



**Lam Geotechnics Limited**

Contract No. HK/2011/07  
Wanchai Development Phase II and Central-Wanchai Bypass  
Sampling, Field Measurement and testing Works (Stage 2)  
Monthly EM&A Report (June 2015)

**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-06/356/2009 AND  
FEP-07/356/2009**

**MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT**

**- JUNE 2015 -**

**CLIENTS:**

**Civil Engineering and Development  
Department**

**and**

**Highways Department**

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**DATE:**

9 July 2015

Ref.: AACWBIECEM00\_0\_6893L.15

14 July 2015

AECOM Asia Company Limited  
Engineer's Representative's Office  
25 Hung Hing Road,  
Causeway Bay,  
Hong Kong

By Post and Fax (3912 3010)

Attention: Mr. Peter Poon

Dear Mr. Poon,

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

**Monthly Environmental Monitoring and Audit Report (June 2015)  
for EP-356/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-  
04/356/2009, 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 June 2015 received by e-mail on 9 July 2015 for our review and comment.

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

Encl.

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**EXECUTIVE SUMMARY**

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – [June 2015](#) 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-06/356/2009 and FEP-07/356/2009. This report presents the environmental monitoring findings and information recorded during the period [May 2015 to June 2015](#). 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:
- [Nil](#)
- iii. During this reporting period, the major work activities for Contract no. HK/2009/02 included:
- [Nil](#)
- iv. During this reporting period, the major work activities for Contract no. HY/2009/15 included:
- [Reinstatement of vertical seawall at TPCWAE](#)
  - [Dredging work near Noon Day Gun](#)
- v. During this reporting period, the major work activities for Contract no. HY/2009/19 included:
- [Nil](#)
- vi. During this reporting period, the major work activities for Contract no. HK/2012/08 included:
- [Removal of rock armour](#)
  - [Dry dock construction](#)
  - [Installation of pipe pile wall](#)
  - [Removal of temporary piling platform for culvert diversion](#)
  - [Construction of culvert](#)
- vii. During this reporting period, the major work activities for Contract no. HY/2010/08.
- [Rock filling works](#)
  - [Pre-treatment works](#)
  - [Bar fixing works](#)
  - [ELS works](#)
  - [Diaphragm Wall, Barrette construction and King Post installation works](#)
  - [Slurry and fill disposal works](#)

#### Noise Monitoring

- viii. Three limit level exceedances at M6 – HK Baptist Church Henrietta Secondary School were recorded on 5, 9 and 16 June 2015 in this reporting month. The exceedances were concluded as non-Project works.
- 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.

#### Real-time Noise Monitoring

- x. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at RTN1 - FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.
- xi. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.
- xii. 24-hour real time noise monitoring was conducted at RTN2a – Hong Kong Electric Centre. No project related exceedance was recorded in the reporting month.

#### Air Quality Monitoring

- xiii. Due to electricity interruption, the 24hr TSP monitoring at CMA4a was rescheduled from 18 June 2015 to 19 June 2015.
- xiv. With respect to the area handover, the air quality monitoring station CMA5a at Children Playgrounds opposite to the Pedestrian Plaza was relocated to the Pedestrian Plaza on 3 December 2014. The station reference and location ID of the air quality monitoring station CMA5a was updated as CMA5b and Pedestrian Plaza respectively
- xv. 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.
- xvi. The location ID of air monitoring station CMA1b was updated as Oil Street Site Office in April 2013.
- xvii. 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; CMA5b – Pedestrian Plaza; CMA6a – WDII PRE Site Office.

#### Water Quality Monitoring

- xviii. Action and Limit level of water quality monitoring was transited from dry season to wet season from 1 April 2015.
- xix. With respect to the water pipe modification works and the suspension of water supply to Windsor House from the water storage tank for water quality sampling, the water quality monitoring station C7 was cancelled on 10 June 2015 during flood tide.

- xx. With respect to the water pipe modification works conducted for the diverted seawater supply system to the Windsor House Cooling water intake and the suspension of water supply to Windsor House from the water storage tank for water quality sampling, the respective water quality monitoring at WQM station C7 was temporarily suspended from 12 June 2015. The water quality monitoring at WQM station C7 has resumed on 17 June 2015 upon completion of the water pipe modification works.
- xxi. With respect to the construction works undertaken at Ex-PCWAW and the forthcoming wet season DO concern, the suspended Enhance DO monitoring within Ex-PCWAW area at the Enhance DO monitoring station Ex-PCWA-SW was resumed on 30 March 2015 at the finely adjusted monitoring location.
- xxii. With respect to the commencement of seawall modification works at Ex-PCWAE and the location of the Enhance DO monitoring stations would form an active construction area, the Enhance DO monitoring at monitoring station EX-PCWA SW and SE were temporarily suspended from 2 March 2015 ebb tide and the monitoring at the location is tentatively to be resumed by early April 2015 to cater for the potential DO concern during Wet Season.
- xxiii. As informed by CWB RSS, the operation of the diverted Windsor House cooling intake was commenced on 20 Dec 2014 and the water quality monitoring at monitoring station C7 for Windsor House Cooling water intake was resumed on 22 Dec 2014.
- xxiv. With respect to the commencement of temporary reclamation works and seawall construction at Ex-PCWAW zone and diverted culvert extension, the location of the Enhance DO monitoring stations (Ex-PCWASW and Ex-PCWA SE) were finely adjusted to the PCWAE since 7 November 2014.
- xxv. With respect to the commencement of marine dredging works at WCR3 under contract HK/2009/02. The respective water quality monitoring station C1 were associated with HK/2009/01 and HK/2009/02.
- xxvi. As confirmed by CWB RSS, the operation of the pump station for Windsor House Cooling Water was suspended from 22 Oct 2014 for the Windsor House intake cooling intake scheme and temporary supply of freshwater from WSD water mains was provided to cooling water intake. The water quality monitoring for the respective cooling water intake at WQM station C7 was temporarily suspended from 22 Oct 2014.
- xxvii. With respect to the commencement of filling works at TS3 and the formation of TZ3 reclamation zone, the enhance DO monitoring at Enhance monitoring station C7 was temporarily suspended from 22 Oct 2014.
- xxviii. As confirmed by WDII RSS and IEC, the cross harbor dredging works have completed since 16 March 2012 while the dredging works for submarine outfall pipeline has completed since 29 November 2011, considering current construction stage and dredging Scenario, the water quality monitoring at stations WSD9 and WSD17 was temporarily suspended since 8 September 2014 flood tide.
- xxix. With respect to the switching over of cooling water intake location, the water quality monitoring at the relocated intake station RW21-P789 under HK/2009/02 was commenced since 29 July 2013 and monitoring station C5e and C5w were temporarily suspended and switched over to monitoring station RW21-P789 on 29 July 2013 due to suspension of pump house operation.
- xxx. As advised by WDII RSS, the water quality monitoring for WSD21 pump station with respect to HK/2009/02 was switched over to the relocated location since 12 March 2014. According to the EM&A Manual, the water quality monitoring station WSD21 was relocated to station

- RW21-P789 and the water quality monitoring at station WSD21 was temporarily suspended since 12 March 2014.
- xxxi. With respect to the commencement of marine dredging works under contract HY/2010/08. The respective water quality monitoring station C7 were associated with HY/2009/15 and HY/2010/08.
- xxxii. With respect to the commencement of marine dredging works under contract HK/2012/08/ The respective water quality monitoring station WSD19, P1, P3, P4, and P5 were associated with Contract HK/2012/08 Since September 2013.
- xxxiii. 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.
- xxxiv. 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.
- xxxv. 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.
- xxxvi. RSS confirmed that all Type III Dredging works under HK/2009/01 have been completed since Oct 2012.
- xxxvii. 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.
- xxxviii. 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.
- xxxix. 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.
- xl. 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.
- xli. 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. 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;
- xlii. 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.
- xliii. 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.
- xliv. 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.

**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 & HK/2009/02	C1	0	0	0	0	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	0	0	0	0	0	0	0	0	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	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	1	0	1
<b>Total</b>		0	0	0	0	0	0	0	0	0	1	0	1

- Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
- 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8 and C9 were completed on 6 Feb 2012.
- C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
- C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
- WSD7 and WSD20 water quality monitoring were temporarily suspended from 27 Apr 2012.
- 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
- WSD21 water quality monitoring station was temporarily suspended since 12 March 2014
- Maintenance responsibility of silt screen C1, WSD19, P3, P4 and P5 are under Contract HK/2009/01.
- WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 September 2014 flood tide.

- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme and was resumed since 22 December 2014.
  - The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.
- xlv. There were no action and 1 limit level of turbidity exceedance recorded, and no action and 1 limit level of suspended solid exceedance recorded in the reporting month. Investigation found that the exceedance was not related to Project works. The details of the recorded exceedance can be referred to the **Section 6.4**.
- xlvi. 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	1	1	1	2
	Ex-WPCWA SE	0	0	0	0
Total		1	1	1	2

- xlvii. There were 2 action level and 3 limit level exceedance of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedance was not related to Project works. The details of the recorded exceedance can be referred to the **Section 6.4**.
- xlvi. 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.
- xlix. 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.
- i. With respect to the commencement of filling works at TS3 and the formation of TZ3 reclamation zone, the enhance DO monitoring at Enhance monitoring station C7 was temporarily suspended from 22 Oct 2014.
  - ii. With respect to the commencement of temporary reclamation works and seawall construction at Ex-PCWAW zone and diverted culvert extension, the location of the Enhance DO monitoring stations (Ex-PCWASW and Ex-PCWA SE) were finely adjusted to the PCWAE



since 7 November 2014.

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

- lii. There was one environmental complaint received in this reporting month.
- liii. The public complaint regarding dark smoke and malodour concern referred by EPD was received by ET on 22 June 2015 (EPD Ref.: H05/RS/00015054-15 dated 22 June 2015). The complainant reported that dark smoke and malodour emission was observed from a hopper barge moored near shore and other construction plants under operation from the reclamation construction site with Contract no. HK/2009/02 at location outside Wan Chai Sports Ground caused air pollution. The complainant alleged that the said situation had been observed for a prolonged period.

ET confirmed with the Resident Site Staff that reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 from 15 June 2015 to 19 June 2015. Total 3 nos. of mobile crane were in operation. On 17 June 2015, one no. of concrete pump truck and two nos. of concrete mixer were in operation. Excavation and Lateral Support was conducted at Portions 3 & 4 from 15 June 2015 to 19 June 2015. Total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. In addition, on 15 June 2015, 17 June 2015 and 19 June 2015, 1 no. of derrick barge was moored near Portions 3 & 4 for transportation of the excavated material away from site.

According to the relevant site records under Contract HK/2009/02, from 15 June 2015 to 19 June 2015, reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 and total 3 nos. of mobile crane, one no. of concrete pump truck (on 17 June 2015 only) and two nos. of concrete mixer (on 17 June 2015 only) were in operation; excavation and lateral support was conducted at Portions 3 & 4 and total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. Based on relevant site record, no hopper barge was moored under Contract HK/2009/02 around the concerned location while 1 no. of derrick barge was moored under Contract HK/2009/02 near Portions 3 & 4 for transportation of the excavated material from Portions 3 & 4 away from site on 15 June 2015, 17 June 2015 and 19 June 2015 respectively.

Follow-up inspection was conducted during weekly environmental inspection on 25 June 2015, no dark smoke and malodour emission was observed from the PMEs operating on-site. A derrick barge was observed moored near Portions 3 & 4 and excavated material was transferred to the derrick barge by the excavators on land without barge operation and no particular dark smoke and malodour emission was observed. Nevertheless, the Contractor was reminded to conduct regular checking on the condition of the derrick barge and other PMEs deployed on site to ensure only well maintained PMEs are used to avoid potential dark smoke and maldour emission affecting nearby public.

#### Site Inspections and Audit

- liv. The Environmental Team (ET) conducted weekly site inspections for Contract nos. HK/2009/01, HK/2009/02, HY/2009/15, 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.
- lv. Construction works under HK/2010/06 was confirmed completed and the respective work area under FEP-05/356/2009 was handover and inspected under HK/2012/08 from 22 September 2014 onwards.

#### Future Key Issues

- lvi. 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](#)

- Nil

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

- Reclamation at WCR3

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

- Reinstatement of vertical seawall at TPCWAE

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

- Nil

##### [Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West](#)

- Removal of rock armour
- Dry dock construction
- Installation of pipe pile wall
- Removal of temporary piling platform for culvert diversion
- Construction of culvert

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



- Pre-treatment works
- Bar fixing works
- ELS works
- Diaphragm Wall, Barrette construction and King Post installation works
- Slurry and fill disposal 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-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-041/2001).
- 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-06/356/2009 and FEP-07/356/2009 during the period of [May 2015 to June 2015](#). 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      Environmental Site Audit** – 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 (Completed)
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	10 March 2014
HY/2010/08	Central- Wanchai Bypass Tunnel – Tunnel (Slip Road 8)	DP1, DP2, DP3	21 March 2013
HY/2011/08	Central-Wan Chai Bypass (CWB) – Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning	DP1	8 October 2014

## 2.4 Project Organization and Contact Personnel

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



**Table 2.3 Contact Details of Key Personnel**

Party	Role	Post	Name	Contact No.	Contact Fax
AECOM	Engineer's Representative for WDII	Principal Resident Engineer	Mr. Frankie Fan	2587 1778	2587 1877
	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	Project Manager	Mr. Simon Liu	9304 8355	2587 1878
		Site Agent	Mr. Andy Yu	9648 4896	
		Engineer Manager	Mr. Terry Wong	9757 9846	
		Construction Manager	Mr. Wyman Wong	9627 2467	
		Construction Manager	Mr. Kenneth Chan	9160 3850	
		Environmental Officer	Ms. Wendy Ng	9803 0057	
		Assistant Environmental Engineer	Miss. Connie Chan	6157 7057	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Project Manager	Mr. Alfred Leung	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	Chris Leung	3557 6393	2566 2192
		Site Manager	Y Huo	3557 6368	
		Contractor's Representative	Andrew Wong	3557 6371	
		Contractor's Representative	Gene Cheung	3557 6395	
		Environmental Officer	Andy Mak	3557 6347	
Chun Wo – CRGL – MBEC Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	David Lau	3758 8879	2570 8013
		Site Agent	Paul Yu	9456 9819	
		Deputy Site Agent	Eric Fong	6191 9337	
		Environmental Manager / Environmental Officer	M.H. Isa	9884 0810	
		Construction Manager (Marine)	Andy Chan	9879 4325	
		Construction Manager (Land)	Bear Ding	6483 6198	
		Operation Manager (Land)	Yung Kwok Wah	9834 1010	

Party	Role	Post	Name	Contact No.	Contact Fax
China State- Leader JV	Contractor under Contract no. HK/2012/08	Project Director	C. N. Lai	9106 5806	2877 1522
		Project Manager	Eddie Chung	9189 8118	
		Site Agent	Keith Tse	9037 1839	
		Environmental Officer	James Ma	9130 9549	
		Environmental Supervisor	Y. L. Ho	9856 5669	
China State	Contractor under Contract no. HY/2010/08	Project Director	Chris Leung	3467 4299	2566 8061
		Project Manager	Chan Ying Lun	3418 3001	
		Site Agent	Dave Chan	3467 4277	
		Environmental Officer	C.M. Wong	3557 6464	
		Environmental Supervisor	Desmond Ho Tsz Ho	3557 6466	
Leighton Joint Venture	Contractor under Contract no. HY/2011/08	Project Manager	Paul Evans	2823 1111	21406799
		Site Agent	Colman Wong	9730 0806	
		Environmental Officer	David Hung	9765 6161	
		Environmental Supervisor	Penny Yiu	2214 7738	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3465 2888	3465 2899
Lam Geotechni cs Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331

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

- Nil

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

- Nil

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

- Reinstatement of vertical seawall at TPCWAE
- Dredging work near Noon Day Gun

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

- Nil

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

- Removal of rock armour
- Dry dock construction
- Installation of pipe pile wall
- Removal of temporary piling platform for culvert diversion
- Construction of culvert

2.4.8. For Contract no. HY/2010/08, no principal work activities this reporting month.

- Rock filling works
- Pre-treatment works
- Bar fixing works
- ELS works
- Diaphragm Wall, Barrette construction and King Post installation works
- Slurry and fill disposal works

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

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

- Nil

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

- Reclamation in WCR3

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

- Reinstatement of vertical seawall at TPCWAE
- Dredging work near Noon Day Gun

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

- Nil

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

- Removal of rock armour
- Dry dock construction
- Installation of pipe pile wall
- Removal of temporary piling platform for culvert diversion
- Construction of culvert

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

- Rock filling works
- Pre-treatment works
- Bar fixing works
- ELS works
- Diaphragm Wall, Barrette and King Post construction work
- Slurry and fill disposal 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	17 Aug 2009	Superseded
Environmental Permit	EP-364/2009/A	4 Aug 2010	Superseded
Environmental Permit	EP-364/2009/B	20 Sep 2012	Superseded
Environmental Permit	EP-364/2009/C	11 Jul 2014	Valid
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	Surrendered
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	Surrendered
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-09/364/2009/B	5 March 2013	Valid
Further Environmental Permit	FEP-10/364/2009/B	26 July 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Status
Further Environmental Permit	FEP-11/364/2009/B	2 May 2014	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/2010/06 – Wan Chai Development Phase II – Central – Wan Chai Bypass over MTR Tsuen Wan Line under FEP-05/356/2009

- 3.1.3. The construction works were completed and the FEP-05/356/2009 was surrendered by the Contractor on 3 October 2014.

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

- 3.1.4. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2009/01 under FEP-02/356/2009 are shown in **Table 3.2** and **Table 3.3**.

**Table 3.2 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-RS1472-14	2 Jan 2015	22 Jan 2015 to 21 Jul 2015	Replaced by GW-RS0101-15
	GW-RS0079-15	27 Jan 2015	16 Feb 2015 to 14 Aug 2015	Valid
	GW-RS0104-15	3 Feb 2015	22 Feb 2015 to 21 Aug 2015	Valid
	GW-RS0101-15	3 Feb 2015	22 Feb 2015 to 21 Aug 2015	Valid
	GW-RS0074-15	22 Jan 2015	10 Feb 2015 to 9 Aug 2015	Valid
	GW-RS0243-15	16 Mar 2015	25 Mar 2015 to 24 Sept 2015	Valid
	GW-RS-269-15	16 Mar 2015	8 Apr 2015 to 7 Oct 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0408-15	13 Apr 2015	20 Apr 2015 to 19 Oct 2015	Valid
	GW-RS0416-15	16 Apr 2015	8 May 2015 to 7 Nov 2015	Valid
	GW-RS0445-15	30 Apr 2015	26 May 2015 to 25 Nov 2015	Valid
	GW-RS0462-15	30 Apr 2015	2 May 2015 to 1 Nov 2015	Valid
Discharge Licence	WT00021138-2015	13 Apr 2015	31 Mar 2020	Valid
	WT00009641-2011	24 Jul 2011	31 Jul 2016	Valid
Billing account under Waste Disposal Ordinance	7010069	21 Jan 2010	N/A	Valid
Registration as a Chemical Waste Producer	WPN5213-134-C3585-01	21 Jan 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-018	2 Jun 2015	6 Jun 2015 to 30 Sept 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/16-007	24 Apr 2015	28 Apr 2015 to 27 May 2015	Expired
	EP/MD/16-019	3 Jun 2015	6 Jun 2015 to 5 Jul 2015	Valid

**Table 3.3 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

EP Condition	Submission	Date of Submission
Condition 2.9	Silt Screen Deployment Plan (Rev. 7)	21 Nov 2014
	Silt Screen Deployment Plan (Rev. 6)	20 Aug 2014
	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
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	Silt Screen Deployment Plan	10 Jun 2011
Condition 2.18	Landscape Plan	31 Oct 2013

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

- 3.1.5. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2009/02 under FEP-03/356/2009 are shown in **Table 3.4** and **Table 3.5**.



**Table 3.4 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-RS1425-14	23 Dec 2014	25 Dec 2014 to 21 Jun 2015	Expired
	GW-RS0066-15	21 Jan 2015	23 Jan 2015 to 15 Jul 2015	Cancelled
	GW-RS0085-15	27 Jan 2015	14 Feb 2015 to 13 Aug 2015	Valid
	GW-RS0014-15	7 Jan 2015	8 Jan 2015 to 1 Jul 2015	Valid
	GW-RS0098-15	30 Jan 2015	1 Feb 2015 to 28 Jul 2015	Cancelled
	GW-RS0198-15	24 Feb 2015	26 Feb 2015 to 22 Aug 2015	Valid
	GW-RS0236-15	13 Mar 2015	25 Mar 2015 to 24 Sep 2015	Valid
	GW-RS0246-15	13 Mar 2015	22 Mar 2015 to 13 Sep 2015	Valid
	GW-RS0366-15	2 April 2015	7 Apr 2015 to 7 Jul 2015	Valid
	GW-RE0424-15	4 May 2015	4 May 2015 to 30 May 2015	Expired
	GW-RS0445-15	30 April 2015	27 May 2015 to 26 Nov 2015	Valid
	GW-RS0447-15	30/4/2015	22 May 2015 to 21 Nov 2015	Valid
	GW-RS0454-15	30/4/2015	2 May 2015 to 28 Oct 2015	Valid
	GW-RS0458-15	30/4/2015	2 May 2015 to 29 Oct 2015	Valid
	GW-RS0544-15	22 May 2015	26 May 2015 to 18 Nov 2015	Valid
	GW-RS0610-15	10 Jun 2015	22 Jun 2015 to 21 Dec 2015	Valid
	GW-RS0637-15	11 Jun 2015	18 Jun 2015 to 8 Dec 2015	Valid
Discharge Licence	WT00006757-2010	28 May 2010	31 May 2015	Valid
	WT00007129-2010	28 July 2010	31 Jul 2015	Valid
	WT00008982-2011	26 Apr 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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Billing Account under Waste Disposal Ordinance (Marine)	7011496	6 Oct 2010	N/A	Valid
Registration as Chemical Waste Producer (Wan Chai)	WPN5213-135-C3 593-01	10 Mar 2010	N/A	Valid
Registration as Chemical Waste Producer (TKO 137)	WPN5213-839-C3 593-02	22 Sep 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/15-181	29 Dec 2014	1 Jan 2015 to 30 Jun 2015	Valid

**Table 3.5 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
Condition 2.9	Silt Screen Deployment Plan	21 April 2010
	Supplementary Information for Existing WSD Salt Water Intakes at Quarry Bay and Sai Wan Ho	5 Oct 2010
	Silt Screen Deployment Plan (Revision B)	15 Feb 2012
	Silt Screen Deployment Plan (Revision C)	3 May 2012
	Silt Screen Deployment Plan (Revision D)	10 Dec 2012
Condition 2.17	Noise Management Plan	6 May 2010

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

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

- 3.1.6. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HY/2009/15 under FEP-04/356/2009 are shown in **Table 3.6** and **Table 3.7**.

**Table 3.6 Cumulative Summary of Valid Licences and Permits under Contract no. 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 seawall removal works at TS4/ME4	GW-RS0021-15	13 Jan 2015	16 Jan 2015 to 15 Jul 2015	Valid
Construction Noise Permit (CNP) for concreting works at Eastern Breakwater of CBTS	GW-RS0150-15	11 Feb 2015	13 Feb 2015 to 10 Aug 2015	Valid
Construction Noise Permit (CNP) for reclamation and d-wall works at Ex-PCWA	GW-RS0329-15	16 Mar 2015	1 Apr 2015 to 29 Sept 2015	Superseded by GW-RS0579-15
	GW-RS0579-15	29 May 2015	31 May 2015 to 26 Nov 2015	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 (Disposal by Vessel)	7011761	23 Dec 2014	17 Apr 2015 to 16 Jul 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/15-205	19 Jan 2015	28 Jan 2015 to 27 Jul 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Dumping Permit (Type 1 – Open Sea Disposal(Dedicated Site) and Type 2 – Confined Marine Disposal)	EP/MD/16-028	12 Jun 2015	15 Jun 2015 to 14 Jul 2015	Valid

**Table 3.7 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

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

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 3.8**

**Table 3.8 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/A	20 Sep 2012	Granted	Valid
Notification of Works Under APCO	326160	24 Jan 2011	Notified	Valid
Construction Noise Permit (CNP) (For Portion Vi Marine)	GW-RS0076-15	21 Jan 2015	23 Jan 2015 to 22 Jul 2015	Valid
Discharge License (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	-

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 FEP-06/356/2009 are shown in **Table 3.9** and **Table 3.10**.

**Table 3.9 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
Water Discharge Licence	WT00018223-2014	28 Jan 2014	31 Jan 2019	Superseded by WT0002059 4-2014
	WT00020594-2014	22 Dec 2014	31 Jan 2019	Valid
Construction Noise Permit	GW-RS0295-15	19 Mar 2015	27 Mar 2015 to 26 Sep 2015	Valid
	GW-RS0296-15	19 Mar 2015	23 Mar 2015 to 22 Sep 2015	Valid
	PP-RS0008-15	10 Mar 2015	12 Mar 2015 to 11 Sep 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0145-15	11 Feb 2015	13 Feb 2015 to 12 Aug 2015	Valid
	GW-RS0144-15	12 Feb 2015	13 Feb 2015 to 12 Aug 2015	Valid
	GW-RS0223-15	3 Mar 2015	9 Mar 2015 to 8 Sep 2015	Valid
	GW-RS-0360-15	1 Apr 2015	2 May 2015 to 31 Oct 2015	Valid

**Table 3.10 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 on 25 Nov 2013 was returned to CSLJV by EPD.
Condition 2.9	Silt Screen Deployment Plan (Rev. 2)	Generally in order as commented by EPD on 19 Sep 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 FEP-07/356/2009 are shown in Table 3.11 and Table 3.12.

**Table 3.11 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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Billing Account under Waste Disposal Ordinance (Dumping by Vessel)	7020947	22 Dec 2014	NIL	Valid.
Water Discharge Licence	WT00020753-2015	3 Feb 2015	28 Feb 2017	Valid
Construction Noise Permit	GW-RS0154-15	11 Feb 2015	12 Feb 2015 to 8 Aug 2015	Valid
	GW-RS0309-15	20 Mar 2015	21 Mar 2015 to 19 Sep 2015	Valid
	GW-RS0531-15	18 May 2015	18 May 2015 to 17 Nov 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/15-169	9 Feb 2015	8 Aug 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/16-008	28 Apr 2015	31 May 2015	Expired

**Table 3.12 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 (rev03)	24 Dec 2014
Condition 2.9	Silt Screen Deployment Plan (rev02)	18 Feb 2015
Condition 2.23	Noise Management Plan (rev02)	25 Mar 2014
Condition 2.24	Landscape Plant (rev04)	23 Sep 2014

## 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 RTN1 - 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
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

#### NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.1.5. The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ).  $L_{eq}$  (30 minutes) shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods,  $L_{eq}$  (5 minutes) shall be employed for comparison with the Noise Control Ordinance (NCO)



criteria. Supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.

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

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

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

#### MONITORING EQUIPMENT

- 4.1.8. As referred to in the Technical Memorandum <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 Site Office**	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
CMA5b	Pedestrian Plaza***	Wan Chai
CMA6a	WDII PRE Site Office *	Wan Chai

Remarks\*: As per the ENPC meeting in March 2011, the monitoring stations CMA3a – Future CWB site office at Wanchai Waterfront Promenade was renamed as remark.

Remarks\*\*: The location ID of monitoring station CMA1b was updated as “Oil Street Site Office” in April 2013.

Remarks\*\*\*: The station ID and monitoring location was updated in December 2014 with respect to monitoring station relocation.

#### 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 4.1**.

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 1 WSD salt water intakes and 7 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>			
WSD19	Sheung Wan	833415.0	816771.0
<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

Station Ref.	Location	Easting	Northing
P5	Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)	835895.2	816215.2
<b>Cooling Water Intake / WSD Salt Water Intake</b>			
RW21-P789	Great Eagle Centre/ Sun Hung Kai Centre/ WSD Wanchai salt water intake	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:**

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

#### DISSOLVED OXYGEN AND TEMPERATURE MEASURING EQUIPMENT

- 4.3.7. 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

- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme.



- Enhanced DO monitoring stations (Ex-PCWA SW and Ex-PCWA SE) was finely adjusted to the PCWAE since 7 November 2014.
- 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. HY/2009/19- Central- 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

5.1.1. The proposed division of noise monitoring stations are summarized in **Table 5.1** below.

**Table 5.1 Noise Monitoring Station for Contract nos. HK/2009/01 and HK/2009/02**

Station	Description
M1a	Harbour Road Sports Centre

5.1.2. No action or limit level exceedance was recorded in this reporting month.

5.1.3. 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**.

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 5.2** below.

**Table 5.2 Noise Monitoring Station for Contract no. HY/2009/15**

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

- 5.1.5. No action or limit level exceedance was recorded in this reporting month.
- 5.1.6. 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**.

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

- 5.1.7. The proposed division of noise monitoring stations are summarized in **Table 5.3** below.

**Table 5.3 Noise Monitoring Station for Contract no. HY/2009/19**

Station	Description
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School

- 5.1.8. Three limit level exceedances were recorded at M6 monitoring station on 5, 9 and 16 June 2015 in this reporting month.
- 5.1.9. Traffic noise was observed during monitoring on 5, 9 and 16 June 2015 and it was considered as the major noise contribution. As such, the limit level exceedances were concluded as non-project related.
- 5.1.10. Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**.

Contract no. HY/2010/08-Central-Wanchi Bypass Tunnel (Slip Road 8 Section)

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

**Table 5.4 Noise Monitoring Station for Contract no. HY/2010/08**

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

5.1.12. No action or limit level exceedance was recorded in this reporting month.

5.1.13. 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 marine-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 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
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

5.2.5 Limit level exceedances were recorded at RTN2a-Electric Centre during daytime on 23, 24 and 25 June 2015 during day time in the reporting month. After checking with Contractor of

HY/2009/19, pile cap breaking works was conducted on 23 and 24 June 2015 and pile cap excavation works was conducted on 25 June 2015. Noise mitigation measures including temporary noise barrier was implemented by the Contractor while breaking works and excavation works was noted on-going at the construction site located next to the monitoring station. In view of the above, the exceedances were considered to be non-Project related and contributed by nearby non-CWB construction site works. Nevertheless, the Contractor was reminded to strengthen the noise mitigation measures implemented for the pile cap demolition works to avoid potential cumulative impact to nearby sensitive receivers.

- 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

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

- 5.3.1. Air monitoring was commenced on 1 April 2011 in response to the commencement of the land-filling work for Contract no. HK/2009/01. The proposed divisions of air monitoring stations are summarized in **Table 5.6** below.

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

Station	Description
CMA5b	Pedestrian Plaza
CMA6a	WDII PRE Site Office

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

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

**Table 5.7 Air Monitoring Station for Contract no. HK/2009/02**

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

- 5.3.4. 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/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)

- 5.3.5. Air monitoring was commenced on 15 March 2011 for the land filling work for Contract no. HY/2009/15. The proposed division of air monitoring stations are summarized in **Table 5.8** below.

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

Station	Description
CMA3a	CWB PRE Site Office

- 5.3.6. 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

- 5.3.7. The proposed division of air monitoring stations are summarized in **Table 5.9** below.

**Table 5.9 Air Monitoring Stations for Contract no. HY/2009/19**

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

- 5.3.8. 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/2012/08- Wan Chai Development Phase II – Central-Wan Chai Bypass at Wan Chai West

- 5.3.9. The proposed division of air monitoring stations are summarized in **Table 5.10** below.

**Table 5.10 Air Monitoring Stations for Contract no. HK/2012/08**

Station	Description
CMA5b	Pedestrian Plaza

- 5.3.10. 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/2010/08- Central-Wanchai Bypass Tunnel (Slip Road 8 Section)

- 5.3.11. The proposed division of air monitoring stations are summarized in **Table 5.11** below. No exceedance was recorded in the reporting month.

**Table 5.11 Air Monitoring Stations for Contract no. HY/2010/08**

Station	Description
CMA3a	CWB PRE Site Office

- 5.3.12. 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. Action and Limit level of water quality monitoring was transited from dry season to wet season from 1 April 2015.
- 5.4.2. With respect to the water pipe modification works and the suspension of water supply to Windsor House from the water storage tank for water quality sampling, the water quality monitoring station C7 was cancelled on 10 June 2015 during flood tide.
- 5.4.3. With respect to the water pipe modification works conducted for the diverted seawater supply system to the Windsor House Cooling water intake and the suspension of water supply to Windsor House from the water storage tank for water quality sampling, the respective water quality monitoring at WQM station C7 was temporarily suspended from 12 June 2015. The water quality monitoring at WQM station C7 has resumed on 17 June 2015 upon completion of the water pipe modification works.
- 5.4.4. With respect to the commencement of seawall modification works at Ex-PCWAE and the location of the Enhance DO monitoring stations would form an active construction area, the Enhance DO monitoring at monitoring station EX-PCWA SW and SE were temporarily suspended from 2 March 2015 ebb tide and the monitoring at the location is tentatively to be resumed by early April 2015 to cater for the potential DO concern during Wet Season.
- 5.4.5. As informed by CWB RSS, the operation of the diverted Windsor House cooling intake was commenced on 20 Dec 2014 and the water quality monitoring at monitoring station C7 for Windsor House Cooling water intake was resumed on 22 Dec 2014
- 5.4.6. With respect to the commencement of temporary reclamation works and seawall construction at Ex-PCWAW zone and diverted culvert extension, the location of the Enhance DO monitoring stations (Ex-PCWASW and Ex-PCWA SE) were finely adjusted to the PCWAE since 7 November 2014.
- 5.4.7. With respect to the commencement of marine dredging works at WCR3 under contract HK/2009/02. The respective water quality monitoring station C1 were associated with HK/2009/01 and HK/2009/02.
- 5.4.8. As confirmed by CWB RSS, the operation of the pump station for Windsor House Cooling Water was suspended from 22 Oct 2014 for the Windsor House intake cooling intake scheme

- and temporary supply of freshwater from WSD water mains was provided to cooling water intake. The water quality monitoring for the respective cooling water intake at WQM station C7 was temporarily suspended from 22 Oct 2014.
- 5.4.9. With respect to the commencement of filling works at TS3 and the formation of TZ3 reclamation zone, the enhance DO monitoring at Enhance monitoring station C7 was temporarily suspended from 22 Oct 2014.
- 5.4.10. As confirmed by WDII RSS and IEC, the cross harbour dredging works have completed since 16 March 2012 while the dredging works for submarine outfall pipeline has completed since 29 November 2011, considering current construction stage and dredging Scenario, the water quality monitoring at stations WSD9 and WSD17 was temporarily suspended since 8 September 2014 flood tide.
- 5.4.11. With respect to the switching over of cooling water intake location, the water quality monitoring at the relocated intake station RW21-P789 under HK/2009/02 was commenced since 29 July 2013 and monitoring station C5e and C5w were temporarily suspended and switched over to monitoring station RW21-P789 on 29 July 2013 due to suspension of pump house operation.
- 5.4.12. As advised by WDII RSS, the water quality monitoring for WSD21 pump station with respect to HK/2009/02 was switched over to the relocated location since 12 March 2014. According to the EM&A Manual, the water quality monitoring station WSD21 was relocated to station RW21-P789 and the water quality monitoring at station WSD21 was temporarily suspended since 12 March 2014.
- 5.4.13. With respect to the commencement of marine dredging works under contract HY/2010/08. The respective water quality monitoring station C7 were associated with HY/2009/15 and HY/2010/08.
- 5.4.14. With respect to the commencement of marine dredging works under contract HK/2012/08/ The respective water quality monitoring station WSD19, P1, P3, P4, and P5 were associated with Contract HK/2012/08 Since September 2013.
- 5.4.15. 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.
- 5.4.16. 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.
- 5.4.17. 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.
- 5.4.18. RSS confirmed that all Type III Dredging works under HK/2009/01 have been completed since Oct 2012.



- 5.4.19. 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.
- 5.4.20. 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.
- 5.4.21. 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.
- 5.4.22. 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.
- 5.4.23. 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. 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;
- 5.4.24. 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.
- 5.4.25. 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.
- 5.4.26. 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.



**Table 5.12 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> , C1 <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)	Nov 2010
HY/2010/08	TCBR3, TCBR4	C6 <sup>4</sup> , C7 (plus enhanced DO monitoring)	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.
- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

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

5.4.27. 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 5.13** below.

**Table 5.13 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

5.4.28. 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 5.14** below.

**Table 5.14 Water Monitoring Stations for Contract no. HK/2009/02**

Station Ref.	Location	Easting	Northing
<b>Cooling Water Intake</b>			
C1	HKCEC Extension	835885.6	816223.0
<b>Cooling Water Intake / WSD Salt Water Intake</b>			
RW21-P789	Great Eagle Centre/ Sun Hung Kai Centre/WSD Wanchai salt water intake	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
- WSD21 water quality monitoring station was temporarily suspended since 12 March 2014
- WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 September 2014 flood tide.
- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

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

5.4.29. 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 5.15** below.

**Table 5.15 Water Monitoring Stations for Contract no. HK/2012/08**

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

- 5.4.30. 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.
- 5.4.31. 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 5.16 below.
- 5.4.32. 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 5.16 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.
- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme and was resumed since 22 December 2014.

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

- 5.4.33. 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.
- 5.4.34. 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.
- 5.4.35. 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.
- 5.4.36. 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.

- 5.4.37. 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.
- 5.4.38. 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 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.
- 5.4.39. 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 & HK/2009/02	C1	0	0	0	0	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	0	0	0	0	0	0	0	0	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	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	1	0	1
<b>Total</b>		0	0	0	0	0	0	0	0	0	1	0	1

- Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
  - 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 were completed on 6 Feb 2012.
  - C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
  - C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
  - WSD7 and WSD20 were temporarily suspended from 27 Apr 2012
  - 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
  - WSD21 water quality monitoring station was temporarily suspended since 12 March 2014
  - Maintenance responsibility of silt screen C1, WSD19, P3, P4 and P5 are under Contract HK/2009/01.
  - WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 September 2014 flood tide.

- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme and was resumed since 22 December 2014.
- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area

5.4.40. There was no action and 1 limit level of turbidity exceedance, and no action and 1 limit level of suspended solid exceedance recorded in the reporting month. Investigation found that the exceedance was not related to Project works. The details of recorded exceedance can be referred to the **Section 6.4**.

5.4.41. 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	1	1	1	2
	Ex-WPCWA SE	0	0	0	0
Total		1	1	1	2

5.4.42. There were 2 action level and 3 limit level exceedance of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedance was not related to Project works. The details of recorded exceedance can be referred to the **Section 6.4**.

5.4.43. 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 5.4**.

5.4.44. 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

- 5.4.45. With respect to the commencement of temporary reclamation works and seawall construction at Ex-PCWAW zone and diverted culvert extension, the location of the Enhance DO monitoring stations (Ex-PCWASW and Ex-PCWA SE) were finely adjusted to the PCWAE since 7 November 2014.

## 5.5 Waste Monitoring Results

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

- 5.5.1. No inert C&D waste and non- inert C&D waste disposed 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>	NIL	62116.405	TKO137, TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	5856.5	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	1673.69	SENT Landfill
Non-inert C&D materials recycled, kg	NIL	203993	N/A
Chemical waste disposed, kg	NIL	10250	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	NIL (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>	NIL (Bulk Volume)	52250 (Bulk Volume)	East of Cha Chau
Dredged Sediment Requiring Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers	NIL (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. No inert C&D waste and Non-inert C&D waste 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>	NIL	276075.1	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>	NIL	1515.103	SENT Landfill
Non-inert C&D materials recycled, m <sup>3</sup>	N/A	N/A	N/A
Chemical waste disposed, kg	NIL	13860	SENT Landfill
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup> *	NIL	243815 (Bulk volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m <sup>3</sup> *	NIL	150573 (Bulk volume)	East of Sha Chau

- 5.5.4. There was no marine sediment Type 1 – Open Sea Disposal (Dedicate Sites) and no Type 1 Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal disposed 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 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	Remarks
Inert C&D materials disposed, m <sup>3</sup>	NIL	141579.2	Tuen Mun Area 38	NIL
	NIL	65216	TKO137 FB	NIL
Inert C&D materials	NIL	304	Ex-PCWA	NIL

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds	Remarks
recycled, m <sup>3</sup>	NIL	111.9	TS4	NIL
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	252.2	SENT Landfill	NIL
Non-inert C&D materials recycled, kg	NIL	299361.5	N/A	NIL
Chemical waste disposed, kg	NIL	8,200	N/A	NIL
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	NIL (Bulk Volume)	126298 (Bulk Volume)	Cheung Chau South	Dredging from TCBR1E / TCBR1W / TCBR2/ TCBR3 / TCBR4 / Maintenance dredging
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	NIL (Bulk Volume)	288615 (Bulk Volume)	East of Sha Chau / South of the Brothers	Dredging from TCBR1E / TCBR1W / TCBR2/ TCBR3 / TCBR4 / Maintenance dredging
Marine Sediment (Type 3 – Special Treatment / Disposal contained in Geosynthetic Containers) m <sup>3</sup>	NIL (Bulk Volume)	12640 (Bulk Volume)	East of Sha Chau / South of the Brothers	Dredging from TCBR1W / Maintenance dredging
Marine Sediment (Type 2 – Confined Marine Disposal), m <sup>3</sup>	NIL	9350 (Bulk Volume)	East of Sha Chau	Dredging from Eastern Breakwater of CBTS
Marine Sediment (Type 1 – Open Sea Disposal) , m3	NIL (Bulk Volume)	600 (Bulk Volume)	East Sha Chau / South of The Brothers	Dredging from Phase 3 Mooring Re-arrangement
Marine Sediment (Type 2– Confined Marine Disposal) , m3	NIL (Bulk Volume)	14,780 (Bulk Volume)	South of The Brothers	Dredging from Phase 3 Mooring Re-arrangement
Marine Sediment (Type 3 – Special Treatment / Disposal contained in Geosynehetic Containers) , m3	NIL (Bulk Volume)	2,760 (Bulk Volume)	South of The Brothers	Dredging from Phase 3 Mooring Re-arrangement

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



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

- 5.5.7. No inert C&D waste and non-inert C&D waste disposed 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. HY/2009/19**

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	NIL	355921.04	TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	59367	N/A
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	1068.6	N/A
Non-inert C&D materials recycled, kg	NIL	333.14	N/A
Chemical waste disposed, L	NIL	2.12	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m <sup>3</sup>	NIL	162	South Cheung Chau
Marine Sediment (Type 2 – Confined Marine Disposal) , m <sup>3</sup>	NIL	681	East Sha Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m <sup>3</sup>	NIL	4976.00	

- 5.5.8. 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

- 5.5.9. There was no Inert C&D waste and no non-inert C&D waste 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. HK/2012/08**

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	NIL	4131	TM38
Inert C&D materials recycled, m <sup>3</sup>	NIL	NIL	N/A

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Non-inert C&D materials disposed, m <sup>3</sup>	NIL	315	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>	NIL (Bulk volume)	31759 (Bulk volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m3	NIL (Bulk volume)	108485 (Bulk volume)	South of The Brothers (from 27 Aug 2013 onwards)

- 5.5.10. No Marine Sediment Type 1 – Open Sea Disposal and no marine sediment Type 1 – Open Sea Disposal (Delicate Sites) & Type 2 – Confined Marine Disposal disposed in this reporting month.

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

- 5.5.11. Inert C&D waste was disposed and no non-inert C&D waste 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. HY/2010/08**

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m <sup>3</sup>	147948.9	267660.2	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
Marine Sediment (Type 1 – Open Sea Disposal)	NIL	55290	South Cheung Chau / Brothers Island *
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	NIL	27760	Brothers Island
Marine Sediment (Type 3 – Special Treatment)	NIL	7780	Brothers Island

Remarks: Under the condition of EP/MD/15-169, dredged sediment required to dispose at South of the Brothers since 9 Feb 2015.

- 5.5.12. There was no Type 1 – Open Sea Disposal, Type 3 – Special Treatment and Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal 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. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link

- 6.1.4 Three limit level exceedances were recorded on 5, 9 and 16 June 2015 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month. Investigations found that on 5, 9 and 16 June 2015, traffic noise was the major contribution in the noise monitoring and exceedance was not related to the Project.

Contract no. HY/2010/08 – Central-Wanchai Bypass – Tunnel (Slip Road 8 Section)

- 6.1.5 No exceedance was recorded in the reporting month.

### **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 daytime on 23, 24 and 25 June 2015 during day time in the reporting month. After checking with Contractor of HY/2009/19, pile cap breaking works was conducted on 23 and 24 June 2015 and pile cap excavation works was conducted on 25 June 2015. Noise mitigation measures including temporary noise barrier was implemented by the Contractor while breaking works and excavation works was noted on-going at the construction site located next to the monitoring station. In view of the above, the exceedances were considered to be non-Project related and contributed by nearby non-CWB construction site works. Nevertheless, the Contractor was reminded to strengthen the noise mitigation measures implemented for the pile cap demolition works to avoid potential cumulative impact to nearby sensitive receivers.

### **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. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel)

6.3.2 No exceedance was recorded in the reporting month.

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

6.3.3 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

6.2.1. No exceedance was recorded in the reporting month.

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

6.2.2. No exceedance was recorded in the reporting month.

Contract no. HY/2010/08 – Central-Wanchai Bypass – Tunnel (Slip Road 8 Section)

6.2.3. 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 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

6.4.2 No exceedance was recorded in the reporting month.

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

6.4.3 There were occasionally limit exceedance was recorded at Ex-WPCWA SW on 28 May, 5, 8, 10 and 17 June 2015 in the reporting month.

6.4.4 After checking with contractor, no marine activities were conducted at Ex-WPCWA on 28 May, 5, 8, 10 and 17 June 2015 and upstream discharge at the concerned location were

consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedances were not related to Project. .

- 6.4.5 There were limit exceedances of turbidity and suspended solid recorded at C7 on 10 June 2015.
- 6.4.6 After checking with contractor, no marine activities were conducted in the vicinity of C7 monitoring station on 10 June 2015. In view of no marine work activity was conducted, it was considered the exceedances were not related to Project.

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

- 6.4.7 No exceedance was recorded in this reporting month.

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

- 6.4.8 No exceedance was recorded in this reporting month.

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

- 6.4.9 There were limit exceedances of turbidity and suspended solid recorded at C7 on 10 June 2015.
- 6.4.10 After checking with contractor, water pipe modification works for the diverted seawater intake was conducted on 10 June 2015. Contractor clarified the seawater supplies to respective cooling water intake pump station for Windsor House was temporary suspended. In addition, no further exceedance was recorded on 17 July 2015 after the resumption of water supplies. In view of the above, the respective cooling water intake was considered not affected by project works.

## **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 non-compliances 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 Final EM&A Report of Central Reclamation Phase III (CRIII) for Contract HK 12/02, the major construction activities were completed by end of January 2014 and no construction activities were undertaken thereafter and 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 Central-Wanchai Bypass at Wanchai West at the Central Reclamation Phase III area, removal of L-shape wall, installation of caisson seawall and ELS works were performed in June 2015 reporting month. As no project related exceedance were recorded during the reporting period, cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was considered as insignificant.
- 7.0.4. According to the construction programme of Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects, the major construction activities under Wan Chai Development Phase II were tunnel works and ELS works at Wan Chai East and temporary reclamation, D-wall construction and ELS works at Wan Chai West. The major construction activities under Central-Wan Chai Bypass and Island Eastern Corridor Link Projects were bridge construction and road works at Central Interchange, land based bored pilling works and ELS works at Victoria Park, D- wall construction and ELS works at TS3, IEC demolition and tunnel works at North Point area in the reporting month.
- 7.0.5. No significant air impact from construction activities was anticipated in the reporting month. Besides, no project related exceedance was recorded during the air and noise environmental monitoring events in the reporting month. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Central Reclamation Phase III (CRIII), Wan Chai Development Phase II (WDII), Central-WanChai Bypass (CWB), Island Eastern Corridor Link projects (IECL) 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, 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 were conducted on 3, 10, 18 and 24 June 2015 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
150603_01	3-Jun-15	Wheel washing shall be implemented at Gate V8.	Gate V8 has been closed for use.	Completion as observed on 10 June 2015
150603_02	3-Jun-15	The dispose of uncontaminated water shall be protected from the excavated surface before discharge at Stage 3.	The pipe transferring the uncontaminated water has been diverted and away from the excavated surface.	Completion as observed on 10 June 2015
150603_03	3-Jun-15	Chemical waste shall be properly handled and stored in chemical storage at Stage 3.	Chemical waste has been taken away and disposed.	Completion as observed on 10 June 2015
150610_01	10-Jun-15	Drip tray shall be provided for oil containers at Stage 3.	Oil containers has been relocated to designated chemical storage area.	Completion as observed on 18 June 2015
150624_01	24-Jun-15	Hole of drip tray shall be covered at outfall.	The air compressor has been relocated and the works area at outfall has been cleared and no further environmental impact is noted.	Completion as observed on 2 July 2015

8.0.3. Five site inspections for Contract no. HK/2009/02 were carried out on 28 May, 4, 11, 17 and 25 June 2015 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
150617_01	17-Jun-15	Silt curtain at RW21-P789 shall be fully extended to seabed level to safeguard the water quality.	Silt curtain at PW21-P789 has fully extended to seabed level.	Completion as observed on 25 June 2015.

8.0.4. Four site inspections for Contract no. HY/2009/15 were carried out on 2, 9, 16 and 22 June 2015 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
150602_1	2-Jun-2015	Three side and top cover provided for grouting station shall be free of opening and gap (EX-PCWA)	The opening of the grouting station was covered	Completion as observed on 9 Jun 2015
150602_2	2-Jun-2015	Water spraying shall be provided to breaking works (EX-PCWA)	Watering spraying was provided	Completion as observed on 9 Jun 2015
150602_3	2-Jun-2015	Review the wastewater treatment plant operation to prevent the direct discharge / overflow of muddy effluent (EX-PCWA)	The wastewater treatment plant was in proper operation condition	Completion as observed on 9 Jun 2015
150616_1	16-Jun-2015	Chemical waste container shall be properly stored/removed (EX-PCWA)	Chemical waste container was removed.	Completion as observed on 22 Jun 2015
150616_2	16-Jun-2015	Concrete wash off shall be collected and treated before discharge (EX-PCWA)	Collection tray was provided for collecting wash off	Completion as observed on 22 Jun 2015
150622_1	22-Jun-2015	Drip tray shall be provided to chemical waste container (EX-PCWA)	Chemical waste container was removed.	Completion as observed on 29 Jun 2015
150622_2	22-Jun-2015	Floating refuses shall be collected more regularly to avoid accumulation (EX-PCWA)	Floating refuses have been collected	Completion as observed on 29 Jun 2015
150622_3	22-Jun-2015	Collection point with sufficient capacity shall be provided for collecting concrete wash off. Surface effluent generated from concrete washing shall be properly collected to avoid overflow. (EX-PCWA)	Additional concrete wash off collection point was provided with manual cleaning of wash off	Completion as observed on 29 Jun 2015

8.0.5. Four site inspections for Contract no. HY/2009/19 were carried out on 3, 10, 17 and 24 June 2015 in reporting month. No particular finding was observed in the reporting month.

8.0.6. Four site inspections for Contract no. HK/2012/08 were carried out on 2, 9, 16 and 23 June 2015 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
150602_01	2-Jun-15	Top and three sides of the grouting station at Zone D	Top and three sides of the grouting station	Completion as observed on 9



Item	Date	Observations	Action taken by Contractor	Outcome
		shall be covered properly	has improved and no effect on causing dust impact.	June 2015
150602_02	2-Jun-15	Floating refuses shall be collected at regular intervals.	Floating refuses has cleaned.	Completion as observed on 9 June 2015
150609_01	9-Jun-15	Cement bags shall be covered on site.	Cement bags were covered by impermeable sheet.	Completion as observed on 16 June 2015
150609_02	9-Jun-15	Drip tray shall be provided for oil container at MVB area.	Drip tray is provided for oil container at MVB area	Completion as observed on 16 June 2015
150609_03	9-Jun-15	Chemical waste shall be properly handle and stored in chemical storage at MVB area.	Chemical waste has cleared at MVB area.	Completion as observed on 16 June 2015
150616_01	16-Jun-15	Drip tray shall be provided for oil containers at Portion 1B.	Drip tray has been provided for oil container at Portion 1B.	Completion as observed on 23 June 2015
150616_02	16-Jun-15	Floating refuses shall be collected at HKCEC2W area.	Floating refuses has cleaned.	Completion as observed on 23 June 2015
150623_01	23-Jun-15	Breaker shall be covered with acoustic material while operating next to Hong Kong Convention and Exhibition Centre.	Breaker were covered with acoustic material on site.	Completion as observed on 30 June 2015

- 8.0.7. Five site inspections for Contract no. HY/2010/08 were carried out on 28 May, 4, 11, 18 and 25 June 2015 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
150521_1	21-May-15	Site hoarding shall be provided to area adjoining public area and area not installed with site hoarding shall be sustained with supporting document (Victoria Park)	Pending Contractor for site hoarding installation and provide justification for area without site hoarding	Pending for Contractor follow up action
150528_1	28-May-15	Direct discharge of muddy water was observed. Contractor should ensure the muddy water treated properly before discharge (TS3)	No further direct discharge was observed	Completion as observed on 4 Jun 2015
150528_2	28-May-15	Provide cleaning to public road (TS3, Victoria Park Gate 3)	Public road was maintained in proper condition	Completion as observed on 4 Jun 2015

150528_3	28-May-15	Provide proper vehicle washing at Tsing Fung Street site exit	Wheel washing and effluent collection was provided	Completion as observed on 4 Jun 2015
150604_1	4-Jun-15	Provide drip tray to chemical container (TS3)	Drip tray was removed	Completion as observed on 11 Jun 2015
150604_2	4-Jun-15	Equipment washing shall not be conducted at critical area adjacent to seawall edge to prevent seepage of surface overflow (TS3)	The concerned work was moved away from the critical location to avoid impact	Completion as observed on 11 Jun 2015
150604_3	4-Jun-15	Construction material shall not be placed near the root area of the protected / retained tree on-site (Victoria Park)	The construction material has been removed	Completion as observed on 11 Jun 2015
150611_1	11-Jun-15	Rectify the mud seepage from mud pit and provide pumping to avoid overflow of mud effluent into nearby water (TS3)	Additional embanking and bund was provided	Completion as observed on 18 Jun 2015
150611_2	11-Jun-15	Effluent water pipe shall be connected to water treatment facilities	The concerned piping was connected to the treatment facilities	Completion as observed on 18 Jun 2015
150611_3	11-Jun-15	Provide covering to cement bags (TS3)	Cement bag was removed	Completion as observed on 18 Jun 2015
150611_4	11-Jun-15	Floating refuse should be cleaned up around cooling water intake (TS3)	Floating refuses has been cleaned	Completion as observed on 18 Jun 2015
150618_1	18-Jun-15	Mud sitting on the edge of seawall should be clean to avoid surface runoff (TS3)	Mud residue has been cleared	Completion as observed on 25 Jun 2015
150618_2	18-Jun-15	Collect floating refuses and scum more frequently (TS3)	Floating refuses has been cleaned	Completion as observed on 25 Jun 2015
150618_3	18-Jun-15	Provide drip tray to chemical waste and oil cans (TS3, Victoria Park, Victoria Park Road)	Chemical waste container have been removed	Completion as observed on 25 Jun 2015
150625_1	25-Jun-15	Muddy seepage was observed at multiple point along the seawall. Drainage for surface runoff and embankment shall be reviewed and enhanced for effective runoff control. Mud residue on impervious surface shall also be cleaned to minimize contamination of runoff (TS3)	No further seepage observed and surface runoff related mud residue was cleared	Completion as observed on 2 July 2015

150625_2	25-Jun-15	Muddy water overflow to pedestrian path shall be cleaned immediately (TS3)	concerned seepage has been cleared	Completion as observed on 2 July 2015
150625_3	25-Jun-15	Mud residue resting at the edge of derrick barge during excavated material transfer shall be cleaned regularly and silt curtain shall be provided to avoid muddy dispersion (TS3)	Mud residue has been cleared	Completion as observed on 2 July 2015
150625_4	25-Jun-15	Watering shall be provided during building demolition works (Victoria Park)	Watering was provided	Completion as observed on 2 July 2015

## 9. Complaints, Notification of Summons and Prosecution

- 9.0.1. There was one environmental complaint received in the reporting month.
- 9.0.2. The public complaint regarding dark smoke and malodour concern referred by EPD was received by ET on 22 June 2015 (EPD Ref.: H05/RS/00015054-15 dated 22 June 2015). The complainant reported that dark smoke and malodour emission was observed from a hopper barge moored near shore and other construction plants under operation from the reclamation construction site with Contract no. HK/2009/02 at location outside Wan Chai Sports Ground caused air pollution. The complainant alleged that the said situation had been observed for a prolonged period.

ET confirmed with the Resident Site Staff that reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 from 15 June 2015 to 19 June 2015. Total 3 nos. of mobile crane were in operation. On 17 June 2015, one no. of concrete pump truck and two nos. of concrete mixer were in operation. Excavation and Lateral Support was conducted at Portions 3 & 4 from 15 June 2015 to 19 June 2015. Total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. In addition, on 15 June 2015, 17 June 2015 and 19 June 2015, 1 no. of derrick barge was moored near Portions 3 & 4 for transportation of the excavated material away from site.

According to the relevant site records under Contract HK/2009/02, from 15 June 2015 to 19 June 2015, reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 and total 3 nos. of mobile crane, one no. of concrete pump truck (on 17 June 2015 only) and two nos. of concrete mixer (on 17 June 2015 only) were in operation; excavation and lateral support was conducted at Portions 3 & 4 and total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. Based on relevant site record, no hopper barge was moored under Contract HK/2009/02 around the concerned location while 1 no. of derrick barge was moored under Contract HK/2009/02 near Portions 3 & 4 for transportation of the excavated material from Portions 3 & 4 away from site on 15 June 2015, 17 June 2015 and 19 June 2015 respectively.

- 9.0.3. Follow-up inspection was conducted during weekly environmental inspection on 25 June 2015, no dark smoke and malodour emission was observed from the PMEs operating on-site. A derrick barge was observed moored near Portions 3 & 4 and excavated material was transferred to the derrick barge by the excavators on land without barge operation and no particular dark smoke and malodour emission was observed. Nevertheless, the Contractor was reminded to conduct regular checking on the condition of the derrick barge and other PMEs deployed on site to ensure only well maintained PMEs are used to avoid potential dark smoke and maldour emission affecting nearby public.
- 9.0.4. The details of cumulative complaint log and updated summary of complaints are presented in **Appendix 9.1**
- 9.0.5. 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	35
June 2015	1
<b>Total</b>	<b>36</b>

**Table 9.2 Cumulative Statistics on Successful Prosecutions**

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

## 10. Conclusion

10.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.

10.0.2. The scheduled construction activities and the recommended mitigation measures for the coming month are listed in **Table 10.1**.

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

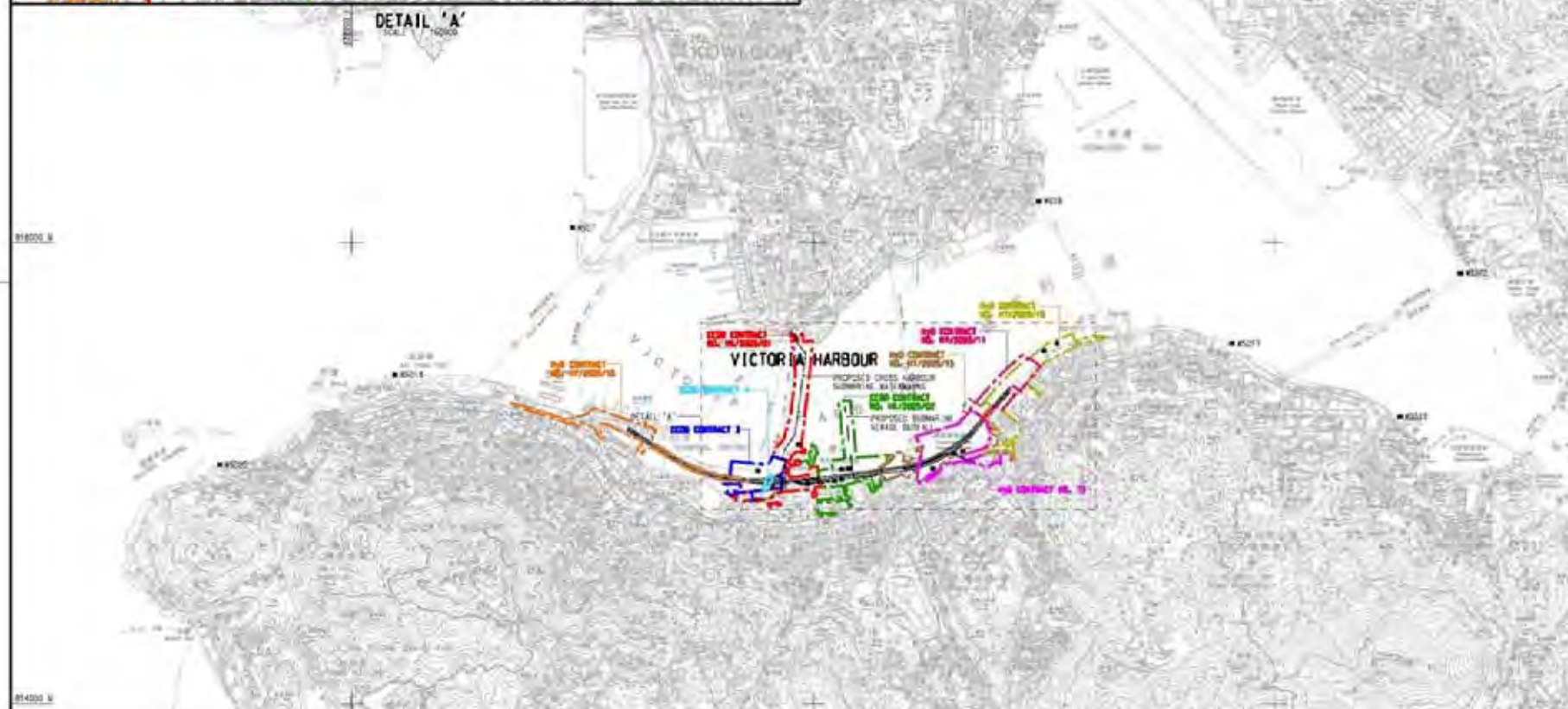
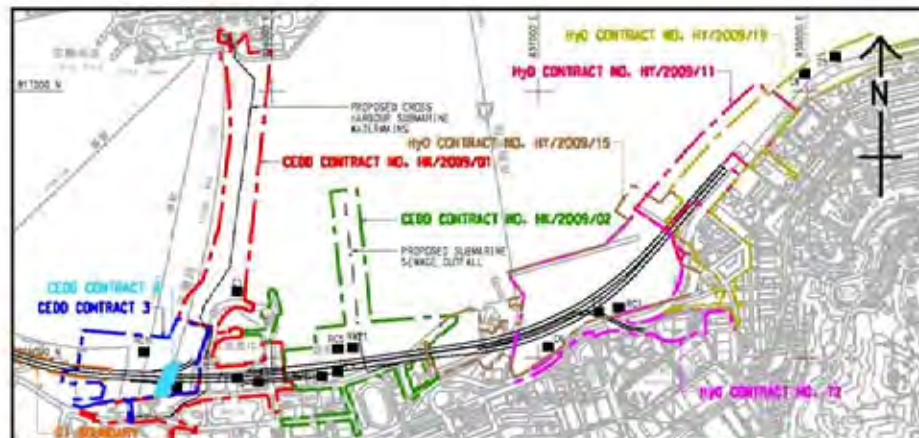
Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2009/01	<ul style="list-style-type: none"> <li>Nil</li> </ul>	<ul style="list-style-type: none"> <li>Nil</li> </ul>
HK/2009/02	<ul style="list-style-type: none"> <li>Reclamation at WCR3</li> </ul>	<ul style="list-style-type: none"> <li>Nil</li> </ul>
HY/2009/15	<ul style="list-style-type: none"> <li>Reinstatement of vertical seawall at TPCWAE</li> <li>Dredging works near Noon Day Gun</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 curtain in accordance with the associated plans submitted to EPD.</li> </ul>
HY/2009/19	<ul style="list-style-type: none"> <li>Nil</li> </ul>	<ul style="list-style-type: none"> <li>To space out noisy equipment and position as far as possible from sensitive receiver.</li> </ul>
HK/2012/08	<ul style="list-style-type: none"> <li>Removal of rock armour</li> <li>Dry dock construction</li> <li>Installation of pipe pile wall</li> <li>Removal of temporary piling platform for culvert diversion</li> <li>Construction of culvert</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/2010/08	<ul style="list-style-type: none"> <li>Rock filling works</li> <li>Pre-treatment works</li> <li>Bar fixing works</li> <li>ELS works</li> <li>Diaphragm Wall, Barrette construction and King Post installation works</li> <li>Slurry and fill disposal 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***

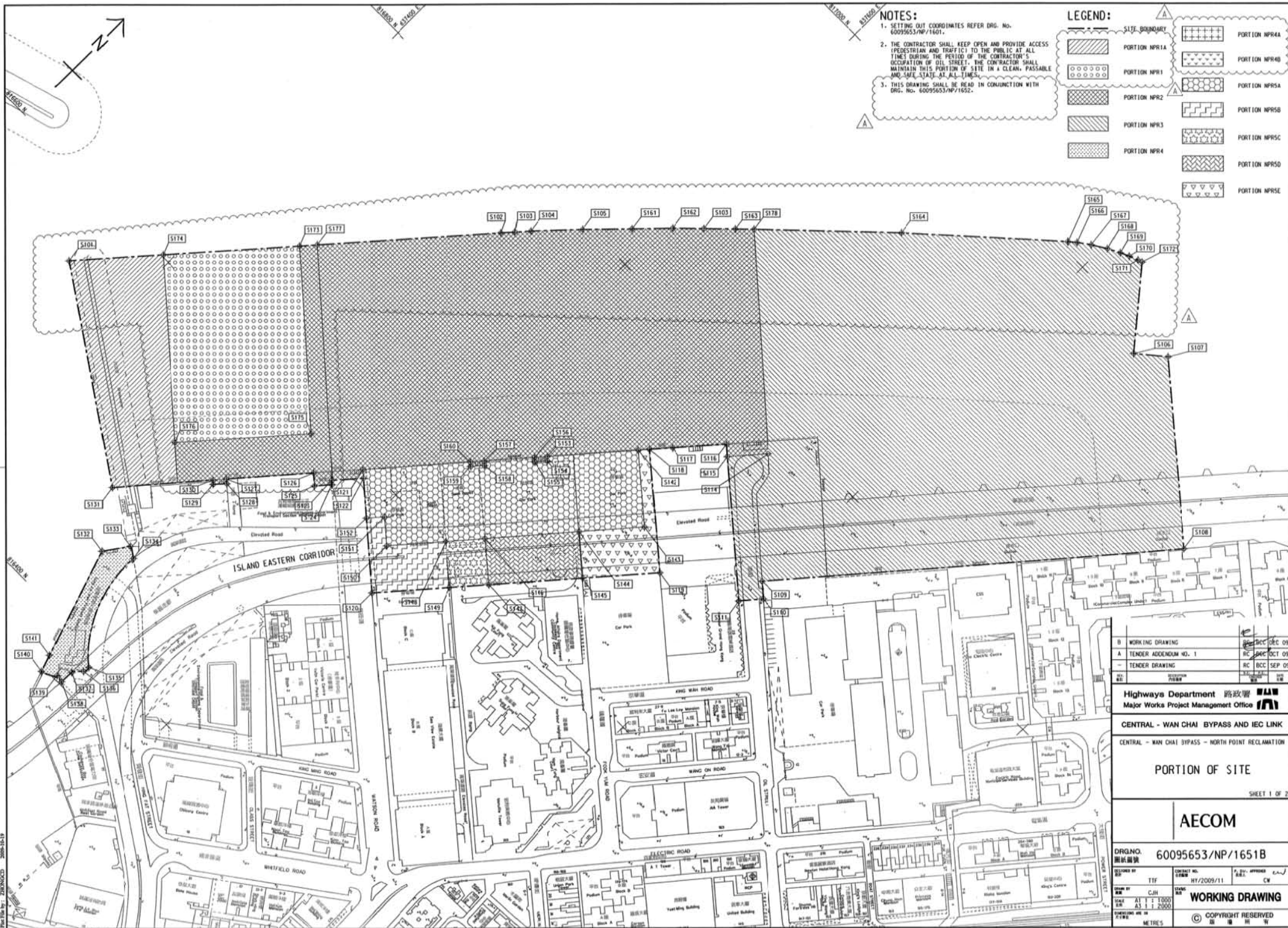




DESIGNATED PROJECTS (DP)	WORKS CONTRACT	DESIGNATED PROJECT ZONE/VID	CONSTRUCTION COMMENCEMENT
DP1 - CENTRAL MAIN CHAL BYPASS WORKS INCLUDING 15 ROAD TUNNEL AND SLIP ROADS	CE200 CONTRACT NO. H/2005/01	DP1, DP2, DP3	APRIL 2010
DP2 - ROAD P2 AND OTHER ROADS (FURNISH A DISTRIBUTION DISTRIBUTOR ROAD)	CE200 CONTRACT NO. H/2005/02	DP1, DP2, DP3	APRIL 2010
DP3 - PLANNING AND TEMPORARY RELOCATION WORKS INCLUDING ASSOCIATED DREDGING WORKS IN MAIN CHAL DEVELOPMENT PHASE 1 (M211 AREA)	CE200 CONTRACT 3	DP1, DP3	END 2010
DP4 - TEMPORARY FURNISH-GRAVEL 1 (DP4 NOT TO BE IMPLEMENTED)	CE200 CONTRACT 4	DP1, DP3	END 2010
DP5 - MAIN CHAL EAST SIDEWALK OUTFALL	CE200 CONTRACT 5	DP3	2011
DP6 - DREDGING FOR THE CROSS-HARBOR WATER MAINS	H/20 CONTRACT NO. H/2005/11	DP3	18 APRIL 2010
	H/20 CONTRACT NO. H/2005/15	DP1, DP3	SEPTEMBER 2010
	H/20 CONTRACT NO. H/2005/16	DP1	OCTOBER 2010
	H/20 CONTRACT NO. H/2005/17	DP1	NOVEMBER 2010
	H/20 CONTRACT 12	DP1, DP3	MIL 2012
DP1 IS COVERED BY CP - 314/2008			
DP2 IS COVERED BY CP - 316/2008			
DP3, DP4 AND DP6 ARE COVERED BY CP - 356/2009			







NOTES:

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

LEGEND:

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

B	WORKING DRAWING	DEC 09
A	TENDER ADDENDUM NO. 1	OCT 09
	TENDER DRAWING	SEP 09

Highways Department 路政署  
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK  
CENTRAL - WAN CHAI BYPASS - NORTH POINT RECLAMATION

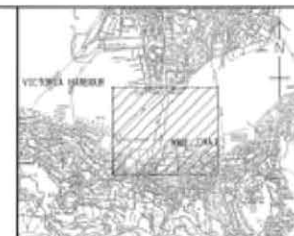
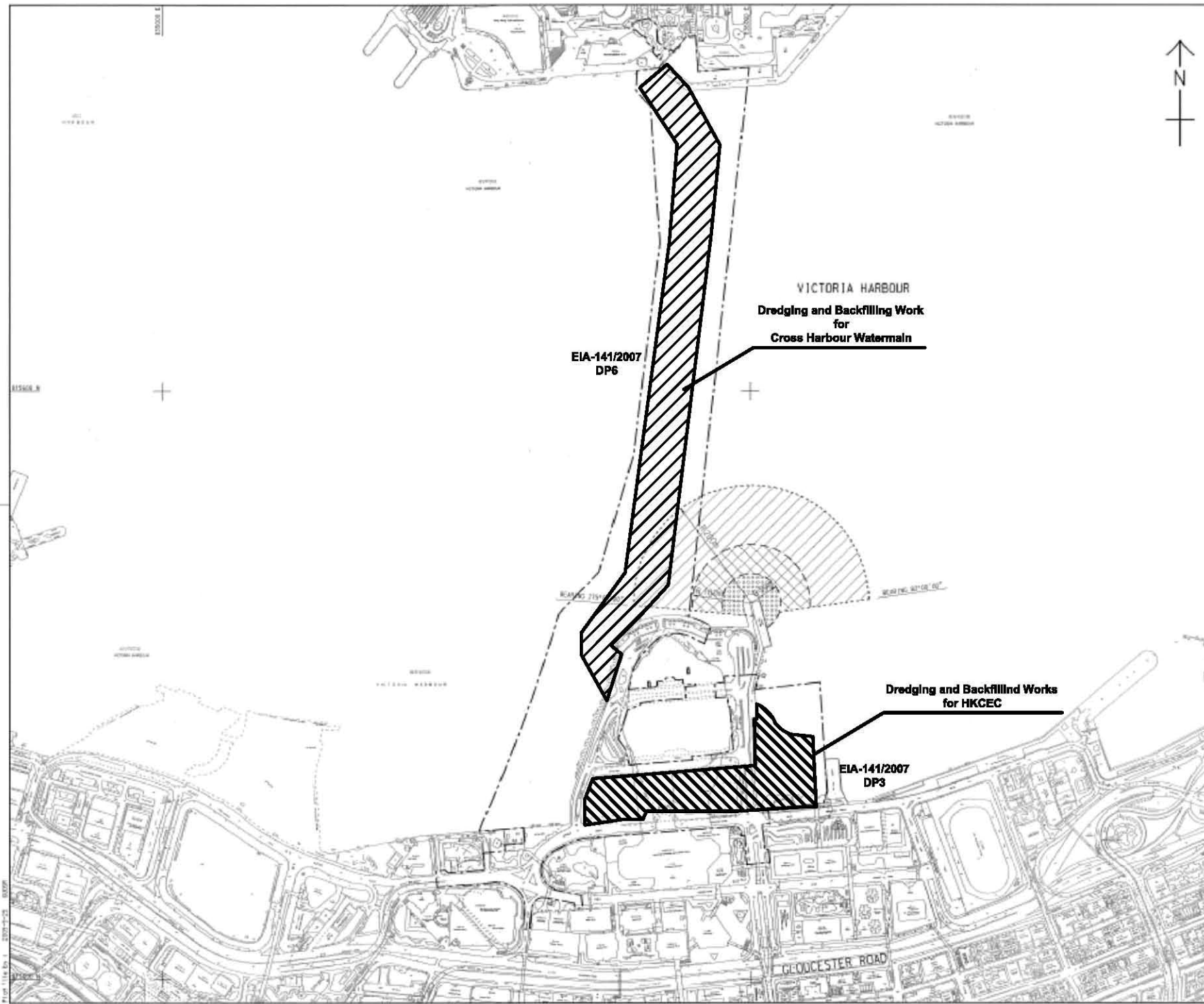
PORTION OF SITE  
SHEET 1 OF 2

AECOM

DRG. NO. 60095653/NP/1651B

DESIGNED BY	CHKD BY	DATE	SCALE	STATUS
TTF	CJH	11/2009/11	1:1000	WORKING DRAWING
COPYRIGHT RESERVED				





LOCATION PLAN  
SCALE 1 : 5000

NOTES:

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

LEGEND:

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

9	TENDER ADDENDUM NO. 4	10/09/09	SEP-09
8	TENDER ADDENDUM NO. 1	10/09/09	SEP-09
7	TENDER DRAWING	10/09/09	SEP-09

土木工務局  
Civil Engineering and Development Department

WAN CHAI DEVELOPMENT PHASE II

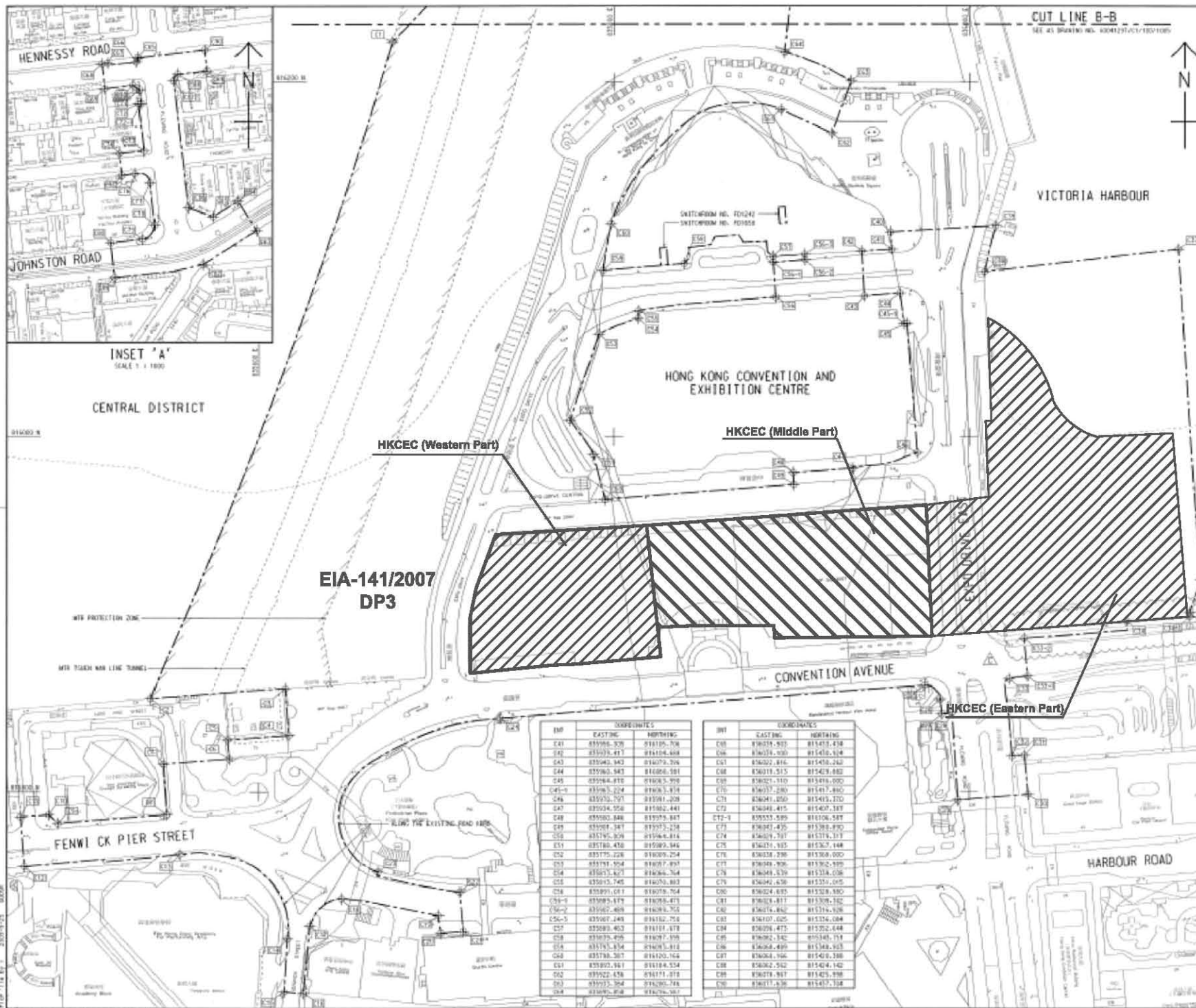
WAN CHAI DEVELOPMENT PHASE II -  
KONG KONG CONVERSION AND EXHIBITION CENTRE

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

**AECOM**

DRAWING NO. 60041297/C1/100/10108

DATE	10/09/09	DATE	10/09/09
BY	ABC	BY	ABC
CHK	ABC	CHK	ABC
APP	ABC	APP	ABC
SCALE	AS 1:5000	SCALE	AS 1:5000
COPYRIGHT	RESERVED	COPYRIGHT	RESERVED



CUT LINE B-B  
SEE AT DRAWING NO. 60041297/C1/100/1006



KEY PLAN  
SCALE 1 : 5000

NOTE:

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

INT	COORDINATES	
	EASTING	NORTHING
C1	830875.205	816222.551
C2	830757.971	816052.595
C3	830414.365	816058.925
C4	830417.020	816051.014
C5	830582.492	816029.522
C6	830581.564	816018.612
C7	830586.545	816015.170
C8	830580.191	816017.147
C9	830486.433	816032.241
C10	830481.082	816037.050
C11	830485.769	816038.075
C12	830467.486	816038.027
C13	830555.460	816044.817
C14	830486.433	816077.122
C15	830414.365	816086.050
C16	830425.195	816055.525
C17	830429.730	816054.441
C18	830446.085	816078.816
C19	830781.421	816050.587
C20	830702.537	816020.885
C21	830711.295	816071.484
C22	830713.183	816072.452
C23	830657.090	816059.074
C24	830735.964	816083.670
C25	830715.280	816080.251
C26	830801.667	816072.286
C27	830804.075	816043.836
C28	830790.218	816044.645
C29	830951.523	816070.380
C30	830653.781	816058.637
C31	830831.210	816028.470
C32	830824.182	816025.117
C33	830821.081	816050.582
C34	830826.795	816084.705
C35	830827.425	816051.056
C36	830805.151	816058.280
C37	830824.832	816049.095
C38	830824.547	816032.285
C39	830826.850	816019.734
C40	830819.190	816026.057
C41	830829.810	816023.295
C42	830816.985	816019.080
C43	830825.682	816015.542

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

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**

DRAWING NO. 60041297/C1/100/1006C

DESIGNED BY	CHK	CHECKED BY	CHK	DATE	11/09/08
DRAWN BY	CHK	DATE	11/09/08	SCALE	AS SHOWN
DATE	11/09/08	BY	CHK	DATE	11/09/08
DATE	11/09/08	BY	CHK	DATE	11/09/08





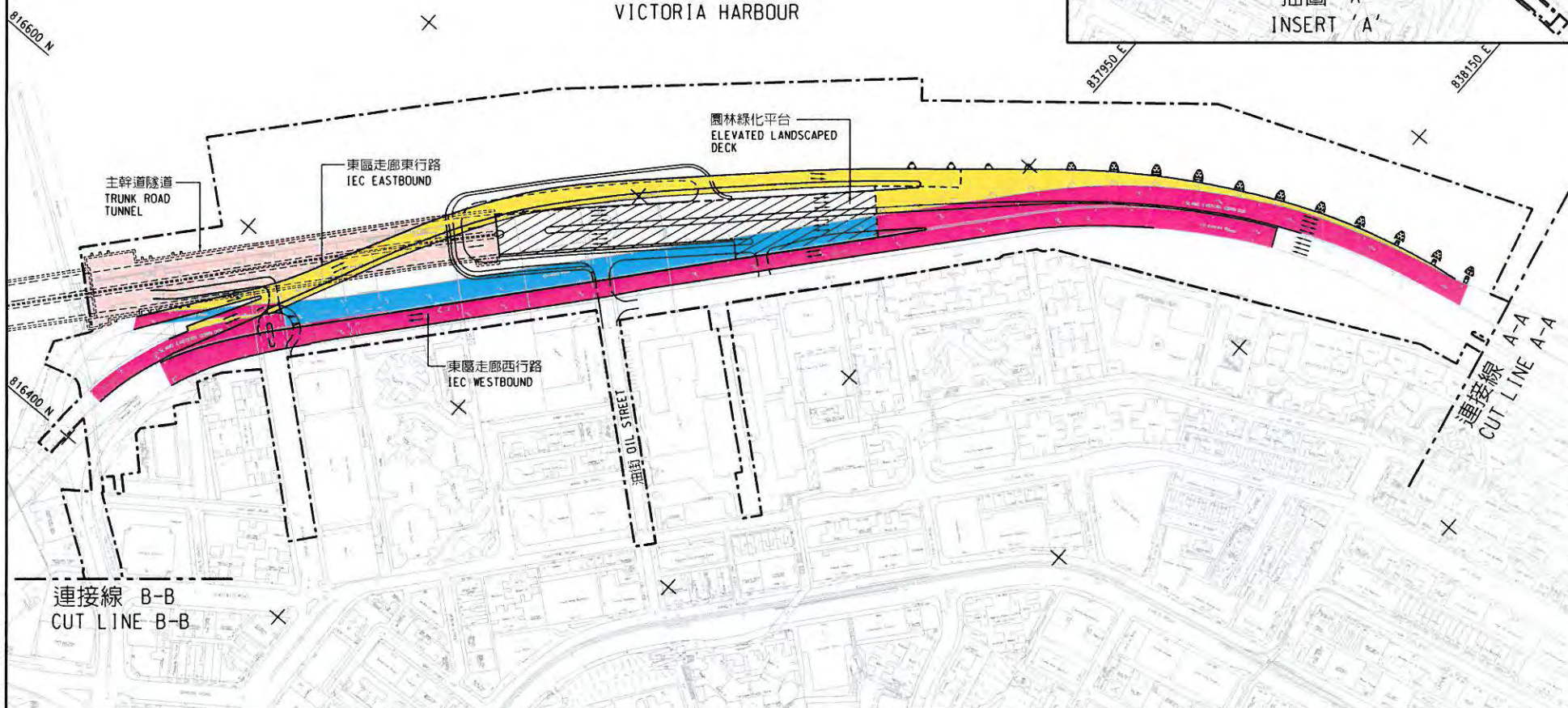
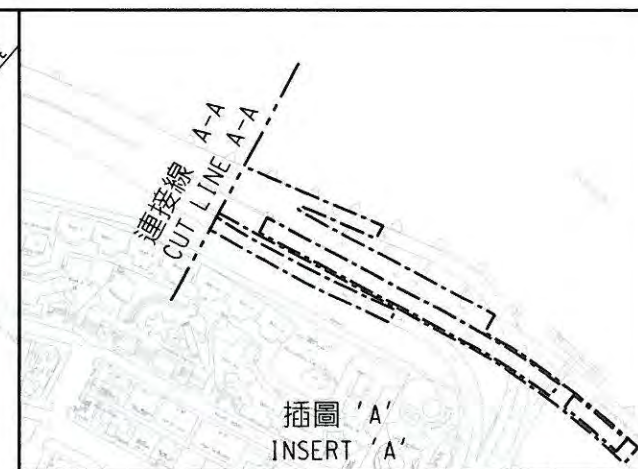


圖例：  
LEGEND:

- 地界範圍  
SITE BOUNDARY
- ▨ 園林綠化平台  
LANDSCAPED DECK
- 主幹道隧道  
TRUNK ROAD TUNNEL
- 擬建高架道路  
PROPOSED ELEVATED CARRIAGEWAY
- 現有高架行車道將予拆卸  
EXISTING ELEVATED CARRIAGEWAY TO BE DEMOLISHED
- 現有高架行車道將予拆卸及重建  
EXISTING ELEVATED CARRIAGEWAY TO BE DEMOLISHED AND RECONSTRUCTED



維多利亞海港 ×  
VICTORIA HARBOUR



合約編號 HY/2009/19 - 中環灣仔繞道 - 北角段隧道及東區走廊連接路

CONTRACT NO. HY/2009/19 - CENTRAL-WAN CHAI BYPASS - TUNNEL (NORTH POINT SECTION) AND ISLAND EASTERN CORRIDOR LINK

SCALE 1 : 3000



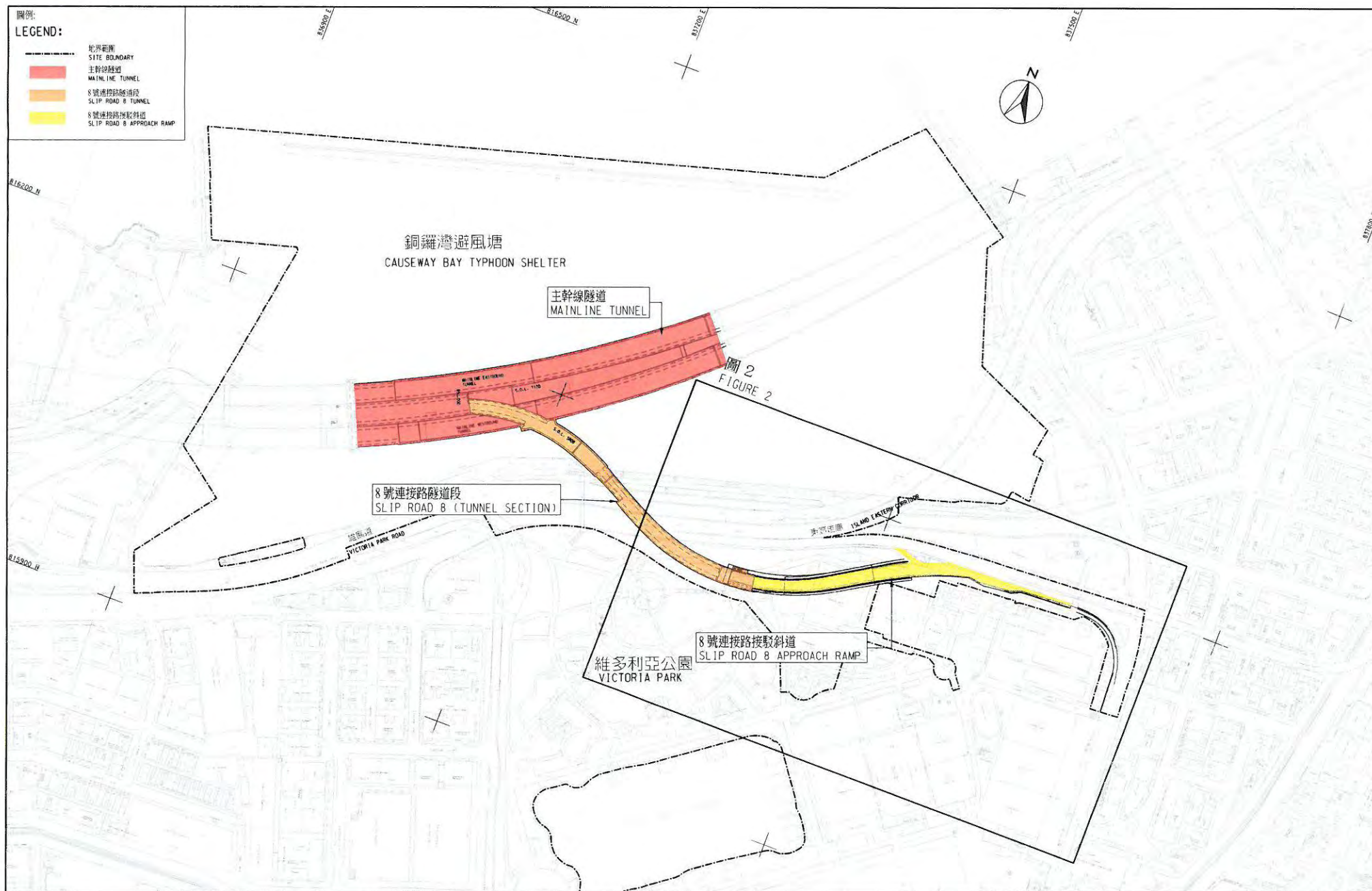


圖1- 合約編號 HY/2010/08中環灣仔繞道-8號連接路段隧道

FIGURE 1 - CONTRACT NO. HY/2010/08 - CENTRAL - WAN CHAI BYPASS - TUNNEL (SLIP ROAD 8 SECTION)

SCALE 1 : 3000

LEGEND:

WORKS AREA



WORKS AREA

DREDGING AREA FOR  
MITIGATION OF ODOUR(DP3)

SITE BOUNDARY

SITE BOUNDARY

港口  
HONG KONG PORT



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

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

TITLE  
LOCATION PLAN OF WORKS AREA

DWG. NO.  
CWBT/EPD/001B

SCALE 1:1000	STATUS AS
DIMENSIONS ARE IN MILLIMETERS	COPYRIGHT RESERVED







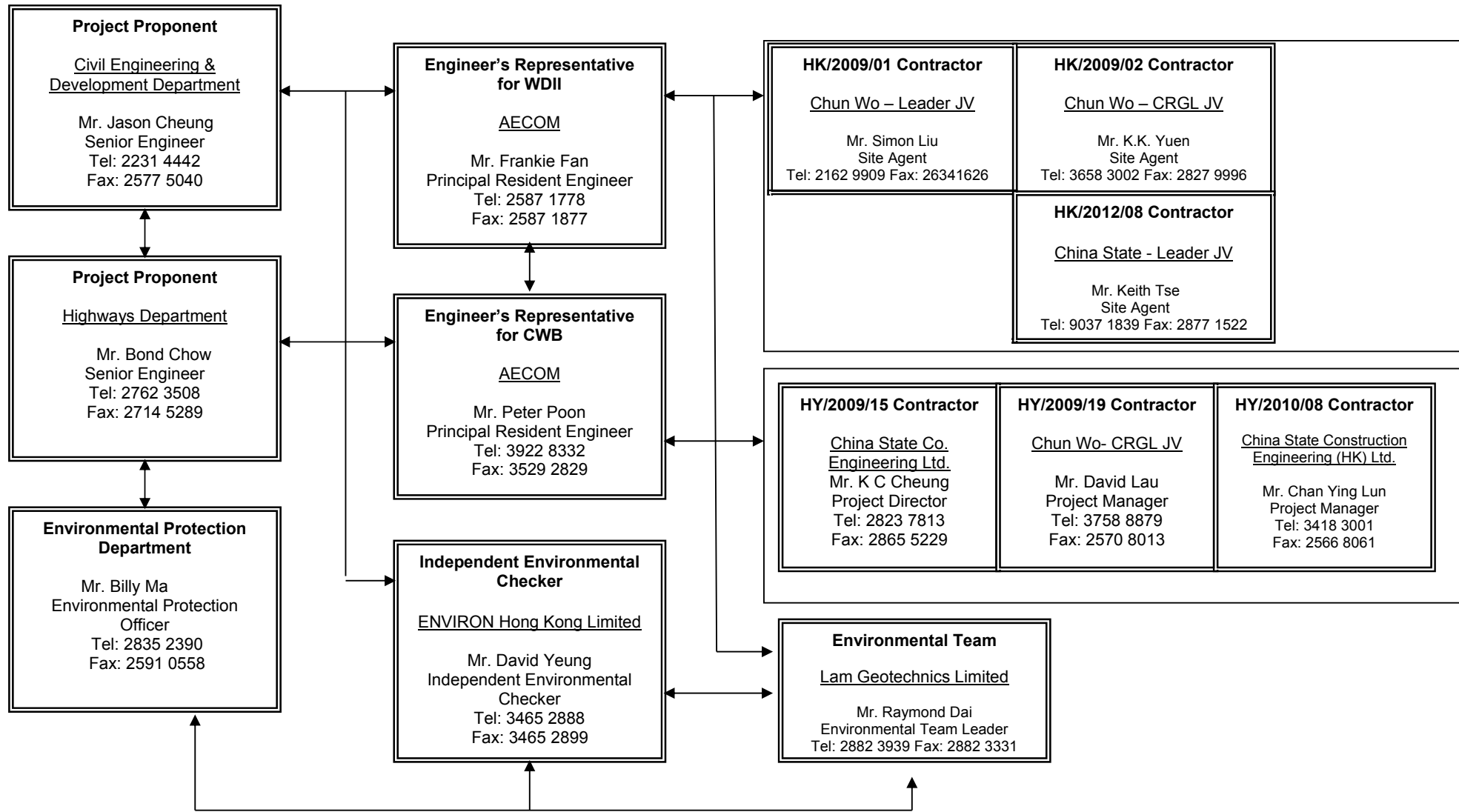


***Figure 2.2***

***Project Organization Chart***



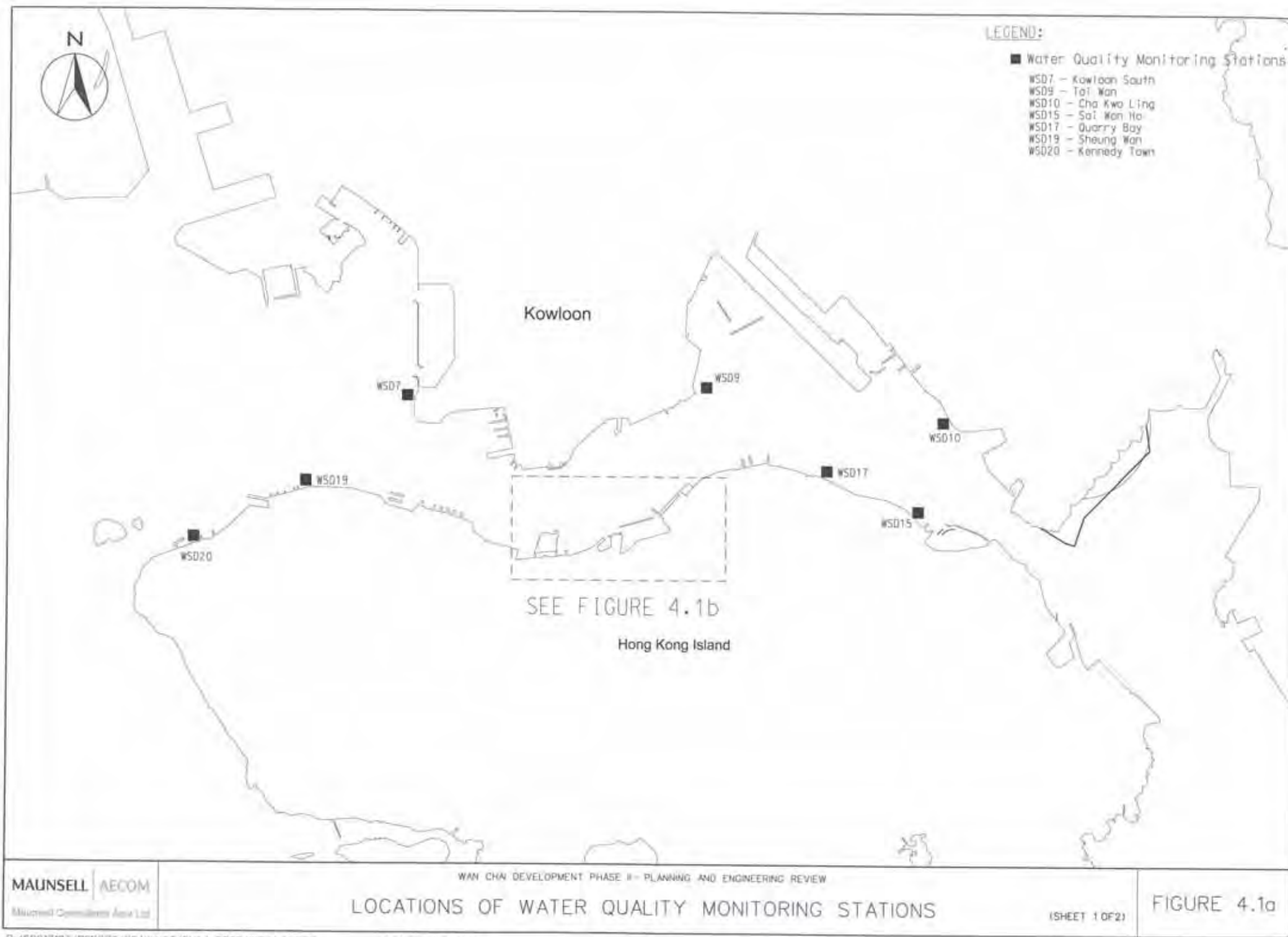
**Project Organization Chart**



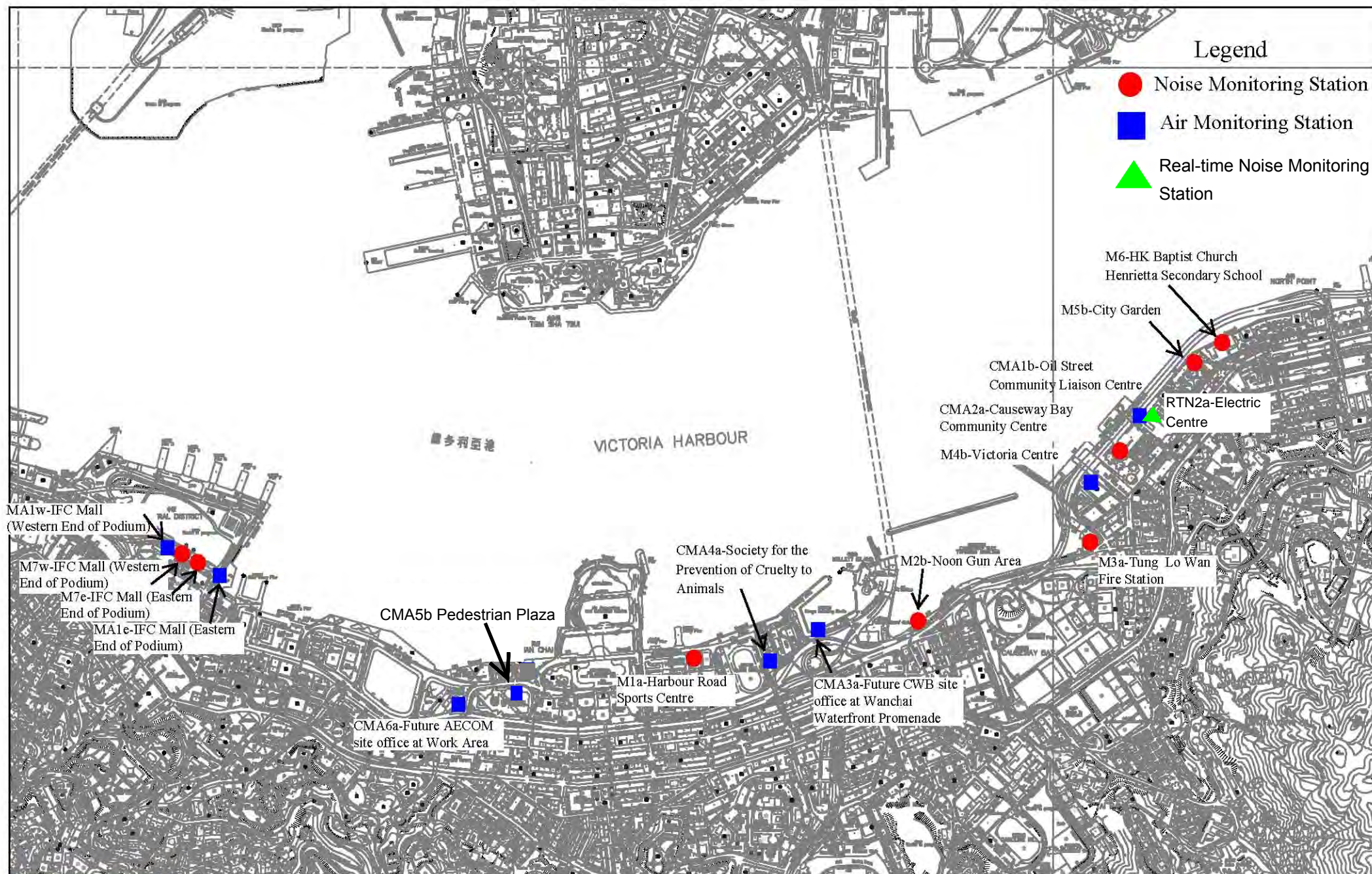


***Figure 4.1***

***Locations of Monitoring Stations***





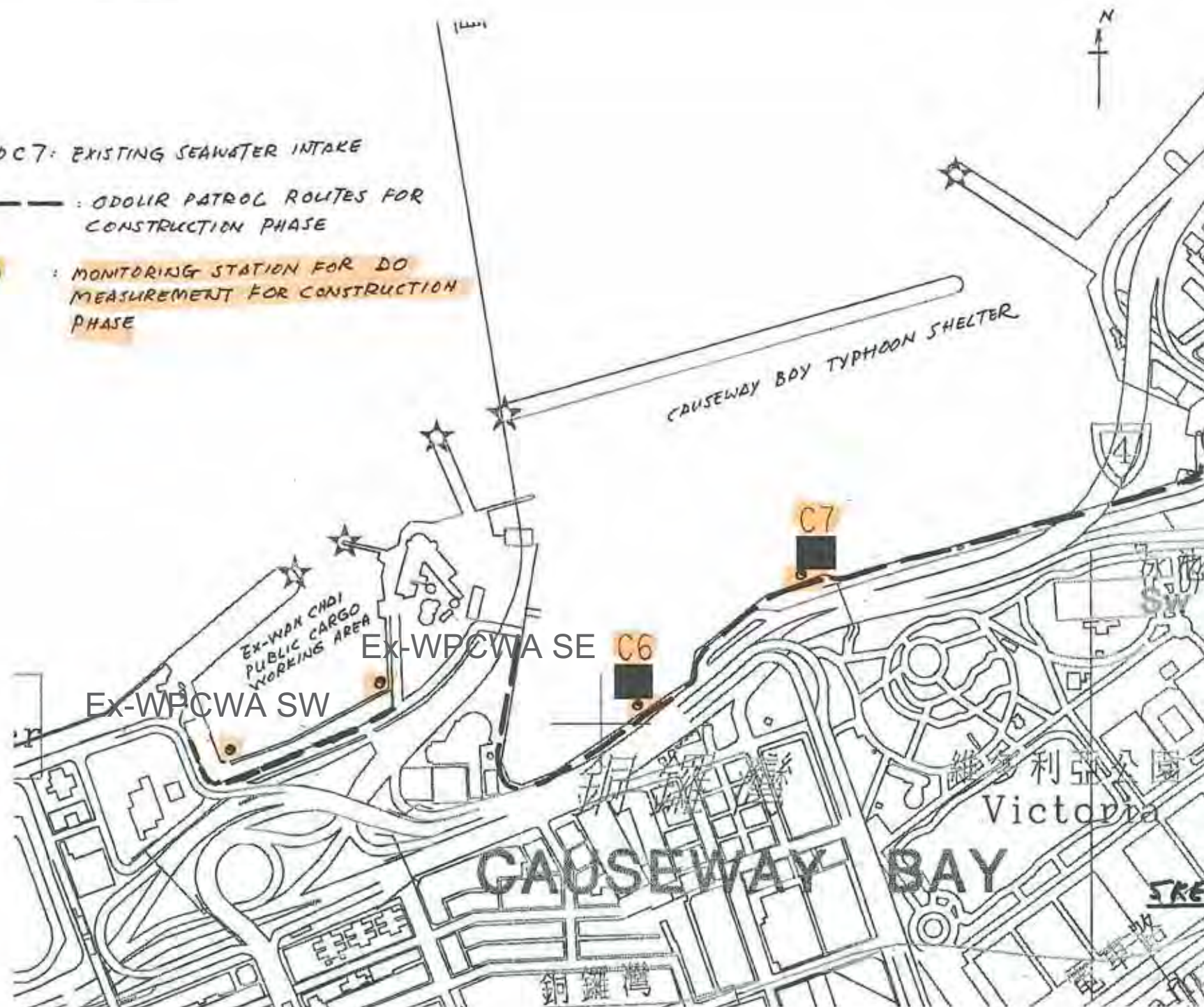




C6 AND C7: EXISTING SEAWATER INTAKE

—— : ODOLIR PATROL ROUTES FOR CONSTRUCTION PHASE

● : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE



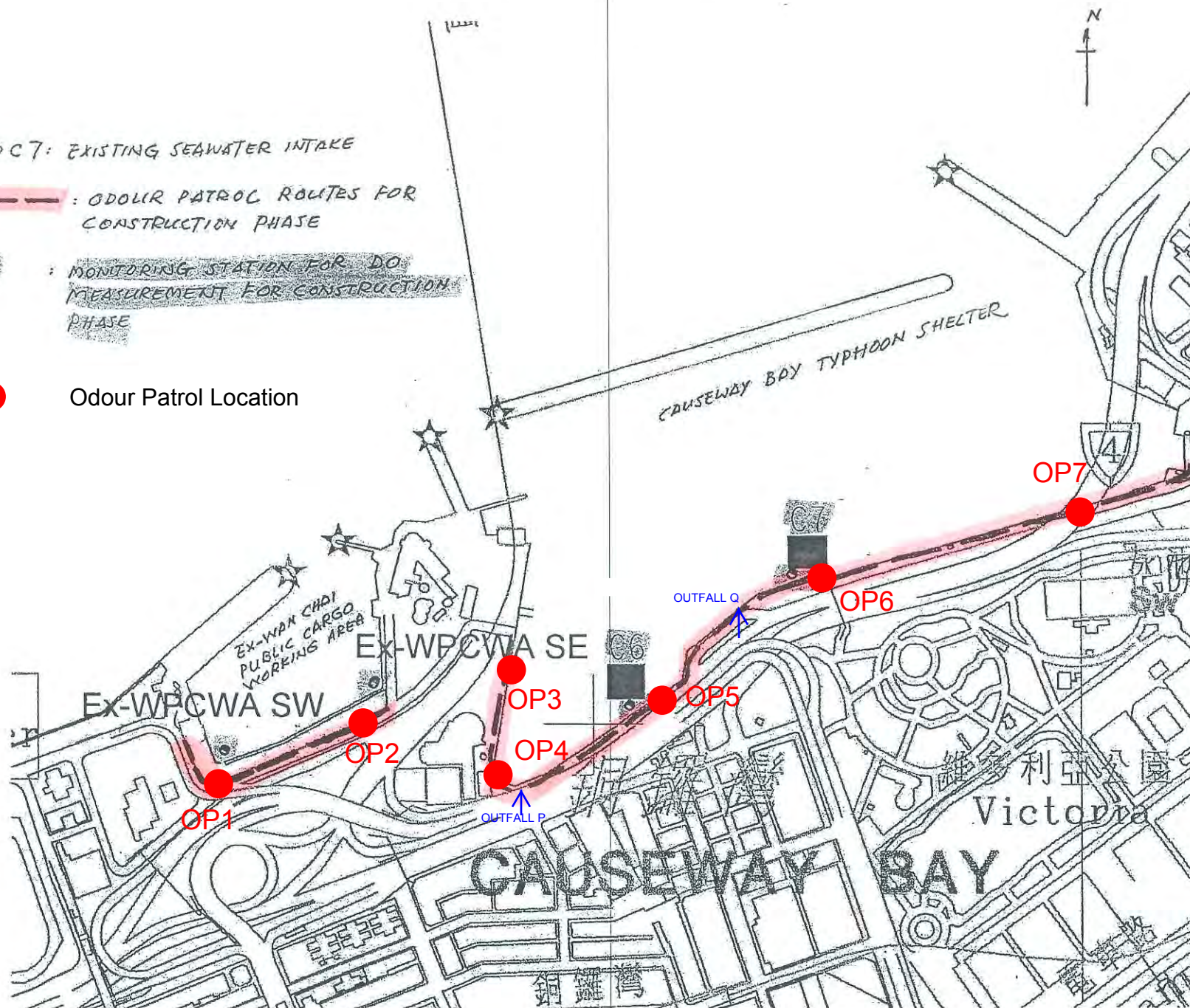


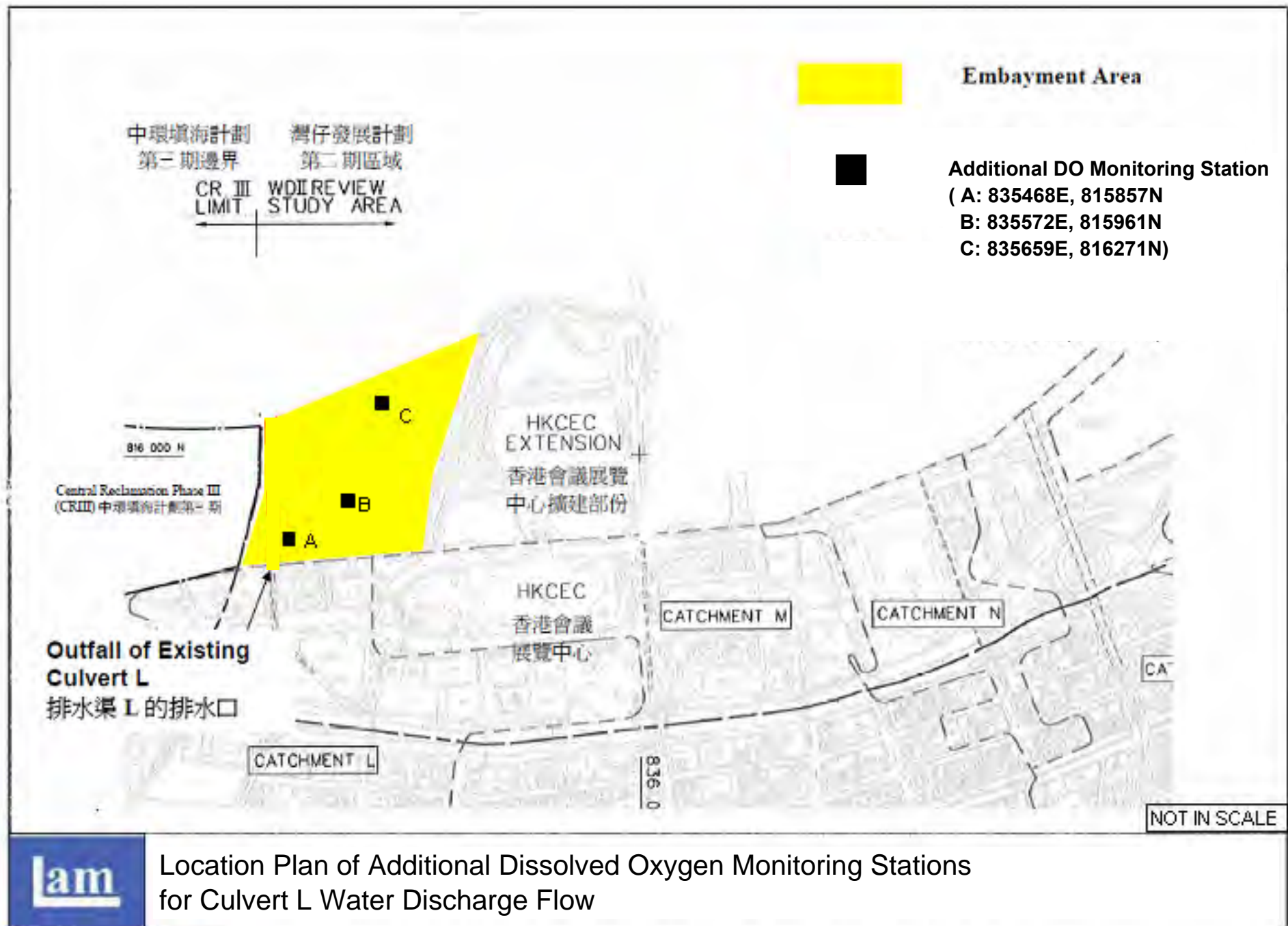
C6 AND C7: EXISTING SEAWATER INTAKE

--- : ODOR PATROL ROUTES FOR CONSTRUCTION PHASE

○ : MONITORING STATION FOR DO MEASUREMENT FOR CONSTRUCTION PHASE

● Odour Patrol Location







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

HYD CONT

HyD CONTRACT NO. HY/2009/11-

HyD CONTRACT NO. HY/2009/15

HyD CONTRACT NO. HY/2010/08

**CEDD CONTRACT  
NO. HK/2009/02**

**CEDD CONTRACT  
NO. HK/2009/01**

**CEDD CONTRACT  
NO. HK/2010/06**

**CEDD CONTRACT  
NO. HK/2012/08**

Causeway Bay  
Typhoon Shelter

WSD21

C5



C6



10



...the ...

99

1175

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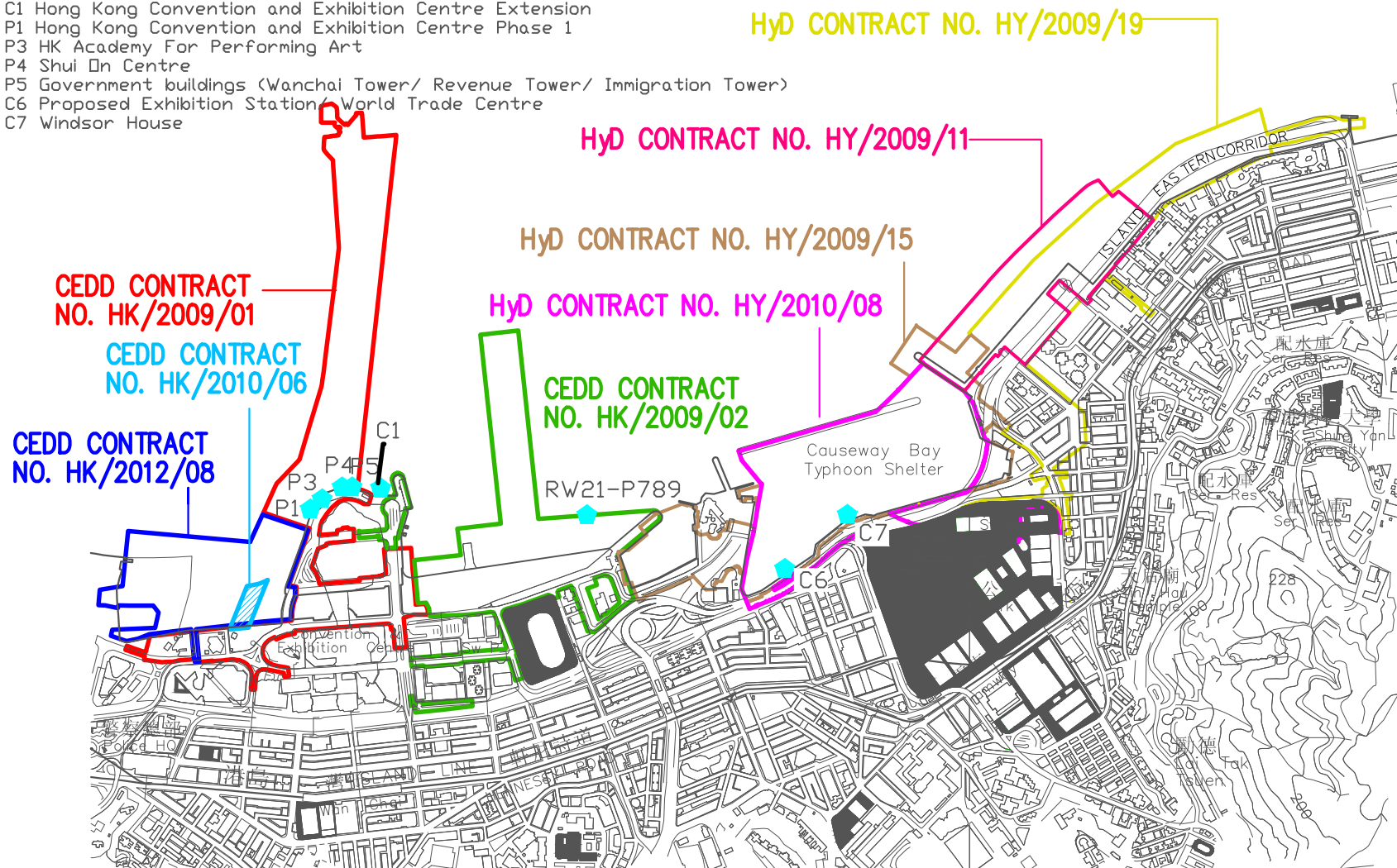
4

[illegible]

# 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





**Legend**

- Additional DO Monitoring Station

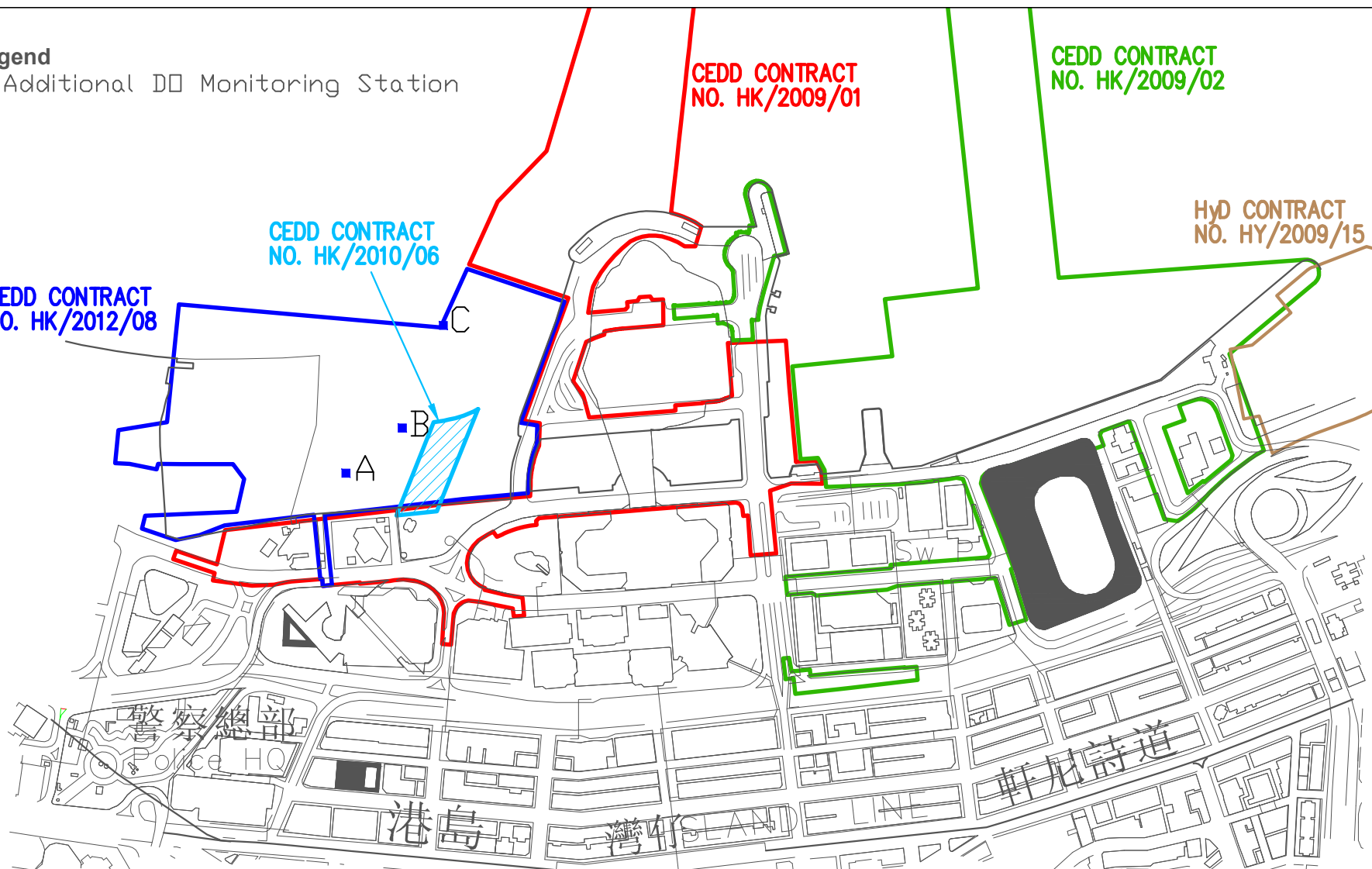
CEDD CONTRACT  
NO. HK/2012/08

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	
Construction Phase								
For the Whole Project								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. <ul style="list-style-type: none"><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 DP1 – CWB (Within the Project Boundary)</b>								
S3.6.53 – S3.6.54	The design parameters of the East and Central Ventilation Buildings as set in Tables 3.10 and 3.11	East and Central Ventilation Buildings / During operation of the Trunk Road	HyD			√		
S3.10.2	Air quality monitoring for the operation performance of the East Ventilation Building and associated East Vent Shaft will be conducted.	East Vent Shaft / During operation of the East Ventilation Building and associated East Vent Shaft	HyD			√		EIAO-TM

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

Appendix 3.1

Table A13.2 Implementation Schedule for Noise Control

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

Appendix 3.1

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.3 – S4.8.5	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks: <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> Use of PME grouping for the following tasks: <ul style="list-style-type: none"> <li>At-grade road construction</li> <li>Substructure for IECL connection</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
<b>For DP2 – WDI Major Roads (Road P2)</b>								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks: <ul style="list-style-type: none"> <li>Temporary road diversion</li> <li>Resurfacing</li> <li>At-grade roadwork</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
<b>For DP3 – Reclamation Works</b>								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following task: <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	
For DP5 – Wan Chai East Sewage Outfall								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: <ul style="list-style-type: none"><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
For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: <ul style="list-style-type: none"><li>Submarine pipelines (marine section)</li><li></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> <p>For Future/Planned NSRs</p> <ul style="list-style-type: none"> <li>about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC</li> </ul>	Near North Point / Before commencement of operation of road project	HyD	√	√	√		EIAO-TM
		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	√	√ #			

## 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	
Construction Phase								
For DP3 – Reclamation Works, DP5 (Wan Chai East Sewage Outfall), DP6 (Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui), DP1 – CWB (within the Project Boundary)								
S5.8	A phased reclamation approach is planned for the WDII. Containment of fill within each of the reclamation phases by seawalls is proposed, with the seawall constructed first (above high water mark) with filling carried out behind the completed seawalls. Any gaps that may need to be provided for marine access will be shielded by silt curtains to control sediment plume dispersion away from the site. Filling for seawall construction should be carried out behind the silt curtain	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8	Dredging shall be carried out by closed grab dredger for the following works: <ul style="list-style-type: none"><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 CR11 and HKCEC1, an impermeable barrier, suspended from a floating boom on the water surface and extending down to the seabed, will be erected by the contractor before the HKCEC1 commences. The barrier will channel the stormwater discharge flows from Culvert L to the outside of the embayment. The contractor will maintain this barrier until the reclamation works in HKCEC2W are carried out and the new Culvert L extension is constructed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																															
S5.8, Figure 5.3	<p>The total dredging rates in each of the marine works zones shall not be more than the maximum production rates stated in the table below. These are the production rates without considering the effect of silt curtain.</p> <table><tr><th colspan="2" rowspan="2">Reclamation Area</th><th colspan="2">Maximum Dredging Rate</th><th rowspan="2">Maximum Dredging Rate (m³ per week)</th></tr><tr><th>m³ per day</th><th>m³ per hour (for 16 hrs per day)</th></tr><tr><td colspan="5">Dredging along seawall or breakwater</td></tr><tr><td colspan="2">North Point Shoreline Zone (NPR)</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td>Causeway Bay Shoreline Zone</td><td>TBW</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td></td><td>TCBR</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td colspan="2">PCWA Zone</td><td>5,000</td><td>313</td><td>35,000</td></tr></table>	Reclamation Area		Maximum Dredging Rate		Maximum Dredging Rate (m³ per week)	m³ per day	m³ per hour (for 16 hrs per day)	Dredging along seawall or breakwater					North Point Shoreline Zone (NPR)		6,000	375	42,000	Causeway Bay Shoreline Zone	TBW	1,500	94	10,500		TCBR	6,000	375	42,000	PCWA Zone		5,000	313	35,000	Work site / During the construction period	Contractor		√		EIAO-TM, WPCO
Reclamation Area				Maximum Dredging Rate			Maximum Dredging Rate (m³ per week)																																
		m³ per day	m³ per hour (for 16 hrs per day)																																				
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	TCBR	6,000	375	42,000																																			
PCWA Zone		5,000	313	35,000																																			

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EIA Ref	Environmental Protection Measures / Mitigation Measures					Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																							
								Des	C	O	Dec																								
	<table border="1"><tr><td colspan="2">Wan Chai Shoreline Zone (WCR)</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td rowspan="2">HKCEC Shoreline Zone (HKCEC)</td><td>HKCEC Stage 1 &amp; 3</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td>HKCEC Stage 2</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td colspan="2">Cross Harbour Water Mains</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td colspan="2">Wan Chai East Submarine Sewage Pipeline</td><td>1,500</td><td>94</td><td>10,500</td></tr></table> <p>Note: 1,500 m<sup>3</sup> per day shall be applied for construction of the western seawall of WCR1.</p>					Wan Chai Shoreline Zone (WCR)		6,000	375	42,000	HKCEC Shoreline Zone (HKCEC)	HKCEC Stage 1 & 3	1,500	94	10,500	HKCEC Stage 2	6,000	375	42,000	Cross Harbour Water Mains		1,500	94	10,500	Wan Chai East Submarine Sewage Pipeline		1,500	94	10,500						
Wan Chai Shoreline Zone (WCR)		6,000	375	42,000																															
HKCEC Shoreline Zone (HKCEC)	HKCEC Stage 1 & 3	1,500	94	10,500																															
	HKCEC Stage 2	6,000	375	42,000																															
Cross Harbour Water Mains		1,500	94	10,500																															
Wan Chai East Submarine Sewage Pipeline		1,500	94	10,500																															
S5.8, Figure 5.3	Dredging along the seawall at WCR1 shall be undertaken initially at 1,500m <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 TCBRIW, the southern and eastern seawalls shall be constructed first (above high water mark) so that the seawater intakes at the inner water would be protected from the impacts from the remaining dredging activities along the northern boundary.					Work site / During the construction period	Contractor		√		EIAO-TM, WPCO																								
S5.8, Figure 5.3	Silt curtains shall be deployed around the closed grab dredgers during seawall dredging and seawall trench filling in the areas of HKCEC, WCR, TCBR and NP.					Work site / During the construction period	Contractor		√		EIAO-TM, WPCO																								
S5.8, Figure 5.3	Silt screens shall be applied to seawater intakes at interim construction stages as stated below: <table border="1"><tr><th>Interim Construction Stage</th><th>Location of Applications</th></tr><tr><td>Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA.</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></table>					Interim Construction Stage	Location of Applications	Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA.	WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong	Work site / During the construction period	Contractor		√		EIAO-TM, WPCO																				
Interim Construction Stage	Location of Applications																																		
Scenario 2A in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA.	WSD saltwater intakes at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South Cooling water intakes for Hong Kong Convention and Exhibition Centre Extension, Hong Kong																																		

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures		Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
					Des	C	O	Dec	
	TBW, NP and Water Mains Zone	Convention and Exhibition Centre Phase I, Telecom House / HK Academy for Performing Arts / Shun On Centre, Wan Chai Tower / Revenue Tower / Immigration Tower and Sun Hung Kai Centre							
	<b>Scenario 2B</b> in late 2009/2010 with concurrent dredging activities at Sewage Pipelines Zone and TCBR.	<b>WSD saltwater intakes</b> at Sheung Wan, Wan Chai <b>Cooling water intakes</b> for Queensway Government Offices, Excelsior Hotel, World Trade Centre and Windsor House.							
	<b>Scenario 2C</b> in 2011 with concurrent dredging activities at HKCEC and TCBR.	<b>WSD saltwater intakes</b> at Sheung Wan and Reprovisioned WSD Wan Chai saltwater intake. <b>Cooling water intakes</b> for MTR South, Excelsior Hotel & World Trade Centre and reprovisioned Windsor House.							
S5.8	Other mitigation measures include: <ul style="list-style-type: none"><li>mechanical grabs, if used, shall be designed and maintained to avoid spillage and sealed tightly while being lifted. For dredging of any contaminated mud, closed watertight grabs must be used;</li><li>all vessels shall be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;</li><li>all hopper barges and dredgers shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li><li>construction activities shall not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds;</li><li>loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water. Barges or hoppers shall not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; and</li></ul>		Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> <li>before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.</li> </ul>							
S5.8	Silt screens are recommended to be deployed at the seawater intakes during the reclamation works period. Installation of silt screens at the seawater intake points may cause a potential for accumulation and trapping of pollutants, floating debris and refuse behind the silt screens and may lead to potential water quality deterioration at the seawater intake points. Major sources of pollutants and floating refuse include the runoff and storm water discharges from the nearby coastal areas. As a mitigation measure to avoid the pollutant and refuse entrapment problems and to ensure that the impact monitoring results are representative, regular maintenance of the silt screens and refuse collection shall be performed at the monitoring stations at regular intervals on a daily basis. The Contractor shall be responsible for keeping the water behind the silt screen free from floating rubbish and debris during the impact monitoring period.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	Dredging of contaminated mud is recommended as a mitigation measures for control of operational odour impact from the Causeway Bay typhoon shelter. In recognition of the potential impacts caused by dredging activities close to the seawater intakes, only 1 small close grab dredger shall be operated within the typhoon shelter (for the dredging to mitigate odour impact) at any time to minimize the potential impact. Double silt curtains shall be deployed to fully enclose the closed grab dredger during the dredging operation. In addition, an impermeable barrier, suspended from a floating boom on the water surface and extended down to the seabed, shall be erected to isolate the adjacent intakes as much as possible from dredging activities. For example, if dredging is to be carried out at the southwest corner of the typhoon shelter, physical barriers shall be erected to west of the cooling water intake for Excelsior Hotel so that the intake would be shielded from most of the SS generated from the dredging operation to the west of the intake. For area in close proximity of the cooling water intake point, the dredging rate shall be reduced as much as practicable. Site audit and water quality monitoring shall be carried out at the seawater intakes during the dredging operations. Daily monitoring of SS at the cooling water intake shall be carried out, and 24 hour monitoring of turbidity at the intakes shall be implemented during the dredging activities. If the monitoring results indicate that the dredging operation has caused significant changes in water quality conditions at the seawater intakes, appropriate actions shall be taken to stop the dredging and mitigation measures such as slowing down the dredging rate shall be implemented.	Causeway Bay typhoon shelter/Implementation of harbour-front enhancement.	CEDD <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	
For the Whole Project								
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.

## Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	required.							
	<ul style="list-style-type: none"> <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	<i>Sewage from Construction Work Force</i> Construction work force sewage discharges on site shall be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage shall be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)
S5.8	<i>Floating Debris and Refuse</i> Collection and removal of floating refuse shall be performed at regular intervals on a daily basis. The contractor shall be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.	Work site and adjacent water / During the construction period.	Contractor		√			WPCO

## Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	<p><i>Storm Water Discharges</i></p> <p>Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned WSD flushing water intakes.</p>	Work site and adjacent water / During the design and construction period.	Contractor	√	√			WPCO
<b>Operation Phase</b>								
<b>DPI – CWB (within the Project Boundary)</b>								
S5.8	<p>For the operation of CWB, a surface water drainage system would be provided to collect road runoff. The following operation stage mitigation measures are recommended to ensure road runoff would comply with the TM under the WPCO:</p> <ul style="list-style-type: none"> <li>The drainage from tunnel sections shall be directed through petrol interceptors to remove oil and grease before being discharged to the nearby foul water manholes.</li> <li>Petrol interceptors shall be regularly cleaned and maintained in good working condition.</li> <li>Oily contents of the petrol interceptors shall be properly handled and disposed of, in compliance with the requirements of the Waste Disposal Ordinance.</li> <li>Sewage arising from ancillary facilities of CWB (for examples, car park,</li> </ul>	CWB/During design and operational period	HyD/TD <sup>3</sup>	√		√		WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>control room, ventilation and administration buildings and tunnel portals) shall be connected to public sewerage system. Sufficient capacity in public sewerage shall be made available to the proposed facilities.</p> <ul style="list-style-type: none"> <li>Road drainage shall also be provided with adequately designed silt trap to minimize discharge of silty runoff.</li> <li>The design of the operational stage mitigation measures for CWB shall take into account the guidelines published in ProPECC PN 5/93 "Drainage Plans subject to Comment by the EPD." All operational discharges from the CWB into drainage or sewerage systems are required to be licensed by EPD under the WPCO.</li> </ul>							

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

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

Appendix 3.1

Table A13.4 Implementation Schedule for Waste Management

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For DP3 – Reclamation Works								
S6.7.2	<p><b>Marine Sediments</b></p> <p>The dredged marine sediments would be loaded onto barges, transported to and disposed of at the designated disposal sites at South of Cheung Chau, East of Ninepin, East of Tung Lung Chau, South of Tsing Yi or East of Sha Chau to be allocated by the MFC depending on their level of contamination or at other disposal sites after consultation with the MFC and EPD. In accordance with the ETWB TCW No. 34/2002, the contaminated material must be dredged and transported with great care. The mitigation measures recommended in Section 5 of the EIA Report shall be incorporated. The dredged contaminated sediment must be effectively isolated from the environment upon final disposal and shall be disposed of at the Type 2 confined marine disposal contaminated mud pit.</p>	Work site / During the construction period	Contractor		√			ETWB TCW No. 34/2002
S6.7.3	Based on the biological screening results, the Category H (>10xLCEL) sediment which failed the biological testing would require Type 3 special disposal. The volume of Category H sediment from the Causeway Bay typhoon shelter which would require special disposal arrangements is estimated to be approximately 0.05 Mm <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.							

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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	
S6.7.5	It will be the responsibility of the Contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, at least 3 months prior to the dredging contract being tendered							
S6.7.6	<p>During transportation and disposal of the dredged marine sediments requiring Type 1 and Type 2 disposal, the following measures shall be taken to minimise potential impacts on water quality:</p> <ul style="list-style-type: none"> <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

## Appendix 3.1

Table A13.5 Implementation Schedule for Land Contamination

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								
S.12.6	<ul style="list-style-type: none"><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>

## Appendix 3.1

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

## Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<u>Air Quality Mitigation Measures</u> <ul style="list-style-type: none"> <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>							
	<u>Noise Mitigation Measures</u> <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	
	<u>Water Quality Mitigation Measures</u> <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> <u>Waste Mitigation Measures</u> <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	
Construction Phase								
For the Whole Project - Schedule 3 DP								
S.9.7.2	Alternative design of the Trunk Road constructed in tunnel shall be adopted to avoid permanent reclamation in CBTS and ex-PWCA Basin.	-	CEDD/HyD	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
For DP3 – Reclamation Works								
S.9.7.3	Translocation of those potentially affected coral colonies to the nearby suitable habitats such as Junk Bay is recommended. A detailed translocation plan (including translocation methodology, monitoring of transplanted corals, etc.) should be drafted and approval by AFCD during the detailed design stage of the Project.	Ex-PCWA Basin and along seawall next to a public pier which is about 250 m away from the CBTS	CEDD/HyD	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

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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	
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	
Construction Phase								
For the Whole Project								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DP1 – CWB (Within the Project Boundary)								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
<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

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Refer to EIA-058/2001 Table 10.13	CM4 Control night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM5 Minimisation of disruption to public by effective programming of the works.	Work site / During Construction Phase	Contractor		√			EIAO TM
<b>For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui</b>								
Refer to EIA-058/2001 Table 10.13	CM2 Minimisation of works areas.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM3 Erection of decorative hoardings.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM4 Control night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM5 Minimisation of disruption to public by effective programming of the works.	Work site / During Construction Phase	Contractor		√			EIAO TM
<b>Operation Phase</b>								
<b>For the Whole Project - Schedule 3 DP</b>								
Table 10.6, Figure 10.5.1-10.5.5	OM1 Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	CEDD/HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM2 Shrub and Climbing Plants to soften proposed structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD	√	√	√		ETWB TCW 2/2004

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EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.6, Figure 10.5.1-10.5.5	OM3 Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD/	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM4 Aesthetic design of proposed waterfront promenade.	Work site / During Design Stage and Operation Phases	CEDD <sup>4</sup>	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM5 Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	CEDD/HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM6 Aesthetic design of roadside amenity areas.	Work site / During Design Stage and Operation Phases	CEDD/HyD	√	√	√		ETWB TCW 2/2004
<b>For DP1 – CWB (Within the Project Boundary)</b>								
Table 10.6, Figure 10.5.1-10.5.5	OM1 Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM2 Shrub and Climbing Plants to soften proposed structures	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM3 Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM5 Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM6 Aesthetic design of roadside amenity areas.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
<b>For DP2 – WDII Major Roads (Road P2)</b>								

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

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
CMA5b <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 $\text{mg/L}$	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 $\text{mg/L}$	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:** SAM LAM **WORK ORDER:** HK1510147  
**CLIENT:** LAM GEOTECHNICS LIMITED  
**DATE RECEIVED:** 2015-05-22  
**DATE OF ISSUE:** 2015-06-01  
**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>	22-May-15

**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

This report may not be reproduced except with prior written approval from Pilot Testing Limited.

**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION**

**WORK ORDER:** HK1510147  
**DATE OF ISSUE:** 2015-06-01  
**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>	22-May-15
<b>Date of next Calibration:</b>	22-Aug-15

**Parameters:****Turbidity**

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

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.86	-3.5
10	10.1	1.0
40	40.0	0.0
100	101	1.0
400	399	-0.3
1000	1000	0.0
	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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**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION****Information supplied by customer:**

**CONTACT:** SAM LAM **WORK ORDER:** HK1510130  
**CLIENT:** LAM GEOTECHNICS LIMITED  
**DATE RECEIVED:** 08/04/2015  
**DATE OF ISSUE:** 15/04/2015  
**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>	1203015
<b>Equipment No.:</b>	---
<b>Date of Calibration:</b>	08/04/2015

**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

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# REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

**WORK ORDER:** HK1510130  
**DATE OF ISSUE:** 15/04/2015  
**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>	1203015
<b>Equipment No.:</b>	---
<b>Date of Calibration:</b>	08/04/2015
<b>Date of next Calibration:</b>	08/07/2015

## Parameters:

### Turbidity

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

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	4.22	5.5
10	9.77	-2.3
40	40.9	2.3
100	99	-1.0
400	412	3.0
1000	983	-1.7
	Tolerance Limit (±%)	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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**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION****Information supplied by customer:**

**CONTACT:** SAM LAM **WORK ORDER:** HK1510131  
**CLIENT:** LAM GEOTECHNICS LIMITED  
**DATE RECEIVED:** 08/04/2015  
**DATE OF ISSUE:** 15/04/2015  
**ADDRESS:** 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD,  
WANCHAI, HONG KONG  
**PROJECT:** ---

**METHOD OF PERFORMANCE CHECK/ CALIBRATION:**

Ref: APHA22nd ed 2130B

**COMMENTS**

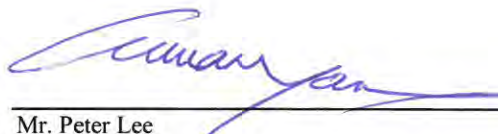
It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory.

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>	1309192
<b>Equipment No.:</b>	---
<b>Date of Calibration:</b>	08/04/2015

**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

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# REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

**WORK ORDER:** HK1510131  
**DATE OF ISSUE:** 15/04/2015  
**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>	1309192
<b>Equipment No.:</b>	---
<b>Date of Calibration:</b>	08/04/2015
<b>Date of next Calibration:</b>	08/07/2015

## Parameters: Turbidity

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

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.89	-2.8
10	10.3	3.0
40	41.5	3.8
100	97	-3.0
400	394	-1.5
1000	978	-2.2
	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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## EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No. : HK1510133  
 Project Name : EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT  
 Date of Issue : 21/04/2015

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

---

Calibration Job No. : HK1510133  
 Test Item No. : HK1510133-01  
 Test Item Details  
 Test Item Description : Multifunctional Meter  
 Manufacturer : YSI  
 Model No. : Professional Plus  
 Serial No. : 14E100105  
 Performance Method : Checked according to in-house method CAL005  
 (References: Temperature (Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B ) , Dissolved oxygen (APHA 19e 4500-O,C))

Test Item Receipt Date : 14-Apr-15  
 Test Item Calibration Date : 15-Apr-15  
 Test Period : 14/04/2015 - 21/04/2015

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- Notes :
1. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
  2. Results relate to item(s) as received.
  3.  $\pm$  indicates the tolerance limit
  4. N/A = Not applicable
  5. APHA - American Public Health Association, American Water Works Association and Water Environment Federation, Standard Methods for the Examination of Water and Wastewater, APHA-AWWA-WEF. USA
  6. DO, pH, salinity and temperature performance check was conducted by Pilot Testing Limited.
  7. Because of high sensitivity and ease of measurement, the conductivity method (according to APHA 19e 2510) is used to determine salinity.

Approved Signatory :

Mr. Peter Lee  
(Director)

Issue Date: 21/04/2015





# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**WORK ORDER:** HK1510133  
**DATE OF ISSUE:** 21/04/2015  
**CLIENT:** LAM GEOTECHNICS LIMITED

<b>Equipment Type</b>	Multifunctional Meter
<b>Manufacturer</b>	YSI
<b>Model No.</b>	Professional Plus
<b>Serial No.</b>	14E100105
<b>Date of Calibration</b>	15-Apr-15
<b>Date of next Calibration</b>	15-Jul-15

## Parameters:

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

Reference Reading (°C)	Display Reading (°C)	Deviation (°C)
10.2	10.4	+0.2
19.9	20.1	+0.2
28.9	27.4	-1.5
Tolerance Limit		±2.0

## pH Value (Method Ref: APHA21e, 4500H:B)

Expected Reading (pH unit)	Reference Reading (pH unit)	Display Reading (pH unit)	Deviation (pH unit)
4.0	3.97	4.08	+0.11
7.0	6.92	7.03	+0.11
10.0	9.91	10.01	+0.10
Tolerance Limit			±0.20

## Conductivity (Method Ref: APHA 19e, 2510)

KCl concentration (mol/L)	Reference Reading (ms/cm)	Display Reading (ms/cm)	Deviation (%)
0.0000	0.00	0.00	--
0.1000	12.89	12.70	-1.50
0.2000	24.80	24.99	+0.77
0.5000	58.67	58.36	-0.53
Tolerance Limit			±2.0

## Dissolved Oxygen (DO) (Method Ref: APHA 19e, 4500-O, C)

Reference DO reading (mg/L)	DO reading of DO probe (mg/L)	Deviation (mg/L)
8.93	8.85	-0.08
5.15	5.17	+0.02
1.58	1.71	+0.13
Tolerance Limit		±0.20

**Remarks:** (1) Maximum tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.  
 (2) Displayed reading presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.  
 (3) Because of high sensitivity and ease of measurement, the conductivity method (according to APHA 19e 2510) is used to determine salinity.

- End of Report -





## EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

<b>Report No.</b>	: HK1510134
<b>Project Name</b>	: EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
<b>Date of Issue</b>	: 24/04/2015
<b>Customer</b>	: LAM GEOTECHNICS LIMITED
<b>Address</b>	: 11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG
<hr/>	
<b>Calibration Job No.</b>	: HK1510134
<b>Test Item No.</b>	: HK1510134-01
<b>Test Item Details</b>	
<b>Test Item Description</b>	: Multifunctional Meter
<b>Manufacturer</b>	: YSI
<b>Model No.</b>	: Professional Plus
<b>Serial No.</b>	: 14M100277
<b>Performance Method</b>	: Checked according to in-house method CAL005 (References: Temperature (Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B ) , Dissolved oxygen (APHA 19e 4500-O,C))
<b>Test Item Receipt Date</b>	: 17-Apr-15
<b>Test Item Calibration Date</b>	: 17-Apr-15
<b>Test Period</b>	: 17/04/2015 - 24/04/2015

- Notes :
1. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
  2. Results relate to item(s) as received.
  3.  $\pm$  indicates the tolerance limit
  4. N/A = Not applicable
  5. APHA - American Public Health Association, American Water Works Association and Water Environment Federation, Standard Methods for the Examination of Water and Wastewater, APHA-AWWA-WEF. USA
  6. DO, pH, salinity and temperature performance check was conducted by Pilot Testing Limited.
  7. Because of high sensitivity and ease of measurement, the conductivity method (according to APHA 19e 2510) is used to determine salinity.

Approved Signatory

  
 Mr. Peter Lee  
 (Director)

Issue Date: 24/04/2015



# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**WORK ORDER:** HK1510134  
**DATE OF ISSUE:** 24/04/2015  
**CLIENT:** LAM GEOTECHNICS LIMITED

<b>Equipment Type</b>	Multifunctional Meter
<b>Manufacturer</b>	YSI
<b>Model No.</b>	Professional Plus
<b>Serial No.</b>	14M100277
<b>Date of Calibration</b>	17-Apr-15
<b>Date of next Calibration</b>	17-Jul-15

## Parameters:

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

Reference Reading (°C)	Display Reading (°C)	Deviation (°C)
10.2	10.5	+0.3
19.7	19.1	-0.6
31.3	31.3	0.0
Tolerance Limit		±2.0

## pH Value (Method Ref: APHA21e, 4500H:B)

Expected Reading (pH unit)	Reference Reading (pH unit)	Display Reading (pH unit)	Deviation (pH unit)
4.0	3.97	4.14	+0.17
7.0	6.88	7.03	+0.15
10.0	9.84	9.90	+0.06
Tolerance Limit			±0.20

## Conductivity (Method Ref: APHA 19e, 2510)

KCl concentration (mol/L)	Reference Reading (ms/cm)	Display Reading (ms/cm)	Deviation (%)
0.0000	0.00	0.00	--
0.1000	12.89	13.08	+1.47
0.2000	24.80	24.43	-1.49
0.5000	58.67	58.10	-0.97
Tolerance Limit			±2.0

## Dissolved Oxygen (DO) (Method Ref: APHA 19e, 4500-O, C)

Reference DO reading (mg/L)	DO reading od DO probe (mg/L)	Deviation (mg/L)
8.18	8.06	-0.12
5.59	5.46	-0.13
3.00	2.96	-0.04
Tolerance Limit		±0.20

**Remarks:** (1) Maxium tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.  
 (2) Displayed reading presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.  
 (3) Because of high sensitivity and ease of measurement, the conductivity method (accorindg to APHA 19e 2510) is used to determine salinity.

- End of Report -



## EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

<b>Report No.</b>	: HK1510132
<b>Project Name</b>	: EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
<b>Date of Issue</b>	: 21/04/2015
<b>Customer</b>	: LAM GEOTECHNICS LIMITED
<b>Address</b>	: 11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG
<b>Calibration Job No.</b>	: HK1510132
<b>Test Item No.</b>	: HK1510132-01
<b>Test Item Details</b>	
<b>Test Item Description</b>	: Multifunctional Meter
<b>Manufacturer</b>	: YSI
<b>Model No.</b>	: Professional Plus
<b>Serial No.</b>	: 11F100420
<b>Performance Method</b>	: Checked according to in-house method CAL005 (References: Temperature (Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B ) , Dissolved oxygen (APHA 19e 4500-O,C))
<b>Test Item Receipt Date</b>	: 14-Apr-15
<b>Test Item Calibration Date</b>	: 15-Apr-15
<b>Test Period</b>	: 14/4/2015 - 21/4/2015

- Notes :
1. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
  2. Results relate to item(s) as received.
  3.  $\pm$  indicates the tolerance limit
  4. N/A = Not applicable
  5. APHA - American Public Health Association, American Water Works Association and Water Environment Federation, Standard Methods for the Examination of Water and Wastewater, APHA-AWWA-WEF. USA
  6. DO, pH, salinity and temperature performance check was conducted by Pilot Testing Limited.
  7. Because of high sensitivity and ease of measurement, the conductivity method (according to APHA 19e 2510) is used to determine salinity.

Approved Signatory

Mr. Peter Lee  
(Director)

Issue Date:

21/04/2015





# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**WORK ORDER:** HK1510132  
**DATE OF ISSUE:** 21/04/2015  
**CLIENT:** LAM GEOTECHNICS LIMITED

<b>Equipment Type</b>	Multifunctional Meter
<b>Manufacturer</b>	YSI
<b>Model No.</b>	Professional Plus
<b>Serial No.</b>	11F100420
<b>Date of Calibration</b>	15-Apr-15
<b>Date of next Calibration</b>	15-Jul-15

## Parameters:

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

Reference Reading (°C)	Display Reading (°C)	Deviation (°C)
10.2	11.1	+0.9
19.9	20.3	+0.4
28.9	28.5	-0.4
Tolerance Limit		±2.0

## pH Value (Method Ref: APHA21e, 4500H:B)

Expected Reading (pH unit)	Reference Reading (pH unit)	Display Reading (pH unit)	Deviation (pH unit)
4.0	3.97	4.09	+0.12
7.0	6.92	6.84	-0.08
10.0	9.91	9.97	+0.06
Tolerance Limit			±0.20

## Conductivity (Method Ref: APHA 19e, 2510)

KCl concentration (mol/L)	Reference Reading (ms/cm)	Display Reading (ms/cm)	Deviation (%)
0.0000	0.00	0.00	--
0.1000	12.89	12.77	-0.93
0.2000	24.80	24.42	-1.53
0.5000	58.67	58.05	-1.05
Tolerance Limit			±2.0

## Dissolved Oxygen (DO) (Method Ref: APHA 19e, 4500-O, C)

Reference DO reading (mg/L)	DO reading od DO probe (mg/L)	Deviation (mg/L)
8.93	8.92	-0.01
5.15	5.20	+0.05
1.58	1.64	+0.06
Tolerance Limit		±0.20

**Remarks:**

- (1) Maxium tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.
- (2) Displayed reading presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.
- (3) Because of high sensitivity and ease of measurement, the conductivity method (accorindg to APHA 19e 2510) is used to determine salinity.

- End of Report -



## CERTIFICATE OF CALIBRATION

Certificate No.: 15CA0312 02-02

Page: 1 of 2

### Item tested

Description: Acoustical Calibrator (Class 1)  
Manufacturer: B & K  
Type/Model No.: 4230  
Serial/Equipment No.: 1411076  
Adaptors used: Yes

### Item submitted by

Customer: Lam Geotechnics Limited  
Address of Customer: -  
Request No.: -  
Date of receipt: 12-Mar-2015

Date of test: 13-Mar-2015

### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	13-May-2015	SCL
Preamplifier	B&K 2673	2239857	10-Apr-2015	CEPREI
Measuring amplifier	B&K 2610	2346941	08-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI
Digital multi-meter	34401A	US36087050	01-Dec-2015	CEPREI
Audio analyzer	8903B	GB41300350	07-Apr-2015	CEPREI
Universal counter	53132A	MY40003662	11-Apr-2015	CEPREI

### Ambient conditions

Temperature:  $21 \pm 1$  °C  
Relative humidity:  $60 \pm 10$  %  
Air pressure:  $1010 \pm 5$  hPa

### Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

### Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory:

Huang Jian Min/Feng Jun Qi

Date: 13-Mar-2015

Company Chop:



**Comments:** The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.





## CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 15CA0312 02-02

Page: 2 of 2

### 1, Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	(Output level in dB re 20 $\mu$ Pa)
			Estimated Expanded Uncertainty dB
1000	94.00	94.22	0.10

### 2, Sound Pressure Level Stability - Short Term Fluctuations

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz STF = 0.002 dB

Estimated expanded uncertainty 0.005 dB

### 3, Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz Actual Frequency = 965.3 Hz

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

### 4, Total Noise and Distortion

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz TND = 0.7 %

Estimated expanded uncertainty 0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

Date:

Fung Chi Yip  
13-Mar-2015

- End -

Checked by:

Date:

Lam Tze Wai  
13-Mar-2015

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



## CERTIFICATE OF CALIBRATION

Certificate No.: 14CA1213 01

Page 1 of 2

### Item tested

Description:	Sound Level Meter (Type 1)	Microphone
Manufacturer:	B & K	B & K
Type/Model No.:	2236	4188
Serial/Equipment No.:	2100736	2288941
Adaptors used:	-	-

### Item submitted by

Customer Name: Lam Geotechnics Limited  
Address of Customer: -  
Request No.: -  
Date of receipt: 13-Dec-2014

Date of test: 13-Dec-2014

### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	20-Jun-2015	CIGISMEC
Signal generator	DS 360	33873	09-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI

### Ambient conditions

Temperature:  $21 \pm 1$  °C  
Relative humidity:  $60 \pm 5$  %  
Air pressure:  $1010 \pm 5$  hPa

### Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of  $\pm 20\%$ .
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure response of the Sound Level Meter.

### Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

Huang Jian Min/Feng Jun Qi

Date: 15-Dec-2014

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.





## CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 14CA1213 01

Page 2 of 2

### 1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	2.1
	C	Pass	1.0	
	Lin	Pass	2.0	
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	2.2
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Linearity range for SPL	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 <sup>3</sup> at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 <sup>4</sup> at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

### 2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

### 3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

Date:

Fung Chi Yip  
13-Dec-2014

Checked by:

Date:

Lam Tze Wai  
15-Dec-2014

- End -

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jul 14, 2014 Rootsmeter S/N 0438320 Ta (K) - 298  
Operator Tisch Orifice I.D. - 0005 Pa (mm) - 749.3

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3870	3.2	2.00
2	NA	NA	1.00	0.9830	6.4	4.00
3	NA	NA	1.00	0.8760	7.9	5.00
4	NA	NA	1.00	0.8340	8.8	5.50
5	NA	NA	1.00	0.6860	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9817	0.7078	1.4042		0.9957	0.7179	0.8919
0.9775	0.9944	1.9859		0.9915	1.0086	1.2613
0.9754	1.1135	2.2203		0.9894	1.1294	1.4101
0.9743	1.1683	2.3286		0.9882	1.1849	1.4790
0.9692	1.4128	2.8084		0.9830	1.4330	1.7837
Qstd slope (m) = 1.99175				Qa slope (m) = 1.24720		
intercept (b) = -0.00041				intercept (b) = -0.00026		
coefficient (r) = 0.99991				coefficient (r) = 0.99991		
y axis = SQRT[H2O(Pa/760) (298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

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

For subsequent flow rate calculations:

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



Lam Geotechnics Limited

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

Location : CMA1b

Equipment no. : EL452

Calibration Date : 10-Apr-15

Calibration Due Date : 10-Jun-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, $T_a$	291	Kelvin	Pressure, $P_a$
			1018 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, $m_c$	1.99175	Intercept, $b_c$	-0.00041
Last Calibration Date	14-Jul-14	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
Calibration Point	Manometer Reading			$Q_{std}$ ( $m^3 / min.$ )  X-axis	Continuous Flow Recorder, W (CFM)	IC ( $W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$ )  Y-axis
	(up)	(down)	(difference)			
1	6.6	6.6	13.2	1.8504	65	65.9295
2	5.3	5.3	10.6	1.6582	58	58.8294
3	4.1	4.1	8.2	1.4585	50	50.7150
4	2.7	2.7	5.4	1.1836	38	38.5434
5	1.6	1.6	3.2	0.9112	31	31.4433

By Linear Regression of Y on X

Slope,  $m$  = 37.8208      Intercept,  $b$  = -4.3250

Correlation Coefficient\* = 0.9965

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Apr-15

Checked by : Derek Lo

Date : 10-Apr-15





Lam Geotechnics Limited

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

Location : CMA1b

Equipment no. : EL452

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	303	Kelvin	Pressure, P <sub>a</sub>
			1007 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, bc	-0.00041
Last Calibration Date	14-Jul-14	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
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	1.7339	60	59.3176
2	4.7	4.7	9.4	1.5220	54	53.3859
3	3.8	3.8	7.6	1.3686	48	47.4541
4	2.3	2.3	4.6	1.0648	38	37.5678
5	1.4	1.4	2.8	0.8308	30	29.6588

By Linear Regression of Y on X

Slope, m = 33.1850      Intercept, b = 2.2031

Correlation Coefficient\* = 0.9994

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15



Lam Geotechnics Limited

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

Location : CMA2a

Equipment no. : EL449

Calibration Date : 10-Apr-15

Calibration Due Date : 10-Jun-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	291	Kelvin	Pressure, P <sub>a</sub>
			1018 mmHg

Orifice Transfer Standard Information				
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>
				-0.00041
Last Calibration Date	14-Jul-14	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$		
Next Calibration Date	14-Jul-15			

Calibration of TSP						
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	1.7935	61	61.8723
2	5.0	5.0	10.0	1.6106	54	54.7722
3	3.9	3.9	7.8	1.4225	49	49.7007
4	2.5	2.5	5.0	1.1389	36	36.5148
5	1.5	1.5	3.0	0.8823	31	31.4433

By Linear Regression of Y on X

Slope, m = 34.4842      Intercept, b = -0.3669

Correlation Coefficient\* = 0.9930

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Apr-15

Checked by : Derek Lo

Date : 10-Apr-15



Lam Geotechnics Limited

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

Location : CMA2a Calibration Date : 10-Jun-15  
 Equipment no. : EL449 Calibration Due Date : 10-Aug-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition						
Temperature, T <sub>a</sub>	303		Kelvin	Pressure, P <sub>a</sub>	1007 mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
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	5.9	5.9	11.8	1.7053	60	59.3176
2	4.8	4.8	9.6	1.5381	52	51.4086
3	3.8	3.8	7.6	1.3686	46	45.4768
4	2.3	2.3	4.6	1.0648	36	35.5906
5	1.4	1.4	2.8	0.8308	20	19.7725

By Linear Regression of Y on X

Slope, m = 42.7672 Intercept, b = -13.3484

Correlation Coefficient\* = 0.9900

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar Checked by : Derek Lo  
 Date : 10-Jun-15 Date : 10-Jun-15



Lam Geotechnics Limited

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

Location : CMA3a

Equipment no. : EL333

Calibration Date : 10-Apr-15

Calibration Due Date : 10-Jun-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	291	Kelvin	Pressure, P <sub>a</sub>
			1018 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
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	5.7	5.7	11.4	1.7196	52	52.7436
2	4.8	4.8	9.6	1.5781	48	48.6864
3	3.6	3.6	7.2	1.3667	42	42.6006
4	2.3	2.3	4.6	1.0924	33	33.4719
5	1.4	1.4	2.8	0.8523	23	23.3289

By Linear Regression of Y on X

Slope, m = 33.5425      Intercept, b = -4.1711

Correlation Coefficient\* = 0.9968

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Apr-15

Checked by : Derek Lo

Date : 10-Apr-15



Lam Geotechnics Limited

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

Location : CMA3a

Equipment no. : EL333

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	303	Kelvin	Pressure, P <sub>a</sub>
			1007 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
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	5.6	5.6	11.2	1.6613	52	51.4086
2	4.5	4.5	9.0	1.4893	48	47.4541
3	3.4	3.4	6.8	1.2946	40	39.5451
4	2.2	2.2	4.4	1.0414	34	33.6133
5	1.4	1.4	2.8	0.8308	28	27.6816

By Linear Regression of Y on X

Slope, m = 28.9984      Intercept, b = 3.3019

Correlation Coefficient\* = 0.9964

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15





Lam Geotechnics Limited

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

Location : CMA4a

Equipment no. : EL390

Calibration Date : 10-Apr-15

Calibration Due Date : 10-Jun-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, $T_a$	291	Kelvin	Pressure, $P_a$
			1018 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, $m_c$	1.99175	Intercept, $b_c$	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
Calibration  Point	Manometer Reading			$Q_{std}$	Continuous Flow	IC
	H (inches of water)			(m <sup>3</sup> / min.)	Recorder, W	(W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	5.8	5.8	11.6	1.7347	55	55.7865
2	4.6	4.6	9.2	1.5448	48	48.6864
3	3.6	3.6	7.2	1.3667	42	42.6006
4	2.3	2.3	4.6	1.0924	33	33.4719
5	1.4	1.4	2.8	0.8523	24	24.3432
By Linear Regression of Y on X						
Slope, m		=	35.2158	Intercept, b		= -5.4433
Correlation Coefficient*		=	0.9997			
Calibration Accepted		=	Yes/No**			

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Apr-15

Checked by : Derek Lo

Date : 10-Apr-15



Lam Geotechnics Limited

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

Location : CMA4a

Equipment no. : EL390

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, $T_a$	303	Kelvin	Pressure, $P_a$
			1007 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, $m_c$	1.99175	Intercept, $b_c$	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
Calibration  Point	Manometer Reading			$Q_{std}$	Continuous Flow	IC
	H (inches of water)			( $m^3 / min.$ )	Recorder, W	( $W(P_g/1013.3 \times 298/T_a)^{1/2}/35.31$ )
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	5.9	5.9	11.8	1.7053	57	56.3517
2	4.7	4.7	9.4	1.5220	52	51.4086
3	3.6	3.6	7.2	1.3321	44	43.4996
4	2.3	2.3	4.6	1.0648	34	33.6133
5	1.4	1.4	2.8	0.8308	26	25.7043
By Linear Regression of Y on X						
Slope, m		=	35.8979	Intercept, b =		-4.2281
Correlation Coefficient*		=	0.9988			
Calibration Accepted		=	Yes/No**			

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15



Lam Geotechnics Limited

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

Location : CMA5b

Equipment no. : EL222

Calibration Date : 02-Apr-15

Calibration Due Date : 02-Jun-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	299	Kelvin	Pressure, P <sub>a</sub>
			1009 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
Calibration  Point	Manometer Reading			Q <sub>std</sub>	Continuous Flow	IC
	H (inches of water)			(m <sup>3</sup> / min.)	Recorder, W	(W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	6.7	6.7	13.4	1.8311	65	64.7534
2	5.3	5.3	10.6	1.6286	61	60.7686
3	4.0	4.0	8.0	1.4149	53	52.7989
4	2.5	2.5	5.0	1.1186	43	42.8369
5	1.5	1.5	3.0	0.8665	37	36.8596

By Linear Regression of Y on X

Slope, m = 30.2820      Intercept, b = 10.0580

Correlation Coefficient\* = 0.9963

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 02-Apr-15

Checked by : Derek Lo

Date : 02-Apr-15



Lam Geotechnics Limited

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

Location : CMA5b  
Equipment no. : EL222

Calibration Date : 02-Jun-15  
Calibration Due Date : 02-Aug-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	303	Kelvin	Pressure, P <sub>a</sub>
			1009 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
Calibration  Point	Manometer Reading			Q <sub>std</sub>	Continuous Flow	IC
	H (inches of water)			(m <sup>3</sup> / min.)	Recorder, W	(W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	6.3	6.3	12.6	1.7639	65	64.3245
2	4.8	4.8	9.6	1.5397	58	57.3973
3	3.6	3.6	7.2	1.3334	52	51.4596
4	2.3	2.3	4.6	1.0658	42	41.5636
5	1.4	1.4	2.8	0.8316	30	29.6883

By Linear Regression of Y on X

Slope, m = 36.5046      Intercept, b = 1.1799  
Correlation Coefficient\* = 0.9934  
Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

Calibrated by : LuLu Mar  
Date : 02-Jun-15

Checked by : Derek Lo  
Date : 02-Jun-15



Lam Geotechnics Limited

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

Location : CMA6a

Equipment no. : EL448

Calibration Date : 10-Apr-15

Calibration Due Date : 10-Jun-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	291	Kelvin	Pressure, P <sub>a</sub>
			1018 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
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	6.3	6.3	12.6	1.8079	58	58.8294
2	5.0	5.0	10.0	1.6106	53	53.7579
3	3.9	3.9	7.8	1.4225	46	46.6578
4	2.5	2.5	5.0	1.1389	38	38.5434
5	1.4	1.4	2.8	0.8523	26	26.3718

By Linear Regression of Y on X

Slope, m = 33.7853      Intercept, b = -1.3336

Correlation Coefficient\* = 0.9966

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Apr-15

Checked by : Derek Lo

Date : 10-Apr-15





Lam Geotechnics Limited

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

Location : CMA6a

Equipment no. : EL448

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	303	Kelvin	Pressure, P <sub>a</sub>
			1007 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m <sub>c</sub>	1.99175	Intercept, b <sub>c</sub>	-0.00041
Last Calibration Date	14-Jul-14	$\left( H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
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	5.8	5.8	11.6	1.6908	55	54.3745
2	4.6	4.6	9.2	1.5057	50	49.4314
3	3.5	3.5	7.0	1.3135	44	43.4996
4	2.3	2.3	4.6	1.0648	35	34.6020
5	1.4	1.4	2.8	0.8308	28	27.6816

By Linear Regression of Y on X

Slope, m = 31.6381      Intercept, b = 1.3862

Correlation Coefficient\* = 0.9990

Calibration Accepted = Yes/No\*\*

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

\*\* Delete as appropriate.

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

\_\_\_\_\_

Calibrated by : LuLu Mar

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15



***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  
June 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				28-May	29-May	30-May
				24hr TSP	1hr TSP	
				Impact WQM Mid-ebb 9:26 Mid-flood 20:48		Impact WQM Mid-ebb 10:30 Mid-flood 16:57
31-May	1-Jun	2-Jun	3-Jun	4-Jun	5-Jun	6-Jun
	Noise (daytime) (M1a, M2b) Impact WQM Mid-ebb 11:29 Mid-flood 18:18	Noise (daytime) (M3a, M4b)	24hr TSP  Impact WQM Mid-ebb 12:42 Mid-flood 19:40	1hr TSP	Noise (daytime) (M5b, M6) Impact WQM Mid-ebb 14:07 Mid-flood 21:13	
7-Jun	8-Jun	9-Jun	10-Jun	11-Jun	12-Jun	13-Jun
	24hr TSP  Impact WQM Mid-flood 9:44 Mid-ebb 16:31	1hr TSP Noise (daytime) (M2b, M3a, M4b, M5b, M6)	Noise (daytime) (M6) Impact WQM Mid-flood 12:19 Mid-ebb 18:47		24hr TSP  Impact WQM Mid-ebb 9:06 Mid-flood 15:09	1hr TSP
14-Jun	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun
	Noise (daytime) (M1a, M2b) Impact WQM Mid-ebb 11:30 Mid-flood 18:14	Noise (daytime) (M3a, M4b, M5b, M6)	Impact WQM Mid-ebb 12:54 Mid-flood 19:51	24hr TSP	24TSP (CMA4a) 1hr TSP  Impact WQM Mid-ebb 14:15 Mid-flood 21:17	
21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun
	Impact WQM Mid-flood 9:09 Mid-ebb 16:04	24hr TSP Noise (daytime) (M3a, M4b, M5b, M6)	1hr TSP Noise (daytime) (M1a, M2b) Impact WQM Mid-ebb 17:02	Impact WQM Mid-flood 0:53	Impact WQM Mid-ebb 19:44	Impact WQM Mid-flood 2:08

Remarks: With respect to the water pipe modification works and the suspension of water supply to Windsor House, the water quality monitoring station C7 was cancelled on 10 June 2015 during flood tide.

With respect to the water pipe modification works and the suspension of water supply to Windsor House, the respective water quality monitoring at WQM station C7 was temporarily suspended from 12 June 2015. The water quality monitoring at WQM station C7 has resumed on 17 June 2015 upon completion of the water pipe modification works.

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  
July 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Jun	29-Jun	30-Jun	1-Jul	2-Jul	3-Jul	4-Jul
	24hr TSP Noise (daytime) Impact WQM Mid-ebb 10:29 Mid-flood 17:29	1hr TSP Noise (daytime)		Impact WQM Mid-ebb 12:27 Mid-flood 19:32		24hr TSP Impact WQM Mid-ebb 13:55 Mid-flood 20:57
5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul
	1hr TSP Noise (daytime) Impact WQM Mid-ebb 15:26 Mid-flood 22:28	Noise (daytime)	Impact WQM Mid-flood 10:48 Mid-ebb 17:10		24hr TSP Impact WQM Mid-flood 13:45 Mid-ebb 19:27	1hr TSP
12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul
	Noise (daytime) Impact WQM Mid-ebb 10:36 Mid-flood 17:28	Noise (daytime)	Impact WQM Mid-ebb 12:01 Mid-flood 19:00	24hr TSP	1hr TSP Impact WQM Mid-ebb 13:18 Mid-flood 20:12	
19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul
	Noise (daytime) Impact WQM Mid-flood 8:18 Mid-ebb 14:59	Noise (daytime)	24hr TSP Impact WQM Mid-flood 9:31 Mid-ebb 16:00	1hr TSP		Impact WQM Mid-flood 0:19 Mid-ebb 7:05
26-Jul	27-Jul					
	Noise (daytime)					



## ***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)					
01/06/15	14:31	Cloudy	72.4	75.0	67.5	72	59	75
10/06/15	9:50	Fine	75.3	77.5	71.0	72	72	75
15/06/15	14:04	Fine	72.4	74.5	68.5	72	59	75
24/06/15	13:29	Cloudy	72.6	75.0	69.0	72	62	75

Location: M2b - Noon-day gun area

Date	Time	Measurement Noise Level				Baseline Level	Construction Noise Level	Limit Level
		Weather	Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
01/06/15	15:15	Cloudy	67.6	68.5	65.5	68	68	75
10/06/15	10:32	Fine	67.1	68.5	65.5	68	67	75
15/06/15	14:40	Fine	68.8	69.5	65.0	68	63	75
24/06/15	14:15	Cloudy	69.5	71.8	65.5	68	65	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)					
02/06/15	8:05	Fine	62.3	63.5	59.8	69	62	75
09/06/15	13:31	Fine	64.8	66.0	62.5	69	65	75
16/06/15	8:30	Fine	65.3	67.5	63.0	69	65	75
23/06/15	8:00	Cloudv	67.5	68.5	66.5	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)					
02/06/15	8:40	Fine	68.9	71.2	66.7	67	64	75
09/06/15	14:11	Fine	65.2	66.0	63.0	67	65	75
16/06/15	9:19	Fine	64.5	65.5	62.5	67	65	75
23/06/15	8:39	Cloudv	68.2	68.9	66.3	67	61	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)					
05/06/15	10:00	Fine	68.4	70.0	66.5	68	58	75
09/06/15	14:54	Fine	68.5	70.0	66.0	68	59	75
16/06/15	10:00	Fine	66.8	67.5	65.5	68	67	75
23/06/15	9:55	Cloudv	69.0	69.2	67.0	68	62	75

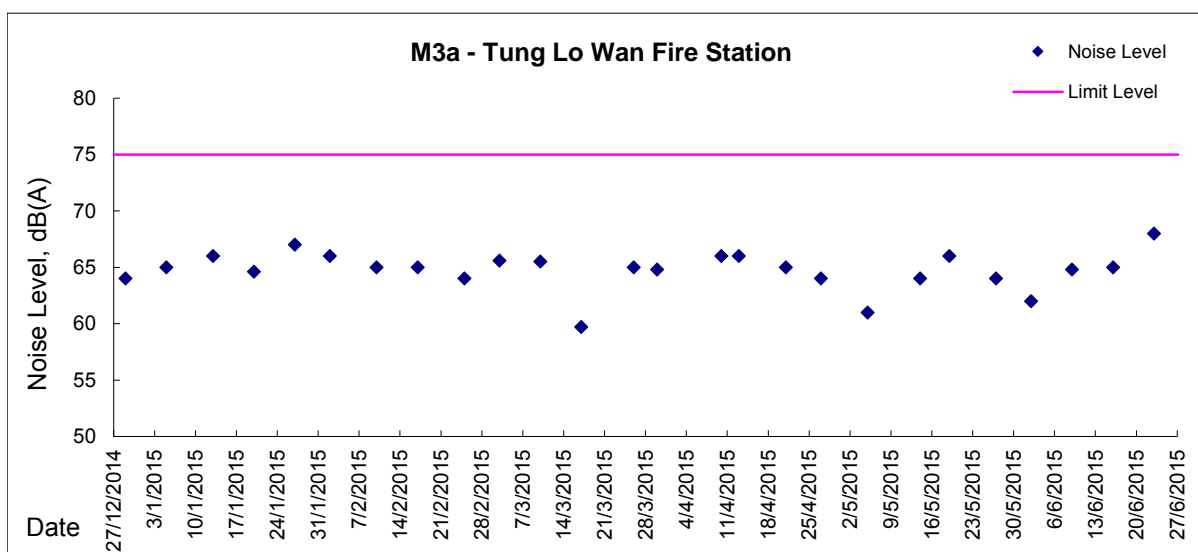
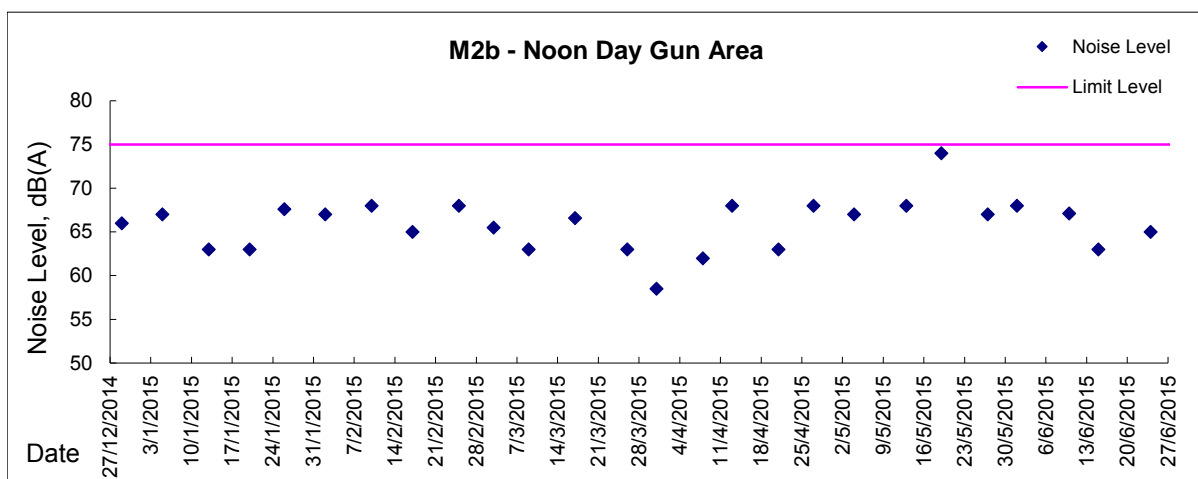
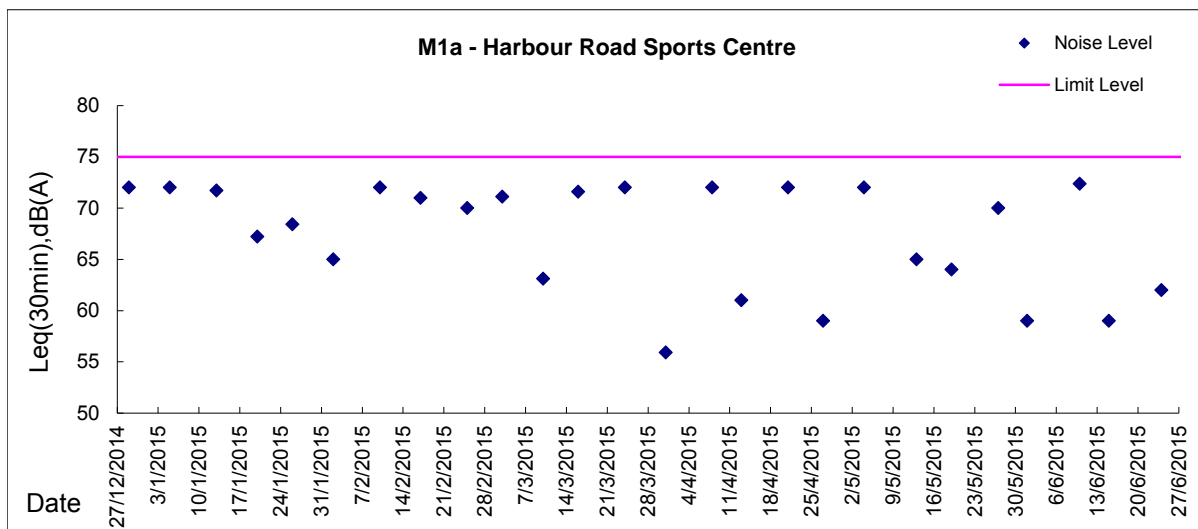
Location: M6 - HK Baptist Church Henrietta Secondary School

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
05/06/15	10:35	Fine	68.0	69.0	66.0	71	68	65
09/06/15	15:35	Fine	68.1	69.5	65.5	71	68	65
16/06/15	10:40	Fine	67.5	68.5	65.0	71	68	65
23/06/15	10:30	Cloudy	70.9	72.0	69.0	71	57	65



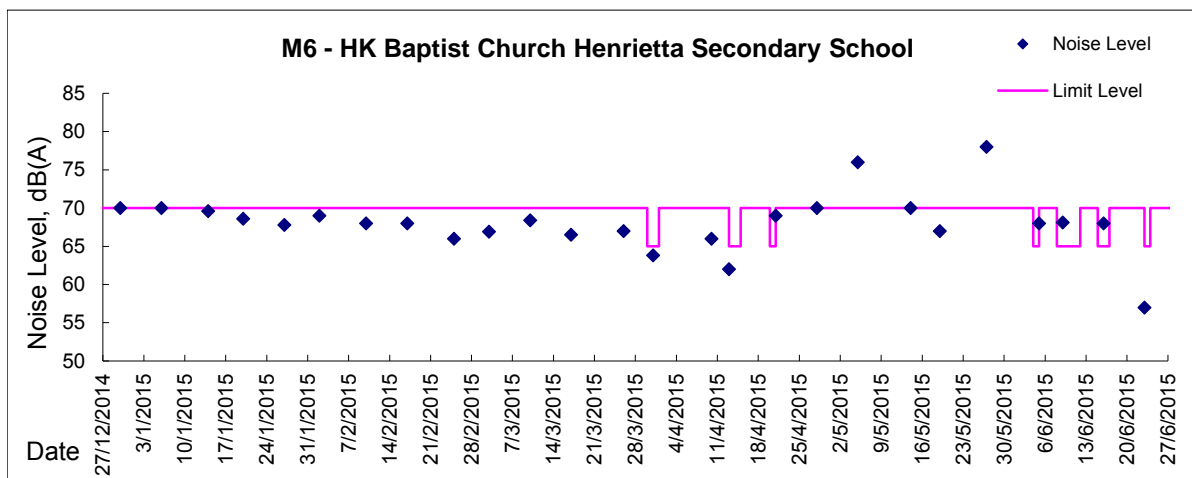
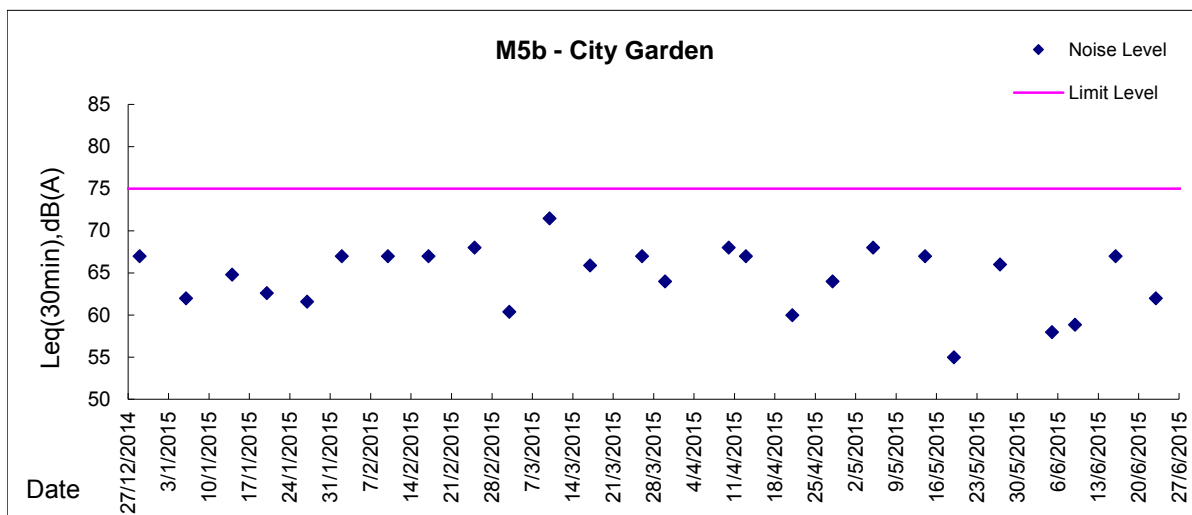
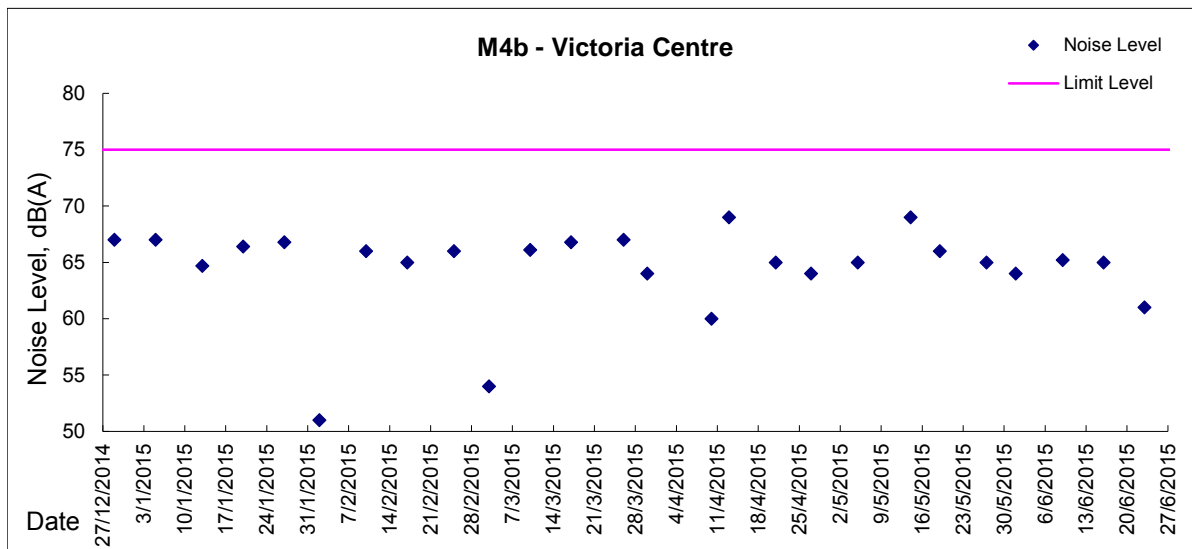
**Graphic Presentation of Noise Monitoring Result**

**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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
28-May-15	8:00	Fine	012114	2.8002	2.9395	6432.45	6456.45	24.00	1.12	1.12	1.12	1611	86.5
3-Jun-15	8:00	Fine	012187	2.8388	2.9158	6459.53	6483.53	24.00	1.17	1.17	1.17	1686	45.7
8-Jun-15	8:00	Cloudy	012197	2.7976	2.8800	6486.54	6510.54	24.00	1.17	1.17	1.17	1685	48.9
12-Jun-15	8:00	Cloudy	012134	2.8251	2.9144	6513.54	6537.54	24.00	1.14	1.14	1.14	1639	54.5
18-Jun-15	8:00	Fine	012324	2.8251	2.9285	6540.54	6564.54	24.00	1.13	1.13	1.13	1632	63.3
23-Jun-15	8:00	Rainy	011970	2.8281	2.9435	6567.54	6591.54	24.00	1.14	1.14	1.14	1641	70.3

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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
29-May-15	8:01	Fine	012124	2.8240	2.8304	6456.53	6457.53	1.00	1.12	1.12	1.12	67	95.3
29-May-15	9:02	Fine	012176	2.8307	2.8396	6457.53	6458.53	1.00	1.12	1.12	1.12	67	132.5
29-May-15	10:05	Fine	012178	2.8278	2.8341	6458.53	6459.53	1.00	1.12	1.12	1.12	67	93.8
4-Jun-15	11:00	Fine	012191	2.8013	2.8056	6483.53	6484.53	1.00	1.17	1.17	1.17	70	61.2
4-Jun-15	13:00	Fine	012195	2.8133	2.8205	6484.53	6485.53	1.00	1.17	1.17	1.17	70	102.5
4-Jun-15	14:02	Fine	012166	2.8367	2.8370	6485.53	6486.53	1.00	1.17	1.17	1.17	70	4.3
9-Jun-15	8:40	Cloudy	012200	2.8186	2.8268	6510.54	6511.54	1.00	1.17	1.17	1.17	70	116.9
9-Jun-15	9:43	Cloudy	012128	2.8227	2.8294	6511.54	6512.54	1.00	1.17	1.17	1.17	70	95.5
9-Jun-15	10:47	Cloudy	012131	2.8314	2.8360	6512.54	6513.54	1.00	1.17	1.17	1.17	70	65.6
13-Jun-15	8:02	Cloudy	011849	2.7257	2.7327	6537.54	6538.54	1.00	1.14	1.14	1.14	68	102.6
13-Jun-15	9:04	Cloudy	011774	2.8218	2.8303	6538.54	6539.54	1.00	1.14	1.14	1.14	68	124.6
13-Jun-15	10:06	Cloudy	011981	2.8285	2.8361	6539.54	6540.54	1.00	1.14	1.14	1.14	68	111.4
19-Jun-15	8:05	Fine	012319	2.8330	2.8405	6564.54	6565.54	1.00	1.13	1.13	1.13	68	110.2
19-Jun-15	9:07	Fine	012316	2.8004	2.8072	6565.54	6566.54	1.00	1.13	1.13	1.13	68	100.0
19-Jun-15	10:10	Fine	012340	2.8259	2.8338	6566.54	6567.54	1.00	1.13	1.13	1.13	68	116.1
24-Jun-15	8:10	Rainy	012296	2.8044	2.8096	6591.54	6592.54	1.00	1.14	1.14	1.14	68	76
24-Jun-15	9:12	Rainy	012304	2.8176	2.8218	6592.54	6593.54	1.00	1.14	1.14	1.14	68	61
24-Jun-15	10:15	Rainy	012339	2.8069	2.8092	6593.54	6594.54	1.00	1.14	1.14	1.14	68	34





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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
28-May-15	8:00	Fine	012113	2.8033	2.8772	16088.87	16112.87	24.00	1.06	1.17	1.11	1602	46.1
3-Jun-15	8:00	Fine	012189	2.8127	2.8650	16115.87	16139.87	24.00	1.17	1.17	1.17	1684	31.1
8-Jun-15	8:00	Cloudy	012196	2.8029	2.8382	16142.87	16166.87	24.00	1.06	1.06	1.06	1523	23.2
12-Jun-15	8:00	Cloudy	012133	2.8362	2.8860	16169.87	16193.87	24.00	1.16	1.16	1.16	1667	29.9
18-Jun-15	8:00	Fine	011990	2.8362	2.9092	16196.95	16220.95	24.00	1.24	1.24	1.24	1790	40.8
23-Jun-15	8:00	Rainy	011971	2.8438	2.9095	16223.95	16247.95	24.00	1.25	1.25	1.25	1797	36.6

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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
29-May-15	8:05	Fine	012125	2.8297	2.8349	16112.87	16113.87	1.00	1.17	1.17	1.17	70	74.2
29-May-15	9:07	Fine	012177	2.8237	2.8287	16113.87	16114.87	1.00	1.11	1.11	1.11	67	74.9
29-May-15	10:09	Fine	012179	2.8371	2.8391	16114.87	16115.87	1.00	1.11	1.11	1.11	67	30.0
4-Jun-15	13:00	Fine	012165	2.8054	2.8069	16139.87	16140.87	1.00	1.17	1.17	1.17	70	21.4
4-Jun-15	14:05	Fine	012097	2.8288	2.8298	16140.87	16141.87	1.00	1.17	1.17	1.17	70	14.3
4-Jun-15	15:09	Fine	012096	2.8299	2.8305	16141.87	16142.87	1.00	1.17	1.17	1.17	70	8.6
9-Jun-15	8:30	Cloudy	012199	2.8094	2.8147	16166.87	16167.87	1.00	1.17	1.17	1.17	70	75.6
9-Jun-15	9:35	Cloudy	012127	2.8416	2.8465	16167.87	16168.87	1.00	1.17	1.17	1.17	70	69.9
9-Jun-15	10:37	Cloudy	012130	2.8454	2.8478	16168.87	16169.87	1.00	1.17	1.17	1.17	70	34.2
13-Jun-15	8:05	Cloudy	011850	2.7384	2.7422	16193.87	16194.87	1.00	1.16	1.16	1.16	69	54.7
13-Jun-15	9:08	Cloudy	011983	2.8256	2.8274	16194.87	16195.87	1.00	1.16	1.16	1.16	69	25.9
13-Jun-15	10:10	Cloudy	011988	2.8183	2.8214	16195.87	16196.87	1.00	1.16	1.16	1.16	69	44.7
19-Jun-15	8:02	Fine	012320	2.8037	2.8106	16220.95	16221.95	1.00	1.24	1.24	1.24	75	92.5
19-Jun-15	9:04	Fine	012318	2.8304	2.8381	16221.95	16222.95	1.00	1.24	1.24	1.24	75	103.2
19-Jun-15	10:06	Fine	012341	2.8272	2.8354	16222.95	16223.95	1.00	1.24	1.24	1.24	75	109.9
24-Jun-15	8:04	Rainy	012295	2.8011	2.8054	16247.95	16248.95	1.00	1.25	1.25	1.25	75	57.5
24-Jun-15	9:05	Rainy	012291	2.8111	2.8185	16248.95	16249.95	1.00	1.25	1.25	1.25	75	98.9
24-Jun-15	10:07	Rainy	012306	2.8250	2.8297	16249.95	16250.95	1.00	1.25	1.25	1.25	75	62.8

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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
28-May-15	8:00	Fine	012122	2.8214	2.9302	3530.57	3554.57	24.00	1.23	1.23	1.23	1776	61.3
3-Jun-15	8:00	Fine	011871	2.7235	2.7800	30557.57	30581.57	24.00	1.18	1.18	1.18	1701	33.2
8-Jun-15	8:00	Cloudy	012008	2.8059	2.8916	3584.57	3608.57	24.00	1.23	1.23	1.23	1777	48.2
12-Jun-15	8:00	Cloudy	011749	2.8222	2.8716	3611.57	3635.57	24.00	1.13	1.12	1.13	1620	30.5
18-Jun-15	8:00	Fine	012323	2.8184	2.9415	3638.68	3662.68	24.00	1.17	1.17	1.17	1691	72.8
23-Jun-15	8:00	Rainy	011964	2.8344	2.9278	3665.68	3689.68	24.00	1.18	1.18	1.18	1698	55.0

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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
29-May-15	9:31	Fine	011595	2.7258	2.7317	3554.57	3555.57	1.00	1.26	1.26	1.26	75	78.2
29-May-15	10:38	Fine	011867	2.7262	2.7330	3556.57	3557.57	1.00	1.26	1.26	1.26	75	90.1
29-May-15	13:00	Fine	011869	2.7132	2.7242	3557.57	3558.57	1.00	1.26	1.26	1.26	75	145.8
4-Jun-15	8:30	Fine	012005	2.8141	2.8275	30581.57	30582.57	1.00	1.26	1.26	1.26	76	177.4
4-Jun-15	9:34	Fine	012006	2.8013	2.8113	30582.57	30583.57	1.00	1.26	1.26	1.26	76	132.4
4-Jun-15	10:40	Fine	012007	2.8047	2.8119	30583.57	30584.57	1.00	1.26	1.26	1.26	76	95.3
9-Jun-15	8:58	Cloudy	011755	2.7977	2.8165	3608.57	3609.57	1.00	1.20	1.20	1.20	72	260.9
9-Jun-15	10:02	Cloudy	011753	2.8303	2.8403	3609.57	3610.57	1.00	1.20	1.20	1.20	72	138.8
9-Jun-15	13:00	Cloudy	011751	2.8129	2.8231	3610.57	3611.57	1.00	1.20	1.20	1.20	72	141.6
13-Jun-15	8:05	Cloudy	011777	2.8084	2.8143	3635.57	3636.57	1.00	1.13	1.13	1.13	68	86.9
13-Jun-15	9:09	Cloudy	011773	2.8094	2.8148	3636.61	3637.61	1.00	1.20	1.20	1.20	72	75.2
13-Jun-15	10:20	Cloudy	012327	2.8241	2.8283	3637.61	3638.61	1.00	1.20	1.20	1.20	72	58.5
19-Jun-15	8:59	Fine	011974	2.8431	2.8571	3662.68	3663.68	1.00	1.19	1.19	1.19	72	195.4
19-Jun-15	10:10	Fine	011976	2.8382	2.8467	3663.68	3664.68	1.00	1.16	1.16	1.16	70	122.0
19-Jun-15	13:00	Fine	011978	2.8296	2.8400	3664.68	3665.68	1.00	1.19	1.19	1.19	72	145.1
24-Jun-15	9:11	Rainy	011598	2.7175	2.7254	3689.68	3690.68	1.00	1.13	1.13	1.13	68	116.1
24-Jun-15	10:15	Rainy	011596	2.7309	2.7353	3690.68	3691.68	1.00	1.17	1.17	1.17	70	62.9
24-Jun-15	13:00	Rainy	012286	2.8133	2.8195	3691.68	3692.68	1.00	1.13	1.13	1.13	68	91.1

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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
28-May-15	8:00	Fine	012123	2.8214	2.9236	20362.77	20386.77	24.00	1.29	1.29	1.29	1854	55.1
3-Jun-15	8:00	Fine	011870	2.7240	2.7842	20389.77	20413.77	24.00	1.29	1.29	1.29	1856	32.4
8-Jun-15	8:00	Cloudy	011399	2.7431	2.8053	20416.77	20440.77	24.00	1.29	1.29	1.29	1855	33.5
12-Jun-15	8:00	Cloudy	011750	2.8178	2.8897	20443.77	20467.77	24.00	1.23	1.23	1.23	1773	40.6
19-Jun-15	14:18	Fine	011965	2.8292	2.9045	20473.90	20497.90	24.00	1.23	1.23	1.23	1768	42.6
23-Jun-15	8:00	Rainy	011730	2.8148	2.9261	20497.90	20521.90	24.00	1.23	1.23	1.23	1775	62.7

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 18 June 2015 to 19 June 2015.

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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
29-May-15	9:22	Fine	011897	2.7096	2.7153	20386.77	20387.77	1.00	1.29	1.29	1.29	77	73.8
29-May-15	10:25	Fine	011594	2.7284	2.7339	20387.77	20388.77	1.00	1.29	1.29	1.29	77	71.2
29-May-15	13:00	Fine	011868	2.7193	2.7249	20388.77	20389.77	1.00	1.29	1.29	1.29	77	72.5
4-Jun-15	8:12	Fine	012010	2.8308	2.8354	20413.77	20414.77	1.00	1.29	1.29	1.29	77	59.5
4-Jun-15	9:17	Fine	011397	2.7340	2.7383	20414.77	20415.77	1.00	1.29	1.29	1.29	77	55.6
4-Jun-15	10:22	Fine	011398	2.7336	2.7386	20415.77	20416.77	1.00	1.29	1.29	1.29	77	64.7
9-Jun-15	8:44	Cloudy	011756	2.8074	2.8112	20440.77	20441.77	1.00	1.29	1.29	1.29	77	49.2
9-Jun-15	9:49	Cloudy	011754	2.8137	2.8219	20441.77	20442.77	1.00	1.29	1.29	1.29	77	106.1
9-Jun-15	10:53	Cloudy	011752	2.8186	2.8246	20442.77	20443.77	1.00	1.29	1.29	1.29	77	77.7
13-Jun-15	8:05	Cloudy	011776	2.8245	2.8274	20467.77	20468.77	1.00	1.23	1.23	1.23	74	39.3
13-Jun-15	9:15	Cloudy	011984	2.8330	2.8376	20468.77	20469.77	1.00	1.23	1.23	1.23	74	62.3
13-Jun-15	10:25	Cloudy	011987	2.8187	2.8225	20469.77	20470.77	1.00	1.23	1.23	1.23	74	51.5
19-Jun-15	8:47	Fine	012307	2.8153	2.8196	20470.90	20471.90	1.00	1.23	1.23	1.23	74	58.4
19-Jun-15	9:58	Fine	011975	2.8259	2.8334	20471.90	20472.90	1.00	1.23	1.23	1.23	74	101.9
19-Jun-15	13:00	Fine	011977	2.8468	2.8533	20472.90	20473.90	1.00	1.23	1.23	1.23	74	88.3
24-Jun-15	8:10	Rainy	011599	2.7350	2.7408	20521.90	20522.90	1.00	1.23	1.23	1.23	74	78.5
24-Jun-15	10:03	Rainy	011597	2.7205	2.7269	20522.90	20523.90	1.00	1.23	1.23	1.23	74	86.6
24-Jun-15	13:00	Rainy	011906	2.7427	2.7518	20523.90	20524.90	1.00	1.23	1.23	1.23	74	123.1

Location: CMA5b - 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		
28-May-15	8:00	Fine	012121	2.8382	2.9175	4838.77	4862.77	24.00	0.89	0.89	0.89	1283	61.8
3-Jun-15	8:00	Fine	012190	2.7975	2.8556	4865.77	4889.77	24.00	0.99	0.99	0.99	1422	40.9
8-Jun-15	8:00	Cloudy	011757	2.8347	2.9080	4892.77	4916.77	24.00	1.06	1.06	1.06	1528	48.0
12-Jun-15	8:00	Cloudy	011999	2.8062	2.8762	4919.78	4943.78	24.00	1.01	1.01	1.01	1455	48.1
23-Jun-15	8:00	Rainy	012293	2.8049	2.8690	4960.81	4984.81	24.00	0.99	0.98	0.99	1419	45.2
24-Jun-15	17:32	Rainy	012299	2.8136	2.8563	4987.82	5011.82	24.00	0.96	0.96	0.96	1381	30.9

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 18 and 23 June 2015 to 23 and 24 June 2015 respectively.

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		
29-May-15	10:50	Fine	012182	2.8462	2.8506	4862.77	4863.77	1.00	0.92	0.92	0.92	55	79.5
29-May-15	13:00	Fine	012186	2.8416	2.8465	4863.77	4864.77	1.00	0.92	0.92	0.92	55	88.5
29-May-15	14:15	Fine	011727	2.8261	2.8335	4864.77	4865.77	1.00	0.92	0.92	0.92	55	133.6
4-Jun-15	13:00	Fine	012194	2.8112	2.8156	4889.77	4890.77	1.00	0.96	0.96	0.96	57	76.7
4-Jun-15	14:27	Fine	011763	2.8446	2.8474	4890.77	4891.77	1.00	0.86	0.86	0.86	52	54.2
4-Jun-15	15:31	Fine	011760	2.8238	2.8248	4891.77	4892.77	1.00	0.86	0.86	0.86	52	19.3
9-Jun-15	13:00	Cloudy	011767	2.8420	2.8473	4916.77	4917.77	1.00	0.96	0.96	0.96	57	92.3
9-Jun-15	14:04	Cloudy	012135	2.8219	2.8260	4917.78	4918.78	1.00	1.06	1.06	1.06	64	64.4
9-Jun-15	15:12	Cloudy	012138	2.8222	2.8262	4918.78	4919.78	1.00	1.09	1.09	1.09	65	61.3
13-Jun-15	8:05	Cloudy	011997	2.8287	2.8321	4943.78	4944.78	1.00	0.96	0.96	0.96	57	59.2
13-Jun-15	9:15	Cloudy	011986	2.8122	2.8149	4944.78	4945.78	1.00	0.96	0.96	0.96	57	47.0
13-Jun-15	10:35	Cloudy	011989	2.8286	2.8313	4945.78	4946.78	1.00	1.01	1.01	1.01	61	44.6
19-Jun-15	11:00	Fine	011960	2.8182	2.8246	4946.83	4947.83	1.00	1.01	1.01	1.01	60	105.9
19-Jun-15	13:05	Fine	011963	2.8328	2.8407	4947.83	4948.83	1.00	0.95	0.95	0.95	57	137.9
19-Jun-15	14:56	Fine	011966	2.8172	2.8232	4948.83	4949.83	1.00	1.01	1.01	1.01	60	99.3
24-Jun-15	13:05	Rainy	012336	2.8304	2.8354	4984.82	4985.82	1.00	0.96	0.96	0.96	58	86.9
24-Jun-15	14:19	Rainy	012289	2.8095	2.8155	4985.82	4986.82	1.00	0.96	0.96	0.96	58	104.3
24-Jun-15	15:30	Rainy	012284	2.8282	2.8331	4986.82	4987.82	1.00	0.96	0.96	0.96	58	85.2



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, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
28-May-15	8:00	Fine	012119	2.8315	2.9500	19945.52	19969.52	24.00	1.22	1.22	1.22	1757	67.4
3-Jun-15	8:00	Fine	011728	2.8214	2.9029	19972.53	19996.53	24.00	1.22	1.22	1.22	1760	46.3
8-Jun-15	8:00	Cloudy	011759	2.8149	2.8876	19999.53	20023.53	24.00	1.22	1.22	1.22	1758	41.3
12-Jun-15	8:00	Cloudy	011847	2.7204	2.8028	20026.53	20050.53	24.00	1.22	1.22	1.22	1756	46.9
18-Jun-15	8:00	Fine	012322	2.8364	2.9179	20053.62	20077.62	24.00	1.21	1.22	1.21	1749	46.6
23-Jun-15	8:00	Rainy	011980	2.8434	2.9434	20080.61	20104.61	24.00	1.22	1.22	1.22	1758	56.9

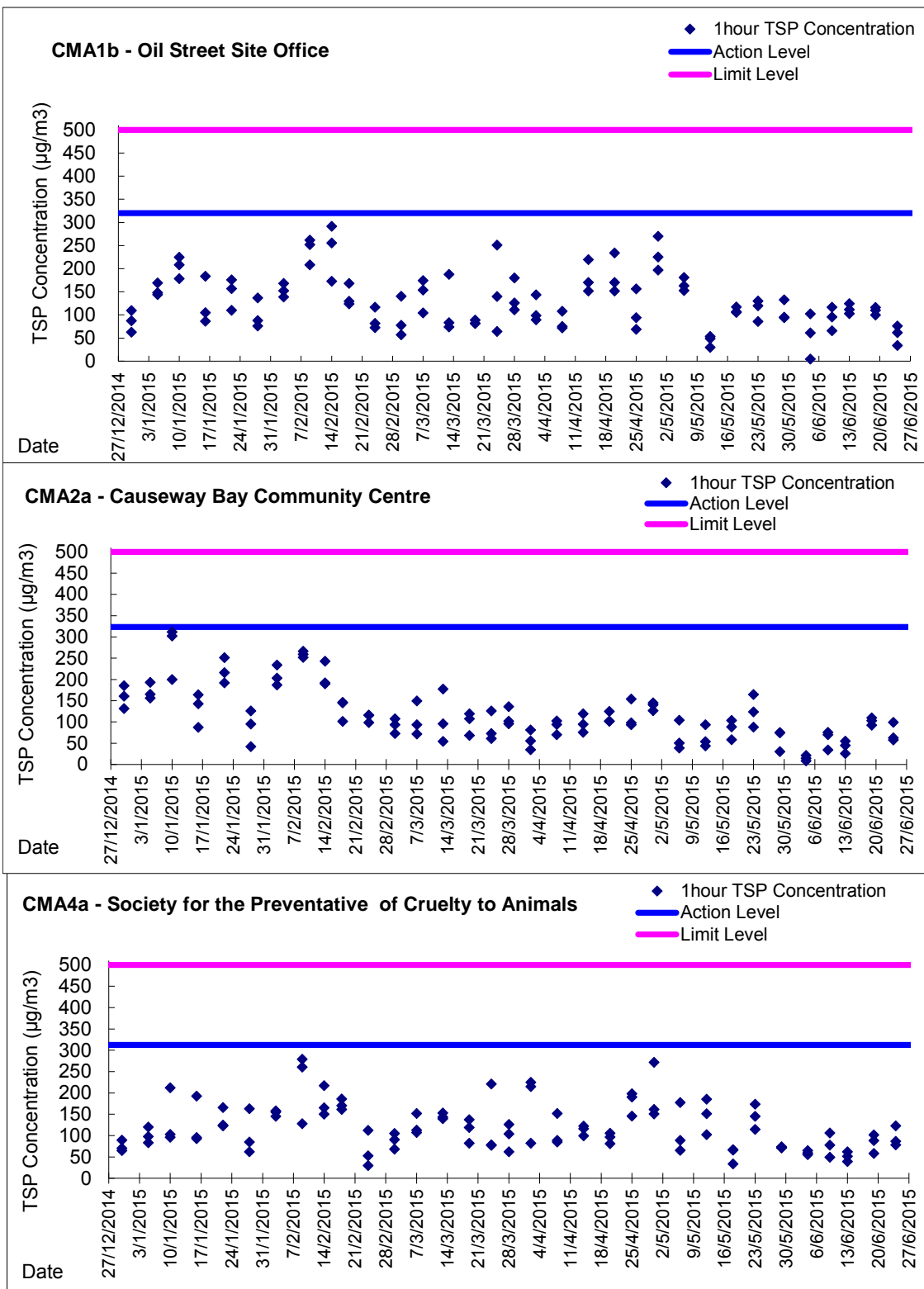
Report on 1-hour TSP monitoring

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

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

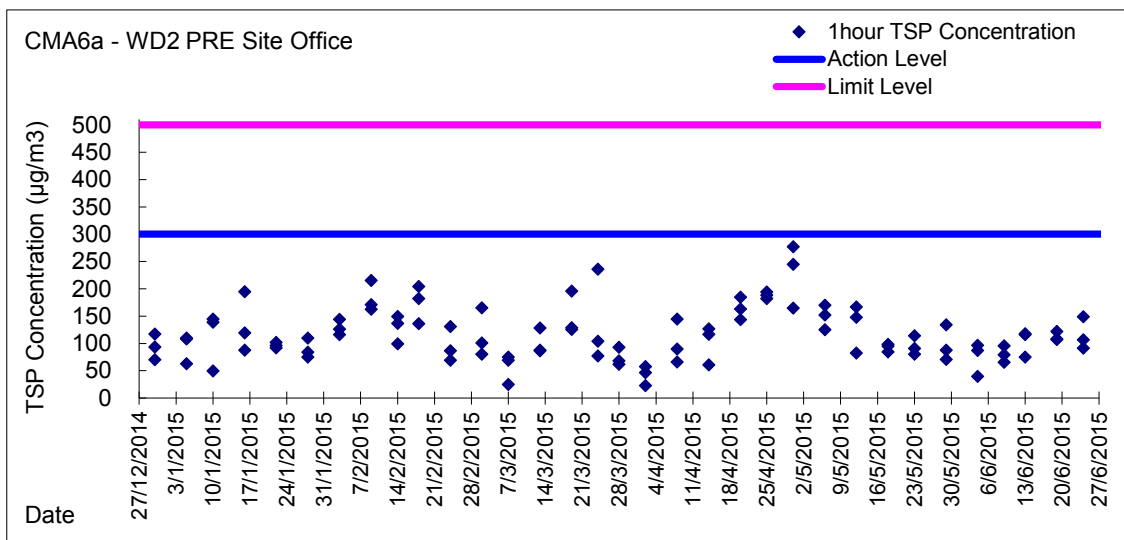
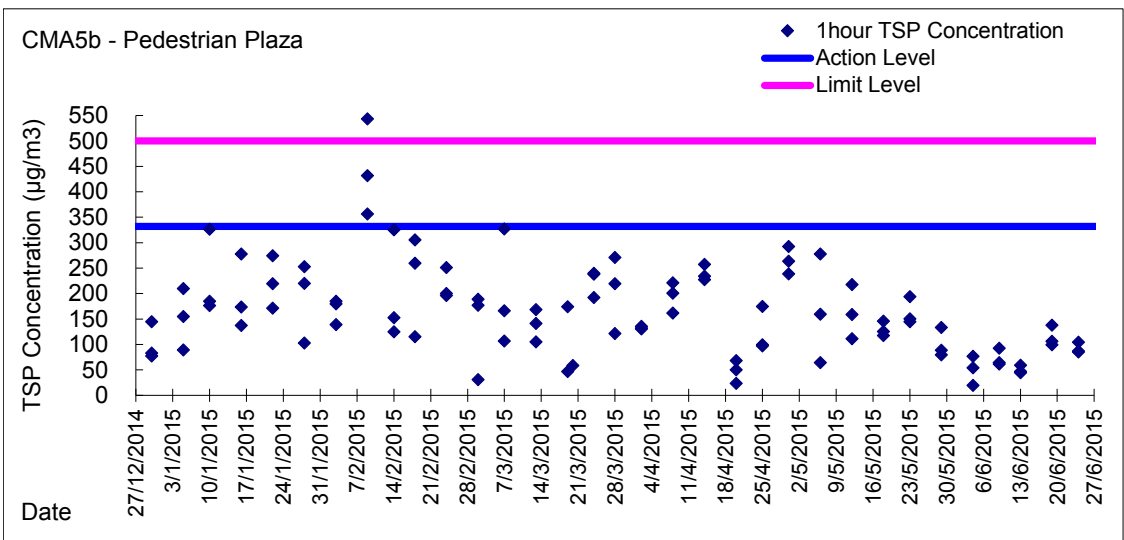
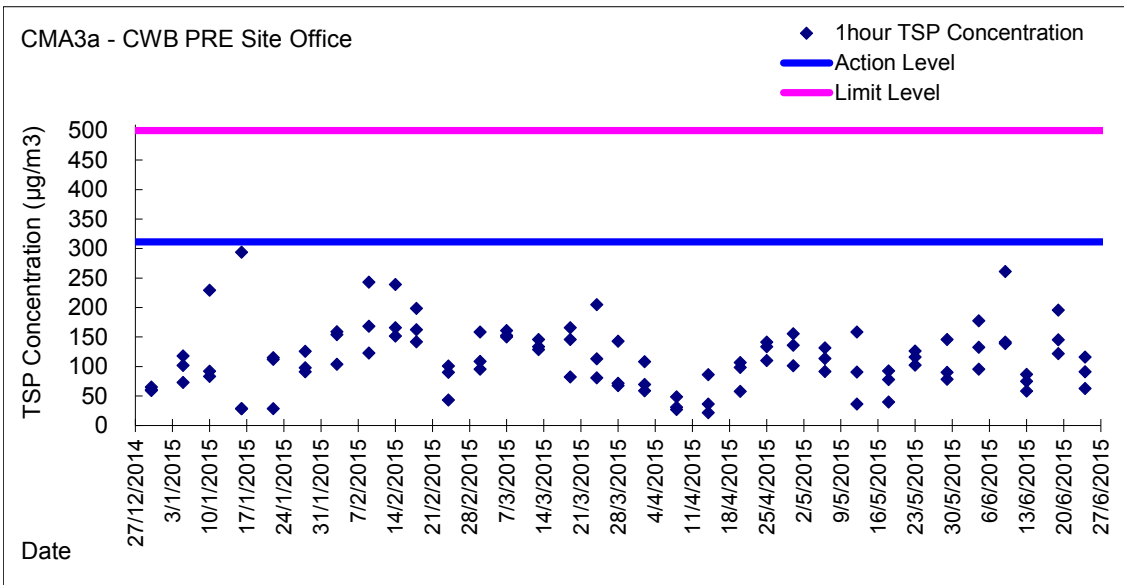
Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, $\text{m}^3/\text{min}$			Total Volume, $\text{m}^3$	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, $Q_{\text{si}}$	Final, $Q_{\text{sf}}$	Average		
29-May-15	10:30	Fine	012180	2.8259	2.8323	19969.53	19970.53	1.00	1.22	1.22	1.22	73	87.4
29-May-15	13:00	Fine	012183	2.8335	2.8387	19970.53	19971.53	1.00	1.22	1.22	1.22	73	71.0
29-May-15	14:02	Fine	011736	2.8400	2.8498	19971.53	19972.53	1.00	1.22	1.22	1.22	73	133.8
4-Jun-15	13:00	Fine	012193	2.7979	2.8043	19996.53	19997.53	1.00	1.22	1.22	1.22	73	87.3
4-Jun-15	14:10	Fine	011740	2.8184	2.8255	19997.53	19998.53	1.00	1.22	1.22	1.22	73	96.8
4-Jun-15	15:13	Fine	011762	2.8077	2.8106	19998.53	19999.53	1.00	1.22	1.22	1.22	73	39.6
9-Jun-15	13:00	Cloudy	011769	2.8282	2.8352	20023.53	20024.53	1.00	1.22	1.22	1.22	73	95.6
9-Jun-15	14:20	Cloudy	012137	2.8288	2.8336	20024.53	20025.53	1.00	1.22	1.22	1.22	73	65.5
9-Jun-15	15:25	Cloudy	011998	2.8152	2.8210	20025.53	20026.53	1.00	1.22	1.22	1.22	73	79.2
13-Jun-15	8:01	Cloudy	011775	2.8239	2.8325	20050.53	20051.53	1.00	1.22	1.22	1.22	73	117.7
13-Jun-15	9:25	Cloudy	011772	2.8384	2.8439	20051.53	20052.53	1.00	1.22	1.22	1.22	73	75.2
13-Jun-15	10:35	Cloudy	012326	2.8253	2.8338	20052.53	20053.53	1.00	1.22	1.22	1.22	73	116.3
19-Jun-15	10:40	Fine	011959	2.7991	2.8069	20077.62	20078.62	1.00	1.22	1.22	1.22	73	107.0
19-Jun-15	13:00	Fine	011961	2.8156	2.8235	20078.62	20079.62	1.00	1.22	1.22	1.22	73	108.4
19-Jun-15	15:07	Fine	011967	2.8150	2.8239	20079.62	20080.62	1.00	1.22	1.22	1.22	73	122.1
24-Jun-15	13:00	Rainy	012298	2.8307	2.8374	20104.61	20105.61	1.00	1.22	1.22	1.22	73	91.5
24-Jun-15	14:03	Rainy	012287	2.7979	2.8057	20105.61	20106.61	1.00	1.22	1.22	1.22	73	106.5
24-Jun-15	15:10	Rainy	012290	2.8090	2.8199	20106.61	20107.61	1.00	1.22	1.22	1.22	73	148.9

## Graphic Presentation of 1 hour TSP Result

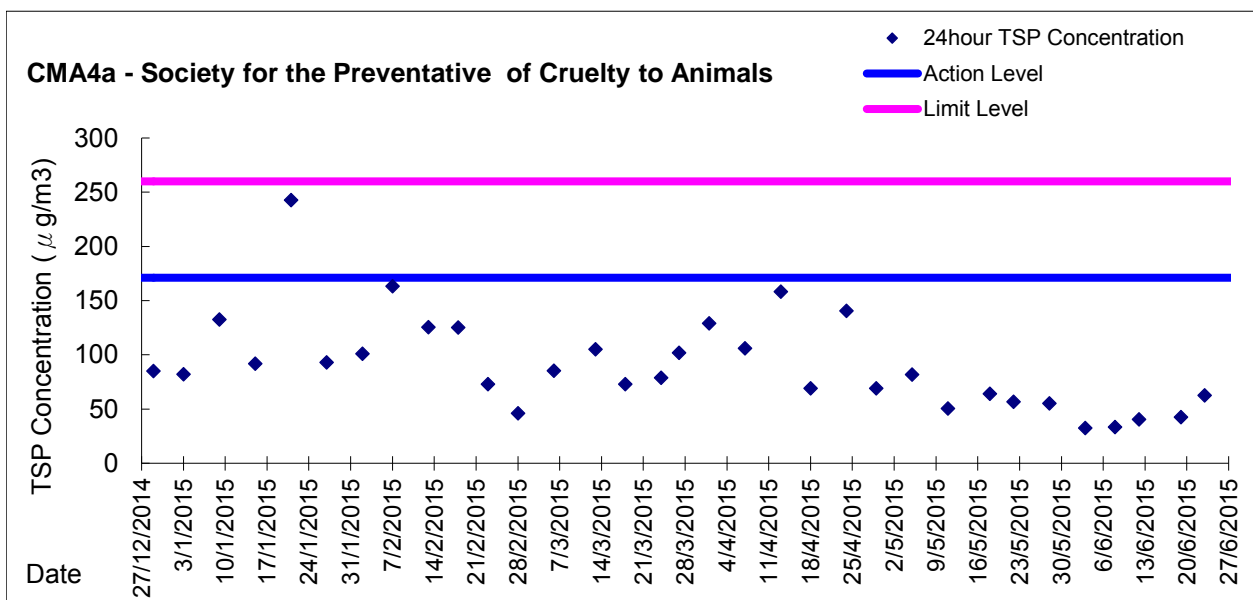
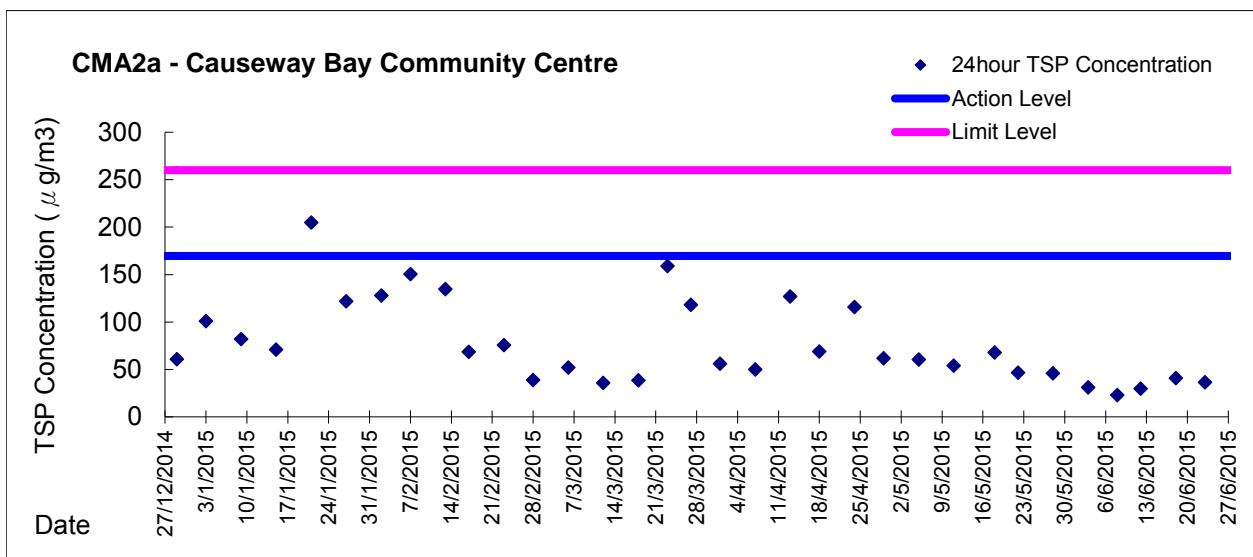
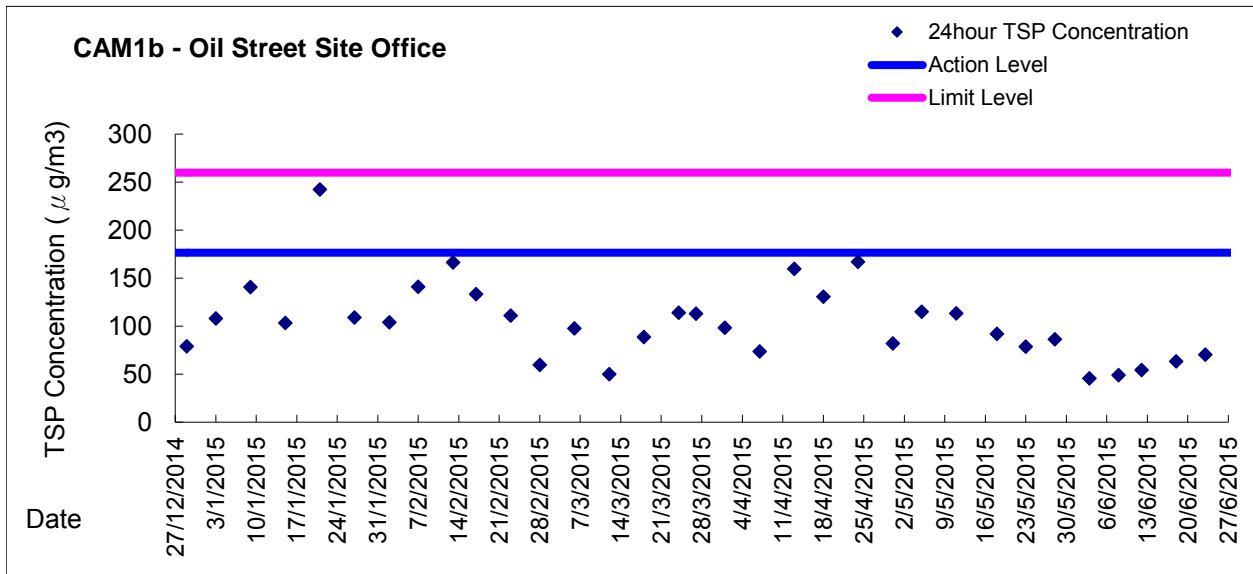




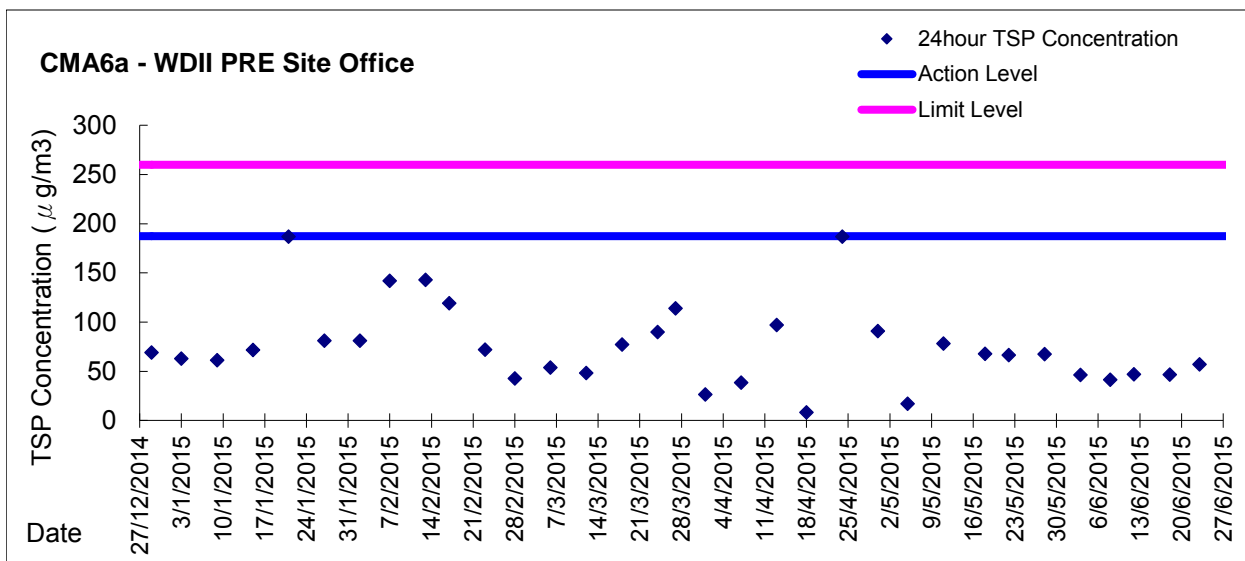
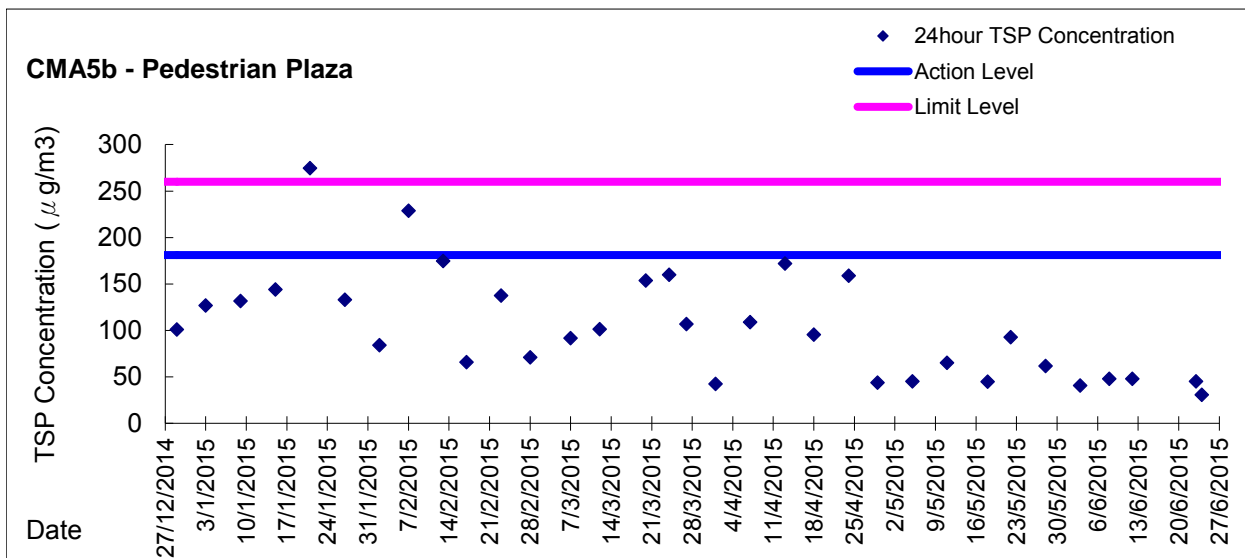
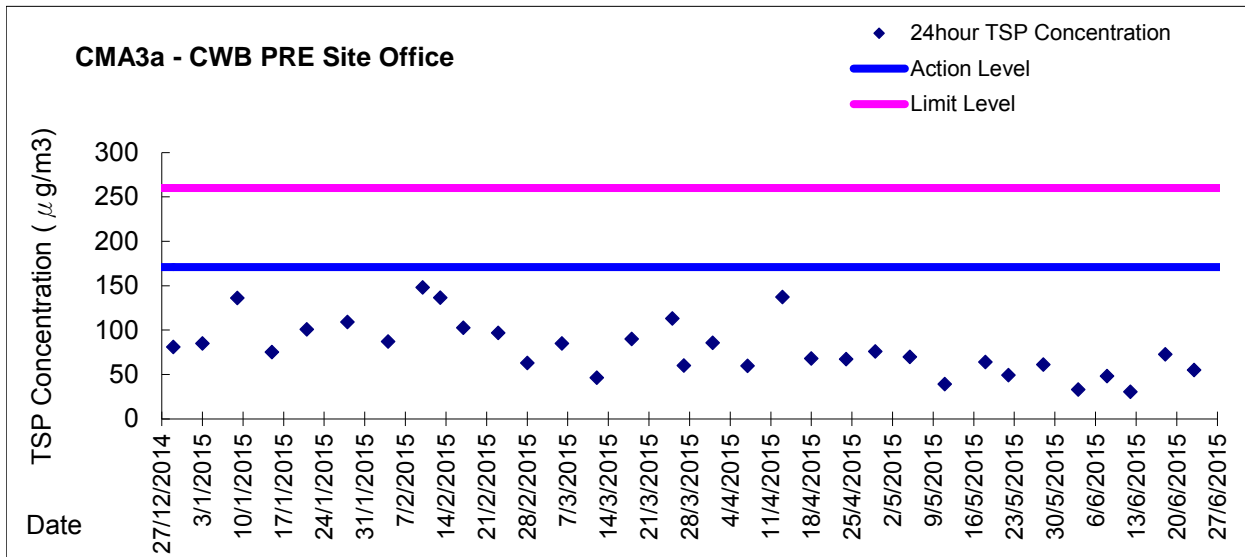
### Graphic Presentation of 1 hour TSP Result



## Graphic Presentation of 24 hour TSP Result



## Graphic Presentation of 24 hour TSP Result





***Appendix 5.4***

***Water Quality and Additional Dissolved Oxygen Monitoring Results and Graphical  
Presentations***



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation		DO		Turbidity			Suspended Solids				
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/5/2015	20:30	Cloudy	Middle	-	27.10	27.10	27.10	7.91	7.91	7.92	25.33	25.33	25.33	76.7	77.4	77.9	5.29	5.34	5.37	1.33	1.31	1.25	<2	<2
	20:31		Middle	-	27.10	27.10		7.93	7.93		25.33	25.33		78.4	78.9		5.41	5.44		1.16	1.21		<2	
30/5/2015	17:25	Fine	Middle	-	28.60	28.60	28.70	8.32	8.32	8.35	24.31	24.31	24.30	77.8	79.4	78.7	5.26	5.36	5.31	3.25	3.19	3.21	4	3.50
	17:27		Middle	-	28.80	28.80		8.38	8.38		24.29	24.29		79.2	78.2		5.35	5.28		3.21	3.17		3	
1/6/2015	19:00	Cloudy	Middle	-	27.10	27.10	27.15	8.29	8.29	8.31	27.46	27.46	27.46	65.2	65.5	65.5	4.44	4.46	4.46	4.55	4.40	4.44	4	4.00
	19:02		Middle	-	27.20	27.20		8.32	8.32		27.46	27.46		65.8	65.4		4.49	4.45		4.40	4.40		4	
3/6/2015	19:10	Cloudy	Middle	-	28.20	28.20	28.25	8.05	8.05	8.05	27.12	27.12	27.12	78.7	78.4	78.2	5.27	5.25	5.24	1.59	1.46	1.49	3	3.00
	19:11		Middle	-	28.30	28.30		8.05	8.05		27.12	27.12		77.9	77.8		5.21	5.21		1.49	1.43		3	
5/6/2015	20:28	Cloudy	Middle	-	27.00	27.00	27.05	7.90	7.90	7.91	27.92	27.92	27.92	73.7	74.6	73.4	5.01	5.07	4.99	1.48	1.46	1.37	<2	<2
	20:29		Middle	-	27.10	27.10		7.92	7.92		27.91	27.91		72.0	73.3		4.90	4.98		1.23	1.29		<2	
8/6/2015	8:25	Fine	Middle	-	27.30	27.30	27.40	8.09	8.09	8.09	29.29	29.29	29.29	59.6	60.8	60.9	4.00	4.08	4.08	3.81	3.81	3.81	4	3.50
	8:27		Middle	-	27.50	27.50		8.09	8.09		29.29	29.29		62.0	61.0		4.16	4.09		3.81	3.79		3	
10/6/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-				
12/6/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-				
15/6/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-				
17/6/2015	20:09	Cloudy	Middle	-	27.20	27.20	27.25	8.12	8.12	8.15	28.88	28.88	28.89	79.6	79.5	80.3	5.37	5.37	5.42	4.63	4.61	4.55	7	7.00
	20:10		Middle	-	27.30	27.30		8.17	8.17		28.89	28.89		80.9	81.1		5.46	5.47		4.57	4.40		7	
19/6/2015	21:03	Fine	Middle	-	27.20	27.20	27.15	8.04	8.04	8.05	27.96	27.96	27.97	78.7	79.8	79.0	5.36	5.43	5.38	2.22	2.19	2.15	<2	<2
	21:04		Middle	-	27.10	27.10		8.06	8.06		27.98	27.98		79.2	78.1		5.39	5.32		2.11	2.09		<2	
22/6/2015	8:25	Cloudy	Middle	-	27.30	27.30	27.30	8.24	8.24	8.24	25.68	25.68	25.68	63.6	64.2	64.7	4.36	4.41	4.44	3.91	3.89	3.89	3	3.50
	8:27		Middle	-	27.30	27.30		8.24	8.24		25.68	25.68		65.2	65.6		4.48	4.50		3.88	3.87		4	
25/6/2015	1:42	Cloudy	Middle	-	27.60	27.60	27.60	8.20	8.20	8.20	24.80	24.80	24.80	77.2	75.9	75.6	5.29	5.22	5.18	1.86	1.58	1.58	<2	<2
	1:43		Middle	-	27.60	27.60		8.20	8.20		24.80	24.80		75.2	73.9		5.15	5.06		1.48	1.38		<2	
27/6/2015	2:40	Cloudy	Middle	-	28.10	28.10	28.10	8.34	8.34	8.34	23.77	23.77	23.77	82.9	80.1	81.7	5.67	5.48	5.59	1.42	1.39	1.36	3	3.00
	2:41		Middle	-	28.10	28.10		8.34	8.34		23.77	23.77		81.3	82.3		5.56	5.63		1.31	1.33		3	

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



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity		Suspended Solids						
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average							
28/5/2015	21:32	Cloudy	Middle	2.5	27.50	27.50	27.50	8.19	8.19	8.19	25.02	25.02	25.02	83.4	82.8	83.1	5.73	5.68	5.71	2.83	2.80	2.89	<2	<2
	21:33		Middle	2.5	27.50	27.50		8.19	8.19		25.02	25.02		83.0	83.1		5.71	5.71		2.94	2.99		<2	
30/5/2015	15:56	Fine	Middle	2.5	28.30	28.30	28.35	8.46	8.46	8.46	24.64	24.64	24.64	74.6	73.1	73.0	5.06	4.96	4.95	4.22	4.18	4.18	3	3.50
	15:58		Middle	2.5	28.40	28.40		8.46	8.46		24.64	24.64		72.3	71.9		4.90	4.88		4.16	4.15		4	
1/6/2015	17:28	Cloudy	Middle	2.5	26.90	26.90	26.90	8.33	8.33	8.33	28.14	28.14	28.14	57.8	57.2	56.8	3.94	3.90	3.87	4.73	4.81	4.90	5	5.00
	17:30		Middle	2.5	26.90	26.90		8.33	8.33		28.14	28.14		56.1	56.1		3.83	3.82		5.01	5.03		5	
3/6/2015	17:04	Cloudy	Middle	2.5	27.50	27.50	27.50	8.22	8.22	8.22	26.78	26.78	26.78	56.8	58.9	56.9	3.86	4.00	3.86	2.89	2.94	2.94	6	6.00
	17:06		Middle	2.5	27.50	27.50		8.21	8.21		26.77	26.77		57.1	54.7		3.88	3.71		2.97	2.96		6	
5/6/2015	22:14	Cloudy	Middle	2.5	26.40	26.40	26.40	8.11	8.11	8.11	28.89	28.89	28.89	77.5	77.8	77.6	5.31	5.33	5.31	2.75	2.46	2.58	<2	2.00
	22:15		Middle	2.5	26.40	26.40		8.11	8.11		28.89	28.89		77.2	77.7		5.29	5.32		2.58	2.52		2	
8/6/2015	10:04	Fine	Middle	3.0	25.70	25.70	25.70	8.47	8.47	8.46	29.80	29.80	29.81	60.4	61.4	60.8	4.70	4.75	4.72	5.58	5.76	5.86	3	3.50
	10:06		Middle	3.0	25.70	25.70		8.44	8.44		29.81	29.81		60.7	60.5		4.72	4.70		6.04	6.04		4	
10/6/2015	14:20	Fine	Middle	2.5	27.20	27.20	27.20	8.28	8.28	8.28	28.58	28.58	28.58	69.6	69.8	69.5	4.71	4.73	4.71	2.74	2.84	2.82	4	5.00
	14:22		Middle	2.5	27.20	27.20		8.28	8.28		28.58	28.58		69.2	69.5		4.68	4.70		2.86	2.84		6	
12/6/2015	15:16	Fine	Middle	2.5	27.80	27.80	27.85	8.33	8.33	8.33	27.94	27.94	27.94	64.2	64.6	63.8	4.32	4.38	4.30	3.00	3.00	3.00	4	3.50
	15:18		Middle	2.5	27.90	27.90		8.33	8.33		27.94	27.94		63.6	62.7		4.28	4.21		3.00	3.00		3	
15/6/2015	16:40	Fine	Middle	2.5	27.80	27.80	27.90	8.27	8.27	8.28	28.80	28.80	28.80	68.1	68.7	67.4	4.56	4.59	4.51	3.81	3.82	3.83	3	3.00
	16:42		Middle	2.5	28.00	28.00		8.28	8.28		28.79	28.79		64.9	68.0		4.34	4.54		3.84	3.85		3	
17/6/2015	17:11	Cloudy	Middle	2.5	28.00	28.00	21.03	8.35	8.35	8.35	28.16	28.16	28.15	76.0	75.5	74.9	5.08	5.05	5.01	2.64	2.59	2.54	6	6.00
	17:13		Middle	2.5	0.00	28.10		8.35	8.35		28.14	28.14		74.8	73.2		5.00	4.89		2.54	2.39		6	
19/6/2015	23:49	Fine	Middle	2.0	26.90	26.90	26.85	8.13	8.13	8.13	30.16	30.16	30.16	85.3	85.7	84.5	5.76	5.79	5.71	2.47	2.34	2.40	<2	<2
	23:50		Middle	2.0	26.80	26.80		8.13	8.13		30.16	30.16		84.3	82.7		5.69	5.59		2.37	2.41		<2	
22/6/2015	10:04	Cloudy	Middle	2.5	26.30	26.30	26.30	8.69	8.69	8.64	28.09	28.10	28.09	55.8	56.2	54.8	3.86	3.87	3.78	6.38	6.45	6.44	6	6.00
	10:06		Middle	2.5	26.30	26.30		8.59	8.59		28.08	28.08		54.1	53.1		3.73	3.66		6.47	6.45		6	
25/6/2015	2:42	Cloudy	Middle	2.0	27.40	27.40	27.40	8.28	8.28	8.29	25.35	25.35	25.35	75.8	76.8	76.0	5.20	5.26	5.21	2.68	2.19	2.26	2	2.00
	2:43		Middle	2.0	27.40	27.40		8.29	8.29		25.35	25.35		75.4	76.1		5.17	5.22		2.10	2.08		<2	
27/6/2015	23:21	Cloudy	Middle	2.0	28.10	28.10	28.15	8.45	8.45	8.45	23.29	23.29	23.29	89.6	88.6	89.5	6.15	6.08	6.14	2.20	2.36	2.29	4	4.00
	23:22		Middle	2.0	28.20	28.20		8.45	8.45		23.29	23.29		90.5	89.1		6.21	6.11		2.29	2.30		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-Flood Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/5/2015	21:06	Cloudy	Middle	2.5	27.60	27.60	27.60	8.18	8.18	8.18	24.30	24.30	24.30	81.3	83.7	82.6	5.57	5.74	5.67	2.46	2.41	2.39	<2	<2
	21:07		Middle	2.5	27.60	27.60		8.18	8.18		24.30	24.30		83.0	82.5		5.70	5.66		2.36	2.34		<2	
30/5/2015	15:44	Fine	Middle	2.5	29.20	29.20	29.35	8.59	8.59	8.62	23.42	23.42	23.89	94.9	94.0	93.1	6.37	6.30	6.24	5.60	5.58	5.51	4	5.00
	15:46		Middle	2.5	29.50	29.50		8.65	8.65		24.36	24.36		92.0	91.3		6.17	6.12		5.48	5.38		6	
1/6/2015	17:15	Cloudy	Middle	2.5	27.90	27.90	27.90	8.34	8.34	8.35	27.10	27.10	27.10	58.0	55.5	55.0	3.91	3.74	3.73	3.52	3.52	3.52	5	4.00
	17:17		Middle	2.5	27.90	27.90		8.35	8.35		27.10	27.10		53.8	52.6		3.63	3.65		3.52	3.53		3	
3/6/2015	16:48	Cloudy	Middle	2.5	28.30	28.30	28.40	8.22	8.22	8.22	26.53	26.53	26.48	64.9	64.5	63.0	4.35	4.33	4.23	3.36	3.35	3.32	4	4.00
	16:50		Middle	2.5	28.50	28.50		8.22	8.22		26.43	26.43		62.3	60.3		4.18	4.04		3.28	3.28		4	
5/6/2015	21:48	Cloudy	Middle	2.5	26.50	26.50	26.45	8.11	8.11	8.11	28.89	28.89	28.90	71.5	72.5	72.0	4.89	4.96	4.93	3.53	3.42	3.38	4	3.00
	21:49		Middle	2.5	26.40	26.40		8.11	8.11		28.90	28.90		72.7	71.3		4.97	4.88		3.32	3.23		2	
8/6/2015	10:24	Fine	Middle	3.0	26.20	26.20	26.20	8.16	8.16	8.15	30.02	30.02	30.02	59.4	58.9	58.0	4.06	4.02	3.96	2.17	2.10	2.10	4	3.50
	10:26		Middle	3.0	26.20	26.20		8.14	8.14		30.02	30.02		57.7	56.0		3.94	3.82		2.07	2.05		3	
10/6/2015	14:00	Fine	Middle	2.5	27.70	27.70	27.80	8.27	8.27	8.26	28.88	28.88	28.88	68.9	69.1	68.8	4.62	4.64	4.61	1.70	1.70	1.70	8	8.00
	14:02		Middle	2.5	27.90	27.90		8.25	8.25		28.88	28.88		69.1	67.9		4.64	4.53		1.70	1.69		8	
12/6/2015	15:00	Fine	Middle	2.5	28.10	28.10	28.30	8.22	8.22	8.25	27.98	27.98	27.91	62.8	65.3	64.1	4.19	4.35	4.27	3.40	3.72	3.58	5	4.00
	15:02		Middle	2.5	28.50	28.50		8.27	8.27		27.83	27.83		65.1	63.1		4.34	4.20		3.66	3.54		3	
15/6/2015	16:23	Fine	Middle	2.5	29.50	29.50	29.65	8.27	8.27	8.28	27.99	27.99	27.99	72.0	73.4	72.4	4.70	4.79	4.72	3.73	3.71	3.71	3	4.00
	16:25		Middle	2.5	29.80	29.80		8.28	8.28		27.99	27.99		73.5	70.7		4.79	4.61		3.71	3.70		5	
17/6/2015	16:55	Cloudy	Middle	2.5	28.50	28.50	28.65	8.33	8.33	8.34	28.25	28.25	28.25	77.3	77.0	76.2	5.11	5.10	5.05	2.28	2.25	2.29	4	4.00
	16:57		Middle	2.5	28.80	28.80		8.35	8.35		28.25	28.25		76.2	74.3		5.04	4.95		2.28	2.33		4	
19/6/2015	23:22	Fine	Middle	2.0	26.90	26.90	26.85	8.10	8.10	8.10	30.89	30.89	30.89	74.6	74.4	73.7	5.02	5.01	4.96	4.45	4.38	4.27	2	3.00
	23:23		Middle	2.0	26.80	26.80		8.10	8.10		30.89	30.89		73.7	72.1		4.96	4.85		4.15	4.11		4	
22/6/2015	10:27	Cloudy	Middle	2.5	27.60	27.60	27.65	8.31	8.31	8.30	26.97	26.97	27.01	60.5	59.0	58.4	4.11	4.04	3.97	2.53	2.53	2.54	3	3.00
	10:29		Middle	2.5	27.70	27.70		8.29	8.29		27.04	27.04		57.7	56.3		3.91	3.81		2.51	2.57		3	
25/6/2015	2:17	Cloudy	Middle	2.0	27.60	27.60	27.60	8.34	8.34	8.35	25.05	25.05	25.05	78.4	79.9	79.7	5.37	5.50	5.47	2.08	2.05	2.02	<2	2.00
	2:18		Middle	2.0	27.60	27.60		8.35	8.35		25.04	25.04		80.4	80.0		5.52	5.48		2.00	1.93		2	
27/6/2015	22:58	Cloudy	Middle	2.0	28.20	28.20	28.20	8.46	8.46	8.46	23.37	23.37	23.37	89.8	90.7	90.7	6.15	6.21	6.21	3.04	2.98	3.03	5	4.50
	22:59		Middle	2.0	28.20	28.20		8.46	8.46		23.37	23.37		92.0	90.1		6.30	6.17		3.02	3.09		4	

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



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

Date	Time	Weater Condition	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					
28/5/2015	21:11	Cloudy	Middle	2.5	27.70	27.70	27.70	8.09	8.09	8.10	24.95	24.95	24.95	86.5	87.0	86.3	5.92	5.95	5.90	1.99	1.95	1.94	<2	<2
	21:12		Middle	2.5	27.70	27.70		8.11	8.11		24.95	24.95		86.2	85.4		5.90	5.84		1.97	1.84		<2	
30/5/2015	15:47	Fine	Middle	2.5	28.80	28.80	28.80	8.58	8.58	8.63	23.70	23.70	23.65	79.2	78.8	78.6	5.36	5.33	5.32	4.41	4.40	4.45	4	3.50
	15:49		Middle	2.5	28.80	28.80		8.67	8.67		23.59	23.59		78.7	77.8		5.32	5.26		4.49	4.51		3	
1/6/2015	17:18	Cloudy	Middle	2.5	27.60	27.60	27.60	8.34	8.34	8.34	27.46	27.46	27.46	63.6	62.3	62.0	4.30	4.22	4.20	3.53	3.37	3.41	4	4.00
	17:20		Middle	2.5	27.60	27.60		8.33	8.33		27.46	27.46		61.6	60.6		4.17	4.10		3.37	3.37		4	
3/6/2015	16:52	Cloudy	Middle	2.5	27.80	27.80	27.90	8.23	8.23	8.23	26.44	26.44	26.43	63.9	63.0	63.3	4.33	4.26	4.29	2.64	2.50	2.49	3	3.00
	16:54		Middle	2.5	28.00	28.00		8.22	8.22		26.41	26.41		63.1	63.3		4.27	4.29		2.42	2.40		3	
5/6/2015	21:54	Cloudy	Middle	2.5	26.40	26.40	26.40	8.12	8.12	8.12	28.96	28.96	28.96	73.2	73.9	73.7	5.01	5.06	5.05	2.75	2.81	2.76	<2	<2
	21:55		Middle	2.5	26.40	26.40		8.12	8.12		28.96	28.96		74.1	73.5		5.07	5.04		2.79	2.70		<2	
8/6/2015	10:16	Fine	Middle	3.0	26.10	26.10	26.15	8.25	8.25	8.24	29.64	29.64	29.64	46.4	44.7	45.5	3.17	3.06	3.11	1.98	1.97	1.97	5	4.00
	10:18		Middle	3.0	26.20	26.20		8.23	8.23		29.64	29.64		44.4	46.6		3.03	3.18		1.97	1.96		3	
10/6/2015	14:05	Fine	Middle	2.5	27.70	27.70	27.70	8.26	8.26	8.26	28.19	28.19	28.19	70.1	70.3	70.2	4.71	4.73	4.72	3.30	3.14	3.21	5	5.50
	14:07		Middle	2.5	27.70	27.70		8.26	8.26		28.19	28.19		70.4	69.8		4.73	4.69		3.20	3.21		6	
12/6/2015	15:04	Fine	Middle	2.5	27.70	27.70	27.80	8.29	8.29	8.29	27.94	27.94	27.93	62.4	61.7	61.1	4.19	4.16	4.11	3.46	3.38	3.40	4	4.00
	15:06		Middle	2.5	27.90	27.90		8.29	8.29		27.91	27.91		60.3	60.0		4.06	4.03		3.27	3.49		4	
15/6/2015	16:27	Fine	Middle	2.5	28.20	28.20	28.35	8.30	8.30	8.30	27.83	27.83	27.83	73.4	71.9	72.5	4.89	4.79	4.83	2.73	2.74	2.74	4	4.00
	16:29		Middle	2.5	28.50	28.50		8.29	8.29		27.82	27.82		73.4	71.3		4.89	4.74		2.74	2.74		4	
17/6/2015	16:59	Cloudy	Middle	2.5	27.70	27.70	27.85	8.34	8.34	13.33	28.11	28.11	28.12	73.8	73.3	74.1	4.95	4.92	4.98	2.77	2.76	2.75	4	5.00
	17:01		Middle	2.5	28.00	28.00		8.32	28.32		28.12	28.12		73.4	76.0		4.93	5.10		2.75	2.73		6	
19/6/2015	23:28	Fine	Middle	2.0	27.00	27.00	27.00	8.08	8.08	8.09	29.88	29.88	29.88	85.8	87.6	85.8	5.79	5.91	5.79	3.05	3.14	3.13	3	4.00
	23:29		Middle	2.0	27.00	27.00		8.09	8.09		29.88	29.88		85.5	84.2		5.77	5.68		3.28	3.03		5	
22/6/2015	10:23	Cloudy	Middle	2.5	27.00	27.00	27.05	8.35	8.35	8.34	27.21	27.21	27.22	57.2	56.1	54.9	3.91	3.84	3.75	2.01	2.99	2.24	2	2.00
	10:25		Middle	2.5	27.10	27.10		8.33	8.33		27.23	27.23		54.1	52.3		3.67	3.57		1.97	1.97		2	
25/6/2015	2:22	Cloudy	Middle	2.0	27.60	27.60	27.60	8.35	8.35	8.35	25.19	25.19	25.19	79.2	79.8	78.8	5.42	5.46	5.39	2.19	2.15	2.11	2	2.50
	2:23		Middle	2.0	27.60	27.60		8.35	8.35		25.19	25.19		77.2	78.9		5.28	5.40		2.02	2.07		3	
27/6/2015	23:06	Cloudy	Middle	2.0	28.10	28.10	28.15	8.46	8.46	8.46	23.31	23.31	23.32	82.0	82.5	83.0	5.62	5.65	5.69	2.36	2.33	2.32	3	4.00
	23:07		Middle	2.0	28.20	28.20		8.46	8.46		23.32	23.32		84.2	83.3		5.77	5.71		2.30	2.27		5	

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



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

Date	Time	Weater Condition	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					
28/5/2015	21:16	Cloudy	Middle	2.5	27.50	27.50	27.55	8.19	8.19	8.19	24.30	24.30	24.30	86.2	87.1	86.5	5.92	5.98	5.93	3.97	3.93	3.77	3	2.50
	21:17		Middle	2.5	27.60	27.60		8.19	8.19		24.30	24.30		86.6	85.9		5.94	5.89		3.54	3.62		2	
30/5/2015	15:50	Fine	Middle	2.5	28.50	28.50	28.70	8.55	8.55	8.53	24.12	24.12	24.13	73.9	73.6	72.1	5.00	4.97	4.80	4.83	4.69	4.69	5	4.50
	15:51		Middle	2.5	28.90	28.90		8.51	8.51		24.13	24.13		71.7	69.1		4.63	4.58		4.59	4.64		4	
1/6/2015	17:21	Cloudy	Middle	2.5	27.00	27.00	27.00	8.34	8.34	8.34	28.05	28.05	28.05	56.2	55.2	54.7	3.83	3.76	3.73	5.32	5.13	5.17	4	5.00
	17:23		Middle	2.5	27.00	27.00		8.34	8.34		28.05	28.05		54.3	53.1		3.69	3.62		5.10	5.13		6	
3/6/2015	16:56	Cloudy	Middle	2.5	27.80	27.80	27.80	8.23	8.23	8.24	26.50	26.50	26.50	62.0	61.1	61.5	4.20	4.14	4.17	3.14	3.16	3.09	4	4.00
	16:58		Middle	2.5	27.80	27.80		8.24	8.24		26.50	26.50		61.2	61.5		4.15	4.17		3.03	3.01		4	
5/6/2015	22:02	Cloudy	Middle	2.5	26.40	26.40	26.40	8.08	8.08	8.09	28.97	28.97	28.97	83.4	83.8	83.5	5.71	5.73	5.72	2.94	3.02	2.95	<2	<2
	22:03		Middle	2.5	26.40	26.40		8.10	8.10		28.97	28.97		83.1	83.7		5.69	5.73		2.84	2.99		<2	
8/6/2015	10:12	Fine	Middle	3.0	26.20	26.20	26.30	8.32	8.32	8.30	33.11	33.11	33.11	62.6	62.1	61.5	4.58	4.16	4.23	3.12	3.11	3.11	3	3.00
	10:14		Middle	3.0	26.40	26.40		8.28	8.28		33.11	33.11		59.1	62.3		3.95	4.22		3.11	3.11		3	
10/6/2015	14:10	Fine	Middle	2.5	27.40	27.40	27.40	8.26	8.26	8.26	28.48	28.48	28.48	68.3	69.7	69.7	4.61	4.72	4.71	2.44	2.39	2.33	5	5.50
	14:12		Middle	2.5	27.40	27.40		8.26	8.26		28.48	28.48		70.2	70.5		4.74	4.75		2.32	2.15		6	
12/6/2015	15:08	Fine	Middle	2.5	27.60	27.60	27.70	8.31	8.31	8.32	27.99	27.99	27.98	65.4	64.4	63.5	4.41	4.33	4.28	3.26	3.21	3.23	4	4.00
	15:10		Middle	2.5	27.80	27.80		8.33	8.33		27.97	27.97		61.3	63.0		4.13	4.23		3.22	3.21		4	
15/6/2015	16:31	Fine	Middle	2.5	27.90	27.90	28.10	8.27	8.27	8.27	28.37	28.37	28.37	72.4	70.8	71.3	4.82	4.72	4.75	2.74	2.71	2.73	3	3.00
	16:33		Middle	2.5	28.30	28.30		8.26	8.26		28.37	28.37		71.2	70.7		4.74	4.71		2.72	2.73		3	
17/6/2015	17:03	Cloudy	Middle	2.5	28.00	28.00	28.05	8.34	8.34	8.35	28.14	28.14	28.14	76.5	75.8	74.9	5.12	5.06	5.01	2.95	2.99	2.96	5	5.00
	17:05		Middle	2.5	28.10	28.10		8.36	8.36		28.14	28.14		74.2	73.2		4.96	4.89		3.01	2.90		5	
19/6/2015	23:34	Fine	Middle	2.0	27.10	27.10	27.05	8.12	8.12	8.13	30.08	30.08	30.09	82.7	83.6	83.1	5.57	5.65	5.61	3.10	3.04	3.06	<2	<2
	23:35		Middle	2.0	27.00	27.00		8.13	8.13		30.09	30.09		83.2	83.0		5.61	5.59		3.00	3.08		<2	
22/6/2015	10:15	Cloudy	Middle	2.5	27.00	27.00	27.00	8.41	8.41	8.40	27.49	27.49	27.53	60.0	58.0	57.1	4.09	3.96	3.90	1.97	1.97	1.97	2	3.00
	10:17		Middle	2.5	27.00	27.00		8.39	8.39		27.56	27.56		56.1	54.3		3.83	3.71		1.96	1.96		4	
25/6/2015	2:27	Cloudy	Middle	2.0	27.50	27.50	27.55	8.22	8.22	8.24	25.00	25.00	25.01	79.1	79.6	80.1	5.43	5.47	5.50	2.57	2.31	2.36	<2	2.00
	2:28		Middle	2.0	27.60	27.60		8.26	8.26		25.01	25.01		80.2	81.4		5.51	5.59		2.29	2.27		2	
27/6/2015	23:11	Cloudy	Middle	2.0	28.10	28.10	28.10	8.45	8.45	8.46	23.33	23.33	23.34	86.7	87.9	87.4	5.94	6.03	6.00	3.79	3.65	3.73	4	4.50
	23:12		Middle	2.0	28.10	28.10		8.46	8.46		23.34	23.34		88.7	86.4		6.08	5.93		3.72	3.76		5	

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



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

Date	Time	Weater Condition	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					
28/5/2015	21:22	Cloudy	Middle	2.5	27.40	27.40	27.45	8.16	8.16	8.16	24.87	24.87	24.87	79.1	80.6	81.4	5.43	5.54	5.59	2.65	2.76	2.70	<2	<2
	21:23		Middle	2.5	27.50	27.50		8.16	8.16		24.86	24.86		83.8	82.2		5.75	5.65		2.68	2.70		<2	
30/5/2015	15:52	Fine	Middle	2.5	28.60	28.60	28.60	8.46	8.46	8.46	24.21	24.21	24.21	67.2	67.8	69.8	4.56	4.60	4.73	4.36	4.38	4.36	3	3.00
	15:54		Middle	2.5	28.60	28.60		8.45	8.45		24.21	24.21		71.8	72.3		4.87	4.90		4.37	4.31		3	
1/6/2015	17:24	Cloudy	Middle	2.5	27.00	27.00	27.05	8.33	8.33	8.33	28.16	28.16	28.16	61.3	60.2	59.2	4.17	4.09	4.05	4.41	4.40	4.39	4	4.50
	17:26		Middle	2.5	27.10	27.10		8.33	8.33		28.16	28.16		58.8	56.4		4.00	3.93		4.39	4.37		5	
3/6/2015	17:00	Cloudy	Middle	2.5	27.70	27.70	27.75	8.23	8.23	8.23	26.60	26.60	26.60	60.0	59.3	59.3	4.07	4.02	4.02	2.74	2.65	2.67	4	4.00
	17:02		Middle	2.5	27.80	27.80		8.23	8.23		26.60	26.60		59.4	58.5		4.02	3.96		2.64	2.64		4	
5/6/2015	22:09	Cloudy	Middle	2.5	26.40	26.40	26.35	8.11	8.11	8.11	29.08	29.08	29.08	74.1	75.5	75.0	5.08	5.17	5.14	4.67	4.64	4.51	<2	<2
	22:10		Middle	2.5	26.30	26.30		8.11	8.11		29.08	29.08		75.4	75.0		5.16	5.14		4.46	4.27		<2	
8/6/2015	10:08	Fine	Middle	3.0	26.10	26.10	26.10	8.37	8.37	8.36	29.54	29.54	29.54	63.3	63.4	63.4	4.34	4.35	4.34	2.38	2.34	2.33	4	4.50
	10:10		Middle	3.0	26.10	26.10		8.34	8.34		29.54	29.54		63.2	63.5		4.33	4.35		2.31	2.27		5	
10/6/2015	14:15	Fine	Middle	2.5	27.10	27.10	27.15	8.29	8.29	8.29	28.61	28.61	28.61	70.5	70.1	70.1	4.77	4.75	4.74	2.62	2.71	2.68	5	5.50
	14:17		Middle	2.5	27.20	27.20		8.29	8.29		28.61	28.61		69.7	70.0		4.68	4.74		2.73	2.64		6	
12/6/2015	15:12	Fine	Middle	2.5	27.70	27.70	27.70	8.34	8.34	8.34	27.94	27.94	27.93	61.9	62.5	61.7	4.17	4.21	4.16	3.16	3.02	2.91	4	4.50
	15:14		Middle	2.5	27.70	27.70		8.34	8.34		27.92	27.92		61.6	60.9		4.16	4.10		2.70	2.74		5	
15/6/2015	16:35	Fine	Middle	2.5	27.70	27.70	27.80	8.26	8.26	8.27	28.67	28.67	28.67	70.5	70.5	69.8	4.73	4.72	4.67	2.71	2.73	2.79	2	2.50
	16:37		Middle	2.5	27.90	27.90		8.27	8.27		28.67	28.67		69.2	68.9		4.63	4.61		2.84	2.89		3	
17/6/2015	17:07	Cloudy	Middle	2.5	27.90	27.90	27.95	8.36	8.36	8.36	28.14	28.14	28.14	75.2	73.4	73.4	5.04	4.92	4.74	2.87	2.87	2.87	6	5.50
	17:09		Middle	2.5	28.00	28.00		8.36	8.36		28.14	28.14		70.7	74.1		4.04	4.96		2.87	2.86		5	
19/6/2015	23:41	Fine	Middle	2.0	27.10	27.10	27.05	8.13	8.13	8.13	30.20	30.20	30.20	81.1	82.2	81.3	5.45	5.56	5.48	2.70	2.51	2.55	<2	2.00
	23:42		Middle	2.0	27.00	27.00		8.13	8.13		30.20	30.20		81.3	80.5		5.47	5.42		2.47	2.53		2	
22/6/2015	10:07	Cloudy	Middle	2.5	26.60	26.60	26.60	8.50	8.50	8.54	27.72	27.72	27.72	56.2	54.5	53.8	3.90	3.75	3.69	2.31	2.28	2.27	3	3.50
	10:09		Middle	2.5	26.60	26.60		8.57	8.57		27.73	27.72		53.9	50.5		3.63	3.47		2.23	2.24		4	
25/6/2015	2:33	Cloudy	Middle	2.0	27.40	27.40	27.45	8.31	8.31	8.31	25.33	25.33	25.33	74.8	76.0	75.0	5.16	5.21	5.15	2.19	2.33	2.28	<2	2.00
	2:34		Middle	2.0	27.50	27.50		8.31	8.31		25.33	25.33		75.1	74.1		5.15	5.08		2.28	2.30		2	
27/6/2015	23:18	Cloudy	Middle	2.0	27.90	27.90	27.93	8.45	8.45	8.45	23.37	23.37	23.37	89.9	91.2	90.2	6.18	6.27	6.20	2.66	2.57	2.61	4	4.50
	23:19		Middle	2.0	28.00	27.90		8.45	8.45		23.37	23.37		90.8	88.9		6.24	6.11		2.59	2.63		5	

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	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids		
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/5/2015	19:55	Cloudy	Middle	3.0	27.50	27.50	27.55	8.10	8.11	8.11	25.50	25.50	25.50	80.0	80.8	80.1	5.47	5.53	5.48	2.16	1.94	1.93	<2	≤2
	19:56		Middle	3.0	27.60	27.60		8.12	8.12		25.49	25.49		79.3	80.1		5.42	5.48		1.86	1.77		<2	
30/5/2015	16:05	Fine	Middle	3.0	28.40	28.40	28.60	8.44	8.44	8.45	24.30	24.30	24.30	88.9	87.5	87.8	6.03	5.93	5.95	3.26	3.27	3.26	3	3.50
	16:07		Middle	3.0	28.80	28.80		8.45	8.45		24.30	24.30		87.4	87.2		5.93	5.91		3.26	3.25		4	
1/6/2015	17:53	Cloudy	Middle	3.5	26.90	26.90	26.85	8.20	8.20	8.26	27.86	27.86	27.85	58.3	57.3	57.4	3.99	3.92	3.93	4.80	4.81	4.71	4	3.50
	17:55		Middle	3.5	26.80	26.80		8.32	8.32		27.84	27.84		57.3	56.6		3.93	3.87		4.60	4.61		3	
3/6/2015	21:00	Cloudy	Middle	3.0	27.30	27.30	27.30	8.15	8.15	8.15	27.85	27.85	27.85	84.8	87.0	85.9	5.65	5.80	5.72	2.27	2.25	2.21	3	2.50
	21:01		Middle	3.0	27.30	27.30		8.15	8.15		27.85	27.85		85.2	86.5		5.67	5.77		2.12	2.20		2	
5/6/2015	19:40	Cloudy	Middle	3.0	27.10	27.10	27.15	7.99	7.99	7.99	27.90	27.90	27.90	71.2	72.8	72.7	4.84	4.94	4.94	3.27	3.31	3.21	<2	2.00
	19:41		Middle	3.0	27.20	27.20		8.00	7.99		27.90	27.90		73.8	73.0		5.01	4.95		3.08	3.16		2	
8/6/2015	7:55	Fine	Middle	3.0	26.90	26.90	26.90	8.16	8.16	8.16	28.97	28.97	28.98	66.2	66.2	65.8	4.50	4.50	4.47	2.96	2.96	2.96	4	4.00
	7:57		Middle	3.0	26.90	26.90		8.16	8.16		28.98	28.98		65.1	65.5		4.42	4.45		2.95	2.95		4	
10/6/2015	9:58	Fine	Middle	3.0	28.20	28.20	28.30	8.25	8.25	8.27	27.96	27.96	27.96	71.3	74.5	72.8	4.75	4.96	4.85	3.21	3.23	3.23	9	9.50
	10:00		Middle	3.0	28.40	28.40		8.29	8.29		27.96	27.96		73.0	72.5		4.85	4.83		3.23	3.24		10	
12/6/2015	15:40	Fine	Middle	3.0	27.80	27.80	27.85	8.35	8.35	8.38	27.43	27.43	27.43	80.4	80.6	80.3	5.41	5.42	5.40	3.09	3.11	3.11	4	4.50
	15:42		Middle	3.0	27.90	27.90		8.40	8.40		27.43	27.43		80.2	79.8		5.40	5.37		3.12	3.13		5	
15/6/2015	15:40	Fine	Middle	3.0	28.60	28.60	28.85	8.32	8.32	8.33	28.13	28.13	28.12	77.8	78.1	78.1	5.13	5.15	5.15	5.75	5.65	5.58	8	8.50
	15:42		Middle	3.0	29.10	29.10		8.34	8.34		28.10	28.10		77.5	78.9		5.11	5.19		5.47	5.43		9	
17/6/2015	19:20	Cloudy	Middle	3.5	27.40	27.40	27.50	8.05	8.05	8.07	29.06	29.06	29.07	82.3	84.0	82.8	5.51	5.63	5.55	2.95	2.82	2.78	5	4.50
	19:21		Middle	3.5	27.60	27.60		8.09	8.09		29.07	29.07		82.7	82.2		5.54	5.50		2.66	2.68		4	
19/6/2015	21:46	Fine	Middle	3.5	26.90	26.90	26.80	8.16	8.16	8.17	29.11	29.11	29.11	80.6	80.0	80.4	5.47	5.44	5.47	2.79	2.81	2.76	3	3.50
	21:47		Middle	3.5	26.70	26.70		8.18	8.18		29.11	29.11		80.1	80.8		5.45	5.50		2.75	2.69		4	
22/6/2015	7:50	Cloudy	Middle	3.0	27.20	27.20	27.20	8.41	8.41	8.41	25.52	25.52	25.64	69.9	71.2	70.3	4.81	4.89	4.83	1.98	1.99	1.99	4	3.00
	7:52		Middle	3.0	27.20	27.20		8.41	8.41		25.75	25.75		70.1	69.9		4.82	4.80		1.99	1.99		2	
25/6/2015	1:18	Cloudy	Middle	3.0	28.10	28.10	28.10	8.14	8.14	8.15	25.13	25.13	25.13	73.9	75.1	74.3	5.02	5.10	5.05	1.98	1.94	1.87	2	2.00
	1:19		Middle	3.0	28.10	28.10		8.15	8.15		25.13	25.13		73.5	74.7		4.99	5.07		1.72	1.82		2	
27/6/2015	0:35	Cloudy	Middle	3.0	28.00	28.00	28.05	8.38	8.38	8.38	23.09	23.09	23.10	84.6	85.9	85.3	5.84	5.92	5.87	3.59	3.62	3.68	5	5.00
	0:36		Middle	3.0	28.10	28.10		8.38	8.38		23.10	23.10		85.5	85.2		5.88	5.85		3.72	3.78		5	

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



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

Date	Time	Weater Condition	Sampling Depth		Water Temperature °C		pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L		
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
28/5/2015	18:30	Cloudy	Middle	2.0	28.40	28.40	28.40	8.14	8.14	8.14	24.52	24.52	24.52	90.8	90.6	90.4	6.16	6.12	6.12	2.72	2.81	2.77	3	3.00
	18:31		Middle	2.0	28.40	28.40		8.14	8.14		24.51	24.51		91.2	89.0		6.16	6.02		2.76	2.79		3	
30/5/2015	14:48	Fine	Middle	3.0	29.20	29.20	29.35	8.37	8.37	8.37	24.53	24.53	24.52	82.4	71.4	75.9	5.50	5.16	5.16	4.57	4.42	4.45	2	2.00
	14:50		Middle	3.0	29.50	29.50		8.37	8.37		24.50	24.50		73.6	76.2		4.91	5.08		4.41	4.40		2	
1/6/2015	16:25	Cloudy	Middle	3.5	27.30	27.30	27.45	8.28	8.28	8.30	27.52	27.52	27.50	60.9	60.1	59.6	4.13	4.06	4.03	4.31	4.48	4.42	5	5.50
	16:27		Middle	3.5	27.60	27.60		8.31	8.31		27.47	27.47		59.6	57.7		4.03	3.90		4.46	4.41		6	
3/6/2015	20:01	Cloudy	Middle	2.5	27.60	27.60	27.65	8.12	8.12	8.12	27.77	27.77	27.77	76.0	77.6	77.1	5.12	5.23	5.19	2.81	2.66	2.72	5	4.50
	20:02		Middle	2.5	27.70	27.70		8.12	8.12		27.77	27.77		77.7	77.1		5.23	5.19		2.68	2.71		4	
5/6/2015	20:55	Cloudy	Middle	2.5	27.00	27.00	27.00	8.08	8.08	8.08	28.44	28.44	28.44	76.6	77.6	76.5	5.21	5.26	5.19	3.13	3.30	3.14	2	2.00
	20:56		Middle	2.5	27.00	27.00		8.08	8.08		28.43	28.43		75.3	76.4		5.10	5.17		3.04	3.10		2	
8/6/2015	8:50	Fine	Middle	3.5	27.20	27.20	27.30	8.25	8.25	8.27	27.69	27.69	27.69	58.7	58.6	58.5	3.98	3.98	3.97	3.74	3.86	3.80	4	3.50
	8:52		Middle	3.5	27.40	27.40		8.28	8.28		27.68	27.68		58.2	58.5		3.95	3.97		3.83	3.78		3	
10/6/2015	11:28	Fine	Middle	3.0	27.90	27.90	28.05	8.18	8.18	8.20	26.72	26.72	26.71	65.1	64.8	64.0	4.39	4.36	4.31	3.22	3.24	3.29	7	6.00
	11:30		Middle	3.0	28.20	28.20		8.21	8.21		26.69	26.69		63.7	62.3		4.29	4.19		3.36	3.33		5	
12/6/2015	14:20	Fine	Middle	3.0	28.70	28.70	28.95	8.30	8.30	8.29	27.20	27.20	27.19	76.3	77.0	76.5	5.05	5.09	5.06	3.73	3.75	3.78	6	6.50
	14:22		Middle	3.0	29.20	29.20		8.28	8.28		27.18	27.18		76.0	76.7		5.02	5.07		3.82	3.82		7	
15/6/2015	18:12	Fine	Middle	3.0	28.10	28.10	28.35	8.21	8.21	8.25	28.25	28.25	28.25	66.4	65.1	65.7	4.42	4.32	4.37	4.31	4.22	4.22	3	3.00
	18:14		Middle	3.0	28.60	28.60		8.29	8.29		28.24	28.24		65.7	65.7		4.36	4.36		4.18	4.17		3	
17/6/2015	20:45	Cloudy	Middle	3.0	27.00	27.00	27.03	8.20	8.20	8.20	29.68	29.68	29.69	82.5	81.2	82.2	5.56	5.47	5.53	3.87	3.71	3.64	5	5.00
	20:46		Middle	3.0	27.10	27.00		8.20	8.20		29.69	29.69		82.9	82.1		5.58	5.52		3.48	3.51		5	
19/6/2015	22:40	Fine	Middle	3.0	27.20	27.20	27.10	8.10	8.10	8.10	29.41	29.41	29.41	81.7	82.1	81.5	5.50	5.55	5.50	3.48	3.79	3.63	3	3.00
	22:41		Middle	3.0	27.00	27.00		8.10	8.10		29.41	29.41		81.7	80.3		5.50	5.43		3.65	3.60		3	
22/6/2015	9:40	Cloudy	Middle	3.0	27.40	27.40	27.45	8.36	8.36	8.38	25.39	25.39	25.40	65.7	67.0	66.9	4.51	4.62	4.60	2.64	2.64	2.64	4	5.00
	9:42		Middle	3.0	27.50	27.50		8.40	8.40		25.40	25.40		67.4	67.3		4.64	4.64		2.62	2.64		6	
25/6/2015	0:10	Cloudy	Middle	3.0	27.80	27.80	27.80	8.26	8.26	8.27	25.10	25.10	25.10	86.2	87.0	86.4	5.89	5.94	5.90	2.17	2.09	2.11	<2	<2
	0:11		Middle	3.0	27.80	27.80		8.28	8.28		25.10	25.10		85.9	86.6		5.87	5.91		2.06	2.13		<2	
27/6/2015	23:45	Cloudy	Middle	3.0	28.20	28.20	28.20	8.26	8.26	8.31	23.11	23.11	23.11	87.6	88.1	87.5	6.01	6.06	6.01	4.77	4.82	4.54	4	4.00
	23:46		Middle	3.0	28.20	28.20		8.35	8.35		23.11	23.11		87.0	87.2		5.97	5.98		4.34	4.21		4	

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					
28/5/2015	9:31	Fine	Middle	-	27.00	27.00	27.05	8.00	8.00	8.02	26.50	26.50	26.56	62.5	61.3	60.7	4.29	4.20	4.16	2.00	2.00	2.00	4	3.00
	9:33		Middle	-	27.10	27.10		8.03	8.03		26.62	26.62		59.1	60.0		4.05	4.11		2.00	1.99		2	
30/5/2015	11:30	Fine	Middle	-	28.00	28.00	28.05	8.09	8.09	8.12	25.14	25.14	25.14	65.8	69.8	68.1	4.68	4.76	4.69	2.37	2.37	2.38	4	4.00
	11:32		Middle	-	28.10	28.10		8.14	8.14		25.14	25.14		68.6	68.3		4.66	4.64		2.38	2.38		4	
1/6/2015	11:57	Cloudy	Middle	-	27.30	27.30	27.35	8.14	8.14	8.18	27.90	27.90	27.89	61.1	59.7	59.5	4.14	4.05	4.03	2.63	2.64	2.64	5	4.50
	11:59		Middle	-	27.40	27.40		8.21	8.21		27.87	27.87		58.3	58.8		3.95	3.99		2.64	2.64		4	
3/6/2015	14:40	Fine	Middle	-	28.20	28.20	28.20	8.15	8.15	8.15	27.94	27.94	27.89	58.7	58.8	58.7	3.92	3.93	3.92	2.70	2.70	2.69	6	6.00
	14:42		Middle	-	28.20	28.20		8.15	8.15		27.83	27.83		58.7	58.7		3.92	3.92		2.68	2.66		6	
5/6/2015	15:26	Cloudy	Middle	-	27.50	27.50	27.60	8.09	8.09	8.10	28.57	28.57	28.60	58.5	56.8	55.9	3.93	3.82	3.75	2.31	2.30	2.31	<2	<2
	15:28		Middle	-	27.70	27.70		8.10	8.10		28.63	28.63		54.7	53.5		3.67	3.58		2.30	2.31		<2	
8/6/2015	15:42	Fine	Middle	-	27.70	27.70	27.75	8.14	8.14	8.14	29.34	29.34	29.33	59.4	58.7	57.7	3.96	3.91	3.85	2.14	2.14	2.14	3	3.50
	15:44		Middle	-	27.80	27.80		8.14	8.14		29.32	29.32		57.1	55.5		3.81	3.70		2.14	2.14		4	
10/6/2015	18:52	Fine	Middle	-	28.20	28.20	28.20	8.27	8.27	8.27	27.54	27.54	27.54	59.7	61.4	60.4	4.00	4.11	4.04	30.84	31.29	<u>31.36</u>	48	<u>73.50</u>
	18:54		Middle	-	28.20	28.20		8.26	8.26		27.54	27.54		61.8	58.5		4.13	3.91		31.54	31.78		99	
12/6/2015	-	Fine	Middle	-	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	#DIV/0!
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-			
15/6/2015	-	Fine	Middle	-	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	#DIV/0!
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-			
17/6/2015	10:41	Fine	Middle	-	27.50	27.50	27.65	8.14	8.14	8.14	30.11	30.11	30.11	61.6	63.3	62.8	4.10	4.21	4.18	2.22	2.25	2.25	3	3.50
	10:43		Middle	-	27.80	27.80		8.13	8.13		30.10	30.10		63.7	62.7		4.24	4.17		2.26	2.26		4	
19/6/2015	14:39	Fine	Middle	-	28.80	28.80	29.00	8.19	8.19	8.19	28.84	28.84	28.79	65.1	64.7	63.9	4.27	4.24	4.19	2.26	2.24	2.23	5	4.00
	14:41		Middle	-	29.20	29.20		8.19	8.19		28.74	28.74		63.3	62.4		4.15	4.09		2.22	2.18		3	
22/6/2015	17:05	Fine	Middle	-	27.60	27.60	27.60	8.29	8.29	8.31	25.49	25.49	25.50	72.6	72.6	71.7	4.96	4.96	4.90	1.37	1.37	1.37	3	3.50
	17:07		Middle	-	27.60	27.60		8.32	8.32		25.50	25.50		71.7	70.0		4.90	4.78		1.37	1.37		4	
24/6/2015	14:10	Cloudy	Middle	-	28.20	28.20	28.25	8.27	8.27	8.27	24.84	24.84	24.84	77.7	78.3	78.1	5.27	5.31	5.30	1.78	1.77	1.87	<2	<2
	14:12		Middle	-	28.30	28.30		8.26	8.26		24.84	24.84		78.5	77.9		5.33	5.28		1.95	1.97		<2	
26/6/2015	19:10	Cloudy	Middle	-	28.20	28.20	28.20	8.19	8.19	8.20	24.19	24.19	24.20	80.5	79.1	79.1	5.49	5.39	5.39	1.91	1.86	1.82	3	3.00
	19:11		Middle	-	28.20	28.20		8.20	8.20		24.20	24.20		78.1	78.8		5.32	5.36		1.78	1.71		3	

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
28/5/2015	9:26	Fine	Middle	2.5	26.80	26.80	8.64	8.64	25.50	25.50	60.2	61.3	4.18	4.26	5.30	5.36	2	2.00
	9:28		Middle	2.5	26.70	26.70	8.45	8.45	25.51	25.51	60.2	58.9	4.18	4.09	5.59	5.61	<2	
30/5/2015	10:35	Fine	Middle	3.0	27.90	27.90	8.41	8.41	23.89	23.89	78.3	79.2	5.37	5.43	3.23	3.23	3	3.00
	10:37		Middle	3.0	28.00	28.00	8.41	8.41	23.89	23.89	79.3	78.7	5.44	5.39	3.24	3.24	<2	
1/6/2015	11:16	Cloudy	Middle	2.5	27.30	27.30	8.43	8.43	27.21	27.21	67.5	68.2	4.59	4.64	3.15	3.14	4	4.00
	11:18		Middle	2.5	27.40	27.40	8.42	8.42	27.21	27.21	67.5	66.7	4.59	4.54	3.14	3.14	4	
3/6/2015	13:56	Fine	Middle	2.5	27.80	27.80	8.21	8.21	27.19	27.19	58.4	57.9	3.95	3.91	3.13	3.05	4	4.00
	13:58		Middle	2.5	27.80	27.80	8.21	8.21	27.19	27.19	57.3	56.0	3.87	3.77	3.01	3.02	4	
5/6/2015	14:40	Cloudy	Middle	3.0	27.40	27.40	8.14	8.14	27.78	27.78	68.2	67.9	4.61	4.60	3.69	3.82	<2	<2
	14:42		Middle	3.0	27.60	27.60	8.15	8.15	27.99	27.99	67.9	68.0	4.60	4.60	3.74	3.75	<2	
8/6/2015	17:01	Fine	Middle	2.5	27.40	27.40	8.34	8.34	27.83	27.83	65.9	65.1	4.46	4.40	3.73	3.70	3	4.00
	17:03		Middle	2.5	27.50	27.50	8.34	8.34	27.83	27.83	64.5	63.8	4.37	4.32	3.56	3.35	5	
10/6/2015	17:16	Fine	Middle	2.5	28.30	28.30	8.39	8.39	27.18	27.18	70.3	70.8	4.71	4.74	3.02	3.01	8	7.50
	17:18		Middle	2.5	28.30	28.30	8.38	8.38	27.19	27.19	70.6	69.5	4.72	4.65	3.13	3.16	7	
12/6/2015	10:17	Fine	Middle	2.5	27.60	27.60	8.24	8.24	26.99	27.05	76.3	76.9	5.18	5.21	5.53	5.57	3	3.50
	10:19		Middle	2.5	27.50	27.50	8.23	8.23	27.00	27.01	74.7	72.6	5.09	4.93	5.79	5.81	4	
15/6/2015	11:20	Fine	Middle	2.5	27.10	27.10	8.30	8.30	27.86	27.86	73.5	74.7	4.99	5.07	2.74	2.75	3	3.00
	11:22		Middle	2.5	27.30	27.30	8.30	8.30	27.85	27.85	73.2	74.1	4.97	5.03	2.74	2.74	3	
17/6/2015	14:35	Fine	Middle	2.5	27.90	27.90	8.30	8.30	28.38	28.38	73.9	74.1	4.94	4.96	2.71	2.65	3	3.50
	14:37		Middle	2.5	28.00	28.00	8.30	8.30	28.38	28.38	74.9	74.7	5.01	4.99	2.64	2.64	4	
19/6/2015	13:43	Fine	Middle	2.5	28.20	28.20	8.33	8.33	28.13	28.13	70.5	70.7	4.70	4.71	3.13	3.08	3	2.50
	13:45		Middle	2.5	28.30	28.30	8.32	8.32	28.11	28.11	70.8	70.0	4.72	4.66	2.74	2.81	2	
22/6/2015	16:16	Fine	Middle	2.5	28.20	28.20	8.58	8.58	24.49	24.49	79.1	78.2	5.39	5.32	2.03	2.01	3	3.50
	16:18		Middle	2.5	28.20	28.20	8.58	8.58	24.49	24.49	78.0	77.3	5.31	5.26	2.01	2.01	4	
24/6/2015	17:16	Cloudy	Middle	2.5	28.60	28.60	8.49	8.49	25.01	25.01	74.1	74.1	4.99	5.00	1.53	1.54	<2	<2
	17:18		Middle	2.5	28.60	28.60	8.48	8.48	25.03	25.03	73.0	70.0	4.92	4.71	1.52	1.52	<2	
26/6/2015	18:01	Cloudy	Middle	3.0	29.30	29.30	8.42	8.42	24.74	24.74	88.0	87.2	5.87	5.82	2.53	2.84	5	5.00
	18:03		Middle	3.0	29.40	29.40	8.41	8.41	24.74	24.74	86.2	83.0	5.72	5.64	2.78	2.81	5	

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



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

Date	Time	Weater Condition	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					
28/5/2015	10:00	Fine	Middle	2.5	27.00	27.00	27.10	8.29	8.29	8.27	25.01	25.01	25.00	66.7	67.2	66.9	4.62	4.64	4.63	2.10	2.09	2.08	<2	<2
	10:02		Middle	2.5	27.20	27.20		8.25	8.25		24.99	24.99		67.1	66.6		4.64	4.61		2.07	2.06		<2	
30/5/2015	10:10	Fine	Middle	3.0	28.30	28.30	28.45	8.35	8.35	8.37	24.08	24.08	24.08	81.4	82.9	82.2	5.53	5.63	5.58	3.87	3.94	4.01	3	3.00
	10:12		Middle	3.0	28.60	28.60		8.38	8.38		24.08	24.08		82.5	81.8		5.60	5.55		4.11	4.11		3	
1/6/2015	11:00	Cloudy	Middle	2.5	27.50	27.50	27.55	8.34	8.34	8.37	27.18	27.17	27.17	61.9	59.8	59.3	4.19	4.05	4.01	3.71	3.67	3.66	3	3.50
	11:02		Middle	2.5	27.60	27.60		8.39	8.39		27.16	27.16		58.2	57.2		3.94	3.87		3.65	3.59		4	
3/6/2015	13:40	Fine	Middle	2.5	28.50	28.50	28.65	8.23	8.23	8.22	28.02	28.02	28.02	54.0	54.2	54.1	3.57	3.59	3.58	3.23	3.14	3.16	4	4.00
	13:42		Middle	2.5	28.80	28.80		8.20	8.20		28.02	28.02		54.0	54.1		3.57	3.58		3.14	3.14		4	
5/6/2015	14:20	Cloudy	Middle	3.0	28.50	28.50	28.85	8.21	8.21	8.18	24.42	24.42	24.46	69.4	68.2	68.4	4.62	4.55	4.55	1.49	1.72	1.70	<2	2.00
	14:22		Middle	3.0	29.20	29.20		8.15	8.15		24.50	24.50		67.5	68.3		4.49	4.55		1.80	1.80		2	
8/6/2015	16:45	Fine	Middle	2.5	27.80	27.80	27.85	8.24	8.24	8.27	28.17	28.16	28.12	67.1	66.4	66.9	4.51	4.45	4.49	3.38	3.37	3.37	4	4.00
	16:47		Middle	2.5	27.90	27.90		8.30	8.30		28.08	28.08		66.6	67.4		4.47	4.52		3.37	3.34		4	
10/6/2015	17:00	Fine	Middle	2.5	28.30	28.30	28.35	8.39	8.39	8.40	26.96	26.96	26.95	69.0	68.4	67.4	4.83	4.69	4.60	3.28	3.25	3.25	4	4.00
	17:02		Middle	2.5	28.40	28.40		8.40	8.40		26.93	26.93		66.7	65.4		4.47	4.39		3.24	3.23		4	
12/6/2015	10:40	Fine	Middle	2.5	27.80	27.80	27.85	8.22	8.22	8.22	26.70	26.70	26.70	71.2	70.6	69.8	4.82	4.78	4.72	2.20	2.27	2.22	4	4.00
	10:42		Middle	2.5	27.90	27.90		8.21	8.21		26.69	26.69		69.0	68.2		4.66	4.61		2.21	2.19		4	
15/6/2015	11:00	Fine	Middle	2.5	27.70	27.70	27.80	8.26	8.26	8.28	27.72	27.72	27.72	75.5	75.1	75.2	5.08	5.05	5.06	2.72	2.64	2.68	3	3.00
	11:02		Middle	2.5	27.90	27.90		8.29	8.29		27.72	27.72		74.6	75.6		5.02	5.09		2.64	2.70		3	
17/6/2015	14:15	Fine	Middle	2.5	28.90	28.90	29.10	8.26	8.26	8.26	29.25	29.25	29.25	78.0	77.9	77.5	5.09	5.07	5.05	3.23	3.14	3.18	9	9.00
	14:17		Middle	2.5	29.30	29.30		8.26	8.26		29.25	29.25		77.0	77.0		5.02	5.01		3.18	3.18		9	
19/6/2015	13:30	Fine	Middle	2.5	29.90	30.00	30.53	8.30	8.30	8.30	28.03	28.03	28.06	66.3	66.6	65.4	4.29	4.31	4.23	2.74	2.72	2.72	2	2.00
	13:32		Middle	2.5	31.10	31.10		8.30	8.30		28.08	28.08		65.5	63.2		4.24	4.09		2.69	2.71		<2	
22/6/2015	16:00	Fine	Middle	2.5	28.70	28.70	28.75	8.52	8.52	8.56	24.16	24.16	24.15	74.5	77.1	75.5	5.08	5.25	5.16	2.25	2.35	2.33	4	3.50
	16:02		Middle	2.5	28.80	28.80		8.59	8.59		24.13	24.13		76.4	74.0		5.21	5.08		2.36	2.37		3	
24/6/2015	17:00	Cloudy	Middle	2.5	28.70	28.70	28.80	8.41	8.41	8.43	25.08	25.08	25.01	75.0	74.1	73.6	5.04	4.97	4.94	2.29	2.29	2.37	<2	<2
	17:02		Middle	2.5	28.90	28.90		8.44	8.44		24.94	24.94		72.8	72.4		4.88	4.86		2.41	2.47		<2	
26/6/2015	17:45	Cloudy	Middle	3.0	29.40	29.40	29.60	8.33	8.33	8.33	25.22	25.22	25.22	92.1	90.2	89.6	6.10	5.97	5.93	3.15	3.14	3.14	4	4.50
	17:47		Middle	3.0	29.80	29.80		8.32	8.32		25.21	25.21		88.1	87.9		5.83	5.81		3.14	3.14		5	

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	Weater Condition	Sampling Depth		Water Temperature		pH			Salinity		DO Saturation		DO		Turbidity			Suspended Solids					
					°C					ppt		%		mg/L		NTU			mg/L					
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average					
28/5/2015	9:51	Fine	Middle	2.5	26.90	26.90	26.90	8.30	8.30	8.28	24.94	24.94	24.87	67.4	66.4	65.2	4.68	4.60	4.52	1.68	1.63	1.62	<2	<2
	9:53		Middle	2.5	26.90	26.90		8.26	8.26		24.79	24.79		64.0	62.8		4.44	4.36		1.58	1.57		<2	
30/5/2015	10:15	Fine	Middle	3.0	28.00	28.00	28.05	8.42	8.42	8.43	24.65	24.65	24.65	80.7	80.7	80.5	5.53	5.53	5.52	3.99	3.97	3.96	3	2.50
	10:17		Middle	3.0	28.10	28.10		8.44	8.44		24.65	24.65		80.5	80.0		5.52	5.48		3.89	3.99		2	
1/6/2015	11:04	Cloudy	Middle	2.5	27.30	27.30	27.30	8.43	8.43	8.44	27.03	27.03	27.02	70.9	70.2	70.1	4.83	4.78	4.77	3.76	3.73	3.77	3	3.50
	11:06		Middle	2.5	27.30	27.30		8.44	8.44		27.00	27.00		70.0	69.1		4.77	4.71		3.77	3.80		4	
3/6/2015	13:44	Fine	Middle	2.5	27.90	27.90	28.00	8.20	8.20	8.19	27.65	27.65	27.64	55.1	54.7	54.3	3.70	3.67	3.64	2.33	2.32	2.34	3	3.00
	13:46		Middle	2.5	28.10	28.10		8.18	8.18		27.63	27.63		54.3	53.1		3.64	3.56		2.36	2.36		3	
5/6/2015	14:25	Cloudy	Middle	3.0	27.70	27.70	27.85	8.16	8.16	8.16	28.06	28.06	28.06	68.1	68.1	68.3	4.57	4.56	4.57	1.65	1.69	1.69	<2	<2
	14:27		Middle	3.0	28.00	28.00		8.15	8.15		28.06	28.06		69.0	67.8		4.60	4.53		1.70	1.70		<2	
8/6/2015	16:49	Fine	Middle	2.5	27.40	27.40	27.50	8.32	8.32	8.32	27.98	27.98	27.95	67.5	68.8	67.8	4.56	4.65	4.59	3.28	3.36	3.40	3	3.50
	16:51		Middle	2.5	27.60	27.60		8.32	8.32		27.91	27.91		68.1	66.8		4.61	4.52		3.50	3.46		4	
10/6/2015	17:04	Fine	Middle	2.5	27.90	27.90	27.90	8.41	8.41	8.41	26.96	26.96	26.94	66.4	67.3	66.7	4.48	4.54	4.50	2.94	2.95	3.01	4	4.50
	17:06		Middle	2.5	27.90	27.90		8.41	8.41		26.92	26.92		66.0	67.2		4.45	4.53		3.13	3.01		5	
12/6/2015	10:50	Fine	Middle	2.5	27.70	27.70	27.80	8.22	8.22	8.22	28.25	28.25	28.26	76.3	75.2	74.4	5.13	5.09	5.03	1.96	1.96	1.99	4	3.50
	10:52		Middle	2.5	27.90	27.90		8.21	8.21		28.26	28.26		73.8	72.1		5.00	4.88		2.02	2.03		3	
15/6/2015	11:05	Fine	Middle	2.5	27.20	27.20	27.25	8.31	8.31	8.31	27.61	27.61	27.61	75.3	75.8	75.5	5.12	5.15	5.13	2.14	2.08	2.07	2	3.00
	11:07		Middle	2.5	27.30	27.30		8.31	8.31		27.60	27.60		75.9	75.1		5.16	5.10		2.03	2.02		4	
17/6/2015	14:20	Fine	Middle	2.5	28.20	28.20	28.30	8.28	8.28	8.29	28.85	28.85	28.85	77.5	78.7	77.8	5.14	5.22	5.16	2.34	2.31	2.31	4	4.00
	14:22		Middle	2.5	28.40	28.40		8.29	8.29		28.84	28.84		78.0	77.1		5.17	5.11		2.29	2.28		4	
19/6/2015	13:33	Fine	Middle	2.5	28.60	28.60	28.70	8.32	8.32	8.33	28.08	28.08	28.04	68.6	69.0	70.0	4.54	4.57	4.63	2.11	2.07	2.05	<2	<2
	13:35		Middle	2.5	28.80	28.80		8.33	8.33		28.00	28.00		71.2	71.2		4.70	4.70		2.03	1.99		<2	
22/6/2015	16:04	Fine	Middle	2.5	28.30	28.30	28.55	8.61	8.61	8.60	24.19	24.19	24.25	89.2	88.3	87.8	6.02	5.97	5.93	1.81	1.84	1.85	3	3.00
	16:06		Middle	2.5	28.80	28.80		8.59	8.59		24.30	24.30		87.4	86.2		5.90	5.82		1.86	1.87		3	
24/6/2015	17:04	Cloudy	Middle	2.5	28.60	28.60	28.40	8.47	8.47	8.49	24.68	24.68	24.76	75.1	73.5	72.9	5.10	4.99	4.95	1.70	1.53	1.57	<2	<2
	17:06		Middle	2.5	28.20	28.20		8.50	8.50		24.84	24.84		72.0	70.9		4.89	4.82		1.52	1.52		<2	
26/6/2015	17:49	Cloudy	Middle	3.0	29.20	29.20	29.30	8.36	8.36	8.38	24.82	24.82	24.82	90.0	88.9	87.8	6.00	5.93	5.88	3.37	3.35	3.33	5	5.00
	17:51		Middle	3.0	29.40	29.40		8.39	8.39		24.82	24.82		83.4	88.8		5.66	5.92		3.32	3.28		5	

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



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids	
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
28/5/2015	9:41	Fine	Middle	2.5	26.90	26.90	8.33	8.33	25.17	25.18	65.2	64.5	4.62	4.47	1.96	2.00	<2	2.00
	9:43		Middle	2.5	27.00	27.00	8.31	8.31	25.16	25.16	63.2	62.1	4.40	4.31	2.04	2.05	2	
30/5/2015	10:23	Fine	Middle	3.0	27.90	27.90	8.43	8.43	23.78	23.78	79.6	80.3	5.46	5.51	4.33	4.32	2	2.00
	10:25		Middle	3.0	28.00	28.00	8.43	8.43	23.78	23.78	79.7	80.1	5.46	5.49	4.32	4.30	2	
1/6/2015	11:08	Cloudy	Middle	2.5	27.30	27.30	8.45	8.45	26.96	26.96	72.6	72.4	4.95	4.93	3.94	3.88	3	3.00
	11:10		Middle	2.5	27.40	27.40	8.45	8.45	26.96	26.96	71.4	71.1	4.87	4.85	3.87	3.84	3	
3/6/2015	13:48	Fine	Middle	2.5	27.80	27.80	8.21	8.21	27.43	27.43	56.8	57.0	3.83	3.84	2.28	2.28	3	3.00
	13:50		Middle	2.5	27.90	27.90	8.21	8.21	27.41	27.41	57.0	56.8	3.84	3.82	2.27	2.27	3	
5/6/2015	14:30	Cloudy	Middle	3.0	27.50	27.50	8.15	8.15	28.09	28.09	68.6	69.2	4.62	4.67	1.95	1.98	<2	<2
	14:32		Middle	3.0	27.70	27.70	8.16	8.16	28.09	28.09	69.5	68.0	4.69	4.58	1.87	1.76	<2	
8/6/2015	16:53	Fine	Middle	2.5	27.20	27.20	8.33	8.33	27.88	27.88	67.9	67.0	4.61	4.54	3.32	3.28	3	3.50
	16:55		Middle	2.5	27.30	27.30	8.33	8.33	27.87	27.87	67.6	66.9	4.58	4.54	3.23	3.20	4	
10/6/2015	17:08	Fine	Middle	2.5	27.80	27.80	8.41	8.41	26.90	26.90	57.9	62.6	3.91	4.22	2.99	3.04	5	5.00
	17:10		Middle	2.5	27.90	27.90	8.41	8.41	26.89	26.89	61.6	63.5	4.16	4.29	2.74	3.14	5	
12/6/2015	10:30	Fine	Middle	2.5	27.80	27.80	8.27	8.27	26.93	26.92	74.1	72.9	5.06	4.97	1.82	1.82	4	4.00
	10:32		Middle	2.5	27.90	27.90	8.24	8.24	26.78	26.78	71.4	70.1	4.87	4.74	1.95	1.96	4	
15/6/2015	11:10	Fine	Middle	2.5	27.10	27.10	8.31	8.31	27.61	27.61	74.7	74.4	5.09	5.07	2.37	2.37	3	3.50
	11:12		Middle	2.5	27.20	27.20	8.31	8.31	27.54	27.54	75.8	75.4	5.16	5.13	2.37	2.38	4	
17/6/2015	14:25	Fine	Middle	2.5	28.10	28.10	8.29	8.29	28.63	28.63	76.2	77.3	5.08	5.13	2.43	2.38	4	3.00
	14:27		Middle	2.5	28.20	28.20	8.29	8.29	28.63	28.63	77.7	76.6	5.17	5.11	2.30	2.28	2	
19/6/2015	13:36	Fine	Middle	2.5	28.50	28.50	8.34	8.34	27.89	27.89	70.9	70.0	4.71	4.64	2.00	1.86	<2	<2
	13:38		Middle	2.5	28.60	28.60	8.34	8.34	27.88	27.88	67.6	66.4	4.49	4.41	1.86	1.99	<2	
22/6/2015	16:08	Fine	Middle	2.5	28.40	28.40	8.59	8.59	24.36	24.36	84.2	82.5	5.72	5.60	1.67	1.66	3	3.00
	16:10		Middle	2.5	28.40	28.40	8.58	8.58	24.34	24.34	82.4	82.4	5.59	5.59	1.56	1.54	3	
24/6/2015	17:08	Cloudy	Middle	2.5	27.90	27.90	8.51	8.51	24.74	24.74	74.3	73.4	5.07	5.01	1.13	1.08	<2	<2
	17:10		Middle	2.5	27.90	27.90	8.51	8.51	24.73	24.73	72.0	71.3	4.91	4.87	1.05	1.13	<2	
26/6/2015	17:53	Cloudy	Middle	3.0	29.20	29.20	8.40	8.40	24.74	24.74	89.7	91.1	5.99	6.08	3.14	3.21	4	4.50
	17:55		Middle	3.0	29.30	29.30	8.40	8.40	24.75	24.75	89.1	87.4	5.94	5.83	3.23	3.22	5	

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



**Water Monitoring Result at P5 - WCT / RT / IT**  
**Mid-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
28/5/2015	9:33	Fine	Middle	2.5	26.90	26.90	8.36	8.36	25.51	25.51	62.2	60.3	4.30	4.17	2.82	2.81	3	3.50
	9:35		Middle	2.5	27.00	27.00	8.35	8.35	25.42	25.42	58.5	59.2	4.04	4.09	2.75	2.71	4	
30/5/2015	10:30	Fine	Middle	3.0	27.80	27.80	8.43	8.43	23.81	23.81	80.9	80.1	5.56	5.51	3.59	3.99	2	2.00
	10:32		Middle	3.0	27.90	27.90	8.42	8.42	23.81	23.81	81.5	81.6	5.60	5.61	3.99	4.00	2	
1/6/2015	11:12	Cloudy	Middle	2.5	27.10	27.10	8.45	8.45	27.10	27.10	70.3	70.4	4.80	4.80	3.76	3.56	5	5.00
	11:14		Middle	2.5	27.20	27.20	8.45	8.45	27.09	27.09	69.2	69.3	4.72	4.73	3.53	3.52	5	
3/6/2015	13:52	Fine	Middle	2.5	27.80	27.80	8.22	8.22	27.23	27.23	57.0	55.6	3.84	3.75	2.57	2.55	3	3.00
	13:54		Middle	2.5	27.90	27.90	8.22	8.22	27.23	27.23	54.6	53.8	3.68	3.63	2.54	2.62	3	
5/6/2015	14:35	Cloudy	Middle	3.0	27.30	27.30	8.14	8.14	28.06	28.06	68.5	69.3	4.64	4.69	2.27	2.31	<2	2.00
	14:37		Middle	3.0	27.50	27.50	8.15	8.15	28.06	28.06	69.1	68.3	4.67	4.61	2.31	2.35	2	
8/6/2015	16:57	Fine	Middle	2.5	27.40	27.40	8.34	8.34	27.82	27.82	68.6	69.4	4.55	4.70	2.72	2.73	4	4.00
	16:59		Middle	2.5	27.40	27.40	8.35	8.35	27.82	27.85	69.0	68.7	4.69	4.65	2.74	2.74	4	
10/6/2015	17:12	Fine	Middle	2.5	28.10	28.10	8.40	8.40	27.09	27.09	71.2	71.4	4.81	4.80	3.49	3.47	6	6.00
	17:14		Middle	2.5	28.20	28.20	8.40	8.40	27.12	27.12	68.0	68.7	4.56	4.61	3.27	3.14	6	
12/6/2015	10:22	Fine	Middle	2.5	28.20	28.20	8.24	8.24	26.87	26.87	72.6	69.7	4.87	4.67	2.77	2.77	5	4.50
	10:24		Middle	2.5	28.40	28.40	8.23	8.23	26.81	26.89	67.2	65.5	4.68	4.41	2.81	2.83	4	
15/6/2015	11:15	Fine	Middle	2.5	27.00	27.00	8.31	8.31	27.69	27.69	73.1	74.2	4.99	5.05	2.50	2.64	2	2.00
	11:17		Middle	2.5	27.10	27.10	8.31	8.31	27.69	27.69	74.0	73.3	5.04	4.99	2.65	2.65	2	
17/6/2015	14:30	Fine	Middle	2.5	27.80	27.80	8.30	8.30	28.63	28.63	76.2	77.8	5.10	5.20	2.64	2.51	4	4.50
	14:32		Middle	2.5	28.00	28.00	8.30	8.30	28.52	28.52	77.5	77.0	5.13	5.14	2.46	2.49	5	
19/6/2015	13:39	Fine	Middle	2.5	28.20	28.20	8.34	8.34	27.98	27.98	78.4	78.1	5.23	5.21	2.43	2.44	2	2.50
	13:41		Middle	2.5	28.30	28.30	8.33	8.33	27.96	27.96	76.6	75.3	5.11	5.02	2.47	2.42	3	
22/6/2015	16:12	Fine	Middle	2.5	28.20	28.20	8.58	8.58	24.47	24.47	82.2	85.5	5.59	5.82	1.55	1.53	4	4.00
	16:14		Middle	2.5	28.20	28.20	8.59	8.59	24.47	24.47	84.7	85.9	5.76	5.85	1.52	1.52	4	
24/6/2015	17:12	Cloudy	Middle	2.5	28.20	28.20	8.50	8.50	24.93	24.93	64.6	63.7	4.38	4.32	1.36	1.50	<2	<2
	17:14		Middle	2.5	28.20	28.20	8.50	8.50	24.95	24.95	60.0	60.2	4.07	4.09	1.51	1.64	<2	
26/6/2015	17:57	Cloudy	Middle	3.0	29.00	29.00	8.42	8.42	24.59	24.59	90.4	88.6	6.06	5.94	3.00	3.00	4	4.50
	17:59		Middle	3.0	29.10	29.10	8.44	8.44	24.58	24.58	85.7	89.0	5.74	5.87	3.00	3.00	5	

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					
28/5/2015	9:05	Fine	Middle	3.0	26.50	26.50	26.60	8.16	8.16	8.16	25.82	25.82	25.83	67.0	65.6	65.9	4.63	4.55	4.58	2.50	2.51	2.51	<2	≤2
	9:07		Middle	3.0	26.70	26.70		8.16	8.16		25.83	25.83		64.8	66.0		4.56	4.57		2.51	2.51		<2	
30/5/2015	11:00	Fine	Middle	3.5	28.00	28.00	28.05	8.26	8.26	8.27	25.14	25.14	25.15	77.3	74.9	75.4	5.26	5.09	5.16	2.98	2.88	2.90	2	2.50
	11:02		Middle	3.5	28.10	28.10		8.27	8.27		25.15	25.15		75.9	75.4		5.16	5.12		2.88	2.87		3	
1/6/2015	11:31	Cloudy	Middle	3.5	27.10	27.10	27.15	8.37	8.37	8.37	27.83	27.83	27.83	64.0	63.8	63.0	4.35	4.33	4.28	3.87	3.87	3.90	6	5.00
	11:33		Middle	3.5	27.20	27.20		8.37	8.37		27.82	27.82		62.6	61.5		4.26	4.18		3.92	3.95		4	
3/6/2015	14:10	Fine	Middle	3.5	27.40	27.40	27.45	8.20	8.20	8.21	27.41	27.41	27.38	56.1	54.6	54.4	3.80	3.70	3.69	2.32	2.31	2.32	4	4.00
	14:12		Middle	3.5	27.50	27.50		8.21	8.21		27.35	27.35		53.8	53.2		3.66	3.61		2.31	2.32		4	
5/6/2015	14:58	Cloudy	Middle	3.5	27.10	27.10	27.20	8.15	8.15	8.15	28.97	28.97	28.92	61.2	62.0	61.2	4.14	4.18	4.13	2.38	2.36	2.38	<2	2.00
	15:00		Middle	3.5	27.30	27.30		8.15	8.15		28.87	28.87		61.1	60.3		4.12	4.07		2.36	2.42		2	
8/6/2015	15:20	Fine	Middle	3.5	27.50	27.50	27.55	8.34	8.34	8.31	29.18	29.18	29.13	64.6	64.2	64.1	4.34	4.31	4.30	3.04	3.00	3.10	4	3.50
	15:22		Middle	3.5	27.60	27.60		8.27	8.27		29.08	29.07		64.4	63.1		4.32	4.23		3.19	3.15		3	
10/6/2015	17:31	Fine	Middle	3.5	27.50	27.50	27.55	8.36	8.36	8.37	27.71	27.71	27.71	62.5	63.2	63.0	4.22	4.27	4.26	2.69	2.70	2.71	8	7.50
	17:33		Middle	3.5	27.60	27.60		8.37	8.37		27.71	27.71		63.3	63.0		4.28	4.26		2.72	2.73		7	
12/6/2015	8:55	Fine	Middle	3.0	27.10	27.10	27.15	8.26	8.26	8.28	26.23	26.23	26.23	69.5	70.1	70.1	4.77	4.81	4.81	3.64	3.80	3.78	3	3.00
	8:57		Middle	3.0	27.20	27.20		8.29	8.29		26.23	26.23		70.6	70.0		4.84	4.80		3.87	3.80		3	
15/6/2015	14:05	Fine	Middle	3.0	28.80	28.80	29.05	8.30	8.30	8.31	28.01	28.01	28.01	80.4	80.2	80.0	5.29	5.27	5.26	3.27	3.24	3.20	4	4.00
	14:07		Middle	3.0	29.30	29.30		8.31	8.31		28.01	28.01		79.3	80.2		5.20	5.27		3.14	3.14		4	
17/6/2015	10:07	Fine	Middle	3.5	26.80	26.80	26.85	8.20	8.20	8.20	30.45	30.45	30.45	62.3	63.3	63.2	4.20	4.26	4.26	2.16	2.15	2.15	3	2.50
	10:09		Middle	3.5	26.90	26.90		8.20	8.20		30.45	30.45		63.5	63.8		4.27	4.29		2.14	2.14		2	
19/6/2015	13:56	Fine	Middle	2.5	27.80	27.80	27.95	8.27	8.27	8.28	28.96	28.96	28.91	65.5	65.0	64.6	4.37	4.36	4.31	2.30	2.27	2.27	3	2.50
	13:58		Middle	2.5	28.10	28.10		8.28	8.28		28.85	28.85		64.4	63.3		4.29	4.20		2.27	2.24		2	
22/6/2015	16:35	Fine	Middle	3.5	28.10	28.10	28.15	8.53	8.53	8.54	25.00	25.00	24.99	77.2	75.5	75.5	5.24	5.13	5.13	2.07	2.05	2.13	3	3.50
	16:37		Middle	3.5	28.20	28.20		8.54	8.54		24.97	24.97		74.6	74.7		5.07	5.07		2.13	2.25		4	
24/6/2015	13:35	Cloudy	Middle	3.0	28.20	28.20	28.30	8.32	8.32	8.33	25.64	25.64	25.64	78.8	78.4	78.8	5.32	5.29	5.32	2.50	2.63	2.60	2	2.00
	13:37		Middle	3.0	28.40	28.40		8.33	8.33		25.63	25.63		78.5	79.3		5.30	5.35		2.64	2.64		2	
26/6/2015	19:58	Cloudy	Middle	3.0	28.20	28.20	28.20	8.24	8.24	8.26	24.35	24.35	24.35	91.2	92.1	90.9	6.22	6.26	6.19	4.01	3.92	3.90	6	5.50
	19:59		Middle	3.0	28.20	28.20		8.27	8.27		24.35	24.35		90.4	90.0		6.14	6.12		3.84	3.81		5	

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



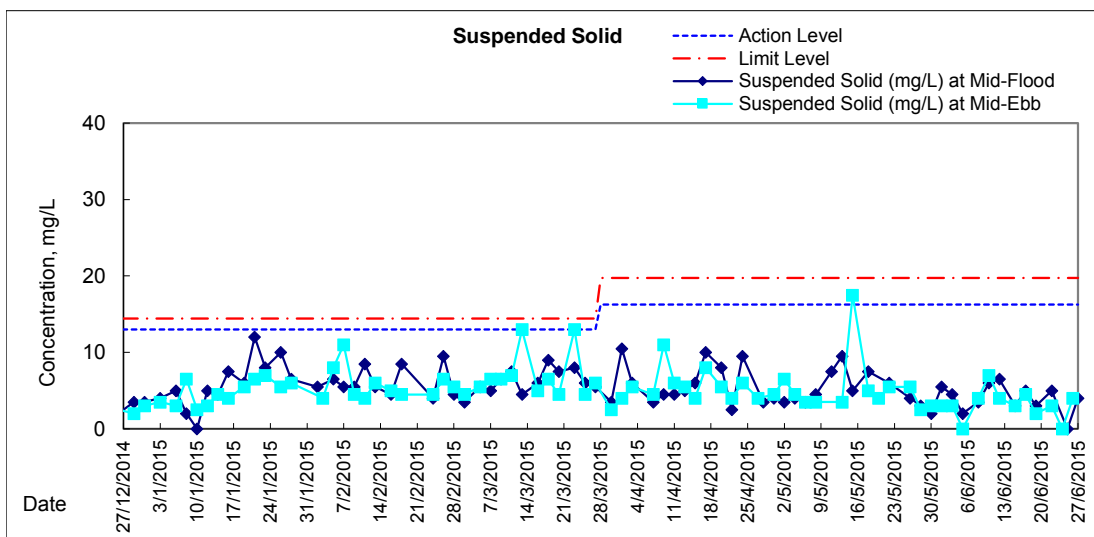
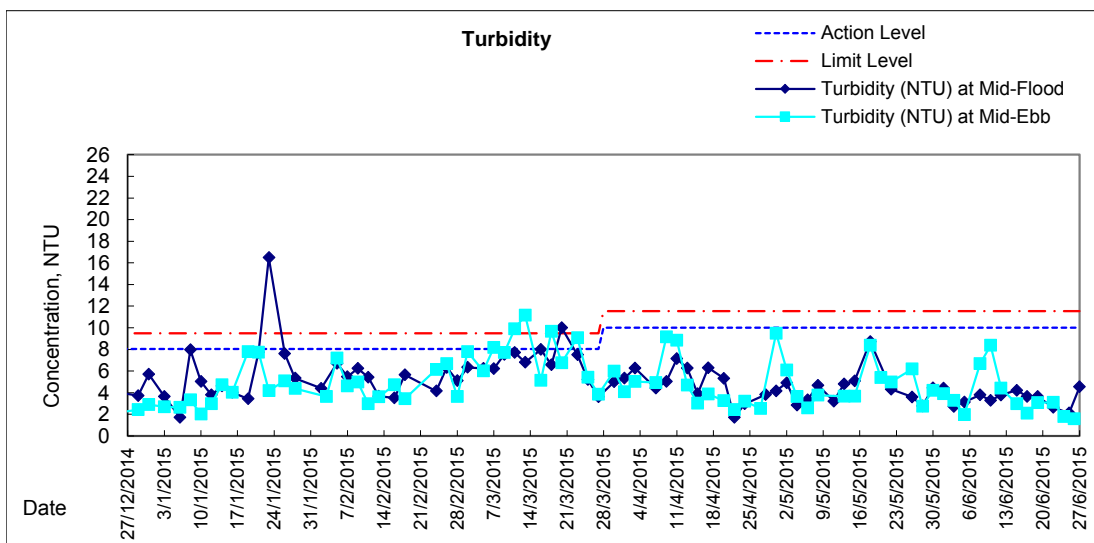
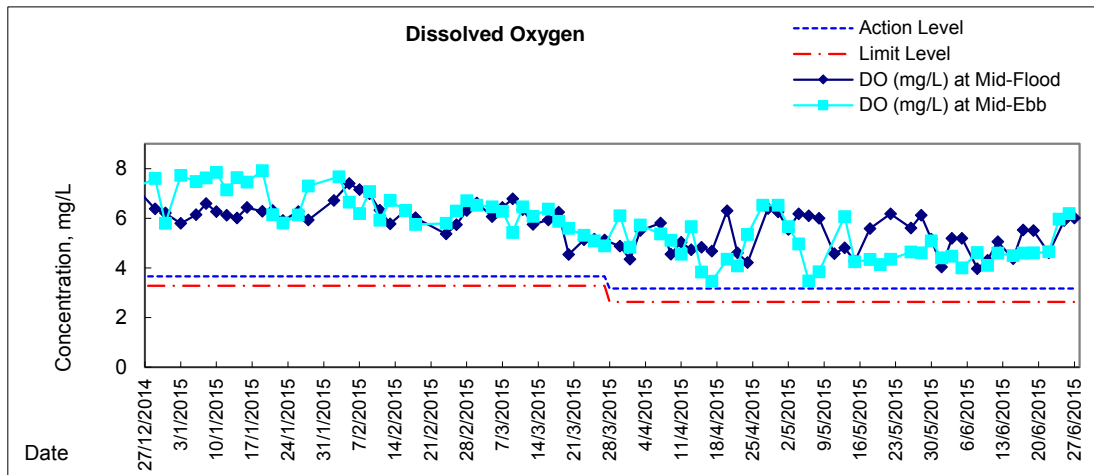
**Water Monitoring Result at WSD19 - Sheung Wan**  
**Mid-Ebb Tide**

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
28/5/2015	8:15	Fine	Middle	3.0	27.20	27.20	8.09	8.09	25.00	25.00	67.3	67.1	4.63	4.62	2.75	2.75	3	2.50
	8:17		Middle	3.0	27.30	27.30	8.11	8.11	25.00	25.00	66.3	66.8	4.57	4.60	2.75	2.76	2	
30/5/2015	9:25	Fine	Middle	3.5	28.10	28.10	8.26	8.26	23.78	23.78	74.5	74.1	5.09	5.06	4.16	4.16	3	3.00
	9:27		Middle	3.5	28.30	28.30	8.26	8.26	23.77	23.77	74.8	74.5	5.11	5.09	4.28	4.27	3	
1/6/2015	10:20	Cloudy	Middle	3.5	27.50	27.50	8.34	8.34	27.12	27.12	63.3	66.0	4.29	4.47	4.06	3.88	3	3.00
	10:22		Middle	3.5	27.60	27.60	8.37	8.37	27.11	27.11	66.0	64.6	4.47	4.37	3.80	3.81	3	
3/6/2015	10:15	Fine	Middle	3.5	27.90	27.90	8.18	8.18	27.43	27.43	66.5	66.0	4.47	4.43	3.27	3.27	3	3.00
	10:17		Middle	3.5	28.20	28.20	8.19	8.19	27.42	27.42	66.4	67.3	4.46	4.51	3.29	3.28	3	
5/6/2015	11:10	Cloudy	Middle	3.5	27.40	27.40	8.18	8.18	28.94	28.94	59.5	59.5	4.00	3.99	1.99	1.99	<2	<2
	11:12		Middle	3.5	27.70	27.70	8.14	8.14	28.94	28.94	58.7	60.7	3.94	4.06	1.98	1.96	<2	
8/6/2015	16:13	Fine	Middle	3.5	27.50	27.50	8.26	8.26	27.62	27.62	68.8	68.1	4.64	4.59	6.48	6.82	3	4.00
	16:15		Middle	3.5	27.80	27.80	8.35	8.35	27.56	27.56	68.7	68.3	4.63	4.60	6.70	6.67	5	
10/6/2015	16:18	Fine	Middle	3.5	27.80	27.80	8.35	8.35	26.81	26.81	61.3	60.5	4.15	4.09	8.39	8.35	7	7.00
	16:20		Middle	3.5	27.90	27.90	8.35	8.35	26.81	26.81	60.3	60.2	4.07	4.07	8.38	8.40	7	
12/6/2015	8:06	Fine	Middle	3.0	27.30	27.30	8.27	8.27	26.08	26.08	67.0	67.0	4.59	4.59	4.49	4.44	4	4.00
	8:07		Middle	3.0	27.50	27.50	8.30	8.30	26.09	26.09	67.5	66.9	4.62	4.57	4.40	4.35	4	
15/6/2015	10:06	Fine	Middle	3.0	27.70	27.70	8.21	8.21	27.83	27.83	65.4	67.1	4.39	4.51	2.87	2.90	3	3.00
	10:08		Middle	3.0	28.00	28.00	8.20	8.20	27.84	27.84	68.2	67.0	4.57	4.49	3.00	3.12	3	
17/6/2015	11:15	Fine	Middle	3.5	27.30	27.30	8.19	8.19	29.07	29.07	67.2	67.7	4.62	4.64	2.18	2.16	5	4.50
	11:17		Middle	3.5	27.60	27.60	8.25	8.25	29.06	29.06	67.4	66.6	4.62	4.47	2.06	2.01	4	
19/6/2015	15:40	Fine	Middle	3.5	29.60	29.60	8.28	8.28	27.96	27.96	70.1	70.7	4.58	4.62	3.04	3.08	2	2.00
	15:42		Middle	3.5	29.90	29.90	8.32	8.32	27.91	27.91	71.1	70.1	4.65	4.58	3.02	3.14	<2	
22/6/2015	15:04	Fine	Middle	3.5	28.60	28.60	8.55	8.55	23.87	23.87	67.7	69.2	4.59	4.69	3.06	3.02	3	3.00
	15:06		Middle	3.5	28.80	28.80	8.57	8.57	23.79	23.79	69.5	68.0	4.71	4.61	3.14	3.20	3	
24/6/2015	15:05	Cloudy	Middle	3.0	28.20	28.20	8.44	8.44	24.59	24.59	89.2	89.1	6.06	6.05	1.77	1.77	<2	<2
	15:07		Middle	3.0	28.40	28.40	8.49	8.49	24.58	24.58	87.5	85.5	5.94	5.80	1.78	1.81	<2	
26/6/2015	21:10	Cloudy	Middle	2.5	28.10	28.10	8.30	8.30	23.06	23.06	89.4	89.8	6.14	6.16	1.64	1.62	4	4.00
	21:11		Middle	2.5	28.10	28.10	8.34	8.34	23.10	23.10	91.0	90.6	6.24	6.22	1.59	1.48	4	

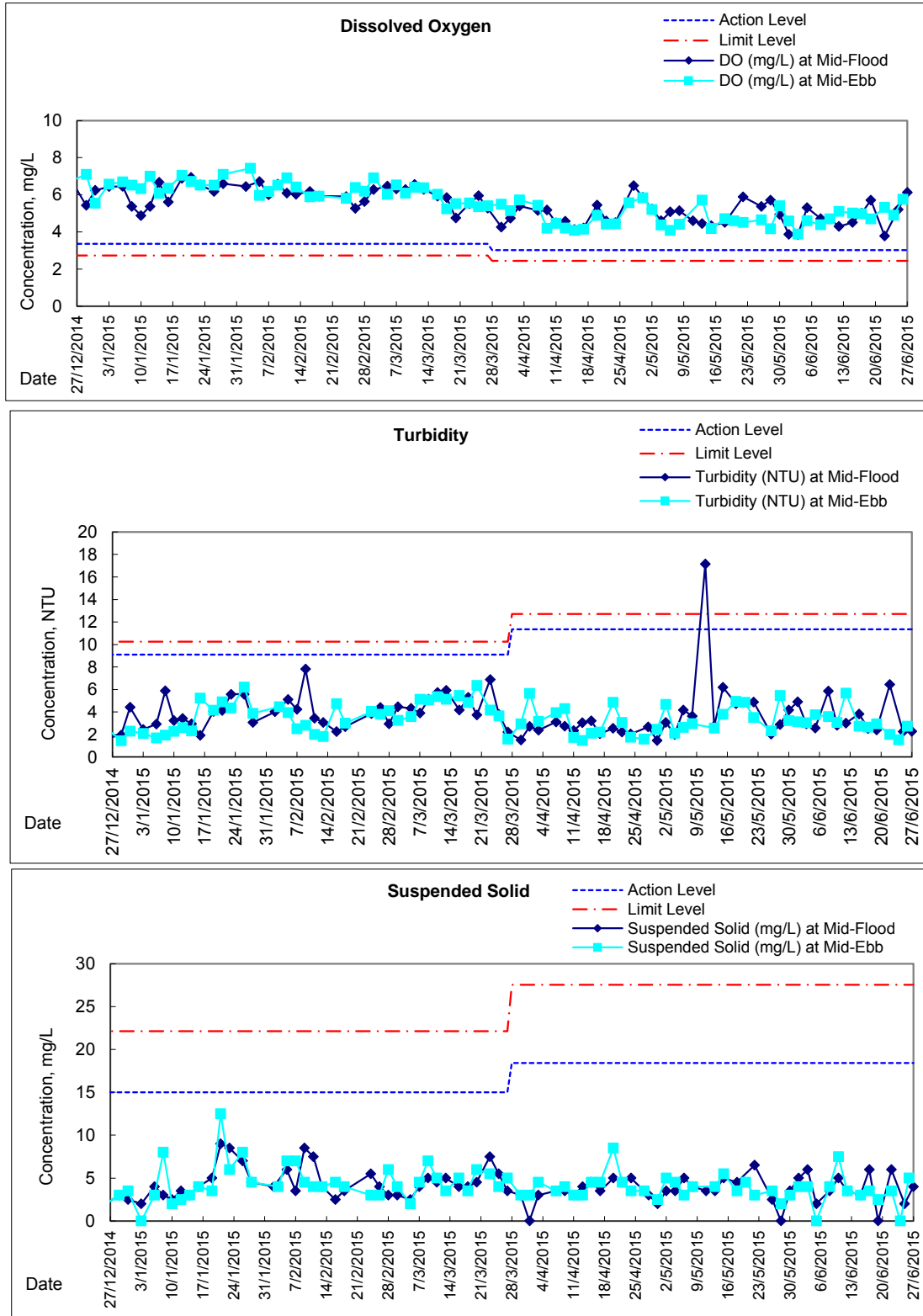
Remarks:  
 Single underline denotes exceedance over Action Level.  
 Double underline denotes exceedance over Limit Level.



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

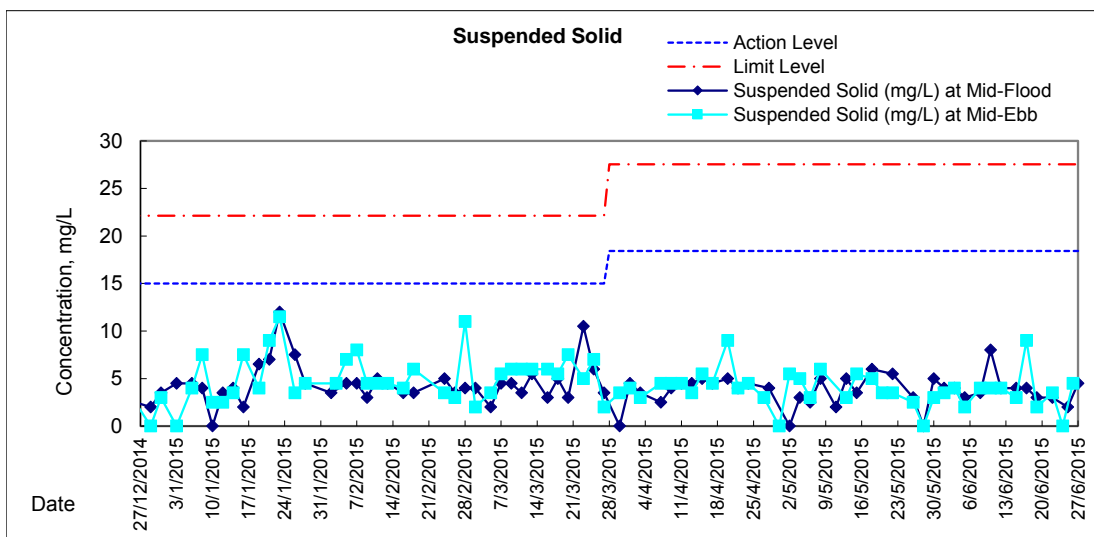
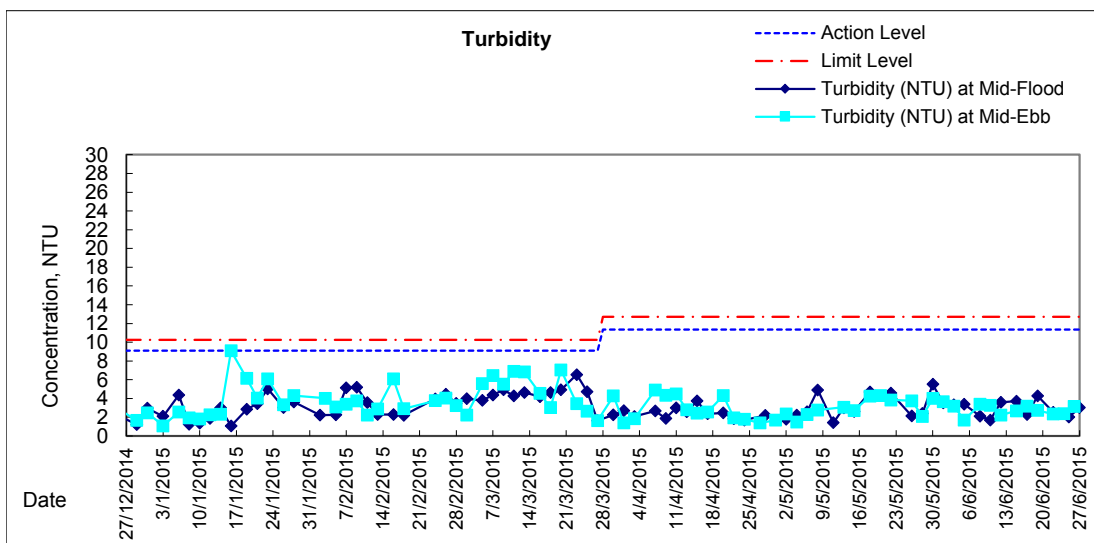
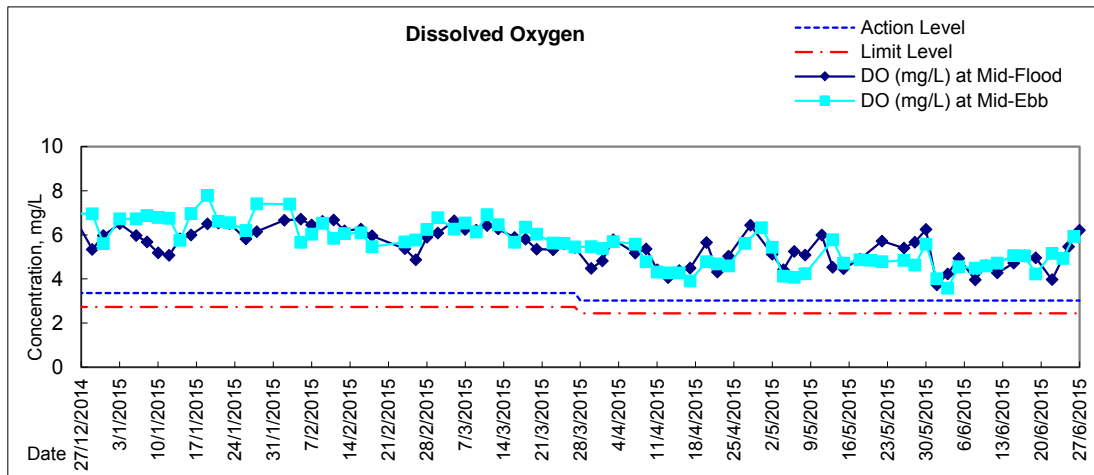


## Graphic Presentation of Water Quality Result of C1 - HKCEC



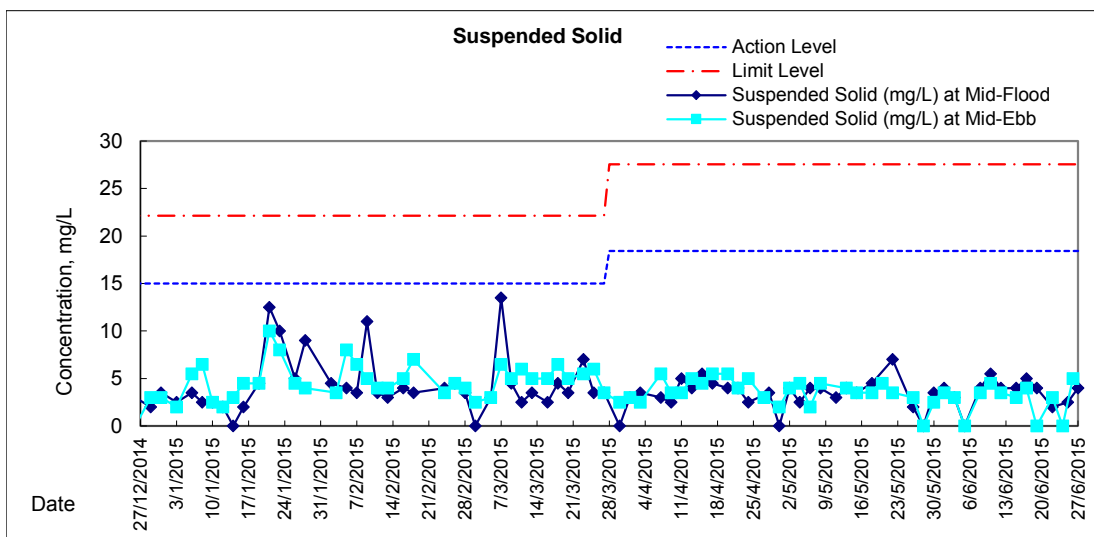
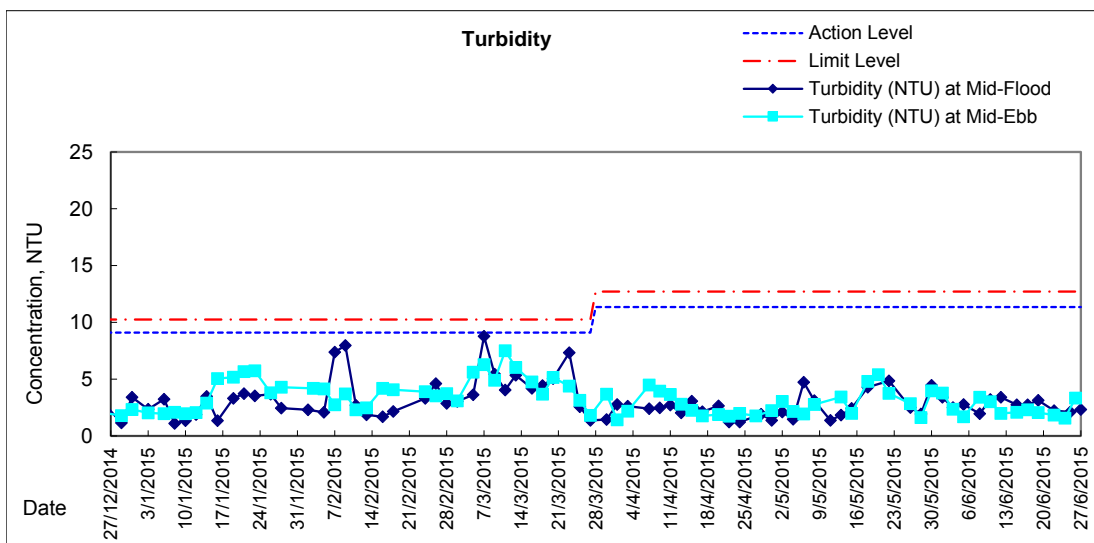
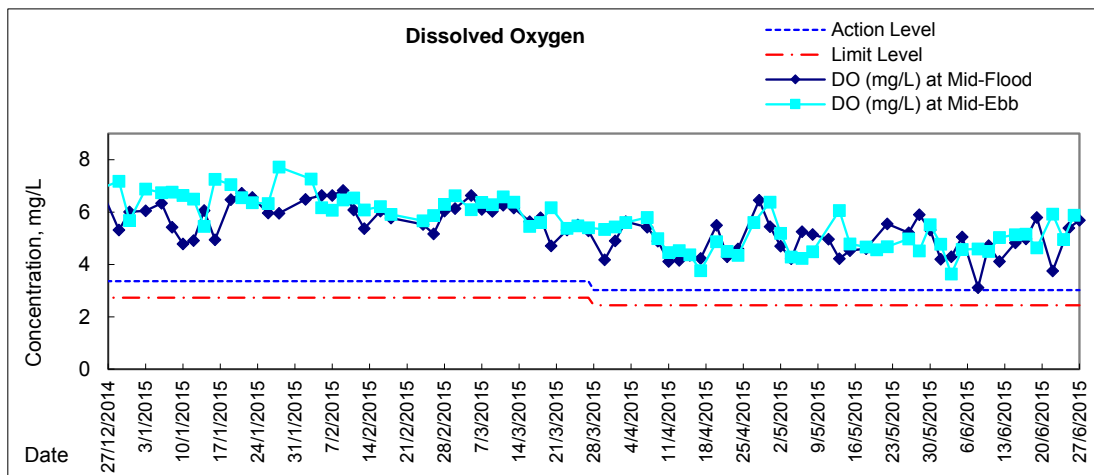


## Graphic Presentation of Water Quality Result of P1 - HKCEC Phase I





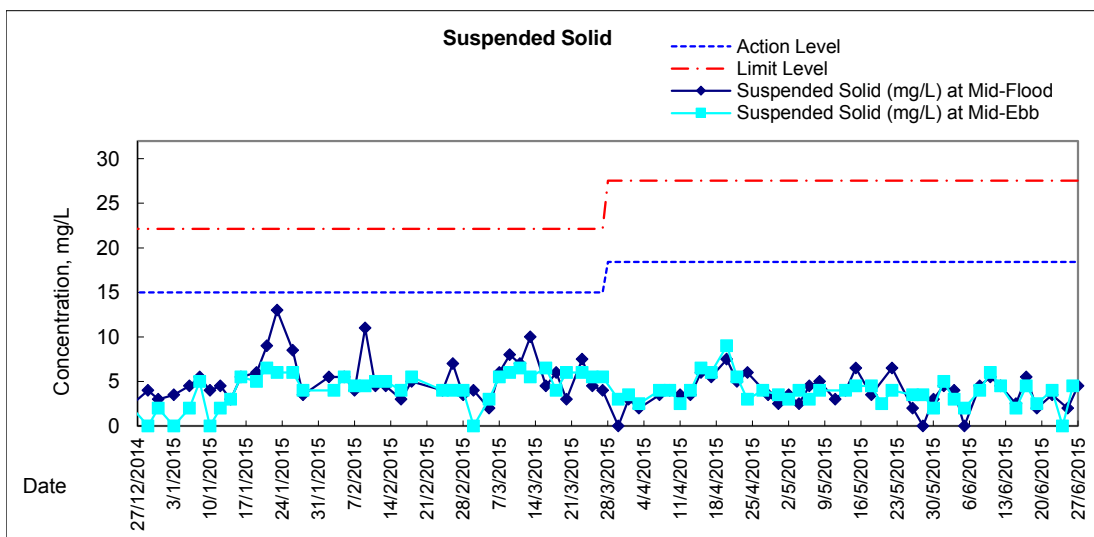
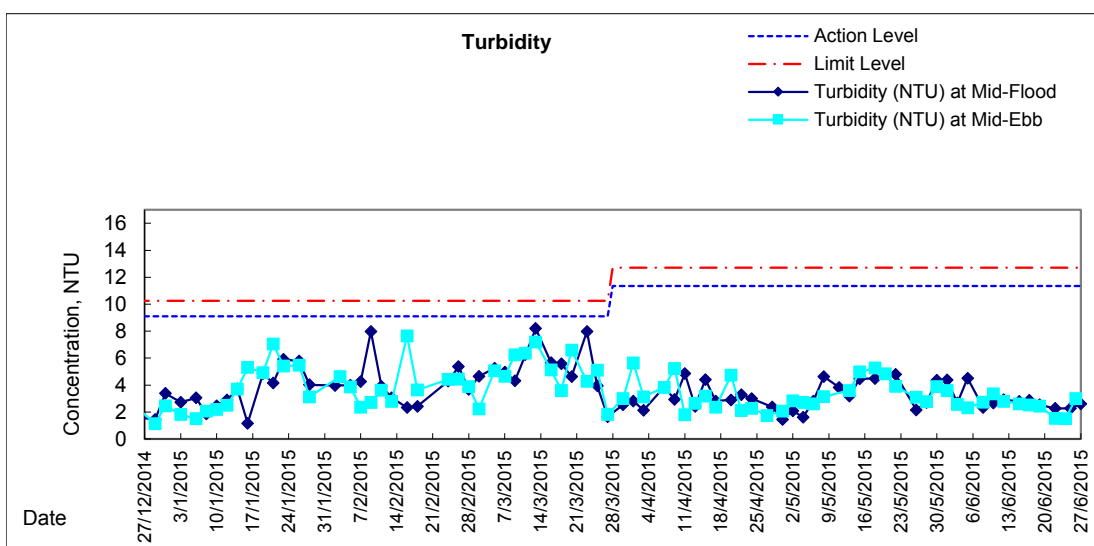
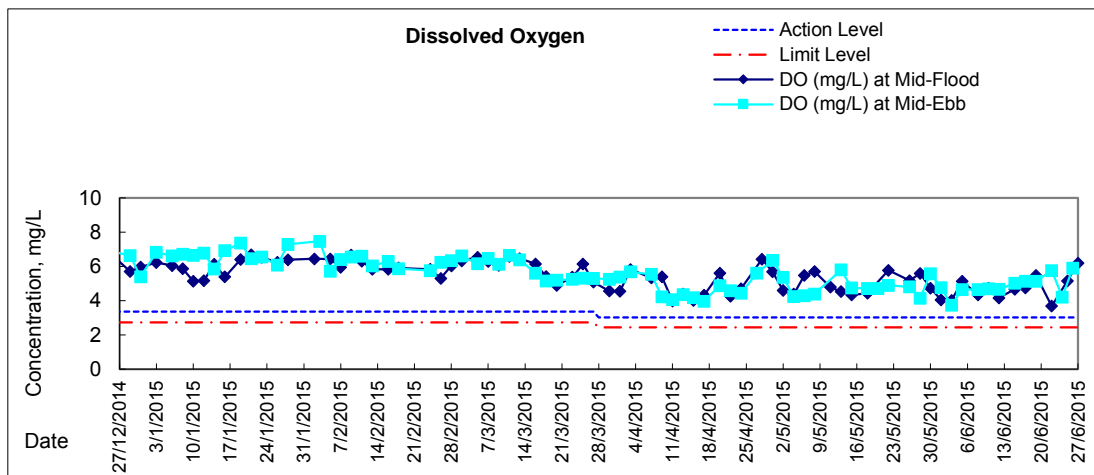
## Graphic Presentation of Water Quality Result of P3 - APA





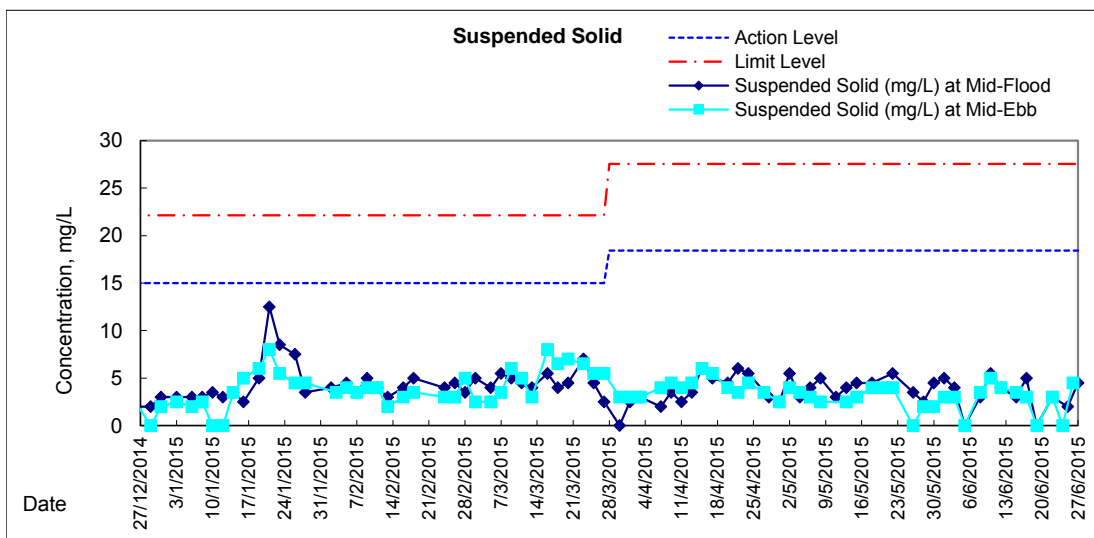
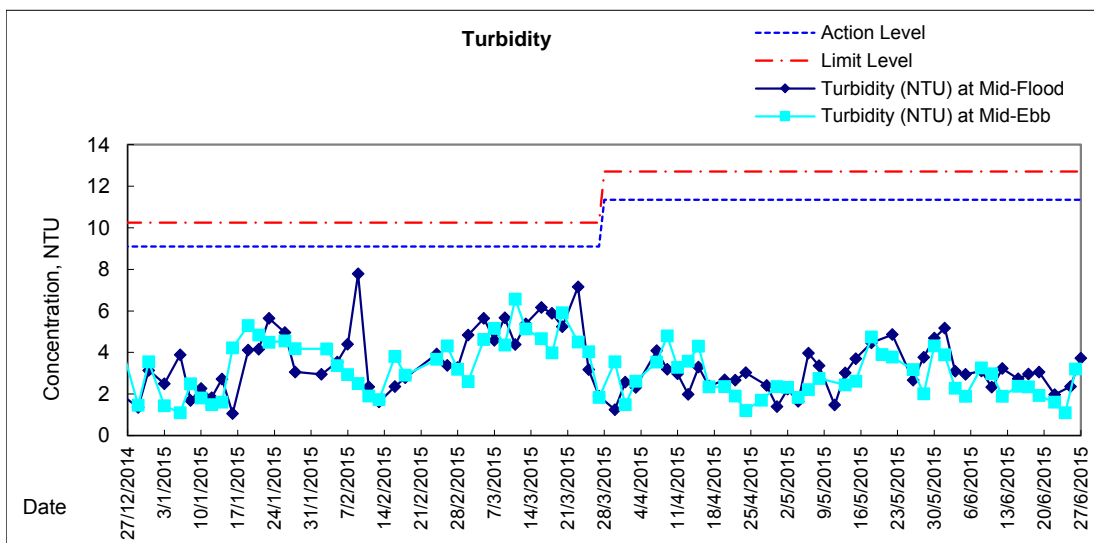
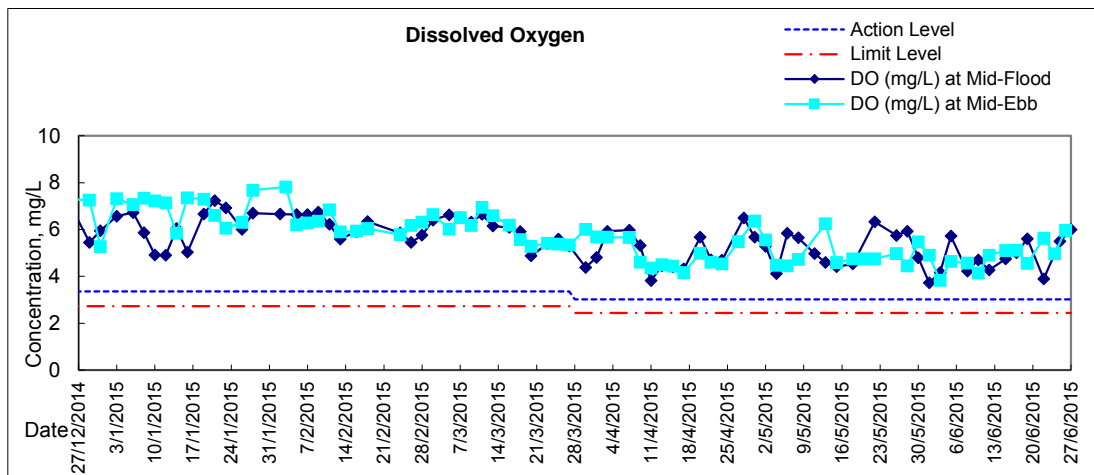


## Graphic Presentation of Water Quality Result of P5 - WCT / RT / IT



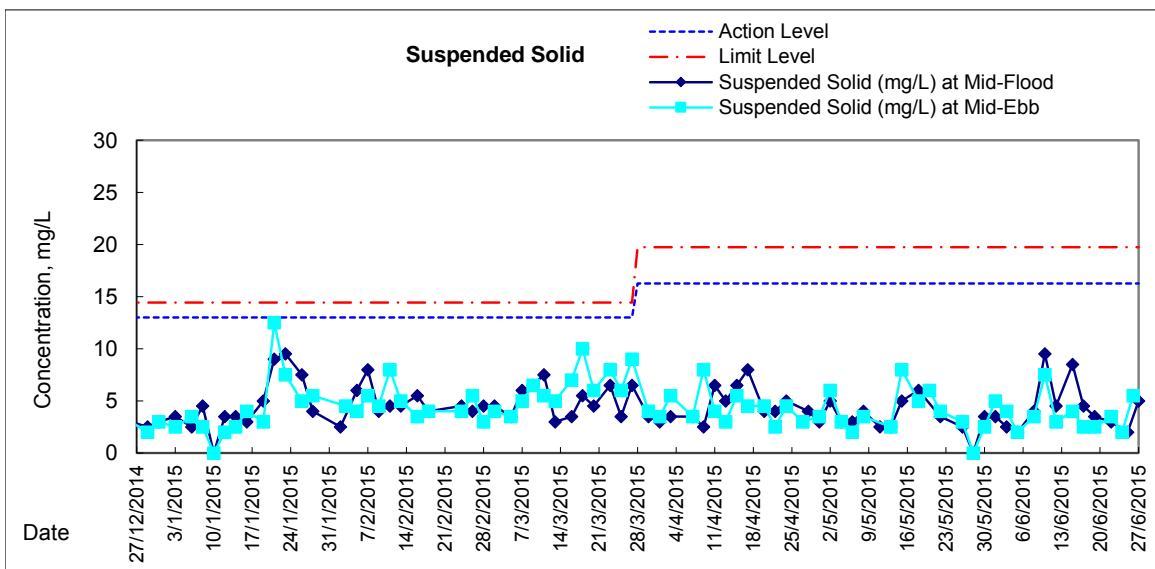
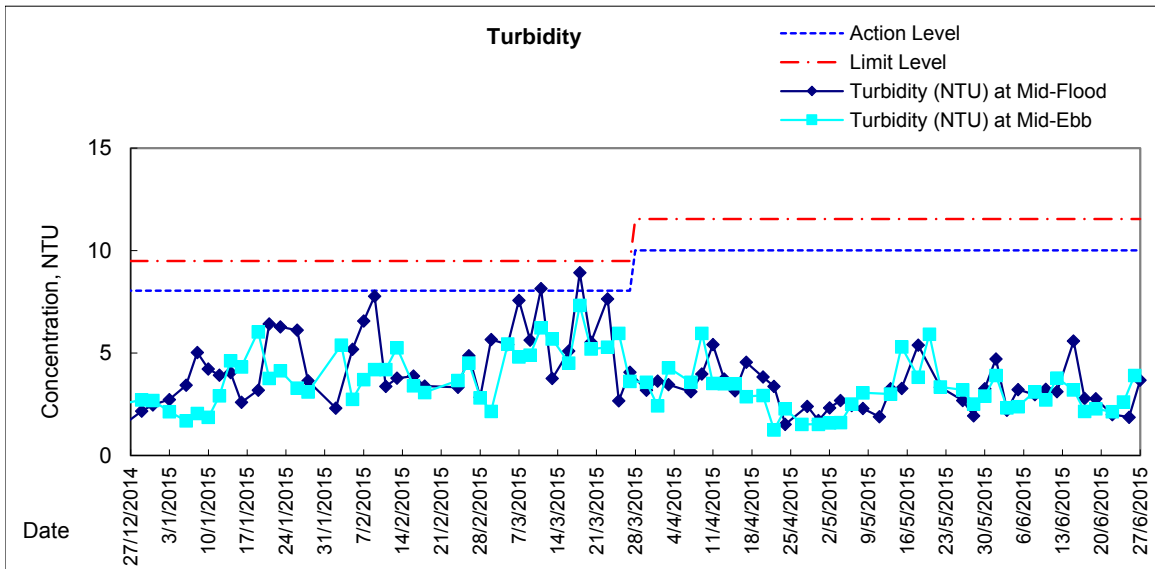
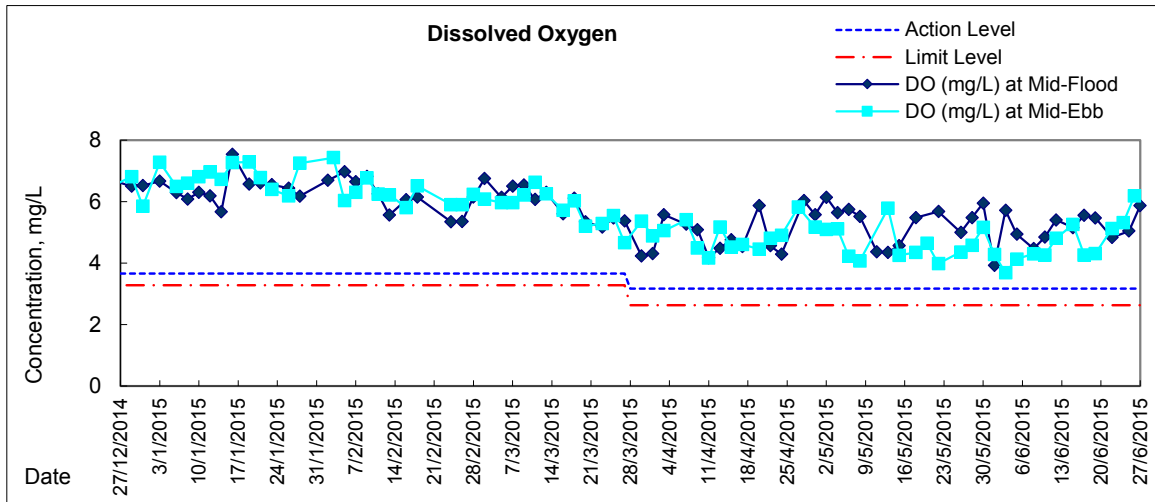


## Graphic Presentation of Water Quality Result of P4 - SOC



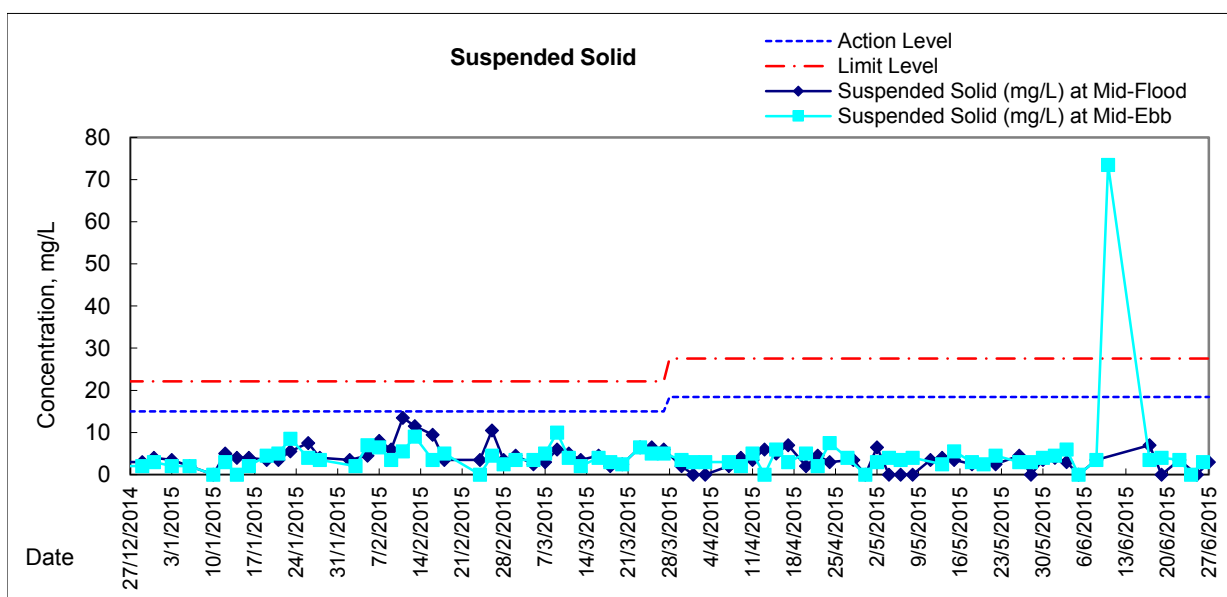
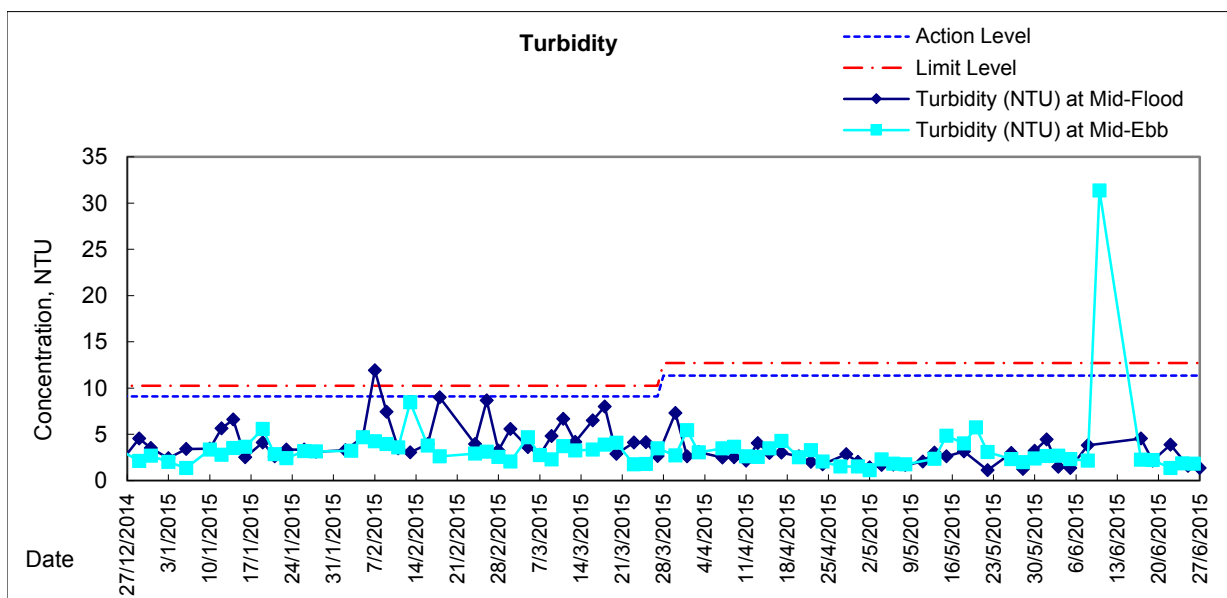
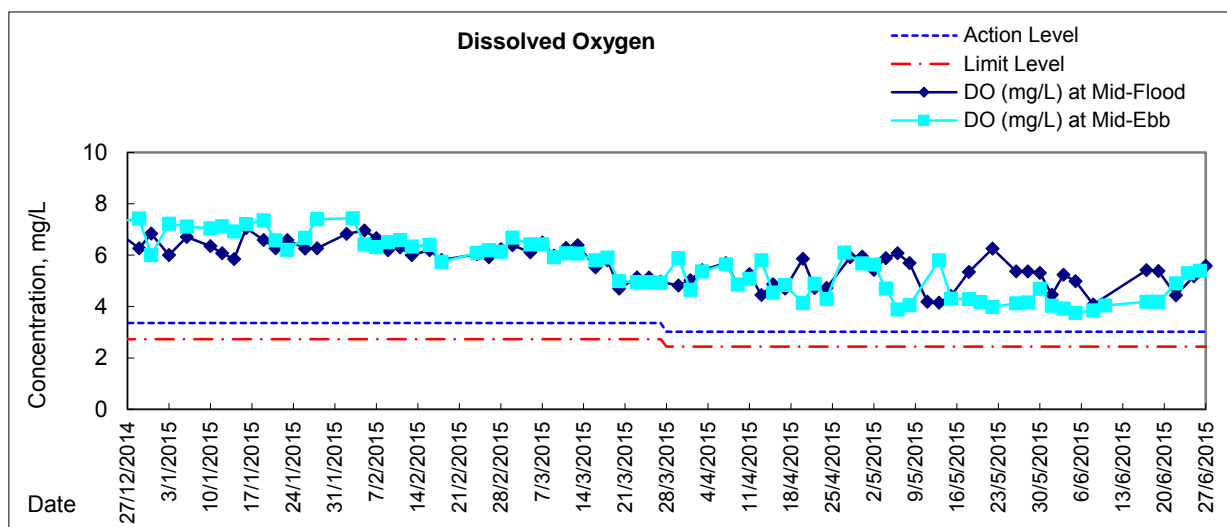


## Graphic Presentation of Water Quality Result of RW21-P789 - GEC/CRC/SHK





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



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

Data Collection Summary																			
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C		-		ppt		%		mg/L						
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
28/5/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	20:43		Middle	1.5	27.10	27.10	27.1	7.77	7.78	7.8	22.82	22.82	22.8	63.2	63.5	63.4	4.42	4.44	4.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:15		Middle	1.5	28.00	28.00	28.0	8.17	8.17	8.2	24.25	24.25	24.3	70.9	70.6	70.8	4.84	4.81	4.83
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:30		Middle	1.5	26.70	26.70	26.7	8.26	8.26	8.3	25.93	25.93	25.9	55.5	55.3	55.4	3.84	3.83	3.84
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:23		Middle	1.0	28.60	28.60	28.6	8.01	8.01	8.0	27.35	27.35	27.4	61.3	62.2	61.8	4.09	4.15	4.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:19		Middle	1.5	26.80	26.80	26.8	7.79	7.79	7.8	23.81	23.81	23.8	44.2	44.3	44.3	3.09	3.10	3.10
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:17		Middle	1.5	26.90	26.90	26.9	8.06	8.06	8.1	28.20	28.20	28.2	55.3	56.3	55.8	3.76	3.83	3.80
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:40		Middle	1.5	28.20	28.20	28.2	8.19	8.19	8.2	27.07	27.07	27.1	73.4	74.5	74.0	4.92	4.99	4.96
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:07		Middle	1.5	28.00	28.00	28.0	8.14	8.14	8.1	25.19	25.19	25.2	55.6	54.4	55.0	3.78	3.70	3.74
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:23		Middle	1.5	29.70	29.70	29.7	8.28	8.28	8.3	27.70	27.70	27.7	77.0	79.3	78.2	4.99	5.11	5.05
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:01		Middle	1.5	27.10	27.10	27.1	8.07	8.07	8.1	25.33	25.33	25.3	65.9	63.9	64.9	4.54	4.41	4.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:48		Middle	1.5	27.20	27.20	27.2	8.17	8.17	8.2	26.30	26.30	26.3	67.7	68.3	68.0	4.64	4.68	4.66
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:15		Middle	1.5	27.10	27.10	27.1	8.23	8.23	8.2	23.42	23.42	23.4	64.1	64.3	64.2	4.47	4.40	4.44
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1:55		Middle	1.0	27.50	27.50	27.5	8.10	8.10	8.1	20.39	20.39	20.4	53.7	54.0	53.9	3.78	3.80	3.79
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2:06		Middle	1.5	27.90	27.90	27.9	7.99	7.99	8.0	20.34	20.34	20.3	66.4	66.8	66.6	4.65	4.68	4.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Data Collection Log - Q2 2015																			
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C		-		ppt		%		mg/L						
			m		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
28/5/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	20:15		Middle	1.0	27.10	27.10	27.1	8.12	8.12	8.1	14.66	14.66	14.7	53.9	52.7	53.3	3.95	3.87	3.91
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:13		Middle	1.5	27.70	27.70	27.7	8.41	8.41	8.4	23.34	23.34	23.3	74.5	76.0	75.3	5.14	5.25	5.20
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:05		Middle	1.5	26.50	26.50	26.5	8.29	8.29	8.3	26.93	26.93	26.9	46.4	46.5	46.5	3.21	3.21	3.21
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:15		Middle	1.0	27.20	27.20	27.2	8.12	8.12	8.1	18.06	18.06	18.1	46.3	47.0	46.7	3.26	3.31	3.29
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:01		Middle	1.0	27.10	27.10	27.1	7.98	7.98	8.0	22.62	22.62	22.6	51.4	53.2	52.3	3.62	3.70	3.66
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:05		Middle	1.5	26.40	26.40	26.4	8.09	8.09	8.1	25.97	25.97	26.0	44.4	44.8	44.6	3.09	3.11	<u>3.10</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:10		Middle	1.5	27.40	27.40	27.4	8.11	8.11	8.1	23.63	23.63	23.6	39.6	39.9	39.8	2.74	2.75	<u>2.75</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:50		Middle	1.5	27.80	27.80	27.8	8.29	8.29	8.3	14.23	14.23	14.2	47.5	47.3	47.4	3.45	3.43	3.44
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:50		Middle	1.5	27.70	27.70	27.7	8.31	8.31	8.3	26.67	26.67	26.7	69.0	68.9	69.0	4.67	4.66	4.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:43		Middle	1.0	27.10	27.10	27.1	8.17	8.17	8.2	26.57	26.57	26.6	64.6	67.5	66.1	4.43	4.63	4.53
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:14		Middle	1.5	27.10	27.10	27.1	8.23	8.23	8.2	18.27	18.27	18.3	60.7	61.9	61.3	4.20	4.29	4.25
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:00		Middle	1.5	27.30	27.30	27.3	8.43	8.43	8.4	16.02	16.02	16.0	59.7	60.7	60.2	4.33	4.41	4.37
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1:32		Middle	1.0	27.60	27.60	27.6	8.28	8.28	8.3	17.83	17.83	17.8	50.9	51.6	51.3	3.63	3.68	3.66
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:50		Middle	1.0	28.20	28.20	28.2	8.31	8.31	8.3	18.72	18.72	18.7	64.2	65.0	64.6	4.78	4.83	4.81
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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



Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH		Salinity		DO Saturation		DO	
			m		°C		Average	-		ppt		%		mg/L	
					Value			Value	Average	Value	Average	Value	Average	Value	Average
28/5/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
30/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
1/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
3/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
5/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
8/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
12/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
15/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
17/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
19/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
22/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
25/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-
27/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C		Average	-		Average	ppt		Average	%		Average	mg/L		
			m	Value	Value	Value		Average	Value		Average	Value		Average	Value		Average		
28/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:40		Middle	2	26.70	26.70	26.7	8.04	8.04	8.0	26.12	26.12	26.1	57.6	57.9	57.8	3.98	4.00	3.99
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:25		Middle	2	27.70	27.70	27.7	8.07	8.07	8.1	23.62	23.62	23.6	55.5	55.6	55.6	3.83	3.83	3.83
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:51		Middle	2	27.00	27.00	27.0	8.10	8.10	8.1	23.28	23.28	23.3	53.3	52.7	53.0	3.72	3.69	3.71
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:37		Middle	2	27.80	27.80	27.8	8.10	8.10	8.1	25.89	25.89	25.9	45.7	44.8	45.3	3.11	3.05	3.08
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:22		Middle	2	27.50	27.50	27.5	8.03	8.03	8.0	27.62	27.62	27.6	52.0	51.7	51.9	3.52	3.60	3.56
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:37		Middle	2	27.60	27.60	27.6	8.16	8.16	8.2	28.19	28.18	28.2	50.3	49.7	50.0	3.39	3.35	3.37
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:36		Middle	2	27.70	27.70	27.7	8.26	8.26	8.3	26.41	26.41	26.4	59.8	59.7	59.8	4.05	4.05	4.05
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:14		Middle	2	27.60	27.60	27.6	8.20	8.20	8.2	23.26	23.26	23.3	68.4	68.7	68.6	4.73	4.75	4.74
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:25		Middle	2	28.00	28.00	28.0	8.25	8.25	8.3	27.57	27.57	27.6	74.7	73.9	74.3	4.99	4.94	4.97
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:35		Middle	2	27.10	27.10	27.1	8.09	8.09	8.1	29.28	29.28	29.3	62.0	63.2	62.6	4.18	4.26	4.22
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:34		Middle	2	29.10	29.10	29.1	8.14	8.14	8.1	27.07	27.07	27.1	64.9	63.0	64.0	4.30	4.18	4.24
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:15		Middle	2	27.30	27.30	27.3	8.36	8.36	8.4	23.63	23.63	23.6	71.1	70.8	71.0	4.93	4.92	4.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:05		Middle	2	27.70	27.70	27.7	8.25	8.25	8.3	24.26	24.26	24.3	78.1	79.2	78.7	5.35	5.43	5.39
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:25		Middle	1	28.00	28.00	28.0	8.18	8.18	8.2	21.36	21.38	21.4	76.7	77.1	76.9	5.28	5.30	5.29
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C			-			ppt			%			mg/L		
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
28/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:16		Middle	1.5	26.40	26.40	26.4	8.12	8.12	8.1	18.09	18.09	18.1	43.7	42.7	43.2	3.18	3.10	<u>3.14</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:10		Middle	1.5	27.40	27.40	27.4	8.24	8.24	8.2	23.60	23.60	23.6	61.6	61.2	61.4	4.27	4.25	4.26
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:38		Middle	1.5	26.70	26.70	26.7	8.26	8.26	8.3	22.00	22.00	22.0	46.4	45.7	46.1	3.28	3.23	3.26
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:21		Middle	1.5	27.10	27.10	27.1	8.13	8.13	8.1	25.74	25.74	25.7	46.9	46.8	46.9	3.22	3.22	3.22
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:07		Middle	1.5	26.70	26.70	26.7	8.10	8.10	8.1	28.33	28.33	28.3	41.6	40.3	41.0	2.84	2.76	<u>2.80</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:26		Middle	1.5	27.10	27.10	27.1	8.24	8.24	8.2	27.03	27.03	27.0	56.9	56.7	56.8	3.89	3.80	3.85
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:40		Middle	1.5	27.40	27.40	27.4	8.35	8.35	8.4	21.67	21.67	21.7	54.8	53.5	54.2	3.87	3.75	3.81
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:00		Middle	1.5	27.00	27.00	27.0	8.31	8.31	8.3	15.75	15.75	15.8	56.9	55.9	56.4	4.15	4.07	4.11
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:20		Middle	1.5	27.20	27.20	27.2	8.24	8.24	8.2	26.94	26.94	26.9	68.0	66.4	67.2	4.60	4.47	4.54
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:19		Middle	1.5	26.90	26.90	26.9	8.18	8.18	8.2	24.90	24.90	24.9	39.9	40.0	40.0	2.76	2.77	<u>2.77</u>
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:04		Middle	1.5	27.40	27.50	27.5	8.25	8.24	8.2	22.73	22.73	22.7	47.4	46.6	47.0	3.29	3.24	3.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:55		Middle	1.5	27.70	27.70	27.7	8.41	8.41	8.4	19.11	19.11	19.1	81.2	80.3	80.8	5.74	5.65	5.70
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:40		Middle	1.5	27.60	27.60	27.6	8.30	8.30	8.3	23.74	23.74	23.7	61.1	61.7	61.4	4.21	4.26	4.24
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:17		Middle	1.0	28.10	28.10	28.1	8.47	8.47	8.5	17.07	17.07	17.1	65.3	65.0	65.2	4.65	4.62	4.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

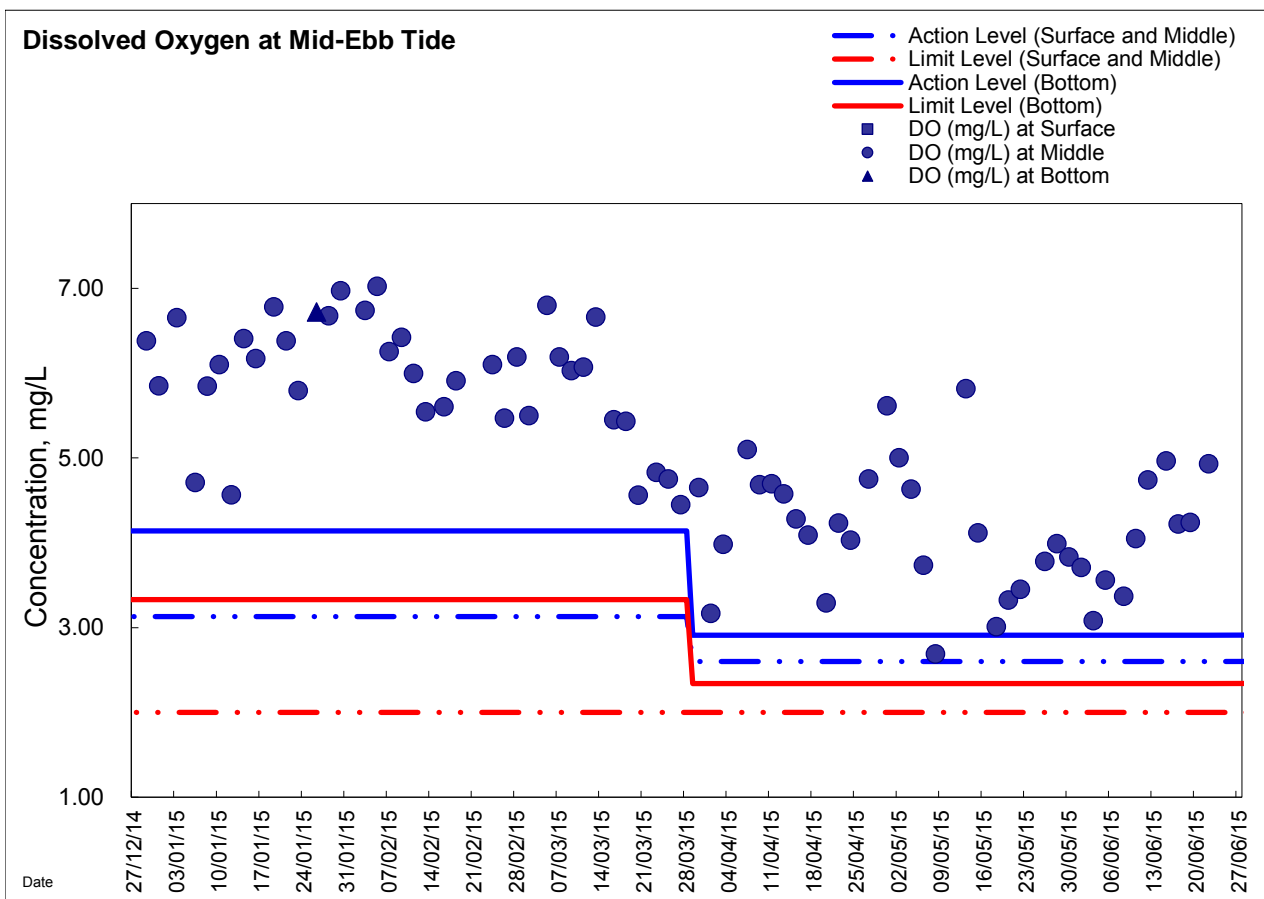
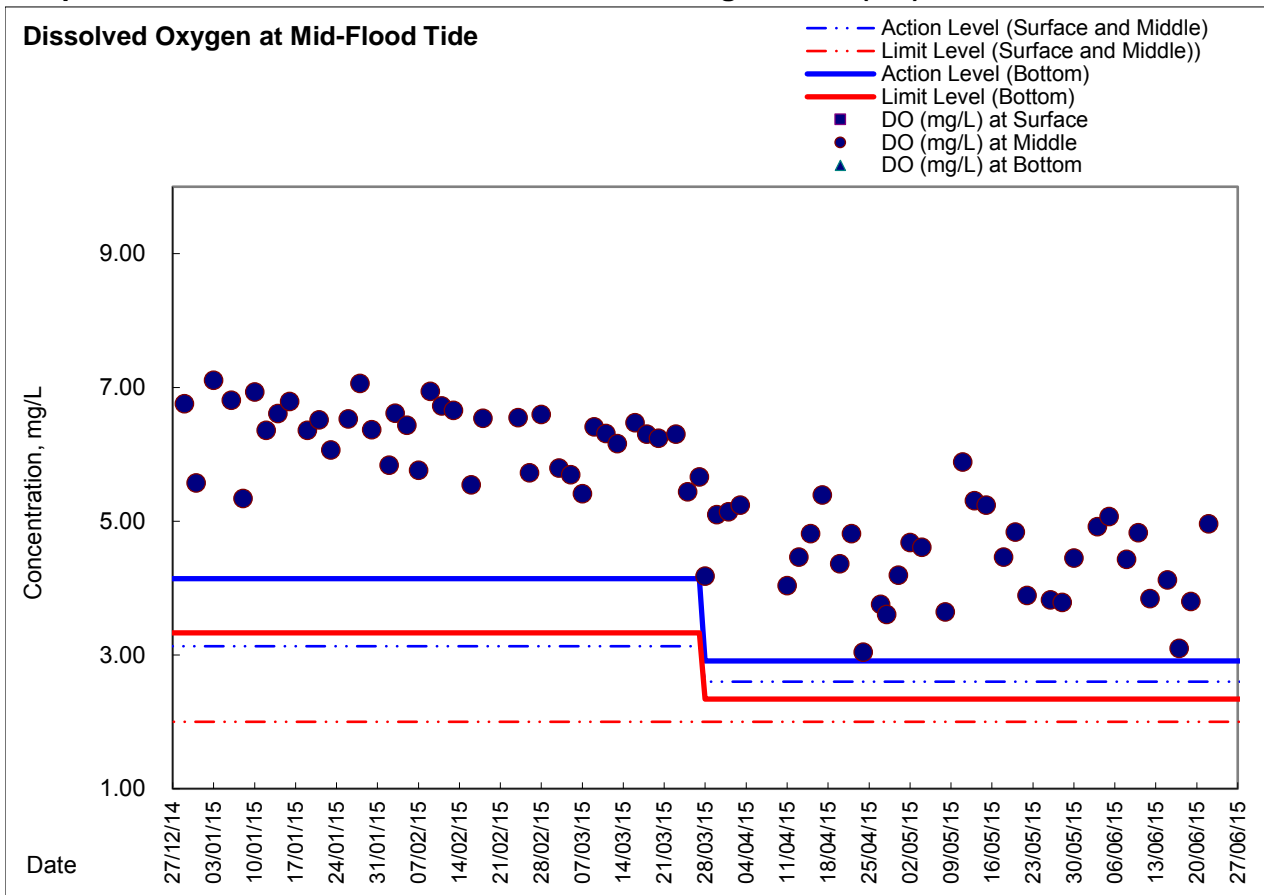
# Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C		-		ppt		%		mg/L						
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
28/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30/5/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/6/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

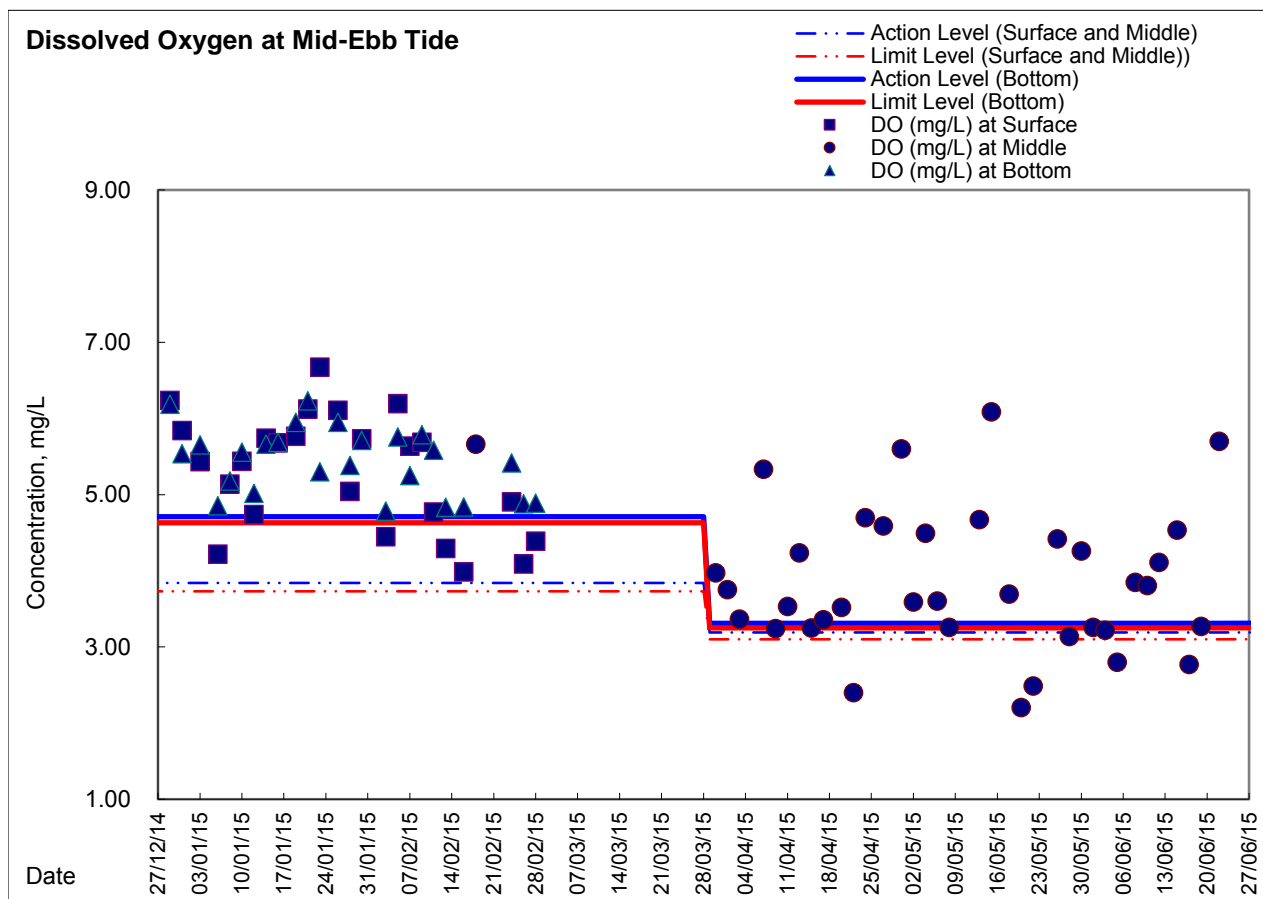
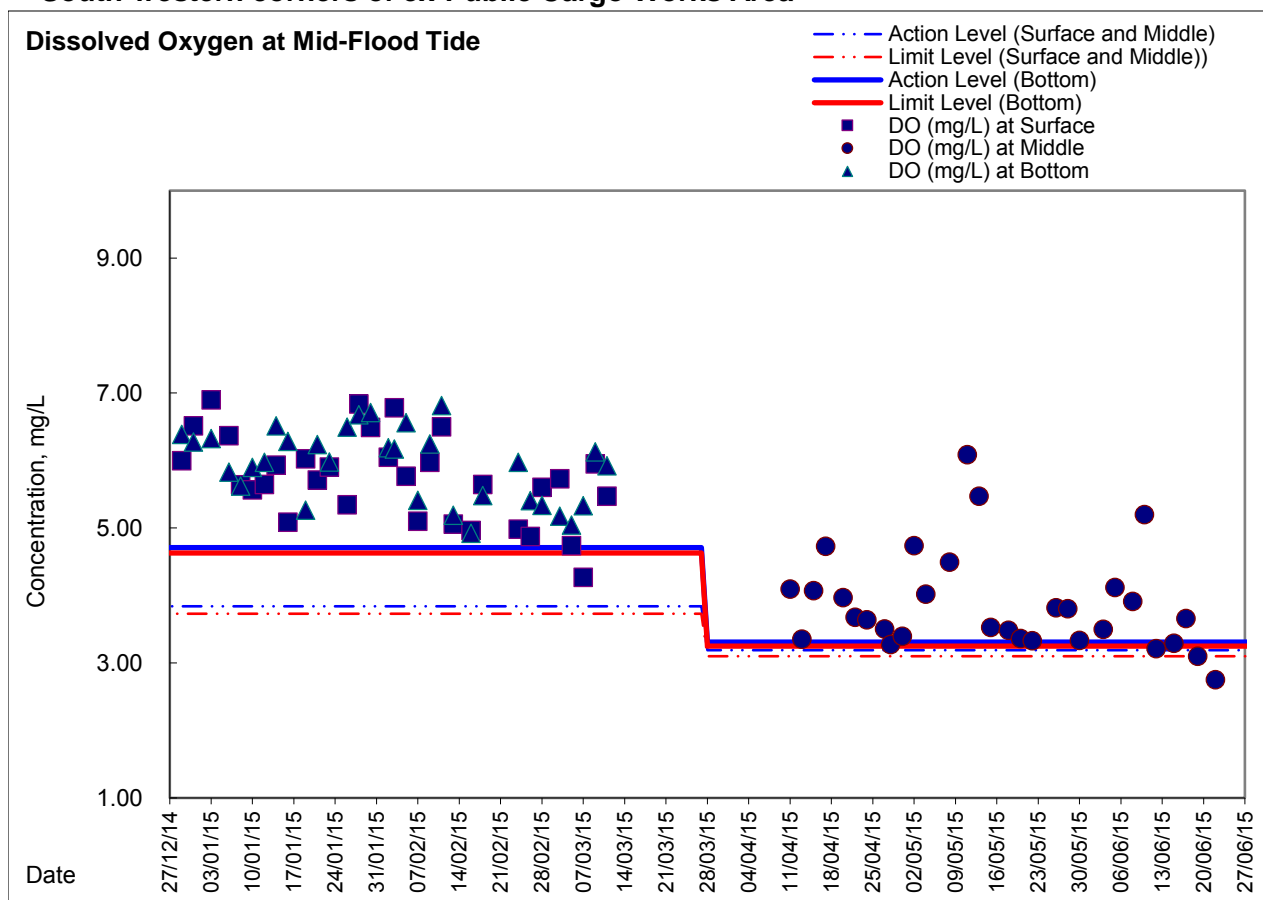


## Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel





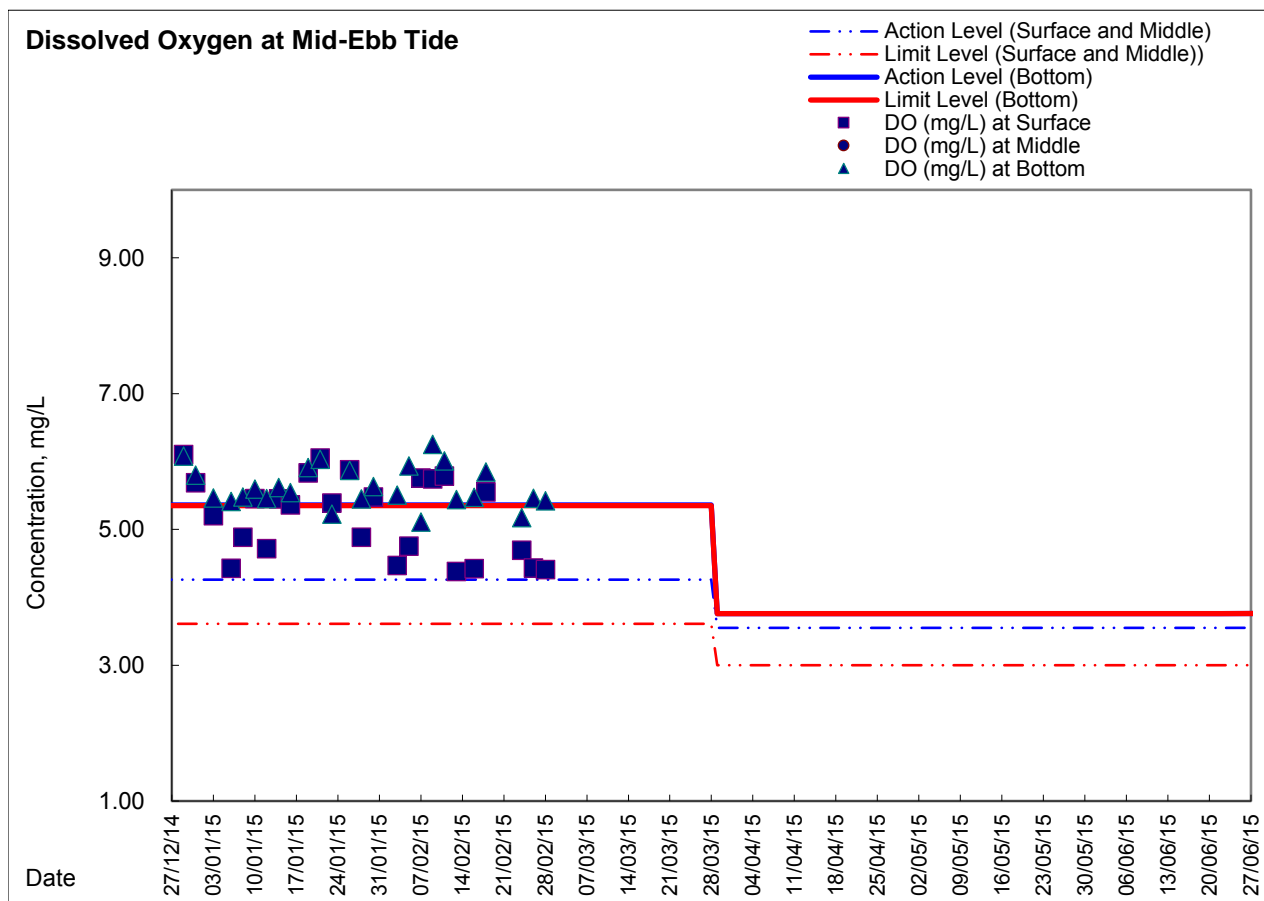
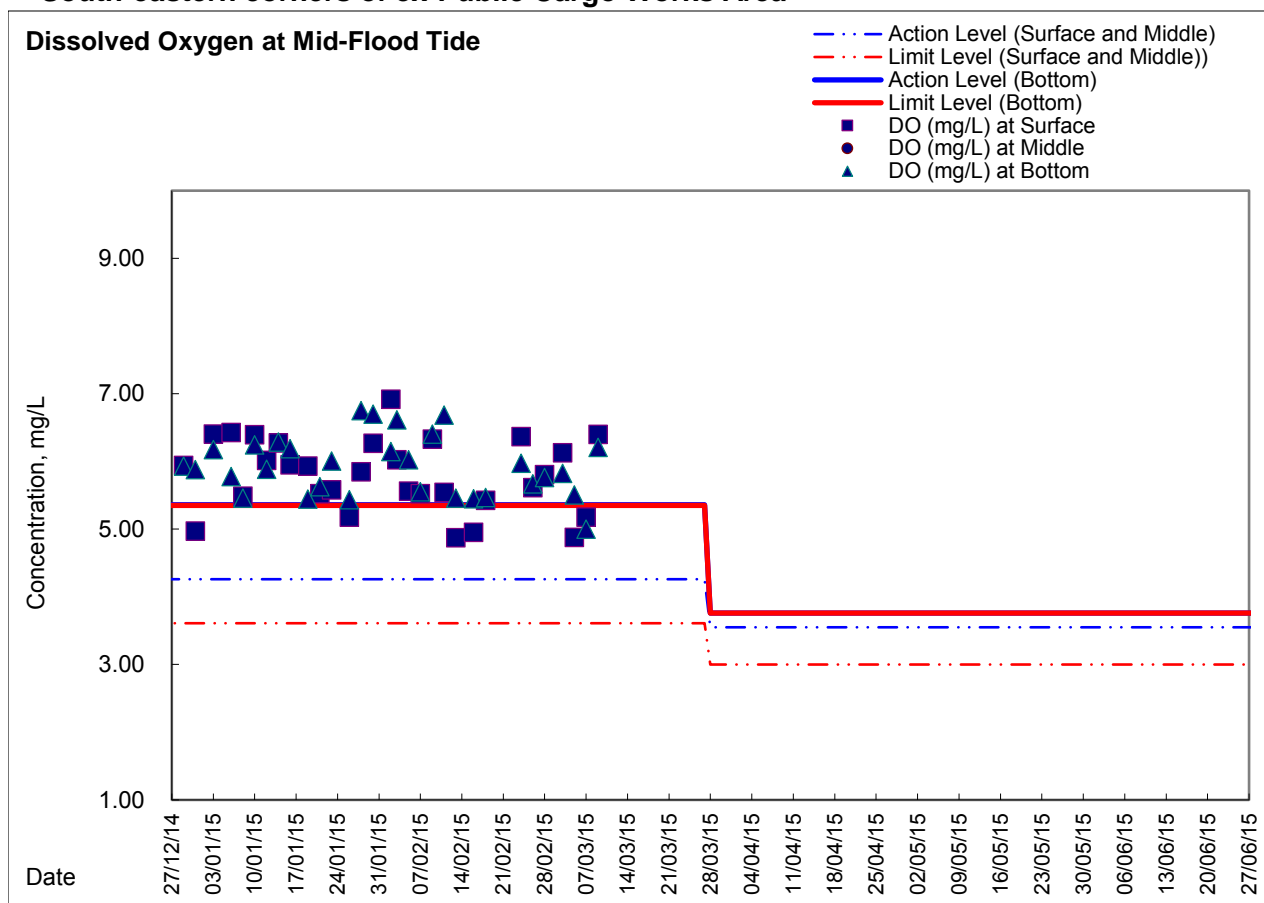
**Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW**  
**- South-western corners of ex-Public Cargo Works Area**







## 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)											
Normal Day 07:00-19:00		2/6/2015 12:01	64	6/6/2015 18:31	63	12/6/2015 13:01	61	18/6/2015 7:31	63	24/6/2015 14:01	75		
		2/6/2015 12:31	63	8/6/2015 7:01	61	12/6/2015 13:31	68	18/6/2015 8:01	60	24/6/2015 14:31	74		
		2/6/2015 13:01	60	8/6/2015 7:31	62	12/6/2015 14:01	64	18/6/2015 8:31	66	24/6/2015 15:01	74		
28/5/2015 7:01	62	2/6/2015 13:31	67	8/6/2015 8:01	57	12/6/2015 14:31	67	18/6/2015 9:01	64	24/6/2015 15:31	74		
28/5/2015 7:31	62	2/6/2015 14:01	69	8/6/2015 8:31	69	12/6/2015 15:01	67	18/6/2015 9:31	67	24/6/2015 16:01	74		
28/5/2015 8:01	72	2/6/2015 14:31	65	8/6/2015 9:01	70	12/6/2015 15:31	67	18/6/2015 10:01	71	24/6/2015 16:31	73		
28/5/2015 8:31	74	2/6/2015 15:01	66	8/6/2015 9:31	69	12/6/2015 16:01	67	18/6/2015 10:31	72	24/6/2015 17:01	72		
28/5/2015 9:01	72	2/6/2015 15:31	63	8/6/2015 10:01	66	12/6/2015 16:31	69	18/6/2015 11:01	73	24/6/2015 17:31	72		
28/5/2015 9:31	72	2/6/2015 16:01	67	8/6/2015 10:31	72	12/6/2015 17:01	66	18/6/2015 11:31	68	24/6/2015 18:01	69		
28/5/2015 10:01	71	2/6/2015 16:31	65	8/6/2015 11:01	71	12/6/2015 17:31	66	18/6/2015 12:01	65	24/6/2015 18:31	52		
28/5/2015 10:31	71	2/6/2015 17:01	62	8/6/2015 11:31	48	12/6/2015 18:01	65	18/6/2015 12:31	65	25/6/2015 7:01	63		
28/5/2015 11:01	72	2/6/2015 17:31	63	8/6/2015 12:01	63	12/6/2015 18:31	64	18/6/2015 13:01	72	25/6/2015 7:31	67		
28/5/2015 11:31	66	2/6/2015 18:01	67	8/6/2015 12:31	67	13/6/2015 7:01	61	18/6/2015 13:31	72	25/6/2015 8:01	70		
28/5/2015 12:01	62	2/6/2015 18:31	63	8/6/2015 13:01	72	13/6/2015 7:31	63	18/6/2015 14:01	72	25/6/2015 8:31	76		
28/5/2015 12:31	63	3/6/2015 7:01	62	8/6/2015 13:31	67	13/6/2015 8:01	67	18/6/2015 14:31	73	25/6/2015 9:01	73		
28/5/2015 13:01	66	3/6/2015 7:31	63	8/6/2015 14:01	68	13/6/2015 8:31	69	18/6/2015 15:01	73	25/6/2015 9:31	73		
28/5/2015 13:31	67	3/6/2015 8:01	65	8/6/2015 14:31	66	13/6/2015 9:01	66	18/6/2015 15:31	73	25/6/2015 10:01	73		
28/5/2015 14:01	67	3/6/2015 8:31	55	8/6/2015 15:01	70	13/6/2015 9:31	68	18/6/2015 16:01	64	25/6/2015 10:31	74		
28/5/2015 14:31	67	3/6/2015 9:01	67	8/6/2015 15:31	69	13/6/2015 10:01	68	18/6/2015 16:31	69	25/6/2015 11:01	71		
28/5/2015 15:01	63	3/6/2015 9:31	58	8/6/2015 16:01	68	13/6/2015 10:31	67	18/6/2015 17:01	71	25/6/2015 11:31	68		
28/5/2015 15:31	65	3/6/2015 10:01	57	8/6/2015 16:31	65	13/6/2015 11:01	69	18/6/2015 17:31	73	25/6/2015 12:01	62		
28/5/2015 16:01	66	3/6/2015 10:31	69	8/6/2015 17:01	65	13/6/2015 11:31	66	18/6/2015 18:01	69	25/6/2015 12:31	70		
28/5/2015 16:31	62	3/6/2015 11:01	64	8/6/2015 17:31	64	13/6/2015 12:01	66	18/6/2015 18:31	67	25/6/2015 13:01	71		
28/5/2015 17:01	65	3/6/2015 11:31	65	8/6/2015 18:01	67	13/6/2015 12:31	66	19/6/2015 7:01	62	25/6/2015 13:31	70		
28/5/2015 17:31	62	3/6/2015 12:01	63	8/6/2015 18:31	67	13/6/2015 13:01	65	19/6/2015 7:31	65	25/6/2015 14:01	71		
28/5/2015 18:01	64	3/6/2015 12:31	63	9/6/2015 7:01	61	13/6/2015 13:31	69	19/6/2015 8:01	68	25/6/2015 14:31	71		
28/5/2015 18:31	63	3/6/2015 13:01	67	9/6/2015 7:31	62	13/6/2015 14:01	68	19/6/2015 8:31	72	25/6/2015 15:01	71		
29/5/2015 7:01	62	3/6/2015 13:31	67	9/6/2015 8:01	66	13/6/2015 14:31	67	19/6/2015 9:01	72	25/6/2015 15:31	71		
29/5/2015 7:31	63	3/6/2015 14:01	66	9/6/2015 8:31	69	13/6/2015 15:01	67	19/6/2015 9:31	73	25/6/2015 16:01	71		
29/5/2015 8:01	67	3/6/2015 14:31	67	9/6/2015 9:01	70	13/6/2015 15:31	68	19/6/2015 10:01	70	25/6/2015 16:31	71		
29/5/2015 8:31	71	3/6/2015 15:01	67	9/6/2015 9:31	69	13/6/2015 16:01	69	19/6/2015 10:31	70	25/6/2015 17:01	69		
29/5/2015 9:01	73	3/6/2015 15:31	68	9/6/2015 10:01	69	13/6/2015 16:31	65	19/6/2015 11:01	72	25/6/2015 17:31	68		
29/5/2015 9:31	71	3/6/2015 16:01	68	9/6/2015 10:31	68	13/6/2015 17:01	63	19/6/2015 11:31	72	25/6/2015 18:01	69		
29/5/2015 10:01	70	3/6/2015 16:31	63	9/6/2015 11:01	69	13/6/2015 17:31	66	19/6/2015 12:01	64	25/6/2015 18:31	63		
29/5/2015 10:31	73	3/6/2015 17:01	64	9/6/2015 11:31	62	13/6/2015 18:01	65	19/6/2015 12:31	63	26/6/2015 7:01	55		
29/5/2015 11:01	68	3/6/2015 17:31	67	9/6/2015 12:01	66	13/6/2015 18:31	64	19/6/2015 13:01	71	26/6/2015 7:31	65		
29/5/2015 11:31	67	3/6/2015 18:01	66	9/6/2015 12:31	53	15/6/2015 7:01	62	19/6/2015 13:31	73	26/6/2015 8:01	69		
29/5/2015 12:01	63	3/6/2015 18:31	64	9/6/2015 13:01	62	15/6/2015 7:31	62	19/6/2015 14:01	70	26/6/2015 8:31	74		
29/5/2015 12:31	64	4/6/2015 7:01	62	9/6/2015 13:31	69	15/6/2015 8:01	68	19/6/2015 14:31	71	26/6/2015 9:01	73		
29/5/2015 13:01	63	4/6/2015 7:31	61	9/6/2015 14:01	68	15/6/2015 8:31	71	19/6/2015 15:01	71	26/6/2015 9:31	71		
29/5/2015 13:31	68	4/6/2015 8:01	63	9/6/2015 14:31	68	15/6/2015 9:01	71	19/6/2015 15:31	73	26/6/2015 10:01	70		
29/5/2015 14:01	57	4/6/2015 8:31	66	9/6/2015 15:01	66	15/6/2015 9:31	70	19/6/2015 16:01	70	26/6/2015 10:31	71		
29/5/2015 14:31	55	4/6/2015 9:01	66	9/6/2015 15:31	66	15/6/2015 10:01	68	19/6/2015 16:31	72	26/6/2015 11:01	72		
29/5/2015 15:01	62	4/6/2015 9:31	67	9/6/2015 16:01	65	15/6/2015 10:31	66	19/6/2015 17:01	70	26/6/2015 11:31	71		
29/5/2015 15:31	57	4/6/2015 10:01	66	9/6/2015 16:31	67	15/6/2015 11:01	66	19/6/2015 17:31	69	26/6/2015 12:01	54		
29/5/2015 16:01	67	4/6/2015 10:31	66	9/6/2015 17:01	70	15/6/2015 11:31	54	19/6/2015 18:01	68	26/6/2015 12:31	67		
29/5/2015 16:31	66	4/6/2015 11:01	67	9/6/2015 17:31	66	15/6/2015 12:01	65	19/6/2015 18:31	67	26/6/2015 13:01	73		
29/5/2015 17:01	65	4/6/2015 11:31	66	9/6/2015 18:01	66	15/6/2015 12:31	66	22/6/2015 7:01	62	26/6/2015 13:31	72		
29/5/2015 17:31	64	4/6/2015 12:01	62	9/6/2015 18:31	65	15/6/2015 13:01	61	22/6/2015 7:31	63	26/6/2015 14:01	71		
29/5/2015 18:01	64	4/6/2015 12:31	62	10/6/2015 7:01	63	15/6/2015 13:31	69	22/6/2015 8:01	65	26/6/2015 14:31	70		
29/5/2015 18:31	63	4/6/2015 13:01	64	10/6/2015 7:31	62	15/6/2015 14:01	61	22/6/2015 8:31	74	26/6/2015 15:01	72		
30/5/2015 7:01	58	4/6/2015 13:31	60	10/6/2015 8:01	61	15/6/2015 14:31	60	22/6/2015 9:01	73	26/6/2015 15:31	70		
30/5/2015 7:31	59	4/6/2015 14:01	64	10/6/2015 8:31	70	15/6/2015 15:01	61	22/6/2015 9:31	72	26/6/2015 16:01	71		
30/5/2015 8:01	64	4/6/2015 14:31	56	10/6/2015 9:01	68	15/6/2015 15:31	67	22/6/2015 10:01	72	26/6/2015 16:31	69		
30/5/2015 8:31	67	4/6/2015 15:01	65	10/6/2015 9:31	61	15/6/2015 16:01	63	22/6/2015 10:31	72	26/6/2015 17:01	71		
30/5/2015 9:01	66	4/6/2015 15:31	60	10/6/2015 10:01	64	15/6/2015 16:31	64	22/6/2015 11:01	72	26/6/2015 17:31	71		
30/5/2015 9:31	58	4/6/2015 16:01	67	10/6/2015 10:31	66	15/6/2015 17:01	65	22/6/2015 11:31	69	26/6/2015 18:01	70		
30/5/2015 10:01	54	4/6/2015 16:31	60	10/6/2015 11:01	59	15/6/2015 17:31	61	22/6/2015 12:01	66	26/6/2015 18:31	66		
30/5/2015 10:31	66	4/6/2015 17:01	70	10/6/2015 11:31	67	15/6/2015 18:01	63	22/6/2015 12:31	64	27/6/2015 7:01	61		
30/5/2015 11:01	62	4/6/2015 17:31	69	10/6/2015 12:01	65	15/6/2015 18:31	67	22/6/2015 13:01	72	27/6/2015 7:31	66		
30/5/2015 11:31	67	4/6/2015 18:01	66	10/6/2015 12:31	66	16/6/2015 7:01	62	22/6/2015 13:31	71	27/6/2015 8:01	70		
30/5/2015 12:01	60	4/6/2015 18:31	67	10/6/2									

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
28/5/2015 20:51	61	30/5/2015 21:56	59	31/5/2015 15:01	59	1/6/2015 20:06	53	3/6/2015 21:11	61	5/6/2015 22:16	62		
28/5/2015 20:56	62	30/5/2015 22:01	58	31/5/2015 15:06	60	1/6/2015 20:11	53	3/6/2015 21:16	48	5/6/2015 22:21	40		
28/5/2015 21:01	62	30/5/2015 22:06	59	31/5/2015 15:11	59	1/6/2015 20:16	62	3/6/2015 21:21	51	5/6/2015 22:26	61		
28/5/2015 21:06	62	30/5/2015 22:11	59	31/5/2015 15:16	58	1/6/2015 20:21	62	3/6/2015 21:26	61	5/6/2015 22:31	61		
28/5/2015 21:11	59	30/5/2015 22:16	59	31/5/2015 15:21	59	1/6/2015 20:26	62	3/6/2015 21:31	52	5/6/2015 22:36	61		
28/5/2015 21:16	62	30/5/2015 22:21	59	31/5/2015 15:26	60	1/6/2015 20:31	62	3/6/2015 21:36	61	5/6/2015 22:41	61		
28/5/2015 21:21	62	30/5/2015 22:26	59	31/5/2015 15:31	60	1/6/2015 20:36	61	3/6/2015 21:41	62	5/6/2015 22:46	61		
28/5/2015 21:26	61	30/5/2015 22:31	59	31/5/2015 15:36	60	1/6/2015 20:41	49	3/6/2015 21:46	62	5/6/2015 22:51	61		
28/5/2015 21:31	61	30/5/2015 22:36	59	31/5/2015 15:41	59	1/6/2015 20:46	52	3/6/2015 21:51	61	5/6/2015 22:56	61		
28/5/2015 21:36	44	30/5/2015 22:41	59	31/5/2015 15:46	60	1/6/2015 20:51	61	3/6/2015 21:56	55	6/6/2015 19:01	55		
28/5/2015 21:41	62	30/5/2015 22:46	59	31/5/2015 15:51	59	1/6/2015 20:56	62	3/6/2015 22:01	62	6/6/2015 19:06	55		
28/5/2015 21:46	61	30/5/2015 22:51	58	31/5/2015 15:56	59	1/6/2015 21:01	61	3/6/2015 22:06	61	6/6/2015 19:11	54		
28/5/2015 21:51	61	30/5/2015 22:56	59	31/5/2015 16:01	59	1/6/2015 21:06	62	3/6/2015 22:11	61	6/6/2015 19:16	62		
28/5/2015 21:56	61	31/5/2015 7:01	57	31/5/2015 16:06	59	1/6/2015 21:11	61	3/6/2015 22:16	49	6/6/2015 19:21	49		
28/5/2015 22:01	62	31/5/2015 7:06	58	31/5/2015 16:11	59	1/6/2015 21:16	62	3/6/2015 22:21	43	6/6/2015 19:26	48		
28/5/2015 22:06	61	31/5/2015 7:11	58	31/5/2015 16:16	59	1/6/2015 21:21	62	3/6/2015 22:26	61	6/6/2015 19:31	51		
28/5/2015 22:11	62	31/5/2015 7:16	57	31/5/2015 16:21	59	1/6/2015 21:26	61	3/6/2015 22:31	61	6/6/2015 19:36	61		
28/5/2015 22:16	62	31/5/2015 7:21	58	31/5/2015 16:26	59	1/6/2015 21:31	61	3/6/2015 22:36	61	6/6/2015 19:41	43		
28/5/2015 22:21	62	31/5/2015 7:26	55	31/5/2015 16:31	59	1/6/2015 21:36	61	3/6/2015 22:41	61	6/6/2015 19:46	47		
28/5/2015 22:26	61	31/5/2015 7:31	57	31/5/2015 16:36	59	1/6/2015 21:41	62	3/6/2015 22:46	60	6/6/2015 19:51	43		
28/5/2015 22:31	61	31/5/2015 7:36	57	31/5/2015 16:41	59	1/6/2015 21:46	62	3/6/2015 22:51	61	6/6/2015 19:56	51		
28/5/2015 22:36	61	31/5/2015 7:41	58	31/5/2015 16:46	59	1/6/2015 21:51	51	3/6/2015 22:56	61	6/6/2015 20:01	51		
28/5/2015 22:41	62	31/5/2015 7:46	58	31/5/2015 16:51	59	1/6/2015 21:56	62	4/6/2015 19:01	58	6/6/2015 20:06	61		
28/5/2015 22:46	61	31/5/2015 7:51	59	31/5/2015 16:56	59	1/6/2015 22:01	61	4/6/2015 19:06	58	6/6/2015 20:11	51		
28/5/2015 22:51	61	31/5/2015 7:56	57	31/5/2015 17:01	59	1/6/2015 22:06	61	4/6/2015 19:11	57	6/6/2015 20:16	62		
28/5/2015 22:56	61	31/5/2015 8:01	58	31/5/2015 17:06	59	1/6/2015 22:11	47	4/6/2015 19:16	57	6/6/2015 20:21	61		
29/5/2015 19:01	59	31/5/2015 8:06	59	31/5/2015 17:11	59	1/6/2015 22:16	61	4/6/2015 19:21	56	6/6/2015 20:26	61		
29/5/2015 19:06	61	31/5/2015 8:11	59	31/5/2015 17:16	59	1/6/2015 22:21	46	4/6/2015 19:26	54	6/6/2015 20:31	61		
29/5/2015 19:11	58	31/5/2015 8:16	59	31/5/2015 17:21	59	1/6/2015 22:26	61	4/6/2015 19:31	53	6/6/2015 20:36	61		
29/5/2015 19:16	59	31/5/2015 8:21	58	31/5/2015 17:26	59	1/6/2015 22:31	61	4/6/2015 19:36	52	6/6/2015 20:41	61		
29/5/2015 19:21	58	31/5/2015 8:26	59	31/5/2015 17:31	59	1/6/2015 22:36	61	4/6/2015 19:41	55	6/6/2015 20:46	61		
29/5/2015 19:26	59	31/5/2015 8:31	59	31/5/2015 17:36	59	1/6/2015 22:41	61	4/6/2015 19:46	54	6/6/2015 20:51	57		
29/5/2015 19:31	59	31/5/2015 8:36	58	31/5/2015 17:41	59	1/6/2015 22:46	61	4/6/2015 19:51	48	6/6/2015 20:56	61		
29/5/2015 19:36	59	31/5/2015 8:41	59	31/5/2015 17:46	59	1/6/2015 22:51	61	4/6/2015 19:56	50	6/6/2015 21:01	61		
29/5/2015 19:41	60	31/5/2015 8:46	59	31/5/2015 17:51	59	1/6/2015 22:56	60	4/6/2015 20:01	53	6/6/2015 21:06	61		
29/5/2015 19:46	59	31/5/2015 8:51	59	31/5/2015 17:56	59	2/6/2015 19:01	54	4/6/2015 20:06	53	6/6/2015 21:11	61		
29/5/2015 19:51	59	31/5/2015 8:56	59	31/5/2015 18:01	59	2/6/2015 19:06	55	4/6/2015 20:11	62	6/6/2015 21:16	61		
29/5/2015 19:56	59	31/5/2015 9:01	59	31/5/2015 18:06	59	2/6/2015 19:11	54	4/6/2015 20:16	53	6/6/2015 21:21	61		
29/5/2015 20:01	59	31/5/2015 9:06	59	31/5/2015 18:11	59	2/6/2015 19:16	53	4/6/2015 20:21	42	6/6/2015 21:26	61		
29/5/2015 20:06	59	31/5/2015 9:11	60	31/5/2015 18:16	59	2/6/2015 19:21	56	4/6/2015 20:26	62	6/6/2015 21:31	61		
29/5/2015 20:11	59	31/5/2015 9:16	60	31/5/2015 18:21	59	2/6/2015 19:26	43	4/6/2015 20:31	62	6/6/2015 21:36	61		
29/5/2015 20:16	59	31/5/2015 9:21	59	31/5/2015 18:26	59	2/6/2015 19:31	49	4/6/2015 20:36	62	6/6/2015 21:41	61		
29/5/2015 20:21	60	31/5/2015 9:26	60	31/5/2015 18:31	59	2/6/2015 19:36	50	4/6/2015 20:41	49	6/6/2015 21:46	60		
29/5/2015 20:26	59	31/5/2015 9:31	61	31/5/2015 18:36	59	2/6/2015 19:41	54	4/6/2015 20:46	62	6/6/2015 21:51	61		
29/5/2015 20:31	59	31/5/2015 9:36	60	31/5/2015 18:41	58	2/6/2015 19:46	53	4/6/2015 20:51	62	6/6/2015 21:56	61		
29/5/2015 20:36	60	31/5/2015 9:41	60	31/5/2015 18:46	58	2/6/2015 19:51	51	4/6/2015 20:56	61	6/6/2015 22:01	61		
29/5/2015 20:41	59	31/5/2015 9:46	61	31/5/2015 18:51	58	2/6/2015 19:56	62	4/6/2015 21:01	62	6/6/2015 22:06	61		
29/5/2015 20:46	59	31/5/2015 9:51	59	31/5/2015 18:56	58	2/6/2015 20:01	50	4/6/2015 21:06	61	6/6/2015 22:11	61		
29/5/2015 20:51	59	31/5/2015 9:56	59	31/5/2015 19:01	58	2/6/2015 20:06	61	4/6/2015 21:11	62	6/6/2015 22:16	62		
29/5/2015 20:56	59	31/5/2015 10:01	60	31/5/2015 19:06	58	2/6/2015 20:11	62	4/6/2015 21:16	61	6/6/2015 22:21	61		
29/5/2015 21:01	59	31/5/2015 10:06	60	31/5/2015 19:11	59	2/6/2015 20:16	62	4/6/2015 21:21	61	6/6/2015 22:26	62		
29/5/2015 21:06	59	31/5/2015 10:11	59	31/5/2015 19:16	59	2/6/2015 20:21	62	4/6/2015 21:26	61	6/6/2015 22:31	61		
29/5/2015 21:11	59	31/5/2015 10:16	60	31/5/2015 19:21	60	2/6/2015 20:26	57	4/6/2015 21:31	61	6/6/2015 22:36	52		
29/5/2015 21:16	59	31/5/2015 10:21	60	31/5/2015 19:26	59	2/6/2015 20:31	56	4/6/2015 21:36	59	6/6/2015 22:41	54		
29/5/2015 21:21	59	31/5/2015 10:26	59	31/5/2015 19:31	59	2/6/2015 20:36	48	4/6/2015 21:41	62	6/6/2015 22:46	62		
29/5/2015 21:26	59	31/5/2015 10:31	60	31/5/2015 19:36	58	2/6/2015 20:41	62	4/6/2015 21:46	62	6/6/2015 22:51	61		
29/5/2015 21:31	58	31/5/2015 10:36	60	31/5/2015 19:41	59	2/6/2015 20:46	62	4/6/2015 21:51	61	6/6/2015 22:56	57		
29/5/2015 21:36	58	31/5/2015 10:41	60	31/5/2015 19:46	65	2/6/2015 20:51	52	4/6/2015 21:56	61	7/6/2015 7:01	60		
29/5/2015 21:41	59	31/5/2015 10:46	59	31/5/2015 19:51	59	2/6/2015 20:56	61	4/6/2015 22:01	62	7/6/2015 7:06	60		
29/5/2015 21:46	59	31/5/2015 10:51	60	31/5/2015 19:56	59	2/6/2015 21:01	62	4/6/2015 22:06	61	7/6/2015 7:11	60		
29/5/2015 21:51	59	31/5/2015 10:56	59	31/5/2015 20:01	59	2/6/2015 21:06	50	4/6/2015 22:11	61	7/6/2015 7:16	60		
29/5/2015 21:56	59	31/5/2015 11:01	60	31/5/2015 20:06	58	2/6/2015 21:11	61	4/6/2015 22:16	61	7/6/2015 7:21	64		
29/5/2015 22:01	59	31/5/2015 11:06	61	31/5/2015 20:11	58	2/6/2015 21:16	62	4/6/2015 22:21	61	7/6/2015 7:26	60		
29/5/2015 22:06	59	31/5/2015 11:11	60	31/5/2015 20:16	58	2/6/2015 21:21	62	4/6/2015 22:26	61	7/6/2015 7:31	60		
29/5/2015 22:11	58	31/5/2015 11:16	59	31/5/2015 20:21	59	2/6/2015 21:26	62	4/6/2015 22:31	61	7/6/2015 7:36	61		
29/5/2015 22:16	58	31/5/2015 11:21	59	31/5/2015 20:26	58	2/6/2015 21:31	62	4/6/2015 22:36	61	7/6/2015 7:41	61		
29/5/2015 22:21	58	31/5/2015 11:26	59	31/5/2015 20:31	58	2/6/2015 21:36	62	4/6/2015 22:41	61	7/6/2015 7:46	60		
29/5/2015 22:26	59	31/5/2015 11:31	58	31/5/2015 20:36	58	2/6/2015 21:41	59	4/6/2015 22:46	61	7/6/2015 7:51	61		
29/5/2015 22:31	58	31/5/2015 11:36	59	31/5/2015 20:41	58	2/6/2015 21:46	62	4/6/2015 22:51	61	7/6/2015 7:56	61		
29/5/2015 22:36	59	31/5/2015 11:41	59	31/5/2015 20:46	58	2/6/2015 21:51	62	4/6/2015 22:56	61	7/6/2015 8:01	61		
29/5/2015 22:41	59	31/5/2015 11:46	59	31/5/2015 20:51	58	2/6/2015 21:56	62	5/6/2015 19:01	54	7/6/2015 8:06	61		
29/5/2015 22:46	58	31/5/2015 11:51	60	31/5/2015 20:56	59	2/6/2015							

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
7/6/2015 11:21	62	7/6/2015 20:26	49	9/6/2015 21:31	49	11/6/2015 22:36	61	14/6/2015 7:41	60	14/6/2015 16:46	46
7/6/2015 11:26	62	7/6/2015 20:31	62	9/6/2015 21:36	61	11/6/2015 22:41	61	14/6/2015 7:46	61	14/6/2015 16:51	54
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7/6/2015 17:21	62	8/6/2015 22:26	61	11/6/2015 19:31	61	13/6/2015 20:36	61	14/6/2015 13:41	51	14/6/2015 22:46	61
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7/6/2015 17:31	62	8/6/2015									

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
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16/6/2015 21:36	61	18/6/2015 22:41	62	20/6/2015 11:46	48	20/6/2015 20:51	62	21/6/2015 13:56	55	22/6/2015 19:01	60
16/6/2015 21:41	62	18/6/2015 22:46	62	20/6/2015 11:51	50	20/6/2015 20:56	61	21/6/2015 14:01	55	22/6/2015 19:06	52
16/6/2015 21:46	61	18/6/2015 22:51	61	20/6/2015 11:56	56	20/6/2015 21:01	62	21/6/2015 14:06	56	22/6/2015 19:11	55
16/6/2015 21:51	55	18/6/2015 22:56	51	20/6/2015 12:01	53	20/6/2015 21:06	61	21/6/2015 14:11	55	22/6/2015 19:16	58
16/6/2015 21:56	61	19/6/2015 19:01	58	20/6/2015 12:06	57	20/6/2015 21:11	61	21/6/2015 14:16	55	22/6/2015 19:21	57
16/6/2015 22:01	61	19/6/2015 19:06	56	20/6/2015 12:11	47	20/6/2015 21:16	61	21/6/2015 14:21	54	22/6/2015 19:26	57
16/6/2015 22:06	61	19/6/2015 19:11	55	20/6/2015 12:16	48	20/6/2015 21:21	61	21/6/2015 14:26	52	22/6/2015 19:31	54
16/6/2015 22:11	61	19/6/2015 19:16	49	20/6/2015 12:21	58	20/6/2015 21:26	60	21/6/2015 14:31	60	22/6/2015 19:36	55
16/6/2015 22:16	61	19/6/2015 19:21	61	20/6/2015 12:26	59	20/6/2015 21:31	60	21/6/2015 14:36	66	22/6/2015 19:41	55
16/6/2015 22:21	52	19/6/2015 19:26	62	20/6/2015 12:31	58	20/6/2015 21:36	61	21/6/2015 14:41	68	22/6/2015 19:46	56
16/6/2015 22:26	61	19/6/2015 19:31	62	20/6/2015 12:36	58	20/6/2015 21:41	61	21/6/2015 14:46	68	22/6/2015 19:51	57
16/6/2015 22:31	61	19/6/2015 19:36	51	20/6/2015 12:41	57	20/6/2015 21:46	61	21/6/2015 14:51	65	22/6/2015 19:56	58
16/6/2015 22:36	61	19/6/2015 19:41	53	20/6/2015 12:46	58	20/6/2015 21:51	61	21/6/2015 14:56	61	22/6/2015 20:01	50
16/6/2015 22:41	61	19/6/2015 19:46	55	20/6/2015 12:51	60	20/6/2015 21:56	51	21/6/2015 15:01	59	22/6/2015 20:06	55
16/6/2015 22:46	61	19/6/2015 19:51	56	20/6/2015 12:56	58	20/6/2015 22:01	62	21/6/2015 15:06	63	22/6/2015 20:11	55
16/6/2015 22:51	61	19/6/2015 19:56	57	20/6/2015 13:01	58	20/6/2015 22:06	62	21/6/2015 15:11	59	22/6/2015 20:16	56
16/6/2015 22:56	61	19/6/2015 20:01	59	20/6/2015 13:06	56	20/6/2015 22:11	61	21/6/2015 15:16	56	22/6/2015 20:21	54
17/6/2015 19:01	63	19/6/2015 20:06	57	20/6/2015 13:11	53	20/6/2015 22:16	50	21/6/2015 15:21	56	22/6/2015 20:26	56
17/6/2015 19:06	62	19/6/2015 20:11	51	20/6/2015 13:16	53	20/6/2015 22:21	61	21/6/2015 15:26	60	22/6/2015 20:31	56
17/6/2015 19:11	62	19/6/2015 20:16	56	20/6/2015 13:21	55	20/6/2015 22:26	62	21/6/2015 15:31	58	22/6/2015 20:36	53
17/6/2015 19:16	62	19/6/2015 20:21	58	20/6/2015 13:26	58	20/6/2015 22:31	62	21/6/2015 15:36	56	22/6/2015 20:41	60
17/6/2015 19:21	62	19/6/2015 20:26	62	20/6/2015 13:31	58	20/6/2015 22:36	61	21/6/2015 15:41	57	22/6/2015 20:46	47
17/6/2015 19:26	62	19/6/2015 20:31	59	20/6/2015 13:36	58	20/6/2015 22:41	50	21/6/2015 15:46	57	22/6/2015 20:51	61
17/6/2015 19:31	56	19/6/2015 20:36	51	20/6/2015 13:41	56	20/6/2015 22:46	61	21/6/2015 15:51	67	22/6/2015 20:56	48
17/6/2015 19:36	58	19/6/2015 20:41	42	20/6/2015 13:46	56	20/6/2015 22:51	52	21/6/2015 15:56	66	22/6/2015 21:01	62
17/6/2015 19:41	53	19/6/2015 20:46	53	20/6/2015 13:51	56	20/6/2015 22:56	61	21/6/2015 16:01	62	22/6/2015 21:06	44
17/6/2015 19:46	56	19/6/2015 20:51	53	20/6/2015 13:56	60	21/6/2015 7:01	68	21/6/2015 16:06	62	22/6/2015 21:11	62
17/6/2015 19:51	56	19/6/2015 20:56	61	20/6/2015 14:01	54	21/6/2015 7:06	60	21/6/2015 16:11	57	22/6/2015 21:16	61
17/6/2015 19:56	56	19/6/2015 21:01	61	20/6/2015 14:06	58	21/6/2015 7:11	40	21/6			

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
23/6/2015 20:21	62	25/6/2015 21:26	62	27/6/2015 22:31	61	29/5/2015 0:21	55	30/5/2015 1:26	57	31/5/2015 2:31	55		
23/6/2015 20:26	58	25/6/2015 21:31	48	27/6/2015 22:36	62	29/5/2015 0:26	56	30/5/2015 1:31	56	31/5/2015 2:36	56		
23/6/2015 20:31	55	25/6/2015 21:36	50	27/6/2015 22:41	62	29/5/2015 0:31	54	30/5/2015 1:36	56	31/5/2015 2:41	56		
23/6/2015 20:36	56	25/6/2015 21:41	52	27/6/2015 22:46	49	29/5/2015 0:36	54	30/5/2015 1:41	57	31/5/2015 2:46	55		
23/6/2015 20:41	51	25/6/2015 21:46	62	27/6/2015 22:51	61	29/5/2015 0:41	54	30/5/2015 1:46	56	31/5/2015 2:51	56		
23/6/2015 20:46	53	25/6/2015 21:51	36	27/6/2015 22:56	62	29/5/2015 0:46	48	30/5/2015 1:51	56	31/5/2015 2:56	55		
23/6/2015 20:51	54	25/6/2015 21:56	45			29/5/2015 0:51	49	30/5/2015 1:56	56	31/5/2015 3:01	55		
23/6/2015 20:56	62	25/6/2015 22:01	62	Night time: 23:00-07:00		29/5/2015 0:56	48	30/5/2015 2:01	56	31/5/2015 3:06	56		
23/6/2015 21:01	48	25/6/2015 22:06	62			29/5/2015 1:01	52	30/5/2015 2:06	56	31/5/2015 3:11	57		
23/6/2015 21:06	46	25/6/2015 22:11	62	28/5/2015 0:01	54	29/5/2015 1:06	49	30/5/2015 2:11	55	31/5/2015 3:16	56		
23/6/2015 21:11	61	25/6/2015 22:16	62	28/5/2015 0:06	53	29/5/2015 1:11	54	30/5/2015 2:16	55	31/5/2015 3:21	55		
23/6/2015 21:16	62	25/6/2015 22:21	62	28/5/2015 0:11	51	29/5/2015 1:16	47	30/5/2015 2:21	55	31/5/2015 3:26	55		
23/6/2015 21:21	39	25/6/2015 22:26	62	28/5/2015 0:16	52	29/5/2015 1:21	49	30/5/2015 2:26	55	31/5/2015 3:31	55		
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23/6/2015 21:36	46	25/6/2015 22:41	62	28/5/2015 0:31	47	29/5/2015 1:36	58	30/5/2015 2:41	56	31/5/2015 3:46	56		
23/6/2015 21:41	62	25/6/2015 22:46	62	28/5/2015 0:36	48	29/5/2015 1:41	42	30/5/2015 2:46	56	31/5/2015 3:51	55		
23/6/2015 21:46	62	25/6/2015 22:51	62	28/5/2015 0:41	59	29/5/2015 1:46	35	30/5/2015 2:51	55	31/5/2015 3:56	55		
23/6/2015 21:51	62	25/6/2015 22:56	62	28/5/2015 0:46	51	29/5/2015 1:51	58	30/5/2015 2:56	57	31/5/2015 4:01	56		
23/6/2015 21:56	62	26/6/2015 19:01	63	28/5/2015 0:51	50	29/5/2015 1:56	57	30/5/2015 3:01	55	31/5/2015 4:06	56		
23/6/2015 22:01	45	26/6/2015 19:06	61	28/5/2015 0:56	49	29/5/2015 2:01	57	30/5/2015 3:06	55	31/5/2015 4:11	56		
23/6/2015 22:06	51	26/6/2015 19:11	62	28/5/2015 1:01	58	29/5/2015 2:06	58	30/5/2015 3:11	41	31/5/2015 4:16	54		
23/6/2015 22:11	55	26/6/2015 19:16	58	28/5/2015 1:06	55	29/5/2015 2:11	57	30/5/2015 3:16	55	31/5/2015 4:21	55		
23/6/2015 22:16	49	26/6/2015 19:21	59	28/5/2015 1:11	54	29/5/2015 2:16	58	30/5/2015 3:21	55	31/5/2015 4:26	54		
23/6/2015 22:21	62	26/6/2015 19:26	59	28/5/2015 1:16	54	29/5/2015 2:21	58	30/5/2015 3:26	55	31/5/2015 4:31	55		
23/6/2015 22:26	62	26/6/2015 19:31	61	28/5/2015 1:21	51	29/5/2015 2:26	57	30/5/2015 3:31	55	31/5/2015 4:36	55		
23/6/2015 22:31	48	26/6/2015 19:36	61	28/5/2015 1:26	52	29/5/2015 2:31	57	30/5/2015 3:36	55	31/5/2015 4:41	55		
23/6/2015 22:36	62	26/6/2015 19:41	61	28/5/2015 1:31	51	29/5/2015 2:36	57	30/5/2015 3:41	56	31/5/2015 4:46	55		
23/6/2015 22:41	61	26/6/2015 19:46	61	28/5/2015 1:36	53	29/5/2015 2:41	57	30/5/2015 3:46	54	31/5/2015 4:51	55		
23/6/2015 22:46	61	26/6/2015 19:51	60	28/5/2015 1:41	52	29/5/2015 2:46	57	30/5/2015 3:51	54	31/5/2015 4:56	55		
23/6/2015 22:51	62	26/6/2015 19:56	61	28/5/2015 1:46	58	29/5/2015 2:51	57	30/5/2015 3:56	55	31/5/2015 5:01	55		
23/6/2015 22:56	62	26/6/2015 20:01	61	28/5/2015 1:51	57	29/5/2015 2:56	57	30/5/2015 4:01	55	31/5/2015 5:06	55		
24/6/2015 19:01	56	26/6/2015 20:06	61	28/5/2015 1:56	56	29/5/2015 3:01	56	30/5/2015 4:06	54	31/5/2015 5:11	55		
24/6/2015 19:06	55	26/6/2015 20:11	48	28/5/2015 2:01	57	29/5/2015 3:06	56	30/5/2015 4:11	55	31/5/2015 5:16	55		
24/6/2015 19:11	57	26/6/2015 20:16	62	28/5/2015 2:06	56	29/5/2015 3:11	56	30/5/2015 4:16	54	31/5/2015 5:21	54		
24/6/2015 19:16	59	26/6/2015 20:21	53	28/5/2015 2:11	57	29/5/2015 3:16	57	30/5/2015 4:21	55	31/5/2015 5:26	54		
24/6/2015 19:21	57	26/6/2015 20:26	62	28/5/2015 2:16	57	29/5/2015 3:21	56	30/5/2015 4:26	55	31/5/2015 5:31	55		
24/6/2015 19:26	57	26/6/2015 20:31	52	28/5/2015 2:21	57	29/5/2015 3:26	57	30/5/2015 4:31	55	31/5/2015 5:36	55		
24/6/2015 19:31	56	26/6/2015 20:36	62	28/5/2015 2:26	57	29/5/2015 3:31	56	30/5/2015 4:36	56	31/5/2015 5:41	55		
24/6/2015 19:36	55	26/6/2015 20:41	43	28/5/2015 2:31	57	29/5/2015 3:36	56	30/5/2015 4:41	55	31/5/2015 5:46	55		
24/6/2015 19:41	57	26/6/2015 20:46	62	28/5/2015 2:36	57	29/5/2015 3:41	57	30/5/2015 4:46	54	31/5/2015 5:51	55		
24/6/2015 19:46	55	26/6/2015 20:51	51	28/5/2015 2:41	57	29/5/2015 3:46	56	30/5/2015 4:51	55	31/5/2015 5:56	56		
24/6/2015 19:51	56	26/6/2015 20:56	57	28/5/2015 2:46	57	29/5/2015 3:51	57	30/5/2015 4:56	55	31/5/2015 6:01	55		
24/6/2015 19:56	57	26/6/2015 21:01	55	28/5/2015 2:51	56	29/5/2015 3:56	57	30/5/2015 5:01	55	31/5/2015 6:06	56		
24/6/2015 20:01	55	26/6/2015 21:06	56	28/5/2015 2:56	56	29/5/2015 4:01	57	30/5/2015 5:06	54	31/5/2015 6:11	56		
24/6/2015 20:06	48	26/6/2015 21:11	56	28/5/2015 3:01	57	29/5/2015 4:06	56	30/5/2015 5:11	54	31/5/2015 6:16	56		
24/6/2015 20:11	53	26/6/2015 21:16	62	28/5/2015 3:06	56	29/5/2015 4:11	56	30/5/2015 5:16	54	31/5/2015 6:21	56		
24/6/2015 20:16	51	26/6/2015 21:21	42	28/5/2015 3:11	58	29/5/2015 4:16	57	30/5/2015 5:21	55	31/5/2015 6:26	56		
24/6/2015 20:21	56	26/6/2015 21:26	62	28/5/2015 3:16	56	29/5/2015 4:21	56	30/5/2015 5:26	56	31/5/2015 6:31	57		
24/6/2015 20:26	48	26/6/2015 21:31	62	28/5/2015 3:21	56	29/5/2015 4:26	56	30/5/2015 5:31	55	31/5/2015 6:36	57		
24/6/2015 20:31	52	26/6/2015 21:36	62	28/5/2015 3:26	56	29/5/2015 4:31	57	30/5/2015 5:36	55	31/5/2015 6:41	57		
24/6/2015 20:36	62	26/6/2015 21:41	62	28/5/2015 3:31	57	29/5/2015 4:36	57	30/5/2015 5:41	56	31/5/2015 6:46	47		
24/6/2015 20:41	62	26/6/2015 21:46	61	28/5/2015 3:36	38	29/5/2015 4:41	57	30/5/2015 5:46	56	31/5/2015 6:51	58		
24/6/2015 20:46	45	26/6/2015 21:51	62	28/5/2015 3:41	57	29/5/2015 4:46	56	30/5/2015 5:51	55	31/5/2015 6:56	58		
24/6/2015 20:51	51	26/6/2015 21:56	55	28/5/2015 3:46	57	29/5/2015 4:51	57	30/5/2015 5:56	56	31/5/2015 23:01	58		
24/6/2015 20:56	61	26/6/2015 22:01	62	28/5/2015 3:51	56	29/5/2015 4:56	56	30/5/2015 6:01	56	31/5/2015 23:06	58		
24/6/2015 21:01	61	26/6/2015 22:06	61	28/5/2015 3:56	56	29/5/2015 5:01	57	30/5/2015 6:06	56	31/5/2015 23:11	57		
24/6/2015 21:06	62	26/6/2015 22:11	62	28/5/2015 4:01	56	29/5/2015 5:06	57	30/5/2015 6:11	56	31/5/2015 23:16	58		
24/6/2015 21:11	62	26/6/2015 22:16	61	28/5/2015 4:06	56	29/5/2015 5:11	57	30/5/2015 6:16	56	31/5/2015 23:21	58		
24/6/2015 21:16	62	26/6/2015 22:21	62	28/5/2015 4:11	56	29/5/2015 5:16	57	30/5/2015 6:21	58	31/5/2015 23:26	58		
24/6/2015 21:21	62	26/6/2015 22:26	62	28/5/2015 4:16	56	29/5/2015 5:21	57	30/5/2015 6:26	58	31/5/2015 23:31	56		
24/6/2015 21:26	62	26/6/2015 22:31	61	28/5/2015 4:21	56	29/5/2015 5:26	57	30/5/2015 6:31	57	31/5/2015 23:36	56		
24/6/2015 21:31	61	26/6/2015 22:36	62	28/5/2015 4:26	57	29/5/2015 5:31	58	30/5/2015 6:36	57	31/5/2015 23:41	57		
24/6/2015 21:36	62	26/6/2015 22:41	62	28/5/2015 4:31	56	29/5/2015 5:36	58	30/5/2015 6:41	57	31/5/2015 23:46	58		
24/6/2015 21:41	53	26/6/2015 22:46	62	28/5/2015 4:36	56	29/5/2015 5:41	58	30/5/2015 6:46	58	31/5/2015 23:51	57		
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24/6/2015 21:51	56	26/6/2015 22:56	62	28/5/2015 4:46	56	29/5/2015 5:51	43	30/5/2015 6:56	58	1/6/2015 0:01	57		
24/6/2015 21:56	49	27/6/2015 19:01	62	28/5/2015 4:51	56	29/5/2015 5:56	58	30/5/2015 23:01	43	1/6/2015 0:06	57		
24/6/2015 22:01	39	27/6/2015 19:06	61	28/5/2015 4:56	56	29/5/2015 6:01	47	30/5/2015 23:06	50	1/6/2015 0:11	57		
24/6/2015 22:06	52	27/6/2015 19:11	51	28/5/2015 5:01	57	29/5/2015 6:06	42	30/5/2015 23:11	44	1/6/2015 0:16	57		
24/6/2015 22:11	57	27/6/2015 19:16	62	28/5/2015 5:06	56	29/5/2015 6:11	54	30/5/2015 23:16	51	1/6/2015 0:21	58		
24/6/2015 22:16	62	27/6/2015 19:21</											



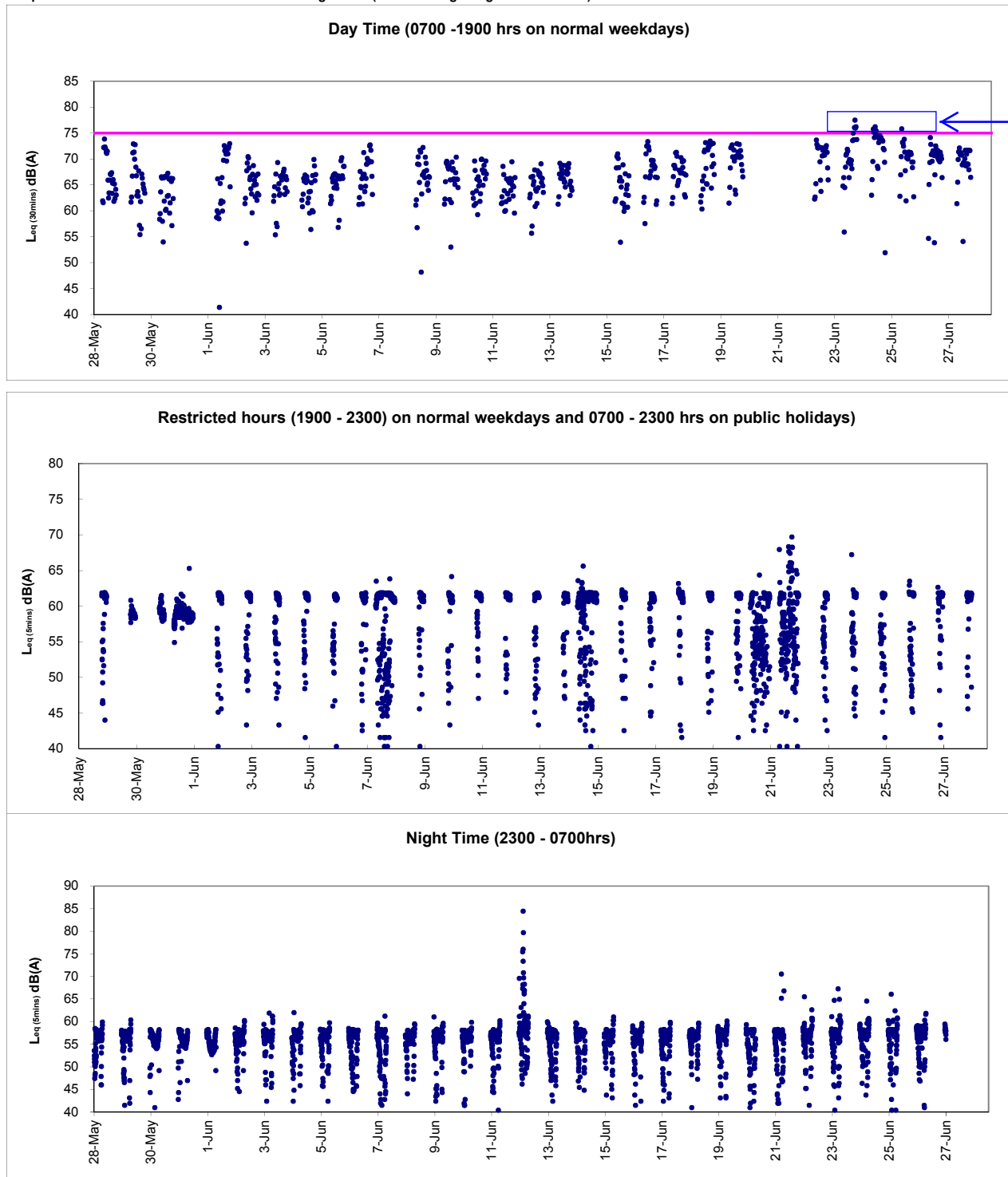
Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
1/6/2015 3:36	53	2/6/2015 4:41	56	3/6/2015 5:46	38	4/6/2015 6:51	59	5/6/2015 23:56	58	7/6/2015 1:01	53		
1/6/2015 3:41	53	2/6/2015 4:46	56	3/6/2015 5:51	48	4/6/2015 6:56	60	6/6/2015 0:01	57	7/6/2015 1:06	54		
1/6/2015 3:46	54	2/6/2015 4:51	57	3/6/2015 5:56	49	4/6/2015 23:01	56	6/6/2015 0:06	56	7/6/2015 1:11	50		
1/6/2015 3:51	54	2/6/2015 4:56	57	3/6/2015 6:01	46	4/6/2015 23:06	58	6/6/2015 0:11	56	7/6/2015 1:16	49		
1/6/2015 3:56	55	2/6/2015 5:01	57	3/6/2015 6:06	55	4/6/2015 23:11	58	6/6/2015 0:16	57	7/6/2015 1:21	49		
1/6/2015 4:01	54	2/6/2015 5:06	57	3/6/2015 6:11	56	4/6/2015 23:16	58	6/6/2015 0:21	56	7/6/2015 1:26	53		
1/6/2015 4:06	53	2/6/2015 5:11	57	3/6/2015 6:16	54	4/6/2015 23:21	56	6/6/2015 0:26	57	7/6/2015 1:31	53		
1/6/2015 4:11	55	2/6/2015 5:16	57	3/6/2015 6:21	57	4/6/2015 23:26	57	6/6/2015 0:31	57	7/6/2015 1:36	44		
1/6/2015 4:16	55	2/6/2015 5:21	57	3/6/2015 6:26	57	4/6/2015 23:31	56	6/6/2015 0:36	55	7/6/2015 1:41	50		
1/6/2015 4:21	53	2/6/2015 5:26	57	3/6/2015 6:31	61	4/6/2015 23:36	56	6/6/2015 0:41	57	7/6/2015 1:46	51		
1/6/2015 4:26	54	2/6/2015 5:31	58	3/6/2015 6:36	57	4/6/2015 23:41	57	6/6/2015 0:46	54	7/6/2015 1:51	48		
1/6/2015 4:31	54	2/6/2015 5:36	58	3/6/2015 6:41	58	4/6/2015 23:46	55	6/6/2015 0:51	56	7/6/2015 1:56	32		
1/6/2015 4:36	54	2/6/2015 5:41	58	3/6/2015 6:46	61	4/6/2015 23:51	56	6/6/2015 0:56	53	7/6/2015 2:01	52		
1/6/2015 4:41	54	2/6/2015 5:46	58	3/6/2015 6:51	60	4/6/2015 23:56	55	6/6/2015 1:01	56	7/6/2015 2:06	42		
1/6/2015 4:46	53	2/6/2015 5:51	58	3/6/2015 6:56	60	5/6/2015 0:01	56	6/6/2015 1:06	50	7/6/2015 2:11	58		
1/6/2015 4:51	54	2/6/2015 5:56	58	3/6/2015 23:01	56	5/6/2015 0:06	53	6/6/2015 1:11	52	7/6/2015 2:16	58		
1/6/2015 4:56	54	2/6/2015 6:01	49	3/6/2015 23:06	56	5/6/2015 0:11	53	6/6/2015 1:16	52	7/6/2015 2:21	43		
1/6/2015 5:01	54	2/6/2015 6:06	58	3/6/2015 23:11	56	5/6/2015 0:16	54	6/6/2015 1:21	52	7/6/2015 2:26	58		
1/6/2015 5:06	55	2/6/2015 6:11	55	3/6/2015 23:16	56	5/6/2015 0:21	55	6/6/2015 1:26	50	7/6/2015 2:31	58		
1/6/2015 5:11	54	2/6/2015 6:16	53	3/6/2015 23:21	51	5/6/2015 0:26	52	6/6/2015 1:31	56	7/6/2015 2:36	58		
1/6/2015 5:16	54	2/6/2015 6:21	56	3/6/2015 23:26	55	5/6/2015 0:31	54	6/6/2015 1:36	55	7/6/2015 2:41	58		
1/6/2015 5:21	54	2/6/2015 6:26	55	3/6/2015 23:31	51	5/6/2015 0:36	54	6/6/2015 1:41	51	7/6/2015 2:46	58		
1/6/2015 5:26	54	2/6/2015 6:31	58	3/6/2015 23:36	53	5/6/2015 0:41	50	6/6/2015 1:46	58	7/6/2015 2:51	58		
1/6/2015 5:31	55	2/6/2015 6:36	58	3/6/2015 23:41	51	5/6/2015 0:46	46	6/6/2015 1:51	50	7/6/2015 2:56	47		
1/6/2015 5:36	55	2/6/2015 6:41	58	3/6/2015 23:46	51	5/6/2015 0:51	52	6/6/2015 1:56	58	7/6/2015 3:01	58		
1/6/2015 5:41	56	2/6/2015 6:46	59	3/6/2015 23:51	49	5/6/2015 0:56	52	6/6/2015 2:01	51	7/6/2015 3:06	42		
1/6/2015 5:46	56	2/6/2015 6:51	60	3/6/2015 23:56	54	5/6/2015 1:01	50	6/6/2015 2:06	52	7/6/2015 3:11	57		
1/6/2015 5:51	55	2/6/2015 6:56	60	4/6/2015 0:01	52	5/6/2015 1:06	58	6/6/2015 2:11	48	7/6/2015 3:16	57		
1/6/2015 5:56	56	2/6/2015 23:01	58	4/6/2015 0:06	40	5/6/2015 1:11	37	6/6/2015 2:16	52	7/6/2015 3:21	57		
1/6/2015 6:01	56	2/6/2015 23:06	57	4/6/2015 0:11	42	5/6/2015 1:16	47	6/6/2015 2:21	48	7/6/2015 3:26	57		
1/6/2015 6:06	57	2/6/2015 23:11	58	4/6/2015 0:16	47	5/6/2015 1:21	47	6/6/2015 2:26	58	7/6/2015 3:31	57		
1/6/2015 6:11	56	2/6/2015 23:16	58	4/6/2015 0:21	50	5/6/2015 1:26	46	6/6/2015 2:31	48	7/6/2015 3:36	57		
1/6/2015 6:16	57	2/6/2015 23:21	58	4/6/2015 0:26	49	5/6/2015 1:31	58	6/6/2015 2:36	50	7/6/2015 3:41	58		
1/6/2015 6:21	57	2/6/2015 23:26	59	4/6/2015 0:31	48	5/6/2015 1:36	58	6/6/2015 2:41	47	7/6/2015 3:46	58		
1/6/2015 6:26	57	2/6/2015 23:31	57	4/6/2015 0:36	58	5/6/2015 1:41	58	6/6/2015 2:46	58	7/6/2015 3:51	57		
1/6/2015 6:31	58	2/6/2015 23:36	56	4/6/2015 0:41	40	5/6/2015 1:46	58	6/6/2015 2:51	45	7/6/2015 3:56	58		
1/6/2015 6:36	58	2/6/2015 23:41	56	4/6/2015 0:46	45	5/6/2015 1:51	58	6/6/2015 2:56	45	7/6/2015 4:01	58		
1/6/2015 6:41	58	2/6/2015 23:46	56	4/6/2015 0:51	54	5/6/2015 1:56	58	6/6/2015 3:01	58	7/6/2015 4:06	58		
1/6/2015 6:46	58	2/6/2015 23:51	56	4/6/2015 0:56	62	5/6/2015 2:01	58	6/6/2015 3:06	57	7/6/2015 4:11	57		
1/6/2015 6:51	49	2/6/2015 23:56	57	4/6/2015 1:01	58	5/6/2015 2:06	57	6/6/2015 3:11	57	7/6/2015 4:16	57		
1/6/2015 6:56	54	3/6/2015 0:01	55	4/6/2015 1:06	58	5/6/2015 2:11	58	6/6/2015 3:16	58	7/6/2015 4:21	57		
1/6/2015 23:01	57	3/6/2015 0:06	55	4/6/2015 1:11	58	5/6/2015 2:16	57	6/6/2015 3:21	58	7/6/2015 4:26	58		
1/6/2015 23:06	57	3/6/2015 0:11	53	4/6/2015 1:16	57	5/6/2015 2:21	57	6/6/2015 3:26	58	7/6/2015 4:31	57		
1/6/2015 23:11	56	3/6/2015 0:16	53	4/6/2015 1:21	58	5/6/2015 2:26	58	6/6/2015 3:31	58	7/6/2015 4:36	57		
1/6/2015 23:16	59	3/6/2015 0:21	52	4/6/2015 1:26	52	5/6/2015 2:31	58	6/6/2015 3:36	45	7/6/2015 4:41	48		
1/6/2015 23:21	56	3/6/2015 0:26	53	4/6/2015 1:31	58	5/6/2015 2:36	57	6/6/2015 3:41	57	7/6/2015 4:46	57		
1/6/2015 23:26	56	3/6/2015 0:31	55	4/6/2015 1:36	58	5/6/2015 2:41	57	6/6/2015 3:46	57	7/6/2015 4:51	58		
1/6/2015 23:31	55	3/6/2015 0:36	49	4/6/2015 1:41	57	5/6/2015 2:46	57	6/6/2015 3:51	57	7/6/2015 4:56	58		
1/6/2015 23:36	56	3/6/2015 0:41	58	4/6/2015 1:46	57	5/6/2015 2:51	57	6/6/2015 3:56	58	7/6/2015 5:01	58		
1/6/2015 23:41	57	3/6/2015 0:46	58	4/6/2015 1:51	58	5/6/2015 2:56	57	6/6/2015 4:01	58	7/6/2015 5:06	58		
1/6/2015 23:46	56	3/6/2015 0:51	47	4/6/2015 1:56	57	5/6/2015 3:01	56	6/6/2015 4:06	58	7/6/2015 5:11	58		
1/6/2015 23:51	56	3/6/2015 0:56	46	4/6/2015 2:01	57	5/6/2015 3:06	56	6/6/2015 4:11	58	7/6/2015 5:16	47		
1/6/2015 23:56	54	3/6/2015 1:01	53	4/6/2015 2:06	57	5/6/2015 3:11	57	6/6/2015 4:16	48	7/6/2015 5:21	51		
2/6/2015 0:01	53	3/6/2015 1:06	58	4/6/2015 2:11	57	5/6/2015 3:16	56	6/6/2015 4:21	57	7/6/2015 5:26	43		
2/6/2015 0:06	53	3/6/2015 1:11	58	4/6/2015 2:16	57	5/6/2015 3:21	56	6/6/2015 4:26	57	7/6/2015 5:31	58		
2/6/2015 0:11	55	3/6/2015 1:16	58	4/6/2015 2:21	57	5/6/2015 3:26	56	6/6/2015 4:31	57	7/6/2015 5:36	46		
2/6/2015 0:16	54	3/6/2015 1:21	58	4/6/2015 2:26	56	5/6/2015 3:31	57	6/6/2015 4:36	58	7/6/2015 5:41	61		
2/6/2015 0:21	51	3/6/2015 1:26	47	4/6/2015 2:31	57	5/6/2015 3:36	57	6/6/2015 4:41	57	7/6/2015 5:46	38		
2/6/2015 0:26	54	3/6/2015 1:31	58	4/6/2015 2:36	57	5/6/2015 3:41	57	6/6/2015 4:46	57	7/6/2015 5:51	58		
2/6/2015 0:31	53	3/6/2015 1:36	58	4/6/2015 2:41	56	5/6/2015 3:46	56	6/6/2015 4:51	57	7/6/2015 5:56	58		
2/6/2015 0:36	55	3/6/2015 1:41	58	4/6/2015 2:46	57	5/6/2015 3:51	57	6/6/2015 4:56	57	7/6/2015 6:01	46		
2/6/2015 0:41	52	3/6/2015 1:46	42	4/6/2015 2:51	57	5/6/2015 3:56	56	6/6/2015 5:01	57	7/6/2015 6:06	44		
2/6/2015 0:46	49	3/6/2015 1:51	57	4/6/2015 2:56	56	5/6/2015 4:01	56	6/6/2015 5:06	58	7/6/2015 6:11	51		
2/6/2015 0:51	32	3/6/2015 1:56	57	4/6/2015 3:01	56	5/6/2015 4:06	57	6/6/2015 5:11	58	7/6/2015 6:16	45		
2/6/2015 0:56	54	3/6/2015 2:01	58	4/6/2015 3:06	57	5/6/2015 4:11	56	6/6/2015 5:16	57	7/6/2015 6:21	54		
2/6/2015 1:01	50	3/6/2015 2:06	57	4/6/2015 3:11	56	5/6/2015 4:16	57	6/6/2015 5:21	57	7/6/2015 6:26	51		
2/6/2015 1:06	47	3/6/2015 2:11	58	4/6/2015 3:16	56	5/6/2015 4:21	56	6/6/2015 5:26	52	7/6/2015 6:31	54		
2/6/2015 1:11	45	3/6/2015 2:16	56	4/6/2015 3:21	57	5/6/2015 4:26	56	6/6/2015 5:31	46	7/6/2015 6:36	53		
2/6/2015 1:16	58	3/6/2015 2:21	57	4/6/2015 3:26	57	5/6/2015 4:31	56	6/6/2015 5:36	58	7/6/2015 6:41	56		
2/6/2015 1:21	39	3/6/2015 2:26	56	4/6/2015 3:31	56	5/6/2015 4:36	49	6/6/2015 5:41	51	7/6/2015 6:46	54		
2/6/2015 1:26	48	3/6/2015 2:31	57	4/6/2015 3:36	56	5/6/2015 4:41	57	6/6/2015 5:46	46	7/6/2015 6:51	55		
2/6/2015 1:31	58	3/6/2015 2:36	57	4/6/2015 3:41	56	5/6/2015 4:46	56	6/6/2015 5:51	32	7/6/2015 6:56	56		
2/6/2015 1:36	58	3/6/2015 2:41	57	4/6/2015 3:46	56	5/6/2015 4:51	57	6/6/2015 5:56	58	7/6/2015 23:01	57		
2/6/2015 1:41	53	3/6/2015 2:46	57	4/6/2015 3:51	56	5/6/2015 4:56	56	6/6/2015 6:01	54	7/6/2015 23:06	57		
2/6/2015 1:46	57	3/6/2015 2:51	56	4/6/2015 3:56</									

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)											
8/6/2015 2:06	57	9/6/2015 3:11	56	10/6/2015 4:16	57	11/6/2015 5:21	50	12/6/2015 6:26	56	13/6/2015 23:31	57		
8/6/2015 2:11	57	9/6/2015 3:16	56	10/6/2015 4:21	56	11/6/2015 5:26	58	12/6/2015 6:31	59	13/6/2015 23:36	56		
8/6/2015 2:16	57	9/6/2015 3:21	56	10/6/2015 4:26	56	11/6/2015 5:31	57	12/6/2015 6:36	59	13/6/2015 23:41	56		
8/6/2015 2:21	56	9/6/2015 3:26	56	10/6/2015 4:31	56	11/6/2015 5:36	40	12/6/2015 6:41	60	13/6/2015 23:46	58		
8/6/2015 2:26	57	9/6/2015 3:31	57	10/6/2015 4:36	56	11/6/2015 5:41	58	12/6/2015 6:46	60	13/6/2015 23:51	57		
8/6/2015 2:31	56	9/6/2015 3:36	57	10/6/2015 4:41	56	11/6/2015 5:46	50	12/6/2015 6:51	61	13/6/2015 23:56	60		
8/6/2015 2:36	55	9/6/2015 3:41	57	10/6/2015 4:46	57	11/6/2015 5:51	52	12/6/2015 6:56	61	14/6/2015 0:01	58		
8/6/2015 2:41	56	9/6/2015 3:46	56	10/6/2015 4:51	56	11/6/2015 5:56	57	12/6/2015 23:01	58	14/6/2015 0:06	56		
8/6/2015 2:46	55	9/6/2015 3:51	56	10/6/2015 4:56	58	11/6/2015 6:01	56	12/6/2015 23:06	60	14/6/2015 0:11	57		
8/6/2015 2:51	55	9/6/2015 3:56	56	10/6/2015 5:01	57	11/6/2015 6:06	58	12/6/2015 23:11	58	14/6/2015 0:16	57		
8/6/2015 2:56	55	9/6/2015 4:01	57	10/6/2015 5:06	56	11/6/2015 6:11	54	12/6/2015 23:16	58	14/6/2015 0:21	57		
8/6/2015 3:01	55	9/6/2015 4:06	57	10/6/2015 5:11	56	11/6/2015 6:16	54	12/6/2015 23:21	58	14/6/2015 0:26	54		
8/6/2015 3:06	56	9/6/2015 4:11	56	10/6/2015 5:16	57	11/6/2015 6:21	55	12/6/2015 23:26	60	14/6/2015 0:31	58		
8/6/2015 3:11	56	9/6/2015 4:16	56	10/6/2015 5:21	58	11/6/2015 6:26	56	12/6/2015 23:31	58	14/6/2015 0:36	56		
8/6/2015 3:16	55	9/6/2015 4:21	56	10/6/2015 5:26	58	11/6/2015 6:31	57	12/6/2015 23:36	58	14/6/2015 0:41	53		
8/6/2015 3:21	55	9/6/2015 4:26	57	10/6/2015 5:31	58	11/6/2015 6:36	58	12/6/2015 23:41	57	14/6/2015 0:46	53		
8/6/2015 3:26	56	9/6/2015 4:31	56	10/6/2015 5:36	58	11/6/2015 6:41	58	12/6/2015 23:46	56	14/6/2015 0:51	54		
8/6/2015 3:31	57	9/6/2015 4:36	58	10/6/2015 5:41	58	11/6/2015 6:46	59	12/6/2015 23:51	57	14/6/2015 0:56	57		
8/6/2015 3:36	56	9/6/2015 4:41	56	10/6/2015 5:46	58	11/6/2015 6:51	60	12/6/2015 23:56	57	14/6/2015 1:01	54		
8/6/2015 3:41	55	9/6/2015 4:46	56	10/6/2015 5:51	58	11/6/2015 6:56	60	13/6/2015 0:01	57	14/6/2015 1:06	52		
8/6/2015 3:46	56	9/6/2015 4:51	57	10/6/2015 5:56	58	11/6/2015 7:01	58	13/6/2015 0:06	57	14/6/2015 1:11	47		
8/6/2015 3:51	56	9/6/2015 4:56	57	10/6/2015 6:01	58	11/6/2015 23:06	58	13/6/2015 0:11	57	14/6/2015 1:16	49		
8/6/2015 3:56	56	9/6/2015 5:01	56	10/6/2015 6:06	50	11/6/2015 23:11	57	13/6/2015 0:16	56	14/6/2015 1:21	50		
8/6/2015 4:01	56	9/6/2015 5:06	56	10/6/2015 6:11	53	11/6/2015 23:16	70	13/6/2015 0:21	57	14/6/2015 1:26	52		
8/6/2015 4:06	57	9/6/2015 5:11	56	10/6/2015 6:16	53	11/6/2015 23:21	61	13/6/2015 0:26	56	14/6/2015 1:31	51		
8/6/2015 4:11	56	9/6/2015 5:16	58	10/6/2015 6:21	53	11/6/2015 23:26	58	13/6/2015 0:31	59	14/6/2015 1:36	50		
8/6/2015 4:16	55	9/6/2015 5:21	57	10/6/2015 6:26	56	11/6/2015 23:31	60	13/6/2015 0:36	56	14/6/2015 1:41	51		
8/6/2015 4:21	55	9/6/2015 5:26	57	10/6/2015 6:31	57	11/6/2015 23:36	58	13/6/2015 0:41	57	14/6/2015 1:46	53		
8/6/2015 4:26	56	9/6/2015 5:31	58	10/6/2015 6:36	56	11/6/2015 23:41	59	13/6/2015 0:46	54	14/6/2015 1:51	51		
8/6/2015 4:31	56	9/6/2015 5:36	58	10/6/2015 6:41	57	11/6/2015 23:46	58	13/6/2015 0:51	55	14/6/2015 1:56	45		
8/6/2015 4:36	56	9/6/2015 5:41	58	10/6/2015 6:46	58	11/6/2015 23:51	58	13/6/2015 0:56	55	14/6/2015 2:01	58		
8/6/2015 4:41	55	9/6/2015 5:46	50	10/6/2015 6:51	59	11/6/2015 23:56	57	13/6/2015 1:01	53	14/6/2015 2:06	58		
8/6/2015 4:46	56	9/6/2015 5:51	51	10/6/2015 6:56	60	12/6/2015 0:01	58	13/6/2015 1:06	54	14/6/2015 2:11	56		
8/6/2015 4:51	56	9/6/2015 5:56	45	10/6/2015 23:01	57	12/6/2015 0:06	56	13/6/2015 1:11	54	14/6/2015 2:16	58		
8/6/2015 4:56	56	9/6/2015 6:01	40	10/6/2015 23:06	57	12/6/2015 0:11	56	13/6/2015 1:16	53	14/6/2015 2:21	58		
8/6/2015 5:01	57	9/6/2015 6:06	44	10/6/2015 23:11	57	12/6/2015 0:16	58	13/6/2015 1:21	55	14/6/2015 2:26	58		
8/6/2015 5:06	56	9/6/2015 6:11	56	10/6/2015 23:16	58	12/6/2015 0:21	57	13/6/2015 1:26	53	14/6/2015 2:31	58		
8/6/2015 5:11	56	9/6/2015 6:16	59	10/6/2015 23:21	57	12/6/2015 0:26	57	13/6/2015 1:31	54	14/6/2015 2:36	48		
8/6/2015 5:16	57	9/6/2015 6:21	56	10/6/2015 23:26	56	12/6/2015 0:31	61	13/6/2015 1:36	54	14/6/2015 2:41	37		
8/6/2015 5:21	58	9/6/2015 6:26	56	10/6/2015 23:31	56	12/6/2015 0:36	57	13/6/2015 1:41	52	14/6/2015 2:46	58		
8/6/2015 5:26	58	9/6/2015 6:31	56	10/6/2015 23:36	57	12/6/2015 0:41	63	13/6/2015 1:46	51	14/6/2015 2:51	58		
8/6/2015 5:31	58	9/6/2015 6:36	57	10/6/2015 23:41	56	12/6/2015 0:46	59	13/6/2015 1:51	53	14/6/2015 2:56	58		
8/6/2015 5:36	58	9/6/2015 6:41	58	10/6/2015 23:46	56	12/6/2015 0:51	55	13/6/2015 1:56	50	14/6/2015 3:01	58		
8/6/2015 5:41	58	9/6/2015 6:46	59	10/6/2015 23:51	56	12/6/2015 0:56	58	13/6/2015 2:01	47	14/6/2015 3:06	58		
8/6/2015 5:46	47	9/6/2015 6:51	59	10/6/2015 23:56	56	12/6/2015 1:01	54	13/6/2015 2:06	48	14/6/2015 3:11	58		
8/6/2015 5:51	58	9/6/2015 6:56	60	11/6/2015 0:01	55	12/6/2015 1:06	51	13/6/2015 2:11	51	14/6/2015 3:16	58		
8/6/2015 5:56	58	9/6/2015 23:01	58	11/6/2015 0:06	55	12/6/2015 1:11	51	13/6/2015 2:16	49	14/6/2015 3:21	58		
8/6/2015 6:01	58	9/6/2015 23:06	57	11/6/2015 0:11	57	12/6/2015 1:16	49	13/6/2015 2:21	48	14/6/2015 3:26	57		
8/6/2015 6:06	49	9/6/2015 23:11	56	11/6/2015 0:16	54	12/6/2015 1:21	48	13/6/2015 2:26	48	14/6/2015 3:31	57		
8/6/2015 6:11	50	9/6/2015 23:16	58	11/6/2015 0:21	53	12/6/2015 1:26	54	13/6/2015 2:31	49	14/6/2015 3:36	57		
8/6/2015 6:16	52	9/6/2015 23:21	56	11/6/2015 0:26	54	12/6/2015 1:31	53	13/6/2015 2:36	50	14/6/2015 3:41	58		
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8/6/2015 6:26	57	9/6/2015 23:31	57	11/6/2015 0:36	55	12/6/2015 1:41	46	13/6/2015 2:46	51	14/6/2015 3:51	58		
8/6/2015 6:31	58	9/6/2015 23:36	56	11/6/2015 0:41	45	12/6/2015 1:46	58	13/6/2015 2:51	56	14/6/2015 3:56	57		
8/6/2015 6:36	57	9/6/2015 23:41	54	11/6/2015 0:46	53	12/6/2015 1:51	58	13/6/2015 2:56	44	14/6/2015 4:01	53		
8/6/2015 6:41	58	9/6/2015 23:46	54	11/6/2015 0:51	46	12/6/2015 1:56	47	13/6/2015 3:01	49	14/6/2015 4:06	57		
8/6/2015 6:46	59	9/6/2015 23:51	55	11/6/2015 0:56	45	12/6/2015 2:01	67	13/6/2015 3:06	58	14/6/2015 4:11	57		
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8/6/2015 23:06	61	10/6/2015 0:11	51	11/6/2015 1:16	58	12/6/2015 2:21	68	13/6/2015 3:26	58	14/6/2015 4:31	57		
8/6/2015 23:11	58	10/6/2015 0:16	55	11/6/2015 1:21	58	12/6/2015 2:26	84	13/6/2015 3:31	58	14/6/2015 4:36	57		
8/6/2015 23:16	57	10/6/2015 0:21	53	11/6/2015 1:26	50	12/6/2015 2:31	73	13/6/2015 3:36	42	14/6/2015 4:41	57		
8/6/2015 23:21	56	10/6/2015 0:26	49	11/6/2015 1:31	52	12/6/2015 2:36	76	13/6/2015 3:41	48	14/6/2015 4:46	58		
8/6/2015 23:26	55	10/6/2015 0:31	57	11/6/2015 1:36	47	12/6/2015 2:41	80	13/6/2015 3:46	58	14/6/2015 4:51	58		
8/6/2015 23:31	56	10/6/2015 0:36	52	11/6/2015 1:41	58	12/6/2015 2:46	71	13/6/2015 3:51	58	14/6/2015 4:56	57		
8/6/2015 23:36	56	10/6/2015 0:41	42	11/6/2015 1:46	44	12/6/2015 2:51	70	13/6/2015 3:56	58	14/6/2015 5:01	57		
8/6/2015 23:41	56	10/6/2015 0:46	42	11/6/2015 1:51	49	12/6/2015 2:56	62	13/6/2015 4:01	57	14/6/2015 5:06	57		
8/6/2015 23:46	55	10/6/2015 0:51	49	11/6/2015 1:56	49	12/6/2015 3:01	60	13/6/2015 4:06	57	14/6/2015 5:11	57		
8/6/2015 23:51	53	10/6/2015 0:56	58	11/6/2015 2:01	57	12/6/2015 3:06	59	13/6/2015 4:11	58	14/6/2015 5:16	57		
8/6/2015 23:56	54	10/6/2015 1:01	42	11/6/2015 2:06	57	12/6/2015 3:11	59	13/6/2015 4:16	57	14/6/2015 5:21	58		
9/6/2015 0:01	55	10/6/2015 1:06	51	11/6/2015 2:11	57	12/6/2015 3:16	64	13/6/2015 4:21	58	14/6/2015 5:26	57		
9/6/2015 0:06	53	10/6/2015 1:11	58	11/6/2015 2:16	57								

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
15/6/2015 0:36	53	16/6/2015 1:41	58	17/6/2015 2:46	56	18/6/2015 3:51	57	19/6/2015 4:56	57	20/6/2015 6:01	50
15/6/2015 0:41	58	16/6/2015 1:46	58	17/6/2015 2:51	57	18/6/2015 3:56	56	19/6/2015 5:01	57	20/6/2015 6:06	50
15/6/2015 0:46	50	16/6/2015 1:51	57	17/6/2015 2:56	57	18/6/2015 4:01	56	19/6/2015 5:06	58	20/6/2015 6:11	51
15/6/2015 0:51	58	16/6/2015 1:56	58	17/6/2015 3:01	57	18/6/2015 4:06	56	19/6/2015 5:11	57	20/6/2015 6:16	52
15/6/2015 0:56	44	16/6/2015 2:01	57	17/6/2015 3:06	56	18/6/2015 4:11	56	19/6/2015 5:16	58	20/6/2015 6:21	54
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15/6/2015 1:06	58	16/6/2015 2:11	57	17/6/2015 3:16	57	18/6/2015 4:21	57	19/6/2015 5:26	58	20/6/2015 6:31	52
15/6/2015 1:11	58	16/6/2015 2:16	56	17/6/2015 3:21	57	18/6/2015 4:26	57	19/6/2015 5:31	58	20/6/2015 6:36	55
15/6/2015 1:16	58	16/6/2015 2:21	57	17/6/2015 3:26	52	18/6/2015 4:31	56	19/6/2015 5:36	58	20/6/2015 6:41	56
15/6/2015 1:21	58	16/6/2015 2:26	57	17/6/2015 3:31	56	18/6/2015 4:36	57	19/6/2015 5:41	32	20/6/2015 6:46	55
15/6/2015 1:26	58	16/6/2015 2:31	58	17/6/2015 3:36	57	18/6/2015 4:41	57	19/6/2015 5:46	48	20/6/2015 6:51	55
15/6/2015 1:31	58	16/6/2015 2:36	56	17/6/2015 3:41	56	18/6/2015 4:46	56	19/6/2015 5:51	48	20/6/2015 6:56	56
15/6/2015 1:36	57	16/6/2015 2:41	56	17/6/2015 3:46	55	18/6/2015 4:51	57	19/6/2015 5:56	43	20/6/2015 23:01	58
15/6/2015 1:41	40	16/6/2015 2:46	57	17/6/2015 3:51	56	18/6/2015 4:56	57	19/6/2015 6:01	43	20/6/2015 23:06	58
15/6/2015 1:46	57	16/6/2015 2:51	57	17/6/2015 3:56	58	18/6/2015 5:01	57	19/6/2015 6:06	55	20/6/2015 23:11	58
15/6/2015 1:51	57	16/6/2015 2:56	56	17/6/2015 4:01	57	18/6/2015 5:06	57	19/6/2015 6:11	56	20/6/2015 23:16	56
15/6/2015 1:56	57	16/6/2015 3:01	56	17/6/2015 4:06	56	18/6/2015 5:11	57	19/6/2015 6:16	56	20/6/2015 23:21	58
15/6/2015 2:01	57	16/6/2015 3:06	57	17/6/2015 4:11	57	18/6/2015 5:16	57	19/6/2015 6:21	59	20/6/2015 23:26	56
15/6/2015 2:06	57	16/6/2015 3:11	56	17/6/2015 4:16	56	18/6/2015 5:21	58	19/6/2015 6:26	57	20/6/2015 23:31	56
15/6/2015 2:11	57	16/6/2015 3:16	56	17/6/2015 4:21	56	18/6/2015 5:26	58	19/6/2015 6:31	58	20/6/2015 23:36	57
15/6/2015 2:16	57	16/6/2015 3:21	57	17/6/2015 4:26	56	18/6/2015 5:31	57	19/6/2015 6:36	58	20/6/2015 23:41	55
15/6/2015 2:21	57	16/6/2015 3:26	57	17/6/2015 4:31	56	18/6/2015 5:36	50	19/6/2015 6:41	59	20/6/2015 23:46	56
15/6/2015 2:26	56	16/6/2015 3:31	56	17/6/2015 4:36	56	18/6/2015 5:41	51	19/6/2015 6:46	59	20/6/2015 23:51	55
15/6/2015 2:31	56	16/6/2015 3:36	56	17/6/2015 4:41	56	18/6/2015 5:46	53	19/6/2015 6:51	60	20/6/2015 23:56	55
15/6/2015 2:36	56	16/6/2015 3:41	57	17/6/2015 4:46	56	18/6/2015 5:51	53	19/6/2015 6:56	59	21/6/2015 0:01	55
15/6/2015 2:41	56	16/6/2015 3:46	56	17/6/2015 4:51	56	18/6/2015 5:56	53	19/6/2015 7:01	58	21/6/2015 0:06	54
15/6/2015 2:46	56	16/6/2015 3:51	57	17/6/2015 4:56	57	18/6/2015 6:01	47	19/6/2015 7:06	57	21/6/2015 0:11	54
15/6/2015 2:51	56	16/6/2015 3:56	56	17/6/2015 5:01	57	18/6/2015 6:06	51	19/6/2015 7:11	59	21/6/2015 0:16	53
15/6/2015 2:56	56	16/6/2015 4:01	55	17/6/2015 5:06	57	18/6/2015 6:11	54	19/6/2015 7:16	58	21/6/2015 0:21	54
15/6/2015 3:01	56	16/6/2015 4:06	57	17/6/2015 5:11	57	18/6/2015 6:16	55	19/6/2015 7:21	57	21/6/2015 0:26	57
15/6/2015 3:06	55	16/6/2015 4:11	56	17/6/2015 5:16	56	18/6/2015 6:21	56	19/6/2015 7:26	57	21/6/2015 0:31	54
15/6/2015 3:11	55	16/6/2015 4:16	56	17/6/2015 5:21	57	18/6/2015 6:26	57	19/6/2015 7:31	58	21/6/2015 0:36	49
15/6/2015 3:16	55	16/6/2015 4:21	56	17/6/2015 5:26	58	18/6/2015 6:31	58	19/6/2015 7:36	58	21/6/2015 0:41	53
15/6/2015 3:21	55	16/6/2015 4:26	56	17/6/2015 5:31	58	18/6/2015 6:36	57	19/6/2015 7:41	58	21/6/2015 0:46	54
15/6/2015 3:26	55	16/6/2015 4:31	56	17/6/2015 5:36	58	18/6/2015 6:41	58	19/6/2015 7:46	57	21/6/2015 0:51	53
15/6/2015 3:31	55	16/6/2015 4:36	56	17/6/2015 5:41	58	18/6/2015 6:46	59	19/6/2015 7:51	55	21/6/2015 0:56	51
15/6/2015 3:36	56	16/6/2015 4:41	57	17/6/2015 5:46	43	18/6/2015 6:51	59	19/6/2015 7:56	55	21/6/2015 1:01	49
15/6/2015 3:41	56	16/6/2015 4:46	57	17/6/2015 5:51	49	18/6/2015 6:56	60	19/6/2015 8:01	58	21/6/2015 1:06	58
15/6/2015 3:46	56	16/6/2015 4:51	57	17/6/2015 5:56	58	18/6/2015 7:01	58	19/6/2015 8:06	55	21/6/2015 1:11	50
15/6/2015 3:51	55	16/6/2015 4:56	57	17/6/2015 6:01	44	18/6/2015 7:06	58	19/6/2015 8:11	55	21/6/2015 1:16	44
15/6/2015 3:56	56	16/6/2015 5:01	58	17/6/2015 6:06	52	18/6/2015 7:11	59	19/6/2015 8:16	56	21/6/2015 1:21	44
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15/6/2015 4:06	56	16/6/2015 5:11	57	17/6/2015 6:16	53	18/6/2015 7:21	58	19/6/2015 8:26	54	21/6/2015 1:31	48
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15/6/2015 4:16	56	16/6/2015 5:21	57	17/6/2015 6:26	56	18/6/2015 7:31	57	19/6/2015 8:36	55	21/6/2015 1:41	58
15/6/2015 4:21	56	16/6/2015 5:26	57	17/6/2015 6:31	57	18/6/2015 7:36	55	19/6/2015 8:41	55	21/6/2015 1:46	42
15/6/2015 4:26	56	16/6/2015 5:31	58	17/6/2015 6:36	58	18/6/2015 7:41	56	19/6/2015 8:46	55	21/6/2015 1:51	58
15/6/2015 4:31	56	16/6/2015 5:36	58	17/6/2015 6:41	57	18/6/2015 7:46	56	19/6/2015 8:51	54	21/6/2015 1:56	43
15/6/2015 4:36	56	16/6/2015 5:41	58	17/6/2015 6:46	58	18/6/2015 7:51	56	19/6/2015 8:56	55	21/6/2015 2:01	57
15/6/2015 4:41	57	16/6/2015 5:46	58	17/6/2015 6:51	60	18/6/2015 7:56	56	19/6/2015 9:01	53	21/6/2015 2:06	57
15/6/2015 4:46	56	16/6/2015 5:51	58	17/6/2015 6:56	60	19/6/2015 0:01	55	20/6/2015 1:06	54	21/6/2015 2:11	58
15/6/2015 4:51	56	16/6/2015 5:56	48	17/6/2015 7:01	57	19/6/2015 0:06	56	20/6/2015 1:11	53	21/6/2015 2:16	58
15/6/2015 4:56	56	16/6/2015 6:01	54	17/6/2015 7:06	56	19/6/2015 0:11	56	20/6/2015 1:16	53	21/6/2015 2:21	58
15/6/2015 5:01	57	16/6/2015 6:06	42	17/6/2015 7:11	57	19/6/2015 0:16	56	20/6/2015 1:21	52	21/6/2015 2:26	58
15/6/2015 5:06	53	16/6/2015 6:11	55	17/6/2015 7:16	58	19/6/2015 0:21	53	20/6/2015 1:26	54	21/6/2015 2:31	38
15/6/2015 5:11	46	16/6/2015 6:16	55	17/6/2015 7:21	57	19/6/2015 0:26	54	20/6/2015 1:31	54	21/6/2015 2:36	46
15/6/2015 5:16	57	16/6/2015 6:21	53	17/6/2015 7:26	57	19/6/2015 0:31	57	20/6/2015 1:36	53	21/6/2015 2:41	42
15/6/2015 5:21	57	16/6/2015 6:26	55	17/6/2015 7:31	58	19/6/2015 0:36	52	20/6/2015 1:41	54	21/6/2015 2:46	58
15/6/2015 5:26	45	16/6/2015 6:31	56	17/6/2015 7:36	57	19/6/2015 0:41	55	20/6/2015 1:46	53	21/6/2015 2:51	58
15/6/2015 5:31	58	16/6/2015 6:36	58	17/6/2015 7:41	57	19/6/2015 0:46	55	20/6/2015 1:51	51	21/6/2015 2:56	58
15/6/2015 5:36	58	16/6/2015 6:41	58	17/6/2015 7:46	56	19/6/2015 0:51	50	20/6/2015 1:56	53	21/6/2015 3:01	57
15/6/2015 5:41	58	16/6/2015 6:46	59	17/6/2015 7:51	55	19/6/2015 0:56	53	20/6/2015 2:01	48	21/6/2015 3:06	57
15/6/2015 5:46	43	16/6/2015 6:51	59	17/6/2015 7:56	56	19/6/2015 1:01	52	20/6/2015 2:06	50	21/6/2015 3:11	57
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15/6/2015 6:01	48	16/6/2015 7:06	58	18/6/2015 0:11	55	19/6/2015 1:16	48	20/6/2015 2:21	52	21/6/2015 3:26	57
15/6/2015 6:06	49	16/6/2015 7:11	56	18/6/2015 0:16	54	19/6/2015 1:21	50	20/6/2015 2:26	49	21/6/2015 3:31	57
15/6/2015 6:11	52	16/6/2015 7:16	56	18/6/2015 0:21	54	19/6/2015 1:26	58	20/6/2015 2:31	45	21/6/2015 3:36	57
15/6/2015 6:16	56	16/6/2015 7:21	57	18/6/2015 0:26	54	19/6/2015 1:31	46	20/6/2015 2:36	42	21/6/2015 3:41	57
15/6/2015 6:21	57	16/6/2015 7:26	55	18/6/2015 0:31	55	19/6/2015 1:36	50	20/6/2015 2:41	48	21/6/2015 3:46	57
15/6/2015 6:26	57	16/6/2015 7:31	54	18/6/2015 0:36	53	19/6/2015 1:41	46	20/6/2015 2:46	46	21/6/2015 3:51	57
15/6/2015 6:31	58	16/6/2015 7:36	55	18/6/2015 0:41	50	19/6/2015 1:46	58	20/6/2015 2:51	54	21/6/2015 3:56	57
15/6/2015 6:36	58	16/6/2015 7:41	53	18/6/2015 0:46	51	19/6/2015 1:51	57	20/6/2015 2:56	58	21/6/2015 4:01	58
15/6/2015 6:41	59	16/6/2015 7:46	57	18/6/2015 0:51	53	19/6/2015 1:56	58	20/6/2015 3:01	58	21/6/2015 4:06	57
15/6/2015 6:46	60	16/6/2015 7:51	55	18/6/2015 0:56	48	19/6/2015 2:01	58	20/6/2015 3:06	58	21/6/2015 4:11	57
15/6/2015 6:51	60	16/6/2015 7:56	53	18/6/2015 1:01	58	19/6/2015 2:06	57	20/6/2015 3:11	58	21/6/2015 4:16	58
15/6/2015 6:56	61	17/6/									

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)									
21/6/2015 23:06	59	23/6/2015 0:11	54	24/6/2015 1:16	52	25/6/2015 2:21	58	26/6/2015 3:26	57	27/6/2015 4:31	58
21/6/2015 23:11	58	23/6/2015 0:16	53	24/6/2015 1:21	52	25/6/2015 2:26	58	26/6/2015 3:31	58	27/6/2015 4:36	58
21/6/2015 23:16	59	23/6/2015 0:21	54	24/6/2015 1:26	54	25/6/2015 2:31	58	26/6/2015 3:36	57	27/6/2015 4:41	58
21/6/2015 23:21	57	23/6/2015 0:26	55	24/6/2015 1:31	50	25/6/2015 2:36	58	26/6/2015 3:41	58	27/6/2015 4:46	58
21/6/2015 23:26	56	23/6/2015 0:31	55	24/6/2015 1:36	52	25/6/2015 2:41	58	26/6/2015 3:46	57	27/6/2015 4:51	58
21/6/2015 23:31	56	23/6/2015 0:36	52	24/6/2015 1:41	50	25/6/2015 2:46	60	26/6/2015 3:51	54	27/6/2015 4:56	58
21/6/2015 23:36	56	23/6/2015 0:41	50	24/6/2015 1:46	58	25/6/2015 2:51	57	26/6/2015 3:56	57	27/6/2015 5:01	58
21/6/2015 23:41	55	23/6/2015 0:46	55	24/6/2015 1:51	51	25/6/2015 2:56	58	26/6/2015 4:01	57	27/6/2015 5:06	57
21/6/2015 23:46	59	23/6/2015 0:51	49	24/6/2015 1:56	58	25/6/2015 3:01	58	26/6/2015 4:06	56	27/6/2015 5:11	58
21/6/2015 23:51	56	23/6/2015 0:56	51	24/6/2015 2:01	32	25/6/2015 3:06	58	26/6/2015 4:11	57	27/6/2015 5:16	58
21/6/2015 23:56	59	23/6/2015 1:01	50	24/6/2015 2:06	57	25/6/2015 3:11	58	26/6/2015 4:16	57	27/6/2015 5:21	58
22/6/2015 0:01	57	23/6/2015 1:06	46	24/6/2015 2:11	57	25/6/2015 3:16	58	26/6/2015 4:21	57	27/6/2015 5:26	46
22/6/2015 0:06	53	23/6/2015 1:11	50	24/6/2015 2:16	54	25/6/2015 3:21	60	26/6/2015 4:26	57	27/6/2015 5:31	58
22/6/2015 0:11	66	23/6/2015 1:16	50	24/6/2015 2:21	58	25/6/2015 3:26	46	26/6/2015 4:31	57	27/6/2015 5:36	58
22/6/2015 0:16	60	23/6/2015 1:21	53	24/6/2015 2:26	57	25/6/2015 3:31	57	26/6/2015 4:36	58	27/6/2015 5:41	45
22/6/2015 0:21	56	23/6/2015 1:26	50	24/6/2015 2:31	58	25/6/2015 3:36	57	26/6/2015 4:41	57	27/6/2015 5:46	47
22/6/2015 0:26	58	23/6/2015 1:31	65	24/6/2015 2:36	58	25/6/2015 3:41	58	26/6/2015 4:46	57	27/6/2015 5:51	52
22/6/2015 0:31	55	23/6/2015 1:36	50	24/6/2015 2:41	58	25/6/2015 3:46	57	26/6/2015 4:51	58	27/6/2015 5:56	50
22/6/2015 0:36	55	23/6/2015 1:41	54	24/6/2015 2:46	58	25/6/2015 3:51	58	26/6/2015 4:56	57	27/6/2015 6:01	48
22/6/2015 0:41	56	23/6/2015 1:46	46	24/6/2015 2:51	57	25/6/2015 3:56	57	26/6/2015 5:01	57	27/6/2015 6:06	48
22/6/2015 0:46	56	23/6/2015 1:51	58	24/6/2015 2:56	57	25/6/2015 4:01	57	26/6/2015 5:06	58	27/6/2015 6:11	55
22/6/2015 0:51	55	23/6/2015 1:56	52	24/6/2015 3:01	57	25/6/2015 4:06	57	26/6/2015 5:11	57	27/6/2015 6:16	53
22/6/2015 0:56	54	23/6/2015 2:01	40	24/6/2015 3:06	57	25/6/2015 4:11	58	26/6/2015 5:16	58	27/6/2015 6:21	53
22/6/2015 1:01	53	23/6/2015 2:06	58	24/6/2015 3:11	57	25/6/2015 4:16	57	26/6/2015 5:21	58	27/6/2015 6:26	54
22/6/2015 1:06	49	23/6/2015 2:11	58	24/6/2015 3:16	57	25/6/2015 4:21	57	26/6/2015 5:26	49	27/6/2015 6:31	56
22/6/2015 1:11	54	23/6/2015 2:16	58	24/6/2015 3:21	56	25/6/2015 4:26	57	26/6/2015 5:31	57	27/6/2015 6:36	56
22/6/2015 1:16	49	23/6/2015 2:21	58	24/6/2015 3:26	57	25/6/2015 4:31	57	26/6/2015 5:36	42	27/6/2015 6:41	58
22/6/2015 1:21	45	23/6/2015 2:26	57	24/6/2015 3:31	57	25/6/2015 4:36	57	26/6/2015 5:41	58	27/6/2015 6:46	59
22/6/2015 1:26	58	23/6/2015 2:31	57	24/6/2015 3:36	57	25/6/2015 4:41	57	26/6/2015 5:46	41	27/6/2015 6:51	58
22/6/2015 1:31	57	23/6/2015 2:36	58	24/6/2015 3:41	57	25/6/2015 4:46	58	26/6/2015 5:51	60	27/6/2015 6:56	58
22/6/2015 1:36	52	23/6/2015 2:41	58	24/6/2015 3:46	57	25/6/2015 4:51	57	26/6/2015 5:56	50	27/6/2015 7:01	66
22/6/2015 1:41	49	23/6/2015 2:46	38	24/6/2015 3:51	57	25/6/2015 4:56	62	26/6/2015 6:01	51	27/6/2015 7:06	64
22/6/2015 1:46	57	23/6/2015 2:51	57	24/6/2015 3:56	54	25/6/2015 5:01	57	26/6/2015 6:06	52	27/6/2015 7:11	58
22/6/2015 1:51	45	23/6/2015 2:56	56	24/6/2015 4:01	50	25/6/2015 5:06	58	26/6/2015 6:11	59	27/6/2015 7:16	58
22/6/2015 1:56	58	23/6/2015 3:01	58	24/6/2015 4:06	58	25/6/2015 5:11	58	26/6/2015 6:16	58	27/6/2015 7:21	57
22/6/2015 2:01	57	23/6/2015 3:06	57	24/6/2015 4:11	44	25/6/2015 5:16	37	26/6/2015 6:21	56	27/6/2015 7:26	57
22/6/2015 2:06	56	23/6/2015 3:11	56	24/6/2015 4:16	58	25/6/2015 5:21	58	26/6/2015 6:26	57	27/6/2015 7:31	57
22/6/2015 2:11	57	23/6/2015 3:16	57	24/6/2015 4:21	58	25/6/2015 5:26	57	26/6/2015 6:31	58	27/6/2015 7:36	58
22/6/2015 2:16	56	23/6/2015 3:21	57	24/6/2015 4:26	57	25/6/2015 5:31	49	26/6/2015 6:36	58	27/6/2015 7:41	56
22/6/2015 2:21	56	23/6/2015 3:26	58	24/6/2015 4:31	57	25/6/2015 5:36	40	26/6/2015 6:41	59	27/6/2015 7:46	56
22/6/2015 2:26	57	23/6/2015 3:31	38	24/6/2015 4:36	57	25/6/2015 5:41	58	26/6/2015 6:46	59	27/6/2015 7:51	56
22/6/2015 2:31	56	23/6/2015 3:36	58	24/6/2015 4:41	57	25/6/2015 5:46	35	26/6/2015 6:51	62	27/6/2015 7:56	56
22/6/2015 2:36	57	23/6/2015 3:41	57	24/6/2015 4:46	57	25/6/2015 5:51	49	26/6/2015 6:56	62		
22/6/2015 2:41	56	23/6/2015 3:46	57	24/6/2015 4:51	57	25/6/2015 5:56	50	26/6/2015 7:01	59		
22/6/2015 2:46	56	23/6/2015 3:51	57	24/6/2015 4:56	56	25/6/2015 6:01	53	26/6/2015 7:06	58		
22/6/2015 2:51	57	23/6/2015 3:56	57	24/6/2015 5:01	65	25/6/2015 6:06	54	26/6/2015 7:11	59		
22/6/2015 2:56	56	23/6/2015 4:01	58	24/6/2015 5:06	60	25/6/2015 6:11	55	26/6/2015 7:16	59		
22/6/2015 3:01	56	23/6/2015 4:06	57	24/6/2015 5:11	46	25/6/2015 6:16	55	26/6/2015 7:21	59		
22/6/2015 3:06	56	23/6/2015 4:11	57	24/6/2015 5:16	57	25/6/2015 6:21	56	26/6/2015 7:26	58		
22/6/2015 3:11	57	23/6/2015 4:16	57	24/6/2015 5:21	58	25/6/2015 6:26	56	26/6/2015 7:31	58		
22/6/2015 3:16	57	23/6/2015 4:21	57	24/6/2015 5:26	58	25/6/2015 6:31	57	26/6/2015 7:36	57		
22/6/2015 3:21	56	23/6/2015 4:26	57	24/6/2015 5:31	58	25/6/2015 6:36	58	26/6/2015 7:41	58		
22/6/2015 3:26	56	23/6/2015 4:31	58	24/6/2015 5:36	52	25/6/2015 6:41	59	26/6/2015 7:46	58		
22/6/2015 3:31	56	23/6/2015 4:36	58	24/6/2015 5:41	49	25/6/2015 6:46	59	26/6/2015 7:51	57		
22/6/2015 3:36	57	23/6/2015 4:41	56	24/6/2015 5:46	48	25/6/2015 6:51	61	26/6/2015 7:56	56		
22/6/2015 3:41	57	23/6/2015 4:46	67	24/6/2015 5:51	53	25/6/2015 6:56	61	27/6/2015 0:01	58		
22/6/2015 3:46	57	23/6/2015 4:51	60	24/6/2015 5:56	51	25/6/2015 7:01	59	27/6/2015 0:06	56		
22/6/2015 3:51	56	23/6/2015 4:56	55	24/6/2015 6:01	53	25/6/2015 7:06	58	27/6/2015 0:11	57		
22/6/2015 3:56	56	23/6/2015 5:01	50	24/6/2015 6:06	60	25/6/2015 7:11	59	27/6/2015 0:16	57		
22/6/2015 4:01	56	23/6/2015 5:06	43	24/6/2015 6:11	57	25/6/2015 7:16	58	27/6/2015 0:21	57		
22/6/2015 4:06	56	23/6/2015 5:11	46	24/6/2015 6:16	57	25/6/2015 7:21	58	27/6/2015 0:26	56		
22/6/2015 4:11	57	23/6/2015 5:16	58	24/6/2015 6:21	57	25/6/2015 7:26	57	27/6/2015 0:31	58		
22/6/2015 4:16	57	23/6/2015 5:21	57	24/6/2015 6:26	58	25/6/2015 7:31	57	27/6/2015 0:36	58		
22/6/2015 4:21	57	23/6/2015 5:26	50	24/6/2015 6:31	58	25/6/2015 7:36	58	27/6/2015 0:41	55		
22/6/2015 4:26	42	23/6/2015 5:31	58	24/6/2015 6:36	59	25/6/2015 7:41	57	27/6/2015 0:46	56		
22/6/2015 4:31	58	23/6/2015 5:36	48	24/6/2015 6:41	61	25/6/2015 7:46	56	27/6/2015 0:51	56		
22/6/2015 4:36	57	23/6/2015 5:41	46	24/6/2015 6:46	59	25/6/2015 7:51	57	27/6/2015 0:56	55		
22/6/2015 4:41	56	23/6/2015 5:46	50	24/6/2015 6:51	60	25/6/2015 7:56	58	27/6/2015 1:01	56		
22/6/2015 4:46	56	23/6/2015 5:51	65	24/6/2015 6:56	60	26/6/2015 0:01	57	27/6/2015 1:06	55		
22/6/2015 4:51	57	23/6/2015 5:56	60	24/6/2015 7:01	60	26/6/2015 0:06	56	27/6/2015 1:11	57		
22/6/2015 4:56	57	23/6/2015 6:01	56	24/6/2015 7:06	58	26/6/2015 0:11	59	27/6/2015 1:16	56		
22/6/2015 5:01	58	23/6/2015 6:06	56	24/6/2015 7:11	58	26/6/2015 0:16	55	27/6/2015 1:21	54		
22/6/2015 5:06	57	23/6/2015 6:11	56	24/6/2015 7:16	58	26/6/2015 0:21	56	27/6/2015 1:26	55		
22/6/2015 5:11	57	23/6/2015 6:16	61	24/6/2015 7:21	57	26/6/2015 0:26	54	27/6/2015 1:31	54		
22/6/2015 5:16	57	23/6/2015 6:21	61	24/6/2015 7:26	57	26/6/2015 0:31	56	27/6/2015 1:36	55		
22/6/2015 5:21	58	23/6/2015 6:26	59	24/6/2015 7:31	58	26/6/2015 0:36	55	27/6/2015 1:41	57		
22/6/2015 5:26	58	23/6/2015 6:31	60	24/6/2015 7:36	57	26/6/2015 0:41	52	27/6/2015 1:46	53		
22/6/2015 5:31	57	23/6/2015 6:36	59	24/6/2015 7:41	60	26/6/2015 0:46	54	27/6/2015 1:51	54		
22/6/2015 5:36	58	23/6/2015 6:41	60	24/6/2015 7:46	57	26/6/2015 0:51	53	27/6/2015 1:56	52		
22/6/2015 5:41	48	23/6/2015 6:46	60	24/6/2015 7:51	56	26/6/2015 0:56	53	27/6/2015 2:01	52		

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



After checking with Contractor of HY/2009/19, pile cap breaking works was conducted on 23, 24 June 2015; and pile cap excavation works was conducted 25 June 2015. Noise mitigation measures including temporary noise barrier was implemented for the breaking works by the Contractor while breaking works and excavation works was noted on-going at the construction site located next to the monitoring station. In view of the above, the exceedances were considered to be non-Project related and contributed by nearby non-CWB construction site works. Nevertheless, the Contractor was reminded to strengthen the noise mitigation measures implemented for the pile cap demolition works to avoid potential cumulative impact to nearby sensitive receivers.



***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.</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. 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.</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> <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.</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. 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.</li> </ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>

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

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



### Event and Action Plan for Marine Water Quality

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



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



### Event and Action Plan for Odour Patrol

Event	ACTION	
	Person-in-charge of Odour Monitoring	Implementation Agent Identified by CEDD
<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_10N179	5-Jun-15	10:35	M6 - HK Baptist Church Henrietta Secondary School	68	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> No construction work was conducted under Contract HY/2009/19 around the concerned location during the time of measurement and 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_10N182	16-Jun-15	10:40	M6 - HK Baptist Church Henrietta Secondary School	68	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> No construction work was conducted under Contract HY/2009/19 around the concerned location during the time of measurement and 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_10N181	9-Jun-15	15:35	M6 - HK Baptist Church Henrietta Secondary School	68	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> No construction work was conducted under Contract HY/2009/19 around the concerned location during the time of measurement and 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>



Lam Geotechnics Limited

Contract No. HK/2011/07  
Wanchai Development Phase II and Central Wanchai Bypass  
Sampling, Field Measurement and Testing Work (Stage2)  
Summary for Notification of Exceedance

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10D513	28-May-15	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	3.14	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedance was not related to Project.
X_10D514	5-Jun-15	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.80	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedance was not related to Project.
X_10D515	8-Jun-15	Mid-flood	Ex-WPCWA SW	Middle	DO(mg/l)	3.10	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedance was not related to Project.
X_10D516	10-Jun-15	Mid-flood	Ex-WPCWA SW	Middle	DO(mg/l)	2.75	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedance was not related to Project.
X_10D517	17-Jun-15	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.77	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedance was not related to Project.



Lam Geotechnics Limited

Contract No. HK/2011/07  
Wanchai Development Phase II and Central Wanchai Bypass  
Sampling, Field Measurement and Testing Work (Stage2)  
Summary for Notification of Exceedance

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C630	10-Jun-15	Mid-ebb	C7	DO(mg/l)	4.04	3.02	2.44	Possible reason:	Temporary water pipe midification works for the diverted cooling water supplies system.
				Turbidity	31.36	11.35	12.71	Action taken/ to be taken:	Immediate repeated in-situ measurement had conducted to confirm the exceedances. Checking with contractor works and review previous monitoring data.
				SS	73.50	18.42	27.54	Remarks/ Other Obs:	No marine works was conducted in the vicinity of the water quality monitoring station under Contract HY/2009/15 on the monitoring date. While water pipe modification works for the diverted seawater intake was conducted under Contract HY/2010/08 on the monitoring date. Contractor clarified the seawater supplies to respective cooling water intake pump station for Windsor House was temporary suspended. In addition, no further exceedance was recorded on 17 July 2015 after the resumption of water supplies. In view of the above, the respective cooling water intake was considered not affected by project works.



***Appendix 9.1***

***Complaint Log***



### Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
100321a	21/3/2010	ICC Case no. 1-224618029, Ms. Tsang	Location near Tin Hau	Complaint regarding the loud noise and dark smoke in the course of dredging works on 21 March 2010 (Sunday).	<ol style="list-style-type: none"><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.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0119-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230. 2) According to RSS 's record, no more daytime and night time dredging since the departure of the split hopper barge from the workplace on 29 April 2010 at 1900 hrs to 5 May 2010. 3) No further complaints were received in the reporting month. The complaint is considered closed.	Closed
100731	31/7/2010	Mr. Lee received by ICC (CC Case: 1-250702681)	Oil Street to Watson Road	Complaint on the noise nuisance due to the dredging works. Three construction plants were operated concurrently.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. 2) There was only 1 grab dredger operated by Contractor within NPR project site area for dredging works. 3) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 27 July and 3 August 2010 during daytime and evening time period. 4) It is considered as invalid from the EP and CNP point of view.	Closed
100812	12/8/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the dredging works at the marine works area adjacent to the Harbour Height during the period from 0700 to 2200.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230. 2) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 10 and 17 August 2010 during daytime and evening time period. 3) It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	Closed





Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
101108	8/11/2010	Mr. Nip received by ICC (CC Case)	Sai Wan Ho	Visual concern around the seaside silt screen outside the WSD freshwater intake pump at Sai Wan Ho (Monitoring station ref no.. WSD15)	<ol style="list-style-type: none"><li>1) Contractor for HY/2009/11 has been regularly 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.	monitoring station at Victoria Centre on 25 July and 4 August 2011 during daytime while breaking and excavation works were undertaken during monitoring. 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.	
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	1) It was referred by AECOM to ET on 28 July 2011 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. 3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am.	Closed
	08/08/2011				4) However, complainant did not satisfy with the response on the noise nuisance from the rock-breaking during morning in front of Victoria Centre and then further complaint via 1823 on 7 August 2011. 5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed. <i>Remarks: There will be counted as two complaints in this complaint log.</i>	
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.	1) It was referred by AECOM to ET on 17 August 2011. 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. 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. 4) Contractors were advised to relocate the loose materials	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 cleanness and no exceedance was recorded during Water Quality Monitoring. It is consider the cause of this complaint is not related to project and environmental issue in this project as well. No more complaint received after ad-hoc inspection</p>	
111014	14/10/2011	The complainant, Ms. Tam complained via hotline 1823	Wan Chai	The polluted fumes and exhaust from the excavation by sub-contractor of CEDD on pedestrian way outside no.25 Harbour Road (in front of the Harbour Centre)	<p>1) RSS notified ET to carry out investigation on 17 October 2011.</p> <p>2) ET confirmed with the Resident Site Staff that the location of the excavator was within site area of Contract no. HK/2009/02 undertaking the water cooling main reprovision works along the Harbour Road. The plants including the excavator have been checked before using</p>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>at the site. However, the polluted fumes and exhausted from the excavator was caused due to insufficient maintenance of the plant after using at site.</p> <p>3) After receiving the complaint, the excavator was then removal off-site for checking and maintenance works on 17 October 2011.</p> <p>4) Contractor was reminded to enhance regular checking and maintenance to all plants at site.</p> <p>5) RSS has replied to the complainant on the arrangement of the measures taken on 17 October 2011. Complainant was satisfied with the response and follow-up action taken by the Contractor.</p>	
111104	04/11/2011	Mr. Liu from LCSD complained via Contractor Complaint Hotline	Wan Chai	Complain about a tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road, the status is not healthy and roof ball of two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue were half cut.	<p>1) ET confirmed with the Resident Site Staff that</p> <ul style="list-style-type: none"><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
140612	12/06/2014	EPD ref: EP/860/F2/24 Annex IV	Wan Chai	The complaint is regarding to the water quality of the waterfront outside the Hong Kong Academy for Performing Arts Theatre Block, where a large piece of muddy water was found.	<p>1) WSII RSS team notified ET on 12 June 2014; Notification letter from EPD (ref: EP/860/F2/24 Annex IV) was received by ET on 13 June 2014.</p> <p>2) ET confirmed with RSS that neither marine construction works nor barge operation was conducted at the concerned location during the time of complaint. With respect to the complaint case, muddy dispersion was observed at HKCEC2W works area on 12 June 2014, and</p>	Interim Report was submitted to EPD on 20 June 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>the dispersion was observed partly extended beyond the outermost layer silt curtain at 1000hrs. Immediate follow up action was requested.</p> <p>3) It is considered that Contractor's mitigation measures would require further review on the effectiveness to avoid seepage of muddy dispersion such as regular diver inspection check and daily visual checking of silt curtains.</p> <p>Additional silt curtain at marine access zone was installed by Contractor on 12 June 2014 and the double layer silt curtain were generally in order. Follow-up inspection was further conducted on 16 June 2014.</p> <p>The Contractor's investigation report on the complaint case was submitted to EPA via email on 18 June 2014.</p>	
140723	21/07/2014	ICC Case Ref: 2-341537112	Works area opposite to Ngan Tao Building	The complaint is regarding to construction noise impact to the complainant who could not sleep due to work and machine at the project site opposite to the Ngan Tao Building.	<p>1) Construction noise impact referred by RSS was received by ET on 25 July 2014</p> <p>2) ET confirmed with RSS that horizontal cutting and removal of D-wall at Eastern, Southern and Northern side of TS2 was undertaken by Contractor of HY/2009/15 within Causeway Bay Typhoon Shelter before 23:00hrs on 20 July 2014 that total 3 numbers of derrick lighter and 3 numbers of saw cut machine were in operation, and removal of D-wall at Panel S30A-1 of TS2 was undertaken by Contractor of HY/2009/15 within Causeway Bay Typhoon Shelter around 00:25hrs to 00:56hrs on 21 July 2014 that total 1 number of derrick lighter was in operation.</p> <p>3) According to the relevant site records under Contract HY/2009/15, before 23:00hrs on 20 July 2014, horizontal cutting and removal of Diaphragm Wall at Eastern, Southern and Northern side of TS2 was conducted under HY/2009/15 within Causeway Bay Typhoon Shelter. Total 3 nos. of derrick lighter and 3 nos. of saw cut machine were in operation at the above period. From around 00:25hrs to 00:56hrs on 21 July 2014, removal of D-wall at Panel S30A-1 of TS2 was undertaken by Contractor of HY/2009/15 within Causeway Bay Typhoon Shelter. Total 1 no. of derrick lighter was found operating at the above period</p> <p>4) It was considered the condition of CNP GW-RS0592-14 was not fulfilled by the Contractor of HY/2009/15. "From 00:25hrs to 00:57hrs on 21 July 2014, the PME(s) (1 no. of Derrick Lighter) on-site could not follow with any given PME grouping requirement(s) as stated in condition 3.a. and condition 3.d. in no. GW-RS0592-14."</p>	<p>Final report (Issue1) issued on 31 July 2014.</p> <p>Further to complainant follow-up, Final report (Issue2) Issued on 12 Aug 2014.</p>



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>Notwithstanding the above, according to the site recorded provided by the RSS, the derrick lighter was found malfunction at around 23:00hrs on 20 July 2014 while the diaphragm wall cutting procedure was incomplete. Under safety and navigation consideration, the completion of diaphragm wall removal was necessary and of imminent need.</p> <p>5) The Contractor of HY/2009/15 was advised to review the construction sequence and emergency response procedure for construction activities during restricted hours and night time period to allow for sufficient buffer time for work completion such that the Construction Noise Permit would be followed. Furthermore, the Contractor of HY/2009/15 was suggested to conduct throughout checking of PME used on site prior to work commencement to minimize the potential malfunctioning of PME during the course of work which affect the duration of works.</p>	
141016	14/10/2014	<p>EPD Ref.: EP860/E2/24 Annex IV</p> <p>ICC complaint received by ET on 10 October 2014</p>	Work site next to new Wan Chai Ferry Pier and opposite to Wan Chai Sports Ground.	Construction noise like piling works was heard on 14 October 2014 night until 23:45 hrs. It was suspected that the noise was emanated from the work site next to new Wan Chai Ferry Pier and opposite to Wan Chai Sports Ground.	<p>A public complaint regarding construction noise impact referred by EPD was received by ET on 16 October 2014 (EPD Ref.: EP860/E2/24 Annex IV dated 16 October 2014). The complainant reported that construction noise like piling works was heard on 14 October 2014 night until 23:45 hrs. It was suspected that the noise was emanated from the work site next to new Wan Chai Ferry Pier and opposite to Wan Chai Sports Ground.</p> <p>ET confirmed with the Resident Site Staff that From 19:00hrs to 23:00hrs on 14 October 2014, dredging works was conducted under Contractor of HK/2009/02 at WCR3 Area. Total one grab dredger was in operation. Mitigation measures including provision of steel sheeting screening to the power generation part of the grab dredger was implemented by the Contractor of HK/2009/02.</p> <p>From 23:00 hrs to 05:00 hrs, dredging works was conducted under Contractor of HK/2009/02 at WCR3 Area. Total one grab dredger was in operation. Mitigation measures including provision of steel sheeting screening to the power generation part of the grab dredger was implemented by the Contractor of HK/2009/02.</p>	<p>Interim investigation report submitted to EPD on 23 October 2014.</p> <p>Updated interim investigation with supplementary information submitted to EPD on 17 November 2014</p>



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>From 23:00 hrs to 06:00hrs, panel replacement works was conducted under Contractor of HK/2009/02 at the Temporary Covered Walkway.</p> <p>Total one scissor platform and two hand held drills (battery) were in operation.</p> <p>From 23:00 hrs to 06:00hrs, trial pit works was conducted under Contractor of HK/2009/02 at Hung Hing Road.Total one crane lorry was in operation.</p> <p>According to the relevant site records under Contract HK/2009/02, from 19:00hrs to 23:00hrs on 14 October 2014, dredging works was conducted under Contractor of HK/2009/02 at WCR3 Area. Total one grab dredger was in operation. Mitigation measures including provision of steel sheeting screening to the power generation part of the grab dredger was implemented by the Contractor of HK/2009/02.</p> <p>From 23:00 hrs to 05:00 hrs, dredging works was conducted under Contractor of HK/2009/02 at WCR3 Area.Total one grab dredger was in operation. Mitigation measures including provision of steel sheeting screening to the power generation part of the grab dredger was implemented by the Contractor of HK/2009/02.</p> <p>From 23:00 hrs to 06:00hrs, panel replacement works was conducted under Contractor of HK/2009/02 at the Temporary Covered Walkway. Total one scissor platform and two hand held drills (battery) were in operation.</p> <p>From 23:00 hrs to 06:00hrs, trial pit works was conducted under Contractor of HK/2009/02 at Hung Hing Road. Total one crane lorry was in operation.</p> <p>In view of the above findings, no direct information associated with the noise concern was considered available.</p>	





Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
141110	07/11/2014	EPD Ref.: H05/RS/000278 15-14  EPD complaint received by ET on 10 November 2014	Construction site at old Wan Chai Ferry Pier	Malodour of construction plant exhaust from the construction site at old Wan Chai Ferry Pier was scented that affecting the swimmers at Wan Chai Swimming Pool.	<p>A public complaint regarding odour concern referred by EPD was received by ET on 07 November 2014 (EPD Ref.: H05/RS/00027815-14 dated 10 November 2014).</p> <p>The complainant reported that Malodour of construction plant exhaust from the construction site at old Wan Chai Ferry Pier was scented that affecting the swimmers at Wan Chai Swimming Pool.</p> <p>ET confirmed with the Resident Site Staff that</p> <p>ELS works was conducted on 7 November 2014 during daytime at Portion 2 (Area oppsite to WanChai Swimming Pool).</p> <p>Total 3 nos. of excavators, 2 nos. of crawler cranes, 2 nos. of generator, 1 no. of crane lorry and 2 no. of dump trucks were operated.</p> <p>Demolition works was conducted on 7 November 2014 during daytime at West of old Wan Chai Ferry Pier.</p> <p>Total 2 nos. of excavators, 1 no. of derrick barge and 1 no. of tug boat were operated.</p> <p>Dredging works was conducted on 7 November 2014 during daytime at WCR3 (East of old Wan Chai Ferry Pier)</p> <p>Total 1 no .of dredger, 1 no. of hopper and 1 no. of tug boat were operated.</p> <p>According to the relevant site records under Contract HK/2009/02, ELS works was conducted on 7 November 2014 during daytime at Portion 2 (Area oppsite to WanChai Swimming Pool). Total 3 nos. of excavators, 2 nos. of crawler cranes, 2 nos. of generator, 1 no. of crane lorry and 2 no. of dump trucks were operated. Demolition works was conducted on 7 November 2014 during daytime at West of old Wan Chai Ferry Pier. Total 2 nos. of excavators, 1 no. of derrick barge and 1 no. of tug boat were operated.</p> <p>Follow-up inspection was conducted during weekly environmental inspection on 13 November 2014, no dark smoke emission was observed from the PMEs operating on-site. The condition of chemical waste storage was considered satisfactory and no malodour was identified. Despite no information related to malodour was identified, the Contractor was reminded to conduct regular checking on the condition of PMEs to ensure only well maintained PMEs are used on site.</p>	<p>Interim investigation report submitted to EPD on 17 November 2014.</p> <p>EPD advised no comment on the interim report and case closed on 1 Dec 2014.</p>



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Based on the relevant information provided by RSS, despite no information associated with the malodour concern was identified after investigation, the Contractor was reminded to conduct regular checking on the condition of PME used on site to ensure only well maintained PME are used on site The interim report would be submitted to EPD on 17 November 2014.	
141113	12/11/2014	EPD Ref.: H05/RS/000282 53-14  EPD complaint received by ET on 13 November 2014	Construction site at old Wan Chai Ferry Pier	Malodour and dark smoke emission from an excavator located at the construction site at old Wan Chai Ferry Pier was observed that affecting the pedestrians.	<p>A public complaint regarding odour concern referred by EPD was received by ET on 13 November 2014 (EPD Ref.: H05/RS/00028253-14 dated 13 November 2014). The complainant reported that Malodour and dark smoke emission from an excavator located at the construction site at old Wan Chai Ferry Pier was observed that affecting the pedestrians. (Contract HK/2009/02)</p> <p>ET confirmed with the Resident Site Staff that demolition works was conducted under Contract HK/2009/02 on 12 November 2014 during daytime at old Wan Chai Ferry Pier. Total 2 nos. of excavators, 1 no. of derrick barge and 1 no. tug boat were operated.</p> <p>According to the relevant site records under Contract HK/2009/02, demolition works was conducted on 12 November 2014 during daytime at old Wan Chai Ferry Pier. Total 2 nos. of excavators, 1 no. of derrick barge and 1 no. tug boat were operated.</p> <p>In addition, investigation found that due to malfunctioning of one of the excavators deployed at old Wan Chai Ferry Pier, dark smoke was emitted from the defective excavator for a short period of approximately 30 seconds at around 15:00 hrs on 12 November 2014. The operation of excavator was immediately suspended and followed by repair works. The normal operation of the excavator was resumed after repair.</p> <p>Follow-up inspection was conducted during weekly environmental inspection on 13 November 2014, no dark smoke emission was observed from the PMEs operating on-site and the Contractor of HK/2009/02 was reminded to conduct regular checking on the condition of PMEs to ensure only well maintained PMEs are used on site.</p>	<p>Interim investigation report submitted to EPD on 19 November 2014.</p> <p>EPD advised no comment on the interim report and case closed on 8 Dec 2014.</p>



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
141121	Not Specified	EPD Ref: H08/RS/28263-14  EPD complaint information and findings was received by ET via email on 21 Nov 2014	Causeway Bay Typhoon Shelter	Resident in Hing Fat Street complaining about loud noise from dredging work in CBTS up to 10pm at night.	EPD received a construction noise complaint from dredging works at Causeway Bay Typhoon Shelter and a resident in Hing Fat Street complaining about loud noise from dredging work in CBTS up to 10pm at night.  EPD investigation found that the operation of a derrick barge is covered by CNP no. GW-RS0701-14.  EPD reminded the Contractor of HY/2011/08 to ensure the work strictly follow the permit conditions and endeavor to minimize the noise as so not to disturb the nearby residents.	Complaint case handled by EPD and relevant investigation findings was sent to ET on 21 November 2014
150127	21 Jan 2015	EPD complaint (EPD Ref.: H05/RS/00001725-15) received by ET on 27 January 2015 and further information from EPD regarding the updated location under complaint was received by ET on 30 January 2015	A portion of Hung Hing Road immediately to the east of Marsh Road near SPCA	Construction dust and grit was emitted from the construction site to the carriageway causing nuisance to the public.	A public complaint regarding air quality impact referred by EPD was received by ET on 27 January 2015 (EPD Case Ref.: H05/RS/00001725-15 dated 27 January 2015) and further information from EPD regarding the updated location under complaint was received by ET on 30 January 2015. The complainant reported that construction dust and grit was emitted from the construction site to the carriageway causing nuisance to the public.  ET confirmed with the Resident Site Staff that the major construction activities around the concerned location conducted on 21 January 2015 include breaking of seawall blocks and D-wall at TPCWAW; concreting, grouting and drilling works at TPCWAW;reclamation/ backfilling works at TPCWAW  Mitigation measures implemented by the Contractor for the above construction works include spraying haul road with water; covering bagged cement with tarpaulin; providing three sided and top covering for grouting stations; providing water spraying to dusty activities such as breaking works  According to the relevant site records, breaking of seawall blocks and D-wall, concreting, grouting and drilling works and reclamation/ backfilling works were	Interim report submitted to EPD on 9 February 2015



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>conducted at TPCWAW. Dust mitigation measures including spraying haul road with water, covering bagged cement with tarpaulin, providing three sided and top covering for grouting stations and water spraying to dusty activities such as breaking works were implemented by the Contractor of HY/2009/15 near the concerned location on 21 January 2015.</p> <p>Follow-up investigation was conducted on 27 January 2015 during weekly environmental inspection, dust mitigation measures including water spraying for dusty haul road and major dust generation works; and provision of three sides and top covering for grouting station were confirmed in place.</p> <p>In addition, based on the review of the monitoring data of the monitoring station located at the concerned location raised by the complainant, namely monitoring station CMA3a, no action or limit level exceedance was recorded during air quality monitoring conducted on 20 and 21 January 2015. Nevertheless, the Air Quality Health Index (AQHI) recorded by EPD across Western District and Eastern District on the complaint date was ranged from 4 to 10+ indicating a severely high concentration of ambient air pollutants.</p> <p>As such, the site condition under Contract HY/2009/15 at the concerned location was considered to be generally satisfactory and no non-conformity related to cumulative air quality impact was observed. Nevertheless, in view of the public concern, the contractor was reminded to enhance the dust mitigation measures implemented to minimize potential nuisance to nearby public.</p>	
150622	18 June 2015	EPD Ref.:H05/RS/ 00015054-15 dated 8 June	A mooring location near shore and at location outside Wan Chai Sports	Dark smoke and malodour emission was observed from a hopper barge moored near shore and	A public complaint regarding dark smoke and malodour concern referred by EPD was received by ET on 22 June 2015 (EPD Ref.: H05/RS/00015054-15 dated 22 June 2015). The complainant reported that dark smoke and malodour emission was observed from a hopper barge	Interim report submitted to EPD on 29 June 2015



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		2015	Ground	other construction plants under operation from the reclamation construction site	<p>moored near shore and other construction plants under operation from the reclamation construction site with Contract no. HK/2009/02 at location outside Wan Chai Sports Ground caused air pollution. The complainant alleged that the said situation had been observed for a prolonged period.</p> <p>ET confirmed with the Resident Site Staff that reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 from 15 June 2015 to 19 June 2015. Total 3 nos. of mobile crane were in operation. On 17 June 2015, one no. of concrete pump truck and two nos. of concrete mixer were in operation. Excavation and Lateral Support was conducted at Portions 3 &amp; 4 from 15 June 2015 to 19 June 2015. Total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. In addition, on 15 June 2015, 17 June 2015 and 19 June 2015, 1 no. of derrick barge was moored near Portions 3 &amp; 4 for transportation of the excavated material away from site.</p> <p>According to the relevant site records under Contract HK/2009/02, from 15 June 2015 to 19 June 2015, reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 and total 3 nos. of mobile crane, one no. of concrete pump truck (on 17 June 2015 only) and two nos. of concrete mixer (on 17 June 2015 only) were in operation; excavation and lateral support was conducted at Portions 3 &amp; 4 and total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. Based on relevant site record, no hopper barge was moored under Contract HK/2009/02 around the concerned location while 1 no. of derrick barge was moored under Contract HK/2009/02 near Portions 3 &amp; 4 for transportation of the excavated material from Portions 3 &amp; 4 away from site on 15 June 2015, 17 June 2015 and 19 June 2015 respectively.</p> <p>Follow-up inspection was conducted during weekly</p>	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					environmental inspection on 25 June 2015, no dark smoke and malodour emission was observed from the PMEs operating on-site. A derrick barge was observed moored near Portions 3 & 4 and excavated material was transferred to the derrick barge by the excavators on land without barge operation and no particular dark smoke and malodour emission was observed. Nevertheless, the Contractor was reminded to conduct regular checking on the condition of the derrick barge and other PMEs deployed on site to ensure only well maintained PMEs are used to avoid potential dark smoke and maldour emission affecting nearby public.	



***Appendix 10.1***

***Construction Programme of Individual Contracts***



**CEDD CONTRACT HK/2009/01**

**CHUN WO - LEADER JOINT VENTURE**

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
HK/2009/01 - Revised Works Programme Updated (Data Date: 20-Jan-15)						
Key Dates (Contractual)		48	20-Feb-15	02-Apr-15	589	
Major Works						
KD-0300	Completion of Section 3 of Works - CWB, Slip Roads 2 & 3 & Works in Area 8	0		11-Mar-15*	0	KD-0305, PRE-4050
KD-0400B	Completion of Outstanding Works for Section 4 - Salt Watermains	0		02-Apr-15	500	TTAM-B6-1030B, TTAM-A2-1040D, TTAM-A3-1090B, TTAM-A5-1050B, TTAM-B6-1090B
KD-0610	Completion of Section 6A of Works - Gov't Offices cooling water discharge	0		20-Feb-15*	-122	TTAM-C2-1100B, TTAM-X3-1000B, KD-0615, TTAM-C2-1100B
KD-0620	Completion of Section 6B of Works - Great Eagle Centre cooling water discharge	0		20-Feb-15*	-122	KD-0625, TTAM-C2-1100B, TTAM-X2-1020B, TTAM-C2-1100B
KD-0630	Completion of Section 6C of Works - China Resources Bldg cooling water discharge	0		20-Feb-15*	-122	TTAM-C2-1100B, TTAM-X2-1020B, KD-0635, TTAM-C2-1100B
KD-0800	Completion of Section 8 of Works - Works in Area 5	0		20-Feb-15*	-105	KD-0805
KD-1200	Completion of Section 12 of Works - Works in Area 10	0		20-Feb-15*	-316	KD-1205
KD-1300	Completion of Section 13 of Works - Works in Area 11	0		20-Feb-15*	-29	KD-1305
Landscaping & Establishment Works						
Key Dates (Forecast Completion)		135	20-Feb-15	18-Jun-15	501	
Major Works						
KD-0405B	Completion of Outstanding Works for Section 4 - Salt Watermains & Works in Area 3	0		20-Feb-15	542	S11-4030, S4-2520, S4-4060, S4-4000, S4-1500, S4-4070, S4-4050, S4-2500, S4-4090, S4-4010, S6-1030, S6A-2010, S6A-2030B
KD-0615	Completion of Section 6A of Works - Gov't Offices cooling water discharge	0		18-Jun-15	-241	S6B-2000, S6-1030, S6B-2020B
KD-0625	Completion of Section 6B of Works - Great Eagle Centre cooling water discharge	0		18-Jun-15	-241	S6C-2000, S6-1030, S6C-2020B
KD-0635	Completion of Section 6C of Works - China Resources Bldg cooling water discharge	0		18-Jun-15	-241	S6C-2000, S6-1030, S6C-2020B
KD-0805	Completion of Section 8 of Works - Works in Area 5	0		22-May-15	-196	S8-3000
KD-1205	Completion of Section 12 of Works - Works in Area 10	0		28-Feb-15*	0	TTAM-A4-1050C, S12-1000, TTAM-A4-1020B, VO105-1000, VO105-1000A
KD-1305	Completion of Section 13 of Works - Works in Area 11	0		28-Feb-15*	0	S3A-TS-1050, S13-1000, S13-3000, S13-2000, VO105-2000, VO105-2000A
Landscaping & Establishment Works						
Possession of Site Preliminaries		0			0	
Preliminaries		1510	04-Mar-11 A	21-Apr-15	481	
Main Road Statement & Design (Major Approval by MTR/OD)						
PRE-2000G	D-Wall Construction for CWB Tunnel (Stage 3)	60	05-Nov-13 A	20-Feb-15*	-426	PRE-2000E

Remaining Work

Actual Work

Summary Bar

Critical Remaining Work

Milestone

CEDD CONTRACT NO. HK/2009/01

Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

WORK PROGRAMME Rev. 6E 3mths Rolling Programme (Data Date on:20-Feb-15)

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**CHUN WO - LEADER JOINT VENTURE**

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**CEDD CONTRACT HK/2009/01**

## CHUN WO - LEADER JOINT VENTURE

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**CEDD CONTRACT HK/2009/01**

## CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors	2011				2012				2013				2014				2015																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
							Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	E&M Works Installation of Intake Screen	0			0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													



**CEDD CONTRACT HK/2009/01**

**CHUN WO - LEADER JOINT VENTURE**








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**CEDD CONTRACT HK/2009/01**

## CHUN WO - LEADER JOINT VENTURE

[illegible]

 Remaining Work       Summary  
 Actual Work       Summary Bar  
 Summary Bar  
 Critical Remaining Work  
 Milestone

CEDD CONTRACT NO. HK/2009/01

Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

WORK PROGRAMME Rev. 6E 3mths Rolling Programme (Data Date on:20-Feb-15)

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**CEDD CONTRACT HK/2009/01**

**CHUN WO - LEADER JOINT VENTURE**








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**CEDD CONTRACT HK/2009/01**

**CHUN WO - LEADER JOINT VENTURE**

[illegible]

 Remaining Work       Summary  
 Actual Work       Summary Bar  
 Summary Bar  
 Critical Remaining Work  
 Milestone

CEDD CONTRACT NO. HK/2009/01

Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

WORK PROGRAMME Rev. 6E 3mths Rolling Programme (Data Date on:20-Feb-15)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015																												
						May				June				July				August				Number												
						3	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30											
	0250-1720.31	Precast Beam Bridge E E4E3-B	14	08-May-15 A	05-Jun-15	92	Precast Beam Bridge E E4E3-B																											
	0250-1720.32	Precast Beam Bridge E E4E3-C	14	03-Apr-15 A	05-Jun-15	92	Precast Beam Bridge E E4E3-C																											
	0250-1720.33	Precast Beam Bridge F5 - 10	18	05-Jun-15	27-Jun-15	135	Precast Beam Bridge F5 - 10																											
	0250-1720.35	Precast Beam Bridge F5 - 11	18	27-Jun-15	20-Jul-15	135	Precast Beam Bridge F5 - 11																											
	0250-1720.36	Precast Beam Bridge F5 - 12	18	20-Jul-15	10-Aug-15	135	Precast Beam Bridge F5 - 12																											
	0250-1720.37	Precast Beam Bridge F5 - 13	18	10-Aug-15	31-Aug-15	135	Precast Beam Bridge F5 - 13																											
	0250-2070	Bridge F1C Pier 36 T-span Segment Off-site Casting (13 nos.)	31	20-May-15	25-Jun-15	159	Bridge F1C Pier 36 T-span Segment Off-site Casting (13 nos.)																											
	0250-2080	Bridge F1C Pier 37 T-span Segment Off-site Casting (11 nos.)	27	26-Jun-15	28-Jul-15	159	Bridge F1C Pier 37 T-span Segment Off-site Casting (11 nos.)																											
	0250-2090	Bridge F1C Abut D12 End-span Segment Off-site Casting (7 nos.)	22	20-May-15	13-Jun-15	168	Bridge F1C Abut D12 End-span Segment Off-site Casting (7 nos.)																											
	0250-2100	Bridge F1C Pier 38 End-span Segment Off-site Casting (6 nos.)	19	15-Jun-15	08-Jul-15	176	Bridge F1C Pier 38 End-span Segment Off-site Casting (6 nos.)																											
	0250-2110	Bridge F2C Pier 39 T-span Segment Off-site Casting (13 nos.)	0	11-Jan-15 A	26-Mar-15 A		Bridge F2C Pier 39 T-span Segment Off-site Casting (13 nos.)																											
	0250-2120	Bridge F2C Pier 38 End-span Segment Off-site Casting (5 nos.)	0	09-Jan-15 A	10-Mar-15 A		Bridge F2C Pier 38 End-span Segment Off-site Casting (5 nos.)																											
	0250-2130	Bridge F2C Pier 40 End-span Segment Off-site Casting (5 nos.)	0	09-Feb-15 A	10-Mar-15 A		Bridge F2C Pier 40 End-span Segment Off-site Casting (5 nos.)																											
	0250-2140	Bridge F3C Pier 41 T-span Segment Off-site Casting (13 nos.)	31	10-Apr-15 A	25-Jun-15	235	Bridge F3C Pier 41 T-span Segment Off-site Casting (13 nos.)																											
	0250-2150	Bridge F3C Pier 42 T-span Segment Off-site Casting (11 nos.)	22	18-Apr-15 A	13-Jun-15	244	Bridge F3C Pier 42 T-span Segment Off-site Casting (11 nos.)																											
	0250-2160	Bridge F3C Pier 40 End-span Segment Off-site Casting (5 nos.)	16	10-Apr-15 A	06-Jun-15	243	Bridge F3C Pier 40 End-span Segment Off-site Casting (5 nos.)																											
	0250-2170	Bridge F3C Pier 43 End-span Segment Off-site Casting (6 nos.)	19	08-Jun-15	30-Jun-15	243	Bridge F3C Pier 43 End-span Segment Off-site Casting (6 nos.)																											
	A2410	Completion of Beam Off-Site Pre casting ( Pier 17 - 20)	0		20-Jul-15	153	Completion of Beam Off-Site Pre casting ( Pier 17 - 20)																											
	A2420	Completion of Beam Off-Site Pre casting ( Pier E2 - E3)	0		05-Jun-15	119	Completion of Beam Off-Site Pre casting ( Pier E2 - E3)																											
	A8380	Bridge F1B2 - Abut D12 Segment - 6 nos. (S2)	19	13-Jun-15	08-Jul-15	393	Bridge F1B2 - Abut D12 Segment - 6 nos. (S2)																											
	A8390	Bridge F1B2 - Pier F1B2 Segment - 13 nos. (S1)	40	02-Jul-15	17-Aug-15	421	Bridge F1B2 - Pier F1B2 Segment - 13 nos. (S1)																											
	A8410	Bridge F1B2 - Pier F3B2 Segment - 6 nos. (S2)	19	15-Jul-15	06-Aug-15	393	Bridge F1B2 - Pier F3B2 Segment - 6 nos. (S2)																											
	A8420	Bridge F2B - Pier F3B2 Segment - 5 nos. (S2)	16	13-Aug-15	01-Sep-15	393	Bridge F2B - Pier F3B2 Segment - 5 nos. (S2)																											
03 - PRELIMINARY WORKS																																		
03.3 - Interface Works																																		
	A7630.1	TTA for Relocation of Cul-De-Sac > Breaking of Concrete/Road Pavment > Stage 2	0	04-Mar-15 A	06-Mar-15 A		TTA for Relocation of Cul-De-Sac > Breaking of Concrete/Road Pavment > Stage 2																											
	A7631	Relocation of Cul-De-Sac > Excavate & install Manhole > Stage 2	0	06-Mar-15 A	18-Mar-15 A		Relocation of Cul-De-Sac > Excavate & install Manhole > Stage 2																											
	A7631.1	Relocation of Cul-De-Sac > Backfilling > Stage 2	0	18-Mar-15 A	28-Mar-15 A		Relocation of Cul-De-Sac > Backfilling > Stage 2																											
	A7631.2	Relocation of Cul-De-Sac > Sheetpile Removal > Stage 2	0	29-Mar-15 A	29-Mar-15 A		Relocation of Cul-De-Sac > Sheetpile Removal > Stage 2																											
	A7631.3	Relocation of Cul-De-Sac > Paving Preparation > Stage 2	0	30-Mar-15 A	30-Mar-15 A		Relocation of Cul-De-Sac > Paving Preparation > Stage 2																											
	A7631.4	Relocation of Cul-De-Sac > Concreting of Pavement + Testing > Stage 2	0	31-Mar-15 A	31-Mar-15 A		Relocation of Cul-De-Sac > Concreting of Pavement + Testing > Stage 2																											
	A7631.5	Relocation of Cul-De-Sac > Asphalt paving > Stage 2	0	01-Apr-15 A	01-Apr-15 A		Relocation of Cul-De-Sac > Asphalt paving > Stage 2																											
	A7632	TTA for Relocation of Cul-De-Sac > Stage 3	4	01-Apr-15 A	23-May-15	12	TTA for Relocation of Cul-De-Sac > Stage 3																											
	A7632.12	Relocation of Cul-De-Sac > Opening of Existing Pavement > Stage 3	0	08-Apr-15 A	12-Apr-15 A		Relocation of Cul-De-Sac > Opening of Existing Pavement > Stage 3																											
	A7632.13	Relocation of Cul-De-Sac > Drive sheetpile & Erect Copperdam > Stage 3	0	13-Apr-15 A	18-Apr-15 A		Relocation of Cul-De-Sac > Drive sheetpile & Erect Copperdam > Stage 3																											
	A7632.14	Relocation of Cul-De-Sac > Excavation + Blinding > Stage 3	0	01-Apr-15 A	04-May-15 A		Relocation of Cul-De-Sac > Excavation + Blinding > Stage 3																											
	A7632.15	Relocation of Cul-De-Sac > Lay Granular Bedding > Stage 3	0	04-May-15 A	05-May-15 A		Relocation of Cul-De-Sac > Lay Granular Bedding > Stage 3																											
	A7632.16	Relocation of Cul-De-Sac > Lay 450 and 750 drain > Stage 3	0	05-May-15 A	05-May-15 A		Relocation of Cul-De-Sac > Lay 450 and 750 drain > Stage 3																											
	A7632.17	Relocation of Cul-De-Sac > Cast Manhole Benching (2nos) > Stage 3	0	06-May-15 A	08-May-15 A		Relocation of Cul-De-Sac > Cast Manhole Benching (2nos) > Stage 3																											
	A7632.17.1	Relocation of Cul-De-Sac > Install Water Main	0	01-May-15 A	05-May-15 A		Relocation of Cul-De-Sac > Install Water Main																											
	A7632.18	Relocation of Cul-De-Sac > Erect Formwork and Cast Manhole (2nos)> Stage 3	0	06-May-15 A	13-May-15 A		Relocation of Cul-De-Sac > Erect Formwork and Cast Manhole (2nos)> Stage 3																											
	A7632.19	Relocation of Cul-De-Sac > Backfilling > Stage 3	0	14-May-15 A	18-May-15 A		Relocation of Cul-De-Sac > Backfilling > Stage 3																											
	A7632.21	Relocation of Cul-De-Sac > Concreting of Pavement + Testing > Stage 3	1	19-May-15 A	20-May-15	11	Relocation of Cul-De-Sac > Concreting of Pavement + Testing > Stage 3																											
	A7632.22	Relocation of Cul-De-Sac > Asphalt paving > Stage 3	9	21-May-15	30-May-15	11	Relocation of Cul-De-Sac > Asphalt paving > Stage 3																											
	A7634	Relocation Cul-De-Sac	0		30-May-15	11	Relocation Cul-De-Sac																											
	A9200	Installation of JTI Gantry - Footing(Nosing)	0	10-Mar-15 A	14-Mar-15 A		Installation of JTI Gantry - Footing(Nosing)																											
	A9201	Installation of JTI Gantry - Install Holding down Bolts	0	10-Mar-15 A	13-Mar-15 A		Installation of JTI Gantry - Install Holding down Bolts																											
	A9202.1	Auto Toll and HKE Commissioning	0	20-Jan-15 A	26-Mar-15 A		Auto Toll and HKE Commissioning																											
	A9203	Installation of JTI Gantry	0	16-Mar-15 A	26-Mar-15 A		Installation of JTI Gantry																											
<div><div>Remaining Level of Effort</div><div>Actual Level of Effort</div><div>Actual Work</div><div>Remaining Work</div><div>Critical Remaining Work</div></div>						Contract HY/2009/19														3 Months Rolling Program ( 20 May 2015 - 19 Aug 2015)														
						Page 2 of 14																												

Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	2015																											
							May				June				July				August				September											
							3	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30										
	A9205.1	Reinstatement of Pavement due to Electrical works at Existing W/B Rd.	0	26-Mar-15 A	26-Mar-15 A		ks at Existing W/B Rd.																											
	A9205.2	Temporary Relocate FEHD On top of Tunnel ( Portion IA) > Stage 1	0	30-Mar-15 A	01-Apr-15 A		nnel ( Portion IA) > Stage 1																											
	A9205.3	Temporary Relocate FEHD On top of Tunnel ( Portion IA) > Stage 2	0	05-Apr-15 A	09-May-15 A		Temporary Relocate FEHD On top of Tunnel ( Portion IA) > Stage 2																											
	A9205.4	Removal of JTI Gantry at E/B Bridge	0	03-Apr-15 A	07-Apr-15 A		ge																											
05 - SECTION 2 & 2A OF THE WORKS																																		
05.1 - Cut & Cover Tunnel Ch 4855-4932 (APS Footprint)																																		
05.1.1 - D-Wall Construction																																		
	A5990	D-Wall Interface Coring	9	16-May-15 A	29-May-15	23	D-Wall Interface Coring																											
	A6000	D-Wall Grouting/Pressure Grouting	2	30-May-15	01-Jun-15	23	D-Wall Grouting/Pressure Grouting																											
05.1.3 - APS & Tunnel Structure																																		
	0513-1316	APS Bay 17 Col - (Reb. Fix + Concrete)	0	11-Mar-15 A	08-Apr-15 A		ncrete)																											
	0513-1530	Tunnel Bay 17 -Tunnel Roof - Steel Fixing	0	19-Feb-15 A	07-Mar-15 A																													
	0513-1540	Tunnel Bay 17 -Tunnel Roof - (Concrete)	0	08-Mar-15 A	08-Mar-15 A																													
	A3800	Tunnel Bay 20 -Tunnel Roof - Steel Fixing	0	12-Mar-15 A	12-Mar-15 A																													
	A3810	Tunnel Bay 20 -Tunnel Roof - (Concrete)	0	13-Mar-15 A	13-Mar-15 A																													
	A3813	APS Bay 21 Col - (Reb. Fix + Concrete)	0	11-Mar-15 A	08-Apr-15 A		ncrete)																											
	A3990	Tunnel Bay 21 -Tunnel Roof - Steel Fixing	0	14-Feb-15 A	12-Mar-15 A																													
	A4000	Tunnel Bay 21 -Tunnel Roof - (Concrete)	0	13-Mar-15 A	13-Mar-15 A																													
	A4000.1	Tunnel Bay 21 -Tunnel Roof - Steel Fixing - Remaining Works	0	14-Mar-15 A	26-Mar-15 A		aining Works																											
	A4000.2	Tunnel Bay 21 -Tunnel Roof - (Concrete) - Remaining Works	0	27-Mar-15 A	27-Mar-15 A		aining Works																											
	A5414	APS Basement (Bay 21-North) - Staircase (APS) > Staircase Landing 4	0	09-Mar-15 A	16-Mar-15 A		Landing 4																											
	A5414.1	APS Basement (Bay 21-North) - Staircase Landing 4 > Staircase Landing 8	0	11-May-15 A	18-May-15 A		APS Basement (Bay 21-North) - Staircase Landing 4 > Staircase Landing 8																											
	A5414.2	APS Basement (Bay 21-North) - Staircase Landing 8 > Staircase Landing 12	6	19-May-15 A	26-May-15	28	APS Basement (Bay 21-North) - Staircase Landing 8 > Staircase Landing 12																											
	A5414.3	Tunnel roof slab - Southside > South Side Corner Beam	7	18-Apr-15 A	27-May-15	0	Tunnel roof slab - Southside > South Side Corner Beam																											
	A5426	APS Basement (Bay 21-South) - Staircase (APS) > Staircase Landing 4	1	11-May-15 A	20-May-15	0	APS Basement (Bay 21-South) - Staircase (APS) > Staircase Landing 4																											
	A5426.1	APS Basement (Bay 21-South) - Staircase Landing 4 > Staircase Landing 8	9	21-May-15	30-May-15	0	APS Basement (Bay 21-South) - Staircase Landing 4 > Staircase Landing 8																											
	A5426.2	APS Basement (Bay 21-South) - Staircase Landing 8 > Staircase Landing 12	10	09-Jun-15	19-Jun-15*	0	APS Basement (Bay 21-South) - Staircase Landing 8 > Staircase Landing 12																											
	A5426.3	Tunnel Level - South Side Additional Beam at Bay 21	7	20-May-15	27-May-15	27	Tunnel Level - South Side Additional Beam at Bay 21																											
	A5426.3.1	Reinstate Temporary Opening of Base Slab > Bay 18	6	21-May-15	27-May-15	27	Reinstate Temporary Opening of Base Slab > Bay 18																											
	A5426.4	APS Basement (Bay 21-North) - Partition wall	0	06-Apr-15 A	18-May-15 A		APS Basement (Bay 21-North) - Partition wall																											
	A5427.1	APS Basement (Bay 21-South) - Partition wall	7	07-Apr-15 A	27-May-15	27	APS Basement (Bay 21-South) - Partition wall																											
	A5427.2	APS Basement (Bay 20) - Partition wall	0	07-Apr-15 A	16-May-15 A		APS Basement (Bay 20) - Partition wall																											
	A5427.3	APS Basement (Bay 19) - Partition wall	0	15-Mar-15 A	08-Apr-15 A		on wall																											
	A5427.4	APS Basement (Bay 18) - Partition wall	0	08-Mar-15 A	08-Apr-15 A		on wall																											
	A5427.5	APS Basement (Bay 17) - Partition wall	0	09-Mar-15 A	08-Apr-15 A		on wall																											
	A5427.5.1	Tunnel roof slab - Northside > North side Beam	0	28-Apr-15 A	05-May-15 A		Tunnel roof slab - Northside > North side Beam																											
	A5427.5.2	Tunnel roof slab - Southside > 2M Wall	0	17-Apr-15 A	17-Apr-15 A		uthside > 2M Wall																											
	A5427.5.3	Tunnel roof slab - Southside > OHVD	0	18-Apr-15 A	27-Apr-15 A		of slab - Southside > OHVD																											
	A5427.5.4	Tunnel roof slab - Southside > Roof Slab	0	28-Apr-15 A	05-May-15 A		Tunnel roof slab - Southside > Roof Slab																											
	A5427.5.6	Tunnel roof slab - Southside > Reinstate Bay 18 Temp Opening	0	24-Apr-15 A	27-Apr-15 A		of slab - Southside > Reinstate Bay 18 Temp Opening																											
	A5427.5.7	Tunnel Level - North Side Additional Wall at Bay 19	1	17-Apr-15 A	20-May-15	33	Tunnel Level - North Side Additional Wall at Bay 19																											
	A5427.6	BHW Coring at C15 & C19 Interface	0	06-Feb-15 A	02-Mar-15 A																													
	A5454	Vertical Saw Cutting of BHW @ 9M(H) X 32M(L)	0	03-Mar-15 A	15-Apr-15 A		BHW @ 9M(H) X 32M(L)																											
	A5465	Horizontal Saw Cutting of BHW @ 9M(H) X 32M(L)	0	16-Mar-15 A	15-Apr-15 A		of BHW @ 9M(H) X 32M(L)																											
	A5830.1	Removal of Bulkhead Wall Eastbound	0	17-Apr-15 A	30-Apr-15 A		oval of Bulkhead Wall Eastbound																											
	A5830.2	Stitching - Tunnel base Slab > Eastbound	0	01-May-15 A	16-May-15 A		Stitching - Tunnel base Slab > Eastbound																											
	A5830.3	Stitching - Roof Slab > Eastbound	5	20-May-15	25-May-15	26	Stitching - Roof Slab > Eastbound																											
	A5830.4	Stitching - OHVD > Eastbound	3	26-May-15	28-May-15	26	Stitching - OHVD > Eastbound																											
	A5830.6	Removal of Bulkhead Wall > Westbound	10	20-Apr-15 A	30-May-15	11	Removal of Bulkhead Wall > Westbound																											

Remaining Level of Effort ◆◆ Milestone  
Actual Level of Effort  
Actual Work  
Remaining Work  
Critical Remaining Work

Contract HY/2009/19

3 Months Rolling Program ( 20 May 2015 - 19 Aug 2015)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015																											
						May				June				July				August				September											
						3	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30										
	A7671	Retaining Wall F Pre-Bored H-Pile - H - Beam + Grout > BS40a	0	07-Feb-15 A	04-Mar-15 A																												
	A7672	Retaining Wall F Pre-Bored H-Pile - H - Beam + Grout > BS40b	0	30-Jan-15 A	06-Mar-15 A																												
	A7673	Retaining Wall F Pre-Bored H-Pile - H - Beam + Grout > BS41a	0	04-Feb-15 A	06-Mar-15 A																												
	A7740.1	Retaining Wall F Pre-Bored H-Pile - H - Installing H-Pile > BS45a	0	31-Dec-14 A	24-Feb-15 A																												
	A7740.2	Retaining Wall F Pre-Bored H-Pile - H - Extract H-Pile due to Collapse of soil > BS4	0	25-Feb-15 A	03-Mar-15 A		> BS45a																										
	A7740.3	Retaining Wall F Pre-Bored H-Pile - H - Grout plug > BS45a	0	04-Mar-15 A	06-Mar-15 A																												
	A7740.4	Retaining Wall F Pre-Bored H-Pile - H - Beam + Grout > BS45a	0	06-Mar-15 A	26-Mar-15 A		Grout > BS45a																										
	A7791	Retaining Wall F Pre Bored - H > Pile Testing	18	27-Oct-15	16-Nov-15	138																											
	A7792.1	Construction of pile cap for Retaining Wall F > C4-1	8	17-Nov-15	25-Nov-15	138																											
	A7792.2	Construction of pile cap for Retaining Wall F > C4-2	8	26-Nov-15	04-Dec-15	138																											
	A7792.3	Construction of pile cap for Retaining Wall F > C5-1	8	05-Dec-15	14-Dec-15	138																											
	A7792.4	Construction of pile cap for Retaining Wall F > C5-2	8	15-Dec-15	23-Dec-15	138																											
	A7792.5	Construction of pile cap for Retaining Wall F > C5-3	8	24-Dec-15	04-Jan-16	138																											
	A7792.6	Construction of pile cap for Retaining Wall F > C5-4	8	05-Jan-16	13-Jan-16	138																											
	A7800	Complete Pre-Bored H-Pile > Retaining Wall	0		26-Mar-15 A																												
	09 - SECTION 6 OF THE WORKS																																
	09.2 - Westbound - Pier 26-27																																
	0920-2110	Pier 26-2 Pre-Bored H-Piles	0	07-Feb-15 A	24-Mar-15 A																												
	0920-2111	Pier 26-1 Pre-Bored H-Piles	0	09-Mar-15 A	25-Mar-15 A																												
	0920-2150	Pier 27 Prepare C.J. and Modify Tie Beam	18	25-Jul-15	14-Aug-15	51																											
	0920-2160	Pier 27 Construct Pier/Column	18	15-Aug-15	04-Sep-15	51																											
	0920-2180	Pier 26 Prepare C.J. + Drill in Re-bar + Modify Pilecap	18	14-Aug-15	03-Sep-15	35																											
	10 - SECTION X OF THE WORKS																																
	10.1 - E/B Bridges (Bridge D, E and F)																																
	10.1.1 - Marine Pier Construction																																
	Pier F01 to F02																																
	1011-2900	F1B Pier/Column Construction	12	20-May-15	02-Jun-15	116																											
	1011-2910	F1B Crosshead Construction	18	03-Jun-15	24-Jun-15	116																											
	1011-2930	Bearing installation pier F1B/F2B	12	25-Jun-15	09-Jul-15	116																											
10.1.3 - E/B Bridge Construction																																	
All E/B Bridges (Common)																																	
1013-1720	Permanent Noise Barrier Type B1 E/B Bridge Ch 962-1059 (132m)	0	02-Dec-14 A	09-Mar-15 A																													
1013-1730	Permanent Noise Barrier Type A1 E/B Bridge Ch 826-962 (136m)	0	05-Dec-14 A	17-Mar-15 A		136m)																											
1013-1730.1	Green Panel Installation	0	12-Nov-14 A	28-Mar-15 A																													
A7621	Remaining E/B Bridges Bitumin Paving Works + Marking - Bridge D1 & D2	0	18-Mar-15 A	19-Mar-15 A		- Bridge D1 & D2																											
10.1.4 - Bridge E / Hing Fat Slip Road																																	
Pier Construction																																	
A4822	Bridge E ( Pier E3) - Pile Cap + Pier Const.	14	17-Aug-15	01-Sep-15	16																												
Bridge Construction																																	
A9260	Bridge E ( Pier 18-19) - Rebar Fix > Diaphragm + Slab + Pipe install	0	13-Feb-15 A	26-Feb-15 A																													
A9270	Bridge E ( Pier 18-19) - Formworks > Slab	0	26-Feb-15 A	26-Feb-15 A																													
A9280	Bridge E ( Pier 18-19) - Concreting > Diaphram + Slab	0	27-Feb-15 A	27-Feb-15 A																													
A9310	Bridge E ( Pier 18-19) - Stitching > Reb. Fix + Concretin	0	20-Feb-15 A	16-Mar-15 A																													
A9360	Bridge E ( Pier 17 - 18) - Rebar Fix > Diaphragm + Slab + Pipe install	0	17-Feb-15 A	02-Mar-15 A																													
A9370	Bridge E ( Pier 17 - 18) - Formworks > Slab	0	02-Mar-15 A	02-Mar-15 A																													
A9380	Bridge E ( Pier 17 - 18) - Concreting > Diaphram + Slab	0	03-Mar-15 A	03-Mar-15 A																													
A9400	Bridge E ( Pier 17 - 18) - Stitching > Reb. Fix + Concretin	0	17-Feb-15 A	16-Mar-15 A																													
A9450	Bridge E ( Pier 19 - D1) - Rebar Fix > Diaphragm + Slab + Pipe install	0	18-Feb-15 A	07-Mar-15 A																													
A9460	Bridge E ( Pier 19 - D1) - Formworks > Slab	0	07-Mar-15 A	07-Mar-15 A																													

Remaining Level of Effort ◆ ◆ Milestone

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015																											
						May				June				July				August				September											
						3	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30										
A9470	Bridge E (Pier 19 - D1) - Concreting > Diaphragm + Slab	0	09-Mar-15 A	09-Mar-15 A																													
	A9472	Bridge E (Pier E1 - D1) - Temporary L3 Parapet Railings	0	18-Feb-15 A	13-Mar-15 A																												
	A9500	Bridge E (Pier 16 - 19) - Lightings	0	24-Feb-15 A	23-Mar-15 A																												
	A9510	Bridge E (Pier 17 - 19) - MJ	0	18-Mar-15 A	22-Mar-15 A																												
	A9520	Bridge E (Pier 17 - 19) - install pre-cast Parapet	0	06-Mar-15 A	18-Mar-15 A																												
	A9521	Bridge E (Pier 17 - 19) - Install L3 Railing/Parapet	0	18-Mar-15 A	23-Mar-15 A																												
	A9540	Bridge E (Pier 17 - D1) - Drainage Gully	0	16-Mar-15 A	21-Mar-15 A																												
	A9560	Bridge E (Pier 19 - D1) - Parapet	14	20-May-15	04-Jun-15	764																											
	A9561	Bridge E (Pier 19 - D1) - Noise Barrier > Post + Panel	14	05-Jun-15	22-Jun-15	764																											
	A9570	Bridge E (Pier 19 - D1) - Green Panel Installation	2	23-Jun-15	25-Jun-15	764																											
	A9590	Bridge E (Pier D1) - MJ	0	17-Mar-15 A	21-Mar-15 A																												
	A9600	Bridge E (Pier 17 - D1) - Asphalting	0	23-Mar-15 A	26-Mar-15 A																												
	A9610	Bridge E (Pier 17 - D1) - Road Marking	0	27-Mar-15 A	27-Mar-15 A																												
	A9620	Bridge E (Pier 17 - D1) - Signage	0	26-Mar-15 A	27-Mar-15 A																												
10.2 - W/B Bridges (Bridge C and F)																																	
10.2.1 - Pier Construction																																	
Pier 38 to 43																																	
1021-1250	Pier 42 (F7C) Prepare C.J. at Existing Pile Cap	11	08-Aug-15	20-Aug-15	137																												
1021-1280	Pier 43 (F8C) Prepare C.J. at Existing Pile Cap	11	01-Aug-15	13-Aug-15	155																												
Pier 28																																	
1021-1112	Pier 28 Prepare C.J. and Modify Tie Beam	18	06-Jul-15	25-Jul-15	0																												
1021-1115	Pier 28 Construct Pier/Column	18	27-Jul-15	15-Aug-15	0																												
Abutment D12																																	
A10720	Construct Abutment D12 Existing W/B & E/B Bridge - Excav. Bored Pile (4 nos)	0	13-Mar-15 A	16-Mar-15 A																													
A10730	Construct Abutment D12 W/B Bridge - Prepare CJ	0	17-Mar-15 A	07-Apr-15 A																													
A10740	Construct Abutment D12 - Construct Abut D12 Pile Cap + Backfill	0	08-Apr-15 A	21-Apr-15 A																													
Pier 20 to 25																																	
1021-1019	Pier 23-1 Pre-Bored H-Piles	14	19-May-15 A	04-Jun-15	49																												
1021-1020	Pier 23-2 Pre Bored H-Piles	14	25-May-15	09-Jun-15	48																												
1021-1030	Pier 23 Bored Pile Testing	12	10-Jun-15	24-Jun-15	99																												
A7230	Pier 25 Prepare C.J. and Modify Tie Beam	18	03-Sep-15	23-Sep-15	48																												
10.2.2 - Bridge Construction																																	
Bridge C4																																	
1022-1081.0	Bridge C4 Erect Pier Segment (1no.) at Piers 31 By Crane	5	20-Aug-15	26-Aug-15	54																												
1022-1090.7	Bridge C4 Erect Pier Segment (1no.) at Piers 29 By Crane	5	30-Jul-15	05-Aug-15	42																												
1022-1090.8	Bridge C4 Erect Pier Segment (1no.) at Piers 30 By Crane	1	10-Aug-15	11-Aug-15	37																												
All W/B Bridges (Common)																																	
A11770	Decommissioning of Exis. Fire mains & Fire Hyd. at Meddian Barrier	0	16-Mar-15 A	27-Mar-15 A																													
A11780	Installation of New Fire Mains	0	16-Mar-15 A	27-Mar-15 A																													
A11790	Install Temporary Lighting at Existing E/B Bridge	0	16-Mar-15 A	19-Mar-15 A																													
A11800	Installation of Temporary L3 Barrier	0	19-Mar-15 A	18-Apr-15 A																													
A11810	Install Traffic Signage	0	15-Apr-15 A	18-Apr-15 A																													
A12960	Saw - Cutting of Slab at W/B Bridge ( Pier 28-29)	0	11-May-15 A	16-May-15 A																													
A12960.1	Saw - Cutting of Slab at W/B Bridge ( Pier 29-30)	1	17-May-15 A	20-May-15	24																												
A12960.2	Saw - Cutting of Slab at W/B Bridge ( Pier 32-33)	3	21-May-15	23-May-15	24																												
A12960.3	Saw - Cutting of Slab at W/B Bridge ( Pier 33-34)	3	25-May-15	27-May-15	24																												
A12960.4	Saw - Cutting of Slab at W/B Bridge ( Pier 30-31)	3	28-May-15	30-May-15	24																												
A12960.5	Saw - Cutting of Slab at W/B Bridge ( Pier 31-32)	3	01-Jun-15	03-Jun-15	31																												
A12980	Saw - Cutting Meddian Barrier ( Pier 28-29)	0	05-May-15 A	11-May-15 A																													

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	A12990	Saw - Cutting Meddian Barrier ( Pier 29-30)	0	05-May-15 A	11-May-15 A																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

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						May				June				July				August					September
						3	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30
A12100	Construct W/B Bridge Pier 31 > Rebar Fixing - Crosshead	14	22-Jul-15	07-Aug-15	54																	Construct W/B Bridge Pier 31 > F	
A12110	Construct W/B Bridge Pier 31 > Formworks + Concreting - Crosshead	6	07-Aug-15	14-Aug-15	54																	Construct W/B Bridge Pi	
A12120	Construct W/B Bridge Pier 31 > Bearing	5	14-Aug-15	20-Aug-15	54																	Construct W/B B	
A12130	Excavate + Demolish W/B Bridge Pier 32 > Pile Cap	7	04-Jul-15	13-Jul-15	50																	Excavate + Demolish W/B Bridge Pier 32 > Pile Cap	
A12140	Construct W/B Bridge Pier 32 > Pile Cap	7	13-Jul-15	21-Jul-15	50																	Construct W/B Bridge Pier 32 > Pile Cap	
A12150	Construct W/B Bridge Pier 32 > Column	10	21-Jul-15	01-Aug-15	50																	Construct W/B Bridge Pier 32 > Column	
A12160	Construct W/B Bridge Pier 32 > Rebar Fixing - Crosshead	14	01-Aug-15	18-Aug-15	50																	Construct W/B Brid	
A12170	Construct W/B Bridge Pier 32 > Formworks + Concreting - Crosshead	6	18-Aug-15	25-Aug-15	50																	Construct V	
A12180	Construct W/B Bridge Pier 32 > Bearing	5	25-Aug-15	31-Aug-15	50																	Cor	
A12190	Excavate + Demolish W/B Bridge Pier 33 > Pile Cap	7	07-Jul-15	15-Jul-15	50																	Excavate + Demolish W/B Bridge Pier 33 > Pile Cap	
A12200	Construct W/B Bridge Pier 33 > Pile Cap	7	15-Jul-15	23-Jul-15	50																	Construct W/B Bridge Pier 33 > Pile Cap	
A12210	Construct W/B Bridge Pier 33 > Column	10	23-Jul-15	04-Aug-15	50																	Construct W/B Bridge Pier 33 > Colu	
A12220	Construct W/B Bridge Pier 33 > Rebar Fixing - Crosshead	14	04-Aug-15	20-Aug-15	50																	Construct W/B B	
A12230	Construct W/B Bridge Pier 33 > Formworks + Concreting - Crosshead	6	20-Aug-15	27-Aug-15	50																	Construct	
A12240	Construct W/B Bridge Pier 33 > Bearing	3	27-Aug-15	31-Aug-15	50																	Cor	
A12240.1	Re-Assemble Crane B at Pier 26-27	8	04-Jun-15	12-Jun-15	0																	Re-Assemble Crane B at Pier 26-27	
A12250	Saw Cutting W/B Bridge Deck Pier 27-28	8	04-Jun-15	12-Jun-15	0																	Saw Cutting W/B Bridge Deck Pier 27-28	
A12260	Demolish W/B Bridge Deck Pier 27-28 (7 beams) > by Crane B	9	13-Jun-15	24-Jun-15	0																	Demolish W/B Bridge Deck Pier 27-28 (7 beams) > by Crane B	
A12270	Demolish W/B Bridge Pier 28 > Column > by Crane C	8	25-Jun-15	04-Jul-15	0																	Demolish W/B Bridge Pier 28 > Column > by Crane C	
A12280	Saw Cutting W/B Bridge Deck Pier 26-27	8	25-Jun-15	04-Jul-15	0																	Saw Cutting W/B Bridge Deck Pier 26-27	
A12290	Demolish W/B Bridge Deck Pier 26-27 (7 beams) > by Crane B	9	06-Jul-15	15-Jul-15	0																	Demolish W/B Bridge Deck Pier 26-27 (7 beams) > by Crane	
A12300	Demolish W/B Bridge Pier 27 > Column > by Crane C	8	16-Jul-15	24-Jul-15	51																	Demolish W/B Bridge Pier 27 > Column > by Cran	
A12310	Saw Cutting W/B Bridge Deck Pier 25-26	8	16-Jul-15	24-Jul-15	0																	Saw Cutting W/B Bridge Deck Pier 25-26	
A12320	Demolish W/B Bridge Deck Pier 25-26 (7 beams) > by Crane B	9	25-Jul-15	04-Aug-15	0																	Demolish W/B Bridge Deck Pier 25-2	
A12330	Demolish W/B Bridge Pier 26 > Column > by Crane C	8	05-Aug-15	13-Aug-15	35																	Demolish W/B Bridge Pier	
A12340	Saw Cutting W/B Bridge Deck Pier 24-25	8	05-Aug-15	13-Aug-15	0																	Saw Cutting W/B Bridge I	
A12350	Demolish W/B Bridge Deck Pier 24-25 (7 beams) > by Crane B	9	14-Aug-15	24-Aug-15	0																	Demolish W	
A12360	Demolish W/B Bridge Pier 25 > Column > by Crane C	8	25-Aug-15	02-Sep-15	48																	D	
A12370	Saw Cutting W/B Bridge Deck Pier 23-24	8	25-Aug-15	02-Sep-15	0																	S	
A12380	Demolish W/B Bridge Deck Pier 23-24 (7 beams) > by Crane B	9	03-Sep-15	12-Sep-15	0																		
A12390	Demolish W/B Bridge Pier 24 > Column > by Crane C	8	14-Sep-15	22-Sep-15	31																		
A12400	Saw Cutting W/B Bridge Deck Pier 22-23	8	14-Sep-15	22-Sep-15	0																		
A12410	Demolish W/B Bridge Deck Pier 22-23 (7 beams) > by Crane B	9	23-Sep-15	05-Oct-15	0																		
A12820	Erection and Testing 2nos T&C Failed > Pier 29-33	0	27-Apr-15 A	06-May-15 A		Erection and Testing 2nos T&C Failed > Pier 29-33																	
A12820.1	Erection and Testing 2nos T&C > replacement of Failed 2nos T&C> Pier 29-33	0	14-May-15 A	16-May-15 A		Erection and Testing 2nos T&C > replacement of Failed 2nos T&C> Pier 29-33																	
A12830	Remove 6th Beam (1nos) By 2 Cranes> Pier 43-44	0	14-May-15 A	14-May-15 A		Remove 6th Beam (1nos) By 2 Cranes> Pier 43-44																	
A12850	Remove 6th Beam (2nos) By 2 Cranes > Pier 41-43	0	15-May-15 A	15-May-15 A		Remove 6th Beam (2nos) By 2 Cranes > Pier 41-43																	
A12860	Remove 6th Beam (2nos) By 2 Cranes > Pier 39-41	1	20-May-15	20-May-15	0	Remove 6th Beam (2nos) By 2 Cranes > Pier 39-41																	
A12870	Remove 6th Beam (2nos) By 2 Cranes > Pier 37-39	1	21-May-15	21-May-15	0	Remove 6th Beam (2nos) By 2 Cranes > Pier 37-39																	
A12880	Remove 5th & 6th Beam (5nos) By 2 Cranes > Pier 34-37	2	22-May-15	23-May-15	0	Remove 5th & 6th Beam (5nos) By 2 Cranes > Pier 34-37																	
A12940	Move Crane - A to Pier 43-44 to Erect LG-1	1	25-May-15	25-May-15	2	Move Crane - A to Pier 43-44 to Erect LG-1																	
A12950	Dismantle & Move Crane - B to Pier 26-27 to Start Demolition of Deck	9	25-May-15	03-Jun-15	0	Dismantle & Move Crane - B to Pier 26-27 to Start Demolition of Deck																	
A13160	Preparation and Tranport LG1 to 41-44	7	13-May-15 A	27-May-15	0	Preparation and Tranport LG1 to 41-44																	
A13160.1	Erect/Assemble LG1 + T&C > Erect Leg Support At Pier 41-44	4	28-May-15	01-Jun-15	0	Erect/Assemble LG1 + T&C > Erect Leg Support At Pier 41-44																	
A13160.2	Erect/Assemble LG1 + T&C-A> Istall Main Beam/Girder Support - Middle Span at B	8	02-Jun-15	10-Jun-15	0	Erect/Assemble LG1 + T&C-A> Istall Main Beam/Girder Support - Middle Span at Bay 42 - 43																	
A13160.3	Erect/Assemble LG1 + T&C-A> Istall Main Beam/Girder Support - End Span at Bay	8	11-Jun-15	19-Jun-15	0	Erect/Assemble LG1 + T&C-A> Istall Main Beam/Girder Support - End Span at Bay 43 - 44																	
A13160.4	Erect/Assemble LG1 + T&C-A> Istall Main Beam/Girder Support - End Span at bay	8	11-Jun-15	19-Jun-15	0	Erect/Assemble LG1 + T&C-A> Istall Main Beam/Girder Support - End Span at bay 41 - 42																	
A13160.5	Erect/Assemble LG1 + T&C-A> Istall Mounting Support & Cables	4	22-Jun-15	25-Jun-15	0	Erect/Assemble LG1 + T&C-A> Istall Mounting Support & Cables																	
A13160.6	Erect/Assemble LG1 + T&C-A> Istall Miscellaneous Parts & support	4	26-Jun-15	30-Jun-15	0	Erect/Assemble LG1 + T&C-A> Istall Miscellaneous Parts & support																	

- Remaining Level of Effort
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
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A13160.7	Demolish W/B Bridge Deck Pier 43 to 44 (5 beams) > by LG1	6	02-Jul-15	08-Jul-15	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

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A10860	TA2-(Pier TA22-23) > Install TA23 Tower	2	19-May-15 A	21-May-15	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								



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A11500	TA2-(Pier TA25-26) > Deck Rebar Fixing	6	29-May-15	05-Jun-15	11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015																	
						May				June				July				August				September	
						3	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30
A10300	Bridge E (Pier 16) - MJ	0	17-Mar-15 A	22-Mar-15 A																			
A2480	TB > (Pier TB1-16) - L3 Railing Installation	0	06-Mar-15 A	09-Mar-15 A																			
10.6 - Tunnel Approach Ramp																							
10.6.1 - Approach Ramp (Excluding Portion IIB)																							
Bored Piles																							
A5851	Bored Pile Ramp - BN25	0	10-Feb-15 A	25-Feb-15 A																			
A5856	Bored Pile Ramp > LHR- BN32 A	0	24-Mar-15 A	11-Apr-15 A		32 A																	
A5856.1	Bored Pile Ramp > LHR- BN32 B	0	20-Mar-15 A	31-Mar-15 A																			
A5857	Bored Pile Ramp > LHR - BN34 A	0	19-Mar-15 A	10-Apr-15 A		34 A																	
A5857.1	Bored Pile Ramp > LHR - BN34 B	0	17-Mar-15 A	01-Apr-15 A																			
A5859.21	Bored Pile Ramp - BN20	0	17-Feb-15 A	11-Mar-15 A																			
A5859.22	Bored Pile Ramp - BN21	0	13-Mar-15 A	26-Mar-15 A																			
A5859.24	Bored Pile Ramp - BS21	0	26-Feb-15 A	14-Mar-15 A																			
A5859.35	LHR - Pre Bored H-Pile > Pile Ramp - BN17 A	0	15-Apr-15 A	27-Apr-15 A		Pre Bored H-Pile > Pile Ramp - BN17 A																	
A5859.35.1	LHR - Pre Bored H-Pile > Pile Ramp - BN17 B	0	17-Apr-15 A	05-May-15 A		LHR - Pre Bored H-Pile > Pile Ramp - BN17 B																	
A5859.36	LHR - Pre Bored H-Pile > Pile Ramp - BN18 A	0	18-Apr-15 A	25-Apr-15 A		Pre Bored H-Pile > Pile Ramp - BN18 A																	
A5859.36.1	LHR - Pre Bored H-Pile > Pile Ramp - BN18 B	0	22-Apr-15 A	02-May-15 A		R - Pre Bored H-Pile > Pile Ramp - BN18 B																	
A5859.36.1.1	LHR - Pre Bored H-Pile > Pile Ramp - BN14 A	14	20-May-15	04-Jun-15	48																		
A5859.36.1.2	LHR - Pre Bored H-Pile > Pile Ramp - BN14 B	14	25-May-15	09-Jun-15	48																		
A5859.36.1.3	LHR - Pre Bored H-Pile > Pile Ramp - BN15 A	14	30-Jun-15*	16-Jul-15	32																		
A5859.36.1.4	LHR - Pre Bored H-Pile > Pile Ramp - BN15 B	14	06-Jul-15	21-Jul-15	32																		
A5859.36.2	LHR - Pre Bored H-Pile > Pile Ramp - BN16 A	14	10-Jul-15	25-Jul-15	32																		
A5859.36.3	LHR - Pre Bored H-Pile > Pile Ramp - BN16 B	14	15-Jul-15	30-Jul-15	32																		
A5859.36.4	Pre Bored H-Pile > Pile Ramp - BM07 A	14	20-Jul-15	04-Aug-15	32																		
A5859.36.5	Pre Bored H-Pile > Pile Ramp - BM07 B	14	24-Jul-15	08-Aug-15	32																		
A5859.36.6	Pre Bored H-Pile > Pile Ramp - BM08 A	14	29-Jul-15	13-Aug-15	32																		
A5859.36.7	Pre Bored H-Pile > Pile Ramp - BM08 B	14	03-Aug-15	18-Aug-15	32																		
A5859.36.8	Pre Bored H-Pile > Pile Ramp - BM06 A	14	07-Aug-15	22-Aug-15	32																		
A5859.36.9	Pre Bored H-Pile > Pile Ramp - BM06 B	14	12-Aug-15	27-Aug-15	32																		
A5859.36.9.1	Pre Bored H-Pile > Pile Ramp - BM05 A	14	17-Aug-15	01-Sep-15	32																		
A5859.36.9.2	Pre Bored H-Pile > Pile Ramp - BM05 B	14	21-Aug-15	05-Sep-15	32																		
A5859.36.9.3	Pre Bored H-Pile > Pile Ramp - BM04 A	14	26-Aug-15	10-Sep-15	32																		
A5859.36.9.4	Pre Bored H-Pile > Pile Ramp - BM04 B	14	31-Aug-15	15-Sep-15	32																		
A5859.36.9.9	Pre Bored H-Pile > Pile Ramp - BS16 A	14	14-Sep-15	30-Sep-15	32																		
A5859.36.9.9.1	Pre Bored H-Pile > Pile Ramp - BS16 B	14	18-Sep-15	06-Oct-15	32																		
A5859.36.9.9.2	Pre Bored H-Pile > Pile Ramp- BS15 A	14	23-Sep-15	10-Oct-15	32																		
A5859.36.9.9.3	Pre Bored H-Pile > Pile Ramp - BS15 B	14	29-Sep-15	15-Oct-15	32																		
A5859.36.9.9.4	Pre Bored H-Pile > Pile Ramp - BS14 A	14	05-Oct-15	20-Oct-15	32																		
A5859.36.9.9.5	Pre Bored H-Pile > Pile Ramp - BS14 B	14	09-Oct-15	26-Oct-15	32																		
A5859.37	Complete Bored Piles Excl.Portion IIB	0		26-Oct-15	32																		
A5859.37.1	Complete Bored Piles > LHR	0		30-Jul-15	104																		
A8050	Complete Pre-Bored H-Pile > CSD Approach Ramp	0		20-May-15	44																		
ELS																							
1061-1065	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D12 Northern	14	20-May-15	04-Jun-15	251																		
1061-1065.2	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D10 Northern	14	05-Jun-15	22-Jun-15	251																		
1061-1065.3	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D10-D09 Northerr	14	23-Jun-15	09-Jul-15	251																		
1061-1065.4	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D09-D08 Northerr	14	10-Jul-15	25-Jul-15	251																		
1061-1065.5	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D08-D07 Northerr	14	27-Jul-15	11-Aug-15	251																		
1061-1065.6	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D07-D06 Northerr	14	12-Aug-15	27-Aug-15	251																		

- Remaining Level of Effort
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

Contract HY/2009/19

3 Months Rolling Program ( 20 May 2015 - 19 Aug 2015)





WP13-0

Layout: CWB - Working Layout for DWP Rev M

Date Printed 26-Sep-14 11

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015				2016			
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
HY/2009/15 - Works Programme Rev. M (DD:20-Sep-12)														
Works in East Ventilation Adit - Based on Alternative Method														
Reinstatement of Breakwater														
S3_54840	Reinstatement works -west side	7d/wk-1	60d	21-Feb-14 08 A	30-Sep-14 18	-85d		Reinstatement works -west side						
S3_60085	Reinstatement works east side	7d/wk-1	60d	31-May-14 08 A	30-Sep-14 18	-85d		Reinstatement works east side						
S3_54845	Completion of Section 3 (KD8) in EVA Area (Alternative Method)	7d/wk-2	0d		30-Sep-14 18	-86d		Completion of Section 3 (KD8) in EVA Area (Alternative Method)						
Works in TS1/TS2 - OHVD and Cable Trough/Maintenance Walkway														
TS2 - OHVD and Cable Trough/Maintenance Walkway														
OHVD Slab and Cable Trough Construction														
S3_6210	TS2 - OHVD/ Cable trough	7d/wk-1	40d	20-May-14 08 A	30-Sep-14 18	-85d		TS2 - OHVD/ Cable trough						
S3_6212	Completion of Section 3 - TS1/TS2 Area (below -6mpd) KD8	7d/wk-2	0d		30-Sep-14 18	-86d		Completion of Section 3 - TS1/TS2 Area (below -6mpd) KD8						
Works in TS4/ME4 Area (Portion 14A, 14B, 15, 23)														
TS4/ME4 - Removal of Temporary Reclamation														
Remaining Works at TZ6														
Stage 4 - Seawall and Reclamation at TZ6														
A-2010	Installation of seawall blocks (Qty: 245 nos.)	7d/wk-2	6d	15-Sep-14 08 A	26-Sep-14 18	-332d		Installation of seawall blocks (Qty: 245 nos.)						
A-2020	Soil Backfilling up to -2.45mPD (Qty:3,000 cu.m.)	7d/wk-2	2d	25-Sep-14 08	26-Sep-14 18	-332d		Soil Backfilling up to -2.45mPD (Qty:3,000 cu.m.)						
A-2030	Utilities installation for Mined Tunnel	7d/wk-2	1d	27-Sep-14 08	27-Sep-14 18	-332d		Utilities installation for Mined Tunnel						
A-2040	Soil backfilling up to ground level (Qty:2,000 cu.m.)	7d/wk-2	2d	28-Sep-14 08	29-Sep-14 18	-332d		Soil backfilling up to ground level (Qty:2,000 cu.m.)						
A-2050	Site clearance	7d/wk-2	1d	30-Sep-14 08	30-Sep-14 18	-305d		Site clearance						
A-2060	Handover to MTR	7d/wk-2	0d		30-Sep-14 18	-305d		Handover to MTR						
Removal of Temporary Reclamation at TS4/ME4														
Stage 5 (Zones A, D & F - TS4-D33 to D-26, SCL2 & ME4-D19 to D13)														
A-3000	D-Wall horizontal cutting (Qty: 62 pcs.)	7d/wk-2	21d	29-Aug-14 08 A	23-Sep-14 18	-340d		D-Wall horizontal cutting (Qty: 62 pcs.)						
Stage 6 (Zone C - P4, ME4-D12 to ME4-D18 & P3)														
A-3011	Marine removal of temporary reclamation and seawall blocks (Zones C )	7d/wk-2	21d	31-Aug-14 08 A	02-Oct-14 18	-353d		Marine removal of temporary reclamation and seawall blocks (Zones C )						
A-3030	D-Wall vertical cutting (Qty: 15 pcs.)	7d/wk-2	4d	03-Oct-14 08	06-Oct-14 18	-353d		D-Wall vertical cutting (Qty: 15 pcs.)						
A-3040	D-Wall horizontal cutting (Qty: 20 pcs.)	7d/wk-2	5d	06-Oct-14 08	10-Oct-14 18	-352d		D-Wall horizontal cutting (Qty: 20 pcs.)						

- Summary Bar
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M
























Prepared by William Caluza

Date	Revision	Checked	Approved
26-Sep...	1st submission		



中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float									
							2015			2016					
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
<b>Stage 7 (Zones C &amp; E - ME4-D06 to D01, SCL1 &amp; TS4-D25)</b>															
A-4000	Marine removal of temporary reclamation and seawall blocks (Zones C & E)	7d/wk-2	18d	06-Sep-14 08 A	06-Oct-14 18	-353d		Marine removal of temporary reclamation and seawall blocks (Zones C & E)							
A-3090	Hole coring (Qty: 44 nos)	7d/wk-2	9d	20-Sep-14 08*	28-Sep-14 18	-346d		Hole coring (Qty: 44 nos)							
A-4010	D-Wall vertical cutting (Qty: 27pcs.)	7d/wk-2	7d	07-Oct-14 08	13-Oct-14 18	-353d		D-Wall vertical cutting (Qty: 27pcs.)							
A-4020	D-Wall horizontal cutting (Qty: 37 pcs.)	7d/wk-2	10d	11-Oct-14 08	20-Oct-14 18	-353d		D-Wall horizontal cutting (Qty: 37 pcs.)							
<b>Stage 9 (Zone I - TS4-D01 to TS4-D08)</b>															
A-3050	Remaining removal of temporary reclamation (Zone I)	7d/wk-2	28d	29-Aug-14 08 A	01-Oct-14 18	-342d		Remaining removal of temporary reclamation (Zone I)							
A-3060	Hole coring (Qty: 25 nos)	7d/wk-2	5d	02-Oct-14 08	06-Oct-14 18	-342d		Hole coring (Qty: 25 nos)							
A-3070	D-Wall vertical cutting (Qty: 14 pcs.)	7d/wk-2	3d	07-Oct-14 08	09-Oct-14 18	-342d		D-Wall vertical cutting (Qty: 14 pcs.)							
A-3080	D-Wall horizontal cutting (Qty: 24 pcs.)	7d/wk-2	5d	21-Oct-14 08	25-Oct-14 18	-353d		D-Wall horizontal cutting (Qty: 24 pcs.)							
<b>Stage 8 (Zones G &amp; K - TS4-D24 to TS4-D15)</b>															
A-4040	Relocation of RHKYC floating pontoon	7d/wk-2	5d	22-Sep-14 08*	26-Sep-14 18	-338d		Relocation of RHKYC floating pontoon							
A-4050	Hole coring (Qty: 27 nos)	7d/wk-2	6d	29-Sep-14 08	04-Oct-14 18	-346d		Hole coring (Qty: 27 nos)							
A-4060	Marine removal of temporary reclamation and seawall blocks (Zone G & K)	7d/wk-2	14d	11-Oct-14 08	24-Oct-14 18	-352d		Marine removal of temporary reclamation and seawall blocks (Zone G & K)							
A-4070	D-Wall vertical cutting (Qty: 18pcs.)	7d/wk-2	4d	25-Oct-14 08	28-Oct-14 18	-352d		D-Wall vertical cutting (Qty: 18pcs.)							
A-4080	D-Wall horizontal cutting (Qty: 25 pcs.)	7d/wk-2	7d	26-Oct-14 08	01-Nov-14 18	-352d		D-Wall horizontal cutting (Qty: 25 pcs.)							
<b>Stage 10 (Zone J - TS4-D09 to TS4-D14)</b>															
A-4090	Land removal of temporary reclamation (Zone J)	7d/wk-2	10d	07-Oct-14 08	16-Oct-14 18	-344d		Land removal of temporary reclamation (Zone J)							
A-5000	Hole coring (Qty: 32 nos)	7d/wk-2	7d	17-Oct-14 08	23-Oct-14 18	-340d		Hole coring (Qty: 32 nos)							
A-5010	Marine removal of temporary reclamation (Zone J)	7d/wk-2	7d	26-Oct-14 08	01-Nov-14 18	-353d		Marine removal of temporary reclamation (Zone J)							
A-5020	D-Wall vertical cutting (Qty: 20 pcs.)	7d/wk-2	5d	02-Nov-14 08	06-Nov-14 18	-353d		D-Wall vertical cutting (Qty: 20 pcs.)							
A-5030	D-Wall horizontal cutting (Qty: 26 pcs.)	7d/wk-2	7d	04-Nov-14 08	10-Nov-14 18*	-353d		D-Wall horizontal cutting (Qty: 26 pcs.)							
<b>Stage 13 - Phase 3 Mooring</b>															
A-5050	Final trimming of sea bed level	7d/wk-2	4d	02-Nov-14 08	05-Nov-14 18	-347d		Final trimming of sea bed level							
A-5060	Phase 3 Mooring	7d/wk-2	6d	06-Nov-14 08	11-Nov-14 18	-347d		Phase 3 Mooring							
A-5040	Reinstatement of existing seawall (Zones I & J)	7d/wk-2	7d	11-Nov-14 08	17-Nov-14 18	-353d		Reinstatement of existing seawall (Zones I & J)							
<b>Stage 12 - Re-provisioning of Jetty</b>															
S6_5258	Provision of Mobile Crane (until permanent re-provision of Jetty is completed)	7d/wk-1	160d	20-Feb-14 08 A	30-Dec-14 18	-335d		Provision of Mobile Crane (until permanent re-provision of Jetty is completed)							
A-6010	BA8 submission and consent for commencement of superstructure	7d/wk-2	28d	20-Sep-14 08 A	16-Oct-14 18	-336d		BA8 submission and consent for commencement of superstructure							

-  Summary Bar
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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

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中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015				2016			
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
A-6012	Submission of performance report	7d/wk-2	1d	25-Oct-14 08*	25-Oct-14 18	-286d								
A-6020	Erection of working platform for jetty beams and reinstate the floating portoon	7d/wk-2	10d	02-Nov-14 08	11-Nov-14 18	-352d								
A-6040	BA10 submission for authorized signatory and subcontractor	7d/wk-2	1d	12-Nov-14 08	12-Nov-14 18	-304d								
A-6030	Jetty beams construction	7d/wk-2	14d	12-Nov-14 08	25-Nov-14 18	-352d								
A-6052	Construction of floating pontoon	7d/wk-2	14d	26-Nov-14 08	09-Dec-14 18	-331d								
A-6050	BA13 submission + 14-day cube test results	7d/wk-2	28d	26-Nov-14 08	23-Dec-14 18	-352d								
A-6060	E&M and accessories installation	7d/wk-2	7d	24-Dec-14 08	30-Dec-14 18	-352d								
A-6070	Handover to RHKYC	7d/wk-2	1d	31-Dec-14 08	31-Dec-14 18	-352d								
Stage 11 - Construction of TZ4														
A-6080	South side - laying rockfill and levelling stone (Qty: 1,550 cu.m)	7d/wk-2	12d	24-Sep-14 08	05-Oct-14 18	-339d								
A-6090	South side - install seawall blocks (Qty: 255 nos.)	7d/wk-2	6d	06-Oct-14 08	11-Oct-14 18	-339d								
A-7000	South side - general fill (Qty: 2,000 cu.m.)	7d/wk-2	2d	12-Oct-14 08	13-Oct-14 18	-339d								
A-7010	North side - laying rockfill and levelling stone (Qty: 1,550 cu.m)	7d/wk-2	12d	21-Oct-14 08	01-Nov-14 18	-346d								
A-7020	North side - install seawall blocks (Qty: 255 nos.)	7d/wk-2	6d	02-Nov-14 08	07-Nov-14 18	-346d								
A-7030	North side - general fill (Qty: 2,000 cu.m.)	7d/wk-2	2d	08-Nov-14 08	09-Nov-14 18	-346d								
A-7040	Handover to contract TS3/SR8	7d/wk-2	1d	10-Nov-14 08	10-Nov-14 18*	-346d								
TS4/ME4, Removal of Temporary Reclamation														
S26875	Completion of Section 2 (With ME4 option) (KD7)	7d/wk-2	0d		17-Nov-14 18	-353d								
S26890	Completion of Section 7B (ME4) (KD13)	7d/wk-2	0d		17-Nov-14 18	-353d								
TS4 - OHVD / Cable Trough														
S5_6185	TS4 (incl. TS4+) - OHVD Slab - Area C (access through temp. opening at TZ4)	7d/wk-1	36d	02-Jan-15 08*	06-Feb-15 18	195d								
S5_6190	TS4 (incl. TS4+) - Cable Trough (access through temp. opening at TZ4)	7d/wk-1	60d	07-Feb-15 08*	14-Apr-15 18	195d								
S5_59850	Completion of Section 5 - TS4/ME4 Area (KD10), below -20mPD	7d/wk-2	0d		02-Nov-15 18*	0d								
Works in TPCWAE Area (Portion 20A, 20B)														
Removal of Temporary Reclamation														
Removal of Temporary Reclamation & Form TZ5														
S67670	Remove general fill/sea wall block	7d/wk-1	24d	20-May-14 08 A	08-Oct-14 18	-296d								
S67675	Diaphragm wall saw cutting (1st D Wall cut on 23 Jun 2014)	7d/wk-1	31d	03-Sep-14 08 A	16-Oct-14 18	-306d								
S67755	Form TZ5	7d/wk-1	18d	25-Sep-14 08	14-Oct-14 18	-304d								

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

3 of 18

China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

Date	Revision	Checked	Approved
26-Sep...	1st submission		

中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.




Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015								2016																												
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3																													
S67685	Achievement of KD5	7d/wk-2	0d		16-Oct-14 18	-323d	◆ Achievement of KD5																																				
S67687	Complete Reinstatement of Vertical Seawall (near PRE Office)	7d/wk-2	0d		27-Oct-14 18	-322d	◆ Complete Reinstatement of Vertical Seawall (near PRE Office)																																				
Reinstate Mucking Out Access Shaft "C"																																											
S67240	Start reinstatement works (after completion of TPCWAW OHVD works)	6d/wk	0d	26-Mar-16 08		-102d									◆ Start reinstatement works (after c																												
S67225	Cast slab opening at top of CCT West bound (access shaft)	6d/wk	18d	28-Mar-16 08	16-Apr-16 18	-102d									■ Cast slab opening at top of																												
S67230	Removal of vertical shaft and backfilling	6d/wk	48d	11-Apr-16 08	04-Jun-16 18	-102d									■ Removal of vertical																												
S67235	Reinstatement of pavement	6d/wk	12d	30-May-16 08	11-Jun-16 18	-102d									■ Reinstatement of																												
TPCWAE - OHVD / Cable Trough																																											
S5_7405	TPCWAE - Cable Trough (access through temp. opening at TZ5 & Portion 19)	6d/wk	48d	04-Sep-15 08	02-Nov-15 18	0d									■ TPCWAE - Cable Trough (access through temp. opening at T																												
S5_7400	TPCWAE - OHVD Slab AT Area A (access through temp. opening at TZ5 & Portion 19)	6d/wk	48d	04-Sep-15 08	02-Nov-15 18	0d									■ TPCWAE - OHVD Slab AT Area A (access through temp. open																												
S5_59840	Completion of Section 5 - TPCWAE Area (KD10), below -20mPD	7d/wk-2	0d		02-Nov-15 18*	0d									◆ Completion of Section 5 - TPCWAE Area (KD10), below -20m																												
Works in TPCWAW Area																																											
TPCWAW - Temporary Reclamation																																											
Temporary Reclamation -																																											
S6_9440	TPCWAW - place levelling stone and tamping, South side	7d/wk-1	6d	15-Oct-14 08	20-Oct-14 18	-122d	■ TPCWAW - place levelling stone and tamping, South side																																				
S6_9450	TPCWAW - place seawall block to +4 at South side (Qty: 569 nos. @ 50 nos/day)	7d/wk-1	12d	21-Oct-14 08	01-Nov-14 18	-122d	■ TPCWAW - place seawall block to +4 at South side (Qty: 569 nos. @ 50 nos/day)																																				
S6_9465	TPCWAW - place levelling stone and tamping, North side	7d/wk-1	6d	02-Nov-14 08	07-Nov-14 18	-122d	■ TPCWAW - place levelling stone and tamping, North side																																				
S6_9470	TPCWAW - place seawall blocks to +4 North side (Qty: 672 nos @ 50 nos/day)	7d/wk-1	14d	08-Nov-14 08	21-Nov-14 18	-122d	■ TPCWAW - place seawall blocks to +4 North side (Qty: 672 nos @ 50 nos/day)																																				
S6_9495	TPCWAW - General fill to +2 within the seawall	7d/wk-1	17d	15-Nov-14 08	01-Dec-14 18	-122d	■ TPCWAW - General fill to +2 within the seawall																																				
S6_9490	TPCWAW - place seawall blocks to +4 at the temporary opening	7d/wk-1	7d	02-Dec-14 08	08-Dec-14 18	-122d	■ TPCWAW - place seawall blocks to +4 at the temporary opening																																				
S6_9475	TPCWAW - Remaining General fill to +4 within the seawall	7d/wk-1	10d	09-Dec-14 08	18-Dec-14 18	-122d	■ TPCWAW - Remaining General fill to +4 within the seawall																																				
TPCWAW - Diaphragm Wall																																											
Diaphragm Wall																																											
S6_9385	Site investigation	7d/wk-1	49d	01-Dec-14 08	21-Jan-15 18	-113d	■ Site investigation																																				
S6_8960	Install guide wall	7d/wk-1	40d	17-Dec-14 08	28-Jan-15 18	-120d	■ Install guide wall																																				
S6_8955	Curtain grout along proposed diaphragm wall	7d/wk-1	40d	19-Dec-14 08	30-Jan-15 18	-122d	■ Curtain grout along proposed diaphragm wall																																				
S6_9382	Set up bentonite silo/plants and equipments	7d/wk-1	30d	19-Dec-14 08	20-Jan-15 18	-112d	■ Set up bentonite silo/plants and equipments																																				
S6_9345	Diaphragm wall construction (34 panels @ 3 panels/ week)	7d/wk-1	68d	30-Jan-15 08	14-Apr-15 18	-141d	■ Diaphragm wall construction (34 panels @ 3 panels/ week)																																				
S6_9350	Install shear pins on diaphragm wall	7d/wk-1	40d	14-Mar-15 08	26-Apr-15 18	-133d	■ Install shear pins on diaphragm wall																																				
<div><div><div>Summary Bar</div><div>Actual Level of Effort</div><div>Actual Work</div><div>Remaining Work</div><div>Critical Remaining Work</div><div>◆ Milestone</div></div></div>							4 of 18							<div>Prepared by William Caluza</div> <table><tr><td>Date</td><td>Revision</td><td>Checked</td><td>Approved</td></tr><tr><td>26-Sep...</td><td>1st submission</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>							Date	Revision	Checked	Approved	26-Sep...	1st submission											<div><div><div>中國建築工程(香港)有限公司</div><div>CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.</div></div></div>						
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China State Construction Engineering (Hong Kong) Ltd							Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)							WORKS PROGRAMME REV. M																													



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float									
							2015			2016					
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
S6_9355	Install king posts	7d/wk-1	40d	14-Mar-15 08	26-Apr-15 18	-133d			Install king posts						
S6_8970	Diaphragm Wall Pile test	7d/wk-1	40d	20-Mar-15 08	03-May-15 18	-129d			Diaphragm Wall Pile test						
S6_9375	Carry out contact/fissure grouting	7d/wk-1	29d	21-Mar-15 08	22-Apr-15 18	-141d			Carry out contact/fissure grouting						
TPCWAW- ELS Works															
ELS Works															
S6_9360	Install dewatering wells and piezometers	7d/wk-1	20d	30-Mar-15 08	22-Apr-15 18	-141d			Install dewatering wells and piezometers						
S6_9365	Install inclinometers inside D-wall	7d/wk-1	20d	15-Apr-15 08	05-May-15 18	-141d			Install inclinometers inside D-wall						
S6_8975	Carry out pumping tests	7d/wk-1	12d	23-Apr-15 08	05-May-15 18	-141d			Carry out pumping tests						
S6_8980	1st Layer - D Wall conc over break if any & Soft Excavation	7d/wk-1	10d	06-May-15 08	15-May-15 18	-141d			1st Layer - D Wall conc over break if any & Soft Excavation						
S6_9260	Submit pumping test report	7d/wk-1	1d	06-May-15 08	06-May-15 18	-137d			Submit pumping test report						
S6_8985	1st Layer - install lateral support	7d/wk-1	10d	16-May-15 08	26-May-15 18	-141d			1st Layer - install lateral support						
S6_8990	Install vibrating wire strain gauge	7d/wk-1	10d	16-May-15 08	26-May-15 18	-141d			Install vibrating wire strain gauge						
S6_8995	2nd Layer - D Wall conc over break if any & Soft Excavation	7d/wk-1	10d	18-May-15 08	28-May-15 18	-141d			2nd Layer - D Wall conc over break if any & Soft Excavation						
S6_9000	2nd Layer - install lateral support	7d/wk-1	10d	29-May-15 08	07-Jun-15 18	-141d			2nd Layer - install lateral support						
S6_9005	3rd Layer - D Wall conc over break if any & Soft Excavation	7d/wk-1	10d	31-May-15 08	09-Jun-15 18	-141d			3rd Layer - D Wall conc over break if any & Soft Excavation						
S6_9010	3rd Layer - install lateral support	7d/wk-1	10d	10-Jun-15 08	19-Jun-15 18	-141d			3rd Layer - install lateral support						
S6_9015	4th Layer - D Wall conc over break if any & Soft Excavation	7d/wk-1	10d	12-Jun-15 08	22-Jun-15 18	-141d			4th Layer - D Wall conc over break if any & Soft Excavation						
S6_9020	4th Layer - install lateral support	7d/wk-1	10d	23-Jun-15 08	03-Jul-15 18	-141d			4th Layer - install lateral support						
S6_9025	5th Layer - D Wall conc over break if any & Soft Excavation	7d/wk-1	10d	25-Jun-15 08	05-Jul-15 18	-141d			5th Layer - D Wall conc over break if any & Soft Excavation						
S6_9030	5th Layer - install lateral support	7d/wk-1	10d	27-Jun-15 08	07-Jul-15 18	-141d			5th Layer - install lateral support						
S6_9035	6th Layer - D Wall conc over break if any & Soft Excavation	7d/wk-1	10d	08-Jul-15 08	17-Jul-15 18	-141d			6th Layer - D Wall conc over break if any & Soft Excavation						
S6_9040	6th Layer - install lateral support	7d/wk-1	10d	18-Jul-15 08	27-Jul-15 18	-69d			6th Layer - install lateral support						
TPCWAW - ROCK EXCAVATION															
S6_6180	Rock excavation to formation	7d/wk-1	112d	18-Jul-15 08	09-Nov-15 18	-141d			Rock excavation to formation						
S6_9370	Install tie back anchor to D- Walls (area on west side, near Portion 11)	7d/wk-1	25d	20-Jul-15 08	13-Aug-15 18	-69d			Install tie back anchor to D- Walls (area on west side, near Portion 11)						
S6_9415	Install tie back anchor to D- Walls (east area)	7d/wk-1	20d	20-Jul-15 08	08-Aug-15 18	-69d			Install tie back anchor to D- Walls (east area)						
S6_9055	Provide Access to WDII Contractor for demolition of bulkhead at Portion 11	7d/wk-2	0d		10-Nov-15 18	-133d			Provide Access to WDII Contractor for demolition of bulkhead						
TPCWAW- CCT RC Structure															
TPCWAW - CCT / OHVD															



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015								2016			
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
S6_9070	TPCWAW Construct tunnel base slab	7d/wk-1	50d	23-Oct-15 08	11-Dec-15 18	-141d									TPCWAW Construct tunnel base slab			
S6_9075	TPCWAW Construct tunnel wall + OHVD + roof slab	7d/wk-1	80d	13-Nov-15 08	02-Feb-16 18	-141d									TPCWAW Construct tunnel wall + OHVD +			
S6_9077	TPCWAW - external waterproofing on top of completed CCT box (incl. screeding)	7d/wk-1	26d	03-Feb-16 08	28-Feb-16 18	-120d									TPCWAW - external waterproofing on			
S6_9076	TPCWAW King post load transfer	7d/wk-1	26d	03-Feb-16 08	28-Feb-16 18	-120d									TPCWAW King post load transfer			
TPCWAW - Removal of Temporary Reclamation																		
Removal of Temporary Reclamation																		
S6_9140	Backfilling/Removal of ELS/ Reinstatement of sea wall at Portion 11 (concurrent activities)	7d/wk-1	30d	17-Feb-16 08	17-Mar-16 18	-120d									Backfilling/Removal of ELS/ Reinsta			
S6_9105	Remove general fill/ seawall block (concurrent activities)	7d/wk-1	25d	06-Mar-16 08	30-Mar-16 18	-120d									Remove general fill/ seawall bloc			
S6_9120	Saw cut diaphragm wall	7d/wk-1	63d	21-Mar-16 08	23-May-16 18	-120d									Saw cut diaphragm w			
S6_7550	Completion of Section 6- (KD11), above - 20mPD	7d/wk-2	0d		23-May-16 18	-121d									Completion of Section			
TPCWAW -Cable Trough/ Maintenance Walkway																		
S6_9085	TPCWAW - Cable Trough (access through temp. opening at Portion 19)	7d/wk-2	24d	02-Mar-16 08	25-Mar-16 18	-144d									TPCWAW - Cable Trough (access			
S6_9135	Completion of Section 5 - TPCWAW Area (KD10), below -20mPD	7d/wk-2	0d		25-Mar-16 18	-144d									Completion of Section 5 - TPCWA			
Works in Wan Chai PCWA (Portion 11)																		
Initial Works & Utilities Works																		
S4_2810	Installation of Hoarding	7d/wk-1	24d	05-May-14 08 A	17-Oct-14 18	-58d									Installation of Hoarding			
S4_2720	Remove existing rock mound	7d/wk-1	24d	21-Oct-14 08	13-Nov-14 18	-61d									Remove existing rock mound			
S4_2750	Carry out Site Investigation for BW1/BW2	7d/wk-1	12d	21-Oct-14 08	01-Nov-14 18	-61d									Carry out Site Investigation for BW1/BW2			
S4_2755	BW1/BW2 Engineers confirmation of provisional Barrettes	7d/wk-1	0d		07-Nov-14 18	-61d									BW1/BW2 Engineers confirmation of provisional Barrettes			
Allow Access to WDII																		
S4_2785	Complete Section 4 - Portion 11 (KD9)	7d/wk-2	0d		10-Nov-15 18	-132d									Complete Section 4 - Portion 11 (KD9)			
S4_2775	Return Portion 11 to WDII	7d/wk-1	0d		10-Nov-15 18	-129d									Return Portion 11 to WDII			
Works for Mined Tunnel (Portion 16, 17, 18)																		
SR8 (Tunnel Excavation + Lining)																		
From West (TPCWAE)																		
Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)																		
A8676	SR8 Heading Excavation From West, CH 4095- 4107 = 8m @2d/m	7d/wk-1a	16d	03-Sep-14 08 A	28-Sep-14 18	164d									SR8 Heading Excavation From West, CH 4095- 4107 = 8m @2d/m			
Bench Excavation (1.5d-2d/m, 20m separation with heading)																		
A8700	SR8 Bench Excavation From West, CH 4055- 4065 = 10m	7d/wk-1a	20d	08-Sep-14 08 A	24-Sep-14 18	148d									SR8 Bench Excavation From West, CH 4055- 4065 = 10m			
Summary Bar							Prepared by William Caluza										 中國建築工程(香港)有限公司 CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.	
Actual Level of Effort							Date		Revision		Checked		Approved					
Actual Work							26-Sep...		1st submission									
Remaining Work																		
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6 of 18																		
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Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)																		
WORKS PROGRAMME REV. M																		



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015				2016			
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
A8705	SR8 Bench Excavation From West, CH 4065- 4075 = 10m	7d/wk-1a	20d	25-Sep-14 08	15-Oct-14 18	148d								
A8685	SR8 Bench Excavation From West, CH 4075- 4085 = 10m	7d/wk-1a	20d	16-Oct-14 08	04-Nov-14 18	148d								
A8680	SR8 Bench Excavation From West, CH 4085- 4095 = 10m	7d/wk-1a	20d	05-Nov-14 08	24-Nov-14 18	148d								
A8725	SR8 Bench Excavation From West, CH 4095- 4100 = 5m	7d/wk-1a	10d	25-Nov-14 08	04-Dec-14 18	148d								
From East (TS4)														
Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)														
A8495	SR8 Heading Excavation From East CH 4115- 4107 = 8m @2d/m	7d/wk-1a	16d	15-Sep-14 08 A	28-Sep-14 18	10d								
Bench Excavation (1.5d/m, 20m separation with heading)														
A8455	SR8 Bench Excavation From East, CH 4147.5- 4135 = 12.5m	7d/wk-1a	19d	20-Sep-14 08	09-Oct-14 18	0d								
A8470	SR8 Bench Excavation From East, CH 4135- 4125 = 10m	7d/wk-1a	15d	10-Oct-14 08	24-Oct-14 18	0d								
A8460	SR8 Bench Excavation From East, CH 4125- 4115 = 10m	7d/wk-1a	15d	25-Oct-14 08	08-Nov-14 18	0d								
A8465	SR8 Bench Excavation From East, CH 4115- 4100 = 15m	7d/wk-1a	23d	09-Nov-14 08	01-Dec-14 18	0d								
Tunnel Lining Works														
From West - Base Slab (10m/bay, 10m separation with benching excavation)														
A8525	SR8, From West, CH 4015 - 4025 = 10m/bay, base slab	7d/wk-1a	10d	15-Sep-14 08 A	04-Oct-14 18	137d								
A8530	SR8, From West,CH 4025 - 4035 = 10m/bay, base slab	7d/wk-1a	10d	05-Oct-14 08	14-Oct-14 18	163d								
A8535	SR8, From West,CH 4035 - 4045 = 10m/bay, base slab	7d/wk-1a	8d	15-Oct-14 08	22-Oct-14 18	165d								
A8540	SR8, From West, CH 4045 - 4055 = 10m/bay, base slab	7d/wk-1a	8d	23-Oct-14 08	30-Oct-14 18	165d								
A8545	SR8, From West, CH 4055 - 4065 = 10m/bay, base slab	7d/wk-1a	8d	05-Nov-14 08	12-Nov-14 18	160d								
A8550	SR8, From West, CH 4065 - 4075 = 10m/bay, base slab	7d/wk-1a	8d	25-Nov-14 08	02-Dec-14 18	148d								
A8555	SR8, From West, CH 4075 - 4085 = 10m/bay, base slab	7d/wk-1a	8d	05-Dec-14 08	12-Dec-14 18	148d								
A8560	SR8, From West, CH 4085 - 4095 = 10m/bay, base slab	7d/wk-1a	8d	13-Dec-14 08	20-Dec-14 18	150d								
A8561	SR8, From West, CH 4095 - 4105 = 10m/bay, base slab	7d/wk-1a	8d	21-Dec-14 08	29-Dec-14 18	152d								
A8562	SR8, From West, CH 4105 - 4115 = 10m/bay, base slab	7d/wk-1a	8d	30-Dec-14 08	07-Jan-15 18	154d								
From West - Lining (5m/bay, 10m separation with base slab)														
A8575	SR8, From West, CH 3995 - 4000 = 1bay, lining	7d/wk-1a	9d	20-Sep-14 08	28-Sep-14 18	0d								
A8580	SR8, From West, CH 4000 - 4005 = 1bay, lining	7d/wk-1a	9d	05-Oct-14 08	13-Oct-14 18	137d								
A8585	SR8, From West, CH 4005 - 4010 = 1bay, lining	7d/wk-1a	9d	14-Oct-14 08	22-Oct-14 18	137d								
A8590	SR8, From West, CH 4010 - 4015 = 1bay, lining	7d/wk-1a	9d	23-Oct-14 08	31-Oct-14 18	137d								

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

7 of 18


China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

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中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015					2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
A8595	SR8, From West, CH 4015 - 4020 = 1bay, lining	7d/wk-1a	9d	01-Nov-14 08	09-Nov-14 18	137d	■ SR8, From West, CH 4015 - 4020 = 1bay, lining							
A8600	SR8, From West, CH 4020 - 4025 = 1bay, lining	7d/wk-1a	9d	10-Nov-14 08	18-Nov-14 18	137d	■ SR8, From West, CH 4020 - 4025 = 1bay, lining							
A8605	SR8, From West, CH 4025 - 4030 = 1bay, lining	7d/wk-1a	5d	19-Nov-14 08	23-Nov-14 18	137d	■ SR8, From West, CH 4025 - 4030 = 1bay, lining							
A8610	SR8, From West, CH 4030 - 4035 = 1bay, lining	7d/wk-1a	5d	24-Nov-14 08	28-Nov-14 18	137d	■ SR8, From West, CH 4030 - 4035 = 1bay, lining							
A8615	SR8, From West, CH 4035 - 4040 = 1bay, lining	7d/wk-1a	5d	29-Nov-14 08	03-Dec-14 18	137d	■ SR8, From West, CH 4035 - 4040 = 1bay, lining							
A8620	SR8, From West, CH 4040 - 4045 = 1bay, lining	7d/wk-1a	5d	04-Dec-14 08	08-Dec-14 18	137d	■ SR8, From West, CH 4040 - 4045 = 1bay, lining							
A8625	SR8, From West, CH 4045 - 4050 = 1bay, lining	7d/wk-1a	5d	09-Dec-14 08	13-Dec-14 18	137d	■ SR8, From West, CH 4045 - 4050 = 1bay, lining							
A8630	SR8, From West, CH 4050 - 4055 = 1bay, lining	7d/wk-1a	5d	14-Dec-14 08	18-Dec-14 18	137d	■ SR8, From West, CH 4050 - 4055 = 1bay, lining							
A8635	SR8, From West, CH 4055 - 4060 = 1bay, lining	7d/wk-1a	5d	19-Dec-14 08	23-Dec-14 18	137d	■ SR8, From West, CH 4055 - 4060 = 1bay, lining							
A8640	SR8, From West, CH 4060 - 4065 = 1bay, lining	7d/wk-1a	5d	24-Dec-14 08	29-Dec-14 18	137d	■ SR8, From West, CH 4060 - 4065 = 1bay, lining							
A8645	SR8, From West, CH 4065 - 4070 = 1bay, lining	7d/wk-1a	5d	30-Dec-14 08	04-Jan-15 18	137d	■ SR8, From West, CH 4065 - 4070 = 1bay, lining							
A8647	SR8, From West, CH 4070 - 4075 = 1bay, lining	7d/wk-1a	5d	05-Jan-15 08	09-Jan-15 18	137d	■ SR8, From West, CH 4070 - 4075 = 1bay, lining							
A8648	SR8, From West, CH 4075 - 4080 = 1bay, lining	7d/wk-1a	5d	10-Jan-15 08	14-Jan-15 18	137d	■ SR8, From West, CH 4075 - 4080 = 1bay, lining							
A8649	SR8, From West, CH 4080 - 4085 = 1bay, lining	7d/wk-1a	5d	15-Jan-15 08	19-Jan-15 18	137d	■ SR8, From West, CH 4080 - 4085 = 1bay, lining							
A8651	SR8, From West, CH 4085 - 4090 = 1bay, lining	7d/wk-1a	5d	20-Jan-15 08	24-Jan-15 18	137d	■ SR8, From West, CH 4085 - 4090 = 1bay, lining							
A8652	SR8, From West, CH 4090 - 4095 = 1bay, lining	7d/wk-1a	5d	25-Jan-15 08	29-Jan-15 18	137d	■ SR8, From West, CH 4090 - 4095 = 1bay, lining							
A8653	SR8, From West, CH 4095 - 4100 = 1bay, lining	7d/wk-1a	5d	30-Jan-15 08	03-Feb-15 18	137d	■ SR8, From West, CH 4095 - 4100 = 1bay, lining							
A8654	SR8, From West, CH 4100 - 4105 = 1bay, lining	7d/wk-1a	5d	04-Feb-15 08	08-Feb-15 18	137d	■ SR8, From West, CH 4100 - 4105 = 1bay, lining							
From East - Base Slab (10m/bay, 10m separation with benching excavation)														
A9775	SR8 From East, CH 4149.5 - 4145 = 4.5m, base slab	7d/wk-1a	8d	02-Dec-14 08	09-Dec-14 18	0d	■ SR8 From East, CH 4149.5 - 4145 = 4.5m, base slab							
A9780	SR8 From East, CH 4145 - 4135 = 10m/bay, base slab	7d/wk-1a	8d	10-Dec-14 08	17-Dec-14 18	0d	■ SR8 From East, CH 4145 - 4135 = 10m/bay, base slab							
A9785	SR8 From East, CH 4135 - 4125 = 10m/bay, base slab	7d/wk-1a	8d	18-Dec-14 08	26-Dec-14 18	8d	■ SR8 From East, CH 4135 - 4125 = 10m/bay, base slab							
A9786	SR8 From East, CH 4125 - 4115 = 10m/bay, base slab	7d/wk-1a	8d	27-Dec-14 08	04-Jan-15 18	10d	■ SR8 From East, CH 4125 - 4115 = 10m/bay, base slab							
From East - Lining (5m/bay, 10m separation with base slab)														
A9820	From East, SR8 CH 4149.5 - 4145 = 4.5m, 1 bay, lining	7d/wk-1a	5d	18-Dec-14 08	22-Dec-14 18	0d	■ From East, SR8 CH 4149.5 - 4145 = 4.5m, 1 bay, lining							
A9815	From East, SR8 CH 4145 - 4140 = 1bay, lining	7d/wk-1a	5d	23-Dec-14 08	28-Dec-14 18	6d	■ From East, SR8 CH 4145 - 4140 = 1bay, lining							
A9810	From East, SR8 CH 4140 - 4135 = 1bay, lining	7d/wk-1a	5d	29-Dec-14 08	03-Jan-15 18	6d	■ From East, SR8 CH 4140 - 4135 = 1bay, lining							
A9805	From East, SR8 CH 4135 - 4130 = 1bay, lining	7d/wk-1a	5d	04-Jan-15 08	08-Jan-15 18	6d	■ From East, SR8 CH 4135 - 4130 = 1bay, lining							

- Summary Bar
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

Date	Revision	Checked	Approved
26-Sep...	1st submission		



中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015							2016			
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
A9870	From East, SR8 CH 4130 - 4125 = 1bay, lining	7d/wk-1a	5d	09-Jan-15 08	13-Jan-15 18	6d											
A9800	From East, SR8 CH 4125 - 4120 = 1bay, lining	7d/wk-1a	5d	14-Jan-15 08	18-Jan-15 18	143d											
A9860	From East, SR8 CH 4120 - 4115 = 1bay, lining	7d/wk-1a	5d	19-Jan-15 08	23-Jan-15 18	143d											
A9855	From East, SR8 CH 4115 - 4110 = 1bay, lining	7d/wk-1a	5d	24-Jan-15 08	28-Jan-15 18	143d											
A9850	From East, SR8 CH 4110 - 4105 = 1bay, lining	7d/wk-1a	5d	29-Jan-15 08	02-Feb-15 18	143d											
OHVD(10m/bay) / Utility Trough																	
A8570	SR8 Tunnel OHVD and utility trough =, 167= 17 bays @ 10m/bay @ 7d/bay	7d/wk-1a	120d	09-Feb-15 08	13-Jun-15 18	137d											
EB Outer Tunnel Excavation																	
From West (TPCWAE)																	
Outer Bench Excavation (1.5d - 2d/m, 20m separation with heading)																	
A9550	EB, Outer Bench From West, CH 4035- 4045 = 10m	7d/wk-1a	30d	07-Aug-14 08 A	20-Oct-14 18	135d											
A9555	EB, Outer Bench From West, CH 4045- 4055 = 10m (2d/m)	7d/wk-1a	20d	20-Oct-14 08	08-Nov-14 18	135d											
A9560	EB, Outer Bench From West, CH 4055- 4065 = 10m (2d/m)	7d/wk-1a	20d	09-Nov-14 08	28-Nov-14 18	135d											
A9565	EB, Outer Bench From West, CH 4065- 4075 = 10m (2d/m)	7d/wk-1a	20d	29-Nov-14 08	18-Dec-14 18	135d											
A9520	EB, Outer Bench From West, CH 4075- 4085 = 10m (2d/m)	7d/wk-1a	20d	19-Dec-14 08	09-Jan-15 18	135d											
A9545	EB, Outer Bench From West, CH 4085- 4095 = 10m 1.5d/m)	7d/wk-1a	15d	10-Jan-15 08	24-Jan-15 18	135d											
From East (TS4)																	
Outer Bench Excavation (1.5d-2d/m, 20m separation with heading)																	
A9605	EB, Outer Bench From East, CH 4147.5 - 4145 = 2.5m	7d/wk-1a	30d	20-Oct-14 08*	18-Nov-14 18	120d											
A9610	EB, Outer Bench From East, CH 4145- 4135 = 10m (2d/m)	7d/wk-1a	20d	19-Nov-14 08	08-Dec-14 18	120d											
A9615	EB, Outer Bench From East, CH 4135- 4125 = 10m (2d/m)	7d/wk-1a	20d	09-Dec-14 08	29-Dec-14 18	120d											
A9620	EB, Outer Bench From East, CH 4125- 4115 = 10m (2d/m)	7d/wk-1a	20d	30-Dec-14 08	19-Jan-15 18	120d											
A9625	EB, Outer Bench From East, CH 4115- 4105 = 10m (2d/m)	7d/wk-1a	20d	20-Jan-15 08	08-Feb-15 18	120d											
A9630	EB, Outer Bench From East, CH 4105- 4095 = 10m (1.5d/m)	7d/wk-1a	15d	08-Feb-15 08	26-Feb-15 18	120d											
EB (Inner Tunnel Excavation + Lining)																	
From West (TPCWAE)																	
Inner Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)																	
A8805	EB,Inner Heading From West, CH 3992- 4005 = 13m @3d/m	7d/wk-1a	39d	29-Sep-14 08	07-Nov-14 18	0d											
A8815	EB,Inner Heading From West, CH 4005- 4015 = 10m @2d/m	7d/wk-1a	20d	08-Nov-14 08	27-Nov-14 18	0d											
9 of 18							Prepared by William Caluza										
China State Construction Engineering (Hong Kong) Ltd Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)  WORKS PROGRAMME REV. M							Date				Revision		Checked		Approved		
							26-Sep...				1st submission						
<div><div>Summary Bar</div><div>Actual Level of Effort</div><div>Actual Work</div><div>Remaining Work</div><div>Critical Remaining Work</div><div>Milestone</div></div>							<div><div>EB,Inner Heading From West, CH 3992- 4005 = 13m @3d/m</div><div>EB,Inner Heading From West, CH 4005- 4015 = 10m @2d/m</div></div>							<div><div>CSCEC</div><div>中國建築工程(香港)有限公司</div><div>CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.</div></div>			



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float									
							2015			2016					
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
A8820	EB,Inner Heading From West , CH 4015- 4025 = 10m @2d/m	7d/wk-1a	20d	28-Nov-14 08	17-Dec-14 18	0d		EB,Inner Heading From West , CH 4015- 4025 = 10m @2d/m							
A8780	EB,Inner Heading From West, CH 4025- 4035 = 10m @2d/m	7d/wk-1a	20d	18-Dec-14 08	08-Jan-15 18	0d		EB,Inner Heading From West, CH 4025- 4035 = 10m @2d/m							
A8810	EB,Inner Heading From West , CH 4035- 4045 = 10m @2d/m	7d/wk-1a	20d	09-Jan-15 08	28-Jan-15 18	0d		EB,Inner Heading From West , CH 4035- 4045 = 10m @2d/m							
A8785	EB,Inner Heading From West , CH 4045- 4055 = 10m @2d/m	7d/wk-1a	20d	29-Jan-15 08	17-Feb-15 18	0d		EB,Inner Heading From West , CH 4045- 4055 = 10m @2d/m							
A8790	EB,Inner Heading From West, CH 4055- 4065 = 10m @ 2d/m	7d/wk-1a	20d	18-Feb-15 08	12-Mar-15 18	0d		EB,Inner Heading From West, CH 4055- 4065 = 10m @ 2d/m							
A8795	EB,Inner Heading From West , CH 4065- 4075 = 10m, @ 2d/m	7d/wk-1a	20d	13-Mar-15 08	01-Apr-15 18	0d		EB,Inner Heading From West , CH 4065- 4075 = 10m, @ 2d/m							
A8800	EB,Inner Heading From West, CH 4075- 4085 = 10m @ 2d/m	7d/wk-1a	20d	02-Apr-15 08	22-Apr-15 18	0d		EB,Inner Heading From West, CH 4075- 4085 = 10m @ 2d/m							
A8825	EB,Inner Heading From West, CH 4085- 4095 = 10m @ 2d/m	7d/wk-1a	20d	23-Apr-15 08	13-May-15 18	0d		EB,Inner Heading From West, CH 4085- 4095 = 10m @ 2d/m							
Inner Bench Excavation (1.5-2d/m, 20m separation with heading)															
A8765	EB, Inner Bench From West, CH 3992- 4005 = 13m (2d/m)	7d/wk-1a	26d	08-Nov-14 08	03-Dec-14 18	23d		EB, Inner Bench From West, CH 3992- 4005 = 13m (2d/m)							
A8770	EB, Inner Bench From West,CH 4005- 4015 = 10m	7d/wk-1a	15d	18-Dec-14 08	03-Jan-15 18	9d		EB, Inner Bench From West,CH 4005- 4015 = 10m							
A8775	EB, Inner Bench From West,CH 4015- 4025 = 10m	7d/wk-1a	15d	09-Jan-15 08	23-Jan-15 18	4d		EB, Inner Bench From West,CH 4015- 4025 = 10m							
A8735	EB, Inner Bench From West,CH 4025- 4035 = 10m	7d/wk-1a	15d	29-Jan-15 08	12-Feb-15 18	14d		EB, Inner Bench From West,CH 4025- 4035 = 10m							
A8740	EB, Inner Bench From West,CH 4035- 4045 = 10m	7d/wk-1a	15d	18-Feb-15 08	07-Mar-15 18	11d		EB, Inner Bench From West,CH 4035- 4045 = 10m							
A8745	EB, Inner Bench From West,CH 4045- 4055 = 10m	7d/wk-1a	15d	13-Mar-15 08	27-Mar-15 18	6d		EB, Inner Bench From West,CH 4045- 4055 = 10m							
A8750	EB, Inner Bench From West,CH 4055- 4065 = 10m	7d/wk-1a	15d	02-Apr-15 08	17-Apr-15 18	1d		EB, Inner Bench From West,CH 4055- 4065 = 10m							
A8755	EB, Inner Bench From West,CH 4065- 4075 = 10m	7d/wk-1a	15d	18-Apr-15 08	03-May-15 18	1d		EB, Inner Bench From West,CH 4065- 4075 = 10m							
A8760	EB, Inner Bench From West,CH 4075- 4085 = 10m	7d/wk-1a	15d	05-May-15 08	19-May-15 18	0d		EB, Inner Bench From West,CH 4075- 4085 = 10m							
A8761	EB, Inner Bench From West,CH 4085- 4095 = 10m	7d/wk-1a	15d	20-May-15 08	03-Jun-15 18	0d		EB, Inner Bench From West,CH 4085- 4095 = 10m							
From East (TS4)															
Inner Heading Excavation (3d/m, 24h/day work shift, 7d/week, no work on statutory holiday)															
A8835	EB,Inner Heading From East, CH 4147.5 to 4145 = 2.5m, @ 3d/m	7d/wk-1a	8d	06-Jan-15 08	13-Jan-15 18	0d		EB,Inner Heading From East, CH 4147.5 to 4145 = 2.5m, @ 3d/m							
A8850	EB,Inner Heading From East, CH 4145- 4135 = 10m, @ 3d/m	7d/wk-1a	30d	14-Jan-15 08	12-Feb-15 18	0d		EB,Inner Heading From East, CH 4145- 4135 = 10m, @ 3d/m							
A8830	EB,Inner Heading From East, CH 4135- 4125 = 10m @2d/m	7d/wk-1a	20d	13-Feb-15 08	07-Mar-15 18	0d		EB,Inner Heading From East, CH 4135- 4125 = 10m @2d/m							
A8840	EB,Inner Heading From East, CH 4125- 4115 = 10m @2d/m	7d/wk-1a	20d	08-Mar-15 08	27-Mar-15 18	0d		EB,Inner Heading From East, CH 4125- 4115 = 10m @2d/m							
A9910	EB,Inner Heading From East, CH 4115- 4105 = 10m @2d/m	7d/wk-1a	20d	28-Mar-15 08	17-Apr-15 18	0d		EB,Inner Heading From East, CH 4115- 4105 = 10m @2d/m							
A8845	EB,Inner Heading From East, CH 4105- 4095 = 10m @2d/m	7d/wk-1a	20d	18-Apr-15 08	08-May-15 18	0d		EB,Inner Heading From East, CH 4105- 4095 = 10m @2d/m							
Inner Bench Excavation (1.5d-2d/m, 20m separation with heading)															
A8860	EB,Inner Bench From East, CH 4147.5 - 4145 = 2.5m	7d/wk-1a	4d	08-Mar-15 08	11-Mar-15 18	11d		EB,Inner Bench From East, CH 4147.5 - 4145 = 2.5m							

- Summary Bar
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

Date	Revision	Checked	Approved
26-Sep...	1st submission		



中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015				2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2
A8865	EB, Inner Bench From East, CH 4145- 4135 = 10m	7d/wk-1a	15d	12-Mar-15 08	26-Mar-15 18	11d			■ EB, Inner Bench From East, CH 4145- 4135 = 10m				
A8870	EB, Inner Bench From East, CH 4135- 4125 = 10m	7d/wk-1a	15d	28-Mar-15 08	12-Apr-15 18	10d			■ EB, Inner Bench From East, CH 4135- 4125 = 10m				
A8855	EB, Inner Bench From East, CH 4125- 4115 = 10m	7d/wk-1a	15d	18-Apr-15 08	03-May-15 18	5d			■ EB, Inner Bench From East, CH 4125- 4115 = 10m				
A8875	EB, Inner Bench From East, CH 4115- 4105 = 10m	7d/wk-1a	15d	09-May-15 08	23-May-15 18	0d			■ EB, Inner Bench From East, CH 4115- 4105 = 10m				
A9915	EB, Inner Bench From East, CH 4105- 4095 = 10m	7d/wk-1a	16d	24-May-15 08	08-Jun-15 18	0d			■ EB, Inner Bench From East, CH 4105- 4095 = 10m				
Tunnel Lining Works													
From West Base Slab (10m/bay, 10m separation with benching excavation)													
A8900	EB From West, Base Slab CH 3990 - 3995 = 1 bay	7d/wk-1a	10d	04-Dec-14 08	13-Dec-14 18	33d			■ EB From West, Base Slab CH 3990 - 3995 = 1 bay				
A8890	EB From West, Base Slab CH 3995 - 4005 = 10m/bay	7d/wk-1a	10d	04-Jan-15 08	13-Jan-15 18	14d			■ EB From West, Base Slab CH 3995 - 4005 = 10m/bay				
A8905	EB From West, Base Slab CH 4005 - 4015 = 10m/bay	7d/wk-1a	10d	24-Jan-15 08	02-Feb-15 18	4d			■ EB From West, Base Slab CH 4005 - 4015 = 10m/bay				
A8910	EB From West, Base Slab CH 4015 - 4025 = 10m/bay	7d/wk-1a	10d	13-Feb-15 08	25-Feb-15 18	14d			■ EB From West, Base Slab CH 4015 - 4025 = 10m/bay				
A8915	EB From West, Base Slab CH 4025 - 4035 = 10m/bay	7d/wk-1a	10d	08-Mar-15 08	17-Mar-15 18	12d			■ EB From West, Base Slab CH 4025 - 4035 = 10m/bay				
A8920	EB From West, Base Slab CH 4035 - 4045 = 10m/bay	7d/wk-1a	10d	28-Mar-15 08	07-Apr-15 18	8d			■ EB From West, Base Slab CH 4035 - 4045 = 10m/bay				
A8925	EB From West, Base Slab CH 4045 - 4055 = 10m/bay	7d/wk-1a	10d	18-Apr-15 08	27-Apr-15 18	4d			■ EB From West, Base Slab CH 4045 - 4055 = 10m/bay				
A8930	EB From West, Base Slab CH 4055 - 4065 = 10m/bay	7d/wk-1a	10d	04-May-15 08	13-May-15 18	5d			■ EB From West, Base Slab CH 4055 - 4065 = 10m/bay				
A8880	EB From West, Base Slab CH 4065 - 4075 = 10m/bay	7d/wk-1a	10d	20-May-15 08	29-May-15 18	5d			■ EB From West, Base Slab CH 4065 - 4075 = 10m/bay				
A8885	EB From West, Base Slab CH 4075 - 4085 = 10m/bay	7d/wk-1a	10d	04-Jun-15 08	13-Jun-15 18	0d			■ EB From West, Base Slab CH 4075 - 4085 = 10m/bay				
A8895	EB From West, Base Slab CH 4085 - 4095 = 10m/bay	7d/wk-1a	10d	14-Jun-15 08	24-Jun-15 18	0d			■ EB From West, Base Slab CH 4085 - 4095 = 10m/bay				
From East Base Slab (10m/bay, 10m separation with benching excavation)													
A9905	EB From East, Base Slab CH 4149.5 - 4145 = 4.5m	7d/wk-1a	10d	13-Apr-15 08	22-Apr-15 18	26d			■ EB From East, Base Slab CH 4149.5 - 4145 = 4.5m				
A9900	EB From East, Base Slab CH 4145 - 4135 = 10m/bay	7d/wk-1a	10d	04-May-15 08	13-May-15 18	16d			■ EB From East, Base Slab CH 4145 - 4135 = 10m/bay				
A9895	EB From East, Base Slab CH 4135 - 4125 = 10m/bay	7d/wk-1a	10d	24-May-15 08	02-Jun-15 18	6d			■ EB From East, Base Slab CH 4135 - 4125 = 10m/bay				
A9890	EB From East, Base Slab CH 4125 - 4115 = 10m/bay	7d/wk-1a	10d	09-Jun-15 08	18-Jun-15 18	0d			■ EB From East, Base Slab CH 4125 - 4115 = 10m/bay				
A9885	EB From East, Base Slab CH 4115 - 4105 = 10m/bay	7d/wk-1a	10d	19-Jun-15 08	29-Jun-15 18	0d			■ EB From East, Base Slab CH 4115 - 4105 = 10m/bay				
A9880	EB From East, Base Slab CH 4105 - 4095 = 10m/bay	7d/wk-1a	10d	30-Jun-15 08	10-Jul-15 18	0d			■ EB From East, Base Slab CH 4105 - 4095 = 10m/bay				
Lining (5m/bay, 15m separation with base slab)													
A9065	EB From West, Lining CH 3990 - 3995 = 1bay	7d/wk-1a	10d	03-Feb-15 08	12-Feb-15 18	4d			■ EB From West, Lining CH 3990 - 3995 = 1bay				
A9005	EB From West, Lining CH 3995 - 4000 = 1bay	7d/wk-1a	10d	13-Feb-15 08	25-Feb-15 18	4d			■ EB From West, Lining CH 3995 - 4000 = 1bay				
A9090	EB From West, Lining CH 4000 - 4005 = 1bay	7d/wk-1a	10d	26-Feb-15 08	07-Mar-15 18	4d			■ EB From West, Lining CH 4000 - 4005 = 1bay				

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

Date	Revision	Checked	Approved
26-Sep...	1st submission		

CSCEC

中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015					2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
A9050	EB From West, Lining CH 4005 - 4010 = 1bay	7d/wk-1a	10d	08-Mar-15 08	17-Mar-15 18	4d			■ EB From West, Lining CH 4005 - 4010 = 1bay					
A9055	EB From West, Lining CH 4010 - 4015 = 1bay	7d/wk-1a	10d	18-Mar-15 08	27-Mar-15 18	4d			■ EB From West, Lining CH 4010 - 4015 = 1bay					
A9080	EB From West, Lining CH 4015 - 4020 = 1bay	7d/wk-1a	10d	26-Mar-15 08	05-Apr-15 18	4d			■ EB From West, Lining CH 4015 - 4020 = 1bay					
A9070	EB From West, Lining CH 4020 - 4025 = 1bay	7d/wk-1a	10d	03-Apr-15 08	13-Apr-15 18	4d			■ EB From West, Lining CH 4020 - 4025 = 1bay					
A9075	EB From West, Lining CH 4025 - 4030 = 1bay	7d/wk-1a	10d	12-Apr-15 08	21-Apr-15 18	4d			■ EB From West, Lining CH 4025 - 4030 = 1bay					
A9080	EB From West, Lining CH 4030 - 4035 = 1bay	7d/wk-1a	10d	20-Apr-15 08	29-Apr-15 18	4d			■ EB From West, Lining CH 4030 - 4035 = 1bay					
A9085	EB From West, Lining CH 4035 - 4040 = 1bay	7d/wk-1a	10d	28-Apr-15 08	08-May-15 18	4d			■ EB From West, Lining CH 4035 - 4040 = 1bay					
A9015	EB From West, Lining CH 4040 - 4045 = 1bay	7d/wk-1a	10d	07-May-15 08	16-May-15 18	4d			■ EB From West, Lining CH 4040 - 4045 = 1bay					
A9020	EB From West, Lining CH 4045 - 4050 = 1bay	7d/wk-1a	10d	15-May-15 08	24-May-15 18	4d			■ EB From West, Lining CH 4045 - 4050 = 1bay					
A9025	EB From West, Lining CH 4050 - 4055 = 1bay	7d/wk-1a	10d	23-May-15 08	01-Jun-15 18	4d			■ EB From West, Lining CH 4050 - 4055 = 1bay					
A9030	EB From West, Lining CH 4055 - 4060 = 1bay	7d/wk-1a	10d	31-May-15 08	09-Jun-15 18	4d			■ EB From West, Lining CH 4055 - 4060 = 1bay					
A9035	EB From West, Lining CH 4060 - 4065 = 1bay	7d/wk-1a	10d	07-Jun-15 08	16-Jun-15 18	4d			■ EB From West, Lining CH 4060 - 4065 = 1bay					
A9040	EB From West, Lining CH 4065 - 4070 = 1bay	7d/wk-1a	10d	14-Jun-15 08	24-Jun-15 18	4d			■ EB From West, Lining CH 4065 - 4070 = 1bay					
A9045	EB From West, Lining CH 4070 - 4075 = 1bay	7d/wk-1a	10d	25-Jun-15 08	05-Jul-15 18	0d			■ EB From West, Lining CH 4070 - 4075 = 1bay					
A8955	EB From West, Lining CH 4075 - 4080 = 1bay	7d/wk-1a	10d	30-Jun-15 08	10-Jul-15 18	0d			■ EB From West, Lining CH 4075 - 4080 = 1bay					
A8960	EB From West, Lining CH 4080 - 4085 = 1bay	7d/wk-1a	5d	11-Jul-15 08	15-Jul-15 18	0d			■ EB From West, Lining CH 4080 - 4085 = 1bay					
A8970	EB From West, Lining CH 4085 - 4090 = 1bay	7d/wk-1a	5d	16-Jul-15 08	20-Jul-15 18	0d			■ EB From West, Lining CH 4085 - 4090 = 1bay					
A8975	EB From West, Lining CH 4090 - 4095 = 1bay	7d/wk-1a	5d	21-Jul-15 08	25-Jul-15 18	0d			■ EB From West, Lining CH 4090 - 4095 = 1bay					
A8980	EB From West, Lining CH 4095 - 4100 = 1bay	7d/wk-1a	5d	26-Jul-15 08	30-Jul-15 18	0d			■ EB From West, Lining CH 4095 - 4100 = 1bay					
A8985	EB From West, Lining CH 4100 - 4105 = 1bay	7d/wk-1a	5d	31-Jul-15 08	04-Aug-15 18	0d			■ EB From West, Lining CH 4100 - 4105 = 1bay					
A8990	EB From West, Lining CH 4105 - 4110 = 1bay	7d/wk-1a	5d	05-Aug-15 08	09-Aug-15 18	0d			■ EB From West, Lining CH 4105 - 4110 = 1bay					
A8995	EB From West, Lining CH 4110 - 4115 = 1bay	7d/wk-1a	5d	10-Aug-15 08	14-Aug-15 18	0d			■ EB From West, Lining CH 4110 - 4115 = 1bay					
A9000	EB From West, Lining CH 4115 - 4120 = 1bay	7d/wk-1a	5d	15-Aug-15 08	19-Aug-15 18	0d			■ EB From West, Lining CH 4115 - 4120 = 1bay					
A9010	EB From West, Lining CH 4120 - 4125 = 1bay	7d/wk-1a	5d	20-Aug-15 08	24-Aug-15 18	0d			■ EB From West, Lining CH 4120 - 4125 = 1bay					
A8965	EB From West, Lining CH 4125 - 4130 = 1bay	7d/wk-1a	5d	25-Aug-15 08	29-Aug-15 18	0d			■ EB From West, Lining CH 4125 - 4130 = 1bay					
A8935	EB From West, Lining CH 4130 - 4135 = 1bay	7d/wk-1a	5d	30-Aug-15 08	03-Sep-15 18	0d			■ EB From West, Lining CH 4130 - 4135 = 1bay					
A8940	EB From West, Lining CH 4135 - 4140 = 1bay	7d/wk-1a	5d	04-Sep-15 08	08-Sep-15 18	0d			■ EB From West, Lining CH 4135 - 4140 = 1bay					
A8945	EB From West, Lining CH 4140 - 4145 = 1bay	7d/wk-1a	5d	09-Sep-15 08	13-Sep-15 18	0d			■ EB From West, Lining CH 4140 - 4145 = 1bay					
A8950	EB From West, Lining CH 4145 - 4149.5 = 4.5m	7d/wk-1a	5d	14-Sep-15 08	18-Sep-15 18	0d			■ EB From West, Lining CH 4145 - 4149.5 = 4.5m					

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

Date	Revision	Checked	Approved
28-Sep...	1st submission		

CSCEC

中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015							2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
OHVD(10m/bay) / Utility Trough																
A9095	EB From West OHVD and utility trough =, 167= 17 bays @ 10m/bay @ 7d/bay	7d/wk-1a	120d	03-Jul-15 08	02-Nov-15 18	0d	<div></div> EB From West OHVD and utility trough =, 167= 17 bays @ 10									
WB Outer Tunnel Excavation																
From West (TPCWAE)																
Outer Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)																
A9651	WB, Outer Heading From West, CH 4085- 4092.5 = 7.5m @ 2d/m	7d/wk-1a	15d	13-Sep-14 08 A	30-Sep-14 18	163d	<div></div> WB, Outer Heading From West, CH 4085- 4092.5 = 7.5m @ 2d/m									
Outer Bench Excavation (1.5d-2d/m, 20m separation with heading)																
A9680	WB, Outer Bench From West, CH 4025- 4035 = 10m	7d/wk-1a	15d	12-Oct-14 08	26-Oct-14 18	163d	<div></div> WB, Outer Bench From West, CH 4025- 4035 = 10m									
A9665	WB, Outer Bench From West, CH 4035- 4045 = 10m	7d/wk-1a	15d	27-Oct-14 08	10-Nov-14 18	163d	<div></div> WB, Outer Bench From West, CH 4035- 4045 = 10m									
A9670	WB, Outer Bench From West, CH 4045- 4055 = 10m	7d/wk-1a	15d	11-Nov-14 08	25-Nov-14 18	163d	<div></div> WB, Outer Bench From West, CH 4045- 4055 = 10m									
A9675	WB, Outer Bench From West, CH 4055- 4065 = 10m	7d/wk-1a	15d	26-Nov-14 08	10-Dec-14 18	163d	<div></div> WB, Outer Bench From West, CH 4055- 4065 = 10m									
A9700	WB, Outer Bench From West, CH 4065- 4075 = 10m	7d/wk-1a	15d	11-Dec-14 08	26-Dec-14 18	163d	<div></div> WB, Outer Bench From West, CH 4065- 4075 = 10m									
A9701	WB, Outer Bench From West, CH 4075- 4082.5 = 7.5m	7d/wk-1a	15d	27-Dec-14 08	11-Jan-15 18	163d	<div></div> WB, Outer Bench From West, CH 4075- 4082.5 = 7.5m									
From East (TS4)																
Outer Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)																
A9730	WB, Outer Heading From East, CH 4105- 4092.5 = 12.5m @2d/m	7d/wk-1a	25d	30-Aug-14 08 A	30-Sep-14 18	168d	<div></div> WB, Outer Heading From East, CH 4105- 4092.5 = 12.5m @2d/m									
Outer Bench Excavation (1.5d-2d/m, 20m separation with heading)																
A9740	WB, Outer Bench From East, CH 4136- 4135 = 1m	7d/wk-1a	2d	12-Oct-14 08	13-Oct-14 18	168d	<div></div> WB, Outer Bench From East, CH 4136- 4135 = 1m									
A9770	WB, Outer Bench From East, CH 4135- 4125 = 10m	7d/wk-1a	15d	14-Oct-14 08	28-Oct-14 18	168d	<div></div> WB, Outer Bench From East, CH 4135- 4125 = 10m									
A9745	WB, Outer Bench From East, CH 4125- 4115 = 10m	7d/wk-1a	15d	28-Oct-14 08	11-Nov-14 18	168d	<div></div> WB, Outer Bench From East, CH 4125- 4115 = 10m									
A9750	WB, Outer Bench From East, CH 4115- 4105 = 10m	7d/wk-1a	15d	11-Nov-14 08	25-Nov-14 18	168d	<div></div> WB, Outer Bench From East, CH 4115- 4105 = 10m									
A9755	WB, Outer Bench From East, CH 4105- 4095 = 10m	7d/wk-1a	15d	26-Nov-14 08	10-Dec-14 18	168d	<div></div> WB, Outer Bench From East, CH 4105- 4095 = 10m									
A9760	WB, Outer Bench From East, CH 4095- 4082.5 = 12.5m	7d/wk-1a	25d	11-Dec-14 08	06-Jan-15 18	168d	<div></div> WB, Outer Bench From East, CH 4095- 4082.5 = 12.5m									
WB (Inner Tunnel Excavation + Lining)																
From West (TPCWAE)																
Inner Heading Excavation (2-3d/m, 24h/day work shift, 7d/week, no work on statutory holiday)																
A9130	WB,Inner Heading From West, CH 3993- 4005 = 12m @3d/m	7d/wk-1a	50d	29-Sep-14 08	18-Nov-14 18	0d	<div></div> WB,Inner Heading From West, CH 3993- 4005 = 12m @3d/m									
A9135	WB,Inner Heading From West,CH 4005- 4015 = 10m @2d/m	7d/wk-1a	20d	19-Nov-14 08	08-Dec-14 18	0d	<div></div> WB,Inner Heading From West,CH 4005- 4015 = 10m @2d/m									
A9140	WB,Inner Heading From West, CH 4015- 4025 = 10m @2d/m	7d/wk-1a	20d	09-Dec-14 08	29-Dec-14 18	0d	<div></div> WB,Inner Heading From West, CH 4015- 4025 = 10m @2d/m									

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

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中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2016										
							Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	
A9100	WB,Inner Heading From West, CH 4025- 4035 = 10m @2d/m	7d/wk-1a	20d	30-Dec-14 08	19-Jan-15 18	0d			WB,Inner Heading From West, CH 4025- 4035 = 10m @2d/m								
A9105	WB,Inner Heading From West, CH 4035- 4045 = 10m @2d/m	7d/wk-1a	20d	20-Jan-15 08	08-Feb-15 18	0d			WB,Inner Heading From West, CH 4035- 4045 = 10m @2d/m								
A9110	WB,Inner Heading From West, CH 4045- 4055 = 10m @2d/m	7d/wk-1a	20d	09-Feb-15 08	03-Mar-15 18	0d			WB,Inner Heading From West, CH 4045- 4055 = 10m @2d/m								
A9115	WB,Inner Heading From West, CH 4055- 4065 = 10m @ 2d/m	7d/wk-1a	20d	04-Mar-15 08	23-Mar-15 18	0d			WB,Inner Heading From West, CH 4055- 4065 = 10m @ 2d/m								
A9120	WB,Inner Heading From West, CH 4065- 4075 = 10m, @ 2d/m	7d/wk-1a	20d	24-Mar-15 08	13-Apr-15 18	0d			WB,Inner Heading From West, CH 4065- 4075 = 10m, @ 2d/m								
A9125	WB,Inner Heading From West, CH 4075- 4085 = 10m @ 2d/m	7d/wk-1a	20d	14-Apr-15 08	04-May-15 18	0d			WB,Inner Heading From West, CH 4075- 4085 = 10m @ 2d/m								
Inner Bench Excavation (1.5d-2d/m, 20m separation with heading)																	
A9180	WB,Inner Bench From West, CH 3993- 4005 = 12m	7d/wk-1a	18d	30-Dec-14 08	17-Jan-15 18	27d			WB,Inner Bench From West, CH 3993- 4005 = 12m								
A9205	WB,Inner Bench From West, CH 4005- 4015 = 10m	7d/wk-1a	15d	20-Jan-15 08	03-Feb-15 18	25d			WB,Inner Bench From West, CH 4005- 4015 = 10m								
A9190	WB,Inner Bench From West, CH 4015- 4025 = 10m	7d/wk-1a	15d	09-Feb-15 08	26-Feb-15 18	20d			WB,Inner Bench From West, CH 4015- 4025 = 10m								
A9185	WB,Inner Bench From West, CH 4025- 4035 = 10m	7d/wk-1a	15d	04-Mar-15 08	18-Mar-15 18	15d			WB,Inner Bench From West, CH 4025- 4035 = 10m								
A9155	WB,Inner Bench From West, CH 4035- 4045 = 10m	7d/wk-1a	15d	24-Mar-15 08	08-Apr-15 18	10d			WB,Inner Bench From West, CH 4035- 4045 = 10m								
A9160	WB,Inner Bench From West, CH 4045- 4055 = 10m	7d/wk-1a	15d	14-Apr-15 08	28-Apr-15 18	5d			WB,Inner Bench From West, CH 4045- 4055 = 10m								
A9165	WB,Inner Bench From West, CH 4055- 4065 = 10m	7d/wk-1a	15d	05-May-15 08	19-May-15 18	0d			WB,Inner Bench From West, CH 4055- 4065 = 10m								
A9170	WB,Inner Bench From West, CH 4065- 4075 = 10m	7d/wk-1a	15d	20-May-15 08	03-Jun-15 18	0d			WB,Inner Bench From West, CH 4065- 4075 = 10m								
A9175	WB,Inner Bench From West, CH 4075- 4085 = 10m	7d/wk-1a	15d	04-Jun-15 08	18-Jun-15 18	0d			WB,Inner Bench From West, CH 4075- 4085 = 10m								
From East (TS4)																	
Inner Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)																	
A9210	WB,Inner Heading From East, CH 4135- 4125 = 10m @2d/m	7d/wk-1a	20d	14-Jan-15 08	02-Feb-15 18	6d			WB,Inner Heading From East, CH 4135- 4125 = 10m @2d/m								
A9215	WB,Inner Heading From East, CH 4125- 4115 = 10m @2d/m	7d/wk-1a	20d	03-Feb-15 08	25-Feb-15 18	6d			WB,Inner Heading From East, CH 4125- 4115 = 10m @2d/m								
A9230	WB,Inner Heading From East, CH 4115- 4105 = 10m @2d/m	7d/wk-1a	20d	26-Feb-15 08	17-Mar-15 18	6d			WB,Inner Heading From East, CH 4115- 4105 = 10m @2d/m								
A9232	WB,Inner Heading From East, CH 4105- 4095 = 10m @2d/m	7d/wk-1a	20d	18-Mar-15 08	07-Apr-15 18	6d			WB,Inner Heading From East, CH 4105- 4095 = 10m @2d/m								
A9225	WB,Inner Heading From East, CH 4095- 4085 = 10m @2d/m	7d/wk-1a	20d	08-Apr-15 08	27-Apr-15 18	6d			WB,Inner Heading From East, CH 4095- 4085 = 10m @2d/m								
Inner Bench Excavation (1.5d-2d/m, 20m separation with heading)																	
A9235	WB,Inner Bench From East, CH 4135- 4125 = 10m	7d/wk-1a	15d	18-Mar-15 08	01-Apr-15 18	16d			WB,Inner Bench From East, CH 4135- 4125 = 10m								
A9240	WB,Inner Bench From East, CH 4125- 4115 = 10m	7d/wk-1a	15d	08-Apr-15 08	22-Apr-15 18	11d			WB,Inner Bench From East, CH 4125- 4115 = 10m								
A9245	WB,Inner Bench From East, CH 4115- 4105 = 10m	7d/wk-1a	15d	28-Apr-15 08	13-May-15 18	6d			WB,Inner Bench From East, CH 4115- 4105 = 10m								
A9247	WB,Inner Bench From East, CH 4105- 4095 = 10m	7d/wk-1a	15d	14-May-15 08	28-May-15 18	6d			WB,Inner Bench From East, CH 4105- 4095 = 10m								
A9250	WB,Inner Bench From East, CH 4095- 4085 = 10m	7d/wk-1a	15d	29-May-15 08	12-Jun-15 18	6d			WB,Inner Bench From East, CH 4095- 4085 = 10m								

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

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中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.



Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float									
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Tunnel Lining Works															
From West Base Slab (10m/bay, 10m separation with benching excavation)															
A9295	WB From West, Base Slab CH 3990 - 3995 = 5m bay	7d/wk-1a	10d	18-Jan-15 08	27-Jan-15 18	37d	■ WB From West, Base Slab CH 3990 - 3995 = 5m bay								
A9320	WB From West, Base Slab CH 3995 - 4005 = 10m/bay	7d/wk-1a	10d	04-Feb-15 08	13-Feb-15 18	30d	■ WB From West, Base Slab CH 3995 - 4005 = 10m/bay								
A9255	WB From West, Base Slab CH 4005 - 4015 = 10m/bay	7d/wk-1a	10d	27-Feb-15 08	08-Mar-15 18	50d	■ WB From West, Base Slab CH 4005 - 4015 = 10m/bay								
A9260	WB From West, Base Slab CH 4015 - 4025 = 10m/bay	7d/wk-1a	10d	19-Mar-15 08	28-Mar-15 18	40d	■ WB From West, Base Slab CH 4015 - 4025 = 10m/bay								
A9265	WB From West, Base Slab CH 4025 - 4035 = 10m/bay	7d/wk-1a	10d	09-Apr-15 08	18-Apr-15 18	30d	■ WB From West, Base Slab CH 4025 - 4035 = 10m/bay								
A9300	WB From West, Base Slab CH 4035 - 4045 = 10m/bay	7d/wk-1a	10d	29-Apr-15 08	09-May-15 18	20d	■ WB From West, Base Slab CH 4035 - 4045 = 10m/bay								
A9325	WB From West, Base Slab CH 4045 - 4055 = 10m/bay	7d/wk-1a	10d	20-May-15 08	29-May-15 18	10d	■ WB From West, Base Slab CH 4045 - 4055 = 10m/bay								
A9305	WB From West, Base Slab CH 4055 - 4065 = 10m/bay	7d/wk-1a	10d	04-Jun-15 08	13-Jun-15 18	5d	■ WB From West, Base Slab CH 4055 - 4065 = 10m/bay								
A9310	WB From West, Base Slab CH 4065 - 4075 = 10m/bay	7d/wk-1a	10d	19-Jun-15 08	29-Jun-15 18	0d	■ WB From West, Base Slab CH 4065 - 4075 = 10m/bay								
A9315	WB From West, Base Slab CH 4075 - 4080 = 5m	7d/wk-1a	10d	30-Jun-15 08	10-Jul-15 18	0d	■ WB From West, Base Slab CH 4075 - 4080 = 5m								
From East Base Slab (10m/bay, 10m separation with benching excavation)															
A9960	WB From East, Base Slab CH 4135 - 4125 = 10m/bay	7d/wk-1a	10d	23-Apr-15 08	03-May-15 18	26d	■ WB From East, Base Slab CH 4135 - 4125 = 10m/bay								
A9955	WB From East, Base Slab CH 4125 - 4115 = 10m/bay	7d/wk-1a	10d	14-May-15 08	23-May-15 18	16d	■ WB From East, Base Slab CH 4125 - 4115 = 10m/bay								
A9950	WB From East, Base Slab CH 4115 - 4105 = 10m/bay	7d/wk-1a	10d	29-May-15 08	07-Jun-15 18	11d	■ WB From East, Base Slab CH 4115 - 4105 = 10m/bay								
A9945	WB From East, Base Slab CH 4105 - 4095 = 10m/bay	7d/wk-1a	10d	13-Jun-15 08	23-Jun-15 18	6d	■ WB From East, Base Slab CH 4105 - 4095 = 10m/bay								
A9940	WB From East, Base Slab CH 4095 - 4085 = 10m/bay	7d/wk-1a	10d	24-Jun-15 08	04-Jul-15 18	6d	■ WB From East, Base Slab CH 4095 - 4085 = 10m/bay								
A9941	WB From East, Base Slab CH 4085 - 4080 = 5m	7d/wk-1a	10d	05-Jul-15 08	14-Jul-15 18	6d	■ WB From East, Base Slab CH 4085 - 4080 = 5m								
Lining (5m/bay, 10m separation with base slab)															
A9430	WB From West, Lining CH 3990 - 3995 = 1bay	7d/wk-1a	7d	14-Feb-15 08	23-Feb-15 18	30d	■ WB From West, Lining CH 3990 - 3995 = 1bay								
A9470	WB From West, Lining CH 3995 - 4000 = 1bay	7d/wk-1a	7d	24-Feb-15 08	02-Mar-15 18	30d	■ WB From West, Lining CH 3995 - 4000 = 1bay								
A9435	WB From West, Lining CH 4000 - 4005 = 1bay	7d/wk-1a	7d	03-Mar-15 08	09-Mar-15 18	30d	■ WB From West, Lining CH 4000 - 4005 = 1bay								
A9360	WB From West, Lining CH 4005 - 4010 = 1bay	7d/wk-1a	7d	10-Mar-15 08	16-Mar-15 18	30d	■ WB From West, Lining CH 4005 - 4010 = 1bay								
A9365	WB From West, Lining CH 4010 - 4015 = 1bay	7d/wk-1a	7d	17-Mar-15 08	23-Mar-15 18	30d	■ WB From West, Lining CH 4010 - 4015 = 1bay								
A9370	WB From West, Lining CH 4015 - 4020 = 1bay	7d/wk-1a	7d	24-Mar-15 08	30-Mar-15 18	30d	■ WB From West, Lining CH 4015 - 4020 = 1bay								
A9375	WB From West, Lining CH 4020 - 4025 = 1bay	7d/wk-1a	7d	31-Mar-15 08	07-Apr-15 18	30d	■ WB From West, Lining CH 4020 - 4025 = 1bay								
A9380	WB From West, Lining CH 4025 - 4030 = 1bay	7d/wk-1a	7d	08-Apr-15 08	14-Apr-15 18	30d	■ WB From West, Lining CH 4025 - 4030 = 1bay								
A9385	WB From West, Lining CH 4030 - 4035 = 1bay	7d/wk-1a	7d	15-Apr-15 08	21-Apr-15 18	30d	■ WB From West, Lining CH 4030 - 4035 = 1bay								

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

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CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD



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							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
A9390	WB From West, Lining CH 4035 - 4040 = 1bay	7d/wk-1a	7d	22-Apr-15 08	28-Apr-15 18	30d				■ WB From West, Lining CH 4035 - 4040 = 1bay								
A9330	WB From West, Lining CH 4040 - 4045 = 1bay	7d/wk-1a	7d	29-Apr-15 08	06-May-15 18	30d				■ WB From West, Lining CH 4040 - 4045 = 1bay								
A9335	WB From West, Lining CH 4045 - 4050 = 1bay	7d/wk-1a	7d	07-May-15 08	13-May-15 18	30d				■ WB From West, Lining CH 4045 - 4050 = 1bay								
A9340	WB From West, Lining CH 4050 - 4055 = 1bay	7d/wk-1a	7d	14-May-15 08	20-May-15 18	30d				■ WB From West, Lining CH 4050 - 4055 = 1bay								
A9345	WB From West, Lining CH 4055 - 4060 = 1bay	7d/wk-1a	7d	21-May-15 08	27-May-15 18	30d				■ WB From West, Lining CH 4055 - 4060 = 1bay								
A9350	WB From West, Lining CH 4060 - 4065 = 1bay	7d/wk-1a	7d	28-May-15 08	03-Jun-15 18	30d				■ WB From West, Lining CH 4060 - 4065 = 1bay								
A9355	WB From West, Lining CH 4065 - 4070 = 1bay	7d/wk-1a	5d	04-Jun-15 08	08-Jun-15 18	30d				■ WB From West, Lining CH 4065 - 4070 = 1bay								
A9415	WB From West, Lining CH 4070 - 4075 = 1bay	7d/wk-1a	5d	11-Jul-15 08	15-Jul-15 18	0d				■ WB From West, Lining CH 4070 - 4075 = 1bay								
A9475	WB From West, Lining CH 4075 - 4080 = 1bay	7d/wk-1a	5d	16-Jul-15 08	20-Jul-15 18	0d				■ WB From West, Lining CH 4075 - 4080 = 1bay								
A9440	WB From West, Lining CH 4080 - 4085 = 1bay	7d/wk-1a	5d	21-Jul-15 08	25-Jul-15 18	0d				■ WB From West, Lining CH 4080 - 4085 = 1bay								
A9445	WB From West, Lining CH 4085 - 4090 = 1bay	7d/wk-1a	5d	26-Jul-15 08	30-Jul-15 18	0d				■ WB From West, Lining CH 4085 - 4090 = 1bay								
A9450	WB From West, Lining CH 4090 - 4095 = 1bay	7d/wk-1a	5d	31-Jul-15 08	04-Aug-15 18	0d				■ WB From West, Lining CH 4090 - 4095 = 1bay								
A9455	WB From West, Lining CH 4095 - 4100 = 1bay	7d/wk-1a	5d	05-Aug-15 08	09-Aug-15 18	0d				■ WB From West, Lining CH 4095 - 4100 = 1bay								
A9420	WB From West, Lining CH 4100 - 4105 = 1bay	7d/wk-1a	5d	10-Aug-15 08	14-Aug-15 18	0d				■ WB From West, Lining CH 4100 - 4105 = 1bay								
A9425	WB From West, Lining CH 4105 - 4110 = 1bay	7d/wk-1a	5d	15-Aug-15 08	19-Aug-15 18	0d				■ WB From West, Lining CH 4105 - 4110 = 1bay								
A9460	WB From West, Lining CH 4110 - 4115 = 1bay	7d/wk-1a	5d	20-Aug-15 08	24-Aug-15 18	0d				■ WB From West, Lining CH 4110 - 4115 = 1bay								
A9465	WB From West, Lining CH 4115 - 4120 = 1bay	7d/wk-1a	5d	25-Aug-15 08	29-Aug-15 18	0d				■ WB From West, Lining CH 4115 - 4120 = 1bay								
A9395	WB From West, Lining CH 4120 - 4125 = 1bay	7d/wk-1a	5d	30-Aug-15 08	03-Sep-15 18	0d				■ WB From West, Lining CH 4120 - 4125 = 1bay								
A9400	WB From West, Lining CH 4125 - 4130 = 1bay	7d/wk-1a	5d	04-Sep-15 08	08-Sep-15 18	0d				■ WB From West, Lining CH 4125 - 4130 = 1bay								
A9405	WB From West, Lining CH 4130 - 4135 = 1bay	7d/wk-1a	5d	09-Sep-15 08	13-Sep-15 18	0d				■ WB From West, Lining CH 4130 - 4135 = 1bay								
A9410	WB From West, Lining CH 4135 - 4136.5 = 1bay	7d/wk-1a	5d	14-Sep-15 08	18-Sep-15 18	0d				■ WB From West, Lining CH 4135 - 4136.5 = 1bay								
OHVD(10m/bay) / Utility Trough																		
A9480	WB From West OHVD and utility trough =, 153= 16 bays @ 10m/bay @ 7d/bay	7d/wk-1a	115d	08-Jul-15 08	02-Nov-15 18	0d				■ WB From West OHVD and utility trough =, 153= 16 bays @ 10m/bay @ 7d/bay								
Completion of KD10- Section 5																		
A8445	KD10- Section 2: Completion of Mined Tunnel Works (orig. Target KD10- 2 Nov 2015)	7d/wk-2	0d		02-Nov-15 18*	0d												
Interface works with other Contracts																		
S5_60115	Handover TZ6 to MTR	7d/wk-2	0d		30-Sep-14 18	-249d	◆ Handover TZ6 to MTR											
S6_5283	Handover TZ4 to CWB(T2)	7d/wk-2	0d		10-Nov-14 18	-290d	◆ Handover TZ4 to CWB(T2)											
S6_5275	Provide access to CWB (CC) Contractor- TS1 & TS2	7d/wk-2	0d		21-Nov-14 18*	-85d	◆ Provide access to CWB (CC) Contractor- TS1 & TS2											
16 of 18							Prepared by William Caluza											
China State Construction Engineering (Hong Kong) Ltd							Date	Revision	Checked	Approved								
Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)							26-Sep...	1st submission										
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Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015				2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2
SB_5280	Provide access to CWB (CC) Contractor- TS4, TPCWA, Mined Tunnel	7d/wk-2	0d		31-Mar-16 18*	-124d							◆ Provide access to CWB (CC) C
Stage and Section Completion													
KD_5735	KD8 - Completion of Section 3, (1326d)	7d/wk-2	0d		30-Sep-14 18*	-86d	◆ KD8 - Completion of Section 3, (1326d)						
KD_5720	KD5 - Achievement of Stage 5, (1152d)	7d/wk-2	0d		16-Oct-14 18*	-323d	◆ KD5 - Achievement of Stage 5, (1152d)						
KD_5760	KD13 - Completion of Section 7B, (1152d)	7d/wk-2	0d		17-Nov-14 18*	-353d	◆ KD13 - Completion of Section 7B, (1152d)						
KD_5730	KD7 - Completion of Section 2, (1152d)	7d/wk-2	0d		17-Nov-14 18*	-297d	◆ KD7 - Completion of Section 2, (1152d)						
KD_5740	KD9 - Completion of Section 4, (1739d)	7d/wk-2	0d		10-Nov-15 18*	-132d					◆ KD9 - Completion of Section 4, (1739d)		
KD_5745	KD10 - Completion of Section 5, (1863d)	7d/wk-2	0d		25-Mar-16 18	-144d					◆ KD10 - Completion of Section 5,		
KD_5750	KD11 - Completion of Section 6, (1949d)	7d/wk-2	0d		23-May-16 18*	-121d					◆ KD11 - Completion of		
Portion Handover Date													
CD_5685	Portion Handover - Portion IV(4), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion IV(4), KD8 +28						
CD_5680	Portion Handover - Portion V (5), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion V (5), KD8 +28						
CD_5695	Portion Handover - Portion VI (6), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion VI (6), KD8 +28						
CD_5735	Portion Handover - Portion XIII B (13B), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion XIII B (13B), KD8 +28						
CD_5790	Portion Handover - Portion XXII (22), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion XXII (22), KD8 +28						
CD_5670	Portion Handover - Portion III (3), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion III (3), KD8 +28						
CD_5720	Portion Handover - Portion XIII A (13A), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XIII A (13A), KD7 +28						
CD_5705	Portion Handover - Portion VIII (8), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion VIII (8), KD7 +28						
CD_5730	Portion Handover - Portion XIVA (14A), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XIVA (14A), KD7 +28						
CD_5740	Portion Handover - Portion XV (15), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XV (15), KD7 +28						
CD_5805	Portion Handover - Portion XXIII (23), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XXIII (23), KD7 +28						
CD_5775	Portion Handover - Portion XVIII (18), KD10 +28	7d/wk-2	0d		30-Nov-15 18*	0d					◆ Portion Handover - Portion XVIII (18), KD10 +28		
CD_5710	Portion Handover - Portion XI (11), KD9 +28	7d/wk-2	0d		27-Dec-15 18*	0d					◆ Portion Handover - Portion XI (11), KD9 +28		
CD_5700	Portion Handover - Portion IX (9), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d					◆ Portion Handover - Portion		
CD_5745	Portion Handover - Portion XIV B (14B), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d					◆ Portion Handover - Portion		
CD_5755	Portion Handover - Portion XVI (16), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d					◆ Portion Handover - Portion		
CD_5750	Portion Handover - Portion XVII (17), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d					◆ Portion Handover - Portion		
CD_5760	Portion Handover - Portion XIX (19), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d					◆ Portion Handover - Portion		
CD_5780	Portion Handover - Portion XXB (20B), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d					◆ Portion Handover - Portion		

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

◆

◆ Milestone

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China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

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Prepared by William Caluza

Date	Revision	Checked	Approved
26-Sep...	1st submission		

中國建築工程(香港)有限公司  
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015					2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
CD_5690	Portion Handover - Portion VII (7), KD11 +28	7d/wk-2	0d		20-Jun-16 18	0d								◆ Portion Handov
CD_5725	Portion Handover - Portion XII (12), KD11 +28	7d/wk-2	0d		20-Jun-16 18	0d								◆ Portion Handov
CD_5715	Portion Handover - Portion X (10), KD11 +28	7d/wk-2	0d		20-Jun-16 18	0d								◆ Portion Handov
CD_5785	Portion Handover - Portion XXA (20A), KD11 +28	7d/wk-2	0d		20-Jun-16 18	0d								◆ Portion Handov
CD_5795	Portion Handover - Portion XXI (21), KD11 +28	7d/wk-2	0d		20-Jun-16 18	0d								◆ Portion Handov

 Summary Bar  
 Actual Level of Effort  
 Actual Work  
 Remaining Work  
 Critical Remaining Work  
 Milestone

18 of 18

China State Construction Engineering (Hong Kong) Ltd

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel ( Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME REV. M

Prepared by William Caluza

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中國建築工程(香港)有限公司  
 CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

<div><div><div><div></div></div><div><div></div></div></div><div><div>利達</div><div>LEADER</div></div><div>中國建築-利達聯營</div><div>CHINA STATE - LEADER JOINT VENTURE</div></div> <div>CEDD Contract No. HK/2012/08 Wan Chai Development Phase II Central - Wan Chai Bypass at Wan Chai West</div> <div>Page : 1 / 6</div>																								
Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish																				
HK/2012/08 Revised Works Programme Rev.4_1(Final)																								
Dredging and Reclamation																								
Marine Work Construction																								
Zone CRIII																								
Dredging - Zone CRIII																								
CRIII - Temporary Pipe Pile Wave Wall (1st Stage)																								
MAR12360	CRIII - temp pipe pile wall (34-197) - install 610 dia. pipe pile [Remaining 28 nos. @750c/c]	42	18-Oct-14 A	18-Aug-15																				
CRIII - Temporary Pipe Pile Wave Wall (2nd Stage)																								
MAR10035	CRIII - temp pipe pile wall (1-33) - relocate interim landing steps	0		06-Jul-15*																				
MAR10040	CRIII - temp pipe pile wall (1-33) - install 610 dia. pipe pile [33nos. @750c/c]	40	07-Jul-15	21-Aug-15																				
Dredging at Zone CRIII																								
2nd Stage of Work (Types 1B(4) & 2D)																								
MAR16095	Zone CRIII - 2nd stage - Remove existing rock armour [B5-E5] after relocating interim landing steps	10	30-Aug-15	08-Sep-15																				
Zone A2																								
Seawall Construction - Zone A2																								
MAR10775	Zone A2 - seawall - Type 4, 13 - lay toe block and leveling stone in line with backfilling in zone A2(2)	18	30-Jun-15	17-Jul-15																				
MAR10780	Zone A2 - seawall - install block seawall Type 4 to -1.5mPD	14	18-Jul-15	31-Jul-15																				
MAR10800	Zone A2 - seawall - install block seawall Type 13 to -1.5mPD	14	18-Jul-15	31-Jul-15																				
MAR10805	Zone A2 - seawall - install block seawall Type 4 from -1.5 to +4.0mPD	10	01-Aug-15	12-Aug-15																				
MAR10807	Zone A2 - seawall - install block seawall Type 13 from -1.5 to +4.0mPD	10	01-Aug-15	12-Aug-15																				
MAR10815	Zone A2 - seawall - place type A behind seawall Type 4 and Type 13 up to -1.5 mPD	7	13-Aug-15	20-Aug-15																				
MAR10817	Zone A2 - seawall - lay geotextile and filter behind seawall Type 4 and Type 13 up to -1.5 mPD	7	21-Aug-15	28-Aug-15																				
Filling - Zone A2																								
MAR20365	Zone A2(2) - Public Fill -4.0 to +4.0mPD (behind Type 4 & 13 for temp channel outlet)	28	01-Aug-15	28-Aug-15																				
Zone C																								
Dredging - Zone C																								
MAR11520	Zone C - Cut existing pipe pile (2 nos.)	30	28-Jul-15	31-Aug-15																				
Zone D																								
Seawall Construction - Zone D																								
Seawall 2C-L																								
MAR12264	Zone D - Pipe Pile & demolish existing seawall	35	01-Feb-15 A	10-Aug-15																				
MAR12265	Zone D - complete fabrication of Caisson Seawall 2C-L and ready for delivery	0		30-Jul-15*																				
MAR12270	Zone D - fill rock mound for Seawall 2C-L	6	11-Aug-15	16-Aug-15																				
MAR12275	Zone D - lay toe block and level stone for Seawall 2C-L	8	17-Aug-15	25-Aug-15																				
MAR12280	Zone D - Install Caisson Seawall 2C-L	3	26-Aug-15	28-Aug-15																				

Data Date: 30-Jun-15	<div><div><div><div></div></div><div><div></div></div></div><div><div>利達</div><div>LEADER</div></div><div>中國建築-利達聯營</div><div>CHINA STATE - LEADER JOINT VENTURE</div></div> <div>CEDD Contract No. HK/2012/08 Wan Chai Development Phase II Central - Wan Chai Bypass at Wan Chai West</div> <div>Page : 1 / 6</div>	<div><div><div><div></div></div><div><div></div></div></div><div><div>利達</div><div>LEADER</div></div><div>中國建築-利達聯營</div><div>CHINA STATE - LEADER JOINT VENTURE</div></div> <div>CEDD Contract No. HK/2012/08 Wan Chai Development Phase II Central - Wan Chai Bypass at Wan Chai West</div> <div>Page : 1 / 6</div>	Works Programme for Non-CRIII Zones (June to August 2015)			
			Date	Revision	Checked	Approved
			03-Jul-15			



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	June 2015				July 2015				August 2015				September 2015				October 2015				November 2015				December 2015				January 2016				February 2016				March 2016				April 2016				May 2016				June 2016				July 2016				August 2016				September 2016			
					01	08	15	22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	29	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19								
Seawall 2C-R																																																																				
MAR12245	Zone D - fill rock mound for Seawall 2C-L	6	28-Aug-15	02-Sep-15																																																																
MAR12250	Zone D - complete fabrication of Caisson Seawall 2C-R and ready for delivery	0		30-Jul-15*																																																																
Works for Section Completion																																																																				
Construction																																																																				
Section II - MVB Structure																																																																				
MVB Substructure - ELS & Structural Works for Portion A																																																																				
MVB Substructure - ELS for Portion A																																																																				
SII11080	Sec II - MVB A - Install Strut L7 at -20mPD	14	02-Jul-15*	17-Jul-15																																																																
SII11100	Sec II - MVB A - Excavation down to -24.45mPD	12	17-Jul-15	30-Jul-15																																																																
MVB Substructure - Structural Works for Portion A																																																																				
SII11120	Sec II - MVB A - Construct B3M slab, column and wall	73	31-Jul-15	27-Oct-15																																																																
MVB Substructure - ELS & Structural Works for Portion B																																																																				
MVB Substructure - ELS for Portion B																																																																				
SII11680	Sec II - MVB B: Excavation down to -18.5mPD	7	02-Jul-15*	09-Jul-15																																																																
SII11700	Sec II - MVB B: Install Strut L7 at -17.5mPD	8	10-Jul-15	18-Jul-15																																																																
SII11720	Sec II - MVB B: Excavation down to -22.5mPD	7	20-Jul-15	27-Jul-15																																																																
SII11740	Sec II - MVB B: Install Strut L8 at -21.5mPD	8	28-Jul-15	05-Aug-15																																																																
SII11760	Sec II - MVB B: Excavation down to -25.45mPD	7	06-Aug-15	13-Aug-15																																																																
MVB Substructure - Structural Works for Portion B																																																																				
SII11780	Sec II - MVB B: Construct B3 slab, column and wall	85	14-Aug-15	24-Nov-15																																																																
MVB Substructure - Piling Works																																																																				
MVB C - Prebored H Piles																																																																				
SII10400	Sec II - MVB C - construct prebored H-piles	35	22-Aug-15	03-Oct-15																																																																
Section II A - CWB Tunnel & Slip Road Structures and Facilities																																																																				
CWB CR111 & A1																																																																				
CWB CR111 & A1 - Pumping Test Preparation/ Pumping Test																																																																				
CWB A1 - Pumping Testing Preparation																																																																				
SIIA11240	Sec II A - CWB A1 - install dewater/ recharge / observation well	17	11-May-15 A	20-Jul-15																																																																
CWB CR111 & A1 - Pumping Test																																																																				
SIIA10780	Sec II A - CWB CR111 - pumping test (CR111, A1)	10	20-Jul-15	30-Jul-15																																																																
CWB CR111 - ELS & Tunnel Structure																																																																				
CWB CR111 - ELS																																																																				
SIIA10820	Sec II A - CWB CR111: Shoring & Excavation	42	18-Apr-15 A	18-Aug-15																																																																
SIIA10960	Sec II A - CWB CR111: Demolish Bulkhead at West End	45	19-Aug-15	12-Oct-15																																																																
CWB CR111 - Tunnel Structure																																																																				
SIIA10840	Sec II A - CWB CR111: Base, wall, OHVD & roof (bay 1)	45	19-Aug-15	12-Oct-15																																																																
SIIA10880	Sec II A - CWB CR111: Base, wall, OHVD & roof (bay 3)	45	19-Aug-15	12-Oct-15																																																																
CWB A1 - ELS & Tunnel Structure																																																																				
CWB A1 - ELS Remaining																																																																				

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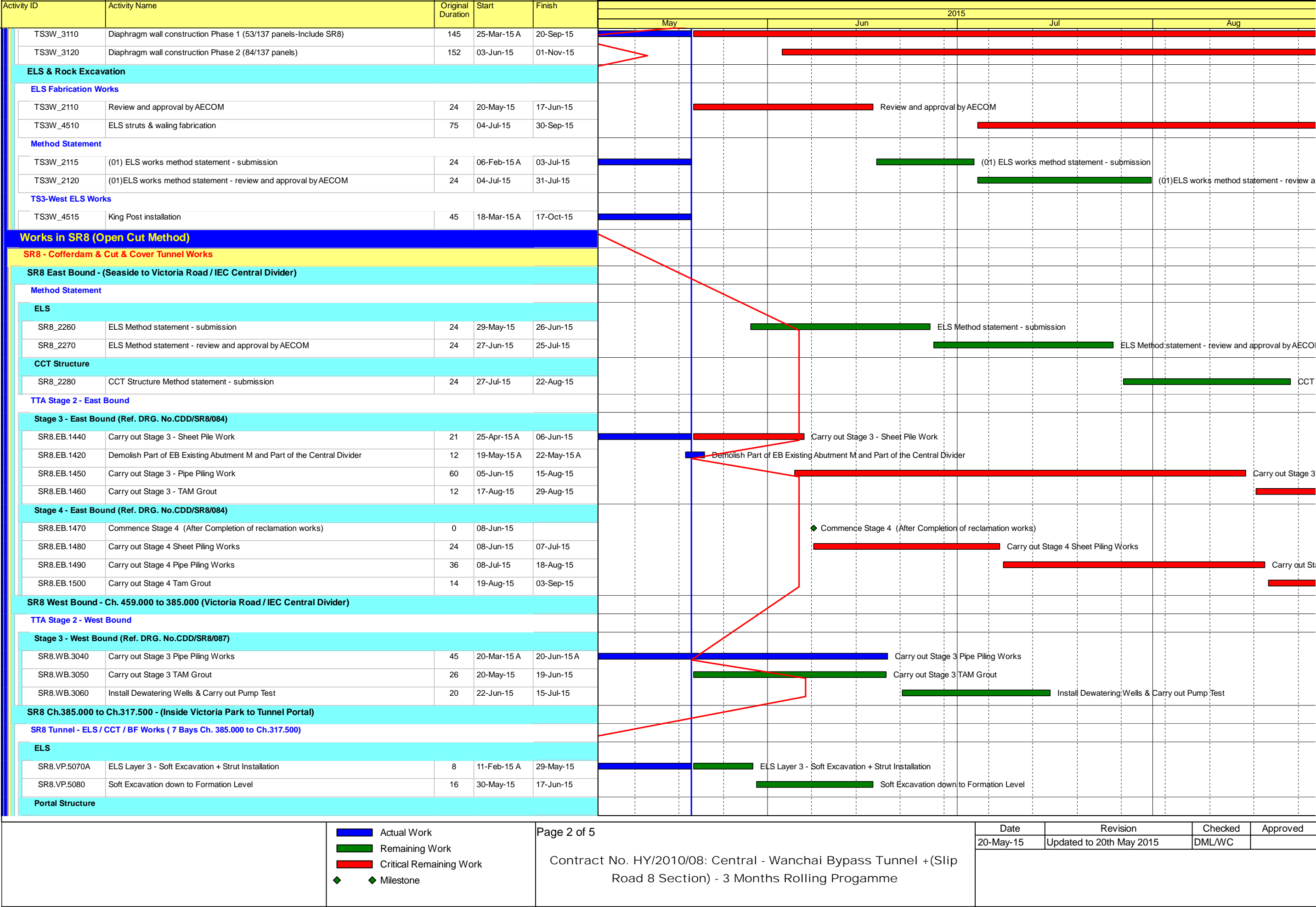


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Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	June 2015							July 2015							August 2015							September 2015							October 2015							November 2015							December 2015							January 2016							February 2016							March 2016							April 2016							May 2016							June 2016							July 2016							August 2016							September 2016						
					01	08	15	22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19																																											
Box Culvert L1 & FRP-L - Bay 8 Temp Work & ELS																																																																																																																				
CUL10200	Culvert L - bay 8 - ELS and bulk excavation & Dwall Break Through ready for Flow Diversion	17	15-Jun-15 A	20-Jul-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 9 to 11																																																																																																																				
Box Culvert L1 & FRP-L - Bay 9 to 11 General																																																																																																																				
CUL11695	Culvert L - [Summary of Cul L bay 9 to 11] - construct in-situ box culverts	17	08-Jun-15 A	20-Jul-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 9																																																																																																																				
CUL11740	Culvert L - bay 9 - construct Wall & Roof	14	18-Jun-15 A	16-Jul-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 10																																																																																																																				
CUL11860	Culvert L - bay 10 - construct Wall & Roof	17	30-Jun-15	20-Jul-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 11																																																																																																																				
CUL11920	Culvert L - bay 11 - construct top slab	12	22-Jun-15 A	14-Jul-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 9-11 Others																																																																																																																				
CUL11930	Culvert L - bay 9-11 - Upstand Wall	18	20-Jun-15 A	27-Jul-15																																																																																																																
CUL11940	Culvert L - bay 9-11 - divert flow to Culvert L permanent structures (bay 9 to bay 11)	0		31-Jul-15																																																																																																																
CUL12020	Culvert L - bay 9-11 - backfill from top slab to final formation level	60	28-Jul-15	07-Oct-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 12 to 13																																																																																																																				
Box Culvert L1 & FRP-L - Bay 12 to 13 Piling																																																																																																																				
CUL12354	Culvert L - bay 12 - construct pre-bored H-pile (PC9)	12	27-Jun-15 A	14-Jul-15																																																																																																																
Box Culvert L1 & FRP-L - Bay 12 to 13 Temp Work & ELS																																																																																																																				
CUL12385	Culvert L - bay 12 - ELS and bulk excavation & Dwall Break Through Ready for Diversion	23	03-Jun-15 A	27-Jul-15																																																																																																																
CUL12405	Culvert L - bay 12 & 13 - extract sheet piles ready for flow diversion (from Bay 4 to Bay 11)	5	27-Jul-15	31-Jul-15																																																																																																																
Section VI C - Area 3, 6, 8A & 8C																																																																																																																				
Area 8A & 8C - Seawall Modification																																																																																																																				
Modification of Seawall																																																																																																																				
Modification of Seawall - Zone 1 & 2																																																																																																																				
PRS10043	Sec VIC - Pipe Pile P32 to P62	35	30-May-15 A	10-Aug-15																																																																																																																
PRS10044	Sec VIC - P33, P33A, P34, P34A, P35, P35A	24	11-Aug-15	07-Sep-15																																																																																																																
Modification of Seawall - Zone 4																																																																																																																				
PRS10160	Sec VIC - Working Platform (Zone 4)	8	11-Aug-15	19-Aug-15																																																																																																																
PRS10180	Sec VIC - Pipe Pile P63 to P68 & P64A (Zone 4)	18	20-Aug-15	09-Sep-15																																																																																																																
Area 6 - Box Culvert bay 5-6																																																																																																																				
SVIC10000	Sec VI C - [Summary] Construct Box Culvert Bay 5-6	53	18-Apr-15 A	31-Aug-15																																																																																																																
Area 3 - Box Culvert bay 4 and Roadwork																																																																																																																				
SVIC10220	Sec VI C - [Summary] Construct Box Culvert Bay 4 in Area 3	53	01-Jan-15 A	31-Aug-15																																																																																																																
Section VI D - Area 8B & 10																																																																																																																				
WDII Box 1 Construction																																																																																																																				
WDII Box 1 Submission and Approval / Material Procurement																																																																																																																				
PCU60410	Sec VI D - WD II Box 1 - Prepare Subcontract for Box 1 structure	60	08-Aug-15	06-Oct-15																																																																																																																
Section VII - Remainder Works																																																																																																																				
Landing Steps Construction																																																																																																																				

Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	June 2015				July 2015				August 2015				September 2015				October 2015				November 2015				December 2015				January 2016				February 2016				March 2016				April 2016				May 2016				June 2016				July 2016				August 2016				September 2016			
					01	08	15	22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15
Demolition of Interim Landing Steps and Construct Permanent Seawall at CRIII	SVII11180	Sec VII - Landing Steps - form temporary access from landing steps to Fleet Acade	5	10-Jun-15 A	06-Jul-15																																																															
	SVII10160	Sec VII - remove interim landing steps - install silt curtain	3	19-Aug-15	21-Aug-15																																																															
	SVII10180	Sec VII - remove interim landing steps - break and remove seawall coping	3	22-Aug-15	25-Aug-15																																																															
	SVII10200	Sec VII - remove interim landing steps - open cut behind interim landing steps	3	26-Aug-15	28-Aug-15																																																															
	SVII10220	Sec VII - remove interim landing steps - protect open cut slope	2	29-Aug-15	31-Aug-15																																																															
Section X - Protection & Preservation of Trees																																																																				
Soft Landscaping Works																																																																				
SX10020	Sec X - Protection & Preservation of Trees	753	31-Jan-13 A	21-Jul-17																																																																

SR8_DWP_06(A)-MU26				SR8 - Layout for 3MRP_2105_05				Appendix C.5																		
Activity ID		Activity Name		Original Duration	Start	Finish	2015																			
							May			Jun			Jul			Aug										
DWP-06 (A) - Update Progress As of 20 May 15																										
Works in TS3																										
Works in TS3-East																										
Diaphragm Wall																										
TS3-East Post D/wall Works																										
TS3E_4100	D/wall Interface coring + grouting	60	20-Feb-15 A	29-May-15	D/wall Interface coring + grouting																					
TS3E_4110	D/wall coring + fissure grouting	60	30-Mar-15 A	24-May-15	D/wall coring + fissure grouting																					
TS3E_4120	D/wall integrity test	60	30-Mar-15 A	20-May-15 A	D/wall integrity test																					
TS3E_4130	Dewatering & observation well installation	36	07-Apr-15 A	20-May-15 A	Dewatering & observation well installation																					
TS3E_4140	Pumping test	7	07-May-15 A	20-May-15 A	Pumping test																					
ELS																										
ELS Fabrication Works																										
TS3E_5510	ELS struts & waling fabrication	72	12-Mar-15 A	23-May-15	ELS struts & waling fabrication																					
TS3-East ELS Works																										
TS3E_5520	ELS Layer 1 - Soft Excav + Strut installation	12	02-May-15 A	29-May-15	ELS Layer 1 - Soft Excav + Strut installation																					
TS3E_5540	ELS Layer 2 - Soft Excav + Strut installation	12	30-May-15	10-Jun-15	ELS Layer 2 - Soft Excav + Strut installation																					
TS3E_5560	ELS Layer 3 - Soft Excav + Strut installation	12	11-Jun-15	22-Jun-15	ELS Layer 3 - Soft Excav + Strut installation																					
TS3E_5580	ELS Layer 4 - Soft Excav + Strut installation	12	23-Jun-15	04-Jul-15	ELS Layer 4 - Soft Excav + Strut installation																					
TS3E_5600	ELS Layer 5 - Soft Excav + Strut installation	12	05-Jul-15	16-Jul-15	ELS Layer 5 - Soft Excav + Strut installation																					
TS3E_5620	ELS Layer 6 - Soft Excav + Strut installation	12	17-Jul-15	28-Jul-15	ELS Layer 6 - Soft Excav + Strut installation																					
TS3E_5660	ELS Layer 7 - Soft Excav + Strut installation	10	29-Jul-15	07-Aug-15	ELS Layer 7 - Soft Excav + Strut installation																					
TS3E_5670	Excavation up to Formation Level (No Rock as Rock Head Level is far below F.L.)	6	08-Aug-15	13-Aug-15	Excavation up to Form																					
Cut & Cover Tunnel Structure																										
Temporary Works Design																										
TS3E_2080	(01) RC Temp Work Design - submission	24	20-May-15 A	01-Jun-15	(01) RC Temp Work Design - submission																					
TS3E_2085	(01) RC Temp Work Design - review and approval by AECOM	24	02-Jun-15	30-Jun-15	(01) RC Temp Work Design - review and approval by AECOM																					
Method Statement																										
TS3E_2090	(01)RC works method statement - submission	24	02-Jul-15	29-Jul-15	(01)RC works method statement - submission																					
TS3E_2095	(01)RC works method statement - review and approval by AECOM	24	30-Jul-15	26-Aug-15																						
TS3-East CCT - Ch.4500.000 to Ch.4582.140																										
TS3 East CCT - Blinding + Waterproofing																										
TS3E_6505	Commence CCT Works	0	14-Aug-15		◆ Commence CCT W																					
Removal of Reclamation																										
Method Statement																										
TS3E_2100	(01) Removal of reclamation method statement - submission	24	14-Aug-15	10-Sep-15																						
Works in TS3-West																										
Diaphragm Wall																										
TS3-West Pre-D/wall Works																										
TS3W_2540	Guidewall construction	106	11-Feb-15 A	15-Jun-15	Guidewall construction																					
TS3W_2530	Curtain grout/soil pre-treatment/slurry wall	137	12-Feb-15 A	16-Jun-15	Curtain grout/soil pre-treatment/slurry wall																					
TS3W_2520A	Pre-drilling / Ground Investigation (SI) - Phase 2	107	09-Apr-15 A	10-Jun-15	Pre-drilling / Ground Investigation (SI) - Phase 2																					
TS3-West Diaphragm Construction																										
				<div>Actual Work</div> <div>Remaining Work</div> <div>Critical Remaining Work</div> <div>◆ Milestone</div>			Page 1 of 5						Contract No. HY/2010/08: Central - Wanchai Bypass Tunnel +(Slip Road 8 Section) - 3 Months Rolling Programme						Date 20-May-15		Revision Updated to 20th May 2015		Checked DML/WC		Approved	





Activity ID	Activity Name	Original Duration	Start	Finish	2015											
					May			Jun			Jul			Aug		
Blinding + Waterproofing																
SR8.VP.5030	Blinding for Bay 1 to Bay 7	7	17-Jun-15	26-Jun-15												
SR8.VP.5090	Waterproofing for Bay 1 to Bay 7	7	27-Jun-15	06-Jul-15												
Base Slab + Drainage																
SR8.VP.5100	Base Slab - Bay 1	8	07-Jul-15	15-Jul-15												
SR8.VP.5110	Base Slab - Bay 2	8	16-Jul-15	24-Jul-15												
SR8.VP.5120	Base Slab - Bay 3	8	25-Jul-15	03-Aug-15												
SR8.VP.5130	Base Slab - Bay 4	8	04-Aug-15	12-Aug-15												
SR8.VP.5140	Base Slab - Bay 5	8	13-Aug-15	21-Aug-15												
Pump Sump E																
SR8.VP.5360	Base Slab	8	07-Jul-15	15-Jul-15												
SR8.VP.5370	Wall Up to Portal Base Slab Bottom	10	16-Jul-15	27-Jul-15												
SR8.VP.5380	Fill Up Void Up to Portal Base Slab Bottom	7	28-Jul-15	04-Aug-15												
SR8 Ch 317.500 to Ch 210.000 - U-Structure & Slab (Victoria Park)																
Excavation and Lateral Support																
SR8_2310	ELS - Excavation to Formation Level + Lateral Support for UBA2 to UBA5	21	12-May-15 A	01-Jun-15												
RC CCT & Backfill Ch317.5000 to Ch240.000																
Structure																
Blinding + Waterproofing																
SR8_1830	Blinding & Waterproofing Bay UBA2 to UBA5	4	02-Jun-15	05-Jun-15												
SR8_1840	Remove Bulk Head at CH317.5	7	18-Jun-15	26-Jun-15												
SR8_1860	Blinding & Waterproofing Bay UBA8	4	27-Jun-15	02-Jul-15												
Base Slab																
SR8_1810	SR8 U-structure Base slab (UBA2 - UBA5)	48	06-Jun-15	03-Aug-15												
SR8_1812	SR8 U-structure Base slab (UBA8)	24	03-Jul-15	30-Jul-15												
SR8_1813	Remove SL3 - (UBA8)	14	31-Jul-15	15-Aug-15												
SR8_1811	Remove SL2 - (UBA2 - UBA5)	28	04-Aug-15	04-Sep-15												
Wall																
SR8_1850B	SR8 U-structure Wall (UBA6-UBA7) - Stage 2	14	23-Feb-15 A	23-Jun-15												
SR8_1850A	Remove SL2, 1 (UBA6-UBA7)	14	20-May-15	05-Jun-15												
SR8_2060	SR8 U-structure Wall (UBA8) - Stage 1	7	17-Aug-15	24-Aug-15												
Tsing Fung St - RW & Subway Extension & Toe Wall at Hing Fat St																
Ret. Wall & TF Subway Extension (Portion V)																
Retaining Wall RW8C at Tsing Fung Street (Portion V)																
VP_1770	Install Steel Railing on Top of RW8C	14	20-May-15	05-Jun-15												
VP_1390	Demolish Top Portion of Existing Wall Head and Kerb	18	05-Jun-15	27-Jun-15												
VP_1400	Road Formation - Subbase + Kerb + U-shape Channel	48	27-Jun-15	24-Aug-15												
Retaining Wall + Toe Wall at Hing Fat Street																
Subway Extension at Tsing Fung Street (Portion VIII)																
West Side																
VP_1365	Excavation and Demolition (West Part) of Subway	14	09-Apr-15 A	23-May-15												
VP_1375.10	TFS Subway extension - Blinding and Waterproofing	8	26-May-15	03-Jun-15												
VP_1375.20	TFS Subway extension - Base slab + Drainage	21	04-Jun-15	29-Jun-15												

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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Date

20-May-15

Revision

Updated to 20th May 2015

Checked

DML/WC

Approved

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	VP_1375.30	TFS Subway extension - Walls		18	30-Jun-15	21-Jul-15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</

Activity ID	Activity Name	Original Duration	Start	Finish	2015											
					May			Jun			Jul			Aug		
VP_1730	BG - Install Irrigation System	24	04-Jun-15	03-Jul-15												
VP_1740	BG - Install Conduit and Lighting System	36	18-Jun-15	31-Jul-15												
VP_1450	BG - Re-provisioning works - Hardscape & Furnitures (Green Turf/ Granite Tiles)	36	15-Jul-15	25-Aug-15												
VP_1745	Test & Commission - Lighting System	16	01-Aug-15	19-Aug-15												
Mooring Components Upkeep (CBTS and ATS)																
MAR_2000	Mooring Upkeep at Portion XIX(19) & XX(20) - ATS (if instructed by Engineer)	1399	21-Mar-13 A	17-Jan-17												
MAR_1000	Mooring Upkeep at Portion III (3) - CBTS	574	15-May-14 A	09-Dec-15												
MAR_3020	Mooring Upkeep at Portion X(10) & XVI(16) - CBTS	979	15-May-14 A	21-Jan-17												
Works for Public Works Regional Laboratory (North Lantau)																
Maintenance and Upkeep of New PWRL (Portion XVII)																
PWRL_1050	Maintenance/ Upkeep of New PWRL	1301	19-Jul-13 A	21-Nov-17												