.96	6.67	10	10.50
	17:48		Middle	2.0	17.40	17.40		7.93	7.93		32.94	32.94		88.4	86.7		6.87	6.83		6.94	6.64		11	
21/3/2011	20:35	Cloudy	Middle	2.0	19.50	19.50	19.50	7.79	7.79	7.79	32.57	32.57	32.57	76.5	73.4	73.9	5.77	5.47	5.55	7.08	6.96	7.01	10	11.00
	20:38		Middle	2.0	19.50	19.50		7.79	7.79		32.57	32.58		70.5	75.1		5.28	5.66		7.32	6.66		12	
23/3/2011	9:28	Cloudy	Middle	2.5	17.60	17.60	17.60	7.81	7.81	7.81	32.68	32.68	32.68	69.4	72.7	72.2	5.45	5.72	5.68	4.99	4.77	5.03	8	7.00
	9:30		Middle	2.5	17.60	17.60		7.81	7.81		32.68	32.68		73.2	73.6		5.75	5.78		5.02	5.32		6	
25/3/2011	10:49	Cloudy	Middle	2.5	18.30	18.30	18.30	7.83	7.83	7.83	32.84	32.84	32.84	78.0	77.3	77.4	6.03	5.93	5.97	7.03	6.90	6.90	12	11.00
	10:51		Middle	2.5	18.30	18.30		7.83	7.83		32.84	32.84		76.6	77.6		5.92	6.00		6.83	6.82		10	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	16:29	Fine	Middle	2.0	17.60	17.60	17.80	8.06	8.06	8.04	31.45	31.45	31.38	90.7	90.1	90.2	7.10	7.05	7.05	5.76	5.42	5.45	9	9.50
	16:31		Middle	2.0	18.00	18.00		8.02	8.02		31.30	31.30		90.4	89.4		7.06	6.98		5.39	5.22		10	
2/3/2011	17:25	Fine	Middle	2.0	17.30	17.30	17.40	8.10	8.10	8.08	31.33	31.33	31.33	80.0	79.1	78.8	6.39	6.33	6.30	13.10	12.70	**12.88**	17	**16.00**
	17:28		Middle	2.0	17.50	17.50		8.06	8.06		31.32	31.32		78.3	77.7		6.25	6.21		12.80	12.90		15	
4/3/2011	19:45	Cloudy	Middle	2.0	16.78	16.78	16.78	8.31	8.31	8.31	30.77	30.77	30.78	85.1	94.0	89.4	6.86	7.58	7.20	5.91	5.80	6.10	9	10.00
	19:50		Middle	2.0	16.77	16.77		8.31	8.31		30.79	30.79		89.6	88.7		7.22	7.15		6.65	6.05		11	
7/3/2011	21:04	Cloudy	Middle	1.5	17.46	17.46	17.50	8.04	8.04	8.01	30.43	30.43	30.41	80.5	81.8	82.7	6.41	6.51	6.58	6.53	5.81	6.21	7	7.00
	21:06		Middle	1.5	17.54	17.54		7.98	7.98		30.38	30.38		83.0	85.5		6.61	6.80		6.60	5.90		7	
9/3/2011	8:27	Cloudy	Middle	2.0	15.94	15.94	15.93	8.38	8.38	8.38	30.10	30.10	30.13	88.5	81.6	84.4	7.30	6.74	6.97	6.39	6.74	6.77	9	9.00
	8:30		Middle	2.0	15.91	15.91		8.37	8.37		30.16	30.16		83.7	83.9		6.92	6.93		6.87	7.08		9	
11/3/2011	9:06	Cloudy	Middle	2.0	16.60	16.60	16.60	7.79	7.79	7.78	31.64	31.64	31.64	71.2	69.3	71.3	5.73	5.60	5.74	5.52	5.87	5.95	7	8.00
	9:09		Middle	2.0	16.60	16.60		7.77	7.77		31.63	31.63		72.6	71.9		5.85	5.78		6.25	6.14		9	
13/3/2011	10:49	Sunny	Middle	2.0	18.70	18.70	18.70	7.66	7.66	7.66	31.59	31.59	31.59	64.3	62.6	63.6	4.97	4.84	4.92	7.50	8.15	7.51	13	13.00
	10:53		Middle	2.0	18.70	18.70		7.66	7.66		31.59	31.59		62.0	65.4		4.79	5.07		7.19	7.20		13	
16/3/2011	14:00	Fine	Middle	2.0	18.00	18.00	18.05	7.85	7.85	7.86	32.75	32.75	32.74	82.2	81.5	82.1	6.38	6.33	6.38	5.86	5.73	5.63	8	8.50
	14:03		Middle	2.0	18.10	18.10		7.86	7.86		32.72	32.72		82.6	82.1		6.41	6.38		5.49	5.45		9	
18/3/2011	18:25	Cloudy	Middle	2.0	17.50	17.50	17.45	7.90	7.90	7.91	32.88	32.88	32.90	85.2	85.3	85.7	6.79	6.70	6.81	9.81	9.75	**9.53**	13	13.00
	18:28		Middle	2.0	17.40	17.40		7.91	7.91		32.92	32.92		86.4	85.8		6.80	6.95		9.12	9.43		13	
21/3/2011	20:20	Cloudy	Middle	2.0	19.40	19.40	19.45	7.76	7.76	7.77	32.24	32.24	32.23	67.6	67.7	68.2	5.12	5.13	5.16	8.24	7.65	7.88	12	12.00
	20:22		Middle	2.0	19.50	19.50		7.77	7.77		32.22	32.22		68.3	69.0		5.17	5.23		8.06	7.55		12	
23/3/2011	9:09	Cloudy	Middle	2.0	17.70	17.70	17.70	7.86	7.86	7.86	32.60	32.60	32.60	70.9	72.5	71.3	5.57	5.70	5.60	5.43	5.41	5.41	9	8.50
	9:11		Middle	2.0	17.70	17.70		7.86	7.86		32.60	32.60		71.6	70.3		5.62	5.52		5.55	5.23		8	
25/3/2011	10:32	Cloudy	Middle	2.0	18.20	18.20	18.20	7.78	7.78	7.78	32.68	32.68	32.68	70.6	70.5	70.9	5.47	5.47	5.49	6.30	6.51	6.42	11	10.00
	10:36		Middle	2.0	18.20	18.20		7.78	7.78		32.68	32.68		71.1	71.2		5.51	5.52		6.55	6.31		9	

Water Monitoring Result at C6 - Excelsior Hotel
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
28/2/2011	16:10	Fine	Middle	1.5	19.10	19.10	19.30	7.81	7.81	7.81	30.88	30.88	30.82	67.5	66.6	67.4	5.17	5.10	5.16	2.56	2.68	2.58	6	6.00
	16:12		Middle	1.5	19.50	19.50		7.81	7.81		30.76	30.76		68.0	67.4		5.21	5.16		2.56	2.52		6	
2/3/2011	16:25	Fine	Middle	1.5	17.70	17.70	17.75	8.01	8.01	7.96	31.05	31.05	31.04	56.3	56.5	56.9	4.39	4.40	4.47	4.65	4.75	4.66	5	5.00
	16:27		Middle	1.5	17.80	17.80		7.91	7.91		31.03	31.03		58.7	56.2		4.56	4.51		4.58	4.64		5	
4/3/2011	19:07	Cloudy	Middle	2.0	16.82	16.82	16.81	8.08	8.08	8.09	30.05	30.05	30.07	77.0	75.1	74.0	6.23	6.08	5.99	3.60	3.29	3.62	4	4.00
	19:09		Middle	2.0	16.79	16.79		8.09	8.09		30.09	30.09		72.2	71.5		5.84	5.79		3.96	3.64		4	
7/3/2011	20:20	Cloudy	Middle	1.5	18.40	18.40	18.45	7.96	7.97	7.96	29.52	29.53	29.53	70.2	68.9	71.2	5.51	5.21	5.54	1.98	1.92	1.95	2	2.00
	20:22		Middle	1.5	18.49	18.49		7.95	7.95		29.54	29.54		71.1	74.5		5.59	5.85		1.96	1.95		2	
9/3/2011	7:45	Cloudy	Middle	1.5	15.54	15.54	15.52	8.09	8.09	8.10	29.60	29.61	29.61	72.5	71.7	70.8	6.05	5.98	5.91	1.55	1.21	1.41	<2	<2
	7:50		Middle	1.5	15.49	15.49		8.10	8.10		29.62	29.62		70.1	69.0		5.85	5.76		1.47	1.42		<2	
11/3/2011	7:40	Cloudy	Middle	1.5	15.50	15.50	15.50	7.48	7.48	7.48	29.77	29.77	29.77	53.0	55.3	54.9	4.40	4.69	4.61	1.72	1.61	1.70	3	2.50
	7:42		Middle	1.5	15.50	15.50		7.48	7.48		29.76	29.76		55.4	55.8		4.73	4.63		1.79	1.66		2	
13/3/2011	10:05	Sunny	Middle	1.5	18.90	18.90	18.90	7.56	7.56	7.52	30.89	30.89	30.90	49.5	49.0	48.8	3.83	3.81	3.78	2.19	2.23	1.95	3	3.50
	10:08		Middle	1.5	18.90	18.90		7.47	7.47		30.90	30.90		47.3	49.4		3.65	3.82		1.69	1.68		4	
16/3/2011	13:35	Fine	Middle	2.0	18.10	18.10	18.15	7.60	7.60	7.59	31.12	31.12	31.14	59.7	58.9	59.4	4.66	4.60	4.64	2.38	2.58	2.45	3	4.00
	13:38		Middle	2.0	18.20	18.20		7.58	7.58		31.15	31.15		59.9	59.0		4.67	4.62		2.48	2.37		5	
18/3/2011	17;55	Cloudy	Middle	1.5	17.40	17.40	17.35	7.78	7.78	7.76	32.01	32.01	32.02	64.5	63.4	64.3	5.13	5.04	5.12	1.93	1.88	1.92	<2	<2
	17:58		Middle	1.5	17.30	17.30		7.74	7.74		32.03	32.03		65.1	64.3		5.18	5.12		1.96	1.91		<2	
21/3/2011	19:35	Cloudy	Middle	1.5	20.40	20.40	20.40	7.68	7.68	7.68	31.94	31.94	31.95	57.6	57.9	56.8	4.29	4.30	4.23	2.47	2.33	2.63	5	4.00
	19:40		Middle	1.5	20.40	20.40		7.68	7.68		31.95	31.95		57.0	54.7		4.25	4.07		3.04	2.69		3	
23/3/2011	8:23	Cloudy	Middle	1.5	17.30	17.30	17.30	7.56	7.55	7.55	30.83	30.83	30.83	50.1	49.8	49.9	4.01	3.99	4.00	2.21	2.51	2.31	4	4.50
	8:26		Middle	1.5	17.30	17.30		7.55	7.55		30.83	30.83		49.6	50.1		3.97	4.02		2.19	2.32		5	
25/3/2011	9:48	Cloudy	Middle	1.5	17.80	17.80	17.80	7.59	7.59	7.59	31.26	31.26	31.26	59.3	59.4	59.0	4.63	4.64	4.61	2.74	2.10	2.35	<2	<2
	9:50		Middle	1.5	17.80	17.80		7.59	7.59		31.26	31.26		59.1	58.2		4.61	4.54		2.21	2.34		<2	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	15:35	Fine	Middle	2.5	21.20	21.20	21.25	7.87	7.87	7.87	31.87	31.87	31.87	83.3	84.6	84.0	6.17	6.24	6.20	2.94	2.70	2.75	8	8.00
	15:38		Middle	2.5	21.30	21.30		7.87	7.86		31.86	31.86		83.9	84.0		6.19	6.20		2.74	2.63		8	
2/3/2011	15:55	Fine	Middle	2.5	16.50	16.50	16.50	7.94	7.94	7.94	31.43	31.42	31.42	84.5	85.0	84.6	6.79	6.82	6.79	3.62	3.48	3.39	5	5.50
	15:58		Middle	2.5	16.50	16.50		7.93	7.93		31.42	31.42		84.4	84.3		6.78	6.77		3.40	3.07		6	
4/3/2011	18:34	Cloudy	Middle	2.5	16.92	16.92	16.88	7.99	8.01	8.01	32.27	32.27	32.27	88.2	88.0	87.4	7.06	7.05	7.02	5.97	6.13	5.87	10	10.50
	18:37		Middle	2.5	16.83	16.83		8.02	8.03		32.27	32.27		86.7	86.5		6.99	6.98		5.71	5.66		11	
7/3/2011	18:50	Cloudy	Middle	2.5	17.80	17.80	17.75	7.97	7.98	7.98	32.10	32.10	32.15	92.7	92.5	92.4	7.27	7.26	7.26	3.67	3.84	3.71	5	5.00
	18:53		Middle	2.5	17.70	17.70		7.98	7.98		32.20	32.20		92.2	92.3		7.25	7.26		3.59	3.74		5	
9/3/2011	10:35	Cloudy	Middle	2.5	16.80	16.80	16.75	7.99	7.99	7.99	32.30	32.30	32.25	91.5	90.6	90.7	7.39	7.33	7.33	2.42	2.55	2.35	5	5.50
	10:38		Middle	2.5	16.70	16.70		7.98	7.98		32.20	32.20		90.4	90.2		7.31	7.29		2.17	2.24		6	
11/3/2011	9:08	Cloudy	Middle	2.5	16.70	16.70	16.65	8.02	8.02	8.03	32.40	32.40	32.35	90.7	90.3	90.3	7.33	7.28	7.28	2.75	3.00	2.64	6	6.00
	9:11		Middle	2.5	16.60	16.60		8.03	8.03		32.30	32.30		90.2	89.9		7.27	7.25		2.31	2.50		6	
13/3/2011	9:42	Sunny	Middle	2.5	18.60	18.60	18.65	7.83	7.84	7.84	33.00	33.00	33.00	88.9	88.6	88.6	6.77	6.78	6.77	2.54	2.18	2.28	3	3.50
	9:44		Middle	2.5	18.70	18.70		7.85	7.85		33.00	33.00		88.5	88.2		6.76	6.75		2.25	2.13		4	
16/3/2011	16:00	Fine	Middle	2.5	18.40	18.40	18.35	7.81	7.81	7.81	32.20	32.20	32.15	95.4	94.0	94.2	7.27	7.25	7.25	2.07	1.85	1.91	4	4.00
	16:03		Middle	2.5	18.30	18.30		7.80	7.80		32.10	32.10		93.7	93.7		7.25	7.24		1.75	1.95		4	
18/3/2011	15:23	Cloudy	Middle	2.5	17.50	17.50	17.45	7.91	7.91	7.91	33.80	33.80	33.75	94.1	94.0	93.5	7.30	7.28	7.24	2.72	2.64	2.55	4	3.50
	15:26		Middle	2.5	17.40	17.40		7.90	7.90		33.70	33.70		93.2	92.7		7.20	7.18		2.39	2.44		3	
21/3/2011	18:42	Cloudy	Middle	2.0	19.80	19.80	19.83	7.78	7.80	7.80	32.40	32.40	32.40	87.9	88.0	87.9	6.61	6.60	6.60	4.77	4.70	4.46	6	6.00
	18:44		Middle	2.0	19.80	19.90		7.81	7.81		32.40	32.40		87.8	87.9		6.61	6.59		4.35	4.01		6	
23/3/2011	9:37	Cloudy	Middle	3.0	17.90	17.90	17.95	7.88	7.88	7.89	32.60	32.60	32.55	84.3	84.7	84.0	6.42	6.65	6.56	4.15	4.10	4.09	6	6.00
	9:40		Middle	3.0	18.00	18.00		7.89	7.89		32.50	32.50		83.6	83.3		6.60	6.57		4.08	4.04		6	
25/3/2011	9:43	Cloudy	Middle	2.5	18.60	18.60	18.58	7.80	7.80	7.80	32.40	32.40	32.35	86.5	86.4	85.6	6.55	6.52	6.52	3.47	3.30	3.19	5	4.50
	9:46		Middle	2.5	18.50	18.60		7.79	7.79		32.30	32.30		85.0	84.6		6.50	6.49		2.78	3.20		4	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	14:30	Fine	Middle	2.0	21.70	21.70	21.70	7.84	7.84	7.84	31.37	31.37	31.37	82.2	82.9	82.2	6.03	6.08	6.03	3.66	3.39	3.48	7	8.00
	14:33		Middle	2.0	21.70	21.70		7.83	7.83		31.36	31.36		81.5	82.0		5.98	6.01		3.48	3.38		9	
2/3/2011	14:40	Fine	Middle	2.0	16.70	16.70	16.65	7.94	7.94	7.94	31.44	31.44	31.44	83.4	83.6	83.6	6.70	6.71	6.71	3.80	3.96	3.83	11	10.00
	14:43		Middle	2.0	16.60	16.60		7.94	7.94		31.43	31.43		83.5	84.0		6.69	6.73		3.70	3.85		9	
4/3/2011	20:18	Cloudy	Middle	2.5	17.34	17.34	17.27	8.16	8.16	8.15	30.46	30.46	30.47	83.5	84.4	80.9	6.69	6.76	6.48	2.54	1.99	2.28	4	4.00
	20:22		Middle	2.5	17.20	17.20		8.14	8.14		30.48	30.48		78.8	77.0		6.31	6.17		2.25	2.33		4	
7/3/2011	21:20	Cloudy	Middle	2.0	17.50	17.50	17.45	7.88	7.88	7.88	32.00	32.10	32.08	89.5	89.4	89.3	7.04	7.05	7.04	3.05	2.96	2.90	6	5.50
	21:22		Middle	2.0	17.40	17.40		7.89	7.89		32.10	32.10		89.2	88.9		7.04	7.03		2.71	2.86		5	
9/3/2011	9:20	Cloudy	Middle	1.5	16.80	16.80	16.80	8.01	8.01	8.02	32.50	32.50	32.45	86.7	86.4	86.3	7.00	6.97	6.97	3.15	3.03	3.09	8	8.50
	9:23		Middle	1.5	16.80	16.80		8.02	8.02		32.40	32.40		86.2	86.0		6.96	6.94		3.02	3.17		9	
11/3/2011	8:58	Cloudy	Middle	2.0	17.10	17.10	17.15	7.98	7.98	7.99	32.80	32.80	32.75	81.1	80.9	80.5	6.48	6.45	6.43	2.43	2.54	2.50	9	12.00
	9:01		Middle	2.0	17.20	17.20		7.99	7.99		32.70	32.70		80.5	79.5		6.44	6.33		2.63	2.41		15	
13/3/2011	12:13	Sunny	Middle	2.0	19.00	19.00	18.98	7.74	7.74	7.75	32.90	33.00	32.95	86.5	86.3	86.3	6.56	6.53	6.53	6.58	6.72	6.28	4	5.00
	12:15		Middle	2.0	18.90	19.00		7.75	7.75		33.00	32.90		86.2	86.0		6.51	6.50		5.85	5.96		6	
16/3/2011	15:43	Fine	Middle	2.0	18.40	18.40	18.25	7.87	7.87	7.86	32.20	32.20	32.05	87.4	86.7	86.1	6.79	6.66	6.67	1.99	2.03	1.96	5	6.00
	15:46		Middle	2.0	18.10	18.10		7.84	7.84		31.90	31.90		85.6	84.7		6.64	6.58		1.92	1.90		7	
18/3/2011	15:07	Cloudy	Middle	2.0	17.80	17.80	17.78	6.85	6.85	6.85	33.60	33.60	33.60	92.3	92.2	92.1	7.33	7.29	7.28	3.45	3.37	3.31	6	6.50
	15:10		Middle	2.0	17.70	17.80		6.84	6.84		33.50	33.70		92.0	91.9		7.27	7.24		3.32	3.09		7	
21/3/2011	20:57	Cloudy	Middle	2.0	19.40	19.40	19.40	7.83	7.84	7.84	32.30	32.30	32.30	85.4	85.3	85.3	6.54	6.53	6.52	3.94	3.79	3.79	5	5.50
	21:02		Middle	2.0	19.40	19.40		7.84	7.85		32.30	32.30		85.2	85.1		6.51	6.49		3.77	3.67		6	
23/3/2011	9:15	Cloudy	Middle	1.0	17.10	17.10	17.10	7.93	7.93	7.94	33.10	33.10	33.10	86.0	85.0	85.4	6.76	6.70	6.72	3.81	3.86	3.56	5	4.50
	9:18		Middle	1.0	17.10	17.10		7.94	7.94		33.10	33.10		85.6	85.0		6.74	6.69		3.28	3.29		4	
25/3/2011	9:24	Cloudy	Middle	2.0	18.60	18.60	18.55	7.76	7.76	7.76	32.40	32.40	32.35	84.2	84.1	83.1	6.52	6.51	6.48	4.89	5.04	4.99	7	7.00
	9:27		Middle	2.0	18.50	18.50		7.75	7.75		32.30	32.30		82.3	81.6		6.44	6.43		5.03	4.98		7	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	14:40	Fine	Middle	3.0	21.60	21.60	21.60	7.85	7.85	7.85	31.34	31.34	31.34	85.2	86.5	85.9	6.26	6.35	6.43	10.41	10.30	10.00	20	**19.50**
	14:43		Middle	3.0	21.60	21.60		7.84	7.84		31.34	31.34		86.3	85.5		6.82	6.27		9.29	9.98		19	
2/3/2011	14:51	Fine	Middle	3.0	16.90	16.90	16.90	7.93	7.93	7.93	31.45	31.45	31.45	83.9	84.6	84.5	6.72	6.77	6.76	5.86	4.99	5.51	13	13.00
	14:54		Middle	3.0	16.90	16.90		7.92	7.92		31.45	31.45		84.8	84.7		6.78	6.77		5.50	5.70		13	
4/3/2011	20:09	Cloudy	Middle	3.0	17.23	17.23	17.23	8.19	8.19	8.19	30.53	30.53	30.53	88.1	87.2	85.3	7.06	6.98	6.80	2.15	2.22	2.23	3	3.00
	20:12		Middle	3.0	17.23	17.23		8.19	8.19		30.53	30.53		82.1	83.6		6.57	6.59		2.30	2.24		3	
7/3/2011	20:59	Cloudy	Middle	3.0	17.50	17.50	17.50	7.87	7.87	7.87	32.10	32.10	32.10	87.9	87.8	85.5	6.95	6.93	6.92	3.68	3.39	3.48	6	5.50
	21:00		Middle	3.0	17.50	17.50		7.87	7.88		32.10	32.10		78.6	87.7		6.89	6.90		3.35	3.48		5	
9/3/2011	9:35	Cloudy	Middle	3.0	16.50	16.50	16.45	8.00	8.00	8.01	32.30	32.30	32.25	89.7	89.4	89.2	7.29	7.28	7.26	4.40	3.86	3.77	8	7.00
	9:38		Middle	3.0	16.40	16.40		8.01	8.01		32.20	32.20		88.9	88.8		7.24	7.22		3.42	3.39		6	
11/3/2011	10:20	Cloudy	Middle	3.0	16.90	16.90	16.95	7.96	7.96	7.96	32.20	32.20	32.20	84.5	84.7	84.5	6.82	6.79	6.79	2.40	2.44	2.41	4	3.50
	10:23		Middle	3.0	17.00	17.00		7.95	7.95		32.20	32.20		84.4	84.2		6.78	6.77		2.47	2.31		3	
13/3/2011	11:55	Sunny	Middle	3.5	18.30	18.20	18.18	7.73	7.74	7.74	32.80	32.90	32.85	83.7	83.6	83.5	6.61	6.59	6.59	1.69	1.68	1.71	4	4.00
	11:57		Middle	3.5	18.10	18.10		7.75	7.75		32.80	32.90		83.4	83.2		6.58	6.57		1.70	1.77		4	
16/3/2011	17:15	Fine	Middle	3.0	17.10	17.10	17.05	7.80	7.80	7.80	33.40	33.40	33.35	91.3	90.3	90.3	6.99	6.93	6.93	3.18	2.93	2.95	5	5.00
	17:18		Middle	3.0	17.00	17.00		7.79	7.79		33.30	33.30		89.7	89.9		6.91	6.89		2.98	2.71		5	
18/3/2011	16:30	Cloudy	Middle	3.0	17.60	17.60	17.55	8.00	8.00	8.00	32.80	32.80	32.75	92.8	92.6	92.4	7.12	7.06	7.07	3.99	3.99	3.71	5	5.50
	16:33		Middle	3.0	17.50	17.50		7.99	7.99		32.70	32.70		92.1	91.9		7.05	7.05		3.49	3.35		6	
21/3/2011	20:44	Cloudy	Middle	3.5	19.70	19.70	19.70	7.75	7.76	7.76	32.20	32.20	32.20	85.6	85.5	85.3	6.33	6.30	6.30	3.67	3.48	3.43	3	3.00
	20:50		Middle	3.5	19.70	19.70		7.76	7.77		32.20	32.20		85.1	84.9		6.28	6.27		3.36	3.20		3	
23/3/2011	10:37	Cloudy	Middle	3.0	18.00	18.00	17.95	7.84	7.84	7.84	33.20	33.20	33.15	76.9	76.6	76.5	6.05	6.03	6.01	2.94	2.86	2.91	3	4.00
	10:40		Middle	3.0	17.90	17.90		7.83	7.83		33.10	33.10		76.3	76.1		6.00	5.97		3.04	2.79		5	
25/3/2011	10:56	Cloudy	Middle	2.5	18.20	18.20	18.25	7.85	7.85	7.85	32.40	32.40	32.35	74.2	73.9	73.9	5.84	5.83	5.82	2.92	2.73	2.79	4	4.00
	10:59		Middle	2.5	18.30	18.30		7.84	7.84		32.30	32.30		73.8	73.6		5.80	5.79		2.82	2.70		4	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	14:53	Fine	Middle	1.5	21.80	21.80	21.85	7.81	7.81	7.82	31.34	31.34	31.34	81.6	81.5	81.9	5.97	5.96	5.99	3.52	3.94	3.59	6	7.00
	14:56		Middle	1.5	21.90	21.90		7.82	7.82		31.33	31.33		81.7	82.6		5.98	6.04		3.26	3.62		8	
2/3/2011	15:06	Fine	Middle	1.5	17.20	17.20	17.25	7.89	7.89	7.90	31.46	31.46	31.46	78.9	77.7	78.4	6.25	6.15	6.22	3.18	2.48	2.62	4	5.00
	15:09		Middle	1.5	17.30	17.30		7.90	7.90		31.45	31.45		78.1	78.9		6.21	6.26		2.53	2.28		6	
4/3/2011	19:45	Cloudy	Middle	2.0	17.27	17.27	17.26	8.16	8.16	8.16	30.43	30.43	30.44	81.4	85.6	86.1	6.52	6.98	6.92	4.44	4.12	3.93	4	5.00
	19:48		Middle	2.0	17.25	17.25		8.16	8.16		30.45	30.45		88.6	88.7		7.09	7.10		3.53	3.64		6	
7/3/2011	20:24	Cloudy	Middle	2.0	17.50	17.50	17.50	7.92	7.92	7.93	32.20	32.20	32.20	91.6	91.4	91.5	7.24	7.23	7.23	4.24	3.95	4.00	10	10.00
	20:28		Middle	2.0	17.50	17.50		7.93	7.93		32.20	32.20		91.5	91.3		7.22	7.21		3.98	3.84		10	
9/3/2011	10:10	Cloudy	Middle	1.5	16.10	16.10	16.10	8.02	8.02	8.03	32.30	32.30	32.30	85.6	85.4	85.4	7.01	7.00	6.99	3.67	2.81	3.00	5	6.00
	10:13		Middle	1.5	16.10	16.10		8.03	8.03		32.30	32.30		85.3	85.1		6.98	6.97		2.77	2.73		7	
11/3/2011	10:12	Cloudy	Middle	2.0	16.80	16.80	16.80	7.97	7.97	7.97	32.30	32.30	32.30	89.4	88.3	87.7	7.18	7.12	7.06	2.39	2.54	2.27	4	4.00
	10:15		Middle	2.0	16.80	16.80		7.97	7.97		32.30	32.30		86.9	86.3		6.99	6.95		2.11	2.05		4	
13/3/2011	11:25	Sunny	Middle	2.0	19.10	19.10	19.13	7.81	7.82	7.82	31.80	31.80	31.83	87.7	87.6	284.2	6.70	6.71	6.70	5.61	5.23	5.44	6	7.00
	11:27		Middle	2.0	19.10	19.20		7.82	7.82		31.80	31.90		874.0	87.3		6.68	6.69		5.37	5.53		8	
16/3/2011	17:02	Fine	Middle	1.5	17.30	17.30	17.25	7.95	7.95	7.95	33.60	33.60	33.55	91.6	90.9	90.6	7.22	7.21	7.17	2.80	2.41	2.47	5	5.00
	17:05		Middle	1.5	17.20	17.20		7.94	7.94		33.50	33.50		90.2	89.7		7.15	7.11		2.35	2.31		5	
18/3/2011	16:20	Cloudy	Middle	1.5	17.60	17.60	17.55	7.97	7.97	7.97	32.60	32.60	32.55	90.5	87.8	88.6	7.09	7.05	7.03	4.88	3.19	4.50	4	4.00
	16:23		Middle	1.5	17.50	17.50		7.96	7.96		32.50	32.50		88.2	87.9		6.97	7.02		6.97	2.96		4	
21/3/2011	20:13	Cloudy	Middle	2.0	19.30	19.30	19.28	7.84	7.84	7.85	32.30	32.30	32.30	87.7	87.5	87.4	6.56	6.55	6.54	6.09	6.28	6.01	8	7.50
	20:16		Middle	2.0	19.30	19.20		7.85	7.85		32.30	32.30		87.3	87.2		6.54	6.51		5.84	5.83		7	
23/3/2011	10:28	Cloudy	Middle	2.0	17.90	17.90	17.80	7.91	7.91	7.92	33.50	33.50	33.50	77.5	77.3	76.0	6.10	6.08	5.99	2.02	2.24	2.18	3	2.50
	10:31		Middle	2.0	17.70	17.70		7.92	7.92		33.50	33.50		74.9	74.4		5.90	5.87		2.24	2.20		2	
25/3/2011	10:37	Cloudy	Middle	2.0	18.20	18.20	18.15	7.84	7.84	7.84	32.50	32.50	32.45	89.4	88.3	88.5	6.80	6.79	6.77	4.20	3.40	3.30	3	3.50
	10:40		Middle	2.0	18.10	18.10		7.83	7.83		32.40	32.40		88.4	88.0		6.70	6.77		2.70	2.90		4	

Water Monitoring Result at C4w - WCT / GEC
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
28/2/2011	14:48	Fine	Middle	1.5	21.30	21.30	21.35	7.80	7.80	7.81	31.20	31.20	31.20	80.2	80.4	80.4	5.92	5.94	5.94	2.58	2.34	2.39	8	7.00
	14:51		Middle	1.5	21.40	21.40		7.81	7.81		31.20	31.20		80.4	80.7		5.93	5.96		2.33	2.32		6	
2/3/2011	14:59	Fine	Middle	1.5	17.20	17.20	17.25	7.82	7.82	7.82	31.31	31.31	31.32	75.5	75.6	75.8	5.98	5.91	5.94	1.11	1.16	1.18	4	4.50
	15:02		Middle	1.5	17.30	17.30		7.82	7.82		31.32	31.32		76.0	75.9		5.93	5.92		1.22	1.23		5	
4/3/2011	20:01	Cloudy	Middle	2.0	17.21	17.21	17.23	8.00	8.00	8.00	30.49	30.49	30.50	88.8	93.4	91.5	7.10	7.47	7.32	2.78	2.94	2.95	4	4.50
	20:04		Middle	2.0	17.25	17.25		8.00	8.00		30.50	30.50		92.0	91.8		7.37	7.35		3.18	2.88		5	
7/3/2011	20:41	Cloudy	Middle	2.0	17.40	17.40	17.40	7.71	7.71	7.71	32.10	32.10	32.08	93.7	93.6	93.5	7.42	7.41	7.41	6.60	5.88	6.03	7	7.00
	20:46		Middle	2.0	17.40	17.40		7.71	7.71		32.10	32.00		93.5	93.3		7.40	7.41		5.69	5.94		7	
9/3/2011	9:53	Cloudy	Middle	2.0	16.40	16.40	16.35	7.87	7.87	7.87	32.30	32.30	32.25	90.1	89.9	89.8	7.33	7.32	7.31	3.77	4.19	3.95	9	8.00
	9:56		Middle	2.0	16.30	16.30		7.86	7.86		32.20	32.20		89.7	89.5		7.30	7.29		3.95	3.90		7	
11/3/2011	10:05	Cloudy	Middle	1.5	16.90	16.90	16.85	7.84	7.84	7.84	32.30	32.30	32.30	82.3	81.8	81.7	6.61	6.58	6.57	2.57	2.47	2.52	3	2.50
	10:08		Middle	1.5	16.80	16.80		7.83	7.83		32.30	32.30		81.5	81.2		6.55	6.54		2.52	2.53		2	
13/3/2011	11:42	Sunny	Middle	2.0	18.70	18.70	18.65	7.71	7.72	7.72	32.90	32.80	32.83	82.6	82.2	82.2	6.26	6.25	6.24	1.64	1.65	1.50	3	4.00
	11:44		Middle	2.0	18.60	18.60		7.72	7.72		32.80	32.80		82.0	81.8		6.23	6.22		1.42	1.28		5	
16/3/2011	16:55	Fine	Middle	2.0	18.00	18.00	17.95	7.76	7.76	7.76	33.40	33.40	33.35	88.9	88.4	87.3	6.86	6.79	6.80	1.63	1.45	1.54	3	3.50
	16:58		Middle	2.0	17.90	17.90		7.75	7.75		33.30	33.30		86.3	85.4		6.85	6.71		1.66	1.43		4	
18/3/2011	16:15	Cloudy	Middle	2.0	17.40	17.40	17.35	7.88	7.88	7.88	33.80	33.80	33.50	89.4	88.9	88.9	7.09	7.15	7.08	1.32	1.37	1.31	3	2.50
	16:18		Middle	2.0	17.30	17.30		7.87	7.87		33.20	33.20		88.8	88.5		7.06	7.02		1.22	1.32		2	
21/3/2011	20:32	Cloudy	Middle	2.0	19.60	19.60	19.60	7.71	7.72	7.72	32.20	32.20	32.20	90.6	90.5	90.4	6.90	6.89	6.89	3.30	3.44	3.41	4	3.50
	20:36		Middle	2.0	19.60	19.60		7.72	7.73		32.20	32.20		90.3	90.2		6.88	6.87		3.33	3.56		3	
23/3/2011	10:20	Cloudy	Middle	1.5	17.90	17.90	17.85	7.79	7.79	7.81	33.30	33.30	33.35	74.9	74.6	74.2	5.89	5.86	5.84	1.41	1.48	1.38	3	3.00
	10:23		Middle	1.5	17.80	17.80		7.83	7.83		33.40	33.40		73.7	73.5		5.80	5.79		1.30	1.31		<2	
25/3/2011	10:44	Cloudy	Middle	1.5	18.10	18.10	18.05	7.79	7.79	7.79	32.40	32.40	32.35	80.2	80.5	80.0	6.60	6.54	6.52	1.10	1.08	1.06	<2	<2
	10:47		Middle	1.5	18.00	18.00		7.78	7.78		32.30	32.30		79.8	79.6		6.49	6.43		0.96	1.08		<2	

Water Monitoring Result at C5e - 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
28/2/2011	15:15	Fine	Middle	1.5	21.20	21.20	21.25	7.87	7.87	7.87	31.32	31.32	31.33	84.6	84.7	84.8	6.22	6.23	6.24	2.98	3.14	3.14	7	7.50
	15:18		Middle	1.5	21.30	21.30		7.86	7.86		31.33	31.33		85.0	84.8		6.26	6.24		3.29	3.15		8	
2/3/2011	15:32	Fine	Middle	1.5	17.50	17.50	17.45	7.90	7.90	7.90	31.27	31.27	31.27	80.0	80.6	80.3	6.24	6.29	6.26	5.80	5.17	5.40	10	9.00
	15:35		Middle	1.5	17.40	17.40		7.89	7.89		31.27	31.27		80.1	80.3		6.25	6.27		5.42	5.22		8	
4/3/2011	19:17	Cloudy	Middle	2.0	16.87	16.87	16.90	8.24	8.24	8.23	30.48	30.48	30.49	89.7	88.3	87.2	7.21	7.10	7.01	2.32	2.16	2.16	5	4.50
	19:20		Middle	2.0	16.93	16.93		8.21	8.21		30.49	30.49		84.9	85.9		6.83	6.91		2.00	2.16		4	
7/3/2011	19:45	Cloudy	Middle	2.0	17.80	17.80	17.80	7.94	7.94	7.94	32.00	32.00	32.00	89.8	89.5	89.4	6.91	6.89	6.88	4.04	4.12	3.88	4	4.50
	19:49		Middle	2.0	17.80	17.80		7.94	7.95		32.00	32.00		89.3	89.1		6.86	6.85		3.63	3.74		5	
9/3/2011	10:06	Cloudy	Middle	1.5	16.60	16.60	16.55	7.95	7.95	7.95	31.38	31.38	31.39	70.0	69.8	70.1	5.66	5.64	5.66	2.26	2.52	2.46	4	3.50
	10:09		Middle	1.5	16.50	16.50		7.95	7.94		31.40	31.40		70.1	70.3		5.67	5.68		2.39	2.65		3	
11/3/2011	9:50	Cloudy	Middle	1.5	17.10	17.10	17.10	7.99	7.99	8.00	32.40	32.40	32.35	86.2	85.5	85.3	6.87	6.84	6.81	3.01	3.33	3.17	6	5.50
	9:53		Middle	1.5	17.10	17.10		8.00	8.00		32.30	32.30		85.0	84.3		6.79	6.74		3.12	3.23		5	
13/3/2011	10:40	Sunny	Middle	2.0	18.80	18.80	18.85	7.81	7.82	7.82	32.90	33.00	32.90	78.7	78.6	78.6	6.06	6.07	6.06	4.53	4.88	4.78	3	4.00
	10:42		Middle	2.0	18.90	18.90		7.82	7.83		32.90	32.80		78.5	78.4		6.05	6.04		5.02	4.70		5	
16/3/2011	16:30	Fine	Middle	2.0	18.30	18.30	18.25	7.88	7.88	7.88	32.30	32.30	32.25	88.2	87.5	87.4	6.89	6.85	6.83	3.50	3.80	3.50	7	7.50
	16:33		Middle	2.0	18.20	18.20		7.87	7.87		32.20	32.20		87.0	86.8		6.83	6.73		3.39	3.30		8	
18/3/2011	15:50	Cloudy	Middle	1.5	17.80	17.80	17.75	7.81	7.81	7.81	33.30	33.30	33.25	90.5	90.2	90.2	6.99	6.98	6.93	3.13	3.41	3.35	3	2.50
	15:53		Middle	1.5	17.70	17.70		7.80	7.80		33.20	33.20		90.1	89.8		6.89	6.85		3.41	3.43		2	
21/3/2011	19:34	Cloudy	Middle	2.0	19.70	19.70	19.70	7.85	7.85	7.86	32.10	32.20	32.18	84.1	83.9	83.8	6.25	6.24	6.23	6.95	7.11	6.98	9	9.00
	19:36		Middle	2.0	19.70	19.70		7.86	7.86		32.20	32.20		83.6	83.4		6.22	6.21		6.87	6.97		9	
23/3/2011	10:08	Cloudy	Middle	2.0	18.30	18.30	18.25	7.90	7.90	7.91	32.30	32.30	32.35	79.3	78.6	78.2	6.22	6.17	6.13	2.98	3.33	2.93	3	3.50
	10:11		Middle	2.0	18.20	18.20		7.91	7.91		32.40	32.40		77.6	77.2		6.10	6.04		2.82	2.60		4	
25/3/2011	10:14	Cloudy	Middle	2.0	18.60	18.60	18.55	7.83	7.83	7.83	32.30	32.30	32.25	83.7	83.1	82.8	6.13	6.25	6.18	3.63	3.49	3.45	6	5.50
	10:17		Middle	2.0	18.50	18.50		7.82	7.82		32.20	32.20		82.0	82.3		6.11	6.22		3.40	3.27		5	

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
28/2/2011	15:21	Fine	Middle	1.5	21.50	21.50	21.45	7.87	7.87	7.87	31.33	31.33	31.33	84.4	84.7	84.9	6.21	6.25	6.25	4.05	3.94	3.92	9	8.50
	15:24		Middle	1.5	21.40	21.40		7.86	7.86		31.32	31.32		85.0	85.5		6.25	6.29		4.01	3.69		8	
2/3/2011	15:39	Fine	Middle	1.5	17.50	17.50	17.55	7.94	7.94	7.94	31.05	31.05	31.06	82.4	82.6	82.7	6.52	6.53	6.54	4.73	5.05	4.59	8	9.00
	15:42		Middle	1.5	17.60	17.60		7.93	7.93		31.06	31.06		82.7	83.1		6.54	6.57		4.27	4.29		10	
4/3/2011	19:30	Cloudy	Middle	2.0	17.12	17.12	17.17	8.24	8.24	8.24	30.38	30.38	30.37	89.2	88.4	88.3	7.15	7.09	7.08	2.22	2.23	2.21	4	4.00
	19:34		Middle	2.0	17.21	17.21		8.24	8.23		30.36	30.36		83.4	92.3		6.69	7.40		2.18	2.20		4	
7/3/2011	20:00	Cloudy	Middle	2.0	17.60	17.60	17.60	7.98	7.98	7.98	31.40	31.50	31.45	90.2	90.1	90.1	7.18	7.17	7.17	3.50	3.08	3.35	3	3.00
	20:05		Middle	2.0	17.60	17.60		7.98	7.98		31.40	31.50		90.0	89.9		7.17	7.15		3.57	3.25		3	
9/3/2011	9:54	Cloudy	Middle	1.5	16.60	16.60	16.50	8.08	8.08	8.07	31.35	31.35	31.36	73.6	73.9	73.9	5.94	5.97	5.97	2.49	2.59	2.56	4	4.50
	9:58		Middle	1.5	16.40	16.40		8.05	8.05		31.36	31.36		74.1	74.0		5.99	5.98		2.55	2.61		5	
11/3/2011	9:40	Cloudy	Middle	1.5	17.10	17.10	17.15	8.01	8.01	8.02	32.40	32.40	32.35	86.4	86.0	85.8	6.90	6.87	6.85	3.36	3.03	3.04	7	6.00
	9:43		Middle	1.5	17.20	17.20		8.02	8.02		32.30	32.30		85.5	85.1		6.83	6.80		2.93	2.84		5	
13/3/2011	10:57	Sunny	Middle	2.0	18.80	18.80	18.85	7.87	7.87	7.88	32.60	32.50	32.50	85.1	84.9	84.8	6.49	6.46	6.46	4.70	3.98	4.35	9	10.00
	10:59		Middle	2.0	18.90	18.90		7.88	7.88		32.50	32.40		84.6	84.5		6.44	6.43		4.32	4.39		11	
16/3/2011	16:37	Fine	Middle	2.0	18.30	18.30	18.35	7.98	7.98	7.98	32.20	32.20	32.15	94.3	94.1	93.9	7.38	7.35	7.35	4.76	4.81	4.70	7	8.00
	16:40		Middle	2.0	18.40	18.40		7.97	7.97		32.10	32.10		93.7	93.4		7.33	7.32		4.64	4.57		9	
18/3/2011	15:53	Cloudy	Middle	1.5	17.60	17.60	17.55	7.98	7.98	7.98	33.00	33.00	32.95	90.3	97.9	91.8	7.09	7.04	7.04	4.79	5.08	4.65	3	3.50
	15:56		Middle	1.5	17.50	17.50		7.97	7.97		32.90	32.90		89.5	89.4		7.03	7.00		4.37	4.35		4	
21/3/2011	19:53	Cloudy	Middle	2.0	19.30	19.30	19.30	7.92	7.92	7.92	32.20	32.20	32.20	84.1	84.0	83.9	6.46	6.44	6.44	7.28	7.14	7.18	12	12.00
	20:00		Middle	2.0	19.30	19.30		7.92	7.93		32.20	32.20		83.8	83.6		6.43	6.41		7.22	7.07		12	
23/3/2011	10:00	Cloudy	Middle	1.0	18.10	18.10	18.15	7.89	7.89	7.89	33.10	33.10	33.15	79.8	79.4	79.4	6.23	6.21	6.20	3.87	4.43	4.20	5	6.00
	10:03		Middle	1.0	18.20	18.20		7.88	7.88		33.20	33.20		79.3	79.0		6.19	6.17		4.39	4.11		7	
25/3/2011	10:21	Cloudy	Middle	1.5	18.60	18.60	18.55	7.88	7.88	7.88	32.40	32.40	32.35	90.4	90.1	90.3	7.08	7.07	7.05	3.20	3.95	3.40	6	5.00
	10:24		Middle	1.5	18.50	18.50		7.87	7.87		32.30	32.30		90.2	90.4		7.04	7.01		3.18	3.28		4	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	15:07	Fine	Middle	2.0	21.10	21.10	21.15	7.87	7.87	7.87	31.32	31.32	31.33	82.6	83.5	83.5	6.12	6.19	6.19	5.63	5.12	5.16	10	9.50
	15:10		Middle	2.0	21.20	21.20		7.86	7.86		31.33	31.33		84.1	83.9		6.23	6.21		4.87	5.01		9	
2/3/2011	15:25	Fine	Middle	2.0	17.50	17.50	17.45	7.96	7.96	7.96	31.34	31.34	31.34	84.7	84.0	84.1	6.84	6.78	6.79	5.85	5.55	5.70	7	8.00
	15:28		Middle	2.0	17.40	17.40		7.95	7.95		31.33	31.33		83.5	84.3		6.73	6.80		5.90	5.48		9	
4/3/2011	19:01	Cloudy	Middle	2.5	16.97	16.97	16.98	8.21	8.21	8.21	30.67	30.67	30.68	85.2	84.1	84.3	6.84	6.76	6.77	4.10	4.00	3.92	7	6.50
	19:04		Middle	2.5	16.99	16.99		8.21	8.21		30.68	30.68		85.5	82.3		6.87	6.62		3.69	3.88		6	
7/3/2011	19:17	Cloudy	Middle	2.0	17.60	17.60	17.55	7.93	7.93	7.94	32.20	32.20	32.20	89.9	89.7	89.6	7.07	7.06	7.05	5.12	5.20	5.02	7	7.50
	19:20		Middle	2.0	17.50	17.50		7.94	7.94		32.20	32.20		89.4	89.3		7.05	7.03		5.03	4.73		8	
9/3/2011	9:36	Cloudy	Middle	2.0	16.40	16.40	16.30	8.03	8.03	8.02	31.55	31.55	31.57	78.7	78.3	78.6	6.38	6.35	6.38	4.33	3.68	3.80	5	6.00
	9:39		Middle	2.0	16.20	16.20		8.01	8.01		31.58	31.58		78.9	78.6		6.40	6.38		3.79	3.39		7	
11/3/2011	9:30	Cloudy	Middle	2.0	16.80	16.80	16.75	8.02	8.02	8.03	32.40	32.40	32.35	86.2	86.0	85.8	6.95	6.93	6.92	3.28	3.23	3.14	10	10.00
	9:33		Middle	2.0	16.70	16.70		8.03	8.03		32.30	32.30		85.6	85.4		6.90	6.88		3.00	3.03		10	
13/3/2011	10:09	Sunny	Middle	2.0	17.60	17.60	17.60	7.91	7.91	7.91	33.20	33.20	33.18	81.6	81.6	81.6	6.39	6.40	6.39	6.90	6.64	6.73	11	12.00
	10:11		Middle	2.0	17.60	17.60		7.91	7.91		33.10	33.20		81.5	81.5		6.39	6.38		6.73	6.64		13	
16/3/2011	16:15	Fine	Middle	2.0	18.40	18.40	18.35	7.97	7.97	7.97	32.30	32.30	32.25	94.7	94.7	94.4	7.40	7.36	7.36	5.79	5.98	5.88	14	**15.00**
	16:18		Middle	2.0	18.30	18.30		7.96	7.96		32.20	32.20		94.2	94.0		7.33	7.34		5.98	5.76		16	
18/3/2011	15:37	Cloudy	Middle	2.0	17.50	17.50	17.45	7.96	7.96	7.96	33.60	33.60	33.55	92.8	92.4	92.3	7.29	7.26	7.25	5.00	4.84	4.81	6	6.00
	15:40		Middle	2.0	17.40	17.40		7.95	7.95		33.50	33.50		92.1	91.9		7.22	7.21		4.55	4.86		6	
21/3/2011	19:07	Cloudy	Middle	2.0	19.70	19.70	19.70	7.81	7.82	7.82	32.20	32.20	32.20	88.9	88.8	88.8	6.68	6.67	6.67	6.60	6.46	6.28	8	7.00
	19:09		Middle	2.0	19.70	19.70		7.82	7.83		32.20	32.20		88.7	88.7		6.67	6.66		5.94	6.13		6	
23/3/2011	9:48	Cloudy	Middle	2.0	18.00	18.00	17.95	7.88	7.88	7.90	33.30	33.30	33.35	77.6	77.4	76.7	6.11	6.08	6.03	5.15	4.14	4.40	6	6.50
	9:52		Middle	2.0	17.90	17.90		7.92	7.92		33.40	33.40		76.0	75.8		5.97	5.95		4.16	4.15		7	
25/3/2011	10:05	Cloudy	Middle	1.5	18.60	18.60	18.55	7.79	7.79	7.79	32.40	32.40	32.35	80.9	80.6	80.6	6.53	6.50	6.46	4.59	4.39	4.66	6	5.00
	10:08		Middle	1.5	18.50	18.50		7.78	7.78		32.30	32.30		80.5	80.2		6.42	6.40		4.88	4.77		4	

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	13:15	Fine	Middle	1.5	18.80	18.80	18.85	7.81	7.81	7.81	31.48	31.48	31.48	90.2	89.8	89.9	7.06	7.03	7.03	3.29	3.53	3.23	5	4.50
	13:18		Middle	1.5	18.90	18.90		7.80	7.80		31.48	31.48		90.3	89.3		7.06	6.96		2.98	3.11		4	
2/3/2011	18:46	Fine	Middle	1.5	17.20	17.20	17.20	7.82	7.82	7.82	31.44	31.44	31.44	82.8	83.4	83.0	6.59	6.63	6.60	5.00	4.76	4.64	6	7.00
	18:48		Middle	1.5	17.20	17.20		7.81	7.81		31.44	31.44		83.5	82.1		6.64	6.53		4.37	4.41		8	
4/3/2011	18:01	Cloudy	Middle	2.0	16.62	16.62	16.62	8.30	8.30	8.30	30.69	30.69	30.70	85.0	89.5	89.9	6.88	7.24	7.27	4.20	4.88	4.61	9	9.00
	18:04		Middle	2.0	16.62	16.62		8.30	8.29		30.70	30.70		90.7	94.3		7.34	7.63		4.53	4.83		9	
7/3/2011	23:17	Cloudy	Middle	2.5	16.63	16.61	16.61	8.09	8.09	8.09	30.56	30.56	30.56	81.0	81.6	79.7	6.82	6.62	6.52	4.27	4.11	4.08	9	8.00
	23:19		Middle	2.5	16.59	16.59		8.09	8.09		30.56	30.56		78.2	77.9		6.33	6.31		3.89	4.03		7	
9/3/2011	7:11	Cloudy	Middle	2.0	15.53	15.53	15.52	8.23	8.23	8.23	30.70	30.70	30.71	91.4	89.2	88.5	7.56	7.38	7.32	4.19	4.38	4.17	9	8.00
	7:14		Middle	2.0	15.53	15.50		8.23	8.23		30.71	30.71		86.9	86.6		7.19	7.16		3.97	4.12		7	
11/3/2011	7:14	Cloudy	Middle	2.0	16.50	16.50	16.50	7.71	7.71	7.71	31.77	31.77	31.78	81.3	81.7	81.6	6.55	6.58	6.57	3.71	3.49	3.56	8	8.50
	7:17		Middle	2.0	16.50	16.50		7.71	7.71		31.78	31.78		82.1	81.2		6.61	6.54		3.49	3.55		9	
13/3/2011	8:36	Sunny	Middle	2.0	19.00	19.00	19.00	7.70	7.70	7.70	31.76	31.76	31.77	76.8	75.1	75.1	5.89	5.57	5.72	3.49	3.17	3.24	8	7.00
	8:40		Middle	2.0	19.00	19.00		7.70	7.70		31.78	31.78		75.0	73.6		5.76	5.65		3.22	3.09		6	
16/3/2011	17:00	Fine	Middle	3.0	17.80	17.80	17.70	7.94	7.94	7.93	32.75	32.75	32.73	83.5	84.1	83.9	6.54	6.59	6.58	5.08	4.12	4.26	9	8.00
	17:04		Middle	3.0	17.60	17.60		7.92	7.92		32.70	32.70		84.2	83.8		6.60	6.57		4.09	3.75		7	
18/3/2011	14:30	Cloudy	Middle	2.0	17.20	17.20	17.10	7.91	7.91	7.93	32.73	32.73	32.72	82.6	82.0	82.4	6.06	6.09	6.32	7.82	6.58	6.67	10	**15.00**
	14:34		Middle	2.0	17.00	17.00		7.95	7.95		32.70	32.70		82.2	82.9		6.53	6.59		6.04	6.24		20	
21/3/2011	22:28	Cloudy	Middle	2.0	20.60	20.60	20.60	7.84	7.84	7.84	32.56	32.56	32.56	80.2	80.1	78.8	5.90	5.89	5.78	5.43	5.66	5.57	9	9.50
	22:30		Middle	2.0	20.60	20.60		7.84	7.84		32.56	32.56		77.1	77.8		5.61	5.72		5.53	5.67		10	
23/3/2011	7:24	Cloudy	Middle	2.0	17.20	17.20	17.20	7.81	7.81	7.81	32.52	32.52	32.52	73.6	76.4	74.1	5.82	6.04	5.86	5.61	5.01	5.52	8	9.00
	7:26		Middle	2.0	17.20	17.20		7.80	7.80		32.52	32.52		74.0	72.2		5.86	5.71		5.68	5.78		10	
25/3/2011	8:41	Cloudy	Middle	2.0	17.70	17.70	17.70	7.84	7.84	7.84	32.68	32.68	32.68	77.7	69.0	74.0	6.12	5.98	5.96	5.10	5.51	5.36	17	**15.50**
	8:43		Middle	2.0	17.70	17.70		7.84	7.82		32.68	32.68		74.8	74.3		5.89	5.85		5.02	5.80		14	

Water Monitoring Result at WSD20 - Kennedy Town
Mid-Flood Tide

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	12:44	Fine	Middle	1.5	18.00	18.00	18.10	7.86	7.86	7.87	31.37	31.37	31.37	87.4	87.1	87.9	6.97	6.94	7.00	3.61	3.32	3.14	6	5.50
	12:47		Middle	1.5	18.20	18.20		7.87	7.87		31.36	31.36		88.4	88.7		7.04	7.06		3.00	2.62		5	
2/3/2011	19:19	Fine	Middle	1.5	17.20	17.20	17.25	7.91	7.91	7.93	31.37	31.37	31.36	91.2	90.6	90.9	7.25	7.20	7.22	4.52	4.92	4.46	8	7.50
	19:21		Middle	1.5	17.30	17.30		7.94	7.94		31.34	31.34		91.5	90.1		7.28	7.16		4.14	4.27		7	
4/3/2011	17:47	Cloudy	Middle	2.0	16.92	16.92	16.88	8.30	8.30	8.30	30.60	30.60	30.66	87.5	90.7	89.1	7.05	7.31	7.18	5.40	4.86	5.02	7	7.50
	17:52		Middle	2.0	16.84	16.84		8.30	8.30		30.72	30.72		91.9	86.3		7.41	6.96		4.88	4.95		8	
7/3/2011	22:57	Cloudy	Middle	2.0	16.85	16.82	16.83	8.20	8.20	8.20	30.58	30.58	30.60	99.0	95.5	95.1	7.98	7.21	7.43	4.48	4.74	4.50	7	8.00
	22:58		Middle	2.0	16.82	16.82		8.20	8.21		30.61	30.61		89.9	96.0		7.26	7.25		4.14	4.65		9	
9/3/2011	6:57	Cloudy	Middle	2.0	15.49	15.49	15.48	8.35	8.35	8.35	30.72	30.72	30.74	92.5	94.1	93.0	7.66	7.79	7.69	3.00	3.09	3.02	5	4.50
	6:59		Middle	2.0	15.46	15.46		8.35	8.35		30.75	30.75		94.9	90.5		7.86	7.46		2.92	3.07		4	
11/3/2011	7:00	Cloudy	Middle	2.0	15.70	15.70	15.70	7.75	7.75	7.75	31.55	31.55	31.55	82.7	84.0	83.3	6.79	6.88	6.82	3.21	3.84	3.59	6	5.50
	7:03		Middle	2.0	15.70	15.70		7.75	7.76		31.55	31.55		83.2	83.2		6.81	6.81		3.93	3.39		5	
13/3/2011	8:12	Sunny	Middle	2.0	18.80	18.80	18.80	7.75	7.75	7.64	32.04	32.04	32.04	75.9	82.9	79.8	5.84	6.38	6.13	4.65	4.59	4.96	12	11.00
	8:16		Middle	2.0	18.80	18.80		7.78	7.28		32.04	32.04		81.2	79.2		6.22	6.09		5.24	5.34		10	
16/3/2011	12:14	Fine	Middle	1.5	17.40	17.40	17.40	7.84	7.84	7.83	32.35	32.35	32.36	87.2	86.9	87.0	6.88	6.85	6.86	3.31	2.98	3.12	6	6.50
	12:16		Middle	1.5	17.40	17.40		7.81	7.81		32.36	32.36		87.5	86.3		6.91	6.81		3.07	3.11		7	
18/3/2011	14:13	Cloudy	Middle	1.5	17.40	17.40	17.35	8.03	8.03	8.02	32.74	32.74	32.53	92.8	91.9	92.6	7.32	7.25	7.31	5.69	5.59	5.70	9	9.00
	14:17		Middle	1.5	17.30	17.30		8.01	8.01		32.31	32.31		93.0	92.7		7.35	7.32		5.84	5.66		9	
21/3/2011	22:05	Cloudy	Middle	2.0	19.40	19.40	19.40	7.92	7.92	7.92	30.28	30.28	30.28	83.3	81.2	83.6	6.47	6.29	6.50	9.03	9.28	**9.51**	14	**14.00**
	22:08		Middle	2.0	19.40	19.40		7.92	7.92		30.28	30.28		84.4	85.6		6.58	6.66		10.30	9.41		14	
23/3/2011	7:00	Cloudy	Middle	2.0	17.10	17.10	17.10	7.81	7.81	7.81	32.48	32.48	32.48	72.6	70.8	71.1	6.09	5.94	6.02	4.90	5.27	4.90	9	9.00
	7:03		Middle	2.0	17.10	17.10		7.81	7.81		32.48	32.48		68.2	72.7		5.97	6.09		4.80	4.62		9	
25/3/2011	8:12	Cloudy	Middle	2.0	17.50	17.50	17.50	7.93	7.93	7.93	32.97	32.97	32.97	85.5	85.3	85.4	6.71	6.89	6.74	7.71	7.61	7.78	9	10.00
	8:13		Middle	2.0	17.50	17.50		7.93	7.93		32.97	32.97		86.1	84.7		6.73	6.63		7.92	7.89		11	

Water Monitoring Result at WSD7 - Kowloon South
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
28/2/2011	13:40	Fine	Middle	1.5	19.00	19.00	18.95	8.18	8.18	8.18	31.58	31.58	31.58	93.2	92.5	92.9	6.98	6.93	6.96	2.62	2.41	2.41	5	5.00
	13:43		Middle	1.5	18.90	18.90		8.18	8.18		31.57	31.57		93.3	92.7		6.98	6.95		2.27	2.34		5	
2/3/2011	19:45	Fine	Middle	1.5	17.60	17.60	17.75	7.82	7.82	7.83	31.50	31.50	31.50	84.7	84.2	84.6	6.65	6.62	6.65	5.54	5.11	5.27	9	9.00
	19:48		Middle	1.5	17.90	17.90		7.83	7.83		31.50	31.50		85.3	84.2		6.70	6.62		5.18	5.26		9	
4/3/2011	21:01	Cloudy	Middle	3.0	16.44	16.44	16.32	8.39	8.39	8.36	30.63	30.81	30.78	87.1	88.1	84.7	7.10	7.19	6.89	5.99	5.51	5.58	9	8.00
	21:03		Middle	3.0	16.20	16.20		8.32	8.32		30.83	30.83		81.5	81.9		6.64	6.64		5.30	5.50		7	
7/3/2011	18:35	Cloudy	Middle	2.0	17.21	17.21	17.21	7.87	7.87	7.86	30.83	30.83	30.79	85.8	80.0	83.6	6.85	7.00	6.83	2.64	2.43	2.62	6	6.00
	18:38		Middle	2.0	17.21	17.21		7.85	7.85		30.75	30.75		84.6	84.1		6.75	6.71		2.70	2.72		6	
9/3/2011	5:57	Cloudy	Middle	2.0	14.93	14.93	14.92	8.25	8.25	8.25	30.75	30.75	30.77	91.5	92.9	91.6	7.66	7.77	7.66	2.95	2.95	2.93	7	6.00
	5:59		Middle	2.0	14.91	14.91		8.24	8.24		30.78	30.78		91.5	90.4		7.65	7.56		2.47	3.33		5	
11/3/2011	6:20	Cloudy	Middle	2.0	15.80	15.80	15.80	7.78	7.78	7.78	31.69	31.69	31.69	81.2	81.6	81.8	6.67	6.70	6.96	3.01	2.99	3.05	5	5.00
	06;22		Middle	2.0	15.80	15.80		7.78	7.78		31.69	31.69		82.1	82.2		7.14	7.34		2.96	3.25		5	
13/3/2011	7:41	Sunny	Middle	2.5	18.80	18.80	18.80	7.69	7.69	7.69	31.90	31.90	31.86	78.2	78.6	77.3	6.07	6.10	5.98	2.15	2.07	2.16	4	3.50
	7:43		Middle	2.5	18.80	18.80		7.69	7.69		31.80	31.82		77.0	75.2		5.97	5.79		2.18	2.24		3	
16/3/2011	16:35	Fine	Middle	1.5	17.60	17.60	17.65	7.78	7.78	7.78	32.23	32.23	32.22	79.6	78.4	79.4	6.25	6.15	6.23	2.14	2.07	2.10	6	5.00
	16:38		Middle	1.5	17.70	17.70		7.78	7.78		32.21	32.21		80.1	79.6		6.28	6.24		2.04	2.13		4	
18/3/2011	15:20	Cloudy	Middle	1.5	17.40	17.40	17.30	7.85	7.85	7.85	32.65	32.65	32.68	82.0	80.7	81.3	6.49	6.29	6.42	6.69	6.84	6.71	10	9.00
	15:23		Middle	1.5	17.20	17.20		7.85	7.85		32.70	32.70		81.7	80.7		6.48	6.40		6.60	6.72		8	
21/3/2011	17:47	Cloudy	Middle	3.0	20.10	20.10	20.05	7.88	7.88	7.88	32.56	32.56	32.56	79.9	79.4	79.3	6.00	5.96	5.95	8.04	8.66	**8.37**	10	9.50
	17:50		Middle	3.0	20.10	19.90		7.88	7.88		32.56	32.56		77.3	80.6		5.80	6.04		7.96	8.81		9	
23/3/2011	5:58	Cloudy	Middle	2.5	17.00	17.00	17.00	7.76	7.76	7.76	32.48	32.48	32.48	70.4	69.8	70.6	5.97	6.01	6.03	3.25	3.45	3.20	3	3.00
	6:00		Middle	2.5	17.00	17.00		7.76	7.76		32.48	32.48		71.4	70.7		6.05	6.09		3.08	3.03		3	
25/3/2011	7:38	Cloudy	Middle	2.5	17.40	17.40	17.40	7.78	7.78	7.78	32.60	32.60	32.60	75.4	76.3	75.6	5.95	6.05	5.98	3.59	3.85	3.46	3	3.00
	7:40		Middle	2.5	17.40	17.40		7.78	7.78		32.60	32.60		76.0	74.5		6.09	5.83		3.16	3.25		3	

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	20:37	Cloudy	Middle	2.0	19.97	20.00	19.99	8.24	8.24	8.24	30.86	30.86	30.85	96.8	92.8	93.1	7.33	7.50	7.17	1.66	1.59	1.68	7	6.00
	20:40		Middle	2.0	20.00	20.00		8.23	8.23		30.84	30.84		93.4	89.2		7.08	6.76		1.81	1.64		5	
2/3/2011	20:42	Cloudy	Middle	2.0	16.04	16.04	16.04	8.31	8.31	8.31	30.85	30.85	30.85	87.3	93.1	89.5	7.14	7.61	7.32	1.66	1.96	1.89	5	4.50
	20:44		Middle	2.0	16.04	16.04		8.31	8.31		30.85	30.85		89.0	88.5		7.27	7.24		2.01	1.91		4	
4/3/2011	10:30	Cloudy	Middle	3.0	16.30	16.30	16.30	8.26	8.26	8.23	31.74	31.74	31.74	96.3	95.4	95.9	7.79	7.72	7.76	2.04	2.15	2.12	6	5.00
	10:34		Middle	3.0	16.30	16.30		8.20	8.20		31.74	31.74		96.2	95.7		7.78	7.74		2.17	2.13		4	
7/3/2011	12:10	Fine	Middle	3.0	17.70	17.70	17.85	8.12	8.12	8.12	31.94	31.94	31.89	97.7	96.6	96.5	7.56	7.46	7.45	2.05	2.04	2.20	4	4.00
	12:15		Middle	3.0	18.00	18.00		8.11	8.11		31.83	31.83		96.7	95.0		7.45	7.33		2.42	2.27		4	
9/3/2011	13:42	Cloudy	Middle	3.0	16.10	16.10	16.10	8.08	8.08	8.08	32.22	32.22	32.23	97.4	97.0	96.7	7.89	7.86	7.84	2.40	2.02	2.22	6	5.00
	13:47		Middle	3.0	16.10	16.10		8.07	8.07		32.23	32.23		96.5	95.9		7.82	7.77		2.26	2.21		4	
11/3/2011	14:43	Cloudy	Middle	2.5	16.90	16.90	17.10	7.91	7.91	7.91	32.12	32.12	32.12	91.3	90.9	91.3	7.27	7.24	7.27	1.93	1.96	1.90	3	2.50
	14:48		Middle	2.5	17.60	17.00		7.90	7.90		32.11	32.11		91.9	91.1		7.32	7.26		1.86	1.84		2	
13/3/2011	19:51	Sunny	Middle	2.0	20.10	20.10	20.10	7.98	7.98	7.98	32.08	32.08	32.08	86.6	86.9	86.0	6.37	6.38	6.32	1.24	1.65	1.32	3	3.00
	19:53		Middle	2.0	20.10	20.10		7.98	7.98		32.08	32.08		85.9	84.5		6.31	6.22		1.09	1.29		3	
16/3/2011	20:05	Cloudy	Middle	2.0	18.10	18.10	18.10	7.92	7.92	7.92	32.27	32.27	32.27	83.5	84.2	85.1	6.51	6.65	6.66	1.80	1.61	1.64	5	4.00
	20:10		Middle	2.0	18.10	18.10		7.92	7.92		32.27	32.27		86.9	85.8		6.77	6.69		1.60	1.56		3	
18/3/2011	8:43	Cloudy	Middle	2.5	17.30	17.30	17.25	7.89	7.89	7.90	32.93	32.93	32.98	89.2	88.5	89.1	7.06	7.00	7.05	3.28	3.14	3.20	10	9.00
	8:47		Middle	2.5	17.20	17.20		7.91	7.91		33.03	33.03		89.7	88.9		7.11	7.04		3.14	3.22		8	
21/3/2011	14:00	Fine	Middle	2.5	19.80	19.80	20.00	7.80	7.80	7.80	32.67	32.67	32.61	85.0	84.4	84.8	6.33	6.30	6.31	2.12	2.02	2.08	4	5.00
	14:05		Middle	2.5	20.20	20.20		7.79	7.79		32.55	32.55		85.4	84.3		6.35	6.27		2.15	2.04		6	
23/3/2011	17:25	Cloudy	Middle	1.5	17.90	17.90	17.80	7.89	7.89	7.88	32.79	32.79	32.80	81.1	80.2	81.3	6.33	6.26	6.35	3.58	3.89	3.82	8	7.00
	17:28		Middle	1.5	17.70	17.70		7.86	7.86		32.81	32.81		81.9	81.9		6.40	6.41		3.89	3.91		6	
25/3/2011	15:48	Cloudy	Middle	2.5	18.50	18.50	18.40	7.95	7.95	7.94	33.05	33.05	33.05	86.4	85.9	86.1	6.66	6.62	6.64	2.39	2.29	2.30	2	2.50
	15:53		Middle	2.5	18.30	18.30		7.92	7.92		33.05	33.05		86.3	85.6		6.66	6.60		2.27	2.24		3	

Water Monitoring Result at WSD10 - Cha Kwo Ling
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	19:49	Cloudy	Middle	2.0	19.69	19.69	19.76	8.29	8.29	8.28	30.97	30.97	30.98	95.8	92.8	96.0	7.28	7.06	7.30	2.36	2.42	2.33	5	5.50
	19:52		Middle	2.0	19.82	19.82		8.27	8.27		30.98	30.98		97.1	98.1		7.38	7.46		2.25	2.29		6	
2/3/2011	1:36	Cloudy	Middle	2.0	15.96	15.96	15.96	8.36	8.36	8.37	31.00	31.00	31.00	83.2	88.6	84.9	6.83	7.25	7.03	1.58	1.47	1.71	5	5.50
	1:40		Middle	2.0	15.95	15.95		8.37	8.37		31.00	31.00		80.5	87.2		6.59	7.45		1.68	2.12		6	
4/3/2011	11:05	Cloudy	Middle	3.0	16.20	16.20	16.30	8.12	8.12	8.13	31.77	31.77	31.70	97.7	96.1	97.0	7.89	7.76	7.84	3.85	3.01	3.39	3	3.50
	11:08		Middle	3.0	16.40	16.40		8.13	8.13		31.62	31.62		97.4	96.9		7.87	7.82		3.46	3.23		4	
7/3/2011	11:30	Fine	Middle	2.5	17.50	17.50	17.65	8.01	8.01	8.03	31.71	31.71	31.72	95.0	94.1	94.7	7.52	7.39	7.47	4.01	3.47	3.65	5	6.00
	11:34		Middle	2.5	17.80	17.80		8.04	8.04		31.73	31.73		95.3	94.5		7.56	7.42		3.49	3.62		7	
9/3/2011	13:20	Cloudy	Middle	3.0	16.60	16.60	16.60	7.95	7.95	7.95	32.22	32.22	32.23	89.2	90.0	89.9	7.16	7.22	7.21	2.64	2.96	2.76	6	5.50
	13:24		Middle	3.0	16.60	16.60		7.95	7.95		32.23	32.23		91.0	89.3		7.30	7.17		2.76	2.69		5	
11/3/2011	15:17	Cloudy	Middle	3.0	16.80	16.80	16.80	7.93	7.93	7.94	32.39	32.39	32.38	94.3	93.5	94.1	7.53	7.46	7.51	2.97	2.85	2.84	5	4.50
	15:20		Middle	3.0	16.80	16.80		7.95	7.95		32.37	32.37		94.6	93.8		7.55	7.49		2.68	2.84		4	
13/3/2011	21:20	Sunny	Middle	2.0	20.10	20.10	20.10	7.86	7.86	7.86	32.17	32.17	32.17	90.9	92.1	90.5	6.45	6.54	6.42	2.35	1.93	1.84	4	3.50
	21:22		Middle	2.0	20.10	20.10		7.86	7.86		32.17	32.17		90.6	88.4		6.41	6.28		1.67	1.40		3	
16/3/2011	19:31	Cloudy	Middle	2.0	17.40	17.40	17.40	7.98	7.98	7.98	33.13	33.13	33.13	86.6	84.0	85.3	6.87	6.60	6.72	2.31	2.59	2.35	4	4.50
	19:34		Middle	2.0	17.40	17.40		7.98	7.98		33.13	33.13		81.6	88.9		6.41	6.99		2.12	2.38		5	
18/3/2011	9:14	Cloudy	Middle	3.0	17.30	17.30	17.30	7.97	7.97	7.97	32.97	32.97	33.05	91.6	90.3	91.0	7.03	7.06	7.14	2.41	2.48	2.40	6	5.00
	9:18		Middle	3.0	17.30	17.30		7.97	7.97		33.12	33.12		91.0	90.9		7.27	7.20		2.35	2.36		4	
21/3/2011	14:37	Fine	Middle	2.0	19.60	19.60	19.75	7.91	7.91	7.92	33.09	33.09	32.99	88.0	87.4	87.9	6.58	6.53	6.55	3.70	2.94	3.14	5	5.00
	14:41		Middle	2.0	19.90	19.90		7.92	7.92		32.89	32.89		88.2	87.9		6.55	6.52		2.92	2.99		5	
23/3/2011	17:45	Cloudy	Middle	1.5	17.90	17.90	17.80	8.00	8.00	7.99	32.88	32.88	32.89	83.4	83.2	82.8	6.51	6.50	6.47	4.07	4.37	4.24	6	7.00
	17:47		Middle	1.5	17.70	17.70		7.97	7.97		32.90	32.90		82.5	82.2		6.45	6.42		4.07	4.43		8	
25/3/2011	16:30	Cloudy	Middle	2.5	18.10	18.10	18.05	8.02	8.02	8.02	33.09	33.09	33.13	90.6	88.6	89.8	7.03	6.88	6.97	2.64	2.72	2.57	4	4.00
	16:34		Middle	2.5	18.00	18.00		8.01	8.01		33.17	33.17		90.9	89.2		7.05	6.90		2.33	2.59		4	

Water Monitoring Result at WSD15 - Sai Wan Ho
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
28/2/2011	0:43	Cloudy	Middle	3	21.07	21.06	20.99	8.20	8.20	8.21	30.72	30.78	30.79	89.9	89.5	91.6	6.70	6.68	6.83	3.04	2.55	2.82	6	6.50
	0:48		Middle	3	20.91	20.91		8.21	8.21		30.82	30.82		96.1	91.0		7.16	6.78		2.50	3.19		7	
2/3/2011	0:42	Cloudy	Middle	3	16.26	16.26	16.26	8.38	8.38	8.38	30.93	30.93	30.94	92.2	89.6	89.7	7.50	7.29	7.30	1.89	1.90	1.83	4	4.50
	0:46		Middle	3	16.25	16.25		8.38	8.38		30.94	30.94		90.9	86.1		7.40	7.01		1.78	1.74		5	
4/3/2011	11:28	Cloudy	Middle	3	16.40	16.40	16.65	8.30	8.29	8.29	31.92	31.92	31.92	97.7	96.5	97.2	7.81	7.71	7.74	2.80	2.40	2.51	3	3.00
	11:30		Middle	3	16.90	16.90		8.28	8.28		31.92	31.92		97.9	96.7		7.79	7.63		2.35	2.50		<2	
7/3/2011	16:10	Fine	Middle	3	17.50	17.50	17.60	8.06	8.06	8.06	31.70	31.70	31.69	88.3	87.2	87.9	6.95	6.87	6.92	1.86	1.72	1.78	6	5.00
	16:13		Middle	3	17.70	17.70		8.06	8.06		31.68	31.68		88.8	87.4		6.99	6.87		1.73	1.82		4	
9/3/2011	12:20	Cloudy	Middle	3	16.30	16.30	16.30	7.77	7.77	7.77	32.12	32.12	32.20	93.7	92.8	93.4	7.56	7.50	7.55	6.34	6.53	6.55	6	6.00
	12:24		Middle	3	16.30	16.30		7.77	7.77		32.27	32.27		94.1	93.1		7.60	7.53		6.87	6.46		6	
11/3/2011	15:45	Cloudy	Middle	3	16.90	16.90	16.90	7.93	7.93	7.93	32.29	32.29	32.30	90.5	89.4	90.2	7.21	7.13	7.19	3.91	3.15	3.38	6	7.00
	15:48		Middle	3	16.90	16.90		7.93	7.93		32.30	32.30		91.1	89.6		7.26	7.15		3.17	3.28		8	
13/3/2011	19:03	Sunny	Middle	3	19.60	19.60	19.60	7.80	7.80	7.80	32.09	32.09	32.09	90.3	92.8	91.6	7.23	7.40	7.22	1.91	2.04	2.05	5	5.00
	19:06		Middle	3	19.60	19.60		7.80	7.80		32.09	32.09		91.0	92.2		7.26	7.00		2.38	1.87		5	
16/3/2011	22:22	Cloudy	Middle	3	17.20	17.20	17.25	7.92	7.92	7.92	32.93	32.93	32.95	89.1	86.5	87.3	7.02	6.82	6.89	2.51	2.43	2.37	5	6.00
	22:24		Middle	3	17.30	17.30		7.92	7.92		32.97	32.97		86.8	86.8		6.86	6.85		2.36	2.19		7	
18/3/2011	9:44	Cloudy	Middle	3	17.50	17.50	17.45	7.99	7.99	8.00	33.06	33.06	33.09	93.7	92.6	93.0	7.38	7.29	7.39	3.89	3.55	3.50	5	5.50
	9:47		Middle	3	17.40	17.40		8.00	8.00		33.11	33.11		93.2	92.5		7.57	7.32		3.07	3.48		6	
21/3/2011	15:06	Fine	Middle	3	19.10	19.10	19.30	7.76	7.76	7.76	32.72	32.72	32.64	67.6	67.0	67.7	5.12	5.07	5.12	5.80	5.49	5.26	6	6.00
	15:10		Middle	3	19.50	19.50		7.76	7.76		32.55	32.55		68.6	67.6		5.17	5.10		4.83	4.91		26*	
23/3/2011	13:54	Cloudy	Middle	3	18.30	18.30	18.30	7.97	7.96	7.95	33.02	33.02	33.03	83.3	81.5	82.2	6.43	6.29	6.35	3.86	3.54	3.61	9	8.00
	13:57		Middle	3	18.30	18.30		7.93	7.93		33.04	33.04		82.1	81.9		6.34	6.33		3.37	3.66		7	
25/3/2011	16:50	Cloudy	Middle	3	18.30	18.30	18.30	7.89	7.89	7.89	33.06	33.06	33.06	79.0	78.7	78.8	6.10	6.07	6.08	3.44	3.72	3.65	6	5.00
	16:53		Middle	3	18.30	18.30		7.89	7.89		33.06	33.06		79.0	78.4		6.10	6.04		3.81	3.62		4	

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
28/2/2011	23:55	Cloudy	Middle	3	21.45	21.45	21.45	8.20	8.20	8.21	30.72	30.72	30.73	88.9	92.2	91.1	6.57	6.81	6.75	2.93	2.76	2.92	5	4.50
	0:11		Middle	3	21.45	21.45		8.21	8.21		30.73	30.73		89.8	93.6		6.71	6.91		2.97	3.00		4	
2/3/2011	0:10	Cloudy	Middle	3	15.94	15.94	15.89	8.31	8.31	8.31	30.63	30.64	30.68	89.4	83.6	86.3	7.36	6.86	7.10	2.57	2.59	2.80	4	4.00
	0:13		Middle	3	15.84	15.84		8.31	8.31		30.73	30.73		89.2	83.1		7.33	6.83		3.04	3.00		4	
4/3/2011	11:50	Cloudy	Middle	3	16.30	16.30	16.35	8.08	8.08	8.08	31.28	31.28	31.23	89.8	89.2	89.6	7.27	7.22	7.26	4.85	4.23	4.47	3	4.00
	11:53		Middle	3	16.40	16.40		8.08	8.08		31.18	31.18		90.0	89.4		7.28	7.25		4.37	4.42		5	
7/3/2011	16:32	Fine	Middle	3	17.10	17.10	17.20	8.07	8.07	8.07	31.44	31.44	31.47	88.2	87.8	88.1	7.01	6.97	6.99	2.78	2.43	2.43	5	4.50
	16:37		Middle	3	17.30	17.30		8.06	8.06		31.50	31.50		88.7	87.5		7.04	6.94		2.24	2.28		4	
9/3/2011	12:42	Cloudy	Middle	3	16.60	16.60	16.60	7.99	7.99	7.98	32.27	32.27	32.27	90.2	89.4	90.1	7.23	7.17	7.23	4.22	3.93	4.00	7	8.00
	12:46		Middle	3	16.60	16.60		7.96	7.96		32.27	32.27		90.7	90.2		7.27	7.23		3.97	3.86		9	
11/3/2011	12:45	Cloudy	Middle	3	16.70	16.70	16.70	7.95	7.95	7.95	32.50	32.50	32.50	88.9	88.6	88.6	7.10	7.08	7.07	5.60	4.74	5.02	8	9.00
	12:49		Middle	3	16.70	16.70		7.94	7.94		32.50	32.50		89.1	87.6		7.11	7.00		4.92	4.81		10	
13/3/2011	18:41	Sunny	Middle	3	20.50	20.50	20.50	7.80	7.80	7.80	32.10	32.10	32.10	85.5	86.3	85.3	6.14	6.21	6.12	1.66	2.25	1.82	3	3.00
	18:43		Middle	3	20.50	20.50		7.80	7.80		32.10	32.10		84.9	84.3		6.10	6.01		1.82	1.54		3	
16/3/2011	21:47	Cloudy	Middle	3	17.40	17.40	17.40	7.91	7.91	7.91	32.88	32.88	32.88	85.6	85.8	84.6	6.74	6.76	6.66	3.00	2.50	2.73	5	5.50
	21:50		Middle	3	17.40	17.40		7.91	7.91		32.88	32.88		83.9	82.9		6.61	6.53		2.80	2.63		6	
18/3/2011	10:08	Cloudy	Middle	3	17.40	17.40	17.40	7.98	7.98	7.99	33.13	33.13	33.16	90.3	89.6	89.9	7.11	7.05	7.11	4.01	4.22	3.84	8	8.00
	10:12		Middle	3	17.40	17.40		7.99	7.99		33.18	33.18		90.9	88.9		7.19	7.09		3.34	3.79		8	
21/3/2011	15:30	Fine	Middle	2	19.00	19.00	19.20	7.79	7.79	7.80	32.69	32.69	32.65	76.2	75.3	75.8	5.78	5.71	5.74	5.42	5.45	5.28	6	6.50
	15:34		Middle	2	19.40	19.40		7.80	7.80		32.60	32.60		76.1	75.5		5.76	5.71		5.16	5.09		7	
23/3/2011	14:28	Cloudy	Middle	2	18.20	18.20	18.25	7.98	7.97	7.96	32.95	32.95	32.96	80.1	79.6	80.1	6.19	6.16	6.19	6.71	6.49	6.25	8	8.00
	14:31		Middle	2	18.30	18.30		7.95	7.95		32.96	32.96		80.0	80.6		6.19	6.23		6.04	5.74		8	
25/3/2011	17:13	Cloudy	Middle	2	18.20	18.20	18.20	7.85	7.85	7.85	32.82	32.82	32.81	70.4	70.0	70.1	5.45	5.42	5.43	3.06	2.84	2.90	4	5.00
	17:15		Middle	2	18.20	18.20		7.84	7.84		32.79	32.79		70.2	69.8		5.44	5.41		2.79	2.92		6	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	22:39	Cloudy	Middle	2	19.04	19.04	19.05	8.06	8.06	8.05	30.57	30.57	30.57	82.3	84.8	83.5	6.36	6.56	6.46	4.20	4.21	4.11	7	6.50
	22:43		Middle	2	19.05	19.05		8.03	8.03		30.57	30.57		85.2	81.8		6.58	6.32		3.99	4.04		6	
2/3/2011	23:43	Cloudy	Middle	2	15.97	15.97	15.99	8.27	8.27	8.27	30.68	30.70	30.72	82.6	80.2	84.0	6.79	6.59	6.91	3.58	3.43	3.41	9	8.00
	23:48		Middle	2	16.01	16.01		8.27	8.27		30.75	30.76		86.2	87.1		7.08	7.16		3.07	3.56		7	
4/3/2011	14:35	Cloudy	Middle	2	16.60	16.60	16.60	8.15	8.15	8.15	31.48	31.48	31.48	85.3	85.4	85.1	6.84	6.85	6.82	3.56	3.72	3.73	6	6.00
	14:38		Middle	2	16.60	16.60		8.14	8.14		31.48	31.48		84.8	85.0		6.79	6.81		3.76	3.86		6	
7/3/2011	15:43	Fine	Middle	2	17.40	17.40	17.40	8.14	8.14	8.09	31.44	31.44	31.43	81.4	81.3	81.1	6.44	6.43	6.42	4.93	3.76	3.85	8	7.00
	15:46		Middle	2	17.40	17.40		8.04	8.04		31.42	31.42		80.8	81.0		6.39	6.40		3.52	3.20		6	
9/3/2011	16:52	Cloudy	Middle	2	16.20	16.20	16.20	7.84	7.84	7.84	31.80	31.80	31.80	85.8	85.2	85.7	6.95	6.90	6.94	6.48	6.51	6.10	10	9.00
	16:55		Middle	2	16.20	16.20		7.83	7.83		31.80	31.80		86.2	85.4		6.99	6.92		5.91	5.51		8	
11/3/2011	17:45	Cloudy	Middle	2	16.60	16.60	16.65	7.77	7.77	7.78	31.83	31.83	31.83	80.8	81.2	80.8	6.48	6.51	6.48	6.48	6.38	6.26	11	10.50
	17:48		Middle	2	16.70	16.70		7.78	7.78		31.82	31.82		80.9	80.3		6.48	6.43		6.36	5.83		10	
13/3/2011	18:15	Sunny	Middle	2	19.60	19.60	19.60	7.68	7.68	7.68	31.90	31.90	31.90	81.3	80.1	80.7	6.04	5.95	6.02	7.19	6.69	6.78	9	8.50
	18:18		Middle	2	19.60	19.60		7.68	7.68		31.90	31.90		79.9	81.3		6.04	6.04		6.70	6.54		8	
16/3/2011	21:25	Cloudy	Middle	2	17.50	17.50	17.50	7.88	7.88	7.88	32.59	32.59	32.59	75.1	78.0	78.3	5.88	6.15	6.16	3.79	3.80	3.87	6	6.00
	21:28		Middle	2	17.50	17.50		7.88	7.88		32.59	32.59		81.4	78.6		6.42	6.20		3.88	4.00		6	
18/3/2011	11:38	Cloudy	Middle	2	17.60	17.60	17.55	7.96	7.96	7.97	33.02	33.02	33.05	90.6	89.1	89.7	7.05	6.99	7.00	6.22	6.08	6.08	12	11.00
	11:41		Middle	2	17.50	17.50		7.97	7.97		33.07	33.07		90.2	89.0		7.03	6.93		5.80	6.20		10	
21/3/2011	16:05	Fine	Middle	2	19.50	19.50	19.65	7.78	7.78	7.78	32.64	32.64	32.63	79.8	79.2	79.6	6.00	5.95	5.97	12.20	11.50	**11.43**	18	**18.50**
	16:08		Middle	2	19.80	19.80		7.78	7.78		32.62	32.62		80.3	78.9		6.02	5.92		11.60	10.40		19	
23/3/2011	13:17	Cloudy	Middle	3	18.40	18.40	18.40	7.98	7.98	7.97	32.82	32.82	32.82	81.7	81.8	81.5	6.30	6.31	6.29	4.18	3.88	3.95	6	6.50
	13:20		Middle	3	18.40	18.40		7.96	7.96		32.82	32.82		81.1	81.5		6.25	6.28		3.94	3.81		7	
25/3/2011	18:48	Cloudy	Middle	2	18.20	18.20	18.20	7.78	7.78	7.79	32.76	32.76	32.76	73.9	72.7	73.6	5.72	5.59	5.69	6.47	6.63	6.29	8	9.00
	18:52		Middle	2	18.20	18.20		7.79	7.79		32.76	32.76		74.3	73.4		5.75	5.68		6.05	6.02		10	

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
28/2/2011	23:11	Cloudy	Middle	2	19.03	19.03	19.05	8.04	8.04	8.04	30.34	30.34	30.33	77.6	80.2	77.8	6.01	6.21	6.03	4.21	4.32	4.00	5	6.00
	23:16		Middle	2	19.06	19.06		8.04	8.04		30.32	30.32		78.9	74.6		6.11	5.77		3.79	3.66		7	
2/3/2011	23:19	Cloudy	Middle	2	17.74	17.78	17.81	8.36	8.36	8.36	30.13	30.13	30.19	87.0	86.4	85.2	7.15	7.10	7.00	4.44	4.28	4.34	8	7.50
	23:22		Middle	2	17.86	17.86		8.36	8.36		30.23	30.26		81.3	86.2		6.68	7.08		4.45	4.18		7	
4/3/2011	14:10	Cloudy	Middle	2	16.90	16.90	16.90	8.03	8.03	8.03	31.19	31.19	31.19	82.0	82.5	81.8	6.55	6.59	6.53	5.94	6.20	6.00	10	10.50
	14:13		Middle	2	16.90	16.90		8.03	8.03		31.19	31.19		81.6	81.1		6.51	6.47		5.85	5.99		11	
7/3/2011	15:27	Fine	Middle	2	17.60	17.60	17.70	7.99	7.99	7.99	31.43	31.44	31.42	78.9	78.8	77.4	6.17	6.16	6.04	4.80	4.48	4.55	12	13.00
	15:30		Middle	2	17.80	17.80		7.98	7.98		31.40	31.40		76.0	75.7		5.92	5.89		4.72	4.19		14	
9/3/2011	16:30	Cloudy	Middle	2	16.20	16.20	16.20	7.84	7.84	7.84	31.77	31.77	31.77	83.8	83.2	83.3	6.79	6.74	6.75	8.13	7.97	7.73	14	14.50
	16:33		Middle	2	16.20	16.20		7.84	7.84		31.77	31.77		83.5	82.5		6.77	6.68		7.57	7.23		15	
11/3/2011	17:15	Cloudy	Middle	2	17.40	17.40	17.45	7.70	7.70	7.69	30.25	30.25	30.26	72.7	72.3	73.1	5.80	5.76	5.83	17.90	17.80	**17.65**	12	13.00
	17:18		Middle	2	17.50	17.50		7.67	7.67		30.27	30.27		74.7	72.8		5.93	5.83		18.10	16.80		14	
13/3/2011	17:59	Sunny	Middle	2	19.30	19.40	19.38	7.58	7.58	7.58	31.72	31.72	31.72	64.6	64.8	63.2	4.83	4.82	4.70	6.15	6.33	6.09	8	8.50
	18:02		Middle	2	19.40	19.40		7.58	7.58		31.72	31.72		62.9	60.3		4.68	4.48		5.92	5.95		9	
16/3/2011	21:10	Cloudy	Middle	2	17.40	17.40	17.45	7.71	7.71	7.72	31.87	31.87	31.93	69.5	67.6	67.8	5.49	5.43	5.38	6.43	6.58	6.61	8	7.00
	21:12		Middle	2	17.50	17.50		7.72	7.72		31.99	31.99		68.3	65.6		5.40	5.18		6.73	6.71		6	
18/3/2011	11:19	Cloudy	Middle	2	17.80	17.80	17.70	7.89	7.89	7.90	31.91	31.91	31.94	81.7	81.5	81.9	6.43	6.42	6.43	12.70	12.50	**12.25**	16	**15.50**
	11:22		Middle	2	17.60	17.60		7.90	7.90		31.97	31.97		82.8	81.4		6.46	6.42		12.00	11.80		15	
21/3/2011	15:50	Fine	Middle	1	19.80	19.80	20.00	7.85	7.85	7.83	32.44	32.44	32.41	77.5	76.6	77.5	5.81	5.75	5.80	17.10	15.60	**15.95**	20	**20.50**
	15:53		Middle	1	20.20	20.20		7.81	7.81		32.37	32.37		78.1	77.8		5.84	5.81		14.90	16.20		21	
23/3/2011	12:58	Cloudy	Middle	2	18.50	18.50	18.55	7.95	7.95	7.94	32.69	32.69	32.69	76.8	76.9	76.7	5.91	5.92	5.91	5.59	5.17	5.41	8	7.00
	13:01		Middle	2	18.60	18.60		7.92	7.92		32.69	32.69		76.5	76.6		5.89	5.90		5.57	5.29		6	
25/3/2011	18:30	Cloudy	Middle	2	18.30	18.30	18.30	7.75	7.75	7.75	32.42	32.42	32.43	71.4	71.0	71.5	5.53	5.50	5.54	7.87	7.65	7.43	11	10.50
	18:34		Middle	2	18.30	18.30		7.75	7.75		32.43	32.43		72.0	71.4		5.58	5.53		7.18	7.00		10	

Water Monitoring Result at C6 - Excelsior Hotel
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
28/2/2011	22:07	Cloudy	Middle	2	19.15	19.15	19.15	7.88	7.87	7.87	29.89	29.89	29.89	71.3	71.0	70.5	5.52	5.50	5.46	3.70	3.13	3.29	4	7.00
	22:10		Middle	2	19.15	19.15		7.86	7.86		29.89	29.89		71.5	68.3		5.54	5.29		3.16	3.17		10	
2/3/2011	22:45	Cloudy	Middle	2	15.70	15.70	15.69	8.01	8.01	8.01	30.23	30.23	30.24	69.2	67.2	67.7	5.72	5.56	5.60	3.43	3.22	3.09	6	5.50
	22:48		Middle	2	15.68	15.68		8.01	8.01		30.24	30.24		65.2	69.1		5.39	5.71		2.82	2.88		5	
4/3/2011	13:35	Cloudy	Middle	2	17.10	17.10	17.10	8.01	8.01	8.01	31.33	31.33	31.33	75.4	75.0	75.1	5.92	5.88	5.89	3.63	3.46	3.54	6	5.00
	13:39		Middle	2	17.10	17.10		8.01	8.01		31.33	31.33		75.2	74.7		5.90	5.86		3.45	3.61		4	
7/3/2011	14:45	Fine	Middle	2	17.70	17.70	17.75	7.96	7.96	7.95	30.58	30.58	30.57	51.2	51.3	51.9	4.01	4.01	4.05	1.76	1.92	1.80	4	5.00
	14:48		Middle	2	17.80	17.80		7.94	7.94		30.56	30.56		52.3	52.7		4.07	4.09		1.75	1.77		6	
9/3/2011	15:56	Cloudy	Middle	2	16.30	16.30	16.25	7.70	7.70	7.69	30.82	30.82	30.84	58.1	57.7	57.9	4.74	4.71	4.73	3.17	2.92	2.75	8	7.50
	15:58		Middle	2	16.20	16.20		7.68	7.68		30.86	30.86		58.3	57.6		4.75	4.70		2.43	2.47		7	
11/3/2011	16:37	Cloudy	Middle	2	17.00	17.00	17.05	7.62	7.62	7.62	30.97	30.97	30.96	58.1	58.0	59.0	4.65	4.64	4.72	2.06	2.06	2.06	4	5.00
	16:40		Middle	2	17.10	17.10		7.61	7.61		30.95	30.95		60.1	59.7		4.81	4.78		2.13	1.99		6	
13/3/2011	17:22	Sunny	Middle	2	18.50	18.50	18.50	7.56	7.56	7.56	31.15	31.15	31.15	64.0	64.6	63.7	5.15	4.89	4.87	2.65	2.36	2.40	4	5.00
	17:25		Middle	2	18.50	18.50		7.56	7.56		31.15	31.15		64.1	62.1		4.80	4.65		1.88	2.69		6	
16/3/2011	20:39	Cloudy	Middle	2	17.60	17.60	17.60	7.65	7.65	7.65	31.34	31.34	31.34	64.2	64.4	64.4	5.10	5.11	5.11	1.70	1.61	1.84	2	2.50
	20:41		Middle	2	17.60	17.60		7.64	7.64		31.34	31.34		64.8	64.3		5.14	5.10		2.16	1.89		3	
18/3/2011	10:50	Cloudy	Middle	2	17.30	17.30	17.25	7.69	7.69	7.69	32.05	32.05	32.07	63.4	62.7	63.5	5.05	5.99	5.30	2.29	2.18	2.13	3	3.00
	10:53		Middle	2	17.20	17.20		7.69	7.69		32.08	32.08		64.2	63.6		5.11	5.06		2.04	2.00		3	
21/3/2011	12:00	Fine	Middle	2	20.20	20.20	20.25	7.67	7.67	7.67	32.14	32.14	32.13	55.4	54.7	55.2	4.10	4.03	4.08	2.99	3.09	3.09	5	6.00
	12:04		Middle	2	20.30	20.30		7.67	7.67		32.11	32.11		55.9	54.8		4.13	4.04		3.23	3.05		7	
23/3/2011	12:26	Cloudy	Middle	2	18.30	18.30	18.35	7.66	7.66	7.65	31.72	31.72	31.76	55.1	55.3	55.2	4.28	4.30	4.29	2.80	2.66	2.64	4	3.50
	12:30		Middle	2	18.40	18.40		7.63	7.63		31.79	31.79		55.0	55.2		4.27	4.29		2.51	2.58		3	
25/3/2011	18:00	Cloudy	Middle	2	18.30	18.30	18.30	7.69	7.69	7.69	31.79	31.79	31.83	56.0	55.4	55.9	4.36	4.31	4.35	5.12	5.42	5.13	7	6.50
	18:04		Middle	2	18.30	18.30		7.68	7.68		31.86	31.86		56.3	55.8		4.38	4.34		5.13	4.84		6	

Water Monitoring Result at C1 - HKCEC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	21:55	Cloudy	Middle	2.0	21.56	21.56	21.58	8.08	8.08	8.24	29.88	29.88	29.89	74.0	73.5	74.7	5.48	5.44	5.53	2.68	2.54	2.52	7	6.00
	22:00		Middle	2.0	21.60	21.60		8.09	8.69		29.89	29.89		74.7	76.7		5.53	5.68		2.41	2.43		5	
2/3/2011	22:38	Cloudy	Middle	2.0	18.09	18.08	18.08	8.25	8.25	8.25	30.09	30.09	30.10	83.4	86.4	83.5	6.59	6.82	6.60	2.37	1.98	2.00	4	3.50
	22:41		Middle	2.0	18.07	18.07		8.25	8.25		30.10	30.10		82.6	81.5		6.53	6.44		1.88	1.78		3	
4/3/2011	15:20	Cloudy	Middle	2.5	17.40	17.40	17.35	8.02	8.02	8.03	32.40	32.40	32.35	91.9	91.7	91.5	7.30	7.28	7.25	3.08	3.10	3.06	6	5.50
	15:23		Middle	2.5	17.30	17.30		8.03	8.03		32.30	32.30		91.2	91.0		7.22	7.21		2.98	3.07		5	
7/3/2011	15:30	Fine	Middle	2.5	18.90	18.90	18.80	7.95	7.95	7.95	32.20	32.20	32.15	91.3	91.6	91.4	7.19	7.19	7.15	2.17	2.22	2.26	6	5.50
	15:33		Middle	2.5	18.70	18.70		7.94	7.94		32.10	32.10		91.7	91.0		7.15	7.05		2.26	2.37		5	
9/3/2011	14:40	Cloudy	Middle	2.5	16.90	16.90	16.85	7.89	7.89	7.89	32.80	32.80	32.75	94.8	94.0	93.9	7.61	7.54	7.53	3.76	3.96	3.73	6	6.00
	14:43		Middle	2.5	16.80	16.80		7.88	7.88		32.70	32.70		93.8	93.0		7.50	7.48		3.53	3.66		6	
11/3/2011	14:55	Cloudy	Middle	2.5	17.60	17.60	17.55	7.85	7.85	7.86	32.80	32.80	32.80	89.8	89.7	88.7	7.09	7.08	7.00	2.60	3.20	3.03	6	5.50
	14:58		Middle	2.5	17.50	17.50		7.86	7.86		32.80	32.80		88.1	87.2		6.93	6.89		3.16	3.15		5	
13/3/2011	16:48	Sunny	Middle	2.5	18.90	18.90	18.98	7.86	7.87	7.87	31.80	31.80	31.90	91.7	91.6	91.6	6.91	6.92	6.94	2.16	2.10	2.04	8	7.00
	16:50		Middle	2.5	19.00	19.10		7.88	7.88		32.00	32.00		91.5	91.4		6.96	6.97		2.00	1.91		6	
16/3/2011	20:24	Cloudy	Middle	2.0	17.10	17.10	17.10	7.86	7.86	7.87	32.62	32.62	32.63	82.6	82.0	81.5	6.55	6.35	6.43	1.72	1.99	1.81	6	5.50
	20:26		Middle	2.0	17.10	17.10		7.87	7.87		32.63	32.63		80.2	81.1		6.37	6.43		1.73	1.78		5	
18/3/2011	10:55	Cloudy	Middle	2.5	18.00	18.00	17.95	7.81	7.81	7.81	32.70	32.70	32.65	92.0	91.9	91.6	7.22	7.19	7.19	3.37	3.83	3.50	5	5.00
	10:58		Middle	2.5	17.90	17.90		7.80	7.80		32.60	32.60		91.1	91.4		7.18	7.17		3.57	3.22		5	
21/3/2011	12:11	Fine	Middle	2.5	20.10	20.10	20.05	7.92	7.92	7.92	32.40	32.40	32.35	90.9	90.7	90.3	6.71	6.64	6.64	5.11	5.00	4.99	7	6.00
	12:14		Middle	2.5	20.00	20.00		7.91	7.91		32.30	32.30		89.8	89.6		6.63	6.56		4.96	4.87		5	
23/3/2011	13:20	Cloudy	Middle	2.5	18.60	18.60	18.65	7.94	7.94	7.94	32.60	32.60	32.55	91.7	91.1	91.1	7.12	7.10	7.07	3.66	3.39	3.49	5	5.00
	13:23		Middle	2.5	18.70	18.70		7.93	7.93		32.50	32.50		91.0	90.6		7.04	7.02		3.40	3.50		5	
25/3/2011	15:10	Cloudy	Middle	2.5	19.20	19.20	19.15	7.76	7.77	7.77	32.60	32.60	32.55	85.7	85.1	85.1	6.62	6.61	6.61	3.06	2.87	2.93	5	5.00
	15:14		Middle	2.5	19.10	19.10		7.78	7.78		32.50	32.50		85.0	84.6		6.60	6.59		2.91	2.88		5	

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	23:04	Cloudy	Middle	2.0	21.34	21.34	21.36	8.15	8.15	8.15	30.48	30.48	30.48	82.3	81.7	81.8	6.10	6.05	6.06	2.28	2.45	2.38	11	10.00
	23:08		Middle	2.0	21.37	21.37		8.14	8.14		30.48	30.48		80.3	82.8		5.95	6.13		2.61	2.17		9	
2/3/2011	0:18	Cloudy	Middle	2.0	18.43	18.43	18.42	8.26	8.26	8.25	30.44	30.44	30.49	85.9	81.0	84.0	6.72	6.34	6.58	2.92	2.68	2.51	6	7.00
	0:21		Middle	2.0	18.41	18.41		8.24	8.24		30.53	30.53		84.3	84.8		6.60	6.64		2.31	2.14		8	
4/3/2011	12:53	Cloudy	Middle	1.0	17.90	17.90	17.85	7.99	7.99	8.00	32.40	32.40	32.35	83.9	83.8	83.8	6.51	6.50	6.50	2.84	2.95	2.78	7	6.00
	12:56		Middle	1.0	17.80	17.80		8.00	8.00		32.30	32.30		83.7	83.6		6.49	6.48		2.59	2.75		5	
7/3/2011	13:30	Fine	Middle	1.5	18.80	18.80	18.85	7.95	7.95	7.96	32.20	32.20	32.25	84.7	84.5	84.4	6.50	6.48	6.47	2.44	2.32	2.46	6	7.00
	13:33		Middle	1.5	18.90	18.90		7.96	7.96		32.30	32.30		84.3	84.2		6.46	6.45		2.52	2.55		8	
9/3/2011	14:07	Cloudy	Middle	2.5	17.40	17.40	17.35	7.92	7.92	7.92	32.70	32.70	32.65	87.4	87.9	87.1	6.99	6.95	6.94	2.77	3.23	3.01	7	7.00
	14:10		Middle	2.5	17.30	17.30		7.91	7.91		32.60	32.60		86.8	86.4		6.91	6.90		3.01	3.01		7	
11/3/2011	14:30	Cloudy	Middle	1.5	17.40	17.40	17.35	7.46	7.46	7.46	33.10	33.10	33.05	91.3	91.0	88.8	7.23	7.21	7.03	2.70	2.58	2.66	4	3.50
	14:33		Middle	1.5	17.30	17.30		7.45	7.45		33.00	33.00		87.1	85.7		6.88	6.79		2.79	2.56		3	
13/3/2011	18:58	Sunny	Middle	2.5	19.00	19.00	19.03	7.46	7.46	7.46	31.32	31.32	31.32	72.7	72.7	72.5	5.39	5.38	5.37	2.21	2.72	2.47	6	6.50
	19:03		Middle	2.5	19.00	19.10		7.46	7.46		31.32	31.32		70.7	73.8		5.23	5.46		2.67	2.27		7	
16/3/2011	22:28	Cloudy	Middle	2.0	17.20	17.20	17.20	7.83	7.83	7.83	32.59	32.59	32.59	76.6	76.4	76.3	6.06	6.05	6.04	2.83	2.52	2.65	6	5.00
	22:32		Middle	2.0	17.20	17.20		7.83	7.83		32.59	32.59		76.9	75.3		6.09	5.96		2.76	2.50		4	
18/3/2011	12:06	Cloudy	Middle	2.0	17.40	17.40	17.35	7.98	7.98	7.98	33.90	33.90	33.85	89.8	89.5	89.3	7.09	6.99	7.00	3.58	3.42	3.35	6	6.00
	12:09		Middle	2.0	17.30	17.30		7.97	7.97		33.80	33.80		89.1	88.9		6.98	6.93		3.33	3.08		6	
21/3/2011	11:53	Fine	Middle	1.5	20.70	20.70	20.65	7.57	7.57	7.57	32.20	32.20	32.15	87.3	87.1	86.9	6.55	6.53	6.52	4.16	3.71	3.92	7	6.50
	11:56		Middle	1.5	20.60	20.60		7.56	7.56		32.10	32.10		86.5	86.5		6.52	6.47		4.18	3.63		6	
23/3/2011	13:05	Cloudy	Middle	2.5	18.40	18.40	18.35	7.62	7.62	7.63	32.40	32.40	32.35	86.4	85.8	85.6	6.73	6.67	6.66	3.55	3.48	3.51	5	4.50
	13:08		Middle	2.5	18.30	18.30		7.63	7.63		32.30	32.30		85.3	84.9		6.64	6.59		3.45	3.56		4	
25/3/2011	14:55	Cloudy	Middle	1.5	19.40	19.50	19.40	7.52	7.54	7.54	32.50	32.50	32.45	83.3	83.1	83.2	6.30	6.29	6.28	4.50	3.74	3.85	8	5.50
	14:58		Middle	1.5	19.30	19.40		7.55	7.56		32.40	32.40		83.4	82.9		6.27	6.25		3.51	3.66		3	

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	22:51	Cloudy	Middle	2.5	21.34	21.34	21.35	8.13	8.13	8.13	30.39	30.39	30.39	82.1	79.9	80.8	6.09	5.92	5.99	3.60	3.18	3.20	6	5.00
	22:54		Middle	2.5	21.36	21.36		8.12	8.12		30.39	30.39		81.8	79.2		6.07	5.87		2.91	3.12		4	
2/3/2011	0:08	Cloudy	Middle	2.5	17.36	17.36	17.35	8.27	8.27	8.27	30.45	30.45	30.46	76.5	75.2	74.6	6.11	6.01	5.96	3.77	3.70	3.60	8	7.50
	0:11		Middle	2.5	17.34	17.34		8.27	8.26		30.46	30.46		74.0	72.6		5.92	5.80		3.51	3.43		7	
4/3/2011	13:15	Cloudy	Middle	2.5	16.50	16.50	16.55	8.10	8.10	8.11	32.30	32.30	32.30	89.8	89.4	89.3	7.25	7.23	7.22	7.49	7.57	7.30	12	13.00
	13:18		Middle	2.5	16.60	16.60		8.11	8.11		32.30	32.30		89.1	88.9		7.20	7.19		6.94	7.21		14	
7/3/2011	13:45	Fine	Middle	2.5	18.30	18.30	18.25	7.99	7.98	7.98	32.50	32.50	32.45	89.4	89.2	89.2	6.94	6.93	6.93	3.48	3.09	3.30	7	11.50
	13:48		Middle	2.5	18.20	18.20		7.98	7.98		32.40	32.40		89.1	89.0		6.92	6.91		3.54	3.10		16	
9/3/2011	13:45	Cloudy	Middle	1.5	17.20	17.20	17.15	7.99	7.99	7.99	32.80	32.80	32.75	91.4	90.1	89.8	7.17	7.09	7.10	4.68	4.68	4.62	5	5.50
	13:48		Middle	1.5	17.10	17.10		7.98	7.98		32.70	32.70		89.0	88.8		7.07	7.05		4.59	4.51		6	
11/3/2011	16:45	Cloudy	Middle	2.5	17.10	17.10	17.15	7.94	7.94	7.95	32.60	32.60	32.65	88.7	88.5	88.4	7.05	7.04	7.03	3.68	3.88	3.65	5	5.00
	16:48		Middle	2.5	17.20	17.20		7.95	7.95		32.70	32.70		88.3	88.1		7.02	7.01		3.58	3.47		5	
13/3/2011	18:41	Sunny	Middle	2.5	19.40	19.40	19.40	7.60	7.60	7.60	31.90	31.90	31.90	73.1	74.5	74.0	5.44	5.55	5.51	3.75	3.73	3.66	5	6.00
	18:45		Middle	2.5	19.40	19.40		7.60	7.60		31.90	31.90		75.1	73.4		5.59	5.47		3.26	3.88		7	
16/3/2011	22:13	Cloudy	Middle	1.5	17.10	17.10	17.10	7.80	7.80	7.80	32.28	32.28	32.28	75.9	76.3	74.8	6.04	6.07	5.95	3.28	3.03	2.95	5	5.50
	22:16		Middle	1.5	17.10	17.10		7.80	7.80		32.28	32.28		74.4	72.5		5.92	5.77		2.72	2.78		6	
18/3/2011	-	Cloudy	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
21/3/2011	13:27	Fine	Middle	3.0	19.40	19.40	19.35	7.85	7.85	7.85	32.40	32.40	32.35	90.3	90.1	90.0	6.76	6.75	6.74	6.85	5.88	6.02	8	7.00
	13:30		Middle	3.0	19.30	19.30		7.84	7.84		32.30	32.30		89.9	89.6		6.73	6.71		5.46	5.87		6	
23/3/2011	14:25	Cloudy	Middle	2.5	18.10	18.10	18.10	7.94	7.94	7.94	32.50	32.50	32.45	85.6	85.4	84.8	6.70	6.69	6.62	4.22	4.33	4.23	7	7.00
	14:28		Middle	2.5	18.10	18.10		7.94	7.94		32.40	32.40		84.2	84.1		6.54	6.54		4.38	3.98		7	
25/3/2011	16:32	Cloudy	Middle	2.5	18.50	18.50	18.45	7.81	7.81	7.81	32.50	32.50	32.45	82.0	81.8	80.6	6.46	6.10	6.18	6.16	5.83	5.62	4	5.00
	16:35		Middle	2.5	18.40	18.40		7.80	7.80		32.40	32.40		79.5	79.0		6.09	6.06		5.20	5.29		6	

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
28/2/2011	22:39	Cloudy	Middle	1.5	21.03	21.03	21.11	8.12	8.12	8.12	30.45	30.45	30.45	75.8	77.0	75.0	5.63	5.70	5.57	3.77	3.58	3.56	8	7.00
	22:43		Middle	1.5	21.18	21.18		8.11	8.11		30.45	30.45		73.0	74.2		5.43	5.52		3.56	3.34		6	
2/3/2011	23:40	Cloudy	Middle	1.5	17.52	17.52	17.49	8.11	8.11	8.10	30.44	30.44	30.45	72.0	75.0	74.2	5.74	5.98	5.92	2.37	2.42	2.53	4	4.50
	23:44		Middle	1.5	17.45	17.45		8.09	8.09		30.46	30.44		73.5	76.3		5.86	6.08		2.70	2.64		5	
4/3/2011	13:37	Cloudy	Middle	1.0	16.50	16.50	16.50	7.89	7.89	7.89	32.00	32.00	32.00	86.6	86.3	86.2	7.00	6.98	6.97	3.61	3.55	3.49	4	4.50
	13:40		Middle	1.0	16.50	16.50		7.88	7.88		32.00	32.00		86.1	85.8		6.96	6.94		3.40	3.39		5	
7/3/2011	14:00	Fine	Middle	1.5	17.60	17.60	17.55	7.87	7.87	7.88	32.10	32.10	32.15	83.5	83.2	83.3	6.81	6.78	6.79	3.00	2.66	2.92	11	8.00
	14:03		Middle	1.5	17.50	17.50		7.88	7.88		32.20	32.20		83.2	83.1		6.78	6.77		3.27	2.74		5	
9/3/2011	14:30	Cloudy	Middle	1.0	16.20	16.20	16.15	7.99	7.99	7.99	32.50	32.50	32.45	94.8	94.6	94.2	7.56	7.54	7.53	2.47	2.81	2.45	4	4.50
	14:33		Middle	1.0	16.10	16.10		7.98	7.98		32.40	32.40		93.8	93.5		7.52	7.49		2.23	2.29		5	
11/3/2011	16:27	Cloudy	Middle	2.0	16.90	16.90	16.90	7.92	7.92	7.92	32.50	32.50	32.45	86.6	85.9	85.6	6.90	6.87	6.83	3.67	3.59	3.59	5	7.50
	16:30		Middle	2.0	16.90	16.90		7.91	7.91		32.40	32.40		85.2	84.8		6.79	6.77		3.79	3.29		10	
13/3/2011	18:11	Sunny	Middle	2.0	18.40	18.40	18.35	7.77	7.78	7.78	33.00	33.10	33.10	84.4	84.1	84.1	6.58	6.57	6.56	2.56	2.65	2.61	7	6.50
	18:13		Middle	2.0	18.30	18.30		7.78	7.79		33.10	33.20		84.0	83.8		6.55	6.54		2.63	2.59		6	
16/3/2011	21:44	Cloudy	Middle	1.5	17.10	17.10	17.10	7.83	7.83	7.83	32.53	32.53	32.53	79.8	77.7	77.9	6.37	6.16	6.19	4.29	3.62	4.07	8	7.50
	21:48		Middle	1.5	17.10	17.10		7.83	7.83		32.53	32.53		77.2	76.9		6.12	6.10		4.11	4.24		7	
18/3/2011	11:47	Cloudy	Middle	1.5	17.20	17.20	17.15	7.88	7.88	7.88	33.80	33.80	33.75	90.3	89.3	88.9	7.00	6.96	6.91	2.01	2.04	2.06	5	4.00
	11:50		Middle	1.5	17.10	17.10		7.87	7.87		33.70	33.70		88.2	87.8		6.87	6.82		2.09	2.08		3	
21/3/2011	13:19	Fine	Middle	1.0	19.30	19.30	19.25	7.87	7.87	7.87	32.20	32.20	32.15	83.9	82.7	82.7	6.72	6.62	6.62	2.00	1.93	1.83	<2	2.00
	13:22		Middle	1.0	19.20	19.20		7.86	7.86		32.10	32.10		82.4	81.8		6.59	6.55		1.79	1.60		2	
23/3/2011	14:13	Cloudy	Middle	1.5	18.20	18.20	18.15	7.89	7.89	7.89	32.40	32.40	32.45	85.4	84.9	84.9	6.69	6.60	6.62	2.62	2.48	2.26	4	3.50
	14:16		Middle	1.5	18.10	18.10		7.89	7.89		32.50	32.50		84.9	84.4		6.61	6.58		2.07	1.88		3	
25/3/2011	16:22	Cloudy	Middle	1.5	18.20	18.20	18.15	7.81	7.81	7.81	32.40	32.40	32.35	84.9	84.7	84.1	6.67	6.59	6.57	2.46	2.45	2.29	2	2.00
	16:25		Middle	1.5	18.10	18.10		7.80	7.80		32.30	32.30		84.0	82.8		6.52	6.49		2.11	2.12		<2	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	22:45	Cloudy	Middle	1.5	21.24	21.25	21.26	8.07	8.07	8.09	30.40	30.40	30.41	75.7	69.7	72.4	5.62	5.18	5.37	2.77	2.55	2.37	4	3.50
	22:49		Middle	1.5	21.28	21.28		8.10	8.10		30.41	30.41		72.6	71.7		5.40	5.28		1.98	2.18		3	
2/3/2011	23:52	Cloudy	Middle	1.5	17.71	17.71	17.67	8.10	8.10	8.10	30.36	30.36	30.43	87.1	87.2	85.3	6.91	6.92	6.78	2.51	2.71	2.70	5	5.00
	23:56		Middle	1.5	17.63	17.63		8.10	8.10		30.49	30.49		83.4	83.5		6.63	6.64		2.92	2.65		5	
4/3/2011	13:51	Cloudy	Middle	1.0	16.30	16.30	16.25	7.99	7.99	8.00	32.20	32.20	32.25	87.6	87.3	87.2	7.11	7.10	7.09	2.49	3.42	3.36	8	8.00
	13:54		Middle	1.0	16.20	16.20		8.00	8.00		32.30	32.30		87.2	86.5		7.09	7.05		3.55	3.97		8	
7/3/2011	14:15	Fine	Middle	0.7	17.10	17.10	17.05	7.87	7.87	7.87	32.40	32.40	32.35	83.6	93.4	81.5	6.65	6.63	6.62	2.40	2.12	2.24	7	7.50
	14:18		Middle	0.7	17.00	17.00		7.86	7.86		32.30	32.30		83.1	65.8		6.61	6.59		2.07	2.35		8	
9/3/2011	14:25	Cloudy	Middle	1.5	16.20	16.20	16.15	7.98	7.98	7.98	32.50	32.50	32.45	91.4	85.0	86.5	7.15	7.11	7.05	2.72	3.45	2.98	3	4.00
	14:28		Middle	1.5	16.10	16.10		7.97	7.97		32.40	32.40		84.8	84.6		7.02	6.93		2.99	2.75		5	
11/3/2011	16:16	Cloudy	Middle	1.0	17.20	17.20	17.25	7.86	7.86	7.87	32.30	32.30	32.25	84.1	83.6	83.5	6.67	6.65	6.64	2.49	2.80	2.73	4	5.00
	16:19		Middle	1.0	17.30	17.30		7.87	7.87		32.20	32.20		83.3	82.8		6.62	6.60		2.79	2.85		6	
13/3/2011	18:26	Sunny	Middle	2.0	18.90	18.90	18.90	7.54	7.54	7.57	31.71	31.71	31.71	79.8	80.0	78.8	6.20	6.21	6.16	1.30	1.19	1.22	4	3.50
	18:30		Middle	2.0	18.90	18.90		7.60	7.60		31.71	31.71		78.7	76.5		6.18	6.03		1.21	1.16		3	
16/3/2011	21:59	Cloudy	Middle	1.5	17.00	17.00	17.00	7.75	7.75	7.75	32.30	32.30	32.30	75.3	76.9	75.4	6.00	6.12	6.00	7.95	7.92	8.26	14	15.00
	22:08		Middle	1.5	17.00	17.00		7.74	7.74		32.30	32.30		74.7	74.6		5.95	5.94		8.40	8.77		16	
18/3/2011	11:53	Cloudy	Middle	1.5	16.90	16.90	16.85	7.92	7.92	7.92	33.60	33.60	33.55	89.5	88.4	88.2	7.18	7.01	7.03	1.91	1.83	1.84	<2	<2
	11:56		Middle	1.5	16.80	16.80		7.91	7.91		33.50	33.50		87.5	87.4		6.97	6.94		1.71	1.90		<2	
21/3/2011	13:12	Fine	Middle	1.0	20.00	20.00	19.95	7.80	7.80	7.80	32.10	32.10	32.05	87.0	86.8	86.6	6.43	6.40	6.39	2.78	2.76	2.76	<2	3.00
	13:15		Middle	1.0	19.90	19.90		7.79	7.79		32.00	32.00		86.5	86.0		6.38	6.36		2.74	2.75		3	
23/3/2011	14:06	Cloudy	Middle	2.0	18.30	18.30	18.30	7.90	7.90	7.90	32.30	32.30	32.35	83.0	82.5	82.2	6.48	6.44	6.42	3.32	2.78	2.89	3	2.50
	14:09		Middle	2.0	18.30	18.30		7.89	7.89		32.40	32.40		81.7	81.4		6.38	6.36		2.77	2.67		2	
25/3/2011	16:15	Cloudy	Middle	1.5	18.60	18.60	18.55	7.78	7.78	7.78	32.40	32.40	32.35	77.6	77.3	77.1	5.94	5.95	5.93	1.23	1.20	1.18	<2	<2
	16:18		Middle	1.5	18.50	18.50		7.77	7.77		32.30	32.30		77.2	76.3		5.92	5.90		1.10	1.19		<2	

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
28/2/2011	22:16	Cloudy	Middle	1.5	21.52	21.52	21.50	8.12	8.12	8.12	30.39	30.39	30.40	75.8	78.9	76.8	5.61	5.83	5.68	2.16	2.19	2.22	5	5.50
	22:20		Middle	1.5	21.48	21.48		8.12	8.12		30.41	30.41		75.4	77.0		5.58	5.69		2.29	2.25		6	
2/3/2011	23:14	Cloudy	Middle	1.5	17.75	17.75	17.67	8.19	8.19	8.19	30.44	30.44	30.53	85.6	82.6	84.3	6.79	6.56	6.69	2.78	2.51	2.58	5	5.00
	23:18		Middle	1.5	17.58	17.58		8.18	8.18		30.62	30.62		86.4	82.4		6.87	6.55		2.42	2.62		5	
4/3/2011	14:39	Cloudy	Middle	1.5	18.00	18.00	18.00	7.99	7.99	8.00	31.20	31.20	31.25	82.8	82.6	82.5	6.50	6.49	6.49	3.97	3.88	3.88	7	6.50
	14:42		Middle	1.5	18.00	18.00		8.00	8.00		31.30	31.30		82.4	82.2		6.48	6.47		3.85	3.82		6	
7/3/2011	14:55	Fine	Middle	1.0	19.20	19.20	19.15	7.58	7.59	7.74	31.50	31.50	31.45	84.1	84.0	83.7	6.43	6.42	6.40	2.42	2.39	2.42	8	7.00
	14:58		Middle	1.0	19.10	19.10		7.89	7.89		31.40	31.40		83.8	82.8		6.38	6.35		2.45	2.40		6	
9/3/2011	15:10	Cloudy	Middle	1.0	17.00	17.00	16.95	7.96	7.96	7.96	32.40	32.40	32.35	86.5	85.8	85.7	6.90	6.91	6.88	4.70	5.39	5.14	6	7.00
	15:13		Middle	1.0	16.90	16.90		7.95	7.95		32.30	32.30		85.4	85.1		6.89	6.82		5.21	5.25		8	
11/3/2011	15:40	Cloudy	Middle	1.0	17.90	17.90	17.85	7.88	7.88	7.89	32.30	32.30	32.25	87.8	87.2	86.9	6.90	6.87	6.85	4.12	3.81	3.91	5	5.50
	15:43		Middle	1.0	17.80	17.80		7.89	7.89		32.20	32.20		86.5	86.1		6.82	6.79		3.82	3.89		6	
13/3/2011	17:35	Sunny	Middle	2.0	18.50	18.50	18.50	7.76	7.77	7.78	33.00	33.10	33.03	85.6	85.5	85.4	6.63	6.62	6.62	3.32	3.34	3.15	5	5.00
	17:40		Middle	2.0	18.50	18.50		7.79	7.80		33.00	33.00		85.3	85.2		6.61	6.60		2.95	3.00		5	
16/3/2011	21:10	Cloudy	Middle	1.5	17.10	17.10	17.05	7.86	7.86	7.86	32.47	32.47	32.48	78.6	78.6	77.4	6.23	6.24	6.15	3.52	4.33	3.86	5	5.50
	21:13		Middle	1.5	17.00	17.00		7.86	7.86		32.48	32.48		76.3	76.2		6.06	6.06		3.69	3.91		6	
18/3/2011	11:25	Cloudy	Middle	1.5	17.70	17.70	17.65	7.84	7.84	7.84	33.60	33.60	33.55	87.7	86.6	86.1	6.79	6.74	6.69	3.01	3.06	3.01	5	4.50
	11:28		Middle	1.5	17.60	17.60		7.83	7.83		33.50	33.50		85.6	84.4		6.64	6.58		2.93	3.04		4	
21/3/2011	12:42	Fine	Middle	1.0	23.00	23.00	22.95	7.69	7.69	7.69	31.60	31.60	31.55	89.2	88.8	88.5	6.43	6.38	6.39	4.01	3.67	3.87	4	4.00
	12:45		Middle	1.0	22.90	22.90		7.68	7.68		31.50	31.50		88.1	87.8		6.39	6.37		3.72	4.09		4	
23/3/2011	13:52	Cloudy	Middle	2.0	18.60	18.60	18.65	7.90	7.90	7.91	32.40	32.40	32.35	78.7	78.0	78.1	6.09	6.06	6.05	2.20	3.63	3.16	6	5.50
	13:55		Middle	2.0	18.70	18.70		7.91	7.91		32.30	32.30		77.9	77.7		6.04	6.02		3.46	3.33		5	
25/3/2011	15:50	Cloudy	Middle	3.0	19.30	19.30	19.25	7.69	7.71	7.68	32.30	32.30	32.25	88.0	87.2	86.8	6.76	6.73	6.71	3.63	4.57	3.79	4	4.00
	15:53		Middle	3.0	19.20	19.20		7.60	7.72		32.20	32.20		86.1	86.0		6.70	6.66		3.45	3.50		4	

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
28/2/2011	22:24	Cloudy	Middle	1.5	21.37	21.37	21.40	8.14	8.14	8.16	30.39	30.39	30.40	80.7	86.7	80.2	5.98	6.42	5.94	3.14	2.89	3.02	4	4.50
	22:27		Middle	1.5	21.43	21.43		8.18	8.18		30.41	30.41		77.0	76.4		5.70	5.65		3.00	3.06		5	
2/3/2011	23:25	Cloudy	Middle	1.5	17.60	17.60	17.53	8.25	8.25	8.23	30.27	30.27	30.43	77.6	78.3	78.6	6.18	6.24	6.26	3.86	4.14	3.87	8	9.00
	23:30		Middle	1.5	17.46	17.46		8.20	8.20		30.59	30.59		77.0	81.5		6.13	6.49		3.69	3.80		10	
4/3/2011	14:30	Cloudy	Middle	1.5	18.30	18.30	18.25	8.04	8.04	8.05	30.70	30.70	30.75	87.4	87.2	86.8	6.88	6.86	6.83	4.53	4.28	4.15	5	6.00
	14:35		Middle	1.5	18.20	18.20		8.05	8.05		30.80	30.80		86.6	85.8		6.80	6.76		4.08	3.70		7	
7/3/2011	15:05	Fine	Middle	1.5	19.20	19.20	19.15	7.94	7.94	7.94	32.10	32.10	32.15	77.3	75.5	74.9	5.90	5.75	5.71	1.86	1.70	1.78	6	5.00
	15:08		Middle	1.5	19.10	19.10		7.93	7.93		32.20	32.20		73.8	72.9		5.63	5.54		1.80	1.76		4	
9/3/2011	15:18	Cloudy	Middle	1.0	16.80	16.80	16.75	8.01	8.01	8.01	33.10	33.10	33.05	86.8	85.9	85.9	6.90	6.98	6.88	5.34	5.58	5.49	5	6.00
	15:21		Middle	1.0	16.70	16.70		8.00	8.00		33.00	33.00		85.7	85.1		6.83	6.82		5.62	5.43		7	
11/3/2011	15:50	Cloudy	Middle	1.5	17.70	17.70	17.65	7.92	7.92	7.93	33.00	33.00	33.00	83.9	83.6	83.5	6.59	6.58	6.57	2.58	2.46	2.49	6	5.00
	15:53		Middle	1.5	17.60	17.60		7.93	7.93		33.00	33.00		83.5	83.1		6.55	6.54		2.37	2.53		4	
13/3/2011	17:53	Sunny	Middle	2.0	18.20	18.20	18.20	7.90	7.90	7.90	31.90	31.90	31.85	80.2	80.1	80.1	6.23	6.21	6.21	4.78	4.50	4.31	9	8.00
	17:56		Middle	2.0	18.20	18.20		7.90	7.90		31.80	31.80		80.0	79.9		6.21	6.20		4.04	3.92		7	
16/3/2011	21:25	Cloudy	Middle	1.5	17.10	17.10	17.10	7.84	7.84	7.84	32.42	32.42	32.42	80.6	80.8	79.7	6.40	6.42	6.32	5.19	4.68	4.91	8	8.50
	21:29		Middle	1.5	17.10	17.10		7.84	7.84		32.42	32.42		80.3	77.0		6.32	6.12		4.91	4.84		9	
18/3/2011	11:31	Cloudy	Middle	2.0	17.60	17.60	17.55	7.97	7.97	7.97	33.30	33.30	33.25	89.1	88.6	88.6	7.07	7.05	7.04	2.84	2.80	2.86	3	3.00
	11:34		Middle	2.0	17.50	17.50		7.96	7.96		33.20	33.20		88.3	88.2		7.02	7.00		2.88	2.91		3	
21/3/2011	12:49	Fine	Middle	1.5	20.90	20.90	20.85	7.89	7.89	7.89	31.60	31.60	31.55	91.5	91.4	91.1	6.97	6.96	6.94	3.32	3.44	3.29	3	2.50
	12:52		Middle	1.5	20.80	20.80		7.88	7.88		31.50	31.50		90.8	90.6		6.92	6.91		3.17	3.21		2	
23/3/2011	13:43	Cloudy	Middle	2.0	18.80	18.80	18.75	7.91	7.91	7.91	32.30	32.30	32.30	91.5	91.2	91.1	7.08	7.05	7.04	4.64	4.72	4.58	7	6.50
	13:47		Middle	2.0	18.70	18.70		7.90	7.90		32.30	32.30		91.0	90.5		7.03	6.99		4.58	4.39		6	
25/3/2011	15:58	Cloudy	Middle	3.0	19.00	19.00	19.00	7.85	7.85	7.85	31.90	31.90	31.85	83.2	82.9	82.9	6.41	6.40	6.41	5.47	5.13	5.21	8	7.00
	16:01		Middle	3.0	19.00	19.00		7.84	7.84		31.80	31.80		82.8	82.6		6.39	6.43		5.26	4.99		6	

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	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	22:06	Cloudy	Middle	2.0	21.70	21.70	21.70	8.14	8.14	8.14	30.20	30.20	30.20	77.8	80.9	81.3	5.74	5.97	5.99	3.94	3.56	3.99	7	7.50
	22:09		Middle	2.0	21.69	21.69		8.14	8.14		30.20	30.20		82.7	83.6		6.10	6.16		4.09	4.38		8	
2/3/2011	22:56	Cloudy	Middle	2.0	17.29	17.29	17.29	8.24	8.24	8.23	30.47	30.47	30.47	83.6	82.9	83.6	6.68	6.63	6.69	3.67	3.62	3.47	7	7.00
	23:00		Middle	2.0	17.29	17.29		8.22	8.22		30.47	30.47		85.0	83.0		6.80	6.64		3.32	3.26		7	
4/3/2011	14:15	Cloudy	Middle	1.5	16.90	16.90	16.85	8.01	8.01	8.02	32.20	32.20	32.15	91.1	90.8	91.3	7.29	7.27	7.30	4.55	4.51	4.57	12	11.00
	14:23		Middle	1.5	16.80	16.80		8.02	8.02		32.10	32.10		91.7	91.4		7.32	7.31		4.87	4.35		10	
7/3/2011	14:35	Fine	Middle	1.5	18.20	18.20	18.00	7.82	7.82	7.89	32.10	32.10	32.00	86.8	86.8	88.0	6.75	6.71	6.87	5.62	5.19	4.98	8	7.00
	14:38		Middle	1.5	17.80	17.80		7.96	7.96		31.90	31.90		89.3	89.0		7.01	6.99		4.50	4.62		6	
9/3/2011	14:53	Cloudy	Middle	2.0	17.20	17.20	17.15	7.96	7.96	7.96	32.60	32.60	32.55	91.1	90.5	90.5	7.29	7.24	7.24	5.12	4.74	4.65	10	9.50
	14:56		Middle	2.0	17.10	17.10		7.95	7.95		32.50	32.50		90.3	90.0		7.22	7.20		4.38	4.37		9	
11/3/2011	15:20	Cloudy	Middle	2.0	17.40	17.40	17.35	7.88	7.88	7.88	32.50	32.50	32.50	88.5	88.1	88.1	7.02	6.99	6.99	4.02	3.97	3.99	7	6.50
	15:23		Middle	2.0	17.30	17.30		7.88	7.88		32.50	32.50		88.0	87.8		6.98	6.97		4.05	3.92		6	
13/3/2011	17:08	Sunny	Middle	2.0	18.60	18.70	18.68	7.88	7.88	7.88	33.10	33.10	33.05	82.7	82.5	82.4	6.34	6.33	6.32	6.54	6.15	6.34	12	12.00
	17:11		Middle	2.0	18.70	18.70		7.88	7.87		33.00	33.00		82.3	82.2		6.31	6.30		6.39	6.28		12	
16/3/2011	20:44	Cloudy	Middle	2.0	16.90	16.90	16.90	7.82	7.82	7.82	32.51	32.51	32.51	78.8	77.8	78.1	6.27	6.20	6.22	4.39	4.02	4.22	10	10.00
	20:48		Middle	2.0	16.90	16.90		7.82	7.82		32.51	32.51		77.4	78.3		6.17	6.24		4.19	4.27		10	
18/3/2011	11:14	Cloudy	Middle	1.5	17.90	17.90	17.85	7.99	7.99	7.99	33.60	33.60	33.55	91.2	90.9	90.4	7.01	7.08	7.04	3.58	3.45	3.55	7	6.50
	11:17		Middle	1.5	17.80	17.80		7.98	7.98		33.50	33.50		90.3	89.3		7.06	7.00		3.45	3.70		6	
21/3/2011	12:30	Fine	Middle	2.0	20.50	20.50	20.45	7.86	7.86	7.86	32.00	32.00	31.95	88.6	88.4	87.6	6.75	6.77	6.55	4.78	5.15	5.00	5	5.50
	12:33		Middle	2.0	20.40	20.40		7.85	7.85		31.90	31.90		88.2	85.1		6.36	6.33		4.94	5.13		6	
23/3/2011	13:35	Cloudy	Middle	2.0	18.80	18.80	18.80	7.93	7.93	7.94	32.30	32.30	32.30	89.0	88.9	88.1	6.88	6.88	6.81	4.97	4.95	4.76	8	8.00
	13:39		Middle	2.0	18.80	18.80		7.94	7.94		32.30	32.30		87.5	86.9		6.76	6.73		4.62	4.49		8	
25/3/2011	15:30	Cloudy	Middle	2.0	19.40	19.30	19.33	7.73	7.74	7.74	32.40	32.40	32.35	85.8	85.2	85.2	6.45	6.49	6.44	5.15	5.13	5.27	6	7.00
	15:33		Middle	2.0	19.30	19.30		7.75	7.74		32.30	32.30		84.9	84.7		6.42	6.38		5.33	5.45		8	

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

Date	Time	Weater Condition	Sampling Depth m		Water Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	21:17	Cloudy	Middle	1.5	19.70	19.72	19.72	8.06	8.06	8.06	30.50	30.50	30.50	83.4	84.9	82.0	6.37	6.49	6.26	3.89	3.61	3.77	5	6.00
	21:20		Middle	1.5	19.72	19.72		8.06	8.06		30.50	30.50		81.9	77.8		6.25	5.94		3.91	3.66		7	
2/3/2011	21:52	Cloudy	Middle	1.5	16.89	16.89	16.89	8.26	8.26	8.26	30.75	30.75	30.76	84.8	85.5	84.8	6.42	6.88	6.73	3.34	3.85	3.72	9	8.00
	21:56		Middle	1.5	16.88	16.88		8.26	8.26		30.76	30.76		83.6	85.3		6.73	6.87		4.04	3.65		7	
4/3/2011	13:00	Cloudy	Middle	1.5	17.10	17.10	17.10	7.96	7.96	7.96	31.40	31.40	31.40	81.0	81.2	81.7	6.41	6.41	6.43	5.14	4.99	4.85	5	5.50
	13:03		Middle	1.5	17.10	17.10		7.96	7.96		31.40	31.40		82.4	82.1		6.47	6.44		4.68	4.60		6	
7/3/2011	13:20	Fine	Middle	1.5	18.70	18.70	18.75	7.95	7.95	7.95	31.29	31.29	31.28	83.7	82.8	83.1	6.46	6.39	6.41	5.20	4.81	4.72	7	7.00
	13:24		Middle	1.5	18.80	18.80		7.95	7.95		31.27	31.27		83.9	82.0		6.47	6.32		4.56	4.32		7	
9/3/2011	15:00	Cloudy	Middle	2.0	16.20	16.20	16.15	7.83	7.83	7.86	31.72	31.73	31.73	83.6	83.2	83.4	6.79	6.76	6.79	7.18	7.83	7.29	11	11.50
	15:04		Middle	2.0	16.10	16.10		7.88	7.88		31.74	31.74		83.8	83.1		6.83	6.78		7.44	6.72		12	
11/3/2011	13:42	Cloudy	Middle	1.5	17.00	17.00	17.05	7.74	7.74	7.75	31.70	31.70	31.70	82.7	82.2	82.8	6.53	6.49	6.54	5.08	5.41	5.00	12	11.50
	13:45		Middle	1.5	17.10	17.10		7.75	7.75		31.70	31.70		83.0	83.4		6.55	6.58		4.90	4.60		11	
13/3/2011	16:15	Sunny	Middle	1.5	19.60	19.60	19.60	7.70	7.70	7.70	31.88	31.88	31.88	85.2	85.5	83.9	6.23	6.24	6.17	4.84	5.34	5.17	8	9.00
	16:18		Middle	1.5	19.60	19.60		7.70	7.70		31.88	31.88		81.5	83.4		5.96	6.23		5.11	5.40		10	
16/3/2011	22:53	Cloudy	Middle	1.5	17.20	17.20	17.20	7.84	7.84	7.84	32.42	32.42	32.42	80.4	80.2	80.6	6.38	6.36	6.39	3.87	3.68	3.47	8	8.50
	22:56		Middle	1.5	17.20	17.20		7.84	7.84		32.42	32.42		80.4	81.2		6.38	6.44		3.19	3.14		9	
18/3/2011	12:45	Cloudy	Middle	1.5	17.00	17.00	17.00	7.90	7.90	7.90	32.56	32.56	32.60	85.8	85.1	85.4	6.81	6.76	6.79	6.17	5.79	6.00	13	12.00
	12:49		Middle	1.5	17.00	17.00		7.90	7.90		32.64	32.64		85.7	85.1		6.81	6.77		6.16	5.88		11	
21/3/2011	12:49	Fine	Middle	1.5	19.50	19.50	19.65	7.81	7.81	7.81	32.62	32.62	32.62	78.3	77.6	78.0	5.92	5.86	5.89	7.55	7.29	7.11	14	13.00
	12:52		Middle	1.5	19.80	19.80		7.81	7.81		32.61	32.61		78.6	77.4		5.93	5.83		6.99	6.59		12	
23/3/2011	15:32	Cloudy	Middle	3.0	18.10	18.10	18.10	7.96	7.96	7.93	32.59	32.59	32.60	75.8	76.6	76.6	5.89	5.95	5.95	8.48	8.08	**8.16**	14	**13.50**
	15:34		Middle	3.0	18.10	18.10		7.90	7.90		32.60	32.60		77.0	77.1		5.98	5.99		8.08	7.98		13	
25/3/2011	14:30	Cloudy	Middle	3.0	18.60	18.60	18.70	7.81	7.81	7.80	32.72	32.72	32.72	71.6	71.2	71.4	5.50	5.46	5.48	7.73	7.60	7.59	14	**13.50**
	14:33		Middle	3.0	18.80	18.80		7.79	7.79		32.71	32.71		71.4	71.2		5.48	5.46		7.58	7.43		13	

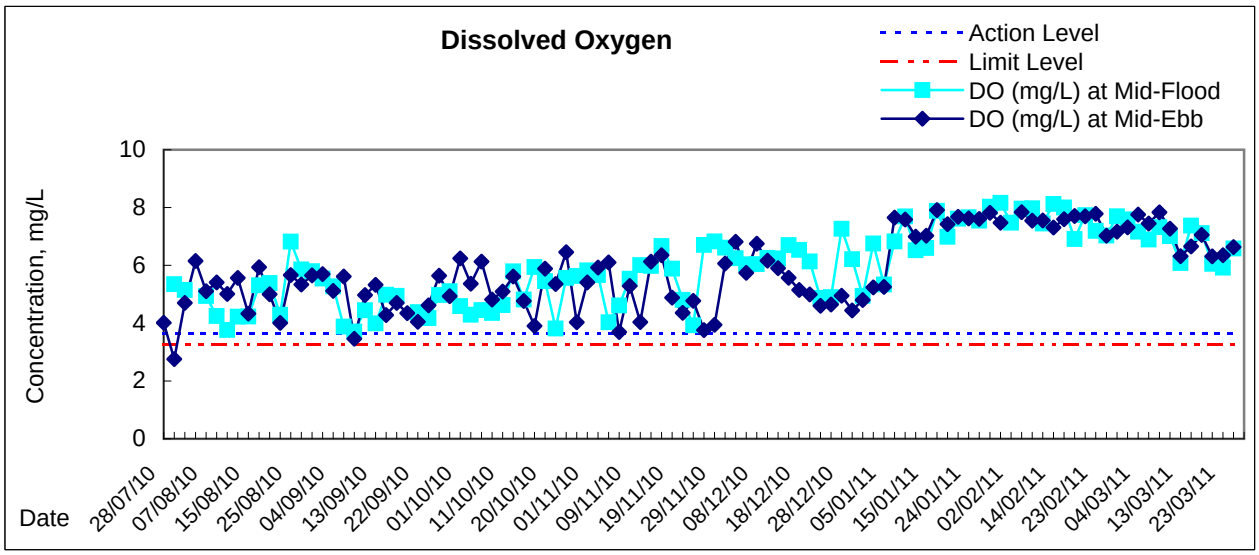
Water Monitoring Result at WSD20 - Kennedy Town
Mid-Ebb Tide

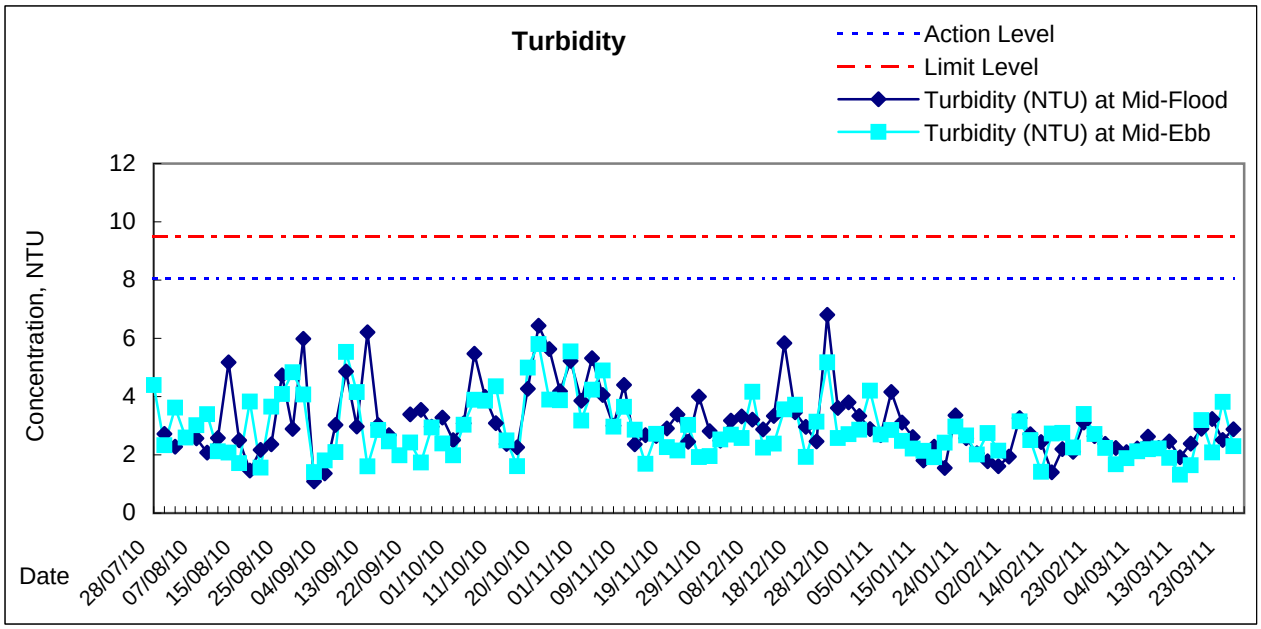
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
28/2/2011	21:00	Cloudy	Middle	1.5	19.08	19.08	19.09	8.05	8.05	8.05	30.77	30.77	30.77	80.0	78.2	82.2	6.17	6.03	6.34	3.05	3.36	3.16	5	6.00
	21:03		Middle	1.5	19.09	19.09		8.05	8.05		30.77	30.77		84.0	86.7		6.48	6.68		3.11	3.12		7	
2/3/2011	21:32	Cloudy	Middle	1.5	15.85	15.76	15.76	8.27	8.27	8.26	30.82	30.82	30.82	79.4	81.2	81.6	6.54	6.68	6.59	2.36	2.45	2.52	8	7.00
	21:36		Middle	1.5	15.71	15.72		8.25	8.25		30.82	30.82		83.2	82.7		6.34	6.80		2.70	2.56		6	
4/3/2011	12:20	Cloudy	Middle	1.5	16.60	16.60	16.70	8.06	8.06	8.05	31.54	31.54	31.48	88.9	87.9	88.4	7.14	7.06	7.10	4.30	3.97	4.06	7	7.50
	12:23		Middle	1.5	16.80	16.80		8.04	8.04		31.41	31.41		88.9	88.0		7.14	7.07		4.24	3.72		8	
7/3/2011	12:57	Fine	Middle	1.5	17.80	17.80	17.90	8.01	8.01	8.03	31.33	31.32	31.30	92.9	92.2	92.4	7.31	7.25	7.26	3.06	2.47	2.60	4	4.00
	13:00		Middle	1.5	18.00	18.00		8.05	8.05		31.28	31.28		92.4	92.0		7.26	7.22		2.24	2.62		4	
9/3/2011	14:40	Cloudy	Middle	1.5	16.40	16.40	16.40	7.83	7.83	7.83	31.69	31.69	31.69	85.0	84.1	84.8	6.88	6.80	6.86	5.70	5.01	5.24	8	8.00
	14:42		Middle	1.5	16.40	16.40		7.82	7.82		31.69	31.69		84.7	85.3		6.86	6.90		5.38	4.88		8	
11/3/2011	13:18	Cloudy	Middle	1.5	16.80	16.80	16.75	7.99	7.99	7.96	31.90	31.90	31.90	86.6	85.8	86.2	6.94	6.87	6.91	7.44	7.48	7.35	10	9.50
	13:20		Middle	1.5	16.70	16.70		7.92	7.92		31.90	31.90		86.5	86.0		6.94	6.89		7.53	6.95		9	
13/3/2011	15:39	Sunny	Middle	1.5	18.50	18.50	18.50	7.82	7.82	7.82	32.03	32.03	32.03	92.6	92.9	91.6	7.47	6.99	6.99	1.94	1.92	1.97	4	4.50
	15:41		Middle	1.5	18.50	18.50		7.82	7.82		32.03	32.03		90.2	90.6		6.72	6.76		2.04	1.98		5	
16/3/2011	23:42	Cloudy	Middle	1.5	17.10	17.10	17.10	7.89	7.89	7.89	32.43	32.43	32.43	89.3	89.0	87.9	7.10	7.07	6.98	2.88	2.69	2.94	8	9.00
	23:44		Middle	1.5	17.10	17.10		7.89	7.89		32.43	32.43		86.7	86.4		6.89	6.87		3.32	2.86		10	
18/3/2011	12:16	Cloudy	Middle	1.5	17.60	17.60	17.60	7.97	7.97	7.98	32.92	32.92	32.91	88.9	88.3	88.4	6.96	6.92	6.93	6.43	6.26	6.07	14	13.00
	12:18		Middle	1.5	17.60	17.60		7.98	7.98		32.89	32.89		88.5	88.0		6.93	6.89		5.76	5.84		12	
21/3/2011	13:15	Fine	Middle	1.5	19.60	19.60	19.65	7.94	7.94	7.94	32.77	32.77	32.77	83.5	83.3	83.6	6.53	6.52	6.54	6.27	6.00	5.97	8	8.00
	13:18		Middle	1.5	19.70	19.70		7.93	7.93		32.77	32.77		83.9	83.5		6.56	6.54		5.75	5.85		8	
23/3/2011	15:03	Cloudy	Middle	1.5	18.20	18.20	18.20	7.98	7.98	7.95	32.73	32.73	32.73	85.2	85.0	84.4	6.60	6.59	6.54	6.70	5.47	5.97	9	9.50
	15:06		Middle	1.5	18.20	18.20		7.91	7.91		32.72	32.72		83.5	83.9		6.47	6.50		5.59	6.12		10	
25/3/2011	14:12	Cloudy	Middle	2.0	18.80	18.80	18.90	7.84	7.84	7.85	32.95	32.95	32.95	88.0	87.6	87.9	6.76	6.74	6.75	6.69	7.58	7.03	7	7.00
	14:14		Middle	2.0	19.00	19.00		7.85	7.85		32.95	32.95		88.1	87.8		6.76	6.75		7.28	6.58		7	

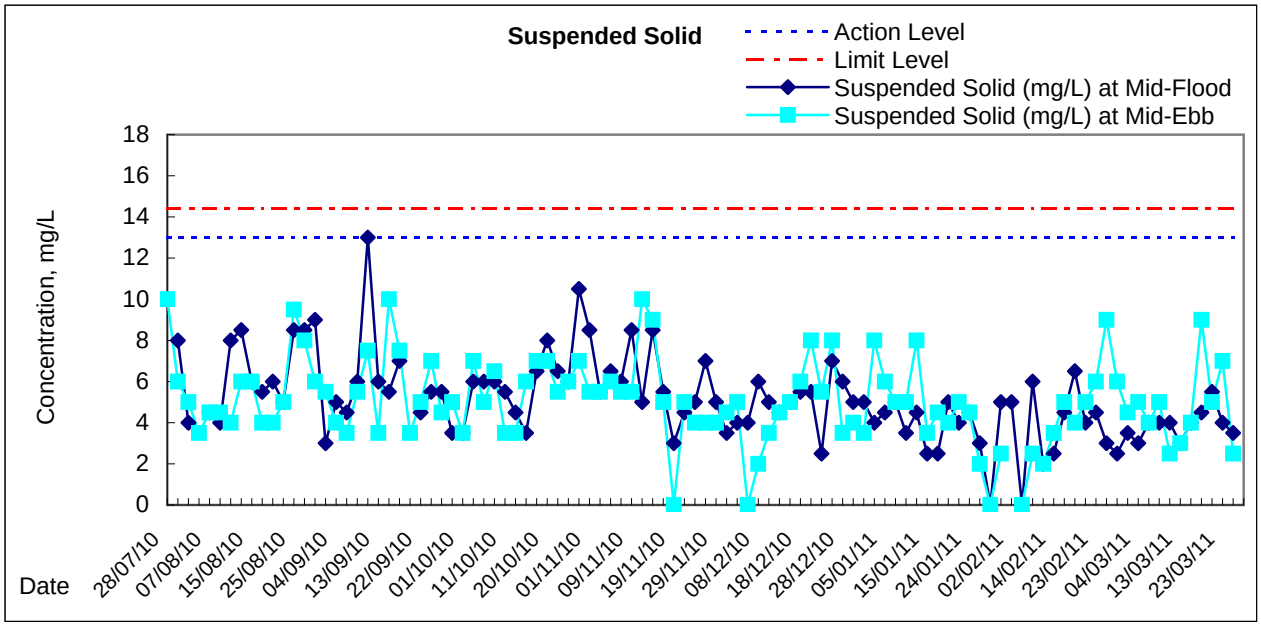
Water Monitoring Result at WSD7 - Kowloon South
Mid-Ebb Tide

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
28/2/2011	20:11	Cloudy	Middle	2.0	19.80	19.80	19.81	7.97	7.97	7.98	30.70	30.70	30.71	83.4	86.0	85.8	6.35	6.54	6.53	1.90	1.65	1.83	8	7.00
	20:16		Middle	2.0	19.81	19.81		7.99	7.99		30.72	30.72		87.4	86.4		6.65	6.57		1.82	1.95		6	
2/3/2011	2:13	Cloudy	Middle	2.5	16.43	16.43	16.41	7.80	7.80	7.93	29.70	29.78	29.94	88.3	85.5	84.3	7.20	6.97	6.87	3.04	2.88	2.89	10	9.00
	2:16		Middle	2.5	16.39	16.39		8.06	8.06		30.13	30.13		81.3	82.0		6.63	6.69		2.80	2.82		8	
4/3/2011	9:45	Cloudy	Middle	1.5	16.70	16.70	16.75	7.94	7.94	7.92	31.36	31.36	31.36	86.7	86.0	86.2	6.96	6.90	6.92	2.84	2.30	2.58	5	5.00
	9:48		Middle	1.5	16.80	16.80		7.90	7.90		31.35	31.35		86.4	85.7		6.93	6.88		2.56	2.61		5	
7/3/2011	12:30	Fine	Middle	1.5	17.40	17.40	17.55	7.96	7.96	7.95	31.46	31.46	31.44	83.7	83.1	83.7	6.61	6.56	6.60	2.11	2.17	2.22	3	3.50
	12:34		Middle	1.5	17.70	17.70		7.94	7.94		31.41	31.41		84.3	83.7		6.64	6.59		2.19	2.41		4	
9/3/2011	14:15	Cloudy	Middle	1.5	16.40	16.40	16.30	7.76	7.76	7.76	31.58	31.58	31.61	82.8	81.3	82.2	6.71	6.59	6.66	2.98	3.03	3.04	7	6.00
	14:18		Middle	1.5	16.20	16.20		7.76	7.76		31.64	31.64		83.0	81.6		6.72	6.62		3.09	3.05		5	
11/3/2011	14:07	Cloudy	Middle	1.5	16.90	16.90	17.10	7.99	7.99	7.90	31.68	31.68	31.76	82.9	81.5	82.6	6.58	6.48	6.55	2.54	2.55	2.42	7	6.00
	14:10		Middle	1.5	17.30	17.30		7.81	7.81		31.83	31.83		83.5	82.4		6.61	6.52		2.15	2.45		5	
13/3/2011	20:42	Sunny	Middle	2.0	19.00	19.00	19.05	7.69	7.69	7.69	31.75	31.75	31.75	86.1	85.9	84.9	6.64	6.32	6.33	2.71	2.81	2.96	7	6.00
	20:44		Middle	2.0	19.10	19.10		7.69	7.69		31.75	31.75		83.9	83.8		6.21	6.14		3.39	2.94		5	
16/3/2011	0:43	Cloudy	Middle	2.0	16.70	16.70	16.70	7.89	7.89	7.89	31.78	31.78	31.78	77.8	78.2	77.0	6.24	6.28	6.19	2.54	2.30	2.41	6	5.00
	0:46		Middle	2.0	16.70	16.70		7.89	7.89		31.78	31.78		76.6	75.5		6.15	6.07		2.43	2.37		4	
18/3/2011	9:08	Cloudy	Middle	1.5	17.10	17.10	17.05	7.87	7.87	7.88	32.35	32.35	32.37	83.1	82.8	83.0	6.61	6.59	6.63	4.86	4.96	4.67	7	6.50
	9:10		Middle	1.5	17.00	17.00		7.88	7.88		32.38	32.38		83.1	82.8		6.65	6.66		4.33	4.51		6	
21/3/2011	13:36	Fine	Middle	1.5	19.70	19.70	19.90	7.81	7.81	7.81	32.90	32.90	32.78	83.9	83.4	83.8	6.27	6.22	6.24	4.78	4.10	4.11	7	6.00
	13:39		Middle	1.5	20.10	20.10		7.81	7.81		32.65	32.65		84.2	83.7		6.25	6.21		3.74	3.83		5	
23/3/2011	16:48	Cloudy	Middle	1.5	18.00	18.00	18.00	7.96	7.95	7.95	32.54	32.54	32.56	76.6	76.4	76.4	5.97	5.95	5.95	4.58	3.76	3.85	8	7.00
	16:52		Middle	1.5	18.00	18.00		7.94	7.94		32.57	32.57		76.7	75.9		5.97	5.91		3.56	3.51		6	
25/3/2011	15:15	Cloudy	Middle	1.5	19.00	19.00	19.05	7.99	7.99	7.99	32.73	32.73	32.73	72.6	72.3	73.7	5.52	5.50	5.66	4.07	3.72	3.71	3	4.00
	15:18		Middle	1.5	19.10	19.10		7.98	7.98		32.73	32.73		75.1	74.6		5.88	5.74		3.54	3.50		5	

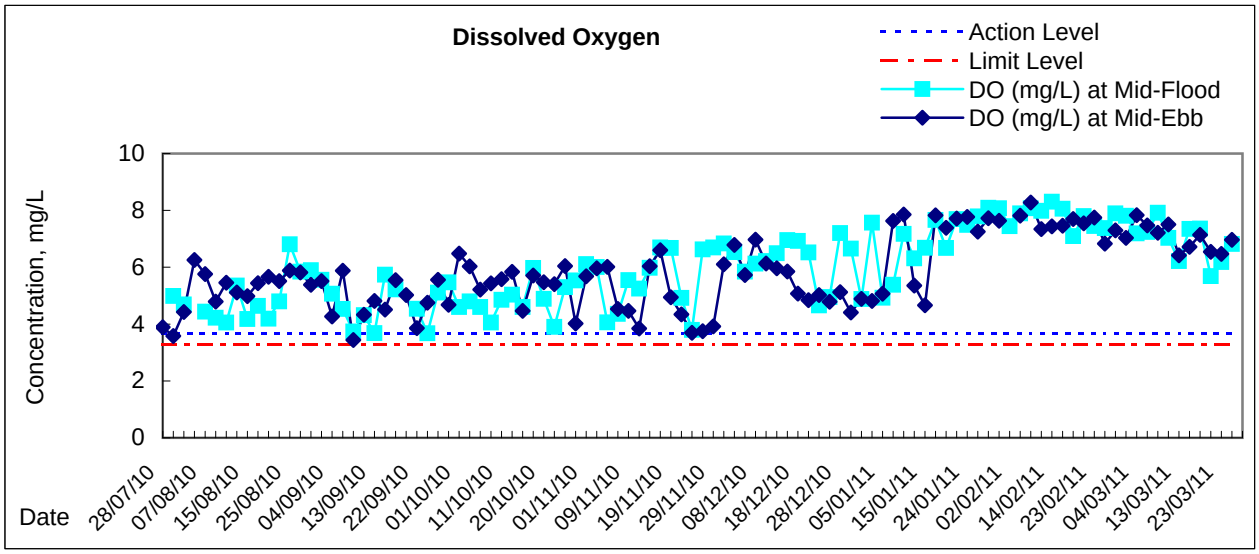
Graphic Presentation of Water Quality Result of WSD9 - Tai Wan

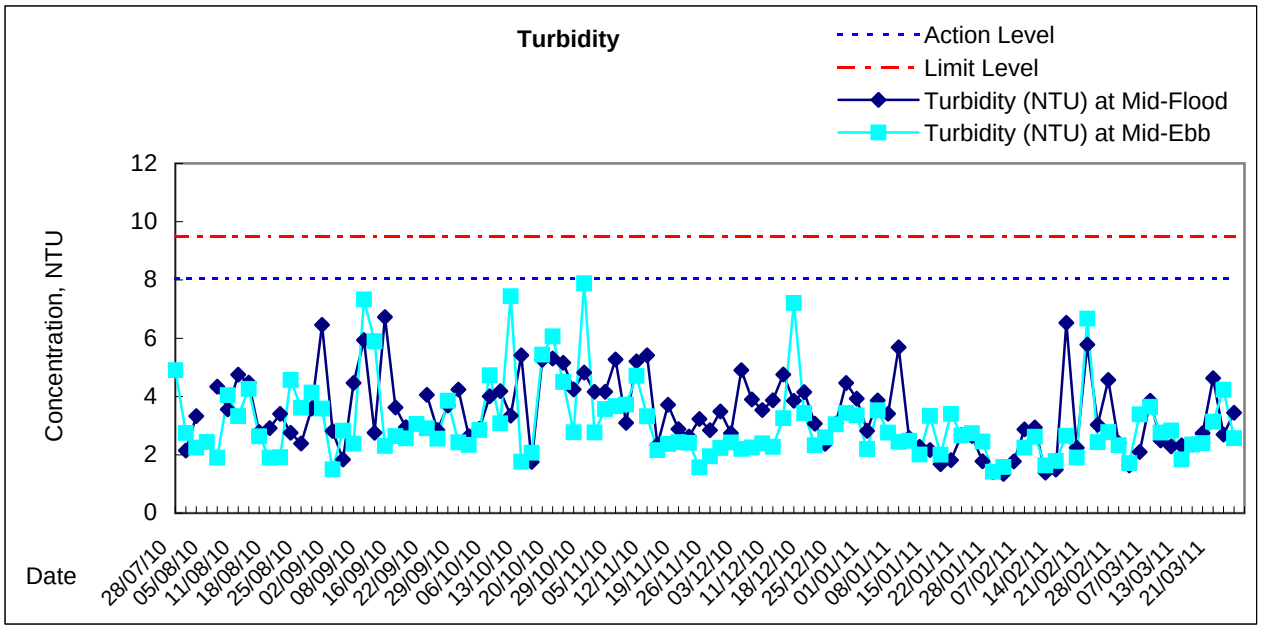


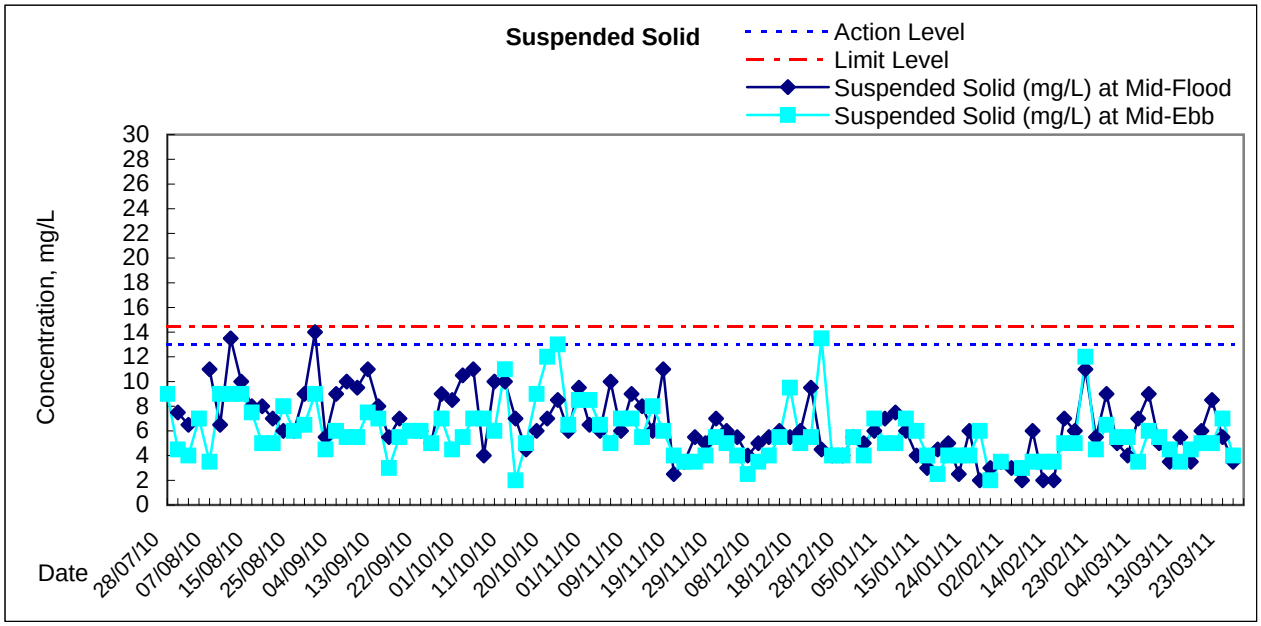




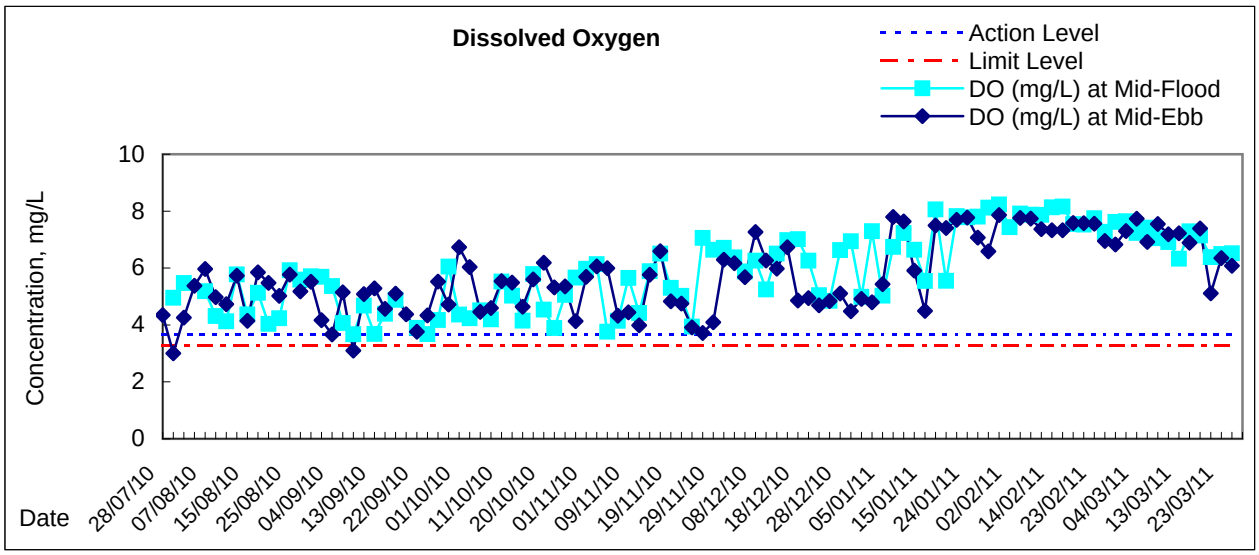
Graphic Presentation of Water Quality Result of WSD10 - Cha Kwo Ling

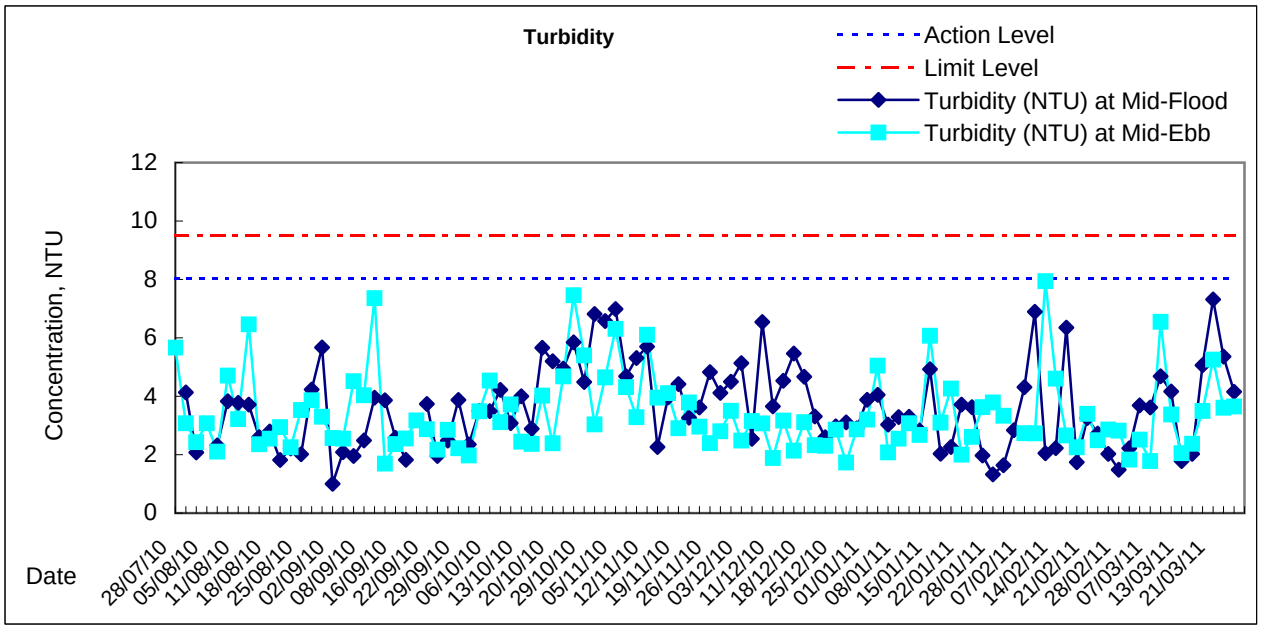


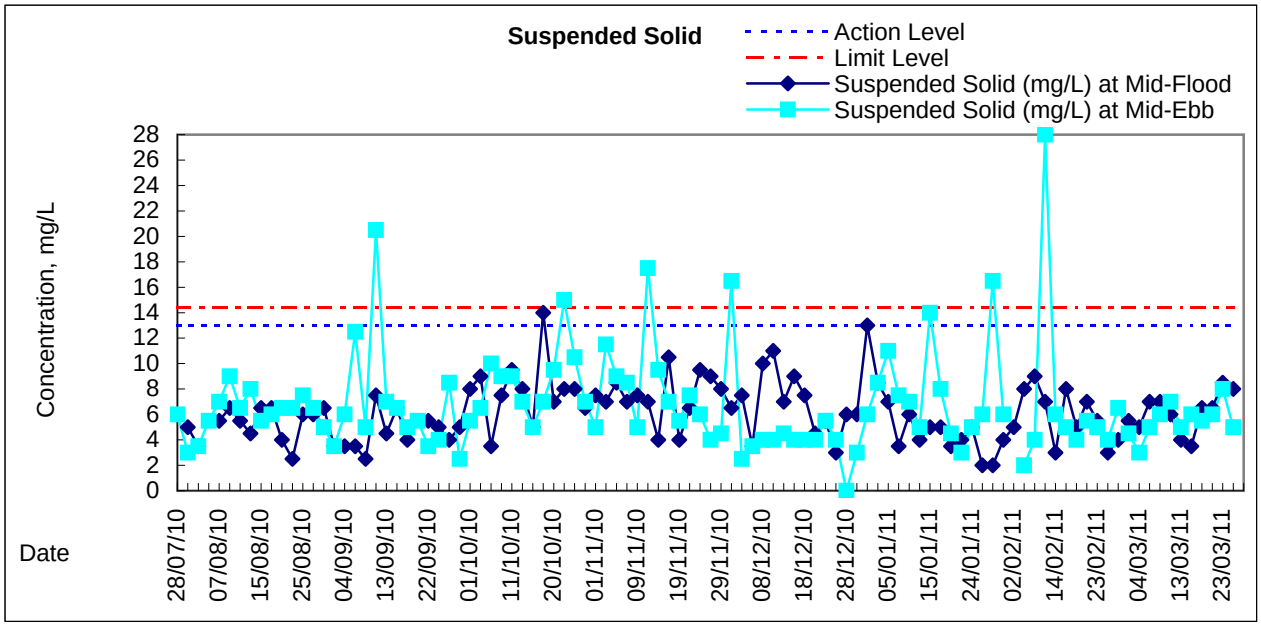




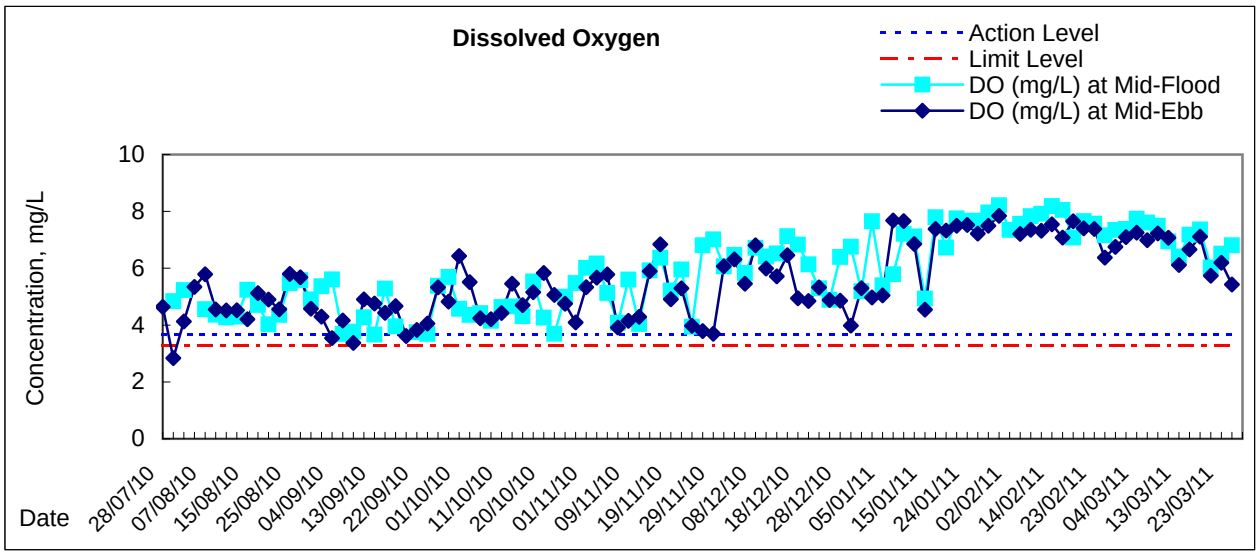
Graphic Presentation of Water Quality Result of WSD15 - Sai Wan Ho

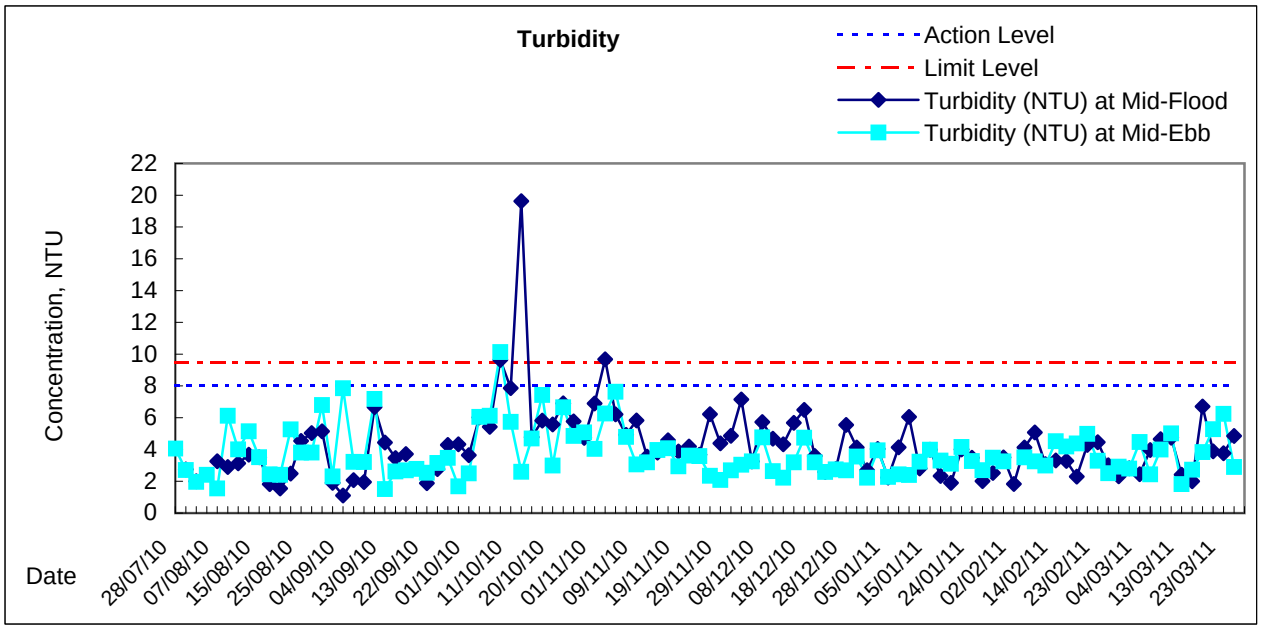


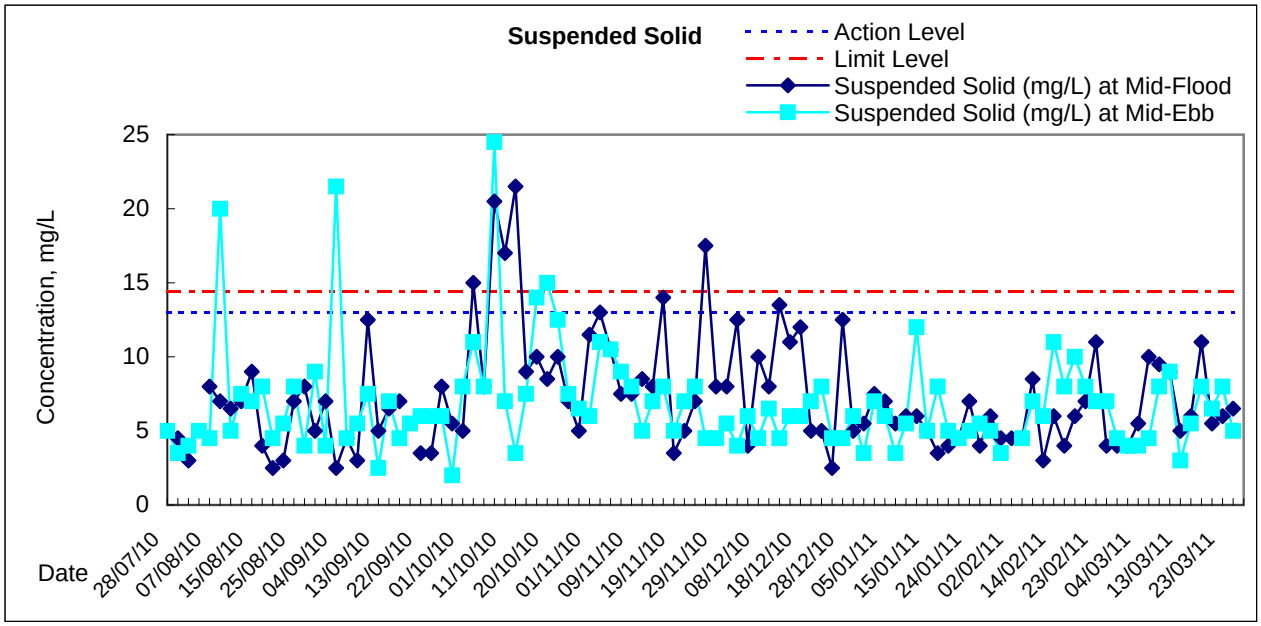




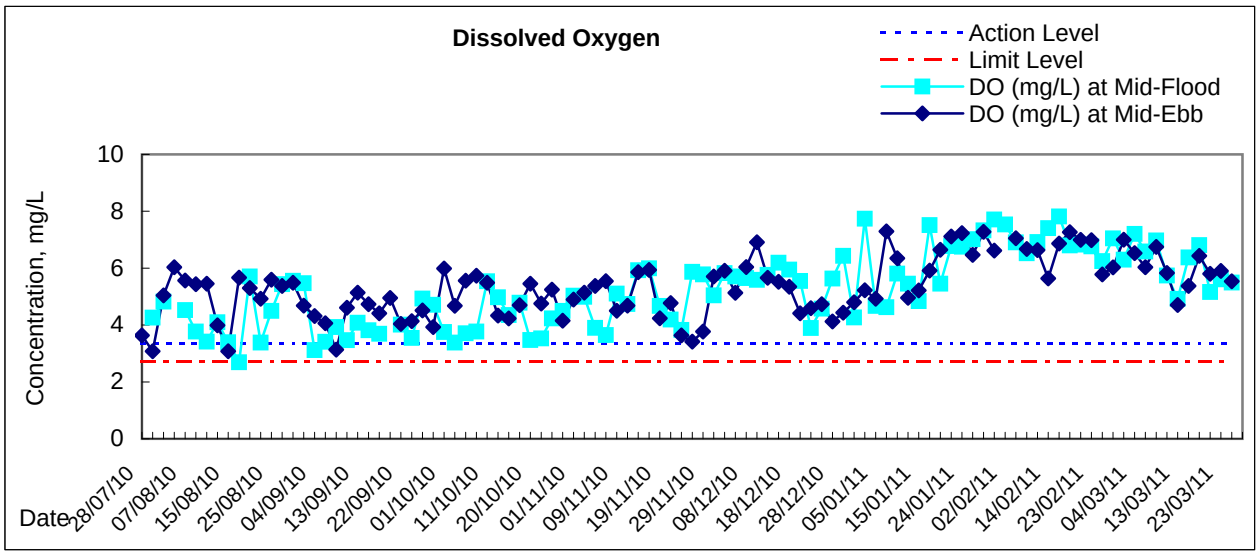
Graphic Presentation of Water Quality Result of WSD17 - Quarry Bay

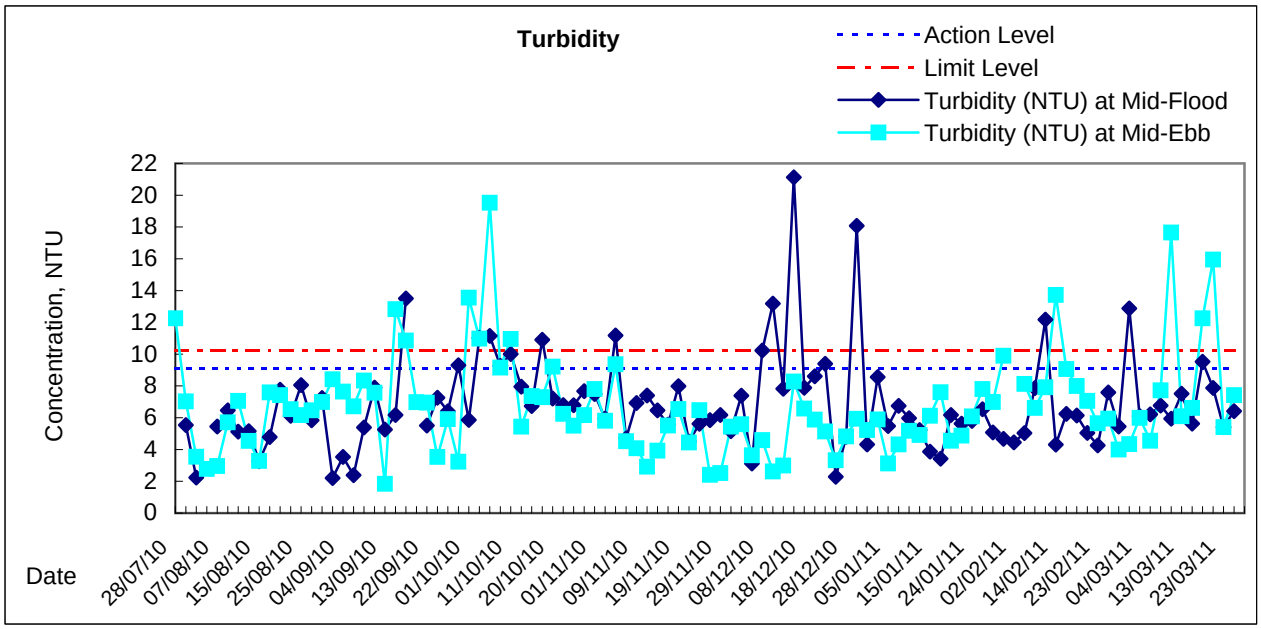


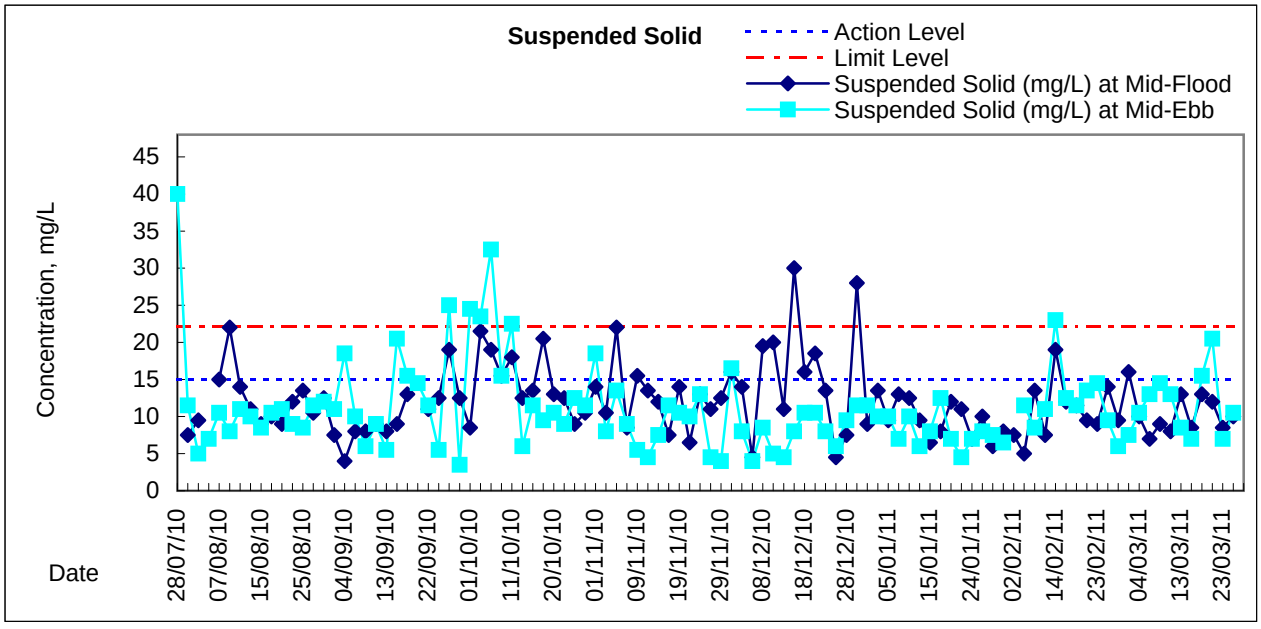




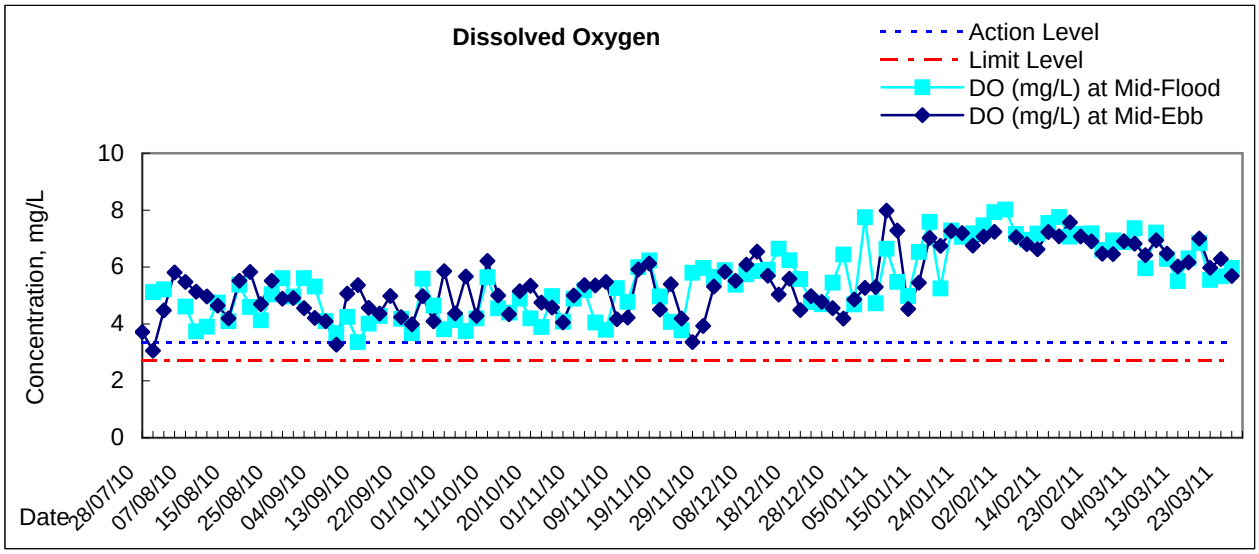
Graphic Presentation of Water Quality Result of C8 - City Garden

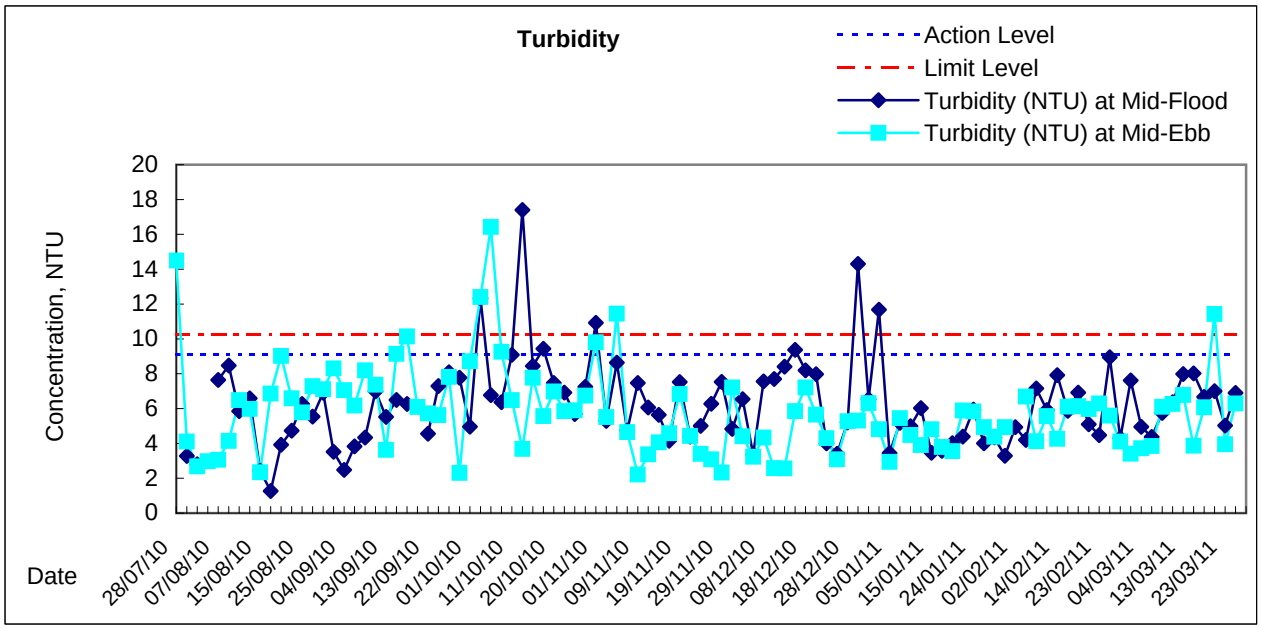


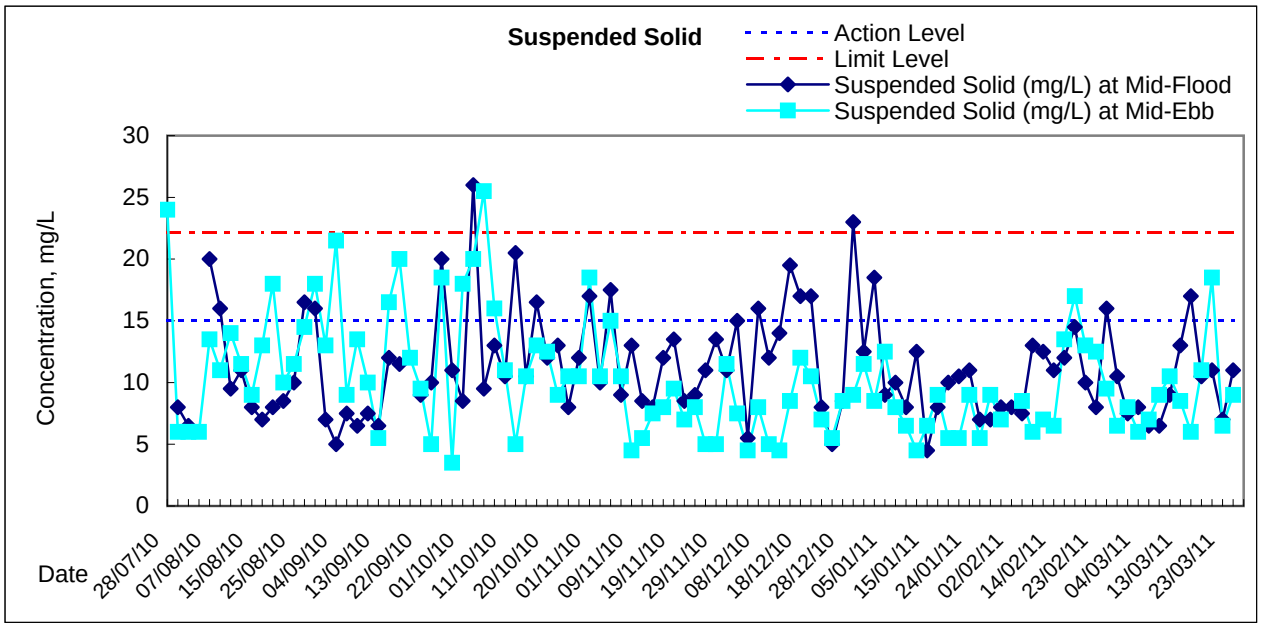




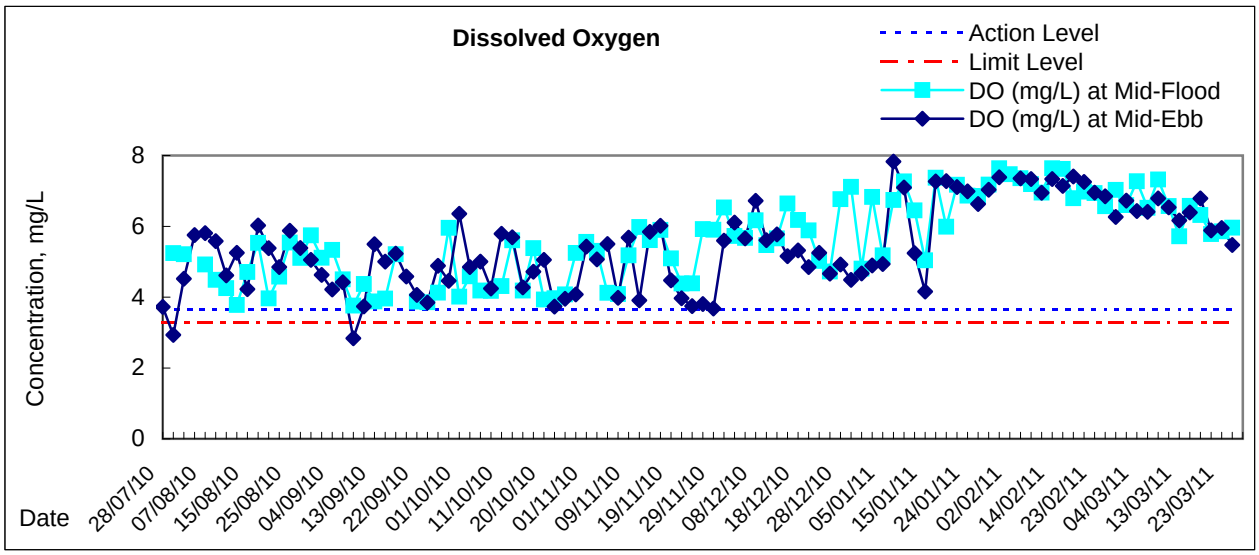
Graphic Presentation of Water Quality Result of C9 - Provident Centre

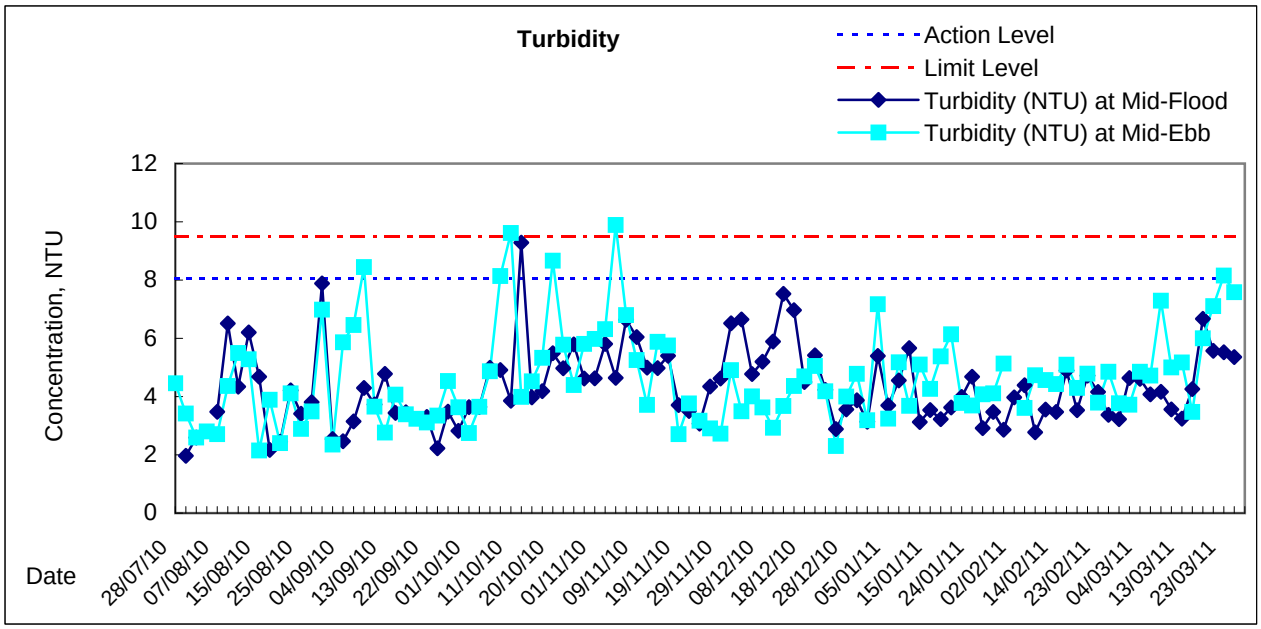


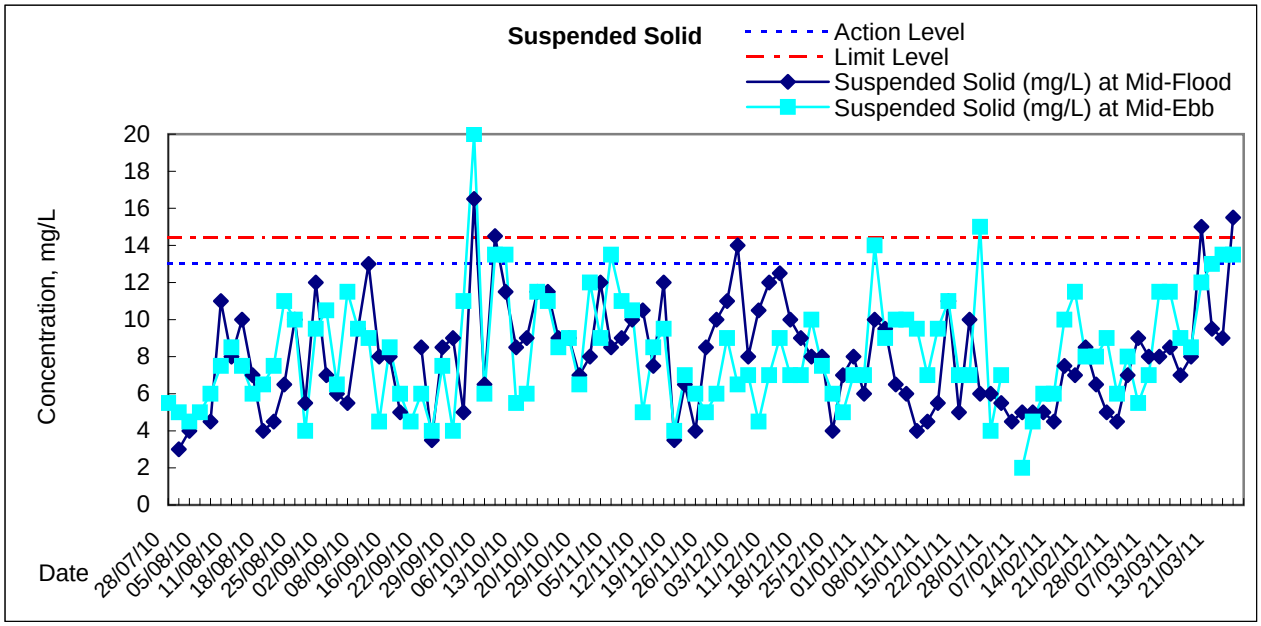




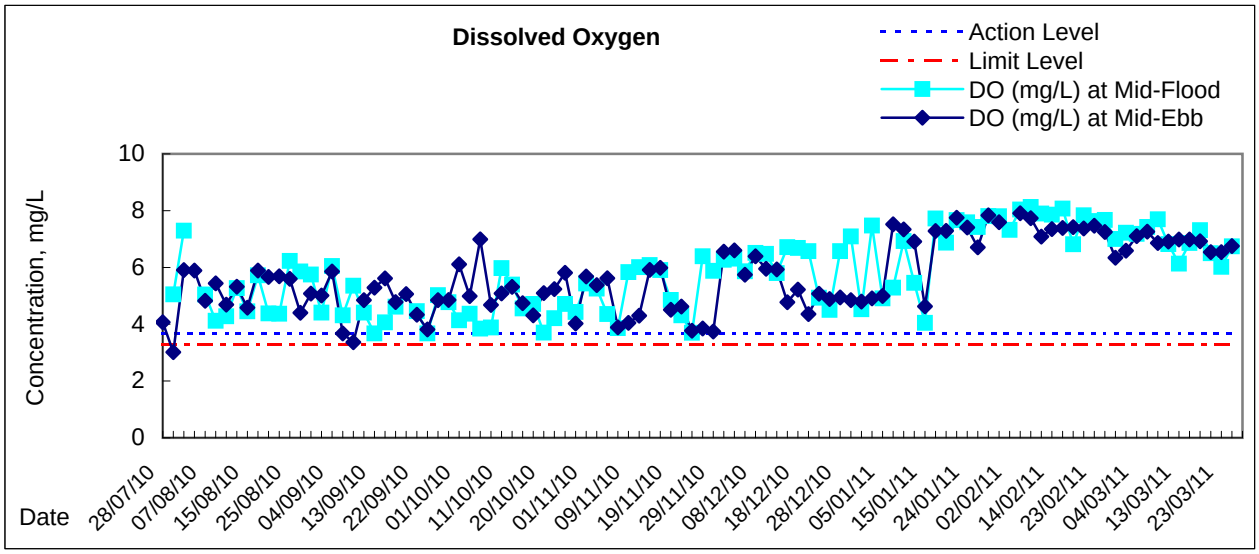
Graphic Presentation of Water Quality Result of WSD19 - Sheung Wan

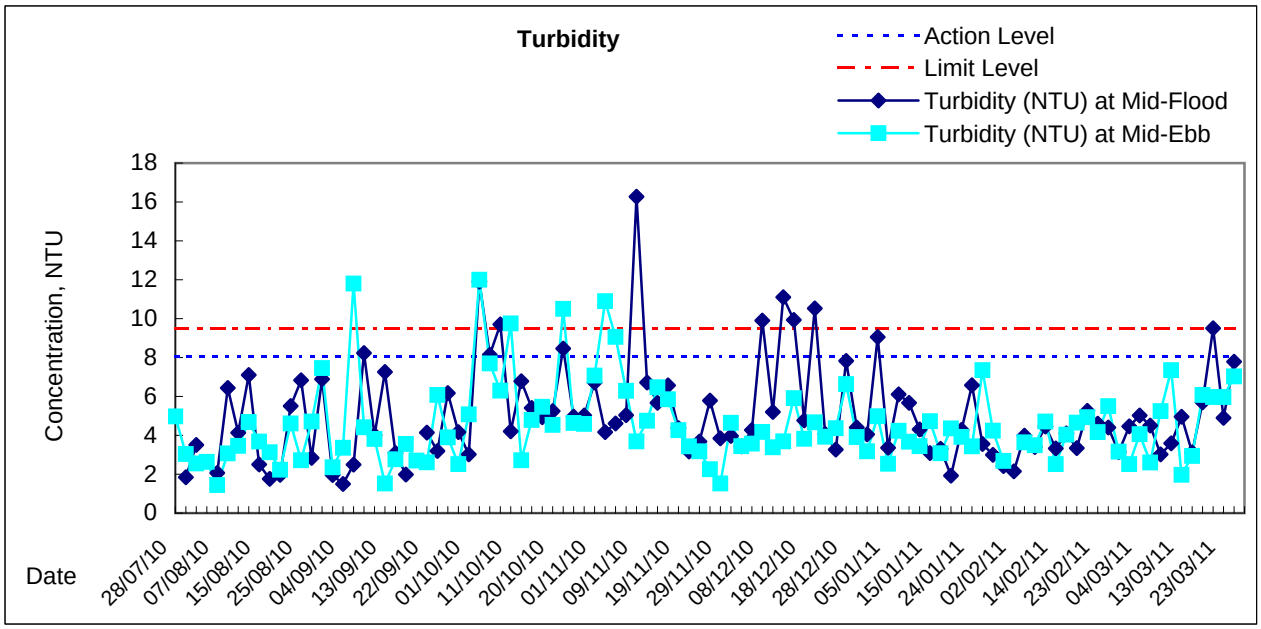


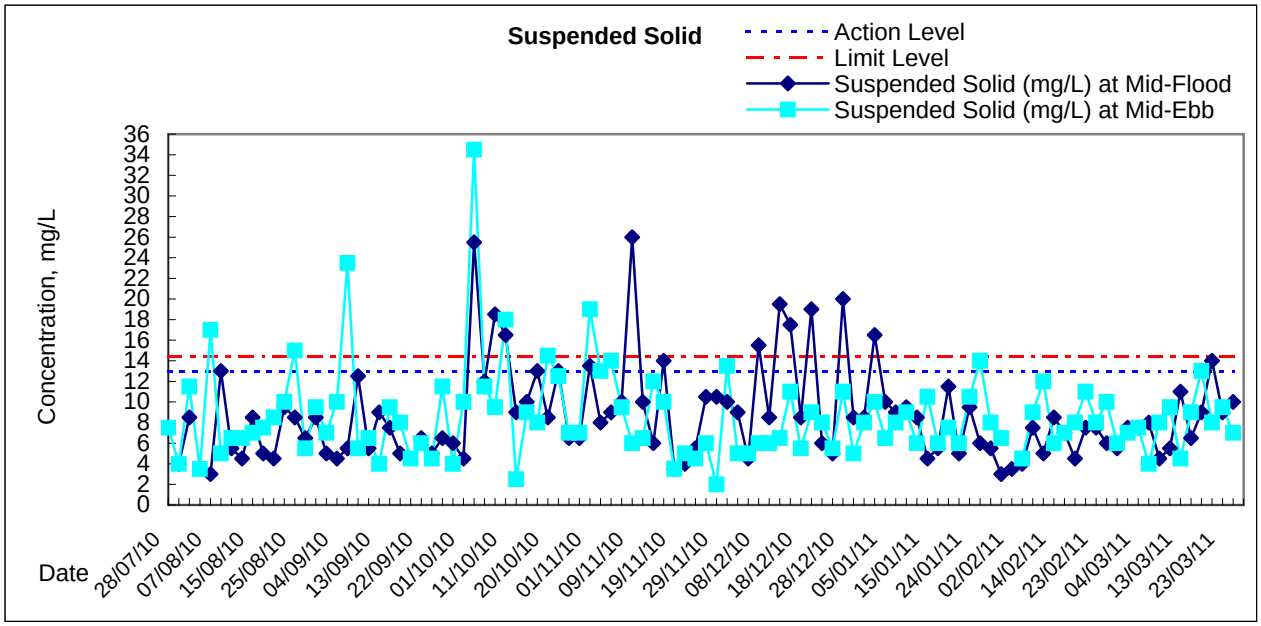




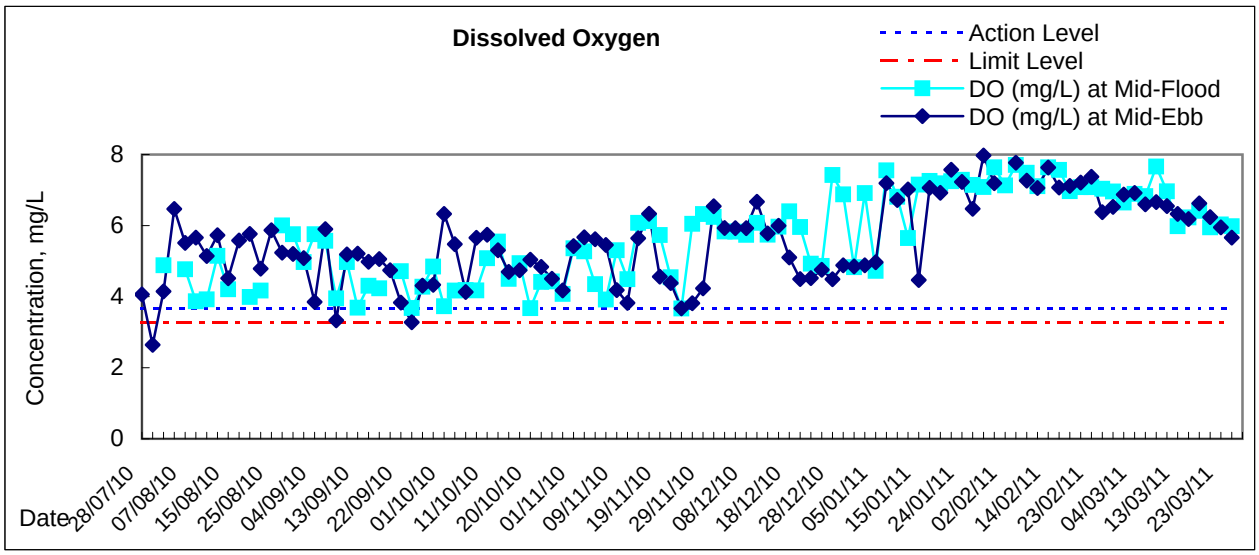
Graphic Presentation of Water Quality Result of WSD20 - Kennedy Town

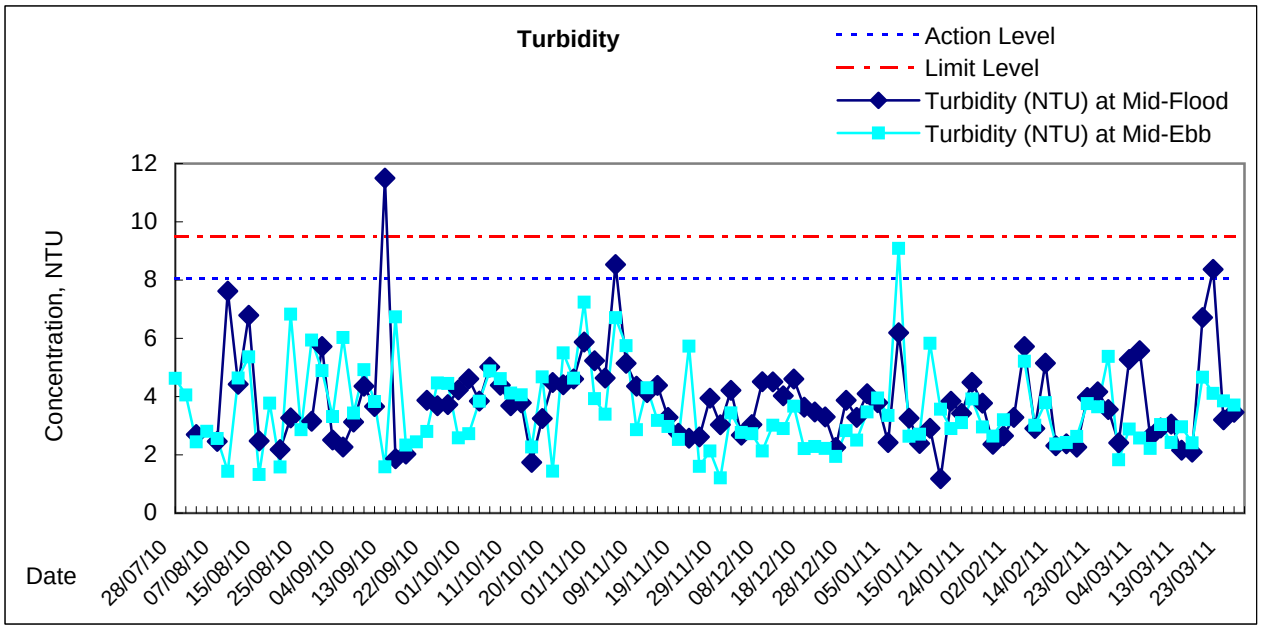


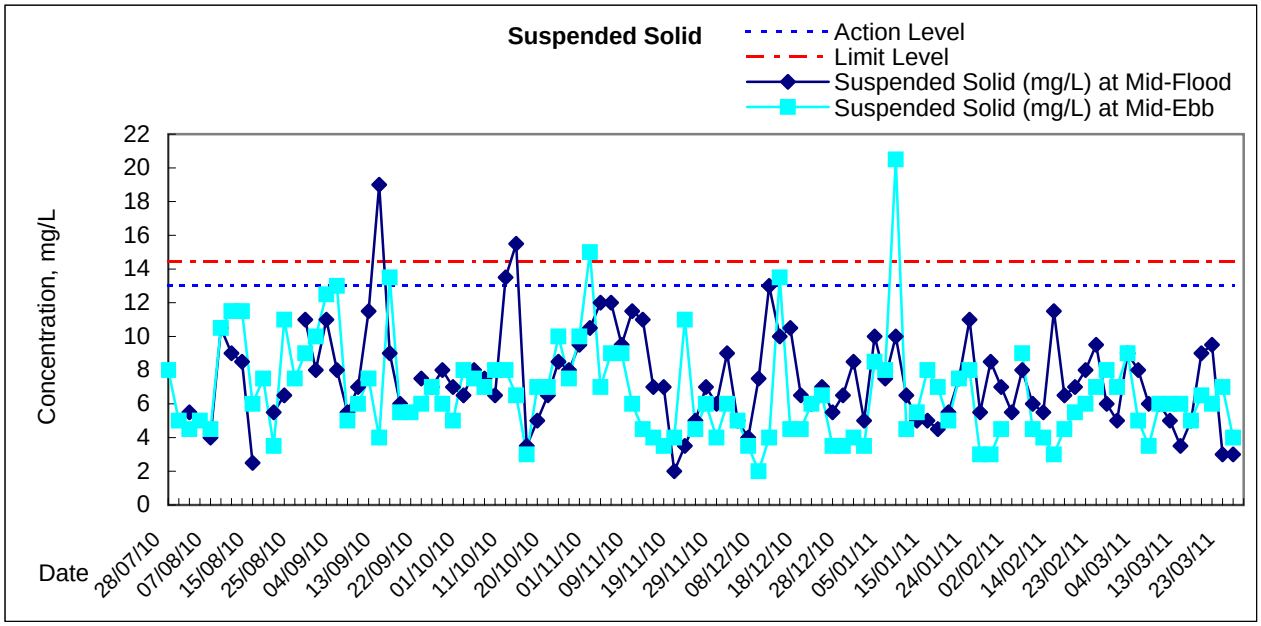




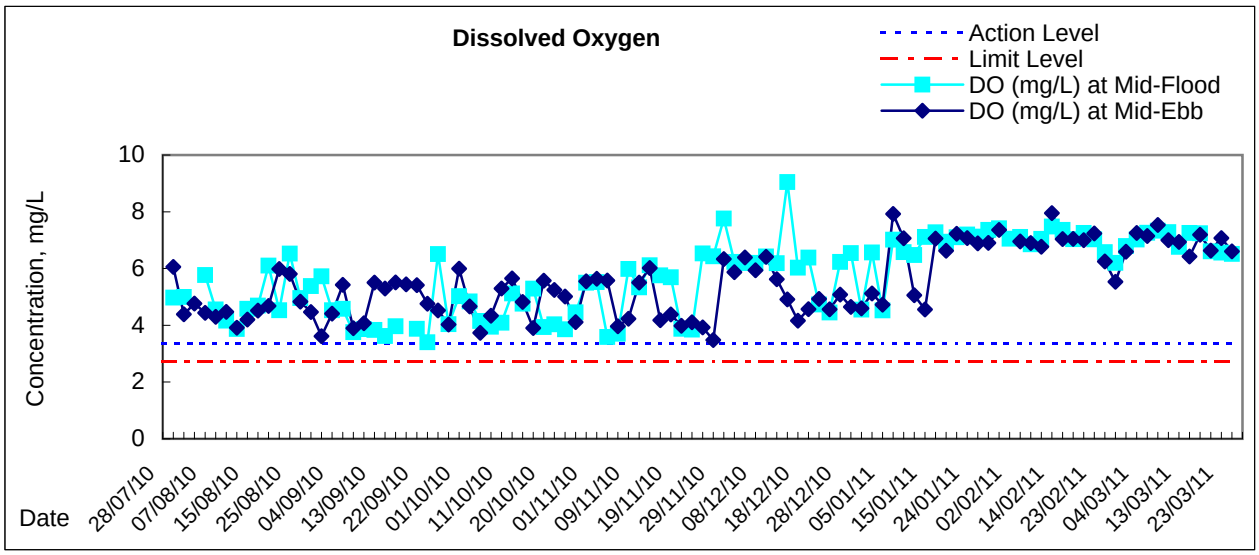
Graphic Presentation of Water Quality Result of WSD7 - Kowloon South

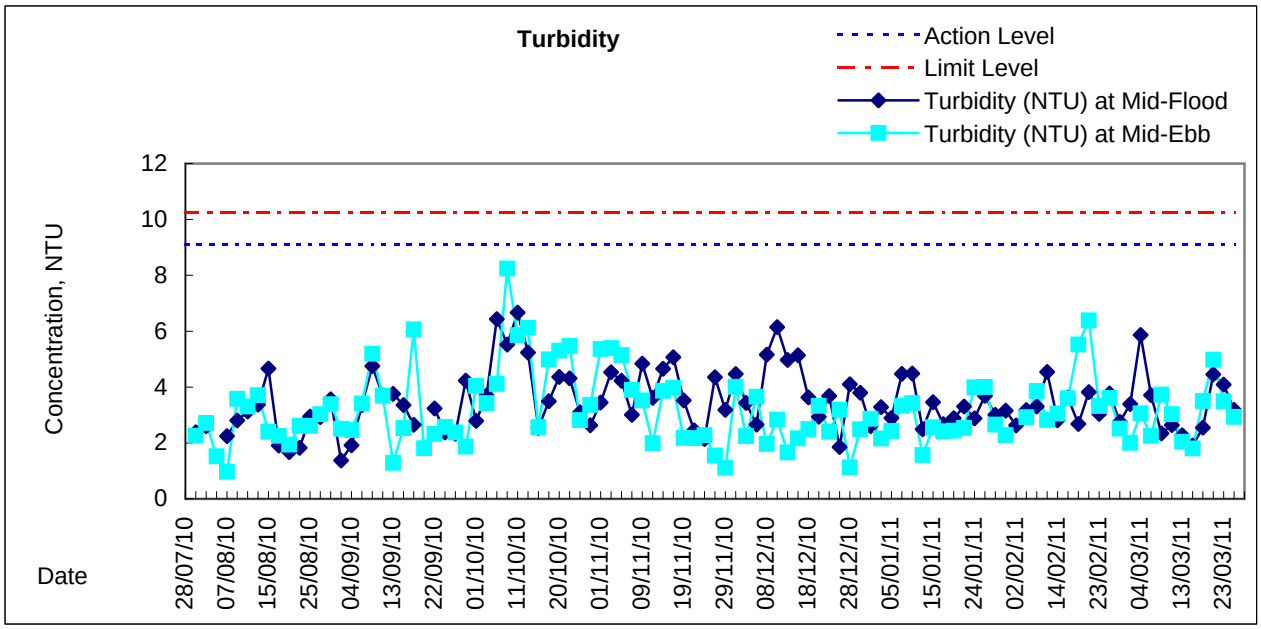


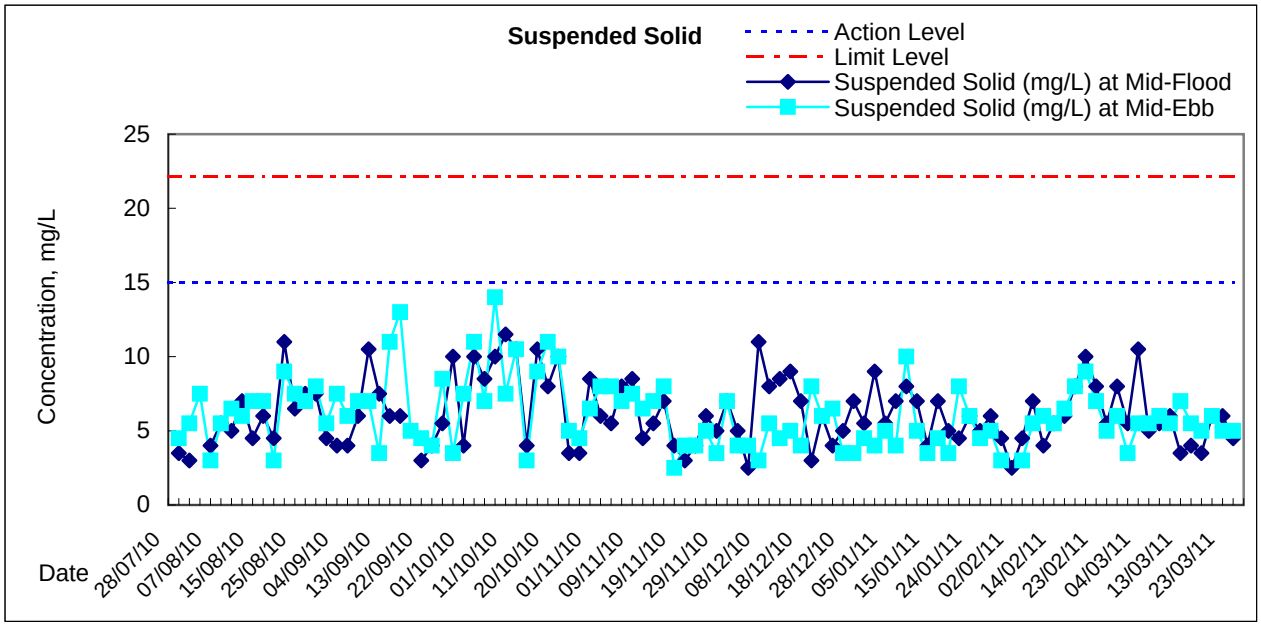




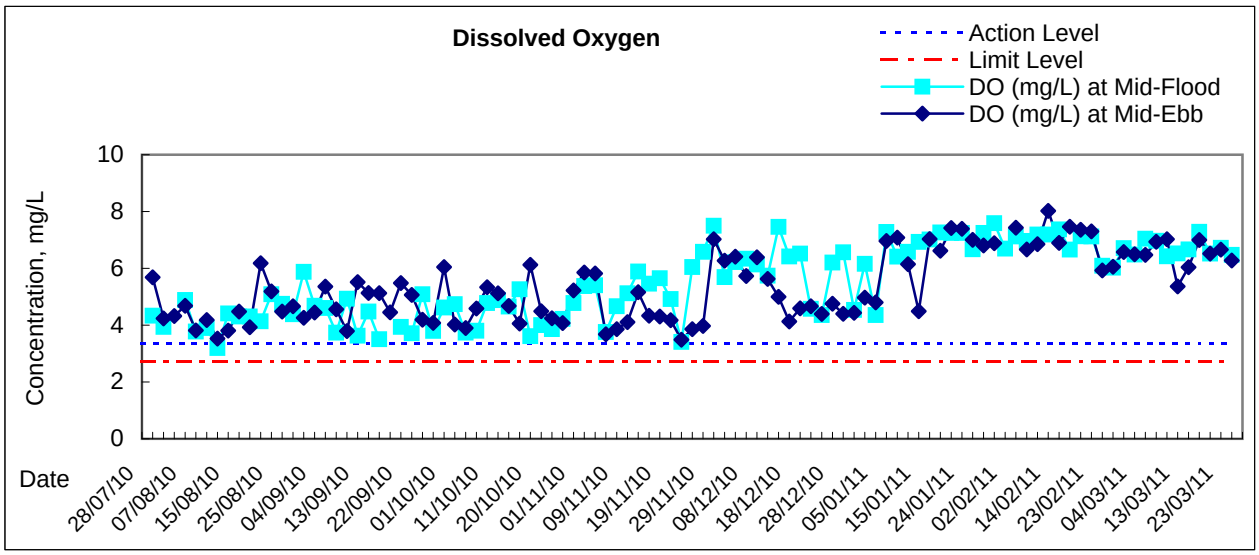
Graphic Presentation of Water Quality Result of C1 - HKCEC

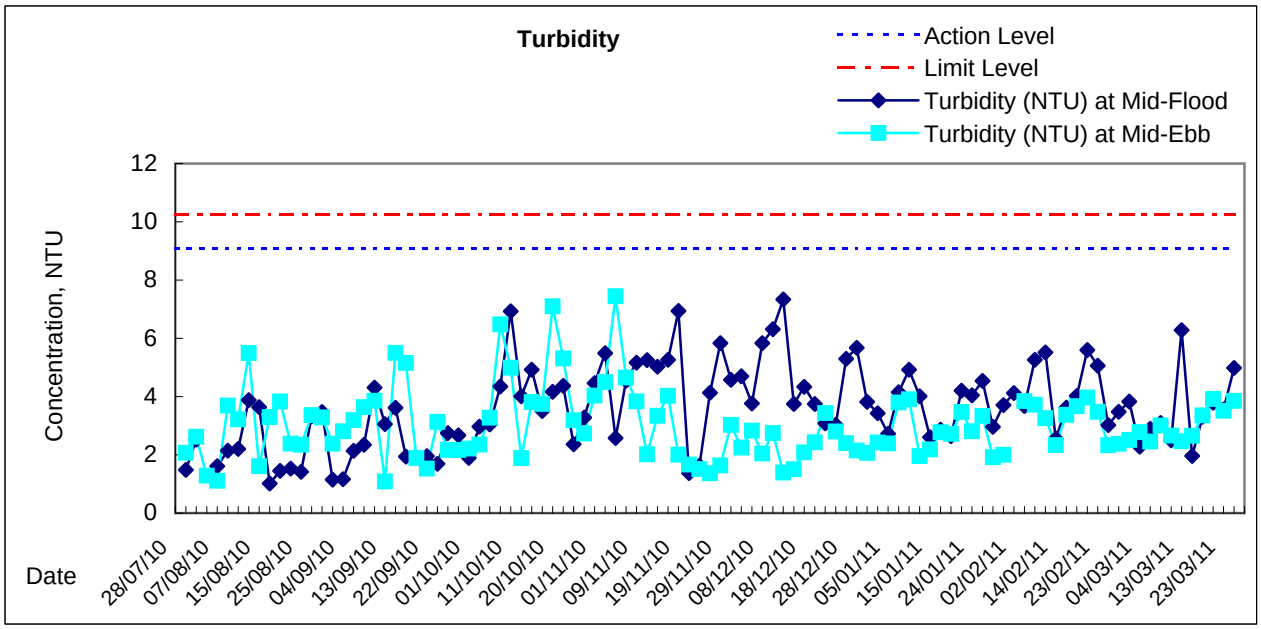


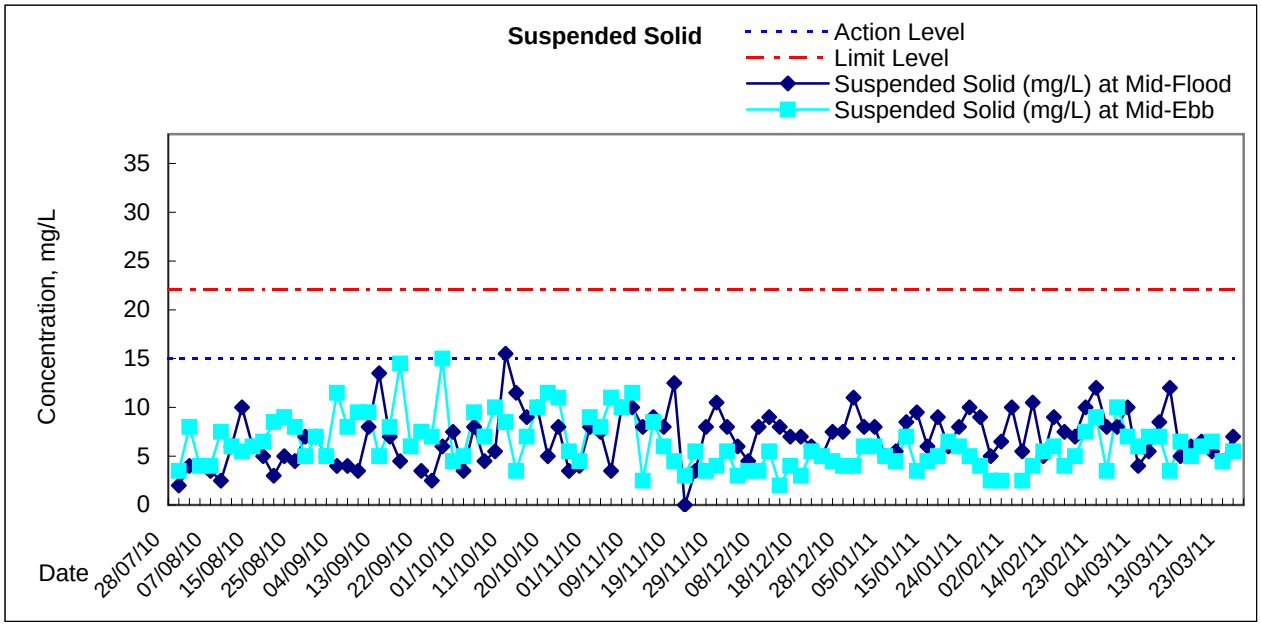




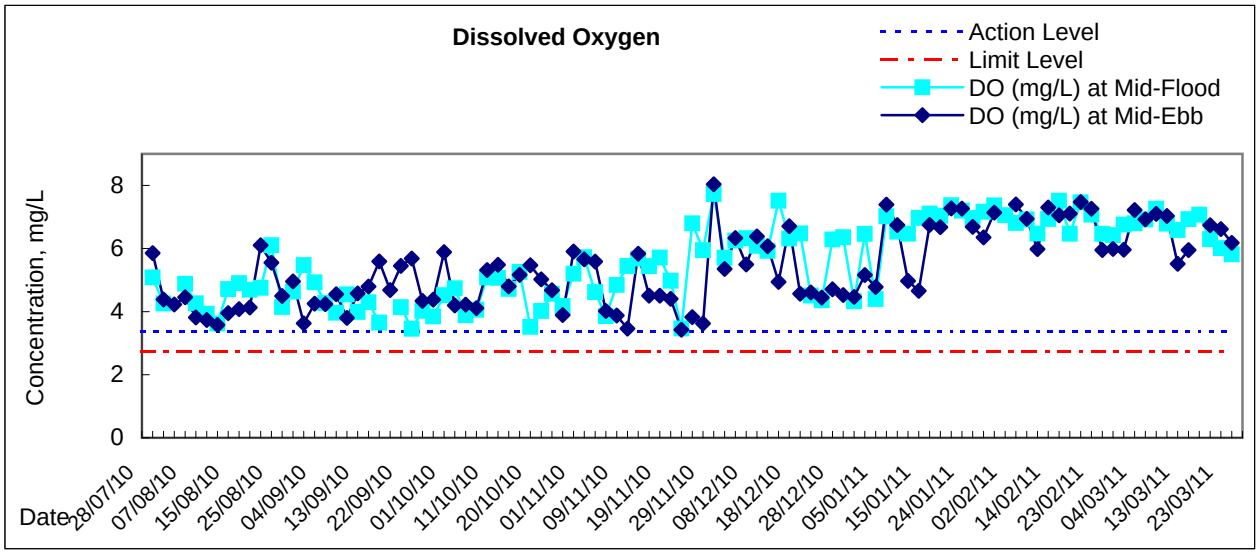
Graphic Presentation of Water Quality Result of C2 - TH / APA / SOC

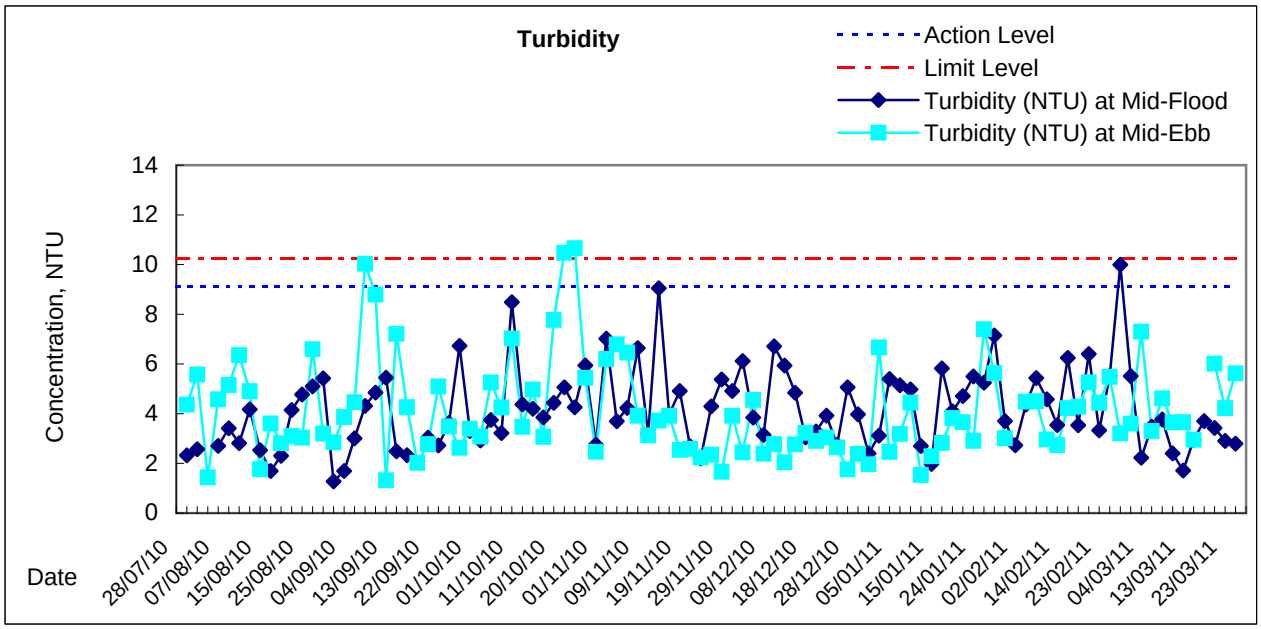


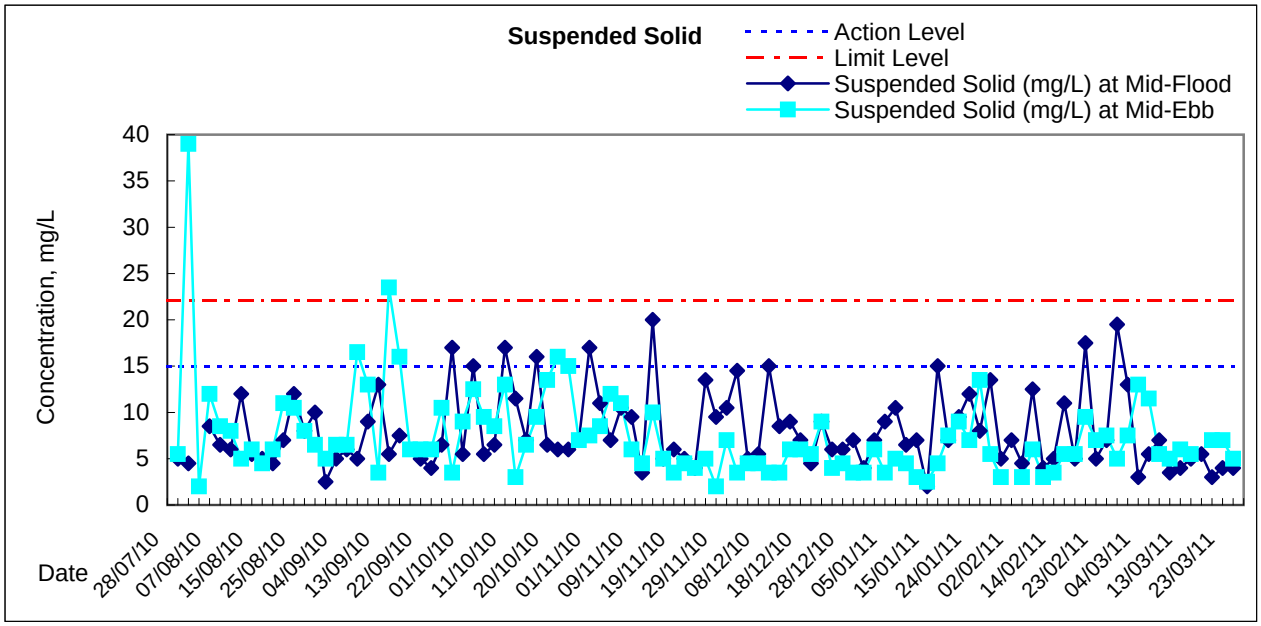




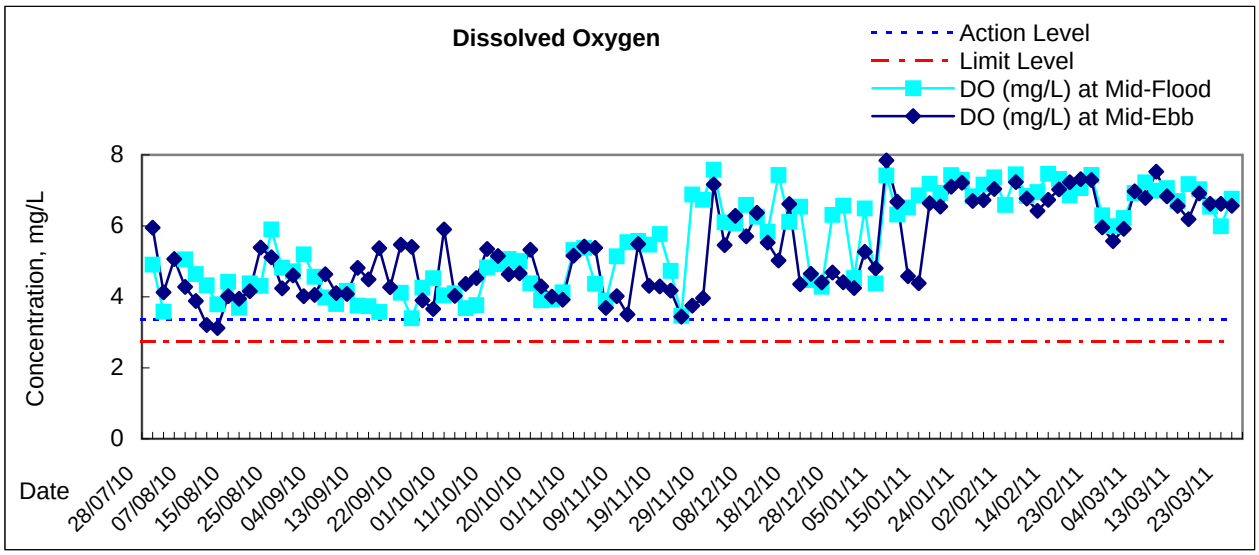
Graphic Presentation of Water Quality Result of C3 - WCT and GEC

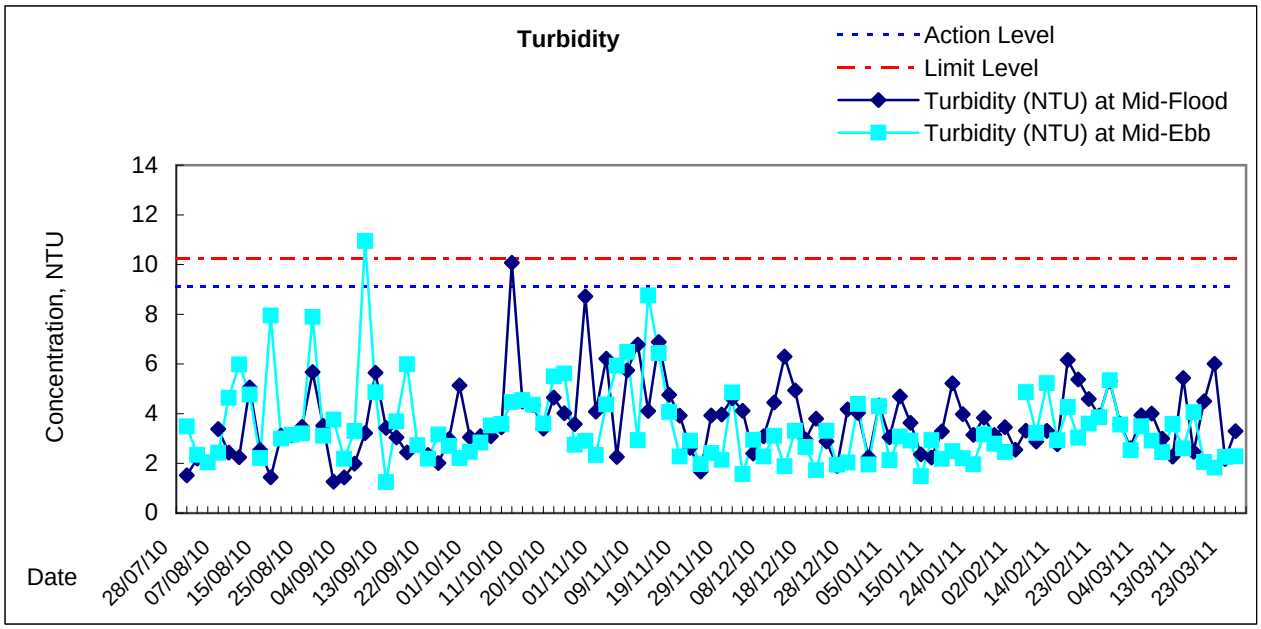


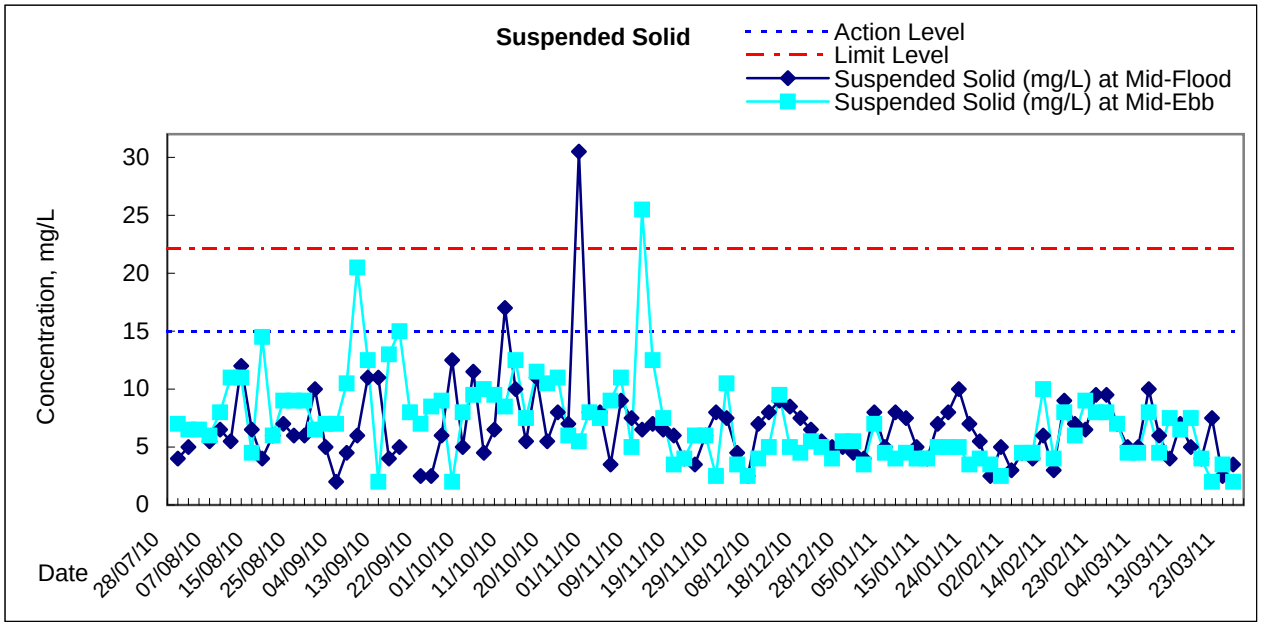




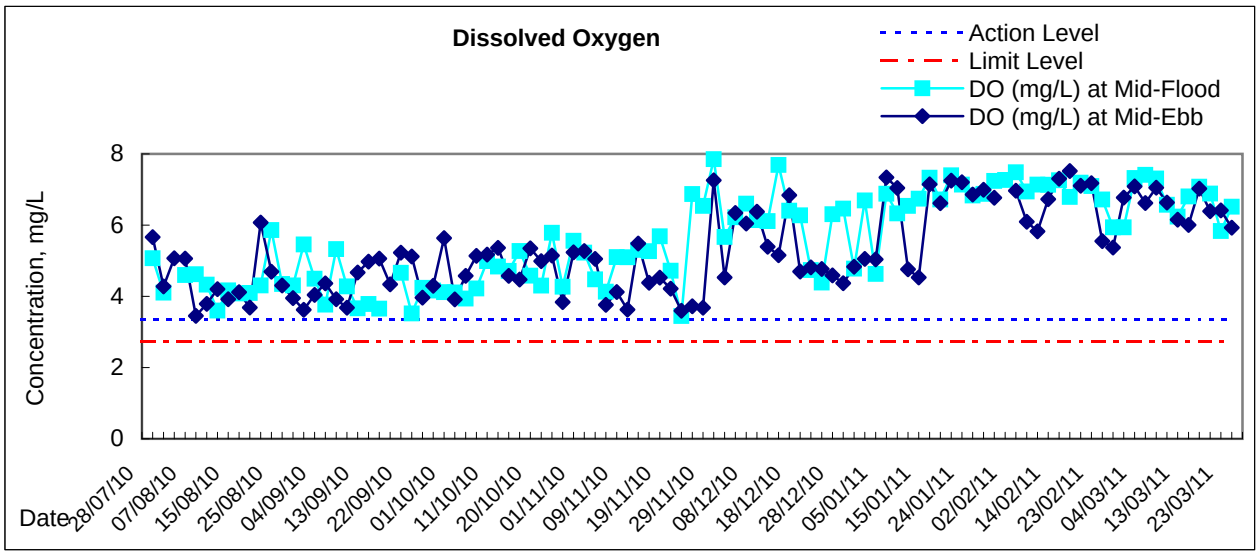
Graphic Presentation of Water Quality Result of C4e - WCT and GEC (Eastern)

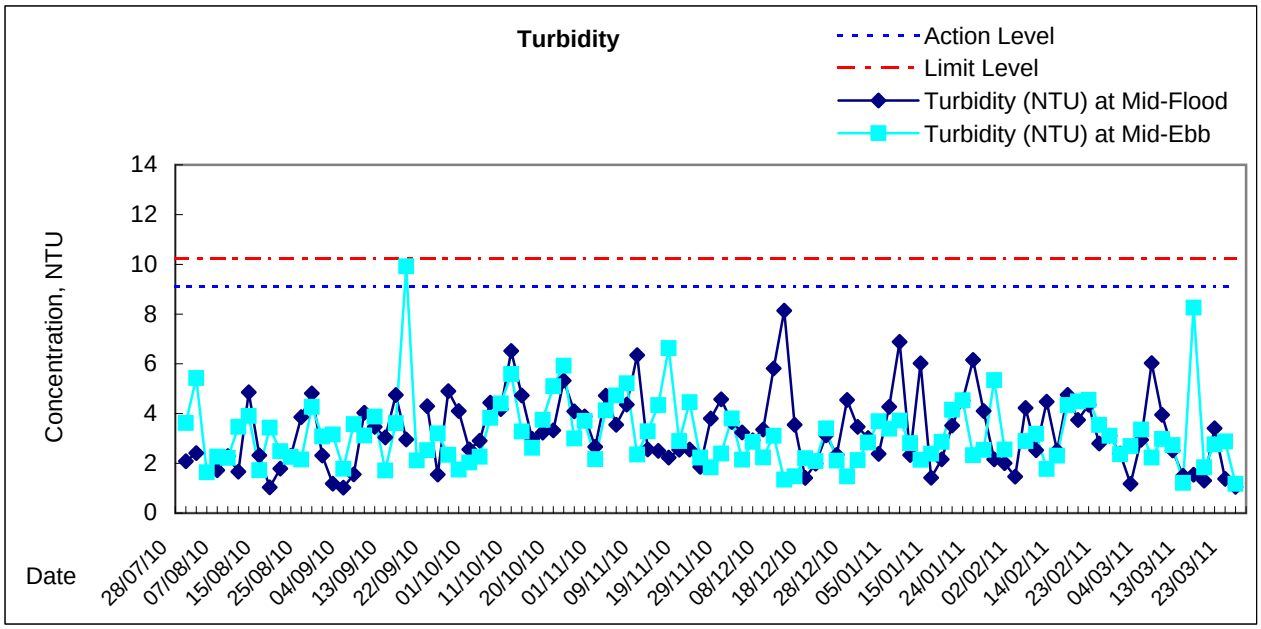


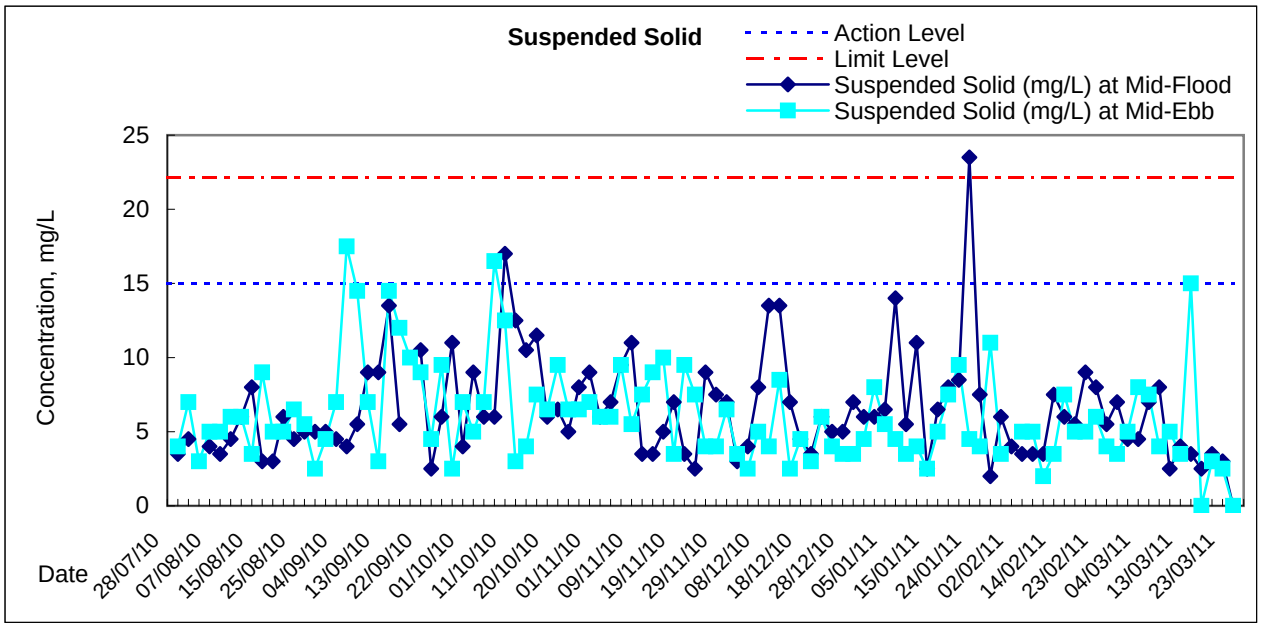




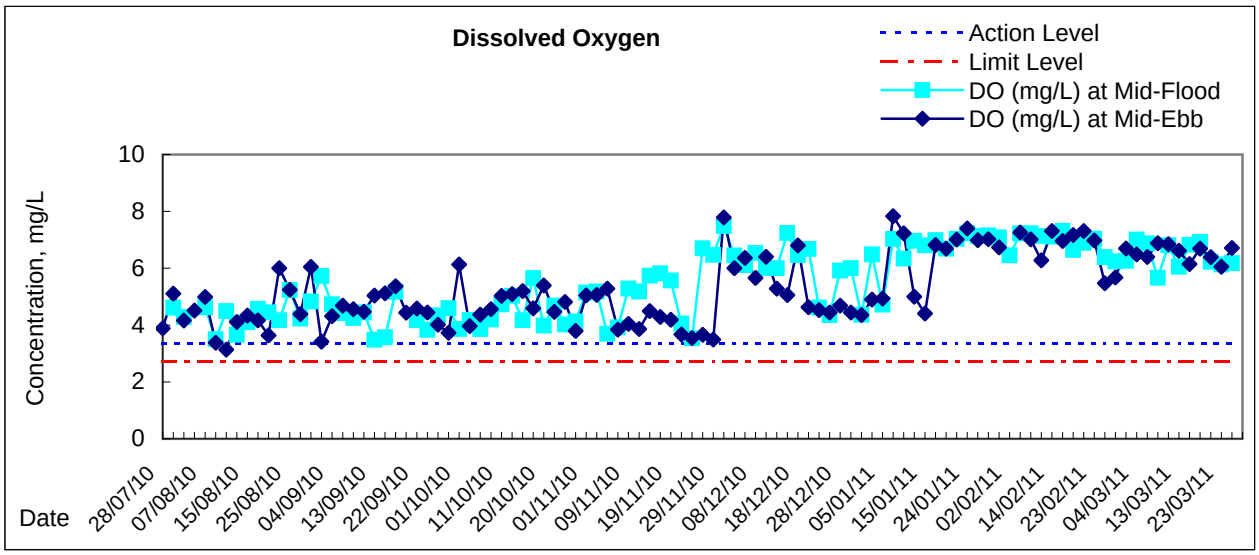
Graphic Presentation of Water Quality Result of C4w - WCT and GEC (Western)

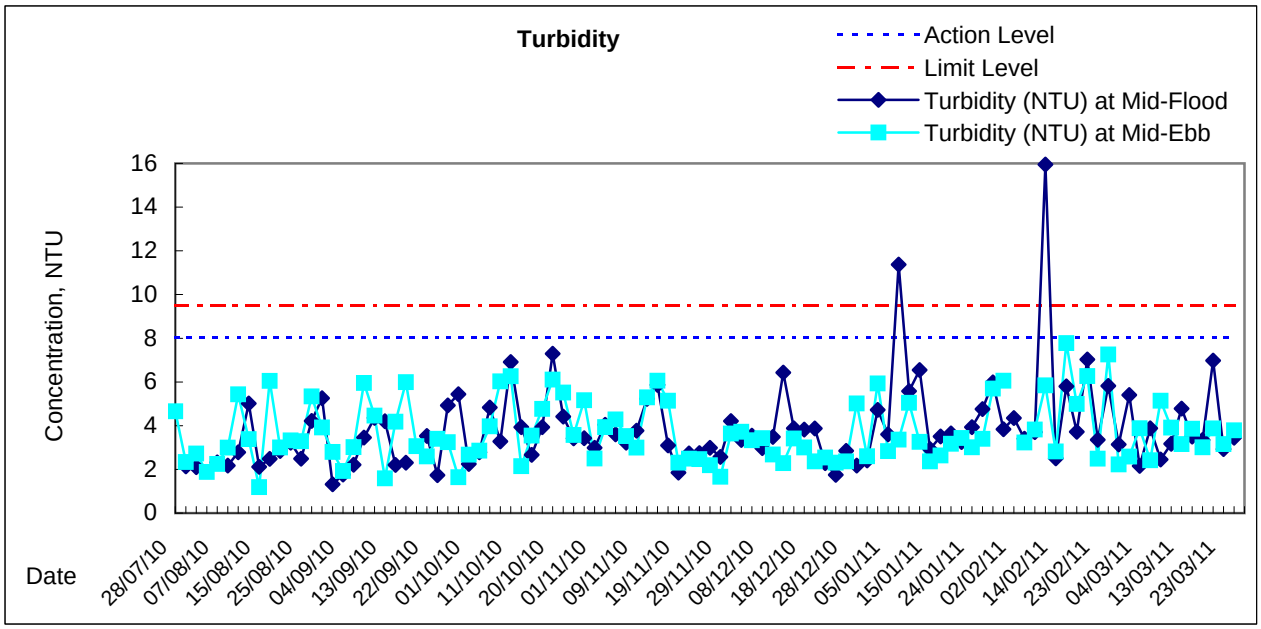


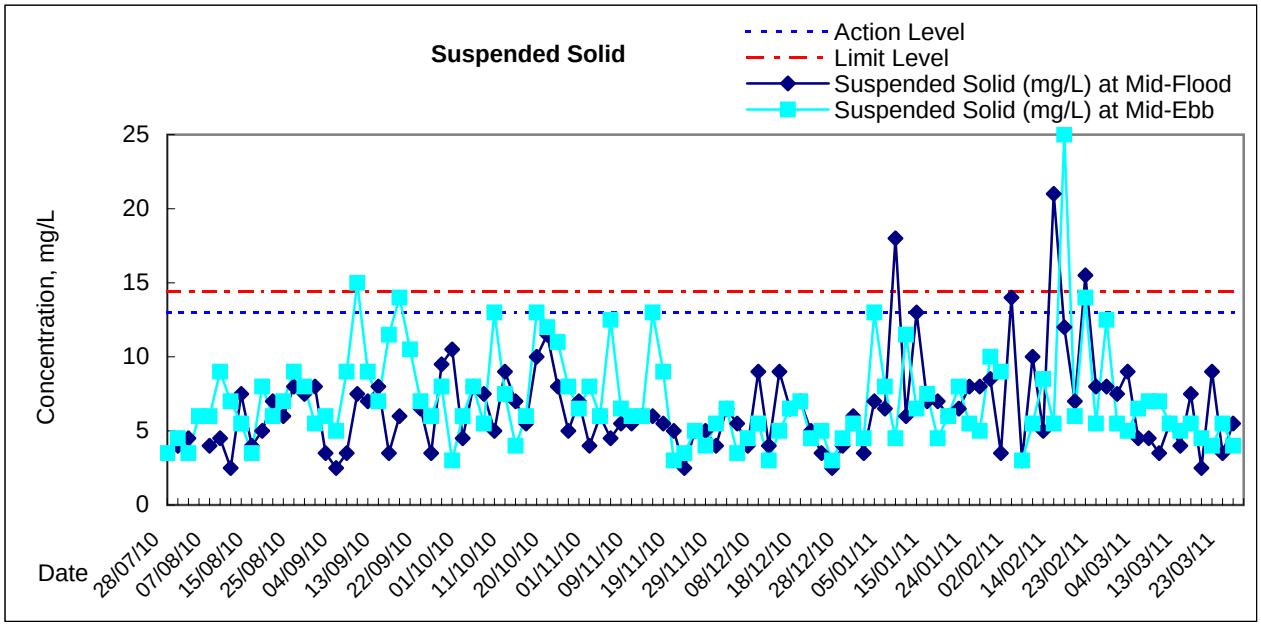




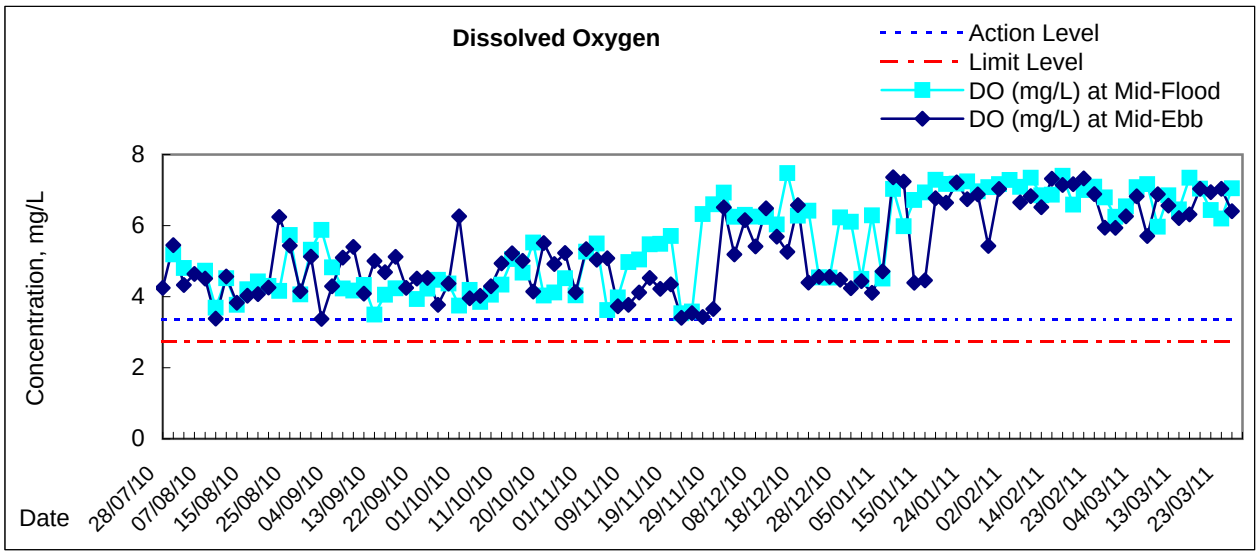
Graphic Presentation of Water Quality Result of C5e - SHKC (Eastern)

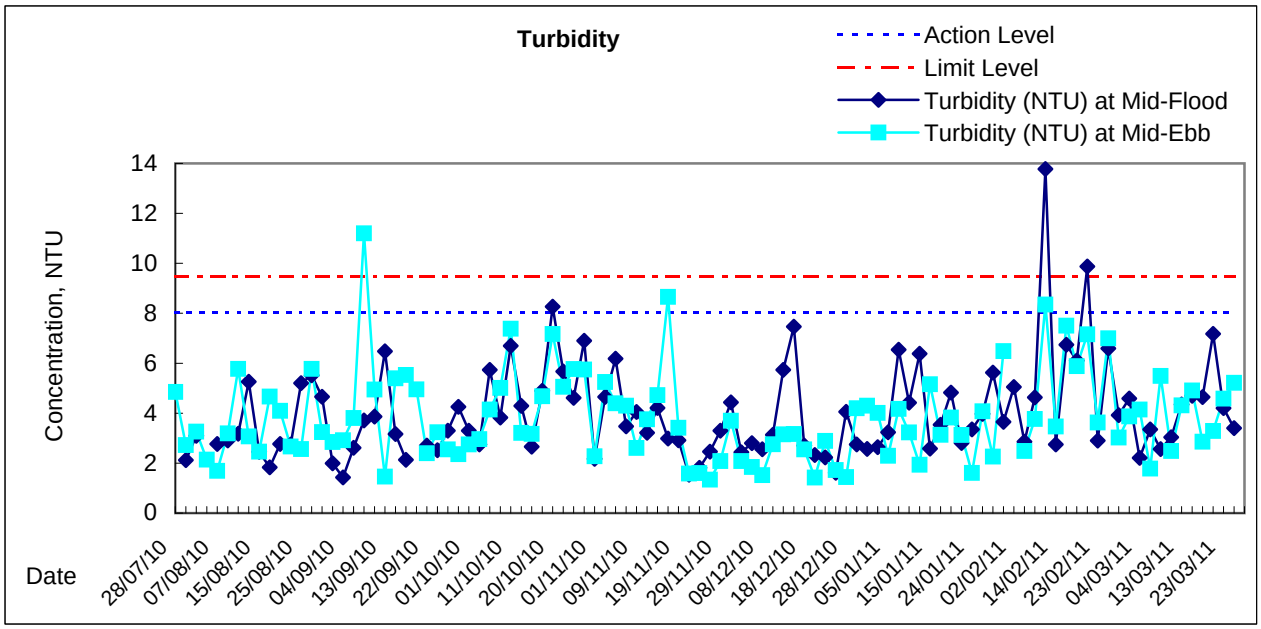


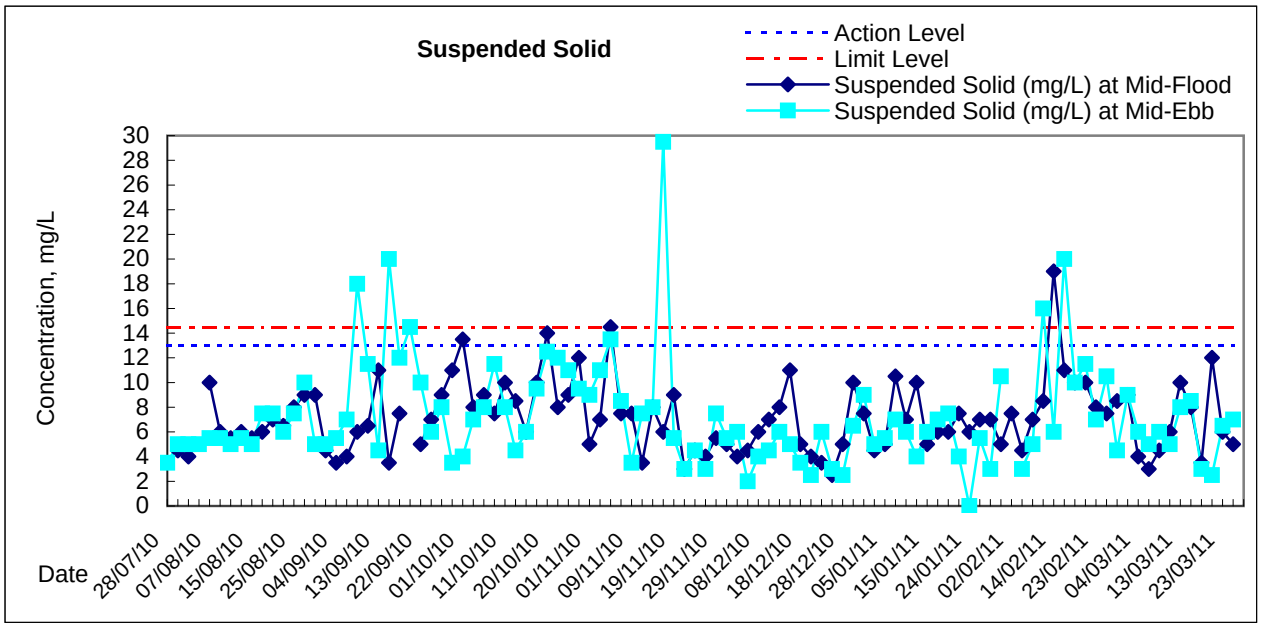




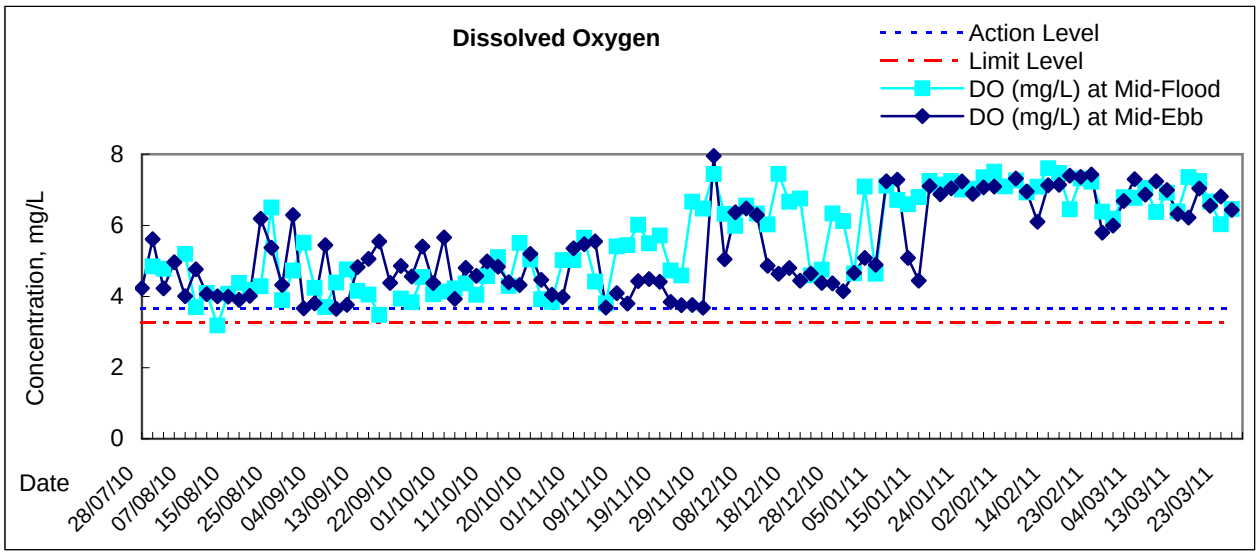
Graphic Presentation of Water Quality Result of C5w - SHKC (Western)

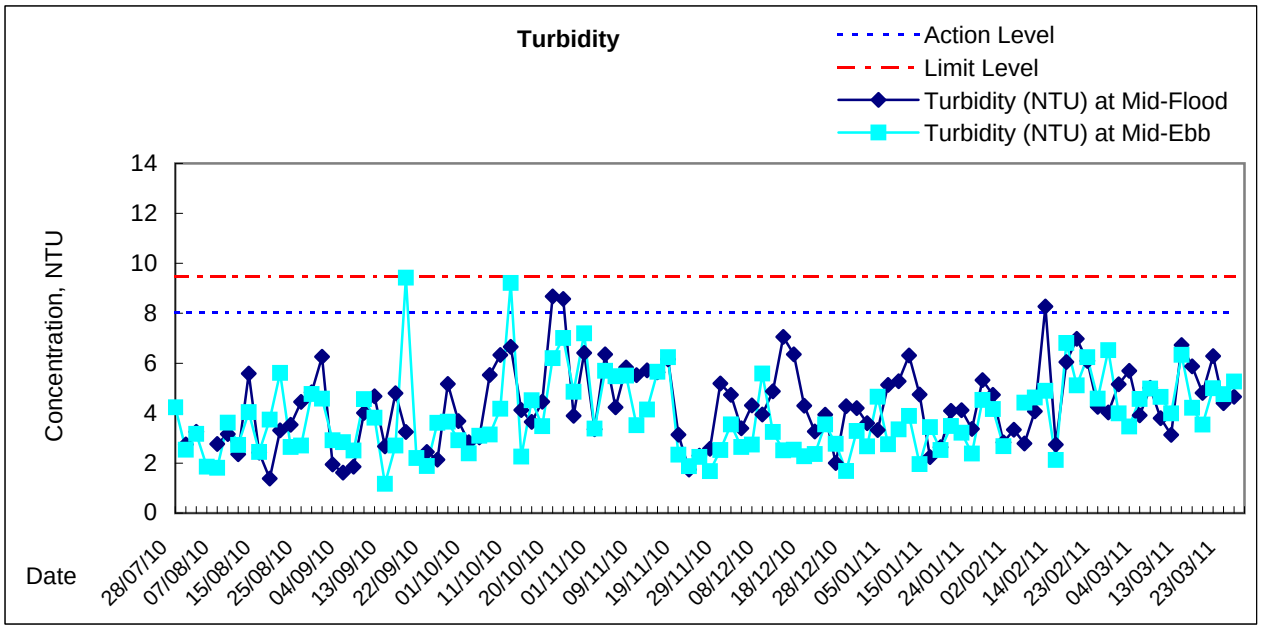


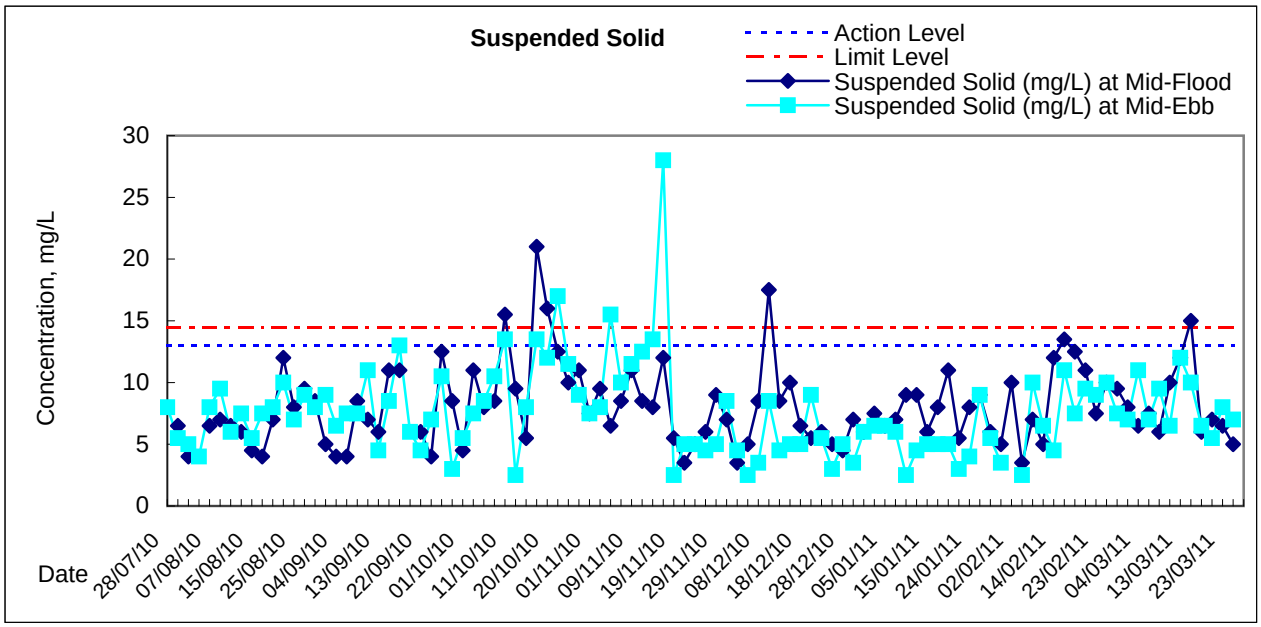




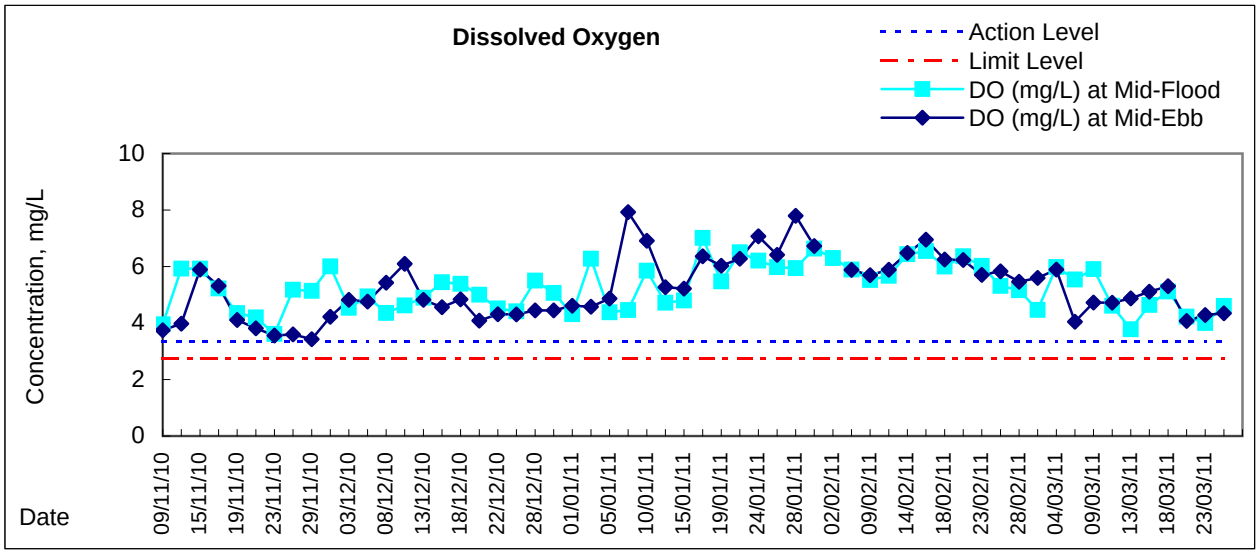
Graphic Presentation of Water Quality Result of WSD21 - Wan Chai

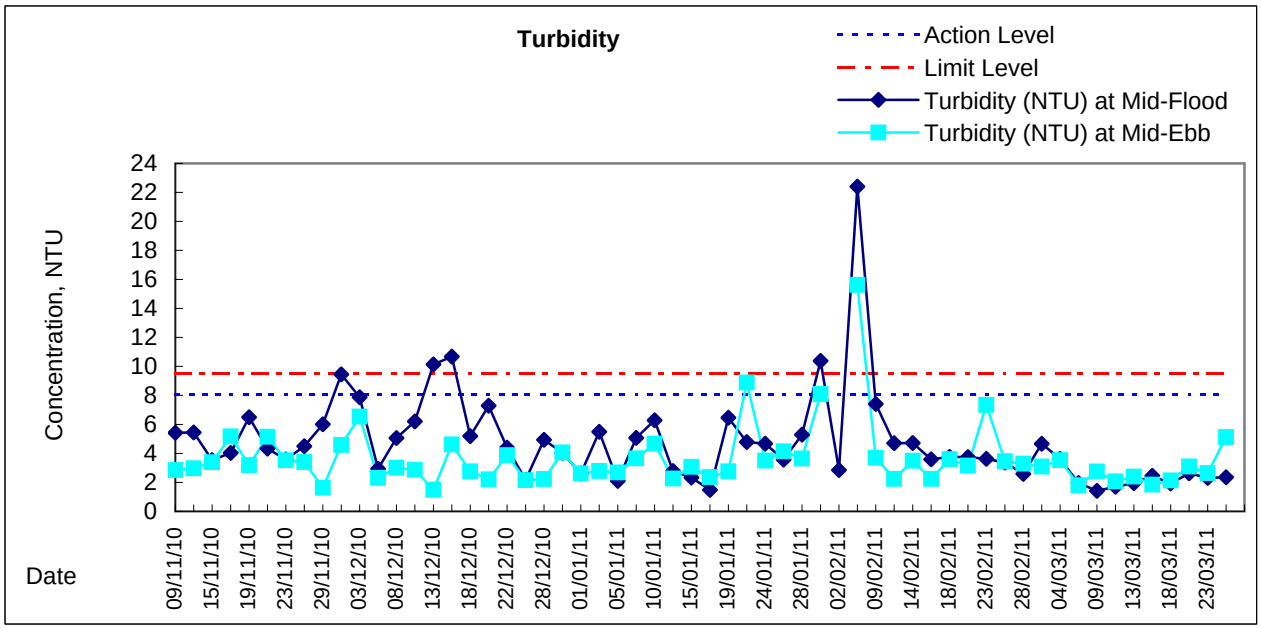


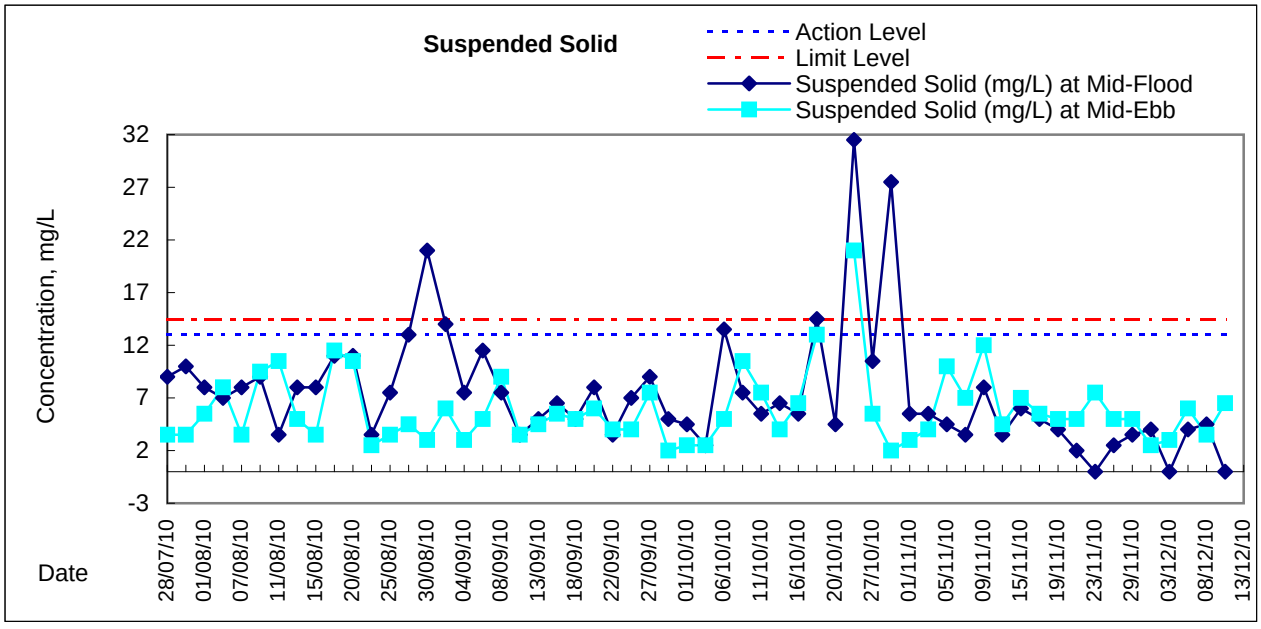




Graphic Presentation of Water Quality Result of C6 - Excelsior Hotel







Water Monitoring Result at C6 - Excelsior Hotel
Mid-Flood 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
28/2/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:04		Middle	1.5	19.10	19.10	19.1	7.81	7.81	7.8	30.76	30.76	30.8	66.6	68.0	67.3	5.10	5.21	5.16
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:25		Middle	1.5	17.70	17.70	17.7	7.91	7.91	7.9	31.04	31.04	31.0	56.2	56.5	56.4	4.51	4.40	4.46
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2011	19:05	Cloudy	Surface	1.0	16.78	16.78	16.8	8.10	8.10	8.1	30.10	30.10	30.1	77.6	71.7	74.7	6.28	5.80	6.04
	19:07		Middle	2.0	16.82	16.82	16.8	8.08	8.08	8.1	30.05	30.05	30.1	77.0	75.1	76.1	6.23	6.08	6.16
	19:09		Bottom	3.0	16.66	16.66	16.7	8.10	8.10	8.1	30.11	30.11	30.1	72.7	75.5	74.1	5.89	6.11	6.00
7/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:20		Middle	1.5	18.40	18.40	18.4	7.96	7.97	8.0	29.52	29.53	29.5	70.2	68.9	69.6	5.51	5.21	5.36
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7:45		Middle	1.5	15.54	15.54	15.5	8.09	8.09	8.1	29.60	29.61	29.6	72.5	71.7	72.1	6.05	5.98	6.02
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2011	0:00	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7:40		Middle	1.5	15.50	15.50	15.5	7.48	7.48	7.5	29.77	29.77	29.8	53.0	55.3	54.2	4.40	4.69	4.55
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2011	0:00	Sunny	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:05		Middle	1.5	18.90	18.90	18.9	7.56	7.56	7.6	30.89	30.89	30.9	49.5	49.0	49.3	3.83	3.81	3.82
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/3/2011	-	Fine	Surface	1.0	18.30	18.30	18.3	7.60	7.60	7.6	31.12	31.12	31.1	61.2	61.0	61.1	4.79	4.78	4.79
	13:35		Middle	2.0	18.10	18.20	18.2	7.60	7.60	7.6	31.12	31.12	31.1	59.9	59.0	59.5	4.67	4.62	4.65
	-		Bottom	3.0	18.10	18.10	18.1	7.60	7.60	7.6	31.11	31.11	31.1	60.2	60.0	60.1	4.70	4.69	4.70
18/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:55		Middle	1.5	17.40	17.40	17.4	7.81	7.81	7.8	32.27	32.27	32.3	72.3	72.5	72.4	5.71	5.73	5.72
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:35		Middle	1.5	20.40	20.40	20.4	7.68	7.68	7.7	31.94	31.94	31.9	57.6	57.9	57.8	4.29	4.30	4.30
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:23		Middle	1.5	17.30	17.30	17.3	7.56	7.55	7.6	30.83	30.83	30.8	50.1	49.8	50.0	4.01	3.99	4.00
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:48		Middle	1.5	17.80	17.80	17.8	7.59	7.59	7.6	31.26	31.26	31.3	59.3	59.4	59.4	4.63	4.64	4.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Water Monitoring Result at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area
Mid-Flood 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
28/2/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:34		Middle	1.5	16.70	16.70	16.7	7.97	7.97	8.0	31.24	31.24	31.2	75.6	75.2	75.4	6.06	6.04	6.05
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:20		Middle	1.5	16.80	16.80	16.8	7.98	7.97	8.0	31.22	31.22	31.2	73.1	72.8	73.0	5.86	5.83	5.85
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:40		Middle	1.5	16.42	16.41	16.4	8.32	8.32	8.3	30.68	30.68	30.7	92.5	90.3	91.4	7.51	7.34	7.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:54		Middle	1.5	17.00	17.00	17.0	7.98	7.98	8.0	31.39	31.39	31.4	70.2	70.0	70.1	5.61	5.53	5.57
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:20		Middle	1.5	16.40	16.40	16.4	7.94	7.94	7.9	31.54	31.54	31.5	68.3	67.8	68.1	5.52	5.48	5.50
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2011	0:00	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:10		Middle	1.5	16.60	16.60	16.6	7.82	7.82	7.8	31.70	31.70	31.7	71.2	69.0	70.1	5.67	5.53	5.60
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2011	0:00	Sunny	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:42		Middle	1.5	17.10	17.10	17.1	7.91	7.91	7.9	31.86	31.86	31.9	64.2	61.2	62.7	4.95	4.88	4.92
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:15		Middle	1.0	17.80	17.80	17.8	7.92	7.92	7.9	31.97	31.97	32.0	69.5	69.2	69.4	5.44	5.41	5.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:39		Middle	1.5	17.60	17.60	17.6	7.98	7.98	8.0	32.65	32.65	32.7	72.2	71.0	71.6	5.67	5.57	5.62
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:14		Middle	1.5	18.80	18.80	18.8	7.83	7.83	7.8	32.49	32.49	32.5	60.3	60.7	60.5	4.60	4.67	4.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2011	7:48	Cloudy	Surface	1.0	16.70	16.70	16.7	7.36	7.36	7.4	32.78	32.78	32.8	64.7	64.1	64.4	5.41	5.38	5.40
	7:49		Middle	2.0	16.70	16.70	16.7	7.36	7.36	7.4	32.78	32.78	32.8	63.7	60.9	62.3	5.03	4.81	4.92
	7:50		Bottom	3.0	16.80	16.80	16.8	7.37	7.37	7.4	32.78	32.77	32.8	60.2	62.1	61.2	4.75	4.90	4.83
25/3/2011	9:29	Cloudy	Surface	1.0	17.70	17.70	17.7	7.98	7.98	8.0	32.63	32.63	32.6	60.0	60.1	60.1	5.00	5.01	5.01
	9:30		Middle	2.0	18.00	18.00	18.0	8.06	8.06	8.1	32.63	32.63	32.6	59.3	58.1	58.7	4.98	4.95	4.97
	9:31		Bottom	3.0	18.20	18.20	18.2	8.00	7.97	8.0	32.64	32.27	32.5	55.4	55.9	55.7	4.91	4.94	4.93

Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area
Mid-Flood 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
28/2/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:40		Middle	1.5	16.80	16.80	16.8	8.06	8.06	8.1	31.31	31.31	31.3	82.8	83.0	82.9	6.60	6.62	6.61
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:10		Middle	1.5	16.60	16.60	16.6	8.20	8.20	8.2	31.32	31.32	31.3	79.4	79.3	79.4	6.41	6.39	6.40
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:50		Middle	1.5	16.30	16.30	16.3	8.23	8.23	8.2	30.70	30.70	30.7	90.7	87.6	89.2	7.37	7.12	7.25
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:02		Middle	1.0	17.00	17.00	17.0	7.98	7.98	8.0	31.40	31.40	31.4	71.0	70.9	71.0	5.67	5.66	5.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:10		Middle	1.0	16.50	16.50	16.5	7.96	7.96	8.0	31.56	31.56	31.6	73.3	73.0	73.2	5.93	5.91	5.92
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2011	0:00	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:04		Middle	1.0	16.60	16.60	16.6	7.92	7.92	7.9	31.62	31.62	31.6	70.0	70.3	70.2	5.63	5.66	5.65
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2011	0:00	Sunny	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:32		Middle	1.0	17.10	17.10	17.1	7.73	7.73	7.7	31.72	31.72	31.7	60.3	59.8	60.1	4.62	4.60	4.61
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:07		Middle	1.5	17.90	17.90	17.9	8.00	8.00	8.0	32.10	32.10	32.1	69.5	68.4	69.0	5.43	5.35	5.39
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:33		Middle	1.5	17.70	17.70	17.7	7.91	7.91	7.9	32.42	32.42	32.4	73.4	73.1	73.3	5.74	5.71	5.73
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:04		Middle	1.0	18.80	18.80	18.8	7.83	7.83	7.8	32.53	32.53	32.5	64.7	63.8	64.3	4.81	4.78	4.80
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7:56		Middle	1.5	17.20	17.00	17.1	7.35	7.35	7.4	32.72	32.72	32.7	61.6	60.7	61.2	4.85	4.79	4.82
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:35		Middle	1.5	18.10	18.30	18.2	8.03	8.03	8.0	32.57	32.57	32.6	58.0	57.3	57.7	4.72	4.70	4.71
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Water Monitoring Result at C6 - Excelsior Hotel
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
28/2/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:07		Middle	2	19.15	19.15	19.2	7.88	7.87	7.9	29.89	29.89	29.9	71.3	71.0	71.2	5.52	5.50	5.51
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:45		Middle	2	15.70	15.70	15.7	8.01	8.01	8.0	30.23	30.23	30.2	69.2	67.2	68.2	5.72	5.56	5.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:35		Middle	2	17.00	17.00	17.0	8.01	8.01	8.0	31.33	31.33	31.3	74.7	75.2	75.0	5.86	5.90	5.88
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:45		Middle	2	17.80	17.80	17.8	7.94	7.94	7.9	30.58	30.58	30.6	51.3	51.2	51.3	4.07	4.01	4.04
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:56		Middle	2	16.20	16.20	16.2	7.68	7.68	7.7	30.86	30.86	30.9	58.3	57.6	58.0	4.75	4.70	4.73
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2011	0:00	Cloudy	Surface	1	17.20	17.20	17.2	7.71	7.71	7.7	30.96	30.96	31.0	72.4	72.0	72.2	6.12	6.11	6.12
	16:50		Middle	2	17.00	17.00	17.0	7.71	7.31	7.5	30.96	30.96	31.0	70.4	69.8	70.1	5.63	5.59	5.61
	0:00		Bottom	3	16.90	16.90	16.9	7.70	7.70	7.7	30.96	30.96	31.0	75.0	74.8	74.9	6.16	6.14	6.15
13/3/2011	0:00	Sunny	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:22		Middle	2	18.50	18.50	18.5	7.56	7.56	7.6	31.15	31.15	31.2	64.0	64.6	64.3	5.15	4.89	5.02
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:39		Middle	2	17.60	17.60	17.6	7.65	7.65	7.7	31.34	31.34	31.3	64.2	64.4	64.3	5.10	5.11	5.11
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:50		Middle	2	17.20	17.20	17.2	7.69	7.69	7.7	32.06	32.06	32.1	63.6	63.4	63.5	5.06	5.05	5.06
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:00		Middle	2	20.30	20.30	20.3	7.67	7.67	7.7	32.14	32.14	32.1	55.9	55.4	55.7	4.13	4.10	4.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2011	12:30	Cloudy	Surface	1	17.20	17.20	17.2	7.51	7.52	7.5	31.74	31.74	31.7	56.5	56.1	56.3	4.42	4.38	4.40
	12:32		Middle	2	17.30	17.30	17.3	7.55	7.55	7.6	31.72	31.72	31.7	55.1	55.3	55.2	4.28	4.30	4.29
	12:34		Bottom	3	17.30	17.30	17.3	7.57	7.57	7.6	31.65	31.65	31.7	54.5	54.6	54.6	4.22	4.23	4.23
25/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:00		Middle	2	18.40	18.40	18.4	7.69	7.69	7.7	31.86	31.86	31.9	55.8	55.4	55.6	4.34	4.31	4.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

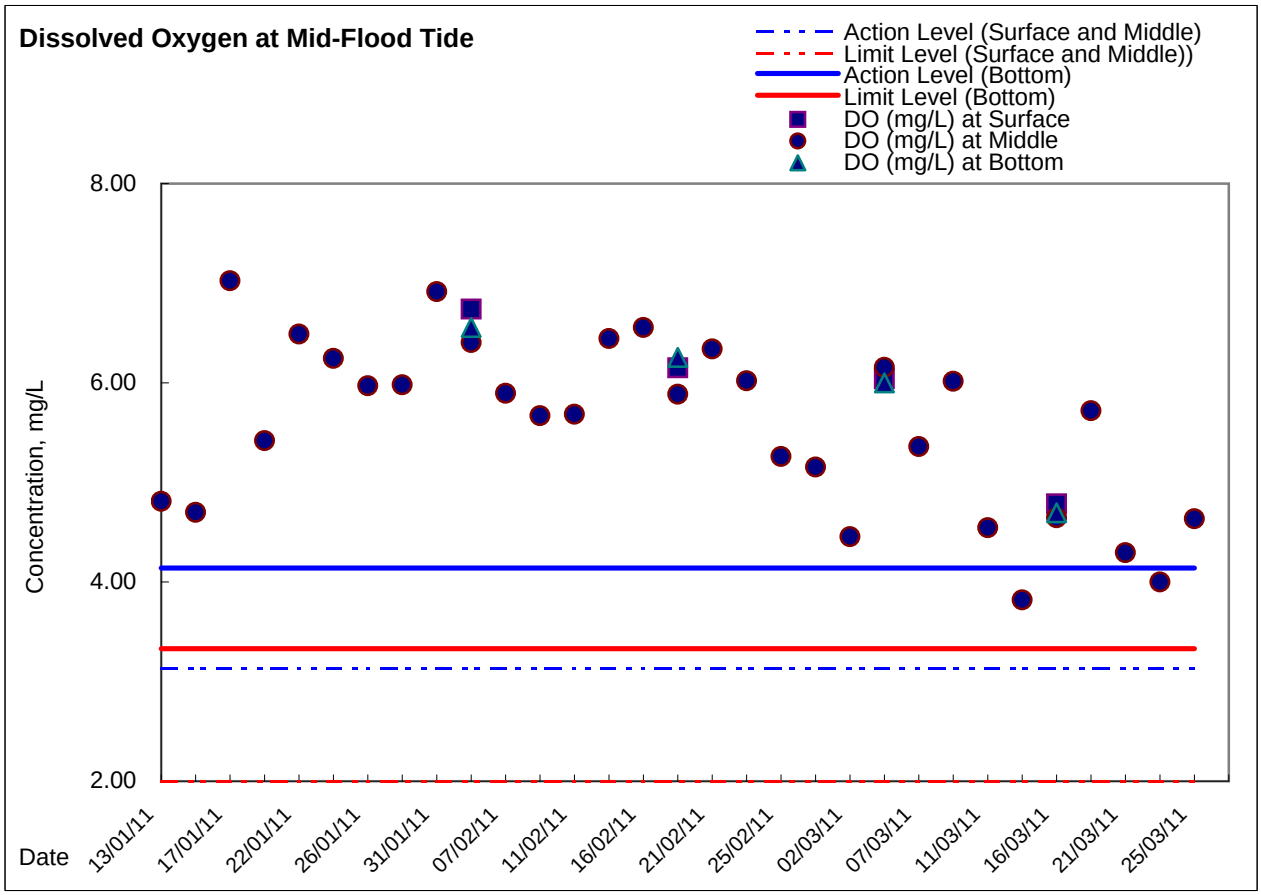
Water Monitoring Result at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area
Mid-Ebb Tide

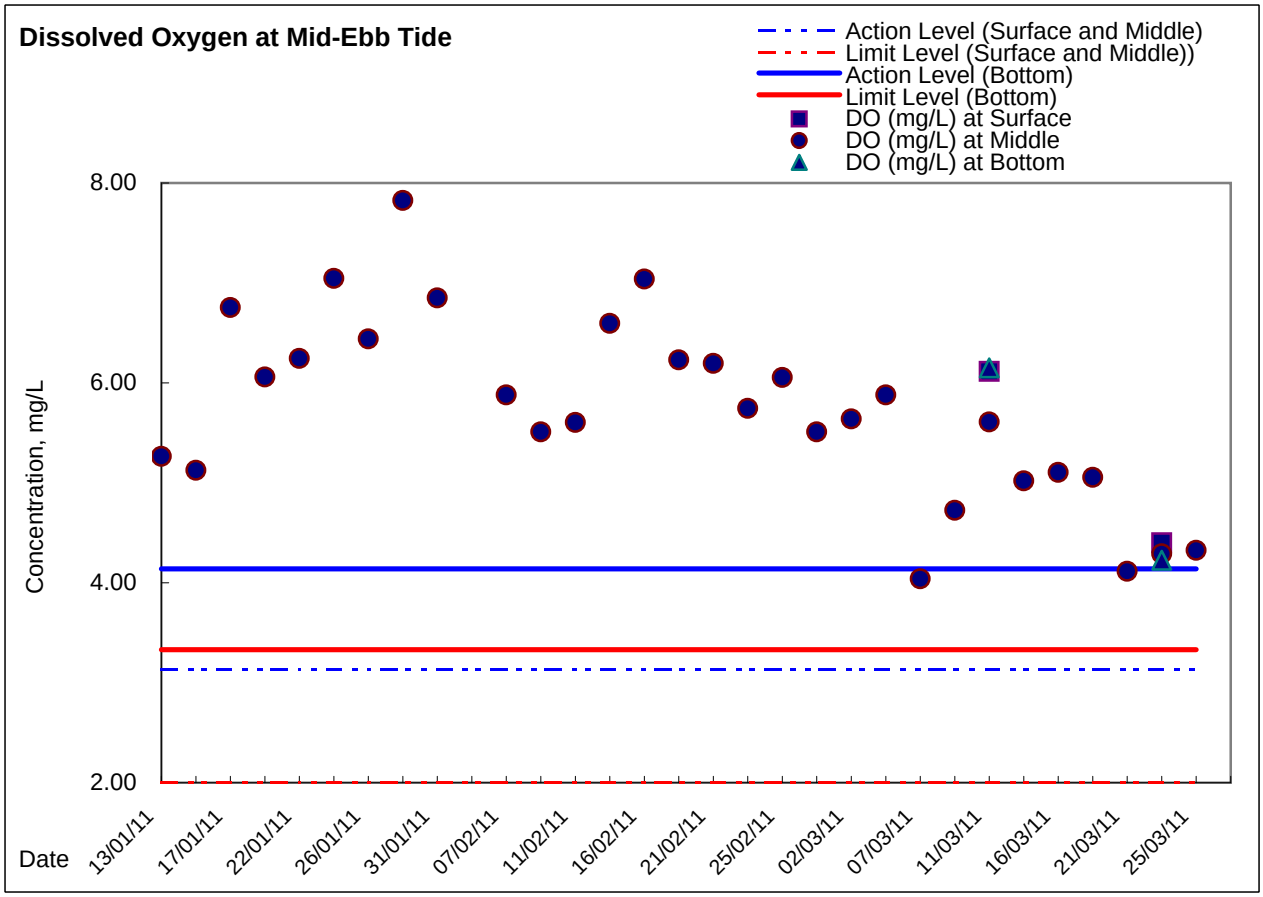
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
28/2/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:47		Middle	1.5	19.45	19.45	19.5	8.17	8.17	8.2	30.06	30.06	30.1	82.3	78.6	80.5	6.32	6.03	6.18
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:18		Middle	1.5	15.50	15.50	15.5	8.25	8.25	8.3	30.40	30.40	30.4	83.8	86.8	85.3	6.94	7.19	7.07
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:15		Middle	1.5	16.50	16.50	16.5	8.03	8.03	8.0	31.37	31.37	31.4	78.1	77.6	77.9	6.29	6.24	6.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:28		Middle	1.5	16.90	16.90	16.9	8.02	8.01	8.0	31.42	31.42	31.4	76.4	76.3	76.4	6.12	6.11	6.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:43		Middle	1.5	16.70	16.70	16.7	7.93	7.93	7.9	31.73	31.73	31.7	74.5	74.0	74.3	5.98	5.94	5.96
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2011	0:00	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:27		Middle	1.5	16.70	16.70	16.7	7.88	7.88	7.9	31.71	31.71	31.7	73.1	73.0	73.1	5.85	5.84	5.85
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2011	0:00	Sunny	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:02		Middle	1.5	17.40	17.40	17.4	7.97	7.97	8.0	31.84	31.85	31.8	65.9	63.8	64.9	5.21	5.05	5.13
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:03		Middle	1.5	17.30	17.30	17.3	7.92	7.92	7.9	32.31	32.31	32.3	71.5	69.6	70.6	5.65	5.55	5.60
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:36		Middle	1.5	17.70	17.70	17.7	8.00	8.00	8.0	32.77	32.77	32.8	71.8	72.5	72.2	5.61	5.67	5.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:47		Middle	1.5	18.20	18.20	18.2	7.86	7.86	7.9	32.67	32.67	32.7	66.2	66.1	66.2	5.07	5.05	5.06
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2011	11:59	Cloudy	Surface	1.0	18.30	18.30	18.3	7.81	7.81	7.8	32.59	32.59	32.6	58.4	58.5	58.5	4.52	4.53	4.53
	12:01		Middle	2.0	18.40	18.40	18.4	7.87	7.87	7.9	32.54	32.54	32.5	57.2	57.1	57.2	4.42	4.41	4.42
	12:03		Bottom	3.0	18.40	18.40	18.4	7.89	7.89	7.9	32.43	32.43	32.4	59.3	59.4	59.4	4.72	4.74	4.73
25/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:40		Middle	1.5	18.30	18.30	18.3	7.81	7.81	7.8	32.71	32.71	32.7	50.1	49.9	50.0	3.87	3.86	3.87
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

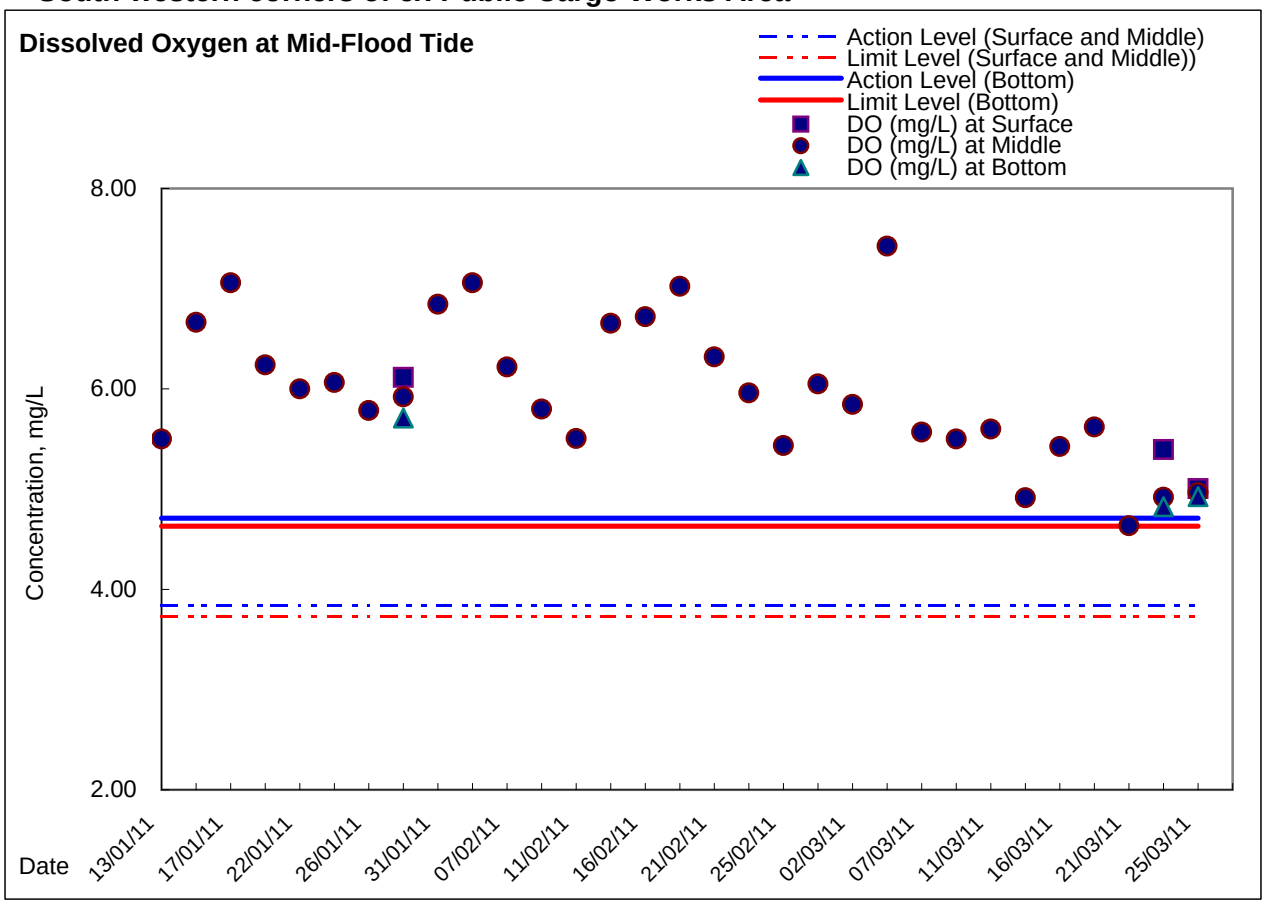
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
28/2/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:52		Middle	1.5	19.55	19.55	19.6	8.16	8.16	8.2	30.05	30.05	30.1	79.6	72.7	76.2	6.11	6.59	6.35
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:30		Middle	1.5	15.85	15.85	15.9	8.20	8.20	8.2	30.21	30.21	30.2	78.9	82.1	80.5	6.53	6.70	6.62
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:10		Middle	1.0	16.70	16.70	16.7	8.09	8.09	8.1	31.43	31.43	31.4	79.2	78.5	78.9	6.37	6.31	6.34
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:25		Middle	1.0	17.10	17.10	17.1	8.04	8.03	8.0	31.39	31.39	31.4	75.4	75.3	75.4	6.02	6.01	6.02
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:38		Middle	1.0	16.60	16.60	16.6	7.83	7.83	7.8	31.78	31.78	31.8	77.2	76.9	77.1	6.21	6.18	6.20
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/2011	0:00	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:13		Middle	1.0	16.80	16.80	16.8	8.08	8.08	8.1	31.79	31.79	31.8	72.1	71.0	71.6	5.77	5.69	5.73
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/3/2011	0:00	Sunny	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:47		Middle	1.5	17.70	17.70	17.7	7.82	7.82	7.8	31.78	31.78	31.8	62.3	61.6	62.0	4.97	4.85	4.91
	0:00		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:11		Middle	1.0	17.30	17.30	17.3	7.92	7.92	7.9	32.24	32.24	32.2	68.2	67.1	67.7	5.39	5.27	5.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:30		Middle	1.5	17.60	17.60	17.6	7.96	7.96	8.0	32.66	32.66	32.7	70.1	69.7	69.9	5.51	5.47	5.49
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/3/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:40		Middle	1.5	18.30	18.30	18.3	8.03	8.03	8.0	32.66	32.66	32.7	70.5	70.7	70.6	5.44	5.45	5.45
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:55		Middle	1.5	18.20	18.20	18.2	7.91	7.91	7.9	32.51	32.51	32.5	64.7	64.5	64.6	5.02	5.00	5.01
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/3/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:33		Middle	1.0	18.50	18.50	18.5	8.01	8.01	8.0	32.70	32.70	32.7	56.2	56.0	56.1	4.33	4.31	4.32
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

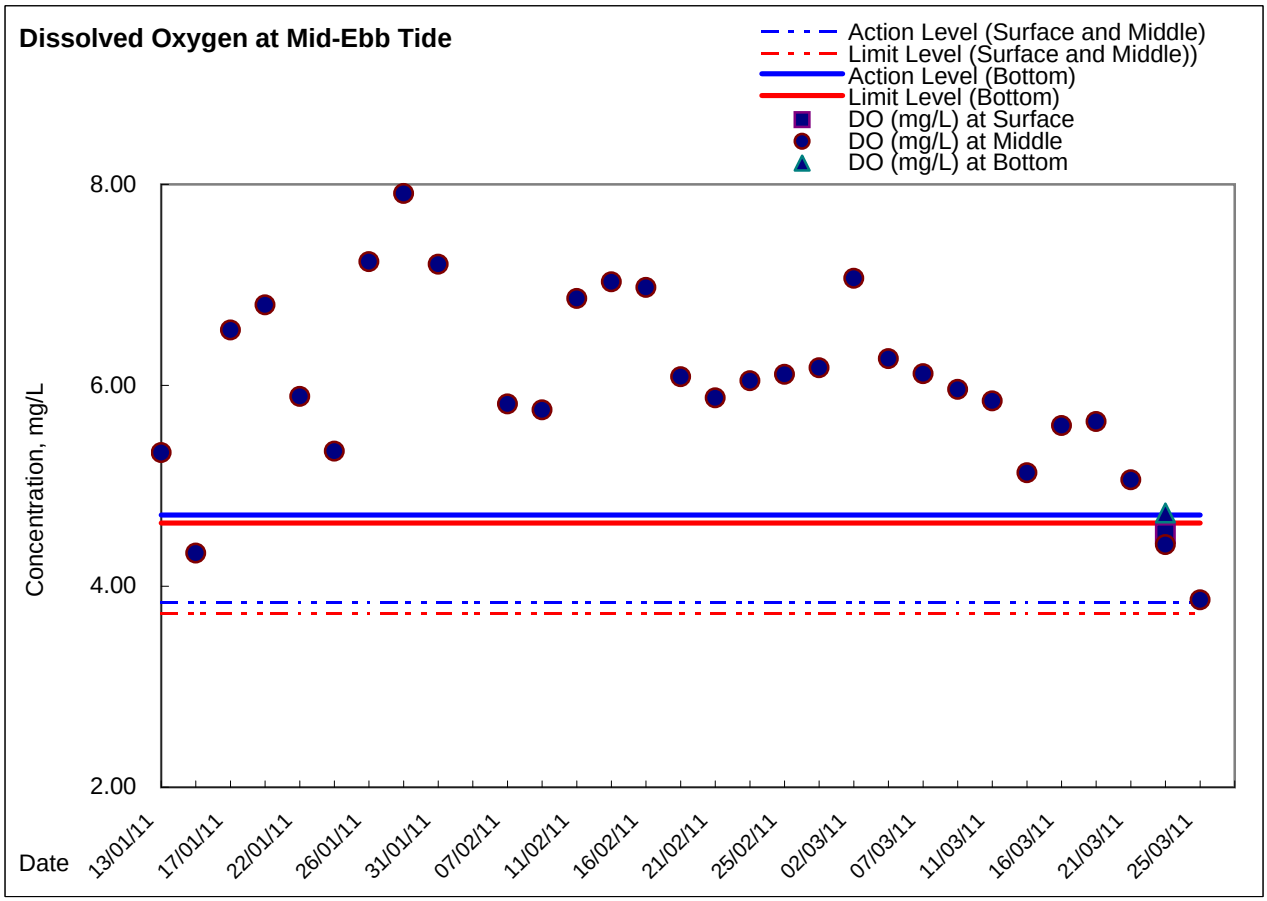
Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel



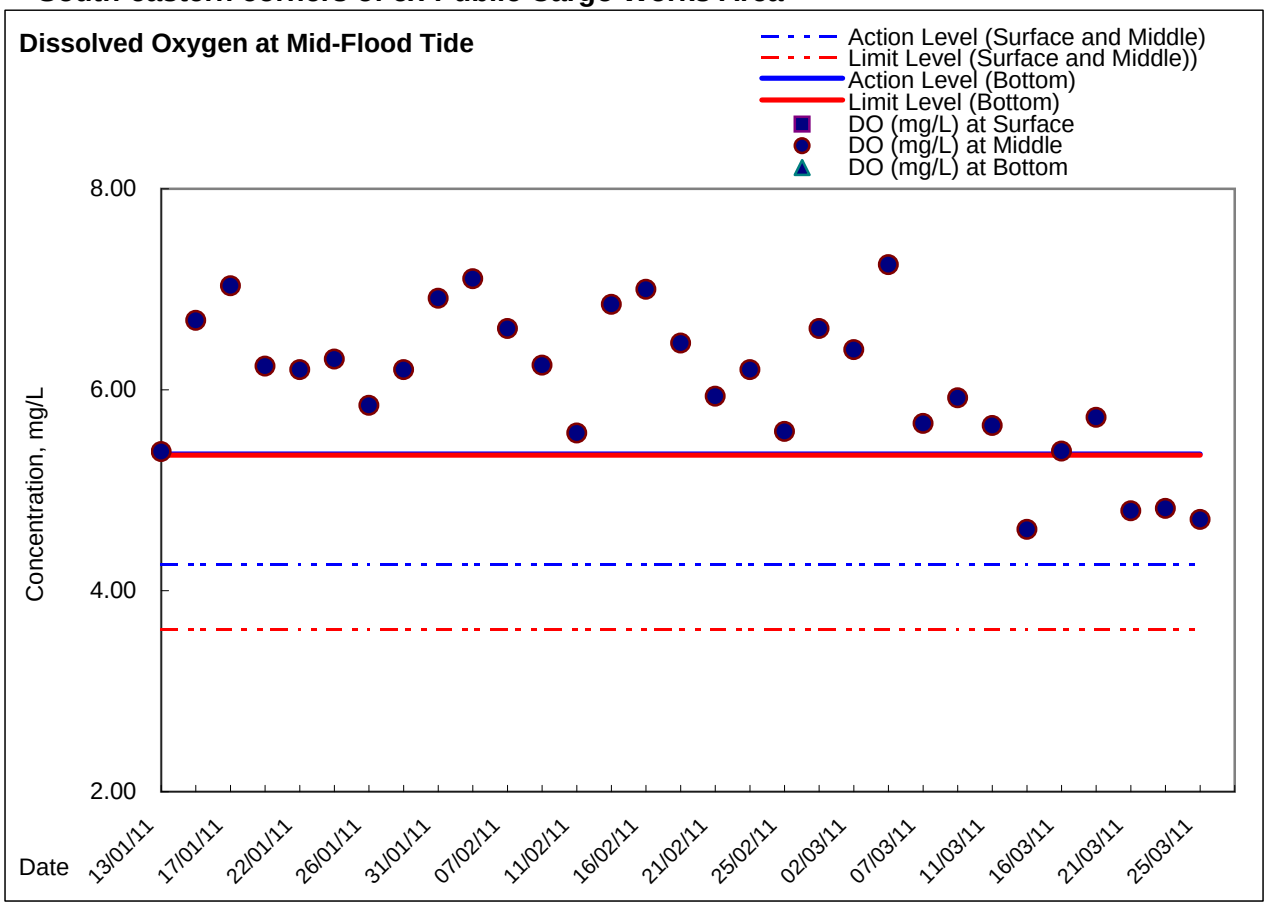


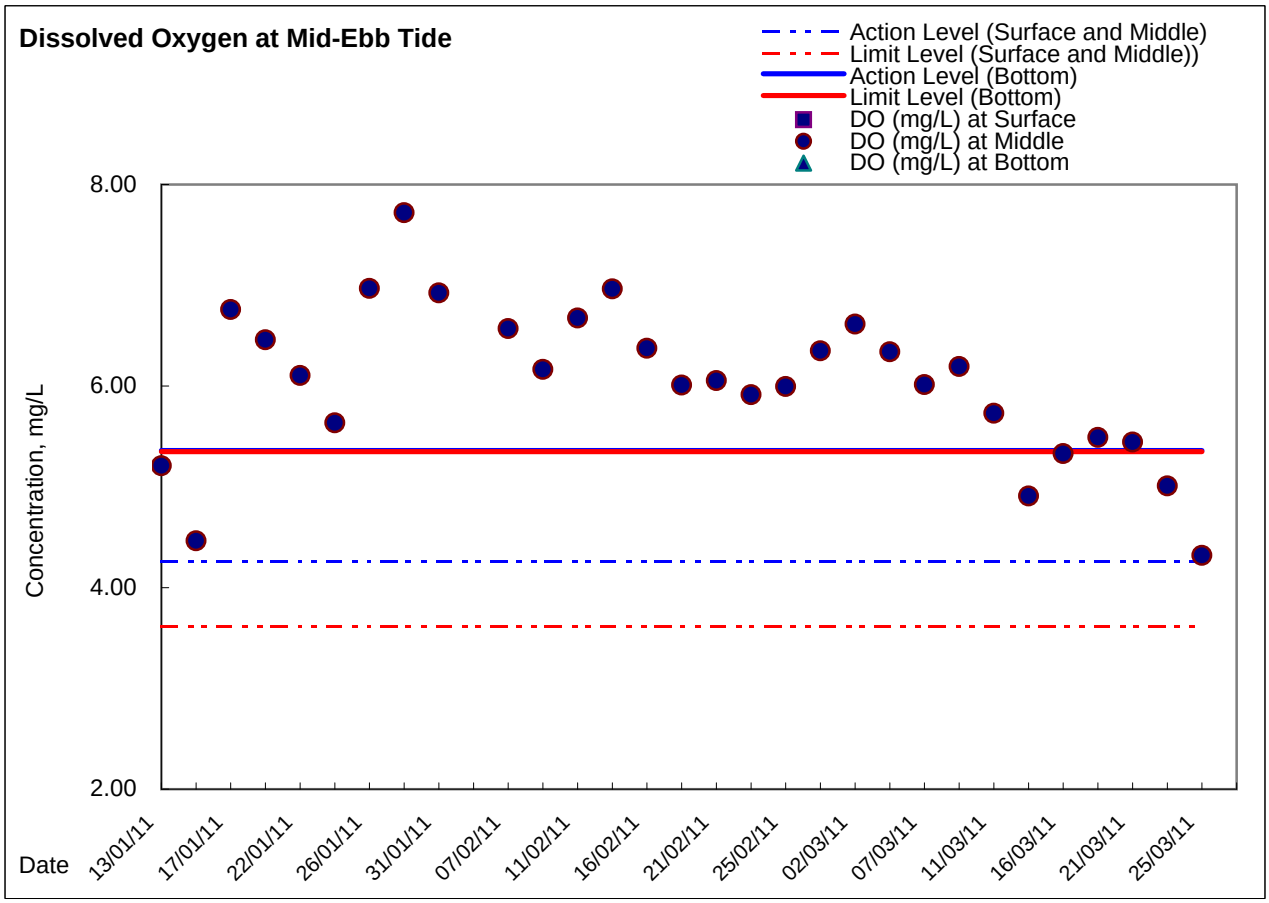
Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area





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





Appendix 6.1

Event Action Plans

Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level being exceeded	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. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	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. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified)

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. 4. Identify source and investigate the cause of exceedance; 5. 5. Carry out analysis of Contractor's working procedures; 6. 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. (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. (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. 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. (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 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. (The above actions should be taken within 2 working days after the exceedance is identified)

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; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. 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 ET 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; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. 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 3working days; Implement the agreed mitigation measures; As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities. (The above actions should be taken within 1 working day after the exceedance is identified)

Appendix 6.2

Summary for Notification of Exceedance

Ref no.	Date	Tidal	Location	Parameters (Avg.)	Measured	Action Level	Limit Level	Follow-up	
X_W200	16-Mar-11	Mid-flood	WSD21	DO (mg/L)	7.36	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	5.88	8.04	9.49	Action taken / to be taken:	Checked and confirmed that the dredging rate at Submarine Sewage Pipeline (631m^3) was complied with FEP condition; Comparing with the monitoring stations closer to the site, the SS levels at C5e and C5w are 7.5mg/L and 8.0mg/L which are below Action Level.
				Suspended Solid	**15.00**	13.00	14.43	Remarks / Other Obs:	No consecutive exceedance was recorded in the next monitoring. Since the silt screen was in proper condition during the monitoring, it is concluded as not related Project.
X_W201	18-Mar-11	Mid-flood	WSD19	DO (mg/L)	6.32	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	6.67	8.04	9.49	Action taken / to be taken:	According to the information reported by Contractor HK/2009/01, rock armour removal in the HKCEC Water Channel area was the only marine work carried out. No adverse water quality impact was expected causing from this work; Comparing with the monitoring stations closer to the site, the SS levels at all stations near HKCEC water channel are below Action Level.
				Suspended Solid	**15.00**	13.00	14.43	Remarks / Other Obs:	No consecutive exceedance was recorded in the next monitoring. Since the silt screen was in proper condition during the monitoring, it is concluded as not related Project.
X_W202	21-Mar-11	Mid-flood	WSD7	DO (mg/L)	5.95	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	**8.37**	8.04	9.49	Action taken / to be taken:	According to the information reported by Contractor HK/2009/01, no particular marine works was conducted.; Comparing with the monitoring stations closer to the site, the SS levels at all stations near HKCEC channel are below Action Level.
				Suspended Solid	9.50	13.00	14.43	Remarks / Other Obs:	In view that no particular marine works was conducted and the station is far away from the Project, it is concluded as not related Project.
X_W203	21-Mar-11	Mid-flood	WSD20	DO (mg/L)	6.50	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	**9.51**	8.04	9.49	Action taken / to be taken:	According to the information reported by Contractor HK/2009/01, no particular marine works was conducted.; Comparing with the monitoring stations closer to the site, the SS levels at all stations near HKCEC channel are below Action Level.
				Suspended Solid	**14.00**	13.00	14.43	Remarks / Other Obs:	In view that no particular marine works was conducted and the station is far away from the Project, it is concluded as not related Project.
X_W204	23-Mar-11	Mid-ebb	WSD19	DO (mg/L)	5.95	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	**8.16**	8.04	9.49	Action taken / to be taken:	According to the information reported by Contractor HK/2009/01, seawall blocks deployment on the North side of Pipe Pile Wall P1 was the only marine work carried out. No adverse water quality impact was expected causing from this work; Comparing with the monitoring stations closer to the site, the turbidity levels at all stations near HKCEC channel are below Action Level.
				Suspended Solid	**13.50**	13.00	14.43	Remarks / Other Obs:	In view that only seawall block deployment was conducted and the station is far away from the Project, it is concluded as not related Project.

Ref no.	Date	Tidal	Location	Parameters (Avg.)	Measured	Action Level	Limit Level	Follow-up	
X_W205	25-Mar-11	Mid-flood	WSD19	DO (mg/L)	5.96	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	5.36	8.04	9.49	Action taken / to be taken:	According to the information reported by Contractor HK/2009/01, seawall block installation work and laying geotextile for reclamation works in HKCEC1 area were carried out. No adverse water quality impact was expected causing from this work; Comparing with the monitoring stations closer to the site, the SS levels at all stations near HKCEC channel are below Action Level.
				Suspended Solid	**15.50**	13.00	14.43	Remarks / Other Obs:	In view that only seawall block installation and laying geotextile at HKCEC1 was conducted and the station is far away from the Project, it is concluded as not related Project.
X_W206	25-Mar-11	Mid-ebb	WSD19	DO (mg/L)	5.48	3.66	3.28	Possible reason:	Natural variation or changes in ambient conditions
				Turbidity	7.59	8.04	9.49	Action taken / to be taken:	According to the information reported by Contractor HK/2009/01, seawall block installation work and laying geotextile for reclamation works in HKCEC1 area were carried out. No adverse water quality impact was expected causing from this work; Comparing with the monitoring stations closer to the site, the SS levels at all stations near HKCEC channel are below Action Level.
				Suspended Solid	**13.50**	13.00	14.43	Remarks / Other Obs:	In view that only seawall block installation and laying geotextile at HKCEC1 was conducted and the station is far away from the Project, it is concluded as not related Project.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C221	28-Feb-11	Mid-flood	C3	DO (mg/L)	6.43	3.36	2.73	Possible reason:	Accumulation of particles from outfalls near monitoring station or the variation of the ambient change
				Turbidity (NTU)	**10.00**	9.1	10.25	Action taken / to be taken:	Reviewed the observation during the monitoring and the trend of monitoring results; The daily and hourly dredging rate were checked and complied with the requirements in the FEP.
				SS (mg/L)	**19.50**	15.00	22.13	Remarks / Other Obs:	The silt screen and floating type of silt curtain were properly installed in front of the intake and surround the dredging area during monitoring. No further exceedance was recorded in the next consecutive monitoring. It was considered not related to the Project works. In view of the current dredging area located closely to the monitoring stations C3, the Contractor was reminded to review all existing water mitigation measures and enhance the further measures so as to ensure the intake could be adequately protected against potential impact.
X_10C222	2-Mar-11	Mid-flood	C8	DO (mg/L)	6.30	3.36	2.73	Possible reason:	Accumulation of particles from outfalls near monitoring station or the variation of the ambient change
				Turbidity (NTU)	**12.88**	9.1	10.25	Action taken / to be taken:	Reviewed the trend of monitoring results and no exceedance in next consecutive monitoring; Checked contractor's site record; According to the reporting of marine activities from contractor, only filling works and deployment of concrete blocks were undertaken during monitoring.
				SS (mg/L)	**16.00**	15.00	22.13	Remarks / Other Obs:	In view of the observed proper silt curtain condition for the filling works and no dredging work conducted adjacent to the City Garden during the monitoring, the exceedances were considered as not related to Project works.
X_10C223	11-Mar-11 17:15	Mid-ebb	C8	DO (mg/L)	5.83	3.36	2.73	Possible reason:	Accumulation of particles from outfalls near monitoring station
				Turbidity (NTU)	**17.65**	9.1	10.25	Action taken / to be taken:	Water discharge and floating oil & grease were observed during the monitoring; Reviewed the trend of monitoring results and no exceedance in next consecutive monitoring
				SS (mg/L)	13.00	15.00	22.13	Remarks / Other Obs:	In view of the observed proper silt curtain in place for the dredging and filling works during the monitoring, the exceedances were considered not related to the Project works.
X_10C224	16-Mar-11	Mid-flood	C9	DO (mg/L)	6.30	3.36	2.73	Possible reason:	Accumulation of particles from outfalls near monitoring station
				Turbidity (NTU)	8.02	9.1	10.25	Action taken / to be taken:	Reviewed the observation during the monitoring and the trend of monitoring results; The station C8 is the closest station to the dredging work area, which has SS level (8.5mg/L) below the Action Level. The daily dredging rate is approx. 106m3 which is complied with the FEP's condition.
				SS (mg/L)	**17.00**	15.00	22.13	Remarks / Other Obs:	No consecutive exceedance was recorded in the next monitoring. Since the silt screen was in proper condition during the monitoring, it is concluded as not related Project.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C225	18-Mar-11	Mid-flood	C8	DO (mg/L)	6.81	3.36	2.73	Possible reason:	Accumulation of particles discharged from outfalls near monitoring station under rainy during the monitoring, The Observatory recorded approximate 5mm daily rainfall in the area of the station.
	18:25			Turbidity (NTU)	**9.53**	9.1	10.25	Action taken / to be taken:	Checked the contractor marine work activities; the daily dredging rate was 137m3 which is complied with the condition of FEP. Turbidity value is within the tolerance of baseline range at C8.
				SS (mg/L)	13.00	15.00	22.13	Remarks / Other Obs:	In view that the silt curtain for the dredging was properly in place during the monitoring, the exceedances were considered not related to the Project works.
X_10C226	18-Mar-11	Mid-ebb	C8	DO (mg/L)	6.43	3.36	2.73	Possible reason:	Accumulation of particles discharged from outfalls near monitoring station under rainy during the monitoring, The Observatory recorded approximate 5mm daily rainfall in the area of the station.
	11:19			Turbidity (NTU)	**12.25**	9.1	10.25	Action taken / to be taken:	Checked the contractor marine work activities; the daily dredging rate was 137m3 which is complied with the condition of FEP. SS value is within the tolerance of baseline range at C8.
				SS (mg/L)	**15.50**	15.00	22.13	Remarks / Other Obs:	In view that the silt curtain for the dredging was properly in place during the monitoring, the exceedances were considered not related to the Project works.
X_10C227	21-Mar-11	Mid-ebb	C8	DO (mg/L)	5.80	3.36	2.73	Possible reason:	Accumulation of particles discharged from outfalls near monitoring station
				Turbidity (NTU)	**15.95**	9.1	10.25	Action taken / to be taken:	Checked the contractor marine work activities; the daily dredging rate was 225m3 which is complied with the condition of FEP(6,000m3 per day). SS value is within the tolerance of baseline range at C8. Water quality(Tur: 7.88NTU, SS:12.0mg/L) resumed below Action Level in the next consecutive monitoring.
				SS (mg/L)	**20.50**	15.00	22.13	Remarks / Other Obs:	No consecutive exceedance was recorded in the next monitoring. In view that the silt curtain for the dredging was properly in place during the monitoring, the exceedances were considered not related to the Project works.
X_10C228	21-Mar-11	Mid-ebb	C9	DO (mg/L)	5.97	3.36	2.73	Possible reason:	Accumulation of particles from outfalls near monitoring station
				Turbidity (NTU)	**11.43**	9.1	10.25	Action taken / to be taken:	Checked the contractor marine work activities; the daily dredging rate was 225m3 which is complied with the condition of FEP(6,000m3 per day). SS value is within the tolerance of baseline range at C9. Water quality(Tur: 7.01NTU, SS:11.0mg/L) resumed below Action Level in the next consecutive monitoring.
				SS (mg/L)	**18.50**	15.00	22.13	Remarks / Other Obs:	No consecutive exceedance was recorded in the next monitoring. Since the silt screen was in proper condition during the monitoring, it is concluded as not related Project.

Action Level - Value highlight in blue colour
Limit Level - Value highlight in red colour

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).	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).	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, Polic 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	Closed

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					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.	
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. Peter Nip received by ICC (CC Case)	Sai Wan Ho	Visual concern around the seaside silt screen outside the WSD freshwater intake pump at Sai Wan Ho (Monitoring station ref no.. WSD15)	1) Contractor for HY/2009/11has been regular checked of condition and removal of trapped rubbish before the dismantling of the floating silt screen to be replaced by wall mount silt screen. 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	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	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	City Garden, North	Two barges were generating noise at 22:00 on 6 December	1) ET confirmed the following information with resident site	Closed

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		resident of 27/F, Block 10, City Garden by ICC (ICC case: 1-266039336)	Point	noise at 22:00 on 6 December 2010 in which the noise from 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; 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.	staff on the complaint: • It was referred to the filling operation at North Point Reclamation of Central Wan Chai Bypass site area instead of part of Wanchai Development Phase II; • 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 precast 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. 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; 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; 4) The absence of the lighting shields at flood light results in visual glare to the complainant at night-time. 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; 6) No further complaint was received after implementation of proposed measures	

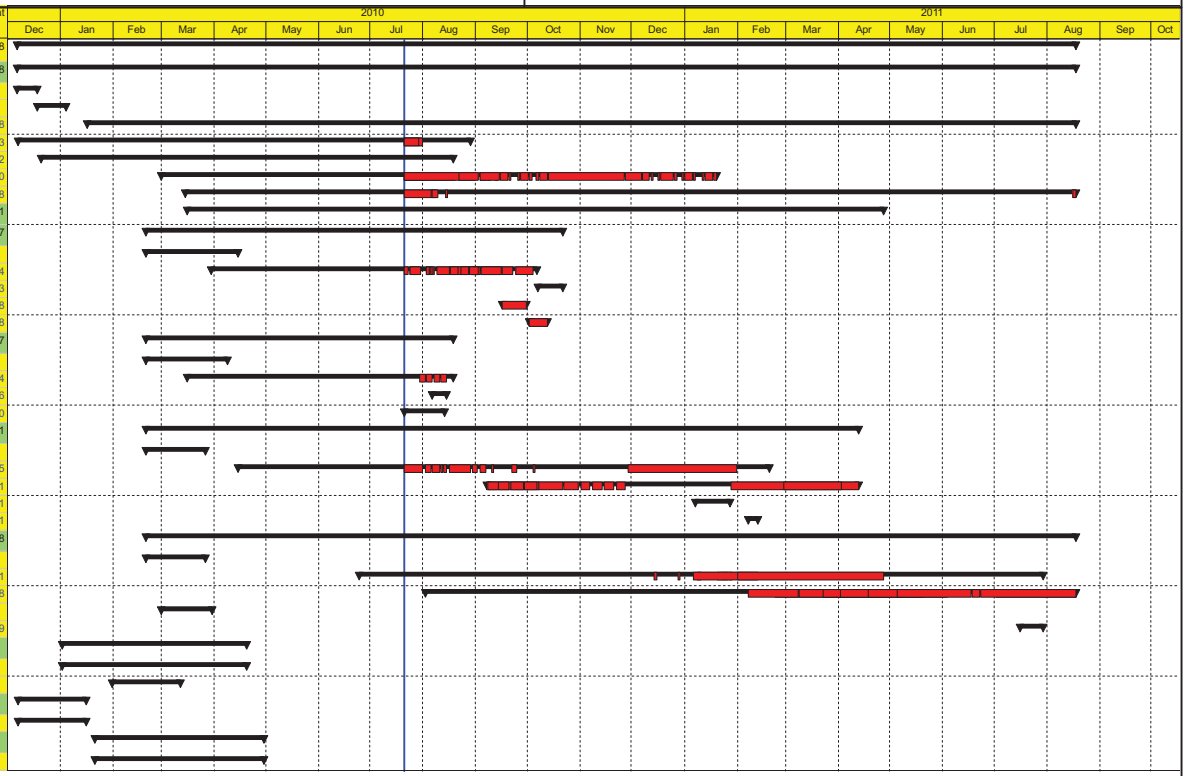
Appendix 10.1

Construction Programme of Individual Contracts

Contract no. HY/2009/11

Detailed Works Programme ver.2 updated 21Jul2010 | Executive Summary | 27-Jul-10 13:59

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float
	Detailed Works Programme ver.2 updated 21Ju	619	393	07-Dec-09 A	17-Aug-11	-8
	PRELIMINARIES	619	393	07-Dec-09 A	17-Aug-11	-8
	PROJECT COMMENCEMENT	34	0	07-Dec-09 A	18-Dec-09 A	
	POSSESSION OF SITE	17	0	18-Dec-09 A	04-Jan-10 A	
	COMPLETION SECTION OF WORKS	578	368	16-Jan-10 A	17-Aug-11	-8
	GENERAL SUBMISSION	265	39	07-Dec-09 A	28-Aug-10	3
	TEMPORARY AND CONTRACTOR DESIGN	230	29	21-Dec-09 A	18-Aug-10	72
	PRE-CAST CAISSON SEAWALL	316	183	01-Mar-10 A	19-Jan-11	0
	PRE-CAST SEAWALL BLOCK	535	393	15-Mar-10 A	17-Aug-11	-8
	Overall Construction	408	281	16-Mar-10 A	27-Apr-11	61
	SECTION 1 OF WORKS (290 DAYS)	214	93	20-Feb-10 A	21-Oct-10	127
	GEOTECHNICAL INSTRUMENTATION AND MONITORING \	14	0	20-Feb-10 A	15-Apr-10 A	
	SEAWALLS AND RECLAMATION WORKS	169	78	30-Mar-10 A	06-Oct-10	44
	DRAINAGE WORKS	12	12	07-Oct-10	21-Oct-10	103
	LANDING STEPS	12	12	16-Sep-10	30-Sep-10	-8
	FENDERS AND RUBBER STEPS	9	9	02-Oct-10	12-Oct-10	-8
	SECTION 1A OF WORKS (230 DAYS)	156	29	20-Feb-10 A	18-Aug-10	177
	GEOTECHNICAL INSTRUMENTATION AND MONITORING \	12	0	20-Feb-10 A	09-Apr-10 A	
	SEAWALLS AND RECLAMATION WORKS	156	20	16-Mar-10 A	18-Aug-10	4
	DRAINAGE WORKS	8	8	06-Aug-10	14-Aug-10	146
	COPINGS	21	21	21-Jul-10	13-Aug-10	10
	SECTION 2 OF WORKS (470 DAYS)	387	266	20-Feb-10 A	12-Apr-11	-11
	GEOTECHNICAL INSTRUMENTATION AND MONITORING \	22	0	20-Feb-10 A	27-Mar-10 A	
	SEAWALLS AND RECLAMATION WORKS	249	175	15-Apr-10 A	19-Feb-11	35
	DRAINAGE WORKS	218	218	07-Sep-10	12-Apr-11	-11
	LANDING STEPS	18	18	07-Jan-11	27-Jan-11	41
	FENDERS AND RUBBER STEPS	6	6	07-Feb-11	12-Feb-11	41
	SECTION 3 OF WORKS (600 DAYS)	514	393	20-Feb-10 A	17-Aug-11	-8
	GEOTECHNICAL INSTRUMENTATION AND MONITORING \	42	0	20-Feb-10 A	27-Mar-10 A	
	SEAWALLS AND RECLAMATION WORKS	374	374	25-Jun-10 A	29-Jul-11	11
	DRAINAGE WORKS	381	381	02-Aug-10	17-Aug-11	-8
	COMMUNITY LIAISON CENTRE	90	0	01-Mar-10 A	31-Mar-10 A	
	PERMANENT RELOCATION OF NAVIGATION LIGHT	12	12	16-Jul-11	29-Jul-11	9
	SECTION 4 OF WORKS (110 DAYS)	90	0	02-Jan-10 A	20-Apr-10 A	
	WORKS IN PORTION NPR4	74	0	02-Jan-10 A	20-Apr-10 A	
	WORKS IN PORTION NPR4A AND NPR4B	34	0	31-Jan-10 A	12-Mar-10 A	
	SECTION 5 OF WORKS (30 DAYS)	23	0	07-Dec-09 A	16-Jan-10 A	
	WORKS IN PORTION NPR5A	23	0	07-Dec-09 A	16-Jan-10 A	
	SECTION 6 OF WORKS (120 DAYS)	112	0	21-Jan-10 A	30-Apr-10 A	
	WORKS IN PORTIONS NPR5B,NPR5C,NPR5D AND NPR5E	112	0	21-Jan-10 A	30-Apr-10 A	



Actual Work | Critical Remaining Work | Summary

Remaining Work | Milestone

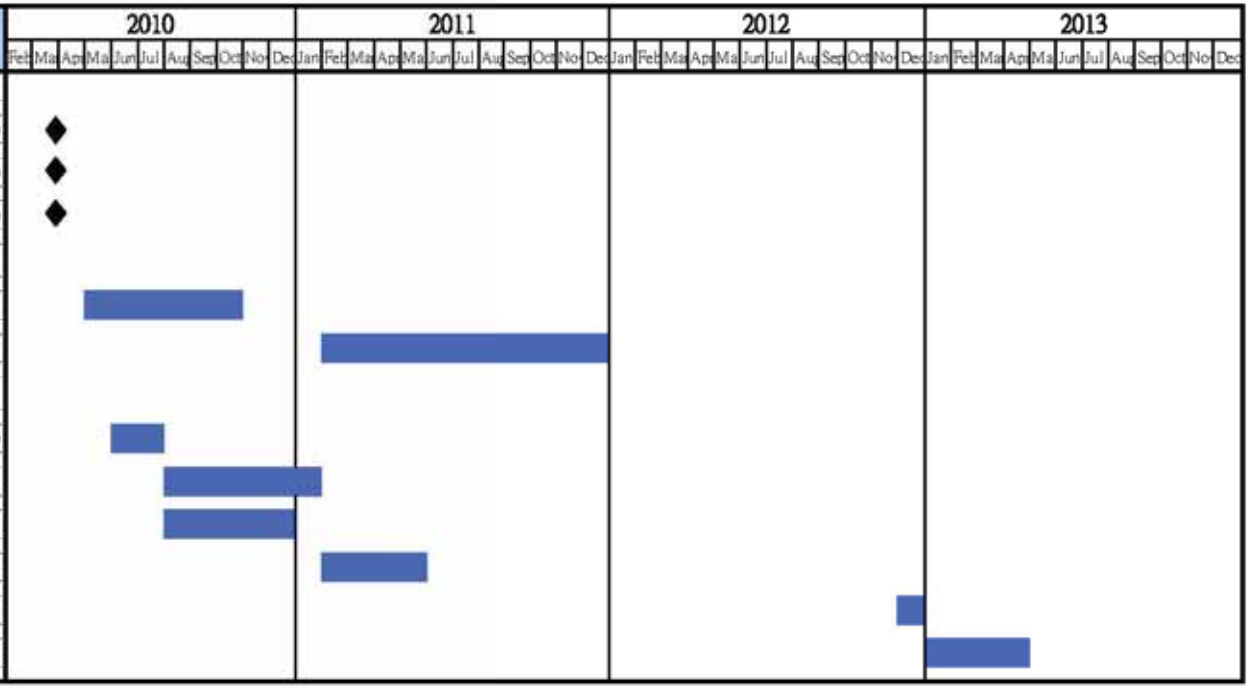
TASK filter: All Activities

Contract No. HK/2009/01

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

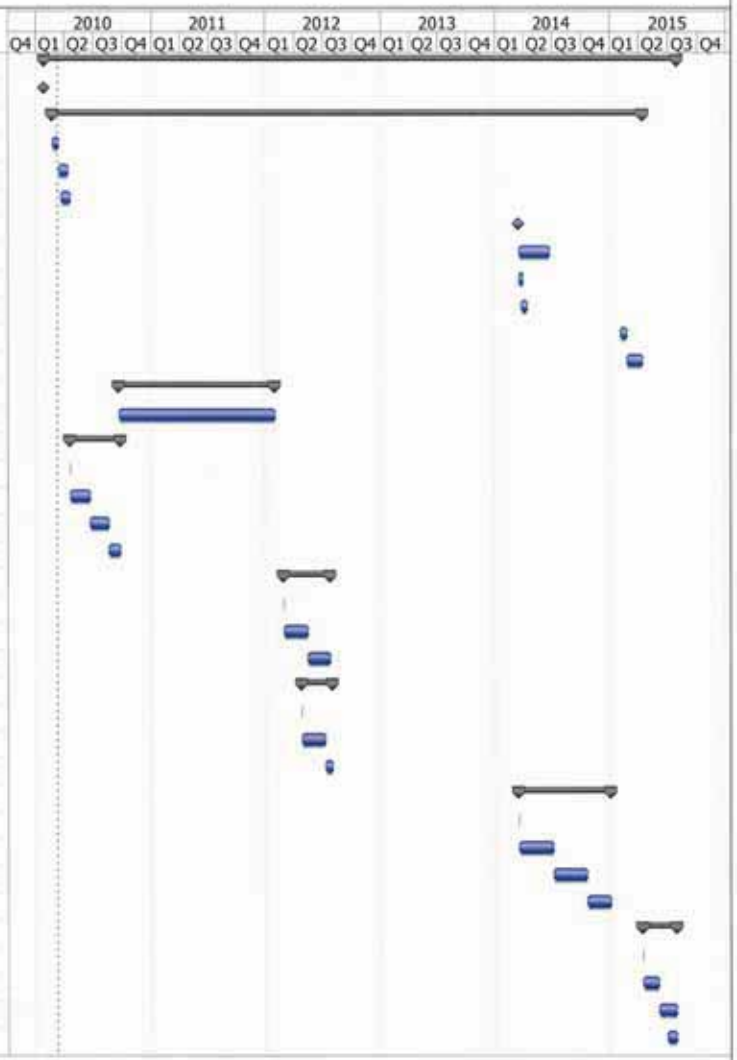
Working Programme for Marine Works (Dredging and Backfilling)

ACTIVITY	START	FINISH
Submissions before Works Commencement		
Submit silt curtain deployment plan	31/3/10	31/3/10
Submit silt screen deployment plan	31/3/10	31/3/10
Submit measures to mitigate noise impact	31/3/10	31/3/10
Cross Harbour Watermains from WCN to TST (DP6)		
Trench dredging for marine watermains installation	29/4/10	28/10/10
Backfilling for watermain	28/1/11	14/12/11
Reclamation Works at HKCEC Water Channel (DP3)		
Dredging at HKCEC Water Channel (Western Part)	1/6/10	1/8/10
Backfilling to +3.5mPD (Western Part)	17/8/10	6/2/11
Dredging at HKCEC Water Channel (Middle Part)	2/8/10	6/1/11
Backfilling to +3.5mPD (Middle Part)	21/2/11	1/6/11
Dredging at HKCEC Water Channel (Eastern Part)	1/12/12	31/12/12
Backfilling to +3.5mPD (Eastern Part)	16/1/13	30/4/13



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

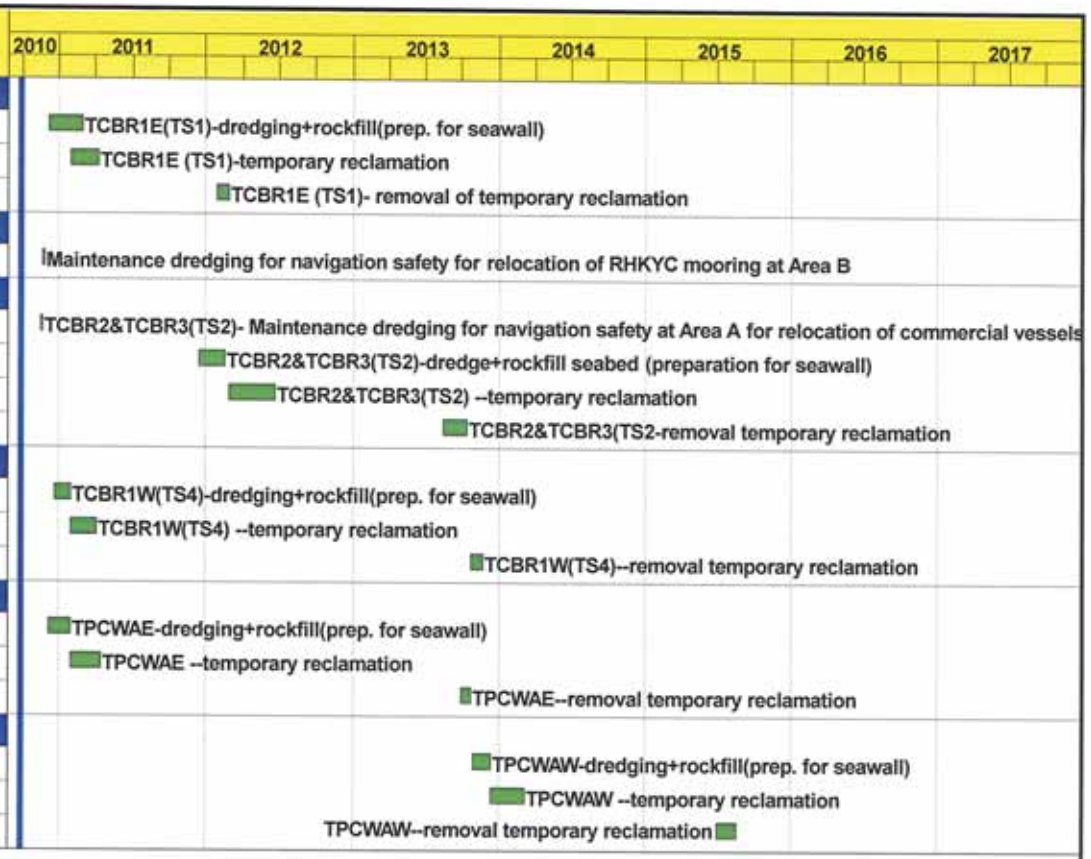
ID	Task Name	Duration	Start
1	**HK/2009/02-Marine & Reclamation Works**	**2008 d**	**Thu 28/1/10**
2	Contract Commencement	0 d	Thu 28/1/10
3	**General**	**1879 d**	**Mon 22/2/10**
4	Submission & obtain approval for marine GI	21 d	Mon 22/2/10
5	Stage 1 Marine GI for reclamation	30 d	Mon 15/3/10
6	Engineer's 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	**Phasee 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 Programm
Date: Tue 9/3/10

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

Activity ID	Cal ID	Activity Description	Orig Dur	Early Start	Early Finish
TCBR1E (TS1 Area)					
105	1	TCBR1E(TS1)-dredging+rockfill(prep. 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(prep. 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(prep. 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(prep. for seawall)	47	28OCT13*	13DEC13
150	1	TPCWAW --temporary reclamation	83	14DEC13	06MAR14
175	1	TPCWAW--removal temporary reclamation	50	02JUL15*	20AUG15



Early Bar
Progress Bar
Critical Activity

?Primavera Systems, Inc.

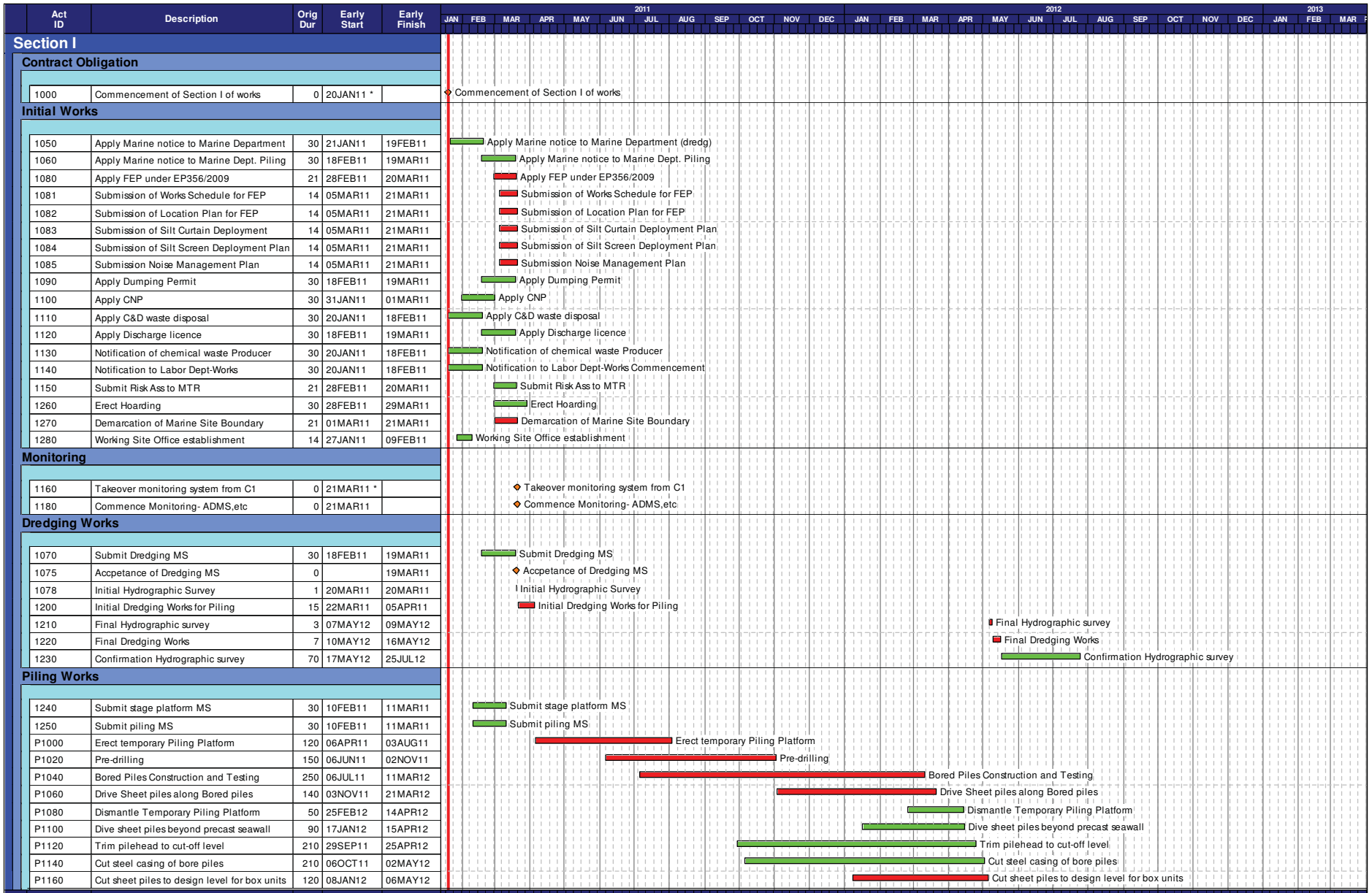
EP02

CHINA STATE CONSTRUCTION ENGG LTD

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

Prepared based on IWP Rev. 0

Date Prepared: 28 Oct 2010



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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 Bypass 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