



CONTRACT NO: HK/2015/01

WANCHAI DEVELOPMENT PHASE II AND CENTRAL
WANCHAI BYPASS
SAMPLING, FIELD MEASUREMENT AND TESTING WORKS
(STAGE 3)

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

- JULY 2016 -

CLIENTS:

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Department

and

Highways Department

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10 August 2016

Ref.: AACWBIECEM00_0_8391L.16.docx

11 August 2016

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/2015/01
Wan Chai Development Phase II - Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 3)**

**Monthly Environmental Monitoring and Audit Report (July 2016)
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 July 2016 received by e-mail on 10 August 2016 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 – **July 2016** 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 of **27th June 2016 to 26th July 2016**. The cut-off date of reporting is at 26th 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
 - Removal of temporary reclamation at TPCWAW
 - Diaphragm wall cutting works at TPCWAW
- 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:
- Precast unit construction for Box 1 inside Dry dock
 - Construction of culvert L Bay 8, Bay 12 and Bay 13
- vii. During this reporting period, the major work activities for Contract no. HY/2010/08.
- Diversion pipe maintenance
 - Diaphragm Wall Removal Works

Noise Monitoring

- viii. With respect to the shift in major construction site portions at Wan Chai North, the noise monitoring station M1a – Harbour Sports Centre was finely adjusted from East of Harbour Road Sports Centre to West of Harbour Road Sports Centre on 21 June 2016.
- ix. **One limit level exceedance was recorded at noise monitoring station M1a – Harbour Road Sports Center on 28 June 2016. The exceedance was concluded as non-project related.**

- x. One limit level exceedance was recorded at noise monitoring station M6 – HK Baptist Church Henrietta Secondary School on 12 July 2016. The exceedance was concluded as non-project related.
- xi. 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.

Air Quality Monitoring

- xii. Due to interruption of electricity supply, the 24hr was rescheduled as follows:
CMA1b monitoring station was rescheduled from 5 July 2016 to 6 July 2016.
CMA2a monitoring station was rescheduled from 16 July 2016 to 18 July 2016.
CMA5b monitoring station was rescheduled from 11 July 2016 to 12 July 2016.
- xiii. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 5 July 2016 and 20 July 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this reporting month.
- xiv. No action or limit level exceedance was recorded in this reporting month.
- xv. 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 in the reporting month.

Water Quality Monitoring

- xvi. Due to the hoisting of Amber Rainstorm Warning Signal, the water quality monitoring event on 6 July 2016 during flood tide was cancelled.
- xvii. As advised by the Contractor of HK/2009/01, all silt screen remains removal works at P1, P3, P4, P5 and C1 water quality monitoring stations were completed on 8 May 2016.
- xviii. With respect to the marine works undertaken at WCR3 by Contract HK/2009/02, the respective water quality monitoring station C1 associated with Contract HK/2009/01 was updated as in association with Contract HK/2009/01 and Contract HK/2009/02.
- xix. With respect to the marine works undertaken at CBTS by Contract HY/2010/08, the respective water quality monitoring station C7 associated with Contract HY/2009/15 was updated as in association with Contract HY/2009/15 and Contract HY/2010/08.
- xx. With respect to the marine works undertaken at HKCEC2 by Contract HK/2012/08, the respective water quality monitoring station WSD19, P1, P3, P4, and P5 were associated with Contract HK/2012/08.

Table I Summary of Water Quality Monitoring Exceedances in Reporting Month

Contract no.	Water quality 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

Contract no.	Water quality monitoring Station	Mid-flood						Mid-ebb						
		DO		Turbidity		SS		DO		Turbidity		SS		
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	
	P3	0	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	0
	P5	0	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	0
HY/2009/15 & HY/2010/08	C7	0	0	0	0	0	0	0	0	1	1	0	0	0
Total		0	0	0	0	0	0	0	0	1	1	0	0	0

- Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011 and the water quality monitoring at C6 was then terminated since 17 May 2011.
- 4-week post construction water quality monitoring at WSD9, WSD10, WSD15 and WSD17 were completed on 6 Feb 2012 and the water quality monitoring at WSD 10 and WSD15 were temporarily suspended since 8 Feb 2012, and WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 2012 onwards.
 - C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
 - C8 & C9 were temporarily suspended since 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 22 Apr 2013
 - P1, P3, P4 and P5 were commenced since 24 Apr 2013
 - C5e and C5w water quality monitoring station was temporarily suspended since 29 Jul 2013.
 - WSD21 water quality monitoring station was temporarily suspended since 12 Mar 2014
 - WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 Sep 2014 flood tide.
 - The water quality monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

- xxi. There were 1 action and 1 limit level of turbidity exceedances recorded in the reporting month.
- xxii. Investigation found that the turbidity exceedances recorded in this reporting month were not related to Project works. The details of the recorded exceedance can be referred to the **Section 6.4**.
- xxiii. Enhanced DO monitoring at 3 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 quality monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15 & HY/2010/08	C6	0	0	0	0
HY/2009/15	Ex-WPCWA SW	0	1	0	1
	Ex-WPCWA SE	0	0	1	0



Contract no.	Water quality monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
Total		0	1	1	1

Remarks:

- Enhanced DO monitoring at Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the formation of temporary reclamation zone TS3 and to be resumed upon removal of the respective temporary reclamation zone.
- Enhanced DO monitoring at Monitoring station at Ex-PCWAE was temporarily suspended from 31 August 2015 with respect to seawall reinstatement works and formation of active works area, to be resumed upon completion of seawall reinstatement works

- xxiv. There was 1 action level and 2 limit level exceedances recorded for enhanced dissolved oxygen monitoring in this reporting month. Investigation found that the exceedance was not related to Project works. The details of the recorded exceedances can be referred to the **Section 6.4**.

Complaints, Notifications of Summons and Successful Prosecutions

- xxv. There was one environmental complaint received in this reporting month.
- xxvi. A public complaint referred by EPD was received by ET on 06 July 2016 (Case Ref.: H05/RS/00016226-16). The complainant reported that a derrick barge in green colour under Contract HY/2009/15 moored near Royal Hong Kong Yacht Club emitted dark smoke since mid of June 2016.
- xxvii. ET confirmed with the Resident Site Staff that the concerned green derrick barge was identified as Yue Fat 206 (YF206) and the concerned green derrick barge was operated within the Ex-PCWA area for excavation works intermittently across the period from 15 June 2016 to 30 June 2016. The concerned green derrick barge YF206 within Ex-PCWA area was no longer deployed under Contract HY/2009/15 after 02 July 2016.
- xxviii. Follow-up inspection was conducted on 11 July 2016, the concerned derrick barge YF206 was not deployed at the concerned location and no dark smoke was observed from other derrick barge operating on-site. Nevertheless, in view of the public concern, the Contractor of HY/2009/15 was reminded to conduct regular checking and maintenance for all derrick barges deployed on site to ensure only well maintained equipment is used to avoid potential dark smoke emission affecting nearby surroundings.

Site Inspections and Audit

- xxix. 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.

Future Key Issues

- xxx. 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

- Nil

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

- Removal of temporary reclamation at TPCWAW
- Diaphragm wall cutting works at TPCWAW
- Reinstate the seawall at Portion XI

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

- Precast unit construction for Box 1 inside Dry dock
- Construction of culvert L Bay 8, Bay 12 and Bay 13

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

- Diversion pipe maintenance
- Diaphragm Wall Removal 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 **27th June 2016 to 26th July 2016**. The cut-off date of reporting is at 26th 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 watermains affected by the revised land use and land formation works mentioned above

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

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

Table 2.1 Schedule 2 Designated Projects under this Project

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

2.3 Division of the Project Responsibility

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

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

Table 2.2 Details of Individual Contracts under the Project

Contract No.	Contract Title	Associated DP(s)	Construction Commencement Date
HK/2009/01	Wan Chai Development Phase II – Central –Wanchai Bypass at Hong Kong Convention and Exhibition Centre	DP3, DP6	23 July 2010
		DP1, DP2	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	
		Construction Manager	Mr. Terry Wong	9757 9846	
		Construction Manager	Mr. Wyman Wong	9627 2467	
		Construction Manager	Mr. Terry Tsang	6683 9394	
		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. Paul Yu	3658-3085	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	Rex Lau	3557 6405	
		Environmental Officer	Andy Mak	3557 6347	
Chun Wo – CRGL – MBEC Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	Rayland Lee	3758 6788	2570 8013
		Site Agent	David Lau	3758 8879	
		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	
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	



Party	Role	Post	Name	Contact No.	Contact Fax
		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	Andrew Wong	3467 4371	
		Environmental Officer	Gabriel Wong	35576466	
		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	
Ramboll Environ Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3465 2888	3465 2899
Lam Geotechnics Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331

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

- 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
- Removal of temporary reclamation at TPCWAW
- Diaphragm wall cutting works at TPCWAW

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:

- Precast unit construction for Box 1 inside Dry dock
- Construction of culvert L Bay 8, Bay 12 and Bay 13

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

- Diversion pipe maintenance
- Diaphragm Wall Removal 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

- Nil

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

- Removal of temporary reclamation at TPCWAW
- Diaphragm wall cutting works at TPCWAW
- Reinstate the seawall at Portion XI

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

- Precast unit construction for Box 1 inside Dry dock
- Construction of culvert L Bay 8, Bay 12 and Bay 13



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

- [Diversion pipe maintenance](#)
- [Diaphragm Wall Removal 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	Superseded
Environmental Permit	EP-364/2009/D	24 Nov 2016	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	Surrendered
Further Environmental Permit	FEP-07/364/2009/D	24 Nov 2015	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

Permits and/or Licences	Reference No.	Issued Date	Status
Further Environmental Permit	FEP-09/364/2009/B	5 March 2013	Valid
Further Environmental Permit	FEP-10/364/2009/B	26 July 2013	Valid
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-RS0384-16	19 Apr 2016	22 Apr 2016 to 19 Oct 2016	Valid
	GW-RS0435-16	03 May 2016	08 May 2016 to 07 Nov 2016	Valid
	GW-RS0482-16	17 May 2016	19 May 2016 to 18 Nov 2016	Valid
	GW-RS0486-16	17 May 2016	19 May 2016 to 18 Nov 2016	Valid
	GW-RS0488-16	17 May 2016	19 May 2016 to 18 Nov 2016	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0492-16	20 May 2016	23 May 2016 to 22 Nov 2016	Valid
	GW-RS0493-16	20 May 2016	23 May 2016 to 22 Nov 2016	Valid
	GW-RS0495-16	20 May 2016	19 May 2016 to 18 Nov 2016	Valid
	GW-RS0592-16	13 Jun 2016	15 Jun 2016 to 12 Dec 2016	Valid
	GW-RS0636-16	20 Jun 2016	21 Jun 2016 to 19 Dec 2016	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)	-	-	-	-
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	-	-	-	-

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

EP Condition	Submission	Date of Submission
	Silt Curtain Deployment Plan	19 Apr 2010
Condition 2.9	Silt Screen Deployment Plan (Rev. 9)	5 Nov 2015
	Silt Screen Deployment Plan (Rev. 8)	7 Sep 2015
	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-RS0321-16	1 Apr 2016	5 Apr 2016 to 5 Jul 2016	Expired
	GW-RS0390-16	22 Apr 2016	27 Apr 2016 to 26 Oct 2016	Valid
	GW-RS0399-16	27 Apr 2016	27 Apr 2016 to 26 Oct 2016	Valid
	GW-RS0403-16	27 Apr 2016	30 Apr 2016 to 24 Sept 2016	Valid
	GW-RS0593-16	13 Jun 2016	15 Jun 2016 to 12 Dec 2016	Valid
Discharge Licence	WT00009691-2011	1 Aug 2011	31 July 2016	Valid
	WT00022295-2015	12 Aug 2015	31 July 2020	Valid
Billing Account under Waste Disposal Ordinance (Land)	7010255	10 Feb 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance (Marine)	7011496	6 Oct 2010	N/A	Valid
Registration as Chemical Waste Producer (Wan Chai)	WPN5213-135-C3 593-01	10 Mar 2010	N/A	Valid
Registration as Chemical Waste Producer (TKO 137)	WPN5213-839-C3 593-02	22 Sep 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-146	24 Dec 2015	1 Jan 2016 to 30 Jun 2016	Expired
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/17-041	23 Jun 2017	01 Jul 2016 to 31 Dec 2016	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



EP Condition	Submission	Date of Submission
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
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 concreting works at Eastern Breakwater of CBTS	GW-RS0233-16	14 Mar 2016	14 Mar 2016 to 10 Sep 2016	Valid
Construction Noise Permit (CNP) for reclamation and d-wall works at Ex-PCWA	GW-RS0235-16	10 Mar 2016	12 Mar 2016 to 8 Sep 2016	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	N/A	Valid
Billing Account under Waste Disposal Ordinance (Disposal by Vessel)	7011761	14 Apr 2016	17 Jul 2016 to 16 Oct 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicated Site) and Type 2 – Confined Marine Disposal)	EP/MD/17-032	6 Jun 2016	6 Jun 2016 to 8 Jul 2016	Valid
	EP/MD/17-057	12 July 2016	14 July 2016 to 13 Aug 2016	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

FEP Condition	Submission	Date of Submission
	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/D	24 Nov 2015	Granted	Valid
Notification of Works Under APCO	326160	24 Jan 2011	Notified	Valid
Construction Noise Permit (CNP) (For Portion Vi Marine)	GW-RS0551-16	1 Jun 2016	18 Jun 2016 to 17 Dec 2016	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	WT00020594-2014	22 Dec 2014	31 Jan 2019	Valid
Construction Noise Permit	GW-RS0079-16	1 Feb 2016	3 Feb 2016 to 2 Aug 2016	Superseded by GW-RS073 9-16
	GW-RS0286-16	24 Mar 2016	27 Mar 2016 to 26 Sep 2016	Superseded by GW-RS072 6-16
	GW-RS0192-16	4 Mar 2016	9 Mar 2016 to 8 Sep 2016	Superseded by GW-RS074 6-16
	GW-RS0583-16	10 Jun 2016	11 Jun 2016 to 9 Dec 2016	Superseded by GW-RS074 9-16
	GW-RS0582-16	10 Jun 2016	11 Jun 2016 to 9 Dec 2016	Superseded by GW-RS073 3-16
	GW-RS0726-16	12 Jul 2016	14 Jul 2016 to 12 Jan 2017	Valid
	GW-RS0749-16	12 Jul 2016	14 Jul 2016 to 12 Jan 2017	Valid
	GW-RS00739-16	12 Jul 2016	14 Jul 2016 to 12 Jan 2017	Valid
	GW-RS0733-16	12 Jul 2016	14 Jul 2016 to 12 Jan 2017	Valid
	GW-RS0746-16	12 Jul 2016	14 Jul 2016 to 12 Jan 2017	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-211	13 Apr 2016	18 Apr 2016 to 30 Jun 2016	Expired

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	EP/MD/17-052	28 Jun 2016	1 Jul 2016 to 31 Dec 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	--	--	--	--

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-RW0061-16	2 Feb 2016	2 Feb 2016 to 31 Jul 2016	Valid
	GW-RW-0240-16	5 May 2016	4 May 2016 to 28 Oct 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-176	23 Mar 2016	23 Mar 2016 to 30 Jun 2016	Valid
	EP-MD-17-003	2 Jun 2016	2 Jun 2016 to 1 Dec 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	--	--	--	--

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

4 Monitoring Requirements

4.1 Noise Monitoring

NOISE MONITORING STATIONS

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

Table 4.1 Noise Monitoring Station

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

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.1.2. 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.
- 4.1.3. 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.
- 4.1.4. 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

- 4.1.5. As referred to in the Technical Memorandum TM issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level

at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

- 4.1.6. 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 4.2** and **Figure 4.1**. **Appendix 4.1** shows the established Action/Limit Levels for the monitoring works.

Table 4.2 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 m³ per minute adjustable flow range;
- equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
- installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
- capable of providing a minimum exposed area of 406 cm²;
- flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
- equipped with a shelter to protect the filter and sampler;
- incorporated with an electronic mass flow rate controller or other equivalent devices;
- equipped with a flow recorder for continuous monitoring;
- provided with a peaked roof inlet;
- incorporated with a manometer;
- able to hold and seal the filter paper to the sampler housing at horizontal position;
- easily changeable filter; and
- capable of operating continuously for a 24-hour period.

4.2.6. Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. The concern parties such as IEC shall properly document the calibration data for future reference. All the data should be converted into standard temperature and pressure condition.

LABORATORY MEASUREMENT / ANALYSIS

4.2.7. A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.

4.2.8. An alternative non-HOKLAS accredited laboratory was set-up for carrying out the laboratory analysis, the laboratory equipment was approved by the ER on 8 February 2011 and the measurement procedures were witnessed by the IEC. Any measurement performed by the laboratory was demonstrated to the satisfaction of the ER and IEC. IEC shall regularly audit to the measurement performed by the laboratory to ensure the accuracy of measurement results.

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

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

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

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. Water quality monitoring was undertaken at 8 monitoring stations for WSD salt water intakes and cooling water intakes along the seafront of the Victoria Harbour in the reporting month. The proposed water quality monitoring stations of the Project are 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 Marine Water Quality Stations for Water Quality Monitoring

Station Ref.	Location	Easting	Northing
WSD Salt Water Intake			
WSD19	Sheung Wan	833415.0	816771.0
Cooling Water Intake			
C1	HKCEC Extension	835885.6	816223.0
C7	Windsor House	837193.7	816150.0
P1	HKCEC Phase I	835774.7	816179.4
P3	The Academy of performing Arts	835824.6	816212.0
P4	Shui on Centre	835865.6	816220.0
P5	Government Buildings (Wanchai Tower / Revenue Tower / Immigration Tower)	835895.2	816215.2
Cooling Water Intake / WSD Salt Water Intake			
RW21-P789	Great Eagle Centre/ Sun Hung Kai Centre/ WSD Wanchai salt water intake / China Resources Building	836268.0	816020.0

- Remarks: - The cessation of seawater intake operation for C6 was confirmed on 17 May 2011 and the water quality monitoring at C6 was then terminated since 17 May 2011.
- 4-week post construction water quality monitoring at WSD9, WSD10, WSD15 and WSD17 were completed on 6 Feb 2012 and the water quality monitoring at WSD 10 and WSD15 were temporarily suspended since 8 Feb 2012, and WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 2012 onwards.
 - C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
 - C8 & C9 were temporary suspended since 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 22 Apr 2013
 - P1, P3, P4 and P5 were commenced since 24 Apr 2013
 - C5e and C5w water quality monitoring station was temporarily suspended since 29 Jul 2013.

- WSD21 water quality monitoring station was temporarily suspended since 12 Mar 2014
- WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 Sep 2014 flood tide.
- The water quality monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

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 4.4** 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 4.4 Marine Water Quality Monitoring Frequency and Parameters

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

Notes:

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

DISSOLVED OXYGEN AND TEMPERATURE MEASURING EQUIPMENT

- 4.3.7. The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
- a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
 - a temperature of 0-45 degree Celsius

- 4.3.8. It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).
- 4.3.9. Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

TURBIDITY MEASUREMENT INSTRUMENT

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

SAMPLER

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

SAMPLE CONTAINER AND STORAGE

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

WATER DEPTH DETECTOR

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

SALINITY

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

MONITORING POSITION EQUIPMENT

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

CALIBRATION OF IN-SITU INSTRUMENTS

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

calibration for a DO meter shall be carried out before measurement at each monitoring location.

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

LABORATORY MEASUREMENT / ANALYSIS

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

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

- 4.3.21. The enhanced water quality monitoring and audit programme is to avoid aggravation of odour nuisance from seawater arising from temporary reclamation in the ex-Wan Chai Public Cargo Working Area and the Causeway Bay Typhoon Shelter.
- 4.3.22. Dissolved oxygen monitoring at the intakes C6 and C7 in Causeway Bay Typhoon Shelter when there is temporary reclamation in Causeway Bay Typhoon Shelter and at the south-western and south-eastern corners of the ex-Wan Chai Public Cargo Working Area. The proposed water quality monitoring stations of the Project are shown in [Table 4.5](#) and [Figure 4.1](#).

Table 4.5 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

Remarks:

1. Enhanced DO monitoring at Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the formation of temporary reclamation zone TS3 and to be resumed upon removal of the respective temporary reclamation zone.
2. Enhanced DO monitoring at Monitoring station at Ex-PCWAE was temporarily suspended from 31 August 2015 with respect to seawall reinstatement works and formation of active works area, to be resumed upon completion of seawall reinstatement works

- 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. One limit level exceedances was recorded at M1a- Harbour Road Sports Centre on 28 June 2016 in this reporting month.

5.1.3. Operation of drill rig at opposite to the monitoring station under non WDII-CWB Contractor was observed as the major noise contribution during monitoring on 28 June 2016. As such, the exceedances were considered as non-Project related.

5.1.4. 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)

5.1.5. 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

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

5.1.7. 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

5.1.8. 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

5.1.9. One limit level exceedance was recorded at M6- HK Baptist Church Henrietta Secondary School on 12 July 2016 in this reporting month.

5.1.10. Traffic noise was observed during monitoring on 12 July 2016 and it was considered as the major noise contribution. As such, the limit level exceedance was concluded as non-project related.

5.1.11. 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)

5.1.12. 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

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

5.1.14. 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 Air Monitoring Results

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

- 5.2.1 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 5.5** below.

Table 5.5 Air Monitoring Stations for Contract no. HK/2009/01

Station	Description
CMA5b	Pedestrian Plaza
CMA6a	WDII PRE Site Office

- 5.2.2 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

- 5.2.3 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 5.6** below.

Table 5.6 Air Monitoring Station for Contract no. HK/2009/02

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

- 5.2.4 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)

- 5.2.5 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 5.7** below.

Table 5.7 Air Monitoring Station for Contract no. HY/2009/15

Station	Description
CMA3a	CWB PRE Site Office

- 5.2.6 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](#).
- 5.2.7 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 5 July 2016 and 20 July 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this reporting month. The details of the odour patrol results and meteorological conditions and on the date of odour patrol are shown in [Appendix 5.3](#).

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

- 5.2.8 The proposed division of air monitoring stations are summarized in **Table 5.8** below.

Table 5.8 Air Monitoring Stations for Contract no. HY/2009/19

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

- 5.2.9 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

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

Table 5.9 Air Monitoring Stations for Contract no. HK/2012/08

Station	Description
CMA5b	Pedestrian Plaza

- 5.2.11 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](#).
- 5.2.12 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 5 July 2016 and 20 July 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this reporting month. The details of the odour patrol results and meteorological conditions and on the date of odour patrol are shown in [Appendix 5.3](#).

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

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

Table 5.10 Air Monitoring Stations for Contract no. HY/2010/08

Station	Description
CMA3a	CWB PRE Site Office

5.2.13 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**.

5.3 Water quality monitoring Results

5.3.1. Due to the hoisting of Strong Wind Signal No. 3, the water quality monitoring event on 6 July 2016 during ebb tide was cancelled.

5.3.2. As advised by the Contractor of HK/2009/01, all silt screen remains removal works at P1, P3, P4, P5 and C1 water quality monitoring stations were completed on 8 May 2016.

5.3.3. With respect to the marine works undertaken at WCR3 by Contract HK/2009/02, the respective water quality monitoring station C1 associated with Contract HK/2009/01 was updated as in association with Contract HK/2009/01 and Contract HK/2009/02.

5.3.4. With respect to the marine works undertaken at CBTS by Contract HY/2010/08, the respective water quality monitoring station C7 associated with Contract HY/2009/15 was updated as in association with Contract HY/2009/15 and Contract HY/2010/08.

5.3.5. With respect to the marine works undertaken at HKCEC2 by Contract HK/2012/08, the respective water quality monitoring station WSD19, P1, P3, P4, and P5 were associated with Contract HK/2012/08.

Table 5.11 Water quality 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 quality monitoring Stations,	Division of WQM w.r.t tentative works commenced / to be commenced
HK/2009/01	WCR3	C1 ¹	Apr 2013
HK/2009/02	WCR3, WCR4, TWCR4	RW21-P789 ² , C1 ¹	Apr 2013
HK/2012/08	HKCEC2W, HKCEC2E	WSD19, P1 ³ , P3 ³ , P4 ³ , P5 ³	Aug 2013
HY/2009/15	TCBR2, TCBR3, TCBR1W, TPCWAE, TPCWAW	C6 ⁴ , C7, Ex-WPCWA SW, Ex-WPCWA SE (plus enhanced DO monitoring)	Nov 2010
HY/2010/08	TCBR3, TCBR4	C6 ⁴ , C7 (plus enhanced DO monitoring)	Mar 2014

Remarks:

1. The water quality monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.
2. 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)
3. The water quality 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. Enhanced DO Monitoring at C6 since the intake abandon in May 2011.

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

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

Table 5.12 Water quality monitoring Stations for Contract no. HK/2009/01

Station Ref.	Location	Easting	Northing
Cooling Water Intake			
C1	HKCEC Extension	835885.6	816223.0

- 5.3.5. No action or limit level exceedance was recorded in this reporting month.
- 5.3.6 Water quality 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**.

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

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

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

Station Ref.	Location	Easting	Northing
Cooling Water Intake			
C1	HKCEC Extension	835885.6	816223.0
Cooling Water Intake / WSD Salt Water Intake			
RW21-P789	Great Eagle Centre/ Sun Hung Kai Centre/WSD Wanchai salt water intake / China Resources Building	836268.0	816020.0

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

- 5.3.9 Water quality 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.**

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

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

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

Station Ref.	Location	Easting	Northing
WSD Salt Water Intake			
WSD19	Sheung Wan	833415.0	816771.0
Cooling Water Intake			
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

- 5.3.11 No action or limit level was recorded in this reporting month.
- 5.3.12 Water quality 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.**

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

- 5.3.13 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 quality monitoring stations are summarized in **Table 5.15** and **Table 5.16** below.

Table 5.15 Water quality monitoring Stations for Contract no. HY/2009/15

Station Ref.	Location	Easting	Northing
Cooling Water Intake			
C7	Windsor House	837193.7	816150.0

Remarks:

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

Table 5.16 Enhance Dissolved Oxygen Monitoring Stations for Contract no. HY/2009/15

Station Ref.	Location
C6	Excelsior Hotel
Ex-WPCWA SW	South-western of the ex-Wan Chai Public Cargo Working Area

Remarks:

1. Enhanced DO monitoring at Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the formation of temporary reclamation zone TS3 and to be resumed upon removal of the respective temporary reclamation zone.
2. Enhanced DO monitoring at Monitoring station at Ex-PCWAE was temporarily suspended from 31 August 2015 with respect to seawall reinstatement works and formation of active works area, to be resumed upon completion of seawall reinstatement works

- 5.3.14 There were 1 action and 1 limit level turbidity exceedance recorded at C7 on 2 July 2016 and 25 July 2016 in this reporting month.
- 5.3.15 After checking with contractor, no marine activity was conducted at Causeway Bay Typhoon Shelter on 2 July 2016 and 25 July 2016. In view of no marine construction activity, and no exceedance recorded on the subsequent monitoring, it was considered that the exceedances were not project related.
- 5.3.16 There were 2 limit level DO exceedances recorded at Ex-WPCWA SW on 2 July 2016 and 4 July 2016 in this reporting month.
- 5.3.17 After checking with contractor, transfer of mud from shaft B to barge was observed conducted at Ex-PCWA during sampling on 2 July 2016 and silt curtain was observed deployed at the outfall location of culvert O. The silt curtain was observed partially deployed (without extending to water column) at the outfall location of culvert O. In view of the environmental concern on potential accumulation of organic pollutant in relate to the embayment effect at the concerned location due to the silt curtain deployment, the contractor was advised to remove any silt curtain/ impermeable deployed at the outfall location of culvert O. All obstruction at the outfall location of culvert O was subsequently removed by contractor on 5 July 2016. No further dissolved oxygen exceedance was recorded during subsequent monitoring conducted on 4 July 2016. Considering the upstream organic discharge influence and the partial silt curtain deployment (without extending to water column) observed during monitoring, the implication of the partially deployed silt curtain on the water circulation could not concluded. Nevertheless, the contractor was advised that any silt curtain/ impermeable barrier shall not be deployed at the culvert O outfall location so that the water circulation would not be adversely affected. In addition, the contractor was reminded to maintain a tarpaulin sheet between the shaft and barge during soil material transfer to avoid potential drop off to nearby waters and to maintain a proper deployment of silt curtain extending throughout the water column around the derrick barge during excavated material transfer to avoid potential muddy dispersion.
- 5.3.18 Removal of steel brackets was observed conducted at Ex-PCWA during sampling on 4 July 2016 and impermeable barrier was observed deployed at the outfall location of culvert O. The impermeable barrier was observed partially deployed (without extending to water column) at the outfall location of culvert O. In view of the environmental concern on potential accumulation of organic pollutant in relate to the embayment effect at the concerned location due to the silt curtain deployment, the contractor was advised to remove any silt curtain/ impermeable

deployed at the outfall location of culvert O. All obstruction at the outfall location of culvert O was subsequently removed by contractor on 05 July 2016. No further dissolved oxygen exceedance was recorded during subsequent monitoring conducted on 04 July 2016. Considering the upstream organic discharge influence and the partial impermeable barrier deployment (without extending to water column) observed during monitoring, the implication of the partially deployed impermeable barrier on the water circulation could not be concluded. Nevertheless, the contractor was advised that any silt curtain/ impermeable barrier shall not be deployed at the culvert O outfall location so that the water circulation would not be adversely affected.

- 5.3.19 There were 1 action level DO exceedances recorded at Ex-WPCWA SE on 22 July 2016 in this reporting month.
- 5.3.20 Despite removal of diaphragm wall and excavation by derrick barge at northern side of TPCWAW were conducted on 22 July 2016, contractor mitigation measures including the use of silt curtain was in place. Upstream discharge from nearby culvert was noted. In view of the above and no exceedance was recorded on the subsequent monitoring, the exceedance was considered not related to the Project works.
- 5.3.21 Water quality 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](#).

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

- 5.3.22 The proposed division of water quality monitoring stations are summarized in **Table 5.17** and **Table 5.18** below:

Table 5.17 Water quality monitoring Stations for Contract no. HY/2010/08

Station Ref.	Location	Easting	Northing
Cooling Water Intake			
C7	Windsor House	837193.7	816150.0

Table 5.18 Enhance Dissolved Oxygen Monitoring Stations for Contract no. HY/2010/08

Station Ref.	Location
C6	Excelsior Hotel

Remarks:

- 1. Enhanced DO monitoring at Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the formation of temporary reclamation zone TS3 and to be resumed upon removal of the respective temporary reclamation zone.
- 5.3.23 There were 1 action and 1 limit level turbidity exceedance recorded at C7 on 2 July 2016 and 25 July 2016 in this reporting month.
- 5.3.24 After checking with contractor, despite reinstatement of seawall was conducted at TS3N3 corner on 2 July 2016, contractor mitigation measure including the deployment of silt curtain was generally in order and installed silt screen was in place. In view of the above, and no exceedance was recorded on the subsequent monitoring, it was considered that the exceedance was not project related.



- 5.3.25 Despite placing of seawall blocks was conducted on the monitoring date, contractor mitigation measures including the use of silt curtain was in place and the installed silt screen was in place. In view of the above, and no exceedance was recorded on the subsequent monitoring, it was considered that the exceedance was not project related.
- 5.3.26 Water quality 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**.

5.4 Waste Monitoring Results

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

5.4.1. 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 ³	NIL	62116.405	TKO137, TM38
Inert C&D materials recycled, m ³	NIL	5856.5	N/A
Non-inert C&D materials disposed, m ³	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 ³	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 ³	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

5.4.2. 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

5.4.3. 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 ³	NIL	276075.1	TKO137 / TM 38
Inert C&D materials recycled, m ³	NIL	18161	N/A
Non-inert C&D materials disposed, m ³	NIL	1515.103	SENT Landfill
Non-inert C&D materials recycled, m ³	N/A	N/A	N/A
Chemical waste disposed, kg	NIL	13860	SENT Landfill
Marine Sediment (Type 1 – Open Sea Disposal), m ³	NIL	240222 (Bulk volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m ³	NIL	146445 (Bulk volume)	East of Sha Chau

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

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

- 5.4.5. Inert C&D materials was recycled 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 ³	NIL	141579.2	Tuen Mun Area 38	NIL
	NIL	65216	TKO137 FB	NIL
Inert C&D materials recycled, m ³	8127.21	8127.21	HY/2010/08	NIL
	NIL	304	Ex-PCWA	NIL
	NIL	111.9	TS4	NIL
Non-inert C&D materials disposed, m ³	NIL	252.2	SENT Landfill	NIL

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds	Remarks
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 ³	NIL (Bulk Volume)	156909 (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 ³	1500 (Bulk Volume)	324296 (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 ³	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 ³	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

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

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

5.4.7. 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 ³	NIL	355921.04	TM38
Inert C&D materials recycled, m ³	NIL	59367	N/A
Non-inert C&D materials disposed, m ³	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 ³	NIL	162	South Cheung Chau
Marine Sediment (Type 2 – Confined Marine Disposal) , m ³	NIL	681	East Sha Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m ³	NIL	4976.00	East Sha Chau

5.4.8. 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 disposed in this reporting month.

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

5.4.9. 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 ³	NIL	4131	TM38
Inert C&D materials recycled, m ³	NIL	NIL	N/A
Non-inert C&D materials	NIL	315	N/A

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
disposed, m ³			
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 ³	NIL (Bulk volume)	31759 (Bulk volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m ³	NIL (Bulk volume)	108542 (Bulk volume)	South of The Brothers (from 27 Aug 2013 onwards)

Remarks: The details of waste disposal is recorded in calendar month period.

- 5.4.10. There was no Marine Sediment Type 1 – Open Sea Disposal (Delicate Sites) & Type 2 – Confined Marine Disposal and Marine Sediment Type 1 – Open Sea Disposal disposed in this reporting month.

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

- 5.4.11. Inert C&D waste was disposed in this reporting month 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 ³	8320.5	26849.2	TM38
	7560.2	19739.4	TKO137
Inert C&D materials recycled, m ³	NIL	NIL	N/A
Non-inert C&D materials disposed, m ³	NIL	NIL	N/A
Non-inert C&D materials recycled, kg	NIL	NIL	N/A
Chemical waste disposed, L	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal)	NIL	62559.4	South Cheung Chau / Brothers Island *
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	NIL	28309.2	Brothers Island
Marine Sediment (Type 3 – Special Treatment)	NIL	7780	Brothers Island

- 5.4.12. There were no Type 1 – Open Sea Disposal and no Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal disposed in this reporting month, and no Type 3-Special Treatment 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 One limit level exceedances was recorded at M1a- Harbour Road Sports Centre on 28 June 2016 in this reporting month.

- 6.1.2 Operation of drill rig at opposite to the monitoring station under non WDII-CWB Contractor was observed as the major noise contribution during monitoring on 28 June 2016. As such, the exceedances were considered as non-Project related.

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

- 6.1.3 One limit level exceedances was recorded at M1a- Harbour Road Sports Centre on 28 June 2016 in this reporting month.

- 6.1.4 Operation of drill rig at opposite to the monitoring station under non WDII-CWB Contractor was observed as the major noise contribution during monitoring on 28 June 2016. As such, the exceedances were considered as non-Project related.

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

- 6.1.5 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

- 6.1.6. One limit level exceedance was recorded at M6- HK Baptist Church Henrietta Secondary School on 12 July 2016 in this reporting month.

- 6.1.7. Traffic noise was observed during monitoring on 12 July 2016 and it was considered as the major noise contribution. As such, the limit level exceedance was concluded as non-project related.

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

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

6.2 Air Monitoring

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

- 6.2.1 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)

6.2.2 No exceedance was recorded in the reporting month.

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

6.2.3 No exceedance was recorded in the reporting month.

6.2.4 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 5 July 2016 and 20 July 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this reporting month.

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

6.3.4. 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

6.3.5. No exceedance was recorded in the reporting month.

6.3.6. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 5 July 2016 and 20 July 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this reporting month.

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

6.3.7. No exceedance was recorded in the reporting month.

6.3 Water Quality Monitoring

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

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

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

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

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

6.4.1 There were 1 action and 1 limit level turbidity exceedance recorded at C7 on 2 July 2016 and 25 July 2016 in this reporting month.

6.4.2 After checking with contractor, no marine activity was conducted at Causeway Bay Typhoon Shelter on 2 July 2016 and 25 July 2016. In view of no marine construction activity, and no

- exceedance recorded on the subsequent monitoring, it was considered that the exceedances were not project related.
- 6.4.3 There were 2 limit level DO exceedances recorded at Ex-WPCWA SW on 2 July 2016 and 4 July 2016 in this reporting month.
- 6.4.4 After checking with contractor, transfer of mud from shaft B to barge was observed conducted at Ex-PCWA during sampling on 2 July 2016 and silt curtain was observed deployed at the outfall location of culvert O. The silt curtain was observed partially deployed (without extending to water column) at the outfall location of culvert O. In view of the environmental concern on potential accumulation of organic pollutant in relate to the embayment effect at the concerned location due to the silt curtain deployment, the contractor was advised to remove any silt curtain/ impermeable deployed at the outfall location of culvert O. All obstruction at the outfall location of culvert O was subsequently removed by contractor on 5 July 2016. No further dissolved oxygen exceedance was recorded during subsequent monitoring conducted on 4 July 2016. Considering the upstream organic discharge influence and the partial silt curtain deployment (without extending to water column) observed during monitoring, the implication of the partially deployed silt curtain on the water circulation could not concluded. Nevertheless, the contractor was advised that any silt curtain/ impermeable barrier shall not be deployed at the culvert O outfall location so that the water circulation would not be adversely affected. In addition, the contractor was reminded to maintain a tarpaulin sheet between the shaft and barge during soil material transfer to avoid potential drop off to nearby waters and to maintain a proper deployment of silt curtain extending throughout the water column around the derrick barge during excavated material transfer to avoid potential muddy dispersion.
- 6.4.5 Removal of steel brackets was observed conducted at Ex-PCWA during sampling on 4 July 2016 and impermeable barrier was observed deployed at the outfall location of culvert O. The impermeable barrier was observed partially deployed (without extending to water column) at the outfall location of culvert O. In view of the environmental concern on potential accumulation of organic pollutant in relate to the embayment effect at the concerned location due to the silt curtain deployment, the contractor was advised to remove any silt curtain/ impermeable deployed at the outfall location of culvert O. All obstruction at the outfall location of culvert O was subsequently removed by contractor on 05 July 2016. No further dissolved oxygen exceedance was recorded during subsequent monitoring conducted on 04 July 2016. Considering the upstream organic discharge influence and the partial impermeable barrier deployment (without extending to water column) observed during monitoring, the implication of the partially deployed impermeable barrier on the water circulation could not concluded. Nevertheless, the contractor was advised that any silt curtain/ impermeable barrier shall not be deployed at the culvert O outfall location so that the water circulation would not be adversely affected.
- 6.4.6 There were 1 action level DO exceedances recorded at Ex-WPCWA SE on 22 July 2016 in this reporting month.
- 6.4.7 Despite removal of diaphragm wall and excavation by derrick barge at northern side of TPCWAW were conducted on 22 July 2016, contractor mitigation measures including the use of silt curtain was in place. Upstream discharge from nearby culvert was noted. In view of the

above and no exceedance was recorded on the subsequent monitoring, the exceedance was considered not related to the Project works.

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

6.4.8 No action or limit level 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

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

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

6.4.10 There were 1 action and 1 limit level turbidity exceedance recorded at C7 on 2 July 2016 and 25 July 2016 in this reporting month.

6.4.11 After checking with contractor, despite reinstatement of seawall was conducted at TS3N3 corner on 2 July 2016, contractor mitigation measure including the deployment of silt curtain was generally in order and installed silt screen was in place. In view of the above, and no exceedance was recorded on the subsequent monitoring, it was considered that the exceedance was not project related.

6.4.12 Despite placing of seawall blocks was conducted on the monitoring date, contractor mitigation measures including the use of silt curtain was in place and the installed silt screen was in place. In view of the above, and no exceedance was recorded on the subsequent monitoring, it was considered that the exceedance was not project related.

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

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

6.5.2 No non-compliances from monitoring was recorded in 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 audit 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 include structural works for tunnel construction, road works and drainage works, and seawall modification were performed in July 2016 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 at Wan Chai East and culvert construction, tunnel construction and ELS works at Wan Chai West. The major construction activities under Central-Wan Chai Bypass and Island Eastern Corridor Link Projects were road works and ventilation building construction at Central Interchange, temporary reclamation removal works at Ex-PCWAW, ELS works and retaining wall construction at Victoria Park, ELS works and tunnel works at TS3; bridge construction, piling and tunnel works at North Point area in the reporting month. In addition, other non-Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects was observed undertaken at Wan Chai North and North Point area.
- 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 28 June 2016, 6, 13 and 21 July 2016 in reporting month. There was no particular findings observed in this reporting month.

8.0.3. Four site inspections for Contract no. HK/2009/02 were carried out on 30 June 2016, 7, 14 and 19 July 2016 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
160707_01	7 Jul 2016	Drip tray shall be provided for air compressor at Portion 3&4	Air compressor was removed at Portion 3&4.	Completion as observed on 14 July 2016

8.0.4. Five site inspections for Contract no. HY/2009/15 were carried out on 28 June, 4, 11, 18 and 26 July 2016 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
160628_1	28 Jun 2016	Impermeable barrier shall be deployed to surround the working area and silt curtain shall be deployed around the derrick barge (EXPCWA North)	No further concerned marine works was observed	Completion as observed on 4 July 2016
160628_2	28 Jun 2016	Embankment shall be provided along the seawall block to prevent potential surface runoff (EX-PCWA)	Embankment was provided along the seawall to avoid surface runoff	Completion as observed on 4 July 2016
160704_1	4 Jul 2016	Silt curtain shall be deploy around the derrick barge and shall not block the circulation of culvert discharge (EX-PCWA)	Silt curtain was deploy to surround the derrick barge and the location was adjusted	Completion as observed on 11 July 2016
160711_1	11 Jul 2016	Silt curtain shall be properly deploy around the D-wall cutting work area the deployed silt curtain shall be extended to seabed level and free of gap.	No more marine works was observed at concerned location	Completion as observed on 18 July 2016
160718_1	18 Jul 2016	Enclose the seawall opening to avoid potential water quality impact from the works area	The seawall opening was enclosed	Completion as observed on 26 July 2016
160726_1	26 Jul 2016	Impermeable barrier shall be	Impermeable	Completion as

Item	Date	Observations	Action taken by Contractor	Outcome
		provided to exposed surface to avoid potential muddy dispersion(EX-PCWA)	barrier was provided to concerned location to avoid muddy dispersion	observed on 4 April 2016
160726_2	26 Jul 2016	Embankment shall be provided along the seawall to avoid potential surface runoff (EX-PCWA)	Embankment was provided along the seawall to avoid potential surface runoff	Completion as observed on 4 April 2016

8.0.5. Four site inspections for Contract no. HY/2009/19 were carried out on 29 June 2016, 6, 13 and 20 July in reporting month. There was no particular findings observed in this reporting month.

8.0.6. Four site inspections for Contract no. HK/2012/08 were carried out on 28 June 2016, 5, 12 and 19 July 2016 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
160628_01	28 Jun 2016	Drip tray shall be provided for oil container at Zone A2	Oil container at Zone A2 was observed removed.	Completion as observed on 5 July 2016
160628_02	28 Jun 2016	Protection measure shall be implemented on the exposed slope at the water channel of Culvert J to prevent potential surface runoff to waterbody	The exposed slope at the water channel of Culvert J was protected and covered by impermeable sheet.	Completion as observed on 5 July 2016

8.0.7. Four site inspections for Contract no. HY/2010/08 were carried out on 29 June 2016, 5, 13 and 20 July 2016 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
160629_3	29 Jun 2016	Silt curtain shall be provided to enclose the working area or derrick barge to avoid potential contamination to nearby water (TS3 North)	Silt curtain was deployed to enclose the working area at concerned location	Completion as observed on 5 July 2016
160705_1	5 Jul 2016	Leaked oil shall be cleaned as chemical waste and drip tray shall be provided to oil container	Leaked oil was cleaned and oil container was removed	Completion as observed on 13 July 2016



160705_2	5 Jul 2016	Mud sitting on the edge of seawall and on top of embankment shall be cleaned regularly to avoid drop off (TS3)	Mud sitting on the edge of seawall was cleaned	Completion as observed on 13 July 2016
160705_3	5 Jul 2016	Provide protection to exposed soil slope to avoid potential seepage of muddy runoff(TS3 North East)	Protection was provided to exposed soil	Completion as observed on 13 July 2016
160713_1	13 Jul 2016	Construction effluent shall be direct to waste water treatment plant prior to discharge (TS3 North)	Construction effluent was divert to waste water treatment plant	Completion as observed on 20 July 2016
160720_	20 Jul 2016	PME without NRMM shall not be used and operated (TS3)	NRMM label was provided for concerned PME	Completion as observed on 27 July 2016
167020_3	20 Jul 2016	Backfill with rock material to form rock mount shall be carried out according to method statement (TS3 East)	No more marine works was observed at concerned location	Completion as observed on 27 July 2016

9. Complaints, Notification of Summons and Prosecution

- 9.0.1. There was one environmental complaint received in this reporting month.
- 9.0.2. A public complaint referred by EPD was received by ET on 06 July 2016 (Case Ref.: H05/RS/00016226-16). The complainant reported that a derrick barge in green colour under Contract HY/2009/15 moored near Royal Hong Kong Yacht Club emitted dark smoke since mid of June 2016.
- 9.0.3. ET confirmed with the Resident Site Staff that the concerned green derrick barge was identified as Yue Fat 206 (YF206) and the concerned green derrick barge was operated within the Ex-PCWA area for excavation works intermittently across the period from 15 June 2016 to 30 June 2016. The concerned green derrick barge YF206 within Ex-PCWA area was no longer deployed under Contract HY/2009/15 after 02 July 2016.
- 9.0.4. Follow-up inspection was conducted on 11 July 2016, the concerned derrick barge YF206 was not deployed at the concerned location and no dark smoke was observed from other derrick barge operating on-site. Nevertheless, in view of the public concern, the Contractor of HY/2009/15 was reminded to conduct regular checking and maintenance for all derrick barges deployed on site to ensure only well maintained equipment is used to avoid potential dark smoke emission affecting nearby surroundings.
- 9.0.5. The details of cumulative complaint log and updated summary of complaints are presented in **Appendix 9.1**
- 9.0.6. Cumulative statistic on complaints and successful prosecutions are summarized in **Table 9.1** and **Table 9.2** respectively.

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works (Mar 2010) to last reporting month	45
July 2016	1
Total	46

Table 9.2 Cumulative Statistics on Successful Prosecutions

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

10. Conclusion

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

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

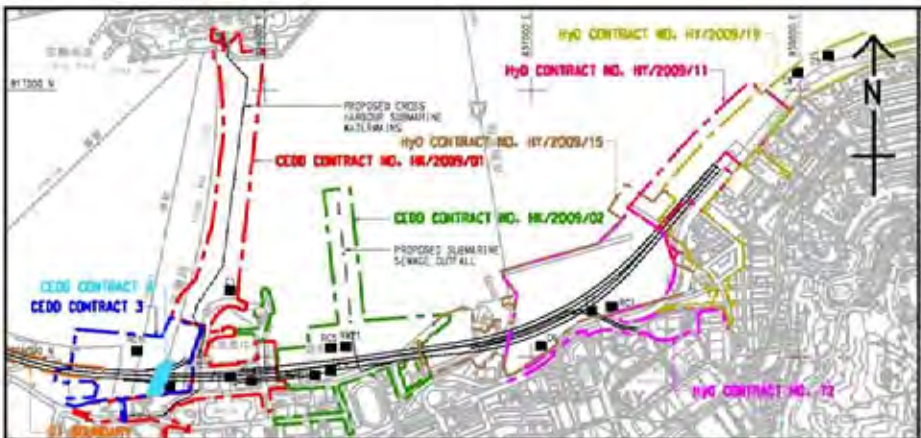
Table 10.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting Month

Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2009/01	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> Nil
HK/2009/02	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> Daily visual inspection of silt screen and silt curtain to ensure its operation properly. Implement silt curtain in accordance with the associated plans submitted to EPD.
HY/2009/15	<ul style="list-style-type: none"> Removal of temporary reclamation at TPCWAW Diaphragm wall cutting works at TPCWAW Reinstate the seawall at Portion XI 	<ul style="list-style-type: none"> Daily visual inspection of silt screen and silt curtain to ensure its operation properly Implement silt curtain in accordance with the associated plans submitted to EPD.
HY/2009/19	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> Nil
HK/2012/08	<ul style="list-style-type: none"> Precast unit construction for Box 1 inside Dry dock Construction of culvert L Bay 8, Bay 12 and Bay 13 	<ul style="list-style-type: none"> To conform the installation and setting as in the silt screen and silt curtain deployment plan To space out noisy equipment and position as far as possible from sensitive receiver. Daily visual inspection of silt screen and silt curtain to ensure its operation properly
HY/2010/08	<ul style="list-style-type: none"> Diversion pipe maintenance Diaphragm Wall Removal Works 	<ul style="list-style-type: none"> To conform the installation and setting as in the silt screen and silt curtain deployment plan Daily visual inspection of silt screen and silt curtain to ensure its operation properly



Figure 2.1

Project Layout



- LEGEND:**
- WATER QUALITY MONITORING STATIONS
- COOLING WATER INTAKES**
- 01 HONG KONG CONVENTION AND EXHIBITION CENTRE EXTENSION
 - 02 TELECOM HONG KONG ACADEMY 1.01 PERFORMING ARTS / SAITLWAY CENTRE
 - 03 HONG KONG CONVENTION AND EXHIBITION CENTRE PHASE 1
 - 04 NEW EXHIBITION TOWER AND GREAT EXHIBITION CENTRE
 - 05 SUN HANG KAI CENTRE
 - 06 PROPOSED EXHIBITION STATION / WORLD TRADE CENTRE
 - 07 WINDSOR HOUSE
 - 08 CITY SQUARE
 - 09 PROVIDENT CENTRE
 - 102 PROPOSED HERPA EXTENSION
 - 103 SUN HANG KAI CENTRE / REPRODUCTION
 - 107 WINDSOR HOUSE / TEMPORARY REPRODUCTION
- WSD SALT WATER INTAKE**
- #201 WAN CHAI
 - #401 WAN CHAI (REPRODUCTION)
 - #501 CEMILION SQUARE
 - #620 SA BAY
 - #6210 CHA KANG LINC
 - #6215 SA BAY ISD
 - #6217 CLARITY BAY
 - #6219 SWIRE WAREHOUSE
 - #6220 KENNEDY TOWER

DESIGNATED PROJECT'S TOP	WORK CONTRACT	DESIGNATED PROJECT NUMBER	COMPLETION (APPROXIMATE)
SP1 - CENTRAL WAN CHAI STYASS WORKS INCLUDING 15 ROAD TUNNEL AND SLOPE ROADS	CEDD CONTRACT NO. HK/2009/01	SP1 - SP3 - SP6	APRIL 2010
SP2 - ROAD P2 AND OTHER ROADS (PRIMARY + DISTRICT DISTRIBUTION ROADS)	CEDD CONTRACT NO. HK/2009/02	SP1 - SP3 - SP5	APRIL 2010
SP3 - PERMANENT AND TEMPORARY ROAD MAINTENANCE WORKS INCLUDING ASSOCIATED DRAINAGE WORKS IN WAN CHAI DEVELOPMENT PHASE 1 (WSD) AREA	CEDD CONTRACT 3	SP1 - SP3	END 2011
SP4 - TEMPORARY BRIDGE-SHELTER 1 (SP4 NOT TO BE IMPLEMENTED)	CEDD CONTRACT 4	SP1 - SP3	END 2011
SP5 - WAN CHAI EAST SEWAGE DUTY ALL	CEDD CONTRACT 5	SP3	2010
SP6 - DISCREET FOR THE CROSS-HARBOUR WATER MAINS	HYD CONTRACT NO. HY/2009/11	SP3	18 AUGUST 2010
	HYD CONTRACT NO. HY/2009/15	SP1 - SP3	SEPTEMBER 2010
	HYD CONTRACT NO. HY/2009/16	SP1	OCTOBER 2010
	HYD CONTRACT NO. HY/2009/18	SP1	NOVEMBER 2010
	HYD CONTRACT 12	SP1 - SP3	MID 2010



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Civil Engineering and Development Department

WAN CHAI DEVELOPMENT PHASE II

WAN CHAI DEVELOPMENT PHASE II (WSD) CENTRE - SANITARY FITTING REVISIONS AND TESTING WORKS (STAGE 1)

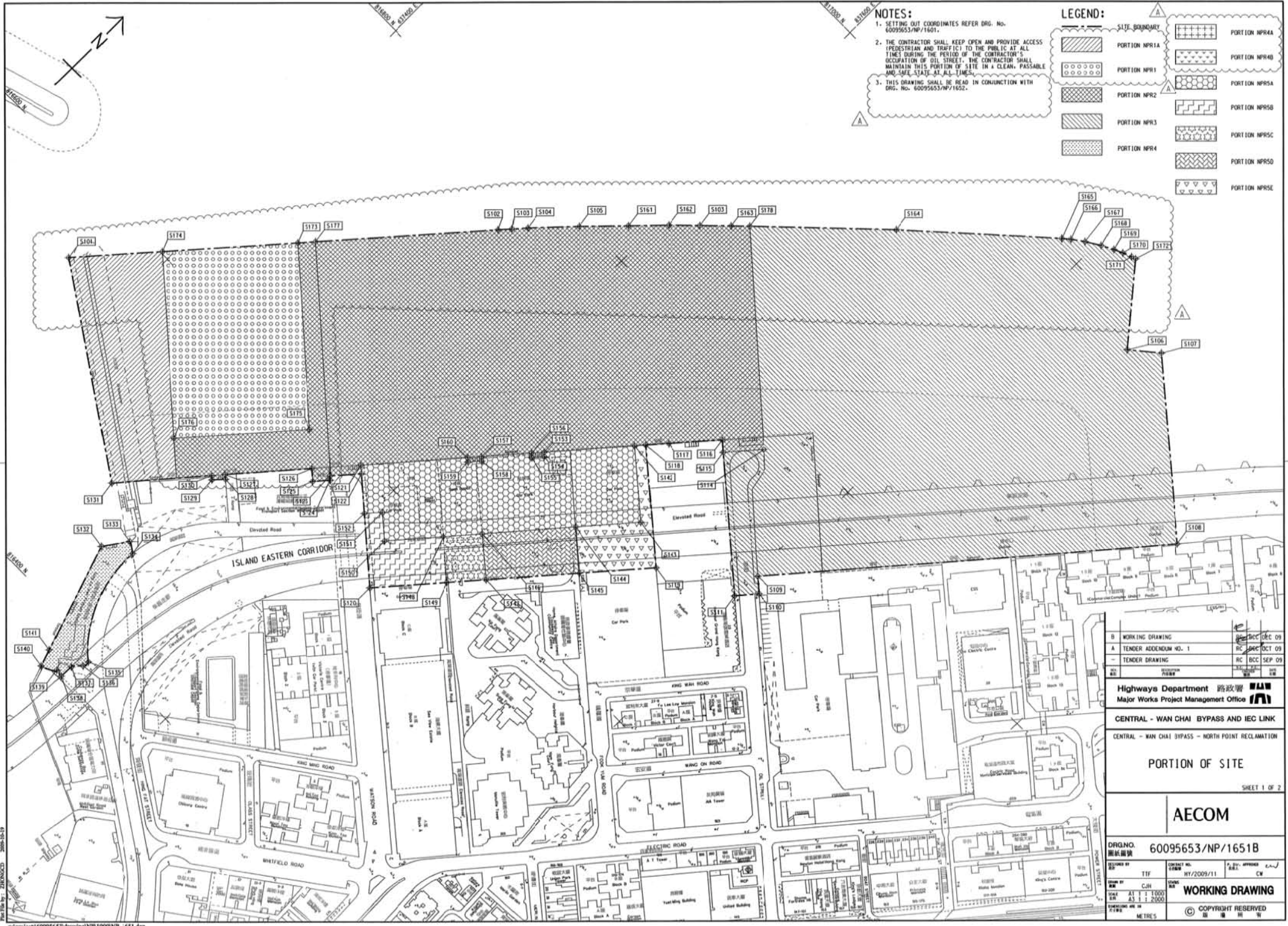
LOCATIONS OF WATER QUALITY MONITORING STATIONS

AECOM

PROJECT NUMBER: **60041297/C5/SK001**

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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:

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-	TENDER DRAWING	09/09/09

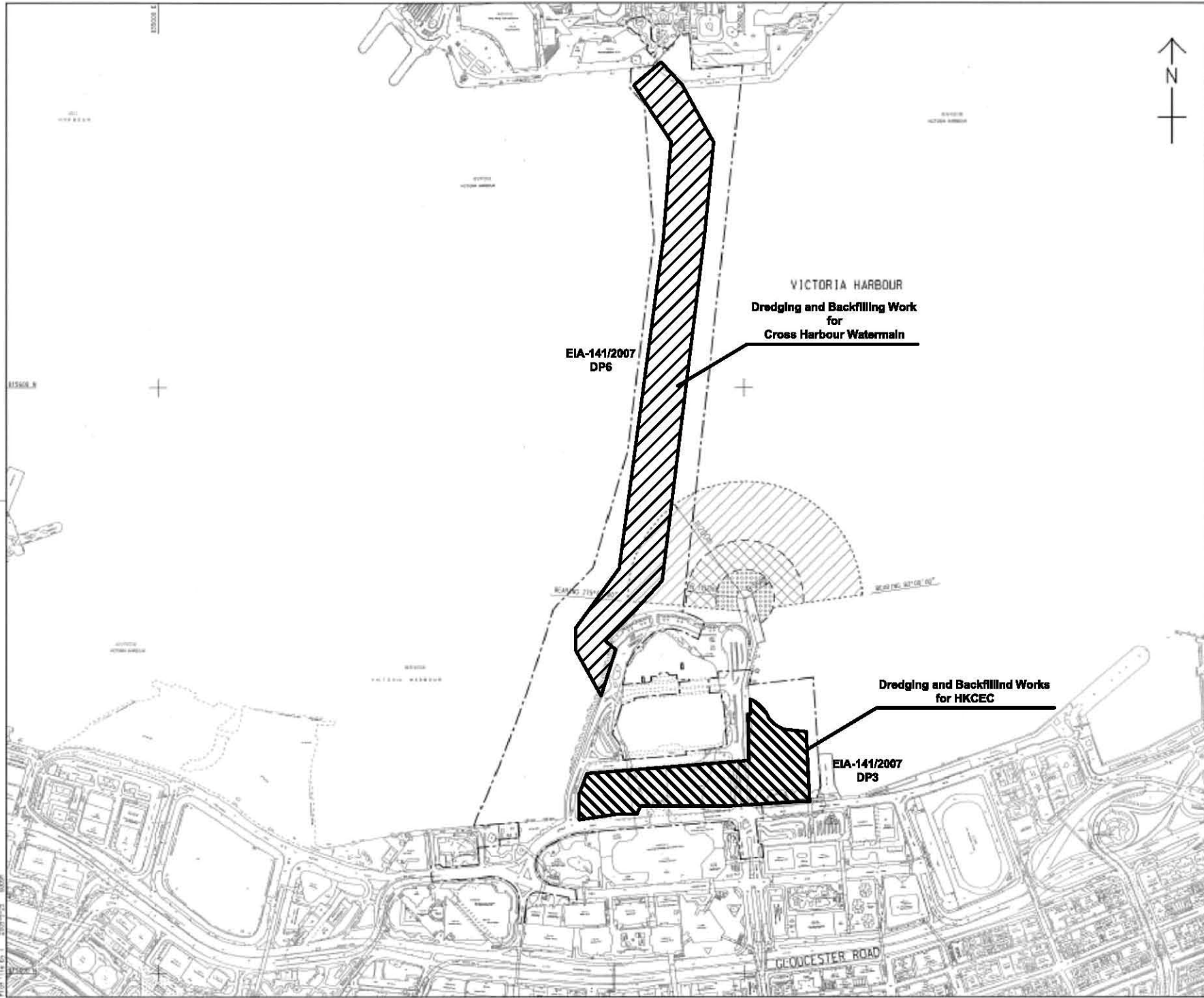
Highways Department 路政署
 Major Works Project Management Office

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

PORTION OF SITE
 SHEET 1 OF 2

AECOM

DRGNO.	60095653/NP/1651B
DESIGNED BY	TTF
CHECKED BY	CJH
DATE	11/09/09
SCALE	AS SHOWN
WORKING DRAWING	
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LOCATION PLAN
SCALE 1 : 5000

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

LEGEND:

- CONTRACT BOUNDARY
- [Diagonal Hatching] WORKING RESTRICTION ZONE
- [Cross Hatching] NAVIGATION AND WORKING RESTRICTION ZONE
- [Grid Hatching] WORKING BARGE, NAVIGATION AND WORKING RESTRICTION ZONE

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

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

WAN CHAI DEVELOPMENT PHASE II

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

AECOM

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DATE 日期	16/2009/01
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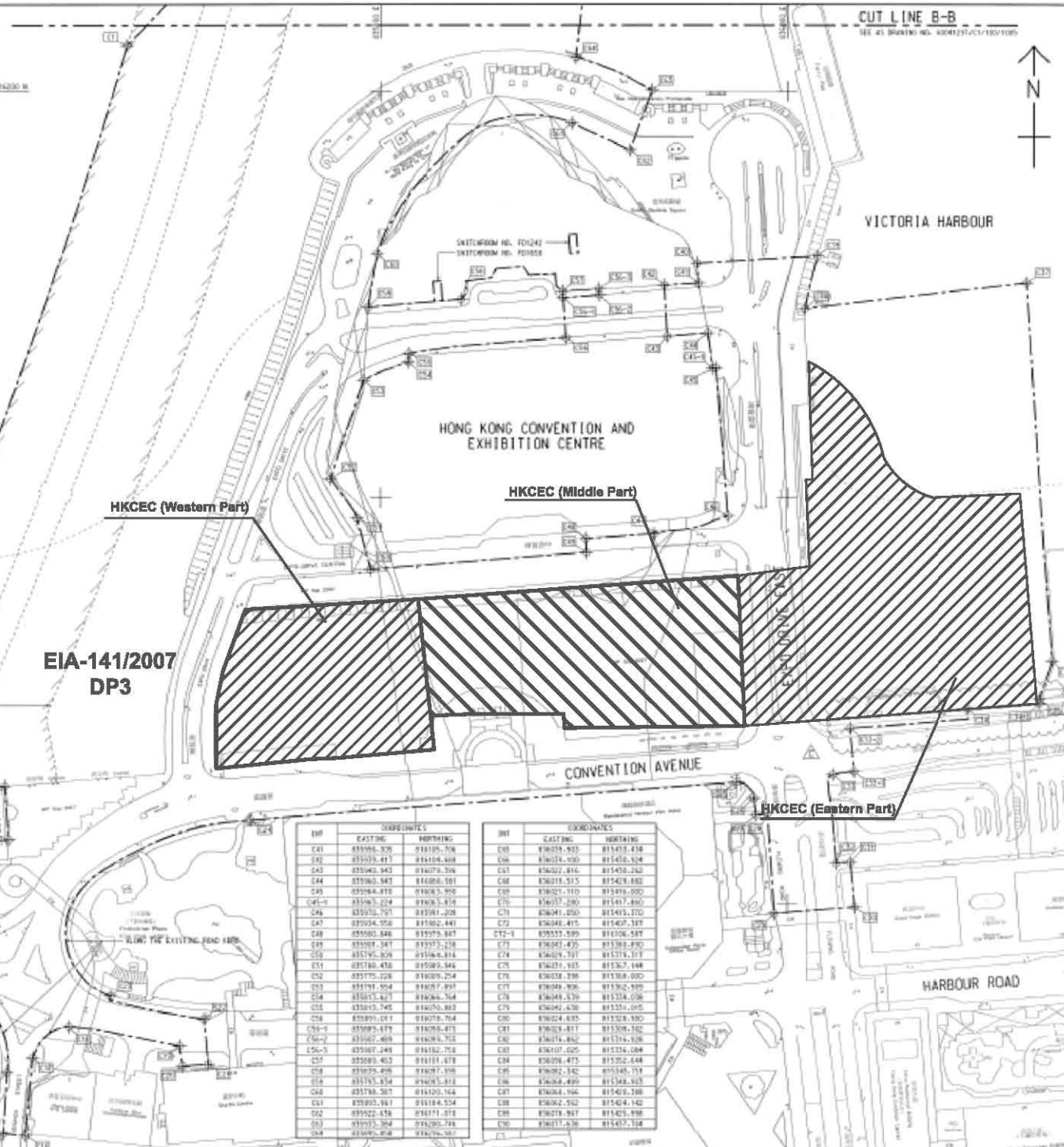
INSET 'A'
SCALE 1 : 1000

CENTRAL DISTRICT

014000 N



**EIA-141/2007
DP3**



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



KEY PLAN
SCALE 1 : 50000

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

INT	COORDINATES	
	EASTING	NORTHING
C1	830879.205	816222.551
C2	830797.971	816262.799
C3	830414.361	816268.425
C4	830417.020	816251.014
C5	830582.492	816229.522
C6	830581.564	816218.612
C7	830586.565	816215.191
C8	830589.191	816207.147
C9	830498.433	816202.241
C10	830491.082	816207.050
C11	830485.389	816208.075
C12	830467.496	816208.027
C13	830523.460	816204.817
C14	830496.433	816217.122
C15	830474.295	816206.593
C16	830475.195	816205.525
C17	830429.139	816204.441
C18	830446.035	816208.816
C19	830381.421	816206.587
C20	830392.537	816220.881
C21	830315.295	816217.484
C22	830313.183	816207.543
C23	830267.096	816209.074
C24	830276.964	816221.676
C25	830315.295	816220.251
C26	830201.647	816212.296
C27	830204.025	816243.836
C28	830206.218	816244.545
C29	830201.225	816239.340
C30	830203.781	816208.647
C31	830217.216	816228.470
C32	830224.142	816225.117
C33	830221.061	816216.482
C34	830226.290	816224.700
C35	830227.428	816225.266
C36	830226.187	816224.290
C37	830224.812	816224.290
C38	830224.747	816224.290
C39	830226.850	816219.134
C40	830219.190	816226.257
C41	830226.810	816227.295
C42	830216.906	816229.080
C43	830225.682	816215.542

C	TENDER ADDENDUM NO.4	SHEN /VL/ DEP 04
B	TENDER ADDENDUM NO.2	SHEN /VL/ DEP 03
A	TENDER ADDENDUM NO.1	SHEN /VL/ DEP 03
-	TENDER DRAWING	SHEN /VL/ DEP 03

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

WAN CHAI DEVELOPMENT PHASE II

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

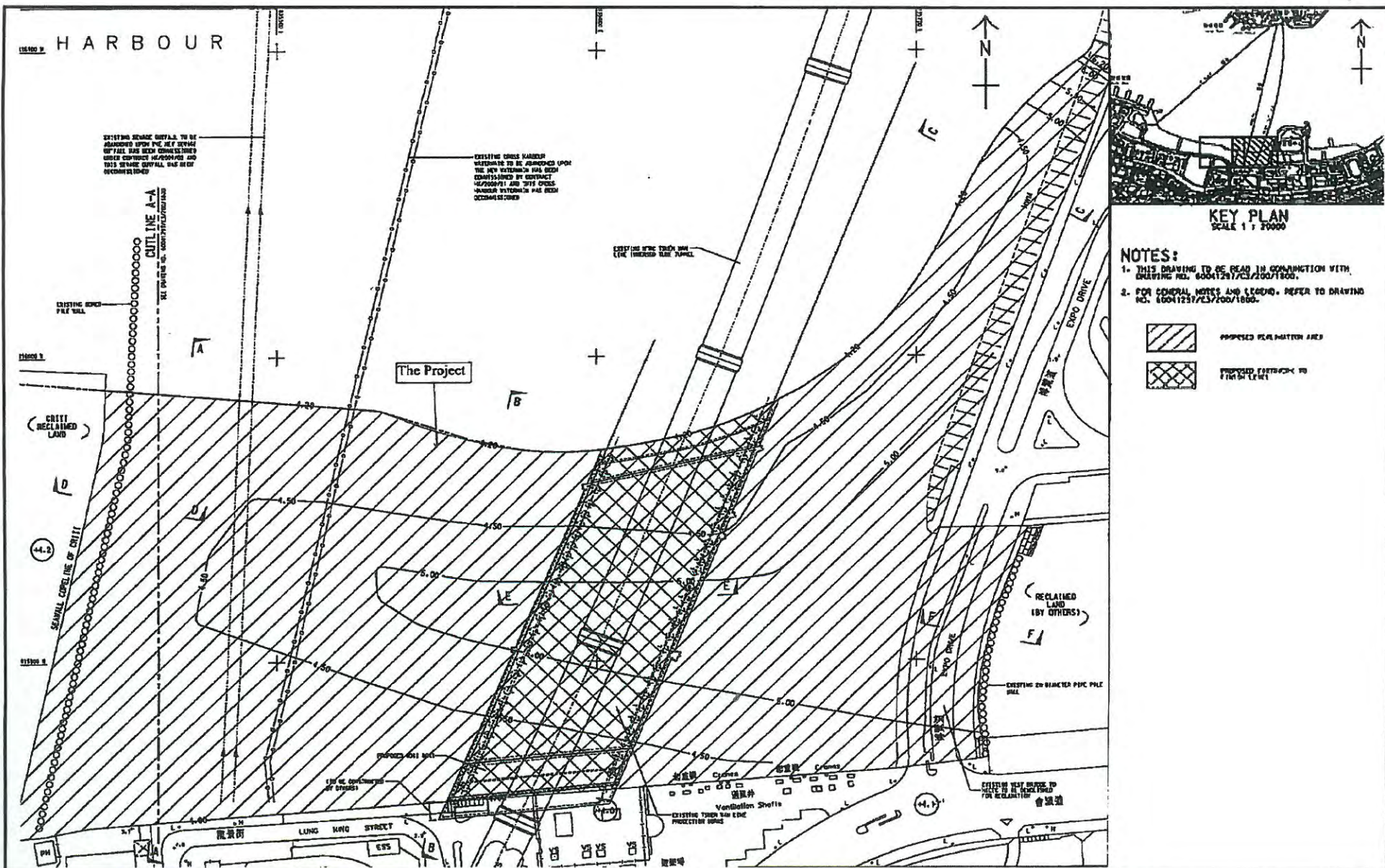
**SITE BOUNDARY
SETTING OUT PLAN**
(Contract no. Hk/2009/01)

AECOM

DRGNO: 60041297/C1/100/1006C

SCALE: 1:500	DATE: 08/2009/01	PROJECT: WAN CHAI
DRAWN BY: JEC	CHECKED BY: JEC	DATE: 08/2009/01
DATE: 08/2009/01	SCALE: 1:500	PROJECT: WAN CHAI

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KEY PLAN
SCALE 1 : 2000

- NOTES:**
- 1- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60041291/C3/200/1800.
 - 2- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING NO. 60041231/C3/200/1800.

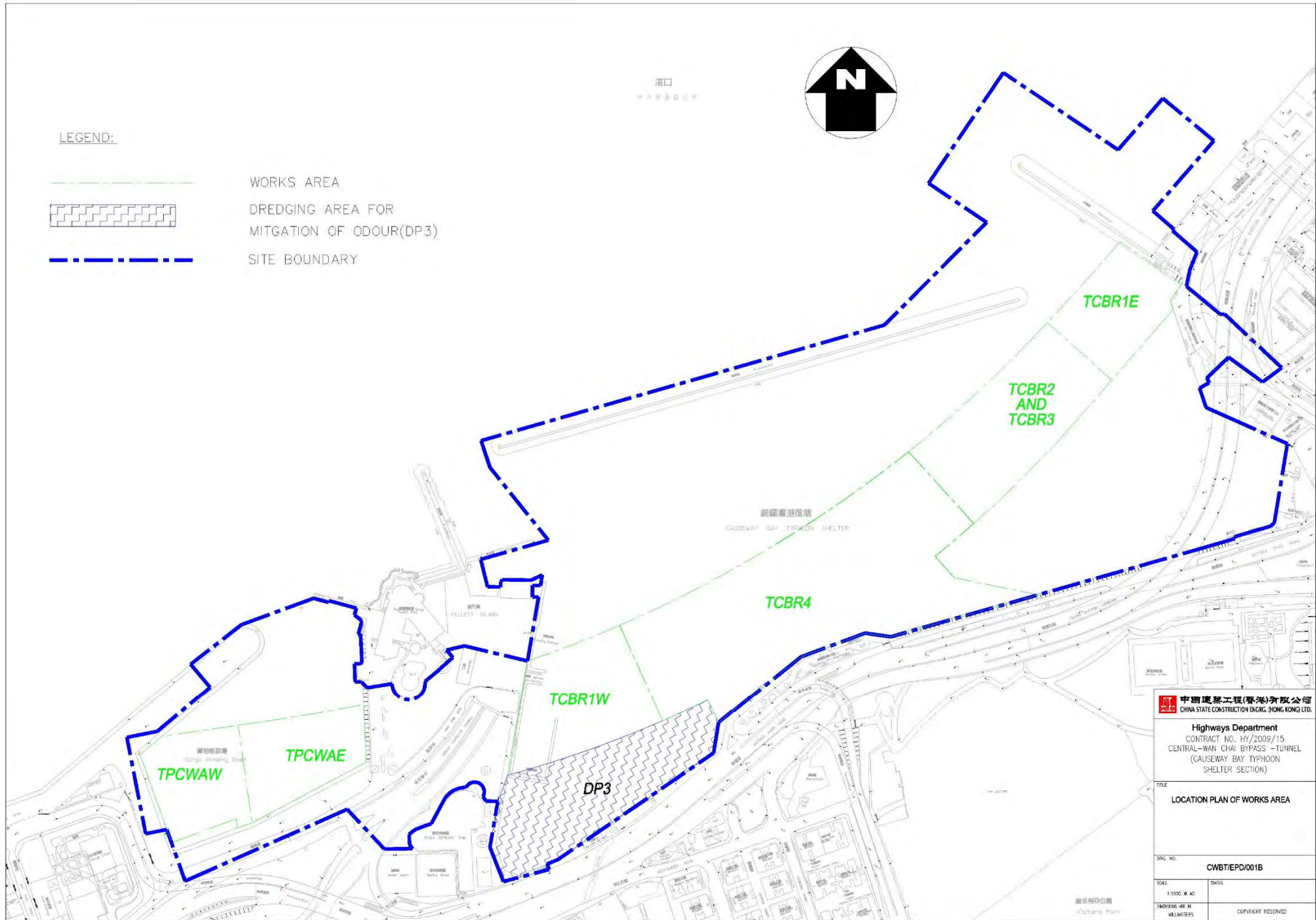
	PROPOSED RECLAMATION AREA
	PROPOSED STRUCTURE TO BE BUILT

Project Title: Wan Chai Development Phase II – Central Wan Chai Bypass at Wan Chai West (Contract No. HK/2012/08) – Marine Works
工程項目名稱: 灣仔發展計劃第二期 - 中環灣仔繞道-灣仔西段(合約編號:HK/2012/08)-海事工程
Environmental Permit No. : FEP-06/356/2009
環境許可證編號 : FEP-06/356/2009

Figure 1b : General Layout of the Project
圖 1b : 工程項目佈局圖

(This figure was prepared based on Figure 1b of Application for Further Environmental Permit (Application No.: FEP 145/2013))
 (本圖是根據申請新的環境許可證(申請書編號 FEP-145/2013) 圖 1b 編製)





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

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

TITLE
LOCATION PLAN OF WORKS AREA

DRG. NO.
CWBT/EPD/001B

SCALE
1:1000 @ A0

DATE
MAY 2012

PROJECT NO.
MTR/01/01

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維多利亞公園
Victoria Park

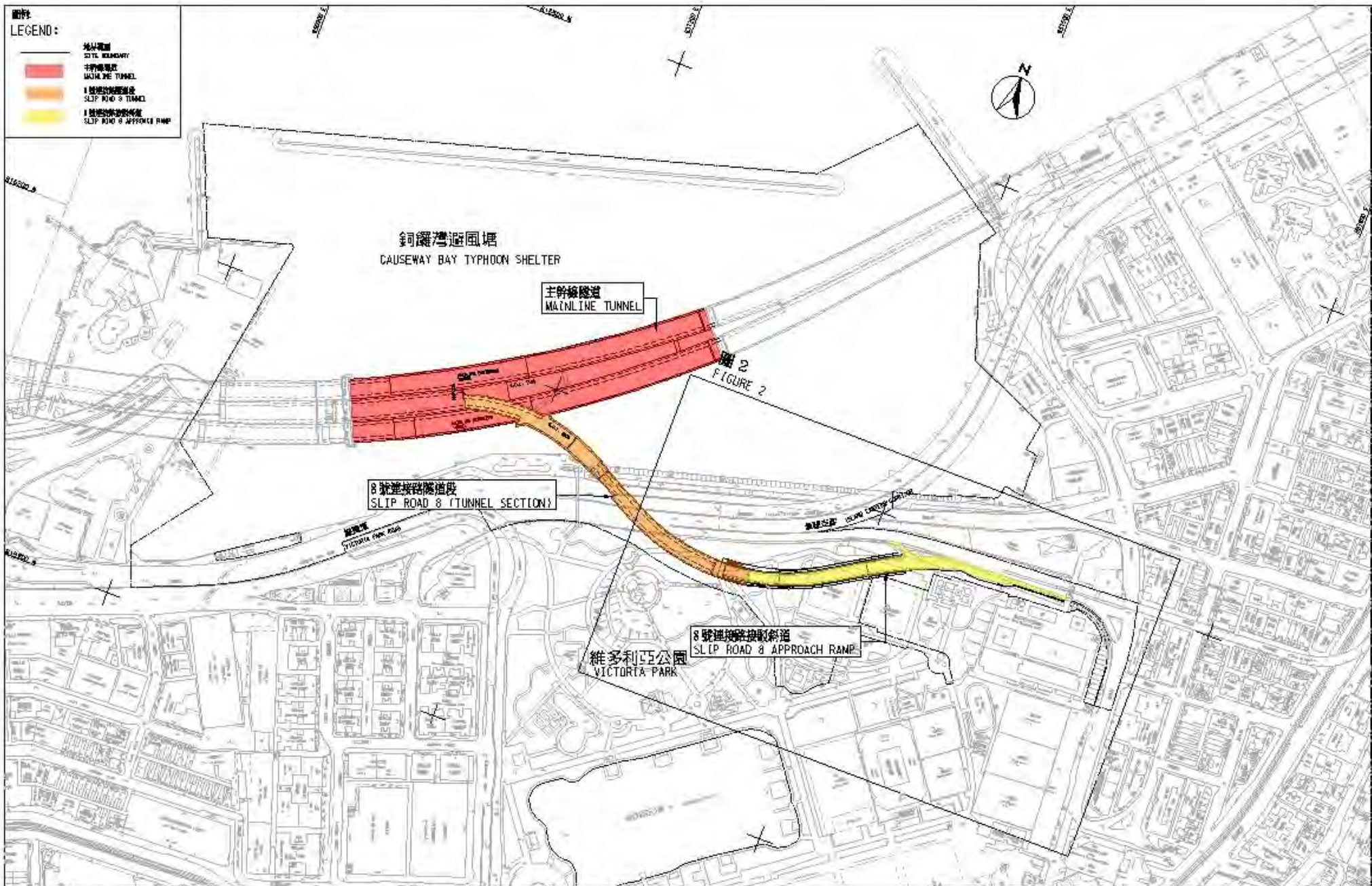


圖 1 - 合約編號 HY/2010/08 中環灣仔繞道-8號連接路段隧道
 FIGURE 1 - CONTRACT NO. HY/2010/08 - CENTRAL - WAN CHAI BYPASS - TUNNEL (SLIP ROAD 8 SECTION)

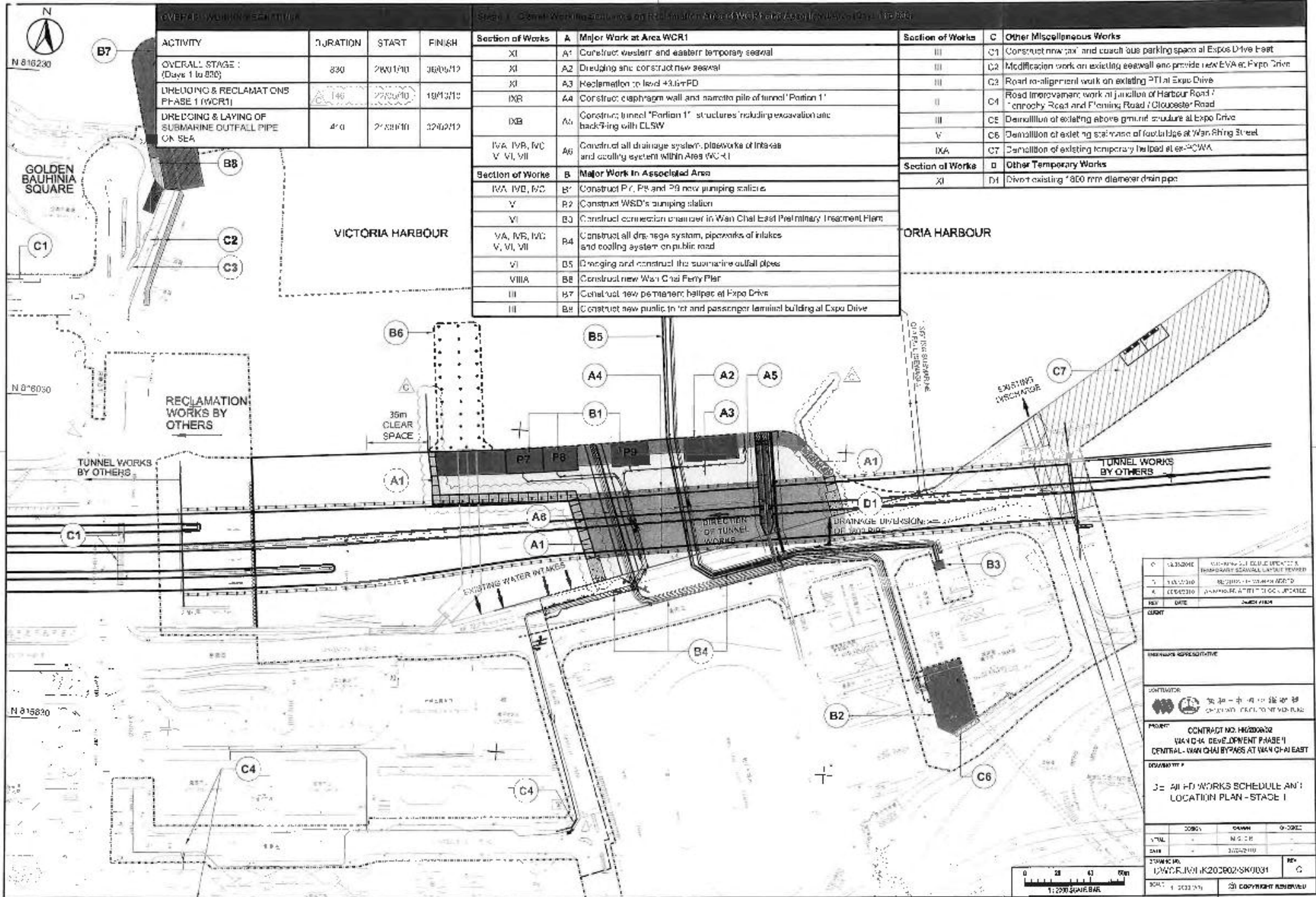


Table I - Overall Work Schedule and an Overall Area Work Allocation for Stage I WCR1

ACTIVITY	DURATION	START	FINISH
OVERALL STAGE I (Days 1 to 830)	830	27/01/10	30/09/12
DREDGING & RECLAMATIONS PHASE I (WCR1)	146	22/06/10	18/10/12
DREDGING & LAYING OF SUBMARINE OUTFALL PIPE ON SEA	47d	27/08/10	31/10/10

Section of Works	A	Major Work at Area WCR1
XI	A1	Construct western and eastern temporary seawall
XI	A2	Dredging and construct new seawall
XI	A3	Reclamation to level +3.6m PD
IXB	A4	Construct diaphragm wall and concrete pile of tunnel 'Portion 1'
IXB	A5	Construct tunnel 'Portion 1' structures including excavation and back-filling with CLSW
IYA, IYB, IYC, V, VI, VII	A6	Construct all drainage system, pipeworks of inlets and cooling system within Area WCR1
Section of Works	B	Major Work in Associated Area
IYA, IYB, IYC	B1	Construct P7, P8 and P9 new pumping stations
V	B2	Construct WSD's pumping station
VI	B3	Construct connection chamber in Wan Chai East Preliminary Treatment Plant
IYA, IYB, IYC, V, VI, VII	B4	Construct all drainage system, pipeworks of inlets and cooling system on public road
VI	B5	Dredging and construct the submarine outfall pipes
VIII A	B6	Construct new Wan Chai Ferry Pier
III	B7	Construct new permanent hallpat at Expo Drive
III	B8	Construct new public toilet and passenger terminal building at Expo Drive

Section of Works	C	Other Miscellaneous Works
III	C1	Construct new road and coach bus parking space at Expo Drive East
III	C2	Modification work on existing seawall and provide new EVA at Expo Drive
III	C3	Road re-alignment work on existing PTI at Expo Drive
II	C4	Road improvement work at junction of Harbour Road / canopy Road and Fleming Road / Gloucester Road
III	C5	Demolition of existing above ground structure at Expo Drive
V	C6	Demolition of existing staircase of footbridge at Wan Chai Street
IXA	C7	Demolition of existing temporary helped at ex-WCWA
Section of Works	D	Other Temporary Works
XI	D1	Divert existing 1800 mm diameter drain pipe

C 1433016 CHINA RAILWAY GROUP CORPORATION
 CHINA RAILWAY GROUP LIMITED
 1. 3/11/2010 PROJECT MANAGER
 4. 22/09/2010 DRAWING APPROVED BY
 503 DATE 30/09/2010

CONTRACT NO. HK200802
 WAI WAI DEVELOPMENT PHASE II
 CENTRAL - WAN CHAI BYPASS AT WAN CHAI EAST

DRAWN BY
 J2 ALL PD WORKS SCHEDULE AND LOCATION PLAN - STAGE I

SCALE	DWG NO.	DATE	REV.
1:2000 SCALE BAR	WCR1/11/1/K200802/SK0031	30/09/2010	C
SCALE 1:2000			

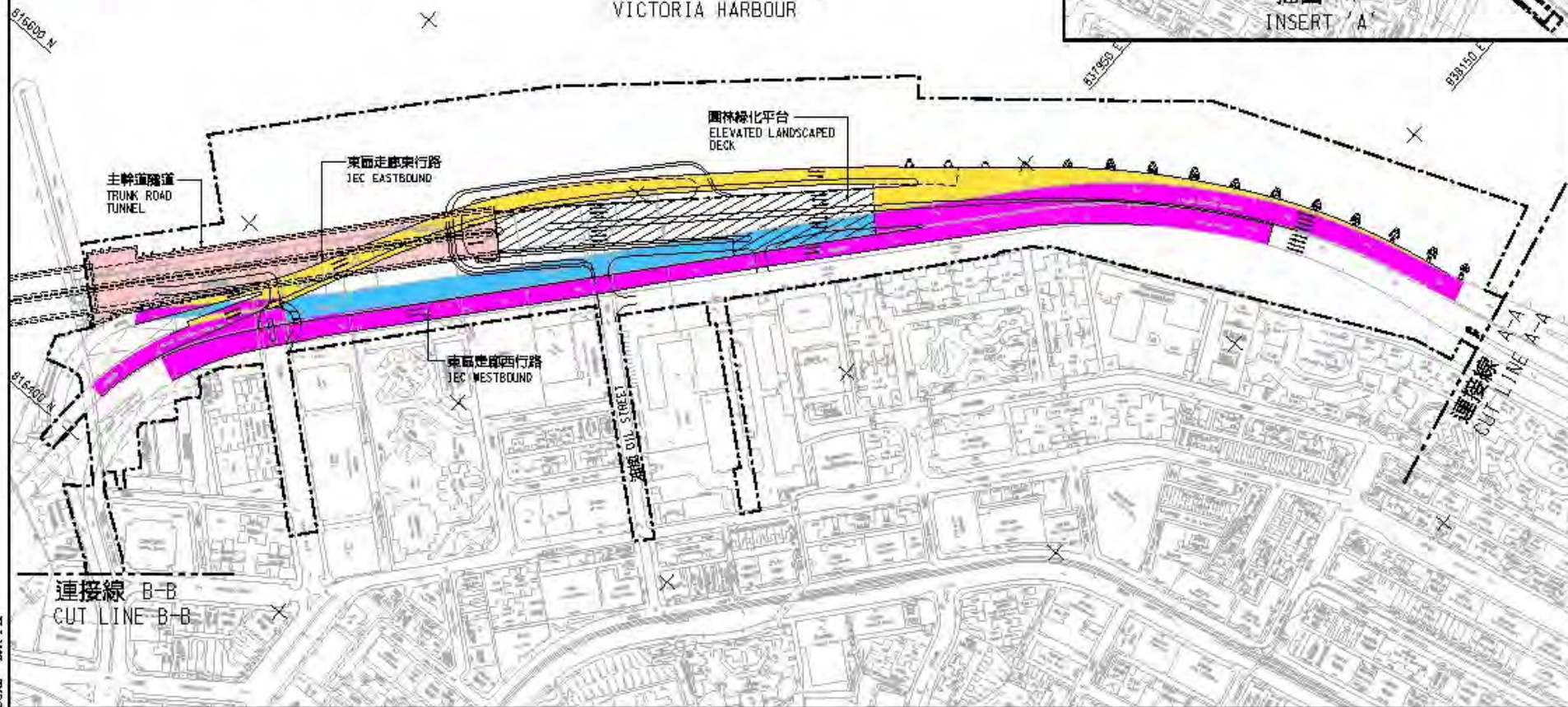
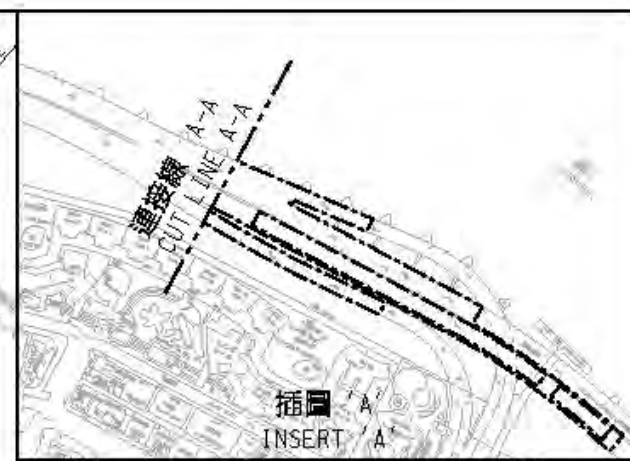
C:\Users\pawli\Documents\WORKING\2110_25_10\2010\11\WCR1\WORKING\WCR1\1111/11/1/K200802/SK0031.dwg 30/09/2010

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
-  擬議高架道路
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



Figure 2.2

Project Organization Chart



Project Organization Chart

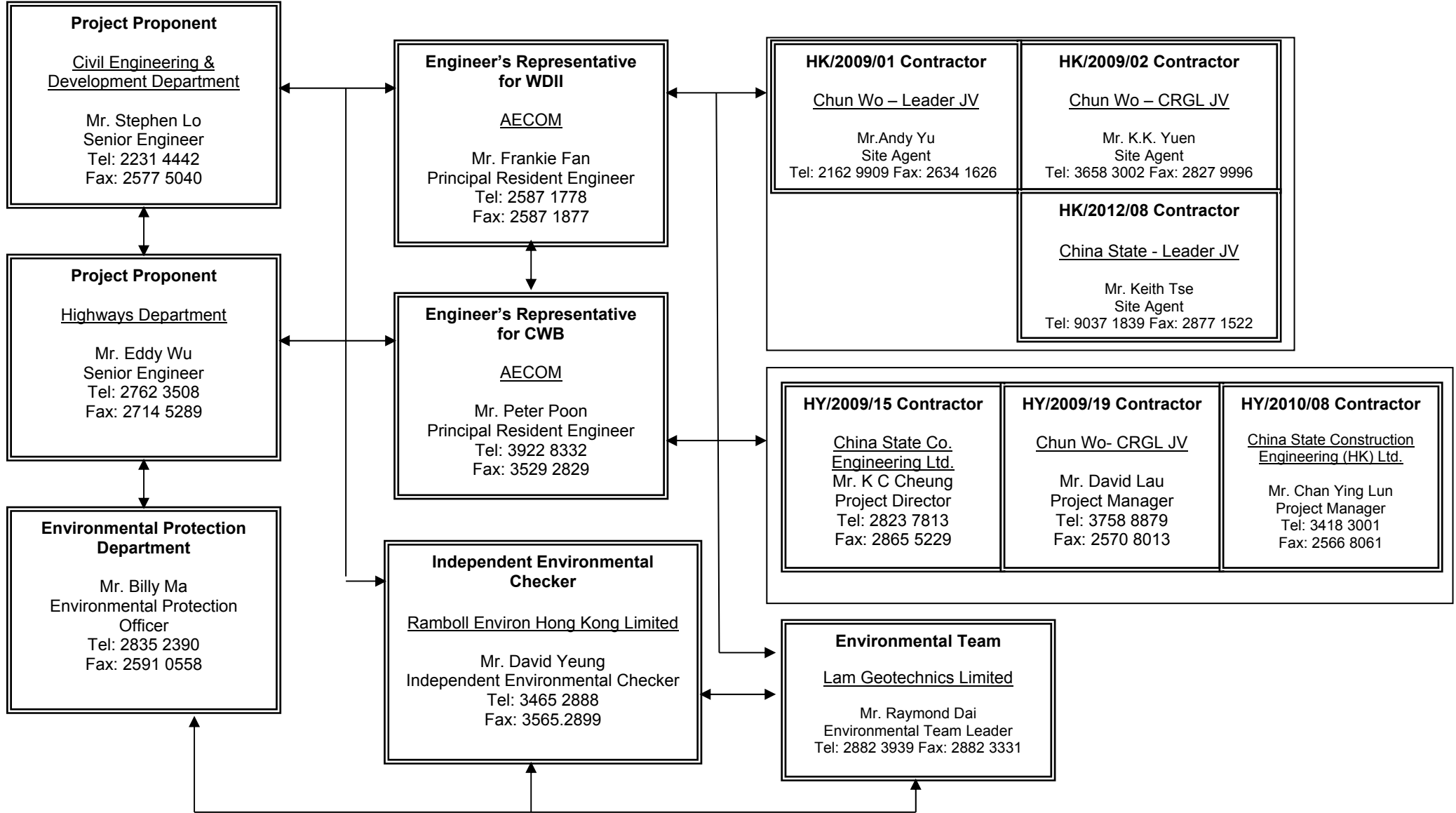


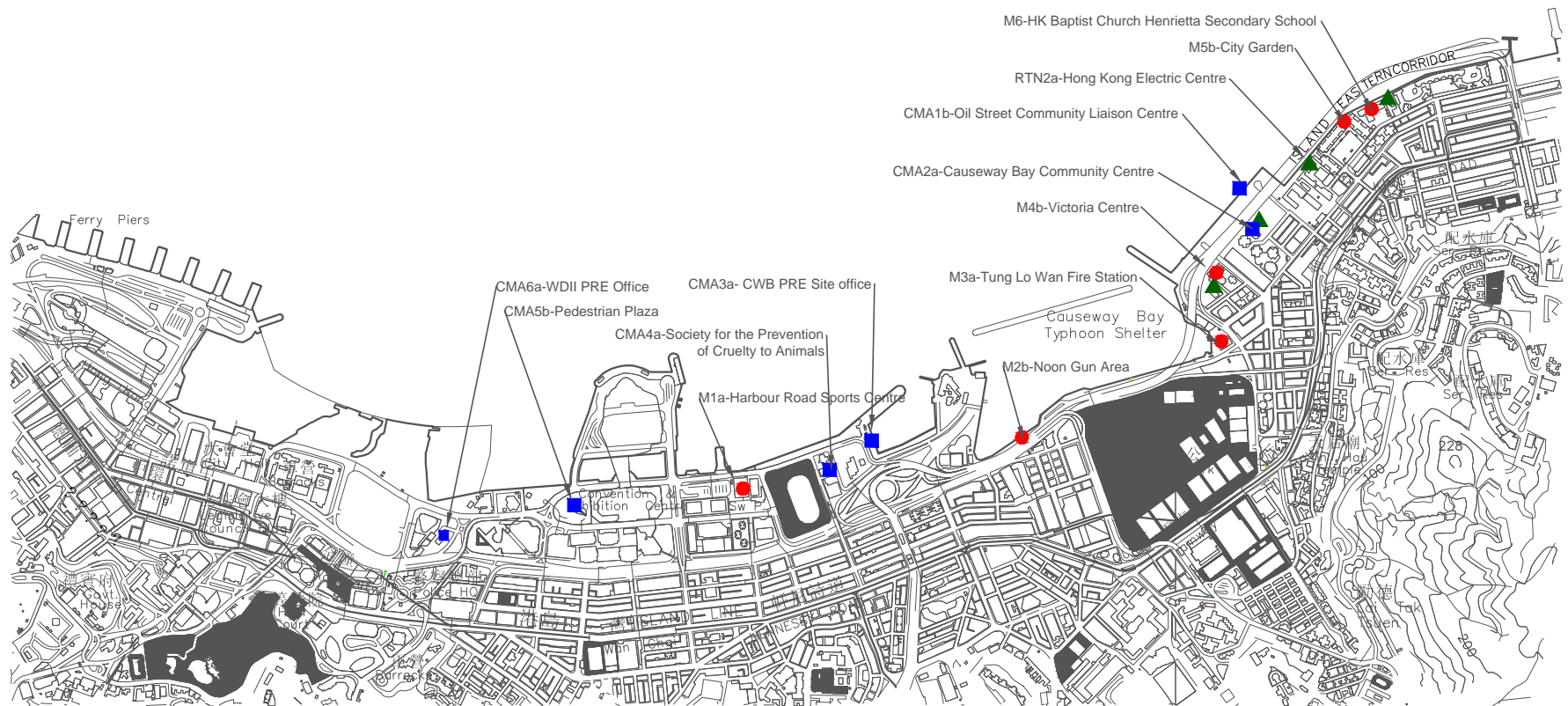


Figure 4.1

Locations of Monitoring Stations

Legend

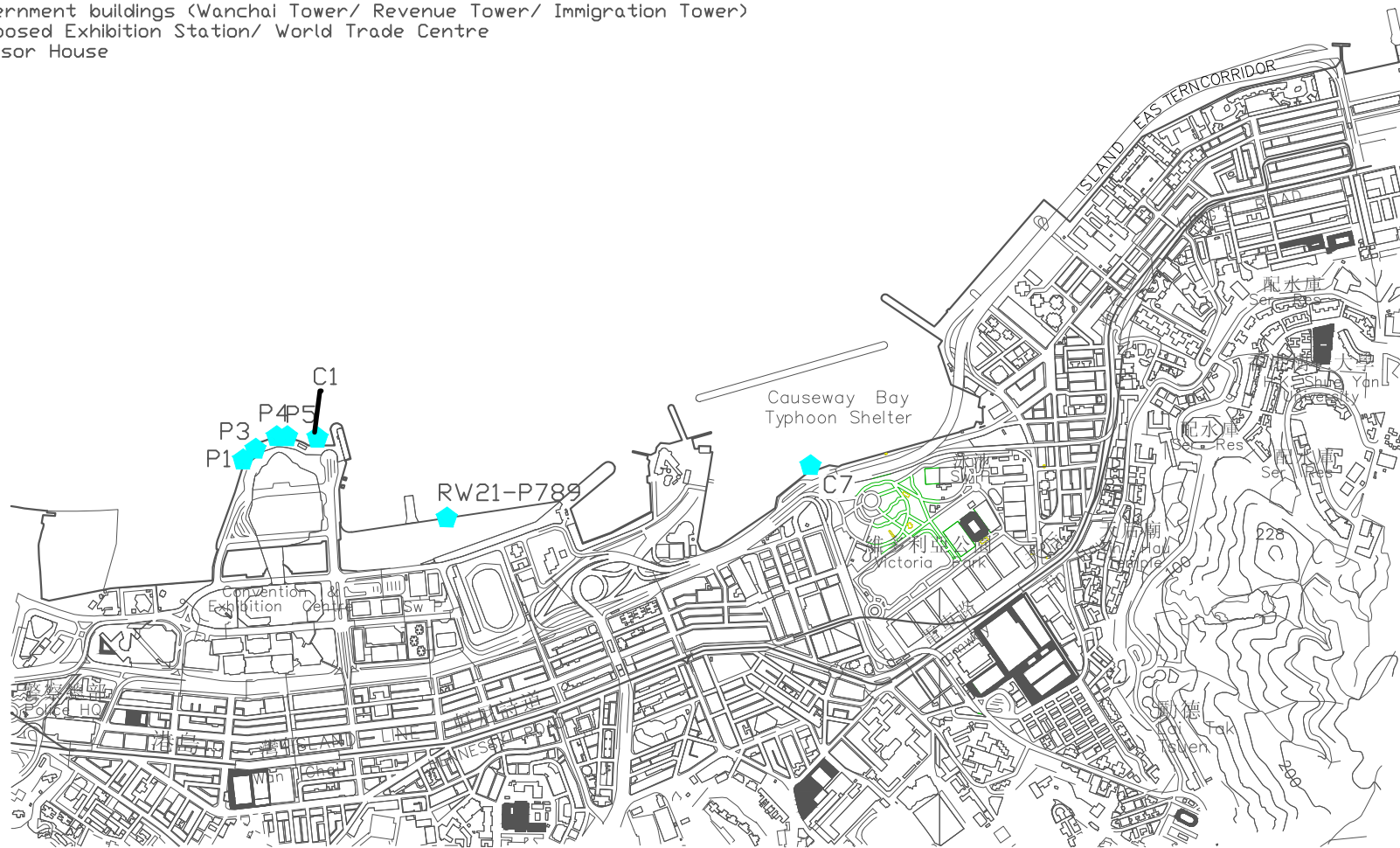
- Noise Monitoring Station
- Air Monitoring Station
- ▲ Real-time Noise Monitoring Station



LOCATIONS OF AIR QUALITY AND NOISE 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

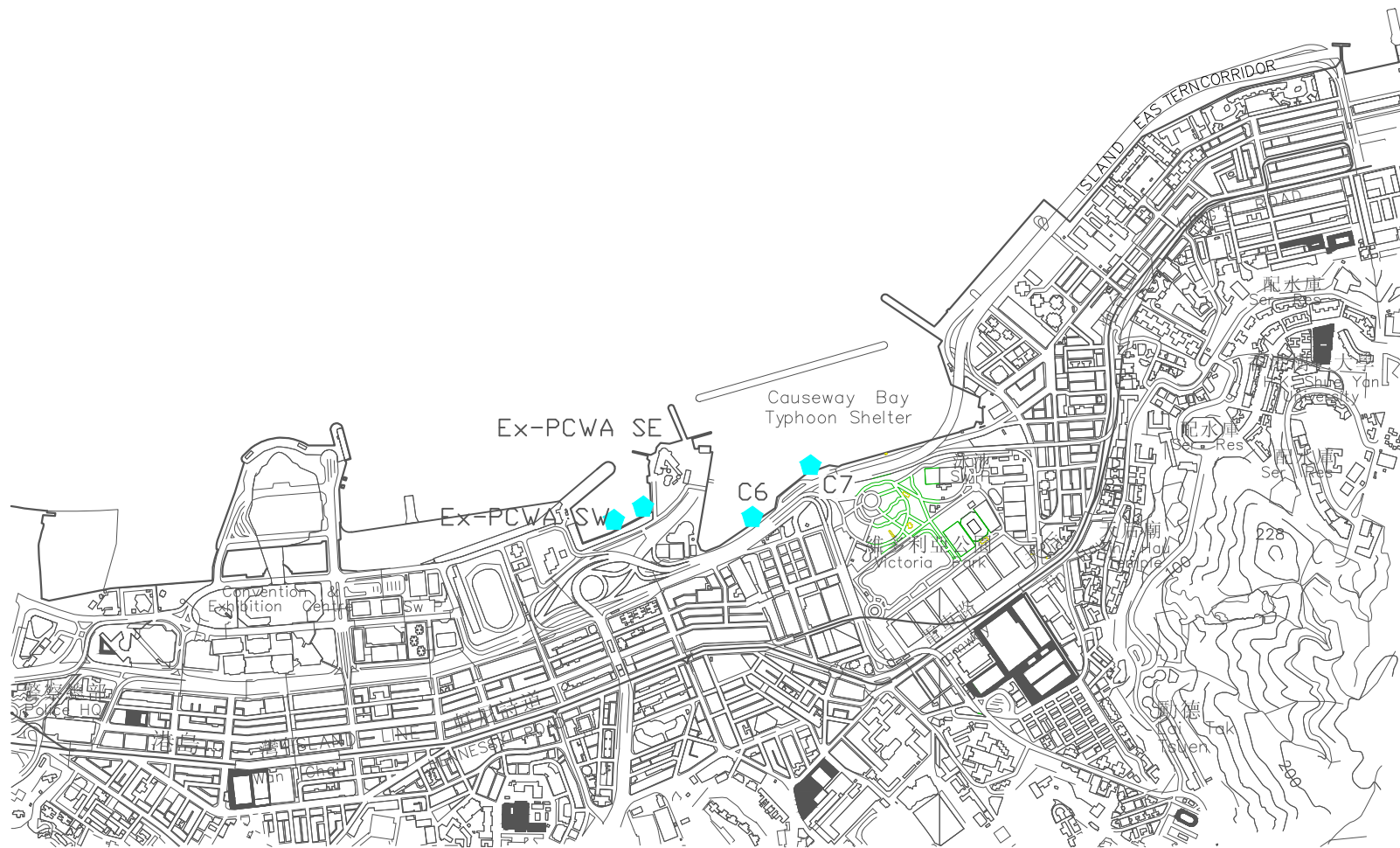


FIGURE

LOCATIONS OF WATER QUALITY MONITORING STATIONS

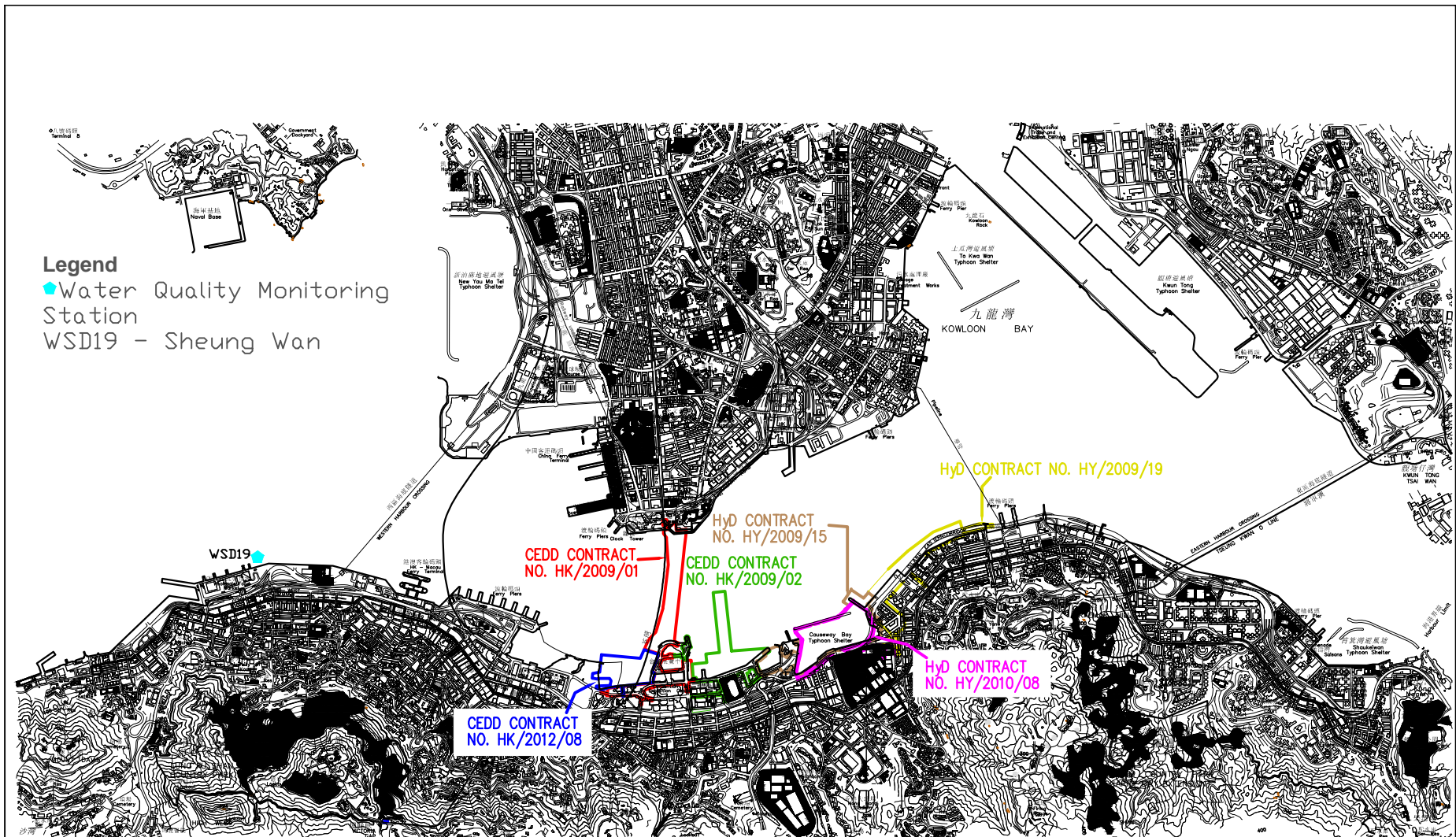
Legend

- ◆ Enhance DO Monitoring Stations
- Ex-PCWA SE Ex-Public Cargo Wanchai Area SouthEast Station
- Ex-PCWA SW Ex-Public Cargo Wanchai Area Southwest Station
- C6 Proposed Exhibition Station/ World Trade Centre
- C7 Windsor House



FIGURE

LOCATIONS OF ENHANCE DO MONITORING STATIONS



Legend

● Water Quality Monitoring Station
 WSD19 - Sheung Wan

FIGURE

LOCATIONS OF WATER QUALITY MONITORING STATIONS

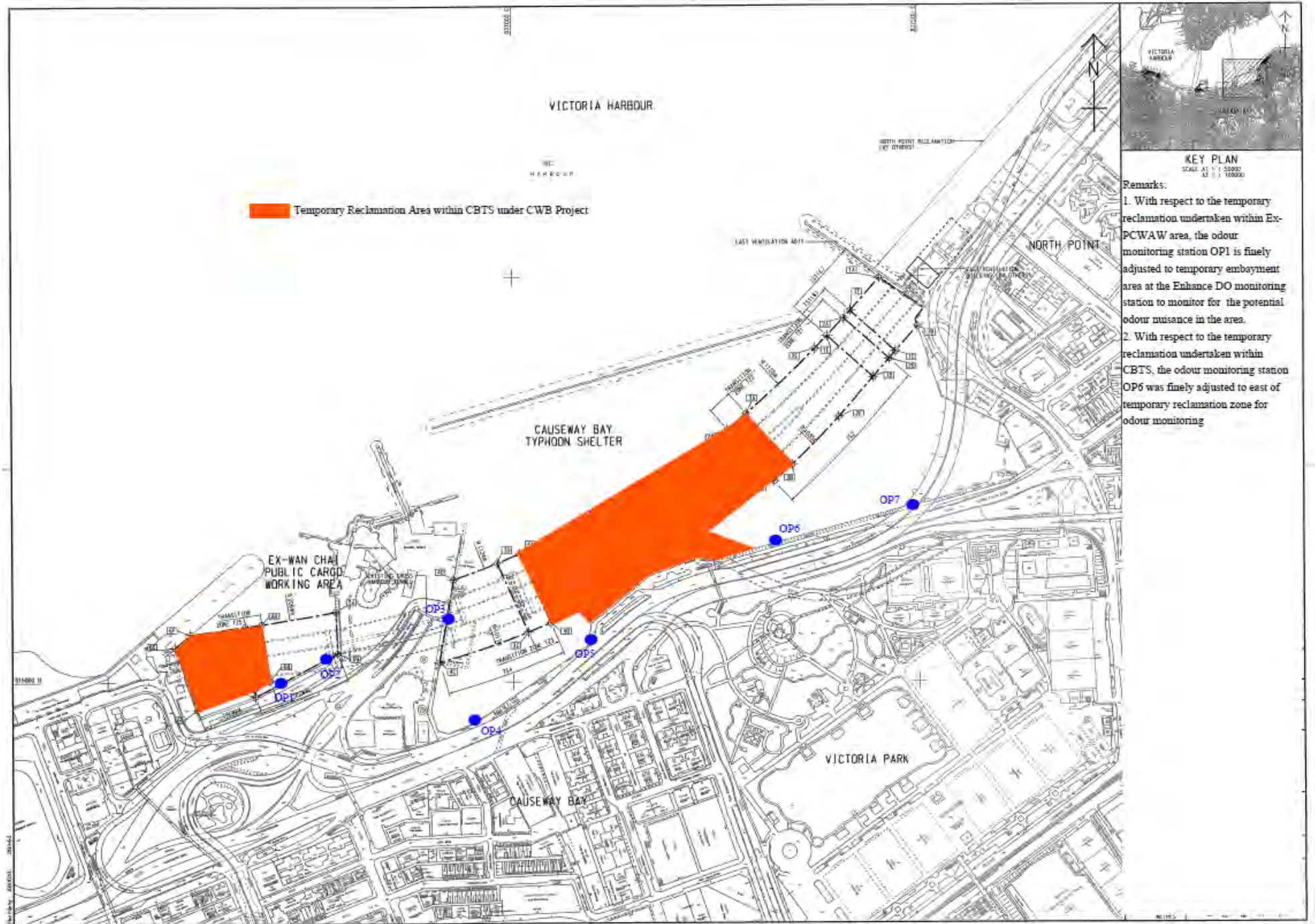


Figure: Locations of Odour Patrol Monitoring



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

Appendix 3.1

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

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

Appendix 3.1

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

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

Table A13.2 Implementation Schedule for Noise Control

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

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

Appendix 3.1

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

Appendix 3.1

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

Appendix 3.1

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

Appendix 3.1

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

Appendix 3.1

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

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

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

Appendix 3.1

Table A13.3 Implementation Schedule for Water Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
<i>For DP3 – Reclamation Works, DP5 (Wan Chai East Sewage Outfall), DP6 (Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui), DP1 – CWB (within the Project Boundary)</i>								
S5.8	A phased reclamation approach is planned for the WDII. Containment of fill within each of the reclamation phases by seawalls is proposed, with the seawall constructed first (above high water mark) with filling carried out behind the completed seawalls. Any gaps that may need to be provided for marine access will be shielded by silt curtains to control sediment plume dispersion away from the site. Filling for seawall construction should be carried out behind the silt curtain	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8	Dredging shall be carried out by closed grab dredger for the following works: <ul style="list-style-type: none"> • Seawall construction in all the reclamation areas; • Construction of the CWB Tunnel • Construction of the proposed WSD water mains; and • Construction of the proposed Wan Chai East sewage outfall pipelines. 	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	Dredging for the Wan Chai East sewage outfall pipelines shall not be carried out concurrently with the following activities: <ul style="list-style-type: none"> • Dredging along the proposed cross-harbour water mains; • Dredging along the seawall in the Wan Chai Reclamation (WCR) zone (area between HKCEC Extension and PCWA). 	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																									
				Des	C	O	Dec																										
S5.8	The water body behind the temporary reclamations within the Causeway Bay typhoon shelter shall not be fully enclosed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																									
S5.8	As a mitigation measure, to avoid the accumulation of water borne pollutants within the temporary embayment between CR111 and HKCEC1, an impermeable barrier, suspended from a floating boom on the water surface and extending down to the seabed, will be erected by the contractor before the HKCEC1 commences. The barrier will channel the stormwater discharge flows from Culvert L to the outside of the embayment. The contractor will maintain this barrier until the reclamation works in HKCEC2W are carried out and the new Culvert L extension is constructed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																									
S5.8, Figure 5.3	The total dredging rates in each of the marine works zones shall not be more than the maximum production rates stated in the table below. These are the production rates without considering the effect of silt curtain. <table border="1" style="margin-top: 10px; width: 100%;"> <thead> <tr> <th 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> </thead> <tbody> <tr> <td colspan="4">Dredging along seawall or breakwater</td> </tr> <tr> <td>North Point Shoreline Zone (NPR)</td> <td>6,000</td> <td>375</td> <td>42,000</td> </tr> <tr> <td>Causeway Bay</td> <td>1,500</td> <td>94</td> <td>10,500</td> </tr> <tr> <td>Shoreline Zone</td> <td>6,000</td> <td>375</td> <td>42,000</td> </tr> <tr> <td>PCWA Zone</td> <td>5,000</td> <td>313</td> <td>35,000</td> </tr> </tbody> </table>	Reclamation Area	Maximum Dredging Rate		Maximum Dredging Rate (m ³ per week)	m ³ per day	m ³ per hour (for 16 hrs per day)	Dredging along seawall or breakwater				North Point Shoreline Zone (NPR)	6,000	375	42,000	Causeway Bay	1,500	94	10,500	Shoreline Zone	6,000	375	42,000	PCWA Zone	5,000	313	35,000	Work site / During the construction period	Contractor		√		EIAO-TM, WPCO
Reclamation Area	Maximum Dredging Rate		Maximum Dredging Rate (m ³ per week)																														
	m ³ per day	m ³ per hour (for 16 hrs per day)																															
Dredging along seawall or breakwater																																	
North Point Shoreline Zone (NPR)	6,000	375	42,000																														
Causeway Bay	1,500	94	10,500																														
Shoreline Zone	6,000	375	42,000																														
PCWA Zone	5,000	313	35,000																														

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures				Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines																						
							Des	C	O	Dec																							
	<table border="1"> <tr> <td>Wan Chai Shoreline Zone (WCR)</td> <td>6,000</td> <td>375</td> <td>42,000</td> </tr> <tr> <td>HKCEC Shoreline Zone (HKCEC)</td> <td>1,500</td> <td>94</td> <td>10,500</td> </tr> <tr> <td>HKCEC Stage 1 & 3</td> <td>6,000</td> <td>375</td> <td>42,000</td> </tr> <tr> <td>HKCEC Stage 2</td> <td>1,500</td> <td>94</td> <td>10,500</td> </tr> <tr> <td>Cross Harbour Water Mains</td> <td>1,500</td> <td>94</td> <td>10,500</td> </tr> <tr> <td>Wan Chai East Submarine Sewage Pipeline</td> <td>1,500</td> <td>94</td> <td>10,500</td> </tr> </table> <p>Note: 1,500 m³ per day shall be applied for construction of the western seawall of WCR1.</p>	Wan Chai Shoreline Zone (WCR)	6,000	375	42,000	HKCEC Shoreline Zone (HKCEC)	1,500	94	10,500	HKCEC Stage 1 & 3	6,000	375	42,000	HKCEC Stage 2	1,500	94	10,500	Cross Harbour Water Mains	1,500	94	10,500	Wan Chai East Submarine Sewage Pipeline	1,500	94	10,500								
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S5.8, Figure 5.3	Dredging along the seawall at WCR1 shall be undertaken initially at 1,500m ³ per day for construction of the western seawall (which is in close proximity of the WSD intake), followed by partial seawall construction at the western seawall (above high water mark) to protect the adjacent intakes as much as possible from further dredging activities.				Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																						
S5.8, Figure 5.3	For dredging within the Causeway Bay typhoon shelter, seawall shall be partially constructed to protect the nearby seawater intakes from further dredging activities. For example, at TCBR1W, the southern and eastern seawalls shall be constructed first (above high water mark) so that the seawater intakes at the inner water would be protected from the impacts from the remaining dredging activities along the northern boundary.				Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																						
S5.8, Figure 5.3	Silt curtains shall be deployed around the closed grab dredgers during seawall dredging and seawall trench filling in the areas of HKCEC, WCR, TCBR and NP.				Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																						
S5.8, Figure 5.3	Silt screens shall be applied to seawater intakes at interim construction stages as stated below:				Work site / During the construction period	Contractor		√			EIAO-TM, WPCO																						
	<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																					
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Appendix 3.1

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

Appendix 3.1

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

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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	<p>Dredging of contaminated mud is recommended as a mitigation measures for control of operational odour impact from the Causeway Bay typhoon shelter. In recognition of the potential impacts caused by dredging activities close to the seawater intakes, only 1 small close grab dredger shall be operated within the typhoon shelter (for the dredging to mitigate odour impact) at any time to minimize the potential impact. Double silt curtains shall be deployed to fully enclose the closed grab dredger during the dredging operation. In addition, an impermeable barrier, suspended from a floating boom on the water surface and extended down to the seabed, shall be erected to isolate the adjacent intakes as much as possible from dredging activities. For example, if dredging is to be carried out at the southwest corner of the typhoon shelter, physical barriers shall be erected to west of the cooling water intake for Excelsior Hotel so that the intake would be shielded from most of the SS generated from the dredging operation to the west of the intake. For area in close proximity of the cooling water intake point, the dredging rate shall be reduced as much as practicable. Site audit and water quality monitoring shall be carried out at the seawater intakes during the dredging operations. Daily monitoring of SS at the cooling water intake shall be carried out, and 24 hour monitoring of turbidity at the intakes shall be implemented during the dredging activities. If the monitoring results indicate that the dredging operation has caused significant changes in water quality conditions at the seawater intakes, appropriate actions shall be taken to stop the dredging and mitigation measures such as slowing down the dredging rate shall be implemented.</p>	Causeway Bay typhoon shelter/Implementation of harbour-front enhancement.	CEDD ³		√			WPCO

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	
				Des	C	O	Dec		
For the Whole Project									
S5.8	<ul style="list-style-type: none"> Construction Runoff and Drainage use of sediment traps, wheel washing facilities for vehicles leaving the site, and adequate maintenance of drainage systems to prevent flooding and overflow; Permanent drainage channels shall incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94; a sediment tank constructed from pre-formed individual cells of approximately 6 - 8 m3 capacity can be used for settling ground water prior to disposal; oil interceptors shall be provided in the drainage system for the tunnels and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor shall have a bypass to prevent flushing during periods of heavy rain; precautions and actions to be taken when a rainstorm is imminent or forecast, and during or after rainstorms. Particular attention shall be paid to the control of any silty surface runoff during storm events; on-site drainage system shall be installed prior to the commencement of other construction activities. Sediment traps shall be installed in order to minimise the sediment loading of the effluent prior to discharge; All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge shall be adequately designed for the controlled release of storm flows. All sediment control measures shall be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage shall be reinstated to its original condition when the construction work is finished or the temporary diversion is no longer 	<ul style="list-style-type: none"> Work site / During the construction period 	Contractor		√				ProPECC PN 1/94; WPCO (TM-DSS)

³ CEDD will identify an implementation agent.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>required.</p> <ul style="list-style-type: none"> All fuel tanks and store areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity. 							
	<ul style="list-style-type: none"> Minimum distances of 100 m shall be maintained between the storm water discharges and the existing or planned WSD flushing water intakes during construction phase. 							
S5.8	<p><i>Sewage from Construction Work Force</i></p> <p>Construction work force sewage discharges on site shall be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage shall be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.</p>	Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)
S5.8	<p><i>Floating Debris and Refuse</i></p> <p>Collection and removal of floating refuse shall be performed at regular intervals on a daily basis. The contractor shall be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.</p>	Work site and adjacent water / During the construction period.	Contractor		√			WPCO

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

Appendix 3.1

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

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

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

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								
<i>For DP3 – Reclamation Works</i>								
S6.7.2	<p>Marine Sediments</p> <p>The dredged marine sediments would be loaded onto barges, transported to and disposed of at the designated disposal sites at South of Cheung Chau, East of Ninepin, East of Tung Lung Chau, South of Tsing Yi or East of Sha Chau to be allocated by the MFC depending on their level of contamination or at other disposal sites after consultation with the MFC and EPD. In accordance with the ETWB TCW No. 34/2002, the contaminated material must be dredged and transported with great care. The mitigation measures recommended in Section 5 of the EIA Report shall be incorporated. The dredged contaminated sediment must be effectively isolated from the environment upon final disposal and shall be disposed of at the Type 2 confined marine disposal contaminated mud pit.</p>	Work site / During the construction period	Contractor		√			ETWB TCW No. 34/2002
S6.7.3	Based on the biological screening results, the Category H (>10xLCEL) sediment which failed the biological testing would require Type 3 special disposal. The volume of Category H sediment from the Causeway Bay typhoon shelter which would require special disposal arrangements is estimated to be approximately 0.05 Mm ³ . A feasible containment method is proposed whereby the dredged sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal.							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.5	It will be the responsibility of the Contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, at least 3 months prior to the dredging contract being tendered							
S6.7.6	<p>During transportation and disposal of the dredged marine sediments requiring Type 1 and Type 2 disposal, the following measures shall be taken to minimise potential impacts on water quality:</p> <ul style="list-style-type: none"> Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved. 							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP. Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation. 							
S6.6.12	<p>Floating Refuse</p> <p>During the construction phase, the project proponent's contractor will be responsible for the collection of any refuse within their works area. Floating booms will be provided on the water surface to confine the refuse from the working barges as well as to avoid the accumulation of pollutants within temporary embayment as mentioned in Table 13.3.</p>	Work site / During the construction period	Contractor		√			
For the Whole Project								

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.8	<p><i>Waste Reduction Measures</i></p> <p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; to encourage collection of aluminium cans, PET bottles and paper, separate labelled bins shall be provided to segregate these wastes from other general refuse generated by the work force; any unused chemicals or those with remaining functional capacity shall be recycled; use of reusable non-timber formwork, such as in casting the tunnel box sections, to reduce the amount of C&D material. prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill; proper storage and site practices to minimise the potential for damage or contamination of construction materials; and plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. 	Work site / During planning and design stage, and construction stage	Contractor	√	√			

Appendix 3.1

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

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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	
S6.7.13	In order to monitor the disposal of public fill and C&D waste at public filling facilities and landfills, respectively, and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team undertaking the environmental monitoring and audit work. An Independent Environment Checker shall be responsible for auditing the results of the system.	Work site / During the construction period	Contractor and Independent Environmental Checker		√			ETWB TCW No. 31/2004
S6.7.14	<p><i>Bentonite Slurry</i></p> <p>The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage" and listed as follows:</p> <ul style="list-style-type: none"> If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis. If the used bentonite slurry is intended to be disposed of through the public drainage system, it shall be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the Technical Memorandum of Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters. If the used bentonite slurry is intended to be disposed to public fill reception facilities, it will be mixed with dry soil on site before disposal. 	Work site / During the construction period	Contractor		√			ProPECC PN 1/94

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

Appendix 3.1

Table A13.5 Implementation Schedule for Land Contamination

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
<i>For the Whole Project</i>								
S.12.6	<ul style="list-style-type: none"> The contaminated site shall be cleaned up before commencement of site clearance and construction work at the concerned area which may disturb the ground. 	A King Marine / Before commencement of construction activities at A King Marine.	Project proponent for the re-provisioned Tin Hau Temple	√				<p>"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops" published by EPD, HKSAR</p> <p>EPD ProPECC Note No. 3/94</p>
S7.10	<p>During soil remediation works, the Contractor for the excavation works shall take note of the following points for excavation:</p> <ul style="list-style-type: none"> Excavation profiles must be properly designed and executed; In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; Quantities of soil to be excavated must be estimated; It maybe necessary to split quantities of soil according to soil type, degree and nature of contamination. Temporary storage of soil at intermediate depot or on-site 	A King Marine / During soil remediation works	Contractor	√				<p>Air Pollution Control Ordinance</p> <p>Noise Control Ordinance</p> <p>Waste Disposal Ordinance</p> <p>Waste Disposal (Chemical Waste) (General) Regulation</p>

Appendix 3.1

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

Appendix 3.1

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

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p><u>Water Quality Mitigation Measures</u></p> <ul style="list-style-type: none"> Stockpile of untreated soil shall be covered as far as practicable to prevent the contaminated material from leaching out. The leachate shall be discharged following the requirements of WPCO. <p><u>Waste Mitigation Measures</u></p> <ul style="list-style-type: none"> Treated oversize materials will be used as filling material for backfilling within the site. Sorted materials of size smaller than 5 cm will be collected and transferred to the mixing plant for further decontamination treatment. Stabilized soils shall be broken into suitable size for backfilling or reuse on site. A high standard of housekeeping shall be maintained within the mixing plant area. If necessary, there shall be clear and separated areas for stockpiling of untreated and treated materials. 							

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

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								
<i>For the Whole Project - Schedule 3 DP</i>								
S.9.7.2	Alternative design of the Trunk Road constructed in tunnel shall be adopted to avoid permanent reclamation in CBTS and ex-PWCA Basin.	-	CEDD/HyD	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
<i>For DP3 - Reclamation Works</i>								
S.9.7.3	Translocation of those potentially affected coral colonies to the nearby suitable habitats such as Junk Bay is recommended. A detailed translocation plan (including translocation methodology, monitoring of transplanted corals, etc.) should be drafted and approval by AFCD during the detailed design stage of the Project.	Ex-PCWA Basin and along seawall next to a public pier which is about 250 m away from the CBTS	CEDD/HyD	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

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"> • Installation of silt curtains during dredging activities • Use of tightly-closed grab dredger • Reduction of dredging rate • Control of grab descending speed • Construction of leading edges of seawall in the early stages of the reclamation works 	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
	<ul style="list-style-type: none"> • Adoption of multiple-phase construction schedule 							

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.9.7.6	<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"> • Use of Quiet Mechanical Plant during the construction phase shall be adopted wherever possible. • Adoption of multiple-phase construction schedule. • General measures to reduce noise generated during the construction phase (see noise impact assessment) shall be effectively implemented. 	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.7	Seawalls shall be constructed in advance around the reclamation areas within the area of the CBTS to screen adjacent feeding ground from construction phase activities, reduce noise disturbance to the associated seabirds and also to restrict access to this habitat adjacent to works areas by ship traffic.	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
S.9.7.8	Loss of artificial seawall habitats shall be reinstated by the construction of about 1 km vertical wave absorbing seawall along the coastlines of the new reclamation around the HKCEC and at North Point. The new seawalls are expected to provide large area of hard substrata for settlement and recruitment of intertidal fauna similar to those previously recorded from existing intertidal habitats.	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

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

Appendix 3.1

Table A13.7 Implementation Schedule for Landscape and Visual

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DPI – CWB (Within the Project Boundary)								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DP2 – WDII Major Roads (Road P2)								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DP3 – Reclamation Works								
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
For DP5 – Wan Chai East Sewage Outfall								
Refer to EIA-058/2001 Table 10.13	CM2 Minimisation of works areas.	Work site / During Construction Phase	Contractor		√			EIAO TM
Refer to EIA-058/2001 Table 10.13	CM3 Erection of decorative hoardings.	Work site / During Construction Phase	Contractor		√			EIAO TM

Appendix 3.1

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

Appendix 3.1

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

⁴ CEDD will identify an implementation agent

Appendix 3.1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Table 10.6, Figure 10.5.1-10.5.5	OM1 Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM3 Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM5 Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM6 Aesthetic design of roadside amenity areas	Work site / During Design Stage and Operation Phases	CEDD/HyD		√	√		ETWB TCW 2/2004
For DP3 – Reclamation Works								
Table 10.6, Figure 10.5.1-10.5.5	OM4 Aesthetic design of proposed waterfront promenade.	Work site / During Design Stage and Operation Phases	CEDD ⁵	√	√	√		ETWB TCW 2/2004

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

⁵ CEDD will identify an implementation agent



Appendix 4.1

Action and Limit Level

**Action and Limit Level****Action and Limit Level for Noise Monitoring**

Time Period	Action Level	Limit Level
07:00 – 19:00 hours on normal weekdays	When one documented complaint is received.	75 dB(A) ^{Note 1}

Note 1:

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

Action and Limit Level for Air Quality 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	320.1	500	176.7	260
CMA2a	323.4	500	169.5	260
CMA3a	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5b	332.0	500	181.0	260
CMA6a	300.1	500	187.3	260

Action and Limit Level for Water Quality Monitoring

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

Remarks:

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

Action and Limit Level for Enhance DO Monitoring

Parameters	Depth	Dry Season		Wet Season	
		Action	Limit	Action	Limit
C6	Surface and Middle	3.13	2.00	2.60	2.00
	Bottom	4.14	3.33	2.91	2.34
C7	Surface and Middle	3.87	3.09	3.31	2.57
	Bottom	3.91	3.53	2.75	2.48
Ex-WPCWA SW	Surface and Middle	3.84	3.73	3.19	3.10
	Bottom	4.71	4.63	3.31	3.25
Ex-WPCWA SE	Surface and Middle	4.26	3.61	3.55	3.00
	Bottom	5.36	5.35	3.76	3.76

Action and Limit Levels for Odour Patrol

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



Appendix 4.2

Copies of Calibration Certificates



CERTIFICATE OF CALIBRATION

Certificate No.: 15CA1203 04-01 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: 03-Dec-2015

Date of test: 04-Dec-2015

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	19-Jun-2016	CIGISMEC
Signal generator	DS 360	33873	16-Apr-2016	CEPREI
Signal generator	DS 360	61227	16-Apr-2016	CEPREI

Ambient conditions

Temperature: 22 ± 1 °C
Relative humidity: 50 ± 10 %
Air pressure: 1010 ± 10 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 responses 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: 05-Dec-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.: 15CA1203 04-01 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	
Linearity range for SPL	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	A	Pass	0.3	
	C	Pass	0.3	
Frequency weightings	Lin	Pass	0.3	
	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	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 ³ at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 ⁴ 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:  - End -
Date: 04-Dec-2015

Checked by: 
Date: 05-Dec-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.: 16CA0513 01-02

Page: 1 of 2

Item tested

Description: Acoustical Calibrator (Class 1)
Manufacturer: Rion Co., Ltd.
Type/Model No.: NC-73
Serial/Equipment No.: 10465798
Adaptors used: -

Item submitted by

Customer: Lam Geotechnics Ltd.
Address of Customer: -
Request No.: -
Date of receipt: 13-May-2016

Date of test: 17-May-2016

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	14-Apr-2017	SCL
Preamplifier	B&K 2673	2239857	28-Apr-2017	CEPREI
Measuring amplifier	B&K 2610	2346941	26-Apr-2017	CEPREI
Signal generator	DS 360	61227	18-Apr-2017	CEPREI
Digital multi-meter	34401A	US36087050	18-Apr-2017	CEPREI
Audio analyzer	8903B	GB41300350	19-Apr-2017	CEPREI
Universal counter	53132A	MY40003662	19-Apr-2017	CEPREI

Ambient conditions

Temperature: 22 ± 1 °C
Relative humidity: 55 ± 10 %
Air pressure: 1010 ± 5 hPa

Test specifications

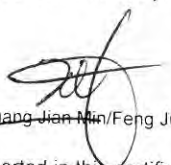
1. The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
2. The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
3. The 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: 18-May-2016

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.: 16CA0513 01-02

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 μ Pa)	
			Estimated	Expanded Uncertainty dB
1000	94.00	93.96	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 = 0.001 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 = 967.3 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 = 0.8 %
 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
17-May-2016

End

Checked by:

Date:

Lam Tze Wai
18-May-2016

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.



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: MR. SAM LAM **WORK ORDER:** HK1610200
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 07/04/2016
DATE OF ISSUE: 14/04/2016
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.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	08/04/2016

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.

Approved Signatory: 

 Ms. Wong Po Yan, Pauline
 Testing Engineer

Issue Date: 14/04/2016

**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION**

WORK ORDER: HK1610200
DATE OF ISSUE: 14/04/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	08/04/2016
Date of next Calibration:	08/07/2016

Parameters:**Turbidity**Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.98	-0.5
10	9.88	-1.2
40	41.3	3.3
100	102	2.0
400	387	-3.3
1000	996	-0.4
	Tolerance Limit (±%)	10.0

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



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: MR. SAM LAM **WORK ORDER:** HK1610339
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 05/07/2016
DATE OF ISSUE: 11/07/2016
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.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	11/07/2016

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.

Approved Signatory: _____
Ms. Wong Po Yan, Pauline
Testing Engineer

Issue Date: _____
11/07/2016

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Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
Phone +852 2527 6691 | Email info@pilot-testing.com

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1610339
DATE OF ISSUE: 11/07/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	11/07/2016
Date of next Calibration:	11/10/2016

Parameters:

Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	4.20	5.0%
10	10.0	0.0%
40	39.0	-2.5%
100	100	0.0%
400	390	-2.5%
1000	990	-1.0%
	Tolerance Limit (±)	10%

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



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: MR. SAM LAM **WORK ORDER:** HK1610168
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 07/04/2016
DATE OF ISSUE: 14/04/2016
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.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	08/04/2016

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.

Approved Signatory: _____

Ms. Wong Po Yan, Pauline
Testing Engineer

Issue Date: _____

14/04/2016

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**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION**

WORK ORDER: HK1610168
DATE OF ISSUE: 14/04/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	08/04/2016
Date of next Calibration:	08/07/2016

Parameters:**Turbidity**Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	4.13	3.3
10	9.75	-2.5
40	41.2	3.0
100	98.4	-1.6
400	407	1.8
1000	976	-2.4
	Tolerance Limit (±%)	10.0

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



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: MR. SAM LAM WORK ORDER: HK1610345
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 05/07/2016
DATE OF ISSUE: 11/07/2016
ADDRESS: 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD,
WANCHAI, HONG KONG
PROJECT: ---

METHOD OF PERFORMANCE CHECK/ CALIBRATION:

Ref: APHA22nd ed 2130B

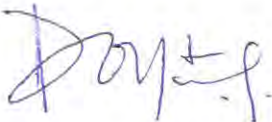
COMMENTS

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.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	11/07/2016

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.

Approved Signatory: 
Ms. Wong Po Yan, Pauline
Testing Engineer

Issue Date: 11/07/2016

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1610345
DATE OF ISSUE: 11/07/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	11/07/2016
Date of next Calibration:	11/10/2016

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	4.10	2.5%
10	10.7	7.0%
40	40.7	1.8%
100	105	5.0%
400	396	-1.0%
1000	1007	0.7%
	Tolerance Limit (±)	10%

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



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: MR. SAM LAM **WORK ORDER:** HK1610156
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 24/03/2016
DATE OF ISSUE: 01/04/2016
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.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1512036
Equipment No.:	---
Date of Calibration:	01/04/2016

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.

Approved Signatory: _____
Ms. Wong Po Yan, Pauline
Testing Engineer

Issue Date: _____ 01/04/2016

**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION**

WORK ORDER: HK1610156
DATE OF ISSUE: 01/04/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1512036
Equipment No.:	---
Date of Calibration:	01/04/2016
Date of next Calibration:	01/07/2016

Parameters:**Turbidity**Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.89	-2.8
10	9.90	-1.0
40	39.6	-1.0
100	98.4	-1.6
400	399	-0.2
1000	999	-0.1
	Tolerance Limit (±%)	10.0

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

**REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION****Information supplied by customer:**

CONTACT: MR. SAM LAM **WORK ORDER:** HK1610364
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 19/07/2016
DATE OF ISSUE: 19/07/2016
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.

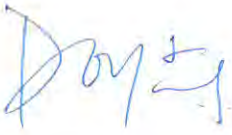
Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of Pilot Testing Limited will be followed.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1512036
Equipment No.:	---
Date of Calibration:	19/07/2016

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.

Approved Signatory: _____


Ms. Wong Po Yan, Pauline
Testing Engineer

Issue Date: _____

19/07/2016

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1610364
DATE OF ISSUE: 19/07/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1512036
Equipment No.:	---
Date of Calibration:	19/07/2016
Date of next Calibration:	19/10/2016

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	4.06	1.5%
10	9.45	-5.5%
40	41.1	2.8%
100	99.3	-0.7%
400	427	6.8%
1000	992	-0.8%
	Tolerance Limit (±)	10%

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



EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No. : HK1610202
Project Name : EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue : 21/04/2016

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

Calibration Job No. : HK1610202
Test Item No. : HK1610202-01
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-16
Test Item Calibration Date : 15-Apr-16

- 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. ± 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 :

Ms. Wong Po Yan, Pauline
(Testing Engineer)

Issue Date:

21/04/2016


REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1610202
DATE OF ISSUE: 21/04/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type	Multifunctional Meter
Manufacturer	YSI
Model No.	Professional Plus
Serial No.	14E100105
Date of Calibration	15-Apr-16
Date of next Calibration	15-Jul-16

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)
10.1	9.8	-0.3
20.3	20.6	+0.3
30.3	30.1	-0.2
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	4.08	4.02	-0.06
7.0	7.04	7.07	+0.03
10.0	9.98	10.03	+0.05
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	12.75	-1.09
0.2000	24.80	24.99	+0.77
0.5000	58.67	58.44	-0.39
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)
8.75	8.69	-0.06
4.87	4.92	+0.05
2.84	2.92	+0.08
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 (accorng to APHA 19e 2510) is used to determine salinity.

- End of Report -



EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No. : HK1610344
 Project Name : EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
 Date of Issue : 11/7/16

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

Calibration Job No. : HK1610344
 Test Item No. : HK1610344-01
 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 : 6-Jul-16
 Test Item Calibration Date : 11-Jul-16

- 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. ± 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 :

Ms. Wong Po Yan, Pauline
 (Testing Engineer)

Issue Date:

11/7/16


REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1610344
DATE OF ISSUE: 11/7/16
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type	Multifunctional Meter
Manufacturer	YSI
Model No.	Professional Plus
Serial No.	14E100105
Date of Calibration	11-Jul-16
Date of next Calibration	11-Oct-16

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)
11.6	11.8	0.2
21.5	21.5	0.0
31.8	31.4	-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	4.04	3.99	-0.05
7.0	7.04	7.11	0.07
10.0	9.98	10.06	0.08
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	12.76	12.69	-0.55
0.2000	24.40	24.30	-0.41
0.5000	56.20	55.80	-0.71
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)
7.20	7.17	-0.03
5.10	4.94	-0.16
4.00	3.92	-0.08
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.
 - (4) Due to the malfunction of pH sensor, there is no reading shown on the multimeter's screen. pH parameter is failed to comply with the tolerance.

- End of Report -



EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No. : HK1610157
 Project Name : EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
 Date of Issue : 20/04/2016

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

Performance check / Calibration Job No. : HK1610157
 Test Item No. : HK1610157-01
 Test Item Details
 Test Item Description : Multifunctional Meter
 Manufacturer : YSI
 Model No. : Professional Plus
 Serial No. : 14M100277
 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 : 13-Apr-16
 Test Item Performance check / Calibration Date : 15-Apr-16

- 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 :

Ms. Wong Po Yan, Pauline
 (Testing Engineer)

Issue Date:

20/04/2016


REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1610157
DATE OF ISSUE: 20/04/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type	Multifunctional Meter
Manufacturer	YSI
Model No.	Professional Plus
Serial No.	14M100277
Date of Performance check / Calibration	15-Apr-16
Date of next Performance check / Calibration	15-Jul-16

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)
10.1	10.3	+0.2
20.3	20.1	-0.2
29.9	30.3	+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	4.06	4.11	+0.05
7.0	7.05	6.94	-0.11
10.0	10.11	10.09	-0.02
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	24.97	+0.69
0.5000	58.67	58.54	-0.22
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)
8.54	8.66	+0.12
4.41	4.49	+0.08
2.23	2.19	-0.04
Tolerance Limit		±0.20

- Remarks:
- (1) Maximum tolerance and performance check / 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

Report No. : HK1610365
Project Name : EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue : 19/07/2016

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

Calibration Job No. : HK1610365
Test Item No. : HK1610365-01
Test Item Details
Test Item Description : Multifunctional Meter
Manufacturer : YSI
Model No. : Professional Plus
Serial No. : 14M100277
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 : 19-Jul-16
Test Item Calibration Date : 19-Jul-16

- 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. ± 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 :

Ms. Wong Po Yan, Pauline
(Testing Engineer)

Issue Date:

19/07/2016



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE
 VILLAGE OF CLEVES, OH
 45002
 513.467.9000
 877.263.7610 TOLL FREE
 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jun 30, 2015 Rootsmeter S/N 0438320 Ta (K) - 296
 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	ORFICE
					DIFF Hg (mm)	DIFF H2O (in.)
1	NA	NA	1.00	1.3930	3.2	2.00
2	NA	NA	1.00	0.9800	6.4	4.00
3	NA	NA	1.00	0.8790	7.9	5.00
4	NA	NA	1.00	0.8350	8.7	5.50
5	NA	NA	1.00	0.6900	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9883	0.7095	1.4090	0.9957	0.7148	0.8889
0.9841	1.0042	1.9926	0.9915	1.0117	1.2570
0.9820	1.1172	2.2278	0.9894	1.1256	1.4054
0.9810	1.1749	2.3365	0.9884	1.1837	1.4740
0.9757	1.4141	2.8179	0.9830	1.4247	1.7777
Qstd slope (m) = 2.00072			Qa slope (m) = 1.25282		
intercept (b) = -0.01209			intercept (b) = -0.00763		
coefficient (r) = 0.99995			coefficient (r) = 0.99995		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

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

For subsequent flow rate calculations:

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



Calibration Data for High Volume Sampler (TSP Sampler)

Location	: CMA1b	Calibration Date	: 18-May-16
Equipment no.	: HVS001	Calibration Due Date	: 18-Jul-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	299	Kelvin	Pressure, P _a
			1010 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori001	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	30-Jun-16	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std}	Continuous Flow	IC
	H (inches of water)			(m ³ / min.)	Recorder, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	6.3	6.3	12.6	1.7744	58	57.8086
2	4.9	4.9	9.8	1.5656	52	51.8284
3	3.5	3.5	7.0	1.3241	44	43.8548
4	2.5	2.5	5.0	1.1200	36	35.8812
5	1.5	1.5	3.0	0.8689	24	23.9208

By Linear Regression of Y on X

Slope, m	=	37.1752		Intercept, b	=	-6.8058
Correlation Coefficient*	=	0.9946				
Calibration Accepted	=	Yes/No**				

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL452 to HVS001 with respect to the update in quality management system.

Calibrated by	: Kit Au	Checked by	: Pauline Wong
Date	: 18-May-16	Date	: 18-May-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA1b
 Equipment no. : HVS001

Calibration Date : 13-Jul-16
 Calibration Due Date : 13-Sep-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	302	Kelvin	Pressure, P_a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori002	Slope, m_c	2.10714	Intercept, b_c	-0.05158
Last Calibration Date	20-May-16	$\left(\frac{H \times P_a}{1013.3 \times 298 / T_a} \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	20-May-17				

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	5.6	5.6	11.2	1.5957	54	53.4211
2	4.4	4.4	8.8	1.4172	48	47.4854
3	3.6	3.6	7.2	1.2842	42	41.5497
4	2.5	2.5	5.0	1.0743	34	33.6355
5	1.6	1.6	3.2	0.8643	28	27.6998

By Linear Regression of Y on X

Slope, m = 36.0048 Intercept, b = -4.1452
 Correlation Coefficient* = 0.9976
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL452 to HVS001 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 13-Jul-16

Checked by : Pauline Wong
 Date : 13-Jul-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA2a Calibration Date : 18-May-16
 Equipment no. : HVS002 Calibration Due Date : 18-Jul-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	299	Kelvin	Pressure, P _a
			1010 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori001	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.8	6.8	13.6	1.8432	58	57.8086
2	5.5	5.5	11.0	1.6583	52	51.8284
3	4.3	4.3	8.6	1.4670	44	43.8548
4	2.8	2.8	5.6	1.1849	38	37.8746
5	1.8	1.8	3.6	0.9513	32	31.8944

By Linear Regression of Y on X

Slope, m = 28.8731 Intercept, b = 3.6256
 Correlation Coefficient* = 0.9928
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been
 re-assigned from EL449 to HVS002 with respect to the update in quality management system.

Calibrated by : Kit Au Checked by : Pualine Wong
 Date : 18-May-16 Date : 18-May-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA2a
 Equipment no. : HVS002

Calibration Date : 13-Jul-16
 Calibration Due Date : 13-Sep-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	302	Kelvin	Pressure, P_a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori002	Slope, m_c	2.10714	Intercept, b_c	-0.05158
Last Calibration Date	20-May-16	$\left(\frac{H \times P_a}{1013.3 \times 298 / T_a} \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	20-May-17				

Calibration of TSP						
Calibration Point	Manometer Reading			Q_{std} ($m^3 / \text{min.}$) 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	6.8	6.8	13.6	1.7559	58	57.3782
2	5.5	5.5	11.0	1.5816	52	51.4425
3	4.2	4.2	8.4	1.3852	46	45.5068
4	2.9	2.9	5.8	1.1552	38	37.5926
5	1.6	1.6	3.2	0.8643	30	29.6784

By Linear Regression of Y on X

Slope, m = 31.2362 Intercept, b = 2.1999
 Correlation Coefficient* = 0.9991
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL449 to HVS002 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 13-Jul-16

Checked by : Pualine Wong
 Date : 13-Jul-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA3a Calibration Date : 18-May-16
 Equipment no. : HVS012 Calibration Due Date : 18-Jul-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	299	Kelvin	Pressure, P_a	1010	mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori001	Slope, m_c	2.00072	Intercept, b_c	-0.01209
Last Calibration Date	30-Jun-15	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading H (inches of water)			Q_{std} ($m^3 / min.$) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ Y-axis
	(up)	(down)	(difference)			
1	6.0	6.0	12.0	1.7318	56	55.8152
2	4.8	4.8	9.6	1.5496	52	51.8284
3	4.0	4.0	8.0	1.4151	44	43.8548
4	2.8	2.8	5.6	1.1849	38	37.8746
5	1.7	1.7	3.4	0.9246	30	29.9010

By Linear Regression of Y on X

Slope, m = 32.9166 Intercept, b = -0.9510

Correlation Coefficient* = 0.9925

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been
re-assigned from EL333 to HVS012 with respect to the update in quality management system.

Calibrated by : Kit Au Checked by : Pauline Wong
 Date : 18-May-16 Date : 18-May-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA3a Calibration Date : 13-Jul-16
 Equipment no. : HVS012 Calibration Due Date : 13-Sep-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	302	Kelvin	Pressure, P _a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori002	Slope, m _c	2.10714	Intercept, b _c	-0.05158
Last Calibration Date	20-May-16	$\left(\frac{H \times P_a}{1013.3 \times 298 / T_a} \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	20-May-17				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.4	5.4	10.8	1.5674	52	51.4425
2	4.4	4.4	8.8	1.4172	48	47.4854
3	3.4	3.4	6.8	1.2488	42	41.5497
4	2.4	2.4	4.8	1.0531	38	37.5926
5	1.4	1.4	2.8	0.8101	30	29.6784

By Linear Regression of Y on X

Slope, m = 28.4435 Intercept, b = 6.8685
 Correlation Coefficient* = 0.9975
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL333 to HVS012 with respect to the update in quality management system.

Calibrated by : Kit Au Checked by : Pauline Wong
 Date : 13-Jul-16 Date : 13-Jul-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA4a Calibration Date : 18-May-16
 Equipment no. : HVS004 Calibration Due Date : 18-Jul-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	299	Kelvin	Pressure, P _a
			1010 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori001	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading H (inches of water)			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.4	6.4	12.8	1.7884	54	53.8218
2	5.3	5.3	10.6	1.6280	50	49.8350
3	4.2	4.2	8.4	1.4499	44	43.8548
4	2.8	2.8	5.6	1.1849	32	31.8944
5	1.6	1.6	3.2	0.8972	22	21.9274

By Linear Regression of Y on X

Slope, m = 37.0104 Intercept, b = -11.1654
 Correlation Coefficient* = 0.9968
 Calibration Accepted = Yes/Ne**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL390 to HVS004 with respect to the update in quality management system.

Calibrated by : Kit Au Checked by : Pauline Wong
 Date : 18-May-16 Date : 18-May-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA4a
 Equipment no. : HVS004

Calibration Date : 13-Jul-16
 Calibration Due Date : 13-Sep-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	302	Kelvin	Pressure, P _a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori002	Slope, m _c	2.10714	Intercept, b _c	-0.05158
Last Calibration Date	20-May-16	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	20-May-17				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.5	5.5	11.0	1.5816	52	51.4425
2	4.4	4.4	8.8	1.4172	48	47.4854
3	3.4	3.4	6.8	1.2488	40	39.5711
4	2.1	2.1	4.2	0.9866	32	31.6569
5	1.5	1.5	3.0	0.8377	24	23.7427

By Linear Regression of Y on X

Slope, m = 37.0124 Intercept, b = -6.1671
 Correlation Coefficient* = 0.9947
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL390 to HVS004 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 13-Jul-16

Checked by : Pauline Wong
 Date : 13-Jul-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5b
 Equipment no. : HVS010

Calibration Date : 21-May-16
 Calibration Due Date : 21-Jul-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	299	Kelvin	Pressure, P _a
			1010 mmHg

Orifice Transfer Standard Information			
Equipment No.	Ori001	Slope, m _c	2.00072
		Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$	
Next Calibration Date	30-Jun-16	= m _c × Q _{std} + b _c	

Calibration of TSP						
Calibration Point	Manometer Reading H (inches of water)			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.2	6.2	12.4	1.7603	64	63.7888
2	4.8	4.8	9.6	1.5496	58	57.8086
3	3.4	3.4	6.8	1.3051	54	53.8218
4	2.4	2.4	4.8	1.0975	46	45.8482
5	1.4	1.4	2.8	0.8396	40	39.8680

By Linear Regression of Y on X						
Slope, m	=	<u>26.0254</u>		Intercept, b	=	<u>18.1230</u>
Correlation Coefficient*	=	<u>0.9942</u>				
Calibration Accepted	=	<u>Yes/No**</u>				

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL222 to HVS010 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 21-May-16

Checked by : Pauline Wong
 Date : 21-May-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5b
 Equipment no. : HVS010

Calibration Date : 13-Jul-16
 Calibration Due Date : 13-Sep-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	302	Kelvin	Pressure, P_a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	Orif002	Slope, m_c	2.10714	Intercept, b_c	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	20-May-17				

Calibration of TSP						
Calibration Point	Manometer Reading			Q_{std} ($m^3 / \text{min.}$) X-axis	Continuous Flow Recorder, W (CFM)	IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$) Y-axis
	H (inches of water) (up)	(down)	(difference)			
1	5.5	5.5	11.0	1.5816	58	57.3782
2	4.3	4.3	8.6	1.4013	53	52.4318
3	3.4	3.4	6.8	1.2488	48	47.4854
4	2.2	2.2	4.4	1.0093	41	40.5604
5	1.4	1.4	2.8	0.8101	34	33.6355

By Linear Regression of Y on X

Slope, m = 30.6917 Intercept, b = 9.1551
 Correlation Coefficient* = 0.9993
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL222 to HVS010 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 13-Jul-16

Checked by : Pauline Wong
 Date : 13-Jul-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA6a
 Equipment no. : HVS013

Calibration Date : 18-May-16
 Calibration Due Date : 18-Jul-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	299	Kelvin	Pressure, P _a
			1010 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori001	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	30-Jun-16	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std}	Continuous Flow	IC
	H (inches of water)			(m ³ / min.)	Recorder, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	6.4	6.4	12.8	1.7884	62	61.7954
2	5.2	5.2	10.4	1.6126	54	53.8218
3	4.2	4.2	8.4	1.4499	48	47.8416
4	2.8	2.8	5.6	1.1849	40	39.8680
5	1.6	1.6	3.2	0.8972	32	31.8944

By Linear Regression of Y on X

Slope, m = 32.9597 Intercept, b = 1.3426
 Correlation Coefficient* = 0.9948
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL551 to HVS013 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 18-May-16

Checked by : Pauline Wong
 Date : 18-May-16



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA6a
 Equipment no. : HVS013

Calibration Date : 13-Jul-16
 Calibration Due Date : 13-Sep-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	302	Kelvin	Pressure, P_a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	Ori002	Slope, m_c	2.10714	Intercept, b_c	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	20-May-17				

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	5.8	5.8	11.6	1.6235	60	59.3567
2	4.8	4.8	9.6	1.4791	52	51.4425
3	3.8	3.8	7.6	1.3188	48	47.4854
4	2.4	2.4	4.8	1.0531	40	39.5711
5	1.4	1.4	2.8	0.8101	32	31.6569

By Linear Regression of Y on X

Slope, m = 32.4558 Intercept, b = 5.1084
 Correlation Coefficient* = 0.9939
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : As per client's provided information, the equipment reference no. of the calibrated High Volume Sampler has been re-assigned from EL551 to HVS013 with respect to the update in quality management system.

Calibrated by : Kit Au
 Date : 13-Jul-16

Checked by : Pauline Wong
 Date : 13-Jul-16



Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

Contract No. HK/2015/01
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 3)
Environmental Monitoring Schedule
July 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	1-Jul	2-Jul
	Impact WQM Mid-flood Mid-ebb	Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6) 10:46 17:16	24hr TSP	1hr TSP Impact WQM Mid-ebb Mid-flood	8:57 15:08	Impact WQM Mid-ebb Mid-flood
3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul
	Noise (daytime) (M1a, M2b, M3a) Impact WQM Mid-ebb Mid-flood	24hr TSP Noise (daytime) (M4b, M5b, M6) 12:16 19:13	24hr TSP (CMA1b) 1hr TSP Impact WQM Mid-ebb Mid-flood	13:45 20:43	Impact WQM Mid-ebb Mid-flood	15:06 22:05
10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul
	24hr TSP Noise (daytime) (M1a, M2b) Impact WQM Mid-ebb	24hr TSP (CMA5b) 1hr TSP Noise (daytime) (M4b, M5b, M6) Impact WQM Mid-flood		Noise (daytime) (M3a) Impact WQM Mid-flood Mid-ebb	1:34 9:03	24hr TSP Impact WQM Mid-ebb Mid-flood
17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul
	24hr TSP (CMA2a) 1hr TSP Impact WQM Mid-ebb Mid-flood	Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6) 11:21 18:36	Impact WQM Mid-ebb Mid-flood	12:36 19:41	24hr TSP Impact WQM Mid-ebb Mid-flood	1hr TSP 13:57 20:53
24-Jul	25-Jul	26-Jul				
	Impact WQM Mid-flood Mid-ebb	Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6) 9:44 16:06				

Remarks: Due to hoisting of Amber Rainstorm Warning Signal, the WQM event on 6 July 2016 during ebb tide was cancelled.

Contract No. HK/2015/01
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 3)
Tentative Environmental Monitoring Schedule
August 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			27-Jul	28-Jul	29-Jul	30-Jul
			Impact WQM Mid-flood 12:12 Mid-ebb 18:07	24hr TSP	1hr TSP Impact WQM Mid-ebb 8:39 Mid-flood 15:11	
31-Jul	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug
	Noise (daytime) Impact WQM Mid-ebb 11:20 Mid-flood 18:19	Noise (daytime)	24hr TSP Impact WQM Mid-ebb 12:46 Mid-flood 19:37	1hr TSP	Impact WQM Mid-ebb 14:02 Mid-flood 20:42	
7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	13-Aug
	Noise (daytime) Impact WQM Mid-flood 9:23 Mid-ebb 15:46	24hr TSP Noise (daytime)	1hr TSP Impact WQM Mid-flood 23:32	Impact WQM Mid-ebb 6:13		24hr TSP Impact WQM Mid-flood 1:04 Mid-ebb 8:59
14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug
	24hr TSP Noise (daytime) Impact WQM Mid-ebb 10:18 Mid-flood 17:45	1hr TSP Noise (daytime)	Impact WQM Mid-ebb 11:34 Mid-flood 18:41		Impact WQM Mid-ebb 12:57 Mid-flood 19:39	24hr TSP
21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug
	1hr TSP Noise (daytime) Impact WQM Mid-flood 8:48 Mid-ebb 15:03	Noise (daytime)	Impact WQM Mid-flood 10:47 Mid-ebb 16:44		24hr TSP Impact WQM Mid-ebb 7:09 Mid-flood 13:47	1hr TSP



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)								
28/6/2016	10:25	Cloudy	84.2	86.0	75.5	72	84	75
4/7/2016	13:32	Fine	75.6	76.5	73.5	72	73	75
11/7/2016	10:15	Cloudy	76.8	80.0	72.5	72	75	75
19/7/2016	10:30	Fine	76.3	78.0	75.5	72	74	75
26/7/2016	10:50	Fine	75.9	77.5	73.5	72	73	75

Location: M2b - Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
28/6/2016	13:00	Cloudy	66.9	68.0	65.0	68	67	75
4/7/2016	14:17	Fine	66.5	67.5	64.5	68	67	75
11/7/2016	14:00	Fine	67.2	68.5	65.5	68	67	75
19/7/2016	11:16	Fine	67.1	68.5	65.0	68	67	75
26/7/2016	11:30	Fine	67.5	71.1	64.5	68	68	75

Location: M3a - Tung Lo Wan Fire Station

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
28/6/2016	13:45	Cloudy	65.1	66.5	63.0	69	65	75
4/7/2016	14:58	Fine	67.0	69.5	64.0	69	67	75
14/7/2016	10:14	Cloudy	65.3	66.5	63.0	69	65	75
19/7/2016	14:03	Fine	65.0	66.0	63.0	69	65	75
26/7/2016	13:35	Fine	65.1	67.0	63.5	69	65	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)								
28/6/2016	14:25	Cloudy	67.7	68.0	65.0	67	57	75
5/7/2016	10:43	Fine	67.3	68.5	64.5	67	67	75
12/7/2016	11:30	Cloudy	65.7	67.0	63.5	67	66	75
19/7/2016	13:23	Fine	66.3	67.5	64.5	67	66	75
26/7/2016	14:19	Fine	69.5	71.5	65.5	67	65	75

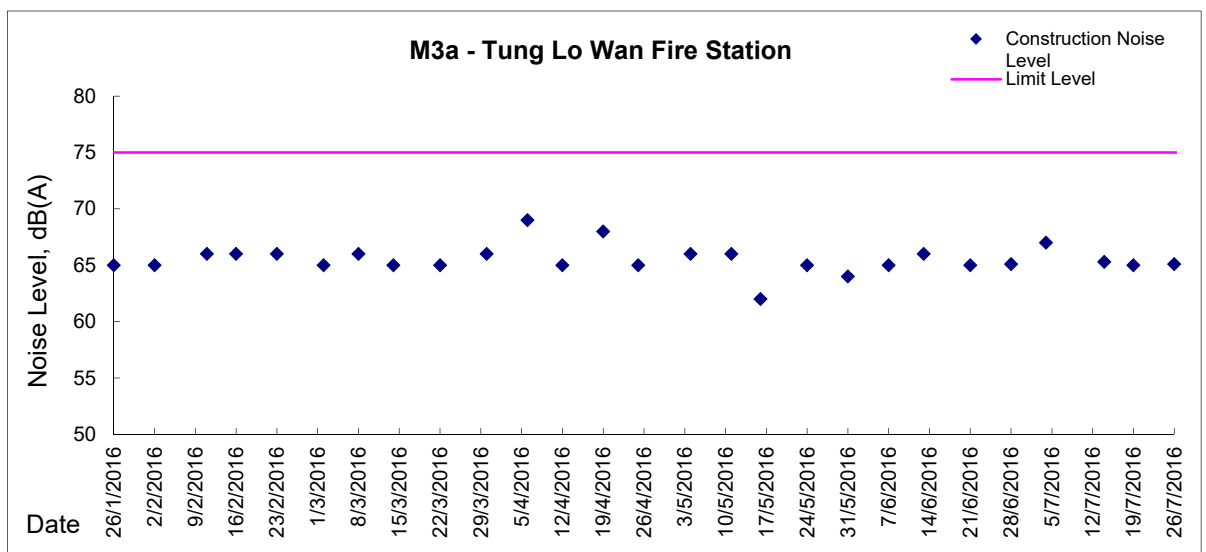
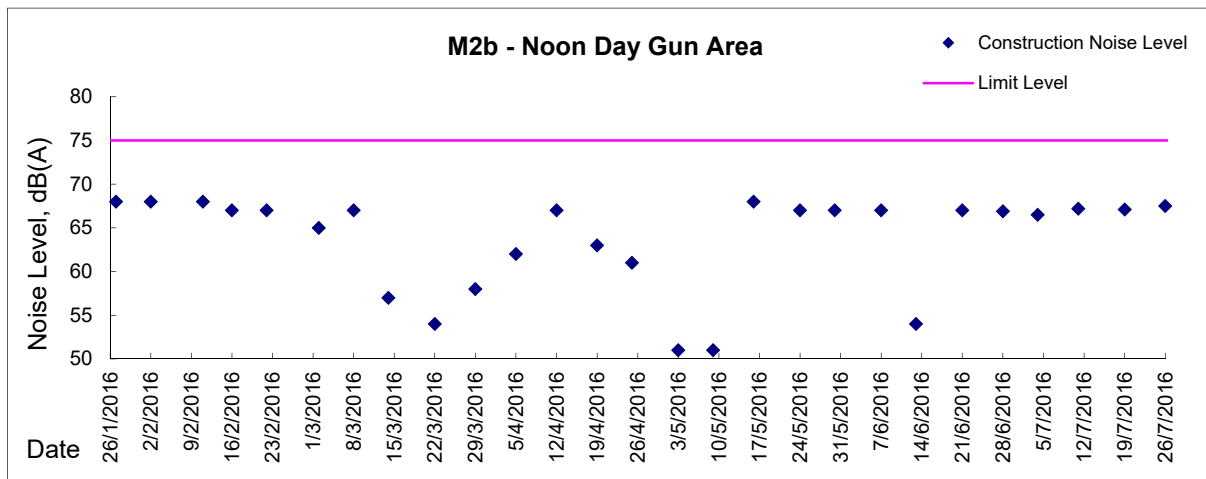
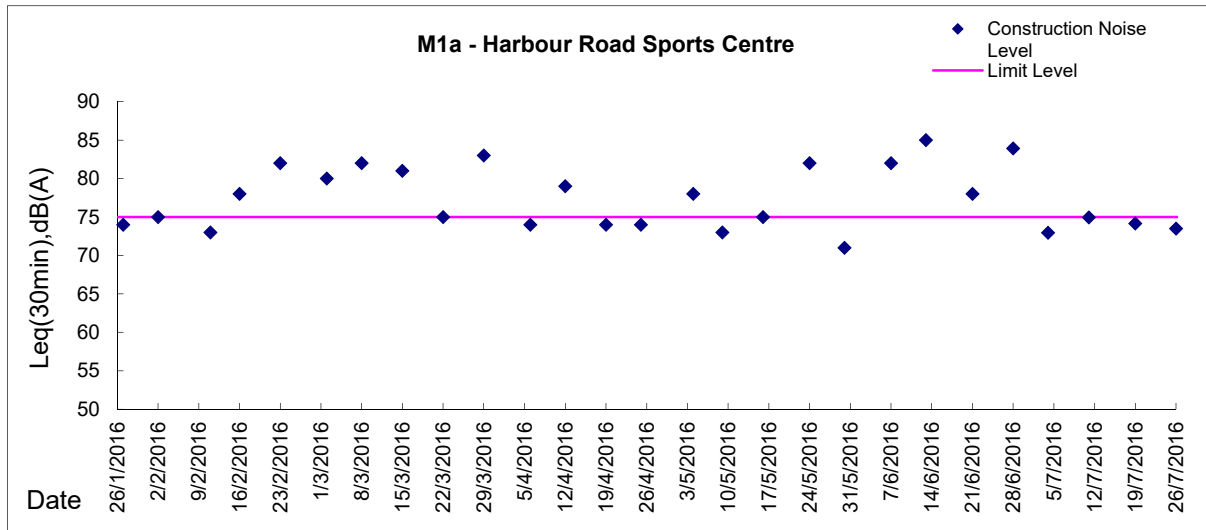
Location: M5b - City Garden

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)								
28/6/2016	15:07	Cloudy	70.8	71.5	69.0	68	68	75
5/7/2016	13:00	Fine	72.3	73.5	70.0	68	70	75
12/7/2016	10:50	Cloudy	71.7	73.5	69.0	68	69	75
19/7/2016	14:48	Fine	69.0	69.5	68.0	68	62	75
26/7/2016	15:05	Fine	71.3	72.5	68.0	68	69	75

Location: M6 - HK Baptist Church Henrietta Secondary School

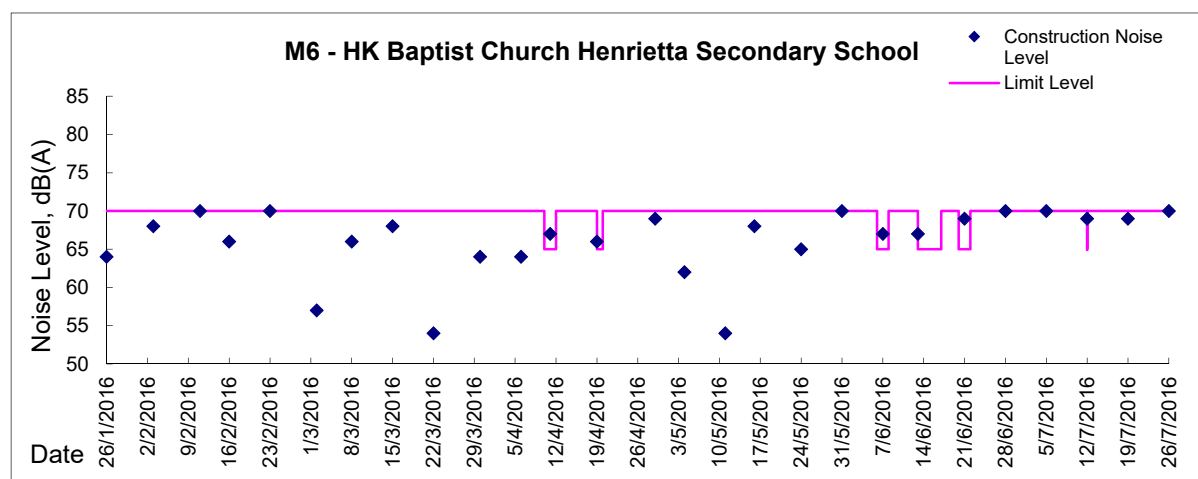
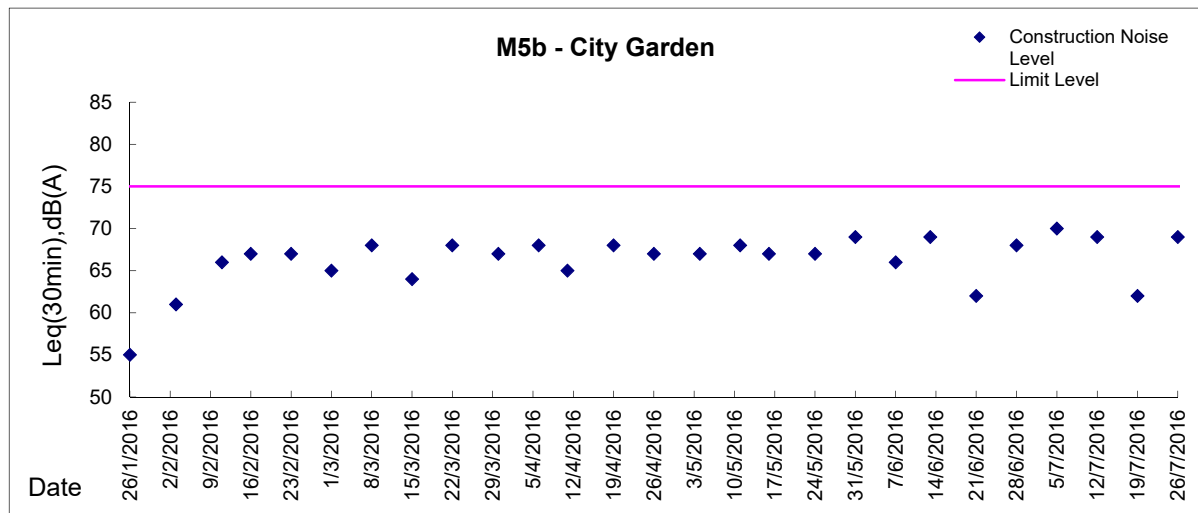
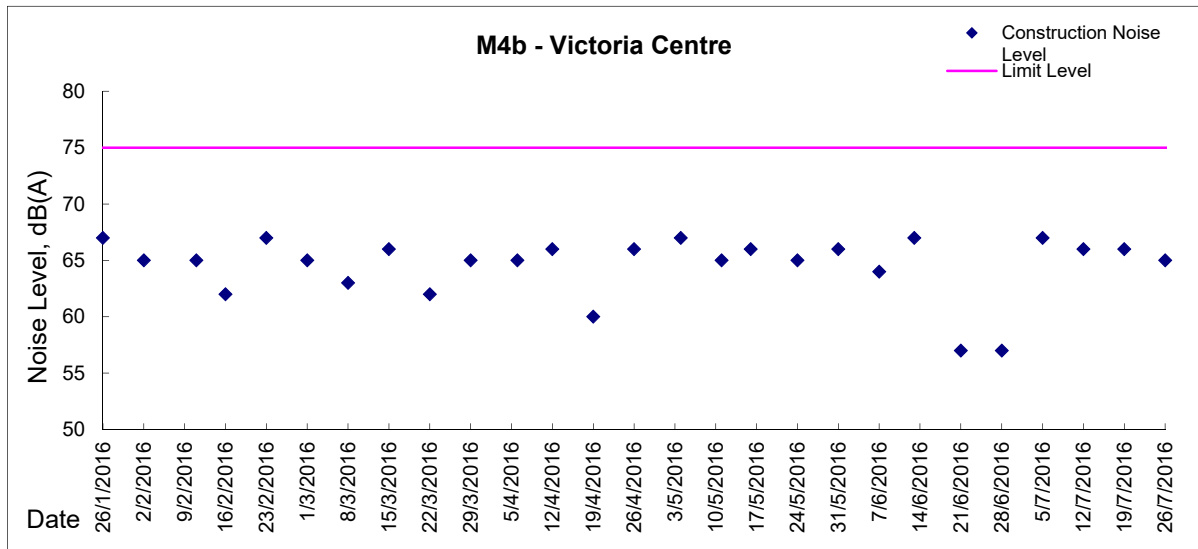
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
28/6/2016	15:45	Cloudy	70.0	72.5	69.5	71	70	70
5/7/2016	11:28	Fine	70.1	71.0	68.5	71	70	70
12/7/2016	09:45	Cloudy	68.9	70.0	66.5	71	69	65
19/7/2016	15:25	Fine	68.8	70.0	67.0	71	69	70
26/7/2016	15:50	Fine	69.7	70.5	68.0	71	70	70

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





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





Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations, and Odour Patrol Results



Location: CMA1b - Oil Street Site Office

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jun-16	8:00	Rainy	016238	2.8413	2.9058	8364.96	8388.96	24.00	1.16	1.16	1.16	1665	38.7
6-Jul-16	15:20	Rainy	015677	2.8549	2.9660	8406.84	8430.84	24.00	1.16	1.15	1.16	1665	66.7
11-Jul-16	8:00	Cloudy	016428	2.9003	2.9591	8430.84	8454.84	24.00	1.15	1.16	1.15	1663	35.4
16-Jul-16	8:00	Fine	016394	2.8472	2.9268	8457.88	8481.88	24.00	1.12	1.12	1.12	1609	49.5
22-Jul-16	8:00	Fine	015591	2.8292	2.9008	8484.88	8508.88	24.00	1.12	1.12	1.12	1612	44.4

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 5 July 2016 to 6 July 2016.

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
30-Jun-16	9:25	Cloudy	016235	2.8413	2.8441	8388.96	8389.96	1.00	1.16	1.16	1.16	69	40.4
30-Jun-16	13:00	Cloudy	016229	2.8323	2.8376	8389.96	8390.96	1.00	1.16	1.16	1.16	69	76.4
30-Jun-16	16:40	Cloudy	015763	2.8259	2.8342	8390.96	8391.96	1.00	1.16	1.16	1.16	69	119.7
6-Jul-16	9:35	Rainy	015686	2.8314	2.8339	8403.82	8404.82	1.00	1.16	1.16	1.16	70	35.9
6-Jul-16	11:00	Rainy	015683	2.8354	2.8364	8404.82	8405.82	1.00	1.16	1.16	1.16	70	14.4
6-Jul-16	13:00	Rainy	015680	2.8334	2.8353	8405.82	8406.82	1.00	1.16	1.16	1.16	70	27.3
12-Jul-16	9:05	Cloudy	015674	2.8574	2.8586	8454.88	8455.88	1.00	1.16	1.16	1.16	69	17.3
12-Jul-16	10:35	Cloudy	016390	2.8594	2.8615	8455.88	8456.88	1.00	1.16	1.16	1.16	69	30.3
12-Jul-16	13:00	Cloudy	016393	2.8341	2.8369	8456.88	8457.88	1.00	1.16	1.16	1.16	69	40.4
18-Jul-16	9:15	Fine	016401	2.8518	2.8591	8481.88	8482.88	1.00	1.12	1.12	1.12	67	108.8
18-Jul-16	10:50	Fine	016404	2.8614	2.8687	8482.88	8483.88	1.00	1.12	1.12	1.12	67	108.8
18-Jul-16	13:00	Fine	015593	2.8521	2.8612	8483.88	8484.88	1.00	1.12	1.12	1.12	67	135.6
23-Jul-16	9:03	Fine	016643	2.9036	2.9073	8508.88	8509.88	1.00	1.12	1.12	1.12	67	55.1
23-Jul-16	10:25	Fine	016640	2.8969	2.9039	8509.88	8510.88	1.00	1.12	1.12	1.12	67	104.3
23-Jul-16	13:00	Fine	016637	2.8934	2.9063	8510.88	8511.88	1.00	1.12	1.12	1.12	67	192.1



Location: CMA2a - Causeway Bay Community Centre

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jun-16	8:00	Rainy	016201	2.8760	2.9308	18024.69	18048.69	24.00	1.13	1.13	1.13	1624	33.7
5-Jul-16	8:00	Cloudy	015764	2.8299	2.9017	18051.69	18075.69	24.00	1.26	1.26	1.26	1817	39.5
11-Jul-16	8:00	Cloudy	016429	2.9028	2.9623	18078.69	18102.69	24.00	1.19	1.19	1.19	1715	34.7
18-Jul-16	14:05	Fine	016510	2.8738	2.9212	18108.69	18132.69	24.00	1.09	1.09	1.09	1564	30.3
22-Jul-16	8:00	Fine	016480	2.9077	2.9577	18132.69	18156.69	24.00	1.09	1.09	1.09	1565	31.9

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 16 July 2016 to 18 July 2016.

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
30-Jun-16	9:22	Cloudy	015789	2.8123	2.8144	18048.69	18049.69	1.00	1.13	1.13	1.13	68	31.1
30-Jun-16	13:00	Cloudy	015770	2.8392	2.8404	18049.69	18050.69	1.00	1.13	1.13	1.13	68	17.7
30-Jun-16	16:40	Cloudy	015766	2.8407	2.8451	18050.69	18051.69	1.00	1.13	1.13	1.13	68	65.1
6-Jul-16	9:35	Rainy	015696	2.8227	2.8266	18075.69	18076.69	1.00	1.20	1.20	1.20	72	54.3
6-Jul-16	13:00	Rainy	015692	2.8281	2.8300	18076.69	18077.69	1.00	1.20	1.20	1.20	72	26.4
6-Jul-16	15:21	Rainy	016430	2.8993	2.9056	18077.69	18078.69	1.00	1.20	1.20	1.20	72	87.7
12-Jul-16	9:12	Cloudy	016416	2.9414	2.9465	18102.69	18103.69	1.00	1.16	1.16	1.16	70	73.3
12-Jul-16	10:15	Cloudy	016420	2.9077	2.9116	18103.69	18104.69	1.00	1.13	1.13	1.13	68	57.7
12-Jul-16	13:00	Cloudy	016424	2.9297	2.9346	18104.69	18105.69	1.00	1.13	1.13	1.13	68	72.5
18-Jul-16	9:18	Fine	016364	2.8438	2.8474	18105.69	18106.69	1.00	1.09	1.09	1.09	65	55.2
18-Jul-16	10:55	Fine	016382	2.8303	2.8349	18106.69	18107.69	1.00	1.09	1.09	1.09	65	70.6
18-Jul-16	13:00	Fine	016512	2.8942	2.9000	18107.69	18108.69	1.00	1.15	1.15	1.15	69	84.3
23-Jul-16	9:02	Fine	016678	2.9334	2.9379	18156.69	18157.69	1.00	1.09	1.09	1.09	65	69.0
23-Jul-16	10:23	Fine	016655	2.8865	2.8912	18157.69	18158.69	1.00	1.09	1.09	1.09	65	72.1
23-Jul-16	13:00	Fine	016652	2.8829	2.8900	18158.69	18159.69	1.00	1.09	1.09	1.09	65	108.9



Location: CMA3a - CWB PRE Site Office Area

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jun-16	8:00	Rainy	016239	2.8456	2.9270	5499.54	5523.54	24.00	1.24	1.24	1.24	1791	45.4
5-Jul-16	8:00	Cloudy	015762	2.8229	2.8551	5526.55	5550.55	24.00	1.13	1.13	1.13	1627	19.8
11-Jul-16	8:00	Cloudy	015678	2.8499	2.9397	5553.54	5577.54	24.00	1.24	1.24	1.24	1788	50.2
16-Jul-16	8:00	Fine	016398	2.8366	2.9244	5580.54	5604.54	24.00	1.16	1.16	1.16	1671	52.5
22-Jul-16	8:00	Fine	015592	2.8491	2.9253	5607.54	5631.54	24.00	1.16	1.16	1.16	1675	45.5

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
30-Jun-16	9:05	Cloudy	016236	2.8425	2.8455	5523.54	5524.54	1.00	1.19	1.19	1.19	71	42.2
30-Jun-16	11:00	Cloudy	016227	2.8285	2.8323	5524.54	5525.54	1.00	1.19	1.19	1.19	71	53.4
30-Jun-16	16:11	Cloudy	016228	2.8356	2.8389	5525.54	5526.54	1.00	1.19	1.19	1.19	71	46.4
6-Jul-16	9:15	Rainy	015756	2.8169	2.8191	5550.55	5551.55	1.00	1.13	1.13	1.13	68	32.4
6-Jul-16	10:50	Rainy	015684	2.8335	2.8349	5551.55	5552.55	1.00	1.16	1.16	1.16	70	20.1
6-Jul-16	13:00	Rainy	015681	2.8178	2.8209	5552.55	5553.55	1.00	1.25	1.25	1.25	75	41.4
12-Jul-16	8:50	Cloudy	015675	2.8592	2.8610	5577.54	5578.54	1.00	1.24	1.24	1.24	75	24.1
12-Jul-16	10:25	Cloudy	016434	2.8880	2.8903	5578.54	5579.54	1.00	1.24	1.24	1.24	75	30.8
12-Jul-16	13:00	Cloudy	015392	2.8392	2.8439	5579.54	5580.54	1.00	1.24	1.24	1.24	75	63.0
18-Jul-16	8:45	Fine	016400	2.8499	2.8535	5604.54	5605.54	1.00	1.10	1.10	1.10	66	54.8
18-Jul-16	10:25	Fine	016403	2.8537	2.8572	5605.54	5606.54	1.00	1.03	1.03	1.03	62	56.7
18-Jul-16	13:00	Fine	015594	2.8667	2.8721	5606.54	5607.54	1.00	1.16	1.16	1.16	70	77.4
23-Jul-16	8:40	Fine	016644	2.8840	2.8900	5631.54	5632.54	1.00	1.16	1.16	1.16	70	86.0
23-Jul-16	10:10	Fine	016679	2.9203	2.9283	5632.54	5633.54	1.00	1.16	1.16	1.16	70	114.6
23-Jul-16	13:00	Fine	016638	2.8933	2.9031	5633.54	5634.54	1.00	1.16	1.16	1.16	70	140.4



Location: CMA4a - SPCA

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 171.2
Limit Level ($\mu\text{g}/\text{m}^3$) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jun-16	8:00	Rainy	016202	2.8723	2.9227	22283.24	22307.24	24.00	1.28	1.28	1.28	1842	27.4
5-Jul-16	8:00	Cloudy	015765	2.8294	2.8715	22310.24	22334.24	24.00	1.28	1.28	1.28	1844	22.8
11-Jul-16	8:00	Cloudy	016431	2.9003	2.9596	22337.24	22361.24	24.00	1.30	1.30	1.30	1877	31.6
16-Jul-16	8:00	Fine	015384	2.8524	2.9095	22364.24	22388.24	24.00	1.14	1.14	1.14	1644	34.7
22-Jul-16	8:00	Fine	016511	2.8933	2.9389	22391.24	22415.24	24.00	1.14	1.14	1.14	1646	27.7

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 312.5
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
30-Jun-16	9:07	Cloudy	015790	2.8187	2.8208	22307.24	22308.24	1.00	1.28	1.28	1.28	77	27.4
30-Jun-16	11:00	Cloudy	015771	2.8381	2.8393	22308.24	22309.24	1.00	1.28	1.28	1.28	77	15.6
30-Jun-16	16:08	Cloudy	015767	2.8489	2.8499	22309.24	22310.24	1.00	1.28	1.28	1.28	77	13.0
6-Jul-16	9:17	Rainy	015753	2.8058	2.8073	22334.24	22335.24	1.00	1.28	1.28	1.28	77	19.5
6-Jul-16	10:49	Rainy	015693	2.8126	2.8136	22335.24	22336.24	1.00	1.28	1.28	1.28	77	13.0
6-Jul-16	16:08	Rainy	015690	2.8271	2.8283	22336.24	22337.24	1.00	1.28	1.28	1.28	77	15.6
12-Jul-16	8:55	Cloudy	016415	2.9473	2.9493	22361.24	22362.24	1.00	1.30	1.30	1.30	78	25.6
12-Jul-16	10:28	Cloudy	016418	2.9174	2.9205	22362.24	22363.24	1.00	1.30	1.30	1.30	78	39.6
12-Jul-16	13:00	Cloudy	016422	2.9252	2.9282	22363.24	22364.24	1.00	1.28	1.28	1.28	77	39.1
18-Jul-16	8:59	Fine	016365	2.8375	2.8391	22388.24	22389.24	1.00	1.14	1.14	1.14	69	23.3
18-Jul-16	10:28	Fine	016361	2.8269	2.8296	22389.24	22390.24	1.00	1.14	1.14	1.14	69	39.4
18-Jul-16	13:00	Fine	016385	2.8367	2.8388	22390.24	22391.24	1.00	1.14	1.14	1.14	69	30.6
23-Jul-16	8:15	Fine	016668	2.9167	2.9201	22415.24	22416.24	1.00	1.19	1.19	1.19	72	47.4
23-Jul-16	10:09	Fine	016656	2.9002	2.9040	22416.24	22417.24	1.00	1.19	1.19	1.19	72	53.0
23-Jul-16	13:00	Fine	016676	2.9082	2.9125	22417.24	22418.24	1.00	1.14	1.14	1.14	69	62.7



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, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jun-16	8:00	Rainy	016203	2.8726	2.9616	6827.68	6851.68	24.00	0.70	0.69	0.69	1000	89.0
5-Jul-16	8:00	Cloudy	015760	2.8173	2.9193	6854.68	6878.68	24.00	0.69	0.70	0.70	1002	101.8
12-Jul-16	16:17	Cloudy	015386	2.8609	2.9375	6888.12	6912.12	24.00	0.69	0.69	0.69	997	76.8
16-Jul-16	8:00	Fine	016388	2.8497	2.9315	6912.16	6936.16	24.00	1.00	1.00	1.00	1441	56.7
22-Jul-16	8:00	Fine	016405	2.8524	2.9551	6939.16	6963.16	24.00	1.00	1.00	1.00	1445	71.1

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 11 July 2016 to 12 July 2016.

Report on 1-hour TSP monitoring

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
30-Jun-16	8:06	Cloudy	015784	2.8217	2.8257	6851.68	6852.68	1.00	0.69	0.69	0.69	42	96.2
30-Jun-16	10:18	Cloudy	015787	2.8313	2.8370	6852.68	6853.68	1.00	0.69	0.69	0.69	42	137.1
30-Jun-16	15:21	Cloudy	015768	2.8439	2.8482	6853.68	6854.68	1.00	0.69	0.69	0.69	42	103.4
6-Jul-16	9:03	Rainy	015754	2.8230	2.8272	6878.68	6879.68	1.00	0.77	0.77	0.77	46	90.7
6-Jul-16	10:35	Rainy	015694	2.8150	2.8163	6879.68	6880.68	1.00	0.70	0.70	0.70	42	31.0
6-Jul-16	13:00	Rainy	015687	2.8284	2.8320	6880.68	6881.68	1.00	0.70	0.70	0.70	42	85.9
12-Jul-16	13:00	Cloudy	016408	2.8610	2.8666	6884.37	6885.37	1.00	0.69	0.69	0.69	42	134.6
12-Jul-16	14:12	Cloudy	016425	2.9048	2.9098	6885.37	6886.37	1.00	0.69	0.69	0.69	42	120.2
12-Jul-16	15:15	Cloudy	016383	2.8562	2.8607	6886.37	6887.37	1.00	0.69	0.69	0.69	42	108.2
18-Jul-16	8:46	Fine	016366	2.8503	2.8553	6936.16	6937.16	1.00	1.00	1.00	1.00	60	83.1
18-Jul-16	10:13	Fine	016362	2.8379	2.8418	6937.16	6938.16	1.00	0.88	0.88	0.88	53	74.0
18-Jul-16	13:00	Fine	016359	2.8363	2.8414	6938.16	6939.16	1.00	1.00	1.00	1.00	60	84.8
23-Jul-16	8:02	Fine	016681	2.9299	2.9367	6963.16	6964.16	1.00	0.94	0.94	0.94	56	120.4
23-Jul-16	10:05	Fine	016677	2.9125	2.9223	6964.16	6965.16	1.00	0.94	0.94	0.94	56	173.5
23-Jul-16	13:00	Fine	016653	2.9084	2.9208	6965.16	6966.16	1.00	0.88	0.88	0.88	53	235.0



Location: CMA6a - WD2 PRE Office

Report on 24-hour TSP monitoring

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

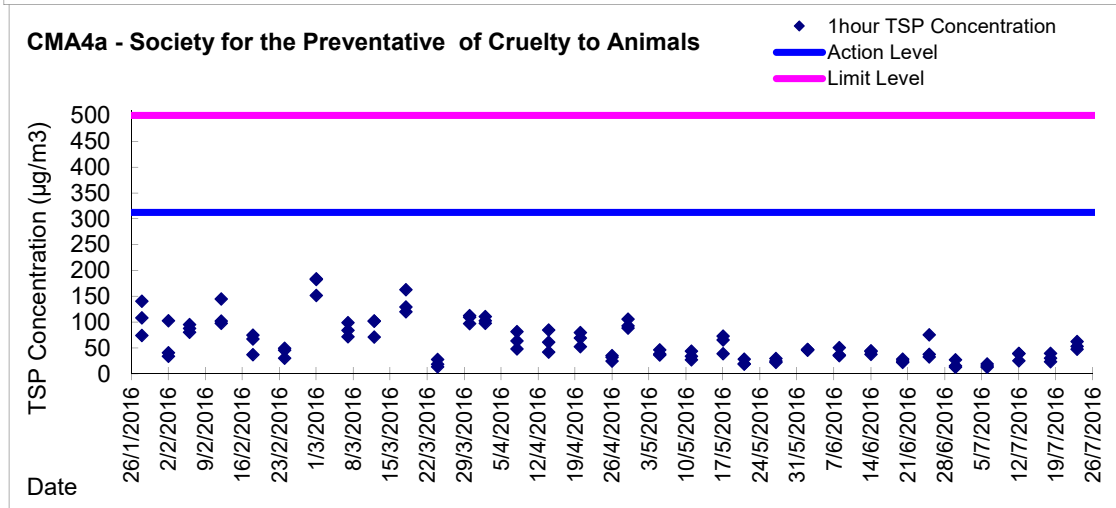
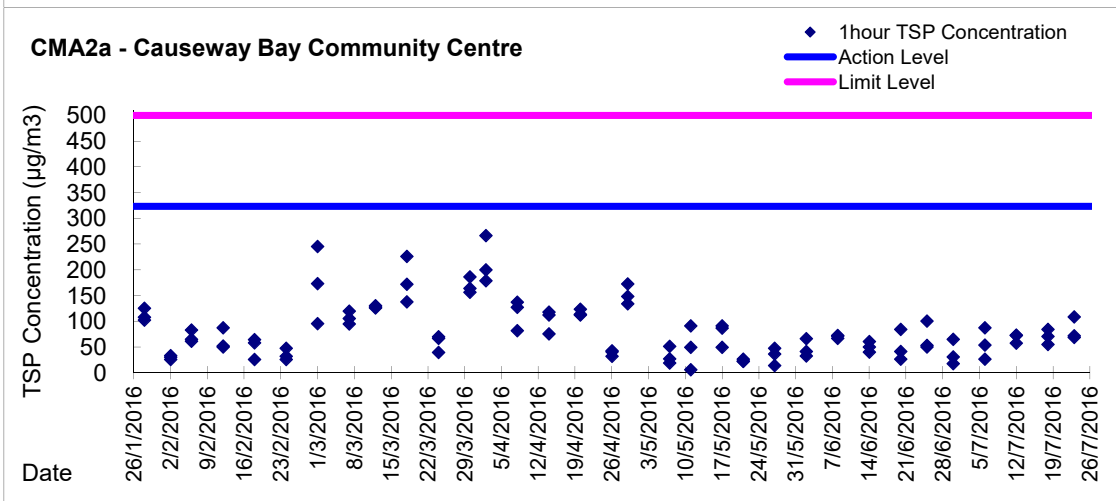
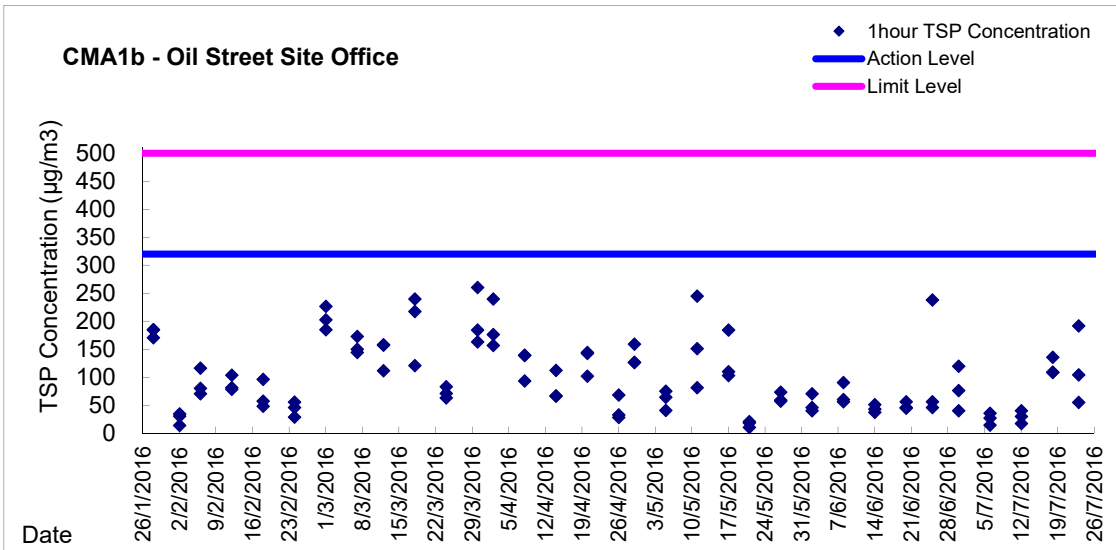
Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jun-16	8:00	Rainy	016240	2.8274	2.8915	563.54	587.54	24.00	1.06	1.06	1.06	1522	42.1
5-Jul-16	8:00	Cloudy	015758	2.8340	2.8888	590.54	614.54	24.00	1.11	1.12	1.12	1608	34.1
11-Jul-16	8:00	Cloudy	015679	2.8381	2.9157	617.54	641.54	24.00	1.11	1.11	1.11	1602	48.4
16-Jul-16	8:00	Fine	016395	2.8367	2.9005	649.40	673.40	24.00	0.95	0.95	0.95	1374	46.4
22-Jul-16	8:00	Fine	015589	2.8449	2.9107	683.29	707.29	24.00	0.96	0.96	0.96	1377	47.8

Report on 1-hour TSP monitoring

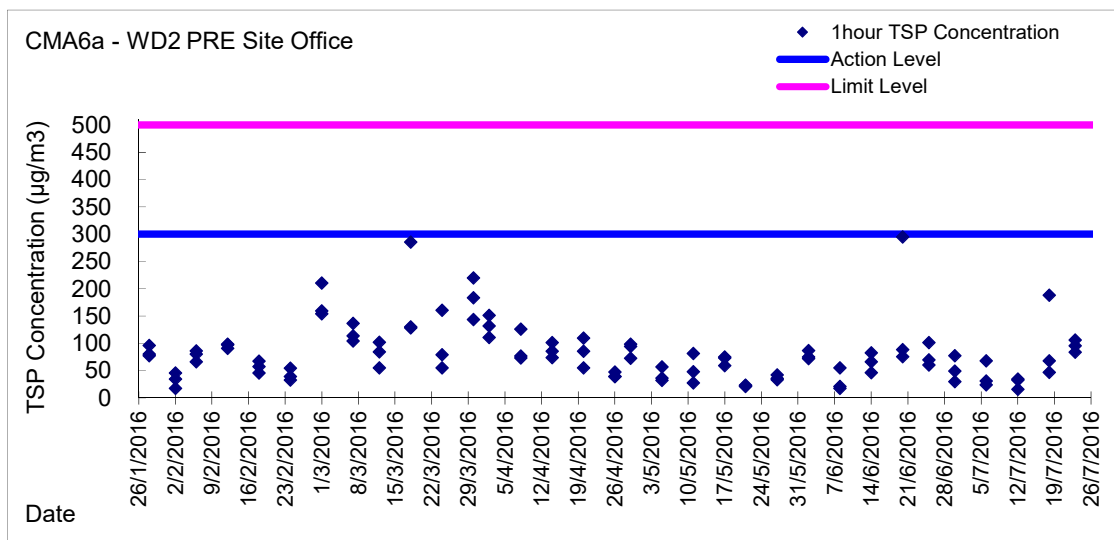
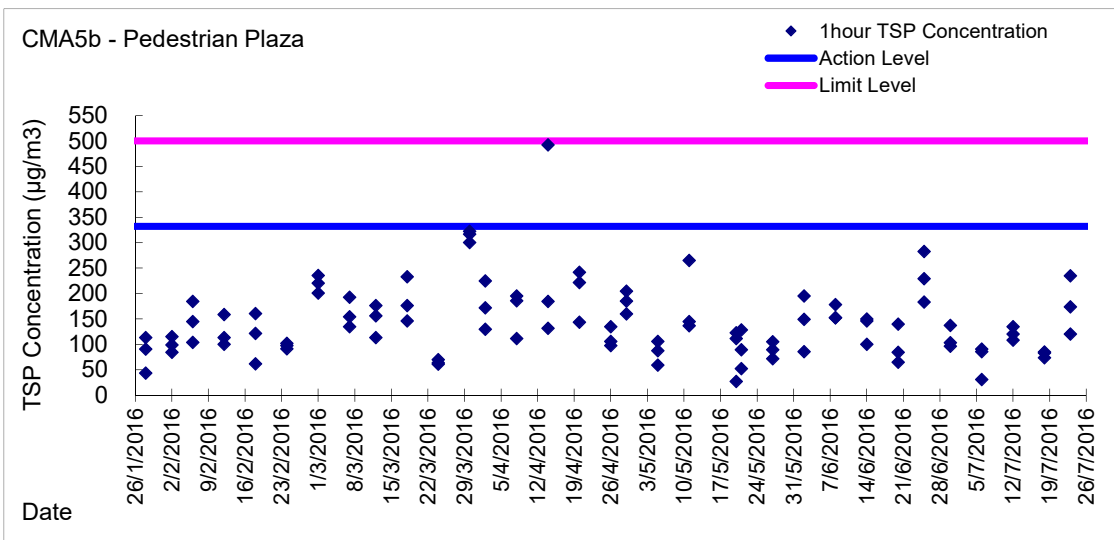
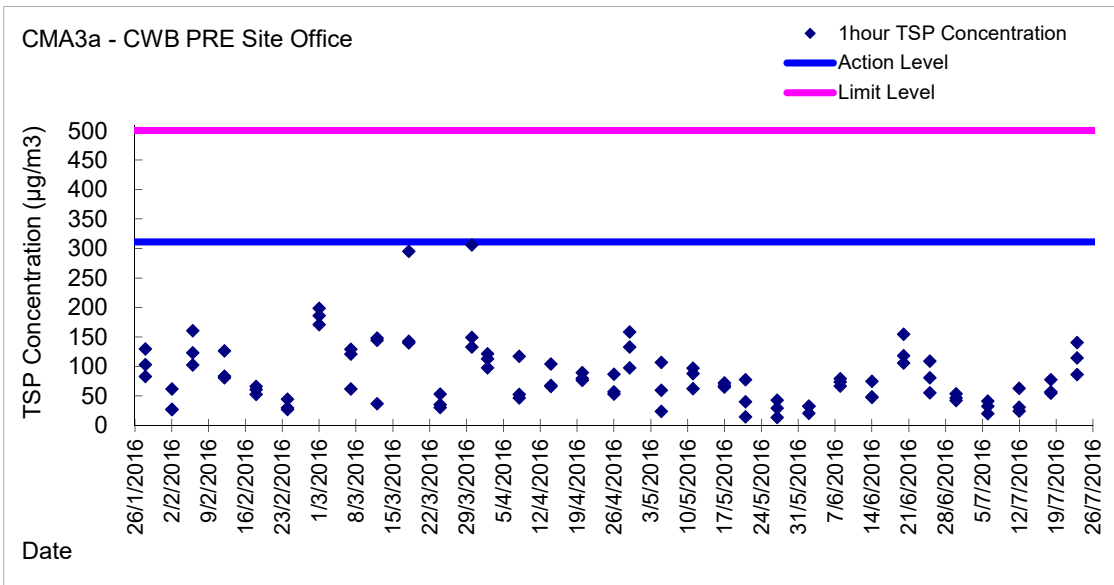
Action Level - 300.1 $\mu\text{g}/\text{m}^3$
Limit Level - 500 $\mu\text{g}/\text{m}^3$

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
30-Jun-16	8:45	Cloudy	016237	2.8281	2.8312	587.54	588.54	1.00	1.06	1.06	1.06	63	48.9
30-Jun-16	10:05	Cloudy	016234	2.8562	2.8581	588.54	589.54	1.00	1.06	1.06	1.06	63	30.0
30-Jun-16	13:00	Cloudy	016304	2.8488	2.8537	589.54	590.54	1.00	1.06	1.06	1.06	63	77.3
6-Jul-16	8:40	Rainy	015757	2.8251	2.8299	614.54	615.54	1.00	1.18	1.18	1.18	71	68.0
6-Jul-16	10:20	Rainy	015685	2.8105	2.8127	615.54	616.54	1.00	1.18	1.18	1.18	71	31.2
6-Jul-16	13:00	Rainy	015682	2.8502	2.8519	616.54	617.54	1.00	1.18	1.18	1.18	71	24.1
12-Jul-16	8:30	Cloudy	015676	2.8493	2.8503	646.40	647.40	1.00	1.06	1.06	1.06	63	15.8
12-Jul-16	10:00	Cloudy	016406	2.8315	2.8337	647.40	648.40	1.00	1.06	1.06	1.06	63	34.7
12-Jul-16	13:00	Cloudy	016391	2.8429	2.8451	648.40	649.40	1.00	1.11	1.11	1.11	67	32.9
18-Jul-16	8:50	Fine	016399	2.8578	2.8617	680.29	681.29	1.00	0.96	0.96	0.96	57	68.0
18-Jul-16	10:00	Fine	016402	2.8554	2.8582	681.29	682.29	1.00	1.01	0.98	1.00	60	46.7
18-Jul-16	13:00	Fine	015595	2.8541	2.8649	682.29	683.29	1.00	0.96	0.96	0.96	57	188.3
23-Jul-16	8:15	Fine	015588	2.8383	2.8437	707.29	708.29	1.00	1.07	1.07	1.07	64	83.8
23-Jul-16	9:45	Fine	016642	2.9136	2.9196	708.29	709.29	1.00	1.04	1.04	1.04	63	95.8
23-Jul-16	10:50	Fine	016639	2.9016	2.9077	709.29	710.29	1.00	0.96	0.96	0.96	57	106.3

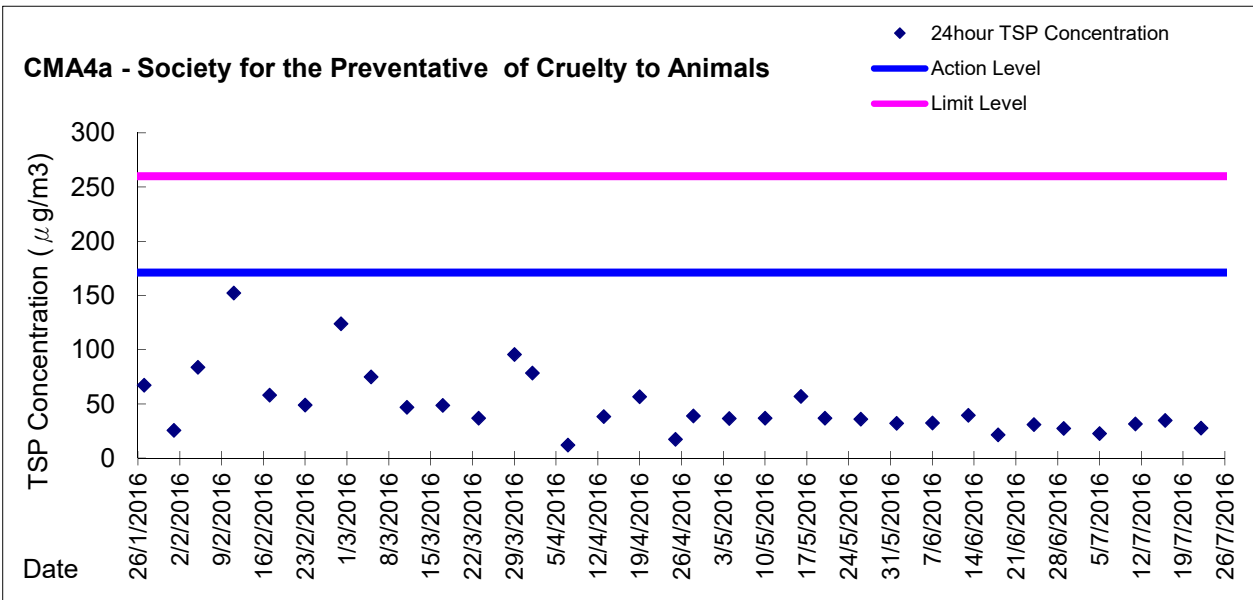
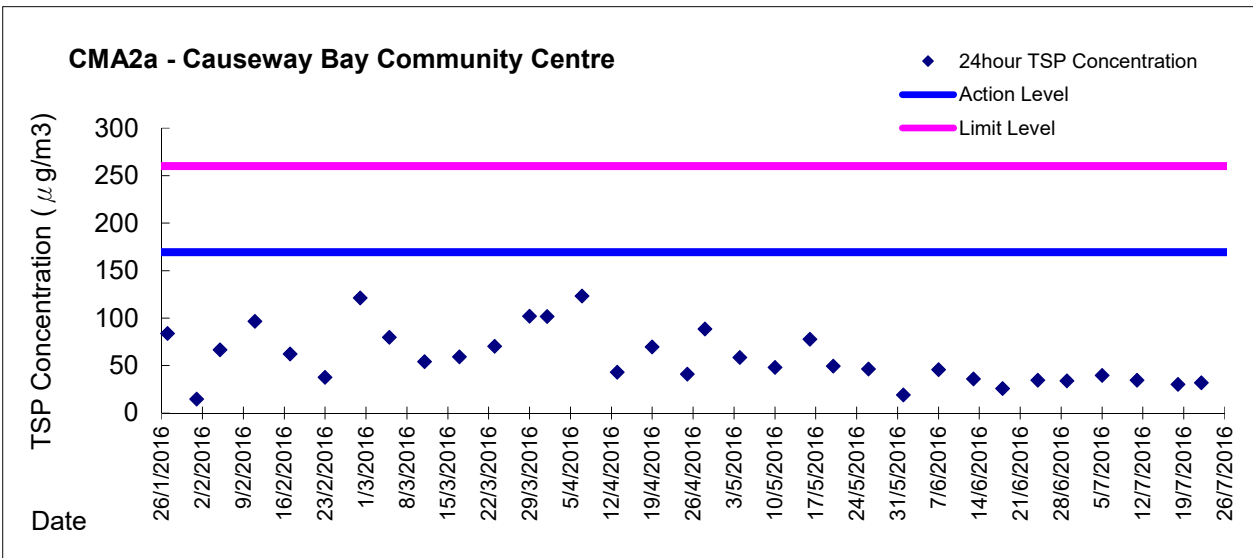
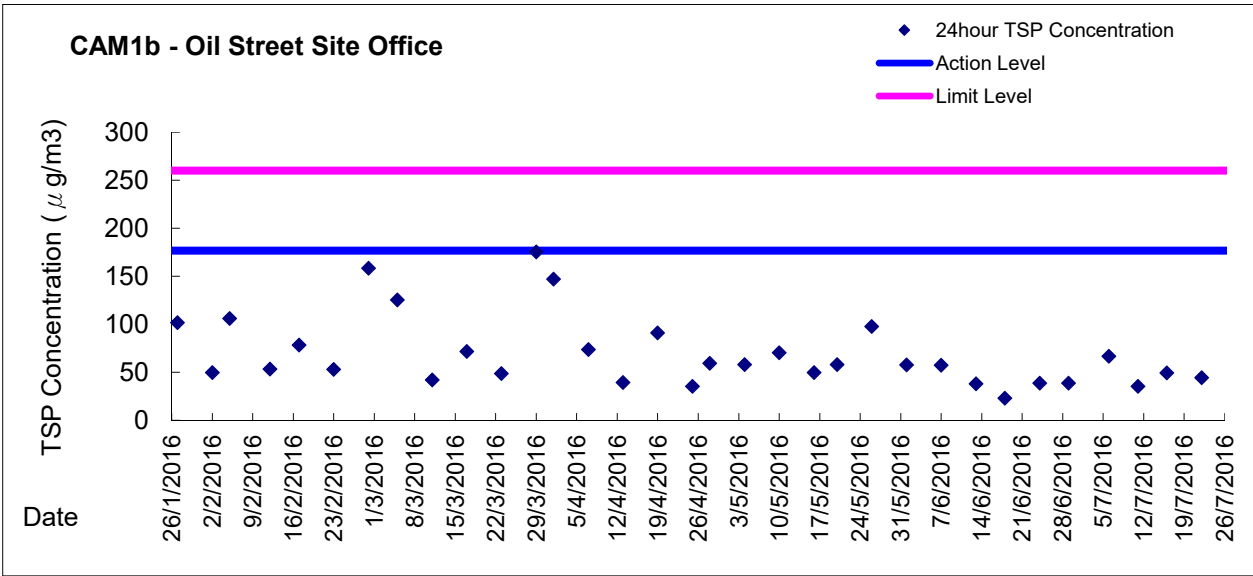
Graphic Presentation of 1 hour TSP Result



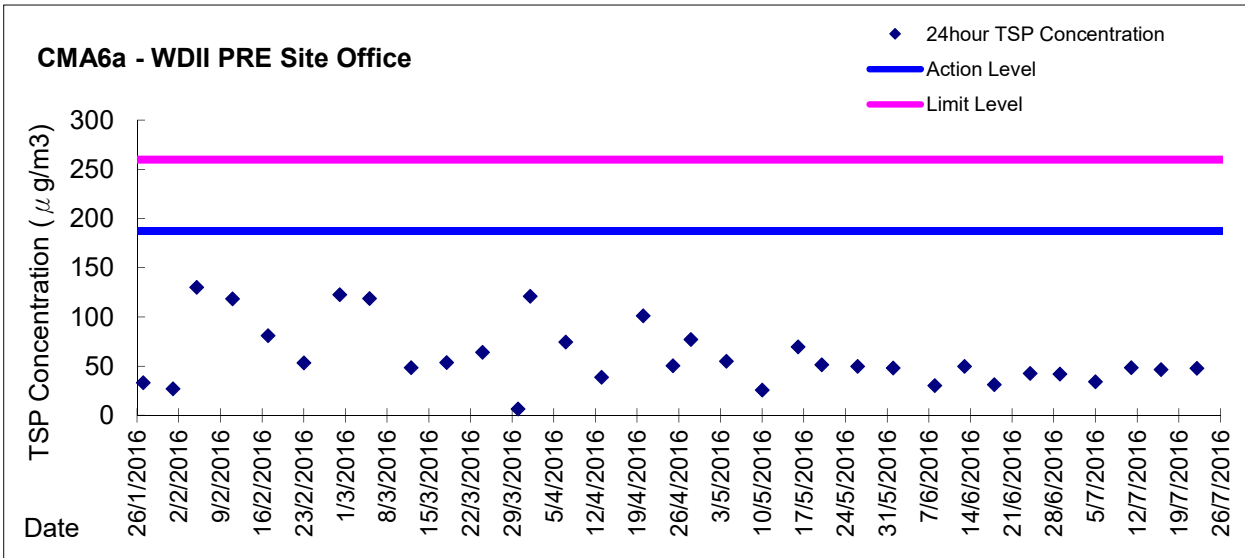
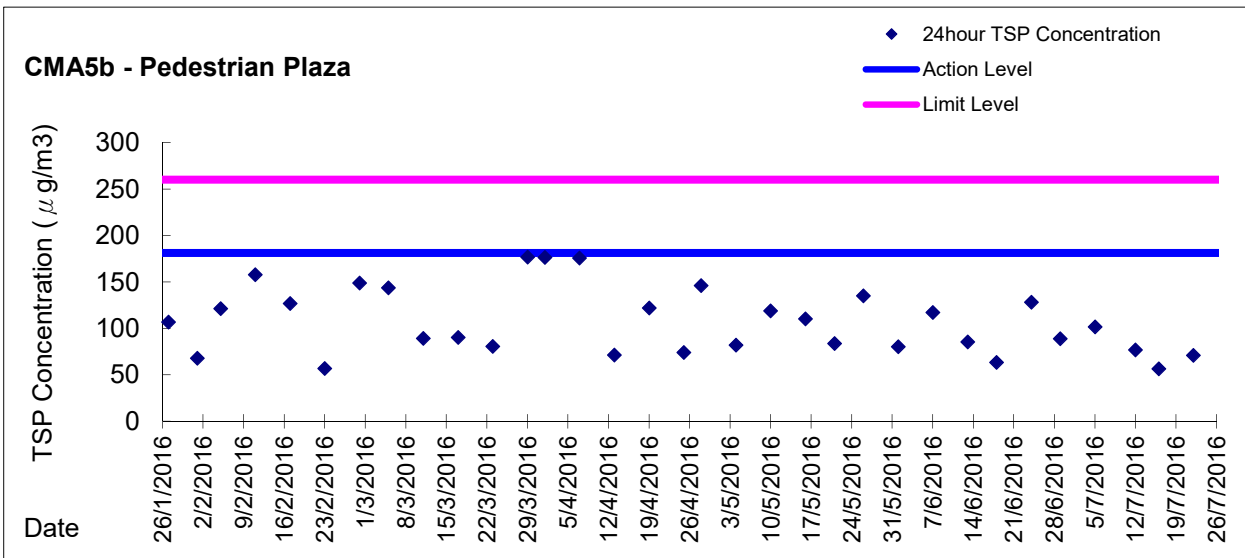
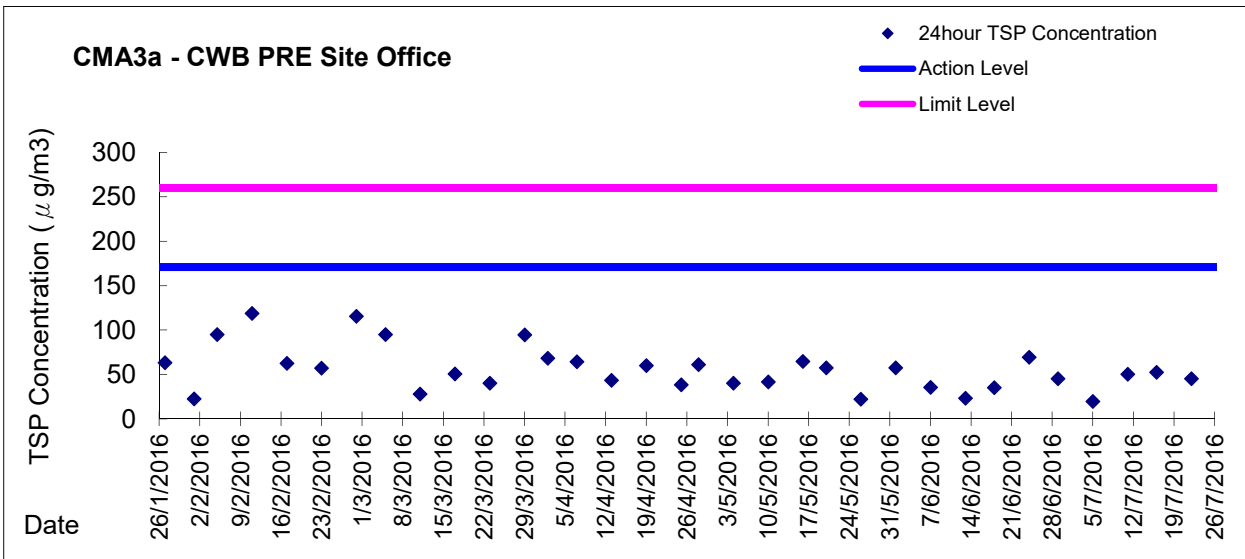
Graphic Presentation of 1 hour TSP Result



Graphic Presentation of 24 hour TSP Result



Graphic Presentation of 24 hour TSP Result





Field Data Record Sheet

Monitoring Date: 20 July 2016
Temperature: 30.8°C – 35.7°C

Weather Condition: Fine
Relative Humidity: 51.1% - 69.3%

Tidal Condition: Ebb

Location	Time	Temperature (°C)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:30	34.9	51.1	0	/	/	/	2.0	E	
OP6	13:48	35.7	52.1	1	Seawater	Sea	Intermittent	0.5	NW	
OP5	13:42	35.1	58.4	0	/	/	/	0.6	W	
OP4	13:39	34.5	65.0	1	Seawater	Sea	Intermittent	0.5	SW	
OP3	13:29	34.8	65.7	0	/	/	/	0	/	
OP2	13:23	33.2	69.3	0	/	/	/	0	/	
OP1	13:21	30.8	65.6	1	Mobile Exhaust	Vehicle	Persistent	0.9	N	

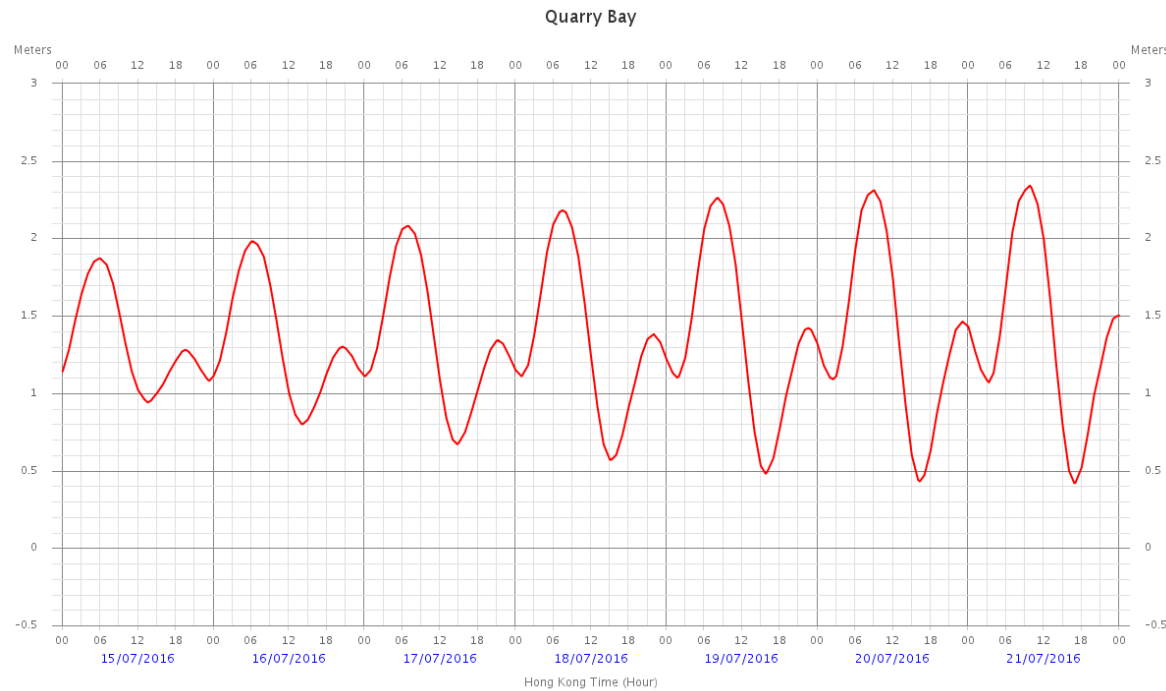
Remarks for Odour Intensity: The perceived odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:
 0 – Not detected. No odour perceived or an odour so weak that it cannot be easily characterised or described;
 1 – Slight Identifiable odour, and slight chance 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 level



Meteorological Conditions on 20 July 2016

- **Hong Kong Observatory Weather Station at Hong Kong Observatory**
Air Temperature: 25.6 – 31.9 °C Relative humidity: 68 – 97%
- **Hong Kong Observatory Weather Station at Hong Kong Park**
Air Temperature: 24.5 – 32.3 °C
- **The tidal data at Quarry Bay Station**

Tide Time	Tide Height (m)
02:30	1.1
08:56	2.3
16:16	0.4
23:07	1.5





Field Data Record Sheet

Monitoring 5 July 2016
Date:
Temperature: 30.7°C – 34.1°C

Weather Condition: Cloudy / Drizzle
Relative Humidity: 70.2% - 84.3%

Tidal Condition: Ebb

Location	Time	Temperature (°C)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	14:09	34.1	72.9	0	/	/	/	0	/	
OP6	14:04	33.9	70.2	1	Seawater	Sea	Persistent	1.3	WSW	
OP5	13:56	33.9	74.3	0	/	/	/	0.7	S	
OP4	13:50	31.2	79.9	1	Mobile Exhaust	Generator & Vehicle	Persistent	0.9	NEN	
OP3	13:43	32.3	78.7	0	/	/	/	1.8	NE	
OP2	13:36	30.7	81.6	0-1	Seawater	Sea	Intermittent	2.2	E	
OP1	13:30	31.2	84.3	0	/	/	/	0.3	N	

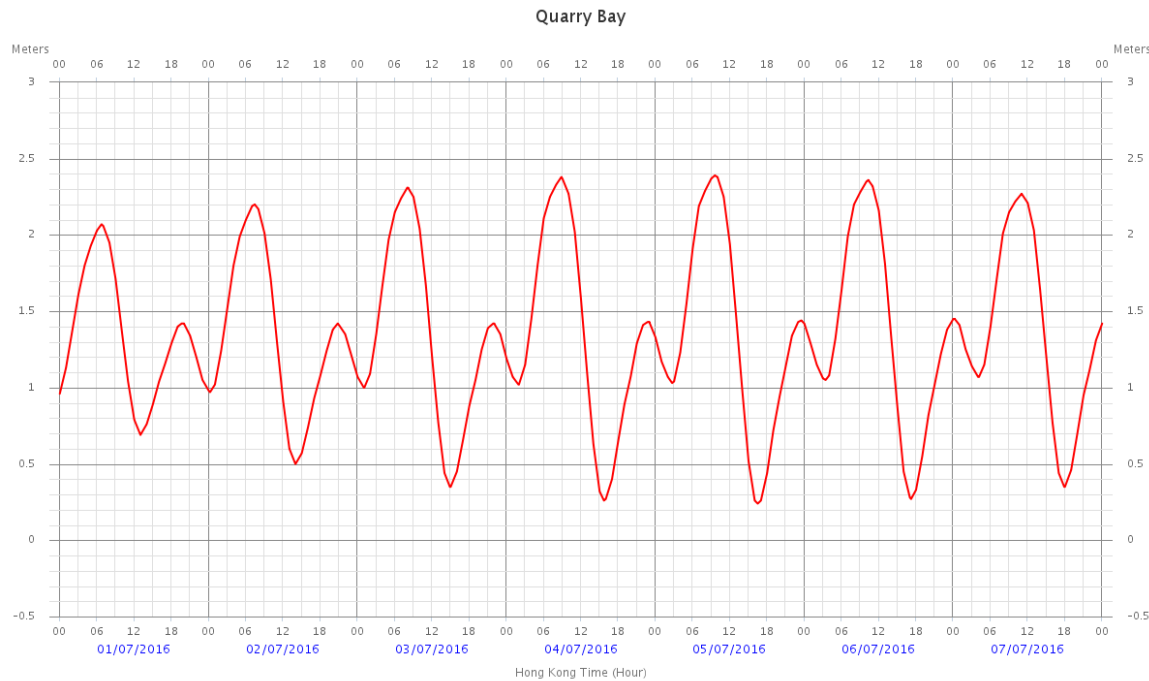
Remarks for Odour Intensity: The perceived odour intensity is to be divided into 5 levels which are ranked in the descending order as follows:
 0 – Not detected. No odour perceived or an odour so weak that it cannot be easily characterised or described;
 1 – Slight Identifiable odour, and slight chance 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 level



Meteorological Conditions on 5 July 2016

- **Hong Kong Observatory Weather Station at Hong Kong Observatory**
Air Temperature: **25.8 – 32.6 °C** Relative humidity: **70 – 96%**
- **Hong Kong Observatory Weather Station at Hong Kong Park**
Air Temperature: **26.2 – 32.0 °C**
- **The tidal data at Quarry Bay Station**

Tide Time	Tide Height (m)
02:41	1.0
09:34	2.4
16:29	0.2
23:30	1.4





Appendix 5.4

Water Quality Monitoring Results and Graphical Presentations



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			Suspended Solids		
					°C			-			ppt			%			mg/L		NTU			mg/L		
					Value	Value	Average	Value	Value	Average	Value	Value	Average	Value	Value	Average	Value	Value	Average	Value	Value	Average	Value	Value
27/6/2016	11:13	Sunny	Middle	2.5	28.00	28.00	28.00	8.69	8.69	8.70	26.70	26.70	26.70	66.2	65.4	65.6	4.47	4.40	4.42	5.94	5.91	6.03	3	2.50
	11:15		Middle	2.5	28.00	28.00		8.71	8.71		26.69	26.69		65.6	65.0		4.42	4.39		4.42	6.08		6.18	
30/6/2016	15:48	Fine	Middle	2.5	28.00	28.10	28.08	8.81	8.81	8.82	25.05	25.05	25.06	71.4	70.2	69.4	4.86	4.77	4.70	5.64	5.75	5.77	7	6.00
	15:50		Middle	2.5	28.10	28.10		8.83	8.83		25.07	25.07		68.3	67.8		4.64	4.54		4.70	5.80		5.88	
2/7/2016	17:42	Cloudy	Middle	2.5	27.90	27.90	27.90	8.76	8.76	8.77	24.24	24.24	24.25	64.6	62.9	62.6	4.43	4.32	4.29	9.99	9.82	9.82	7	6.00
	17:44		Middle	2.5	27.90	27.90		8.77	8.77		24.26	24.26		61.7	61.1		4.23	4.19		4.29	9.78		9.69	
4/7/2016	16:30	Fine	Middle	3.0	27.70	27.70	27.75	8.58	8.58	8.58	24.91	24.91	24.91	69.2	70.0	69.7	4.74	4.80	4.77	8.56	8.62	8.60	5	5.00
	16:32		Middle	3.0	27.80	27.80		8.57	8.57		24.90	24.90		69.2	70.3		4.74	4.81		4.77	8.61		8.59	
6/7/2016	21:11	Cloudy	Middle	2.0	27.60	27.60	27.65	8.51	8.51	8.52	25.33	25.33	25.33	70.4	70.5	70.9	4.81	4.82	4.85	5.65	5.90	5.80	8	7.50
	21:12		Middle	2.0	27.70	27.70		8.52	8.52		25.33	25.33		71.2	71.4		4.87	4.88		4.85	5.87		5.79	
8/7/2016	23:40	Fine	Middle	2.5	29.80	29.90	29.83	8.38	8.38	8.39	27.18	27.18	27.18	74.0	73.9	74.5	4.77	4.76	4.80	4.36	4.38	4.29	6	6.50
	23:41		Middle	2.5	29.80	29.80		8.39	8.40		27.18	27.18		74.8	75.4		4.82	4.86		4.80	4.22		4.19	
11/7/2016	0:27	Cloudy	Middle	2.0	27.30	27.30	27.35	8.26	8.26	8.32	27.68	27.68	27.69	72.7	72.4	72.5	4.93	4.91	4.92	3.82	3.98	3.85	10	9.50
	0:28		Middle	2.0	27.40	27.40		8.38	8.38		27.70	27.70		72.7	72.3		4.93	4.90		4.92	3.95		3.66	
14/7/2016	3:40	Cloudy	Middle	2.5	26.90	26.90	26.93	8.29	8.29	8.32	27.65	27.65	27.65	74.4	74.9	74.8	5.08	5.11	5.10	2.63	2.61	2.60	11	10.50
	3:41		Middle	2.5	27.00	26.90		8.34	8.34		27.64	27.64		74.9	74.8		5.11	5.10		5.10	2.60		2.57	
16/7/2016	18:03	Fine	Middle	2.5	27.30	27.30	27.30	8.48	8.48	8.47	27.32	27.32	27.32	82.5	81.7	81.1	5.61	5.56	5.51	4.01	3.83	3.98	7	6.00
	18:05		Middle	2.5	27.30	27.30		8.46	8.46		27.32	27.32		80.6	79.4		5.48	5.40		5.51	3.95		4.13	
18/7/2016	17:53	Fine	Middle	2.5	27.30	27.30	20.48	8.58	8.58	8.58	27.39	27.39	27.39	90.3	90.9	87.9	6.14	6.16	6.11	4.73	4.82	4.85	10	10.50
	17:55		Middle	2.5	0.00	27.30		8.58	8.58		27.38	27.38		90.3	80.0		6.14	5.98		6.11	4.94		4.91	
20/7/2016	17:15	Cloudy	Middle	2.5	27.60	27.60	27.65	8.45	8.45	8.45	27.77	27.77	27.77	84.8	85.4	85.2	5.72	5.76	5.75	4.20	4.22	4.25	6	6.00
	17:17		Middle	2.5	27.70	27.70		8.44	8.44		27.77	27.77		85.9	84.5		5.80	5.70		5.75	4.22		4.35	
22/7/2016	22:21	Fine	Middle	3.0	28.30	28.30	28.30	7.82	7.82	7.81	30.80	30.80	30.81	74.0	74.2	73.9	4.85	4.87	4.85	5.51	5.43	5.40	7	6.50
	22:22		Middle	3.0	28.30	28.30		7.80	7.80		30.81	30.81		74.0	73.5		4.86	4.82		4.85	5.40		5.26	
25/7/2016	10:00	Fine	Middle	3.0	25.40	25.40	25.45	8.23	8.23	8.23	31.81	31.81	31.81	76.5	77.9	77.9	5.24	5.34	5.34	4.30	4.14	4.17	6	5.50
	10:02		Middle	3.0	25.50	25.50		8.22	8.22		31.81	31.81		78.1	79.0		5.35	5.41		5.34	4.11		4.12	

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



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
27/6/2016	10:57	Sunny	Middle	2.5	28.80	28.80	28.80	8.58	8.58	8.60	27.03	27.03	27.04	67.9	66.5	66.6	4.51	4.42	4.43	7.28	7.24	7.23	5	5.50
	10:59		Middle	2.5	28.80	28.80		8.61	8.61		27.04	27.04		66.2	65.8		4.40	4.37		7.21	7.20		6	
30/6/2016	15:32	Fine	Middle	2.5	29.30	29.30	29.35	8.59	8.59	8.63	24.96	24.96	24.93	61.3	61.5	60.9	4.08	4.10	4.06	6.34	6.43	6.52	5	6.00
	15:34		Middle	2.5	29.40	29.40		8.66	8.66		24.90	24.90		60.9	59.7		4.06	3.98		6.61	6.68		7	
2/7/2016	17:26	Cloudy	Middle	2.5	28.50	28.50	28.50	8.59	8.59	8.62	24.14	24.14	24.14	59.4	57.9	57.4	4.00	3.93	3.89	8.82	8.70	8.75	6	5.50
	17:28		Middle	2.5	28.50	28.50		8.64	8.64		24.13	24.13		56.6	55.5		3.84	3.77		8.73	8.76		5	
4/7/2016	16:10	Fine	Middle	3.0	29.20	29.20	29.30	8.52	8.52	8.56	23.51	27.51	24.51	74.6	75.2	74.1	5.02	5.05	4.98	7.97	7.96	7.97	5	4.50
	16:12		Middle	3.0	29.40	29.40		8.60	8.60		23.50	23.50		74.3	72.3		4.99	4.86		7.96	7.97		4	
6/7/2016	19:56	Cloudy	Middle	2.0	27.90	27.90	27.95	8.47	8.47	8.48	24.87	24.87	24.88	78.3	79.2	78.6	5.33	5.39	5.35	4.19	4.01	3.99	5	5.00
	19:57		Middle	2.0	28.00	28.00		8.48	8.48		24.89	24.89		78.4	78.5		5.34	5.35		3.90	3.85		5	
8/7/2016	23:10	Fine	Middle	2.5	29.60	29.60	29.65	8.49	8.49	8.50	26.85	26.85	26.84	73.6	73.8	74.3	4.83	4.86	4.88	4.77	4.79	4.51	6	6.50
	23:11		Middle	2.5	29.70	29.70		8.50	8.50		26.83	26.83		74.6	75.2		4.89	4.93		4.23	4.25		7	
11/7/2016	22:40	Cloudy	Middle	2.0	27.50	27.50	27.55	8.43	8.43	8.45	28.06	28.06	28.06	79.0	79.5	79.1	5.33	5.36	5.33	5.79	5.91	5.82	8	7.50
	22:41		Middle	2.0	27.60	27.60		8.46	8.46		28.06	28.06		79.0	78.7		5.33	5.31		5.93	5.66		7	
14/7/2016	3:11	Cloudy	Middle	2.5	27.00	27.00	27.05	8.41	8.41	8.42	28.18	28.18	28.18	76.8	76.2	76.0	5.20	5.18	5.16	2.40	2.34	2.52	6	6.00
	3:12		Middle	2.5	27.10	27.10		8.43	8.43		28.18	28.18		76.0	75.0		5.16	5.10		2.74	2.61		6	
16/7/2016	17:47	Fine	Middle	2.5	28.40	28.40	28.50	8.35	8.35	8.38	26.83	26.83	26.55	77.2	76.1	77.4	5.15	5.09	5.18	3.08	3.23	3.21	5	5.50
	17:49		Middle	2.5	28.60	28.60		8.40	8.40		26.26	26.26		76.9	79.5		5.14	5.32		3.29	3.24		6	
18/7/2016	17:37	Fine	Middle	2.5	28.60	28.60	28.65	8.45	8.45	8.47	27.13	27.13	27.12	82.1	80.7	83.0	5.47	5.37	5.53	5.02	5.00	5.01	10	10.00
	17:39		Middle	2.5	28.70	28.70		8.49	8.49		27.10	27.10		85.0	84.1		5.66	5.60		4.99	5.02		10	
20/7/2016	16:59	Cloudy	Middle	2.5	28.50	28.50	28.50	8.42	8.42	8.44	27.49	27.49	27.50	82.5	81.5	81.3	5.50	5.45	5.42	3.44	3.38	3.39	6	6.50
	17:01		Middle	2.5	28.50	28.50		8.46	8.46		27.50	27.50		80.9	80.2		5.39	5.34		3.36	3.36		7	
22/7/2016	21:53	Fine	Middle	3.0	28.30	28.30	28.30	7.81	7.81	7.81	30.46	30.46	30.46	77.8	78.6	77.6	5.11	5.17	5.11	6.65	6.60	6.50	4	4.50
	21:54		Middle	3.0	28.30	28.30		7.81	7.81		30.46	30.46		77.4	76.7		5.08	5.06		6.48	6.25		5	
25/7/2016	9:40	Fine	Middle	3.0	26.60	26.60	26.70	8.19	8.19	8.19	32.16	32.16	32.16	77.9	77.4	77.1	5.21	5.17	5.15	5.20	5.08	5.12	6	5.50
	9:42		Middle	3.0	26.80	26.80		8.19	8.19		32.16	32.16		76.3	76.7		5.10	5.12		5.09	5.11		5	

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



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
27/6/2016	11:01	Sunny	Middle	2.5	28.80	28.80	28.55	8.63	8.63	8.64	27.08	27.08	27.08	67.4	65.9	65.4	4.51	4.41	4.38	7.00	6.46	6.58	4	4.50
	11:03		Middle	2.5	28.30	28.30		8.65	8.65		27.08	27.08		64.6	63.7		4.32	4.27		6.42	6.42		5	
30/6/2016	15:36	Fine	Middle	2.5	29.00	29.00	28.80	8.69	8.69	8.70	25.08	25.08	25.06	64.5	63.7	63.3	4.35	4.30	4.27	6.09	6.28	6.27	6	6.50
	15:38		Middle	2.5	28.60	28.60		8.71	8.71		25.04	25.04		62.8	62.1		4.24	4.18		6.42	6.30		7	
2/7/2016	17:30	Cloudy	Middle	2.5	28.30	28.30	28.30	8.67	8.67	8.68	24.24	24.24	24.19	64.0	62.2	61.5	4.35	4.25	4.21	8.63	8.55	8.56	5	5.50
	17:32		Middle	2.5	28.30	28.30		8.69	8.69		24.14	24.14		60.9	59.0		4.15	4.07		8.52	8.54		6	
4/7/2016	16:15	Fine	Middle	3.0	28.10	28.10	28.20	8.60	8.60	8.60	24.44	24.44	24.44	71.4	72.7	72.3	4.86	4.95	4.92	7.37	7.30	7.20	5	5.50
	16:17		Middle	3.0	28.30	28.30		8.59	8.59		24.43	24.43		73.0	72.2		4.96	4.91		7.08	7.04		6	
6/7/2016	20:05	Cloudy	Middle	2.0	27.70	27.70	27.70	8.49	8.49	8.49	25.30	25.30	25.30	76.4	76.6	76.6	5.22	5.23	5.23	5.93	5.82	5.81	3	3.50
	20:06		Middle	2.0	27.70	27.70		8.49	8.49		25.30	25.30		77.0	76.4		5.26	5.22		5.80	5.68		4	
8/7/2016	23:16	Fine	Middle	2.5	29.40	29.40	29.40	8.50	8.50	8.51	26.82	26.82	26.83	72.3	73.8	73.6	4.69	4.79	4.77	2.76	2.81	2.87	7	7.00
	23:17		Middle	2.5	29.40	29.40		8.51	8.51		26.83	26.83		74.4	73.8		4.82	4.78		2.90	3.02		7	
11/7/2016	22:48	Cloudy	Middle	2.0	27.30	27.30	27.35	8.50	8.50	8.51	28.04	28.04	28.47	73.4	74.3	73.5	4.97	5.02	4.97	3.22	3.01	3.03	7	7.00
	22:49		Middle	2.0	27.40	27.40		8.51	8.51		28.90	28.90		73.4	72.7		4.97	4.92		2.98	2.89		7	
14/7/2016	3:18	Cloudy	Middle	2.5	27.00	27.00	27.05	8.47	8.47	8.47	27.85	27.85	27.85	72.6	72.8	73.3	4.94	4.96	4.99	1.87	1.91	1.91	10	10.00
	3:19		Middle	2.5	27.10	27.10		8.47	8.47		27.84	27.84		73.8	73.8		5.02	5.03		1.93	1.94		10	
16/7/2016	17:51	Fine	Middle	2.5	28.70	28.70	28.70	8.41	8.41	8.41	26.70	26.70	26.72	84.3	82.5	83.3	5.71	5.59	5.64	3.29	3.44	3.40	5	4.50
	17:53		Middle	2.5	28.70	28.70		8.41	8.41		26.74	26.74		83.7	82.7		5.65	5.60		3.46	3.39		4	
18/7/2016	17:41	Fine	Middle	2.5	27.80	27.80	27.80	8.51	8.51	8.52	27.42	27.42	27.40	83.7	81.6	83.2	5.64	5.50	5.61	5.34	5.53	5.43	10	9.50
	17:43		Middle	2.5	27.80	27.80		8.53	8.53		27.38	27.38		83.4	83.9		5.62	5.66		5.47	5.39		9	
20/7/2016	17:03	Cloudy	Middle	2.5	28.00	28.00	28.05	8.52	8.52	8.53	27.43	27.43	27.43	88.4	89.7	87.3	5.93	6.02	5.86	2.97	2.99	2.95	3	3.50
	17:05		Middle	2.5	28.10	28.10		8.53	8.53		27.43	27.43		87.6	83.5		5.89	5.60		2.94	2.90		4	
22/7/2016	22:02	Fine	Middle	3.0	28.60	28.60	28.60	7.88	7.88	7.88	30.74	30.74	30.74	71.6	72.3	71.5	4.68	4.72	4.67	3.39	3.41	3.46	5	4.50
	22:03		Middle	3.0	28.60	28.60		7.87	7.87		30.74	30.74		71.8	70.4		4.69	4.60		3.53	3.50		4	
25/7/2016	9:45	Fine	Middle	3.0	25.90	25.90	26.00	8.20	8.20	8.20	31.94	31.94	31.94	66.5	66.4	66.6	4.51	4.50	4.52	4.58	4.49	4.47	6	6.00
	9:47		Middle	3.0	26.10	26.10		8.20	8.20		31.94	31.94		66.7	66.8		4.52	4.53		4.46	4.34		6	

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



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
					°C			-			ppt			%			mg/L			NTU			mg/L	
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average
27/6/2016	11:05	Sunny	Middle	2.5	28.10	28.10	28.10	8.66	8.66	8.67	29.96	26.96	27.71	70.1	68.3	67.8	4.71	4.59	4.55	7.24	7.22	7.13	3	4.00
	11:07		Middle	2.5	28.10	28.10		8.68	8.68		26.96	26.96		67.0	65.6		4.50	4.41		7.07	7.00		5	
30/6/2016	15:40	Fine	Middle	2.5	28.50	28.50	28.50	8.73	8.73	8.75	24.92	24.92	24.97	68.6	67.7	67.3	4.64	4.58	4.58	7.15	7.18	7.10	7	7.00
	15:42		Middle	2.5	28.50	28.50		8.77	8.77		25.01	25.01		67.3	65.7		4.65	4.44		7.01	7.06		7	
2/7/2016	17:34	Cloudy	Middle	2.5	28.00	28.00	28.00	8.70	8.70	8.60	24.30	24.30	24.31	62.7	62.3	62.4	4.29	4.26	4.26	9.79	9.72	9.82	8	8.50
	17:36		Middle	2.5	28.00	28.00		8.24	8.74		24.32	24.32		63.0	61.7		4.25	4.22		9.87	9.90		9	
4/7/2016	16:20	Fine	Middle	3.0	27.80	27.80	27.90	8.59	8.59	8.59	24.73	24.73	24.73	69.2	69.9	70.0	4.73	4.78	4.78	8.54	8.55	8.59	4	5.00
	16:22		Middle	3.0	28.00	28.00		8.58	8.58		24.73	24.73		70.0	70.7		4.78	4.83		8.59	8.68		6	
6/7/2016	20:10	Cloudy	Middle	2.0	27.70	27.70	27.75	8.52	8.52	8.52	25.28	25.28	25.28	70.8	71.7	72.1	4.80	4.89	4.91	5.21	5.19	5.14	8	7.50
	20:11		Middle	2.0	27.80	27.80		8.52	8.52		25.28	25.28		73.0	72.7		4.98	4.97		5.04	5.10		7	
8/7/2016	23:24	Fine	Middle	5.0	30.20	30.10	30.13	8.52	8.52	8.53	27.20	27.20	27.20	72.5	73.2	73.6	4.63	4.68	4.71	3.77	3.79	3.81	10	10.00
	23:25		Middle	2.5	30.10	30.10		8.53	8.53		27.20	27.20		74.5	74.1		4.77	4.74		3.81	3.85		10	
11/7/2016	22:54	Cloudy	Middle	2.0	27.30	27.30	27.35	8.48	8.48	8.48	27.78	27.78	27.78	73.5	74.9	73.8	4.98	5.07	5.00	3.94	3.55	3.57	7	6.50
	22:55		Middle	2.0	27.40	27.40		8.47	8.48		27.78	27.78		73.5	73.2		4.98	4.95		3.37	3.40		6	
14/7/2016	3:24	Cloudy	Middle	2.5	27.10	27.10	27.15	8.48	8.48	8.48	27.72	27.72	27.72	70.5	70.8	71.0	4.79	4.82	4.83	2.28	2.20	2.19	4	4.50
	3:25		Middle	2.5	27.20	27.20		8.48	8.48		27.71	27.71		71.9	70.8		4.89	4.81		2.11	2.16		5	
16/7/2016	17:55	Fine	Middle	2.5	27.60	27.60	27.60	8.43	8.43	8.45	26.81	26.81	26.57	94.8	95.0	94.9	6.45	6.46	6.46	3.34	3.35	3.39	6	5.00
	17:57		Middle	2.5	27.60	27.60		8.46	8.46		26.32	26.32		95.1	94.8		6.47	6.45		3.29	3.56		4	
18/7/2016	17:45	Fine	Middle	2.5	27.60	27.60	27.50	8.55	8.55	8.56	27.50	27.50	27.46	92.9	93.7	93.4	6.31	6.36	6.34	4.34	4.46	4.57	11	10.50
	17:47		Middle	2.5	27.40	27.40		8.57	8.57		27.41	27.41		94.0	93.0		6.38	6.32		4.69	4.78		10	
20/7/2016	17:07	Cloudy	Middle	2.5	27.80	27.80	27.85	8.51	8.51	8.50	27.73	27.73	27.73	75.7	75.0	74.2	5.20	5.04	5.02	3.98	4.11	4.04	6	6.00
	17:09		Middle	2.5	27.90	27.90		8.49	8.49		27.72	27.72		73.8	72.2		4.95	4.88		4.04	4.01		6	
22/7/2016	22:10	Fine	Middle	3.0	28.30	28.30	28.30	7.89	7.89	7.90	31.35	31.35	31.35	79.7	79.9	79.4	5.21	5.23	5.19	5.76	5.65	5.63	7	7.00
	22:11		Middle	3.0	28.30	28.30		7.91	7.91		31.35	31.35		78.9	79.1		5.16	5.17		5.56	5.54		7	
25/7/2016	9:50	Fine	Middle	3.0	25.80	25.80	25.85	8.21	8.21	8.21	32.04	32.04	32.04	75.4	75.2	75.6	5.12	5.11	5.14	4.56	4.57	4.67	9	8.50
	9:52		Middle	3.0	25.90	25.90		8.21	8.21		32.04	32.04		75.6	76.3		5.13	5.18		4.78	4.78		8	

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



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity		DO Saturation		DO		Turbidity			Suspended Solids				
					°C			-			ppt		%		mg/L		NTU			mg/L				
					Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average		
27/6/2016	11:09	Sunny	Middle	2.5	28.10	28.10	28.05	8.68	8.68	8.68	26.91	26.91	27.12	68.1	66.3	65.6	4.58	4.46	4.41	6.75	6.54	6.52	4	4.00
	11:11		Middle	2.5	28.00	28.00		8.68	8.68		27.32	27.32		65.0	63.0		65.6	4.37		4.23	4.41		6.46	
30/6/2016	15:44	Fine	Middle	2.5	28.30	28.30	28.35	8.79	8.79	8.80	24.97	24.97	24.97	68.4	67.0	66.4	4.63	4.54	4.50	7.14	7.18	7.08	7	7.00
	15:46		Middle	2.5	28.40	28.40		8.81	8.81		24.97	24.97		65.4	64.9		66.4	4.43		4.39	4.50		7.07	
2/7/2016	17:38	Cloudy	Middle	2.5	28.00	28.00	27.95	8.73	8.73	8.74	24.09	24.09	24.18	67.9	66.7	66.0	4.65	4.57	4.52	9.13	9.24	9.16	9	9.00
	17:40		Middle	2.5	27.90	27.90		8.75	8.75		24.27	24.27		65.5	63.8		66.0	4.48		4.37	4.52		9.13	
4/7/2016	16:25	Fine	Middle	3.0	27.80	27.80	27.85	8.59	8.59	8.60	24.29	24.29	24.29	69.2	69.9	70.8	4.73	4.78	4.85	8.54	8.55	8.61	5	4.50
	16:27		Middle	3.0	27.90	27.90		8.60	8.60		24.28	24.28		72.0	71.9		70.8	4.94		4.93	4.85		8.69	
6/7/2016	20:15	Cloudy	Middle	2.0	27.70	27.70	27.70	8.40	8.40	8.41	25.11	25.11	25.12	73.4	74.0	74.0	5.02	5.07	5.06	6.06	6.00	5.98	10	10.00
	20:16		Middle	2.0	27.70	27.70		8.41	8.41		25.13	25.13		74.2	74.4		74.0	5.07		5.09	5.06		5.98	
8/7/2016	23:30	Fine	Middle	2.5	29.50	29.50	29.50	8.56	8.56	8.56	27.27	27.27	27.27	73.0	73.4	73.3	4.78	4.80	4.79	3.54	3.49	3.47	8	8.00
	23:31		Middle	2.5	29.50	29.50		8.56	8.56		27.27	27.27		73.2	73.4		73.3	4.79		4.80	4.79		3.43	
11/7/2016	23:06	Cloudy	Middle	2.0	27.40	27.40	27.45	8.51	8.51	8.51	27.67	27.67	27.68	75.0	74.5	74.4	5.07	5.04	5.03	3.43	3.05	3.11	11	10.50
	23:07		Middle	2.0	27.50	27.50		8.50	8.51		27.68	27.68		73.9	74.0		74.4	5.00		5.01	5.03		2.97	
14/7/2016	3:32	Cloudy	Middle	2.5	26.90	26.90	26.95	8.48	8.48	8.49	27.81	27.81	27.81	74.4	76.5	75.7	5.07	5.21	5.15	1.77	1.92	1.87	4	4.00
	3:33		Middle	2.5	27.00	27.00		8.49	8.49		27.80	27.80		76.0	75.7		75.7	5.17		5.14	5.15		1.96	
16/7/2016	17:59	Fine	Middle	2.5	27.70	27.70	27.70	8.47	8.47	8.49	26.25	26.25	26.33	92.3	89.1	88.6	6.27	6.06	6.03	4.58	4.19	4.48	4	4.50
	18:01		Middle	2.5	27.70	27.70		8.50	8.50		26.41	26.41		87.6	85.4		88.6	5.96		5.81	6.03		4.58	
18/7/2016	17:49	Fine	Middle	2.5	27.30	27.30	27.55	8.53	8.53	8.56	27.35	27.35	27.35	90.2	87.8	87.0	6.14	5.97	5.92	5.23	5.17	5.09	10	10.00
	17:51		Middle	2.5	27.80	27.80		8.58	8.58		27.35	27.35		85.5	84.6		87.0	5.81		5.76	5.92		5.04	
20/7/2016	17:11	Cloudy	Middle	2.5	27.60	27.60	27.60	8.47	8.47	8.47	27.78	27.78	27.78	84.9	83.6	82.3	5.70	5.64	5.55	3.80	3.55	3.47	6	5.00
	17:13		Middle	2.5	27.60	27.60		8.46	8.46		27.78	27.78		81.6	79.2		82.3	5.52		5.34	5.55		3.45	
22/7/2016	22:17	Fine	Middle	3.0	28.20	28.20	28.15	7.95	7.95	7.96	30.97	30.97	30.97	78.9	77.9	78.6	5.17	5.10	5.15	4.61	4.65	4.67	6	5.50
	22:18		Middle	3.0	28.10	28.10		7.97	7.97		30.97	30.97		78.4	79.3		78.6	5.14		5.19	5.15		4.67	
25/7/2016	9:55	Fine	Middle	3.0	25.60	25.60	25.65	8.22	8.22	8.22	31.88	31.88	31.88	77.2	76.5	76.9	5.26	5.22	5.25	5.18	5.03	5.03	8	8.00
	9:57		Middle	3.0	25.70	25.70		8.22	8.22		31.88	31.88		76.3	77.7		76.9	5.20		5.30	5.25		5.00	

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



**Water Monitoring Result at RW21-P789 - Sun Hung Kai Centre
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity			Suspended Solids			
					°C		-		ppt		%		mg/L		NTU		mg/L							
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
27/6/2016	11:25	Sunny	Middle	3.5	27.40	27.40	27.45	8.63	8.63	8.65	27.64	27.64	27.64	78.3	78.7	77.7	5.31	5.33	5.26	5.62	5.73	5.78	5	5.50
	11:27		Middle	3.5	27.50	27.50		8.66	8.66		27.64	27.64		77.3	76.4		5.24	5.17		5.89	5.89		6	
30/6/2016	16:00	Fine	Middle	3.5	28.30	28.30	28.35	8.64	8.64	8.68	25.14	25.14	25.13	71.6	68.7	68.0	4.84	4.64	4.60	5.63	5.64	5.64	5	6.00
	16:02		Middle	3.5	28.40	28.40		8.72	8.72		25.12	25.12		66.1	65.7		4.46	4.44		5.65	5.64		7	
2/7/2016	15:23	Cloudy	Middle	3.5	28.60	28.60	28.90	8.56	8.56	8.61	23.68	23.68	23.58	70.1	68.4	67.4	4.75	4.63	4.56	9.98	9.99	9.92	6	6.00
	15:25		Middle	3.5	29.20	29.20		8.65	8.65		23.48	23.48		66.1	65.0		4.47	4.39		9.86	9.84		6	
4/7/2016	18:00	Fine	Middle	3.0	28.30	28.30	28.35	8.53	8.53	8.54	24.84	24.84	24.85	74.9	75.3	74.9	5.08	5.10	5.08	4.82	4.49	4.65	5	5.00
	18:01		Middle	3.0	28.40	28.40		8.56	8.55		24.85	24.85		74.9	74.4		5.08	5.04		4.57	4.70		5	
6/7/2016	18:11	Cloudy	Middle	3.0	27.70	27.70	27.70	8.50	8.50	8.50	24.18	24.18	24.18	79.6	79.9	79.9	5.48	5.51	5.50	3.68	3.50	3.53	6	6.50
	18:12		Middle	3.0	27.70	27.70		8.50	8.50		24.18	24.18		80.0	80.2		5.50	5.50		3.47	3.45		7	
8/7/2016	21:45	Fine	Middle	3.0	29.50	29.50	29.50	8.44	8.44	8.45	26.74	26.74	26.74	71.5	72.7	72.6	4.70	4.78	4.77	3.50	3.58	3.56	8	8.00
	21:46		Middle	3.0	29.50	29.50		8.45	8.45		26.73	26.73		73.5	72.5		4.83	4.76		3.61	3.54		8	
11/7/2016	21:10	Cloudy	Middle	3.0	27.30	27.30	27.30	8.45	8.45	8.45	28.23	28.23	28.24	70.9	71.5	71.6	4.79	4.83	4.84	2.84	2.94	2.84	7	7.00
	21:11		Middle	3.0	27.30	27.30		8.45	8.45		28.24	28.24		72.2	71.9		4.88	4.86		2.92	2.66		7	
14/7/2016	2:40	Cloudy	Middle	3.5	27.10	27.10	27.15	8.37	8.37	8.37	27.72	27.72	27.73	66.4	66.6	66.5	4.51	4.53	4.52	2.40	2.25	2.21	6	6.00
	2:41		Middle	3.5	27.20	27.20		8.37	8.37		27.73	27.73		66.6	66.3		4.53	4.50		2.06	2.11		6	
16/7/2016	15:45	Fine	Middle	3.5	27.80	27.80	27.90	8.34	8.34	8.39	26.04	26.04	26.04	100.9	101.1	101.0	6.84	6.88	6.86	4.44	4.50	4.39	7	7.00
	15:47		Middle	3.5	28.00	28.00		8.44	8.44		26.04	26.04		101.3	100.8		6.89	6.83		4.34	4.28		7	
18/7/2016	18:06	Fine	Middle	3.5	27.30	27.30	27.30	8.51	8.51	8.52	27.32	27.32	27.31	82.4	81.8	81.5	5.61	5.56	5.54	4.79	4.73	4.76	7	7.50
	18:08		Middle	3.5	27.30	27.30		8.52	8.52		27.30	27.30		81.0	80.8		5.51	5.49		4.75	4.75		8	
20/7/2016	17:20	Cloudy	Middle	3.0	27.90	27.90	27.90	7.90	7.90	7.91	27.78	27.78	27.78	88.6	89.3	88.7	5.94	5.95	5.93	3.93	3.91	3.98	6	5.50
	17:21		Middle	3.0	27.90	27.90		7.91	7.91		27.77	27.77		87.9	89.0		5.88	5.95		4.06	4.01		5	
22/7/2016	22:35	Fine	Middle	3.5	27.40	27.40	27.40	7.74	7.74	7.74	31.01	31.01	31.01	70.9	72.5	72.2	4.64	4.70	4.71	9.63	9.57	9.54	5	5.00
	22:36		Middle	3.5	27.40	27.40		7.74	7.74		31.01	31.01		72.4	72.8		4.72	4.76		9.52	9.44		5	
25/7/2016	10:15	Fine	Middle	3.5	25.50	25.50	25.60	8.23	8.23	8.24	31.39	31.39	31.39	83.3	83.2	82.6	5.70	5.69	5.65	4.70	4.59	4.60	8	7.00
	10:17		Middle	3.5	25.70	25.70		8.24	8.24		31.38	31.38		81.3	82.7		5.56	5.65		4.51	4.58		6	

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



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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity		Suspended Solids				
					°C			-			ppt			%		mg/L		NTU		mg/L				
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average
27/6/2016	10:14	Sunny	Middle	3.5	28.40	28.40	28.50	8.53	8.53	8.55	26.70	26.70	26.68	65.3	65.8	65.9	4.37	4.40	4.41	8.42	8.40	8.34	6	5.00
	10:16		Middle	3.5	28.60	28.60		8.57	8.57		26.65	26.65		67.1	65.4		4.48	4.37		8.32	8.22		4	
30/6/2016	14:45	Fine	Middle	3.5	28.70	28.70	28.80	8.64	8.64	8.66	24.48	24.47	24.46	61.3	60.8	60.9	4.13	4.10	4.10	8.06	8.06	8.05	8	7.50
	14:47		Middle	3.5	28.90	28.90		8.68	8.68		24.45	24.45		60.5	60.8		4.08	4.10		8.05	8.04		7	
2/7/2016	16:38	Cloudy	Middle	3.5	27.50	27.50	27.50	8.50	8.50	8.54	24.52	24.52	24.52	55.3	55.4	55.0	3.81	3.81	3.79	9.39	9.36	9.38	5	5.50
	16:40		Middle	3.5	27.50	27.50		8.57	8.57		24.52	24.52		54.9	54.4		3.78	3.75		9.38	9.38		6	
4/7/2016	19:10	Fine	Middle	3.0	27.60	27.60	27.75	8.52	8.52	8.52	25.16	25.16	25.16	70.5	70.2	70.1	4.81	4.79	4.78	4.18	4.22	4.28	8	8.50
	19:11		Middle	3.0	27.90	27.90		8.51	8.51		25.15	25.15		69.9	69.9		4.76	4.77		4.40	4.30		9	
6/7/2016	18:55	Cloudy	Middle	3.0	27.10	27.10	27.15	8.47	8.47	8.48	24.47	24.47	24.48	73.4	73.2	73.1	5.09	5.07	5.07	2.81	2.84	2.95	5	5.50
	18:56		Middle	3.0	27.20	27.20		8.48	8.48		24.48	24.48		73.1	72.8		5.06	5.04		3.11	3.03		6	
8/7/2016	22:22	Fine	Middle	3.0	29.80	29.80	29.80	8.39	8.39	8.39	27.04	27.04	27.04	71.1	71.3	71.2	4.64	4.65	4.65	4.97	4.99	4.87	5	5.50
	22:23		Middle	3.0	29.80	29.80		8.39	8.40		27.04	27.04		71.3	71.0		4.65	4.64		4.70	4.80		6	
11/7/2016	22:00	Cloudy	Middle	3.0	27.30	27.30	27.35	8.41	8.41	8.42	28.05	28.05	28.05	75.4	75.9	75.4	5.09	5.13	5.09	3.50	3.45	3.42	7	7.00
	22:01		Middle	3.0	27.40	27.40		8.43	8.43		28.05	28.05		75.5	74.6		5.10	5.04		3.37	3.35		7	
14/7/2016	3:57	Cloudy	Middle	3.5	27.00	27.00	27.05	8.38	8.38	8.39	27.09	27.09	27.10	72.1	72.6	72.9	4.93	4.96	4.98	1.69	1.66	1.65	5	4.50
	3:58		Middle	3.5	27.10	27.10		8.41	8.39		27.10	27.10		73.3	73.6		5.01	5.03		1.64	1.62		4	
16/7/2016	16:41	Fine	Middle	3.5	28.50	28.50	28.65	8.36	8.36	8.45	25.48	25.48	25.49	86.0	84.6	85.9	5.77	5.67	5.64	3.97	3.98	4.04	9	8.00
	16:43		Middle	3.5	28.80	28.80		8.53	8.53		25.49	25.49		86.5	86.4		5.81	5.29		4.09	4.11		7	
18/7/2016	16:52	Fine	Middle	3.5	28.20	28.20	28.05	8.32	8.32	8.37	26.81	26.81	26.82	80.0	78.2	78.1	5.41	5.29	5.29	4.25	4.29	4.29	10	10.00
	16:54		Middle	3.5	27.90	27.90		8.42	8.42		26.83	26.83		77.3	76.9		5.24	5.21		4.25	4.38		10	
20/7/2016	19:32	Cloudy	Middle	3.0	27.20	27.20	27.25	7.84	7.84	7.84	28.95	28.95	28.95	79.9	81.1	80.4	5.38	5.47	5.42	5.65	5.86	5.81	5	4.50
	19:35		Middle	3.0	27.30	27.30		7.84	7.84		28.94	28.94		80.6	80.0		5.42	5.40		5.99	5.74		4	
22/7/2016	21:15	Fine	Middle	3.5	27.40	27.40	27.40	7.88	7.88	7.88	30.84	30.84	30.84	74.4	74.3	74.0	4.87	4.87	4.85	5.53	5.15	5.17	5	5.50
	21:16		Middle	3.5	27.40	27.40		7.88	7.88		30.84	30.84		74.0	73.4		4.83	4.82		4.98	5.02		6	
25/7/2016	8:48	Fine	Middle	3.5	25.70	25.70	25.85	8.48	8.48	8.40	31.74	31.74	31.64	64.8	65.7	65.3	4.41	4.47	4.45	9.85	9.95	9.95	12	11.50
	8:50		Middle	3.5	26.00	26.00		8.32	8.32		31.54	31.54		65.5	65.2		4.46	4.44		10.01	10.00		11	

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							
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
27/6/2016	17:56	Sunny	Middle	-	28.60	28.60	28.60	8.62	8.62	8.66	26.53	26.53	26.29	68.8	68.0	69.0	4.60	4.55	4.61	6.91	6.94	6.91	4	4.00
	17:58		Middle	-	28.60	28.60		8.70	8.70		26.54	25.54		69.3	69.9		4.63	4.67		6.91	6.87		4	
30/6/2016	11:41	Fine	Middle	-	28.90	28.90	28.90	8.65	8.65	8.66	24.28	24.28	24.29	62.9	61.7	61.7	4.24	4.16	4.16	7.25	7.23	7.33	5	5.00
	11:43		Middle	-	28.90	28.90		8.66	8.66		24.29	24.29		61.3	60.7		4.13	4.09		7.42	7.43		5	
2/7/2016	11:47	Cloudy	Middle	-	28.70	28.70	28.70	8.56	8.56	8.60	23.98	23.98	23.99	56.5	55.7	55.5	3.83	3.77	3.76	34.12	34.12	<u>34.62</u>	4	4.00
	11:49		Middle	-	28.70	28.70		8.63	8.63		24.00	24.00		55.1	54.8		3.73	3.71		35.19	35.06		4	
4/7/2016	14:30	Fine	Middle	-	28.90	28.90	29.05	8.32	8.32	8.36	24.54	24.54	24.53	67.4	67.5	67.2	4.53	4.53	4.51	6.54	6.53	6.52	3	3.50
	14:32		Middle	-	29.20	29.20		8.39	8.39		24.52	24.52		67.0	67.0		4.49	4.49		6.52	6.48		4	
6/7/2016	-	Amber Rainstorm Warning Signal	Middle	-	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	#DIV/0!
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
8/7/2016	16:00	Fine	Middle	-	28.70	28.70	28.95	8.12	8.12	8.15	26.13	26.13	26.13	94.6	95.2	94.5	6.30	6.35	6.30	1.96	1.95	1.93	6	5.50
	16:02		Middle	-	29.20	29.20		8.18	8.18		26.13	26.13		94.2	94.1		6.28	6.27		1.90	1.90		5	
11/7/2016	14:50	Fine	Middle	-	28.10	28.10	28.35	8.09	8.09	8.10	28.17	28.17	28.14	84.5	85.1	84.7	5.61	5.65	5.62	4.69	4.50	4.56	11	11.50
	14:52		Middle	-	28.60	28.60		8.10	8.10		28.10	28.10		84.8	84.3		5.63	5.59		4.48	4.57		12	
14/7/2016	10:00	Cloudy	Middle	-	26.90	26.90	26.95	8.07	8.07	8.10	25.69	25.69	25.69	76.8	76.0	75.9	5.31	5.25	5.25	2.37	2.36	2.36	5	4.50
	10:02		Middle	-	27.00	27.00		8.12	8.12		25.69	25.69		76.0	74.9		5.25	5.17		2.35	2.35		4	
16/7/2016	11:50	Fine	Middle	-	28.40	27.40	28.20	8.11	8.11	8.21	25.29	25.29	25.29	94.9	96.4	95.1	6.40	6.50	6.41	2.76	2.77	2.73	5	5.50
	11:52		Middle	-	28.50	28.50		8.31	8.31		25.28	25.28		94.1	95.1		6.34	6.41		2.71	2.67		6	
18/7/2016	10:47	Fine	Middle	-	28.00	28.00	28.05	8.29	8.29	8.29	27.06	27.06	27.06	81.2	82.3	81.8	5.47	5.53	5.50	3.32	3.24	3.26	6	5.50
	10:49		Middle	-	28.10	28.10		8.29	8.29		27.05	27.05		82.0	81.5		5.51	5.48		3.24	3.24		5	
20/7/2016	14:20	Fine	Middle	-	28.80	28.80	28.85	8.17	8.17	8.18	28.47	28.47	28.37	74.0	72.4	70.5	4.89	4.78	4.66	3.89	3.81	3.82	5	5.50
	14:22		Middle	-	28.90	28.90		8.18	8.18		28.26	28.26		69.1	66.6		4.56	4.40		3.59	3.99		6	
22/7/2016	15:12	Fine	Middle	-	26.80	26.80	26.90	8.10	8.10	8.10	30.08	30.08	30.08	65.7	65.5	64.6	4.43	4.42	4.35	2.56	2.55	2.58	2	2.00
	15:14		Middle	-	27.00	27.00		8.10	8.10		30.08	30.08		64.5	62.5		4.34	4.21		2.63	2.56		2	
25/7/2016	17:02	Sunny	Middle	-	26.70	26.70	26.80	8.08	8.08	8.09	31.22	31.22	31.21	58.7	58.8	59.2	3.94	3.95	3.97	12.26	12.25	<u>12.08</u>	6	5.50
	17:06		Middle	-	26.90	26.90		8.09	8.09		31.20	31.20		60.0	59.3		4.01	3.98		11.94	11.87		5	

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



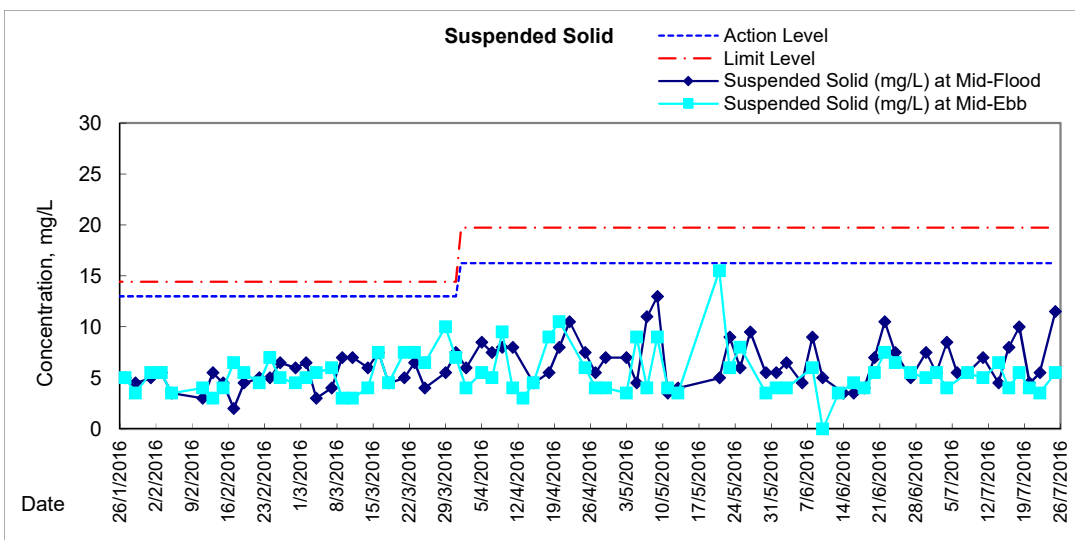
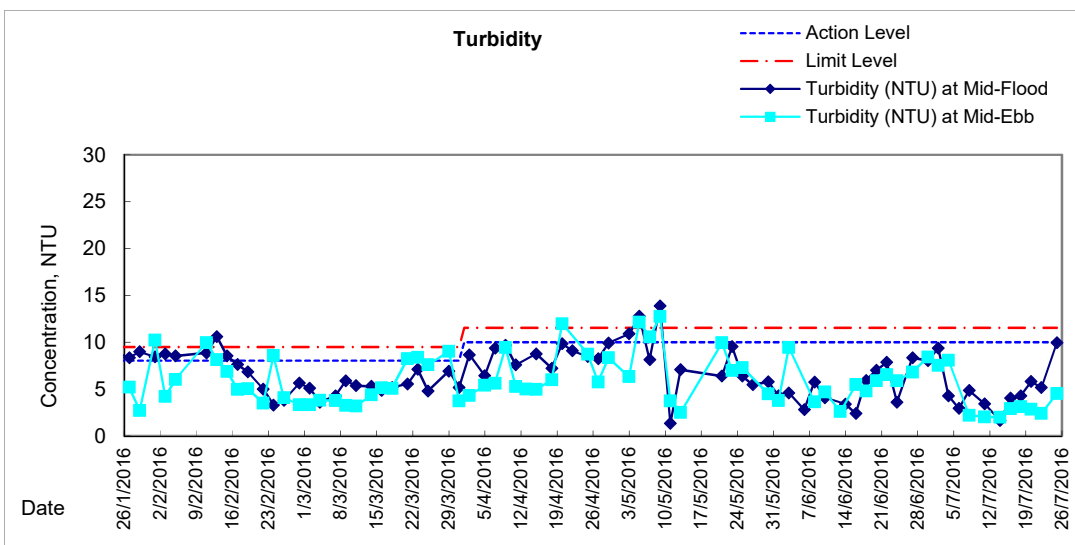
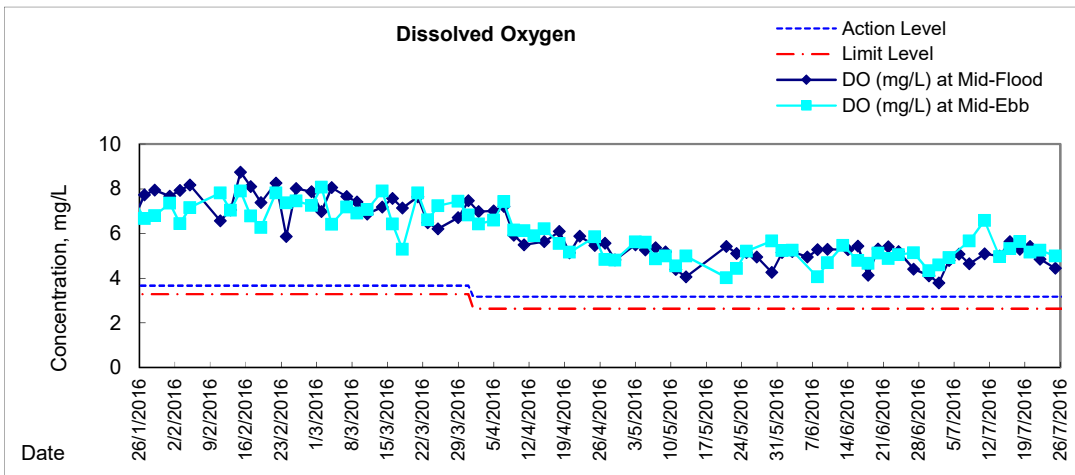
Water Monitoring Result at WSD19 - Sheung Wan Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature		pH		Salinity		DO Saturation		DO		Turbidity		Suspended Solids							
					°C		-		ppt		%		mg/L		NTU		mg/L							
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average						
27/6/2016	16:14	Sunny	Middle	3.5	29.20	29.70	29.88	8.70	8.70	8.74	24.89	24.90	24.80	78.8	76.1	78.0	5.19	4.98	5.13	6.70	6.88	6.83	6	5.50
	16:16		Middle	3.5	30.30	30.30		8.78	8.78		24.71	24.71		78.3	78.9		5.15	5.18		6.90	6.83		5	
30/6/2016	8:18	Fine	Middle	3.5	28.10	28.10	28.15	8.50	8.50	8.55	23.88	23.88	23.88	64.8	62.9	63.2	4.43	4.30	4.32	8.49	8.53	8.41	5	5.00
	8:20		Middle	3.5	28.20	28.20		8.59	8.59		23.88	23.88		62.2	63.0		4.25	4.30		8.35	8.26		5	
2/7/2016	10:09	Cloudy	Middle	3.5	28.40	28.40	28.50	8.45	8.45	8.52	23.02	23.02	22.99	69.0	67.8	67.0	4.72	4.62	4.58	7.72	7.61	7.53	6	5.50
	10:11		Middle	3.5	28.60	28.60		8.59	8.59		22.96	22.96		66.0	65.1		4.53	4.45		7.47	7.30		5	
4/7/2016	10:05	Fine	Middle	4.0	28.00	28.00	28.05	8.45	8.45	8.48	23.47	23.47	23.48	72.6	72.1	71.5	4.98	4.96	4.91	8.02	8.08	8.07	4	4.00
	10:07		Middle	4.0	28.10	28.10		8.50	8.50		23.48	23.48		70.1	71.3		4.81	4.89		8.07	8.09		4	
6/7/2016	-	Amber Rainstorm Warning Signal	Middle	-	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	-	#DIV/0!	-	#DIV/0!
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-			
8/7/2016	14:20	Fine	Middle	3.5	29.80	29.80	29.80	7.96	7.96	8.03	25.91	25.91	25.79	88.9	89.0	88.0	5.69	5.73	5.66	2.20	2.22	2.21	5	5.50
	14:22		Middle	3.5	29.80	29.80		8.10	8.10		25.67	25.67		88.2	85.8		5.68	5.53		2.22	2.21		6	
11/7/2016	15:20	Fine	Middle	3.5	28.10	28.10	28.25	8.29	8.29	8.32	27.29	27.29	27.29	98.4	99.6	98.4	6.58	6.66	6.58	2.09	2.04	2.04	4	5.00
	15:22		Middle	3.5	28.40	28.40		8.35	8.35		27.28	27.28		98.1	97.3		6.56	6.50		2.01	2.00		6	
14/7/2016	8:15	Cloudy	Middle	3.5	26.70	26.70	26.70	8.35	8.35	8.34	25.19	25.19	25.19	71.8	71.6	71.4	5.00	4.97	4.96	1.98	1.99	1.99	6	6.50
	8:17		Middle	3.5	26.70	26.70		8.33	8.33		25.19	25.19		70.8	71.2		4.92	4.95		1.99	1.99		7	
16/7/2016	10:13	Fine	Middle	3.5	29.20	29.20	29.05	8.34	8.34	8.38	24.70	24.70	24.73	80.0	79.8	79.1	5.37	5.37	5.32	2.96	2.91	2.91	4	4.00
	10:15		Middle	3.5	28.90	28.90		8.41	8.41		24.75	24.75		78.9	77.8		5.30	5.23		2.89	2.89		4	
18/7/2016	11:26	Fine	Middle	3.5	27.20	27.20	27.30	8.28	8.28	8.31	27.30	27.30	27.27	83.2	82.6	82.9	5.66	5.62	5.64	3.06	3.08	3.11	6	5.50
	11:28		Middle	3.5	27.40	27.40		8.33	8.33		27.23	27.23		82.6	83.1		5.62	5.65		3.06	3.24		5	
20/7/2016	9:57	Fine	Middle	3.5	27.60	27.60	27.65	8.33	8.33	8.33	27.73	27.73	27.70	75.7	77.3	76.3	5.12	5.22	5.15	2.90	2.81	2.87	4	4.00
	9:59		Middle	3.5	27.70	27.70		8.33	8.33		27.67	27.67		76.9	75.1		5.20	5.07		2.89	2.88		4	
22/7/2016	11:03	Fine	Middle	4.0	27.90	27.90	28.10	8.37	8.37	8.39	29.55	29.55	29.55	90.9	90.0	90.6	6.02	5.96	5.24	2.34	2.42	2.41	3	3.50
	11:05		Middle	4.0	28.30	28.30		8.40	8.40		29.55	29.55		91.2	90.1		3.03	5.96		2.43	2.43		4	
25/7/2016	15:06	Sunny	Middle	3.5	27.30	27.30	27.40	8.32	8.32	8.32	31.58	31.58	31.54	75.9	74.9	75.1	5.04	4.97	4.99	4.45	4.90	4.53	6	5.50
	15:08		Middle	3.5	27.50	27.50		8.32	8.32		31.50	31.50		75.0	74.7		4.98	4.96		4.48	4.28		5	

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

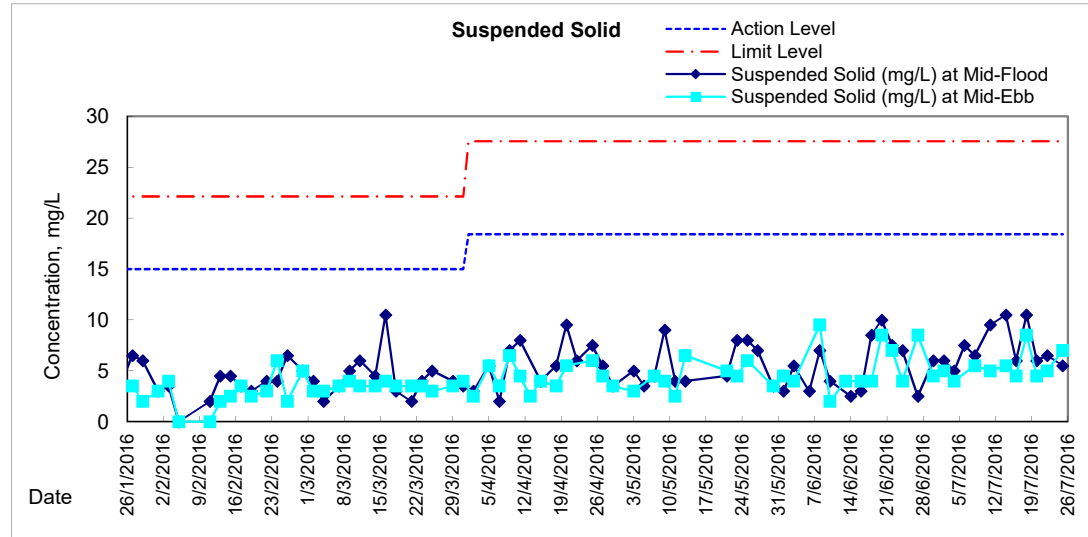
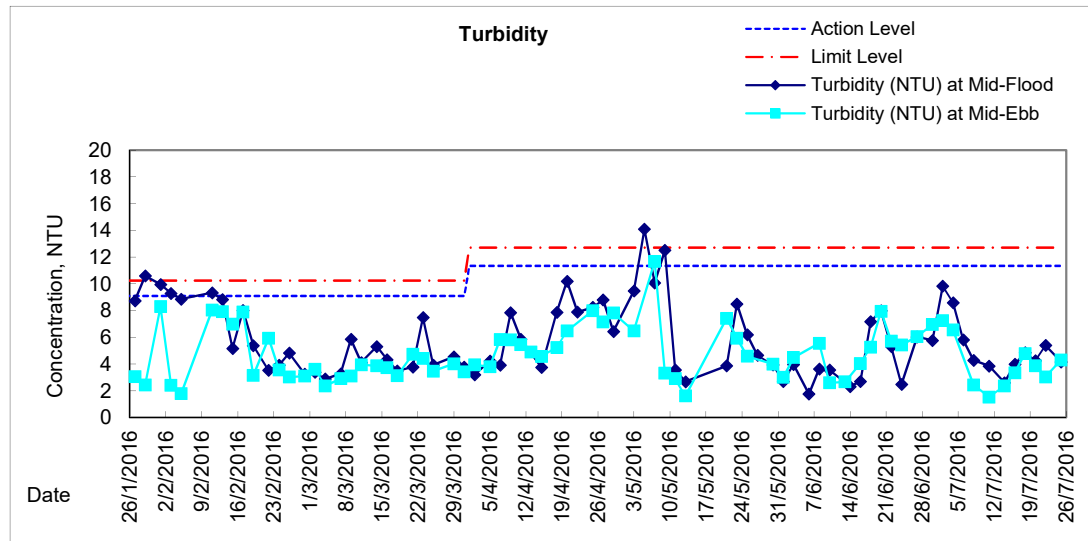
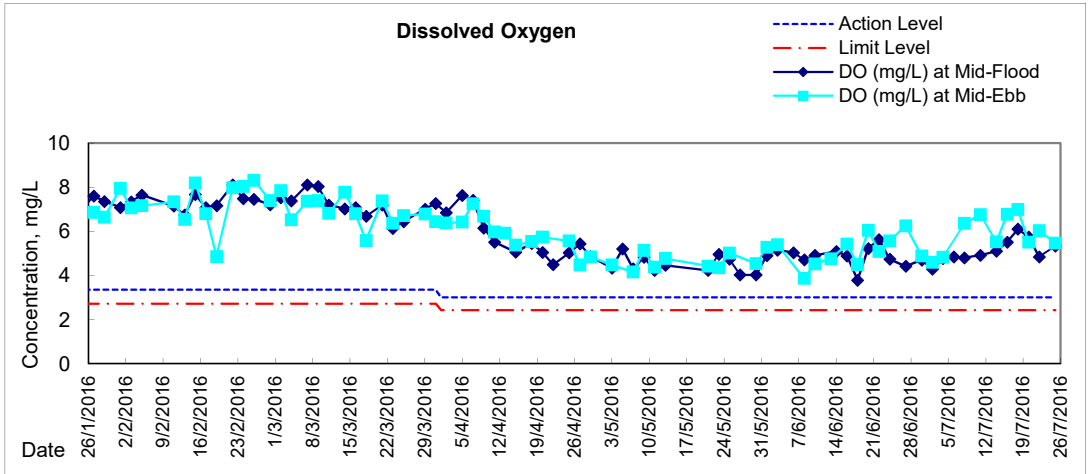


Graphic Presentation of Water Quality Result of WSD19 - Sheung Wan



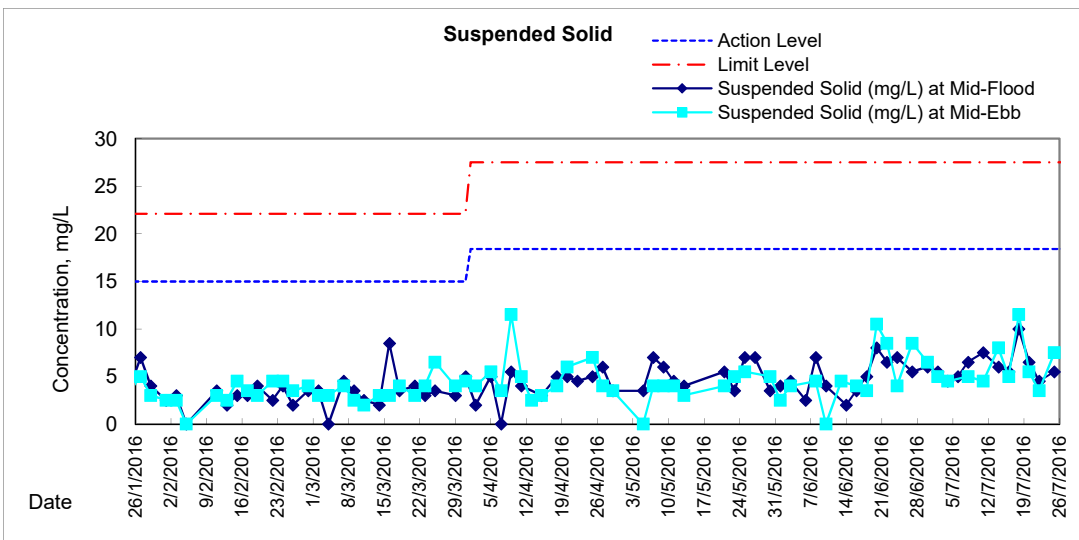
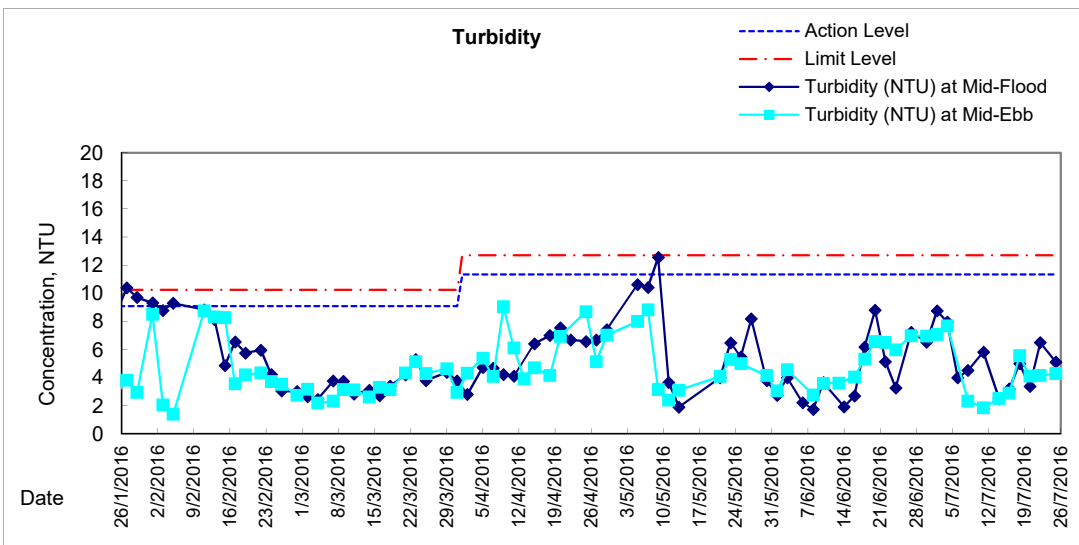
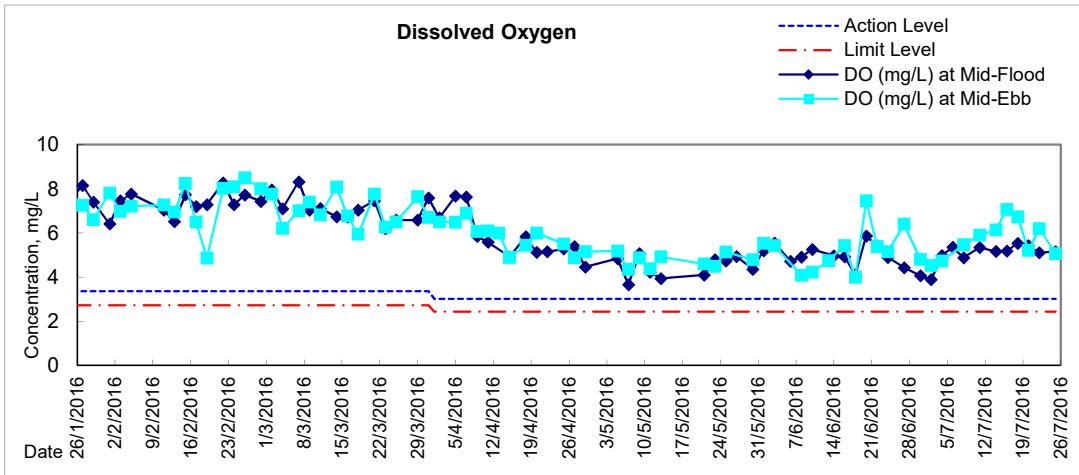


Graphic Presentation of Water Quality Result of C1 - HKCEC



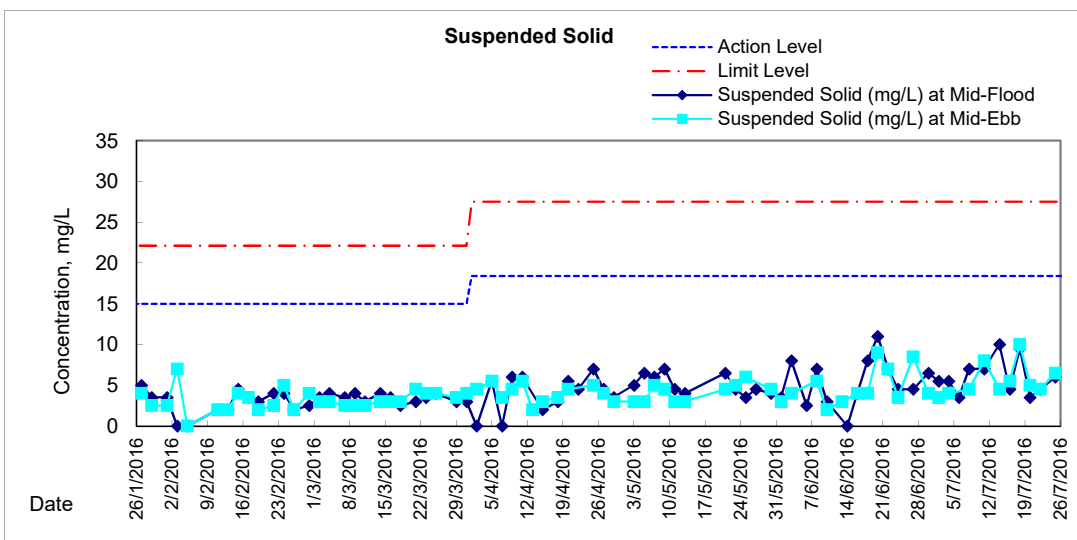
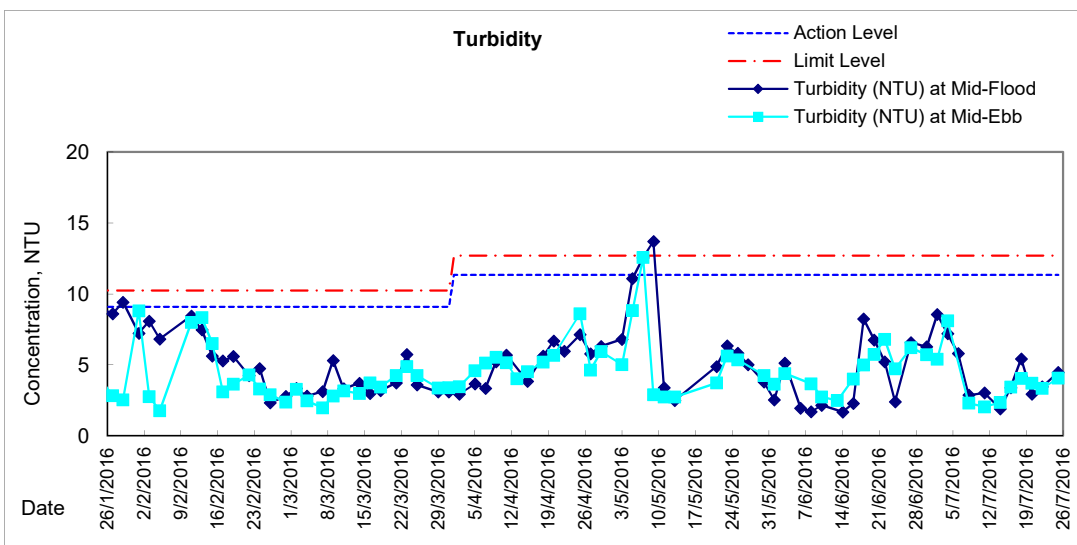
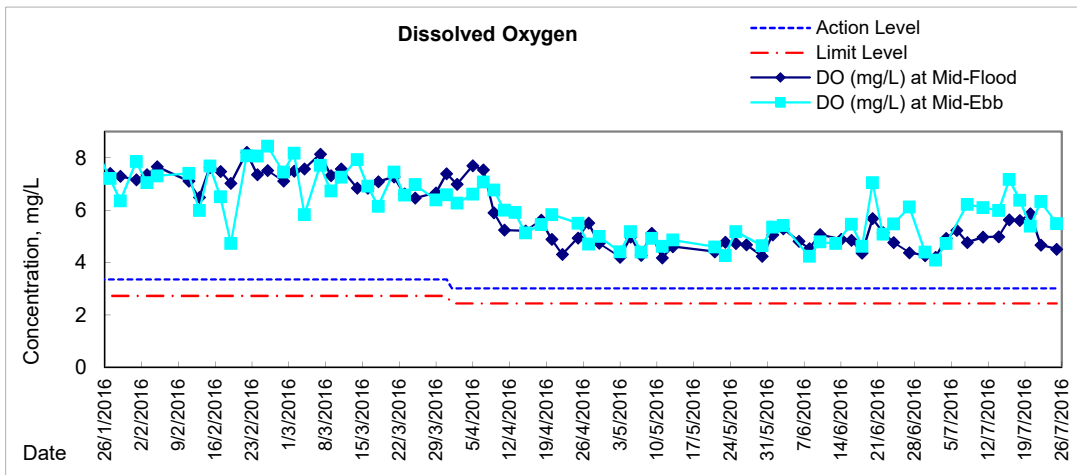


Graphic Presentation of Water Quality Result of P1 - HKCEC Phase I



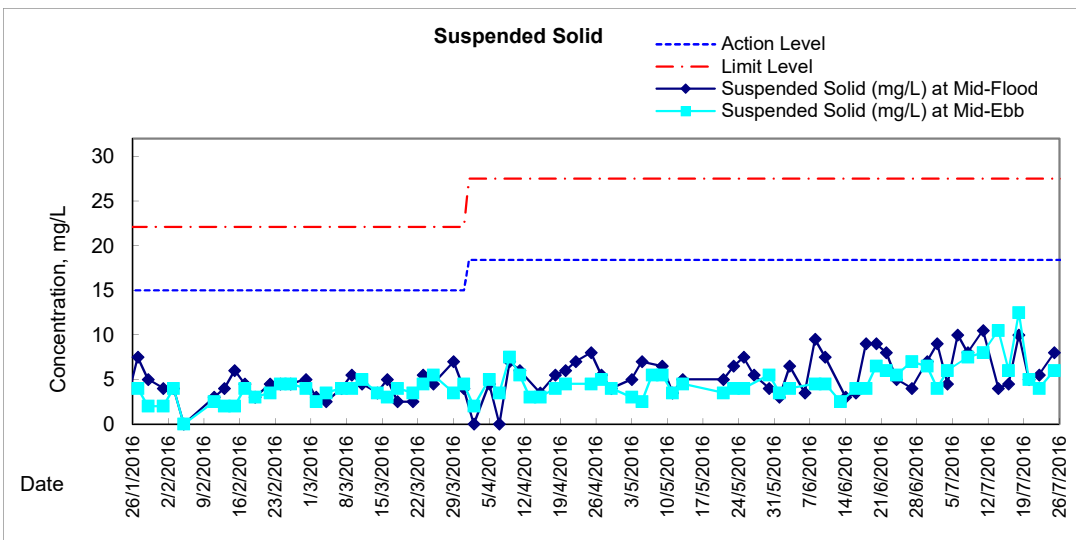
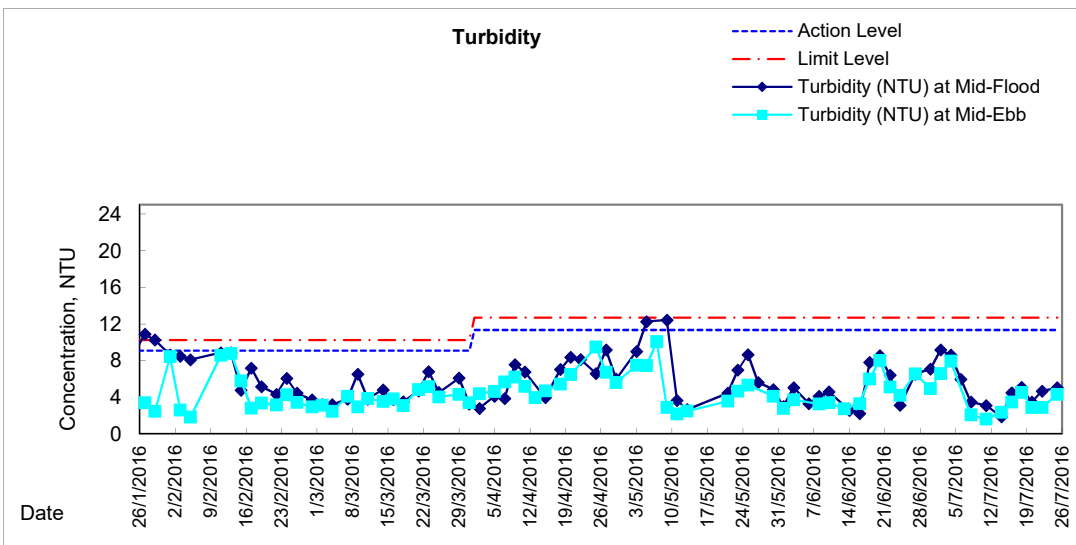
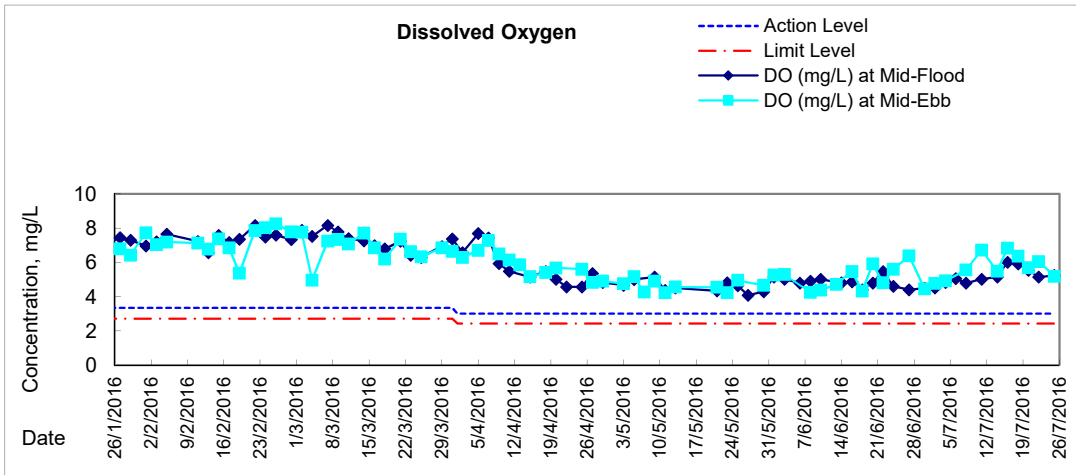


Graphic Presentation of Water Quality Result of P3 - APA



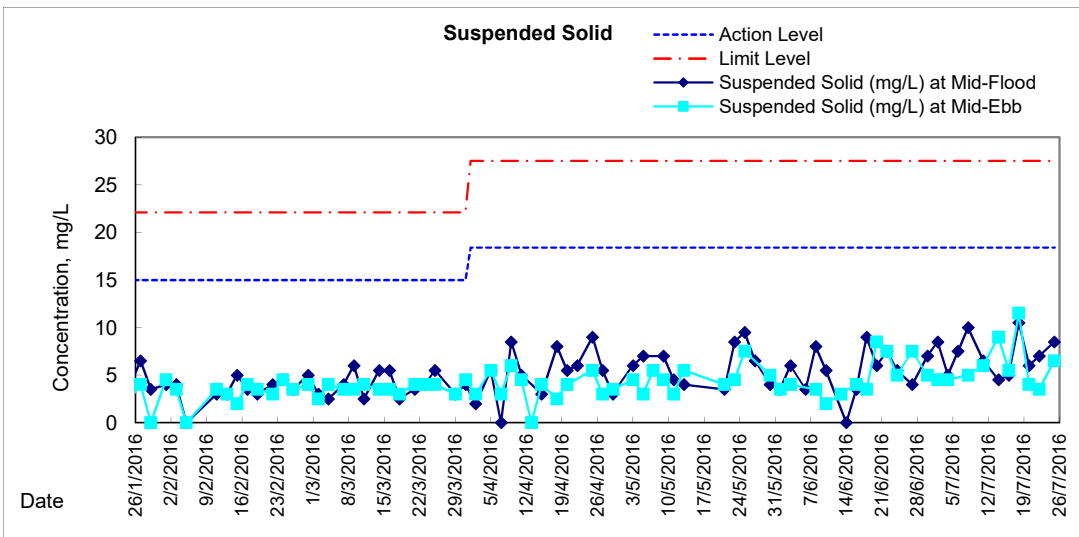
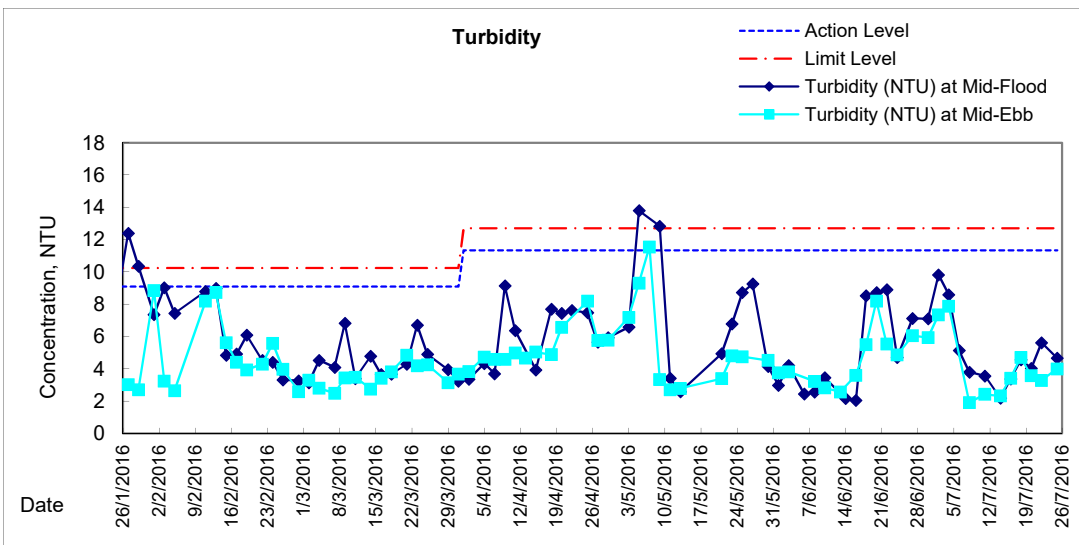
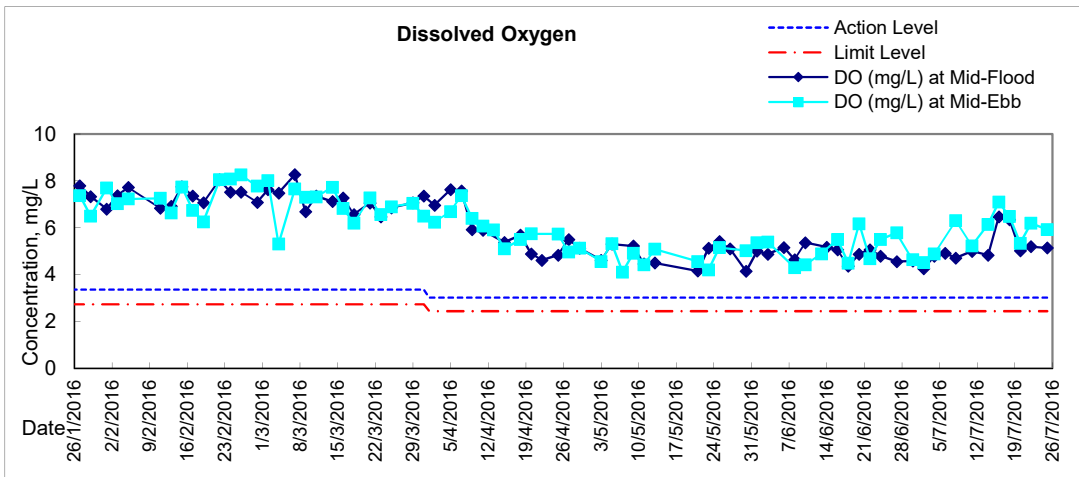


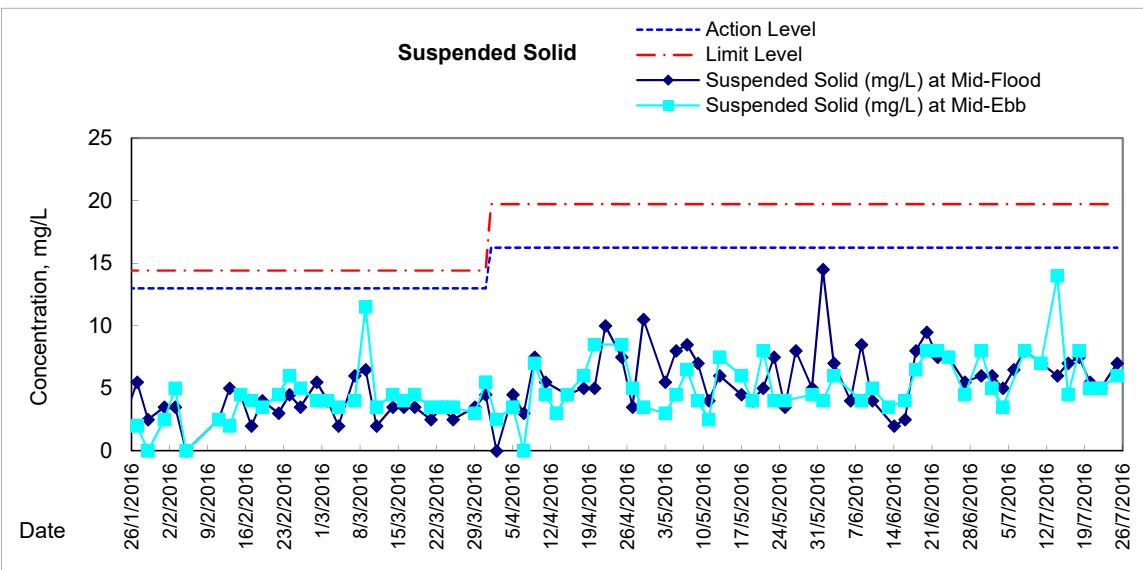
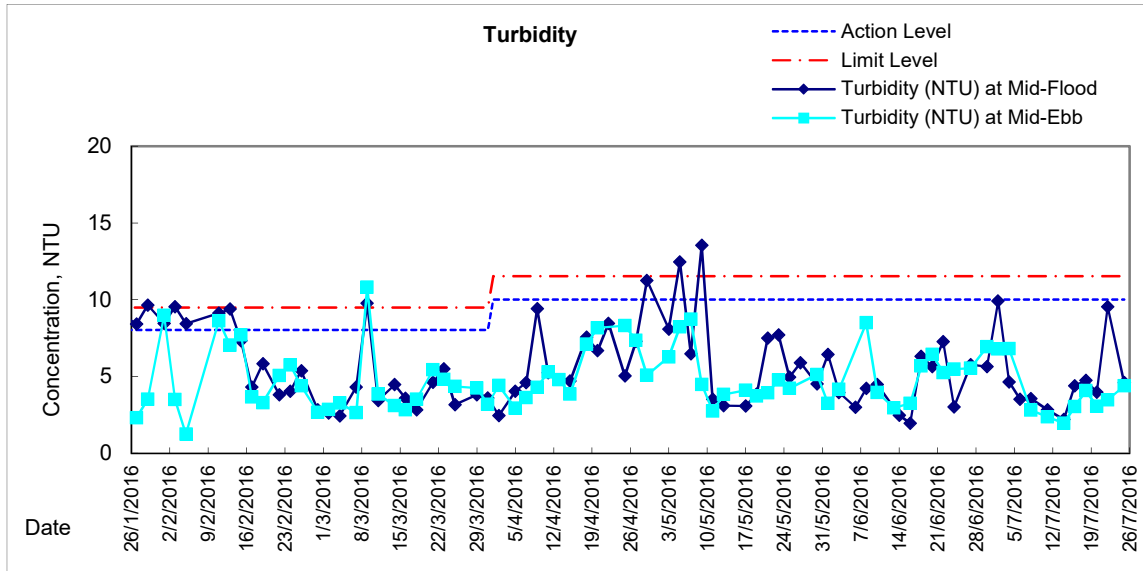
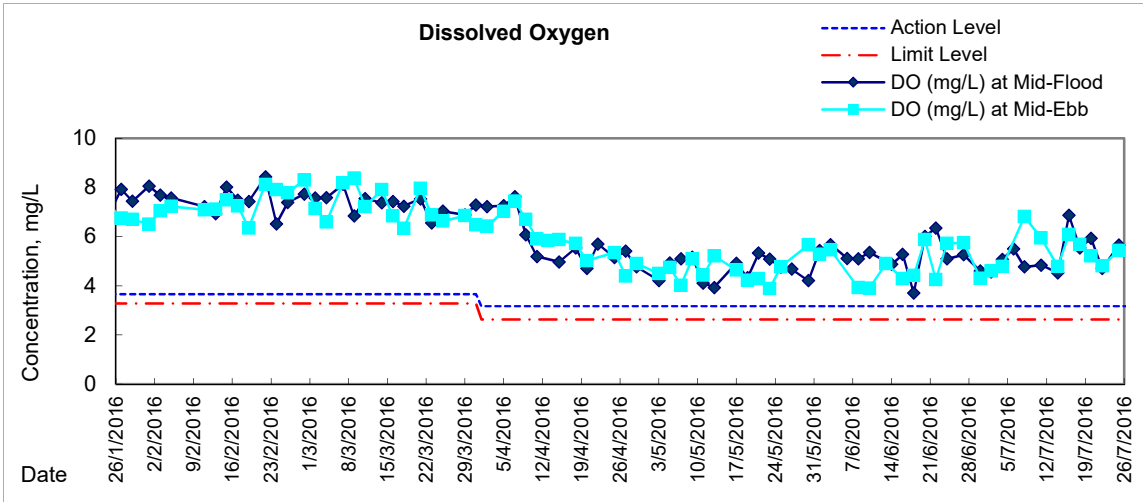
Graphic Presentation of Water Quality Result of P5 - WCT / RT / IT





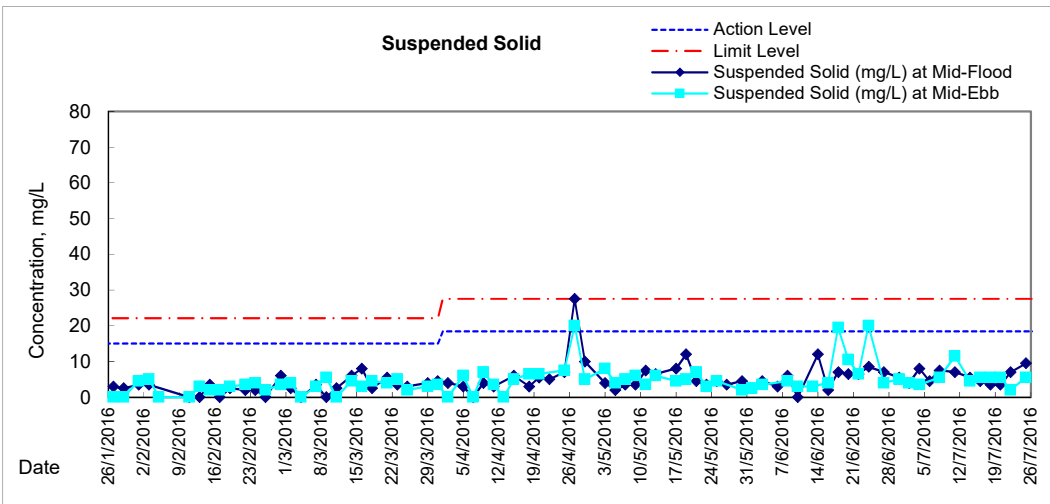
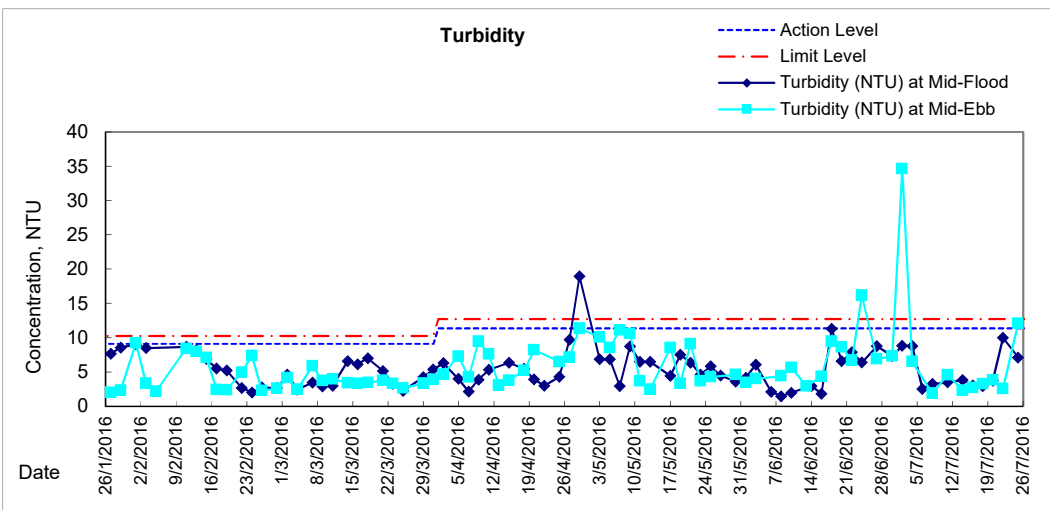
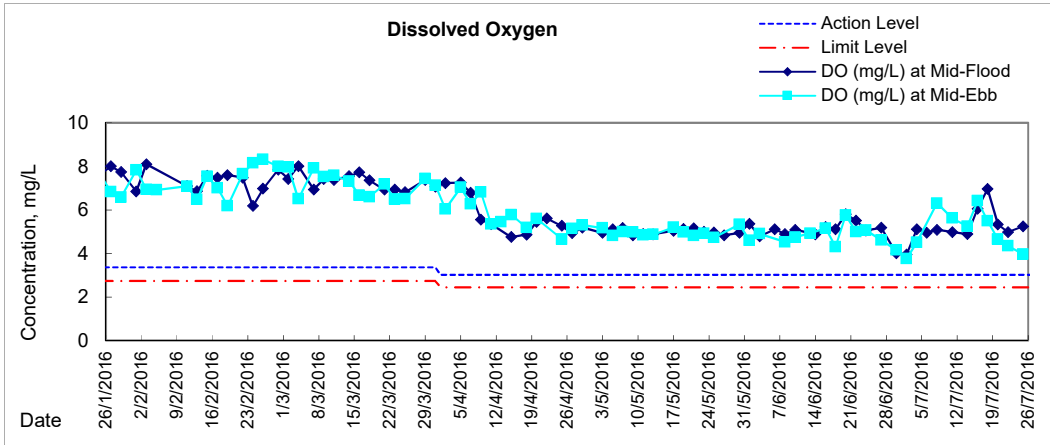
Graphic Presentation of Water Quality Result of P4 - SOC







Graphic Presentation of Water Quality Result of C7 - Windsor House





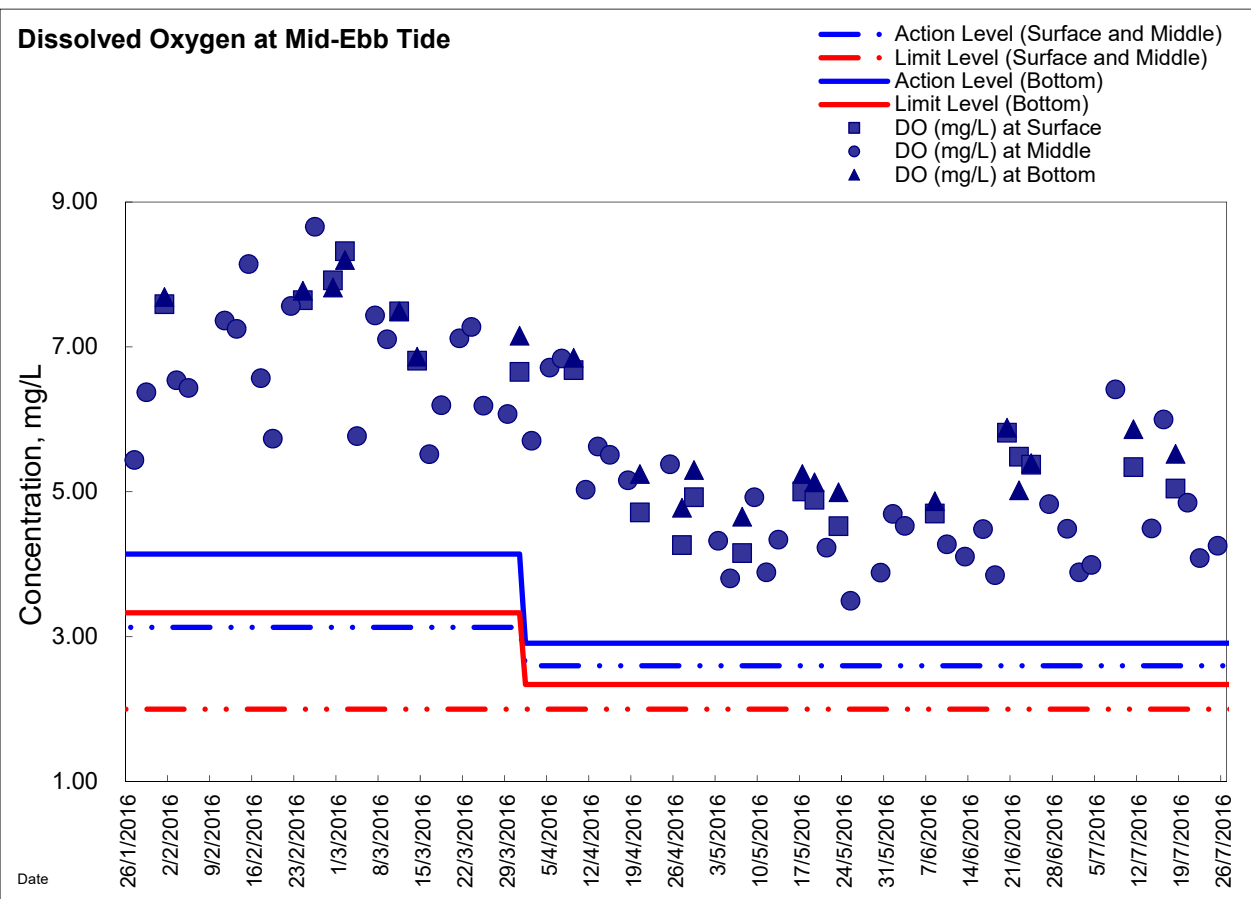
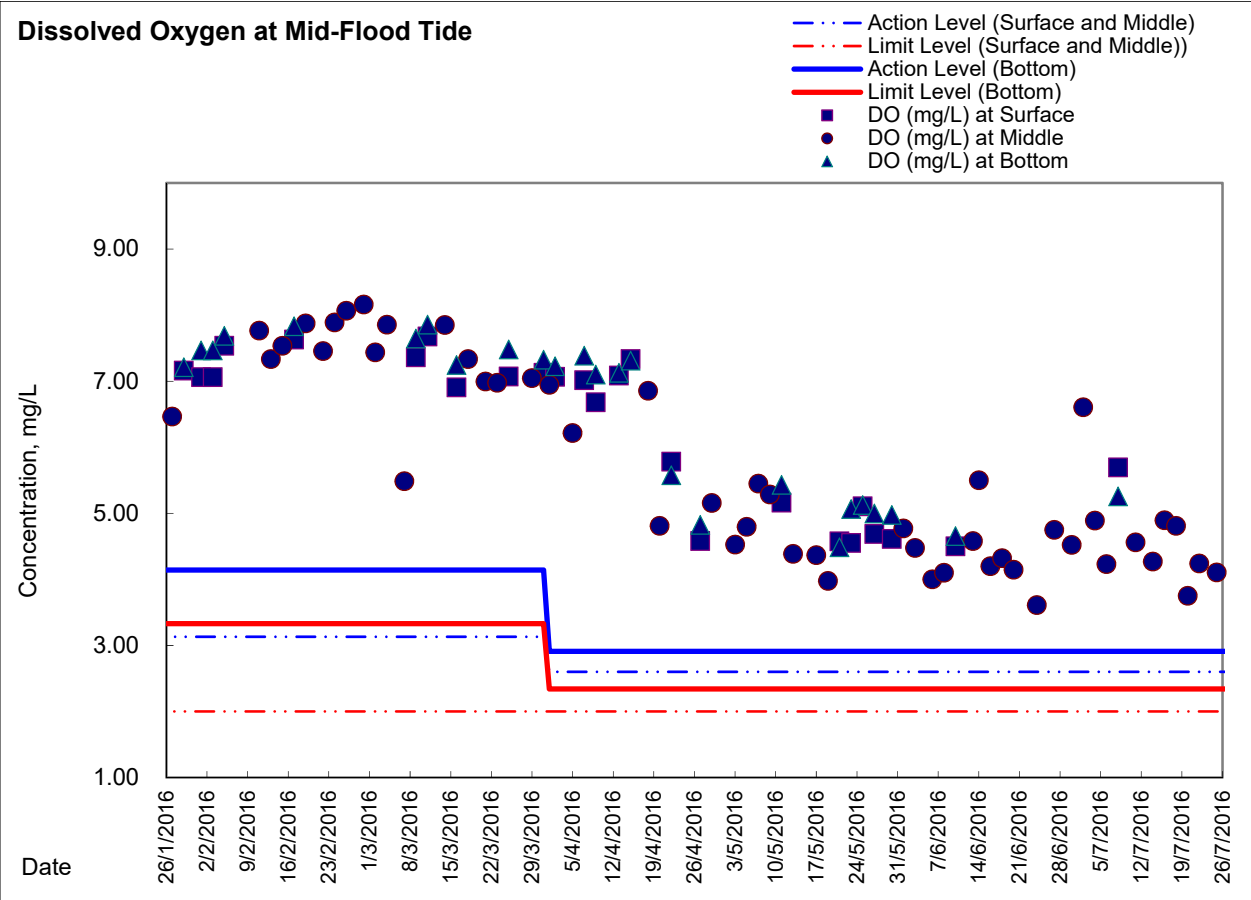
**Water Monitoring Result at C6 - Excelsior Hotel
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
					°C			-			ppt		%		mg/L				
			m	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average				
27/6/2016	12:00	Sunny	Surface	1.0	28.70	28.70	28.7	8.65	8.65	8.7	25.26	25.26	25.3	84.1	85.5	84.8	5.65	5.74	5.70
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:02		Bottom	3.0	28.50	28.50	28.5	8.69	8.69	8.7	25.44	25.44	25.4	77.1	78.8	78.0	5.20	5.31	5.26
30/6/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:29		Middle	1.5	28.80	28.80	28.8	8.21	8.21	8.2	21.04	21.04	21.0	66.7	66.2	66.5	4.58	4.54	4.56
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:03		Middle	1.5	28.10	28.10	28.1	8.55	8.55	8.6	22.24	22.24	22.2	62.8	61.1	62.0	4.33	4.21	4.27
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:05		Middle	1.5	28.00	28.00	28.0	8.17	8.17	8.2	22.08	22.08	22.1	70.7	70.8	70.8	4.89	4.90	4.90
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:53		Middle	1.0	27.50	27.50	27.5	8.26	8.26	8.3	22.00	22.00	22.0	68.7	68.9	68.8	4.80	4.82	4.81
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21:25		Middle	1.0	29.90	29.90	29.9	8.12	8.12	8.1	22.73	22.73	22.7	55.8	56.5	56.2	3.73	3.77	3.75
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/7/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:52		Middle	1.0	27.30	27.30	27.3	8.10	8.10	8.1	23.95	23.95	24.0	61.1	61.4	61.3	4.23	4.25	4.24
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14/7/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1:30		Middle	1.5	27.00	27.00	27.0	8.30	8.30	8.3	23.35	23.35	23.4	58.5	59.2	58.9	4.08	4.13	4.11
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16/7/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:20		Middle	1.5	28.00	28.00	28.0	8.36	8.36	8.4	24.96	24.96	25.0	99.4	95.5	97.5	6.75	6.49	6.62
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18/7/2016	16:05	Fine	Surface	1.0	28.60	28.60	28.6	8.44	8.44	8.4	24.04	24.04	24.0	95.1	97.2	96.2	6.47	6.58	6.53
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:07		Bottom	3.0	28.80	28.80	28.8	8.43	8.43	8.4	26.61	26.61	26.6	102.0	102.6	102.3	6.93	6.97	6.95
20/7/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:35		Middle	1.0	27.90	27.80	27.9	7.92	7.92	7.9	24.91	24.91	24.9	72.0	72.6	72.3	4.91	4.96	4.94
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:40		Middle	1.5	26.60	26.60	26.6	7.60	7.60	7.6	26.62	26.62	26.6	60.3	60.6	60.5	4.14	4.16	4.15
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:45		Middle	1.5	27.50	27.50	27.5	8.07	8.07	8.1	30.28	30.28	30.3	83.1	83.5	83.3	5.60	5.62	5.61
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

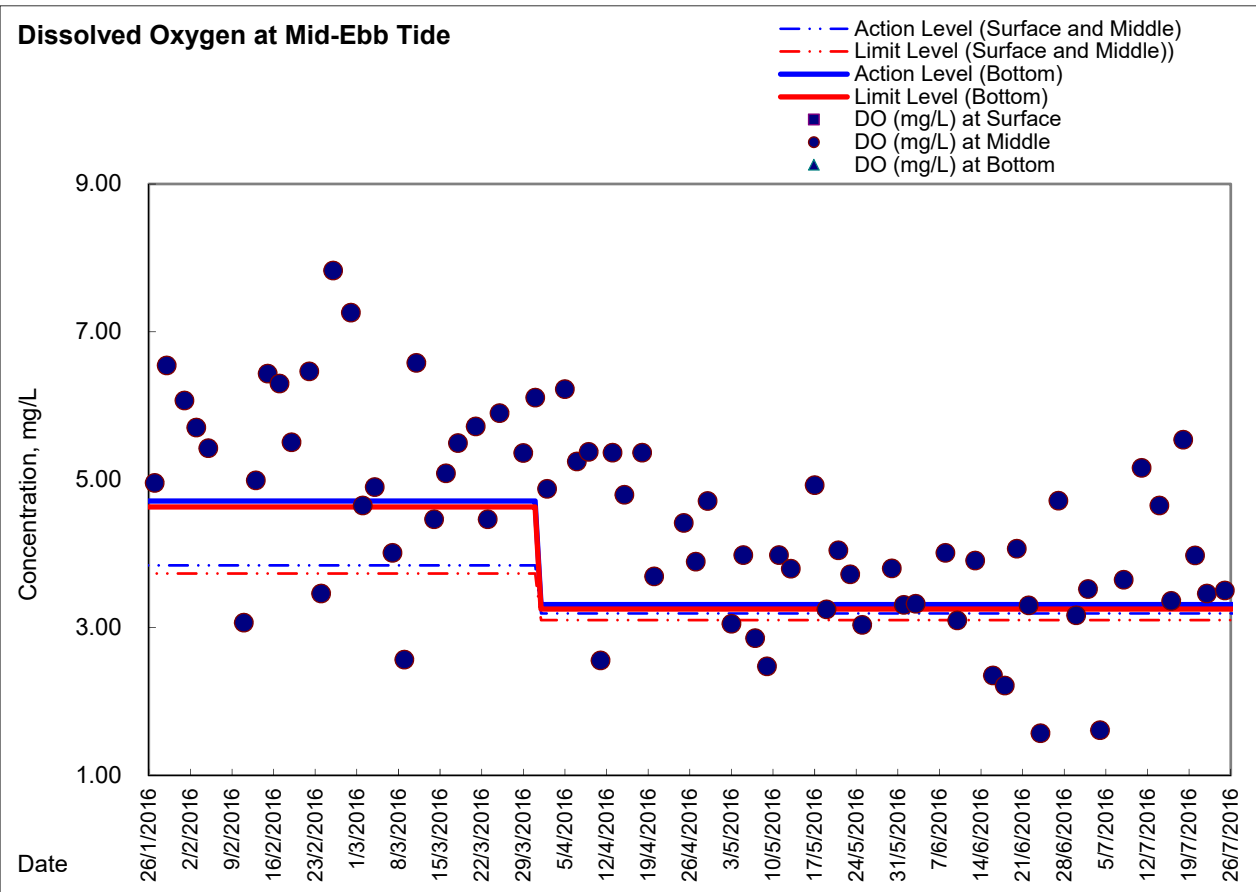
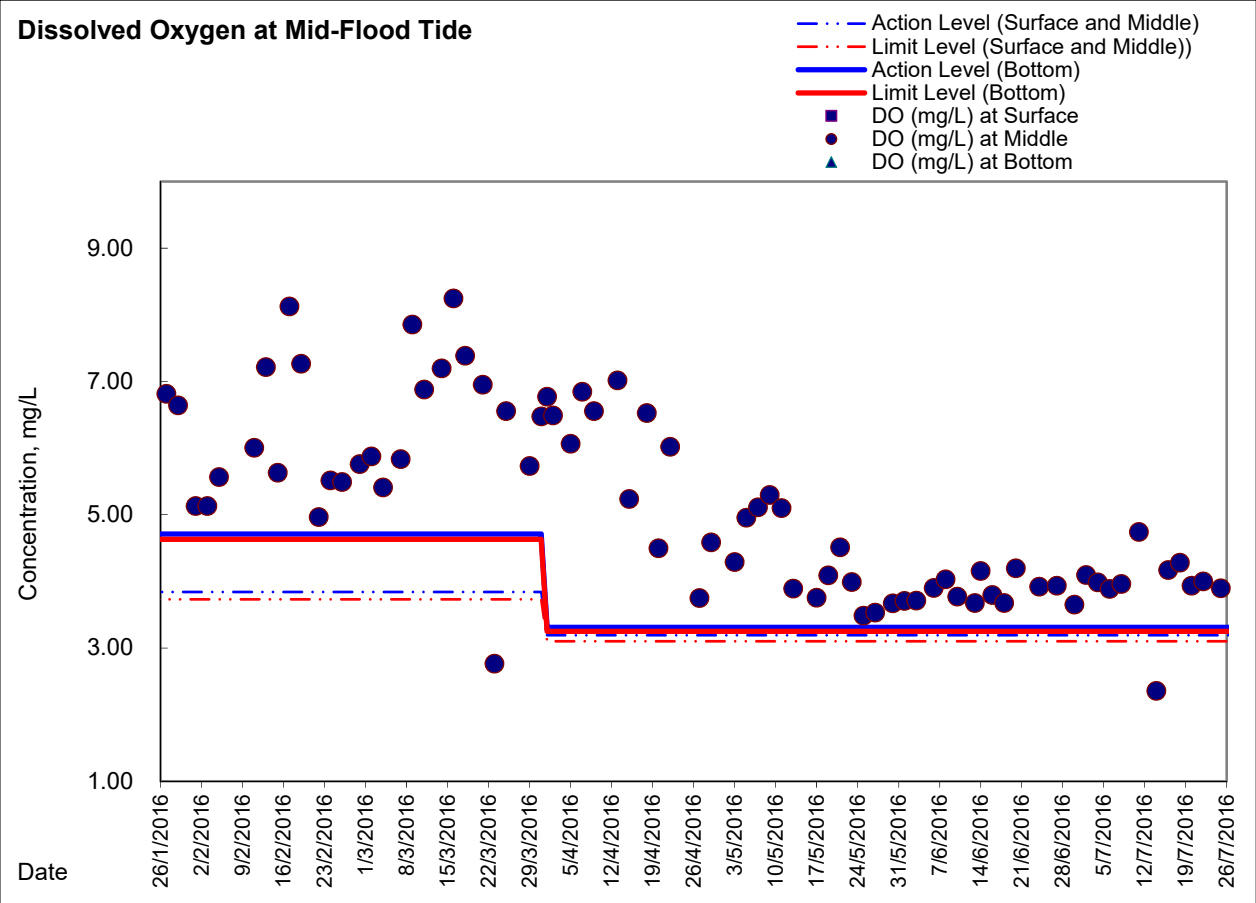


Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel



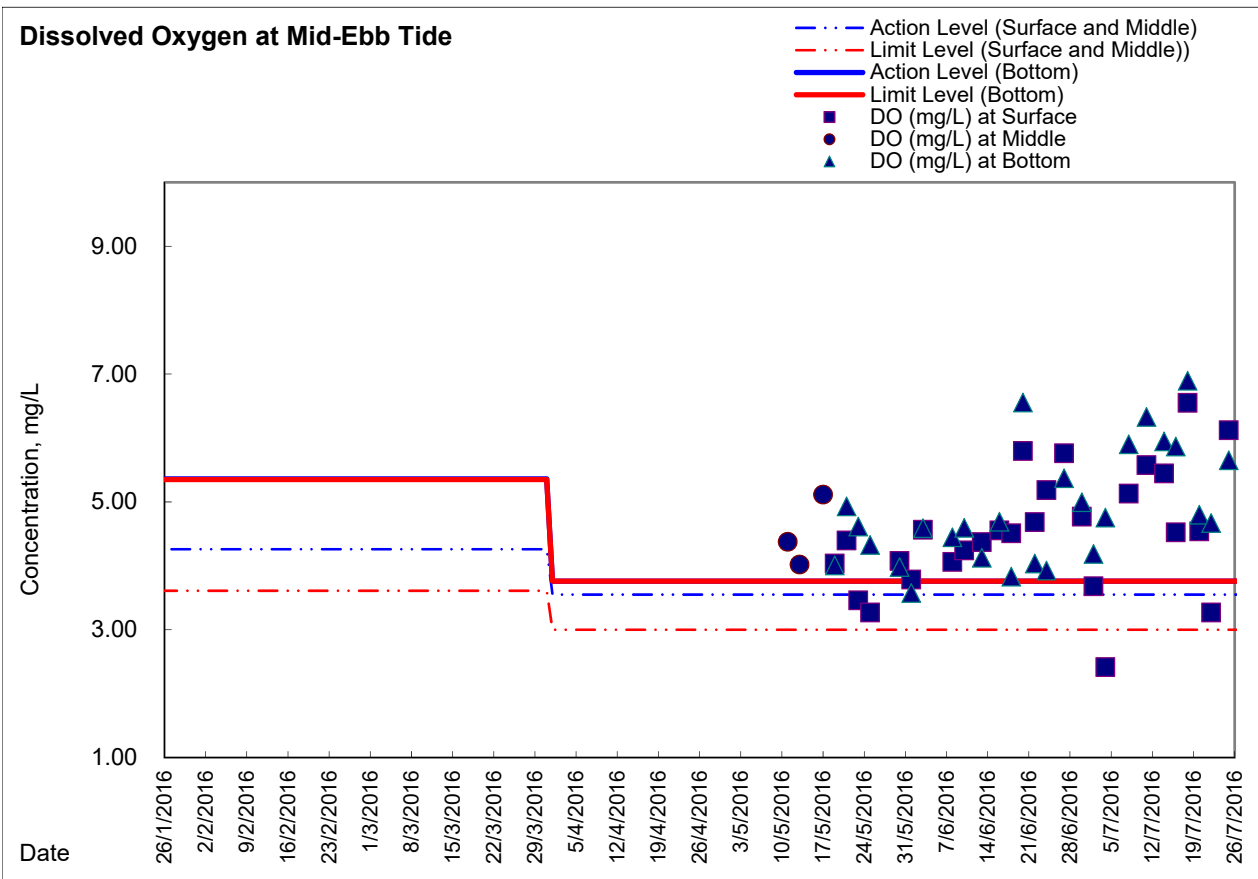
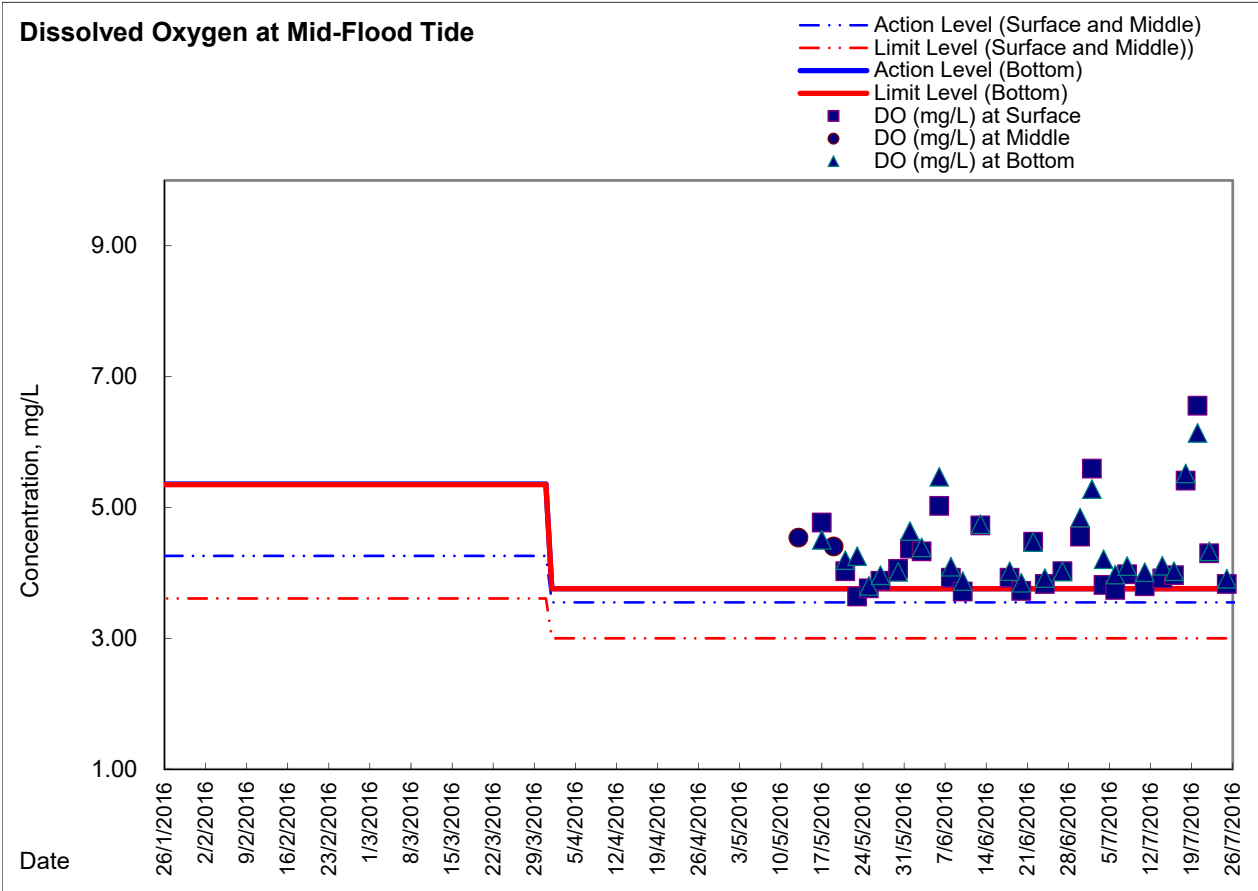


**Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW
- South-western corners of ex-Public Cargo Works Area**





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





Appendix 6.1

Event Action Plans



Event/Action Plan for Construction Noise

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



EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)



Event / Action Plan for Construction Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	<ol style="list-style-type: none"> Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Notify Contractor. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Rectify any unacceptable practice; 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	<ol style="list-style-type: none"> Identify source; Inform IEC and ER; Advise the ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and ER; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
LIMIT LEVEL				
1. Exceedance for one sample	<ol style="list-style-type: none"> Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; 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)	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; 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	<ol style="list-style-type: none"> Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; 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)	<ol style="list-style-type: none"> Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; 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	<p>Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform IEC, contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level. (The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)</p>
Limit level being exceeded by more than one consecutive sampling days	<p>Identify source(s) of impact; Inform IEC, contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. (The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. (The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; Implement the agreed mitigation measures; As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities. (The above actions should be taken within 1 working day after the exceedance is identified)</p>



Event and Action Plan for Odour Patrol

Event	ACTION	
	Person-in-charge of Odour Monitoring	Implementation Agent Identified by CEDD
Action Level		
Exceedance of Action Level	<ol style="list-style-type: none">1. Identify source/reason of exceedance;2. Repeat odour patrol to confirm finding.	<ol style="list-style-type: none">1. Carry out investigation to identify the source/reason of exceedance;2. Rectify any unacceptable practice3. Implement more mitigation measures if necessary;4. Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris.
Limit Level		
Exceedance of Limit Level	<ol style="list-style-type: none">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.	<ol style="list-style-type: none">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, dB(A)	Parameter	Action Level	Limit Level dB(A)	Follow-up action
X_16N0049	28-Jun-16	10:25	M1a-Harbour Road Sports Centre	84	Leq(30min)	when one documented complaint was received.	75	<p>Possible reason: Operation of drill rig opposite to the monitoring station was observed as the major noise contribution under non WDII-CWB Contractor.</p> <p>Action taken / to be taken: A repeat measurement was conducted to confirm result and reviewed the trend of previous noise monitoring and Contractor's working procedure.</p> <p>Remarks / Other Obs: Excavation work at Portion 5 was conducted under Contract HK/2009/02 around the concerned location during the time of measurement while operation of drill rig opposite to the monitoring station under non WDII-CWB Contractor was observed as the major noise contribution during monitoring. As such, the exceedance was considered as non-Project related.</p>
X_16N050	28-Jun-16	10:25	M1a-Harbour Road Sports Centre	84	Leq(30min)	when one documented complaint was received.	75	<p>Possible reason: Operation of drill rig opposite to the monitoring station was observed as the major noise contribution under non WDII-CWB Contractor.</p> <p>Action taken / to be taken: A repeat measurement was conducted to confirm result and reviewed the trend of previous noise monitoring and Contractor's working procedure.</p> <p>Remarks / Other Obs: Backfilling work was conducted under Contract HK/2009/01 at Area 8 (West of Wan Chai Ferry Pier) during the time of measurement while operation of drill rig opposite to monitoring station under non WDII-CWB Contractor was observed as the major noise contribution during monitoring. As such, the exceedance was considered as non-Project related.</p>
X_16N051	12-Jul-16	9:45	M6 - HK Baptist Church Henrietta Secondary School	69	Leq(30min)	when one documented complaint was received.	65	<p>Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution.</p> <p>Action taken / to be taken: Repeated measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure.</p> <p>Remarks / Other Obs: Only fixing of cast-in-item and segment erection with launching girder were conducted under Contract HY/2009/19 around the monitoring location and nearby traffic noise was observed as major noise source during monitoring. As such, the exceedance was considered as non-Project related.</p>



Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_16D0019	2-Jul-16	Mid-flood	Ex-WPCWA SW	Middle	DO(mg/l)	2.36	3.19	3.10	<p>Possible reason: Upstream organic discharge from Culvert O was observed and suspected potential embayment effect as a result of the partial silt curtain deployed.</p> <p>Action taken/ to be taken: Immediate repeat measurement to confirm the exceedance. The dissolved oxygen level of the repeated measurement at the same monitoring location on the same date and tide was: <u>2 July 2016 flood tide 2.51mg/L</u>.</p> <p>Obstruction at the outfall location of culvert O was subsequently removed by Contractor of HY/2009/15 on 05 July 2016 to avoid further potential adverse impact on dissolved oxygen at the concerned location</p> <p>Remarks/ Other Obs: Transfer of mud from shaft B to barge was observed conducted under Contract HY/2009/15 at Ex-PCWA during sampling at flood tide and silt curtain was observed deployed at the outfall location of culvert O. The silt curtain was observed partially deployed (without extending to water column) at the outfall location of Culvert O. In view of the environmental concern on potential accumulation of organic pollutant in relate to the embayment effect at the concerned location due to the silt curtain deployment, the Contractor of HY/2009/15 was advised to remove any silt curtain/ impermeable deployed at the outfall location of Culvert O. All obstruction at the outfall location of culvert O was subsequently removed by Contractor of HY/2009/15 on 05 July 2016. No further dissolved oxygen exceedance was recorded during subsequent monitoring conducted on 04 July 2016 during flood tide: <u>4 July 2016 flood tide 4.17mg/L</u>. Considering the upstream organic discharge influence and the partial silt curtain deployment (without extending to water column) observed during monitoring, the implication of the partially deployed silt curtain on the water circulation could not concluded. Nevertheless, the Contractor of HY/2009/15 was advised that any silt curtain/ impermeable barrier shall NOT be deployed at the Culvert O outfall location so that the water circulation would not be adversely affected. In addition, the Contractor of HY/2009/15 was reminded to maintain a tarpaulin sheet between the shaft and barge during soil material transfer to avoid potential drop off to nearby waters and to maintain a proper deployment of silt curtain extending throughout the water column around the derrick barge during excavated material transfer to avoid potential muddy dispersion.</p>
X_16D0020	4-Jul-16	Mid-ebb	Ex-WPCWA SW	Surface	DO(mg/l)	1.61	3.19	3.10	<p>Possible reason: Upstream organic discharge from Culvert O was observed and suspected potential embayment effect as a result of the partial impermeable barrier deployed.</p> <p>Action taken/ to be taken: Immediate repeat measurement to confirm the exceedance. The dissolved oxygen level of the repeated measurement at the same monitoring location on the same date and tide was: <u>4 July 2016 ebb tide 1.60mg/L</u>.</p> <p>Obstruction at the outfall location of culvert O was subsequently removed by Contractor of HY/2009/15 on 05 July 2016 to avoid further potential adverse impact on dissolved oxygen at the concerned location.</p> <p>Remarks/ Other Obs: Removal of steel brackets was observed conducted under Contract HY/2009/15 at Ex-PCWA during sampling at ebb tide and impermeable barrier was observed deployed at the outfall location of culvert O. The impermeable barrier was observed partially deployed (without extending to water column) at the outfall location of Culvert O. In view of the environmental concern on potential accumulation of organic pollutant in relate to the embayment effect at the concerned location due to the silt curtain deployment, the Contractor of HY/2009/15 was advised to remove any silt curtain/ impermeable deployed at the outfall location of Culvert O. All obstruction at the outfall location of culvert O was subsequently removed by Contractor of HY/2009/15 on 05 July 2016. No further dissolved oxygen exceedance was recorded during subsequent monitoring conducted on 04 July 2016 during flood tide: <u>4 July 2016 flood tide 4.17mg/L</u>. Considering the upstream organic discharge influence and the partial impermeable barrier deployment (without extending to water column) observed during monitoring, the implication of the partially deployed impermeable barrier on the water circulation could not concluded. Nevertheless, the Contractor of HY/2009/15 was advised that any silt curtain/ impermeable barrier shall NOT be deployed at the Culvert O outfall location so that the water circulation would not be adversely affected.</p>



Lam Geotechnics Limited

Contract No. HK/2015/01
Wanchai Development Phase II and Central Wanchai Bypass
Sampling, Field Measurement and Testing Work (Stage3)
Summary for Notification of Exceedance

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_16D0021	22-Jul-16	Mid-ebb	Ex-WPCWA SE	Surface	DO(mg/l)	3.27	3.55	3.00	<p>Possible reason: Possible in relation to the upstream organic discharge.</p> <p>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.</p> <p>Remarks/ Other Obs: Despite removal of diaphragm wall and excavation by derrick barge at northern side of TPCWAW were conducted under Contract HY/2009/15 on the monitoring date, contractor mitigation measures including the use of silt curtain was in place. Upstream discharge from nearby culvert was noted. In view of the above and no exceedance was recorded on the subsequent monitoring, the exceedance was considered not related to the Project works.</p>



Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16C036	2-Jul-16	Mid-ebb	C7	DO(mg/l)	3.76	3.02	2.44	Possible reason:	Natural variation or changes of water quality in the vicinity of water abstraction location for the water quality monitoring station.
				Turbidity	34.62	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	4.00	18.42	27.54	Remarks/ Other Obs:	No marine activity was conducted under Contract HY/2009/15 at Causeway Bay Typhoon Shelter on the monitoring date. In view of no marine construction activity, the exceedance was considered not related to Contract HY/2009/15 construction works. Despite reinstate of seawall was conducted at TS3NE corner under Contract HY/2010/08 on the monitoring date, contractor mitigation measure including the deployment of silt curtain was generally in order and installed silt screen was in place. In view of the above, and no exceedance was recorded on the subsequent monitoring, it was considered that the exceedance was not project related.
X_16C037	25-Jul-16	Mid-ebb	C7	DO(mg/l)	3.97	3.02	2.44	Possible reason:	Natural variation or changes of water quality in the vicinity of water abstraction location for the water quality monitoring station.
				Turbidity	12.08	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	5.50	18.42	27.54	Remarks/ Other Obs:	No marine activity was conducted under Contract HY/2009/15 at Causeway Bay Typhoon Shelter on the monitoring date. In view of no marine construction activity, the exceedance was considered not related to Contract HY/2009/15 construction works. Despite placing of seawall blocks was conducted under Contract HY/2010/08 on the monitoring date, contractor mitigation measures including the use of silt curtain was in place and the installed silt screen was in place. In view of the above, and no exceedance was recorded on the subsequent monitoring, it was considered that the exceedance was not project related.



Appendix 9.1

Complaint Log

**Environmental Complaints Log**

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
100321a	21/3/2010	ICC Case no. 1-224618029, Ms. Tsang	Location near Tin Hau	Complaint regarding the loud noise and dark smoke in the course of dredging works on 21 March 2010 (Sunday).	<ol style="list-style-type: none">1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18th Feb. 2010 for the dredging works which carry out at area for North Point Reclamation.2) Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.3) The Contractor (CHEC-CRBC JV) strictly comply all the conditions in CNP and take all mitigation measures in order to minimize the potential impacts to surrounding sensitive receivers. A formal letter was issued out by CHEC-CRBC JV and to explain the status of the recent construction activities.4) No limit level exceedance was recorded on the noise measurement during day time and evening time noise measurement on 23 March 2010. Additional restrict hours noise monitoring at Causeway Bay Community and City Garden was conducted on 5 April 2010 (Public Holiday). No limit level exceedance was recorded in the monitoring.5) No further complaints were received from Mr. Tsang in the reporting month. The complaint is considered closed.	Closed
100321b	21/3/2010	Unknown	Near the eastern breakwater of the Causeway Bay Typhoon Shelter	A public complaint and enquiry regarding loud noises emanated from dredging activities on 21/3/2010 (Sunday) until 2220 hours and between 1920-1946 hours in the evening of 22 March 2010(Monday).	<ol style="list-style-type: none">1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18th Feb. 2010 for the dredging works at area for North Point Reclamation during general holidays including Sunday between 0700-2300 hours and any day not being a general holiday between 1900-2300hours. It is complied with the condition of CNP.2) Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation.3) No limit level exceedance was recorded on the noise measurement during day time and evening time noise measurement on 23 March 2010. Additional restrict hours noise monitoring at Causeway Bay Community and City Garden was conducted on 5 April 2010 (Public Holiday). No limit level exceedance was recorded in the monitoring.4) No further complaints were received in the reporting month. The complaint is considered closed.	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
100504	4/5/2010	Public complainant received by ICC (ICC case: 1-233384048)	Watson Road	Complaint on the noise nuisance due to the large scale of dredging machine (face to Island East Corridor) in particular the hours 1900 to 0800 and request to reduce the noise level.	<ol style="list-style-type: none">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.	<ol style="list-style-type: none">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.	<ol style="list-style-type: none">1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230.2) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 10 and 17 August 2010 during daytime and evening time period.3) It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
101108	8/11/2010	Mr. Nip received by ICC (CC Case)	Sai Wan Ho	Visual concern around the seaside silt screen outside the WSD freshwater intake pump at Sai Wan Ho (Monitoring station ref no.. WSD15)	<ol style="list-style-type: none">1) Contractor for HY/2009/11 has been regular checked of condition and removal of trapped rubbish before the dismantling of the floating silt screen to be replaced by wall mount silt screen.2) Follow-up action had been immediately carried out to check and clear the floating refuse around the seaside silt screen after receipt of the complaint.3) Removal of seaside silt screen outside the WSD freshwater intake (WSD15) by contractor HY/2009/11 was checked and confirmed dated 9 November 2010. Silt screen has been deployed into the existing steel frame at WSD15 for the protection of WSD salt water intake.	Closed
101110	10/11/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the power mechanical equipment during the 0700 to 2200hrs	<ol style="list-style-type: none">1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0870-10 for their dredging works during evening time. Contractor has implemented mitigation measures to reduce the working hour not later than 2230.2) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 4 and 10 November 2010 during daytime and evening time period.3) It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	Closed
101203	3/12/2010, 01:45a.m.	The resident of Block 11, City Garden by ICC referral from Marine Department	North Point	Bad odour was generated from the dredging plant off North Point	<ol style="list-style-type: none">1) The first investigation was carried out by Marine Department patrol in the morning on 3 Dec 2010 at around 10:00 and revealed that a few working barges were anchoring in the vicinity without carrying out dredging work.2) A further specific investigation inspection on contractor's backhoe barge in the vicinity of City Garden was jointly conducted with Engineer Representatives (AECOM/RSS), and ET on 8 Dec 2010 at 11:30. No bad odour was noted during the investigation.3) Routine dredging operation of the backhoe barge was performed during the jointed investigation inspection and it was revealed that no bad odour was attributed by the dredged materials inspected.	Closed
101206	6/12/2010	Ms Lui, the resident of 27/F, Block 10, City	City Garden, North Point	Two barges were generating noise at 22:00 on 6 December 2010 in which the noise from	<ol style="list-style-type: none">1) ET confirmed the following information with resident site staff on the complaint:<ul style="list-style-type: none">• It was referred to the filling operation at North Point	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		Garden by ICC (ICC case: 1-266039336)		<p>filling operation was louder than the traffic noise & visual impact was generated due to the spot-light pointing directly to the complainant flat, suspected the filling operation was part of Wanchai Development Phase II;</p> <p>Complainant also raised the same complaint to District Councillor, Mr. Hui on 7 Dec 2010 regarding the night-time noise and suspected earlier start of work at 06:30. Complaint also requested for limiting the plant operating hours from 09:00-21:00.</p>	<p>Reclamation of Central Wan Chai Bypass site area instead of part of Wanchai Development Phase II;</p> <ul style="list-style-type: none"> • Two derrick barges were in operation at the time of complaint for placing 400 rockfill onto the excavation trench and for levelling the formation level to receive the pre-cast caisson seawall; • Flood light on the control mast of derrick barge have no lighting shields for the prevention of glare of flood lights; • No starting work on 7 Dec 2010 at 0630hours. <p>2) PME used in restricted hours were checked and confirmed compliant with valid CNP no. GW-RS0870-10. The noise level recorded on 6 Dec 2010 was complied with the noise criteria during restricted hour;</p> <p>3) It was found that the occasional noise nuisance might be caused by the hitting or scratching onto the rock surface during loading down the grab onto the Grade 400 rockfill;</p> <p>4) The absence of the lighting shields at flood light results in visual glare to the complainant at night-time.</p> <p>5) Contractor was advised to minimize the finishing time of placing Grade 400 rockfill at 2100hrs and switch off all unnecessary flood lights apart from the light for the safety and security purpose;</p> <p>6) No further complaint was received after implementation of proposed measures</p>	
110415	15/04/2011	The resident, Mr Law at Victoria Centre by ICC (ICC#1-281451236)	North Point	A dust generation and a concern of mosquitoes breeding complaint in which suspected the filling operation was part of North Point Reclamation.	<p>1) The concerned stockpile was a working stockpile under Contract HY/209/15 and was covered at night time after work.</p> <p>2) Water spraying on the haul road and potential dust generating material at least 4 times a day was conducted by contractor that complies with the requirement.</p> <p>3) It is considered invalid but preventive actions can be taken because the stockpile is relatively large and easily visible by complainant.</p> <p>4) It was recommended that increasing the frequency of water spraying shall be conducted to all potential dust generating materials and activities. Besides, Contractor should consider to cover the idle part of the stockpile</p> <p>5) The concern of mosquitoes breeding is out the scope of EM&A, the follow-up action is not reported in this monthly EM&A report.</p>	Closed



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



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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">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 period2) 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.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.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.	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">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 2011.2) 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.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	Closed



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



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



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					away from the coastline as far as practicable. Any loose material placed which needed to be placed near the coastline shall be properly compacted or covered as appropriate. To avoid any further environmental deficiency, Contractors shall ensure all necessary environmental mitigation measures will not be missing during site area handover.	
110826	26/08/2011	Grand Hyatt and a complainant by ICC	Wan Chai	Construction noise and vibration nuisance generated from the works at Convention Avenue and inside the HKCEC1 reclamation area.	<ol style="list-style-type: none"> 1) Confirmed with the Resident Site Staff that the construction works were referred to the Contractor HK/2009/01. 2) The Excavator mounted breaker at Convention Avenue and Drilling rig at HKCEC1 reclamation area were the dominant construction noise source during this period. 3) The drilling rig at HKCEC1 reclamation area and excavator mounted breaker at Convention Avenue were then temporary suspended after received the complaint. 4) Investigation revealed that the erected noise barrier (4m cantilevered movable noise barrier for the drilling rig and 1m movable noise barrier for the excavator mounted breaker) were not located close to the plants to provide adequate noise screening. 5) Contractor was advised to avoid concurrent operation of construction plants at site. Further enhancement of movable noise barriers at HKCEC1 and providing noise enclosure for the excavator mounted breaker at Convention Avenue are needed. 6) Further site investigation and checking on 31 August and 7 September 2011 revealed that the implemented noise mitigation measures were in proper and minimize the noise impact. 	Closed
110826A	26/08/2011	A complaint letter from Mr. Au of Cayley Property of City Garden	North Point	Harbor front adjacent to their cooling water intake suction which caused 3 times of system breakdown of the sea water pump on 9, 22 and 25 August 2011.	<ol style="list-style-type: none"> 1) It was referred by AECOM to ET on 29 August 2011. Confirmed with the Resident Site Staff that the <ul style="list-style-type: none"> • construction works were referred to the Contractors HY/2009/11 and HY/2009/19. • The pump is located on the site area of HY/2009/19 • A temporary garbage defender was installed on 23 July 2011 by HY/2009/11 and the shape of the defender was adjusted on 8 August 2011 in order to exclude the outfall. • An ad hoc inspection of the effectiveness of garbage defender was conducted with RSS (CWB project 	Closed



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					<p>team), contractor of HY/200911 and HY/2009/19 and IECon 29 August 2011. Inspection report of it was submitted to RSS on 19 September 2011.</p> <ul style="list-style-type: none"> • Daily cleaning near the water intake was conducted twice a day by contractor HY/2009/19. • In response to City Garden request, the contractors have set up the temporary garbage defender in function and collect the floating refuses, but cannot eliminate all refuses, in particular the refuse coming from the seabed <p>2) According to the complaint letter from Cayley Property, the outcomes of the preventive measures were not complying with their expectation.</p> <p>3) During on-site inspection, floating refuses observed occasionally outside the garbage defender. No conclusion could be made for the source of these floating refuses. On the other hand, some of the refuses were observed floating behind the garbage defender during investigation.</p> <p>4) All daily cleaning actions had been taken by contractor to minimize floating refuse inside the construction site.</p> <p>5) It was noted that the cooling water intake was accessible to the public. As such, fish breeding and fishing activities were observed even though a notice has already hoisted. Also, tripping of rubbish by the passers-by could result in a lot of rubbish accumulated around the intake point.</p> <p>6) Referring to the record provided by CPML, there were a lot of nylon/ plastic bags and nylon wire mesh that matched those rubbishes generated from the public activities.</p> <p>7) Contractors have fulfilled the requirement of site cleanliness and no exceedance was recorded during Water Quality Monitoring. It is considered 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 re-provision works along the Harbour Road. The plants including the excavator have been checked before using</p>	Closed



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					<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 LCS D complained via Contractor Complaint Hotline	Wan Chai	Complain about a tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road, the status is not healthy and roof ball of two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue were half cut.	<p>1) ET confirmed with the Resident Site Staff that</p> <ul style="list-style-type: none">• A tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road is the Tree no. TA1122 under Contract no. HK/2009/02. Leaves of a branch of this tree were shrivelled.• Two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue are the tree nos. A160 and A161 under Contract no. HK/2009/01. Part of roof ball of these two trees was covered by the metal plate. <p>2) Independent Tree Specialists for these two inspected the trees. Contractor HK/2009/01 has taken the measure as recommend downgrading the soil level around the trunk base. Reinstating of the ground works will be conducted in mid-December 2011. For the tree no. TA1122 under Contract no. HK/2009/02, the brown leaves were removed and fenced the tree with orange net is provided to prevent damage of tree trunk by construction works. The distance between the tree and the edge of the trench is kept approximate 2m. Two Contractors were reminded to carry out regular watering to the trees within their site area.</p>	Closed
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>	Closed



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					<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



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					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>	Closed



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>



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					<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).</p> <p>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.</p> <p>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.</p> <p>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> <p>EPD</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. 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>	advised no further comment on the updated interim report and case closed on 27 Nov 2014.



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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>



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					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>	Interim investigation report submitted to EPD on 19 November 2014. EPD advised no comment on the interim report and case closed on 8 Dec 2014.



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, EPD advised no comment on 27 February 2016 on the interim report submitted and case closed.



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 and EPD



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 & 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.</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 & 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.</p> <p>Follow-up inspection was conducted during weekly</p>	advised no comment on 20 July 2016 on the interim report submitted and case closed.



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					environmental inspection on 25 June 2015, no dark smoke and malodour emission was observed from the PME's 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 PME's deployed on site to ensure only well maintained PME's are used to avoid potential dark smoke and maldour emission affecting nearby public.	
150723	20 July 2015	EPD Ref.:H05/RS/ 00018040-15 dated 23 July 2015	Ex-Wanchai Ferry Pier near 720 & & 722 Bus stop	Malodour from marine sediment	<p>A public complaint regarding malodour referred by EPD was received by ET on 23 July 2015 (EPD Ref.: H05/RS/00018040-15 dated 23 July 2015).</p> <p>The complainant reported that malodour from marine sediment was scented at ex-Wanchai ferry pier near route 720 & 722 bus stop. (Contract HK/2009/02).</p> <p>ET confirmed with the Resident Site Staff that Rockfill placing works was conducted by one derrick barge at the concerned location (WCR3) under Contract HK/2009/02 on 20 July 2015. No marine sediment was stored or placed on site at the concerned location under Contract HK/2009/02 on 20 July 2015.</p> <p>According to the relevant site records under Contract HK/2009/02, rockfill placing works was conducted by one derrick barge at WCR3 area on 20 July 2015 and no marine sediment was stored or placed on site at the concerned location on the concerned date.</p> <p>Follow-up inspection was conducted during weekly environmental inspection on 29 July 2015. No marine sediment was observed stored or placed at the concerned location while it was noted that a culvert outfall with potential odour concern is located adjacent to the concerned location.</p>	Interim report submitted to EPD on 30 July 2015. EPD advised no comment on 17 August 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Nevertheless, the Contractor was reminded to review the handling procedures in case of any future marine sediment handling at the concerned location and to consider the implementation of mitigation measures as appropriate to minimize potential malodour impact to nearby public.	
150904	01 Sept 2015	EPD Ref.: H05/RS/0002 2241-15 dated 04 September 2015 received by ET on 4 September 2015	East of New WanChai Ferry Pier	Dropping of excavated material from land to sea during loading of material	<p>A public complaint regarding dropping of excavated material from land to sea referred by EPD was received by ET on 04 September 2015 (EPD Ref.: H05/RS/00022241-15 dated 04 September 2015). The complainant reported that dropping of excavated materials from land to sea during loading of materials by excavator at the construction site to work boat. (Contract HK/2009/02)</p> <p>ET confirmed with the Resident Site Staff that transferring of C&D materials from land to hopper barge by excavator at seaside along CWB Tunnel Portions 3 and 4 was undertaken by Contract HK/2009/02 on 01 September 2015.</p> <p>Mitigation measure including providing tarpaulin sheet to cover the gap between seawall and the hopper barge to prevent dropping of material to the sea was implemented by the Contractor.</p> <p>According to the relevant site records under Contract HK/2009/02, transferring of C&D materials from land to hopper barge by excavator at seaside along CWB Tunnel Portions 3 and 4 was carried out on 01 September 2015 and mitigation measures including provision of tarpaulin sheet between seawall and the hopper barge was implemented by the Contractor of HK/2009/02 on the concerned date. Follow-up inspection was conducted during weekly environmental inspection on 10 September 2015. Transferring of C&D materials from land to barge by excavator was observed at the concerned location and mitigation measures including provision of tarpaulin sheet between seawall and hopper</p>	Interim report submitted to EPD on 14 September 2015. EPD advised no comment on 5 October 2015 on the interim report submitted and case closed



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					<p>barge and the material transfer works was generally in order. Nevertheless, the Contractor of HK/2009/02 was reminded to maintain the handling procedure for C&D materials transfer from land to hopper barge and regularly inspect the condition of the tarpaulin sheet provided to ensure the nearby water quality are not affected by the loading and unloading of material from land side to hopper barge.</p> <p>The Contractor was reminded to maintain the handling procedure for C&D materials transfer from land to hopper barge and regularly inspect the condition of the tarpaulin sheet provided to ensure the nearby water quality are not affected by the loading and unloading of material from land side to hopper barge.</p>	
150904	02 Sept 2015	EPD Ref.: H04/RS/0002 2385-15 dated 04 September 2015 received by ET on 04 September 2015	Location outside Fleet Arcade	Construction noise was generated from the construction site of HK/2012/08 at location outside Fleet Arcade during night time on weekdays and daytime during General Holidays. The complainant also concerned construction dust and exhaust emission from derrick barges during transporting C&D material at the site.	<p>A public complaint regarding construction noise and dust and exhaust emission referred by EPD was received by ET on 04 September 2015 (EPD Ref.: H04/RS/00022385-15 dated 04 September 2015). The complainant reported that construction noise was generated from the construction site of HK/2012/08 at location outside Fleet Arcade during night time on weekdays and daytime during General Holidays. The complainant also concerned construction dust and exhaust emission from derrick barges during transporting C&D material at the site. (Contract HK/2012/08)</p> <p>ET confirmed with the Resident Site Staff that from 0800 hrs to 1800 hrs on 30 August 2015, removal of scaffold and timber and installation of bulkhead was undertaken by the Contractor of HK/2012/08 at the concerned location. Total one generator and one circular saw were in operation.</p> <p>From 1900hrs on 30 August 2015 to 0700 on 31 August 2015, no construction works was undertaken by the Contractor of HK/2012/08 at the concerned location.</p>	<p>Interim report submitted to EPD on 14 September 2015.</p> <p>2nd interim report submitted to EPD on 17 Dec 2015</p> <p>3rd interim report submitted to EPD on 31 Dec 2015</p>



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					<p>From 1900hrs on 31 August 2015 to 0700hrs on 01 September 2015, no construction works was undertaken by the Contractor of HK/2012/08 at the concerned location.</p> <p>From 1900hrs to 2115 hrs on 01 September 2015, unloading of soil was undertaken by the Contractor of HK/2012/08 at the concerned location. Total one derrick barge was in operation.</p> <p>From 2300hrs on 01 September 2015 to 0700hrs on 02 September 2015, no construction works was undertaken by the Contractor of HK/2012/08 at the concerned location. One derrick barge was deployed for unloading of soil on 02 September 2015 during daytime under Contract HK/2012/08 at the concerned location.</p> <p>Based on the relevant site records, from 0800 hrs to 1800 hrs on 30 August 2015, removal of scaffold and timber and installation of bulkhead was undertaken by the Contractor of HK/2012/08 at the concerned location. Total one generator and one circular saw were in operation and the relevant Construction Noise Permit GW-RS0296-15 for the concerned operation was confirmed in place.</p> <p>From 1900hrs on 30 August 2015 to 0700 on 31 August 2015, no construction works was undertaken by the Contractor of HK/2012/08 at the concerned location and from 1900hrs on 31 August 2015 to 0700hrs on 01 September 2015, no construction works was undertaken by the Contractor of HK/2012/08 at the concerned location.</p> <p>From 1900hrs to 2115 hrs on 01 September 2015, unloading of soil was undertaken by the Contractor of HK/2012/08 at the concerned location. Total one derrick barge was in operation and the Construction Noise Permit GW-RS0296-15 for the concerned operation was confirmed in place.</p>	



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					<p>From 2300hrs on 01 September 2015 to 0700hrs on 02 September 2015, no construction works was undertaken by the Contractor of HK/2012/08 at the concerned location. In view of the above, the construction activities conducted under Contract HK/2012/08 during the concerned period was in compliance with the statutory requirement.</p> <p>In addition, one derrick barge was deployed for unloading of soil on 02 September 2015 during daytime under Contract HK/2012/08 at the concerned location. Follow-up inspection was conducted during weekly environmental inspection on 08 September 2015 and no dark smoke emission was observed from the derrick barge moored outside the concerned location. Nevertheless, the Contractor of HK/2012/08 was reminded to conduct regular checking on the condition of the all derrick barges deployed on site to ensure only well maintained equipment are used to avoid potential dark smoke emission affecting nearby public and the Contractor of HK/2012/08 was reminded to upkeep the site control system for construction works carrying out at restricted hours and night time for Construction Noise Permit compliance.</p> <p>The Contractor was reminded to conduct regular checking on the condition of derrick barges deployed on site to ensure only well maintained equipments are used on site to avoid potential dark smoke emission affecting nearby public.</p> <p>The Contractor of HK/2012/08 was reminded to upkeep the site control system for construction works carrying out at restricted hours and night time for Construction Noise Permit compliance.</p>	
150917	17 Sep 2015	A public complaint regarding water quality referred by EPD was	Central and Wan Chai Reclamation coastline (between LUNG WUI ROAD to LUNG WO ROAD,	Silt from Central and Wan Chai Reclamation was spotted along the coastline (between LUNG WUI ROAD to LUNG WO ROAD, Central & Wan	Based on the site records confirmed by RSS, removal of seawall blocks by derrick barge was undertaken by Contract HK/2012/08 at Central Reclamation Phase III works area while mitigation measures including provision of silt curtain implemented by the Contractor of HK/2012/08 during the	Interim investigation report submitted to EPD on 25



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		received by ET on 17 September 2015	Central & Wan Chai, Hong Kong)	Chai, Hong Kong)	<p>seawall block removal works. According to relevant record, muddy dispersion at HKCEC2W (area opposite to Lung King Street) was observed by the Environmental Team on 14 September 2015 afternoon. The muddy patch was observed dispersing outside the outer layer silt curtain deployed by the Contractor of HK/2012/08 towards the Central Reclamation Phase III area while the outer layer silt curtain was observed partially opened.</p> <p>In view of the above observations, the Contractor was advised to rectify any environmental deficiencies such that adequate protection such as silt curtain shall be provided for exposed soil slope to mitigate for potential runoff related water quality impact to the surrounding waters; outer layer silt curtain deployed shall be entirely closed during works to safeguard the surrounding water quality. Any opening for marine vessel shall be closed promptly after passage and localized silt curtain deployed on site shall be properly maintained to avoid any gap or opening to effectively safeguard the nearby waters.</p>	September 2015. EPD advised no comment on 14 October 2015 and case closed.
151015	11 Oct 2015	A public complaint regarding direct discharge of muddy effluent referred by RSS was received by ET on 14 October 2015	Seafront opposite to Watson Road adjacent to Eastern Breakwater	Pink fluid was observed discharged into marine waters at seafront opposite to Watson Road adjacent to the Eastern Breakwater on 11 October 2015.	<p>Based on the site records confirmed by RSS, no construction activity near the seaside between Eastern Breakwater and the Dumping Jetty was undertaken by Contract HY/2009/19 while at site area away from the seawall, construction of EVB substructure, EVB and APS structure was undertaken on 11 October 2015. In addition, no works involving the use of paint was carried out at the concerned site area (Site Portion between Eastern Breakwater and the Dumping Jetty) and along the alignment of the Culvert T1 under Contract HY/2009/19 and no temporary storage of paint was located at the concerned site area and along the alignment of the Culvert T1 under HY/2009/19 on 11 October 2015.</p> <p>Follow-up inspection was conducted during weekly environmental inspection on 14 October 2015. No construction works involving the use of paint was observed undertaken at the concerned location while a few number of small containers of paint was observed placed around the concerned location and the paint containers were sealed and no sign of leakage was observed. The few containers were further checked and was found not matching the pink fluid observed on the complaint date. On the other hand, a culvert discharge outfall was found located within the concerned area where the pink fluid was observed.</p> <p>Based on the above, no direct information indicating the pink</p>	HyD will consolidate all input from relevant parties to form a reply to ICC.



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					fluid was originated from the worksarea under HY/2009/19 was considered available. Nevertheless, the Contractor was reminded that paints stored on site shall be properly labelled and stored in sealed container at weather proof location to avoid potential spillage.	
151028	26 Oct 2015	A public complaint regarding construction noise impact referred by EPD was received by ET on 28 October 2015 (EPD Ref:H05/RS/00 027330-15 Dated 28 October 2015)	Construction Site next to ex-Wan Chai Ferry Pier	Operation of grab dredger at construction site near the ex-Wan Chai Ferry Pier from around 0100 to 0400 hours on 26 October 2015 caused noise nuisance.	<p>According to the relevant site records under Contract HK/2009/02, from 01:00hrs to 04:00hrs on 26 October 2015, rock filling 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 and the relevant Construction Noise Permit</p> <p>GW-RS1121-15 for the concerned construction works was in place.</p> <p>The construction activity conducted under Contract HK/2009/02 during the concerned period was in compliance with the statutory requirement. Nevertheless, the Contractor was reminded to upkeep the site control system for construction works carrying out at restricted hours and night time for Construction Noise Permit compliance in view of the nearby public concern.</p>	The interim report would be submitted to EPD on 05 November 2015 and EPD advised no comment on 16 November 2016 and case closed.
151116	13 November 2015	A public complaint regarding water quality referred by EPD was received by ET on 16 November 2015 (EPD Ref: H05/RS/000291 26-15)	Construction Site at HKCEC and seafront outside Lung Wo Road	Muddy water was discharged from the construction site at HKCEC and dispersed to seafront outside Lung Wo Road on 13 November 2015 afternoon. The complainant also alleged that the deployment of the silt curtain did not follow the design requirement under the environmental permit that the curtain should be hanged to seabed level	<p>Based on the site records, rock mound trimming works was conducted under Contract HK/2012/08 at HKECE2 area on 13 November 2015 and mitigation measures including provision of localized silt curtain around the works area was implemented by the Contractor. Follow-up inspection was conducted during weekly environmental inspection on 17 November 2015, both outer layer silt curtain and localized layer of silt curtain around the active works area were observed deployed while the localized silt curtain deployed around the marine works area was observed partially opened for marine access. Despite no muddy dispersion was generated around the localized silt curtain enclosed area, the Contractor was advised to promptly improve the condition of the silt curtain to ensure the effectiveness of the mitigation measure deployed and to ensure the silt curtain is closed after marine vessel movement.</p> <p>Based on further review on the current construction stage at HKECE2, the dredging works and trench filling works were completed and filling works were conducted behind seawall or temporarily seawall in form of rockbund, the outer layer of silt curtain currently serves as the additional mitigation measure to</p>	The interim investigation report would be submitted to EPD on 1 December 2015 and record of diving inspection conducted on 27 November 2016 was forwarded to EPD on 4 Dec 2016. EPD advised no further comment on 14 Dec 2015 and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>the required silt curtain deployment for safeguarding the water quality in the area. To clarify for the current silt curtain arrangement, the Contractor was advised to submit an updated silt curtain deployment plan with respect to the latest silt curtain arrangement for the current construction stage. In addition, contaminated discharge at Culvert L originating from upstream locations was intermittently observed based on previous site records. Nevertheless, in view of the public concern, the Contractor was reminded to conduct regular checking on the condition and maintenance for the silt curtain deployed on site to ensure the effectiveness of the mitigation measure.</p> <p>A joint meeting for the complaint was held amongst the EPD, WDII RSS team, the ET and the Contractor of HK/2012/08 on 24 November 2015 and a joint silt curtain diver inspection check amongst EPD, ET, IEC, WDII RSS and the Contractor was conducted on 27 November 2015 to confirm the silt curtain condition and the silt curtain deployed at the HKCEC2 water channel was found generally in order.</p>	
160413 (HK201208)	13 April 2016	A public complaint referred by EPD was received by ET on 13 April 2016 (EPD Ref.: H05/RS/00008367-16 dated 13 April 2016)	Outside the Hong Kong Academy for Performing Arts	Muddy water discharge from construction site	<p>A public complaint regarding muddy water discharge referred by EPD was received by ET on 13 April 2016 (EPD Ref.: H05/RS/00008367-16 dated 13 April 2016). The complainant reported that muddy water was discharged from the construction work of Contract HK/2012/08 to the sea outside the Hong Kong Academy for Performing Arts on 13 April 2016 morning.</p> <p>ET confirmed with the Resident Site Staff that internal transport of soil to the hopper barge for storage via landing barge was conducted by Contractor of HK/2012/08 during 0800 hours to 1000 hours on 13 April 2016 at the sea outside the concerned location and 3 nos. of dump trucks were deployed for the operation.</p> <p>Protection measure including provision of sandbag bunding along the side of the landing barge was implemented by the Contractor of HK/2012/08.</p> <p>According to the relevant site records provided by RSS, internal transport of soil to the hopper barge for storage via landing barge was conducted by Contractor of HK/2012/08 during 0800 hours to 1000 hours on 13</p>	<p>Interim investigation report was submitted to the EPD on 21 April 2016.</p> <p>EPD advised no further comment on 6 June 2016 on the interim report submitted and case closed.</p>



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>April 2016 at the sea outside the concerned location and 3 nos. of dump trucks were deployed for the operation. Protection measure including provision of sandbag bunding along the side of the landing barge was implemented by the Contractor of HK/2012/08. In addition, amber rainstorm warning signal was hoisted from 0630 hours to 1200 hours on 13 April 2016 and during the above time period, muddy water was observed from the upstream of culvert L outside the HK/2012/08 site.</p> <p>Follow up inspection was conducted on 19 April 2016, protection measures including provision of sandbag bunding along the side of the landing barge was implemented and no mud or soil deposition was observed along the seawall and no discharge point was located within the temporary water channel connecting the Culvert L outfall location to the Victoria Harbour. In addition, piling works was observed at the north side of Zone A1 on 19 April 2016 and construction effluent collection from piling work via sedimentation tank to wastewater treatment facility was implemented and steel barrier was installed around the piling works area to mitigate against potential surface runoff related impact.</p> <p>Nevertheless, in view of the public concern, the Contractor was reminded to maintain adequate perimeter embankment protection along the seawall boundary and maintain proper construction effluent collection system to avoid potential runoff related impact to nearby waters.</p>	
160706	30 June 2016	A public complaint referred by EPD was received by ET on 06 July	Construction area near Royal Hong Kong Yacht Club	Derrick barge moored near Royal Hong Kong Yacht Club emitted dark smoke since mid of June 2016.	A public complaint referred by EPD was received by ET on 06 July 2016 (Case Ref.: H05/RS/0016226-16). The complainant reported that a derrick barge in green colour under Contract HY/2009/15 moored near Royal Hong Kong Yacht Club emitted dark smoke since mid of June 2016.	Interim report was submitted to EPD on 14 July 2016.

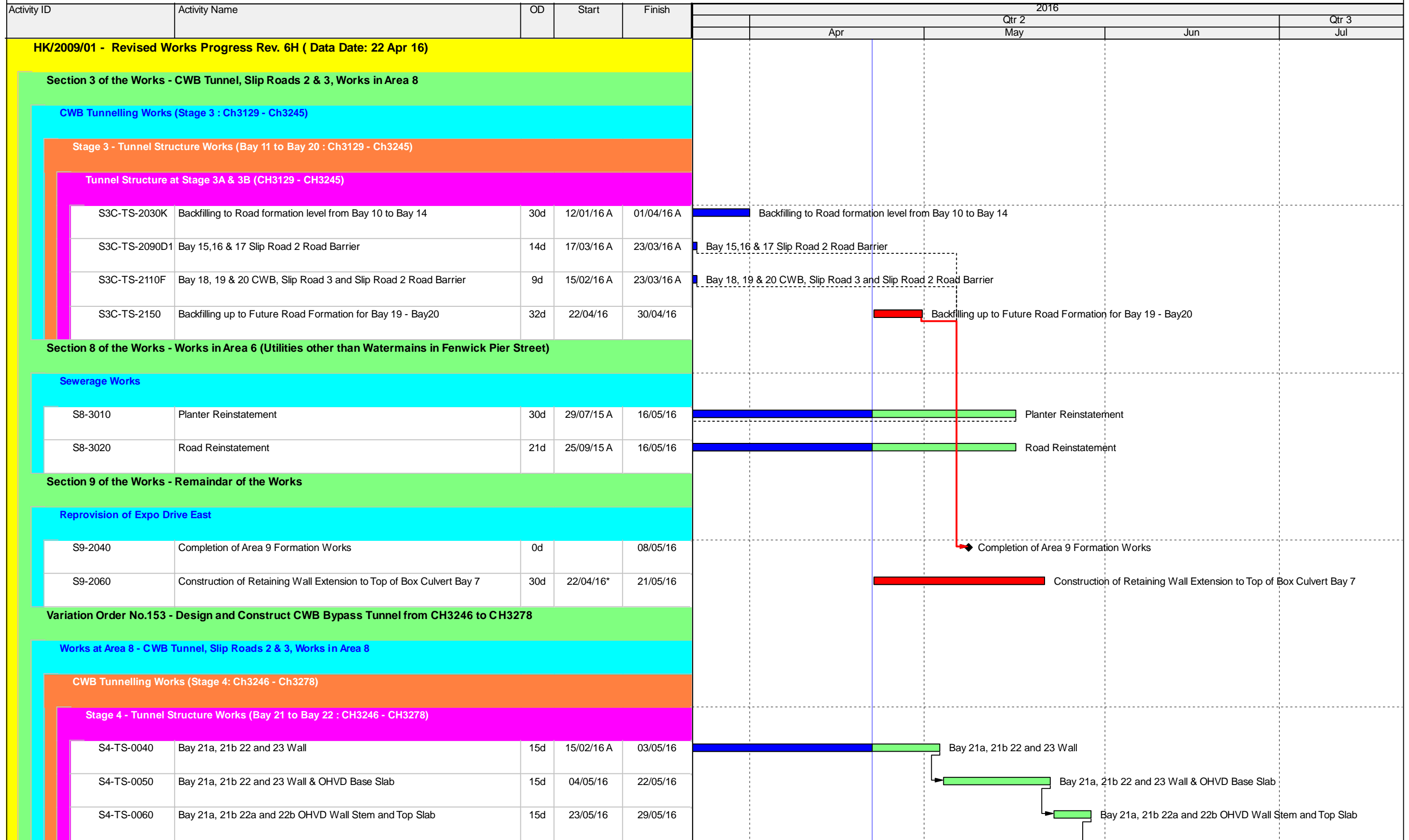


Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		2016 (Case Ref.: H05/RS/00016 226-16),			<p>ET confirmed with Resident Site Staff that the concerned green derrick barge was identified as Yue Fat 206 (YF 206) and the concerned green derrick barge was operated within the Ex-PCWA area for excavation works intermittently across the period from 15 June 2016 to 30 June 2016. The concerned green derrick barge YF206 within Ex-PCWA area was no longer deployed under Contract HY/2009/15 after 02 July 2016.</p> <p>Follow-up inspection was conducted on 11 July 2016, the concerned derrick barge YF206 was not deployed at the concerned location and no dark smoke was observed from other derrick barge operating on-site. Nevertheless, in view of the public concern, the Contractor of HY/2009/15 was reminded to conduct regular checking and maintenance of all derrick barges deployed on site to ensure only well maintained equipment is used to avoid potential dark smoke emission affect nearby surroundings.</p>	



Appendix 10.1

Construction Programme of Individual Contracts



Activity ID	Activity Name	OD	Start	Finish	2016			
					Apr	May	Jun	Jul
S4-TS-0070	Construction of Road Barrier and Backfilling to Formation Level from approx. -4.0mPD to +2.5mPD (approx. 23,975cu.m)	20d	30/05/16	19/06/16				Construction of Road Barrier and Backfill

	Remaining Work		Summa...
	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)
WORKS PROGRAMME Rev.4 - 3 Month Programme starting from 22/04/16

Date	Revision	Checked	Appro...
15-Sep-15	Master Programme 6H		
22/04/16	Progress Updated on 22Apr 2016		

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016															
						June				July				August							
						22	29	05	12	19	26	03	10	17	24	31	07	14			
3MRP - May 2016 to Aug 2016						111	01-Jun-15 A	30-Sep-16	353												
02 - PRE-CONSTRUCTION WORKS						106	20-Jun-15 A	23-Sep-16	358												
02.3 - Method Statement / Shop Drawings						91	20-Jun-15 A	06-Sep-16	373												
0230-1380	MS Landscape Deck Structure - Submission	11	20-Jun-15 A	31-May-16	371	MS Landscape Deck Structure - Submission															
0230-1390	MS Landscape Deck Structure - ER Review & Comment	28	31-May-16	28-Jun-16	371	MS Landscape Deck Structure - ER Review & Comment															
0230-1400	MS Landscape Deck Structure - Resubmission	28	28-Jun-16	26-Jul-16	371	MS Landscape Deck Structure - Resubmission															
0230-1410	MS Landscape Deck Structure - ER Approval	28	26-Jul-16	23-Aug-16	371	MS Landscape Deck Structure - ER Approval															
0240-1210	HGHK Permanent Carpark Design - BD Approval	9	21-Mar-16 A	28-May-16	62	HGHK Permanent Carpark Design - BD Approval															
0240-1220	HGHK Permanent Carpark Design- BD Approval Received	0		28-May-16	62	◆ HGHK Permanent Carpark Design- BD Approval Received															
0240-1230	HGHK Carpark - Application for BD Consent (BA8)	28	29-May-16	25-Jun-16	62	HGHK Carpark - Application for BD Consent (BA8)															
0240-1240	HGHK Carpark - BD Consent Received	0		25-Jun-16	62	◆ HGHK Carpark - BD Consent Received															
0240-1250	HGHK Carpark - Commencement Notification to BD (BA10)	7	26-Jun-16	02-Jul-16	62	HGHK Carpark - Commencement Notification to BD (BA10)															
0240-1270	Landscaping Design - Submission	25	20-Apr-16 A	14-Jun-16	451	Landscaping Design - Submission															
0240-1280	Landscaping Design - ER Review/Resubmission	28	14-Jun-16	12-Jul-16	451	Landscaping Design - ER Review/Resubmission															
0240-1290	Landscaping Design - ER Approval	28	12-Jul-16	09-Aug-16	451	Landscaping Design - ER Approval															
0240-1295	Landscaping Design - Fabrication & Delivery	28	09-Aug-16	06-Sep-16	451	Landscaping Design - Fabrication & Delivery															
0240-1298	Green Roof Minimum 2 years Establishment - Start	0	17-Jun-16		65	◆ Green Roof Minimum 2 years Establishment - Start															
0240-2460	MS for for trial erection of green roof - Resubmission	14	04-Apr-16 A	02-Jun-16	77	MS for for trial erection of green roof - Resubmission															
0240-2470	MS for for trial erection of green roof - No Adverse Comment	15	02-Jun-16	17-Jun-16	77	MS for for trial erection of green roof - No Adverse Comment															
02.5 - Bridge Segment/Beam Off-site Precasting						106	20-May-16	23-Sep-16	58												
0250-3860	Bridge F1B2 - Abut D12 Segment - 6 nos. (S2)	19	20-May-16	11-Jun-16	33	Bridge F1B2 - Abut D12 Segment - 6 nos. (S2)															
0250-3880	Bridge F1B2 - Pier F1B2 Segment - 13 nos. (S1)	40	20-May-16	07-Jul-16	58	Bridge F1B2 - Pier F1B2 Segment - 13 nos. (S1)															
0250-3900	Bridge F1B2 - Pier F2B2 Segment - 11 nos. (S1)	28	15-Jul-16	16-Aug-16	58	Bridge F1B2 - Pier F2B2 Segment - 11 nos. (S1)															
0250-3920	Bridge F1B2 - Pier F3B2 Segment - 6 nos. (S2)	19	20-Jun-16	12-Jul-16	33	Bridge F1B2 - Pier F3B2 Segment - 6 nos. (S2)															
0250-3940	Bridge F2B - Pier F3B2 Segment - 5 nos. (S2)	16	20-Jul-16	06-Aug-16	33	Bridge F2B - Pier F3B2 Segment - 5 nos. (S2)															
0250-3960	Bridge F2B - Pier F4B Segment - 13 nos. (S1)	32	17-Aug-16	23-Sep-16	58	Bridge F2B - Pier F4B Segment - 13 nos. (S1)															
0250-3980	Bridge F2B - Pier F5B Segment - 6 nos. (S2)	19	15-Aug-16	05-Sep-16	33	Bridge F2B - Pier F5B Segment - 6 nos. (S2)															
05 - SECTION 2 & 2A OF THE WORKS						46	20-May-16	14-Jul-16	20												
05.1 - Cut & Cover Tunnel Ch 4855-4932 (APS Footprint)						46	20-May-16	14-Jul-16	20												
05.1.6 - EVB Sub-structure & Tunnel						46	20-May-16	14-Jul-16	20												
05.1.6 - EVB Outstanding Works						15	20-May-16	06-Jun-16	0												
0515-3091	EVB Works(Zone 2) - Construction Stair 01	7	20-May-16	27-May-16	8	EVB Works(Zone 2) - Construction Stair 01															
0515-3093	EVB Works(Zone 2) -Installation of Sheetpile - G.L > 6-7/A-B	2	20-May-16	21-May-16	0	EVB Works(Zone 2) -Installation of Sheetpile - G.L > 6-7/A-B															
0515-3094	EVB Works(Zone 2) -Demolition of South D-Wall + Excavation - G.L > 6-7/A-B	2	23-May-16	24-May-16	0	EVB Works(Zone 2) -Demolition of South D-Wall + Excavation - G.L > 6-7/A-B															
0515-3095	EVB Works(Zone 2) -Mass Concrete + Waterproofing	2	25-May-16	26-May-16	0	EVB Works(Zone 2) -Mass Concrete + Waterproofing															
0515-3096	EVB Works(Zone 2) -Construction Wall and Stair 06 G.L > 6-7/A-B	9	27-May-16	06-Jun-16	0	EVB Works(Zone 2) -Construction Wall and Stair 06 G.L > 6-7/A-B															
0515-3098	EVB Works(Zone 4-5 & Zone 2) - Clearing & Demobilization of EVB	2	04-Jun-16	06-Jun-16	0	EVB Works(Zone 4-5 & Zone 2) - Clearing & Demobilization of EVB															
0515-3099	Complete EVB Outstanding Works	0		06-Jun-16	0	◆ Complete EVB Outstanding Works															
05.1.7 - Connection to EVA						46	20-May-16	14-Jul-16	20												

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

Contract HY/2009/19
Three Months Rolling Programme (20 May to 19 Aug 2016)

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016											
						June				July				August			
						22	29	05	12	19	26	03	10	17	24	31	07
0515-3360	EVA - WATERPROOFING PREP - Break mass concrete by hand held hydraulic breaker at the outer corner of D-wall and EVA	5	20-May-16	25-May-16	20	EVA - WATERPROOFING PREP - Break mass concrete by hand held hydraulic breaker at the outer corne											
0515-3370	EVA - WATERPROOFING PREP - Break mass concrete by hand held hydraulic breaker to expose couplers	5	26-May-16	31-May-16	20	EVA - WATERPROOFING PREP - Break mass concrete by hand held hydraulic breaker to expose d											
0515-3380	EVA - SLAB CONSTRUCTION - Falsework removal and cleaning	2	01-Jun-16	02-Jun-16	20	EVA - SLAB CONSTRUCTION - Falsework removal and cleaning											
0515-3390	EVA - SLAB CONSTRUCTION - Install the water proofing system & Testing	2	03-Jun-16	04-Jun-16	20	EVA - SLAB CONSTRUCTION - Install the water proofing system & Testing											
0515-3400	EVA - SLAB CONSTRUCTION - Core hole and install steel bar	2	06-Jun-16	07-Jun-16	20	EVA - SLAB CONSTRUCTION - Core hole and install steel bar											
0515-3410	EVA - SLAB CONSTRUCTION - Re-bar fixing	3	08-Jun-16	11-Jun-16	20	EVA - SLAB CONSTRUCTION - Re-bar fixing											
0515-3420	EVA - SLAB CONSTRUCTION - Erection of formwork	2	13-Jun-16	14-Jun-16	20	EVA - SLAB CONSTRUCTION - Erection of formwork											
0515-3430	EVA - SLAB CONSTRUCTION - Concreting	1	15-Jun-16	15-Jun-16	20	EVA - SLAB CONSTRUCTION - Concreting											
0515-3440	EVA - SLAB CONSTRUCTION - Removal of formwork	1	16-Jun-16	16-Jun-16	20	EVA - SLAB CONSTRUCTION - Removal of formwork											
0515-3450	EVA - WALL & ROOF SLAB CONSTRUCTION - Erection of falsework	4	17-Jun-16	21-Jun-16	20	EVA - WALL & ROOF SLAB CONSTRUCTION - Erection of falsework											
0515-3460	EVA - WALL & ROOF SLAB CONSTRUCTION - Install the water proofing system	3	22-Jun-16	24-Jun-16	20	EVA - WALL & ROOF SLAB CONSTRUCTION - Install the water pro											
0515-3470	EVA - WALL & ROOF SLAB CONSTRUCTION - Rebar fixing	4	25-Jun-16	29-Jun-16	20	EVA - WALL & ROOF SLAB CONSTRUCTION - Rebar fixing											
0515-3480	EVA - WALL & ROOF SLAB CONSTRUCTION - Erection of formwork	3	30-Jun-16	04-Jul-16	20	EVA - WALL & ROOF SLAB CONSTRUCTION - Erectio											
0515-3490	EVA - WALL & ROOF SLAB CONSTRUCTION - Concreting	1	05-Jul-16	05-Jul-16	20	EVA - WALL & ROOF SLAB CONSTRUCTION - Conc											
0515-3510	EVA - WALL CONSTRUCTION (to 4.2mPD) - Erection of falsework	1	06-Jul-16	06-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD) - Erectio											
0515-3530	EVA - WALL CONSTRUCTION (to 4.2mPD) - Rebar fixing	1	07-Jul-16	07-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD) - Reba											
0515-3540	EVA - WALL CONSTRUCTION (to 4.2mPD) - Erection of formwork	1	08-Jul-16	08-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD) - Erec											
0515-3550	EVA - WALL CONSTRUCTION (to 4.2mPD) - Concreting	1	09-Jul-16	09-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD) - Co											
0515-3560	EVA - WALL CONSTRUCTION (to 4.2mPD) - Removal of formwork	1	11-Jul-16	11-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD) - R											
0515-3570	EVA - WALL CONSTRUCTION (to 4.2mPD) - Install the water proofing system & Testing	2	12-Jul-16	13-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD)											
0515-3580	EVA - WALL CONSTRUCTION (to 4.2mPD) - Place concrete screeding	1	14-Jul-16	14-Jul-16	20	EVA - WALL CONSTRUCTION (to 4.2mPD)											
0515-3590	COMPLETE EVA WORKS	0		14-Jul-16*	20	COMPLETE EVA WORKS											
06 - SECTION 3 OF THE WORKS		24	20-May-16	17-Jun-16	10												
06.3 - Admin Building		24	20-May-16	17-Jun-16	10												
Admin Building - Outstanding Works After Hanover to CC		10	20-May-16	31-May-16	0												
0630-2705	Construct Road Pavement Between P31-32 within Porion VB incl sub-base	7	20-May-16	27-May-16	3	Construct Road Pavement Between P31-32 within Porion VB incl sub-base											
0630-2770	Admin Building - Complete Outstanding Works	0		31-May-16*	0	Admin Building - Complete Outstanding Works											
Admin Building - Ground Beams to be Completed after CC Basement (Timing to be Confirmed)		24	20-May-16	17-Jun-16	10												
0630-1880	Grd. Beam - (GL > P-R) - Removal of Existing Sheet Piles	4	20-May-16	24-May-16	10	Grd. Beam - (GL > P-R) - Removal of Existing Sheet Piles											
0630-1900	Grd. Beam - (GL > P-R) - Excavate to formation level + Blinding Layer Casting	5	25-May-16	30-May-16	10	Grd. Beam - (GL > P-R) - Excavate to formation level + Blinding Layer Casting											
0630-1920	Grd. Beam - (GL > P-R) - Install Capping Plate	6	30-May-16	04-Jun-16	10	Grd. Beam - (GL > P-R) - Install Capping Plate											
0630-1940	Grd. Beam - (GL > P-R) - Rebar Fixing for Beam	7	02-Jun-16	10-Jun-16	10	Grd. Beam - (GL > P-R) - Rebar Fixing for Beam											
0630-1960	Grd. Beam - (GL > P-R) - Erect Formworks for Beam	4	11-Jun-16	15-Jun-16	10	Grd. Beam - (GL > P-R) - Erect Formworks for Beam											
0630-1980	Grd. Beam - (GL > P-R) - Cast Concrete for Beam	1	16-Jun-16	16-Jun-16	10	Grd. Beam - (GL > P-R) - Cast Concrete for Beam											
0630-2000	Grd. Beam - (GL > P-R) - Formworks Removal	1	17-Jun-16	17-Jun-16	10	Grd. Beam - (GL > P-R) - Formworks Removal											
0630-2036	ADB(Pier29-30) - West Basement (GL > 1-2.0/C-F) - 1st Layer Excav Approx. +2.5mPD	3	20-May-16	23-May-16	11	ADB(Pier29-30) - West Basement (GL > 1-2.0/C-F) - 1st Layer Excav Approx. +2.5mPD											
0630-2037	ADB(Pier29-30) - West Basement (GL > 1-2.0/C-F) - Install Strut and Waling Support	4	24-May-16	27-May-16	11	ADB(Pier29-30) - West Basement (GL > 1-2.0/C-F) - Install Strut and Waling Support											
0630-2038	ADB(Pier29-30) - West Basement (GL > 1-2.0/C-F) - 2nd Layer Excav to Ground Beam Formation level + blinding	3	28-May-16	31-May-16	11	ADB(Pier29-30) - West Basement (GL > 1-2.0/C-F) - 2nd Layer Excav to Ground Beam Formation											

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

Contract HY/2009/19
Three Months Rolling Programme (20 May to 19 Aug 2016)

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016											
						June				July				August			
						22	29	05	12	19	26	03	10	17	24	31	07
1021-2400	Pier 27 > Tie Beam. - Post Drilling & Rebar Fixing Works	7	27-May-16	03-Jun-16	68												
1021-2410	Pier 27 > Tie Beam. - Formworks & Concreting Works	4	04-Jun-16	08-Jun-16	68												
1021-2420	Pier 27 > Tie Beam. - Remove Fwk & Backfilling	4	10-Jun-16	14-Jun-16	68												
10.2.2 - Pier Construction		20	20-May-16	13-Jun-16	42												
Pier 38 to 43		20	20-May-16	13-Jun-16	42												
1021-2171	Pier 42 (F7C) - Remove formwork and prepare construction joint	2	20-May-16	21-May-16	8												
1021-2172	Pier 42 (F7C) - Remove formwork and scaffolding	1	23-May-16	23-May-16	14												
1021-2173	Pier 42 (F7C) - Remove structural steel of falsework	2	24-May-16	25-May-16	14												
1021-2200	Pier 42 (F7C) Install Bearing	9	23-May-16	01-Jun-16	8												
1021-2246	Pier 43 (F8C) - Fixing Reinforcement for Crosshead Bottom Layer	1	20-May-16	20-May-16	42												
1021-2247	Pier 43 (F8C) - Installation of case-in items	3	21-May-16	24-May-16	42												
1021-2248	Pier 43 (F8C) - Fixing Reinforcement for Crosshead Upper Layer	2	25-May-16	26-May-16	42												
1021-2249	Pier 43 (F8C) - Installation of tie-bolts	1	27-May-16	27-May-16	42												
1021-2250	Pier 43 (F8C) - Pouring concrete for crosshead	2	28-May-16	30-May-16	42												
1021-2251	Pier 43 (F8C) - Remove formwork and prepare construction joint	2	31-May-16	01-Jun-16	42												
1021-2252	Pier 43 (F8C) - Remove formwork and scaffolding	3	06-Jun-16	08-Jun-16	43												
1021-2253	Pier 43 (F8C) - Remove structural steel of falsework	2	10-Jun-16	11-Jun-16	43												
1021-2290	Pier 43 (F8C) Install Bearing	9	02-Jun-16	13-Jun-16	42												
10.2.3 - Bridge Construction		91	07-Apr-16 A	05-Sep-16	20												
Bridge C1		51	07-Apr-16 A	20-Jul-16	42												
1022-1002.1	Bridge C1 - Construction (Pier 17 - 21) > Rebar Fixing of Deck + Diaphragm	3	30-Apr-16 A	23-May-16	44												
1022-1002.2	Bridge C1 - Construction (Pier 17 - 21) > Deck Concreting	4	07-May-16 A	24-May-16	44												
1022-1002.3	Bridge C1 - Construction (Pier 17 - 21) > Bridge Deck Wing Extension	14	07-May-16 A	04-Jun-16	48												
1022-1003	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Precast Skin Wall Installation	12	25-May-16	07-Jun-16	44												
1022-1003.1	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Rebar & Cast-in Fixing	7	08-Jun-16	16-Jun-16	44												
1022-1003.2	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Shutter Installation	7	17-Jun-16	24-Jun-16	44												
1022-1003.3	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Concreting	8	17-Jun-16	25-Jun-16	44												
1022-1004	Bridge C1 - Construct Int. Single Noise Encl. (South) Pier 17-20 Stage 1 - Base Plate & Main Post	8	27-Jun-16	06-Jul-16	44												
1022-1004.1	Bridge C1 - Construct Int. Single Noise Encl. (South) Pier 17-20 Stage 1 - Main Frames	8	02-Jul-16	11-Jul-16	44												
1022-1004.2	Bridge C1 - Construct Int. Single Noise Encl. (South) Pier 17-20 Stage 1 - Secondary Frames & Panels	8	09-Jul-16	18-Jul-16	44												
1022-1005	Bridge C1 - Construct Int. Single Noise Encl. (North & South) Pier 20-21 - Base Plate & Main Post	8	27-Jun-16	06-Jul-16	44												
1022-1005.1	Bridge C1 - Construct Int. Single Noise Encl. (North & South) Pier 20-21 - Main Frames	8	02-Jul-16	11-Jul-16	44												
1022-1005.2	Bridge C1 - Construct Int. Single Noise Encl. (North & South) Pier 20-21 - Secondary Frames & Panels	8	09-Jul-16	18-Jul-16	44												
1022-2753	Bridge C1 - Construction (Pier 21 - 22) > Wing Extension - North/South Wing	12	07-Apr-16 A	02-Jun-16	42												
1022-2754	Bridge C1 - Construction (Pier 21- 22) > Construct Parapet (North & South)	14	03-Jun-16	20-Jun-16	42												
1022-2755	Bridge C1 - Construction (Pier 21-22) > Install Street Furniture/GullyEtc.	14	03-Jun-16	20-Jun-16	67												
1022-2756	Bridge C1 - Construction (Pier 21-22) > Install MJ at Pier 22	7	21-Jun-16	28-Jun-16	60												
1022-2763	Bridge C1 - Construct Int. Single Noise Encl. (North & South) Pier 21-22 - Base Plate & Main Post	8	21-Jun-16	29-Jun-16	42												

- Remaining Level of Effort ◆ ◆ Milestone
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Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016																
						June				July				August								
						22	29	05	12	19	26	03	10	17	24	31	07	14				
1022-2763.1	Bridge C1 - Construct Int. Single Noise Encl. (North & South) Pier 21-22 - Main Frames	8	30-Jun-16	09-Jul-16	42																	
1022-2763.2	Bridge C1 - Construct Int. Single Noise Encl. (North & South) Pier 21-22 - Secondary Farmes & Panels	9	11-Jul-16	20-Jul-16	42																	
Bridge C2		85	17-May-16 A	29-Aug-16	26																	
1022-2822	Bridge C2 - Stitching at midspan between Pier 24 and 25	1	17-May-16 A	20-May-16	26																	
1022-2824	Launch LG2 at Pier 23 to 22	2	21-May-16	23-May-16	26																	
1022-2826	Bridge C2 - Erect T-span at Pier 23 (12 nos) > By LG2	3	24-May-16	26-May-16	26																	
1022-2828	Bridge C2 - Erect End-span at Pier 22 (4 nos) > By LG2	7	24-May-16	31-May-16	26																	
1022-2829	Dismantle LG2 at Bridge C2	15	01-Jun-16	18-Jun-16	26																	
1022-2920	Bridge C2 - Stitching at midspan between Pier 23 and 24	3	27-May-16	30-May-16	35																	
1022-2980	Bridge C2 - Stitching at midspan between Pier 22 and 23	3	01-Jun-16	03-Jun-16	31																	
1022-3020	Bridge C2 - External Stressing	7	04-Jun-16	13-Jun-16	31																	
1022-3040	Bridge C2 - Construct North Parapet - Precast Skin Wall Installation	6	20-Jun-16	25-Jun-16	26																	
1022-3040.2	Bridge C2 - Construct North Parapet - Rebar & Cast-in Fixing	6	27-Jun-16	04-Jul-16	26																	
1022-3040.4	Bridge C2 - Construct North Parapet - Shutter Installation	5	05-Jul-16	09-Jul-16	26																	
1022-3040.6	Bridge C2 - Construct North Parapet - Concreting	6	05-Jul-16	11-Jul-16	26																	
1022-3180	Bridge C2 - Construct South Parapet - Precast Skin Wall Installation	6	20-Jun-16	25-Jun-16	26																	
1022-3180.2	Bridge C2 - Construct South Parapet - Rebar & Cast-in Fixing	6	27-Jun-16	04-Jul-16	26																	
1022-3180.4	Bridge C2 - Construct South Parapet - Shutter Installation	5	05-Jul-16	09-Jul-16	26																	
1022-3180.6	Bridge C2 - Construct South Parapet - Concreting	6	05-Jul-16	11-Jul-16	26																	
1022-4120	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 21-22 - Base Plate & Main Post	8	12-Jul-16	20-Jul-16	26																	
1022-4120.1	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 21-22 - Main Frames	8	21-Jul-16	29-Jul-16	26																	
1022-4120.2	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 21-22 - Secondary Farmes & Panels	8	30-Jul-16	08-Aug-16	26																	
1022-4140	Bridge C2 + C1 Deck Road Waterproofing, Surfacing & Marking	18	09-Aug-16	29-Aug-16	26																	
Bridge C3		64	20-May-16	04-Aug-16	47																	
1022-2760	Bridge C3 - Construct North Parapet - Precast Skin Wall Installation	9	20-May-16	30-May-16	29																	
1022-2760.2	Bridge C3 - Construct North Parapet - Rebar & Cast-in Fixing	6	31-May-16	06-Jun-16	29																	
1022-2760.4	Bridge C3 - Construct North Parapet - Shutter Installation	6	07-Jun-16	14-Jun-16	29																	
1022-2760.6	Bridge C3 - Construct North Parapet - Concreting	7	07-Jun-16	15-Jun-16	29																	
1022-2780	Bridge C3 - Construct South Parapet - Precast Skin Wall Installation	9	20-May-16	30-May-16	47																	
1022-2780.2	Bridge C3 - Construct South Parapet - Rebar & Cast-in Fixing	6	31-May-16	06-Jun-16	47																	
1022-2780.4	Bridge C3 - Construct South Parapet - Shutter Installation	6	07-Jun-16	14-Jun-16	47																	
1022-2780.6	Bridge C3 - Construct South Parapet - Concreting	7	07-Jun-16	15-Jun-16	47																	
1022-4110	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Base Plate & Main Post	8	16-Jun-16	24-Jun-16	47																	
1022-4110.1	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Main Frames	8	25-Jun-16	05-Jul-16	47																	
1022-4110.2	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Secondary Farmes & Panels	8	06-Jul-16	14-Jul-16	47																	
1022-4111	Bridge C3 - Deck Road Waterproofing, Surfacing & Marking	18	15-Jul-16	04-Aug-16	47																	
Bridge C4		31	07-May-16 A	25-Jun-16	80																	
1022-1552.2	Bridge C4 - Construct South Parapet - Shutter Installation	1	07-May-16 A	20-May-16	80																	

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█ Critical Remaining Work

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Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016											
						June				July				August			
						22	29	05	12	19	26	03	10	17	24	31	07
1022-1552.3	Bridge C4 - Construct South Parapet - Concreting	2	13-May-16 A	23-May-16	80	■ Bridge C4 - Construct South Parapet - Concreting											
1022-1558	Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Base Plate & Main Post	8	24-May-16	01-Jun-16	80	■ Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Base Plate & Main Post											
1022-1558.1	Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Main Frames	8	31-May-16	08-Jun-16	80	■ Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Main Frames											
1022-1558.2	Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Secondary Farmes & Panels	8	08-Jun-16	17-Jun-16	80	■ Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Secondary Farmes & Panels											
1022-1564	Bridge C4 - Deck Road Waterproofing, Surfacing & Marking	7	18-Jun-16	25-Jun-16	80	■ Bridge C4 - Deck Road Waterproofing, Surfacing & Marking											
Bridge C5		49	12-May-16 A	18-Jul-16	62												
1022-3942.1	Bridge C5 - Construct South Parapet - Precast Skin Wall Installation	6	12-May-16 A	26-May-16	5	■ Bridge C5 - Construct South Parapet - Precast Skin Wall Installation											
1022-3942.2	Bridge C5 - Construct South Parapet - Rebar & Cast-in Fixing	7	27-May-16	03-Jun-16	5	■ Bridge C5 - Construct South Parapet - Rebar & Cast-in Fixing											
1022-3942.3	Bridge C5 - Construct South Parapet - Shutter Installation	7	04-Jun-16	13-Jun-16	5	■ Bridge C5 - Construct South Parapet - Shutter Installation											
1022-3942.4	Bridge C5 - Construct South Parapet - Concreting	8	04-Jun-16	14-Jun-16	5	■ Bridge C5 - Construct South Parapet - Concreting											
1022-3942.5	Bridge C5 - Construct North Parapet - Precast Skin Wall Installation	6	12-May-16 A	26-May-16	5	■ Bridge C5 - Construct North Parapet - Precast Skin Wall Installation											
1022-3942.6	Bridge C5 - Construct North Parapet - Rebar & Cast-in Fixing	7	27-May-16	03-Jun-16	5	■ Bridge C5 - Construct North Parapet - Rebar & Cast-in Fixing											
1022-3942.7	Bridge C5 - Construct North Parapet - Shutter Installation	7	04-Jun-16	13-Jun-16	5	■ Bridge C5 - Construct North Parapet - Shutter Installation											
1022-3942.8	Bridge C5 - Construct North Parapet - Concreting	8	04-Jun-16	14-Jun-16	5	■ Bridge C5 - Construct North Parapet - Concreting											
1022-3953	Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Base Plate & Main Post	8	15-Jun-16	23-Jun-16	5	■ Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Base Plate &											
1022-3953.1	Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Main Frames	8	22-Jun-16	30-Jun-16	62	■ Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Main											
1022-3953.2	Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Secondary Farmes & Panels	8	30-Jun-16	09-Jul-16	62	■ Bridge C5 - Construct Int. Single Noise Encl. Bridge											
1022-3954	Bridge C5 - Deck Road Waterproofing, Surfacing & Marking	7	11-Jul-16	18-Jul-16	62	■ Bridge C5 - Deck Road Waterproofing											
Bridge F1C		59	27-May-16	05-Aug-16	46												
1022.1-4245	Bridge F1C - Construct South Parapet - Precast Skin Wall Installation	14	27-May-16	13-Jun-16	32	■ Bridge F1C - Construct South Parapet - Precast Skin Wall Installation											
1022.1-4245.1	Bridge F1C - Construct South Parapet - Rebar & Cast-in Fixing	12	11-Jun-16	24-Jun-16	46	■ Bridge F1C - Construct South Parapet - Rebar & Cast-in Fixing											
1022.1-4245.2	Bridge F1C - Construct South Parapet - Shutter Installation	7	24-Jun-16	02-Jul-16	46	■ Bridge F1C - Construct South Parapet - Shutter Installation											
1022.1-4245.3	Bridge F1C - Construct South Parapet - Concreting	8	24-Jun-16	04-Jul-16	46	■ Bridge F1C - Construct South Parapet - Concreting											
1022.1-4247	Bridge F1C - Construct Int. Double Noise Encl. Bridge F1C - Base Plate & Main Post	8	05-Jul-16	13-Jul-16	46	■ Bridge F1C - Construct Int. Double Noise Encl											
1022.1-4248	Bridge F1C - Construct Int. Double Noise Encl. Bridge F1C - Main Frames	8	12-Jul-16	20-Jul-16	46	■ Bridge F1C - Construct Int. Double N											
1022.1-4249	Bridge F1C - Construct Int. Double Noise Encl. Bridge F1C - Secondary Farmes & Panels	8	20-Jul-16	28-Jul-16	46	■ Bridge F1C - Construct Int											
1022.1-4251	Bridge F1C - Bridge F1C Deck Road Waterproofing, Surfacing & Marking	7	29-Jul-16	05-Aug-16	46	■ Bridge F1C - Br											
Bridge F2C		81	20-May-16	24-Aug-16	30												
1022.1-4318	Pier 38(MJ Right) - End Span Erection - Hanging Segments	2	20-May-16	21-May-16	0	■ Pier 38(MJ Right) - End Span Erection - Hanging Segments											
1022.1-4321	Pier 38(MJ Right) - End Span Erection	1	23-May-16	23-May-16	0	■ Pier 38(MJ Right) - End Span Erection											
1022.1-4324	Pier 38(MJ Right) - End Span Erection - Stitching	3	24-May-16	26-May-16	0	■ Pier 38(MJ Right) - End Span Erection - Stitching											
1022.1-4327	Pier 38(MJ Right) - End Span Erection - Formwork Fixing for and Grouting for Bearing	3	24-May-16	26-May-16	32	■ Pier 38(MJ Right) - End Span Erection - Formwork Fixing for and Grouting for Bearing											
1022.1-4330	Pier 38(MJ Right) - End Span Erection - Prestress Span Tendons	1	27-May-16	27-May-16	32	■ Pier 38(MJ Right) - End Span Erection - Prestress Span Tendons											
1022.1-4333	Pier 38(MJ Right) - End Span Erection - Remove Hanger Bar & Hanger Beam & Stitching Formwork	1	28-May-16	28-May-16	32	■ Pier 38(MJ Right) - End Span Erection - Remove Hanger Bar & Hanger Beam & Stitching Formwork											
1022.1-4336	Pier 40(MJ Left) - End Span Erection - Hanging Segments	2	24-May-16	25-May-16	4	■ Pier 40(MJ Left) - End Span Erection - Hanging Segments											
1022.1-4339	Pier 40(MJ Left) - End Span Erection - Erect Segments	1	26-May-16	26-May-16	4	■ Pier 40(MJ Left) - End Span Erection - Erect Segments											
1022.1-4342	Pier 40(MJ Left) - End Span Erection - Stitching	3	27-May-16	30-May-16	4	■ Pier 40(MJ Left) - End Span Erection - Stitching											
1022.1-4345	Pier 40(MJ Left) - End Span Erection - Formwork Fixing for and Grouting for Bearing	3	27-May-16	30-May-16	4	■ Pier 40(MJ Left) - End Span Erection - Formwork Fixing for and Grouting for Bearing											

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Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016																
						June				July				August								
						22	29	05	12	19	26	03	10	17	24	31	07	14				
1022.1-4348	Pier 40(MJ Left) - End Span Erection - Prestress Span Tendons	1	31-May-16	31-May-16	4																	
1022.1-4351	Pier 40(MJ Left) - End Span Erection - Remove Hanger Bar & Hanger Beam & Stitching Formwork	1	01-Jun-16	01-Jun-16	4																	
1022.1-4354	LG-A Launching - Deactivate the MS at F3C/Pier37 and Engage FL at F6C/Pier41	1	27-May-16	27-May-16	0																	
1022.1-4355	Prestress Extenral Tendon of Bridge F2C/Pier36	12	01-Jun-16	15-Jun-16	30																	
1022.1-4356	Bridge F2C - Construct South Parapet - Precast Skin Wall Installation	14	16-Jun-16	02-Jul-16	30																	
1022.1-4357	Bridge F2C - Construct South Parapet - Rebar & Cast-in Fixing	12	30-Jun-16	14-Jul-16	30																	
1022.1-4358	Bridge F2C - Construct South Parapet - Shutter Installation	7	14-Jul-16	21-Jul-16	30																	
1022.1-4359	Bridge F2C - Construct South Parapet - Concreting	8	14-Jul-16	22-Jul-16	30																	
1022.1-4363.1	Bridge F2C - Construct Int. Double Noise Encl. (54m) - Base Plate & Main Post	8	23-Jul-16	01-Aug-16	30																	
1022.1-4363.2	Bridge F2C - Construct Int. Double Noise Encl. (54m) - Main Frames	8	30-Jul-16	08-Aug-16	30																	
1022.1-4363.3	Bridge F2C - Construct Int. Double Noise Encl. (54m) - Secondary Frames & Panels	8	08-Aug-16	16-Aug-16	30																	
1022.1-4369	Bridge F2C - Deck Road Waterproofing, Surfacing & Marking	7	17-Aug-16	24-Aug-16	30																	
Bridge F3C		84	28-May-16	05-Sep-16	14																	
1022.1-4370	Pier 41 - Install Pier Segment - Place Pier Segment	1	28-May-16	28-May-16	0																	
1022.1-4375	Pier 41 - Install Pier Segment - Adjust Segment Level and Location	2	30-May-16	31-May-16	0																	
1022.1-4380	Pier 41 - Install Pier Segment - Grouting the Bearing Upper Plinth	3	01-Jun-16	03-Jun-16	0																	
1022.1-4385	Pier 41 - Install Pier Segment - Stressing Nailing	1	04-Jun-16	04-Jun-16	0																	
1022.1-4390	Pier 41 - Install Pier Segment - Install MS at F6C/Pier41	1	06-Jun-16	06-Jun-16	0																	
1022.1-4395	LG-A Launching - Shift the MS from F5C/Pier40 Left to Right	1	07-Jun-16	07-Jun-16	0																	
1022.1-4400	LG-A Launching - Deactivate the MS at F4C/Pier39 and Engage FL at F7C/Pier42	3	08-Jun-16	11-Jun-16	0																	
1022.1-4405	Pier 42 - Install Pier Segment - Place Pier Segment	1	13-Jun-16	13-Jun-16	0																	
1022.1-4410	Pier 42 - Install Pier Segment - Adjust Segment Level and Location	2	14-Jun-16	15-Jun-16	3																	
1022.1-4415	Pier 42 - Install Pier Segment - Grouting the Bearing Upper Plinth	4	16-Jun-16	20-Jun-16	3																	
1022.1-4420	Pier 42 - Install Pier Segment - Stressing Nailing	1	21-Jun-16	21-Jun-16	3																	
1022.1-4425	Pier 42 - Install Pier Segment - Install MS at F7C/Pier42	1	22-Jun-16	22-Jun-16	3																	
1022.1-4430	Pier 41 - T Span Erection (6 pairs)	3	14-Jun-16	16-Jun-16	0																	
1022.1-4435	Pier 40(MJ Right) - End Span Erection - Hanging Segments	2	17-Jun-16	18-Jun-16	0																	
1022.1-4440	Pier 40(MJ Right) - End Span Erection - Erect Segments	1	20-Jun-16	20-Jun-16	0																	
1022.1-4445	Pier 40(MJ Right) - End Span Erection - Stitching	3	21-Jun-16	23-Jun-16	0																	
1022.1-4450	Pier 40(MJ Right) - End Span Erection - Formwork Fixing for and Grouting for Bearing	3	21-Jun-16	23-Jun-16	0																	
1022.1-4455	Pier 40(MJ Right) - End Span Erection - Prestress Span Tendons	1	24-Jun-16	24-Jun-16	0																	
1022.1-4460	Pier 40(MJ Right) - End Span Erection - Remove Hanger Bar & Hanger Beam & Stitching Formwork	1	25-Jun-16	25-Jun-16	0																	
1022.1-4465	LG-A Launching - Deactivate the MS at F5C/Pier40 and Engage FL at F8C/Pier43 Right	2	27-Jun-16	28-Jun-16	0																	
1022.1-4466	Pier 43 - Install Pier Segment - Place Pier Segment	1	29-Jun-16	29-Jun-16	0																	
1022.1-4467	Pier 43 - Install Pier Segment - Adjust Segment Level and Location	2	30-Jun-16	02-Jul-16	0																	
1022.1-4468	Pier 43 - Install Pier Segment - Grouting the Bearing Upper Plinth	4	04-Jul-16	07-Jul-16	0																	
1022.1-4469	Pier 43 - Install Pier Segment - Stressing Nailing	1	08-Jul-16	08-Jul-16	0																	

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Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016													
						June				July				August					
						22	29	05	12	19	26	03	10	17	24	31	07	14	
1022.1-4470	Pier 43 - Install Pier Segment - Install MS at F8C/Pier43	1	09-Jul-16	09-Jul-16	0														Pier 43 - Install Pier Segment - Install MS at F8C/Pier43
1022.1-4481	Pier 42 - T Span Erection (5 pairs)	3	29-Jun-16	02-Jul-16	5													Pier 42 - T Span Erection (5 pairs)	
1022.1-4482	Bridge F6-F7 T Span Stitching - Install Clamping Beam and Adjust T span (F6-F7)	1	04-Jul-16	04-Jul-16	5													Bridge F6-F7 T Span Stitching - Install Clamping Beam and Adjust T span (F6-F7)	
1022.1-4483	Bridge F6-F7 T Span Stitching - Stitching (F6-F7)	2	05-Jul-16	06-Jul-16	5													Bridge F6-F7 T Span Stitching - Stitching (F6-F7)	
1022.1-4484	Bridge F6-F7 T Span Stitching - Prestress Span Tendons (F6-F7)	1	07-Jul-16	07-Jul-16	5													Bridge F6-F7 T Span Stitching - Prestress Span Tendons (F6-F7)	
1022.1-4485	Pier 43(MJ Left) - End Span Erection - Hanging Segments	2	11-Jul-16	12-Jul-16	0													Pier 43(MJ Left) - End Span Erection - Hanging Segments	
1022.1-4486	Pier 43(MJ Left) - End Span Erection - Erect Segments	1	13-Jul-16	13-Jul-16	0													Pier 43(MJ Left) - End Span Erection - Erect Segments	
1022.1-4487	Pier 43(MJ Left) - End Span Erection - Stitching	3	14-Jul-16	16-Jul-16	0													Pier 43(MJ Left) - End Span Erection - Stitching	
1022.1-4488	Pier 43(MJ Left) - End Span Erection - Formwork Fixing for and Grouting for Bearing	3	14-Jul-16	16-Jul-16	5													Pier 43(MJ Left) - End Span Erection - Formwork Fixing for and Grouting for Bearing	
1022.1-4489	Pier 43(MJ Left) - End Span Erection - Prestress Span Tendons	1	18-Jul-16	18-Jul-16	5													Pier 43(MJ Left) - End Span Erection - Prestress Span Tendons	
1022.1-4490	Pier 43(MJ Left) - End Span Erection - Remove Hanger Bar & Hanger Beam & Stitching Formwork	1	19-Jul-16	19-Jul-16	5													Pier 43(MJ Left) - End Span Erection - Remove Hanger Bar & Hanger Beam & Stitching Formwork	
1022.1-4520	Prestress External Tendon Bridge F3C	10	14-Jul-16	25-Jul-16	0													Prestress External Tendon Bridge F3C	
1022.1-4525	Bridge F3C - Construct South Parapet (83m)	15	26-Jul-16	11-Aug-16	14													Bridge F3C - Construct South Parapet (83m)	
1022.1-4530	Bridge F3C - Construct Int. Double Noise End. Bridge F3C (83m)	21	12-Aug-16	05-Sep-16	14													Bridge F3C - Construct Int. Double Noise End. Bridge F3C (83m)	
Bridge F5		35	20-Jul-16	29-Aug-16	0														
1022.1-4540	LG-A Launching - Deactivate the MS at F6C	1	20-Jul-16	20-Jul-16	8													LG-A Launching - Deactivate the MS at F6C	
1022.1-4545	LG-A Launching - Install the LGA-MS-Modified at F9	1	21-Jul-16	21-Jul-16	8													LG-A Launching - Install the LGA-MS-Modified at F9	
1022.1-4550	LG-A Launching - Replace the MS at F8 to LGA-M MS	1	22-Jul-16	22-Jul-16	8													LG-A Launching - Replace the MS at F8 to LGA-M MS	
1022.1-4555	LG-A Launching - Deactivate the MS at F7C	1	23-Jul-16	23-Jul-16	8													LG-A Launching - Deactivate the MS at F7C	
1022.1-5000	Bridge F5 - Upstand Wall & Bearing Installation at Pier 43 after Tendon Stressing of F3C	7	26-Jul-16	02-Aug-16	0													Bridge F5 - Upstand Wall & Bearing Installation at Pier 43 after Tendon Stressing of F3C	
1022.1-5005	Bridge F5 - W/B precast beams at Pier 43 to 44 (6 nos)	6	03-Aug-16	09-Aug-16	0													Bridge F5 - W/B precast beams at Pier 43 to 44 (6 nos)	
1022.1-5010	Dismantle LG1	15	10-Aug-16	26-Aug-16	0													Dismantle LG1	
1022.1-5015	Bridge F5 - W/B Construct R.C. Deck	15	12-Aug-16	29-Aug-16	0													Bridge F5 - W/B Construct R.C. Deck	
10.6 - Tunnel Approach Ramp		80	01-Jun-15 A	24-Aug-16	177														
10.6.1 - Approach Ramp (Excluding Portion IIB)		80	01-Jun-15 A	24-Aug-16	177														
Bored Piles		54	01-Jun-15 A	23-Jul-16	203														
1061-1120	Bored Piles Testing Approach Ramp (112 nos)	54	01-Jun-15 A	23-Jul-16	203													Bored Piles Testing Approach Ramp (112 nos)	
Excavation & ELS Works		80	21-Mar-16 A	24-Aug-16	30														
1061-4900.1	Sheet Piling Works (WF1>S1:50m@1.5m/d)	25	11-Apr-16 A	20-Jun-16	30													Sheet Piling Works (WF1>S1:50m@1.5m/d)	
1061-4900.2	Sheet Piling Works (WF1->S2:37m@1.5m/d)	25	20-Jun-16	20-Jul-16	30													Sheet Piling Works (WF1->S2:37m@1.5m/d)	
1061-4900.3	Sheet Piling Works (WF2->S3:25m@1.5m/d)	17	11-Apr-16 A	08-Jun-16	36													Sheet Piling Works (WF2->S3:25m@1.5m/d)	
1061-4900.4	Sheet Piling Works (WF2->S4:23m@1.5m/d)	5	25-Apr-16 A	26-May-16	36													Sheet Piling Works (WF2->S4:23m@1.5m/d)	
1061-4900.5	Sheet Piling Works (WF2->S5:51m@1.5m/d)	34	26-May-16	07-Jul-16	40													Sheet Piling Works (WF2->S5:51m@1.5m/d)	
1061-4900.6	Predrilling Works (WF3>B2:25m@1.22m/d)	20	26-May-16	20-Jun-16	36													Predrilling Works (WF3>B2:25m@1.22m/d)	
1061-4900.7	Predrilling Works (WF3>B3:19m@1.22m/d)	16	20-Jun-16	09-Jul-16	56													Predrilling Works (WF3>B3:19m@1.22m/d)	
1061-4900.8	Predrilling Works (WF4>B1:46m@1.22m/d)	38	26-May-16	12-Jul-16	36													Predrilling Works (WF4>B1:46m@1.22m/d)	
1061-4900.9	Sheet Piling Works (WF1>B2:25m@1.5m/d)	17	20-Jul-16	09-Aug-16	30													Sheet Piling Works (WF1>B2:25m@1.5m/d)	
1061-4901.1	Sheet Piling Works (WF2>B1:46m@1.5m/d)	31	12-Jul-16	17-Aug-16	36													Sheet Piling Works (WF2>B1:46m@1.5m/d)	

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

Contract HY/2009/19 Three Months Rolling Programme (20 May to 19 Aug 2016)

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float	2016													
						June				July				August					
						22	29	05	12	19	26	03	10	17	24	31	07	14	
1061-4901.2	Sheet Piling Works (WF1>B2:19m@1.5m/d)	13	09-Aug-16	24-Aug-16	30														
1061-4940	Instrumentation > Inclinator (2Nos)	7	07-Jun-16	15-Jun-16	53														
1061-4960	Instrumentation > Settlement Marker (14Nos)	3	16-Jun-16	18-Jun-16	60														
1061-4980	Instrumentation > Tiltmeter (14Nos)	3	20-Jun-16	22-Jun-16	60														
1061-5000	Instrumentation > Movement Marker (14Nos)	3	23-Jun-16	25-Jun-16	60														
1061-5020	Instrumentation > Pizometer/Standpipe (4Nos)	8	27-Jun-16	06-Jul-16	60														
1061-5040	Dewatering System > Recharge Well (8Nos)	10	16-Jun-16	27-Jun-16	53														
1061-5060	Dewatering System > Dewatering Well (14Nos)	14	28-Jun-16	14-Jul-16	53														
1061-5080	Dewatering System > Observation Well (10Nos)	11	15-Jul-16	27-Jul-16	53														
1061-5130	Ch 5234 - 5331 > Advance Excav to Lower down Level to make enough HR (Ch 5285 - 5331 w/ open cut)	22	21-Mar-16 A	15-Jun-16	33														
10.7 - Section X - Miscellaneous Works		120	02-Jun-16	30-Sep-16	1														
10.7.1 - TTM Stages		120	02-Jun-16	30-Sep-16	1														
1071-1300	TTM Stage 6 - TMLG Consultation and Endorsement	120	02-Jun-16	30-Sep-16	1														

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

Contract HY/2009/19
Three Months Rolling Programme (20 May to 19 Aug 2016)

Activity ID	Activity Name	Physical % Complete	Original Duration	Start	Finish	Total Float	2016												2017	
							Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
HY/2009/15 - Works Programme Update 20 July 2016																				
Stage and Section Completion																				
KD_5745	KD10 - Completion of Section 5, (1863d)	100%	0d		25-Mar-16 08:00 A												◆ KD10 - Completion of Section 5, (1863d)			
KD_5740	KD9 - Completion of Section 4, (1739d)	0%	0d		03-Sep-16 18:00*	-428d											◆ KD9 - Completion of Section 4, (1739d)			
KD_5750	KD11 - Completion of Section 6, (1949d)	0%	0d		21-Sep-16 18:00*	-236d											◆ KD11 - Completion of Section 6, (1949d)			
TPCWAW																				
TPCWAW ELS Works - East Section																				
S6_6180	East excavation to formation	100%	85d	18-Sep-15 08:00 A	24-Dec-15 18:00 A												■ East excavation to formation			
S5_61070	Demolition of bulkhead wall TPCWAE/TPCWAW	100%	34d	06-Dec-15 00:00 A	09-Jan-16 18:00 A												■ Demolition of bulkhead wall TPCWAE/TPCWAW			
TPCWAW- CCT RC Structure, Base Slab																				
S5_60600	Waterproofing + Base slab Bay 1 (incl. removal of 7th layer struts after casting of base slab)	100%	15d	03-Dec-15 08:00 A	23-Dec-15 18:00 A												■ Waterproofing + Base slab Bay 1 (incl. removal of 7th layer struts after casting of base slab)			
S5_60620	Waterproofing + Base slab Bay 5	100%	11d	05-Dec-15 08:00 A	29-Dec-15 18:00 A												■ Waterproofing + Base slab Bay 5			
S5_60625	Waterproofing + Base slab Bay 6	100%	11d	16-Dec-15 08:00 A	19-Jan-16 18:00 A												■ Waterproofing + Base slab Bay 6			
S5_60630	Waterproofing + Base slab Bay 7	100%	7d	07-Jan-16 08:00 A	05-Feb-16 18:00 A												■ Waterproofing + Base slab Bay 7			
S5_60635	Waterproofing + Base slab Bay 8	100%	6d	12-Jan-16 08:00 A	05-Feb-16 18:00 A												■ Waterproofing + Base slab Bay 8			
S5_61065	Waterproofing + Base slab Bay 9 (stitching with TPCWAE)	100%	6d	15-Jan-16 08:00 A	05-Feb-16 18:00 A												■ Waterproofing + Base slab Bay 9 (stitching with TPCWAE)			
TPCWAW- CCT RC Structure, Wall																				
S5_60675	Wall Bay 2 (+ repropping and removal of 5th & 6th struts)	100%	10d	10-Dec-15 08:00 A	05-Jan-16 18:00 A												■ Wall Bay 2 (+ repropping and removal of 5th & 6th struts)			
S5_60680	Wall Bay 3 (+ repropping and removal of 5th & 6th struts)	100%	21d	10-Dec-15 08:00 A	07-Jan-16 18:00 A												■ Wall Bay 3 (+ repropping and removal of 5th & 6th struts)			
S5_60670	Wall Bay 1 (+ repropping and removal of 5th & 6th struts)	100%	21d	15-Dec-15 08:00 A	10-Jan-16 18:00 A												■ Wall Bay 1 (+ repropping and removal of 5th & 6th struts)			
S5_60685	Wall Bay 4 (+ repropping and removal of 5th & 6th struts)	100%	22d	20-Dec-15 08:00 A	11-Jan-16 18:00 A												■ Wall Bay 4 (+ repropping and removal of 5th & 6th struts)			
S5_60690	Wall Bay 5 (+ removal of 5th strut)	100%	10d	02-Jan-16 08:00 A	29-Jan-16 18:00 A												■ Wall Bay 5 (+ removal of 5th strut)			
S5_60695	Wall Bay 6 (+ removal of 5th strut)	100%	7d	21-Jan-16 08:00 A	25-Feb-16 18:00 A												■ Wall Bay 6 (+ removal of 5th strut)			
S5_60700	Wall Bay 7 (+ removal of 5th strut)	100%	8d	16-Feb-16 08:00 A	25-Feb-16 18:00 A												■ Wall Bay 7 (+ removal of 5th strut)			
S5_60705	Wall Bay 8 (+ removal of 5th strut)	100%	9d	16-Feb-16 08:00 A	25-Feb-16 18:00 A												■ Wall Bay 8 (+ removal of 5th strut)			
S5_61075	Wall Bay 9 (+ removal of 5th strut)	100%	8d	16-Feb-16 08:00 A	25-Feb-16 18:00 A												■ Wall Bay 9 (+ removal of 5th strut)			
TPCWAW -Maintenance Walkway																				

- Remaining Work
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Summary
- Actual Work

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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 UPDATE

Prepared by Anthony Fesalbon			
Date	Revision	Checked	Approved
20-Jul-16	Progress Update (based on WP Rev. N-4th Submission)	WC	WSL

Activity ID	Activity Name	Physical % Complete	Original Duration	Start	Finish	Total Float	2016												2017		
							Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
S6_9085	TPCWAW - Maintenance walkway / profile barrier	100%	23d	20-Dec-15 08:00 A	23-Mar-16 18:00 A		TPCWAW - Maintenance walkway / profile barrier														
TPCWAW- CCT RC Structure, OHVD																					
S5_60755	OHVD Bay 4	100%	12d	24-Dec-15 08:00 A	25-Jan-16 18:00 A		OHVD Bay 4														
S5_60740	OHVD Bay 1	100%	12d	29-Dec-15 08:00 A	21-Jan-16 18:00 A		OHVD Bay 1														
S5_60745	OHVD Bay 2	100%	12d	31-Dec-15 08:00 A	18-Jan-16 18:00 A		OHVD Bay 2														
S5_60750	OHVD Bay 3	100%	12d	02-Jan-16 08:00 A	18-Jan-16 18:00 A		OHVD Bay 3														
S5_60760	OHVD Bay 5	100%	12d	06-Jan-16 08:00 A	25-Jan-16 18:00 A		OHVD Bay 5														
S5_61080	OHVD Bay 6	100%	9d	20-Jan-16 08:00 A	16-Feb-16 18:00 A		OHVD Bay 6														
S5_61085	OHVD Bay 7	100%	9d	12-Feb-16 08:00 A	28-Feb-16 18:00 A		OHVD: Bay 7														
S5_61095	OHVD Bay 9	100%	9d	12-Feb-16 08:00 A	28-Feb-16 18:00 A		OHVD: Bay 9														
S5_61090	OHVD Bay 8	100%	9d	16-Feb-16 08:00 A	28-Feb-16 18:00 A		OHVD: Bay 8														
S5_61100	OHVD Bay 10	100%	7d	16-Feb-16 08:00 A	26-Feb-16 18:00 A		OHVD Bay 10														
S5_61110	Shaft B Reinstatement - OHVD	100%	20d	20-Feb-16 08:00 A	22-Apr-16 18:00 A		Shaft B Reinstatement - OHVD														
TPCWAW- CCT RC Structure, Top Slab + Waterproofing																					
S5_60815	Top slab Bay 2	100%	10d	08-Jan-16 08:00 A	02-Feb-16 18:00 A		Top slab Bay 2														
S5_60820	Top slab Bay 3	100%	10d	11-Jan-16 08:00 A	16-Feb-16 18:00 A		Top slab Bay 3														
S5_60810	Top slab Bay 1	100%	11d	19-Jan-16 08:00 A	23-Feb-16 18:00 A		Top slab Bay 1														
S5_60825	Top slab Bay 4	100%	11d	19-Jan-16 08:00 A	24-Feb-16 18:00 A		Top slab Bay 4														
S5_61105	Shaft B Reinstatement - Top Slab	100%	15d	14-Feb-16 08:00 A	29-Feb-16 18:00 A		Shaft B Reinstatement - Top Slab														
S5_60830	Top slab Bay 5	100%	10d	19-Feb-16 08:00 A	29-Feb-16 18:00 A		Top slab Bay 5														
S5_60835	Top slab Bay 6	100%	12d	20-Feb-16 08:00 A	02-Mar-16 18:00 A		Top slab Bay 6														
S5_60840	Top slab Bay 7	100%	7d	20-Feb-16 08:00 A	05-Mar-16 18:00 A		Top slab Bay 7														
S5_60845	Top slab Bay 8	100%	16d	20-Feb-16 08:00 A	05-Mar-16 18:00 A		Top slab Bay 8														
S5_60865	Top slab Bay 9	100%	15d	20-Feb-16 08:00 A	07-Mar-16 18:00 A		Top slab Bay 9														
S5_60875	Top slab Bay 10	100%	5d	20-Feb-16 08:00 A	09-Mar-16 18:00 A		Top slab Bay 10														
S5_61120	Provide access to CWB (CC) Contractor - TPCWAW Area	100%	0d		29-Feb-16 18:00 A		◆ Provide access to CWB (CC) Contractor - TPCWAW Area;														
S6_9055	Provide Access to WDII Contractor for bulkhead wall removal	100%	0d		29-Feb-16 18:00 A		◆ Provide Access to WDII Contractor for bulkhead wall removal														
S6_9135	Completion of Section 5 - TPCWAW Area (KD10), below -20mPD	100%	0d		09-Mar-16 00:00 A		◆ Completion of Section 5 - TPCWAW Area (KD10), below -20mPD														
TPCWAW - King Post Load Transfer / Waterproofing on Top Slab																					

- Remaining Work
- Actual Work
- ◆ Remaining Work
- Critical Remaining Work
- ◆ Milestone
- Summary
- ◆ Actual Work

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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 UPDATE

Prepared by Anthony Fesalbon			
Date	Revision	Checked	Approved
20-Jul-16	Progress Update (based on WP Rev. N-4th Submission)	WC	WSL



Activity ID	Activity Name	Physical % Complete	Original Duration	Start	Finish	Total Float	2016												2017			
							Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	
S6_9076	TPCWAW King post load transfer + waterproofing (except Bay 10)	100%	26d	04-Mar-16 08:00 A	29-Mar-16 18:00 A																	
S5_61115	TPCWAW waterproofing - Bay 10	100%	2d	09-Mar-16 08:00 A	10-Mar-16 18:00 A																	
TPCWAW Removal of Temporary Reclamation																						
S6_9140	Backfilling/Removal of ELS + Re charge water	100%	25d	30-Mar-16 08:00 A	04-Jul-16 18:00 A																	
S6_9105	Remove general fill/ seawall block (concurrent activities)	100%	25d	28-May-16 08:00 A	02-Jul-16 18:00 A																	
S6_9120	Saw cut diaphragm wall	40%	75d	20-Jul-16 08:00 A	02-Sep-16 18:00*	-216d																
S6_7550	Completion of Section 6- (KD11), above - 20mPD	0%	0d		21-Sep-16 18:00*	-236d																
Works in Portion 11 under KD9 (incl. Reinstatement of Vertical Seawall)																						
S6_9144	Reinstate vertical seawall (by marine plant)	0%	21d	23-Jul-16 08:00 A	16-Aug-16 18:00	-342d																
S6_9147	Reinstate ground level at Portion 11	0%	40d	26-Jul-16 08:00 A	08-Sep-16 18:00	-362d																
S6_9148	Completion of KD9- Works in Portion 11	0%	0d		08-Sep-16 18:00	-428d																

- Remaining Work
- Actual Work
- ◆ Remaining Work
- Critical Remaining Work
- ◆ Milestone
- Summary
- ◆ Actual Work

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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 UPDATE

Prepared by Anthony Fesalbon			
Date	Revision	Checked	Approved
20-Jul-16	Progress Update (based on WP Rev. N-4th Submission)	WC	WSL





Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float	2016			
						Jun	Jul	Aug	Sep
HK/2012/08 Revised Works Programme Rev.7_Updated as of 31-May-16									
Dredging and Reclamation									
Marine Work Construction									
Zone A1									
Seawall Construction - Zone A1									
MAR10310	Zone A1 - seawall - Type 3 - dredging from -2.5mPD to -7.2mPD)	2	27-Jun-16	28-Jun-16	-14				
MAR10311	Zone A1 - seawall - Trimming of G400 and grab sampling	1	29-Jun-16	29-Jun-16	-14				
MAR10312	Zone A1 - seawall - Type 3 - lay toe block and leveling stone	5	30-Jun-16	06-Jul-16	-14				
MAR10320	Zone A1 - seawall - install block seawall type 3	9	07-Jul-16	16-Jul-16	-14				
MAR10340	Zone A1 - seawall - place type A behind seawall Type 3	3	18-Jul-16	20-Jul-16	-14				
MAR10345	Zone A1 - seawall - lay geotextile and filter behind seawall Type 3	5	21-Jul-16	26-Jul-16	-14				
Others - Landing Steps									
MAR21400	Zone D - [summary] landing steps at seawall 9	70	01-Aug-16	24-Oct-16	62				
Works for Section Completion									
Construction									
Section II - MVB Structure									
MVB Substructure - ELS & Structural Works for Portion A									
MVB Substructure - Structural Works for Portion A									
SII11200	Sec II - MVB A - Construct 2/F top slab, column and wall	4	19-Mar-16 A	03-Jun-16	-120				
SII11220	Sec II - MVB A - Remove Strut SL3 and SL2 & Concrete Packing	10	04-Jun-16	13-Jun-16	-120				
SII11240	Sec II - MVB A: Construct 2M/F Inclined Strut	6	14-Jun-16	19-Jun-16	-120				
SII11260	Sec II - MVB A: Construct B2M/F wall and OHVD	55	20-Jun-16	13-Aug-16	-120				
SII11300	Sec II - MVB A: Construct B1/F roof slab	41	14-Aug-16	23-Sep-16	-120				
MVB Substructure - ELS & Structural Works for Portion B									
MVB Substructure - Structural Works for Portion B									
SII11880	Sec II - MVB B: Construct B2/F wall, colum & top slab	26	03-May-16 A	25-Jun-16	-46				
SII11900	Sec II - MVB B: Remove Strut SL2 & SL3 & Concrete Packing	8	28-Jun-16	05-Jul-16	-46				
SII11920	Sec II - MVB B: Construct B2M/F wall, colum & top slab	35	06-Jul-16	09-Aug-16	-46				
SII11940	Sec II - MVB B: Remove Strut SL1 & Concrete Packing	7	13-Aug-16	19-Aug-16	-46				
SII12360	Sec II - MVB B: Construct B1/F Wall, Column & Slab	32	20-Aug-16	20-Sep-16	-46				
MVB Substructure - Diaphragm Wall for Portion C									
MVB C - Pumping Test Preparation/ Pumping Test									
SII10670	Sec II - MVB C - sheetpile wall installation	18	01-Jul-16	18-Jul-16	-46				
SII10680	Sec II - MVB C - Precaution grout / fissure grout	8	19-Jul-16	26-Jul-16	-46				
MVB Substructure - ELS & Structural Works for Portion C									
MVB Substructure - ELS for Portion C									
SII12020	Sec II - MVB C: Excavation down to +1.7mPD	3	27-Jul-16	29-Jul-16	-46				
SII12040	Sec II - MVB C : Install Strut S1 at +2.7mPD	4	30-Jul-16	02-Aug-16	-46				
SII12060	Sec II - MVB C : Excavation down to +0.0mPD	4	03-Aug-16	06-Aug-16	-46				
SII12080	Sec II - MVB C : Install Strut S2 at +1.0mPD	4	07-Aug-16	10-Aug-16	-46				
SII12100	Sec II - MVB C : Excavation down to -2.0mPD	4	11-Aug-16	14-Aug-16	-46				
SII12120	Sec II - MVB C : Install Strut S3 at -1.0mPD	4	15-Aug-16	18-Aug-16	-46				

Data Date:
31-May-16

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

3-Months Rolling Programme for Works at Non-CRIII Area
(Jun 2016 to Aug 2016)

Date	Revision	Checked	Approved
01-Jun-16	Rev. 1		



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float	2016			
						Jun	Jul	Aug	Sep
SII12180	Sec II - MVB C : Excavation down to -3mPD	3	19-Aug-16	21-Aug-16	-46				
MVB Substructure - Structural Works for Portion C									
SII12200	Sec II - MVB C : Construct Slab B1/F	16	22-Aug-16	06-Sep-16	-46				
Section II A - CWB Tunnel & Slip Road Structures and Facilities									
CWB A2(2)									
CWB A2 (2) - ELS & Tunnel Structure									
CWB A2 - ELS									
CWB A2 - West									
SIIA13445	Sec II A - CWB A2(2): demolition of temp bulk head wall at west end	21	03-May-16 A	20-Jun-16	-79				
CWB A2 - Tunnel Structure									
SIIA11700	Sec II A - CWB A2(2): base, wall, OHVD & roof (bay 1 -Adjacent to A1)	51	21-Jun-16	10-Aug-16	-79				
SIIA11750	Sec II A - CWB A2(2): base, wall, OHVD & roof (bay 2)	54	12-May-16 A	23-Jul-16	-61				
SIIA12492	Sec II A - CWB A2(2): base, wall, OHVD & roof (bay3)	51	28-Apr-16 A	20-Jul-16	-49				
CWB A2 - Other Works									
SIIA12530	Sec II A - CWB A2(2) : waterproofing and backfill to +4.0mPD	45	11-Aug-16	04-Oct-16	-66				
CWB A2 (2) - Associated Facilities									
SIIA14320	Sec II A - CWB A2(2): Civil Provisions - lay screeding	7	04-Aug-16	10-Aug-16	-63				
SIIA14430	Sec II A - CWB A2(2): Civil Provisions - cast cable trough	8	11-Aug-16	18-Aug-16	-63				
CWB B & A2(1)									
CWB B - ELS & Tunnel Structure									
CWB B - ELS									
CWB B - Inside Concrete Plug									
SIIA13562	Sec II A - CWB B Inside Concrete Plug: Jet Grouting at Both Corners	3	23-May-16 A	02-Jun-16	-119				
SIIA13582	Sec II A - CWB B Inside Concrete Plug: Stage 1 Pumping Test	1	03-Jun-16	03-Jun-16	-119				
SIIA13602	Sec II A - CWB B Inside Concrete Plug: Jet Grouting along C4	17	04-Jun-16	20-Jun-16	-119				
SIIA13622	Sec II A - CWB B Inside Concrete Plug: Stage 2 Pumping Test	1	21-Jun-16	21-Jun-16	-119				
SIIA13642	Sec II A - CWB B Inside Concrete Plug: Excavation to formation	3	22-Jun-16	24-Jun-16	-102				
SIIA13662	Sec II A - CWB B Inside Concrete Plug: Cast top layer of concrete plug and blinding layer	2	25-Jun-16	26-Jun-16	-102				
SIIA13682	Sec II A - CWB B: Demolish concrete plug (near C4 unit)	18	14-Jul-16	31-Jul-16	-119				
CWB B - Outside Concrete Plug									
SIIA 15120	Sec II A - CWB B Outside Concrete Plug: Install struts for Layer S2 at -1.0 mPD	2	30-May-16 A	01-Jun-16	-99				
SIIA 15160	Sec II A - CWB B Outside Concrete Plug: Removal of diagonal struts for sheetpile at -2.0mPD	5	22-Jun-16	26-Jun-16	-119				
SIIA 15170	Sec II A - CWB B Outside Concrete Plug:Excavate down to -6.7mPD	4	27-Jun-16	30-Jun-16	-119				
SIIA 15180	Sec II A - CWB B Outside Concrete Plug: Install Struts S3 at level -5.70mPD	5	01-Jul-16	05-Jul-16	-119				
SIIA 15200	Sec II A - CWB B Outside Concrete Plug: Formation Excavation	4	06-Jul-16	09-Jul-16	-119				
SIIA 15220	Sec II A - CWB B Outside Concrete Plug:Blinding layer and removal of sheetpile	4	10-Jul-16	13-Jul-16	-119				
CWB B - Exhaust Air Duct									
SIIA 16100	Sec II A - CWB B Exhaust Air Duct: Formation Excavation	16	22-May-16 A	15-Jun-16	-104				
SIIA 16120	Sec II A - CWB B Exhaust Air Duct: Blinding Layer	6	16-Jun-16	21-Jun-16	-104				
CWB A2(1) & B - Tunnel Structure									
SIIA13558	Sec II A - CWB A2(1): base, wall, OHVD & roof (bay 4 - Adjance to Zone A2(2))	59	20-May-16 A	28-Jul-16	-60				
SIIA13560	Sec II A - CWB B: Air Duct Trough - base & wall (bay 5 - Adjacent to Zone A2(1))	25	22-Jun-16	16-Jul-16	-104				
SIIA13600	Sec II A - CWB B: base, wall, OHVD & roof (bay 6)	61	17-Jul-16	15-Sep-16	-104				
SIIA13660	Sec II A - CWB B: base, wall, OHVD & roof (bay 7 - Adjacent to C4)	66	02-Aug-16	06-Oct-16	-119				
CWB A2(1) & B - Associated Facilities									
SIIA14460	Sec II A - CWB A2(1): Civil Provisions - lay screeding	7	29-Jul-16	05-Aug-16	-50				
SIIA14480	Sec II A - CWB A2(1): Civil Provisions - cast cable trough	8	06-Aug-16	15-Aug-16	-50				
CWB C (W)									
CWB C(W) - ELS & Tunnel Structure									



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float	2016				
						Jun	Jul	Aug	Sep	
CWB C(W) - ELS										
CWB C(W) - ELS bay 1 & 2										
SIIA12121	Sec II A - CWB CW Bay 1&2: Formation Excavation	7	30-May-16 A	06-Jun-16	-89					
SIIA12161	Sec II A - CWB CW Bay 1&2:Blindling Layer	1	07-Jun-16	07-Jun-16	-89					
CWB C(W) - ELS Inside Concrete Plug										
SIIA 12150	Sec II A - CWB CW inside Concret Plug: Jet grouting along C4	19	31-May-16 A	18-Jun-16	-119					
SIIA 12170	Sec II A - CWB CW inside Concret Plug: Stage 2 pumping test	1	19-Jun-16	19-Jun-16	-119					
SIIA 12190	Sec II A - CWB CW inside Concret Plug: Formation Excavation	9	20-Jun-16	28-Jun-16	-119					
SIIA 12210	Sec II A - CWB CW inside Concret Plug:Blinding layer	2	29-Jun-16	30-Jun-16	-78					
CWB C(W) - ELS Outside Concrete Plug										
SIIA 13100	Sec II A - CWB CW outside Concrete Plug: Remove struts	11	26-Jun-16	06-Jul-16	-119					
SIIA 13120	Sec II A - CWB CW outside Concrete Plug: Formation excavation (bay 1 & exhaust duct)	10	07-Jul-16	16-Jul-16	-119					
SIIA 13140	Sec II A - CWB CW outside Concrete Plug: Remove sheetpile	3	17-Jul-16	19-Jul-16	-119					
SIIA 13160	Sec II A - CWB CW: Remove concrete bulkhead (Adjacent C4 unit)	21	20-Jul-16	09-Aug-16	-119					
CWB C(W) - Tunnel Structure										
SIIA12140	Sec II A - CWB CW: base, wall, OHVD & roof (bay 1)	57	11-Aug-16	06-Oct-16	-119					
SIIA12180	Sec II A - CWB CW: base, wall, OHVD & roof (bay 2)	85	08-Jun-16	31-Aug-16	-89					
CWB C (E)										
CWB C(E) - ELS & Tunnel Structure										
CWB C(E) - ELS										
CWB C(E) - ELS - Bay 1										
SIIA14100	Sec II A - CWB CE Bay 1: 3 rd layer excavation & Strutting	2	07-May-16 A	01-Jun-16	-101					
SIIA14120	Sec II A - CWB CE Bay 1 : Formation excavation	7	02-Jun-16	08-Jun-16	-101					
SIIA14140	Sec II A - CWB CE Bay 1 : Blinding layer	2	09-Jun-16	10-Jun-16	-101					
CWB C(E) - ELS - Bay 2 & 3										
SIIA15540	Sec II A - CWB CE Bay 2&3: 3rd layer excavation & Strutting	15	26-May-16 A	14-Jun-16	-118					
SIIA15560	Sec II A - CWB CE Bay 2&3: Formation excavation	9	15-Jun-16	23-Jun-16	-118					
SIIA15580	Sec II A - CWB CE Bay 2&3: Blinding layer	1	24-Jun-16	24-Jun-16	-118					
SIIA15600	Sec II A - CWB CE: Demolish Bulkhead at C1 Interface	24	25-Jun-16	18-Jul-16	-118					
CWB C(E) - Tunnel Structure										
SIIA13215	Sec II A - CWB CE: base, wall, OHVD & roof (bay 1) (after MVB Bulkhead Removal)	75	11-Jun-16	24-Aug-16	-101					
SIIA13220	Sec II A - CWB CE: base, wall, OHVD & roof (bay 2)	70	25-Jun-16	02-Sep-16	-102					
SIIA13280	Sec II A - CWB CE: base, wall, OHVD & roof (bay 3) (after C1 Infrface Bulkhead Removal)	61	12-Jul-16	10-Sep-16	-118					
CWB C(E) - Other Works										
SIIA13320	Sec II A - CWB CE: Cut Down Dwall Head	45	25-Aug-16	08-Oct-16	-99					
CWB C - Exhaust Duct										
CWB C - Exhaust Duct Temp Work & ELS										
SIIA12880	Sec II A - Exhaust Duct at Slip Rd3: Temp. Sheetpiling	15	25-Jun-16*	09-Jul-16	-101					
SIIA12900	Sec II A - Exhaust Duct at Slip Rd3: Excavation & Shoring	26	10-Jul-16	04-Aug-16	-101					
SIIA12910	Sec II A - Exhaust Duct at Slip Rd3: Blinding & Capping Plate	6	05-Aug-16	10-Aug-16	-101					
SIIA12920	Sec II A - Exhaust Duct at Slip Rd3: Demolish Bulkheads	22	09-Aug-16	30-Aug-16	-101					
CWB C - Exhaust Duct Structural Work										
SIIA12938	Sec II A - Exhaust Duct at Slip Rd3: bottom slab, wall and top slab (bay 1) (after Bulkhead Removal)	26	31-Aug-16	25-Sep-16	-101					
SIIA12940	Sec II A - Exhaust Duct at Slip Rd3: bottom slab, wall and top slab (bay 2)	26	09-Aug-16	03-Sep-16	-95					
SIIA12946	Sec II A - Exhaust Duct at Slip Rd3: bottom slab, wall and top slab (bay 3)	26	19-Aug-16	13-Sep-16	-89					
SIIA12948	Sec II A - Exhaust Duct at Slip Rd3: bottom slab, wall and top slab (bay 4) (after Bulkhead Removal)	26	31-Aug-16	25-Sep-16	-101					
CWB D - Slip Road 1										
CWB D - Slip Road 1 - ELS & Tunnel Structure										



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float	2016				
						Jun	Jul	Aug	Sep	
CWB D - Slip Road 1 - ELS										
CWB D - SR1 - ELS - Bay 1 & 2										
SIIA 12482	Sec II A - CWB SR1 Concrete Plug: Sheetpiling at norther corner	2	30-May-16 A	01-Jun-16	-87					
SIIA 12522	Sec II A - CWB SR1 Concrete Plug: Jet grouting at norther corner	5	02-Jun-16	06-Jun-16	-87					
SIIA 12542	Sec II A - CWB SR1 Concrete Plug: excavation to formation	11	30-May-16 A	10-Jun-16	-91					
SIIA 12562	Sec II A - CWB SR1 Concrete Plug: Cast concrete plug	3	11-Jun-16	13-Jun-16	-91					
SIIA 12582	Sec II A - CWB SR1 Concrete Plug: Jet grouting along C4 & bpumpiong test	10	15-Jun-16	24-Jun-16	-91					
SIIA 12602	Sec II A - CWB SR1 Bay 1&2: 1st layer excavation & strutting	6	25-Jun-16	30-Jun-16	-91					
SIIA 12622	Sec II A - CWB SR1 Bay 1&2: 2nd layer excavation & strutting	9	01-Jul-16	09-Jul-16	-91					
SIIA 12642	Sec II A - CWB SR1 Bay 1&2: 3rd layer excavation & strutting	8	10-Jul-16	17-Jul-16	-91					
SIIA 12662	Sec II A - CWB SR1 Bay 1&2: Formation excavtion	4	18-Jul-16	21-Jul-16	-91					
SIIA 12682	Sec II A - CWB SR1 Bay 1&2: Blinding layer	1	22-Jul-16	22-Jul-16	-91					
CWB D - SR1 - ELS - Bay 3										
SIIA 12530	Sec II A - CWB SR1 Bay 3: 2nd Layer Excavation & Shoringg	4	25-May-16 A	03-Jun-16	971					
SIIA 12550	Sec II A - CWB SR1 Bay 3: 3rd Layer Excavation & Shoring	10	10-Jun-16	19-Jun-16	-87					
SIIA 12570	Sec II A - CWB SR1 Bay 3: Formation Excavation	8	25-Jun-16	02-Jul-16	-87					
SIIA 12590	Sec II A - CWB SR1 Bay 3: Blinding Layer	3	03-Jul-16	05-Jul-16	-87					
CWB D - SR1 - ELS - Bay 4										
SIIA 12600	Sec II A - CWB SR1 Bay 4: 2nd Layer Excavation & Shoring	4	30-May-16 A	03-Jun-16	-87					
SIIA 12620	Sec II A - CWB SR1 Bay 4: 3rd Layer Excavation & Shoring	5	04-Jun-16	08-Jun-16	-87					
SIIA 12660	Sec II A - CWB SR1 Bay 4: Formation Excavation	5	20-Jun-16	24-Jun-16	-87					
SIIA 12680	Sec II A - CWB SR1 Bay 4: Blinding Layer	1	25-Jun-16	25-Jun-16	-21					
CWB D - SR1 - ELS - Bay 5										
SIIA 16140	Sec II A - CWB SR1 Bay 5: Formation Excavation	6	29-May-16 A	05-Jun-16	-26					
SIIA 16160	Sec II A - CWB SR1 Bay 5: Blinding Layer	1	06-Jun-16	06-Jun-16	-26					
CWB D - Slip Road 1 - Tunnel Structure										
SIIA12500	Sec II A - CWB SR1: base & roof (bay 1 & 2)	50	23-Jul-16	10-Sep-16	-91					
SIIA12540	Sec II A - CWB SR1: base, wall & roof (bay 3)	56	06-Jul-16	30-Aug-16	-87					
SIIA12560	Sec II A - CWB SR1: base, wall & roof (bay 4)	51	26-Jun-16	15-Aug-16	-21					
SIIA12565	Sec II A - CWB SR1: base, wall & roof (bay 5)	24	07-Jun-16	30-Jun-16	-26					
CWB D - Slip Road 1 - Trough / Retaining Wall										
CWB D - Slip Road 1 - Trough/Retaining Wall Temp Work & ELS										
SIIA12760	Sec II A - CWB SR1 Trough & RW: install sheetpile	12	02-Jul-16*	13-Jul-16	-99					
SIIA12780	Sec II A - CWB SR1 Trough & RW: Excavation & Shoring	18	14-Jul-16	31-Jul-16	-99					
CWB D - Slip Road 1 - Trough/Retaining Wall Structure										
SIIA12800	Sec II A - CWB SR1 Trough & RW: Trough Structure (bay 1)	15	01-Aug-16	15-Aug-16	-99					
SIIA13720	Sec II A - CWB SR1 Trough & RW: Trough Structure (bay 2)	15	16-Aug-16	30-Aug-16	-99					
SIIA13740	Sec II A - CWB SR1 Trough & RW: Trough Structure (bay 3)	15	25-Aug-16	08-Sep-16	-99					
SIIA13800	Sec II A - CWB SR1 Trough & RW: Retaining Walls RW3 (bay 1)	15	21-Aug-16	04-Sep-16	-91					
SIIA13840	Sec II A - CWB SR1 Trough & RW: Retaining Walls RW3 (bay 3)	15	21-Aug-16	04-Sep-16	-91					
Section III - Road D11 & Part of Road P2, Area 4, Implement 1st Stage ITA										
Roadwork & Utilities										
Remaining Works for Handing Over Area 4										
SIIII11100	Sec III - Road D11 Footpath westbound	26	20-May-16 A	30-Jun-16	766					
SIIII11120	Sec III - Road D11 Footpath eastbound	12	20-May-16 A	14-Jun-16	780					



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float	2016			
						Jun	Jul	Aug	Sep
SIII11122	Sec III - Road D11 Central divider	11	23-May-16 A	13-Jun-16	781	[Green bar]			
SIII11124	Sec III - Road P2 Central divider	25	31-May-16	29-Jun-16	767	[Green bar]			
SIII11126	Sec III - Road P2 Footpath westbound	17	24-May-16 A	20-Jun-16	775	[Green bar]			
Works after the Box Culvert Reinstatement									
SIII10240	[Summary] reinstatement of Box Culvert K	71	02-Aug-16	26-Oct-16	-66	[Green bar]			
Section III A - Road A2, A4, A5, Area 11; Implement 2nd Stage ITA									
Roadwork & Utilities at A1									
SIIIA10260	Sec III A - roadwork and utilities (Zone A1) - Backfill to pavement founding level	42	16-Aug-16	05-Oct-16	-66	[Red bar]			
SIIIA10280	Sec III A - roadwork and utilities (Zone A1) - storm water drain & sub-soil drain	42	25-Aug-16	15-Oct-16	-66	[Red bar]			
Box Culvert L1 & FRP-L - Bay 8									
Box Culvert L1 & FRP-L - Bay 8 Structure									
CUL10260	Culvert L - Bay 8 - pipe bridging	14	21-Apr-16 A	13-Jun-16	50	[Green bar]			
CUL11320	Culvert L - bay 8 - construct pile cap	16	14-Jun-16	29-Jun-16	50	[Green bar]			
CUL11322	Culvert L - bay 8 - construct base slab	10	30-Jun-16	09-Jul-16	50	[Green bar]			
CUL11326	Culvert L - Bay 8 - construct wall	24	10-Jul-16	02-Aug-16	50	[Green bar]			
CUL11328	Culvert L - bay 8 - top slab (& Desilting Openings)	28	03-Aug-16	30-Aug-16	50	[Green bar]			
Box Culvert L1 & FRP-L - Bay 8 Others									
CUL11340	Culvert L - bay 8 - backfill above box section	12	31-Aug-16	13-Sep-16	40	[Green bar]			
Box Culvert L1 & FRP-L - Bay 12 to 13									
Box Culvert L1 & FRP-L - Bay 12 to 13 Temp Work & ELS									
CUL12500	Culvert L - bay 12 & 13 - pile head treatment	22	25-May-16 A	25-Jun-16	-25	[Red bar]			
CUL12520	Culvert L - Bay 12 & 13 - precast pile cap PC 9-11	9	16-Jul-16*	26-Jul-16	-41	[Red bar]			
CUL12540	Culvert L - Bay 12 & 13 - install pile cap PC 9-11	5	27-Jul-16	01-Aug-16	-41	[Red bar]			
Box Culvert L1 & FRP-L - Bay 12 to 13 Structure									
CUL12545	Culvert L - bay 12 & 13 - Construct Precast Units (off site)	77	31-May-16*	30-Aug-16	-66	[Red bar]			
CUL12548	Culvert L - bay 12 & 13 - Install Precast Units & Joint Survey	14	31-Aug-16	15-Sep-16	-66	[Red bar]			
Section VI D - Area 8B & 10									
WDII Box 1 Construction									
WDII Box 1 Existing Pile Head and Dry Dock									
WD-C3032	Sec VI D - Precast Box 1 (bottom slab and temp bulk head wall)	64	05-Apr-16 A	15-Aug-16	-124	[Red bar]			
WD-C3052	Sec VID - Precast Box Beam	29	27-Jun-16*	30-Jul-16	-66	[Red bar]			
WDII Box 1 ELS									
WD-C3994	Sec VIC - Excavation at Zone 3	3	20-May-16 A	02-Jun-16	-117	[Red bar]			
WD-C3995	Sec VIC - Removal of Platform of Bored Pile	2	03-Jun-16	04-Jun-16	-117	[Red bar]			
WD-C3998	Sec VIC - Install Column, C1, Struct S1 & RS1	10	06-Jun-16	17-Jun-16	-117	[Red bar]			
WD-C4000	Sec VIC - Excavation of Fluid	8	18-Jun-16	27-Jun-16	-117	[Red bar]			
WD-C4020	Sec VIC - Excavation of Rockfill to -7.5mPD	4	28-Jun-16	02-Jul-16	-117	[Red bar]			
WD-C4040	Sec VIC - 2nd Layer of Strut	6	04-Jul-16	09-Jul-16	-117	[Red bar]			
WD-C4060	Sec VIC - Excavation down to -11.5mPD	4	11-Jul-16	14-Jul-16	-117	[Red bar]			
WD-C4080	Sec VIC - 3rd Layer of Strut	7	15-Jul-16	22-Jul-16	-117	[Red bar]			
WD-C4120	Sec VIC - Joint Survey of excavated level	2	23-Jul-16	25-Jul-16	-117	[Red bar]			
WD-C4140	Sec VIC - Tremie concrete at bottom level	5	26-Jul-16	30-Jul-16	-117	[Red bar]			
WD-C4160	Sec VIC - Joint Survey of concrete level	2	01-Aug-16	02-Aug-16	-117	[Red bar]			
WD-C4180	Sec VIC - Remove Strut S2	2	03-Aug-16	04-Aug-16	-117	[Red bar]			
WD-C4190	Sec VIC - Reinstatement of platform of bored piles	2	05-Aug-16	06-Aug-16	-117	[Red bar]			
WDII Box 1 Bottom Slab									



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float	2016			
						Jun	Jul	Aug	Sep
WD-C5040	Sec VI D - tow bottom slab to position	3	16-Aug-16	18-Aug-16	-124				
WDII Box 1 Remaining Structure									
WD-C6000	Sec VI D - construct remaining Box 1 structure	42	19-Aug-16	08-Oct-16	-124				
Section IV - Slip Road 3									
Roadwork & Utilities (Lung King Street)									
SIV11000	Sec IV - Stage 1: Roadwork & Utilities (MH1.2 to MH1.3)	1	09-May-16 A	31-May-16	-19				
SIV11020	Sec IV - Stage 2: Roadwork & Utilities (MH1.3 to MH1.4)	31	01-Jun-16	08-Jul-16	-19				
SIV11060	Sec IV - Stage 3: Roadwork & Utilities (MH1.4 to MH1.5)	13	09-Jul-16	23-Jul-16	-19				
Section VII - Remainder Works									
Landing Steps Construction									
Landing Steps BSW9									
SVII11100	Sec VII - Landing steps (BSW9) - construct mass concrete coping	24	01-Aug-16*	27-Aug-16	62				
SVII11120	Sec VII - Landing steps (BSW9) - curing and dismantle formwork	14	29-Aug-16	13-Sep-16	62				
Promenade Seawall Parapet Construction									
SVII10400	Sec VII - construct block seawall mass concrete coping & backfill to pavement formation	120	15-Jul-16*	05-Dec-16	1				
Section VIII - Landscape Softworks									
Soft Landscaping Works									
SVIII10040	Sec VIII - Trees Planting	163	31-May-16	12-Dec-16	0				
Section X - Protection & Preservation of Trees									
Soft Landscaping Works									
SX10020	Sec X - Protection & Preservation of Trees	417	31-Jan-13 A	21-Jul-17	0				
VO : Construction of Box 4A & 4B									
Box 4A									
4A10000	Concrete Fill with 300 dia. carrier drain (Approx. 50m)	16	08-Aug-16*	25-Aug-16	-95				
4A10020	Internal Suspended Slab & Internal Wall	24	12-Aug-16	08-Sep-16	-95				
Box 4B									
4B10000	Concrete Fill with 300 dia. carrier drain (Approx. 50m)	16	26-Aug-16	13-Sep-16	-87				

Activity ID	Activity Name	Original Duration	Start	Finish	2016																	
					Jul			Aug			Sep			Oct								
Total		1791d	21-Mar-13 A	13-Dec-17																		
DWP-06 (A) - Update Progress As of 20 Jul 16		1791d	21-Mar-13 A	13-Dec-17																		
Works in KD2		16d	16-Jun-16 A	30-Jul-16																		
Works in TS3-East		16d	16-Jun-16 A	30-Jul-16																		
Removal of Temporary Reclamation at TS3(E)		16d	16-Jun-16 A	30-Jul-16																		
Construction of Seawall at Eastern side of TS3W		16d	16-Jun-16 A	30-Jul-16																		
TS3E_9300	Levelling Stone	4d	16-Jun-16 A	20-Jun-16 A																		
TS3E_9310	Seawall Blocks Installation	16d	28-Jun-16 A	22-Jul-16 A																		
TS3E_9320	Backfill General Fill	5d	21-Jul-16 A	30-Jul-16																		
Works in KD7		102d	01-Jun-16 A	29-Oct-16																		
Works in TS3-West		102d	01-Jun-16 A	29-Oct-16																		
ELS		30d	01-Jun-16 A	27-Aug-16																		
East Portion		13d	17-Jun-16 A	07-Jul-16 A																		
Zone E1 (Type 4 to Type 3)		2d	18-Jun-16 A	24-Jun-16 A																		
TS3W_1820	Zone E1 - Blinding	2d	18-Jun-16 A	24-Jun-16 A																		
Zone E2 (Type 2)		4d	17-Jun-16 A	07-Jul-16 A																		
TS3W_1330	Zone E2 - Excavation to Formation Level	2d	17-Jun-16 A	28-Jun-16 A																		
TS3W_1830	Zone E2 - Blinding	2d	29-Jun-16 A	07-Jul-16 A																		
West Portion		30d	01-Jun-16 A	27-Aug-16																		
Zone W1 (Type 2 & Type 1b)		15d	07-Jun-16 A	12-Aug-16																		
TS3W_1480	Zone W1 - Excavation for Layer 8	9d	07-Jun-16 A	28-Jul-16																		
TS3W_1490	Zone W1 - Strut Installation for SL8	9d	28-Jul-16	06-Aug-16																		
TS3W_1860	Zone W1 - Construct 2nos. Barrettes within this zone	4d	06-Aug-16	10-Aug-16																		
TS3W_1500	Zone W1 - Excavation to Formation Level	4d	06-Aug-16	10-Aug-16																		
TS3W_1840	Zone W1 - Blinding	2d	10-Aug-16	12-Aug-16																		
Zone W2 (Type 1a)		28d	01-Jun-16 A	27-Aug-16																		
TS3W_1650	Zone W2 - Excavation for Layer 8	6d	01-Jun-16 A	06-Aug-16																		
TS3W_1640	Zone W2 - Strut Installation for SL7	6d	02-Jun-16 A	31-Jul-16																		
TS3W_1660	Zone W2 - Strut Installation for SL8	6d	06-Aug-16	12-Aug-16																		
TS3W_1670	Zone W2 - Soft Excavation to Formation Level	4d	12-Aug-16	16-Aug-16																		
TS3W_1870	Zone W2 - Construct 2nos. Barrettes within this zone	4d	17-Aug-16	20-Aug-16																		
TS3W_1680	Zone W2 - Rock Excavation to Formation Level	9d	17-Aug-16	25-Aug-16																		
TS3W_1850	Zone W2 - Blinding	2d	25-Aug-16	27-Aug-16																		
CCT		102d	16-Jun-16 A	29-Oct-16																		
Northern & Southern Tunnel		99d	16-Jun-16 A	26-Oct-16																		
Zone E1		64d	16-Jun-16 A	21-Sep-16																		
Bay 1		64d	16-Jun-16 A	21-Sep-16																		
TS3W_2080	Bay 1 - Concrete Strut & Remove SL 5,6,7	7d	20-Jul-16 A	26-Jul-16																		
TS3W_2090	Bay 1 - Spray Type Waterproofing, Protection Board & Backfilling	10d	08-Aug-16	17-Aug-16																		
TS3W_2100	Bay 1 - Break Trough Bulkhead Bay 1N & 1S	21d	08-Aug-16	28-Aug-16																		
Bay N1		55d	28-Jun-16 A	21-Sep-16																		
TS3W_2110	Bay N1 - Base Slab	7d	28-Jun-16 A	19-Jul-16 A																		
TS3W_2120	Bay N1 - Wall 5	7d	30-Jul-16	05-Aug-16																		

- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone

Date	Revision	Checked	Approved
20-Jul-16	Updated to 20th Jul 2016	DML/WC	

Activity ID	Activity Name	Original Duration	Start	Finish	2016			
					Jul	Aug	Sep	Oct
TS3W_2130	Bay N1 - Utility Trough	4d	06-Aug-16	09-Aug-16		Bay N1 - Utility Trough		
TS3W_2140	Bay N1 - OHVD Slab & Hanger Wall	11d	01-Sep-16	11-Sep-16			Bay N1 - OHVD Slab & Hanger Wall	
TS3W_2150	Bay N1 - Roof Slab	10d	12-Sep-16	21-Sep-16			Bay N1 - Roof Slab	
Bay S1		53d	16-Jun-16 A	21-Sep-16				
TS3W_2160	Bay S1 - Base Slab	7d	16-Jun-16 A	11-Jul-16 A	Bay S1 - Base Slab			
TS3W_2170	Bay S1 - Wall 6	7d	01-Aug-16	07-Aug-16		Bay S1 - Wall 6		
TS3W_2180	Bay S1 - Utility Trough	4d	08-Aug-16	11-Aug-16		Bay S1 - Utility Trough		
TS3W_2190	Bay S1 - OHVD Slab & Hanger Wall	11d	01-Sep-16	11-Sep-16			Bay S1 - OHVD Slab & Hanger Wall	
TS3W_2200	Bay S1 - Roof Slab	10d	12-Sep-16	21-Sep-16			Bay S1 - Roof Slab	
Bay 2		44d	16-Jun-16 A	01-Sep-16				
TS3W_2210	Bay 2 - Waterproofing	3d	16-Jun-16 A	27-Jun-16 A	proofing			
TS3W_2220	Bay 2 - Concrete Strut & Remove SL 6,7,8	7d	20-Jul-16	26-Jul-16		Bay 2 - Concrete Strut & Remove SL 6,7,8		
TS3W_2230	Bay 2 - Spray Type Waterproofing, Protection Board & Backfilling	10d	08-Aug-16	17-Aug-16			Bay 2 - Spray Type Waterproofing, Protection Board & Backfilling	
Bay N2		42d	05-Jul-16 A	30-Aug-16				
TS3W_2240	Bay N2 - Base Slab	7d	05-Jul-16 A	23-Jul-16 A	Bay N2 - Base Slab			
TS3W_2250	Bay N2 - Wall 5	7d	30-Jul-16	05-Aug-16		Bay N2 - Wall 5		
TS3W_2260	Bay N2 - Utility Trough	4d	06-Aug-16	09-Aug-16		Bay N2 - Utility Trough		
TS3W_2270	Bay N2 - OHVD Slab & Hanger Wall	11d	10-Aug-16	20-Aug-16			Bay N2 - OHVD Slab & Hanger Wall	
TS3W_2280	Bay N2 - Roof Slab	10d	21-Aug-16	30-Aug-16			Bay N2 - Roof Slab	
Bay S2		41d	28-Jun-16 A	01-Sep-16				
TS3W_2290	Bay S2 - Base Slab	7d	28-Jun-16 A	16-Jul-16 A	Bay S2 - Base Slab			
TS3W_2300	Bay S2 - Wall 6	7d	01-Aug-16	07-Aug-16		Bay S2 - Wall 6		
TS3W_2310	Bay S2 - Utility Trough	4d	08-Aug-16	11-Aug-16		Bay S2 - Utility Trough		
TS3W_2320	Bay S2 - OHVD Slab & Hanger Wall	11d	12-Aug-16	22-Aug-16			Bay S2 - OHVD Slab & Hanger Wall	
TS3W_2330	Bay S2 - Roof Slab	10d	23-Aug-16	01-Sep-16			Bay S2 - Roof Slab	
Zone E2		55d	08-Jul-16 A	12-Sep-16				
Bay 3		55d	08-Jul-16 A	12-Sep-16				
TS3W_2340	Bay 3 - Waterproofing	3d	08-Jul-16 A	13-Jul-16 A	Bay 3 - Waterproofing			
TS3W_2350	Bay 3 - Concrete Strut & Remove SL 6,7,8	7d	31-Jul-16	06-Aug-16		Bay 3 - Concrete Strut & Remove SL 6,7,8		
TS3W_2360	Bay 3 - Spray Type Waterproofing, Protection Board & Backfilling	10d	19-Aug-16	28-Aug-16			Bay 3 - Spray Type Waterproofing, Protection Board & Backfilling	
Bay N3		46d	13-Jul-16 A	10-Sep-16				
TS3W_2370	Bay N3 - Base Slab	7d	13-Jul-16 A	30-Jul-16	Bay N3 - Base Slab			
TS3W_2380	Bay N3 - Wall 5	7d	10-Aug-16	16-Aug-16		Bay N3 - Wall 5		
TS3W_2390	Bay N3 - Utility Trough	4d	17-Aug-16	20-Aug-16		Bay N3 - Utility Trough		
TS3W_2400	Bay N3 - OHVD Slab & Hanger Wall	11d	21-Aug-16	31-Aug-16			Bay N3 - OHVD Slab & Hanger Wall	
TS3W_2410	Bay N3 - Roof Slab	10d	01-Sep-16	10-Sep-16			Bay N3 - Roof Slab	
Bay S3		47d	10-Jul-16 A	12-Sep-16				
TS3W_2420	Bay S3 - Base Slab	7d	10-Jul-16 A	26-Jul-16 A	Bay S3 - Base Slab			
TS3W_2430	Bay S3 - Wall 6	7d	12-Aug-16	18-Aug-16		Bay S3 - Wall 6		
TS3W_2440	Bay S3 - Utility Trough	4d	19-Aug-16	22-Aug-16		Bay S3 - Utility Trough		
TS3W_2450	Bay S3 - OHVD Slab & Hanger Wall	11d	23-Aug-16	02-Sep-16			Bay S3 - OHVD Slab & Hanger Wall	
TS3W_2460	Bay S3 - Roof Slab	10d	03-Sep-16	12-Sep-16			Bay S3 - Roof Slab	
Zone W1		75d	10-Jul-16 A	26-Oct-16				
Bay 4		56d	10-Jul-16 A	07-Oct-16				

Activity ID	Activity Name	Original Duration	Start	Finish	2016			
					Jul	Aug	Sep	Oct
TS3W_2470	Bay 4 - Waterproofing	3d	10-Jul-16 A	20-Jul-16 A	Bay 4 - Waterproofing			
TS3W_2480	Bay 4 - Concrete Strut & Remove SL 6,7,8	7d	24-Aug-16	31-Aug-16	Bay 4 - Concrete Strut & Remove SL 6,7,8			
TS3W_2490	Bay 4 - Spray Type Waterproofing, Protection Board & Backfilling	10d	12-Sep-16	22-Sep-16	Bay 4 - Spray Type Waterproofing, Protection Board & Backfilling			
Bay N4		50d	16-Aug-16	05-Oct-16				
TS3W_2600	Bay N4 - Base Slab	7d	16-Aug-16	23-Aug-16	Bay N4 - Base Slab			
TS3W_2610	Bay N4 - Wall 5	7d	03-Sep-16	10-Sep-16	Bay N4 - Wall 5			
TS3W_2620	Bay N4 - Utility Trough	4d	10-Sep-16	14-Sep-16	Bay N4 - Utility Trough			
TS3W_2630	Bay N4 - OHVD Slab & Hanger Wall	11d	14-Sep-16	25-Sep-16	Bay N4 - OHVD Slab & Hanger Wall			
TS3W_2640	Bay N4 - Roof Slab	10d	25-Sep-16	05-Oct-16	Bay N4 - Roof Slab			
Bay S4		48d	28-Jul-16 A	07-Oct-16				
TS3W_2650	Bay S4 - Base Slab	7d	28-Jul-16 A	24-Aug-16	Bay S4 - Base Slab			
TS3W_2660	Bay S4 - Wall 6	7d	05-Sep-16	12-Sep-16	Bay S4 - Wall 6			
TS3W_2680	Bay S4 - Utility Trough	4d	12-Sep-16	16-Sep-16	Bay S4 - Utility Trough			
TS3W_2690	Bay S4 - OHVD Slab & Hanger Wall	11d	16-Sep-16	27-Sep-16	Bay S4 - OHVD Slab & Hanger Wall			
TS3W_2700	Bay S4 - Roof Slab	10d	27-Sep-16	07-Oct-16	Bay S4 - Roof Slab			
Bay 5		59d	28-Jul-16 A	10-Oct-16				
TS3W_2710	Bay 5 - Waterproofing	3d	28-Jul-16 A	15-Aug-16	Bay 5 - Waterproofing			
TS3W_2720	Bay 5 - Concrete Strut & Remove SL 6,7,8	7d	27-Aug-16	03-Sep-16	Bay 5 - Concrete Strut & Remove SL 6,7,8			
TS3W_2730	Bay 5 - Spray Type Waterproofing, Protection Board & Backfilling	10d	15-Sep-16	25-Sep-16	Bay 5 - Spray Type Waterproofing, Protection Board & Backfilling			
Bay N5		50d	19-Aug-16	08-Oct-16				
TS3W_2740	Bay N5 - Base Slab	7d	19-Aug-16	26-Aug-16	Bay N5 - Base Slab			
TS3W_2750	Bay N5 - Wall 5	7d	06-Sep-16	13-Sep-16	Bay N5 - Wall 5			
TS3W_2760	Bay N5 - Utility Trough	4d	13-Sep-16	17-Sep-16	Bay N5 - Utility Trough			
TS3W_2770	Bay N5 - OHVD Slab & Hanger Wall	11d	17-Sep-16	28-Sep-16	Bay N5 - OHVD Slab & Hanger Wall			
TS3W_2780	Bay N5 - Roof Slab	10d	28-Sep-16	08-Oct-16	Bay N5 - Roof Slab			
Bay S5		51d	20-Aug-16	10-Oct-16				
TS3W_2790	Bay S5 - Base Slab	7d	20-Aug-16	27-Aug-16	Bay S5 - Base Slab			
TS3W_2800	Bay S5 - Wall 6	7d	08-Sep-16	15-Sep-16	Bay S5 - Wall 6			
TS3W_2810	Bay S5 - Utility Trough	4d	15-Sep-16	19-Sep-16	Bay S5 - Utility Trough			
TS3W_2820	Bay S5 - OHVD Slab & Hanger Wall	11d	19-Sep-16	30-Sep-16	Bay S5 - OHVD Slab & Hanger Wall			
TS3W_2830	Bay S5 - Roof Slab	10d	30-Sep-16	10-Oct-16	Bay S5 - Roof Slab			
Bay 6		72d	15-Aug-16	26-Oct-16				
TS3W_2840	Bay 6 - Waterproofing	3d	15-Aug-16	18-Aug-16	Bay 6 - Waterproofing			
TS3W_2850	Bay 6 - Concrete Strut & Remove SL 6,7,8	7d	27-Aug-16	03-Sep-16	Bay 6 - Concrete Strut & Remove SL 6,7,8			
TS3W_2860	Bay 6 - Spray Type Waterproofing, Protection Board & Backfilling	10d	15-Sep-16	25-Sep-16	Bay 6 - Spray Type Waterproofing, Protection Board & Backfilling			
Bay N6		66d	18-Aug-16	23-Oct-16				
TS3W_2870	Bay N6 - Base Slab	7d	18-Aug-16	25-Aug-16	Bay N6 - Base Slab			
TS3W_2880	Bay N6 - Wall 5	7d	06-Sep-16	13-Sep-16	Bay N6 - Wall 5			
TS3W_2890	Bay N6 - Utility Trough	4d	13-Sep-16	17-Sep-16	Bay N6 - Utility Trough			
TS3W_2900	Bay N6 - OHVD Slab & Hanger Wall	11d	02-Oct-16	13-Oct-16	Bay N6 - OHVD Slab & Hanger Wall			
TS3W_2910	Bay N6 - Roof Slab	10d	13-Oct-16	23-Oct-16	Bay N6 - Roof Slab			
Bay S6		67d	20-Aug-16	26-Oct-16				
TS3W_2920	Bay S6 - Base Slab	7d	20-Aug-16	27-Aug-16	Bay S6 - Base Slab			
TS3W_2930	Bay S6 - Wall 6	7d	08-Sep-16	15-Sep-16	Bay S6 - Wall 6			

Activity ID	Activity Name	Original Duration	Start	Finish	2016				
					Jul	Aug	Sep	Oct	
TS3W_2940	Bay S6 - Utility Trough	4d	15-Sep-16	19-Sep-16				■ Bay S6 - Utility Trough	
TS3W_2950	Bay S6 - OHVD Slab & Hanger Wall	11d	05-Oct-16	16-Oct-16					■ Bay S6 - OHVD Slab & Hanger Wall
TS3W_2960	Bay S6 - Roof Slab	10d	16-Oct-16	26-Oct-16					■ Bay S6 - Roof Slab
Bay SR6		7d	25-Sep-16	02-Oct-16					
SR8_S_1250	SR8 - Bay SR6 Base Slab	7d	25-Sep-16	02-Oct-16				■ SR8 - Bay SR6 Base Slab	
Zone W2		58d	27-Aug-16	24-Oct-16					
Bay 7		58d	27-Aug-16	24-Oct-16					
TS3W_3220	Bay 7 - Waterproofing (Include SR8 - Bay SR7)	3d	27-Aug-16	30-Aug-16			■ Bay 7 - Waterproofing (Include SR8 - Bay SR7)		
TS3W_3230	Bay 7 - Concrete Strut & Remove SL 6,7,8	7d	15-Sep-16	22-Sep-16				■ Bay 7 - Concrete Strut & Remove SL 6,7,8	
TS3W_3240	Bay 7 - Spray Type Waterproofing, Protection Board & Backfilling	10d	29-Sep-16	09-Oct-16				■ Bay 7 - Spray Type Waterproofing, Protection Board & Backfilling	
Bay N7		55d	30-Aug-16	24-Oct-16					
TS3W_3250	Bay N7 - Base Slab	7d	30-Aug-16	06-Sep-16			■ Bay N7 - Base Slab		
TS3W_3260	Bay N7 - Wall 5 & 1	7d	22-Sep-16	29-Sep-16				■ Bay N7 - Wall 5 & 1	
TS3W_3270	Bay N7 - Utility Trough	4d	29-Sep-16	03-Oct-16				■ Bay N7 - Utility Trough	
TS3W_3280	Bay N7 - OHVD	11d	03-Oct-16	14-Oct-16				■ Bay N7 - OHVD	
TS3W_3290	Bay N7 - Roof Slab	10d	14-Oct-16	24-Oct-16				■ Bay N7 - Roof Slab	
Bay S7		46d	08-Sep-16	24-Oct-16					
TS3W_3300	Bay S7 - Base Slab	7d	08-Sep-16	15-Sep-16			■ Bay S7 - Base Slab		
TS3W_3310	Bay S7 - Wall 6 & 2	7d	22-Sep-16	29-Sep-16				■ Bay S7 - Wall 6 & 2	
TS3W_3320	Bay S7 - Utility Trough	4d	29-Sep-16	03-Oct-16				■ Bay S7 - Utility Trough	
TS3W_3330	Bay S7 - OHVD	11d	03-Oct-16	14-Oct-16				■ Bay S7 - OHVD	
TS3W_3340	Bay S7 - Roof Slab	10d	14-Oct-16	24-Oct-16				■ Bay S7 - Roof Slab	
Bay SR7		46d	08-Sep-16	24-Oct-16					
SR8_S_1300	SR8 - Bay SR7 - Base Slab	7d	08-Sep-16	15-Sep-16			■ SR8 - Bay SR7 - Base Slab		
SR8_S_1310	SR8 - Bay SR7 - Wall	7d	22-Sep-16	29-Sep-16				■ SR8 - Bay SR7 - Wall	
SR8_S_1320	SR8 - Bay SR7 - Utility Trough	4d	29-Sep-16	03-Oct-16				■ SR8 - Bay SR7 - Utility Trough	
SR8_S_1330	SR8 - Bay SR7 - OHVD	11d	03-Oct-16	14-Oct-16				■ SR8 - Bay SR7 - OHVD	
SR8_S_1340	SR8 - Bay SR7 - Roof Slab	10d	14-Oct-16	24-Oct-16				■ SR8 - Bay SR7 - Roof Slab	
Bay 8		54d	30-Aug-16	23-Oct-16					
TS3W_3400	Bay 8 - Waterproofing (Include SR8 - Bay SR8)	3d	30-Aug-16	02-Sep-16			■ Bay 8 - Waterproofing (Include SR8 - Bay SR8)		
TS3W_3410	Bay 8 - Concrete Strut & Remove SL 6,7,8	7d	18-Sep-16	25-Sep-16				■ Bay 8 - Concrete Strut & Remove SL 6,7,8	
TS3W_3420	Bay 8 - Spray Type Waterproofing, Protection Board & Backfilling	10d	02-Oct-16	12-Oct-16				■ Bay 8 - Spray Type Waterproofing, Protection Board & Backfilling	
TS3W_3430	Bay 8 - Break Trough Bulkhead Bay 8N, 8S & SR8	21d	02-Oct-16	23-Oct-16				■ Bay 8 - Break Trough Bulkhead Bay 8N, 8S & SR8	
Bay N8		34d	02-Sep-16	06-Oct-16					
TS3W_3440	Bay N8 - Base Slab	7d	02-Sep-16	09-Sep-16			■ Bay N8 - Base Slab		
TS3W_3450	Bay N8 - Wall 5 & 1	7d	25-Sep-16	02-Oct-16				■ Bay N8 - Wall 5 & 1	
TS3W_3460	Bay N8 - Utility Trough	4d	02-Oct-16	06-Oct-16				■ Bay N8 - Utility Trough	
Bay S8		25d	11-Sep-16	06-Oct-16					
TS3W_3490	Bay S8 - Base Slab	7d	11-Sep-16	18-Sep-16			■ Bay S8 - Base Slab		
TS3W_3500	Bay S8 - Wall 6 & 2	7d	25-Sep-16	02-Oct-16				■ Bay S8 - Wall 6 & 2	
TS3W_3600	Bay S8 - Utility Trough	4d	02-Oct-16	06-Oct-16				■ Bay S8 - Utility Trough	
Bay SR8		25d	11-Sep-16	06-Oct-16					
SR8_S_1350	SR8 - Bay SR8 - Base Slab	7d	11-Sep-16	18-Sep-16			■ SR8 - Bay SR8 - Base Slab		
SR8_S_1360	SR8 - Bay SR8 - Wall	7d	25-Sep-16	02-Oct-16				■ SR8 - Bay SR8 - Wall	

Activity ID	Activity Name	Original Duration	Start	Finish	2016			
					Jul	Aug	Sep	Oct
SR8_S_1370	SR8 - Utility Trough	4d	02-Oct-16	06-Oct-16				SR8 - Utility Trough
Egress Passage (EP-02) & Cross Passage (CP31)		42d	02-Sep-16	13-Oct-16				
TS3W_3680	CP-31 + EP-02 Stair Case Structure at Bay N2 & S2	21d	02-Sep-16	22-Sep-16				CP-31 + EP-02 Stair Case Structure at Bay N2 & S2
TS3W_3690	EP-02 Corridor on Top of S2 & S3 Roof	21d	23-Sep-16	13-Oct-16				EP-02 Corridor on Top of S2 & S3 Roof
Egress Passage (EP-03) & Cross Passage (CP-30)		11d	08-Sep-16	19-Sep-16				
TS3W_3700	CP-30 in Bay 5	7d	08-Sep-16	15-Sep-16				CP-30 in Bay 5
TS3W_3710	Waterproofing to CP-30 & Backfilling up to SR8 BaySR6 Base Slab Bottom	4d	15-Sep-16	19-Sep-16				Waterproofing to CP-30 & Backfilling up to SR8 BaySR6 Base Slab Bottom
Waterproofing to Roof & Screeding		51d	31-Aug-16	20-Oct-16				
Zone E1 (Bay 1 to Bay 2)		32d	31-Aug-16	01-Oct-16				
TS3W_3760	Bay 2N - Waterproofing & Screeding	10d	31-Aug-16	09-Sep-16				Bay 2N - Waterproofing & Screeding
TS3W_3770	Bay 2S - Waterproofing & Screeding	10d	02-Sep-16	11-Sep-16				Bay 2S - Waterproofing & Screeding
TS3W_3740	Bay 1N - Waterproofing & Screeding	10d	22-Sep-16	01-Oct-16				Bay 1N - Waterproofing & Screeding
TS3W_3750	Bay 1S - Waterproofing & Screeding	10d	22-Sep-16	01-Oct-16				Bay 1S - Waterproofing & Screeding
Zone E2 (Bay 3)		12d	11-Sep-16	22-Sep-16				
TS3W_3780	Bay 3N - Waterproofing & Screeding	10d	11-Sep-16	20-Sep-16				Bay 3N - Waterproofing & Screeding
TS3W_3790	Bay 3S - Waterproofing & Screeding	10d	13-Sep-16	22-Sep-16				Bay 3S - Waterproofing & Screeding
Zone W1 (Bay 4 to Bay 6)		15d	05-Oct-16	20-Oct-16				
TS3W_3800	Bay 4N - Waterproofing & Screeding	10d	05-Oct-16	15-Oct-16				Bay 4N - Waterproofing & Screeding
TS3W_3810	Bay 4S - Waterproofing & Screeding	10d	07-Oct-16	17-Oct-16				Bay 4S - Waterproofing & Screeding
TS3W_3820	Bay 5N - Waterproofing & Screeding	10d	08-Oct-16	18-Oct-16				Bay 5N - Waterproofing & Screeding
TS3W_3830	Bay 5S - Waterproofing & Screeding	10d	10-Oct-16	20-Oct-16				Bay 5S - Waterproofing & Screeding
SR8 Tunnel		102d	20-Jul-16	29-Oct-16				
Waterproofing to Base Slab		10d	20-Jul-16	29-Jul-16				
SR8_S_1000	Waterproof to Base Slab - Bay SR1 to SR3A	10d	20-Jul-16	29-Jul-16				Waterproof to Base Slab - Bay SR1 to SR3A
Bay SR1		32d	30-Jul-16	30-Aug-16				
SR8_S_1010	SR8 - Bay SR1 - Base Slab	7d	30-Jul-16	05-Aug-16				SR8 - Bay SR1 - Base Slab
SR8_S_1020	SR8 - Bay SR1 - Utility Trough	4d	06-Aug-16	09-Aug-16				SR8 - Bay SR1 - Utility Trough
SR8_S_1030	SR8 - Bay SR1 - OHVD Slab & Hanger Wall	11d	10-Aug-16	20-Aug-16				SR8 - Bay SR1 - OHVD Slab & Hanger Wall
SR8_S_1040	SR8 - Bay SR1 - Roof Slab	10d	21-Aug-16	30-Aug-16				SR8 - Bay SR1 - Roof Slab
Bay SR2		32d	04-Aug-16	04-Sep-16				
SR8_S_1050	SR8 - Bay SR2 - Base Slab	7d	04-Aug-16	10-Aug-16				SR8 - Bay SR2 - Base Slab
SR8_S_1060	SR8 - Bay SR2 - Utility Trough	4d	11-Aug-16	14-Aug-16				SR8 - Bay SR2 - Utility Trough
SR8_S_1070	SR8 - Bay SR2 - OHVD Slab & Hanger Wall	11d	15-Aug-16	25-Aug-16				SR8 - Bay SR2 - OHVD Slab & Hanger Wall
SR8_S_1080	SR8 - Bay SR2 - Roof Slab	10d	26-Aug-16	04-Sep-16				SR8 - Bay SR2 - Roof Slab
Bay SR3 (Part Within Zone E2)		42d	13-Sep-16	24-Oct-16				
SR8_S_1090	Breaking to Cut Off Level of Temporary Diaphragm Wall	3d	13-Sep-16	15-Sep-16				Breaking to Cut Off Level of Temporary Diaphragm Wall
SR8_S_1100	SR8 - Bay SR3 - Base Slab	7d	16-Sep-16	22-Sep-16				SR8 - Bay SR3 - Base Slab
SR8_S_1110	SR8 - Bay SR3 - Wall	7d	23-Sep-16	29-Sep-16				SR8 - Bay SR3 - Wall
SR8_S_1120	SR8 - Bay SR3 - Utility Trough	4d	30-Sep-16	03-Oct-16				SR8 - Bay SR3 - Utility Trough
SR8_S_1130	SR8 - Bay SR3 - OHVD Slab & Hanger Wall	11d	04-Oct-16	14-Oct-16				SR8 - Bay SR3 - OHVD Slab & Hanger Wall
SR8_S_1140	SR8 - Bay SR3 - Roof Slab	10d	15-Oct-16	24-Oct-16				SR8 - Bay SR3 - Roof Slab
Bay SR4 (Within Zone W1)		32d	27-Sep-16	29-Oct-16				
SR8_S_1150	SR8 - Bay SR4 - Base Slab	10d	27-Sep-16	07-Oct-16				SR8 - Bay SR4 - Base Slab
SR8_S_1160	SR8 - Bay SR4 - Wall	7d	07-Oct-16	14-Oct-16				SR8 - Bay SR4 - Wall

Activity ID	Activity Name	Original Duration	Start	Finish	2016					
					Jul	Aug	Sep	Oct		
SR8_S_1170	SR8 - Bay SR4 - Utility Trough	4d	14-Oct-16	18-Oct-16						
SR8_S_1180	SR8 - Bay SR4 - OHVD Slab & Hanger Wall	11d	18-Oct-16	29-Oct-16						
Bay SR5 (Within Zone W1)		21d	30-Sep-16	21-Oct-16						
SR8_S_1200	SR8 - Bay SR5 - Base Slab	10d	30-Sep-16	10-Oct-16						
SR8_S_1210	SR8 - Bay SR5 - Wall	7d	10-Oct-16	17-Oct-16						
SR8_S_1220	SR8 - Bay SR5 - Utility Trough	4d	17-Oct-16	21-Oct-16						
Waterproofing to Roof Slab		9d	31-Aug-16	08-Sep-16						
SR8_S_1400	Waterproof to Roof Slab - Bay SR1	4d	31-Aug-16	03-Sep-16						
SR8_S_1410	Waterproof to Roof Slab - Bay SR2	4d	05-Sep-16	08-Sep-16						
Works in KD8		35d	12-Sep-16	17-Oct-16						
Removal of Temporary Reclamation at TS3W		35d	12-Sep-16	17-Oct-16						
Preparation Works		35d	12-Sep-16	17-Oct-16						
Zone Type 4		15d	02-Oct-16	17-Oct-16						
TS3W_4510	Type 4 - King Post Load Transfer to Roof Slab	7d	02-Oct-16	08-Oct-16						
TS3W_4520	Type 4 - Re-prop SL6 after Wall Waterproofing Completion	7d	02-Oct-16	08-Oct-16						
TS3W_4530	Type 4 - Backfill to -12.5mPD	4d	09-Oct-16	13-Oct-16						
TS3W_4540	Type 4 - Remove Strut SL4	4d	13-Oct-16	17-Oct-16						
Zone Type 3		24d	12-Sep-16	06-Oct-16						
TS3W_4560	Type 3 - Re-prop SL6 after Wall Waterproofing Completion	7d	12-Sep-16	18-Sep-16						
TS3W_4570	Type 3 - Backfill to -17.5mPD	2d	19-Sep-16	20-Sep-16						
TS3W_4580	Type 3 - Remove Strut SL5	7d	20-Sep-16	27-Sep-16						
TS3W_4590	Type 3 - Backfill to -14.0mPD	2d	27-Sep-16	29-Sep-16						
TS3W_4600	Type 3 - Remove Strut SL4	7d	29-Sep-16	06-Oct-16						
Works in KD6		190d	19-Apr-16 A	25-Oct-16						
Works in SR8 (Open Cut Method)		190d	19-Apr-16 A	25-Oct-16						
SR8 - Cofferdam & Cut & Cover Tunnel Works		190d	19-Apr-16 A	25-Oct-16						
SR8 (Zone C) - Ch. 528 to Ch. 368		86d	15-Jun-16 A	25-Oct-16						
ELS - Excavation & Struts Installation		71d	15-Jun-16 A	10-Oct-16						
Area A (CH384 to CH462) / (78m) - Victoria Park to Steel Deck WB + IEC		21d	16-Sep-16	07-Oct-16						
SR8_ZC_1170	Area A - Strut & Waling Installation for Layer 6 (SL5)	8d	16-Sep-16*	24-Sep-16						
SR8_ZC_1180	Area A - Bracing Installation for Layer 2 (Bottom Horizontal & Diagonal)	3d	24-Sep-16	27-Sep-16						
SR8_ZC_1190	Area A - Excavate Further Down for Replacement of Rock Fill	3d	27-Sep-16	30-Sep-16						
SR8_ZC_1200	Area A - Rock Fill	6d	30-Sep-16	06-Oct-16						
SR8_ZC_1210	Area A - Blinding	1d	06-Oct-16	07-Oct-16						
Area B (Ch.462 to Ch.525) / (63m) - IEC + Steel Deck EB + SR8/TS3 Interface		71d	15-Jun-16 A	10-Oct-16						
SR8_ZC_1350	Area B - Excavation to Layer 5	4d	15-Jun-16 A	21-Jun-16 A						
SR8_ZC_1360	Area B - Strut & Waling Installation for Layer 5 (SL4)	4d	16-Sep-16*	21-Sep-16						
SR8_ZC_1370	Area B - Excavation to Layer 6 (Fromation Level)	9d	21-Sep-16	29-Sep-16						
SR8_ZC_1380	Area B - Strut & Waling Installation for Layer 6 (SL5)	5d	29-Sep-16	05-Oct-16						
SR8_ZC_1390	Area B - Bracing Installation for Layer 2 (Bottom Horizontal & Diagonal)	1d	05-Oct-16	06-Oct-16						
SR8_ZC_1400	Area B - Excavate Further Down for Replacement of Rock Fill	2d	06-Oct-16	08-Oct-16						
SR8_ZC_1410	Area B - Rock Fill	2d	08-Oct-16	09-Oct-16						
SR8_ZC_1420	Area B - Blinding	1d	09-Oct-16	10-Oct-16						
Tunnel Structure		18d	07-Oct-16	25-Oct-16						

- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

Date	Revision	Checked	Approved
20-Jul-16	Updated to 20th Jul 2016	DML/WC	

Activity ID	Activity Name	Original Duration	Start	Finish	2016			
					Jul	Aug	Sep	Oct
Bay C1								
SR8_ZC_1430	Bay C1 - Concrete for Gap of Base Slab & Waterproofing	3d	07-Oct-16	10-Oct-16				Bay C1 - Concrete for Gap of
SR8_ZC_1440	Bay C1 - Base Slab & Drainage Pipe	5d	10-Oct-16	15-Oct-16				Bay C1 - Base Slab
SR8_ZC_1450	Bay C1 - Remove Strut SL5	3d	15-Oct-16	18-Oct-16				Bay C1 - Ren
SR8_ZC_1460	Bay C1 - Install T-Grid Waterproofing for Wall & Vertical Blinding	6d	18-Oct-16	24-Oct-16				Bay C1 - B
Bay C2								
SR8_ZC_1570	Bay C2 - Concrete for Gap of Base Slab & Waterproofing	3d	10-Oct-16	13-Oct-16				Bay C2 - Concrete for
SR8_ZC_1580	Bay C2 - Base Slab & Drainage Pipe	5d	15-Oct-16	20-Oct-16				Bay C2 -
Bay C3								
SR8_ZC_1710	Bay C3 - Concrete for Gap of Base Slab & Waterproofing	3d	07-Oct-16	10-Oct-16				Bay C3 - Concrete for Gap of
SR8_ZC_1720	Bay C3 - Base Slab & Drainage Pipe	5d	10-Oct-16	15-Oct-16				Bay C3 - Base Slab
SR8_ZC_1730	Bay C3 - Remove Strut SL5	3d	15-Oct-16	18-Oct-16				Bay C3 - Ren
SR8_ZC_1740	Bay C3 - Install T-Grid Waterproofing for Wall & Vertical Blinding	6d	18-Oct-16	24-Oct-16				Bay C3 - B
Bay C4								
SR8_ZC_1850	Bay C4 - Concrete for Gap of Base Slab & Waterproofing	3d	10-Oct-16	13-Oct-16				Bay C4 - Concrete for
SR8_ZC_1860	Bay C4 - Base Slab & Drainage Pipe	4d	19-Oct-16	23-Oct-16				Bay C4 -
Bay C5								
SR8_ZC_2000	Bay C5 - Concrete for Gap of Base Slab & Waterproofing	3d	10-Oct-16	13-Oct-16				Bay C5 - Concrete for
SR8_ZC_2010	Bay C5 - Base Slab & Drainage Pipe	6d	13-Oct-16	19-Oct-16				Bay C5 - B
SR8_ZC_2020	Bay C5 - Remove Strut SL5	3d	19-Oct-16	22-Oct-16				Bay C5 -
Bay C6								
SR8_ZC_2120	Bay C6 - Waterproofing	2d	13-Oct-16	15-Oct-16				Bay C6 - Waterpr
SR8_ZC_2130	Bay C6 - Base Slab & Drainage Pipe	6d	19-Oct-16	25-Oct-16				Bay C6 -
SR8 (Zone B) - Ch.385.000 to Ch.317.500 - (Inside Victoria Park to Tunnel Portal)								
SR8 (Zone B) Tunnel - ELS / CCT / BF Works (7 Bays Ch. 385.000 to Ch.317.500)								
Portal Structure								
Roof Slab Construction								
Bay B3 (CH351.8 to CH368)								
SR8_ZB_1340	B3 - Remove Upper Struts inside Tunnel Box	4d	08-Jun-16 A	20-Jun-16 A				inside Tunnel Box
Backfill & Remove Struts								
SR8_ZB_1350	Zone B - Backfill Gap between Structural Wall & Pipe Piles	4d	19-Apr-16 A	05-Aug-16				Zone B - Backfill Gap between Structural Wall & Pipe Piles
SR8_ZB_1360	Zone B - Remove Remaining Struts near Ground Level	8d	06-Aug-16	15-Aug-16				Zone B - Remove Remaining Struts near Ground Level
SR8_ZB_1380	Zone B - Remove Top Layer of Strut for Pump House Shaft Construction	8d	15-Aug-16	24-Aug-16				Zone B - Remove Top Layer of Strut for Pump House Shaft Construction
OHVD								
Bay B2 (CH338.625 to CH351.8)								
SR8_ZB_1390	Zone B - OHVD Bay 2 - Erect Scaffolding & Soffit Formwork	6d	17-Sep-16*	23-Sep-16				Zone B - OHVD Bay 2 - Erect Scaffolding & Soffit Formwork
SR8_ZB_1400	Zone B - OHVD Bay 2 - Rebar Fixing for Slab of OHVD	3d	24-Sep-16	27-Sep-16				Zone B - OHVD Bay 2 - Rebar Fixing for Slab of OHVD
SR8_ZB_1410	Zone B - OHVD Concrete of Slab of OHVD	1d	28-Sep-16	28-Sep-16				Zone B - OHVD Concrete of Slab of OHVD
SR8_ZB_1420	Zone B - OHVD Rebar Fixing to Wall	1d	29-Sep-16	29-Sep-16				Zone B - OHVD Rebar Fixing to Wall
SR8_ZB_1430	Zone B - OHVD Erect Wall Formwork for OHVD	2d	30-Sep-16	03-Oct-16				Zone B - OHVD Erect Wall Formwork for
SR8_ZB_1440	Zone B - OHVD Concrete Hanger Wall of OHVD	1d	04-Oct-16	04-Oct-16				Zone B - OHVD Concrete Hanger Wall of
SR8_ZB_1450	Zone B - OHVD Curing Period for OHVD Slab	10d	04-Oct-16	14-Oct-16				Zone B - OHVD Curing
SR8_ZB_1460	Zone B - OHVD Remove Soffit Formwork & Scaffolding	5d	14-Oct-16	20-Oct-16				Zone B -
Bay B3 (CH351.8 to CH368)								

Activity ID	Activity Name	Original Duration	Start	Finish	2016				
					Jul	Aug	Sep	Oct	
SR8_ZB_1470	Zone B - OHVD Bay 3 - Erect Scaffolding & Soffit Formwork	6d	05-Oct-16	12-Oct-16					Zone B - OHVD Bay 3 -
SR8_ZB_1480	Zone B - OHVD Bay 3 - Rebar Fixing for Slab of OHVD	3d	13-Oct-16	15-Oct-16					Zone B - OHVD Bay 3 -
SR8_ZB_1490	Zone B - OHVD Bay 3 - Concrete of Slab of OHVD	1d	17-Oct-16	17-Oct-16					Zone B - OHVD Bay 3 -
SR8_ZB_1500	Zone B - OHVD Bay 3 - Rebar Fixing to Wall	1d	18-Oct-16	18-Oct-16					Zone B - OHVD Bay 3 -
SR8_ZB_1510	Zone B - OHVD Bay 3 - Erect Wall Formwork for OHVD	2d	19-Oct-16	20-Oct-16					Zone B - OHVD Bay 3 -
Utility Trough		21d	17-Sep-16	13-Oct-16					
Left Hand Side		21d	17-Sep-16	13-Oct-16					
SR8_ZB_1550	Zone B - U trough (LHS) Bay 1	7d	17-Sep-16*	24-Sep-16					Zone B - U trough (LHS) Bay 1
SR8_ZB_1560	Zone B - U trough (LHS) Bay 2	7d	26-Sep-16	04-Oct-16					Zone B - U trough (LHS) Bay 2
SR8_ZB_1570	Zone B - U trough (LHS) Bay 3	7d	05-Oct-16	13-Oct-16					Zone B - U trough (LHS) Bay 3
Pump House		35d	24-Aug-16	06-Oct-16					
Access Hut Near Ground Level		14d	24-Aug-16	09-Sep-16					
SR8_ZB_1800	PS- Internal Wall Formwork	4d	24-Aug-16	29-Aug-16					PS- Internal Wall Formwork
SR8_ZB_1810	PS- Erect Scaffolding + Roof Soffit Fromwork	5d	29-Aug-16	03-Sep-16					PS- Erect Scaffolding + Roof Soffit Fromwork
SR8_ZB_1820	PS- Rebar Fixing	4d	03-Sep-16	08-Sep-16					PS- Rebar Fixing
SR8_ZB_1830	PS- Place Concrete to Wall & Roof Slab	1d	08-Sep-16	09-Sep-16					PS- Place Concrete to Wall & Roof Slab
Floor Slabs & Partition Walls		21d	09-Sep-16	06-Oct-16					
SR8_ZB_1860	PS-Internal Wall Inside Pump House	21d	09-Sep-16	06-Oct-16					PS-Internal Wall Inside Pump House
SR8 (Zone A) - Ch 317.500 to Ch 210.000 - U-Structure & Slab (Victoria Park)		119d	15-May-16 A	13-Sep-16					
RC CCT & Backfill Ch317.5000 to Ch240.000		48d	20-Jul-16	13-Sep-16					
Structure		48d	20-Jul-16	13-Sep-16					
Utility Through		48d	20-Jul-16	13-Sep-16					
SR8_ZA_1260	Zone A - Utility Trough	48d	20-Jul-16	13-Sep-16					Zone A - Utility Trough
SR8 Structural Slab Ch.240.000 to Ch.210.000		91d	15-May-16 A	16-Aug-16					
SR8_2330	Zone A - Remove Temporary Stockpile for Type 1 Excavated Material	14d	15-May-16 A	07-Jul-16 A					Zone A - Remove Temporary Stockpile for Type 1 Excavated Material
SR8_2090B	Zone A - Wall Stern - Bay 3	14d	20-Jul-16	02-Aug-16					Zone A - Wall Stern - Bay 3
SR8_2090C	Zone A - Profile Barrier for Utilities Trough	14d	03-Aug-16	16-Aug-16					Zone A - Profile Barrier for Utilities Trough
Aone A & B - Backfill & Reinstatement Works Including Removal of Struts		28d	08-Aug-16	09-Sep-16					
SR8_1920	SR8 U structure - Backfilling & Compaction + Removal of Struts & Sheet Pile	14d	08-Aug-16	24-Aug-16					SR8 U structure - Backfilling & Compaction + Removal of Struts & Sheet Pile
SR8_1930	Remove and/or Pull Sheet Piling Materials	14d	24-Aug-16	09-Sep-16					Remove and/or Pull Sheet Piling Materials
Works in KD9		155d	30-Jan-16 A	14-Nov-16					
Tsing Fung St - RW & Subway Extension & Toe Wall at Hing Fat St		116d	02-May-16 A	21-Oct-16					
Ret. Wall & TF Subway Extension (Portion V)		67d	02-May-16 A	22-Aug-16					
Retaining Wall RW8C at Tsing Fung Street (Portion V)		67d	02-May-16 A	22-Aug-16					
VP_1390	RW8C - Demolish Top Portion of Existing Wall Head at Boundary Fence	18d	02-May-16 A	05-Aug-16					RW8C - Demolish Top Portion of Existing Wall Head at Boundary Fence
VP_1370A	RW8C - Install Steel Railing on Top of RW8C	14d	06-Aug-16	22-Aug-16					RW8C - Install Steel Railing on Top of RW8C
Subway Extension at Tsing Fung Street (Portion VIII)		14d	20-Jul-16	04-Aug-16					
VP_1375.50	TFS Subway extension - install Railing	14d	20-Jul-16	04-Aug-16					TFS Subway extension - install Railing
Retaining Wall + Toe Wall at Hing Fat Street		78d	20-Jul-16	21-Oct-16					
Retaining Wall RW8D		76d	20-Jul-16	19-Oct-16					
Bay 3(10m) to Bay 4(10m)		31d	20-Jul-16	24-Aug-16					
RW8D_1020	RW8D(B3 to B4) - Remove Base Formwork	15d	20-Jul-16	05-Aug-16					RW8D(B3 to B4) - Remove Base Formwork
RW8D_1030	RW8D(B3 to B4) - Wall Stems	7d	06-Aug-16	13-Aug-16					RW8D(B3 to B4) - Wall Stems
RW8D_1040	RW8D(B3 to B4) - Remove Wall Formworks & Repair F5 Finish	5d	15-Aug-16	19-Aug-16					RW8D(B3 to B4) - Remove Wall Formworks & Repair F5 Finish

Activity ID	Activity Name	Original Duration	Start	Finish	2016			
					Jul	Aug	Sep	Oct
RW8D_1050	RW8D(B3 to B4) - Backfill to Ground Level	4d	20-Aug-16	24-Aug-16				
Bay 2(10m) to Bay 1(12.5m)		33d	25-Aug-16	04-Oct-16				
RW8D_1060	RW8D(B2 to B1) - Excavation & Blinding	8d	25-Aug-16	02-Sep-16				
RW8D_1070	RW8D(B2 to B1) - Base Slab	7d	03-Sep-16	10-Sep-16				
RW8D_1080	RW8D(B2 to B1) - Remove Base Formwork	2d	12-Sep-16	13-Sep-16				
RW8D_1090	RW8D(B2 to B1) - Wall Stems	7d	14-Sep-16	22-Sep-16				
RW8D_1100	RW8D(B2 to B1) - Remove Wall Formworks & Repair F5 Finish	5d	23-Sep-16	28-Sep-16				
RW8D_1110	RW8D(B2 to B1) - Backfill to Ground Level	4d	29-Sep-16	04-Oct-16				
Toe Wall (8m)		12d	05-Oct-16	19-Oct-16				
RW8D_1120	RW8DToe Wall - Excavation & Blinding	8d	05-Oct-16	14-Oct-16				
RW8D_1130	RW8DToe Wall - Toe Wall Construction	4d	15-Oct-16	19-Oct-16				
Retaining Wall RW8E		14d	05-Oct-16	21-Oct-16				
RW8E_2000	RW8E - Excavation & Temporary Works	14d	05-Oct-16	21-Oct-16				
SR8 External Works: Raod & Drain, Surfacing, Furnitures, Traffic Signs etc.		155d	30-Jan-16 A	14-Nov-16				
WSD Connection for Watermain for Zone 1 to Zone 4		28d	13-Oct-16	14-Nov-16				
EX_WSD_1020	Zone 2 - DN 100 MDPE Water Main Ready for WSD Connection	28d	13-Oct-16	14-Nov-16				
Zone 1 - Area Form RW8E to Subway Extension		21d	05-Oct-16	29-Oct-16				
External Works at Hing Fat Street Footpath		21d	05-Oct-16	29-Oct-16				
EX_Z1_1070	Zone 1 - DS16 - Footing	21d	05-Oct-16	29-Oct-16				
Zone 2 - Subway Extensiion to New Lay-by		141d	30-Jan-16 A	28-Oct-16				
Works Within victoria Park Area		141d	30-Jan-16 A	28-Oct-16				
EX_Z2_1040	Zone 2 - Laying DN150 Sewer	21d	30-Jan-16 A	14-Sep-16				
EX_Z2_1000	Zone 2 - Remove Existing Boundary Wall Footing at Tsing Fung Street	14d	02-May-16 A	04-Aug-16				
EX_Z2_1010	Zone 2 - Constrtuction of VMS6 Footing	21d	05-Aug-16	29-Aug-16				
EX_Z2_1020	Zone 2 - Construction of FVMSH3 Footing	21d	05-Aug-16	29-Aug-16				
EX_Z2_1030	Zone 2 - Construction of 15m CCTV Camera High Mast Footing at Lay-by	21d	05-Aug-16	29-Aug-16				
EX_Z2_1050	Zone 2 - Laying DN100 MDPE Water Main - F01	21d	15-Sep-16	12-Oct-16				
EX_Z2_1060	Zone 2 - Laying DN225 Strom Drain	14d	15-Sep-16	03-Oct-16				
EX_Z2_1070	Zone 2 - Laying DN40 Irrigation Main	14d	13-Oct-16	28-Oct-16				
Zone 4 - Zone A to Zone C within Victoria Park		35d	09-Sep-16	24-Oct-16				
Footing Along U-struture & Portal Both Sides		35d	09-Sep-16	24-Oct-16				
EX_Z4_1000	Zone 4 - Sewer & Strom Drain Pipe Laying	21d	09-Sep-16	06-Oct-16				
EX_Z4_1010	Zone 4 - Laying DN40 Irrigation Main	14d	06-Oct-16	24-Oct-16				
EX_Z4_1020	Zone 4 - Overheight Detector Footing & Draw Pits at Both Sides	14d	06-Oct-16	24-Oct-16				
Works in Victoria Park		1470d	21-Mar-13 A	13-Dec-17				
Re-Provisioning Works		123d	27-Apr-16 A	13-Dec-16				
Nursery Compound		123d	27-Apr-16 A	13-Dec-16				
Submission		123d	27-Apr-16 A	13-Dec-16				
Structural Submission		21d	27-Apr-16 A	12-Aug-16				
Method Statement		21d	27-Apr-16 A	12-Aug-16				
VP_NC_1020	Method Statement - Submission	7d	27-Apr-16 A	19-Jul-16 A				
VP_NC_1030	Method Statement - ER Review and Approval	21d	20-Jul-16	12-Aug-16				
ABWF Submission		109d	22-Jun-16 A	26-Nov-16				
Material		88d	22-Jun-16 A	02-Nov-16				

Activity ID	Activity Name	Original Duration	Start	Finish	2016			
					Jul	Aug	Sep	Oct
VP_NC_1040	ABWF Materail - Submission for Specification and Samples	14d	22-Jun-16 A	14-Jul-16 A	ABWF Materail - Submission for Specification and Samples			
VP_NC_1050	ABWF Materail - ER Review and Approval	28d	20-Jul-16	20-Aug-16	ABWF Materail - ER Review and Approval			
VP_NC_1060	ABWF Issue P.O. / Manufacturing / Fabrication	30d	22-Aug-16	26-Sep-16	ABWF Issue P.O. / Manufacturing / Fabrication			
VP_NC_1070	ABWF Materail Delivery	30d	27-Sep-16	02-Nov-16	ABWF Materail Delivery			
Shop Drawing		81d	22-Aug-16	26-Nov-16				
VP_NC_1080	ABWF Shop Drawing - Submission	21d	22-Aug-16	14-Sep-16	ABWF Shop Drawing - Submission			
VP_NC_1090	ABWF Shop Drawing - ER Review and Approval	60d	15-Sep-16	26-Nov-16	ABWF Shop Drawing - ER Review and Approval			
Method Statement		42d	22-Aug-16	12-Oct-16				
VP_NC_1100	ABWF Method Statement - Submission	14d	22-Aug-16	06-Sep-16	ABWF Method Statement - Submission			
VP_NC_1110	ABWF Method Statement - ER Review and Approval	28d	07-Sep-16	12-Oct-16	ABWF Method Statement - ER Review and Approval			
E&M Submission		123d	20-Jul-16	13-Dec-16				
Material		102d	20-Jul-16	18-Nov-16				
VP_NC_1120	E&M Materail - Submission for Specification and Samples	14d	20-Jul-16	04-Aug-16	E&M Materail - Submission for Specification and Samples			
VP_NC_1130	E&M Materail - ER Review and Approval	28d	05-Aug-16	06-Sep-16	E&M Materail - ER Review and Approval			
VP_NC_1140	E&M Issue P.O. / Manufacturing / Fabrication	30d	07-Sep-16	14-Oct-16	E&M Issue P.O. / Manufacturing / Fabrication			
VP_NC_1150	E&M Materail Delivery	30d	15-Oct-16	18-Nov-16	E&M Materail Delivery			
Shop Drawing		81d	07-Sep-16	13-Dec-16				
VP_NC_1160	E&M Shop Drawing - Submission	21d	07-Sep-16	03-Oct-16	E&M Shop Drawing - Submission			
VP_NC_1170	E&M Shop Drawing - ER Review and Approval	60d	04-Oct-16	13-Dec-16	E&M Shop Drawing - ER Review and Approval			
Method Statement		42d	07-Sep-16	28-Oct-16				
VP_NC_1180	E&M Method Statement - Submission	14d	07-Sep-16	23-Sep-16	E&M Method Statement - Submission			
VP_NC_1190	E&M Method Statement - ER Review and Approval	28d	24-Sep-16	28-Oct-16	E&M Method Statement - ER Review and Approval			
Nursery Construction		57d	16-Aug-16	24-Oct-16				
VP_NC_1200	Implement Additional Site Access to Victoria Park	1d	16-Aug-16	16-Aug-16	Implement Additional Site Access to Victoria Park			
VP_NC_1220	NC - U/G Utilities and Foundation Works	21d	17-Aug-16	09-Sep-16	NC - U/G Utilities and Foundation Works			
VP_NC_1230	NC - Base Slab	14d	10-Sep-16	27-Sep-16	NC - Base Slab			
VP_NC_1240	NC - Walls	21d	28-Sep-16	24-Oct-16	NC - Walls			
Establishment Works for Landscape Softworks		901d	23-Feb-15 A	13-Dec-17				
KD11 - Section 7A: Portion XIV & XV (Victoria Park Open Space)		901d	23-Feb-15 A	13-Dec-17				
EW_1000	Establishment Works - for Landscape Softworks and transplanted trees in Portion XIV & XV	901d	23-Feb-15 A	13-Dec-17	Establishment Works - for Landscape Softworks and transplanted trees in Portion XIV & XV			
KD12 - Section 7B: Portion VI & VII (Reprov. Bowling Green Area)		177d	03-Dec-15 A	20-Jul-16				
EW_1010	Establishment Works - for Landscape Softworks and transplanted trees in Portion VI & VII	177d	03-Dec-15 A	20-Jul-16	Establishment Works - for Landscape Softworks and transplanted trees in Portion VI & VII			
KD10 - Preservation and Protection of Trees		1088d	21-Mar-13 A	19-Nov-16				
PPT_0000	Preservation and Protection of Existing Trees	1088d	21-Mar-13 A	19-Nov-16	Preservation and Protection of Existing Trees			
KD15 & KD8 - Mooring Components Upkeep (CBTS and ATS)		1399d	21-Mar-13 A	17-Jan-17				
MAR_2000	Mooring Upkeep at Portion XIX(19) & XX(20) - ATS (if instructed by Engineer)	1399d	21-Mar-13 A	17-Jan-17	Mooring Upkeep at Portion XIX(19) & XX(20) - ATS (if instructed by Engineer)			
MAR_3020	Mooring Upkeep at Portion X(10) & XVI(16) - CBTS	979d	15-May-14 A	17-Jan-17	Mooring Upkeep at Portion X(10) & XVI(16) - CBTS			
Works for Public Works Regional Laboratory (North Lantau)		1301d	19-Jul-13 A	20-Nov-17				
KD17 - Maintenance and Upkeep of New PWRL (Portion XVII)		1301d	19-Jul-13 A	20-Nov-17				
PWRL_1050	Maintenance/ Upkeep of New PWRL	1301d	19-Jul-13 A	20-Nov-17	Maintenance/ Upkeep of New PWRL			