



CONTRACT NO: HK/2011/07

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

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

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- DECEMBER 2013 -

CLIENTS:

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Department

and

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DATE:

14 January 2014

Ref.: AACWBIECEM00\_0\_4800L.14

14 January 2014

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Shatin, New Territories  
Hong Kong

By Post and Fax (2691 2649)

Attention: Mr. Conrad Ng

Dear Sir,

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

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for December 2013 received by email on 14 January 2014.

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

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

Yours sincerely,



David Yeung  
Independent Environmental Checker

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**EXECUTIVE SUMMARY**

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report –December 2013 for the Project of Wan Chai Development Phase II and Central-Wanchai Bypass under Environmental Permit no. EP-356/2009 and Further Environmental permit nos. FEP-02/356/2009, FEP-03/356/2009, FEP-04/356/2009, FEP-05/356/2009, FEP-06/356/2009 and FEP-07/356/2009. This report presents the environmental monitoring findings and information recorded during the period November 2013 to December 2013. 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. HK/2009/01 included:
- Marine Works (at Wan Chai)
- Further rock filling from HATS at East side of Area 8 in order to extend the work area.
  - Concreting of roof slab of bay 9.
  - The construction of D-Wall at C1/C2 interface. The guide wall and ground treatment for construction from CH325 to CH360.
  - Reinstatement works at Tsim Sha Tsi Site B.
  - Footpath diversion for construction of discharge pipes at Expo Drive East.

## Waterworks

- Reinstatement works at HKCEC northwest.
- Cooling main laying works along Expo Drive East to Fleming Road in C1-3 and Zone X2-1.
- Salt watermain laying works near Grand Hyatt Hotel. Zone A5-2, A1-5C and A1-5B. Zone A1-5A3 near the Urban Car Park. Salt watermain laying works at Harbour Road and Zone A5-3, A5-4 toward the eastbound. Night works for salt watermain laying near Renaissance Harbour View hotel.

## Tunnel Works

- Installation of pre-bored H-pile in CWB Stage 2 Atrium Link.
- Installation of pre-bored H-pile in CWB Stage 3 Atrium Link.
- Construction of the Common D-wall in Stage 2.
- Backfilling of Temporary Water Channel & Reclaim Land at CH220 – CH260
- Installation of sheet pile for demolition of P5 house and the works for tie-back.
- Installation of ELS at first layer for Stage 1.

- iii. During this reporting period, the major work activities for Contract no. HK/2009/02 included:
- Modification of existing covered walkway along Expo Drive East.
  - Modification of road junction between Expo Drive and Expo Drive East.
  - Rectification works of the special movement joint for P8 discharge main at

CHBH152m. Trench excavation and the rectified special movement joint was delivered to the Site.

- Additional flushing & CCTV for P9 intake mains was done.
- The watertightness test of Salt Water Intake Culvert.
- The watertightness test of Inlet Chamber of WSD Salt Water Pumping Station.
- The remaining ABWF works and boundary wall in WSD Salt Water Pumping Station, including maintenance platform and external finishes.
- Watertightness test of Box Culvert N1 was eventually.
- Concreting for the Temporary Covered Walkway footing (GL5) in the vicinity of Ferry Pier.
- Area 9A was being vacated for handing over it to HY/2009/15 contractor. The new site office would be relocated to Gate No.3 underneath the existing Hung Hing Road Flyover.

WCR4/TWCR4 Reclamation:

- No progress in the reporting period as the diversion of temp 1800 dia, drain to the completed Box Culvert N1.
- iv. During this reporting period, the major work activities for Contract no. HY/2009/15 included:
- Construction of EVA
- v. During this reporting period, the major work activities for Contract no. HK/2010/06 included:
- Sheet piling works
- vi. During this reporting period, the major work activities for Contract no. HY/2009/19 included:
- Construction works for Box Culvert T1
  - Removal of marine platform
  - Construction of pile cap, pier & cross head (Marine)
  - ELS, EVB and Cut & Cover Tunnel
  - Installation of dewatering well
  - Laying of 1500 $\phi$  pipe
  - Launching of segments
  - Extraction of temporary pile from marine section
  - Construction of bridge truss TA1
- vii. During this reporting period, the major work activities for Contract no. HK/2012/08 included:
- ELS for box culvert La at Lung King Street
  - Dredging
  - Filling for seawall rock mound formation
  - Filling for reclamation at sea area of former Expo Drive West Bridge

- Works for abandoning submarine sewerage outfall
- viii. During this reporting period, the major work activities for Contract no. HY/2010/08 was included:
- Dredging works

#### Noise Monitoring

- ix. Noise monitoring during daytime and restricted hour were conducted at the stations M1a, M2b, M3a, M4b, M5b and M6 on a weekly basis in the reporting month.
- x. No action and 2 limit level exceedances at M6 – HK Baptist Church Henrietta Secondary School were recorded on 10 and 18 December 2013 in this reporting month. The exceedances were concluded as non-project related.

#### Real-time Noise Monitoring

- xi. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.
- xii. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- xiii. 24-hour real time noise monitoring was conducted at RTN2a – Hong Kong Electric Centre. No project related exceedance was recorded in the reporting month.
- xiv. 24-hour real time noise monitoring was conducted at RTN2a – Hong Kong Electric Centre. Limit level exceedances were recorded at RTN2a-Electric Centre during restricted hours on 30 November 2013. After checking with contractor, no noisy construction activities were conducted at the concerned location by the Contractor during the recorded period and the exceedances was non-continuous. As such, the exceedances were considered as non-project related and contributed by nearby IEC traffic and nearby non-CWB Project.

#### Air Quality Monitoring

- xv. Due to electricity interruption, the 24hr TSP monitoring at CMA2a was rescheduled from 23 December 2013 to 24 December 2013.
- xvi. Due to extension of site boundary by contractor of HY/2009/19, location of air monitoring station CMA1b – Oil Street Community Liaison Centre has been finely adjusted on 21 April 2012.
- xvii. The location ID of air monitoring station CMA1b was updated as Oil Street Site Office in April 2013.
- xviii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted at CMA1b – Oil Street Site Office; CMA2a – Causeway Bay Community Center; CMA3a – CWB PRE Site Office Area; CMA4a – Society for the Prevention of Cruelty to Animals; CMA5a –

Children Garden opposite to Pedestrian Plaza; MA1e and MA1w – International Finance Centre eastern and western wing on every six days basis.

#### Water Quality Monitoring

- xix. Since marine dredging works was commenced under contract HY/2010/08. The respective water quality monitoring station C7 have been started under HY/2009/15 and HY/201008
- xx. Since marine dredging works was commenced under contract HK/2012/08. The respective water quality monitoring station WSD19, P1, P3, P4, and P5 have been started under contract HK/2012/08 September 2013.
- xxi. Water quality monitoring station RW21-P789 has been implemented with respect to HK/2009/02 started on 29 July 2013.
- xxii. As confirmed by CWB RSS, the marine piling works under contract HY/2009/19 was confirmed completed by 4 March 2013. The water quality monitoring at the respective monitoring stations C8 and C9 were temporarily suspended since 30 March 2013.
- xxiii. WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended. Upon confirmation with WDII RSS and the IEC, water quality monitoring at relocated intakes monitoring location P1, P3, P4 and P5 were commenced since 24 April 2013.
- xxiv. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others were remains unchanged.
- xxv. Based on the joint inspection on 4 Jan 2012 for the NPR area, the 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 to confirm no water deterioration with respect to NPR was commenced since 7 Jan 2012 and was completed on 6 Feb 2012 water quality monitoring.
- xxvi. Water quality monitoring at WSD10 and WSD15 will be temporary suspended while water quality monitoring at WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 12 onwards;
- xxvii. Water quality monitoring at C8 and C9 have been implemented with respect to HY/2009/19 since the marine bore piling work started on 28 Jan 12.
- xxviii. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.
- xxix. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.

- xxx. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.
- xxxi. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui-DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7 and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration.
- xxxii. Water quality monitoring at 11 monitoring stations was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in **Table I**.

**Table I Summary of Water Quality Monitoring Exceedances in Reporting Month**

Contract no.	Water Monitoring Station	Mid-flood						Mid-ebb					
		DO		Turbidity		SS		DO		Turbidity		SS	
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01	C1	0	0	0	0	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	1	3	1	3	0	0	0	1	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02 Monitoring started on 8 Feb 2012	WSD21	0	0	0	0	2	2	0	0	0	0	0	2
	WSD9	0	0	1	0	0	1	0	0	0	0	0	1
	WSD17	0	0	0	0	0	1	0	0	0	0	0	0
Monitoring started on 29 July 2013	RW21-P789	0	0	0	0	0	0	0	0	0	0	0	0
HY/2009/15 & HY/2010/08	C7	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		0	0	2	3	3	6	0	0	0	1	0	3

- Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
  - 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8 and C9 were completed on 6 Feb 2012.
  - C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
  - C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
  - WSD7 and WSD20 water quality monitoring were temporarily suspended from 27 Apr 2012.
  - C2, C3 C4e and C4w water quality monitoring station was temporarily suspended since 24 Apr 2013
  - C5e and C5w water quality monitoring station was temporarily suspended since 29 July 2013



- xxxiii. Investigation found that the exceedances were not project-related. The details of the recorded exceedances can be referred to the **Section 6.4**.
- xxxiv. Enhanced DO monitoring at 4 monitoring stations in Causeway Bay Typhoon Shelter and Ex-Public Cargo Works Area was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in **Table II**.

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

Contract no.	Water Monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15	C6	0	0	0	0
	C7	0	0	0	0
	Ex-WPCWA SW	0	1	0	5
	Ex-WPCWA SE	1	0	0	5
Total		1	1	0	10

- xxxv. There were 1 action level exceedances and 10 limit level exceedances of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedances are not related to the Project works. The details of the recorded exceedances can be referred to the **Section 6.4**.
- xxxvi. In response to the Condition 2.18 of the Environmental Permit no. EP-356/2009 requiring that a silt curtain / impermeable barrier system be installed to channel water discharge flow from Culvert L to locations outside the embayment area, a proposed replacement of the requirement with additional dissolved oxygen monitoring has been conducted at three monitoring stations, namely A, B and C between the eastern seawall of Central Reclamation Phase III and the HKCEC Extension since November 2011 under EP-356/2009 so that DO level between the eastern seawall of Central Reclamation Phase II and the HKCEC extension could be continuously monitored.
- xxxvii. With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit, the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013.

Complaints, Notifications of Summons and Successful Prosecutions

- xxxviii. There was no environmental complaint received in this reporting month.

Site Inspections and Audit

- xxxix. The Environmental Team (ET) conducted weekly site inspections for Contract nos. HK/2009/01, HK/2009/02, HY/2009/15, HK/2010/06, HY/2009/19, HK/2012/08 and HY/2010/08 under EP no. EP-356/2009 in the reporting month. Major observations and recommendations made during the audit sessions were rectified by the Contractors. No non-conformance was identified during the site inspections.

### Future Key Issues

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

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

##### Marine Works

- Import rock fill from HATS to extend the coastline at East of Area 8.
- The roof slab of bay 8 would be cast. Backfilling works at box culvert bay 8 and bay9 would be carried out for further road diversion works.
- Construction of RC structure proposed box culvert wall and roof slab at bay 8 and bay 9.
- D-wall construction at Stage 3.
- Outfall construction for discharge pipes at Expo Drive East.

##### Waterworks (Cooling Watermains, Salt Watermains and Sewer)

- Salt watermain laying works for the works area in Zone A1-5B, A1-5C and A1-5A2 near Grand Hyatt hotel.
- Salt watermain laying works at Harbour Road would go further north to Zone A5-3, A5-4 and A5-6.
- Cooling main laying works along Expo Drive East and night works.
- Pedestrian relocation at the temporary steel bridge near junction of Expo Drive East and Convention Ave for cooling main laying works

##### Tunnel Works

- Stage 3 tunnel works include the installation of pre-bored H-pile and Stage 3 Southern D-wall construction.
- Demolition of the HKCEC Pump home.
- ELS for Stage 1 CWB.
- Backfilling Temporary Water Channel & Reclaim Land at CH220- CH260.

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

- Special movement joint rectification works for P8 discharge mains at CHBH152m.
- Hatch box replacement for P7 intake mains and cable relocation works for subsequent construction of 8x8 pit.
- All outstanding works for handing over P7, P8 and P9 Cooling Water Pumping Stations.
- The connection with the existing DN600 salt watermains at Hung Hing Road.

- The water tightness test for Salt Water Intake Culvert.
- Removal of temporary bulkhead for commencement of wet test of the WSD Salt Water Pumping Station.
- Wet test of the WSD Salt Water Pumping Station and connection with existing saltwater system at Hung Hing Road.
- Outstanding works at WSD Salt Water Pumping Station.
- Box Culvert N1 & Drain FRP-N and the associated testing for handing over to DSD
- Drainage re-diversion from temp 1800 dia. drain to the completed Box Culvert N1.
- ABWF works in Ferry Pier.
- Rectifying the defects in movable ramps.
- Most of the individual T&C of E&M equipment at Ferry Pier
- Utility installation works and EVA construction extending from P7 Cooling Water Pumping Station to the Ferry Pier.
- Construction of Temporary Covered Walkway footing at GL5 in the vicinity of Ferry Pier.
- Design verification works of the Eastern Bulkhead by the CSD Designer for substantial handing over to Section IXA of the Works.
- Seawall blocks installation and filling works at WCR4/TWCR4 after abandonment of existing temp 1800 dia. drain at WCR4.

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

- Construction of EVA

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

- Sheet piling works

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

- Removal of strut at ELS will commence
- Construction works for Box Culvert T1
- Removal of marine platform
- Construction of pile cap, pier & cross head (Marine)
- ELS, EVB and Cut & Cover Tunnel
- Installation of dewatering well
- Laying of 1500 $\phi$  pipe
- Launching of segments
- Extraction of temporary pile from marine section



- Construction of bridge truss TA1

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

- Dredging
- ELS for box culvert La at Lung King Street
- Filling for seawall rock mound formation
- Filling for reclamation at sea area of former Expo Drive West Bridge
- Caisson seawall units installation
- Works for abandoning submarine sewerage outfall

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

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

### 1.2 Structure of the Report

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



- Section 8**     ***Site Inspection*** – summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.
- Section 9**     ***Complaints, Notification of summons and Prosecution*** – summarizes the cumulative statistics on complaints, notification of summons and prosecution
- Section 10**    ***Conclusion***



## 2 Project Background

### 2.1 Background

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

### 2.2 Scope of the Project and Site Description

- 2.2.1. The Project is located mainly in Wan Chai North, Causeway Bay and North Point, and is demarcated by Gloucester Road and Victoria Park Road to the south, Fenwick Pier Street to the west and Tong Shui Road Interchange to the east, as shown in **Figure 2.1**.
- 2.2.2. The study area encompasses existing developments along the Wan Chai, Causeway Bay and North Point shorelines. Major land uses include the Hong Kong Convention & Exhibition Centre (HKCEC) Extension, the Wan Chai Ferry Pier, the ex-Wan Chai Public Cargo Working Area (ex-PCWA), the Royal Hong Kong Yacht Club (RHKYC), the Police Officers’ Club, the Causeway Bay Typhoon Shelter (CBTS) and commercial and residential developments.
- 2.2.3. The scope of the Project comprises:
- Land formation for key transport infrastructure and facilities, including the Trunk Road (i.e. CWB) and the associated slip roads for connection to the Trunk Road and for through traffic from Central to Wan Chai and Causeway Bay. The land formed for the above transport infrastructure will provide opportunities for the development of an attractive waterfront promenade for the enjoyment of the public
  - Reprovisioning / protection of the existing facilities and structures affected by the land formation works mentioned above
  - Extension, modification, reprovisioning or protection of existing storm water drainage outfalls, sewerage outfalls and water mains affected by the revised land use and land formation works mentioned above

- Upgrading of hinterland storm water drainage system and sewerage system, which would be rendered insufficient by the land formation works mentioned above
- Provision of the ground level roads, flyovers, footbridges, necessary transport facilities and the associated utility services
- Construction of the new waterfront promenade, landscape works and the associated utility services
- The Trunk Road (i.e. CWB) within the study area and the associated slip roads for connection to the Trunk Road.

2.2.4. The project also contains various Schedule 2 DPs that, under the EIAO, require Environmental Permits (Eps) to be granted by the DEP before they may be either constructed or operated. **Table 2.1** summarises the five individual DPs under this Project. **Figure 2.1** shows the locations of these Schedule 2 DPs.

**Table 2.1 Schedule 2 Designated Projects under this Project**

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

### 2.3 Division of the Project Responsibility

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

2.3.2. The details of individual contracts are summarized in **Table 2.2**.

**Table 2.2 Details of Individual Contracts under the Project**

Contract No.	Contract Title	Associated DP(s)	Construction Commencement Date
HK/2009/01	Wan Chai Development Phase II – Central –Wanchai Bypass at Hong Kong Convention and Exhibition Centre	DP3, DP6	23 July 2010
		DP1, DP2	25 August 2011
HK/2009/02	Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East	DP3, DP5	5 July 2010
		DP1	26 April 2011
HY/2009/11	Wan Chai Development Phase II and Central – Wan Chai Bypass – North Point Reclamation	DP3	17 March 2010 (Completed)
HY/2009/15	Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)	DP3	10 November 2010
		DP1	13 July 2011
HK/2010/06	Wan Chai Development Phase II-Central-Wan Chai Bypass over MTR Tsuen Wan Line	DP3	22 March 2011
04/HY/2006	Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street	DP1	September 2010 (Completed)
HY/2009/17	Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works.	DP1	5 October 2010 (Completed)
HY/2009/18	Central – Wan Chai Bypass (CWB) – Central Interchange	DP1	21 April 2011
HY/2009/19	Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link	DP1	24 March 2011
HK/2012/08	Wan Chai Development Phase II Central-Wan Chai Bypass at Wan Chai West	DP1,DP2, DP3	5 March 2013
HY/2010/08	Central- Wanchai Bypass Tunnel – Tunnel (Slip Road 8)	DP1, DP2, DP3	21 March 2013

**2.4 Project Organization and Contact Personnel**

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

**Table 2.3 Contact Details of Key Personnel**

Party	Role	Post	Name	Contact No.	Contact Fax



Party	Role	Post	Name	Contact No.	Contact Fax
AECOM	Engineer's Representative for WDII	Principal Resident Engineer	Mr. Frankie Fan	2587 1778	2587 1877
	Engineer's Representative for CWB	Principal Resident Engineer	Mr. Peter Poon	3912 3388	3912 3010
Chun Wo – Leader Joint Venture	Contractor under Contract no. HK/2009/01	Joint Venture Board Representative	Mr. Simon Liu	2162 9909	2587 1878
		Deputy Site Agent	Mr Andy Yu	9648 4896	
		Construction Manager	Mr Terry Wong	9757 9846	
		Construction Manager	Mr. Wyman Wong	9627 2467	
		Construction Manager	Mr Kenneth Chan	9160 3850	
		Environmental Officer (Compliance Manager)	Mr. Frank So	9863 6587	
		Environmental Supervisor	Fan Chun Wai	6487 4488	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Project Manager	Mr. David Lau	3658-3022	2827 9996
		Quality & Environmental Manager	Mr. C.P. Ho	9191 8856	
China State Construction Engineering (HK) Ltd.	Contractor under Contract no. HY/2009/15	Project Director	K C Cheung	3557 6399	2566 2192
		Site Manager	J H Chen	3557 6368	
		Contractor's Representative	Andrew Wong	3557 6358	
		Head of Construction Manager	Roger Cheung	3557 6371	
		Senior Construction Manager	Gene Cheung	3557 6395	
		Environmental Officer	Andy Mak	3557 6347	
Gammon -Leader JV	Contractor under Contract no. HK/2010/06	Project Manager	Mr. Paul Lui	9095 7922	2529 2880
		Site Agent	Mr. Eric Yip	2529 2068	
		Environmental Officer	Clement Pang	9735 9200	
		Environmental Supervisor	Jacky Cheung	9779 2292	

Party	Role	Post	Name	Contact No.	Contact Fax
Chun Wo – CRGL – MBEC Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	Mr. Rayland Lee	3758 8879	
		Site Agent	Mr. Eric Yip	252902068	
		Environmental Engineer	Mr. Calvin Leung	9286 9208	
		Environmental Manager / Environmental Officer	Mr. M.H. Isa	9884 0810	
		Construction Manager (Marine)	William Luk	9610 1101	
		Construction Manager (Land)	Patrick Cheung	9643 3012	
		Construction Manager (Land)	Eric Fong	6191 9337	
		Operation Manager (Land)	Yung Kwok Wah	9834 1010	
China State-Leader JV	Contractor under Contract no. HK/2012/08	Project Director	Andrew Tse	9137 1811	2877 1522
		Project Manager	Victor Wu	9193 8871	
		Deputy Project Manager	George Cheung	9268 1918	
		Site Agent	Paul Lui	9095 7922	
		Environmental Officer	James Ma	9130 9549	
		Environmental Supervisor	Ching Man, Chan	6050 4919	
China State	Contractor under Contract no. HY/2010/08	Project Director	Cheung Kit Cheung	3557 6399	2566 8061
		Project Manager	Chan Ying Lun	9812 0592	
		Deputy Project Manager	Chris Leung	3467 4299	
		Site Agent	Dave Chan	3467 4277	
		Environmental Officer	C.M. Wong	3557 6464	
		Environmental Supervisor	Louis Lam Tsz Kwan	3557 6470	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3465 2888	3465 2899
Lam Geotechnics Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331

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

Marine Works (at Wan Chai)

- Further rock filling from HATS at East side of Area 8 in order to extend the work area.
- Concreting of roof slab of bay 9.
- The construction of D-Wall at C1/C2 interface. The guide wall and ground treatment for construction from CH325 to CH360.
- Reinstatement works at Tsim Sha Tsi Site B.
- Footpath diversion for construction of discharge pipes at Expo Drive East.

Waterworks

- Reinstatement works at HKCEC northwest.
- Cooling main laying works along Expo Drive East to Fleming Road in C1-3 and Zone X2-1.
- Salt watermain laying works near Grand Hyatt Hotel. Zone A5-2, A1-5C and A1-5B. Zone A1-5A3 near the Urban Car Park. Salt watermain laying works at Harbour Road and Zone A5-3, A5-4 toward the eastbound. Night works for salt watermain laying near Renaissance Harbour View hotel.

Tunnel Works

- Installation of pre-bored H-pile in CWB Stage 2 Atrium Link.
- Installation of pre-bored H-pile in CWB Stage 3 Atrium Link.
- Construction of the Common D-wall in Stage 2.
- Backfilling of Temporary Water Channel & Reclaim Land at CH220 – CH260
- Installation of sheet pile for demolition of P5 house and the works for tie-back.
- Installation of ELS at first layer for Stage 1..

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

- Modification of existing covered walkway along Expo Drive East.
- Modification of road junction between Expo Drive and Expo Drive East.
- Rectification works of the special movement joint for P8 discharge main at CHBH152m. Trench excavation and the rectified special movement joint was delivered to the Site.
- Additional flushing & CCTV for P9 intake mains was done.
- The watertightness test of Salt Water Intake Culvert.
- The watertightness test of Inlet Chamber of WSD Salt Water Pumping Station.
- The remaining ABWF works and boundary wall in WSD Salt Water Pumping Station, including maintenance platform and external finishes.
- Watertightness test of Box Culvert N1 was eventually.



- Concreting for the Temporary Covered Walkway footing (GL5) in the vicinity of Ferry Pier.
- Area 9A was being vacated for handing over it to HY/2009/15 contractor. The new site office would be relocated to Gate No.3 underneath the existing Hung Hing Road Flyover.

WCR4/TWCR4 Reclamation:

- No progress in the reporting period as the diversion of temp 1800 dia, drain to the completed Box Culvert N1.

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

- Construction of EVA

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

- Sheet piling works

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

- Construction works for Box Culvert T1
- Removal of marine platform
- Construction of pile cap, pier & cross head (Marine)
- ELS, EVB and Cut & Cover Tunnel
- Installation of dewatering well
- Laying of 1500 $\phi$  pipe
- Launching of segments
- Extraction of temporary pile from marine section
- Construction of bridge truss TA1

2.4.8. For Contract no. HK/2012/08, the principal work activity in this reporting month included:

- ELS for box culvert La at Lung King Street
- Dredging
- Filling for seawall rock mound formation
- Filling for reclamation at sea area of former Expo Drive West Bridge
- Works for abandoning submarine sewerage outfall

2.4.9. For Contract no. HY/2010/08, the principal work activity in this reporting month included:

- Dredging works

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

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

Marine Works

- Import rock fill from HATS to extend the coastline at East of Area 8.
- The roof slab of bay 8 would be cast. Backfilling works at box culvert bay 8 and bay9 would be carried out for further road diversion works.
- Construction of RC structure proposed box culvert wall and roof slab at bay 8 and bay 9.
- D-wall construction at Stage 3.
- Outfall construction for discharge pipes at Expo Drive East.

Waterworks (Cooling Watermains, Salt Watermains and Sewer)

- Salt watermain laying works for the works area in Zone A1-5B, A1-5C and A1-5A2 near Grand Hyatt hotel.
- Salt watermain laying works at Harbour Road would go further north to Zone A5-3, A5-4 and A5-6.
- Cooling main laying works along Expo Drive East and night works.
- Pedestrian relocation at the temporary steel bridge near junction of Expo Drive East and Convention Ave for cooling main laying works

Tunnel Works

- Stage 3 tunnel works include the installation of pre-bored H-pile and Stage 3 Southern D-wall construction.
- Demolition of the HKCEC Pump home.
- ELS for Stage 1 CWB.
- Backfilling Temporary Water Channel & Reclaim Land at CH220- CH260.

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

- Special movement joint rectification works for P8 discharge mains at CHBH152m.
- Hatch box replacement for P7 intake mains and cable relocation works for subsequent construction of 8x8 pit.
- All outstanding works for handing over P7, P8 and P9 Cooling Water Pumping Stations.
- The connection with the existing DN600 salt watermains at Hung Hing Road.
- The water tightness test for Salt Water Intake Culvert.

- Removal of temporary bulkhead for commencement of wet test of the WSD Salt Water Pumping Station.
- Wet test of the WSD Salt Water Pumping Station and connection with existing saltwater system at Hung Hing Road.
- Outstanding works at WSD Salt Water Pumping Station.
- Box Culvert N1 & Drain FRP-N and the associated testing for handing over to DSD
- Drainage re-diversion from temp 1800 dia. drain to the completed Box Culvert N1.
- ABWF works in Ferry Pier.
- Rectifying the defects in movable ramps.
- Most of the individual T&C of E&M equipment at Ferry Pier
- Utility installation works and EVA construction extending from P7 Cooling Water Pumping Station to the Ferry Pier.
- Construction of Temporary Covered Walkway footing at GL5 in the vicinity of Ferry Pier.
- Design verification works of the Eastern Bulkhead by the CSD Designer for substantial handing over to Section IXA of the Works.
- Seawall blocks installation and filling works at WCR4/TWCR4 after abandonment of existing temp 1800 dia. drain at WCR4.

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

- Construction of EVA

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

- Sheet piling works

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

- Removal of strut at ELS will commence
- Construction works for Box Culvert T1
- Removal of marine platform
- Construction of pile cap, pier & cross head (Marine)
- ELS, EVB and Cut & Cover Tunnel
- Installation of dewatering well
- Laying of 1500 $\phi$  pipe
- Launching of segments
- Extraction of temporary pile from marine section
- Construction of bridge truss TA1

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

- Dredging
- ELS for box culvert La at Lung King Street
- Filling for seawall rock mound formation
- Filling for reclamation at sea area of former Expo Drive West Bridge
- Caisson seawall units installation
- Works for abandoning submarine sewerage outfall

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

- Dredging 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	Superseded
Environmental Permit	EP-364/2009/B	20 Sep 2012	Valid
Environmental Permit	EP-364/2009	17 Aug 2009	Superseded
Environmental Permit	EP-376/2009	13 Nov 2010	Valid
Further Environmental Permit	FEP-01/356/2009	18 Feb 2010	Surrendered
Further Environmental Permit	FEP-02/356/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	Valid
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	Valid
Further Environmental Permit	FEP-01/364/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-02/364/2009	21 Apr 2010	Valid
Further Environmental Permit	FEP-03/364/2009	12 Jul 2010	Surrendered
Further Environmental Permit	FEP-04/364/2009/A	14 Oct 2010	Surrendered
Further Environmental Permit	FEP-05/364/2009/A	15 Nov 2010	Valid
Further Environmental Permit	FEP-06/364/2009/A	22 Nov 2010	Valid
Further Environmental Permit	FEP-07/364/2009/B	20 Sep 2012	Valid
Further Environmental Permit	FEP-08/364/2009/A	15 Jun 2012	Valid
Further Environmental Permit	FEP-06/356/2009	5 Mar 2013	Valid
Further Environmental Permit	FEP-07/356/2009	26 July 2013	Valid
Further Environmental Permit	FEP-10/364/2009/B	26 July 2013	Valid

3.1.2. Due to the multi-contract nature of the Project, the status of permits and/or licences under the individual contract(s) are presented as below:

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

3.1.3. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2009/01 under FEP-02/356/2009 are shown in **Table 3.4** and **Table 3.5**.

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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-02/356/2009	24 Mar 2010	N/A	Valid
	FEP-02/364/2009	21 Apr 2010	N/A	Valid
Notification of Works Under APCO	313088	06 Jan 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0797-13	16 Jul 2013	18 Jul 2013 to 15 Jan 2014	Cancelled
	GW-RS0773-13	16 Jul 2013	20 July 2013 to 19 Jan 2014	Cancelled
	GW-RS0807-13	24 Jul 2013	25 Jul 2013 to 21 Jan 2014	Cancelled
	GW-RS0626-13	13 Jun 2013	15 Jun 2013 to 12 Dec 2013	Cancelled
	GW-RS0631-13	14 Jun 2013	14 Jun 2013 to 13 Dec 2013	Cancelled
	GW-RS0651-13	21 Jun 2013	22 Jun 2013 to 20 Dec 2013	Cancelled
	GW-RS0856-13	7 Aug 2013	10 Aug 2013 to 1 Feb 2014	Valid
	GW-RS0883-13	12 Aug 2013	14 Aug 2013 to 13 Feb 2014	Valid
	GW-RS0937-13	23 Aug 2013	25 Aug 2013 to 22 Feb 2014	Valid
	GW-RS1063-13	24 Sep 2013	26 Sep 2013 to 23 Mar 2014	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RE1034-13	27 Sep 2013	30 Sep 2013 to 29 Mar 2014	Valid
	GW-RS0626-13	13 Jun 2013	15 Jun 2013 to 12 Dec 2013	Cancelled
	GW-RS1094-13	7 Oct 2013	08 Oct 2013 to 07 Apr 2014	Valid
	GW-RS1114-13	11 Oct 2013	13 Oct 2013 to 12 Apr 2014	Valid
	GW-RS1153-13	21 Oct 2013	23 Oct 2013 to 20 Apr 2014	Cancelled
	GW-RS1083-13	27 Sep 2013	29 Sep 2013 to 26 Mar 2014	Cancelled
	GW-RS1091-13	7 Oct 2013	08 Oct 2013 to 07 Apr 2014	Valid
	GW-RS1211-13	4 Nov 2013	09 Nov 2013 to 08 May 2014	Valid
	GW-RS1246-13	8 Nov 2013	10 Nov 2013 to 07 May 2014	Valid
	GW-RS1265-13	14 Nov 2013	16 Nov 2013 to 12 May 2014	Valid
	GW-RS-1270-13	13 Nov 2013	14 Nov 2013 to 13 May 2014	Valid
	GW-RS1324-13	19 Nov 2013	22 Nov 2013 to 18 May 2014	Valid
	GW-RS1374-13	2 Dec 2013	3 Dec 2013 to 2 Jun 2014	Valid
	GW-RS1433-13	20 Dec 2013	21 Dec 2013 to 20 Jun 2014	Valid
Discharge Licence	WT00006220-2010	18 Mar 2010	31 Mar 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	WT00009641-2011	24 Jul 2011	31 Jul 2016	Valid
Billing account under Waste Disposal Ordinance	7010069	21 Jan 2010	N/A	Valid
Registration as a Chemical Waste Producer	WPN5213-134-C3585-01	21 Jan 2010	N/A	Valid

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

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	13 Apr 2010
Condition 2.7	Works Schedule and Location Plan	8 Apr 2010
Condition 2.8	Silt Curtain Deployment Plan (Rev. 5)	24 Aug 2012
	Silt Curtain Deployment Plan (Rev. 4)	12 July 2012
	Silt Curtain Deployment Plan (Rev. 3)	27 June 2012
	Silt Curtain Deployment Plan	19 Apr 2010
Condition 2.9	Silt Screen Deployment Plan (Rev.5)	24 Jul 2013
	Silt Screen Deployment Plan (Rev.4)	15 Nov 2012
	Silt Screen Deployment Plan	19 Apr 2010
Conditions 2.8 and 2.9	Supplementary Document on Silt Curtain and Silt Screen Deployment Plan	19 Jul 2010
	Report on Field Testing for Silt Curtain	26 Aug 2010
	Report on Field Testing for Silt Curtain (Rev. A)	15 Nov 2010
Condition 2.12(d)	Alternative Proposal on Concurrent Dredging for Sewage Pipeline and Cross Harbour Water Mains	15 Apr 2011
Condition 2.17	Noise Management Plan	23 Apr 2010

EP Condition	Submission	Date of Submission
Condition 2.18	Landscape Plan (Erection of Decorative Screen Hoarding along Construction Site around Hong Kong Exhibition and Convention Centre)	15 May 2010
	Landscape Plan (Night-time Lighting)	22 Oct 2010
	Landscape Plan (Rev. B)	15 Nov 2010
Condition 1.12	Notification of Commencement Date	20 Jun 2011
Condition 2.6 to 2.8	Management Organization, Works Schedule and Location Plan	18 May 2011
Condition 2.9	Noise Management Plan	10 Jun 2011
Condition 2.11	Landscape Plan	31 Oct 2013

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

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

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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	N/A	Valid
	FEP-01/364/2009	24 Mar 2010	N/A	Valid
Notification of Works Under APCO	313962	2 Feb 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RE0508-13	21 May /2013	30 May 2013 to 29 Nov 2013	Expired
	GW-RS0525-13	21 May /2013	30 May 2013 to 29 Nov 2013	Expired
	GW-RS0538-13	21 May /2013	30 May 2013 to 29 Nov 2013	Expired
	GW-RS0539-13	23 May 2013	6 June 2013 to 5 Dec 2013	Cancelled
	GW-RS0554-13	23 May 2013	6 June 2013 to 5 Dec 2013	Expired
	GW-RS0633-13	14 June 2013	16 June 2013 to 13 Dec 2013	Cancelled
	GW-RS0739-13	09 July 2013	17 July 2013 to 16 Jan 2014	Valid
	GW-RS0708-13	03 July 2013	03 July 2013 to 01 Jan 2014	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0846-13	30 July 2013	01 Aug 2013 to 25 Jan 2014	Cancelled
	GW-RS0857-13	2 Aug 2013	15 Aug 2013 to 14 Feb 2014	Valid
	GW-RS0945-13	29 Aug 2013	11 Sep 2013 to 10 Mar 2014	Valid
	GW-RS0993-13	6 Sep 2013	20 Sep 2013 to 19 Mar 2014	Valid
	GW-RS1027-13	10 Sep 2013	15 Sep 2013 to 9 Mar 2014	Valid
	GW-RS1002-13	12 Sep 2013	25 Sep 2013 to 24 Mar 2014	Valid
	GW-RS1078-13	30 Sep 2013	18 Oct 2013 to 17 Apr 2014	Valid
	GW-RS1119-13	11 Oct 2013	16 Oct 2013 to 15 Apr 2014	Valid
	GW-RS1128-13	8 Oct 2013	11 Oct 2013 to 6 Apr 2014	Valid
	GW-RS1197-13	4 Nov 2013	10 Nov 2013 to 9 May 2014	Valid
	GW-RS1254-13	12 Nov 2013	17 Nov 2013 to 16 May 2014	Valid
	GW-RS1256-13	12 Nov 2013	22 Nov 2013 to 21 May 2014	Valid
	GW-RS1240-13	7 Nov 2013	28 Nov 2013 to 27 May 2014	Valid
	GW-RE1199-13	6 Nov 2013	30 Nov 2013 to 29 May 2014	Valid
	GW-RS1258-13	12 Nov 2013	17 Nov 2013 to 6 May 2014	Valid
	GW-RS1261-13	12 Nov 2013	13 Nov 2013 to 6 May 2014	Valid
	GW-RS1325-13	27 Nov 2013	30 Nov 2013 to 29 May 2014	Valid
	GW-RS1337-13	27 Nov 2013	29 Nov 2013 to 26 May 2014	Valid
	GW-RS1466-13	24 Dec 2013	17 Jan 2014 to 16 July 2014	Valid
	GW-RS1458-13	24 Dec 2013	2 Jan 2014 to 1 July 2014	Valid
Discharge Licence	WT00006249-2010	22 Mar 2010	31 Mar 2015	Valid
	WT00006436-2010	15 Apr 2010	30 Apr 2015	Valid
	WT00006673-2010	14 May 2010	31 Mar 2015	Cancelled
	WT00006757-2010	28 May 2010	31 May 2015	Valid
	WT00007129-2010	28 July 2010	31 Jul 2015	Valid
	WT00008982-2011	26 April 2011	30 April 2016	Valid
	WT00009691-2011	1 Aug 2011	31 July 2016	Valid
Billing Account under Waste Disposal Ordinance (Land)	7010255	10 Feb 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance (Marine)	7011496	6 Oct 2010	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Registration as Chemical Waste Producer (Wan Chai)	WPN5213-135-C3 593-01	10 Mar 2010	N/A	Valid
Registration as Chemical Waste Producer (TKO 137)	WPN5213-839-C3 593-02	22 Sep 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/14-098	26/11/2013	29 Nov 2013 to 28 May 2014	Valid

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

EP Condition	Submission	Date of Submission
Condition 1.12	Commencement Date of Construction of Marine Works	8 April 2010
Condition 2.6	Management Organization of Main Construction Companies	10 April 2010
Condition 2.7	Works Schedule and Location Plans	8 April 2010
Condition 2.8	Silt Curtain Deployment Plan (Revision A)	20 April 2010
	Silt Curtain Deployment Plan (Revision B)	25 May 2010
	Silt Curtain Deployment Plan (Revision C)	14 Jun 2010
	Silt Curtain Deployment Plan (Revision H)	15 Feb 2011
	Silt Curtain Deployment Plan (Revision I)	17 Nov 2011
	Silt Curtain Deployment Plan (Revision J)	15 Feb 2012
	Silt Curtain Deployment Plan (Revision K)	3 May 2012
	Silt Curtain Deployment Plan (Revision L)	25 Oct 2012
	Silt Curtain Deployment Plan (Revision M)	30 Nov 2012
	Silt Screen Deployment Plan	21 April 2010
	Supplementary Information for Existing WSD Salt Water Intakes at Quarry Bay and Sai Wan Ho	5 Oct 2010
	Silt Screen Deployment Plan (Revision B)	15 Feb 2012
	Silt Screen Deployment Plan (Revision C)	3 May 2012
	Silt Screen Deployment Plan (Revision D)	10 Dec 2012
Condition 2.17	Noise Management Plan	6 May 2010
Condition 2.18	Landscape Plan (Decorative Screen Hoarding)	11 May 2010
	Landscape Plan (Control of Night Time Lighting)	2 June 2010

EP Condition	Submission	Date of Submission
	Landscape Plan (Combined Version)	20 July 2011
	Landscape Plan (Combined Version)	5 Aug 2011
-----	Acknowledge of Submission	22 Aug 2011

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

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

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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	N/A	Valid
Notification of Works Under APCO	321822	24 Sep 2010	N/A	Valid
Construction Noise Permit (CNP) for breakwater removal works at Eastern Breakwater of CBTS	GW-RS0798-13	18 Jul 2013	19 Jul 2013 to 18 Jan 2014	Cancelled
Construction Noise Permit (CNP) for concreting works at Eastern Breakwater of CBTS	GW-RS0921-13	20 Aug 2013	20 Aug 2013 to 18 Feb 2014	Valid
Construction Noise Permit (CNP) for Pre-treatment, ELS and rock breaking works at TS4/ME4	GW-RS0705-13	28 Jun 2013	02 Jul 2013 to 31 Dec 2013	Valid
Construction Noise Permit (CNP) for maintenance dredging	GW-RS1232-13	6 Nov 2013	6 Nov 2013 to 30 Apr 2014	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C116 9-35	15 Nov 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7011553	30 Sep 2010	27 Sep 2010 to 27 Jan 2016	Valid
Billing Account under Waste Disposal Ordinance (Dumping by Vessel)	7011761	25 Sep 2013	17 Oct 2013 to 16 Jan 2014	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/14-034	16 Jul 2013	24 Jul 2013 to 23 Jan 2014	Valid
Dumping Permit (Type 1 – Open Sea Disposal and Type 2 – Confined Marine Disposal)	EP/MD/14-093	19 Nov 2013	24 Nov 2013 to 23 Dec 2013	Expired

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Dumping Permit (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers)	EP/MD/14-080	12 Nov 2013	13 Nov 2013 to 12 Dec 2013	Expired

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

FEP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	30 Sep 2010
	Amendment for Management Organization of Main Construction Companies	16 May 2011
Condition 2.7	Works Schedule and Location Plans	27 Oct 2010
	Amendment for Works Schedule and Location Plans	12 Nov 2010
Condition 2.8	Silt Curtain Deployment Plan	30 Nov 2010
	Amendment for Silt Curtain Deployment Plan	24 Feb 2011
	Amendment for Silt Curtain Deployment Plan	11 May 2011
	Amendment for Silt Curtain Deployment Plan	11 Sep 2012
	Amendment for Silt Curtain Deployment Plan	30 Oct 2012
Condition 2.9	Silt Screen Deployment Plan	19 Oct 2010
	Amendment for Silt Screen Deployment Plan	18 Feb 2011
	Amendment for Silt Screen Deployment Plan	15 Jun 2011
Condition 2.18	Proposal for the Removal of Odorous Sediment and Slime	13 Jan 2011
	Amendment for Proposal for the Removal of Odorous Sediment and Slime	8 Mar 2011
	Amendment for Proposal for the Removal of Odorous Sediment and Slime	2 Aug 2011
Condition 2.21	Landscape Plan	18 Feb 2011
Condition 2.23	Noise Management Plan	20 Oct 2010
	Amendment for Noise Management Plan	27 Jan 2011

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

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

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

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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	N/A	Valid
	FEP-08/364//2009/A	15 June 2012	N/A	Valid
Notification of Works Under APCO	326344	18 Jan 2011	N/A	Valid
Construction Noise Permit (CNP) for piling equipment	PP-RS0017-13	19 June 2013	6 Jul 2013 to 5 Jan 2014	Valid
Billing Account under Waste Disposal Ordinance	7012338	16 Feb 2011	N/A	Valid

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

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

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

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

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

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
Further Environmental Permit	FEP-07/364/2009/B	20 Sep 2012	Granted	Valid
Notification of Works Under APCO	326160	24 Jan 2011	Notified	Valid



Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
Construction Noise Permit (CNP) (For D-wall construction) (Portion I, VII, VIII & IX)	GW-RS0503-13	21-May-12	20-Nov-13	Cancelled
	GW-RS1125-13	13-Oct-13	10-Apr-13	Cancelled
	GW-RS1473-13	29-Dec-13	23-Jun-14	Valid
Construction Noise Permit (CNP) (For Bored pile construction at Portion III)	GW-RS0767-13	11-Jul-13	10-Jan-14	Valid
Construction Noise Permit (CNP) (For Segment Launching at Portion III)	GW-RS1009-13	09-Sep-13	08-Mar-14	Cancelled
	GW-RS1176-13	25-Oct-13	22-Apr-14	Cancelled
	GW-RS1474-13	29-Dec-13	23-Jun-13	Cancelled
Construction Noise Permit (CNP) (For Watson Road)	GW-RS0528-12	26-May-13	25-Nov-13	Expired
Construction Noise Permit (CNP) (For IEC)	GW-RS0706-13	11-Jul-13	10-Jan-14	Valid
Construction Noise Permit (CNP) (For IEC Parapet Removal – Loading/Unloading)	GW-RS1099-13	21-Oct-13	20-Apr-14	Valid
Construction Noise Permit (CNP) (For Portion Vi Marine)	GW-RS0724-13	08-Jul-13	07-Jan-14	Cancelled
	GW-RS1179-13	25-Oct-13	22-Apr-14	Valid
Discharge Licence (Land)	WT00010093-2011	17 Aug 2012	30-Sept-16	Cancelled
	WT00010093-2011	17 Aug 2012	30-Sept-16	Valid
Discharge Licence (Sea)	WT00010865-2011	03 Nov 2011	30-Nov-16	Valid
C&D Waste Disposal	7012306	10 Feb 2011	Registered	-
Vessel Disposal	7013285	21 July 2011	Registered	-
Registration as Chemical Waste Producer	5213-151-C3654-01	24 Mar 2011	Registered	-
Dumping Permit (Tunnel) (Type 1 – Open Sea Disposal)	EP/MD/14-019	10 Jun 2013	09 Dec 2013	Expired
	EP/MD/14-104	10 Dec 2013	09 Jun 2013	Valid

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
Dumping Permit (Tunnel) (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/14-097	25 Nov 2013	24 Dec 2013	Expired

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

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

**Table 3.13** *Cumulative Summary of Valid Licences and Permits under Contract no. HK/2012/08*

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-06/356/2009	5 Mar 2013	N/A	Valid
Notification of Works Under APCO	355439	4 Feb 2013	N/A	Valid
Registration as a Chemical Waste Producer	5213-134-C3790-01	8 Mar 2013	N/A	Valid
Billing Account under Waste Disposal Ordinance	7016883	18 Feb 2013	18 Jul 2017	Valid
Construction Noise Permit	GW-RS0703-13	3 Jul 2013	4 Jul 2013 to 2 Jan 2014	Valid
	GW-RS0824-13	29 Jul 2013	30 Jul 2013 to 28 Jan 2014	Valid
	GW-RS0896-13	19 Aug 2013	20 Aug 2013 to 18 Feb 2014	Cancelled
	GW-RS1175-13	23 Oct 2013	25 Oct 2013 to 21 Apr 2014	Cancelled
	GW-RS01086-13	30 Sep 2013	2 Oct 2013 to 26 Mar 2014	Valid
	GW-RS1231-13	8 Nov 2013	11 Nov 2013 to 28 Feb 2014	Valid
	GW-RS1357-13	2 Dec 2013	4 Dec 2013 to 1 Jun 2014	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/14-008	23 May 2013	24 Nov 2013	Supersede d by EP/MD/14-082
	EP/MD/14-082	29 Oct 2013	31 Dec 2013	Valid
Dumping Permit (Type 1 – Open	EP/MD/14-094	19 Nov 2013	24 Dec 2013	Expired

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/14-110	16 Dec 2013	24 Jan 2014	Valid

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

FEP Condition	Submission	Date of Submission
Condition 2.8	Silt Curtain Deployment Plan (Rev. 3)	Submitted to EPD on 25 Nov 2013
Condition 2.9	Silt Screen Deployment Plan (Rev. 2)	Deposited to EPD on 19 Aug 2013
Condition 2.23	Noise Management Plan (Rev. 2)	Generally in order as commented by EPD on 15 Aug 2013
Condition 2.24	Landscape Plan (Rev. 3)	Generally in order as commented by EPD on 31 Oct 2013

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

- 3.1.10. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HY/2010/08 under EP-356/2009 are shown in Table 3.15 and Table 3.16.

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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-07/356/2009	26 Jul 2013	NA	Valid
	FEP-10/364/2009/B	26 Jul 2013	NA	Valid
Notification of Works Under APCO	357176	2 Apr 2013	NIL	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C11 69-44	27 Mar 2013	NIL	Valid
Billing Account under Waste Disposal Ordinance	7017170	27 Mar 2013	NIL	Valid
Water Discharge Licence	WT0001651-2013	9 Jul 2013	31 Jul 2018	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	() in EP/MD/14-095	29 Nov 2013	1 Jun 2014	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	() in EP/MD/14-096	29 Nov 2013	1 Jan 2014	Valid

**Table 3.16 Summary of submission status under EP-356/2009 and FEP-07/356/2009 Condition**

FEP Condition	Submission	Date of Submission
Condition 2.8	Silt Curtain Deployment Plan	28 Nov 2013
Condition 2.9	Silt Screen Deployment Plan	29 Nov 2013
Condition 2.23	Noise Management Plan	21 Nov 2013
Condition 2.24	Landscape Plan	18 Nov 2013

## Monitoring Requirements

### 4.1 Noise Monitoring

#### NOISE MONITORING STATIONS

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

**Table 4.1 Noise Monitoring Station**

Station	Description
M1a	Harbour Road Sports Centre
M2b	Noon Gun Area
M3a	Tung Lo Wan Fire Station
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School

#### REAL-TIME NOISE MONITORING STATIONS

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

**Table 4.2 Real Time Noise Monitoring Station**

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

#### NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.1.5. The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ).  $L_{eq}(30 \text{ minutes})$  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.

4.1.6. Noise monitoring shall be carried out at all the designated monitoring stations. The monitoring frequency shall depend on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities are underway:

- one set of measurements between 0700 and 1900 hours on normal weekdays.

4.1.7. If construction works are extended to include works during the hours of 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring shall be carried out during respective restricted hours periods. Applicable permits under NCO shall be obtained by the Contractor.

**MONITORING EQUIPMENT**

4.1.8. As referred to in the Technical Memorandum <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.

4.1.9. Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

**4.2 Air Monitoring**

**AIR QUALITY MONITORING STATIONS**

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

**Table 4.3 Air Monitoring Station**

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

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

#### AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

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

#### SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.5. High volume samplers (HVSs) in compliance with the following specifications shall be used for carrying out the 1-hour and 24-hour TSP monitoring:
- 0.6 – 1.7 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. An alternative non-HOKLAS accredited laboratory was set-up for carrying out the laboratory analysis, the laboratory equipment was approved by the ER on 8 February 2011 and the measurement procedures were witnessed by the IEC. Any measurement performed by the laboratory was demonstrated to the satisfaction of the ER and IEC. IEC shall regularly audit the measurement performed by the laboratory to ensure the accuracy of measurement results.
- 4.2.9. Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24-hours and be pre-weighed before use for the sampling.
- 4.2.10. After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.
- 4.2.11. All the collected samples shall be kept in a good condition for 6 months before disposal.

#### IMPACT MONITORING FOR ODOUR PATROL

- 4.2.12. Odour patrols along the shorelines of Causeway Bay Typhoon Shelter and ex-Wan Chai Public Cargo Working Area when there is temporary reclamation in Causeway Bay Typhoon Shelter and/or in the ex-Wan Chai Public Cargo Working Area, or when there is dredging of the odorous sediment and slime at the south-western corner of the Causeway Bay Typhoon Shelter. Odour patrols will be carried out at bi-weekly intervals during July, August and September by a qualified person of the ET who shall:
- be at least 16 years of age;
  - be free from any respiratory illnesses; and
  - not be allowed to smoke, eat, drink (except water) or use chewing gum or sweets 30 min before and during odour patrol
- 4.2.13. Odour patrol shall be conducted by independent trained personnel / competent persons patrolling and sniffing around the shore as shown in **Figure 4.1** to detect any odour at the concerned hours (afternoon is preferred for higher daily temperature).
- 4.2.14. The qualified person will use the nose (olfactory sensor) to sniff odours at different locations. The main odour emission sources and the areas to be affected by the odour nuisance will be identified.
- 4.2.15. The perceived odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:
- 0 – Not detected. No odour perceived or an odour so weak that it cannot be easily characterized or described;
  - 1 – Slight Identifiable odour, and slight chance to have odour nuisance;



- 2 – Moderate Identifiable odour, and moderate chance to have odour nuisance;
- 3 – Strong Identifiable, likely to have odour nuisance;
- 4 – Extreme Severe odour, and unacceptable odour level.

4.2.16. The findings including odour intensity, odour nature and possible odour sources, and also the local wind speed and direction at each location will be recorded. In addition, some relevant meteorological and tidal data such as daily average temperature, and daily average humidity, on that surveyed day will be obtained from the Hong Kong Observatory Station for reference. The Action and Limit levels for odour patrol are shown in **Appendix 6.1**.

4.2.17. The qualified odour patrol member has individual n-butanol thresholds complied with the requirement of European Standard Method of Air Quality – Determination of Odour Concentration by Dynamic Olfactometry (EN13725) in the range of 20 to 80 ppb.

### 4.3 Water Quality Monitoring

4.3.1. The EIA Report has identified that the key water quality impact would be associated with the dredging works during the construction phase. Marine water quality monitoring for dissolved oxygen (DO), suspended solid (SS) and turbidity is therefore recommended to be carried out at selected WSD flushing water intakes. The impact monitoring should be carried out during the proposed dredging works to ensure the compliance with the water quality standards.

4.3.2. The updated EM&A Manual for EP-356/2009 (Version in March 2011) is approval by EPD on 29 April 2011. As such, the Action Level and Limit Level for the wet season (April – September) will be effected and applied to the water quality monitoring data from 30 April 2011.

#### Water Quality Monitoring Stations

4.3.3. It is proposed to monitor the water quality at 4 WSD salt water intakes and 8 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>			
WSD9	Tai Wan	837921.0	818330.0
WSD17	Quarry Bay	839790.3	817032.2
WSD19	Sheung Wan	833415.0	816771.0
WSD21	Wan Chai	836220.8	815940.1
<b>Cooling Water Intake</b>			
C1	HKCEC Extension	835885.6	816223.0
C7	Windsor House	837193.7	816150.0
P1	HKCEC Phase I	835774.7	816179.4
P3	The Academy of performing Arts	835824.6	816212.0
P4	Shui on Centre	835865.6	816220.0
P5	Government Buildings (Wanchai Tower / Revenue	835895.2	816215.2

Station Ref.	Location	Easting	Northing
	Tower / Immigration Tower)		
RW21-P789	Great Eagle Centre/ Sun Hung Kai Centre/CWB	836268.0	816020.0

WATER QUALITY PARAMETERS

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

SAMPLING PROCEDURES AND MONITORING EQUIPMENT

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

**Table 4.5 Marine Water Quality Monitoring Frequency and Parameters**

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

Notes:

- 1. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides should be not less than 0.5m.
- 2. Turbidity should be measured in situ whereas SS should be determined by laboratory.

DISSOLVED OXYGEN AND TEMPERATURE MEASURING EQUIPMENT

- 4.3.7. The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
  - a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
  - a temperature of 0-45 degree Celsius
- 4.3.8. It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement

where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).

- 4.3.9. Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

#### TURBIDITY MEASUREMENT INSTRUMENT

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

#### SAMPLER

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

#### SAMPLE CONTAINER AND STORAGE

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

#### WATER DEPTH DETECTOR

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

#### SALINITY

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

#### MONITORING POSITION EQUIPMENT

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

#### CALIBRATION OF IN-SITU INSTRUMENTS

- 4.3.16. All in-situ monitoring instrument shall be checked, calibrated and certified by a laboratory accredited under HOKLAS or equivalent before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes should be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.

- 4.3.17. For the on site calibration of field equipment by the ET, the BS 127:1993, "Guide to Field and on-site test methods for the analysis of waters" should be observed.
- 4.3.18. Sufficient stocks of spare parts should be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 4.3.19. Current calibration certificates of equipments are presented in **Appendix 4.2**.

**LABORATORY MEASUREMENT / ANALYSIS**

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

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

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

**Table 4.6 Marine Water Quality Stations for Enhanced Water Quality Monitoring**

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

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

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

- 4.3.24. During dredging of the sediment at the south-western corner of the Causeway Bay Typhoon Shelter, daily monitoring of suspended solids and 24 hour monitoring of turbidity at the cooling water intakes (C6 and C7) shall be conducted.
- 4.3.25. The 24 hours monitoring of turbidity at the cooling water intakes (C6 and C7) shall be established by setting up a continuous water quality monitoring station in front of the intakes

during the dredging activities. The monitoring system include the turbidity sensor and data logger which is capable of data capturing at every 5 minutes. The data shall be downloaded daily and compared with the Action and Limit level determined during the baseline water quality monitoring at the cooling water intake locations.

ADDITIONAL DISSOLVED OXYGEN MONITORING FOR CULVERT L WATER DISCHARGE FLOW

- 4.3.26. In response to the Condition 2.18 of the Environmental Permit no. EP-356/2009 requiring that a silt curtain / impermeable barrier system be installed to channel water discharge flow from Culvert L to locations outside the embayment area, a proposed replacement of the requirement with additional dissolved oxygen monitoring has been conducted at three monitoring stations, namely A, B and C between the eastern seawall of Central Reclamation Phase III and the HKCEC Extension since November 2011 under EP-356/2009 so that DO level between the eastern seawall of Central Reclamation Phase II and the HKCEC extension could be continuously monitored.
- 4.3.27. With respect to the commencement of dredging works under HK/2012/08 and the installation of MTR precast protection unit, the enhanced water quality monitoring for Culvert L was temporarily suspended since 24 July 2013
- 4.3.28. The monitoring of dissolved oxygen are to be carried out once per week, at mid-flood and mid-ebb tides for 3 water depths (1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth may be omitted. If the water depth be equal to or less than 3m, only the mid-depth will be monitored).

**5. Monitoring Results**

5.0.1. The environmental monitoring will be implemented based on the division of works areas of each designed project managed under different contracts with separate FEP applied by individual contractors. Overall layout showing work areas of various contracts, latest status of work commencement and monitoring stations is shown in **Figure 2.1** and **Figure 4.1**. The monitoring results are presented in according to the Individual Contract(s).

5.0.2. In the reporting month, the concurrent contracts are as follows:

- Contract no. HK/2009/01 – Wan Chai Development Phase II – Central-Wan Chai Bypass at Hong Kong Convention and Exhibition Centre; and
- Contract no. HK/2009/02 Wan Chai Development Phase II – Central-Wan Chai Bypass at Wan Chai East
- Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)
- Contract no. HK/2010/06 Wan Chai Development Phase II – Central-Wan Chai Bypass over MTR Tsuen Wan Line
- Contract no. HY/2009/19- Cental- Wan Chai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link
- Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West
- Contract no. HY/2010/08 – Central- Wanchai Bypass Tunnel (Slip Road 8 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. HK/2009/01 - Wan Chai Development Phase II – Central –Wanchai Bypass at HKCEC, Contract no. HK/2009/02 - Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East and Contract no. HK/2010/06 Wan Chai Development Phase II – Central-Wan Chai Bypass over MTR Tsuen Wan Line

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

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

Station	Description
M1a	Harbour Road Sports Centre

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

5.1.3. No exceedance was recorded in this reporting period. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**

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

Shelter Section)

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

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

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

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

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

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

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

Station	Description
M3a	Tung Lo Wan Fire Station
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School

5.1.7. Two limit level exceedances were recorded on 10 and 18 December 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month.

5.1.8. Major traffic noise observed during monitoring on 10 and 18 December 2013 and it was considered as the major noise contribution. As such, the limit level exceedances were concluded as non-project related.

5.1.9. Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**.

**5.2 Real-time Noise Monitoring**

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

5.2.1 As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong



- Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.
- 5.2.2 The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- 5.2.3 The major work activities for Contract no. HY/2009/11 was confirmed substantial complete by RSS on 4 January 2012. The construction site was handed over to contractor HY/2009/19 on 31 December 2011 and the FEP-01/356/2009 was surrendered on 22 Oct 2012.
- 5.2.4 Limit level exceedances were recorded at RTN2a-Electric Centre during restricted hours on 11 November 2013. After checking with contractor, no construction activity was conducted at the concerned location by the Contractor during the recorded period. As such, the exceedances were considered as non-project related and contributed by nearby IEC traffic.
- 5.2.5 Real-time noise monitoring at FEHD Hong Kong Transport Section Whitfield Depot commenced external wall renovation since 1 June 2012

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

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

- Real time noise monitoring results and graphical presentation during night time period are for information only.
- RTN2 had been relocated to RTN2a since 5 Oct 2012
- RTN1 monitoring had been finished on 28 Nov 2012

- 5.2.6 Details of real time noise monitoring results and graphical presentation can be referred to **Appendix 5.5.**
- 5.3 Air Monitoring Results**
- 5.3.1. Due to electricity interruption, the 24hr TSP monitoring at CMA2a was rescheduled from 23 December 2013 to 24 December 2013.

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

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

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

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



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

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

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

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

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

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

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

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

Station	Description
CMA3a	CWB PRE Site Office

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

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

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

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

Station	Description
CMA1b	Oil Street Site Office
CMA2a	Causeway Bay Community Centre

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

#### **5.4 Water Monitoring Results.**

- 5.4.1. Water quality monitoring station RW21-P789 has been implemented with respect to HK/2009/02 started on 29 July 2013.
- 5.4.2. With respect to status of cooling intakes relocation, WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended to confirm the commissioning status of the relocated pump stations with the WDII RSS and the IEC for preparation of relocation of the WQM stations to the relocated cooling intake pump stations
- 5.4.3. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others remain unchanged.
- 5.4.4. Based on the joint inspection on 4 Jan 2012 for the NPR area, the 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 to confirm no water deterioration with respect to NPR was commenced since 7 Jan 2012 and it was completed on 6 February 2012.
- 5.4.5. Water quality monitoring at WSD10 and WSD15 was temporary suspended while water quality monitoring at WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 12 onwards;
- 5.4.6. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.
- 5.4.7. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 to the closest accessible point prior to the completion of the external façade refurbishment work.
- 5.4.8. With respect to the trial dredging at WCR2 was scheduled on 20, 22, 24, 25 March and 1, 3, 11, 13, 15, 17, 19, 20 Apr and 3 May 2012, on-going water quality monitoring results at WSD21 during this period was checked and indicated that there was no contribution due to the trial dredging operation. Enhanced review of water quality around WCR2 was also implemented and no deterioration in the water quality was observed.
- 5.4.9. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.
- 5.4.10. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui-DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7

- and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration.
- 5.4.11. Due to the presence of obstacle within the inner silt curtain frame at sampling point, water quality point at C7 was finely adjusted to the outside of the inner silt curtain frame since 29 Dec 2012.
- 5.4.12. As confirmed by CWB RSS, the marine pilling works under contract HY/2009/19 was confirmed completed by 4 March 2013. The water quality monitoring at the respective monitoring stations C8 and C9 were temporarily suspended since 30 March 2013.
- 5.4.13. With respect to status of cooling intakes relocation, WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended to confirm the commissioning status of the relocated pump stations with the WDII RSS and the IEC for preparation of relocation of the WQM stations to the relocated cooling intake pump stations.
- 5.4.14. Upon confirmation with WDII RSS and the IEC, water quality monitoring at relocated intakes monitoring location P1, P3, P4 and P5 were commenced since 24 April 2013.

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

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

Remarks:

-The water monitoring stations for WSD19, P1, P3, P4, P5 shall be associated with Contract No. HK/2009/01 prior to their transition to Contract HK/2012/08.

-4 intakes (re-provisioned Wanchai WSD intake, Great Eagle Centre, China Resources Centre & Sun Hung Kai Centre constructed adjacent to each other) taken as a single group for silt screen protection and monitoring.

-Re-provisioned intake reference: P1: HKCEC Phase 1; P3: APA, P4: Shui On; P5: Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)

-Enhanced DO Monitoring at C6 since the intake abandon in May 2011.

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

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

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

Station Ref.	Location	Easting	Northing
<b>Cooling Water Intake</b>			
C1	HKCEC Extension	835885.6	816223.0

Remarks:

- The water monitoring stations for the dredging works under Contract No. HK/2009/01 should also include WSD9, WSD17, WSD 21 and C5 if water quality monitoring at these locations have not been carried out by others. Similarly, the water monitoring stations for the dredging works under Contract No. HK/2009/02 should also include WSD7, WSD9, WSD17, WSD 19, C1, C2, C3 and C4 if water quality monitoring at these locations have not been carried out by others.
- WSD7 and WSD20 water quality monitoring were temporarily suspended since 27 Apr 2012.
- C2, C3 C4e and C4w water quality monitoring station was temporarily suspended since 24 Apr 2013

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

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

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

Station Ref.	Location	Easting	Northing
<b>WSD Salt Water Intake</b>			
WSD21	Wan Chai	836220.8	815940.1
WSD9	Tai Wan	837921.0	818330.0
WSD17	Quarry Bay	839790.3	817032.2
<b>Cooling Water Intake</b>			
RW21-P789	Great Eagle Centre/ Sun Hung Kai Centre/CWB	836268.0	816020.0

Remarks:

- The water monitoring stations for the dredging works under Contract No. HK/2009/01 should also include WSD9, WSD17, WSD 21 and C5 if water quality monitoring at these locations have not been carried out by others. Similarly, the water monitoring stations for the dredging works under Contract No. HK/2009/02 should also include WSD7, WSD9, WSD17, WSD 19, C1, C2, C3 and C4 if water quality monitoring at these locations has not been carried out by others.
- Water quality monitoring at WSD9 and WSD 17 was implemented with respect to HK/2009/02 from 8 Feb 2012.
- C5e and C5w water quality monitoring station was temporarily suspended since 29 July 2013

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

5.4.17. Water monitoring for Contract no. HK/2012/08 was commenced on 5 March 2013. The proposed division of water monitoring stations are summarized in **Table 5.14** below.

**Table 5.14 Water Monitoring Stations for Contract no. HK/2012/08**

Station Ref.	Location	Easting	Northing
<b>WSD Salt Water Intake</b>			

Station Ref.	Location	Easting	Northing
WSD19	Sheung Wan	833415.0	816771.0
<b>Cooling Water Intake</b>			
P1	HKCEC Phase I	835774.7	816179.4
P3	The Academy of performing Arts	835824.6	816212.0
P4	Shui on Centre	835865.6	816220.0
P5	Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)	835895.2	816215.2

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

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

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

Station Ref.	Location	Easting	Northing
<b>Cooling Water Intake</b>			
C7	Windsor House	837193.7	816150.0

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

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

- 5.4.21. Due to the commencement of the marine bored piling on 28 Jan 2012, water quality monitoring for Contract no. HY/2009/19 was commenced on 28 Jan 2012. The proposed division of water monitoring stations are summarized in Table 5.16 below.
- 5.4.22. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.
- 5.4.23. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Center (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.

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

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

Contract no.	Water Monitoring Station	Mid-flood						Mid-ebb					
		DO		Turbidity		SS		DO		Turbidity		SS	
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01	C1	0	0	0	0	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	1	3	1	3	0	0	0	1	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02 Monitoring started on 8 Feb 2012	WSD21	0	0	0	0	2	2	0	0	0	0	0	2
	WSD9	0	0	1	0	0	1	0	0	0	0	0	1
	WSD17	0	0	0	0	0	1	0	0	0	0	0	0
	Monitoring started on 29 July 2013	RW21-P789	0	0	0	0	0	0	0	0	0	0	0
HY/2009/15 & HY/2010/08	C7	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>		0	0	2	2	3	6	0	0	0	1	0	3

- Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
  - 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 were completed on 6 Feb 2012.
  - C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
  - C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
  - WSD7 and WSD20 were temporarily suspended from 27 Apr 2012
  - C2, C3 C4e and C4w water quality monitoring station was temporarily suspended since 24 Apr 2013
  - C5e and C5w water quality monitoring station was temporarily suspended since 29 July 2013

- 5.4.28. Investigation found that the exceedances were not project-related. The details of the recorded exceedances can be referred to the **Section 6.4**.
- 5.4.29. Enhanced DO monitoring at 4 monitoring stations in Causeway Bay Typhoon Shelter and Ex-Public Cargo Works Area was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in **Table 5.18**.



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

Contract no.	Water Monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15	C6	0	0	0	0
	C7	0	0	0	0
	Ex-WPCWA SW	0	1	0	5
	Ex-WPCWA SE	1	0	0	5
Total		1	1	0	10

5.4.30. There were 1 action level exceedances and 11 limit level exceedances of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedances are not related to the Project works. The details of the recorded exceedances can be referred to the **Section 6.4**.

5.4.31. In response to the Condition 2.18 of the Environmental Permit no. EP-356/2009 requiring that a silt curtain / impermeable barrier system be installed to channel water discharge flow from Culvert L to locations outside the embayment area, a proposed replacement of the requirement with additional dissolved oxygen monitoring has been conducted at three monitoring stations, namely A, B and C between the eastern seawall of Central Reclamation Phase III and the HKCEC Extension since November 2011 under EP-356/2009 so that DO level between the eastern seawall of Central Reclamation Phase II and the HKCEC extension could be continuously monitored. Details of additional DO monitoring results can be referred in **Appendix 5.4a**.

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

**5.5 Waste Monitoring Results**

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

5.5.1. Inert C&D waste was disposed and non- inert C&D waste was disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.19**.

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	123.66	37540.655	TKO137, TM38
Inert C&D materials recycled, m <sup>3</sup>	5000	10104.5	N/A
Non-inert C&D materials disposed,	37.51	1538.35	SENT Landfill



Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
m <sup>3</sup>			
Non-inert C&D materials recycled, kg	0	151143	N/A
Chemical waste disposed, kg	0	10050	N/A
*Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0 (Bulk Volume)	97428.2 (Bulk Volume)	South of Cheung Chau
* Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0 (Bulk Volume)	52250 (Bulk Volume)	East of Cha Chau
Dredged Sediment Requiring Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers	0 (Bulk Volume)	6773 (Bulk Volume)	East of Cha Chau

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

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

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

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	364.69	242164.715	TKO137 / TM 38
Inert C&D materials recycled, m <sup>3</sup>	NIL	18161	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	41.20	1250.60	SENT Landfill
Non-inert C&D materials recycled, m <sup>3</sup>	N/A	N/A	N/A
Chemical waste disposed, kg	700	10936	SENT Landfill
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0	184167 (Bulk volume)	South of Cheung Chau

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0	129320 (Bulk volume)	East of Sha Chau

Remarks: Cumulative Quantity – to – Date of Non-inert C&D materials disposed and Chemical waste disposed was updated

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

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

- 5.5.5. No Inert C&D waste and no non- inert C&D waste were disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.21**

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	NIL	141579.2	Tuen Mun Area 38
	NIL	65216	TKO137 FB
Inert C&D materials recycled, m <sup>3</sup>	NIL	304	ex-PCWA
	NIL	111.9	TS4
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	252.2	SENT Landfill
Non-inert C&D materials recycled, kg	NIL	299361.5	N/A
Chemical waste disposed, kg	NIL	8,200	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0 (Bulk Volume)	100208 (Bulk Volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	3730 (Bulk Volume)	226495 (Bulk Volume)	East of Sha Chau
Marine Sediment (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers)	590	8780 (Bulk Volume)	East of Sha Chau
Marine Sediment (Type 2 – Confined Marine Disposal), m <sup>3</sup>	0 (Bulk Volume)	9350 (Bulk Volume)	East of Sha Chau

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

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

5.5.7. No inert C&D waste was disposed and no non-Inert C&D waste was recycled in this reporting month. Details of the waste flow table are summarized in **Table 5.22**.

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	0	12567.88	TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	267	HK/2009/01
Non-inert C&D materials disposed, m <sup>3</sup>	0	369.48	SENT/TKO137SF
Non-inert C&D materials recycled, T	0	60.58	Recyclers
Chemical waste disposed, L	0	2600	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	0	3,891 (Bulk Volume)	South Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	0	12,586 (Bulk Volume)	East Sha Chau

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

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

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

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	28256.18	299650.95	TM38
Inert C&D materials recycled, m <sup>3</sup>	0	51347.97	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	42.47	560.07	N/A
Non-inert C&D materials recycled, kg	0	303.6	N/A
Chemical waste disposed, L	0.38	1.15	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>	0	162	South Cheung Chau
Marine Sediment (Type 2 – Confined Marine Disposal), m <sup>3</sup>	0	681	East Sha Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m <sup>3</sup>	0	4976.00	

Remarks: Cumulative Quantity – to – Date of Inert C&D materials disposed and Non-inert C&D materials disposed was updated

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

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

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

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	0	1175	TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	0	20	N/A
Non-inert C&D materials recycled, kg	NIL	NIL	N/A
Chemical waste disposed, L	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	2140	25248	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m <sup>3</sup>	10834	106169	South of The Brothers (from 27 Aug 2013 onwards)

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

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

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

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	Nil	Nil	N/A
Inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	Nil	Nil	N/A
Non-inert C&D materials recycled, kg	NIL	NIL	N/A
Chemical waste disposed, L	NIL	NIL	N/A
Dumping Permit (Type 1 – Open Sea Disposal)	8420	8420	South Cheung Chau
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	11120	11120	Brothers Island

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

## 6. Compliance Audit

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

### 6.1 Noise Monitoring

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

6.1.1 No exceedance was recorded in the reporting month.

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

6.1.2 No exceedance was recorded in the reporting month.

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

6.1.3 No exceedance was recorded in the reporting month.

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

6.1.4 No exceedance was recorded in the reporting month.

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

6.1.5 Two limit level exceedances were recorded on 10 and 18 December 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month. Investigations found that on 10 and 18 December 2013, traffic noise was major contribution in the noise monitoring and exceedances were not related to the Project.

### 6.2 Real-time noise Monitoring

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

6.2.1 Limit level exceedances were recorded at RTN2a-Electric Centre during restricted hours on 30 November 2013. After checking with contractor, no noisy construction activities were conducted at the concerned location by the Contractor during the recorded period and the exceedances was non-continuous. As such, the exceedances were considered as non-project related and contributed by nearby IEC traffic and nearby non-CWB Project.

### 6.3 Air Monitoring

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

6.3.1 No exceedance was recorded in the reporting month.

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

6.3.2 No exceedance was recorded in the reporting month.

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

6.3.3 No exceedance was recorded in the reporting month.

#### 6.4 Water Quality Monitoring

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

6.4.1 There was turbidity and SS exceedance recorded at WSD19 on 30 November 2013, 4, 7, 9, 16 and 18 December 2013 during flood tide and ebb tide, confirmed with Contractor, silt screen was in proper condition. Dredging and filling for seaway rock mould formation works was conducted by Contractor HK/2012/08 during monitoring. Mitigation measures including framed silt curtain was confirmed in place. The exceedances was considered not project related.

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

6.4.2 There were occasionally SS exceedances at WSD21 on 30 November 2013, 7, 13, 18 and 24 December 2013 during flood and ebb tide in this reporting month. Confirmed with Contractor, In view of no marine work was conducting during water quality monitoring. Silt screen was confirmed in order, the exceedances was considered not project related.

6.4.3 There were SS exceedances at WSD17 recorded on 17 December 2013 during flood tide in this reporting month. Confirmed with Contractor, in view that no marine work was conducted on those day, the exceedances was considered not project related.

6.4.4 There were occasionally turbidity and SS exceedances at WSD9 recorded on 9 and 21 December 2013 during flood and ebb tide in this reporting month. Confirmed with Contractor, in view of no marine works was conducted on that day and since WSD9 was located at the downstream of the Project, the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.

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

6.4.5 There were occasionally DO exceedances at Ex-WPCWA SE and Ex-WPCWA SW recorded in this reporting month. No odour nuisance was noted during DO monitoring. After checking with Contractor, there was no marine work undertaken at ex-WPCWA. The exceedances were possible in relation to the accumulation of organic particles discharge from culvert near monitoring station and considered not related to the Projects works.

- 6.4.6 There were turbidity and SS exceedances at C7 recorded on 4 December 2013. Installation of rebar for EVA at Eastern Breakwater and dredging of type 2 marine sediment was conducted by contractor HY/2009/15 on that day. Mitigation measure including frame type silt curtain was confirmed in place. In view of no further exceedance was recorded in the next consecutive monitoring despite on-going marine works within same sampling date. The exceedance was considered as non-project related.
- 6.4.7 There were turbidity and SS exceedances at C7 recorded on 16 December 2013. Underwater silt screen inspection was observed during water quality monitoring. According to on-site observation during sampling, it was considered that the dragging action of unwinding silt curtain installed around the silt screen could have impaired the water quality and lead to the abnormal turbidity and SS level. Contractor was advised to review the underwater silt screen inspection process as a propose to reduce the impact on water quality in the vicinity of water quality monitoring station. In view of no further exceedance was recorded in the next consecutive monitoring despite on-going marine works within same sampling date. The exceedance was considered as works-related

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

- 6.4.8 No exceedance was recorded in this reporting month.

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

- 6.4.9 No exceedance was recorded in this reporting month.

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

- 6.4.10 There was turbidity and SS exceedance recorded at WSD19 on 30 November 2013, 4, 7, 9, 16 and 18 December 2013 during flood tide and ebb tide, confirmed with Contractor, silt screen was in proper condition. Dredging and filling for seaway rock mould formation works was conducted by Contractor HK/2012/08 during monitoring. Mitigation measures including framed silt curtain was confirmed in place. The exceedances was considered not project related.

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

- 6.4.11 There were turbidity and SS exceedances at C7 recorded on 16 December 2013. Underwater silt screen inspection was observed during water quality monitoring. According to on-site observation during sampling, it was considered that the dragging action of unwinding silt curtain installed around the silt screen could have impaired the water quality and lead to the abnormal turbidity and SS level. Contractor was advised to review the underwater silt screen inspection process as a propose to reduce the impact on water quality in the vicinity of water quality monitoring station. In view of no further exceedance was recorded in the next



consecutive monitoring despite on-going marine works within same sampling date. The exceedance was considered as works-related

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

- 6.5.1 There was no non-compliance from the site audits in the reporting period. The observations and recommendations made in each individual site audit session were presented in Section 8.
- 6.5.2 No project-related non-compliance from monitoring was recorded in the reporting month.

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

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

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

- 7.0.1. According to Condition 3.4 of the EP-356/2009, this section addresses the relevant cumulative construction impact due to the concurrent activities of the current projects including the Central Reclamation Phase III, Central-Wanchai Bypass and Island Eastern Corridor Link projects.
- 7.0.2. According to the Monthly EM&A report (November 2013) of Central Reclamation Phase III (CRIII) for Contract HK 12/02, remaining footpath construction at Edinburgh Place were performed in the December 2013 reporting month. The water quality monitoring was completed in October 2011 and no Project-related exceedance was recorded for air and noise monitoring. It can be concluded that cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was insignificant.
- 7.0.3. According to the construction programme of Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects, the major construction activity under Wan Chai Development Phase II were marine works at HKCEC areas, cross-harbour Watermains, Fresh Watermains and Cooling Watermains Installations, tunnel works at Wan Chai East. The major construction activities under Central-Wan Chai Bypass and Island Eastern Corridor Link Projects were ELS work and tunnel water proofing works at TS4 and cut and cover tunnel construction at TPCWAE. Bridge construction and tunnel works at Central Interchange, ELS segment launching works and IEC parapet demolition at North Point area. The major environmental impact was water quality impact at Causeway Bay and Wan Chai. Land-based construction activities were excavation at TS2, ELS work and tunnel water proofing works at TS4, cut and cover tunnel construction at TPCWAE, tunnel works at Central and ELS work at North Point and tunnel works at Wan Chai East in the reporting month.
- 7.0.4. The major environmental impacts generated from tunnel works at Central and tunnel works at Wan Chai East, IECL and Causeway Bay Typhoon Shelter were undertaken in the reporting month.. As no project related exceedance was recorded in the Project, it was considered no adverse environmental impact caused by the Project works. Thus, it is evaluated the cumulative construction impact was insignificant.

**8. Environmental Site Audit**

8.0.1. During this reporting month, weekly environmental site audits were conducted for Contracts no. HK/2009/01, HK/2009/02, HY/2009/15, HK/2010/06, HY/2009/19, HK/2012/08 and HY/2010/08. No non-conformance was identified during the site audits.

8.0.2. Four site inspections for Contract no. HK/2009/01 was carried out on 4, 11, 20, 23 December 2013 in reporting month. Results of these inspections and outcomes are summarized in Table 8.1.

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

Item	Date	Observations	Action taken by Contractor	Outcome
131204_01	4-Dec-13	Public road should be kept in clean condition ( Convention Avenue)	The public road was cleared	Completion as observed on 11 Dec 2013
131220_01	20-Dec-13	Mud abd silt should be prevented from leakage into public road, mud and silt should be cleaned and oil stain should be cleaned as chemical waste ( Convention Avenue)	The public road was cleared	Completion as observed on 23 Dec 2013

8.0.3. Five site inspections for Contract no. HK/2009/02 was carried out on 28 November 2013, 5, 12, 18, and 23 December 2013 in reporting month. Results of these inspections and outcomes are summarized in Table 8.2.

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

Item	Date	Observations	Action taken by Contractor	Outcome
131223_01	23-Dec-13	Chemical containers should be properly stored as chemical waste. (WCR2)	Chemical container was removed	Completion as observed on 02 Jan 2014
131223_02	23-Dec-13	Drip try should be provided for oil drum. (WCR2)	Oil drum have been removed.	Completion as observed on 02 Jan 2014

8.0.4. Four site inspections for Contract no. HY/2009/15 was carried out on 3, 10, 17 and 24 December 2013 in reporting month. The results of these inspections and outcomes are summarized in **Table 8.3**.

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

Item	Date	Observations	Action taken by Contractor	Outcome
131203_01	3-Dec-13	Clear the leaked oil as chemical waste (TS2)	Chemical waste were removed	Completion as observed on 10 Dec 2013
131210_01	10-Dec-13	Provide proper collection point for collecting surface runoff to prevent overflow to nearby water	Proper collection point have been provided.	Completion as observed on 17 Dec 2013

Item	Date	Observations	Action taken by Contractor	Outcome
		( TS1)		
131210_02	10-Dec-13	Provide tarpaulin sheet during excavated material transfer and clear the mud resting at the edge of barge.	Tarpaulin sheet have been provided	Completion as observed on 17 Dec 2013
131217_01	17-Dec-13	Provide drip tray to oil containers and clear the leaked oil as chemical waste (TS2, TS4)	Drip trays were provided	Completion as observed on 24 Dec 2013
131217_02	17-Dec-13	Reinforce the embankment around critical area to prevent the runoff of concreting runoff to waterbody.	Embankment were reinforced to prevent runoff	Completion as observed on 24 Dec 2013

- 8.0.5. Four site inspections for Contract no. HK/2010/06 was carried out on 2, 9, 19 and 23 December 2013 in reporting month. No observation is found in the reporting month.
- 8.0.6. Four site inspections for Contract no. HY/2009/19 was carried out on 4, 12, 18 and 23 December 2013 in reporting month. No observation is found in the reporting month.
- 8.0.7. Four site inspections for Contract no. HK/2012/08 were carried out on 3, 10, 17 and 24 December 2013 in this reporting period. The results of these inspections and outcomes are summarized in **Table 8.5**.

**Table 8.5 Summary of Environmental Inspections for Contract no. HK/2012/08**

Item	Date	Observations	Action taken by Contractor	Outcome
131203_01	3-Dec-13	The objects around the tree roots should be removed and contractor was reminded to update the landscape plan.	Objects placed around the tree roots have been removed.	Completion as observed on 10 Dec 2013.

- 8.0.8. Five site inspections for Contract no. HY/2010/08 was carried out on 28 November 2013, 5, 12, 19 and 27 December 2013 in this reporting period. The results of these inspections and outcomes are summarized in **Table 8.6**.

**Table 8.6 Summary of Environmental Inspections for Contract no. HY/2010/08**

Item	Date	Observations	Action taken by Contractor	Outcome
131128_01	28-Nov-13	Provide drip tray to oil drums	Drip trays were provided	Completion as observed on 05 Dec 2013
131219_01	19-Dec-13	Clear the muddy residue at site exit (Gate 3 )	Mud residue was cleared	Completion as observed on 27 Dec 2013

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

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

**Table 9.1 Cumulative Statistics on Complaints**

Reporting Period	No. of Complaints
Commencement works (Mar 2010) to last reporting month	28
December 2013	0

**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>0</b>	<b>0</b>

## 10. Conclusion

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

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

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

Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2009/01	<p>Marine Works</p> <ul style="list-style-type: none"> <li>• Import rock fill from HATS to extend the coastline at East of Area 8.</li> <li>• The roof slab of bay 8 would be cast. Backfilling works at box culvert bay 8 and bay9 would be carried out for further road diversion works.</li> <li>• Construction of RC structure proposed box culvert wall and roof slab at bay 8 and bay 9.</li> <li>• D-wall construction at Stage 3.</li> <li>• Outfall construction for discharge pipes at Expo Drive East.</li> </ul> <p>Waterworks (Cooling Watermains, Salt Watermains and Sewer)</p> <ul style="list-style-type: none"> <li>• Salt watermain laying works for the works area in Zone A1-5B, A1-5C and A1-5A2 near Grand Hyatt hotel.</li> <li>• Salt watermain laying works at Harbour Road would go further north to Zone A5-3, A5-4 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
	<p>A5-6.</p> <ul style="list-style-type: none"> <li>• Cooling main laying works along Expo Drive East and night works.</li> <li>• Pedestrian relocation at the temporary steel bridge near junction of Expo Drive East and Convention Ave for cooling main laying works</li> </ul> <p>Tunnel Works</p> <ul style="list-style-type: none"> <li>• Stage 3 tunnel works include the installation of pre-bored H-pile and Stage 3 Southern D-wall construction.</li> <li>• Demolition of the HKCEC Pump home.</li> <li>• ELS for Stage 1 CWB.</li> <li>• Backfilling Temporary Water Channel &amp; Reclaim Land at CH220- CH260.</li> </ul>	
HK/2009/02	<ul style="list-style-type: none"> <li>• Special movement joint rectification works for P8 discharge mains at CHBH152m.</li> <li>• Hatch box replacement for P7 intake mains and cable relocation works for subsequent construction of 8x8 pit.</li> <li>• All outstanding works for handing over P7, P8 and P9 Cooling Water Pumping Stations.</li> <li>• The connection with the existing DN600 salt watermains at Hung Hing Road.</li> <li>• The water tightness test for Salt Water Intake Culvert.</li> <li>• Removal of temporary bulkhead</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> <li>• Review silt screen deployment and silt curtain deployment and resubmit associate plans to EPD</li> <li>• Implement silt screen and silt curtain in accordance with the</li> </ul>



Contract No.	Key Construction Works	Recommended Mitigation Measures
	<p>for commencement of wet test of the WSD Salt Water Pumping Station.</p> <ul style="list-style-type: none"> <li>• Wet test of the WSD Salt Water Pumping Station and connection with existing saltwater system at Hung Hing Road.</li> <li>• Outstanding works at WSD Salt Water Pumping Station.</li> <li>• Box Culvert N1 &amp; Drain FRP-N and the associated testing for handing over to DSD</li> <li>• Drainage re-diversion from temp 1800 dia. drain to the completed Box Culvert N1.</li> <li>• ABWF works in Ferry Pier.</li> <li>• Rectifying the defects in movable ramps.</li> <li>• Most of the individual T&amp;C of E&amp;M equipment at Ferry Pier</li> <li>• Utility installation works and EVA construction extending from P7 Cooling Water Pumping Station to the Ferry Pier.</li> <li>• Construction of Temporary Covered Walkway footing at GL5 in the vicinity of Ferry Pier.</li> <li>• Design verification works of the Eastern Bulkhead by the CSD Designer for substantial handing over to Section IXA of the Works.</li> <li>• Seawall blocks installation and filling works at WCR4/TWCR4 after abandonment of existing temp 1800 dia. drain at WCR4.</li> </ul>	<p>associated plans submitted to EPD.</p>

Contract No.	Key Construction Works	Recommended Mitigation Measures
HY/2009/15	<ul style="list-style-type: none"> <li>Construction of EVA</li> </ul>	<ul style="list-style-type: none"> <li>Daily visual inspection of silt screen and silt curtain to ensure its operation properly</li> <li>Implement silt screen and silt curtain in accordance with the associated plans submitted to EPD.</li> </ul>
HK/2010/06	<ul style="list-style-type: none"> <li>Sheet 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>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>
HY/2009/19	<ul style="list-style-type: none"> <li>Removal of strut at ELS will commence</li> <li>Construction works for Box Culvert T1</li> <li>Removal of marine platform</li> <li>Construction of pile cap, pier &amp; cross head (Marine)</li> <li>ELS, EVB and Cut &amp; Cover Tunnel</li> <li>Installation of dewatering well</li> <li>Laying of 1500φ pipe</li> <li>Launching of segments</li> <li>Extraction of temporary pile from marine section</li> </ul> <p>Construction of bridge truss TA1</p>	<ul style="list-style-type: none"> <li>To conform the installation and setting as in the silt screen and silt curtain deployment plan</li> </ul>
HK/2012/08	<ul style="list-style-type: none"> <li>Dredging</li> <li>ELS for box culvert La at Lung King Street</li> <li>Filling for seawall rock mound formation</li> <li>Filling for reclamation at sea area of former Expo Drive West Bridge</li> <li>Caisson seawall units installation</li> <li>Works for abandoning submarine sewerage outfall</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>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>

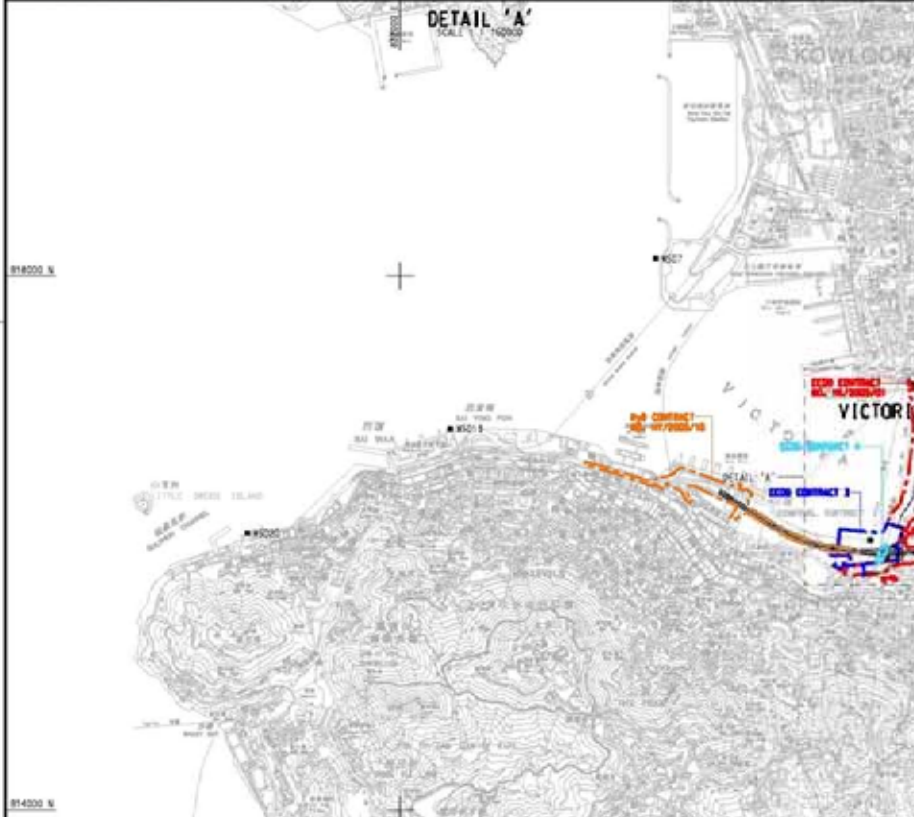
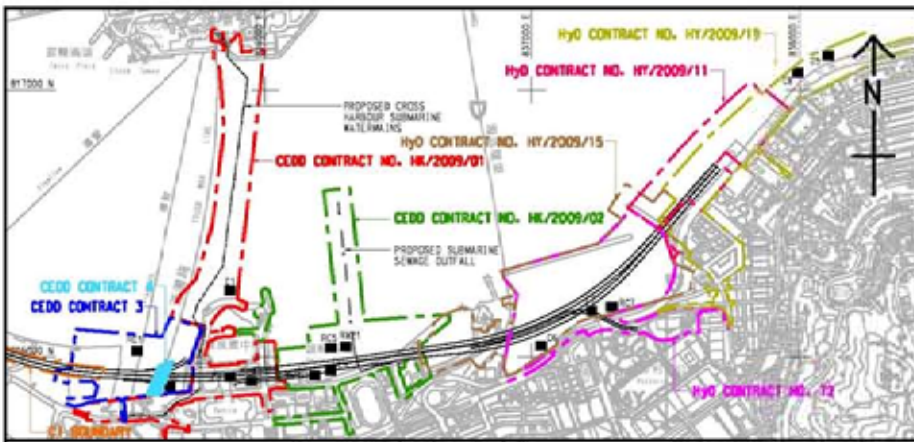


Contract No.	Key Construction Works	Recommended Mitigation Measures
HY/2009/08	<ul style="list-style-type: none"><li>Dredging works</li></ul>	<ul style="list-style-type: none"><li>To conform the installation and setting as in the silt screen and silt curtain deployment plan</li><li>Daily visual inspection 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**
- 01 HONG KONG CONVENTION AND EXHIBITION CENTRE EXTENSION
  - 02 TELECOM HONG KONG ACADEMY FOR PERFORMING ARTS / SALT ON CENTRE
  - 03 HONG KONG CONVENTION AND EXHIBITION CENTRE PHASE 1
  - 04 WAN CHAI TOWER AND GREAT EXHIBITION CENTRE
  - 05 SUN HANG KAI CENTRE
  - 06 PROPOSED EXHIBITION STATION / WORLD TRADE CENTRE
  - 07 WINDZER HOUSE
  - 08 CITY GREEN
  - 09 PREVIENT CENTRE
  - 103 PROPOSED HERPA EXTENSION
  - 105 SUN HANG KAI CENTRE (REPROVISION)
  - 107 WINDZER HOUSE (TEMPORARY REPROVISION)

**MSD SALT WATER INTAKE**

- W521 WAN CHAI
- W401 WAN CHAI (REPROVISION)
- W501 GEMUNION ISLAND
- W525 TAI WAN
- W5210 SHI KONG L'ONG
- W5215 SAI WAN HO
- W5217 SCARRY BAY
- W5219 SHEUNG WAN
- W5220 KENNEDY TOWN

**DESIGNATED PROJECTS (DP)**

DP1	- CENTRAL WAN CHAI BYPASS (CWB) INCLUDING ITS ROAD TUNNEL AND SLIP ROADS
DP2	- ROAD P2 AND OTHER ROADS (PRIMARY / DISTRICT DISTRIBUTOR ROADS)
DP3	- PERMANENT AND TEMPORARY REDUPLICATION WORKS INCLUDING ASSOCIATED DREDGING WORKS IN WAN CHAI DEVELOPMENT PHASE 1 (WCH1) AREA
DP4	- TEMPORARY EMERGENCY 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 PROJECTS INVOLVED	CONSTRUCTION COMMENCEMENT
CEDD CONTRACT NO. HK/2009/01	DP1, DP2, DP6	APRIL 2010
CEDD CONTRACT NO. HK/2009/02	DP1, DP2, 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, PWD CENTRAL - WAN CHAI BYPASS - CANAL, FLOOD PREVENTION AND TESTING WORKS (STAGE 1)

**LOCATIONS OF WATER QUALITY MONITORING STATIONS**



PROJECT NUMBER: 60041297/C5/SK001

DESIGNED BY: AEC	CHECKED BY: AEC	DATE: 11/2008	SCALE: METRES
DRAWN BY: AEC		DATE: 11/2008	
CHECKED BY: AEC		DATE: 11/2008	
DESIGNED BY: AEC		DATE: 11/2008	





**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 DIL 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:**

[Dotted pattern]	PORTION NPR1	[Cross-hatch pattern]	PORTION NPR4
[Diagonal lines /]	PORTION NPR2	[Diagonal lines \]	PORTION NPR5
[Diagonal lines /]	PORTION NPR3	[Stippled pattern]	PORTION NPR6
[Diagonal lines \]	PORTION NPR4	[Horizontal lines]	PORTION NPR7

B	WORKING DRAWING	REV	DEC 09
A	TENDER ADDENDUM NO. 1	RC	OCT 09
-	TENDER DRAWING	RC	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. 圖紙編號	60095653/NP/1651B
DESIGNED BY 設計人	TTF
CHECKED BY 校核人	CJH
DATE 日期	AT 17 1000 2009
SCALE 比例尺	1:1000
UNIT 單位	METRES

WORKING DRAWING  
圖紙





LOCATION PLAN  
SCALE 1 : 5000

**NOTES:**  
 1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.  
 2. THE RESTRICTION ZONE IS THIS DRAWING WILL COME INTO EFFECT AFTER THE OPERATION OF THE GOVERNMENT HULLING AT EDP/D/D/E LAST.

**LEGEND:**

	CONTRACT BOUNDARY
	WORKING RESTRICTION ZONE
	NAVIGATION AND WORKING RESTRICTION ZONE
	WORKING BARGE, NAVIGATION AND WORKING RESTRICTION ZONE

TENDER ADDENDUM NO. 4	DATE: 21/11/09
TENDER ADDENDUM NO. 1	DATE: 21/11/09
TENDER DRAWING	DATE: 21/11/09

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

**WAN CHAI DEVELOPMENT PHASE II**

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

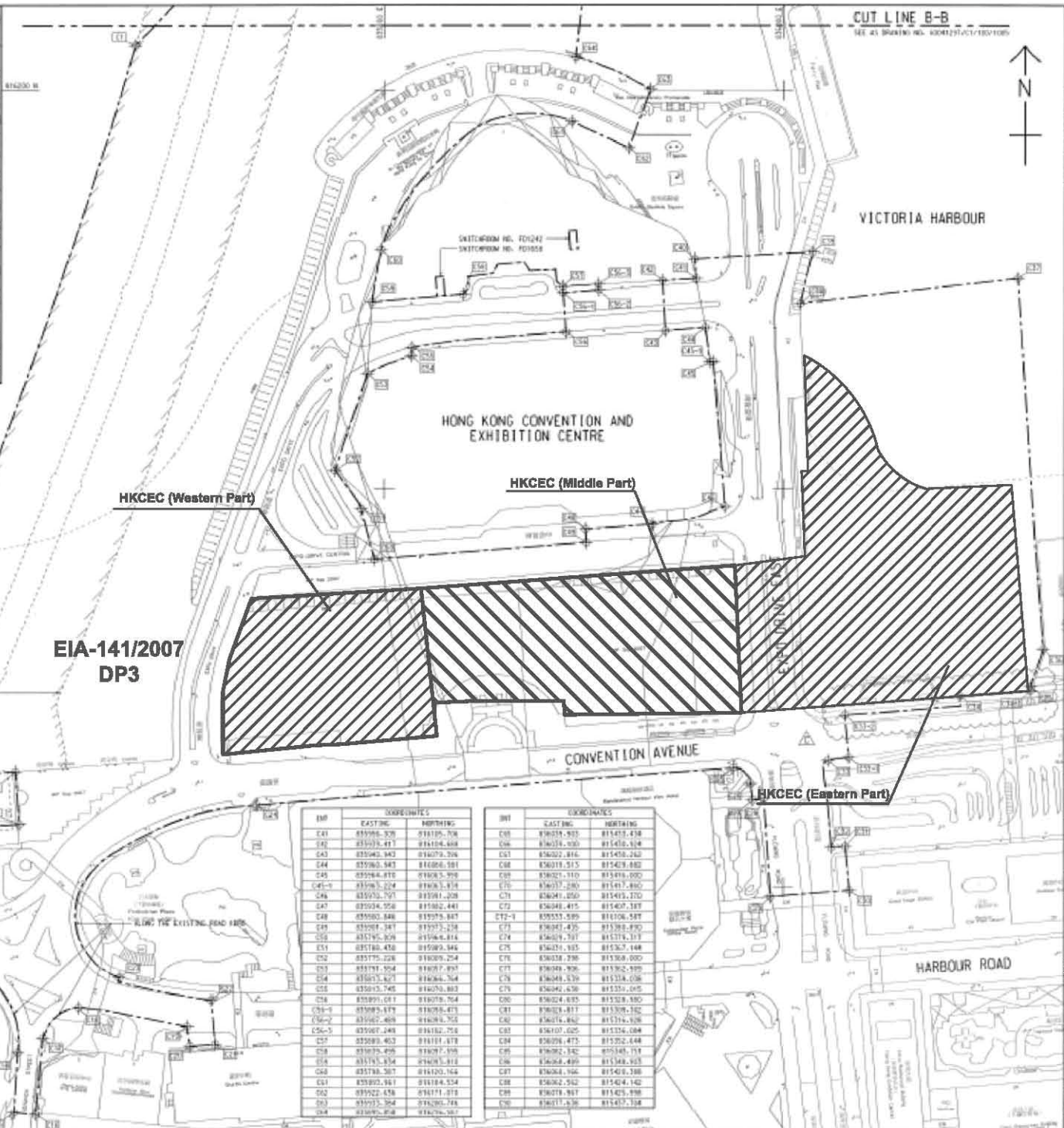
**AECOM**

DRGNO.	60041297/C1/100/10108
DATE	16/2009/01
SCALE	AS 1:5000
COPYRIGHT RESERVED	



**INSET 'A'**  
SCALE 1:1000

CENTRAL DISTRICT



**EIA-141/2007  
DP3**

IMP	COORDINATES	
	EASTING	NORTHING
C41	85996.526	818105.708
C42	85975.417	818104.408
C43	85962.943	818079.206
C44	85962.543	818086.581
C45	85964.818	818085.259
C46	85958.524	818083.814
C46	85952.757	818081.208
C47	85954.956	818082.441
C48	85950.846	818078.887
C49	85951.347	818073.238
C50	85950.529	818066.814
C51	85948.478	818080.946
C52	85975.226	818089.224
C53	85973.504	818077.893
C54	85955.627	818064.764
C55	85953.745	818070.883
C56	85997.071	818076.764
C56-1	85995.675	818078.673
C56-2	85982.469	818078.762
C56-3	85987.248	818182.758
C57	85989.463	818181.878
C58	85978.496	818087.199
C59	85975.374	818083.818
C60	85978.507	818120.144
C61	85989.881	818184.524
C62	85982.438	818171.812
C63	85993.384	818280.748
C64	85995.818	818276.307

IMP	COORDINATES	
	EASTING	NORTHING
C65	85958.953	818413.438
C66	85954.030	818412.614
C67	85922.816	818450.240
C68	85919.515	818453.882
C69	85923.110	818494.000
C70	85937.289	818471.890
C71	85941.050	818493.270
C72	85948.415	818467.187
C72-1	85955.589	818106.587
C73	85945.435	818385.890
C74	85959.797	818374.137
C75	85924.185	818332.148
C76	85938.298	818368.000
C77	85949.706	818362.899
C78	85948.439	818334.038
C79	85942.630	818351.015
C80	85924.635	818328.880
C81	85928.417	818309.182
C82	85918.882	818376.188
C83	85910.025	818326.084
C84	85926.473	818322.444
C85	85982.342	818348.711
C86	85984.499	818348.925
C87	85984.196	818345.388
C88	85982.512	818344.142
C89	85978.987	818345.898
C90	85977.630	818337.198

**CUT LINE B-B**  
SEE AT DRAWING NO. K000295/C1/100/1006



**KEY PLAN**  
SCALE 1:1,000

**NOTE:**  
1. FOR NOTES & LEGEND, REFER TO DRAWING NO. K000295/C1/100/1006.

IMP	COORDINATES	
	EASTING	NORTHING
C1	859879.205	818222.551
C2	859795.971	818282.299
C3	859414.563	818284.826
C4	859417.020	818281.014
C5	859582.492	818285.522
C6	859581.584	818288.612
C7	859586.540	818281.197
C8	859589.191	818287.147
C9	859486.433	818282.247
C10	859491.082	818287.060
C11	859485.389	818288.075
C12	859487.486	818288.027
C13	859528.469	818284.817
C14	859486.433	818287.122
C15	859474.289	818288.530
C16	859475.195	818285.526
C17	859489.136	818284.441
C18	859446.085	818288.816
C19	859381.421	818280.587
C20	859382.537	818280.881
C21	859378.295	818274.484
C22	859373.182	818284.245
C23	859387.086	818288.074
C24	859378.984	818283.670
C25	859375.280	818280.241
C26	859381.647	818282.286
C27	859384.025	818283.836
C28	859389.218	818284.245
C29	859391.525	818280.382
C30	859383.781	818288.647
C31	859331.216	818288.470
C32	859324.142	818282.117
C33	859321.081	818284.882
C34	859326.299	818284.709
C35	859327.428	818282.066
C36	859386.187	818284.280
C37	859324.832	818288.089
C38	859324.747	818282.285
C39	859326.850	818281.734
C40	859318.190	818288.037
C41	859328.810	818287.295
C42	859316.906	818288.086
C43	859305.682	818285.522

E	TENDER ADDENDUM NO.4	SKM/JVL/SEP/09
F	TENDER ADDENDUM NO.2	SKM/JVL/SEP/09
A	TENDER ADDENDUM NO.1	SKM/JVL/SEP/09
-	TENDER DRAWING	SKM/JVL/SEP/09
W	WORKS	SKM/JVL/SEP/09

**CEDD** 土木工程發展局  
Civil Engineering and Development Department

**WAN CHAI DEVELOPMENT PHASE II**

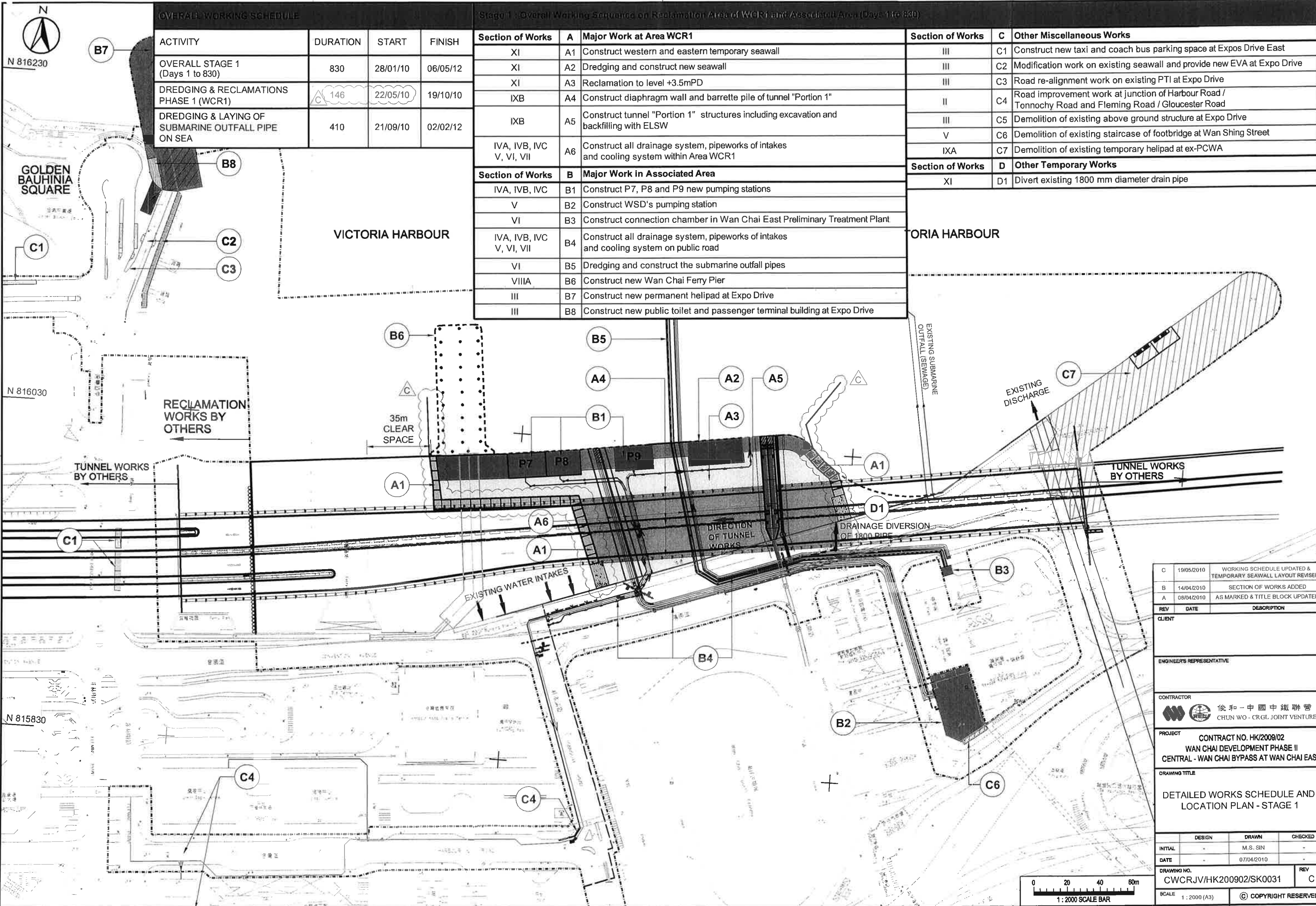
WAN CHAI DEVELOPMENT PHASE II -  
CONTRACT NO. HK/2009/01 -  
HONG KONG CONVENTION AND EXHIBITION CENTRE

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

**AECOM**

DRGNO. 圖號	60041297/C1/100/1006C
DATE 日期	08/2009/01
SCALE 比例	AS SHOWN 按圖所示
DESIGNED BY 繪圖人	NS1
CHECKED BY 校核人	EC
DATE 日期	08/2009/01
SCALE 比例	AS SHOWN 按圖所示
DESIGNED BY 繪圖人	NS1
CHECKED BY 校核人	EC
DATE 日期	08/2009/01
SCALE 比例	AS SHOWN 按圖所示





**OVERALL WORKING SCHEDULE**

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

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

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

REV	DATE	DESCRIPTION
C	19/05/2010	WORKING SCHEDULE UPDATED & TEMPORARY SEAWALL LAYOUT REVISED
B	14/04/2010	SECTION OF WORKS ADDED
A	08/04/2010	AS MARKED & TITLE BLOCK UPDATED

CLIENT: \_\_\_\_\_

ENGINEER'S REPRESENTATIVE: \_\_\_\_\_

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

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

DRAWING TITLE: DETAILED WORKS SCHEDULE AND LOCATION PLAN - STAGE 1

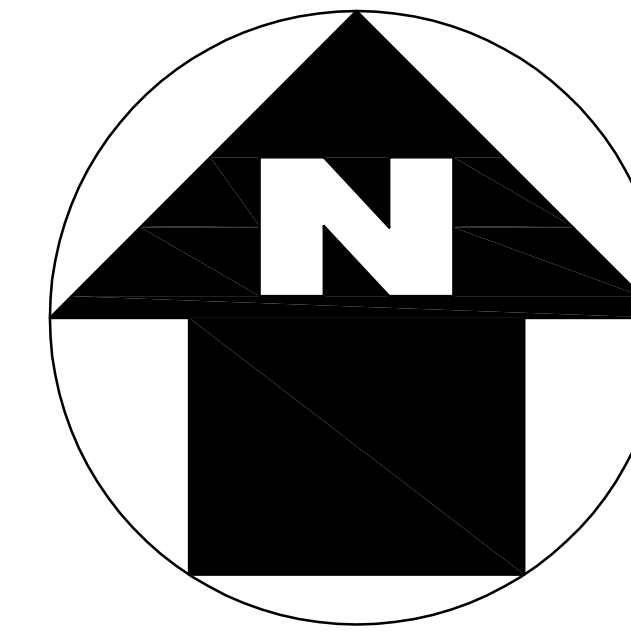
DESIGN	DRAWN	CHECKED
INITIAL: -	M.S. SIN	-
DATE: -	07/04/2010	-

DRAWING NO. CWCRJV/HK200902/SK0031 REV C

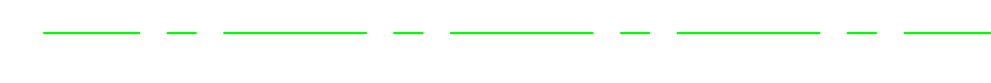
SCALE: 1:2000 (A3) © COPYRIGHT RESERVED



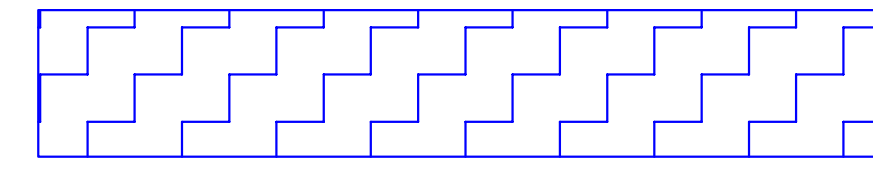
港口  
HARBOUR



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

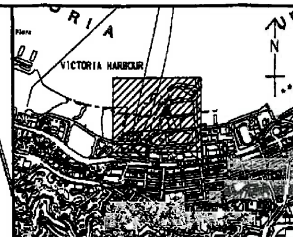
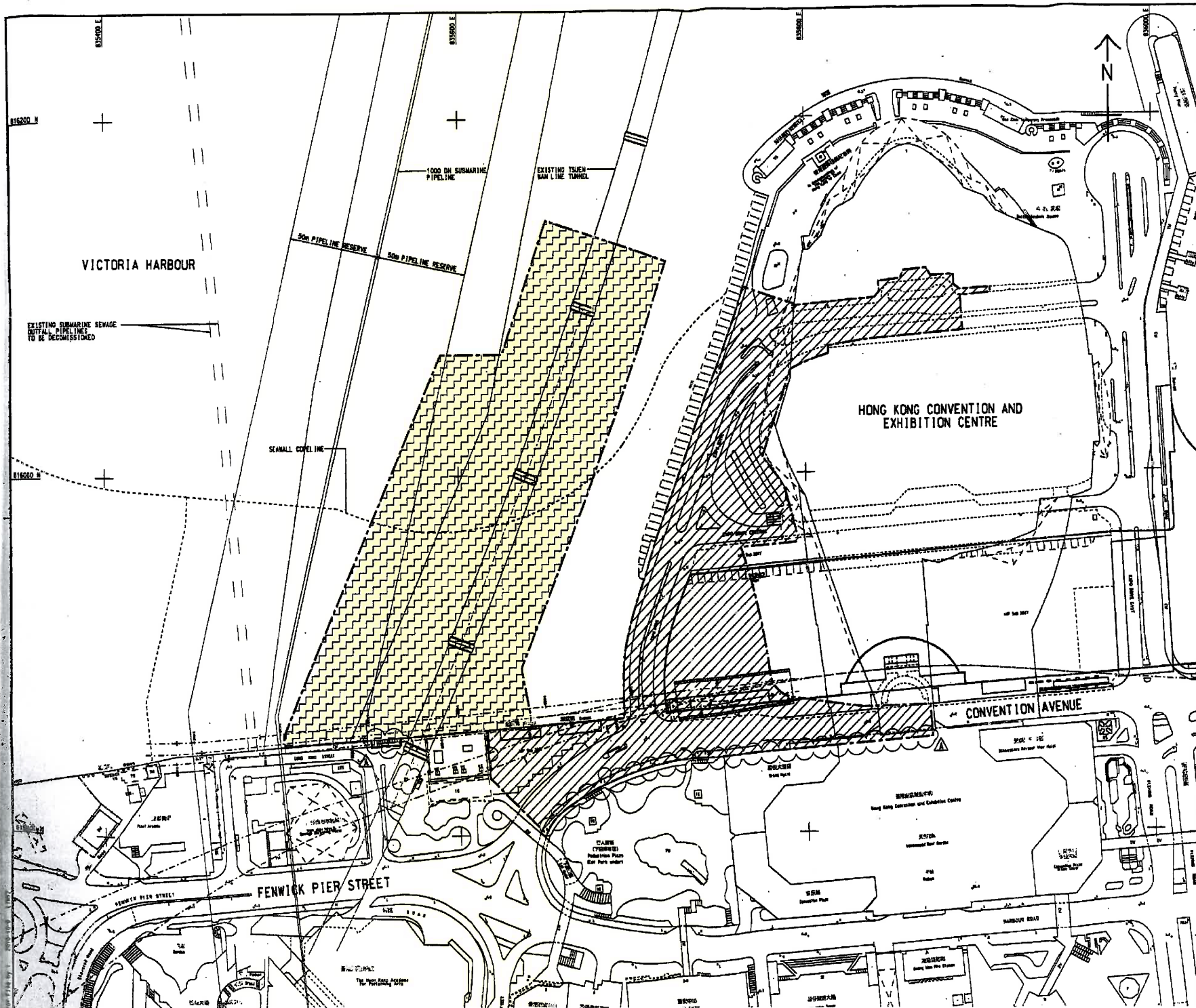
STATUS

DIMENSIONS ARE IN  
MILLIMETERS

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維多利亞公園  
Victoria Park





**KEY PLAN**  
SCALE 1 : 20000

- NOTES:**
- COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.
  - LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (1985) UNLESS OTHERWISE NOTED.
  - DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
  - SETTING OUT DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRICALLY FROM THE DRAWINGS OR FILES.
  - SITE BOUNDARY SETTING OUT POINTS SHALL REFER TO DRAWING NO. 60041297/C4/100/1201.

**LEGEND:**

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

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

**CDP** 土木工務發展局  
Civil Engineering and Development Department

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

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

**AECOM**

DRAWING NO. 60041297/C4/100/1301A

DESIGNED BY SHW	CHECKED BY TRR
DATE 16/2010/06	DATE
SCALE AS SHOWN	SCALE

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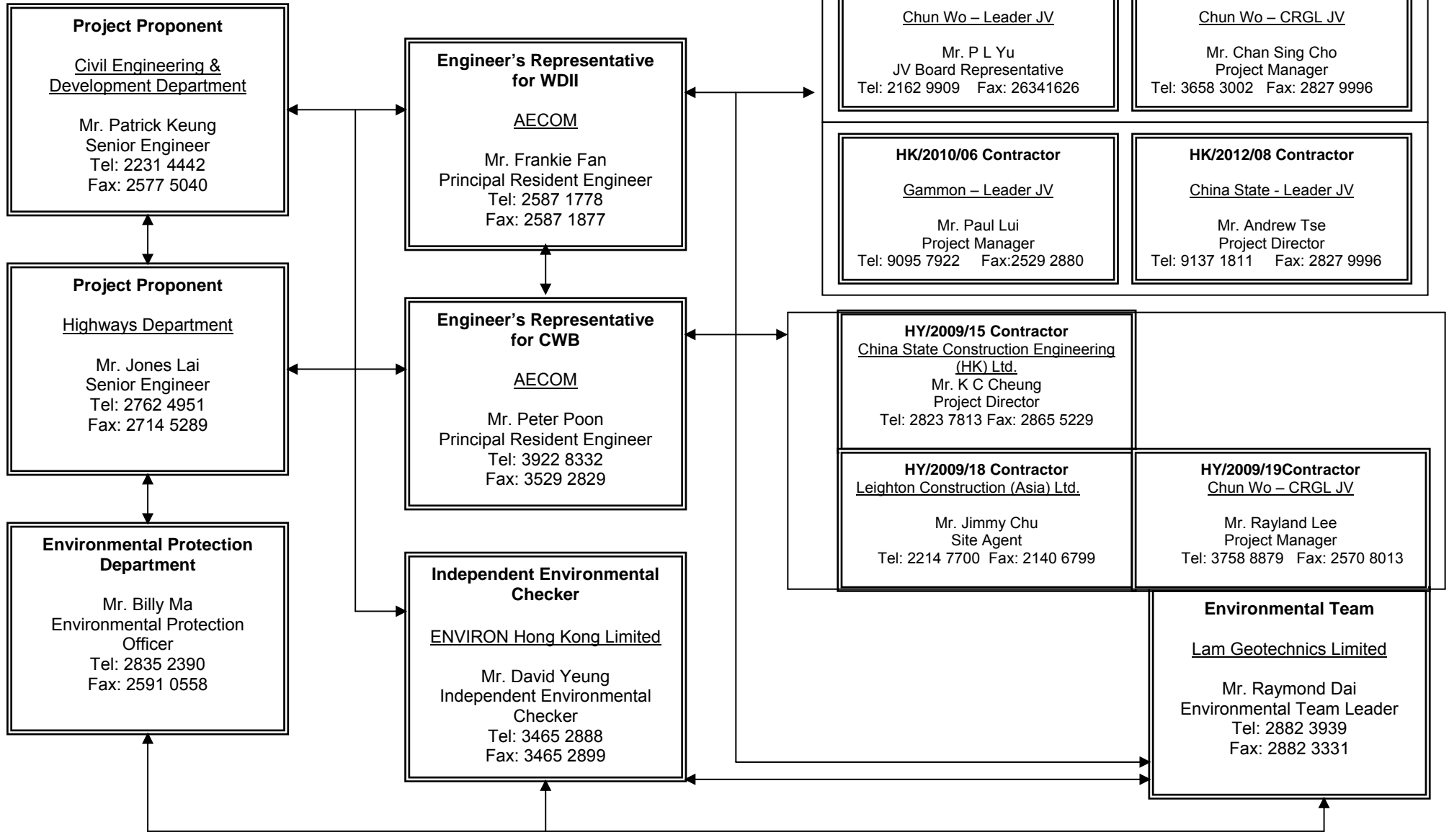


***Figure 2.2***

***Project Organization Chart***



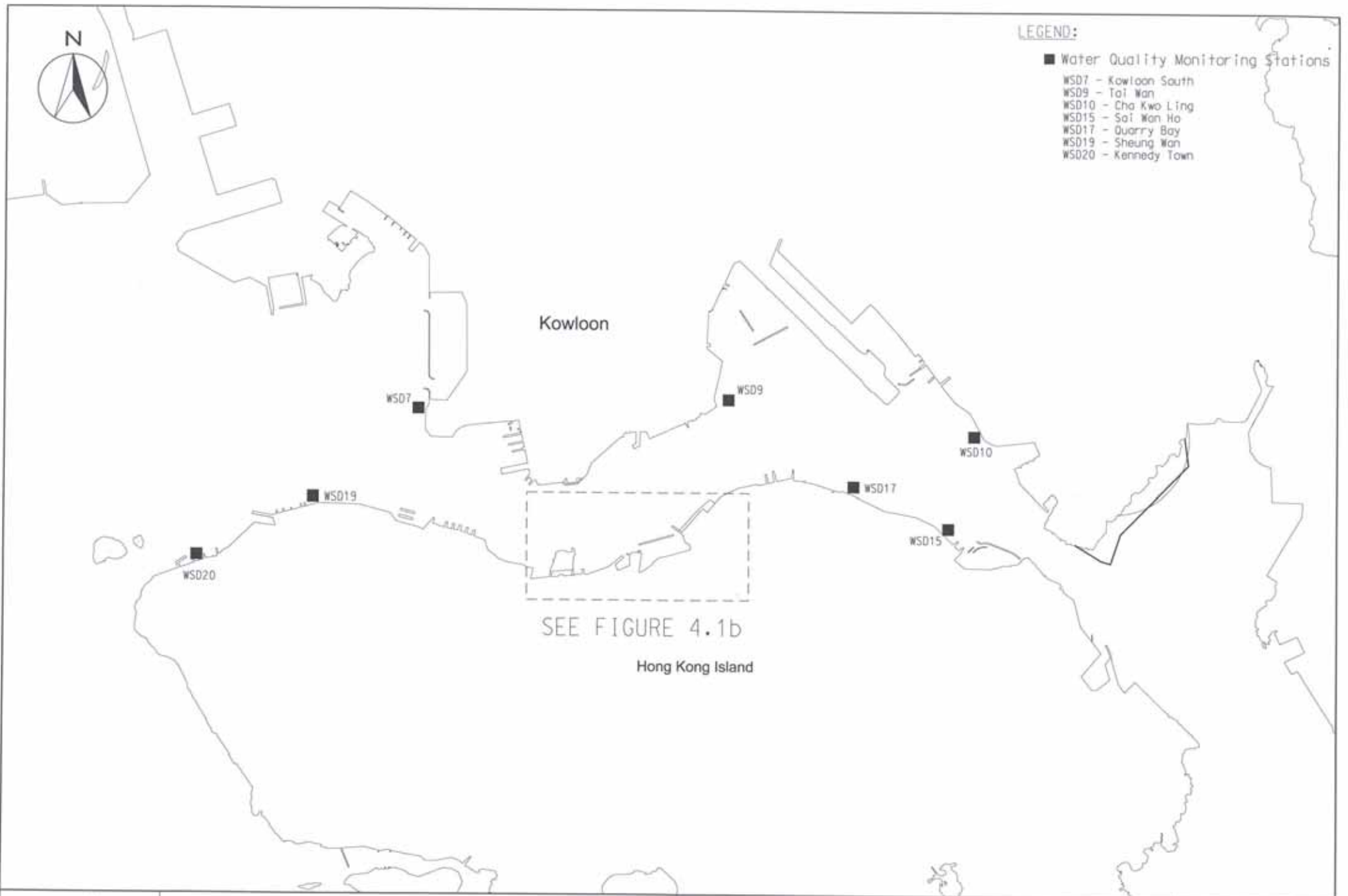
**Project Organization Chart**





***Figure 4.1***

***Locations of Monitoring Stations***





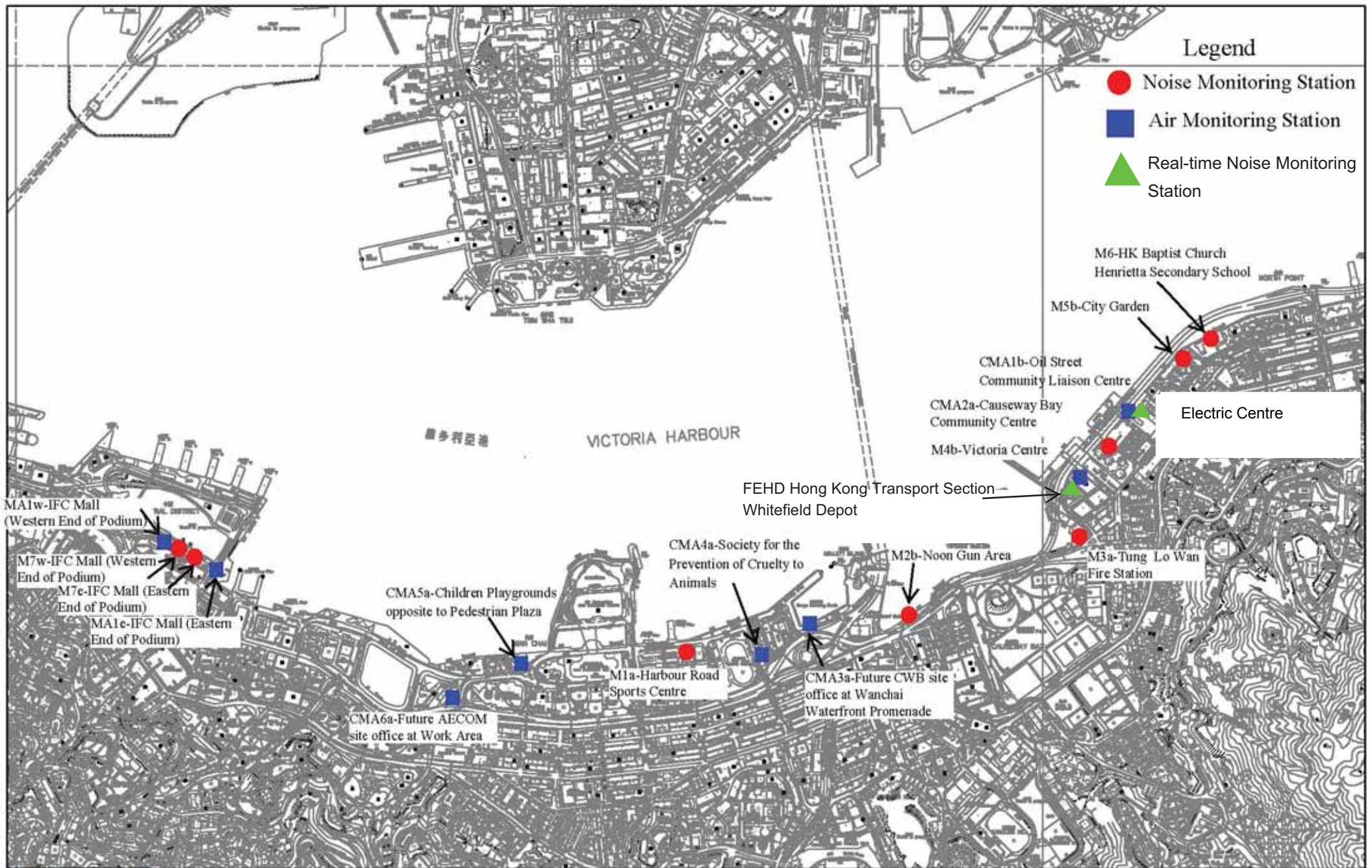
**LEGEND:**

**WATER QUALITY MONITORING STATIONS**

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





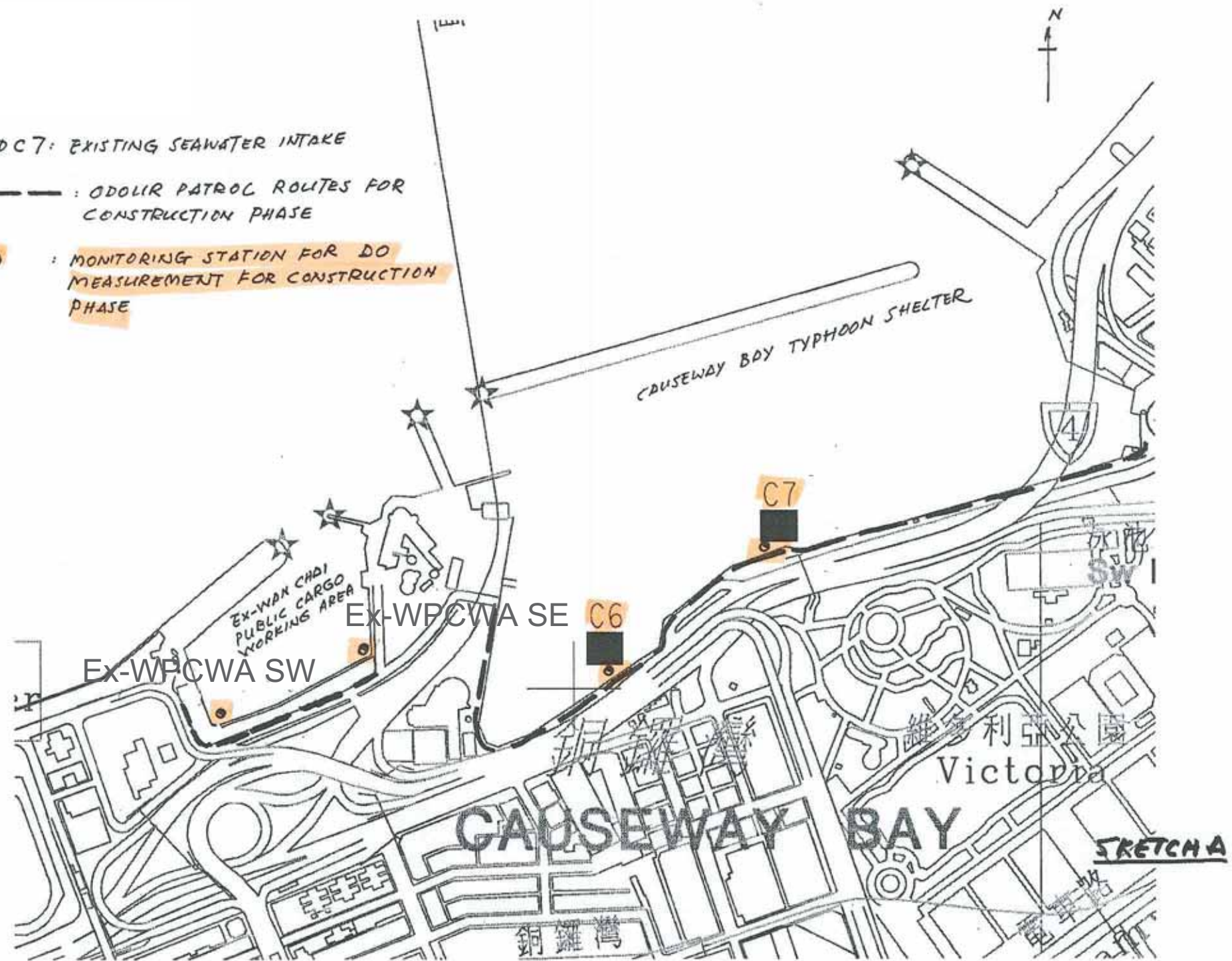




C6 AND C7: EXISTING SEAWATER INTAKE


----- : ODOR PATROL ROUTES FOR CONSTRUCTION PHASE

● : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE




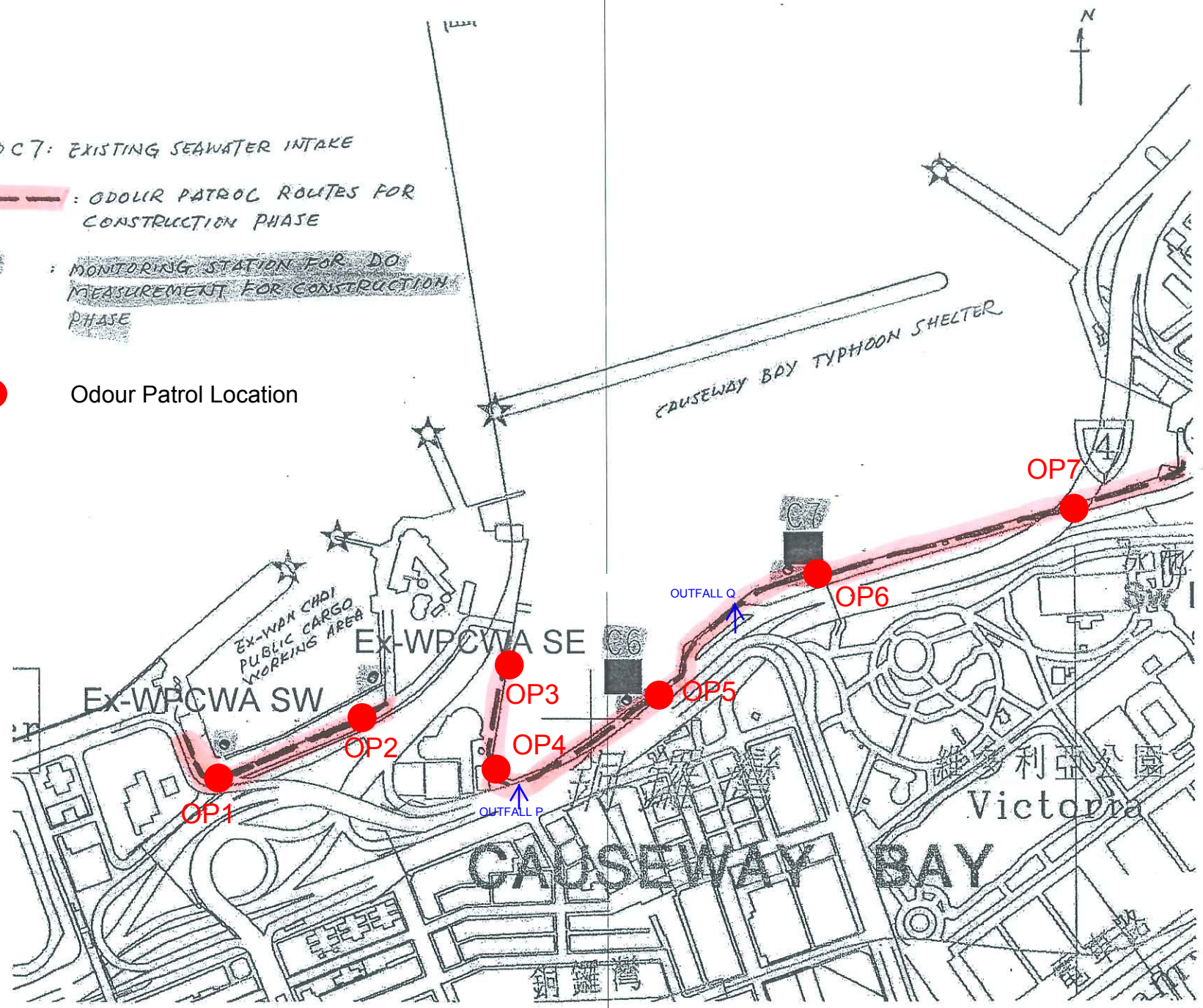


C6 AND C7: EXISTING SEAWATER INTAKE

 : ODOR PATROL ROUTES FOR CONSTRUCTION PHASE

 : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE

 Odour Patrol Location



中環填海計劃  
第三期邊界  
CR III  
LIMIT

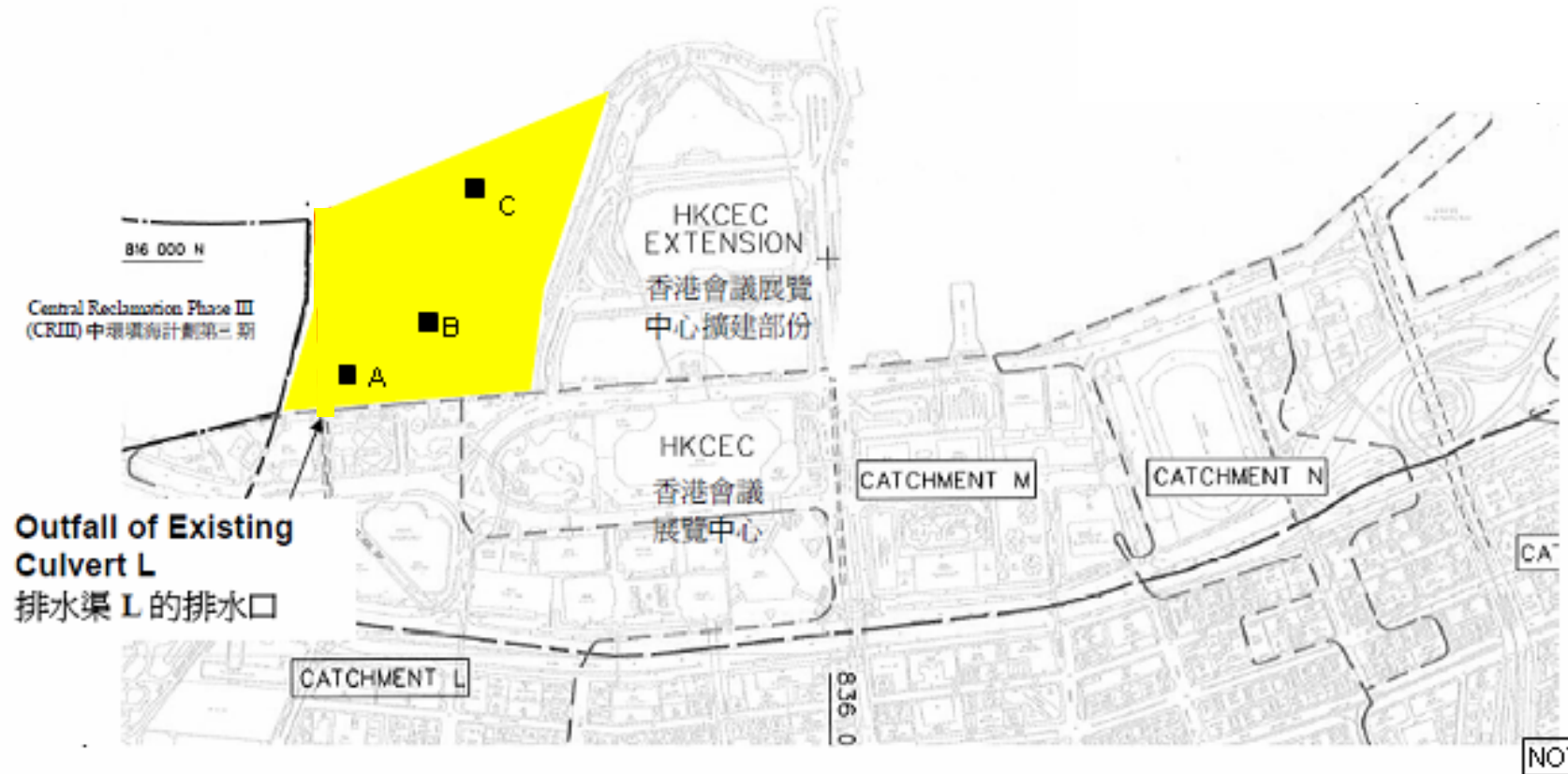
灣仔發展計劃  
第二期區域  
WDII REVIEW  
STUDY AREA



**Embayment Area**



**Additional DO Monitoring Station**  
( A: 835468E, 815857N  
B: 835572E, 815961N  
C: 835659E, 816271N)

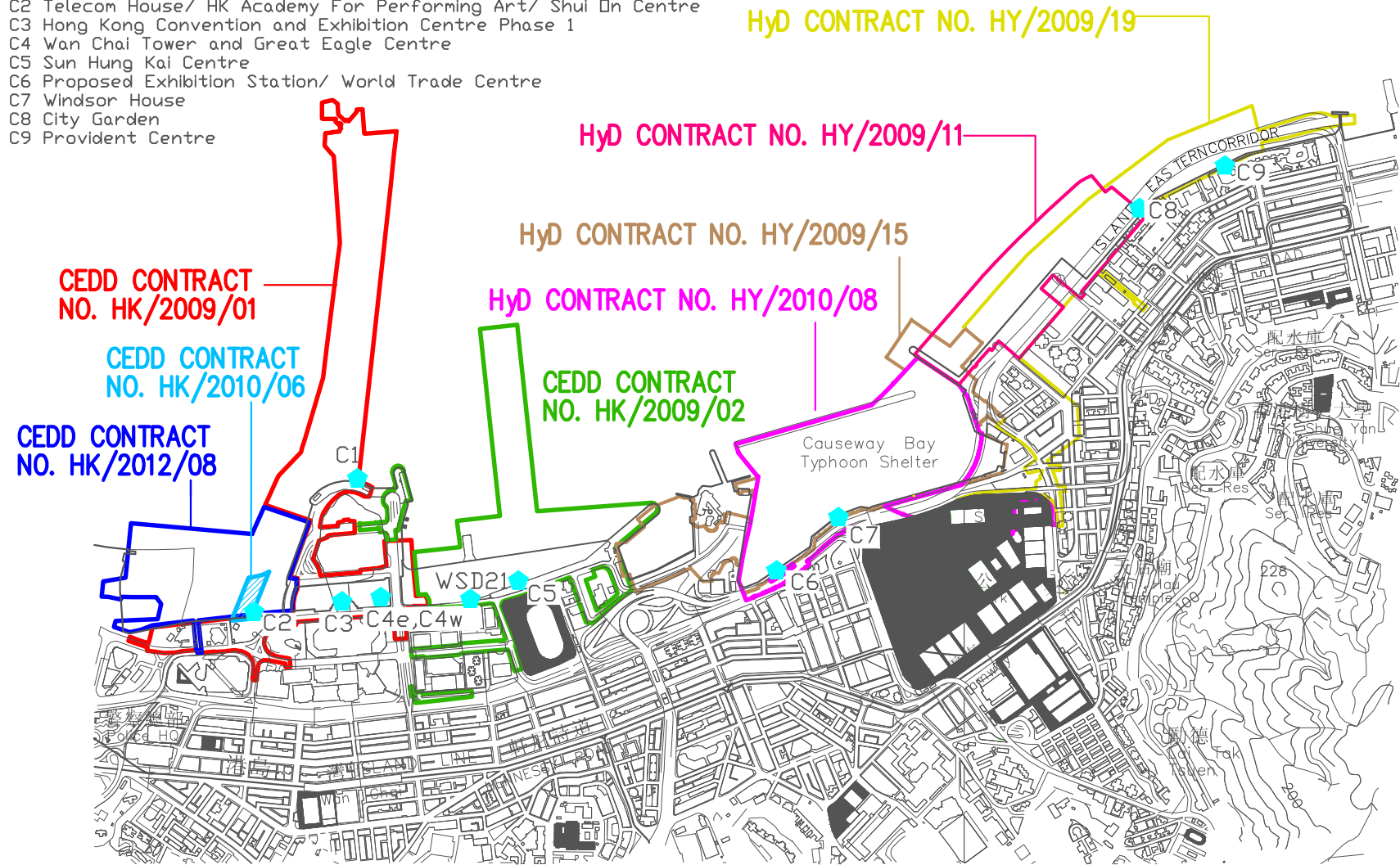


Location Plan of Additional Dissolved Oxygen Monitoring Stations  
for Culvert L Water Discharge Flow



**Legend**

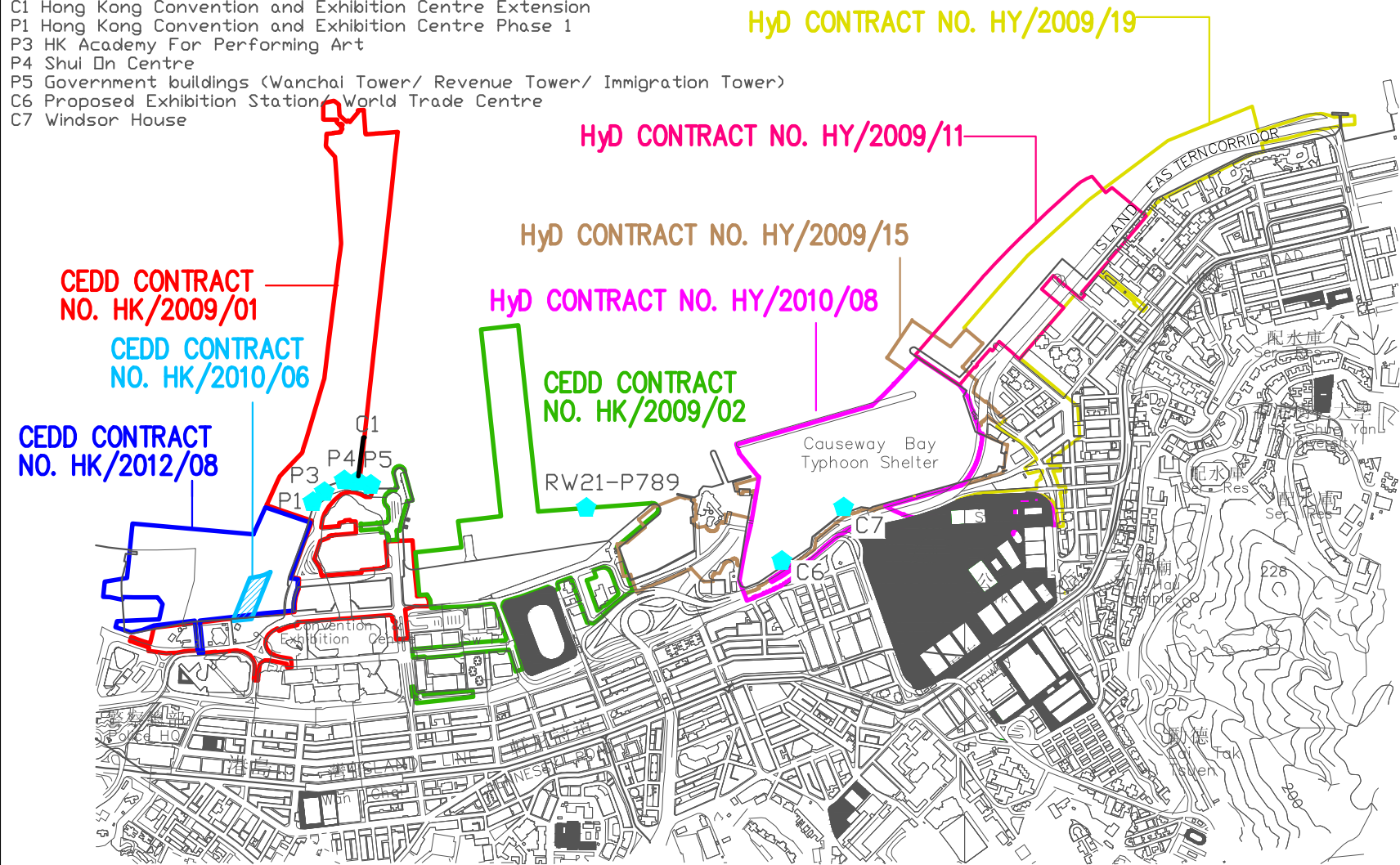
- ◆ Water Quality Monitoring Stations
- C1 Hong Kong Convention and Exhibition Centre Extension
- C2 Telecom House/ HK Academy For Performing Art/ Shui On Centre
- C3 Hong Kong Convention and Exhibition Centre Phase 1
- C4 Wan Chai Tower and Great Eagle Centre
- C5 Sun Hung Kai Centre
- C6 Proposed Exhibition Station/ World Trade Centre
- C7 Windsor House
- C8 City Garden
- C9 Provident Centre



# LOCATIONS OF WATER QUALITY MONITORING STATIONS

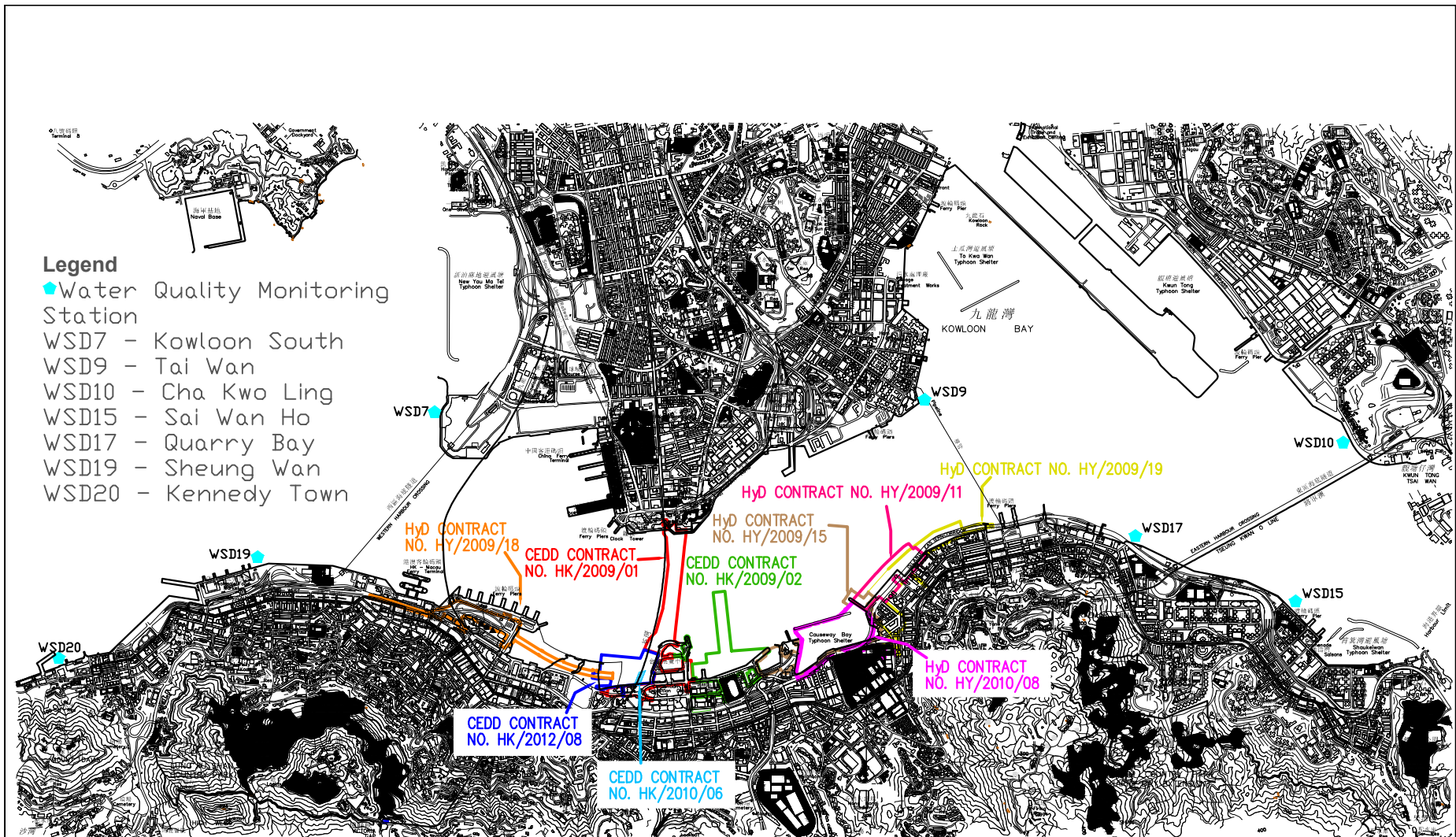
**Legend**

- ◆ Water Quality Monitoring Stations
- RW21-P789 (Wanchai WSD intake/ Great Eagle Centre/ China Resources Centre/ Sun Hung Kai Centre)
- C1 Hong Kong Convention and Exhibition Centre Extension
- P1 Hong Kong Convention and Exhibition Centre Phase 1
- P3 HK Academy For Performing Art
- P4 Shui On Centre
- P5 Government buildings (Wanchai Tower/ Revenue Tower/ Immigration Tower)
- C6 Proposed Exhibition Station/ World Trade Centre
- C7 Windsor House



# LOCATIONS OF WATER QUALITY MONITORING STATIONS





# LOCATIONS OF WATER QUALITY MONITORING STATIONS

**Legend**

- Additional □ Monitoring Station

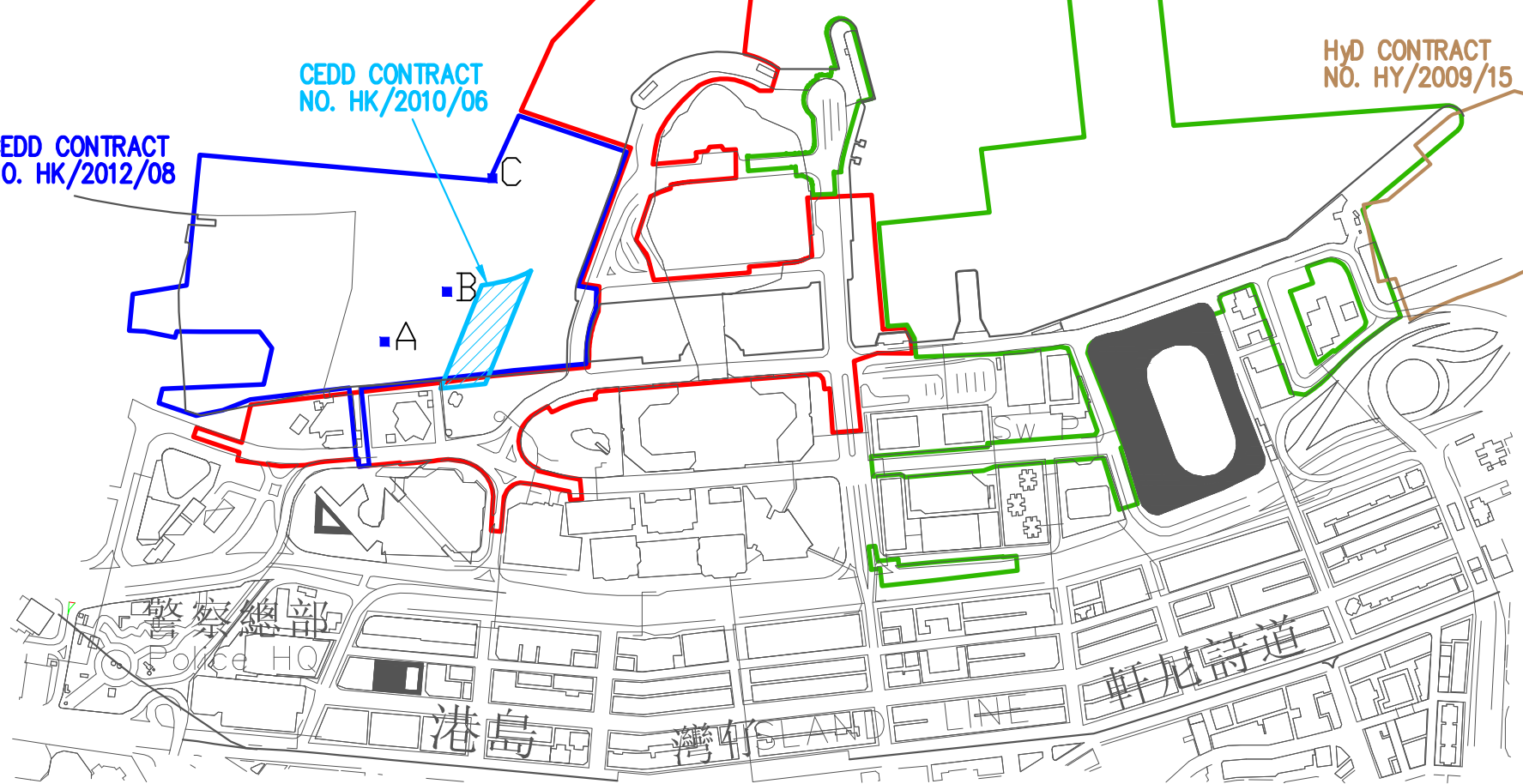
CEDD CONTRACT  
NO. HK/2012/08

CEDD CONTRACT  
NO. HK/2010/06

CEDD CONTRACT  
NO. HK/2009/01

CEDD CONTRACT  
NO. HK/2009/02

HyD CONTRACT  
NO. HY/2009/15



**LOCATIONS OF ADDITIONAL DISSOLVED OXYGEN MONITORING STATIONS FOR CULVERT L WATER DISCHARGE FLOW**





***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

**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>								

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
<i>For DP1 – CWB (Within the Project Boundary)</i>								

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
<i>For DP2 – WDII Major Roads (Road P2)</i>								
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
<i>For DP3 – Reclamation Works</i>								
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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.14 – S4.8.18	<ul style="list-style-type: none"> <li>For Existing NSRs</li> <li>about 235m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC</li> <li>about 230m length of noise semi-enclosure with transparent panel covering the main carriageways (eastbound and westbound) of the CWB and IEC</li> <li>about 135m length of 5.5m high cantilevered noise barrier with 3m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC</li> <li>about 95m length of 5.5m high cantilevered noise barrier with 1m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC</li> <li>about 350m length of 3.5m high vertical noise barrier with transparent panel on the eastbound slip road to the IEC</li> <li>low noise road surfacing for the trunk road (except tunnel section and beneath the landscaped deck at the eastern portal area) with speed limit of 70 km/hour</li> </ul> For Future/Planned NSRs	Near North Point / Before commencement of operation of road project  In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.	HyD	√	√	√		EIAO-TM
					√	√ <sup>#</sup>		

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

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

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

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 CR111 and HKCEC1, an impermeable barrier, suspended from a floating boom on the water surface and extending down to the seabed, will be erected by the contractor before the HKCEC1 commences. The barrier will channel the stormwater discharge flows from Culvert L to the outside of the embayment. The contractor will maintain this barrier until the reclamation works in HKCEC2W are carried out and the new Culvert L extension is constructed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																								
S5.8, Figure 5.3	The total dredging rates in each of the marine works zones shall not be more than the maximum production rates stated in the table below. These are the production rates without considering the effect of silt curtain.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <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					
Reclamation Area	Maximum Dredging Rate		Maximum Dredging Rate (m <sup>3</sup> per week)																													
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North Point Shoreline Zone (NPR)	6,000	375	42,000																													
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Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures				Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																						
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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	Silt screens shall be applied to seawater intakes at interim construction stages as stated below:				Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																						
	<table border="1"> <thead> <tr> <th>Interim Construction Stage</th> <th>Location of Applications</th> </tr> </thead> <tbody> <tr> <td>Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA,</td> <td>WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong</td> </tr> </tbody> </table>	Interim Construction Stage	Location of Applications	Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA,	WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong																												
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Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures		Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines						
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	<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.								
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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)						

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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	
	<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

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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		
<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>								
<i>DPI – CWB (within the Project Boundary)</i>								
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	<p><i>Bentonite Slurry</i></p> <p>The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage" and listed as follows:</p> <ul style="list-style-type: none"> <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

**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	√				<p>"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops" published by EPD, HKSAR</p> <p>EPD ProPECC Note No. 3/94</p>
S7.10	<p>During soil remediation works, the Contractor for the excavation works shall take note of the following points for excavation:</p> <ul style="list-style-type: none"> <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	√				<p>Air Pollution Control Ordinance</p> <p>Noise Control Ordinance</p> <p>Waste Disposal Ordinance</p> <p>Waste Disposal (Chemical Waste) (General) Regulation</p>



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

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>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>								
<b>For the Whole Project - Schedule 3 DP</b>								
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.
<b>For DP3 - Reclamation Works</b>								
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>								
<b>For the Whole Project</b>								
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
<b>For DP1 – CWB (Within the Project Boundary)</b>								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
<b>For DP2 – WDII Major Roads (Road P2)</b>								
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
<b>For DP3 – Reclamation Works</b>								
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
<b>For DP5 – Wan Chai East Sewage Outfall</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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Refer to EIA-058/2001 Table 10.13	CM4 Control night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM5 Minimisation of disruption to public by effective programming of the works.	Work site / During Construction Phase	Contractor		√			EIAO TM
<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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.6, Figure 10.5.1-10.5.5	OM3 Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD/	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM4 Aesthetic design of proposed waterfront promenade.	Work site / During Design Stage and Operation Phases	CEDD <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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.6, Figure 10.5.1-10.5.5	OM1 Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM3 Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM5 Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM6 Aesthetic design of roadside amenity areas	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
<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
CMA1b <sup>Note 2</sup>	320.1	500	176.7	260
CMA2a	323.4	500	169.5	260
CMA3a <sup>Note 2</sup>	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5a <sup>Note 2</sup>	332.0	500	181.0	260
CMA6a <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 were proposed for IEC verification and EPD approval.
- The established Action and Limit Levels from the baseline air monitoring will be adopted to the alternative monitoring stations.

#### Action and Limit Level for Water Monitoring

Parameters	Dry Season		Wet Season	
	Action	Limit	Action	Limit
<b>WSD Salt Water Intake</b>				
SS in $\text{mg L}^{-1}$	13.00	14.43	16.26	19.74
Turbidity in NTU	8.04	9.49	10.01	11.54
DO in mg/L	3.66	3.28	3.17	2.63
<b>Cooling Water Intake</b>				
SS in $\text{mg L}^{-1}$	15.00	22.13	18.42	27.54
Turbidity in NTU	9.10	10.25	11.35	12.71
DO in mg/L	3.36	2.73	3.02	2.44

Remarks:

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

#### Action and Limit Levels for Odour Patrol

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



***Appendix 4.2***

***Copies of Calibration Certificates***

**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

---

**Information supplied by customer:**

**CONTACT: DEREK LO**

**WORK ORDER: HK1310015**

**CLIENT: LAM GEOTECHNICS LIMITED**

**DATE RECEIVED: 09/09/2013**

**DATE OF ISSUE: 13/09/2013**

**ADDRESS: 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD,  
WANCHAI, HONG KONG**

**PROJECT: —**

---

**METHOD OF PERFORMANCE CHECK/ CALIBRATION:**

Ref: APHA22nd ed 2130B

**COMMENTS**

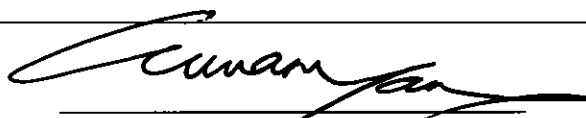
It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory. Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.

<b>Scope of Test:</b>	Turbidity
<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203008
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	13 September, 2013

**Remarks:**

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

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Mr. Peter Lee

Director

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**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

**WORK ORDER: HK1310015**

**DATE OF ISSUE: 13<sup>th</sup> September, 2013**

**CLIENT: LAM GEOTECHNICS LIMITED**

<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203008
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	13 September, 2013
<b>Date of next Calibration:</b>	13 December, 2013

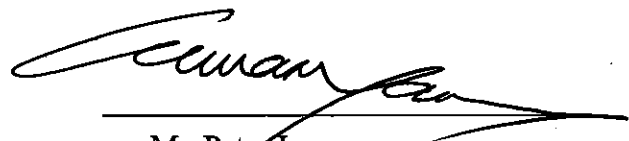
**Parameters:**

**Turbidity**

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.00	0
4	3.85	-3.8
10	10.2	+2.0
40	39.1	-2.2
100	95.0	-5.0
400	420	+5.0
1000	980	-2.0
	<b>Tolerance Limit (±%)</b>	<b>10.0</b>

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



Mr. Peter Lee

Director

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**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

**WORK ORDER: HK1310044**

**DATE OF ISSUE: 10<sup>th</sup> December, 2013**

**CLIENT: LAM GEOTECHNICS LIMITED**

<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203008
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	10 December, 2013
<b>Date of next Calibration:</b>	10 March, 2014

**Parameters:**

**Turbidity**

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.02	---
4	3.68	-8.0
10	10.3	+3.0
40	38.2	-4.5
100	94.0	-6.0
400	416	+4.0
1000	970	-3.0
	<b>Tolerance Limit (±%)</b>	<b>10.0</b>

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

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Phone +852 2527 6691 | Email info@pilot-testing.com





**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

**WORK ORDER: HK1310025**

**DATE OF ISSUE: 5<sup>th</sup> November 2013**

**CLIENT: LAM GEOTECHNICS LIMITED**

<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203016
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	5 November, 2013
<b>Date of next Calibration:</b>	5 February, 2014

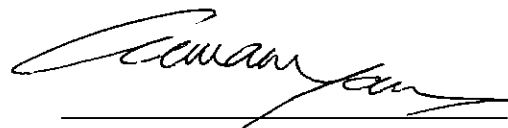
**Parameters:**

**Turbidity**

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.02	+0.2
4	4.27	+6.8
10	10.3	+3.0
40	42.4	+5.2
100	105	+5.0
400	417	+4.2
1000	970	-3.0
Tolerance Limit ( $\pm\%$ )		10.0

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



Mr. Peter Lee

Director

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**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

**Information supplied by customer:**

**CONTACT: KATHIE HO**

**WORK ORDER: HK1310026**

**CLIENT: LAM GEOTECHNICS LIMITED**

**DATE RECEIVED: 04/11/2013**

**DATE OF ISSUE: 05/11/2013**

**ADDRESS: 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD,  
WANCHAI, HONG KONG**

**PROJECT: ---**

**METHOD OF PERFORMANCE CHECK/ CALIBRATION:**

Ref: APHA22nd ed 2130B

**COMMENTS**

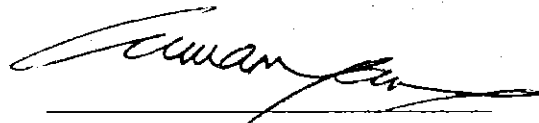
It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.

<b>Scope of Test:</b>	Turbidity
<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203025
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	5 November, 2013

Remarks:

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



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**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

**WORK ORDER: HK1310026**

**DATE OF ISSUE: 5<sup>th</sup> November, 2013**

**CLIENT: LAM GEOTECHNICS LIMITED**

<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203025
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	5 November, 2013
<b>Date of next Calibration:</b>	5 February, 2014

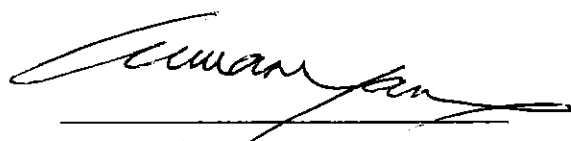
**Parameters:**

**Turbidity**

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.02	---
4	4.20	+5.0
10	10.4	+4.0
40	42.0	+5.0
100	102	+2.0
400	400	0
1000	980	+2.0
	Tolerance Limit ( $\pm\%$ )	10.0

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



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---

**Information supplied by customer:**

**CONTACT: KATHIE HO**

**WORK ORDER: HK1310039**

**CLIENT: LAM GEOTECHNICS LIMITED**

**DATE RECEIVED: 21/11/2013**

**DATE OF ISSUE: 28/11/2013**

**ADDRESS: 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD,  
WANCHAI, HONG KONG**

**PROJECT: ---**

---

**METHOD OF PERFORMANCE CHECK/ CALIBRATION:**

Ref: APHA22nd ed 2130B

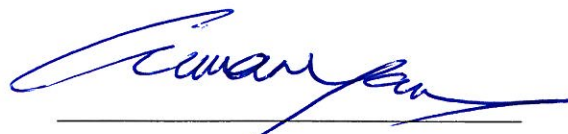
**COMMENTS**

It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory. Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.

<b>Scope of Test:</b>	Turbidity
<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203010
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	28 November, 2013

Remarks:

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



Mr. Peter Lee

Director

**REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

**WORK ORDER: HK1310039**

**DATE OF ISSUE: 28<sup>th</sup> November, 2013**

**CLIENT: LAM GEOTECHNICS LIMITED**

<b>Equipment Type:</b>	Turbidimeter
<b>Brand Name:</b>	Xin Rui
<b>Model No.:</b>	WGZ-3B
<b>Serial No.:</b>	1203010
<b>Equipment No.:</b>	--
<b>Date of Calibration:</b>	28 November, 2013
<b>Date of next Calibration:</b>	28 February, 2014

**Parameters:**

**Turbidity**

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.02	---
4	4.23	+5.8
10	10.2	+2.0
40	38.6	-3.5
100	106	+6.0
400	420	+5.0
1000	983	-1.7
	Tolerance Limit ( $\pm\%$ )	10.0

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



## ALS Technichem (HK) Pty Ltd

### REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

**WORK ORDER:** HK1327829  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 09/10/2013  
**DATE OF ISSUE:** 17/10/2013

**PROJECT:** --

#### COMMENTS

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

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

Scope of Test: Dissolved Oxygen, pH, Salinity and Temperature  
Equipment Type: Multimeter  
Brand Name: YSI  
Model No.: Professional plus  
Serial No.: 11F100597  
Equipment No.: --  
Date of Calibration: 15 October, 2013

#### NOTES

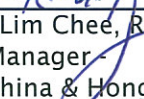
This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

#### ISSUING LABORATORY: HONG KONG

##### Address

ALS Technichem (HK) Pty Ltd  
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Mr. Fung Lim Chee, Richard  
General Manager  
Greater China & Hong Kong

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**Work Order:** HK1327829  
**Date of Issue:** 17/10/2013  
**Client:** LAM GEOTECHNICS LIMITED



**Equipment Type:** Multimeter  
**Brand Name:** YSI  
**Model No.:** Professional plus  
**Serial No.:** 11F100597  
**Equipment No.:** --  
**Date of Calibration:** 15 October, 2013      **Date of next Calibration:** 15 January, 2014

**Parameters:**

**Dissolved Oxygen**

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
1.85	1.89	0.04
5.22	5.37	0.15
7.95	7.96	0.01
Tolerance Limit ( $\pm$ mg/L)		0.20

**pH Value**

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.01	0.01
7.0	6.98	-0.02
10.0	10.02	0.02
Tolerance Limit ( $\pm$ pH unit)		0.20

**Salinity**

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.02	--
10	9.61	-3.9
20	19.65	-1.8
30	29.86	-0.5
Tolerance Limit ( $\pm$ ppt)		10.0

**Temperature**

**Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading ( $^{\circ}$ C)	Displayed Reading ( $^{\circ}$ C)	Tolerance ( $^{\circ}$ C)
11.0	11.5	0.5
25.0	23.8	-1.2
38.0	37.1	-0.9
Tolerance Limit ( $\pm^{\circ}$ C)		2.0

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

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





## ALS Technichem (HK) Pty Ltd

### REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

**WORK ORDER:** HK1326638  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 27/09/2013  
**DATE OF ISSUE:** 07/10/2013

**PROJECT:** --

#### COMMENTS

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

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

Scope of Test: Dissolved Oxygen, pH, Salinity and Temperature  
Equipment Type: Multimeter  
Brand Name: YSI  
Model No.: Professional plus  
Serial No.: 11F100420  
Equipment No.: --  
Date of Calibration: 07 October, 2013

#### NOTES

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

#### ISSUING LABORATORY: HONG KONG

##### Address

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

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**Work Order:** HK1326638  
**Date of Issue:** 07/10/2013  
**Client:** LAM GEOTECHNICS LIMITED



**Equipment Type:** Multimeter  
**Brand Name:** YSI  
**Model No.:** Professional plus  
**Serial No.:** 11F100420  
**Equipment No.:** --  
**Date of Calibration:** 07 October, 2013      **Date of next Calibration:** 07 January, 2014

**Parameters:**

**Dissolved Oxygen**

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.32	2.33	0.01
4.36	4.32	-0.04
6.30	6.29	-0.01
Tolerance Limit (±mg/L)		0.20

**pH Value**

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.17	0.17
7.0	7.19	0.19
10.0	9.96	-0.04
Tolerance Limit (±pH unit)		0.20

**Salinity**

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.03	--
10	9.94	-0.6
20	19.49	-2.6
30	29.55	-1.5
Tolerance Limit (±%)		10.0

**Temperature**

**Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
10.0	9.8	-0.2
24.0	23.1	-0.9
41.0	40.4	-0.6
Tolerance Limit (±°C)		2.0

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

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



## ALS Technichem (HK) Pty Ltd

### REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

**WORK ORDER:** HK1323779  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 02/09/2013  
**DATE OF ISSUE:** 17/09/2013

**PROJECT:** --

#### COMMENTS

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

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

Scope of Test: Dissolved Oxygen, pH, Salinity and Temperature  
Equipment Type: Multimeter  
Brand Name: YSI  
Model No.: Professional plus  
Serial No.: 13A100242  
Equipment No.: --  
Date of Calibration: 07 September, 2013

#### NOTES

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#### ISSUING LABORATORY: HONG KONG

##### Address

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PP

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

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**Work Order:** HK1323779  
**Date of Issue:** 17/09/2013  
**Client:** LAM GEOTECHNICS LIMITED



**Equipment Type:** Multimeter  
**Brand Name:** YSI  
**Model No.:** Professional plus  
**Serial No.:** 13A100242  
**Equipment No.:** --  
**Date of Calibration:** 07 September, 2013      **Date of next Calibration:** 07 December, 2013

**Parameters:**

**pH Value**

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.04	0.04
7.0	7.14	0.14
10.0	10.14	0.14
Tolerance Limit ( $\pm$ pH unit)		0.20

**Salinity**

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	10.22	2.2
20	20.80	4.0
30	30.55	1.8
Tolerance Limit ( $\pm$ %)		10.0

**Temperature**

**Method Ref: Section 6 of International Accreditation New Zealand Technical**

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

Expected Reading ( $^{\circ}$ C)	Displayed Reading ( $^{\circ}$ C)	Tolerance ( $^{\circ}$ C)
9.5	10.1	0.6
24.0	23.0	-1.0
38.0	37.1	-0.9
Tolerance Limit ( $\pm$ $^{\circ}$ C)		2.0

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

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

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**Work Order:** HK1323779  
**Date of Issue:** 17/09/2013  
**Client:** LAM GEOTECHNICS LIMITED



**Equipment Type:** Multimeter  
**Brand Name:** YSI  
**Model No.:** Professional plus  
**Serial No.:** 13A100242  
**Equipment No.:** --  
**Date of Calibration:** 07 September, 2013      **Date of next Calibration:** 07 December, 2013

**Parameters:**

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

1<sup>st</sup> time

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
5.26	4.54	-0.72
6.20	5.90	-0.30
8.28	8.01	-0.27
Tolerance Limit (±mg/L)		0.20

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

2<sup>nd</sup> time

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
4.45	3.43	-1.02
6.62	6.39	-0.23
8.31	8.45	0.14
Tolerance Limit (±mg/L)		0.20

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

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



# ALS Technichem (HK) Pty Ltd

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

**WORK ORDER:** HK1327060  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 03/10/2013  
**DATE OF ISSUE:** 08/10/2013

**PROJECT:** --

### COMMENTS

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

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

Scope of Test: Dissolved Oxygen  
Equipment Type: Multimeter  
Brand Name: YSI  
Model No.: Professional plus  
Serial No.: 13A100242  
Equipment No.: --  
Date of Calibration: 08 October, 2013

### NOTES

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

### ISSUING LABORATORY: HONG KONG

#### Address

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1327060  
Date of Issue: 08/10/2013  
Client: LAM GEOTECHNICS LIMITED



Equipment Type: Multimeter  
Brand Name: YSI  
Model No.: Professional plus  
Serial No.: 13A100242  
Equipment No.: --  
Date of Calibration: 08 October, 2013      Date of next Calibration: 08 January, 2014

## Parameters:

### Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
7.85	7.68	-0.17
5.82	5.67	-0.15
3.24	3.18	-0.06
	Tolerance Limit ( $\pm$ mg/L)	0.20

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



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

**WORK ORDER:** HK1334576  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 12/12/2013  
**DATE OF ISSUE:** 17/12/2013

### COMMENTS

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.  
Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of ALS will be followed.

Scope of Test: Dissolved Oxygen, pH, Salinity and Temperature  
Equipment Type: Multimeter  
Brand Name: YSI  
Model No.: Professional plus  
Serial No.: 13A100242  
Equipment No.: --  
Date of Calibration: 16 December, 2013

### NOTES

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

  
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General Manager  
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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1334576  
 Date of Issue: 17/12/2013  
 Client: LAM GEOTECHNICS LIMITED



Equipment Type: Multimeter  
 Brand Name: YSI  
 Model No.: Professional plus  
 Serial No.: 13A100242  
 Equipment No.: --  
 Date of Calibration: 16 December, 2013      Date of next Calibration: 16 March, 2014

## Parameters:

### Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
1.93	2.07	0.14
4.72	4.83	0.11
8.61	8.74	0.13
Tolerance Limit ( $\pm$ mg/L)		0.20

### pH Value

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.05	0.05
7.0	6.94	-0.06
10.0	9.92	-0.08
Tolerance Limit ( $\pm$ pH unit)		0.20

### Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.99	-0.1
20	20.35	1.8
30	30.73	2.4
Tolerance Limit ( $\pm$ %)		10.0

### Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical

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

Expected Reading ( $^{\circ}$ C)	Displayed Reading ( $^{\circ}$ C)	Tolerance ( $^{\circ}$ C)
10.0	10.7	0.7
18.5	18.2	-0.3
38.0	37.6	-0.4
Tolerance Limit ( $\pm$ $^{\circ}$ C)		2.0

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

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



TISCH ENVIRONMENTAL, INC.  
 145 SOUTH MIAMI AVE.  
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**AIR POLLUTION MONITORING EQUIPMENT**  
 ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jul 15, 2013    Roots-meter S/N    0438320    Ta (K) -    300  
 Operator Tisch    Orifice I.D. -    0005    Pa (mm) -    759.46

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	1.3910	3.2	2.00
2	NA	NA	1.00	0.9830	6.4	4.00
3	NA	NA	1.00	0.8800	7.9	5.00
4	NA	NA	1.00	0.8380	8.8	5.50
5	NA	NA	1.00	0.6930	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9884	0.7106	1.4090	0.9958	0.7159	0.8888
0.9843	1.0013	1.9926	0.9916	1.0087	1.2570
0.9822	1.1161	2.2278	0.9895	1.1244	1.4054
0.9811	1.1708	2.3365	0.9884	1.1795	1.4740
0.9760	1.4084	2.8180	0.9832	1.4188	1.7777
Qstd slope (m) = 2.01968			Qa slope (m) = 1.26469		
intercept (b) = -0.02746			intercept (b) = -0.01732		
coefficient (r) = 0.99999			coefficient (r) = 0.99999		
y axis = $\sqrt{H_2O(Pa/760)(298/Ta)}$			y axis = $\sqrt{H_2O(Ta/Pa)}$		

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:

$$Qstd = 1/m \{ [\sqrt{H_2O(Pa/760)(298/Ta)}] - b \}$$

$$Qa = 1/m \{ [\sqrt{H_2O(Ta/Pa)}] - b \}$$



Lam Geotechnics Limited

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

Location : CMA1b  
 Equipment no. : EL452

Calibration Date : 19-Nov-13  
 Calibration Due Date : 19-Jan-14

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	294	Kelvin	Pressure, P <sub>a</sub>
			1021 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	2.01968	Intercept, b <sub>c</sub>	-0.02746
Last Calibration Date	15-Jul-13	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	15-Jul-14				

Calibration of RSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7613	62	62.6571
2	5.1	5.1	10.2	1.6117	53	53.5617
3	4.0	4.0	8.0	1.4289	43	43.4557
4	2.5	2.5	5.0	1.1325	28	28.2967
5	1.4	1.4	2.8	0.8509	14	14.1484

By Linear Regression of Y on X

Slope, m = 52.9089      Intercept, b = -31.3758  
 Correlation Coefficient\* = 0.9994  
 Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

Calibrated by : Henry  
 Date : 19-Nov-13

Checked by : Derek Lo  
 Date : 19-Nov-13





Lam Geotechnics Limited

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

Location : CMA2a  
 Equipment no. : EL449

Calibration Date : 19-Nov-13  
 Calibration Due Date : 19-Jan-14

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	294	Kelvin	Pressure, P <sub>a</sub>
			1021 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	2.01968	Intercept, b <sub>c</sub>	-0.02746
Last Calibration Date	15-Jul-13	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	15-Jul-14				

Calibration of RSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7613	60	60.6359
2	5.0	5.0	10.0	1.5959	51	51.5405
3	4.1	4.1	8.2	1.4465	43	43.4557
4	2.5	2.5	5.0	1.1325	27	27.2861
5	1.4	1.4	2.8	0.8509	14	14.1484

By Linear Regression of Y on X

Slope, m = 51.1083      Intercept, b = -29.9618  
 Correlation Coefficient\* = 0.9995  
 Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

Calibrated by : Sam  
 Date : 19-Nov-13

Checked by : Derek Lo  
 Date : 19-Nov-13





Lam Geotechnics Limited

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

Location : CMA4a  
 Equipment no. : EL390

Calibration Date : 19-Nov-13  
 Calibration Due Date : 19-Jan-14

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	294	Kelvin	Pressure, P <sub>a</sub>
			1021 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	2.01968	Intercept, b <sub>c</sub>	-0.02746
Last Calibration Date	15-Jul-13	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	15-Jul-14				

Calibration of RSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7613	62	62.6571
2	5.1	5.1	10.2	1.6117	52	52.5511
3	4.0	4.0	8.0	1.4289	42	42.4451
4	2.5	2.5	5.0	1.1325	26	26.2755
5	1.5	1.5	3.0	0.8803	13	13.1378

By Linear Regression of Y on X

Slope, m = 55.6501      Intercept, b = -36.4335  
 Correlation Coefficient\* = 0.9992  
 Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

Calibrated by : Henry  
 Date : 19-Nov-13

Checked by : Derek Lo  
 Date : 19-Nov-13



Lam Geotechnics Limited

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

Location : CMA5a  
 Equipment no. : EL380

Calibration Date : 19-Nov-13  
 Calibration Due Date : 19-Jan-14

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	294	Kelvin	Pressure, P <sub>a</sub>
			1021 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	2.01968	Intercept, b <sub>c</sub>	-0.02746
Last Calibration Date	15-Jul-13	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	15-Jul-14				

Calibration of RSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.2	6.2	12.4	1.7756	61	61.6465
2	5.1	5.1	10.2	1.6117	52	52.5511
3	4.1	4.1	8.2	1.4465	44	44.4663
4	2.4	2.4	4.8	1.1099	28	28.2967
5	1.5	1.5	3.0	0.8803	18	18.1908

By Linear Regression of Y on X

Slope, m = 48.3214      Intercept, b = -24.9174  
 Correlation Coefficient\* = 0.9994  
 Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

Calibrated by : Henry  
 Date : 19-Nov-13

Checked by : Derek Lo  
 Date : 19-Nov-13



Lam Geotechnics Limited

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

Location : CMA6a  
 Equipment no. : EL448

Calibration Date : 19-Nov-13  
 Calibration Due Date : 19-Jan-14

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	294	Kelvin	Pressure, P <sub>a</sub>
			1021 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	2.01968	Intercept, b <sub>c</sub>	-0.02746
Last Calibration Date	15-Jul-13	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	15-Jul-14				

Calibration of RSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7613	60	60.6359
2	5.0	5.0	10.0	1.5959	51	51.5405
3	4.0	4.0	8.0	1.4289	43	43.4557
4	2.4	2.4	4.8	1.1099	28	28.2967
5	1.5	1.5	3.0	0.8803	17	17.1802

By Linear Regression of Y on X

Slope, m = 48.8703      Intercept, b = -26.0098  
 Correlation Coefficient\* = 0.9997  
 Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

Calibrated by : Henry  
 Date : 19-Nov-13

Checked by : Derek Lo  
 Date : 19-Nov-13



***Appendix 5.1***

***Monitoring Schedules for Reporting Month and Coming Reporting Month***

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

**Environmental Monitoring Schedule  
December 2013**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
24-Nov				28-Nov	29-Nov	30-Nov
				Impact WQM Mid-ebb 8:01 Mid-flood 14:38		Impact WQM Mid-ebb 10:04 Mid-flood 15:50
1-Dec	2-Dec	3-Dec	4-Dec	5-Dec	6-Dec	7-Dec
24hr TSP Noise (Daytime) (M1a) Impact WQM Mid-flood 17:08 Mid-ebb 23:52	1hr TSP	Noise (Daytime) (M2b, M3a, M4b, M5b, M)	Impact WQM Mid-ebb 13:17 Mid-flood 18:35		24hr TSP Impact WQM Mid-ebb 3:03 Mid-flood 10:17	
8-Dec	9-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec
1hr TSP Impact WQM Mid-ebb 4:48 Mid-flood 12:06	Noise (Daytime)	Impact WQM Mid-flood 13:54 Mid-ebb 20:34		24hr TSP Impact WQM Mid-flood 15:24 Mid-ebb 22:20		1hr TSP
15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec
Impact WQM Mid-flood 17:09	Noise (Daytime) (M5b) Impact WQM Mid-ebb 0:10	Noise (Daytime) (M2b, M3a, M4b, M6) Impact WQM Mid-flood 18:08	24hr TSP Noise (Daytime) (M1a) Impact WQM Mid-ebb 1:14		1hr TSP	Impact WQM Mid-ebb 2:04 Mid-flood 9:19
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	
24hr TSP Noise (Daytime)	24hr TSP (CMA2a) 1hr TSP Impact WQM Mid-ebb 3:29 Mid-flood 11:22			Impact WQM Mid-ebb 4:54 Mid-flood 12:50		

Contract No. HK/2011/07  
**Wan Chai Development Phase II and Central-Wan Chai Bypass**  
**Sampling, Field Measurement and Testing Works (Stage 2)**  
**Tentative Environmental Monitoring Schedule**  
**January 2014**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec
	24hr TSP Noise (Daytime)	1hr TSP Noise (Daytime) Impact WQM Mid-ebb 3:29 Mid-flood 11:22		Impact WQM Mid-ebb 4:54 Mid-flood 12:50		24hr TSP Impact WQM Mid-flood 14:20 Mid-ebb 21:22
29-Dec	30-Dec	31-Dec	1-Jan	2-Jan	3-Jan	4-Jan
	1hr TSP Noise (Daytime)	Noise (Daytime)		Impact WQM Mid-ebb 13:07 Mid-flood 18:25	24hr TSP	1hr TSP Impact WQM Mid-flood 9:05 Mid-ebb 14:44
5-Jan	6-Jan	7-Jan	8-Jan	9-Jan	10-Jan	11-Jan
	VC 24hr TSP Impact WQM Mid-flood 10:34 Mid-ebb 16:26	VC 1hr TSP Noise (Daytime)	Noise (Daytime) Impact WQM Mid-flood 12:07 Mid-ebb 18:41	24hr TSP	1hr TSP Impact WQM Mid-flood 13:42 Mid-ebb 21:18	
12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan
	VC 24hr TSP Noise (Daytime) Impact WQM Mid-flood 16:02 Mid-ebb 23:24	VC 1hr TSP Noise (Daytime)	24hr TSP Impact WQM Mid-flood 17:20	1hr TSP Impact WQM Mid-ebb 0:28		Impact WQM Mid-ebb 1:27 Mid-flood 8:12
19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan
	VC 24hr TSP 24hr TSP Noise (Daytime) Impact WQM Mid-flood 9:08 Mid-ebb 14:47	VC 1hr TSP 1hr TSP	Impact WQM Mid-flood 10:21 Mid-ebb 16:18	Noise (Daytime)	24hr TSP Impact WQM Mid-flood 11:47 Mid-ebb 18:28	1hr TSP
26-Jan	27-Jan					
	VC 24hr TSP Noise (Daytime) Impact WQM Mid-flood 14:28 Mid-ebb 21:51					





***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)								
2/12/2013	11:30	Fine	71.6	74.5	65.0	72	72	75
10/12/2013	14:00	Fine	71.9	74.5	67.0	72	72	75
19/12/2013	10:45	Fine	72.5	75.0	67.0	72	61	75
23/12/2013	9:23	Fine	73.1	76.0	68.0	72	66	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)								
4/12/2013	9:32	Fine	70.0	72.0	67.0	68	66	75
10/12/2013	16:40	Fine	69.7	71.5	66.5	68	66	75
18/12/2013	8:40	Fine	67.9	71.3	61.4	68	56	75
23/12/2013	10:07	Fine	74.2	76.5	69.0	68	73	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)								
4/12/2013	10:16	Fine	66.4	67.5	64.0	69	66	75
10/12/2013	17:45	Fine	66.5	67.5	65.0	69	67	75
18/12/2013	9:20	Fine	68.8	70.5	66.0	69	69	75
23/12/2013	10:46	Fine	67.8	69.0	65.0	69	68	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)								
4/12/2013	11:03	Fine	71.8	73.0	69.5	67	70	75
10/12/2013	8:29	Cloudy	73.9	76.0	68.0	67	73	75
18/12/2013	10:05	Fine	72.0	73.5	68.0	67	70	75
23/12/2013	11:24	Fine	70.6	72.5	67.0	67	68	75

Location: M5b - City Garden

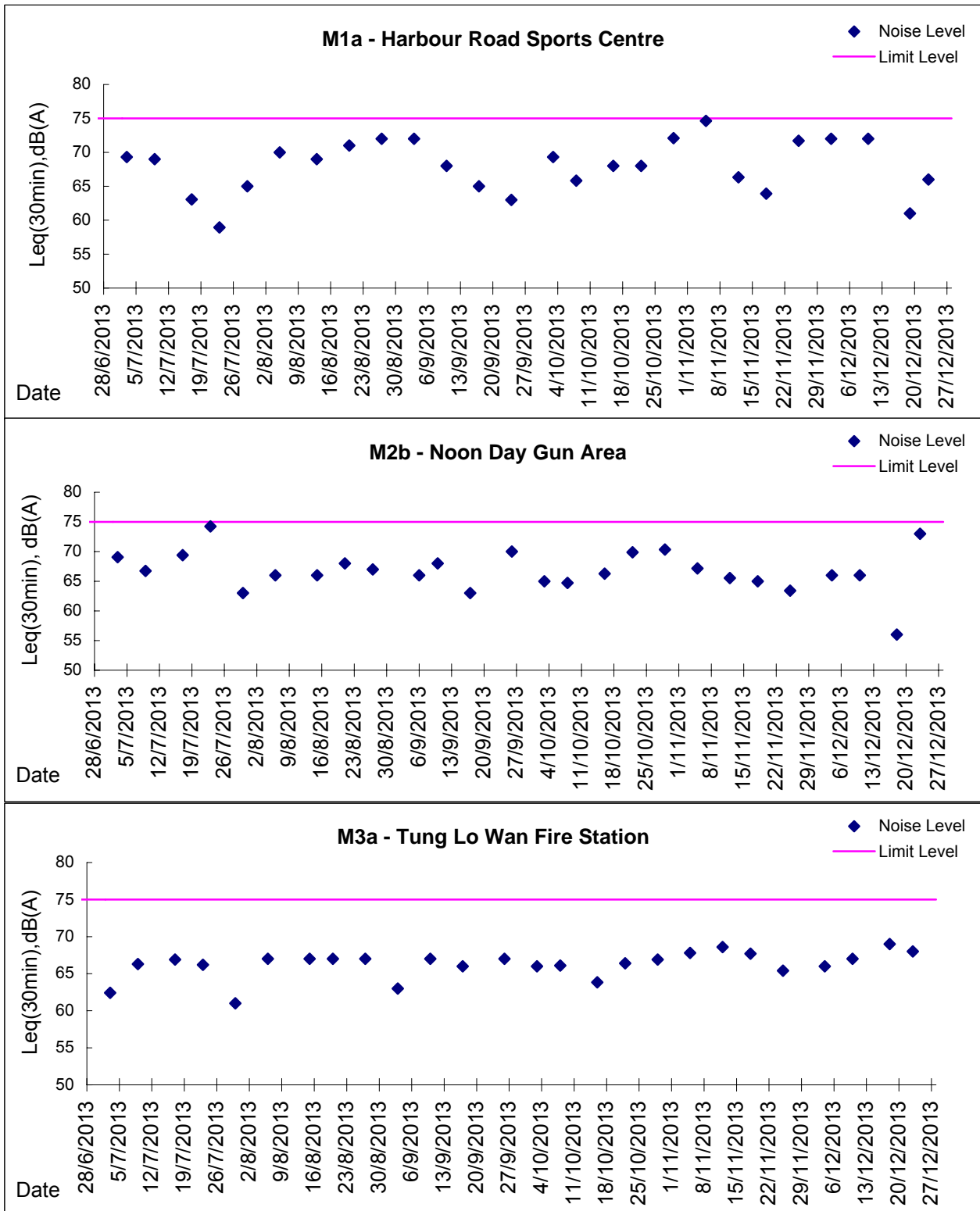
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)								
4/12/2013	15:37	Fine	68.1	70.0	65.5	68	52	75
10/12/2013	10:36	Cloudy	68.9	70.0	66.5	68	62	75
17/12/2013	15:05	Cloudy	67.1	68.0	64.5	68	67	75
23/12/2013	13:07	Fine	69.8	71.0	68.0	68	65	75

Location: M6 - HK Baptist Church Henrietta Secondary School

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
4/12/2013	16:48	Fine	73.2	74.0	71.5	71	70	70
10/12/2013	9:18	Cloudy	75.2	76.0	73.0	71	73	65
18/12/2013	10:40	Fine	74.6	76.6	73.2	71	72	65
23/12/2013	14:50	Fine	73.1	74.5	71.0	71	69	70



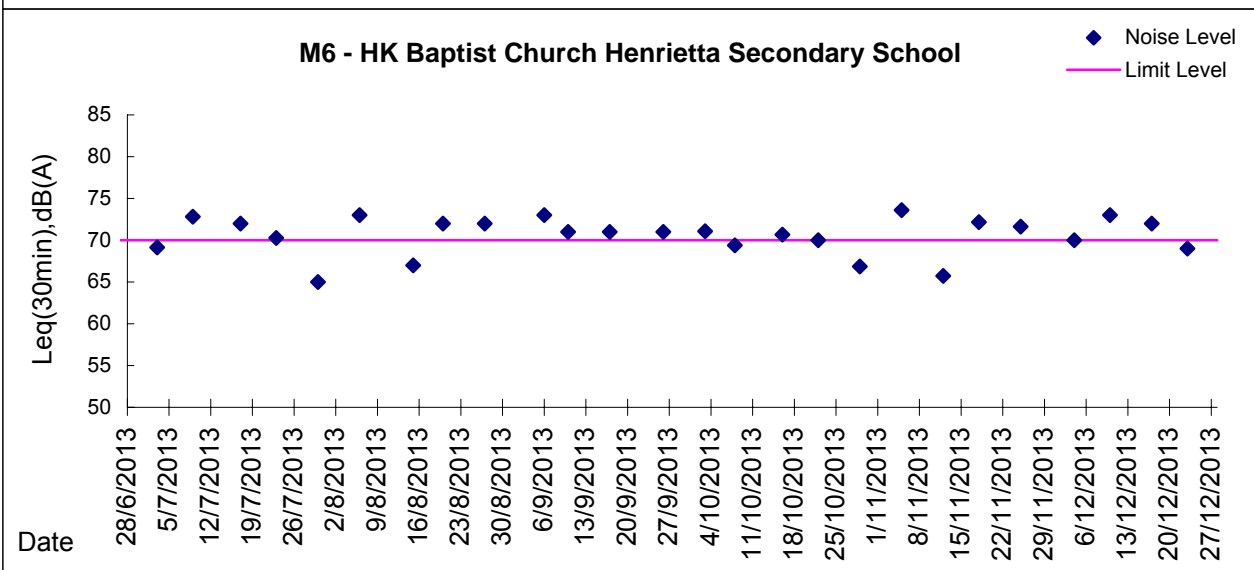
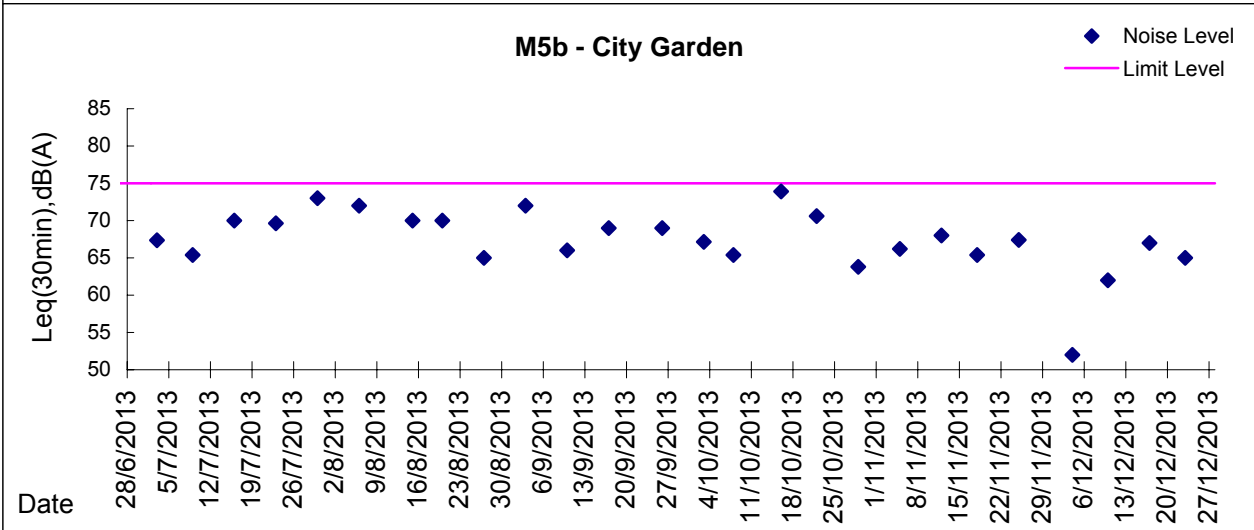
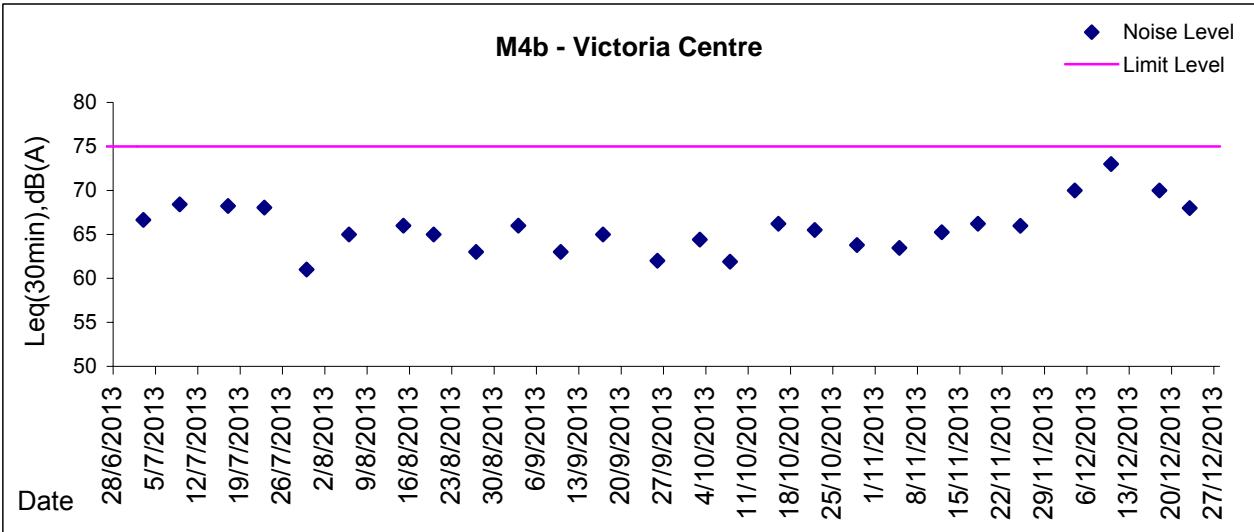
**Graphic Presentation of Noise Monitoring Result**  
**Day Time (0700 - 1900hrs on normal weekdays)**





Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)





***Appendix 5.3***

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



Location: CMA1b - Oil Street Site Office

Report on 24-hour TSP monitoring

Action Level ( $\mu\text{g}/\text{m}^3$ ) - 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		
2-Dec-13	8:00	Fine	005988	2.6291	2.8802	3786.05	3810.05	24.00	1.38	1.38	1.38	1993	126
7-Dec-13	8:00	Fine	005962	2.6384	2.9136	3813.05	3837.05	24.00	1.36	1.36	1.36	1963	140
13-Dec-13	8:00	Cloudy	007626	2.6175	2.8165	3840.04	3864.04	24.00	1.36	1.36	1.36	1965	101
19-Dec-13	8:00	Cloudy	005972	2.6137	2.7241	3867.04	3891.04	24.00	1.36	1.36	1.36	1964	56
23-Dec-13	8:00	Cloudy	005904	2.6484	2.8694	3894.04	3918.04	24.00	1.32	1.32	1.32	1905	116

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		
3-Dec-13	8:20	Fine	006489	2.7402	2.7569	3810.05	3811.05	1.00	1.36	1.36	1.36	82	204
3-Dec-13	9:26	Fine	006492	2.7534	2.7643	3811.05	3812.05	1.00	1.36	1.36	1.36	82	133
3-Dec-13	10:31	Fine	005959	2.6456	2.6639	3812.05	3813.05	1.00	1.36	1.36	1.36	82	223
9-Dec-13	9:56	Fine	007676	2.6222	2.6348	3837.05	3838.05	1.00	1.36	1.36	1.36	82	154
9-Dec-13	10:58	Fine	007675	2.6383	2.6479	3838.05	3839.05	1.00	1.36	1.36	1.36	82	118
9-Dec-13	13:00	Fine	005967	2.6533	2.6754	3839.05	3840.05	1.00	1.36	1.36	1.36	82	271
14-Dec-13	8:10	Rainy	005952	2.6142	2.6328	3864.04	3865.04	1.00	1.36	1.36	1.36	82	227
14-Dec-13	9:15	Rainy	005954	2.6392	2.6598	3865.04	3866.04	1.00	1.36	1.36	1.36	82	252
14-Dec-13	10:20	Rainy	005956	2.6253	2.6427	3866.04	3867.04	1.00	1.36	1.36	1.36	82	212
20-Dec-13	8:20	Cloudy	005854	2.6269	2.6385	3891.04	3892.04	1.00	1.36	1.36	1.36	82	142
20-Dec-13	9:25	Cloudy	005853	2.6303	2.6422	3892.04	3893.04	1.00	1.36	1.36	1.36	82	145
20-Dec-13	10:30	Cloudy	005860	2.6310	2.6415	3893.04	3894.04	1.00	1.36	1.36	1.36	82	128
24-Dec-13	8:20	Rainy	007546	2.6276	2.6363	3918.04	3919.04	1.00	1.32	1.32	1.32	79	110
24-Dec-13	9:25	Rainy	007549	2.6412	2.6466	3919.04	3920.04	1.00	1.32	1.32	1.32	79	68
24-Dec-13	10:30	Rainy	007534	2.6498	2.6586	3920.04	3921.04	1.00	1.32	1.32	1.32	79	111



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		
2-Dec-13	8:00	Fine	006456	2.7572	2.9622	13497.52	13521.52	24.00	1.43	1.42	1.42	2051	100
7-Dec-13	8:00	Fine	005963	2.6542	2.8035	13524.54	13548.54	24.00	1.27	1.27	1.27	1828	82
13-Dec-13	8:00	Cloudy	005968	2.6538	2.9278	13551.54	13575.54	24.00	1.27	1.27	1.27	1830	150
19-Dec-13	8:00	Cloudy	005973	2.6495	2.8074	13578.53	13602.53	24.00	1.27	1.27	1.27	1830	86
24-Dec-13	15:00	Cloudy	006474	2.7661	2.9910	13608.21	13632.21	24.00	1.34	1.34	1.34	1933	116

Due to interruption of electricity supply, the 24hr TSP monitoring was rescheduled from 23 Dec 2013 to 24 Dec 2013.

Report on 1-hour TSP monitoring  
Action Level ( $\mu\text{g}/\text{m}^3$ ) - 323.4  
Limit Level ( $\mu\text{g}/\text{m}^3$ ) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
3-Dec-13	8:05	Fine	006491	2.7375	2.7544	13521.52	13522.52	1.00	1.39	1.39	1.39	83	203
3-Dec-13	9:12	Fine	006288	2.5966	2.6157	13522.52	13523.52	1.00	1.39	1.39	1.39	83	230
3-Dec-13	10:17	Fine	005960	2.6495	2.6686	13523.52	13524.52	1.00	1.39	1.39	1.39	83	230
9-Dec-13	9:50	Fine	007677	2.6462	2.6598	13548.54	13549.54	1.00	1.30	1.30	1.30	78	174
9-Dec-13	10:52	Fine	004806	2.8120	2.8238	13549.54	13550.54	1.00	1.30	1.30	1.30	78	151
9-Dec-13	13:00	Fine	004807	2.8072	2.8231	13550.54	13551.54	1.00	1.30	1.30	1.30	78	203
14-Dec-13	8:00	Rainy	005953	2.6189	2.6419	13575.54	13576.54	1.00	1.31	1.31	1.31	79	293
14-Dec-13	9:05	Rainy	005955	2.6451	2.6674	13576.54	13577.54	1.00	1.31	1.31	1.31	79	284
14-Dec-13	10:10	Rainy	005971	2.6273	2.6449	13577.54	13578.54	1.00	1.31	1.31	1.31	79	224
20-Dec-13	8:10	Cloudy	005512	2.8199	2.8377	13602.53	13603.53	1.00	1.31	1.31	1.31	79	227
20-Dec-13	9:15	Cloudy	005852	2.6528	2.6591	13603.53	13604.53	1.00	1.31	1.31	1.31	79	80
20-Dec-13	10:20	Cloudy	005905	2.6264	2.6353	13604.53	13605.53	1.00	1.31	1.31	1.31	79	113
24-Dec-13	9:03	Rainy	007545	2.6219	2.6294	13605.21	13606.21	1.00	1.30	1.30	1.30	78	96
24-Dec-13	10:15	Rainy	007548	2.6478	2.6563	13606.21	13607.21	1.00	1.30	1.30	1.30	78	109
24-Dec-13	13:00	Rainy	007535	2.6481	2.6502	13607.21	13608.21	1.00	1.30	1.30	1.30	78	27



Location: CMA3a - CWB PRE Site Office Area

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
2-Dec-13	8:00	Fine	005985	2.6523	2.8642	898.89	922.89	24.00	1.38	1.38	1.38	1985	107
7-Dec-13	8:00	Fine	005966	2.6469	2.9128	925.89	949.89	24.00	1.38	1.37	1.38	1981	134
13-Dec-13	8:00	Cloudy	005969	2.6538	2.9725	952.87	976.87	24.00	1.38	1.38	1.38	1983	161
19-Dec-13	8:00	Cloudy	007807	2.6310	2.7575	979.87	1003.87	24.00	1.41	1.41	1.41	2033	62
23-Dec-13	8:00	Cloudy	006679	2.6478	2.9284	1006.87	1030.87	24.00	1.41	1.41	1.41	2027	138

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
3-Dec-13	8:45	Fine	006248	2.6073	2.6217	922.89	923.89	1.00	1.38	1.38	1.38	83	174
3-Dec-13	9:48	Fine	006250	2.6275	2.6405	923.89	924.89	1.00	1.38	1.38	1.38	83	157
3-Dec-13	10:55	Fine	006475	2.7223	2.7329	924.89	925.89	1.00	1.34	1.34	1.34	81	132
9-Dec-13	10:00	Fine	006235	2.6686	2.6846	949.89	950.89	1.00	1.37	1.37	1.37	82	194
9-Dec-13	13:00	Fine	007671	2.6512	2.6669	950.89	951.89	1.00	1.37	1.37	1.37	82	191
9-Dec-13	15:00	Fine	005806	2.7709	2.7924	951.89	952.89	1.00	1.34	1.34	1.34	80	268
14-Dec-13	8:40	Rainy	007813	2.6499	2.6648	976.87	977.87	1.00	1.38	1.38	1.38	83	180
14-Dec-13	9:45	Rainy	007811	2.6289	2.6439	977.87	978.87	1.00	1.38	1.38	1.38	83	181
14-Dec-13	10:55	Rainy	007809	2.6484	2.6632	978.87	979.87	1.00	1.34	1.34	1.34	81	184
20-Dec-13	8:40	Cloudy	007672	2.6435	2.6534	1003.87	1004.87	1.00	1.41	1.41	1.41	85	117
20-Dec-13	9:45	Cloudy	006683	2.6595	2.6700	1004.87	1005.87	1.00	1.41	1.41	1.41	85	124
20-Dec-13	10:57	Cloudy	006445	2.7282	2.7408	1005.87	1006.87	1.00	1.38	1.38	1.38	83	152
24-Dec-13	8:48	Rainy	007805	2.6333	2.6481	1030.87	1031.87	1.00	1.41	1.41	1.41	84	175
24-Dec-13	10:34	Rainy	007803	2.6550	2.6689	1031.87	1032.87	1.00	1.41	1.41	1.41	84	165
24-Dec-13	14:17	Rainy	006469	2.7456	2.7581	1032.87	1033.87	1.00	1.37	1.37	1.37	82	152



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		
2-Dec-13	8:00	Fine	005990	2.6522	2.8240	17696.25	17720.25	24.00	1.35	1.35	1.35	1950	88
7-Dec-13	8:00	Fine	006476	2.7501	2.9591	17723.25	17747.25	24.00	1.35	1.35	1.35	1947	107
13-Dec-13	8:00	Cloudy	006223	2.6432	2.9004	17750.24	17774.24	24.00	1.35	1.35	1.35	1949	132
19-Dec-13	8:00	Cloudy	007808	2.6416	2.7475	17777.24	17801.24	24.00	1.35	1.35	1.35	1948	54
23-Dec-13	8:00	Cloudy	006682	2.6486	2.9017	17805.34	17829.34	24.00	1.35	1.35	1.35	1942	130

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		
3-Dec-13	8:35	Fine	006247	2.6293	2.6404	17720.25	17721.25	1.00	1.35	1.35	1.35	81	137
3-Dec-13	9:40	Fine	006249	2.6486	2.6596	17721.25	17722.25	1.00	1.35	1.35	1.35	81	135
3-Dec-13	10:45	Fine	006243	2.6039	2.6130	17722.25	17723.25	1.00	1.32	1.32	1.32	79	115
9-Dec-13	10:26	Fine	006234	2.6429	2.6544	17747.25	17748.25	1.00	1.31	1.31	1.31	79	146
9-Dec-13	13:00	Fine	007673	2.6517	2.6653	17748.25	17749.25	1.00	1.31	1.31	1.31	79	173
9-Dec-13	14:05	Fine	005805	2.7941	2.8114	17749.25	17750.25	1.00	1.31	1.31	1.31	79	219
14-Dec-13	8:46	Rainy	007796	2.6187	2.6335	17724.24	17725.24	1.00	1.32	1.32	1.32	79	187
14-Dec-13	9:50	Rainy	007812	2.6400	2.6534	17725.24	17726.24	1.00	1.32	1.32	1.32	79	169
14-Dec-13	10:53	Rainy	007810	2.6133	2.6255	17726.24	17727.24	1.00	1.32	1.32	1.32	79	154
20-Dec-13	8:46	Cloudy	007674	2.6250	2.6291	17802.34	17803.34	1.00	1.35	1.35	1.35	81	51
20-Dec-13	9:50	Cloudy	006446	2.7624	2.7710	17803.34	17804.34	1.00	1.35	1.35	1.35	81	106
20-Dec-13	10:53	Cloudy	006681	2.6453	2.6565	17804.34	17805.34	1.00	1.35	1.35	1.35	81	138
24-Dec-13	8:40	Rainy	006399	2.6922	2.7105	17829.34	17830.34	1.00	1.35	1.35	1.35	81	226
24-Dec-13	10:18	Rainy	007804	2.6309	2.6465	17830.34	17831.34	1.00	1.35	1.35	1.35	81	193
24-Dec-13	14:08	Rainy	006470	2.7432	2.7556	17831.34	17832.34	1.00	1.35	1.35	1.35	81	153

Location: CMA5a - Children Garden opposite to Pedestrian Plaza

Report on 24-hour TSP monitoring

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
2-Dec-13	8:00	Fine	007633	2.6505	2.8230	18703.16	18727.16	24.00	1.36	1.36	1.36	1961	88
7-Dec-13	8:00	Fine	005965	2.6493	2.9351	18730.16	18754.16	24.00	1.36	1.36	1.36	1957	146
13-Dec-13	8:00	Cloudy	005802	2.7735	3.0648	18757.15	18781.15	24.00	1.32	1.32	1.32	1901	153
19-Dec-13	8:00	Cloudy	007559	2.6605	2.7752	18784.15	18808.15	24.00	1.32	1.32	1.32	1901	60
23-Dec-13	8:00	Cloudy	006418	2.7553	2.9762	18811.15	18835.15	24.00	1.32	1.31	1.31	1893	117

Report on 1-hour TSP monitoring

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
3-Dec-13	8:38	Fine	006030	2.6259	2.6391	18727.16	18728.16	1.00	1.36	1.36	1.36	82	162
3-Dec-13	9:42	Fine	005796	2.8551	2.8717	18728.16	18729.16	1.00	1.36	1.36	1.36	82	203
3-Dec-13	10:50	Fine	005798	2.8527	2.8663	18729.16	18730.16	1.00	1.36	1.36	1.36	82	167
9-Dec-13	8:06	Fine	006468	2.7513	2.7689	18754.16	18755.16	1.00	1.35	1.35	1.35	81	217
9-Dec-13	9:29	Fine	005935	2.6337	2.6594	18755.16	18756.16	1.00	1.35	1.35	1.35	81	316
9-Dec-13	13:00	Fine	006217	2.6638	2.6765	18756.16	18757.16	1.00	1.35	1.35	1.35	81	156
14-Dec-13	8:30	Rainy	007550	2.6373	2.6483	18781.15	18782.15	1.00	1.36	1.36	1.36	82	135
14-Dec-13	9:35	Rainy	007553	2.6417	2.6511	18782.15	18783.15	1.00	1.36	1.36	1.36	82	115
14-Dec-13	10:40	Rainy	007556	2.6723	2.6827	18783.15	18784.15	1.00	1.36	1.36	1.36	82	127
20-Dec-13	8:30	Cloudy	007562	2.6597	2.6671	18808.15	18809.15	1.00	1.36	1.36	1.36	82	91
20-Dec-13	9:35	Cloudy	007565	2.6635	2.6719	18809.15	18810.15	1.00	1.36	1.36	1.36	82	103
20-Dec-13	10:40	Cloudy	006421	2.7520	2.7594	18810.15	18811.15	1.00	1.36	1.36	1.36	82	91
24-Dec-13	8:35	Rainy	007663	2.6306	2.6389	18835.15	18836.15	1.00	1.35	1.35	1.35	81	102
24-Dec-13	9:45	Rainy	007657	2.6286	2.6382	18836.15	18837.15	1.00	1.35	1.35	1.35	81	118
24-Dec-13	10:50	Rainy	007662	2.6438	2.6531	18837.15	18838.15	1.00	1.35	1.35	1.35	81	115

Location: CMA6a - WD2 PRE Office

Report on 24-hour TSP monitoring

Action Level - 187.3  $\mu\text{g}/\text{m}^3$   
Limit Level - 260  $\mu\text{g}/\text{m}^3$

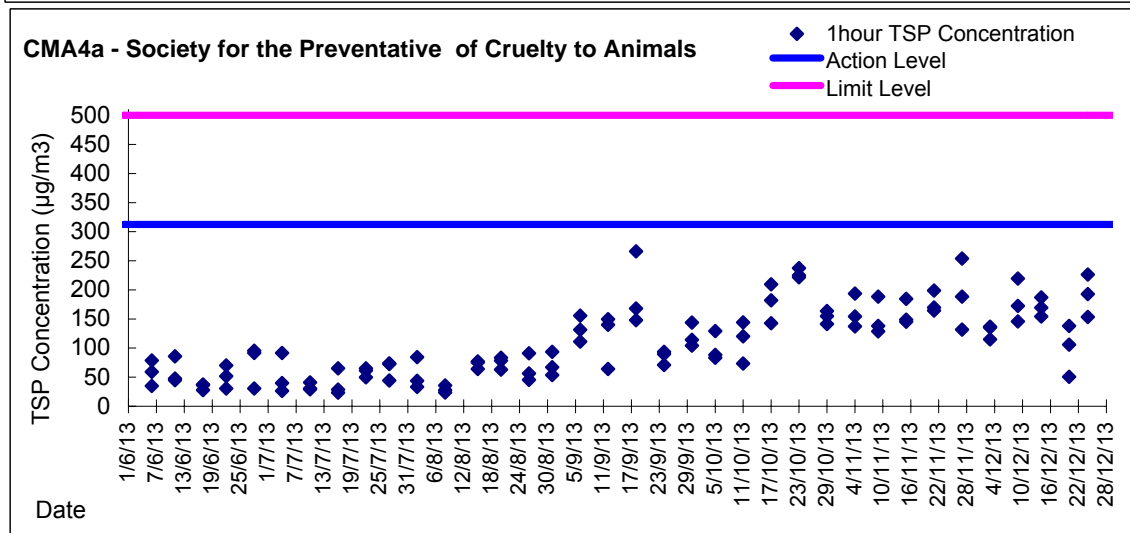
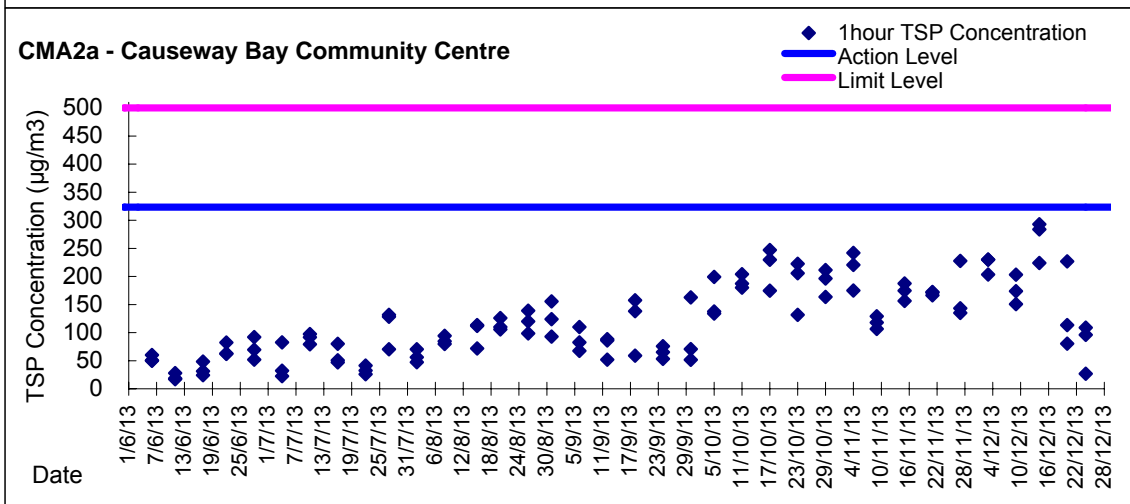
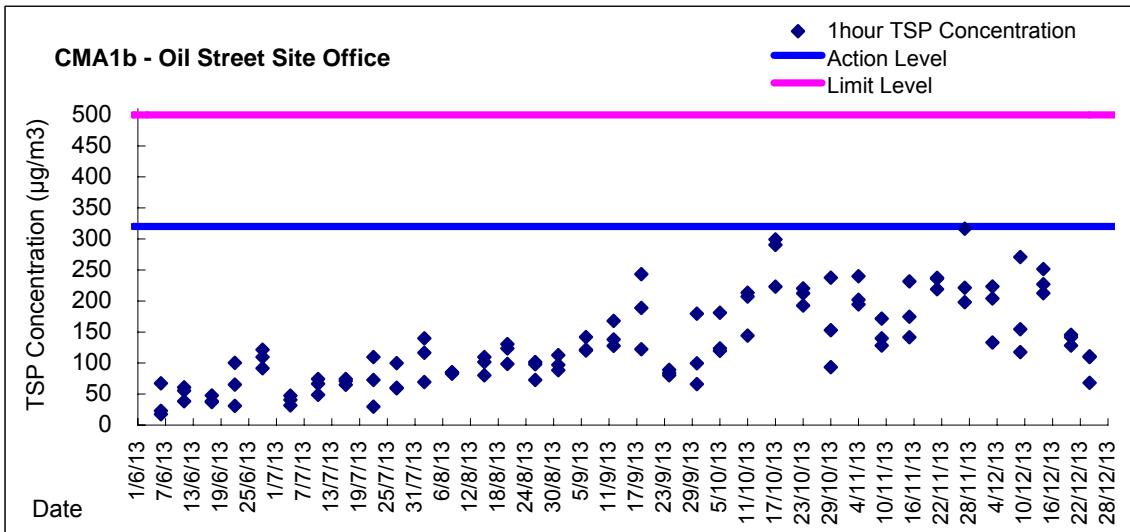
Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
2-Dec-13	8:00	Fine	006487	2.7641	2.9290	17006.51	17030.51	24.00	1.33	1.33	1.33	1914	86
7-Dec-13	8:00	Fine	006212	2.6698	2.9144	17033.88	17057.88	24.00	1.33	1.33	1.33	1910	128
13-Dec-13	8:00	Cloudy	005800	2.8396	3.1093	17060.87	17084.87	24.00	1.37	1.37	1.37	1969	137
19-Dec-13	8:00	Cloudy	007558	2.6693	2.7634	17087.87	17111.87	24.00	1.37	1.37	1.37	1969	48
23-Dec-13	8:00	Cloudy	006419	2.7848	3.1072	17114.87	17138.87	24.00	1.36	1.36	1.36	1961	164

Report on 1-hour TSP monitoring

Action Level - 300.1  $\mu\text{g}/\text{m}^3$   
Limit Level - 500  $\mu\text{g}/\text{m}^3$

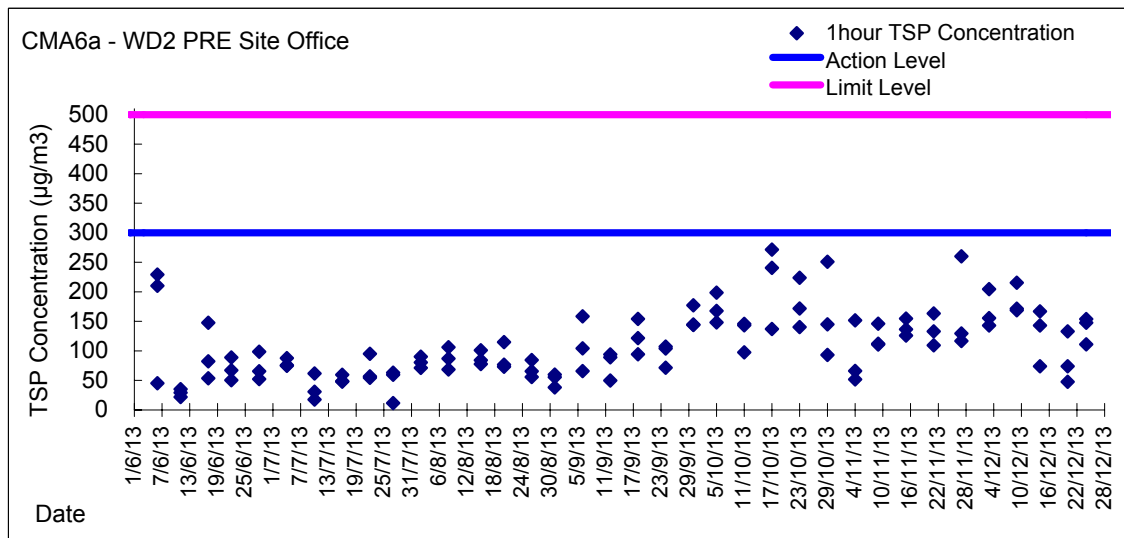
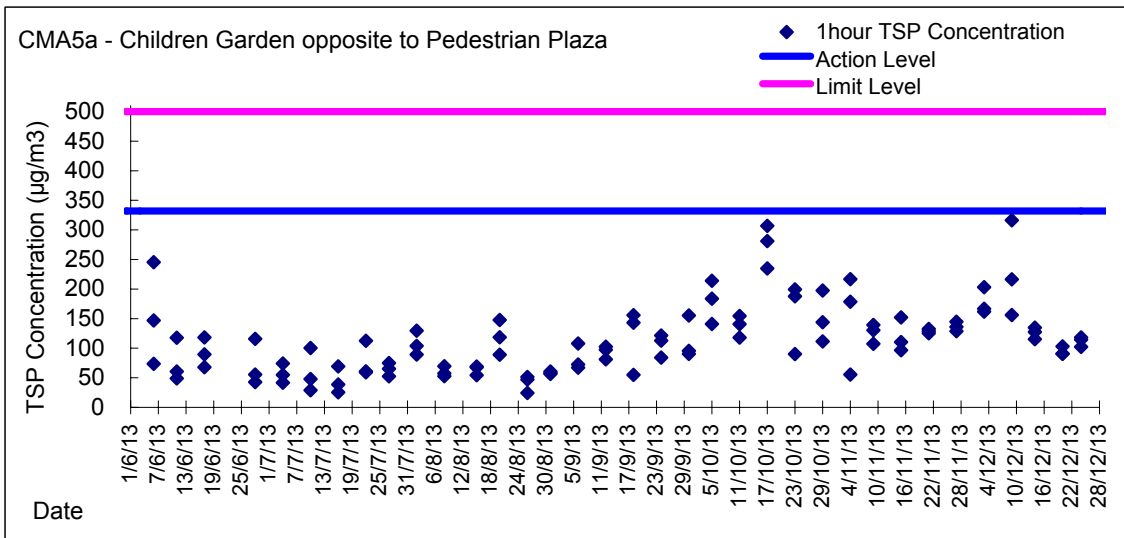
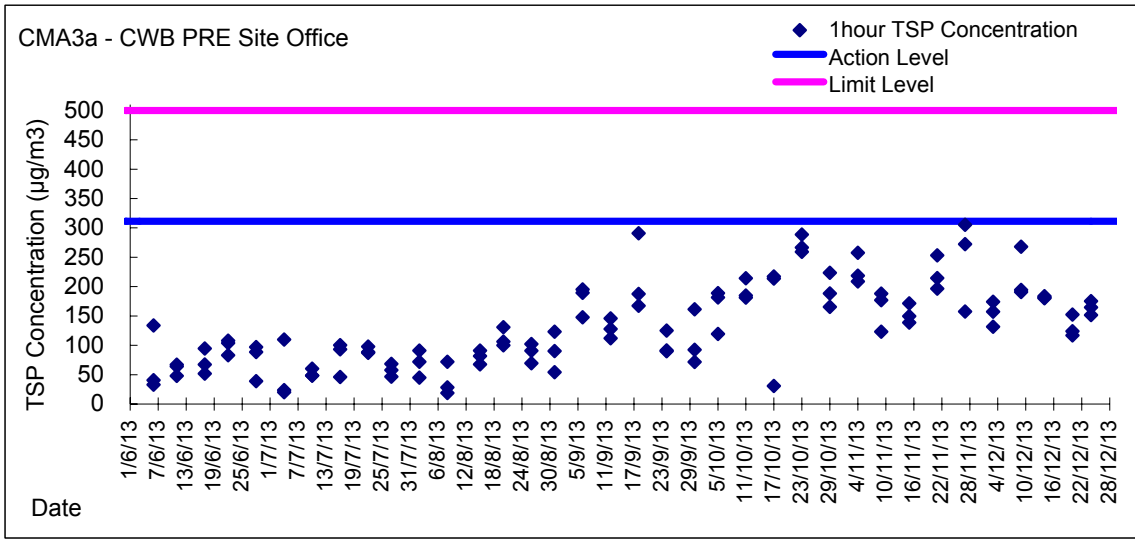
Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{si}$	Final, $Q_{sf}$	Average		
3-Dec-13	8:48	Fine	006029	2.6327	2.6451	17030.51	17031.51	1.00	1.33	1.33	1.33	80	156
3-Dec-13	9:50	Fine	006031	2.6513	2.6627	17031.51	17032.51	1.00	1.33	1.33	1.33	80	143
3-Dec-13	13:00	Fine	005799	2.8548	2.8711	17032.51	17033.51	1.00	1.33	1.33	1.33	80	205
9-Dec-13	8:14	Fine	006467	2.7562	2.7733	17057.88	17058.88	1.00	1.32	1.32	1.32	79	216
9-Dec-13	9:45	Fine	006214	2.6613	2.6747	17058.88	17059.88	1.00	1.32	1.32	1.32	79	169
9-Dec-13	13:00	Fine	006215	2.6331	2.6467	17059.88	17060.88	1.00	1.32	1.32	1.32	79	171
14-Dec-13	8:20	Rainy	007568	2.6572	2.6686	17084.87	17085.87	1.00	1.33	1.33	1.33	80	143
14-Dec-13	9:25	Rainy	007552	2.6555	2.6688	17085.87	17086.87	1.00	1.33	1.33	1.33	80	167
14-Dec-13	10:30	Rainy	007555	2.6699	2.6758	17086.87	17087.87	1.00	1.33	1.33	1.33	80	74
20-Dec-13	8:25	Cloudy	007561	2.6484	2.6522	17111.87	17112.87	1.00	1.33	1.33	1.33	80	48
20-Dec-13	9:30	Cloudy	007564	2.6830	2.6936	17112.87	17113.87	1.00	1.33	1.33	1.33	80	133
20-Dec-13	10:35	Cloudy	007567	2.6696	2.6755	17113.87	17114.87	1.00	1.33	1.33	1.33	80	74
24-Dec-13	8:25	Rainy	007665	2.6666	2.6788	17138.87	17139.87	1.00	1.32	1.32	1.32	79	154
24-Dec-13	9:30	Rainy	007659	2.6367	2.6484	17139.87	17140.87	1.00	1.32	1.32	1.32	79	148
24-Dec-13	10:35	Rainy	007654	2.6442	2.6530	17140.87	17141.87	1.00	1.32	1.32	1.32	79	111

Graphic Presentation of 1 hour TSP Result



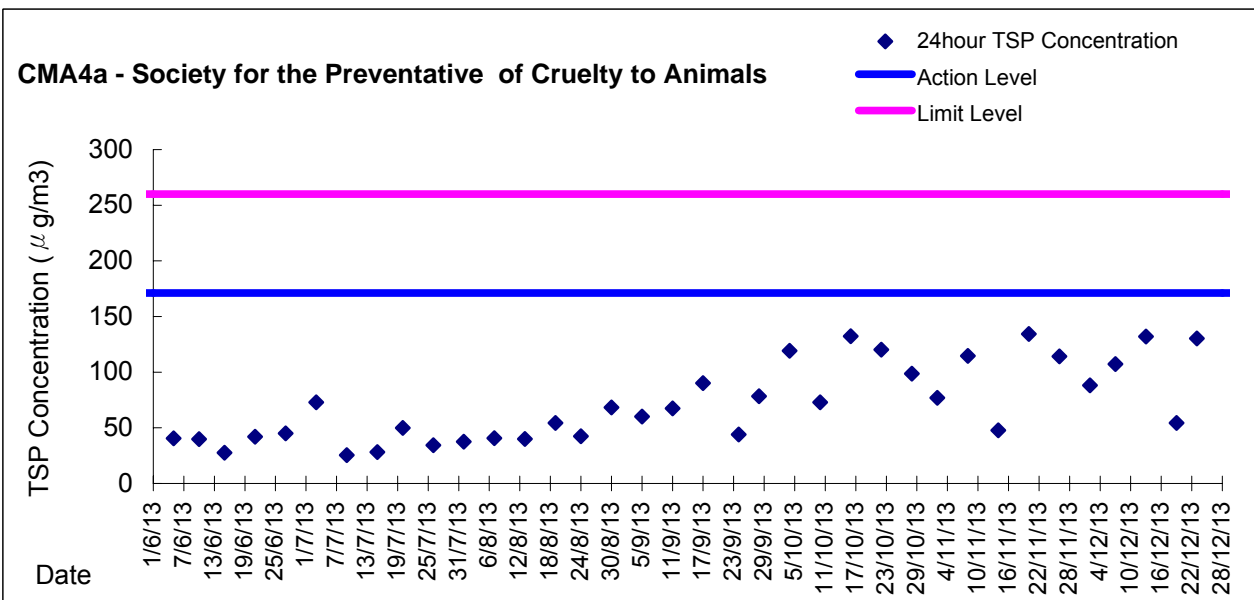
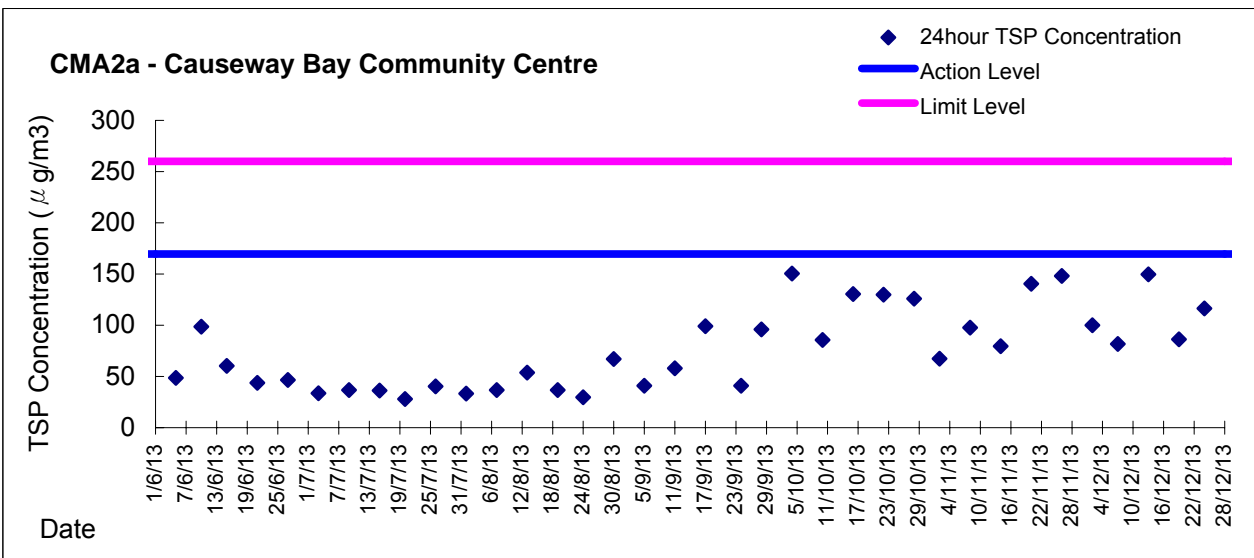
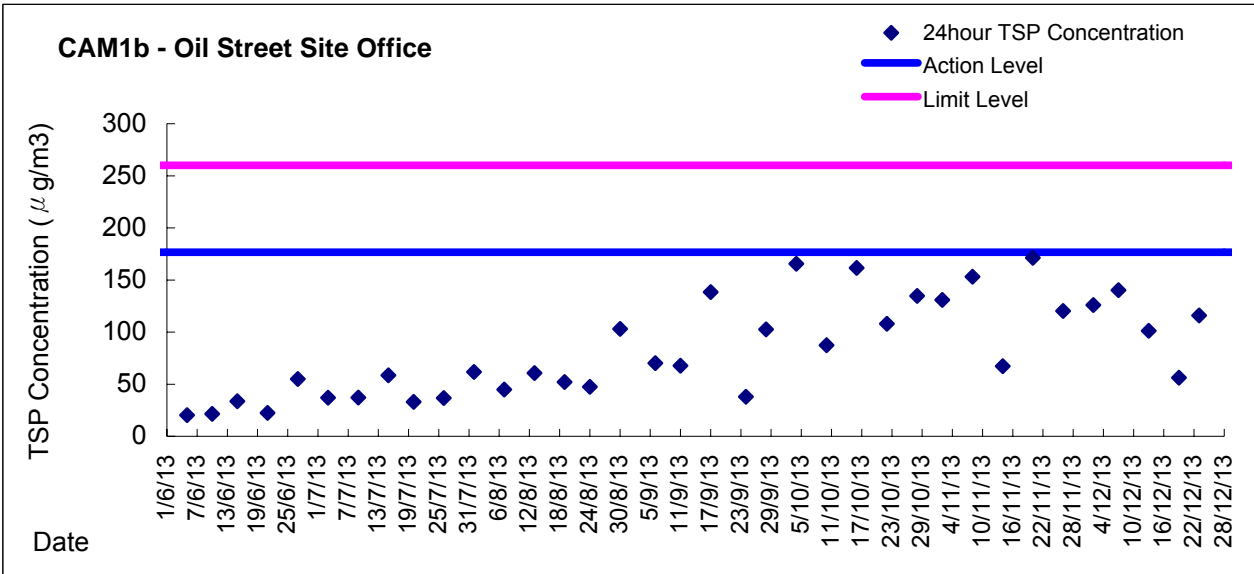


Graphic Presentation of 1 hour TSP Result

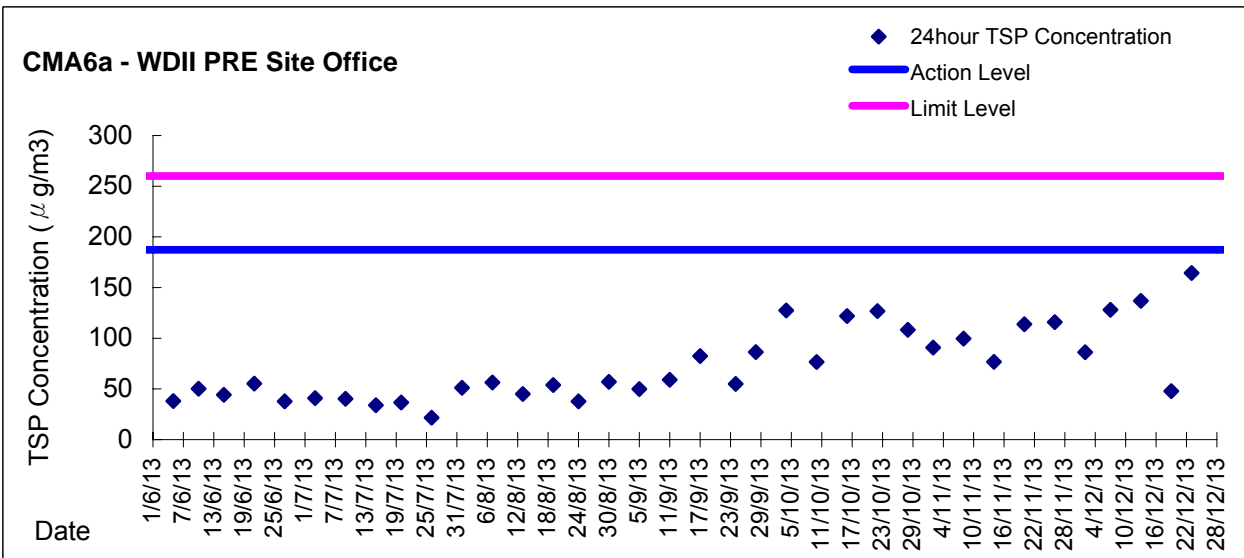
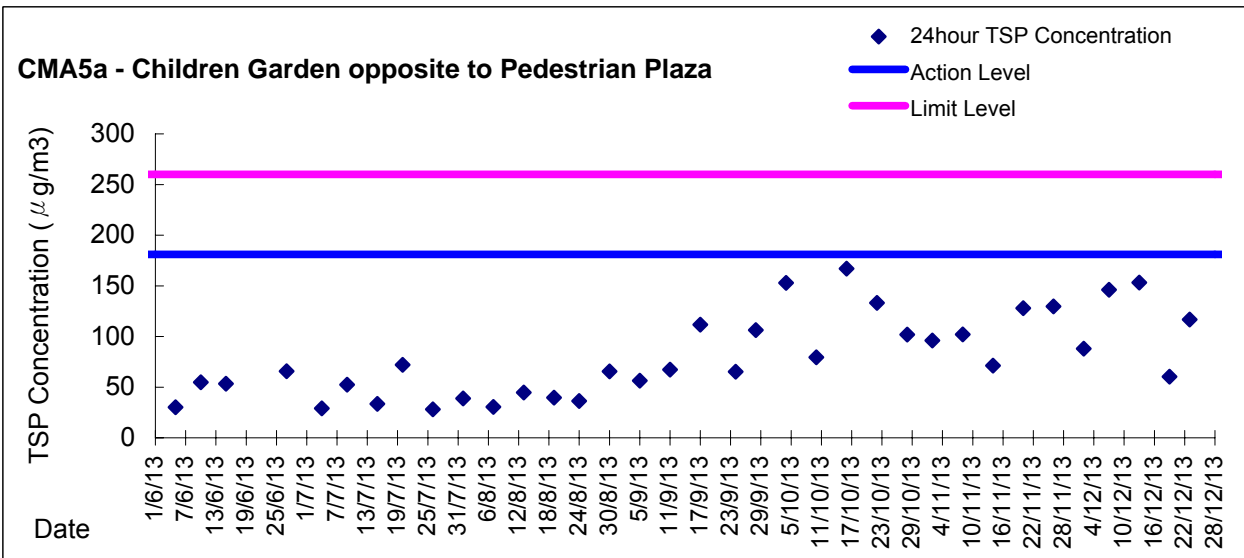
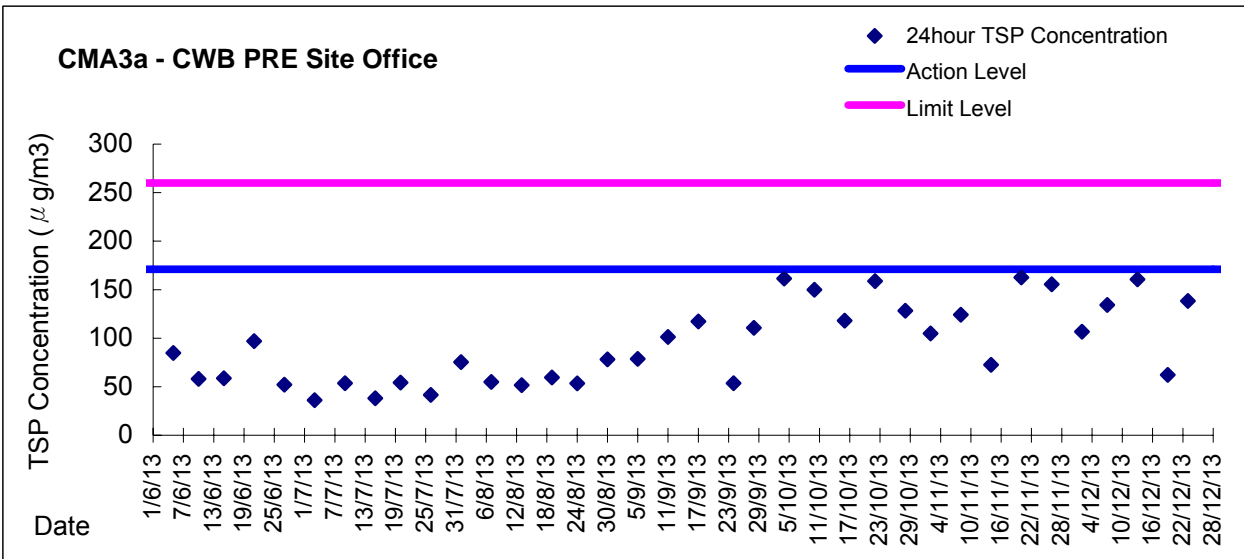




Graphic Presentation of 24 hour TSP Result



Graphic Presentation of 24 hour TSP Result





***Appendix 5.4***

***Water Quality Monitoring Results and Graphical Presentations***



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

Date	Time	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
28/11/2013	15:35	Fine	Middle	3.5	21.50	21.50	21.50	8.12	8.12	8.12	32.40	32.40	32.41	87.7	88.3	88.4	6.42	6.48	6.48	4.72	4.71	4.67	7	7.00
	15:37		Middle	3.5	21.50	21.50		8.12	8.12		32.41	32.41		88.8	88.9		88.4	6.50		6.51	6.48		4.69	
30/11/2013	17:20	Fine	Middle	3.5	20.90	20.90	20.80	8.19	8.19	8.19	32.35	32.35	32.36	86.4	88.1	88.0	6.40	6.52	6.52	4.73	4.71	4.72	4	4.00
	17:22		Middle	3.5	20.70	20.70		8.19	8.19		32.36	32.36		88.6	89.0		88.0	6.57		6.60	6.52		4.71	
2/12/2013	17:30	Fine	Middle	3.5	21.10	21.10	21.10	8.17	8.17	8.17	32.33	32.33	32.33	98.1	98.0	98.3	6.96	6.96	6.97	3.79	3.66	3.77	5	4.50
	17:32		Middle	3.5	21.10	21.10		8.17	8.17		32.33	32.33		98.4	98.6		98.3	6.98		6.99	6.97		3.81	
4/12/2013	18:05	Fine	Middle	2.5	20.60	20.60	20.58	8.23	8.23	8.23	33.32	33.32	33.30	85.5	85.7	85.1	6.33	6.35	6.30	4.12	4.22	4.16	4	4.00
	18:06		Middle	2.5	20.50	20.60		8.23	8.23		33.27	33.27		84.8	84.2		85.1	6.27		6.24	6.30		4.16	
7/12/2013	9:15	Fine	Middle	3.0	19.60	19.60	19.60	8.24	8.24	8.24	32.37	32.37	32.37	88.2	88.7	88.4	6.69	6.73	6.70	4.20	4.21	4.21	4	4.50
	9:17		Middle	3.0	19.60	19.60		8.23	8.23		32.37	32.37		88.6	88.0		88.4	6.72		6.67	6.70		4.21	
9/12/2013	8:45	Fine	Middle	3.0	20.90	20.90	20.90	8.50	8.50	8.50	32.86	32.86	32.86	88.8	88.3	88.3	6.54	6.51	6.51	4.97	4.98	5.04	20	<u>20.00</u>
	8:47		Middle	3.0	20.90	20.90		8.50	8.50		32.86	32.86		88.1	88.0		88.3	6.50		6.50	6.51		5.11	
11/12/2013	10:20	Fine	Middle	2.5	19.80	19.80	19.80	8.19	8.19	8.19	32.75	32.75	32.76	89.8	90.5	89.8	6.76	6.85	6.76	6.42	6.43	6.42	<2	<2
	10:22		Middle	2.5	19.80	19.80		8.19	8.19		32.76	32.76		89.6	89.1		89.8	6.73		6.70	6.76		6.42	
13/12/2013	12:20	Cloudy	Middle	3.0	20.80	20.80	20.80	8.16	8.16	8.16	31.45	31.45	31.56	87.2	87.1	87.1	6.42	6.41	6.41	3.66	3.65	3.65	3	4.00
	12:22		Middle	3.0	20.80	20.80		8.16	8.16		31.67	31.67		87.0	87.0		87.1	6.40		6.39	6.41		3.65	
16/12/2013	17:39	Cloudy	Middle	3.0	18.90	18.90	18.90	8.15	8.15	8.15	33.49	33.49	33.49	84.1	84.0	84.5	6.40	6.40	6.44	6.61	6.60	6.50	4	5.00
	17:41		Middle	3.0	18.90	18.90		8.15	8.15		33.49	33.49		84.9	84.8		84.5	6.47		6.47	6.44		6.50	
18/12/2013	18:45	Fine	Middle	3.5	17.70	17.70	17.70	8.45	8.45	8.45	35.86	35.86	35.86	96.7	96.4	96.1	7.44	7.42	7.40	2.90	2.90	2.91	5	5.00
	18:47		Middle	3.5	17.70	17.70		8.45	8.45		35.85	35.86		95.4	95.9		96.1	7.35		7.39	7.40		2.91	
21/12/2013	8:15	Fine	Middle	2.5	17.70	17.70	17.70	8.28	8.28	8.28	36.06	36.06	36.06	88.3	88.2	88.0	6.80	6.79	6.78	8.39	8.42	<u>8.45</u>	7	7.00
	8:17		Middle	2.5	17.70	17.70		8.28	8.28		36.06	36.06		87.9	87.5		88.0	6.78		6.75	6.78		8.49	
24/12/2013	8:05	Fine	Middle	2.5	16.50	16.50	16.50	8.31	8.31	8.31	36.10	36.10	36.10	83.6	84.4	84.0	6.58	6.66	6.63	6.90	6.87	6.86	4	4.50
	8:07		Middle	2.5	16.50	16.50		8.31	8.31		36.10	36.10		83.8	84.2		84.0	6.62		6.65	6.63		6.83	
26/12/2013	13:25	Fine	Middle	2.5	18.00	18.00	17.98	8.25	8.25	8.25	33.76	33.76	33.77	87.9	88.2	88.0	6.82	6.86	6.83	4.32	4.02	4.05	5	5.50
	13:26		Middle	2.5	17.90	18.00		8.25	8.25		33.77	33.77		88.2	87.6		88.0	6.85		6.77	6.83		3.96	

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



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

Date	Time	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	
28/11/2013	11:30	Fine	Middle	3.0	20.90	20.90	20.85	8.07	8.07	8.08	31.98	31.98	31.98	83.2	83.8	83.5	6.17	6.22	6.21	3.41	3.44	3.43	6	6.50
	11:32		Middle	3.0	20.80	20.80		8.09	8.09		31.98	31.98		83.0	83.9		6.21	6.23		3.45	3.43		7	
30/11/2013	15:30	Fine	Middle	2.5	20.60	20.60	20.60	8.17	8.17	8.18	32.38	32.38	32.39	91.3	91.9	92.0	6.79	6.84	6.85	6.16	6.16	6.14	8	8.00
	15:32		Middle	2.5	20.60	20.60		8.18	8.18		32.39	32.39		92.3	92.4		6.87	6.88		6.15	6.10		8	
2/12/2013	16:00	Fine	Middle	3.5	20.40	20.40	20.40	8.16	8.16	8.16	32.42	32.42	32.42	86.2	87.3	87.0	6.42	6.51	6.48	4.15	4.12	4.09	5	4.00
	16:02		Middle	3.5	20.40	20.40		8.16	8.16		32.42	32.42		87.2	87.1		6.49	6.50		4.06	4.02		3	
4/12/2013	19:55	Fine	Middle	3.5	20.20	20.20	20.15	8.26	8.26	8.26	33.44	33.44	33.48	85.8	85.4	85.5	6.39	6.32	6.28	4.93	5.06	5.06	4	4.00
	19:56		Middle	3.5	20.10	20.10		8.26	8.26		33.52	33.52		85.9	85.0		6.10	6.31		5.15	5.10		4	
7/12/2013	10:05	Fine	Middle	3.0	20.40	20.40	20.40	8.21	8.21	8.21	32.68	32.68	32.68	91.1	90.7	91.0	6.78	6.76	6.77	8.00	7.69	7.80	14	<u>14.50</u>
	10:07		Middle	3.0	20.40	20.40		8.21	8.21		32.68	32.68		91.1	90.9		6.78	6.77		7.73	7.79		15	
9/12/2013	10:00	Fine	Middle	3.0	21.10	21.10	21.10	8.13	8.13	8.13	32.39	32.39	32.39	80.1	79.0	79.5	5.89	5.82	5.85	3.83	3.83	3.83	6	11.50
	10:02		Middle	3.0	21.10	21.10		8.13	8.13		32.39	32.39		79.0	79.7		5.81	5.87		3.84	3.80		17	
11/12/2013	11:20	Fine	Middle	3.5	20.40	20.40	20.40	8.17	8.17	8.17	32.58	32.58	32.59	87.2	86.0	86.3	5.50	5.41	5.45	3.00	2.95	2.95	4	4.00
	11:24		Middle	3.5	20.40	20.40		8.17	8.17		32.59	32.59		86.2	85.9		5.43	5.46		2.94	2.92		4	
13/12/2013	13:29	Cloudy	Middle	3.0	20.70	20.70	20.70	8.23	8.23	8.23	33.66	33.66	33.66	88.2	88.6	88.3	6.49	6.52	6.49	3.56	3.56	3.56	2	2.00
	13:32		Middle	3.0	20.70	20.70		8.23	8.23		33.66	33.66		88.4	87.8		6.50	6.46		3.57	3.56		2	
16/12/2013	16:30	Cloudy	Middle	2.5	18.90	18.90	18.80	8.30	8.30	8.31	33.32	33.32	33.47	85.1	85.6	85.2	6.50	6.53	6.50	7.01	7.01	7.02	4	4.50
	16:32		Middle	2.5	18.70	18.70		8.32	8.32		33.61	33.61		85.0	85.0		6.49	6.49		7.02	7.02		5	
18/12/2013	16:50	Fine	Middle	3.0	17.70	17.70	17.70	8.33	8.33	8.33	35.71	35.71	35.71	92.4	92.5	92.4	7.11	7.13	7.11	4.31	4.31	4.30	8	6.50
	16:52		Middle	3.0	17.70	17.70		8.33	8.33		35.71	35.71		91.9	92.8		7.08	7.11		4.30	4.27		5	
21/12/2013	9:10	Fine	Middle	3.0	17.90	17.90	17.90	8.55	8.55	8.55	36.09	36.09	36.09	89.5	90.3	89.5	6.84	6.90	6.85	7.87	7.87	7.86	11	10.00
	9:12		Middle	3.0	17.90	17.90		8.55	8.55		36.09	36.09		89.2	89.0		6.83	6.81		7.87	7.83		9	
24/12/2013	9:15	Fine	Middle	3.0	17.80	17.80	17.80	8.50	8.50	8.50	35.93	35.93	35.95	89.7	89.5	89.2	6.88	6.87	6.85	5.43	5.41	5.39	7	6.00
	9:17		Middle	3.0	17.80	17.80		8.50	8.50		35.96	35.96		89.2	88.5		6.85	6.80		5.40	5.30		5	
26/12/2013	9:30	Fine	Middle	3.0	17.60	17.60	17.55	8.26	8.26	8.26	31.33	31.33	31.33	71.4	72.1	72.4	5.66	5.71	5.73	4.07	3.89	3.84	10	10.00
	9:31		Middle	3.0	17.50	17.50		8.26	8.26		31.33	31.33		72.9	73.0		5.78	5.78		3.67	3.74		10	

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





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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity		DO Saturation		DO		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			
28/11/2013	14:15	Fine	Middle	1.5	21.40	21.40	21.40	7.97	7.97	7.97	31.09	31.09	31.09	57.5	58.2	58.1	4.25	4.30	4.30	1.25	1.26	1.24	6	5.50
	14:17		Middle	1.5	21.40	21.40		7.97	7.97		31.09	31.09		58.2	58.6		4.30	4.33		1.25	1.21		5	
30/11/2013	15:02	Fine	Middle	1.5	21.00	21.00	21.00	8.06	8.06	8.05	31.32	31.32	31.32	60.1	60.5	60.5	4.47	4.50	4.50	3.78	3.76	3.75	3	3.00
	15:04		Middle	1.5	21.00	21.00		8.04	8.04		31.32	31.32		60.7	60.7		4.51	4.50		3.74	3.73		3	
2/12/2013	15:30	Fine	Middle	1.5	21.60	21.60	21.60	8.06	8.06	8.06	31.74	31.74	31.74	70.1	70.4	70.5	5.16	5.17	5.17	5.53	5.45	5.46	3	4.00
	15:32		Middle	1.5	21.60	21.60		8.06	8.06		31.74	31.74		70.7	70.8		5.17	5.18		5.42	5.42		5	
4/12/2013	19:25	Fine	Middle	1.5	20.00	20.00	19.95	8.13	8.13	8.13	32.75	32.75	32.75	69.4	70.6	70.0	5.21	5.31	5.26	14.78	14.81	14.76	23	<u>23.00</u>
	19:26		Middle	1.5	19.90	19.90		8.13	8.13		32.76	32.75		69.9	70.1		5.25	5.27		14.75	14.70		23	
7/12/2013	11:32	Fine	Middle	1.5	20.90	20.90	20.90	8.05	8.05	8.05	31.68	31.68	31.68	62.5	62.6	62.4	4.64	4.64	4.63	2.85	2.81	2.81	4	4.00
	11:34		Middle	1.5	20.90	20.90		8.05	8.05		31.68	31.68		62.3	62.3		4.62	4.62		2.78	2.80		4	
9/12/2013	12:47	Fine	Middle	1.5	22.00	22.00	22.15	8.02	8.02	8.01	31.89	31.89	31.89	63.1	63.5	64.6	4.58	4.61	4.68	4.85	4.88	4.90	11	11.00
	12:49		Middle	1.5	22.30	22.30		8.00	8.00		31.89	31.89		65.0	66.7		4.70	4.83		4.91	4.95		11	
11/12/2013	16:17	Fine	Middle	1.5	21.50	21.50	21.60	8.03	8.03	8.02	31.81	31.81	31.81	61.5	62.1	61.6	4.50	4.54	4.51	3.06	3.04	3.04	4	3.50
	16:19		Middle	1.5	21.70	21.70		8.01	8.01		31.80	31.80		61.6	61.3		4.50	4.48		3.03	3.02		3	
13/12/2013	15:47	Cloudy	Middle	1.5	20.80	20.80	20.80	8.14	8.14	8.14	32.63	32.63	32.62	59.7	59.8	60.0	4.41	4.43	4.44	3.21	3.18	3.17	2	2.00
	15:49		Middle	1.5	20.80	20.80		8.14	8.14		32.60	32.60		60.3	60.1		4.46	4.45		3.14	3.13		2	
16/12/2013	15:52	Cloudy	Middle	1.5	18.10	18.10	18.10	8.23	8.23	8.23	32.05	32.05	32.05	62.1	62.6	62.8	4.85	4.89	4.91	39.13	39.13	<u>39.13</u>	66	<u>65.50</u>
	15:54		Middle	1.5	18.10	18.10		8.23	8.23		32.05	32.05		63.4	63.2		4.96	4.94		39.13	39.14		65	
18/12/2013	16:22	Fine	Middle	1.5	18.20	18.20	18.20	8.35	8.35	8.35	34.19	34.19	34.19	64.7	65.4	65.3	4.98	5.03	5.03	2.50	2.51	2.51	2	2.00
	16:24		Middle	1.5	18.20	18.20		8.35	8.35		34.19	34.19		65.4	65.6		5.04	5.05		2.50	2.52		<2	
21/12/2013	10:32	Fine	Middle	1.5	18.40	18.40	18.40	8.47	8.47	8.47	35.14	35.14	35.14	71.4	72.0	71.8	5.44	5.48	5.47	5.19	5.20	5.22	4	4.50
	10:34		Middle	1.5	18.40	18.40		8.47	8.47		35.14	35.14		72.1	71.6		5.49	5.46		5.22	5.25		5	
24/12/2013	12:02	Fine	Middle	1.5	18.50	18.50	18.50	8.42	8.42	8.42	35.26	35.26	35.27	56.1	56.8	56.7	4.29	4.31	4.31	4.08	4.09	4.08	5	4.00
	12:04		Middle	1.5	18.50	18.50		8.41	8.41		35.27	35.27		56.8	57.1		4.31	4.34		4.08	4.06		3	
26/12/2013	10:20	Fine	Middle	1.0	17.60	17.60	17.55	8.32	8.32	8.32	31.97	31.96	32.01	62.8	63.4	63.2	4.95	5.00	4.99	6.93	6.98	6.96	6	6.50
	10:21		Middle	1.0	17.50	17.50		8.31	8.31		32.05	32.05		63.6	63.0		5.02	4.98		6.97	6.95		7	

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



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

Date	Time	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
28/11/2013	13:53	Fine	Middle	2.0	21.60	21.60	21.60	8.39	8.39	8.39	35.20	35.20	35.20	65.8	66.1	66.2	4.72	4.75	4.76	5.80	5.72	5.70	5	5.00
	13:55		Middle	2.0	21.60	21.60		8.39	8.39		35.20	35.20		66.8	66.1		4.81	4.76		5.69	5.57		5	
30/11/2013	15:48	Fine	Middle	2.0	21.00	21.00	21.00	8.42	8.42	8.42	35.12	35.12	35.21	55.0	55.0	54.8	3.99	3.99	3.97	5.70	5.70	5.72	4	4.50
	15:50		Middle	2.0	21.00	21.00		8.42	8.42		35.30	35.30		54.8	54.3		3.97	3.94		5.70	5.78		5	
2/12/2013	15:42	Fine	Middle	2.5	20.60	20.60	20.60	8.60	8.60	8.60	35.40	35.40	35.40	68.9	68.7	68.8	5.04	5.03	5.04	4.72	4.73	4.73	4	4.00
	15:44		Middle	2.5	20.60	20.60		8.60	8.60		35.40	35.40		68.3	69.2		5.01	5.07		4.72	4.73		4	
4/12/2013	18:43	Fine	Middle	3.0	20.60	20.60	20.50	8.40	8.40	8.40	35.44	35.44	35.44	68.9	68.6	68.4	5.04	5.02	5.01	4.59	4.55	4.55	5	5.00
	18:45		Middle	3.0	20.40	20.40		8.39	8.39		35.44	35.44		68.1	67.9		4.99	4.98		4.54	4.50		5	
7/12/2013	10:38	Fine	Middle	2.0	20.70	20.70	20.70	8.39	8.39	8.40	35.53	35.53	35.54	68.4	69.3	68.7	4.98	5.05	5.01	5.31	5.33	5.31	12	11.50
	10:40		Middle	2.0	20.70	20.70		8.40	8.40		35.54	35.54		68.8	68.3		5.01	4.98		5.33	5.27		11	
9/12/2013	11:15	Fine	Middle	2.5	21.00	21.00	21.00	8.39	8.39	8.39	35.43	35.43	35.43	68.7	68.8	68.9	4.98	4.98	4.99	5.34	5.32	5.30	9	9.00
	11:17		Middle	2.5	21.00	21.00		8.38	8.38		35.43	35.43		69.0	69.1		5.00	5.01		5.26	5.27		9	
11/12/2013	14:23	Fine	Middle	3.0	20.60	20.60	20.60	8.43	8.43	8.43	35.57	35.57	35.57	70.1	71.2	70.6	5.12	5.20	5.16	3.21	3.21	3.21	3	3.00
	14:25		Middle	3.0	20.60	20.60		8.43	8.43		35.57	35.57		71.0	70.0		5.18	5.13		3.21	3.21		3	
13/12/2013	15:25	Cloudy	Middle	2.5	20.80	20.80	20.80	8.19	8.19	8.18	32.60	32.60	32.60	76.0	74.1	75.0	5.62	5.48	5.55	4.07	4.10	4.11	4	3.50
	15:27		Middle	2.5	20.80	20.80		8.16	8.16		32.60	32.60		75.1	74.7		5.56	5.52		4.13	4.14		3	
16/12/2013	16:21	Cloudy	Middle	2.5	19.60	19.60	19.60	8.19	8.19	8.19	32.37	32.37	32.38	80.7	81.1	81.1	6.13	6.17	6.17	5.66	5.68	5.67	3	3.00
	16:23		Middle	2.5	19.60	19.60		8.19	8.19		32.38	32.38		81.3	81.4		6.19	6.20		5.67	5.68		3	
18/12/2013	15:50	Fine	Middle	2.0	18.80	18.80	14.10	8.24	8.24	8.24	32.56	32.56	32.56	80.6	81.8	81.7	6.20	6.30	6.29	4.61	4.63	4.61	4	4.50
	15:52		Middle	2.0	0.00	18.80		8.24	8.24		32.56	32.56		82.0	82.5		6.31	6.35		4.61	4.60		5	
21/12/2013	10:07	Fine	Middle	2.0	18.80	18.80	18.80	8.24	8.24	8.24	32.78	32.78	32.78	73.6	74.9	75.1	5.66	5.77	5.79	5.53	5.53	5.51	6	6.00
	10:09		Middle	2.0	18.80	18.80		8.24	8.24		32.78	32.78		75.7	76.3		5.83	5.88		5.50	5.49		6	
24/12/2013	11:39	Fine	Middle	2.5	18.50	18.50	18.50	8.20	8.20	8.20	32.81	32.81	32.81	74.2	74.7	74.8	5.73	5.76	5.77	5.79	5.80	5.81	5	5.00
	11:40		Middle	2.5	18.50	18.50		8.20	8.20		32.81	32.81		74.8	75.3		5.77	5.81		5.82	5.84		5	
26/12/2013	10:15	Fine	Middle	2.5	18.00	18.00	17.90	8.19	8.19	8.19	32.80	32.80	32.80	72.8	72.5	72.4	5.67	5.65	5.65	4.99	4.94	4.91	8	7.00
	10:17		Middle	2.5	17.80	17.80		8.19	8.19		32.79	32.79		72.3	72.0		5.64	5.63		4.88	4.83		6	

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



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

Date	Time	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
28/11/2013	14:26	Fine	Middle	3.0	21.70	21.70	21.75	8.37	8.37	8.37	35.24	35.24	35.24	63.1	63.8	63.6	4.53	4.58	4.56	4.70	4.71	4.69	5	6.00
	14:28		Middle	3.0	21.80	21.80		8.37	8.37		35.24	35.24		63.7	63.6		4.57	4.56		4.69	4.67		7	
30/11/2013	16:20	Fine	Middle	3.0	21.60	21.60	21.55	8.39	8.39	8.40	35.28	35.29	35.31	62.1	61.2	61.9	4.46	4.40	4.45	5.83	5.84	5.81	7	7.00
	16:22		Middle	3.0	21.50	21.50		8.40	8.40		35.33	35.33		61.9	62.3		4.45	4.48		5.82	5.73		7	
2/12/2013	16:16	Fine	Middle	3.0	21.10	21.10	21.10	8.45	8.45	8.45	35.47	35.47	35.47	69.4	70.0	69.8	5.02	5.07	5.05	5.21	5.22	5.23	3	3.50
	16:18		Middle	3.0	21.10	21.10		8.45	8.45		35.47	35.47		69.9	70.0		5.03	5.07		5.24	5.23		4	
4/12/2013	19:34	Fine	Middle	3.0	20.50	20.50	20.45	8.38	8.38	8.39	35.49	35.49	35.50	71.1	70.8	70.7	5.21	5.20	5.20	7.57	7.54	7.52	6	6.00
	19:36		Middle	3.0	20.40	20.40		8.39	8.39		35.50	35.50		70.7	70.3		5.20	5.17		7.52	7.44		6	
7/12/2013	11:15	Fine	Middle	2.5	20.80	20.80	20.75	8.38	8.38	8.39	35.57	35.57	35.56	68.0	67.4	67.5	4.94	4.90	4.91	4.29	4.25	4.23	9	8.00
	11:17		Middle	2.5	20.70	20.70		8.39	8.39		35.56	35.55		66.9	67.5		4.87	4.91		4.19	4.17		7	
9/12/2013	11:50	Fine	Middle	2.5	21.40	21.40	21.40	8.36	8.36	8.36	35.49	35.49	35.49	75.2	75.7	75.9	5.42	5.44	5.44	5.08	5.07	5.05	6	6.50
	11:52		Middle	2.5	21.40	21.40		8.36	8.36		35.49	35.49		76.3	76.4		5.43	5.47		5.01	5.02		7	
11/12/2013	14:58	Fine	Middle	2.5	20.70	20.70	20.70	8.37	8.37	8.38	35.58	35.57	35.58	70.5	72.6	72.1	5.14	5.30	5.26	3.63	3.63	3.63	<2	<2
	15:00		Middle	2.5	20.70	20.70		8.38	8.38		35.57	35.58		72.9	72.2		5.32	5.26		3.63	3.63		<2	
13/12/2013	16:00	Cloudy	Middle	3.0	20.90	20.90	20.90	8.15	8.15	8.14	32.51	32.51	32.55	72.8	71.5	71.8	5.37	5.27	5.30	3.43	3.40	3.37	4	4.50
	16:02		Middle	3.0	20.90	20.90		8.13	8.13		32.58	32.58		71.3	71.7		5.26	5.29		3.33	3.31		5	
16/12/2013	16:43	Cloudy	Middle	3.0	19.50	19.50	19.55	8.16	8.16	8.16	32.15	32.15	32.15	75.3	76.6	77.0	5.74	5.86	5.88	3.72	3.71	3.70	3	3.00
	16:45		Middle	3.0	19.60	19.60		8.16	8.16		32.15	32.15		78.0	78.0		5.95	5.96		3.68	3.69		3	
18/12/2013	16:22	Fine	Middle	2.5	19.00	19.00	19.00	8.20	8.20	8.20	32.56	32.56	32.56	84.6	84.0	84.9	6.50	6.45	6.54	4.13	4.66	4.30	4	4.00
	16:24		Middle	2.5	19.00	19.00		8.20	8.20		32.56	32.56		85.5	85.6		6.59	6.60		4.19	4.23		4	
21/12/2013	10:38	Fine	Middle	2.5	18.90	18.90	18.90	8.22	8.22	8.22	32.78	32.78	32.78	75.6	75.7	75.4	5.81	5.82	5.80	4.07	4.08	4.08	4	4.00
	10:40		Middle	2.5	18.90	18.90		8.22	8.22		32.78	32.78		75.4	74.9		5.79	5.79		4.06	4.09		4	
24/12/2013	11:10	Fine	Middle	2.5	18.70	18.70	18.70	8.25	8.25	8.25	32.88	32.88	32.88	84.0	83.0	83.1	6.46	6.38	6.39	5.33	5.34	5.34	5	5.00
	11:12		Middle	2.5	18.70	18.70		8.25	8.25		32.88	32.88		82.6	82.8		6.35	6.37		5.32	5.36		5	
26/12/2013	10:53	Fine	Middle	2.5	17.60	17.60	17.50	8.19	8.19	8.19	32.83	32.83	32.83	77.5	77.0	76.8	6.09	6.06	6.05	4.30	4.28	4.26	6	6.00
	10:55		Middle	2.5	17.40	17.40		8.19	8.19		32.83	32.83		76.6	76.2		6.04	6.01		4.25	4.22		6	

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



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

Date	Time	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
28/11/2013	14:17	Fine	Middle	2.5	21.40	21.40	21.40	8.36	8.36	8.36	35.23	35.23	35.23	65.4	65.6	65.8	4.74	4.76	4.78	3.99	4.01	4.07	6	5.50
	14:19		Middle	2.5	21.40	21.40		8.36	8.36		35.23	35.23		66.2	66.1		4.81	4.80		4.13	4.15		5	
30/11/2013	16:10	Fine	Middle	3.0	21.60	21.60	21.50	8.40	8.40	8.40	35.15	35.15	35.17	56.8	56.2	55.8	4.09	4.04	4.01	3.22	3.21	3.21	3	2.50
	16:12		Middle	3.0	21.40	21.40		8.40	8.40		35.18	35.18		55.4	54.6		3.99	3.93		3.21	3.21		2	
2/12/2013	16:07	Fine	Middle	2.5	20.80	20.80	20.80	8.47	8.47	8.47	35.45	35.45	35.45	69.6	69.5	69.7	5.06	5.05	5.07	5.11	5.10	5.09	4	4.00
	16:09		Middle	2.5	20.80	20.80		8.47	8.47		35.45	35.45		69.8	69.8		5.08	5.08		5.08	5.07		4	
4/12/2013	19:21	Fine	Middle	3.0	20.50	20.50	20.40	8.38	8.38	8.38	35.50	35.50	35.49	69.9	69.4	69.4	5.12	5.10	5.10	4.18	4.15	4.14	6	5.50
	19:23		Middle	3.0	20.30	20.30		8.37	8.37		35.48	35.48		69.2	69.1		5.09	5.09		4.11	4.12		5	
7/12/2013	11:05	Fine	Middle	2.5	20.50	20.50	20.45	8.39	8.39	8.39	35.47	35.47	35.48	64.1	64.4	64.6	4.70	4.71	4.73	4.63	4.55	4.56	8	8.00
	11:07		Middle	2.5	20.40	20.40		8.38	8.38		35.48	35.48		65.0	64.7		4.76	4.73		4.53	4.52		8	
9/12/2013	11:42	Fine	Middle	2.5	20.90	20.90	20.90	8.37	8.37	8.37	35.44	35.44	35.44	70.6	71.4	70.7	5.13	5.18	5.14	4.28	4.16	4.18	7	7.00
	11:44		Middle	2.5	20.90	20.90		8.37	8.37		35.44	35.44		70.6	70.2		5.13	5.10		4.11	4.15		7	
11/12/2013	14:50	Fine	Middle	2.5	20.70	20.70	20.65	8.39	8.39	8.39	35.56	35.55	35.56	71.3	71.1	71.3	5.24	5.20	5.22	2.66	2.65	2.64	<2	<2
	14:52		Middle	2.5	20.60	20.60		8.39	8.39		35.56	35.55		70.1	72.7		5.13	5.32		2.61	2.62		<2	
13/12/2013	15:49	Cloudy	Middle	3.0	20.70	20.70	20.65	8.14	8.14	8.14	32.60	32.60	32.62	79.1	78.2	77.7	5.86	5.79	5.76	3.27	3.23	3.23	4	4.00
	15:51		Middle	3.0	20.60	20.60		8.13	8.13		32.63	32.63		77.3	76.2		5.73	5.65		3.22	3.21		4	
16/12/2013	16:41	Cloudy	Middle	3.0	19.60	19.60	19.60	8.17	8.17	8.17	32.40	32.40	32.40	77.4	79.9	79.6	5.97	5.97	6.05	3.51	3.55	3.53	3	3.50
	16:43		Middle	3.0	19.60	19.60		8.17	8.17		32.40	32.40		80.5	80.7		6.11	6.13		3.57	3.49		4	
18/12/2013	16:15	Fine	Middle	2.5	19.10	19.10	19.10	8.21	8.21	8.21	32.56	32.56	32.56	82.2	82.6	82.4	6.30	6.35	6.33	4.88	4.87	4.84	8	6.50
	16:17		Middle	2.5	19.10	19.10		8.21	8.21		32.56	32.56		82.4	82.5		6.33	6.33		4.80	4.79		5	
21/12/2013	10:30	Fine	Middle	2.5	18.80	18.80	18.80	8.23	8.23	8.23	32.75	32.75	32.77	79.7	79.5	79.7	7.45	7.27	7.41	4.49	4.48	4.48	4	5.00
	10:33		Middle	2.5	18.80	18.80		8.23	8.23		32.79	32.79		79.8	79.6		7.47	7.45		4.47	4.46		6	
24/12/2013	11:15	Fine	Middle	2.5	18.60	18.60	18.60	8.22	8.22	8.22	32.84	32.84	32.84	79.9	80.2	80.5	6.17	6.20	6.22	5.83	5.84	5.84	5	5.50
	11:17		Middle	2.5	18.60	18.60		8.22	8.22		32.84	32.84		80.8	80.9		6.24	6.25		5.85	5.83		6	
26/12/2013	10:41	Fine	Middle	2.5	17.80	17.80	17.70	8.20	8.20	8.20	32.76	32.76	32.77	77.4	77.2	77.1	6.06	6.05	6.05	4.15	4.14	4.13	4	4.00
	10:43		Middle	2.5	17.60	17.60		8.20	8.20		32.77	32.77		77.0	76.8		6.04	6.03		4.14	4.07		4	

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



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

Date	Time	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	
28/11/2013	14:09	Fine	Middle	2.5	21.70	21.70	21.70	8.39	8.39	8.39	35.21	35.21	35.21	62.5	63.1	63.8	4.50	4.57	4.60	6.79	6.81	6.79	7	8.00
	14:11		Middle	2.5	21.70	21.70		8.39	8.39		35.21	35.21		64.6	65.1		4.65	4.69		6.84	6.73		9	
30/11/2013	16:00	Fine	Middle	2.5	21.20	21.20	21.15	8.41	8.41	8.41	35.21	35.22	35.24	61.4	60.9	61.6	4.44	4.40	4.46	4.11	4.08	4.05	4	4.00
	16:02		Middle	2.5	21.10	21.10		8.41	8.41		35.27	35.27		62.0	62.2		4.49	4.50		4.07	3.95		4	
2/12/2013	15:57	Fine	Middle	2.5	20.60	20.60	20.55	8.49	8.49	8.49	35.37	35.37	35.37	68.1	69.0	68.7	4.99	5.06	5.05	4.40	4.41	4.41	4	3.50
	15:59		Middle	2.5	20.50	20.50		8.49	8.49		35.37	35.37		68.8	68.9		5.04	5.09		4.40	4.41		3	
4/12/2013	19:04	Fine	Middle	3.0	20.60	20.60	20.50	8.39	8.39	8.39	35.44	35.44	35.44	72.1	71.8	71.6	5.27	5.25	5.24	4.74	4.72	4.71	6	6.00
	19:06		Middle	3.0	20.40	20.40		8.39	8.39		35.44	35.44		71.3	71.1		5.23	5.22		4.72	4.67		6	
7/12/2013	10:54	Fine	Middle	2.5	20.60	20.60	20.55	8.40	8.40	8.40	35.52	35.52	35.54	68.1	68.0	67.3	4.97	4.96	4.91	4.54	4.43	4.41	5	5.50
	10:56		Middle	2.5	20.50	20.50		8.40	8.40		35.55	35.55		67.0	66.2		4.89	4.82		4.35	4.31		6	
9/12/2013	11:32	Fine	Middle	2.5	20.80	20.80	20.80	8.38	8.38	8.38	35.44	35.44	35.44	71.9	72.5	72.4	5.26	5.28	5.28	4.64	4.59	4.59	6	6.00
	11:35		Middle	2.5	20.80	20.80		8.38	8.38		35.44	35.44		72.3	72.8		5.27	5.31		4.53	4.58		6	
11/12/2013	14:42	Fine	Middle	2.5	20.40	20.40	20.40	8.41	8.41	8.41	35.58	35.58	35.59	72.2	73.3	73.1	5.27	5.36	5.34	3.50	3.49	3.47	2	2.50
	14:44		Middle	2.5	20.40	20.40		8.41	8.41		35.59	35.59		73.6	73.3		5.37	5.35		3.44	3.45		3	
13/12/2013	15:39	Cloudy	Middle	2.5	20.70	20.70	20.70	8.15	8.15	8.15	32.58	32.58	32.58	77.0	76.8	76.7	5.70	5.68	5.68	4.73	4.63	4.63	3	3.50
	15:41		Middle	2.5	20.70	20.70		8.14	8.14		32.58	32.58		76.4	76.4		5.66	5.66		4.60	4.55		4	
16/12/2013	16:34	Cloudy	Middle	3.0	19.50	19.50	19.50	8.17	8.17	8.17	32.41	32.41	32.41	80.9	80.8	80.6	6.16	6.15	6.13	4.67	4.66	4.64	4	3.50
	16:36		Middle	3.0	19.50	19.50		8.17	8.17		32.41	32.41		80.4	80.1		6.11	6.10		4.63	4.60		3	
18/12/2013	16:07	Fine	Middle	2.5	18.80	18.80	18.70	8.21	8.21	8.21	32.54	32.54	32.54	84.3	84.0	84.7	6.47	6.46	6.52	4.98	5.00	5.00	3	3.50
	16:09		Middle	2.5	18.40	18.80		8.21	8.21		32.54	32.54		85.2	85.3		6.56	6.57		4.99	5.02		4	
21/12/2013	10:21	Fine	Middle	2.5	18.70	18.70	18.70	8.23	8.23	8.23	32.77	32.77	32.77	77.1	76.9	77.0	5.93	5.10	5.72	5.39	5.40	5.41	6	5.50
	10:23		Middle	2.5	18.70	18.70		8.23	8.23		32.77	32.77		76.7	77.3		5.90	5.95		5.41	5.42		5	
24/12/2013	11:24	Fine	Middle	2.5	18.70	18.70	18.70	8.20	8.20	8.20	32.82	32.82	32.82	75.9	76.4	75.9	5.84	5.87	5.84	5.40	5.39	5.39	5	5.50
	11:26		Middle	2.5	18.70	18.70		8.20	8.20		32.82	32.82		75.5	75.6		5.83	5.81		5.37	5.41		6	
26/12/2013	10:31	Fine	Middle	2.5	17.90	17.90	17.80	8.20	8.20	8.20	32.73	32.73	32.73	80.3	80.0	79.8	6.29	6.28	6.26	3.63	3.58	3.57	4	4.00
	10:33		Middle	2.5	17.70	17.70		8.20	8.20		32.73	32.73		79.7	79.2		6.26	6.20		3.56	3.52		4	

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



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

Date	Time	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
28/11/2013	14:01	Fine	Middle	2.5	21.60	21.60	21.60	8.37	8.37	8.37	35.17	35.17	35.17	63.8	64.4	64.6	4.60	4.64	4.66	4.85	4.86	4.88	8	8.00
	14:03		Middle	2.5	21.60	21.60		8.37	8.37		35.17	35.17		65.0	65.3		4.69	4.71		4.90	4.89		8	
30/11/2013	15:56	Fine	Middle	2.5	21.10	21.10	21.00	8.42	8.42	8.42	35.09	35.09	35.10	59.7	59.0	59.8	4.33	4.36	4.35	5.21	5.18	5.16	4	4.00
	15:58		Middle	2.5	20.90	20.90		8.42	8.42		35.10	35.10		60.1	60.2		4.35	4.37		5.15	5.10		4	
2/12/2013	15:52	Fine	Middle	2.5	20.50	20.40	20.45	8.54	8.54	8.54	35.40	35.40	35.39	68.1	69.0	68.6	5.00	5.07	5.04	5.00	5.00	5.00	4	4.50
	15:54		Middle	2.5	20.40	20.50		8.54	8.54		35.38	35.38		68.5	68.7		5.03	5.04		5.00	5.00		5	
4/12/2013	18:53	Fine	Middle	3.0	20.40	20.40	20.25	8.39	8.39	8.39	35.40	35.40	35.36	74.3	74.1	73.9	5.69	5.68	5.67	7.08	7.01	6.99	7	7.00
	18:55		Middle	3.0	20.10	20.10		8.39	8.39		35.32	35.32		73.8	73.5		5.66	5.64		6.94	6.92		7	
7/12/2013	10:50	Fine	Middle	2.5	20.60	20.60	20.50	8.40	8.40	8.40	35.52	35.52	35.53	69.5	68.9	68.6	5.08	5.03	5.01	5.19	5.05	5.07	9	8.50
	10:52		Middle	2.5	20.40	20.40		8.40	8.40		35.53	35.53		68.2	67.7		4.98	4.95		5.02	5.01		8	
9/12/2013	11:27	Fine	Middle	2.5	20.80	20.80	20.80	8.38	8.38	8.38	35.45	35.45	35.45	72.1	72.5	72.4	5.25	5.28	5.27	6.14	6.14	6.14	9	9.00
	11:29		Middle	2.5	20.80	20.80		8.38	8.38		35.45	35.45		72.6	72.4		5.29	5.27		6.14	6.15		9	
11/12/2013	14:35	Fine	Middle	2.5	20.40	20.40	20.40	8.42	8.42	8.42	35.54	35.61	35.60	78.3	78.5	78.0	5.74	5.76	5.72	4.55	4.56	4.55	3	2.50
	14:37		Middle	2.5	20.40	20.40		8.42	8.42		35.62	35.62		77.6	77.7		5.71	5.66		4.55	4.53		2	
13/12/2013	15:36	Cloudy	Middle	2.5	20.70	20.70	20.65	8.16	8.16	8.16	32.60	32.60	32.60	78.5	77.4	77.7	5.82	5.74	5.76	4.92	4.77	4.80	4	4.00
	15:38		Middle	2.5	20.60	20.60		8.15	8.15		32.60	32.60		77.3	77.5		5.73	5.75		4.75	4.74		4	
16/12/2013	16:30	Cloudy	Middle	3.0	19.60	19.60	19.60	8.18	8.18	8.18	32.94	32.44	32.57	80.8	80.9	81.2	6.13	6.14	6.17	6.48	6.47	6.46	4	4.00
	16:32		Middle	3.0	19.60	19.60		8.18	8.18		32.44	32.44		81.2	81.8		6.17	6.22		6.45	6.43		4	
18/12/2013	16:01	Fine	Middle	2.5	18.60	18.60	18.55	8.22	8.22	8.22	32.25	32.25	32.25	85.2	86.7	86.1	7.04	7.30	7.17	5.43	5.43	5.43	4	3.50
	16:03		Middle	2.5	18.50	18.50		8.22	8.22		32.25	32.25		86.4	86.2		7.18	7.16		5.41	5.43		3	
21/12/2013	10:15	Fine	Middle	2.5	18.40	18.40	18.40	8.23	8.23	8.24	32.80	32.80	32.80	80.4	79.8	80.3	6.22	6.19	6.22	5.21	5.22	5.21	5	4.50
	10:17		Middle	2.5	18.40	18.40		8.24	8.24		32.80	32.80		80.1	81.0		6.21	6.27		5.20	5.19		4	
24/12/2013	11:31	Fine	Middle	2.5	18.50	18.50	18.50	8.20	8.20	8.20	32.80	32.80	32.80	81.5	81.6	81.9	6.29	6.30	6.32	4.94	4.95	4.96	5	5.00
	11:33		Middle	2.5	18.50	18.50		8.20	8.20		32.80	32.80		82.2	82.1		6.34	6.33		4.97	4.99		5	
26/12/2013	10:24	Fine	Middle	2.5	17.90	17.90	17.75	8.20	8.20	8.20	32.79	32.79	32.80	79.5	79.3	79.1	6.22	6.21	6.20	5.66	5.61	5.60	5	4.50
	10:26		Middle	2.5	17.60	17.60		8.20	8.20		32.80	32.80		78.9	78.5		6.19	6.17		5.59	5.54		4	

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





**Water Monitoring Result at RW21-P789 - 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	Value	Average	
28/11/2013	13:40	Fine	Middle	3.0	21.30	21.30	21.25	8.10	8.10	8.10	31.66	31.66	31.67	77.8	78.9	78.4	5.75	5.82	5.79	2.19	2.17	2.19	4	3.50
	13:42		Middle	3.0	21.20	21.20		8.10	8.10		31.67	31.67		78.4	78.5		5.78	5.79		2.18	2.21		3	
30/11/2013	14:25	Fine	Middle	3.5	21.10	21.10	21.00	8.15	8.15	8.15	32.21	32.21	32.22	84.5	83.8	84.3	6.24	6.19	6.23	4.09	4.09	4.09	4	4.00
	14:27		Middle	3.5	20.90	20.90		8.14	8.14		32.23	32.23		84.1	84.7		6.22	6.26		4.09	4.08		4	
2/12/2013	14:50	Fine	Middle	3.5	21.40	21.40	21.35	8.12	8.12	8.12	32.30	32.30	32.31	88.4	88.4	87.9	6.49	6.49	6.45	3.30	3.20	3.25	3	3.00
	14:52		Middle	3.5	21.30	21.30		8.12	8.12		32.32	32.32		87.7	87.1		6.43	6.40		3.21	3.29		3	
4/12/2013	20:30	Fine	Middle	3.5	19.70	19.70	19.70	8.15	8.15	8.15	33.25	33.25	33.26	79.4	79.7	79.6	5.97	5.99	5.99	4.55	4.50	4.51	6	7.00
	20:31		Middle	3.5	19.70	19.70		8.16	8.15		33.27	33.27		79.6	79.8		5.98	6.00		4.59	4.40		8	
7/12/2013	11:00	Fine	Middle	3.5	20.70	20.70	20.70	8.15	8.15	8.15	32.43	32.43	32.43	81.0	81.4	81.0	5.02	5.04	5.02	4.31	4.31	4.32	7	7.00
	11:02		Middle	3.5	20.70	20.70		8.15	8.15		32.43	32.43		80.9	80.7		5.00	5.00		4.32	4.34		7	
9/12/2013	11:05	Fine	Middle	3.0	21.60	21.60	21.65	8.09	8.09	8.09	32.31	32.31	32.32	81.7	82.2	82.4	5.95	5.99	6.00	4.79	4.71	4.80	8	9.00
	11:07		Middle	3.0	21.70	21.70		8.09	8.09		32.32	32.32		83.0	82.6		6.05	6.01		4.75	4.96		10	
11/12/2013	13:45	Fine	Middle	3.5	21.40	21.40	21.40	8.14	8.14	8.14	32.48	32.48	32.48	84.4	84.8	84.5	6.16	6.18	6.16	4.19	4.19	4.20	4	4.00
	13:47		Middle	3.5	21.40	21.40		8.14	8.14		32.48	32.48		84.6	84.3		6.17	6.14		4.20	4.21		4	
13/12/2013	15:00	Cloudy	Middle	4.0	20.70	20.70	20.65	8.17	8.17	8.18	33.39	33.39	33.40	77.7	77.4	77.5	5.73	5.71	5.72	3.55	3.61	3.62	3	3.50
	15:02		Middle	4.0	20.60	20.60		8.18	8.18		33.40	33.40		77.3	77.6		5.70	5.73		3.66	3.65		4	
16/12/2013	15:00	Cloudy	Middle	3.5	18.30	18.30	18.30	8.26	8.26	8.26	33.38	33.38	33.38	77.0	76.8	76.5	5.95	5.93	5.90	6.41	6.42	6.43	4	3.50
	15:02		Middle	3.5	18.30	18.30		8.26	8.26		33.38	33.38		76.1	75.9		5.87	5.86		6.42	6.46		3	
18/12/2013	15:45	Fine	Middle	3.5	18.20	18.20	18.05	8.28	8.28	8.31	35.03	35.03	35.03	81.4	81.8	81.4	6.25	6.29	6.26	5.60	5.60	5.60	4	3.50
	15:47		Middle	3.5	17.90	17.90		8.33	8.33		35.03	35.03		81.3	81.0		6.25	6.23		5.60	5.59		3	
21/12/2013	9:55	Fine	Middle	3.5	18.40	18.40	18.40	8.51	8.51	8.51	35.84	35.84	35.84	84.7	84.6	84.5	6.44	6.43	6.43	4.70	4.72	4.74	5	5.50
	9:57		Middle	3.5	18.40	18.40		8.51	8.51		35.84	35.84		84.3	84.5		6.41	6.43		4.75	4.78		6	
24/12/2013	10:25	Fine	Middle	3.5	18.30	18.30	18.30	8.48	8.48	8.48	35.87	35.87	35.88	82.7	83.0	81.4	6.30	6.32	6.22	4.37	4.33	4.32	5	5.00
	10:27		Middle	3.5	18.30	18.30		8.48	8.48		35.89	35.89		81.0	79.0		6.17	6.10		4.29	4.29		5	
26/12/2013	9:55	Fine	Middle	3.0	18.00	18.00	17.98	8.15	8.15	8.16	33.44	33.44	33.45	73.2	73.6	74.0	5.58	5.62	5.70	4.61	4.55	4.42	5	5.00
	9:56		Middle	3.0	17.90	18.00		8.16	8.16		33.45	33.45		74.5	74.7		5.79	5.80		4.24	4.26		5	

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



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

Date	Time	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	
28/11/2013	13:36	Fine	Middle	1.0	21.50	21.50	21.55	8.39	8.39	8.39	35.07	35.07	35.07	63.0	63.1	63.4	4.54	4.55	4.57	4.22	4.20	4.19	5	5.50
	13:38		Middle	1.0	21.60	21.60		8.39	8.39		35.07	35.07		63.7	63.8		4.59	4.60		4.18	4.14		6	
30/11/2013	15:24	Fine	Middle	1.5	21.10	21.10	21.05	8.41	8.41	8.42	35.26	35.26	35.29	60.0	60.3	60.3	4.35	4.37	4.37	5.66	5.79	5.77	27	<u>27.50</u>
	15:26		Middle	1.5	21.00	21.00		8.42	8.42		35.32	35.32		60.5	60.2		4.39	4.36		5.80	5.82		28	
2/12/2013	15:16	Fine	Middle	1.5	21.20	21.20	21.20	8.94	8.93	8.93	34.44	34.44	34.44	64.7	64.5	64.0	4.71	4.69	4.66	4.15	4.17	4.17	2	2.00
	15:18		Middle	1.5	21.20	21.20		8.93	8.92		34.44	34.44		63.7	63.1		4.64	4.59		4.19	4.18		2	
4/12/2013	18:20	Fine	Middle	2.0	20.60	20.60	20.50	8.39	8.39	8.39	35.39	35.39	35.39	71.4	71.0	70.9	5.22	5.20	5.19	4.69	4.75	4.71	5	5.50
	18:22		Middle	2.0	20.40	20.40		8.39	8.39		35.39	35.39		70.7	70.4		5.18	5.16		4.78	4.63		6	
7/12/2013	10:12	Fine	Middle	1.5	20.80	20.80	20.75	8.40	8.40	8.40	35.29	35.29	35.30	69.5	68.4	68.6	5.07	4.99	5.00	4.01	4.00	3.99	8	8.50
	10:14		Middle	1.5	20.70	20.70		8.39	8.39		35.30	35.30		68.5	67.9		4.99	4.95		3.98	3.96		9	
9/12/2013	10:50	Fine	Middle	1.5	20.80	20.80	20.80	8.42	8.42	8.42	35.37	35.36	35.37	66.0	67.2	66.7	4.81	4.90	4.86	5.70	5.69	5.74	16	11.50
	10:52		Middle	1.5	20.80	20.80		8.42	8.42		35.37	35.36		66.7	66.9		4.86	4.88		5.72	5.86		7	
11/12/2013	13:52	Fine	Middle	1.5	20.70	20.70	20.70	8.56	8.56	8.56	35.51	35.51	35.51	71.2	71.3	71.0	5.20	5.20	5.17	5.24	5.26	5.24	2	2.00
	13:54		Middle	1.5	20.70	20.70		8.56	8.56		35.51	35.51		70.5	70.8		5.12	5.17		5.25	5.22		2	
13/12/2013	15:02	Cloudy	Middle	1.5	21.00	21.00	21.00	8.44	8.44	8.42	32.60	32.60	32.61	73.9	74.7	73.9	5.45	5.50	5.44	6.35	6.27	6.28	14	<u>13.50</u>
	15:04		Middle	1.5	21.00	21.00		8.40	8.40		32.61	32.61		73.8	73.1		5.43	5.38		6.32	6.18		13	
16/12/2013	15:57	Cloudy	Middle	2.0	19.50	19.50	19.50	8.19	8.19	8.19	32.32	32.32	32.32	82.1	82.8	82.7	6.24	6.30	6.31	5.46	5.48	5.46	7	6.50
	15:59		Middle	2.0	19.50	19.50		8.19	8.19		32.32	32.32		82.9	83.1		6.31	6.37		5.45	5.44		6	
18/12/2013	15:31	Fine	Middle	1.5	19.50	19.50	19.50	8.31	8.31	8.31	32.26	32.26	32.26	84.1	84.2	84.2	6.42	6.44	6.44	6.93	6.92	6.90	14	<u>14.00</u>
	15:33		Middle	1.5	19.50	19.50		8.31	8.31		32.26	32.26		84.5	84.1		6.45	6.43		6.89	6.87		14	
21/12/2013	9:44	Fine	Middle	1.0	18.80	18.80	18.80	8.29	8.29	8.29	32.66	32.66	32.66	78.5	78.7	79.2	6.03	6.05	6.09	5.45	5.44	5.45	9	9.00
	9:46		Middle	1.0	18.80	18.80		8.29	8.29		32.66	32.66		79.6	79.9		6.13	6.14		5.46	5.45		9	
24/12/2013	11:55	Fine	Middle	1.5	18.70	18.70	18.70	8.21	8.21	8.21	32.64	32.64	32.64	74.0	74.2	74.9	5.70	5.72	5.78	6.73	6.78	6.79	13	13.00
	11:57		Middle	1.5	18.70	18.70		8.21	8.21		32.64	32.64		75.6	75.9		5.83	5.85		6.81	6.83		13	
26/12/2013	9:53	Fine	Middle	2.0	17.80	17.80	17.70	8.18	8.18	8.18	32.15	32.15	32.16	75.0	74.6	74.4	5.90	5.88	5.87	3.26	3.27	3.23	5	5.50
	9:55		Middle	2.0	17.60	17.60		8.18	8.18		32.17	32.17		74.2	73.9		5.86	5.83		3.23	3.15		6	

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



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

Date	Time	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			
28/11/2013	12:45	Fine	Middle	3.0	20.90	20.90	20.90	8.12	8.12	8.12	31.92	31.92	31.92	71.4	71.5	71.8	5.29	5.29	5.32	5.40	5.56	5.58	6	6.50
	12:47		Middle	3.0	20.90	20.90		8.12	8.12		31.92	31.92		72.0	72.2		5.34	5.35		5.68	5.69		7	
30/11/2013	14:00	Fine	Middle	3.0	21.30	21.30	21.30	8.15	8.15	8.15	32.40	32.40	32.40	90.3	90.1	90.1	6.63	6.62	6.62	6.00	5.99	6.15	16	<u>16.50</u>
	14:02		Middle	3.0	21.30	21.30		8.14	8.14		32.40	32.40		90.0	89.9		6.61	6.60		6.20	6.41		17	
2/12/2013	14:30	Fine	Middle	3.0	21.10	21.10	21.10	8.12	8.12	8.11	32.40	32.40	32.41	81.6	81.6	81.9	6.00	6.00	6.01	6.70	6.71	6.71	10	9.50
	14:32		Middle	3.0	21.10	21.10		8.10	8.10		32.41	32.41		82.2	82.2		6.02	6.03		6.71	6.71		9	
4/12/2013	21:05	Fine	Middle	2.0	20.20	20.20	20.15	8.26	8.26	8.26	33.24	33.24	33.26	75.8	75.7	75.3	5.66	5.65	5.62	4.18	4.69	4.51	4	4.00
	21:06		Middle	2.0	20.10	20.10		8.25	8.25		33.27	33.27		75.1	74.6		5.60	5.56		4.65	4.51		4	
7/12/2013	10:35	Fine	Middle	3.0	20.50	20.50	20.50	8.16	8.16	8.16	32.43	32.43	32.44	84.1	84.0	84.6	6.26	6.25	6.29	20.78	20.83	<u>20.87</u>	14	<u>13.50</u>
	10:37		Middle	3.0	20.50	20.50		8.15	8.15		32.44	32.44		85.2	84.9		6.35	6.29		20.95	20.91		13	
9/12/2013	10:40	Fine	Middle	3.5	21.60	21.60	21.65	8.10	8.10	8.10	32.33	32.33	32.33	74.1	78.9	78.1	5.48	5.79	6.22	8.73	8.72	<u>8.73</u>	19	<u>19.50</u>
	10:42		Middle	3.5	21.70	21.70		8.10	8.10		32.32	32.32		79.9	79.3		5.82	7.78		8.72	8.73		20	
11/12/2013	11:50	Fine	Middle	3.0	20.60	20.60	20.60	8.10	8.10	8.10	32.45	32.45	32.45	84.9	84.9	84.2	6.30	6.30	6.25	4.37	4.23	4.23	3	3.50
	11:52		Middle	3.0	20.60	20.60		8.10	8.10		32.45	32.45		83.6	83.4		6.21	6.19		4.20	4.10		4	
13/12/2013	14:32	Cloudy	Middle	3.0	20.50	20.50	20.55	8.20	8.20	8.20	33.24	33.24	33.10	82.7	82.9	81.2	6.14	6.13	6.00	4.75	4.76	4.60	5	5.00
	14:34		Middle	3.0	20.60	20.60		8.20	8.20		33.46	32.46		80.0	79.0		5.91	5.83		4.45	4.43		5	
16/12/2013	14:30	Cloudy	Middle	3.0	17.60	17.60	17.60	8.30	8.23	8.25	32.15	32.15	32.71	77.7	77.5	77.5	6.11	6.08	6.10	11.84	11.80	<u>11.73</u>	9	8.00
	14:32		Middle	3.0	17.60	17.60		8.23	8.23		33.27	33.27		77.6	77.3		6.12	6.08		11.70	11.58		7	
18/12/2013	15:20	Fine	Middle	3.5	18.00	18.00	17.90	8.13	8.13	8.17	35.64	35.64	35.65	83.9	85.0	84.6	6.43	6.62	6.51	12.59	12.76	<u>12.79</u>	14	<u>23.50</u>
	15:22		Middle	3.5	17.80	17.80		8.20	8.20		35.66	35.66		84.9	84.7		6.51	6.49		6.51	12.88		12.92	
21/12/2013	9:30	Fine	Middle	3.5	18.20	18.20	18.20	8.52	8.52	8.52	35.90	35.90	35.90	86.6	85.4	85.8	6.53	6.51	6.52	4.96	4.84	4.85	6	8.50
	9:32		Middle	3.5	18.20	18.20		8.52	8.52		35.90	35.90		85.6	85.5		6.52	6.51		4.80	4.79		11	
24/12/2013	10:00	Fine	Middle	3.5	17.50	17.50	17.50	8.50	8.50	8.50	35.98	35.98	35.98	83.2	84.4	84.0	6.42	6.51	6.48	6.09	6.07	6.07	8	8.00
	10:02		Middle	3.5	17.50	17.50		8.50	8.50		35.98	35.98		84.6	83.9		6.53	6.47		6.06	6.05		8	
26/12/2013	10:53	Fine	Middle	1.5	17.90	17.90	17.85	8.21	8.21	8.21	33.69	33.69	33.69	77.7	78.2	78.1	6.03	6.08	6.07	5.96	5.77	5.61	6	7.00
	10:54		Middle	1.5	17.80	17.80		8.21	8.21		33.68	33.68		78.4	78.1		6.09	6.07		5.30	5.40		8	

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



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

Date	Time	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					
28/11/2013	7:15	Cloudy	Middle	2.5	19.60	19.60	19.60	8.68	8.68	8.68	32.46	32.46	32.46	90.1	90.2	90.1	6.83	6.85	6.83	3.22	3.23	3.26	6	6.50
	7:17		Middle	2.5	19.60	19.60		8.68	8.68		32.46	32.46		90.1	89.9		6.83	6.80		3.29	3.29		7	
30/11/2013	8:15	Fine	Middle	3.0	17.90	17.90	17.90	8.25	8.25	8.25	32.60	32.60	32.61	91.4	92.1	92.0	7.14	7.19	7.18	4.00	4.02	4.03	4	4.00
	8:17		Middle	3.0	17.90	17.90		8.25	8.25		32.61	32.61		92.6	91.9		7.20	7.19		4.04	4.04		4	
2/12/2013	23:20	Fine	Middle	2.0	19.60	19.60	19.60	8.23	8.23	8.23	33.27	33.27	33.27	86.7	87.2	86.5	6.63	6.57	6.53	1.97	1.78	1.82	3	3.00
	23:21		Middle	2.0	19.60	19.60		8.23	8.23		33.27	33.27		86.4	85.5		6.48	6.44		1.80	1.74		3	
4/12/2013	11:35	Fine	Middle	3.0	20.50	20.50	20.50	8.20	8.20	8.20	32.54	32.54	32.54	89.5	89.9	90.9	6.67	6.70	6.78	4.27	4.29	4.29	5	4.50
	11:37		Middle	3.0	20.50	20.50		8.20	8.20		32.54	32.54		91.6	92.7		6.83	6.92		4.30	4.30		4	
7/12/2013	2:25	Fine	Middle	2.5	19.00	19.00	19.00	8.18	8.18	8.19	33.36	33.36	33.36	80.1	81.4	80.9	6.10	6.19	6.15	1.86	1.75	1.74	5	5.00
	2:26		Middle	2.5	19.00	19.00		8.20	8.20		33.36	33.36		81.1	80.8		6.17	6.15		1.68	1.65		5	
9/12/2013	3:52	Fine	Middle	2.0	21.40	21.40	21.40	8.21	8.21	8.21	33.34	33.34	33.34	84.2	84.7	84.5	6.13	6.16	6.15	1.64	1.54	1.62	16	<u>16.50</u>
	3:53		Middle	2.0	21.40	21.40		8.21	8.21		33.34	33.34		84.4	84.6		6.14	6.15		1.70	1.60		17	
11/12/2013	19:40	Cloudy	Middle	2.5	20.30	20.30	20.30	8.26	8.26	8.27	33.75	33.75	33.75	87.2	86.9	87.7	6.47	6.44	6.51	3.13	2.79	2.91	4	3.00
	19:41		Middle	2.5	20.30	20.30		8.27	8.27		33.74	33.74		88.4	88.2		6.58	6.54		2.84	2.87		2	
13/12/2013	21:50	Cloudy	Middle	2.0	20.50	20.50	20.50	8.24	8.24	8.24	33.62	33.62	33.63	79.9	80.0	81.2	5.90	5.91	6.00	2.55	2.43	2.43	3	2.50
	21:51		Middle	2.0	20.50	20.50		8.24	8.24		33.63	33.63		82.1	82.6		6.07	6.10		2.40	2.33		2	
17/12/2013	23:50	Cloudy	Middle	2.0	17.20	17.20	17.20	8.33	8.33	8.33	33.11	33.55	33.45	85.4	86.4	85.8	6.73	6.88	6.79	3.00	2.98	3.00	4	3.50
	23:51		Middle	2.0	17.20	17.20		8.33	8.33		33.56	33.59		85.6	85.8		6.77	6.76		3.02	3.01		3	
19/12/2013	0:46	Fine	Middle	2.0	14.30	14.30	14.30	8.34	8.34	8.34	33.39	33.39	33.38	85.2	86.3	86.0	7.12	7.20	7.23	2.73	2.82	2.74	4	4.00
	0:47		Middle	2.0	14.30	14.30		8.34	8.34		33.36	33.36		86.3	86.0		7.30	7.29		2.70	2.71		4	
21/12/2013	1:23	Fine	Middle	2.5	17.50	17.50	17.50	8.31	8.31	8.31	33.84	33.87	33.87	90.9	91.8	91.5	7.10	7.16	7.14	5.07	4.94	4.96	9	10.00
	1:24		Middle	2.5	17.50	17.50		8.31	8.31		33.88	33.88		91.7	91.5		7.16	7.14		4.98	4.83		11	
24/12/2013	2:18	Fine	Middle	2.0	16.40	16.40	16.40	8.29	8.29	8.29	33.81	33.81	33.79	89.1	89.7	89.9	7.11	7.17	7.18	2.40	2.50	2.43	8	7.50
	2:19		Middle	2.0	16.40	16.40		8.29	8.29		33.74	33.79		90.2	90.5		7.20	7.22		2.38	2.42		7	
26/12/2013	3:38	Fine	Middle	2.0	16.20	16.20	16.20	8.32	8.32	8.33	33.81	33.81	33.60	89.1	89.2	89.8	7.14	7.14	7.19	2.28	2.24	2.19	3	3.50
	3:39		Middle	2.0	16.20	16.20		8.33	8.33		33.64	33.13		90.2	90.6		7.22	7.25		2.22	2.00		4	

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



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

Date	Time	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					
28/11/2013	8:40	Cloudy	Middle	3	20.20	20.20	20.15	8.17	8.17	8.17	32.08	32.08	32.09	90.8	91.2	90.7	6.82	6.85	6.82	3.13	3.13	3.14	5	5.00
	8:42		Middle	3	20.10	20.10		8.17	8.17		32.10	32.10		90.3	90.6		6.78	6.82		3.14	3.16		5	
30/11/2013	9:50	Fine	Middle	3	19.90	19.90	19.85	8.23	8.23	8.23	32.06	32.06	32.07	87.7	88.1	87.4	6.62	6.65	6.60	5.41	5.41	5.40	4	4.50
	9:52		Middle	3	19.80	19.80		8.22	8.22		32.07	32.07		86.7	86.9		6.56	6.56		5.40	5.36		5	
2/12/2013	2:30	Fine	Middle	3	19.80	19.80	19.80	8.19	8.19	8.19	33.16	33.16	33.16	75.8	75.6	75.7	5.69	5.68	5.68	3.68	3.73	3.68	4	4.00
	2:31		Middle	3	19.80	19.80		8.19	8.19		33.16	33.16		75.6	75.6		5.67	5.68		3.71	3.60		4	
4/12/2013	15:10	Fine	Middle	3	20.80	20.80	20.85	8.15	8.15	8.15	32.49	32.49	32.49	87.5	87.7	87.1	6.47	6.48	6.44	4.90	4.79	4.82	6	6.00
	15:12		Middle	3	20.90	20.90		8.15	8.15		32.49	32.49		87.2	86.1		6.44	6.35		4.79	4.79		6	
7/12/2013	4:35	Fine	Middle	3	18.90	18.90	18.90	8.25	8.25	8.25	32.91	32.91	32.91	76.4	77.6	77.8	5.84	5.93	5.95	3.49	3.58	3.55	6	6.50
	4:36		Middle	3	18.90	18.90		8.25	8.25		32.91	32.91		78.8	78.3		6.02	5.99		3.66	3.47		7	
9/12/2013	5:15	Fine	Middle	3	21.10	21.10	21.10	8.19	8.19	8.19	33.13	33.13	33.23	75.7	76.3	76.6	5.54	5.52	5.54	2.19	2.21	2.23	18	11.50
	5:16		Middle	3	21.10	21.10		8.19	8.19		33.33	33.33		77.2	77.0		5.55	5.54		2.23	2.30		5	
11/12/2013	20:32	Cloudy	Middle	3	20.20	20.20	20.20	8.28	8.28	8.28	33.48	33.49	33.49	80.4	81.0	81.0	5.98	6.02	6.02	3.83	3.75	3.75	3	3.50
	20:33		Middle	3	20.20	20.20		8.28	8.28		33.49	33.49		81.4	81.0		6.06	6.02		3.71	3.72		4	
13/12/2013	23:50	Cloudy	Middle	3	20.30	20.30	20.30	8.22	8.22	8.22	33.50	33.50	33.50	77.7	78.1	77.8	5.77	5.79	5.77	2.93	2.77	2.74	5	4.50
	23:51		Middle	3	20.30	20.30		8.22	8.22		33.50	33.50		78.0	77.5		5.79	5.73		2.61	2.66		4	
17/12/2013	2:25	Cloudy	Middle	3	17.50	17.50	17.45	8.33	8.33	8.33	33.46	33.46	33.44	82.4	82.7	82.4	6.46	6.46	6.45	3.89	3.75	3.83	4	4.00
	2:26		Middle	3	17.40	17.40		8.33	8.33		33.42	33.42		82.3	82.1		6.45	6.44		3.87	3.80		4	
19/12/2013	3:49	Fine	Middle	3	15.70	15.70	15.70	8.33	8.33	8.33	32.37	32.37	32.38	76.2	76.6	76.7	6.21	6.23	6.25	3.83	3.85	3.77	5	4.50
	3:50		Middle	3	15.70	15.70		8.33	8.33		32.38	32.38		77.2	76.8		6.29	6.28		3.69	3.72		4	
21/12/2013	3:47	Fine	Middle	3	17.50	17.50	17.50	8.18	8.18	8.19	32.53	32.36	32.51	77.0	76.7	76.7	6.06	6.03	6.03	5.75	5.51	5.48	7	6.00
	3:48		Middle	3	17.50	17.50		8.19	8.19		32.57	32.58		75.8	77.1		5.96	6.07		5.31	5.34		5	
24/12/2013	3:48	Fine	Middle	3	16.70	16.70	16.70	8.32	8.32	8.32	33.78	33.78	33.79	80.1	80.6	80.2	6.35	6.39	6.36	3.13	3.18	3.21	3	3.50
	3:49		Middle	3	16.70	16.70		8.32	8.32		33.79	33.79		80.2	80.0		6.36	6.33		3.25	3.29		4	
26/12/2013	6:35	Fine	Middle	3	16.50	16.50	16.45	8.32	8.32	8.32	33.73	33.77	33.74	81.1	81.0	81.1	6.47	6.46	6.47	2.83	2.78	2.76	6	6.00
	6:36		Middle	3	16.40	16.40		8.31	8.31		33.71	33.73		81.1	81.0		6.47	6.46		2.71	2.73		6	

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



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

Date	Time	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				
28/11/2013	10:30	Cloudy	Middle	2	20.30	20.30	20.25	7.94	7.94	7.94	30.40	30.40	30.40	69.9	70.1	69.7	5.29	5.30	5.27	2.93	2.93	2.93	9	8.50
	10:32		Middle	2	20.20	20.20		7.93	7.93		30.40	30.40		69.3	69.3		5.24	5.24		2.93	2.94		8	
30/11/2013	11:22	Fine	Middle	2	20.80	20.80	20.75	8.06	8.06	8.05	31.68	31.68	31.68	62.3	61.1	61.6	4.64	4.59	4.61	1.61	1.57	1.57	6	6.00
	11:24		Middle	2	20.70	20.70		8.04	8.04		31.68	31.68		61.1	62.0		4.59	4.61		1.54	1.55		6	
2/12/2013	1:50	Fine	Middle	1	19.40	19.40	19.40	7.96	7.96	7.96	31.15	31.15	31.16	51.8	51.9	51.5	3.97	3.97	3.94	2.37	2.32	2.35	3	3.00
	1:51		Middle	1	19.40	19.40		7.96	7.96		31.16	31.16		50.9	51.5		3.89	3.94		2.42	2.27		3	
4/12/2013	14:52	Fine	Middle	2	21.60	21.60	21.75	8.09	8.09	8.09	31.62	31.62	31.62	71.2	71.5	71.4	5.20	5.24	5.22	5.24	5.22	5.22	7	6.00
	14:54		Middle	2	21.90	21.90		8.08	8.08		31.61	31.61		71.6	71.2		5.24	5.20		5.21	5.21		5	
7/12/2013	4:03	Fine	Middle	1	19.30	19.30	19.25	8.20	8.20	8.19	31.86	31.86	31.86	69.8	69.8	70.5	5.36	5.34	5.25	1.61	1.58	1.62	3	3.50
	4:04		Middle	1	19.20	19.20		8.18	8.18		31.86	31.86		71.1	71.2		5.14	5.15		1.64	1.65		4	
9/12/2013	4:48	Fine	Middle	1	21.00	21.00	21.00	8.17	8.17	8.17	30.58	30.58	30.58	57.4	57.3	57.4	4.27	4.31	4.29	1.56	1.41	1.37	4	4.50
	4:49		Middle	1	21.00	21.00		8.17	8.16		30.58	30.58		57.7	57.3		4.30	4.26		1.26	1.23		5	
11/12/2013	20:05	Cloudy	Middle	2	20.10	20.10	20.10	8.12	8.13	8.12	32.16	32.21	32.20	61.5	61.9	61.9	4.51	4.56	4.55	3.19	3.25	3.24	<2	<2
	20:06		Middle	2	20.10	20.10		8.12	8.12		32.21	32.21		62.0	62.0		4.56	4.56		3.22	3.28		<2	
13/12/2013	23:20	Cloudy	Middle	1	20.40	20.40	20.40	8.26	8.26	8.24	31.69	31.69	31.69	68.7	69.2	69.0	5.15	5.18	5.16	2.01	2.13	2.00	<2	<2
	23:21		Middle	1	20.40	20.40		8.22	8.22		31.69	31.69		69.3	68.6		5.19	5.13		1.91	1.94		<2	
17/12/2013	1:58	Cloudy	Middle	1	16.90	16.90	16.90	8.20	8.20	8.20	26.48	26.48	26.48	48.2	49.0	48.9	3.97	4.04	4.03	3.45	3.47	3.41	<2	<2
	1:59		Middle	1	16.90	16.90		8.19	8.20		26.48	26.48		49.1	49.1		4.05	4.05		3.40	3.31		<2	
19/12/2013	3:22	Fine	Middle	1	15.00	15.00	14.98	8.15	8.15	8.15	28.30	28.30	28.51	51.7	52.0	52.0	4.36	4.41	4.40	2.88	2.92	2.95	9	7.00
	3:23		Middle	1	14.90	15.00		8.15	8.15		28.74	28.71		52.1	52.2		4.41	4.41		3.00	2.98		5	
21/12/2013	3:11	Fine	Middle	1	16.90	16.90	16.90	8.11	8.11	8.11	29.50	29.50	29.50	50.3	50.4	50.4	4.08	4.08	4.09	2.84	2.87	2.86	3	4.00
	3:12		Middle	1	16.90	16.90		8.10	8.10		29.50	29.50		50.4	50.5		4.09	4.09		2.88	2.83		5	
24/12/2013	3:15	Fine	Middle	1	16.50	16.50	16.50	8.14	8.14	8.14	31.37	31.37	31.38	60.6	61.0	61.3	4.00	4.06	4.50	2.06	2.03	2.02	3	2.50
	3:16		Middle	1	16.50	16.50		8.14	8.14		31.39	31.39		61.9	61.7		4.99	4.96		2.00	1.98		2	
26/12/2013	5:45	Fine	Middle	1	15.90	15.90	15.90	8.13	8.13	8.13	30.92	30.92	30.92	49.0	49.3	49.2	4.02	4.04	4.04	1.41	1.45	1.47	<2	<2
	5:46		Middle	1	15.90	15.90		8.12	8.12		30.92	30.92		49.3	49.3		4.04	4.04		1.48	1.52		<2	

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





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

Date	Time	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					
28/11/2013	10:15	Cloudy	Middle	2.5	21.40	21.40	21.35	8.35	8.35	8.35	35.26	35.26	35.26	65.6	65.5	65.3	4.73	4.73	4.72	4.41	4.40	4.40	6	5.00
	10:17		Middle	2.5	21.30	21.30		8.35	8.36		35.26	35.26		65.0	65.2		4.70	4.72		4.40	4.40		4	
30/11/2013	10:46	Fine	Middle	2.5	21.10	21.10	21.00	8.43	8.43	8.44	35.23	35.23	35.23	60.7	62.1	62.2	4.39	4.46	4.49	4.98	4.99	4.99	5	5.00
	10:48		Middle	2.5	20.90	20.90		8.44	8.44		35.22	35.22		62.6	63.3		4.53	4.59		4.98	5.00		5	
2/12/2013	23:55	Fine	Middle	2.5	20.60	20.60	20.50	8.42	8.42	8.42	35.44	35.44	35.45	61.0	60.7	60.6	4.46	4.44	4.44	3.64	3.74	3.70	4	4.00
	23:57		Middle	2.5	20.40	20.40		8.41	8.41		35.45	35.45		60.5	60.1		4.43	4.41		3.75	3.65		4	
4/12/2013	14:18	Fine	Middle	2.5	20.80	20.80	20.80	8.23	8.24	8.24	35.53	35.53	35.53	74.2	75.0	74.9	5.40	5.46	5.45	4.75	4.76	4.76	5	6.00
	14:20		Middle	2.5	20.80	20.80		8.23	8.24		35.53	35.53		75.3	75.1		5.47	5.47		4.75	4.76		7	
7/12/2013	2:46	Fine	Middle	2.5	20.30	20.30	20.30	8.36	8.36	8.36	35.58	35.58	35.58	71.6	71.8	71.6	5.25	5.27	5.25	3.37	3.39	3.39	8	8.50
	2:48		Middle	2.5	20.30	20.30		8.36	8.36		35.58	35.58		71.4	71.4		5.24	5.24		3.40	3.41		9	
9/12/2013	6:52	Fine	Middle	2.5	20.70	20.70	20.70	8.35	8.35	8.35	35.48	35.48	35.48	73.8	74.0	74.0	5.37	5.39	5.39	4.87	4.87	4.87	7	8.00
	6:54		Middle	2.5	20.70	20.70		8.35	8.35		35.48	35.48		74.4	73.6		5.42	5.36		4.87	4.87		9	
11/12/2013	18:35	Cloudy	Middle	2.0	20.40	20.40	20.30	8.11	8.11	8.10	32.53	32.53	32.55	71.4	70.5	70.9	5.34	5.26	5.29	5.01	5.00	4.99	4	3.50
	18:37		Middle	2.0	20.20	20.20		8.09	8.09		32.56	32.56		70.6	70.9		5.27	5.30		4.98	4.98		3	
13/12/2013	22:17	Cloudy	Middle	2.5	20.50	20.50	20.45	8.12	8.12	8.12	32.63	32.63	32.63	74.1	75.0	74.6	5.52	5.59	5.56	3.64	3.65	3.65	4	5.00
	22:19		Middle	2.5	20.40	20.40		8.12	8.12		32.63	32.63		74.8	74.4		5.57	5.54		3.65	3.64		6	
17/12/2013	0:21	Cloudy	Middle	2.5	19.20	19.30	19.25	8.12	8.13	8.13	32.61	32.62	32.62	75.5	78.6	78.0	5.76	6.03	5.97	4.30	4.29	4.30	4	5.00
	0:23		Middle	2.5	19.30	19.20		8.13	8.12		32.61	32.62		79.9	77.8		6.11	5.98		4.30	4.29		6	
19/12/2013	1:04	Fine	Middle	3.0	17.90	17.90	17.65	8.23	8.23	8.22	32.75	32.75	32.75	70.7	70.3	70.2	5.53	5.51	5.50	3.31	3.32	3.28	9	7.50
	1:06		Middle	3.0	17.40	17.40		8.21	8.21		32.74	32.74		70.0	69.8		5.48	5.47		3.25	3.24		6	
21/12/2013	2:22	Fine	Middle	3.0	18.50	18.50	18.45	8.21	8.21	8.20	32.87	32.87	32.87	70.3	70.1	69.9	5.43	5.42	5.41	2.44	2.43	2.41	2	2.50
	2:24		Middle	3.0	18.40	18.40		8.19	8.19		32.86	32.86		69.7	69.6		5.40	5.40		2.40	2.35		3	
24/12/2013	3:58	Fine	Middle	3.0	17.60	17.60	17.55	8.16	8.16	8.15	32.89	32.89	32.89	63.0	62.7	62.7	4.95	4.93	4.93	6.14	6.11	6.08	7	7.50
	4:00		Middle	3.0	17.50	17.50		8.14	8.14		32.89	32.89		62.6	62.4		4.93	4.92		6.05	6.02		8	
26/12/2013	5:15	Fine	Middle	3.0	17.20	17.20	17.15	8.16	8.16	8.15	32.80	32.80	32.80	65.8	65.6	65.5	5.21	5.20	5.19	4.02	3.98	3.96	3	3.50
	5:17		Middle	3.0	17.10	17.10		8.14	8.14		32.79	32.79		65.3	65.1		5.18	5.17		3.94	3.89		4	

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



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

Date	Time	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					
28/11/2013	10:57	Cloudy	Middle	2.5	20.80	20.80	20.80	8.37	8.37	8.37	35.31	35.31	35.31	67.0	68.1	67.9	4.88	4.96	4.94	3.94	3.94	3.94	6	6.50
	10:59		Middle	2.5	20.80	20.80		8.37	8.37		35.31	35.31		68.2	68.1		4.97	4.96		3.94	3.94		7	
30/11/2013	11:25	Fine	Middle	2.5	21.10	21.10	21.00	8.42	8.42	8.43	35.13	35.13	35.22	68.4	68.3	67.9	4.96	4.95	4.93	6.01	5.93	5.94	6	5.00
	11:27		Middle	2.5	20.90	20.90		8.43	8.43		35.31	35.31		67.6	67.3		4.91	4.89		5.91	5.90		4	
2/12/2013	0:42	Fine	Middle	2.5	20.50	20.50	20.40	8.44	8.44	8.44	35.43	35.43	35.44	72.9	72.3	72.1	5.34	5.30	5.29	5.56	5.55	5.62	6	5.00
	0:44		Middle	2.5	20.30	20.30		8.44	8.44		35.44	35.44		71.8	71.5		5.27	5.25		5.69	5.66		4	
4/12/2013	14:54	Fine	Middle	2.5	21.00	21.00	21.00	8.36	8.36	8.36	35.52	35.52	35.52	80.9	81.0	80.9	5.87	5.79	5.86	5.49	5.45	5.46	4	4.00
	14:56		Middle	2.5	21.00	21.00		8.36	8.36		35.52	35.52		80.6	81.2		5.86	5.90		5.45	5.44		4	
7/12/2013	3:20	Fine	Middle	2.5	20.40	20.30	20.35	8.41	8.41	8.41	35.55	35.55	35.55	79.3	79.2	79.0	5.82	5.82	5.80	3.74	3.72	3.73	9	9.00
	3:22		Middle	2.5	20.40	20.30		8.41	8.41		35.55	35.55		78.8	78.6		5.79	5.78		3.72	3.72		9	
9/12/2013	7:27	Fine	Middle	2.5	20.60	20.60	20.60	8.36	8.36	8.37	35.23	35.24	35.24	72.2	73.0	74.8	5.28	5.41	5.55	3.73	3.72	3.72	9	9.50
	7:29		Middle	2.5	20.60	20.60		8.38	8.38		35.25	35.23		77.4	76.6		5.66	5.85		3.72	3.72		10	
11/12/2013	18:45	Cloudy	Middle	2.5	20.60	20.60	20.50	8.10	8.10	8.10	32.55	32.55	32.56	77.4	77.3	77.4	5.75	5.75	5.76	6.05	6.12	6.11	4	4.50
	18:47		Middle	2.5	20.40	20.40		8.10	8.10		32.57	32.57		77.2	77.6		5.74	5.78		6.13	6.14		5	
13/12/2013	22:55	Cloudy	Middle	2.5	20.30	20.30	20.30	8.12	8.12	8.12	32.61	32.60	32.61	84.8	84.5	84.4	6.36	6.33	6.32	6.48	6.49	6.48	6	6.50
	22:57		Middle	2.5	20.30	20.30		8.12	8.12		32.61	32.60		84.0	84.2		6.28	6.30		6.49	6.47		7	
17/12/2013	0:56	Cloudy	Middle	2.5	19.10	19.20	19.15	8.20	8.20	8.20	32.60	32.59	32.67	82.7	84.3	83.8	6.34	6.47	6.45	4.59	4.60	4.59	4	4.00
	0:58		Middle	2.5	19.20	19.10		8.20	8.20		32.89	32.60		84.7	83.5		6.50	6.48		4.60	4.58		4	
19/12/2013	0:15	Fine	Middle	3.0	18.00	18.00	17.85	8.31	8.31	8.31	32.78	32.78	32.78	86.6	86.4	86.2	6.76	6.75	6.74	6.77	6.73	6.71	7	5.50
	0:01		Middle	3.0	17.70	17.70		8.30	8.30		32.77	32.77		86.1	85.7		6.73	6.71		6.69	6.65		4	
21/12/2013	1:36	Fine	Middle	3.0	18.70	18.70	18.60	8.36	8.36	8.34	32.92	32.92	32.92	86.0	85.8	85.7	6.61	6.60	6.59	3.89	3.84	3.84	4	4.00
	1:38		Middle	3.0	18.50	18.50		8.31	8.31		32.92	32.92		85.5	85.3		6.57	6.56		3.83	3.79		4	
24/12/2013	3:01	Fine	Middle	3.0	18.30	18.30	18.25	8.37	8.37	8.34	32.92	32.92	32.92	79.9	79.7	79.6	6.18	6.17	5.41	4.87	4.83	4.83	4	3.50
	3:03		Middle	3.0	18.20	18.20		8.31	8.31		32.91	32.91		79.4	79.2		6.15	6.14		4.84	4.76		3	
26/12/2013	4:27	Fine	Middle	3.0	18.10	18.10	17.90	8.37	8.37	8.34	32.86	32.86	32.86	75.8	75.6	75.5	5.92	5.91	5.91	3.71	3.72	3.69	3	3.00
	4:29		Middle	3.0	17.70	17.70		8.30	8.30		32.85	32.85		75.3	75.2		5.90	5.89		3.68	3.63		3	

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



**Water Monitoring Result at P3 - APA  
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					
28/11/2013	10:43	Cloudy	Middle	2.5	21.60	21.60	21.60	8.37	8.37	8.37	35.30	35.30	35.30	64.6	65.1	64.6	4.64	4.68	4.64	5.04	5.06	5.05	7	6.50
	10:45		Middle	2.5	21.60	21.60		8.37	8.37		35.30	35.30		64.0	64.7		4.60	4.65		5.07	5.03		6	
30/11/2013	11:15	Fine	Middle	2.5	20.90	20.90	20.80	8.40	8.40	8.41	35.07	35.07	35.21	59.0	59.0	58.8	4.30	4.30	4.28	6.15	6.15	6.15	8	7.50
	11:17		Middle	2.5	20.70	20.70		8.42	8.42		35.34	35.34		58.5	58.5		4.26	4.26		6.14	6.15		7	
2/12/2013	0:26	Fine	Middle	2.5	20.80	20.80	20.60	8.44	8.44	8.44	35.43	35.43	35.44	68.4	68.2	68.0	5.00	4.99	4.98	5.76	5.98	5.88	6	5.50
	0:28		Middle	2.5	20.40	20.40		8.44	8.44		35.44	35.44		67.7	67.6		4.97	4.97		5.88	5.88		5	
4/12/2013	14:46	Fine	Middle	2.5	20.90	20.90	20.90	8.35	8.35	8.35	35.53	35.53	35.53	76.6	79.7	79.2	5.77	5.78	5.80	5.85	5.86	5.86	3	3.50
	14:48		Middle	2.5	20.90	20.90		8.35	8.35		35.53	35.53		80.0	80.4		5.81	5.85		5.87	5.86		4	
7/12/2013	3:10	Fine	Middle	2.5	20.30	20.30	20.30	8.41	8.41	8.41	35.57	35.57	35.57	77.1	77.5	76.9	5.66	5.69	5.66	3.63	3.63	3.63	6	6.50
	3:12		Middle	2.5	20.30	20.30		8.41	8.41		35.57	35.57		76.6	76.5		5.66	5.62		3.63	3.63		7	
9/12/2013	7:18	Fine	Middle	2.5	20.70	20.70	20.70	8.37	8.37	8.37	35.46	35.46	35.46	76.7	76.0	76.3	5.59	5.54	5.56	3.60	3.62	3.62	8	8.00
	7:20		Middle	2.5	20.70	20.70		8.37	8.37		35.46	35.46		76.1	76.2		5.55	5.56		3.63	3.62		8	
11/12/2013	18:50	Cloudy	Middle	2.5	20.50	20.50	20.50	8.11	8.11	8.11	32.51	32.51	32.54	76.8	78.1	77.9	5.73	5.82	5.81	5.50	5.48	5.46	4	4.00
	18:52		Middle	2.5	20.50	20.50		8.11	8.11		32.57	32.57		78.3	78.3		5.85	5.85		5.45	5.41		4	
13/12/2013	22:44	Cloudy	Middle	2.5	20.40	20.40	20.40	8.11	8.11	8.11	32.35	32.36	32.35	80.7	81.8	81.4	6.02	6.18	6.20	6.14	6.15	6.15	6	6.00
	22:46		Middle	2.5	20.40	20.40		8.11	8.11		32.34	32.35		82.4	80.8		6.19	6.39		6.14	6.16		6	
17/12/2013	0:47	Cloudy	Middle	2.5	19.50	19.50	19.45	8.17	8.16	8.17	32.62	32.61	32.62	79.6	80.2	79.7	6.02	6.19	6.06	4.34	4.32	4.33	4	4.00
	0:49		Middle	2.5	19.40	19.40		8.17	8.16		32.62	32.61		79.6	79.4		6.03	5.98		4.32	4.34		4	
19/12/2013	0:33	Fine	Middle	3.0	18.70	18.70	18.55	8.27	8.27	8.28	32.77	32.77	32.76	85.9	85.6	85.5	6.61	6.59	6.59	5.54	5.50	5.49	5	6.00
	0:35		Middle	3.0	18.40	18.40		8.28	8.28		32.74	32.74		85.4	85.2		6.58	6.57		5.47	5.46		7	
21/12/2013	1:52	Fine	Middle	3.0	18.60	18.60	18.50	8.25	8.25	8.25	32.82	32.82	32.82	85.3	85.0	85.0	6.57	6.55	6.55	3.47	3.48	3.56	4	4.00
	1:54		Middle	3.0	18.40	18.40		8.25	8.25		32.82	32.82		84.9	84.7		6.55	6.53		3.42	3.88		4	
24/12/2013	3:18	Fine	Middle	3.0	17.90	17.90	17.85	8.22	8.22	8.22	32.92	32.92	32.91	78.5	78.1	78.1	6.11	6.08	6.08	4.73	4.67	4.67	4	4.00
	3:20		Middle	3.0	17.80	17.80		8.21	8.21		32.90	32.90		78.0	77.7		6.08	6.06		4.65	4.63		4	
26/12/2013	4:43	Fine	Middle	3.0	17.60	17.60	17.55	8.19	8.19	8.19	32.84	32.84	32.83	74.6	74.2	74.1	5.85	5.82	5.82	2.57	2.55	2.53	2	2.00
	4:45		Middle	3.0	17.50	17.50		8.18	8.18		32.81	32.81		73.9	73.7		5.80	5.80		2.52	2.47		2	

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



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

Date	Time	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					
28/11/2013	10:32	Cloudy	Middle	2.5	21.70	21.70	21.70	8.36	8.36	8.36	35.28	35.28	35.29	64.0	64.1	64.5	4.59	4.60	4.63	5.13	5.12	5.12	8	7.50
	10:34		Middle	2.5	21.70	21.70		8.36	8.36		35.29	35.29		64.6	65.2		4.63	4.68		5.10	5.11		7	
30/11/2013	11:04	Fine	Middle	2.5	21.00	21.00	20.95	8.40	8.40	8.40	35.26	35.26	35.34	59.6	59.7	60.4	4.32	4.34	4.38	5.91	5.90	5.91	8	7.00
	11:06		Middle	2.5	20.90	20.90		8.40	8.40		35.41	35.41		61.1	61.1		4.43	4.44		5.90	5.92		6	
2/12/2013	0:19	Fine	Middle	2.5	20.50	20.50	20.40	8.42	8.42	8.43	35.43	35.43	35.44	69.6	69.4	69.1	5.10	5.09	5.07	4.84	4.91	4.83	4	4.00
	0:21		Middle	2.5	20.30	20.30		8.43	8.43		35.45	35.45		68.8	68.7		5.05	5.05		4.80	4.77		4	
4/12/2013	14:36	Fine	Middle	2.5	20.80	20.70	20.75	8.33	8.33	8.33	35.53	35.53	35.53	75.9	77.3	76.8	5.55	5.62	5.60	5.87	5.88	5.89	8	7.00
	14:38		Middle	2.5	20.80	20.70		8.33	8.33		35.53	35.53		76.9	77.1		5.61	5.63		5.90	5.89		6	
7/12/2013	3:00	Fine	Middle	2.5	20.40	20.40	20.40	8.39	8.39	8.39	35.58	35.58	35.58	73.6	74.4	73.8	5.40	5.47	5.42	3.63	3.63	3.63	8	8.50
	3:02		Middle	2.5	20.40	20.40		8.39	8.39		35.58	35.58		74.2	73.1		5.45	5.37		3.63	3.63		9	
9/12/2013	7:08	Fine	Middle	2.5	20.70	20.70	20.70	8.36	8.36	8.36	35.49	35.49	35.49	74.8	76.3	76.0	5.45	5.56	5.54	4.99	4.98	4.99	8	7.00
	7:10		Middle	2.5	20.70	20.70		8.36	8.36		35.49	35.49		76.0	76.9		5.54	5.61		4.99	4.98		6	
11/12/2013	18:55	Cloudy	Middle	2.5	20.60	20.60	20.60	8.11	8.11	8.11	32.54	32.54	32.54	80.5	80.2	79.5	5.99	5.99	5.93	5.22	5.22	5.22	5	4.50
	18:57		Middle	2.5	20.60	20.60		8.11	8.11		32.54	32.54		79.6	77.6		5.93	5.79		5.21	5.21		4	
13/12/2013	22:33	Cloudy	Middle	2.5	20.40	20.40	20.40	8.14	8.14	8.14	32.70	32.71	32.71	78.1	80.2	79.8	5.96	6.01	6.00	4.29	4.16	4.19	5	4.50
	22:35		Middle	2.5	20.40	20.40		8.14	8.14		32.71	32.70		80.7	80.2		6.04	5.99		4.15	4.15		4	
17/12/2013	0:37	Cloudy	Middle	2.5	19.50	19.40	19.45	8.18	8.17	8.18	32.57	32.57	32.58	83.5	83.0	83.0	6.33	6.30	6.30	4.39	4.38	4.39	4	4.50
	0:39		Middle	2.5	19.40	19.50		8.17	8.18		32.58	32.58		82.1	83.2		6.25	6.32		4.38	4.40		5	
19/12/2013	0:46	Fine	Middle	3.0	18.50	18.50	18.25	8.27	8.27	8.28	32.75	32.75	32.75	86.8	86.5	86.4	6.72	6.70	6.69	5.49	5.45	5.42	7	8.50
	0:48		Middle	3.0	18.00	18.00		8.28	8.28		32.75	32.75		86.2	85.9		6.68	6.66		5.38	5.36		10	
21/12/2013	2:06	Fine	Middle	3.0	18.70	18.70	18.65	8.27	8.27	8.27	32.83	32.83	32.83	84.1	83.8	83.7	6.46	6.44	6.44	3.62	3.59	3.57	4	3.50
	2:08		Middle	3.0	18.60	18.60		8.26	8.26		32.82	32.82		83.6	83.3		6.43	6.41		3.54	3.54		3	
24/12/2013	3:37	Fine	Middle	3.0	18.30	18.30	18.25	8.26	8.26	8.25	32.87	32.87	32.87	78.1	77.9	77.9	6.05	6.04	6.04	3.82	3.81	3.78	5	5.00
	3:39		Middle	3.0	18.20	18.20		8.24	8.24		32.86	32.86		77.8	77.6		6.04	6.02		3.76	3.72		5	
26/12/2013	4:56	Fine	Middle	3.0	17.70	17.70	17.60	8.22	8.22	8.22	32.79	32.79	32.79	75.4	75.1	75.0	5.91	5.89	5.88	2.98	2.95	2.93	3	3.00
	4:58		Middle	3.0	17.50	17.50		8.21	8.21		32.79	32.79		74.8	74.6		5.87	5.86		2.91	2.88		3	

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



**Water Monitoring Result at P5 - WCT / RT / IT  
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					
28/11/2013	10:24	Cloudy	Middle	2.5	21.50	21.50	21.50	8.37	8.37	8.37	35.28	35.28	35.28	65.3	65.4	65.4	4.70	4.71	4.71	5.72	5.72	5.72	6	6.00
	10:26		Middle	2.5	21.50	21.50		8.37	8.37		35.28	35.28		65.3	65.4		4.70	4.71		5.72	5.73		6	
30/11/2013	10:57	Fine	Middle	2.5	20.90	20.90	20.80	8.42	8.42	8.42	35.40	35.40	35.42	63.3	63.6	62.5	4.60	4.64	4.55	4.62	4.60	4.60	6	5.00
	10:59		Middle	2.5	20.70	20.70		8.42	8.42		35.44	35.44		60.9	62.1		4.43	4.52		4.59	4.60		4	
2/12/2013	0:07	Fine	Middle	2.5	20.50	20.50	20.45	8.42	8.42	8.42	35.52	35.52	35.52	66.1	65.9	65.6	4.84	4.82	4.81	3.63	3.64	3.61	4	3.50
	0:09		Middle	2.5	20.40	20.40		8.42	8.42		35.51	35.51		65.4	65.1		4.80	4.78		3.59	3.56		3	
4/12/2013	14:30	Fine	Middle	2.5	20.70	20.70	20.70	8.30	8.30	8.30	35.54	35.53	35.54	78.8	79.6	79.1	5.76	5.81	5.77	5.45	5.46	5.44	6	5.50
	14:32		Middle	2.5	20.70	20.70		8.30	8.30		35.54	35.54		78.6	79.4		5.74	5.76		5.42	5.41		5	
7/12/2013	2:55	Fine	Middle	2.5	20.40	20.40	20.40	8.36	8.36	8.36	35.57	35.57	35.57	76.9	77.4	77.2	5.65	5.68	5.67	3.29	3.29	3.29	4	5.00
	2:57		Middle	2.5	20.40	20.40		8.36	8.36		35.57	35.57		77.1	77.2		5.67	5.67		3.29	3.29		6	
9/12/2013	7:01	Fine	Middle	2.5	20.70	20.70	20.70	8.35	8.35	8.35	35.50	35.50	35.50	71.9	72.8	72.3	5.24	5.31	5.27	5.02	5.02	5.02	10	11.00
	7:03		Middle	2.5	20.70	20.70		8.35	8.35		35.50	35.50		72.0	72.5		5.25	5.29		5.01	5.01		12	
11/12/2013	18:40	Cloudy	Middle	2.0	20.50	20.50	20.40	8.09	8.09	8.09	31.95	31.95	32.25	75.5	75.6	75.8	5.61	5.64	5.64	5.00	4.99	4.97	4	3.50
	18:42		Middle	2.0	20.30	20.30		8.09	8.09		32.54	32.54		76.2	75.7		5.69	5.61		4.96	4.94		3	
13/12/2013	22:27	Cloudy	Middle	2.5	20.30	20.30	20.30	8.11	8.11	8.11	32.66	32.57	32.62	79.1	79.3	79.2	5.90	5.92	5.91	4.20	4.10	4.13	5	4.50
	22:29		Middle	2.5	20.30	20.30		8.11	8.11		32.52	32.74		78.8	79.5		5.88	5.93		4.10	4.10		4	
17/12/2013	0:31	Cloudy	Middle	2.5	19.30	19.40	19.35	8.16	8.15	8.16	32.61	32.62	32.62	79.7	8.2	61.8	6.18	6.28	6.15	3.71	3.72	3.72	3	3.50
	0:33		Middle	2.5	19.40	19.30		8.15	8.16		32.62	32.61		79.4	80.0		6.04	6.09		3.72	3.71		4	
19/12/2013	0:55	Fine	Middle	3.0	18.30	18.30	18.20	8.26	8.26	8.26	32.73	32.73	32.73	83.4	83.2	83.1	6.46	6.45	6.44	5.67	5.68	5.64	6	6.00
	0:57		Middle	3.0	18.10	18.10		8.25	8.25		32.73	32.73		83.0	82.7		6.44	6.42		5.62	5.59		6	
21/12/2013	2:14	Fine	Middle	3.0	18.50	18.50	18.40	8.25	8.24	8.24	32.81	32.81	32.82	83.6	83.5	83.2	6.45	6.45	6.44	3.64	3.63	3.59	3	3.50
	2:16		Middle	3.0	18.30	18.30		8.24	8.24		32.82	32.82		83.1	82.7		6.43	6.41		3.55	3.52		4	
24/12/2013	3:46	Fine	Middle	3.0	18.30	18.30	18.30	8.20	8.20	8.20	32.88	32.88	32.87	79.1	78.6	78.5	6.14	6.11	6.10	3.75	3.71	3.70	4	4.00
	3:48		Middle	3.0	18.30	18.30		8.20	8.20		32.86	32.86		78.3	78.0		6.09	6.07		3.70	3.64		4	
26/12/2013	5:03	Fine	Middle	3.0	18.00	18.00	17.90	8.16	8.16	8.16	32.70	32.70	32.73	71.0	70.7	70.7	5.53	5.51	5.51	2.33	2.31	2.29	4	4.00
	5:05		Middle	3.0	17.80	17.80		8.16	8.16		32.76	32.76		70.6	70.4		5.51	5.49		2.25	2.25		4	

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



**Water Monitoring Result at RW21-P789 - 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					
28/11/2013	9:50	Cloudy	Middle	3.5	20.70	20.70	20.65	8.07	8.07	8.07	31.99	31.99	31.99	80.2	80.5	79.8	5.97	5.99	5.93	4.38	4.39	4.39	6	5.50
	9:52		Middle	3.5	20.60	20.60		8.06	8.06		31.99	31.99		79.5	78.8		5.90	5.87		4.39	4.41		5	
30/11/2013	10:45	Fine	Middle	3.0	20.50	20.50	20.50	8.16	8.16	8.16	32.27	32.27	32.27	85.2	85.6	84.8	6.34	6.37	6.31	4.01	3.68	3.80	6	5.50
	10:47		Middle	3.0	20.50	20.50		8.16	8.16		32.27	32.27		85.0	83.5		6.32	6.20		3.73	3.79		5	
2/12/2013	1:05	Fine	Middle	3.0	19.70	19.60	19.63	8.21	8.21	8.21	33.23	33.23	33.23	75.8	76.0	76.2	5.71	5.72	5.74	2.60	2.67	2.66	4	3.50
	1:06		Middle	3.0	19.60	19.60		8.21	8.21		33.22	33.22		76.7	76.3		5.78	5.74		2.77	2.59		3	
4/12/2013	14:10	Fine	Middle	3.5	21.20	21.20	21.20	8.14	8.14	8.13	32.41	32.41	32.41	82.8	82.9	82.5	6.08	6.09	6.05	4.07	4.08	4.07	8	7.50
	14:12		Middle	3.5	21.20	21.20		8.12	8.12		32.41	32.41		81.9	82.2		5.98	6.03		4.06	4.07		7	
7/12/2013	3:25	Fine	Middle	3.0	19.10	19.10	19.10	8.15	8.15	8.15	33.26	33.26	33.26	74.4	75.3	74.7	5.66	5.71	5.67	1.89	1.83	1.85	5	6.00
	3:26		Middle	3.0	19.10	19.10		8.15	8.15		33.26	33.26		74.4	74.5		5.66	5.66		1.85	1.84		7	
9/12/2013	4:18	Fine	Middle	3.0	21.10	21.10	21.10	7.93	7.93	7.94	33.16	33.16	33.16	71.3	71.3	70.5	5.22	5.23	5.16	1.97	1.84	1.86	4	5.00
	4:19		Middle	3.0	21.10	21.10		7.94	7.94		33.16	33.16		70.0	69.2		5.13	5.07		1.80	1.82		6	
11/12/2013	21:05	Cloudy	Middle	3.0	20.10	20.10	20.10	8.05	8.05	8.06	33.37	33.37	33.39	76.8	78.0	77.8	5.73	5.82	5.81	2.52	2.60	2.56	5	4.50
	21:06		Middle	3.0	20.10	20.10		8.07	8.07		33.40	33.40		78.3	78.2		5.84	5.83		2.54	2.58		4	
13/12/2013	22:40	Cloudy	Middle	3.0	20.40	20.40	20.40	8.03	8.03	8.04	33.42	33.42	33.42	80.7	82.4	82.2	5.98	6.11	6.09	1.97	1.64	1.68	2	2.00
	22:41		Middle	3.0	20.40	20.40		8.05	8.05		33.42	33.42		82.3	83.4		6.10	6.18		1.57	1.52		2	
17/12/2013	1:25	Cloudy	Middle	3.0	17.10	17.10	17.10	8.08	8.08	8.09	31.93	31.94	31.94	71.9	72.6	72.3	5.76	5.79	5.76	2.21	2.02	2.03	3	3.00
	1:26		Middle	3.0	17.10	17.10		8.09	8.10		31.95	31.95		72.4	72.4		5.75	5.75		1.98	1.90		3	
19/12/2013	2:35	Fine	Middle	3.0	15.00	15.00	15.00	8.34	8.34	8.34	32.69	32.69	32.69	69.7	70.0	70.0	5.75	5.78	5.78	1.44	1.49	1.45	3	3.00
	2:36		Middle	3.0	15.00	15.00		8.34	8.34		32.69	32.69		70.2	70.2		5.80	5.80		1.47	1.41		3	
21/12/2013	2:30	Fine	Middle	3.0	17.20	17.20	17.20	8.32	8.32	8.32	33.36	33.36	33.36	77.9	76.8	77.5	6.13	6.05	6.10	1.61	1.55	1.64	9	6.00
	2:31		Middle	3.0	17.20	17.20		8.32	8.32		33.36	33.36		77.4	77.9		6.10	6.12		1.72	1.66		3	
24/12/2013	2:45	Fine	Middle	3.0	16.50	16.50	16.50	8.35	8.35	8.35	33.53	33.53	33.53	74.0	73.9	74.4	5.30	5.30	5.34	2.60	2.67	2.69	3	3.50
	2:46		Middle	3.0	16.50	16.50		8.34	8.34		33.52	33.52		75.0	74.7		5.38	5.36		2.72	2.75		4	
26/12/2013	4:45	Fine	Middle	3.0	16.10	16.10	16.10	8.08	8.08	8.09	32.94	32.94	32.94	65.3	66.5	66.4	5.27	5.37	5.36	1.37	1.35	1.39	2	2.00
	4:46		Middle	3.0	16.10	16.10		8.09	8.09		32.94	32.94		67.0	66.6		5.41	5.37		1.41	1.44		2	

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



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

Date	Time	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					
28/11/2013	9:41	Cloudy	Middle	1.5	21.70	21.70	21.70	8.41	8.41	8.41	33.61	33.62	33.62	53.7	54.0	54.0	3.90	3.92	3.92	4.48	4.50	4.50	8	7.00
	9:43		Middle	1.5	21.70	21.70		8.40	8.40		33.62	33.61		54.1	54.2		3.93	3.94		4.51	4.49		6	
30/11/2013	10:21	Fine	Middle	1.5	21.10	21.10	21.00	8.53	8.53	8.52	35.01	35.01	34.28	55.9	57.0	57.3	4.05	4.14	4.16	7.77	7.76	7.77	15	<u>15.50</u>
	10:23		Middle	1.5	20.90	20.90		8.50	8.50		35.05	32.05		58.4	58.0		4.24	4.21		7.76	7.78		16	
2/12/2013	23:10	Fine	Middle	2.5	20.70	20.70	20.65	8.53	8.53	8.50	35.02	35.02	35.02	56.2	56.0	55.8	4.11	4.10	4.08	3.24	3.21	3.22	3	3.00
	23:43		Middle	2.5	20.60	20.60		8.47	8.47		35.01	35.01		55.5	55.3		4.07	4.05		3.21	3.20		3	
4/12/2013	13:53	Fine	Middle	1.0	21.30	21.30	16.50	7.84	7.85	7.86	34.96	34.97	34.97	74.3	74.1	74.2	5.40	5.39	5.40	3.03	3.01	3.01	4	3.50
	13:55		Middle	1.0	21.20	2.20		7.87	7.86		34.96	34.97		74.4	73.8		5.41	5.38		2.98	3.00		3	
7/12/2013	2:19	Fine	Middle	2.0	20.80	20.80	20.80	8.38	8.38	8.38	34.73	34.73	34.73	62.0	62.7	62.3	4.53	4.58	4.55	4.95	4.96	4.95	16	<u>15.50</u>
	2:21		Middle	2.0	20.80	20.80		8.38	8.38		34.73	34.73		62.3	62.1		4.55	4.54		4.93	4.94		15	
9/12/2013	6:23	Fine	Middle	1.5	21.40	21.40	21.40	8.45	8.45	8.45	34.07	34.07	34.07	50.3	50.7	50.9	3.65	3.68	3.69	2.03	2.03	2.03	16	10.50
	6:25		Middle	1.5	21.40	21.40		8.45	8.45		34.07	34.07		51.1	51.3		3.71	3.73		2.03	2.03		5	
11/12/2013	18:20	Cloudy	Middle	2.0	20.80	20.80	20.70	8.12	8.12	8.12	32.51	32.51	32.51	74.4	74.8	74.6	5.51	5.55	5.53	5.24	5.40	5.42	3	3.00
	18:22		Middle	2.0	20.60	20.60		8.12	8.12		32.51	32.51		74.7	74.4		5.53	5.52		5.44	5.61		3	
13/12/2013	21:52	Cloudy	Middle	2.0	20.70	20.70	20.70	8.14	8.14	8.15	31.88	31.89	31.89	78.6	79.0	78.4	5.85	5.89	5.84	3.52	3.63	3.61	3	3.00
	21:54		Middle	2.0	20.70	20.70		8.15	8.15		31.88	31.89		78.2	77.9		5.82	5.81		3.64	3.63		3	
17/12/2013	23:45	Cloudy	Middle	2.0	19.20	19.10	19.15	8.19	8.19	8.19	31.16	31.16	31.16	63.7	66.9	64.7	4.98	5.12	4.99	7.33	7.34	7.34	10	10.00
	23:47		Middle	2.0	19.20	19.10		8.19	8.19		31.16	31.16		64.8	63.4		4.98	4.86		7.35	7.33		10	
19/12/2013	1:45	Fine	Middle	2.0	18.40	18.40	18.25	8.18	8.18	8.18	31.69	31.69	31.69	64.9	64.8	64.7	5.05	5.05	5.04	6.63	6.57	6.56	4	4.00
	1:47		Middle	2.0	18.10	18.10		8.17	8.17		31.69	31.69		64.6	64.3		5.03	5.02		6.54	6.48		4	
21/12/2013	2:54	Fine	Middle	2.0	18.80	18.80	18.70	8.17	8.17	8.17	31.74	31.74	31.77	71.4	71.2	71.1	5.51	5.50	5.50	4.98	4.94	4.91	9	8.00
	2:56		Middle	2.0	18.60	18.60		8.16	8.16		31.79	31.79		71.0	70.8		5.49	5.48		4.86	4.87		7	
24/12/2013	4:31	Fine	Middle	2.0	17.80	17.80	17.75	8.16	8.16	8.16	30.94	30.94	30.98	70.3	70.1	69.9	5.56	5.55	5.54	4.62	4.61	4.58	4	4.50
	4:33		Middle	2.0	17.70	17.70		8.15	8.15		31.01	31.01		69.8	69.2		5.53	5.50		4.56	4.53		5	
26/12/2013	5:46	Fine	Middle	2.0	17.70	17.70	17.60	8.18	8.18	8.18	32.42	32.42	32.42	78.4	78.0	77.8	6.16	6.14	6.13	3.52	3.53	3.50	3	3.00
	5:48		Middle	2.0	17.50	17.50		8.18	8.18		32.42	32.42		77.6	77.3		6.12	6.10		3.49	3.44		3	

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

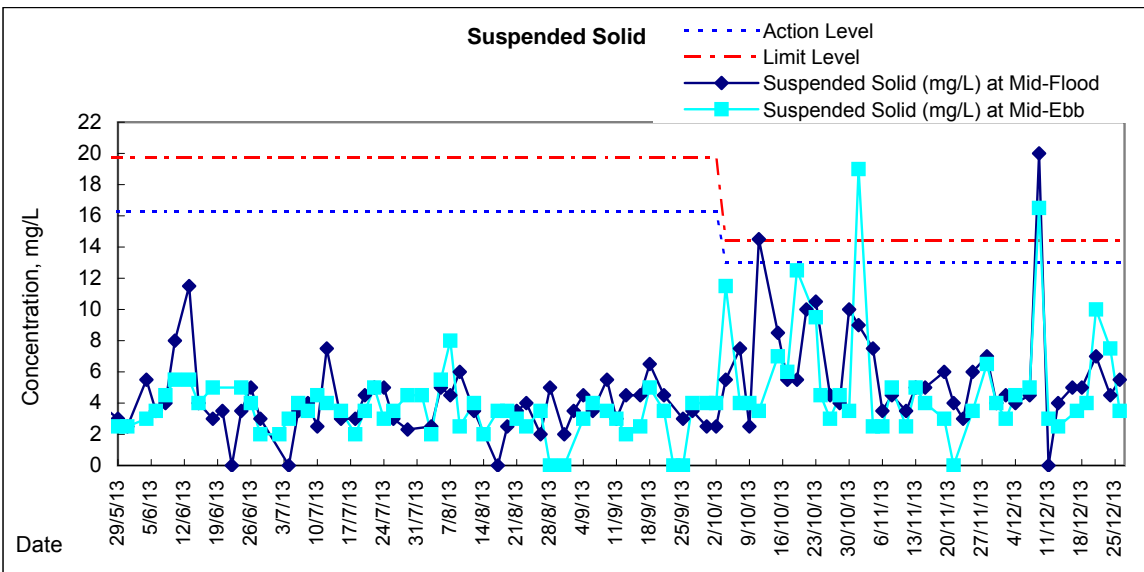
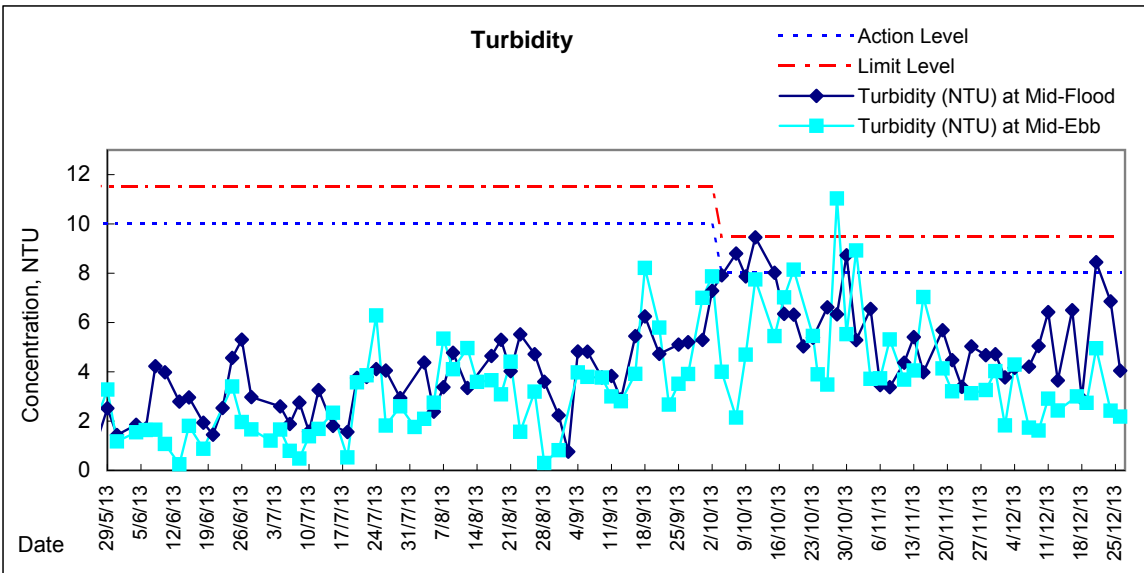
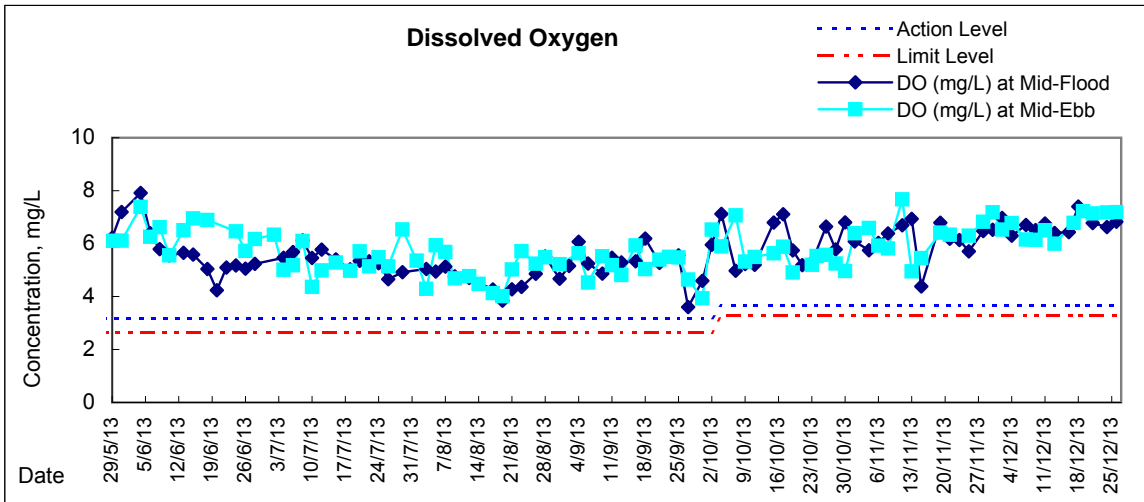


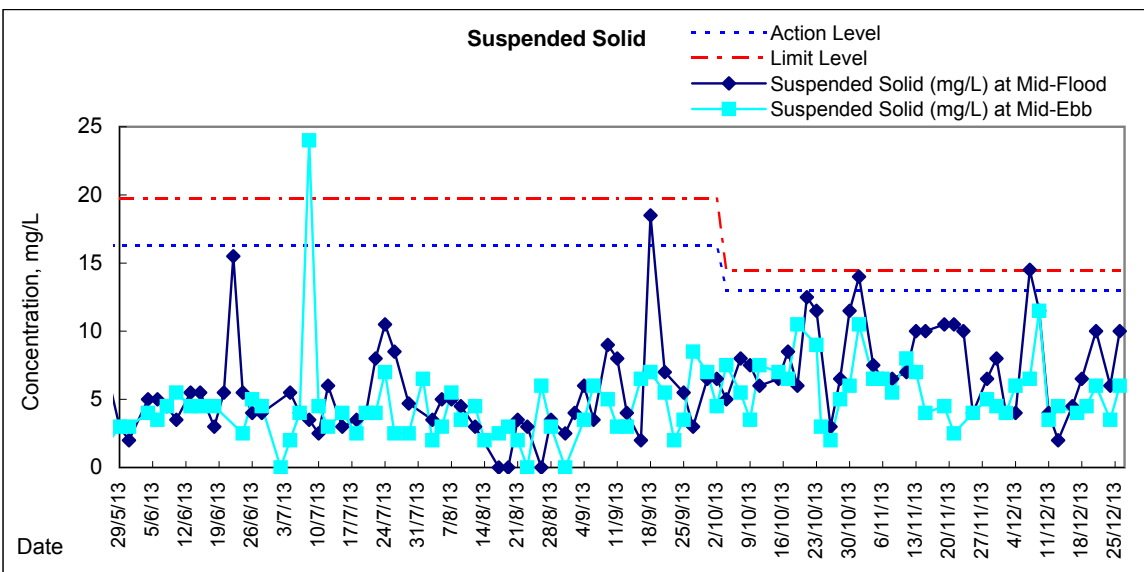
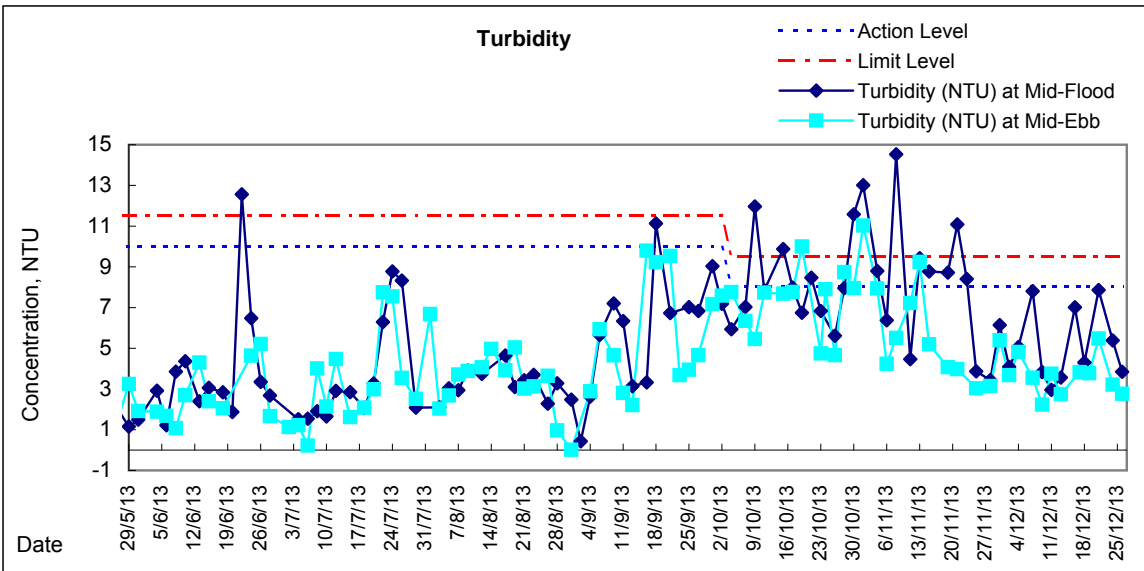
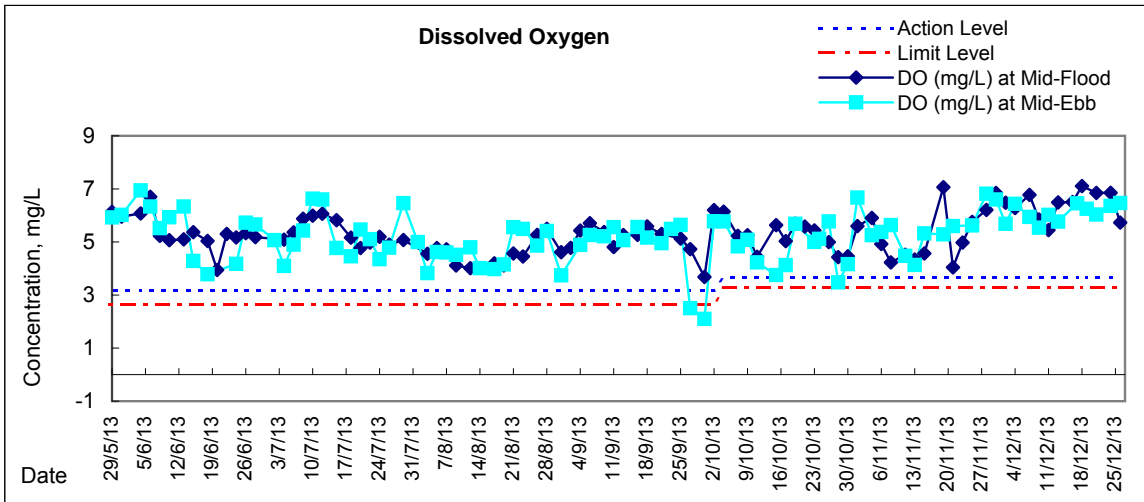


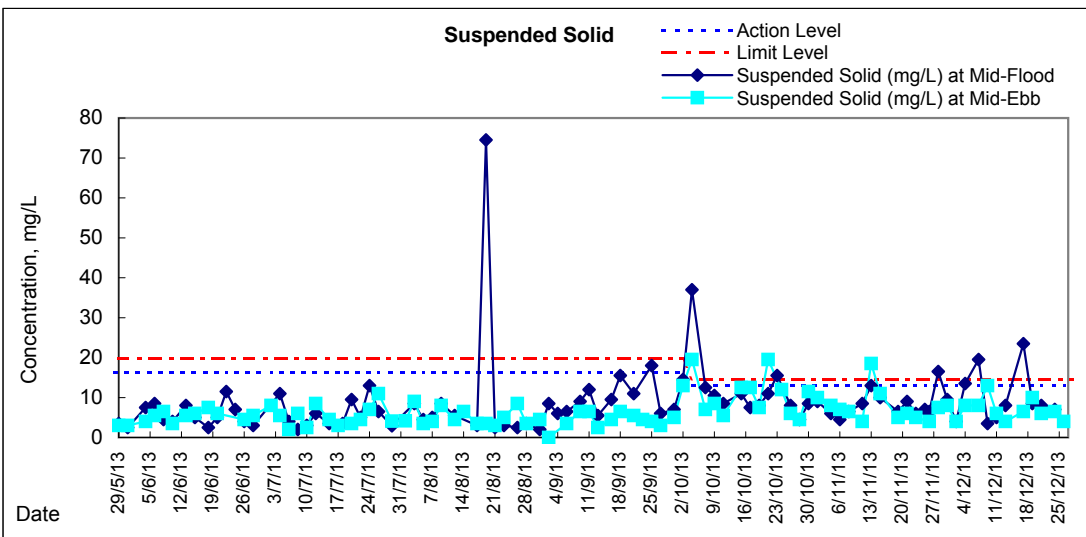
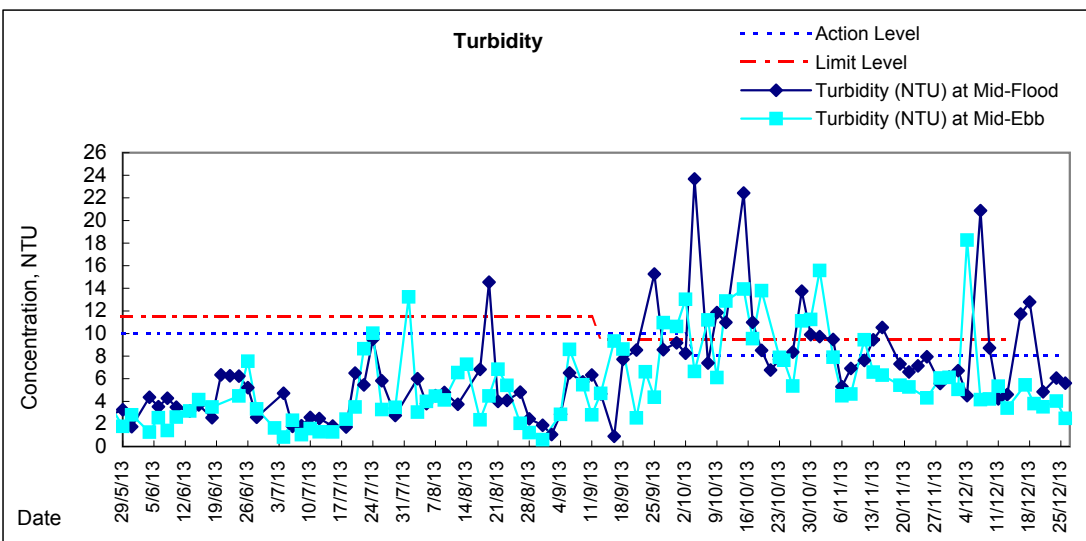
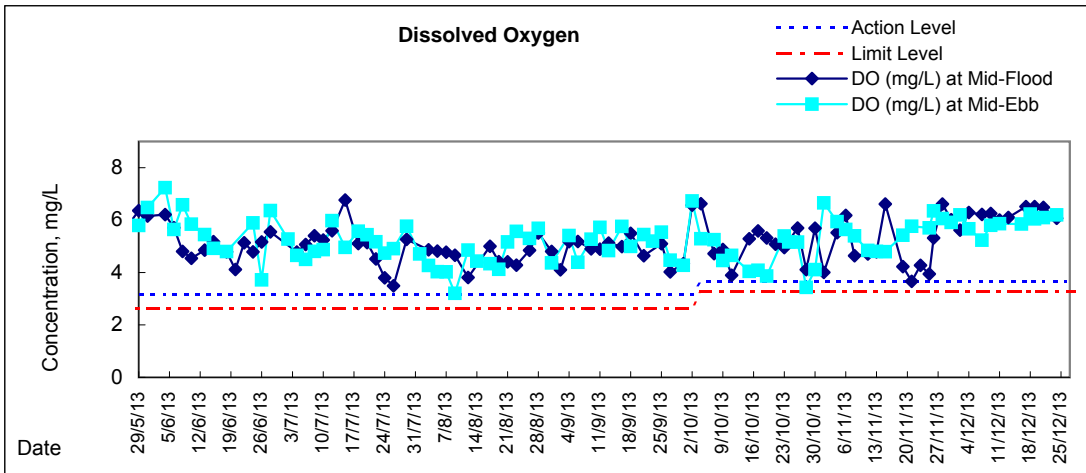
**Water Monitoring Result at WSD19 - Sheung Wan  
Mid-Ebb Tide**

Date	Time	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					
28/11/2013	9:18	Cloudy	Middle	3.0	20.60	20.60	20.45	8.09	8.09	8.08	32.03	32.03	32.04	85.9	84.8	84.9	6.41	6.34	6.35	6.10	6.08	6.06	8	7.50
	9:20		Middle	3.0	20.30	20.30		8.07	8.07		32.04	32.04		84.9	84.1		6.35	6.31		6.05	6.02		7	
30/11/2013	10:25	Fine	Middle	3.0	20.10	20.10	20.05	8.17	8.17	8.17	32.28	32.28	32.26	80.3	80.7	80.6	6.03	6.07	6.06	6.31	6.11	6.12	9	8.00
	10:27		Middle	3.0	20.00	20.00		8.16	8.16		32.24	32.24		80.6	80.9		6.06	6.08		6.04	6.03		7	
2/12/2013	3:05	Fine	Middle	1.5	20.00	20.00	19.98	8.26	8.26	8.26	33.16	33.25	33.21	78.4	79.5	78.8	5.89	5.95	5.91	5.07	5.16	5.06	4	4.00
	3:06		Middle	1.5	19.90	20.00		8.26	8.26		33.16	33.26		79.1	78.3		5.93	5.87		5.02	4.99		4	
4/12/2013	13:50	Fine	Middle	3.0	21.40	21.40	21.35	8.13	8.13	8.12	32.45	32.45	32.45	84.3	84.7	84.6	6.18	6.21	6.20	18.25	18.17	<u>18.28</u>	8	8.00
	13:52		Middle	3.0	21.30	21.30		8.11	8.11		32.45	32.45		84.6	84.6		6.20	6.20		18.33	18.35		8	
7/12/2013	5:17	Fine	Middle	1.5	19.60	19.60	19.55	7.99	7.99	8.00	32.86	32.86	32.92	75.6	75.9	75.0	5.71	5.74	5.67	4.09	4.11	4.15	9	8.00
	5:18		Middle	1.5	19.50	19.50		8.02	8.01		32.97	32.97		73.9	74.5		5.59	5.63		4.24	4.16		7	
9/12/2013	6:00	Fine	Middle	1.5	20.80	20.80	20.80	8.03	8.03	8.04	33.12	33.12	33.13	73.8	74.7	74.1	5.15	5.50	5.24	4.37	4.32	4.21	17	13.00
	6:01		Middle	1.5	20.80	20.80		8.04	8.04		33.13	33.13		74.1	73.7		5.16	5.13		4.04	4.10		9	
11/12/2013	21:40	Cloudy	Middle	1.5	20.20	20.20	20.20	8.29	8.29	8.29	33.45	33.49	33.36	79.1	79.6	79.5	5.39	5.94	5.80	5.33	5.40	5.34	6	6.00
	21:41		Middle	1.5	20.20	20.20		8.29	8.29		33.12	33.37		79.4	79.8		5.92	5.95		5.43	5.21		6	
13/12/2013	0:46	Cloudy	Middle	1.5	20.40	20.40	20.40	8.23	8.23	8.23	33.63	33.63	33.63	79.3	79.4	79.2	5.87	5.88	5.86	3.54	3.43	3.41	3	4.00
	0:47		Middle	1.5	20.40	20.40		8.23	8.23		33.63	33.63		79.1	78.8		5.86	5.84		3.34	3.31		5	
17/12/2013	3:10	Cloudy	Middle	1.5	17.40	17.40	17.40	8.34	8.34	8.34	33.28	33.28	33.34	73.3	74.6	74.5	5.75	5.87	5.85	5.57	5.63	5.46	6	6.50
	3:11		Middle	1.5	17.40	17.40		8.33	8.33		33.39	33.39		75.3	74.8		5.91	5.87		5.33	5.29		7	
19/12/2013	4:22	Fine	Middle	1.5	16.40	16.40	16.40	8.32	8.32	8.32	33.42	33.45	33.45	76.6	78.5	77.8	6.12	6.28	6.23	3.92	3.80	3.80	13	10.00
	4:23		Middle	1.5	16.40	16.40		8.32	8.32		33.46	33.46		77.7	78.3		6.23	6.27		3.77	3.70		7	
21/12/2013	4:46	Fine	Middle	1.5	17.40	17.40	17.40	8.34	8.34	8.34	33.56	33.54	33.55	76.9	77.0	77.2	6.02	6.03	6.04	3.67	3.42	3.51	6	6.00
	4:47		Middle	1.5	17.40	17.40		8.34	8.34		33.54	33.55		77.2	77.5		6.05	6.07		3.46	3.48		6	
24/12/2013	4:40	Fine	Middle	1.5	16.80	16.80	16.75	8.32	8.32	8.31	33.73	33.73	33.74	76.6	77.3	76.9	6.07	6.12	6.09	3.94	4.02	4.02	7	6.50
	4:41		Middle	1.5	16.70	16.70		8.30	8.30		33.74	33.74		76.9	76.8		6.09	6.09		3.99	4.11		6	
26/12/2013	4:25	Fine	Middle	1.5	16.10	16.10	16.05	8.09	8.09	8.11	33.54	33.55	33.55	76.9	77.4	77.0	6.20	6.23	6.20	2.52	2.43	2.49	4	4.00
	4:26		Middle	1.5	16.00	16.00		8.12	8.12		33.56	33.56		77.2	76.6		6.20	6.15		2.55	2.46		4	

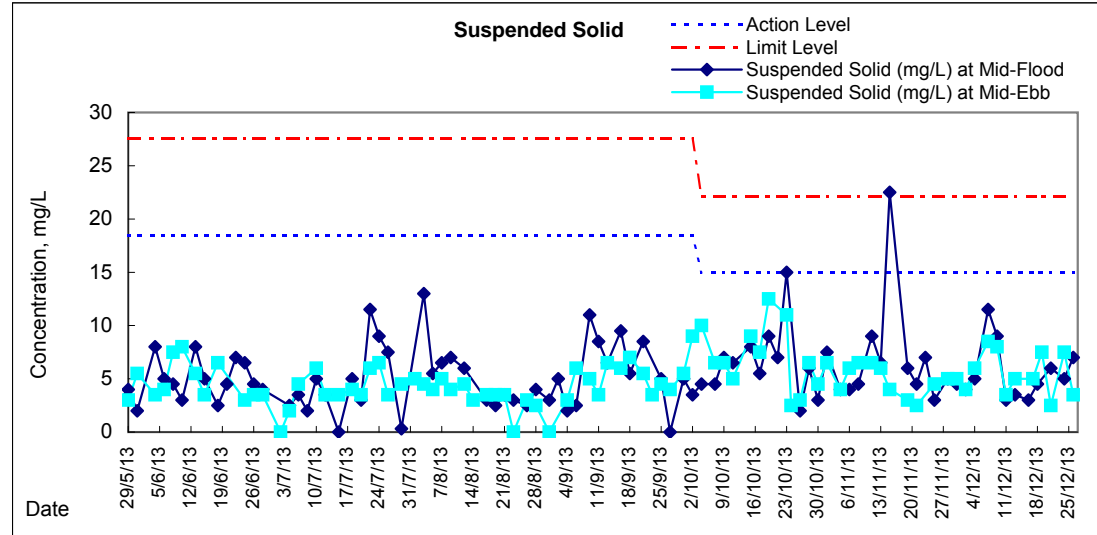
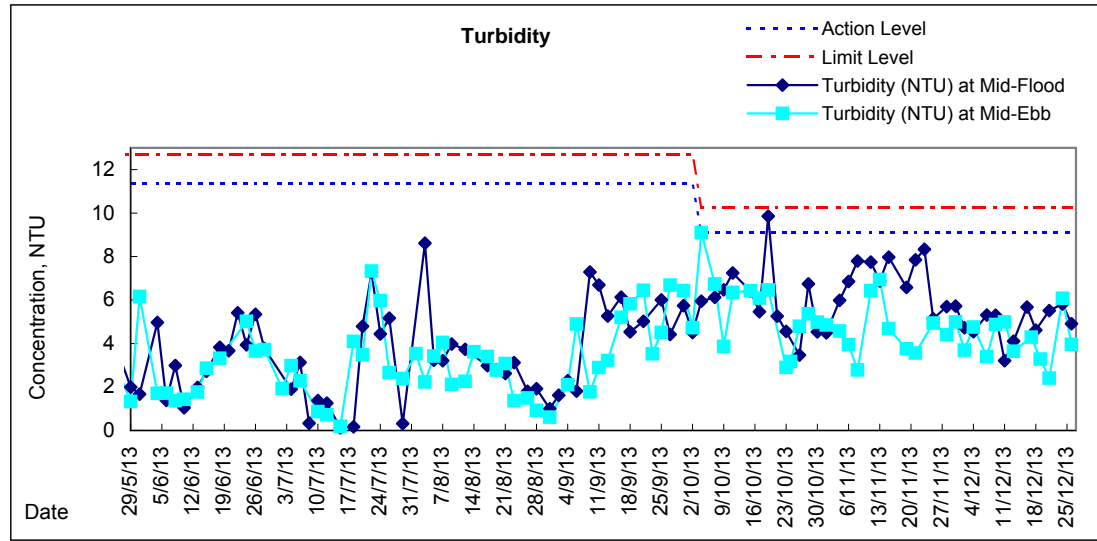
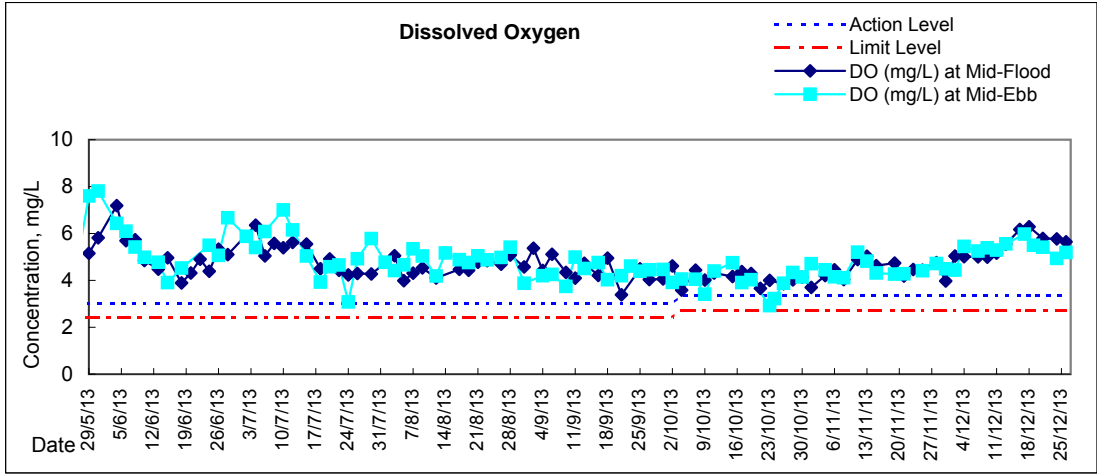
Remarks:  
Single underline denotes exceedance over Action Level.  
Double underline denotes exceedance over Limit Level.

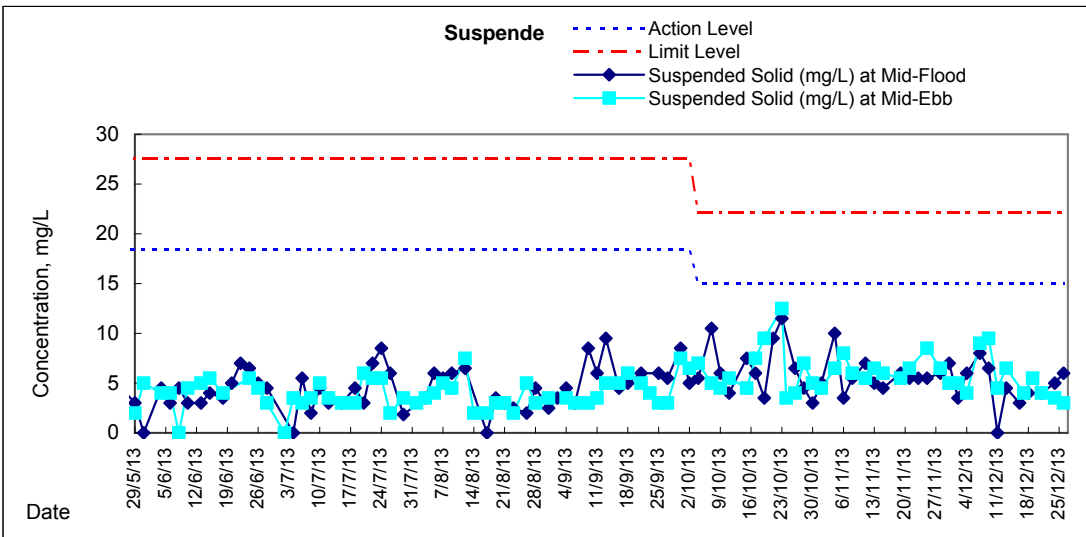
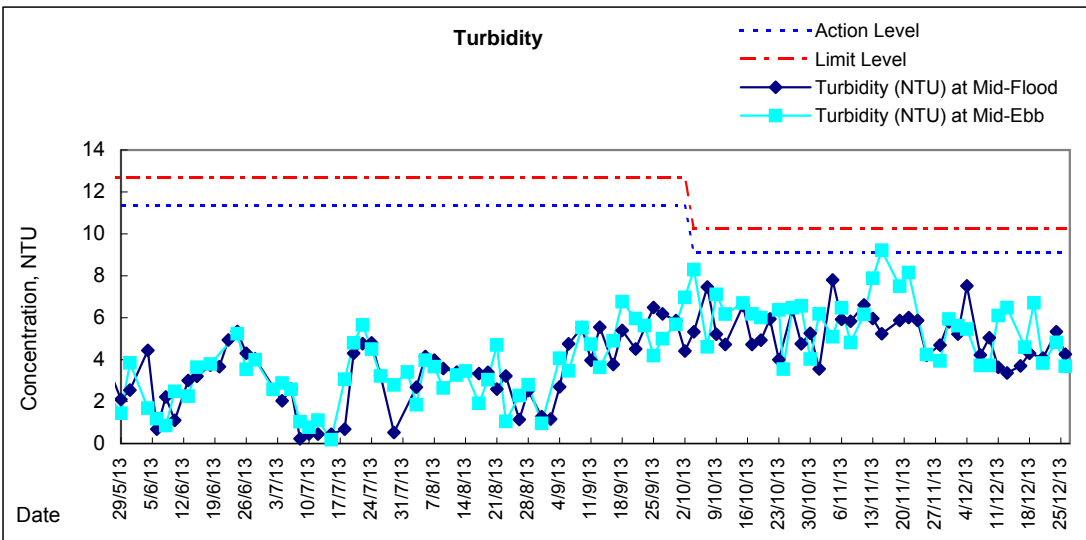
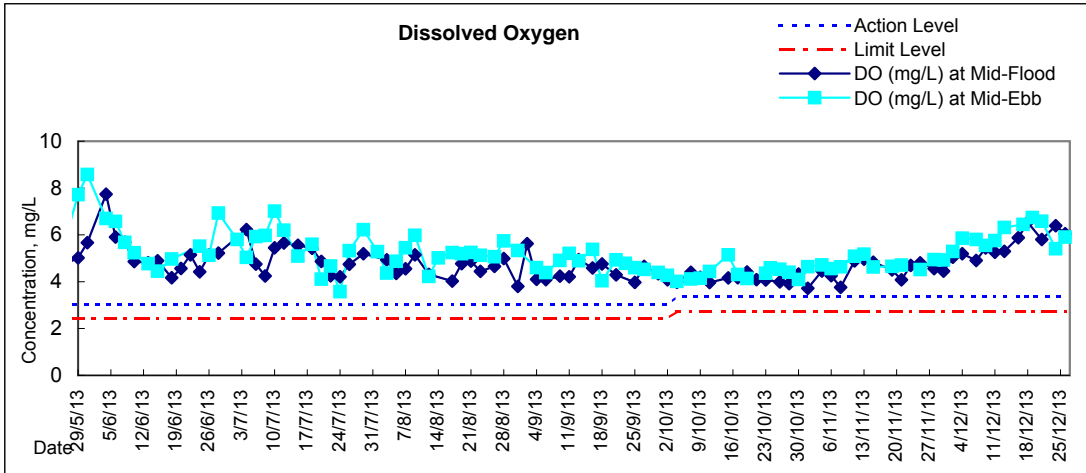


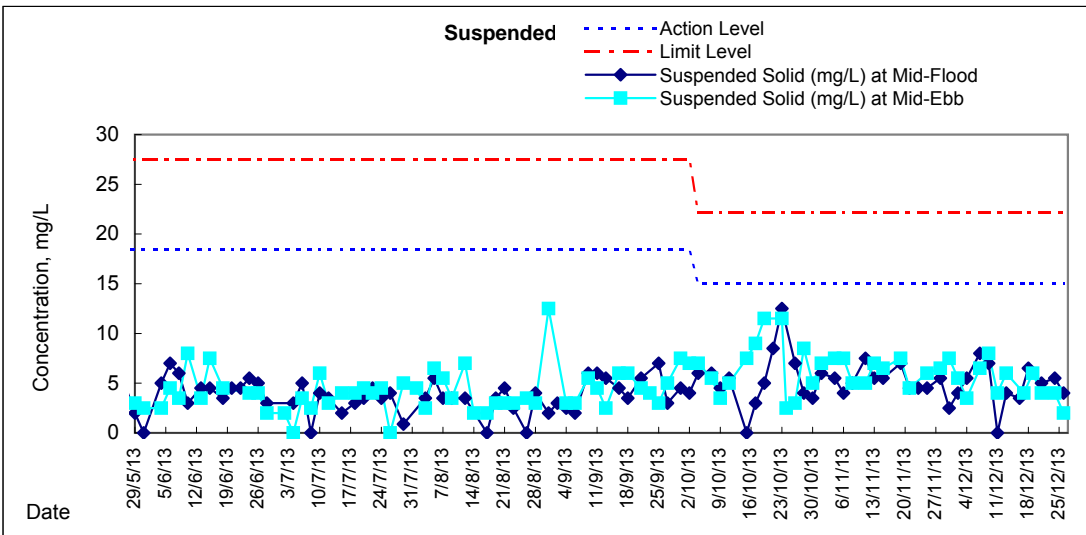
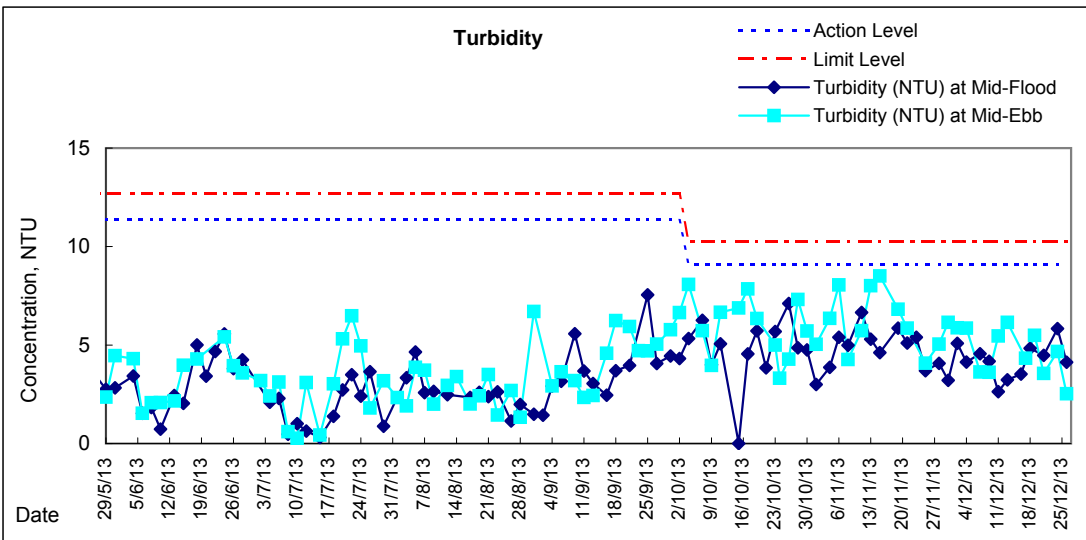
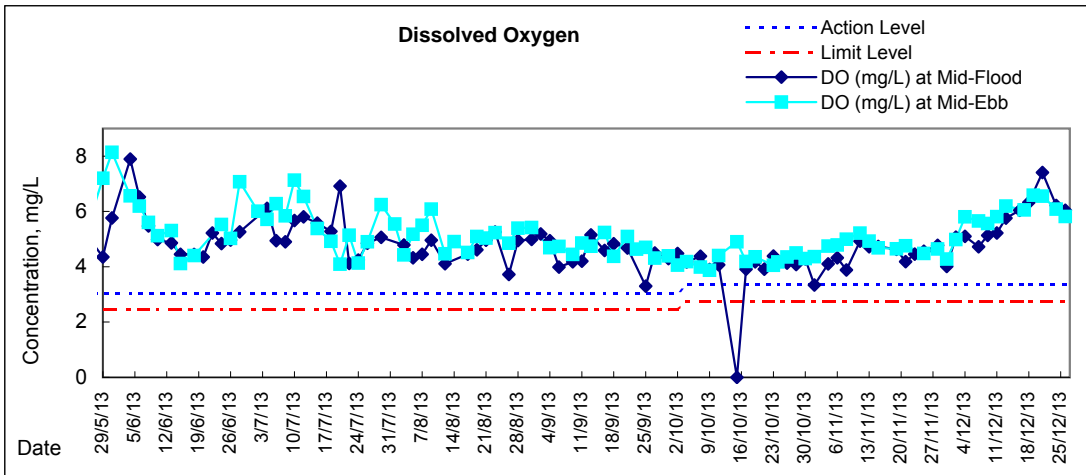




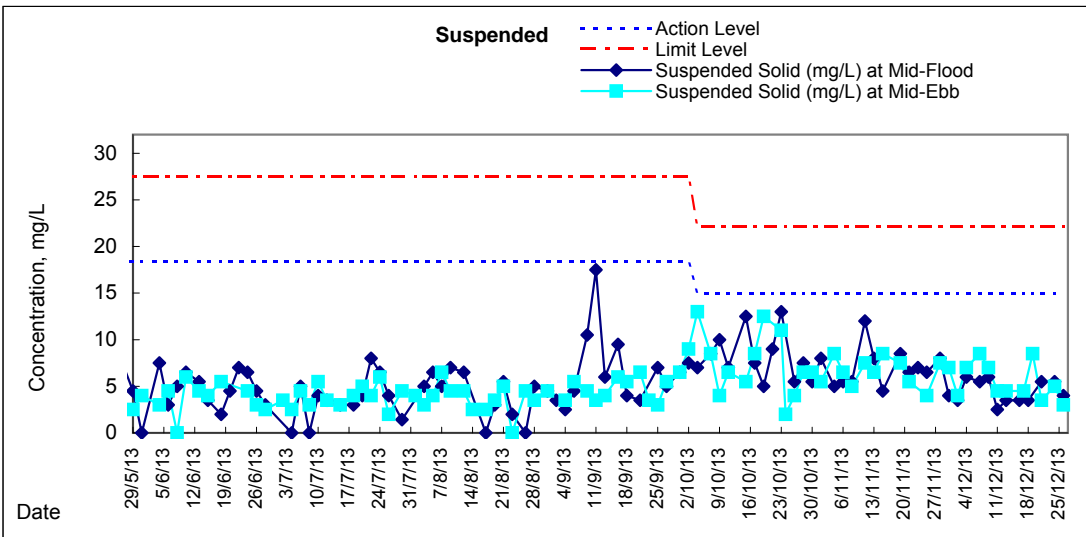
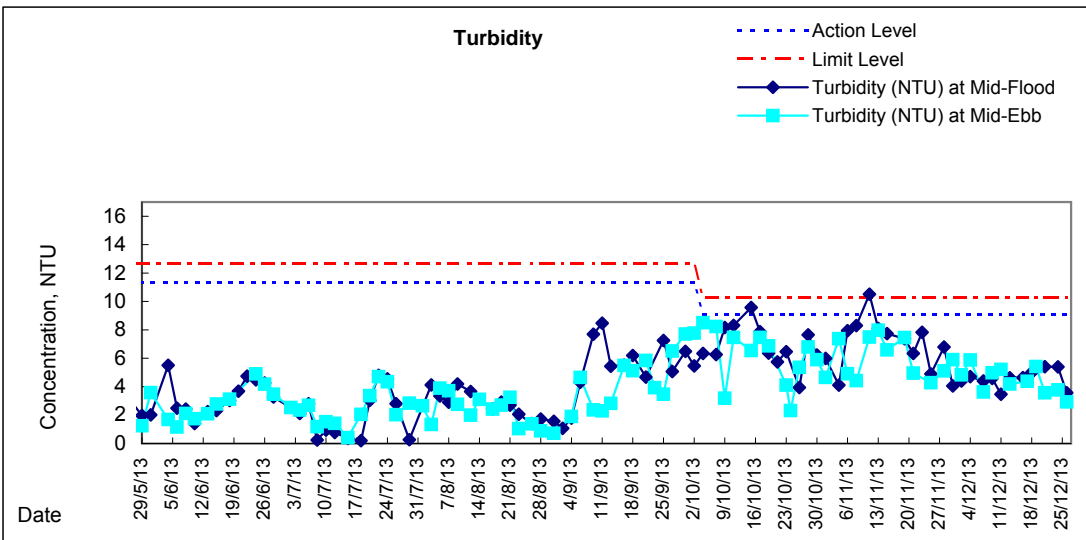
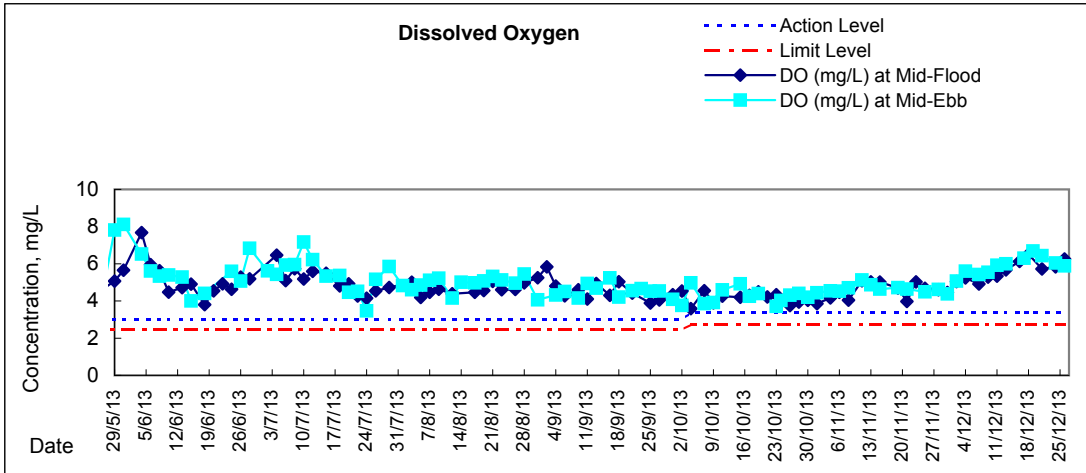
## Graphic Presentation of Water Quality Result of C1 - HKCEC





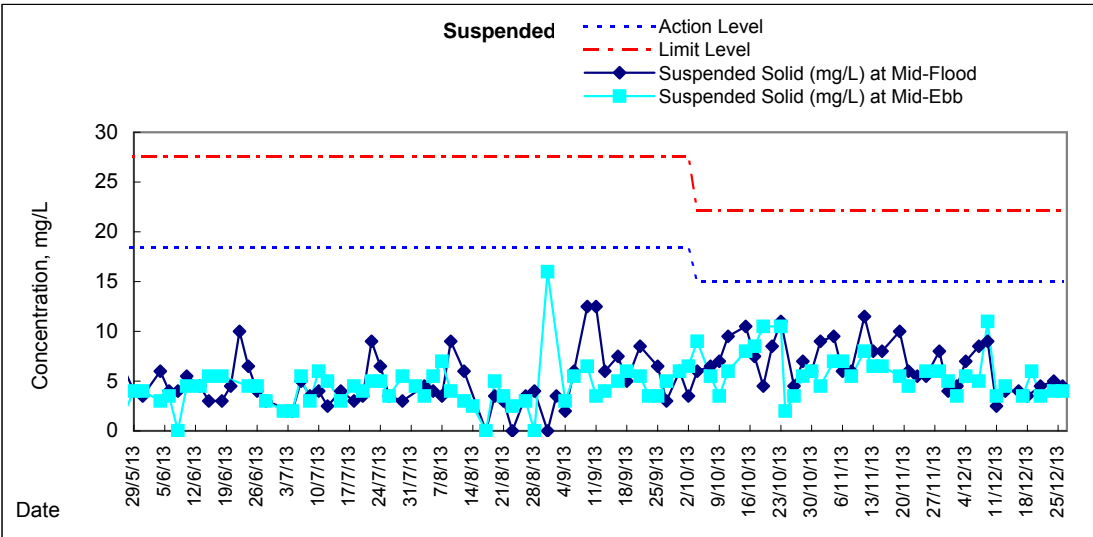
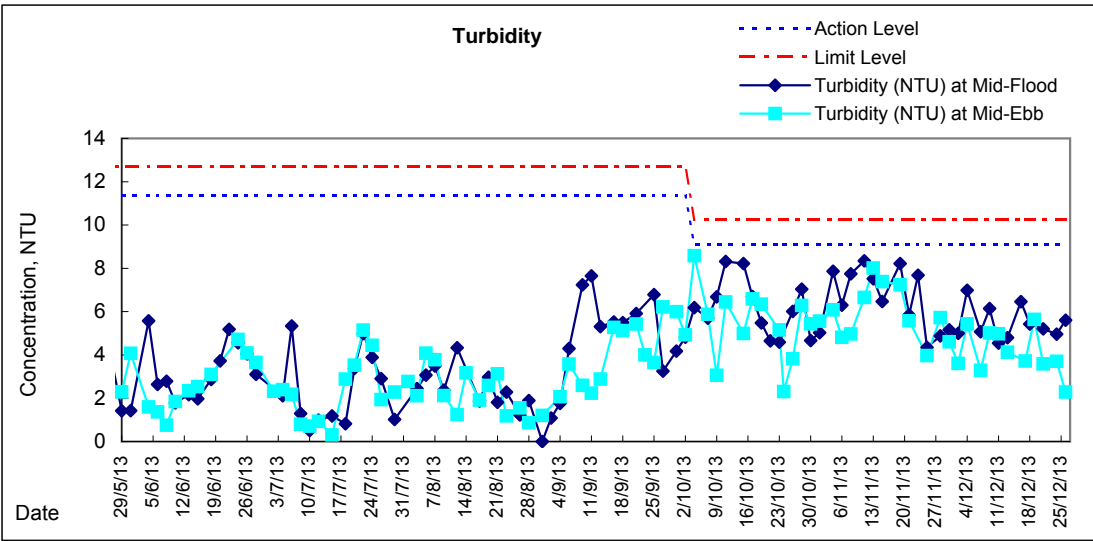
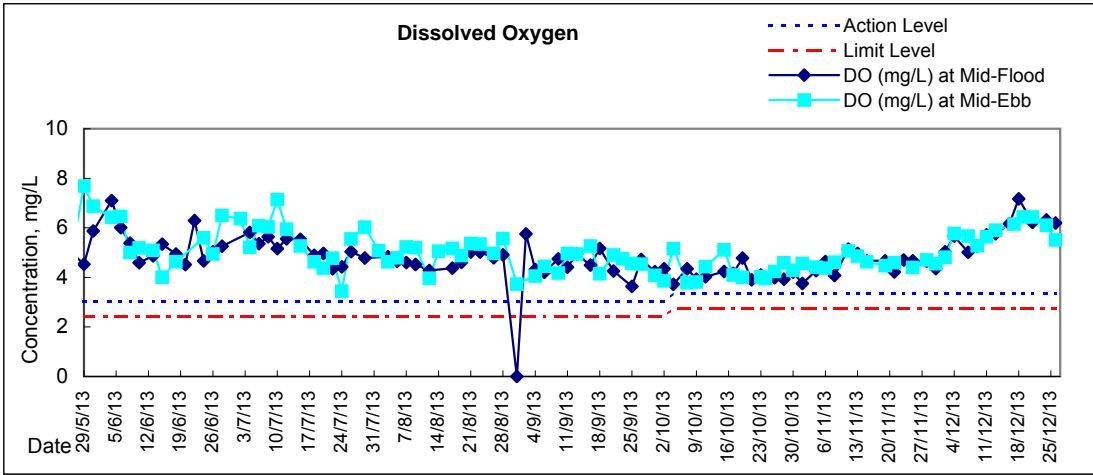


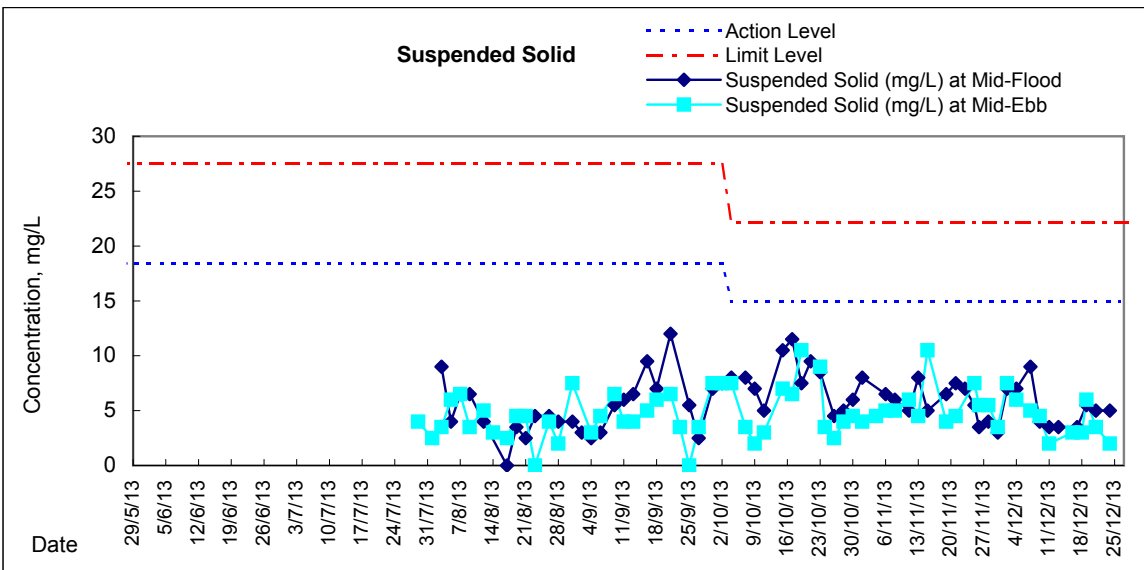
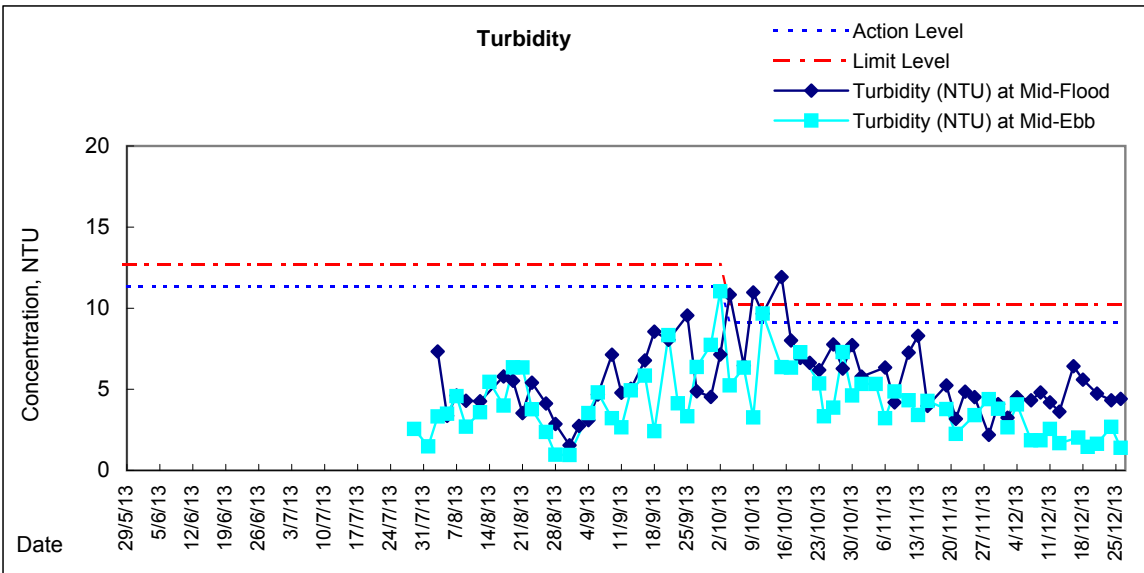
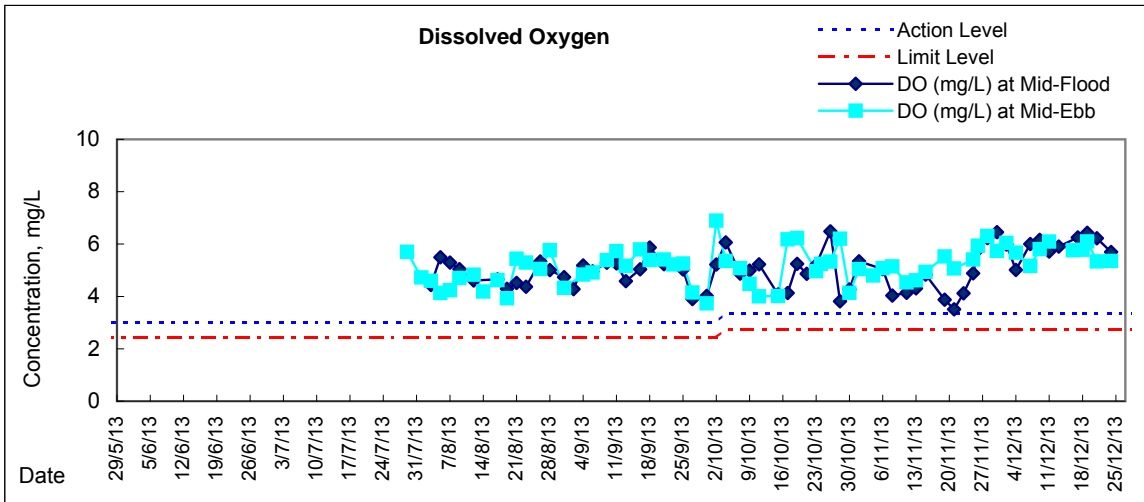


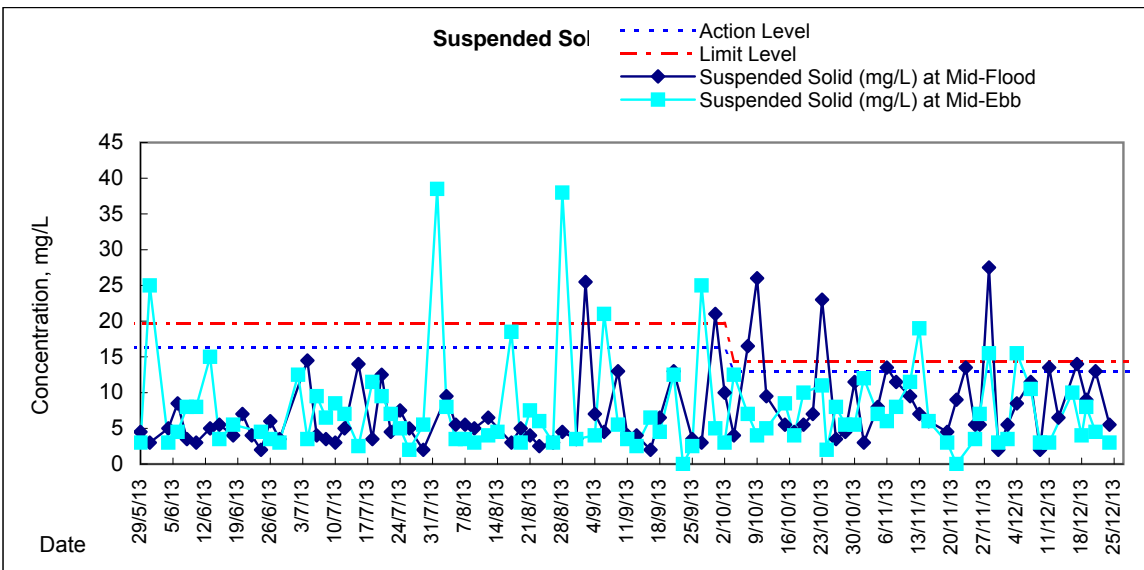
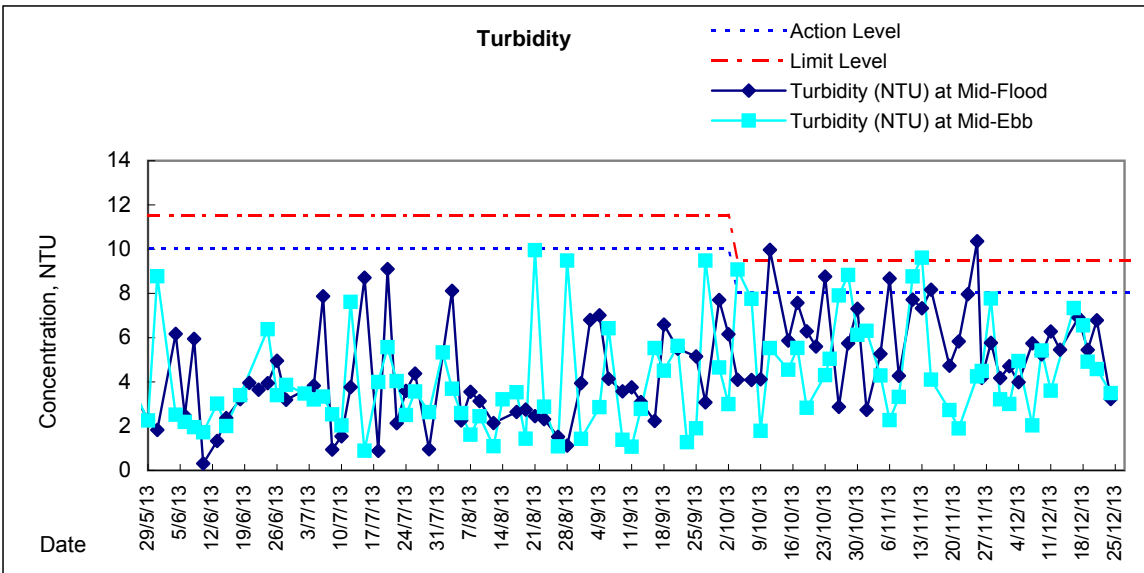
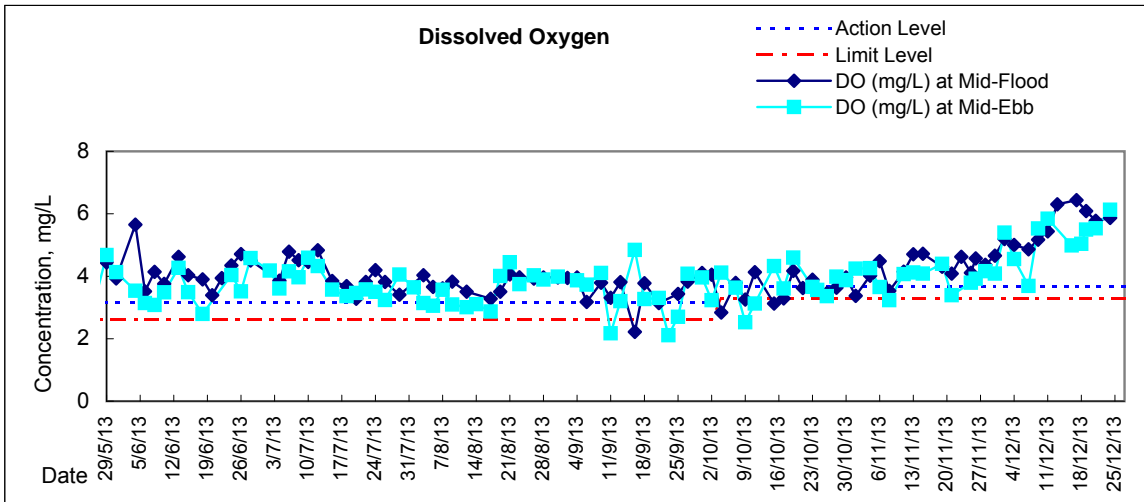




# Graphic Presentation of Water Quality Result of P5 - WCT / RT / IT

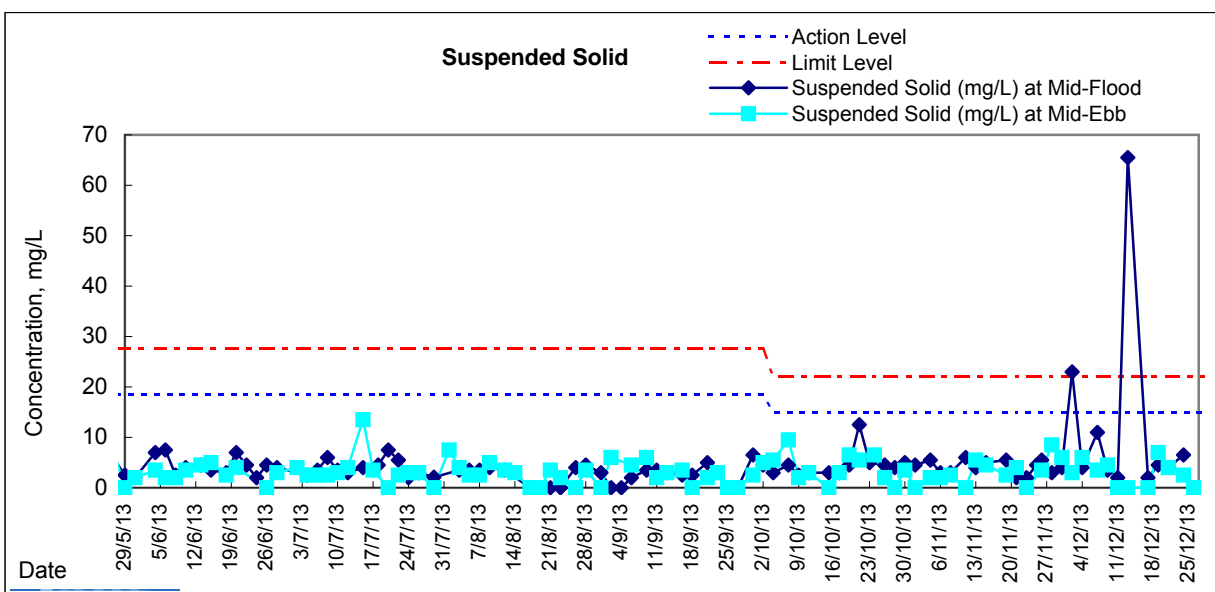
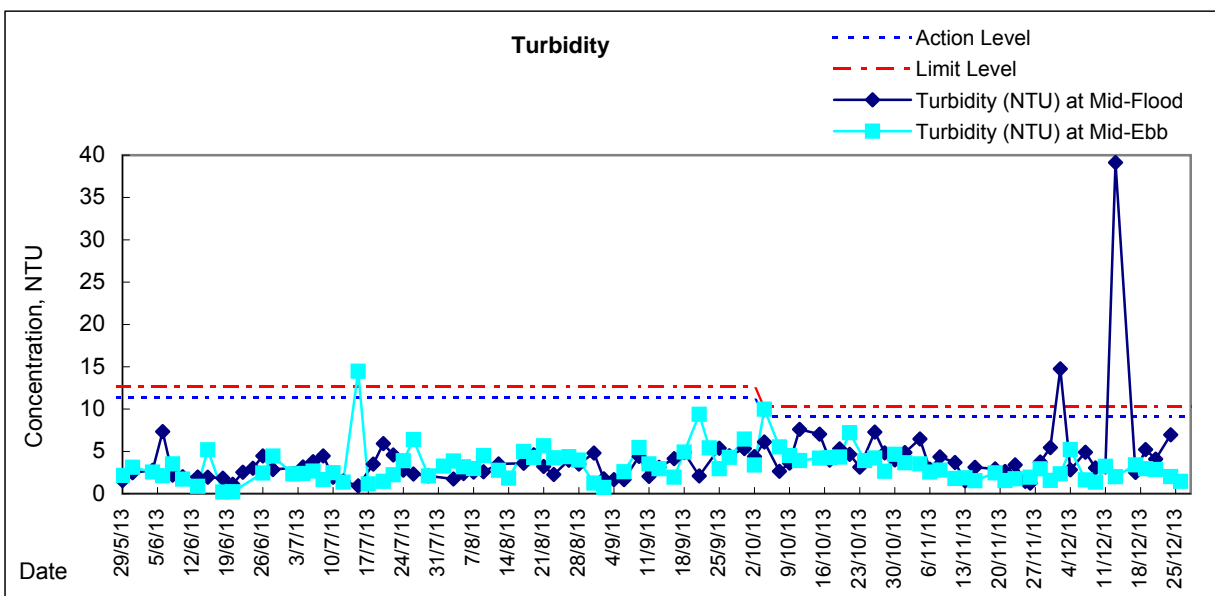
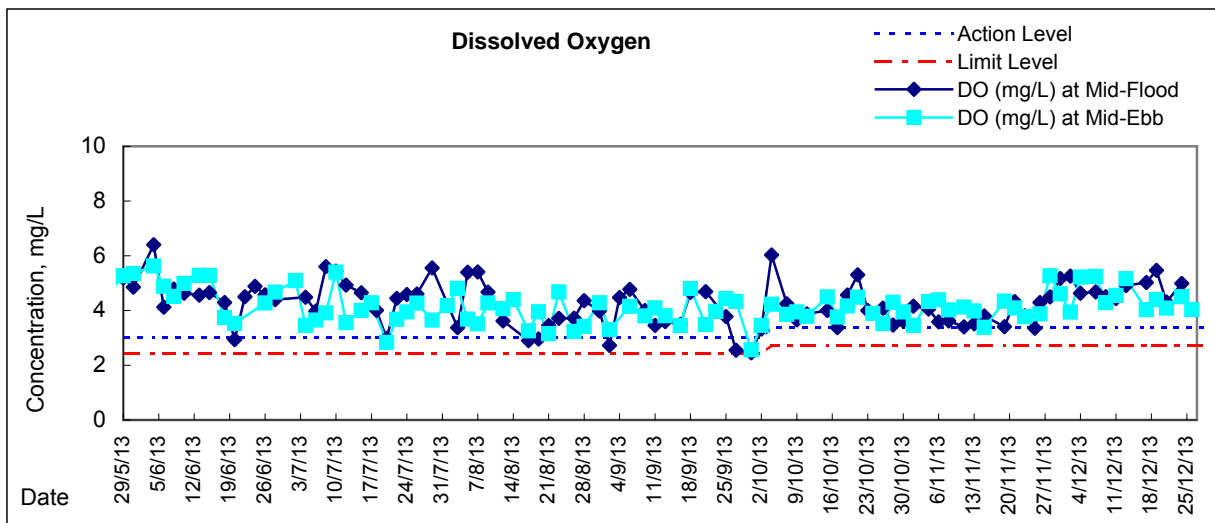








## Graphic Presentation of Water Quality Result of C7 - Windsor House













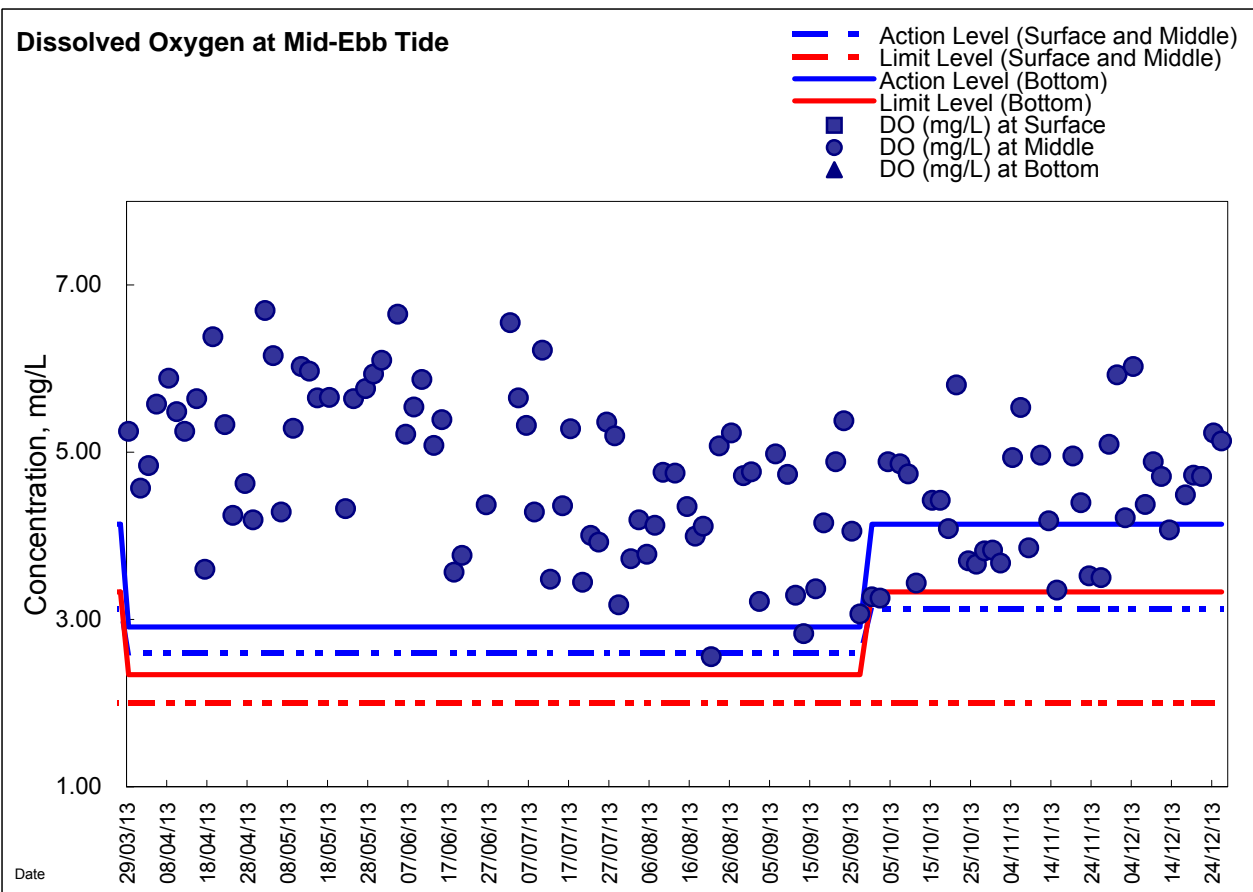
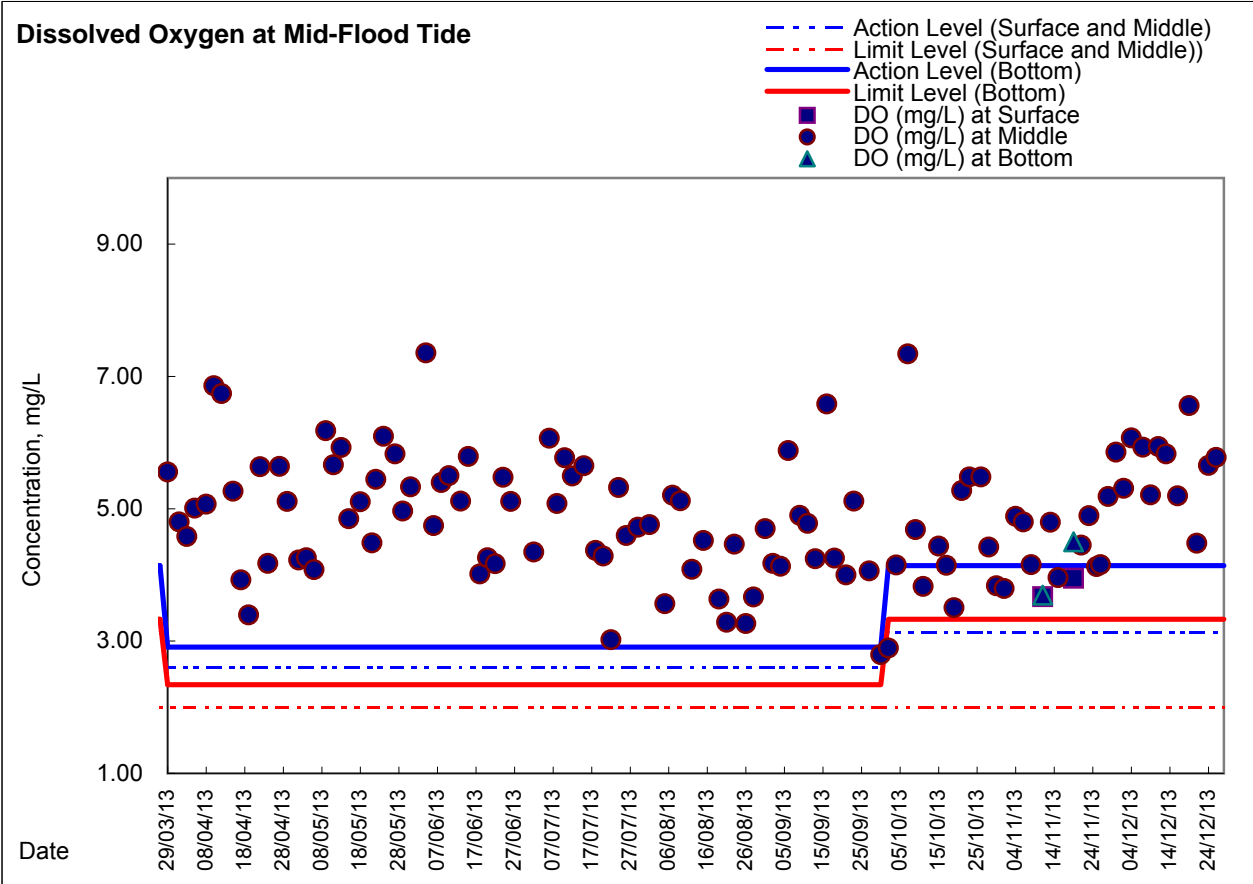








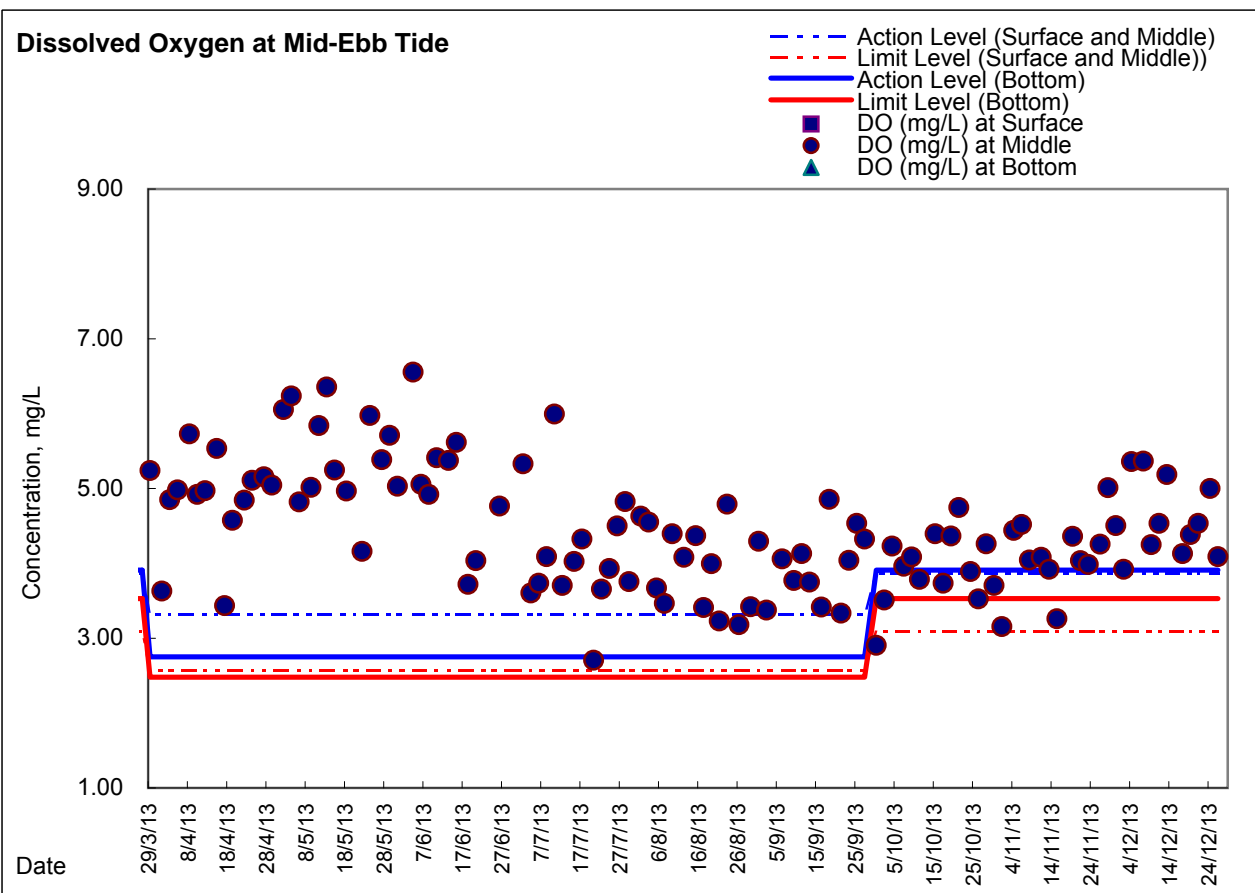
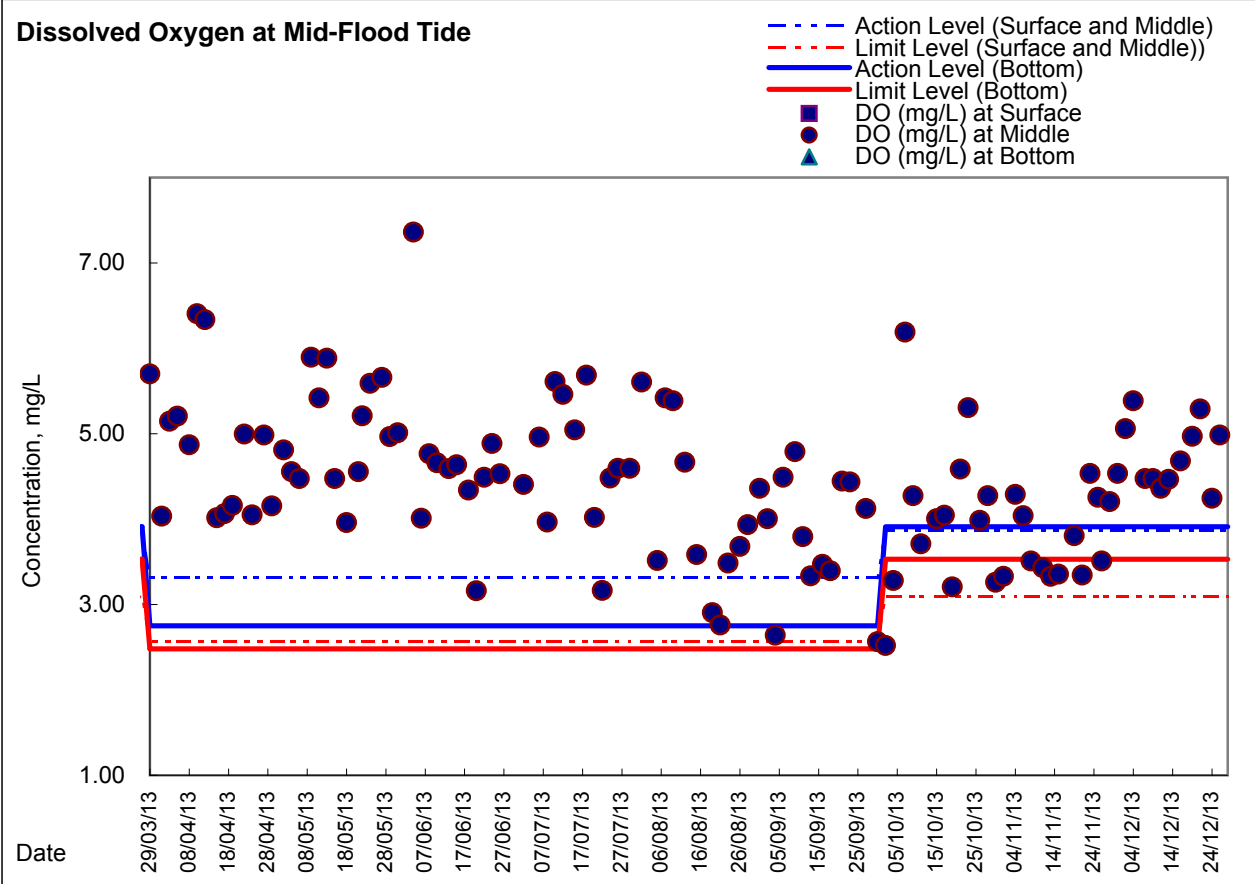
### Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel





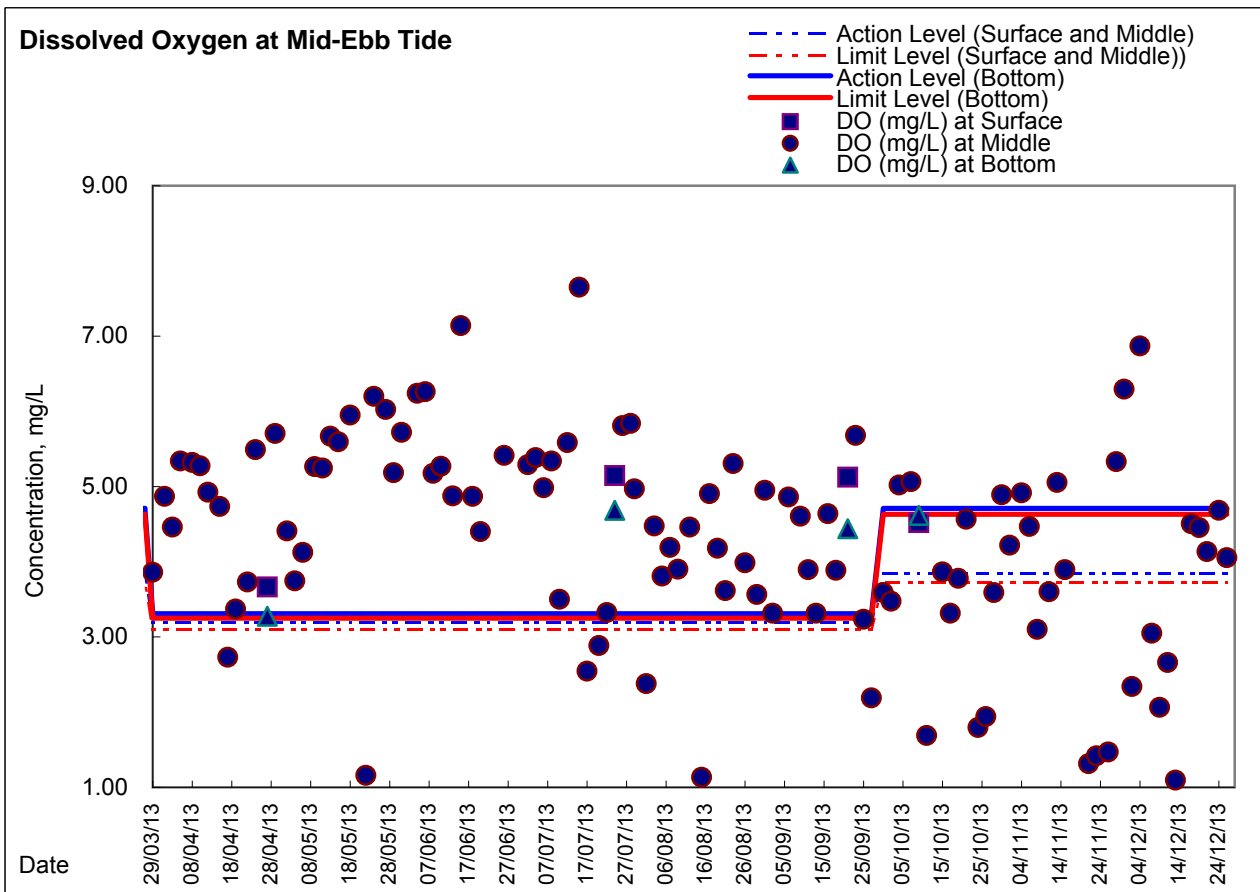
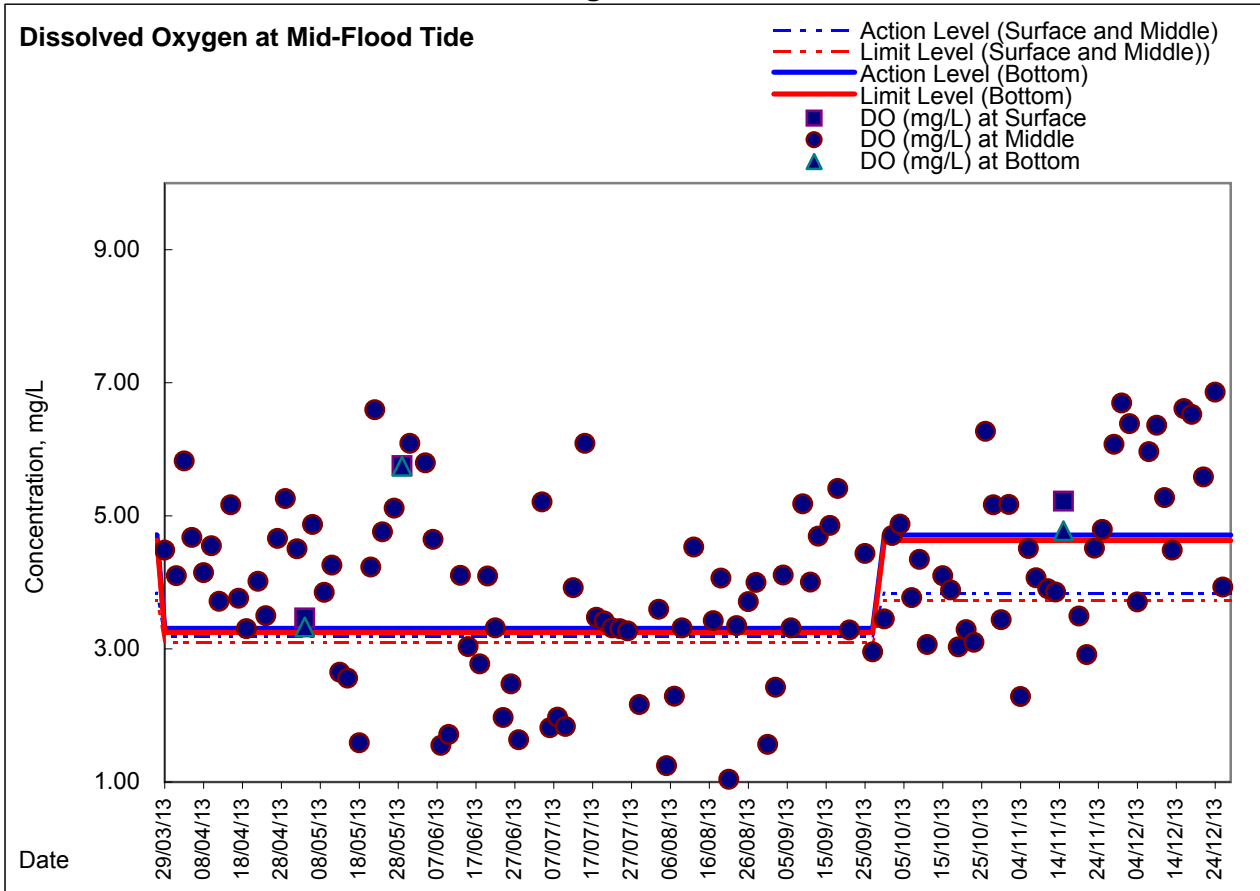


### Graphic Presentation of Enhanced Water Monitoring Results (DO) at C7 - Windsor House



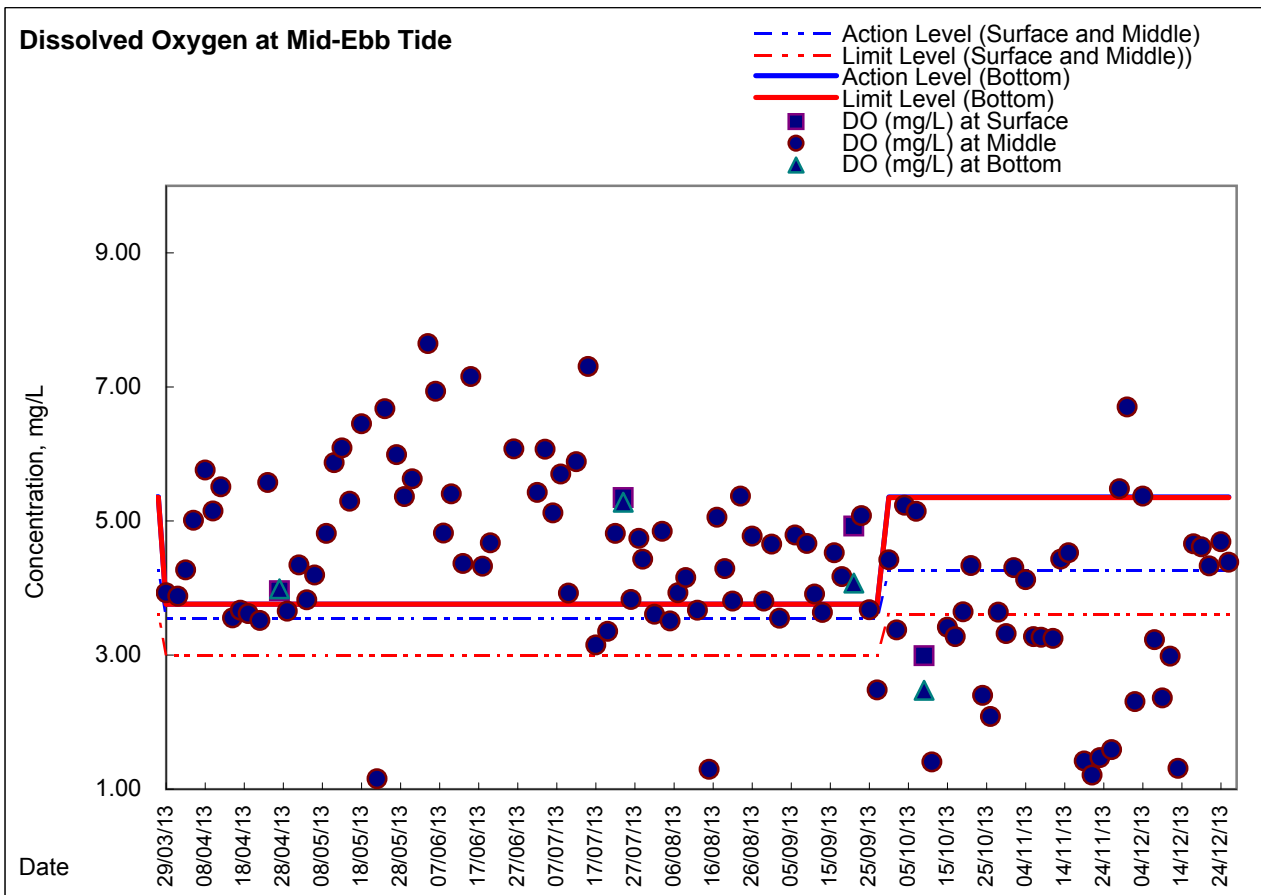
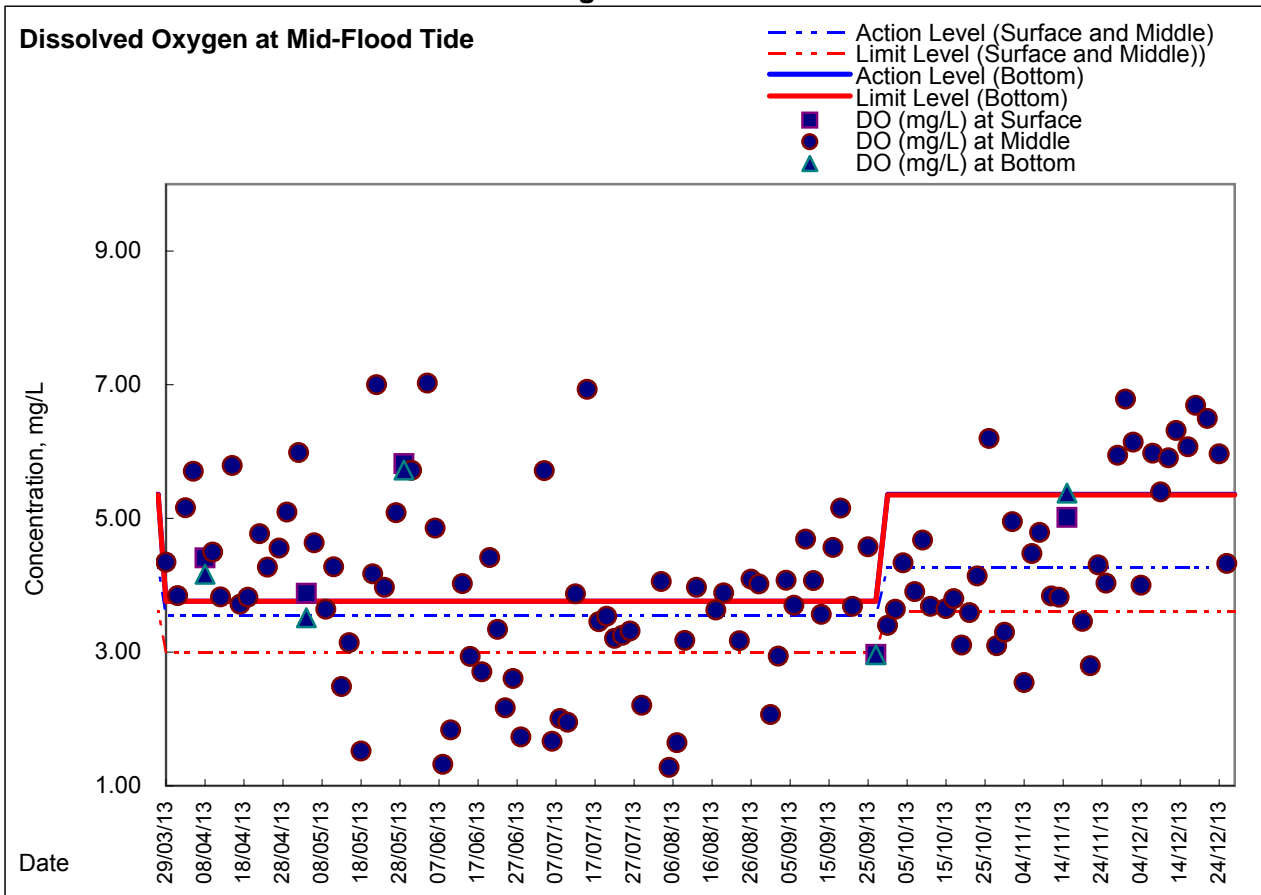


### Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area





### 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***

Real-time Noise Data	RTN2a (Hong Kong Electric Centre)							
<b>Normal Day 07:00-19:00</b>	3/12/2013 12:01	70.7	7/12/2013 18:31	66.8	13/12/2013 13:01	71.5	19/12/2013 7:31	72.5
	3/12/2013 12:31	70.2	9/12/2013 7:01	60.6	13/12/2013 13:31	72.2	19/12/2013 8:01	72.7
	3/12/2013 13:01	71.5	9/12/2013 7:31	70.1	13/12/2013 14:01	72.2	19/12/2013 8:31	73.1
28/11/2013 7:01	67.0		9/12/2013 8:01	71.7	13/12/2013 14:31	71.6	19/12/2013 9:01	72.9
28/11/2013 7:31	70.3		9/12/2013 8:31	72.5	13/12/2013 15:01	71.1	19/12/2013 9:31	73.3
28/11/2013 8:01	70.4		9/12/2013 9:01	72.2	13/12/2013 15:31	73.4	19/12/2013 10:01	72.8
28/11/2013 8:31	71.4		9/12/2013 9:31	71.9	13/12/2013 16:01	74.4	19/12/2013 10:31	72.9
28/11/2013 9:01	70.9		9/12/2013 10:01	71.5	13/12/2013 16:31	73.7	19/12/2013 11:01	73.5
28/11/2013 9:31	71.2		9/12/2013 10:31	71.9	13/12/2013 17:01	72.7	19/12/2013 11:31	71.4
28/11/2013 10:01	72.2		9/12/2013 11:01	72.1	13/12/2013 17:31	71.6	19/12/2013 12:01	71.5
28/11/2013 10:31	71.3		9/12/2013 11:31	69.9	13/12/2013 18:01	70.3	19/12/2013 12:31	72.1
28/11/2013 11:01	71.9		9/12/2013 12:01	67.4	13/12/2013 18:31	57.4	19/12/2013 13:01	72.9
28/11/2013 11:31	69.7		9/12/2013 12:31	69.5	14/12/2013 7:01	58.1	19/12/2013 13:31	72.7
28/11/2013 12:01	69.6		9/12/2013 13:01	70.3	14/12/2013 7:31	71.1	19/12/2013 14:01	73.0
28/11/2013 12:31	69.6		9/12/2013 13:31	71.3	14/12/2013 8:01	72.5	19/12/2013 14:31	73.1
28/11/2013 13:01	71.5		9/12/2013 14:01	72.0	14/12/2013 8:31	72.9	19/12/2013 15:01	72.5
28/11/2013 13:31	72.2		9/12/2013 14:31	72.2	14/12/2013 9:01	73.5	19/12/2013 15:31	73.2
28/11/2013 14:01	71.4		9/12/2013 15:01	72.2	14/12/2013 9:31	72.7	19/12/2013 16:01	73.0
28/11/2013 14:31	71.4		9/12/2013 15:31	71.1	14/12/2013 10:01	70.6	19/12/2013 16:31	73.7
28/11/2013 15:01	71.6		9/12/2013 16:01	70.5	14/12/2013 10:31	70.8	19/12/2013 17:01	72.8
28/11/2013 15:31	72.0		9/12/2013 16:31	73.0	14/12/2013 11:01	70.9	19/12/2013 17:31	71.9
28/11/2013 16:01	72.1		9/12/2013 17:01	72.4	14/12/2013 11:31	71.0	19/12/2013 18:01	70.6
28/11/2013 16:31	71.2		9/12/2013 17:31	70.7	14/12/2013 12:01	68.1	19/12/2013 18:31	66.7
28/11/2013 17:01	71.4		9/12/2013 18:01	68.9	14/12/2013 12:31	71.5	20/12/2013 7:01	62.2
28/11/2013 17:31	70.3		9/12/2013 18:31	60.4	14/12/2013 13:01	71.8	20/12/2013 7:31	71.6
28/11/2013 18:01	64.4		10/12/2013 7:01	67.1	14/12/2013 13:31	71.8	20/12/2013 8:01	71.3
28/11/2013 18:31	66.9		10/12/2013 7:31	70.0	14/12/2013 14:01	71.6	20/12/2013 8:31	72.4
29/11/2013 7:01	65.3		10/12/2013 8:01	70.6	14/12/2013 14:31	71.8	20/12/2013 9:01	72.9
29/11/2013 7:31	69.0		10/12/2013 8:31	70.8	14/12/2013 15:01	71.2	20/12/2013 9:31	72.8
29/11/2013 8:01	69.3		10/12/2013 9:01	71.3	14/12/2013 15:31	71.6	20/12/2013 10:01	72.7
29/11/2013 8:31	70.0		10/12/2013 9:31	71.9	14/12/2013 16:01	72.2	20/12/2013 10:31	73.0
29/11/2013 9:01	69.6		10/12/2013 10:01	70.1	14/12/2013 16:31	73.2	20/12/2013 11:01	72.1
29/11/2013 9:31	68.5		10/12/2013 10:31	70.4	14/12/2013 17:01	72.7	20/12/2013 11:31	69.7
29/11/2013 10:01	69.1		10/12/2013 11:01	70.7	14/12/2013 17:31	72.4	20/12/2013 12:01	70.8
29/11/2013 10:31	69.9		10/12/2013 11:31	70.1	14/12/2013 18:01	69.8	20/12/2013 12:31	71.8
29/11/2013 11:01	69.7		10/12/2013 12:01	69.3	14/12/2013 18:31	65.9	20/12/2013 13:01	72.0
29/11/2013 11:31	67.5		10/12/2013 12:31	70.4	16/12/2013 7:01	50.9	20/12/2013 13:31	71.3
29/11/2013 12:01	65.8		10/12/2013 13:01	71.1	16/12/2013 7:31	70.9	20/12/2013 14:01	70.3
29/11/2013 12:31	69.3		10/12/2013 13:31	71.2	16/12/2013 8:01	73.0	20/12/2013 14:31	71.8
29/11/2013 13:01	70.3		10/12/2013 14:01	71.2	16/12/2013 8:31	73.5	20/12/2013 15:01	72.5
29/11/2013 13:31	70.6		10/12/2013 14:31	70.2	16/12/2013 9:01	73.6	20/12/2013 15:31	72.4
29/11/2013 14:01	70.8		10/12/2013 15:01	69.9	16/12/2013 9:31	72.8	20/12/2013 16:01	72.2
29/11/2013 14:31	70.6		10/12/2013 15:31	70.6	16/12/2013 10:01	73.2	20/12/2013 16:31	71.0
29/11/2013 15:01	71.4		10/12/2013 16:01	71.0	16/12/2013 10:31	72.7	20/12/2013 17:01	70.1
29/11/2013 15:31	71.3		10/12/2013 16:31	71.3	16/12/2013 11:01	72.8	20/12/2013 17:31	70.2
29/11/2013 16:01	71.2		10/12/2013 17:01	70.9	16/12/2013 11:31	71.4	20/12/2013 18:01	69.9
29/11/2013 16:31	70.5		10/12/2013 17:31	71.5	16/12/2013 12:01	70.7	20/12/2013 18:31	54.2
29/11/2013 17:01	71.3		10/12/2013 18:01	71.0	16/12/2013 12:31	72.7	21/12/2013 7:01	66.8
29/11/2013 17:31	71.4		10/12/2013 18:31	66.0	16/12/2013 13:01	73.1	21/12/2013 7:31	70.0
29/11/2013 18:01	67.1		11/12/2013 7:01	49.9	16/12/2013 13:31	73.3	21/12/2013 8:01	72.4
29/11/2013 18:31	65.9		11/12/2013 7:31	69.9	16/12/2013 14:01	72.8	21/12/2013 8:31	73.1
30/11/2013 7:01	65.9		11/12/2013 8:01	69.6	16/12/2013 14:31	71.3	21/12/2013 9:01	72.4
30/11/2013 7:31	69.3		11/12/2013 8:31	72.2	16/12/2013 15:01	70.4	21/12/2013 9:31	72.5
30/11/2013 8:01	71.0		11/12/2013 9:01	71.1	16/12/2013 15:31	70.6	21/12/2013 10:01	72.4
30/11/2013 8:31	71.2		11/12/2013 9:31	72.7	16/12/2013 16:01	71.5	21/12/2013 10:31	72.5
30/11/2013 9:01	71.5		11/12/2013 10:01	72.2	16/12/2013 16:31	71.0	21/12/2013 11:01	72.6
30/11/2013 9:31	71.7		11/12/2013 10:31	72.1	16/12/2013 17:01	70.8	21/12/2013 11:31	70.7
30/11/2013 10:01	71.0		11/12/2013 11:01	72.1	16/12/2013 17:31	71.8	21/12/2013 12:01	67.0
30/11/2013 10:31	71.2		11/12/2013 11:31	71.1	16/12/2013 18:01	70.3	21/12/2013 12:31	69.1
30/11/2013 11:01	70.8		11/12/2013 12:01	70.6	16/12/2013 18:31	55.7	21/12/2013 13:01	68.3
30/11/2013 11:31	68.6		11/12/2013 12:31	70.8	17/12/2013 7:01	56.7	21/12/2013 13:31	72.1
30/11/2013 12:01	67.8		11/12/2013 13:01	71.6	17/12/2013 7:31	70.4	21/12/2013 14:01	73.1
30/11/2013 12:31	70.3		11/12/2013 13:31	71.1	17/12/2013 8:01	71.6	21/12/2013 14:31	72.5
30/11/2013 13:01	73.6		11/12/2013 14:01	71.4	17/12/2013 8:31	71.9	21/12/2013 15:01	71.8
30/11/2013 13:31	75.9		11/12/2013 14:31	70.4	17/12/2013 9:01	73.1	21/12/2013 15:31	69.7
30/11/2013 14:01	74.1		11/12/2013 15:01	71.7	17/12/2013 9:31	73.1	21/12/2013 16:01	71.6
30/11/2013 14:31	71.3		11/12/2013 15:31	70.4	17/12/2013 10:01	72.9	21/12/2013 16:31	71.6
30/11/2013 15:01	71.2		11/12/2013 16:01	71.1	17/12/2013 10:31	72.3	21/12/2013 17:01	71.4
30/11/2013 15:31	71.1		11/12/2013 16:31	71.0	17/12/2013 11:01	72.6	21/12/2013 17:31	69.7
30/11/2013 16:01	69.9		11/12/2013 17:01	70.7	17/12/2013 11:31	71.2	21/12/2013 18:01	68.1
30/11/2013 16:31	70.5		11/12/2013 17:31	70.0	17/12/2013 12:01	69.8	21/12/2013 18:31	61.6
30/11/2013 17:01	70.7		11/12/2013 18:01	68.4	17/12/2013 12:31	70.1	23/12/2013 7:01	56.4
30/11/2013 17:31	69.6		11/12/2013 18:31	58.0	17/12/2013 13:01	70.9	23/12/2013 7:31	71.5
30/11/2013 18:01	66.6		12/12/2013 7:01	67.0	17/12/2013 13:31	71.7	23/12/2013 8:01	71.7
30/11/2013 18:31	66.4		12/12/2013 7:31	70.9	17/12/2013 14:01	72.2	23/12/2013 8:31	73.0
2/12/2013 7:01	67.1		12/12/2013 8:01	71.4	17/12/2013 14:31	72.0	23/12/2013 9:01	73.3
2/12/2013 7:31	71.4		12/12/2013 8:31	71.3	17/12/2013 15:01	72.4	23/12/2013 9:31	73.4
2/12/2013 8:01	71.4		12/12/2013 9:01	69.1	17/12/2013 15:31	70.1	23/12/2013 10:01	73.7
2/12/2013 8:31	70.5		12/12/2013 9:31	70.0	17/12/2013 16:01	72.4	23/12/2013 10:31	73.6
2/12/2013 9:01	71.2		12/12/2013 10:01	70.0	17/12/2013 16:31	73.2	23/12/2013 11:01	72.8
2/12/2013 9:31	71.9		12/12/2013 10:31	71.9	17/12/2013 17:01	72.8	23/12/2013 11:31	71.2
2/12/2013 10:01	71.1		12/12/2013 11:01	70.8	17/12/2013 17:31	73.1	23/12/2013 12:01	71.1
2/12/2013 10:31	72.0		12/12/2013 11:31	69.6	17/12/2013 18:01	72.4	23/12/2013 12:31	71.6
2/12/2013 11:01	70.9		12/12/2013 12:01	68.3	17/12/2013 18:31	64.3	23/12/2013 13:01	72.2
2/12/2013 11:31	68.2		12/12/2013 12:31	69.9	18/12/2013 7:01	62.9	23/12/2013 13:31	72.5
2/12/2013 12:01	68.7		12/12/2013 13:01	70.0	18/12/2013 7:31	71.9	23/12/2013 14:01	71.3
2/12/2013 12:31	70.3		12/12/2013 13:31	71.2	18/12/2013 8:01	72.9	23/12/2013 14:31	70.2
2/12/2013 13:01	71.0		12/12/2013 14:01	70.2	18/12/2013 8:31	72.9	23/12/2013 15:01	71.0
2/12/2013 13:31	70.9		12/12/2013 14:31	69.3	18			

Real-time Noise Data	RTN2a (Hong Kong Electric Centre)					
29/11/2013 20:51 63.8	1/12/2013 9:56 63.1	1/12/2013 19:01 63.1	3/12/2013 20:16 64.1	5/12/2013 21:11 63.8	7/12/2013 22:16 62.6	
29/11/2013 20:56 63.8	1/12/2013 10:01 63.1	1/12/2013 19:06 63.4	3/12/2013 20:11 64.3	5/12/2013 21:16 63.6	7/12/2013 22:21 63.3	
29/11/2013 21:01 63.5	1/12/2013 10:06 63.2	1/12/2013 19:11 63.5	3/12/2013 20:16 63.9	5/12/2013 21:21 63.8	7/12/2013 22:26 63.7	
29/11/2013 21:06 63.5	1/12/2013 10:11 63.8	1/12/2013 19:16 63.9	3/12/2013 20:21 64.1	5/12/2013 21:26 63.7	7/12/2013 22:31 62.9	
29/11/2013 21:11 63.6	1/12/2013 10:16 63.6	1/12/2013 19:21 64.1	3/12/2013 20:26 63.8	5/12/2013 21:31 63.3	7/12/2013 22:36 63.1	
29/11/2013 21:16 63.2	1/12/2013 10:21 63.3	1/12/2013 19:26 63.7	3/12/2013 20:31 64.7	5/12/2013 21:36 63.7	7/12/2013 22:41 63.1	
29/11/2013 21:21 62.8	1/12/2013 10:26 62.6	1/12/2013 19:31 63.6	3/12/2013 20:36 64.4	5/12/2013 21:41 63.6	7/12/2013 22:46 63.6	
29/11/2013 21:26 62.7	1/12/2013 10:31 63.5	1/12/2013 19:36 63.6	3/12/2013 20:41 63.8	5/12/2013 21:46 64.2	7/12/2013 22:51 64.1	
29/11/2013 21:31 63.1	1/12/2013 10:36 63.6	1/12/2013 19:41 63.6	3/12/2013 20:46 64.9	5/12/2013 21:51 63.4	7/12/2013 22:56 63.2	
29/11/2013 21:36 62.0	1/12/2013 10:41 63.1	1/12/2013 19:46 62.8	3/12/2013 20:51 64.1	5/12/2013 21:56 64.0	8/12/2013 7:01 60.5	
29/11/2013 21:41 62.2	1/12/2013 10:46 63.4	1/12/2013 19:51 63.6	3/12/2013 20:56 63.5	5/12/2013 22:01 63.4	8/12/2013 7:06 60.4	
29/11/2013 21:46 62.0	1/12/2013 10:51 63.8	1/12/2013 19:56 64.2	3/12/2013 21:01 63.1	5/12/2013 22:06 63.1	8/12/2013 7:11 60.3	
29/11/2013 21:51 62.4	1/12/2013 10:56 63.4	1/12/2013 20:01 64.1	3/12/2013 21:06 63.3	5/12/2013 22:11 63.8	8/12/2013 7:16 60.1	
29/11/2013 21:56 62.8	1/12/2013 11:01 62.7	1/12/2013 20:06 62.9	3/12/2013 21:11 63.0	5/12/2013 22:16 63.4	8/12/2013 7:21 62.0	
29/11/2013 22:01 62.4	1/12/2013 11:06 63.6	1/12/2013 20:11 62.9	3/12/2013 21:16 63.5	5/12/2013 22:21 64.0	8/12/2013 7:26 61.0	
29/11/2013 22:06 62.5	1/12/2013 11:11 62.9	1/12/2013 20:16 63.1	3/12/2013 21:21 64.2	5/12/2013 22:26 63.1	8/12/2013 7:31 61.1	
29/11/2013 22:11 62.2	1/12/2013 11:16 62.7	1/12/2013 20:21 62.5	3/12/2013 21:26 65.4	5/12/2013 22:31 63.0	8/12/2013 7:36 61.8	
29/11/2013 22:16 62.5	1/12/2013 11:21 63.6	1/12/2013 20:26 62.8	3/12/2013 21:31 63.9	5/12/2013 22:36 63.1	8/12/2013 7:41 61.8	
29/11/2013 22:21 62.7	1/12/2013 11:26 63.6	1/12/2013 20:31 63.2	3/12/2013 21:36 63.6	5/12/2013 22:41 64.3	8/12/2013 7:46 61.8	
29/11/2013 22:26 63.2	1/12/2013 11:31 63.4	1/12/2013 20:36 63.5	3/12/2013 21:41 64.2	5/12/2013 22:46 63.2	8/12/2013 7:51 61.4	
29/11/2013 22:31 64.1	1/12/2013 11:36 63.6	1/12/2013 20:41 62.2	3/12/2013 21:46 63.1	5/12/2013 22:51 63.6	8/12/2013 7:56 63.0	
29/11/2013 22:36 62.6	1/12/2013 11:41 63.7	1/12/2013 20:46 63.0	3/12/2013 21:51 63.9	5/12/2013 22:56 63.5	8/12/2013 8:01 61.4	
29/11/2013 22:41 62.0	1/12/2013 11:46 63.6	1/12/2013 20:51 63.3	3/12/2013 21:56 63.9	6/12/2013 19:01 63.9	8/12/2013 8:06 62.7	
29/11/2013 22:46 62.5	1/12/2013 11:51 63.5	1/12/2013 20:56 62.9	3/12/2013 22:01 63.5	6/12/2013 19:06 65.0	8/12/2013 8:11 62.0	
29/11/2013 22:51 63.1	1/12/2013 11:56 63.6	1/12/2013 21:01 63.1	3/12/2013 22:06 63.3	6/12/2013 19:11 64.0	8/12/2013 8:16 62.3	
29/11/2013 22:56 63.2	1/12/2013 12:01 63.9	1/12/2013 21:06 62.8	3/12/2013 22:11 63.4	6/12/2013 19:16 62.9	8/12/2013 8:21 63.1	
30/11/2013 19:01 64.4	1/12/2013 12:06 63.8	1/12/2013 21:11 63.1	3/12/2013 22:16 63.6	6/12/2013 19:21 62.2	8/12/2013 8:26 63.6	
30/11/2013 19:06 64.2	1/12/2013 12:11 63.3	1/12/2013 21:16 62.8	3/12/2013 22:21 63.4	6/12/2013 19:26 63.3	8/12/2013 8:31 62.5	
30/11/2013 19:11 63.9	1/12/2013 12:16 63.6	1/12/2013 21:21 62.6	3/12/2013 22:26 63.9	6/12/2013 19:31 63.4	8/12/2013 8:36 62.6	
30/11/2013 19:16 64.0	1/12/2013 12:21 63.6	1/12/2013 21:26 62.8	3/12/2013 22:31 63.9	6/12/2013 19:36 63.0	8/12/2013 8:41 63.0	
30/11/2013 19:21 65.9	1/12/2013 12:26 63.7	1/12/2013 21:31 62.8	3/12/2013 22:36 63.8	6/12/2013 19:41 64.5	8/12/2013 8:46 63.5	
30/11/2013 19:26 64.3	1/12/2013 12:31 64.2	1/12/2013 21:36 63.0	3/12/2013 22:41 63.4	6/12/2013 19:46 65.5	8/12/2013 8:51 63.0	
30/11/2013 19:31 64.5	1/12/2013 12:36 63.3	1/12/2013 21:41 63.0	3/12/2013 22:46 63.3	6/12/2013 19:51 65.9	8/12/2013 8:56 63.3	
30/11/2013 19:36 64.5	1/12/2013 12:41 63.9	1/12/2013 21:46 63.6	3/12/2013 22:51 63.0	6/12/2013 19:56 65.3	8/12/2013 9:01 63.0	
30/11/2013 19:41 64.2	1/12/2013 12:46 64.2	1/12/2013 21:51 62.9	3/12/2013 22:56 63.7	6/12/2013 20:01 65.3	8/12/2013 9:06 64.6	
30/11/2013 19:46 63.9	1/12/2013 12:51 64.2	1/12/2013 21:56 63.5	4/12/2013 19:01 63.7	6/12/2013 20:06 64.4	8/12/2013 9:11 64.1	
30/11/2013 19:51 65.3	1/12/2013 12:56 64.3	1/12/2013 22:01 62.3	4/12/2013 19:06 64.5	6/12/2013 20:11 64.5	8/12/2013 9:16 63.2	
30/11/2013 19:56 63.2	1/12/2013 13:01 64.0	1/12/2013 22:06 63.1	4/12/2013 19:11 64.4	6/12/2013 20:16 64.4	8/12/2013 9:21 64.4	
30/11/2013 20:01 63.6	1/12/2013 13:06 63.7	1/12/2013 22:11 62.7	4/12/2013 19:16 63.8	6/12/2013 20:21 63.9	8/12/2013 9:26 64.4	
30/11/2013 20:06 63.1	1/12/2013 13:11 63.7	1/12/2013 22:16 63.5	4/12/2013 19:21 65.0	6/12/2013 20:26 63.8	8/12/2013 9:31 63.6	
30/11/2013 20:11 63.0	1/12/2013 13:16 64.2	1/12/2013 22:21 62.8	4/12/2013 19:26 63.7	6/12/2013 20:31 64.4	8/12/2013 9:36 63.9	
30/11/2013 20:16 64.1	1/12/2013 13:21 64.3	1/12/2013 22:26 63.4	4/12/2013 19:31 64.8	6/12/2013 20:36 64.8	8/12/2013 9:41 65.4	
30/11/2013 20:21 63.8	1/12/2013 13:26 64.2	1/12/2013 22:31 62.8	4/12/2013 19:36 64.5	6/12/2013 20:41 64.4	8/12/2013 9:46 64.2	
30/11/2013 20:26 64.5	1/12/2013 13:31 63.6	1/12/2013 22:36 63.3	4/12/2013 19:41 64.6	6/12/2013 20:46 63.3	8/12/2013 9:51 63.5	
30/11/2013 20:31 63.5	1/12/2013 13:36 64.2	1/12/2013 22:41 62.6	4/12/2013 19:46 63.9	6/12/2013 20:51 63.5	8/12/2013 9:56 63.9	
30/11/2013 20:36 63.8	1/12/2013 13:41 64.4	1/12/2013 22:46 62.3	4/12/2013 19:51 63.4	6/12/2013 20:56 63.1	8/12/2013 10:01 63.6	
30/11/2013 20:41 63.8	1/12/2013 13:46 63.9	1/12/2013 22:51 62.8	4/12/2013 19:56 64.0	6/12/2013 21:01 63.2	8/12/2013 10:06 64.0	
30/11/2013 20:46 63.5	1/12/2013 13:51 64.0	1/12/2013 22:56 62.3	4/12/2013 20:01 64.3	6/12/2013 21:06 63.7	8/12/2013 10:11 63.1	
30/11/2013 20:51 63.2	1/12/2013 13:56 63.7	1/12/2013 19:01 64.7	4/12/2013 20:06 63.7	6/12/2013 21:11 63.6	8/12/2013 10:16 63.6	
30/11/2013 20:56 63.7	1/12/2013 14:01 63.4	2/12/2013 19:06 64.7	4/12/2013 20:11 63.9	6/12/2013 21:16 63.9	8/12/2013 10:21 64.6	
30/11/2013 21:01 62.9	1/12/2013 14:06 63.9	2/12/2013 19:11 63.9	4/12/2013 20:16 64.2	6/12/2013 21:21 63.0	8/12/2013 10:26 63.2	
30/11/2013 21:06 62.8	1/12/2013 14:11 64.2	2/12/2013 19:16 64.3	4/12/2013 20:21 63.7	6/12/2013 21:26 64.3	8/12/2013 10:31 62.7	
30/11/2013 21:11 63.3	1/12/2013 14:16 64.8	2/12/2013 19:21 65.0	4/12/2013 20:26 64.2	6/12/2013 21:31 64.0	8/12/2013 10:36 63.5	
30/11/2013 21:16 63.0	1/12/2013 14:21 64.2	2/12/2013 19:26 64.7	4/12/2013 20:31 63.8	6/12/2013 21:36 64.2	8/12/2013 10:41 64.0	
30/11/2013 21:21 63.4	1/12/2013 14:26 64.4	2/12/2013 19:31 64.2	4/12/2013 20:36 63.4	6/12/2013 21:41 63.3	8/12/2013 10:46 63.5	
30/11/2013 21:26 63.5	1/12/2013 14:31 64.2	2/12/2013 19:36 64.4	4/12/2013 20:41 64.0	6/12/2013 21:46 63.5	8/12/2013 10:51 64.0	
30/11/2013 21:31 63.2	1/12/2013 14:36 63.8	2/12/2013 19:41 64.5	4/12/2013 20:46 63.6	6/12/2013 21:51 64.1	8/12/2013 10:56 63.4	
30/11/2013 21:36 63.5	1/12/2013 14:41 63.7	2/12/2013 19:46 64.4	4/12/2013 20:51 63.5	6/12/2013 21:56 63.3	8/12/2013 11:01 63.3	
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30/11/2013 21:46 62.9	1/12/2013 14:51 64.1	2/12/2013 19:56 64.4	4/12/2013 21:01 63.0	6/12/2013 22:06 63.3	8/12/2013 11:11 63.3	
30/11/2013 21:51 63.3	1/12/2013 14:56 64.3	2/12/2013 20:01 66.3	4/12/2013 21:06 63.2	6/12/2013 22:11 63.4	8/12/2013 11:16 63.1	
30/11/2013 21:56 63.1	1/12/2013 15:01 64.1	2/12/2013 20:06 64.0	4/12/2013 21:11 63.3	6/12/2013 22:16 63.6	8/12/2013 11:21 63.7	
30/11/2013 22:01 63.6	1/12/2013 15:06 65.0	2/12/2013 20:11 64.3	4/12/2013 21:16 63.8	6/12/2013 22:21 63.9	8/12/2013 11:26 64.4	
30/11/2013 22:06 63.0	1/12/2013 15:11 64.2	2/12/2013 20:16 64.5	4/12/2013 21:21 63.6	6/12/2013 22:26 63.5	8/12/2013 11:31 63.6	
30/11/2013 22:11 62.8	1/12/2013 15:16 64.0	2/12/2013 20:21 64.2	4/12/2013 21:26 64.1	6/12/2013 22:31 63.9	8/12/2013 11:36 64.0	
30/11/2013 22:16 62.9	1/12/2013 15:21 63.9	2/12/2013 20:26 64.5	4/12/2013 21:31 63.4	6/12/2013 22:36 63.5	8/12/2013 11:41 64.4	
30/11/2013 22:21 64.0	1/12/2013 15:26 64.6	2/12/2013 20:31 63.9	4/12/2013 21:36 62.7	6/12/2013 22:41 63.6	8/12/2013 11:46 64.4	
30/11/2013 22:26 63.2	1/12/2013 15:31 64.4	2/12/2013 20:36 63.7	4/12/2013 21:41 63.6	6/12/2013 22:46 64.2	8/12/2013 11:51 63.1	
30/11/2013 22:31 63.2	1/12/2013 15:36 64.2	2/12/2013 20:41 63.2	4/12/2013 21:46 63.6	6/12/2013 22:51 63.5	8/12/2013 11:56 63.3	
30/11/2013 22:36 62.5	1/12/2013 15:41 64.2	2/12/2013 20:46 64.1	4/12/2013 21:51 63.9	6/12/2013 22:56 63.4	8/12/2013 12:01 63.7	
30/11/2013 22:41 63.2	1/12/2013 15:46 65.6	2/12/2013 20:51 63.6	4/12/2013 21:56 63.2	7/12/2013 19:01 64.5	8/12/2013 12:06 66.0	
30/11/2013 22:46 62.8	1/12/2013 15:51 66.3	2/12/2013 20:56 63.9	4/12/2013 22:01 62.3	7/12/2013 19:06 63.7	8/12/2013 12:11 64.2	
30/11/2013 22:51 63.3	1/12/2013 15:56 64.3	2/12/2013 21:01 63.2	4/12/2013 22:06 63.0	7/12/2013 19:11 64.3	8/12/2013 12:16 63.5	
30/11/2013 22:56 63.0	1/12/2013 16:01 63.7	2/12/2013 21:06 64.5	4/12/2013 22:11 62.4	7/12/2013 19:16 63.8	8/12/2013 12:21 63.8	
1/12/2013 7:01 59.1	1/12/2013 16:06 64.3	2/12/2013 21:11 63.9	4/12/2013 22:16 63.0	7/12/2013 19:21 63.3	8/12/2013 12:26 64.2	
1/12/2013 7:06 58.0	1/12/2013 16:11 64.2	2/12/2013 21:16 62.9	4/12/2013 22:21 63.4	7/12/2013 19:26 64.1	8/12/2013 12:31 64.0	
1/12/2013 7:11 55.6	1/12/2013 16:16 63.7	2/12/2013 21:21 63.3	4/12/2013 22:26 62.9	7/12/2013 19:31 64.5	8/12/2013 12:36 63.6	
1/12/2013 7:16 56.0	1/12/2013 16:21 64.7	2/12/2013 21:26 63.7	4/12/2013 22:31 63.4	7/12/2013 19:36 66.9	8/12/2013 12:41 64.2	
1/12/2013 7:21 63.1	1/12/2013 16:26 65.6	2/12/2013 21:31 63.0	4/12/2013 22:36 63.1	7/12/2013 19:41 66.7	8/12/2013 12:46 64.1	
1/1						

Real-time Noise Data	RTN2a (Hong Kong Electric Centre)				
8/12/2013 15:21	64.1	9/12/2013 20:26	64.4	11/12/2013 21:31	63.3
8/12/2013 15:26	63.9	9/12/2013 20:31	63.0	11/12/2013 21:36	63.6
8/12/2013 15:31	63.8	9/12/2013 20:36	64.1	11/12/2013 21:41	64.4
8/12/2013 15:36	64.0	9/12/2013 20:41	63.1	11/12/2013 21:46	64.2
8/12/2013 15:41	64.5	9/12/2013 20:46	63.2	11/12/2013 21:51	64.5
8/12/2013 15:46	64.4	9/12/2013 20:51	62.9	11/12/2013 21:56	63.6
8/12/2013 15:51	63.7	9/12/2013 20:56	61.9	11/12/2013 22:01	63.0
8/12/2013 15:56	63.8	9/12/2013 21:01	63.5	11/12/2013 22:06	63.4
8/12/2013 16:01	64.3	9/12/2013 21:06	63.4	11/12/2013 22:11	63.6
8/12/2013 16:06	64.5	9/12/2013 21:11	63.1	11/12/2013 22:16	63.8
8/12/2013 16:11	63.9	9/12/2013 21:16	62.9	11/12/2013 22:21	63.5
8/12/2013 16:16	63.6	9/12/2013 21:21	62.8	11/12/2013 22:26	63.1
8/12/2013 16:21	65.3	9/12/2013 21:26	62.6	11/12/2013 22:31	63.5
8/12/2013 16:26	64.5	9/12/2013 21:31	62.8	11/12/2013 22:36	63.8
8/12/2013 16:31	64.8	9/12/2013 21:36	64.3	11/12/2013 22:41	63.6
8/12/2013 16:36	64.4	9/12/2013 21:41	63.1	11/12/2013 22:46	64.3
8/12/2013 16:41	63.9	9/12/2013 21:46	62.4	11/12/2013 22:51	64.1
8/12/2013 16:46	63.6	9/12/2013 21:51	63.1	11/12/2013 22:56	63.1
8/12/2013 16:51	64.5	9/12/2013 21:56	62.0	12/12/2013 19:01	62.9
8/12/2013 16:56	64.4	9/12/2013 22:01	62.1	12/12/2013 19:06	63.6
8/12/2013 17:01	64.2	9/12/2013 22:06	63.3	12/12/2013 19:11	63.2
8/12/2013 17:06	64.9	9/12/2013 22:11	62.3	12/12/2013 19:16	63.3
8/12/2013 17:11	64.4	9/12/2013 22:16	63.1	12/12/2013 19:21	63.2
8/12/2013 17:16	63.9	9/12/2013 22:21	63.1	12/12/2013 19:26	63.1
8/12/2013 17:21	63.9	9/12/2013 22:26	63.8	12/12/2013 19:31	63.5
8/12/2013 17:26	63.6	9/12/2013 22:31	62.8	12/12/2013 19:36	63.0
8/12/2013 17:31	64.2	9/12/2013 22:36	63.2	12/12/2013 19:41	64.1
8/12/2013 17:36	63.3	9/12/2013 22:41	63.1	12/12/2013 19:46	64.5
8/12/2013 17:41	64.5	9/12/2013 22:46	62.0	12/12/2013 19:51	64.1
8/12/2013 17:46	64.1	9/12/2013 22:51	62.8	12/12/2013 19:56	64.7
8/12/2013 17:51	64.1	9/12/2013 22:56	62.4	12/12/2013 20:01	64.4
8/12/2013 17:56	63.5	10/12/2013 19:01	59.5	12/12/2013 20:06	64.7
8/12/2013 18:01	63.7	10/12/2013 19:06	59.7	12/12/2013 20:11	64.1
8/12/2013 18:06	63.5	10/12/2013 19:11	59.9	12/12/2013 20:16	65.0
8/12/2013 18:11	63.2	10/12/2013 19:16	60.7	12/12/2013 20:21	64.1
8/12/2013 18:16	63.5	10/12/2013 19:21	58.7	12/12/2013 20:26	63.7
8/12/2013 18:21	63.4	10/12/2013 19:26	60.9	12/12/2013 20:31	65.9
8/12/2013 18:26	63.9	10/12/2013 19:31	60.6	12/12/2013 20:36	64.6
8/12/2013 18:31	63.7	10/12/2013 19:36	63.0	12/12/2013 20:41	63.7
8/12/2013 18:36	63.4	10/12/2013 19:41	63.8	12/12/2013 20:46	64.3
8/12/2013 18:41	65.2	10/12/2013 19:46	63.8	12/12/2013 20:51	64.3
8/12/2013 18:46	64.4	10/12/2013 19:51	60.6	12/12/2013 20:56	64.0
8/12/2013 18:51	64.2	10/12/2013 19:56	59.9	12/12/2013 21:01	63.3
8/12/2013 18:56	64.4	10/12/2013 20:01	58.9	12/12/2013 21:06	63.5
8/12/2013 19:01	63.8	10/12/2013 20:06	59.7	12/12/2013 21:11	63.0
8/12/2013 19:06	63.5	10/12/2013 20:11	59.9	12/12/2013 21:16	63.7
8/12/2013 19:11	63.5	10/12/2013 20:16	61.1	12/12/2013 21:21	63.8
8/12/2013 19:16	63.3	10/12/2013 20:21	62.9	12/12/2013 21:26	63.9
8/12/2013 19:21	63.9	10/12/2013 20:26	63.5	12/12/2013 21:31	63.6
8/12/2013 19:26	63.1	10/12/2013 20:31	63.7	12/12/2013 21:36	64.2
8/12/2013 19:31	63.5	10/12/2013 20:36	62.6	12/12/2013 21:41	63.9
8/12/2013 19:36	63.3	10/12/2013 20:41	62.6	12/12/2013 21:46	64.6
8/12/2013 19:41	63.8	10/12/2013 20:46	63.7	12/12/2013 21:51	65.8
8/12/2013 19:46	63.3	10/12/2013 20:51	63.6	12/12/2013 21:56	64.9
8/12/2013 19:51	62.8	10/12/2013 20:56	63.0	12/12/2013 22:01	63.8
8/12/2013 19:56	62.8	10/12/2013 21:01	63.2	12/12/2013 22:06	64.7
8/12/2013 20:01	62.7	10/12/2013 21:06	62.6	12/12/2013 22:11	64.0
8/12/2013 20:06	62.7	10/12/2013 21:11	62.9	12/12/2013 22:16	64.0
8/12/2013 20:11	63.4	10/12/2013 21:16	63.4	12/12/2013 22:21	63.7
8/12/2013 20:16	62.6	10/12/2013 21:21	63.2	12/12/2013 22:26	63.7
8/12/2013 20:21	62.9	10/12/2013 21:26	63.3	12/12/2013 22:31	64.2
8/12/2013 20:26	62.9	10/12/2013 21:31	63.0	12/12/2013 22:36	63.5
8/12/2013 20:31	62.3	10/12/2013 21:36	62.6	12/12/2013 22:41	64.0
8/12/2013 20:36	64.6	10/12/2013 21:41	63.1	12/12/2013 22:46	63.7
8/12/2013 20:41	62.6	10/12/2013 21:46	63.5	12/12/2013 22:51	63.6
8/12/2013 20:46	62.4	10/12/2013 21:51	63.5	12/12/2013 22:56	63.7
8/12/2013 20:51	62.6	10/12/2013 21:56	62.7	13/12/2013 19:01	62.1
8/12/2013 20:56	63.2	10/12/2013 22:01	63.5	13/12/2013 19:06	62.0
8/12/2013 21:01	63.1	10/12/2013 22:06	63.0	13/12/2013 19:11	62.3
8/12/2013 21:06	62.6	10/12/2013 22:11	64.1	13/12/2013 19:16	62.5
8/12/2013 21:11	62.3	10/12/2013 22:16	63.2	13/12/2013 19:21	61.9
8/12/2013 21:16	63.1	10/12/2013 22:21	63.7	13/12/2013 19:26	65.5
8/12/2013 21:21	62.5	10/12/2013 22:26	63.6	13/12/2013 19:31	63.0
8/12/2013 21:26	64.6	10/12/2013 22:31	63.3	13/12/2013 19:36	63.1
8/12/2013 21:31	63.0	10/12/2013 22:36	63.4	13/12/2013 19:41	63.3
8/12/2013 21:36	64.5	10/12/2013 22:41	62.7	13/12/2013 19:46	64.4
8/12/2013 21:41	62.7	10/12/2013 22:46	62.8	13/12/2013 19:51	64.3
8/12/2013 21:46	62.8	10/12/2013 22:51	63.1	13/12/2013 19:56	64.0
8/12/2013 21:51	62.5	10/12/2013 22:56	62.6	13/12/2013 20:01	64.4
8/12/2013 21:56	62.5	11/12/2013 19:01	64.3	13/12/2013 20:06	64.2
8/12/2013 22:01	63.2	11/12/2013 19:06	64.7	13/12/2013 20:11	63.8
8/12/2013 22:06	63.3	11/12/2013 19:11	64.6	13/12/2013 20:16	64.2
8/12/2013 22:11	62.7	11/12/2013 19:16	64.7	13/12/2013 20:21	63.8
8/12/2013 22:16	62.4	11/12/2013 19:21	64.8	13/12/2013 20:26	63.8
8/12/2013 22:21	63.2	11/12/2013 19:26	64.7	13/12/2013 20:31	64.4
8/12/2013 22:26	61.7	11/12/2013 19:31	64.6	13/12/2013 20:36	63.8
8/12/2013 22:31	62.6	11/12/2013 19:36	64.4	13/12/2013 20:41	63.5
8/12/2013 22:36	62.9	11/12/2013 19:41	64.6	13/12/2013 20:46	63.2
8/12/2013 22:41	62.4	11/12/2013 19:46	64.0	13/12/2013 20:51	63.6
8/12/2013 22:46	62.2	11/12/2013 19:51	64.6	13/12/2013 20:56	62.6
8/12/2013 22:51	62.8	11/12/2013 19:56	63.9	13/12/2013 21:01	63.1
8/12/2013 22:56	62.6	11/12/2013 20:01	64.7	13/12/2013 21:06	63.2
9/12/2013 19:01	62.3	11/12/2013 20:06	65.2	13/12/2013 21:11	63.2
9/12/2013 19:06	61.5	11/12/2013 20:11	64.1	13/12/2013 21:16	64.0
9/12/2013 19:11	63.3	11/12/2013 20:16	63.8	13/12/2013 21:21	63.1
9/12/2013 19:16	63.0	11/12/2013 20:21	63.8	13/12/2013 21:26	63.2
9/12/2013 19:21	63.4	11/12/2013 20:26	64.5	13/12/2013 21:31	64.1
9/12/2013 19:26	61.9	11/12/2013 20:31	64.4	13/12/2013 21:36	63.3
9/12/2013 19:31	63.6	11/12/2013 20:36	63.3	13/12/2013 21:41	63.6
9/12/2013 19:36	63.7	11/12/2013 20:41	63.4	13/12/2013 21:46	63.0
9/12/2013 19:41	63.7	11/12/2013 20:46	64.0	13/12/2013 21:51	63.6
9/12/2013 19:46	64.2	11/12/2013 20:51	64.0	13/12/2013 21:56	63.3
9/12/2013 19:51	63.7	11/12/2013 20:56	63.7	13/12/2013 22:01	63.3
9/12/2013 19:56	64.3	11/12/2013 21:01	63.3	13/12/2013 22:06	63.4
9/12/2013 20:01	63.1	11/12/2013 21:06	64.1	13/12/2013 22:11	64.0
9/12/2013 20:06	63.0	11/12/2013 21:11	63.4	13/12/2013 22:16	63.8
9/12/2013 20:11	63.1	11/12/2013 21:16	64.3	13/12/2013 22:21	64.8
9/12/2013 20:16	64.0	11/12/2013 21:21	63.7	13/12/2013 22:26	65.3
9/12/2013 20:21	63.4	11/12/2013 21:26	63.8	13/12/2013 22:31	63.8
				13/12/2013 22:36	65.3
				13/12/2013 22:41	63.4
				13/12/2013 22:46	63.5
				13/12/2013 22:51	63.8
				13/12/2013 22:56	63.4
				14/12/2013 19:01	63.7
				14/12/2013 19:06	63.7
				14/12/2013 19:11	63.0
				14/12/2013 19:16	64.0
				14/12/2013 19:21	67.3
				14/12/2013 19:26	65.6
				14/12/2013 19:31	66.0
				14/12/2013 19:36	62.8
				14/12/2013 19:41	63.6
				14/12/2013 19:46	64.0
				14/12/2013 19:51	64.1
				14/12/2013 19:56	64.4
				14/12/2013 20:01	64.4
				14/12/2013 20:06	64.4
				14/12/2013 20:11	64.0
				14/12/2013 20:16	64.8
				14/12/2013 20:21	64.9
				14/12/2013 20:26	65.5
				14/12/2013 20:31	66.1
				14/12/2013 20:36	66.1
				14/12/2013 20:41	65.6
				14/12/2013 20:46	65.6
				14/12/2013 20:51	66.3
				14/12/2013 20:56	66.1
				14/12/2013 21:01	66.6
				14/12/2013 21:06	67.6
				14/12/2013 21:11	66.1
				14/12/2013 21:16	67.3
				14/12/2013 21:21	66.8
				14/12/2013 21:26	67.5
				14/12/2013 21:31	66.0
				14/12/2013 21:36	66.4
				14/12/2013 21:41	66.3
				14/12/2013 21:46	66.0
				14/12/2013 21:51	66.1
				14/12/2013 2	



Real-time Noise Data	RTN2a (Hong Kong Electric Centre)				
17/12/2013 21:51 65.5	19/12/2013 22:56 62.2	22/12/2013 8:01 57.9	22/12/2013 17:06 63.3	23/12/2013 22:11 61.9	25/12/2013 11:16 61.4
17/12/2013 21:56 66.5	20/12/2013 19:01 63.8	22/12/2013 8:06 60.0	22/12/2013 17:11 63.7	23/12/2013 22:16 61.9	25/12/2013 11:21 61.7
17/12/2013 22:01 65.5	20/12/2013 19:06 63.4	22/12/2013 8:11 58.5	22/12/2013 17:16 63.9	23/12/2013 22:21 62.9	25/12/2013 11:26 61.1
17/12/2013 22:06 66.2	20/12/2013 19:11 63.8	22/12/2013 8:16 61.0	22/12/2013 17:21 63.7	23/12/2013 22:26 62.5	25/12/2013 11:31 60.2
17/12/2013 22:11 66.6	20/12/2013 19:16 63.9	22/12/2013 8:21 60.6	22/12/2013 17:26 62.8	23/12/2013 22:31 63.2	25/12/2013 11:36 58.6
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19/12/2013 19:16 61.9	21/12/2013 20:21 62.2	22/12/2013 13:26 61.4	22/12/2013 22:31 62.5	25/12/2013 7:36 56.0	25/12/2013 16:41 63.0
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19/12/2013 19:31 63.7	21/12/2013 20:36 63.8	22/12/2013 13:41 63.4	22/12/2013 22:46 63.3	25/12/2013 7:51 56.9	25/12/2013 16:56 63.0
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19/12/2013 19:56 63.4	21/12/2013 21:01 61.3	22/12/2013 14:06 62.4	23/12/2013 19:11 61.6	25/12/2013 8:16 59.7	25/12/2013 17:21 62.0
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19/12/2013 20:06 64.5	21/12/2013 21:11 62.2	22/12/2013 14:16 64.9	23/12/2013 19:21 59.8	25/12/2013 8:26 59.6	25/12/2013 17:31 62.2
19/12/2013 20:11 64.2	21/12/2013 21:16 61.5	22/12/2013 14:21 64.5	23/12/2013		

Real-time Noise Data	RTN2a (Hong Kong Electric Centre)				
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25/12/2013 20:31 61.5	26/12/2013 13:36 60.9	26/12/2013 22:41 61.6	28/11/2013 4:31 59.1	29/11/2013 5:36 57.0	30/11/2013 6:41 63.8
25/12/2013 20:36 60.9	26/12/2013 13:41 61.6	26/12/2013 22:46 64.8	28/11/2013 4:36 58.3	29/11/2013 5:41 57.8	30/11/2013 6:46 61.6
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25/12/2013 20:46 60.0	26/12/2013 13:51 61.8	26/12/2013 22:56 60.5	28/11/2013 4:46 56.3	29/11/2013 5:51 58.4	30/11/2013 6:56 61.9
25/12/2013 20:51 60.3	26/12/2013 13:56 60.8	27/12/2013 19:01 60.8	28/11/2013 4:51 57.3	29/11/2013 5:56 57.1	30/11/2013 23:01 64.6
25/12/2013 20:56 60.1	26/12/2013 14:01 60.5	27/12/2013 19:06 61.9	28/11/2013 4:56 58.1	29/11/2013 6:01 57.8	30/11/2013 23:06 64.7
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25/12/2013 22:06 61.4	26/12/2013 15:11 61.8	27/12/2013 20:16 62.8	28/11/2013 6:06 61.3	29/11/2013 23:11 63.9	1/12/2013 0:16 64.6
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25/12/2013 22:21 61.1	26/12/2013 15:26 61.8	27/12/2013 20:31 62.9	28/11/2013 6:21 62.6	29/11/2013 23:26 64.3	1/12/2013 0:31 64.3
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Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
1/12/2013 23:36	64.2	3/12/2013 0:41	62.5	4/12/2013 1:46	61.1	5/12/2013 2:51	59.9	6/12/2013 3:56	60.0	7/12/2013 5:01	61.3
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1/12/2013 23:46	63.5	3/12/2013 0:51	62.3	4/12/2013 1:56	60.9	5/12/2013 3:01	59.4	6/12/2013 4:06	59.6	7/12/2013 5:11	61.8
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1/12/2013 23:56	64.2	3/12/2013 1:01	61.7	4/12/2013 2:06	62.0	5/12/2013 3:11	59.8	6/12/2013 4:16	58.7	7/12/2013 5:21	62.1
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2/12/2013 4:56	57.9	3/12/2013 6:01	61.3	4/12/2013 7:06	64.3	6/12/2013 0:11	64.1	7/12/2013 1:16	63.5	8/12/2013 2:21	62.0
2/12/2013 5:01	57.2	3/12/2013 6:06	61.6	4/12/2013 7:11	64.0	6/12/2013 0:16	64.0	7/12/2013 1:21	63.3	8/12/2013 2:26	62.2
2/12/2013 5:06	58.9	3/12/2013 6:11	62.1	4/12/2013 7:16	64.8	6/12/2013 0:21	63.7	7/12/2013 1:26	62.9	8/12/2013 2:31	61.7
2/12/2013 5:11	58.7	3/12/2013 6:16	62.7	4/12/2013 7:21	64.5	6/12/2013 0:26	63.0	7/12/2013 1:31	63.2	8/12/2013 2:36	62.0
2/12/2013 5:16	59.6	3/12/2013 6:21	62.2	4/12/2013 7:26	64.6	6/12/2013 0:31	63.2	7/12/2013 1:36	65.3	8/12/2013 2:41	63.9
2/12/2013 5:21	58.1	3/12/2013 6:26	63.0	4/12/2013 7:31	64.3	6/12/2013 0:36	62.9	7/12/2013 1:41	63.1	8/12/2013 2:46	61.5
2/12/2013 5:26	59.6	3/12/2013 6:31	62.5	4/12/2013 7:36	64.5	6/12/2013 0:41	63.2	7/12/2013 1:46	63.0	8/12/2013	

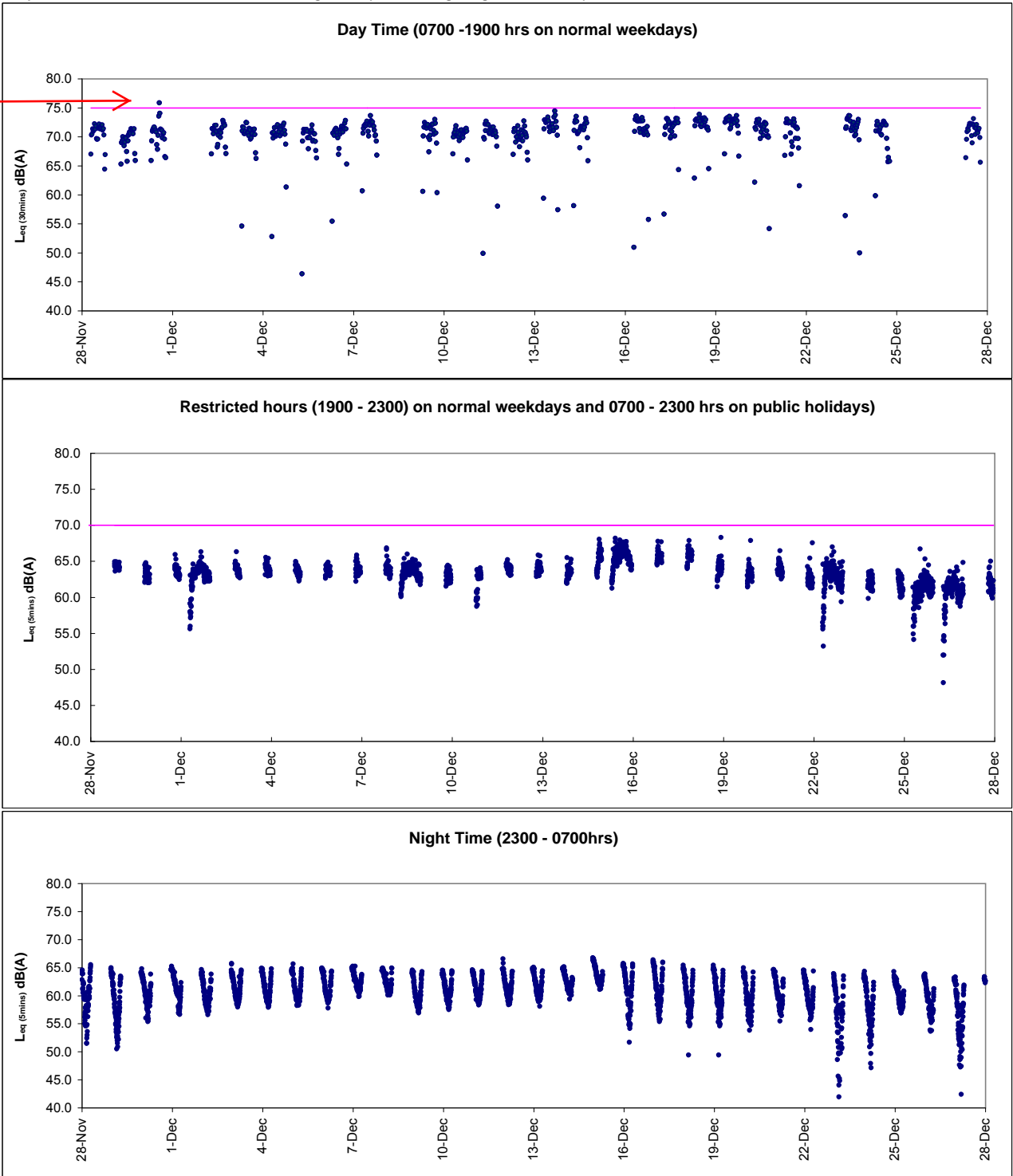
Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
8/12/2013 6:06	61.1	9/12/2013 23:11	64.5	11/12/2013 0:16	63.5	12/12/2013 1:21	61.9	13/12/2013 2:26	60.5	14/12/2013 3:31	60.8
8/12/2013 6:11	61.3	9/12/2013 23:16	63.8	11/12/2013 0:21	63.8	12/12/2013 1:26	62.1	13/12/2013 2:31	61.0	14/12/2013 3:36	61.2
8/12/2013 6:16	62.1	9/12/2013 23:21	64.0	11/12/2013 0:26	63.1	12/12/2013 1:31	61.5	13/12/2013 2:36	60.1	14/12/2013 3:41	60.8
8/12/2013 6:21	62.0	9/12/2013 23:26	64.5	11/12/2013 0:31	62.8	12/12/2013 1:36	61.5	13/12/2013 2:41	60.4	14/12/2013 3:46	61.2
8/12/2013 6:26	61.9	9/12/2013 23:31	64.1	11/12/2013 0:36	62.6	12/12/2013 1:41	61.3	13/12/2013 2:46	60.4	14/12/2013 3:51	60.8
8/12/2013 6:31	61.9	9/12/2013 23:36	63.3	11/12/2013 0:41	62.8	12/12/2013 1:46	61.7	13/12/2013 2:51	60.5	14/12/2013 3:56	60.5
8/12/2013 6:36	62.2	9/12/2013 23:41	64.2	11/12/2013 0:46	62.3	12/12/2013 1:51	61.6	13/12/2013 2:56	59.9	14/12/2013 4:01	61.1
8/12/2013 6:41	62.9	9/12/2013 23:46	63.9	11/12/2013 0:51	62.5	12/12/2013 1:56	61.3	13/12/2013 3:01	60.5	14/12/2013 4:06	60.5
8/12/2013 6:46	64.1	9/12/2013 23:51	63.5	11/12/2013 0:56	62.8	12/12/2013 2:01	61.5	13/12/2013 3:06	60.3	14/12/2013 4:11	60.4
8/12/2013 6:51	64.9	9/12/2013 23:56	63.7	11/12/2013 1:01	62.5	12/12/2013 2:06	60.9	13/12/2013 3:11	60.9	14/12/2013 4:16	61.0
8/12/2013 6:56	64.9	10/12/2013 0:01	63.8	11/12/2013 1:06	62.1	12/12/2013 2:11	61.2	13/12/2013 3:16	59.3	14/12/2013 4:21	60.5
8/12/2013 23:01	64.0	10/12/2013 0:06	63.3	11/12/2013 1:11	61.9	12/12/2013 2:16	60.3	13/12/2013 3:21	61.3	14/12/2013 4:26	60.6
8/12/2013 23:06	64.2	10/12/2013 0:11	63.7	11/12/2013 1:16	62.0	12/12/2013 2:21	60.8	13/12/2013 3:26	59.4	14/12/2013 4:31	60.5
8/12/2013 23:11	64.0	10/12/2013 0:16	63.2	11/12/2013 1:21	62.2	12/12/2013 2:26	60.7	13/12/2013 3:31	60.0	14/12/2013 4:36	60.7
8/12/2013 23:16	64.6	10/12/2013 0:21	63.0	11/12/2013 1:26	62.2	12/12/2013 2:31	60.6	13/12/2013 3:36	59.4	14/12/2013 4:41	59.4
8/12/2013 23:21	64.0	10/12/2013 0:26	62.9	11/12/2013 1:31	61.9	12/12/2013 2:36	60.4	13/12/2013 3:41	59.5	14/12/2013 4:46	60.6
8/12/2013 23:26	63.9	10/12/2013 0:31	62.9	11/12/2013 1:36	61.9	12/12/2013 2:41	60.6	13/12/2013 3:46	58.9	14/12/2013 4:51	60.3
8/12/2013 23:31	64.2	10/12/2013 0:36	62.4	11/12/2013 1:41	60.8	12/12/2013 2:46	60.0	13/12/2013 3:51	60.0	14/12/2013 4:56	60.6
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8/12/2013 23:46	63.4	10/12/2013 0:51	62.1	11/12/2013 1:56	60.6	12/12/2013 3:01	60.0	13/12/2013 4:06	60.0	14/12/2013 5:11	60.7
8/12/2013 23:51	63.7	10/12/2013 0:56	61.9	11/12/2013 2:01	60.9	12/12/2013 3:06	59.7	13/12/2013 4:11	59.4	14/12/2013 5:16	60.3
8/12/2013 23:56	63.8	10/12/2013 1:01	61.9	11/12/2013 2:06	60.5	12/12/2013 3:11	60.0	13/12/2013 4:16	59.3	14/12/2013 5:21	60.7
9/12/2013 0:01	63.2	10/12/2013 1:06	61.8	11/12/2013 2:11	59.3	12/12/2013 3:16	60.1	13/12/2013 4:21	59.7	14/12/2013 5:26	60.6
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9/12/2013 0:46	61.9	10/12/2013 1:51	61.2	11/12/2013 2:56	59.6	12/12/2013 4:01	58.4	13/12/2013 5:06	59.6	14/12/2013 6:11	62.2
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9/12/2013 1:16	60.5	10/12/2013 2:21	60.1	11/12/2013 3:26	60.4	12/12/2013 4:31	58.9	13/12/2013 5:36	60.1	14/12/2013 6:41	63.3
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9/12/2013 1:36	60.5	10/12/2013 2:41	59.6	11/12/2013 3:46	58.9	12/12/2013 4:51	58.5	13/12/2013 5:56	60.6	14/12/2013 23:01	66.7
9/12/2013 1:41	59.7	10/12/2013 2:46	59.4	11/12/2013 3:51	60.4	12/12/2013 4:56	58.9	13/12/2013 6:01	61.6	14/12/2013 23:06	66.8
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9/12/2013 1:51	60.0	10/12/2013 2:56	59.4	11/12/2013 4:01	58.7	12/12/2013 5:06	59.8	13/12/2013 6:11	61.9	14/12/2013 23:16	66.7
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9/12/2013 2:21	59.7	10/12/2013 3:26	60.3	11/12/2013 4:31	59.3	12/12/2013 5:36	60.4	13/12/2013 6:41	63.4	14/12/2013 23:46	66.3
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9/12/2013 2:36	58.7	10/12/2013 3:41	59.0	11/12/2013 4:46	59.8	12/12/2013 5:51	60.9	13/12/2013 6:56	64.4	15/12/2013 0:01	66.2
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9/12/2013 2:46	59.7	10/12/2013 3:51	58.6	11/12/2013 4:56	59.2	12/12/2013 6:01	60.9	13/12/2013 23:06	65.0	15/12/2013 0:11	65.9
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9/12/2013 3:21	58.4	10/12/2013 4:26	57.5	11/12/2013 5:31	60.2	12/12/2013 6:36	63.3	13/12/2013 23:41	64.7	15/12/2013 0:46	65.0
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9/12/2013 3:31	58.4	10/12/2013 4:36	58.3	11/12/2013 5:41	60.4	12/12/2013 6:46	64.3	13/12/2013 23:51	64.4	15/12/2013 0:56	65.3
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9/12/2013 3:46	58.6	10/12/2013 4:51	58.8	11/12/2013 5:56	61.1	12/12/2013 23:01	64.8	14/12/2013 0:06			

Real-time Noise Data	RTN2a (Hong Kong Electric Centre)				
15/12/2013 4:36 62.3	16/12/2013 5:41 60.0	17/12/2013 6:46 64.7	18/12/2013 23:51 64.5	20/12/2013 0:56 61.2	21/12/2013 2:01 60.6
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15/12/2013 4:46 61.7	16/12/2013 5:51 61.1	17/12/2013 6:56 65.9	19/12/2013 0:01 64.0	20/12/2013 1:06 60.8	21/12/2013 2:11 60.0
15/12/2013 4:51 62.5	16/12/2013 5:56 61.3	17/12/2013 23:01 64.7	19/12/2013 0:06 63.8	20/12/2013 1:11 60.5	21/12/2013 2:16 60.3
15/12/2013 4:56 62.0	16/12/2013 6:01 61.4	17/12/2013 23:06 64.9	19/12/2013 0:11 63.1	20/12/2013 1:16 61.9	21/12/2013 2:21 60.7
15/12/2013 5:01 62.0	16/12/2013 6:06 61.0	17/12/2013 23:11 65.4	19/12/2013 0:16 63.7	20/12/2013 1:21 59.2	21/12/2013 2:26 60.3
15/12/2013 5:06 62.3	16/12/2013 6:11 62.6	17/12/2013 23:16 64.7	19/12/2013 0:21 63.6	20/12/2013 1:26 60.7	21/12/2013 2:31 59.8
15/12/2013 5:11 61.5	16/12/2013 6:16 61.9	17/12/2013 23:21 65.0	19/12/2013 0:26 63.1	20/12/2013 1:31 58.5	21/12/2013 2:36 59.4
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		25/12/2013 7:01 63.5
		25/12/2013 7:06 63.7
		25/12/2013 7:11 63.4
		25/12/2013 7:16 63.2
		25/12/2013 7:21 63.1
		25/12/2013 7:26 63.0
		25/12/2013 7:31 63.2
		25/12/2013 7:36 62.7
		25/12/2013 7:41 63.5
		25/12/2013 7:46 62.7
		25/12/2013 7:51 63.9
		25/12/2013 7:56 62.6
		26/12/2013 0:01 63.0
		26/12/2013 0:06 62.9
		26/12/2013 0:11 62.6
		26/12/2013 0:16 62.6
		26/12/2013 0:21 62.1
		26/12/2013 0:26 62.7
		26/12/2013 0:31 62.3
		26/12/2013 0:36 62.0
		26/12/2013 0:41 62.4
		26/12/2013 0:46 61.9
		26/12/2013 0:51 61.0
		26/12/2013 0:56 61.2
		26/12/2013 1:01 61.5
		26/12/2013 1:06 60.5
		26/12/2013 1:11 59.9
		26/12/2013 1:16 61.1
		26/12/2013 1:21 60.5
		26/12/2013 1:26 60.2
		26/12/2013 1:31 60.7
		26/12/2013 1:36 60.1
		26/12/2013 1:41 59.8
		26/12/2013 1:46 59.4
		26/12/2013 1:51 59.0
		26/12/2013 1:56 60.0
		26/12/2013 2:01 59.2
		26/12/2013 2:06 60.3
		26/12/2013 2:11 59.4
		26/12/2013 2:16 59.2
		26/12/2013 2:21 60.2
		26/12/2013 2:26 59.0
		26/12/2013 2:31 59.2
		26/12/2013 2:36 60.4
		26/12/2013 2:41 59.3
		26/12/2013 2:46 59.0
		26/12/2013 2:51 57.7
		26/12/2013 2:56 58.9
		26/12/2013 3:01 57.9
		26/12/2013 3:06 57.5
		26/12/2013 3:11 57.8
		26/12/2013 3:16 56.7
		26/12/2013 3:21 57.7
		26/12/2013 3:26 57.6
		26/12/2013 3:31 57.9
		26/12/2013 3:36 57.5
		26/12/2013 3:41 56.2
		26/12/2013 3:46 56.3
		26/12/2013 3:51 58.6
		26/12/2013 3:56 53.9
		26/12/2013 4:01 56.8
		26/12/2013 4:06 56.5
		26/12/2013 4:11 53.6
		26/12/2013 4:16 57.3
		26/12/2013 4:21 56.1
		26/12/2013 4:26 55.6
		26/12/2013 4:31 56.1
		26/12/2013 4:36 56.2
		26/12/2013 4:41 55.2
		26/12/2013 4:46 57.6
		26/12/2013 4:51 57.9
		26/12/2013 4:56 56.8
		26/12/2013 5:01 53.8
		26/12/2013 5:06 57.4
		26/12/2013 5:11 58.4
		26/12/2013 5:16 56.0
		26/12/2013 5:21 56.7
		26/12/2013 5:26 55.6
		26/12/2013 5:31 55.6
		26/12/2013 5:36 55.6
		26/12/2013 5:41 56.8
		26/12/2013 5:46 57.4
		26/12/2013 5:51 57.1
		26/12/2013 5:56 57.5
		26/12/2013 6:01 56.9
		26/12/2013 6:06 57.7



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



After checking with contractor HY/2009/19, no major noisy construction works were conducted at the concerned location during the recorded period and contractor mitigation measures including erection of temporary noise barrier was confirmed in place. As the exceedance is non-continuous, the exceedances were considered to be contributed by nearby IEC traffic and nearby non- CWB Projects.





***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	<ol style="list-style-type: none"> <li>1. Inform IEC, ER, Contractor and EPD;</li> <li>2. Repeat measurements to confirm findings;</li> <li>3. Increase monitoring frequency;</li> <li>4. Identify source and investigate the cause of exceedance;</li> <li>5. Carry out analysis of Contractor's working procedures;</li> <li>6. Discuss with the IEC, Contractor and ER on remedial measures required;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>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)</li> </ol>	<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> <li>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)</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Submit further proposal if problem still not under control;</li> <li>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)</li> </ol>



**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;</li> <li>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;</li> <li>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 3 working days;            Implement the agreed mitigation measures;            As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.            (The above actions should be taken within 1 working day after the exceedance is identified)</p>



Event and Action Plan for Odour Patrol

Event	ACTION	
	Person-in-charge of Odour Monitoring	Implementation Agent Identified by CEDD
<b>Action Level</b>		
Exceedance of Action Level	1. Identify source/reason of exceedance; 2. Repeat odour patrol to confirm finding.	1. Carry out investigation to identify the source/reason of exceedance; 2. Rectify any unacceptable practice 3. Implement more mitigation measures if necessary; 4. Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.
<b>Limit Level</b>		
Exceedance of Limit Level	1. Identify source / reason of exceedance; 2. Repeat odour patrol to confirm findings; 3. Increase odour patrol frequency; 4. If exceedance stops, cease additional odour patrol.	1. Carry out investigation to identify the source/reason of exceedance. Investigation shall be completed within 2 weeks; 2. Rectify any unacceptable practice; 3. Formulate remedial actions; 4. Ensure remedial actions properly implemented; 5. If exceedance continues, consider what more/enhanced mitigation measures shall be implemented; 6. Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.



***Appendix 6.2***

***Summary for Notification of Exceedance***





Ref. No.	Date	Time	Location	Construction Noise Level	Unit	Action Level	Limit Level	Follow-up action
X_10N149	10-Dec-13	9:18	M6 - HK Baptist Church Henrietta Secondary School	73	Leq(30-min)	when one documented complaint was received.	65	<p><b>Possible reason:</b> Traffic nearby was observed during monitoring and was considered as the major noise contribution.</p> <p><b>Action taken / to be taken:</b> Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.</p> <p><b>Remarks / Other Obs:</b> Crosshead and Rebar fixing works for Contract HY/2009/19 were conducted during the measurement. It was observed that traffic noise was a major noise source during monitoring. It is concluded that the exceedance was not due to project but to traffic noise nearby.</p>



Ref. No.	Date	Time	Location	Construction Noise Level	Unit	Action Level	Limit Level	Follow-up action
X_10N150	18-Dec-13	10:40	M6 - HK Baptist Church Henrietta Secondary School	72	Leq(30-min)	when one documented complaint was received.	65	<p><b>Possible reason:</b> Traffic nearby was observed during monitoring and was considered as the major noise contribution.</p> <p><b>Action taken / to be taken:</b> Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.</p> <p><b>Remarks / Other Obs:</b> Rebar fixing works for Contract HY/2009/19 were conducted during the measurement. It was observed that traffic noise was a major noise source during monitoring. It is concluded that the exceedance was not due to project but to traffic noise nearby.</p>



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10C602	4-Dec-13	Mid-flood	C7	DO(mg/L)	5.26	3.36	2.73	<b>Possible reason:</b> Natural variation or changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	14.76	9.10	10.25	<b>Action taken / to be taken:</b> Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	23.00	15.00	22.13	<b>Remarks / Other Obs:</b> Silt screen was in proper condition. Installation of rebar for EVA at Eastern Breakwater and dredging of type 2 marine sediment was conducted by contractor HY/2009/15 on that day. Mitigation measure including frame type silt curtain was confirmed in place. In view of no further exceedance was recorded in the next consecutive monitoring despite on-going marine works within same sampling date. The exceedance was considered as works-related
X_10C603	16-Dec-13	Mid-flood	C7	DO(mg/L)	4.91	3.36	2.73	<b>Possible reason:</b> Underwater silt screen inspection leading to changes of water quality in the vicinity of the water quality monitoring station
				Turbidity	39.13	9.10	10.25	<b>Action taken / to be taken:</b> Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works.
				SS	62.50	15.00	22.13	<b>Remarks / Other Obs:</b> Underwater silt screen inspection was observed during water quality monitoring. According to on-site observation during sampling, it was considered that the dragging action of unwinding silt curtain installed around the silt screen could have impaired the water quality and lead to the abnormal turbidity and SS level. Contractor was advised to review the underwater silt screen inspection process as a propose to reduce the impact on water quality in the vicinity of water quality monitoring station. In view of no further exceedance was recorded in the next consecutive monitoring despite on-going marine works within same sampling date. The exceedance was considered as works-related



Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10D385	2-Dec-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.34	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D386	2-Dec-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	2.31	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D387	4-Dec-13	Mid-Flood	Ex-WPCWA SW	Middle	DO(mg/l)	3.71	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: Owing to minimal flushing combined with organic dischargeduring ebb tide. DO level was observed improved during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D388	4-Dec-13	Mid-Flood	Ex-WPCWA SE	Middle	DO(mg/l)	4.00	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: Owing to minimal flushing combined with organic dischargeduring ebb tide. DO level was observed improved during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>



Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10D389	7-Dec-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	3.05	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D390	7-Dec-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	3.23	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D391	9-Dec-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.07	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D392	9-Dec-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	2.36	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>



Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_10D393	11-Dec-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.66	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D394	11-Dec-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	2.99	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D395	13-Dec-13	Mid-Ebb	Ex-WPCWA SW	Middle	DO(mg/l)	1.10	3.84	3.73	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>
X_10D396	13-Dec-13	Mid-Ebb	Ex-WPCWA SE	Middle	DO(mg/l)	1.31	4.26	3.61	<p>Possible reason: Possible in relation to the accumulation of organic particles discharged from culvert near monitoring station</p> <p>Action taken / to be taken: Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checked with Contract works.</p> <p>Remarks / Other Obs: It was observed that natural tidal flushing was minimal during ebb tide. DO level was observed replenished during flood tide cycle. The DO level at the concerned location will be keep in view closely and additional measures should be considered when necessary. DO level was observed restored during both ebb and flood tide since 16 December 2013 In view that there was no marine activities at ex-WPCWA, it was considered not related to Project works.</p>



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_W539	30-Nov-13	Mid-Flood	WSD21	DO(mg/L)	4.37	3.66	3.28	Possible reason: Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	5.77	8.04	9.49	Action taken / to be taken: Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	27.50	13.00	14.43	Remarks / Other Obs: According to contractor record, silt screen washing was conducted on that day. In view of no marine work was conducting during water quality monitoring. Silt screen was confirmed in order, the exceedances was considered not
X_W540	30-Nov-13	Mid-Flood	WSD19	DO(mg/L)	6.62	3.66	3.28	Possible reason:
				Turbidity	6.15	8.04	9.49	Action taken / to be taken:
				SS	16.50	13.00	14.43	Remarks / Other Obs:
X_W541	30-Nov-13	Mid-Ebb	WSD21	DO(mg/L)	4.16	3.66	3.28	Possible reason: Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	7.77	8.04	9.49	Action taken / to be taken: Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	15.50	13.00	14.43	Remarks / Other Obs: In view of no marine work was conducting during water quality monitoring. Silt screen was confirmed in order, the exceedances was considered not project related.
X_W542	4-Dec-13	Mid-Ebb	WSD19	DO(mg/L)	6.20	3.66	3.28	Possible reason: Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	18.28	8.04	9.49	Action taken / to be taken: Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. .
				SS	8.00	13.00	14.43	Remarks / Other Obs: Dredging works was conducted by Contractor HK/2012/08 during monitoring. Mitigation meares including framed silt curtain was confirmed in place. Silt screen was confirmed in order, The exceedances was considered not project related.
X_W543	7-Dec-13	Mid-Flood	WSD17	DO(mg/L)	6.77	3.66	3.28	Possible reason: Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	7.80	8.04	9.49	Action taken / to be taken: Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works.
				SS	14.50	13.00	14.43	Remarks / Other Obs: In view of no marine work was conducting during water quality monitoring, the exceedances was considered not project related.
X_W544	7-Dec-13	Mid-Flood	WSD19	DO(mg/L)	6.29	3.66	3.28	Possible reason:
				Turbidity	20.87	8.04	9.49	Action taken / to be taken:
				SS	13.50	13.00	14.43	Remarks / Other Obs:
X_W545	7-Dec-13	Mid-Ebb	WSD21	DO(mg/L)	4.55	3.66	3.28	Possible reason: Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	4.95	8.04	9.49	Action taken / to be taken: Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	15.50	13.00	14.43	Remarks / Other Obs: According to contractor record, silt screen washing was conducted on that day. In view of no marine work was conducting during water quality monitoring. Silt screen was confirmed in order, the exceedances was considered not



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_W546	9-Dec-13	Mid-Flood	WSD19	DO(mg/L)	6.22	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	8.73	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. .
				SS	19.50	13.00	14.43	Remarks / Other Obs:	Dredging works was conducted by Contractor HK/2012/08 during monitoring. Mitigation measures including framed silt curtain was confirmed in place. Silt screen was confirmed in order, The exceedances was considered not project related.
X_W547	9-Dec-13	Mid-Flood	WSD9	DO (mg/L)	6.51	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	5.04	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. The tidal was moving westward.
				Suspended Solid	20.00	13.00	14.43	Remarks / Other Obs:	No marine works was conducted on that day and no further exceedance was recorded in the next consecutive monitoring and since WSD9 was located at the upstream of the Project, in view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.
X_W548	9-Dec-13	Mid-Ebb	WSD9	DO (mg/L)	6.15	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	1.62	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. The tidal was moving westward.
				Suspended Solid	16.50	13.00	14.43	Remarks / Other Obs:	In view of no marine works was conducted on that day and the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.
X_W549	13-Dec-13	Mid-Flood	WSD21	DO(mg/L)	5.44	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	6.28	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	13.50	13.00	14.43	Remarks / Other Obs:	In view of no marine work was conducting during water quality monitoring. Silt screen was confirmed in order, the exceedances was considered not project related.
X_W550	16-Dec-13	Mid-Flood	WSD19	DO(mg/L)	6.10	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	11.73	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. .
				SS	8.00	13.00	14.43	Remarks / Other Obs:	Dredging works was conducted by Contractor HK/2012/08 during monitoring. Mitigation measures including framed silt curtain was confirmed in place. The exceedances was considered not project related.
X_W551	18-Dec-13	Mid-Flood	WSD19	DO(mg/L)	6.51	3.66	3.28	Possible reason:	
				Turbidity	12.79	8.04	9.49	Action taken / to be taken:	
				SS	23.50	13.00	14.43	Remarks / Other Obs:	
X_W552	18-Dec-13	Mid-Flood	WSD21	DO(mg/L)	6.44	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	6.90	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	14.00	13.00	14.43	Remarks / Other Obs:	According to contractor record, silt screen washing was conducted on that day. In view of no marine work was conducting during water quality monitoring. Silt screen was confirmed in order, the exceedances was considered not





Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_W553	21-Dec-13	Mid-Flood	WSD9	DO (mg/L)	6.78	3.66	3.28	Possible reason:	Natural variation or changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	8.45	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. The tidal was moving westward.
				Suspended Solid	7.00	13.00	14.43	Remarks / Other Obs:	In view of no marine works was conducted on that day and no further exceedance was recorded in the next consecutive monitoring and since WSD9 was located at the upstream of the Project, in view that the water quality at monitoring stations located nearest the marine work site were well below the Action level, the exceedances was considered not project related.
X_W554	24-Dec-13	Mid-Flood	WSD21	DO(mg/L)	5.78	3.66	3.28	Possible reason:	Natural variation of changes of water quality in the vicinity of the water quality monitoring station.
				Turbidity	6.79	8.04	9.49	Action taken / to be taken:	Immediate repeated in-situ measurements had conducted to confirm the exceedances. Checking with contractor's works. Checking with contractor's inspection record.
				SS	45.00	13.00	14.43	Remarks / Other Obs:	According to contractor record, silt screen was in order on that day. In view of no marine work was conducting during water quality monitoring and no further exceedance was recorded in the next consecutive monitoring, the exceedances was considered not project related.



***Appendix 9.1***

***Complaint Log***

**Environmental Complaints Log**

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	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, Police 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 Holiday). No limit level exceedance was recorded in the monitoring.</li><li>4) No further complaints were received in the reporting month. The complaint is considered closed.</li></ol>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
100504	4/5/2010	Public complainant received by ICC (ICC case: 1-233384048)	Watson Road	Complaint on the noise nuisance due to the large scale of dredging machine (face to Island East Corridor) in particular the hours 1900 to 0800 and request to reduce the noise level.	<ol style="list-style-type: none"><li>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.</li><li>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.</li><li>3) No further complaints were received in the reporting month. The complaint is considered closed.</li></ol>	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.	<ol style="list-style-type: none"><li>1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works.</li><li>2) There was only 1 grab dredger operated by Contractor within NPR project site area for dredging works.</li><li>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.</li><li>4) It is considered as invalid from the EP and CNP point of view.</li></ol>	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.	<ol style="list-style-type: none"><li>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.</li><li>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.</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



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
101108	8/11/2010	Mr. Nip received by ICC (CC Case)	Sai Wan Ho	Visual concern around the seaside silt screen outside the WSD freshwater intake pump at Sai Wan Ho (Monitoring station ref no.. WSD15)	<ol style="list-style-type: none"><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 resident of 27/F, Block 10, City	City Garden, North Point	Two barges were generating noise at 22:00 on 6 December 2010 in which the noise from	<ol style="list-style-type: none"><li>1) ET confirmed the following information with resident site staff on the complaint:<ul style="list-style-type: none"><li>• It was referred to the filling operation at North Point</li></ul></li></ol>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		Garden by ICC (ICC case: 1-266039336)		<p>filling operation was louder than the traffic noise &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>Reclamation of Central Wan Chai Bypass site area instead of part of Wanchai Development Phase II;</p> <ul style="list-style-type: none"> <li>• Two derrick barges were in operation at the time of complaint for placing 400 rockfill onto the excavation trench and for levelling the formation level to receive the pre-cast caisson seawall;</li> <li>• Flood light on the control mast of derrick barge have no lighting shields for the prevention of glare of flood lights;</li> <li>• No starting work on 7 Dec 2010 at 0630hours.</li> </ul> <p>2) PME used in restricted hours were checked and confirmed compliant with valid CNP no. GW-RS0870-10. The noise level recorded on 6 Dec 2010 was complied with the noise criteria during restricted hour;</p> <p>3) It was found that the occasional noise nuisance might be caused by the hitting or scratching onto the rock surface during loading down the grab onto the Grade 400 rockfill;</p> <p>4) The absence of the lighting shields at flood light results in visual glare to the complainant at night-time.</p> <p>5) Contractor was advised to minimize the finishing time of placing Grade 400 rockfill at 2100hrs and switch off all unnecessary flood lights apart from the light for the safety and security purpose;</p> <p>6) No further complaint was received after implementation of proposed measures</p>	
110415	15/04/2011	The resident, Mr Law at Victoria Centre by ICC (ICC#1-281451236)	North Point	A dust generation and a concern of mosquitoes breeding complaint in which suspected the filling operation was part of North Point Reclamation.	<p>1) The concerned stockpile was a working stockpile under Contract HY/209/15 and was covered at night time after work.</p> <p>2) Water spraying on the haul road and potential dust generating material at least 4 times a day was conducted by contractor that complies with the requirement.</p> <p>3) It is considered invalid but preventive actions can be taken because the stockpile is relatively large and easily visible by complainant.</p> <p>4) It was recommended that increasing the frequency of water spraying shall be conducted to all potential dust generating materials and activities. Besides, Contractor should consider to cover the idle part of the stockpile</p> <p>5) The concern of mosquitoes breeding is out the scope of EM&amp;A, the follow-up action is not reported in this monthly EM&amp;A report.</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
110419	19/04/2011	Ms Chiu at Victoria Centre at Victoria Centre by ICC (ICC# 1-272874759)	North Point	The episode of night noise on 19/4/11 and 20/4/11 at 2:50 am and the noise lasted for 30 minutes per night.	<ol style="list-style-type: none"><li>1) According to the RSS's record, there was no construction works undertaken under the EP-356/2009 during the concern time period.</li><li>2) There was no abnormal real-time noise monitoring data recorded in RTN1 - FEHD Hong Kong Transport Section Whitefield Depot which is next to the Victoria Centre.</li><li>3) It is considered as invalid complaint under this Project.</li></ol>	Closed
110617	9/06/2011	Mr. Law from Victoria Centre Management Office	North Point	An odour nuisance suspected generating from the discharge point – Channel T at Watson Road in part of the site area was related to CWB under Contract no. HY/2009/11	<ol style="list-style-type: none"><li>1) The complaint was received by ET on 13 Jun 2011. During the weekly site inspection on 7 and 17 June 2011, there was no any odour impact detected in the site area.</li><li>2) According to the site record, there was muddy water discharged from the unknown source at upstream of Channel T during heavy rainstorm. No any site surface runoff to the Channel T and out of site boundary was observed in the inspection.</li><li>3) In order to prevent muddy water washing out to the water body under heavy rainstorm, a silt curtain was installed at the outfall of the channel by Contractor. ET confirmed with the Resident Site Staff that a silt curtain was installed at the outfall of the channel to prevent muddy water washing out to the water body under heavy rainstorm. Besides, regular cleaning of refuse in the channel has been conducted by Contractor.</li><li>4) A further site investigation on 28 June 2011 revealed that no odour nuisance was detected at the upstream of the Channel T and no source of odour nuisance was identified at site. As such, it was concluded that the source of odour nuisance was not related to the Project works.</li><li>5) Although no source of odour nuisance was identified at site, the muddy water and dirt from the unknown source at upstream of Channel T may cause a potential smell during low tide and low water flow. Contractor was reminded to remove the silt curtain at the channel on non-rainy day so as to avoid the accumulation of the sediment and dirt in the water channel.</li></ol>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
110709	09/07/2011	Mr. Au from City Garden Management Office	North Point	A complaint letter to Contractor HY/2009/11 was raised by Cayley Property Management Limit on 9 July 2011 regarding a series of pump breakdown events at seawater intake of City Garden on 4, 6, 7 and 8 July 2011. A lot of rubbish such as plastic bags, nylon bags, nylon-wire mesh was observed sucking from the seawater intake at the seawater front of Block 7 of City Garden affecting the operation of seawater pump plant.	<ol style="list-style-type: none"><li>1) Contractor conducted formation works for installation of caisson seawall at C27, C28, C29 and C30 on 4, 6, 7 and 8 July 2011 and no dredging work was conducted during this time period</li><li>2) Water mitigation measures of an 80m long silt curtain at the site boundary in front of City Garden Relocation of silt curtain and silt curtain at the outfall of the channel were provided and maintained to accommodate the site works. All vessels are equipped with rubbish collection facilities and disposed the rubbish regularly. Also, daily cleaning actions had been taken by contractor to minimize floating refuse within the site boundary.</li><li>3) Moreover, it has been reported several times that discharged from outfall pipeline outside the site boundary near the intake of the pump maybe considered as another source of rubbish generation.</li><li>4) Referring to the record provided by Cayley Property Management Limit, the trapped rubbish was unlikely generated from the construction works. It was considered that complaint is invalid and not related to project.</li></ol>	Closed
110710	09/07/2011	Complainant by ICC (ICC no. 1-301520309)	North Point	It was received at 00:56 on 10 July 2011. There was complained a derrick barge unloading rockfill material off the shore facing the Harbour Grant HK Hotel causing noise nuisance.	<ol style="list-style-type: none"><li>1) ET confirmed with the Resident Site Staff that the complaint was referred to Contract HY/2009/15 for the loading and unloading of fill material at two barges operation in the sea at around 300m adjacent to Island Eastern Corridor (Oil Street Chainage) where is outside the Site of HY/2009/15 in the period of around 19:45 on 9 July to 1:00 on 10 July 2011.</li><li>2) The material loading and unloading operation processed in restricted hours was checked without a valid CNP. It was found that the operation was due to an unexpected water leakage of the hopper barge and considered an incident.</li><li>3) According to the incident report provided from RSS on 20 July 2011, around 7:30 pm the barge S22 was inclined slightly and slightly water leakage might occur. Due to marine safety concern, the hopper barge would open the hopper to release the contained materials in order to reduce the weight and stabilize the barge. In consider of slight water leakage, the operator decided to use the nearby Derrick Barge ST32 to help for unload the general fill materials first and the unloading operation was started at around 7:45pm, and end at around 1:00 am. Contractor was reminder to provide frequent check of vessel condition</li></ol>	Closed





Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					so as to prevent recurrent by barge defect	
110723a	23/07/2011	Ms. Law at Victoria Centre by ICC no. 1-303887687	North Point	She concerned that Highways Department published a notice in their Management Office about construction works will be conducted from 0700 hours to 2300 hours during July to December 2011 including Saturday, Sunday and public holiday.	<ol style="list-style-type: none"> <li>1) It was referred by AECOM to ET on 28 July 2011</li> <li>2) RSS confirmed that the notice was prepared by Victoria Centre's Management office to their resident and the advice was only given on the extension construction works (for Contract HY/2009/15) to 7am-9pm from Monday to Saturday except Public Holidays and Sundays.</li> <li>3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am and is expected to be completed by mid-August 2011.</li> <li>4) No noise exceedance was recorded at construction noise monitoring station at Victoria Centre on 19 and 25 July 2011 during daytime while breaking and excavation works were undertaken during monitoring.</li> <li>5) In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. The complainant was satisfied with the arrangement and no further complaint was received after proposed measures.</li> </ol>	Closed
110723b	23/07/2011	Ms. Yau at Block 2, Victoria Centre by ICC no. 1-304013959	North Point	Reclamation work was conducted at Causeway Bay Typhoon Shelter at 7am on 23 July 2011. She complained that the works shall be started later to minimize the noise nuisance to the vicinity of the residents in early morning	<ol style="list-style-type: none"> <li>1) It was referred by AECOM to ET on 8 August 2011</li> <li>2) With reference to the construction noise monitoring at Vitoria Centre, no exceedance was recorded on 19 and 25 July 2011 during daytime while breaking and excavation works were undertaken during monitoring</li> <li>3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am and is expected to be completed by mid-August 2011.</li> <li>4) In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. The complainant was satisfied with the arrangement and no further complaint was received after proposed measures.</li> </ol>	Closed
110727a	27/07/2011	Mr. Law from Victoria Centre Management Office by ICC no. 1-304616162	North Point	It was complained by Mr. Law from Victoria Centre Management Office on 27 July 2011 regarding construction noise generated by the construction operations of	<ol style="list-style-type: none"> <li>1) It was referred by AECOM to ET on 28 July 2011</li> <li>2) RSS confirmed to start the rock breaking activities for Contract HY/2009/15 at 8am as a mitigation measure to minimize the noise nuisance in the vicinity of the residents.</li> <li>3) No noise exceedance was recorded at construction noise</li> </ol>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
				Central-Wanchai Bypass at noon rather than in morning at 7am.	<p>monitoring station at Victoria Centre on 25 July and 4 August 2011 during daytime while breaking and excavation works were undertaken during monitoring.</p> <p>4) In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. No further complaint from complainant was received after proposed the mitigation measure.</p>	
110727b	27/07/2011	Ms. Chiu by ICC no.1-304615409	North Point	Noise nuisance from the excavation works for the Highways Department adjacent to the Victoria Centre was conducted from 7am	<p>1) It was referred by AECOM to ET on 28 July 2011</p> <p>2) With reference to the construction noise monitoring at Vitoria Centre, no exceedance was recorded on 25 July and 4 and 10 August 2011 during daytime while breaking and excavation works were undertaken during monitoring.</p> <p>3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am.</p>	Closed
	08/08/2011				<p>4) However, complainant did not satisfy with the response on the noise nuisance from the rock-breaking during morning in front of Victoria Centre and then further complaint via 1823 on 7 August 2011.</p> <p>5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed.</p> <p><i>Remarks: There will be counted as two complaints in this complaint log.</i></p>	
110810	10/08/2011	Mr. Yip by ICC no. 1 - 306740207	North Point	Muddy water was discharged from work site to the seafront near Oil Street during heavy rain. The environmental protection measures were not good enough and are needed to rectify.	<p>1) It was referred by AECOM to ET on 17 August 2011.</p> <p>2) Confirmed with RE, Muddy water was caused by a heap of earth being washed to the sea by heavy rain. The heap of earth was referred as a small stockpile placed close to the seafront in front of Oil Street within the site area under handover transition period from contract HY/2009/11 to contract HY/2009/19. The necessary mitigation measures to protect the small stockpile against rainfall were missing at the time of complaint.</p> <p>3) Due to the missing of mitigation measures to protect the small stockpile during handover transition period, loose material was washed into the harbour when heavy rain came. Muddy water was formed and dispersed in the sea that caused the water quality and visual concern to the public. The complaint was considered as valid.</p> <p>4) Contractors were advised to relocate the loose materials</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					away from the coastline as far as practicable. Any loose material placed which needed to be placed near the coastline shall be properly compacted or covered as appropriate. To avoid any further environmental deficiency, Contractors shall ensure all necessary environmental mitigation measures will not be missing during site area handover.	
110826	26/08/2011	Grand Hyatt and a complainant by ICC	Wan Chai	Construction noise and vibration nuisance generated from the works at Convention Avenue and inside the HKCEC1 reclamation area.	<ol style="list-style-type: none"> <li>1) Confirmed with the Resident Site Staff that the construction works were referred to the Contractor HK/2009/01.</li> <li>2) The Excavator mounted breaker at Convention Avenue and Drilling rig at HKCEC1 reclamation area were the dominant construction noise source during this period.</li> <li>3) The drilling rig at HKCEC1 reclamation area and excavator mounted breaker at Convention Avenue were then temporary suspended after received the complaint.</li> <li>4) Investigation revealed that the erected noise barrier (4m cantilevered movable noise barrier for the drilling rig and 1m movable noise barrier for the excavator mounted breaker) were not located close to the plants to provide adequate noise screening.</li> <li>5) Contractor was advised to avoid concurrent operation of construction plants at site. Further enhancement of movable noise barriers at HKCEC1 and providing noise enclosure for the excavator mounted breaker at Convention Avenue are needed.</li> <li>6) Further site investigation and checking on 31 August and 7 September 2011 revealed that the implemented noise mitigation measures were in proper and minimize the noise impact.</li> </ol>	Closed
110826A	26/08/2011	A complaint letter from Mr. Au of Cayley Property of City Garden	North Point	Harbor front adjacent to their cooling water intake suction which caused 3 times of system breakdown of the sea water pump on 9, 22 and 25 August 2011.	<ol style="list-style-type: none"> <li>1) It was referred by AECOM to ET on 29 August 2011. Confirmed with the Resident Site Staff that the               <ul style="list-style-type: none"> <li>• construction works were referred to the Contractors HY/2009/11 and HY/2009/19.</li> <li>• The pump is located on the site area of HY/2009/19</li> <li>• A temporary garbage defender was installed on 23 July 2011 by HY/2009/11 and the shape of the defender was adjusted on 8 August 2011 in order to exclude the outfall.</li> <li>• An ad hoc inspection of the effectiveness of garbage defender was conducted with RSS (CWB project</li> </ul> </li> </ol>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>team), contractor of HY/200911 and HY/2009/19 and IECon 29 August 2011. Inspection report of it was submitted to RSS on 19 September 2011.</p> <ul style="list-style-type: none"> <li>• Daily cleaning near the water intake was conducted twice a day by contractor HY/2009/19.</li> <li>• In response to City Garden request, the contractors have set up the temporary garbage defender in function and collect the floating refuses, but cannot eliminate all refuses, in particular the refuse coming from the seabed</li> </ul> <p>2) According to the complaint letter from Cayley Property, the outcomes of the preventive measures were not complying with their expectation.</p> <p>3) During on-site inspection, floating refuses observed occasionally outside the garbage defender. No conclusion could be made for the source of these floating refuses. On the other hand, some of the refuses were observed floating behind the garbage defender during investigation.</p> <p>4) All daily cleaning actions had been taken by contractor to minimize floating refuse inside the construction site.</p> <p>5) It was noted that the cooling water intake was accessible to the public. As such, fish breeding and fishing activities were observed even though a notice has already hoisted. Also, tripping of rubbish by the passers-by could result in a lot of rubbish accumulated around the intake point.</p> <p>6) Referring to the record provided by CPML, there were a lot of nylon/ plastic bags and nylon wire mesh that matched those rubbishes generated from the public activities.</p> <p>7) Contractors have fulfilled the requirement of site cleanliness and no exceedance was recorded during Water Quality Monitoring. It is consider the cause of this complaint is not related to project and environmental issue in this project as well. No more complaint received after ad-hoc inspection</p>	
111014	14/10/2011	The complainant, Ms. Tam complained via hotline 1823	Wan Chai	The polluted fumes and exhaust from the excavation by sub-contractor of CEDD on pedestrian way outside no.25 Harbour Road (in front of the Harbour Centre)	<p>1) RSS notified ET to carry out investigation on 17 October 2011.</p> <p>2) ET confirmed with the Resident Site Staff that the location of the excavator was within site area of Contract no. HK/2009/02 undertaking the water cooling main reposition works along the Harbour Road. The plants including the excavator have been checked before using</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>at the site. However, the polluted fumes and exhausted from the excavator was caused due to insufficient maintenance of the plant after using at site.</p> <p>3) After receiving the complaint, the excavator was then removal off-site for checking and maintenance works on 17 October 2011.</p> <p>4) Contractor was reminded to enhance regular checking and maintenance to all plants at site.</p> <p>5) RSS has replied to the complainant on the arrangement of the measures taken on 17 October 2011. Complainant was satisfied with the response and follow-up action taken by the Contractor.</p>	
111104	04/11/2011	Mr. Liu from LCSO complained via Contractor Complaint Hotline	Wan Chai	Complain about a tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road, the status is not healthy and roof ball of two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue were half cut.	<p>1) ET confirmed with the Resident Site Staff that</p> <ul style="list-style-type: none"><li>• A tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road is the Tree no. TA1122 under Contract no. HK/2009/02. Leaves of a branch of this tree were shrivelled.</li><li>• Two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue are the tree nos. A160 and A161 under Contract no. HK/2009/01. Part of roof ball of these two trees was covered by the metal plate.</li></ul> <p>2) Independent Tree Specialists for these two inspected the trees. Contractor HK/2009/01 has taken the measure as recommend downgrading the soil level around the trunk base. Reinstating of the ground works will be conducted in mid-December 2011. For the tree no. TA1122 under Contract no. HK/2009/02, the brown leaves were removed and fenced the tree with orange net is provided to prevent damage of tree trunk by construction works. The distance between the tree and the edge of the trench is kept approximate 2m. Two Contractors were reminded to carry out regular watering to the trees within their site area.</p>	Waiting RSS respond
111106	06/11/2011	Police officer	Wan Chai	Construction noise generated from the site at about 6:30 a.m on 6 November 2011 and require to stop the machine operation	<p>1) According to the information reported by Contractor, one BC cutter and hoist were operated for Diaphragm Wall construction of Shatin-Central Link to inspect bentonite pipes and ensure no damages and all the joints are tightened in good position. Then, the subcontractor for Diaphragm wall, SAMBO Korean foreman stopped the engine of the BC cutter immediately. The police officer recorded the details and HKID number of the foreman and then left. Due to the different language communication between the police officer and the Korean foreman, no</p>	Keep in view for three months from the date of complaint received



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>CNP was checked by the police officer.</p> <p>2) ET confirmed with the Resident Site Staff that same issue was also raised out by RSS at about 7:00a.m on the same day. Besides, it was confirmed that there is no valid Construction Noise Permit for the conducted construction works in the period between 2300 and 0700.</p> <p>3) Due to insufficient communication between Contractor HK/2009/01 and their Korean Sub-contractor, Korean Sub-contractor had not notified to Contractor before carrying out the inspection of the BC cutter, hoists and bentonite pipes at about 6:00a.m to ensure no damages and all the pipe joints should be tightened and in good position.</p> <p>4) Contractor was advised to enhance the communication between Contractor and sub-contractor and provide sufficient environmental training to all foreman and operators on restricted hour operation. Furthermore, Construction Noise Permit should be checked and in place for the construction works during restricted hour</p> <p>5) This complaint was considered in relation to the conducted construction works during restricted hours without valid Construction Noise Permit. No more construction works were conducted during night time period. The construction works will be conducted in accordance with the time period stated in valid CNP. This complaint will be kept in view of any follow-up action from the relevant government activities.</p>	
120405	05/04/2012	N/A	North Point	A complaint regarding excessive noise from construction sites of CBTS was observed daily before 7:30am except on public holidays, and the noise source was mainly from piling works. The complainant requested that construction works should start after 8:30am to avoid nuisance to nearby residents and a speedy follow-up and reply.	<p>1) RSS notified ET on 5 April 2012.</p> <p>2) ET confirmed with the Resident Site Staff that no piling works were performed during the concerned period.</p> <p>3) After reviewing the results of noise monitoring (M2b and M3a), no exceedance was recorded during daytime period and the noise level was below 75dB(A). Site inspection for HY/2009/15 was conducted on 10 April 2012. The condition of noise mitigation measures around CBTS was found satisfactory. RSS confirmed that no pilings were performed during the concerned period. The major works included drilling, diaphragm wall construction and excavations.</p> <p>4) HyD made a reply to the complainant on 16 April 2012 via 1823. HyD replied that the current works at CBTS were drilling, diaphragm wall construction and deep excavations. In order to minimize the noise generated</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					from the above works, the Contractor had erected temporary noise barriers and provided noise blankets on plants. RSS would continue to work with the Contractor on the effectiveness of the environmental mitigation measures implemented on site. No further complaint was received after the response.	
130308	06/03/2013	ICC Case#1-407181502	Tin Hau	A complaint regarding the dropping of fine rock material into surrounding waterbody was observed during rock breaking operation with two excavators in active operation at the Eastern Breakwater of Causeway Bay Typhoon Shelter near the North Point lighthouse.	<p>1) RSS notified ET on 8 March 2013</p> <p>2) ET confirmed with RSS that excavation works, installation of buoy, flashing light and silt curtain and dredging works were undertaken at Eastern Breakwater during the concerned period on 6 March 2013. One backhoe equipped with breaker and one derrick barge were confirmed in operation while another backhoe was at idle during the concerned period on 6 March 2013.</p> <p>3) Reviewing the photo record provided by RSS, the condition of the silt curtain deployed around the Eastern Breakwater on 6 March 2013 was found to be in good condition. It is considered that the silt curtain was properly in place during the concerned period and the concerned act of dropping of fine rock material was confined within the silt curtain boundary without adverse impact to the nearby water quality.</p> <p>Further follow up was conducted on 12 March 2013 during weekly environmental audit inspection, the silt curtain deployed around the concerned area was found to be maintained in good condition and the water quality at the concerned work area was generally satisfactory. No violation of the Environmental Permit condition was found.</p> <p>The contractor was advised and committed to implement preventive measures to minimize the potential impact of work including conducting regular diver check to ensure the integrity and the extend of silt curtain deployment and to provide adequate back up stock of silt curtain for emergency use.</p>	Closed



***Appendix 10.1***

***Construction Programme of Individual Contracts***





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

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

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	

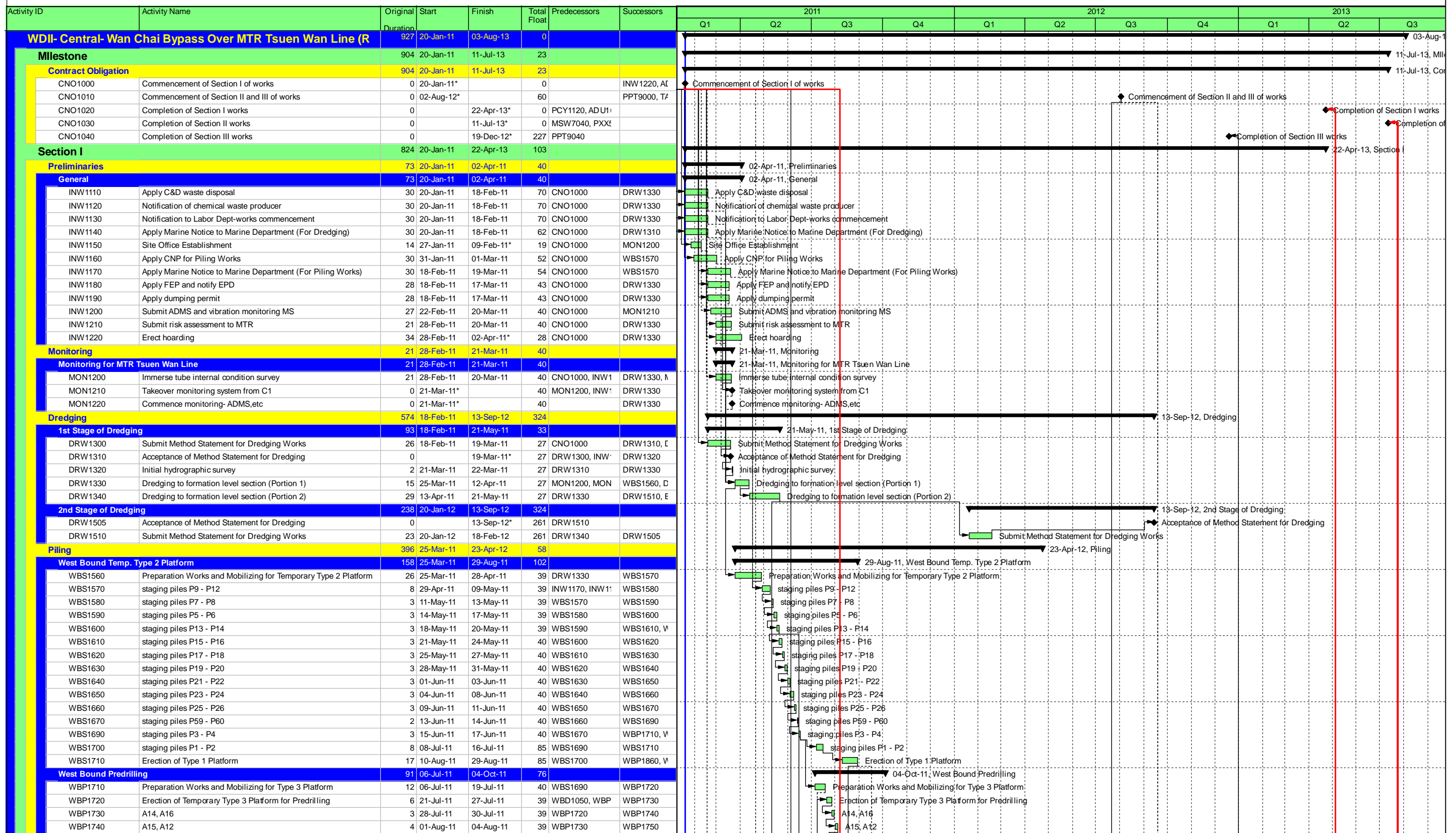
Activity ID	Cal ID	Activity Description	Orig Dur	Early Start	Early Finish	Year													
						2010	2011	2012	2013	2014	2015	2016	2017						
<b>TCBR1E (TS1 Area)</b>																			
105	1	TCBR1E(TS1)-dredging+rockfill(pre. for seawall)	86	03DEC10*	26FEB11														
110	1	TCBR1E (TS1)-temporary 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

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  
 Date Prepared: 28 Oct 2010





Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors
<b>WDII- Central- Wan Chai Bypass Over MTR Tsuen Wan Line (R)</b>							
<b>Milestone</b>							
904	20-Jan-11	11-Jul-13	23				
<b>Contract Obligation</b>							
904	20-Jan-11	11-Jul-13	23				
CNO1000	Commencement of Section I of works	0	20-Jan-11*	0		INW1220, AI	
CNO1010	Commencement of Section II and III of works	0	02-Aug-12*	60		PPT9000, T	
CNO1020	Completion of Section I works	0		22-Apr-13*	0	PCY1120, ADU1	
CNO1030	Completion of Section II works	0		11-Jul-13*	0	MSW7040, PXX	
CNO1040	Completion of Section III works	0		19-Dec-12*	227	PPT9040	
<b>Section I</b>							
824	20-Jan-11	22-Apr-13	103				
<b>Preliminaries</b>							
73	20-Jan-11	02-Apr-11	40				
<b>General</b>							
73	20-Jan-11	02-Apr-11	40				
INW1110	Apply C&D waste disposal	30	20-Jan-11	18-Feb-11	70	CNO1000	DRW1330
INW1120	Notification of chemical waste producer	30	20-Jan-11	18-Feb-11	70	CNO1000	DRW1330
INW1130	Notification to Labor Dept-works commencement	30	20-Jan-11	18-Feb-11	70	CNO1000	DRW1330
INW1140	Apply Marine Notice to Marine Department (For Dredging)	30	20-Jan-11	18-Feb-11	62	CNO1000	DRW1310
INW1150	Site Office Establishment	14	27-Jan-11	09-Feb-11*	19	CNO1000	MON1200
INW1160	Apply CNP for Piling Works	30	31-Jan-11	01-Mar-11	52	CNO1000	WBS1570
INW1170	Apply Marine Notice to Marine Department (For Piling Works)	30	18-Feb-11	19-Mar-11	54	CNO1000	WBS1570
INW1180	Apply FEP and notify EPD	28	18-Feb-11	17-Mar-11	43	CNO1000	DRW1330
INW1190	Apply dumping permit	28	18-Feb-11	17-Mar-11	43	CNO1000	DRW1330
INW1200	Submit ADMS and vibration monitoring MS	27	22-Feb-11	20-Mar-11	40	CNO1000	MON1210
INW1210	Submit risk assessment to MTR	21	28-Feb-11	20-Mar-11	40	CNO1000	DRW1330
INW1220	Erect hoarding	34	28-Feb-11	02-Apr-11*	28	CNO1000	DRW1330
<b>Monitoring</b>							
21	28-Feb-11	21-Mar-11	40				
<b>Monitoring for MTR Tsuen Wan Line</b>							
21	28-Feb-11	21-Mar-11	40				
MON1200	Immerse tube internal condition survey	21	28-Feb-11	20-Mar-11	40	CNO1000, INW1	DRW1330, M
MON1210	Takeover monitoring system from C1	0	21-Mar-11*	40	MON1200, INW1	DRW1330	
MON1220	Commence monitoring- ADMS, etc	0	21-Mar-11*	40	DRW1330		
<b>Dredging</b>							
574	18-Feb-11	13-Sep-12	324				
<b>1st Stage of Dredging</b>							
93	18-Feb-11	21-May-11	33				
DRW1300	Submit Method Statement for Dredging Works	26	18-Feb-11	19-Mar-11	27	CNO1000	DRW1310, I
DRW1310	Acceptance of Method Statement for Dredging	0		19-Mar-11*	27	DRW1300, INW1	DRW1320
DRW1320	Initial hydrographic survey	2	21-Mar-11	22-Mar-11	27	DRW1310	DRW1330
DRW1330	Dredging to formation level section (Portion 1)	15	25-Mar-11	12-Apr-11	27	MON1200, MON	WBS1560, D
DRW1340	Dredging to formation level section (Portion 2)	29	13-Apr-11	21-May-11	27	DRW1330	DRW1510, E
<b>2nd Stage of Dredging</b>							
238	20-Jan-12	13-Sep-12	324				
DRW1505	Acceptance of Method Statement for Dredging	0		13-Sep-12*	261	DRW1510	
DRW1510	Submit Method Statement for Dredging Works	23	20-Jan-12	18-Feb-12	261	DRW1340	DRW1505
<b>Piling</b>							
396	25-Mar-11	23-Apr-12	58				
<b>West Bound Temp. Type 2 Platform</b>							
158	25-Mar-11	29-Aug-11	102				
WBS1560	Preparation Works and Mobilizing for Temporary Type 2 Platform	26	25-Mar-11	28-Apr-11	39	DRW1330	WBS1570
WBS1570	staging piles P9 - P12	8	29-Apr-11	09-May-11	39	INW1170, INW1	WBS1580
WBS1580	staging piles P7 - P8	3	11-May-11	13-May-11	39	WBS1570	WBS1590
WBS1590	staging piles P5 - P6	3	14-May-11	17-May-11	39	WBS1580	WBS1600
WBS1600	staging piles P13 - P14	3	18-May-11	20-May-11	39	WBS1590	WBS1610, V
WBS1610	staging piles P15 - P16	3	21-May-11	24-May-11	40	WBS1600	WBS1620
WBS1620	staging piles P17 - P18	3	25-May-11	27-May-11	40	WBS1610	WBS1630
WBS1630	staging piles P19 - P20	3	28-May-11	31-May-11	40	WBS1620	WBS1640
WBS1640	staging piles P21 - P22	3	01-Jun-11	03-Jun-11	40	WBS1630	WBS1650
WBS1650	staging piles P23 - P24	3	04-Jun-11	08-Jun-11	40	WBS1640	WBS1660
WBS1660	staging piles P25 - P26	3	09-Jun-11	11-Jun-11	40	WBS1650	WBS1670
WBS1670	staging piles P59 - P60	2	13-Jun-11	14-Jun-11	40	WBS1660	WBS1690
WBS1690	staging piles P3 - P4	3	15-Jun-11	17-Jun-11	40	WBS1670	WBP1710, V
WBS1700	staging piles P1 - P2	8	08-Jul-11	16-Jul-11	85	WBS1690	WBS1710
WBS1710	Erection of Type 1 Platform	17	10-Aug-11	29-Aug-11	85	WBS1700	WBP1860, V
<b>West Bound Predrilling</b>							
91	06-Jul-11	04-Oct-11	76				
WBP1710	Preparation Works and Mobilizing for Type 3 Platform	12	06-Jul-11	19-Jul-11	40	WBS1690	WBP1720
WBP1720	Erection of Temporary Type 3 Platform for Predrilling	6	21-Jul-11	27-Jul-11	39	WBD1050, WBP	WBP1730
WBP1730	A14, A16	3	28-Jul-11	30-Jul-11	39	WBP1720	WBP1740
WBP1740	A15, A12	4	01-Aug-11	04-Aug-11	39	WBP1730	WBP1750

**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)



**金門 - 利達聯營**  
Gammon - Leader Joint Venture



**利達 LEADER**

Legend	Date	Revision	Ch...	Approved
Actual Work	31-May-12	Rev. E	MF	KT
Remaining Work	23-Jun-12	Rev. F	MF	KT
Critical Remaining ...	19-Jul-12	Rev. G	MF	KT
Milestone	14-Aug-12	Rev. H	MF	KT
Summary	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013					
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
WBP1750	A11	2	05-Aug-11	06-Aug-11	39	WBP1740	WBP1755														
WBP1755	A13	2	08-Aug-11	09-Aug-11	39	WBP1750	WBP1760														
WBP1760	A10	6	10-Aug-11	16-Aug-11	39	WBP1755	WBP1765														
WBP1765	A28	3	13-Aug-11	16-Aug-11	39	WBP1760	WBP1770														
WBP1770	A29	4	17-Aug-11	20-Aug-11	39	WBP1765	WBP1780														
WBP1780	A18, A22	4	22-Aug-11	25-Aug-11	39	WBP1770	WBP1790														
WBP1790	A19, A23	4	26-Aug-11	30-Aug-11	39	WBP1780	WPP1400, W														
WBP1800	A20, A24	4	31-Aug-11	03-Sep-11	64	WBP1790	WBP1810														
WBP1810	A21, A25	4	05-Sep-11	08-Sep-11	64	WBP1800	WBP1820														
WBP1820	A26, A27	4	09-Sep-11	14-Sep-11	64	WBP1810	WBP1830														
WBP1830	A4, A6	4	15-Sep-11	19-Sep-11	64	WBP1820	WBP1840														
WBP1840	A5, A8	4	20-Sep-11	23-Sep-11	64	WBP1830	WBP1850														
WBP1850	A7, A9	4	24-Sep-11	28-Sep-11	64	WBP1840	WBP1860														
WBP1860	A3	4	29-Sep-11	04-Oct-11	64	WBP1850, WBS	EBP2610, W														
<b>West Bound Bored Pile Construction Works</b>		<b>265</b>	<b>27-Jun-11</b>	<b>17-Mar-12</b>	<b>72</b>																
<b>Driving of 2650mm dia. casing</b>		<b>83</b>	<b>27-Jun-11</b>	<b>17-Sep-11</b>	<b>104</b>																
WBD1000	A14	2	27-Jun-11	28-Jun-11	39	WBS1600	WBD1010														
WBD1010	A16	2	30-Jun-11	02-Jul-11	39	WBD1000	WBD1020														
WBD1020	A18	2	08-Jul-11	09-Jul-11	39	WBD1010	WBD1030														
WBD1030	A12	3	11-Jul-11	13-Jul-11	39	WBD1020	WBD1040														
WBD1040	A10	3	14-Jul-11	16-Jul-11	39	WBD1030	WBD1050														
WBD1050	A20	3	18-Jul-11	20-Jul-11	39	WBD1040	WBP1720, V														
WBD1060	A22	3	21-Jul-11	23-Jul-11	104	WBD1050	WBD1070														
WBD1070	A24	3	25-Jul-11	27-Jul-11	104	WBD1060	WBD1080														
WBD1080	A26	3	28-Jul-11	30-Jul-11	104	WBD1070	WBD1090														
WBD1090	A28	3	01-Aug-11	03-Aug-11	104	WBD1080	WBD1100														
WBD1100	T5	3	04-Aug-11	06-Aug-11	104	WBD1090	WBD1110														
WBD1110	A8	3	30-Aug-11	01-Sep-11	85	WBD1100, WBS	WBD1120														
WBD1120	A6	3	02-Sep-11	05-Sep-11	85	WBD1110	WBD1130, V														
WBD1130	A4	10	06-Sep-11	17-Sep-11	85	WBD1120	WPP1500														
<b>Excavation to Rockhead Level</b>		<b>123</b>	<b>31-Aug-11</b>	<b>31-Dec-11</b>	<b>86</b>																
WPP1400	A15	5	31-Aug-11	05-Sep-11	39	WBP1790	WPP1410														
WPP1410	A11	3	08-Sep-11	10-Sep-11	39	WPP1400	WPP1420														
WPP1420	A17	4	14-Sep-11	17-Sep-11	39	WPP1410	WPP1430														
WPP1430	A13	2	19-Sep-11	20-Sep-11	39	WPP1420	WPP1440														
WPP1440	A21	3	23-Sep-11	26-Sep-11	39	WPP1430	WPP1450														
WPP1450	A27	5	30-Sep-11	07-Oct-11	39	WPP1440	WPP1460														
WPP1460	A12	2	08-Oct-11	10-Oct-11	39	WPP1450	WBC2010, V														
WPP1470	A19	4	11-Oct-11	14-Oct-11	55	WPP1460	WPP1480														
WPP1480	A29	5	17-Oct-11	21-Oct-11	55	WPP1470	WPP1490														
WPP1490	A16	3	22-Oct-11	25-Oct-11	55	WPP1480	WPP1500														
WPP1500	A5	4	26-Oct-11	29-Oct-11	55	WPP1490, WBD	WPP1510														
WPP1510	A20	5	31-Oct-11	04-Nov-11	55	WPP1500	WPP1520														
WPP1520	A25	5	05-Nov-11	10-Nov-11	55	WPP1510	WPP1530														
WPP1530	A9	4	11-Nov-11	15-Nov-11	55	WPP1520	WPP1540														
WPP1540	A14	3	16-Nov-11	18-Nov-11	55	WPP1530	WPP1560, V														
WPP1550	A10	2	23-Nov-11	24-Nov-11	55	EPP1480	WPP1570														
WPP1560	A23	5	19-Nov-11	24-Nov-11	69	WPP1540	WPP1580														
WPP1570	A3	6	25-Nov-11	01-Dec-11	55	WBP1860, WPP	WPP1590														
WPP1580	A18	5	25-Nov-11	30-Nov-11	69	WPP1560	WPP1600														
WPP1590	A7	5	02-Dec-11	07-Dec-11	55	WPP1570, WBD	WPP1610														
WPP1600	A28	5	01-Dec-11	06-Dec-11	69	WPP1580	WPP1620														
WPP1610	A4	5	08-Dec-11	13-Dec-11	55	WPP1590	WPP1630, V														
WPP1620	A22	5	07-Dec-11	12-Dec-11	69	WPP1600	WPP1640														
WPP1630	A8	5	14-Dec-11	19-Dec-11	57	WPP1610	EPP1490														
WPP1640	A26	5	13-Dec-11	17-Dec-11	69	WPP1620	WPP1650														
WPP1650	A6	5	19-Dec-11	23-Dec-11	69	WPP1640	WPP1660														
WPP1660	A24	5	24-Dec-11	31-Dec-11	69	WPP1650	EPP1510														
<b>Rock Excavation and Concreting</b>		<b>145</b>	<b>25-Oct-11</b>	<b>17-Mar-12</b>	<b>72</b>																
WBC2010	A12	13	25-Oct-11	08-Nov-11	39	WPP1460	WBC2040														



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Actual Work	31-May-12	Rev. E	MF	KT
Remaining Work	23-Jun-12	Rev. F	MF	KT
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Milestone	14-Aug-12	Rev. H	MF	KT
Summary	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

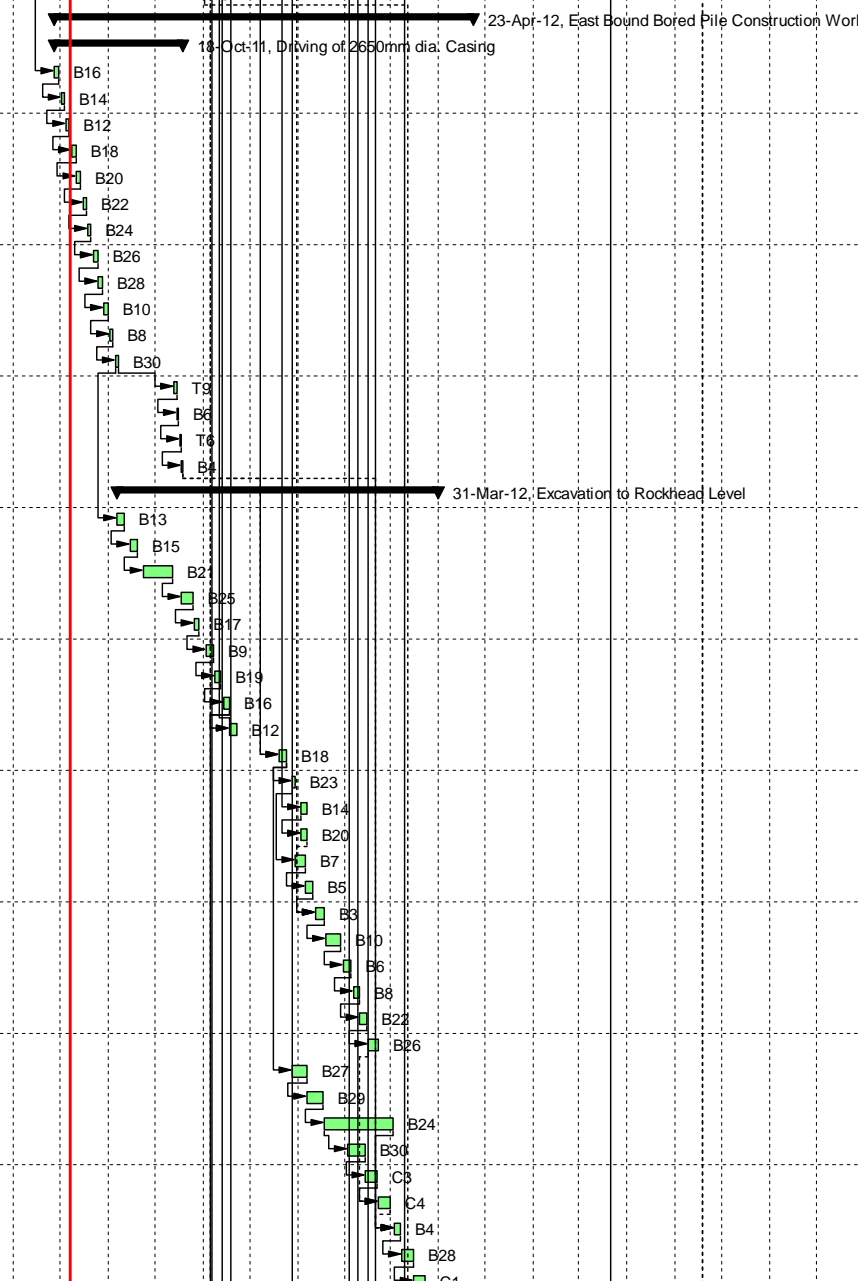
**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)







Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013				
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
EBP2550	B8	6	18-Oct-11	24-Oct-11	58	EBP2540	EBP2560													
EBP2560	B7	2	25-Oct-11	26-Oct-11	58	EBP2550	EBP2570													
EBP2570	B6	4	27-Oct-11	31-Oct-11	58	EBP2560	EBP2580													
EBP2580	B5	2	01-Nov-11	02-Nov-11	58	EBS2390, EBP2570	EBP2590													
EBP2590	B4	3	03-Nov-11	05-Nov-11	58	EBP2580	EBP2600													
EBP2600	B3	6	08-Nov-11	14-Nov-11	58	EBP2590	EPP1550, EF													
EBP2610	B27	3	04-Oct-11	07-Oct-11	64	WBP1860	EBP2620													
EBP2620	C4	6	08-Oct-11	14-Oct-11	64	EBP2610	EBP2630													
EBP2630	C3	6	15-Oct-11	21-Oct-11	64	EBP2620	EBP2640													
EBP2640	C1	4	22-Oct-11	26-Oct-11	64	EBP2630	EBP2650													
EBP2650	C2	5	27-Oct-11	01-Nov-11	64	EBP2640	EPP1700													
<b>East Bound Bored Pile Construction Work</b>			<b>271</b>	<b>28-Jul-11</b>	<b>23-Apr-12</b>	<b>58</b>														
<b>Driving of 2650mm dia. Casing</b>			<b>83</b>	<b>28-Jul-11</b>	<b>18-Oct-11</b>	<b>71</b>														
EBD1010	B16	3	28-Jul-11	30-Jul-11	27	EBS2340	EBD1020													
EBD1020	B14	3	01-Aug-11	03-Aug-11	27	EBD1010	EBD1030													
EBD1030	B12	3	04-Aug-11	06-Aug-11	27	EBD1020	EBD1040													
EBD1040	B18	3	08-Aug-11	10-Aug-11	27	EBD1030	EBD1050													
EBD1050	B20	3	11-Aug-11	13-Aug-11	27	EBD1040	EBD1060													
EBD1060	B22	3	15-Aug-11	17-Aug-11	27	EBD1050	EBD1070													
EBD1070	B24	3	18-Aug-11	20-Aug-11	27	EBD1060	EBD1080													
EBD1080	B26	3	22-Aug-11	24-Aug-11	27	EBD1070	EBD1090													
EBD1090	B28	3	25-Aug-11	27-Aug-11	27	EBD1080	EBD1100													
EBD1100	B10	3	29-Aug-11	31-Aug-11	27	EBD1090	EBD1110													
EBD1110	B8	3	01-Sep-11	03-Sep-11	27	EBD1100	EBD1130													
EBD1130	B30	3	05-Sep-11	07-Sep-11	27	EBD1110	EPP1400, EF													
EBD1140	T9	2	13-Oct-11	14-Oct-11	59	EBD1130	EBD1150													
EBD1150	B6	1	15-Oct-11	15-Oct-11	59	EBD1140	EBD1155													
EBD1155	T6	1	17-Oct-11	17-Oct-11	59	EBD1150	EBD1160													
EBD1160	B4	1	18-Oct-11	18-Oct-11	59	EBD1155	EPP1490, EF													
<b>Excavation to Rockhead Level</b>			<b>208</b>	<b>06-Sep-11</b>	<b>31-Mar-12</b>	<b>74</b>														
EPP1400	B13	5	06-Sep-11	10-Sep-11	27	EBD1130	EPP1410													
EPP1410	B15	4	15-Sep-11	19-Sep-11	27	EPP1400	EPP1420													
EPP1420	B21	15	23-Sep-11	12-Oct-11	27	EPP1410	EPP1430													
EPP1430	B25	7	18-Oct-11	25-Oct-11	27	EPP1420	EPP1440													
EPP1440	B17	4	26-Oct-11	29-Oct-11	27	EPP1430	EPP1450													
EPP1450	B9	4	03-Nov-11	07-Nov-11	27	EPP1440	EPP1460													
EPP1460	B19	5	08-Nov-11	12-Nov-11	27	EPP1450	EPP1470													
EPP1470	B16	4	14-Nov-11	17-Nov-11	27	EPP1460	EBC2000, EF													
EPP1480	B12	4	18-Nov-11	22-Nov-11	55	EBP2600, EPP1470	WPP1550													
EPP1490	B18	5	20-Dec-11	24-Dec-11	57	EBD1160, WPP1480	EPP1500, EF													
EPP1500	B23	3	28-Dec-11	30-Dec-11	65	EPP1490	EPP1530													
EPP1510	B14	4	03-Jan-12	06-Jan-12	69	WPP1660	EPP1520													
EPP1520	B20	4	03-Jan-12	06-Jan-12	69	EPP1510	EPP1550													
EPP1530	B7	5	30-Dec-11	05-Jan-12	65	EPP1500	EPP1540													
EPP1540	B5	4	06-Jan-12	10-Jan-12	65	EPP1530	EPP1550													
EPP1550	B3	6	12-Jan-12	18-Jan-12	65	EPP1540, EPP1530	EPP1560													
EPP1560	B10	6	19-Jan-12	28-Jan-12	65	EPP1550	EPP1570													
EPP1570	B6	6	30-Jan-12	04-Feb-12	65	EPP1560	EPP1580													
EPP1580	B8	4	06-Feb-12	09-Feb-12	65	EPP1570	EPP1590													
EPP1590	B22	4	10-Feb-12	14-Feb-12	65	EPP1580	EPP1600													
EPP1600	B26	7	15-Feb-12	22-Feb-12	65	EPP1590	EPP1662													
EPP1610	B27	8	28-Dec-11	06-Jan-12	57	EPP1490	EPP1620													
EPP1620	B29	9	07-Jan-12	17-Jan-12	57	EPP1610	EPP1630													
EPP1630	B24	36	18-Jan-12	02-Mar-12	57	EPP1620	EPP1640, EF													
EPP1640	B30	10	02-Feb-12	13-Feb-12	59	EPP1630	EPP1650													
EPP1650	C3	7	14-Feb-12	21-Feb-12	59	EPP1640	EPP1662													
EPP1662	C4	7	22-Feb-12	29-Feb-12	59	EPP1650, EPP1640	EPP1670													
EPP1670	B4	4	03-Mar-12	07-Mar-12	57	EBD1160, EPP1662	EPP1680													
EPP1680	B28	7	08-Mar-12	15-Mar-12	57	EPP1670	EPP1690													
EPP1690	C1	7	16-Mar-12	23-Mar-12	57	EPP1680	EPP1700													



<span style="color: blue;">█</span> Actual Work	Date	Revision	Ch...	Approved
<span style="color: green;">█</span> Remaining Work	31-May-12	Rev. E	MF	KT
<span style="color: red;">█</span> Critical Remaining ...	23-Jun-12	Rev. F	MF	KT
◆ Milestone	19-Jul-12	Rev. G	MF	KT
➤ Summary	14-Aug-12	Rev. H	MF	KT
	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
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**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
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Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011			2012				2013				
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
STG7003	Formwork Erection	17	25-Jun-12	11-Jul-12	97	STG7002	STG7004												
STG7004	Concreting	2	12-Jul-12	13-Jul-12	97	STG7003	STG7005												
STG7005	Formwork Removal	6	16-Jul-12	21-Jul-12	97	STG7004	STG1210												
<b>Stage 8</b>		<b>32</b>	<b>23-Jun-12</b>	<b>24-Jul-12</b>	<b>62</b>														
<b>First Part of Wall 48A, 49A(Side Wall) &amp; 43A(Double Wall) of Box 4A and 43B</b>		<b>32</b>	<b>23-Jun-12</b>	<b>24-Jul-12</b>	<b>62</b>														
STG8001	Setting Out	20	23-Jun-12	12-Jul-12	62	STG4005	STG8002												
STG8002	Rebar Fixing	20	25-Jun-12	14-Jul-12	62	STG8001	STG8003												
STG8003	Formwork Erection	22	27-Jun-12	18-Jul-12	62	STG8002	STG8004												
STG8004	Concreting	2	19-Jul-12	20-Jul-12	62	STG8003	STG8005												
STG8005	Formwork Removal	3	22-Jul-12	24-Jul-12	62	STG8004	STG1410												
<b>Stage 9</b>		<b>27</b>	<b>21-Jul-12</b>	<b>16-Aug-12</b>	<b>111</b>														
<b>First Part of Wall 46 &amp; 48B of (Box 4B)</b>		<b>27</b>	<b>21-Jul-12</b>	<b>16-Aug-12</b>	<b>111</b>														
STG9001	Setting Out	15	21-Jul-12	04-Aug-12	111	STG2004	STG9002												
STG9002	Rebar Fixing	13	23-Jul-12	04-Aug-12	111	STG9001	STG9003												
STG9003	Formwork Erection	13	25-Jul-12	06-Aug-12	111	STG9002	STG9004												
STG9004	Concreting	2	07-Aug-12	08-Aug-12	111	STG9003	STG9005												
STG9005	Formwork Removal	6	11-Aug-12	16-Aug-12	111	STG9004	PPC6000												
<b>Stage 10</b>		<b>22</b>	<b>26-Jul-12</b>	<b>16-Aug-12</b>	<b>74</b>														
<b>First Part of Wall 47 (Internal Wall) (WAC)</b>		<b>22</b>	<b>26-Jul-12</b>	<b>16-Aug-12</b>	<b>74</b>														
STG1010	Setting Out	15	26-Jul-12	09-Aug-12	74	STG2004	STG1020												
STG1020	Rebar Fixing	12	28-Jul-12	08-Aug-12	74	STG1010	STG1030												
STG1030	Formwork Erection	12	30-Jul-12	10-Aug-12	74	STG1020	STG1040												
STG1040	Concreting	1	11-Aug-12	11-Aug-12	74	STG1030	STG1050												
STG1050	Formwork Removal	3	14-Aug-12	16-Aug-12	74	STG1040	STG1510												
<b>Stage 10A</b>		<b>27</b>	<b>21-Jul-12</b>	<b>16-Aug-12</b>	<b>74</b>														
<b>Intermediate Slab (Panel Slot Slab) and First Part of Wall 53, 54 &amp; 55 of WAC</b>		<b>27</b>	<b>21-Jul-12</b>	<b>16-Aug-12</b>	<b>74</b>														
SGA1010	Setting Out	14	21-Jul-12	03-Aug-12	0	STG6004	SGA1020												
SGA1020	Falsework Erection	12	23-Jul-12	03-Aug-12	0	SGA1010	SGA1030												
SGA1030	Formwork Erection	11	25-Jul-12	04-Aug-12	0	SGA1020	SGA1040												
SGA1040	Rebar Fixing	11	27-Jul-12	06-Aug-12	0	SGA1030	SGA1050												
SGA1050	Concreting	1	07-Aug-12	07-Aug-12	0	SGA1040	STG1310, S												
SGA1060	Formwork and Falsework Removal	5	12-Aug-12	16-Aug-12	74	SGA1050	STG1510												
<b>Stage 11</b>		<b>29</b>	<b>02-Aug-12</b>	<b>30-Aug-12</b>	<b>97</b>														
<b>First Part of Wall 44, 45A, 45B, 49B of (Box 4B)</b>		<b>29</b>	<b>02-Aug-12</b>	<b>30-Aug-12</b>	<b>97</b>														
STG1110	Setting Out	15	02-Aug-12	16-Aug-12	0	STG2006	STG1120												
STG1120	Rebar Fixing	13	04-Aug-12	16-Aug-12	0	STG1110	STG1130												
STG1130	Formwork Erection	13	06-Aug-12	18-Aug-12	0	STG1120	STG1140												
STG1140	Concreting	1	19-Aug-12	19-Aug-12	0	STG1130	STG1610, S												
STG1150	Formwork Removal	8	23-Aug-12	30-Aug-12	97	STG1140	PPC6000												
<b>Stage 12</b>		<b>42</b>	<b>20-Jul-12</b>	<b>30-Aug-12</b>	<b>97</b>														
<b>Top Slab of Box 2 &amp; 3</b>		<b>42</b>	<b>20-Jul-12</b>	<b>30-Aug-12</b>	<b>97</b>														
STG1210	Setting Out	19	20-Jul-12	07-Aug-12	97	STG7005	STG1220												
STG1220	Falsework Erection	17	22-Jul-12	07-Aug-12	97	STG1210	STG1230												
STG1230	Formwork Erection	17	24-Jul-12	09-Aug-12	97	STG1220	STG1240												
STG1240	Rebar Fixing	17	26-Jul-12	11-Aug-12	97	STG1230	STG1250												
STG1250	Concreting	2	12-Aug-12	13-Aug-12	97	STG1240	STG1260												
STG1260	Formwork and Falsework Removal	8	23-Aug-12	30-Aug-12	97	STG1250	PPC6000												
<b>Stage 13</b>		<b>23</b>	<b>27-Sep-12</b>	<b>19-Oct-12</b>	<b>0</b>														
<b>Wall 52 (lower) -5.25 to 0.5 + Lower Roof Slab</b>		<b>23</b>	<b>27-Sep-12</b>	<b>19-Oct-12</b>	<b>0</b>														
STG1310	Setting Out	15	27-Sep-12	11-Oct-12	0	STG6005, SGA1	STG1320												
STG1320	Rebar Fixing	11	29-Sep-12	09-Oct-12	0	STG1310	STG1330												
STG1330	Formwork Erection	11	01-Oct-12	11-Oct-12	0	STG1320	STG1340												
STG1340	Concreting	1	12-Oct-12	12-Oct-12	0	STG1330	STG1350												
STG1350	Formwork Removal	2	18-Oct-12	19-Oct-12	0	STG1340	PPC6000, S												
<b>Stage 14</b>		<b>32</b>	<b>03-Sep-12</b>	<b>04-Oct-12</b>	<b>62</b>														
<b>Top Slab of Box 4A</b>		<b>32</b>	<b>03-Sep-12</b>	<b>04-Oct-12</b>	<b>62</b>														
STG1410	Setting Out	11	03-Sep-12	13-Sep-12	62	STG8005	STG1420												
STG1420	Falsework Erection	11	06-Sep-12	16-Sep-12	62	STG1410	STG1430												
STG1430	Formwork Erection	10	08-Sep-12	17-Sep-12	62	STG1420	STG1440												
STG1440	Rebar Fixing	10	10-Sep-12	19-Sep-12	62	STG1430	STG1450												

	Actual Work		
	Remaining Work		
	Critical Remaining ...		
	Milestone		
	Summary		
Date	Revision	Ch...	Approved
31-May-12	Rev. E	MF	KT
23-Jun-12	Rev. F	MF	KT
19-Jul-12	Rev. G	MF	KT
14-Aug-12	Rev. H	MF	KT
19-Sep-12	Rev. I	MF	KT
21-Nov-12	Rev. J	MF	KT
19-Feb-13	Rev. K	MF	KT
05-Mar-13	Rev. L	MF	KT

**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

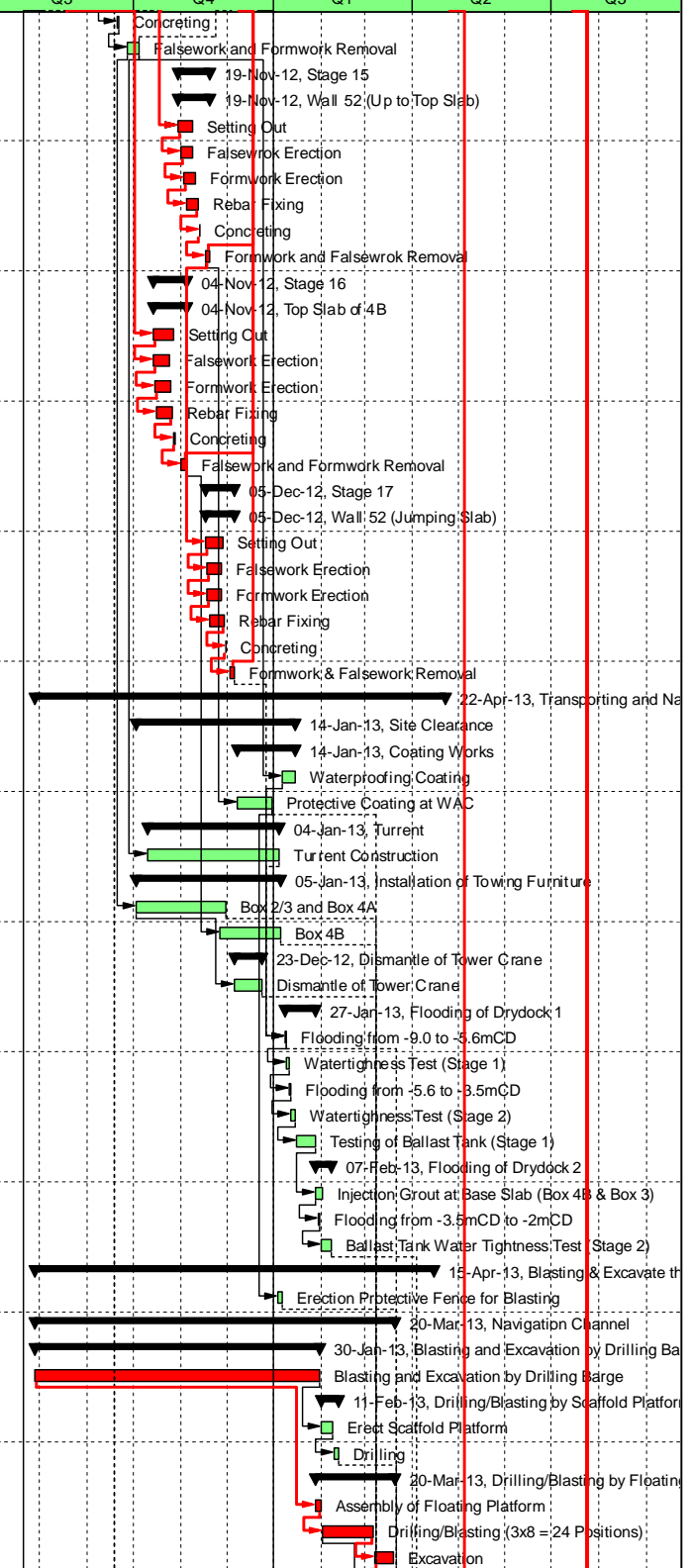


**金門 - 利達聯營**

**Gammon - Leader Joint Venture**



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
STG1450	Concreting	2	20-Sep-12	21-Sep-12	62	STG1440	STG1460												
STG1460	Falsework and Formwork Removal	8	27-Sep-12	04-Oct-12	62	STG1450	ITF3010, PP												
<b>Stage 15</b>		<b>21</b>	<b>30-Oct-12</b>	<b>19-Nov-12</b>	<b>0</b>														
<b>Wall 52 (Up to Top Slab)</b>		<b>21</b>	<b>30-Oct-12</b>	<b>19-Nov-12</b>	<b>0</b>														
STG1510	Setting Out	10	30-Oct-12	08-Nov-12	0	STG1050, STG1	STG1520												
STG1520	Falsework Erection	8	01-Nov-12	08-Nov-12	0	STG1510	STG1530												
STG1530	Formwork Erection	8	03-Nov-12	10-Nov-12	0	STG1520	STG1540												
STG1540	Rebar Fixing	8	05-Nov-12	12-Nov-12	0	STG1530	STG1550												
STG1550	Concreting	1	13-Nov-12	13-Nov-12	0	STG1540	STG1560												
STG1560	Formwork and Falsework Removal	3	17-Nov-12	19-Nov-12	0	STG1550	STG1710, C												
<b>Stage 16</b>		<b>22</b>	<b>14-Oct-12</b>	<b>04-Nov-12</b>	<b>0</b>														
<b>Top Slab of 4B</b>		<b>22</b>	<b>14-Oct-12</b>	<b>04-Nov-12</b>	<b>0</b>														
STG1610	Setting Out	14	14-Oct-12	27-Oct-12	0	STG1140	STG1620												
STG1620	Falsework Erection	11	14-Oct-12	24-Oct-12	0	STG1610	STG1630												
STG1630	Formwork Erection	11	15-Oct-12	25-Oct-12	0	STG1620	STG1640												
STG1640	Rebar Fixing	11	16-Oct-12	26-Oct-12	0	STG1630	STG1650												
STG1650	Concreting	2	27-Oct-12	28-Oct-12	0	STG1640	STG1660												
STG1660	Falsework and Formwork Removal	4	01-Nov-12	04-Nov-12	0	STG1650	PPC6000, IT												
<b>Stage 17</b>		<b>19</b>	<b>17-Nov-12</b>	<b>05-Dec-12</b>	<b>0</b>														
<b>Wall 52 (Jumping Slab)</b>		<b>19</b>	<b>17-Nov-12</b>	<b>05-Dec-12</b>	<b>0</b>														
STG1710	Setting Out	12	17-Nov-12	28-Nov-12	0	STG1560	STG1720												
STG1720	Falsework Erection	10	18-Nov-12	27-Nov-12	0	STG1710	STG1730												
STG1730	Formwork Erection	10	18-Nov-12	27-Nov-12	0	STG1720	STG1740												
STG1740	Rebar Fixing	10	20-Nov-12	29-Nov-12	0	STG1730	STG1750												
STG1750	Concreting	1	30-Nov-12	30-Nov-12	0	STG1740	STG1760												
STG1760	Formwork & Falsework Removal	3	03-Dec-12	05-Dec-12	0	STG1750	FOD6010, P												
<b>Transporting and Navigating</b>		<b>268</b>	<b>29-Jul-12</b>	<b>22-Apr-13</b>	<b>0</b>														
<b>Site Clearance</b>		<b>104</b>	<b>03-Oct-12</b>	<b>14-Jan-13</b>	<b>67</b>														
<b>Coating Works</b>		<b>38</b>	<b>08-Dec-12</b>	<b>14-Jan-13</b>	<b>67</b>														
CWW1000	Waterproofing Coating	9	06-Jan-13	14-Jan-13	62	STG1460	FOD6010												
CWW1010	Protective Coating at WAC	23	08-Dec-12	30-Dec-12	75	STG1560	BED3000, BI												
<b>Turrent</b>		<b>87</b>	<b>10-Oct-12</b>	<b>04-Jan-13</b>	<b>70</b>														
SCT2000	Turrent Construction	87	10-Oct-12	04-Jan-13	65	STG1460	FOD6010												
<b>Installation of Towing Furniture</b>		<b>95</b>	<b>03-Oct-12</b>	<b>05-Jan-13</b>	<b>68</b>														
ITF3010	Box 2/3 and Box 4A	59	03-Oct-12	30-Nov-12	82	STG1460	DTC4010, BI												
ITF3020	Box 4B	41	26-Nov-12	05-Jan-13	63	STG1660	BED3400												
<b>Dismantle of Tower Crane</b>		<b>18</b>	<b>06-Dec-12</b>	<b>23-Dec-12</b>	<b>87</b>														
DTC4010	Dismantle of Tower Crane	18	06-Dec-12	23-Dec-12	82	ITF3010	BED3400												
<b>Flooding of Drydock 1</b>		<b>20</b>	<b>08-Jan-13</b>	<b>27-Jan-13</b>	<b>67</b>														
FOD6010	Flooding from -9.0 to -5.6mCD	1	08-Jan-13	08-Jan-13	62	CWW1000, STG	PPU8000, F												
FOD6020	Watertightness Test (Stage 1)	2	09-Jan-13	10-Jan-13	62	FOD6010	FOD6030												
FOD6030	Flooding from -5.6 to -3.5mCD	1	11-Jan-13	11-Jan-13	62	FOD6020	FOD6040												
FOD6040	Watertightness Test (Stage 2)	3	12-Jan-13	14-Jan-13	62	FOD6030	FOD6050												
FOD6050	Testing of Ballast Tank (Stage 1)	13	15-Jan-13	27-Jan-13	62	FOD6040	FOD7010												
<b>Flooding of Drydock 2</b>		<b>11</b>	<b>28-Jan-13</b>	<b>07-Feb-13</b>	<b>67</b>														
FOD7010	Injection Grout at Base Slab (Box 4B & Box 3)	5	28-Jan-13	01-Feb-13	62	FOD6050	FOD7020												
FOD7020	Flooding from -3.5mCD to -2mCD	1	30-Jan-13	30-Jan-13	62	FOD7010	FOD7030												
FOD7030	Ballast Tank Water Tightness Test (Stage 2)	8	31-Jan-13	07-Feb-13	62	FOD7020	PPU8010												
<b>Blasting &amp; Excavate the Navigation and Dock Gate</b>		<b>261</b>	<b>29-Jul-12</b>	<b>15-Apr-13</b>	<b>0</b>														
BED3000	Erection Protective Fence for Blasting	4	03-Jan-13	06-Jan-13	81	CWW1010	PPU8000												
<b>Navigation Channel</b>		<b>235</b>	<b>29-Jul-12</b>	<b>20-Mar-13</b>	<b>13</b>														
<b>Blasting and Excavation by Drilling Barge</b>		<b>186</b>	<b>29-Jul-12</b>	<b>30-Jan-13</b>	<b>0</b>														
BED3100	Blasting and Excavation by Drilling Barge	186	29-Jul-12*	30-Jan-13	0		BED3200, BI												
<b>Drilling/Blasting by Scaffold Platform</b>		<b>12</b>	<b>31-Jan-13</b>	<b>11-Feb-13</b>	<b>50</b>														
BED3200	Erect Scaffold Platform	9	31-Jan-13	08-Feb-13	45	BED3100	BED3210												
BED3210	Drilling	3	09-Feb-13	11-Feb-13	50	BED3200	PPU8000												
<b>Drilling/Blasting by Floating Platform</b>		<b>52</b>	<b>28-Jan-13</b>	<b>20-Mar-13</b>	<b>9</b>														
BED3300	Assembly of Floating Platform	4	28-Jan-13	31-Jan-13	0	BED3100	BED3310												
BED3310	Drilling/Blasting (3x8 = 24 Positions)	29	01-Feb-13	06-Mar-13	0	BED3300	BED3320, BI												
BED3320	Excavation	13	07-Mar-13	19-Mar-13	0	BED3310	BED3330												



Legend	Date	Revision	Ch...	Approved
Actual Work	31-May-12	Rev. E	MF	KT
Remaining Work	23-Jun-12	Rev. F	MF	KT
Critical Remaining ...	19-Jul-12	Rev. G	MF	KT
Milestone	14-Aug-12	Rev. H	MF	KT
Summary	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

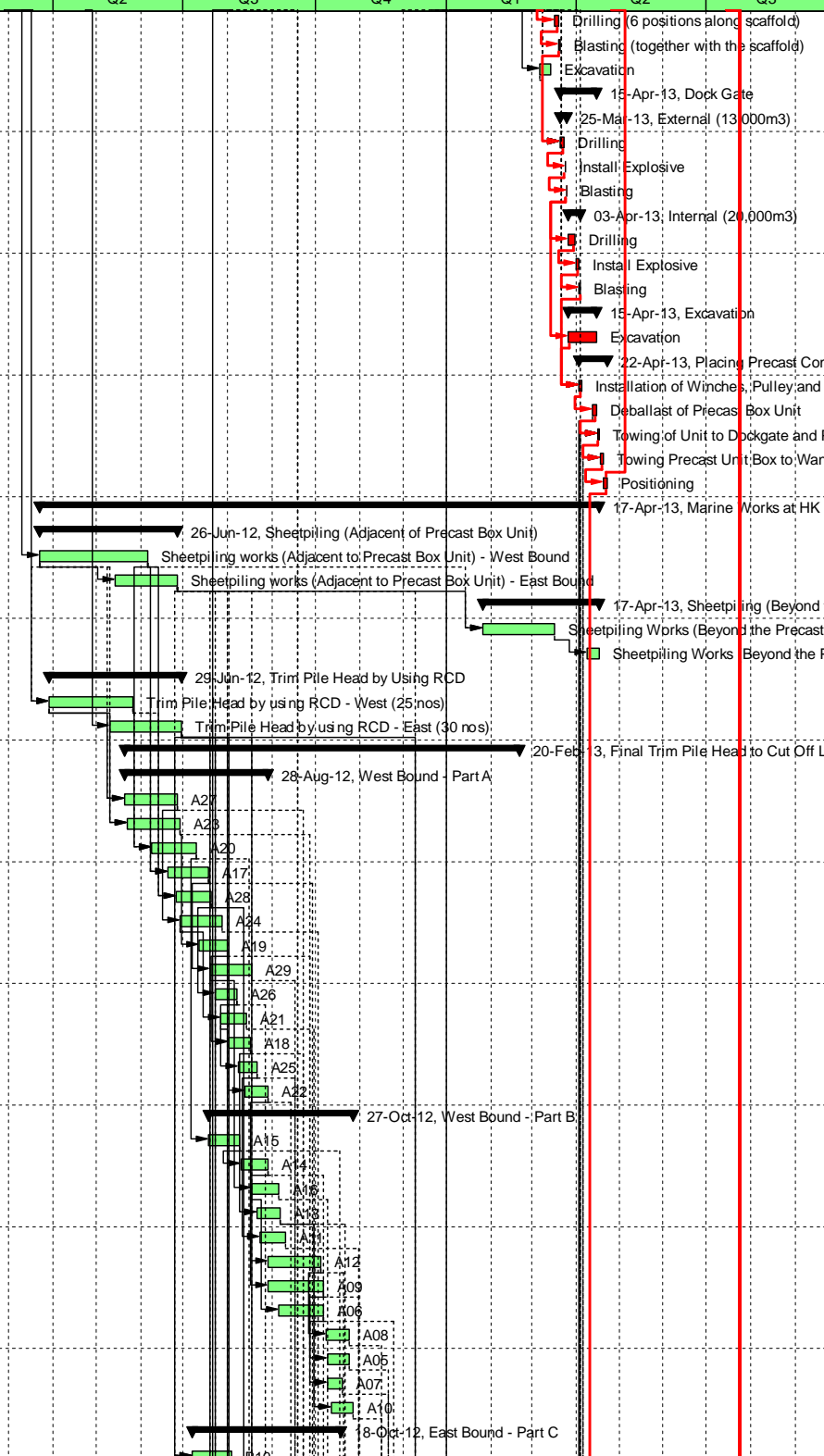
**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

金門 - 利達聯營

**Gammon - Leader Joint Venture**



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013		
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
BED3330	Drilling (6 positions along scaffold)	3	17-Mar-13	19-Mar-13	0	BED3320	BED3340											
BED3340	Blasting (together with the scaffold)	1	20-Mar-13	20-Mar-13	0	BED3330	BED3400											
BED3350	Excavation	9	06-Mar-13	14-Mar-13	15	BED3310	BED3400											
<b>Dock Gate</b>		26	21-Mar-13	15-Apr-13	0													
<b>External (13,000m3)</b>		5	21-Mar-13	25-Mar-13	0													
BED3400	Drilling	3	21-Mar-13	23-Mar-13	0	ITF3010, DTC40	BED3410											
BED3410	Install Explosive	1	24-Mar-13	24-Mar-13	0	BED3400	BED3420											
BED3420	Blasting	1	25-Mar-13	25-Mar-13	0	BED3410	BED3500, BI											
<b>Internal (20,000m3)</b>		9	26-Mar-13	03-Apr-13	0													
BED3500	Drilling	6	26-Mar-13	31-Mar-13	0	BED3420	BED3510											
BED3510	Install Explosive	2	01-Apr-13	02-Apr-13	0	BED3500	BED3520											
BED3520	Blasting	1	03-Apr-13	03-Apr-13	0	BED3510	PPU8000											
<b>Excavation</b>		21	26-Mar-13	15-Apr-13	0													
BED4000	Excavation	21	26-Mar-13	15-Apr-13	0	BED3420	PPU8000											
<b>Placing Precast Combined Unit</b>		20	03-Apr-13	22-Apr-13	0													
PPU8000	Installation of Winches, Pulley and Survey Tower at Box 4B top sl	2	03-Apr-13	04-Apr-13	0	FOD6010, BED3	PPU8005											
PPU8005	Deballast of Precast Box Unit	4	12-Apr-13	15-Apr-13	0	PPU8000	PPU8010, DI											
PPU8010	Towing of Unit to Dockgate and Preparation for Towing	2	16-Apr-13	17-Apr-13	0	PPU8005, FPP1	PPU8020											
PPU8020	Towing Precast Unit Box to Wan Chai	2	18-Apr-13	19-Apr-13	0	PPU8010, DRW	PPU8030											
PPU8030	Positioning	2	20-Apr-13	22-Apr-13	0	PPU8020	SSU9010, CI											
<b>Marine Works at HK</b>		392	22-Mar-12	17-Apr-13	108													
<b>Sheetpiling (Adjacent of Precast Box Unit)</b>		97	22-Mar-12	26-Jun-12	65													
PCW1800	Sheetpiling works (Adjacent to Precast Box Unit) - West Bound	59	22-Mar-12	05-Jun-12	55	WBC2320	PCW1810, V											
PCW1805	Sheetpiling works (Adjacent to Precast Box Unit) - East Bound	37	14-May-12	26-Jun-12	55	PCW1800	EBC3820, EI											
<b>Sheetpiling (Beyond the Precast Box Unit)</b>		82	26-Jan-13	17-Apr-13	108													
PCW1810	Sheetpiling Works (Beyond the Precast Box Unit) - (Eastern)	40	26-Jan-13	16-Mar-13	89	PCW1800, PCW	PCW1820											
PCW1820	Sheetpiling Works (Beyond the Precast Box Unit) - (Western)	9	08-Apr-13	17-Apr-13	89	PCW1810												
<b>Trim Pile Head by Using RCD</b>		93	29-Mar-12	29-Jun-12	80													
PCW1815	Trim Pile Head by using RCD - West (25 nos)	45	29-Mar-12	26-May-12	95	EBC2330, PCW1	WBA1820, V											
PCW1825	Trim Pile Head by using RCD - East (30 nos)	43	10-May-12	29-Jun-12	27	EBC2330	EBC3830, EI											
<b>Final Trim Pile Head to Cut Off Level</b>		276	21-May-12	20-Feb-13	50													
<b>West Bound - Part A</b>		100	21-May-12	28-Aug-12	118													
WBA1800	A27	31	21-May-12	26-Jun-12	95	PCW1815, PCW	WGA1860, V											
WBA1810	A23	31	23-May-12	28-Jun-12	97	PCW1800, PCW	WBA1860, V											
WBA1820	A20	24	09-Jun-12	09-Jul-12	94	PCW1815, PCW	WBB2810, V											
WBA1830	A17	23	20-Jun-12	18-Jul-12	107	PCW1800, PCW	WGA1900, V											
WBA1840	A28	21	26-Jun-12	20-Jul-12	71	PCW1815, PCW	WGA1800, V											
WBA1850	A24	25	28-Jun-12	27-Jul-12	95	WBA1800	WGA1920, V											
WBA1860	A19	17	12-Jul-12	31-Jul-12	97	WBA1810	WGA1880, V											
WBA1870	A29	26	19-Jul-12	17-Aug-12	107	WBA1830	WBB2830, V											
WBA1880	A26	14	23-Jul-12	07-Aug-12	98	WBA1840	WGA1820, V											
WBA1890	A21	15	27-Jul-12	13-Aug-12	95	WBA1850	WGA1910, V											
WBA1900	A18	14	01-Aug-12	16-Aug-12	97	WBA1860	WGA1870, V											
WBA1910	A25	12	08-Aug-12	21-Aug-12	104	WBA1880	WBB2850, V											
WBA1920	A22	14	13-Aug-12	28-Aug-12	95	WBA1890	WGA1830, V											
<b>West Bound - Part B</b>		102	18-Jul-12	27-Oct-12	125													
WBB2810	A15	20	18-Jul-12	09-Aug-12	94	WBA1820	WBB2820, V											
WBB2820	A14	16	10-Aug-12	28-Aug-12	94	WBB2810	WBB2860, V											
WBB2830	A16	17	17-Aug-12	05-Sep-12	107	WBA1870	WGB2810, V											
WBB2840	A13	15	21-Aug-12	06-Sep-12	97	WBA1900	WBB2920, V											
WBB2850	A11	16	23-Aug-12	10-Sep-12	121	WBA1910	WGB2860											
WBB2860	A12	30	29-Aug-12	04-Oct-12	94	WBB2820	WBB2890, V											
WBB2870	A09	32	29-Aug-12	06-Oct-12	100	WBA1920	WBB2900, V											
WBB2880	A06	26	05-Sep-12	06-Oct-12	107	WBB2830	WGB2910, V											
WBB2890	A08	14	08-Oct-12	24-Oct-12	100	WBB2860	WGB2870											
WBB2900	A05	13	09-Oct-12	24-Oct-12	104	WBB2870	WGB2890											
WBB2910	A07	10	09-Oct-12	19-Oct-12	107	WBB2880	WGB2900											
WBB2920	A10	13	12-Oct-12	27-Oct-12	97	WBB2840	WGB2880											
<b>East Bound - Part C</b>		104	07-Jul-12	18-Oct-12	102													
EBC3800	B10	24	07-Jul-12	03-Aug-12	75	PCW1825, PCW	EGC3900, E											



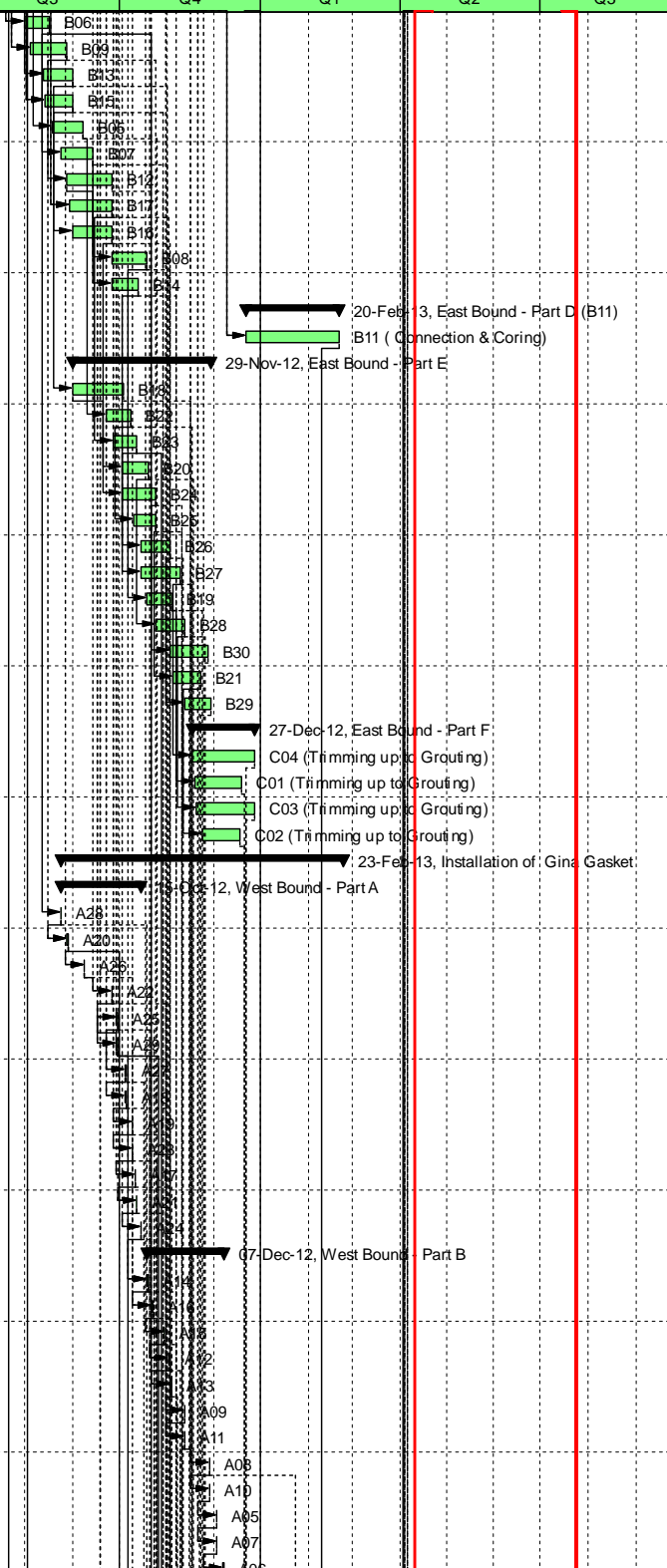
	Date	Revision	Ch...	Approved
Actual Work	31-May-12	Rev. E	MF	KT
Remaining Work	23-Jun-12	Rev. F	MF	KT
Critical Remaining ...	19-Jul-12	Rev. G	MF	KT
Milestone	14-Aug-12	Rev. H	MF	KT
Summary	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

金門 - 利達聯營

**Gammon - Leader Joint Venture**

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
EBC3810	B06	15	31-Jul-12	16-Aug-12	27	PCW1825, PCW	EGC3800, E												
EBC3820	B09	20	04-Aug-12	27-Aug-12	62	PCW1805, PCW	EGC3810, E												
EBC3830	B13	17	13-Aug-12	31-Aug-12	66	PCW1825, PCW	EBC3890, E												
EBC3840	B15	16	14-Aug-12	31-Aug-12	84	PCW1805, PCW	EGC3840, E												
EBC3850	B05	18	18-Aug-12	07-Sep-12	75	EBC3800	EBE5010, E												
EBC3860	B07	18	24-Aug-12	13-Sep-12	49	EBC3810	EGC3850, E												
EBC3870	B12	26	28-Aug-12	26-Sep-12	62	EBC3820	EGC3830, E												
EBC3880	B17	24	30-Aug-12	26-Sep-12	65	PCW1805, PCW	EGC3870, E												
EBC3890	B16	22	01-Sep-12	26-Sep-12	66	EBC3830	EGC3890, E												
EBC3900	B08	18	26-Sep-12	18-Oct-12	49	EBC3860	EGC3880, E												
EBC3910	B14	14	26-Sep-12	13-Oct-12	87	EBC3870	EBE5060, E												
<b>East Bound - Part D (B11)</b>		<b>61</b>	<b>22-Dec-12</b>	<b>20-Feb-13</b>	<b>48</b>														
EBD4000	B11 ( Connection & Coring)	46	22-Dec-12	20-Feb-13	37	PCW1825, PCW	EGC3920												
<b>East Bound - Part E</b>		<b>90</b>	<b>01-Sep-12</b>	<b>29-Nov-12</b>	<b>109</b>														
EBE5000	B18	26	01-Sep-12	03-Oct-12	88	EBC3840	EGD4050, E												
EBE5010	B22	12	22-Sep-12	08-Oct-12	86	EBC3850	EBE5050, E												
EBE5020	B23	12	27-Sep-12	12-Oct-12	82	EBC3880	EGD4000, E												
EBE5030	B20	15	03-Oct-12	19-Oct-12	82	EBC3890	EGD4080, E												
EBE5040	B24	18	03-Oct-12	24-Oct-12	88	EBE5000	EGD4010, E												
EBE5050	B25	12	10-Oct-12	24-Oct-12	86	EBE5010	EBE5110, E												
EBE5060	B26	16	15-Oct-12	02-Nov-12	87	EBC3910	EGD4030, E												
EBE5070	B27	22	15-Oct-12	09-Nov-12	82	EBE5020	EGD4070, E												
EBE5080	B19	13	19-Oct-12	03-Nov-12	86	EBC3900	EBE5140, E												
EBE5090	B28	17	24-Oct-12	12-Nov-12	82	EBE5030	EBE5150, E												
EBE5100	B30	21	03-Nov-12	27-Nov-12	88	EBE5040	EGD4090												
EBE5110	B21	16	05-Nov-12	22-Nov-12	86	EBE5050	EGD4040, E												
EBE5120	B29	16	12-Nov-12	29-Nov-12	87	EBE5060	EGD4100												
<b>East Bound - Part F</b>		<b>41</b>	<b>17-Nov-12</b>	<b>27-Dec-12</b>	<b>105</b>														
EBE5130	C04 (Trimming up to Grouting)	33	17-Nov-12	27-Dec-12	82	EBE5070	ECE6540												
EBE5140	C01 (Trimming up to Grouting)	27	19-Nov-12	19-Dec-12	86	EBE5080	ECE6510												
EBE5150	C03 (Trimming up to Grouting)	31	20-Nov-12	27-Dec-12	82	EBE5090	ECE6530												
EBE5160	C02 (Trimming up to Grouting)	21	24-Nov-12	18-Dec-12	87	EBE5110	ECE6520												
<b>Installation of Gina Gasket</b>		<b>184</b>	<b>24-Aug-12</b>	<b>23-Feb-13</b>	<b>48</b>														
<b>West Bound - Part A</b>		<b>53</b>	<b>24-Aug-12</b>	<b>15-Oct-12</b>	<b>87</b>														
WGA1800	A28	1	24-Aug-12	24-Aug-12	71	WBA1840	WGA1810, V												
WGA1810	A20	1	28-Aug-12	28-Aug-12	71	WBA1820, WGA	WCA2000, V												
WGA1820	A26	1	08-Sep-12	08-Sep-12	71	WBA1880, WGA	WGA1830, V												
WGA1830	A22	1	26-Sep-12	26-Sep-12	71	WBA1920, WGA	WGA1850, V												
WGA1840	A25	1	29-Sep-12	29-Sep-12	71	WGA1850, WBA	WCA2060, V												
WGA1850	A29	1	29-Sep-12	29-Sep-12	71	WGA1830, WBA	WGA1840, V												
WGA1860	A27	1	05-Oct-12	05-Oct-12	71	WBA1800, WGA	WCA2020, V												
WGA1870	A18	1	05-Oct-12	05-Oct-12	71	WBA1900, WGA	WCA2100, V												
WGA1880	A19	1	09-Oct-12	09-Oct-12	71	WBA1860, WGA	WGA1890, V												
WGA1890	A23	1	09-Oct-12	09-Oct-12	71	WGA1880, WBA	WGA1900, V												
WGA1900	A17	1	11-Oct-12	11-Oct-12	71	WGA1890, WBA	WGA1910, V												
WGA1910	A21	1	12-Oct-12	12-Oct-12	71	WGA1900, WBA	WCA2080, V												
WGA1920	A24	1	15-Oct-12	15-Oct-12	71	WBA1850, WGA	WCA2050, V												
<b>West Bound - Part B</b>		<b>50</b>	<b>19-Oct-12</b>	<b>07-Dec-12</b>	<b>90</b>														
WGB2800	A14	1	19-Oct-12	19-Oct-12	71	WBB2820, WGA	WGB2810, V												
WGB2810	A16	1	22-Oct-12	22-Oct-12	71	WBB2830, WGB	WGB2820, V												
WGB2820	A15	1	30-Oct-12	30-Oct-12	71	WGB2810, WBB	WCD4020, V												
WGB2830	A12	1	02-Nov-12	02-Nov-12	71	WGB2820, WBB	WCD4040, V												
WGB2840	A13	1	03-Nov-12	03-Nov-12	71	WBB2840, WGB	WGB2850, V												
WGB2850	A09	1	12-Nov-12	12-Nov-12	71	WGB2840, WBB	WGB2860												
WGB2860	A11	1	12-Nov-12	12-Nov-12	71	WBB2850, WGB	WGB2870, V												
WGB2870	A08	1	28-Nov-12	28-Nov-12	71	WGB2860, WBB	WGB2880, F												
WGB2880	A10	1	28-Nov-12	28-Nov-12	71	WGB2870, WBB	WGB2890												
WGB2890	A05	1	03-Dec-12	03-Dec-12	71	WBB2900, WGB	WGB2900												
WGB2900	A07	1	03-Dec-12	03-Dec-12	71	WGB2890, WBB	WGB2910												
WGB2910	A06	1	07-Dec-12	07-Dec-12	71	WBB2880, WGB	RBP1010												



<span style="color: blue;">█</span>	Actual Work
<span style="color: green;">█</span>	Remaining Work
<span style="color: red;">█</span>	Critical Remaining ...
◆	Milestone
➤	Summary

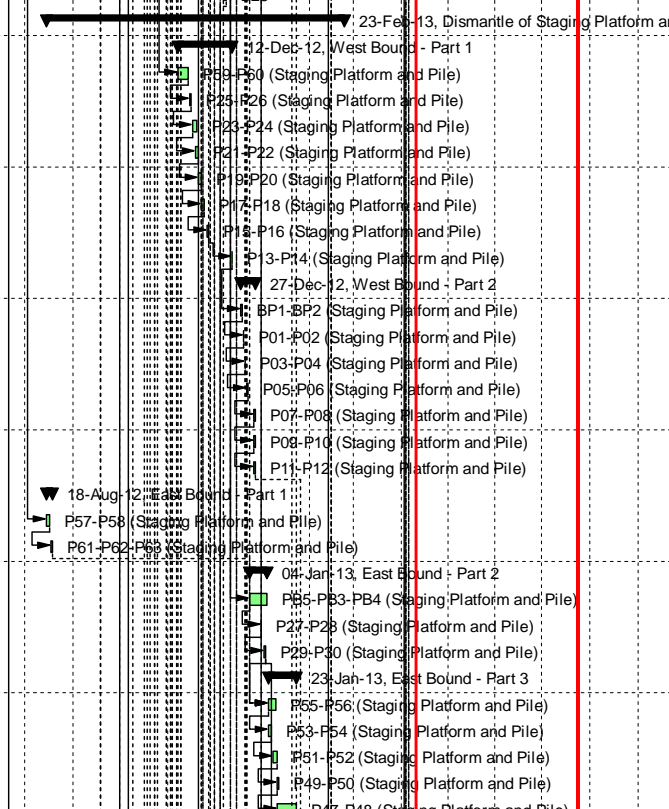
  

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31-May-12	Rev. E	MF	KT
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19-Jul-12	Rev. G	MF	KT
14-Aug-12	Rev. H	MF	KT
19-Sep-12	Rev. I	MF	KT
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**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
<b>East Bound - Part C</b>																			
EGC3800	B06	1	03-Nov-12	03-Nov-12	113		EGC3810												
EGC3810	B09	1	06-Nov-12	06-Nov-12	27	EBC3810	EGC3820												
EGC3820	B05	1	07-Nov-12	07-Nov-12	27	EGC3810, EBC3	EGC3830												
EGC3830	B12	1	10-Nov-12	10-Nov-12	27	EGC3820, EBC3	RBP2080, E												
EGC3840	B15	1	10-Nov-12	10-Nov-12	27	EBC3840, EGC3	EGC3860, E												
EGC3850	B07	1	13-Nov-12	13-Nov-12	27	EGC3860, EBC3	EGC3870												
EGC3860	B13	1	13-Nov-12	13-Nov-12	27	EGC3840, EBC3	EGC3850, E												
EGC3870	B17	1	14-Nov-12	14-Nov-12	27	EGC3850, EBC3	ECC5030, E												
EGC3880	B08	1	15-Nov-12	15-Nov-12	27	EGC3890, EBC3	EGC3900, E												
EGC3890	B16	1	15-Nov-12	15-Nov-12	27	EBC3890, EGC3	EGC3880, E												
EGC3900	B10	1	19-Nov-12	19-Nov-12	91	EBC3800, EGC3	EGC3910, R												
EGC3910	B14	1	19-Nov-12	19-Nov-12	91	EGC3900, EBC3	ECC5010												
<b>East Bound - Part C (B11)</b>																			
EGC3920	B11 (Installation of Gina Gasket)	3	21-Feb-13	23-Feb-13	48														
<b>East Bound - Part D</b>																			
EGD4000	B23	1	09-Nov-12	09-Nov-12	83	EBE5020	EGD4010, E												
EGD4010	B24	1	23-Nov-12	23-Nov-12	83	EBE5040, EGD4	EGD4020, E												
EGD4020	B25	1	23-Nov-12	23-Nov-12	83	EGD4010, EBE5	EGD4030, E												
EGD4030	B26	1	24-Nov-12	24-Nov-12	83	EBE5060, EGD4	ECE6000, E												
EGD4040	B21	1	27-Nov-12	27-Nov-12	83	EBE5110, EGD4	EGD4050, E												
EGD4050	B18	1	28-Nov-12	28-Nov-12	83	EGD4040, EBE5	EGD4060, E												
EGD4060	B22	1	29-Nov-12	29-Nov-12	83	EBE5010, EGD4	EGD4070, E												
EGD4070	B27	1	29-Nov-12	29-Nov-12	83	EBE5070, EGD4	ECE6010, E												
EGD4080	B20	1	30-Nov-12	30-Nov-12	83	EBE5030, EGD4	EGD4090, E												
EGD4090	B30	1	04-Dec-12	04-Dec-12	83	EBE5100, EGD4	EGD4100, E												
EGD4100	B29	1	05-Dec-12	05-Dec-12	83	EGD4090, EBE5	ECE6050, E												
EGD4110	B19	1	06-Dec-12	06-Dec-12	83	EBE5080, EGD4	EGD4120, E												
EGD4120	B28	1	08-Dec-12	08-Dec-12	84	EBE5090, EGD4	ECE6060												
<b>Dismantle of Staging Platform and Pile</b>																			
		193	15-Aug-12	23-Feb-13	76														
<b>West Bound - Part 1</b>																			
WSPA1000	P59-P60 (Staging Platform and Pile)	6	08-Nov-12	14-Nov-12	105		WSPA1010												
WSPA1010	P25-P26 (Staging Platform and Pile)	2	15-Nov-12	16-Nov-12	84	WSPA1000	WSPA1020												
WSPA1020	P23-P24 (Staging Platform and Pile)	2	17-Nov-12	19-Nov-12	84	WSPA1010	WSPA1030												
WSPA1030	P21-P22 (Staging Platform and Pile)	2	19-Nov-12	20-Nov-12	84	WSPA1020	WSPA1040												
WSPA1040	P19-P20 (Staging Platform and Pile)	2	21-Nov-12	22-Nov-12	84	WSPA1030	WSPA1050												
WSPA1050	P17-P18 (Staging Platform and Pile)	2	23-Nov-12	24-Nov-12	84	WSPA1040	WSPA1060												
WSPA1060	P15-P16 (Staging Platform and Pile)	2	26-Nov-12	27-Nov-12	84	WSPA1050	WSPC2070												
WSPC2070	P13-P14 (Staging Platform and Pile)	1	12-Dec-12	12-Dec-12	84	WSPA1060	WSPC2000												
<b>West Bound - Part 2</b>																			
WSPC2000	BP1-BP2 (Staging Platform and Pile)	2	18-Dec-12	19-Dec-12	84	WSPC2070	WSPC2010												
WSPC2010	P01-P02 (Staging Platform and Pile)	1	20-Dec-12	20-Dec-12	84	WSPC2000	WSPC2020												
WSPC2020	P03-P04 (Staging Platform and Pile)	1	21-Dec-12	21-Dec-12	84	WSPC2010	WSPC2030												
WSPC2030	P05-P06 (Staging Platform and Pile)	1	22-Dec-12	22-Dec-12	84	WSPC2020	WSPC2040												
WSPC2040	P07-P08 (Staging Platform and Pile)	1	27-Dec-12	27-Dec-12	84	WSPC2030	WSPC2050												
WSPC2050	P09-P10 (Staging Platform and Pile)	1	27-Dec-12	27-Dec-12	84	WSPC2040	WSPC2060												
WSPC2060	P11-P12 (Staging Platform and Pile)	1	27-Dec-12	27-Dec-12	84	WSPC2050	DRW1520												
<b>East Bound - Part 1</b>																			
ESPD3000	P57-P58 (Staging Platform and Pile)	2	15-Aug-12	16-Aug-12	173	EBC3800	ESPD3100												
ESPD3100	P61-P62-P63 (Staging Platform and Pile)	2	17-Aug-12	18-Aug-12	173	ESPD3000	ESPD4000												
<b>East Bound - Part 2</b>																			
ESPB3070	PB5-PB3-PB4 (Staging Platform and Pile)	8	24-Dec-12	04-Jan-13	27	EGC3880	ESPB3080												
ESPB3080	P27-P28 (Staging Platform and Pile)	1	31-Dec-12	31-Dec-12	27	ESPB3070	ESPB3090												
ESPB3090	P29-P30 (Staging Platform and Pile)	2	02-Jan-13	03-Jan-13	27	ESPB3080	ESPD4000, I												
<b>East Bound - Part 3</b>																			
ESPD4000	P55-P56 (Staging Platform and Pile)	4	05-Jan-13	09-Jan-13	60	ESPD3100, EGD	ESPD4010												
ESPD4010	P53-P54 (Staging Platform and Pile)	2	05-Jan-13	07-Jan-13	60	ESPD4000	ESPD4020												
ESPD4020	P51-P52 (Staging Platform and Pile)	3	08-Jan-13	10-Jan-13	60	ESPD4010	ESPD4030												
ESPD4030	P49-P50 (Staging Platform and Pile)	1	11-Jan-13	11-Jan-13	60	ESPD4020	ESPD4040												
ESPD4040	P47-P48 (Staging Platform and Pile)	11	11-Jan-13	23-Jan-13	60	ESPD4030	ESPD4050												



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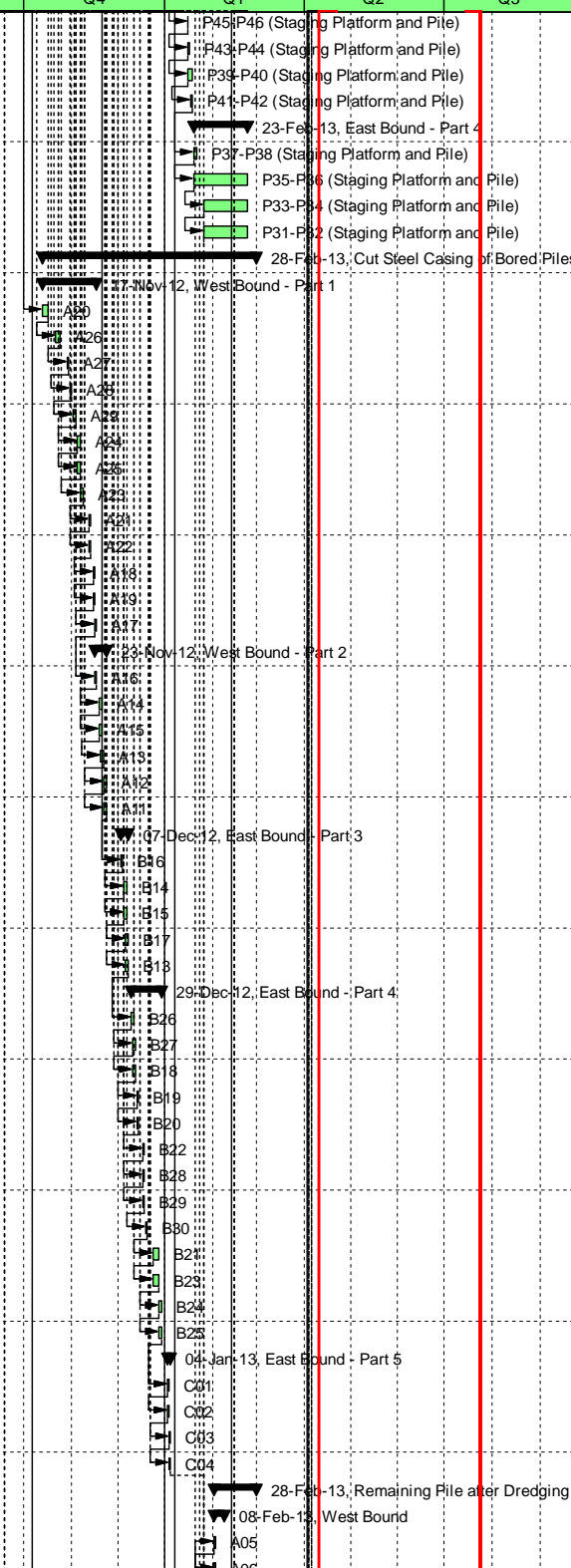
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**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

**金門 - 利達聯營**

**Gammon - Leader Joint Venture**



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
ESPD4050	P45-P46 (Staging Platform and Pile)	1	15-Jan-13	15-Jan-13	60	ESPD4040	ESPD4060												
ESPD4060	P43-P44 (Staging Platform and Pile)	2	15-Jan-13	16-Jan-13	60	ESPD4050	ESPD4070												
ESPD4070	P39-P40 (Staging Platform and Pile)	4	15-Jan-13	18-Jan-13	60	ESPD4060	ESPD4080												
ESPD4080	P41-P42 (Staging Platform and Pile)	2	17-Jan-13	18-Jan-13	60	ESPD4070	ESPB3000												
<b>East Bound - Part 4</b>		<b>36</b>	<b>19-Jan-13</b>	<b>23-Feb-13</b>	<b>76</b>														
ESPB3000	P37-P38 (Staging Platform and Pile)	2	19-Jan-13	21-Jan-13	60	ESPD4080	ESPB3010												
ESPB3010	P35-P36 (Staging Platform and Pile)	28	19-Jan-13	23-Feb-13	60	ESPB3000	ESPB3020												
ESPB3020	P33-P34 (Staging Platform and Pile)	22	26-Jan-13	23-Feb-13	60	ESPB3010	ESPB3030												
ESPB3030	P31-P32 (Staging Platform and Pile)	22	26-Jan-13	23-Feb-13	60	ESPB3020	DRW1520												
<b>Cut Steel Casing of Bored Piles</b>		<b>139</b>	<b>13-Oct-12</b>	<b>28-Feb-13</b>	<b>48</b>														
<b>West Bound - Part 1</b>		<b>36</b>	<b>13-Oct-12</b>	<b>17-Nov-12</b>	<b>98</b>														
WCA2000	A20	3	13-Oct-12	16-Oct-12	78	WGA1810	WCA2010												
WCA2010	A26	2	22-Oct-12	24-Oct-12	78	WGA1820, WCA	WCA2020												
WCA2020	A27	2	29-Oct-12	30-Oct-12	78	WGA1860, WCA	WCA2030												
WCA2030	A28	2	31-Oct-12	01-Nov-12	78	WCA2020, WGA	WCA2040												
WCA2040	A29	2	02-Nov-12	03-Nov-12	78	WGA1850, WCA	WCA2050												
WCA2050	A24	2	05-Nov-12	06-Nov-12	78	WGA1920, WCA	WCA2060												
WCA2060	A25	2	05-Nov-12	06-Nov-12	78	WCA2050, WGA	WCA2070												
WCA2070	A23	2	07-Nov-12	08-Nov-12	78	WCA2060, WGA	WCA2080												
WCA2080	A21	2	12-Nov-12	13-Nov-12	78	WGA1910, WCA	WCA2090												
WCA2090	A22	2	12-Nov-12	13-Nov-12	78	WGA1830, WCA	WCA2100												
WCA2100	A18	2	15-Nov-12	16-Nov-12	78	WGA1870, WCA	WCA2110												
WCA2110	A19	2	15-Nov-12	16-Nov-12	78	WCA2100, WGA	WCA2120												
WCA2120	A17	2	16-Nov-12	17-Nov-12	78	WCA2110, WGA	WCD4000												
<b>West Bound - Part 2</b>		<b>8</b>	<b>16-Nov-12</b>	<b>23-Nov-12</b>	<b>98</b>														
WCD4000	A16	2	16-Nov-12	17-Nov-12	78	WGB2810, WCA	WCD4010												
WCD4010	A14	2	19-Nov-12	20-Nov-12	78	WCD4000, WGE	WCD4020												
WCD4020	A15	2	19-Nov-12	20-Nov-12	78	WGB2820, WCE	WCD4030												
WCD4030	A13	2	20-Nov-12	21-Nov-12	78	WCD4020, WGE	WCD4040												
WCD4040	A12	2	22-Nov-12	23-Nov-12	78	WCD4030, WGE	WCD4050												
WCD4050	A11	2	22-Nov-12	23-Nov-12	78	WCD4040, WGE	ECC5000												
<b>East Bound - Part 3</b>		<b>5</b>	<b>03-Dec-12</b>	<b>07-Dec-12</b>	<b>98</b>														
ECC5000	B16	2	03-Dec-12	04-Dec-12	78	EGC3890, WCD	ECC5010												
ECC5010	B14	2	05-Dec-12	06-Dec-12	78	ECC5000, EGC3	ECC5020												
ECC5020	B15	2	05-Dec-12	06-Dec-12	78	EGC3840, ECC5	ECC5030												
ECC5030	B17	2	06-Dec-12	07-Dec-12	78	ECC5020, EGC3	ECC5040												
ECC5040	B13	2	06-Dec-12	07-Dec-12	78	EGC3860, ECC5	ECE6000												
<b>East Bound - Part 4</b>		<b>20</b>	<b>10-Dec-12</b>	<b>29-Dec-12</b>	<b>101</b>														
ECE6000	B26	2	10-Dec-12	11-Dec-12	78	EGD4030, ECC5	ECE6010												
ECE6010	B27	2	11-Dec-12	12-Dec-12	78	EGD4070, ECE6	ECE6020												
ECE6020	B18	2	11-Dec-12	12-Dec-12	78	EGD4050, ECE6	ECE6030												
ECE6030	B19	2	13-Dec-12	14-Dec-12	78	EGD4110, ECE6	ECE6040												
ECE6040	B20	2	13-Dec-12	14-Dec-12	78	EGD4080, ECE6	ECE6050												
ECE6050	B22	2	17-Dec-12	18-Dec-12	78	EGD4100, ECE6	ECE6060												
ECE6060	B28	2	17-Dec-12	18-Dec-12	78	EGD4120, ECE6	ECE6070												
ECE6070	B29	2	17-Dec-12	18-Dec-12	78	EGD4060, ECE6	ECE6080												
ECE6080	B30	2	19-Dec-12	20-Dec-12	78	EGD4090, ECE6	ECE6090												
ECE6090	B21	2	24-Dec-12	27-Dec-12	78	EGD4040, ECE6	ECE6100												
ECE6100	B23	2	24-Dec-12	27-Dec-12	78	EGD4000, ECE6	ECE6110												
ECE6110	B24	2	28-Dec-12	29-Dec-12	78	EGD4010, ECE6	ECE6120												
ECE6120	B25	2	28-Dec-12	29-Dec-12	78	EGD4020, ECE6	ECE6510												
<b>East Bound - Part 5</b>		<b>3</b>	<b>02-Jan-13</b>	<b>04-Jan-13</b>	<b>99</b>														
ECE6510	C01	2	02-Jan-13	03-Jan-13	78	EBE5140, ECE6	ECE6520												
ECE6520	C02	2	02-Jan-13	03-Jan-13	78	EBE5160, ECE6	ECE6530												
ECE6530	C03	2	03-Jan-13	04-Jan-13	78	EBE5150, ECE6	ECE6540												
ECE6540	C04	2	03-Jan-13	04-Jan-13	78	EBE5130, ECE6	DRW1520												
<b>Remaining Pile after Dredging</b>		<b>28</b>	<b>01-Feb-13</b>	<b>28-Feb-13</b>	<b>48</b>														
<b>West Bound</b>		<b>8</b>	<b>01-Feb-13</b>	<b>08-Feb-13</b>	<b>35</b>														
RBP1000	A05	2	01-Feb-13	02-Feb-13	27	DRW1515	RBP1010												
RBP1010	A06	2	01-Feb-13	02-Feb-13	27	WGB2910, RBP	RBP1020												



	Date	Revision	Ch...	Approved
Actual Work	31-May-12	Rev. E	MF	KT
Remaining Work	23-Jun-12	Rev. F	MF	KT
Critical Remaining ...	19-Jul-12	Rev. G	MF	KT
Milestone	14-Aug-12	Rev. H	MF	KT
Summary	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

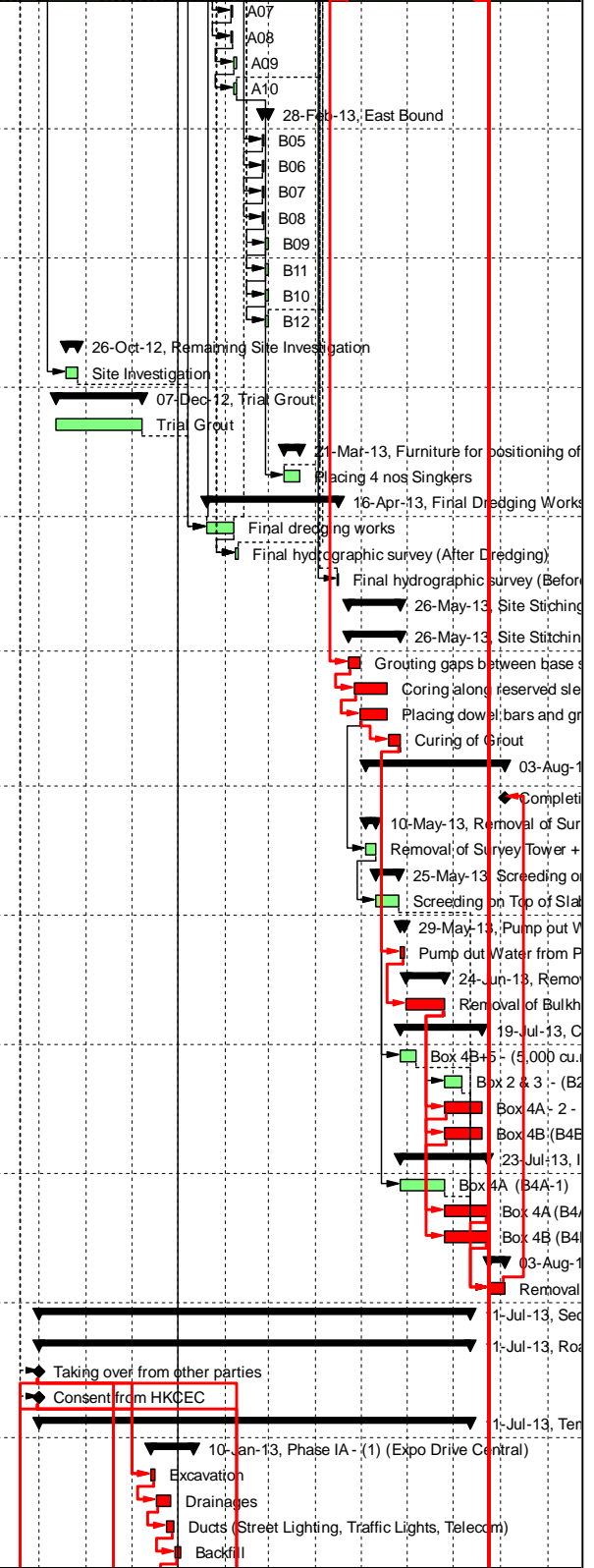
**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

金門 - 利達聯營

**Gammon - Leader Joint Venture**



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013		
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
RBP1020	A07	2	04-Feb-13	05-Feb-13	27	RBP1010	RBP1030											
RBP1030	A08	2	04-Feb-13	05-Feb-13	27	WGB2870, RBP1010	RBP1040											
RBP1040	A09	3	06-Feb-13	08-Feb-13	27	RBP1030	RBP1050											
RBP1050	A10	3	06-Feb-13	08-Feb-13	27	RBP1040	FPP1515, PF											
<b>East Bound</b>																		
RBP2000	B05	2	25-Feb-13	26-Feb-13	37	DRW1515, EGC	RBP2010											
RBP2010	B06	2	25-Feb-13	26-Feb-13	37	RBP2000	RBP2030											
RBP2030	B07	2	25-Feb-13	26-Feb-13	37	RBP2010	RBP2040											
RBP2040	B08	2	25-Feb-13	26-Feb-13	37	RBP2030	RBP2050											
RBP2050	B09	2	27-Feb-13	28-Feb-13	37	RBP2040	RBP2060											
RBP2060	B11	2	27-Feb-13	28-Feb-13	37	EGC3920, RBP2050	RBP2070											
RBP2070	B10	2	27-Feb-13	28-Feb-13	37	EGC3900, RBP2060	RBP2080											
RBP2080	B12	2	27-Feb-13	28-Feb-13	37	EGC3830, RBP2070	PPU8020											
<b>Remaining Site Investigation</b>																		
RSI6000	Site Investigation	6	19-Oct-12	26-Oct-12	96	WGA1850	DRW1515											
<b>Trial Grout</b>																		
TGR6500	Trial Grout	48	12-Oct-12*	07-Dec-12	60		DRW1515											
<b>Furniture for positioning of precast unit</b>																		
FPP1515	Placing 4 nos Singlers	11	11-Mar-13	21-Mar-13	36	RBP1050	PPU8010											
<b>Final Dredging Works</b>																		
DRW1515	Final dredging works	16	19-Jan-13	06-Feb-13	27	TGR6500, RSI6000	DRW1520, F											
DRW1520	Final hydrographic survey (After Dredging)	3	07-Feb-13	09-Feb-13	50	DRW1515, ESPE	PPU8020											
DRW1530	Final hydrographic survey (Before Positioning of Precast Box Unit)	2	15-Apr-13	16-Apr-13	1	PPU8005	PPU8010											
<b>Site Sticking of Precast Box Unit</b>																		
<b>Site Sticking Precast Combined Unit</b>																		
SSU9010	Grouting gaps between base slab and bored piles within the gash	7	23-Apr-13	30-Apr-13	0	PPU8030	SSU9020											
SSU9020	Coring along reserved sleeve pipe to bored piles (816nos.)	18	26-Apr-13	18-May-13	0	SSU9010	SSU9030											
SSU9030	Placing dowel bars and grouting works (816nos.)	15	30-Apr-13	18-May-13	0	SSU9020	SSU9040, M											
SSU9040	Curing of Grout	8	19-May-13	26-May-13	0	SSU9030	MPU10600, I											
<b>Minor Outstanding Works inside Precast Box Unit after Sticking</b>																		
MWP1100	Completion of Outstanding Works inside Precast Box Unit after S	0	04-May-13	03-Aug-13*	0	MPU10900												
<b>Removal of Survey Tower + Towing Furniture</b>																		
MPU10100	Removal of Survey Tower + Towing Furniture	6	04-May-13	10-May-13	48	SSU9030	MPU10200											
<b>Screeding on Top of Slab</b>																		
MPU10200	Screeding on Top of Slab	15	11-May-13	25-May-13	59	MPU10100	MPU10900											
<b>Pump out Water from Pre-cast Box Unit</b>																		
MPU10300	Pump out Water from Pre-cast Box Unit	3	27-May-13	29-May-13	0	SSU9040	MPU10400											
<b>Removal of Bulkheads</b>																		
MPU10400	Removal of Bulkheads	26	30-May-13	24-Jun-13	0	MPU10300	MPU10510, I											
<b>Construction of Drain Pipes, Profile Barriers, Foam Concrete and Infill Concrete</b>																		
MPU10500	Box 4B+5 - (5,000 cu.m) (Foam Concrete)	54	27-May-13	19-Jul-13	4	SSU9040	MPU10900											
MPU10510	Box 2 & 3 - (B2-1/B2-2/B3) (5,000 cu.m) (Foam Concrete)	10	25-Jun-13	06-Jul-13	14	MPU10400	MPU10900											
MPU10520	Box 4A - 2 - (4BA-2) (Concrete Infill)	21	25-Jun-13	19-Jul-13	0	MPU10400	MPU10620											
MPU10530	Box 4B (B4B-1/B4B-2) (Concrete Infill)	21	25-Jun-13	19-Jul-13	0	MPU10400	MPU10630											
<b>Intermediate Slab</b>																		
MPU10600	Box 4A (B4A-1)	58	27-May-13	23-Jul-13	0	SSU9040	MPU10900											
MPU10620	Box 4A (B4A-2)	24	25-Jun-13	23-Jul-13	0	MPU10520	MPU10900											
MPU10630	Box 4B (B4B-1)	24	25-Jun-13	23-Jul-13	0	MPU10530	MPU10900											
<b>Removal of Turrets</b>																		
MPU10900	Removal of Turrets	11	24-Jul-13	03-Aug-13	0	MPU10510, MPL	MWP1100											
<b>Section II</b>																		
<b>Road Works</b>																		
TAR8000	Taking over from other parties	284	01-Oct-12	11-Jul-13	0	CNO1010	P1A1000, P1											
TAR8010	Consent from HKCEC	0	01-Oct-12*		0	CNO1010	P1A1000, P1											
<b>Temporary Access Road at HKCEC West Bridge</b>																		
<b>Phase IA - (1) (Expo Drive Central)</b>																		
P1A1000	Excavation	29	13-Dec-12	10-Jan-13	0	TAR8000, TAR8010	P1A1010											
P1A1010	Drainages	4	13-Dec-12	16-Dec-12	0	P1A1000	P1A1020											
P1A1020	Ducts (Street Lighting, Traffic Lights, Telecom)	10	17-Dec-12	26-Dec-12	0	P1A1010	P1A1030											
P1A1030	Backfill	5	24-Dec-12	28-Dec-12	0	P1A1020	P1A1040											
P1A1040	Backfill	5	29-Dec-12	02-Jan-13	0	P1A1020	P1A1040											








<span style="background-color: blue; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Actual Work	Date	Revision	Ch...	Approved
<span style="background-color: green; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Remaining Work	31-May-12	Rev. E	MF	KT
<span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Critical Remaining ...	23-Jun-12	Rev. F	MF	KT
<span style="color: blue;">◆</span> Milestone	19-Jul-12	Rev. G	MF	KT
<span style="color: blue;">▶</span> Summary	14-Aug-12	Rev. H	MF	KT
	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

金門 - 利達聯營

**Gammon - Leader Joint Venture**

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
P1A1040	Subbase, Kerb	6	01-Jan-13	06-Jan-13	0	P1A1030	P1A1050												
P1A1050	Surfacing	4	07-Jan-13	10-Jan-13	0	P1A1040	P1A1200												
<b>Phase II A</b>		<b>30</b>	<b>11-Jan-13</b>	<b>09-Feb-13</b>	<b>0</b>														
P1A1200	Excavation	7	11-Jan-13	17-Jan-13	0	P1A1050	P1A1210												
P1A1210	Drainages	10	15-Jan-13	24-Jan-13	0	P1A1200	P1A1220												
P1A1220	Ducts (Street Lighting, Traffic Lights, Telecom)	10	22-Jan-13	31-Jan-13	0	P1A1210	P1A1230												
P1A1230	Backfill	7	29-Jan-13	04-Feb-13	0	P1A1220	P1A1240												
P1A1240	Subbase, Kerb	6	02-Feb-13	07-Feb-13	0	P1A1230	P1A1250												
P1A1250	Surfacing	4	06-Feb-13	09-Feb-13	0	P1A1240	P1A2060												
<b>Phase IA - (2) (Expo Drive Central)</b>		<b>29</b>	<b>10-Feb-13</b>	<b>10-Mar-13</b>	<b>0</b>														
P1A2060	Excavation	4	10-Feb-13	13-Feb-13	0	P1A1250	P1A2070												
P1A2070	Drainages	10	14-Feb-13	23-Feb-13	0	P1A2060	P1A2080												
P1A2080	Ducts (Street Lighting, Traffic Lights)	5	21-Feb-13	25-Feb-13	0	P1A2070	P1A2090												
P1A2090	Backfill	5	26-Feb-13	02-Mar-13	0	P1A2080	P1A2100												
P1A2100	Subbase, Kerb	6	01-Mar-13	06-Mar-13	0	P1A2090	P1A2110												
P1A2110	Surfacing	4	07-Mar-13	10-Mar-13	0	P1A2100	P1B2000												
<b>Phase IB (Expo Drive)</b>		<b>30</b>	<b>11-Mar-13</b>	<b>09-Apr-13</b>	<b>0</b>														
P1B2000	Excavation	5	11-Mar-13	15-Mar-13	0	P1A2110	P1B2010												
P1B2010	Drainages	7	16-Mar-13	22-Mar-13	0	P1B2000	P1B2020												
P1B2020	Ducts (Street Lighting, Traffic Lights)	7	20-Mar-13	26-Mar-13	0	P1B2010	P1B2030												
P1B2030	Backfill	4	27-Mar-13	30-Mar-13	0	P1B2020	P1B2040												
P1B2040	Subbase, Kerb	10	31-Mar-13	09-Apr-13	0	P1B2030	P1B2050												
P1B2050	Surfacing	6	04-Apr-13	09-Apr-13	0	P1B2040	P2B2100												
<b>Phase II B (1)</b>		<b>28</b>	<b>10-Apr-13</b>	<b>07-May-13</b>	<b>0</b>														
P2B2100	Excavation	7	10-Apr-13	16-Apr-13	0	P1B2050	P2B2110												
P2B2110	Ducts (Street Lighting, Traffic Lights)	10	14-Apr-13	23-Apr-13	0	P2B2100	P2B2120												
P2B2120	Kerb	6	24-Apr-13	29-Apr-13	0	P2B2110	P2B2130												
P2B2130	Footway	8	30-Apr-13	07-May-13	0	P2B2120	P2B2200												
<b>Phase II B (2)</b>		<b>25</b>	<b>08-May-13</b>	<b>01-Jun-13</b>	<b>0</b>														
P2B2200	Excavation	10	08-May-13	17-May-13	0	P2B2130	P2B2210												
P2B2210	Ducts (Street Lighting, Traffic Lights)	11	13-May-13	23-May-13	0	P2B2200	P2B2220												
P2B2220	Backfill	7	18-May-13	24-May-13	0	P2B2210	P2B2230												
P2B2230	Subbase, Kerb	10	23-May-13	01-Jun-13	0	P2B2220	P2B2240												
P2B2240	Surfacing	4	28-May-13	31-May-13	0	P2B2230	P3B3000												
<b>Phase III B</b>		<b>27</b>	<b>01-Jun-13</b>	<b>27-Jun-13</b>	<b>0</b>														
P3B3000	Excavation	7	01-Jun-13	07-Jun-13	0	P2B2240	P3B3010												
P3B3010	Ducts (Street Lighting, Traffic Lights)	10	08-Jun-13	17-Jun-13	0	P3B3000	P3B3020												
P3B3020	Backfill	7	18-Jun-13	24-Jun-13	0	P3B3010	P3B3030												
P3B3030	Subbase	7	21-Jun-13	27-Jun-13	0	P3B3020	P3B3040												
P3B3040	Surfacing	4	24-Jun-13	27-Jun-13	0	P3B3030	CNO1030												
<b>Phase IC (Convention Avenue)</b>		<b>100</b>	<b>20-Feb-13</b>	<b>30-May-13</b>	<b>0</b>														
P1C4000	Excavation	7	20-Feb-13	26-Feb-13	0	TAR8000, TAR8000	P1C4010												
P1C4010	Drainages	18	24-Feb-13	13-Mar-13	0	P1C4000	P1C4020												
P1C4020	Ducts (Street Lighting, Traffic Lights)	21	06-Mar-13	26-Mar-13	0	P1C4010	P1C4030, M1												
P1C4030	Sewerage	21	06-Mar-13	26-Mar-13	0	P1C4020	P1C4040												
P1C4040	Fresh Water Main	21	11-Mar-13	31-Mar-13	0	P1C4030	P1C4050												
P1C4050	HEC Duct	21	11-Mar-13	31-Mar-13	0	P1C4040	P1C4060, M1												
P1C4060	Telecom Duct	21	11-Mar-13	31-Mar-13	0	P1C4050	P1C4070, M1												
P1C4070	Backfill	14	21-Mar-13	03-Apr-13	0	P1C4060	P1C4080												
P1C4080	Subbase, Kerb	12	28-Mar-13	08-Apr-13	0	P1C4070	P1C4090, P2												
P1C4090	Surfacing	4	27-May-13	30-May-13	0	P1C4080, MSW1	CNO1030												
<b>Phase II C (Convention Avenue)</b>		<b>38</b>	<b>13-Apr-13</b>	<b>20-May-13</b>	<b>0</b>														
P2C4100	Excavation	7	13-Apr-13	19-Apr-13	0	P1C4080	P2C4110												
P2C4110	Drainages	14	18-Apr-13	01-May-13	0	P2C4100	P2C4120, P2												
P2C4120	Duct (Traffic Light)	5	27-Apr-13	01-May-13	7	P2C4110	P2C4150												
P2C4130	Sewerage	21	18-Apr-13	08-May-13	0	P2C4110	P2C4140												
P2C4140	Fresh Water Main	21	18-Apr-13	08-May-13	0	P2C4130	P2C4150												
P2C4150	Backfill	4	09-May-13	12-May-13	0	P2C4140, P2C41	P2C4160												
P2C4160	Subbase	4	13-May-13	16-May-13	0	P2C4150	P2C4170												
P2C4170	Surfacing	4	17-May-13	20-May-13	0	P2C4160	P3C4200												

	Actual Work		
	Remaining Work		
	Critical Remaining ...		
	Milestone		
	Summary		
Date	Revision	Ch...	Approved
31-May-12	Rev. E	MF	KT
23-Jun-12	Rev. F	MF	KT
19-Jul-12	Rev. G	MF	KT
14-Aug-12	Rev. H	MF	KT
19-Sep-12	Rev. I	MF	KT
21-Nov-12	Rev. J	MF	KT
19-Feb-13	Rev. K	MF	KT
05-Mar-13	Rev. L	MF	KT

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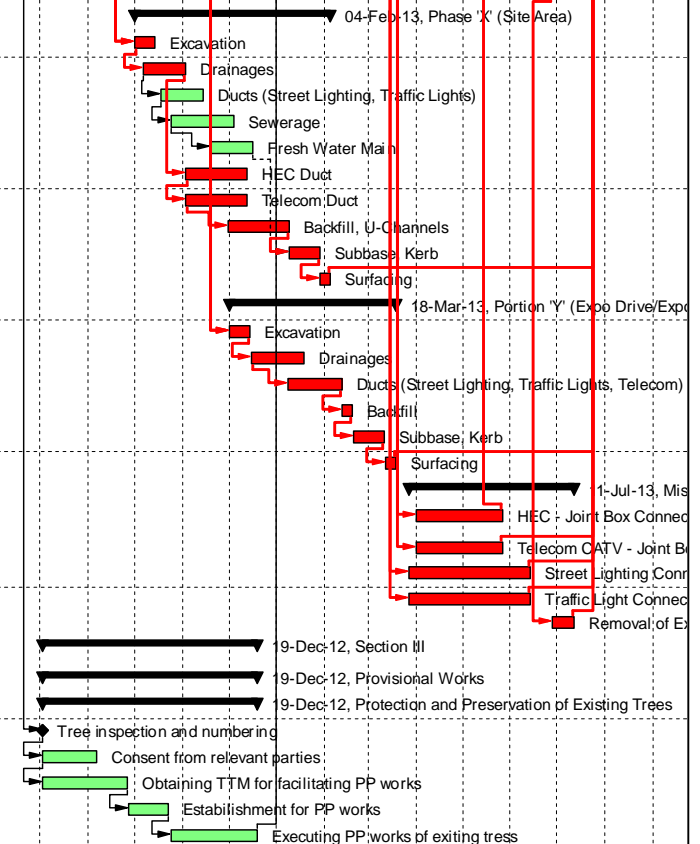


金門 - 利達聯營

**Gammon - Leader Joint Venture**



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Predecessors	Successors	2011				2012				2013			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
<b>Phase III C (Convention Avenue)</b>																			
P3C4200	Excavation	4	21-May-13	15-Jun-13	0	P2C4170	P3C4210												15-Jun-13, Phase II
P3C4210	Sewerage	18	21-May-13	07-Jun-13	0	P3C4200	P3C4220												Excavation
P3C4220	Duct (Bullard, Traffic Lights)	7	28-May-13	03-Jun-13	0	P3C4210	P3C4230												Sewerage
P3C4230	Backfill	4	04-Jun-13	07-Jun-13	0	P3C4220	P3C4240												Duct (Bullard, Traffic L
P3C4240	Subbase, Kerb	4	08-Jun-13	11-Jun-13	0	P3C4230	P3C4250												Backfill
P3C4250	Surfacing	4	12-Jun-13	15-Jun-13	0	P3C4240	P4C4300												Subbase, Kerb
<b>Phase IV C (Convention Avenue)</b>																			
P4C4300	Excavation	4	16-Jun-13	19-Jun-13	0	P3C4250	P4C4310												27-Jun-13, Phase
P4C4310	Ducts (Traffic Lights)	4	20-Jun-13	23-Jun-13	0	P4C4300	P4C4320												Excavation
P4C4320	Backfill	4	20-Jun-13	23-Jun-13	0	P4C4310	P4C4330												Ducts (Traffic Light
P4C4330	Subbase, Kerb	4	20-Jun-13	23-Jun-13	0	P4C4320	P4C4340												Backfill
P4C4340	Surfacing	4	24-Jun-13	27-Jun-13	0	P4C4330	MSW7040												Subbase, Kerb
<b>Phase 'X' (Site Area)</b>																			
PXX5000	Excavation	127	01-Oct-12	04-Feb-13	0														04-Feb-13, Phase 'X' (Site Area)
PXX5010	Drainages	14	01-Oct-12	14-Oct-12	0	TAR8000, TAR80	PXX5010												Excavation
PXX5020	Ducts (Street Lighting, Traffic Lights)	28	06-Oct-12	02-Nov-12	0	PXX5000	PXX5050, PXX5030												Drainages
PXX5030	Sewerage	42	24-Oct-12	04-Dec-12	23	PXX5020	PXX5040												Ducts (Street Lighting, Traffic Lights)
PXX5040	Fresh Water Main	28	19-Nov-12	16-Dec-12	23	PXX5030	PXX5080												Sewerage
PXX5050	HEC Duct	40	03-Nov-12	12-Dec-12	0	PXX5010	PXX5060												Fresh Water Main
PXX5060	Telecom Duct	40	03-Nov-12	12-Dec-12	0	PXX5050	PXX5070												HEC Duct
PXX5070	Backfill, U-Channels	40	30-Nov-12	08-Jan-13	0	PXX5060	PXX5080												Telecom Duct
PXX5080	Subbase, Kerb	20	09-Jan-13	28-Jan-13	0	PXX5070, PXX5080	PXX5090												Backfill, U-Channels
PXX5090	Surfacing	7	29-Jan-13	04-Feb-13	0	PXX5080	CNO1030												Subbase, Kerb
<b>Portion 'Y' (Expo Drive/Expo Drive Central)</b>																			
PYY6000	Excavation	14	01-Dec-12	14-Dec-12	0	TAR8000, TAR80	PYY6010												18-Mar-13, Portion 'Y' (Expo Drive/Expo
PYY6010	Drainages	35	15-Dec-12	18-Jan-13	0	PYY6000	PYY6020												Excavation
PYY6020	Ducts (Street Lighting, Traffic Lights, Telecom)	35	08-Jan-13	11-Feb-13	0	PYY6010	PYY6030												Drainages
PYY6030	Backfill	7	12-Feb-13	18-Feb-13	0	PYY6020	PYY6040												Ducts (Street Lighting, Traffic Lights, Telecom)
PYY6040	Subbase, Kerb	21	19-Feb-13	11-Mar-13	0	PYY6030	PYY6050												Backfill
PYY6050	Surfacing	7	12-Mar-13	18-Mar-13	0	PYY6040	CNO1030												Subbase, Kerb
<b>Miscellaneous Work</b>																			
MSW7000	HEC - Joint Box Connection	56	01-Apr-13	26-May-13	0	P1C4050	P1C4090												1-Jul-13, Mis
MSW7010	Telecom CATV - Joint Box Connection	56	01-Apr-13	26-May-13	0	P1C4060	CNO1030												HEC - Joint Box Connec
MSW7020	Street Lighting Connection/Installation	79	27-Mar-13	13-Jun-13	0	P1C4020	CNO1030												Telecom CATV - Joint B
MSW7030	Traffic Light Connection/Installation	79	27-Mar-13	13-Jun-13	0	P1C4020	CNO1030												Street Lighting Conn
MSW7040	Removal of Existing Street Lighting	14	28-Jun-13	11-Jul-13	0	P4C4340	CNO1030												Traffic Light Connec
<b>Section III</b>																			
<b>Provisional Works</b>																			
<b>Protection and Preservation of Existing Trees</b>																			
PPT9000	Tree inspection and numbering	0	02-Aug-12*		181	CNO1010	PPT9010												9-Dec-12, Section III
PPT9010	Consent from relevant parties	31	02-Aug-12	06-Sep-12	181	PPT9000	PPT9020												9-Dec-12, Provisional Works
PPT9020	Obtaining TTM for facilitating PP works	48	02-Aug-12	26-Sep-12	181	PPT9010	PPT9030												9-Dec-12, Protection and Preservation of Existing Trees
PPT9030	Establishment for PP works	20	27-Sep-12	22-Oct-12	181	PPT9020	PPT9040												Tree inspection and numbering
PPT9040	Executing PP works of exiting tress	49	24-Oct-12	19-Dec-12	181	PPT9030	CNO1040												Consent from relevant parties



	Date	Revision	Ch...	Approved
Actual Work	31-May-12	Rev. E	MF	KT
Remaining Work	23-Jun-12	Rev. F	MF	KT
Critical Remaining ...	19-Jul-12	Rev. G	MF	KT
Milestone	14-Aug-12	Rev. H	MF	KT
Summary	19-Sep-12	Rev. I	MF	KT
	21-Nov-12	Rev. J	MF	KT
	19-Feb-13	Rev. K	MF	KT
	05-Mar-13	Rev. L	MF	KT

**Contract No.: HK/2010/06**  
**Wan Chai Development Phase II-**  
**Central-Wan Chai Bypass over MTR Tuen Wan Line**  
 (Works Programme - Rev. L)

**金門 - 利達聯營**

**Gammon - Leader Joint Venture**



Activity ID	Activity Name	Rem Dur	Start	Finish	2013												2014					
					November						December						January			February		
					21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17
<b>3MRP - Nov 2013 to Feb 2013</b>																						
<b>02 - PRE-CONSTRUCTION WORKS</b>																						
<b>02.3 - Method Statement / Shop Drawings</b>																						
0230-1580	MS Bridge F1A/F2A Int. Noise Semi Enclosure - Submission	28	16-Dec-13	12-Jan-14																		
0230-1590	MS Bridge F1A/F2A Int. Noise Semi Enclosure - ER Review / Comment	18	13-Jan-14	30-Jan-14																		
0230-1600	MS Bridge F1A/F2A Int. Noise Semi Enclosure - Resubmission	18	31-Jan-14	17-Feb-14																		
0230-1610	MS Bridge F1A/F2A Int. Noise Semi Enclosure - No Adverse Comment	18	18-Feb-14	07-Mar-14																		
0230-1930	MS Marine Temp Pile Removal - No Adverse Comment	2	18-Sep-13 A	21-Nov-13																		
0230-1940	MS Beam Erection D1 to E2 - Submission	28	06-Jan-14*	02-Feb-14																		
0230-1950	MS Beam Erection D1 to E2 - Comment/Resubmission	30	03-Feb-14	04-Mar-14																		
0230-1372	MS Segment Erection by Crane - Submission	0	20-Sep-13 A	15-Nov-13 A																		
0230-1374	MS Segment Erection by Crane - Comment/Resubmission	12	16-Nov-13 A	01-Dec-13																		
0230-1376	MS Segment Erection by Crane - No Adverse Comment	12	02-Dec-13	13-Dec-13																		
0230-2010	MS EVB ELS - Comment/Resubmission	0	20-Oct-13 A	31-Oct-13 A																		
0230-2020	MS EVB ELS - No Adverse Comment	0	01-Nov-13 A	12-Nov-13 A																		
0230-2030	MS Beam Erection F8 to F15 - Submission	28	16-Dec-13*	12-Jan-14																		
0230-2040	MS Beam Erection F8 to F15 - Review/Comment	15	13-Jan-14	27-Jan-14																		
0230-2050	MS Beam Erection F8 to F15 - Resubmission	15	28-Jan-14	11-Feb-14																		
0230-2060	MS Beam Erection F8 to F15 - No Adverse Comment	15	12-Feb-14	26-Feb-14																		
0230-2070	MS ADB Pre-bored H-pile - Resubmission	6	21-Oct-13 A	25-Nov-13																		
0230-2080	MS ADB Pre-bored H-pile - No Adverse Comment	15	26-Nov-13	10-Dec-13																		
0230-1420	MS Noise Barrier - Submission	28	16-Dec-13	12-Jan-14																		
0230-1430	MS Permanent Noise Barrier - ER Review & Comment	18	13-Jan-14	30-Jan-14																		
0230-1440	MS Permanent Noise Barrier - Resubmission	18	31-Jan-14	17-Feb-14																		
0230-1450	MS Permanent Noise Barrier - No Adverse Comment	18	18-Feb-14	07-Mar-14																		
0230-1780	MS Temporary Bridge TD - Submission	28	03-Feb-14*	02-Mar-14																		
<b>02.4 - Contractor's Design and Build Items</b>																						
0240-1041	Temp Bridge "TD" Design - Submission	48	01-Mar-13 A	06-Jan-14																		
0240-1042	Temp Bridge "TD" Design - ER review and comment	24	07-Jan-14	30-Jan-14																		
0240-1043	Temp Bridge "TD" Design - Resubmission	30	31-Jan-14	01-Mar-14																		
0240-1105	Int. Noise Enclosure Structural Design - Submission	12	20-Mar-13 A	01-Dec-13																		
0240-1110	Int. Noise Enclosure Structural Design - ER Review/Resubmission	28	02-Dec-13	29-Dec-13																		
0240-1112	Int. Noise Enclosure Structural Design - No Adverse Comment	28	30-Dec-13	26-Jan-14																		
0240-1113	Int. Noise Enclosure Structural - Shop Drawings Bridge F1A/F2A	60	27-Jan-14	27-Mar-14																		
0240-1127	Noise Barrier Structural Design - ER Review/Resubmission	6	30-May-13 A	25-Nov-13																		
0240-1131	Noise Barrier - Procurement/Sub-contractor	26	01-Nov-13 A	15-Dec-13																		
0240-1128	Noise Barrier Structural Design - No Adverse Comment	28	26-Nov-13	23-Dec-13																		
0240-1132	Noise Barrier Structural - Shop Drawings	90	16-Dec-13	15-Mar-14																		
0240-1133	Noise Barrier Structural - Fabrication/Delivery	120	15-Jan-14	14-May-14																		
0240-1134	Noise Barrier Panel - Submission	36	16-Dec-13	20-Jan-14																		
0240-1136	Noise Barrier Panel - Design ER Review/Resubmission	28	21-Jan-14	17-Feb-14																		
0240-1137	Noise Barrier Panel - Design No Adverse Comment	28	18-Feb-14	17-Mar-14																		
0240-1138	Noise Barrier Panel - Fabrication Delivery	90	18-Feb-14	18-May-14																		
0240-1141	Noise Barrier Green Wall - Design Submission	60	15-Jan-14	15-Mar-14																		

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**Three Month Rolling Programme (20 Nov 2013 to 19 Feb 2013)**

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Activity ID	Activity Name	Rem Dur	Start	Finish	2013																	2014						
					November							December							January			February						
					21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17						
0524-2890	Pump Sump - Structure	12	04-Dec-13	17-Dec-13																		Pump Sump - Structure						
0524-2925	Tunnel Phase 2 Zone 4 - Excav	0	07-Oct-13 A	02-Nov-13 A	Tunnel Phase 2 Zone 4 - Excav																							
0524-2935	Tunnel Phase 2 Zone 4 - LS + Preload	0	22-Oct-13 A	09-Nov-13 A	Tunnel Phase 2 Zone 4 - LS + Preload																							
0524-2945	Tunnel Phase 2 Zone 5 - Excav	3	12-Sep-13 A	22-Nov-13	Tunnel Phase 2 Zone 5 - Excav																							
0524-2955	Tunnel Phase 2 Zone 5 - LS + Preload	9	26-Oct-13 A	29-Nov-13	Tunnel Phase 2 Zone 5 - LS + Preload																							
0524-2980	Tunnel Phase 2 Zone 7 - Excav	9	02-Oct-13 A	06-Dec-13	Tunnel Phase 2 Zone 7 - Excav																							
0524-2963	Tunnel Phase 2 Zone 1 - Remaining LS + Preload	1	30-Sep-13 A	20-Nov-13	Tunnel Phase 2 Zone 1 - Remaining LS + Preload																							
0524-2965	Tunnel Phase 2 Zone 6 - Excav	7	20-Nov-13	28-Nov-13	Tunnel Phase 2 Zone 6 - Excav																							
0524-2975	Tunnel Phase 2 Zone 6 - LS + Preload	9	28-Nov-13	09-Dec-13	Tunnel Phase 2 Zone 6 - LS + Preload																							
0524-2985	Tunnel Phase 2 Zone 8 - Excav	12	09-Dec-13	23-Dec-13	Tunnel Phase 2 Zone 8 - Excav																							
0524-3000	Tunnel Phase 2 Zone 8 - Lateral Support	10	23-Dec-13	06-Jan-14	Tunnel Phase 2 Zone 8 - Lateral Support																							
0524-3005	Tunnel Phase 2 Zone 9 - Excav	6	06-Jan-14	13-Jan-14	Tunnel Phase 2 Zone 9 - Excav																							
<b>05.2.4 - Tunnel Structure</b>																												
0524-3015	Bay 1 Tunnel Vertical Wall	7	10-Dec-13	17-Dec-13	Bay 1 Tunnel Vertical Wall																							
0524-3025	Bay 1 Tunnel False Works	6	18-Dec-13	24-Dec-13	Bay 1 Tunnel False Works																							
0524-3035	Bay 1 Tunnel OHVD Slab	8	26-Dec-13	04-Jan-14	Bay 1 Tunnel OHVD Slab																							
0524-3045	Bay 1 Tunnel Roof Slab	12	06-Jan-14	18-Jan-14	Bay 1 Tunnel Roof Slab																							
0524-3065	Bay 3 Tunnel Vertical Wall	0	21-Oct-13 A	28-Oct-13 A	Bay 3 Tunnel Vertical Wall																							
0524-3075	Bay 3 Tunnel False Works	6	20-Nov-13	26-Nov-13	Bay 3 Tunnel False Works																							
0524-3085	Bay 3 Tunnel OHVD Slab	8	27-Nov-13	05-Dec-13	Bay 3 Tunnel OHVD Slab																							
0524-3095	Bay 3 Tunnel Roof Slab	12	06-Dec-13	19-Dec-13	Bay 3 Tunnel Roof Slab																							
0524-3155	Bay 6 Tunnel Base Slab	0	22-Oct-13 A	29-Oct-13 A	Bay 6 Tunnel Base Slab																							
0524-3165	Bay 6 Tunnel Vertical Wall	7	30-Oct-13 A	27-Nov-13	Bay 6 Tunnel Vertical Wall																							
0524-3175	Bay 6 Tunnel False Works	6	28-Nov-13	04-Dec-13	Bay 6 Tunnel False Works																							
0524-3185	Bay 6 Tunnel OHVD Slab	8	05-Dec-13	13-Dec-13	Bay 6 Tunnel OHVD Slab																							
0524-3195	Bay 6 Tunnel Roof Slab	12	14-Dec-13	28-Dec-13	Bay 6 Tunnel Roof Slab																							
0524-3305	Tunnel Waterproofing Base Slab Bay 9	6	07-Dec-13	13-Dec-13	Tunnel Waterproofing Base Slab Bay 9																							
0524-3315	Bay 9 Tunnel Base Slab	7	14-Dec-13	21-Dec-13	Bay 9 Tunnel Base Slab																							
0524-3325	Bay 9 Tunnel Vertical Wall	7	23-Dec-13	31-Dec-13	Bay 9 Tunnel Vertical Wall																							
0524-3335	Bay 9 Tunnel False Works	6	02-Jan-14	08-Jan-14	Bay 9 Tunnel False Works																							
0524-3345	Bay 9 Tunnel OHVD Slab	8	09-Jan-14	17-Jan-14	Bay 9 Tunnel OHVD Slab																							
0524-3355	Bay 9 Tunnel Roof Slab	12	18-Jan-14	04-Feb-14	Bay 9 Tunnel Roof																							
0524-3115	Bay 2 Tunnel Vertical Wall	7	10-Dec-13	17-Dec-13	Bay 2 Tunnel Vertical Wall																							
0524-3125	Bay 2 Tunnel False Works	6	18-Dec-13	24-Dec-13	Bay 2 Tunnel False Works																							
0524-3135	Bay 2 Tunnel OHVD Slab	8	26-Dec-13	04-Jan-14	Bay 2 Tunnel OHVD Slab																							
0524-3145	Bay 2 Tunnel Roof Slab	12	06-Jan-14	18-Jan-14	Bay 2 Tunnel Roof Slab																							
0524-3205	Bay 4 Tunnel Base Slab	0	30-Oct-13 A	06-Nov-13 A	Bay 4 Tunnel Base Slab																							
0524-3215	Bay 4 Tunnel Vertical Wall	7	20-Nov-13	27-Nov-13	Bay 4 Tunnel Vertical Wall																							
0524-3225	Bay 4 Tunnel False Works	6	28-Nov-13	04-Dec-13	Bay 4 Tunnel False Works																							
0524-3235	Bay 4 Tunnel OHVD Slab	8	05-Dec-13	13-Dec-13	Bay 4 Tunnel OHVD Slab																							
0524-3245	Bay 4 Tunnel Roof Slab	12	14-Dec-13	28-Dec-13	Bay 4 Tunnel Roof Slab																							
0524-3265	Bay 5 Tunnel Vertical Wall	5	07-Nov-13 A	25-Nov-13	Bay 5 Tunnel Vertical Wall																							
0524-3275	Bay 5 Tunnel False Works	6	26-Nov-13	02-Dec-13	Bay 5 Tunnel False Works																							
0524-3285	Bay 5 Tunnel OHVD Slab	8	03-Dec-13	11-Dec-13	Bay 5 Tunnel OHVD Slab																							

- Remaining Level of Effort
- Actual Level of Effort
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Activity ID	Activity Name	Rem Dur	Start	Finish	2013												2014					
					November						December						January			February		
					21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17
0610-2126	Pier 29-4 Bored Pile	30	04-Feb-14	10-Mar-14																		
<b>06.2 - Box Culvert U1</b>																						
0620-2600	1500mm Drainage Construct MH 1-43	0	02-Oct-13 A	23-Oct-13 A	1500mm Drainage Construct MH 1-43																	
0620-2610	1500mm Drainage MH 1-43 to 1-59A - Backfill + Extract Sheet Pile	6	02-Oct-13 A	26-Nov-13	1500mm Drainage MH 1-43 to 1-59A - Backfill + Extract Sheet Pile																	
0620-2630	1500mm Drainage MH 1-42 to 1-43 - Excavation	7	02-Jan-14	09-Jan-14	1500mm Drainage MH 1-42 to 1-43 - Excavation																	
0620-2640	1500mm Drainage MH 1-42 to 1-43 - Pipe Laying	5	10-Jan-14	15-Jan-14	1500mm Drainage MH 1-42 to 1-43 - Pipe Laying																	
0620-2650	1500mm Drainage Construct MH 1-42	12	16-Jan-14	29-Jan-14	1500mm Drainage Construct MH 1-42																	
0620-2660	1500mm Drainage MH 1-42 to 1-43 - Backfill + Extract Sheet Pile	9	30-Jan-14	12-Feb-14	1500mm Drainage MH 1-42 to 1-43 - Backfill + Extract Sheet Pile																	
<b>06.3 - Admin Building</b>																						
0630-3100	Predrill for Adm Building (27 no) (3 set)	35	31-Oct-13 A	31-Dec-13	Predrill for Adm Building (27 no) (3 set)																	
0630-3105	Admin Bldg Pile G.I. Report / Founding Level	18	20-Dec-13	11-Jan-14	Admin Bldg Pile G.I. Report / Founding Level																	
0630-3110	Pre-bored H-pile for Adm bldg (55 no) ( 3 set)	130	13-Jan-14	21-Jun-14	Pre-bored H-pile for Adm bldg (55 no) ( 3 set)																	
<b>10 - SECTION X OF THE WORKS</b>																						
<b>10.1 - E/B Bridges (Bridge D, E and F)</b>																						
<b>10.1.1 - Marine Pier Construction</b>																						
<b>Pier F03 to F15</b>																						
1011-2235	Bearing intallation Pier F5	0	14-Oct-13 A	31-Oct-13 A	Bearing intallation Pier F5																	
1011-2261	Bearing intallation Pier F6	0	22-Oct-13 A	04-Nov-13 A	Bearing intallation Pier F6																	
1011-2291	Bearing intallation Pier F7	6	29-Oct-13 A	26-Nov-13	Bearing intallation Pier F7																	
1011-2320	F8 Crosshead Construction	6	21-Oct-13 A	26-Nov-13	F8 Crosshead Construction																	
1011-2345	Bearing intallation Pier F8	12	04-Dec-13	17-Dec-13	Bearing intallation Pier F8																	
1011-3115	F9 Pile Cap Construction	0	26-Sep-13 A	26-Oct-13 A	F9 Pile Cap Construction																	
1011-2390	F9 Pier/Column Construction	8	28-Oct-13 A	28-Nov-13	F9 Pier/Column Construction																	
1011-2400	F9 Crosshead Construction	24	28-Nov-13	27-Dec-13	F9 Crosshead Construction																	
1011-2410	F10 Pile Cap Shutter Cofferdam	0	16-Sep-13 A	26-Oct-13 A	F10 Pile Cap Shutter Cofferdam																	
1011-3125	F10 Pile Cap Construction	7	28-Oct-13 A	27-Nov-13	F10 Pile Cap Construction																	
1011-2420	F10 Pier/Column Construction	15	28-Nov-13	14-Dec-13	F10 Pier/Column Construction																	
1011-2430	F10 Crosshead Construction	24	16-Dec-13	14-Jan-14	F10 Crosshead Construction																	
1011-2350	F11 Pile Cap Shutter Cofferdam	0	30-Sep-13 A	02-Nov-13 A	F11 Pile Cap Shutter Cofferdam																	
1011-3135	F11 Pile Cap Construction	19	04-Nov-13 A	11-Dec-13	F11 Pile Cap Construction																	
1011-2360	F11 Pier/Column Construction	15	11-Dec-13	30-Dec-13	F11 Pier/Column Construction																	
1011-2370	F11 Crosshead Construction	24	30-Dec-13	28-Jan-14	F11 Crosshead Construction																	
1011-2440	F12 Pile Cap Shutter Cofferdam	3	21-Oct-13 A	22-Nov-13	F12 Pile Cap Shutter Cofferdam																	
1011-3145	F12 Pile Cap Construction	21	22-Nov-13	17-Dec-13	F12 Pile Cap Construction																	
1011-2450	F12 Pier/Column Construction	15	17-Dec-13	06-Jan-14	F12 Pier/Column Construction																	
1011-2460	F12 Crosshead Construction	24	06-Jan-14	06-Feb-14	F12 Crosshead Construction																	
1011-2470	F13 Pile Cap Shutter Cofferdam	16	04-Nov-13 A	09-Dec-13	F13 Pile Cap Shutter Cofferdam																	
1011-3155	F13 Pile Cap Construction	21	09-Dec-13	04-Jan-14	F13 Pile Cap Construction																	
1011-2480	F13 Pier/Column Construction	15	04-Jan-14	22-Jan-14	F13 Pier/Column Construction																	
1011-2490	F13 Crosshead Construction	18	06-Feb-14	27-Feb-14	F13 Crosshead Construction																	
1011-2500	F14 Pile Cap Shutter Cofferdam	18	20-Nov-13*	10-Dec-13	F14 Pile Cap Shutter Cofferdam																	
1011-3165	F14 Pile Cap Construction	21	11-Dec-13*	06-Jan-14	F14 Pile Cap Construction																	
1011-2510	F14 Pier/Column Construction	12	07-Jan-14	20-Jan-14	F14 Pier/Column Construction																	
1011-2520	F14 Crosshead Construction	18	21-Jan-14	13-Feb-14	F14 Crosshead Construction																	

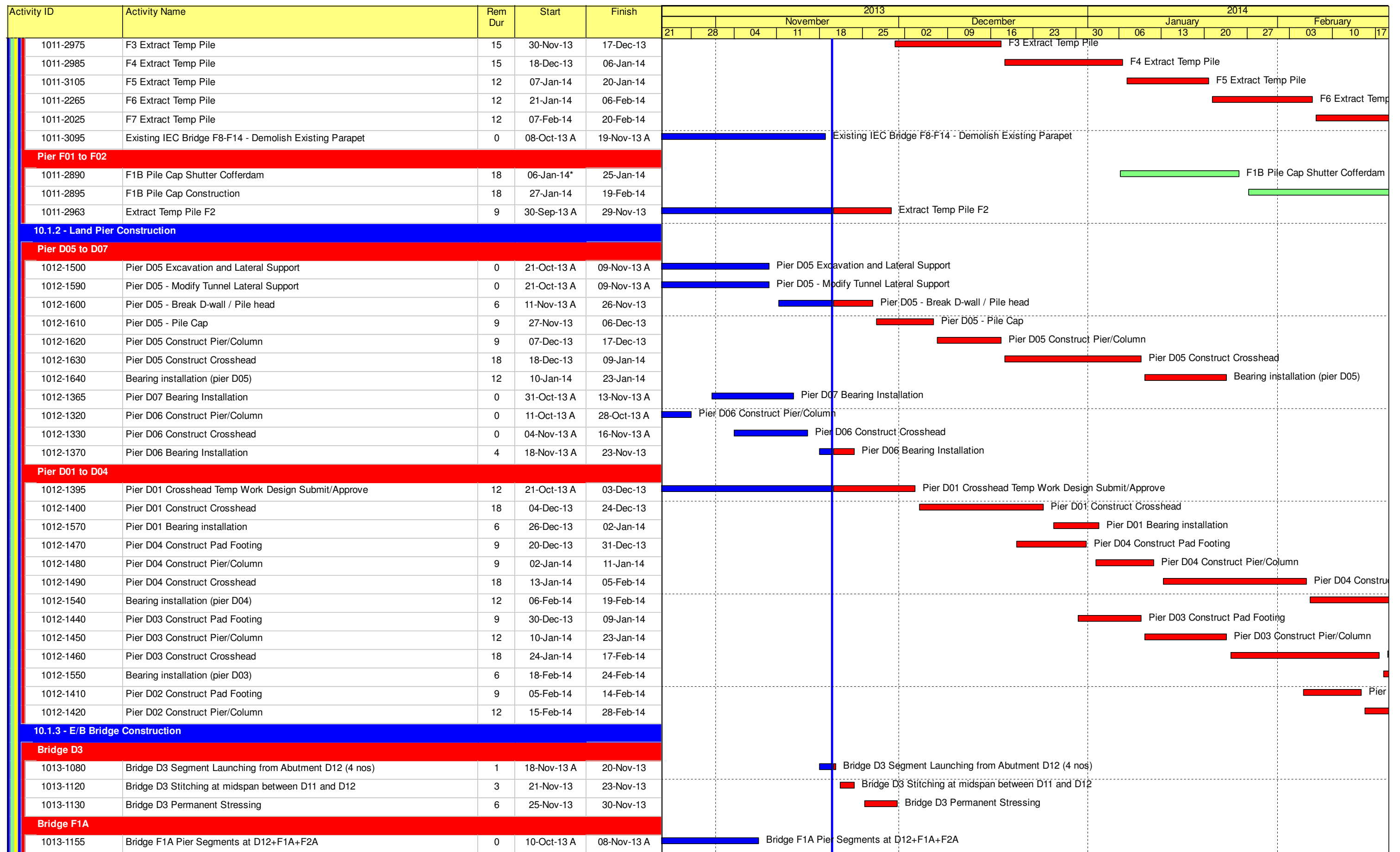
- Remaining Level of Effort
- Actual Level of Effort
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- Critical Remaining Work
- ◆ Milestone

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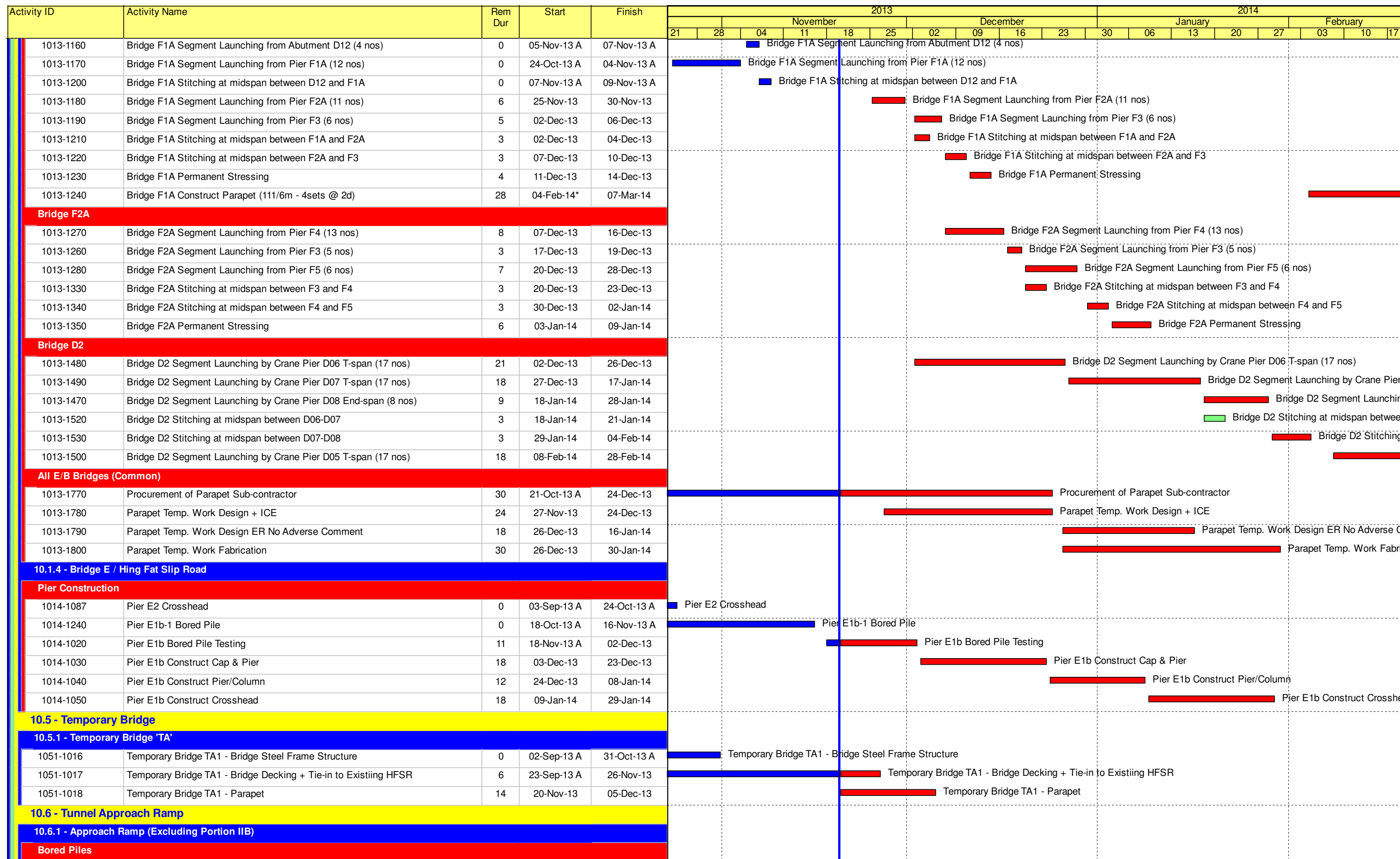
- Remaining Level of Effort
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- Remaining Level of Effort
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Activity ID	Activity Name	Rem Dur	Start	Finish	2013												2014				
					November						December						January			February	
					21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	03	10
1061-1580	Bored Pile Ramp - BN07	9	25-Oct-13 A	29-Nov-13	Actual Work						Remaining Work										
1061-1661	Bored Pile Ramp - BM40	12	03-Oct-13 A	03-Dec-13	Actual Work						Remaining Work										
1061-1670	Remaining Pre-drilling for Approach Ramp Bored Piles	42	19-Jul-13 A	09-Jan-14	Actual Work						Remaining Work										
1061-1680	Bored Pile Ramp - BM42	18	04-Dec-13	24-Dec-13							Remaining Work										
1061-1690	Bored Pile Ramp - BM39	18	26-Dec-13	16-Jan-14							Remaining Work										
1061-1700	Bored Pile Ramp - BM43	18	17-Jan-14	10-Feb-14							Remaining Work										
1061-1710	Bored Pile Ramp - BM40	18	11-Feb-14	03-Mar-14							Remaining Work										

-  Remaining Level of Effort
-  Actual Level of Effort
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Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	2013												2014												2015												2016												2017												2018											
					D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N
<b>HK/2012/08 Reviewed Works Programme - (Conforming) - Rev.0/1 23 Aug 2013</b>																																																																												
<b>Dredging and Reclamation</b>																																																																												
<b>Marine Work Construction</b>																																																																												
<b>Area C - Demolish Expo Drive West Bridge</b>																																																																												
MAR12840	Area C - Expo Drive - saw cut and remove (Bay 3)	5	11-Aug-13 A	24-Aug-13																																																																								
MAR13220	Area C - Expo Drive - saw cut and remove (Bay 4)	5	13-Aug-13 A	24-Aug-13																																																																								
MAR13240	Area C - Expo Drive - saw cut and remove (Bay 5)	5	26-Aug-13	30-Aug-13																																																																								
MAR13260	Area C - Expo Drive - saw cut and remove (Bay 6)	5	31-Aug-13	05-Sep-13																																																																								
MAR13280	Area C - Expo Drive - saw cut and remove (Bay 7)	5	06-Sep-13	11-Sep-13																																																																								
MAR13440	Area C - Expo Drive - saw cut and remove (Bay 8)	5	12-Sep-13	17-Sep-13																																																																								
MAR13480	Area C - Expo Drive - saw cut and remove (Bay 9)	5	18-Sep-13	24-Sep-13																																																																								
MAR13500	Area C - Expo Drive - saw cut and remove (Bay 10)	5	25-Sep-13	30-Sep-13																																																																								
MAR13520	Area C - Expo Drive - saw cut and remove ((Bay 11)	5	02-Oct-13	07-Oct-13																																																																								
<b>Dredging</b>																																																																												
<b>Dredging - Zone C</b>																																																																												
MAR11340	Zone C - Dredging [R6, R7] (25m control zone / temp seawall)	3	30-Aug-13	02-Sep-13																																																																								
MAR11350	Zone C - Dredging [R3-R5] (25m control zone)	4	03-Sep-13	06-Sep-13																																																																								
MAR11360	Zone C - remove existing rock armour [S7-S8] (temp seawall)	7	07-Sep-13	14-Sep-13																																																																								
MAR11380	Zone C - Final Hydrographic Survey (temp seawall)	3	16-Sep-13	18-Sep-13																																																																								
MAR11410	Zone C - Dredging [S3-S6, T4-T5]	13	16-Sep-13	02-Oct-13																																																																								
MAR11460	Zone C - remove existing rock armour [T6-T7, U6-U7] (bridge area)	7	08-Oct-13	16-Oct-13																																																																								
MAR11480	Zone C - Dredging [U4-U7] (bridge area)	3	17-Oct-13	19-Oct-13																																																																								
MAR11500	Zone C - Dredging [T4-T7] (bridge area)	6	21-Oct-13	26-Oct-13																																																																								
MAR11580	Zone C - Final Hydrographic Survey (bridge area)	4	28-Oct-13	31-Oct-13																																																																								
<b>Dredging - Zone B</b>																																																																												
MAR10900	Zone B - dredging [Q6-Q8] (25m control zone / seawall)	4	30-Aug-13	03-Sep-13																																																																								
MAR10910	Zone B - dredging [Q2-Q5] (25m control zone)	4	04-Sep-13	07-Sep-13																																																																								
MAR10920	Zone B - dredging [P6-P8] (seawall)	6	09-Sep-13	14-Sep-13																																																																								
MAR12100	Zone B - dredging [P2-P5]	6	28-Oct-13	02-Nov-13																																																																								
MAR12140	Zone B - Final Hydrographic Survey	7	04-Nov-13	11-Nov-13																																																																								
<b>Dredging - Zone A2</b>																																																																												
MAR10120	Zone A2 - Complete decommissioning of Submarine Sewage Outfall (conforming by others)	0		20-Aug-13																																																																								
MAR10140	Zone A2 - Complete decommissioning of Cross Harbour Watermains (conforming by others)	0		20-Aug-13																																																																								
MAR10160	Zone A2 - dredging [L6-L8, M6-M8] (seawall)	11	16-Sep-13	28-Sep-13																																																																								
MAR10200	Zone A2 - dredging [M1-M5]	11	04-Nov-13	15-Nov-13																																																																								
MAR12440	Zone A2 - dredging [L0-L5]	5	16-Nov-13	21-Nov-13																																																																								
MAR12460	Zone A2 - abandon / remove existing submarine sewage outfall [L2-L5]	52	30-Sep-13	30-Nov-13																																																																								

Data Date: 20-Aug-13	<ul style="list-style-type: none"> <li>◆ Current Milestone</li> <li>■ Actual Work</li> <li>■ Critical Remaining Work</li> <li>■ Remaining Work</li> <li>■ Remaining Level of Effort</li> </ul>
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**3 Months Rolling Programme for Area Outside Zone CRIII**

Date	Revision	Checked	Approved
29-Aug-13	Rev. 0/1		





Activity ID	Activity Name	Original Duration	Start	Finish	2013		2014			
					Nov	Dec	Jan	Feb	Mar	
<b>HY/2010/08: CWB-SR8 Three Months Rolling Programme_updated up to 20131120</b>										
<b>Works in TS3</b>										
<b>TS3 East &amp; West Reclamation Works</b>										
<b>TS3E - Reclamation (Advance Works)</b>										
TS3E.MW.1010	Commence Advance Marine Works	0	04-Nov-13 A		◆ Commence Advance Marine Works					
TS3E.MW.1020	TS3E North - Dredging Works (Type 3)	18	04-Nov-13 A	23-Nov-13	■ TS3E North - Dredging Works (Type 3)					
TS3E.MW.1025	TS3E North - Dredging Works (Type 1 & 2)	41	02-Dec-13	21-Jan-14	■ TS3E North - Dredging Works (Type 1 & 2)					
TS3E.MW.1030	TS3E North - Rockfill + Levelling Works	13	22-Jan-14	08-Feb-14	■ TS3E North - Rockfill + Levelling Works					
TS3E.MW.1050	C15 - Relocate Vessels	9	10-Feb-14	19-Feb-14	■ C15 - Relocate Vessels					
TS3E.MW.1060	C15 - Dredging at Temporary Mooring Area	18	20-Feb-14	12-Mar-14	■ C15 - Dredging at Temporary Mooring Area					
<b>Works in SR8 (Open Cut Method)</b>										
<b>SR8 - Cofferdam &amp; Cut &amp; Cover Tunnel Works</b>										
<b>SR8 East Bound - (Seaside to Victoria Road / IEC Central Divider)</b>										
<b>TTA Stage 0 - East Bound</b>										
<b>Stage 0A - East Bound (Seaside) (Ref. DRG. No.CDD/SR8/081)</b>										
SR8.EB.0150	Ground Pre-treatment works at Seawall Part 1	12	31-Oct-13 A	13-Nov-13 A	■ Ground Pre-treatment works at Seawall Part 1					
<b>Stage 0B - East Bound (Seaside) (Ref. DRG. No. CDD/SR8/081)</b>										
SR8.EB.0210	Implement TTM (DRG REF. 4843/012/030)	0	14-Nov-13 A		◆ Implement TTM (DRG REF. 4843/012/030)					
SR8.EB.0220	Ground Pre-Treatment works at Seawall Part 2	6	14-Nov-13 A	20-Nov-13	■ Ground Pre-Treatment works at Seawall Part 2					
SR8.EB.0230	Construct Proposed Walkway and Install Pipe for Water Main	12	16-Nov-13 A	29-Nov-13	■ Construct Proposed Walkway and Install Pipe for Water Main					
SR8.EB.0240	Demolish Island / Construct & Relocate New Bus Stop (West of Footbridge)	24	16-Nov-13 A	13-Dec-13	■ Demolish Island / Construct & Relocate New Bus Stop (West of Footbridge)					
<b>Stage 1A - East Bound (Seaside) (Ref. DRG. No.CDD/SR8/082)</b>										
SR8.EB.1140	Construction of ADMS at Seaside Planter	44	24-Oct-13 A	13-Jan-14	■ Construction of ADMS at Seaside Planter					
SR8.EB.1010	Implement TTM (Divert Pedestrian to Proposed Walkway)	0		29-Nov-13	◆ Implement TTM (Divert Pedestrian to Proposed Walkway)					
SR8.EB.1020	Carry out Pre-Boring Work for Stage 1A Sheet Pile	12	30-Nov-13	13-Dec-13	■ Carry out Pre-Boring Work for Stage 1A Sheet Pile					
SR8.EB.1030	Carry out Stage 1A Sheet Pile Work	15	07-Dec-13	24-Dec-13	■ Carry out Stage 1A Sheet Pile Work					
SR8.EB.1040	Carry out Stage 1A Pipe Piling Work	28	27-Dec-13	29-Jan-14	■ Carry out Stage 1A Pipe Piling Work					
SR8.EB.1050	Carry out Stage 1A TAM Grout	10	30-Jan-14	13-Feb-14	■ Carry out Stage 1A TAM Grout					
SR8.EB.1060	Trim down the Sheet Pile and Pipe Pile and construct the Gas Main Trough	6	10-Feb-14	15-Feb-14	■ Trim down the Sheet Pile and Pipe Pile and construct the Gas Main Trough					
SR8.EB.1070	Divert the Water Main to Seaside	12	13-Feb-14	26-Feb-14	■ Divert the Water Main to Seaside					
SR8.EB.1090	Trim down the Sheet Pile/Pipe Pile and Divert HEC Cable (11kv) to completed Pipe pile	6	17-Feb-14	22-Feb-14	■ Trim down the Sheet Pile/Pipe Pile and Divert HEC Cable (11kv) to completed Pipe pile					
SR8.EB.1100	Pre- Laying of One Gas Main Pipe to Gas Trough for diversion at Stage 2	6	17-Feb-14	22-Feb-14	■ Pre- Laying of One Gas Main Pipe to Gas Trough for diversion at Stage 2					
SR8.EB.1080	Divert Gas Main from Foot Path to Gas Main Trough	12	17-Feb-14	01-Mar-14	■ Divert Gas Main from Foot Path to Gas Main Trough					
SR8.EB.1110	Shift wiring and Relocation of Lamp Post	6	24-Feb-14	01-Mar-14	■ Shift wiring and Relocation of Lamp Post					

- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

Date	Revision	Checked	Approved
27-Nov-13	Updated to 20th Nov 2013	DML/WC	





Activity ID	Activity Name	Original Duration	Start	Finish	2013					2014					
					Nov		Dec			Jan		Feb			Mar
VP_1090	CP - Footings / Foundation Works	12	29-Nov-13	12-Dec-13											
VP_1100	CP - Base Slab	12	13-Dec-13	28-Dec-13											
VP_1690	CP - Kerbs and Planters	12	30-Dec-13	13-Jan-14											
VP_1140	CP - Lighting System	18	07-Jan-14	27-Jan-14											
VP_1200	CP - Install Play Equipment	18	28-Jan-14	20-Feb-14											
VP_1230	CP - Install Safety Matting	12	14-Feb-14	27-Feb-14											
VP_1160	CP - Completion of KD4 - Works in Section1B	0		27-Feb-14											◆ CP - Co
<b>Bowling Green Office</b>															
<b>BGO - Construction Works</b>															
VP_1110	BGO - Site Possession, Portion VI & XI (245d)	0	21-Nov-13												◆ BGO - Site Possession, Portion VI & XI (245d)
VP_1100.01	BGO - hoarding erection	24	22-Nov-13	19-Dec-13											
VP_1100.02	BGO - site clearance	24	20-Dec-13	20-Jan-14											
VP_1150	BGO - Underground utilities & foundation works	36	21-Jan-14	06-Mar-14											
<b>Tree Transplanting at Portion XIV (Victoria Park Open Space)</b>															
VP_1040	Tree Transplanting & Upkeep at Portion XIV	347	16-Oct-13 A	13-Dec-14											
<b>Mooring Components Upkeep (CBTS and ATS)</b>															
MAR_2000	Mooring Upkeep at Portion XIX(19) & XX(20) - ATS (if instructed by Engineer)	1399	21-Mar-13 A	17-Jan-17											
<b>Works for Public Works Regional Laboratory (North Lantau)</b>															
<b>Maintenance and Upkeep of New PWRL (Portion XVII)</b>															
PWRL_1050	Maintenance/ Upkeep of New PWRL	1301	19-Jul-13 A	20-Nov-17											
<b>Demolition of Existing PWRL (Portion XVIII)</b>															
PWRL_1060	Demolition of Existing PWRL & Reinstatement works	49	17-Sep-13 A	15-Nov-13 A											
PWRL_1070	Completion of KD16 - Completion of Section 10A	0		15-Nov-13 A											◆ Completion of KD16 - Completion of Section 10A

- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

Date	Revision	Checked	Approved
27-Nov-13	Updated to 20th Nov 2013	DML/WC	