



**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 ENVIRONMENTAL PERMIT NOS. FEP-01/356/2009,  
FEP-02/356/2009, FEP-03/356/2009 AND FEP-04/356/2009**

**MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT**

**- JANUARY 2011 -**

**CLIENTS:**

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**and**

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## EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – January 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 and FEP-04/356/2009. This report presents the environmental monitoring findings and information recorded during the period 28<sup>th</sup> December 2010 to 27<sup>th</sup> January 2011. The cut-off date of reporting is at 27<sup>th</sup> 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;
  - Floating out of caisson seawall;
  - Construction & installation of seawall block;
  - Construction of coping;
  - Delivery of caisson seawall,
  - Drainage construction works and
  - Installation of caisson Seawall.
- iii. During this reporting period, the major work activities for Contract no. HK/2009/01 included:
  - Dredging works for the open cut trench of cross harbour water mains;
  - Casting of concrete surround to submarine pipelines;
  - Concrete surrounded submarine pipeline were transported to fabrication yard for field jointing.;
  - Routine maintenance and clearance works for silt screens;
  - Trial pits for determination of connection location for HKAPA, Great Eagle Centre / Harbour Centre at Wan Chai areas;
  - Preparation works for temporary diversion of Convention Avenue discharge mains Due to construction of SCL works;
  - Erection of temporary staging platform was commenced;
  - Installation of pipe pile PQ4 down to -40mPD was completed;
  - The fabrication of extra 3 nos. of mud barges; and
  - Dredging at HKCEC water channel.
- iv. During this reporting period, the major work activities for Contract no. HK/2009/02 included:
  - Site clearance;
  - Dredging in West temporary seawall construction in Area WCR1;
  - Rock Filling and Reclamation in Area WCR1;



- Permanent seawall construction;
  - Drainage diversion of existing 1800mm dia. pipe for WCR1 reclamation;
  - Construction of new public toilet and helipad terminal building at Expo Drive East;
  - Seawall construction near Expo Drive East;
  - Tree transplanting;
  - Piling at new Wan Chai Ferry Pier;
  - Operation of Public Fill Sorting Facility at TKO 137;
  - Installation of building services for public toilet;
  - Construction of precast units of Box Culvert N1, Salt Water Intake Culvert, Drain FRP-N and Cooling Water Discharge Pipe in Area WCR1;
  - Installation of Cooling Main at China Resources Building;
  - Driven temporary sheetpiles, erect temporary shoring and excavation at China Resources Building, Great Eagle Centre/Harbour Centre;
  - Break or remove existing footpath for cooling main work at Great Eagle Centre and Harbour Centre;
  - Pile road test at WSD Salt Water Pumping Station;
  - Sheetpiles & Cantilever decking (Left Lane) at Wan Shing Street;
  - Dredging for Submarine outfall;
  - Outfall pipe installation for submarine sewage outfall; and
  - Excavation for WSD Salt Water Pumping Station
- v. During this reporting period, the major work activities for Contract no. HY/2009/15 included:
- Dredging works at TCBR1W and TPCWAW;
  - Dredging works at TPCWAE and TCBR1E for seawall;
  - Type 3 sediments disposal; and
  - Ground investigation works

#### Noise Monitoring

- vi. 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 4 and 12 January 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

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

#### Air Quality Monitoring

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

Water Quality Monitoring

- ix. 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 excepted the SS and turbidity exceedances at C8 on 30 December 2010 at mid-flood tide. The details of the exceedances can be referred to Section 5.3 and 6.3 of the report.

**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	1	0
	WSD17	0	0	0	0	0	0	0	0	0	0	0	0
	C8	0	0	0	1	0	1	0	0	0	0	0	0
	C9	0	0	0	2	1	1	0	0	0	0	0	0
HK/2009/01	WSD19	0	0	0	0	0	0	0	0	0	0	1	1
	WSD20	0	0	1	0	0	2	0	0	0	0	1	0
	WSD7	0	0	0	0	0	0	0	0	1	0	0	1
	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	0	0	0	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	1	0	0	0	0	0	0
HK/2009/02	C5e	0	0	0	1	1	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	0	0	0	0	0	0	0
HY/2009/15	C6	0	0	0	0	0	0	0	0	0	0	0	0
	C7	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>

- x. Turbidity and SS exceedances at C8 on 30 December 2010 were recorded. Due to intake owner's constraint, delay was experienced in the re-provision of modified frame-type silt screen to protect City Garden intake against potential impact arising from the dredging works and accumulation of discharge and pollutants from nearby outfall adjacent to the intake. The exceedances were confirmed related to HY/2009/11 contractor difficulties in the provision of

frame type silt screen. Contractor enhanced mitigation measures with a double layer silt curtain on 7 Jan 2011. No further exceedance was recorded after installation of double layer silt curtain. Close monitoring on contractor mitigation and the variation of water quality results will be maintained. Contractor will further liaise with the owner on the re-provision of the frame-type silt screen.

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

- xi. There were no environmental complaint was recorded in the reporting month.
- xii. An incident of split hopper barge named Shun Tat 11 (Licence no. B21623V) for the Contract no. HK/2009/01 was recorded at the location near Cross Harbour Water Mains marine work zone on 24 January 2011. The ballast tank on the port side of the split hopper barge was flooded with water. The split hopper barge was towed back to the dredging zone within a short period and immediately opened its hopper to dump the sediment back to the same dredging trench. It is suspected that the hull on the port side might be broken causing ingress of seawater into the ballast tanks. Meanwhile, the barge has been demobilized from the site and currently anchored at To Kwa Wan Typhoon Shelter. The emergency dumping was notified to EPD at 10:00a.m. on 24 January 2011. This barge will not be deployed to the site under HK/2009/01 to dispose the dredged sediment until it has been repaired and inspected by the competent surveyor. The incident will be kept in view for determining further follow up and remedial measures.

#### Site Inspections and Audit

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

#### 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;
- 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 (max.72m long);
- Dredging for the cross harbour water mains from Wan Chai side;
- Pipe line installation for the cross harbour water mains from Wan Chai side;
- Implementation of TTM scheme at Convention Avenue, Harbour Road and Expo Drive (HKCEC area);
- Trial pit excavation for connection and the subsequent installation of cooling mains, harbour main & fresh water mains at Zone A1, A5 & B1;
- Tree transplantation at Wan Chai and TST;
- Additional coring for pipe sleeve and puddle flange opening at Pump Station Nos. 1, 3, 4 & 5;
- Dredging the seabed within the water channel at HKCEC;
- Preparation work for backfilling;
- Reclamation works for tunnel construction;
- Installation of pipe pile wall P1; and
- Installation of temporary working platform

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

- Dredging work for submarine outfall pipes;
- Filling work in Area WCR1;
- Construction of public toilet and passenger terminal building;
- Demolition of existing Expo Drive Ferry Pier;
- Construction of cooling mains along Harbour Road and Great Eagle/Harbour Centre
- Drainage diversion of existing culvert "O" at small pet garden;
- Continue construction of extended connection chamber at DSD Screening Plant;
- Continue dredging, pipe welding and bagged concrete for submarine outfall pipes;
- Continue bulk reclamation;
- Manufacturing & Delivery of Aeration System and pressure vessels at WSD Salt water pumping station;
- Partial demolition of existing Finger Pier at Expo Drive East;
- Provision of noise barrier & reconstruction of deck structure at Expo Drive East Ferry Pier; and
- Break or remove existing carriageway and footpath for cooling main work along Tonnochy Road

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

- Dredging works at TCBR1E, TCBR1W and TPCWA for seawall;



- Type 3 sediments disposal;
- Removal of odorous sediment and slime;
- Ground investigation works; and
- Pipe 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 and FEP-04/356/2009 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 28<sup>th</sup> December 2010 to 27<sup>th</sup> January 2011. The cut-off date of reporting is at 27<sup>th</sup> of each reporting month.

### 1.2 Structure of the Report

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



summarizes the relevant cumulative construction impact due to the concurrent activities of the concurrent Projects.

**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, re-provisioning 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

2.3.3. Contract no. HK/2010/06 – Central-Wan Chai Bypass over MTR Tsuen Wan Line was commenced on 20 January 2011. No construction works was undertaken in the reporting month. The details information of this Contract will be reported in the next reporting month.

## 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	
		Construction Manager	Mr. C K Kwok	9779 2162	2566 2192
		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	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3743 0788	3548 6988



<b>Party</b>	<b>Role</b>	<b>Post</b>	<b>Name</b>	<b>Contact No.</b>	<b>Contact Fax</b>
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;
- Floating out of caisson seawall;
- Construction & installation of seawall block;
- Construction of coping;
- Delivery of caisson seawall,
- Drainage construction works and
- Installation of caisson Seawall.

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

- Dredging works for the open cut trench of cross harbour water mains;
- Casting of concrete surround to submarine pipelines;
- Concrete surrounded submarine pipeline were transported to fabrication yard for field jointing.;
- Routine maintenance and clearance works for silt screens;
- Trial pits for determination of connection location for HKAPA, Great Eagle Centre / Harbour Centre at Wan Chai areas;
- Preparation works for temporary diversion of Convention Avenue discharge mains Due to construction of SCL works;
- Erection of temporary staging platform was commenced;
- Installation of pipe pile PQ4 down to -40mPD was completed;
- The fabrication of extra 3 nos. of mud barges; and
- Dredging at HKCEC water channel.

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

- Site clearance;
- Dredging in West temporary seawall construction in Area WCR1;
- Rock Filling and Reclamation in Area WCR1;
- Permanent seawall construction;
- Drainage diversion of existing 1800mm dia. pipe for WCR1 reclamation;
- Construction of new public toilet and helipad terminal building at Expo Drive East;
- Seawall construction near Expo Drive East;



- Tree transplanting;
- Piling at new Wan Chai Ferry Pier;
- Operation of Public Fill Sorting Facility at TKO 137;
- Installation of building services for public toilet;
- Construction of precast units of Box Culvert N1, Salt Water Intake Culvert, Drain FRP-N and Cooling Water Discharge Pipe in Area WCR1;
- Installation of Cooling Main at China Resources Building;
- Driven temporary sheetpiles, erect temporary shoring and excavation at China Resources Building, Great Eagle Centre/Harbour Centre;
- Break or remove existing footpath for cooling main work at Great Eagle Centre and Harbour Centre;
- Pile road test at WSD Salt Water Pumping Station;
- Sheetpiles & Cantilever decking (Left Lane) at Wan Shing Street;
- Dredging for Submarine outfall;
- Outfall pipe installation for submarine sewage outfall; and
- Excavation for WSD Salt Water Pumping Station

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

- Dredging works at TCBR1W and TPCWAW;
- Dredging works at TPCWAE and TCBR1E for seawall;
- Type 3 sediments disposal; and
- Ground investigation works

2.4.7. 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;
- 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 (max.72m long);
- Dredging for the cross harbour water mains from Wan Chai side;
- Pipe line installation for the cross harbour water mains from Wan Chai side;
- Implementation of TTM scheme at Convention Avenue, Harbour Road and Expo

Drive (HKCEC area);

- Trial pit excavation for connection and the subsequent installation of cooling mains, harbour main & fresh water mains at Zone A1, A5 & B1;
- Tree transplantation at Wan Chai and TST;
- Additional coring for pipe sleeve and puddle flange opening at Pump Station Nos. 1, 3, 4 & 5;
- Dredging the seabed within the water channel at HKCEC;
- Preparation work for backfilling;
- Reclamation works for tunnel construction;
- Installation of pipe pile wall P1; and
- Installation of temporary working platform

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

- Dredging work for submarine outfall pipes;
- Filling work in Area WCR1;
- Construction of public toilet and passenger terminal building;
- Demolition of existing Expo Drive Ferry Pier;
- Construction of cooling mains along Harbour Road and Great Eagle/Harbour Centre
- Drainage diversion of existing culvert "O" at small pet garden;
- Continue construction of extended connection chamber at DSD Screening Plant;
- Continue dredging, pipe welding and bagged concrete for submarine outfall pipes;
- Continue bulk reclamation;
- Manufacturing & Delivery of Aeration System and pressure vessels at WSD Salt water pumping station;
- Partial demolition of existing Finger Pier at Expo Drive East;
- Provision of noise barrier & reconstruction of deck structure at Expo Drive East Ferry Pier; and
- Break or remove existing carriageway and footpath for cooling main work along Tonnochy Road

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

- Dredging works at TCBR1E, TCBR1W and TPCWA for seawall;
- Type 3 sediments disposal;
- Removal of odorous sediment and slime;
- Ground investigation works; and
- Pipe 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-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

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-RS0534-10	22 Jun 2010	29 Jun 2010 to 28 Dec 2010	Expired
	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/11-096	30 Nov 2010	10 Dec to 30 Dec 2010	Expired
	EP/MD/11-115	29 Dec 2010	31 Dec 2010 to 30 Jan 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
Condition 2.10	Coral Translocation Plan	20 Nov 2009
Condition 2.16	Noise Management Plan	1 Mar 2010

EP Condition	Submission	Date of Submission
	Revised Noise Management Plan	28 Sep 2010
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	Valid
	GW-RS0771-10	1 Sep 2010	1 Sep 2010 to 28 Feb 2011	Valid
	GW-RS0772-10	3 Sep 2010	15 Sep 2010 to 14 Mar 2011	Valid
	GW-RS0819-10	15 Sep 2010	16 Sep 2010 to 15 Mar 2011	Valid
	GW-RS0900-10	20 Oct 2010	27 Oct 2010 to 26 Mar 2011	Valid
	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	Valid
	GS-RS0022-11	12 Jan 2011	23 Jan 2011 to 22 Jul 2011	Valid
Discharge Licence	WT00006220-	18 Mar 2010	31 Mar 2015	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	2010			
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/11-101	3 Dec 2010	8 Dec 2010 to 7 Jan 2011	Expired
	EP/MD/11-113	3 Jan 2010	8 Jan to 7 Feb 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-RS0016-10	14 Apr 2010	1 Jun 2010 to 31 Nov 2010	Expired
	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	Valid
	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	Valid
	GW-RS0777-10	13 Sept 2010	01 Oct 2010 to 31 Mar 2011	Valid
	GW-RS0891-10	14 Oct 2010	09 Nov 2010 to 12 Jan 2011	Expired
	GW-RS0910-10	22 Oct 2010	25 Oct 2010 to 24 Apr 2011	Valid
	GW-RS0934-10	22 Oct 2010	25 Oct 2010 to 24 Apr 2011	Valid
	GW-RS0958-10	3 Nov 2010	16 Nov 2010 to 16 Jan 2011	Expired
	GW-RS0961-10	5 Nov 2010	6 Nov 2010 to 5 May 2011	Valid
	GW-RS0993-10	10 Nov 2010	24 Nov 2010 to 31 Jan 2011	Valid
	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-RS1093-10	8 Dec 2010	11 Dec 2010 to 31 Jan 2011	Valid
	GW-RS0021-11	11 Jan 2011	17 Jan to 16 Feb 2011	Valid
	GW-RS0033-11	19 Jan 2011	01 Feb to 31 Jul 2011	Valid
Discharge Licence	WT00006249- 2010	22 Mar 2010	31 Mar 2015	Valid
	WT00006436- 2010	15 Apr 2010	30 Apr 2015	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	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-C3593-01	10 Mar 2010	N/A	Valid
	WPN5213-839-C3593-02	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/11-102	8 Dec 2010	10 Dec 2010 to 9 Jan 2011	Expired
	EP/MD/11-114	3 Jan 2011	10 Jan to 9 Feb 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
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-RS0997-10	11 Nov 2010	15 Nov 2010 to 14 May 2011	Superseded
	GW-RS1080-10	23 Nov 2010	07 Dec 2010 to 05 June 2011	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C1169-35	15 Nov 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7011553	30 Sep 2010	27 Sep 2010 to 27 Jan 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/11-080	06 Oct 2010	04 Nov 2010 to 03 May 2011	Withdrawal on 1 Dec 2010
	EP/MD/11-097	29 Nov 2010	1 Dec 2010 to 31 May 2011	Withdrawal on 17 Jan 2011
	EP/MD/11-120	17 Jan 2011	18 Jan 2011 to 17 Jul 2011	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/11-094	24 Nov 2010	1 Dec 2010 to 31 Dec 2010	Expired
	EP/MD/11-098 (For Type 3 Trial)	20 Dec 2010	20 Dec 2010 to 19 Jan 2011	Expired
	EP/MD/11-108	28 Dec 2010	1 Jan 2011 to 31 Jan 2011	Valid
Dumping Permit (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers)	EP/MD/11-099	7 Jan 2011	7 Jan 2011 to 6 Feb 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	12 Nov 2010
Condition 2.9	Silt Screen Deployment Plan	27 Oct 2010
	Silt Screen Deployment Plan (Rev1)	5 Jan 2011
Condition 2.23	Noise Management Plan	27 Oct 2010
	Amendment for Noise Management Plan	12 Nov 2010

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

#### 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 ( $L_{eq}$ ).  $L_{eq(30\text{ minutes})}$  shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods,  $L_{eq(5\text{ minutes})}$  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 <sup>TM</sup> 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	Future CWB site office at Wanchai Waterfront Promenade	Causeway Bay
CMA4a	Society for the Prevention of Cruelty to Animals	Wan Chai
CMA5a	Children Playgrounds opposite to Pedestrian Plaza	Wan Chai
CMA6a	Future AECOM site office at Work Area	Wan Chai

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 m<sup>3</sup> 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 cm<sup>2</sup>;
- 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. 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.

- 4.2.9. 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.
- 4.2.10. 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
<b>WSD Salt Water Intake</b>			
WSD7	Kowloon South	834150.0	818300.3
WSD9	Tai Wan	837921.0	818330.0
WSD10	Cha Kwo Ling	841900.9	817700.1
WSD15	Sai Wan Ho	841110.4	816450.1
WSD17	Quarry Bay	839790.3	817032.2
WSD19	Sheung Wan	833415.0	816771.0
WSD20	Kennedy Town	830750.6	816030.3
WSD21	Wan Chai	836220.8	815940.1
RW1	Wan Chai (Reprovision)	836188.8	815911.1
<b>Cooling Water Intake</b>			
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

Station Ref.	Location	Easting	Northing
C5e	Sun Hung Kai Centre (Eastern)	836250.1	815932.2
C5w	Sun Hung Kai Centre (Western)	836248.1	815933.2
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 <sup>1</sup>	Parameters <sup>2</sup>
During the 4-week baseline monitoring period	Three days per week, at mid-flood and mid-ebb tides	Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity
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:

- 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.
- 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**



<b>Station</b>	<b>Location</b>
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).



## 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)

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

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 and HK/2009/02**

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 4 and 12 January 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. No exceedance was recorded 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.

**Table 5.6 Air Monitoring Stations for Contract no. HK/2009/01**

Station	Description
CMA5a	Children Playgrounds opposite to Pedestrian Plaza
CMA6a	Future AECOM site office at Work Area 1

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.

**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)

5.3.5. Air monitoring will be commenced from the land filling work for Contract no. HY/2009/15. The proposed division of air monitoring stations are summarized in **Table 5.8** below.

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



Station	Description
CMA3a	CWB site office at Wanchai Waterfront Promenade

#### 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
<b>WSD Salt Water Intake</b>			
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
<b>Cooling Water Intake</b>			
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
<b>WSD Salt Water Intake</b>			
WSD7	Kowloon South	834150.0	818300.3
WSD19	Sheung Wan	833415.0	816771.0
WSD20	Kennedy Town	830750.6	816030.3
<b>Cooling Water Intake</b>			
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

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
<b>WSD Salt Water Intake</b>			
WSD21	Wan Chai	836220.8	815940.1
<b>Cooling Water Intake</b>			
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. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)

5.4.4. 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 5.12** below.

**Table 5.12 Water Monitoring Stations for Contract no. HY/2009/15**

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

5.4.5. 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 5.13 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	1	0
	WSD17	0	0	0	0	0	0	0	0	0	0	0	0
	C8	0	0	0	1	0	1	0	0	0	0	0	0
	C9	0	0	0	2	1	1	0	0	0	0	0	0
HK/2009/01	WSD19	0	0	0	0	0	0	0	0	0	0	1	1
	WSD20	0	0	1	0	0	2	0	0	0	0	1	0
	WSD7	0	0	0	0	0	0	0	0	1	0	0	1
	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	0	0	0	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	1	0	0	0	0	0	0
HK/2009/02	C5e	0	0	0	1	1	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	0	0	0	0	0	0	0
HY/2009/15	C6	0	0	0	0	0	0	0	0	0	0	0	0
	C7	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>

5.4.6. Investigations were found that the most of exceedances are not related to the Project works excepted the SS and turbidity exceedances at C8 on 30 December 2010 at mid-flood tide. The details of the recorded exceedances can be referred to the Section 6.3.

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

## 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 5.14**.

**Table 5.14 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 <sup>3</sup>	NIL	NIL	N/A
Inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	NIL	N/A
Non-inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Chemical waste disposed, kg	N/A	N/A	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0 (Bulk Volume)	89,500 (Bulk Volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m <sup>3</sup>	1,500 (Bulk Volume)	123,900 (Bulk Volume)	East of Sha Chau

5.5.2. 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 500m<sup>3</sup> per day in the reporting month, which is complied with the recommended maximum dredging rate, 6000m<sup>3</sup> listed in Table 2 of FEP-01/356/2009.

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

5.5.3. Inert and non- inert C&D waste were disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.15**.

**Table 5.15 Details of Waste Disposal for Contract no. HK/2009/01**

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	436.21	2,357.02	TKO134
Inert C&D materials recycled, m <sup>3</sup>	0	0	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	18.6	152.9	SENT Landfill
Non-inert C&D materials recycled, kg	267	1718	N/A
Chemical waste disposed, kg	500	1460	N/A

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	14,318.2 (Bulk Volume)	66,815.2 (Bulk Volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	1,219 (Bulk Volume)	9,314 (Bulk Volume)	East of Cha Chau

5.5.4. According to the clarification from the Contractor, the quantities of chemical waste disposal in last month and cumulative quantity are 300kg and 960 kg respectively. Thus, the cumulative quantity of chemical waste disposal is 1,460kg. Besides, Contractor clarified the unit of the reported non-inert C&D materials disposed is in '000kg. The cumulative non-inert C&D materials disposed is 1718kg

5.5.5. There were marine sediments Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal marine sediment disposed in the reporting month. The maximum dredging rate in HKCEC1 and Cross Harbour Water Mains marine work zone marine work zones are 654m<sup>3</sup> per day respectively, which are complied with the recommended maximum dredging rate, 1500m<sup>3</sup> 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

5.5.6. 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/2009/02**

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	146	4,682	TKO137
Inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	8	56.5	SENT Landfill
Non-inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Chemical waste disposed, kg	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0 (Bulk Volume)	82,257 (Bulk Volume)	N/A
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate	8,770 (Bulk Volume)	86,400 (Bulk Volume)	East of Sha Chau

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>			

5.5.7. There were marine sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) disposed in the reporting month. The maximum dredging rate in submarine sewage pipeline marine work zone 1,260m<sup>3</sup> per day, which is complied with the recommended maximum dredging rate, 1,500m<sup>3</sup> listed in Table 2 of FEP-03/356/2009.

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

5.5.8. 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. HY/2009/15**

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	NIL	NIL	N/A
Inert C&D materials recycled, m <sup>3</sup>	13.8	184.0	To Contract HY/2009/11
Non-inert C&D materials disposed, m <sup>3</sup>	19.2	28.7	SENT Landfill
Non-inert C&D materials recycled, kg	NIL	13,435	N/A
Chemical waste disposed, kg	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	50,452 (Bulk Volume)	85,092 (Bulk Volume)	East of Sha Chau
Marine Sediment (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers)	340 (Bulk Volume)	340 (Bulk Volume)	East of Sha Chau

5.5.9. In the reporting month, there was marine sediment Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal marine sediment disposed from the dredging works at TCBR1W, TCBRAW, TPCWAE and TCBR1E for seawall. The maximum dredging rate, 3,805m<sup>3</sup> 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.





## 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 4 and 12 January 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-RS0777-10 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.

### 6.2 Real-time noise Monitoring

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

- 6.2.1. No exceedance was recorded 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 WSD15 had one SS exceedance recorded in this month.
- 6.4.2. 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. Most of the turbidity and SS exceedances were concluded as not project related exceedances excluded the exceedance at C8 on 30 December 2010.
- 6.4.3. Turbidity and SS exceedances at C8 on 30 December 2010 were recorded. Due to intake owner's constraint, delay was experienced in the re-provision of modified frame-type silt screen to protect City Garden intake against potential impact arising from the dredging works and accumulation of discharge and pollutants from nearby outfall adjacent to the intake. The exceedances were confirmed related to HY/2009/11 contractor difficulties in the provision of frame type silt screen. Contractor enhanced mitigation measures with a double layer silt curtain on 7 January 2011. No further exceedance was recorded after installation of double layer silt curtain. Close monitoring on contractor mitigation and the variation of water quality results will be maintained. Contractor will further liaise with the owner on the re-provision of the frame-type silt screen.
- 6.4.4. Reviewed the trend of overall results at all monitoring stations nearer the marine work area, the SS exceedance recorded at WSD15 while low SS value was recorded at the stations near the marine work area without exceeded the action and limit level. Thus, this SS exceedance was considered not related to the Project works.

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

- 6.4.5. 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.
- 6.4.6. One SS exceedance recorded at C4w on 24 January 2011. Investigation found that the condition of silt screen and silt curtain was in proper condition and low daily dredging rate was complied with EP condition. No exceedance was recorded at the C3 which is the nearest monitoring station near the dredging work area. It is concluded as not related Project.

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

- 6.4.7. One turbidity and SS exceedance was recorded at C5e on 8 January 2011. Investigation found that the condition of silt screen and silt curtain was in proper condition and daily dredging rate at submarine sewage pipeline was complied with EP condition. Besides, the additional measure of additional silt curtain is deployed to protect the monitoring stations C5e. 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)

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



6.4.9. 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 (December 2010) of Central Reclamation Phase III (CRIII) the key works in January 2011 are as follows:

- Architectural works and commissioning tests at Pier 7;
- Wet Trades and Architectural works at the Lower, middle and upper decks of Pier 8 and steel frame for roof glazing;
- CTB installation of clock into the clock tower, architectural and E & M works & link bridge construction;
- Piling (Socket H-Pile & Rock Anchors) and tie beam works at Public Pier West;
- Testing and Commissioning of Pump Station P5.1;
- Electricity Cable laying to Piers and to ESBs S11.1 & S11.2 (temporary);
- MYS Footbridge – cross head construction and steel frame fabrication (off Site);
- MYS storm drainage, sewers, watermains and roadworks to pier areas;
- MYS Laying of 800 dia. Cooling Main;
- MYS Existing Culvert F – preparation for desilting and stabilisation works for culvert.
- MYS Culvert F Extension –preparation for piling for Bay 1;
- General filling works above +2.5mpd in IRAE;
- In situ work to caisson and pumping stations' seawall copings;
- Internal E&M works to IRAE pump stations;
- ESB (S8.1 & S9.1) –Installation of generators and cabling works;
- ESB (S11.1 & S11.2) –ABWF and E&M works;
- Culvert J piling and structural works;
- Bored piling at Eastern Seawall and;
- Cooling water main construction in Lung Wui Road, Edinburgh Place and in IRAE.

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) respectively, the dredging and filling at submarine sewage pipeline and Wan Chai Reclamation Shoreline Subzone (WCR1) respectively, dredging at HKCEC1 and cross harbour water mains and dredging at TCBR1W, TCBRAW, TPCWAE and TCBR1E for seawall construction 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 only one project-related exceedance was recorded in North Point district that is far away from the work area of CRIII, it is evaluated that 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. Five site inspections for Contract no. HY/2009/11 were carried out on 28 December 2010, 4, 12, 18 and 25 January 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
101228_01	28-Dec-10	The contractor was reminded to collect the refuse inside silt screen at Excelsior and Windsor House	Collect refuse regularly	Completion as observed on 4-Jan-11
110104_01	4-Jan-11	Addition silt curtain at site boundary is needed to maintain and inspect frequently	Maintain and inspect the silt curtain	Completion as observed on 12-Jan-11
110104_02	4-Jan-11	Silt curtain at caisson seawall type 3 is needed to tie tightly	Tie the silt curtain tightly	Completion as observed on 12-Jan-11
110104_03	4-Jan-11	Collect the refuse inside silt screen at Excelsior shall be conducted	Collect refuse at Excelsior	Completion as observed on 12-Jan-11
110112_01	12-Jan-11	The contractor was reminded to collect the floating refuses on the sea near the site office area at oil street	Collect the refuse	Completion as observed on 14-Jan-11
110118_01	18-Jan-11	The contractor was reminded to collect the floating refuses in the silt screen at C6 and C7	Collect the refuse	Completion as observed on 25-Jan-11
110118_02	18-Jan-11	The contractor was reminded to collect the floating refuses on the sea near the site office area at oil street	Collect the refuse	Completion as observed on 25-Jan-11
110125_01	27-Jan-11	Silt curtain shall be tied tightly at sea wall type 3 after diving activities.	Tie the silt curtain tightly	Completion as observed on 1-Feb-11

8.0.3. Five site inspections and one landscape audit for Contract no. HK/2009/01 were carried out on 30 December 2010, 5, 12, 18, 20 and 25 January 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
101230_01	30-Dec-10	Proper labels and drip tray for oil drums shall be provided. Contaminated soil shall be disposed as chemical waste with proper procedure.	Handle the chemical waste with proper procedure	Completion as observed on 6-Jan-11
101230_02	30-Dec-10	Sand at the site entrance of VIP drop off area shall be cleared up.	Clearance of the sand	Completion as observed on 6-Jan-11
101230_03	30-Dec-10	The gap between the noise	Maintenance the	Completion as

Item	Date	Observations	Action taken by Contractor	Outcome
		barriers at westbound of HKCEC water channel shall be minimized to enhance the noise mitigation effectiveness.	noise gap	observed on 6-Jan-11
110118_01	18-Jan-11	The contractor has been reminded the following: Protection of soil-balls and root system; Protection of tree-trunks; and Provision of adequate water for the newly transplanted trees; if possible, showering for the leaves on the first few days and dry weather as well.	Handle the transplanting tree in proper practices	Completion as observed on 18-Jan-11
110120_01	20-Jan-11	Floating refuse inside the silt screen at water quality monitoring C2 shall be cleared up.	Clearance of floating refuse	Completion as observed on 25-Jan-11
110120_02	20-Jan-11	The edge of silt curtain shall be mounted tightly to the seawall.	Tightly mount on the seawall	Completion as observed on 25-Jan-11
110120_03	20-Jan-11	It is recommended that the holding time of closed grab shall be increased before transportation to the mud barge.	Improvement of the practices for the dredging works	Completion as observed on 25-Jan-11
110120_04	20-Jan-11	Sand was observed at the vehicle access of south bound of water channel. Proper washing vehicle wheel is needed before leave the site.	Regular clearance of the dusty road access.	Completion as observed on 25-Jan-11
110125_01	25-Jan-11	Temporary drainage system at south bound water channel shall be reviewed against the coming wet seasons.	Contractor planed to improve the temporary drainage system after Chinese New Year.	Completion as observed on 9-Feb-11
110125_02	25-Jan-11	Floating up of silt curtain for HKCEC water channel and dredging works for cross harbour water mains were observed. Contractor shall repair and maintain it in proper condition with adequate depth.	Floating up silt curtain had been repaired.	Completion as observed on 31-Jan-11
110125_03	25-Jan-11	Contractor was reminded that no dredging work at HKCEC water channel can be undertaken if the Type I silt screen at C3 has not been maintained	Proper silt curtain was installed during the dredging activities.	Completion as observed on 31-Jan-11

8.0.4. Five 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
101230_01	30-Dec-10	FEP shall be displayed at site entrance (adjacent to Gold Bauhinia Plaza) for public's information.	FEP in place at the site entrance	Completion as observed on 6-Jan-11
101230_02	30-Dec-10	Floating refuse near pet garden shall be cleared up.	Floating refuse was cleared up.	Completion as observed on 6-Jan-11

Item	Date	Observations	Action taken by Contractor	Outcome
101230_03	30-Dec-10	House keeping should be maintained at the working barge near pet garden.	Well maintenance of the house keeping at the barge	Completion as observed on 6-Jan-11
110106_01	6-Jan-11	Slurry was observed inside a dip tray at a generator at pet garden.	Slurry was cleared up.	Completion as observed on 13-Jan-11
110113_01	13-Jan-11	Silt curtain shall be mounted on the seawall tightly.	Mount the silt curtain tightly	Completion as observed on 20-Jan-11
110113_02	13-Jan-11	Chemical containers were placed in the sedimentation tank. Contractor was reminded that containers shall be stored at the proper area/chemical chamber.	Removal of the containers in sedimentation tank	Completion as observed on 20-Jan-11
110113_03	13-Jan-11	Stockpile of soil at Harbour Road shall be covered with tarpaulin sheet.	Stockpile covered with tarpaulin sheet.	Completion as observed on 20-Jan-11
110120_01	20-Jan-11	General refuse on the frame type silt screen at C5w shall be cleared.	Clearance the refuse on the frame type silt screen.	Completion as observed on 27-Jan-11
110120_02	20-Jan-11	Apart from the existing silt curtain, the contractor was advised the silt curtain shall be also provided to any seawall gap for marine access.	Installation of silt curtain to surround between sheet pile and caisson seawall.	Completion as observed on 1-Feb-11
110127_01	27-Jan-11	The seawall gap between caisson seawall and sheet pile shall be surrounded by silt curtain.	Installation of silt curtain to surround between sheet pile and caisson seawall.	Completion as observed on 1-Feb-11
110127_02	27-Jan-11	Sand and concrete debris in the U-channel shall be cleared regularly.	Clearance of debris in the U-channel.	Completion as observed on 1-Feb-11
110127_03	27-Jan-11	It is reminder to spray water on the surface of C&D material stockpile at pet garden.	Sufficient water spraying on the dusty surface of stockpile.	Completion as observed on 1-Feb-11

8.0.5. Five site inspections for Contract no. HY/2009/15 were carried out on 28 December 2010, 4, 11, 18 and 27 January 2011. 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
28-Dec-10	101228_01	water spraying shall be conducted at Portion 13 A to prevent dust generation	conduct water spraying at portion 13	Completion as observed on 4-Jan-11
4-Jan-11	110104_01	Silt curtain between B21796V and 40416V was found loosen, the contractor was reminded to tie it tightly	Tie the silt curtain tightly	Completion as observed on 11-Jan-11
11-Jan-11	110111_01	Drip tray shall be provided for storing deodorizer and other chemicals at site office area	provide drip tray for chemical storage	Completion as observed on 18-Jan-11
18-Jan-11	110118_01	Mud leakage was observed at the sleeve of the closed grab	improve the grab	Completion as observed on 27-





Item	Date	Observations	Action taken by Contractor	Outcome
		B40416V. The contractor was reminded to improve the performance of the grab to prevent leakage. Especially the grab for type 3 dredging		Jan-11
18-Jan-11	110118_02	Drip tray shall be provide for thinner storage	provide drip tray for chemical storage	Completion as observed on 27-Jan-11
18-Jan-11	110118_03	water spraying at portion 13 (vehicle parking)	conduct water spraying at portion 13	Completion as observed on 27-Jan-11

**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
January 2011	0
<b>Project-to-Date</b>	<b>9</b>

**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
<b>Total</b>	<b>-</b>	<b>0</b>	<b>0</b>

- 9.0.4. An incident of split hopper barge named Shun Tat 11 (Licence no. B21623V) for the Contract no. HK/2009/01 was recorded at the location near Cross Harbour Water Mains marine work zone on 24 January 2011. The ballast tank on the port side of the split hopper barge was flooded with water. The split hopper barge was towed back to the dredging zone within a short period and immediately opened its hopper to dump the sediment back to the same dredging trench. It is suspected that the hull on the port side might be broken causing ingress of seawater into the ballast tanks. Meanwhile, the barge has been demobilized from the site and currently anchored at To Kwa Wan Typhoon Shelter. The emergency dumping was notified to EPD at 10:00a.m. on 24 January 2011. This barge will not be deployed to the site under HK/2009/01 to dispose the dredged sediment until it has been repaired and inspected by the competent surveyor. The incident will be kept in view for determining further follow up and remedial measures.

**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	<ul style="list-style-type: none"> <li>• Dredging works;</li> <li>• Reclamation works;</li> <li>• Construction &amp; installation of seawall block;</li> <li>• Drainage construction works;</li> <li>• Construction of coping; and</li> <li>• Installation of caisson Seawall.</li> </ul>	<ul style="list-style-type: none"> <li>• To avoid concurrent noisy operation</li> <li>• To locate the plant and equipments far away to the noise sensitive receivers</li> <li>• Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> <li>• Daily clearance of floating debris behind the silt screen</li> <li>• Installation of frame type silt screen at City Garden</li> </ul>
HK/2009/01	<ul style="list-style-type: none"> <li>• Fabrication of the pipe strings (max.72m long);</li> <li>• Dredging for the cross harbour water mains from Wan Chai side;</li> <li>• Pipe line installation for the cross harbour water mains from Wan Chai side;</li> <li>• Implementation of TTM scheme at Convention Avenue, Harbour Road and Expo Drive (HKCEC area);</li> <li>• Trial pit excavation for connection and the subsequent installation of cooling mains, harbour main &amp; fresh water mains at Zone A1, A5 &amp; B1;</li> <li>• Tree transplantation at Wan Chai and TST;</li> <li>• Additional coring for pipe sleeve and puddle flange opening at Pump Station Nos. 1, 3, 4 &amp; 5;</li> <li>• Dredging the seabed within the water channel at HKCEC;</li> <li>• Preparation work for backfilling;</li> <li>• Reclamation works for tunnel construction;</li> <li>• Installation of pipe pile wall P1; and</li> </ul>	<ul style="list-style-type: none"> <li>• To conform the installation and setting as in the silt screen deployment plan</li> <li>• Frequency spray water on the dry dusty road and on the surface of concrete breaking</li> <li>• To cover the dusty material or stockpile by impervious sheet</li> <li>• To space out noisy equipment and position as far as possible from sensitive receiver.</li> <li>• To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance.</li> <li>• Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum</li> <li>• Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> </ul>



Contract No.	Key Construction Works	Recommended Mitigation Measures
	<ul style="list-style-type: none"> <li>• Installation of temporary working platform</li> </ul>	
HK/2009/02	<ul style="list-style-type: none"> <li>• Complete modification of planter at Gloucester Road;</li> <li>• Dredging work for submarine outfall pipes;</li> <li>• Filling work in Area WCR1;</li> <li>• Construction of public toilet and passenger terminal building;</li> <li>• Demolition of existing Expo Drive Ferry Pier;</li> <li>• Construction of cooling mains along Harbour Road and Great Eagle/Harbour Centre</li> <li>• Drainage diversion of existing culvert "O" at small pet garden;</li> <li>• Continue construction of extended connection chamber at DSD Screening Plant;</li> <li>• Continue dredging, pipe welding and bagged concrete for submarine outfall pipes;</li> <li>• Continue bulk reclamation;</li> <li>• Manufacturing &amp; Delivery of Aeration System and pressure vessels at WSD Salt water pumping station;</li> <li>• Partial demolition of existing Finger Pier at Expo Drive East;</li> <li>• Provision of noise barrier &amp; reconstruction of deck structure at Expo Drive East Ferry Pier; and</li> <li>• Break or remove existing carriageway and footpath for cooling main work along Tonnochy Road</li> </ul>	<ul style="list-style-type: none"> <li>• To cover the dusty material or stockpile by impervious sheet;</li> <li>• Frequency spray water on the dry dusty road and on the surface of concrete breaking</li> <li>• To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance and dark smoke emission</li> <li>• To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> <li>• Movable noise barrier shall be deployed for demolition works</li> <li>• Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> </ul>
HY/2009/15	<ul style="list-style-type: none"> <li>• Dredging works at TCBR1E, TCBR1W and TPCWA for seawall;</li> <li>• Type 3 sediments disposal;</li> <li>• Removal of odorous sediment and slime;</li> <li>• Ground investigation works; and</li> <li>• Pipe piling works</li> </ul>	<ul style="list-style-type: none"> <li>• To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> <li>• Frequency spray water on the dry dusty road and on the surface of concrete breaking</li> <li>• To cover the dusty material or stockpile by impervious sheet</li> </ul>

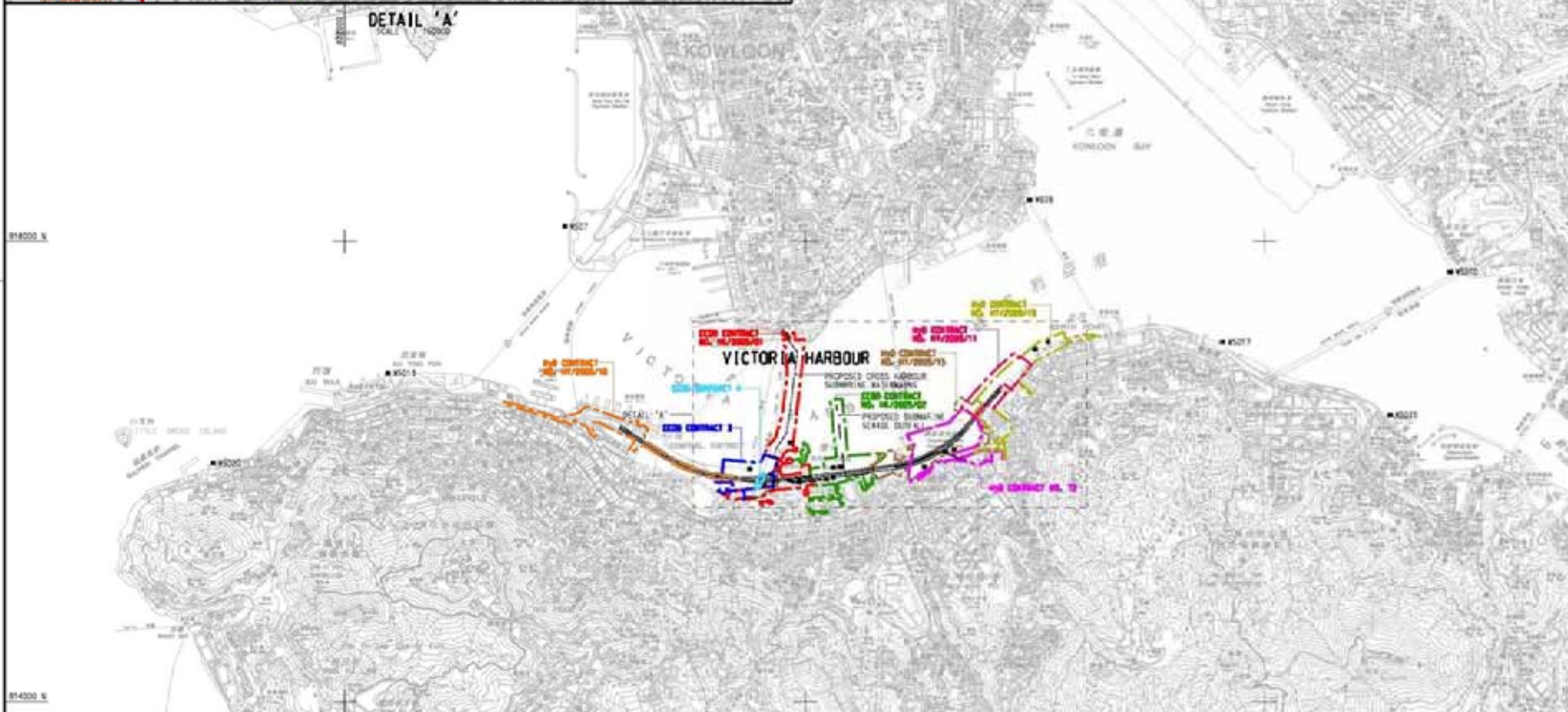
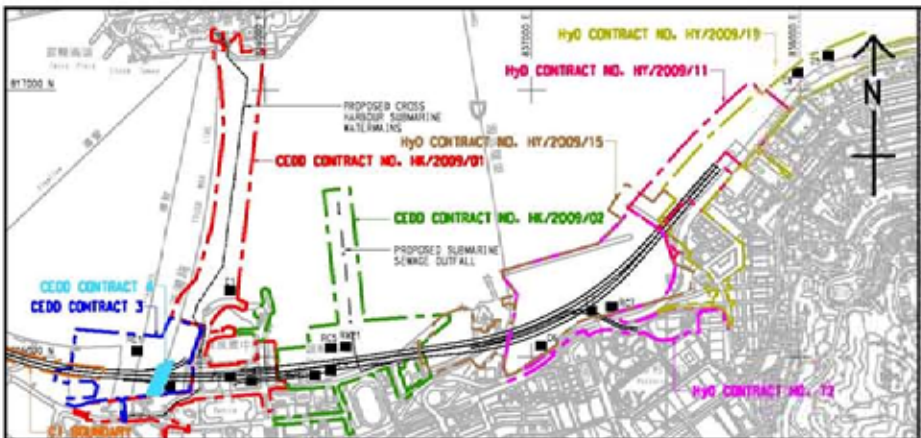


Contract No.	Key Construction Works	Recommended Mitigation Measures
		<ul style="list-style-type: none"><li>• To space out noisy equipment and position as far as possible from sensitive receiver.</li><li>• Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li></ul>



***Figure 2.1***

***Project Layout***



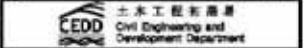
- LEGEND:**
- WATER QUALITY MONITORING STATIONS
- COOLING WATER INTAKES**
- D1 HONG KONG CONVENTION AND EXHIBITION CENTRE EXTENSION
  - D2 TELECOM HONG KONG ACADEMY FOR PERFORMING ARTS / SALT ON CENTRE
  - D3 HONG KONG CONVENTION AND EXHIBITION CENTRE PHASE 1
  - D4 WAN CHAI TOWER AND GREAT EXHIBITION CENTRE
  - D5 SUN HANG KAI CENTRE
  - D6 PROPOSED EXHIBITION STATION / WORLD TRADE CENTRE
  - D7 WINDSOR HOUSE
  - D8 CITY GREEN
  - D9 PREVIENT CENTRE
  - D10 PROPOSED HERPA EXTENSION
  - D11 SUN HANG KAI CENTRE (REPROVISION)
  - D12 WINDSOR HOUSE (TEMPORARY REPROVISION)
- MSD SALT WATER INTAKE**
- W521 WAN CHAI
  - W401 WAN CHAI (REPROVISION)
  - W501 GEMUNION ISLAND
  - W525 TAI BAA
  - W5210 CHA KWO LING
  - W5215 SAI WAN HO
  - W5217 SCARRY BAY
  - W5219 SHEUNG WAN
  - W5220 KENNEDY TOWN

**DESIGNATED PROJECTS (DP)**

DP1	- CENTRAL WAN CHAI BYPASS (CNB) INCLUDING ITS ROAD TUNNEL AND SLIP ROADS
DP2	- ROAD P2 AND OTHER ROADS (PRIMARY / DISTRICT DISTRIBUTOR ROADS)
DP3	- PERMANENT AND TEMPORARY REDUCATION WORKS INCLUDING ASSOCIATED DREDGING WORKS IN WAN CHAI DEVELOPMENT PHASE 1 (WCH1) AREA
DP4	- TEMPORARY-EMBANK-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 - 314/2008  
 DP2 IS COVERED BY EP - 316/2008  
 DP3, DP5 AND DP6 ARE COVERED BY EP - 356/2005

WORKS CONTRACT	DESIGNATED PROJECT(S) INVOLVED	CONSTRUCTION COMMENCEMENT
CEDD CONTRACT NO. HK/2009/01	DP1, DP3, DP6	APRIL 2010
CEDD CONTRACT NO. HK/2009/02	DP1, DP3, DP6	APRIL 2010
CEDD CONTRACT 3	DP1, DP3	END 2011
CEDD CONTRACT 4	DP1, DP3	END 2012
CEDD CONTRACT 5	DP3	2015
HyO CONTRACT NO. HY/2009/11	DP3	18 MARCH 2010
HyO CONTRACT NO. HY/2009/15	DP1, DP3	SEPTEMBER 2010
HyO CONTRACT NO. HY/2009/18	DP1	OCTOBER 2010
HyO CONTRACT NO. HY/2009/19	DP1	NOVEMBER 2010
HyO CONTRACT 12	DP1, DP3	MID 2013



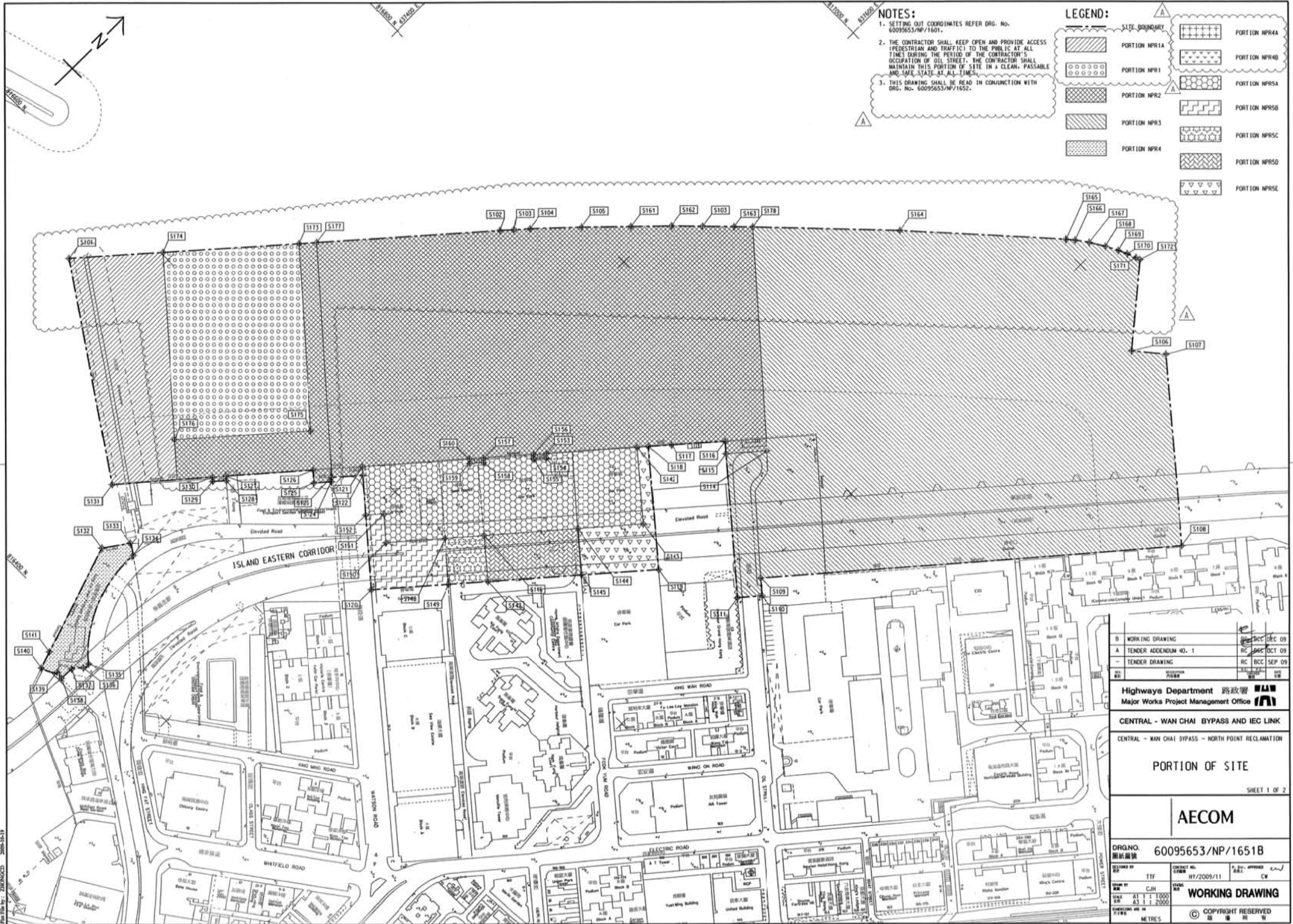
**WAN CHAI DEVELOPMENT PHASE II**  
 WAN CHAI DEVELOPMENT PHASE II, P&I CENTRAL -  
 WAN CHAI BYPASS - CANAL, P&I, S&I MEASUREMENT  
 AND TESTING WORKS (STAGE 1)

**LOCATIONS OF  
 WATER QUALITY  
 MONITORING STATIONS**



<b>PROJECT NUMBER</b>		<b>60041297/C5/SK001</b>	
DESIGNED BY	CHECKED BY	DATE	SCALE
BY: AEC	BY: AEC	AT: 11/2008	AS SHOWN
DATE: 11/2008	SCALE: METRES	COPYRIGHT RESERVED	





**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:**

	PORTION NPR1		PORTION NPR5
	PORTION NPR2		PORTION NPR6
	PORTION NPR3		PORTION NPR7
	PORTION NPR4		PORTION NPR8
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	PORTION NPR93		PORTION NPR97
	PORTION NPR94		PORTION NPR98
	PORTION NPR95		PORTION NPR99
	PORTION NPR96		PORTION NPR100

B	WORKING DRAWING	REV	DEC 09
A	TENDER ADDENDUM NO. 1	REV	DEC 09
-	TENDER DRAWING	REV	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**

DRGNO. 60095653/NP/1651B  
 圖號/圖號  
 DESIGNED BY TTF  
 CHECKED BY TTF  
 DATE AT 11/2/2009  
 DRAWING NO. 11/2/2009  
 METRES

APPROVED BY CW  
**WORKING DRAWING**  
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p:\project\60095653\drawing\NP1000\NF\_651.dgn





LOCATION PLAN  
SCALE 1 : 5000

- NOTES:
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  2. THE RESTRICTION ZONE IS THIS DRAWING WILL COME INTO EFFECT AFTER THE OPERATION OF THE GOVERNMENT HELPING AT EIP/D/D/16 EAST.

LEGEND:

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

TENDER ADDENDUM NO. 4	SEP 25, 2009
TENDER ADDENDUM NO. 1	SEP 25, 2009
TENDER DRAWING	SEP 25, 2009

CEDD 土木工程發展署  
Civil Engineering and Development Department

WAN CHAI DEVELOPMENT PHASE II

WAN CHAI DEVELOPMENT PHASE II -  
KONG KONG CONVENTION AND EXHIBITION CENTRE  
**RESTRICTED ZONE FOR  
CONSTRUCTION VESSELS**  
(Contract no: HK/2009/01)

**AECOM**

DRGNO. 圖號	60041297/C1/100/1010B
DATE 日期	16/2009/01
SCALE 比例	AS 1:8000
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INSET 'A'  
SCALE 1:1000

CENTRAL DISTRICT



EIA-141/2007  
DP3

HKCEC (Western Part)

HKCEC (Middle Part)

HKCEC (Eastern Part)

INT	COORDINATES	
	EASTING	NORTHING
C41	835986.528	818105.708
C42	835979.417	818104.408
C43	835983.943	818079.326
C44	835983.543	818086.581
C45	835984.818	818085.528
C46	835985.524	818085.514
C46	835975.757	815981.208
C47	835974.956	815982.441
C48	835980.846	815975.887
C49	835981.347	815973.238
C50	835976.828	815966.814
C51	835984.478	815989.846
C52	835975.226	818089.224
C53	835973.504	818077.897
C54	835975.827	818084.764
C55	835973.745	818079.883
C56	835991.071	818078.764
C56-1	835990.579	818078.873
C56-2	835987.468	818078.765
C56-3	835987.248	818182.758
C57	835983.403	818181.878
C58	835978.498	818087.198
C59	835978.574	818085.818
C60	835978.507	818120.164
C61	835980.881	818184.524
C62	835982.434	818171.812
C63	835973.504	818080.788
C64	835975.828	818078.507

INT	COORDINATES	
	EASTING	NORTHING
C65	836028.933	815413.438
C66	836034.030	815413.614
C67	836022.816	815413.240
C68	836019.515	815413.882
C69	836021.110	815414.000
C70	836027.289	815413.880
C71	836041.050	815413.270
C72	836048.415	815407.187
C72-1	835555.589	815106.587
C73	836047.435	815385.890
C74	836049.797	815374.107
C75	836024.185	815382.148
C76	836038.298	815388.000
C77	836048.906	815382.898
C78	836048.439	815374.038
C79	836042.430	815351.015
C80	836024.635	815328.880
C81	836028.417	815308.182
C82	836024.882	815374.148
C83	836107.025	815324.084
C84	836098.473	815322.444
C85	836092.342	815343.714
C86	836084.499	815348.925
C87	836084.196	815403.388
C88	836082.512	815404.142
C89	836078.987	815425.898
C90	836071.430	815437.198

CUT LINE B-B  
SEE AT DRAWING NO. A00025/C1/100/1006



KEY PLAN  
SCALE 1:10000

NOTE:  
1. FOR NOTES & LEGEND, REFER TO DRAWING NO. A00025/C1/100/1006.

INT	COORDINATES	
	EASTING	NORTHING
C1	836875.205	816222.559
C2	836875.207	816222.559
C3	836874.561	816224.825
C4	836871.020	816231.014
C5	836882.492	816229.522
C6	836881.584	816218.612
C7	836886.585	816215.197
C8	836886.195	816207.147
C9	836886.433	816202.247
C10	836891.082	816207.050
C11	836885.389	816208.075
C12	836877.486	816208.107
C13	836923.468	816204.817
C14	836886.433	816217.122
C15	836874.285	816208.593
C16	836875.195	816205.525
C17	836888.138	816204.441
C18	836846.085	816208.816
C19	836871.421	816206.587
C20	836902.537	816220.881
C21	836875.205	816217.484
C22	836873.182	816214.445
C23	836867.086	816209.074
C24	836776.984	816203.670
C25	836875.280	816203.251
C26	836881.447	816212.286
C27	836904.025	816243.896
C28	836906.218	816244.445
C29	836901.523	816236.180
C30	836883.781	816208.447
C31	836837.216	816228.470
C32	836824.142	816225.117
C33	836821.081	816215.482
C34	836826.290	816204.700
C35	836827.428	816203.256
C36	836808.187	816201.280
C36-1	836824.812	816208.093
C36-2	836824.747	816203.285
C36-3	836826.850	816219.194
C37	836818.190	816203.037
C38	836828.810	816207.295
C39	836818.906	816219.080
C40	836825.682	816215.512

C	TENDER ADDENDUM NO.4	SHEN JYL DEP C8
B	TENDER ADDENDUM NO.2	SHEN JYL DEP C8
A	TENDER ADDENDUM NO.1	SHEN JYL DEP C8
-	TENDER DRAWING	SHEN JYL DEP C8
20	REVISION	SHEN JYL DEP C8

土木工程師學會  
Civil Engineering and  
Development Department

WAN CHAI DEVELOPMENT PHASE II

WAN CHAI DEVELOPMENT PHASE II -  
CONTRACT NO. HK/2009/01  
HONG KONG CONVENTION AND EXHIBITION CENTRE

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

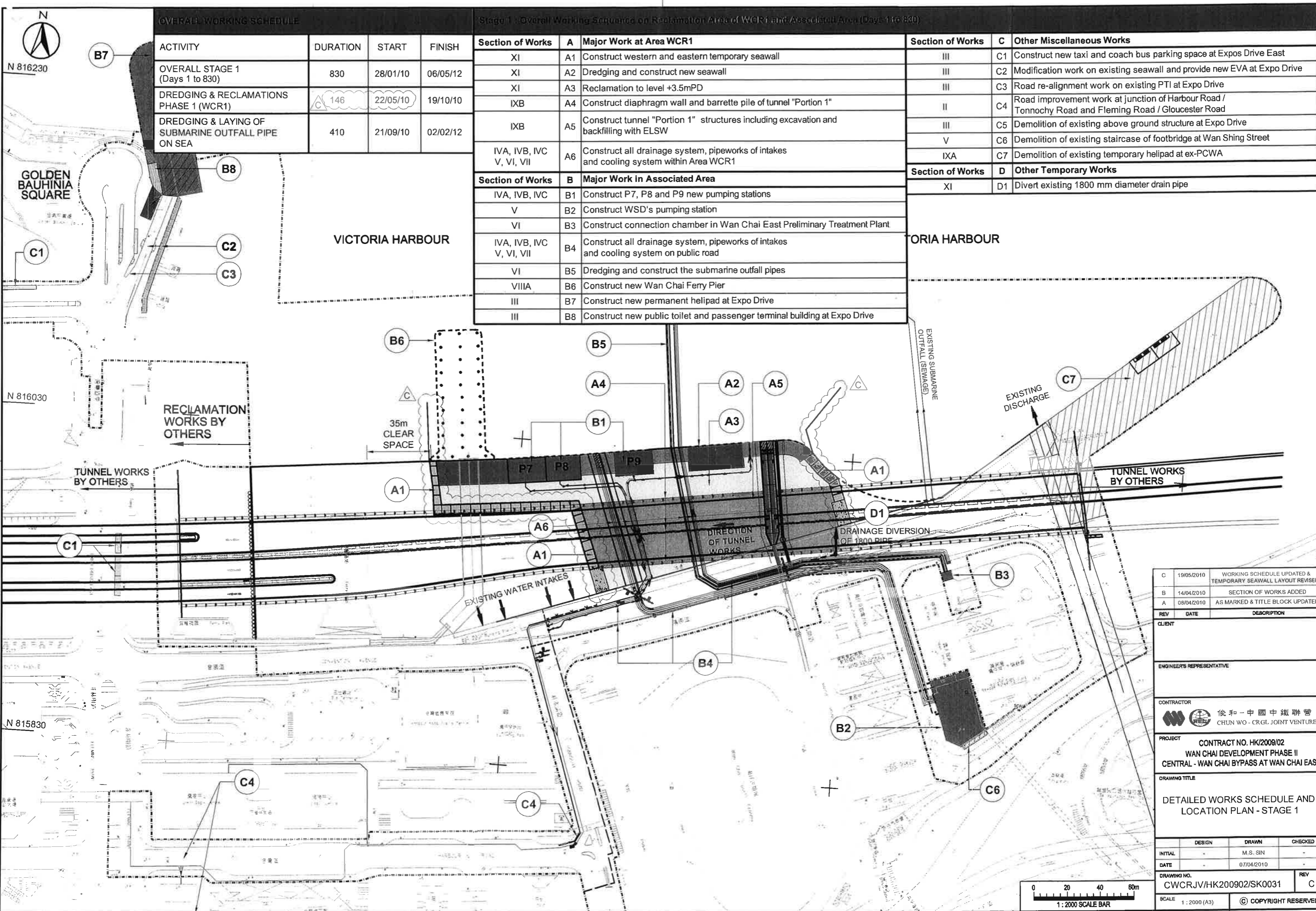
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DRGNO.  
圖號  
60041297/C1/100/1006C

SCALE	1:1000	DATE	20/05/01	BY	PMC
DESIGNED BY	HSY	CHECKED BY	HSY	DATE	20/05/01
DRAWN BY	HSY	DATE	20/05/01	BY	PMC
SCALE	AS 1:2000	DATE	20/05/01	BY	PMC

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**OVERALL WORKING SCHEDULE**

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

**Stage 1: Overall Working Sequence on Reclamation Area of WCR1 and Associated Area (Days 1 to 830)**

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

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: \_\_\_\_\_

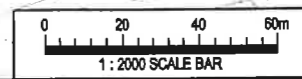
CONTRACTOR: 俊和-中國中鐵聯營  
 CHUN WO - CRGL JOINT VENTURE

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

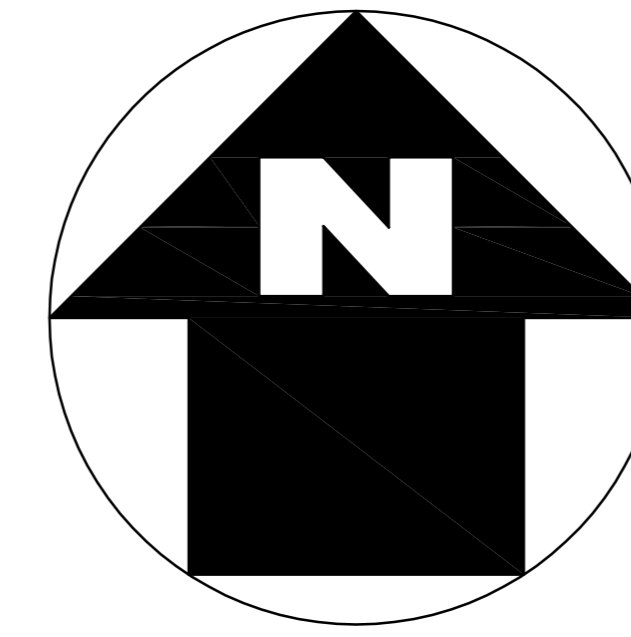
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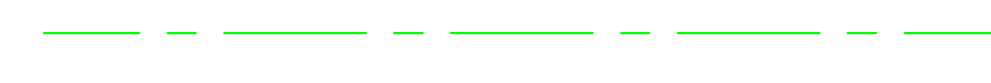




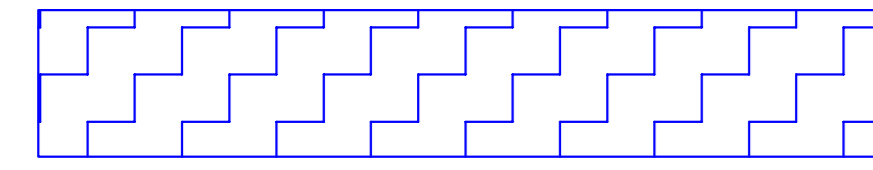
港口  
HARBOUR



LEGEND:



WORKS AREA



DREDGING AREA FOR  
MITIGATION OF ODOUR(DP3)



SITE BOUNDARY

TCBR1E

TCBR2  
AND  
TCBR3

銅鑼灣避風塘  
CAUSEWAY BAY TYPHOON SHELTER

TCBR4

TCBR1W

貨物裝卸灣  
Cargo Handling Basin  
TPCWAW

TPCWAE

DP3

中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGR. (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

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MILLIMETERS

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Victoria Park



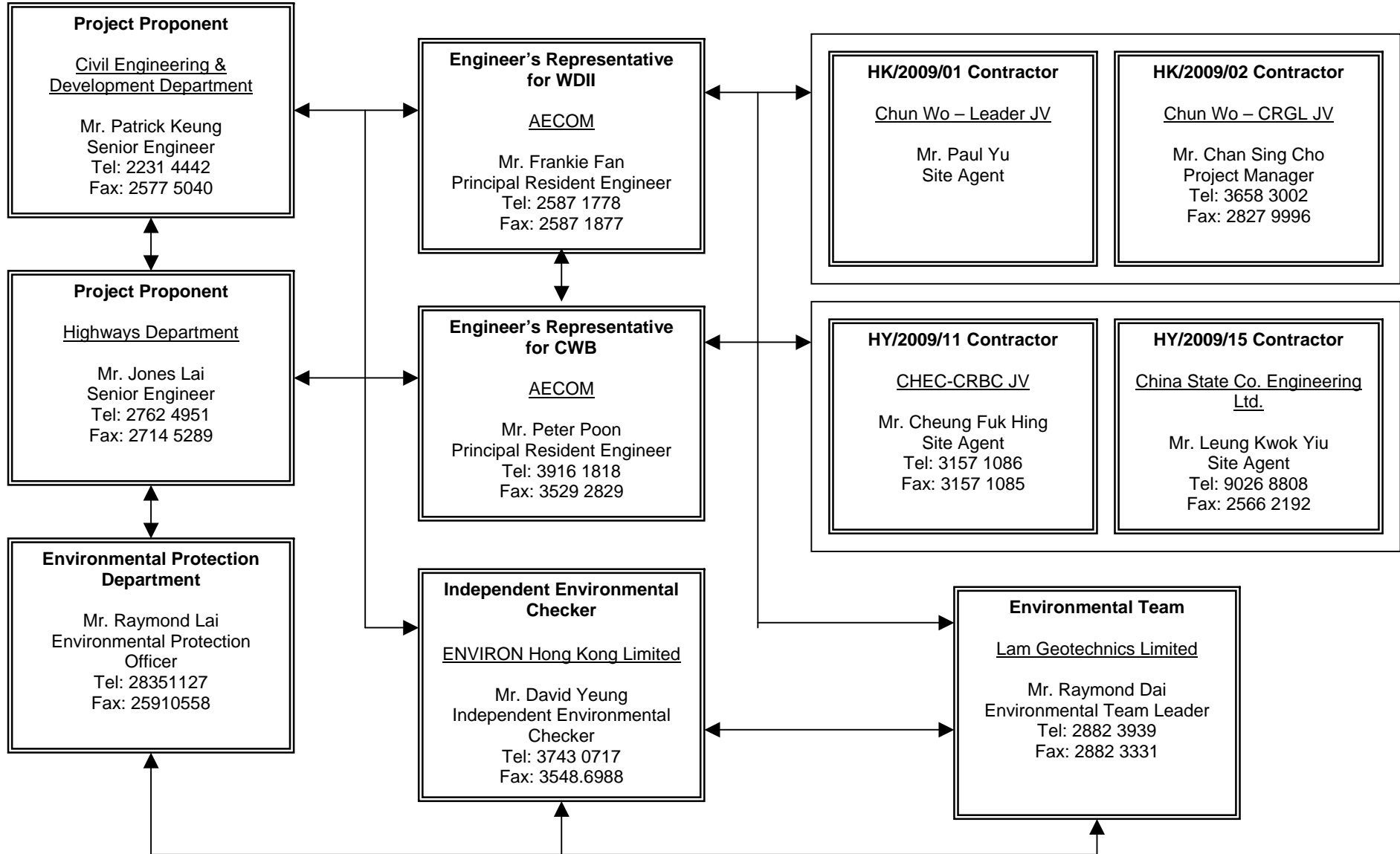


***Figure 2.2***

***Project Organization Chart***



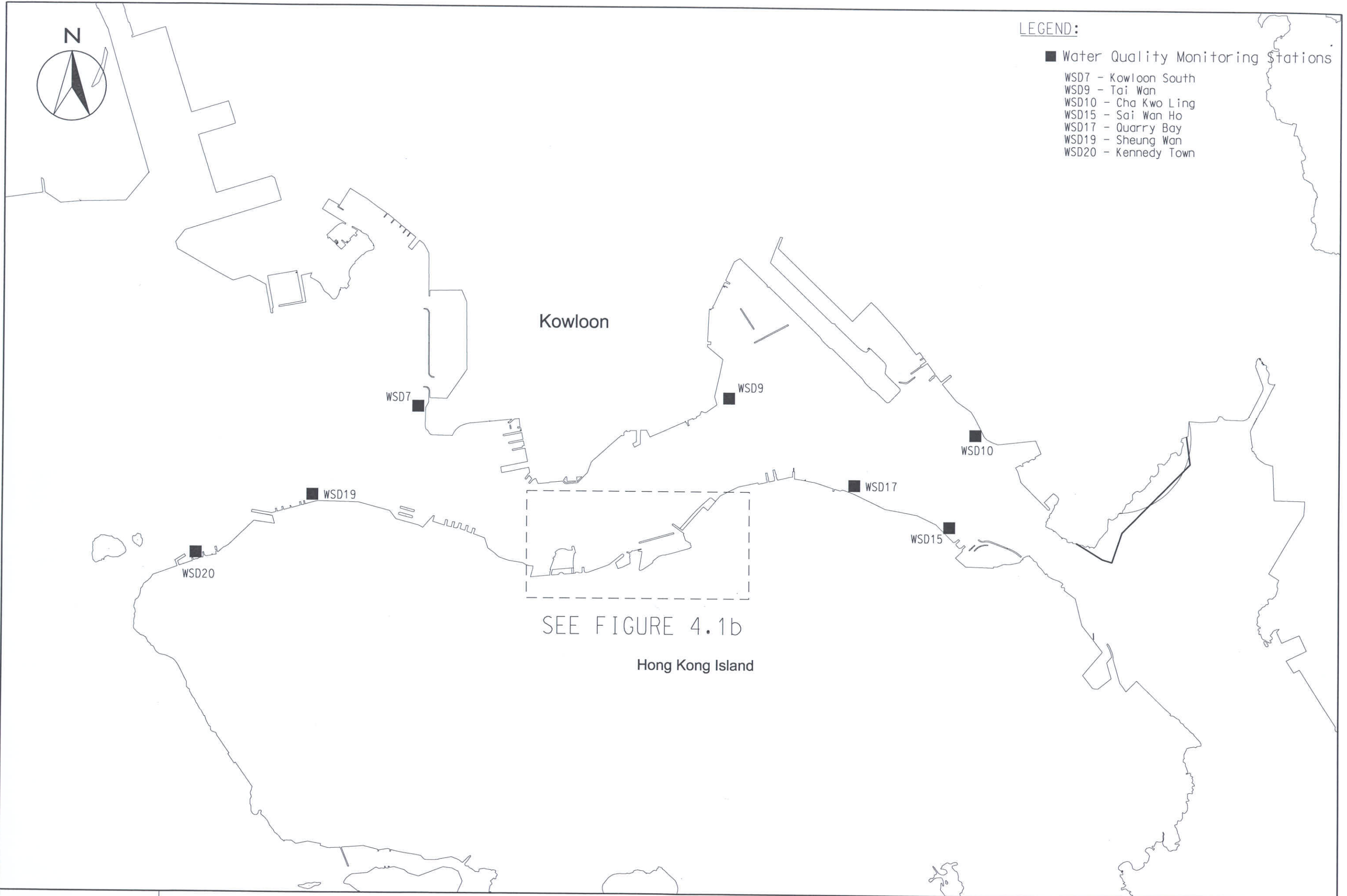
**Project Organization Chart**





***Figure 4.1***

***Locations of Monitoring Stations***

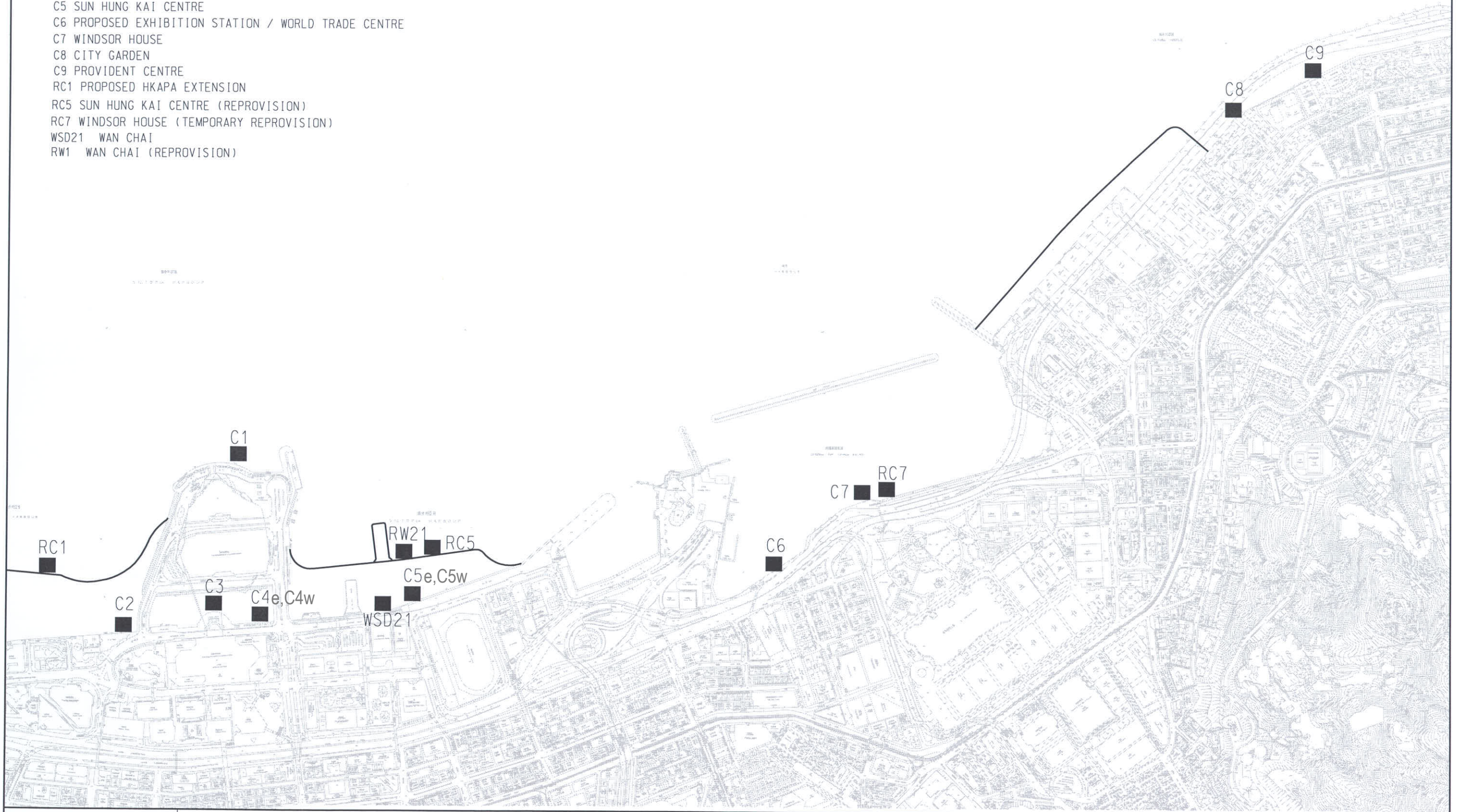




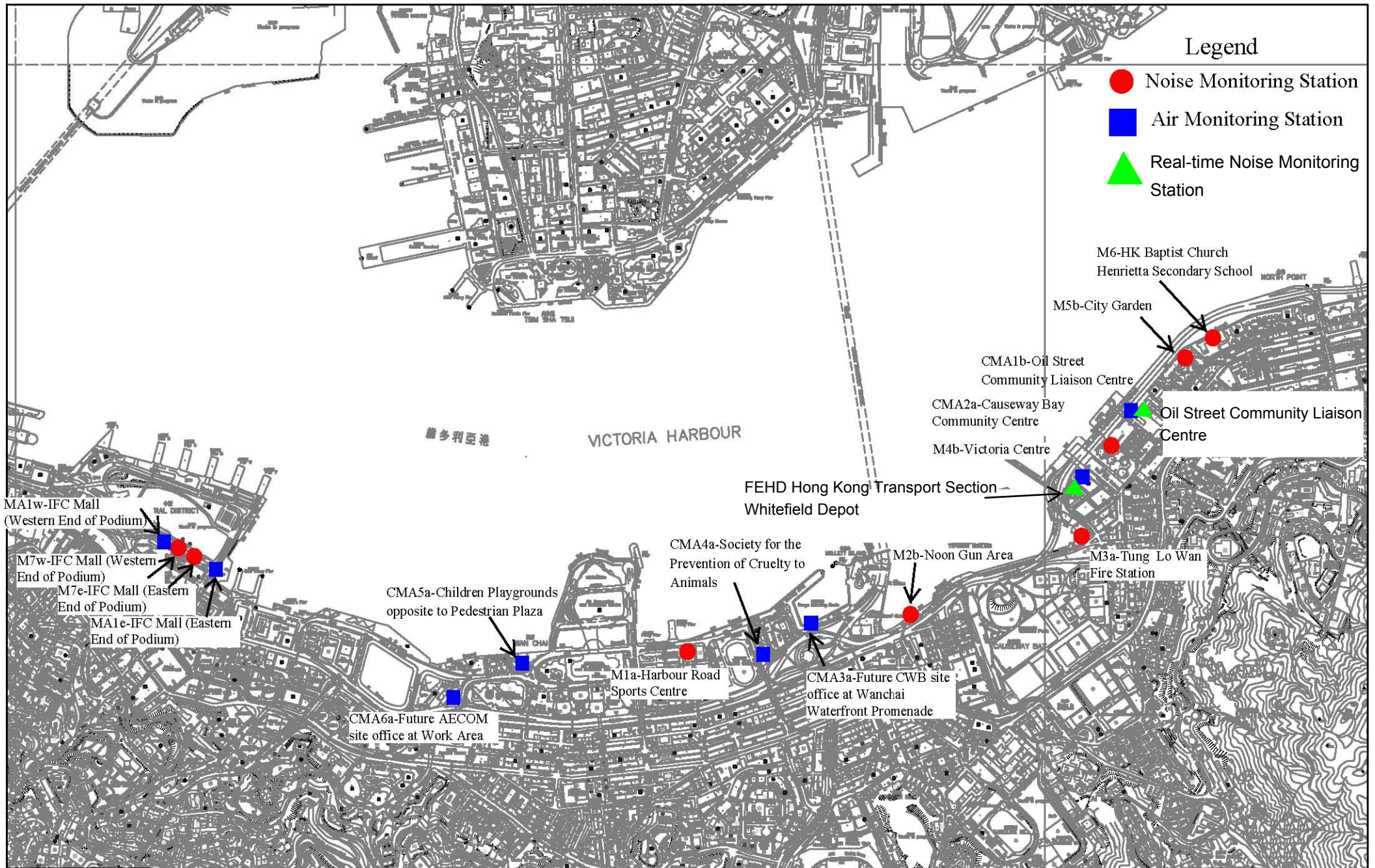
**LEGEND:**

**WATER QUALITY MONITORING STATIONS**

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





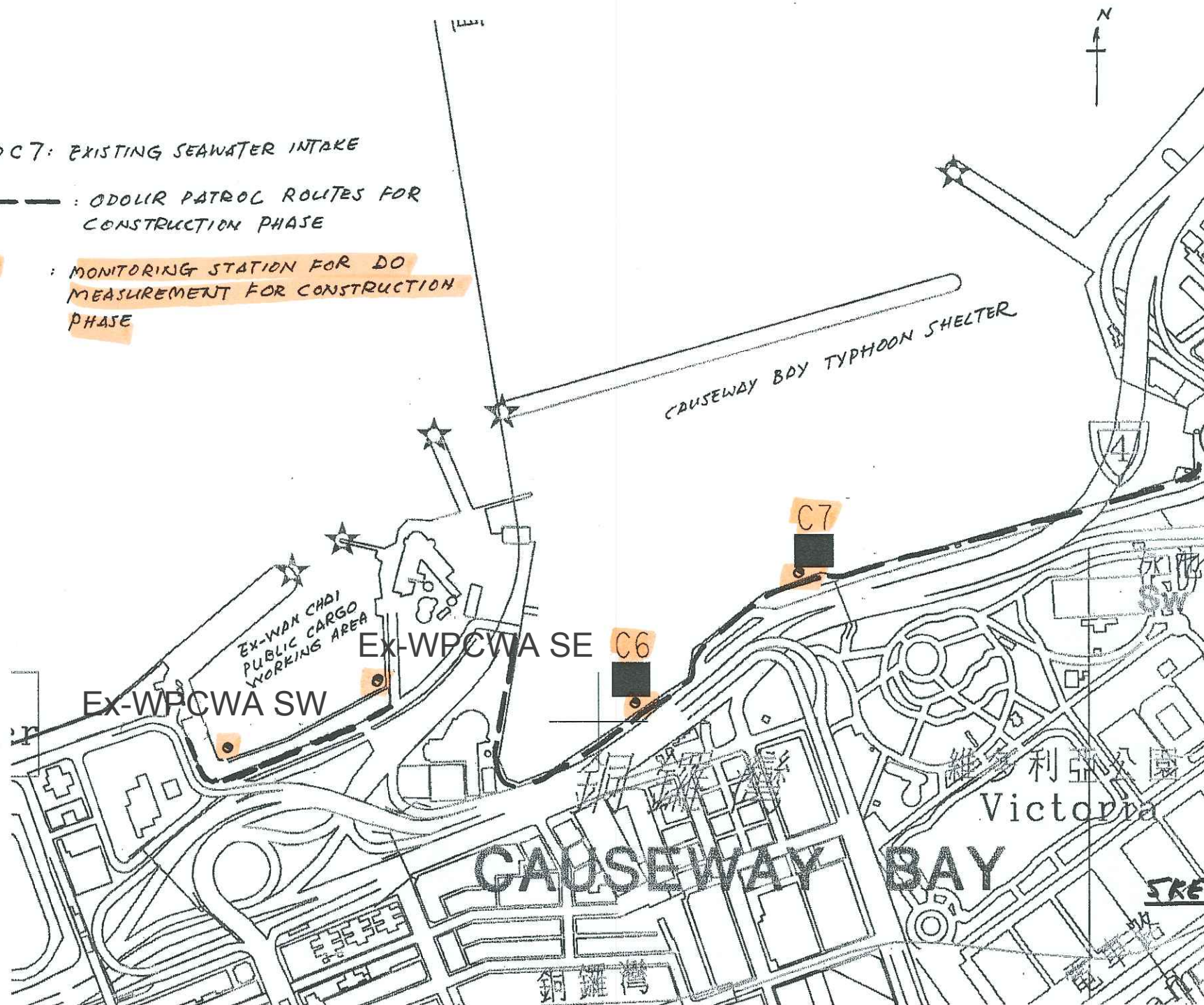




C6 AND C7: EXISTING SEAWATER INTAKE

----- : ODOLIR PATROL ROUTES FOR CONSTRUCTION PHASE

● : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE



SKETCH A



***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	
<b>Construction Phase</b>								
<i>For the Whole Project</i>								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. <ul style="list-style-type: none"> <li>Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition;</li> <li>Watering during excavation and material handling;</li> <li>Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and</li> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> </ul>	Work site / during construction	Contractor		√			

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.5.6	For the dredging activities carried out in the vicinity of Police Officers' Club, the dredging operation will be restricted to only 1 small close grab dredger to minimise the odour impact during the dredging activity. The dredging rate should be reduced as much as practicable for the area in close proximity to the Police Officers' Club. The sediments contain highly contaminated mud which may be disposed with the use of geosynthetic containers (details shall refer to Section 6), grab dredger has to be used for filling up the geosynthetic containers on barges. the dredging rate for the removal of the sediments at the south-west corner of the typhoon shelter shall be slowed down or restricted to specific non-popular hours in weekdays when it is necessary during construction.	Corner of CBTS/implementation of harbour-front enhancement	CEDD <sup>1</sup>		√			EIAO-TM
S3.8.8	Carry out dredging at the corner of CBTS to remove the sediment and clean the slime attached on the CBTS shoreline seawall	Corner of CBTS & CBTS shoreline seawall/implementation of harbour-front enhancement	CEDD <sup>2</sup>		√			EIAO-TM
<b>Operation Phase</b>								
<i>For the Whole Project</i>								

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

<sup>2</sup> CEDD will identify an implementation agent.

Appendix 3.1

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

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

Appendix 3.1

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

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.9.4	<p>Good Site Practice:</p> <ul style="list-style-type: none"> <li>Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.</li> <li>Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.</li> <li>Mobile plant, if any, shall be sited as far away from NSRs as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.</li> <li>Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
<b>For DP1 – CWB (Within the Project Boundary)</b>								

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.3 – S4.8.5	<p>Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:</p> <ul style="list-style-type: none"> <li>Slip road 8 tunnel</li> <li>Construction of diaphragm wall and substructures of the tunnel approach ramp</li> <li>Excavation</li> <li>Construction of slabs</li> <li>Backfill</li> <li>Demolition and construction of substructures for the IEC</li> <li>Demolition works of existing piers and crossheads of the marine section of the existing IEC</li> </ul> <p>Use of PME grouping for the following tasks:</p> <ul style="list-style-type: none"> <li>At-grade road construction</li> <li>Substructure for IECL connection</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
<b>For DP2 – WDII Major Roads (Road P2)</b>								
S4.8.3 – S4.8.4	<p>Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:</p> <ul style="list-style-type: none"> <li>Temporary road diversion</li> <li>Resurfacing</li> <li>At-grade roadwork</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
<b>For DP3 – Reclamation Works</b>								
S4.8.3 – S4.8.4	<p>Use of quiet powered mechanical equipment for the following task:</p> <ul style="list-style-type: none"> <li>Filling behind seawall</li> <li>Seawall construction</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>For DP5 – Wan Chai East Sewage Outfall</b>								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: <ul style="list-style-type: none"> <li>Submarine pipelines (marine section)</li> </ul> Use of quiet powered mechanical equipment and movable noise barrier for the following tasks: <ul style="list-style-type: none"> <li>Installation of a new pipeline (land section)</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
<b>For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui</b>								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: <ul style="list-style-type: none"> <li>Submarine pipelines (marine section)</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

Appendix 3.1

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

Appendix 3.1





**Table A13.3 Implementation Schedule for Water Quality Control**

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
<i>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)</i>								
S5.8	A phased reclamation approach is planned for the WDII. Containment of fill within each of the reclamation phases by seawalls is proposed, with the seawall constructed first (above high water mark) with filling carried out behind the completed seawalls. Any gaps that may need to be provided for marine access will be shielded by silt curtains to control sediment plume dispersion away from the site. Filling for seawall construction should be carried out behind the silt curtain	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8	Dredging shall be carried out by closed grab dredger for the following works: <ul style="list-style-type: none"> <li>• Seawall construction in all the reclamation areas;</li> <li>• Construction of the CWB Tunnel</li> <li>• Construction of the proposed WSD water mains; and</li> <li>• Construction of the proposed Wan Chai East sewage outfall pipelines.</li> </ul>	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	Dredging for the Wan Chai East sewage outfall pipelines shall not be carried out concurrently with the following activities: <ul style="list-style-type: none"> <li>• Dredging along the proposed cross-harbour water mains;</li> <li>• Dredging along the seawall in the Wan Chai Reclamation (WCR) zone (area between HKCEC Extension and PCWA).</li> </ul>	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																									
				Des	C	O	Dec																										
S5.8	The water body behind the temporary reclamations within the Causeway Bay typhoon shelter shall not be fully enclosed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																									
S5.8	As a mitigation measure, to avoid the accumulation of water borne pollutants within the temporary embayment between 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. <table border="1" style="margin: 10px auto; width: 80%;"> <thead> <tr> <th rowspan="2">Reclamation Area</th> <th colspan="2">Maximum Dredging Rate</th> <th rowspan="2">Maximum Dredging Rate (m<sup>3</sup> per week)</th> </tr> <tr> <th>m<sup>3</sup> per day</th> <th>m<sup>3</sup> per hour (for 16 hrs per day)</th> </tr> </thead> <tbody> <tr> <td colspan="4"><b>Dredging along seawall or breakwater</b></td> </tr> <tr> <td>North Point Shoreline Zone (NPR)</td> <td>6,000</td> <td>375</td> <td>42,000</td> </tr> <tr> <td>Causeway Bay</td> <td>1,500</td> <td>94</td> <td>10,500</td> </tr> <tr> <td>Shoreline Zone</td> <td>6,000</td> <td>375</td> <td>42,000</td> </tr> <tr> <td>PCWA Zone</td> <td>5,000</td> <td>313</td> <td>35,000</td> </tr> </tbody> </table>	Reclamation Area	Maximum Dredging Rate		Maximum Dredging Rate (m <sup>3</sup> per week)	m <sup>3</sup> per day	m <sup>3</sup> per hour (for 16 hrs per day)	<b>Dredging along seawall or breakwater</b>				North Point Shoreline Zone (NPR)	6,000	375	42,000	Causeway Bay	1,500	94	10,500	Shoreline Zone	6,000	375	42,000	PCWA Zone	5,000	313	35,000	Work site / During the construction period	Contractor		√		EIAO-TM, WPCO
Reclamation Area	Maximum Dredging Rate		Maximum Dredging Rate (m <sup>3</sup> per week)																														
	m <sup>3</sup> per day	m <sup>3</sup> per hour (for 16 hrs per day)																															
<b>Dredging along seawall or breakwater</b>																																	
North Point Shoreline Zone (NPR)	6,000	375	42,000																														
Causeway Bay	1,500	94	10,500																														
Shoreline Zone	6,000	375	42,000																														
PCWA Zone	5,000	313	35,000																														

Appendix 3.1

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures		Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines					
					Des	C	O	Dec						
	<table border="1"> <tr> <td>TBW, NP and Water Mains Zone</td> <td>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 Re-provisioned WSD Wan Chai saltwater intake. Cooling water intakes for MTR South, Excelsior Hotel &amp; World Trade Centre and re-provisioned Windsor House.</td> </tr> </table>	TBW, NP and Water Mains Zone	Convention and Exhibition Centre Phase I, Telecom House / HK Academy for Performing Arts / Shun On Centre, Wan Chai Tower / Revenue Tower / Immigration Tower and Sun Hung Kai Centre	Scenario 2B in late 2009/2010 with concurrent dredging activities at Sewage Pipelines Zone and TCBR.	WSD saltwater intakes at Sheung Wan, Wan Chai Cooling water intakes for Queensway Government Offices, Excelsior Hotel, World Trade Centre and Windsor House.	Scenario 2C in 2011 with concurrent dredging activities at HKCEC and TCBR.	WSD saltwater intakes at Sheung Wan and Re-provisioned WSD Wan Chai saltwater intake. Cooling water intakes for MTR South, Excelsior Hotel & World Trade Centre and re-provisioned Windsor House.							
TBW, NP and Water Mains Zone	Convention and Exhibition Centre Phase I, Telecom House / HK Academy for Performing Arts / Shun On Centre, Wan Chai Tower / Revenue Tower / Immigration Tower and Sun Hung Kai Centre													
Scenario 2B in late 2009/2010 with concurrent dredging activities at Sewage Pipelines Zone and TCBR.	WSD saltwater intakes at Sheung Wan, Wan Chai Cooling water intakes for Queensway Government Offices, Excelsior Hotel, World Trade Centre and Windsor House.													
Scenario 2C in 2011 with concurrent dredging activities at HKCEC and TCBR.	WSD saltwater intakes at Sheung Wan and Re-provisioned WSD Wan Chai saltwater intake. Cooling water intakes for MTR South, Excelsior Hotel & World Trade Centre and re-provisioned Windsor House.													
S5.8	<p>Other mitigation measures include:</p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>all hopper barges and dredgers shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li> <li>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;</li> <li>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</li> </ul>	Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)						

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> <li>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.</li> </ul>							
S5.8	<p>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.</p>	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	<p>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.</p>	Causeway Bay typhoon shelter/Implementation of harbour-front enhancement.	CEDD <sup>3</sup>		√			WPCO

Appendix 3.1

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

<sup>3</sup> 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	
	<p>required.</p> <ul style="list-style-type: none"> <li>All fuel tanks and store areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity.</li> </ul>							
	<ul style="list-style-type: none"> <li>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.</li> </ul>							
S5.8	<p><i>Sewage from Construction Work Force</i></p> <p>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.</p>	Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)
S5.8	<p><i>Floating Debris and Refuse</i></p> <p>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.</p>	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	<p><i>Storm Water Discharges</i></p> <p>Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned WSD flushing water intakes.</p>	Work site and adjacent water / During the design and construction period.	Contractor	√	√			WPCO
<b>Operation Phase</b>								
<b>DPI – CWB (within the Project Boundary)</b>								
S5.8	<p>For the operation of CWB, a surface water drainage system would be provided to collect road runoff. The following operation stage mitigation measures are recommended to ensure road runoff would comply with the TM under the WPCO:</p> <ul style="list-style-type: none"> <li>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.</li> <li>Petrol interceptors shall be regularly cleaned and maintained in good working condition.</li> <li>Oily contents of the petrol interceptors shall be properly handled and disposed of, in compliance with the requirements of the Waste Disposal Ordinance.</li> <li>Sewage arising from ancillary facilities of CWB (for examples, car park,</li> </ul>	CWB/During design and operational period	HyD/TD <sup>3</sup>	√		√		WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>control room, ventilation and administration buildings and tunnel portals) shall be connected to public sewerage system. Sufficient capacity in public sewerage shall be made available to the proposed facilities.</p> <ul style="list-style-type: none"> <li>Road drainage shall also be provided with adequately designed silt trap to minimize discharge of silty runoff.</li> <li>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.</li> </ul>							

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

<sup>3</sup> if employ Management, Operation and Maintenance (MOM) Contract

Appendix 3.1

**Table A13.4 Implementation Schedule for Waste Management**

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
<i>For DP3 – Reclamation Works</i>								
	<b>Marine Sediments</b>							
S6.7.2	The dredged marine sediments would be loaded onto barges, transported to and disposed of at the designated disposal sites at South of Cheung Chau, East of Ninepin, East of Tung Lung Chau, South of Tsing Yi or East of Sha Chau to be allocated by the MFC depending on their level of contamination or at other disposal sites after consultation with the MFC and EPD. In accordance with the ETWB TCW No. 34/2002, the contaminated material must be dredged and transported with great care. The mitigation measures recommended in Section 5 of the EIA Report shall be incorporated. The dredged contaminated sediment must be effectively isolated from the environment upon final disposal and shall be disposed of at the Type 2 confined marine disposal contaminated mud pit.	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 <sup>3</sup> . A feasible containment method is proposed whereby the dredged sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal.							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.5	It will be the responsibility of the Contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, at least 3 months prior to the dredging contract being tendered							
S6.7.6	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: <ul style="list-style-type: none"> <li>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.</li> </ul>							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>							
S6.6.12	<p><b>Floating Refuse</b></p> <p>During the construction phase, the project proponent's contractor will be responsible for the collection of any refuse within their works area. Floating booms will be provided on the water surface to confine the refuse from the working barges as well as to avoid the accumulation of pollutants within temporary embayment as mentioned in Table 13.3.</p>	Work site / During the construction period	Contractor		√			
<b>For the Whole Project</b>								

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.7	<p><b>Good Site Practices</b></p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> <li>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;</li> <li>training of site personnel in proper waste management and chemical waste handling procedures;</li> <li>provision of sufficient waste disposal points and regular collection for disposal;</li> <li>appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and</li> <li>a recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).</li> </ul>	Work site / During the construction period	Contractor		√			Waste Disposal Ordinance (Cap.354)

Appendix 3.1



EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.8	<p><i>Waste Reduction Measures</i></p> <p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>any unused chemicals or those with remaining functional capacity shall be recycled;</li> <li>use of reusable non-timber formwork, such as in casting the tunnel box sections, to reduce the amount of C&amp;D material.</li> <li>prior to disposal of C&amp;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;</li> <li>proper storage and site practices to minimise the potential for damage or contamination of construction materials; and</li> <li>plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</li> </ul>	Work site / During planning and design stage, and construction stage	Contractor	√	√			

Appendix 3.1

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.13	In order to monitor the disposal of public fill and C&D waste at public filling facilities and landfills, respectively, and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team undertaking the environmental monitoring and audit work. An Independent Environment Checker shall be responsible for auditing the results of the system.	Work site / During the construction period	Contractor and Independent Environmental Checker		√			ETWB TCW No. 31/2004
S6.7.14	<i>Bentonite Slurry</i> 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: <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	Work site / During the construction period	Contractor		√			ProPECC PN 1/94

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

Appendix 3.1

**Table A13.5 Implementation Schedule for Land Contamination**

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
<i>For the Whole Project</i>								
S.12.6	<ul style="list-style-type: none"> <li>The contaminated site shall be cleaned up before commencement of site clearance and construction work at the concerned area which may disturb the ground.</li> </ul>	A King Marine / Before commencement of construction activities at A King Marine.	Project proponent for the re-provisioned Tin Hau Temple	√				<i>"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops"</i> 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: <ul style="list-style-type: none"> <li>Excavation profiles must be properly designed and executed;</li> <li>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;</li> <li>Quantities of soil to be excavated must be estimated;</li> <li>It maybe necessary to split quantities of soil according to soil type, degree and nature of contamination.</li> <li>Temporary storage of soil at intermediate depot or on-site</li> </ul>	A King Marine / During soil remediation works	Contractor	√				Air Pollution Control Ordinance Noise Control Ordinance  Waste Disposal Ordinance  Waste Disposal (Chemical Waste) (General) Regulation

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	maybe required. The storage site shall include protection facilities for leaching into the ground. eg. Liner maybe required.							
	<ul style="list-style-type: none"> <li>Supply of suitable clean backfill materials is needed after excavation.</li> <li>Care must be taken of existing buildings and utilities.</li> <li>Precautions must be taken to control of ground settlement</li> <li>Speed controls for vehicles shall be imposed on dusty site areas.</li> <li>Vehicle wheel and body washing facilities at the site's exit points shall be established and used.</li> </ul> <p>The following environmental mitigation measures shall be strictly followed during the operation and/or maintenance of the CS/S facilities:</p>							Water Pollution Control Ordinance

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p><u>Air Quality Mitigation Measures</u></p> <ul style="list-style-type: none"> <li>The loading, unloading, handling, transfer or storage of cement shall be carried out in an enclosed system.</li> <li>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.</li> <li>All practicable measures, including speed controls for vehicles, shall be taken to prevent or minimize the dust emission caused by vehicle movement.</li> <li>Tarpaulin or low permeable sheet shall be put on dusty vehicle loads transported between site locations.</li> </ul>							
	<p><u>Noise Mitigation Measures</u></p> <ul style="list-style-type: none"> <li>The mixing facilities shall be sited as far as practicable to the nearby noise sensitive receivers.</li> <li>Simultaneous operation of mixing facilities and other equipment shall be avoided.</li> <li>Mixing process and other associated material handling activities shall be properly scheduled to minimise potential cumulative noise impact on the nearby noise sensitive receivers.</li> <li>Construction Noise Permit shall be applied for the operation of powered mechanical equipment during restricted hours (if any).</li> </ul>							

Appendix 3.1

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

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

Appendix 3.1

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

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.9.7.4	<p>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:</p> <ul style="list-style-type: none"> <li>• Installation of silt curtains during dredging activities</li> <li>• Use of tightly-closed grab dredger</li> <li>• Reduction of dredging rate</li> <li>• Control of grab descending speed</li> <li>• Construction of leading edges of seawall in the early stages of the reclamation works</li> </ul>	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
	<ul style="list-style-type: none"> <li>• Adoption of multiple-phase construction schedule</li> </ul>							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.9.7.6	<p>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:</p> <ul style="list-style-type: none"> <li>• Use of Quiet Mechanical Plant during the construction phase shall be adopted wherever possible.</li> <li>• Adoption of multiple-phase construction schedule.</li> <li>• General measures to reduce noise generated during the construction phase (see noise impact assessment) shall be effectively implemented.</li> </ul>	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.7	Seawalls shall be constructed in advance around the reclamation areas within the area of the CBTS to screen adjacent feeding ground from construction phase activities, reduce noise disturbance to the associated seabirds and also to restrict access to this habitat adjacent to works areas by ship traffic.	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.8	Loss of artificial seawall habitats shall be reinstated by the construction of about 1 km vertical wave absorbing seawall along the coastlines of the new reclamation around the HKCEC and at North Point. The new seawalls are expected to provide large area of hard substrata for settlement and recruitment of intertidal fauna similar to those previously recorded from existing intertidal habitats.	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

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

Appendix 3.1

**Table A13.7 Implementation Schedule for Landscape and Visual**

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

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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
<i>For DP2 – WDII Major Roads (Road P2)</i>								
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
<i>For DP3 – Reclamation Works</i>								
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
<i>For DP5 – Wan Chai East Sewage Outfall</i>								
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

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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
<b>For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui</b>								
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
<b>Operation Phase</b>								
<b>For the Whole Project - Schedule 3 DP</b>								
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

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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 <sup>4</sup>	√	√	√		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
<b>For DP1 – CWB (Within the Project Boundary)</b>								
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
<b>For DP2 – WDII Major Roads (Road P2)</b>								

<sup>4</sup> CEDD will identify an implementation agent

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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
<b>For DP3 – Reclamation Works</b>								
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 <sup>5</sup>	√	√	√		ETWB TCW 2/2004

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

<sup>5</sup> 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) <sup>Note 1</sup>

Note 1:

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

*Action and Limit Level for Air Monitoring*

Monitoring Location	1-hour TSP Level in $\mu\text{g}/\text{m}^3$		24-hour TSP Level in $\mu\text{g}/\text{m}^3$	
	Action Level	Limit Level	Action Level	Limit Level
CMA1a <sup>Note 2</sup>	320.1	500	176.7	260
CMA2a	323.4	500	169.5	260
CMA3 <sup>Note 2</sup>	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5 <sup>Note 2</sup>	332.0	500	181.0	260
CMA6 <sup>Note 2</sup>	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 will be proposed for IEC verification and EPD approval.

*Action and Limit Level for Water Monitoring*

Parameter	Action Level	Limit Level
<b>WSD Salt Water Intakes</b>		
SS in mg/L	13.00	14.43
Turbidity in NTU	8.04	9.49
DO in mg/L	3.66	3.28
<b>Cooling Water Intakes</b>		
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***



# 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:

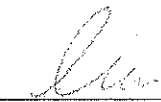
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017A	Multi-Function Generator	00804	SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR

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.

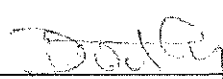
The test equipment used for calibration are traceable to International System of Units (SI).

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

Tel: 2425 8801 Fax: 2425 8646

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# Calibration Certificate

Certificate No. 06680

Page 2 of 4 Pages

Results :

## 1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Time Const.		
20 - 100	L <sub>A</sub>	Fast	94.0	94.3
		Slow		94.3
	L <sub>C</sub>	Fast		94.3
30 - 120	L <sub>A</sub>	Fast	94.0	94.4
		Slow		94.4
	L <sub>C</sub>	Fast		94.4
30 - 120	L <sub>A</sub>	Fast	114.0	94.3
		Slow		94.3
	L <sub>C</sub>	Fast		94.3

IEC 651 Type 1 Spec. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.1$  dB

## 2. Level Stability : 0.0 dB

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

Uncertainty :  $\pm 0.01$  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	
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 :  $\pm 0.1$  dB



# Calibration Certificate

Certificate No. 06680

Page 3 of 4 Pages

## 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

Certificate No. 06680

Page 4 of 4 Pages

## 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 <sup>2</sup>	40.0	39.9	
1/10 <sup>3</sup>	40.0	40.3	± 1.0 dB
1/10 <sup>4</sup>	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-----



# Calibration Certificate

Certificate No. 06681

Page 1 of 2 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 : 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).

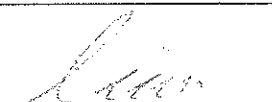
Main Test equipment used:

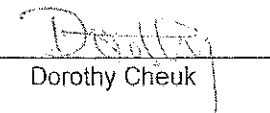
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	03926	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR
S041	Universal Counter	04461	SCL-HKSAR
S206	Sound Level Meter	04462	SCL-HKSAR

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 8846





# Calibration Certificate

Certificate No. 06681

Page 2 of 2 Pages

Results :

## 1. Level

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

The above measured values are the mean of 3 measurements.

Uncertainty :  $\pm 0.1$  dB

## 2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	0.9834 kHz	$\pm 2$ %

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

## 3. Level Stability : 0.0 dB

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

Uncertainty :  $\pm 0.01$  dB

## 4. Total Harmonic Distortion : $< 0.2$ %

IEC 942 Class 1 Spec. :  $< 3$  %

Uncertainty :  $\pm 2.3$  % 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-----



# Calibration Certificate

Certificate No. 03250A

Page 1 of 3 Pages

**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:

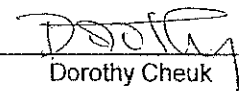
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	93758	NIM-PRC & SCL-HKSAR

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

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# Calibration Certificate

Certificate No. 03250A

Page 2 of 3 Pages

Results :

## 1. SPL Accuracy

UUT Setting		Frequency Weighting	Dynamic Characteristic	Applied Value (dB)	UUT Reading (dB)
Level Range	Filter				
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. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.1$  dB

## 2. Level Stability : 0.0 dB

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

Uncertainty :  $\pm 0.01$  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	$\pm 0.7$ 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 :  $\pm 0.1$  dB



# Calibration Certificate

Certificate No. 03250A

Page 3 of 3 Pages

### 3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	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 <sup>2</sup>	40.0	40.0	
1/10 <sup>3</sup>	40.0	40.1	± 1.0 dB
1/10 <sup>4</sup>	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 -----



# Calibration Certificate

Certificate No. 03445

Page 1 of 2 Pages

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).

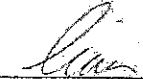
Main Test equipment used:

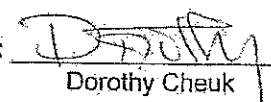
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S024	Sound Level Calibrator	93758	16-Jul-10	NIM-PRC & SCL-HKSAR
S041	Universal Counter	94005	6-Aug-10	SCL-HKSAR

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 8546



# Calibration Certificate

Certificate No. 03445

Page 2 of 2 Pages

Results :

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

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

Uncertainty :  $\pm 0.2$  dB

**2. Frequency Accuracy**

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

Uncertainty :  $\pm 0.1$  %

**3. Level Stability : 0.0 dB**

IEC 942 Class 2 Spec. :  $\pm 1.2$  dB

Uncertainty :  $\pm 0.01$  dB

**4. Total Harmonic Distortion :  $< 1.2$  %**

IEC 942 Class 1 Spec. :  $< 3$  %

Uncertainty :  $\pm 2.3$  % 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 -----

**CERTIFICATE OF CALIBRATION**

Certificate No. : 2KS100612-7

Page 1 of 2

**Calibration of :**

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

**Client :**

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

**Calibration Conditions :**

<b>Air Temperature</b> :	23	°C
<b>Air Pressure</b> :	101.9	kPa
<b>Relative Humidity</b> :	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 :

Certificate issued : 22 July, 2010

Approved signatory :

  
Dai Bin  
Jacky Leung

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## 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.

<b>Test :</b>	<b>Subtest :</b>	<b>Status :</b>
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

<b>Description :</b>	<b>Make &amp; Model :</b>	<b>Serial No. :</b>	<b>Last Cal. Date :</b>	<b>Traceable to:</b>
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSCS (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 : *Dan Rm*  
Date : 22 July 2010

Checked By : *[Signature]*  
Date : 22 July, 2010



**CERTIFICATE OF CALIBRATION****Certificate No. :** 2KS100705-2**Page 1 of 2****Calibration of :**

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

**Client :**

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

**Calibration Conditions :**

<b>Air Temperature :</b>	23	°C
<b>Air Pressure :</b>	101.9	kPa
<b>Relative Humidity :</b>	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 :**

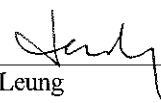
A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 03 Aug, 2010

Certificate issued : 03 Aug, 2010

Calibrated By :

Approved signatory :

  
Dai Bin  
Jacky Leung

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## CERTIFICATE OF CALIBRATION

**Certificate No. :** 2KS100705-2

**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	HKSCS (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 & M*  
Date : 03 Aug 2010

Checked By : *Janly*  
Date : 03 Aug, 2010



ALS Technichem (HK) Pty Ltd

## CERTIFICATE OF ANALYSIS

CONTACT: MS CHERRY MAK  
CLIENT: LAM GEOTECHNICS LIMITED  
ADDRESS: 11/F., CENTRE POINT,  
181-185 GLOUCESTER ROAD,  
WAN CHAI, HONG KONG.

WORK ORDER: HK1027230  
LABORATORY: HONG KONG  
DATE RECEIVED: 17/11/2010  
DATE OF ISSUE: 18/11/2010  
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

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Mr. Fung Lim Chee, Richard  
General Manager

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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

Page 1 of 2

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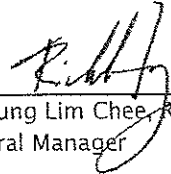
Work Order: HK1027230  
Date of Issue: 18/11/2010  
Client: LAM GEOTECHNICS LIMITED  
Client Reference:

## Calibration of Multimeter

Item : Multimeter Model No.: Multi 3430 Set G  
ALS Lab ID: HK1027230 -001 Equipment No.: --  
Date of Calibration: 18 November, 2010 Serial No.: 10410294

### Testing Results :

	Expected Reading	Recording Reading	Testing Method:
pH	4.00	4.12	APHA (20th edition), 4500-H <sup>+</sup> B
	7.00	7.09	
	10.0	9.98	
	Allowing Deviation	± 0.2 unit	
Temperature	Expected Reading	Recording Reading	Testing Method:
	13.5 °C	13.9 °C	In-House Method
	22.0 °C	21.8 °C	
	33.0 °C	32.8 °C	
Allowing Deviation	±2.0°C		
Salinity	Expected Reading	Recording Reading	Testing Method:
	0 g/L	0 g/L	APHA (20th edition), 2520 A and B
	10.0 g/L	10.3 g/L	
	20.0 g/L	20.6 g/L	
30.0 g/L	31.0 g/L		
Allowing Deviation	± 10%		
Dissolved Oxygen	Expected Reading	Recording Reading	Testing Method:
	5.56 mg/L	5.52 mg/L	APHA (20th edition), 4500-OC & C
	6.69 mg/L	6.66 mg/L	
	8.39 mg/L	8.37 mg/L	
Allowing Deviation	± 0.2 mg/L		

  
Mr. Fung Lim Chee, Richard  
General Manager



ALS Technichem (HK) Pty Ltd

## CERTIFICATE OF ANALYSIS

CONTACT: MS CHERRY MAK  
CLIENT: LAM GEOTECHNICS LIMITED  
ADDRESS: 11/F., CENTRE POINT,  
181-185 GLOUCESTER ROAD,  
WAN CHAI, HONG KONG  
PROJECT: --

WORK ORDER: HK1031088  
LABORATORY: HONG KONG  
DATE RECEIVED: 30/12/2010  
DATE OF ISSUE: 04/01/2011  
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

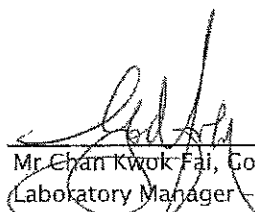
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Mr. Chan Kwok Fai, Godfrey  
Laboratory Manager - Hong Kong

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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

Page 1 of 2

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# CERTIFICATE OF ANALYSIS



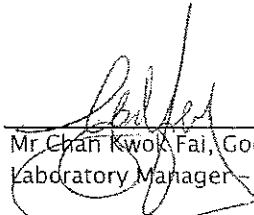
**Work Order:** HK1031088  
**Date of Issue:** 04/01/2011  
**Client:** LAM GEOTECHNICS LIMITED  
**Client Reference:**

**Calibration of Multimeter**

**Item :** Sonde **Model No.:** YSI Sonde 600XL  
**ALS Lab ID:** HK1031088 -001 **Equipment No.:** EL424  
**Date of Calibration:** 31 December, 2010 **Serial No.:** 05C1607

**Testing Results :**

pH	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">Expected Reading</th> <th style="width: 50%;">Recording Reading</th> </tr> </thead> <tbody> <tr> <td>4.00</td> <td>3.88</td> </tr> <tr> <td>7.00</td> <td>7.07</td> </tr> <tr> <td>10.0</td> <td>9.90</td> </tr> <tr> <td>Allowing Deviation</td> <td>± 0.2 unit</td> </tr> </tbody> </table>	Expected Reading	Recording Reading	4.00	3.88	7.00	7.07	10.0	9.90	Allowing Deviation	± 0.2 unit	<p><b>Testing Method:</b> APHA (20th edition), 4500-H<sup>+</sup>B</p>		
Expected Reading	Recording Reading													
4.00	3.88													
7.00	7.07													
10.0	9.90													
Allowing Deviation	± 0.2 unit													
Conductivity	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">Expected Reading</th> <th style="width: 50%;">Recording Reading</th> </tr> </thead> <tbody> <tr> <td>146.9 uS/cm</td> <td>146.0 uS/cm</td> </tr> <tr> <td>6667 uS/cm</td> <td>6230 uS/cm</td> </tr> <tr> <td>12890 uS/cm</td> <td>12473 uS/cm</td> </tr> <tr> <td>58670 uS/cm</td> <td>54244 uS/cm</td> </tr> <tr> <td>Allowing Deviation</td> <td>± 10%</td> </tr> </tbody> </table>	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%	<p><b>Testing Method:</b> APHA (20th edition), 2510B</p>
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%													
Temperature	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">Expected Reading</th> <th style="width: 50%;">Recording Reading</th> </tr> </thead> <tbody> <tr> <td>14.5 °C</td> <td>14.9 °C</td> </tr> <tr> <td>22.5 °C</td> <td>22.3 °C</td> </tr> <tr> <td>34.0 °C</td> <td>34.3 °C</td> </tr> <tr> <td>Allowing Deviation</td> <td>±2.0°C</td> </tr> </tbody> </table>	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	<p><b>Testing Method:</b> In-House Method</p>		
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													
Salinity	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">Expected Reading</th> <th style="width: 50%;">Recording Reading</th> </tr> </thead> <tbody> <tr> <td>0 g/L</td> <td>0 g/L</td> </tr> <tr> <td>10.0 g/L</td> <td>9.61 g/L</td> </tr> <tr> <td>20.0 g/L</td> <td>19.8 g/L</td> </tr> <tr> <td>30.0 g/L</td> <td>29.9 g/L</td> </tr> <tr> <td>Allowing Deviation</td> <td>± 10%</td> </tr> </tbody> </table>	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%	<p><b>Testing Method:</b> APHA (20th edition), 2520 A and B</p>
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%													
Dissolved Oxygen	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">Expected Reading</th> <th style="width: 50%;">Recording Reading</th> </tr> </thead> <tbody> <tr> <td>6.61 mg/L</td> <td>6.65 mg/L</td> </tr> <tr> <td>7.94 mg/L</td> <td>8.03 mg/L</td> </tr> <tr> <td>8.69 mg/L</td> <td>8.61 mg/L</td> </tr> <tr> <td>Allowing Deviation</td> <td>± 0.2 mg/L</td> </tr> </tbody> </table>	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	<p><b>Testing Method:</b> APHA (20th edition), 4500-OC &amp; C</p>		
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													

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



ALS Technichem (HK) Pty Ltd

## CERTIFICATE OF ANALYSIS

CONTACT: MS CHERRY MAK  
CLIENT: LAM GEOTECHNICS LIMITED  
ADDRESS: 11/F., CENTRE POINT,  
181-185 GLOUCESTER ROAD,  
WAN CHAI, HONG KONG  
PROJECT: --

WORK ORDER: HK1100487  
LABORATORY: HONG KONG  
DATE RECEIVED: 06/01/2011  
DATE OF ISSUE: 11/01/2011  
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

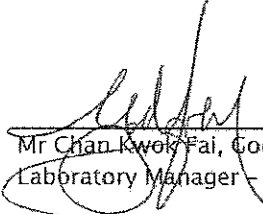
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Email: hongkong@alsenviro.com

  
Mr Chan Kwok Fai, Godfrey  
Laboratory Manager - Hong Kong

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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

Page 1 of 2

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# CERTIFICATE OF ANALYSIS



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

**Calibration of Multimeter**

**Item :** Sonde **Model No.:** YSI Professional Plus  
**ALS Lab ID:** HK1100487-001 **Equipment No.:** --  
**Date of Calibration:** 07 January, 2011 **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<sup>+</sup>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:**

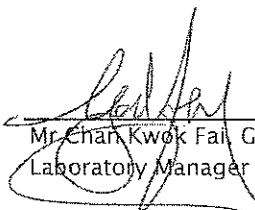
APHA (20th edition), 2520 A and B

**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  
CLIENT: LAM GEOTECHNICS LIMITED  
ADDRESS: 11/F., CENTRE POINT,  
181-185 GLOUCESTER ROAD,  
WAN CHAI, HONG KONG.

WORK ORDER: HK1027605  
LABORATORY: HONG KONG  
DATE RECEIVED: 20/11/2010  
DATE OF ISSUE: 24/11/2010  
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

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Mr Chan Kwok Fai, Godfrey  
Laboratory Manager - Hong Kong

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CHK denotes duplicate check sample  
LOR denotes limit of reporting  
LCS % REC denotes Laboratory Control Sample percentage recovery

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# CERTIFICATE OF ANALYSIS



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

## Calibration of Turbidimeter

Item : TURBIDIMETER Model No.: HACH 2100P  
ALS Lab ID: HK1027605-001 Equipment No.: EL148  
Date of Calibration: 22 November, 2010 Serial No.: 931000003861

Testing Results :

Turbidity

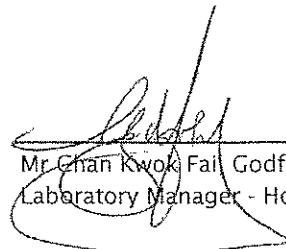
Expected Reading	Recording Reading
0.00 NTU	0.27 NTU
4.00 NTU	4.24 NTU
40.0 NTU	38.7 NTU
80.0 NTU	76.1 NTU
400 NTU	392 NTU
Allowing Deviation	± 10%

Testing Method:

APHA (19th edition), 2130B

ALS Technichem (HK) Pty Ltd

**ALS Environmental**

  
Mr. Chan Kwok Fai Godfrey  
Laboratory Manager - Hong Kong

# ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

## ALS Technichem (HK) Pty Ltd

Environmental Division



### CERTIFICATE OF ANALYSIS

**CONTACT:** MS CHERRY MAK  
**CLIENT:** LAM GEOTECHNICS LIMITED  
**ADDRESS:** 11/F., CENTRE POINT,  
181-185 GLOUCESTER ROAD,  
WAN CHAI, HONG KONG.

**WORK ORDER:** HK1026497  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 10/11/2010  
**DATE OF ISSUE:** 11/11/2010  
**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

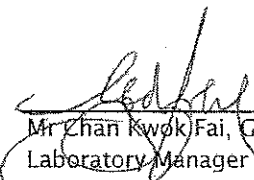
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**Fax:** 852-2610 2021  
**Email:** hongkong@alsenviro.com

  
Mr. Chan Kwok Fai, Godfrey  
Laboratory Manager Hong Kong

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Melbourne	Singapore
Sydney	Vancouver
Newcastle	Santiago
	Artofagasta
	Lima

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Page 1 of 2

# CERTIFICATE OF ANALYSIS



Batch: HK1026497  
Date of Issue: 11/11/2010  
Client: LAM GEOTECHNICS LIMITED  
Client Reference:

## Calibration of Turbidimeter

Item : TURBIDIMETER  
ALS Lab ID: HK1026497-001  
Date of Calibration: 10 November, 2010

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

Testing Results :

Turbidity

Expected Reading	Recording Reading
0.00 NTU	0.20 NTU
4.00 NTU	3.82 NTU
40.0 NTU	38.2 NTU
80.0 NTU	78.5 NTU
400 NTU	373 NTU
Allowing Deviation	± 10%

Testing Method:

APHA (19th edition), 2130B

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



TISCH ENVIRONMENTAL, INC.  
 145 SOUTH MIAMI AVE.  
 VILLAGE OF CLEVELAND, 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 Rootsometer 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	ORFICE
					DIFF Hg (mm)	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

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

$$Qstd = Vstd / \text{Time}$$

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

$$Qa = Va / \text{Time}$$

For subsequent flow rate calculations:

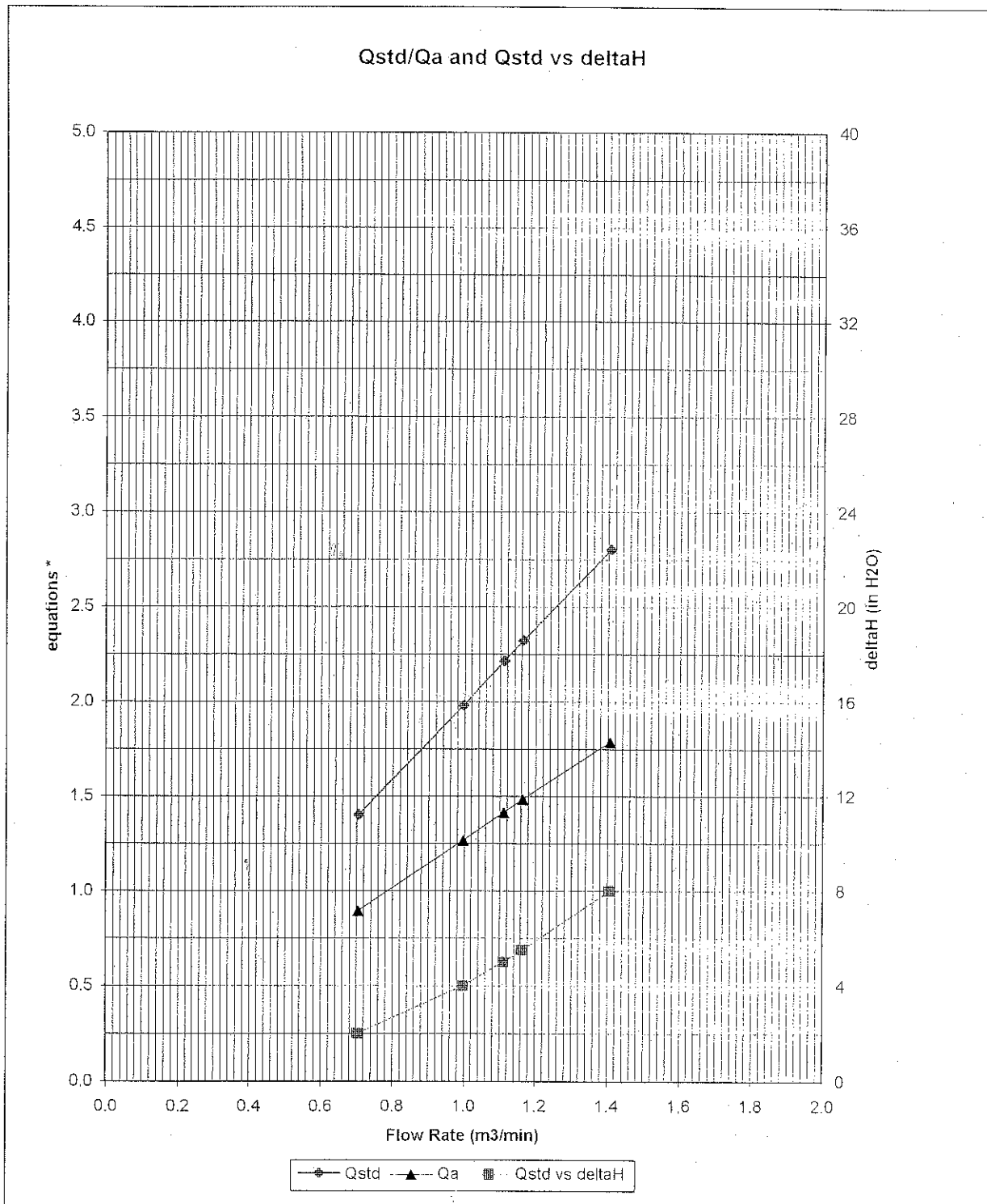
$$Qstd = 1/m \{ [\text{SQRT}(H2O(Pa/760)(298/Ta))] - b \}$$

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



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AIR POLLUTION MONITORING EQUIPMENT



\* y-axis equations:

Qstd series: 
$$\sqrt{\Delta H \left( \frac{P_a}{P_{std}} \right) \left( \frac{T_{std}}{T_a} \right)}$$

Qa series: 
$$\sqrt{(\Delta H (T_a / P_a))}$$

#0005



Lam Geotechnics Limited

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

Location : CMA1b  
 Equipment no. : EL452

Calibration Date : 28-Dec-10  
 Calibration Due Date : 28-Feb-11

#### CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, $T_a$	293	Kelvin	Pressure, $P_a$
			1020 mmHg

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

Calibration of RSP						
Calibration Point	Manometer Reading			$Q_{std}$ ( $m^3 / min.$ ) 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	6.5	6.5	13.0	1.8625	59	59.6977
2	5.3	5.3	10.6	1.6852	54	54.6385
3	3.9	3.9	7.8	1.4506	48	48.5676
4	2.5	2.5	5.0	1.1684	37	37.4375
5	1.5	1.5	3.0	0.9129	29	29.3429

By Linear Regression of Y on X

Slope, m	=	32.3952	Intercept, b	=	0.0678
Correlation Coefficient*	=	0.9975			
Calibration Accepted	=	Yes/No**			

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

\*\* Delete as appropriate.

Remarks : \_\_\_\_\_

Calibrated by : Derek Lo  
 Date : 28-Dec-10

Checked by : Cherry Mak  
 Date : 28-Dec-10



Lam Geotechnics Limited

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

Location : CMA2a Calibration Date : 28-Dec-10  
 Equipment no. : EL449 Calibration Due Date : 28-Feb-11

#### CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, $T_a$	293	Kelvin	Pressure, $P_a$
			1020 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, $m_c$	1.99628	Intercept, $b_c$	-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			$Q_{std}$ ( $m^3 / min.$ ) X-axis	Continuous Flow Recorder, W (CFM)	IC ( $W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$ ) Y-axis
	H (inches of water)					
	(up)	(down)	(difference)			
1	6.5	6.5	13.0	1.8625	52	52.6149
2	5.2	5.2	10.4	1.6696	47	47.5558
3	4.0	4.0	8.0	1.4686	40	40.4730
4	2.6	2.6	5.2	1.1908	30	30.3547
5	1.5	1.5	3.0	0.9129	18	18.2128

By Linear Regression of Y on X

Slope, m = 36.4116                      Intercept, b = -13.8945

Correlation Coefficient\* = 0.9967

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-Dec-10 Date : 28-Dec-10





Lam Geotechnics Limited

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

Location : CMA4a  
 Equipment no. : EL390

Calibration Date : 22-Nov-10  
 Calibration Due Date : 22-Jan-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, $b_c$	-0.06990
Last Calibration Date	28-Jun-10	$\left( \frac{H \times P_a}{1013.3 \times 298 / T_a} \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-11				

Calibration of RSP						
Calibration Point	Manometer Reading			$Q_{std}$ ( $m^3 / min.$ ) 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	6.1	6.1	12.2	1.7830	58	57.9454
2	4.9	4.9	9.8	1.6017	51	50.9520
3	3.7	3.7	7.4	1.3964	44	43.9586
4	2.4	2.4	4.8	1.1315	35	34.9671
5	1.5	1.5	3.0	0.9018	24	23.9774

By Linear Regression of Y on X

Slope,  $m$  = 37.6189      Intercept,  $b$  = -8.9104  
 Correlation Coefficient\* = 0.9978  
 Calibration Accepted = Yes/No\*\*

\* if Correlation Coefficient &lt; 0.990, check and recalibration again.

\*\* Delete as appropriate.

Remarks : \_\_\_\_\_

Calibrated by : Derek Lo  
 Date : 22-Nov-10

Checked by : Cherry Mak  
 Date : 22-Nov-10



Lam Geotechnics Limited

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

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

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	297	Kelvin	Pressure, P <sub>a</sub>
			1008 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99628	Intercept, b <sub>c</sub>	-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 <sub>c</sub> × Q <sub>std</sub> + b <sub>c</sub>			

Calibration of RSP						
Calibration Point	Manometer Reading H (inches of water)			Q <sub>std</sub> (m <sup>3</sup> / min.)	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$
	(up)	(down)	(difference)	X-axis	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



***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**  
**January 2011**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>26-Dec</b>	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	<b>1-Jan</b>
		Impact WQM Mid-flood: 12:09 Mid-ebb: 18:19	24hr TSP Noise (Day time)	1hr TSP x 3  Impact WQM Mid-flood: 13:43 Mid-ebb: 20:58		Impact WQM Mid-flood: 15:20 Mid-ebb: 22:45
<b>2-Jan</b>	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan
	Impact WQM Mid-flood: 16:53	24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2000 Impact WQM Mid-ebb: 0:06	1hr TSP x 3  Impact WQM Mid-flood: 18:17	Impact WQM Mid-ebb: 1:20		Impact WQM Mid-ebb: 2:22 Mid-flood: 9:37
<b>9-Jan</b>	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan
	24hr TSP  Impact WQM Mid-flood: 10:38	1hr TSP x 3  Impact WQM Mid-ebb: 3:35	Noise (Day time) Noise (Restricted hr) 1900-2000	Impact WQM Mid-flood: 12:09 Mid-ebb: 19:38		24hr TSP  Impact WQM Mid-flood: 13:11 Mid-ebb: 21:43
<b>16-Jan</b>	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan
	1hr TSP x 3  Impact WQM Mid-flood: 15:11 Mid-ebb: 22:57	Noise (Day time) Noise (Restricted hr) 1900-2000	Impact WQM Mid-flood: 17:08	Impact WQM Mid-ebb: 0:22	24hr TSP	1hr TSP x 3  Impact WQM Mid-flood: 8:33 Mid-ebb: 14:09
<b>23-Jan</b>	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan
	Impact WQM Mid-flood: 9:49 Mid-ebb: 15:44	Noise (Day time) Noise (Restricted hr) 1900-2000	Impact WQM Mid-flood: 11:15 Mid-ebb: 17:46	24hr TSP		

**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**  
**February 2011**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>23-Jan</b>	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan
					1hr TSP x 3  Impact WQM Mid-flood: 12:50 Mid-ebb: 21:28	
<b>30-Jan</b>	31-Jan	1-Feb	2-Feb	<b>3-Feb</b>	<b>4-Feb</b>	<b>5-Feb</b>
	Impact WQM Mid-flood: 15:55 Mid-ebb: 23:18	24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2000	1hr TSP x 3  Impact WQM Mid-flood: 17:30	Impact WQM  Mid-ebb: 0:28	Impact WQM Mid-ebb: 13:28 Mid-flood: 18:50	
<b>6-Feb</b>	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb
	Impact WQM Mid-flood: 9:01 Mid-ebb: 14:58	24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2000	1hr TSP x 3  Impact WQM Mid-flood: 9:50 Mid-ebb: 16:14		Impact WQM Mid-flood: 10:46 Mid-ebb: 18:19	
<b>13-Feb</b>	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb
	24hr TSP  Impact WQM Mid-flood: 9:35 Mid-ebb: 21:51	1hr TSP x 3	Impact WQM Mid-flood: 16:10 Mid-ebb: 23:20	Noise (Day time) Noise (Restricted hr) 1900-2000	Impact WQM Mid-ebb: 12:24 Mid-flood: 18:09	24hr TSP
<b>20-Feb</b>	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb
	1hr TSP x 3  Impact WQM Mid-flood: 8:26 Mid-ebb: 14:28	Noise (Day time) Noise (Restricted hr) 1900-2000	Impact WQM Mid-flood: 9:38 Mid-ebb: 16:03		24hr TSP  Impact WQM Mid-flood: 11:02 Mid-ebb: 19:42	1hr TSP x 3
<b>27-Feb</b>	28-Feb	1-Mar	2-Mar	3-Mar	4-Mar	5-Mar

**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**  
**March 2011**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Feb	28-Feb	1-Mar	2-Mar	3-Mar	4-Mar	5-Mar
	Impact WQM Mid-flood: 14:41 Mid-ebb: 22:17	Noise (Day time) Noise (Restricted hr) 1900-2000 Impact WQM	Impact WQM Mid-flood: 16:41 Mid-ebb: 23:32	24hr TSP	1hr TSP x 3  Impact WQM Mid-ebb: 12:29 Mid-flood: 18:06	
6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar	12-Mar
	Impact WQM Mid-ebb: 13:53 Mid-flood: 19:58	Noise (Day time) Noise (Restricted hr) 1900-2000	24hr TSP  Impact WQM Mid-flood: 8:27 Mid-ebb: 14:53	1hr TSP x 3	Impact WQM Mid-flood: 8:53 Mid-ebb: 15:58	
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
Impact WQM Mid-flood: 9:51 Mid-ebb: 18:31		24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2000	1hr TSP x 3  Impact WQM Mid-flood: 14:55 Mid-ebb: 22:05		Impact WQM Mid-ebb: 11:20 Mid-flood: 17:11	
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
	24hr TSP  Impact WQM Mid-ebb: 13:22 Mid-flood: 19:48	1hr TSP x 3	Impact WQM Mid-flood: 8:22 Mid-ebb: 14:50	Noise (Day time) Noise (Restricted hr) 1900-2000	Impact WQM Mid-flood: 9:34 Mid-ebb: 16:48	24hr TSP
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)**

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 and C7 (Commenced on 9 Nov 2010)
  - Contract HK/2009/01: WSD7, WSD19, WSD20, C1, C2, C3, C4e, C4w (Commenced on 8 July 2010)
  - Contract HK/2009/02: WSD21, C5e, C5w (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 and CMA6a (Commenced on 12 May 2010, To be reported in Monthly report when filling work was commenced)
  - Contract HK/2009/02: (Commenced on 30 Mar 2010, To be reported in Monthly report in Jan 2011)
  - Contract HY/2009/11: CMA1b and CMA2a (Commenced on 17 Jun 2010, To be reported in Monthly report on 11 Aug 2010) and CMA2a (Commenced on 12 May 2010, To be reported in Monthly report on 11 Aug 2010)
  - Contract HY/2009/15: CMA3a (To be commenced when the power supply is available)

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 Quality Monitoring Stations corresponding to active contracts are sub-divided below:
  - Contract HK/2009/01 and HK/2009/02: M1a (Commenced on 30 Mar 2010, To be reported in Monthly report on 6 July 2010)
  - Contract HY/2009/11: M4b, M5b (Commenced on 23 Mar 2010 when dredging work starts)
  - Contract HY/2009/15: M2b (Commenced and reported on 10 Nov 2010) and M3a (Commenced on 10 May 2010, To be reported in Monthly report on 10 Nov 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): Contracts HY/2009/11, HK/2009/02 and HY/2009/15



***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)								
29/12/10	10:21	Fine	72.2	75.0	68.1	69.2	69	75
04/01/11	10:28	Cloudy	73.3	76.0	66.6	69.2	71	75
12/01/11	9:47	Cloudy	74.9	77.7	70.6	69.2	74	75
18/01/11	10:41	Sunny	74.2	79.1	66.8	69.2	73	75
25/01/11	10:25	Hazy	73.1	76.1	68.7	69.2	71	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)								
29/12/10	11:07	Fine	70.5	72.3	67.8	-	71	75
04/01/11	11:14	Cloudy	70.1	72.0	67.4	-	70	75
12/01/11	10:32	Cloudy	70.0	71.7	67.9	-	70	75
18/01/11	11:23	Sunny	68.8	70.8	66.0	-	69	75
25/01/11	11:08	Fine	68.9	70.7	66.7	-	69	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)								
29/12/10	13:00	Fine	68.5	69.9	65.4	-	69	75
04/01/11	13:00	Cloudy	67.0	68.9	64.7	-	67	75
12/01/11	11:15	Cloudy	68.4	69.9	66.7	-	68	75
18/01/11	13:00	Sunny	66.8	68.9	64.4	-	67	75
25/01/11	13:00	Fine	67.2	69.3	64.8	-	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)								
29/12/10	13:42	Sunny	70.0	71.6	67.6	-	70	75
04/01/11	13:46	Cloudy	73.9	77.2	70.6	-	74	75
12/01/11	13:10	Cloudy	74.4	76.2	70.3	-	74	75
18/01/11	13:38	Sunny	73.6	76.8	69.4	-	74	75
25/01/11	13:40	Sunny	72.9	75.0	69.8	-	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)								
29/12/10	15:48	Fine	71.7	74.9	68.0	-	72	75
04/01/11	15:22	Cloudy	69.5	70.7	67.9	-	70	75
12/01/11	14:02	Cloudy	70.2	71.5	68.5	-	70	75
18/01/11	15:10	Sunny	68.0	69.4	66.4	-	68	75
25/01/11	15:04	Sunny	71.0	73.9	67.5	-	71	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)									
04/01/11	20:51	Cloudy	67.0	68.9	64.7	66.9	-	67	70
	20:56		67.1	68.9	65.0				
	21:01		66.7	68.3	64.7				
12/01/11	21:03	Cloudy	66.9	68.8	64.6	67.4	-	67	70
	21:08		67.5	69.0	64.6				
	21:13		67.7	69.9	65.0				
18/01/11	19:21	Fine	69.1	71.7	65.7	68.7	-	69	70
	19:26		68.2	70.1	65.7				
	19:31		68.7	70.9	65.9				
25/01/11	19:32	Fine	66.6	68.3	64.9	67.1	-	67	70
	19:37		67.4	71.1	65.0				
	19:42		67.4	68.6	65.1				

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)									
04/01/11	21:17	Cloudy	66.4	67.7	64.9	66.5	-	67	70
	21:22		66.7	67.9	65.3				
	21:27		66.4	67.6	65.2				
12/01/11	21:35	Cloudy	65.7	66.6	64.3	65.9	-	66	70
	21:40		65.9	67.1	64.4				
	21:45		66.1	67.8	64.3				
18/01/11	20:54	Fine	66.2	66.7	64.7	65.9	-	66	70
	20:59		65.8	66.7	64.8				
	21:04		65.7	66.8	64.1				
22/01/11	19:00	Fine	67.2	68.2	65.9	67.4	-	67	70
	19:05		67.8	68.9	66.7				
	19:10		67.3	68.4	66.1				

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)									
04/01/11	19:12	Cloudy	72.0	75.2	66.5	71.4	61.1	71	70
	19:17		71.7	75.0	64.9				
	19:22		70.4	72.5	63.4				
12/01/11	19:17	Cloudy	73.0	76.4	66.6	72.8	61.1	73	70
	19:22		72.3	74.6	66.9				
	19:27		73.2	76.6	68.5				
18/01/11	21:35	Fine	69.8	72.0	64.7	69.7	61.1	69	70
	21:45		69.4	72.0	64.6				
	21:50		69.9	72.9	64.9				
25/01/11	21:06	Fine	70.7	72.5	66.7	70.4	61.1	70	70
	21:11		71.4	73.9	65.7				
	21:16		69.0	71.5	63.9				



**Noise Monitoring Result**

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

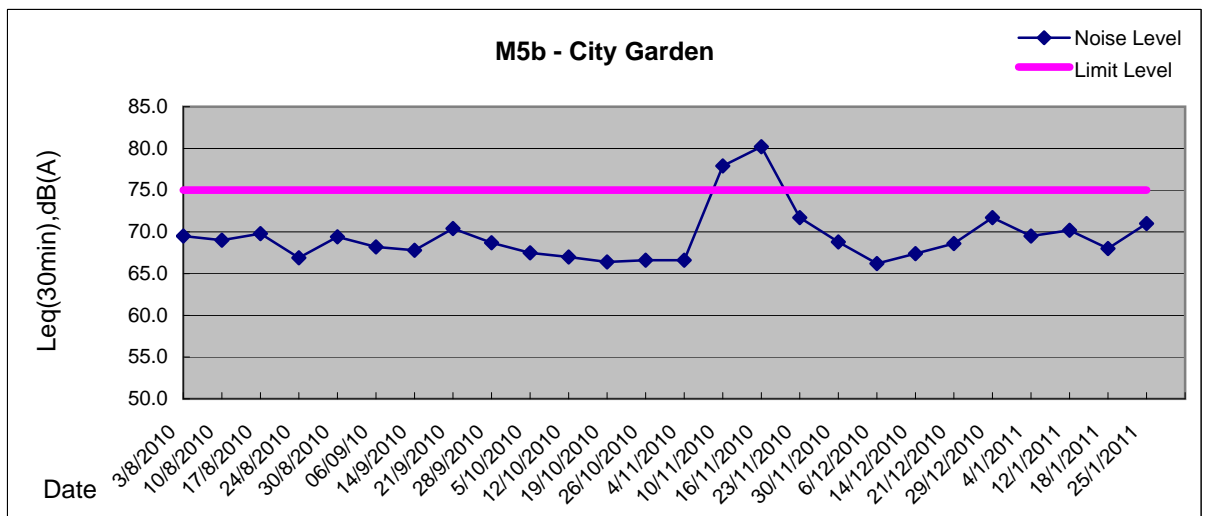
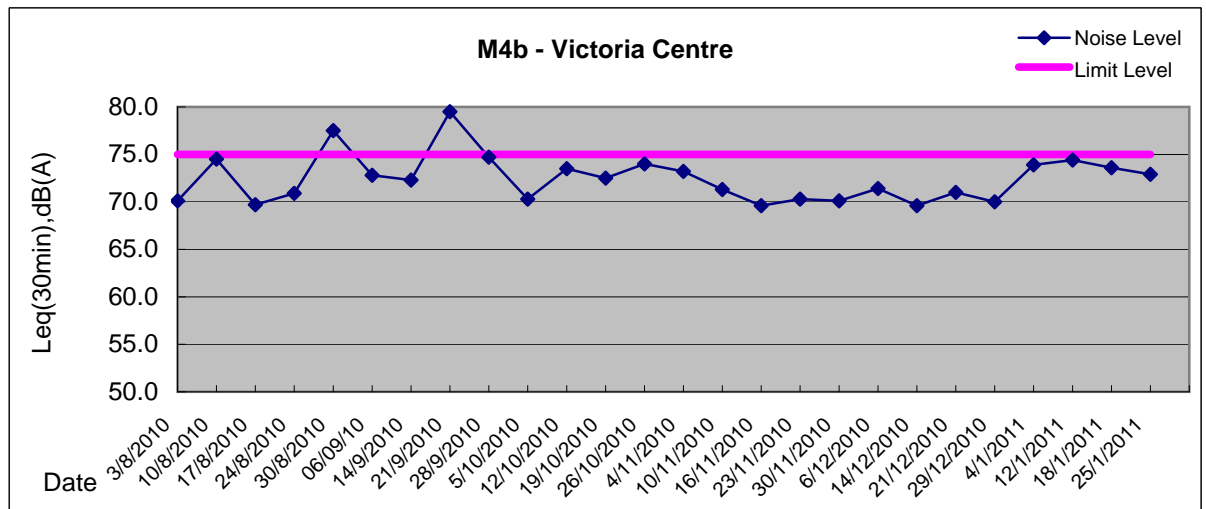
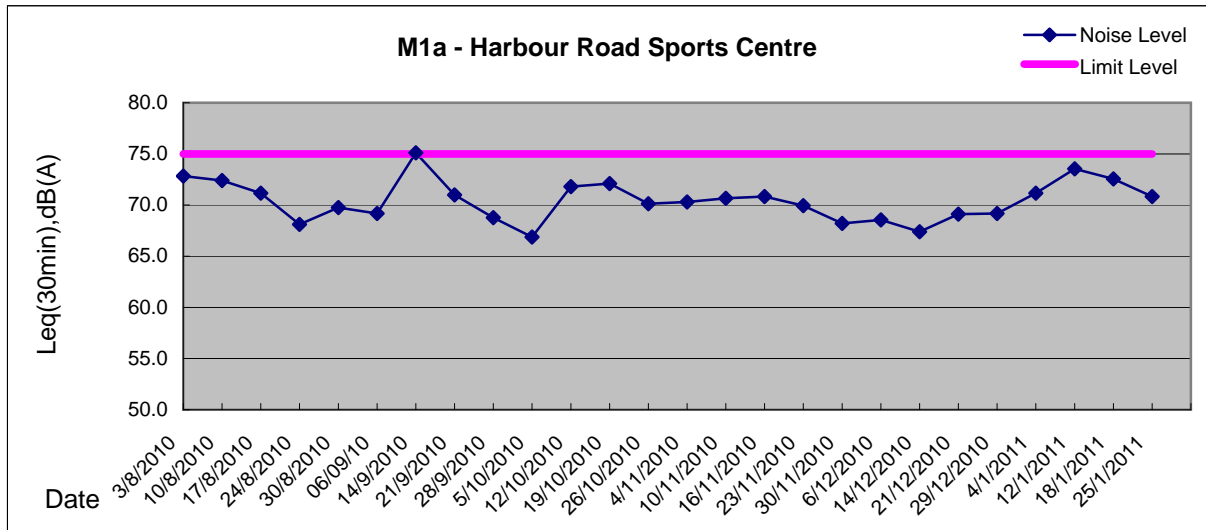
Location: M2b -Noon-day gun area

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)									
04/01/11	19:59	Cloudy	67.1	69.2	64.3	67.2	-	67	70
	20:04		67.2	68.5	65.2				
	20:09		67.2	68.6	65.5				
12/01/11	20:03	Cloudy	67.1	68.8	64.5	66.7	-	67	70
	20:08		66.2	67.4	64.8				
	20:13		66.7	68.1	65.0				
18/01/11	19:21	Fine	69.1	71.7	65.7	68.7	-	69	70
	19:26		68.2	70.1	65.7				
	19:31		68.7	70.9	65.9				
25/01/11	20:31	Fine	68.2	70.1	66.0	68.2	-	68	70
	20:36		68.0	69.2	66.1				
	20:41		68.4	69.4	66.1				

Location: M3a - Tung Lo Wan Fire Station

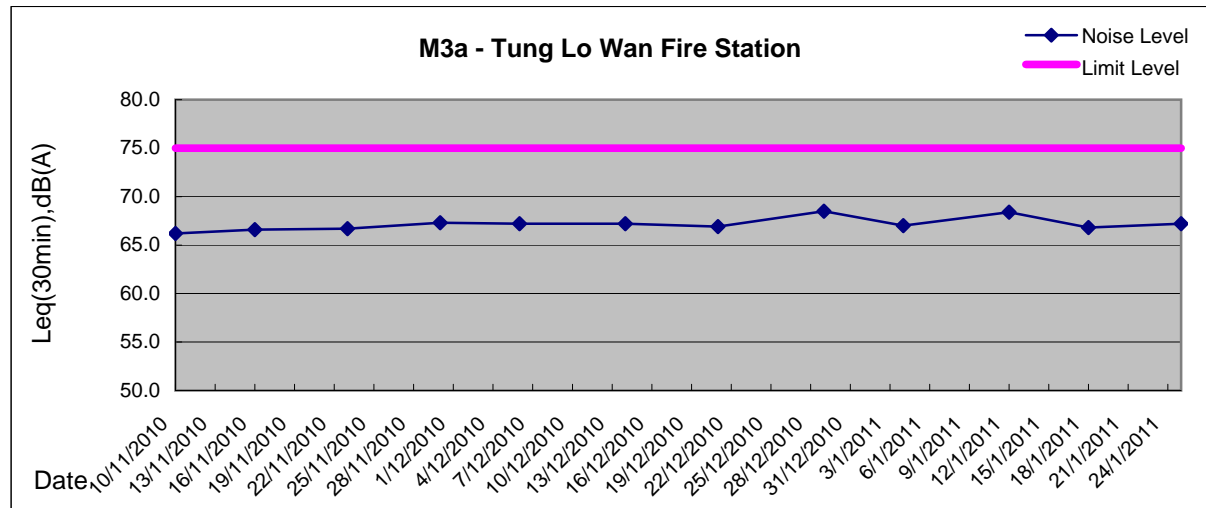
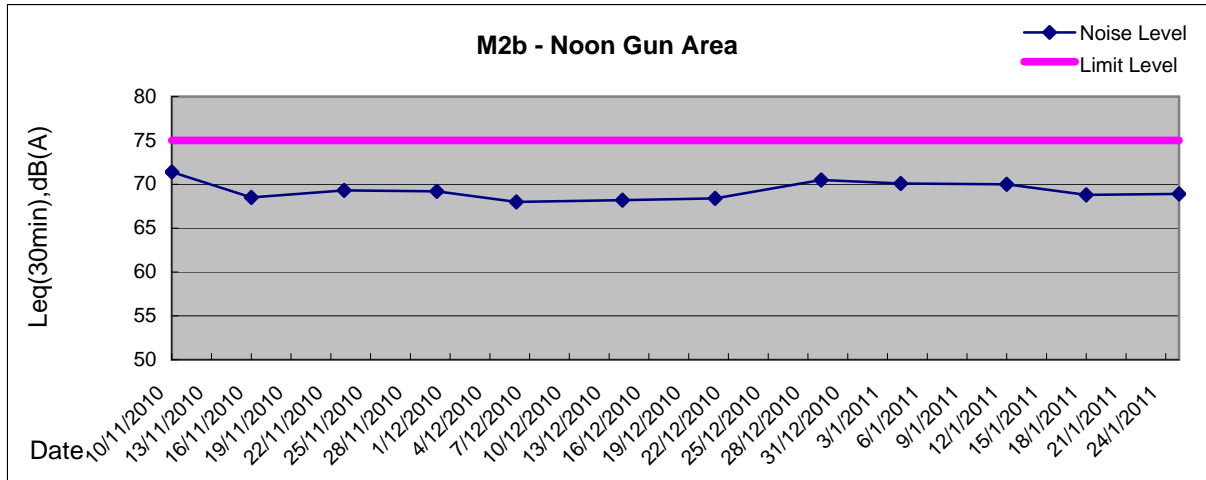
Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
Unit: dB(A), (5-min)									
04/01/11	20:30	Cloudy	67.1	69.2	64.3	67.2	-	67	70
	20:35		67.2	68.5	65.2				
	20:40		67.2	68.6	65.5				
12/01/11	20:36	Cloudy	65.3	66.6	63.8	65.5	-	66	70
	20:41		66.2	68.5	63.5				
	20:46		65.1	67.1	62.8				
18/01/11	19:49	Fine	67.4	69.6	64.8	68.1	-	68	70
	19:54		68.6	70.8	65.4				
	19:59		68.3	70.7	65.1				
25/01/11	19:59	Fine	66.2	68.3	63.7	66.4	-	66	70
	20:04		66.3	68.4	63.5				
	20:09		66.7	68.8	63.8				

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





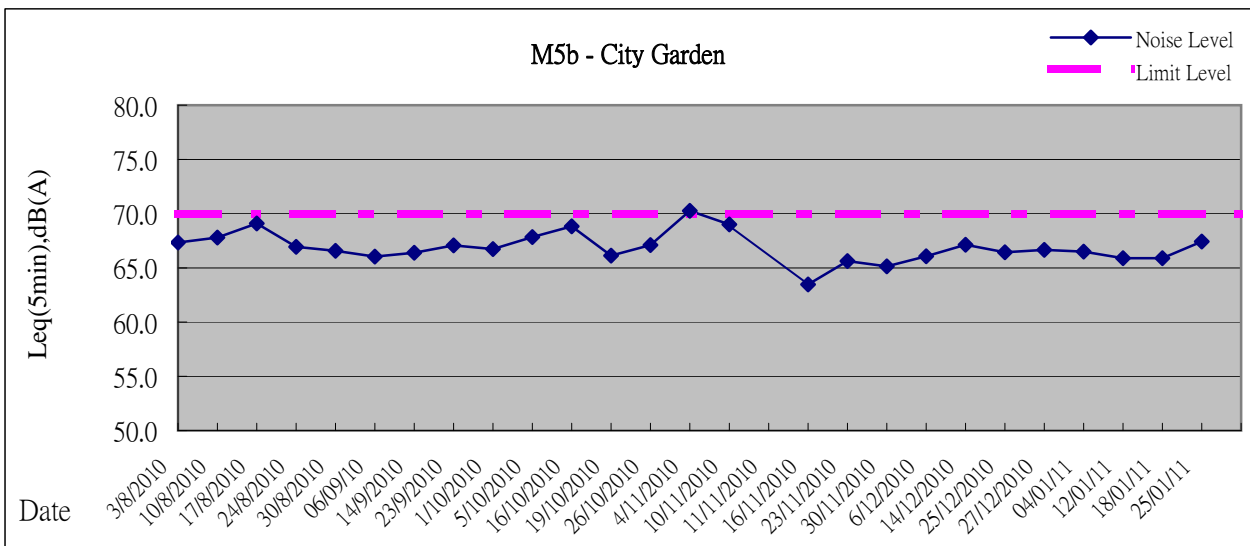
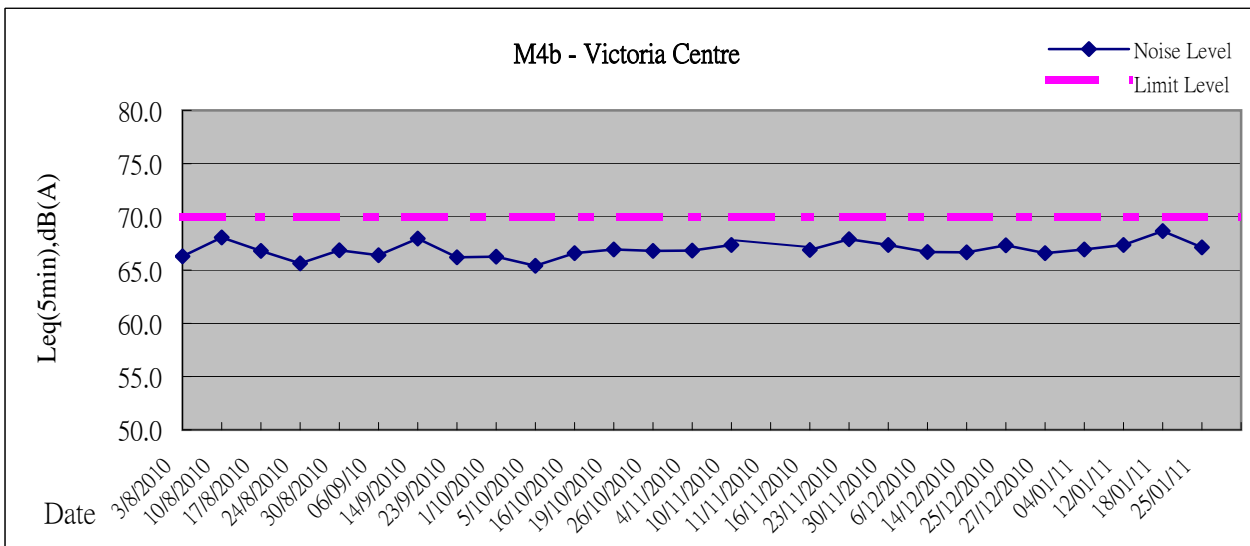
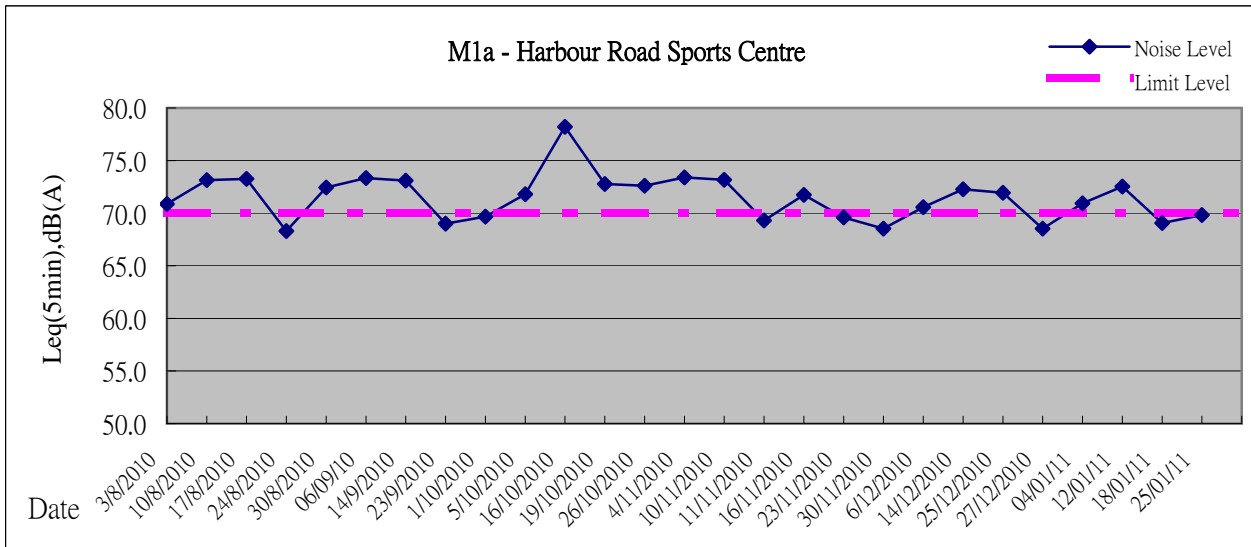
**Graphic Presentation of Noise Monitoring Result**  
**Day Time (0700 - 1900hrs on normal weekdays)**





**Graphic Presentation of Noise Monitoring Result**

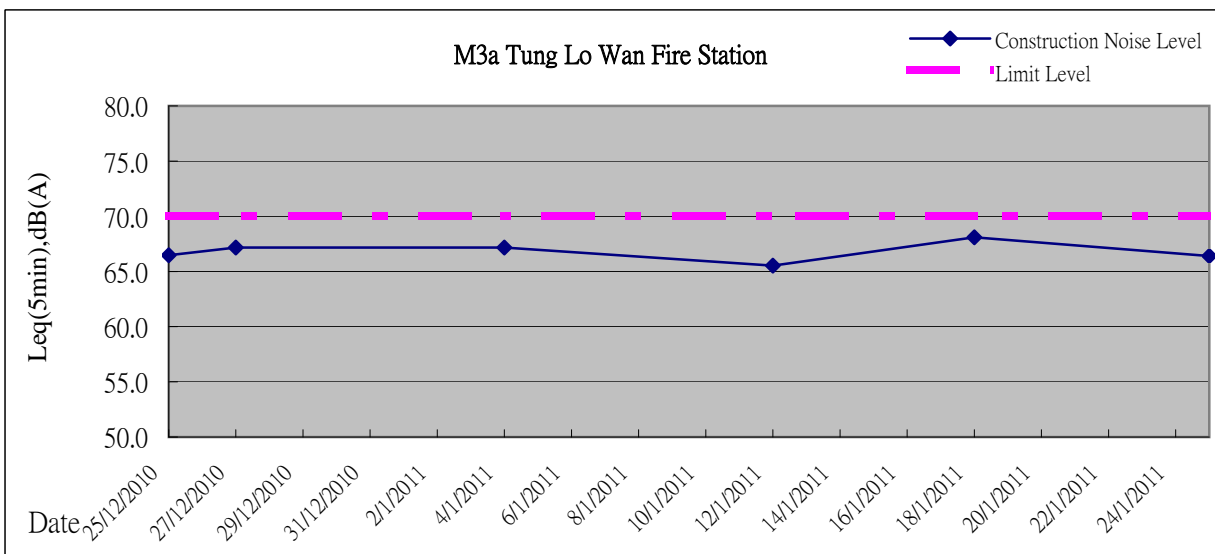
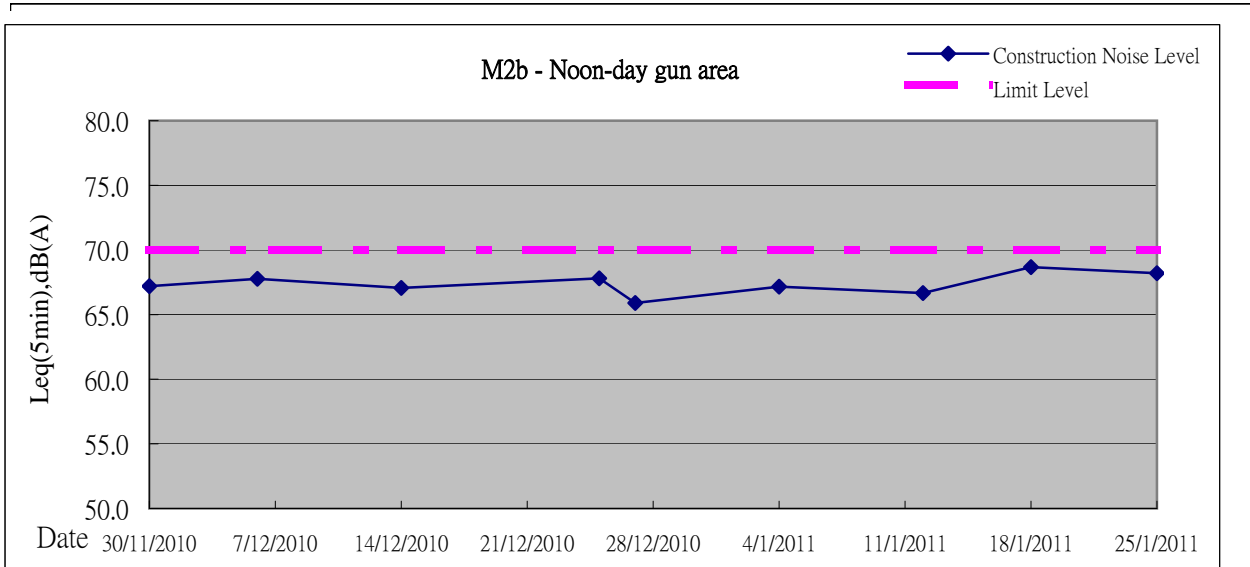
**Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)**





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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
29-Dec-10	8:00	Fine	201864	2.8020	3.0300	9015.80	9039.80	24.00	1.11	1.11	1.11	1599	143
4-Jan-11	8:00	Hazy	201929	2.7518	2.9275	9042.80	9066.79	23.99	1.16	1.15	1.16	1666	105
10-Jan-11	8:00	Hazy	201965	2.7322	3.1049	9069.79	9093.79	24.00	1.47	1.47	1.47	2120	176
15-Jan-11	8:00	Hazy	202011	2.8579	3.1923	9096.79	9120.79	24.00	1.37	1.37	1.37	1966	170
21-Jan-11	8:00	Hazy	202018	2.8639	3.0877	9123.79	9147.79	24.00	1.18	1.18	1.18	1702	131
27-Jan-11	8:00	Hazy	202044	2.8494	3.1420	9150.79	9174.79	24.00	1.16	1.16	1.16	1665	176

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
30-Dec-10	11:00	Fine	201922	2.7602	2.7805	9039.80	9040.80	1.00	1.14	1.14	1.14	68	297
30-Dec-10	13:00	Fine	201924	2.7710	2.7907	9040.80	9041.80	1.00	1.14	1.14	1.14	68	288
30-Dec-10	14:17	Fine	201928	2.7584	2.7799	9041.80	9042.80	1.00	1.14	1.14	1.14	68	314
5-Jan-11	8:05	Hazy	201953	2.7295	2.7451	9066.79	9067.79	1.00	1.09	1.09	1.09	65	238
5-Jan-11	9:10	Hazy	201963	2.7248	2.7405	9067.79	9068.79	1.00	1.09	1.09	1.09	65	241
5-Jan-11	11:15	Hazy	201943	2.7376	2.7546	9068.79	9069.79	1.00	1.09	1.09	1.09	65	261
11-Jan-11	8:05	Hazy	201999	2.7292	2.7463	9093.79	9094.79	1.00	1.31	1.31	1.31	78	218
11-Jan-11	9:08	Hazy	202009	2.8591	2.8793	9094.79	9095.79	1.00	1.28	1.25	1.26	76	267
11-Jan-11	10:20	Hazy	202010	2.8685	2.8874	9095.79	9096.79	1.00	1.22	1.22	1.22	73	259
17-Jan-11	8:05	Hazy	201975	2.7348	2.7487	9120.79	9121.79	1.00	1.15	1.15	1.15	69	201
17-Jan-11	9:10	Hazy	202024	2.8604	2.8724	9121.79	9122.79	1.00	1.15	1.15	1.15	69	173
17-Jan-11	10:15	Hazy	201983	2.7353	2.7458	9122.79	9123.79	1.00	1.15	1.15	1.15	69	152
22-Jan-11	9:45	Hazy	202038	2.8603	2.8766	9147.79	9148.79	1.00	1.09	1.09	1.09	65	249
22-Jan-11	11:00	Hazy	202039	2.8683	2.8772	9148.79	9149.79	1.00	1.09	1.09	1.09	65	136
22-Jan-11	13:05	Hazy	202042	2.8518	2.8636	9149.79	9150.79	1.00	1.09	1.09	1.09	65	180



Location: CMA2a - Causeway Bay Community Centre

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
29-Dec-10	8:00	Fine	201865	2.8042	2.9750	13100.10	13124.10	24.00	1.51	1.51	1.51	2168	79
4-Jan-11	8:00	Hazy	201930	2.7493	2.9171	13127.10	13151.14	24.04	1.51	1.52	1.52	2188	77
10-Jan-11	8:00	Hazy	201941	2.7375	2.9154	13154.14	13178.12	23.98	1.46	1.46	1.46	2105	85
15-Jan-11	8:00	Hazy	201966	2.7325	3.0555	13181.12	13205.12	24.00	1.48	1.48	1.48	2138	151
21-Jan-11	8:00	Hazy	202019	2.8690	3.0863	13208.12	13232.12	24.00	1.48	1.48	1.48	2134	102
27-Jan-11	8:00	Hazy	202027	2.8435	3.0480	13233.99	13257.99	24.00	1.44	1.44	1.44	2072	99

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
30-Dec-10	10:51	Fine	201921	2.7581	2.7711	13124.10	13125.10	1.00	1.51	1.51	1.51	90	144
30-Dec-10	13:00	Fine	201923	2.7657	2.7817	13125.10	13126.10	1.00	1.51	1.51	1.51	90	177
30-Dec-10	14:27	Fine	201927	2.7563	2.7694	13126.10	13127.10	1.00	1.51	1.51	1.51	90	145
5-Jan-11	8:15	Hazy	201954	2.7277	2.7370	13151.14	13152.14	1.00	1.51	1.51	1.51	91	103
5-Jan-11	9:20	Hazy	201955	2.7278	2.7377	13152.14	13153.14	1.00	1.51	1.51	1.51	91	109
5-Jan-11	13:00	Hazy	201956	2.7212	2.7313	13153.14	13154.14	1.00	1.51	1.51	1.51	91	111
11-Jan-11	8:20	Hazy	202000	2.7155	2.7336	13178.12	13179.12	1.00	1.52	1.52	1.52	91	199
11-Jan-11	9:30	Hazy	202001	2.7212	2.7382	13179.12	13180.12	1.00	1.52	1.52	1.52	91	187
11-Jan-11	10:50	Hazy	202002	2.7183	2.7356	13180.12	13181.12	1.00	1.52	1.52	1.52	91	190
17-Jan-11	8:15	Hazy	201972	2.7458	2.7599	13205.12	13206.12	1.00	1.52	1.52	1.52	91	155
17-Jan-11	9:30	Hazy	201973	2.7569	2.7710	13206.12	13207.12	1.00	1.52	1.52	1.52	91	155
17-Jan-11	10:48	Hazy	201974	2.7499	2.7626	13207.12	13208.12	1.00	1.52	1.52	1.52	91	139
22-Jan-11	9:30	Hazy	202037	2.8665	2.8795	13232.12	13233.12	1.00	1.54	1.54	1.54	93	141
22-Jan-11	11:05	Hazy	202040	2.8620	2.8730	13233.12	13234.12	1.00	1.54	1.54	1.54	93	119
22-Jan-11	13:00	Hazy	202041	2.8617	2.8725	13234.12	13235.12	1.00	1.54	1.54	1.54	93	117



Location: CMA4a - SPCA

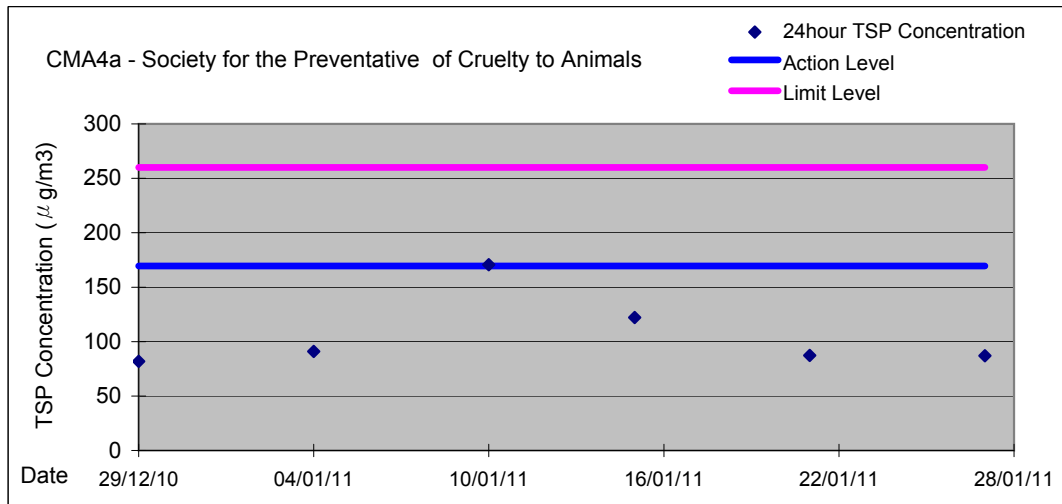
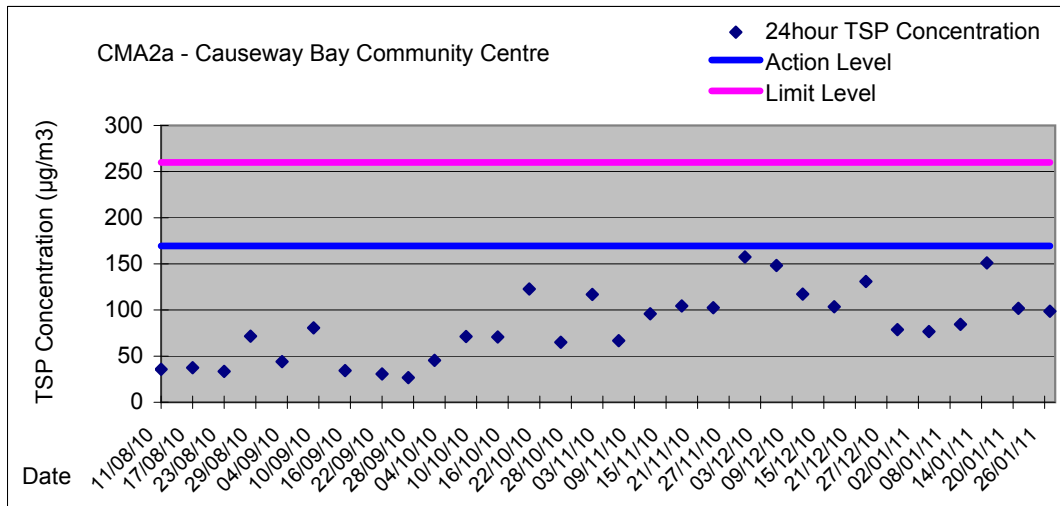
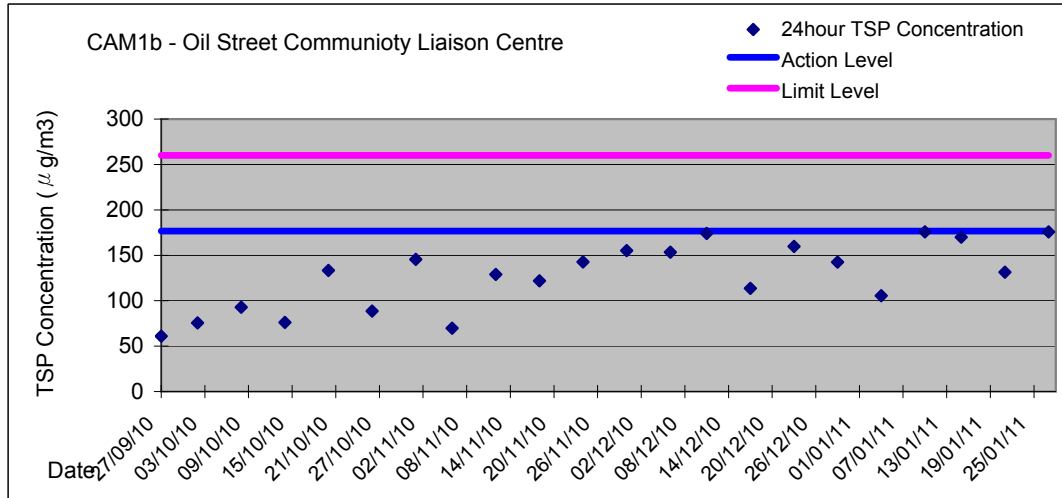
Report on 24-hour TSP monitoring  
 Action Level ( $\mu\text{g}/\text{m}^3$ ) - 171.2  
 Limit Level ( $\mu\text{g}/\text{m}^3$ ) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
29-Dec-10	8:00	Fine	201831	2.7920	2.9512	12467.70	12491.70	24.00	1.32	1.38	1.35	1945	82
4-Jan-11	9:30	Hazy	201926	2.7476	2.9286	12496.31	12520.23	23.92	1.39	1.38	1.39	1990	91
10-Jan-11	8:00	Hazy	201932	2.7478	3.1168	12524.23	12548.23	24.00	1.51	1.49	1.50	2162	171
15-Jan-11	8:00	Hazy	201970	2.7409	2.9858	12551.23	12575.23	24.00	1.39	1.39	1.39	2005	122
21-Jan-11	8:00	Hazy	202014	2.8629	3.0430	12578.23	12602.23	24.00	1.38	1.49	1.43	2062	87
27-Jan-11	8:00	Hazy	202031	2.8658	3.0352	12605.20	12627.86	22.66	1.38	1.48	1.43	1946	87

Report on 1-hour TSP monitoring  
 Action Level ( $\mu\text{g}/\text{m}^3$ ) - 312.5  
 Limit Level ( $\mu\text{g}/\text{m}^3$ ) - 500

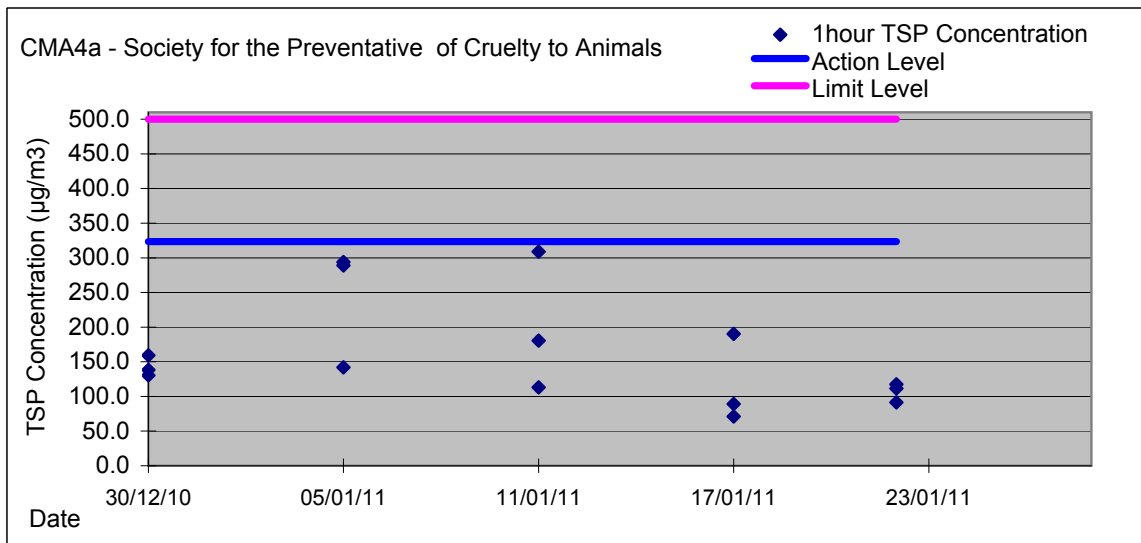
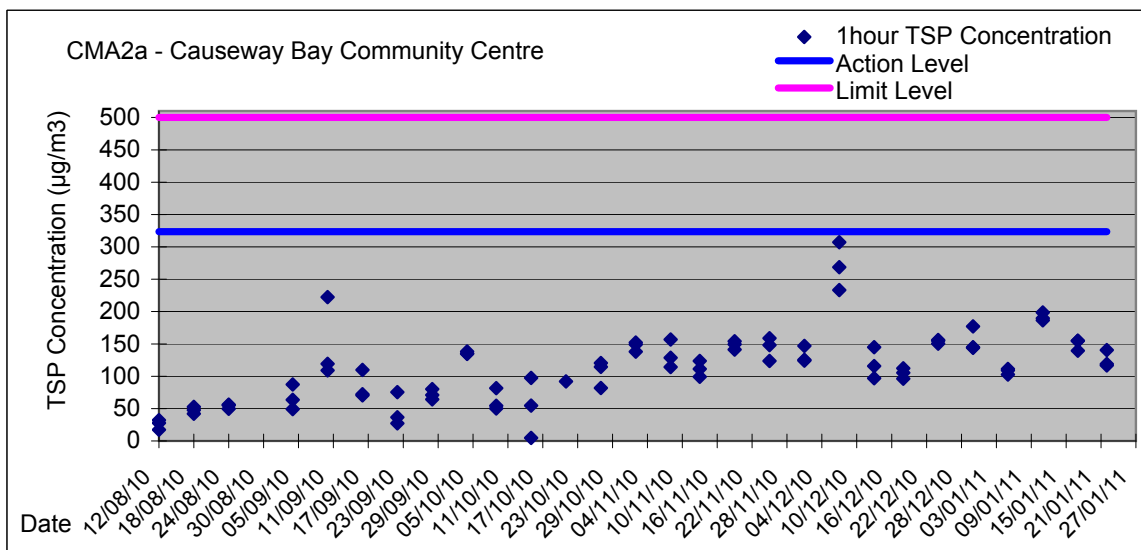
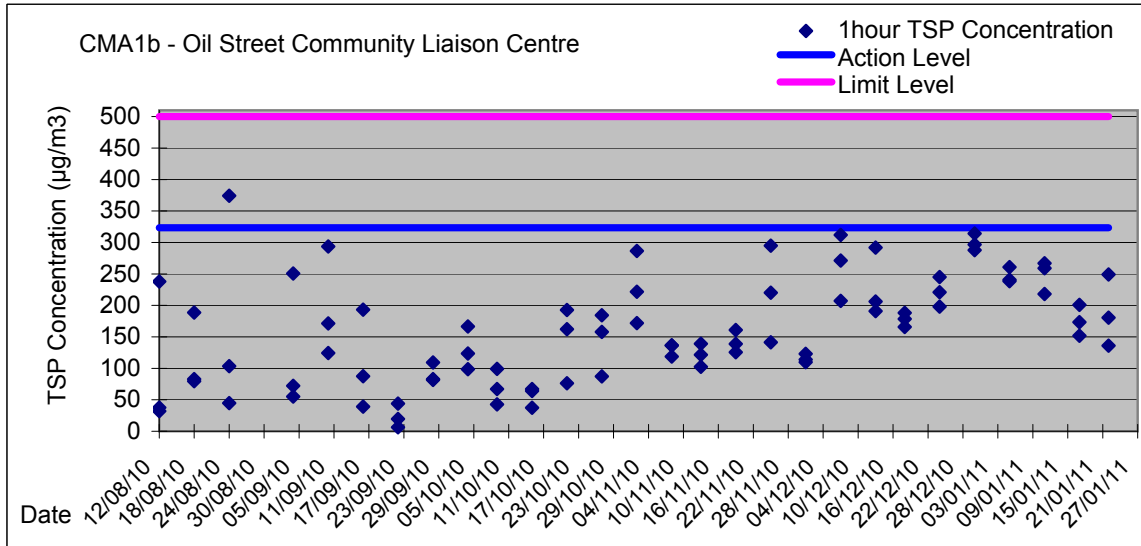
Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
30-Dec-10	14:44	Fine	201669	2.8029	2.8131	12223.65	12224.65	1.00	1.29	1.32	1.30	78	130
30-Dec-10	10:00	Fine	201937	2.7425	2.7537	12491.70	12492.70	1.00	1.35	1.35	1.35	81	138
30-Dec-10	11:03	Fine	201931	2.7408	2.7537	12492.70	12493.70	1.00	1.35	1.35	1.35	81	159
30-Dec-10	13:00	Fine	201925	2.7445	2.7560	12493.70	12494.70	1.00	1.35	1.35	1.35	81	142
5-Jan-11	10:28	Hazy	201939	2.7614	2.7696	12520.23	12521.23	1.00	1.33	1.38	1.36	81	289
5-Jan-11	13:00	Hazy	201968	2.7428	2.7494	12521.23	12522.23	1.00	1.33	1.38	1.36	81	294
5-Jan-11	14:24	Hazy	201967	2.7340	2.7408	12522.23	12523.23	1.00	1.33	1.38	1.36	81	309
11-Jan-11	9:38	Hazy	201991	2.7365	2.7515	12548.23	12549.23	1.00	1.38	1.38	1.38	83	181
11-Jan-11	13:00	Hazy	201969	2.7412	2.7506	12549.23	12550.23	1.00	1.38	1.38	1.38	83	113
11-Jan-11	15:50	Hazy	201998	2.7224	2.7298	12550.23	12551.23	1.00	1.38	1.38	1.38	83	89
17-Jan-11	8:10	Hazy	201981	2.7189	2.7292	12575.23	12576.23	1.00	1.37	1.37	1.37	82	125
17-Jan-11	9:40	Hazy	201978	2.7378	2.7435	12576.23	12577.23	1.00	1.35	1.32	1.33	80	71
17-Jan-11	15:00	Hazy	201979	2.7269	2.7428	12577.23	12578.23	1.00	1.39	1.39	1.39	84	190
22-Jan-11	9:55	Hazy	202029	2.8493	2.8587	12602.23	12603.23	1.00	1.41	1.41	1.41	84	111
22-Jan-11	11:00	Hazy	201980	2.7339	2.7416	12603.23	12604.23	1.00	1.41	1.41	1.41	84	91
22-Jan-11	13:00	Hazy	202030	2.8461	2.8560	12604.23	12605.23	1.00	1.41	1.41	1.41	84	117

**Graphic Presentation of 24 hour TSP Result**





Graphic Presentation of 1 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	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			Suspended Solids		
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/12/2010	10:30	Fine	Middle	2.5	19.31	19.31	19.29	7.89	7.89	7.91	32.10	32.10	32.12	96.0	95.3	94.9	7.35	7.29	7.27	3.70	3.49	3.61	7	6.00
	10:33		Middle	2.5	19.27	19.28		7.93	7.93		32.13	32.13		94.4	94.0		7.22	7.20		3.45	3.80		5	
30/12/2010	13:30	Fine	Middle	2.5	19.50	19.50	19.60	8.15	8.15	8.16	32.30	32.30	32.35	85.1	84.1	84.2	6.30	6.21	6.22	4.00	3.65	3.80	4	5.00
	13:33		Middle	2.5	19.70	19.70		8.16	8.16		32.40	32.40		84.0	83.6		6.19	6.16		3.85	3.71		6	
1/1/2011	14:20	Fine	Middle	2.5	19.50	19.50	19.50	8.08	8.08	8.08	32.42	32.42	32.42	61.4	66.7	64.9	4.67	5.20	4.95	3.45	3.93	3.33	4	5.00
	14:26		Middle	2.5	19.50	19.50		8.08	8.08		32.42	32.42		67.4	64.1		5.06	4.85		3.01	2.94		6	
3/1/2011	18:11	Cloudy	Middle	3.0	16.80	16.80	16.80	8.26	8.26	8.27	34.20	34.20	34.20	85.2	84.8	84.8	6.78	6.75	6.76	3.11	2.66	2.88	3	4.00
	18:13		Middle	3.0	16.80	16.80		8.27	8.27		34.20	34.20		84.6	84.5		6.75	6.74		2.94	2.82		5	
5/1/2011	17:58	Cloudy	Middle	2.5	17.60	17.60	17.60	8.27	8.27	8.27	32.83	32.83	32.83	59.2	57.9	61.5	4.63	4.53	5.34	2.61	2.42	2.68	4	4.50
	18:04		Middle	2.5	17.60	17.60		8.27	8.27		32.83	32.83		65.1	63.9		6.10	6.08		2.90	2.77		5	
8/1/2011	9:07	Cloudy	Middle	2.5	15.19	15.19	15.18	8.49	8.49	8.49	31.69	31.69	31.71	83.4	81.6	82.5	6.90	6.75	6.83	4.21	4.16	4.16	4	5.00
	9:10		Middle	2.5	15.17	15.17		8.48	8.48		31.72	31.72		82.3	82.8		6.81	6.85		4.16	4.10		6	
10/1/2011	9:10	Sunny	Middle	3.0	16.03	16.03	16.02	8.35	8.35	8.33	31.42	31.42	31.50	94.2	93.3	94.3	7.68	7.61	7.69	3.18	3.12	3.11	3	3.50
	9:12		Middle	3.0	16.00	16.00		8.31	8.31		31.57	31.57		95.0	94.7		7.75	7.73		2.80	3.35		4	
13/1/2011	10:52	Cloudy	Middle	3.0	17.41	17.41	17.41	8.27	8.27	8.27	31.83	31.83	31.83	86.2	83.4	82.4	6.82	6.60	6.52	2.81	2.47	2.61	4	4.50
	10:55		Middle	3.0	17.41	17.41		8.27	8.27		31.83	31.83		80.0	80.0		6.33	6.33		2.54	2.63		5	
15/1/2011	12:10	Fine	Middle	2.5	17.00	16.98	16.98	8.35	8.35	8.35	31.89	31.89	31.89	81.9	82.2	82.8	6.53	6.56	6.60	1.66	2.16	1.81	2	2.50
	12:20		Middle	2.5	16.97	16.97		8.35	8.35		31.89	31.89		83.2	83.7		6.63	6.67		1.73	1.69		3	
17/1/2011	17:39	Fine	Middle	3.0	15.70	15.70	15.65	8.12	8.12	8.12	32.96	32.96	32.96	97.2	96.4	97.0	7.89	7.84	7.88	2.27	2.30	2.28	3	2.50
	17:42		Middle	3.0	15.60	15.60		8.11	8.11		32.95	32.95		97.5	97.0		7.92	7.88		2.32	2.24		2	
19/1/2011	14:09	Cloudy	Middle	3.0	16.40	16.40	16.40	8.43	8.43	8.43	31.96	31.96	31.95	89.6	89.1	89.2	7.02	6.98	6.99	1.71	1.47	1.55	6	5.00
	14:11		Middle	3.0	16.39	16.39		8.43	8.43		31.93	31.93		89.5	88.7		7.01	6.95		1.59	1.42		4	
22/1/2011	8:22	Cloudy	Middle	3.0	14.50	14.50	14.45	8.10	8.10	8.09	32.82	32.82	32.82	92.1	91.1	91.3	7.69	7.59	7.61	3.44	3.35	3.36	<2	4.00
	8:25		Middle	3.0	14.40	14.40		8.08	8.08		32.82	32.82		91.5	90.4		7.63	7.54		3.34	3.30		4	
24/1/2011	8:50	Cloudy	Middle	3.0	14.80	14.80	14.80	8.16	8.16	8.15	32.77	32.77	32.80	92.9	92.1	92.5	7.69	7.63	7.67	2.67	2.64	2.57	5	4.50
	8:53		Middle	3.0	14.80	14.80		8.13	8.13		32.83	32.83		93.2	91.9		7.72	7.62		2.46	2.52		4	
26/1/2011	9:30	Fine	Middle	3.0	16.30	16.30	16.35	8.08	8.08	8.08	32.63	32.63	32.64	94.6	93.0	93.9	7.60	7.48	7.55	2.14	2.10	2.05	<2	3.00
	9:33		Middle	3.0	16.40	16.40		8.08	8.08		32.64	32.64		94.2	93.9		7.57	7.54		2.03	1.94		3	



**Water Monitoring Result at WSD10 - Cha Kwo Ling  
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	10:45	Fine	Middle	2.5	19.30	19.30	19.29	8.10	8.10	8.11	32.02	32.02	32.02	94.8	94.0	94.3	7.25	7.17	7.20	4.35	4.95	4.46	4	4.00
	10:48		Middle	2.5	19.27	19.27		8.11	8.11		32.02	32.02		94.4	93.8		7.23	7.16		4.62	3.93		4	
30/12/2010	13:52	Fine	Middle	2.5	20.00	20.00	20.00	8.26	8.26	8.27	32.80	32.80	32.80	88.7	88.5	88.7	6.66	6.65	6.66	3.92	4.00	3.93	5	5.50
	13:55		Middle	2.5	20.00	20.00		8.27	8.27		32.80	32.80		89.1	88.4		6.69	6.63		3.89	3.89		6	
1/1/2011	13:45	Fine	Middle	2.5	19.20	19.20	19.20	8.25	8.25	8.25	32.71	32.71	32.71	61.9	60.0	64.5	4.67	4.54	4.88	2.66	2.98	2.83	5	5.00
	13:51		Middle	2.5	19.20	19.20		8.25	8.25		32.71	32.71		69.3	66.6		5.26	5.06		2.69	2.97		5	
3/1/2011	15:00	Cloudy	Middle	3.0	17.00	17.00	17.00	8.32	8.31	8.32	32.60	32.60	32.60	94.5	94.3	94.2	7.59	7.58	7.57	3.61	3.84	3.87	5	6.00
	15:02		Middle	3.0	17.00	17.00		8.32	8.32		32.60	32.60		94.1	94.0		7.55	7.54		4.11	3.91		7	
5/1/2011	17:11	Cloudy	Middle	2.5	17.70	17.70	17.70	8.33	8.33	8.33	32.91	32.91	32.91	59.5	58.7	63.2	4.66	4.59	4.93	3.20	3.12	3.41	6	7.00
	17:16		Middle	2.5	17.70	17.70		8.33	8.33		32.91	32.91		67.7	66.8		5.30	5.15		3.85	3.47		8	
8/1/2011	9:35	Cloudy	Middle	2.5	15.60	15.60	15.62	8.50	8.50	8.51	31.78	31.78	31.77	66.7	66.0	65.7	5.46	5.41	5.39	6.01	6.02	5.69	7	7.50
	9:38		Middle	2.5	15.64	15.64		8.52	8.52		31.76	31.76		65.8	64.4		5.40	5.27		5.29	5.44		8	
10/1/2011	10:15	Sunny	Middle	3.0	16.07	16.07	16.07	8.33	8.33	8.32	31.69	31.69	31.79	89.7	89.1	89.2	7.21	7.17	7.18	2.74	2.53	2.58	6	6.00
	10:17		Middle	3.0	16.06	16.06		8.31	8.31		31.88	31.88		89.3	88.5		7.18	7.14		2.55	2.50		6	
13/1/2011	9:45	Cloudy	Middle	2.5	17.58	17.58	17.58	8.28	8.28	8.28	31.87	31.87	31.87	80.1	81.5	80.5	6.25	6.43	6.31	2.33	2.64	2.28	5	4.00
	9:48		Middle	2.5	17.58	17.58		8.28	8.28		31.87	31.87		80.0	80.2		6.31	6.26		2.03	2.10		3	
15/1/2011	10:23	Fine	Middle	2.0	17.45	17.45	17.46	8.47	8.47	8.46	31.80	31.80	31.80	88.2	83.7	84.5	6.97	6.62	6.68	2.32	2.18	2.16	3	3.00
	10:33		Middle	2.0	17.46	17.46		8.44	8.44		31.80	31.80		82.5	83.7		6.52	6.62		1.80	2.35		3	
17/1/2011	17:18	Fine	Middle	3.0	15.20	15.20	15.20	8.10	8.10	8.10	32.94	32.94	32.94	96.5	95.7	95.8	7.71	7.66	7.66	1.66	1.43	1.68	4	4.50
	17:21		Middle	3.0	15.20	15.20		8.10	8.10		32.94	32.94		95.9	95.0		7.67	7.61		1.94	1.70		5	
19/1/2011	15:44	Cloudy	Middle	3.0	16.38	16.38	16.42	8.40	8.40	8.39	32.04	32.04	32.02	83.6	83.4	83.0	6.73	6.72	6.68	1.49	2.05	1.82	6	5.00
	15:47		Middle	3.0	16.46	16.46		8.38	8.38		31.99	32.00		82.6	82.3		6.65	6.62		1.84	1.90		4	
22/1/2011	9:02	Cloudy	Middle	3.0	14.90	14.90	14.85	8.08	8.08	8.09	32.80	32.80	32.83	92.9	91.4	92.6	7.70	7.58	7.69	2.81	2.64	2.68	2	2.50
	9:04		Middle	3.0	14.80	14.80		8.09	8.09		32.85	32.85		93.5	92.6		7.77	7.71		2.67	2.59		3	
24/1/2011	9:25	Cloudy	Middle	2.5	15.30	15.30	15.25	8.03	8.03	8.05	32.64	32.64	32.68	91.4	90.6	91.1	7.51	7.45	7.49	2.89	2.73	2.65	6	6.00
	9:28		Middle	2.5	15.20	15.20		8.06	8.06		32.71	32.71		91.4	91.1		7.51	7.49		2.60	2.36		6	
26/1/2011	10:00	Fine	Middle	2.5	15.90	15.90	15.90	8.09	8.09	8.09	32.56	32.56	32.56	96.6	95.8	96.0	7.84	7.77	7.79	1.74	1.72	1.78	2	2.00
	10:03		Middle	2.5	15.90	15.90		8.09	8.09		32.56	32.56		96.0	95.4		7.79	7.75		1.94	1.71		<2	





**Water Monitoring Result at WSD15 - Sai Wan Ho  
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value
28/12/2010	11:02	Fine	Middle	2.5	18.30	18.30	18.32	8.12	8.12	8.11	32.16	32.16	32.17	85.6	84.6	85.4	6.65	6.56	6.63	3.32	3.22	3.11	6	6.00
	11:03		Middle	2.5	18.33	18.33		8.09	8.09		32.17	32.17		87.5	84.0		6.79	6.52		3.15	2.74		6	
30/12/2010	14:10	Fine	Middle	3.0	19.20	19.20	19.20	8.26	8.26	8.26	32.60	32.60	32.60	91.2	91.0	90.9	6.96	6.95	6.94	3.16	2.81	2.91	7	6.00
	14:13		Middle	3.0	19.20	19.20		8.26	8.26		32.60	32.60		90.9	90.4		6.95	6.91		2.78	2.87		5	
1/1/2011	17:10	Fine	Middle	3.0	18.90	18.90	18.90	8.30	8.30	8.30	32.80	32.80	32.81	69.3	67.2	65.0	5.30	5.21	4.99	4.20	4.10	3.88	19	13.00
	17:16		Middle	3.0	18.90	18.90		8.30	8.30		32.81	32.81		64.5	58.9		4.94	4.51		3.87	3.35		7	
3/1/2011	15:18	Cloudy	Middle	3.0	17.00	17.00	17.05	8.34	8.34	8.34	33.30	33.30	33.30	92.1	91.8	91.8	7.31	7.30	7.30	4.17	3.91	4.05	9	8.50
	15:20		Middle	3.0	17.10	17.10		8.34	8.34		33.30	33.30		91.7	91.6		7.29	7.28		4.10	4.01		8	
5/1/2011	19:32	Cloudy	Middle	3.0	18.20	18.20	18.20	8.32	8.32	8.32	32.84	32.84	32.84	64.0	62.2	64.9	4.96	4.81	5.03	3.34	3.00	3.03	6	7.00
	19:38		Middle	3.0	18.20	18.20		8.32	8.32		32.84	32.84		67.6	65.9		5.24	5.11		2.82	2.97		8	
8/1/2011	10:05	Cloudy	Middle	2.5	15.60	15.60	15.54	8.66	8.66	8.63	31.82	31.82	31.90	80.0	82.5	82.1	6.57	6.77	6.74	3.47	3.14	3.29	4	3.50
	10:08		Middle	2.5	15.48	15.48		8.59	8.59		31.98	31.98		82.6	83.4		6.78	6.85		3.42	3.13		3	
10/1/2011	10:45	Sunny	Middle	3.0	16.33	16.33	16.34	8.30	8.30	8.30	32.03	32.03	32.02	88.2	89.5	89.5	7.12	7.23	7.23	3.66	3.17	3.30	7	6.00
	10:47		Middle	3.0	16.35	16.35		8.30	8.30		32.00	32.00		91.0	89.4		7.34	7.21		3.20	3.16		5	
13/1/2011	11:38	Cloudy	Middle	3.0	17.70	17.70	17.70	8.40	8.40	8.40	32.04	32.04	32.04	84.3	87.4	85.3	6.42	6.86	6.65	2.93	2.76	2.83	5	4.00
	11:41		Middle	3.0	17.70	17.70		8.40	8.40		32.04	32.04		84.7	84.6		6.65	6.65		2.75	2.86		3	
15/1/2011	15:43	Fine	Middle	3.0	15.74	15.74	15.74	8.62	8.62	8.59	32.18	32.18	32.18	69.6	65.9	68.0	5.68	5.37	5.55	5.14	5.03	4.93	5	5.00
	15:50		Middle	3.0	15.74	15.74		8.56	8.56		32.18	32.18		70.2	66.4		5.72	5.41		4.87	4.67		5	
17/1/2011	16:30	Fine	Middle	2.5	14.80	14.80	14.70	8.16	8.16	8.17	33.01	33.01	33.05	97.9	96.3	97.1	8.13	7.99	8.06	2.08	2.16	2.04	4	5.00
	16:33		Middle	2.5	14.60	14.60		8.17	8.17		33.09	33.09		97.7	96.5		8.12	8.00		1.97	1.93		6	
19/1/2011	16:05	Cloudy	Middle	3.0	16.09	16.10	16.07	8.33	8.33	8.32	32.02	32.02	32.04	68.7	67.8	68.4	5.57	5.50	5.55	2.49	2.05	2.27	4	3.50
	16:08		Middle	3.0	16.05	16.05		8.30	8.30		32.07	32.06		68.8	68.4		5.58	5.55		2.30	2.22		3	
22/1/2011	9:24	Cloudy	Middle	3.0	14.60	14.60	14.50	8.11	8.11	8.12	32.83	32.83	32.86	94.3	93.0	94.0	7.85	7.74	7.83	4.03	3.68	3.72	4	4.00
	9:27		Middle	3.0	14.40	14.40		8.12	8.12		32.88	32.88		94.5	94.0		7.88	7.83		3.42	3.74		4	
24/1/2011	9:48	Cloudy	Middle	3.0	15.00	15.00	15.00	8.17	8.17	8.16	32.71	32.71	32.73	94.9	94.0	94.3	7.83	7.76	7.79	3.42	3.43	3.63	4	5.00
	9:50		Middle	3.0	15.00	15.00		8.14	8.14		32.75	32.75		94.5	93.8		7.80	7.75		3.67	3.98		6	
26/1/2011	10:23	Fine	Middle	3.0	15.50	15.50	15.55	8.10	8.10	8.10	32.59	32.59	32.59	96.2	95.6	95.8	7.84	7.79	7.81	2.08	1.85	1.98	2	2.00
	10:26		Middle	3.0	15.60	15.60		8.10	8.10		32.59	32.59		96.4	94.9		7.86	7.74		2.05	1.92		2	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity			Suspended Solids			
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/12/2010	11:20	Fine	Middle	2.5	19.10	19.10	19.11	7.99	7.99	7.99	32.20	32.20	32.18	84.8	83.0	83.6	6.48	6.35	6.40	5.78	5.46	5.55	14	12.50
	11:23		Middle	2.5	19.12	19.12		7.98	7.98		32.16	32.16		83.8	82.9		6.41	6.34		5.62	5.35		11	
30/12/2010	14:40	Fine	Middle	3.0	19.70	19.70	19.70	8.24	8.24	8.24	32.70	32.70	32.70	89.6	89.4	89.4	6.77	6.75	6.76	4.37	4.01	4.13	5	5.00
	14:43		Middle	3.0	19.70	19.70		8.24	8.24		32.70	32.70		89.5	89.0		6.77	6.73		3.93	4.22		5	
1/1/2011	16:52	Fine	Middle	3.0	18.80	18.80	18.80	8.31	8.31	8.31	32.77	32.77	32.77	72.0	68.9	67.9	5.52	5.25	5.19	2.57	2.41	2.70	6	5.50
	17:00		Middle	3.0	18.80	18.80		8.31	8.31		32.77	32.77		66.1	64.4		5.07	4.92		3.22	2.61		5	
3/1/2011	15:40	Cloudy	Middle	3.5	16.80	16.80	16.80	8.31	8.31	8.31	32.60	32.60	32.60	91.9	91.7	91.6	7.67	7.66	7.65	4.52	4.04	4.04	7	7.50
	15:43		Middle	3.5	16.80	16.80		8.31	8.31		32.60	32.60		91.5	91.3		7.64	7.63		3.85	3.73		8	
5/1/2011	19:19	Cloudy	Middle	3.0	17.90	17.90	17.90	8.31	8.31	8.31	32.90	32.90	32.90	74.5	72.3	69.7	5.81	5.51	5.40	2.27	2.15	2.23	6	7.00
	19:24		Middle	3.0	17.90	17.90		8.31	8.31		32.90	32.90		67.5	64.6		5.23	5.04		2.43	2.08		8	
8/1/2011	10:24	Cloudy	Middle	3.0	15.85	15.85	15.86	8.53	8.53	8.53	31.95	31.95	31.98	71.1	70.6	71.1	5.79	5.75	5.79	4.38	4.28	4.14	5	5.50
	10:27		Middle	3.0	15.86	15.86		8.53	8.53		32.01	32.01		71.7	70.9		5.84	5.78		3.91	3.97		6	
10/1/2011	11:02	Sunny	Middle	3.0	16.48	16.48	16.48	8.34	8.34	8.33	31.97	31.97	31.98	90.1	89.8	89.5	7.26	7.23	7.22	6.40	5.89	6.05	6	6.00
	11:05		Middle	3.0	16.48	16.48		8.32	8.32		31.99	31.98		89.4	88.5		7.25	7.12		5.79	6.11		6	
13/1/2011	12:10	Cloudy	Middle	3.0	16.80	16.80	16.80	8.00	8.00	8.00	32.17	32.17	32.17	95.9	94.8	91.0	7.45	7.32	7.12	2.78	2.62	2.81	7	6.00
	12:13		Middle	3.0	16.80	16.80		8.00	8.00		32.17	32.17		86.6	86.6		6.85	6.84		2.99	2.84		5	
15/1/2011	15:02	Fine	Middle	2.5	15.41	15.41	15.41	8.53	8.53	8.53	31.45	31.45	31.45	61.5	58.6	59.9	5.07	4.83	4.94	4.23	3.94	3.99	6	5.00
	15:14		Middle	2.5	15.41	15.41		8.53	8.53		31.45	31.45		60.6	58.9		4.99	4.85		3.96	3.81		4	
17/1/2011	16:55	Fine	Middle	3.0	14.40	14.40	14.40	8.16	8.16	8.16	33.08	33.08	33.08	93.6	93.3	93.3	7.81	7.79	7.79	2.19	2.56	2.33	4	3.50
	16:58		Middle	3.0	14.40	14.40		8.16	8.16		33.08	33.08		92.4	93.7		7.73	7.84		2.29	2.29		3	
19/1/2011	16:27	Cloudy	Middle	3.0	15.81	15.81	15.83	8.30	8.30	8.30	31.98	31.98	31.99	87.9	87.0	87.3	6.77	6.71	6.73	2.04	1.86	1.91	4	4.00
	16:30		Middle	3.0	15.84	15.84		8.30	8.30		32.00	32.00		87.4	86.8		6.75	6.69		1.83	1.89		4	
22/1/2011	9:40	Cloudy	Middle	3.0	14.40	14.40	14.35	8.10	8.10	8.11	32.84	32.84	32.88	93.5	92.2	92.8	7.82	7.71	7.75	4.19	3.89	4.01	5	4.50
	9:43		Middle	3.0	14.30	14.30		8.12	8.12		32.91	32.91		93.0	92.3		7.76	7.72		4.04	3.92		4	
24/1/2011	10:08	Cloudy	Middle	3.0	15.10	15.10	15.15	8.15	8.15	8.13	32.73	32.73	32.74	93.4	92.5	93.2	7.68	7.61	7.67	4.14	3.52	3.49	8	7.00
	10:11		Middle	3.0	15.20	15.20		8.10	8.10		32.74	32.74		94.1	92.9		7.74	7.64		3.27	3.01		6	
26/1/2011	10:40	Fine	Middle	3.0	15.40	15.40	15.40	8.09	8.09	8.09	32.57	32.57	32.57	94.1	93.4	93.7	7.70	7.65	7.67	2.11	2.04	2.01	4	4.00
	10:43		Middle	3.0	15.40	15.40		8.09	8.09		32.57	32.57		93.9	93.3		7.69	7.64		1.89	2.01		4	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	13:17	Fine	Middle	2.0	18.45	18.45	18.48	7.43	7.42	7.43	31.85	31.85	31.83	66.6	69.6	69.0	5.62	5.38	5.45	5.26	5.36	5.21	8	8.50
	13:20		Middle	2.0	18.50	18.50		7.42	7.43		31.80	31.80		68.0	71.7		5.26	5.54		5.04	5.17		9	
30/12/2010	15:30	Fine	Middle	2.0	19.20	19.20	19.10	8.17	8.17	8.18	32.50	32.50	32.50	85.1	84.4	84.1	6.51	6.47	6.44	14.30	15.00	14.30	24	23.00
	15:33		Middle	2.0	19.00	19.00		8.18	8.18		32.50	32.50		83.9	83.1		6.43	6.35		13.90	14.00		22	
1/1/2011	16:38	Fine	Middle	2.0	19.70	19.70	19.70	8.18	8.18	8.18	32.56	32.56	32.56	66.7	64.0	62.1	5.04	4.84	4.69	6.58	5.94	6.53	13	12.50
	16:44		Middle	2.0	19.70	19.70		8.18	8.18		32.56	32.56		59.4	58.2		4.49	4.37		6.85	6.75		12	
3/1/2011	16:50	Cloudy	Middle	2.0	17.20	17.20	17.20	8.27	8.27	8.28	32.50	32.50	32.50	91.1	90.8	90.6	7.79	7.75	7.75	12.30	11.90	11.68	17	18.50
	16:52		Middle	2.0	17.20	17.20		8.28	8.28		32.50	32.50		90.3	90.2		7.75	7.72		11.30	11.20		20	
5/1/2011	18:58	Cloudy	Middle	2.0	18.00	18.00	18.00	8.26	8.26	8.26	32.66	32.66	32.66	57.7	60.2	60.0	4.50	4.89	4.73	3.47	3.46	3.45	10	9.00
	19:03		Middle	2.0	18.00	18.00		8.26	8.26		32.66	32.66		59.5	62.6		4.63	4.88		3.43	3.42		8	
8/1/2011	12:35	Cloudy	Middle	2.0	16.40	16.40	16.36	8.33	8.33	8.31	31.60	31.60	31.65	82.5	81.8	82.3	6.67	6.61	6.65	5.88	5.04	5.18	10	10.00
	12:38		Middle	2.0	16.32	16.32		8.28	8.28		31.70	31.70		82.7	82.0		6.68	6.62		5.21	4.60		10	
10/1/2011	12:50	Sunny	Middle	2.0	16.36	16.36	16.38	8.10	8.10	8.10	31.79	31.79	31.82	68.3	67.7	67.8	5.52	5.47	5.48	5.45	4.70	4.99	8	8.00
	12:53		Middle	2.0	16.39	16.39		8.09	8.09		31.84	31.84		68.0	67.2		5.49	5.43		5.25	4.54		8	
13/1/2011	15:00	Cloudy	Middle	2.0	16.48	16.48	16.46	8.18	8.18	8.19	31.30	31.30	31.53	63.9	60.6	62.9	4.90	4.80	4.98	7.18	6.01	6.03	14	12.50
	15:03		Middle	2.0	16.43	16.43		8.20	8.20		31.76	31.76		65.9	61.0		5.31	4.92		5.44	5.48		11	
15/1/2011	14:43	Fine	Middle	2.0	16.06	16.06	16.06	8.63	8.63	8.63	31.97	31.97	31.97	81.4	82.4	81.7	6.60	6.28	6.53	3.53	3.83	3.47	5	4.50
	14:48		Middle	2.0	16.06	16.06		8.63	8.63		31.97	31.97		83.1	80.0		6.73	6.52		3.38	3.12		4	
17/1/2011	14:10	Fine	Middle	2.0	15.60	15.60	15.65	8.30	8.30	8.27	32.92	32.92	32.92	93.9	92.7	93.4	7.63	7.53	7.59	4.17	3.45	3.58	8	8.00
	14:12		Middle	2.0	15.70	15.70		8.24	8.23		32.92	32.92		94.0	93.1		7.63	7.56		3.42	3.27		8	
19/1/2011	17:50	Cloudy	Middle	2.0	15.68	15.68	15.69	8.37	8.37	8.35	31.87	31.87	31.87	64.6	63.7	64.1	5.29	5.21	5.25	4.38	4.17	4.01	10	10.00
	17:53		Middle	2.0	15.69	15.69		8.33	8.33		31.87	31.87		64.4	63.8		5.28	5.21		3.78	3.72		10	
22/1/2011	11:45	Cloudy	Middle	2.0	15.20	15.20	15.25	8.23	8.23	8.18	32.70	32.70	32.72	89.0	88.3	88.7	7.31	7.25	7.28	4.70	4.55	4.40	10	10.50
	11:47		Middle	2.0	15.30	15.30		8.12	8.12		32.73	32.73		89.2	88.2		7.33	7.24		4.24	4.09		11	
24/1/2011	12:25	Cloudy	Middle	2.0	15.70	15.70	15.70	8.05	8.05	8.04	32.53	32.53	32.62	86.2	85.5	86.8	7.01	6.96	7.06	6.78	5.74	5.94	12	11.00
	12:28		Middle	2.0	15.70	15.70		8.02	8.05		32.71	32.71		87.7	87.6		7.14	7.13		5.87	5.38		10	
26/1/2011	13:11	Fine	Middle	2.0	15.50	15.50	15.65	8.07	8.07	8.07	32.63	32.63	32.58	88.6	87.4	88.3	7.21	7.11	7.18	4.46	3.89	4.01	6	7.00
	13:14		Middle	2.0	15.80	15.80		8.06	8.06		32.52	32.52		89.2	88.0		7.25	7.15		3.75	3.94		8	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average
28/12/2010	13:04	Fine	Middle	2.0	18.80	18.80	18.82	7.04	7.04	7.06	31.95	31.95	31.93	73.0	72.4	73.3	5.62	5.57	5.64	5.20	4.73	4.81	8	7.50
	13:07		Middle	2.0	18.84	18.84		7.08	7.08		31.91	31.91		74.6	73.3		5.74	5.61		4.56	4.73		7	
30/12/2010	15:15	Fine	Middle	2.0	19.80	19.80	19.80	8.12	8.12	8.13	32.40	32.40	32.40	85.7	85.1	85.0	6.49	6.45	6.44	19.20	18.40	<b>18.08</b>	28	<b>28.00</b>
	15:18		Middle	2.0	19.80	19.80		8.14	8.14		32.40	32.40		84.9	84.2		6.42	6.38		17.30	17.40		28	
1/1/2011	16:29	Fine	Middle	2.0	19.70	19.70	19.70	8.02	7.94	7.96	32.05	32.05	32.05	52.8	51.0	52.1	4.40	4.08	4.27	4.06	4.72	4.32	10	9.00
	16:34		Middle	2.0	19.70	19.70		7.94	7.94		32.05	32.05		52.6	52.0		4.25	4.33		4.54	3.94		8	
3/1/2011	16:10	Cloudy	Middle	2.0	17.00	17.00	16.95	8.30	8.30	8.30	32.10	32.20	32.18	91.7	91.7	91.7	7.75	7.74	7.74	8.87	8.10	8.56	14	13.50
	16:12		Middle	2.0	16.90	16.90		8.30	8.30		32.20	32.20		91.7	91.5		7.74	7.73		9.32	7.95		13	
5/1/2011	18:45	Cloudy	Middle	2.0	19.00	19.00	19.00	7.82	7.82	7.82	31.91	31.91	31.91	60.5	61.4	59.5	4.99	4.78	4.67	6.06	5.87	5.48	10	9.50
	18:50		Middle	2.0	19.00	19.00		7.82	7.82		31.91	31.91		57.7	58.5		4.42	4.49		5.14	4.83		9	
8/1/2011	12:15	Cloudy	Middle	2.0	16.80	16.80	16.79	8.29	8.29	8.29	31.19	31.19	31.21	57.5	57.1	57.4	4.62	4.59	4.63	6.86	7.13	6.75	11	13.00
	12:18		Middle	2.0	16.77	16.77		8.28	8.28		31.22	31.22		58.3	56.5		4.74	4.55		6.60	6.39		15	
10/1/2011	12:38	Sunny	Middle	2.0	16.89	16.89	16.88	8.15	8.15	8.15	31.03	31.03	31.04	72.4	71.7	72.3	5.81	5.78	5.81	6.29	6.16	5.97	13	12.50
	12:40		Middle	2.0	16.87	16.87		8.14	8.14		31.05	31.05		72.9	72.0		5.84	5.79		5.70	5.72		12	
13/1/2011	14:36	Cloudy	Middle	2.0	16.78	16.78	16.80	8.30	8.30	8.29	31.56	31.56	31.65	64.1	64.1	66.9	5.14	5.14	5.46	5.58	5.17	5.23	9	9.50
	14:38		Middle	2.0	16.82	16.82		8.28	8.28		31.74	31.74		72.9	66.4		6.23	5.31		5.23	4.94		10	
15/1/2011	14:25	Fine	Middle	1.5	16.20	16.20	16.20	8.47	8.47	8.47	31.85	31.85	31.85	54.4	62.9	59.8	4.40	5.09	4.84	4.14	3.76	3.86	6	6.50
	14:35		Middle	1.5	16.20	16.20		8.47	8.47		31.85	31.85		54.0	68.0		4.37	5.50		3.82	3.73		7	
17/1/2011	15:55	Fine	Middle	2.0	15.60	15.60	15.50	8.13	8.13	8.13	32.76	32.76	32.83	92.2	90.8	91.9	7.53	7.42	7.51	3.50	3.66	3.43	8	8.00
	15:58		Middle	2.0	15.40	15.40		8.13	8.13		32.90	32.90		92.7	91.9		7.58	7.52		3.25	3.30		8	
19/1/2011	17:30	Cloudy	Middle	2.0	15.76	15.76	15.77	8.34	8.34	8.34	31.93	31.93	31.93	66.9	66.0	66.7	5.47	5.41	5.45	6.51	6.23	6.17	11	12.00
	17:33		Middle	2.0	15.77	15.77		8.33	8.33		31.93	31.93		66.6	67.1		5.45	5.48		6.23	5.72		13	
22/1/2011	11:35	Cloudy	Middle	2.0	15.50	15.50	15.45	8.01	8.01	8.02	32.16	32.16	32.20	83.0	82.0	82.7	6.81	6.73	6.78	6.52	4.91	5.63	11	11.00
	11:38		Middle	2.0	15.40	15.40		8.03	8.03		32.23	32.23		83.3	82.4		6.82	6.75		5.55	5.55		11	
24/1/2011	12:08	Cloudy	Middle	2.0	15.70	15.70	15.70	8.02	8.02	8.03	32.17	32.17	32.18	83.1	82.7	83.0	6.77	6.73	6.76	6.29	5.82	5.80	7	7.00
	12:11		Middle	2.0	15.70	15.70		8.03	8.03		32.18	32.18		83.6	82.4		6.81	6.71		5.59	5.50		7	
26/1/2011	13:00	Fine	Middle	2.0	16.20	16.20	16.30	8.06	8.06	8.06	32.62	32.62	32.57	87.7	86.7	87.6	7.04	6.95	7.02	6.98	6.74	6.54	11	10.00
	13:03		Middle	2.0	16.40	16.40		8.06	8.06		32.51	32.51		88.4	87.5		7.08	7.00		6.17	6.25		9	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	12:55	Fine	Middle	2.0	19.71	19.71	19.72	6.52	6.52	6.58	31.72	31.72	31.74	70.6	69.3	69.2	5.38	5.25	5.25	3.26	3.13	3.06	2	2.50
	12:58		Middle	2.0	19.72	19.72		6.63	6.63		31.75	31.75		68.8	68.2		5.21	5.16		2.86	3.00		3	
30/12/2010	11:14	Fine	Middle	2.0	20.60	20.60	20.65	8.05	8.05	8.05	31.70	31.70	31.65	72.6	72.1	72.1	5.41	5.38	5.38	3.40	3.42	3.31	5	5.00
	11:17		Middle	2.0	20.70	20.70		8.05	8.05		31.60	31.60		72.3	71.5		5.39	5.33		3.21	3.21		5	
1/1/2011	16:13	Fine	Middle	2.0	19.70	19.70	19.70	8.07	8.07	8.07	32.04	32.04	32.04	60.0	59.4	58.3	4.56	4.42	4.40	1.99	1.59	1.72	3	2.50
	16:18		Middle	2.0	19.70	19.70		8.07	8.07		32.04	32.04		57.1	56.7		4.31	4.29		1.78	1.51		2	
3/1/2011	14:39	Cloudy	Middle	2.0	17.10	17.10	17.10	8.14	8.14	8.15	33.50	33.50	33.50	81.4	81.1	80.9	6.47	6.45	6.44	3.24	3.54	3.37	7	7.50
	14:41		Middle	2.0	17.10	17.10		8.16	8.16		33.50	33.50		80.7	80.5		6.42	6.40		3.33	3.37		8	
5/1/2011	18:32	Cloudy	Middle	2.0	18.10	18.10	18.10	8.12	8.12	8.12	32.35	32.35	32.35	58.6	57.2	57.5	4.56	4.45	4.48	1.86	1.92	2.11	2	2.50
	18:37		Middle	2.0	18.10	18.10		8.12	8.12		32.35	32.35		57.3	57.0		4.47	4.44		2.56	2.10		3	
8/1/2011	11:40	Cloudy	Middle	2.0	16.51	16.51	16.54	8.49	8.49	8.47	31.35	31.35	31.33	78.6	76.0	76.9	6.35	6.13	6.21	3.81	3.64	3.75	4	5.00
	11:42		Middle	2.0	16.56	16.56		8.44	8.44		31.31	31.31		76.8	76.2		6.20	6.15		3.86	3.70		6	
10/1/2011	12:13	Sunny	Middle	2.5	17.39	17.39	17.34	8.20	8.20	8.20	31.24	31.24	31.26	82.4	81.8	82.3	6.55	6.50	6.53	5.45	5.31	5.43	7	7.00
	12:16		Middle	2.5	17.29	17.29		8.20	8.20		31.28	31.28		82.8	82.0		6.57	6.51		5.70	5.25		7	
13/1/2011	13:59	Cloudy	Middle	2.0	16.70	16.70	16.70	8.04	8.04	8.04	32.24	32.24	32.24	66.5	65.4	66.0	5.32	5.24	5.30	3.70	3.41	3.57	6	7.00
	14:02		Middle	2.0	16.70	16.70		8.04	8.04		32.24	32.24		66.3	65.9		5.30	5.33		3.68	3.50		8	
15/1/2011	13:49	Fine	Middle	2.0	16.19	16.19	16.19	8.10	8.08	8.09	31.42	31.44	31.44	54.1	52.1	52.6	4.40	4.31	4.33	5.60	5.41	5.32	9	8.00
	13:55		Middle	2.0	16.19	16.19		8.08	8.08		31.44	31.44		52.0	52.0		4.32	4.30		5.12	5.13		7	
17/1/2011	15:26	Fine	Middle	1.5	16.30	16.30	16.25	8.15	8.15	8.15	32.35	32.35	32.38	88.2	87.5	88.3	7.04	6.99	7.05	2.92	2.43	2.74	4	3.50
	15:28		Middle	1.5	16.20	16.20		8.14	8.14		32.40	32.40		89.0	88.4		7.11	7.05		2.02	3.58		3	
19/1/2011	17:10	Cloudy	Middle	1.5	16.13	16.13	16.13	8.28	8.28	8.27	31.62	31.62	31.63	79.2	78.7	78.7	6.43	6.40	6.40	3.91	3.85	3.86	8	8.00
	17:13		Middle	1.5	16.12	16.12		8.26	8.26		31.64	31.64		78.6	78.1		6.39	6.36		3.88	3.80		8	
22/1/2011	11:18	Cloudy	Middle	1.5	15.70	15.70	15.70	8.03	8.03	8.03	32.53	32.53	32.55	78.9	77.4	78.4	6.43	6.30	6.38	5.76	5.73	5.70	10	9.00
	11:20		Middle	1.5	15.70	15.70		8.03	8.03		32.57	32.57		79.6	77.7		6.48	6.32		5.69	5.63		8	
24/1/2011	11:43	Cloudy	Middle	1.5	15.90	15.90	16.00	8.14	8.14	8.12	32.44	32.44	32.46	77.8	76.7	77.2	6.30	6.20	6.24	3.85	3.90	3.81	5	6.00
	11:45		Middle	1.5	16.10	16.10		8.09	8.09		32.47	32.47		77.7	76.4		6.29	6.18		3.71	3.78		7	
26/1/2011	12:32	Fine	Middle	2.0	16.30	16.30	16.35	7.97	7.97	7.97	33.34	33.34	32.82	77.6	67.1	74.7	6.23	6.19	6.20	2.75	2.74	2.69	<2	3.00
	12:34		Middle	2.0	16.40	16.40		7.97	7.97		32.30	32.30		77.4	76.8		6.21	6.17		2.55	2.70		3	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/12/2010	12:45	Fine	Middle	2.0	18.93	18.93	18.96	7.14	7.14	7.06	31.57	31.57	31.56	72.6	70.7	71.5	5.59	5.44	5.50	5.05	5.24	4.93	4	5.00
	12:48		Middle	2.0	18.99	18.99		6.97	6.97		31.55	31.55		71.5	71.2		5.49	5.48		4.82	4.62		6	
30/12/2010	11:09	Fine	Middle	2.0	20.20	20.20	20.30	8.07	8.07	8.07	31.80	31.80	31.75	68.3	68.0	67.9	5.11	5.08	5.06	3.95	4.70	4.04	6	6.50
	11:12		Middle	2.0	20.40	20.40		8.07	8.07		31.70	31.70		67.8	67.4		5.05	5.01		3.81	3.69		7	
1/1/2011	16:05	Fine	Middle	2.0	19.70	19.70	19.70	8.11	8.11	8.11	32.00	31.97	31.98	57.3	54.1	56.8	4.33	4.11	4.31	3.05	2.46	2.60	4	5.00
	16:10		Middle	2.0	19.70	19.70		8.11	8.11		31.97	31.97		58.0	57.8		4.43	4.38		2.42	2.47		6	
3/1/2011	14:30	Cloudy	Middle	2.5	17.10	17.10	17.10	8.16	8.16	8.16	32.00	32.00	32.05	76.2	75.9	75.7	6.32	6.28	6.28	5.37	5.51	5.49	7	8.00
	14:32		Middle	2.5	17.10	17.10		8.16	8.16		32.10	32.10		75.5	75.3		6.26	6.24		5.84	5.22		9	
5/1/2011	18:22	Cloudy	Middle	2.0	18.00	18.00	18.00	8.14	8.14	8.14	32.32	32.32	32.32	57.4	58.4	56.1	4.48	4.56	4.38	2.14	2.04	2.10	3	3.50
	18:27		Middle	2.0	18.00	18.00		8.14	8.14		32.32	32.32		55.0	53.6		4.29	4.18		1.96	2.27		4	
8/1/2011	11:38	Cloudy	Middle	2.0	17.05	17.05	17.03	8.16	8.16	8.17	31.07	31.07	31.11	55.9	55.2	55.7	4.47	4.43	4.46	5.58	5.10	5.07	8	7.00
	11:40		Middle	2.0	17.01	17.01		8.17	8.17		31.15	31.15		56.3	55.5		4.49	4.44		4.55	5.03		6	
10/1/2011	12:10	Sunny	Middle	2.5	16.89	16.89	16.90	8.17	8.17	8.17	31.16	31.16	31.15	74.4	72.3	73.0	5.97	5.80	5.85	6.34	6.26	6.28	8	9.00
	12:13		Middle	2.5	16.90	16.90		8.16	8.16		31.14	31.14		73.0	72.1		5.85	5.79		6.40	6.11		10	
13/1/2011	13:40	Cloudy	Middle	1.5	16.72	16.72	16.72	8.07	8.07	8.07	31.29	31.29	31.29	62.2	60.8	61.1	4.88	4.77	4.72	3.07	2.69	2.79	6	5.00
	13:42		Middle	1.5	16.72	16.72		8.07	8.07		31.29	31.29		60.6	60.9		4.61	4.62		2.86	2.52		4	
15/1/2011	13:32	Fine	Middle	1.5	16.70	16.70	16.70	7.99	7.99	7.99	30.89	30.89	30.89	59.2	60.1	60.0	4.78	4.80	4.80	2.48	2.42	2.33	4	4.50
	13:42		Middle	1.5	16.70	16.70		7.99	7.99		30.89	30.89		60.3	60.3		4.81	4.81		2.20	2.22		5	
17/1/2011	15:20	Fine	Middle	1.5	16.00	16.00	16.00	8.10	8.10	8.10	32.23	32.23	32.24	88.0	87.3	87.9	7.03	6.98	7.02	1.49	1.53	1.48	3	2.50
	15:22		Middle	1.5	16.00	16.00		8.10	8.11		32.25	32.25		88.4	87.8		7.05	7.00		1.45	1.44		2	
19/1/2011	17:07	Cloudy	Middle	1.5	16.44	16.44	16.45	8.25	8.25	8.25	31.17	31.17	31.18	67.9	67.4	67.7	5.49	5.46	5.48	6.60	6.49	6.46	15	13.50
	17:08		Middle	1.5	16.45	16.45		8.24	8.24		31.18	31.18		68.9	66.4		5.58	5.37		6.40	6.34		12	
22/1/2011	11:12	Cloudy	Middle	1.5	15.40	15.40	15.35	7.95	7.95	7.96	32.17	32.17	32.18	79.3	78.5	79.0	6.52	6.46	6.50	4.72	5.13	4.78	11	7.50
	11:14		Middle	1.5	15.30	15.30		7.96	7.96		32.18	32.18		79.9	78.4		6.58	6.45		4.63	4.62		4	
24/1/2011	11:40	Cloudy	Middle	1.5	16.20	16.20	16.25	7.97	7.97	7.97	32.18	32.18	32.19	76.9	76.1	76.9	6.21	6.13	6.21	4.78	4.79	4.67	6	5.50
	11:42		Middle	1.5	16.30	16.30		7.97	7.97		32.20	32.20		78.0	76.7		6.29	6.20		4.85	4.27		5	
26/1/2011	12:27	Fine	Middle	1.5	16.80	16.80	16.85	7.94	7.94	7.94	32.04	32.04	32.04	75.5	74.3	75.1	6.02	5.92	5.98	3.79	3.64	3.57	7	6.50
	12:29		Middle	1.5	16.90	16.90		7.93	7.93		32.04	32.04		75.7	74.7		6.03	5.95		3.38	3.45		6	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	12:47	Fine	Middle	2.5	19.20	19.20	19.20	8.15	8.15	8.16	32.20	32.30	32.28	82.7	81.9	81.8	6.29	6.24	6.24	3.93	3.90	4.10	6	5.00
	12:50		Middle	2.5	19.20	19.20		8.16	8.16		32.30	32.30		81.6	81.1		6.21	6.20		4.09	4.49		4	
30/12/2010	15:40	Fine	Middle	2.5	19.61	19.61	19.62	8.01	8.01	8.02	31.56	31.56	31.57	87.3	86.2	86.0	6.64	6.56	6.54	4.10	4.00	3.80	8	7.00
	15:43		Middle	2.5	19.62	19.62		8.02	8.02		31.57	31.57		86.0	84.5		6.54	6.42		3.65	3.44		6	
1/1/2011	14:02	Fine	Middle	2.5	19.80	19.80	19.80	7.97	7.97	7.97	32.27	32.27	32.27	60.8	62.6	60.4	4.59	4.72	4.55	2.73	2.67	2.60	5	5.50
	14:07		Middle	2.5	19.80	19.80		7.97	7.97		32.27	32.27		59.9	58.1		4.50	4.39		2.55	2.45		6	
3/1/2011	15:27	Cloudy	Middle	2.5	17.30	17.40	17.33	8.23	8.23	8.23	33.90	33.90	33.90	83.9	83.8	83.7	6.58	6.57	6.57	3.32	3.33	3.28	9	9.00
	15:30		Middle	2.5	17.30	17.30		8.23	8.23		33.90	33.90		83.6	83.5		6.56	6.56		3.42	3.05		9	
5/1/2011	18:18	Cloudy	Middle	2.5	18.00	18.00	18.00	8.21	8.21	8.21	32.71	32.71	32.73	58.2	57.7	57.2	4.53	4.50	4.52	2.79	2.91	2.90	6	5.50
	18:23		Middle	2.5	18.00	18.00		8.21	8.21		32.74	32.74		58.5	54.5		4.80	4.26		3.31	2.57		5	
8/1/2011	9:20	Cloudy	Middle	2.5	16.80	16.80	16.85	8.14	8.14	8.14	33.10	33.10	33.05	88.2	88.1	87.8	7.05	7.04	7.02	4.84	4.95	4.47	8	7.00
	9:23		Middle	2.5	16.90	16.90		8.13	8.13		33.00	33.00		87.7	87.2		7.00	6.97		3.91	4.19		6	
10/1/2011	10:33	Sunny	Middle	2.0	16.70	16.70	16.70	8.15	8.15	8.15	32.60	32.60	32.60	82.5	82.3	82.2	6.61	6.59	6.58	4.35	4.38	4.48	7	8.00
	10:36		Middle	2.0	16.70	16.70		8.15	8.15		32.60	32.60		82.0	81.8		6.56	6.55		4.95	4.25		9	
13/1/2011	12:48	Cloudy	Middle	2.5	17.20	17.20	17.20	8.13	8.13	8.13	33.00	33.00	33.00	82.5	82.3	82.2	6.51	6.49	6.48	2.36	2.57	2.49	8	7.00
	12:51		Middle	2.5	17.20	17.20		8.13	8.13		33.00	33.00		82.0	81.8		6.47	6.44		2.50	2.54		6	
15/1/2011	12:43	Fine	Middle	2.5	17.00	17.00	17.00	8.25	8.26	8.26	32.90	33.00	32.93	89.7	89.6	89.6	7.13	7.12	7.11	4.12	3.47	3.46	5	4.00
	12:48		Middle	2.5	17.00	17.00		8.26	8.26		32.90	32.90		89.4	89.5		7.09	7.11		3.14	3.12		3	
17/1/2011	15:52	Fine	Middle	2.5	16.50	16.50	16.55	8.24	8.24	8.24	33.20	33.20	33.15	91.4	91.2	91.3	7.29	7.27	7.28	2.80	2.70	2.67	8	7.00
	15:55		Middle	2.5	16.60	16.60		8.23	8.23		33.10	33.10		91.3	91.1		7.28	7.26		2.53	2.66		6	
19/1/2011	16:24	Cloudy	Middle	2.5	17.90	17.90	17.95	8.26	8.26	8.26	32.70	32.70	32.70	89.4	89.3	89.2	6.96	6.95	6.95	3.02	3.29	2.89	4	5.00
	16:27		Middle	2.5	18.00	18.00		8.26	8.26		32.70	32.70		89.0	89.1		6.93	6.94		2.60	2.64		6	
22/1/2011	9:40	Cloudy	Middle	2.5	16.10	16.10	16.15	8.26	8.26	8.26	33.00	33.00	32.95	90.1	90.0	90.0	7.12	7.11	7.10	3.54	3.28	3.30	5	4.50
	9:43		Middle	2.5	16.20	16.20		8.25	8.25		32.90	32.90		89.9	89.8		7.09	7.08		3.25	3.14		4	
24/1/2011	11:13	Cloudy	Middle	2.5	16.10	16.10	16.15	8.21	8.21	8.22	33.50	33.50	33.45	89.4	88.8	88.8	7.24	7.20	7.20	2.76	2.95	2.88	7	6.00
	11:16		Middle	2.5	16.20	16.20		8.22	8.22		33.40	33.40		88.6	88.5		7.18	7.17		2.89	2.92		5	
26/1/2011	12:37	Fine	Middle	2.5	17.50	17.40	17.43	8.26	8.26	8.26	33.70	33.70	33.65	90.4	90.2	90.3	7.14	7.12	7.13	4.03	3.53	3.69	6	5.00
	12:40		Middle	2.5	17.40	17.40		8.25	8.25		33.60	33.60		90.3	90.1		7.13	7.11		3.64	3.56		4	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/12/2010	11:29	Fine	Middle	2.0	18.60	18.60	18.60	8.17	8.17	8.17	32.40	32.40	32.40	81.3	80.8	80.7	6.25	6.22	6.21	5.06	5.50	5.30	7	7.50
	11:32		Middle	2.0	18.60	18.60		8.17	8.17		32.40	32.40		80.5	80.0		6.19	6.16		5.84	4.79		8	
30/12/2010	14:30	Fine	Middle	2.0	19.71	19.71	19.71	7.97	7.97	7.98	31.63	31.63	31.63	87.1	86.3	86.5	6.61	6.55	6.57	5.54	6.06	5.68	10	11.00
	14:33		Middle	2.0	19.70	19.70		7.98	7.98		31.62	31.62		86.0	86.6		6.53	6.57		5.80	5.30		12	
1/1/2011	16:00	Fine	Middle	2.5	19.80	19.80	19.80	8.08	8.08	8.08	32.36	32.36	32.36	61.1	60.2	60.3	4.62	4.46	4.54	3.66	4.29	3.82	9	8.00
	16:06		Middle	2.5	19.80	19.80		8.08	8.08		32.36	32.36		59.3	60.7		4.48	4.59		3.53	3.79		7	
3/1/2011	14:38	Cloudy	Middle	2.0	16.80	16.80	16.80	8.20	8.20	8.21	35.80	35.80	35.80	78.6	78.5	78.5	6.17	6.16	6.16	3.54	3.38	3.43	8	8.00
	14:41		Middle	2.0	16.80	16.80		8.21	8.21		35.80	35.80		78.4	78.5		6.14	6.15		3.31	3.49		8	
5/1/2011	19:24	Cloudy	Middle	2.5	18.20	18.20	18.20	8.20	8.20	8.20	32.58	32.58	32.58	51.9	58.6	55.9	4.04	4.65	4.35	2.83	2.90	2.73	6	5.00
	19:30		Middle	2.5	18.20	18.20		8.20	8.20		32.58	32.58		57.6	55.4		4.42	4.30		2.68	2.50		4	
8/1/2011	9:05	Cloudy	Middle	2.0	16.70	16.70	16.65	8.19	8.19	8.19	33.00	33.00	32.95	91.1	90.8	90.6	7.31	7.29	7.28	4.71	4.06	4.15	6	5.50
	9:08		Middle	2.0	16.60	16.60		8.18	8.18		32.90	32.90		90.4	90.2		7.27	7.25		3.92	3.90		5	
10/1/2011	9:40	Sunny	Middle	2.0	16.20	16.20	16.20	8.17	8.17	8.17	32.60	32.60	32.60	79.5	79.2	79.1	6.45	6.42	6.41	4.53	4.70	4.92	8	8.50
	9:43		Middle	2.0	16.20	16.20		8.17	8.17		32.60	32.60		79.0	78.8		6.39	6.38		5.10	5.36		9	
13/1/2011	11:31	Cloudy	Middle	2.0	16.90	16.90	16.90	8.19	8.19	8.19	32.90	32.90	32.90	83.4	83.1	82.9	6.63	6.60	6.58	4.38	3.99	4.01	9	9.50
	11:34		Middle	2.0	16.90	16.90		8.19	8.19		32.90	32.90		82.7	82.2		6.56	6.53		4.11	3.57		10	
15/1/2011	13:56	Fine	Middle	2.5	17.50	17.50	17.53	8.24	8.24	8.23	32.80	32.90	32.85	88.8	88.7	88.6	6.95	6.94	6.93	2.63	2.55	2.60	7	6.00
	14:03		Middle	2.5	17.60	17.50		8.23	8.23		32.80	32.90		88.5	88.4		6.92	6.91		2.64	2.59		5	
17/1/2011	14:30	Fine	Middle	1.5	16.70	16.70	16.65	8.30	8.30	8.30	33.50	33.50	33.45	87.6	88.1	88.5	6.95	6.97	7.01	2.95	2.82	2.87	10	9.00
	14:33		Middle	1.5	16.60	16.60		8.29	8.29		33.40	33.40		88.9	89.4		7.04	7.09		2.91	2.78		8	
19/1/2011	15:12	Cloudy	Middle	2.0	17.40	17.40	17.40	8.29	8.29	8.29	33.30	33.30	33.30	93.0	92.7	92.4	7.31	7.30	7.26	2.50	3.02	2.64	7	6.00
	15:15		Middle	2.0	17.40	17.40		8.29	8.29		33.30	33.30		91.9	91.8		7.23	7.20		2.72	2.33		5	
22/1/2011	8:30	Cloudy	Middle	2.0	16.00	16.00	15.95	8.28	8.28	8.29	33.00	33.00	33.05	89.8	89.7	89.8	7.25	7.24	7.25	4.46	4.41	4.20	8	8.00
	8:33		Middle	2.0	15.90	15.90		8.29	8.29		33.10	33.10		89.6	89.9		7.23	7.26		3.94	4.00		8	
24/1/2011	10:15	Cloudy	Middle	1.5	15.70	15.70	15.75	8.26	8.26	8.26	33.50	33.50	33.55	89.4	88.7	88.6	7.30	7.25	7.24	4.51	4.62	4.05	10	10.00
	10:18		Middle	1.5	15.80	15.80		8.25	8.25		33.60	33.60		88.2	88.0		7.22	7.20		2.93	4.12		10	
26/1/2011	11:30	Fine	Middle	1.5	17.30	17.30	17.25	8.26	8.26	8.26	33.40	33.40	33.35	84.5	84.3	84.0	6.70	6.69	6.67	4.90	4.41	4.54	9	9.00
	11:33		Middle	1.5	17.20	17.20		8.26	8.26		33.30	33.30		83.8	83.4		6.67	6.62		4.29	4.56		9	





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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			Suspended Solids		
					°C			-			ppt			%			mg/L		NTU			mg/L		
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
28/12/2010	11:39	Fine	Middle	2.5	19.20	19.20	19.20	8.19	8.19	8.20	32.50	32.50	32.50	82.6	82.5	82.4	6.31	6.30	6.29	4.90	5.62	5.06	6	6.00
	11:42		Middle	2.5	19.20	19.20		8.20	8.20		32.50	32.50		82.2	82.1		6.28	6.26		4.94	4.79		6	
30/12/2010	14:40	Fine	Middle	3.0	20.00	20.00	20.01	7.96	7.96	7.96	31.55	31.55	31.56	85.0	84.4	84.2	6.42	6.38	6.36	4.04	3.94	3.97	8	7.00
	14:43		Middle	3.0	20.01	20.01		7.95	7.95		31.56	31.56		83.6	83.7		6.31	6.32		3.66	4.25		6	
1/1/2011	15:45	Fine	Middle	3.0	19.60	19.60	19.60	8.09	8.09	8.09	32.29	32.29	32.29	58.0	57.0	57.5	4.39	4.24	4.33	2.40	2.48	2.41	4	4.00
	15:50		Middle	3.0	19.60	19.60		8.09	8.09		32.29	32.29		56.0	58.8		4.24	4.45		2.55	2.19		4	
3/1/2011	14:49	Cloudy	Middle	2.5	16.90	16.90	16.90	8.10	8.10	8.10	36.90	36.90	36.90	83.6	83.3	83.2	6.50	6.48	6.46	3.34	3.19	3.12	8	7.00
	14:52		Middle	2.5	16.90	16.90		8.10	8.10		36.90	36.90		83.0	82.7		6.45	6.42		3.02	2.93		6	
5/1/2011	19:12	Cloudy	Middle	3.0	18.30	18.30	18.30	8.21	8.21	8.21	32.59	32.59	32.59	60.4	56.6	56.9	4.68	4.36	4.40	5.47	5.05	5.40	11	9.00
	19:17		Middle	3.0	18.30	18.30		8.21	8.21		32.59	32.59		54.8	55.8		4.22	4.33		5.65	5.41		7	
8/1/2011	9:55	Cloudy	Middle	3.0	16.70	16.70	16.63	8.20	8.20	8.21	32.90	32.90	32.85	87.9	87.6	87.4	7.05	7.04	7.02	5.41	5.51	5.15	12	10.50
	9:58		Middle	3.0	16.50	16.60		8.21	8.21		32.80	32.80		87.1	86.9		7.01	6.98		4.80	4.86		9	
10/1/2011	9:54	Sunny	Middle	2.5	16.20	16.20	16.20	8.16	8.16	8.16	32.40	32.50	32.43	81.6	81.4	81.3	6.55	6.54	6.54	5.15	5.59	4.98	7	6.50
	9:57		Middle	2.5	16.20	16.20		8.16	8.16		32.40	32.40		81.2	81.1		6.53	6.52		4.47	4.71		6	
13/1/2011	11:40	Cloudy	Middle	3.0	16.80	16.80	16.80	8.18	8.18	8.18	32.70	32.70	32.70	81.8	81.6	81.5	6.50	6.47	6.47	2.99	2.55	2.70	8	7.00
	11:43		Middle	3.0	16.80	16.80		8.18	8.18		32.70	32.70		81.5	81.1		6.46	6.44		2.71	2.55		6	
15/1/2011	13:44	Fine	Middle	2.5	16.80	16.80	16.83	8.16	8.16	8.16	32.60	32.60	32.65	88.3	88.2	88.0	6.99	6.99	6.97	1.96	1.99	1.98	2	2.00
	13:50		Middle	2.5	16.90	16.80		8.16	8.16		32.70	32.70		87.8	87.7		6.96	6.95		1.97	1.98		2	
17/1/2011	14:42	Fine	Middle	3.0	16.60	16.60	16.55	8.21	8.21	8.22	33.30	33.30	33.25	88.7	88.5	88.5	7.13	7.11	7.11	5.89	5.70	5.82	16	15.00
	14:45		Middle	3.0	16.50	16.50		8.22	8.22		33.20	33.20		88.5	88.2		7.11	7.09		5.97	5.73		14	
19/1/2011	15:23	Cloudy	Middle	3.0	17.60	17.60	17.60	8.25	8.25	8.25	33.20	33.20	33.20	90.2	89.9	89.9	7.06	7.04	7.04	4.33	3.68	4.10	6	7.00
	15:27		Middle	3.0	17.60	17.60		8.25	8.25		33.20	33.20		89.8	89.7		7.02	7.02		4.22	4.15		8	
22/1/2011	8:40	Cloudy	Middle	3.0	16.20	16.20	16.15	8.18	8.18	8.19	32.90	32.90	32.85	91.2	90.8	90.8	7.40	7.38	7.37	5.10	4.23	4.71	12	9.50
	8:43		Middle	3.0	16.10	16.10		8.19	8.19		32.80	32.80		90.6	90.4		7.36	7.35		4.77	4.73		7	
24/1/2011	10:23	Cloudy	Middle	3.0	16.00	16.00	15.95	8.21	8.21	8.22	33.50	33.50	33.45	89.3	88.6	88.6	7.25	7.20	7.20	5.72	5.61	5.50	13	12.00
	10:26		Middle	3.0	15.90	15.90		8.22	8.22		33.40	33.40		88.3	88.0		7.18	7.16		5.49	5.17		11	
26/1/2011	11:40	Fine	Middle	3.0	17.90	17.80	17.83	8.05	8.05	8.06	33.50	33.50	33.45	90.3	89.7	89.1	7.05	7.02	6.97	5.36	5.38	5.25	8	8.00
	11:43		Middle	3.0	17.80	17.80		8.06	8.06		33.40	33.40		88.6	87.7		6.92	6.87		5.26	5.00		8	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
28/12/2010	11:53	Fine	Middle	1.5	18.90	18.90	18.88	8.19	8.19	8.19	32.50	32.50	32.50	82.7	82.4	82.4	6.34	6.31	6.31	4.09	4.60	4.18	5	5.00
	11:56		Middle	1.5	18.80	18.90		8.18	8.18		32.50	32.50		82.4	82.1		6.30	6.29		4.06	3.95		5	
30/12/2010	14:51	Fine	Middle	1.5	19.43	19.43	19.44	7.91	7.91	7.92	31.65	31.65	31.65	87.0	85.7	86.1	6.64	6.53	6.57	4.44	4.03	4.03	5	4.50
	14:54		Middle	1.5	19.44	19.44		7.92	7.92		31.64	31.64		86.5	85.3		6.60	6.50		3.96	3.69		4	
1/1/2011	15:28	Fine	Middle	2.0	19.60	19.60	19.60	8.11	8.11	8.11	32.24	32.24	32.24	59.8	60.3	60.0	4.50	4.57	4.53	2.33	2.09	2.25	4	4.00
	15:35		Middle	2.0	19.60	19.60		8.11	8.11		32.24	32.24		58.8	61.2		4.42	4.62		2.17	2.41		4	
3/1/2011	15:11	Cloudy	Middle	1.5	17.10	17.10	17.10	8.19	8.19	8.19	33.90	33.90	33.90	82.8	82.4	82.2	6.55	6.51	6.49	4.63	4.53	4.34	7	8.00
	15:14		Middle	1.5	17.10	17.10		8.19	8.19		33.90	33.90		82.0	81.5		6.46	6.44		4.20	3.98		9	
5/1/2011	18:59	Cloudy	Middle	2.0	17.90	17.90	17.90	8.22	8.22	8.22	32.53	32.53	32.53	54.3	55.1	56.8	4.24	4.28	4.38	3.39	3.08	3.05	5	5.00
	19:04		Middle	2.0	17.90	17.90		8.22	8.22		32.53	32.53		60.7	57.1		4.53	4.45		2.90	2.83		5	
8/1/2011	10:14	Cloudy	Middle	1.5	17.00	17.00	17.00	8.21	8.21	8.21	33.20	33.20	33.15	93.5	93.4	93.2	7.46	7.43	7.42	5.36	4.83	4.70	7	8.00
	10:17		Middle	1.5	17.00	17.00		8.21	8.22		33.10	33.10		93.1	92.9		7.41	7.37		4.31	4.29		9	
10/1/2011	10:09	Sunny	Middle	1.5	16.40	16.40	16.40	8.18	8.18	8.18	32.60	32.60	32.60	79.3	79.2	79.0	6.34	6.34	6.32	3.95	3.77	3.63	7	7.50
	10:12		Middle	1.5	16.40	16.40		8.18	8.18		32.60	32.60		78.9	78.5		6.31	6.28		3.58	3.22		8	
13/1/2011	11:56	Cloudy	Middle	1.5	16.70	16.80	16.73	8.21	8.21	8.21	33.00	33.00	33.00	82.6	82.0	81.9	6.56	6.54	6.52	2.28	2.30	2.36	6	5.00
	11:59		Middle	1.5	16.70	16.70		8.21	8.22		33.00	33.00		81.7	81.4		6.50	6.47		2.39	2.48		4	
15/1/2011	13:31	Fine	Middle	2.0	17.50	17.50	17.53	8.23	8.23	8.23	32.70	32.80	32.78	87.7	87.5	87.5	6.87	6.86	6.86	2.21	2.15	2.24	4	4.00
	13:37		Middle	2.0	17.60	17.50		8.24	8.24		32.70	32.90		87.4	87.5		6.86	6.85		2.28	2.31		4	
17/1/2011	14:56	Fine	Middle	2.0	16.60	16.60	16.65	8.29	8.29	8.30	33.00	33.00	32.95	89.5	89.3	89.3	7.20	7.18	7.18	3.27	3.46	3.29	6	7.00
	14:59		Middle	2.0	16.70	16.70		8.30	8.30		32.90	32.90		89.0	89.2		7.17	7.18		3.33	3.08		8	
19/1/2011	15:40	Cloudy	Middle	1.5	17.70	17.70	17.70	8.25	8.25	8.25	33.30	33.30	33.30	88.6	88.5	88.3	6.98	6.95	6.93	5.10	5.54	5.23	7	8.00
	15:43		Middle	1.5	17.70	17.70		8.25	8.25		33.30	33.30		88.1	88.1		6.88	6.89		4.99	5.27		9	
22/1/2011	8:55	Cloudy	Middle	1.5	16.50	16.50	16.55	8.28	8.28	8.28	33.10	33.10	33.05	92.9	92.8	92.4	7.49	7.47	7.43	4.29	4.18	3.98	12	10.00
	8:58		Middle	1.5	16.60	16.60		8.27	8.27		33.00	33.00		92.5	91.2		7.41	7.34		3.83	3.61		8	
24/1/2011	10:35	Cloudy	Middle	1.5	16.10	16.10	16.10	8.26	8.26	8.27	33.40	33.40	33.45	90.5	90.3	90.1	7.34	7.32	7.30	3.17	3.36	3.15	6	7.00
	10:38		Middle	1.5	16.10	16.10		8.27	8.27		33.50	33.50		89.9	89.6		7.28	7.25		2.92	3.14		8	
26/1/2011	11:54	Fine	Middle	1.5	17.90	17.90	17.95	8.23	8.23	8.24	33.50	33.50	33.55	87.7	87.4	87.3	6.86	6.84	6.83	4.06	3.77	3.84	3	5.50
	11:57		Middle	1.5	18.00	18.00		8.24	8.24		33.60	33.60		87.2	87.0		6.82	6.81		3.69	3.82		8	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	11:49	Fine	Middle	1.5	19.60	19.60	19.60	8.19	8.19	8.19	32.50	32.50	32.50	83.4	83.1	83.1	6.32	6.31	6.31	4.45	4.64	4.55	5	5.00
	11:51		Middle	1.5	19.60	19.60		8.19	8.19		32.50	32.50		82.9	82.9		6.30	6.29		4.82	4.28		5	
30/12/2010	14:44	Fine	Middle	1.5	19.91	19.91	19.92	7.88	7.88	7.88	31.54	31.54	31.54	85.8	86.0	85.1	6.58	6.51	6.46	3.61	3.56	3.47	6	7.00
	14:47		Middle	1.5	19.92	19.92		7.87	7.87		31.53	31.53		84.7	84.0		6.41	6.35		3.41	3.28		8	
1/1/2011	15:36	Fine	Middle	2.0	20.20	20.20	20.20	8.08	8.08	8.08	32.40	32.40	32.40	64.6	63.9	63.7	4.84	4.81	4.78	3.03	3.01	3.02	7	6.00
	15:43		Middle	2.0	20.20	20.20		8.08	8.08		32.40	32.40		63.2	62.9		4.74	4.72		2.99	3.03		5	
3/1/2011	15:03	Cloudy	Middle	1.5	16.90	16.90	16.90	8.17	8.17	8.17	33.40	33.40	33.40	86.2	85.5	85.3	6.76	6.71	6.69	2.37	2.46	2.38	6	6.00
	15:06		Middle	1.5	16.90	16.90		8.17	8.17		33.40	33.40		85.0	84.6		6.66	6.64		2.39	2.29		6	
5/1/2011	19:05	Cloudy	Middle	2.0	17.90	17.90	17.90	7.99	7.99	7.99	32.64	32.64	32.45	55.6	65.0	59.6	4.32	5.03	4.63	4.79	4.00	4.28	7	6.50
	19:11		Middle	2.0	17.90	17.90		7.99	7.99		32.64	31.88		57.4	60.5		4.49	4.68		3.90	4.41		6	
8/1/2011	10:06	Cloudy	Middle	1.5	17.10	17.20	17.18	8.16	8.16	8.16	33.10	33.10	33.05	87.4	86.8	87.0	6.92	6.88	6.88	7.90	6.22	6.88	13	14.00
	10:09		Middle	1.5	17.20	17.20		8.15	8.15		33.00	33.00		87.0	86.8		6.87	6.86		6.55	6.86		15	
10/1/2011	10:18	Sunny	Middle	1.5	16.70	16.70	16.70	8.15	8.15	8.15	32.50	32.50	32.50	79.9	79.8	79.7	6.34	6.34	6.33	2.28	2.47	2.34	6	5.50
	10:21		Middle	1.5	16.70	16.70		8.15	8.15		32.50	32.50		79.6	79.5		6.33	6.31		2.23	2.36		5	
13/1/2011	11:49	Cloudy	Middle	1.5	17.20	17.20	17.20	8.10	8.10	8.10	32.90	32.90	32.90	83.3	83.0	82.9	6.57	6.56	6.54	5.91	6.03	6.02	10	11.00
	11:52		Middle	1.5	17.20	17.20		8.10	8.10		32.90	32.90		82.7	82.5		6.52	6.50		6.02	6.13		12	
15/1/2011	13:38	Fine	Middle	2.0	17.80	17.80	17.80	8.18	8.18	8.18	32.60	32.70	32.65	87.0	86.8	86.7	6.77	6.74	6.74	1.38	1.50	1.42	2	2.50
	13:43		Middle	2.0	17.80	17.80		8.18	8.18		32.60	32.70		86.6	86.5		6.73	6.72		1.40	1.41		3	
17/1/2011	14:51	Fine	Middle	1.5	16.60	16.60	16.55	8.23	8.23	8.24	33.10	33.10	33.05	91.6	91.8	91.5	7.35	7.37	7.33	2.32	2.12	2.16	6	6.50
	14:54		Middle	1.5	16.50	16.50		8.24	8.24		33.00	33.00		91.4	91.2		7.31	7.30		2.06	2.15		7	
19/1/2011	15:32	Cloudy	Middle	1.5	18.40	18.40	18.40	8.24	8.24	8.24	32.20	32.20	32.20	86.8	86.7	86.5	6.74	6.73	6.72	3.88	3.42	3.52	9	8.00
	15:35		Middle	1.5	18.40	18.40		8.24	8.24		32.20	32.20		86.4	86.1		6.72	6.69		3.40	3.39		7	
22/1/2011	8:48	Cloudy	Middle	1.5	16.70	16.70	16.75	8.29	8.29	8.30	33.10	33.10	33.15	94.1	94.2	94.5	7.37	7.38	7.40	4.73	4.26	4.53	6	8.50
	8:51		Middle	1.5	16.80	16.80		8.30	8.30		33.20	33.20		94.8	94.9		7.40	7.44		4.49	4.63		11	
24/1/2011	10:29	Cloudy	Middle	1.5	16.40	16.40	16.40	8.26	8.26	8.26	33.50	33.50	33.45	88.8	88.7	88.6	7.15	7.14	7.14	6.22	6.59	6.16	29	<b>23.50</b>
	10:32		Middle	1.5	16.40	16.40		8.26	8.26		33.40	33.40		88.5	88.3		7.12	7.13		6.14	5.69		18	
26/1/2011	11:45	Fine	Middle	1.5	18.40	18.40	18.35	8.23	8.23	8.24	33.40	33.40	33.45	88.7	88.2	88.2	6.88	6.85	6.83	4.48	4.03	4.11	7	7.50
	11:48		Middle	1.5	18.30	18.30		8.24	8.24		33.50	33.50		88.0	87.7		6.83	6.76		4.14	3.78		8	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/12/2010	12:25	Fine	Middle	1.5	19.30	19.30	19.30	8.12	8.12	8.12	32.50	32.50	32.50	79.1	78.2	78.0	5.99	5.94	5.92	2.92	3.02	2.85	4	4.00
	12:28		Middle	1.5	19.30	19.30		8.12	8.12		32.50	32.50		77.5	77.3		5.88	5.85		2.65	2.80		4	
30/12/2010	15:17	Fine	Middle	2.0	19.80	19.80	19.81	7.82	7.82	7.83	31.70	31.70	31.71	79.5	79.6	79.3	6.02	6.03	6.01	1.97	2.05	2.17	6	6.00
	15:20		Middle	2.0	19.81	19.81		7.83	7.83		31.71	31.71		80.1	78.0		6.07	5.90		2.28	2.39		6	
1/1/2011	14:50	Fine	Middle	2.0	19.90	19.90	19.90	8.08	8.08	8.08	32.48	32.48	32.48	58.5	56.3	58.1	4.40	4.20	4.36	2.93	2.48	2.41	4	3.50
	14:55		Middle	2.0	19.90	19.90		8.08	8.08		32.48	32.48		59.6	57.9		4.49	4.36		2.16	2.06		3	
3/1/2011	16:05	Cloudy	Middle	1.5	17.40	17.40	17.40	8.21	8.21	8.21	33.50	33.50	33.50	82.4	83.0	82.4	6.49	6.53	6.49	5.02	4.73	4.72	6	7.00
	16:08		Middle	1.5	17.40	17.40		8.21	8.21		33.50	33.50		82.2	81.9		6.48	6.45		4.93	4.20		8	
5/1/2011	18:42	Cloudy	Middle	2.0	17.80	17.80	17.80	8.19	8.19	8.19	32.57	32.66	32.64	61.5	60.7	60.3	4.82	4.75	4.72	3.65	3.68	3.61	7	6.50
	18:46		Middle	2.0	17.80	17.80		8.19	8.19		32.66	32.66		59.7	59.1		4.68	4.62		3.69	3.40		6	
8/1/2011	10:35	Cloudy	Middle	1.5	17.40	17.40	17.35	8.22	8.22	8.22	33.10	33.10	33.05	89.9	89.6	89.4	7.07	7.05	7.03	12.10	11.30	<b>11.38</b>	17	<b>18.00</b>
	10:38		Middle	1.5	17.30	17.30		8.21	8.21		33.00	33.00		89.3	88.9		7.02	6.98		10.90	11.20		19	
10/1/2011	10:48	Sunny	Middle	1.5	17.00	17.00	17.00	8.19	8.19	8.19	32.60	32.60	32.60	80.7	80.5	80.5	6.36	6.34	6.34	5.08	5.90	5.58	5	6.00
	10:54		Middle	1.5	17.00	17.00		8.19	8.19		32.60	32.60		80.4	80.3		6.34	6.32		5.52	5.83		7	
13/1/2011	12:24	Cloudy	Middle	1.5	17.40	17.40	17.40	8.26	8.26	8.26	33.00	33.00	33.00	89.0	88.7	88.6	7.00	6.97	6.96	6.58	6.36	6.55	14	13.00
	12:27		Middle	1.5	17.40	17.40		8.26	8.26		33.00	33.00		88.4	88.1		6.96	6.92		6.66	6.60		12	
15/1/2011	13:08	Fine	Middle	2.0	17.80	17.80	17.78	8.20	8.21	8.21	32.80	32.90	32.88	87.9	87.7	87.6	6.84	6.81	6.81	2.89	2.99	2.93	6	7.00
	13:14		Middle	2.0	17.70	17.80		8.21	8.21		32.90	32.90		87.5	87.4		6.80	6.79		2.89	2.95		8	
17/1/2011	15:30	Fine	Middle	2.0	17.20	17.20	17.15	8.29	8.29	8.29	33.40	33.40	33.35	88.4	88.3	88.3	7.00	6.99	6.99	4.18	3.38	3.51	7	7.00
	15:33		Middle	2.0	17.10	17.10		8.28	8.28		33.30	33.30		88.1	88.3		6.98	6.99		3.27	3.21		7	
19/1/2011	16:02	Cloudy	Middle	1.5	18.20	18.20	18.20	8.26	8.26	8.26	32.40	32.40	32.40	87.1	87.0	86.3	6.76	6.73	6.69	4.26	3.61	3.65	6	6.00
	16:05		Middle	1.5	18.20	18.20		8.26	8.26		32.40	32.40		85.4	85.5		6.62	6.64		3.31	3.40		6	
22/1/2011	9:23	Cloudy	Middle	1.5	16.90	16.90	16.95	8.30	8.30	8.31	33.50	33.50	33.45	90.0	89.1	89.2	7.10	7.02	7.03	3.57	3.17	3.25	8	6.50
	9:26		Middle	1.5	17.00	17.00		8.31	8.31		33.40	33.40		88.9	88.8		7.01	6.99		3.10	3.16		5	
24/1/2011	10:53	Cloudy	Middle	1.5	16.50	16.50	16.45	8.29	8.29	8.29	33.10	33.10	33.15	90.3	90.2	90.0	7.26	7.24	7.23	4.20	4.12	3.93	7	8.00
	10:56		Middle	1.5	16.40	16.40		8.28	8.28		33.20	33.20		89.8	89.7		7.22	7.21		4.03	3.38		9	
26/1/2011	12:17	Fine	Middle	1.5	17.90	17.90	17.95	8.30	8.30	8.30	33.80	33.80	33.75	91.5	91.1	91.1	7.16	7.14	7.14	4.80	5.06	4.76	7	8.00
	12:20		Middle	1.5	18.00	18.00		8.29	8.29		33.70	33.70		90.9	90.7		7.13	7.11		4.58	4.59		9	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	12:31	Fine	Middle	1.5	19.60	19.60	19.60	8.15	8.15	8.16	32.50	32.50	32.50	83.6	83.3	83.3	6.27	6.24	6.23	4.14	4.32	4.06	4	5.00
	12:34		Middle	1.5	19.60	19.60		8.16	8.16		32.50	32.50		83.1	83.0		6.21	6.20		3.83	3.94		6	
30/12/2010	15:23	Fine	Middle	2.0	19.64	19.64	19.64	7.87	7.87	7.87	31.67	31.67	31.67	80.6	80.5	80.4	6.12	6.11	6.11	2.94	2.89	2.75	11	10.00
	15:26		Middle	2.0	19.63	19.63		7.87	7.87		31.66	31.66		81.8	78.8		6.22	5.99		2.62	2.55		9	
1/1/2011	14:57	Fine	Middle	2.0	20.00	20.00	20.00	8.12	8.12	8.12	32.14	32.14	32.14	62.0	61.7	60.1	4.69	4.62	4.50	2.42	2.69	2.57	8	7.50
	15:03		Middle	2.0	20.00	20.00		8.12	8.12		32.14	32.14		59.6	57.2		4.40	4.29		2.83	2.33		7	
3/1/2011	16:15	Cloudy	Middle	1.5	17.50	17.60	17.58	8.18	8.18	8.18	33.80	33.80	33.80	80.7	80.4	80.3	6.31	6.30	6.29	2.97	2.66	2.64	4	4.50
	16:19		Middle	1.5	17.60	17.60		8.18	8.18		33.80	33.80		80.1	80.0		6.27	6.27		2.46	2.46		5	
5/1/2011	18:47	Cloudy	Middle	2.0	17.90	17.90	17.90	8.20	8.20	8.20	32.59	32.59	32.59	57.3	57.0	56.9	4.77	4.41	4.51	3.61	3.17	3.24	4	5.00
	18:52		Middle	2.0	17.90	17.90		8.20	8.20		32.59	32.59		55.3	58.0		4.31	4.54		3.05	3.11		6	
8/1/2011	10:25	Cloudy	Middle	1.5	17.10	17.10	17.05	8.21	8.21	8.21	32.60	32.60	32.55	89.8	89.7	89.7	7.06	7.04	7.03	6.95	6.41	6.54	10	10.50
	10:28		Middle	1.5	17.00	17.00		8.20	8.20		32.50	32.50		89.5	89.6		7.01	7.02		6.52	6.29		11	
10/1/2011	10:56	Sunny	Middle	1.5	17.10	17.10	17.10	8.18	8.18	8.18	32.60	32.60	32.60	76.6	76.5	76.5	5.99	5.99	5.98	4.86	4.07	4.42	8	7.00
	10:59		Middle	1.5	17.10	17.10		8.18	8.18		32.60	32.60		76.4	76.3		5.97	5.97		3.78	4.98		6	
13/1/2011	12:31	Cloudy	Middle	1.5	17.40	17.40	17.40	8.25	8.25	8.25	33.00	33.00	33.00	86.4	86.1	86.0	6.76	6.73	6.72	6.43	6.13	6.38	10	10.00
	12:34		Middle	1.5	17.40	17.40		8.25	8.25		33.00	33.00		85.9	85.7		6.70	6.69		6.37	6.60		10	
15/1/2011	13:16	Fine	Middle	2.0	17.10	17.10	17.08	8.23	8.24	8.24	32.70	32.70	32.75	88.5	88.4	88.3	6.96	6.94	6.93	2.54	2.54	2.58	4	5.00
	13:21		Middle	2.0	17.00	17.10		8.24	8.24		32.80	32.80		88.1	88.0		6.92	6.91		2.61	2.64		6	
17/1/2011	15:36	Fine	Middle	2.0	17.30	17.30	17.25	8.32	8.32	8.33	33.40	33.40	33.35	92.0	92.1	92.1	7.28	7.29	7.29	3.16	4.12	3.54	7	6.00
	15:39		Middle	2.0	17.20	17.20		8.33	8.33		33.30	33.30		92.2	92.1		7.30	7.29		3.37	3.51		5	
19/1/2011	16:09	Cloudy	Middle	1.5	18.40	18.40	18.40	8.29	8.29	8.29	32.40	32.40	32.40	92.6	92.5	92.6	7.18	7.17	7.17	4.97	4.76	4.82	7	6.00
	16:12		Middle	1.5	18.40	18.40		8.29	8.29		32.40	32.40		92.6	92.5		7.17	7.16		4.73	4.83		5	
22/1/2011	9:30	Cloudy	Middle	1.5	17.10	17.10	17.05	8.29	8.29	8.29	33.50	33.50	33.48	91.6	91.5	91.4	7.20	7.19	7.18	2.95	2.77	2.81	9	7.50
	9:33		Middle	1.5	17.00	17.00		8.28	8.28		33.40	33.50		91.3	91.2		7.17	7.16		2.89	2.61		6	
24/1/2011	10:59	Cloudy	Middle	1.5	16.30	16.30	16.30	8.28	8.28	8.29	33.30	33.30	33.25	90.2	90.1	90.0	7.26	7.25	7.24	3.66	3.38	3.35	7	6.00
	11:02		Middle	1.5	16.30	16.30		8.29	8.29		33.20	33.20		89.9	89.7		7.24	7.22		3.23	3.14		5	
26/1/2011	12:24	Fine	Middle	1.5	18.00	18.00	18.00	8.29	8.29	8.29	33.50	33.50	33.50	89.9	89.1	89.1	7.02	6.98	6.97	4.08	3.92	3.97	8	7.00
	12:27		Middle	1.5	18.00	18.00		8.29	8.29		33.50	33.50		88.8	88.6		6.94	6.92		3.82	4.06		6	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average		
28/12/2010	12:11	Fine	Middle	2.0	19.90	19.90	19.90	8.16	8.16	8.17	32.50	32.50	32.45	84.6	84.3	84.3	6.36	6.34	6.34	3.77	4.38	4.28	4	4.50
	12:14		Middle	2.0	19.90	19.90		8.17	8.17		32.40	32.40		84.2	84.0		6.32	6.32		4.26	4.70		5	
30/12/2010	15:07	Fine	Middle	2.0	19.49	19.49	19.50	7.87	7.87	7.88	31.65	31.65	31.66	80.8	79.2	80.4	6.15	6.03	6.12	4.18	4.00	4.20	8	7.00
	15:10		Middle	2.0	19.50	19.50		7.88	7.88		31.66	31.66		80.9	80.7		6.16	6.14		4.16	4.46		6	
1/1/2011	14:22	Fine	Middle	2.0	18.70	18.70	18.70	8.16	8.16	8.16	32.35	32.35	32.35	60.5	59.9	60.2	4.68	4.61	4.65	3.77	3.90	3.60	7	6.00
	14:29		Middle	2.0	18.70	18.70		8.16	8.16		32.35	32.35		59.4	61.1		4.59	4.71		3.25	3.48		5	
3/1/2011	15:51	Cloudy	Middle	2.0	17.30	17.30	17.30	8.23	8.23	8.23	30.80	30.80	30.80	89.0	88.8	88.7	7.13	7.11	7.09	4.10	3.18	3.33	8	7.50
	15:54		Middle	2.0	17.30	17.30		8.23	8.23		30.80	30.80		88.7	88.3		7.10	7.03		3.05	2.97		7	
5/1/2011	18:30	Cloudy	Middle	2.5	18.10	18.10	18.10	7.73	7.73	7.73	32.22	32.22	32.22	57.7	55.3	58.6	4.79	4.30	4.64	4.86	5.49	5.14	6	6.50
	18:40		Middle	2.5	18.10	18.10		7.73	7.73		32.22	32.22		62.0	59.5		4.83	4.63		5.35	4.84		7	
8/1/2011	9:43	Cloudy	Middle	2.0	17.50	17.50	17.45	8.20	8.20	8.21	33.30	33.30	33.35	90.9	90.7	90.5	7.15	7.12	7.11	5.95	5.22	5.28	8	7.00
	9:46		Middle	2.0	17.40	17.40		8.21	8.21		33.40	33.40		90.3	90.0		7.10	7.08		5.35	4.61		6	
10/1/2011	11:08	Sunny	Middle	2.0	16.80	16.80	16.80	8.17	8.17	8.17	32.70	32.70	32.70	86.0	85.9	85.8	6.74	6.72	6.72	6.43	5.79	6.31	8	9.00
	11:11		Middle	2.0	16.80	16.80		8.17	8.17		32.70	32.70		85.6	85.6		6.71	6.69		6.32	6.70		10	
13/1/2011	12:03	Cloudy	Middle	2.0	17.70	17.70	17.70	8.24	8.24	8.24	33.10	33.10	33.13	84.6	84.6	84.5	6.60	6.60	6.59	4.69	4.99	4.75	10	9.00
	12:07		Middle	2.0	17.70	17.70		8.24	8.24		33.20	33.10		84.4	84.3		6.58	6.58		4.77	4.53		8	
15/1/2011	12:57	Fine	Middle	2.0	18.00	17.90	17.93	8.24	8.24	8.24	32.50	32.70	32.70	86.6	86.7	86.6	6.80	6.81	6.80	2.34	2.19	2.25	7	6.00
	13:03		Middle	2.0	17.90	17.90		8.24	8.24		32.80	32.80		86.5	86.4		6.79	6.78		2.23	2.22		5	
17/1/2011	15:15	Fine	Middle	2.5	17.70	17.60	17.63	8.31	8.31	8.31	33.50	33.50	33.45	92.4	92.5	92.3	7.26	7.27	7.25	2.69	2.59	2.64	9	8.00
	15:18		Middle	2.5	17.60	17.60		8.30	8.30		33.40	33.40		92.3	92.1		7.24	7.22		2.65	2.62		7	
19/1/2011	15:51	Cloudy	Middle	2.5	18.50	18.50	18.50	8.28	8.28	8.28	32.50	32.50	32.50	92.9	92.7	92.7	7.16	7.15	7.15	4.40	4.08	4.10	12	11.00
	15:54		Middle	2.5	18.50	18.50		8.28	8.28		32.50	32.50		92.5	92.5		7.14	7.13		3.88	4.02		10	
22/1/2011	9:10	Cloudy	Middle	2.0	17.30	17.30	17.35	8.28	8.28	8.28	33.60	33.60	33.65	93.4	92.9	92.9	7.27	7.25	7.25	4.43	4.13	4.12	6	5.50
	9:13		Middle	2.0	17.40	17.40		8.27	8.27		33.70	33.70		92.8	92.6		7.24	7.22		3.80	4.12		5	
24/1/2011	10:45	Cloudy	Middle	2.0	16.50	16.50	16.50	8.29	8.29	8.30	33.60	33.60	33.55	88.0	87.9	87.8	7.03	7.01	7.01	3.31	3.96	3.37	9	8.00
	10:48		Middle	2.0	16.50	16.50		8.30	8.30		33.50	33.50		87.7	87.6		7.00	6.99		3.12	3.09		7	
26/1/2011	12:06	Fine	Middle	2.0	18.30	18.30	18.35	8.27	8.27	8.28	33.50	33.50	33.55	90.4	90.5	90.5	7.02	7.06	7.03	5.57	5.17	5.33	10	9.00
	12:09		Middle	2.0	18.40	18.40		8.28	8.28		33.60	33.60		90.6	90.3		7.03	7.00		5.25	5.31		8	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
			m		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
28/12/2010	12:30	Fine	Middle	1.5	18.90	18.90	18.96	7.81	7.81	7.83	32.30	32.30	32.30	88.6	86.0	88.2	6.83	6.59	6.77	3.56	3.56	3.56	7	7.00
	12:33		Middle	1.5	19.02	19.02		7.84	7.84		32.30	32.30		90.6	87.7		6.94	6.71		3.65	3.48		7	
30/12/2010	12:58	Fine	Middle	1.5	20.30	20.30	20.30	8.15	8.15	8.17	32.50	32.50	32.50	95.4	95.0	95.0	7.14	7.12	7.12	4.28	3.84	3.88	7	8.00
	13:01		Middle	1.5	20.30	20.30		8.18	8.18		32.50	32.50		95.0	94.7		7.11	7.09		3.80	3.58		9	
1/1/2011	15:40	Fine	Middle	2.0	18.90	18.90	18.90	8.15	8.15	8.15	32.43	32.43	32.43	64.5	62.1	62.8	4.94	4.75	4.81	3.25	3.20	3.14	7	6.00
	15:46		Middle	2.0	18.90	18.90		8.15	8.15		32.43	32.43		60.0	64.6		4.57	4.96		3.08	3.02		5	
3/1/2011	14:15	Cloudy	Middle	1.5	16.90	16.90	16.90	8.19	8.19	8.20	30.90	31.00	31.03	83.7	82.9	82.8	6.90	6.84	6.83	6.10	5.16	5.40	11	10.00
	14:17		Middle	1.5	16.90	16.90		8.20	8.21		31.10	31.10		82.3	82.2		6.79	6.78		4.95	5.37		9	
5/1/2011	20:24	Cloudy	Middle	2.0	17.80	17.80	17.80	8.25	8.25	8.25	32.55	32.55	32.55	64.0	69.4	66.2	5.01	5.43	5.18	3.96	3.74	3.70	12	9.50
	20:30		Middle	2.0	17.80	17.80		8.25	8.25		32.55	32.55		67.5	63.8		5.28	4.99		3.54	3.56		7	
8/1/2011	11:10	Cloudy	Middle	1.5	16.79	16.79	16.77	8.39	8.39	8.37	31.49	31.49	31.51	84.3	83.1	84.0	6.77	6.68	6.74	4.74	4.35	4.56	6	6.50
	11:13		Middle	1.5	16.74	16.74		8.34	8.34		31.52	31.52		84.7	83.7		6.80	6.72		4.60	4.53		7	
10/1/2011	11:45	Sunny	Middle	1.5	16.86	16.85	16.86	8.28	8.28	8.27	31.77	31.77	31.76	91.6	91.8	91.0	7.32	7.33	7.27	5.80	5.84	5.67	7	6.00
	11:48		Middle	1.5	16.87	16.87		8.25	8.25		31.74	31.74		91.1	89.5		7.28	7.15		5.48	5.55		5	
13/1/2011	12:00	Cloudy	Middle	1.5	17.48	17.50	17.50	8.43	8.43	8.43	31.29	31.29	31.30	83.3	82.4	82.2	6.57	6.50	6.45	3.55	2.94	3.13	5	4.00
	12:03		Middle	1.5	17.50	17.50		8.43	8.43		31.30	31.30		81.8	81.4		6.32	6.41		3.05	2.96		3	
15/1/2011	16:57	Fine	Middle	2.0	16.53	16.53	16.53	8.45	8.45	8.45	31.29	31.29	31.29	63.8	62.5	62.6	5.14	5.04	5.04	3.44	3.57	3.54	4	4.50
	17:03		Middle	2.0	16.53	16.53		8.45	8.45		31.29	31.29		63.5	60.4		5.12	4.86		3.61	3.54		5	
17/1/2011	14:25	Fine	Middle	1.5	15.50	15.50	15.48	8.03	8.03	8.04	32.78	32.78	32.80	90.5	89.9	90.4	7.38	7.34	7.37	3.32	3.07	3.23	5	5.50
	14:28		Middle	1.5	15.40	15.50		8.04	8.04		32.81	32.81		90.9	90.1		7.41	7.35		3.40	3.12		6	
19/1/2011	14:56	Cloudy	Middle	1.5	16.74	16.74	16.73	8.21	8.21	8.21	31.88	31.88	31.89	74.9	74.1	74.9	5.98	5.93	5.99	3.88	3.52	3.63	11	11.00
	14:59		Middle	1.5	16.72	16.72		8.21	8.21		31.89	31.89		75.7	75.0		6.05	6.00		3.41	3.70		11	
22/1/2011	10:12	Cloudy	Middle	1.5	14.70	14.70	14.65	8.03	8.03	8.03	32.56	32.56	32.61	86.8	86.0	86.3	7.22	7.15	7.18	4.13	3.99	3.99	4	5.00
	10:15		Middle	1.5	14.60	14.60		8.03	8.03		32.66	32.66		86.4	85.8		7.19	7.14		3.90	3.94		6	
24/1/2011	10:56	Cloudy	Middle	1.5	15.60	15.60	15.60	8.01	8.01	8.01	32.63	32.63	32.62	84.7	83.1	84.5	6.88	6.76	6.87	4.93	4.68	4.68	9	10.00
	10:59		Middle	1.5	15.60	15.60		8.01	8.01		32.60	32.60		85.5	84.8		6.94	6.88		4.69	4.43		11	
26/1/2011	11:51	Fine	Middle	1.5	15.90	15.90	15.95	7.99	7.99	7.99	32.46	32.46	32.47	85.0	84.0	84.6	6.89	6.81	6.86	3.12	2.88	2.92	7	6.00
	11:53		Middle	1.5	16.00	16.00		7.98	7.98		32.47	32.47		85.0	84.3		6.89	6.84		2.67	2.99		5	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
28/12/2010	12:00	Fine	Middle	1.5	18.86	18.86	18.86	8.06	8.06	8.05	32.22	32.22	32.23	85.7	87.3	85.7	6.71	6.58	6.58	7.63	8.31	7.83	18	<u>20.00</u>
	12:03		Middle	1.5	18.86	18.86		8.04	8.05		32.23	32.23		84.3	85.3		6.54	6.47		7.64	7.73		22	
30/12/2010	12:40	Fine	Middle	1.5	19.00	19.00	19.00	8.24	8.24	8.25	32.70	32.70	32.70	92.7	92.5	92.4	7.11	7.10	7.09	4.68	4.44	4.41	8	8.50
	12:43		Middle	1.5	19.00	19.00		8.26	8.26		32.70	32.70		92.3	92.1		7.09	7.07		4.46	4.04		9	
1/1/2011	15:24	Fine	Middle	2.0	20.20	20.20	20.20	8.26	8.26	8.26	32.80	32.80	32.80	64.7	60.9	60.4	4.79	4.65	4.53	4.02	4.25	4.05	9	8.50
	15:29		Middle	2.0	20.20	20.20		8.26	8.26		32.80	32.80		59.1	57.0		4.41	4.26		3.98	3.96		8	
3/1/2011	14:00	Cloudy	Middle	1.5	16.90	16.90	16.95	8.28	8.28	8.28	32.90	32.90	32.90	94.6	94.5	94.5	7.49	7.48	7.47	9.76	8.88	<u>9.05</u>	18	<u>16.50</u>
	14:03		Middle	1.5	17.00	17.00		8.28	8.28		32.90	32.90		94.4	94.6		7.47	7.45		8.66	8.90		15	
5/1/2011	20:06	Cloudy	Middle	2.0	17.90	17.90	17.90	8.26	8.26	8.26	32.74	32.74	32.74	64.3	59.0	63.0	5.05	4.56	4.91	3.45	3.14	3.36	10	10.00
	20:11		Middle	2.0	17.90	17.90		8.26	8.26		32.74	32.74		66.1	62.7		5.15	4.89		3.00	3.84		10	
8/1/2011	10:53	Cloudy	Middle	1.5	16.63	16.63	16.60	8.56	8.56	8.56	31.84	31.84	31.88	65.6	65.2	66.4	5.27	5.25	5.29	6.64	5.70	6.11	8	9.00
	10:56		Middle	1.5	16.56	16.56		8.56	8.56		31.91	31.91		67.7	67.2		5.44	5.20		6.11	5.97		10	
10/1/2011	11:30	Sunny	Middle	1.5	16.45	16.45	16.40	8.39	8.39	8.36	31.81	31.81	31.88	86.3	85.5	85.7	6.97	6.92	6.93	6.42	5.52	5.67	10	9.50
	11:33		Middle	1.5	16.35	16.35		8.32	8.32		31.94	31.94		85.9	85.0		6.94	6.88		5.21	5.54		9	
13/1/2011	12:48	Cloudy	Middle	1.5	17.44	17.44	17.44	8.25	8.25	8.25	31.23	31.23	31.23	69.6	73.0	68.8	5.53	5.79	5.46	4.09	4.42	4.31	9	8.50
	12:50		Middle	1.5	17.44	17.44		8.25	8.25		31.23	31.23		67.0	65.4		5.32	5.19		4.61	4.11		8	
15/1/2011	16:15	Fine	Middle	1.5	16.19	16.19	16.19	8.39	8.39	8.39	31.86	31.86	31.86	50.1	50.2	49.9	4.06	4.08	4.05	3.59	2.90	3.08	4	4.50
	16:20		Middle	1.5	16.19	16.19		8.39	8.39		31.86	31.86		48.9	50.4		3.96	4.10		2.97	2.87		5	
17/1/2011	14:00	Fine	Middle	1.5	15.90	15.90	15.95	8.09	8.09	8.09	32.68	32.67	32.83	96.4	95.1	95.7	7.78	7.68	7.73	3.71	3.23	3.31	5	5.50
	14:03		Middle	1.5	16.00	16.00		8.09	8.09		32.98	32.98		96.2	94.9		7.77	7.67		3.11	3.17		6	
19/1/2011	14:39	Cloudy	Middle	1.5	16.52	16.52	16.52	8.47	8.47	8.45	31.82	31.82	31.90	89.8	88.9	89.2	6.92	6.85	6.87	2.11	1.72	1.93	12	11.50
	14:41		Middle	1.5	16.52	16.52		8.42	8.42		31.97	31.97		89.8	88.1		6.92	6.79		1.84	2.03		11	
22/1/2011	10:34	Cloudy	Middle	1.5	14.90	14.90	14.85	8.20	8.20	8.19	32.83	32.83	32.86	93.0	92.1	92.7	7.69	7.61	7.67	4.36	4.39	4.28	4	5.00
	10:36		Middle	1.5	14.80	14.80		8.18	8.18		32.89	32.89		93.3	92.4		7.71	7.65		4.12	4.24		6	
24/1/2011	10:40	Cloudy	Middle	1.5	15.30	15.30	15.25	8.10	8.10	8.10	32.83	32.83	32.87	92.6	92.0	92.6	7.59	7.54	7.59	6.62	6.26	6.58	10	9.50
	10:42		Middle	1.5	15.20	15.20		8.10	8.10		32.90	32.90		93.1	92.5		7.63	7.59		6.62	6.80		9	
26/1/2011	11:34	Fine	Middle	1.5	16.10	16.10	16.15	8.22	8.22	8.20	32.78	32.78	32.79	92.9	91.6	92.3	7.48	7.37	7.43	3.79	3.61	3.56	6	6.00
	11:36		Middle	1.5	16.20	16.20		8.17	8.17		32.79	32.79		92.6	91.9		7.46	7.39		3.25	3.58		6	





**Water Monitoring Result at WSD7 - Kowloon South  
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt		%		mg/L		NTU		mg/L					
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/12/2010	9:40	Fine	Middle	1.5	19.40	19.40	19.37	8.18	8.18	8.16	31.82	31.82	31.81	97.8	96.9	97.2	7.47	7.40	7.42	4.03	3.84	3.87	6	6.50
	9:43		Middle	1.5	19.33	19.33		8.14	8.14		31.80	31.80		97.5	96.5		7.45	7.37		3.90	3.72		7	
30/12/2010	12:10	Fine	Middle	1.5	19.30	19.30	19.30	8.15	8.15	8.16	32.60	32.60	32.60	90.3	89.9	89.9	6.91	6.87	6.88	3.84	3.13	3.29	9	8.50
	12:13		Middle	1.5	19.30	19.30		8.18	8.17		32.60	32.60		89.8	89.7		6.87	6.87		3.19	2.98		8	
1/1/2011	14:48	Fine	Middle	2.5	19.90	19.90	19.90	8.16	8.16	8.16	32.61	32.61	32.61	63.6	61.5	64.5	4.79	4.53	4.83	4.43	4.17	4.10	6	5.00
	14:53		Middle	2.5	19.90	19.90		8.16	8.16		32.61	32.61		67.7	65.0		5.10	4.90		3.99	3.80		4	
3/1/2011	18:45	Cloudy	Middle	1.5	17.80	17.80	17.75	8.18	8.18	8.21	32.80	32.80	32.80	87.8	87.5	87.6	6.93	6.91	6.91	4.02	3.29	3.79	11	10.00
	18:47		Middle	1.5	17.70	17.70		8.24	8.24		32.80	32.80		87.6	87.4		6.91	6.90		3.99	3.87		9	
5/1/2011	17:38	Cloudy	Middle	2.5	18.10	18.10	18.10	8.22	8.22	8.22	32.70	32.70	32.70	55.0	59.5	60.3	4.27	4.62	4.73	2.34	2.33	2.43	7	7.50
	17:43		Middle	2.5	18.10	18.10		8.22	8.22		32.70	32.70		63.5	63.0		5.02	4.99		2.49	2.54		8	
8/1/2011	8:40	Cloudy	Middle	1.5	16.06	16.06	16.04	8.56	8.56	8.55	31.48	31.48	31.52	91.4	90.7	91.1	7.58	7.53	7.56	6.37	6.43	6.20	10	10.00
	6:42		Middle	1.5	16.02	16.02		8.54	8.54		31.55	31.55		91.8	90.4		7.61	7.50		5.76	6.22		10	
10/1/2011	8:40	Sunny	Middle	1.5	15.91	15.91	15.91	8.31	8.31	8.31	31.87	31.87	31.88	84.1	83.3	83.8	6.83	6.77	6.81	3.28	3.39	3.26	7	6.50
	8:43		Middle	1.5	15.90	15.90		8.30	8.30		31.89	31.89		84.4	83.5		6.85	6.79		3.22	3.14		6	
13/1/2011	10:25	Cloudy	Middle	1.5	17.46	17.46	17.46	8.11	8.11	8.11	31.70	31.70	31.70	74.7	74.7	72.4	5.83	5.83	5.65	2.36	2.50	2.39	4	5.00
	10:28		Middle	1.5	17.46	17.46		8.11	8.11		31.70	31.70		70.1	70.2		5.44	5.50		2.43	2.27		6	
15/1/2011	11:26	Fine	Middle	2.5	16.80	16.80	16.80	8.21	8.21	8.21	31.16	31.17	31.17	92.9	88.4	89.3	7.46	7.09	7.16	2.98	3.01	2.91	6	5.00
	11:33		Middle	2.5	16.80	16.80		8.21	8.21		31.16	31.17		88.4	87.4		7.09	6.98		2.65	3.00		4	
17/1/2011	13:40	Fine	Middle	1.5	16.50	16.50	16.40	8.01	8.01	8.01	32.72	32.72	32.76	91.3	89.2	90.7	7.33	7.15	7.26	1.19	1.19	1.18	4	4.50
	13:43		Middle	1.5	16.30	16.30		8.01	8.01		32.79	32.79		91.3	90.8		7.33	7.22		1.21	1.14		5	
19/1/2011	14:24	Cloudy	Middle	1.5	16.54	16.54	16.54	8.45	8.45	8.43	31.76	31.76	31.83	93.3	92.4	92.6	7.25	7.18	7.19	4.70	3.56	3.84	6	5.50
	14:27		Middle	1.5	16.54	16.55		8.40	8.40		31.90	31.90		92.9	91.7		7.21	7.12		3.46	3.65		5	
22/1/2011	7:42	Cloudy	Middle	1.5	15.50	15.50	15.35	7.87	7.87	7.93	32.63	32.63	32.72	88.4	87.8	88.3	7.26	7.21	7.25	3.38	3.53	3.42	5	7.50
	7:45		Middle	1.5	15.20	15.20		7.98	7.98		32.80	32.80		88.7	88.1		7.29	7.24		3.40	3.38		10	
24/1/2011	8:20	Cloudy	Middle	1.5	15.40	15.40	15.40	8.04	8.04	8.04	32.70	32.70	32.70	89.4	89.2	89.1	7.32	7.29	7.29	4.74	4.59	4.49	11	11.00
	8:22		Middle	1.5	15.40	15.40		8.04	8.05		32.70	32.70		89.3	88.4		7.31	7.23		4.40	4.23		11	
26/1/2011	9:10	Fine	Middle	1.5	16.20	16.20	16.25	7.58	7.58	7.64	32.64	32.64	32.68	89.3	88.1	88.8	7.19	7.08	7.14	3.91	3.85	3.77	4	5.50
	9:12		Middle	1.5	16.30	16.30		7.69	7.70		32.71	32.71		89.5	88.4		7.20	7.10		3.74	3.59		7	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	18:10	Fine	Middle	2.0	19.20	19.20	19.20	8.24	8.24	8.24	32.76	32.76	32.76	63.9	61.0	64.9	4.88	4.64	4.95	2.77	2.52	2.58	3	3.50
	18:16		Middle	2.0	19.20	19.20		8.24	8.24		32.76	32.76		67.9	66.8		5.20	5.09		2.48	2.53		4	
30/12/2010	20:22	Fine	Middle	2.0	19.40	19.40	19.40	8.23	8.23	8.23	32.52	32.52	32.56	60.6	58.1	58.5	4.66	4.41	4.44	2.82	2.96	2.71	3	4.00
	20:29		Middle	2.0	19.40	19.40		8.23	8.23		32.59	32.59		58.7	56.6		4.37	4.33		2.61	2.45		5	
1/1/2011	0:22	Fine	Middle	2.0	18.60	18.60	18.60	8.28	8.28	8.28	32.64	32.64	32.64	58.2	66.1	62.8	4.47	5.00	4.80	2.67	2.63	2.86	3	3.50
	0:28		Middle	2.0	18.60	18.60		8.28	8.28		32.64	32.64		64.5	62.2		4.95	4.79		3.27	2.87		4	
4/1/2011	23:16	Cloudy	Middle	2.0	17.50	17.50	17.50	8.37	8.37	8.37	32.95	32.95	32.95	68.4	67.2	66.8	5.36	5.27	5.24	4.55	4.16	4.20	8	8.00
	23:23		Middle	2.0	17.50	17.50		8.37	8.37		32.95	32.95		66.3	65.2		5.20	5.12		4.07	4.03		8	
6/1/2011	2:28	Cloudy	Middle	2.0	18.70	18.70	18.70	8.33	8.33	8.33	32.81	32.81	32.81	74.6	67.9	68.8	5.73	5.15	5.26	2.75	2.40	2.70	5	6.00
	2:34		Middle	2.0	18.70	18.70		8.33	8.33		32.81	32.81		67.1	65.4		5.14	5.00		2.61	3.03		7	
8/1/2011	1:33	Fine	Middle	2.0	16.80	16.80	16.80	8.31	8.31	8.31	33.70	33.70	33.70	96.8	96.8	96.8	7.65	7.66	7.66	2.70	2.94	2.85	6	5.00
	1:39		Middle	2.0	16.80	16.80		8.31	8.31		33.70	33.70		96.8	96.9		7.65	7.66		2.87	2.90		4	
11/1/2011	3:00	Fine	Middle	2.0	15.80	15.80	15.80	8.33	8.33	8.33	33.20	33.20	33.20	93.6	93.6	93.3	7.62	7.61	7.59	2.72	2.79	2.48	5	5.00
	3:05		Middle	2.0	15.80	15.80		8.33	8.33		33.20	33.20		93.1	92.9		7.56	7.56		2.24	2.16		5	
13/1/2011	22:23	Cloudy	Middle	2.0	15.80	15.80	15.80	8.44	8.44	8.44	31.84	31.84	31.84	85.3	86.7	85.9	6.97	7.08	7.00	2.29	2.31	2.22	7	8.00
	22:30		Middle	2.0	15.80	15.80		8.44	8.44		31.84	31.84		85.2	86.2		6.96	6.97		2.08	2.18		9	
15/1/2011	0:09	Fine	Middle	2.0	14.05	14.05	14.05	8.72	8.72	8.72	31.46	31.46	31.46	83.9	84.1	83.0	7.11	7.12	7.03	2.26	2.36	2.14	4	3.50
	0:15		Middle	2.0	14.05	14.05		8.72	8.72		31.46	31.46		82.3	81.5		6.97	6.91		1.98	1.94		3	
17/1/2011	20:30	Fine	Middle	2.0	14.70	14.70	14.70	8.08	8.08	8.08	32.08	32.08	32.08	95.9	93.9	94.7	8.00	7.83	7.92	1.99	2.30	1.92	4	4.50
	20:37		Middle	2.0	14.70	14.70		8.08	8.08		32.08	32.08		94.1	95.0		7.90	7.93		1.93	1.46		5	
20/1/2011	22:32	Cloudy	Middle	2.0	16.30	16.30	16.30	8.11	8.11	8.11	32.97	32.97	32.97	94.4	91.8	92.7	7.57	7.32	7.43	2.71	2.35	2.42	3	4.00
	22:38		Middle	2.0	16.30	16.30		8.11	8.11		32.97	32.97		92.6	92.0		7.43	7.38		2.30	2.30		5	
22/1/2011	12:30	Cloudy	Middle	3.0	15.10	15.10	15.05	8.11	8.11	8.11	32.89	32.89	32.89	93.0	92.2	92.7	7.69	7.65	7.68	2.97	3.03	2.98	4	5.00
	12:33		Middle	3.0	15.00	15.00		8.11	8.11		32.88	32.88		93.3	92.4		7.71	7.66		2.84	3.06		6	
24/1/2011	12:57	Cloudy	Middle	2.5	15.40	15.40	15.40	8.14	8.14	8.14	32.84	32.85	32.85	94.0	93.3	93.5	7.66	7.60	7.62	2.72	2.66	2.67	5	4.50
	13:00		Middle	2.5	15.40	15.40		8.13	8.13		32.85	32.85		93.8	93.0		7.65	7.58		2.70	2.59		4	
26/1/2011	16:35	Haze	Middle	2.0	17.43	17.43	17.43	7.99	7.99	7.98	31.31	31.31	31.32	96.8	97.5	95.9	7.72	7.75	7.61	1.86	1.63	2.01	<2	2.00
	16:40		Middle	2.0	17.43	17.43		7.96	7.96		31.32	31.32		94.5	94.8		7.53	7.44		2.31	2.25		2	



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	17:00	Fine	Middle	2.0	19.20	19.20	19.20	8.31	8.31	8.31	32.81	32.81	32.81	67.9	65.0	67.6	5.17	4.91	5.13	3.35	3.21	3.43	4	4.00
	17:06		Middle	2.0	19.20	19.20		8.31	8.31		32.81	32.81		69.4	67.9		5.29	5.13		3.53	3.64		4	
30/12/2010	19:30	Fine	Middle	2.0	19.50	19.50	19.50	8.31	8.31	8.31	32.76	32.76	32.76	60.7	59.5	58.4	4.57	4.49	4.41	3.35	3.78	3.36	6	5.50
	19:36		Middle	2.0	19.50	19.50		8.31	8.31		32.76	32.76		57.2	56.2		4.33	4.25		3.12	3.18		5	
1/1/2011	0:47	Fine	Middle	2.0	18.80	18.80	18.80	8.27	8.27	8.27	32.64	32.64	32.64	58.4	63.7	62.2	4.47	5.38	4.89	1.82	2.27	2.20	5	4.00
	0:53		Middle	2.0	18.80	18.80		8.27	8.27		32.64	32.64		64.2	62.5		4.92	4.77		2.22	2.47		3	
4/1/2011	22:31	Cloudy	Middle	2.0	17.50	17.50	17.50	8.33	8.33	8.33	32.78	32.78	32.78	63.7	63.2	61.8	4.93	4.92	4.82	3.02	3.64	3.53	7	7.00
	22:36		Middle	2.0	17.50	17.50		8.33	8.33		32.78	32.78		60.7	59.7		4.74	4.67		3.57	3.88		7	
6/1/2011	3:04	Cloudy	Middle	2.0	18.70	18.70	18.70	8.35	8.35	8.35	32.88	32.88	32.88	64.8	63.0	66.0	4.97	4.82	5.07	2.92	2.95	2.76	4	5.00
	3:10		Middle	2.0	18.70	18.70		8.35	8.35		32.88	32.88		69.7	66.6		5.36	5.12		2.71	2.47		6	
8/1/2011	0:46	Fine	Middle	2.0	16.80	16.80	16.80	8.35	8.35	8.35	33.80	33.80	33.80	96.5	96.4	96.4	7.64	7.62	7.63	2.86	2.69	2.45	6	5.00
	0:51		Middle	2.0	16.80	16.80		8.35	8.35		33.80	33.80		96.3	96.2		7.62	7.63		2.13	2.10		4	
11/1/2011	2:01	Fine	Middle	2.0	15.80	15.80	15.80	8.38	8.38	8.38	33.30	33.30	33.30	97.3	96.8	96.8	7.90	7.88	7.86	2.60	2.32	2.48	8	7.00
	2:06		Middle	2.0	15.80	15.80		8.38	8.38		33.30	33.30		96.6	96.3		7.83	7.82		2.72	2.28		6	
13/1/2011	22:58	Cloudy	Middle	2.0	15.37	15.37	15.37	8.41	8.41	8.41	31.96	31.96	31.96	62.2	68.0	65.8	5.12	5.59	5.36	1.83	1.79	2.01	6	6.00
	23:06		Middle	2.0	15.37	15.37		8.41	8.41		31.96	31.96		65.0	67.8		5.35	5.36		2.00	2.43		6	
15/1/2011	1:48	Fine	Middle	2.0	14.23	14.23	14.23	8.74	8.74	8.74	32.13	32.13	32.13	63.3	58.9	59.3	4.43	4.77	4.66	3.18	3.55	3.34	5	4.00
	1:54		Middle	2.0	14.23	14.23		8.74	8.74		32.13	32.13		58.2	56.7		4.76	4.68		3.22	3.39		3	
17/1/2011	19:49	Fine	Middle	2.0	14.60	14.60	14.60	8.14	8.14	8.14	32.97	32.97	32.97	94.5	91.8	94.1	7.86	7.63	7.83	2.02	2.04	2.00	2	2.50
	19:58		Middle	2.0	14.60	14.60		8.14	8.14		32.97	32.97		96.4	93.7		8.02	7.79		2.07	1.88		3	
20/1/2011	21:36	Cloudy	Middle	2.0	16.30	16.30	16.30	8.12	8.12	8.12	32.93	32.93	32.93	92.8	92.1	92.2	7.45	7.40	7.39	3.76	3.43	3.41	4	4.00
	21:44		Middle	2.0	16.30	16.30		8.12	8.12		32.93	32.93		92.0	91.7		7.34	7.36		3.14	3.29		4	
22/1/2011	14:20	Cloudy	Middle	2.5	15.60	15.60	15.60	8.13	8.13	8.13	32.85	32.85	32.84	95.3	93.6	94.6	7.77	7.63	7.72	2.72	2.77	2.67	5	4.00
	14:23		Middle	2.5	15.60	15.60		8.13	8.13		32.83	32.83		95.0	94.6		7.74	7.72		2.64	2.53		3	
24/1/2011	14:30	Cloudy	Middle	2.5	16.40	16.40	16.45	8.09	8.09	8.10	32.75	32.75	32.77	97.4	96.7	97.1	7.80	7.74	7.77	3.05	2.80	2.74	5	4.00
	14:33		Middle	2.5	16.50	16.50		8.11	8.11		32.79	32.79		97.6	96.7		7.81	7.74		2.66	2.46		3	
26/1/2011	15:11	Haze	Middle	2.0	18.84	18.84	18.84	8.12	8.12	8.12	31.58	31.58	31.58	93.7	90.5	94.0	7.22	6.98	7.25	2.32	2.56	2.45	6	6.00
	15:15		Middle	2.0	18.84	18.84		8.12	8.12		31.58	31.58		97.5	94.4		7.52	7.28		2.50	2.43		6	



**Water Monitoring Result at WSD15 - Sai Wan Ho  
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:49	Fine	Middle	3	18.90	18.90	18.90	8.28	8.28	8.28	32.72	32.72	32.72	68.4	61.8	66.0	5.42	4.73	5.11	2.01	1.60	1.73	<2	<2
	19:55		Middle	3	18.90	18.90		8.28	8.28		32.72	32.72		64.6	69.3		4.95	5.33		1.59	1.73			
30/12/2010	22:15	Fine	Middle	3	19.70	19.70	19.70	8.23	8.23	8.23	32.52	32.52	32.52	61.3	61.1	59.9	4.68	4.52	4.49	2.88	2.37	2.87	3	3.00
	22:21		Middle	3	19.70	19.70		8.23	8.23		32.52	32.52		60.0	57.1		4.42	4.32		3.07	3.14		3	
1/1/2011	22:14	Fine	Middle	3	18.70	18.70	18.70	8.33	8.33	8.33	32.75	32.75	32.75	63.7	68.0	64.0	4.90	5.23	4.92	2.82	2.82	3.20	6	6.00
	22:20		Middle	3	18.70	18.70		8.33	8.33		32.75	32.75		62.8	61.4		4.81	4.72		3.56	3.60		6	
4/1/2011	1:00	Cloudy	Middle	3	18.00	18.00	18.00	8.35	8.35	8.35	32.94	32.94	32.94	63.2	62.2	62.1	4.90	4.83	4.80	4.87	5.19	5.05	8	8.50
	1:07		Middle	3	18.00	18.00		8.35	8.35		32.94	32.94		61.7	61.1		4.70	4.76		4.74	5.38		9	
6/1/2011	0:49	Cloudy	Middle	3	18.40	18.40	18.40	8.32	8.32	8.32	32.84	32.84	32.84	73.7	74.1	72.1	5.70	5.69	5.43	1.98	2.18	2.08	11	11.00
	0:55		Middle	3	18.40	18.40		8.32	8.32		32.84	32.84		71.5	68.9		5.52	4.82		2.04	2.11		11	
8/1/2011	3:02	Fine	Middle	3	16.70	16.70	16.70	8.35	8.35	8.35	33.90	33.90	33.90	98.4	98.4	98.4	7.80	7.79	7.80	2.54	2.50	2.55	9	7.50
	3:08		Middle	3	16.70	16.70		8.35	8.35		33.90	33.90		98.4	98.4		7.80	7.80		2.50	2.65		6	
11/1/2011	4:33	Fine	Middle	3	18.00	18.00	18.00	8.34	8.34	8.34	32.80	32.80	32.80	99.4	99.5	99.4	7.64	7.65	7.64	3.28	3.19	3.07	6	7.00
	4:39		Middle	3	18.00	18.00		8.34	8.34		32.80	32.80		99.3	99.3		7.62	7.63		2.94	2.88		8	
13/1/2011	17:49	Cloudy	Middle	3	15.55	15.55	15.55	8.39	8.39	8.39	32.02	32.02	32.02	75.2	71.8	72.7	5.96	5.89	5.91	2.79	3.13	2.67	4	5.00
	17:52		Middle	3	15.55	15.55		8.39	8.39		32.02	32.02		73.2	70.6		6.00	5.79		2.32	2.45		6	
15/1/2011	19:57	Fine	Middle	3	14.71	14.71	14.71	8.70	8.70	8.70	31.92	31.92	31.92	52.8	51.4	53.4	4.50	4.37	4.49	6.06	6.52	6.07	8	<b>14.00</b>
	20:05		Middle	3	14.71	14.71		8.70	8.70		31.92	31.92		50.8	58.6		4.33	4.77		5.81	5.90		20	
17/1/2011	1:47	Fine	Middle	3	14.20	14.20	14.20	8.11	8.11	8.11	32.98	32.98	32.98	91.6	90.2	89.7	7.68	7.56	7.50	2.72	2.97	3.10	9	8.00
	1:52		Middle	3	14.20	14.20		8.11	8.11		32.98	32.98		89.8	87.2		7.44	7.31		3.28	3.42		7	
20/1/2011	2:43	Cloudy	Middle	3	16.20	16.20	16.20	8.12	8.12	8.12	32.97	32.97	32.97	93.9	92.7	92.3	7.50	7.45	7.41	4.50	4.49	4.27	4	4.50
	2:47		Middle	3	16.20	16.20		8.12	8.12		32.97	32.97		91.5	91.1		7.36	7.32		3.96	4.11		5	
22/1/2011	14:40	Cloudy	Middle	3	14.90	14.90	14.90	8.14	8.14	8.14	32.90	32.90	32.91	93.8	92.6	93.2	7.75	7.65	7.70	2.04	1.96	2.00	2	3.00
	14:43		Middle	3	14.90	14.90		8.13	8.13		32.91	32.91		93.5	92.7		7.73	7.65		2.00	2.01		4	
24/1/2011	15:00	Cloudy	Middle	3	15.60	15.60	15.60	8.18	8.18	8.17	32.74	32.74	32.76	95.9	95.2	95.4	7.80	7.76	7.77	2.68	2.65	2.61	6	5.00
	15:03		Middle	3	15.60	15.60		8.15	8.15		32.77	32.77		95.7	94.9		7.79	7.73		2.61	2.49		4	
26/1/2011	19:00	Haze	Middle	3	18.48	18.48	15.98	8.25	8.25	8.25	31.54	31.54	31.54	88.5	92.2	91.0	6.88	7.16	7.07	3.91	3.76	3.63	7	6.00
	19:05		Middle	3	18.48	8.48		8.25	8.25		31.54	31.54		90.8	92.4		7.06	7.18		3.48	3.35		5	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:28	Fine	Middle	3	18.90	18.90	18.90	8.24	8.24	8.24	32.64	32.64	32.64	63.9	62.2	63.7	4.89	4.77	4.86	2.61	2.81	2.69	4	4.50
	19:34		Middle	3	18.90	18.90		8.24	8.24		32.64	32.64		66.2	62.6		5.05	4.72		2.82	2.53		5	
30/12/2010	21:53	Fine	Middle	3	19.60	19.60	19.60	8.14	8.14	8.14	31.83	31.83	31.83	52.4	51.1	52.0	4.01	3.91	3.98	3.44	3.62	3.55	5	6.00
	21:59		Middle	3	19.60	19.60		8.14	8.14		31.83	31.83		52.0	52.6		4.00	4.01		3.36	3.78		7	
1/1/2011	21:53	Fine	Middle	3	18.70	18.70	18.70	8.32	8.32	8.32	32.74	32.74	32.74	67.9	71.0	68.9	5.22	5.46	5.30	2.26	1.92	2.23	3	3.50
	22:00		Middle	3	18.70	18.70		8.32	8.32		32.74	32.74		69.2	67.4		5.33	5.18		2.44	2.28		4	
4/1/2011	0:36	Cloudy	Middle	3	17.80	17.80	17.80	8.35	8.35	8.35	32.88	32.88	32.88	65.3	64.0	63.8	5.10	4.99	4.97	3.68	3.65	3.95	6	7.00
	0:43		Middle	3	17.80	17.80		8.35	8.35		32.88	32.88		63.3	62.5		4.94	4.86		4.13	4.33		8	
6/1/2011	0:37	Cloudy	Middle	3	18.20	18.20	18.20	8.33	8.33	8.33	32.91	32.91	32.91	69.9	66.7	65.7	5.41	5.01	5.05	2.24	2.26	2.28	6	6.00
	0:41		Middle	3	18.20	18.20		8.33	8.33		32.91	32.91		63.7	62.5		4.93	4.84		2.17	2.43		6	
8/1/2011	2:46	Fine	Middle	3	16.80	16.80	16.80	8.34	8.34	8.34	33.90	33.90	33.90	97.2	97.1	97.1	7.70	7.69	7.68	2.65	2.34	2.44	4	3.50
	2:52		Middle	3	16.80	16.80		8.34	8.34		33.90	33.90		97.1	96.8		7.68	7.66		2.52	2.25		3	
11/1/2011	4:15	Fine	Middle	3	18.50	18.50	18.50	8.33	8.33	8.33	32.80	32.80	32.80	99.1	99.1	99.0	7.67	7.67	7.66	2.59	2.60	2.40	5	5.50
	4:21		Middle	3	18.50	18.50		8.33	8.33		32.80	32.80		99.0	98.9		7.65	7.65		2.17	2.23		6	
13/1/2011	18:07	Cloudy	Middle	3	15.52	15.52	15.52	8.37	8.37	8.37	31.76	31.76	31.76	82.8	86.7	83.4	6.80	7.12	6.85	2.92	3.18	3.23	13	12.00
	18:12		Middle	3	15.52	15.52		8.37	8.37		31.76	31.76		81.6	82.5		6.71	6.78		3.36	3.47		11	
15/1/2011	19:32	Fine	Middle	3	14.52	14.52	14.52	8.70	8.70	8.70	31.91	31.91	31.91	51.1	51.0	53.2	4.37	4.34	4.55	4.23	3.70	3.99	6	5.00
	19:36		Middle	3	14.52	14.52		8.70	8.70		31.91	31.91		59.4	51.4		5.08	4.39		4.05	3.98		4	
17/1/2011	0:53	Fine	Middle	3	14.00	14.00	14.00	8.12	8.12	8.12	32.80	32.80	32.80	86.8	87.1	87.8	7.29	7.31	7.38	2.91	3.43	3.30	9	8.00
	1:02		Middle	3	14.00	14.00		8.12	8.12		32.80	32.80		88.2	89.0		7.43	7.50		3.40	3.46		7	
20/1/2011	1:59	Cloudy	Middle	3	16.40	16.40	16.40	8.11	8.11	8.11	32.94	32.94	32.94	92.8	91.7	92.0	7.39	7.34	7.33	2.92	3.28	3.11	4	5.00
	2:07		Middle	3	16.40	16.40		8.11	8.11		32.94	32.94		90.8	92.5		7.28	7.30		3.18	3.04		6	
22/1/2011	15:05	Cloudy	Middle	3	15.10	15.10	15.05	8.12	8.12	8.12	32.76	32.76	32.78	91.1	90.6	90.9	7.52	7.47	7.50	4.22	4.10	4.16	6	4.50
	15:08		Middle	3	15.00	15.00		8.12	8.12		32.80	32.80		91.3	90.7		7.51	7.48		4.29	4.02		3	
24/1/2011	15:17	Cloudy	Middle	3	15.30	15.30	15.30	8.11	8.11	8.11	32.60	32.60	32.60	92.3	91.5	91.8	7.57	7.51	7.52	3.30	3.52	3.28	6	5.00
	15:20		Middle	3	15.30	15.30		8.11	8.11		32.60	32.61		92.2	91.1		7.56	7.45		3.28	3.00		4	
26/1/2011	18:27	Haze	Middle	3	17.96	17.96	17.95	8.29	8.29	8.30	31.58	31.58	31.60	92.6	91.6	92.0	7.27	7.17	7.22	2.74	2.92	2.70	5	5.50
	18:32		Middle	3	17.93	17.93		8.30	8.30		31.62	31.62		94.2	89.5		7.40	7.03		2.50	2.64		6	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:08	Fine	Middle	2	19.70	19.70	19.70	8.18	8.18	8.18	32.51	32.51	32.51	61.8	59.1	60.2	4.66	4.51	4.56	5.56	5.66	5.27	8	8.50
	19:13		Middle	2	19.70	19.70		8.18	8.18		32.51	32.51		57.6	62.4		4.35	4.71		4.92	4.94		9	
30/12/2010	21:32	Fine	Middle	2	19.30	19.30	19.30	8.14	8.14	8.14	32.47	32.47	32.47	57.9	55.6	55.2	4.37	4.23	4.19	5.23	4.85	5.31	10	9.00
	21:38		Middle	2	19.30	19.30		8.14	8.14		32.47	32.47		53.9	53.2		4.10	4.05		5.30	5.87		8	
1/1/2011	21:40	Fine	Middle	2	18.50	18.50	18.50	8.23	8.23	8.23	32.56	32.56	32.56	66.7	64.0	63.3	5.15	4.94	4.86	6.05	6.73	6.31	11	11.50
	21:45		Middle	2	18.50	18.50		8.23	8.23		32.56	32.56		61.9	60.6		4.76	4.58		6.30	6.16		12	
4/1/2011	0:16	Cloudy	Middle	2	18.10	18.10	18.10	8.29	8.29	8.29	32.79	32.79	32.79	69.8	68.0	67.3	5.42	5.28	5.27	5.07	4.98	4.82	9	8.50
	0:21		Middle	2	18.10	18.10		8.29	8.29		32.79	32.79		64.6	66.7		4.96	5.43		4.65	4.56		8	
6/1/2011	0:21	Cloudy	Middle	2	17.70	17.70	17.70	8.32	8.32	8.32	32.05	32.05	32.05	67.2	70.3	67.6	5.28	5.49	5.30	3.39	2.98	2.94	11	12.50
	0:27		Middle	2	17.70	17.70		8.32	8.32		32.05	32.05		67.0	65.9		5.27	5.16		2.78	2.62		14	
8/1/2011	2:25	Fine	Middle	2	16.40	16.40	16.40	8.32	8.32	8.32	33.80	33.80	33.80	99.8	99.8	99.8	7.98	7.98	7.98	5.65	5.74	5.45	9	8.00
	2:30		Middle	2	16.40	16.40		8.32	8.32		33.80	33.80		99.8	99.8		7.99	7.98		5.33	5.08		7	
11/1/2011	3:53	Fine	Middle	2	17.20	17.20	17.20	8.29	8.29	8.29	33.30	33.30	33.30	92.7	92.4	92.1	7.34	7.31	7.29	4.16	4.99	4.49	7	6.50
	3:58		Middle	2	17.20	17.20		8.29	8.29		33.30	33.30		91.7	91.5		7.26	7.23		4.17	4.62		6	
13/1/2011	21:14	Cloudy	Middle	2	16.20	16.20	16.20	8.30	8.30	8.30	31.15	31.15	31.15	57.5	57.4	56.0	4.57	4.67	4.53	3.73	3.82	3.91	5	4.50
	21:20		Middle	2	16.20	16.20		8.30	8.30		31.15	31.15		55.2	53.8		4.49	4.37		4.06	4.02		4	
15/1/2011	21:34	Fine	Middle	2	15.36	15.36	15.35	8.78	8.78	8.77	31.80	31.80	31.80	66.9	66.7	66.1	5.50	5.50	5.45	4.52	5.17	4.82	7	6.50
	21:44		Middle	2	15.33	15.33		8.75	8.75		31.80	31.80		59.7	71.2		4.93	5.87		4.89	4.69		6	
17/1/2011	23:58	Fine	Middle	2	13.80	13.80	13.80	8.14	8.14	8.14	32.86	32.86	32.86	85.0	80.3	83.1	7.19	6.79	7.03	3.75	3.80	3.80	8	9.00
	0:04		Middle	2	13.80	13.80		8.14	8.14		32.86	32.86		83.7	83.2		7.08	7.04		3.78	3.86		10	
20/1/2011	1:25	Cloudy	Middle	2	15.90	15.90	15.90	8.10	8.10	8.10	32.77	32.77	32.77	84.8	84.7	83.2	6.87	6.86	6.74	3.63	3.46	3.55	6	5.50
	1:30		Middle	2	15.90	15.90		8.10	8.10		32.77	32.77		83.4	80.0		6.76	6.48		3.28	3.84		5	
22/1/2011	16:25	Cloudy	Middle	2	15.30	15.30	15.40	8.09	8.09	8.09	32.74	32.74	32.73	89.1	88.7	88.9	7.29	7.25	7.27	6.19	6.09	5.89	6	5.50
	16:27		Middle	2	15.50	15.50		8.09	8.09		32.72	32.72		89.2	88.4		7.29	7.23		5.73	5.56		5	
24/1/2011	16:53	Cloudy	Middle	2	15.40	15.40	15.40	8.07	8.07	8.07	32.55	32.55	32.58	88.1	87.2	87.8	7.22	7.15	7.20	6.17	5.74	5.83	10	9.00
	16:57		Middle	2	15.40	15.40		8.07	8.07		32.60	32.60		88.4	87.5		7.24	7.17		5.74	5.68		8	
26/1/2011	18:08	Haze	Middle	2	17.35	17.35	17.35	8.19	8.19	8.19	30.91	30.91	30.91	84.4	90.7	86.5	6.60	7.09	6.76	5.27	4.93	4.93	6	5.50
	18:13		Middle	2	17.35	17.35		8.19	8.19		30.91	30.91		86.1	84.8		6.72	6.62		4.69	4.84		5	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:00	Fine	Middle	2	19.40	19.40	19.40	8.13	8.13	8.13	32.42	32.42	32.42	55.7	54.7	54.5	4.22	4.15	4.13	4.73	5.20	4.82	9	9.50
	19:05		Middle	2	19.40	19.40		8.13	8.13		32.42	32.42		54.5	53.0		4.12	4.02		4.58	4.77		10	
30/12/2010	21:22	Fine	Middle	2	19.20	19.20	19.20	8.13	8.13	8.13	32.45	32.45	32.45	57.3	53.8	57.1	4.73	4.08	4.43	5.59	6.36	5.94	11	11.50
	21:27		Middle	2	19.20	19.20		8.13	8.13		32.45	32.45		57.9	59.2		4.41	4.51		5.38	6.41		12	
1/1/2011	21:30	Fine	Middle	2	18.40	18.40	18.40	8.24	8.24	8.24	32.45	32.45	32.45	63.8	63.0	62.2	4.94	4.87	4.80	4.94	5.83	5.22	12	11.50
	21:35		Middle	2	18.40	18.40		8.24	8.24		32.45	32.45		62.0	60.0		4.76	4.64		4.94	5.18		11	
4/1/2011	0:08	Cloudy	Middle	2	17.90	17.90	17.90	8.29	8.29	8.29	32.75	32.75	32.75	70.1	68.0	67.3	5.41	5.26	5.22	6.23	5.88	5.89	9	10.00
	0:13		Middle	2	17.90	17.90		8.29	8.29		32.75	32.75		66.0	65.0		5.15	5.07		5.63	5.83		11	
6/1/2011	0:11	Cloudy	Middle	2	17.70	17.70	17.70	8.19	8.19	8.19	31.09	31.09	31.09	65.3	61.7	64.3	5.14	4.35	4.92	2.96	3.35	3.12	9	10.00
	0:17		Middle	2	17.70	17.70		8.19	8.19		31.09	31.09		65.9	64.3		5.18	5.02		3.12	3.06		11	
8/1/2011	2:17	Fine	Middle	2	16.30	16.30	16.30	8.31	8.31	8.31	33.60	33.60	33.60	91.7	91.0	91.0	7.35	7.31	7.30	4.40	4.40	4.32	8	7.00
	2:22		Middle	2	16.30	16.30		8.31	8.31		33.60	33.60		90.7	90.5		7.26	7.26		4.25	4.23		6	
11/1/2011	3:41	Fine	Middle	2	17.20	17.20	17.20	8.19	8.19	8.19	32.90	32.90	32.90	80.7	80.0	80.0	6.39	6.36	6.35	5.30	5.03	5.18	11	10.00
	3:46		Middle	2	17.20	17.20		8.19	8.19		32.90	32.90		79.6	79.5		6.33	6.30		5.39	4.98		9	
13/1/2011	20:45	Cloudy	Middle	2	16.12	16.12	16.12	8.24	8.24	8.24	30.86	30.86	30.86	59.9	54.7	60.8	4.88	4.47	4.96	4.72	5.31	4.91	5	6.00
	20:50		Middle	2	16.12	16.12		8.24	8.24		30.86	30.86		65.4	63.0		5.34	5.14		4.66	4.95		7	
15/1/2011	21:04	Fine	Middle	2	15.48	15.48	15.48	8.68	8.68	8.68	31.73	31.73	31.76	62.0	64.6	63.3	5.10	5.32	5.22	6.09	6.56	6.12	11	8.00
	21:14		Middle	2	15.48	15.48		8.68	8.68		31.78	31.78		62.3	64.1		5.13	5.32		5.37	6.47		5	
17/1/2011	0:15	Fine	Middle	2	13.80	13.80	13.80	7.95	7.95	7.95	31.62	31.62	31.62	70.9	69.5	69.2	6.04	5.98	5.91	7.49	8.08	7.60	11	12.50
	0:20		Middle	2	13.80	13.80		7.95	7.95		31.62	31.62		69.4	67.0		5.92	5.71		7.12	7.72		14	
20/1/2011	1:01	Cloudy	Middle	2	16.00	16.00	16.00	8.03	8.03	8.03	32.30	32.30	32.30	83.0	83.2	82.2	6.72	6.74	6.65	4.57	4.63	4.55	7	7.00
	1:07		Middle	2	16.00	16.00		8.03	8.03		32.30	32.30		82.2	80.4		6.65	6.48		4.59	4.41		7	
22/1/2011	16:13	Cloudy	Middle	2	15.50	15.50	15.55	8.06	8.06	8.07	32.60	32.60	32.56	87.9	86.6	87.2	7.17	7.07	7.12	5.08	5.08	4.88	5	4.50
	16:15		Middle	2	15.60	15.60		8.07	8.07		32.51	32.51		87.4	86.8		7.13	7.09		4.73	4.62		4	
24/1/2011	16:36	Cloudy	Middle	2	15.40	15.40	15.40	8.07	8.07	8.08	32.16	32.16	32.16	88.9	88.2	88.1	7.30	7.23	7.23	6.33	6.16	6.08	6	7.00
	16:39		Middle	2	15.40	15.40		8.08	8.08		32.15	32.15		88.4	87.0		7.25	7.14		6.06	5.77		8	
26/1/2011	17:56	Haze	Middle	2	17.50	17.49	17.49	8.31	8.31	8.31	31.05	31.05	31.05	83.2	83.4	81.7	6.61	6.63	6.47	7.73	8.04	7.81	7	8.00
	17:59		Middle	2	17.49	17.49		8.31	8.31		31.05	31.05		80.6	79.4		6.31	6.31		8.03	7.42		9	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	18:46	Fine	Middle	2	19.60	19.60	19.60	8.12	8.12	8.12	32.29	32.29	32.30	58.2	59.8	58.3	4.47	4.53	4.43	2.26	2.26	2.15	3	3.00
	18:51		Middle	2	19.60	19.60		8.12	8.12		32.30	32.30		59.2	55.9		4.49	4.24		1.92	2.14		3	
30/12/2010	21:00	Fine	Middle	2	19.20	19.20	19.20	8.02	8.02	8.02	32.10	32.10	32.10	55.3	53.1	54.0	4.25	4.06	4.13	2.32	2.36	2.36	4	3.50
	21:05		Middle	2	19.20	19.20		8.02	8.02		32.10	32.10		53.1	54.5		4.06	4.16		2.25	2.52		3	
1/1/2011	21:22	Fine	Middle	2	18.60	18.60	18.60	8.11	8.11	8.11	32.08	32.08	32.08	58.2	57.6	57.7	4.51	4.47	4.47	1.96	2.26	2.30	4	3.50
	21:27		Middle	2	18.60	18.60		8.11	8.11		32.08	32.08		58.5	56.4		4.56	4.35		2.64	2.35		3	
4/1/2011	23:53	Cloudy	Middle	2	18.10	18.10	18.10	8.19	8.19	8.19	32.30	32.30	32.30	60.1	58.4	59.5	4.68	4.55	4.62	2.61	2.30	2.25	6	6.00
	23:58		Middle	2	18.10	18.10		8.18	8.18		32.30	32.30		59.0	60.4		4.60	4.65		2.01	2.08		6	
6/1/2011	23:56	Cloudy	Middle	2	18.00	18.00	18.00	8.15	8.15	8.15	32.30	32.30	32.30	64.4	60.7	62.1	5.03	4.74	4.85	1.90	1.85	1.75	3	3.50
	0:01		Middle	2	18.00	18.00		8.15	8.15		32.30	32.30		62.9	60.2		4.91	4.70		1.58	1.67		4	
8/1/2011	2:05	Fine	Middle	2	16.20	16.20	16.20	8.18	8.18	8.18	33.00	33.00	33.00	99.8	99.8	99.8	8.04	8.04	8.04	3.11	3.20	3.08	4	4.00
	2:10		Middle	2	16.20	16.20		8.18	8.18		33.00	33.00		99.8	99.8		8.03	8.03		2.90	3.09		4	
11/1/2011	3:27	Fine	Middle	2	17.10	17.10	17.10	8.16	8.16	8.16	32.70	32.70	32.70	89.4	89.1	89.0	7.13	7.11	7.09	3.21	3.07	3.19	4	3.50
	3:32		Middle	2	17.10	17.10		8.16	8.16		32.70	32.70		88.9	88.6		7.07	7.06		3.00	3.47		3	
13/1/2011	17:07	Cloudy	Middle	2	16.70	16.70	16.70	8.00	8.00	8.00	32.16	32.16	32.16	66.8	65.8	65.6	5.34	5.26	5.28	2.71	2.55	2.68	6	5.00
	17:12		Middle	2	16.70	16.70		8.00	8.00		32.16	32.16		66.2	63.6		5.29	5.23		2.76	2.70		4	
15/1/2011	20:52	Fine	Middle	2	14.97	14.97	14.97	8.51	8.51	8.51	31.25	31.25	31.25	48.9	50.3	50.2	4.08	4.26	4.19	3.40	3.16	3.37	5	4.00
	20:58		Middle	2	14.97	14.97		8.51	8.51		31.25	31.25		50.5	51.2		4.11	4.30		3.23	3.67		3	
17/1/2011	23:19	Fine	Middle	2	13.60	13.60	13.60	8.07	8.07	8.07	32.63	32.63	32.63	82.7	83.6	81.5	7.29	7.10	6.99	2.49	2.63	2.45	4	4.50
	23:24		Middle	2	13.60	13.60		8.07	8.07		32.63	32.63		79.3	80.5		6.72	6.84		2.27	2.40		5	
20/1/2011	0:32	Cloudy	Middle	2	16.10	16.10	16.10	8.03	8.03	8.03	32.46	32.46	32.46	74.2	77.7	76.7	6.01	6.28	6.19	2.59	2.60	2.46	4	4.00
	0:37		Middle	2	16.10	16.10		8.03	8.03		32.46	32.46		79.0	76.0		6.33	6.15		2.39	2.27		4	
22/1/2011	15:48	Cloudy	Middle	2	15.90	15.90	15.90	8.16	8.16	8.13	32.38	32.38	32.40	84.4	83.4	84.0	6.85	6.77	6.82	7.93	7.85	7.80	10	10.00
	15:50		Middle	2	15.90	15.90		8.10	8.10		32.42	32.42		84.6	83.5		6.87	6.78		7.58	7.84		10	
24/1/2011	16:15	Cloudy	Middle	2	15.50	15.50	15.45	8.04	8.04	8.04	32.20	32.20	32.18	79.4	78.8	79.2	6.52	6.47	6.50	3.73	3.55	3.60	6	11.50
	16:17		Middle	2	15.40	15.40		8.03	8.03		32.16	32.16		79.7	78.7		6.54	6.47		3.53	3.60		17	
26/1/2011	17:41	Haze	Middle	2	16.62	16.62	16.62	7.95	7.95	7.95	31.20	31.20	31.20	79.4	80.1	79.9	6.40	6.46	6.43	3.62	3.76	3.59	5	4.00
	17:44		Middle	2	16.62	16.62		7.95	7.95		31.20	31.20		80.5	79.5		6.43	6.41		3.50	3.49		3	





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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
28/12/2010	18:37	Fine	Middle	2	20.00	20.00	20.00	8.12	8.12	8.12	32.19	32.19	32.19	58.7	59.4	58.6	4.51	4.50	4.45	2.03	2.65	2.24	5	4.50
	18:42		Middle	2	20.00	20.00		8.12	8.12		32.19	32.20		59.0	57.4		4.45	4.33		2.17	2.09		4	
30/12/2010	20:51	Fine	Middle	2	19.20	19.20	19.20	8.06	8.06	8.06	32.25	32.25	32.25	58.1	57.7	57.0	4.72	4.44	4.45	3.84	4.31	4.07	6	5.50
	20:56		Middle	2	19.20	19.20		8.06	8.06		32.25	32.25		55.3	57.0		4.22	4.41		4.18	3.94		5	
1/1/2011	21:15	Fine	Middle	2	18.50	18.50	18.50	8.08	8.08	8.08	31.94	31.94	31.94	58.1	57.5	58.3	4.51	4.76	4.61	2.99	2.68	2.62	4	5.00
	21:20		Middle	2	18.50	18.50		8.08	8.08		31.94	31.94		60.4	57.1		4.74	4.43		2.33	2.47		6	
4/1/2011	23:45	Cloudy	Middle	2	18.50	18.50	18.50	8.16	8.16	8.16	31.91	31.91	31.91	59.7	57.6	59.6	4.59	4.46	4.58	2.81	3.02	2.78	6	6.00
	23:50		Middle	2	18.50	18.50		8.16	8.16		31.91	31.91		61.4	59.8		4.74	4.53		2.53	2.75		6	
6/1/2011	23:45	Cloudy	Middle	2	17.70	17.70	17.70	8.12	8.12	8.12	32.33	32.33	32.33	67.3	60.7	62.3	5.29	4.72	4.87	2.63	2.79	2.69	3	4.00
	23:50		Middle	2	17.70	17.70		8.12	8.12		32.33	32.33		61.4	59.8		4.80	4.65		2.86	2.47		5	
8/1/2011	1:58	Fine	Middle	2	16.00	16.00	16.00	8.18	8.18	8.18	32.50	32.50	32.50	98.5	98.4	98.4	7.92	7.93	7.93	3.68	3.84	3.66	3	4.00
	2:03		Middle	2	16.00	16.00		8.18	8.18		32.50	32.50		98.4	98.4		7.93	7.93		3.39	3.71		5	
11/1/2011	3:21	Fine	Middle	2	17.00	17.00	17.00	8.18	8.18	8.18	32.70	32.70	32.65	87.6	87.1	86.6	6.98	6.96	6.92	4.52	4.84	4.67	8	7.50
	3:26		Middle	2	17.00	17.00		8.18	8.18		32.60	32.60		86.0	85.6		6.88	6.84		4.58	4.73		7	
13/1/2011	17:00	Cloudy	Middle	2	16.70	16.70	16.70	8.04	8.04	8.04	32.14	32.14	32.14	66.0	65.6	65.8	5.28	5.25	5.27	2.26	2.15	2.26	<2	2.00
	17:05		Middle	2	16.70	16.70		8.04	8.04		32.14	32.14		65.0	66.7		5.24	5.30		2.12	2.51		2	
15/1/2011	20:28	Fine	Middle	2	15.25	15.25	15.25	8.58	8.58	8.58	31.29	31.29	31.31	68.0	66.5	63.5	5.63	5.51	5.22	3.37	2.93	3.07	3	2.50
	20:36		Middle	2	15.25	15.25		8.58	8.58		31.32	31.32		59.2	60.1		4.84	4.90		3.12	2.87		2	
17/1/2011	23:09	Fine	Middle	2	13.50	13.50	13.50	8.02	8.02	8.02	32.38	32.38	32.40	76.9	74.2	74.8	6.55	6.32	6.36	2.61	2.31	2.36	3	2.50
	23:14		Middle	2	13.50	13.50		8.02	8.02		32.42	32.42		74.4	73.5		6.34	6.23		2.28	2.24		2	
20/1/2011	0:25	Cloudy	Middle	2	16.10	16.10	16.10	8.00	8.00	8.00	32.45	32.45	32.45	75.7	74.1	74.6	6.12	6.00	6.03	3.02	2.80	2.76	6	5.00
	0:30		Middle	2	16.10	16.10		8.00	8.00		32.45	32.45		73.9	74.7		6.00	6.00		2.70	2.50		4	
22/1/2011	15:45	Cloudy	Middle	2	16.00	16.00	16.00	8.01	8.01	8.01	32.14	32.14	32.16	77.2	76.6	77.6	6.27	6.22	6.28	8.85	8.98	8.89	10	10.50
	15:47		Middle	2	16.00	16.00		8.00	8.00		32.17	32.17		78.6	77.9		6.34	6.27		8.98	8.75		11	
24/1/2011	16:10	Cloudy	Middle	2	15.90	15.90	15.90	7.99	7.99	7.99	32.14	32.14	32.19	87.0	86.3	87.0	7.07	7.02	7.07	3.51	3.51	3.51	8	7.50
	16:12		Middle	2	15.90	15.90		7.98	7.98		32.23	32.23		87.6	87.1		7.13	7.07		3.54	3.46		7	
26/1/2011	17:33	Haze	Middle	2	17.43	17.43	17.43	7.77	7.77	7.77	31.14	31.14	31.14	84.3	77.7	80.7	6.70	6.18	6.41	4.24	3.89	4.14	4	4.00
	17:36		Middle	2	17.43	17.43		7.77	7.77		31.14	31.14		80.4	80.5		6.39	6.38		4.32	4.11		4	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	18:18	Fine	Middle	2.0	18.90	18.90	18.90	8.21	8.21	8.21	32.67	32.67	32.67	65.0	63.6	64.2	5.16	5.04	5.08	1.17	1.19	1.13	4	3.50
	18:23		Middle	2.0	18.90	18.90		8.21	8.21		32.67	32.67		61.3	66.7		4.84	5.29		1.02	1.14		3	
30/12/2010	20:02	Fine	Middle	2.0	19.30	19.30	19.30	8.15	8.15	8.15	32.54	32.54	32.54	62.6	60.9	60.3	4.83	4.71	4.65	2.49	2.73	2.49	4	3.50
	20:07		Middle	2.0	19.30	19.30		8.15	8.15		32.54	32.54		59.5	58.1		4.59	4.46		2.52	2.23		3	
1/1/2011	22:02	Fine	Middle	2.0	18.50	18.50	18.50	8.15	8.15	8.15	32.41	32.41	32.41	59.1	56.7	59.6	4.51	4.38	4.60	3.36	2.43	2.86	5	4.50
	22:09		Middle	2.0	18.50	18.50		8.15	8.15		32.41	32.41		60.0	62.6		4.67	4.82		2.80	2.86		4	
4/1/2011	23:19	Cloudy	Middle	2.0	17.00	17.00	17.00	7.87	7.87	7.89	32.59	32.59	32.60	62.4	64.7	65.0	4.88	5.12	5.12	2.25	1.93	2.16	5	4.00
	23:24		Middle	2.0	17.00	17.00		7.90	7.90		32.60	32.60		68.3	64.4		5.40	5.09		2.36	2.09		3	
6/1/2011	0:55	Cloudy	Middle	2.0	17.70	17.70	17.70	8.22	8.22	8.22	32.62	32.62	32.62	60.2	62.3	60.4	4.71	4.88	4.73	2.47	2.78	2.43	4	5.00
	1:00		Middle	2.0	17.70	17.70		8.22	8.22		32.62	32.62		60.3	58.9		4.70	4.61		2.41	2.06		6	
8/1/2011	1:51	Fine	Middle	2.0	16.40	16.40	16.40	8.23	8.23	8.23	33.40	33.40	33.40	99.6	99.5	99.6	7.92	7.93	7.92	3.37	3.38	3.33	4	4.00
	1:56		Middle	2.0	16.40	16.40		8.23	8.23		33.40	33.40		99.6	99.6		7.92	7.92		2.93	3.65		4	
11/1/2011	3:08	Fine	Middle	2.0	17.30	17.30	17.30	8.24	8.24	8.24	32.90	32.90	32.90	89.5	89.4	89.2	7.10	7.08	7.07	3.68	3.45	3.43	9	10.00
	3:13		Middle	2.0	17.30	17.30		8.24	8.24		32.90	32.90		89.1	88.9		7.05	7.04		3.38	3.19		11	
13/1/2011	19:34	Cloudy	Middle	2.0	15.54	15.54	15.54	8.37	8.37	8.37	31.96	31.96	31.96	64.9	60.7	64.2	5.34	4.99	5.06	1.59	1.57	1.57	5	5.00
	19:38		Middle	2.0	15.54	15.54		8.37	8.37		31.96	31.96		68.7	62.3		5.63	4.28		1.56	1.55		5	
15/1/2011	21:16	Fine	Middle	2.0	14.41	14.41	14.41	8.64	8.64	8.64	31.79	31.79	31.79	47.5	53.5	51.0	4.18	4.71	4.56	2.81	2.54	2.56	4	3.50
	21:21		Middle	2.0	14.41	14.41		8.64	8.64		31.79	31.79		52.1	50.8		4.70	4.65		2.55	2.34		3	
17/1/2011	22:35	Fine	Middle	2.0	14.30	14.30	14.30	8.10	8.10	8.10	32.96	32.96	32.96	87.1	85.9	84.6	7.29	7.14	7.06	2.19	2.83	2.42	4	4.50
	22:40		Middle	2.0	14.30	14.30		8.10	8.10		32.96	32.96		84.1	81.4		6.99	6.81		2.41	2.25		5	
20/1/2011	23:57	Cloudy	Middle	2.0	16.20	16.20	16.20	8.05	8.05	8.05	32.78	32.78	32.78	83.9	81.7	82.4	6.78	6.58	6.63	2.62	2.58	2.44	3	3.50
	0:02		Middle	2.0	16.20	16.20		8.05	8.05		32.78	32.78		82.3	81.5		6.58	6.56		2.36	2.19		4	
22/1/2011	14:27	Cloudy	Middle	2.5	16.10	16.10	16.15	8.28	8.28	8.28	33.70	33.70	33.65	90.1	90.0	89.9	7.25	7.24	7.23	2.68	2.49	2.54	13	8.00
	14:30		Middle	2.5	16.20	16.20		8.27	8.27		33.60	33.60		89.8	89.6		7.22	7.20		2.54	2.43		3	
24/1/2011	15:20	Cloudy	Middle	2.0	17.40	17.40	17.40	8.22	8.22	8.22	33.10	33.10	33.10	90.2	89.8	89.7	7.11	7.09	7.07	4.14	4.13	3.99	5	6.00
	15:23		Middle	2.0	17.40	17.40		8.22	8.22		33.10	33.10		89.5	89.3		7.06	7.03		3.93	3.77		7	
26/1/2011	15:18	Haze	Middle	2.0	16.20	16.20	16.10	8.00	8.00	8.01	32.60	32.60	32.58	89.8	89.2	89.4	6.92	6.87	6.89	4.25	4.60	4.01	4	4.50
	15:21		Middle	2.0	16.00	16.00		8.02	8.02		32.56	32.56		89.9	88.6		6.93	6.82		3.64	3.53		5	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:37	Fine	Middle	2.0	18.80	18.80	18.80	8.19	8.19	8.19	32.57	32.57	32.57	59.7	59.6	59.8	4.70	4.75	4.76	2.36	2.71	2.40	4	4.00
	19:44		Middle	2.0	18.80	18.80		8.19	8.19		32.57	32.57		58.9	61.1		4.70	4.87		2.37	2.17		4	
30/12/2010	21:18	Fine	Middle	2.0	19.00	19.00	19.00	8.10	8.10	8.10	32.53	32.53	32.53	58.8	58.1	56.7	4.60	4.48	4.40	2.19	2.04	2.15	4	4.00
	21:23		Middle	2.0	19.00	19.00		8.10	8.10		32.53	32.53		54.5	55.2		4.22	4.30		2.30	2.07		<2	
1/1/2011	23:42	Fine	Middle	2.0	18.40	18.40	18.40	8.15	8.15	8.15	32.30	32.30	32.30	60.0	58.4	57.9	4.65	4.37	4.43	2.29	2.08	2.07	7	6.00
	23:50		Middle	2.0	18.40	18.40		8.15	8.15		32.30	32.30		55.1	58.2		4.23	4.48		2.05	1.85		5	
4/1/2011	0:44	Cloudy	Middle	2.0	17.30	17.30	17.30	8.16	8.16	8.16	32.64	32.64	32.64	62.3	61.2	63.0	4.92	4.82	4.97	2.66	2.56	2.43	5	6.00
	0:54		Middle	2.0	17.30	17.30		8.16	8.16		32.64	32.64		61.5	66.9		4.85	5.28		2.21	2.27		7	
6/1/2011	1:58	Cloudy	Middle	2.0	17.70	17.70	17.70	8.22	8.22	8.22	32.70	32.70	32.70	60.2	62.9	61.4	4.71	4.92	4.80	2.33	2.70	2.39	4	5.00
	2:06		Middle	2.0	17.70	17.70		8.22	8.22		32.70	32.70		60.1	62.2		4.70	4.87		2.38	2.14		6	
8/1/2011	3:04	Fine	Middle	2.0	17.10	17.10	17.10	8.23	8.23	8.23	33.50	33.60	33.58	88.2	88.0	88.0	6.98	6.97	6.97	3.46	3.97	3.80	5	4.50
	3:11		Middle	2.0	17.10	17.10		8.23	8.23		33.60	33.60		87.9	87.7		6.98	6.93		4.12	3.64		4	
11/1/2011	4:07	Fine	Middle	2.0	17.30	17.30	17.30	8.24	8.24	8.24	33.00	33.00	33.00	90.1	89.8	89.7	7.13	7.10	7.08	4.04	3.74	3.91	8	7.00
	4:13		Middle	2.0	17.30	17.30		8.24	8.24		33.00	33.00		89.8	89.1		7.04	7.05		4.02	3.83		6	
13/1/2011	20:38	Cloudy	Middle	2.0	16.32	16.32	16.32	8.35	8.35	8.35	31.32	31.32	31.32	76.6	75.5	76.3	6.21	6.12	6.15	1.95	2.46	1.96	4	3.50
	20:43		Middle	2.0	16.32	16.32		8.35	8.35		31.32	31.32		76.6	76.6		6.13	6.13		1.55	1.87		3	
15/1/2011	22:31	Fine	Middle	2.0	14.20	14.20	14.20	8.62	8.62	8.62	31.74	31.74	31.74	53.0	53.0	52.4	4.52	4.52	4.49	2.58	2.30	2.19	4	4.50
	22:37		Middle	2.0	14.20	14.20		8.62	8.62		31.74	31.74		52.8	50.9		4.40	4.52		1.98	1.88		5	
17/1/2011	23:49	Fine	Middle	2.0	14.70	14.70	14.70	8.09	8.09	8.09	32.76	32.76	32.76	84.4	85.1	84.5	7.01	7.09	7.03	2.88	2.54	2.78	6	5.00
	23:54		Middle	2.0	14.70	14.70		8.09	8.09		32.76	32.76		84.5	84.1		7.03	7.00		2.90	2.78		4	
20/1/2011	1:12	Cloudy	Middle	2.0	16.20	16.20	16.20	8.04	8.04	8.04	32.72	32.72	32.72	81.5	82.1	81.9	6.62	6.65	6.62	2.59	2.73	2.72	7	6.50
	1:18		Middle	2.0	16.20	16.20		8.04	8.04		32.72	32.72		81.5	82.3		6.58	6.64		2.97	2.60		6	
22/1/2011	13:21	Cloudy	Middle	1.5	15.60	15.50	15.53	8.29	8.29	8.29	33.60	33.60	33.55	91.5	91.2	91.0	7.46	7.44	7.42	3.60	3.49	3.47	6	6.00
	13:24		Middle	1.5	15.50	15.50		8.28	8.28		33.50	33.50		90.8	90.4		7.40	7.38		3.41	3.38		6	
24/1/2011	14:00	Cloudy	Middle	1.5	16.70	16.70	16.70	8.26	8.26	8.26	33.10	33.10	33.10	92.6	92.5	92.3	7.42	7.40	7.39	2.65	3.24	2.81	6	5.00
	14:03		Middle	1.5	16.70	16.70		8.26	8.26		33.10	33.10		92.2	92.0		7.38	7.36		2.71	2.62		4	
26/1/2011	15:30	Haze	Middle	2.0	16.30	16.30	16.35	8.19	8.19	8.19	32.61	32.65	32.64	88.5	88.0	87.9	7.05	7.01	7.00	3.31	3.64	3.34	3	4.00
	15:33		Middle	2.0	16.40	16.40		8.18	8.18		32.64	32.67		87.6	87.5		6.99	6.96		3.23	3.16		5	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:27	Fine	Middle	2.5	18.90	18.90	18.90	8.19	8.19	8.19	32.55	32.55	32.55	58.2	59.6	59.0	4.72	4.73	4.71	1.77	1.90	1.76	4	4.50
	19:32		Middle	2.5	18.90	18.90		8.19	8.19		32.55	32.55		57.6	60.4		4.58	4.80		1.65	1.71		5	
30/12/2010	21:07	Fine	Middle	2.5	18.80	18.80	18.80	8.12	8.12	8.12	32.48	32.48	32.48	57.8	58.9	57.9	4.52	4.61	4.53	2.38	2.62	2.38	4	3.50
	21:12		Middle	2.5	18.80	18.80		8.12	8.12		32.48	32.48		58.1	56.9		4.55	4.42		2.31	2.22		3	
1/1/2011	23:27	Fine	Middle	2.5	18.40	18.40	18.40	8.13	8.13	8.13	32.30	32.30	32.30	58.6	58.3	57.7	4.53	4.51	4.46	1.82	1.82	1.97	3	3.50
	23:35		Middle	2.5	18.40	18.40		8.13	8.13		32.30	32.30		55.2	58.7		4.27	4.54		2.15	2.07		4	
4/1/2011	0:31	Cloudy	Middle	2.5	17.10	17.10	17.10	8.23	8.23	8.23	32.73	32.73	32.73	63.5	62.3	65.2	5.00	4.93	5.16	6.94	6.56	6.66	5	6.00
	0:37		Middle	2.5	17.10	17.10		8.23	8.23		32.73	32.73		65.4	69.6		5.20	5.50		6.58	6.57		7	
6/1/2011	1:49	Cloudy	Middle	2.5	17.70	17.70	17.70	8.22	8.22	8.22	32.61	32.61	32.61	61.8	60.4	61.1	4.85	4.74	4.78	2.61	2.51	2.46	4	3.50
	1:54		Middle	2.5	17.70	17.70		8.22	8.22		32.61	32.61		58.6	63.5		4.59	4.93		2.54	2.17		3	
8/1/2011	2:53	Fine	Middle	2.5	17.00	17.00	17.00	8.26	8.26	8.26	33.50	33.50	33.50	94.5	93.5	93.4	7.45	7.41	7.39	3.53	3.18	3.19	4	5.00
	2:57		Middle	2.5	17.00	17.00		8.26	8.26		33.50	33.50		93.0	92.7		7.36	7.34		2.94	3.11		6	
11/1/2011	3:58	Fine	Middle	2.5	16.80	16.80	16.80	8.18	8.18	8.18	32.90	32.90	33.00	85.6	84.5	84.5	6.82	6.75	6.74	4.84	4.29	4.45	5	4.50
	4:02		Middle	2.5	16.80	16.80		8.18	8.18		33.10	33.10		84.3	83.6		6.72	6.68		3.97	4.68		4	
13/1/2011	20:26	Cloudy	Middle	2.5	16.06	16.06	16.06	8.33	8.33	8.33	31.58	31.58	31.58	62.4	63.2	61.5	5.07	5.14	4.97	1.63	1.58	1.53	3	3.00
	20:30		Middle	2.5	16.06	16.06		8.33	8.33		31.58	31.58		61.5	58.7		5.01	4.66		1.40	1.52		3	
15/1/2011	22:18	Fine	Middle	2.0	14.67	14.67	14.67	8.57	8.57	8.57	31.50	31.50	31.39	56.9	52.0	55.2	4.73	4.51	4.66	2.27	2.39	2.29	2	2.50
	22:24		Middle	2.0	14.67	14.67		8.57	8.57		31.05	31.50		53.9	58.1		4.62	4.76		2.20	2.28		3	
17/1/2011	23:39	Fine	Middle	2.0	14.60	14.60	14.60	8.03	8.03	8.03	32.72	32.72	32.72	82.3	81.7	81.5	6.85	6.79	6.75	2.74	2.79	2.82	4	4.50
	23:42		Middle	2.0	14.60	14.60		8.03	8.03		32.72	32.72		80.8	81.2		6.73	6.63		3.07	2.68		5	
20/1/2011	0:59	Cloudy	Middle	2.5	16.10	16.10	16.10	8.00	7.96	7.97	32.68	32.68	32.68	85.1	82.6	82.5	6.87	6.67	6.68	3.85	3.88	3.83	8	7.50
	1:05		Middle	2.5	16.10	16.10		7.96	7.96		32.68	32.68		81.9	80.3		6.65	6.51		3.95	3.63		7	
22/1/2011	13:31	Cloudy	Middle	2.5	15.80	15.80	15.85	8.26	8.26	8.27	33.50	33.50	33.45	90.3	89.8	89.7	7.31	7.28	7.27	3.78	3.60	3.66	8	9.00
	13:34		Middle	2.5	15.90	15.90		8.27	8.27		33.40	33.40		89.6	89.2		7.26	7.22		3.81	3.43		10	
24/1/2011	14:09	Cloudy	Middle	2.5	16.80	16.80	16.80	8.25	8.25	8.25	33.30	33.30	33.30	91.3	91.2	91.2	7.28	7.26	7.26	3.11	3.03	2.91	8	7.00
	14:11		Middle	2.5	16.80	16.80		8.25	8.25		33.30	33.30		91.2	91.0		7.26	7.25		2.73	2.75		6	
26/1/2011	15:10	Haze	Middle	2.5	16.00	16.00	16.00	7.96	7.96	7.93	32.54	32.54	32.55	88.1	87.7	88.1	6.69	6.66	6.69	8.19	7.68	7.40	14	13.50
	15:12		Middle	2.5	16.00	16.00		7.90	7.91		32.55	32.55		88.6	87.9		6.73	6.67		6.82	6.90		13	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:12	Fine	Middle	1.5	18.10	18.10	18.10	8.19	8.19	8.19	32.56	32.56	32.56	59.2	59.7	59.1	4.71	4.72	4.69	1.94	2.15	2.04	6	5.50
	19:18		Middle	1.5	18.10	18.10		8.19	8.19		32.56	32.57		58.2	59.3		4.61	4.71		2.05	2.00		5	
30/12/2010	20:51	Fine	Middle	1.5	18.90	18.90	18.90	8.13	8.13	8.13	32.49	32.49	32.49	55.2	55.6	56.6	4.31	4.34	4.41	4.20	4.66	4.40	5	5.50
	20:56		Middle	1.5	18.90	18.90		8.13	8.13		32.49	32.49		57.3	58.2		4.47	4.52		4.38	4.34		6	
1/1/2011	23:01	Fine	Middle	1.5	18.60	18.60	18.60	8.12	8.12	8.12	32.01	32.01	32.01	55.5	54.5	59.9	4.29	4.21	4.25	2.18	1.95	1.96	3	3.50
	23:09		Middle	1.5	18.60	18.60		8.12	8.12		32.01	32.01		63.9	65.8		4.17	4.32		1.87	1.84		4	
4/1/2011	0:16	Cloudy	Middle	1.5	16.70	16.70	16.70	8.23	8.23	8.23	32.70	32.70	32.70	65.4	67.6	65.5	5.39	5.39	5.27	4.50	3.98	4.30	7	7.00
	0:21		Middle	1.5	16.70	16.70		8.23	8.23		32.70	32.70		65.5	63.5		5.22	5.06		4.30	4.42		7	
6/1/2011	1:39	Cloudy	Middle	1.5	17.80	17.80	17.80	8.21	8.21	8.21	32.62	32.62	32.62	63.0	59.9	61.0	4.92	4.87	4.80	2.75	2.17	2.13	4	4.50
	1:43		Middle	1.5	17.80	17.80		8.21	8.21		32.62	32.62		61.2	60.0		4.78	4.64		1.78	1.82		5	
8/1/2011	2:42	Fine	Middle	1.5	17.10	17.10	17.10	8.21	8.21	8.21	33.40	33.40	33.40	99.0	99.0	99.0	7.84	7.85	7.84	3.08	3.48	3.08	4	4.00
	2:47		Middle	1.5	17.10	17.10		8.21	8.21		33.40	33.40		98.9	98.9		7.84	7.84		2.92	2.83		4	
11/1/2011	3:48	Fine	Middle	1.5	17.00	17.00	17.00	8.21	8.21	8.21	33.10	33.10	33.10	84.9	84.3	84.1	6.74	6.69	6.68	3.03	2.91	2.92	4	4.50
	3:52		Middle	1.5	17.00	17.00		8.21	8.21		33.10	33.10		83.7	83.3		6.65	6.63		2.88	2.85		5	
13/1/2011	20:17	Cloudy	Middle	1.5	16.20	16.20	16.20	8.35	8.35	8.35	31.64	31.64	31.64	59.5	55.8	56.4	4.83	4.53	4.58	1.55	1.62	1.49	5	4.00
	20:20		Middle	1.5	16.20	16.20		8.35	8.35		31.64	31.64		55.8	54.5		4.53	4.43		1.38	1.39		3	
15/1/2011	22:07	Fine	Middle	1.5	14.82	14.82	14.82	8.66	8.66	8.66	31.66	31.66	31.66	55.8	50.7	52.5	4.66	4.26	4.38	2.54	2.88	2.94	3	4.00
	22:11		Middle	1.5	14.82	14.82		8.66	8.66		31.66	31.66		51.9	51.5		4.31	4.30		3.05	3.27		5	
17/1/2011	23:26	Fine	Middle	1.5	14.80	14.80	14.80	8.07	8.07	8.06	32.71	32.71	32.71	79.8	80.8	80.3	6.50	6.72	6.64	2.20	2.12	2.18	4	5.00
	23:31		Middle	1.5	14.80	14.80		8.05	8.05		32.71	32.71		81.0	79.4		6.73	6.60		2.09	2.31		6	
20/1/2011	0:46	Cloudy	Middle	1.5	16.20	16.20	16.20	8.00	8.00	8.00	32.71	32.71	32.71	81.4	82.4	81.2	6.56	6.64	6.55	2.66	2.52	2.49	5	5.00
	0:51		Middle	1.5	16.20	16.20		8.00	8.00		32.71	32.71		80.6	80.4		6.50	6.48		2.57	2.22		5	
22/1/2011	13:43	Cloudy	Middle	1.0	16.50	16.50	16.45	8.26	8.26	8.26	33.50	33.50	33.45	89.1	88.9	88.8	7.13	7.11	7.10	2.24	2.11	2.21	7	5.00
	13:46		Middle	1.0	16.40	16.40		8.25	8.25		33.40	33.40		88.7	88.5		7.09	7.08		2.35	2.14		3	
24/1/2011	14:27	Cloudy	Middle	1.0	17.10	17.10	17.10	8.24	8.24	8.24	33.10	33.10	33.10	91.3	90.8	90.8	7.26	7.21	7.22	2.10	2.09	1.96	3	3.50
	14:30		Middle	1.0	17.10	17.10		8.24	8.24		33.10	33.10		90.7	90.5		7.21	7.18		1.90	1.76		4	
26/1/2011	15:45	Haze	Middle	1.0	16.50	16.50	16.45	8.22	8.22	8.23	33.00	33.00	32.95	83.8	83.5	83.5	6.72	6.71	6.70	3.51	3.13	3.17	4	4.00
	15:48		Middle	1.0	16.40	16.40		8.23	8.23		32.90	32.90		83.3	83.2		6.70	6.68		2.98	3.06		4	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	19:20	Fine	Middle	1.5	18.10	18.10	18.10	8.16	8.16	8.16	32.35	32.35	32.35	57.0	56.0	58.0	4.51	4.44	4.59	1.61	1.42	1.47	4	3.50
	19:26		Middle	1.5	18.10	18.10		8.16	8.16	8.16	32.35	32.35		32.35	60.7		58.2	58.0		4.78	4.62		4.59	
30/12/2010	20:57	Fine	Middle	1.5	19.10	19.10	19.10	8.06	8.06	8.06	32.30	32.30	32.30	55.0	56.7	56.2	4.28	4.41	4.37	2.31	2.08	2.13	3	3.50
	21:05		Middle	1.5	19.10	19.10		8.06	8.06	8.06	32.30	32.30		32.30	54.3		58.6	56.2		4.22	4.56		4.37	
1/1/2011	23:11	Fine	Middle	1.5	18.60	18.60	18.60	8.11	8.11	8.11	32.37	32.37	32.37	64.5	64.3	62.8	5.00	4.97	4.83	2.93	2.73	2.84	5	4.50
	23:23		Middle	1.5	18.60	18.60		8.11	8.11	8.11	32.37	32.37		32.37	62.4		60.0	62.8		4.79	4.57		4.83	
4/1/2011	0:24	Cloudy	Middle	1.5	17.10	17.10	17.10	8.09	8.09	8.09	32.71	32.71	32.71	63.8	62.1	63.8	5.05	4.92	5.05	3.77	3.84	3.69	8	8.00
	0:30		Middle	1.5	17.10	17.10		8.09	8.09	8.09	32.71	32.71		32.71	61.5		67.8	63.8		4.87	5.37		5.05	
6/1/2011	1:44	Cloudy	Middle	1.5	17.80	17.80	17.80	8.07	8.07	8.07	32.61	32.61	32.61	67.2	64.7	64.6	5.22	5.05	5.04	3.36	3.38	3.39	5	5.50
	1:48		Middle	1.5	17.80	17.80		8.07	8.07	8.07	32.61	32.61		32.61	63.6		63.0	64.6		4.97	4.91		5.04	
8/1/2011	2:47	Fine	Middle	1.5	16.70	16.70	16.70	8.15	8.15	8.15	33.40	33.40	33.40	92.7	92.7	92.6	7.35	7.35	7.34	3.89	3.94	3.72	4	4.50
	2:52		Middle	1.5	16.70	16.70		8.15	8.15	8.15	33.40	33.40		33.40	92.6		92.4	92.6		7.34	7.32		7.34	
11/1/2011	3:53	Fine	Middle	1.5	17.30	17.30	17.30	8.22	8.22	8.22	33.10	33.10	33.13	89.5	89.3	89.1	7.06	7.06	7.04	2.77	2.76	2.81	3	3.50
	3:57		Middle	1.5	17.30	17.30		8.22	8.22	8.22	33.10	33.20		33.13	88.9		88.8	89.1		7.03	7.02		7.04	
13/1/2011	20:21	Cloudy	Middle	1.5	16.08	16.08	16.08	8.30	8.30	8.30	31.56	31.56	31.56	54.4	57.5	58.9	4.41	4.64	4.76	2.09	2.09	2.15	5	4.00
	20:25		Middle	1.5	16.08	16.08		8.30	8.30	8.30	31.56	31.56		31.56	60.6		62.9	58.9		4.92	5.07		4.76	
15/1/2011	22:12	Fine	Middle	1.5	14.67	14.67	14.67	8.53	8.53	8.53	31.57	31.57	31.57	54.6	50.7	54.2	4.51	4.27	4.53	2.33	2.47	2.39	3	2.50
	22:17		Middle	1.5	14.67	14.67		8.53	8.53	8.53	31.57	31.57		31.57	56.5		55.0	54.2		4.68	4.66		4.53	
17/1/2011	23:32	Fine	Middle	1.5	14.70	14.70	14.65	8.03	8.03	8.03	32.80	32.80	32.80	87.5	86.2	86.1	7.27	7.12	7.15	2.78	2.94	2.86	4	5.00
	23:37		Middle	1.5	14.60	14.60		8.02	8.02	8.03	32.80	32.80		32.80	85.6		85.2	86.1		7.11	7.08		7.15	
20/1/2011	0:52	Cloudy	Middle	1.5	16.20	16.20	16.20	8.04	8.04	8.04	32.73	32.73	32.73	81.2	82.8	82.2	6.52	6.67	6.62	3.86	4.35	4.16	8	7.50
	0:58		Middle	1.5	16.20	16.20		8.04	8.04	8.04	32.73	32.73		32.73	82.7		81.9	82.2		6.66	6.61		6.62	
22/1/2011	13:37	Cloudy	Middle	1.0	16.70	16.70	16.65	8.27	8.27	8.27	33.40	33.40	33.40	91.7	91.4	90.9	7.32	7.30	7.25	5.01	4.53	4.54	11	9.50
	13:40		Middle	1.0	16.60	16.60		8.26	8.26	8.27	33.40	33.40		33.40	90.2		90.1	90.9		7.19	7.18		7.25	
24/1/2011	14:18	Cloudy	Middle	1.0	17.40	17.40	17.40	8.22	8.22	8.22	33.40	33.40	33.40	91.5	91.4	91.3	7.22	7.21	7.20	2.34	2.35	2.33	4	4.50
	14:21		Middle	1.0	17.40	17.40		8.22	8.22	8.22	33.40	33.40		33.40	91.1		91.0	91.3		7.19	7.19		7.20	
26/1/2011	15:47	Haze	Middle	1.0	16.30	16.30	16.25	8.21	8.21	8.21	32.80	32.80	32.75	85.6	85.3	85.2	6.88	6.86	6.86	2.87	2.48	2.54	3	4.00
	15:51		Middle	1.0	16.20	16.20		8.20	8.20	8.21	32.70	32.70		32.75	85.1		84.9	85.2		6.85	6.84		6.86	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	18:40	Fine	Middle	1.5	18.50	18.50	18.50	8.20	8.20	8.20	32.58	32.58	32.58	61.9	59.1	59.9	4.82	4.58	4.69	2.67	2.45	2.37	5	4.50
	18:45		Middle	1.5	18.50	18.50		8.20	8.20		32.58	32.58		60.0	58.7		4.73	4.62		2.33	2.02		4	
30/12/2010	20:28	Fine	Middle	1.5	19.30	19.30	19.30	8.19	8.19	8.19	32.46	32.46	32.46	59.9	53.7	57.2	4.53	4.17	4.44	4.65	4.87	5.02	6	5.50
	20:34		Middle	1.5	19.30	19.30		8.19	8.19		32.46	32.46		54.9	60.1		4.26	4.80		5.13	5.42		5	
1/1/2011	22:32	Fine	Middle	1.5	18.50	18.50	18.50	8.12	8.12	8.12	32.43	32.43	32.43	57.8	58.0	56.5	4.47	4.44	4.35	2.65	3.06	2.60	5	4.50
	22:39		Middle	1.5	18.50	18.50		8.12	8.12		32.43	32.43		56.0	54.2		4.32	4.17		2.53	2.15		4	
4/1/2011	23:47	Cloudy	Middle	1.5	17.00	17.00	17.00	8.20	8.20	8.20	32.77	32.77	32.77	64.1	62.5	62.2	5.08	4.86	4.90	6.12	6.02	5.93	14	13.00
	23:55		Middle	1.5	17.00	17.00		8.20	8.20		32.77	32.77		63.2	59.0		5.01	4.64		5.45	6.13		12	
6/1/2011	1:21	Cloudy	Middle	1.5	17.80	17.80	17.80	8.14	8.14	8.14	32.66	32.66	32.66	61.5	59.6	63.0	4.81	4.61	4.93	2.88	3.10	2.84	8	8.00
	1:25		Middle	1.5	17.80	17.80		8.14	8.14		32.66	32.66		65.0	65.7		5.16	5.14		2.85	2.51		8	
8/1/2011	2:19	Fine	Middle	1.5	16.90	16.90	16.90	8.20	8.20	8.20	33.50	33.50	33.50	98.9	98.9	98.9	7.83	7.83	7.83	3.29	3.73	3.36	5	4.50
	2:24		Middle	1.5	16.90	16.90		8.20	8.20		33.50	33.50		98.9	98.9		7.83	7.83		3.42	3.00		4	
11/1/2011	3:29	Fine	Middle	1.5	17.20	17.20	17.20	8.24	8.24	8.24	33.30	33.30	33.30	92.5	91.5	91.2	7.32	7.24	7.23	5.01	4.85	5.05	10	11.50
	3:33		Middle	1.5	17.20	17.20		8.24	8.24		33.30	33.30		90.6	90.2		7.19	7.16		5.43	4.89		13	
13/1/2011	19:56	Cloudy	Middle	1.5	15.91	15.91	15.91	8.32	8.32	8.32	31.63	31.63	31.63	65.1	62.2	61.4	5.31	5.07	5.00	3.63	3.25	3.26	7	6.50
	20:01		Middle	1.5	15.91	15.91		8.32	8.32		31.63	31.63		55.0	63.1		4.48	5.14		3.21	2.95		6	
15/1/2011	21:43	Fine	Middle	1.5	14.29	14.29	14.29	8.73	8.73	8.73	31.72	31.72	31.72	51.0	52.1	52.2	4.29	4.33	4.41	2.43	2.40	2.37	8	7.50
	21:51		Middle	1.5	14.29	14.29		8.73	8.73		31.72	31.72		52.8	52.8		4.50	4.51		2.38	2.26		7	
17/1/2011	23:01	Fine	Middle	1.5	14.20	14.20	14.20	8.08	8.08	8.08	32.83	32.83	32.83	83.4	80.3	81.4	6.94	6.73	6.82	2.58	2.87	2.64	4	4.50
	23:07		Middle	1.5	14.20	14.20		8.08	8.08		32.83	32.83		81.4	80.6		6.85	6.75		2.68	2.42		5	
20/1/2011	0:23	Cloudy	Middle	1.5	16.10	16.10	16.10	8.03	8.03	8.03	32.74	32.74	32.74	84.0	83.1	82.7	6.76	6.72	6.69	3.27	3.08	3.17	5	6.00
	0:28		Middle	1.5	16.10	16.10		8.03	8.03		32.74	32.74		81.5	82.0		6.68	6.59		2.70	3.64		7	
22/1/2011	14:05	Cloudy	Middle	1.5	17.00	17.00	17.05	8.29	8.29	8.29	33.60	33.60	33.55	88.7	88.6	88.5	7.03	7.02	7.01	3.41	3.45	3.43	7	8.00
	14:08		Middle	1.5	17.10	17.10		8.28	8.28		33.50	33.50		88.5	88.3		7.00	6.98		3.53	3.34		9	
24/1/2011	14:53	Cloudy	Middle	1.0	17.90	17.90	17.90	8.26	8.26	8.26	33.40	33.40	33.40	94.7	94.4	94.5	7.42	7.39	7.40	3.09	3.13	3.01	5	5.50
	14:56		Middle	1.0	17.90	17.90		8.26	8.26		33.40	33.40		94.6	94.2		7.42	7.36		2.96	2.86		6	
26/1/2011	15:20	Haze	Middle	1.0	15.90	15.90	15.95	8.04	8.04	8.04	32.50	32.50	32.50	86.1	85.5	86.3	6.98	6.92	6.99	3.62	3.42	3.40	4	5.00
	15:22		Middle	1.0	16.00	16.00		8.04	8.04		32.50	32.50		87.1	86.5		7.05	7.00		3.34	3.20		6	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	18:46	Fine	Middle	1.5	18.70	18.70	18.70	8.16	8.16	8.16	32.60	32.60	32.60	56.3	58.1	57.0	4.42	4.55	4.48	1.59	1.51	1.44	3	2.50
	18:51		Middle	1.5	18.70	18.70		8.16	8.16		32.60	32.60		56.1	57.6		4.43	4.51		1.41	1.26		2	
30/12/2010	20:35	Fine	Middle	1.5	18.80	18.80	18.80	8.12	8.12	8.12	32.38	32.38	32.38	53.4	56.6	54.9	4.12	4.37	4.24	4.42	4.12	4.20	7	6.50
	20:40		Middle	1.5	18.80	18.80		8.12	8.12		32.38	32.38		54.9	54.8		4.24	4.23		4.20	4.04		6	
1/1/2011	22:41	Fine	Middle	1.5	18.50	18.50	18.50	8.15	8.15	8.15	32.45	32.45	32.45	55.4	61.6	57.5	4.27	4.76	4.44	4.29	4.59	4.30	8	9.00
	22:46		Middle	1.5	18.50	18.50		8.15	8.15		32.45	32.45		57.0	56.1		4.39	4.33		4.22	4.10		10	
4/1/2011	23:57	Cloudy	Middle	1.5	17.40	17.40	17.40	8.15	8.15	8.15	32.33	32.33	32.33	52.7	51.8	51.8	4.19	4.09	4.11	4.14	3.85	4.01	6	5.00
	0:02		Middle	1.5	17.40	17.40		8.15	8.15		32.33	32.33		50.3	52.2		4.03	4.12		3.83	4.23		4	
6/1/2011	1:26	Cloudy	Middle	1.5	17.70	17.70	17.70	8.19	8.19	8.19	32.66	32.66	32.66	61.9	60.7	61.0	4.65	4.71	4.71	2.56	2.45	2.30	5	5.50
	1:30		Middle	1.5	17.70	17.70		8.19	8.19		32.66	32.66		59.4	61.8		4.65	4.84		2.11	2.06		6	
8/1/2011	2:25	Fine	Middle	1.5	17.20	17.20	17.20	8.23	8.23	8.23	33.60	33.60	33.60	94.2	93.3	93.2	7.43	7.39	7.36	4.35	4.34	4.17	7	7.00
	2:30		Middle	1.5	17.20	17.20		8.23	8.23		33.60	33.60		93.0	92.1		7.36	7.27		3.92	4.07		7	
11/1/2011	3:34	Fine	Middle	1.5	16.80	16.80	16.80	8.24	8.24	8.24	33.10	33.10	33.10	92.1	91.3	90.8	7.33	7.28	7.24	3.56	3.17	3.23	6	6.00
	3:39		Middle	1.5	16.80	16.80		8.24	8.24		33.10	33.10		90.5	89.4		7.21	7.13		3.29	2.89		6	
13/1/2011	20:02	Cloudy	Middle	1.5	15.97	15.97	15.97	8.26	8.26	8.26	31.63	31.63	31.63	60.4	52.8	53.9	4.92	4.30	4.39	2.06	1.99	1.94	4	4.00
	20:07		Middle	1.5	15.97	15.97		8.26	8.26		31.63	31.63		51.5	50.8		4.20	4.14		1.87	1.82		4	
15/1/2011	21:54	Fine	Middle	1.5	14.27	14.27	14.27	8.78	8.78	8.78	31.68	31.68	31.68	50.7	53.4	53.3	4.25	4.28	4.46	5.25	5.14	5.16	6	6.00
	21:59		Middle	1.5	14.27	14.27		8.78	8.78		31.68	31.68		54.1	54.9		4.65	4.66		5.18	5.06		6	
17/1/2011	23:08	Fine	Middle	1.5	14.20	14.20	14.20	8.18	8.18	8.18	32.84	32.84	32.84	81.3	80.0	81.0	6.78	6.66	6.77	2.95	3.24	3.13	8	7.00
	23:13		Middle	1.5	14.20	14.20		8.18	8.18		32.84	32.84		81.1	81.7		6.80	6.85		3.44	2.90		6	
20/1/2011	0:30	Cloudy	Middle	1.5	16.20	16.20	16.20	8.04	8.04	8.04	32.71	32.71	32.71	83.6	84.6	82.4	6.74	6.82	6.64	3.80	3.71	3.83	8	7.50
	0:34		Middle	1.5	16.20	16.20		8.04	8.04		32.71	32.71		80.2	81.2		6.47	6.54		3.85	3.94		7	
22/1/2011	14:11	Cloudy	Middle	1.5	17.30	17.30	17.25	8.27	8.27	8.28	33.70	33.70	33.65	92.1	91.8	92.0	7.23	7.20	7.22	3.44	3.50	3.13	3	4.00
	14:14		Middle	1.5	17.20	17.20		8.28	8.28		33.60	33.60		92.0	91.9		7.22	7.21		2.88	2.69		5	
24/1/2011	15:03	Cloudy	Middle	1.0	17.70	17.70	17.73	8.20	8.20	8.20	33.20	33.20	33.20	86.6	86.4	86.2	6.78	6.75	6.74	1.70	1.55	1.61	<2	<2
	15:06		Middle	1.0	17.70	17.80		8.19	8.19		33.20	33.20		86.1	85.8		6.73	6.71		1.56	1.62		<2	
26/1/2011	15:25	Haze	Middle	1.0	16.00	16.00	16.05	8.02	8.02	8.02	32.52	32.52	32.51	85.3	84.5	85.1	6.90	6.83	6.88	4.13	3.91	4.07	6	5.50
	15:28		Middle	1.0	16.10	16.10		8.02	8.02		32.50	32.50		85.5	85.0		6.91	6.87		3.93	4.32		5	





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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	18:30	Fine	Middle	2.0	18.10	18.10	18.10	8.17	8.17	8.17	32.57	32.57	32.57	55.7	58.2	55.7	4.37	4.58	4.37	1.58	1.57	1.68	4	5.00
	18:36		Middle	2.0	18.10	18.10		8.17	8.17		32.57	32.57		55.4	53.5		4.33	4.20		1.43	2.15		6	
30/12/2010	20:14	Fine	Middle	2.0	18.80	18.80	18.80	8.07	8.07	8.07	32.46	32.46	32.46	52.3	54.5	53.2	4.06	4.26	4.15	3.50	3.34	3.29	4	3.50
	20:24		Middle	2.0	18.80	18.80		8.07	8.07		32.46	32.46		52.0	54.1		4.06	4.22		3.19	3.13		3	
1/1/2011	22:20	Fine	Middle	2.0	18.30	18.30	18.30	8.17	8.17	8.17	32.47	32.47	32.47	57.0	59.7	60.4	4.40	4.61	4.67	2.95	2.85	2.68	6	6.00
	22:29		Middle	2.0	18.30	18.30		8.17	8.17		32.47	32.47		63.7	61.2		4.93	4.73		2.63	2.27		6	
4/1/2011	23:30	Cloudy	Middle	2.0	17.40	17.40	17.40	8.24	8.24	8.24	32.50	32.50	32.50	60.9	62.0	64.4	4.79	5.02	5.08	4.74	4.95	4.66	6	6.50
	23:36		Middle	2.0	17.40	17.40		8.24	8.24		32.50	32.50		67.4	67.2		5.31	5.21		4.41	4.53		7	
6/1/2011	1:11	Cloudy	Middle	2.0	17.70	17.70	17.70	8.24	8.24	8.24	32.45	32.45	32.45	58.2	61.7	62.3	4.62	4.84	4.89	3.32	2.70	2.76	7	6.50
	1:19		Middle	2.0	17.70	17.70		8.24	8.24		32.45	32.45		66.3	62.8		5.17	4.93		2.58	2.42		6	
8/1/2011	2:07	Fine	Middle	2.0	17.30	17.30	17.30	8.24	8.24	8.24	33.20	33.20	33.30	92.9	92.4	91.9	7.33	7.29	7.24	3.43	3.35	3.35	6	6.00
	2:14		Middle	2.0	17.30	17.30		8.24	8.24		33.40	33.40		91.2	91.0		7.17	7.17		3.30	3.33		6	
11/1/2011	3:19	Fine	Middle	2.0	16.90	16.90	16.90	8.25	8.25	8.25	33.10	33.10	33.10	93.6	92.9	91.8	7.43	7.40	7.28	3.56	3.54	3.89	2	2.50
	3:25		Middle	2.0	16.90	16.90		8.25	8.25		33.10	33.10		90.5	90.1		7.19	7.11		4.16	4.29		3	
13/1/2011	19:47	Cloudy	Middle	2.0	15.59	15.55	15.61	8.28	8.28	8.28	31.78	31.78	31.77	61.3	61.5	62.3	5.03	5.04	5.09	2.07	1.98	1.96	5	4.50
	19:54		Middle	2.0	15.59	15.71		8.27	8.27		31.76	31.76		61.8	64.6		5.02	5.25		1.95	1.85		4	
15/1/2011	21:31	Fine	Middle	2.0	14.13	14.13	14.13	8.62	8.62	8.62	31.62	31.62	31.62	56.4	54.3	52.3	4.87	4.57	4.45	3.61	3.50	3.44	6	5.00
	21:38		Middle	2.0	14.13	14.13		8.62	8.62		31.62	31.62		48.1	50.2		4.16	4.19		3.56	3.09		4	
17/1/2011	22:50	Fine	Middle	2.0	14.50	14.50	14.45	8.11	8.11	8.11	32.68	32.68	32.68	88.5	84.7	85.1	7.39	7.07	7.10	2.74	2.59	2.52	6	5.00
	22:58		Middle	2.0	14.40	14.40		8.10	8.10		32.68	32.68		83.9	83.3		7.00	6.95		2.45	2.31		4	
20/1/2011	0:11	Cloudy	Middle	2.0	16.70	16.70	16.70	7.93	7.93	7.93	32.52	32.52	32.52	88.2	87.0	86.1	7.03	6.83	6.88	3.20	3.91	3.48	6	5.00
	0:20		Middle	2.0	16.70	16.70		7.93	7.93		32.52	32.52		83.5	85.8		6.83	6.81		3.22	3.60		4	
22/1/2011	13:52	Cloudy	Middle	1.5	17.50	17.50	17.45	8.28	8.28	8.29	33.70	33.70	33.75	90.4	90.3	90.2	7.07	7.05	7.04	3.52	3.10	3.22	3	3.00
	13:55		Middle	1.5	17.40	17.40		8.29	8.29		33.80	33.80		90.1	90.0		7.03	7.01		3.18	3.07		3	
24/1/2011	14:40	Cloudy	Middle	1.5	17.80	17.80	17.80	8.24	8.24	8.24	33.20	33.20	33.20	92.8	92.7	92.5	7.26	7.25	7.24	2.49	2.38	2.38	4	4.00
	14:43		Middle	1.5	17.80	17.80		8.24	8.24		33.20	33.20		92.5	92.0		7.23	7.20		2.44	2.22		4	
26/1/2011	15:35	Haze	Middle	2.0	15.90	15.90	16.00	8.04	8.04	8.04	32.61	32.61	32.54	85.6	85.0	85.3	6.92	6.86	6.89	4.64	4.60	4.53	10	9.00
	15:38		Middle	2.0	16.10	16.10		8.03	8.03		32.46	32.46		85.5	84.9		6.91	6.85		4.48	4.40		8	



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	20:30	Fine	Middle	1.5	18.80	18.80	18.80	8.30	8.30	8.30	32.66	32.66	32.66	62.8	61.0	64.3	4.76	4.71	4.92	4.09	3.58	4.00	5	5.00
	20:36		Middle	1.5	18.80	18.80		8.30	8.30		32.66	32.66		68.0	65.2		5.22	5.00		4.06	4.27		5	
30/12/2010	22:54	Fine	Middle	1.5	19.30	19.30	19.30	8.20	8.20	8.20	32.59	32.59	32.59	59.6	65.8	62.8	4.52	4.01	4.49	4.40	5.14	4.78	7	7.00
	22:59		Middle	1.5	19.30	19.30		8.20	8.20		32.59	32.59		64.1	61.5		4.77	4.65		4.93	4.66		7	
1/1/2011	23:08	Fine	Middle	1.5	18.70	18.70	18.70	8.16	8.16	8.16	32.41	32.41	32.41	56.8	61.4	60.7	4.33	4.73	4.67	3.07	2.78	3.19	6	7.00
	23:15		Middle	1.5	18.70	18.70		8.16	8.16		32.41	32.41		61.3	63.4		4.72	4.89		3.32	3.57		8	
4/1/2011	1:56	Cloudy	Middle	1.5	17.80	17.80	17.80	8.27	8.27	8.27	32.64	32.64	32.64	65.9	64.0	62.9	5.09	5.00	4.90	7.12	7.56	7.17	16	<b>14.00</b>
	2:03		Middle	1.5	17.80	17.80		8.27	8.27		32.64	32.64		61.0	60.5		4.77	4.72		7.25	6.76		12	
6/1/2011	1:30	Cloudy	Middle	1.5	18.40	18.40	18.40	8.25	8.25	8.25	32.55	32.55	32.55	59.9	60.9	62.2	4.64	5.21	4.94	3.05	2.61	3.24	10	9.00
	1:36		Middle	1.5	18.40	18.40		8.25	8.25		32.55	32.55		64.9	63.0		5.03	4.86		3.77	3.54		8	
8/1/2011	3:46	Fine	Middle	1.5	16.80	16.80	16.80	8.25	8.25	8.25	33.60	33.60	33.60	98.9	98.9	98.9	7.83	7.83	7.83	5.52	5.33	5.18	11	10.00
	3:56		Middle	1.5	16.80	16.80		8.25	8.25		33.60	33.60		98.9	98.9		7.83	7.83		4.89	4.96		9	
11/1/2011	5:15	Fine	Middle	1.5	18.50	18.50	18.50	8.17	8.17	8.17	32.40	32.40	32.40	91.6	91.5	91.4	7.11	7.11	7.10	4.00	3.73	3.68	10	10.00
	5:21		Middle	1.5	18.50	18.50		8.17	8.17		32.40	32.40		91.4	91.1		7.09	7.08		3.46	3.54		10	
13/1/2011	19:30	Cloudy	Middle	1.5	15.77	15.78	15.78	8.21	8.21	8.21	31.68	31.68	31.68	63.7	66.7	64.3	5.21	5.46	5.24	5.21	5.19	5.10	9	9.50
	19:37		Middle	1.5	15.78	15.78		8.21	8.21		31.68	31.68		65.2	61.7		5.25	5.05		4.99	5.01		10	
15/1/2011	22:30	Fine	Middle	1.5	14.98	14.98	14.98	8.54	8.54	8.54	31.66	31.66	31.72	51.4	48.3	50.1	4.27	4.01	4.16	3.82	3.86	4.27	7	7.00
	22:39		Middle	1.5	14.98	14.98		8.54	8.54		31.78	31.78		50.4	50.4		4.18	4.18		4.73	4.65		7	
17/1/2011	22:09	Fine	Middle	1.5	14.20	14.20	14.20	8.05	8.05	8.05	32.85	32.85	32.85	87.3	85.7	86.6	7.33	7.20	7.27	4.88	5.33	5.38	9	9.50
	22:15		Middle	1.5	14.20	14.20		8.05	8.05		32.85	32.85		86.1	87.1		7.23	7.32		5.77	5.53		10	
20/1/2011	3:53	Cloudy	Middle	1.5	16.50	16.50	16.50	8.09	8.09	8.09	32.81	32.81	32.81	90.6	93.1	91.0	7.25	7.45	7.28	6.15	6.08	6.14	10	11.00
	4:03		Middle	1.5	16.50	16.50		8.09	8.09		32.81	32.81		88.6	91.5		7.09	7.32		6.17	6.14		12	
22/1/2011	13:42	Cloudy	Middle	1.5	15.70	15.70	15.75	8.14	8.14	8.12	32.67	32.67	32.65	87.6	86.8	87.5	7.11	7.05	7.11	3.96	3.81	3.78	8	7.00
	13:45		Middle	1.5	15.80	15.80		8.09	8.09		32.62	32.62		88.2	87.4		7.18	7.10		3.77	3.59		6	
24/1/2011	13:56	Cloudy	Middle	1.5	17.10	17.10	17.10	8.05	8.05	8.04	32.78	32.78	32.74	88.7	88.0	88.3	7.02	6.97	6.99	3.78	3.75	3.69	7	7.00
	13:59		Middle	1.5	17.10	17.10		8.02	8.02		32.70	32.70		88.9	87.4		7.04	6.92		3.55	3.68		7	
26/1/2011	19:54	Haze	Middle	1.5	17.72	17.72	17.72	8.21	8.21	8.21	31.57	31.57	31.57	88.0	84.3	84.3	6.93	6.65	6.63	3.99	4.05	4.08	14	<b>15.00</b>
	20:03		Middle	1.5	17.72	17.72		8.21	8.21		31.57	31.57		82.9	82.1		6.53	6.41		4.18	4.09		16	



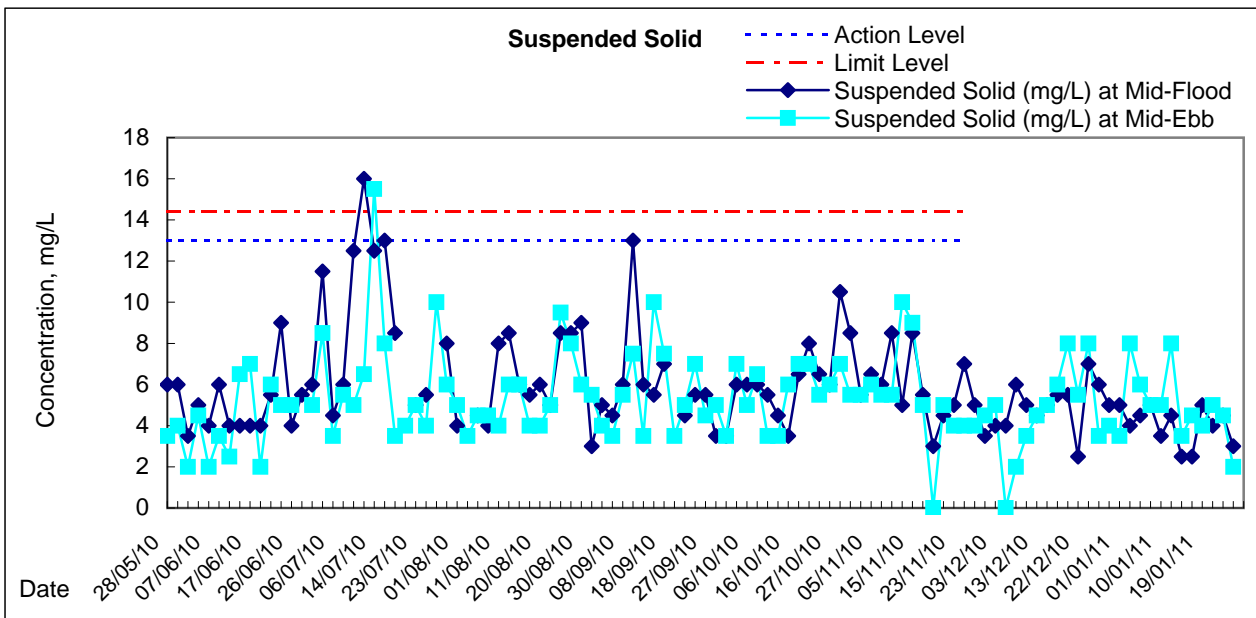
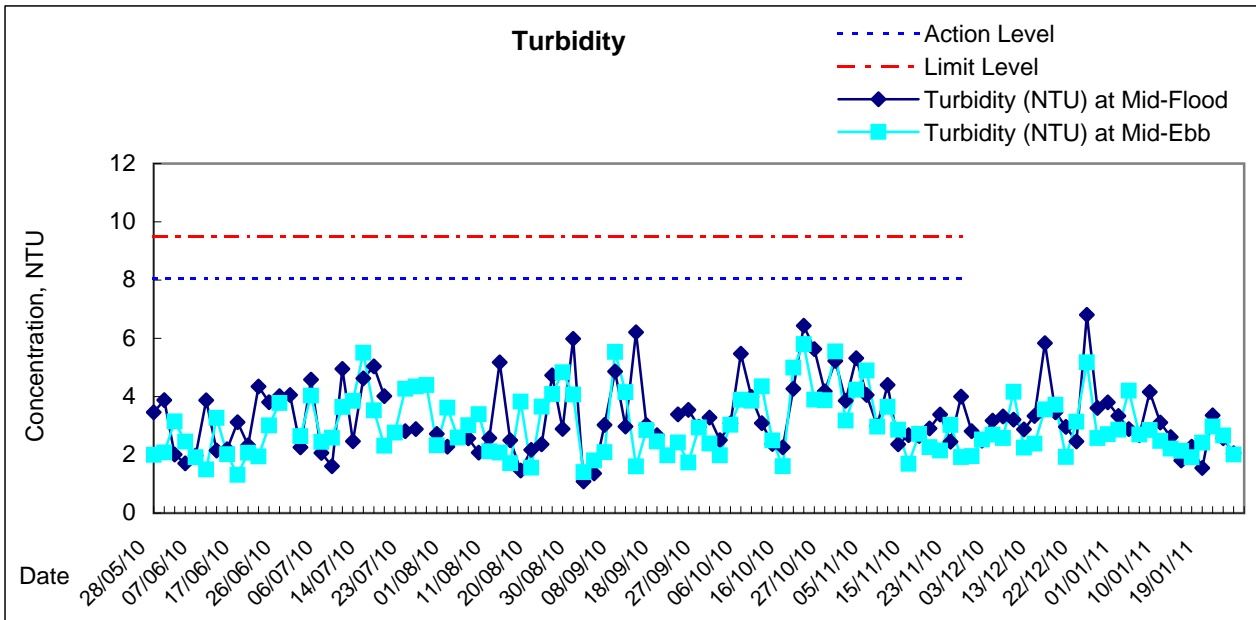
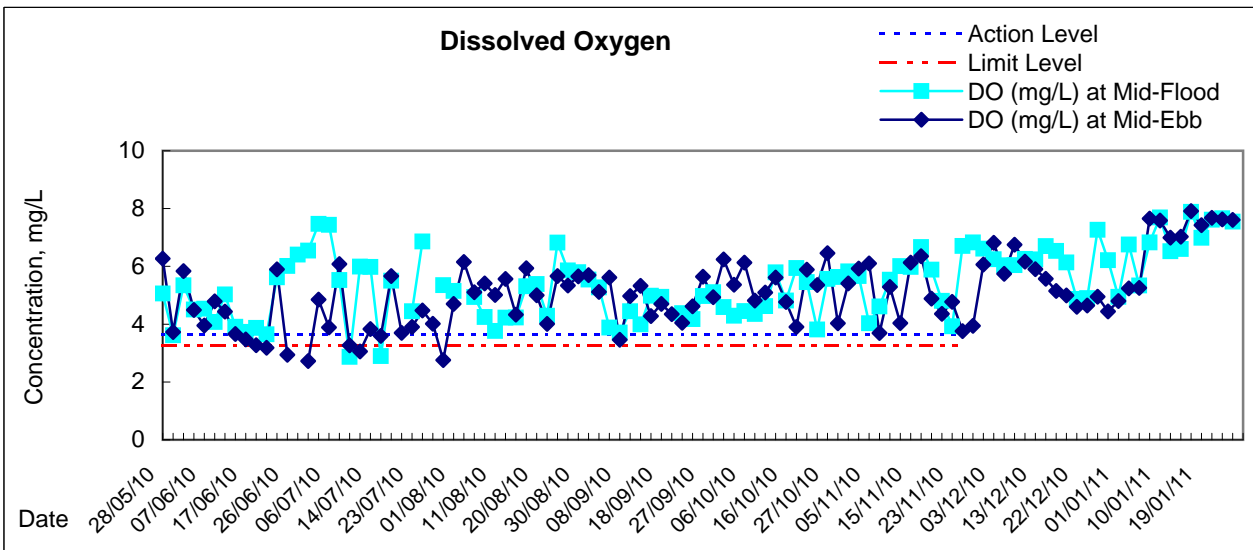
**Water Monitoring Result at WSD20 - Kennedy Town  
Mid-Ebb Tide**

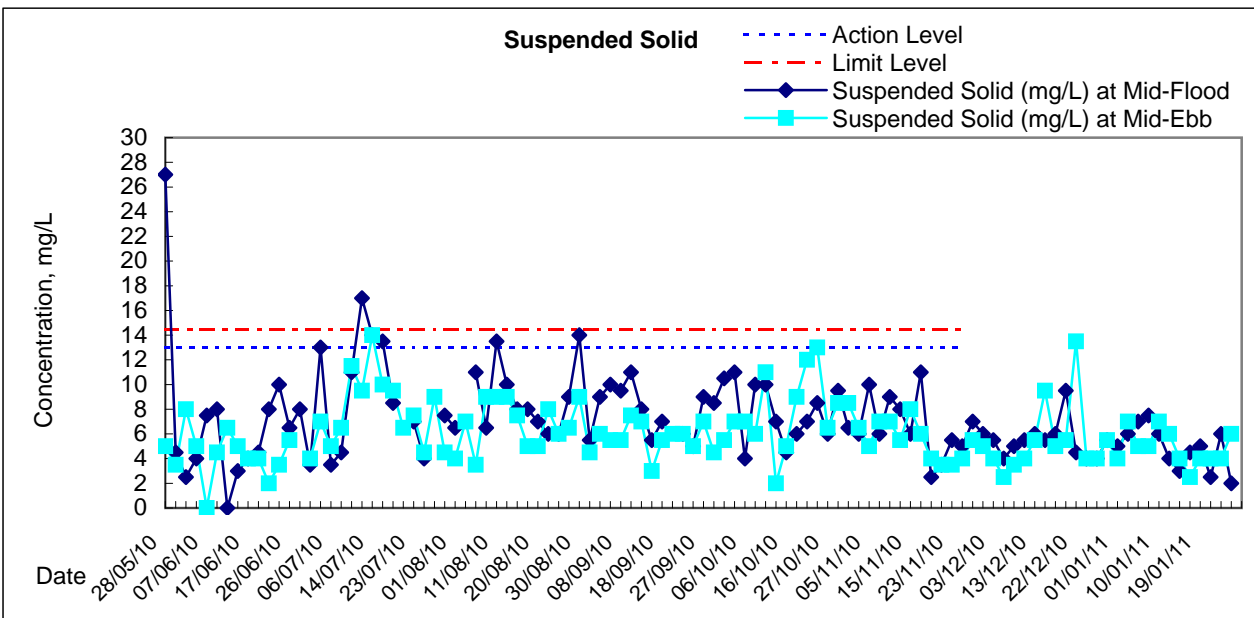
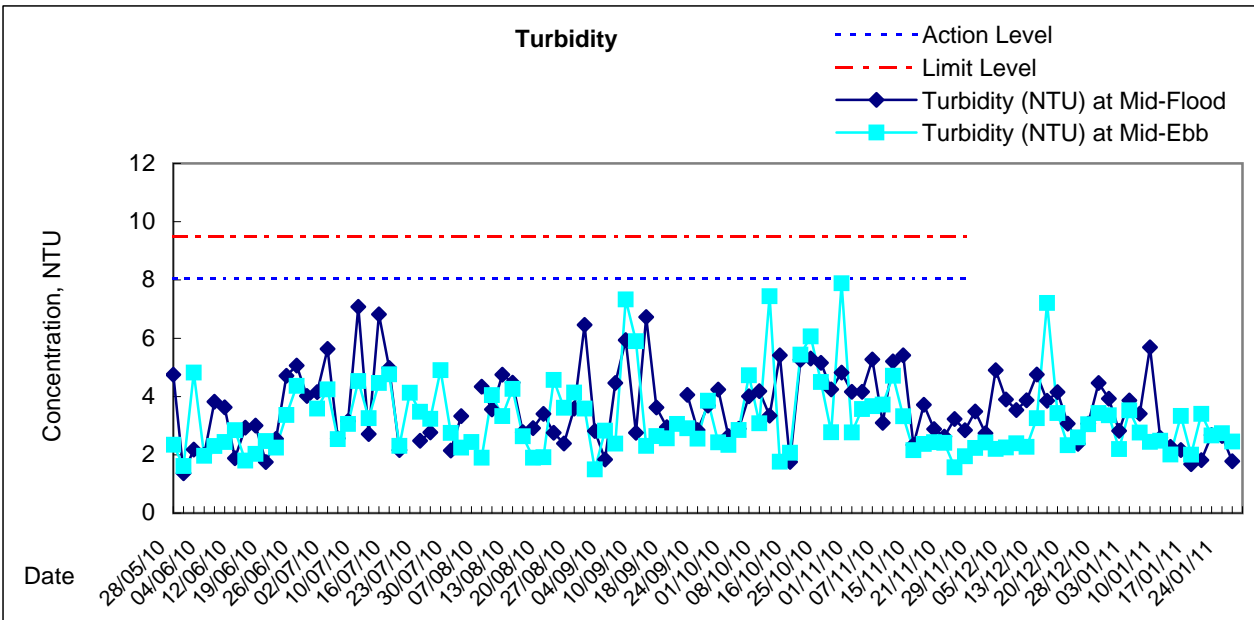
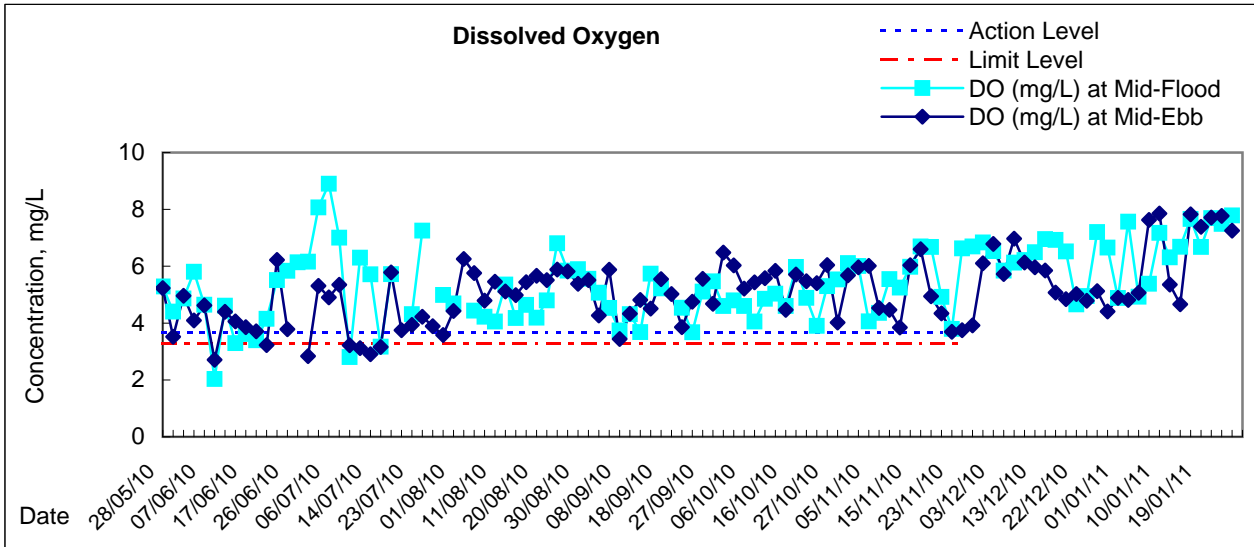
Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	20:15	Fine	Middle	1.5	19.50	19.50	19.50	8.25	8.25	8.25	32.86	32.86	32.86	65.2	62.8	65.6	4.93	4.74	4.94	7.01	6.52	6.63	11	11.00
	20:20		Middle	1.5	19.50	19.50		8.25	8.25		32.86	32.86		65.9	68.4		4.93	5.17		6.55	6.45		11	
30/12/2010	22:43	Fine	Middle	1.5	18.70	18.70	18.70	8.01	8.01	8.01	32.27	32.28	32.28	67.4	63.9	63.6	5.14	4.91	4.85	4.22	3.67	3.91	6	5.00
	22:48		Middle	1.5	18.70	18.70		8.01	8.01		32.28	32.28		62.8	60.4		4.79	4.55		3.44	4.32		4	
1/1/2011	22:45	Fine	Middle	1.5	18.40	18.40	18.40	8.30	8.30	8.30	32.77	32.77	32.77	58.7	66.2	63.1	4.27	5.11	4.80	3.54	3.09	3.18	7	8.00
	22:50		Middle	1.5	18.40	18.40		8.30	8.30		32.77	32.77		64.8	62.5		4.98	4.83		2.98	3.09		9	
4/1/2011	1:38	Cloudy	Middle	1.5	17.40	17.40	17.40	8.32	8.32	8.32	32.98	32.98	32.98	57.1	63.3	62.9	4.48	4.93	4.91	4.46	5.27	4.98	9	10.00
	1:43		Middle	1.5	17.40	17.40		8.32	8.32		32.98	32.98		66.3	64.7		5.15	5.08		5.31	4.89		11	
6/1/2011	1:12	Cloudy	Middle	1.5	17.80	17.80	17.80	8.24	8.24	8.24	32.70	32.70	32.70	65.9	63.4	64.1	5.09	4.95	4.99	2.75	2.44	2.54	6	6.50
	1:17		Middle	1.5	17.80	17.80		8.24	8.24		32.70	32.70		61.0	66.1		4.77	5.16		2.45	2.51		7	
8/1/2011	3:30	Fine	Middle	1.5	16.10	16.10	16.10	8.27	8.27	8.27	33.60	33.60	33.60	95.3	94.7	94.6	7.57	7.53	7.52	4.49	4.04	4.23	9	8.00
	3:35		Middle	1.5	16.10	16.10		8.27	8.27		33.60	33.60		94.2	94.1		7.50	7.47		4.21	4.18		7	
11/1/2011	4:58	Fine	Middle	1.5	17.20	17.20	17.20	8.25	8.25	8.25	33.40	33.40	33.40	93.0	92.5	92.7	7.37	7.35	7.34	3.76	3.76	3.67	8	9.00
	5:03		Middle	1.5	17.20	17.20		8.25	8.25		33.40	33.40		92.7	92.6		7.32	7.32		3.59	3.58		10	
13/1/2011	19:04	Cloudy	Middle	1.5	16.09	16.09	16.09	8.33	8.33	8.33	31.35	31.35	31.35	85.7	87.3	84.9	6.98	7.11	6.91	3.87	3.17	3.44	7	6.00
	19:09		Middle	1.5	16.09	16.09		8.33	8.33		31.35	31.35		83.1	83.3		6.77	6.79		3.42	3.29		5	
15/1/2011	22:05	Fine	Middle	1.5	15.61	15.61	15.61	8.57	8.57	8.57	31.94	31.94	31.94	51.7	56.4	55.8	4.23	4.85	4.63	5.02	4.53	4.73	11	10.50
	22:10		Middle	1.5	15.61	15.61		8.57	8.57		31.94	31.94		63.1	51.9		5.17	4.26		4.86	4.50		10	
17/1/2011	21:51	Fine	Middle	1.5	13.50	13.50	13.50	8.12	8.12	8.12	32.94	32.94	32.94	87.5	85.1	85.4	7.43	7.23	7.29	3.19	3.00	3.08	6	6.00
	21:56		Middle	1.5	13.50	13.50		8.12	8.12		32.94	32.94		83.2	85.8		7.24	7.24		3.17	2.96		6	
20/1/2011	3:27	Cloudy	Middle	1.5	16.20	16.20	16.20	8.07	8.07	8.07	32.80	32.80	32.80	91.7	92.0	89.7	7.42	7.63	7.29	4.92	4.32	4.35	8	7.50
	3:30		Middle	1.5	16.20	16.20		8.07	8.07		32.80	32.80		88.7	86.3		7.16	6.95		4.03	4.13		7	
22/1/2011	13:10	Cloudy	Middle	1.5	14.60	14.60	14.60	8.15	8.15	8.15	32.91	32.91	32.91	93.9	93.2	93.4	7.78	7.74	7.75	3.99	4.04	3.92	6	6.00
	13:13		Middle	1.5	14.60	14.60		8.14	8.14		32.91	32.91		93.5	92.9		7.76	7.72		3.87	3.78		6	
24/1/2011	13:38	Cloudy	Middle	1.5	15.80	15.80	15.80	8.09	8.09	8.10	32.84	32.84	32.84	90.2	89.4	89.9	7.44	7.36	7.41	3.40	3.45	3.44	10	10.50
	13:40		Middle	1.5	15.80	15.80		8.10	8.10		32.84	32.84		90.4	89.6		7.45	7.37		3.32	3.57		11	
26/1/2011	19:39	Haze	Middle	1.5	18.14	18.14	18.14	8.20	8.20	8.20	31.77	31.77	31.77	89.7	86.0	86.4	7.00	6.71	6.71	7.11	7.40	7.35	13	14.00
	19:42		Middle	1.5	18.14	18.14		8.20	8.20		31.77	31.77		85.1	84.7		6.51	6.61		6.99	7.89		15	

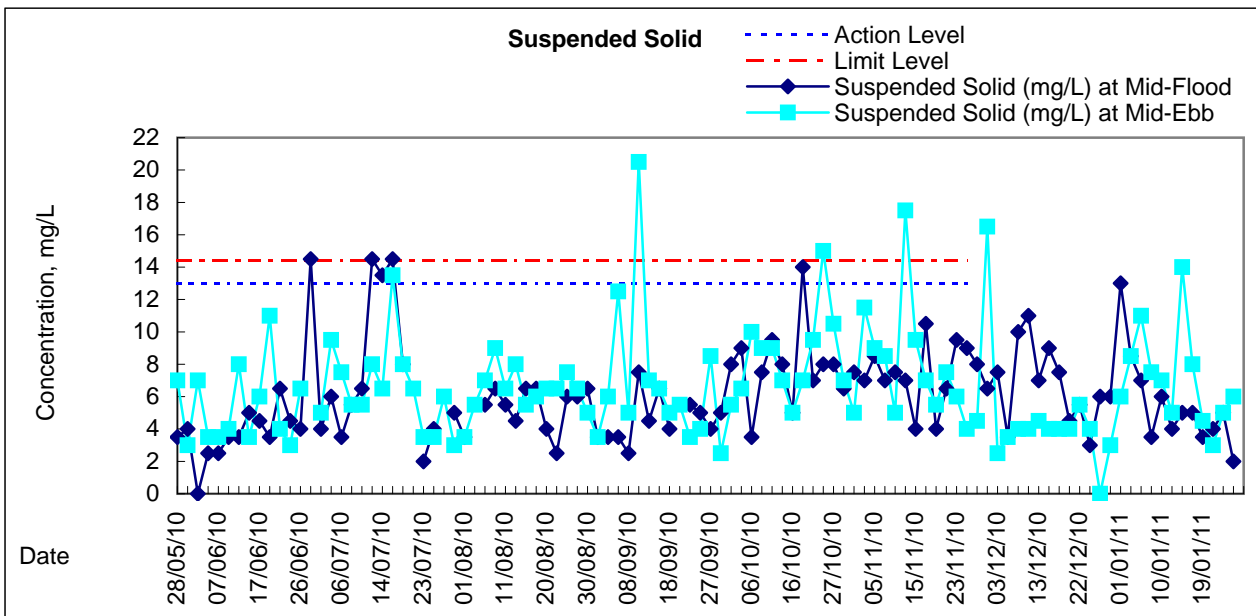
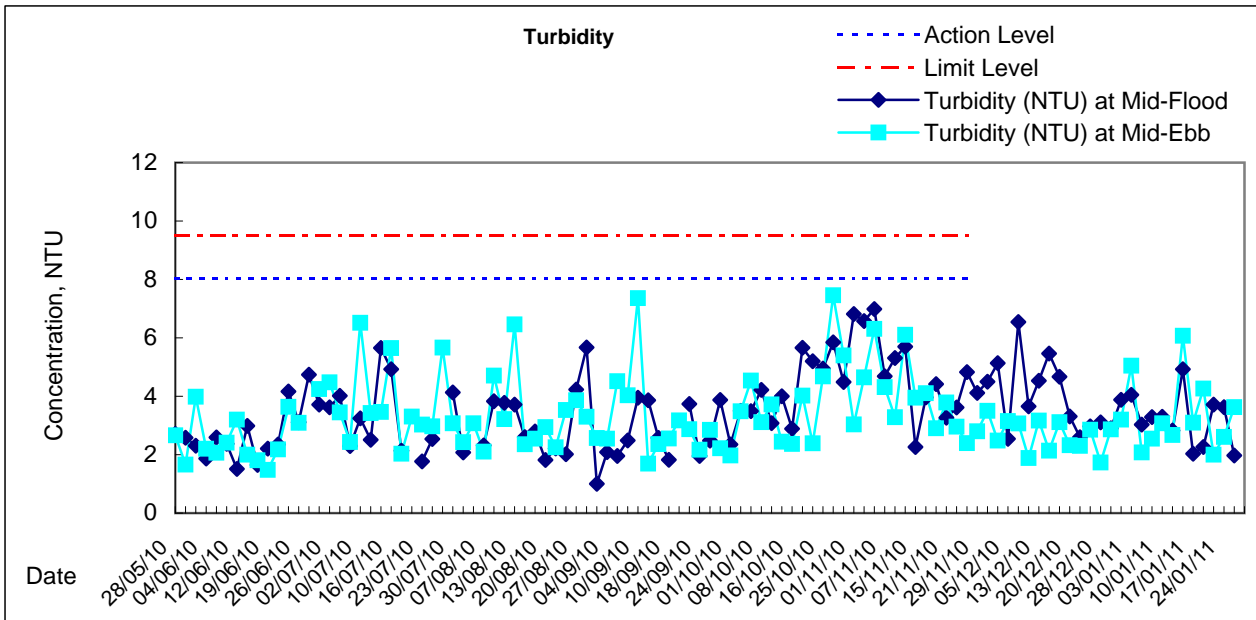
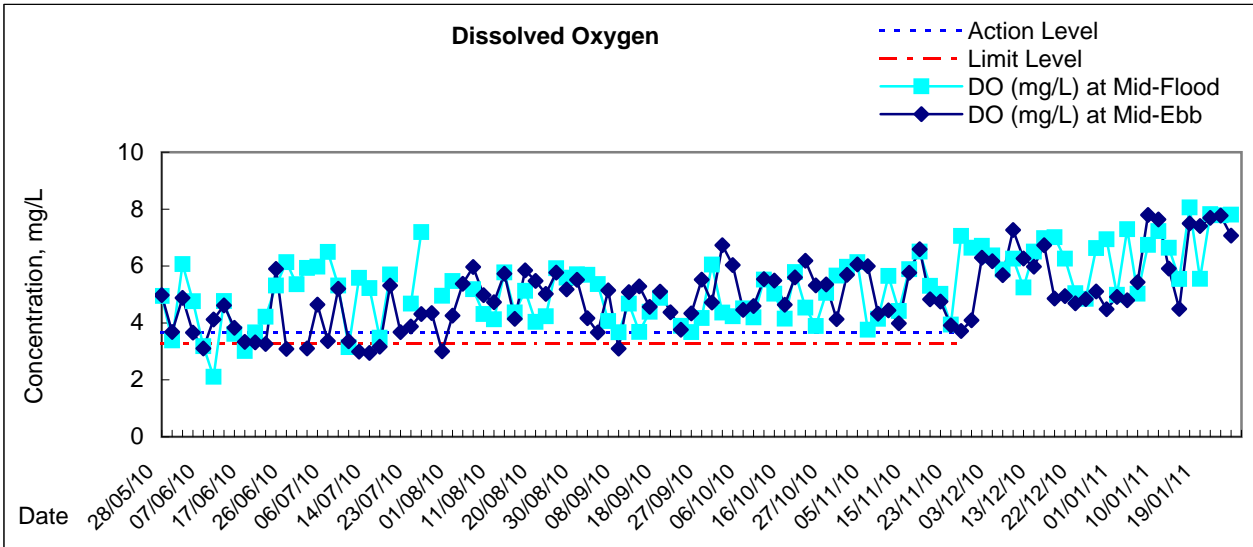


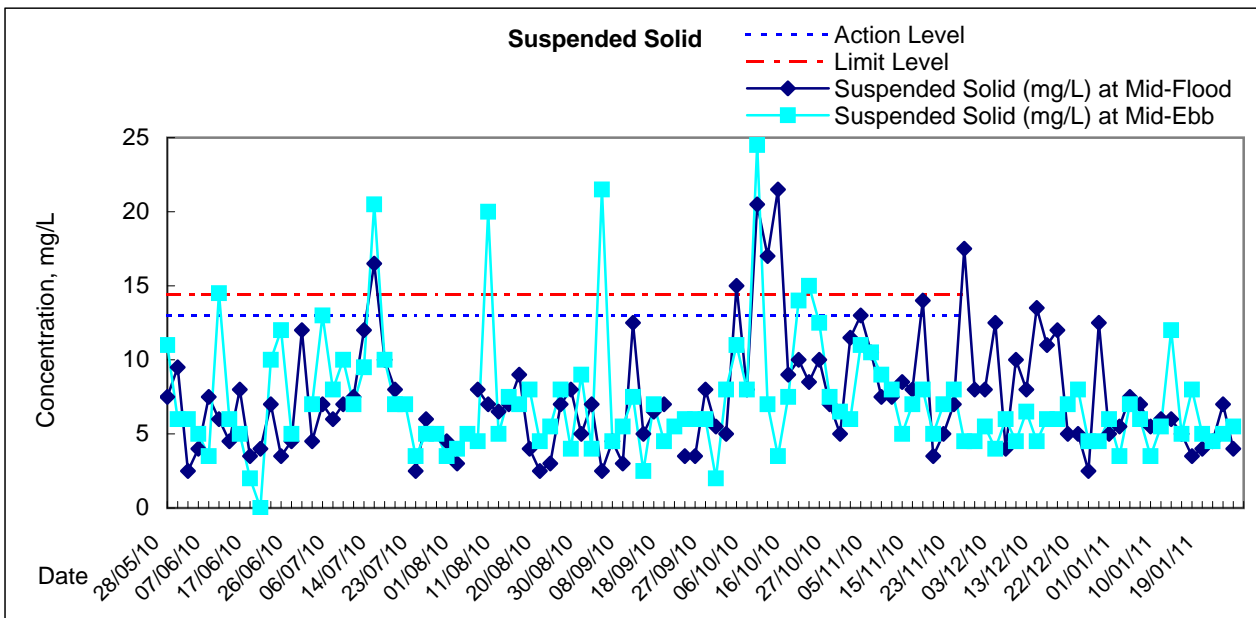
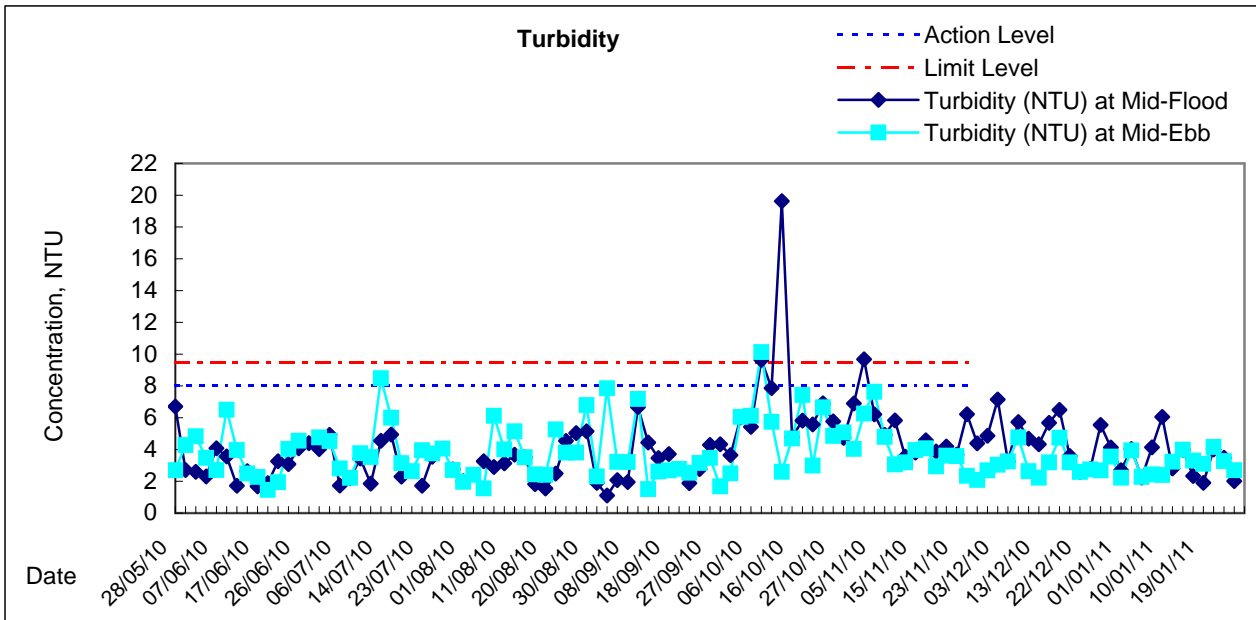
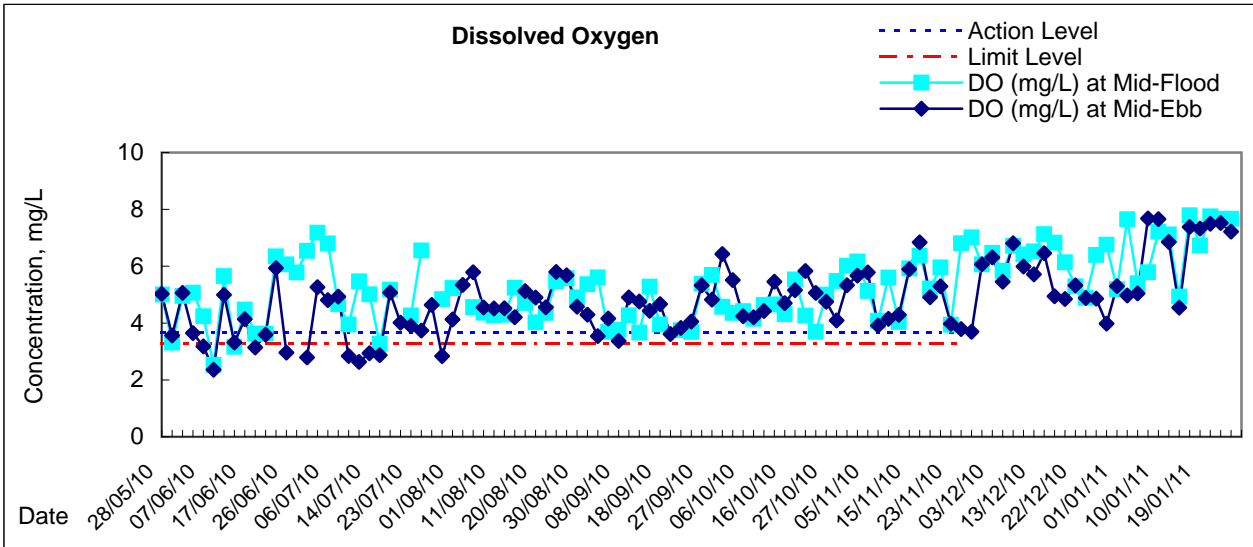
**Water Monitoring Result at WSD7 - Kowloon South  
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/12/2010	17:38	Fine	Middle	2.0	20.20	20.20	20.20	7.97	7.97	7.97	32.65	32.65	32.65	63.8	61.3	60.3	4.74	4.58	4.49	2.76	2.60	2.83	4	3.50
	17:43		Middle	2.0	20.20	20.20		7.97	7.97		32.65	32.65		58.6	57.4		4.36	4.28		3.04	2.91		3	
30/12/2010	20:00	Fine	Middle	2.5	19.20	19.20	19.20	8.07	8.07	8.07	32.58	32.58	32.58	62.2	67.5	64.1	4.74	5.14	4.88	2.56	2.78	2.51	5	4.00
	20:05		Middle	2.5	19.20	19.20		8.07	8.07		32.58	32.58		64.1	62.6		4.88	4.77		2.35	2.33		3	
1/1/2011	23:50	Fine	Middle	2.0	18.50	18.50	18.50	8.19	8.19	8.19	32.56	32.56	32.56	64.2	65.4	62.9	4.95	5.05	4.85	3.50	3.50	3.48	3	3.50
	23:55		Middle	2.0	18.50	18.50		8.19	8.19		32.56	32.56		61.7	60.3		4.75	4.65		3.64	3.26		4	
4/1/2011	22:56	Cloudy	Middle	2.0	18.20	18.20	18.20	8.22	8.22	8.22	32.69	32.69	32.69	66.2	62.9	63.2	5.10	4.87	4.88	4.26	3.49	3.95	9	8.50
	23:01		Middle	2.0	18.20	18.20		8.22	8.22		32.69	32.69		62.1	61.4		4.80	4.76		3.71	4.34		8	
6/1/2011	2:02	Cloudy	Middle	2.0	18.20	18.20	18.20	8.21	8.21	8.21	32.71	32.71	32.71	68.3	61.6	64.4	5.23	4.77	4.97	3.77	3.22	3.35	7	8.00
	2:07		Middle	2.0	18.20	18.20		8.21	8.21		32.71	32.71		60.2	67.5		4.68	5.20		3.19	3.23		9	
8/1/2011	1:11	Fine	Middle	2.0	16.20	16.20	16.20	8.23	8.23	8.23	33.40	33.40	33.45	91.6	91.5	91.6	7.20	7.19	7.20	8.74	9.80	<b>9.09</b>	19	<b>20.50</b>
	1:16		Middle	2.0	16.20	16.20		8.23	8.23		33.50	33.50		91.6	91.5		7.20	7.19		9.32	8.49		22	
11/1/2011	2:37	Fine	Middle	2.0	17.60	17.60	17.60	8.14	8.14	8.14	31.90	31.90	31.90	85.5	85.0	85.0	6.76	6.72	6.72	2.60	2.85	2.64	4	4.50
	2:42		Middle	2.0	17.60	17.60		8.14	8.14		31.90	31.90		84.8	84.8		6.70	6.70		2.51	2.60		5	
13/1/2011	21:45	Cloudy	Middle	2.0	15.85	15.85	15.85	8.44	8.44	8.44	31.12	31.12	31.12	85.8	85.9	85.5	7.05	7.05	7.02	2.93	2.51	2.71	5	5.50
	21:50		Middle	2.0	15.85	15.85		8.44	8.44		31.12	31.12		84.9	85.2		6.98	7.00		2.44	2.95		6	
15/1/2011	0:48	Fine	Middle	2.0	14.28	14.28	14.28	8.57	8.57	8.57	31.86	31.86	31.86	52.0	50.5	51.1	4.56	4.43	4.47	6.05	5.93	5.83	9	8.00
	0:57		Middle	2.0	14.28	14.28		8.57	8.57		31.86	31.86		49.6	52.1		4.36	4.52		5.57	5.76		7	
17/1/2011	21:12	Fine	Middle	2.0	13.40	13.40	13.40	8.09	8.09	8.09	32.75	32.75	32.65	86.1	82.4	83.2	7.35	6.93	7.06	3.94	3.55	3.57	7	7.00
	21:18		Middle	2.0	13.40	13.40		8.09	8.09		32.55	32.55		81.7	82.6		6.95	7.02		3.47	3.30		7	
20/1/2011	23:02	Cloudy	Middle	2.0	16.20	16.20	16.20	8.04	8.04	8.04	32.74	32.74	32.74	87.2	88.1	86.0	7.02	7.10	6.92	3.15	3.00	2.90	4	5.00
	23:07		Middle	2.0	16.20	16.20		8.04	8.04		32.74	32.74		85.8	82.9		6.91	6.66		2.64	2.81		6	
22/1/2011	12:42	Cloudy	Middle	1.5	14.90	14.90	14.95	8.01	8.01	8.00	32.74	32.74	32.74	90.6	89.9	90.5	7.58	7.53	7.57	3.01	3.12	3.11	6	7.50
	12:45		Middle	1.5	15.00	15.00		7.99	8.00		32.74	32.74		91.1	90.3		7.62	7.56		3.06	3.23		9	
24/1/2011	13:16	Cloudy	Middle	1.5	16.60	16.60	16.60	8.05	8.05	8.05	32.74	32.74	32.75	88.0	87.2	87.5	7.27	7.21	7.23	3.97	3.82	3.92	8	8.00
	13:20		Middle	1.5	16.60	16.60		8.05	8.05		32.75	32.75		87.8	86.9		7.26	7.18		4.01	3.88		8	
26/1/2011	16:08	Haze	Middle	2.0	18.85	18.85	18.85	8.13	8.13	8.13	31.55	31.55	31.55	81.7	80.4	83.9	6.31	6.20	6.47	2.45	3.04	2.96	3	3.00
	16:12		Middle	2.0	18.85	18.85		8.13	8.13		31.55	31.55		86.9	86.5		6.71	6.67		3.14	3.19		3	

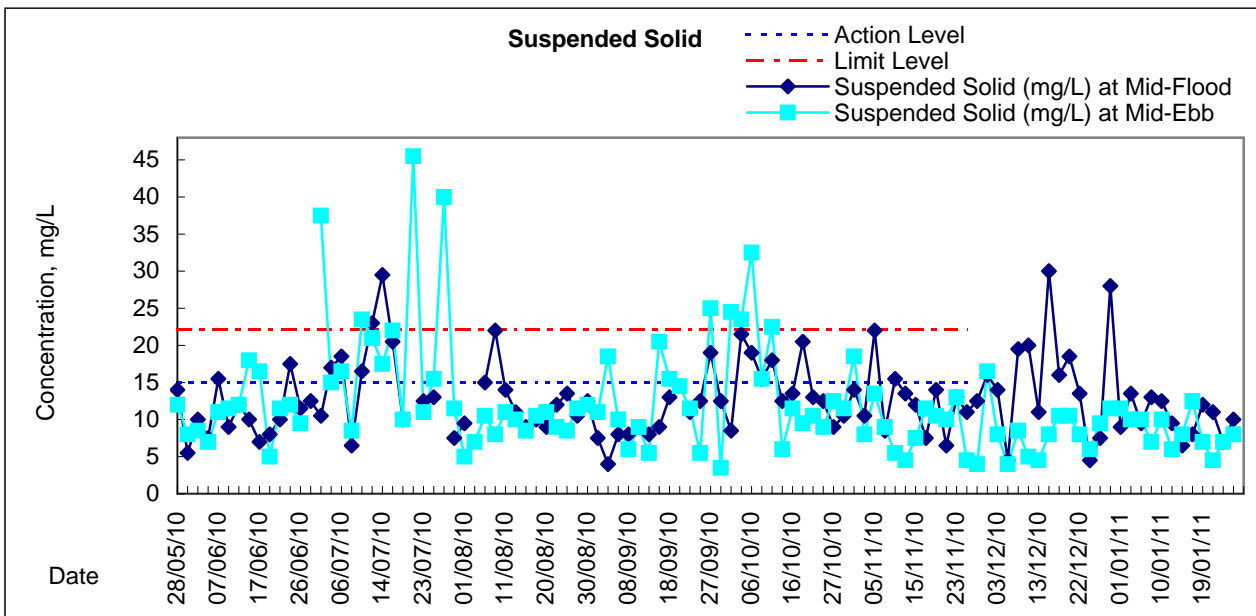
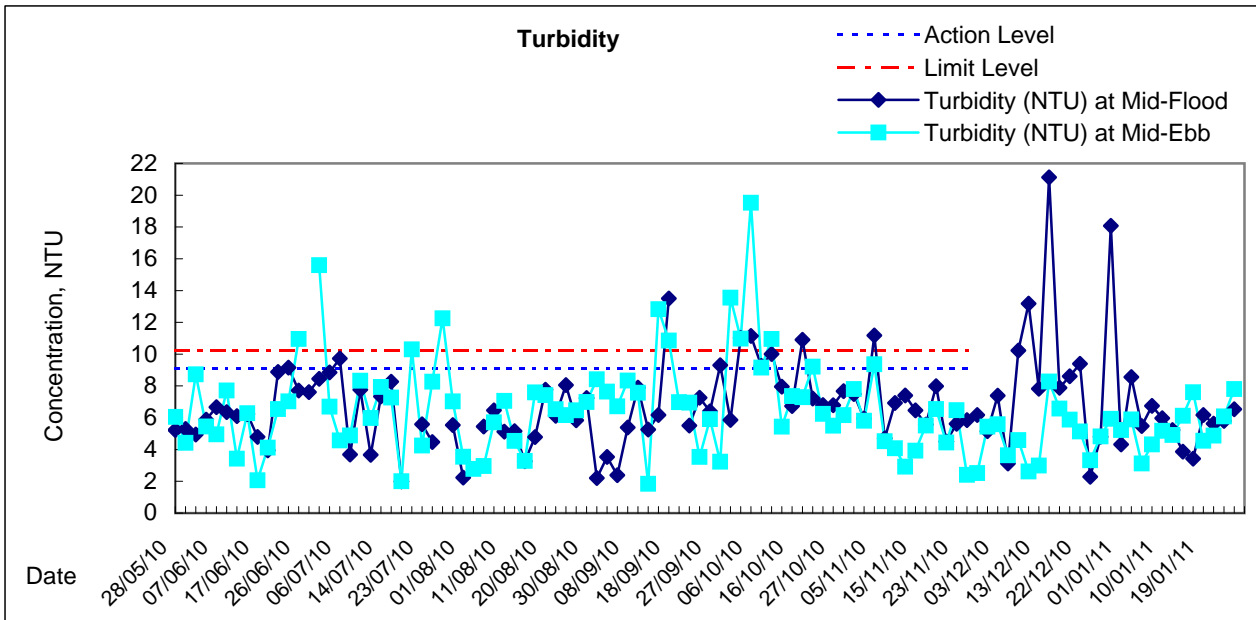
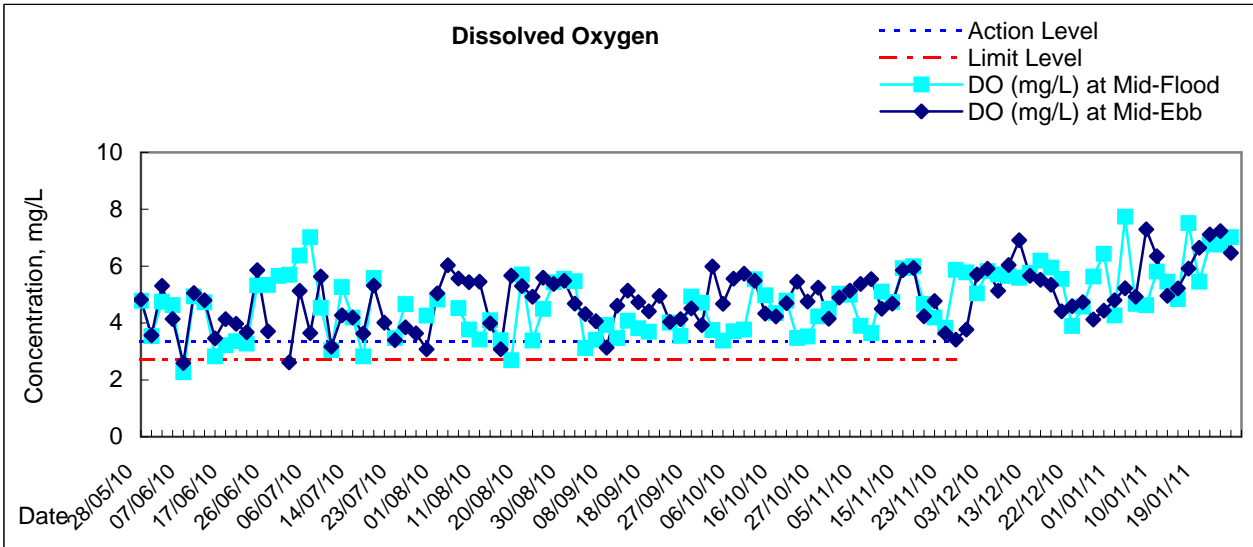


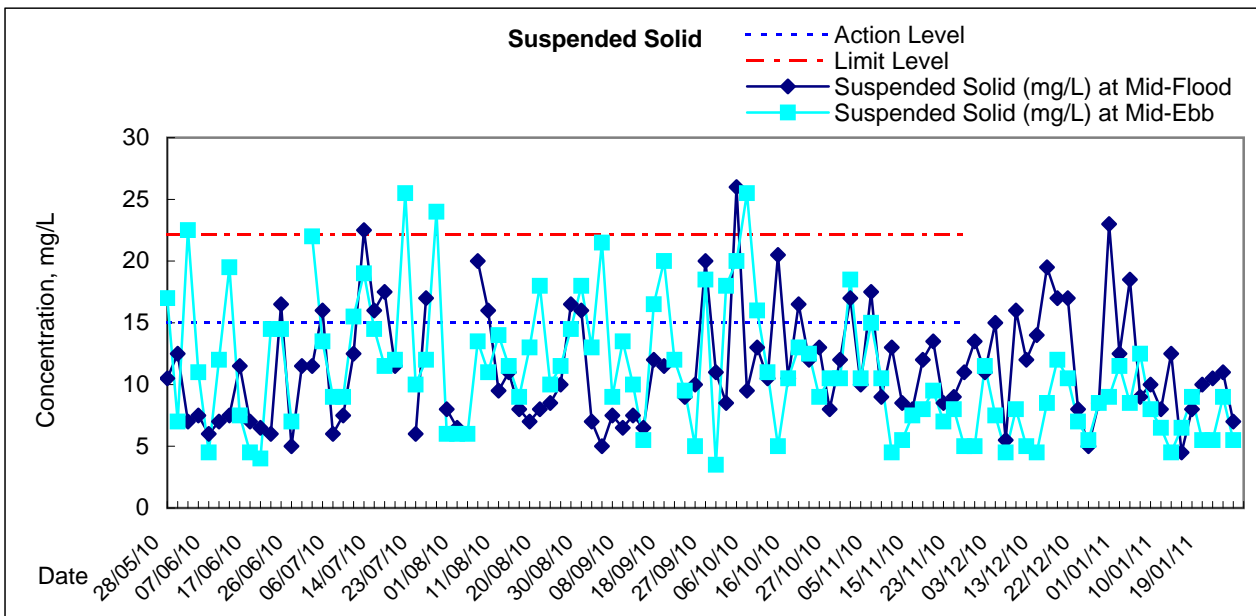
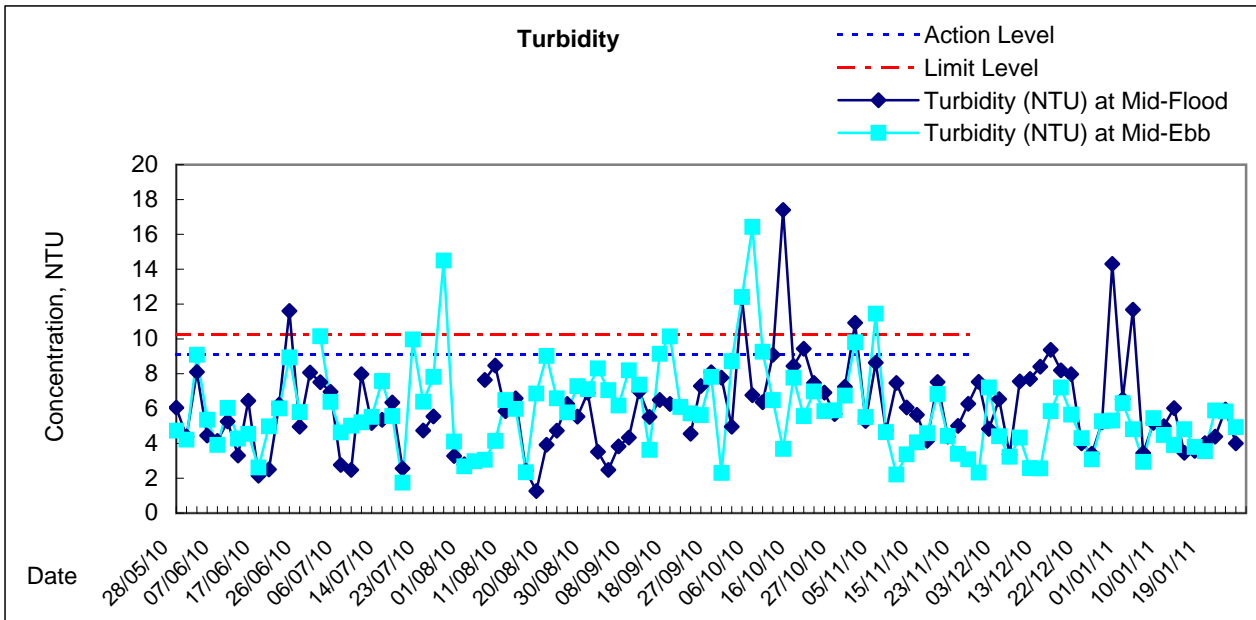
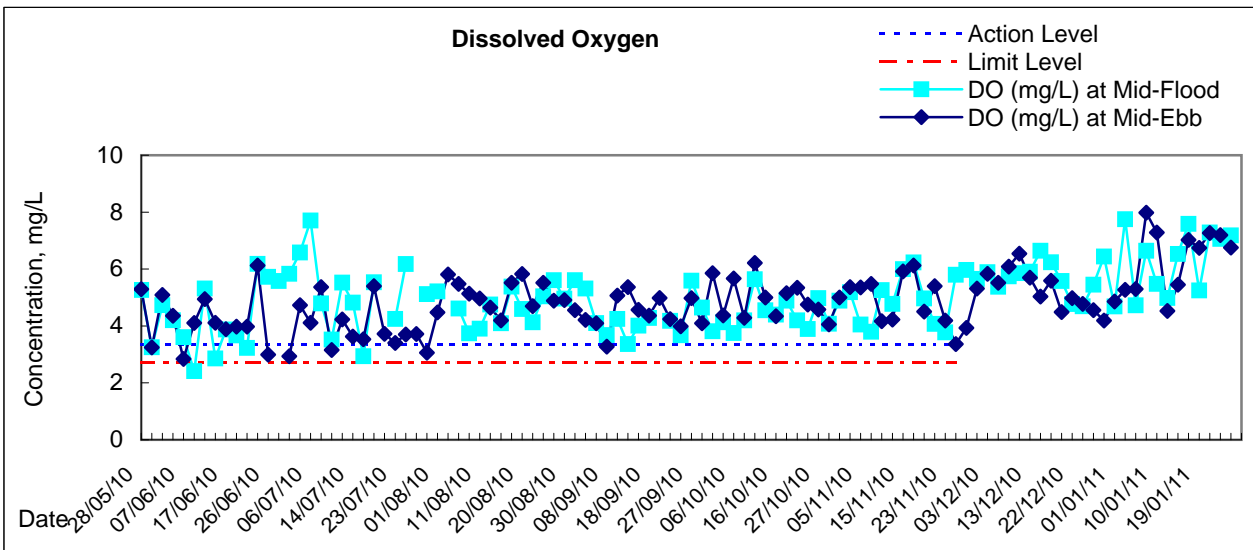


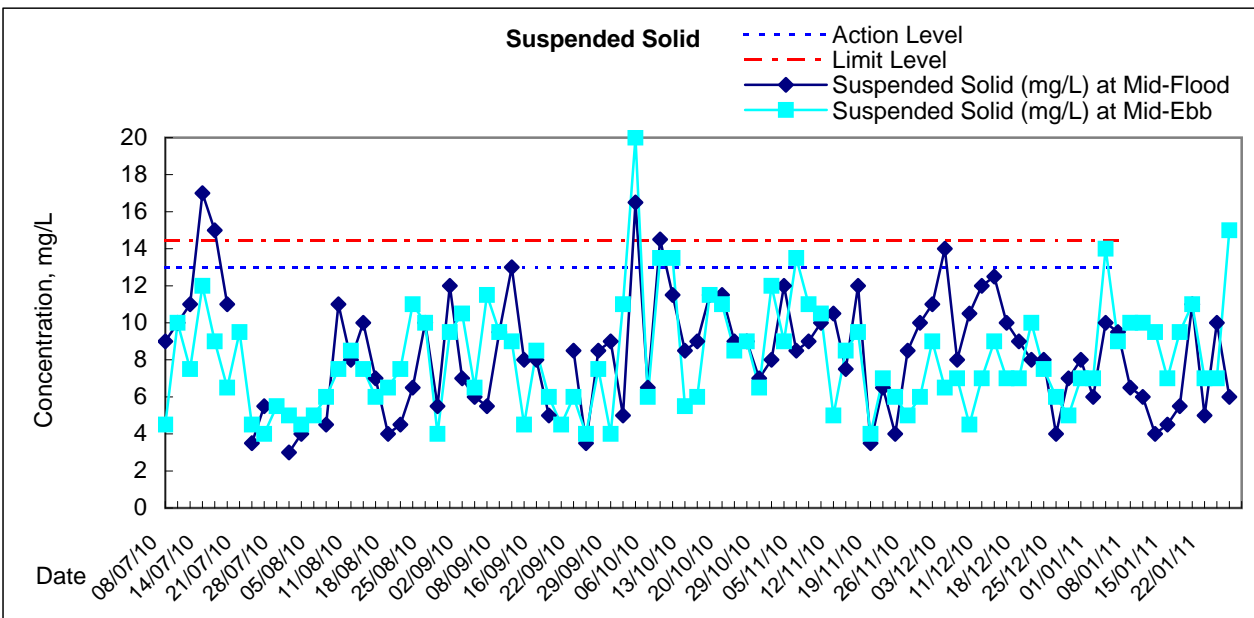
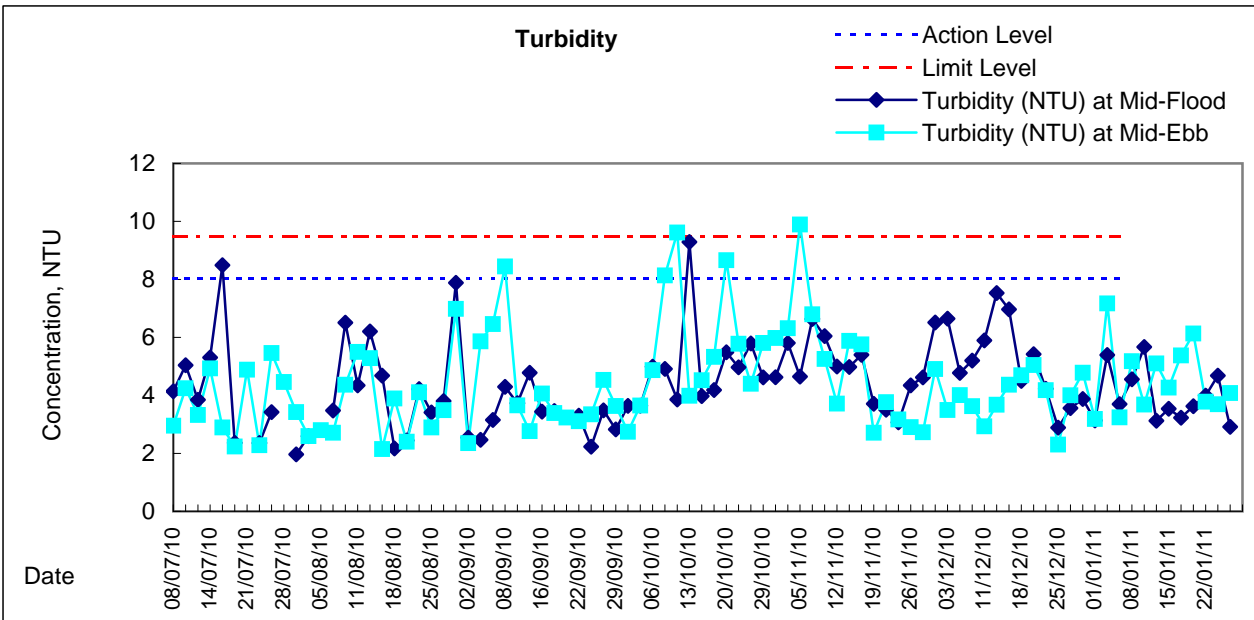
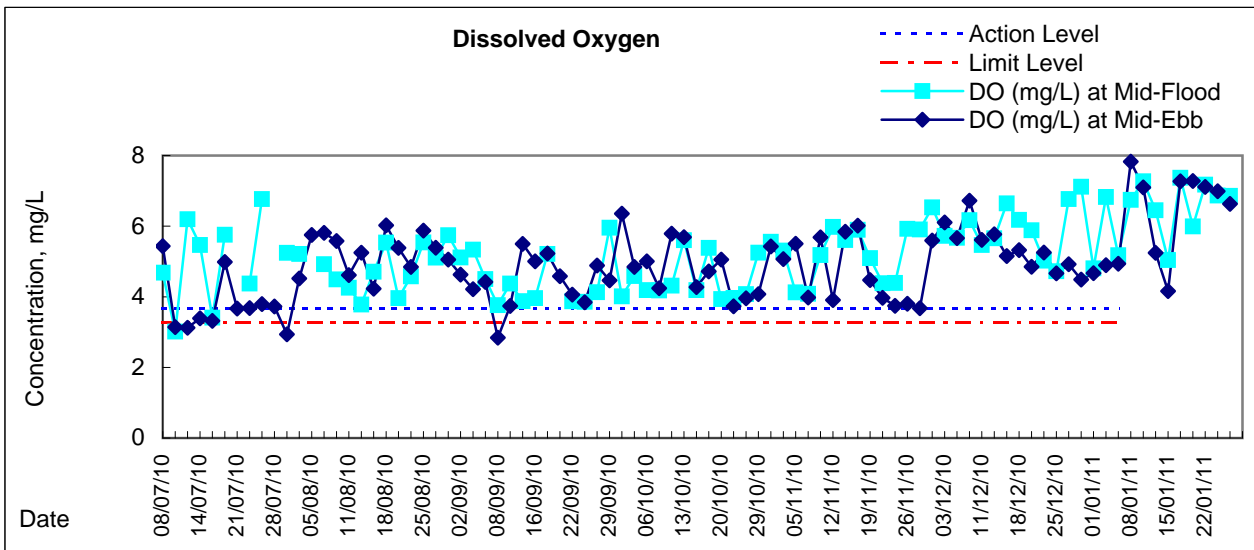






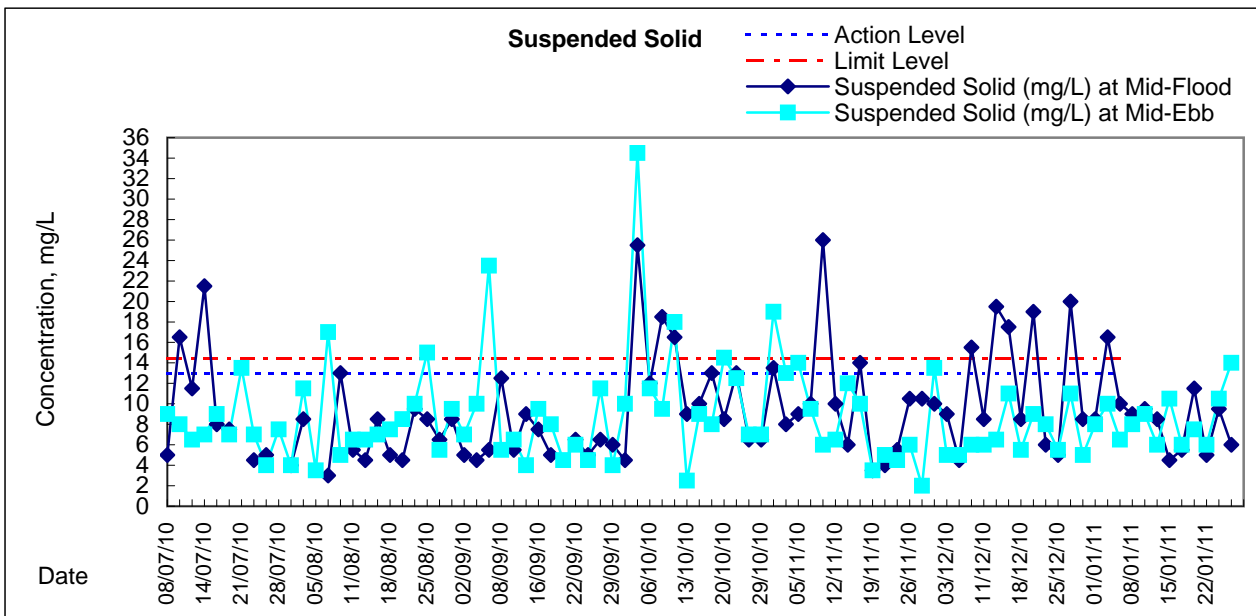
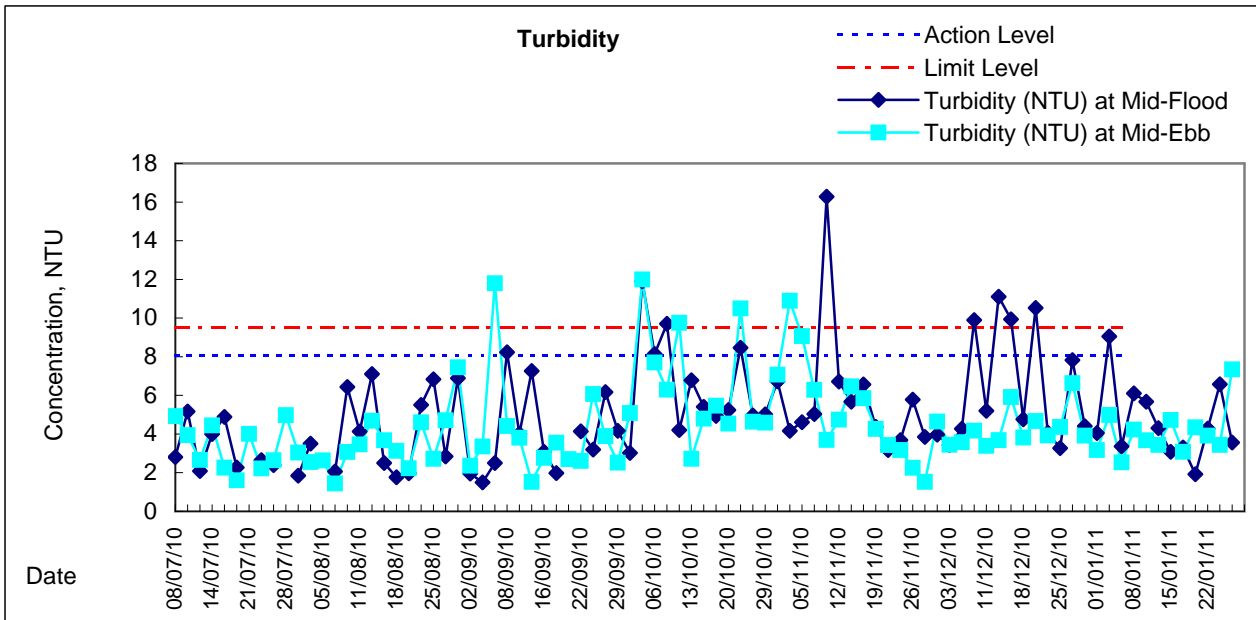
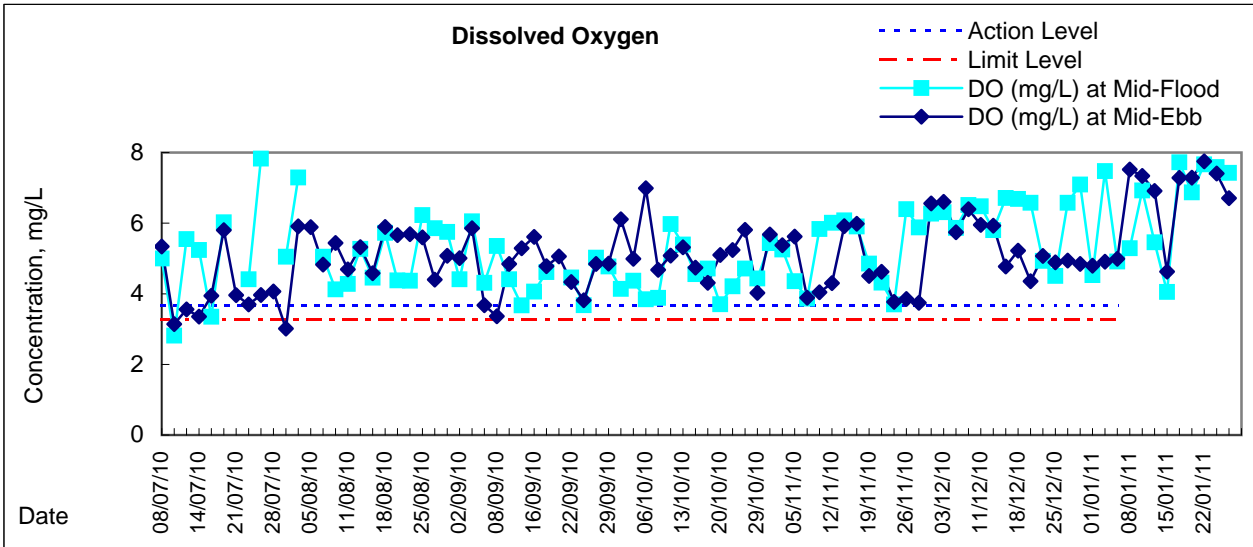


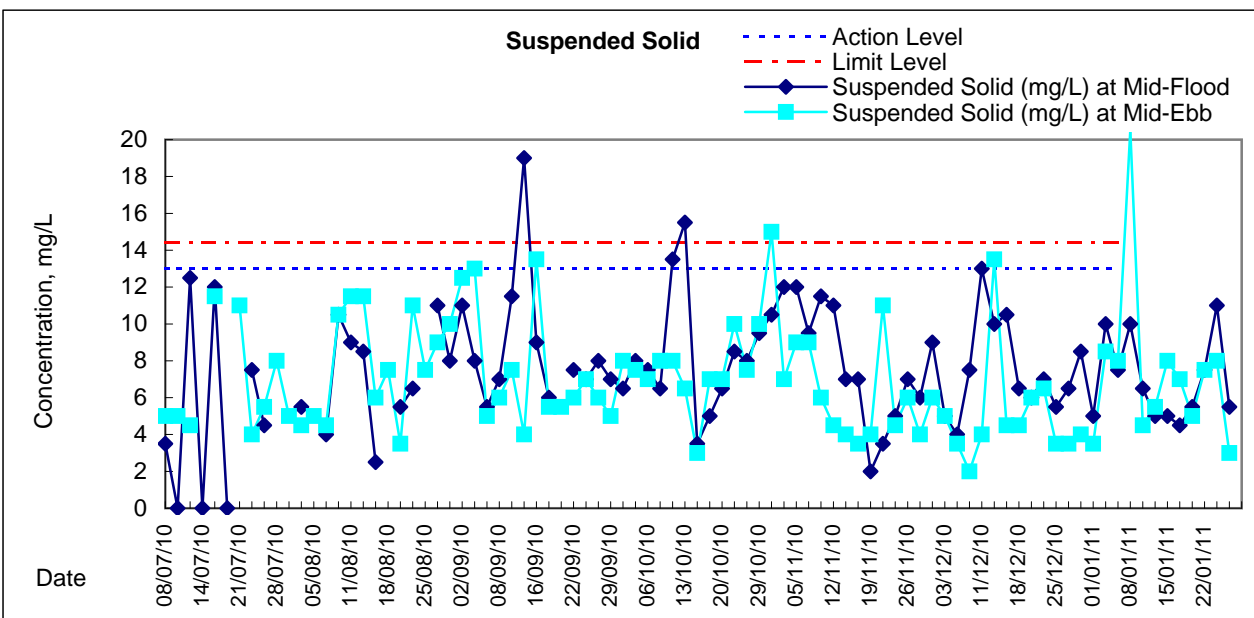
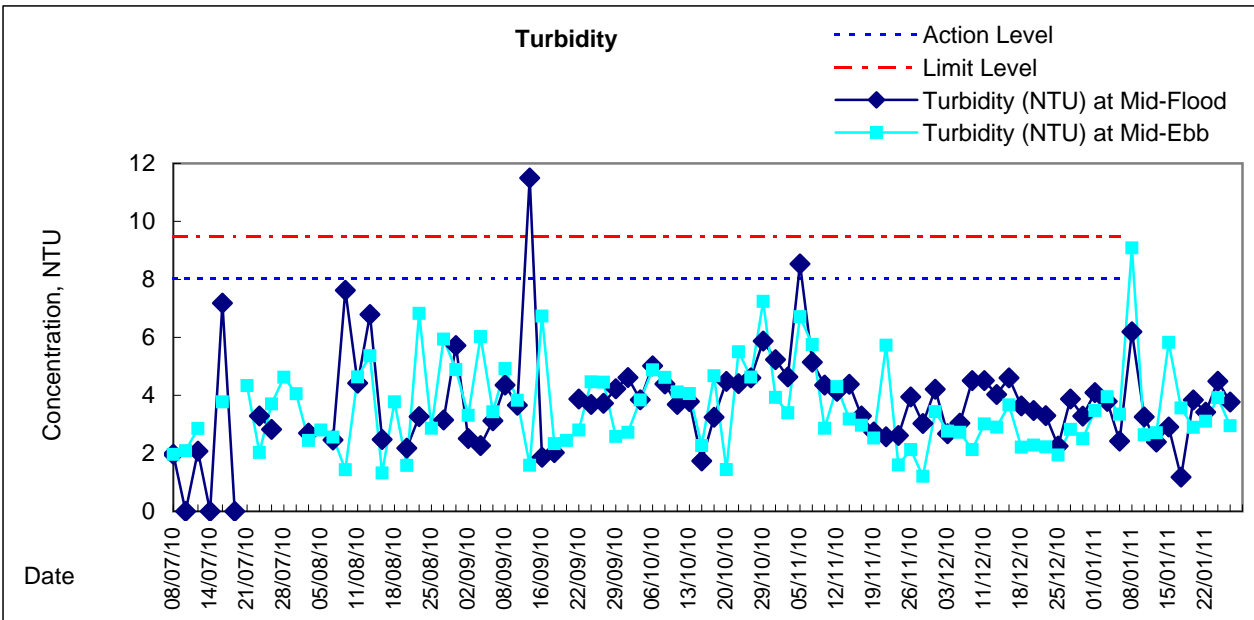
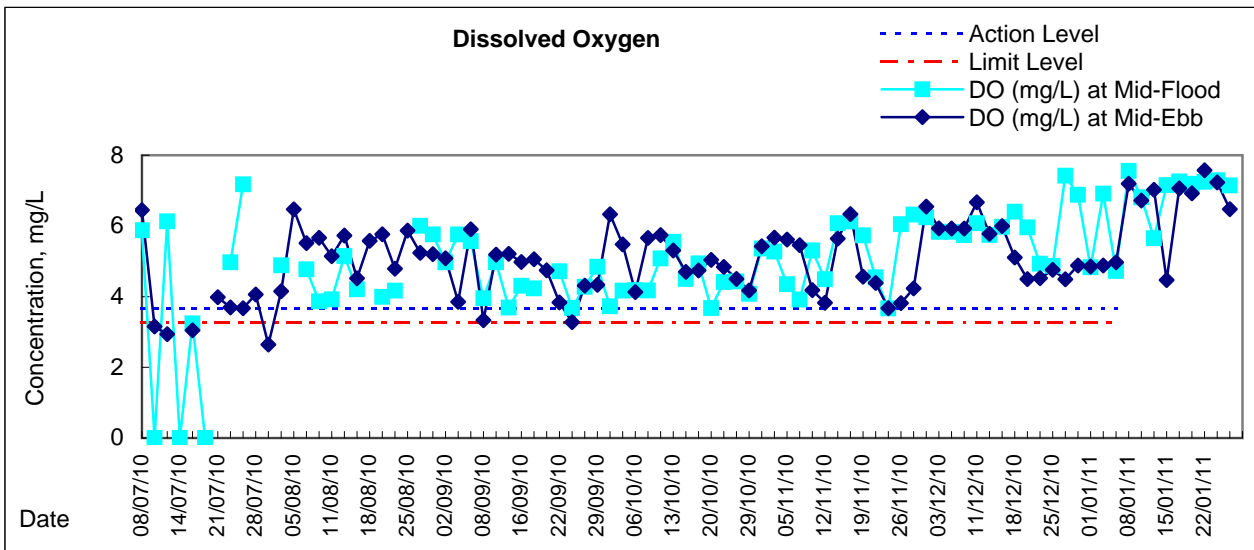






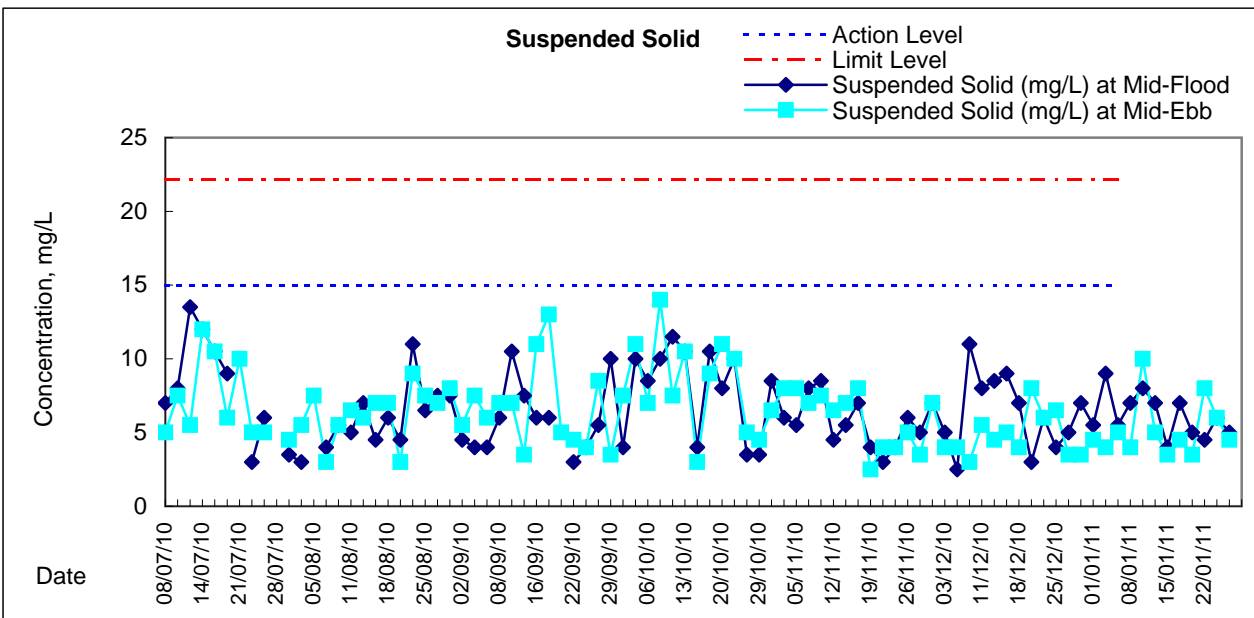
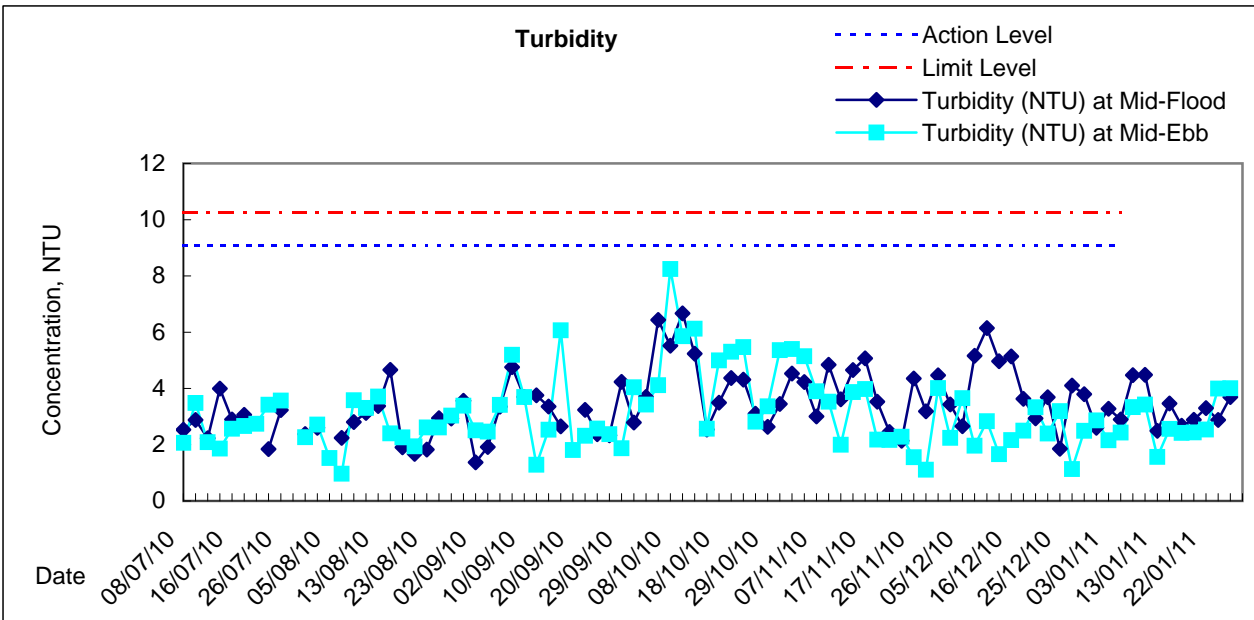
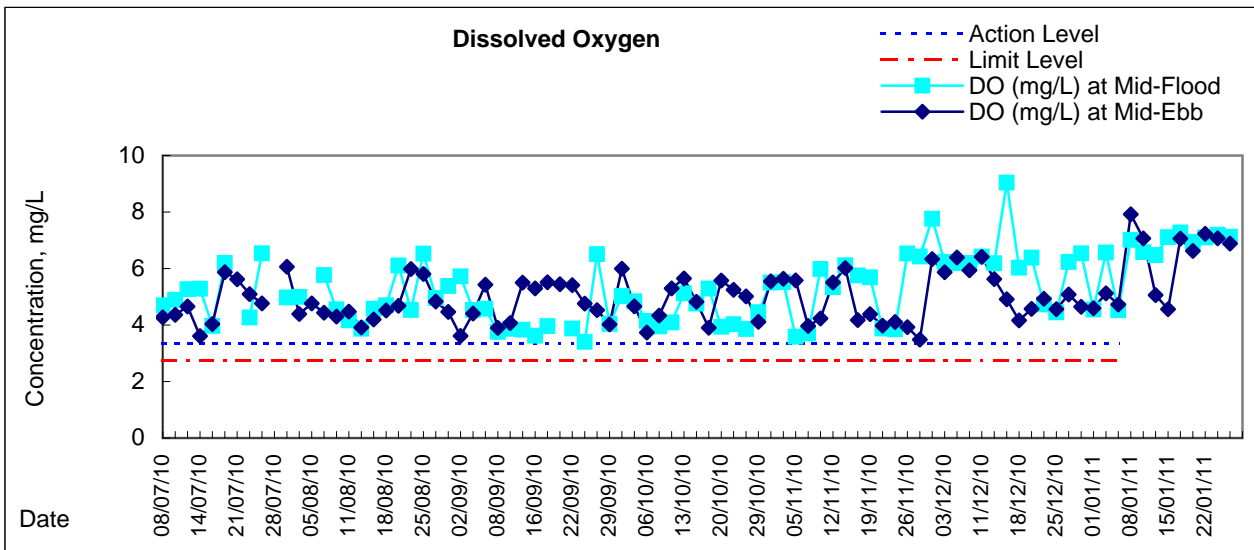
# Graphic Presentation of Water Quality Result of WSD20 - Kennedy Town

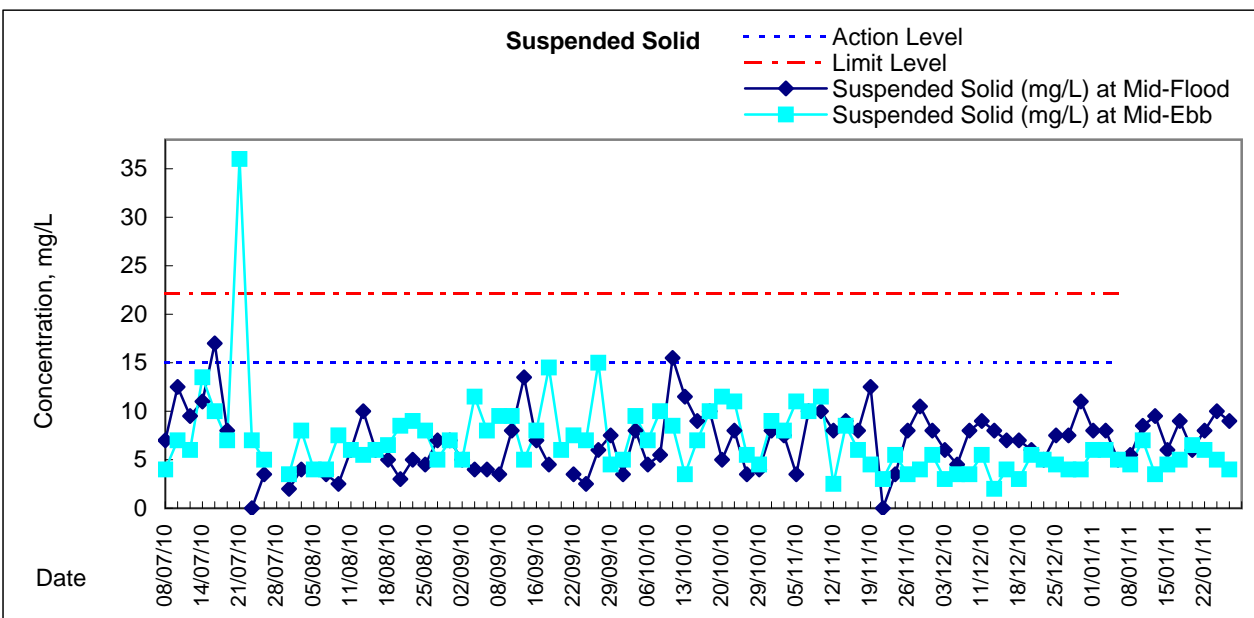
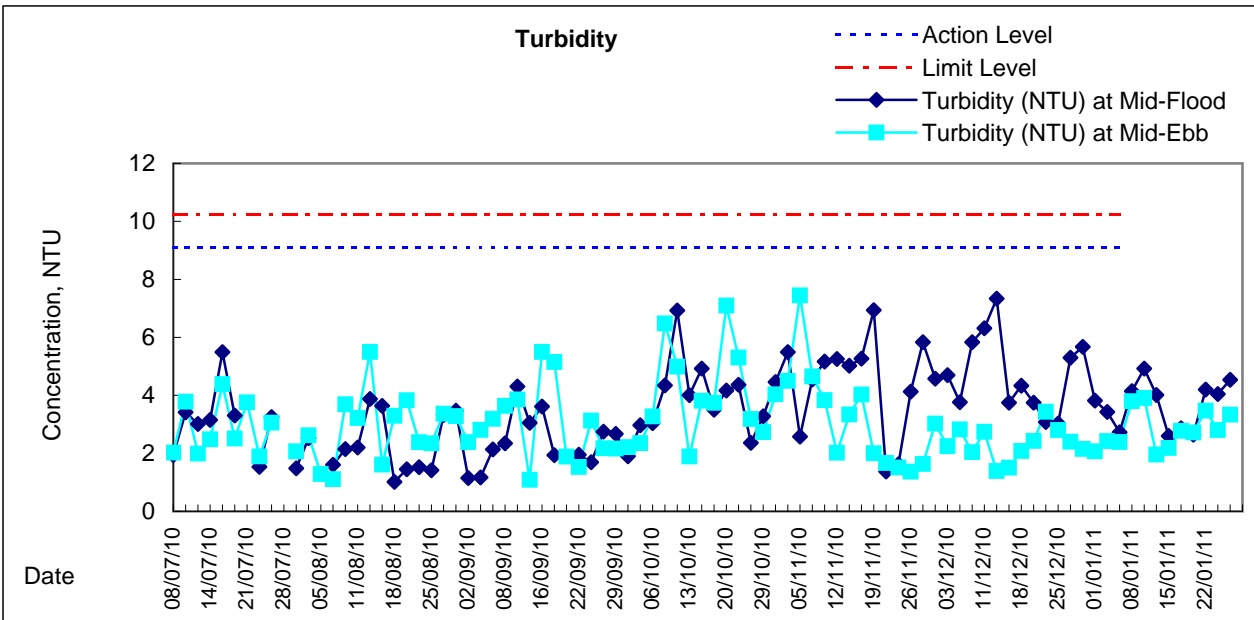
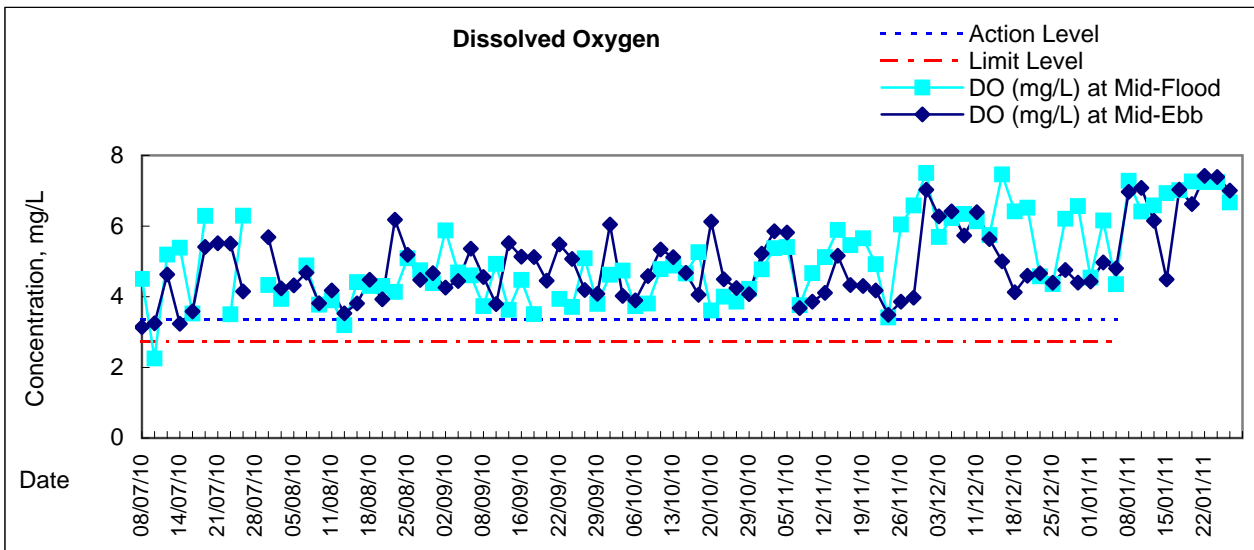


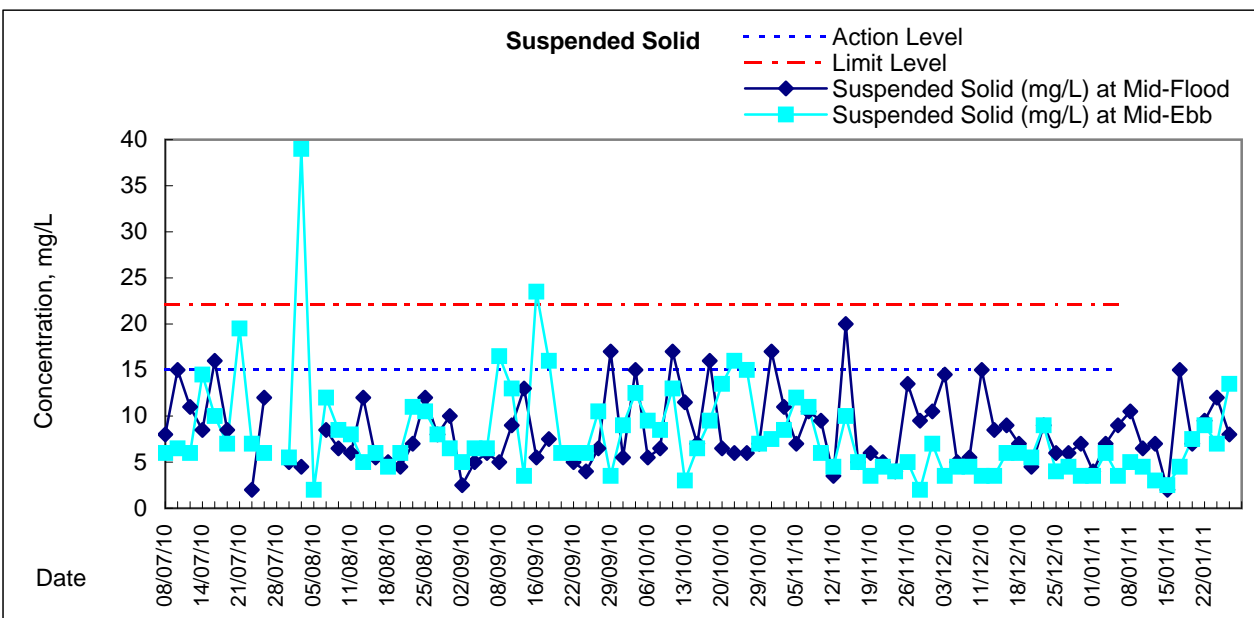
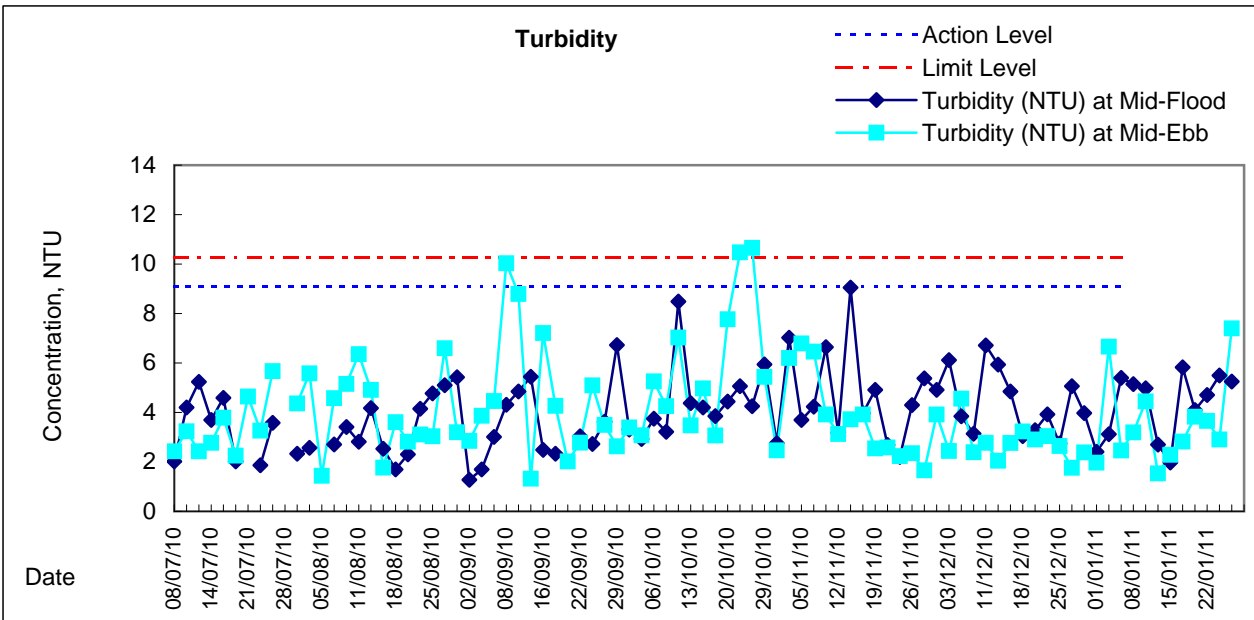
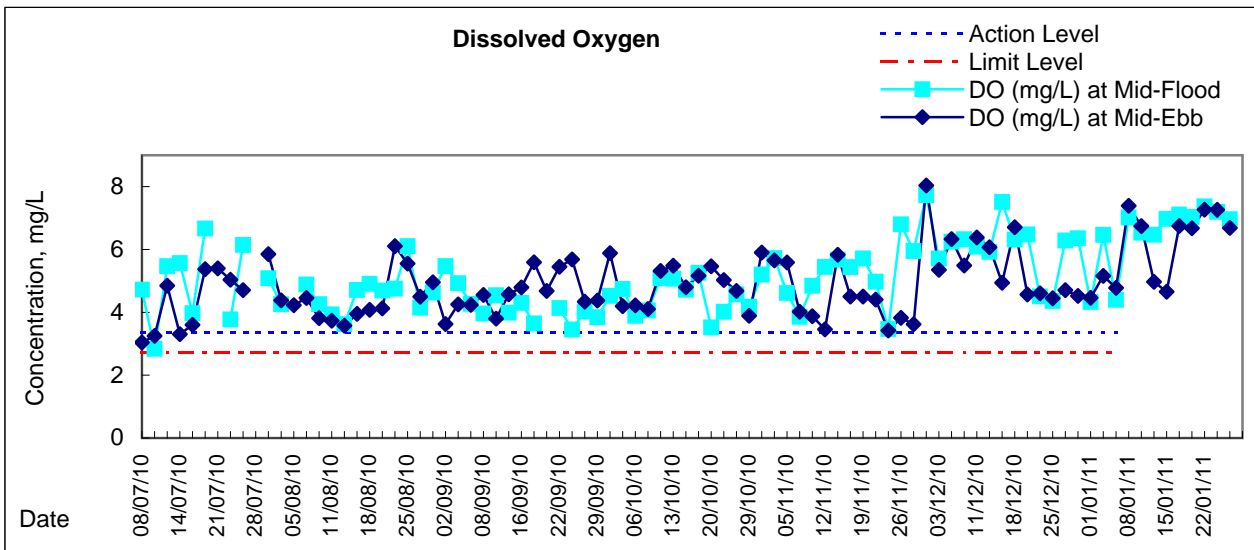




# Graphic Presentation of Water Quality Result of C1 - HKCEC



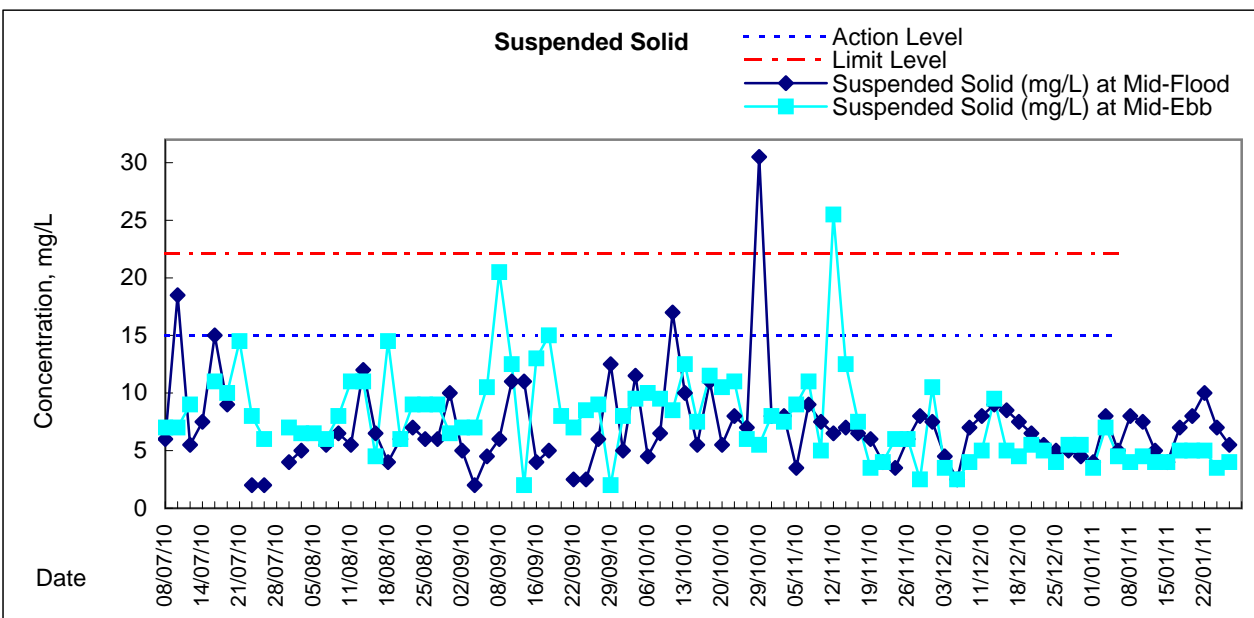
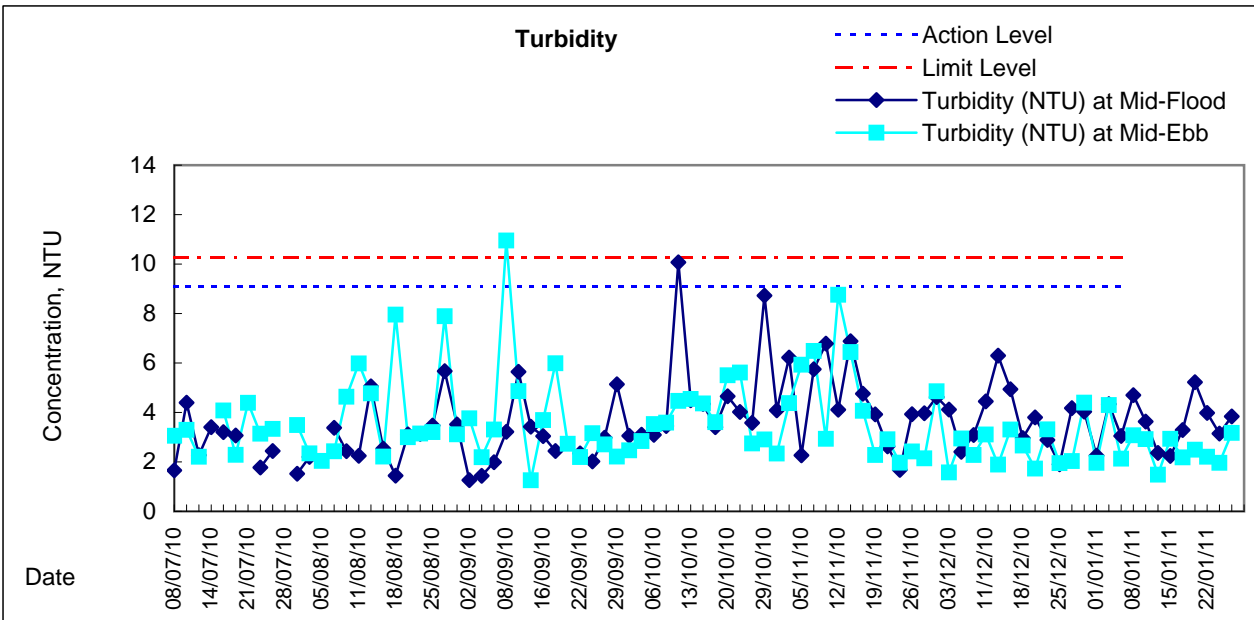
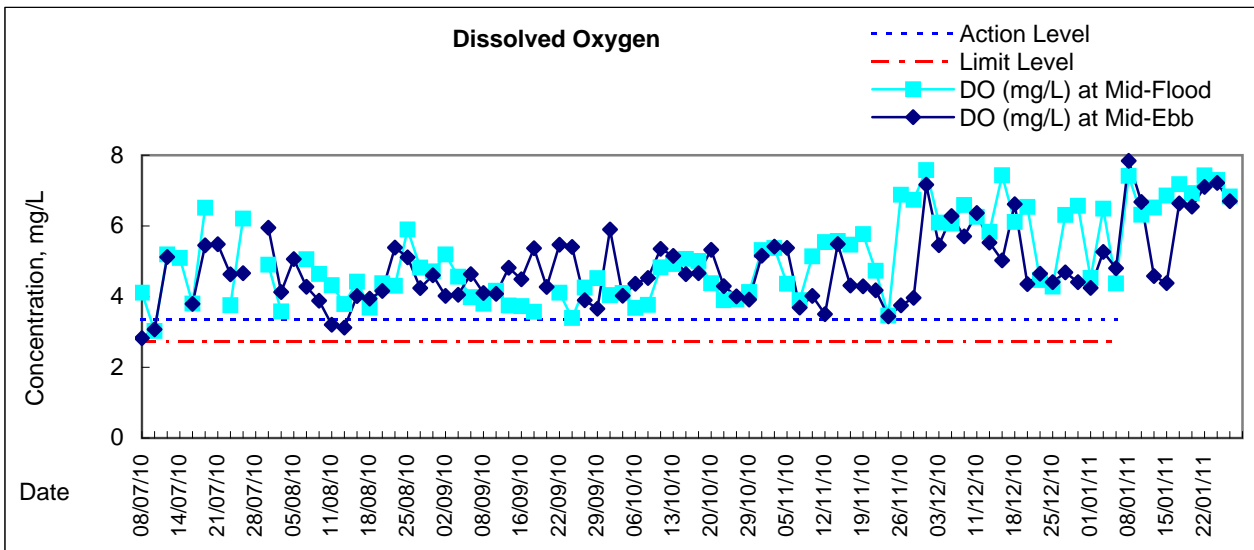






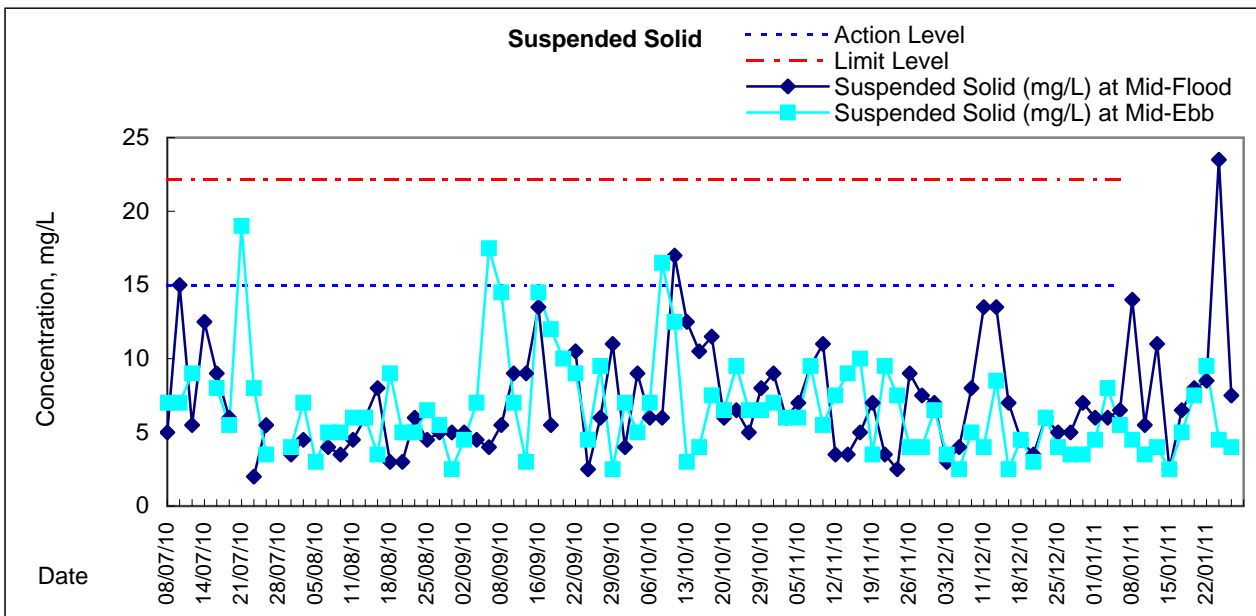
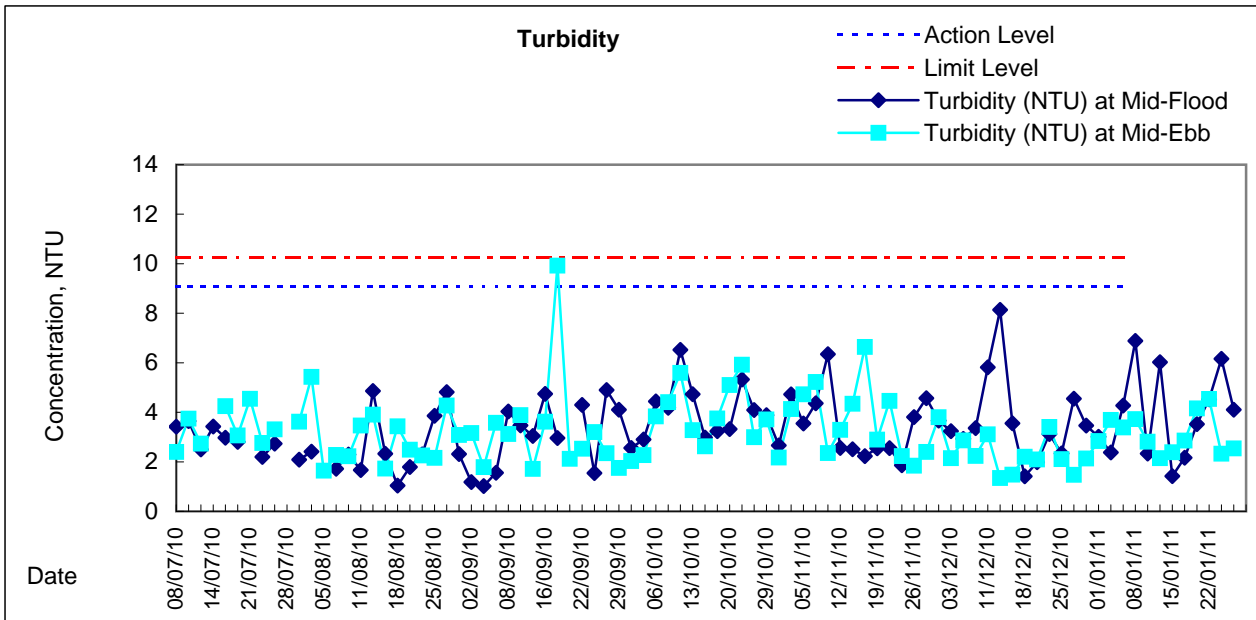
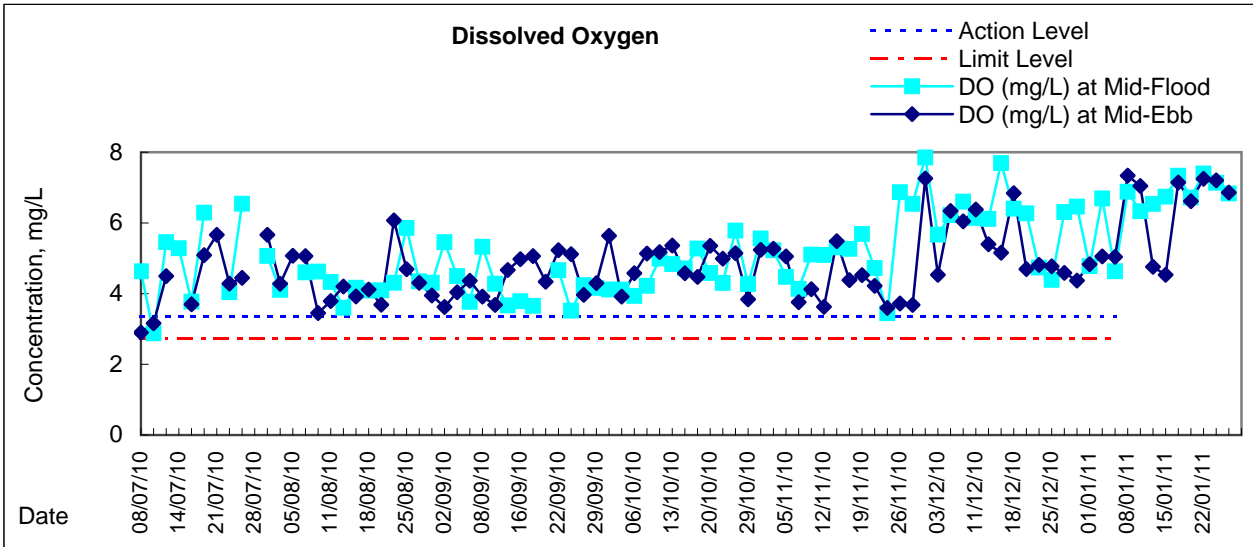


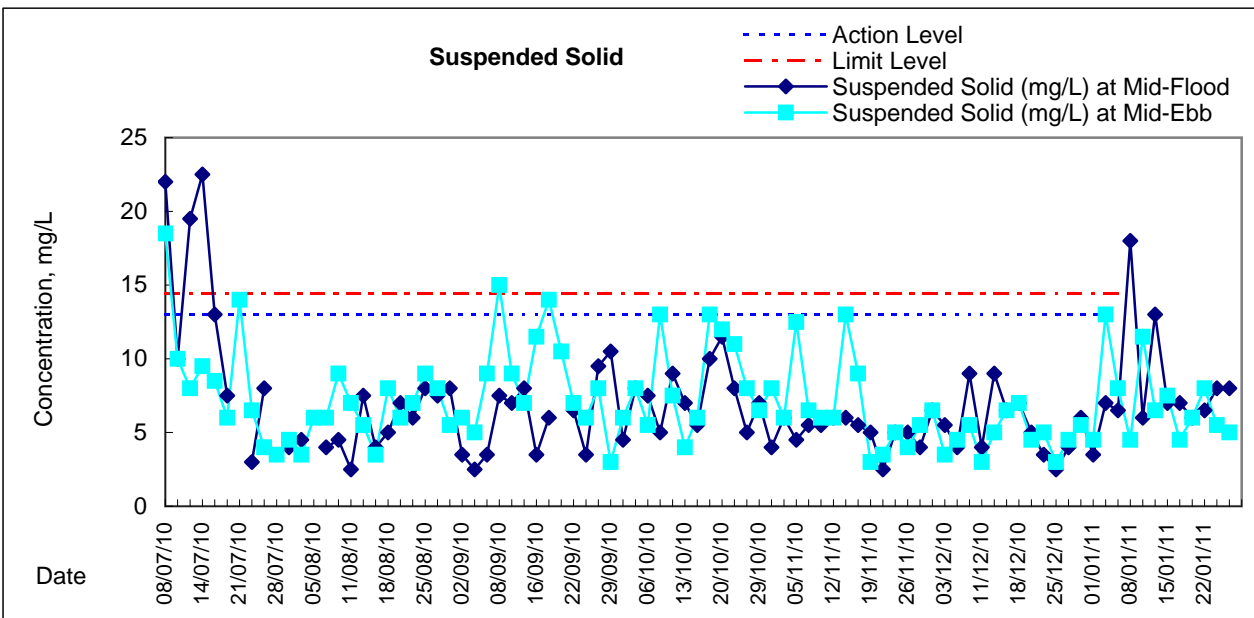
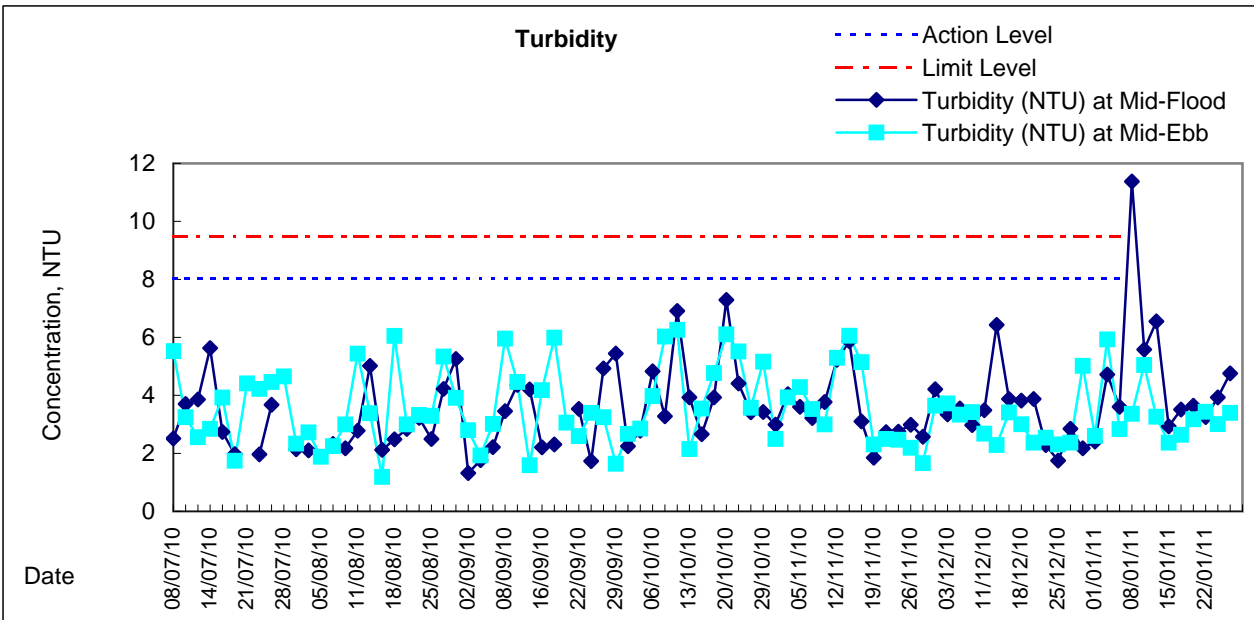
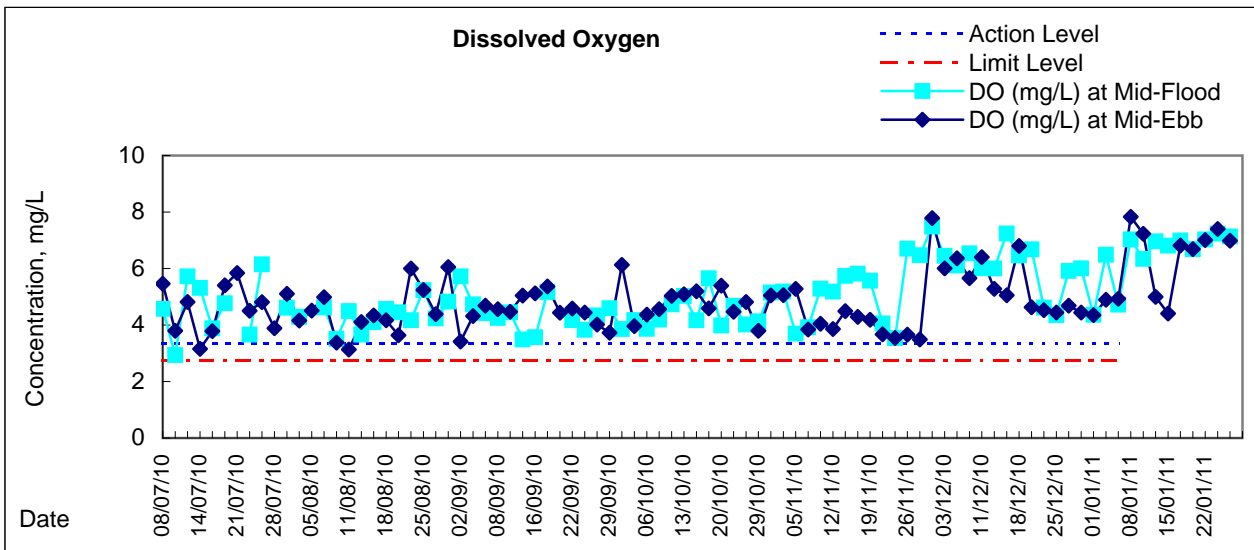
# Graphic Presentation of Water Quality Result of C4e - WCT and GEC (Eastern)

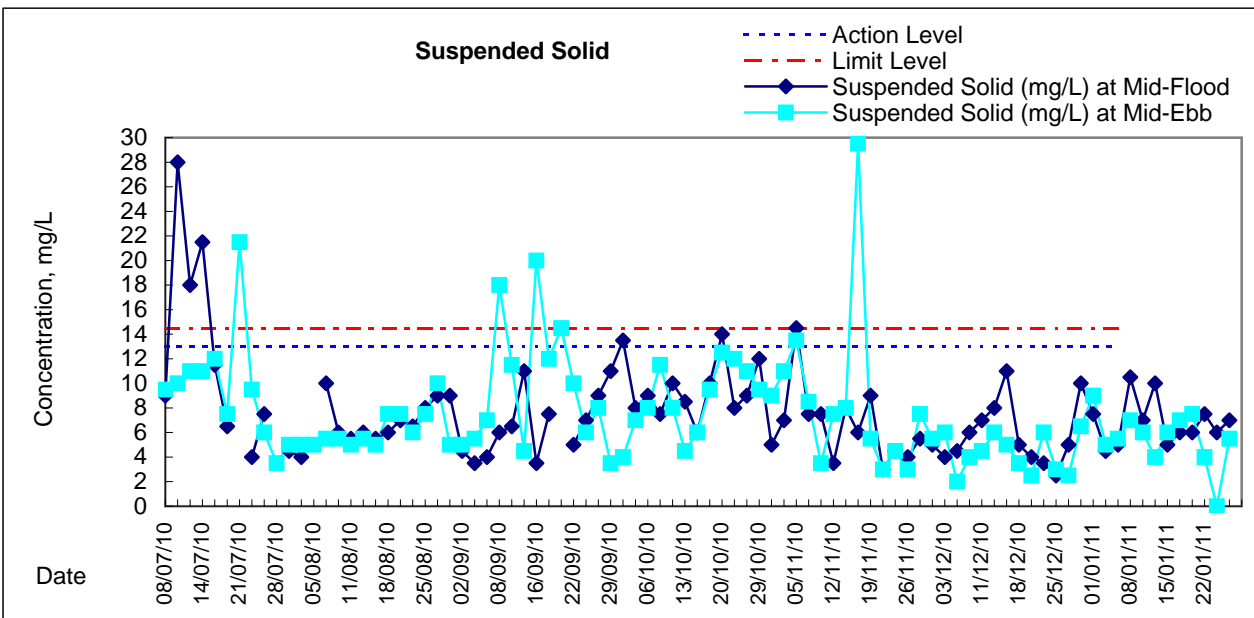
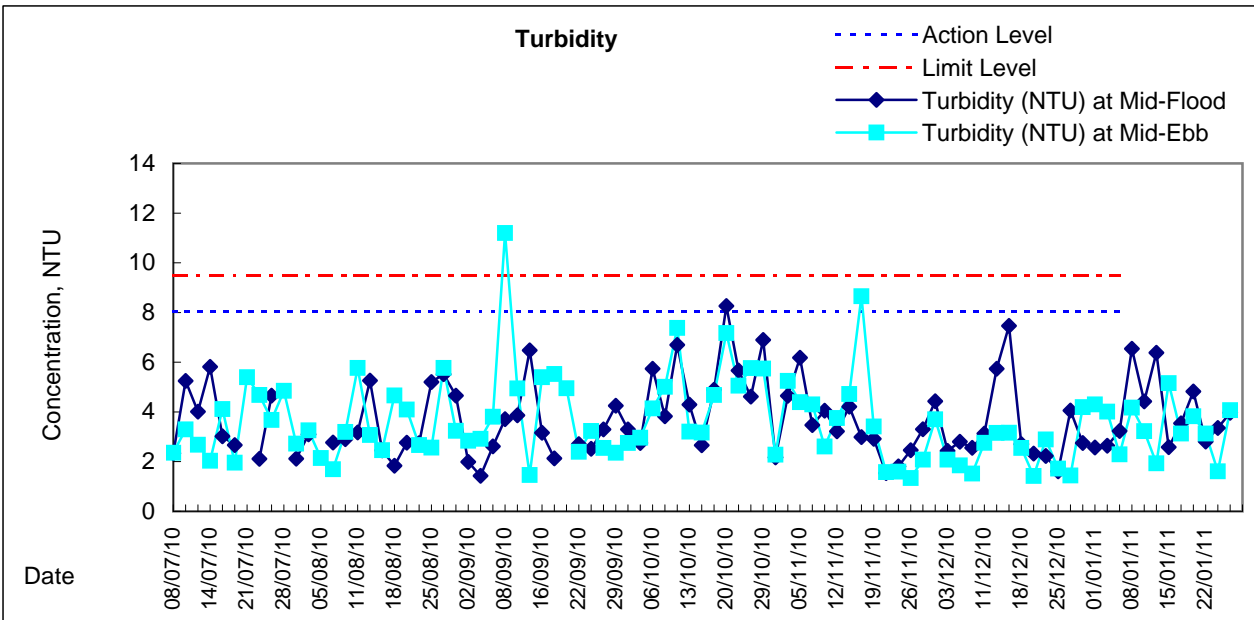
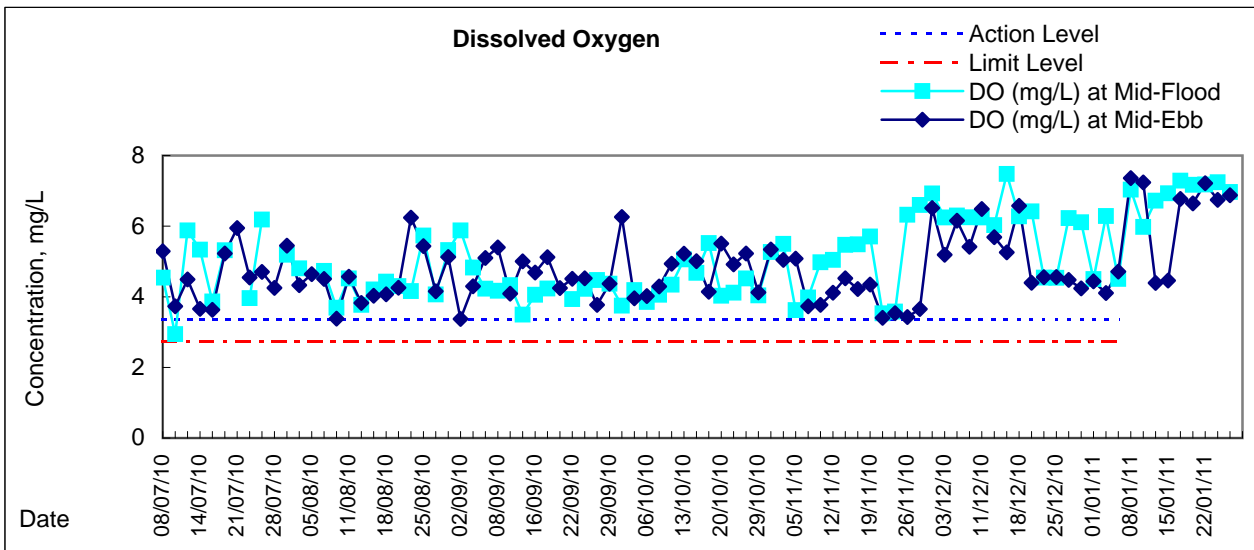


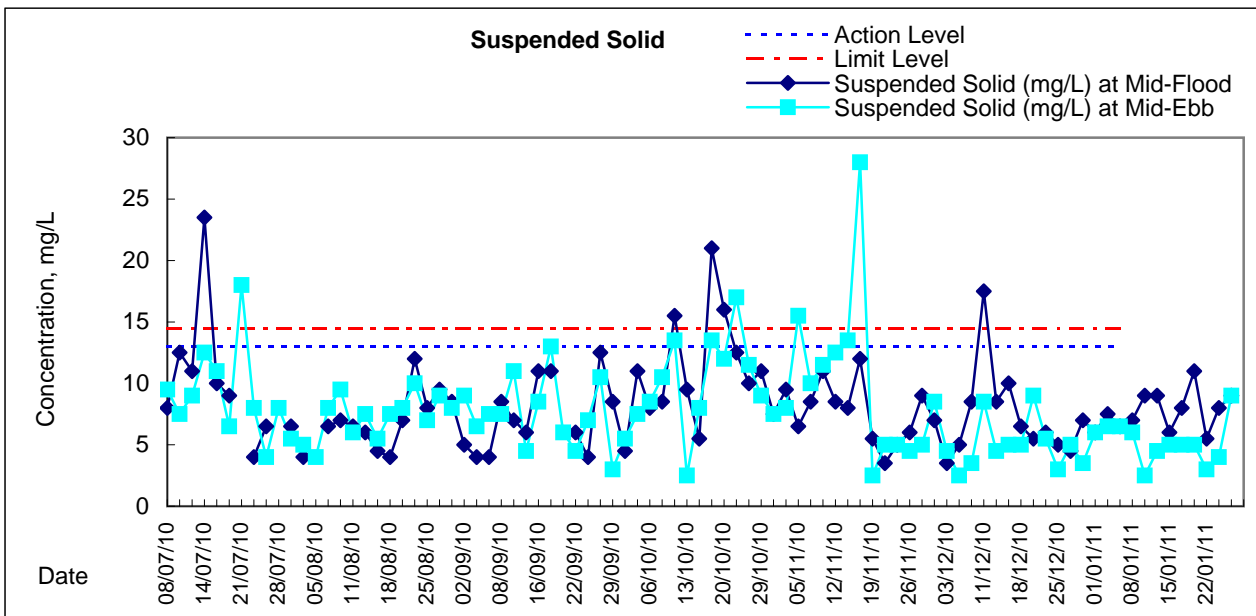
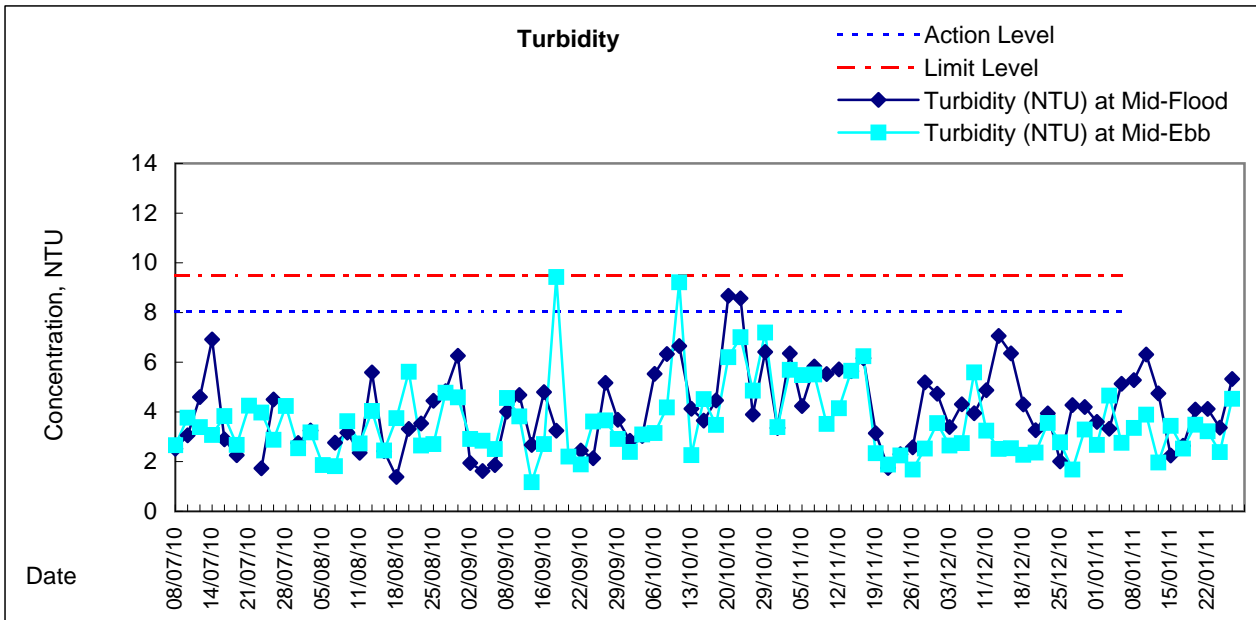
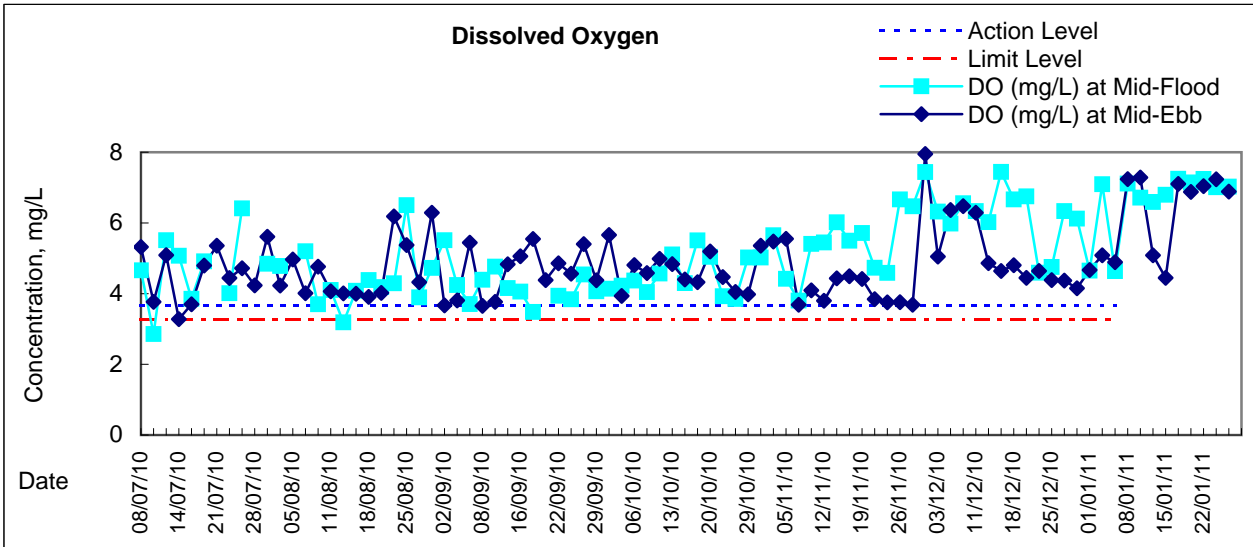


# Graphic Presentation of Water Quality Result of C4w - WCT and GEC (Western)



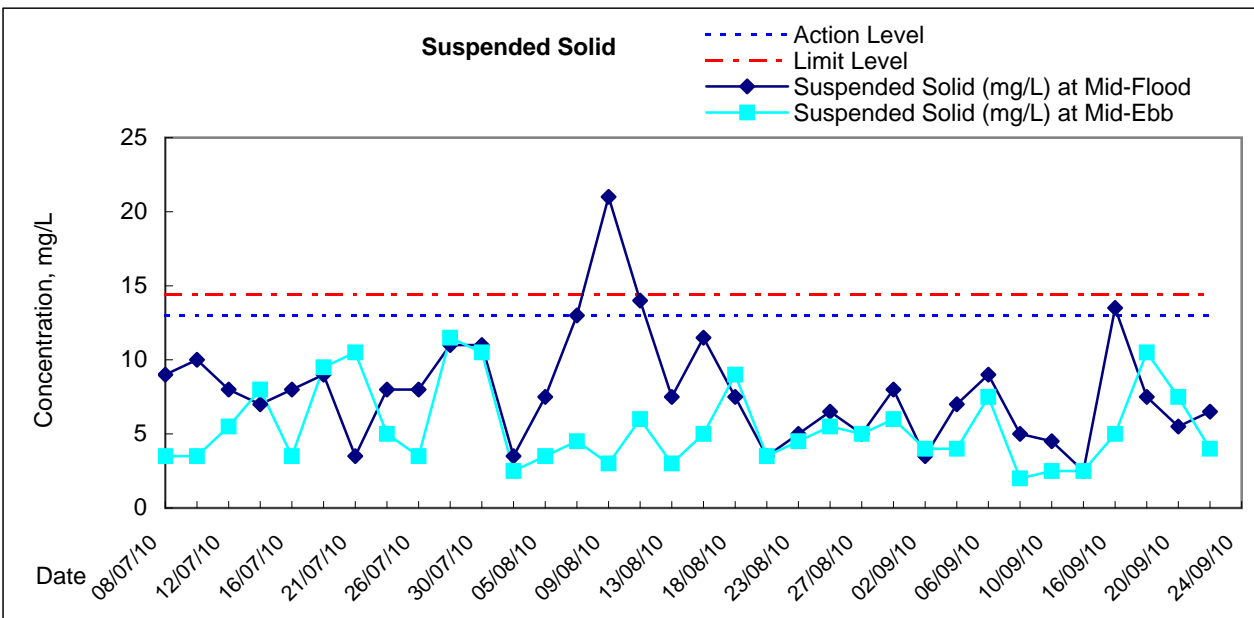
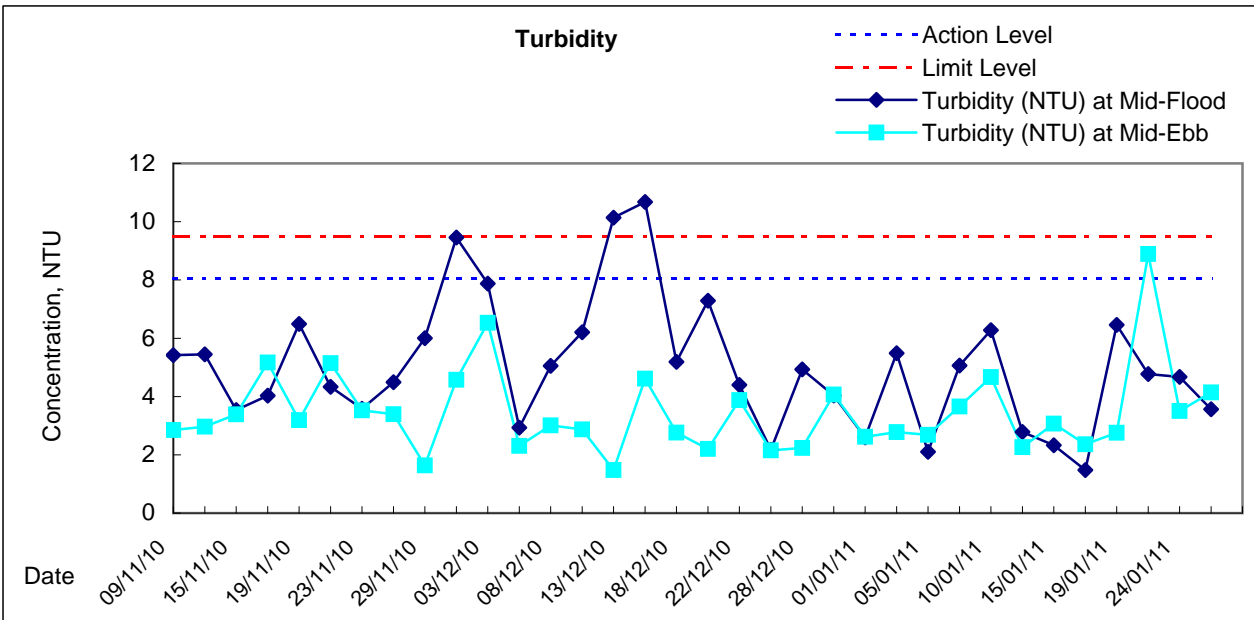
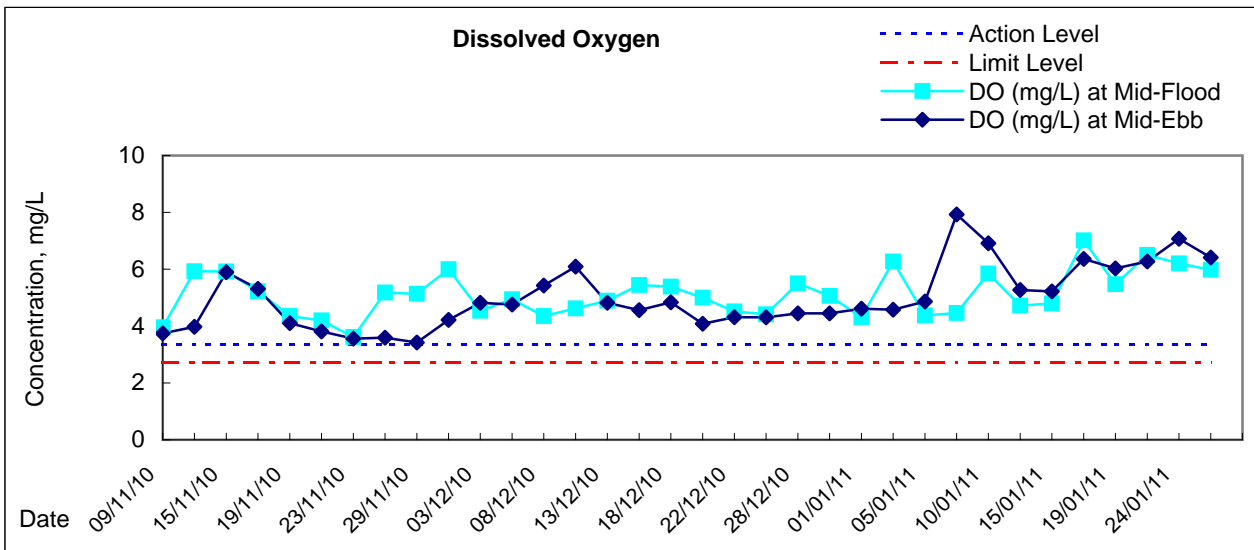


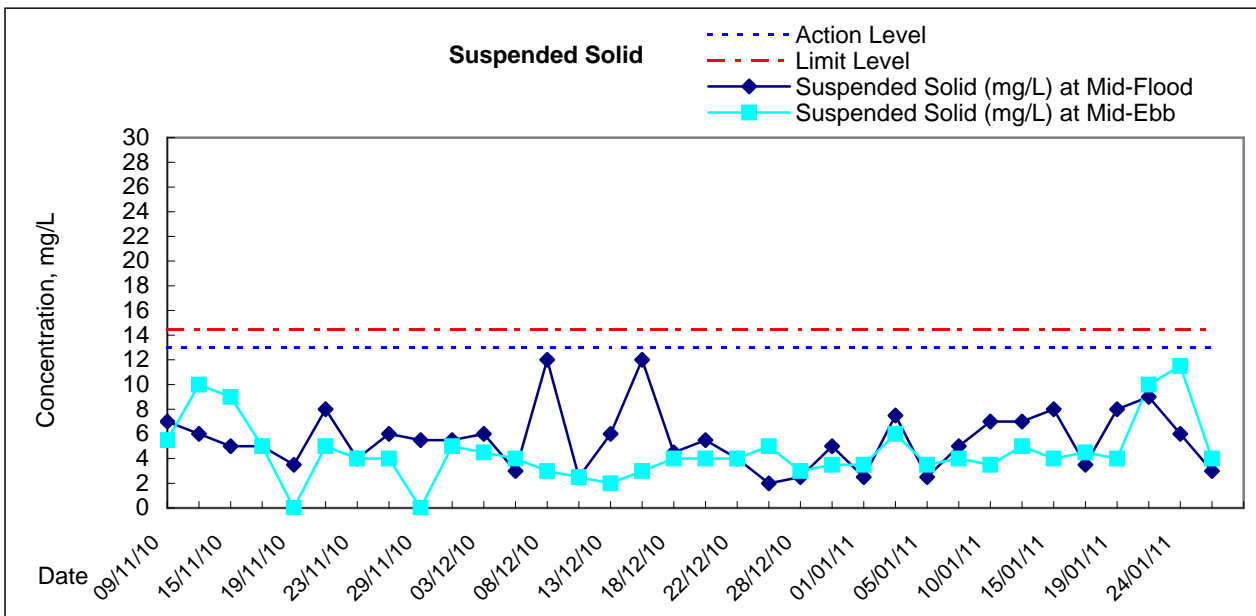
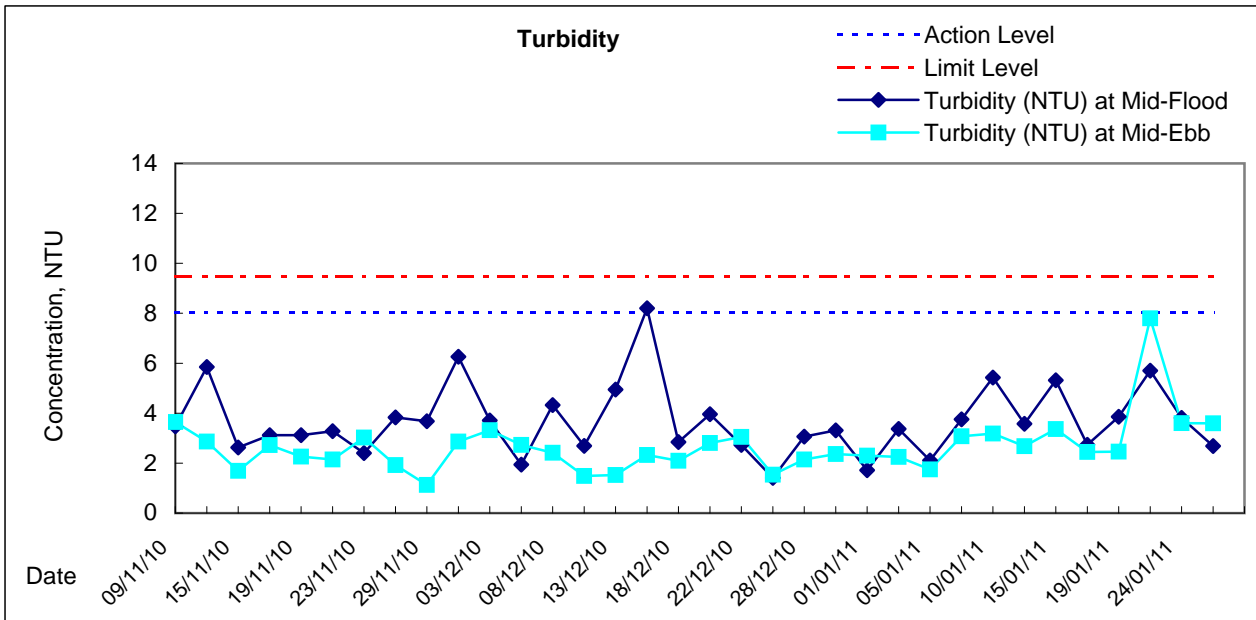
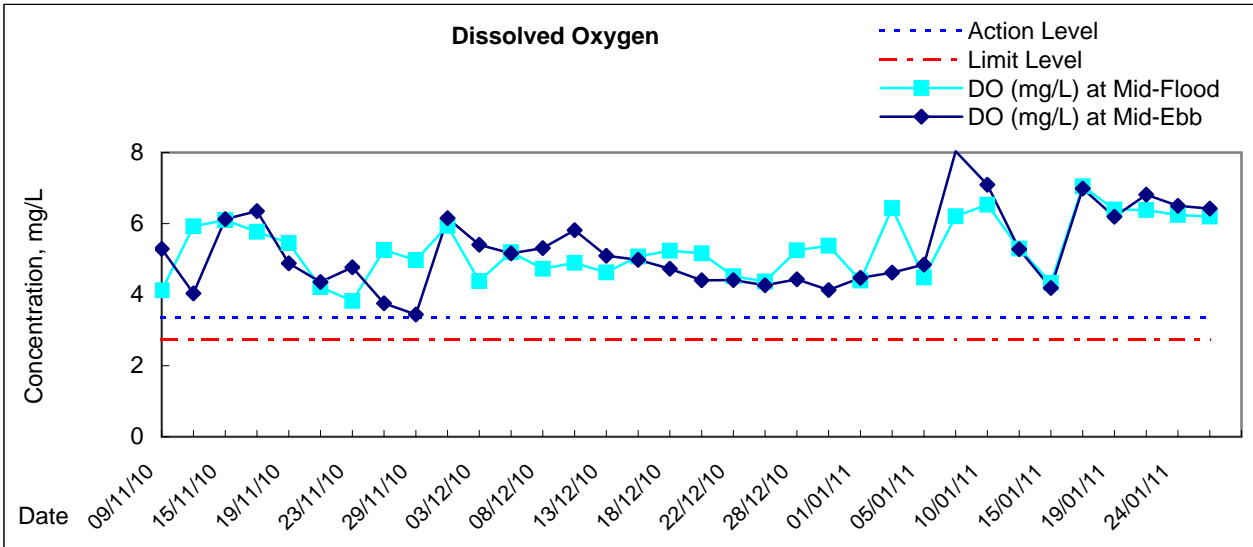






## Graphic Presentation of Water Quality Result of C6 - Excelsior Hotel











**Enhanced Water Monitoring Results (DO) at C7 - Windsor House  
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity		DO Saturation		DO				
					°C			-			ppt		%		mg/L				
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
13/1/2011	14:15	Cloudy	Surface	1.0	16.70	16.70	16.7	8.10	8.10	8.1	32.23	32.27	32.3	67.6	66.3	67.0	5.41	5.31	5.4
	14:17		Middle	2.0	16.70	16.70	16.7	8.04	8.04	8.0	32.24	32.26	32.3	66.5	65.4	66.0	5.32	5.24	5.3
	14:20		Bottom	3.0	16.70	16.70	16.7	8.02	8.02	8.0	32.29	32.29	32.3	65.0	64.2	64.6	5.20	5.14	5.2
15/1/2011	13:46	Fine	Surface	1.0	16.33	16.33	16.3	8.00	8.00	8.0	31.20	31.20	31.2	52.8	52.8	52.8	4.68	4.57	4.6
	13:49		Middle	2.0	16.20	16.20	16.2	8.02	8.02	8.0	31.42	31.42	31.4	52.7	50.3	51.5	4.68	4.08	4.4
	13:54		Bottom	3.0	16.25	16.25	16.3	8.06	8.06	8.1	31.39	31.39	31.4	54.9	54.9	54.9	4.64	4.62	4.6
17/1/2011	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:28		Middle	1.5	16.20	16.20	16.2	8.14	8.14	8.1	32.40	32.40	32.4	89.0	88.4	88.7	7.11	7.05	7.1
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/1/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:15		Middle	1.5	16.13	16.14	16.1	8.24	8.24	8.2	31.62	31.62	31.6	78.5	78.0	78.3	6.38	6.34	6.4
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/1/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:18		Middle	1.5	15.70	15.70	15.7	8.03	8.03	8.0	32.53	32.53	32.5	78.9	77.4	78.2	6.43	6.30	6.4
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/1/2011	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:45		Middle	1.5	15.90	15.90	15.9	8.14	8.14	8.1	32.44	32.44	32.4	77.8	76.7	77.3	6.30	6.20	6.3
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/1/2011	12:25	Fine	Surface	1.0	16.60	16.60	16.6	7.97	7.97	8.0	32.31	32.31	32.3	77.7	77.0	77.4	6.23	6.18	6.2
	12:27		Middle	2.0	16.60	16.60	16.6	7.97	7.97	8.0	32.34	32.34	32.3	77.6	77.1	77.4	6.23	6.19	6.2
	12:30		Bottom	3.0	16.50	16.50	16.5	7.97	7.97	8.0	32.32	32.32	32.3	77.2	77.0	77.1	6.20	6.17	6.2





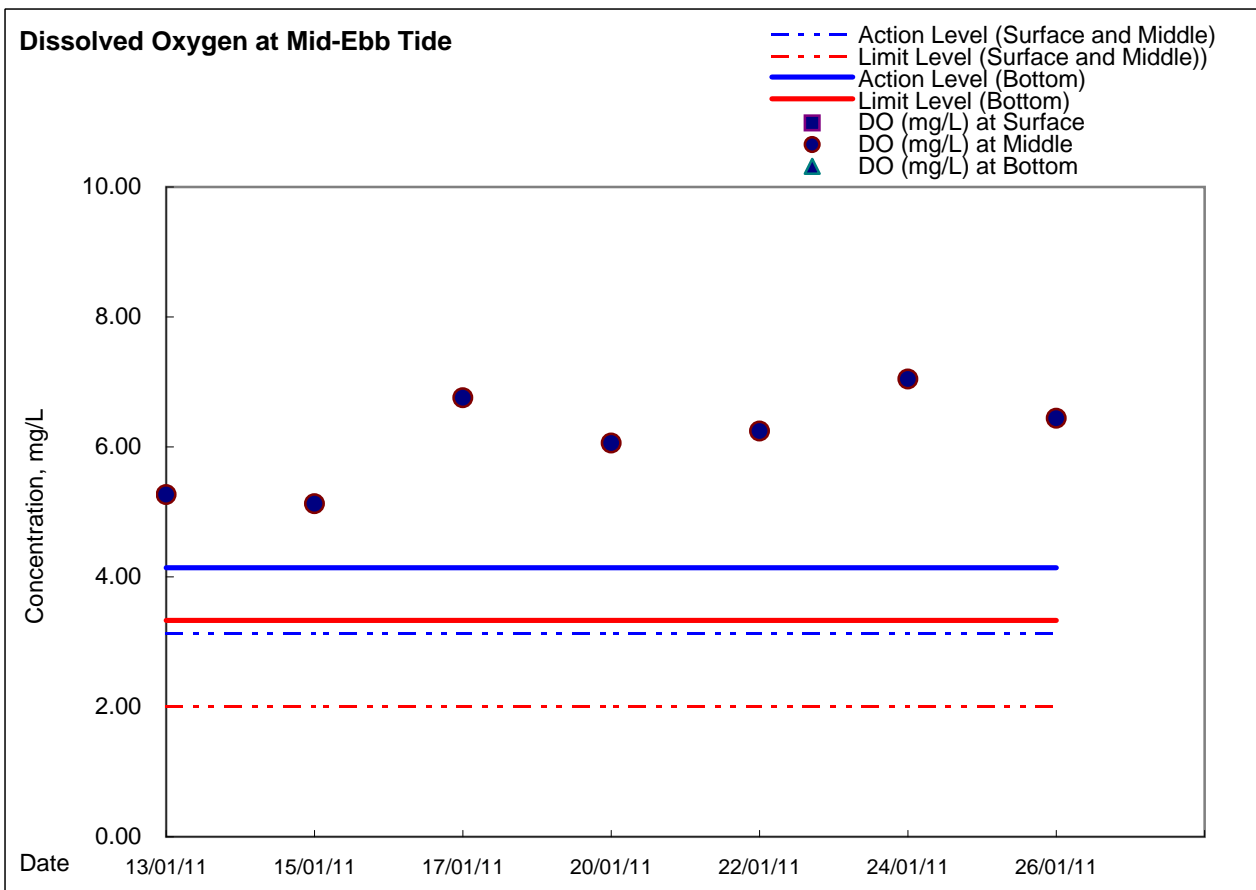
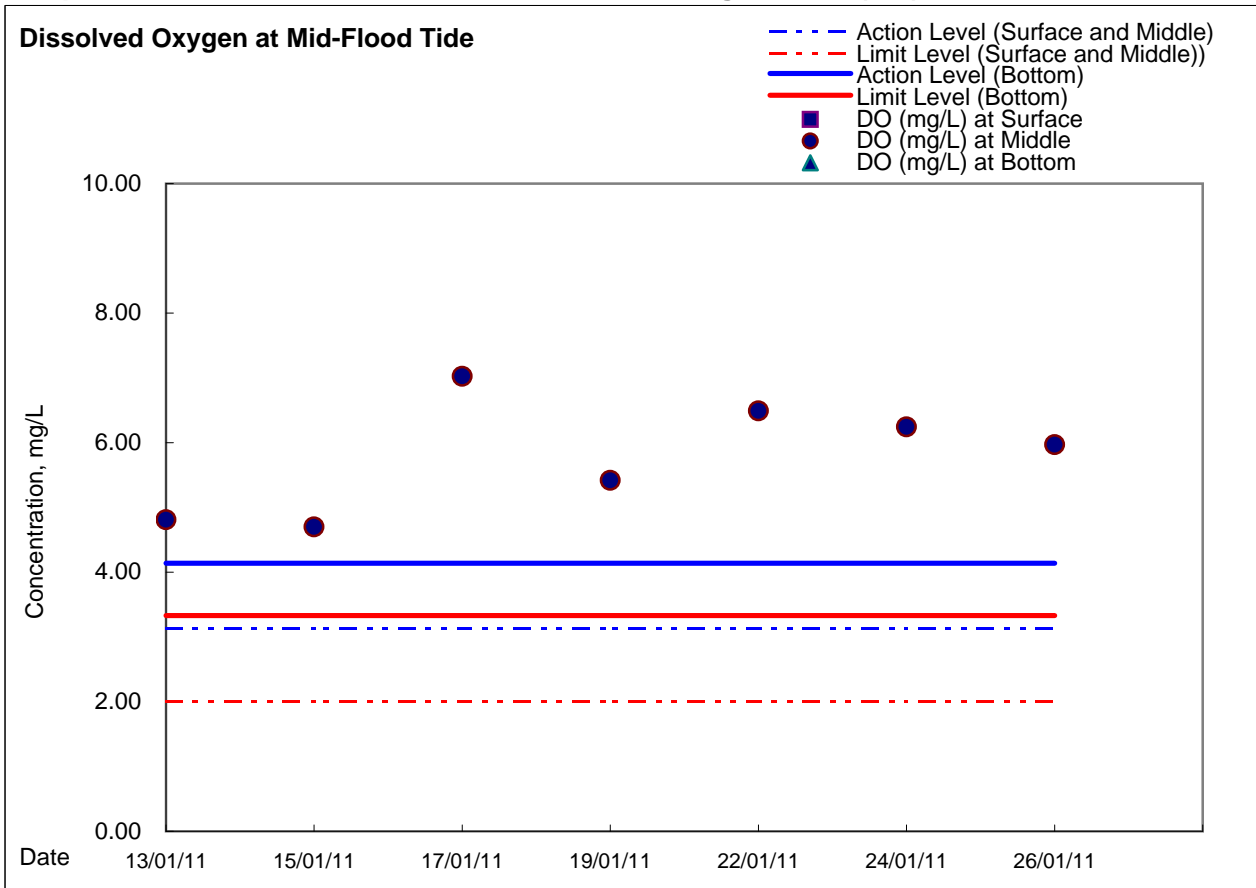






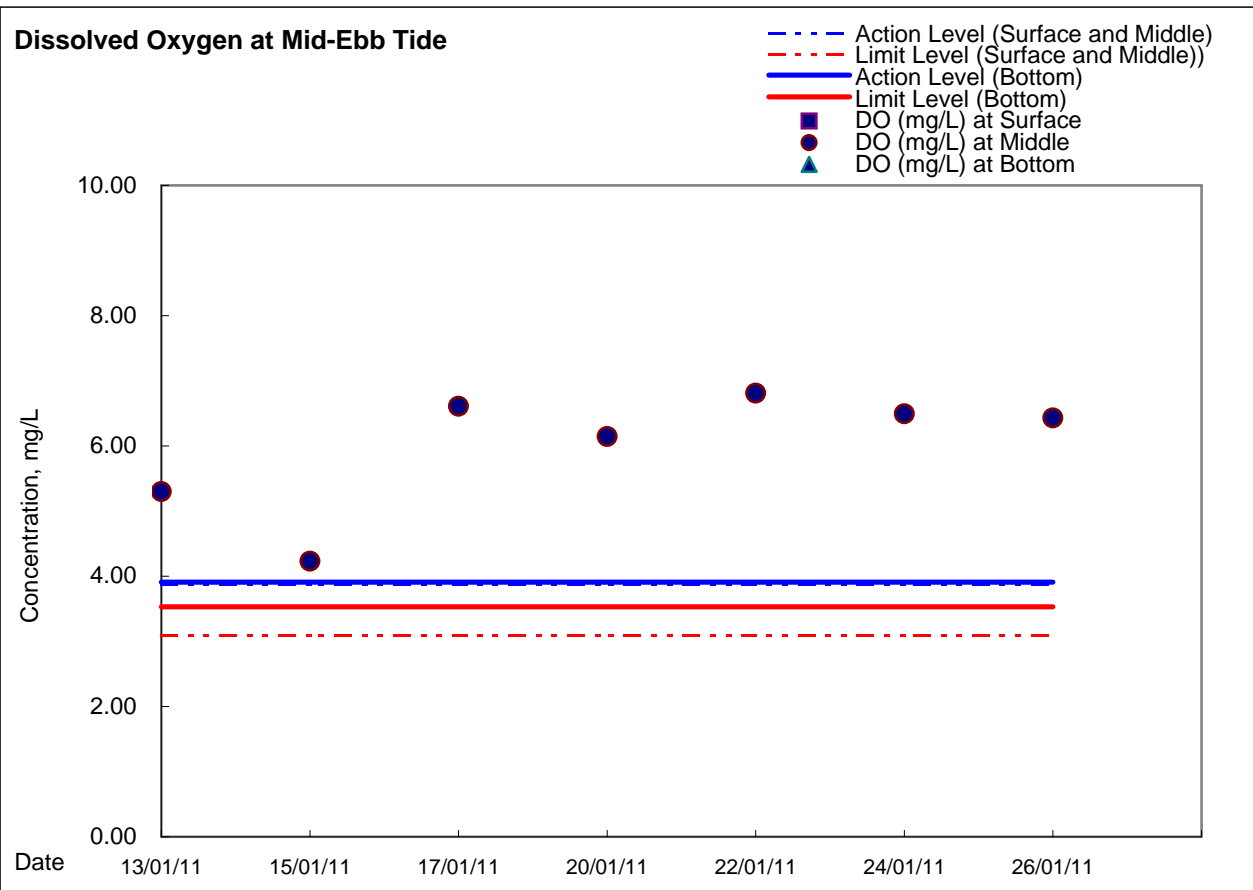
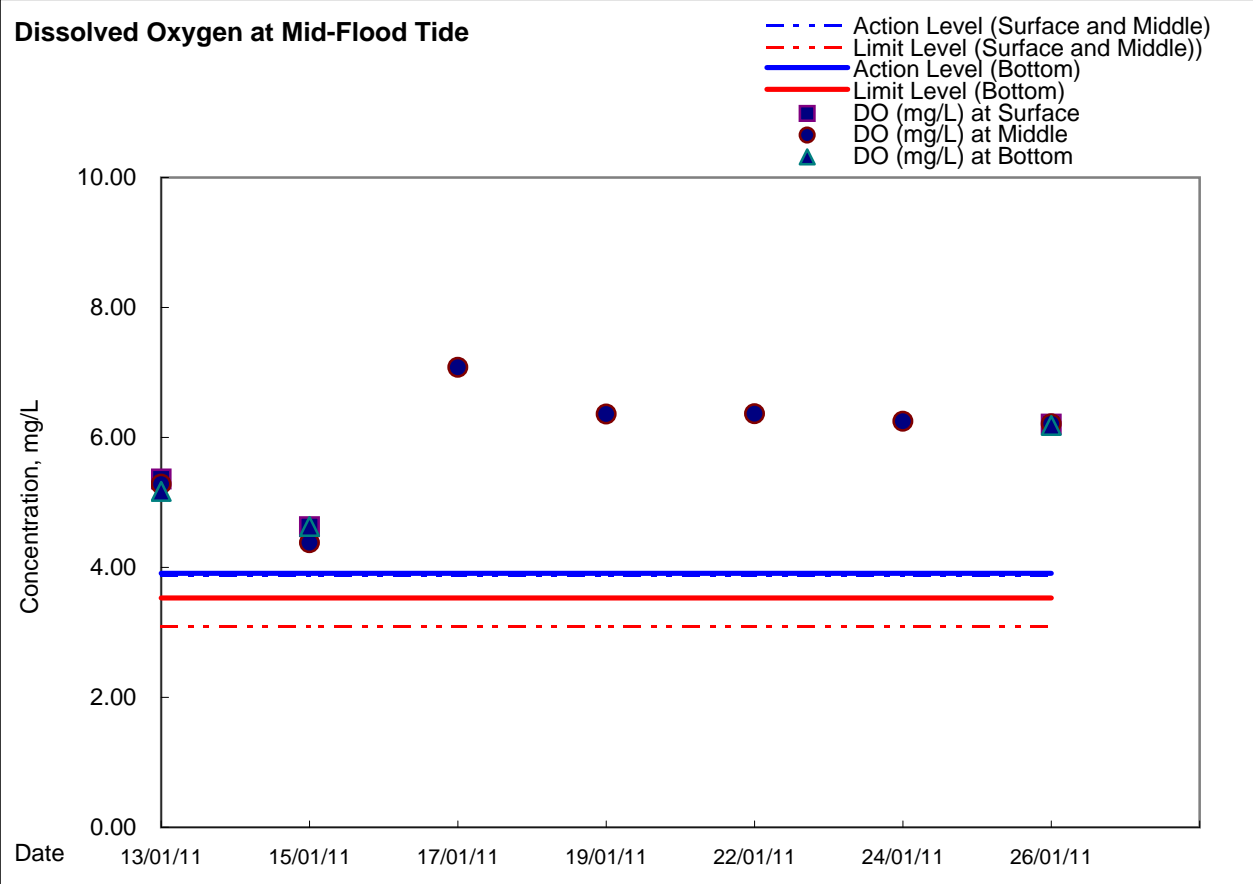


### Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel



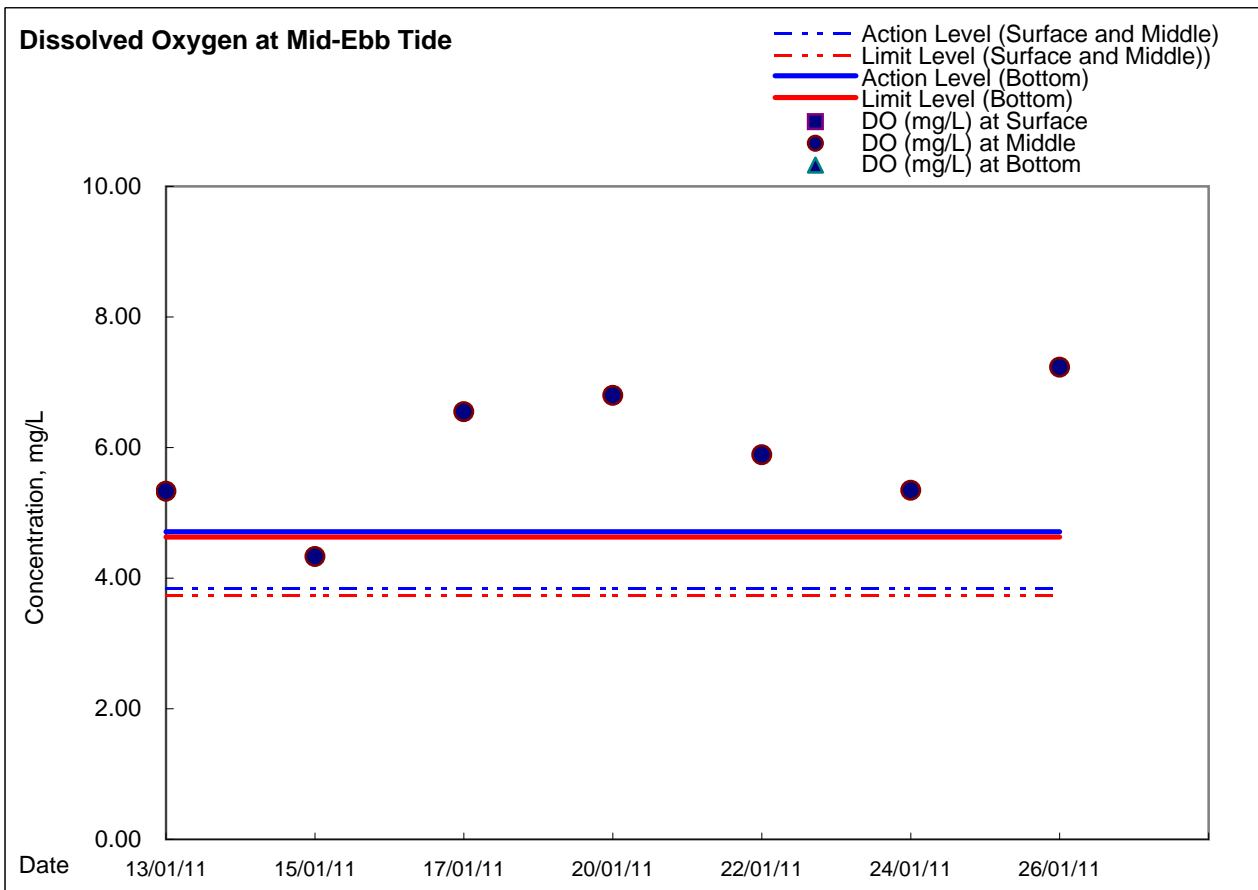
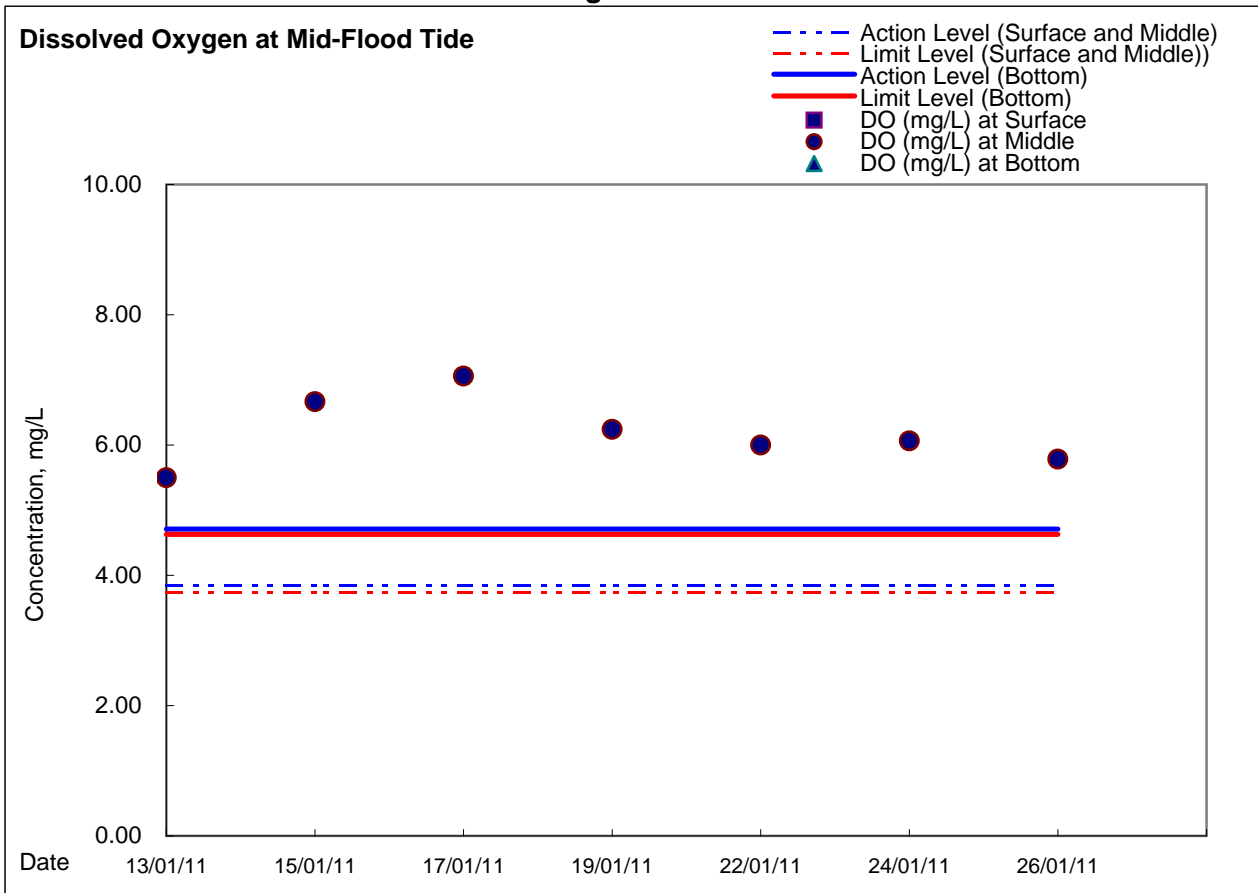


### Graphic Presentation of Enhanced Water Monitoring Results (DO) at C7 - Windsor House



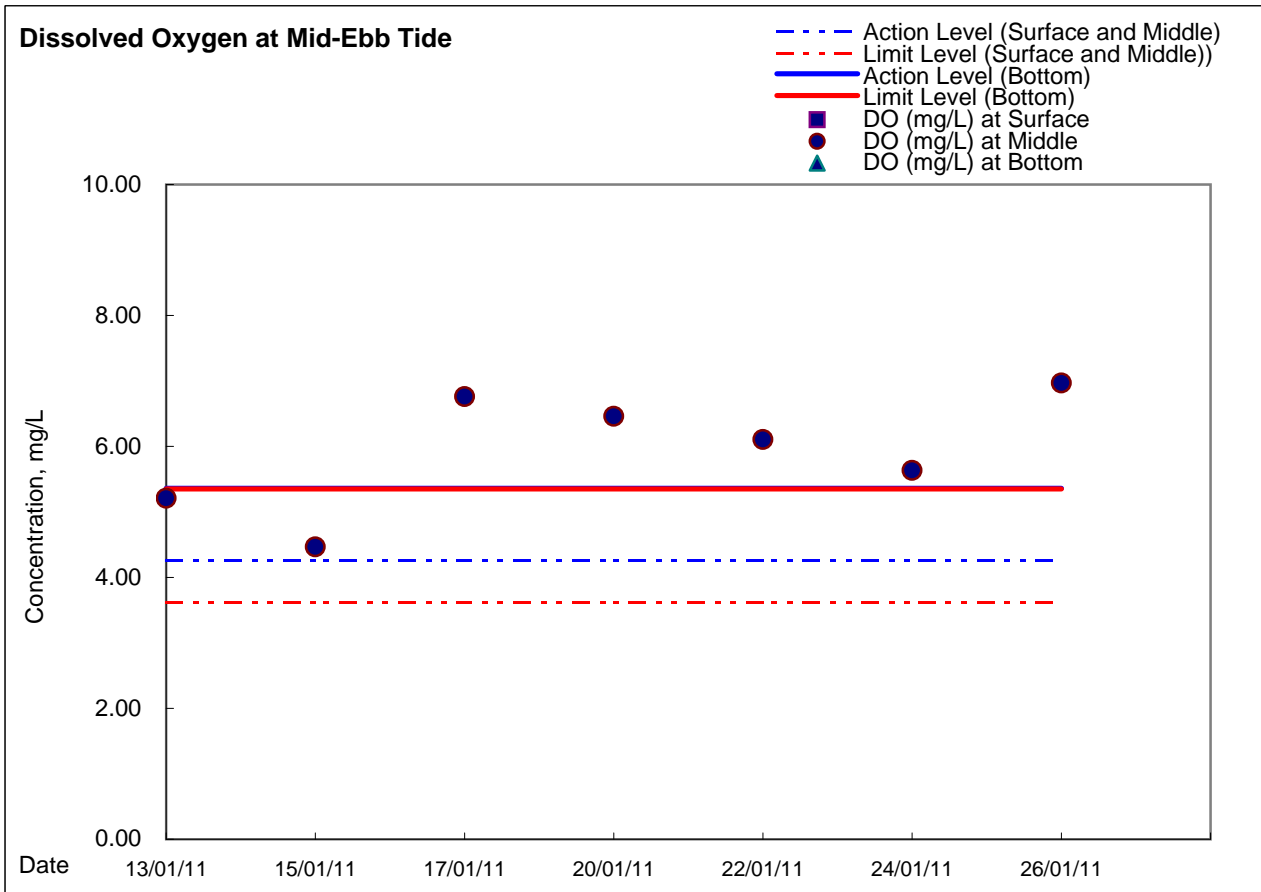
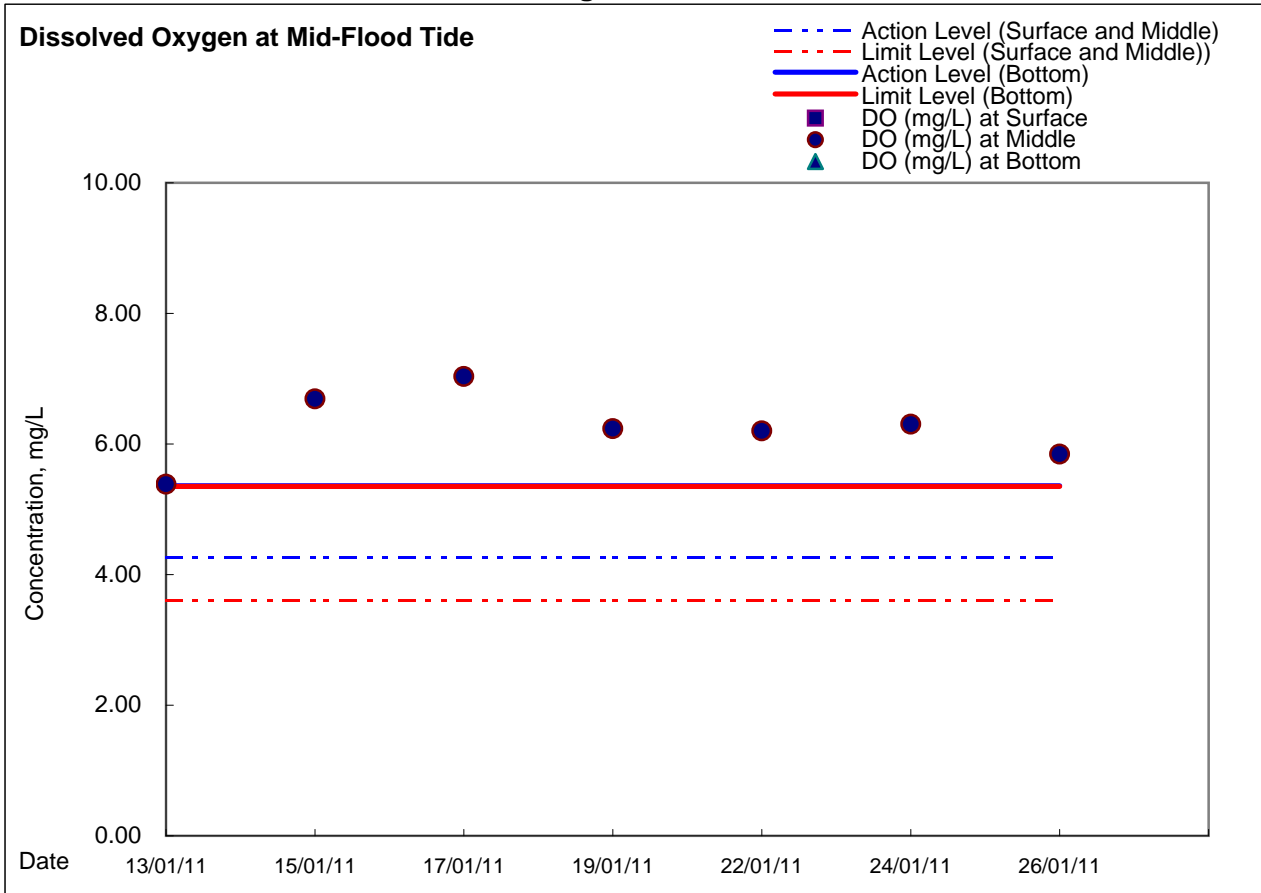


### Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area





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





***Appendix 5.5***

*Real-time Noise Monitoring Results and Graphical Presentations*















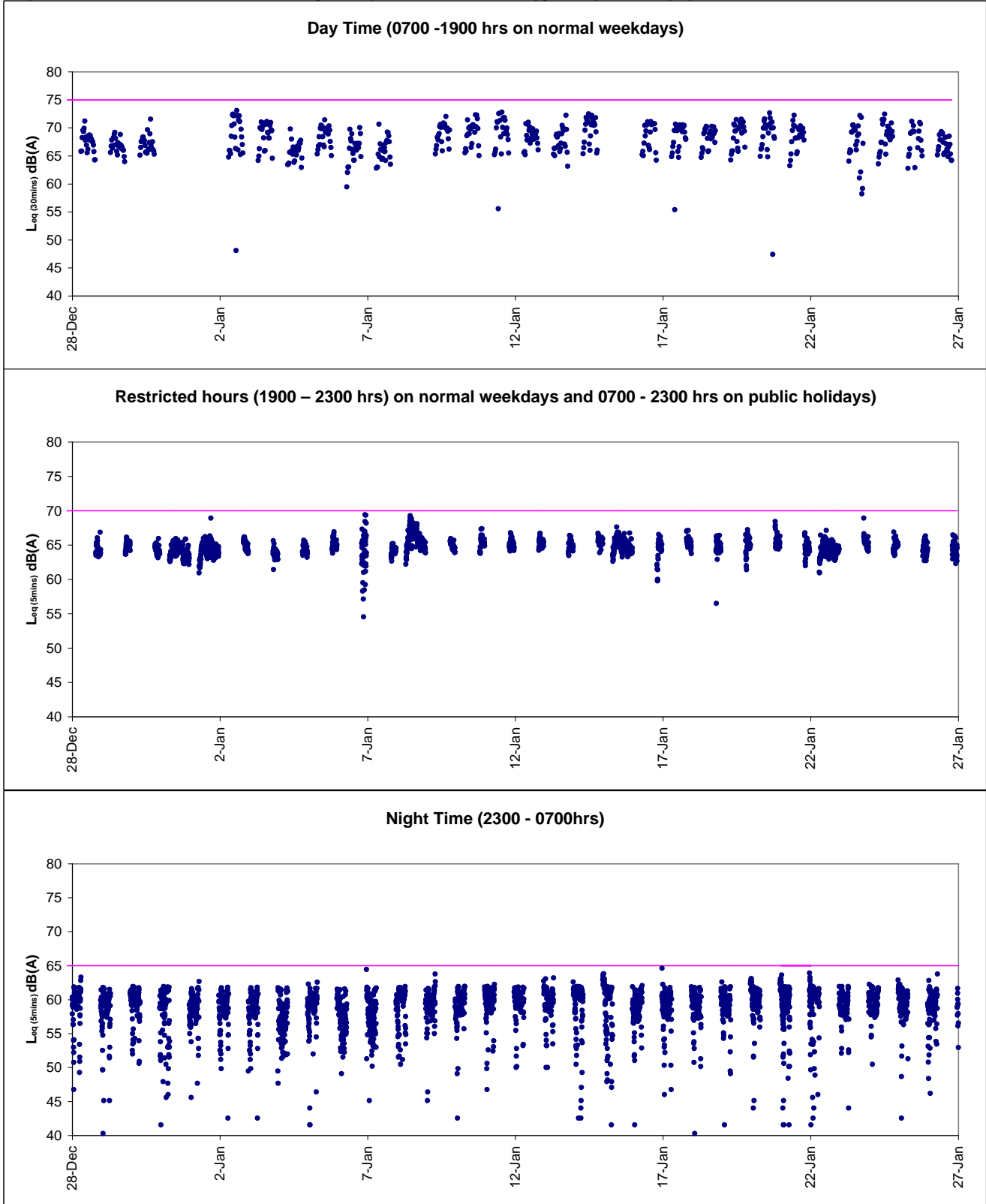








Graphic Presentation of Real Time Noise Monitoring Result (Food and Environmental Hygiene Department Depot)









Real-time Noise Data RTN2 (Oil Street Community Liaison Centre)

Table with columns for date and time (e.g., 05/01/2011 22:45 62.0) and noise level readings, organized into four vertical sections.









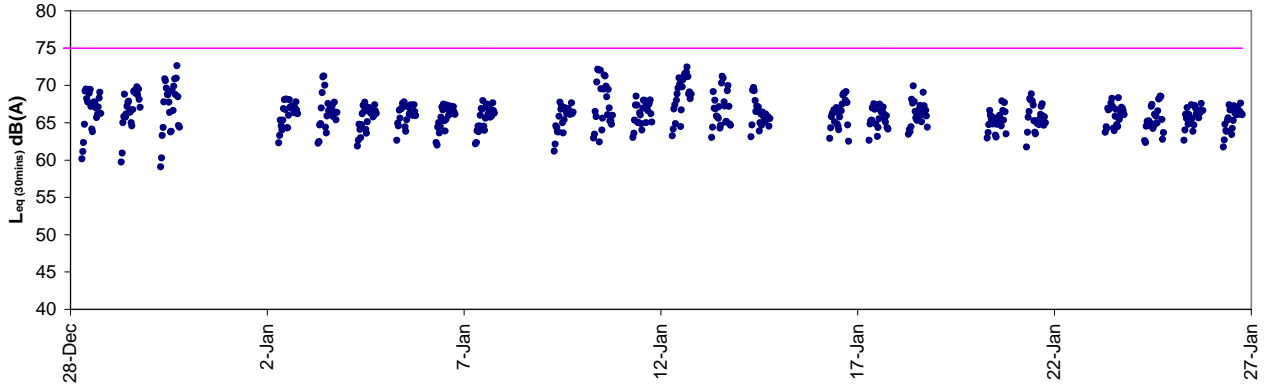




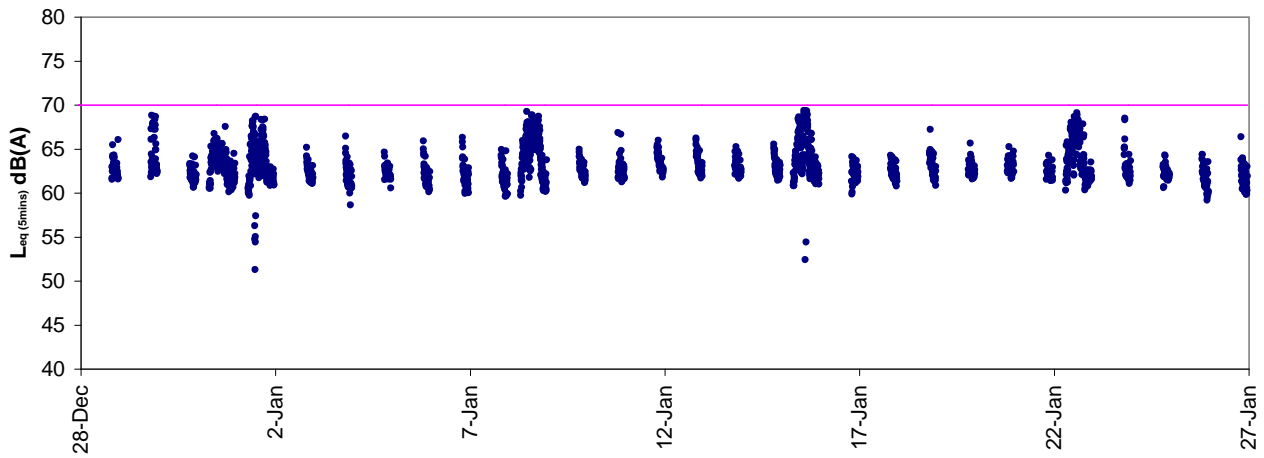


Graphic Presentation of Real Time Noise Monitoring Result (Oil Street Communicate Liaison Centre)

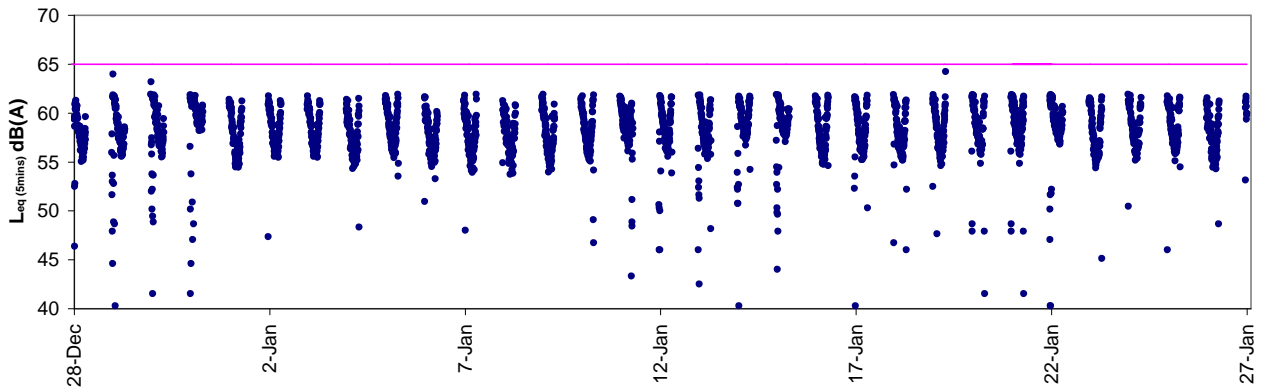
Day Time (0700 -1900 hrs on normal weekdays)



Restricted hours on normal weekdays and 0700 - 2300 hrs on public holidays)



Night Time (2300 - 0700hrs)







***Appendix 6.1***

*Event Action Plans*



Event/Action Plan for Construction Noise

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



EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. (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
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Notify Contractor.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Rectify any unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>Identify source;</li> <li>Inform IEC and ER;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IEC and Contractor on remedial actions required;</li> <li>If exceedance continues, arrange meeting with IEC and ER;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ET on the effectiveness of the proposed remedial measures;</li> <li>Supervise Implementation of remedial measures.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Submit proposals for remedial to ER within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)
<b>LIMIT LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and EPD;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Supervise implementation of remedial measures.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>Notify IEC, ER, Contractor and EPD;</li> <li>Identify source;</li> <li>Repeat measurement to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Ensure remedial measures properly implemented;</li> <li>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.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>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)</li> </ol>



**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	<p>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)</p>	<p>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)</p>	<p>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)</p>	<p>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)</p>
Limit level being exceeded by more than one consecutive sampling days	<p>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)</p>	<p>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)</p>	<p>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)</p>	<p>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)</p>



***Appendix 6.2***

*Summary for Notification of Exceedance*



Ref no.	Date	Tidal	Location	Parameters (Avg.)	Measured	Action Level	Limit Level	Follow-up
X_W197	28-Dec-10	Mid-flood	WSD20	DO (mg/L)	6.58	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Reviewed the trend of overall results at all monitoring stations; Dredging rate at HKCEC1 was checked and complied with the EP condition Remarks / Other Obs: In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HK/2009/01, it is considered not related to the Project.
					7.83	8.04	9.49	
				Turbidity	20.00	13.00	14.43	
				Suspended Solid				
X_W190	3-Jan-11	Mid-flood	WSD20	DO (mg/L)	7.47	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Reviewed the trend of overall results at all monitoring stations; Dredging rate at HKCEC1 was checked and complied with the EP condition Remarks / Other Obs: In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HK/2009/01, it is considered not related to the Project.
					9.05	8.04	9.49	
				Turbidity	16.50	13.00	14.43	
				Suspended Solid				
X_W191	4-Jan-11	Mid-ebb	WSD19	DO (mg/L)	4.90	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Reviewed the trend of overall results at all monitoring stations; Dredging rate at HKCEC1 was checked and complied with the EP condition Remarks / Other Obs: In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HK/2009/01, it is considered not related to the Project.
					7.17	8.04	9.49	
				Turbidity	14.00	13.00	14.43	
				Suspended Solid				
X_W192	8-Jan-11	Mid-ebb	WSD7	DO (mg/L)	7.20	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Reviewed the trend of overall results at all monitoring stations; Checked and confirmed that the dredging rate at HKCEC1 was complied with EP condition Remarks / Other Obs: In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HK/2009/01, it is considered not related to the Project.
					9.09	8.04	9.49	
				Turbidity	20.50	13.00	14.43	
				Suspended Solid				
X_W193	15-Jan-11	Mid-ebb	WSD15	DO (mg/L)	4.49	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Reviewed the trend of overall results at all monitoring stations Remarks / Other Obs: Silt screen was in proper condition during monitoring. In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HY/2009/11, it is considered not related to the Project.
					6.07	8.04	9.49	
				Turbidity	14.00	13.00	14.43	
				Suspended Solid				
X_W194	26-Jan-11	Mid-ebb	WSD19	DO (mg/L)	6.63	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Since the natural flow during the ebb tide indicated that the source of impact was located at the upstream of the project site; Reviewed the trend of overall results at all monitoring stations; Dredging rate at HKCEC1 was checked and complied with the EP condition Remarks / Other Obs: In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HK/2009/01, it is considered not related to the Project.
				Turbidity	4.08	8.04	9.49	
				Suspended Solid	15.00	13.00	14.43	





Ref no.	Date	Tidal	Location	Parameters (Avg.)	Measured	Action Level	Limit Level	Follow-up
X_W195	26-Jan-11	Mid-ebb	WSD20	DO (mg/L)	6.71	3.66	3.28	Possible reason: Natural variation or changes in ambient conditions Action taken / to be taken: Since the natural flow during the ebb tide indicated that the source of impact was located at the upstream of the project site; Reviewed the trend of overall results at all monitoring stations; Dredging rate at HKCEC1 was checked and complied with the EP condition Remarks / Other Obs: In the view of no exceedance recorded at the monitoring Stations near the marine works area of Contract no.HK/2009/01, it is considered not related to the Project.
				Turbidity	7.35	8.04	9.49	
				Suspended Solid	14.00	13.00	14.43	

Action Level - Value highlight in blue colour

Limit Level - Value highlight in red colour



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10C195	30-Dec-10	Mid-flood	C8	DO (mg/L)	6.44	3.36	2.73	Possible reason: Due to intake owner's constraint, delay was experienced in the re-provision of modified frame type silt screen to protect City Garden intake against potential impact arising from the dredging works and accumulation of pollutants from nearby outfall adjacent to the intake.
				Turbidity (NTU)	18.08	9.1	10.25	Action taken / to be taken: RE and Contractor was notified on the next working day and a joint investigation with IEC conducted on 3 Jan 2011. Daily dredging rate (100m3) and installation of caisson seawall was undertaken on 30 Dec 2010 at mid-flood. Contractor was reminded to enhance mitigation measures with a double layer silt curtain before the frame type silt screen could be installed. Close monitoring on contractor mitigation and the variation of water quality results was then maintained.
				SS (mg/L)	28.00	15.00	22.13	Remarks / Other Obs: Turbidity and SS values exceeded the tolerance of baseline range. The exceedances was confirmed related to HY/2009/11 contractor difficulties in the provision of frame type silt screen. No further exceedance was recorded in the next consecutive monitoring (Turbidity:5.94NTU, SS:11.5mg/L on 30 Dec 2010 at mid-ebb tide). ET further checked and confirmed that the double layer silt curtain was deployed at site on 7 Jan 2011.
X_10C196	30-Dec-10	Mid-flood	C9	DO (mg/L)	6.44	3.36	2.73	Possible reason: Accumulation of particles from outfalls near monitoring station and potential impact arising from the dredging works
				Turbidity (NTU)	14.30	9.1	10.25	Action taken / to be taken: Reviewed the Contractor works and the trend of monitoring results
				SS (mg/L)	23.00	15.00	22.13	Remarks / Other Obs: The natural flow during the flood tide indicated that the source of impact was located at the upstream of the project site, it is concluded that the source of impact was due to natural variation or change around C9 and not related to the project work.
X_10C197	3-Jan-11	Mid-flood	C9	DO (mg/L)	7.75	3.36	2.73	Possible reason: Accumulation of particles from outfalls near monitoring station
				Turbidity (NTU)	11.68	9.1	10.25	Action taken / to be taken: Reviewed the Contractor works and the trend of monitoring results
				SS (mg/L)	18.50	15.00	22.13	Remarks / Other Obs: Since the natural flow during the flood tide indicated that the source of impact was located at the upstream of the project site and no exceedanced recorded at the nearest monitoring station to the marine work area, it is concluded that the source of impact was due to natural variation or change around C9 and not related to the project work.



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C198	8-Jan-11	Mid-flood	C5e	DO (mg/L)	7.03	3.36	2.73	Possible reason: Action taken / to be taken:  Remarks / Other Obs:	
				Turbidity (NTU)	11.38				Silt screen washing was conducted during monitoring Checked and confirmed that the dredging rate at Submarine Sewage Pipeline was complied with EP condition; Contractor was reminded to avoid conducting screen washing during monitoring date
				SS (mg/L)	18.00	9.1	10.25		
				15.00	22.13				
X_10C201	24-Jan-11	Mid-flood	C4w	DO (mg/L)	7.14	3.36	2.73	Possible reason: Action taken / to be taken:  Remarks / Other Obs:	
				Turbidity (NTU)	6.16				Natural variation or changes in ambient conditions Reviewed the trend of overall results at all monitoring stations; no exceedance was recorded in the next consecutive monitoring.
				SS (mg/L)	23.50	9.1	10.25		
				15.00	22.13				

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).	<ol style="list-style-type: none"><li>1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18<sup>th</sup> Feb. 2010 for the dredging works which carry out at area for North Point Reclamation.</li><li>2) Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.</li><li>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.</li><li>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.</li><li>5) No further complaints were received from Mr. Tsang in the reporting month. The complaint is considered closed.</li></ol>	Closed
100321b	21/3/2010	Unknown	Near the eastern breakwater of the Causeway Bay Typhoon Shelter	A public complaint and enquiry regarding loud noises emanated from dredging activities on 21/3/2010 (Sunday) until 2220 hours and between 1920-1946 hours in the evening of 22 March 2010(Monday).	<ol style="list-style-type: none"><li>1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18<sup>th</sup> Feb. 2010 for the dredging works at area for North Point Reclamation during general holidays including Sunday between 0700-2300 hours and any day not being a general holiday between 1900-2300hours. It is complied with the condition of CNP.</li><li>2) Officer from Marine Department, Polic and EPD's officer attended the scene for inspection and investigation.</li><li>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</li></ol>	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)	<ol style="list-style-type: none"> <li>1) Contractor for HY/2009/11 has been regular checked of condition and removal of trapped rubbish before the dismantling of the floating silt screen to be replaced by wall mount silt screen.</li> <li>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.</li> <li>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.</li> </ol>	Closed
101110	10/11/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the power mechanical equipment during the 0700 to 2200hrs	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3) It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.</li> </ol>	Closed
101203	3/12/2010, 01:45a.m.	The resident of Block 11, City Garden by ICC referral from Marine Department	North Point	Bad odour was generated from the dredging plant off North Point	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>	Closed
101206	6/12/2010	Ms Lui, the	City Garden, North	Two barges were generating noise at 22:00 on 6 December	<ol style="list-style-type: none"> <li>1) ET confirmed the following information with resident site</li> </ol>	Closed



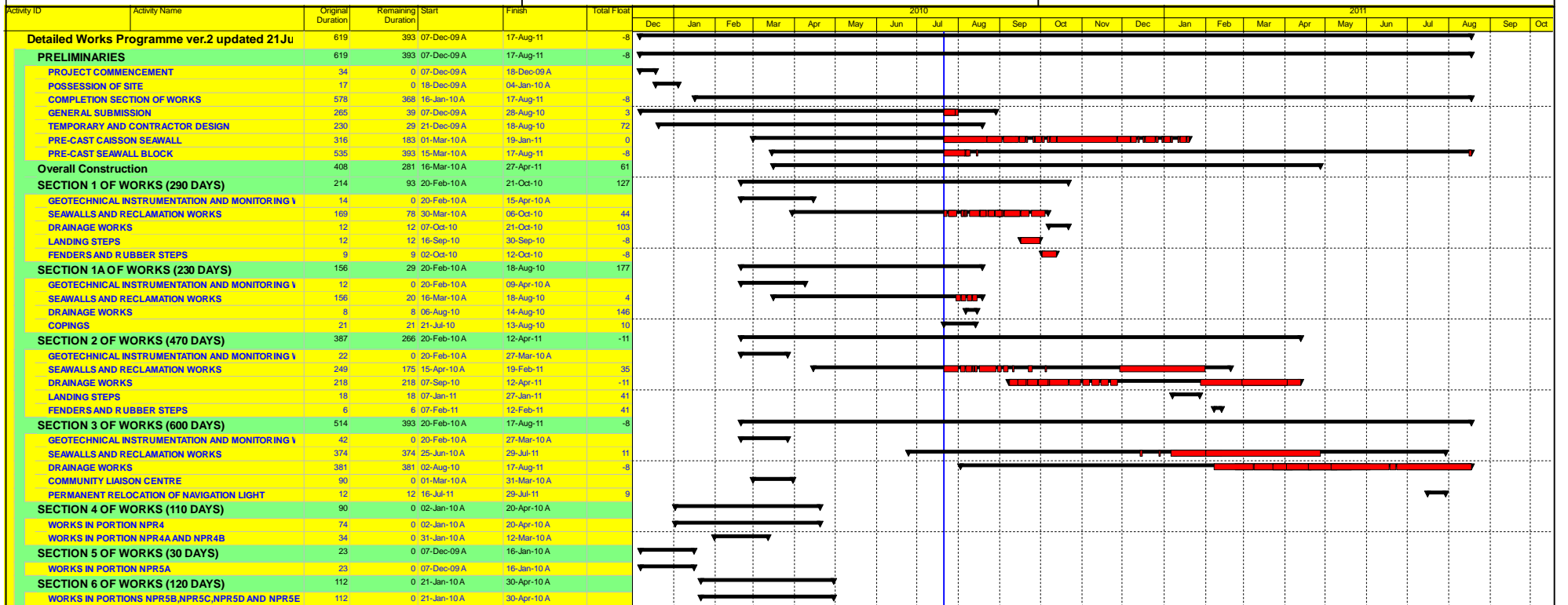
Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		resident of 27/F, Block 10, City Garden by ICC (ICC case: 1-266039336)	Point	<p>noise at 22:00 on 6 December 2010 in which the noise from filling operation was louder than the traffic noise &amp; visual impact was generated due to the spot-light pointing directly to the complainant flat, suspected the filling operation was part of Wanchai Development Phase II;</p> <p>Complainant also raised the same complaint to District Councillor, Mr. Hui on 7 Dec 2010 regarding the night-time noise and suspected earlier start of work at 06:30. Complaint also requested for limiting the plant operating hours from 09:00-21:00.</p>	<p>staff on the complaint:</p> <ul style="list-style-type: none"><li>• 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;</li><li>• Two derrick barges were in operation at the time of complaint for placing 400 rockfill onto the excavation trench and for levelling the formation level to receive the precast caisson seawall;</li><li>• Flood light on the control mast of derrick barge have no lighting shields for the prevention of glare of flood lights;</li><li>• No starting work on 7 Dec 2010 at 0630hours.</li></ul> <ol style="list-style-type: none"><li>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;</li><li>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;</li><li>4) The absence of the lighting shields at flood light results in visual glare to the complainant at night-time.</li><li>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;</li><li>6) No further complaint was received after implementation of proposed measures</li></ol>	





***Appendix 10.1***

*Construction Programme of Individual Contracts*



█ Actual Work     █ Critical Remaining Work     ▶ Summary  
█ Remaining Work     ◆ Milestone

Contract No. HK/2009/01

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

**Working Programme for Marine Works (Dredging and Backfilling)**

ACTIVITY	START	FINISH	2010												2011												2012												2013																																			
			Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																									
<b>Submissions before Works Commencement</b>																																																																										
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	◆																																																																							
<b>Cross Harbour Watermains from WCN to TST (DP6)</b>																																																																										
Trench dredging for marine watermains installation	29/4/10	28/10/10	■																																																																							
Backfilling for watermain	28/1/11	14/12/11													■																																																											
<b>Reclamation Works at HKCEC Water Channel (DP3)</b>																																																																										
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	2010 2011 2012 2013 2014 2015																							
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
1	<b>HK/2009/02-Marine &amp; Reclamation Works</b>	<b>2008 d</b>	<b>Thu 28/1/10</b>	[Summary bar]																							
2	Contract Commencement	0 d	Thu 28/1/10	[Milestone]																							
3	<b>General</b>	<b>1879 d</b>	<b>Mon 22/2/10</b>	[Summary bar]																							
4	Submission & obtain approval for marine GI	21 d	Mon 22/2/10	[Task bar]																							
5	Stage 1 Marine GI for reclamation	30 d	Mon 15/3/10	[Task bar]																							
6	Engineer's Design review for Dredging of WCR1, WCR2 & WCR4	30 d	Mon 22/3/10	[Task bar]																							
7	Relocation of New Star Ferry Pier	0 d	Tue 18/3/14	[Milestone]																							
8	Demolition of Existing Star Ferry Pier	100 d	Tue 18/3/14	[Task bar]																							
9	Stage 2 Marine GI for Reclamation	14 d	Tue 18/3/14	[Task bar]																							
10	Engineer's Design review for Dredging of WCR3	21 d	Tue 25/3/14	[Task bar]																							
11	Complete Diversion of Hung Hing Road Traffic Back to Original	20 d	Fri 6/2/15	[Task bar]																							
12	Excavate & remove top of d-wall for permanet seawall construction	50 d	Wed 25/2/15	[Task bar]																							
13	<b>Submarine Outfall</b>	<b>500 d</b>	<b>Tue 21/9/10</b>	[Summary bar]																							
14	Dredging, Laying and Backfilling of Submarine Outfall Pipe at Sea	500 d	Tue 21/9/10	[Task bar]																							
15	<b>Phase 1 - WCR1</b>	<b>158 d</b>	<b>Wed 21/4/10</b>	[Summary bar]																							
16	Mobilization of plants	1 d	Wed 21/4/10	[Task bar]																							
17	Seabed dredging	63 d	Wed 21/4/10	[Task bar]																							
18	Bedding Filling and Permanent seawall (precast cassion)	60 d	Tue 22/6/10	[Task bar]																							
19	Bulk reclamation	37 d	Fri 20/8/10	[Task bar]																							
20	<b>Phase 2 - WCR2</b>	<b>149 d</b>	<b>Thu 1/3/12</b>	[Summary bar]																							
21	Mobilization of plants	1 d	Thu 1/3/12	[Task bar]																							
22	Temp seawall and Seabed dredging	77 d	Thu 1/3/12	[Task bar]																							
23	Bulk reclamation	73 d	Wed 16/5/12	[Task bar]																							
24	<b>Phase 3 - TWCR4 &amp; WCR4</b>	<b>98 d</b>	<b>Sat 28/4/12</b>	[Summary bar]																							
25	Mobilization of plants	1 d	Sat 28/4/12	[Task bar]																							
26	Temp Seawall and Seabed dredging	75 d	Sat 28/4/12	[Task bar]																							
27	Bulk & temp reclamation	24 d	Wed 11/7/12	[Task bar]																							
28	<b>Phase 4 - WCR3</b>	<b>294 d</b>	<b>Tue 18/3/14</b>	[Summary bar]																							
29	Mobilization of plants	1 d	Tue 18/3/14	[Task bar]																							
30	Seabed dredging for Permanent Seawall	112 d	Tue 18/3/14	[Task bar]																							
31	Backfill and permanent seawall (precast cassion)	108 d	Tue 8/7/14	[Task bar]																							
32	Bulk reclamation	74 d	Fri 24/10/14	[Task bar]																							
33	<b>Phase 5 - Construct Permanent Seawall Blocks along curved coastline &amp; Remove TWCR4</b>	<b>105 d</b>	<b>Wed 15/4/15</b>	[Summary bar]																							
34	Mobilization of plants	1 d	Wed 15/4/15	[Task bar]																							
35	Dredging and Filling for permanent seawall construction	50 d	Wed 15/4/15	[Task bar]																							
36	Construction of Permanent Seawall Blocks for curved coastline	56 d	Wed 3/6/15	[Task bar]																							
37	Remove temp seawall and reinstate the location of TWCR4	30 d	Mon 29/6/15	[Task bar]																							

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

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



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

 Early Bar  
 Progress Bar  
 Critical Activity

?Primavera Systems, Inc.

EP02 CHINA STATE CONSTRUCTION ENGG LTD Sheet 1 of 1

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

Prepared based on IWP Rev. 0  
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