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 EVIRONMENTAL 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

- SEPTEMBER 2016 -

CLIENTS:

Civil Engineering and Development Department

and

Highways Department

PREPARED BY:

Lam Geotechnics Limited

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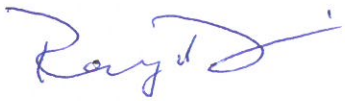

Raymond Dai
Environmental Team Leader

DATE:

14 October 2016

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Ref.: AACWBIECEM00_0_8608L.16.docx

14 October 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 (September 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 September 2016 received by e-mail on 14 October 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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c.c.

HyD	Attn: Mr. Eddy Wu	by fax: 2714 5289
CEDD	Attn: Mr. Stephen Lo	by fax: 2577 5040
AECOM	Attn: Mr. Frankie Fan	by fax: 2691 2649
AECOM	Attn: Mr. Conrad Ng	by fax: 2691 2649
Lam	Attn: Mr. Raymond Dai	by fax: 2882 3331

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EXECUTIVE SUMMARY

i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – September 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 August 2016 to 26th September 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
- Reinstate the seawall at Portion XI

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

x. 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

xi. Due to interruption of electricity supply, the 24hr was rescheduled as follows:
CMA5b monitoring station was rescheduled from 19 September 2016 to 20 September 2016.

xii. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 13 September 2016 and 26 September 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this reporting month.

xiii. Two 1hr TSP action level exceedance was recorded at CMA5b – Pedestrian Plaza on 14 and 26 September 2016 in the reporting month.

xiv. 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

xv. 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.

xvi. 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.

xvii. 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.

xviii. 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	1	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	1	5	0	0	0	0	1	1	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	1	0	0	0	0	0	0	0	0
	P5	0	0	0	1	0	0	0	0	0	0	0	0
HK/2009/02	RW21-P789	0	0	2	0	0	0	0	0	0	0	0	0
HY/2009/15 & HY/2010/08	C7	0	0	0	1	0	0	0	0	0	0	0	0
Total		0	0	3	9	0	0	0	0	1	1	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 temporary 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.

xix. There were 4 action and 10 limit level of turbidity exceedances recorded in the reporting month.

xx. 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***.

xxi. 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	3
	Ex-WPCWA SE	1	0	0	0
Total		1	1	0	3

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. The Enhance DO monitoring at Ex-PCWAE was resumed on 11 May 2016 due to completed section of seawall reinstatement works at Ex-PCWA.

xxii. There was 1 action level and 4 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

xxiii. There was no environmental complaint received in this reporting month.

Site Inspections and Audit

xxiv. 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

xxv. 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
- Reinstatement of existing seawall at TPCWAE
- 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 August 2016 to 26th September 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
- Reinstate the seawall at Portion XI

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
- Reinstatement of existing seawall at TPCWAE
- 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
	GW-RS0822-16	28 Jul 2016	7 Aug 2016 to 31 Jan 2017	Valid
Discharge Licence	WT00024952-2016	6 Jul 2016	31 Jul 2021	Valid
	WT00024844-2016	29 Jun 2016	31 Mar 2020	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

EP Condition	Submission	Date of Submission
	Silt Curtain Deployment Plan (Rev. 4)	12 July 2012
	Silt Curtain Deployment Plan (Rev. 3)	27 June 2012
	Silt Curtain Deployment Plan	19 Apr 2010
Condition 2.9	Silt Screen Deployment Plan (Rev. 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-RS0390-16	22 Apr 2016	27 Apr 2016 to 26 Oct 2016	Cancelled
	GW-RS0399-16	27 Apr 2016	27 Apr 2016 to 26 Oct 2016	Valid
	GW-RS0593-16	13 Jun 2016	15 Jun 2016 to 12 Dec 2016	Valid
	GW-RS0803-16	28 Jul 2016	30 Jul 2016 to 27 Jan 2017	Valid
	GW-RS0926-16	5 Sep 2016	07/9/2016 to 04/3/2017	Valid
	GW-RS0985-16	19/9/2016	20/9/2016 to 18/3/2017	Valid
Discharge Licence	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/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	Expired
	GW-RS0889-16	23 Aug 2016	11 Sep 2016 to 10 Mar 2017	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	Expired
	GW-RS0884-16	23 Aug 2016	8 Sep 2016 to 7 Mar 2017	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C1169-35	15 Nov 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7011553	30 Sep 2010	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/17-076	5 Aug 2016	14 Aug 2016 to 13 Sep 2016	Expired

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

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

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

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

3.1.8. Summary of the current status on licences and/or permits on environmental protection pertinent for contract no. HY/2009/19 is shown in ***Table 3.8***

Table 3.8 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/19

Permit / Licence / Notification / Approval	**Reference No.**	**Issued Date**	**Valid Period / Expiry date**	**Status**
Further Environmental Permit	FEP-07/364/2009/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	-

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
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
	FEP-08/356/2009	1 Aug 2016	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	30 Jun 2016	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-RS0726-16	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
	GW-RS0909-16	23 Aug 2016	26 Aug 2016 to 1 Oct 2016	Valid
	GW-RS0902-16	24 Aug 2016	26 Aug 2016 to 25 Feb 2017	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	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)	EP/MD/17-073	3 Aug 2016	8 Aug 2016 to 7 Sep 2016	Expired
	EP/MD/17-091	6 Sep 2016	12 Sep 2016 to 11 Oct 2016	Valid

Table 3.10 Summary of submission status under EP-356/2009 and FEP-06/356/2009 Condition

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

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

3.1.10. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HY/2010/08 under FEP-07/356/2009 are shown in Table ***3.11*** and ***Table 3.12***.

Table 3.11 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2010/08

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-07/356/2009	26 Jul 2013	NA	Valid
	FEP-10/364/2009/B	26 Jul 2013	NA	Valid
Notification of Works Under APCO	357176	2 Apr 2013	NIL	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C11 69-44	27 Mar 2013	NIL	Valid
Billing Account under Waste Disposal Ordinance	7017170	27 Mar 2013	NIL	Valid
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-RW-0240-16	5 May 2016	4 May 2016 to 28 Oct 2016	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP-MD-17-003	2 Jun 2016	2 Jun 2016 to 1 Dec 2016	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	--	--	--	--

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 ™ 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 be demonstrated to the satisfaction of the ER and IEC. IEC shall regularly audit to the measurement performed by the laboratory to ensure the accuracy of measurement results.

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

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

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

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 temporary 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. The Enhance DO monitoring at Ex-PCWAE was resumed on 11 May 2016 due to completed section of seawall reinstatement works at Ex-PCWA.

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

ADDITIONAL DISSOVLED OXYGEN MONITORING FOR CULVERT L WATER DISCHARGE FLOW

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

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

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

5. Monitoring Results

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

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

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

5.0.3. The environment monitoring schedules for reporting month and coming month are presented in ***Appendix 5.1***.

5.1 Noise Monitoring Results

Contract no. HK/2009/01 - Wan Chai Development Phase II – Central –Wanchai Bypass at HKCEC, Contract no. HK/2009/02 - Wan Chai Development Phase II – Central – Wan Chai Bypass at WanChai East

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

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

Station	Description
M1a	Harbour Road Sports Centre

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

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

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

5.1.4. The noise monitoring for HY/2009/15 was commenced on 10 November 2010. The proposed division of noise monitoring stations are summarized in ***Table 5.2*** below.

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

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

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

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

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

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

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

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

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

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

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

5.1.10. 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

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

5.1.12. 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 There were two action level exceedances of 1hr TSP recorded on 14 and 26 September 2016 in this reporting month.

5.2.3 Pipe laying was undertaken on the monitoring data around Pedestrian Plaza and no particular observation regarding air quality impact was observed on 14 September 2016 during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station.

5.2.4 Manhole construction was undertaken on 26 September 2016 around Pedestrian Plaza and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station. According to the EPD information, smog was observed on the monitoring date and the prevailing meteorological condition on 26 September 2016 is detrimental to dispersion of any potential roadside pollutant.

5.2.5 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

5.2.6 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

5.2.7 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)

5.2.8 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

5.2.9 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***.

5.2.10 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 13 September 2016 and 26 September 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

5.2.11 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

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

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

5.2.13 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

5.2.14 There were two action level exceedances of 1hr TSP recorded on 14 and 26 September 2016 in this reporting month.

5.2.15 Despite formwork erection was undertaken on 14 September 2016 at around Pedestrian Plaza, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling. In view of the above, the active level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station.

5.2.16 Despite formwork erection and re-bar fixing were undertaken on 26 September 2016 at around Pedestrian Plaza, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affect local ambient condition such as road traffic next to the monitoring station. According to the EPD information, smog was observed on the monitoring date and the prevailing meteorological condition on 26 September 2016 is detrimental to dispersion of any potential roadside pollutant.

5.2.17 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in ***Appendix 5.3***.

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

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

5.2.18 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***.

5.2.19 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 13 September 2016 and 26 September 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.***

5.3 Water quality monitoring Results

5.3.1. 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.

5.3.2. 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.

5.3.3. 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.

5.3.4. 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.

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

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 There were 1 limit level of turbidity exceedance recorded at C1 on 19 September 2016.

5.3.6 After checking with contractor, no marine activity was conducted on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not related to project works.

5.3.7 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

5.3.8 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

5.3.9 There were 2 action level of turbidity exceedances recorded at RW21-P789 on 2 and 21 September 2016.

5.3.10 After checking with contractor, no marine activity was conducted on 2 and 21 September 2016. The installed silt screen was generally in order. In view of the above, the exceedances were considered not related to project works.

5.3.11 There were 1 limit level of turbidity exceedance recorded at C1 on 19 September 2016.

5.3.12 After checking with contractor, no marine activity was conducted on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not related to project works.

5.3.13 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

5.3.14 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

5.3.15 There were 2 action level and 6 limit level of turbidity exceedances recorded at WSD19 on 2, 5, 7, 17, 19, 21, 23 and 26 September 2016.

5.3.16 After checking with the contractor, despite trimming of rock slope profile near Zone D was conducted on 2, 5 and 7 September 2016. Contractor mitigation measure including the use of silt curtain was generally in place. In view of the above, the exceedances were considered not project related.

5.3.17 No marine construction activity was conducted on 17, 19, 21, 23 and 26 September 2016. In view of no marine construction activity was conducted, the exceedance were considered not project related.

5.3.18 There was 1 limit level of turbidity exceedance recorded at P4 on 19 September 2016.

5.3.19 After checking with the contractor, no marine activity was conducted on the monitoring date. Location of the construction area was at downstream of monitoring station P4. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring.

5.3.20 There was 1 limit level of turbidity exceedance recorded at P5 on 19 September 2016.

5.3.21 After checking with the contractor, no marine activity was conducted on the monitoring date. Location of the constriction area was at downstream of monitoring station P5. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring.

5.3.22 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)

5.3.23 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
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.

5.3.24 There was one limit level of turbidity exceedance recorded at C7 on 7 September 2016.

5.3.25 After checking with the contractor, no marine activity was conducted at Causeway Bay Typhoon Shelter on the monitoring date. In view of no marine construction activity, the exceedance was considered not related to project works.

5.3.26 There were 4 limit level of DO exceedance recorded at Ex-WPCWA-SW on 29, 31 August 2016 and 2 September 2016.

5.3.27 After checking with the contractor, despite removal of D-wall at TPCWAW was conducted on 29 and 31 August 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, the exceedance were considered not related to Project works.

5.3.28 Despite filling levelling stone for seawall reinstatement at Western side of TPCWAW and removal of D-wall at northern side of TPCWAW were conducted on 2 September 2016, contractor mitigation measures including the use of silt curtain and impermeable barrier were implemented. Upstream discharge from nearby culvert was noted. In view of the above, the exceedance was considered not related to Project works. No exceedance was recorded on the subsequent monitoring.

5.3.29 There was 1 action level of DO exceedance recorded at Ex-WPCWA-SE on 29 August 2016.

5.3.30 After checking with the contractor, despite removal of D-wall at northern side of TPCWAW was conducted 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, the exceedance was considered not related to project works.

5.3.31 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)

5.3.32 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.

5.3.33 There was 1 limit level of turbidity exceedance recorded at C7 on 7 September 2016.

5.3.34 After checking with contractor, no marine activity was conducted on the monitoring date, and the installed silt screen was in place. In view of the above, it was considered that the exceedance was not related to project works. No exceedance was recorded on the subsequent monitoring.

5.3.35 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. No Inert and non-inert C&D material 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	NIL	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	NIL (Bulk Volume)	325796 (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 and no Type 1 Open Sea Disposal disposed in this reporting month.

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

5.4.7. 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) , m3	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 Inert C&D waste disposed in this reporting month. 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 238	4131 273	TM38 TKO137
Inert C&D materials recycled, m^3	NIL	NIL	N/A

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Non-inert C&D materials disposed, m^3	NIL	315	N/A
Non-inert C&D materials recycled, kg	NIL	NIL	N/A
Chemical waste disposed, L	NIL	NIL	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m^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) , m3	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.
There was 35m^3 of inert C&D materials disposed at TKO137 in August reporting month. The cumulative quantity of captioned inert C&D materials is updated in this reporting month.

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. No inert C&D 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	NIL NIL	26849.2 19739.4	TM38 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 No exceedance was recorded in the reporting month.

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

6.1.2 No exceedance was recorded in the reporting month.

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

6.1.3 No exceedance was recorded in the reporting month.

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

6.1.6. No exceedance was recorded in the reporting month.

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

6.1.7. 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 There were two action level exceedances of 1hr TSP recorded on 14 and 26 September 2016 in this reporting month.

6.2.2 Pipe laying was undertaken on the monitoring data around Pedestrian Plaza and no particular observation regarding air quality impact was observed on 14 September 2016 during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station.

6.2.3 Manhole construction was undertaken on 26 September 2016 around Pedestrian Plaza and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station. According to the EPD information, smog was observed on the monitoring date and the prevailing meteorological condition on 26 September 2016 is detrimental to dispersion of any potential roadside pollutant.

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

Wan Chai East (CWB Tunnel)

6.2.4 No exceedance was recorded in the reporting month.

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

6.2.5 No exceedance was recorded in the reporting month.

6.2.6 The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 13 September 2016 and 26 September 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. There were two action level exceedances of 1hr TSP recorded on 14 and 26 September 2016 in this reporting month.

6.3.6. Despite formwork erection was undertaken on 14 September 2016 at around Pedestrian Plaza, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling. In view of the above, the active level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station.

6.3.7. Despite formwork erection and re-bar fixing were undertaken on 26 September 2016 at around Pedestrian Plaza, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affect local ambient condition such as road traffic next to the monitoring station. According to the EPD information, smog was observed on the monitoring date and the prevailing meteorological condition on 26 September 2016 is detrimental to dispersion of any potential roadside pollutant.

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

6.3.8. No exceedance was recorded in the reporting month.

6.3.9. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 13 September 2016 and 26 September 2016 at the concerned hours (afternoon for higher daily temperature). No action and limit level was recorded during this 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 There were 1 limit level of turbidity exceedance recorded at C1 on 19 September 2016.

6.3.2 After checking with contractor, no marine activity was conducted on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not related to project works.

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

6.3.3 There were 2 action level of turbidity exceedances recorded at RW21-P789 on 2 and 21 September 2016.

6.3.4 After checking with contractor, no marine activity was conducted on 2 and 21 September 2016. The installed silt screen was generally in order. In view of the above, the exceedances were considered not related to project works.

6.3.5 There were 1 limit level of turbidity exceedance recorded at C1 on 19 September 2016.

6.3.6 After checking with contractor, no marine activity was conducted on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not related to project works.

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

6.3.7 There was one limit level of turbidity exceedance recorded at C7 on 7 September 2016.

6.3.8 After checking with the contractor, no marine activity was conducted at Causeway Bay Typhoon Shelter on the monitoring date. In view of no marine construction activity, the exceedance was considered not related to project works.

6.3.9 There were 4 limit level of DO exceedance recorded at Ex-WPCWA-SW on 29, 31 August 2016 and 2 September 2016.

6.3.10 After checking with the contractor, despite removal of D-wall at TPCWAW was conducted on 29 and 31 August 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, the exceedance were considered not related to Project works.

6.3.11 Despite filling levelling stone for seawall reinstatement at Western side of TPCWAW and removal of D-wall at northern side of TPCWAW were conducted on 2 September 2016, contractor mitigation measures including the use of silt curtain and impermeable barrier were implemented. Upstream discharge from nearby culvert was noted. In view of the above, the exceedance was considered not related to Project works. No exceedance was recorded on the subsequent monitoring.

6.3.12 There was 1 action level of DO exceedance recorded at Ex-WPCWA-SE on 29 August 2016.

6.3.13 After checking with the contractor, despite removal of D-wall at northern side of TPCWAW was conducted 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, the exceedance was considered not related to project works.

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

6.3.14 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

6.3.15 There were 2 action level and 6 limit level of turbidity exceedances recorded at WSD19 on 2, 5, 7, 17, 19, 21, 23 and 26 September 2016.

6.3.16 After checking with the contractor, despite trimming of rock slope profile near Zone D was conducted on 2, 5 and 7 September 2016. Contractor mitigation measure including the use of silt curtain was generally in place. In view of the above, the exceedances were considered not project related.

6.3.17 No marine construction activity was conducted on 17, 19, 21, 23 and 26 September 2016. In view of no marine construction activity was conducted, the exceedance were considered not project related.

6.3.18 There was 1 limit level of turbidity exceedance recorded at P4 on 19 September 2016.

6.3.19 After checking with the contractor, no marine activity was conducted on the monitoring date. Location of the construction area was at downstream of monitoring station P4. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring.

6.3.20 There was 1 limit level of turbidity exceedance recorded at P5 on 19 September 2016.

6.3.21 After checking with the contractor, no marine activity was conducted on the monitoring date. Location of the constriction area was at downstream of monitoring station P5. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring.

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

6.3.22 There was 1 limit level of turbidity exceedance recorded at C7 on 7 September 2016.

6.3.23 After checking with contractor, no marine activity was conducted on the monitoring date, and the installed silt screen was in place. In view of the above, it was considered that the exceedance was not related to project works. No exceedance was recorded on the subsequent monitoring.

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

6.4.1 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.

6.4.2 No non-compliances from monitoring was recorded in reporting month.

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

6.5.1 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 were performed in September 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 culvert reinstatement, road and drains, building demolition and tunnel works at Wan Chai East and 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 31 August 2016, 7, 15 and 21 September 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 1, 8, 14 and 20 September 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
160908_01	8 Sep 2016	Hole of drip tray under oil container shall be covered in Portion5	The hole of the drip trap has been covered.	Completion as observed on 14 September 2016.

8.0.4. Four site inspections for Contract no. HY/2009/15 were carried out on 30 August 2016, 6, 13 and 20 September 2016 in reporting month. There was no particular findings observed in this reporting month.

8.0.5. Four site inspections for Contract no. HY/2009/19 were carried out on 31 August 2016, 7, 14 and 21 September 2016 in reporting month. Results of these inspections and outcomes are summarized in ***Table 8.4***.

Table 8.4 Summary of Environmental Inspections for Contract no. HY/2009/19

Item	Date	Observations	Action taken by Contractor	Outcome
160914_1	14 Sep 2016	Effluent generated from temporary washing sink shall properly collected and treated by water treatment plant prior to discharge to avoid potential contaminated runoff from the sink into nearby water(Portion 3)	Temporary washing sink at Portion 3 was removed	Completion as observed on 21 September 2016

8.0.6. Four site inspections for Contract no. HK/2012/08 were carried out on 30 August 2016, 6, 13 and 20 September 2016 in this reporting period. There was no particular findings observed in this reporting month.

8.0.7. Four site inspections for Contract no. HY/2010/08 were carried out on 31 August 2016, 9, 14 and 21 September 2016 in this reporting period. There was no particular findings observed in this reporting month.

9. Complaints, Notification of Summons and Prosecution

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

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

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

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works (Mar 2010) to last reporting month	47
September 2016	0
Total	**47**

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.

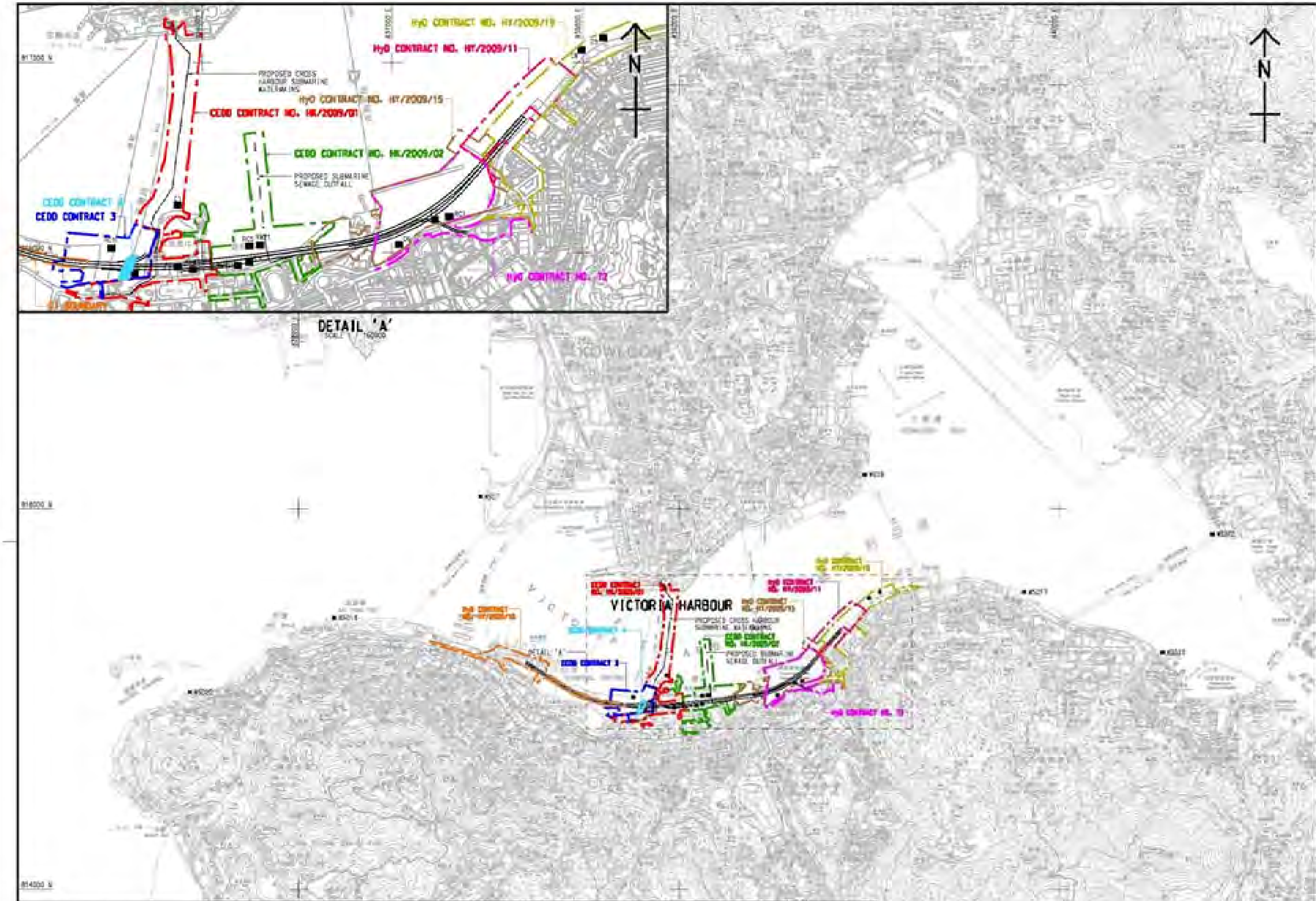
10.0.2. The scheduled construction activities and the recommended mitigation measures for the coming month are listed in ***Table 10.1***.

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

Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2009/01	• Nil	• Nil
HK/2009/02	• Nil	• 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	• Removal of temporary reclamation at TPCWAW • Reinstatement of existing seawall at TPCWAE • Diaphragm wall cutting works at TPCWAW • Reinstate the seawall at Portion XI	• 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	• Nil	• Nil
HK/2012/08	• Precast unit construction for Box 1 inside Dry dock • Construction of culvert L Bay 8, Bay 12 and Bay 13	• 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	• Diversion pipe maintenance • Diaphragm Wall Removal Works	• 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

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

WSD SALT WATER INTAKE

WSD21 WAN CHAI
RW21 WAN CHAI (REPROVISION)
WSD7 KOWLOON SOUTH
WSD9 TAI WAN
WSD10 CHA KWO LING
WSD15 SAI WAN HO
WSD17 QUARRY BAY
WSD19 SHEUNG WAN
WSD20 KENNEDY TOWN

DESIGNATED PROJECTS (DP)

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

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

WORKS CONTRACT	DESIGNATED PROJECT INVOLVED	CONSTRUCTION COMMENCEMENT
CEDD CONTRACT NO. HK/2009/01	DP1, DP3, DP6	APRIL 2010
CEDD CONTRACT NO. HK/2009/02	DP1, DP3, DP5	APRIL 2010
CEDD CONTRACT 3	DP1, DP3	END 2011
CEDD CONTRACT 4	DP1, DP3	END 2011
CEDD CONTRACT 5	DP2	2015
HyD CONTRACT NO. HY/2009/11	DP3	18 MARCH 2010
HyD CONTRACT NO. HY/2009/15	DP1, DP3	SEPTEMBER 2010
HyD CONTRACT NO. HY/2009/18	DP1	OCTOBER 2010
HyD CONTRACT NO. HY/2009/19	DP1	NOVEMBER 2010
HyD CONTRACT 12	DP1, DP3	MID 2013

土木工程拓展署
Civil Engineering and Development Department

WAN CHAI DEVELOPMENT PHASE II

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

LOCATIONS OF WATER QUALITY MONITORING STATIONS

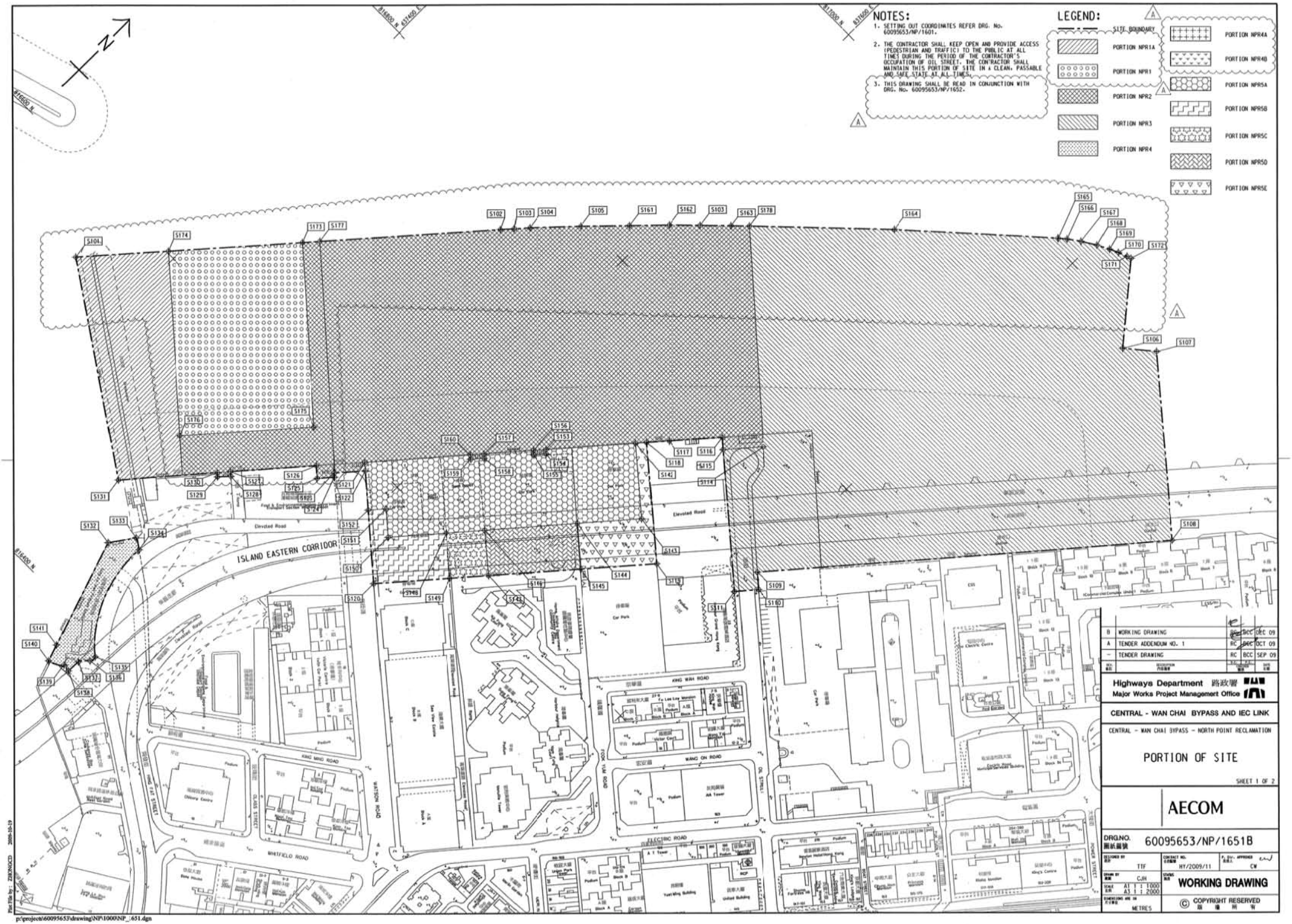
AECOM

DRG NO. 60041297/C5/SK001

SCALE A1 1:20000

UNITS METRES

PATH: p:\projects\60041297\DRAWING\SKETCH\C5\SKETCH 001.dgn


NOTES:
1. SETTING OUT COORDINATES REFER DRG. No. 60095653/NP/1601.
2. THE CONTRACTOR SHALL KEEP OPEN AND PROVIDE ACCESS (PEDESTRIAN AND TRAFFIC) TO THE PUBLIC AT ALL TIMES DURING THE PERIOD OF THE CONTRACTOR'S OCCUPATION OF OIL STREET. THE CONTRACTOR SHALL MAINTAIN THIS PORTION OF SITE IN A CLEAN, PASSABLE AND SAFE STATE AT ALL TIMES.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. No. 60095653/NP/1652.
LEGEND:
SITE BOUNDARY
PORTION NPR1A
PORTION NPR1
PORTION NPR2
PORTION NPR3
PORTION NPR4
PORTION NPR4A
PORTION NPR4B
PORTION NPR5A
PORTION NPR5B
PORTION NPR5C
PORTION NPR5D
PORTION NPR5E
816600 N
817400 E
817000 N
815600 E
816400 N
ISLAND EASTERN CORRIDOR
Elevated Road
KING WAH ROAD
WANG ON ROAD
ELECTRIC ROAD
KING MING ROAD
WHITFIELD ROAD
HOI TAI ROAD
MARSH ROAD
OIL STREET
CAUSEWAY BAY TYPHOON SHELTER
Car Park
Podium
Victor Court
Yue Hing Building
United Building
Kings Centre
Metro Harbour View
Metro Centre
Cityplaza
Oilsery Centre
Data House
Hong Kong Electric Centre
Hopewell Centre
Harbour Grand Hong Kong
Island Shangri-La
Pacific Place
Admiralty Centre
Tower 1
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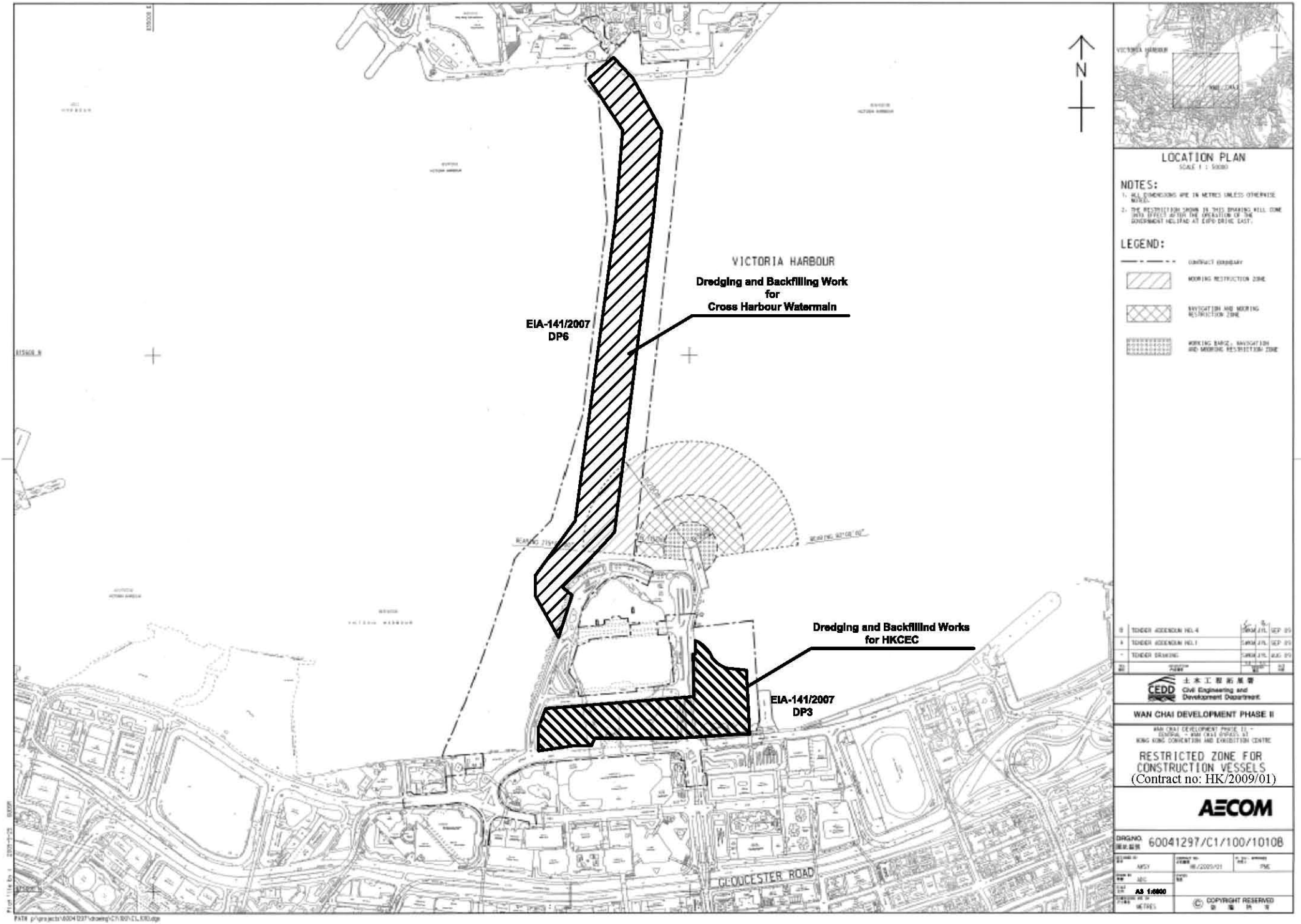
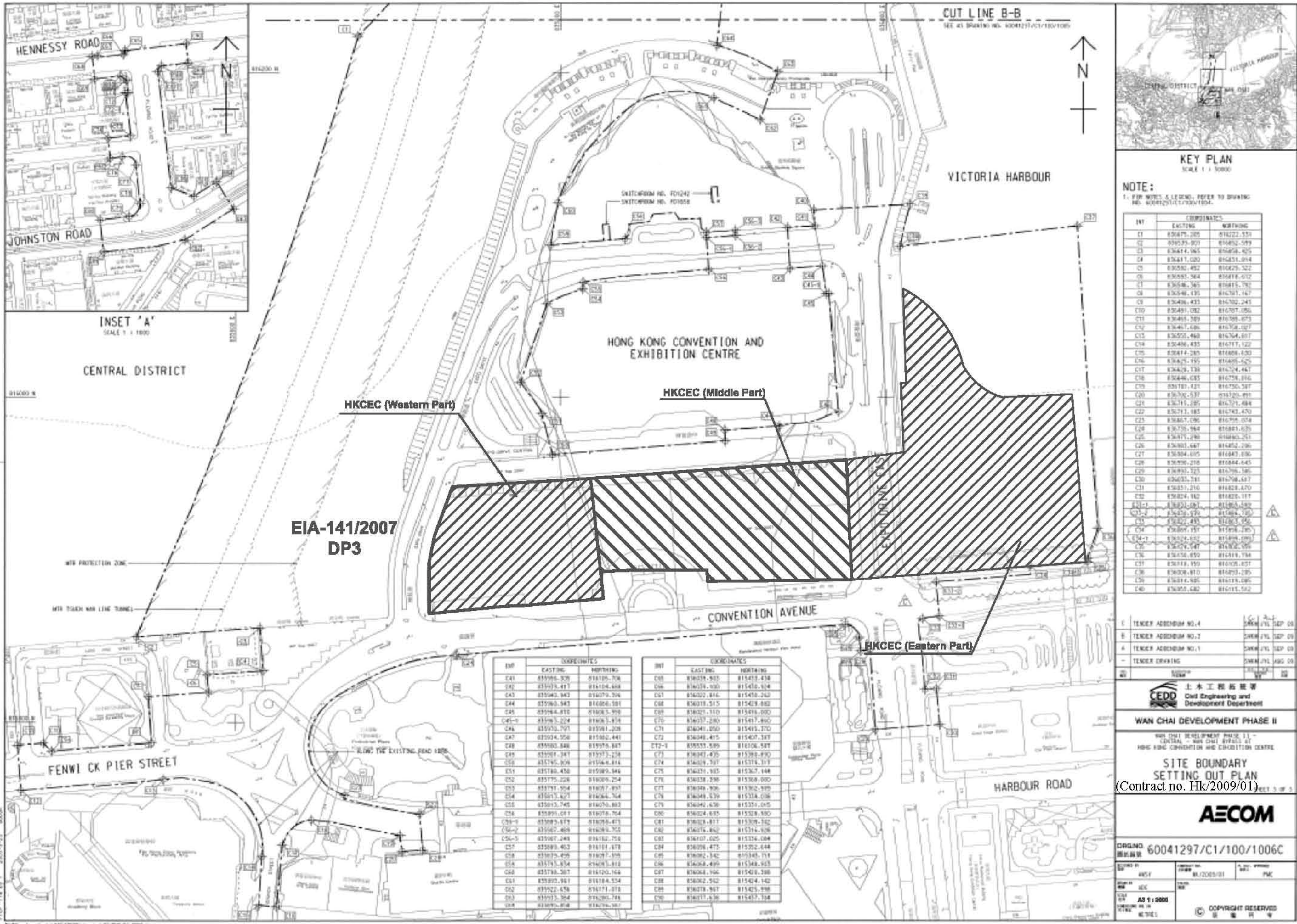
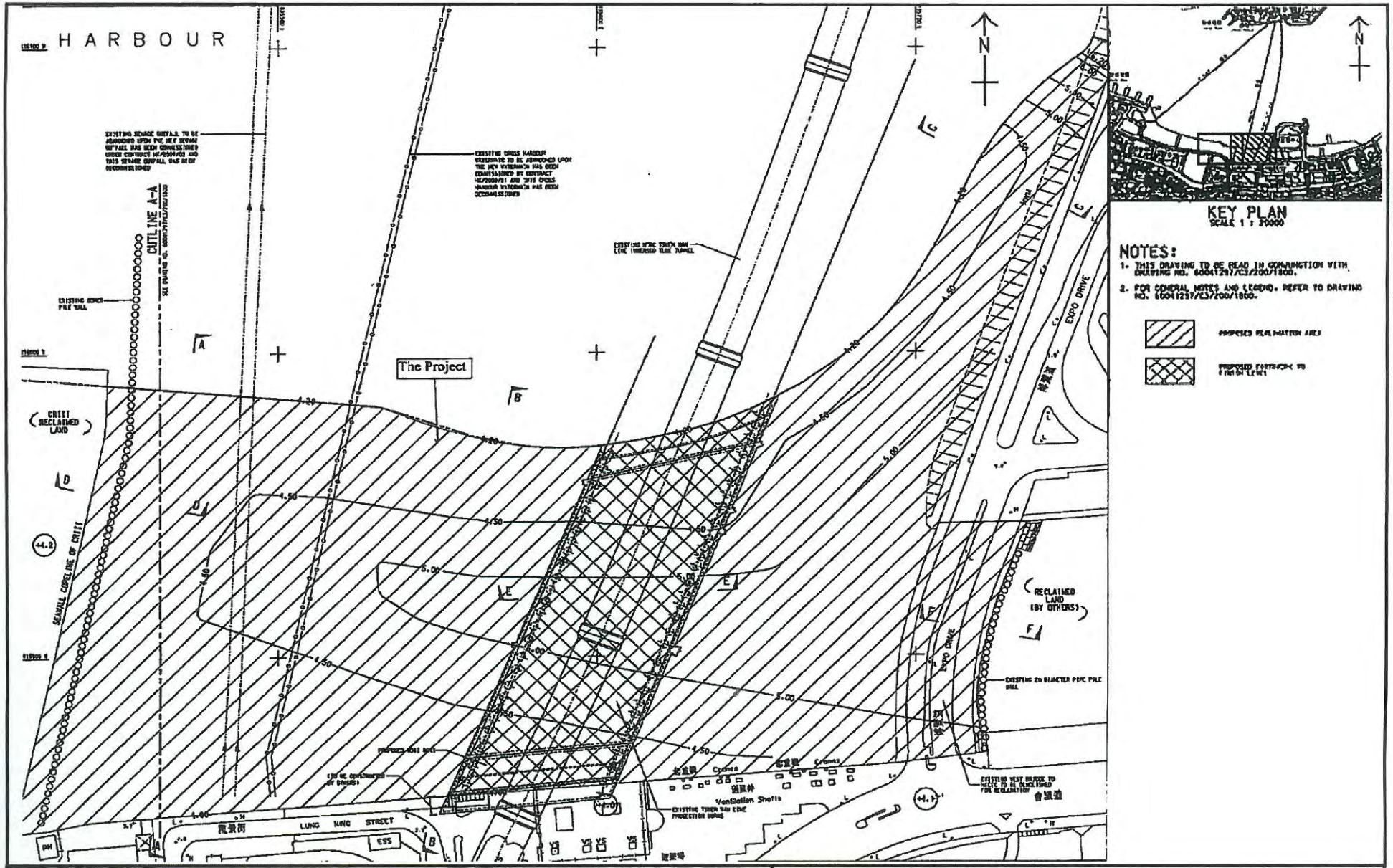
Tower 178
B WORKING DRAWING RC DEC DEC 09
A TENDER ADDENDUM NO. 1 RC DEC OCT 09
- TENDER DRAWING RC BCC SEP 09
Highways Department 路政署
Major Works Project Management Office
CENTRAL - WAN CHAI BYPASS AND IEC LINK
CENTRAL - WAN CHAI BYPASS - NORTH POINT RECLAMATION
PORTION OF SITE
SHEET 1 OF 2
AECOM
DRG.NO. 60095653/NP/1651B
DESIGNED BY TTF
CONTRACT NO. HY/2009/11
CHK'D BY CJH
APPROVED CW
STATUS WORKING DRAWING
SCALE A1 1 : 1000 A3 1 : 2000
METRES
COPYRIGHT RESERVED
Plot File by : ZXRONGCI 2009-10-19
p:\projects\60095653\drawing\NP\1000\NP_651.dgn


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



CUT LINE B-B
HENNESSY ROAD
JOHNSTON ROAD
INSET 'A'
SCALE 1 : 1000
CENTRAL DISTRICT
VICTORIA HARBOUR
HONG KONG CONVENTION AND EXHIBITION CENTRE
HKCEC (Western Part)
HKCEC (Middle Part)
HKCEC (Eastern Part)
EIA-141/2007
DP3
MTR PROTECTION ZONE
CONVENTION AVENUE
FENWICK PIER STREET
HARBOUR ROAD
KEY PLAN
NOTE:
COORDINATES
EASTING
NORTHING
TENDER ADDENDUM NO.4
TENDER ADDENDUM NO.3
TENDER ADDENDUM NO.1
TENDER DRAWING
CEDD
土木工程拓展署
Civil Engineering and Development Department
WAN CHAI DEVELOPMENT PHASE II
SITE BOUNDARY
SETTING OUT PLAN
(Contract no. Hk/2009/01)
AECOM
DRG.NO. 60041297/C1/100/1006C
A3 1:2000
COPYRIGHT RESERVED

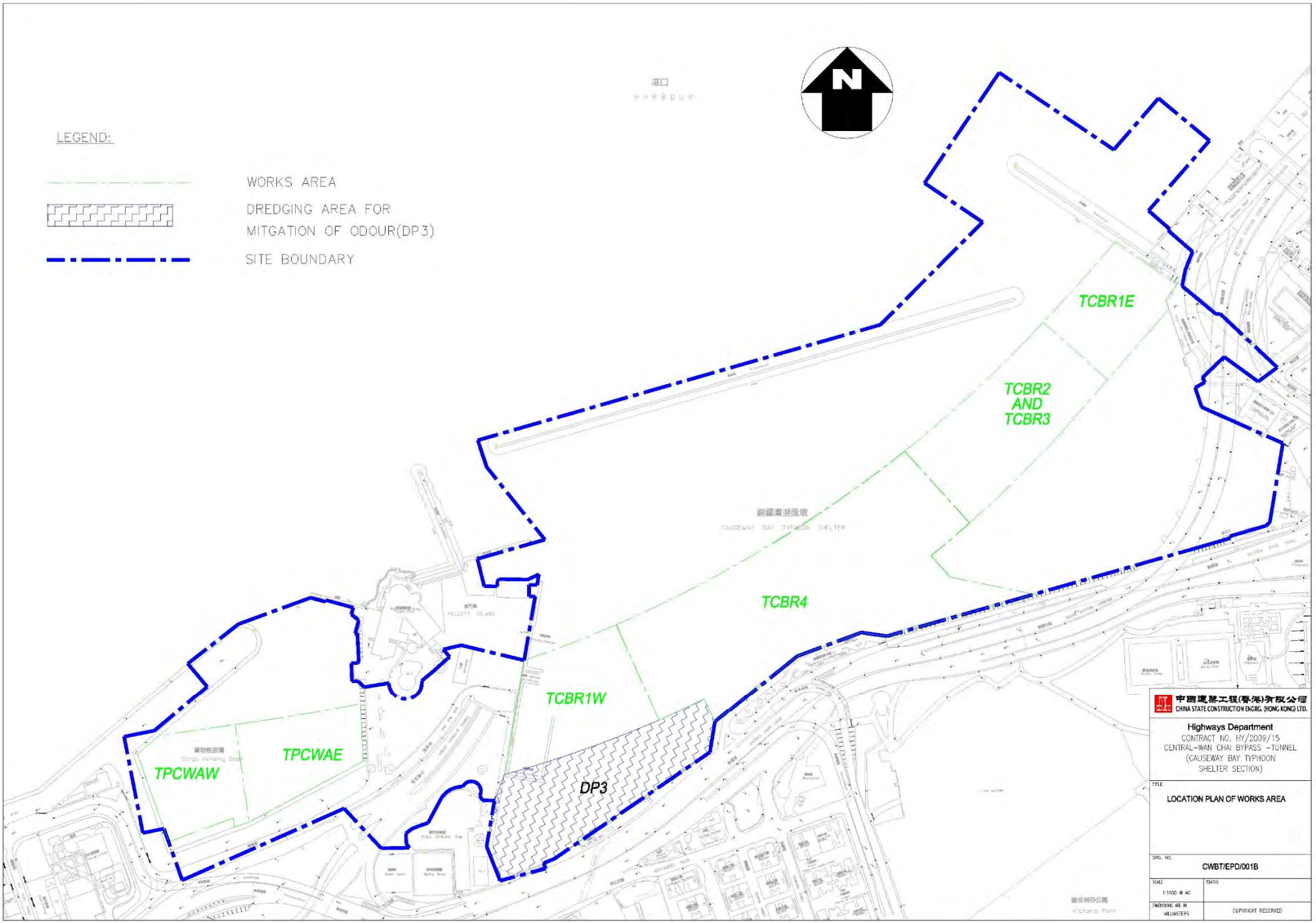


Project Title: Wan Chai Development Phase II – Central Wan Chai Bypass at Wan Chai West (Contract No. HK/2012/08) – Marine Works
工程項目名稱: 灣仔發展計劃第二期 - 中環灣仔繞道-灣仔西段(合約編號:HK/2012/08)-海事工程
Environmental Permit No. : FEP-06/356/2009
環境許可證編號 : FEP-06/356/2009

EIAO Ordinance Register Office EIAO DPD 環境影響評估條例登記冊

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)


LEGEND:
WORKS AREA
DREDGING AREA FOR MITGATION OF ODOUR(DP3)
SITE BOUNDARY
N
TCBR1E
TCBR2 AND TCBR3
TCBR4
TCBR1W
DP3
TPCWAE
TPCWAW
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGRG. (HONG KONG) LTD.
Highways Department
CONTRACT NO. HY/2009/15
CENTRAL-WAN CHAI BYPASS -TUNNEL (CAUSEWAY BAY TYPHOON SHELTER SECTION)
TITLE
LOCATION PLAN OF WORKS AREA
DRG. NO.
CWBT/EPD/001B
SCALE
1:1000 @ A0
STATUS
DIMENSIONS ARE IN MILLIMETERS
COPYRIGHT RESERVED

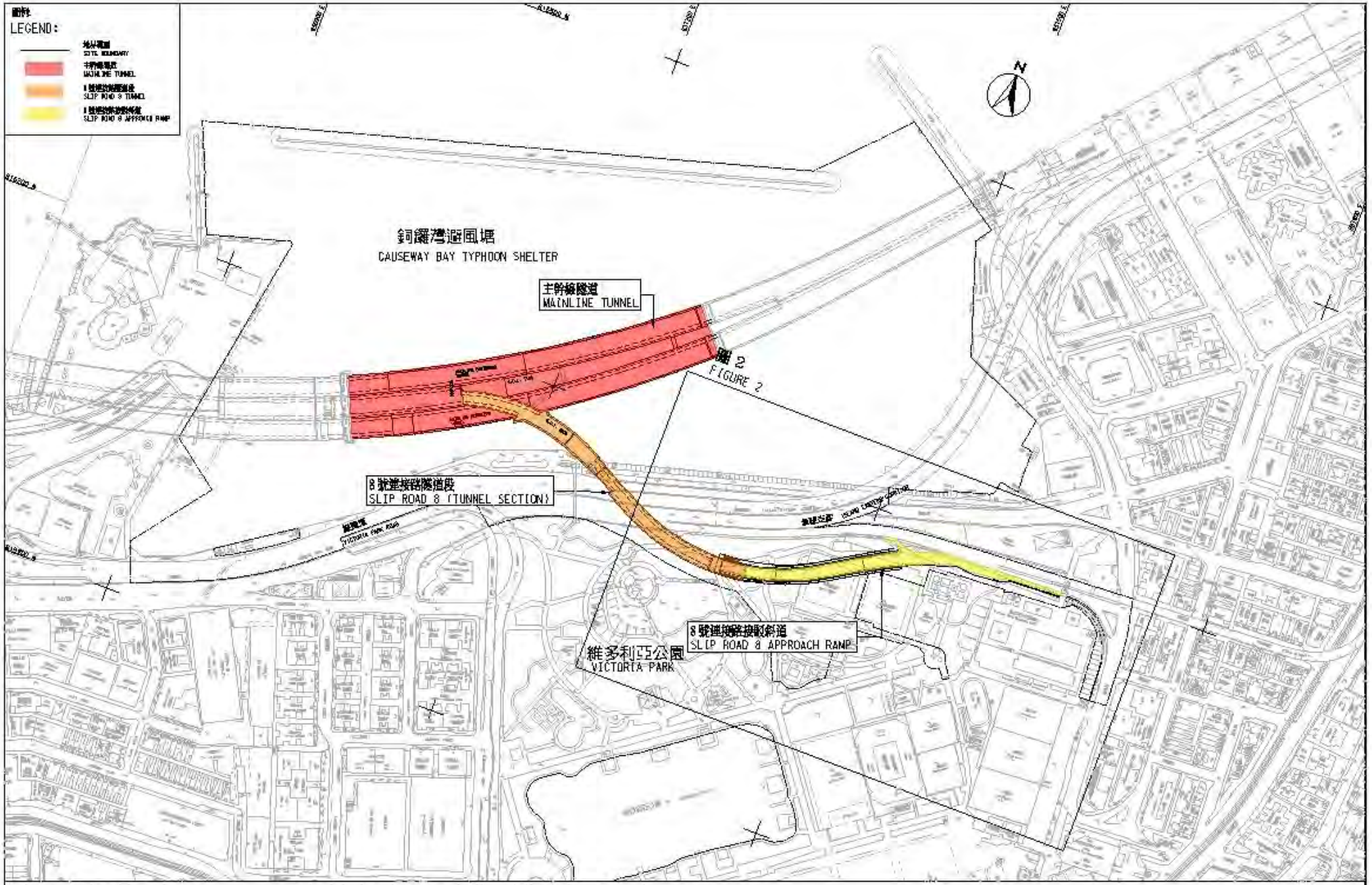


圖1- 合約編號 HY/2010/08中環灣仔繞道-8號連接路段隧道

SCALE 1 : 3000

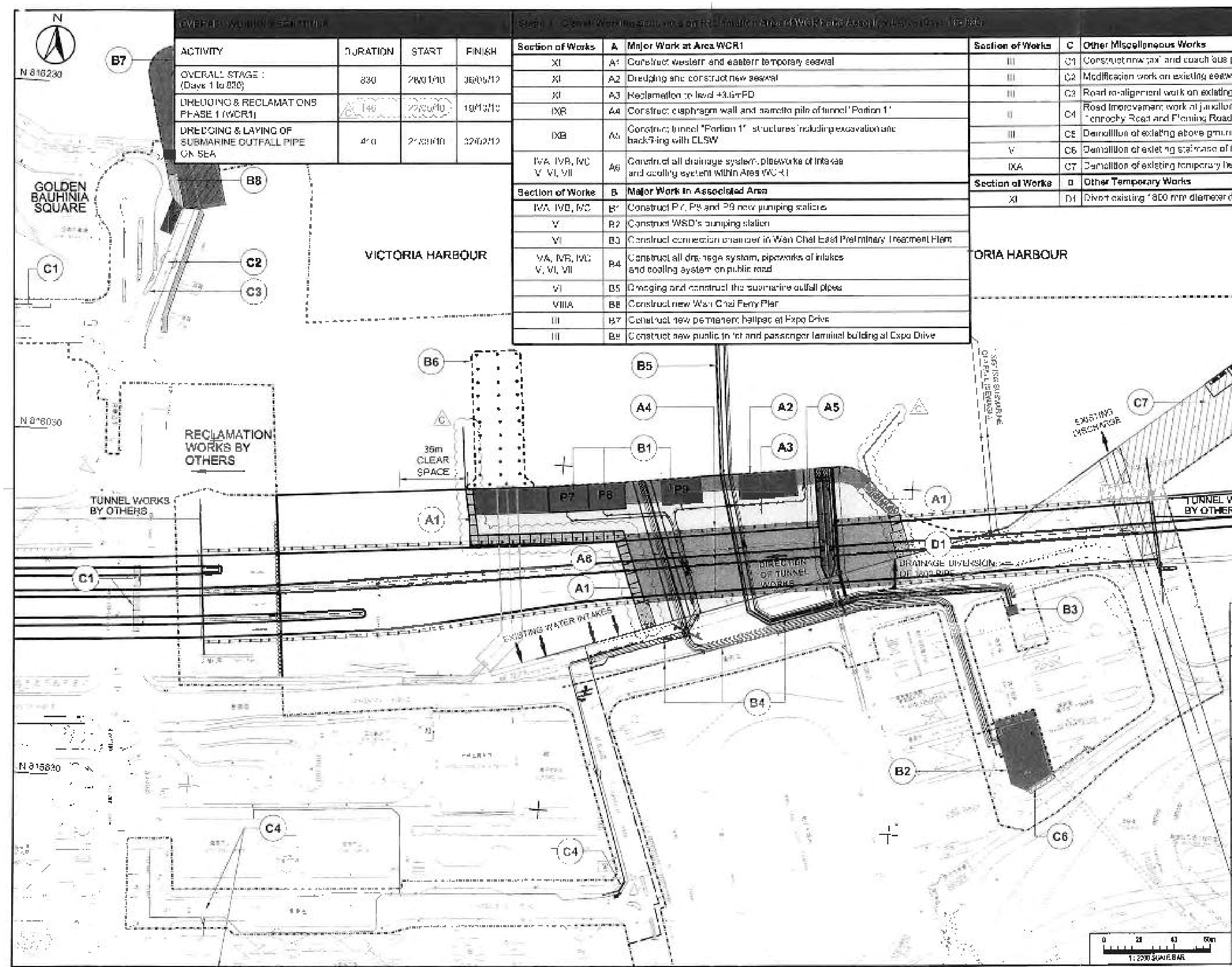
FIGURE 1 - CONTRACT NO. HY/2010/08 - CENTRAL - WAN CHAI BYPASS - TUNNEL (SLIP ROAD 8 SECTION)

T:\HY_2010_08\Misc\ARE\Docs\Figure for Website\T2 Figure 1.dgn 08-Apr-13

ACTIVITY	DURATION	START	FINISH
OVERALL STAGE : (Days 1 to 830)	830	26/01/10	30/05/12
DREDGING & RECLAMATIONS PHASE 1 (WCR1)	146	22/05/10	19/10/10
DREDGING & LAYING OF SUBMARINE OUTFALL PIPE ON SEA	410	21/09/10	02/02/12

Section of Works	A	Major Work at Area WCR1
XI	A1	Construct western and eastern temporary seawall
XI	A2	Dredging and construct new seawall
XI	A3	Reclamation to level +3.5mPD
IXB	A4	Construct diaphragm wall and barrette pile of tunnel "Portion 1"
IXB	A5	Construct tunnel "Portion 1" structures including excavation and backfilling with CLSW
IVA, IVB, IVC V, VI, VII	A6	Construct all drainage system, pipeworks of intakes and cooling system within Area WCR1
Section of Works	**B**	**Major Work in Associated Area**
IVA, IVB, IVC	B1	Construct P7, P8 and P9 new pumping stations
V	B2	Construct WSD's pumping station
VI	B3	Construct connection chamber in Wan Chai East Preliminary Treatment Plant
VA, IVB, IVC V, VI, VII	B4	Construct all drainage system, pipeworks of intakes and cooling system on public road
VI	B5	Dredging and construct the submarine outfall pipes
VIIIA	B6	Construct new Wan Chai Ferry Pier
III	B7	Construct new permanent helipad at Expo Drive
III	B8	Construct new public toilet and passenger terminal building at Expo Drive

Section of Works	C	Other Miscellaneous Works
III	C1	Construct new taxi and coach bus parking space at 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 / Fenwick Road and Fleming Road / Gloucester Road
III	C5	Demolition of existing above ground structure at Expo Drive
V	C6	Demolition of existing staircase of footbridge at Wan Shing Street
IXA	C7	Demolition of existing temporary helipad at ex-PCWA
Section of Works	**D**	**Other Temporary Works**
XI	D1	Divert existing 1800 mm diameter drain pipe



REV	DATE	DESCRIPTION
C	12/05/2010	TEMPORARY SEAWALL LAYOUT REVISED
B	11/05/2010	
A	07/04/2010	

CLIENT

ENGINEER'S REPRESENTATIVE

CONTRACTOR

CHUN WO - CRCC JOINT VENTURE

PROJECT

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

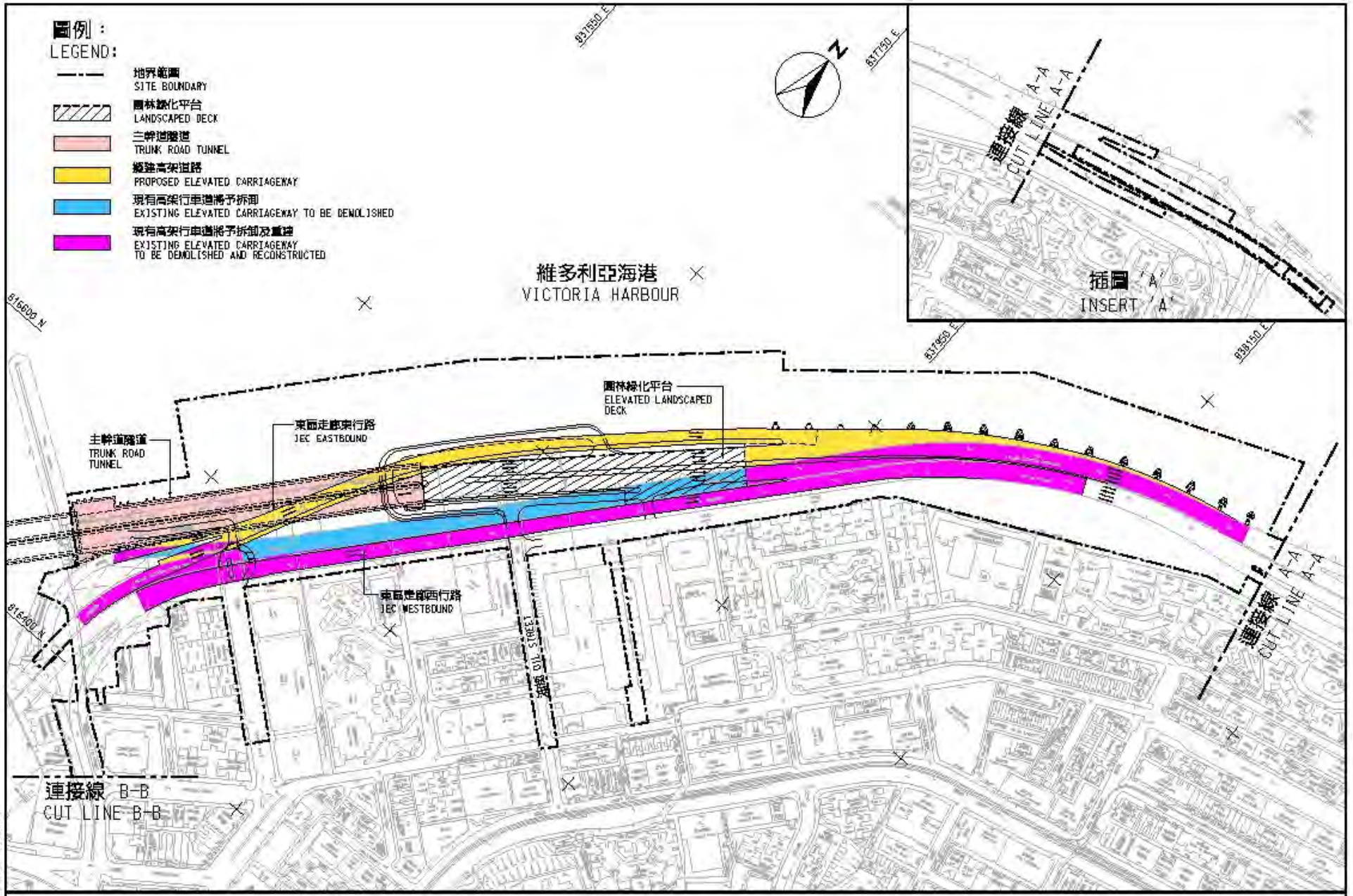
DRAWING TITLE

DETAILED WORKS SCHEDULE AND LOCATION PLAN - STAGE I

	DESIGN	DRAWN	CHECKED
INITIAL	-	N.G.C.H.	-
DATE	-	07/04/2010	-

DRAWING NO. CWCRJV/HK200902/SK0031 REV C

SCALE 1:2000 (A3)



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

Plotted by: ZUUL_NL 2011-1-12

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Figure 2.2

Project Organization Chart

Project Organization Chart

Project Proponent

Civil Engineering & Development Department

Mr. Stephen Lo
Senior Engineer
Tel: 2231 4442
Fax: 2577 5040

Project Proponent

Highways Department

Mr. Eddy Wu
Senior Engineer
Tel: 2762 3508
Fax: 2714 5289

Environmental Protection Department

Mr. Billy Ma
Environmental Protection Officer
Tel: 2835 2390
Fax: 2591 0558

Engineer's Representative for WDII

AECOM

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

Engineer's Representative for CWB

AECOM

Mr. Peter Poon
Principal Resident Engineer
Tel: 3922 8332
Fax: 3529 2829

Independent Environmental Checker

Ramboll Environ Hong Kong Limited

Mr. David Yeung
Independent Environmental Checker
Tel: 3465 2888
Fax: 3565.2899

HK/2009/01 Contractor

Chun Wo – Leader JV

Mr.Andy Yu
Site Agent
Tel: 2162 9909 Fax: 2634 1626

HK/2009/02 Contractor

Chun Wo – CRGL JV

Mr. K.K. Yuen
Site Agent
Tel: 3658 3002 Fax: 2827 9996

HK/2012/08 Contractor

China State - Leader JV

Mr. Keith Tse
Site Agent
Tel: 9037 1839 Fax: 2877 1522

HY/2009/15 Contractor

China State Co. Engineering Ltd.
Mr. K C Cheung
Project Director
Tel: 2823 7813
Fax: 2865 5229

HY/2009/19 Contractor

Chun Wo- CRGL JV

Mr. David Lau
Project Manager
Tel: 3758 8879
Fax: 2570 8013

HY/2010/08 Contractor

China State Construction Engineering (HK) Ltd.

Mr. Chan Ying Lun
Project Manager
Tel: 3418 3001
Fax: 2566 8061

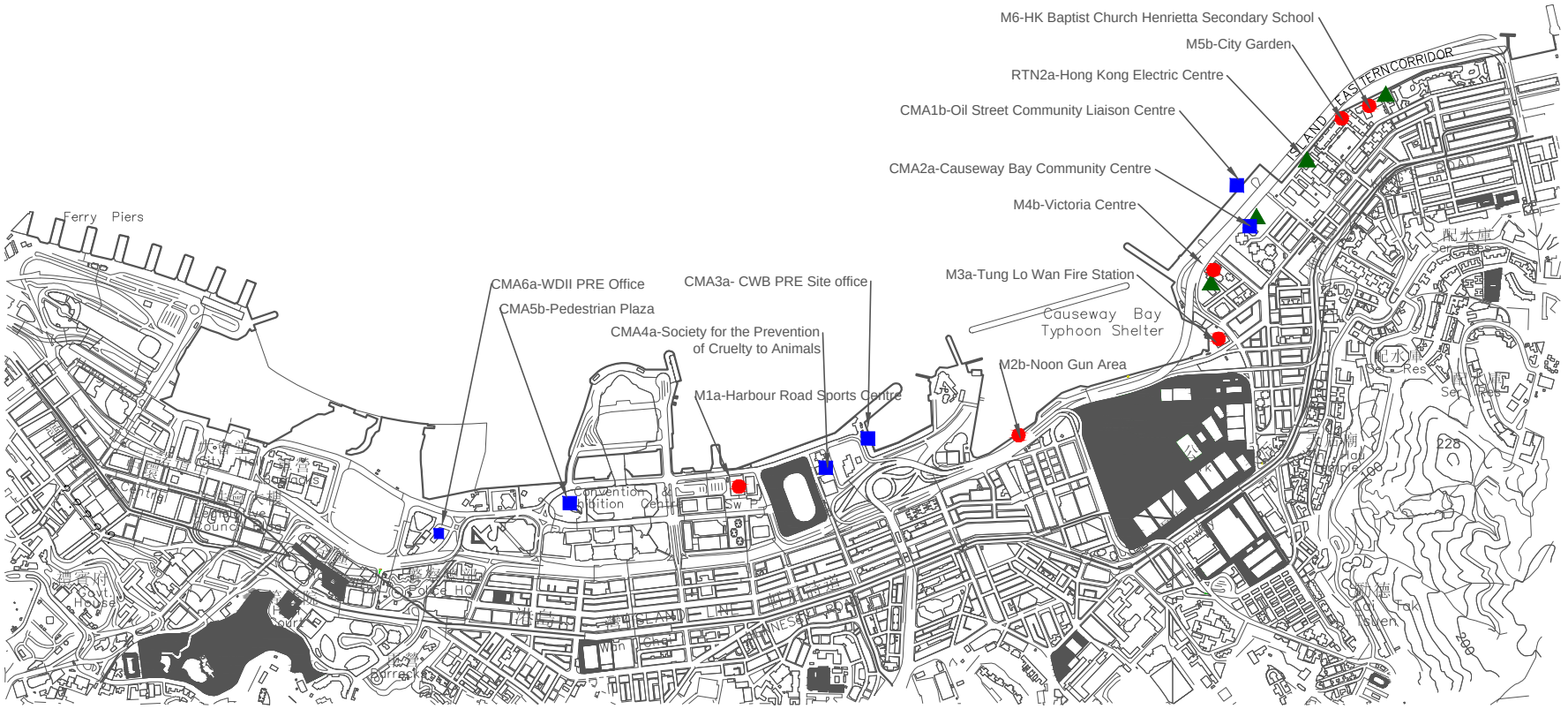
Environmental Team

Lam Geotechnics Limited

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

Figure 4.1

Locations of Monitoring Stations



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

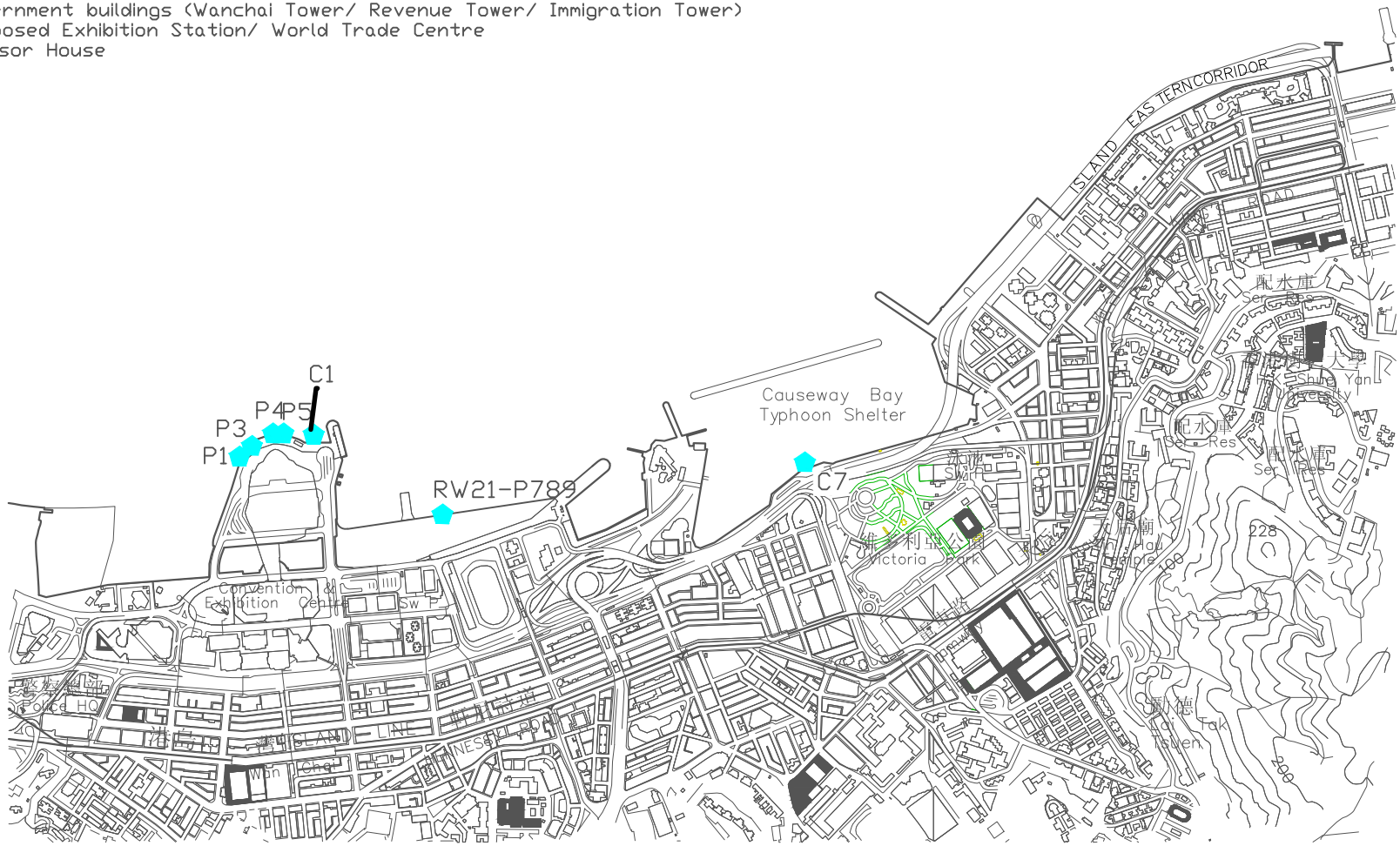


FIGURE	LOCATIONS OF WATER QUALITY MONITORING STATIONS

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

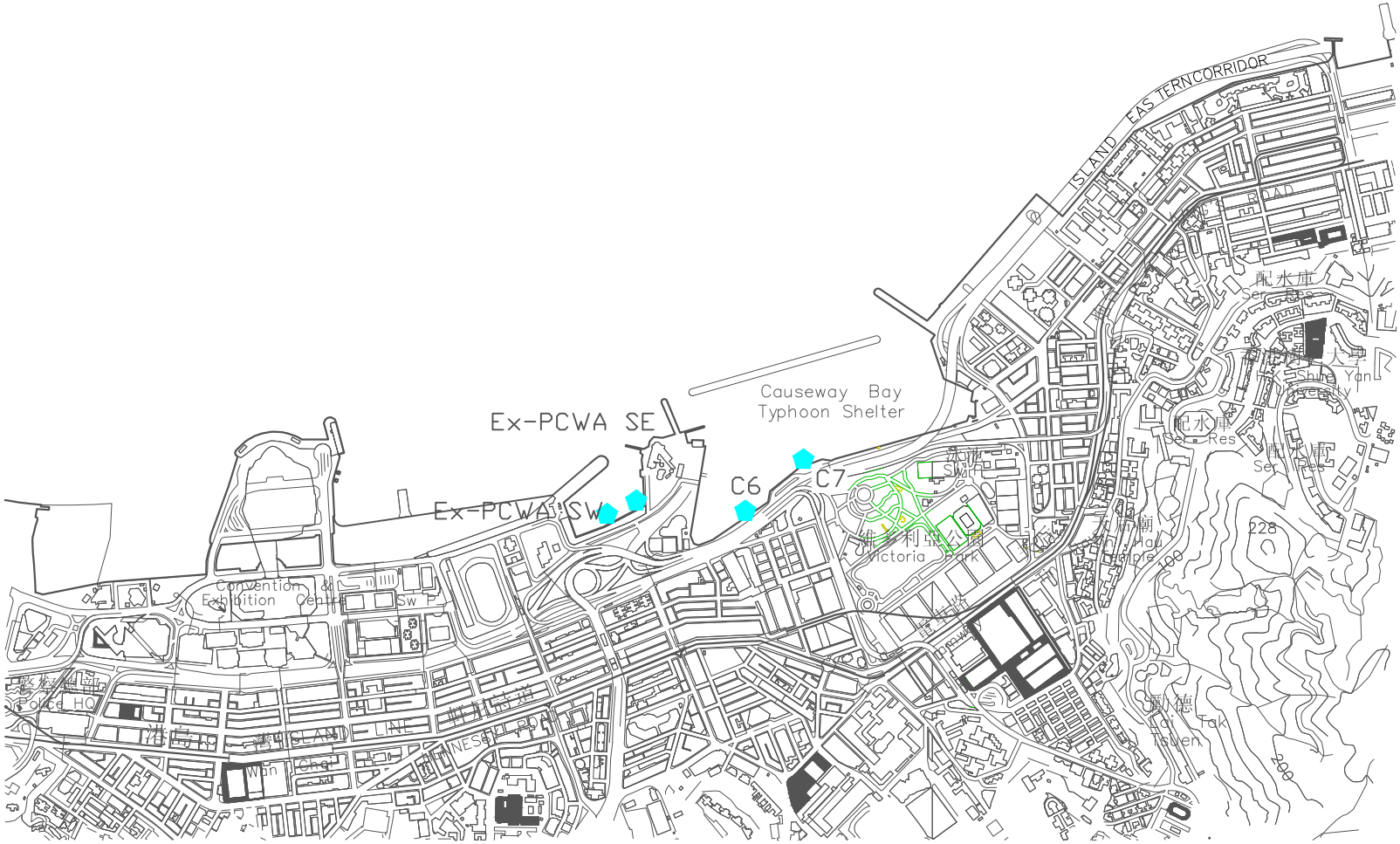


FIGURE	LOCATIONS OF ENHANCE DO MONITORING STATIONS

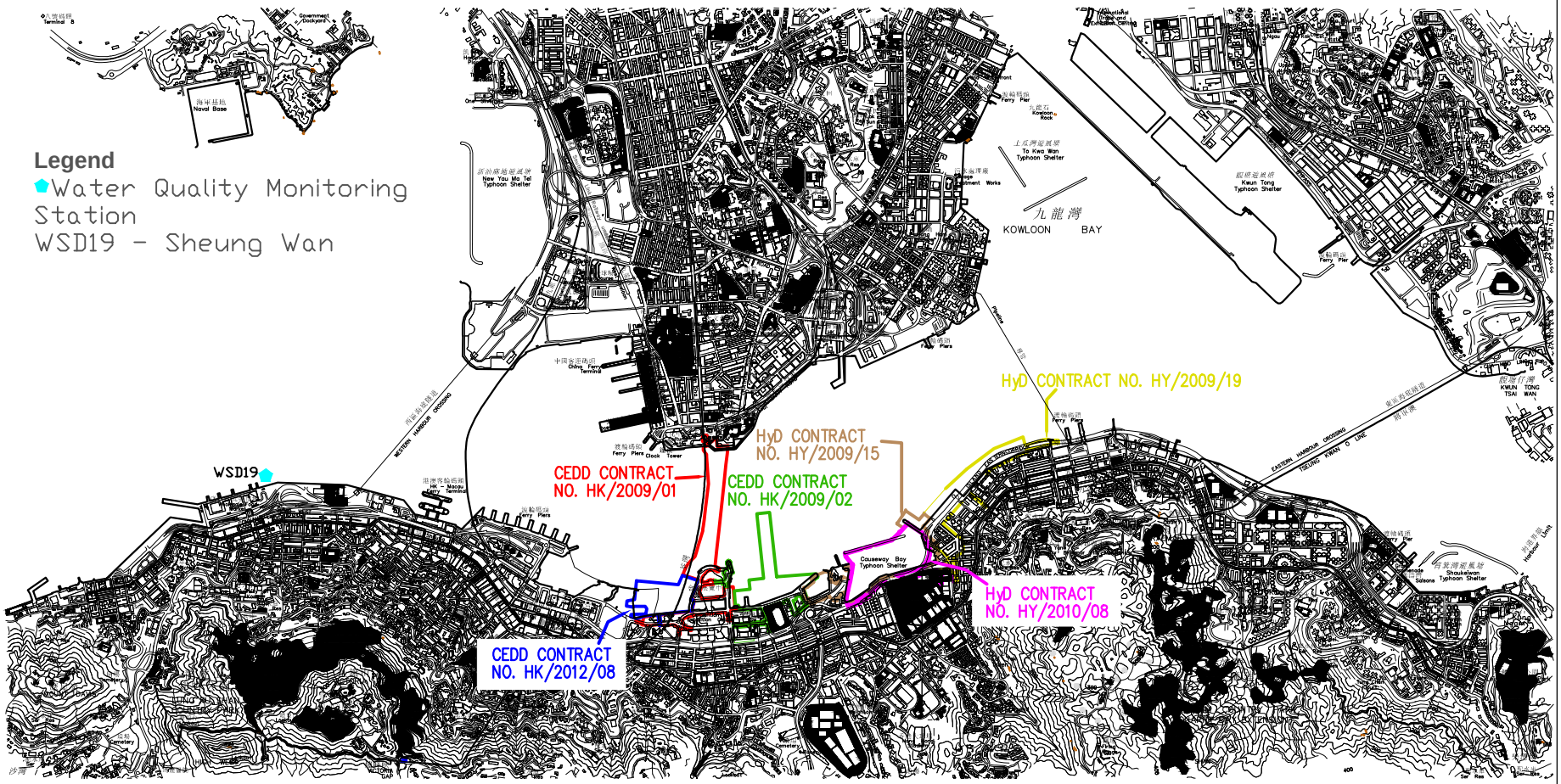


FIGURE	LOCATIONS OF WATER QUALITY MONITORING STATIONS

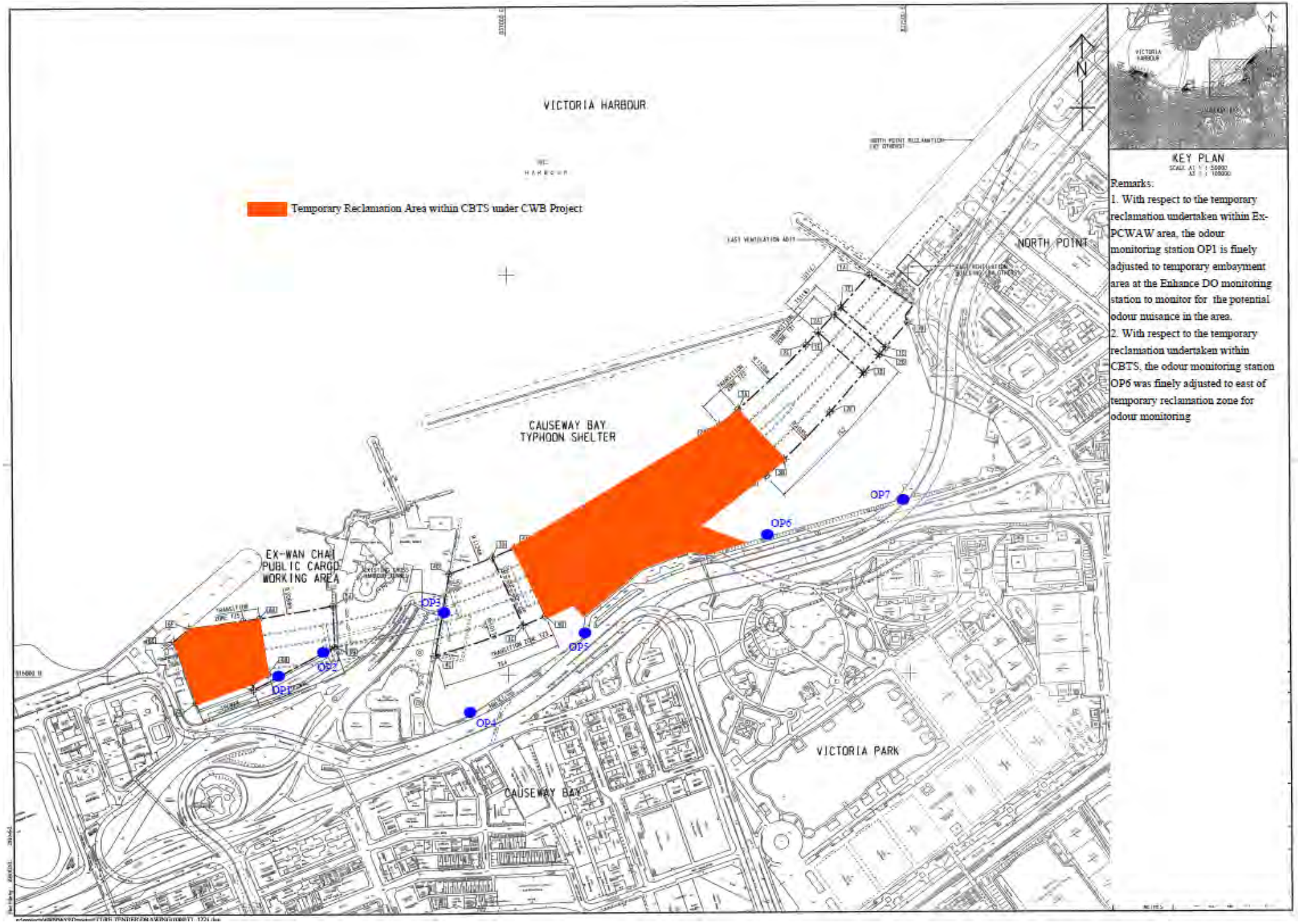


Figure: Locations of Odour Patrol Monitoring

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								
For the Whole Project								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. • Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition; • Watering during excavation and material handling; • Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	Work site / during construction	Contractor		√			

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

[1] CEDD will identify an implementation agent.

[2] CEDD will identify an implementation agent.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.10.2	Monthly (from July to September) monitoring of odour impacts, for a period of 5 years, is proposed during the operational phase of the Project to ascertain the effectiveness of the Enhancement Package over time, and to monitor any on-going odour impacts at the ASRs.	Planned ASRs (CBTS Breakwater)/First 5-year period of operation phase	CEDD[1]			√		EIAO-TM
For DP1 – CWB (Within the Project Boundary)								
S3.6.53 – S3.6.54	The design parameters of the East and Central Ventilation Buildings as set in Tables 3.10 and 3.11	East and Central Ventilation Buildings / During operation of the Trunk Road	HyD			√		
S3.10.2	Air quality monitoring for the operation performance of the East Ventilation Building and associated East Vent Shaft will be conducted.	East Vent Shaft / During operation of the East Ventilation Building and associated East Vent Shaft	HyD			√		EIAO-TM

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

Table A13.2 Implementation Schedule for Noise Control

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.9.4	Good Site Practice: • Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program. • Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program. • Mobile plant, if any, shall be sited as far away from NSRs as possible. • Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum. • Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. • Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP1 – CWB (Within the Project Boundary)								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.3 – S4.8.5	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks: • Slip road 8 tunnel • Construction of diaphragm wall and substructures of the tunnel approach ramp • Excavation • Construction of slabs • Backfill • Demolition and construction of substructures for the IEC • Demolition works of existing piers and crossheads of the marine section of the existing IEC Use of PME grouping for the following tasks: • At-grade road construction • Substructure for IECL connection	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP2 – WDII Major Roads (Road P2)								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks: • Temporary road diversion • Resurfacing • At-grade roadwork	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP3 – Reclamation Works								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following task: • Filling behind seawall • Seawall construction	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
For DP5 – Wan Chai East Sewage Outfall								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: • Submarine pipelines (marine section) Use of quiet powered mechanical equipment and movable noise barrier for the following tasks: • Installation of a new pipeline (land section)	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
For DP6 – Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui								
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment for the following tasks: • Submarine pipelines (marine section) •	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8.14 – S4.8.18	• For Existing NSRs • about 235m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC • about 230m length of noise semi-enclosure with transparent panel covering the main carriageways (eastbound and westbound) of the CWB and IEC • about 135m length of 5.5m high cantilevered noise barrier with 3m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC • about 95m length of 5.5m high cantilevered noise barrier with 1m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC • about 350m length of 3.5m high vertical noise barrier with transparent panel on the eastbound slip road to the IEC • low noise road surfacing for the trunk road (except tunnel section and beneath the landscaped deck at the eastern portal area) with speed limit of 70 km/hour	Near North Point / Before commencement of operation of road project	HyD	√	√	√		EIAO-TM
	For Future/Planned NSRs • about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC	In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.	HyD	√	√ #			

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	• The openable windows of the temple, if any, should be orientated so as to avoid direct line of sight to the existing Victoria Park Road as far as practicable.	Near Causeway Bay Fire Station / During detailed design of the re-provisioned Tin Hau Temple	Project Proponent for the re-provisioned Tin Hau Temple	√				

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

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

Table A13.3 Implementation Schedule for Water Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For DP3 – Reclamation Works, DP5 (Wan Chai East Sewage Outfall), DP6 (Cross-Harbour Water Mains from Wan Chai to Tsim Sha Tsui), DP1 – CWB (within the Project Boundary)								
S5.8	A phased reclamation approach is planned for the WDII. Containment of fill within each of the reclamation phases by seawalls is proposed, with the seawall constructed first (above high water mark) with filling carried out behind the completed seawalls. Any gaps that may need to be provided for marine access will be shielded by silt curtains to control sediment plume dispersion away from the site. Filling for seawall construction should be carried out behind the silt curtain	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8	Dredging shall be carried out by closed grab dredger for the following works: • Seawall construction in all the reclamation areas; • Construction of the CWB Tunnel • Construction of the proposed WSD water mains; and • Construction of the proposed Wan Chai East sewage outfall pipelines.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	Dredging for the Wan Chai East sewage outfall pipelines shall not be carried out concurrently with the following activities: • Dredging along the proposed cross-harbour water mains; • Dredging along the seawall in the Wan Chai Reclamation (WCR) zone (area between HKCEC Extension and PCWA).	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	The water body behind the temporary reclamations within the Causeway Bay typhoon shelter shall not be fully enclosed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8	As a mitigation measure, to avoid the accumulation of water borne pollutants within the temporary embayment between CRIII and HKCEC1, an impermeable barrier, suspended from a floating boom on the water surface and extending down to the seabed, will be erected by the contractor before the HKCEC1 commences. The barrier will channel the stormwater discharge flows from Culvert L to the outside of the embayment. The contractor will maintain this barrier until the reclamation works in HKCEC2W are carried out and the new Culvert L extension is constructed.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	The total dredging rates in each of the marine works zones shall not be more than the maximum production rates stated in the table below. These are the production rates without considering the effect of silt curtain.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

Reclamation Area		Maximum Dredging Rate		Maximum Dredging Rate (m^3 per week)
		m^3 per day	m^3 per hour (for 16 hrs per day)	
Dredging along seawall or breakwater				
North Point Shoreline Zone (NPR)		6,000	375	42,000
Causeway Bay Shoreline Zone	TBW	1,500	94	10,500
	TCBR	6,000	375	42,000
PCWA Zone		5,000	313	35,000

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<table><tr><td colspan="2">Wan Chai Shoreline Zone (WCR)</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td rowspan="2">HKCEC Shoreline Zone (HKCEC)</td><td>HKCEC Stage 1 & 3</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td>HKCEC Stage 2</td><td>6,000</td><td>375</td><td>42,000</td></tr><tr><td colspan="2">Cross Harbour Water Mains</td><td>1,500</td><td>94</td><td>10,500</td></tr><tr><td colspan="2">Wan Chai East Submarine Sewage Pipeline</td><td>1,500</td><td>94</td><td>10,500</td></tr></table> Note: 1,500 m^3 per day shall be applied for construction of the western seawall of WCR1.							
S5.8, Figure 5.3	Dredging along the seawall at WCR1 shall be undertaken initially at 1,500m^3 per day for construction of the western seawall (which is in close proximity of the WSD intake), followed by partial seawall construction at the western seawall (above high water mark) to protect the adjacent intakes as much as possible from further dredging activities.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	For dredging within the Causeway Bay typhoon shelter, seawall shall be partially constructed to protect the nearby seawater intakes from further dredging activities. For example, at TCBR1W, the southern and eastern seawalls shall be constructed first (above high water mark) so that the seawater intakes at the inner water would be protected from the impacts from the remaining dredging activities along the northern boundary.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	Silt curtains shall be deployed around the closed grab dredgers during seawall dredging and seawall trench filling in the areas of HKCEC, WCR, TCBR and NP.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO
S5.8, Figure 5.3	Silt screens shall be applied to seawater intakes at interim construction stages as stated below: <table><tr><th>Interim Construction Stage</th><th>Location of Applications</th></tr><tr><td>**Scenario 2A** in early 2009 with concurrent dredging activities at HKCEC, WCR, TPCWA, TBW, NP and Water Mains Zone</td><td>**WSD saltwater intakes** at Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai, Kowloon South **Cooling water intakes** for Hong Kong Convention and Exhibition Centre Extension, Hong Kong Convention and Exhibition Centre Phase I, Telecom House / HK Academy for Performing Arts / Shun On Centre, Wan Chai Tower / Revenue Tower / Immigration Tower and Sun Hung Kai Centre</td></tr><tr><td>**Scenario 2B** in late 2009/2010 with concurrent dredging activities at Sewage Pipelines Zone and TCBR.</td><td>**WSD saltwater intakes** at Sheung Wan, Wan Chai **Cooling water intakes** for Queensway Government Offices, Excelsior Hotel, World Trade Centre and Windsor House.</td></tr><tr><td>**Scenario 2C** in 2011 with concurrent dredging activities at HKCEC and TCBR.</td><td>**WSD saltwater intakes** at Sheung Wan and Reprovisioned WSD Wan Chai saltwater intake. **Cooling water intakes** for MTR South, Excelsior Hotel & World Trade Centre and reprovisioned Windsor House.</td></tr></table>	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	Other mitigation measures include: • mechanical grabs, if used, shall be designed and maintained to avoid spillage and sealed tightly while being lifted. For dredging of any contaminated mud, closed watertight grabs must be used; • all vessels shall be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; • all hopper barges and dredgers shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material; • construction activities shall not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; • loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water. Barges or hoppers shall not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; and	Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	• before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.							
S5.8	Silt screens are recommended to be deployed at the seawater intakes during the reclamation works period. Installation of silt screens at the seawater intake points may cause a potential for accumulation and trapping of pollutants, floating debris and refuse behind the silt screens and may lead to potential water quality deterioration at the seawater intake points. Major sources of pollutants and floating refuse include the runoff and storm water discharges from the nearby coastal areas. As a mitigation measure to avoid the pollutant and refuse entrapment problems and to ensure that the impact monitoring results are representative, regular maintenance of the silt screens and refuse collection shall be performed at the monitoring stations at regular intervals on a daily basis. The Contractor shall be responsible for keeping the water behind the silt screen free from floating rubbish and debris during the impact monitoring period.	Work site / During the construction period	Contractor		√			EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	Dredging of contaminated mud is recommended as a mitigation measures for control of operational odour impact from the Causeway Bay typhoon shelter. In recognition of the potential impacts caused by dredging activities close to the seawater intakes, only 1 small close grab dredger shall be operated within the typhoon shelter (for the dredging to mitigate odour impact) at any time to minimize the potential impact. Double silt curtains shall be deployed to fully enclose the closed grab dredger during the dredging operation. In addition, an impermeable barrier, suspended from a floating boom on the water surface and extended down to the seabed, shall be erected to isolate the adjacent intakes as much as possible from dredging activities. For example, if dredging is to be carried out at the southwest corner of the typhoon shelter, physical barriers shall be erected to west of the cooling water intake for Excelsior Hotel so that the intake would be shielded from most of the SS generated from the dredging operation to the west of the intake. For area in close proximity of the cooling water intake point, the dredging rate shall be reduced as much as practicable. Site audit and water quality monitoring shall be carried out at the seawater intakes during the dredging operations. Daily monitoring of SS at the cooling water intake shall be carried out, and 24 hour monitoring of turbidity at the intakes shall be implemented during the dredging activities. If the monitoring results indicate that the dredging operation has caused significant changes in water quality conditions at the seawater intakes, appropriate actions shall be taken to stop the dredging and mitigation measures such as slowing down the dredging rate shall be implemented.	Causeway Bay typhoon shelter/Implementation of harbour-front enhancement.	CEDD[3]		√			WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
For the Whole Project								
S5.8	• Construction Runoff and Drainage • use of sediment traps, wheel washing facilities for vehicles leaving the site, and adequate maintenance of drainage systems to prevent flooding and overflow; • Permanent drainage channels shall incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94; • a sediment tank constructed from pre-formed individual cells of approximately 6 - 8 m3 capacity can be used for settling ground water prior to disposal; • oil interceptors shall be provided in the drainage system for the tunnels and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor shall have a bypass to prevent flushing during periods of heavy rain; • precautions and actions to be taken when a rainstorm is imminent or forecast, and during or after rainstorms. Particular attention shall be paid to the control of any silty surface runoff during storm events; • on-site drainage system shall be installed prior to the commencement of other construction activities. Sediment traps shall be installed in order to minimise the sediment loading of the effluent prior to discharge; • All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge shall be adequately designed for the controlled release of storm flows. All sediment control measures shall be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage shall be reinstated to its original condition when the construction work is finished or the temporary diversion is no longer	• Work site / During the constructi on period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)

[3] CEDD will identify an implementation agent.

Contract no. HK/2015/01
Wan Chai Development Phase II and Central-Wanchai Bypass
- Sampling, Field Measurement and Testing Works (Stage 3)
Monthly EM&A Report

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	required. • All fuel tanks and store areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity.							
	• Minimum distances of 100 m shall be maintained between the storm water discharges and the existing or planned WSD flushing water intakes during construction phase.							
S5.8	*Sewage from Construction Work Force* Construction work force sewage discharges on site shall be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage shall be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Work site / During the construction period	Contractor		√			ProPECC PN 1/94; WPCO (TM-DSS)
S5.8	*Floating Debris and Refuse* Collection and removal of floating refuse shall be performed at regular intervals on a daily basis. The contractor shall be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.	Work site and adjacent water / During the construction period.	Contractor		√			WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.8	*Storm Water Discharges* Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned WSD flushing water intakes.	Work site and adjacent water / During the design and construction period.	Contractor	√	√			WPCO
Operation Phase								
DP1 – CWB (within the Project Boundary)								
S5.8	For the operation of CWB, a surface water drainage system would be provided to collect road runoff. The following operation stage mitigation measures are recommended to ensure road runoff would comply with the TM under the WPCO: • The drainage from tunnel sections shall be directed through petrol interceptors to remove oil and grease before being discharged to the nearby foul water manholes. • Petrol interceptors shall be regularly cleaned and maintained in good working condition. • Oily contents of the petrol interceptors shall be properly handled and disposed of, in compliance with the requirements of the Waste Disposal Ordinance. • Sewage arising from ancillary facilities of CWB (for examples, car park,	CWB/During design and operational period	HyD/TD[3]	√		√		WPCO

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

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

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

Table A13.4 Implementation Schedule for Waste Management

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.5	It will be the responsibility of the Contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, at least 3 months prior to the dredging contract being tendered							
S6.7.6	During transportation and disposal of the dredged marine sediments requiring Type 1 and Type 2 disposal, the following measures shall be taken to minimise potential impacts on water quality: • Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.							

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

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.7.13	In order to monitor the disposal of public fill and C&D waste at public filling facilities and landfills, respectively, and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team undertaking the environmental monitoring and audit work. An Independent Environment Checker shall be responsible for auditing the results of the system.	Work site / During the construction period	Contractor and Independent Environmental Checker		√			ETWB TCW No. 31/2004
S6.7.14	*Bentonite Slurry* The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage" and listed as follows: • If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis. • If the used bentonite slurry is intended to be disposed of through the public drainage system, it shall be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the Technical Memorandum of Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters. • If the used bentonite slurry is intended to be disposed to public fill reception facilities, it will be mixed with dry soil on site before disposal.	Work site / During the construction period	Contractor		√			ProPECC PN 1/94

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

Table A13.5 Implementation Schedule for Land Contamination

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								
S.12.6	• The contaminated site shall be cleaned up before commencement of site clearance and construction work at the concerned area which may disturb the ground.	A King Marine / Before commencement of construction activities at A King Marine.	Project proponent for the re-provisioned Tin Hau Temple	√				*"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops"* published by EPD, HKSAR EPD ProPECC Note No. 3/94
S7.10	During soil remediation works, the Contractor for the excavation works shall take note of the following points for excavation: • Excavation profiles must be properly designed and executed; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; • Quantities of soil to be excavated must be estimated; • It maybe necessary to split quantities of soil according to soil type, degree and nature of contamination. • Temporary storage of soil at intermediate depot or on-site	A King Marine / During soil remediation works	Contractor	√				Air Pollution Control Ordinance Noise Control Ordinance Waste Disposal Ordinance Waste Disposal (Chemical Waste) (General) Regulation

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	maybe required. The storage site shall include protection facilities for leaching into the ground. eg. Liner maybe required.							
	• Supply of suitable clean backfill materials is needed after excavation. • Care must be taken of existing buildings and utilities. • Precautions must be taken to control of ground settlement • Speed controls for vehicles shall be imposed on dusty site areas. • Vehicle wheel and body washing facilities at the site's exit points shall be established and used. The following environmental mitigation measures shall be strictly followed during the operation and/or maintenance of the CS/S facilities:							Water Pollution Control Ordinance

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	Water Quality Mitigation Measures • Stockpile of untreated soil shall be covered as far as practicable to prevent the contaminated material from leaching out. The leachate shall be discharged following the requirements of WPCO. *Waste Mitigation Measures* • Treated oversize materials will be used as filling material for backfilling within the site. Sorted materials of size smaller than 5 cm will be collected and transferred to the mixing plant for further decontamination treatment. • Stabilized soils shall be broken into suitable size for backfilling or reuse on site. • A high standard of housekeeping shall be maintained within the mixing plant area. • If necessary, there shall be clear and separated areas for stockpiling of untreated and treated materials.							

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

Table A13.6 Implementation Schedule for Marine Ecology

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project - Schedule 3 DP								
S.9.7.2	Alternative design of the Trunk Road constructed in tunnel shall be adopted to avoid permanent reclamation in CBTS and ex-PWCA Basin.	-	CEDD/HyD	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
For DP3 – Reclamation Works								
S.9.7.3	Translocation of those potentially affected coral colonies to the nearby suitable habitats such as Junk Bay is recommended. A detailed translocation plan (including translocation methodology, monitoring of transplanted corals, etc.) should be drafted and approval by AFCD during the detailed design stage of the Project.	Ex-PCWA Basin and along seawall next to a public pier which is about 250 m away from the CBTS	CEDD/HyD	√				EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.9.7.4	During dredging and filling operations, a number of mitigation measures to control water quality shall be adopted to confine sediment plume within reclamation area and protect marine fauna in proximity to the reclamation. The mitigation measures include the following: • Installation of silt curtains during dredging activities • Use of tightly-closed grab dredger • Reduction of dredging rate • Control of grab descending speed • Construction of leading edges of seawall in the early stages of the reclamation works	Work site / during construction phase	Contractor		√			EIAO TM Annex 16 (Section 8.4) & EIAO Guidance Note No. 3/2002.
	• Adoption of multiple-phase construction schedule							

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

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

Table A13.7 Implementation Schedule for Landscape and Visual

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

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

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

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

[4] CEDD will identify an implementation agent

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

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

[5] CEDD will identify an implementation agent

Appendix 4.1

Action and Limit Level

Action and Limit Level

Action and Limit Level for Noise Monitoring

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

Note 1:
- 70dB(A) and 65 dB(A) for schools during normal teaching periods and school examination periods, respectively.
- If works are to be carried out during the restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

Action and Limit Level for Air Quality Monitoring

Monitoring Location	1-hour TSP Level in $\mu g/m^3$		24-hour TSP Level in $\mu g/m^3$	
	Action Level	Limit Level	Action Level	Limit Level
CMA1b	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)	• When two documented complaint are received; or • Odour Intensity of 2 is measured from odour intensity analysis.	• 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

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533

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 ±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 responsess 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:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 15CA1203 04-01 Page 2 of 2

1, Electrical Tests

The electrical tests were perfomed 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	
	C	Pass	1.0	2.1
	Lin	Pass	2.0	2.2
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	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	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100μs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor $1/10^3$ 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.

- End -

Calibrated by: Fung Chi Yip Date: 04-Dec-2015

Checked by: Lam Tze Wai 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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533

CERTIFICATE OF CALIBRATION

Certificate No.: 16CA0413 02 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer:	B & K	B & K	B & K
Type/Model No.:	2250-L	4950	ZC0032
Serial/Equipment No.:	2722310	2698702	13318
Adaptors used:	-	-	-

Item submitted by

Customer Name:	Lam Geotechnics Limited
Address of Customer:	-
Request No.:	-
Date of receipt:	13-Apr-2016

Date of test: 09-May-2016

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	18-Apr-2017	CEPREI
Signal generator	DS 360	61227	18-Apr-2017	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1005 ± 5 hPa

Test specifications

1. The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
2. The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±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 responsess 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:** 10-May-2016 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. Tel : (852) 2873 6860
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓 Fax : (852) 2555 7533
E-mail: smec@cigismec.com Website: www.cigismec.com

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 16CA0413 02 **Page** 2 **of** 2

1, Electrical Tests

The electrical tests were perfomed 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 Uncertanity (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	
	Lin	Pass	1.6	
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	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	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100μs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor $1/10^3$ 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 Uncertanity (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.

- End -

Calibrated by: Fung Chi Yip **Date:** 09-May-2016

Checked by: J.Q. Feng **Date:** 10-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:**	**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: _____ Issue Date: 11/07/2016

Ms. Wong Po Yan, Pauline
Testing Engineer

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 Calibation:	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.

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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: _____ Issue Date: 11/07/2016

Ms. Wong Po Yan, Pauline
Testing Engineer

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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 Calibation:	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.

Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
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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: _____ Issue Date: 19/07/2016

Ms. Wong Po Yan, Pauline
Testing Engineer

Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
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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 Calibation:	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.

Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT:	**MR. SAM LAM**	**WORK ORDER:**	**HK1610310**
CLIENT:	**LAM GEOTECHNICS LIMITED**		
DATE RECEIVED:	**08/06/2016**		
DATE OF ISSUE:	**15/06/2016**		
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.:	1512046
Equipment No.:	---
Date of Calibration:	08/06/2016

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: 15/06/2016

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: HK1610310
DATE OF ISSUE: 15/06/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1512046
Equipment No.:	---
Date of Calibration:	08/06/2016
Date of next Calibation:	08/09/2016

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	4.20	5.0%
10	9.85	-1.5%
40	42.0	5.0%
100	96.0	-4.0%
400	410	2.5%
1000	975	-2.5%
	Tolerance Limit (±)	10%

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

Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT:	**MR. SAM LAM**	**WORK ORDER:**	**HK1610441**
CLIENT:	**LAM GEOTECHNICS LIMITED**		
DATE RECEIVED:	**02/09/2016**		
DATE OF ISSUE:	**05/09/2016**		
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.:	1512046
Equipment No.:	---
Date of Calibration:	05/09/2016

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: _____ Issue Date: 05/09/2016

Ms. Wong Po Yan, Pauline
Testing Engineer

Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1610441
DATE OF ISSUE: 05/09/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1512046
Equipment No.:	---
Date of Calibration:	05/09/2016
Date of next Calibation:	05/12/2016

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	4.10	2.5%
10	10.1	1.0%
40	41.2	3.0%
100	109	9.0%
400	407	1.8%
1000	1000	0.0%
	Tolerance Limit (±)	10%

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

Address: No.B12, 5th Floor, Block B, Tonic Industrial Centre, No.19 Lam Hing Street, Kowloon Bay, Kowloon
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PILOT TESTING

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

Pilot Testing Limited
Address: Room B12, Block B, 5/F, Tonic Industrial Centre, 19 Lam Hing Street, Kowloon Bay, Kowloon
Tel: (852) 2527 6691 email: test@pilot-testing.com

PILOT TESTING

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 Calibation	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) Maxium tolerance and calibration frequency stated in the report, unless otherewise 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 (accoridng to APHA 19e 2510) is used to determine salinity.
(4) Due to the malfuction of pH sensor, there is no reading shown on the multimeter's screen. pH parameter is failed to comply with the tolerence.

- 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

PILOT TESTING

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1610365
DATE OF ISSUE: 19/07/2016
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type	Multifunctional Meter
Manufacturer	YSI
Model No.	Professional Plus
Serial No.	14M100277
Date of Calibration	19-Jul-16
Date of next Calibation	19-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)
10.9	10.8	-0.1
20.8	20.7	-0.1
29.5	29.3	-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	4.23	4.22	-0.01
7.0	7.03	6.91	-0.12
10.0	10.04	9.93	-0.11
	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	12.60	12.63	0.24
0.2000	24.30	24.40	0.41
0.5000	57.80	57.70	-0.17
	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)
8.23	8.34	0.11
6.00	5.93	-0.07
4.60	4.47	-0.13
	Tolerance Limit	±0.20

Remarks:
(1) Maxium tolerance and calibration frequency stated in the report, unless otherewise 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 (accoridng to APHA 19e 2510) is used to determine salinity.
(4) Due to the malfuction of pH sensor, there is no reading shown on the multimeter's screen. pH parameter is failed to comply with the tolerence.

- End of Report -

TISCH ENVIRONMENTAL, INC.
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ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 20, 2016 Rootsmeter S/N 0438320 Ta (K) - 293
Operator Tisch Orifice I.D. - 3166 Pa (mm) - 748.03

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4270	3.2	2.00
2	NA	NA	1.00	1.0220	6.4	4.00
3	NA	NA	1.00	0.9100	7.9	5.00
4	NA	NA	1.00	0.8730	8.8	5.50
5	NA	NA	1.00	0.7180	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9967	0.6985	1.4150		0.9957	0.6977	0.8851
0.9925	0.9711	2.0010		0.9915	0.9701	1.2517
0.9904	1.0883	2.2372		0.9893	1.0872	1.3995
0.9892	1.1332	2.3464		0.9882	1.1320	1.4678
0.9840	1.3705	2.8299		0.9830	1.3691	1.7702
Qstd slope (m) =		2.10714		Qa slope (m) =		1.31946
intercept (b) =		-0.05158		intercept (b) =		-0.03226
coefficient (r) =		0.99978		coefficient (r) =		0.99978
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	**Calbration Date**	:	13-Jul-16
Equipment no.	:	HVS001	**Calbration 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, bc**	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	20-May-17	$= m_c \times Q_{std} + b_c$			

Calibration Point	Manometer Reading H (inches of water)			Q_{std} (m^3 / min.)	Continuous Flow Recorder, W	IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	5.6	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	**Checked by**	:	Pauline Wong
Date	:	13-Jul-16	**Date**	:	13-Jul-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA1b	**Calbration Date**	:	12-Sep-16
Equipment no.	:	HVS001	**Calbration Due Date**	:	13-Nov-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1010	mmHg

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

Calibration of TSP

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3x298/T_a)^{1/2}/35.31)$ Y-axis
1	1.2	1.2	2.4	0.7536	12	11.9008
2	2.2	2.2	4.4	1.0117	20	19.8347
3	3.5	3.5	7.0	1.2697	26	25.7852
4	4.5	4.5	9.0	1.4364	30	29.7521
5	5.5	5.5	11.0	1.5855	34	33.7190

By Linear Regression of Y on X

Slope, m = 25.7206 Intercept, b = -6.9594

Correlation Coefficient* = 0.9984

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	:	Jackey MA	**Checked by**	:	Pauline Wong
Date	:	12-Sep-16	**Date**	:	12-Sep-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA2a	**Calbration Date**	:	13-Jul-16
Equipment no.	:	HVS002	**Calbration 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, bc**	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	20-May-17	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std} (m^3 / min.) X-axis**	**Continuous Flow Recorder, W (CFM)**	**IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$) 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	**Checked by**	:	Pualine Wong
Date	:	13-Jul-16	**Date**	:	13-Jul-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA2a	**Calbration Date**	:	12-Sep-16
Equipment no.	:	HVS002	**Calbration Due Date**	:	13-Nov-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1010	mmHg

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

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std} (m^3 / min.) X-axis**	**Continuous Flow Recorder, W (CFM)**	**IC $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ Y-axis**
	(up)	(down)	(difference)			
1	1.4	1.4	2.8	0.8120	28	27.7686
2	2.3	2.3	4.6	1.0339	34	33.7190
3	4.3	4.3	8.6	1.4047	44	43.6364
4	4.9	4.9	9.8	1.4979	48	47.6034
5	6.0	6.0	12.0	1.6549	56	55.5372

By Linear Regression of Y on X

Slope, m	=	31.4606	Intercept, b	=	1.3620
Correlation Coefficient*	=	0.9900			
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	:	Jackey MA	**Checked by**	:	Pualine Wong
Date	:	12-Sep-16	**Date**	:	12-Sep-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA3a	**Calbration Date**	:	13-Jul-16
Equipment no.	:	HVS012	**Calbration 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, bc**	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	20-May-17	$= m_c \times Q_{std} + b_c$			

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3x298/T_a)^{1/2}/35.31)$ Y-axis
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	:	CMA3a	**Calbration Date**	:	12-Sep-16
Equipment no.	:	HVS012	**Calbration Due Date**	:	13-Nov-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1010	mmHg

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

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3x298/T_a)^{1/2}/35.31)$ Y-axis
1	1.2	1.2	2.4	0.7536	24	23.8017
2	1.8	1.8	3.6	0.9175	32	31.7356
3	3.2	3.2	6.4	1.2152	40	39.6695
4	4.2	4.2	8.4	1.3886	45	44.6281
5	5.4	5.4	10.8	1.5712	50	49.5868

By Linear Regression of Y on X

Slope, m = 30.5105 Intercept, b = 2.2112

Correlation Coefficient* = 0.9943

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	:	Jackey MA	**Checked by**	:	Pauline Wong
Date	:	12-Sep-16	**Date**	:	12-Sep-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	**Calbration Date**	:	13-Jul-16
Equipment no.	:	HVS004	**Calbration 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, bc**	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	20-May-17	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std} (m^3 / min.) X-axis**	**Continuous Flow Recorder, W (CFM)**	**IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$) 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	**Checked by**	:	Pauline Wong
Date	:	13-Jul-16	**Date**	:	13-Jul-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	**Calbration Date**	:	12-Sep-16
Equipment no.	:	HVS004	**Calbration Due Date**	:	13-Nov-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1010	mmHg

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

Calibration Point	Manometer Reading H (inches of water)			Q_{std} (m^3 / min.)	Continuous Flow Recorder, W	IC $(W(P_a/1013.3\times298/T_a)^{1/2}/35.31)$
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	1.4	1.4	2.8	0.8120	22	21.8182
2	2.2	2.2	4.4	1.0117	32	31.7356
3	3.4	3.4	6.8	1.2518	44	43.6364
4	4.4	4.4	8.8	1.4207	48	47.6034
5	5.5	5.5	11.0	1.5855	56	55.5372

By Linear Regression of Y on X

Slope, m = 42.7983 Intercept, b = -11.9911

Correlation Coefficient* = 0.9952

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	:	Jackey MA	**Checked by**	:	Pauline Wong
Date	:	12-Sep-16	**Date**	:	12-Sep-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	: CMA5b	**Calbration Date**	: 13-Jul-16
Equipment no.	: HVS010	**Calbration 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, bc**	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	20-May-17	$= m_c \times Q_{std} + b_c$			

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3\times298/T_a)^{1/2}/35.31)$ Y-axis
1	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	**Checked by**	: Pauline Wong
Date	: 13-Jul-16	**Date**	: 13-Jul-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	: CMA5b	**Calbration Date**	: 12-Sep-16
Equipment no.	: HVS010	**Calbration Due Date**	: 13-Nov-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1010	mmHg

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

Calibration of TSP

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ Y-axis
1	1.4	1.4	2.8	0.8120	34	33.7190
2	2.2	2.2	4.4	1.0117	42	41.6529
3	3.4	3.4	6.8	1.2518	50	49.5868
4	4.4	4.4	8.8	1.4207	56	55.5372
5	5.6	5.6	11.2	1.5996	61	60.4959

By Linear Regression of Y on X

Slope, m = 34.0485 Intercept, b = 6.6876

Correlation Coefficient* = 0.9985

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	: Jackey MA	**Checked by**	: Pauline Wong
Date	: 12-Sep-16	**Date**	: 12-Sep-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA6a	**Calbration Date**	:	13-Jul-16
Equipment no.	:	HVS013	**Calbration 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, bc**	-0.05158
Last Calibration Date	20-May-16	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	20-May-17	$= m_c \times Q_{std} + b_c$			

Calibration of TSP

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3\times298/T_a)^{1/2}/35.31)$ Y-axis
1	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	**Checked by**	:	Pauline Wong
Date	:	13-Jul-16	**Date**	:	13-Jul-16

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA6a	**Calbration Date**	:	12-Sep-16
Equipment no.	:	HVS013	**Calbration Due Date**	:	13-Nov-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1010	mmHg

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

Calibration of TSP

Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ Y-axis
1	1.5	1.5	3.0	0.8397	31	30.7438
2	2.4	2.4	4.8	1.0556	39	38.6777
3	3.7	3.7	7.4	1.3048	48	47.6034
4	4.7	4.7	9.4	1.4675	53	52.5620
5	5.8	5.8	11.6	1.6275	60	59.5042

By Linear Regression of Y on X

Slope, m = 35.8920 Intercept, b = 0.6298

Correlation Coefficient* = 0.9992

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	:	Jackey MA	**Checked by**	:	Pauline Wong
Date	:	12-Sep-16	**Date**	:	12-Sep-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
September 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Aug	29-Aug Impact WQM Mid-ebb 10:21 Mid-flood 17:23	30-Aug Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6)	31-Aug Impact WQM Mid-ebb 11:48 Mid-flood 18:32	1-Sep 24hr TSP	2-Sep 1hr TSP Impact WQM Mid-ebb 13:03 Mid-flood 19:25	3-Sep
4-Sep	5-Sep Impact WQM Mid-flood 8:28 Mid-ebb 14:42	6-Sep Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6)	7-Sep 24hr TSP Impact WQM Mid-flood 9:53 Mid-ebb 15:52	8-Sep 1hr TSP	9-Sep Impact WQM Mid-ebb 5:13 Mid-flood 23:04	10-Sep
11-Sep	12-Sep Noise (daytime) (M1a) Impact WQM Mid-ebb 9:00 Mid-flood 16:43	13-Sep 24hr TSP Noise (daytime) (M2b, M3a, M4b, M5b, M6)	14-Sep 1hr TSP Impact WQM Mid-ebb 10:22 Mid-flood 17:34	15-Sep	16-Sep	17-Sep 24hr TSP Impact WQM Mid-ebb 11:06 Mid-flood 17:59
18-Sep	19-Sep 24hr TSP Noise (daytime) (M2b) Impact WQM Mid-flood 7:52 Mid-ebb 14:01	20-Sep 24hr TSP (CMA5b) 1hr TSP Noise (daytime) (M1a, M5b, M6)	21-Sep Noise (daytime) (M3a, M4b) Impact WQM Mid-flood 9:39 Mid-ebb 15:33	22-Sep	23-Sep Impact WQM Mid-ebb 5:21 Mid-flood 12:13	24-Sep 24hr TSP
25-Sep	26-Sep 1hr TSP Impact WQM Mid-ebb 9:07 Mid-flood 16:18					

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
October 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		27-Sep Noise (daytime)	28-Sep	29-Sep 24hr TSP	30-Sep 1hr TSP	1-Oct
	Impact WQM Mid-ebb 9:07 Mid-flood 16:18		Impact WQM Mid-ebb 10:45 Mid-flood 17:25		Impact WQM Mid-ebb 12:03 Mid-flood 18:16	
2-Oct	3-Oct Noise (daytime)	4-Oct Noise (daytime)	5-Oct 24hr TSP	6-Oct 1hr TSP	7-Oct	8-Oct
	Impact WQM Mid-flood 7:38 Mid-ebb 13:43		Impact WQM Mid-flood 8:56 Mid-ebb 14:48			Impact WQM Mid-ebb 4:12 Mid-flood 11:55
9-Oct	10-Oct	11-Oct 24hr TSP Noise (daytime)	12-Oct 1hr TSP Noise (daytime)	13-Oct	14-Oct	15-Oct 24hr TSP
		Impact WQM Mid-ebb 7:58 Mid-flood 15:45		Impact WQM Mid-ebb 9:47 Mid-flood 16:45		Impact WQM Mid-ebb 11:26 Mid-flood 17:47
16-Oct	17-Oct 1hr TSP Noise (daytime)	18-Oct Noise (daytime)	19-Oct	20-Oct	21-Oct 24hr TSP	22-Oct 1hr TSP
	Impact WQM Mid-ebb 12:58 Mid-flood 18:58		Impact WQM Mid-flood 8:39 Mid-ebb 14:29		Impact WQM Mid-ebb 3:46 Mid-flood 10:48	
23-Oct	24-Oct Noise (daytime)	25-Oct Noise (daytime)	26-Oct			
	Impact WQM Mid-ebb 7:28 Mid-flood 14:57		Impact WQM Mid-ebb 9:30 Mid-flood 16:13		Impact WQM Mid-ebb 11:00 Mid-flood 17:10	

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)					
30/8/2016	10:13	Fine	76.5	77.5	74.5	72	74	75
6/9/2016	10:35	Fine	76.8	79.0	74.0	72	75	75
12/9/2016	13:49	Fine	75.5	78.0	72.0	72	73	75
20/9/2016	14:00	Fine	74.7	76.0	72.5	72	71	75

Location: M2b - Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/8/2016	10:56	Fine	66.4	68.0	64.5	68	66	75
6/9/2016	11:18	Fine	67.4	68.5	65.5	68	67	75
12/9/2016	14:25	Fine	67.0	68.0	65.0	68	67	75
19/9/2016	09:53	Fine	67.2	68.5	65.0	68	67	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)					
30/8/2016	11:30	Fine	65.3	66.5	63.0	69	65	75
6/9/2016	13:00	Fine	66.0	67.0	64.5	69	66	75
13/9/2016	13:00	Fine	65.5	66.0	63.0	69	66	75
21/9/2016	10:25	Fine	66.0	67.5	63.0	69	66	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)					
30/8/2016	13:05	Fine	65.5	66.5	63.5	67	66	75
6/9/2016	13:40	Fine	65.4	67.0	63.5	67	65	75
13/9/2016	13:35	Fine	64.1	65.5	63.0	67	64	75
21/9/2016	11:30	Fine	64.4	65.5	62.0	67	64	75

Location: M5b - City Garden

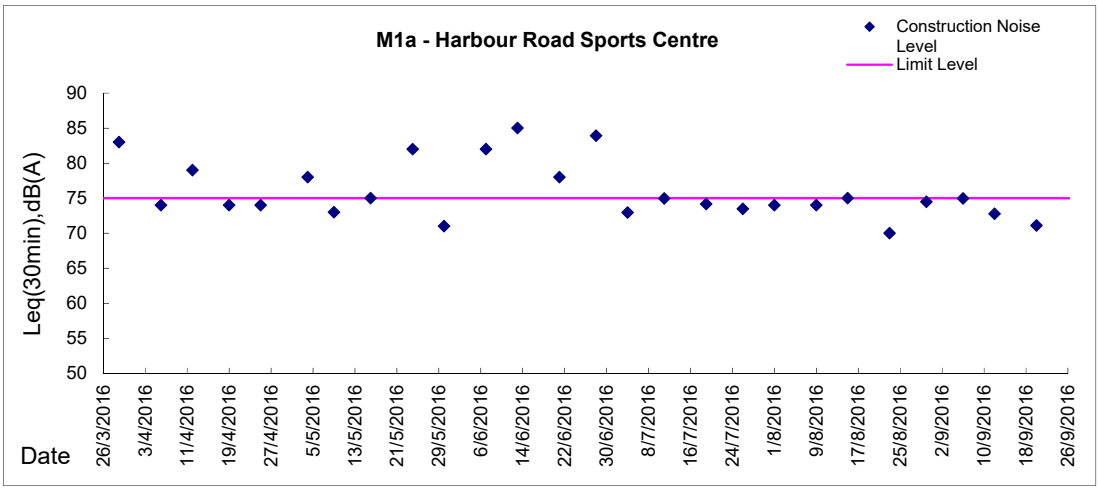
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
30/8/2016	13:50	Fine	69.4	69.5	68.5	68	64	75
6/9/2016	14:20	Fine	72.1	76.0	67.0	68	70	75
13/9/2016	14:15	Fine	70.1	71.0	68.5	68	66	75
20/9/2016	14:49	Fine	70.1	71.0	69.0	68	66	75

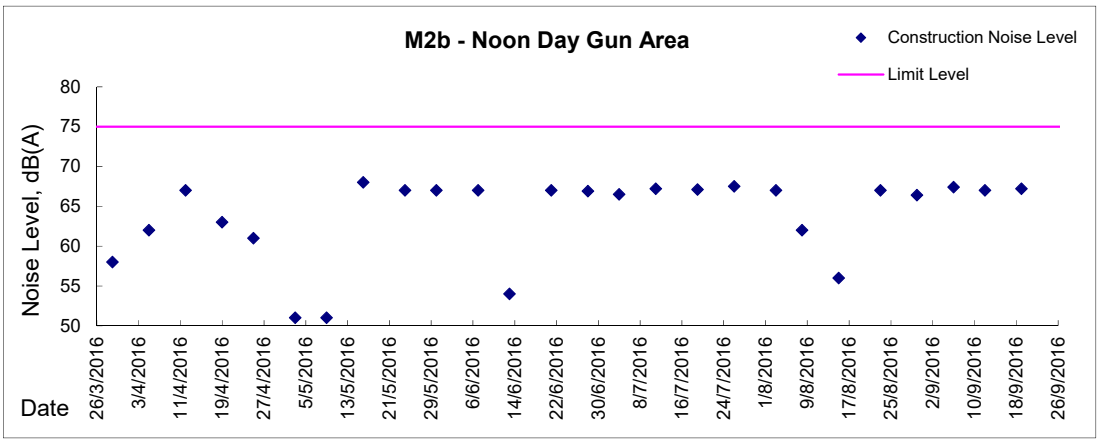
Location: M6 - HK Baptist Church Henrietta Secondary School

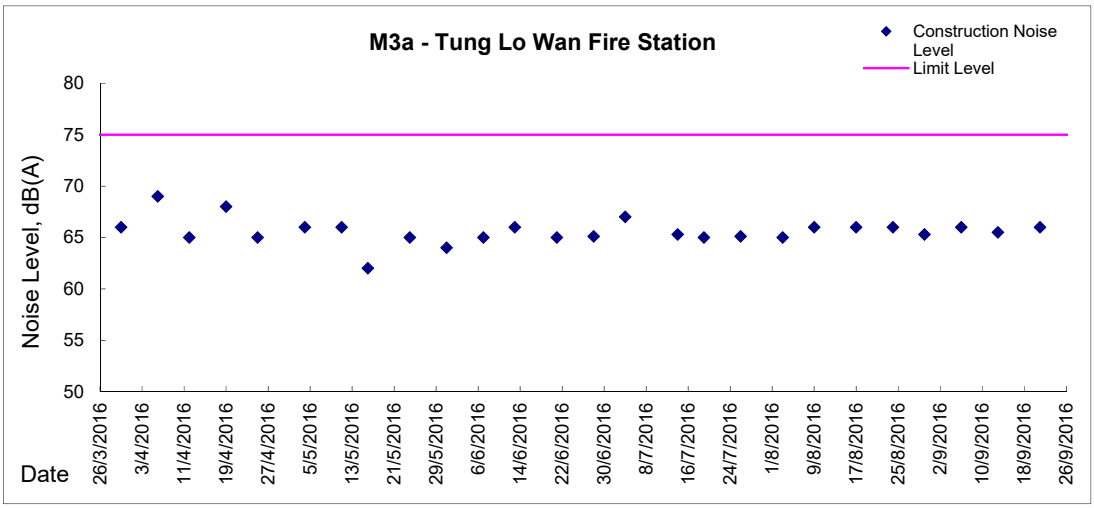
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/8/2016	14:26	Fine	71.5	72.0	70.0	71	64	70
6/9/2016	14:57	Fine	68.1	69.0	66.5	71	68	70
13/9/2016	14:55	Fine	71.7	72.5	69.0	71	65	70
20/9/2016	15:29	Fine	71.1	72.0	69.5	71	61	70

Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

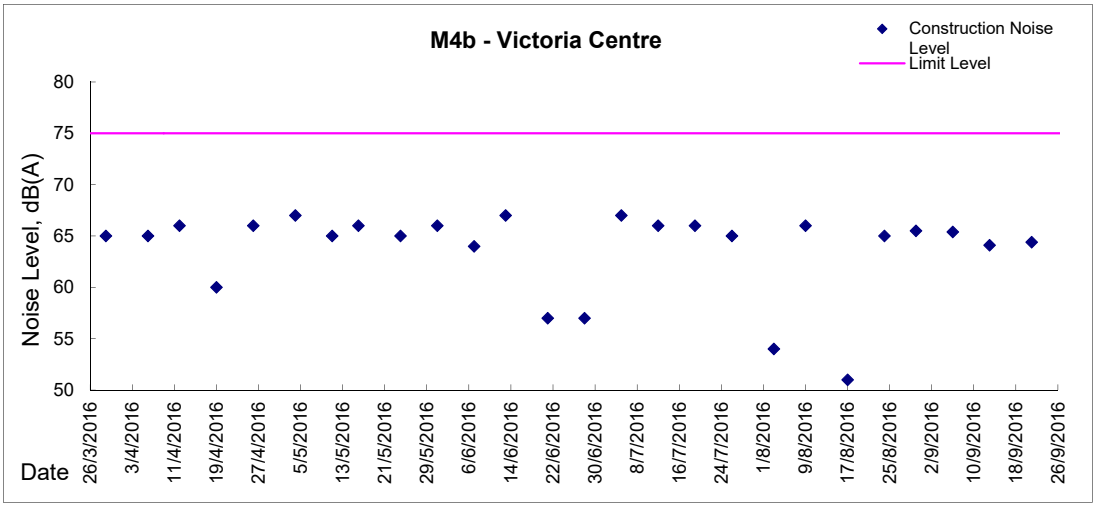


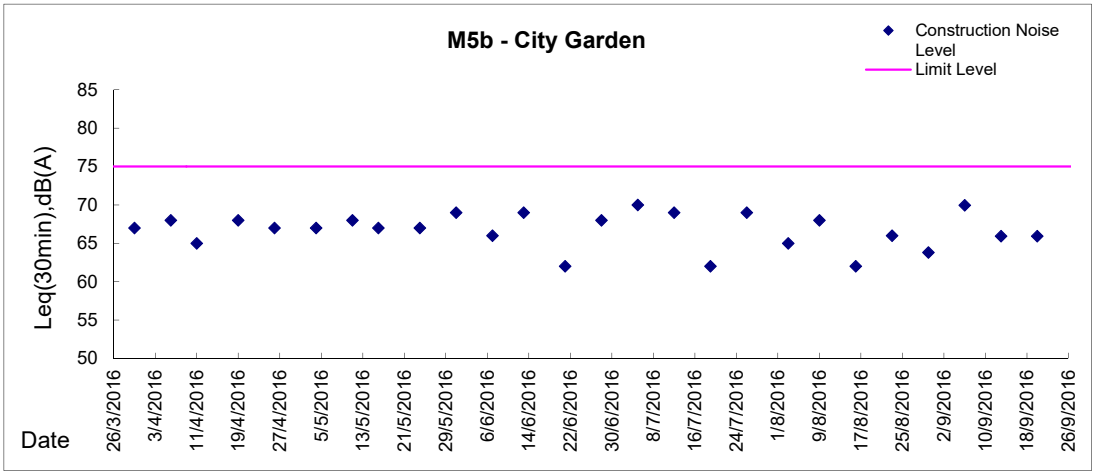


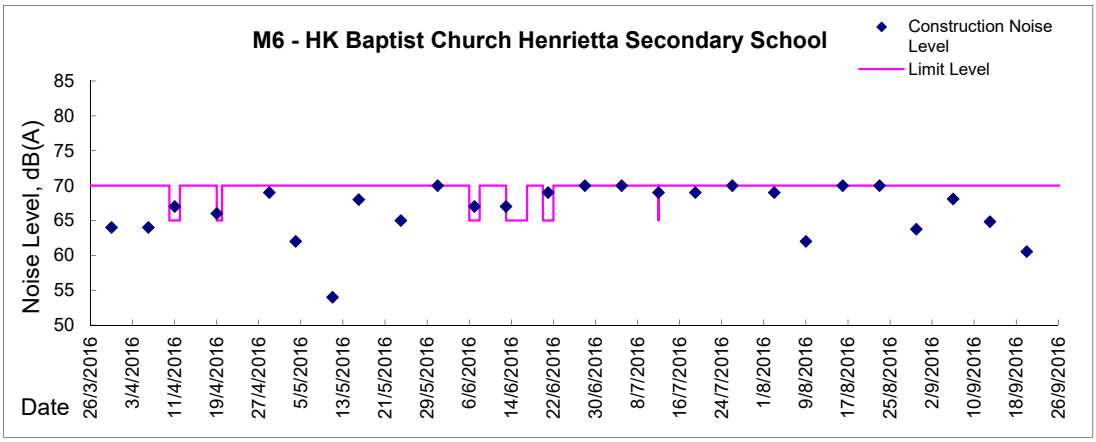


Graphic Presentation of Noise Monitoring Result

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 (μ g/m3) - 176.7

Limit Level (μ g/m3) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
1-Sep-16	8:00	Rainy	17032	2.8312	2.9116	8697.97	8721.97	24.00	1.12	1.12	1.12	1610	49.9
7-Sep-16	8:00	Rainy	16770	2.8039	2.8563	8724.97	8748.97	24.00	1.23	1.23	1.23	1770	29.6
13-Sep-16	8:00	Cloudy	17292	2.6595	2.8578	8751.97	8775.97	24.00	1.68	1.67	1.68	2415	82.1
19-Sep-16	8:00	Cloudy	17280	2.7187	2.9738	8778.97	8802.97	24.00	1.68	1.69	1.68	2422	105.3
24-Sep-16	8:00	Fine	17223	2.7318	3.0122	8806.00	8830.00	24.00	1.68	1.68	1.68	2421	115.8

Report on 1-hour TSP monitoring

Action Level (μ g/m3) - 320.1

Limit Level (μ g/m3) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
2-Sep-16	8:45	Cloudy	17034	2.8157	2.8194	8721.97	8722.97	1.00	1.28	1.28	1.28	77	48.4
2-Sep-16	10:00	Cloudy	17024	2.8194	2.8229	8722.97	8723.97	1.00	1.28	1.28	1.28	77	45.7
2-Sep-16	13:00	Cloudy	16877	2.6847	2.7090	8723.97	8724.97	1.00	1.28	1.28	1.28	77	317.6
8-Sep-16	9:24	Cloudy	16769	2.8154	2.8173	8748.97	8749.97	1.00	1.12	1.12	1.12	67	28.2
8-Sep-16	10:35	Cloudy	16883	2.6575	2.6607	8749.97	8750.97	1.00	1.12	1.12	1.12	67	47.5
8-Sep-16	13:00	Cloudy	16756	2.8362	2.8378	8750.97	8751.97	1.00	1.12	1.12	1.12	67	23.7
14-Sep-16	9:10	Fine	17299	2.6298	2.6395	8775.97	8776.97	1.00	1.67	1.67	1.67	100	96.6
14-Sep-16	11:00	Fine	17268	2.6473	2.6585	8776.97	8777.97	1.00	1.67	1.67	1.67	100	111.6
14-Sep-16	13:00	Fine	17264	2.6343	2.6488	8777.97	8778.97	1.00	1.67	1.67	1.67	100	144.4
20-Sep-16	9:35	Rainy	17243	2.7176	2.7253	8802.97	8803.97	1.00	1.69	1.69	1.69	101	76.1
20-Sep-16	10:50	Rainy	17237	2.6874	2.6970	8803.97	8804.97	1.00	1.69	1.69	1.69	101	94.9
20-Sep-16	13:00	Rainy	17230	2.7048	2.7173	8804.97	8805.97	1.00	1.69	1.69	1.69	101	123.5
26-Sep-16	8:50	Fine	17218	2.6983	2.7119	8830.00	8831.00	1.00	1.83	1.83	1.83	110	124.2
26-Sep-16	11:00	Fine	16749	2.8118	2.8297	8831.00	8832.00	1.00	1.83	1.83	1.83	110	163.4
26-Sep-16	13:00	Fine	16745	2.8057	2.8330	8832.00	8833.00	1.00	1.83	1.83	1.83	110	249.3

Location: CMA2a - Causeway Bay Community Centre

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
1-Sep-16	8:00	Rainy	17033	2.8365	2.8771	18321.69	18345.69	24.00	1.09	1.08	1.09	1563	26.0
7-Sep-16	8:00	Rainy	16884	2.6744	2.6966	18348.69	18372.69	24.00	1.09	1.09	1.09	1572	14.1
13-Sep-16	8:00	Cloudy	17291	2.7125	2.8260	18375.69	18399.69	24.00	1.11	1.10	1.11	1593	71.2
19-Sep-16	8:00	Cloudy	17281	2.6722	2.7598	18402.69	18426.69	24.00	1.11	1.11	1.11	1599	54.8
24-Sep-16	8:00	Fine	17222	2.7109	2.8152	18429.69	18453.69	24.00	1.11	1.11	1.11	1598	65.3

Report on 1-hour TSP monitoring
Action Level (μg/m3) - 323.4
Limit Level (μg/m3) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
2-Sep-16	8:03	Cloudy	17035	2.8346	2.8365	18345.69	18346.69	1.00	1.08	1.08	1.08	65	29.2
2-Sep-16	9:10	Cloudy	17025	2.8094	2.8120	18346.69	18347.69	1.00	1.08	1.08	1.08	65	40.0
2-Sep-16	13:00	Cloudy	16780	2.8372	2.8460	18347.69	18348.69	1.00	1.08	1.08	1.08	65	135.2
8-Sep-16	9:25	Cloudy	17313	2.6156	2.6178	18372.69	18373.69	1.00	1.09	1.09	1.09	65	33.6
8-Sep-16	10:35	Cloudy	17309	2.6444	2.6464	18373.69	18374.69	1.00	1.09	1.09	1.09	65	30.5
8-Sep-16	13:00	Cloudy	17305	2.6461	2.6487	18374.69	18375.69	1.00	1.09	1.09	1.09	65	39.7
14-Sep-16	8:05	Fine	17302	2.6423	2.6521	18399.69	18400.69	1.00	1.22	1.22	1.22	73	133.4
14-Sep-16	10:30	Fine	17267	2.6913	2.6954	18400.69	18401.69	1.00	1.10	1.10	1.10	66	61.9
14-Sep-16	15:00	Fine	17265	2.7030	2.7104	18401.69	18402.69	1.00	1.10	1.10	1.10	66	111.8
20-Sep-16	8:05	Rainy	17245	2.6399	2.6463	18426.69	18427.69	1.00	1.24	1.24	1.24	74	86.3
20-Sep-16	9:07	Rainy	17238	2.7095	2.7139	18427.69	18428.69	1.00	1.11	1.11	1.11	67	65.8
20-Sep-16	10:30	Rainy	17231	2.6932	2.6983	18428.69	18429.69	1.00	1.11	1.11	1.11	67	76.3
26-Sep-16	8:03	Fine	17217	2.6954	2.7043	18453.69	18454.69	1.00	1.11	1.11	1.11	66	134.0
26-Sep-16	9:30	Fine	16750	2.8217	2.8327	18454.69	18455.69	1.00	1.11	1.11	1.11	66	165.7
26-Sep-16	13:00	Fine	16743	2.8257	2.8381	18455.69	18456.69	1.00	1.11	1.11	1.11	66	186.7

Location: CMA3a - CWB PRE Site Office Area

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
1-Sep-16	8:00	Rainy	16715	2.8294	2.8939	5796.58	5820.58	24.00	1.13	1.13	1.13	1625	39.7
7-Sep-16	8:00	Rainy	15520	2.8285	2.8765	5823.58	5847.58	24.00	1.10	1.10	1.10	1586	30.3
13-Sep-16	8:00	Cloudy	17294	2.6914	2.7648	5850.58	5874.58	24.00	1.18	1.17	1.18	1693	43.4
19-Sep-16	8:00	Cloudy	17262	2.6922	2.7755	5877.59	5901.59	24.00	1.18	1.18	1.18	1699	49.0
24-Sep-16	8:00	Fine	17255	2.7045	2.8191	5904.59	5928.59	24.00	1.24	1.24	1.24	1788	64.1

Report on 1-hour TSP monitoring
Action Level (μg/m3) - 311.3
Limit Level (μg/m3) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
2-Sep-16	8:30	Cloudy	17036	2.8195	2.8231	5820.58	5821.58	1.00	1.03	1.03	1.03	62	58.4
2-Sep-16	9:55	Cloudy	17026	2.8194	2.8214	5821.58	5822.58	1.00	1.03	1.03	1.03	62	32.5
2-Sep-16	10:57	Cloudy	16878	2.6509	2.6597	5822.58	5823.58	1.00	1.03	1.03	1.03	62	142.8
8-Sep-16	9:00	Cloudy	16778	2.8273	2.8294	5847.58	5848.58	1.00	1.03	1.03	1.03	62	33.8
8-Sep-16	10:20	Cloudy	16767	2.8215	2.8232	5848.58	5849.58	1.00	1.03	1.03	1.03	62	27.4
8-Sep-16	13:00	Cloudy	17316	2.8385	2.8399	5849.58	5850.58	1.00	1.03	1.03	1.03	62	22.6
14-Sep-16	9:03	Fine	17273	2.7147	2.7229	5874.58	5875.58	1.00	1.11	1.11	1.11	67	123.1
14-Sep-16	10:04	Fine	17269	2.6850	2.6932	5875.58	5876.58	1.00	1.11	1.11	1.11	67	123.1
14-Sep-16	13:26	Fine	17295	2.6348	2.6447	5876.58	5877.58	1.00	1.11	1.11	1.11	67	148.7
20-Sep-16	8:02	Rainy	17246	2.6471	2.6504	5901.59	5902.59	1.00	1.12	1.12	1.12	67	49.1
20-Sep-16	10:35	Rainy	17240	2.6851	2.6906	5902.59	5903.59	1.00	1.12	1.12	1.12	67	81.8
20-Sep-16	13:00	Rainy	17233	2.7025	2.7084	5903.59	5904.59	1.00	1.12	1.12	1.12	67	87.7
26-Sep-16	8:03	Fine	17219	2.7214	2.7296	5928.59	5929.59	1.00	1.24	1.24	1.24	74	110.4
26-Sep-16	10:50	Fine	16751	2.8227	2.8353	5929.59	5930.59	1.00	1.24	1.24	1.24	74	169.6
26-Sep-16	13:00	Fine	16753	2.8132	2.8305	5930.59	5931.59	1.00	1.24	1.24	1.24	74	232.9

Location: CMA4a - SPCA

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
1-Sep-16	8:00	Rainy	17051	2.7976	2.8476	22580.24	22604.24	24.00	1.25	1.24	1.24	1793	27.9
7-Sep-16	8:00	Rainy	15521	2.8331	2.8507	22607.24	22631.24	24.00	1.15	1.15	1.15	1652	10.7
13-Sep-16	8:00	Cloudy	17293	2.6807	2.7728	22634.24	22658.24	24.00	1.13	1.12	1.13	1621	56.8
19-Sep-16	8:00	Cloudy	17263	2.6610	2.7349	22661.25	22685.25	24.00	1.13	1.13	1.13	1625	45.5
24-Sep-16	8:00	Fine	17224	2.7153	2.8088	22688.25	22712.25	24.00	1.13	1.13	1.13	1624	57.6

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
2-Sep-16	8:02	Cloudy	17031	2.8274	2.8296	22604.24	22605.24	1.00	1.14	1.14	1.14	68	32.1
2-Sep-16	9:15	Cloudy	17027	2.8342	2.8375	22605.24	22606.24	1.00	1.14	1.14	1.14	68	48.2
2-Sep-16	10:30	Cloudy	16879	2.6525	2.6591	22606.24	22607.24	1.00	1.14	1.14	1.14	68	96.4
8-Sep-16	8:50	Cloudy	17314	2.5801	2.5821	22631.24	22632.24	1.00	1.15	1.15	1.15	69	29.1
8-Sep-16	10:21	Cloudy	17310	2.6206	2.6223	22632.24	22633.24	1.00	1.15	1.15	1.15	69	24.7
8-Sep-16	13:00	Cloudy	17306	2.6525	2.6550	22633.24	22634.24	1.00	1.15	1.15	1.15	69	36.3
14-Sep-16	8:05	Fine	17274	2.7391	2.7447	22658.24	22659.24	1.00	1.12	1.12	1.12	67	83.1
14-Sep-16	9:10	Fine	17270	2.6843	2.6905	22659.24	22660.24	1.00	1.12	1.12	1.12	67	92.0
14-Sep-16	13:00	Fine	17266	2.6886	2.6991	22660.24	22661.24	1.00	1.12	1.12	1.12	67	155.8
20-Sep-16	8:02	Rainy	17247	2.6507	2.6549	22685.25	22686.25	1.00	1.22	1.22	1.22	73	57.3
20-Sep-16	9:10	Rainy	17241	2.6837	2.6893	22686.25	22687.25	1.00	1.22	1.22	1.22	73	76.5
20-Sep-16	10:30	Rainy	17232	2.7254	2.7327	22687.25	22688.25	1.00	1.13	1.13	1.13	68	107.6
26-Sep-16	8:05	Fine	16692	2.9136	2.9169	22712.25	22713.25	1.00	1.13	1.13	1.13	68	48.9
26-Sep-16	9:30	Fine	16752	2.8165	2.8295	22713.25	22714.25	1.00	1.13	1.13	1.13	68	192.5
26-Sep-16	10:32	Fine	16744	2.8239	2.8370	22714.25	22715.25	1.00	1.13	1.13	1.13	68	194.0

Location: CMA5b - Pedestrian Plaza

Report on 24-hour TSP monitoring
Action Level (μg/m3) - 181
Limit Level (μg/m3) - 260

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
1-Sep-16	8:00	Rainy	17038	2.8201	2.8753	7174.50	7198.50	24.00	0.94	0.94	0.94	1354	40.8
7-Sep-16	8:00	Rainy	16352	2.8336	2.8710	7201.50	7225.50	24.00	0.95	0.95	0.95	1363	27.4
13-Sep-16	8:00	Cloudy	17008	2.7175	2.8952	7228.50	7252.50	24.00	0.98	0.97	0.98	1408	126.2
20-Sep-16	14:00	Rainy	17227	2.6834	2.8590	7271.77	7295.77	24.00	0.99	0.99	0.99	1419	123.7
24-Sep-16	8:00	Fine	16698	2.9328	3.0314	7295.77	7319.77	24.00	0.87	0.87	0.87	1252	78.8

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 19 September 2016 to 20 September 2016.

Report on 1-hour TSP monitoring
Action Level (μg/m3) - 332
Limit Level (μg/m3) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
2-Sep-16	8:02	Cloudy	16838	2.6790	2.6802	7198.50	7199.50	1.00	0.88	0.88	0.88	53	22.8
2-Sep-16	9:10	Cloudy	17028	2.8286	2.8305	7199.50	7200.50	1.00	0.88	0.88	0.88	53	36.1
2-Sep-16	13:30	Cloudy	17021	2.8236	2.8357	7200.50	7201.50	1.00	1.00	1.00	1.00	60	201.5
8-Sep-16	8:35	Cloudy	17315	2.8341	2.8371	7225.50	7226.50	1.00	0.95	0.95	0.95	57	52.8
8-Sep-16	10:09	Cloudy	17311	2.6282	2.6352	7226.50	7227.50	1.00	0.95	0.92	0.93	56	125.3
8-Sep-16	13:00	Cloudy	17307	2.6684	2.6718	7227.50	7228.50	1.00	0.95	0.92	0.93	56	60.9
14-Sep-16	8:05	Fine	17334	2.7929	2.8054	7252.50	7253.50	1.00	0.92	0.92	0.92	55	226.8
14-Sep-16	9:10	Fine	17271	2.6871	2.7077	7253.50	7254.50	1.00	0.92	0.89	0.90	54	379.4
14-Sep-16	13:00	Fine	17297	2.6465	2.6633	7254.50	7255.50	1.00	0.86	0.86	0.86	52	324.4
20-Sep-16	8:05	Rainy	17324	2.7988	2.8038	7268.77	7269.77	1.00	0.99	0.99	0.99	59	84.5
20-Sep-16	9:10	Rainy	17249	2.6871	2.6950	7269.77	7270.77	1.00	0.99	0.99	0.99	59	133.6
20-Sep-16	10:30	Rainy	17236	2.6718	2.6829	7270.77	7271.77	1.00	0.99	0.99	0.99	59	187.7
26-Sep-16	8:05	Fine	17397	2.7948	2.8063	7319.77	7320.77	1.00	0.98	0.98	0.98	59	196.0
26-Sep-16	9:10	Fine	16759	2.8228	2.8441	7320.77	7321.77	1.00	0.92	0.92	0.92	55	385.0
26-Sep-16	13:00	Fine	16748	2.8146	2.8318	7321.77	7322.77	1.00	0.98	0.95	0.96	58	297.3

Location: CMA6a - WD2 PRE Office

Report on 24-hour TSP monitoring

Action Level - 187.3 µg/m3

Limit Level - 260 µg/m3

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
1-Sep-16	8:00	Rainy	17052	2.8076	2.8723	872.40	896.40	24.00	1.07	1.07	1.07	1544	41.9
7-Sep-16	8:00	Rainy	11288	2.7611	2.8070	900.39	924.39	24.00	1.08	1.08	1.08	1553	29.6
13-Sep-16	8:00	Cloudy	17290	2.6788	2.7908	927.39	951.39	24.00	1.10	1.09	1.10	1579	70.9
19-Sep-16	8:00	Cloudy	16322	2.8422	2.9475	954.40	978.40	24.00	1.10	1.10	1.10	1584	66.5
24-Sep-16	8:00	Fine	17221	2.6966	2.8088	981.40	1005.40	24.00	1.10	1.10	1.10	1584	70.9

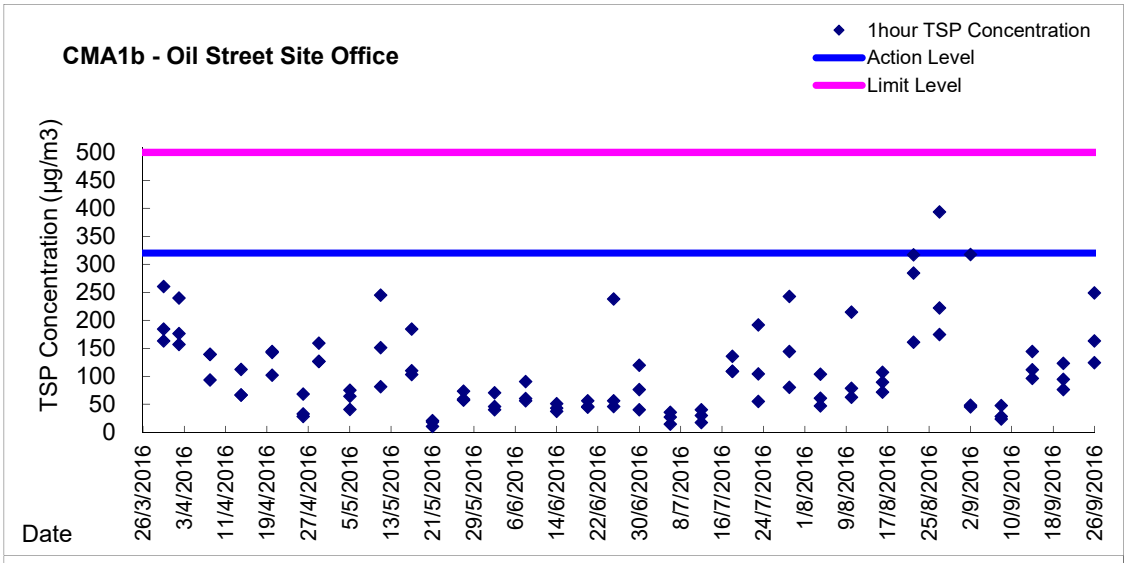
Report on 1-hour TSP monitoring

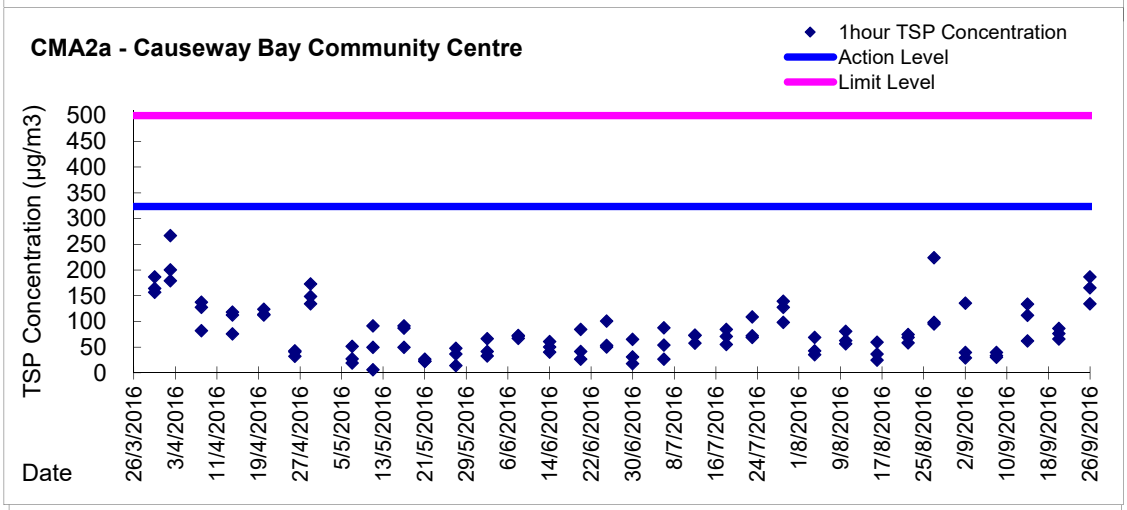
Action Level - 300.1 μ g/m^3

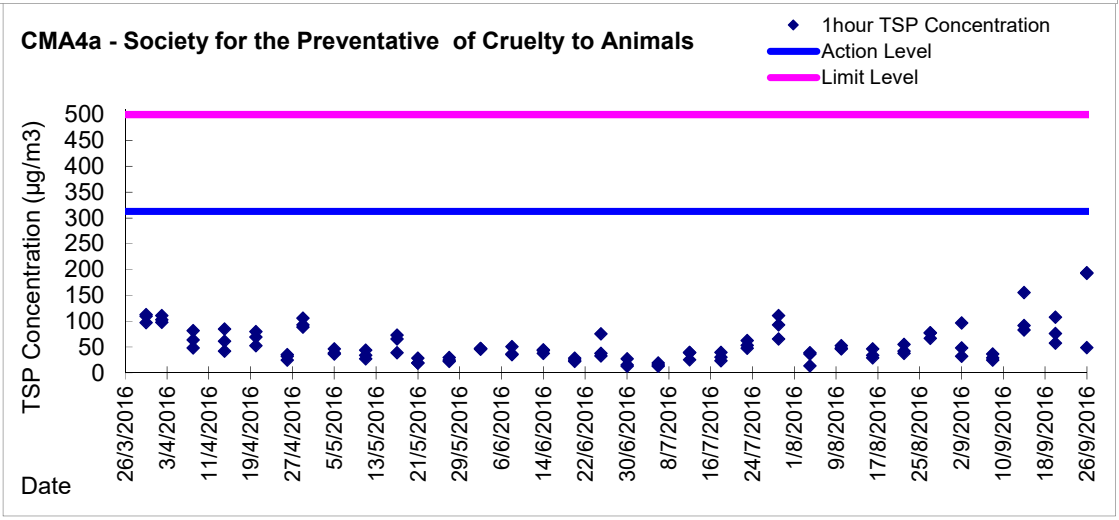
Limit Level - 500 μ g/m3

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu g/m^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
2-Sep-16	8:04	Cloudy	17037	2.8097	2.8119	896.40	897.40	1.00	1.01	1.01	1.01	61	36.2
2-Sep-16	9:30	Cloudy	17029	2.8149	2.8172	897.40	898.40	1.00	1.07	1.07	1.07	64	35.8
2-Sep-16	10:40	Cloudy	17022	2.8355	2.8430	898.40	899.40	1.00	1.07	1.07	1.07	64	116.7
8-Sep-16	9:55	Cloudy	16768	2.8380	2.8390	924.39	925.39	1.00	0.96	0.96	0.96	58	17.3
8-Sep-16	13:00	Cloudy	16691	2.9108	2.9152	925.39	926.39	1.00	1.08	1.08	1.08	65	68.0
8-Sep-16	14:05	Cloudy	16350	2.8426	2.8459	926.39	927.39	1.00	1.08	1.08	1.08	65	51.0
14-Sep-16	8:05	Fine	17332	2.7984	2.8052	951.39	952.39	1.00	1.09	1.09	1.09	66	103.7
14-Sep-16	10:05	Fine	17298	2.6329	2.6383	952.39	953.39	1.00	1.09	1.09	1.09	66	82.3
14-Sep-16	13:00	Fine	17296	2.6354	2.6500	953.39	954.39	1.00	1.09	1.09	1.09	66	222.6
20-Sep-16	8:05	Rainy	16318	2.8407	2.8436	978.40	979.40	1.00	1.10	1.10	1.10	66	43.8
20-Sep-16	10:15	Rainy	17242	2.6811	2.6865	979.40	980.40	1.00	1.10	1.10	1.10	66	81.5
20-Sep-16	13:00	Rainy	17234	2.6543	2.6604	980.40	981.40	1.00	1.05	1.05	1.05	63	96.8
26-Sep-16	8:05	Fine	17396	2.8116	2.8198	1005.40	1006.40	1.00	1.10	1.10	1.10	66	124.6
26-Sep-16	9:35	Fine	16757	2.8216	2.8303	1006.40	1007.40	1.00	1.04	1.04	1.04	63	138.9
26-Sep-16	13:00	Fine	16746	2.8235	2.8368	1007.40	1008.40	1.00	1.10	1.10	1.10	66	202.1

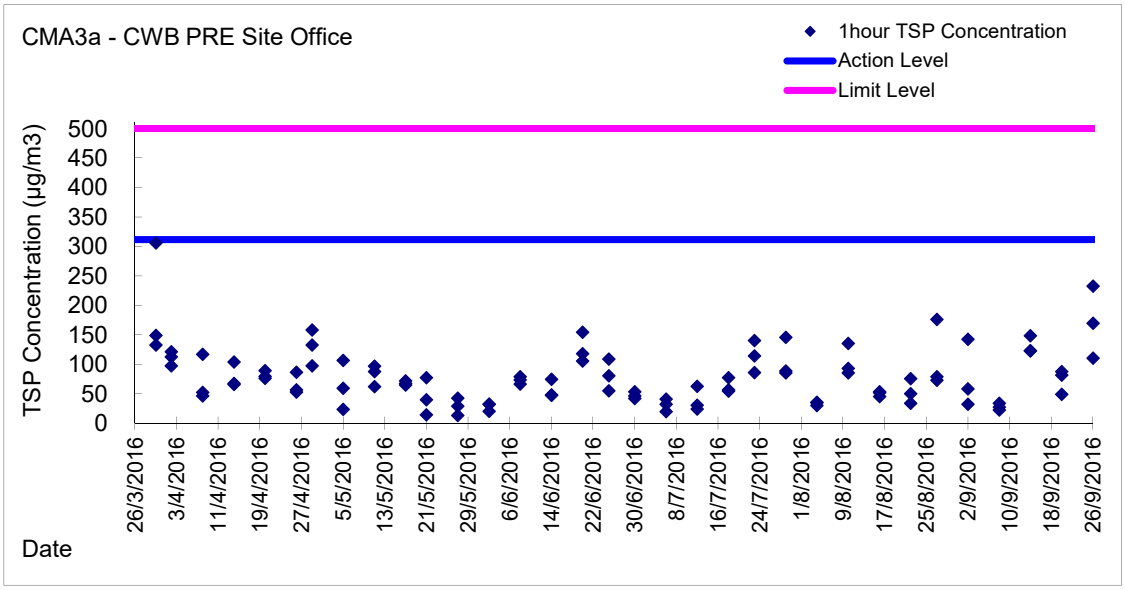
Graphic Presentation of 1 hour TSP Result

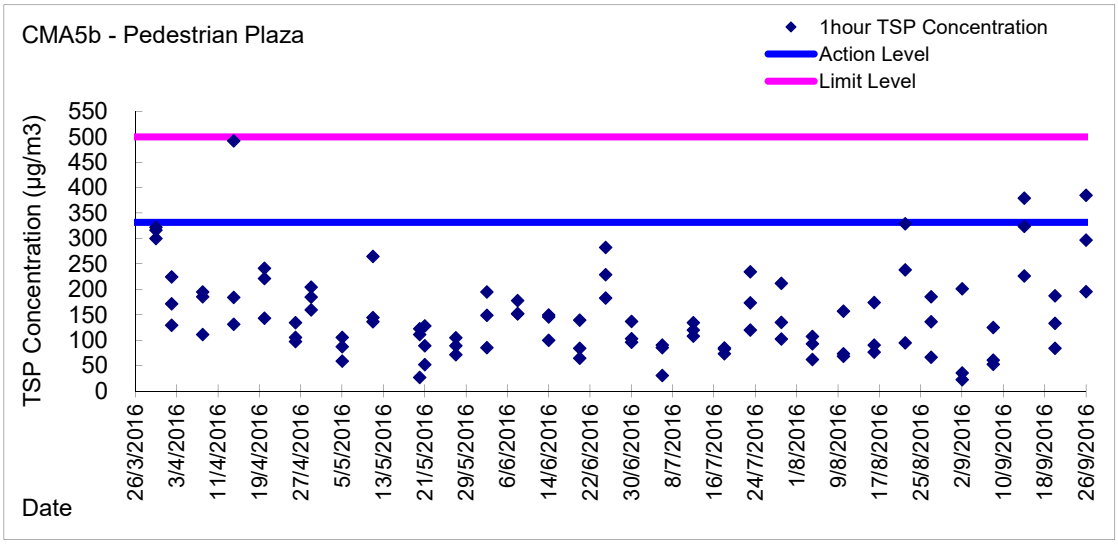


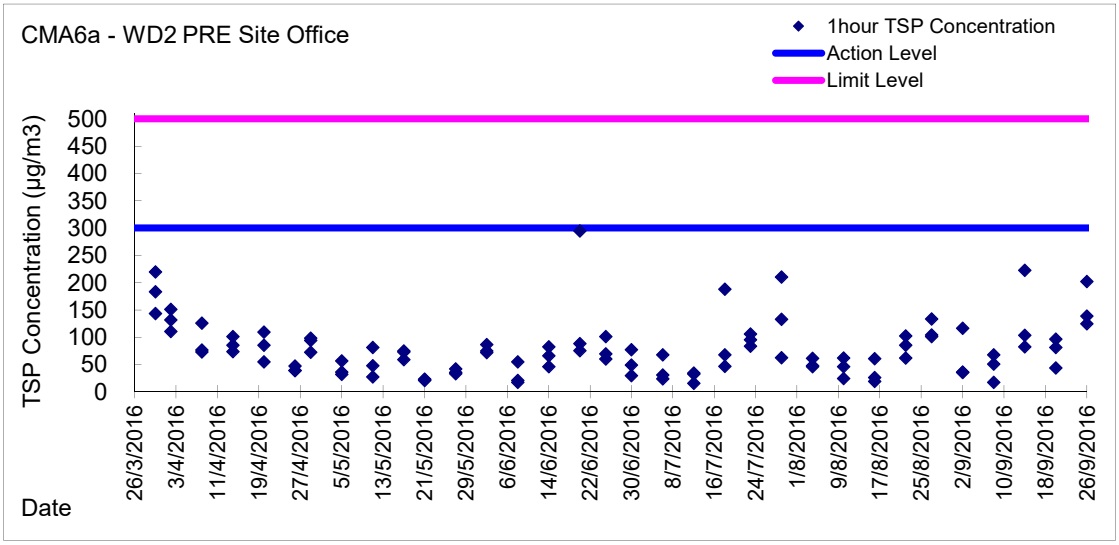




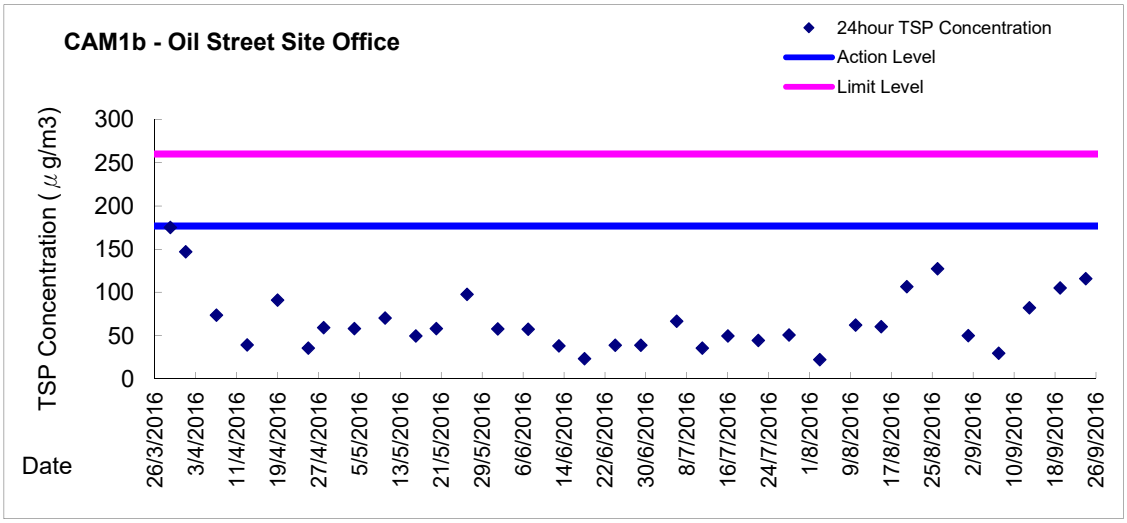
Graphic Presentation of 1 hour TSP Result

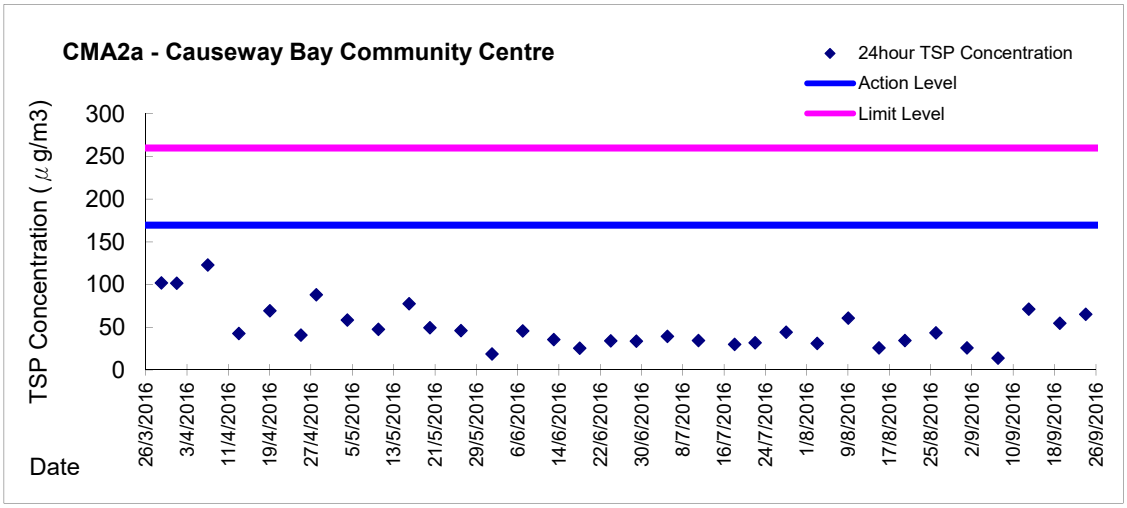


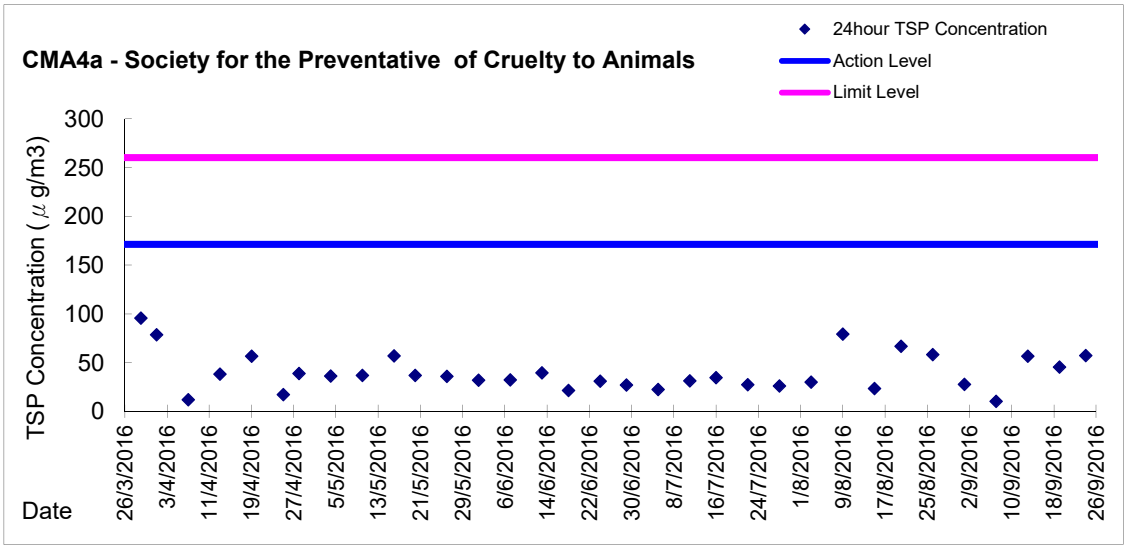




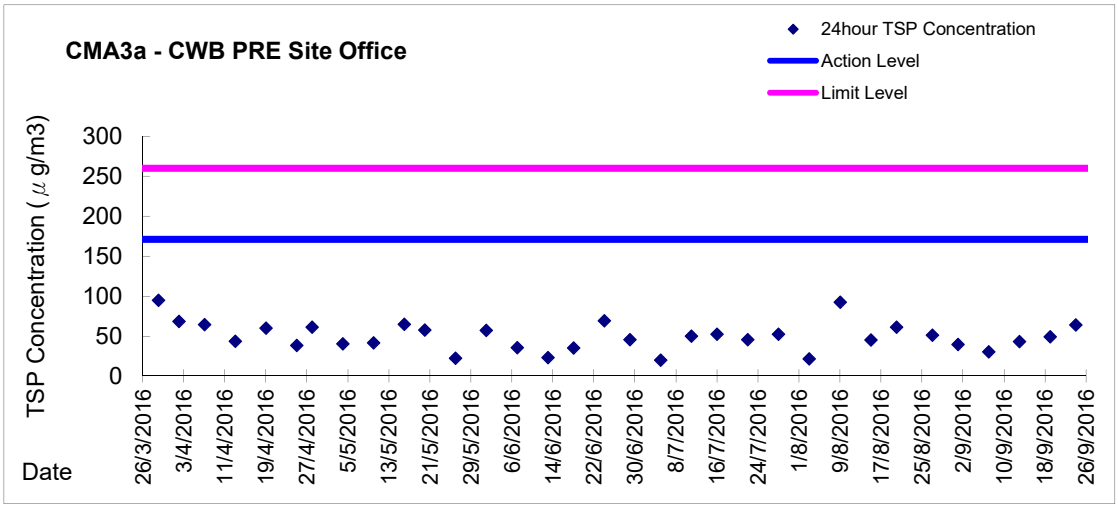
Graphic Presentation of 24 hour TSP Result

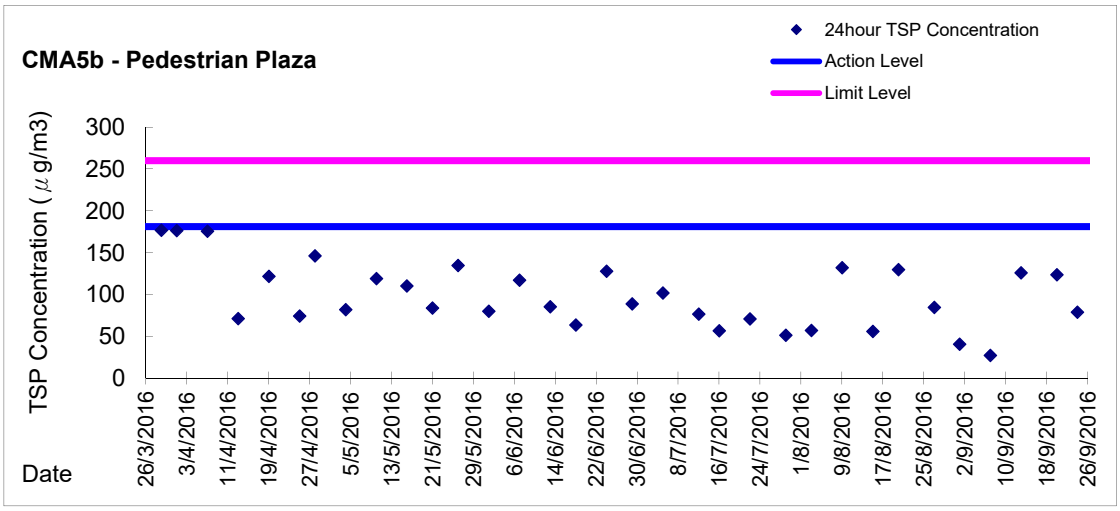


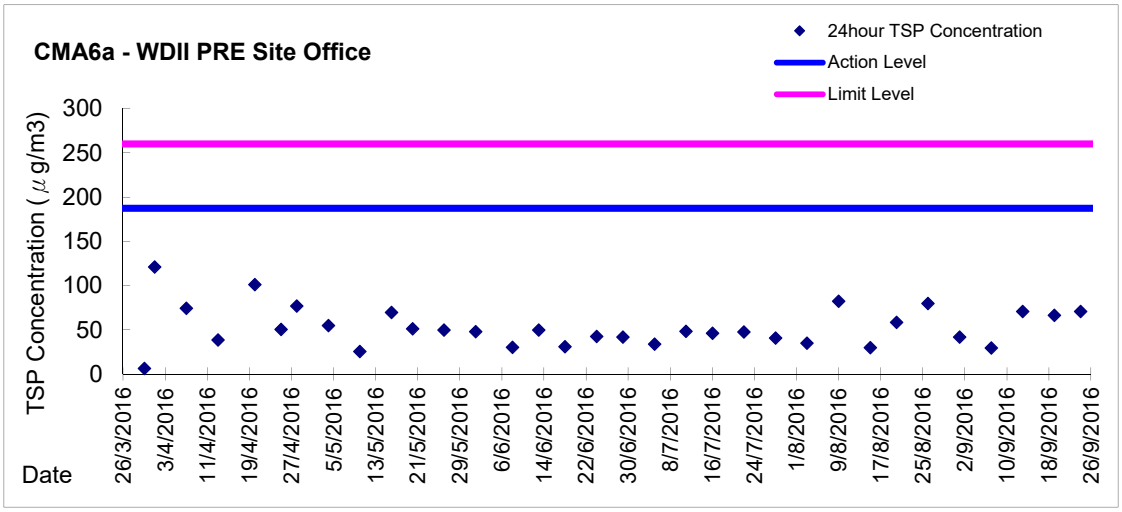




Graphic Presentation of 24 hour TSP Result







Field Data Record Sheet

Monitoring Date: 13 September 2016 **Weather Condition:** Fine **Tidal Condition:** Ebb

Temperature: 30.2^{0}C – 34.3^{0}C **Relative Humidity:** 55.4% - 72.0%

Location	Time	Temperature (℃)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:50	31.9	56.3	0	/	/	/	1.0	W	
OP6	13:47	34.3	64.7	0	/	/	/	0.6	W	
OP5	13:42	34.1	55.4	0	/	/	/	0	/	
OP4	13:38	31.6	72.0	1	Culvert Discharge	Sea	Persistent	2.3	NE	
OP3	13:30	30.2	68.2	0-1	Culvert Discharge	Sea	Intermittent	1.5	SE	
OP2	13:26	33.4	68.2	1	Culvert Discharge	Sea	Persistent	0.9	W	
OP1	13:23	31.4	71.9	1	Seawater	Sea	Intermittent	1.6	NE	

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

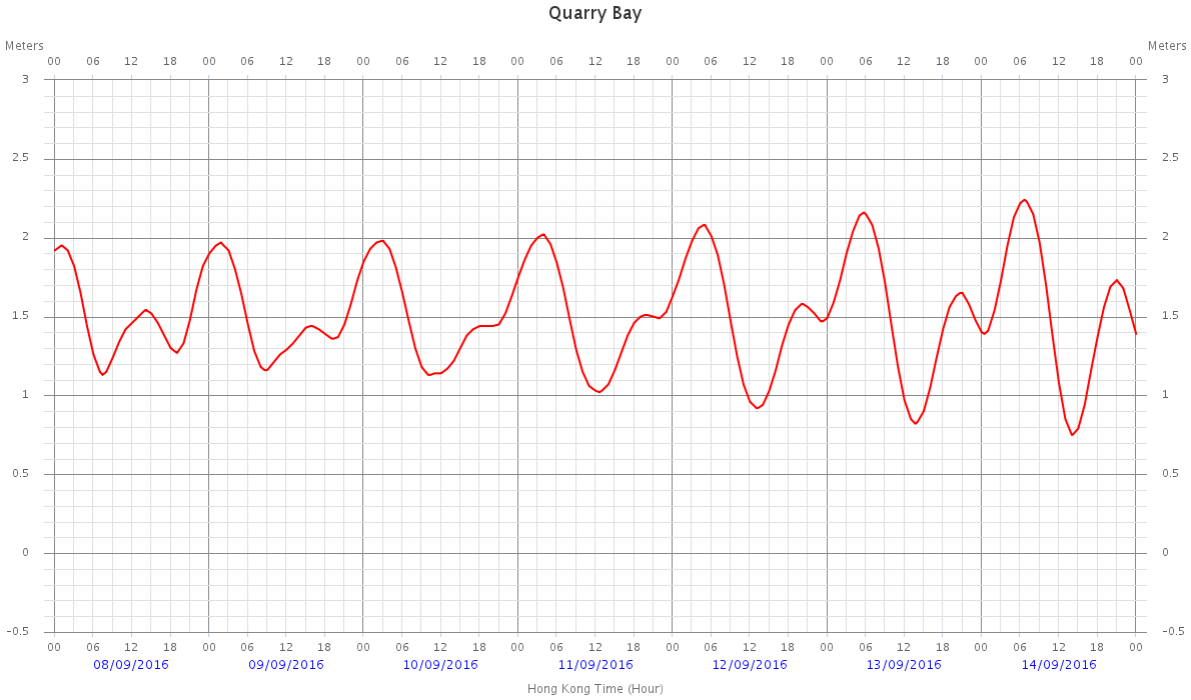
Meteorological Conditions on 13 September 2016

- **Hong Kong Observatory Weather Station at Hong Kong Observatory**
  Air Temperature: **26.0 – 30.9** ℃ Relative humidity: **73 – 96%**

- **Hong Kong Observatory Weather Station at Hong Kong Park**
  Air Temperature: **25.8 – 30.4** ℃

- **The tidal data at Quarry Bay Station**

Tide Time	Tide Height (m)
05:41	2.2
13:42	0.8
20:39	1.7



Field Data Record Sheet

Monitoring Date: 26 September 2016 **Weather Condition:** Haze **Tidal Condition:** Ebb

Temperature: 30.5^{0}C – 33.2^{0}C **Relative Humidity:** 64.9% - 84.5%

Location	Time	Temperature (℃)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:51	31.6	69.4	0	/	/	/	0.1	SW	
OP6	13:47	32.7	68.9	1	Seawater	Sea	Intermittent	0.7	SW	
OP5	13:41	30.5	70.6	0	/	/	/	2.0	NE	
OP4	13:37	33.2	64.9	0	/	/	/	1.5	SW	
OP3	13:31	32.1	67.8	0-1	Mobile Exhaust	Vehicle	Intermittent	0.6	W	
OP2	13:25	31.3	77.6	0	/	/	/	0.4	S	
OP1	13:22	29.4	84.5	0-1	Culvert Discharge	Sea	Intermittent	0.4	S	

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

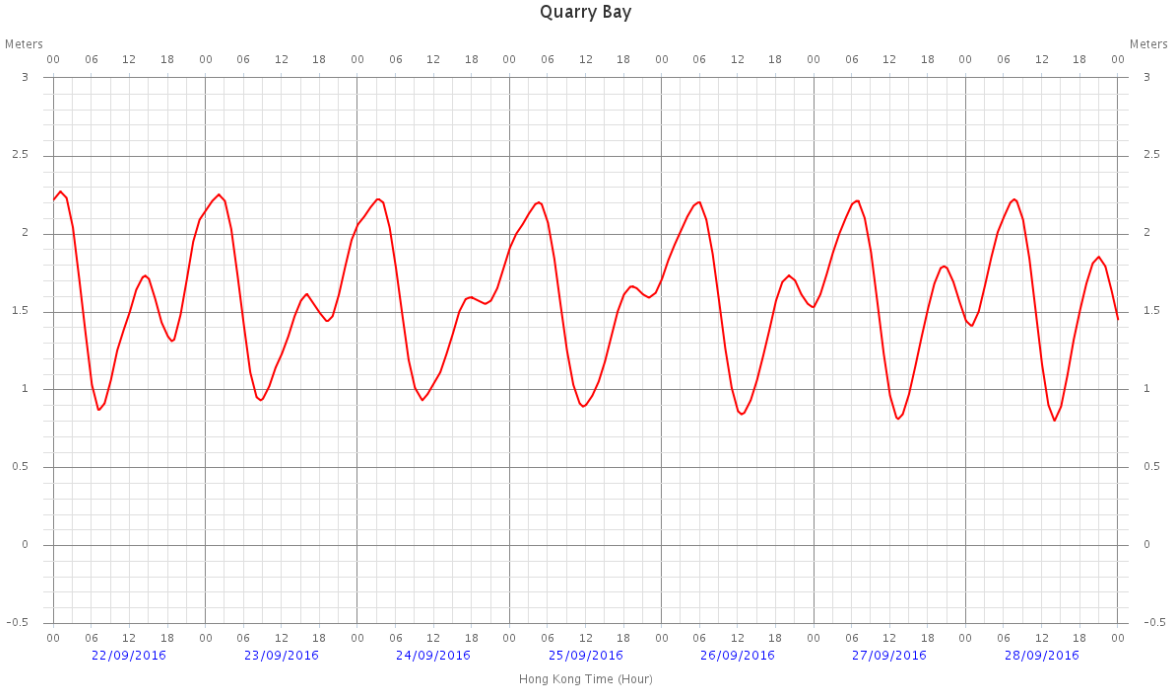
Meteorological Conditions on 26 September 2016

- **Hong Kong Observatory Weather Station at Hong Kong Observatory**
  Air Temperature: **27.0 – 31.1** ℃ Relative humidity: **71 – 89%**

- **Hong Kong Observatory Weather Station at Hong Kong Park**
  Air Temperature: **26.3 – 30.8** ℃

- **The tidal data at Quarry Bay Station**

Tide Time	Tide Height (m)
05:41	2.2
12:33	0.8
20:04	1.7
23:41	1.5



Appendix 5.4

Water Quality Monitoring Results and Graphical Presentations

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	17:45	Cloudy	Middle	-	27.60	27.60	27.60	7.64	7.94	7.76	30.29	30.29	30.29	87.1	87.0	86.5	5.80	5.79	5.76	6.80	6.77	6.81	5	5.50
	17:47		Middle	-	27.60	27.60		7.72	7.72		30.28	30.28		86.2	85.6		5.74	5.70		6.84	6.83		6	
31/8/2016	18:45	Fine	Middle	-	28.00	28.00	28.00	7.73	7.73	7.76	30.72	30.72	30.72	84.9	87.4	86.5	5.60	5.77	5.71	4.20	4.17	4.17	7	7.00
	18:47		Middle	-	28.00	28.00		7.79	7.79		30.72	30.72		87.2	86.5		5.75	5.70		4.15	4.15		7	
2/9/2016	18:00	Cloudy	Middle	-	28.50	28.50	28.50	7.69	7.70	7.70	30.41	30.41	30.41	68.5	68.8	68.4	4.49	4.50	4.48	6.20	6.16	6.10	5	5.00
	18:01		Middle	-	28.50	28.50		7.70	7.70		30.41	30.41		68.1	68.0		4.46	4.46		5.99	6.05		5	
5/9/2016	10:24	Cloudy	Middle	-	27.50	27.50	27.50	7.75	7.75	7.76	30.68	30.68	30.68	87.7	87.0	87.7	5.83	5.79	5.83	10.95	10.91	10.91	4	4.50
	10:26		Middle	-	27.50	27.50		7.76	7.76		30.68	30.68		87.8	88.1		5.84	5.86		10.89	10.89		5	
7/9/2016	12:04	Cloudy	Middle	-	27.30	27.30	27.30	7.71	7.71	7.72	29.88	29.88	29.89	82.6	82.2	81.7	5.54	5.51	5.48	13.12	13.12	**13.22**	7	8.00
	12:06		Middle	-	27.30	27.30		7.73	7.73		29.89	29.89		81.4	80.5		5.46	5.39		13.18	13.47		9	
10/9/2016	0:25	Cloudy	Middle	-	27.00	27.00	27.05	7.68	7.68	7.68	29.25	29.25	29.25	68.5	68.9	68.3	4.63	4.66	4.62	6.50	6.39	6.34	3	3.50
	0:26		Middle	-	27.10	27.10		7.68	7.68		29.25	29.25		68.6	67.2		4.64	4.54		6.21	6.27		4	
12/9/2016	14:40	Fine	Middle	-	29.20	29.20	29.30	7.65	7.65	7.66	28.92	28.92	28.92	85.5	85.9	86.0	5.58	5.61	5.61	5.69	5.62	5.58	8	9.00
	14:42		Middle	-	29.40	29.40		7.66	7.66		28.91	28.91		86.3	86.2		5.63	5.62		5.60	5.40		10	
14/9/2016	17:45	Fine	Middle	-	28.90	28.90	28.90	7.90	7.90	7.95	29.06	29.06	29.06	104.2	104.8	104.2	6.84	6.88	6.84	8.92	9.01	9.00	6	6.00
	17:47		Middle	-	28.90	28.90		7.99	7.99		29.06	29.06		103.6	104.3		6.79	6.84		9.05	9.00		6	
17/9/2016	18:05	Fine	Middle	-	28.70	28.70	28.75	7.67	7.67	7.71	30.06	30.06	30.06	87.0	89.4	88.3	5.69	5.85	5.78	4.78	4.82	4.79	5	4.50
	18:07		Middle	-	28.80	28.80		7.74	7.74		30.05	30.05		88.6	88.2		5.79	5.77		4.79	4.78		4	
19/9/2016	10:05	Fine	Middle	-	28.70	28.70	28.70	7.77	7.77	7.79	30.81	30.81	30.81	90.4	88.9	88.8	5.89	5.80	5.79	5.45	5.45	5.46	5	4.00
	10:07		Middle	-	28.70	28.70		7.81	7.81		30.80	30.80		87.1	88.9		5.67	5.79		5.47	5.45		3	
21/9/2016	10:45	Fine	Middle	-	28.30	28.30	28.30	7.93	7.93	7.92	31.09	31.09	31.09	87.9	89.4	89.1	5.76	5.86	5.84	6.06	6.05	6.02	10	9.00
	10:47		Middle	-	28.30	28.30		7.91	7.91		31.09	31.09		89.9	89.3		5.88	5.86		6.04	5.92		8	
23/9/2016	14:46	Fine	Middle	-	29.10	29.10	29.20	7.89	7.89	7.89	31.47	31.47	31.47	88.7	90.9	90.0	5.71	5.85	5.79	5.24	5.15	5.16	3	4.00
	14:48		Middle	-	29.30	29.30		7.89	7.89		31.47	31.47		90.0	90.2		5.79	5.80		5.12	5.12		5	
26/9/2016	17:05	Fine	Middle	-	28.30	28.30	28.55	7.88	7.88	7.89	31.34	31.34	31.35	98.4	97.4	97.6	6.39	6.32	6.33	3.84	3.89	3.94	5	6.00
	17:07		Middle	-	28.80	28.80		7.90	7.90		31.36	31.36		97.0	97.4		6.30	6.32		4.01	4.00		7	

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	16:47	Cloudy	Middle	2.5	26.90	26.90	26.90	7.94	7.94	7.94	30.51	30.51	30.54	77.8	77.0	75.8	5.23	5.18	5.10	7.12	6..98	6.85	7	7.00
	16:49		Middle	2.5	26.90	26.90		7.94	7.94		30.57	30.57		74.6	73.6		5.02	4.95		6.73	6.70		7	
31/8/2016	17:32	Fine	Middle	3.5	28.00	28.00	28.00	7.87	7.87	7.87	30.69	30.69	30.69	68.2	68.4	69.0	4.50	4.58	4.57	6.52	6.52	6.52	7	7.00
	17:34		Middle	3.5	28.00	28.00		7.86	7.86		30.69	30.69		69.5	69.9		4.58	4.61		6.52	6.52		7	
2/9/2016	20:15	Cloudy	Middle	3.0	27.70	27.70	27.75	7.71	7.71	7.72	30.31	30.31	30.31	76.4	77.2	76.2	5.07	5.12	5.06	9.82	9.98	9.89	11	11.50
	20:16		Middle	3.0	27.80	27.80		7.72	7.72		30.31	30.31		75.5	75.7		5.01	5.02		9.87	9.90		12	
5/9/2016	9:30	Cloudy	Middle	3.0	26.90	26.90	26.90	7.85	7.85	7.85	31.11	31.11	31.11	89.7	89.8	89.7	6.01	6.02	6.01	7.92	7.98	7.94	10	9.50
	9:32		Middle	3.0	26.90	26.90		7.85	7.85		31.10	31.10		89.3	90.0		5.99	6.03		7.95	7.90		9	
7/9/2016	11:03	Cloudy	Middle	2.5	26.90	26.90	26.90	7.82	7.82	7.83	30.49	30.49	30.50	71.8	71.4	70.4	4.83	4.81	4.74	9.08	9.01	9.02	9	8.50
	11:05		Middle	2.5	26.90	26.90		7.83	7.83		30.51	30.51		70.3	68.2		4.73	4.59		9.02	8.96		8	
10/9/2016	2:10	Cloudy	Middle	3.0	27.20	27.20	27.20	7.60	7.60	7.59	29.31	29.31	29.31	75.8	76.1	75.9	5.11	5.13	5.12	2.46	2.48	2.52	2	2.50
	2:11		Middle	3.0	27.20	27.20		7.58	7.58		29.31	29.31		76.2	75.5		5.14	5.09		2.55	2.58		3	
12/9/2016	17:09	Fine	Middle	3.5	28.20	28.20	28.25	7.78	7.78	7.79	28.76	28.76	29.26	87.8	86.9	86.4	5.80	5.74	5.71	4.31	4.36	4.34	5	4.00
	17:11		Middle	3.5	28.30	28.30		7.79	7.79		29.76	29.76		86.9	83.9		5.74	5.54		4.36	4.32		3	
14/9/2016	16:30	Fine	Middle	3.0	28.20	28.20	28.20	8.04	8.04	8.04	29.73	29.73	29.74	91.8	91.5	91.0	6.07	6.05	6.02	8.61	8.25	8.37	8	8.00
	16:32		Middle	3.0	28.20	28.20		8.04	8.04		29.74	29.74		90.2	90.5		5.96	5.99		8.25	8.37		8	
17/9/2016	17:11	Fine	Middle	2.5	28.40	28.40	28.40	7.90	7.90	7.90	30.29	30.29	30.30	78.9	77.9	78.1	5.19	5.12	5.05	7.57	7.52	7.57	5	4.50
	17:13		Middle	2.5	28.40	28.40		7.89	7.89		30.30	30.30		77.8	77.7		5.11	4.78		7.61	7.57		4	
19/9/2016	9:01	Fine	Middle	3.5	27.70	27.70	20.78	7.94	7.94	7.89	31.08	31.08	31.08	89.6	88.4	88.8	5.92	5.84	5.87	13.08	13.09	**13.10**	5	4.50
	9:03		Middle	3.5	0.00	27.70		7.84	7.84		31.08	31.08		88.5	88.5		5.85	5.86		13.10	13.11		4	
21/9/2016	9:40	Fine	Middle	3.0	27.40	27.40	27.40	7.94	7.94	7.94	31.19	31.19	31.19	88.0	87.6	87.6	5.85	5.82	5.82	9.79	9.83	9.84	12	12.00
	9:42		Middle	3.0	27.40	27.40		7.94	7.94		31.19	31.19		87.2	87.4		5.80	5.81		9.88	9.87		12	
23/9/2016	11:39	Fine	Middle	3.5	27.80	27.80	27.80	7.96	7.96	7.96	31.51	31.51	31.51	88.8	88.1	88.2	5.85	5.81	5.82	6.00	6.05	6.06	6	6.50
	11:41		Middle	3.5	27.80	27.80		7.96	7.96		31.51	31.51		87.9	88.1		5.80	5.81		6.09	6.10		7	
26/9/2016	16:10	Fine	Middle	3.0	28.50	28.50	28.55	7.95	7.95	7.95	31.39	31.39	31.39	86.4	86.2	86.5	5.63	5.61	5.65	6.53	6.67	6.63	4	4.50
	16:12		Middle	3.0	28.60	28.60		7.95	7.95		31.39	31.39		86.8	86.7		5.68	5.67		6.66	6.67		5	

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	16:31	Cloudy	Middle	2.5	26.90	26.90	26.90	7.90	7.90	7.91	30.69	30.69	30.63	81.0	80.9	80.1	5.44	5.44	5.38	6.73	6.63	6.62	5	5.50
	16:33		Middle	2.5	26.90	26.90		7.92	7.92		30.57	30.57		79.6	78.7		5.35	5.27		6.56	6.56		6	
31/8/2016	17:16	Fine	Middle	3.5	28.30	28.30	28.35	7.86	7.86	7.87	30.76	30.76	30.76	90.4	89.1	89.6	5.93	5.84	5.87	9.73	9.94	9.69	7	7.50
	17:18		Middle	3.5	28.40	28.40		7.87	7.87		30.75	30.75		89.8	89.1		5.88	5.84		9.54	9.54		8	
2/9/2016	19:40	Cloudy	Middle	3.0	27.80	27.80	27.85	7.76	7.76	7.77	29.93	29.93	29.93	66.1	66.5	66.7	4.38	4.42	4.43	7.93	7.85	7.91	6	6.50
	19:41		Middle	3.0	27.90	27.90		7.77	7.77		29.93	29.93		66.9	67.2		4.44	4.46		7.90	7.94		7	
5/9/2016	9:10	Cloudy	Middle	3.0	27.30	27.30	27.35	7.81	7.81	7.82	31.13	31.13	31.13	94.0	94.5	93.6	6.25	6.29	6.23	5.92	5.92	5.92	6	5.50
	9:12		Middle	3.0	27.40	27.40		7.83	7.83		31.13	31.13		92.8	93.0		6.17	6.19		5.91	5.91		5	
7/9/2016	10:47	Cloudy	Middle	2.5	27.10	27.10	27.10	7.80	7.80	7.81	30.28	30.30	30.29	70.3	69.8	69.9	4.72	4.69	4.69	6.81	6.80	6.80	5	5.50
	10:49		Middle	2.5	27.10	27.10		7.81	7.81		30.28	30.28		70.1	69.2		4.70	4.65		6.80	6.79		6	
10/9/2016	1:50	Cloudy	Middle	3.0	27.10	27.10	27.10	7.68	7.68	7.70	29.44	29.44	29.44	79.2	78.2	78.4	5.34	5.27	5.29	2.39	2.43	2.40	<2	<2
	1:51		Middle	3.0	27.10	27.10		7.71	7.71		29.43	29.43		78.4	77.6		5.29	5.24		2.36	2.40		<2	
12/9/2016	16:53	Fine	Middle	3.5	29.10	29.10	29.25	7.78	7.78	7.79	29.59	29.59	29.57	84.3	87.4	87.4	6.13	6.00	5.92	3.77	3.52	3.57	4	4.00
	16:55		Middle	3.5	29.40	29.40		7.79	7.79		29.55	29.55		89.7	88.1		5.83	5.72		3.50	3.49		4	
14/9/2016	16:10	Fine	Middle	3.0	28.50	28.50	28.60	8.00	8.00	8.01	29.53	29.53	29.53	97.8	97.9	97.6	6.42	6.43	6.39	7.83	7.80	7.77	7	6.50
	16:12		Middle	3.0	28.70	28.70		8.02	8.02		29.53	29.53		97.1	97.6		6.31	6.41		7.67	7.76		6	
17/9/2016	16:55	Fine	Middle	2.5	28.20	28.20	28.30	7.85	7.85	7.86	30.66	30.66	30.66	88.1	87.6	87.0	5.83	5.76	5.73	8.67	8.61	8.62	7	7.00
	16:57		Middle	2.5	28.40	28.40		7.86	7.86		30.65	30.65		85.6	86.6		5.62	5.69		8.60	8.61		7	
19/9/2016	8:45	Fine	Middle	3.5	27.70	27.70	27.80	7.88	7.88	7.89	30.69	30.69	30.68	89.4	93.4	92.5	5.92	6.18	6.12	10.14	10.10	10.07	5	5.00
	8:47		Middle	3.5	27.90	27.90		7.90	7.90		30.66	30.66		91.6	95.6		6.06	6.32		10.02	10.01		5	
21/9/2016	9:15	Fine	Middle	3.0	27.60	27.60	27.60	7.91	7.91	7.92	31.10	31.10	31.10	94.7	93.3	93.8	6.28	6.18	6.22	8.25	8.23	8.24	7	7.00
	9:17		Middle	3.0	27.60	27.60		7.92	7.92		31.10	31.10		94.4	92.8		6.25	6.15		8.24	8.24		7	
23/9/2016	11:23	Fine	Middle	3.5	27.90	27.90	27.95	7.93	7.93	7.94	31.40	31.40	31.40	96.9	95.8	95.4	6.38	6.30	6.28	9.56	9.42	9.43	4	4.00
	11:25		Middle	3.5	28.00	28.00		7.94	7.94		31.40	31.40		95.1	93.8		6.26	6.17		9.33	9.39		4	
26/9/2016	15:50	Fine	Middle	3.0	28.70	28.70	28.75	7.92	7.92	7.93	31.65	31.65	31.65	98.3	98.0	97.8	6.37	6.35	6.34	5.92	5.91	5.90	6	6.00
	15:52		Middle	3.0	28.80	28.80		7.94	7.94		31.65	31.65		98.7	96.3		6.40	6.24		5.89	5.87		6	

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

Water Monitoring Result at P3 - APA
Mid-Flood Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	16:35	Cloudy	Middle	2.5	26.70	26.70	26.70	7.92	7.92	7.92	30.53	30.53	30.58	70.7	70.7	71.4	4.77	4.77	4.82	6.73	6.84	7.00	9	8.00
	16:37		Middle	2.5	26.70	26.70		7.92	7.92		30.63	30.63		72.5	71.8		4.89	4.85		7.20	7.24		7	
31/8/2016	17:20	Fine	Middle	3.5	28.00	28.00	28.05	7.87	7.87	7.87	30.83	30.83	30.83	76.7	77.8	76.8	5.06	5.13	4.98	5.93	5.92	5.94	5	5.50
	17:22		Middle	3.5	28.10	28.10		7.86	7.86		30.83	30.83		77.5	75.3		4.77	4.96		5.99	5.90		6	
2/9/2016	19:50	Cloudy	Middle	3.0	27.70	27.70	27.70	7.77	7.77	7.78	30.01	30.01	30.02	72.4	71.7	72.1	4.81	4.76	4.79	6.56	6.58	6.56	6	6.50
	19:51		Middle	3.0	27.70	27.70		7.78	7.78		30.03	30.03		72.4	71.9		4.81	4.77		6.53	6.55		7	
5/9/2016	9:15	Cloudy	Middle	3.0	26.90	26.90	26.95	7.84	7.84	7.84	31.14	31.74	31.29	87.5	86.7	86.9	5.86	5.80	5.82	5.83	5.72	5.78	7	7.00
	9:17		Middle	3.0	27.00	27.00		7.84	7.84		31.14	31.14		87.2	86.1		5.85	5.76		5.79	5.76		7	
7/9/2016	10:51	Cloudy	Middle	2.5	27.00	27.00	27.00	7.81	7.81	7.81	30.21	30.21	30.28	76.4	75.0	74.8	5.14	5.03	5.03	7.75	7.78	7.70	7	7.00
	10:53		Middle	2.5	27.00	27.00		7.81	7.81		30.34	30.34		74.0	73.7		4.98	4.95		7.66	7.59		7	
10/9/2016	1:56	Cloudy	Middle	3.0	27.10	27.10	27.10	7.79	7.79	7.80	29.39	29.39	29.39	76.4	76.4	76.0	5.15	5.15	5.12	2.65	2.66	2.64	<2	<2
	1:57		Middle	3.0	27.10	27.10		7.80	7.80		29.39	29.39		75.7	75.3		5.10	5.08		2.63	2.61		<2	
12/9/2016	16:57	Fine	Middle	3.5	28.60	28.60	28.65	7.79	7.79	7.79	29.63	29.63	29.63	82.4	82.4	82.8	5.41	5.41	5.39	3.82	3.94	3.87	4	4.50
	16:59		Middle	3.5	28.70	28.70		7.79	7.79		29.63	29.63		81.5	84.9		5.35	5.38		3.95	3.75		5	
14/9/2016	16:15	Fine	Middle	3.0	28.50	28.50	28.55	8.03	8.03	8.04	29.49	29.49	29.49	97.7	97.8	97.4	6.44	6.44	6.41	6.64	6.69	6.69	5	5.00
	16:17		Middle	3.0	28.60	28.60		8.04	8.04		29.49	29.49		97.5	96.4		6.42	6.35		6.79	6.64		5	
17/9/2016	16:59	Fine	Middle	2.5	27.80	27.80	27.85	7.88	7.88	7.89	30.59	30.59	31.09	84.4	85.9	88.2	5.59	5.68	5.81	6.46	6.47	6.45	6	5.50
	17:01		Middle	2.5	27.90	27.90		7.89	7.89		32.59	30.59		90.2	92.2		5.86	6.10		6.40	6.47		5	
19/9/2016	8:49	Fine	Middle	3.5	27.40	27.40	27.45	7.90	7.90	7.91	30.82	30.82	30.82	84.1	78.5	82.9	5.61	5.22	5.52	10.83	10.85	10.85	8	8.00
	8:51		Middle	3.5	27.50	27.50		7.91	7.91		30.82	30.82		83.8	85.2		5.57	5.66		10.86	10.87		8	
21/9/2016	9:20	Fine	Middle	3.0	27.20	27.20	27.40	7.92	7.92	7.92	31.08	31.08	31.08	84.6	85.4	85.1	5.64	5.69	5.67	7.65	7.63	7.64	6	6.00
	9:22		Middle	3.0	27.60	27.60		7.91	7.91		31.08	31.08		84.7	85.6		5.64	5.71		7.64	7.64		6	
23/9/2016	11:27	Fine	Middle	3.5	27.60	27.60	27.65	7.94	7.94	7.94	31.39	31.39	31.39	92.3	92.2	91.7	6.10	6.10	6.07	8.74	8.58	8.61	7	6.00
	11:29		Middle	3.5	27.70	27.70		7.94	7.94		31.39	31.39		91.8	90.6		6.07	5.99		8.55	8.58		5	
26/9/2016	15:55	Fine	Middle	3.0	28.60	28.60	28.60	7.91	7.91	7.92	31.49	31.49	31.50	91.4	90.3	89.9	5.95	5.88	5.85	6.38	6.33	6.32	7	6.50
	15:57		Middle	3.0	28.60	28.60		7.93	7.93		31.51	31.51		89.0	88.7		5.79	5.78		6.38	6.19		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	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	16:39	Cloudy	Middle	2.5	26.90	26.90	26.95	7.92	7.92	7.92	30.57	30.57	30.57	68.9	68.4	68.0	4.62	4.59	4.56	7.87	7.66	7.71	7	7.50
	16:41		Middle	2.5	27.00	27.00		7.92	7.92		30.57	30.57		67.8	67.0		4.54	4.50		7.66	7.66		8	
31/8/2016	17:24	Fine	Middle	3.5	27.90	27.90	27.90	7.87	7.87	7.87	30.83	30.83	30.83	81.1	81.3	80.9	5.36	5.37	5.34	6.07	6.06	6.12	6	6.00
	17:26		Middle	3.5	27.90	27.90		7.87	7.87		30.82	30.82		80.2	80.8		5.30	5.34		6.17	6.18		6	
2/9/2016	19:56	Cloudy	Middle	3.0	27.60	27.60	27.65	7.78	7.78	7.78	30.26	30.26	30.26	67.6	67.9	67.8	4.51	4.51	4.51	9.76	9.74	9.77	11	11.00
	19:57		Middle	3.0	27.70	27.70		7.78	7.78		30.26	30.26		67.7	67.9		4.50	4.51		9.81	9.78		11	
5/9/2016	9:20	Cloudy	Middle	3.0	26.90	26.90	26.90	7.84	7.84	7.85	31.05	31.05	31.06	84.3	85.1	84.5	5.65	5.70	5.65	7.45	7.31	7.36	6	5.50
	9:22		Middle	3.0	26.90	26.90		7.85	7.85		31.06	31.06		84.0	84.4		5.62	5.63		7.30	7.37		5	
7/9/2016	10:55	Cloudy	Middle	2.5	26.90	26.90	26.90	7.81	7.81	7.81	30.31	30.31	30.36	76.4	74.5	73.3	5.12	5.02	4.93	9.03	9.06	9.00	8	8.00
	10:57		Middle	2.5	26.90	26.90		7.81	7.81		30.41	30.41		72.1	70.1		4.85	4.72		9.02	8.88		8	
10/9/2016	2:03	Cloudy	Middle	3.0	27.10	27.10	27.10	7.78	7.78	7.78	29.39	29.39	29.39	66.1	66.4	66.2	4.46	4.48	4.46	2.40	2.35	2.34	2	3.00
	2:04		Middle	3.0	27.10	27.10		7.78	7.78		29.39	29.39		66.2	65.9		4.46	4.44		2.32	2.30		4	
12/9/2016	17:01	Fine	Middle	3.5	28.20	28.20	28.25	7.79	7.79	7.79	29.82	29.84	29.84	80.2	79.9	79.6	5.30	5.28	5.26	4.38	4.39	4.40	3	3.50
	17:03		Middle	3.5	28.30	28.30		7.79	7.79		29.84	29.84		79.4	78.7		5.24	5.20		4.40	4.44		4	
14/9/2016	16:20	Fine	Middle	3.0	28.20	28.20	28.20	8.04	8.04	8.04	29.59	29.59	29.60	91.8	93.4	93.0	6.08	6.19	6.16	7.99	7.78	7.77	6	7.00
	16:22		Middle	3.0	28.20	28.20		8.04	8.04		29.60	29.60		93.7	93.1		6.20	6.17		7.66	7.66		8	
17/9/2016	17:03	Fine	Middle	27.9	27.90	27.90	27.90	7.90	7.90	7.90	30.61	30.61	30.62	83.6	83.3	83.6	5.53	5.51	5.45	7.19	7.21	7.21	6	6.00
	17:05		Middle	2.5	27.90	27.90		7.90	7.90		30.62	30.62		87.0	80.5		5.42	5.32		7.21	7.24		6	
19/9/2016	8:53	Fine	Middle	3.5	27.60	27.60	27.65	7.91	7.91	7.92	31.04	31.04	31.05	88.8	87.4	88.0	5.88	5.79	5.83	14.01	14.00	**14.00**	7	7.00
	8:55		Middle	3.5	27.70	27.70		7.93	7.93		31.06	31.06		87.2	88.7		5.77	5.87		14.00	14.00		7	
21/9/2016	9:25	Fine	Middle	3.0	27.30	27.30	27.30	7.92	7.92	7.93	31.13	31.13	31.13	89.4	89.9	89.7	5.95	5.97	5.97	9.14	9.12	9.21	11	11.00
	9:27		Middle	3.0	27.30	27.30		7.93	7.93		31.13	31.13		90.0	89.6		6.00	5.96		9.28	9.29		11	
23/9/2016	11:31	Fine	Middle	3.5	27.60	27.60	27.65	7.94	7.94	7.90	31.48	31.48	31.49	94.8	94.9	94.0	6.26	6.27	6.21	8.30	8.35	8.33	7	7.00
	11:33		Middle	3.5	27.70	27.70		7.85	7.85		31.49	31.49		93.5	92.7		6.18	6.12		8.33	8.35		7	
26/9/2016	16:00	Fine	Middle	3.0	28.60	28.60	28.60	7.94	7.94	7.94	31.48	31.48	31.49	88.0	88.1	87.8	5.72	5.73	5.71	7.48	7.56	7.64	7	6.50
	16:02		Middle	3.0	28.60	28.60		7.94	7.94		31.49	31.49		88.1	86.9		5.73	5.65		7.62	7.89		6	

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	16:43	Cloudy	Middle	2.5	26.90	26.90	26.90	7.92	7.92	7.93	30.57	30.57	30.56	76.7	74.0	74.3	5.16	4.97	4.99	6.66	6.71	6.71	8	7.50
	16:45		Middle	2.5	26.90	26.90		7.93	7.93		30.51	30.59		73.3	73.0		4.93	4.91		6.52	6.93		7	
31/8/2016	17:28	Fine	Middle	3.5	27.90	27.90	27.95	7.87	7.87	7.87	30.77	30.77	30.77	77.0	78.4	78.2	5.09	5.18	5.16	6.05	6.02	5.97	6	5.50
	17:30		Middle	3.5	28.00	28.00		7.87	7.87		30.77	30.77		78.3	78.9		5.17	5.21		6.00	5.81		5	
2/9/2016	20:06	Cloudy	Middle	3.0	27.60	27.60	27.65	7.80	7.80	7.80	30.27	30.27	30.27	66.0	67.1	66.9	4.39	4.47	4.45	9.76	9.74	9.67	13	12.00
	20:07		Middle	3.0	27.70	27.70		7.79	7.80		30.27	30.27		67.1	67.4		4.46	4.48		9.60	9.58		11	
5/9/2016	9:25	Cloudy	Middle	3.0	26.90	26.90	26.90	7.85	7.85	7.85	31.08	31.08	31.09	85.0	84.4	84.1	5.73	5.66	5.65	7.92	7.90	7.91	7	6.50
	9:27		Middle	3.0	26.90	26.90		7.85	7.85		31.09	31.09		82.3	84.7		5.52	5.69		7.90	7.90		6	
7/9/2016	10:59	Cloudy	Middle	2.5	26.90	26.90	26.90	7.81	7.81	7.82	30.35	30.35	30.41	70.2	68.1	67.6	4.72	4.58	4.55	9.20	9.23	9.17	7	7.00
	11:01		Middle	2.5	26.90	26.90		7.82	7.82		30.46	30.46		66.6	65.5		4.48	4.40		9.12	9.13		7	
10/9/2016	2:07	Cloudy	Middle	3.0	27.10	27.10	27.15	7.76	7.76	7.77	29.49	29.49	29.50	71.3	71.1	70.8	4.80	4.79	4.77	2.21	2.19	2.19	2	3.00
	2:08		Middle	3.0	27.20	27.20		7.77	7.77		29.50	29.50		70.5	70.1		4.75	4.72		2.18	2.16		4	
12/9/2016	17:05	Fine	Middle	3.5	28.30	28.30	28.30	7.79	7.79	7.79	29.63	29.63	29.64	70.5	68.8	69.2	4.66	4.54	4.57	3.74	3.73	3.76	2	3.00
	17:07		Middle	3.5	28.30	28.30		7.78	7.78		29.64	29.64		64.8	72.6		4.28	4.79		3.84	3.74		4	
14/9/2016	16:25	Fine	Middle	3.0	28.00	28.00	28.05	8.04	8.04	8.04	29.76	29.76	29.76	88.0	88.1	88.4	5.83	5.84	5.86	9.00	8.67	8.70	7	8.00
	16:27		Middle	3.0	28.10	28.10		8.04	8.04		29.76	29.76		88.8	88.7		5.88	5.88		8.64	8.50		9	
17/9/2016	17:07	Fine	Middle	2.5	28.50	28.50	28.25	7.90	7.90	7.91	30.63	30.63	30.64	86.4	85.0	85.2	5.70	5.61	5.63	8.23	8.03	7.89	6	5.50
	17:09		Middle	2.5	28.00	28.00		7.91	7.91		30.64	30.64		84.9	84.6		5.61	5.59		7.66	7.65		5	
19/9/2016	8:57	Fine	Middle	3.5	27.70	27.70	27.70	7.93	7.93	7.94	31.07	31.07	31.07	86.2	88.0	87.9	5.71	5.83	5.81	14.06	14.00	**13.93**	10	9.50
	8:59		Middle	3.5	27.70	27.70		7.94	7.94		31.07	31.07		88.7	88.8		5.81	5.88		13.90	13.76		9	
21/9/2016	9:30	Fine	Middle	3.0	27.30	27.30	27.30	7.93	7.93	7.94	31.16	31.16	31.16	88.1	89.2	88.5	5.86	5.94	5.88	10.19	10.13	10.08	9	9.50
	9:32		Middle	3.0	27.30	27.30		7.94	7.94		31.17	31.16		86.9	89.8		5.72	5.98		10.06	9.92		10	
23/9/2016	11:35	Fine	Middle	3.5	27.80	27.80	27.80	7.95	7.95	7.96	31.51	31.51	31.51	81.0	80.9	81.3	5.34	5.33	5.36	8.55	8.90	8.87	9	8.50
	11:37		Middle	3.5	27.80	27.80		7.96	7.96		31.51	31.51		81.6	81.8		5.38	5.39		9.02	9.00		8	
26/9/2016	16:05	Fine	Middle	3.0	28.60	28.60	28.60	7.95	7.95	7.95	31.47	31.47	31.49	92.4	93.0	92.3	6.01	6.05	6.01	8.39	8.61	8.56	7	7.00
	16:07		Middle	3.0	28.60	28.60		7.95	7.95		31.50	31.50		92.9	91.0		6.04	5.95		8.62	8.63		7	

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	17:01	Cloudy	Middle	3.5	27.10	27.10	27.10	7.89	7.89	7.90	30.93	30.93	30.92	61.3	60.8	61.0	4.10	4.07	4.08	8.24	8.25	8.22	10	9.50
	17:03		Middle	3.5	27.10	27.10		7.91	7.91		30.91	30.91		60.7	61.2		4.06	4.07		8.21	8.18		9	
31/8/2016	17:45	Fine	Middle	3.5	27.60	27.60	27.60	7.85	7.85	7.86	30.74	30.74	30.74	75.6	75.4	75.6	5.02	5.01	5.02	7.79	7.73	7.69	9	9.50
	17:47		Middle	3.5	27.60	27.60		7.86	7.86		30.74	30.74		76.1	75.3		5.05	5.00		7.68	7.57		10	
2/9/2016	18:40	Cloudy	Middle	3.0	27.70	27.70	27.75	7.70	7.70	7.71	29.84	29.84	29.84	65.7	65.7	65.2	4.36	4.37	4.34	11.13	11.07	11.10	10	10.50
	18:41		Middle	3.0	27.80	27.80		7.71	7.71		29.83	29.83		64.8	64.4		4.31	4.30		11.15	11.06		11	
5/9/2016	9:45	Cloudy	Middle	4.0	27.00	27.00	27.05	7.80	7.80	7.81	31.32	31.32	31.32	80.9	81.4	80.5	5.40	5.44	5.38	7.87	7.86	7.83	8	7.50
	9:47		Middle	4.0	27.10	27.10		7.82	7.82		31.32	31.32		79.6	80.2		5.32	5.36		7.79	7.78		7	
7/9/2016	11:27	Cloudy	Middle	3.5	27.00	27.00	27.00	7.82	7.82	7.82	30.36	30.36	30.36	64.9	64.0	63.7	4.36	4.29	4.28	7.50	7.51	7.51	7	6.50
	11:29		Middle	3.5	27.00	27.00		7.82	7.82		30.35	30.35		63.3	62.5		4.25	4.20		7.54	7.50		6	
10/9/2016	1:15	Cloudy	Middle	3.5	27.00	27.00	27.05	7.54	7.54	7.60	29.50	29.50	29.50	70.4	71.3	70.8	4.75	4.81	4.78	2.21	2.17	2.16	<2	≤2
	1:16		Middle	3.5	27.10	27.10		7.66	7.66		29.50	29.50		70.3	71.2		4.74	4.80		2.14	2.13		<2	
12/9/2016	13:45	Fine	Middle	3.5	29.80	29.80	29.90	7.76	7.76	7.76	29.14	29.14	29.14	79.2	79.8	78.8	5.10	5.14	5.08	4.04	4.00	4.00	2	3.00
	13:47		Middle	3.5	30.00	30.00		7.75	7.75		29.14	29.14		78.5	77.7		5.06	5.00		3.98	3.97		4	
14/9/2016	16:45	Fine	Middle	4.0	28.40	28.40	28.40	8.07	8.07	8.09	29.40	29.40	29.40	111.0	111.6	361.1	7.32	7.40	7.34	8.25	8.25	8.25	8	8.50
	16:47		Middle	4.0	28.40	28.40		8.11	8.11		29.40	29.40		111.1	1110.8		7.32	7.30		8.24	8.26		9	
17/9/2016	17:10	Fine	Middle	3.5	28.30	28.30	28.30	7.88	7.88	7.89	30.55	30.55	30.55	80.6	80.4	80.7	5.30	5.28	5.30	7.79	7.78	7.63	6	6.00
	17:12		Middle	3.5	28.30	28.30		7.89	7.89		30.55	30.55		80.8	80.9		5.31	5.32		7.22	7.74		6	
19/9/2016	9:15	Fine	Middle	4.0	28.10	28.10	28.15	7.88	7.88	7.89	31.03	31.03	31.03	81.0	82.1	81.9	5.32	5.40	5.39	9.80	9.84	9.79	6	6.50
	9:17		Middle	4.0	28.20	28.20		7.89	7.89		31.02	31.02		82.1	82.5		5.40	5.42		9.82	9.68		7	
21/9/2016	9:50	Fine	Middle	4.0	27.70	27.70	27.70	7.91	7.91	7.93	31.34	31.34	31.35	81.1	81.5	81.3	5.36	5.38	5.37	10.45	10.36	10.34	14	13.00
	9:52		Middle	4.0	27.70	27.70		7.94	7.94		31.35	31.35		82.1	80.5		5.43	5.32		10.27	10.27		12	
23/9/2016	11:45	Fine	Middle	4.0	28.00	28.00	28.00	7.92	7.92	7.93	31.54	31.54	31.55	84.9	86.5	85.7	5.57	5.68	5.62	7.83	7.84	7.85	8	7.50
	11:47		Middle	4.0	28.00	28.00		7.93	7.93		31.55	31.55		85.5	85.8		5.61	5.63		7.87	7.87		7	
26/9/2016	16:25	Fine	Middle	4.0	28.50	28.50	28.50	7.97	7.97	7.97	31.52	31.52	31.53	84.9	86.1	85.9	5.53	5.61	5.60	8.25	8.30	8.36	8	8.50
	16:27		Middle	4.0	28.50	28.50		7.97	7.97		31.53	31.53		86.1	86.6		5.61	5.64		8.50	8.40		9	

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

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	15:51	Cloudy	Middle	3.5	27.20	27.20	27.20	7.83	7.83	7.85	30.89	30.89	30.88	72.6	72.6	73.4	4.85	4.93	4.91	9.56	9.72	9.78	13	13.00
	15:53		Middle	3.5	27.20	27.20		7.86	7.86		30.87	30.87		74.9	73.4		4.95	4.91		9.89	9.96		13	
31/8/2016	16:00	Fine	Middle	3.5	28.10	28.10	28.20	7.91	7.91	7.89	30.58	30.58	30.58	75.8	77.1	76.7	4.99	5.07	5.05	8.58	8.32	8.45	9	9.00
	16:02		Middle	3.5	28.30	28.30		7.87	7.87		30.57	30.57		76.9	76.9		5.06	5.06		8.49	8.40		9	
2/9/2016	20:55	Cloudy	Middle	3.5	27.60	27.60	27.65	7.77	7.77	7.77	30.26	30.26	30.27	62.4	63.1	63.0	4.15	4.20	4.19	12.05	11.99	**12.01**	14	14.00
	20:56		Middle	3.5	27.70	27.70		7.77	7.77		30.27	30.27		63.2	63.1		4.20	4.19		12.01	11.98		14	
5/9/2016	7:55	Cloudy	Middle	4.0	27.40	27.40	27.45	7.85	7.85	7.85	31.12	31.12	31.12	82.8	82.9	82.1	5.50	5.51	5.46	10.47	10.46	**10.44**	9	9.50
	7:57		Middle	4.0	27.50	27.50		7.85	7.85		31.12	31.12		82.2	80.6		5.46	5.36		10.44	10.39		10	
7/9/2016	9:33	Cloudy	Middle	3.5	27.10	27.10	27.10	7.84	7.84	7.85	30.33	30.33	30.34	63.3	63.9	63.8	4.25	4.29	4.29	11.78	11.82	**11.79**	13	12.50
	9:35		Middle	3.5	27.10	27.10		7.85	7.85		30.35	30.35		64.2	63.8		4.31	4.29		11.77	11.77		12	
10/9/2016	2:19	Cloudy	Middle	3.5	27.20	27.20	27.20	7.49	7.49	7.53	29.10	29.10	29.11	75.1	75.2	75.2	5.07	5.08	5.08	3.26	3.38	3.37	3	2.50
	2:20		Middle	3.5	27.20	27.20		7.56	7.56		29.11	29.11		75.5	75.0		5.10	5.06		3.40	3.43		2	
12/9/2016	15:48	Fine	Middle	3.5	29.40	29.40	29.65	7.73	7.73	7.74	29.61	29.61	29.59	86.7	87.8	86.5	5.61	5.67	5.59	3.39	3.38	3.38	3	3.00
	15:50		Middle	3.5	29.90	29.90		7.74	7.74		29.56	29.56		86.7	84.8		5.60	5.47		3.37	3.37		3	
14/9/2016	15:30	Fine	Middle	3.5	28.80	28.80	28.85	8.27	8.27	8.25	29.24	29.24	29.25	106.6	107.2	105.2	6.99	7.03	6.90	7.10	7.10	7.10	9	8.50
	15:32		Middle	3.5	28.90	28.90		8.23	8.23		29.25	29.25		103.2	103.6		6.77	6.79		7.10	7.09		8	
17/9/2016	16:11	Fine	Middle	3.5	29.10	29.10	29.25	7.93	7.93	7.91	30.50	30.50	30.48	89.9	89.5	88.6	5.82	5.79	5.73	9.52	9.52	9.52	6	6.50
	16:13		Middle	3.5	29.40	29.40		7.88	7.88		30.46	30.46		87.5	87.6		5.66	5.66		9.52	9.52		7	
19/9/2016	7:30	Fine	Middle	4.0	27.80	27.80	28.00	7.92	7.92	7.92	30.82	30.82	30.82	80.8	75.8	79.4	5.54	5.00	5.47	9.99	9.99	9.99	14	13.00
	7:32		Middle	4.0	28.20	28.20		7.92	7.92		30.82	30.82		76.7	84.3		5.12	6.23		9.99	9.99		12	
21/9/2016	8:30	Fine	Middle	3.5	27.30	27.30	27.25	7.89	7.89	7.91	31.25	31.25	31.26	79.4	79.8	79.9	5.29	5.32	5.32	13.11	13.11	**13.11**	16	16.00
	8:32		Middle	3.5	27.20	27.20		7.93	7.93		31.26	31.26		80.1	80.1		5.34	5.34		13.12	13.10		16	
23/9/2016	9:30	Fine	Middle	3.5	28.00	28.00	28.05	7.86	7.86	7.88	31.27	31.27	31.27	92.4	91.3	91.5	6.07	6.00	6.01	15.42	15.57	**15.45**	15	14.50
	9:32		Middle	3.5	28.10	28.10		7.89	7.89		31.27	31.27		91.9	90.2		6.04	5.93		15.39	15.41		14	
26/9/2016	14:50	Fine	Middle	3.5	29.10	29.10	29.20	7.83	7.83	7.85	31.57	31.57	31.57	94.4	93.6	93.5	6.07	6.02	6.02	15.29	15.11	**15.14**	14	15.00
	14:52		Middle	3.5	29.30	29.30		7.87	7.87		31.56	31.56		93.1	93.0		5.99	5.98		15.08	15.09		16	

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	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	11:54	Cloudy	Middle	-	27.80	27.80	27.75	7.74	7.74	7.75	30.28	30.28	30.29	67.0	68.2	68.4	4.45	4.53	4.54	3.47	3.48	3.47	3	4.00
	11:56		Middle	-	27.70	27.70		7.76	7.76		30.30	30.30		68.8	69.4		4.57	4.61		3.49	3.45		5	
31/8/2016	11:45	Fine	Middle	-	28.30	28.30	28.35	7.88	7.88	7.87	30.85	30.85	30.86	88.6	87.9	88.7	5.81	5.77	5.82	5.85	5.86	5.87	10	9.50
	11:47		Middle	-	28.40	28.40		7.86	7.86		30.87	30.87		89.0	89.1		5.84	5.84		5.88	5.89		9	
2/9/2016	11:45	Cloudy	Middle	-	28.10	28.10	28.15	7.71	7.71	7.72	29.78	29.78	29.78	84.2	84.7	84.0	5.57	5.60	5.56	4.55	4.50	4.45	4	4.00
	11:47		Middle	-	28.20	28.20		7.73	7.73		29.77	29.77		84.0	83.2		5.56	5.50		4.44	4.31		4	
5/9/2016	16:15	Rainy	Middle	-	27.10	27.10	27.10	7.76	7.76	7.77	30.22	30.22	30.22	81.8	81.8	82.1	5.49	5.49	5.51	9.00	8.97	9.05	9	9.50
	16:17		Middle	-	27.10	27.10		7.78	7.78		30.22	30.22		82.4	82.3		5.53	5.53		9.13	9.10		10	
7/9/2016	17:43	Cloudy	Middle	-	27.00	27.00	27.00	7.72	7.72	7.73	29.83	29.83	29.84	80.0	80.2	79.9	5.39	5.42	5.39	5.90	5.99	5.96	6	7.00
	17:45		Middle	-	27.00	27.00		7.73	7.73		29.84	29.84		79.3	80.2		5.35	5.41		5.94	5.99		8	
9/9/2016	3:27	Cloudy	Middle	-	27.30	27.30	27.30	7.75	7.75	7.64	29.88	29.88	29.81	67.5	67.4	66.4	4.55	4.52	4.46	11.26	11.30	11.21	6	6.50
	3:28		Middle	-	27.30	27.30		7.53	7.53		29.89	29.59		65.4	65.1		4.38	4.37		11.18	11.10		7	
12/9/2016	11:05	Fine	Middle	-	29.20	29.20	29.25	7.61	7.61	7.63	28.93	28.93	28.93	90.0	90.0	90.0	5.88	5.87	5.88	8.64	8.81	8.75	3	3.50
	11:07		Middle	-	29.30	29.30		7.64	7.64		28.92	28.92		90.0	90.1		5.87	5.88		8.83	8.73		4	
14/9/2016	11:30	Fine	Middle	-	28.90	28.90	29.00	7.83	7.83	7.82	29.69	29.69	29.69	90.2	94.4	93.1	5.88	6.15	6.06	5.80	5.70	5.68	8	7.00
	11:32		Middle	-	29.10	29.10		7.81	7.81		29.69	29.69		94.2	93.5		6.14	6.08		5.62	5.59		6	
17/9/2016	11:45	Fine	Middle	-	28.80	28.80	28.85	7.61	7.61	7.66	30.76	30.76	30.76	93.1	93.0	92.0	6.05	6.04	5.97	8.80	8.89	8.78	11	10.00
	11:47		Middle	-	28.90	28.90		7.70	7.70		30.76	30.76		90.9	90.9		5.90	5.90		8.73	8.71		9	
19/9/2016	15:20	Fine	Middle	-	29.30	29.30	29.35	7.73	7.73	7.75	30.63	30.63	30.63	90.5	90.0	90.7	5.84	5.81	5.85	5.46	5.42	5.44	6	5.00
	15:27		Middle	-	29.40	29.40		7.77	7.77		30.62	30.62		91.3	90.8		5.89	5.85		5.43	5.45		4	
21/9/2016	15:50	Fine	Middle	-	29.20	29.20	29.35	7.83	7.83	7.85	31.00	31.00	31.00	89.5	89.8	89.1	5.76	5.78	5.74	4.92	4.78	4.84	7	8.00
	15:52		Middle	-	29.50	29.50		7.86	7.86		30.99	30.99		88.6	88.6		5.70	5.70		4.75	4.89		9	
23/9/2016	2:30	Cloudy	Middle	-	27.30	27.30	27.25	7.87	7.87	7.87	31.80	31.80	31.81	76.3	76.4	76.6	5.07	5.09	5.10	5.93	5.99	5.84	<2	<2
	2:31		Middle	-	27.20	27.20		7.87	7.87		31.81	31.81		76.0	77.7		5.06	5.16		5.77	5.68		<2	
26/9/2016	11:10	Fine	Middle	-	29.30	29.30	29.30	7.85	7.85	7.86	31.57	31.57	31.58	91.3	91.6	91.4	5.87	5.89	5.87	6.97	6.98	6.97	4	5.00
	11:12		Middle	-	29.30	29.30		7.87	7.87		31.58	31.58		91.2	91.3		5.86	5.87		6.93	6.98		6	

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

Water Monitoring Result at C1 - HKCEC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	11:11	Cloudy	Middle	2.5	27.10	27.10	27.15	7.93	7.93	7.94	30.23	30.23	30.29	79.0	77.2	77.1	5.30	5.17	5.17	3.00	3.00	3.00	4	4.00
	11:13		Middle	2.5	27.20	27.20		7.94	7.94		30.34	30.34		76.3	75.9		5.11	5.08		3.00	2.98		4	
31/8/2016	10:50	Fine	Middle	3.5	27.50	27.50	27.50	7.92	7.92	7.92	31.10	31.10	31.10	87.2	86.3	86.0	5.79	5.73	5.70	7.12	7.20	7.15	7	7.00
	10:52		Middle	3.5	27.50	27.50		7.92	7.92		31.10	31.10		84.9	85.4		5.63	5.66		7.16	7.11		7	
2/9/2016	14:50	Cloudy	Middle	2.5	27.60	27.60	27.60	7.86	7.86	7.86	29.65	29.65	29.65	86.4	87.1	87.0	5.77	5.82	5.81	7.17	7.06	7.12	6	6.00
	14:52		Middle	2.5	27.60	27.60		7.86	7.86		29.65	29.65		87.0	87.6		5.81	5.85		7.10	7.15		6	
5/9/2016	17:27	Rainy	Middle	2.5	27.20	27.20	27.20	7.84	7.84	7.84	29.72	29.72	29.72	80.2	79.5	79.0	5.39	5.34	5.31	5.05	5.07	5.06	6	6.00
	17:29		Middle	2.5	27.20	27.20		7.84	7.84		29.72	29.72		78.8	77.6		5.30	5.22		5.07	5.06		6	
7/9/2016	18:25	Cloudy	Middle	2.5	27.00	27.00	27.00	7.83	7.83	7.83	30.01	30.01	30.02	72.6	71.2	71.8	4.89	4.80	4.84	7.66	7.57	7.60	7	6.50
	18:27		Middle	2.5	27.00	27.00		7.83	7.83		30.02	30.02		70.4	73.0		4.74	4.92		7.57	7.58		6	
9/9/2016	5:40	Cloudy	Middle	3.0	27.20	27.20	27.20	7.70	7.70	7.71	29.76	29.76	29.76	63.0	63.6	63.1	4.24	4.27	4.24	4.72	4.67	4.58	9	9.50
	5:41		Middle	3.0	27.20	27.20		7.71	7.71		29.76	29.76		62.9	62.9		4.23	4.23		4.49	4.42		10	
12/9/2016	10:10	Fine	Middle	3.0	28.10	28.10	28.15	7.80	7.80	7.80	29.15	29.15	29.15	91.7	91.4	91.4	6.09	6.06	6.07	3.59	3.58	3.58	3	3.00
	10:12		Middle	3.0	28.20	28.20		7.80	7.80		29.15	29.15		91.3	91.3		6.06	6.06		3.58	3.58		3	
14/9/2016	13:05	Fine	Middle	2.5	28.60	28.60	28.60	8.27	8.27	8.27	28.67	28.67	28.63	113.1	113.0	112.2	7.47	7.47	7.42	5.75	5.81	5.82	8	8.00
	13:07		Middle	2.5	28.60	28.60		8.27	8.27		28.58	28.58		111.4	111.1		7.37	7.35		5.86	5.87		8	
17/9/2016	10:50	Fine	Middle	3.0	28.00	28.00	28.00	7.97	7.97	7.97	31.07	31.07	31.07	89.6	91.7	90.5	5.90	6.03	5.95	8.06	8.08	8.11	8	8.50
	10:52		Middle	3.0	28.00	28.00		7.97	7.97		31.07	31.07		90.4	90.2		5.92	5.94		8.13	8.18		9	
19/9/2016	14:45	Fine	Middle	3.0	28.50	28.50	28.50	7.89	7.89	7.89	30.84	30.84	30.84	86.4	87.6	87.1	5.65	5.73	5.70	9.12	9.12	9.11	10	10.00
	14:47		Middle	3.0	28.50	28.50		7.89	7.89		30.83	30.84		87.4	86.8		5.72	5.68		9.11	9.10		10	
21/9/2016	16:49	Fine	Middle	2.5	27.80	27.80	27.80	7.95	7.95	7.95	31.45	31.45	31.45	93.3	93.5	93.3	6.15	6.17	6.16	5.00	4.95	5.00	7	6.50
	16:51		Middle	2.5	27.80	27.80		7.95	7.95		31.45	31.45		93.9	92.6		6.20	6.11		4.99	5.05		6	
23/9/2016	5:50	Cloudy	Middle	3.0	27.20	27.20	27.20	7.83	7.83	7.84	31.70	31.70	31.70	70.2	71.4	71.0	4.67	4.75	4.72	4.82	4.62	4.66	6	5.50
	5:51		Middle	3.0	27.20	27.20		7.86	7.86		31.70	31.70		70.7	71.7		4.70	4.77		4.61	4.57		5	
26/9/2016	10:20	Fine	Middle	3.0	28.30	28.30	28.30	7.95	7.95	7.95	31.59	31.59	31.58	92.1	93.0	92.3	6.01	6.07	6.03	7.93	7.97	7.97	4	4.50
	10:22		Middle	3.0	28.30	28.30		7.95	7.95		31.57	31.57		92.2	92.0		6.02	6.01		7.99	7.98		5	

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	10:55	Cloudy	Middle	2.5	27.20	27.20	27.15	7.91	7.91	7.92	30.48	30.48	30.48	78.8	81.4	80.8	5.29	5.50	5.43	3.98	3.98	3.91	4	4.00
	10:57		Middle	2.5	27.10	27.10		7.92	7.92		30.48	30.48		82.5	80.3		5.54	5.39		3.85	3.82		4	
31/8/2016	10:30	Fine	Middle	3.5	28.00	28.00	28.05	7.90	7.90	7.90	31.15	31.15	31.16	91.1	92.5	91.7	5.99	6.09	6.03	6.74	6.55	6.57	8	8.00
	10:32		Middle	3.5	28.10	28.10		7.90	7.90		31.16	31.16		91.3	91.9		6.00	6.04		6.56	6.43		8	
2/9/2016	14:30	Cloudy	Middle	2.5	27.50	27.50	27.55	7.87	7.87	7.87	29.80	29.80	29.80	92.2	92.4	92.4	6.16	6.17	6.17	5.83	5.88	5.94	5	5.00
	14:32		Middle	2.5	27.60	27.60		7.86	7.86		29.80	29.80		92.6	92.5		6.18	6.18		6.01	6.04		5	
5/9/2016	17:11	Rainy	Middle	2.5	26.80	26.80	26.80	7.61	7.61	7.67	29.84	29.84	29.84	97.7	97.3	96.8	6.60	6.58	6.54	6.35	6.34	6.32	4	4.50
	17:13		Middle	2.5	26.80	26.80		7.72	7.72		29.84	29.84		97.1	95.0		6.57	6.42		6.30	6.27		5	
7/9/2016	18:09	Cloudy	Middle	2.5	26.80	26.80	26.80	7.78	7.78	7.79	30.19	30.19	30.19	72.2	72.7	72.7	4.87	4.90	4.90	6.23	6.23	6.23	6	5.00
	18:11		Middle	2.5	26.80	26.80		7.79	7.79		30.19	30.19		73.1	72.6		4.93	4.90		6.24	6.23		4	
9/9/2016	3:45	Cloudy	Middle	3.0	27.10	27.10	27.15	7.76	7.76	7.76	29.74	29.74	29.74	66.1	66.6	65.7	4.45	4.48	4.42	3.73	3.71	3.76	8	7.00
	3:46		Middle	3.0	27.20	27.20		7.76	7.76		29.74	29.74		65.4	64.7		4.40	4.36		3.78	3.82		6	
12/9/2016	9:50	Fine	Middle	3.0	28.40	28.40	28.50	7.78	7.78	7.79	29.07	29.07	29.07	96.7	95.8	95.6	6.39	6.32	6.31	3.27	3.31	3.34	4	3.00
	9:52		Middle	3.0	28.60	28.60		7.79	7.79		29.07	29.07		95.5	94.2		6.32	6.22		3.35	3.41		2	
14/9/2016	12:45	Fine	Middle	2.5	28.90	28.90	29.05	7.91	7.91	7.95	28.84	28.84	28.84	117.1	117.7	117.7	7.67	7.70	7.70	4.41	4.40	4.41	4	4.50
	12:47		Middle	2.5	29.20	29.20		7.99	7.99		28.83	28.83		117.1	118.8		7.67	7.77		4.40	4.44		5	
17/9/2016	10:30	Fine	Middle	3.0	28.60	28.60	28.70	7.91	7.91	7.92	31.13	31.13	31.13	93.2	94.1	93.2	6.06	6.12	6.06	8.37	8.27	8.25	7	7.00
	10:32		Middle	3.0	28.80	28.80		7.93	7.93		31.13	31.13		93.8	91.7		6.09	5.96		8.20	8.15		7	
19/9/2016	14:25	Fine	Middle	3.0	28.80	28.80	29.05	7.77	7.77	7.80	30.90	30.90	30.90	96.4	96.1	95.6	6.23	6.21	6.17	9.65	9.65	9.62	8	9.00
	14:27		Middle	3.0	29.30	29.30		7.83	7.83		30.89	30.89		95.0	94.7		6.14	6.11		9.60	9.57		10	
21/9/2016	16:33	Fine	Middle	2.5	28.10	28.10	28.20	7.81	7.81	7.85	31.39	31.39	31.38	96.4	92.6	93.2	6.31	6.06	6.10	5.81	5.87	5.88	5	4.50
	16:35		Middle	2.5	28.30	28.30		7.88	7.88		31.36	31.36		91.5	92.1		5.99	6.03		5.92	5.91		4	
23/9/2016	5:12	Cloudy	Middle	3.0	26.90	26.90	26.90	7.92	7.92	7.93	31.92	31.92	31.92	70.8	71.2	71.3	4.73	4.75	4.76	4.96	4.94	4.82	5	5.00
	5:13		Middle	3.0	26.90	26.90		7.93	7.93		31.92	31.92		71.6	71.7		4.78	4.77		4.73	4.64		5	
26/9/2016	10:00	Fine	Middle	3.0	28.90	28.90	28.90	7.89	7.89	7.90	31.72	31.72	31.72	93.1	94.1	92.9	6.02	6.08	6.01	8.01	8.02	8.01	6	6.00
	10:02		Middle	3.0	28.90	28.90		7.91	7.91		31.72	31.72		91.6	92.9		5.92	6.01		8.00	7.99		6	

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

Water Monitoring Result at P3 - APA
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	10:59	Cloudy	Middle	2.5	26.90	26.90	26.90	7.93	7.93	7.93	30.41	30.41	30.41	82.7	83.0	82.8	5.57	5.59	5.58	4.05	3.99	3.98	2	2.50
	11:01		Middle	2.5	26.90	26.90		7.93	7.93		30.40	30.40		84.5	80.9		5.69	5.45		3.94	3.95		3	
31/8/2016	10:35	Fine	Middle	3.5	27.60	27.60	27.60	7.91	7.91	7.91	31.14	31.14	31.14	88.6	88.8	88.3	5.87	5.89	5.85	6.38	6.17	6.16	8	8.00
	10:37		Middle	3.5	27.60	27.60		7.91	7.91		31.14	31.14		88.2	87.4		5.84	5.79		6.03	6.04		8	
2/9/2016	14:35	Cloudy	Middle	2.5	27.60	27.60	27.60	7.86	7.86	7.86	29.67	29.67	29.70	87.7	87.7	87.7	5.84	5.84	5.85	6.02	6.02	6.02	5	5.00
	14:37		Middle	2.5	27.60	27.60		7.86	7.86		29.72	29.72		87.9	87.3		5.88	5.82		6.01	6.01		5	
5/9/2016	17:15	Rainy	Middle	2.5	26.90	26.90	26.90	7.76	7.76	7.77	29.94	29.94	29.95	80.6	80.1	78.2	5.43	5.40	5.33	5.69	5.68	5.68	5	5.00
	17:17		Middle	2.5	26.90	26.90		7.78	7.78		29.95	29.95		77.4	74.7		5.43	5.04		5.69	5.66		5	
7/9/2016	18:13	Cloudy	Middle	2.5	26.80	26.80	26.80	7.80	7.80	7.81	30.15	30.15	30.18	81.3	80.1	81.0	5.49	5.40	5.47	6.50	6.62	6.53	4	4.50
	18:15		Middle	2.5	26.80	26.80		7.82	7.82		30.20	30.20		81.6	81.0		5.51	5.47		6.53	6.45		5	
9/9/2016	3:50	Cloudy	Middle	3.0	27.20	27.20	27.20	7.74	7.74	7.74	29.76	29.76	29.76	62.3	63.3	62.6	4.19	4.25	4.20	3.94	3.86	3.91	6	5.50
	3:51		Middle	3.0	27.20	27.20		7.74	7.74		29.76	29.76		62.1	62.5		4.16	4.21		3.90	3.95		5	
12/9/2016	9:55	Fine	Middle	3.0	28.20	28.20	28.25	7.79	7.79	7.79	29.15	29.15	29.15	90.9	91.8	91.1	6.02	6.12	6.04	3.53	3.52	3.53	4	3.00
	9:57		Middle	3.0	28.30	28.30		7.79	7.79		29.15	29.15		90.4	91.2		5.99	6.04		3.54	3.53		2	
14/9/2016	12:50	Fine	Middle	2.5	28.60	28.60	28.65	8.17	8.17	8.19	28.25	28.25	28.50	110.0	105.5	107.3	7.26	6.96	7.08	5.35	5.35	5.30	4	4.00
	12:52		Middle	2.5	28.70	28.70		8.21	8.21		28.75	28.75		106.4	107.3		7.02	7.08		5.26	5.25		4	
17/9/2016	10:35	Fine	Middle	3.0	28.20	28.20	28.25	7.95	7.95	7.96	31.07	31.07	31.07	95.3	94.5	95.3	6.25	6.20	6.25	6.09	6.14	6.14	7	8.00
	10:37		Middle	3.0	28.30	28.30		7.96	7.96		31.07	31.07		95.9	95.6		6.29	6.27		6.16	6.16		9	
19/9/2016	14:30	Fine	Middle	3.0	28.40	28.40	28.50	7.85	7.85	7.86	30.88	30.88	30.88	88.8	89.6	89.6	5.81	5.87	5.86	9.55	9.55	9.53	8	7.00
	14:32		Middle	3.0	28.60	28.60		7.87	7.87		30.87	30.87		90.9	89.2		5.94	5.83		9.47	9.53		6	
21/9/2016	16:37	Fine	Middle	2.5	27.80	27.80	27.80	7.91	7.91	7.92	31.37	31.37	31.37	97.0	97.3	96.2	6.40	6.41	6.34	5.22	5.43	5.34	6	5.00
	16:39		Middle	2.5	27.80	27.80		7.92	7.92		31.37	31.37		96.4	94.0		6.35	6.20		5.43	5.29		4	
23/9/2016	5:19	Cloudy	Middle	3.0	27.00	27.00	26.98	7.96	7.96	7.97	31.96	31.96	31.96	77.6	77.3	78.1	5.17	5.16	5.20	6.04	6.01	5.99	6	5.50
	5:20		Middle	3.0	26.90	27.00		7.97	7.97		31.96	31.96		79.2	78.2		5.28	5.20		5.98	5.93		5	
26/9/2016	10:05	Fine	Middle	3.0	28.60	28.60	28.65	7.92	7.92	7.93	31.59	31.59	31.59	90.0	90.5	90.6	5.85	5.88	5.89	7.93	7.91	7.95	6	5.00
	10:07		Middle	3.0	28.70	28.70		7.93	7.93		31.59	31.59		91.7	90.3		5.96	5.87		7.98	7.97		4	

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

Water Monitoring Result at P4 - SOC
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	11:03	Cloudy	Middle	2.5	27.00	27.00	27.00	7.93	7.93	7.93	30.34	30.34	30.35	73.8	71.9	71.1	4.96	4.84	4.81	3.78	3.75	3.68	4	4.00
	11:05		Middle	2.5	27.00	27.00		7.93	7.93		30.35	30.35		70.0	68.8		4.79	4.63		3.60	3.57		4	
31/8/2016	10:40	Fine	Middle	3.5	27.50	27.50	27.50	7.91	7.91	7.92	31.13	31.13	31.13	83.7	84.6	84.4	5.56	5.61	5.60	6.99	6.97	6.97	7	7.00
	10:42		Middle	3.5	27.50	27.50		7.92	7.92		31.13	31.13		84.8	84.5		5.63	5.61		6.96	6.96		7	
2/9/2016	14:40	Cloudy	Middle	2.5	27.50	27.50	27.50	7.86	7.86	7.86	29.24	29.24	29.47	89.2	89.1	89.3	5.97	5.97	5.98	5.80	5.78	5.79	7	6.00
	14:42		Middle	2.5	27.50	27.50		7.86	7.86		29.69	29.69		89.2	89.8		5.97	6.01		5.79	5.79		5	
5/9/2016	17:19	Rainy	Middle	2.5	27.00	27.00	27.00	7.80	7.80	7.81	30.31	30.11	30.16	77.6	76.7	76.7	5.22	5.16	5.16	6.99	6.85	6.92	7	6.00
	17:21		Middle	2.5	27.00	27.00		7.81	7.81		30.11	30.11		74.5	77.9		5.02	5.25		6.95	6.90		5	
7/9/2016	18:17	Cloudy	Middle	2.5	26.80	26.80	26.80	7.82	7.82	7.82	30.19	30.19	30.20	73.0	71.9	71.4	4.91	4.85	4.81	6.64	6.69	6.66	5	4.50
	18:19		Middle	2.5	26.80	26.80		7.82	7.82		30.20	30.20		71.1	69.4		4.80	4.68		6.66	6.65		4	
9/9/2016	3:59	Cloudy	Middle	3.0	27.10	27.10	27.10	7.63	7.63	7.63	29.72	29.72	29.72	64.2	64.6	64.0	4.32	4.35	4.31	4.05	4.01	4.01	10	9.50
	4:00		Middle	3.0	27.10	27.10		7.63	7.63		29.72	29.72		63.9	63.3		4.30	4.26		3.97	3.99		9	
12/9/2016	10:00	Fine	Middle	3.0	28.10	28.10	28.15	7.79	7.79	7.79	29.20	29.20	29.20	89.2	89.4	89.0	5.92	5.93	5.90	3.63	3.95	3.80	5	5.50
	10:02		Middle	3.0	28.20	28.20		7.79	7.79		29.20	29.20		89.0	88.4		5.90	5.84		3.84	3.77		6	
14/9/2016	12:55	Fine	Middle	2.5	28.70	28.70	28.65	8.24	8.24	8.25	28.78	28.78	28.77	109.1	109.1	108.1	7.20	7.20	7.30	5.30	5.32	5.33	2	2.50
	12:57		Middle	2.5	28.60	28.60		8.26	8.26		28.74	28.79		101.4	112.7		7.35	7.44		5.34	5.35		3	
17/9/2016	10:40	Fine	Middle	3.0	28.10	28.10	28.10	7.96	7.96	7.96	31.07	31.07	31.07	92.5	94.4	93.7	6.08	6.20	7.01	5.87	5.86	5.85	7	6.50
	10:42		Middle	3.0	28.10	28.10		7.96	7.96		31.07	31.07		94.3	93.7		9.60	6.16		5.84	5.83		6	
19/9/2016	14:35	Fine	Middle	3.0	28.20	28.20	28.25	7.88	7.88	7.89	30.88	30.88	30.88	88.7	88.9	88.3	5.82	5.84	5.80	9.06	9.02	9.02	9	9.50
	14:37		Middle	3.0	28.30	28.30		7.89	7.89		30.87	30.87		87.9	87.7		5.77	5.76		9.00	8.99		10	
21/9/2016	16:41	Fine	Middle	2.5	27.80	27.80	27.80	7.93	7.93	7.93	31.30	31.30	31.31	90.0	89.2	88.2	5.94	5.89	5.82	5.45	5.21	5.36	4	4.00
	16:43		Middle	2.5	27.80	27.80		7.93	7.93		31.31	31.31		85.1	88.5		5.62	5.82		5.39	5.39		4	
23/9/2016	5:25	Cloudy	Middle	3.0	26.80	26.80	26.80	7.98	7.98	7.98	31.93	31.93	31.93	77.6	78.8	78.1	5.18	5.26	5.22	6.58	6.48	6.53	6	6.00
	5:26		Middle	3.0	26.80	26.80		7.98	7.98		31.93	31.93		78.3	77.6		5.23	5.19		6.51	6.53		6	
26/9/2016	10:10	Fine	Middle	3.0	28.50	28.50	28.50	7.93	7.93	7.94	31.60	31.60	31.60	91.1	91.7	91.1	5.93	5.97	5.93	8.16	8.17	8.17	6	6.00
	10:12		Middle	3.0	28.50	28.50		7.94	7.94		31.60	31.60		90.7	90.9		5.90	5.92		8.18	8.18		6	

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

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	11:07	Cloudy	Middle	2.5	27.10	27.10	27.10	7.93	7.93	7.93	30.30	30.30	30.31	82.5	81.1	80.7	5.54	5.45	5.42	3.50	3.26	3.31	2	2.00
	11:09		Middle	2.5	27.10	27.10		7.93	7.93		30.32	30.32		80.4	78.8		5.40	5.29		3.25	3.23		2	
31/8/2016	10:45	Fine	Middle	3.5	27.40	27.40	27.45	7.92	7.92	7.92	31.10	31.10	31.11	88.9	89.5	89.2	5.90	5.88	5.90	6.31	6.27	6.25	7	7.50
	10:47		Middle	3.5	27.50	27.50		7.92	7.92		31.11	31.11		89.0	89.3		5.91	5.92		6.20	6.23		8	
2/9/2016	14:45	Cloudy	Middle	2.5	27.50	27.50	27.50	7.86	7.86	7.86	29.66	29.66	29.72	94.3	94.3	94.3	6.31	6.31	6.31	6.63	6.52	6.59	6	6.00
	14:47		Middle	2.5	27.50	27.50		7.86	7.86		29.78	29.78		94.9	93.5		6.35	6.26		6.50	6.70		6	
5/9/2016	17:23	Rainy	Middle	2.5	27.20	27.20	27.15	7.83	7.83	7.84	29.71	29.77	29.76	72.7	76.4	74.8	4.89	5.14	5.03	6.18	6.17	6.17	5	4.50
	17:25		Middle	2.5	27.10	27.10		7.84	7.84		29.77	29.77		75.3	74.9		5.06	5.04		6.17	6.17		4	
7/9/2016	18:21	Cloudy	Middle	2.5	26.80	26.80	26.80	7.83	7.83	7.83	30.08	30.08	30.10	75.4	74.0	74.2	5.09	4.99	5.02	7.45	7.45	7.42	6	5.50
	18:23		Middle	2.5	26.80	26.80		7.83	7.83		30.11	30.11		74.4	73.0		5.02	4.96		7.45	7.32		5	
9/9/2016	4:04	Cloudy	Middle	3.0	27.10	27.10	27.15	7.39	7.39	7.45	29.48	29.48	29.48	74.8	75.9	75.2	5.04	5.11	5.07	5.60	5.53	5.38	3	3.50
	4:05		Middle	3.0	27.20	27.20		7.50	7.50		29.48	29.48		75.4	74.8		5.07	5.04		5.19	5.21		4	
12/9/2016	10:05	Fine	Middle	3.0	28.20	28.20	28.20	7.80	7.80	7.80	29.16	29.16	29.16	92.5	92.0	92.3	6.14	6.10	6.13	3.20	3.23	3.22	3	3.00
	10:07		Middle	3.0	28.20	28.20		7.80	7.80		29.15	29.15		92.2	92.6		6.12	6.14		3.23	3.22		3	
14/9/2016	13:00	Fine	Middle	2.5	28.50	28.50	28.45	8.26	8.26	8.27	28.74	28.74	28.76	106.9	107.0	107.1	7.08	7.09	7.09	4.52	4.59	4.59	5	5.00
	13:02		Middle	2.5	28.40	28.40		8.27	8.27		28.77	28.77		107.2	107.2		7.10	7.10		4.62	4.64		5	
17/9/2016	10:45	Fine	Middle	3.0	28.20	28.20	28.20	7.96	7.96	7.97	31.06	31.06	31.07	91.2	93.8	93.2	5.98	6.15	6.12	11.00	10.84	10.79	8	8.00
	10:47		Middle	3.0	28.20	28.20		7.97	7.97		31.07	31.07		95.1	92.8		6.24	6.09		10.71	10.60		8	
19/9/2016	14:40	Fine	Middle	3.0	28.40	28.40	28.45	7.89	7.89	7.90	30.84	30.84	30.84	91.9	92.2	92.4	6.02	6.04	6.04	10.89	10.90	10.75	3	3.00
	14:42		Middle	3.0	28.50	28.50		7.90	7.90		30.84	30.84		92.4	92.9		6.04	6.07		10.72	10.48		3	
21/9/2016	16:45	Fine	Middle	2.5	27.70	27.70	27.70	7.94	7.94	7.95	31.35	31.35	31.35	96.2	94.5	94.0	6.35	6.25	6.21	4.89	4.55	4.81	6	5.50
	16:47		Middle	2.5	27.70	27.70		7.95	7.95		31.35	31.35		92.6	92.8		6.12	6.13		4.90	4.88		5	
23/9/2016	5:33	Cloudy	Middle	3.0	26.90	26.90	26.90	8.00	8.00	8.00	31.77	31.77	31.77	72.6	74.7	74.1	4.86	4.99	4.96	5.26	5.24	5.23	5	4.50
	5:34		Middle	3.0	26.90	26.90		7.99	7.99		31.77	31.77		75.0	74.2		5.03	4.96		5.22	5.20		4	
26/9/2016	10:15	Fine	Middle	3.0	28.70	28.70	28.55	7.94	7.94	7.95	31.58	31.58	31.58	92.7	93.3	92.8	6.04	6.08	6.04	6.89	6.87	6.88	6	6.50
	10:17		Middle	3.0	28.40	28.40		7.95	7.95		31.58	31.58		92.3	93.0		6.02	6.02		6.87	6.87		7	

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

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

Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	11:22	Cloudy	Middle	3.5	27.40	27.40	27.40	7.82	7.82	7.86	30.46	30.46	30.46	75.2	74.7	74.0	5.02	4.98	4.94	3.11	3.18	3.18	3	3.00
	11:24		Middle	3.5	27.40	27.40		7.90	7.90		30.46	30.46		74.0	72.2		4.93	4.82		3.20	3.23		3	
31/8/2016	11:10	Fine	Middle	4.0	27.80	27.80	27.85	7.95	7.95	7.95	31.23	31.23	31.23	74.9	76.4	75.6	4.94	5.04	4.99	6.31	6.28	6.29	6	5.50
	11:12		Middle	4.0	27.90	27.90		7.94	7.94		31.23	31.23		76.1	75.0		5.02	4.95		6.27	6.29		5	
2/9/2016	11:00	Cloudy	Middle	3.5	28.60	28.60	28.15	7.79	7.79	7.80	30.47	30.47	30.47	77.0	77.4	77.1	5.03	5.06	5.04	6.62	6.53	6.52	6	5.50
	11:02		Middle	3.5	27.70	27.70		7.80	7.80		30.46	30.46		77.4	76.7		5.06	5.01		6.52	6.39		5	
5/9/2016	15:45	Rainy	Middle	3.5	26.60	26.66	26.62	7.82	7.82	7.83	29.53	29.53	29.53	87.7	87.3	87.2	5.96	5.93	5.87	4.64	4.61	4.60	4	4.00
	15:47		Middle	3.5	26.60	26.60		7.83	7.83		29.53	29.53		86.9	86.7		5.71	5.89		4.57	4.58		4	
7/9/2016	17:05	Cloudy	Middle	3.5	27.00	27.00	27.00	7.71	7.71	7.73	29.99	29.99	30.00	62.1	62.6	64.7	4.18	4.21	4.35	6.02	6.02	6.02	4	4.00
	17:07		Middle	3.5	27.00	27.00		7.74	7.74		30.00	30.00		66.1	67.8		4.45	4.56		6.02	6.02		4	
9/9/2016	2:55	Cloudy	Middle	3.5	27.10	27.10	27.15	7.63	7.63	7.64	30.41	30.41	30.41	63.1	62.7	63.5	4.22	4.20	4.25	5.26	5.28	5.30	2	2.50
	2:56		Middle	3.5	27.20	27.20		7.64	7.64		30.41	30.41		64.9	63.2		4.35	4.23		5.22	5.44		3	
12/9/2016	10:35	Fine	Middle	3.5	28.30	28.30	28.35	7.76	7.76	7.76	29.23	29.23	29.23	69.9	71.2	71.7	4.62	4.76	4.75	3.13	3.14	3.13	4	4.00
	10:37		Middle	3.5	28.40	28.40		7.75	7.75		29.23	29.23		72.9	72.7		4.82	4.80		3.13	3.13		4	
14/9/2016	13:15	Fine	Middle	3.5	28.70	28.70	28.75	8.19	8.19	8.20	29.02	29.02	29.02	116.3	115.6	114.5	7.65	7.60	7.53	4.88	4.85	4.83	9	9.50
	13:17		Middle	3.5	28.80	28.80		8.21	8.20		29.02	29.02		112.7	113.5		7.41	7.46		4.80	4.79		10	
17/9/2016	11:00	Fine	Middle	4.0	28.50	28.50	28.50	7.93	7.93	7.93	31.24	31.24	31.24	85.9	85.9	85.6	5.60	5.60	5.58	6.26	6.26	6.25	5	5.50
	11:02		Middle	4.0	28.50	28.50		7.94	7.92		31.23	31.23		85.1	85.3		5.54	5.56		6.24	6.23		6	
19/9/2016	15:00	Fine	Middle	3.5	29.20	29.20	29.25	7.85	7.85	7.86	31.00	31.00	31.01	85.5	86.4	85.7	5.52	5.58	5.53	6.52	6.63	6.62	5	5.50
	15:02		Middle	3.5	29.30	29.30		7.87	7.87		31.01	31.01		85.2	85.6		5.50	5.52		6.65	6.67		6	
21/9/2016	15:20	Fine	Middle	3.5	29.10	29.10	29.20	7.88	7.88	7.90	31.67	31.67	31.67	85.4	85.0	85.1	5.50	5.47	5.47	6.18	6.17	6.16	5	4.50
	15:22		Middle	3.5	29.30	29.30		7.92	7.92		31.66	31.66		84.9	85.0		5.46	5.46		6.17	6.12		4	
23/9/2016	2:55	Cloudy	Middle	3.5	27.30	27.30	27.25	7.77	7.77	7.80	32.00	32.00	32.00	76.2	77.4	76.8	5.06	5.13	5.10	3.95	3.94	3.94	2	2.50
	2:56		Middle	3.5	27.20	27.20		7.82	7.82		32.00	32.00		76.5	77.2		5.07	5.12		3.98	3.89		3	
26/9/2016	10:35	Fine	Middle	4.0	28.90	28.90	28.90	7.92	7.92	7.93	31.73	31.73	31.73	90.7	91.0	90.6	5.86	5.88	5.86	7.34	7.36	7.36	3	3.50
	10:37		Middle	4.0	28.90	28.90		7.94	7.94		31.73	31.73		90.2	90.5		5.83	5.86		7.37	7.37		4	

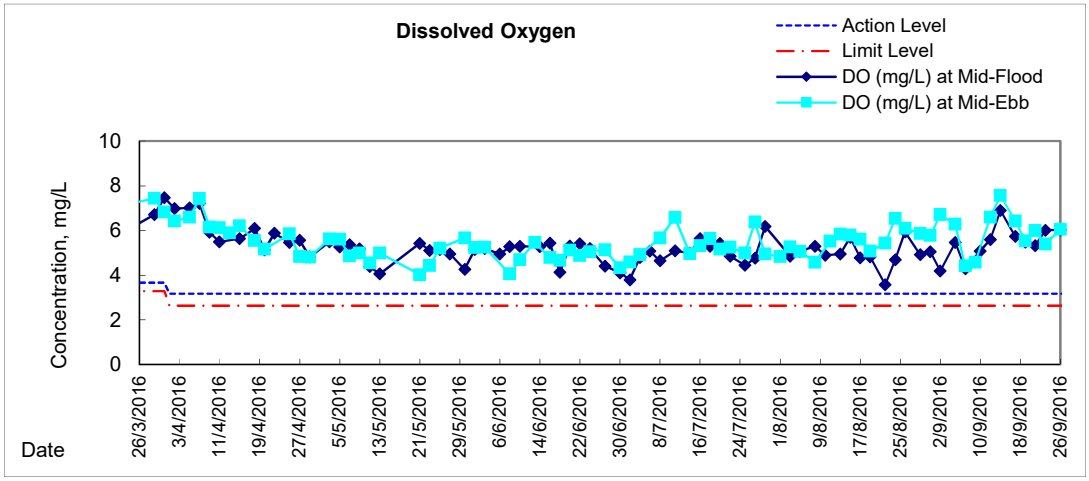
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

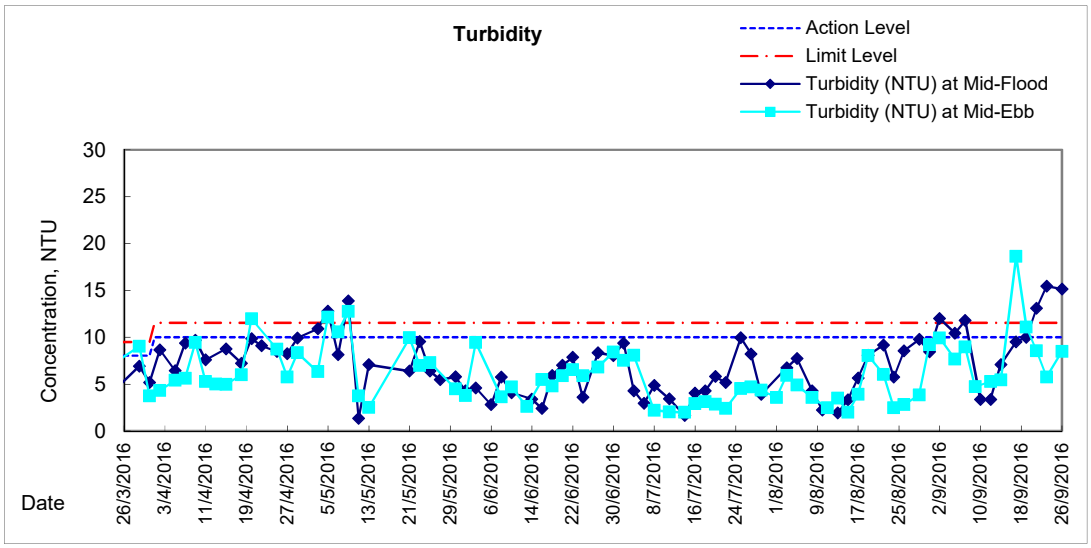
Water Monitoring Result at WSD19 - Sheung Wan
Mid-Ebb Tide

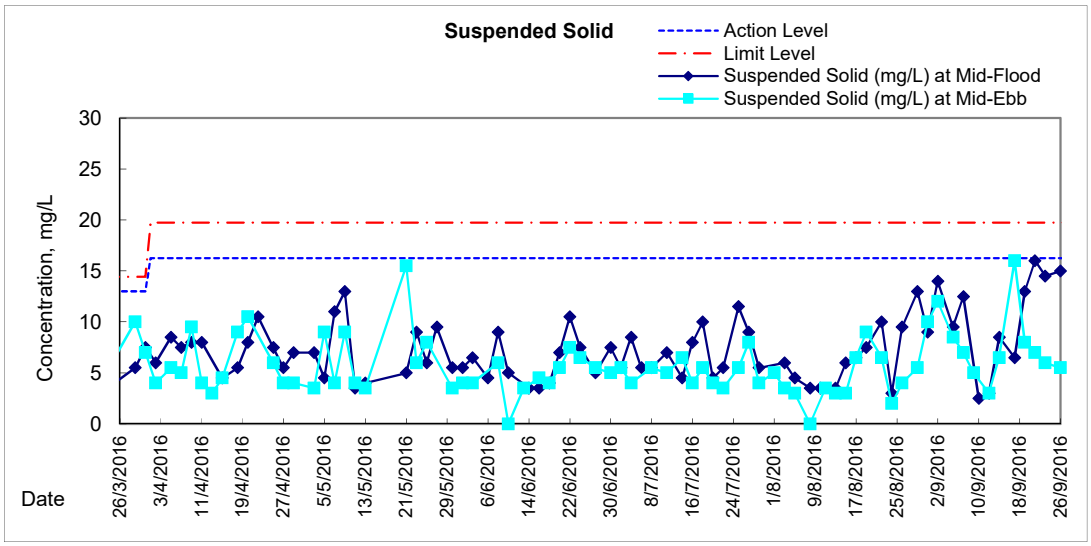
Date	Time	Weater Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/8/2016	9:49	Cloudy	Middle	3.5	27.50	27.50	27.55	7.76	7.76	7.79	30.31	30.31	30.27	88.1	88.6	87.8	5.88	5.91	5.86	3.84	3.84	3.84	5	5.50
	9:51		Middle	3.5	27.60	27.60		7.82	7.82		30.22	30.22		88.1	86.4		5.88	5.76		3.84	3.84		6	
31/8/2016	10:00	Fine	Middle	4.0	27.60	27.60	27.50	7.70	7.70	7.75	31.00	31.00	31.01	87.7	87.8	87.3	5.81	5.81	5.78	9.10	9.20	9.21	10	10.00
	10:02		Middle	4.0	27.00	27.80		7.80	7.80		31.01	31.01		86.9	86.8		5.75	5.74		9.23	9.30		10	
2/9/2016	13:50	Cloudy	Middle	3.5	28.10	28.10	28.20	7.82	7.82	7.84	29.50	29.50	29.51	103.1	102.1	101.2	6.83	6.76	6.70	9.89	9.95	9.94	12	12.00
	13:52		Middle	3.5	28.30	28.30		7.85	7.85		29.51	29.51		99.8	99.9		6.61	6.61		9.96	9.94		12	
5/9/2016	14:10	Rainy	Middle	4.0	27.00	27.00	27.00	7.90	7.90	7.90	29.80	29.80	29.80	93.7	93.9	93.1	6.32	6.33	6.28	7.67	7.66	7.66	8	8.50
	14:12		Middle	4.0	27.00	27.00		7.90	7.90		29.80	29.80		92.0	92.9		6.21	6.25		7.66	7.65		9	
7/9/2016	15:37	Cloudy	Middle	3.5	26.90	26.90	26.90	7.76	7.76	7.77	30.24	30.24	30.24	63.8	63.8	65.5	4.30	4.30	4.41	8.98	8.97	8.97	7	7.00
	15:39		Middle	3.5	26.90	26.90		7.78	7.78		30.24	30.24		67.0	67.4		4.51	4.54		8.97	8.97		7	
9/9/2016	2:15	Cloudy	Middle	3.5	27.40	27.40	27.40	7.62	7.62	7.64	29.90	29.90	29.90	68.0	68.6	68.4	4.54	4.59	4.57	4.70	4.69	4.72	6	5.00
	2:16		Middle	3.5	27.40	27.40		7.65	7.65		29.90	29.90		68.6	68.2		4.59	4.56		4.72	4.75		4	
12/9/2016	8:30	Fine	Middle	3.5	28.00	28.00	28.05	7.88	7.88	7.86	28.97	28.97	28.97	99.9	99.7	99.2	6.65	6.63	6.60	5.30	5.29	5.29	3	3.00
	8:32		Middle	3.5	28.10	28.10		7.84	7.84		28.97	28.97		98.7	98.3		6.56	6.54		5.28	5.28		3	
14/9/2016	10:00	Fine	Middle	3.5	28.80	28.80	28.80	7.97	7.97	7.98	28.52	28.52	28.52	115.2	116.3	115.1	7.59	7.63	7.57	5.44	5.42	5.43	6	6.50
	10:02		Middle	3.5	28.80	28.80		7.99	7.99		28.51	28.51		114.5	114.3		7.53	7.52		5.43	5.44		7	
17/9/2016	9:50	Fine	Middle	4.0	28.10	28.10	28.15	7.96	7.96	7.97	31.20	31.20	31.20	97.7	98.8	97.9	6.41	6.45	6.41	18.81	18.74	**18.62**	15	16.00
	9:52		Middle	4.0	28.20	28.20		7.97	7.97		31.20	31.20		97.9	97.1		6.42	6.37		18.59	18.34		17	
19/9/2016	13:20	Fine	Middle	3.5	29.80	29.80	29.90	7.93	7.93	7.92	30.89	30.89	30.89	85.6	87.0	86.8	5.46	5.55	5.53	11.12	11.09	**11.08**	9	8.00
	13:22		Middle	3.5	30.00	30.00		7.90	7.90		30.89	30.89		87.4	87.1		5.57	5.53		11.06	11.05		7	
21/9/2016	14:42	Fine	Middle	3.5	28.90	28.90	29.10	7.91	7.91	7.93	31.30	31.30	31.29	98.2	95.7	95.4	6.34	5.52	5.99	8.50	8.55	8.55	7	7.00
	14:44		Middle	3.5	29.30	29.30		7.94	7.94		31.28	31.28		93.4	94.1		6.02	6.06		8.58	8.57		7	
23/9/2016	4:40	Cloudy	Middle	3.5	27.20	7.20	22.20	7.50	7.50	7.55	31.37	31.37	31.38	81.3	81.7	81.0	5.41	5.44	5.39	5.70	5.74	5.76	6	6.00
	4:41		Middle	3.5	27.20	27.20		7.60	7.60		31.38	31.38		80.1	80.7		5.33	5.37		5.79	5.82		6	
26/9/2016	7:50	Fine	Middle	4.0	28.20	28.20	28.20	7.86	7.86	7.88	31.62	31.62	31.63	92.8	93.6	92.5	6.07	6.12	6.05	8.51	8.50	8.50	5	5.50
	7:52		Middle	4.0	28.20	28.20		7.90	7.90		31.63	31.63		93.0	90.4		6.08	5.91		8.50	8.50		6	

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

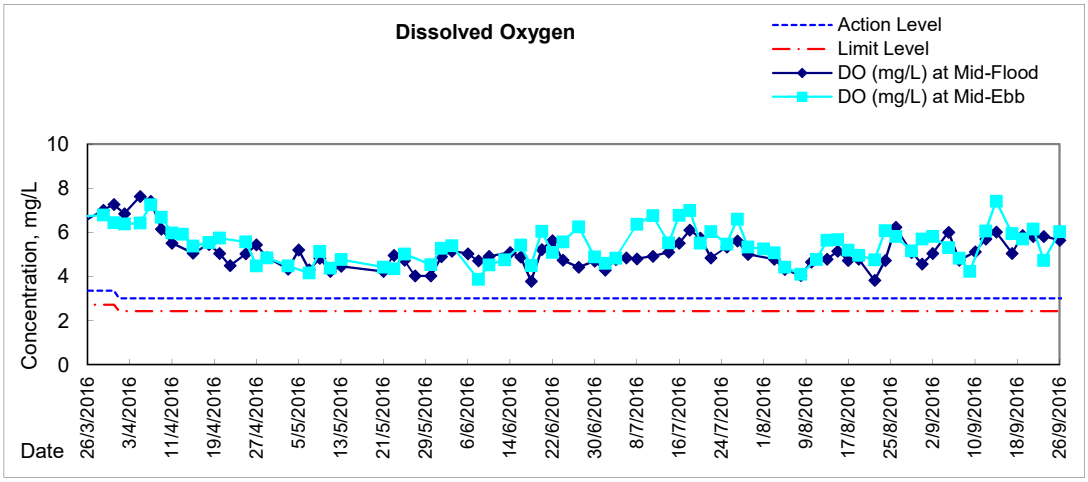
Graphic Presentation of Water Quality Result of WSD19 - Sheung Wan

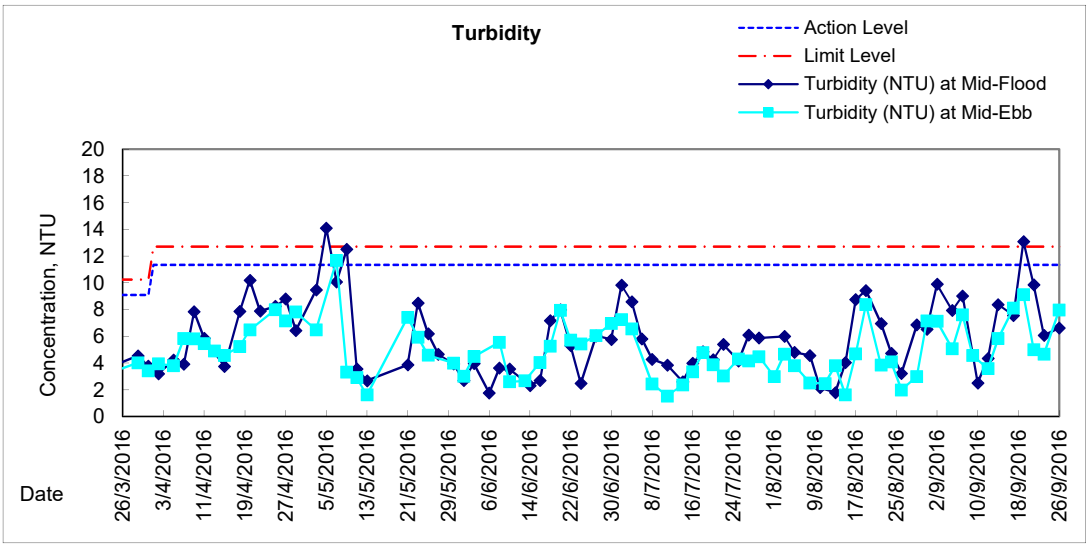


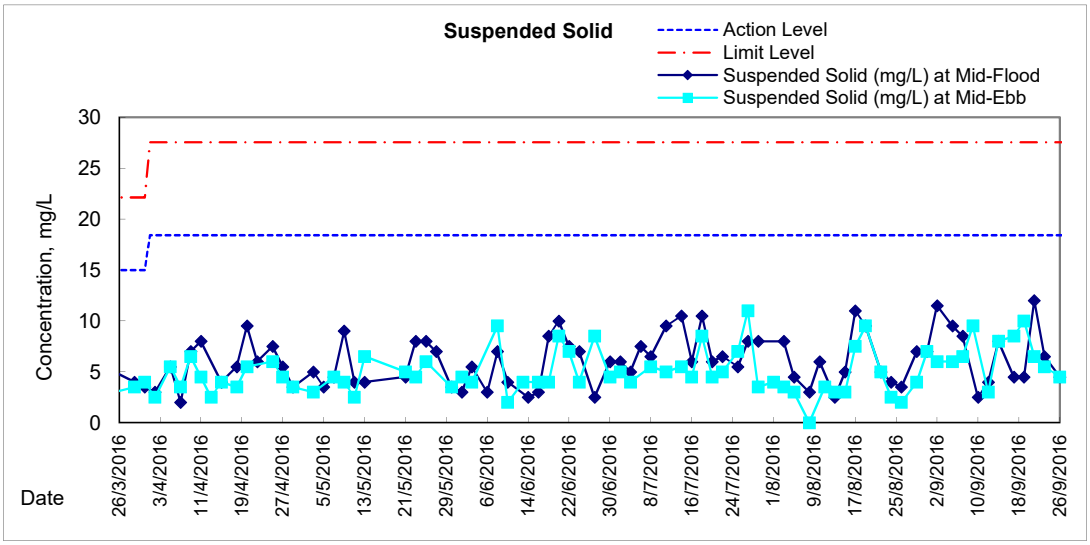




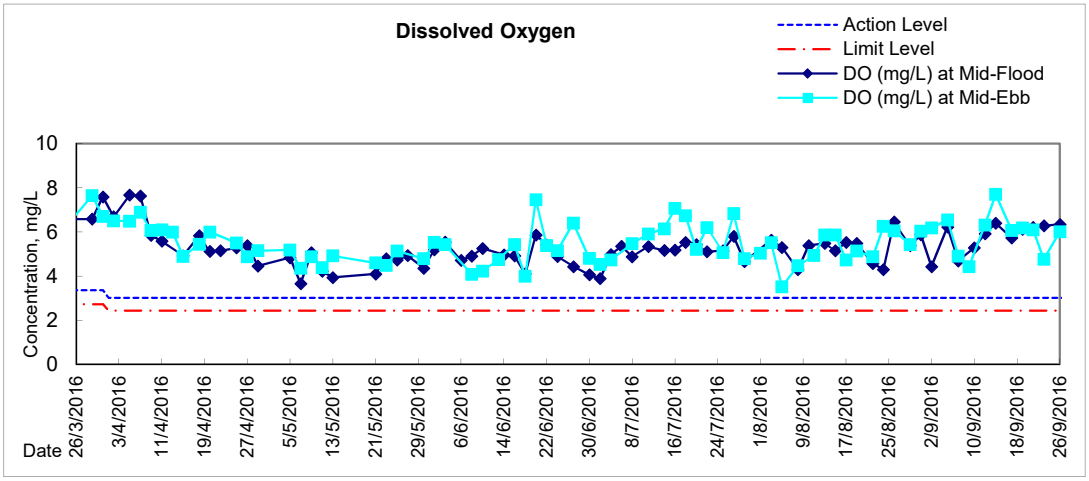
Graphic Presentation of Water Quality Result of C1 - HKCEC

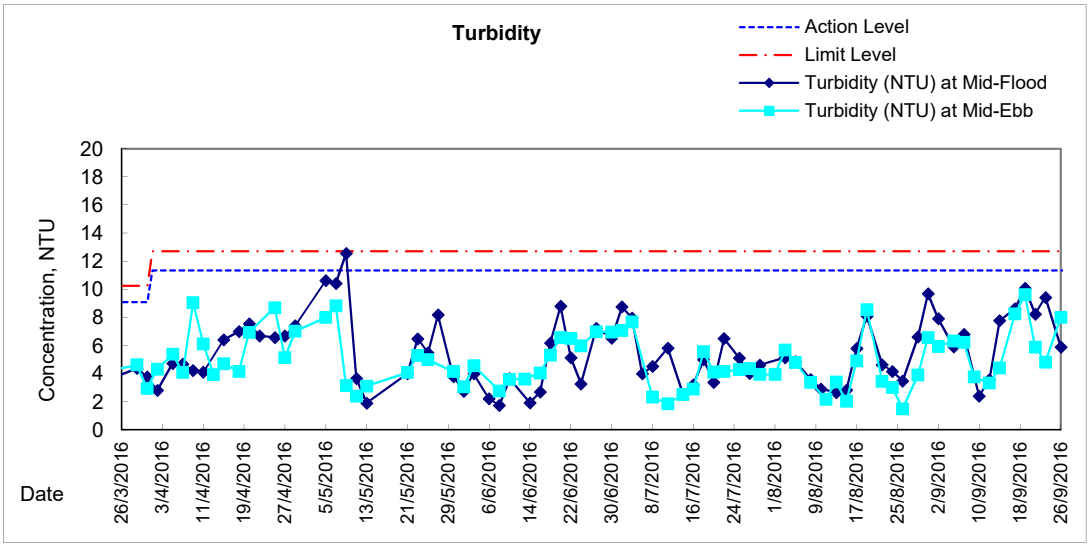


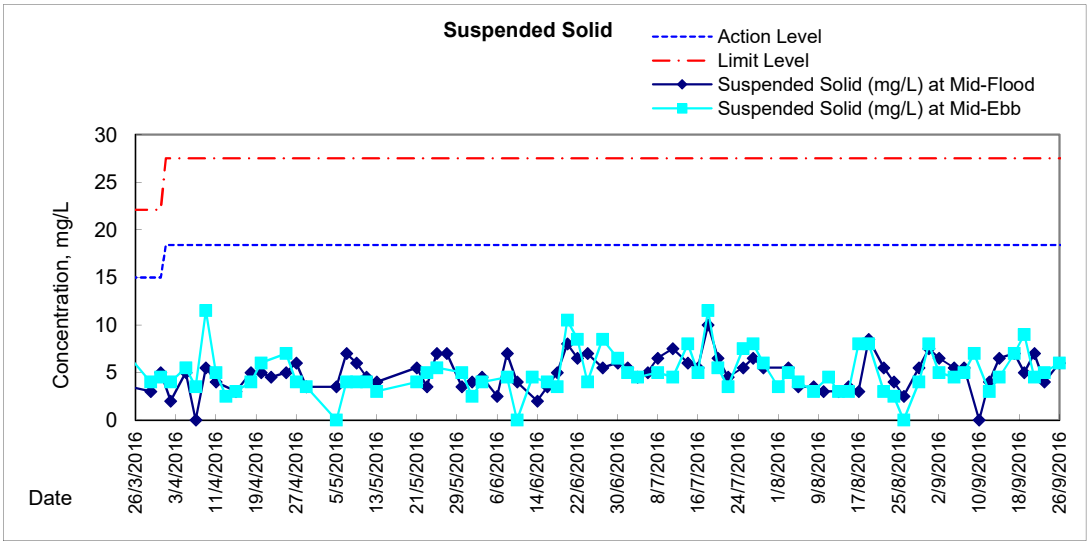




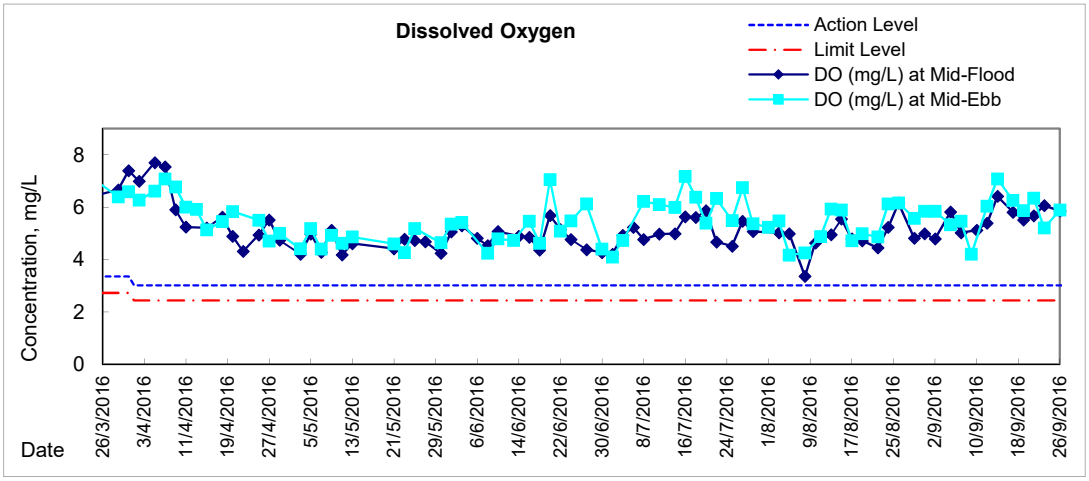
Graphic Presentation of Water Quality Result of P1 - HKCEC Phase I

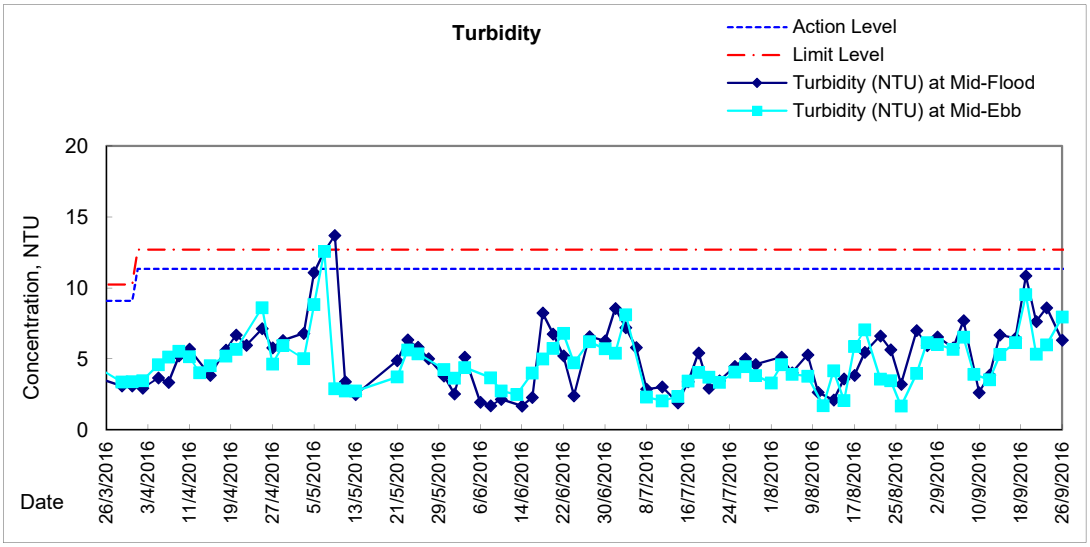


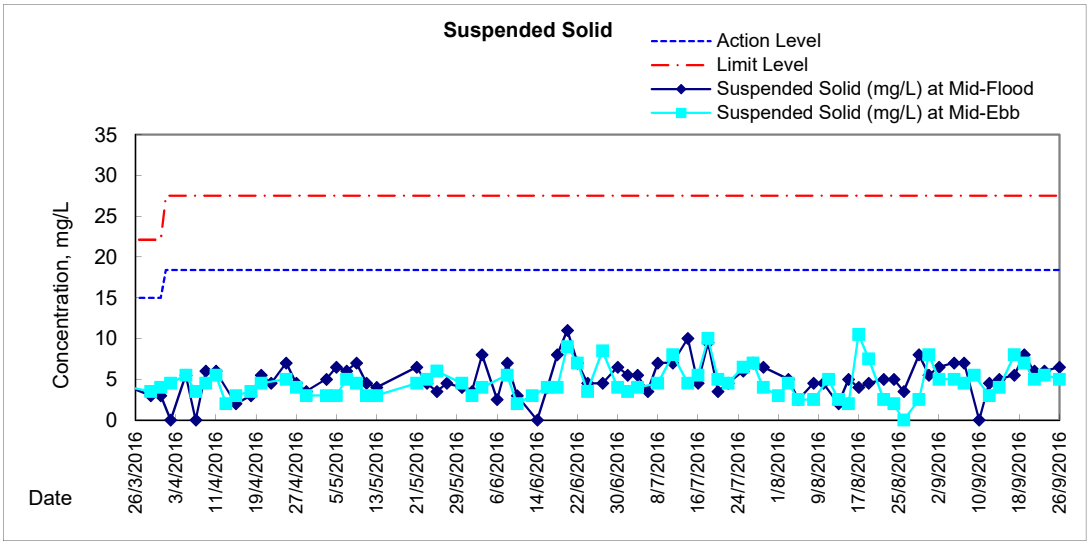




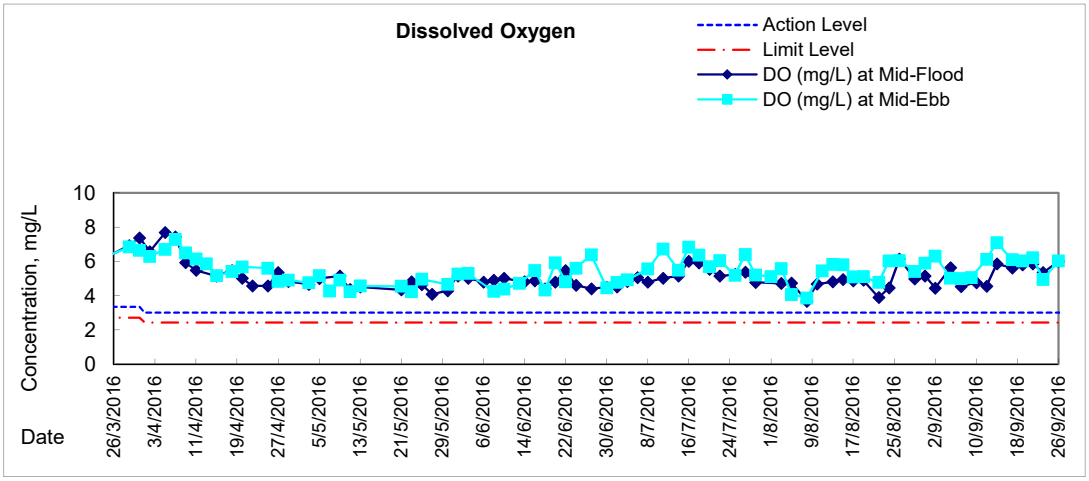
Graphic Presentation of Water Quality Result of P3 - APA

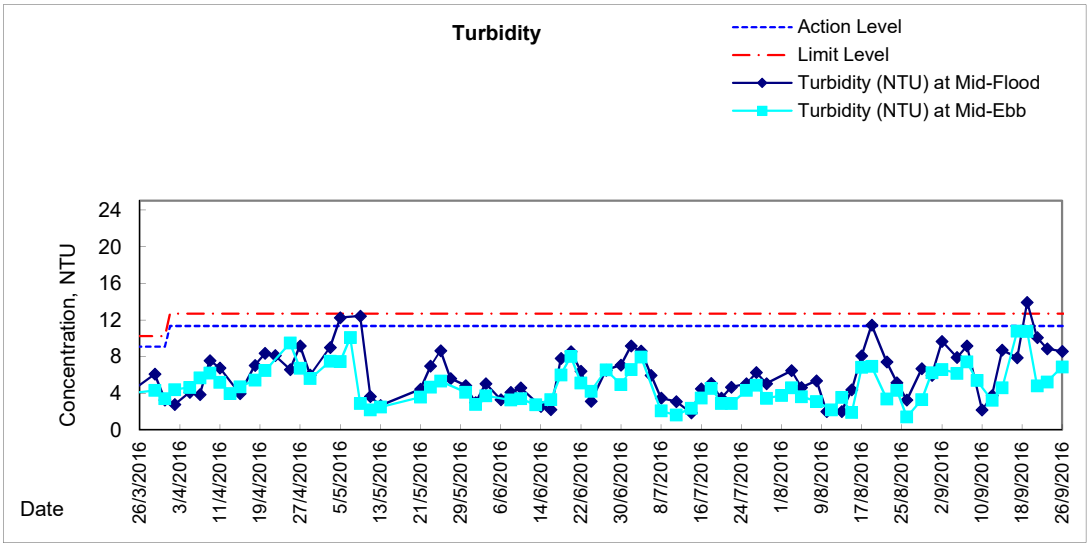


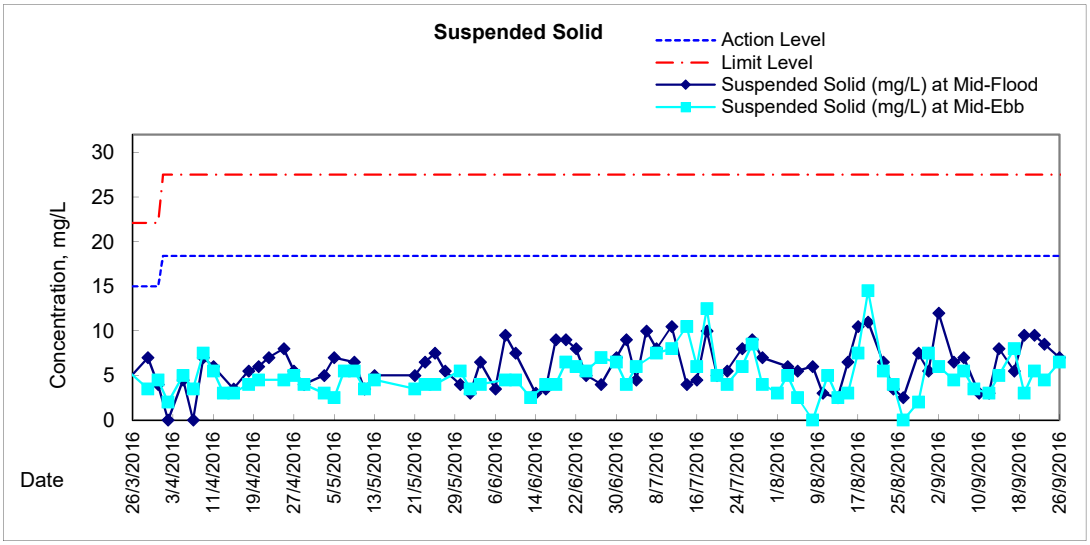




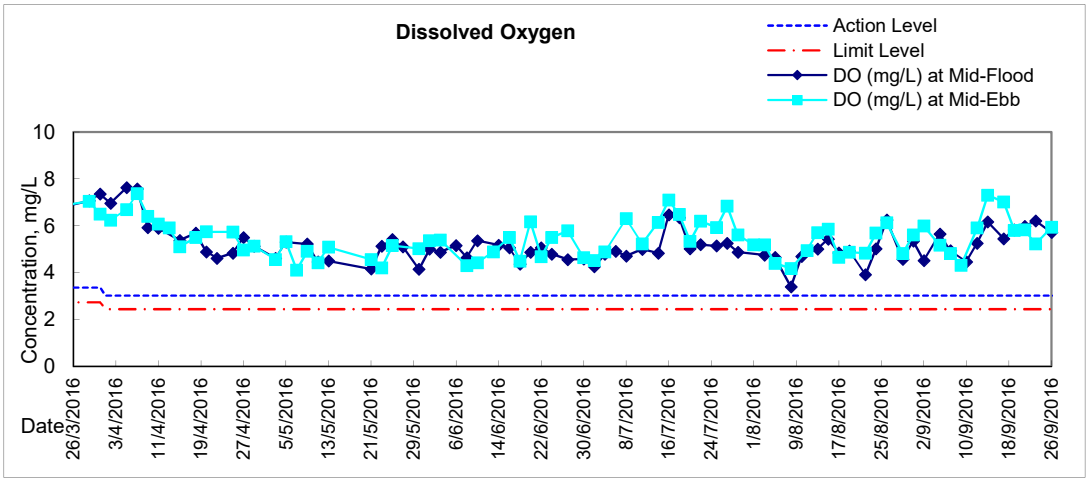
Graphic Presentation of Water Quality Result of P5 - WCT / RT / IT

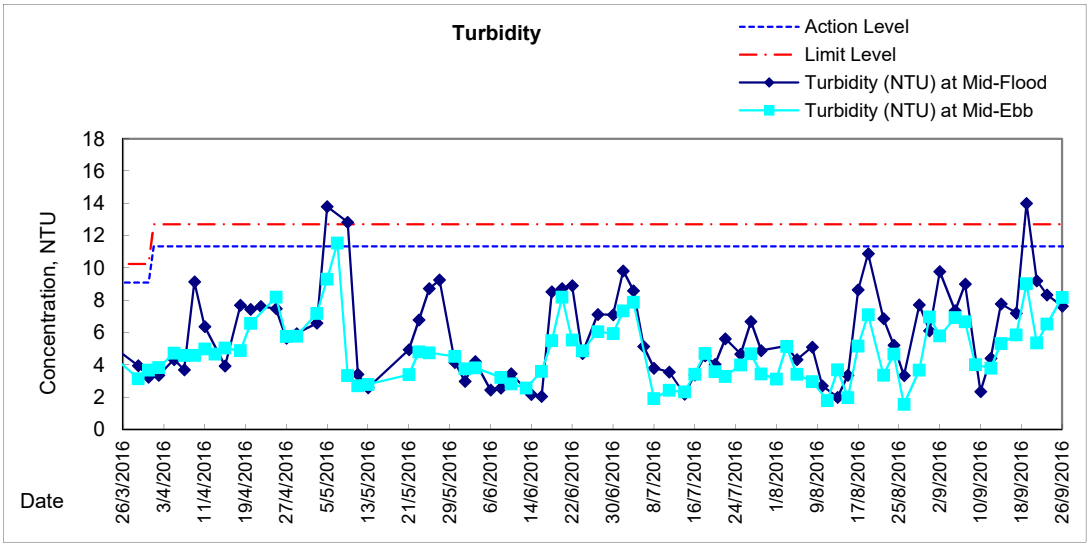


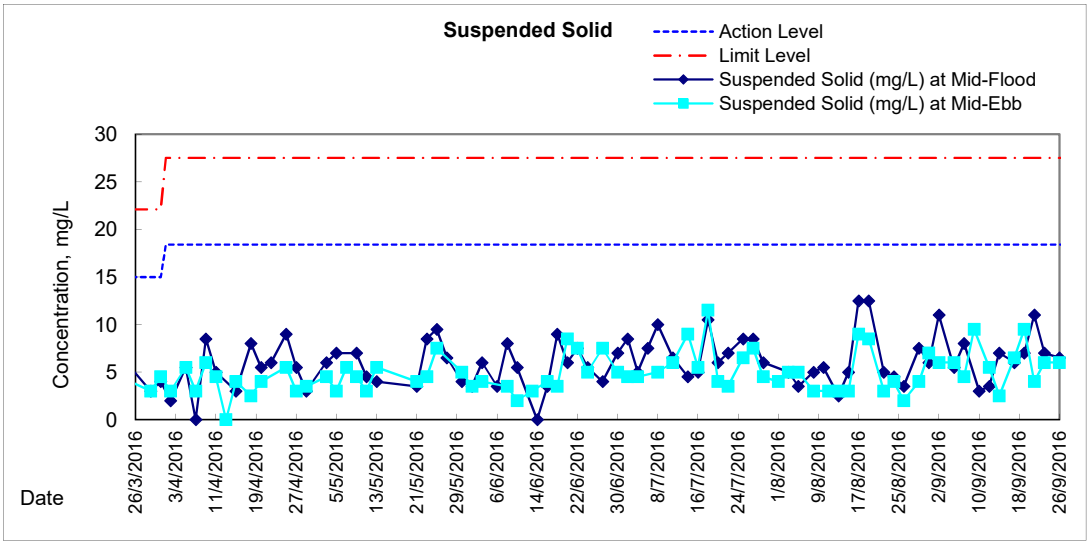




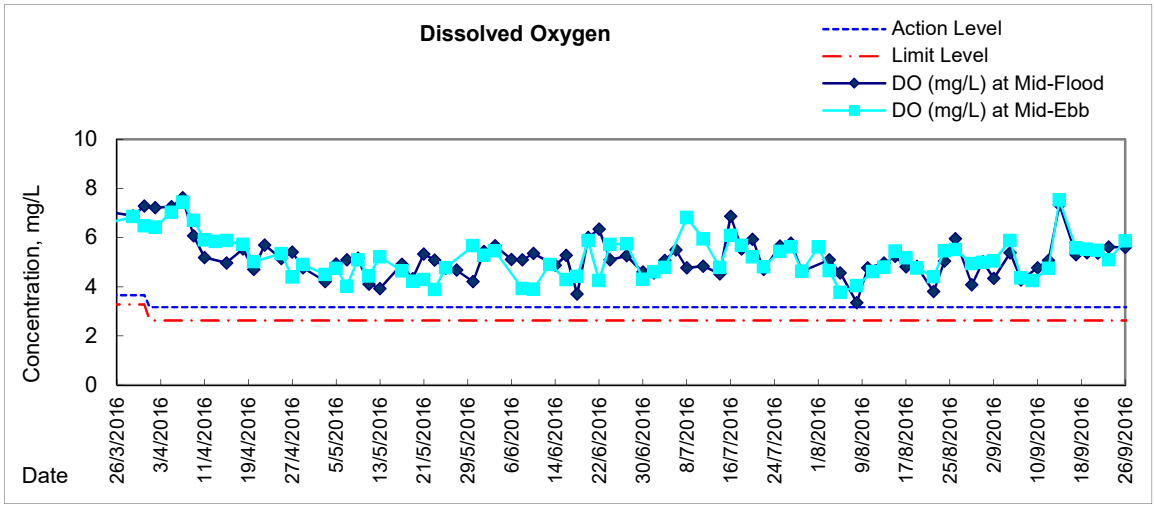
Graphic Presentation of Water Quality Result of P4 - SOC

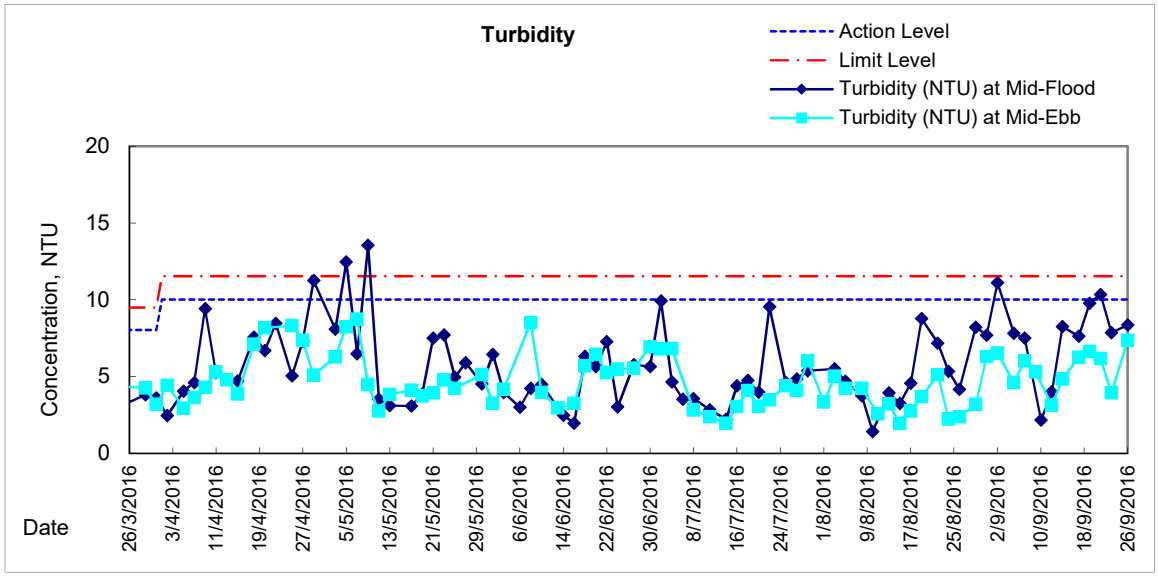


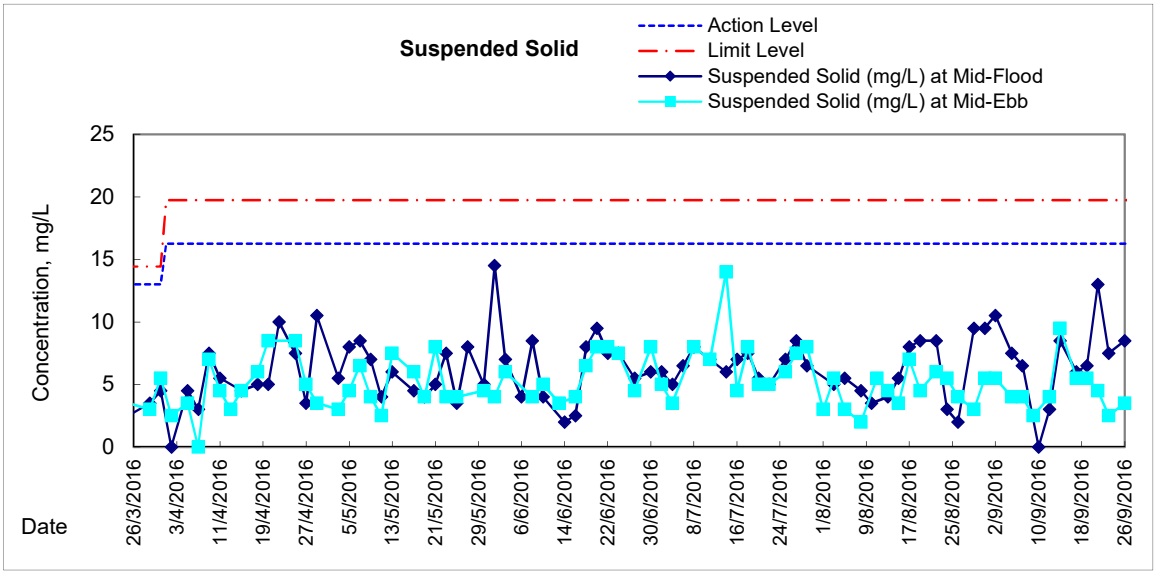




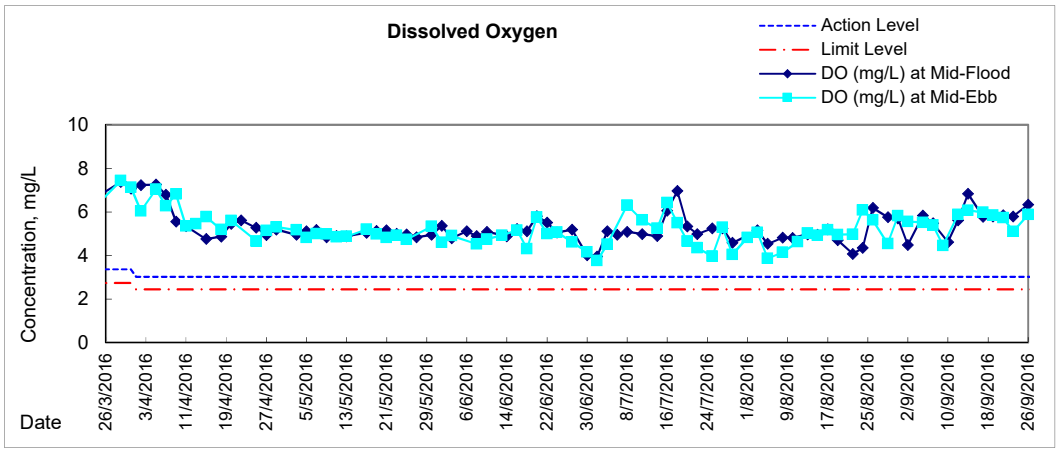
Graphic Presentation of Water Quality Result of RW21-P789 - GEC/CRC/SHK

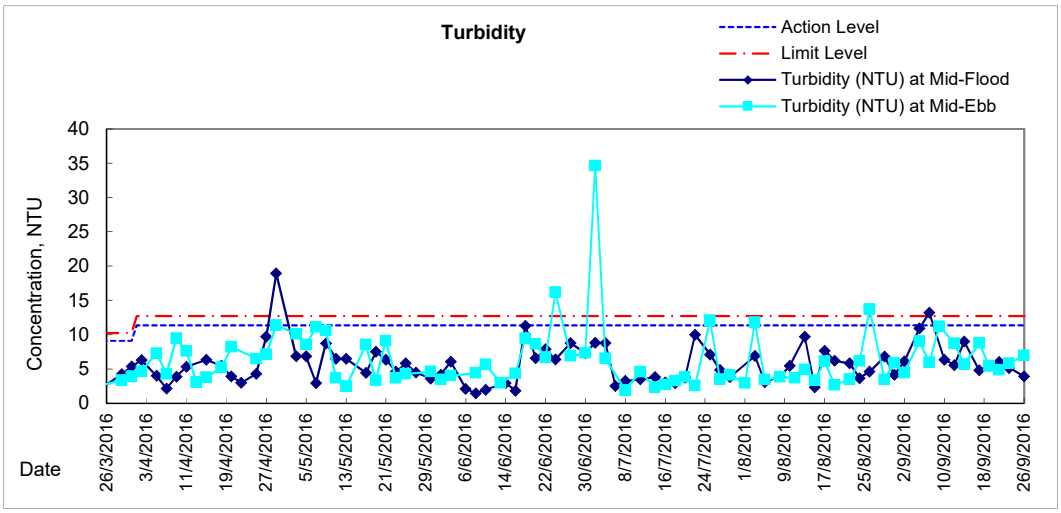


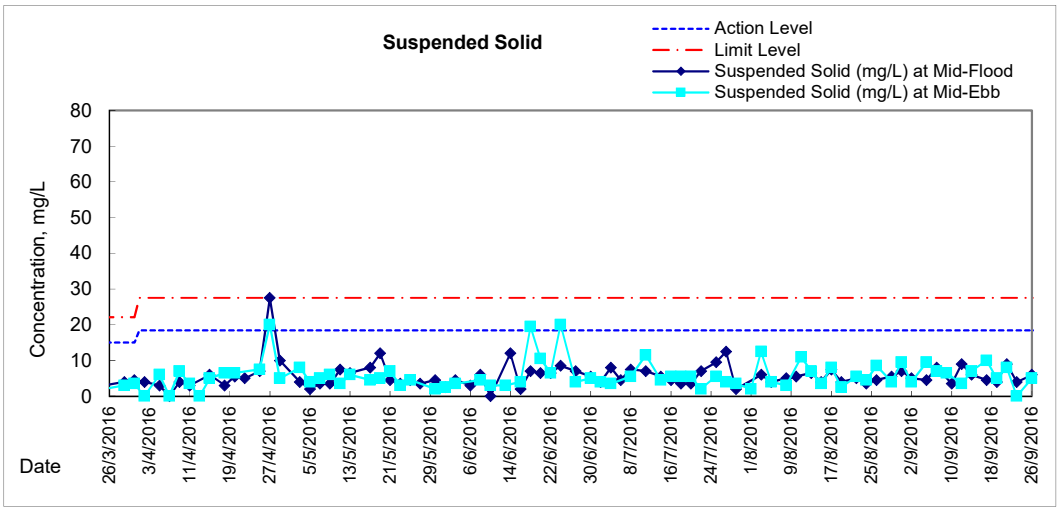




Graphic Presentation of Water Quality Result of C7 - Windsor House







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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/8/2016	17:50	Cloudy	Surface	1.0	27.30	27.30	27.3	7.80	7.80	7.8	28.09	28.09	28.1	63.1	62.9	63.0	4.29	4.27	4.28
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:52		Bottom	3.0	27.10	27.10	27.1	7.78	7.78	7.8	28.71	28.71	28.7	79.5	78.1	78.8	5.38	5.29	5.34
31/8/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:30		Middle	1.5	27.50	27.50	27.5	7.84	7.84	7.8	29.36	29.60	29.5	71.9	75.3	73.6	4.81	5.04	4.93
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:10		Middle	1.0	27.80	27.80	27.8	7.45	7.45	7.5	26.98	26.98	27.0	61.2	60.7	61.0	4.14	4.10	4.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/9/2016	10:20	Cloudy	Surface	1.0	27.50	27.50	27.5	7.75	7.75	7.8	28.96	29.96	29.5	76.9	77.2	77.1	5.17	5.18	5.18
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:22		Bottom	3.0	27.30	27.30	27.3	7.75	7.75	7.8	29.65	29.65	29.7	92.7	93.3	93.0	6.22	6.26	6.24
7/9/2016	12:00	Cloudy	Surface	1.0	27.00	27.00	27.0	7.83	7.83	7.8	21.69	21.69	21.7	78.2	76.8	77.5	5.52	5.42	5.47
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:02		Bottom	3.0	27.00	27.00	27.0	7.72	7.72	7.7	28.36	28.36	28.4	82.6	82.1	82.4	5.62	5.59	5.61
10/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:30		Middle	1.5	27.00	27.00	27.0	7.57	7.57	7.6	25.72	25.72	25.7	55.5	56.4	56.0	3.84	3.89	3.87
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:30		Middle	1.5	29.50	29.50	29.5	7.55	7.55	7.6	25.55	25.55	25.6	63.1	63.9	63.5	4.16	4.21	4.19
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:50		Middle	1.5	28.30	28.30	28.3	8.02	8.02	8.0	27.68	27.68	27.7	92.7	95.6	94.2	6.19	6.38	6.29
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:15		Middle	1.5	28.00	28.00	28.0	7.77	7.77	7.8	30.04	30.04	30.0	76.6	78.6	77.6	5.07	5.20	5.14
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/9/2016	9:50	Fine	Surface	1.0	28.40	28.40	28.4	7.79	7.79	7.8	28.35	28.35	28.4	78.7	79.0	78.9	5.22	5.24	5.23
	-		Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:52		Bottom	4.0	28.10	28.10	28.1	7.80	7.80	7.8	29.12	29.12	29.1	88.1	88.1	88.1	5.85	5.85	5.85
21/9/2016	10:32	Fine	Surface	1.0	27.90	27.90	27.9	7.85	7.85	7.9	29.08	29.08	29.1	77.0	77.2	77.1	5.13	5.14	5.14
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:34		Bottom	3.0	27.80	27.80	27.8	7.85	7.85	7.9	29.46	29.46	29.5	93.4	93.1	93.3	6.23	6.24	6.24
23/9/2016	14:50	Fine	Surface	1.0	28.60	28.60	28.6	7.91	7.91	7.9	30.47	30.47	30.5	82.8	81.6	82.2	5.41	5.33	5.37
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:52		Bottom	3.0	28.30	28.30	28.3	7.91	7.91	7.9	30.64	30.64	30.6	85.5	86.7	86.1	5.61	5.69	5.65
26/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:55		Middle	1.5	28.30	28.30	28.3	7.87	7.87	7.9	29.16	29.16	29.2	69.3	69.8	69.6	4.63	4.65	4.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/8/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:14		Middle	1.5	26.90	26.90	26.9	7.97	7.97	8.0	13.33	13.33	13.3	29.2	28.3	28.8	2.16	2.10	2.13
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31/8/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:50		Middle	1.5	27.40	27.40	27.4	7.88	7.88	7.9	25.01	25.01	25.0	45.9	47.9	46.9	3.41	3.61	3.51
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:52		Middle	1.0	27.70	27.60	27.7	8.08	8.08	8.1	11.81	11.82	11.8	58.5	59.9	59.2	3.95	4.04	4.00
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:04		Middle	1.5	27.10	27.10	27.1	7.83	7.83	7.8	28.40	28.40	28.4	62.3	61.8	62.1	4.23	4.20	4.22
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:47		Middle	1.5	26.90	26.90	26.9	7.94	7.94	7.9	20.83	20.83	20.8	57.4	57.3	57.4	4.08	4.07	4.08
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1:30		Middle	1.5	27.00	27.00	27.0	7.81	7.81	7.8	21.56	21.56	21.6	55.8	54.7	55.3	3.85	3.77	3.81
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:00		Middle	1.5	28.40	28.40	28.4	7.90	7.90	7.9	18.12	18.12	18.1	46.3	46.2	46.3	3.23	3.22	3.23
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:00		Middle	1.5	27.90	27.90	27.9	8.07	8.07	8.1	18.23	18.23	18.2	69.0	69.3	69.2	4.89	4.91	4.90
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:25		Middle	1.5	27.60	27.60	27.6	8.07	8.07	8.1	15.50	15.50	15.5	42.8	43.0	42.9	3.26	3.30	3.28
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:35		Middle	1.5	27.70	27.70	27.7	7.89	7.89	7.9	23.34	23.34	23.3	58.0	57.0	57.5	4.00	3.93	3.97
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:13		Middle	1.5	27.30	27.30	27.3	7.96	7.96	8.0	24.62	24.62	24.6	63.5	63.9	63.7	4.38	4.41	4.40
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:03		Middle	1.5	27.90	27.90	27.9	7.94	7.94	7.9	28.25	28.25	28.3	55.4	55.8	55.6	3.71	3.73	3.72
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:40		Middle	1.5	28.20	28.20	28.2	7.93	7.93	7.9	26.35	26.35	26.4	62.9	62.6	62.7	4.23	4.21	4.22
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/8/2016	17:10	Cloudy	Surface	1.0	27.20	27.20	27.2	7.91	7.91	7.9	27.50	27.50	27.5	48.4	49.4	48.9	3.30	3.36	3.33
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:12		Bottom	3.0	27.00	27.00	27.0	7.94	7.94	7.9	22.92	22.92	22.9	60.4	60.5	60.5	4.24	4.22	4.23
31/8/2016	17:43	Fine	Surface	1.0	27.40	27.40	27.4	7.90	7.90	7.9	28.18	28.18	28.2	54.8	54.0	54.4	3.69	3.64	3.67
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:45		Bottom	3.0	27.30	27.30	27.3	7.89	7.89	7.9	27.51	27.51	27.5	61.9	61.6	61.8	4.20	4.18	4.19
2/9/2016	18:56	Cloudy	Surface	1.0	27.70	27.70	27.7	8.00	7.98	8.0	11.76	11.76	11.8	56.9	59.0	58.0	3.83	3.97	3.90
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:57		Bottom	3.0	27.70	27.70	27.7	7.98	7.99	8.0	11.78	11.78	11.8	59.2	58.7	59.0	3.99	3.96	3.98
5/9/2016	10:00	Cloudy	Surface	1.0	27.10	27.10	27.1	7.89	7.89	7.9	28.65	28.65	28.7	65.4	65.2	65.3	4.43	4.41	4.42
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:02		Bottom	3.0	26.90	26.90	26.9	7.82	7.82	7.8	30.98	30.98	31.0	72.4	72.6	72.5	4.86	4.87	4.87
7/9/2016	11:43	Cloudy	Surface	1.0	27.00	27.00	27.0	7.89	7.89	7.9	26.38	26.38	26.4	64.1	62.5	63.3	4.40	4.29	4.35
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:45		Bottom	3.0	26.90	26.90	26.9	7.82	7.82	7.8	29.49	29.49	29.5	65.7	65.2	65.5	4.44	4.41	4.43
10/9/2016	1:35	Cloudy	Surface	1.0	27.00	27.00	27.0	7.70	7.70	7.7	21.56	21.56	21.6	55.4	56.6	56.0	3.82	3.91	3.87
	-		Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1:36		Bottom	4.0	27.00	27.00	27.0	7.69	7.69	7.7	21.56	21.56	21.6	56.2	57.0	56.6	3.88	3.93	3.91
12/9/2016	14:05	Fine	Surface	1.0	28.70	28.70	28.7	7.74	7.74	7.7	18.81	18.81	18.8	54.8	54.2	54.5	3.81	3.80	3.81
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:07		Bottom	3.0	28.50	28.50	28.5	7.60	7.60	7.6	26.84	26.84	26.8	72.4	71.5	72.0	4.83	4.77	4.80
14/9/2016	16:56	Fine	Surface	1.0	27.90	27.90	27.9	8.25	8.25	8.3	12.86	12.86	12.9	59.4	59.2	59.3	4.33	4.32	4.33
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:58		Bottom	3.0	28.20	28.20	28.2	7.94	7.94	7.9	24.34	24.34	24.3	101.2	101.0	101.1	6.91	6.89	6.90
17/9/2016	17:21	Fine	Surface	1.0	28.00	28.00	28.0	7.97	7.97	8.0	27.37	27.37	27.4	56.2	56.9	56.6	3.77	3.82	3.80
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:23		Bottom	3.0	27.90	27.90	27.9	7.89	7.89	7.9	28.64	28.64	28.6	71.0	71.3	71.2	4.25	4.20	4.23
19/9/2016	9:30	Fine	Surface	1.0	27.70	27.70	27.7	7.80	7.80	7.8	26.19	26.17	26.2	64.5	64.1	64.3	4.39	4.36	4.38
	-		Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:32		Bottom	4.0	27.70	27.70	27.7	7.77	7.77	7.8	28.38	28.38	28.4	76.3	76.4	76.4	5.13	5.13	5.13
21/9/2016	10:09	Fine	Surface	1.0	27.70	27.70	27.7	7.94	7.94	7.9	28.33	28.33	28.3	60.5	59.8	60.2	4.06	4.02	4.04
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:11		Bottom	3.0	27.70	27.70	27.7	7.90	7.90	7.9	30.28	30.28	30.3	76.9	77.2	77.1	5.12	5.13	5.13
23/9/2016	11:59	Fine	Surface	1.0	28.10	28.10	28.1	7.98	7.98	8.0	27.17	27.17	27.2	67.2	66.9	67.1	4.51	4.49	4.50
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:01		Bottom	3.0	28.00	28.00	28.0	7.91	7.91	7.9	30.01	30.01	30.0	78.9	77.6	78.3	5.22	5.14	5.18
26/9/2016	16:45	Fine	Surface	1.0	28.40	28.40	28.4	7.88	7.88	7.9	26.68	26.68	26.7	70.6	71.0	70.8	4.68	4.71	4.70
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:47		Bottom	3.0	28.30	28.30	28.3	7.88	7.88	7.9	30.22	30.22	30.2	89.7	88.2	89.0	5.91	5.81	5.86

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		℃			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/8/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:53		Middle	2	27.30	27.30	27.3	7.73	7.73	7.7	29.29	29.29	29.3	69.2	67.6	68.4	4.66	4.55	4.61
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31/8/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:05		Middle	2	27.70	27.70	27.7	7.93	7.93	7.9	24.85	24.85	24.9	70.4	71.8	71.1	4.82	4.91	4.87
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:35		Middle	2	28.10	28.10	28.1	7.71	7.71	7.7	28.47	28.47	28.5	64.5	65.4	65.0	4.30	4.36	4.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/9/2016	-	Rainy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:20		Middle	2	26.70	26.70	26.7	7.99	7.99	8.0	27.98	27.98	28.0	82.4	82.2	82.3	6.01	6.00	6.01
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:41		Middle	1	26.70	26.00	26.4	7.80	7.80	7.8	22.90	22.90	22.9	73.3	72.1	72.7	5.16	5.08	5.12
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3:18		Middle	2	27.10	27.10	27.1	7.61	7.61	7.6	20.49	20.49	20.5	52.2	52.9	52.6	3.71	3.76	3.74
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:15		Middle	2	28.60	28.60	28.6	7.67	7.67	7.7	25.39	25.39	25.4	63.8	65.0	64.4	4.29	4.37	4.33
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:35		Middle	2	28.20	28.20	28.2	7.82	7.82	7.8	28.04	28.04	28.0	66.5	66.4	66.5	4.43	4.42	4.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/9/2016	11:50	Fine	Surface	1	28.60	28.60	28.6	7.83	7.83	7.8	24.22	24.22	24.2	78.0	78.6	78.3	5.28	5.32	5.30
	-		Middle	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:52		Bottom	3	28.60	28.60	28.6	7.78	7.78	7.8	24.85	24.85	24.9	86.9	86.8	86.9	5.83	5.83	5.83
19/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:30		Middle	2	28.80	28.80	28.8	7.81	7.81	7.8	27.67	27.67	27.7	75.7	76.1	75.9	5.00	5.03	5.02
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:55		Middle	2	28.30	28.30	28.3	7.89	7.89	7.9	28.41	28.41	28.4	70.5	70.7	70.6	4.68	4.69	4.69
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2:40		Middle	2	26.90	26.97	26.9	7.79	7.79	7.8	28.69	28.69	28.7	69.3	70.0	69.7	4.69	4.74	4.72
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:15		Middle	2	28.70	28.70	28.7	7.89	7.89	7.9	30.48	30.48	30.5	78.4	79.0	78.7	5.11	5.17	5.14
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		℃			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/8/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:40		Middle	1.5	27.10	27.10	27.1	7.93	7.93	7.9	18.53	18.53	18.5	27.8	32.6	30.2	1.99	2.33	2.16
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31/8/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:25		Middle	1.5	27.30	27.30	27.3	7.98	7.98	8.0	16.58	16.58	16.6	36.6	36.5	36.6	2.64	2.63	2.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:15		Middle	1.5	27.70	27.70	27.7	7.91	7.91	7.9	18.49	18.49	18.5	36.6	35.8	36.2	2.59	2.54	2.57
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/9/2016	-	Rainy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:00		Middle	1.5	26.70	26.70	26.7	8.06	8.06	8.1	18.14	18.14	18.1	75.2	74.8	75.0	5.44	5.41	5.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:24		Middle	1.5	26.80	26.80	26.8	7.94	7.94	7.9	20.81	20.81	20.8	58.3	58.1	58.2	4.14	4.14	4.14
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3:05		Middle	1.5	27.10	27.10	27.1	7.88	7.88	7.9	20.02	20.01	20.0	51.3	51.9	51.6	3.65	3.69	3.67
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:51		Middle	1.5	27.60	27.60	27.6	7.79	7.79	7.8	22.01	22.01	22.0	48.4	50.0	49.2	3.37	3.48	3.43
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:05		Middle	1.5	27.70	27.70	27.7	8.00	8.00	8.0	22.57	22.57	22.6	66.0	65.8	65.9	4.56	4.55	4.56
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:20		Middle	1.5	27.40	27.40	27.4	7.99	7.99	8.0	15.52	15.52	15.5	45.0	46.0	45.5	3.26	3.33	3.30
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:19		Middle	1.5	28.00	28.00	28.0	7.94	7.94	7.9	21.41	21.41	21.4	46.8	46.7	46.8	5.25	5.24	5.25
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:42		Middle	1.5	27.80	27.80	27.8	7.99	7.99	8.0	22.55	22.55	22.6	52.7	52.6	52.7	3.65	3.64	3.65
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/9/2016	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3:10		Middle	1.5	27.00	27.00	27.0	7.83	7.83	7.8	27.63	27.63	27.6	56.8	57.5	57.2	3.87	3.92	3.90
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/9/2016	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:40		Middle	1.5	28.40	28.40	28.4	7.90	7.90	7.9	28.06	28.06	28.1	64.4	64.5	64.5	4.28	4.28	4.28
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

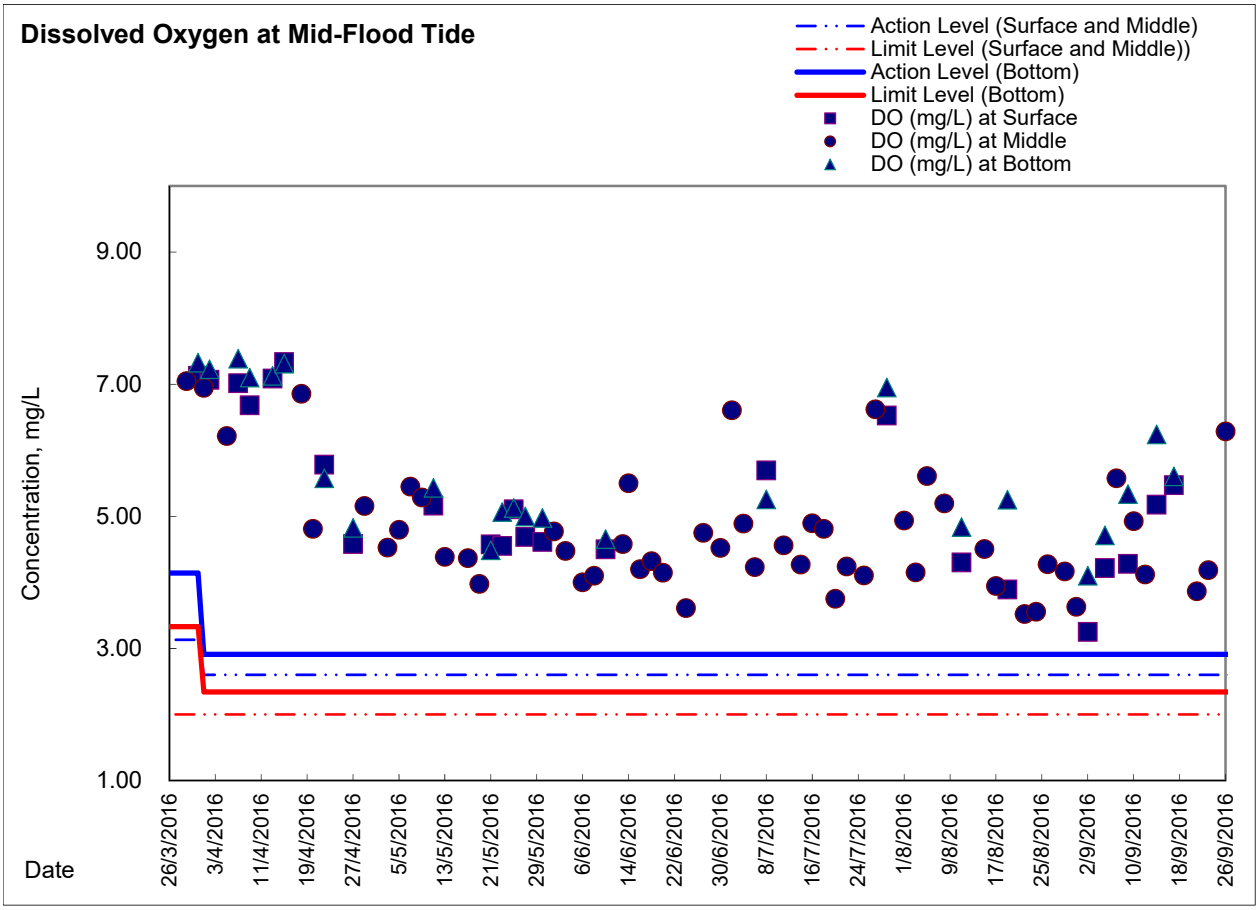
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

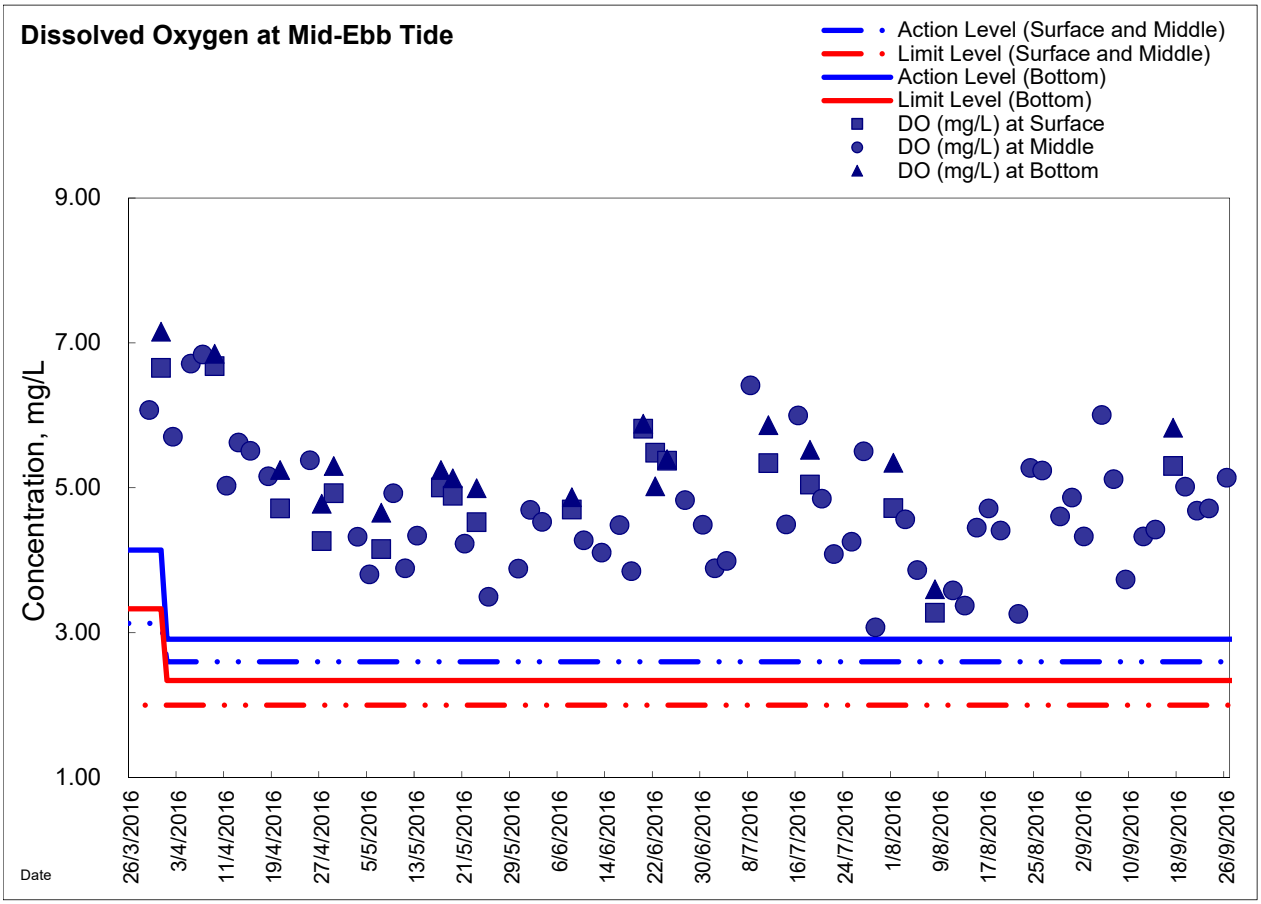
Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth (m)		Water Temperature (°C)			pH (-)			Salinity (ppt)			DO Saturation (%)			DO (mg/L)		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/8/2016	11:34	Cloudy	Surface	1.0	26.80	26.80	26.8	7.76	7.76	7.8	22.94	22.94	22.9	51.9	51.4	51.7	3.65	3.61	3.63
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:36		Bottom	3.0	26.90	26.90	26.9	7.71	7.71	7.7	26.82	26.82	26.8	67.9	66.1	67.0	4.66	4.54	4.60
31/8/2016	11:30	Fine	Surface	1.0	27.40	27.40	27.4	7.68	7.68	7.7	24.43	24.43	24.4	64.3	64.4	64.4	4.37	4.42	4.40
	-		Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:32		Bottom	4.0	27.50	27.50	27.5	7.66	7.66	7.7	28.20	28.20	28.2	83.5	83.4	83.5	5.63	5.63	5.63
2/9/2016	11:20	Cloudy	Surface	1.0	27.70	27.70	27.7	7.69	7.69	7.7	22.36	22.36	22.4	64.6	64.1	64.4	4.49	4.52	4.51
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:22		Bottom	3.0	27.80	27.80	27.8	7.62	7.62	7.6	27.67	27.67	27.7	80.0	80.2	80.1	5.38	5.39	5.39
5/9/2016	15:56	Rainy	Surface	1.0	26.60	26.60	26.6	8.15	8.15	8.2	15.76	15.76	15.8	78.3	78.5	78.4	5.75	5.77	5.76
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:58		Bottom	3.0	26.60	26.60	26.6	7.91	7.91	7.9	26.54	26.54	26.5	76.7	75.1	75.9	5.30	5.19	5.25
7/9/2016	17:20	Cloudy	Surface	1.0	26.80	26.80	26.8	7.90	7.90	7.9	23.85	23.85	23.9	59.6	59.2	59.4	4.17	4.14	4.16
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:22		Bottom	3.0	26.90	26.90	26.9	7.81	7.81	7.8	27.72	27.72	27.7	67.4	67.0	67.2	4.61	4.58	4.60
9/9/2016	3:09	Cloudy	Surface	1.0	27.10	27.10	27.1	7.70	7.70	7.7	20.01	20.01	20.0	53.3	54.1	53.7	3.79	3.84	3.82
	-		Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3:10		Bottom	4.0	27.10	27.10	27.1	7.67	7.67	7.7	20.01	20.01	20.0	53.8	54.4	54.1	3.83	3.86	3.85
12/9/2016	10:47	Fine	Surface	1.0	28.00	28.00	28.0	7.83	7.83	7.8	29.87	29.87	29.9	58.1	58.0	58.1	3.95	3.94	3.95
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:49		Bottom	3.0	27.90	27.90	27.9	7.75	7.75	7.8	26.83	26.83	26.8	65.4	64.8	65.1	4.41	4.37	4.39
14/9/2016	11:10	Fine	Surface	1.0	27.60	27.60	27.6	7.98	7.98	8.0	18.70	18.70	18.7	75.0	75.6	75.3	5.32	5.36	5.34
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:12		Bottom	3.0	27.90	27.90	27.9	7.81	7.81	7.8	25.96	25.96	26.0	86.0	85.7	85.9	5.83	5.81	5.82
17/9/2016	11:16	Fine	Surface	1.0	28.20	28.20	28.2	7.90	7.90	7.9	24.61	24.61	24.6	64.9	65.4	65.2	4.41	4.44	4.43
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:18		Bottom	3.0	27.80	27.80	27.8	7.95	7.90	7.9	23.20	23.20	23.2	70.4	70.8	70.6	4.85	4.88	4.87
19/9/2016	15:15	Fine	Surface	1.0	28.50	28.50	28.5	7.98	7.98	8.0	23.64	23.64	23.6	56.7	57.1	56.9	3.86	3.88	3.87
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:17		Bottom	3.0	28.40	28.40	28.4	7.86	7.86	7.9	26.87	26.87	26.9	78.3	78.2	78.3	5.24	5.30	5.27
21/9/2016	15:38	Fine	Surface	1.0	28.60	28.60	28.6	7.92	7.92	7.9	28.98	28.98	29.0	59.4	57.4	58.4	4.57	4.47	4.52
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:40		Bottom	3.0	28.20	28.20	28.2	7.91	7.91	7.9	30.66	30.66	30.7	87.9	87.2	87.6	5.78	5.74	5.76
23/9/2016	3:15	Cloudy	Surface	1.0	27.00	27.00	27.0	7.82	7.82	7.8	27.75	27.75	27.8	58.1	58.2	58.2	3.96	3.97	3.97
	-		Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3:16		Bottom	4.0	27.10	27.10	27.1	7.82	7.82	7.8	27.76	27.76	27.8	58.5	58.9	58.7	3.98	4.02	4.00
26/9/2016	10:45	Fine	Surface	1.0	28.10	28.10	28.1	7.92	7.92	7.9	25.10	25.10	25.1	72.6	72.8	72.7	4.93	4.94	4.94
	-		Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:47		Bottom	3.0	28.20	28.20	28.2	7.86	7.86	7.9	27.83	27.83	27.8	90.4	90.8	90.6	6.03	6.06	6.05

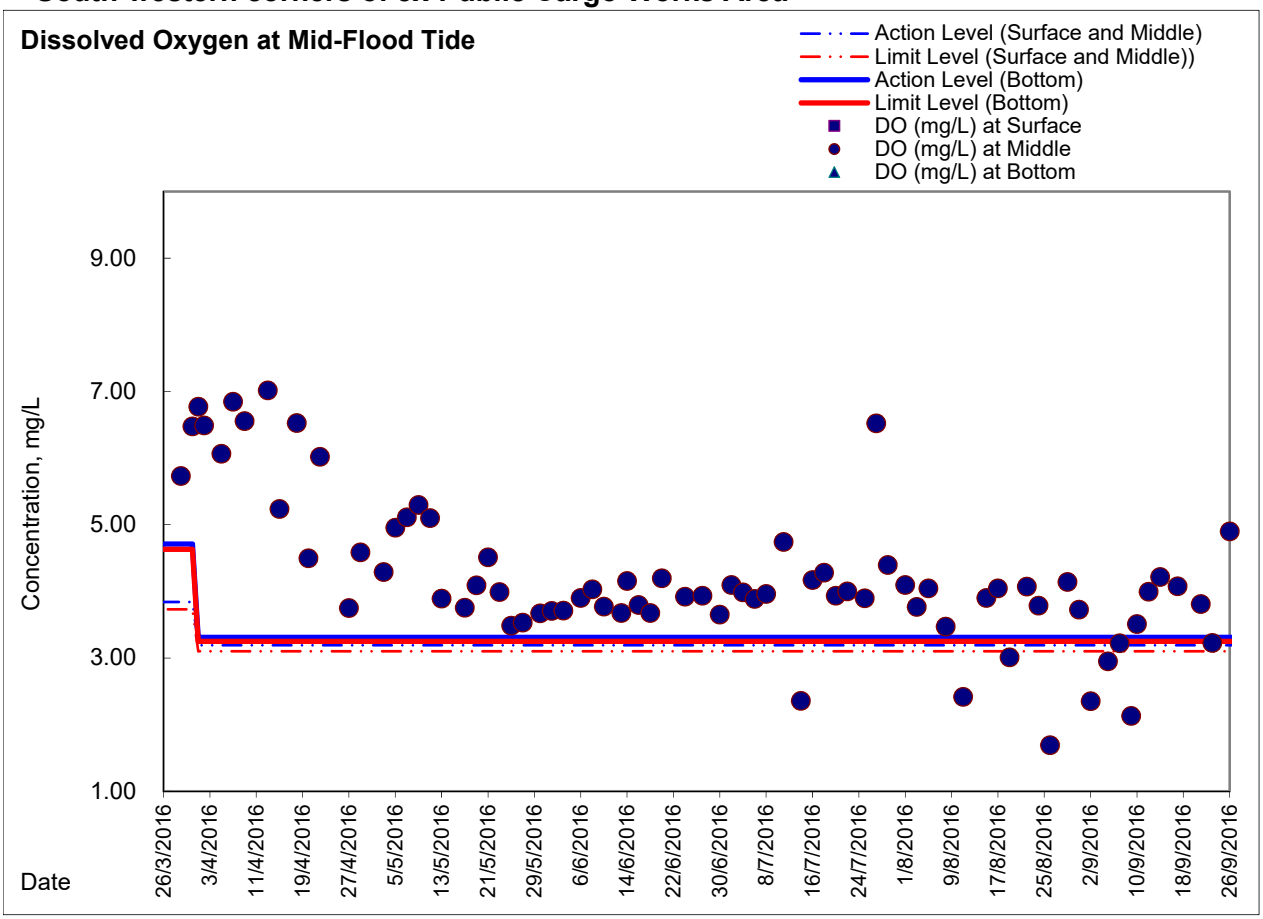
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

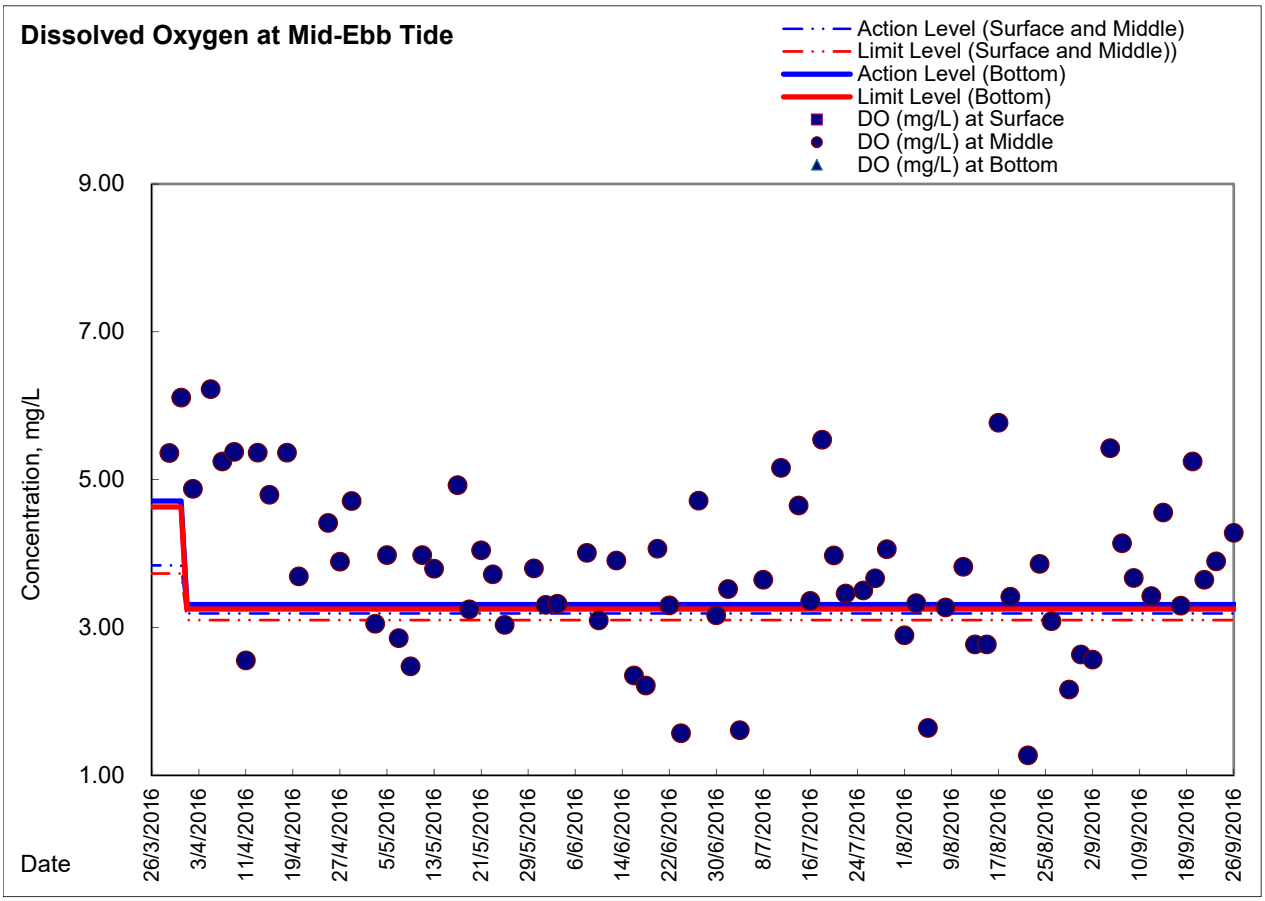
Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel



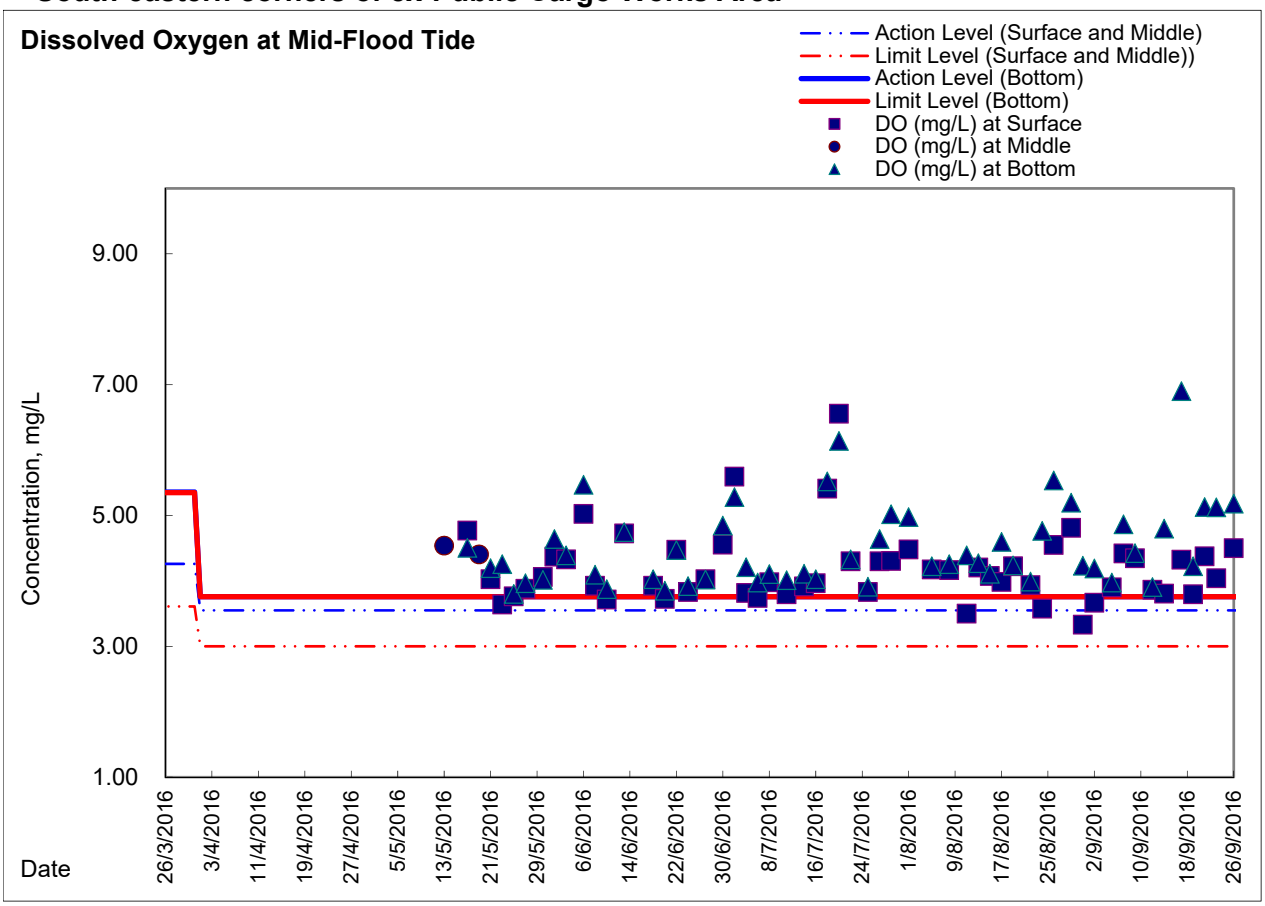


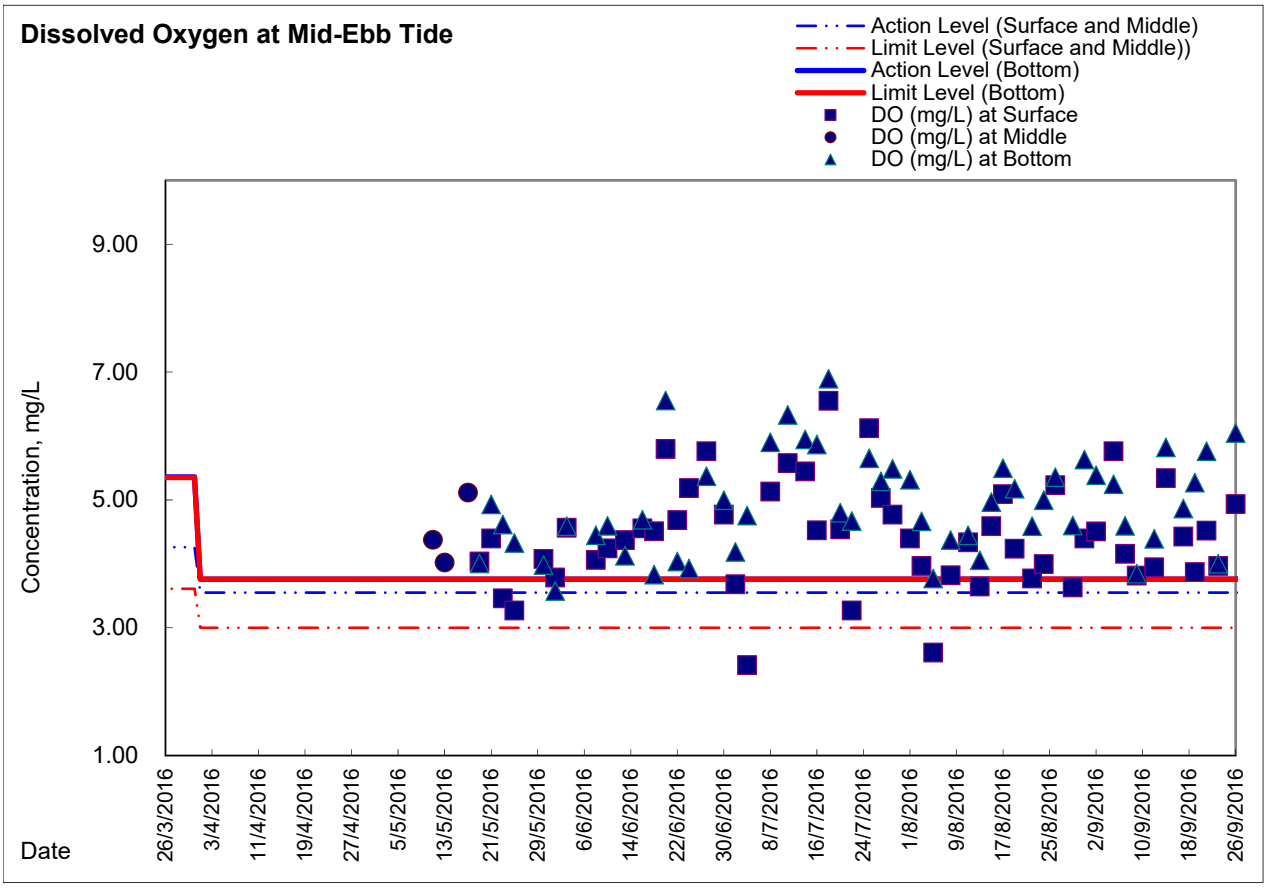
Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area





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	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified)

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

Event / Action Plan for Construction Air Quality

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

Event and Action Plan for Marine Water Quality

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

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

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

Appendix 6.2

Summary for Notification of Exceedance

Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action	
X_16A007	14-Sep-16	9:10	CMA5b- Pedestrian Plaza	**379.4**	1 hr TSP (ug/m^3)	332.0	500	**Possible reason:**	Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station
								Action taken / to be taken:	Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Mitigation measures including maintaining haul road in dampened condition was implemented by contractor.
								Remarks / Other Obs:	Despite formwork erection was undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2012/08, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date. Nevertheless, the Contractor of HK/2012/08 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.
X_16A008	14-Sep-16	9:10	CMA5b- Pedestrian Plaza	**379.4**	1 hr TSP (ug/m^3)	332.0	500	**Possible reason:**	Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station
								Action taken / to be taken:	Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures.
								Remarks / Other Obs:	Pipe laying was undertaken on the monitoring date around Pedestrian Plaza under Contract HK/2009/01 and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date. Nevertheless, the Contractor of HK/2009/01 was reminded to maintain regular dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.
X_16A010	26-Sep-16	9:10	CMA5b- Pedestrian Plaza	**385**	1 hr TSP (ug/m^3)	332.0	500	**Possible reason:**	Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station
								Action taken / to be taken:	Reviewed the trend of air quality measurement across monitoring stations. Reviewed Contractor's working procedures. Mitigation measures including maintaining haul road in dampened condition was implemented by Contractor.
								Remarks / Other Obs:	Despite formwork erection and re-bar fixing were undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2012/08, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station. According to the EPD information, smog was observed on the monitoring date and the prevailing meteorological condition on the monitoring date is detrimental to dispersion of any potential roadside pollutant. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date. Nevertheless, the Contractor of HK/2012/08 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.
X_16A011	26-Sep-16	9:10	CMA5b- Pedestrian Plaza	**385**	1 hr TSP (ug/m^3)	332.0	500	**Possible reason:**	Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station
								Action taken / to be taken:	Reviewed the trend of air quality measurement across monitoring stations. Reviewed contractor's working procedures.
								Remarks / Other Obs:	Manhole construction was undertaken on the monitoring date around Pedestrian Plaza under Contract HK/2009/01 and no particular observation regarding air quality impact was observed during sampling. In view of the above, the action level exceedance was considered to be non-project related and potentially contributed by other sources affecting local ambient condition such as road traffic next to the monitoring station. According to the EPD information, smog was observed on the monitoring date and the prevailing meteorological condition on the monitoring date is detrimental to dispersion of any potential roadside pollutant. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date. Nevertheless, the Contractor of HK/2009/01 was reminded to maintain regular dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16C041	7-Sep-16	Mid-flood	C7	DO(mg/l)	5.48	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	13.22	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	8.00	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. No marine activity was conducted under Contract HY/2010/08 on the monitoring date, and the installed silt screen was in place. In view of the above, it was considered that the exceedance was not project related. No exceedance was recorded on the subsequent monitoring.
X_16C042	19-Sep-16	Mid-flood	C1	DO(mg/l)	5.87	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	13.10	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	4.50	18.42	27.54	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2009/01 on the monitoring date. In view of the above, the exceedance was considered not related to Contract HK/2009/01 construction works. No marine activity was conducted under Contract HK/2009/02 on the monitoring date. In view of the above, the exceedance was considered not related to Contract HK/2009/02 construction works. No exceedance was recorded on the subsequent monitoring.
X_16C043	19-Sep-16	Mid-flood	P4	DO(mg/l)	5.83	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	14.00	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	7.00	18.42	27.54	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. Location of construction area was at downstream of monitoring station P4. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring.
X_16C044	19-Sep-16	Mid-flood	P5	DO(mg/l)	5.81	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	13.93	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	9.50	18.42	27.54	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. Location of construction area was at downstream of monitoring station P5. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16W046	2-Sep-16	Mid-flood	WSD19	DO(mg/l)	4.19	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	12.01	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	14.00	16.26	17.74	Remarks/ Other Obs:	Trimming of rock slope profile near Zone D was conducted under Contract HK/2012/08 on the monitoring date. Contractor mitigation measure including the use of silt curtain was generally in place. In view of the above, the exceedance was considered not project related.
X_16W047	2-Sep-16	Mid-flood	RW21-P789	DO(mg/l)	4.34	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	11.10	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	10.50	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2009/02 on the monitoring date. The installed silt screen was generally in order. In view of no marine activity was conducted, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 5 September 2016 during flood tide.
X_16W048	5-Sep-16	Mid-flood	WSD19	DO(mg/l)	5.46	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	10.44	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	9.50	16.26	17.74	Remarks/ Other Obs:	Trimming of rock slope profile near Zone D was conducted under Contract HK/2012/08 on the monitoring date. Contractor mitigation measure including the use of silt curtain was generally in place. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 5 September 2016 during ebb tide.
X_16W049	7-Sep-16	Mid-flood	WSD19	DO(mg/l)	4.29	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	11.79	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	12.50	16.26	17.74	Remarks/ Other Obs:	Trimming of rock slope profile near Zone D was conducted under Contract HK/2012/08 on the monitoring date. Contractor mitigation measure including the use of silt curtain was generally in place. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 7 September 2016 during ebb tide.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16W050	17-Sep-16	Mid-ebb	WSD19	DO(mg/l)	6.41	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	18.62	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	16.00	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. Location of the construction activity was at the downstream of monitoring station WSD19 during monitoring period. In view of no marine activity was conducted, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 17 September 2016 during flood tide.
X_16W051	19-Sep-16	Mid-ebb	WSD19	DO(mg/l)	5.53	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	11.08	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	8.00	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. Location of the construction activity was at the downstream of monitoring station WSD19 during monitoring period. In view of no marine activity was conducted, the exceedance was considered not project related.
X_16W052	21-Sep-16	Mid-flood	WSD19	DO(mg/l)	5.32	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	13.11	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	16.00	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 21 September 2016 during ebb tide.
X_16W053	21-Sep-16	Mid-flood	RW21-P789	DO(mg/l)	5.37	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	10.34	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	13.00	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2009/02 on the monitoring date. The installed silt screen was generally in order. In view of no marine activity was conducted, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 21 September 2016 during ebb tide.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16W054	23-Sep-16	Mid-flood	WSD19	DO(mg/l)	6.01	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	15.45	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	14.50	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 26 September 2016 during ebb tide.
X_16W055	26-Sep-16	Mid-flood	WSD19	DO(mg/l)	6.02	3.17	2.63	Possible reason:	Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	15.14	10.01	11.54	Action taken/ to be taken:	Immediate repeated in-situ measurement to confirm the exceedances. Checking with Contractor works and review previous monitoring data.
				SS	15.00	16.26	17.74	Remarks/ Other Obs:	No marine activity was conducted under Contract HK/2012/08 on the monitoring date. In view of no marine activity was conducted, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 28 September 2016 during ebb tide.

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16D0035	29-Aug-16	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.16	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with Contractor works and review previous monitoring data.
									Remarks/ Other Obs:	Removal of D-wall at northern side of TPCWAW was 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, the exceedance was considered not related to Project works.
X_16D0036	29-Aug-16	Mid-flood	Ex-WPCWA SW	Middle	DO(mg/l)	2.13	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with Contractor works and review previous monitoring data.
									Remarks/ Other Obs:	Removal of D-wall at northern side of TPCWAW was 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, the exceedance was considered not related to Project works.
X_16D0037	29-Aug-16	Mid-flood	Ex-WPCWA SE	Surface	DO(mg/l)	3.33	3.55	3.00	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with Contractor works and review previous monitoring data.
									Remarks/ Other Obs:	Removal of D-wall at northern side of TPCWAW was 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, the exceedance was considered not related to Project works. No exceedance was recorded on the subsequent monitoring on 31 August 2016 ebb tide.
X_16D0038	31-Aug-16	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.64	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge and variation of water quality within Ex-PCWA area.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with Contractor works and review previous monitoring data.
									Remarks/ Other Obs:	Removal of D-wall at southern side of TPCWAW was 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, the exceedance was considered not related to Project works. No exceedance was recorded on the subsequent monitoring on 31 August 2016 flood tide.

Ref no.	Date	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_16D0038	2-Sep-16	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.57	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge and variation of water quality within Ex-PCWA area.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with Contractor works and review previous monitoring data.
									Remarks/ Other Obs:	Despite filling levelling stone for seawall reinstatement at Western side of TPCWAW and removal of D-wall at northern side of TPCWAW were conducted under Contract HY/2009/15, contractor mitigation measures including the use of silt curtain and impermeable barrier were implemented. Upstream discharge from nearby culvert was noted. In view of the above, the exceedance was considered not related to Project works. No exceedance was recorded on the subsequent monitoring on 2 September 2016 flood tide.

Appendix 9.1

Complaint Log

Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
100321a	21/3/2010	ICC Case no. 1-224618029, Ms. Tsang	Location near Tin Hau	Complaint regarding the loud noise and dark smoke in the course of dredging works on 21 March 2010 (Sunday).	1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18th Feb. 2010 for the dredging works which carry out at area for North Point Reclamation. 2) Officer from Marine Department, Police and EPD's officer attended the scene for inspection and investigation. 3) The Contractor (CHEC-CRBC JV) strictly comply all the conditions in CNP and take all mitigation measures in order to minimize the potential impacts to surrounding sensitive receivers. A formal letter was issued out by CHEC-CRBC JV and to explain the status of the recent construction activities. 4) No limit level exceedance was recorded on the noise measurement during day time and evening time noise measurement on 23 March 2010. Additional restrict hours noise monitoring at Causeway Bay Community and City Garden was conducted on 5 April 2010 (Public Holiday). No limit level exceedance was recorded in the monitoring. 5) No further complaints were received from Mr. Tsang in the reporting month. The complaint is considered closed.	Closed
100321b	21/3/2010	Unknown	Near the eastern breakwater of the Causeway Bay Typhoon Shelter	A public complaint and enquiry regarding loud noises emanated from dredging activities on 21/3/2010 (Sunday) until 2220 hours and between 1920-1946 hours in the evening of 22 March 2010(Monday).	1) A valid Construction Noise Permit no. GW-RS0119-10 was granted from EPD since 18th Feb. 2010 for the dredging works at area for North Point Reclamation during general holidays including Sunday between 0700-2300 hours and any day not being a general holiday between 1900-2300hours. It is complied with the condition of CNP. 2) Officer from Marine Department, 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.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0119-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230. 2) According to RSS 's record, no more daytime and night time dredging since the departure of the split hopper barge from the workplace on 29 April 2010 at 1900 hrs to 5 May 2010. 3) No further complaints were received in the reporting month. The complaint is considered closed.	Closed
100731	31/7/2010	Mr. Lee received by ICC (CC Case: 1-250702681)	Oil Street to Watson Road	Complaint on the noise nuisance due to the dredging works. Three construction plants were operated concurrently.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. 2) There was only 1 grab dredger operated by Contractor within NPR project site area for dredging works. 3) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 27 July and 3 August 2010 during daytime and evening time period. 4) It is considered as invalid from the EP and CNP point of view.	Closed
100812	12/8/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the dredging works at the marine works area adjacent to the Harbour Height during the period from 0700 to 2200.	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0371-10 for their dredging works. Contractor has implemented mitigation measures to reduce the working hour not later than 2230. 2) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 10 and 17 August 2010 during daytime and evening time period. 3) It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	Closed

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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)	1) Contractor for HY/2009/11has been regular checked of condition and removal of trapped rubbish before the dismantling of the floating silt screen to be replaced by wall mount silt screen. 2) Follow-up action had been immediately carried out to check and clear the floating refuse around the seaside silt screen after receipt of the complaint. 3) Removal of seaside silt screen outside the WSD freshwater intake (WSD15) by contractor HY/2009/11 was checked and confirmed dated 9 November 2010. Silt screen has been deployed into the existing steel frame at WSD15 for the protection of WSD salt water intake.	Closed
101110	10/11/2010	Mr. Wong, Harbour Heights (Management) Ltd.	Harbour Heights	Management office received their resident complained on the noise nuisance from the power mechanical equipment during the 0700 to 2200hrs	1) Contractor for HY/2009/11 was granted valid Construction Noise Permit no. GW-RS0870-10 for their dredging works during evening time. Contractor has implemented mitigation measures to reduce the working hour not later than 2230. 2) No noise exceedance was recorded at noise monitoring station at Victoria Centre on 4 and 10 November 2010 during daytime and evening time period. 3) It is considered as invalid complaint. No further complaints were received in the reporting month. The complaint is considered closed.	Closed
101203	3/12/2010, 01:45a.m.	The resident of Block 11, City Garden by ICC referral from Marine Department	North Point	Bad odour was generated from the dredging plant off North Point	1) The first investigation was carried out by Marine Department patrol in the morning on 3 Dec 2010 at around 10:00 and revealed that a few working barges were anchoring in the vicinity without carrying out dredging work. 2) A further specific investigation inspection on contractor's backhoe barge in the vicinity of City Garden was jointly conducted with Engineer Representatives (AECOM/RSS), and ET on 8 Dec 2010 at 11:30. No bad odour was noted during the investigation. 3) Routine dredging operation of the backhoe barge was performed during the jointed investigation inspection and it was revealed that no bad odour was attributed by the dredged materials inspected.	Closed
101206	6/12/2010	Ms Lui, the 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	1) ET confirmed the following information with resident site staff on the complaint: • It was referred to the filling operation at North Point	Closed

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		Garden by ICC (ICC case: 1-266039336)		filling operation was louder than the traffic noise & visual impact was generated due to the spot-light pointing directly to the complainant flat, suspected the filling operation was part of Wanchai Development Phase II; Complainant also raised the same complaint to District Councillor, Mr. Hui on 7 Dec 2010 regarding the night-time noise and suspected earlier start of work at 06:30. Complaint also requested for limiting the plant operating hours from 09:00-21:00.	Reclamation of Central Wan Chai Bypass site area instead of part of Wanchai Development Phase II; • Two derrick barges were in operation at the time of complaint for placing 400 rockfill onto the excavation trench and for levelling the formation level to receive the 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. 2) PME used in restricted hours were checked and confirmed compliant with valid CNP no. GW-RS0870-10. The noise level recorded on 6 Dec 2010 was complied with the noise criteria during restricted hour; 3) It was found that the occasional noise nuisance might be caused by the hitting or scratching onto the rock surface during loading down the grab onto the Grade 400 rockfill; 4) The absence of the lighting shields at flood light results in visual glare to the complainant at night-time. 5) Contractor was advised to minimize the finishing time of placing Grade 400 rockfill at 2100hrs and switch off all unnecessary flood lights apart from the light for the safety and security purpose; 6) No further complaint was received after implementation of proposed measures	
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.	1) The concerned stockpile was a working stockpile under Contract HY/209/15 and was covered at night time after work. 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. 3) It is considered invalid but preventive actions can be taken because the stockpile is relatively large and easily visible by complainant. 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 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.	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.	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	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.	1) Contractor conducted formation works for installation of caisson seawall at C27, C28, C29 and C30 on 4, 6, 7 and 8 July 2011 and no dredging work was conducted during this time period 2) Water mitigation measures of an 80m long silt curtain at the site boundary in front of City Garden Relocation of silt curtain and silt curtain at the outfall of the channel were provided and maintained to accommodate the site works. All vessels are equipped with rubbish collection facilities and disposed the rubbish regularly. Also, daily cleaning actions had been taken by contractor to minimize floating refuse within the site boundary. 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.	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.	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	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	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.	monitoring station at Victoria Centre on 25 July and 4 August 2011 during daytime while breaking and excavation works were undertaken during monitoring. 4) In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. No further complaint from complainant was received after proposed the mitigation measure.	
110727b	27/07/2011	Ms. Chiu by ICC no.1-304615409	North Point	Noise nuisance from the excavation works for the Highways Department adjacent to the Victoria Centre was conducted from 7am	1) It was referred by AECOM to ET on 28 July 2011 2) With reference to the construction noise monitoring at Vitoria Centre, no exceedance was recorded on 25 July and 4 and 10 August 2011 during daytime while breaking and excavation works were undertaken during monitoring. 3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am.	Closed
	08/08/2011				4) However, complainant did not satisfy with the response on the noise nuisance from the rock-breaking during morning in front of Victoria Centre and then further complaint via 1823 on 7 August 2011. 5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed. *Remarks: There will be counted as two complaints in this complaint log.*	
110810	10/08/2011	Mr. Yip by ICC no. 1 – 306740207	North Point	Muddy water was discharged from work site to the seafront near Oil Street during heavy rain. The environmental protection measures were not good enough and are needed to rectify.	1) It was referred by AECOM to ET on 17 August 2011. 2) Confirmed with RE, Muddy water was caused by a heap of earth being washed to the sea by heavy rain. The heap of earth was referred as a small stockpile placed close to the seafront in front of Oil Street within the site area under handover transition period from contract HY/2009/11 to contract HY/2009/19. The necessary mitigation measures to protect the small stockpile against rainfall were missing at the time of complaint. 3) Due to the missing of mitigation measures to protect the small stockpile during handover transition period, loose material was washed into the harbour when heavy rain came. Muddy water was formed and dispersed in the sea that caused the water quality and visual concern to the public. The complaint was considered as valid. 4) Contractors were advised to relocate the loose materials	Closed

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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.	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.	1) It was referred by AECOM to ET on 29 August 2011. Confirmed with the Resident Site Staff that the • 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 excluse the outfall. • An ad hoc inspection of the effectiveness of garbage defender was conducted with RSS (CWB project	Closed

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					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. • 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 2) According to the complaint letter from Cayley Property, the outcomes of the preventive measures were not complying wih their expectation. 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. 4) All daily cleaning actions had been taken by contractor to minimize floating refuse inside the construction site. 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. 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. 7) Contractors have fulfilled the requirement of site cleanness and no exceedance was recorded during Water Quality Monitoring. It is consider the cause of this complaint is not related to project and environmental issue in this project as well. No more complaint received after ad-hoc inspection	
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)	1) RSS notified ET to carry out investigation on 17 October 2011. 2) ET confirmed with the Resident Site Staff that the location of the excavator was within site area of Contract no. HK/2009/02 undertaking the water cooling main reprovision works along the Harbour Road. The plants including the excavator have been checked before using	Closed

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					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. 3) After receiving the complaint, the excavator was then removal off-site for checking and maintenance works on 17 October 2011. 4) Contractor was reminded to enhance regular checking and maintenance to all plants at site. 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.	
111104	04/11/2011	Mr. Liu from LCSD complained via Contractor Complaint Hotline	Wan Chai	Complain about a tree near the site of pipe installation works outside Wan Chai Swimming Pool at Harbour Road, the status is not healthy and roof ball of two trees inside the site near Renaissance Hong Kong Harbour View Hotel at Convention Avenue were half cut.	1) ET confirmed with the Resident Site Staff that • 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. 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.	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	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	Closed

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					CNP was checked by the police officer. 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. 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. 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. Futhermore, Construction Noise Permit should be checked and in place for the construction works during restricted hour 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.	
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.	1) RSS notified ET on 5 April 2012. 2) ET confirmed with the Resident Site Staff that no piling works were performed during the concerned period. 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. 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	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.	1) RSS notified ET on 8 March 2013 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. 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. 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. The contracotr was advised and committed to implement preventive meaures to miminize the potential impact of work including conducting regular diver check to ensure the integrity and the extend of silt curtain deployment and to provide adequtae back up stock of silt curtain for emergency use.	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.	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. 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	Closed

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					the dispersion was observed partly extended beyond the outermost layer silt curtain at 1000hrs. Immediate follow up action was requested. 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. 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. The Contractor's investigation report on the complaint case was submitted to EPA via email on 18 June 2014.	
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.	1) Construction noise impact referred by RSS was received by ET on 25 July 2014 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. 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 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."	Final report (Issue1) issued on 31 July 2014. Further to complainant follow-up, Final report (Issue2) Issued on 12 Aug 2014.

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					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. 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.	
141016	14/10/2014	EPD Ref.: EP860/E2/24 Annex IV ICC complaint received by ET on 10 October 2014	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.	A public complaint regarding construction noise impact referred by EPD was received by ET on 16 October 2014 (EPD Ref.: EP860/E2/24 Annex IV dated 16 October 2014). The complainant reported that construction noise like piling works was heard on 14 October 2014 night until 23:45 hrs. It was suspected that the noise was emanated from the work site next to new Wan Chai Ferry Pier and opposite to Wan Chai Sports Ground. ET confirmed with the Resident Site Staff that From 19:00hrs to 23:00hrs on 14 October 2014, dredging works was conducted under Contractor of HK/2009/02 at WCR3 Area. Total one grab dredger was in operation. Mitigation measures including provision of steel sheeting screening to the power generation part of the grab dredger was implemented by the Contractor of HK/2009/02. 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.	Interim investigation report submitted to EPD on 23 October 2014. Updated interim investigation with supplementary information submitted to EPD on 17 November 2014 EPD

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					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. 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. 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. 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. 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. 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. In view of the above findings, no direct information associated with the noise concern was considered available.	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/00027815-14 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.	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). 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. ET confirmed with the Resident Site Staff that 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. Dredging works was conducted on 7 November 2014 during daytime at WCR3 (East of old Wan Chai Ferry Pier) Total 1 no .of dredger, 1 no. of hopper and 1 no. of tug boat were operated. 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. 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.	Interim investigation report submitted to EPD on 17 November 2014. EPD advised no comment on the interim report and case closed on 1 Dec 2014.

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Based on the relevant information provided by RSS, despite no information associated with the malodour concern was identified after investigation, the Contractor was reminded to conduct regular checking on the condition of PME used on site to ensure only well maintained PME are used on site The interim report would be submitted to EPD on 17 November 2014.	
141113	12/11/2014	EPD Ref.: H05/RS/00028253-14 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.	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 thatMalodour 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) 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. 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. 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. 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.	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
					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. 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. 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. 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.	
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	moored near shore and other construction plants under operation from the reclamation construction site with Contract no. HK/2009/02 at location outside Wan Chai Sports Ground caused air pollution. The complainant alleged that the said situation had been observed for a prolonged period. ET confirmed with the Resident Site Staff that reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 from 15 June 2015 to 19 June 2015. Total 3 nos. of mobile crane were in operation. On 17 June 2015, one no. of concrete pump truck and two nos. of concrete mixer were in operation.Excavation and Lateral Support was conducted at Portions 3 & 4 from 15 June 2015 to 19 June 2015. Total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. In addition, on 15 June 2015, 17 June 2015 and 19 June 2015, 1 no. of derrick barge was moored near Portions 3 & 4 for transportation of the excavated material away from site. According to the relevant site records under Contract HK/2009/02, from 15 June 2015 to 19 June 2015, reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 and total 3 nos. of mobile crane, one no. of concrete pump truck (on 17 June 2015 only) and two nos. of concrete mixer (on 17 June 2015 only) were in operation; excavation and lateral support was conducted at Portions 3 & 4 and total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. Based on relevant site record, no hopper barge was moored under Contract HK/2009/02 around the concerned location while 1 no. of derrick barge was moored under Contract HK/2009/02 near Portions 3 & 4 for transportation of the excavated material from Portions 3 & 4 away from site on 15 June 2015,17 June 2015 and 19 June 2015 respectively. Follow-up inspection was conducted during weekly	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 PMEs operating on-site. A derrick barge was observed moored near Portions 3 & 4 and excavated material was transferred to the derrick barge by the excavators on land without barge operation and no particular dark smoke and malodour emission was observed. Nevertheless, the Contractor was reminded to conduct regular checking on the condition of the derrick barge and other PMEs deployed on site to ensure only well maintained PMEs are used to avoid potential dark smoke and maldour emission affecting nearby public.	
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	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). 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). 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. 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. 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.	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.

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					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/00022241-15 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 laoding of material	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) 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. 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. 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	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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					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. 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.	
150904	02 Sept 2015	EPD Ref.: H04/RS/00022385-15 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.	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) 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. 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.	Interim report submitted to EPD on 14 September 2015. 2nd interim report submitted to EPD on 17 Dec 2015 3rd interim report submitted to EPD on 31 Dec 2015

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					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. 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. 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. 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. 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. 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.	

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					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. 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. 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. 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.	
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

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		received by ET on 17 September 2015	Central & Wan Chai, Hong Kong)	Chai, Hong Kong)	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. 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.	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.	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. 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. Based on the above, no direct information indicating the pink	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/00027330-15 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.	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 GW-RS1121-15 for the concerned construction works was in place. 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.	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/00029126-15)	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	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. 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	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
					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. 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.	
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	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. 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. Protection measure including provision of sandbag bunding along the side of the landing barge was implemented by the Contractor of HK/2012/08. 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	Interim investigation report was submitted to the EPD on 21 April 2016. EPD advised no further comment on 6 June 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
					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. 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. 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.	
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),			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. 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.	

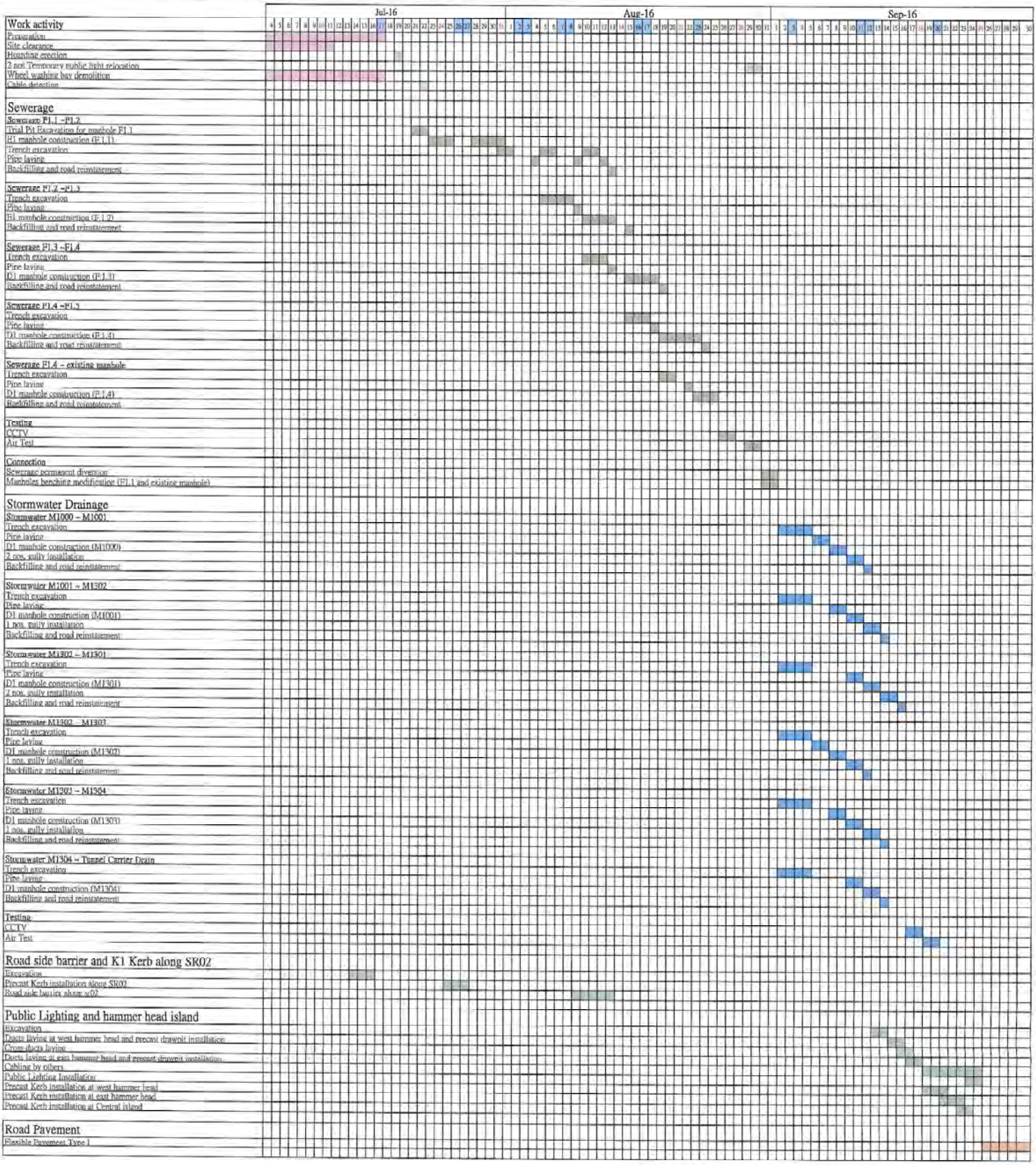
Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
160825	25 May 2016	A public complaint referred by EPD was received by ET on 25 August 2016 (Case Ref.: H08/RS/00012592-16)	East of Temporary Reclamation Zone TS3, Causeway Bay Typhoon Shelter	Muddy water was observed at Causeway Bay Typhoon Shelter	A public complaint referred by EPD was received on 25 August 2016 (Case Ref.: H08/RS/00012592-16). The complainant reported that muddy water was observed at Causeway Bay Typhoon Shelter. ET confirmed with the Resident Site Staff that no marine construction activities were undertaken at the concerned location at East of Temporary Reclamation Zone TS3 within Causeway Bay Typhoon Shelther from 14:00hrs to 17:00hrs on 25 May 2016. Site control measures including the following were implemented by the Contractor of HY/2010/08 around the concerned location. Site control measures including i) Wastewater treatment facilities (AquaSed) were installed at TS3 for treatment of wastewater generated during construction activities. Sampling of effluent from AquaSed was conducted by the Contractor of HY/2010/08 and all results complied with the requirements in the Discharge Licence. Visual inspection and pH measurement of effluent were conducted daily by Environmental Supervisors and all results passed. ii) Brick/ earth/ sandbag bunds were installed alongside the site perimeter of TS3 to prevent muddy runoff into the sea. iii) Piping with idled ends were removed to prevent accidental discharge of untreated wastewater. iv) Diver inspection for silt curtains and/ or impermeable barriers was conducted on an ad-hoc basis. vii) Temporary cut slopes were shotcreted or properly covered with tarpaulin sheets. viii) Regular inspections were conducted by the RSS and Contractor's environmental representatives on regular basis on the conditions of mitigation measures implemented on site. Based on the complainant photo information, the exposed soil slope at Temporary Reclamation Zone TS3 were observed protected by covering and enclosed by double layer of impermeable barrier/ silt curtain and no contaminated discharge was identified. In addition, based on information from Hong Kong Observatory, the tidal condition on 25 May 2016 afternoon was found to	The Interim investigation report was submitted to EPD on 2 September 2016.

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					be ebb-tide while non construction works marine vessel movements around the identified muddy plume within Causeway Bay Typhoon Shelter was observed in the complainant photo information. Based on review on relevant records, no contaminated surface runoff and no contaminated discharge was identified at the concerned location during the environmental site inspection conducted on 25 May 2016. Follow up inspection was conducted on 31 August 2016 and seawall construction and filing works at the Temporary Reclamation Zone TS3 was observed completed. No contaminated discharge and no contaminated surface runoff was found. Nevertheless, the contractor of HY/2010/08 was reminded to maintain appropriate bunding at seawall boundary for protection against potential surface runoff related impact. Also, the Contractor of HY/2010/08 was reminded to maintain proper site drainage for effluent collection and treatment system to ensure the compliance with relevant discharge license.	

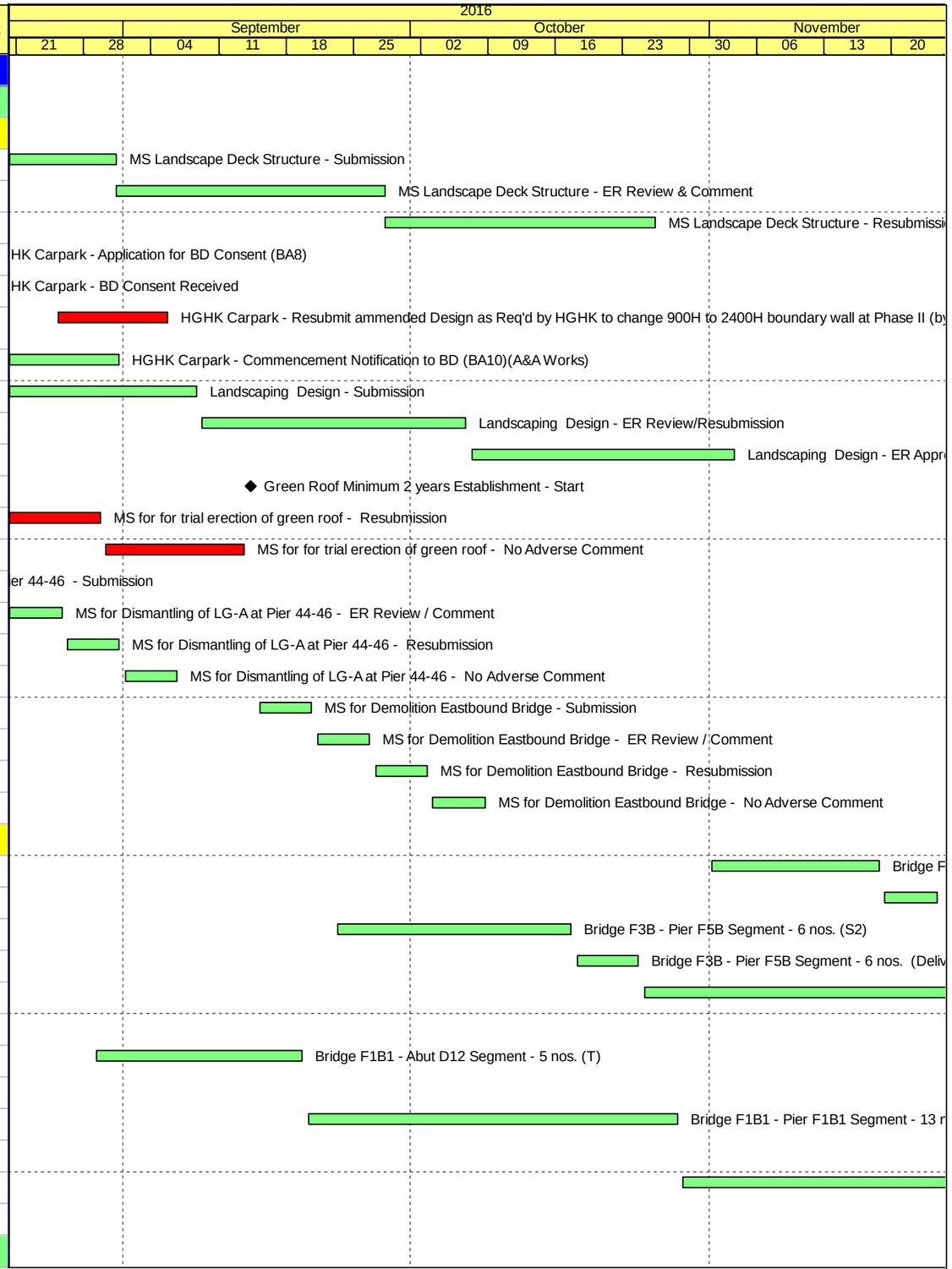
Appendix 10.1

Construction Programme of Individual Contracts

HK/2009/01 Roadworks, Drainage and Sewerage Works at Junction of Expo Drive and Expo Drive Central



Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
3MRP - Aug 2016 to Nov 2016		139	20-Jun-15 A	03-Feb-17	500
02 - PRE-CONSTRUCTION WORKS		139	20-Jun-15 A	03-Feb-17	220
02.3 - Method Statement / Shop Drawings		76	20-Jun-15 A	03-Nov-16	358
0230-1380	MS Landscape Deck Structure - Submission	11	20-Jun-15 A	31-Aug-16	261
0230-1390	MS Landscape Deck Structure - ER Review & Comment	28	31-Aug-16	28-Sep-16	261
0230-1400	MS Landscape Deck Structure - Resubmission	28	28-Sep-16	26-Oct-16	261
0240-1230	HGHK Carpark - Application for BD Consent (BA8)	0	21-Jun-16 A	16-Aug-16 A	
0240-1240	HGHK Carpark - BD Consent Received	0		16-Aug-16 A	
0240-1241	HGHK Carpark - Resubmit ammended Design as Req'd by HGHK to change 900H to 2400H boundary wall at Phase II (by AECOM)	12	25-Aug-16*	05-Sep-16	0
0240-1250	HGHK Carpark - Commencement Notification to BD (BA10)(A&A Works)	12	17-Aug-16 A	31-Aug-16	36
0240-1270	Landscaping Design - Submission	20	20-Apr-16 A	08-Sep-16	358
0240-1280	Landscaping Design - ER Review/Resubmission	28	09-Sep-16	06-Oct-16	358
0240-1290	Landscaping Design - ER Approval	28	07-Oct-16	03-Nov-16	358
0240-1298	Green Roof Minimum 2 years Establishment - Start	0	14-Sep-16		-6
0240-2460	MS for for trial erection of green roof - Resubmission	10	04-Apr-16 A	29-Aug-16	-6
0240-2470	MS for for trial erection of green roof - No Adverse Comment	15	30-Aug-16	13-Sep-16	-6
A2050	MS for Dismantling of LG-A at Pier 44-46 - Submission	0	25-Jul-16 A	29-Jul-16 A	
A2060	MS for Dismantling of LG-A at Pier 44-46 - ER Review / Comment	6	20-Aug-16	25-Aug-16	6
A2070	MS for Dismantling of LG-A at Pier 44-46 - Resubmission	6	26-Aug-16	31-Aug-16	6
A2080	MS for Dismantling of LG-A at Pier 44-46 - No Adverse Comment	6	01-Sep-16	06-Sep-16	6
A2090	MS for Demolition Eastbound Bridge - Submission	6	15-Sep-16*	20-Sep-16	9
A2100	MS for Demolition Eastbound Bridge - ER Review / Comment	6	21-Sep-16	26-Sep-16	9
A2110	MS for Demolition Eastbound Bridge - Resubmission	6	27-Sep-16	02-Oct-16	9
A2120	MS for Demolition Eastbound Bridge - No Adverse Comment	6	03-Oct-16	08-Oct-16	9
02.5 - Bridge Segment/Beam Off-site Precasting		132	29-Aug-16	03-Feb-17	151
0250-3940	Bridge F2B - Pier F3B2 Segment - 5 nos. (S2)	16	01-Nov-16	18-Nov-16	21
0250-3940.1	Bridge F2B - Pier F3B2 Segment - 5 nos. (Delivery to Site)	5	19-Nov-16	24-Nov-16	104
0250-4000	Bridge F3B - Pier F5B Segment - 6 nos. (S2)	19	23-Sep-16	17-Oct-16	3
0250-4000.1	Bridge F3B - Pier F5B Segment - 6 nos. (Delivery to Site)	6	18-Oct-16	24-Oct-16	97
0250-4020	Bridge F3B - Pier F6B Segment - 13 nos. (S2)	32	25-Oct-16	30-Nov-16	3
0250-4020.1	Bridge F3B - Pier F6B Segment - 13 nos. (Delivery to Site)	10	01-Dec-16	12-Dec-16	45
0250-4070	Bridge F1B1 - Abut D12 Segment - 5 nos. (T)	18	29-Aug-16*	19-Sep-16	3
0250-4070.1	Bridge F1B1 - Abut D12 Segment - 5 nos. (Delivery to Site)	5	27-Jan-17	03-Feb-17	151
0250-4080	Bridge F1B1 - Pier F1B1 Segment - 13 nos. (T)	32	20-Sep-16	28-Oct-16	3
0250-4080.1	Bridge F1B1 - Pier F1B1 Segment - 13 nos. (Delivery to Site)	10	16-Jan-17	26-Jan-17	142
0250-4090	Bridge F1B1 - Pier F2B1 Segment - 11 nos. (T)	28	29-Oct-16	30-Nov-16	142
0250-4090.1	Bridge F1B1 - Pier F2B1 Segment - 11 nos. (Delivery to Site)	10	04-Jan-17	14-Jan-17	142
05 - SECTION 2 & 2A OF THE WORKS		90	12-May-16 A	06-Dec-16	-210



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

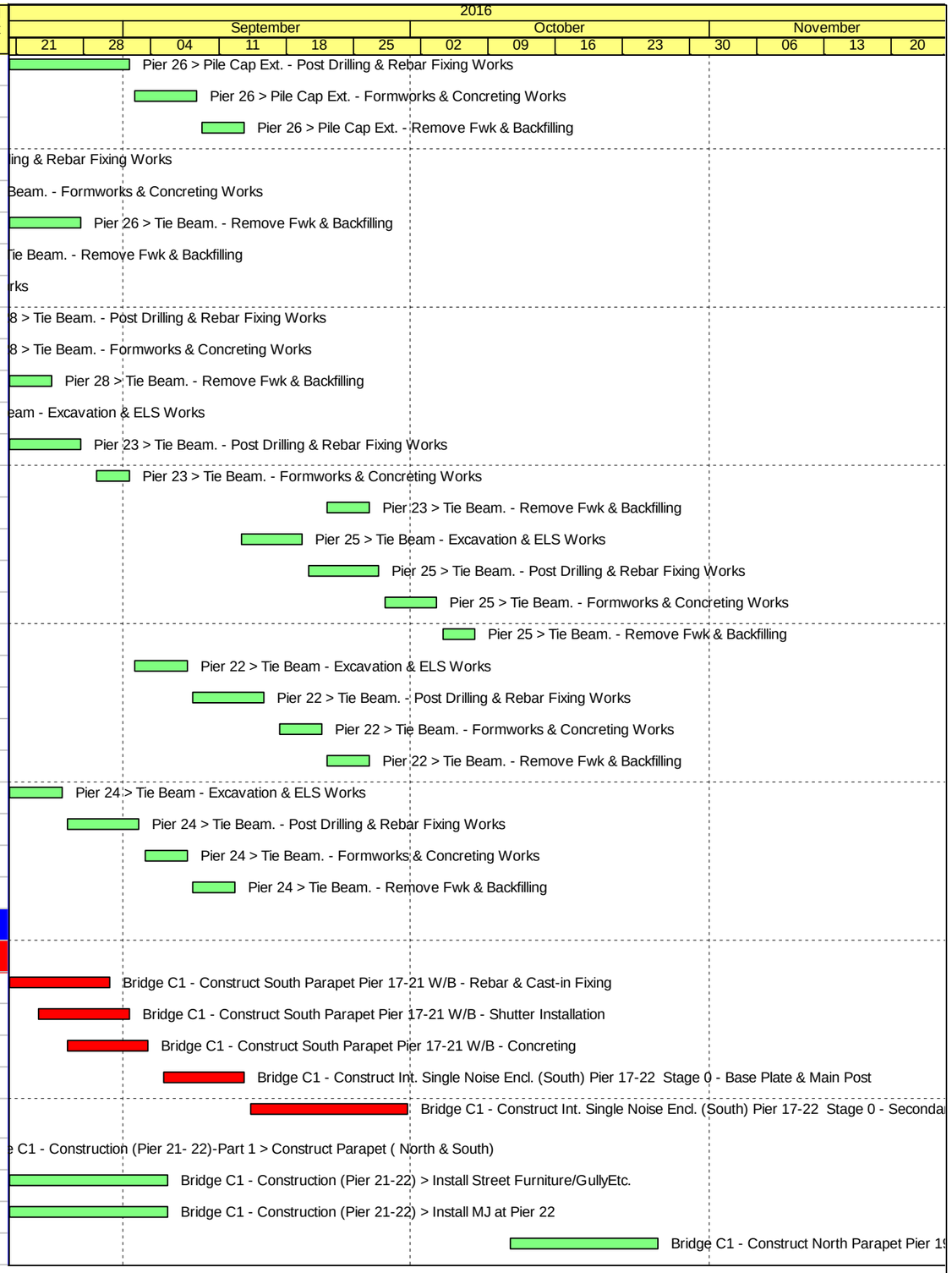
Contract HY/2009/19
Three Months Rolling Programme (20 Aug to 19 Nov 2016)

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
05.1 - Cut & Cover Tunnel Ch 4855-4932 (APS Footprint)		90	12-May-16 A	06-Dec-16	-210
05.1.6 - EVB Sub-structure & Tunnel		90	12-May-16 A	06-Dec-16	-210
05.1.6 - EVB Outstanding Works		90	12-May-16 A	06-Dec-16	-211
0515-3099	Complete EVB Outstanding Works	0		06-Dec-16*	-211
0710-0900	Water proofing system (external) - Stage 1	5	12-May-16 A	25-Aug-16	-211
0710-1000	Backfill (N46-64/S48-67) for East Vent Bldg - Stage 1	35	27-Jun-16 A	30-Sep-16	-211
A1960	Reinstate the temporary opening	35	20-Aug-16	30-Sep-16	-156
A1961	Water proofing system (external) - Stage 2	7	03-Oct-16	11-Oct-16	-211
A1962	Backfill (N46-64/S48-67) for East Vent Bldg - Stage 2	43	12-Oct-16	30-Nov-16	-211
A1963	Concrete paving / Finishing surface	5	01-Dec-16	06-Dec-16	-211
A1980	Remove of temporary sheet pile cover	30	26-Aug-16	30-Sep-16	-156
A1990	Water proofing system (internal)	35	05-Aug-16 A	30-Sep-16	-156
05.1.7 - EVB & Tunnel Remedial Works		35	05-Aug-16 A	30-Sep-16	-155
A2030	Tunnel - Pump Sump E > Rectification of Reserve Pipe & Gen Cleaning Works	10	20-Aug-16	31-Aug-16	-131
A2040	Tunnel - OHVD (Eastern Side) > Rectification of Water Seepage	23	20-Aug-16	15-Sep-16	-156
A2250	Tunnel - OHVD (Western Side) > Rectification of Structural Concrete Defect	15	31-Aug-16	17-Sep-16	-144
A2260	Tunnel - OHVD (Western Side) > Rectification of Water Seepage	12	17-Sep-16	30-Sep-16	-156
A2270	Tunnel - APS > Rectification of Structural Concrete Defect & Gen Cleaning Works	14	31-Aug-16	15-Sep-16	-144
A2280	EVB - Rectification of Structural Defects at Stairs 03	10	05-Aug-16 A	31-Aug-16	-156
A2290	EVB - Rectification of Structural Defects at Stairs 01	9	01-Sep-16	10-Sep-16	-156
A2300	EVB - Rectification of Structural Defects at Stairs 02	16	12-Sep-16	30-Sep-16	-156
A2310	EVB - (Western Side) > Rectification of Structural Concrete Defect & Gen Cleaning Works	10	20-Aug-16	31-Aug-16	-156
A2320	EVB - (Eastern Side) > Rectification of Structural Concrete Defect & Gen Cleaning Works	25	01-Sep-16	30-Sep-16	-156
A2330	EVB - Rectification of Defects to Water Tanks	10	20-Aug-16	31-Aug-16	-131
09 - SECTION 6 OF THE WORKS		50	07-Sep-16	08-Nov-16	42
09.1 - Carparks for Harbour Grand Hong Kong		50	07-Sep-16	08-Nov-16	42
0910-1003	HGHK Carpark Work Commenced	0		07-Sep-16	28
0910-1007	Demo > Gen Clearance, Plant/Tile/Slab Removal (Part 1)	7	08-Sep-16	15-Sep-16	28
0910-1007.1	Drainage Construction	10	17-Sep-16	28-Sep-16	42
0910-1007.2	E&M Manhole Const. and Waterpipe Installations	5	29-Sep-16	05-Oct-16	42
0910-1007.3	3000H Feature Wall (RC)	10	06-Oct-16	18-Oct-16	42
0910-1007.4	900H Boundary Wall (RC)	8	06-Oct-16	15-Oct-16	42
0910-1007.5	Planter Box (RC)	10	06-Oct-16	18-Oct-16	42
0910-1010	Carprk Base Slab Works (Partial - Portion IVB)	18	19-Oct-16	08-Nov-16	42
0910-1050	Demo > Gen Clearance, Plant/Tile/Slab Removal (Part II)	9	03-Oct-16	13-Oct-16	28
10 - SECTION X OF THE WORKS		78	20-Jun-16 A	22-Nov-16	561
10.2 - W/B Bridges (Bridge C and F)		71	20-Jun-16 A	14-Nov-16	311
10.2.1 - Tie Beam & Pile Caps Extension		40	08-Jul-16 A	07-Oct-16	292
1021-2300	Pier 26 > Pile Cap Ext. - Excavation & ELS Works	0	08-Aug-16 A	17-Aug-16 A	

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 Aug to 19 Nov 2016)

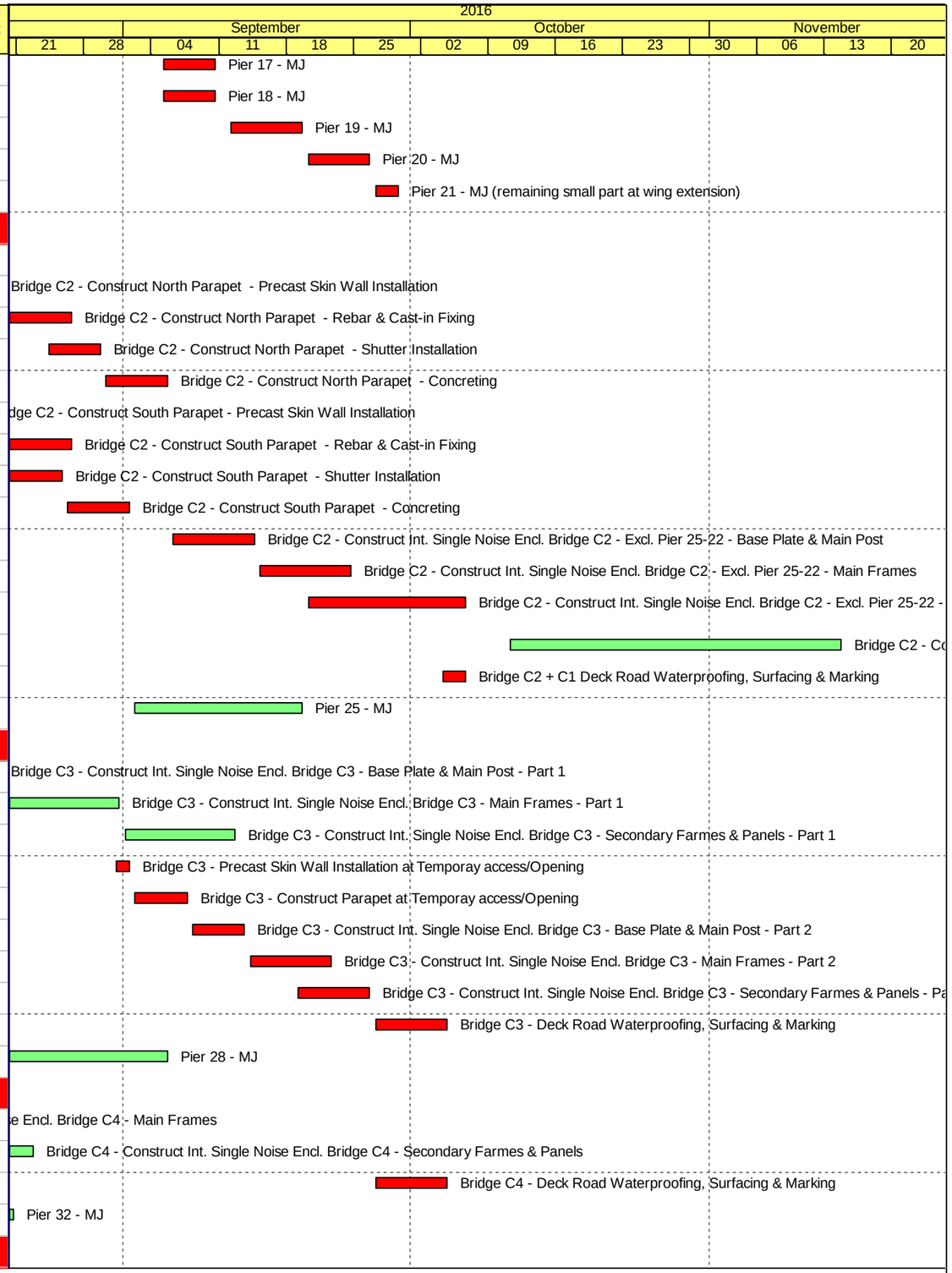
Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
1021-2320	Pier 26 > Pile Cap Ext. - Post Drilling & Rebar Fixing Works	11	18-Aug-16 A	01-Sep-16	14
1021-2330	Pier 26 > Pile Cap Ext. - Formworks & Concreting Works	6	02-Sep-16	08-Sep-16	14
1021-2340	Pier 26 > Pile Cap Ext. - Remove Fwk & Backfilling	4	09-Sep-16	13-Sep-16	14
1021-2360	Pier 26 > Tie Beam. - Post Drilling & Rebar Fixing Works	0	16-Jul-16 A	30-Jul-16 A	
1021-2370	Pier 26 > Tie Beam. - Formworks & Concreting Works	0	28-Jul-16 A	10-Aug-16 A	
1021-2380	Pier 26 > Tie Beam. - Remove Fwk & Backfilling	7	11-Aug-16 A	27-Aug-16	14
1021-2420	Pier 27 > Tie Beam. - Remove Fwk & Backfilling	0	21-Jul-16 A	12-Aug-16 A	
1021-2430	Pier 28 > Tie Beam - Excavation & ELS Works	0	08-Jul-16 A	21-Jul-16 A	
1021-2440	Pier 28 > Tie Beam. - Post Drilling & Rebar Fixing Works	0	22-Jul-16 A	15-Aug-16 A	
1021-2450	Pier 28 > Tie Beam. - Formworks & Concreting Works	0	12-Aug-16 A	15-Aug-16 A	
1021-2460	Pier 28 > Tie Beam. - Remove Fwk & Backfilling	4	20-Aug-16	24-Aug-16	141
A1920	Pier 28 > Tie Beam - Excavation & ELS Works	0	05-Aug-16 A	09-Aug-16 A	
A1930	Pier 23 > Tie Beam. - Post Drilling & Rebar Fixing Works	7	10-Aug-16 A	27-Aug-16	301
A1940	Pier 23 > Tie Beam. - Formworks & Concreting Works	4	29-Aug-16	01-Sep-16	301
A1950	Pier 23 > Tie Beam. - Remove Fwk & Backfilling	4	22-Sep-16	26-Sep-16	301
A2130	Pier 25 > Tie Beam - Excavation & ELS Works	5	13-Sep-16	19-Sep-16	18
A2140	Pier 25 > Tie Beam. - Post Drilling & Rebar Fixing Works	7	20-Sep-16	27-Sep-16	18
A2150	Pier 25 > Tie Beam. - Formworks & Concreting Works	4	28-Sep-16	03-Oct-16	18
A2160	Pier 25 > Tie Beam. - Remove Fwk & Backfilling	4	04-Oct-16	07-Oct-16	18
A2170	Pier 22 > Tie Beam - Excavation & ELS Works	5	02-Sep-16	07-Sep-16	301
A2180	Pier 22 > Tie Beam. - Post Drilling & Rebar Fixing Works	7	08-Sep-16	15-Sep-16	301
A2190	Pier 22 > Tie Beam. - Formworks & Concreting Works	4	17-Sep-16	21-Sep-16	301
A2200	Pier 22 > Tie Beam. - Remove Fwk & Backfilling	4	22-Sep-16	26-Sep-16	301
A2210	Pier 24 > Tie Beam - Excavation & ELS Works	5	17-Aug-16 A	25-Aug-16	18
A2220	Pier 24 > Tie Beam. - Post Drilling & Rebar Fixing Works	7	26-Aug-16	02-Sep-16	18
A2230	Pier 24 > Tie Beam. - Formworks & Concreting Works	4	03-Sep-16	07-Sep-16	18
A2240	Pier 24 > Tie Beam. - Remove Fwk & Backfilling	4	08-Sep-16	12-Sep-16	18
10.2.3 - Bridge Construction		71	20-Jun-16 A	14-Nov-16	311
Bridge C1		55	20-Jun-16 A	26-Oct-16	32
1022-1003.3	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Rebar & Cast-in Fixing	9	27-Jul-16 A	30-Aug-16	-4
1022-1003.4	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Shutter Installation	9	23-Aug-16	01-Sep-16	-4
1022-1003.5	Bridge C1 - Construct South Parapet Pier 17-21 W/B - Concreting	8	26-Aug-16	03-Sep-16	-4
1022-1004	Bridge C1 - Construct Int. Single Noise Encl. (South) Pier 17-22 Stage 0 - Base Plate & Main Post	8	05-Sep-16	13-Sep-16	-4
1022-1004.2	Bridge C1 - Construct Int. Single Noise Encl. (South) Pier 17-22 Stage 0 - Secondary Farmes & Panels (Vertical)	14	14-Sep-16	30-Sep-16	-4
1022-2754	Bridge C1 - Construction (Pier 21- 22)-Part 1 > Construct Parapet (North & South)	0	20-Jun-16 A	15-Aug-16 A	
1022-2755	Bridge C1 - Construction (Pier 21-22) > Install Street Furniture/GullyEtc.	14	21-Jun-16 A	05-Sep-16	17
1022-2756	Bridge C1 - Construction (Pier 21-22) > Install MJ at Pier 22	14	20-Aug-16	05-Sep-16	17
1022-3100	Bridge C1 - Construct North Parapet Pier 19-20 W/B	14	11-Oct-16	26-Oct-16	32



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 Aug to 19 Nov 2016)

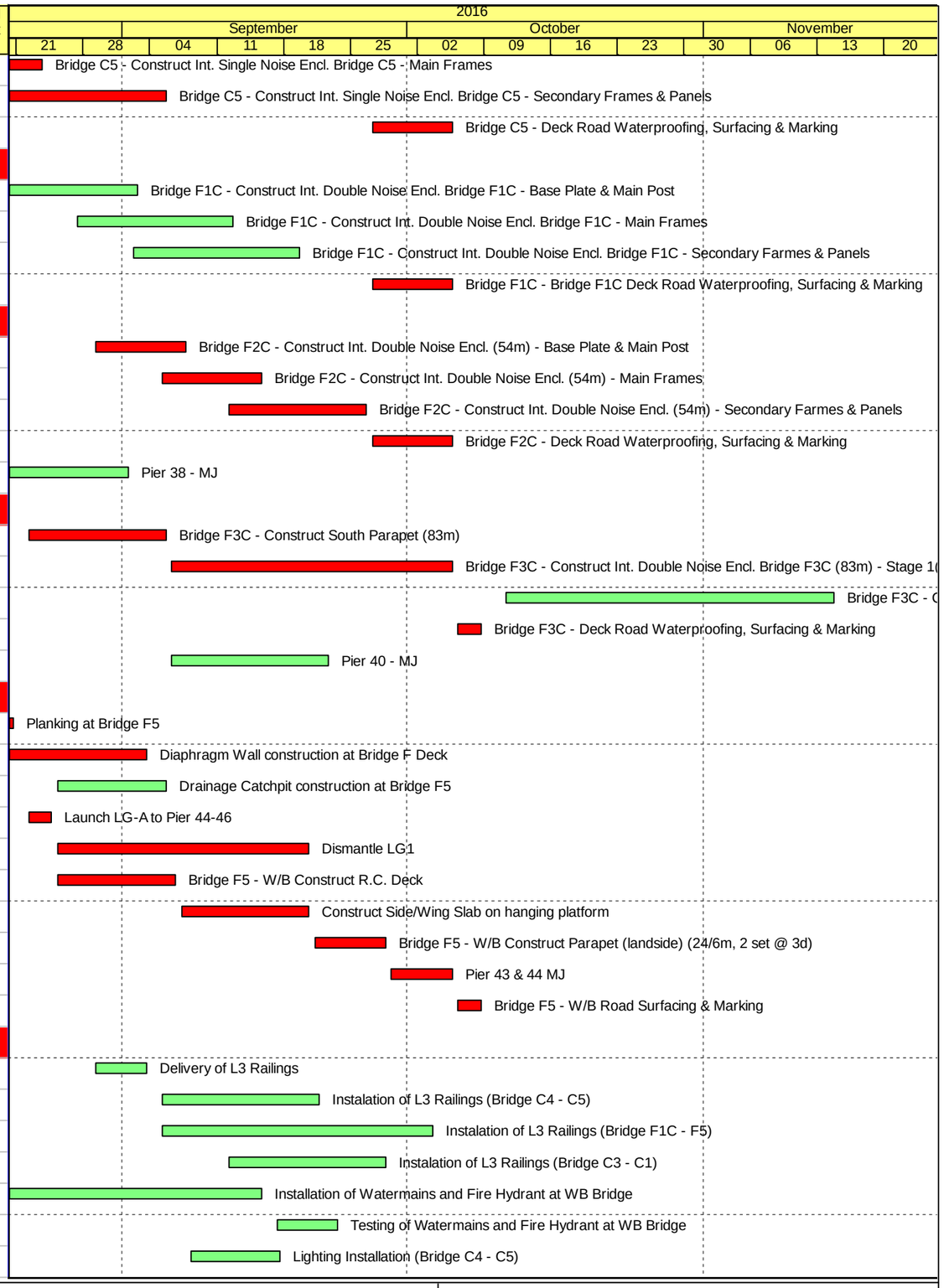
Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
A2400	Pier 17 - MJ	6	05-Sep-16	10-Sep-16	-3
A2410	Pier 18 - MJ	6	05-Sep-16	10-Sep-16	-3
A2420	Pier 19 - MJ	6	12-Sep-16	19-Sep-16	-3
A2430	Pier 20 - MJ	6	20-Sep-16	26-Sep-16	-3
A2440	Pier 21 - MJ (remaining small part at wing extension)	3	27-Sep-16	29-Sep-16	-3
Bridge C2		71	28-Jun-16 A	14-Nov-16	311
1022-2830	Dismantle LG2	0	28-Jun-16 A	29-Jul-16 A	
1022-3040	Bridge C2 - Construct North Parapet - Precast Skin Wall Installation	0	09-Aug-16 A	19-Aug-16 A	
1022-3040.2	Bridge C2 - Construct North Parapet - Rebar & Cast-in Fixing	6	20-Aug-16	26-Aug-16	-5
1022-3040.4	Bridge C2 - Construct North Parapet - Shutter Installation	5	24-Aug-16	29-Aug-16	-5
1022-3040.6	Bridge C2 - Construct North Parapet - Concreting	6	30-Aug-16	05-Sep-16	-5
1022-3180	Bridge C2 - Construct South Parapet - Precast Skin Wall Installation	0	12-Aug-16 A	17-Aug-16 A	
1022-3180.2	Bridge C2 - Construct South Parapet - Rebar & Cast-in Fixing	6	18-Aug-16 A	26-Aug-16	-4
1022-3180.4	Bridge C2 - Construct South Parapet - Shutter Installation	5	20-Aug-16	25-Aug-16	-4
1022-3180.6	Bridge C2 - Construct South Parapet - Concreting	6	26-Aug-16	01-Sep-16	-4
1022-4120	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 25-22 - Base Plate & Main Post	8	06-Sep-16	14-Sep-16	-5
1022-4120.1	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 25-22 - Main Frames	8	15-Sep-16	24-Sep-16	-5
1022-4120.2	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 25-22 - Secondary Farmes & Panels(50%)	14	20-Sep-16	06-Oct-16	-5
1022-4120.3	Bridge C2 - Construct Int. Single Noise Encl. Bridge C2 - Excl. Pier 25-22 - Complete Panel Installation	30	11-Oct-16	14-Nov-16	311
1022-4140	Bridge C2 + C1 Deck Road Waterproofing, Surfacing & Marking	3	04-Oct-16	06-Oct-16	-5
A2390	Pier 25 - MJ	14	02-Sep-16	19-Sep-16	6
Bridge C3		37	25-Jul-16 A	04-Oct-16	-4
1022-4110	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Base Plate & Main Post - Part 1	0	25-Jul-16 A	19-Aug-16 A	
1022-4110.1	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Main Frames - Part 1	10	20-Aug-16	31-Aug-16	7
1022-4110.2	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Secondary Farmes & Panels - Part 1	10	01-Sep-16	12-Sep-16	7
1022-4110.3	Bridge C3 - Precast Skin Wall Installation at Temporay access/Opening	2	31-Aug-16	01-Sep-16	-4
1022-4110.4	Bridge C3 - Construct Parapet at Temporay access/Opening	5	02-Sep-16	07-Sep-16	-4
1022-4110.5	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Base Plate & Main Post - Part 2	5	08-Sep-16	13-Sep-16	-4
1022-4110.6	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Main Frames - Part 2	7	14-Sep-16	22-Sep-16	-4
1022-4110.7	Bridge C3 - Construct Int. Single Noise Encl. Bridge C3 - Secondary Farmes & Panels - Part 2	7	19-Sep-16	26-Sep-16	-4
1022-4111	Bridge C3 - Deck Road Waterproofing, Surfacing & Marking	6	27-Sep-16	04-Oct-16	-4
A2380	Pier 28 - MJ	14	20-Aug-16	05-Sep-16	13
Bridge C4		37	01-Jul-16 A	04-Oct-16	-4
1022-1558.1	Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Main Frames	0	01-Jul-16 A	25-Jul-16 A	
1022-1558.2	Bridge C4 - Construct Int. Single Noise Encl. Bridge C4 - Secondary Farmes & Panels	2	05-Jul-16 A	22-Aug-16	2
1022-1564	Bridge C4 - Deck Road Waterproofing, Surfacing & Marking	6	27-Sep-16	04-Oct-16	-4
A2370	Pier 32 - MJ	1	29-Jul-16 A	20-Aug-16	26
Bridge C5		38	30-Jun-16 A	05-Oct-16	-4



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 Aug to 19 Nov 2016)

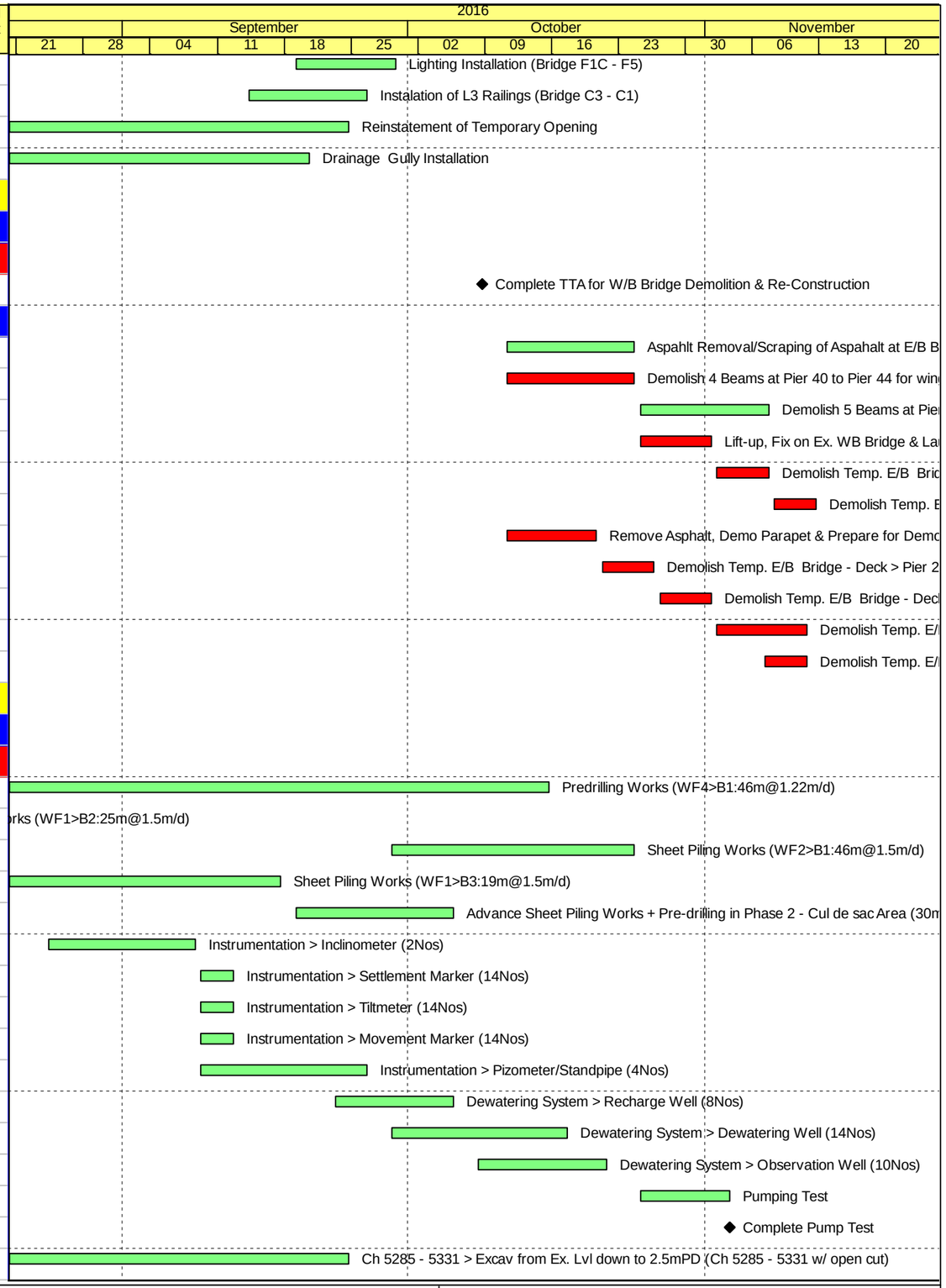
Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
1022-3953.1	Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Main Frames	3	30-Jun-16 A	23-Aug-16	-14
1022-3953.2	Bridge C5 - Construct Int. Single Noise Encl. Bridge C5 - Secondary Frames & Panels	14	05-Aug-16 A	05-Sep-16	-14
1022-3954	Bridge C5 - Deck Road Waterproofing, Surfacing & Marking	7	27-Sep-16	05-Oct-16	-4
Bridge F1C		38	12-Aug-16 A	05-Oct-16	-4
1022.1-4247	Bridge F1C - Construct Int. Double Noise Encl. Bridge F1C - Base Plate & Main Post	12	12-Aug-16 A	02-Sep-16	2
1022.1-4248	Bridge F1C - Construct Int. Double Noise Encl. Bridge F1C - Main Frames	14	27-Aug-16	12-Sep-16	2
1022.1-4249	Bridge F1C - Construct Int. Double Noise Encl. Bridge F1C - Secondary Farmes & Panels	14	02-Sep-16	19-Sep-16	2
1022.1-4251	Bridge F1C - Bridge F1C Deck Road Waterproofing, Surfacing & Marking	7	27-Sep-16	05-Oct-16	-4
Bridge F2C		38	16-Aug-16 A	05-Oct-16	-4
1022.1-4363.1	Bridge F2C - Construct Int. Double Noise Encl. (54m) - Base Plate & Main Post	9	29-Aug-16	07-Sep-16	-4
1022.1-4363.2	Bridge F2C - Construct Int. Double Noise Encl. (54m) - Main Frames	10	05-Sep-16	15-Sep-16	-4
1022.1-4363.3	Bridge F2C - Construct Int. Double Noise Encl. (54m) - Secondary Farmes & Panels	12	12-Sep-16	26-Sep-16	-4
1022.1-4369	Bridge F2C - Deck Road Waterproofing, Surfacing & Marking	7	27-Sep-16	05-Oct-16	-4
A2360	Pier 38 - MJ	11	16-Aug-16 A	01-Sep-16	16
Bridge F3C		70	22-Aug-16	14-Nov-16	311
1022.1-4525	Bridge F3C - Construct South Parapet (83m)	13	22-Aug-16	05-Sep-16	-6
1022.1-4530	Bridge F3C - Construct Int. Double Noise Encl. Bridge F3C (83m) - Stage 1(Install 50% Panel)	24	06-Sep-16	05-Oct-16	-6
1022.1-4531	Bridge F3C - Construct Int. Double Noise Encl. Bridge F3C (83m) - Stage 2(Complete Panel)	30	11-Oct-16	14-Nov-16	311
1022.1-4535	Bridge F3C - Deck Road Waterproofing, Surfacing & Marking	3	06-Oct-16	08-Oct-16	-6
A2350	Pier 40 - MJ	14	06-Sep-16	22-Sep-16	4
Bridge F5		41	18-Aug-16 A	08-Oct-16	-6
1022.1-5006	Planking at Bridge F5	1	18-Aug-16 A	20-Aug-16	-6
1022.1-5007	Diaphragm Wall construction at Bridge F Deck	13	19-Aug-16 A	03-Sep-16	-4
1022.1-5008	Drainage Catchpit construction at Bridge F5	10	25-Aug-16	05-Sep-16	6
1022.1-5009	Launch LG-A to Pier 44-46	3	22-Aug-16	24-Aug-16	-6
1022.1-5010	Dismantle LG1	22	25-Aug-16	20-Sep-16	-6
1022.1-5015	Bridge F5 - W/B Construct R.C. Deck	11	25-Aug-16	06-Sep-16	-6
1022.1-5016	Construct Side/Wing Slab on hanging platform	11	07-Sep-16	20-Sep-16	-6
1022.1-5020	Bridge F5 - W/B Construct Parapet (landside) (24/6m, 2 set @ 3d)	7	21-Sep-16	28-Sep-16	-6
1022.1-5021	Pier 43 & 44 MJ	5	29-Sep-16	05-Oct-16	-6
1022.1-5025	Bridge F5 - W/B Road Surfacing & Marking	3	06-Oct-16	08-Oct-16	-6
All W/B Bridges (Common)		36	01-Jul-16 A	03-Oct-16	2
A2445	Delivery of L3 Railings	6	29-Aug-16*	03-Sep-16	1
A2450	Instalation of L3 Railings (Bridge C4 - C5)	14	05-Sep-16	21-Sep-16	1
A2460	Instalation of L3 Railings (Bridge F1C - F5)	23	05-Sep-16	03-Oct-16	2
A2470	Instalation of L3 Railings (Bridge C3 - C1)	14	12-Sep-16	28-Sep-16	2
A2490	Installation of Watermains and Fire Hydrant at WB Bridge	23	01-Jul-16 A	15-Sep-16	6
A2500	Testing of Watermains and Fire Hydrant at WB Bridge	6	17-Sep-16	23-Sep-16	6
A2510	Lighting Installation (Bridge C4 - C5)	8	08-Sep-16	17-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 Aug to 19 Nov 2016)

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
A2520	Lighting Installation (Bridge F1C - F5)	10	19-Sep-16	29-Sep-16	1
A2530	Instalation of L3 Railings (Bridge C3 - C1)	10	14-Sep-16	26-Sep-16	4
A2540	Reinstatement of Temporary Opening	30	01-Jul-16 A	24-Sep-16	2
A2550	Drainage Gully Installation	26	01-Jul-16 A	20-Sep-16	1
10.4 - Bridge Deck Demolition		29	08-Oct-16	12-Nov-16	7
10.4.1 - Existing W/B Bridge		0	08-Oct-16	08-Oct-16	-6
10.4.1.2 - Demolition Works		0	08-Oct-16	08-Oct-16	-6
10410-2580	Complete TTA for W/B Bridge Demolition & Re-Construction	0		08-Oct-16	-6
10.4.3 - Existing E/B Bridge		29	11-Oct-16	12-Nov-16	7
10412-1280	Aspahlt Removal/Scraping of Aspahalt at E/B Bridge > P44-P35	12	11-Oct-16	24-Oct-16	1
10412-1285	Demolish 4 Beams at Pier 40 to Pier 44 for wing Extension (4 span @ 1 beam) By Crane	12	11-Oct-16	24-Oct-16	-6
10412-1290	Demolish 5 Beams at Pier Abut D12 to Pier 40 for wing Extension (5 span @ 1 beam) By Crane	12	25-Oct-16	07-Nov-16	12
10412-1300	Lift-up, Fix on Ex. WB Bridge & Launch LG2 to Pier 43-45	7	25-Oct-16	01-Nov-16	-6
10412-1320	Demolish Temp. E/B Bridge - Deck > Pier 43 to 44 (6 beams)	5	02-Nov-16	07-Nov-16	-6
10412-1340	Demolish Temp. E/B Bridge - Deck > Pier 42 to 43 (6 beams)	5	08-Nov-16	12-Nov-16	-6
10412-2060	Remove Asphalt, Demo Parapet & Prepare for Demolition	9	11-Oct-16	20-Oct-16	-6
10412-2070	Demolish Temp. E/B Bridge - Deck > Pier 27 to 28 (6 beams)	5	21-Oct-16	26-Oct-16	-6
10412-2080	Demolish Temp. E/B Bridge - Deck > Pier 26 to 27 (6 beams)	5	27-Oct-16	01-Nov-16	-6
10412-2100	Demolish Temp. E/B Bridge - Crosshead & Pier > 27	9	02-Nov-16	11-Nov-16	-6
10412-2120	Demolish Temp. E/B Bridge - Deck > Pier 25 to 26 (6 beams)	5	07-Nov-16	11-Nov-16	-6
10.6 - Tunnel Approach Ramp		78	08-Jul-16 A	22-Nov-16	57
10.6.1 - Approach Ramp (Excluding Portion IIB)		78	08-Jul-16 A	22-Nov-16	57
Excavation & ELS Works		78	08-Jul-16 A	22-Nov-16	57
1061-4900.8	Predrilling Works (WF4>B1:46m@1.22m/d)	46	08-Jul-16 A	15-Oct-16	2
1061-4900.9	Sheet Piling Works (WF1>B2:25m@1.5m/d)	0	19-Jul-16 A	08-Aug-16 A	
1061-4901.1	Sheet Piling Works (WF2>B1:46m@1.5m/d)	20	29-Sep-16	24-Oct-16	2
1061-4901.2	Sheet Piling Works (WF1>B3:19m@1.5m/d)	24	12-Jul-16 A	17-Sep-16	31
1061-4910	Advance Sheet Piling Works + Pre-drilling in Phase 2 - Cul de sac Area (30m)	14	19-Sep-16	05-Oct-16	97
1061-4940	Instrumentation > Inclinometer (2Nos)	14	24-Aug-16	08-Sep-16	4
1061-4960	Instrumentation > Settlement Marker (14Nos)	3	09-Sep-16	12-Sep-16	27
1061-4980	Instrumentation > Tiltmeter (14Nos)	3	09-Sep-16	12-Sep-16	27
1061-5000	Instrumentation > Movement Marker (14Nos)	3	09-Sep-16	12-Sep-16	27
1061-5020	Instrumentation > Pizometer/Standpipe (4Nos)	14	09-Sep-16	26-Sep-16	27
1061-5040	Dewatering System > Recharge Well (8Nos)	10	23-Sep-16	05-Oct-16	4
1061-5060	Dewatering System > Dewatering Well (14Nos)	14	29-Sep-16	17-Oct-16	4
1061-5080	Dewatering System > Observation Well (10Nos)	11	08-Oct-16	21-Oct-16	4
1061-5100	Pumping Test	9	25-Oct-16	03-Nov-16	2
1061-5120	Complete Pump Test	0		03-Nov-16	2
1061-5140	Ch 5285 - 5331 > Excav from Ex. Lvl down to 2.5mPD (Ch 5285 - 5331 w/ open cut)	30	15-Aug-16 A	24-Sep-16	10



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 Aug to 19 Nov 2016)

Activity ID	Activity Name	Rem Dur	Start	Finish	Total Float
1061-5160	Ch 5234 - 5285 > Excav from Ex. Lvl down to 2.5mPD	15	26-Sep-16	14-Oct-16	10
1061-5180	Ch 5234 - 5285 > Install 1st Layer of Strut & Waling	9	15-Oct-16	25-Oct-16	10
1061-5200	Ch 5234 - 5285 > Excav from 2.5mPD to 1m Below 2nd Layer of Struts	16	04-Nov-16	22-Nov-16	2
10.7 - Section X - Miscellaneous Works		72	19-Jul-16 A	15-Nov-16	567
10.7.1 - TTM Stages		41	19-Jul-16 A	08-Oct-16	-6
1071-1300	TTM Stage 6 - TMLG Consultation and Endorsement	48	19-Jul-16 A	06-Oct-16	-6
1071-1320	TTM Stage 6 - TTM Enabling Works	1	08-Oct-16	08-Oct-16	-6
1071-1340	TTM Stage 6 - Divert W/B 3 lanes traffic from old E/B to new W/B Bridge	0		08-Oct-16	-6
10.7.2 - Oil Street/Watson Road (Portion III)		50	15-Sep-16	15-Nov-16	567
1072-1040	Fresh Water Main 100DI - F03 Portion III (Oil Street/Admin Bldg)	50	15-Sep-16	15-Nov-16	567
1072-1060	Salt Water Main 100DI - S03 Portion III (Oil Street/Admin Bldg)	50	15-Sep-16	15-Nov-16	567
1072-1080	Foul Sewer Dia. 300 Portion III (Oil Street/Admin Bldg)	42	15-Sep-16	05-Nov-16	567
11 - SECTION 11 OF THE WORKS		61	16-Aug-16 A	02-Nov-16	21
11.1 - Portion XIIA - Stage 1		61	16-Aug-16 A	02-Nov-16	21
11.1.2 - Along Victoria Park Rd. Triangular Island - Modification Works (Portion XIIA)		26	16-Aug-16 A	20-Sep-16	1
1110-2870	Step-joint to be made at the existing bituminous paving	6	16-Aug-16 A	26-Aug-16	1
1110-2890	Placing road base and base course bituminous paving	5	27-Aug-16	01-Sep-16	1
1110-2900	Bituminous paving to be demolished and removed for subsequent installation of manhole covers	5	02-Sep-16	07-Sep-16	1
1110-2910	Placing stone mastic asphalt bituminous paving	5	08-Sep-16	13-Sep-16	1
1110-2920	Placing road marking	5	14-Sep-16	20-Sep-16	1
11.1.3 - Along Tsing Fung St. - TCSS cable ducting (Portion XIIA)		36	17-Sep-16	31-Oct-16	1
1110-2930	TCSS cable ducting along Tsing Fung St	36	17-Sep-16	31-Oct-16	1
A2560	Expiration of existing Excavation Permit	0		13-Oct-16*	0
A2570	Extension of existing Excavation Permit (by AECOM)	18	24-Sep-16	11-Oct-16	1
11.1.4 - Along Gordon House - Cross road ducting at Hing Fat St adjacent to (Portion XIIA)		16	17-Sep-16	06-Oct-16	5
1110-2940	Trench 1 (E&M, PL) - (Night Work)	16	17-Sep-16	06-Oct-16	5
11.1.5 - Footing and frame/pole for directional sign FVMSH2, ADS16 and OHVD (Portion XIIA)		38	17-Sep-16	02-Nov-16	3
1110-2960	ADS16	26	17-Sep-16	19-Oct-16	3
1110-2970	OHVD	12	20-Oct-16	02-Nov-16	3
11.1.6 - Along Hing Fat St. - TCSS cable ducting (Pending V.O.) (Portion XIIA)		56	20-Aug-16	27-Oct-16	26
1110-2990	Ducting at pedestrian walkway	38	20-Aug-16	05-Oct-16	26
1110-3000	Cross road ducting at Hing Fat St adjacent to Viking Garden	28	20-Aug-16	22-Sep-16	26
1110-3010	Cross road ducting at Hing Fat St adjacent to The CWB Kaifong Welfare Advancement Bradbuary Building	28	23-Sep-16	27-Oct-16	26

Remaining Level of Effort ◆ Milestone
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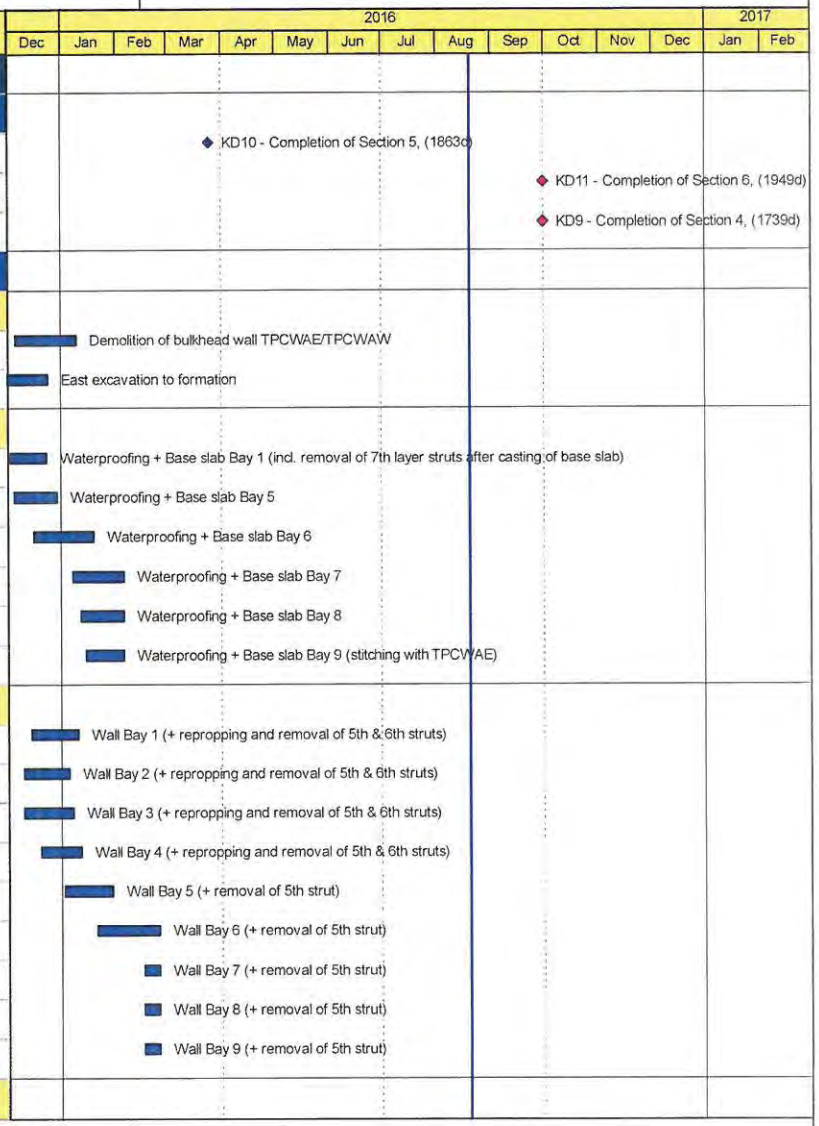
Contract HY/2009/19
Three Months Rolling Programme (20 Aug to 19 Nov 2016)

Activity ID	Activity Name	Physical % Complete	Original Duration	Start	Finish	Total Float
HY/2009/15 - Works Programme Update 20 August 2016						
Stage and Section Completion						
KD_5745	KD10 - Completion of Section 5, (1863d)	100%	0d		25-Mar-16 A	
KD_5750	KD11 - Completion of Section 6, (1949d)	0%	0d		30-Sep-16*	-245d
KD_5740	KD9 - Completion of Section 4, (1739d)	0%	0d		30-Sep-16*	-455d
TPCWAW						
TPCWAW ELS Works - East Section						
S5_61070	Demolition of bulkhead wall TPCWAE/TPCWAW	100%	34d	06-Dec-15 A	09-Jan-16 A	
S6_6180	East excavation to formation	100%	85d	18-Sep-15 A	24-Dec-15 A	
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 A	23-Dec-15 A	
S5_60620	Waterproofing + Base slab Bay 5	100%	11d	05-Dec-15 A	29-Dec-15 A	
S5_60625	Waterproofing + Base slab Bay 6	100%	11d	16-Dec-15 A	19-Jan-16 A	
S5_60630	Waterproofing + Base slab Bay 7	100%	7d	07-Jan-16 A	05-Feb-16 A	
S5_60635	Waterproofing + Base slab Bay 8	100%	6d	12-Jan-16 A	05-Feb-16 A	
S5_61065	Waterproofing + Base slab Bay 9 (stitching with TPCWAE)	100%	6d	15-Jan-16 A	05-Feb-16 A	
TPCWAW- CCT RC Structure, Wall						
S5_60670	Wall Bay 1 (+ repropping and removal of 5th & 6th struts)	100%	21d	15-Dec-15 A	10-Jan-16 A	
S5_60675	Wall Bay 2 (+ repropping and removal of 5th & 6th struts)	100%	10d	10-Dec-15 A	05-Jan-16 A	
S5_60680	Wall Bay 3 (+ repropping and removal of 5th & 6th struts)	100%	21d	10-Dec-15 A	07-Jan-16 A	
S5_60685	Wall Bay 4 (+ repropping and removal of 5th & 6th struts)	100%	22d	20-Dec-15 A	11-Jan-16 A	
S5_60690	Wall Bay 5 (+ removal of 5th strut)	100%	10d	02-Jan-16 A	29-Jan-16 A	
S5_60695	Wall Bay 6 (+ removal of 5th strut)	100%	7d	21-Jan-16 A	25-Feb-16 A	
S5_60700	Wall Bay 7 (+ removal of 5th strut)	100%	8d	16-Feb-16 A	25-Feb-16 A	
S5_60705	Wall Bay 8 (+ removal of 5th strut)	100%	9d	16-Feb-16 A	25-Feb-16 A	
S5_61075	Wall Bay 9 (+ removal of 5th strut)	100%	8d	16-Feb-16 A	25-Feb-16 A	
TPCWAW -Maintenance Walkway						



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

China State Construction Engineering (Hong Kong) Ltd.

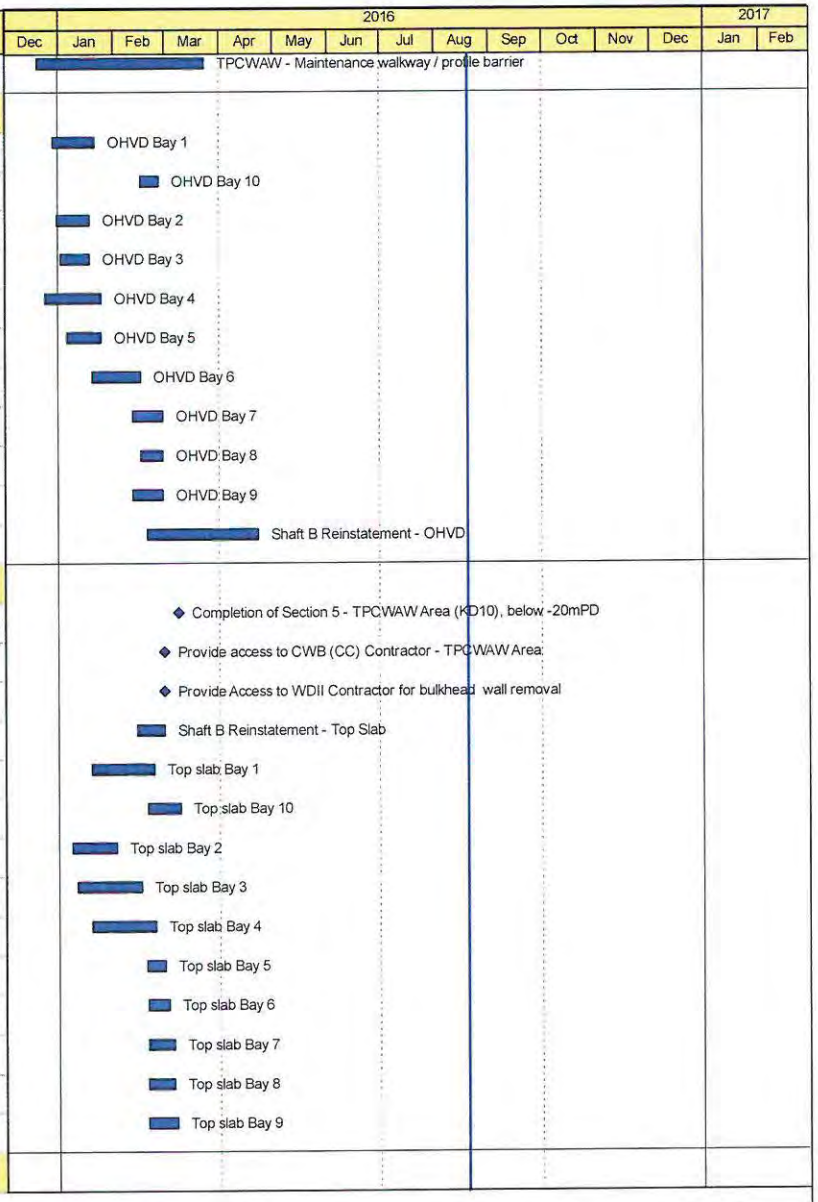
Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel (Causeway Bay Typhoon Shelter Section)

WORKS PROGRAMME UPDATE

Prepared by Anthony Fesalbon

Date	Revision	Checked	Approved
20-Aug-16	Progress Update	WC	WSL
	(based on WP Rev. N-4th Submission)		

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



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

China State Construction Engineering (Hong Kong) Ltd.

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

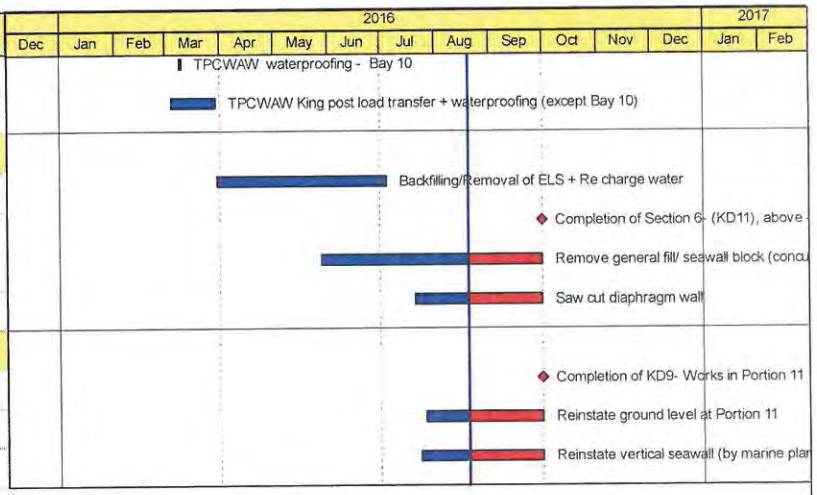
WORKS PROGRAMME UPDATE

Prepared by Anthony Fesalbon

Date	Revision	Checked	Approved
20-Aug-16	Progress Update	WC	WSL
	(based on WP Rev. N-4th Submission)		

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

Activity ID	Activity Name	Physical % Complete	Original Duration	Start	Finish	Total Float
S5_61115	TPCWAW waterproofing - Bay 10	100%	2d	09-Mar-16 A	10-Mar-16 A	
S6_9076	TPCWAW King post load transfer + waterproofing (except Bay 10)	100%	26d	04-Mar-16 A	29-Mar-16 A	
TPCWAW Removal of Temporary Reclamation						
S6_9140	Backfilling/Removal of ELS + Re charge water	100%	25d	30-Mar-16 A	04-Jul-16 A	
S6_7550	Completion of Section 6- (KD11), above - 20mPD	0%	0d		30-Sep-16*	-245d
S6_9105	Remove general fill/ seawall block (concurrent activities)	0%	25d	28-May-16 A	30-Sep-16	0d
S6_9120	Saw cut diaphragm wall	44%	75d	20-Jul-16 A	30-Sep-16*	-244d
Works in Portion 11 under KD9 (incl. Reinstatement of Vertical Seawall)						
S6_9148	Completion of KD9- Works in Portion 11	0%	0d		30-Sep-16	-455d
S6_9147	Reinstate ground level at Portion 11	10%	40d	26-Jul-16 A	30-Sep-16	-385d
S6_9144	Reinstate vertical seawall (by marine plant)	0%	21d	23-Jul-16 A	30-Sep-16	-384d



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

3 of 3

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

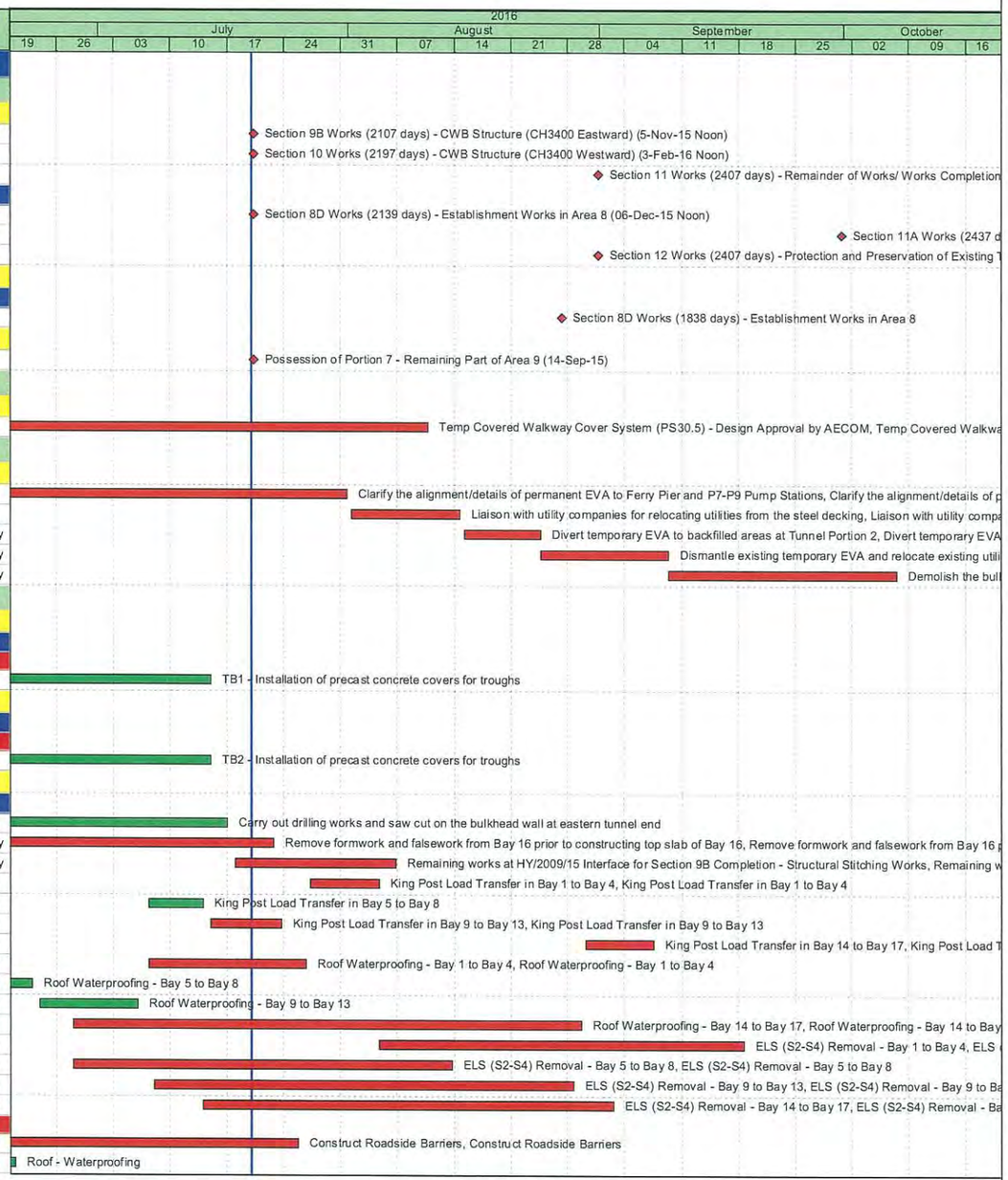
Prepared by Anthony Fesalbon

Date	Revision	Checked	Approved
20-Aug-16	Progress Update	WC	WSL
	(based on WP Rev. N-4th Submission)		

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

CEDD CONTRACT HK/2009/02

Activity ID	Activity Name	Orig Dur	Rem Dur	Scheduled/ Actual Start	Scheduled/ Actual Finish	Total Float	Calendar
Three Months Rolling Programme 2016-07-20 (dd 20-Jul-16)							
Programme Milestones (Revised up to EOTO No.16 issued on 01-Dec-15)							
Contractual Completion Dates							
KDC0170	Section 9B Works (2107 days) - CWB Structure (CH3400 Eastward) (5-Nov-15 Noon)	0	0		20-Jul-16*	-257	Calendar Day
KDC0180	Section 10 Works (2197 days) - CWB Structure (CH3400 Westward) (3-Feb-16 Noon)	0	0		20-Jul-16*	-167	Calendar Day
KDC0190	Section 11 Works (2407 days) - Remainder of Works/ Works Completion Date (31-Aug-16 Noon)	0	0		31-Aug-16*	0	Calendar Day
Soft Landscaping & Establishment Key Dates							
KDC0150	Section 8D Works (2139 days) - Establishment Works in Area 8 (06-Dec-15 Noon)	0	0		20-Jul-16*	-226	Calendar Day
KDC0200	Section 11A Works (2437 days) - Remaining Landscape Softworks (30-Sep-16 Noon)	0	0		30-Sep-16*	0	Calendar Day
KDC0220	Section 12 Works (2407 days) - Protection and Preservation of Existing Trees (31-Aug-16 Noon)	0	0		31-Aug-16*	0	Calendar Day
Forecast Completion Dates							
Soft Landscaping & Establishment Key Dates							
KDF0150	Section 8D Works (1838 days) - Establishment Works in Area 8	0	0		27-Aug-16*	-264	Calendar Day
Possession of Site							
PS0070a	Possession of Portion 7 - Remaining Part of Area 9 (14-Sep-15)	0	0	20-Jul-16*		-310	Calendar Day
Preliminaries							
Critical Submission & Approval							
PRE-SUB-1010B	Temp Covered Walkway Cover System (PS30.5) - Design Approval by AECOM	30	22	29-Jan-15 A	10-Aug-16*	-713	Calendar Day
Section 8A of the Works - Reprovisioning of Wan Chai Ferry Pier in Area 8							
Outstanding Works							
S8A-OUT-1005	Clarify the alignment/details of permanent EVA to Ferry Pier and P7-P9 Pump Stations	90	12	29-Feb-16 A	31-Jul-16	-134	Calendar Day
S8A-OUT-1007	Liaison with utility companies for relocating utilities from the steel decking	14	14	01-Aug-16	14-Aug-16	-134	Calendar Day
S8A-OUT-1010	Divert temporary EVA to backfilled areas at Tunnel Portion 2	10	10	15-Aug-16	24-Aug-16	-123	HK Working Day
S8A-OUT-1020	Dismantle existing temporary EVA and relocate existing utilities	15	15	24-Aug-16	09-Sep-16	-123	HK Working Day
S8A-OUT-1030	Demolish the bulkhead wall underneath the temporary EVA	25	25	09-Sep-16	07-Oct-16	-123	HK Working Day
Section 9B of the Works - CWB Tunnel Structure (CH3400 - CH3796)							
Tunnel Portion 1 (CH3500-CH3630)							
CWB Structural Works							
Outstanding Works							
S9B-T1-OUT-1000	TB1 - Installation of precast concrete covers for troughs	15	0	20-Jun-16 A	15-Jul-16 A		Calendar Day
Tunnel Portion 2 (CH3425-CH3500)							
CWB Structural Works							
Outstanding Works							
S9B-T2-OUT-1000	TB2 - Installation of precast concrete covers for troughs	15	0	20-Jun-16 A	15-Jul-16 A		Calendar Day
Tunnel Portion 3 & Tunnel Portion 4 (CH3630-CH3790)							
CWB Structural Works							
S9B-T34-3104	Carry out drilling works and saw cut on the bulkhead wall at eastern tunnel end	71	0	15-Mar-16 A	17-Jul-16 A		Calendar Day
S9B-T34-3105	Remove formwork and falsework from Bay 16 prior to constructing top slab of Bay 16	15	3	07-Jun-16 A	22-Jul-16	-482	HK Working Day
S9B-T34-3200	Remaining works at HY/2009/15 Interface for Section 9B Completion - Structural Stitching Works	20	18	18-Jul-16 A	06-Aug-16	-246	HK Working Day
S9B-T34-5600	King Post Load Transfer in Bay 1 to Bay 4	9	9	27-Jul-16	04-Aug-16	-535	Calendar Day
S9B-T34-5700	King Post Load Transfer in Bay 5 to Bay 8	9	0	07-Jul-16 A	14-Jul-16 A		Calendar Day
S9B-T34-5800	King Post Load Transfer in Bay 9 to Bay 13	9	4	15-Jul-16 A	23-Jul-16	-532	Calendar Day
S9B-T34-5900	King Post Load Transfer in Bay 14 to Bay 17	9	9	30-Aug-16	07-Sep-16	-534	Calendar Day
S9B-T34-6000	Roof Waterproofing - Bay 1 to Bay 4	7	7	07-Jul-16 A	26-Jul-16	-535	Calendar Day
S9B-T34-6100	Roof Waterproofing - Bay 5 to Bay 8	7	0	15-Jun-16 A	23-Jun-16 A		Calendar Day
S9B-T34-6200	Roof Waterproofing - Bay 9 to Bay 13	7	0	24-Jun-16 A	06-Jul-16 A		Calendar Day
S9B-T34-6300	Roof Waterproofing - Bay 14 to Bay 17	7	41	28-Jun-16 A	29-Aug-16	-534	Calendar Day
S9B-T34-7000	ELS (S2-S4) Removal - Bay 1 to Bay 4	45	45	04-Aug-16	18-Sep-16	-535	Calendar Day
S9B-T34-7100	ELS (S2-S4) Removal - Bay 5 to Bay 8	45	25	28-Jun-16 A	13-Aug-16	-499	Calendar Day
S9B-T34-7200	ELS (S2-S4) Removal - Bay 9 to Bay 13	45	40	08-Jul-16 A	28-Aug-16	-514	Calendar Day
S9B-T34-7300	ELS (S2-S4) Removal - Bay 14 to Bay 17	45	45	14-Jul-16 A	02-Sep-16	-495	Calendar Day
Bay 1							
S9B-T34-B1-1185	Construct Roadside Barriers	7	6	13-May-16 A	25-Jul-16	-263	Calendar Day
S9B-T34-B1-1270	Roof - Waterproofing	7	0	15-Jun-16 A	21-Jun-16 A		Calendar Day



◆ Milestone
◆ Critical Milestones
Current Works
Critical Works
Remaining Level of Effort

CHUN WO - CRGL

JOINT VENTURE

CEDD CONTRACT NO. HK/2009/02

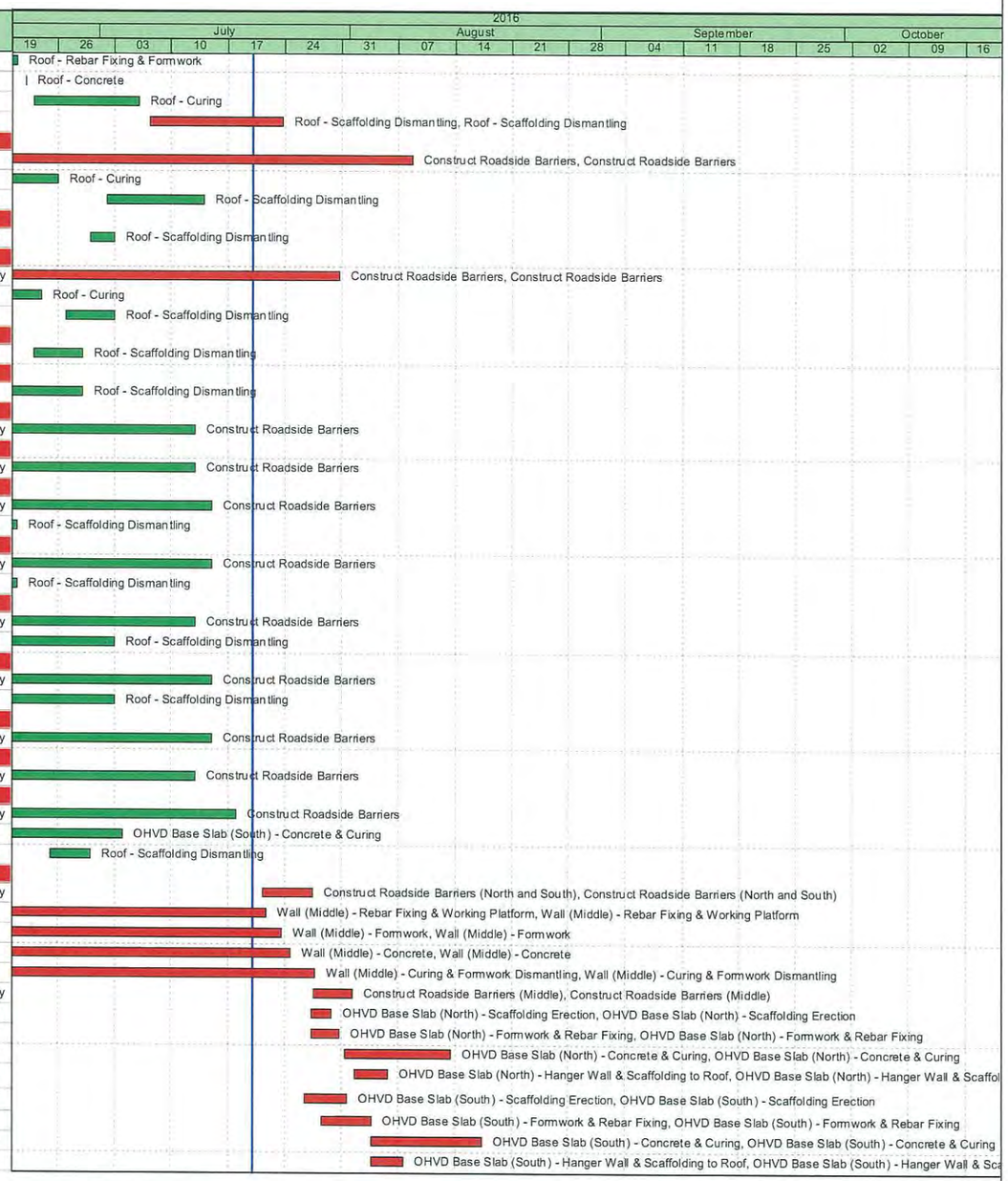
WD II - Central Wanchai Bypass at Wan Chai East (Contract 2)

3-MONTH ROLLING PROGRAMME (dd 20-Jul-16)

Date	Revision	Checked	Approved
20-Jul-16	Rev. 18		

CEDD CONTRACT HK/2009/02

Activity ID	Activity Name	Orl Dur	Rem Dur	Scheduled/ Actual Start	Scheduled/ Actual Finish	Total Float	Calendar
S9B-T34-B1-1280	Roof - Rebar Fixing & Formwork	12	0	17-Jun-16 A	21-Jun-16 A		Calendar Day
S9B-T34-B1-1290	Roof - Concrete	1	0	22-Jun-16 A	22-Jun-16 A		Calendar Day
S9B-T34-B1-1300	Roof - Curing	14	0	23-Jun-16 A	06-Jul-16 A		Calendar Day
S9B-T34-B1-1310	Roof - Scaffolding Dismantling	11	4	07-Jul-16 A	23-Jul-16	-261	Calendar Day
Bay 2							
S9B-T34-B2-1185	Construct Roadside Barriers	7	20	09-May-16 A	08-Aug-16	-277	Calendar Day
S9B-T34-B2-1300	Roof - Curing	14	0	13-Jun-16 A	26-Jun-16 A		Calendar Day
S9B-T34-B2-1310	Roof - Scaffolding Dismantling	7	0	02-Jul-16 A	14-Jul-16 A		Calendar Day
Bay 3							
S9B-T34-B3-1310	Roof - Scaffolding Dismantling	7	0	30-Jun-16 A	03-Jul-16 A		Calendar Day
Bay 4							
S9B-T34-B4-1185	Construct Roadside Barriers	8	11	03-May-16 A	30-Jul-16	-240	HK Working Day
S9B-T34-B4-1300	Roof - Curing	14	0	10-Jun-16 A	24-Jun-16 A		Calendar Day
S9B-T34-B4-1310	Roof - Scaffolding Dismantling	7	0	27-Jun-16 A	03-Jul-16 A		Calendar Day
Bay 5							
S9B-T34-B5-1310	Roof - Scaffolding Dismantling	7	0	23-Jun-16 A	29-Jun-16 A		Calendar Day
Bay 6							
S9B-T34-B6-1310	Roof - Scaffolding Dismantling	7	0	10-Jun-16 A	29-Jun-16 A		Calendar Day
Bay 7							
S9B-T34-B7-1185	Construct Roadside Barriers	8	0	25-Mar-16 A	13-Jul-16 A		HK Working Day
Bay 8							
S9B-T34-B8-1185	Construct Roadside Barriers	8	0	25-Mar-16 A	13-Jul-16 A		HK Working Day
Bay 9							
S9B-T34-B9-1185	Construct Roadside Barriers	8	0	27-Mar-16 A	15-Jul-16 A		HK Working Day
S9B-T34-B9-1310	Roof - Scaffolding Dismantling	7	0	16-Jun-16 A	21-Jun-16 A		Calendar Day
Bay 10							
S9B-T34-B10-1185	Construct Roadside Barriers	8	0	29-Mar-16 A	15-Jul-16 A		HK Working Day
S9B-T34-B10-1310	Roof - Scaffolding Dismantling	7	0	16-Jun-16 A	21-Jun-16 A		Calendar Day
Bay 11							
S9B-T34-B11-1185	Construct Roadside Barriers	8	0	20-Apr-16 A	13-Jul-16 A		HK Working Day
S9B-T34-B11-1310	Roof - Scaffolding Dismantling	7	0	19-Jun-16 A	03-Jul-16 A		Calendar Day
Bay 12							
S9B-T34-B12-1185	Construct Roadside Barriers	8	0	22-Apr-16 A	15-Jul-16 A		HK Working Day
S9B-T34-B12-1310	Roof - Scaffolding Dismantling	7	0	19-Jun-16 A	03-Jul-16 A		Calendar Day
Bay 13							
S9B-T34-B13-1185	Construct Roadside Barriers	8	0	18-Apr-16 A	15-Jul-16 A		HK Working Day
Bay 14							
S9B-T34-B14-1185	Construct Roadside Barriers	8	0	22-Apr-16 A	13-Jul-16 A		HK Working Day
Bay 15							
S9B-T34-B15-1175	Construct Roadside Barriers	8	0	21-Apr-16 A	18-Jul-16 A		HK Working Day
S9B-T34-B15-1240	OHVD Base Slab (South) - Concrete & Curing	14	0	19-May-16 A	04-Jul-16 A		Calendar Day
S9B-T34-B15-1300	Roof - Scaffolding Dismantling	7	0	25-Jun-16 A	30-Jun-16 A		Calendar Day
Bay 16							
S9B-T34-B16-1135	Construct Roadside Barriers (North and South)	6	6	21-Jul-16	27-Jul-16	-485	HK Working Day
S9B-T34-B16-1140	Wall (Middle) - Rebar Fixing & Working Platform	3	2	17-Apr-16 A	21-Jul-16	-543	Calendar Day
S9B-T34-B16-1150	Wall (Middle) - Formwork	2	0	20-Apr-16 A	23-Jul-16	-543	Calendar Day
S9B-T34-B16-1160	Wall (Middle) - Concrete	1	0	22-Apr-16 A	24-Jul-16	-543	Calendar Day
S9B-T34-B16-1170	Wall (Middle) - Curing & Formwork Dismantling	3	0	23-Apr-16 A	27-Jul-16	-543	Calendar Day
S9B-T34-B16-1175	Construct Roadside Barriers (Middle)	4	4	27-Jul-16	01-Aug-16	-240	HK Working Day
S9B-T34-B16-1180	OHVD Base Slab (North) - Scaffolding Erection	3	3	27-Jul-16	29-Jul-16	-543	Calendar Day
S9B-T34-B16-1190	OHVD Base Slab (North) - Formwork & Rebar Fixing	4	4	27-Jul-16	30-Jul-16	-543	Calendar Day
S9B-T34-B16-1200	OHVD Base Slab (North) - Concrete & Curing	13	13	31-Jul-16	13-Aug-16	-543	Calendar Day
S9B-T34-B16-1210	OHVD Base Slab (North) - Hanger Wall & Scaffolding to Roof	4	4	01-Aug-16	05-Aug-16	-543	Calendar Day
S9B-T34-B16-1220	OHVD Base Slab (South) - Scaffolding Erection	5	5	26-Jul-16	31-Jul-16	-544	Calendar Day
S9B-T34-B16-1230	OHVD Base Slab (South) - Formwork & Rebar Fixing	6	6	28-Jul-16	03-Aug-16	-544	Calendar Day
S9B-T34-B16-1240	OHVD Base Slab (South) - Concrete & Curing	13	13	03-Aug-16	17-Aug-16	-544	Calendar Day
S9B-T34-B16-1250	OHVD Base Slab (South) - Hanger Wall & Scaffolding to Roof	4	4	03-Aug-16	07-Aug-16	-544	Calendar Day



◆ Milestone
◆ Critical Milestones
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CHUN WO - CRGL

JOINT VENTURE

CEDD CONTRACT NO. HK/2009/02

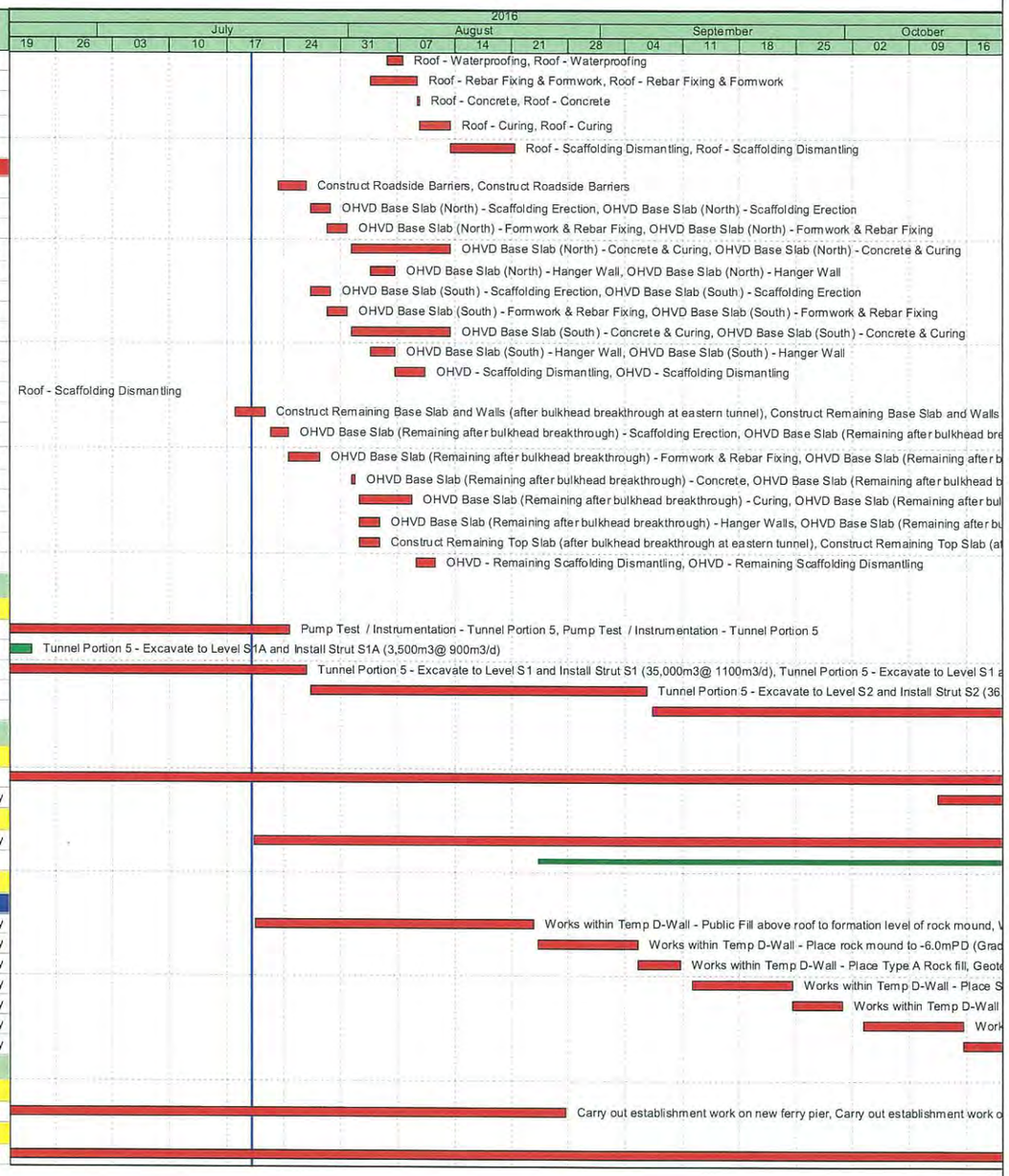
WD II - Central Wanchai Bypass at Wan Chai East (Contract 2)

3-MONTH ROLLING PROGRAMME (dd 20-Jul-16)

Date	Revision	Checked	Approved
20-Jul-16	Rev. 18		

CEDD CONTRACT HK/2009/02

Activity ID	Activity Name	Orl Dur	Rem Dur	Scheduled/ Actual Start	Scheduled/ Actual Finish	Total Float	Calendar
S9B-T34-B16-1260	Roof - Waterproofing	2	2	05-Aug-16	07-Aug-16	-544	Calendar Day
S9B-T34-B16-1270	Roof - Rebar Fixing & Formwork	5	5	03-Aug-16	09-Aug-16	-544	Calendar Day
S9B-T34-B16-1280	Roof - Concrete	1	1	09-Aug-16	09-Aug-16	-544	Calendar Day
S9B-T34-B16-1290	Roof - Curing	4	4	09-Aug-16	13-Aug-16	-544	Calendar Day
S9B-T34-B16-1300	Roof - Scaffolding Dismantling	8	8	13-Aug-16	21-Aug-16	-289	Calendar Day
Bay 17							
S9B-T34-B17-1185	Construct Roadside Barriers	4	4	23-Jul-16	26-Jul-16	-543	Calendar Day
S9B-T34-B17-1190	OHVD Base Slab (North) - Scaffolding Erection	3	3	27-Jul-16	29-Jul-16	-543	Calendar Day
S9B-T34-B17-1200	OHVD Base Slab (North) - Formwork & Rebar Fixing	3	3	29-Jul-16	31-Jul-16	-275	Calendar Day
S9B-T34-B17-1210	OHVD Base Slab (North) - Concrete & Curing	12	12	01-Aug-16	13-Aug-16	-275	Calendar Day
S9B-T34-B17-1220	OHVD Base Slab (North) - Hanger Wall	3	3	03-Aug-16	06-Aug-16	-275	Calendar Day
S9B-T34-B17-1230	OHVD Base Slab (South) - Scaffolding Erection	3	3	27-Jul-16	29-Jul-16	-278	Calendar Day
S9B-T34-B17-1240	OHVD Base Slab (South) - Formwork & Rebar Fixing	3	3	29-Jul-16	31-Jul-16	-278	Calendar Day
S9B-T34-B17-1250	OHVD Base Slab (South) - Concrete & Curing	12	12	01-Aug-16	13-Aug-16	-278	Calendar Day
S9B-T34-B17-1260	OHVD Base Slab (South) - Hanger Wall	3	3	03-Aug-16	06-Aug-16	-278	Calendar Day
S9B-T34-B17-1280	OHVD - Scaffolding Dismantling	4	4	06-Aug-16	10-Aug-16	-278	Calendar Day
S9B-T34-B17-1294	Roof - Scaffolding Dismantling	3	0	18-Jun-16 A	20-Jun-16 A		Calendar Day
S9B-T34-B17-1311	Construct Remaining Base Slab and Walls (after bulkhead breakthrough at eastern tunnel)	4	2	18-Jul-16 A	21-Jul-16	-543	Calendar Day
S9B-T34-B17-1312	OHVD Base Slab (Remaining after bulkhead breakthrough) - Scaffolding Erection	3	3	22-Jul-16	24-Jul-16	-538	Calendar Day
S9B-T34-B17-1313	OHVD Base Slab (Remaining after bulkhead breakthrough) - Formwork & Rebar Fixing	4	4	24-Jul-16	28-Jul-16	-276	Calendar Day
S9B-T34-B17-1314	OHVD Base Slab (Remaining after bulkhead breakthrough) - Concrete	1	1	01-Aug-16	01-Aug-16	-280	Calendar Day
S9B-T34-B17-1314a	OHVD Base Slab (Remaining after bulkhead breakthrough) - Curing	7	7	02-Aug-16	08-Aug-16	-280	Calendar Day
S9B-T34-B17-1315	OHVD Base Slab (Remaining after bulkhead breakthrough) - Hanger Walls	3	3	02-Aug-16	04-Aug-16	-276	Calendar Day
S9B-T34-B17-1315a	Construct Remaining Top Slab (after bulkhead breakthrough at eastern tunnel)	3	3	02-Aug-16	04-Aug-16	-276	Calendar Day
S9B-T34-B17-1316	OHVD - Remaining Scaffolding Dismantling	3	3	09-Aug-16	11-Aug-16	-280	Calendar Day
Section 10 Works - CWB Tunnel Structure (CH3246 - CH3400)							
Tunnel Portion 5 (CH3276-CH3400)							
S10-T5-1060	Pump Test / Instrumentation - Tunnel Portion 5	27	5	27-Mar-16 A	24-Jul-16	-496	Calendar Day
S10-T5-2010	Tunnel Portion 5 - Excavate to Level S1A and Install Strut S1A (3,500m3@ 900m3/d)	18	0	20-May-16 A	23-Jun-16 A		Calendar Day
S10-T5-2020	Tunnel Portion 5 - Excavate to Level S1 and Install Strut S1 (35,000m3@ 1100m3/d)	39	7	07-Jun-16 A	26-Jul-16	-597	Calendar Day
S10-T5-2030	Tunnel Portion 5 - Excavate to Level S2 and Install Strut S2 (36,800m3@ 1100m3/d)	42	42	27-Jul-16	06-Sep-16	-597	Calendar Day
S10-T5-2040	Tunnel Portion 5 - Excavate to Level S3 and Install Strut S3 (54,700m3@ 1100m3/d)	57	57	07-Sep-16	02-Nov-16	-597	Calendar Day
Section 11 of the Works - Remainder of Works							
Demolition Works							
S11-DEMO-1100	Demolition of existing WSD salt water pumping station	53	103	13-Jun-16 A	30-Oct-16	-246	Calendar Day
S11-DEMO-1300	Demoliton of abandoned seawall down to +1.5mPD - at the north of Ex-Salt Water Pump Station	12	12	12-Oct-16	25-Oct-16	-48	HK Working Day
Formation and Hard Landscaping Works							
S11-FM-3000A	Tunnel Portion 3 & 4 Backfilling to -6mPD (90,000m3; 1,000m3/d)	102	102	20-Jul-16	05-Nov-16	-503	HK Working Day
S11-FM-3000B1	Permament Seawall Construction (within temp D-Walls) for WCR4 Reclamation [Summary]	475	475	24-Aug-16	12-Dec-17	-523	Calendar Day
Misc. Works							
Removal of Temporary Reclamation							
S11-RTC-3010	Works within Temp D-Wall - Public Fill above roof to formation level of rock mound	34	34	20-Jul-16	23-Aug-16	-491	HK Working Day
S11-RTC-3020	Works within Temp D-Wall - Place rock mound to -6.0mPD (Grade 400: 6,000m3)	12	12	24-Aug-16	05-Sep-16	-491	HK Working Day
S11-RTC-3022	Works within Temp D-Wall - Place Type A Rock fill, Geotextile and Filter to -6.0mPD	6	6	05-Sep-16	10-Sep-16	-491	HK Working Day
S11-RTC-3023	Works within Temp D-Wall - Place Sorted Public Fill to -6.0mPD	12	12	12-Sep-16	24-Sep-16	-491	HK Working Day
S11-RTC-3024	Works within Temp D-Wall - Place Type A Rockfill and Filter from -6.0mPD to -2.0mPD	6	6	24-Sep-16	30-Sep-16	-491	HK Working Day
S11-RTC-3025	Works within Temp D-Wall - Place Sorted Public Fill from -6.0mPD to -2.0mPD	12	12	03-Oct-16	15-Oct-16	-491	HK Working Day
S11-RTC-3028	Works within Temp D-Wall - Place Mass Concrete Footing for HHR Flyover from -2.0mPD to +2.75...	12	12	15-Oct-16	28-Oct-16	-491	HK Working Day
Soft Landscaping & Establishment Works							
Section 8D of the Works - Establishment Works in Area 8							
S8D-0010	Carry out establishment work on new ferry pier	288	39	28-Aug-15 A	27-Aug-16	-264	Calendar Day
Section 12 of the Works - Protection and Preservation of Existing Trees							
S12-0010	Protection and preservation of existing trees	2111	613	24-Feb-10 A	24-Mar-18	-570	Calendar Day



◆ Milestone
◆ Critical Milestones
Current Works
Critical Works
Remaining Level of Effort

CHUN WO - CRGL

JOINT VENTURE

CEDD CONTRACT NO. HK/2009/02

WD II - Central Wanchai Bypass at Wan Chai East (Contract 2)

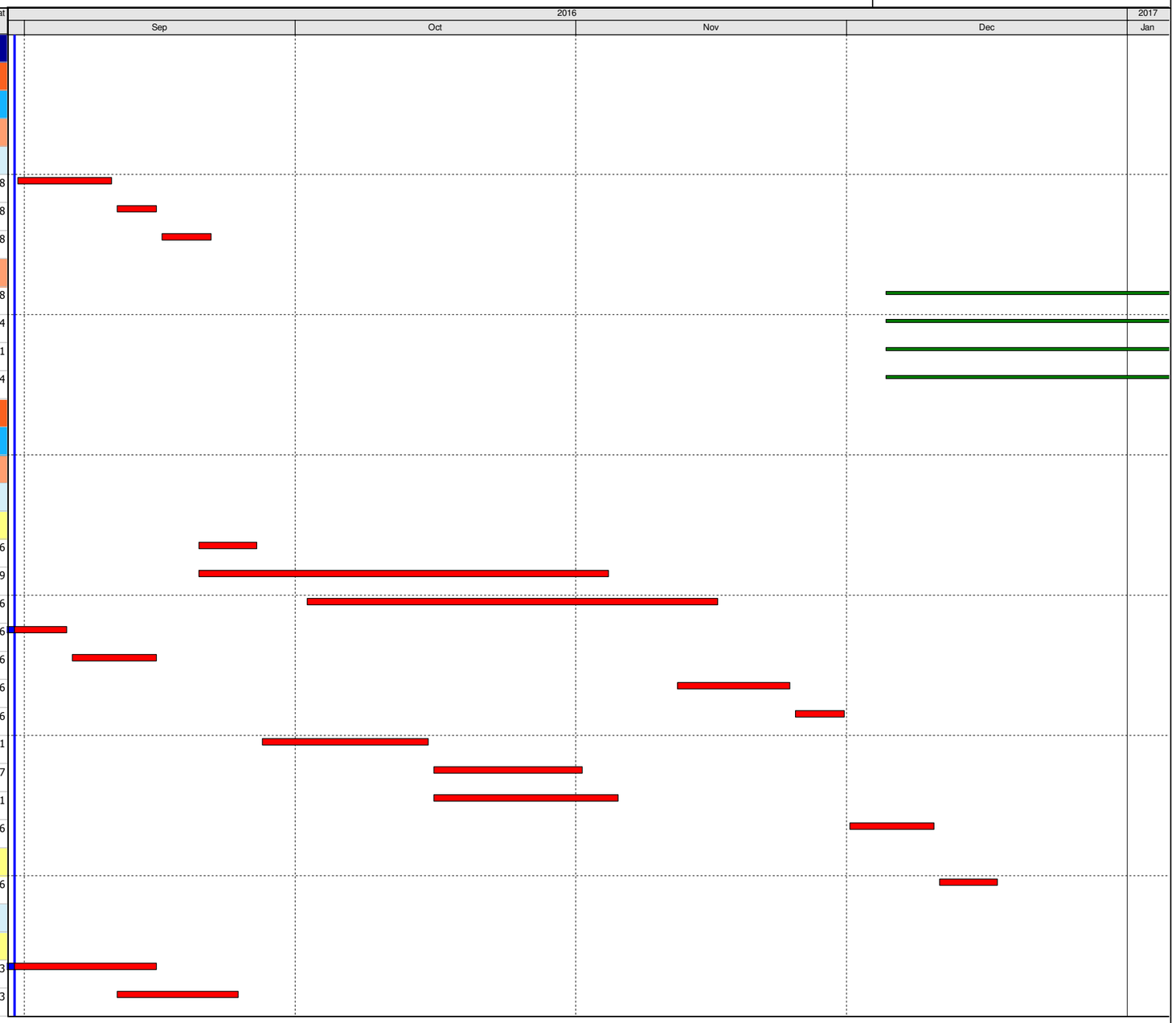
3-MONTH ROLLING PROGRAMME (dd 20-Jul-16)

Date	Revision	Checked	Approved
20-Jul-16	Rev. 18		

中國建築-利達聯營
CHINA STATE - LEADER JOINT VENTURE

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

Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
HK/2012/08 Revised Works Programme Rev.8 (DD 31 August 2016)					
Dredging and Reclamation					
Marine Work Construction					
Zone A1					
Seawall Construction - Zone A1					
MAR10330	Zone A1 - Seawall - Install remaining seawall type 3 (after reinstatement of culver k and cooling mains)	11	31-Aug-16	10-Sep-16	-68
MAR10340	Zone A1 - seawall - place type A behind seawall type 3	5	11-Sep-16	15-Sep-16	-68
MAR10345	Zone A1 - seawall - lay geotextile and filter behind seawall Type 3	6	16-Sep-16	21-Sep-16	-68
Others - Landing Steps					
MAR21360	Zone A2 - [summary] landing steps at seawall 4	77	05-Dec-16	11-Mar-17	-28
MAR21380	Zone B - [summary] landing steps at seawall 5	73	05-Dec-16	07-Mar-17	-24
MAR21400	Zone D - [summary] landing steps at seawall 9	70	05-Dec-16	03-Mar-17	-21
MAR21420	Zone A2 - [summary] landing steps at seawall 13	73	05-Dec-16	07-Mar-17	-24
Works for Section Completion					
Construction					
Section II - MVB Structure					
MVB Substructure - ELS & Structural Works for Portion A					
MVB Substructure - Structural Works for Portion A					
SII11250	Sec II - MVB A : Remove strut S1	7	20-Sep-16	26-Sep-16	-166
SII11252	Sec II - MVB A : Remove bulkhead at east	46	20-Sep-16	04-Nov-16	-159
SII11254	Sec II - MVB A : Remove bulkhead at west	46	02-Oct-16	16-Nov-16	-166
SII11260	Sec II - MVB A : Construct Bay 14- B2M/F wall	6	29-Jul-16 A	05-Sep-16	-166
SII11300	Sec II - MVB A : Construct Bay 15 - B2M/F OHVD	10	06-Sep-16	15-Sep-16	-166
SII11420	Sec II - MVB A : Construct Bay 14a - B2M/F wall (adjacent to bulkhead)	13	12-Nov-16	24-Nov-16	-166
SII11960	Sec II - MVB A : Construct Bay 15a - B2M/F OHVD (adjacent to bulkhead)	6	25-Nov-16	30-Nov-16	-166
SII11980	Sec II - MVB A : Construct Bay 16 - Wall btw OHVD and Roof)	19	27-Sep-16	15-Oct-16	-131
SII12140	Sec II - MVB A : Construct Bay 17 - Roof Slab	17	16-Oct-16	01-Nov-16	-127
SII12160	Sec II - MVB A : Construct Bay 18 - Roof Slab	21	16-Oct-16	05-Nov-16	-131
SII12340	Sec II - MVB A : Constrcut Bay 16a, 17a & 18a - Wall & Slab (Adjacent to bulkhead)	10	01-Dec-16	10-Dec-16	-166
MVB Substructure - Other Works for Portion A					
SII11320	Sec II - MVB A: Remove Strut & flasework	7	11-Dec-16	17-Dec-16	-166
MVB Substructure - ELS & Structural Works for Portion B					
MVB Substructure - Structural Works for Portion B					
SII11920	Sec II - MVB B: Construct Bay K - B2M/F Wall	16	01-Aug-16 A	15-Sep-16	-103
SII11930	Sec II - MVB B: Construct Bay L - B2M/F Top Slab	14	11-Sep-16	24-Sep-16	-103



Data Date:
31-Aug-16

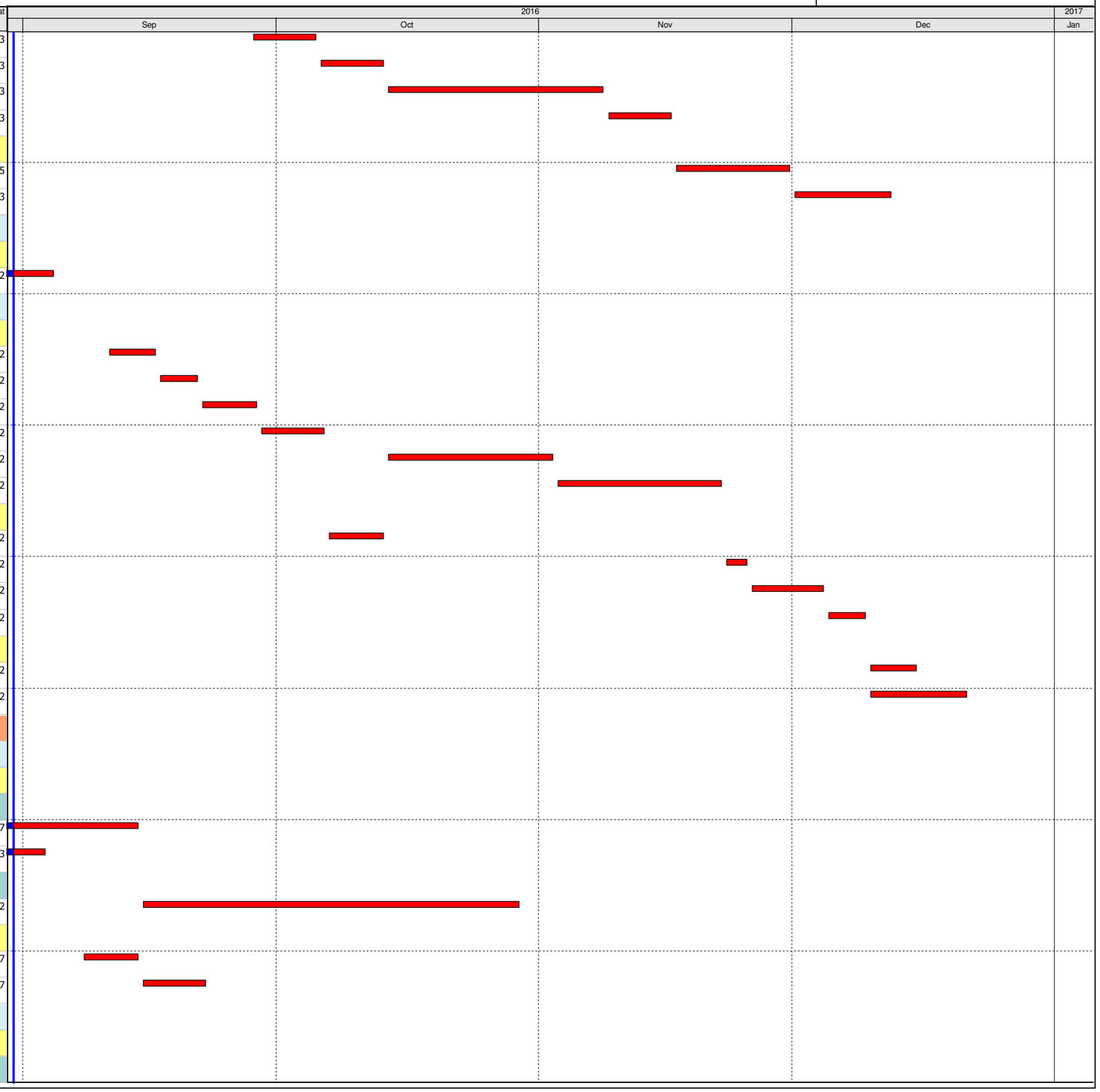
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Remaining Level of Effort

3-Months Rolling Programme for Non-CRIII Area (Sep 2016-Nov 2016)

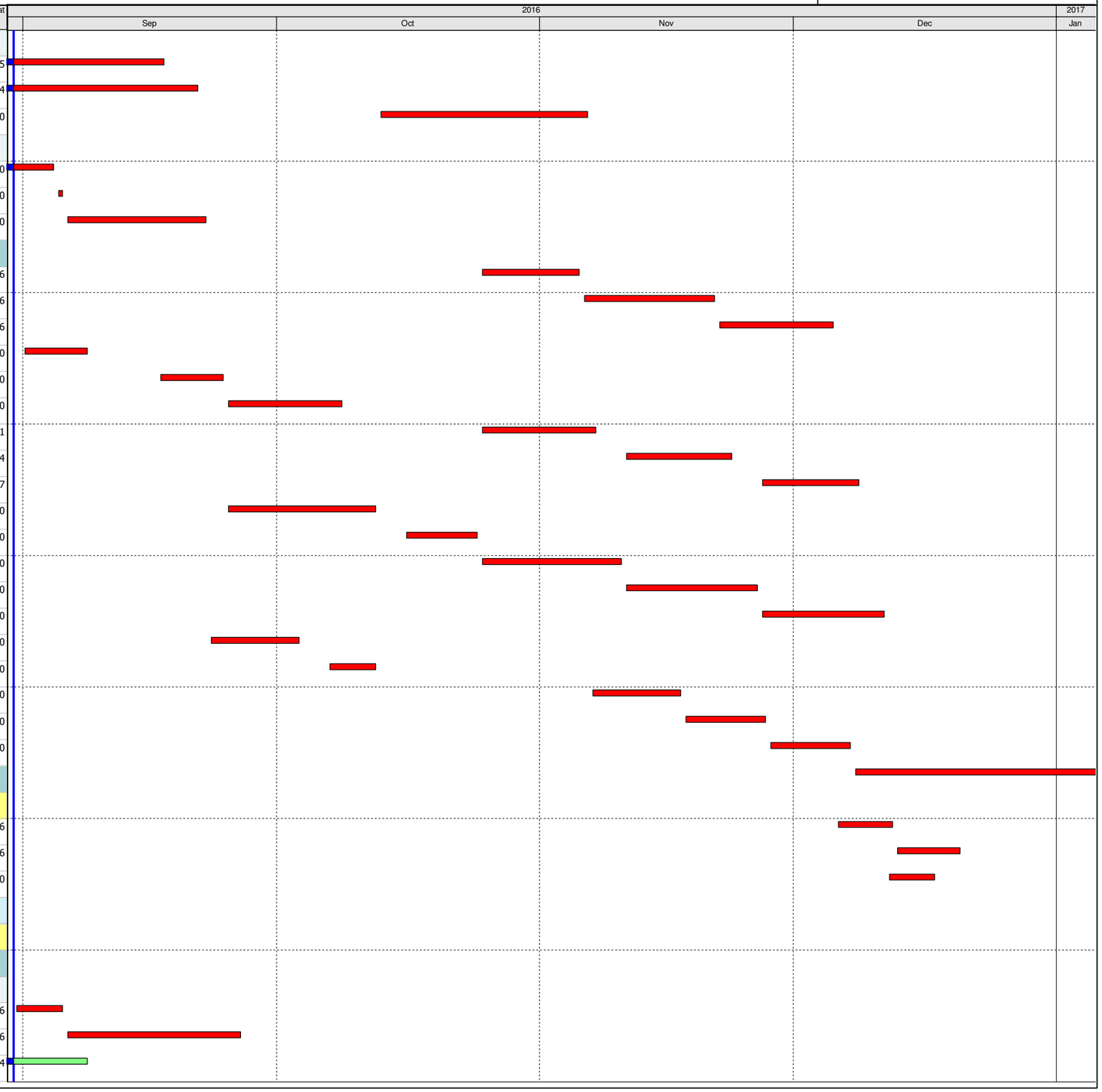
(Ref. to Revised Works Programme (Rev. 8))

Date	Revision	Checked	Approved
31-Aug-16	8		

Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
SII11940	Sec II - MVB B: Remove Strut SL1 & Concrete Backing	8	28-Sep-16	05-Oct-16	-103
SII12080	Sec II - MVB B: Saw cut southern diaphragm wall	8	06-Oct-16	13-Oct-16	-103
SII12360	Sec II - MVB B: Construct Bay M - B1/F Wall	26	14-Oct-16	08-Nov-16	-103
SII12420	Sec II - MVB B: Construct Bay M - B1/F Top Slab	8	09-Nov-16	16-Nov-16	-103
MVB Substructure - Other Works for Portion B					
SII12100	Sec III - MVB B: remove strut and flasework	12	17-Nov-16	30-Nov-16	-85
SII12120	Sec II - MVB B: seal up temp access openings	12	01-Dec-16	12-Dec-16	-103
MVB Substructure - Diaphragm Wall for Portion C					
MVB C - Sheetpile Installation					
SII10670	Sec II - MVB C - sheetpile wall installation	5	13-Aug-16 A	04-Sep-16	-112
MVB Substructure - ELS & Structural Works for Portion C					
MVB Substructure - ELS for Portion C					
SII12020	Sec II - MVB C: Excavation down to +1.7mPD	6	11-Sep-16	16-Sep-16	-112
SII12040	Sec II - MVB C : Install Strut S1	5	17-Sep-16	21-Sep-16	-112
SII12060	Sec II - MVB C : Excavation down to formation (-1.8mPD/-3.0mPD)	7	22-Sep-16	28-Sep-16	-112
SII12180	Sec II - MVB C : Cast Blinding layer & pile head treatment	8	29-Sep-16	06-Oct-16	-112
SII12380	Sec III - MVB C : Remove bulhead wall between MVB plant room and Zone CW	20	14-Oct-16	02-Nov-16	-112
SII12400	Sec III - MVB C : Remove bulhead wall between MVB plant room and MVB south	20	03-Nov-16	22-Nov-16	-112
MVB Substructure - Structural Works for Portion C					
SII12200	Sec II - MVB C : Construct Slab B1/F	7	07-Oct-16	13-Oct-16	-112
SII12220	Sec II - MVB C : Remove Strut S1	3	23-Nov-16	25-Nov-16	-112
SII12240	Sec II - MVB C : Construct Wall of B1/F	9	26-Nov-16	04-Dec-16	-112
SII12260	Sec II - MVB C : Construct Floor Slab of G/F	5	05-Dec-16	09-Dec-16	-112
MVB Substructure - Other Works for Portion C					
SII12280	Sec II - MVB C : Remove all struts and Falsework	6	10-Dec-16	15-Dec-16	-112
SII12300	Sec II - MVB C : seal up temp access openings	12	10-Dec-16	21-Dec-16	-112
Section II A - CWB Tunnel & Slip Road Structures and Facilities					
CWB A2(2)					
CWB A2 (2) - ELS & Tunnel Structure					
CWB A2 - Tunnel Structure					
SIIA11700	Sec II A - CWB A2(2): base, wall, OHVD & roof (bay 1 -Adjancent to A1)	15	11-Jun-16 A	14-Sep-16	-97
SIIA11750	Sec II A - CWB A2(2): base, wall, OHVD & roof (bay 2)	4	12-May-16 A	03-Sep-16	-93
CWB A2 - Other Works					
SIIA12530	Sec II A - CWB A2(2) : waterproofing and backfill to +4.0mPD	45	15-Sep-16	29-Oct-16	-92
CWB A2 (2) - Associated Facilities					
SIIA14320	Sec II A - CWB A2(2): Civil Provisions - lay screeding	7	08-Sep-16	14-Sep-16	-97
SIIA14430	Sec II A - CWB A2(2): Civil Provisions - cast cable trough	8	15-Sep-16	22-Sep-16	-97
CWB B & A2(1)					
CWB B - ELS & Tunnel Structure					
CWB B - ELS					

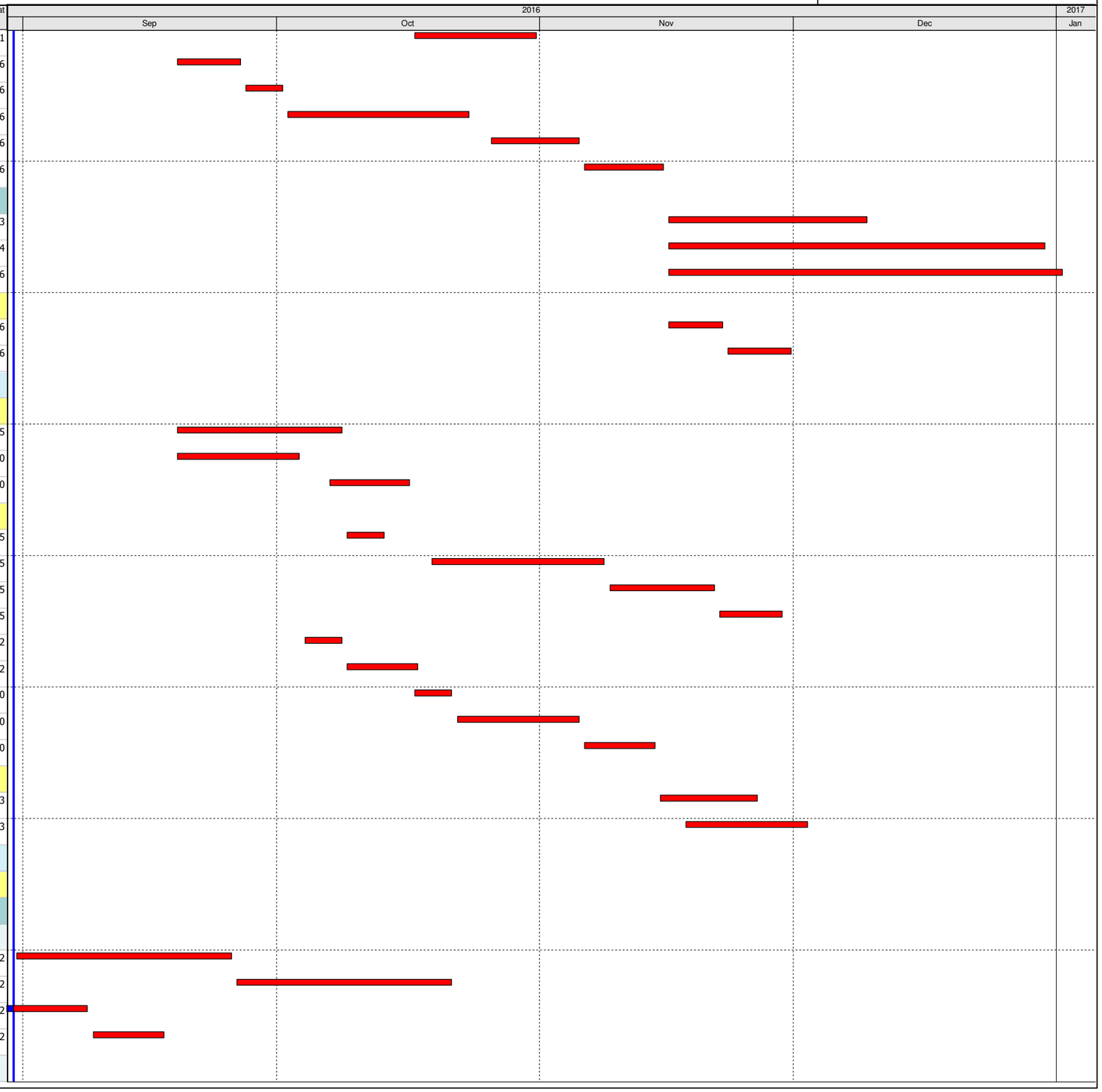


Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
	CWB B - Inside Concrete Plug				
SIIA13662	Sec II A - CWB B Inside Concrete Plug: Cut and remove the excess blinding layer	18	23-Aug-16 A	17-Sep-16	-175
SIIA13664	Sec II A - CWB B Inside Concrete Plug: Saw Cut the Base Slab of C4 Unit	18	27-Aug-16 A	21-Sep-16	-144
SIIA13682	Sec II A - CWB B: Demolish cocnrete plug (near C4 unit)	25	13-Oct-16	06-Nov-16	-180
	CWB B - Outside Concrete Plug				
SIIA 15200	Sec II A - CWB B Outside Concrete Plug: Tunnel Formation Excavation	5	29-Aug-16 A	04-Sep-16	-180
SIIA 15220	Sec II A - CWB B Outside Concrete Plug: Vertical Blinding	1	05-Sep-16	05-Sep-16	-180
SIIA 15260	Sec II A - CWB B Outside Concrete Plug: Remove struts & Sheetpile	17	06-Sep-16	22-Sep-16	-180
	CWB A2(1) & B - Tunnel Structure				
SIIA13570	Sec II A - CWB A2(1): Construct Bay 4 - Wall (remaining)	12	25-Oct-16	05-Nov-16	-186
SIIA13572	Sec II A - CWB A2(1): Construct Bay 4 - OHVD	16	06-Nov-16	21-Nov-16	-186
SIIA13574	Sec II A - CWB A2(1): Construct Bay 4 - Top Slab	14	22-Nov-16	05-Dec-16	-186
SIIA13580	Sec II A - CWB B: Construct Bay 5 - Exhaust Duct Base Slab (South)	8	01-Sep-16*	08-Sep-16	0
SIIA13590	Sec II A - CWB B: Construct Bay 5 - Exhaust Duct Wall	8	17-Sep-16	24-Sep-16	-190
SIIA13600	Sec II A - CWB B: Construct Bay 6 - Base Slab	14	25-Sep-16	08-Oct-16	-190
SIIA13610	Sec II A - CWB B: Construct Bay 6 - Wall	14	25-Oct-16	07-Nov-16	-181
SIIA13620	Sec II A - CWB B: Construct Bay 6 - OHVD	13	11-Nov-16	23-Nov-16	-184
SIIA13630	Sec II A - CWB B: Construct Bay 6 - Roof Slab	12	27-Nov-16	08-Dec-16	-187
SIIA13640	Sec II A - CWB B: Construct Bay 7a - Base Slab	18	25-Sep-16	12-Oct-16	-190
SIIA13645	Sec II A - CWB B: Remove Strut S2 & S3 and concrete packing (for Bay 4, 6 & 7a)	9	16-Oct-16	24-Oct-16	-190
SIIA13650	Sec II A - CWB B: Construct Bay 7a - Wall	17	25-Oct-16	10-Nov-16	-190
SIIA13660	Sec II A - CWB B: Construct Bay 7a - OHVD	16	11-Nov-16	26-Nov-16	-190
SIIA13680	Sec II A - CWB B: Construct Bay 7a - Top Slab	15	27-Nov-16	11-Dec-16	-190
SIIA13700	Sec II A - CWB B: Construct Bay 7b - Base Slab	11	23-Sep-16	03-Oct-16	-180
SIIA13710	Sec II A - CWB B: Remove Strut S2 & S3 (for Bay 7b)	6	07-Oct-16	12-Oct-16	-180
SIIA13880	Sec II A - CWB B: Construct Bay 7b - Wall	11	07-Nov-16	17-Nov-16	-180
SIIA13900	Sec II A - CWB B: Construct Bay 7b - OHVD	10	18-Nov-16	27-Nov-16	-180
SIIA13920	Sec II A - CWB B: Construct Bay 7b - Top Slab	10	28-Nov-16	07-Dec-16	-180
	CWB A2(1) & B - Other Works				
	CWB A2(1) & B - Associated Facilities				
SIIA14460	Sec II A - CWB A2(1): Civil Provisions - lay screeding	7	06-Dec-16	12-Dec-16	-186
SIIA14480	Sec II A - CWB A2(1): Civil Provisions - cast cable trough	8	13-Dec-16	20-Dec-16	-186
SIIA14580	Sec II A - CWB B: Civil Provisions - lay screeding	6	12-Dec-16	17-Dec-16	-190
	CWB C (W)				
	CWB C(W) - ELS & Tunnel Structure				
	CWB C(W) - ELS				
	CWB C(W) - ELS Inside Concrete Plug				
SIIA 12210	Sec II A - CWB CW inside Concret Plug: cut and remove 2m strip opening along bulkhead	6	31-Aug-16	05-Sep-16	-186
SIIA 12230	Sec II A - CWB CW inside Concret Plug: cut and remove base slab of C4 unit	21	06-Sep-16	26-Sep-16	-186
SIIA 12250	Sec II A - CWB CW inside Concret Plug: cut and remove the excess blinding layer	9	25-Aug-16 A	08-Sep-16	874

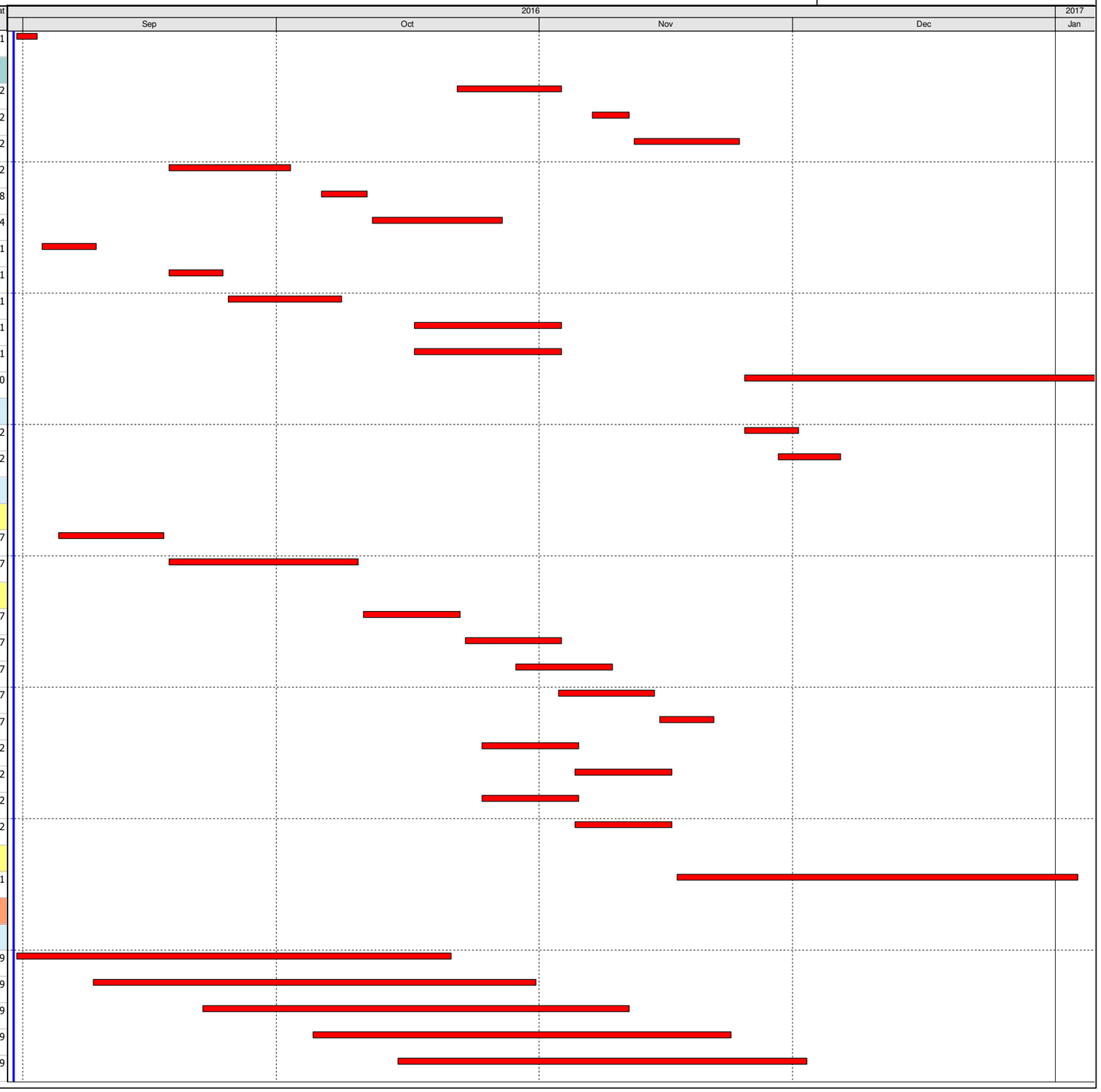


Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
SIIA 12270	Sec II A - CWB CW inside Concret Plug: remove concrete bulkhead	20	19-Oct-16	07-Nov-16	-186
CWB C(W) - ELS Outide Concrete Plug					
SIIA 13100	Sec II A - CWB CW outside Concrete Plug: Remove struts S3	4	30-Aug-16 A	03-Sep-16	-155
SIIA 13120	Sec II A - CWB CW outside Concrete Plug: Install transverse strut	3	04-Sep-16	06-Sep-16	-155
SIIA 13140	Sec II A - CWB CW outside Concrete Plug: Remove strut S1 & S2	11	07-Sep-16	17-Sep-16	-155
SIIA 13160	Sec II A - Sec II A - CWB CW outside Concrete Plug: Tunnel formation excavation	4	25-Aug-16 A	03-Sep-16	-185
SIIA 13180	Sec II A - CWB CW outside Concrete Plug: Exhaust duct formation excavation	5	05-Sep-16	09-Sep-16	-185
SIIA 13200	Sec II A - CWB CW outside Concrete Plug: blinding layer and remove diagonal struts & sheetpile	16	10-Sep-16	25-Sep-16	-185
CWB C(W) - Tunnel Structure					
SIIA12160	Sec II A - CWB CW: Construct Bay 1 - Base Slab	12	27-Sep-16	08-Oct-16	-186
SIIA12180	Sec II A - CWB CW: Remove Struts S2 & S3	6	13-Oct-16	18-Oct-16	-186
SIIA12300	Sec II A - CWB CW: Construct Bay 1 - Wall	8	08-Nov-16	15-Nov-16	-186
SIIA12320	Sec II A - CWB CW: Construct Bay 1 - OHVD	10	18-Nov-16	27-Nov-16	-186
SIIA12340	Sec II A - CWB CW: Construct Bay 1 - Top Slab	10	28-Nov-16	07-Dec-16	-186
SIIA12380	Sec II A - CWB CW: Construct Bay 2b - Exhaust duct base slab	9	17-Sep-16	25-Sep-16	-165
SIIA12400	Sec II A - CWB CW: Construct Bay 2b - Exhaust duct wall	8	26-Sep-16	03-Oct-16	-165
SIIA12420	Sec II A - CWB CW: Construct Bay 2b - Tunnel base slab	13	04-Oct-16	16-Oct-16	-165
SIIA12460	Sec II A - CWB CW: Construct Bay 2b - B1/F slab	8	27-Oct-16	03-Nov-16	-136
SIIA12480	Sec II A - CWB CW: Construct Bay 2b - B1/F wall	9	04-Nov-16	12-Nov-16	-136
SIIA12520	Sec II A - CWB CW: Construct Bay 2b - B1/F roof slab	11	13-Nov-16	23-Nov-16	-136
SIIA12640	Sec II A - CWB CW: Construct Bay 2a & 2b - Wall	8	17-Oct-16	24-Oct-16	-165
SIIA12700	Sec II A - CWB CW: Construct Bay 2a & 2b - OHVD	10	27-Oct-16	05-Nov-16	-165
SIIA12720	Sec II A - CWB CW: Construct Bay 2a & 2b - Roof Slab	11	06-Nov-16	16-Nov-16	-165
CWB C(W) - Other Works					
SIIA12200	Sec II A - CWB CW: Cut Down Dwall Head	21	08-Dec-16	28-Dec-16	-142
SIIA12220	Sec II A - CWB CW: backfill to +4.0mPD	52	08-Dec-16	28-Jan-17	-150
CWB C(W) - Associated Facilities					
SIIA14040	Sec II A - CWB CW: Civil Provisions - lay screeding	6	08-Dec-16	13-Dec-16	-186
SIIA14220	Sec II A - CWB CW: Civil Provisions - cast cable trough	7	14-Dec-16	20-Dec-16	-186
CWB C (E)					
CWB C(E) - ELS & Tunnel Structure					
CWB C(E) - ELS					
CWB C(E) - ELS - Bay 2 & 3					
SIIA15600	Sec II A - CWB CE: Demolish Bulkhead at C1 Interface	19	31-Aug-16	18-Sep-16	-166
CWB C(E) - Tunnel Structure					
SIIA13255	Sec II A - CWB CE: Construct Bay 1 - Wall	46	26-Aug-16 A	15-Oct-16	-164
SIIA13275	Sec II A - CWB CE: Construct Bay 1 - OHVD	14	18-Oct-16	31-Oct-16	-164
SIIA13295	Sec II A - CWB CE: Construct Bay 1 - Roof Slab	13	01-Nov-16	13-Nov-16	-164
SIIA13315	Sec II A - CWB CE: Construct Bay 2 - Wall	31	30-Aug-16 A	30-Sep-16	-151
SIIA13335	Sec II A - CWB CE: Construct Bay 2 - OHVD	14	03-Oct-16	16-Oct-16	-151

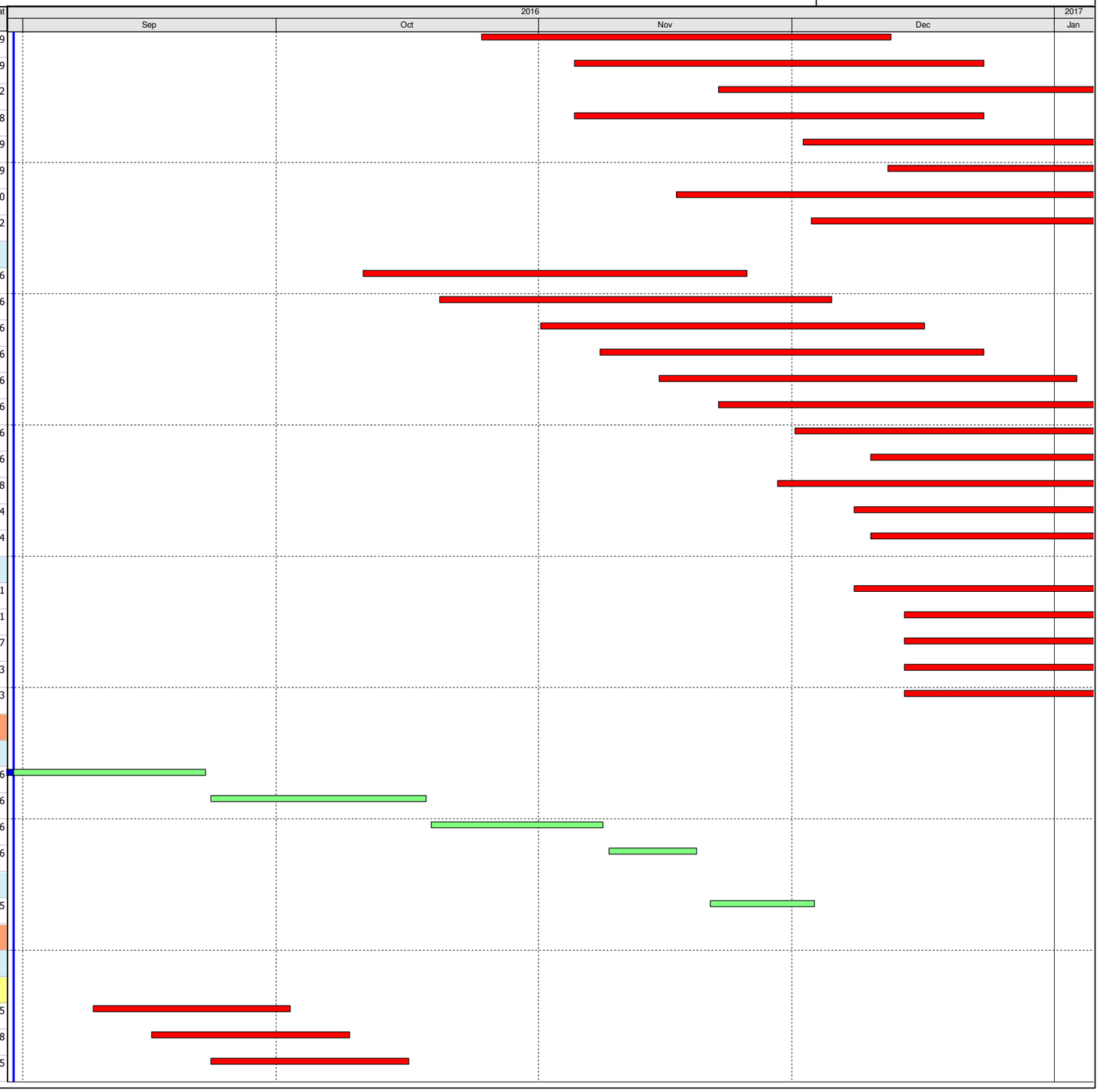
Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
SIIA13355	Sec II A - CWB CE: Construct Bay 2 - Roof Slab	15	17-Oct-16	31-Oct-16	-151
SIIA13375	Sec II A - CWB CE: Construct Bay 3 - Base Slab	8	19-Sep-16	26-Sep-16	-166
SIIA13395	Sec II A - CWB CE: Remove Strut S2 & S3 (for Bay 3)	5	27-Sep-16	01-Oct-16	-166
SIIA13415	Sec II A - CWB CE: Construct Bay 3 - Wall	22	02-Oct-16	23-Oct-16	-166
SIIA13435	Sec II A - CWB CE: Construct Bay 3 - OHVD	11	26-Oct-16	05-Nov-16	-166
SIIA13455	Sec II A - CWB CE: Construct Bay 3 - Roof Slab	10	06-Nov-16	15-Nov-16	-166
	CWB C(E) - Other Works				
SIIA13300	Sec II A - CWB CE: Dismantle Scaffolding	24	16-Nov-16	09-Dec-16	-123
SIIA13320	Sec II A - CWB CE: Cut Down Dwall Head	45	16-Nov-16	30-Dec-16	-144
SIIA13325	Sec II A - CWB CE: backfill to +4.0mPD	47	16-Nov-16	01-Jan-17	-146
	CWB C(E) - Associated Facilities				
SIIA14222	Sec II A - CWB CE: Civil Provisions - lay screeding	7	16-Nov-16	22-Nov-16	-166
SIIA14280	Sec II A - CWB CE: Civil Provisions - cast cable trough	8	23-Nov-16	30-Nov-16	-166
	CWB C - Exhaust Duct				
	CWB C - Exhaust Duct Temp Work & ELS				
SIIA12900	Sec II A - Exhaust Duct at Slip Rd3: Excavation & Shoring - Bay 1	20	19-Sep-16*	08-Oct-16	-165
SIIA12910	Sec II A - Exhaust Duct at Slip Rd3: Excavation & Shoring - Bay 2	15	19-Sep-16	03-Oct-16	-150
SIIA12920	Sec II A - Exhaust Duct at Slip Rd3: Excavation & Shoring - Bay 3	10	07-Oct-16	16-Oct-16	-150
	CWB C - Exhaust Duct Structural Work				
SIIA12938	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 1 - base slab	5	09-Oct-16	13-Oct-16	-165
SIIA12939	Sec II A - Exhaust Duct at Slip Rd 3: Demolish bulkhead between MVB south and exhaust duct	21	19-Oct-16	08-Nov-16	-165
SIIA12940	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 1 - wall	13	09-Nov-16	21-Nov-16	-165
SIIA13480	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 1 - roof slab	8	22-Nov-16	29-Nov-16	-165
SIIA13520	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 2 - base slab	5	04-Oct-16	08-Oct-16	-122
SIIA13540	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 2 - wall & roof slab	9	09-Oct-16	17-Oct-16	-122
SIIA13560	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 3 - base slab	5	17-Oct-16	21-Oct-16	-150
SIIA13575	Sec II A - Exhust Duct at Slaip Rd 3: Demolish bulkhead at C1	15	22-Oct-16	05-Nov-16	-150
SIIA13960	Sec II A - Exhaust Duct at Slip Rd3: Construt Bay 3 - wall & roof slab	9	06-Nov-16	14-Nov-16	-150
	CWB C - Exhaust Duct Others				
SIIA12950	Sec II A - Exhaust Duct at Slip Rd3: curing and dismantle formwork / falsework	12	15-Nov-16	26-Nov-16	-93
SIIA12952	Sec II A - Exhaust Duct at Slip Rd3: Backfilling	15	18-Nov-16	02-Dec-16	-93
	CWB D - Slip Road 1				
	CWB D - Slip Road 1 - ELS & Tunnel Structure				
	CWB D - Slip Road 1 - ELS				
	CWB D - SR1 - ELS - Bay 1 & 2				
SIIA 12582	Sec II A - CWB SR1 Concrete Plug: Saw cut to formation	26	31-Aug-16	25-Sep-16	-172
SIIA 12584	Sec II A - CWB SR1 Concrete Plug: Remove concrete bulkhead	26	26-Sep-16	21-Oct-16	-172
SIIA 12622	Sec II A - CWB SR1 Bay 1&2: 2nd layer excavation & strutting	9	24-Aug-16 A	08-Sep-16	-142
SIIA 12642	Sec II A - CWB SR1 Bay 1&2: Formation excavation	9	09-Sep-16	17-Sep-16	-142
	CWB D - SR1 - ELS - Bay 3				



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
SIIA 12590	Sec II A - CWB SR1 Bay 3: Blinding Layer	3	31-Aug-16	02-Sep-16	-151
CWB D - Slip Road 1 - Tunnel Structure					
SIIA13060	Sec II A - CWB SR1: Construct Bay 1 - Base Slab	13	22-Oct-16	03-Nov-16	-172
SIIA13070	Sec II A - CWB SR1: Remove Strut S1 & S2	5	07-Nov-16	11-Nov-16	-172
SIIA13080	Sec II A - CWB SR1: Construct Bay 1 - Roof Slab	13	12-Nov-16	24-Nov-16	-172
SIIA13220	Sec II A - CWB SR1: Construct Bay 2 - Base Slab	15	18-Sep-16	02-Oct-16	-142
SIIA13230	Sec II - CWB SR1: Remove Strut S1 & S2	4	06-Oct-16	11-Oct-16	-118
SIIA13240	Sec II A - CWB SR1: Construct Bay 2 - Roof Slab	16	12-Oct-16	27-Oct-16	-144
SIIA13260	Sec II A - CWB SR1: Construct Bay 3 - Trough Base Slab	7	03-Sep-16	09-Sep-16	-151
SIIA13280	Sec II A - CWB SR1: Construct Bay 3 - Trough Wall	7	18-Sep-16	24-Sep-16	-151
SIIA13380	Sec II A - CWB SR1: Construct Bay 3 - Base Slab	14	25-Sep-16	08-Oct-16	-151
SIIA13440	Sec II A - CWB SR1: Construct Bay 3 - Roof Slab	18	17-Oct-16	03-Nov-16	-151
SIIA13460	Sec II A - CWB SR1: Construct Bay 4 - Roof Slab	18	17-Oct-16	03-Nov-16	-151
SIIA13940	Sec II A - CWB SR1: Cut Down Dwall Head	55	25-Nov-16	18-Jan-17	-120
CWB D - Associated Facilities					
SIIA12580	Sec II A - CWB SR1: Civil Provisions - lay screeding	7	25-Nov-16	01-Dec-16	-172
SIIA14000	Sec II A - CWB SR1: Civil Provisions - cast cable trough	8	29-Nov-16	06-Dec-16	-172
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	13	05-Sep-16*	17-Sep-16	-157
SIIA12780	Sec II A - CWB SR1 Trough & RW: Excavation & Shoring	23	18-Sep-16	10-Oct-16	-157
CWB D - Slip Road 1 - Trough/Retaining Wall Structure					
SIIA12800	Sec II A - CWB SR1 Trough & RW: Trough Structure (bay 1)	12	11-Oct-16	22-Oct-16	-157
SIIA13720	Sec II A - CWB SR1 Trough & RW: Trough Structure (bay 2)	12	23-Oct-16	03-Nov-16	-157
SIIA13740	Sec II A - CWB SR1 Trough & RW: Trough Structure (bay 3)	12	29-Oct-16	09-Nov-16	-157
SIIA13760	Sec II A - CWB SR1 Trough & RW: construct upstand wall along top of Trough Structure	12	03-Nov-16	14-Nov-16	-157
SIIA13780	Sec II A - CWB SR1 Trough & RW: install waling	7	15-Nov-16	21-Nov-16	-157
SIIA13800	Sec II A - CWB SR1 Trough & RW: Retaining Walls RW3 (bay 1)	12	25-Oct-16	05-Nov-16	-152
SIIA13820	Sec II A - CWB SR1 Trough & RW: Retaining Walls RW3 (bay 2)	12	05-Nov-16	16-Nov-16	-152
SIIA13840	Sec II A - CWB SR1 Trough & RW: Retaining Walls RW3 (bay 3)	12	25-Oct-16	05-Nov-16	-152
SIIA13860	Sec II A - CWB SR1 Trough & RW: Retaining Walls RW4 (bay 1)	12	05-Nov-16	16-Nov-16	-152
CWB D - Slip Road 1 - Trough/ Retaining Wall Other Works					
SIIA13865	Sec II A - CWB SR1: backfill to +4.0mPD	38	17-Nov-16	03-Jan-17	-111
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	31-Aug-16	21-Oct-16	-69
SIIIA10280	Sec III A - roadwork and utilities (Zone A1) - storm water drain & sub-soil drain	42	09-Sep-16	31-Oct-16	-69
SIIIA10300	Sec III A - roadwork and utilities (Zone A1) - Fresh watermain & Irrigation Mains	42	22-Sep-16	11-Nov-16	-69
SIIIA10320	Sec III A - roadwork and utilities (Zone A1) - Gas main	42	05-Oct-16	23-Nov-16	-69
SIIIA10340	Sec III A - roadwork and utilities (Zone A1) - HEC	42	15-Oct-16	02-Dec-16	-69



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
SIIIA10360	Sec III A - roadwork and utilities (Zone A1) - sub-base	42	25-Oct-16	12-Dec-16	-69
SIIIA10380	Sec III A - roadwork and utilities (Zone A1) - road kerb	42	05-Nov-16	23-Dec-16	-69
SIIIA10400	Sec III A - roadwork and utilities (Zone A1) - flexible pavement	42	22-Nov-16	12-Jan-17	-62
SIIIA10420	Sec III A - roadwork and utilities (Zone A1) - construct u-channel	42	05-Nov-16	23-Dec-16	-58
SIIIA10440	Sec III A - roadwork and utilities (Zone A1) - pave footpath concrete	42	02-Dec-16	23-Jan-17	-69
SIIIA10460	Sec III A - roadwork and utilities (Zone A1) - Road Lighting, TCSS Ducts &Traffic Signs	40	12-Dec-16	03-Feb-17	-69
SIIIA10480	Sec III A - roadwork and utilities (Zone A1) - lay footpath paving block	45	17-Nov-16	11-Jan-17	-60
SIIIA10500	Sec III A - roadwork and utilities (Zone A1) - Road sign and road marking	40	03-Dec-16	21-Jan-17	-62
Roadwork & Utilities at A2					
SIIIA10580	Sec III A - roadwork and utilities (Zone A2) - Backfill to pavement founding level	40	11-Oct-16	25-Nov-16	-76
SIIIA10600	Sec III A - roadwork and utlities (Zone A2) - storm water drain & sub-soil drain	40	20-Oct-16	05-Dec-16	-76
SIIIA10620	Sec III A - roadwork and utilities (Zone A2) - Fresh watermain & Irrigation Mains	40	01-Nov-16	16-Dec-16	-76
SIIIA10640	Sec III A - roadwork and utilities (Zone A2) - Gas main	40	08-Nov-16	23-Dec-16	-76
SIIIA10660	Sec III A - roadwork and utilities (Zone A2) - HEC	40	15-Nov-16	03-Jan-17	-76
SIIIA10680	Sec III A - roadwork and utilities (Zone A2) - sub-base	40	22-Nov-16	10-Jan-17	-76
SIIIA10700	Sec III A - roadwork and utilities (Zone A2) - road kerb	40	01-Dec-16	19-Jan-17	-76
SIIIA10720	Sec III A - roadwork and utilities (Zone A2) - flexible pavement	50	10-Dec-16	14-Feb-17	-76
SIIIA10740	Sec III A - roadwork and utilities (Zone A2) - construct u-channel	50	29-Nov-16	02-Feb-17	-68
SIIIA10760	Sec III A - roadwork and utilities (Zone A2) - pave footpath concrete	40	08-Dec-16	26-Jan-17	-74
SIIIA10800	Sec III A - roadwork and utilities (Zone A2) - lay footpath paving block	40	10-Dec-16	02-Feb-17	-74
Roadwork & Utilities at D					
SIIIA11090	Sec III A - roadwork and utlities (Zone D) - backfill to pavement founding level	50	08-Dec-16	11-Feb-17	-111
SIIIA11100	Sec III A - roadwork and utlities (Zone D) - storm water drain & sub-soil drain	50	14-Dec-16	17-Feb-17	-111
SIIIA11110	Sec III A - roadwork and utilities (Zone D) - Fresh watermain & Irrigation Mains	50	14-Dec-16	17-Feb-17	-107
SIIIA11120	Sec III A - roadwork and utilities (Zone D) - Gas main	50	14-Dec-16	17-Feb-17	-103
SIIIA11130	Sec III A - roadwork and utilities (Zone D) - HEC	50	14-Dec-16	17-Feb-17	-103
Box Culvert L1 & FRP-L - Bay 8					
Box Culvert L1 & FRP-L - Bay 8 Structure					
CUL11320	Culvert L - bay 8 - construct pile cap	23	25-Jul-16 A	22-Sep-16	6
CUL11322	Culvert L - bay 8 - construct base slab	26	23-Sep-16	18-Oct-16	6
CUL11326	Culvert L - Bay 8 - construct wall	21	19-Oct-16	08-Nov-16	6
CUL11328	Culvert L - bay 8 - construt top slab	11	09-Nov-16	19-Nov-16	6
Box Culvert L1 & FRP-L - Bay 8 Others					
CUL11340	Culvert L - bay 8 - backfill above box section	12	21-Nov-16	03-Dec-16	5
Section VI D - Area 8B & 10					
WDII Box 1 Construction					
WDII Box 1 Existing Pile Head and Dry Dock					
WD-C3054	Sec VID - Install rebar & formwork at Wall 12	24	09-Sep-16*	02-Oct-16	-175
WD-C3056	Sec VID - Install rebar & formwork at Wall BH	24	16-Sep-16	09-Oct-16	-168
WD-C3058	Sec VID - Install rebar & formwork at Wall 15 & 16	24	23-Sep-16	16-Oct-16	-175



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
WD-C3072	Sec VID - Formwork striking, tie bolt hole and waterproofing	20	18-Aug-16 A	19-Sep-16	-178
WD-C3092	Sec VID - Install internal strutting S1	9	22-Sep-16	30-Sep-16	-178
WD-C3112	Sec VID - Install buoyancy tank	9	01-Oct-16	09-Oct-16	-178
WD-C3132	Sec VID - Install ballast tanks inside precast box I and internal strut S2	10	10-Oct-16	19-Oct-16	-178
WDII Box 1 ELS					
WD-C3998	Sec VIC - Install middle strut S2 at -6.5mPD	14	30-Aug-16 A	13-Sep-16	-179
WD-C4060	Sec VIC - Excavation of rock fill down to -11.5mPD	8	14-Sep-16	21-Sep-16	-179
WD-C4070	Sec VIC - Install waling WB4 at -10.6mPD	7	22-Sep-16	28-Sep-16	-179
WD-C4080	Sec VIC - 3rd Layer of Strut	9	29-Sep-16	07-Oct-16	-179
WD-C4120	Sec VIC - Joint Survey of excavated level	2	08-Oct-16	09-Oct-16	-179
WD-C4140	Sec VIC - Tremie concrete at bottom level	5	10-Oct-16	14-Oct-16	-179
WD-C4160	Sec VIC - Joint Survey of concrete level	2	15-Oct-16	16-Oct-16	-179
WD-C4180	Sec VIC - Remove Strut S2	2	17-Oct-16	18-Oct-16	-179
WD-C4190	Sec VIC - Cut bored pile casing	2	19-Oct-16	20-Oct-16	-179
WDII Box 1 Bottom Slab					
WD-C5040	Sec VI D - tow bottom slab to position	2	21-Oct-16	22-Oct-16	-179
WDII Box 1 Remaining Structure					
WD-C6040	Sec VID - Concreting Wall 12, 13, 15 & 16 and Wall BH	4	23-Oct-16	26-Oct-16	-179
WD-C6060	Sec VID - Construct roof slab	10	27-Oct-16	05-Nov-16	-179
WD-C6080	Sec VID - Extension of sacarifical wall (2.3m)	17	06-Nov-16	22-Nov-16	-179
WD-C6100	Sec VID - Balasting and final sink Box I to -10.0mPD	3	23-Nov-16	25-Nov-16	-179
WD-C6120	Sec VID - Constrcut remaining roof slab	8	26-Nov-16	03-Dec-16	-179
WD-C6140	Sec VID - Backfilling lean concreting to -6.5mPD	3	04-Dec-16	06-Dec-16	-179
WD-C6160	Sec VID - Remove ELS and cut off pipe pile head	16	07-Dec-16	22-Dec-16	-179
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-Aug-16	-64
SIV11020	Sec IV - Stage 2: Roadwork & Utilities (MH1.3 to MH1.4)	31	01-Sep-16	08-Oct-16	-64
SIV11060	Sec IV - Stage 3: Roadwork & Utilities (MH1.4 to MH1.5)	13	11-Oct-16	25-Oct-16	-64
Section VII - Remainder Works					
Retaining Wall RW5 Construction					
SVII10660	Sec VII - Retaining Wall RW5 (bay 1) - construct base slab and wall	18	07-Nov-16	26-Nov-16	-18
SVII10680	Sec VII - Retaining wall RW5 (bay 2) - construct base slab and wall	18	28-Nov-16	17-Dec-16	-18
SVII10800	Sec VII - Retaining wall RW5 (bay 3) - construct base slab and wall	18	07-Nov-16	26-Nov-16	-18
SVII10820	Sec VII - Retaining wall RW5 (bay 4) - construct base slab and wall	18	28-Nov-16	17-Dec-16	-18
Landing Steps Construction					
Landing Steps BSW13					
SVII10700	Sec VII - Landing steps (BSW13) - construct mass concrete coping	26	05-Dec-16	06-Jan-17	-28
Landing Steps BSW4					
SVII10940	Sec VII - Landing steps (BSW4) - construct mass concrete coping	26	05-Dec-16	06-Jan-17	-28

中國建築-利達聯營
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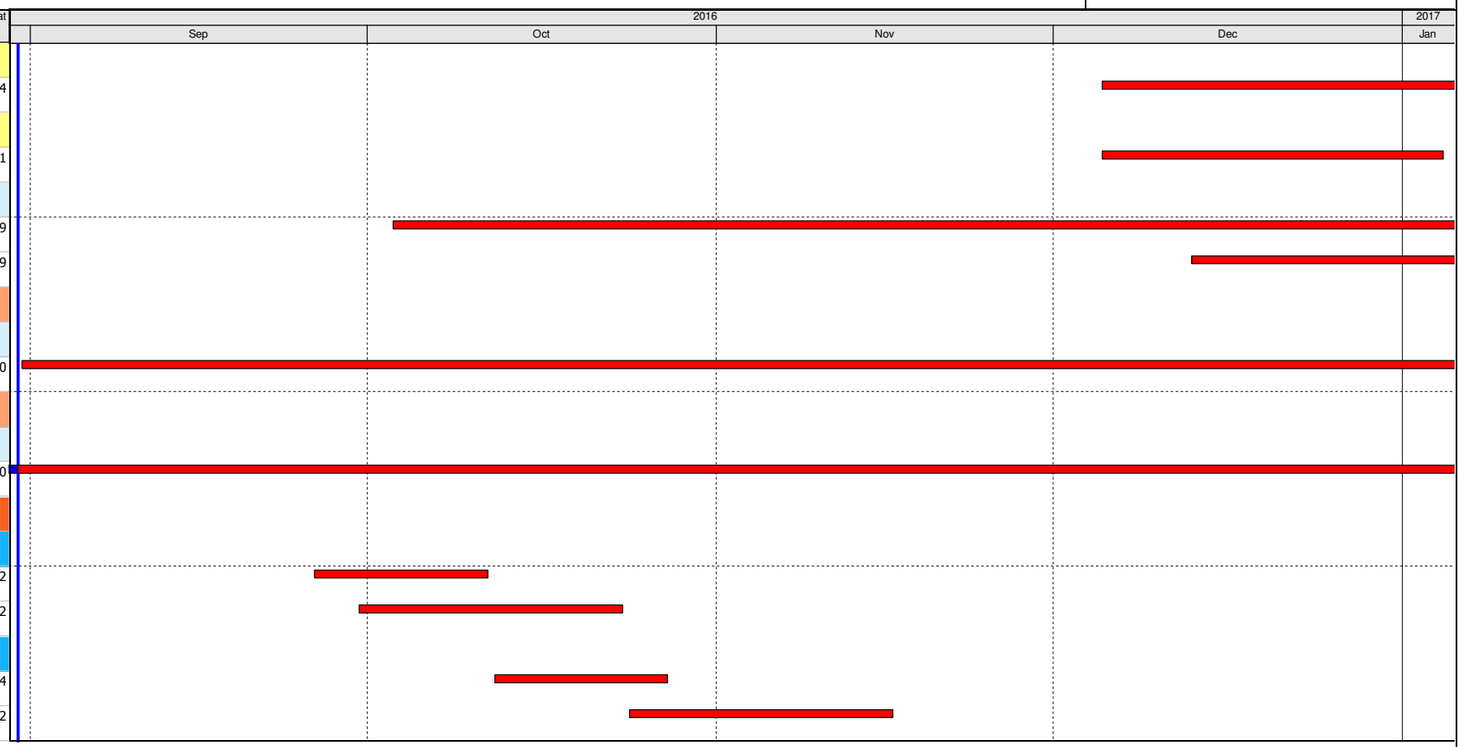
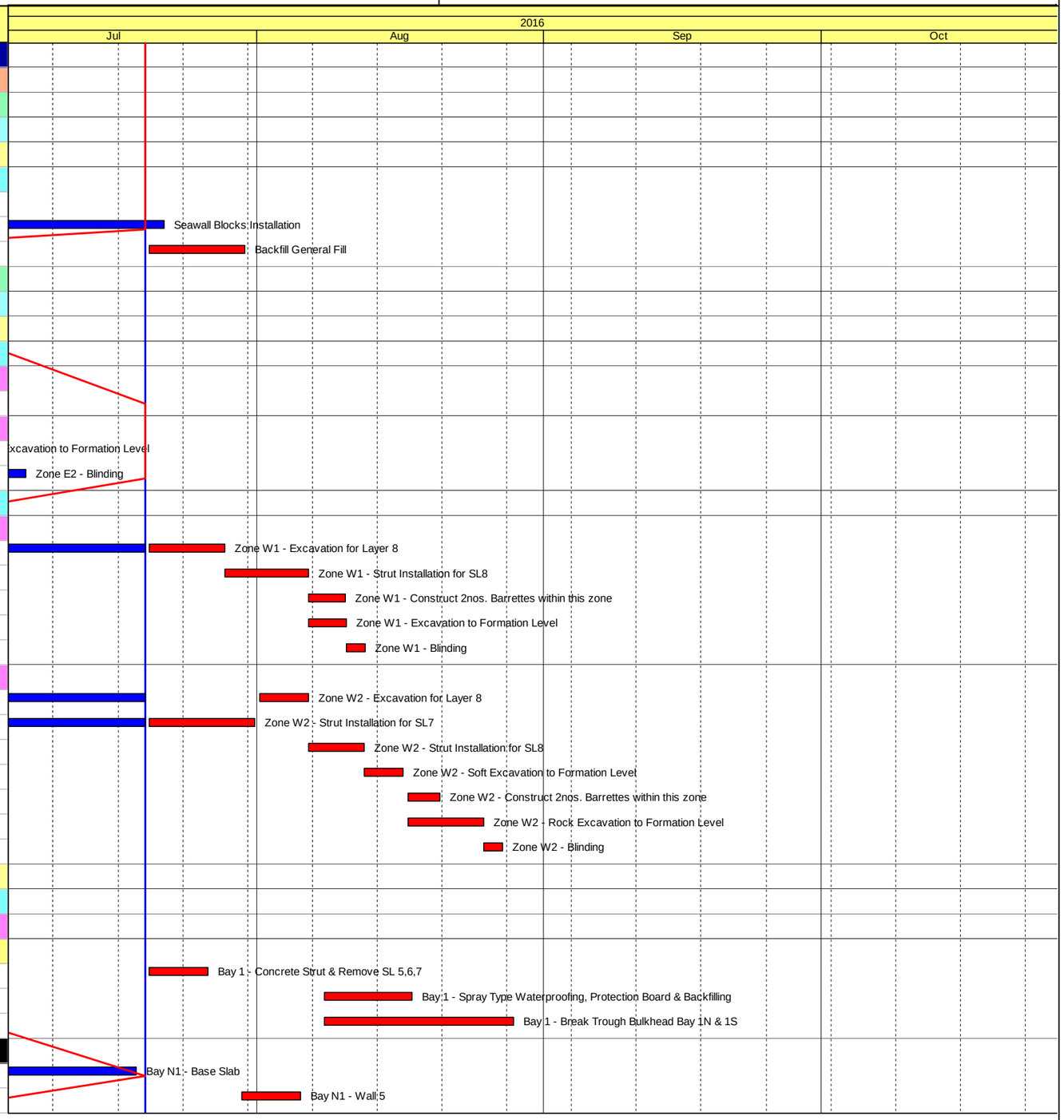
Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Total Float
Landing Steps BSW5					
SVII11020	Sec VII - Landing steps (BSW5) - construct mass concrete coping	26	05-Dec-16	06-Jan-17	-24
Landing Steps BSW9					
SVII11100	Sec VII - Landing steps (BSW9) - construct mass concrete coping	24	05-Dec-16*	04-Jan-17	-21
Promenade Seawall Parapet Construction					
SVII10400	Sec VII - construct block seawall mass concrete coping & backfill to pavement formation	90	03-Oct-16*	19-Jan-17	-9
SVII10600	Sec VII - construct seawall parapet (Zone A1, A2 & B)	90	13-Dec-16	05-Apr-17	-9
Section VIII - Landscape Softworks					
Soft Landscaping Works					
SVIII10040	Sec VIII - Trees Planting	163	31-Aug-16	20-Mar-17	0
Section X - Protection & Preservation of Trees					
Soft Landscaping Works					
SX10020	Sec X - Protection & Preservation of Trees	326	31-Jan-13 A	22-Jul-17	0
VO : Construction of Box 4A & 4B					
Box 4A					
4A10000	Concrete Fill with 300 dia. carrier drain (Approx. 50m)	16	26-Sep-16*	11-Oct-16	-152
4A10020	Internal Suspended Slab & Internal Wall	24	30-Sep-16	23-Oct-16	-152
Box 4B					
4B10000	Concrete Fill with 300 dia. carrier drain (Approx. 50m)	16	12-Oct-16	27-Oct-16	-144
4B10010	Internal Suspended Slab & Internal Wall	24	24-Oct-16	16-Nov-16	-152



Activity ID	Activity Name	Original Duration	Start	Finish
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

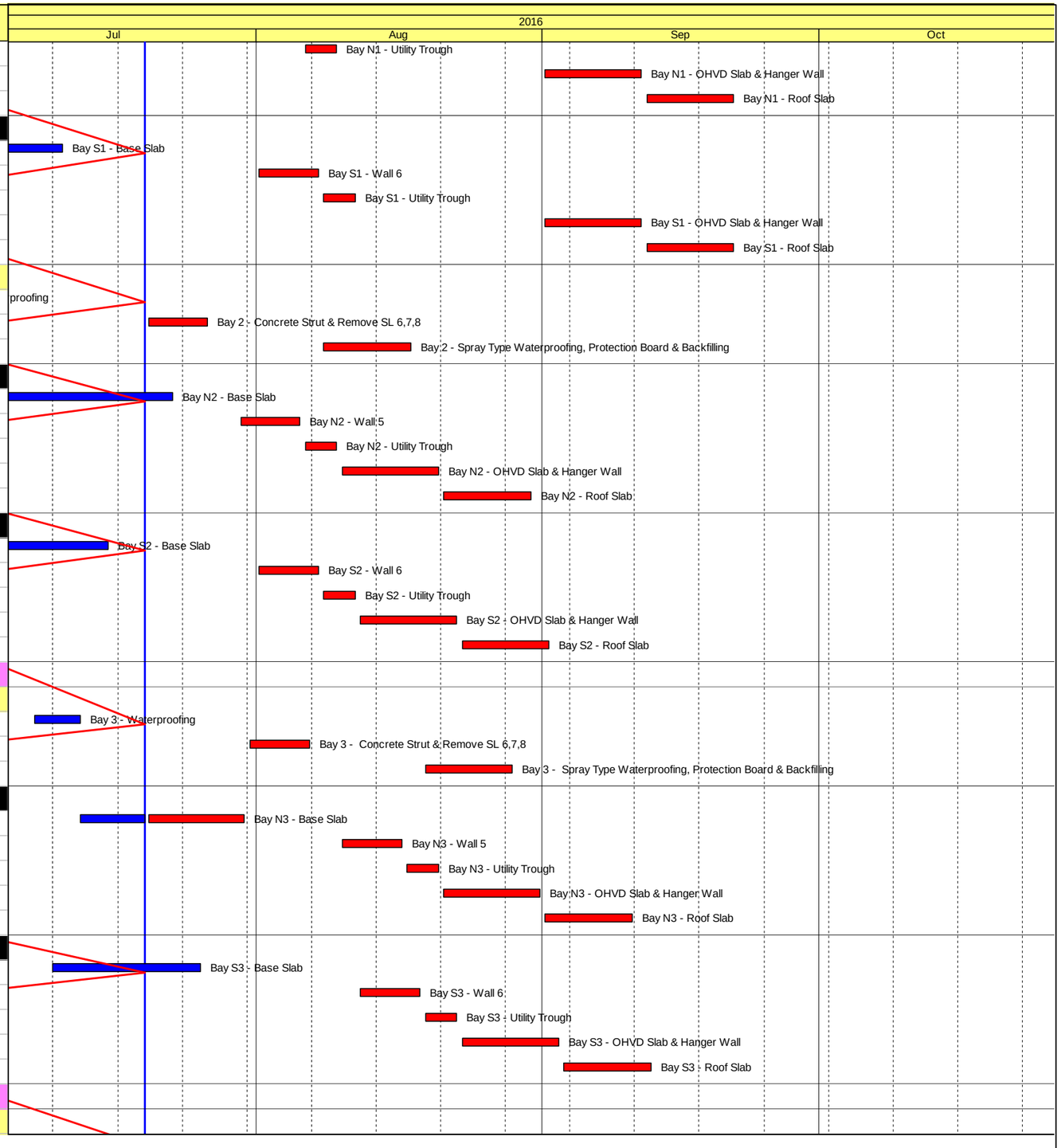


Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract No. HY/2010/08: Central - Wanchai Bypass Tunnel +(Slip Road 8 Section) - 3 Months Rolling Progamme

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

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



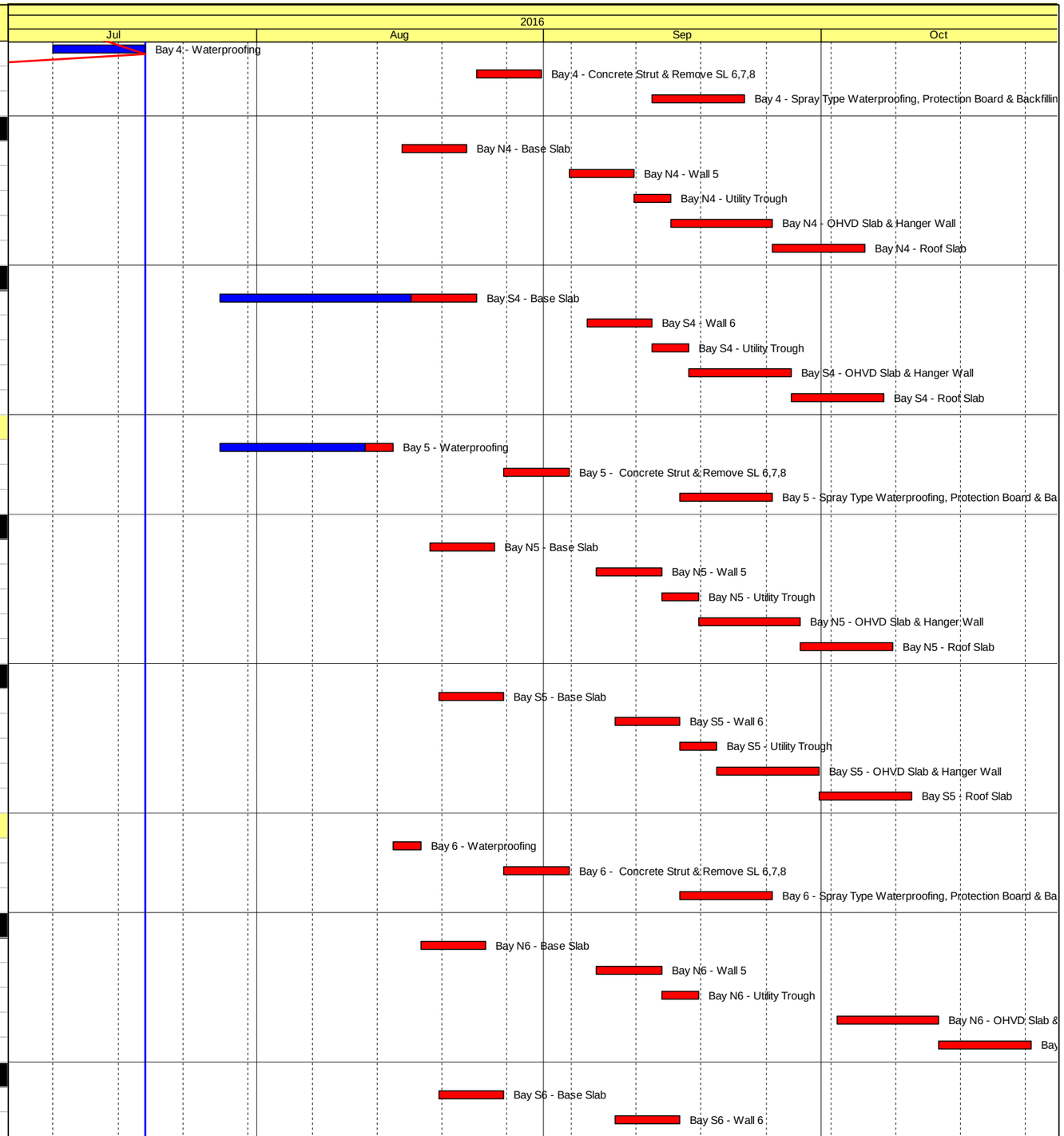
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract No. HY/2010/08: Central - Wanchai Bypass Tunnel +(Slip Road 8 Section) - 3 Months Rolling Progamme

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

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



中國建築工程(香港)有限公司
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Actual Work
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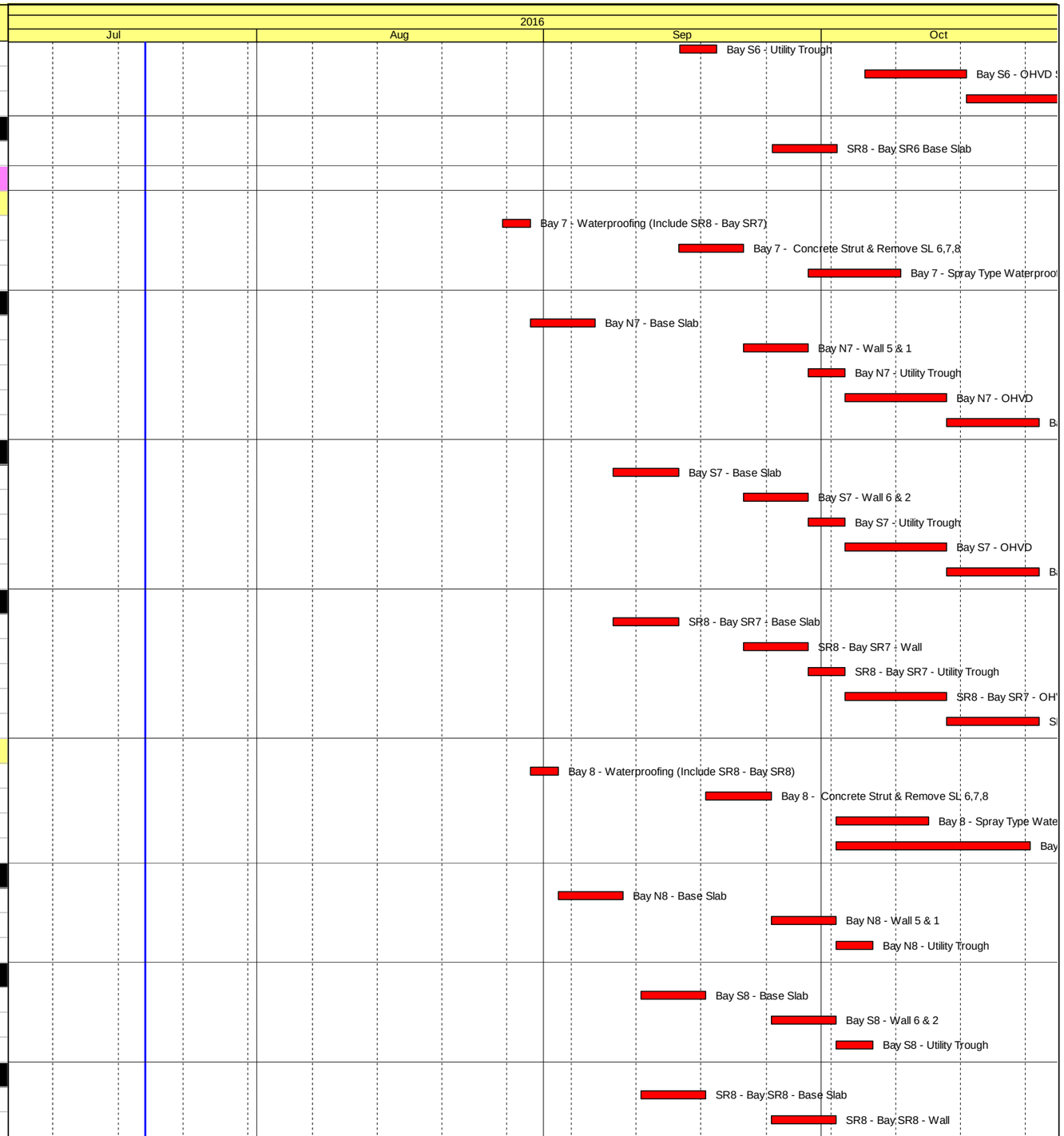
Date	Revision	Checked	Approved
20-Jul-16	Updated to 20th Jul 2016	DML/WC	

Activity ID	Activity Name	Original Duration	Start	Finish
TS3W_2940	Bay S6 - Utility Trough	4d	15-Sep-16	19-Sep-16
TS3W_2950	Bay S6 - OHVD Slab & Hanger Wall	11d	05-Oct-16	16-Oct-16
TS3W_2960	Bay S6 - Roof Slab	10d	16-Oct-16	26-Oct-16
Bay SR6		7d	25-Sep-16	02-Oct-16
SR8_S_1250	SR8 - Bay SR6 Base Slab	7d	25-Sep-16	02-Oct-16
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
TS3W_3230	Bay 7 - Concrete Strut & Remove SL 6,7,8	7d	15-Sep-16	22-Sep-16
TS3W_3240	Bay 7 - Spray Type Waterproofing, Protection Board & Backfilling	10d	29-Sep-16	09-Oct-16
Bay N7		55d	30-Aug-16	24-Oct-16
TS3W_3250	Bay N7 - Base Slab	7d	30-Aug-16	06-Sep-16
TS3W_3260	Bay N7 - Wall 5 & 1	7d	22-Sep-16	29-Sep-16
TS3W_3270	Bay N7 - Utility Trough	4d	29-Sep-16	03-Oct-16
TS3W_3280	Bay N7 - OHVD	11d	03-Oct-16	14-Oct-16
TS3W_3290	Bay N7 - Roof Slab	10d	14-Oct-16	24-Oct-16
Bay S7		46d	08-Sep-16	24-Oct-16
TS3W_3300	Bay S7 - Base Slab	7d	08-Sep-16	15-Sep-16
TS3W_3310	Bay S7 - Wall 6 & 2	7d	22-Sep-16	29-Sep-16
TS3W_3320	Bay S7 - Utility Trough	4d	29-Sep-16	03-Oct-16
TS3W_3330	Bay S7 - OHVD	11d	03-Oct-16	14-Oct-16
TS3W_3340	Bay S7 - Roof Slab	10d	14-Oct-16	24-Oct-16
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_S_1310	SR8 - Bay SR7 - Wall	7d	22-Sep-16	29-Sep-16
SR8_S_1320	SR8 - Bay SR7 - Utility Trough	4d	29-Sep-16	03-Oct-16
SR8_S_1330	SR8 - Bay SR7 - OHVD	11d	03-Oct-16	14-Oct-16
SR8_S_1340	SR8 - Bay SR7 - Roof Slab	10d	14-Oct-16	24-Oct-16
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
TS3W_3410	Bay 8 - Concrete Strut & Remove SL 6,7,8	7d	18-Sep-16	25-Sep-16
TS3W_3420	Bay 8 - Spray Type Waterproofing, Protection Board & Backfilling	10d	02-Oct-16	12-Oct-16
TS3W_3430	Bay 8 - Break Trough Bulkhead Bay 8N, 8S & SR8	21d	02-Oct-16	23-Oct-16
Bay N8		34d	02-Sep-16	06-Oct-16
TS3W_3440	Bay N8 - Base Slab	7d	02-Sep-16	09-Sep-16
TS3W_3450	Bay N8 - Wall 5 & 1	7d	25-Sep-16	02-Oct-16
TS3W_3460	Bay N8 - Utility Trough	4d	02-Oct-16	06-Oct-16
Bay S8		25d	11-Sep-16	06-Oct-16
TS3W_3490	Bay S8 - Base Slab	7d	11-Sep-16	18-Sep-16
TS3W_3500	Bay S8 - Wall 6 & 2	7d	25-Sep-16	02-Oct-16
TS3W_3600	Bay S8 - Utility Trough	4d	02-Oct-16	06-Oct-16
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_S_1360	SR8 - Bay SR8 - Wall	7d	25-Sep-16	02-Oct-16



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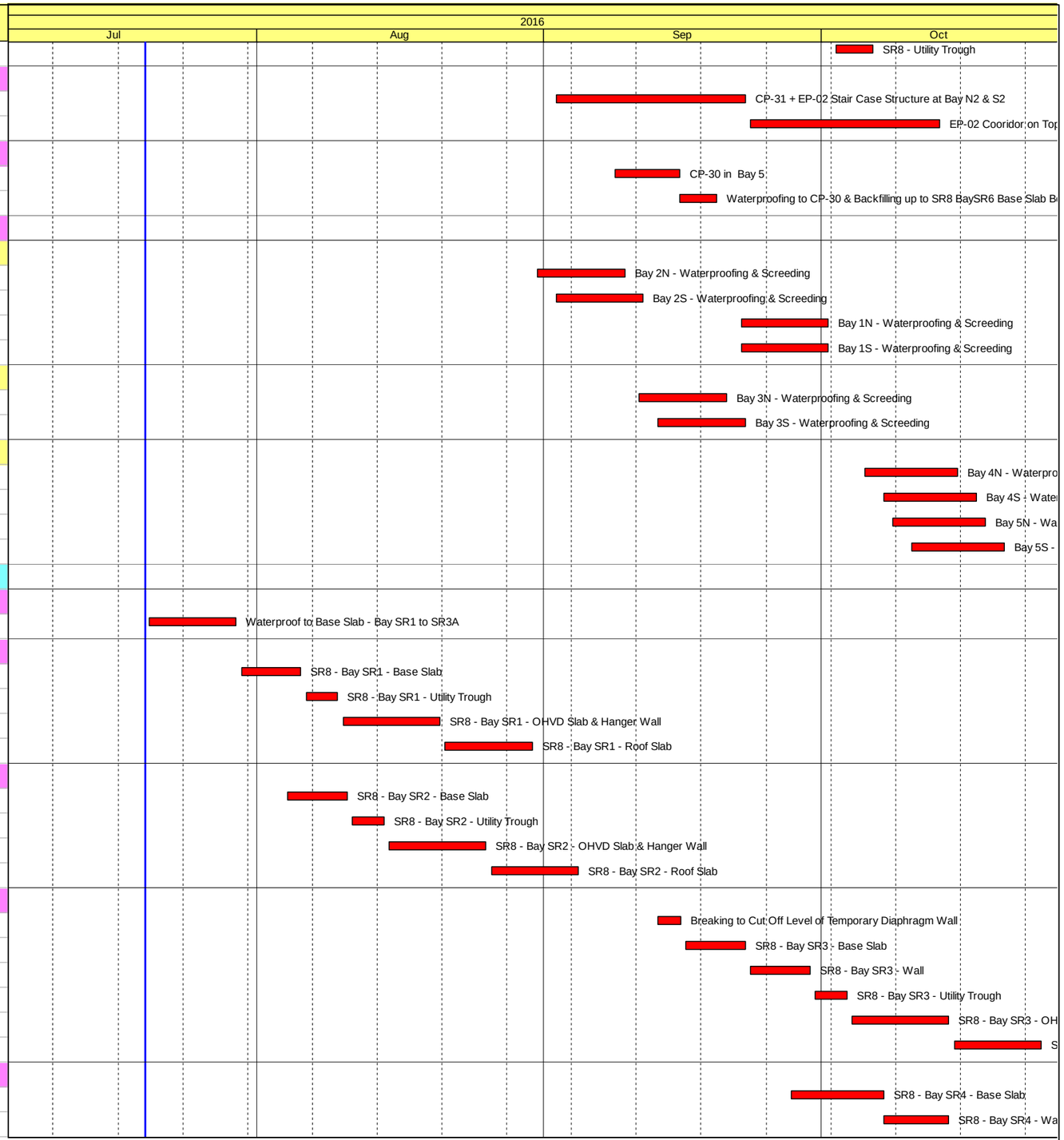
Activity ID	Activity Name	Original Duration	Start	Finish
SR8_S_1370	SR8 - Utility Trough	4d	02-Oct-16	06-Oct-16
Egress Passage (EP-02) & Cross Passage (CP31)		42d	02-Sep-16	13-Oct-16
TS3W_3680	CP-31 + EP-02 Stair Case Structure at Bay N2 & S2	21d	02-Sep-16	22-Sep-16
TS3W_3690	EP-02 Cooridor on Top of S2 & S3 Roof	21d	23-Sep-16	13-Oct-16
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
TS3W_3710	Waterproofing to CP-30 & Backfilling up to SR8 BaySR6 Base Slab Bottom	4d	15-Sep-16	19-Sep-16
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
TS3W_3770	Bay 2S - Waterproofing & Screeding	10d	02-Sep-16	11-Sep-16
TS3W_3740	Bay 1N - Waterproofing & Screeding	10d	22-Sep-16	01-Oct-16
TS3W_3750	Bay 1S - Waterproofing & Screeding	10d	22-Sep-16	01-Oct-16
Zone E2 (Bay 3)		12d	11-Sep-16	22-Sep-16
TS3W_3780	Bay 3N - Waterproofing & Screeding	10d	11-Sep-16	20-Sep-16
TS3W_3790	Bay 3S - Waterproofing & Screeding	10d	13-Sep-16	22-Sep-16
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
TS3W_3810	Bay 4S - Waterproofing & Screeding	10d	07-Oct-16	17-Oct-16
TS3W_3820	Bay 5N - Waterproofing & Screeding	10d	08-Oct-16	18-Oct-16
TS3W_3830	Bay 5S - Waterproofing & Screeding	10d	10-Oct-16	20-Oct-16
SR8 Tunnel		102d	20-Jul-16	29-Oct-16
Waterfroofing 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
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_S_1020	SR8 - Bay SR1 - Utility Trough	4d	06-Aug-16	09-Aug-16
SR8_S_1030	SR8 - Bay SR1 - OHVD Slab & Hanger Wall	11d	10-Aug-16	20-Aug-16
SR8_S_1040	SR8 - Bay SR1 - Roof Slab	10d	21-Aug-16	30-Aug-16
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_S_1060	SR8 - Bay SR2 - Utility Trough	4d	11-Aug-16	14-Aug-16
SR8_S_1070	SR8 - Bay SR2 - OHVD Slab & Hanger Wall	11d	15-Aug-16	25-Aug-16
SR8_S_1080	SR8 - Bay SR2 - Roof Slab	10d	26-Aug-16	04-Sep-16
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
SR8_S_1100	SR8 - Bay SR3 - Base Slab	7d	16-Sep-16	22-Sep-16
SR8_S_1110	SR8 - Bay SR3 - Wall	7d	23-Sep-16	29-Sep-16
SR8_S_1120	SR8 - Bay SR3 - Utility Trough	4d	30-Sep-16	03-Oct-16
SR8_S_1130	SR8 - Bay SR3 - OHVD Slab & Hanger Wall	11d	04-Oct-16	14-Oct-16
SR8_S_1140	SR8 - Bay SR3 - Roof Slab	10d	15-Oct-16	24-Oct-16
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_S_1160	SR8 - Bay SR4 - Wall	7d	07-Oct-16	14-Oct-16



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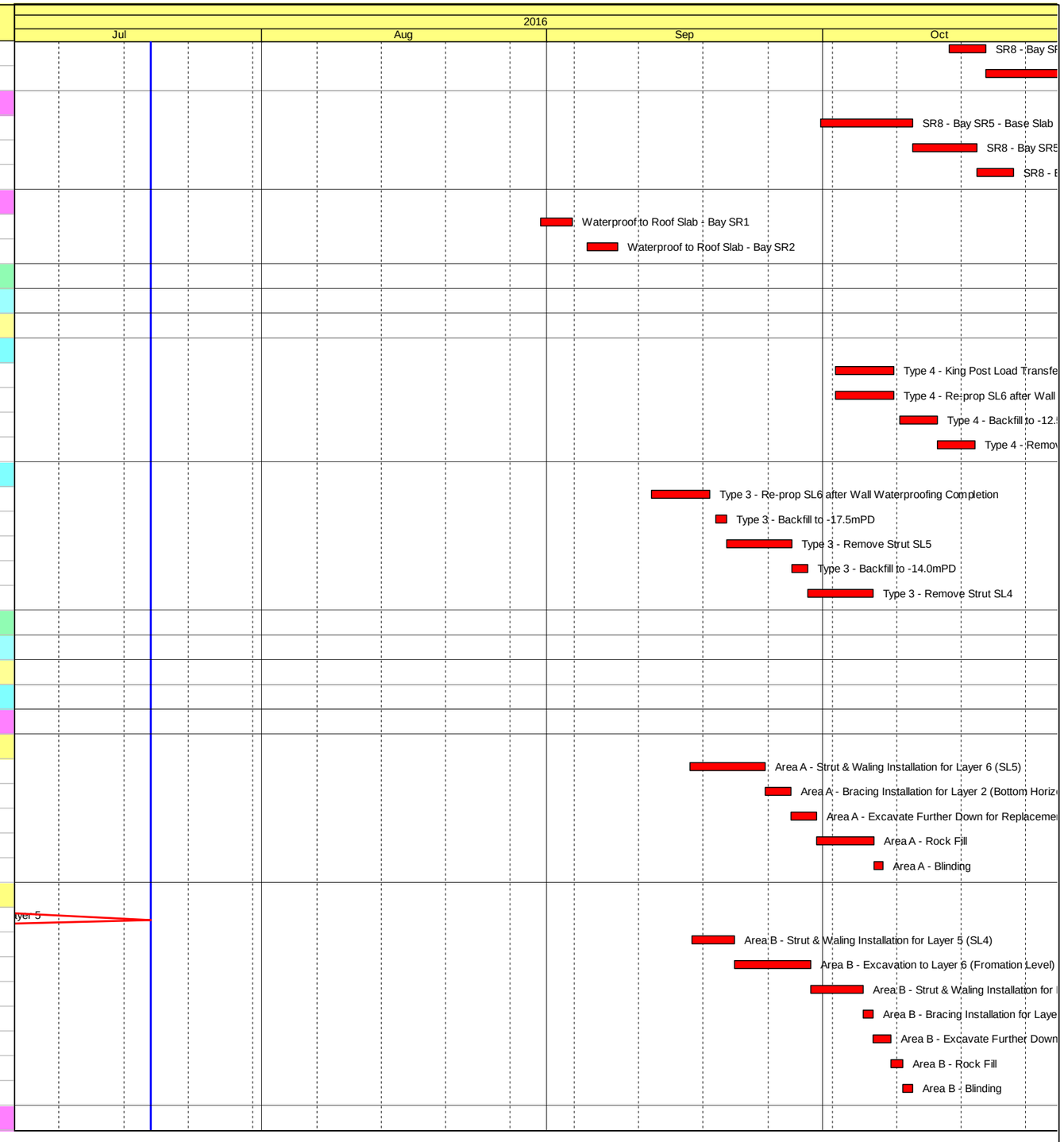
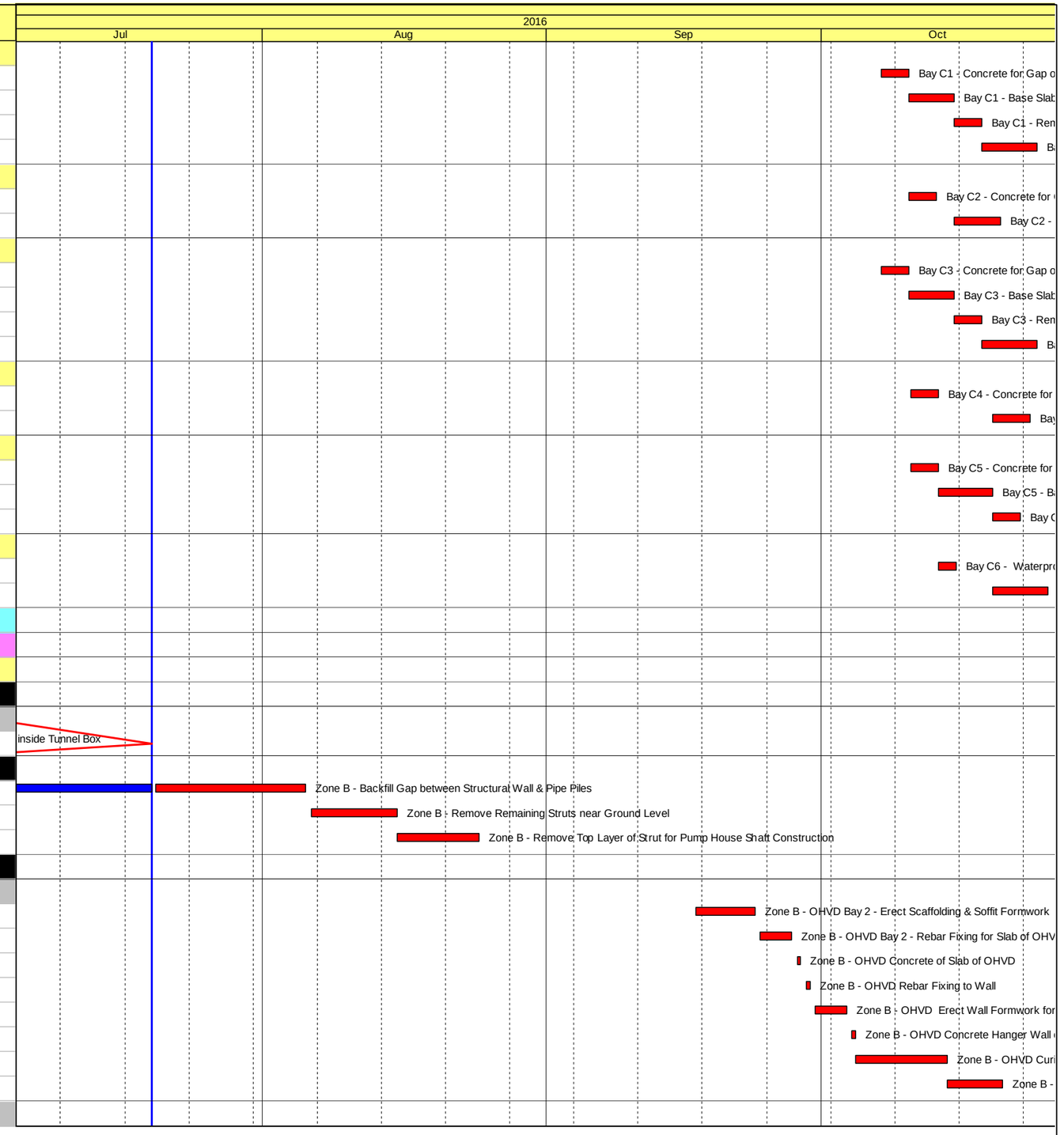
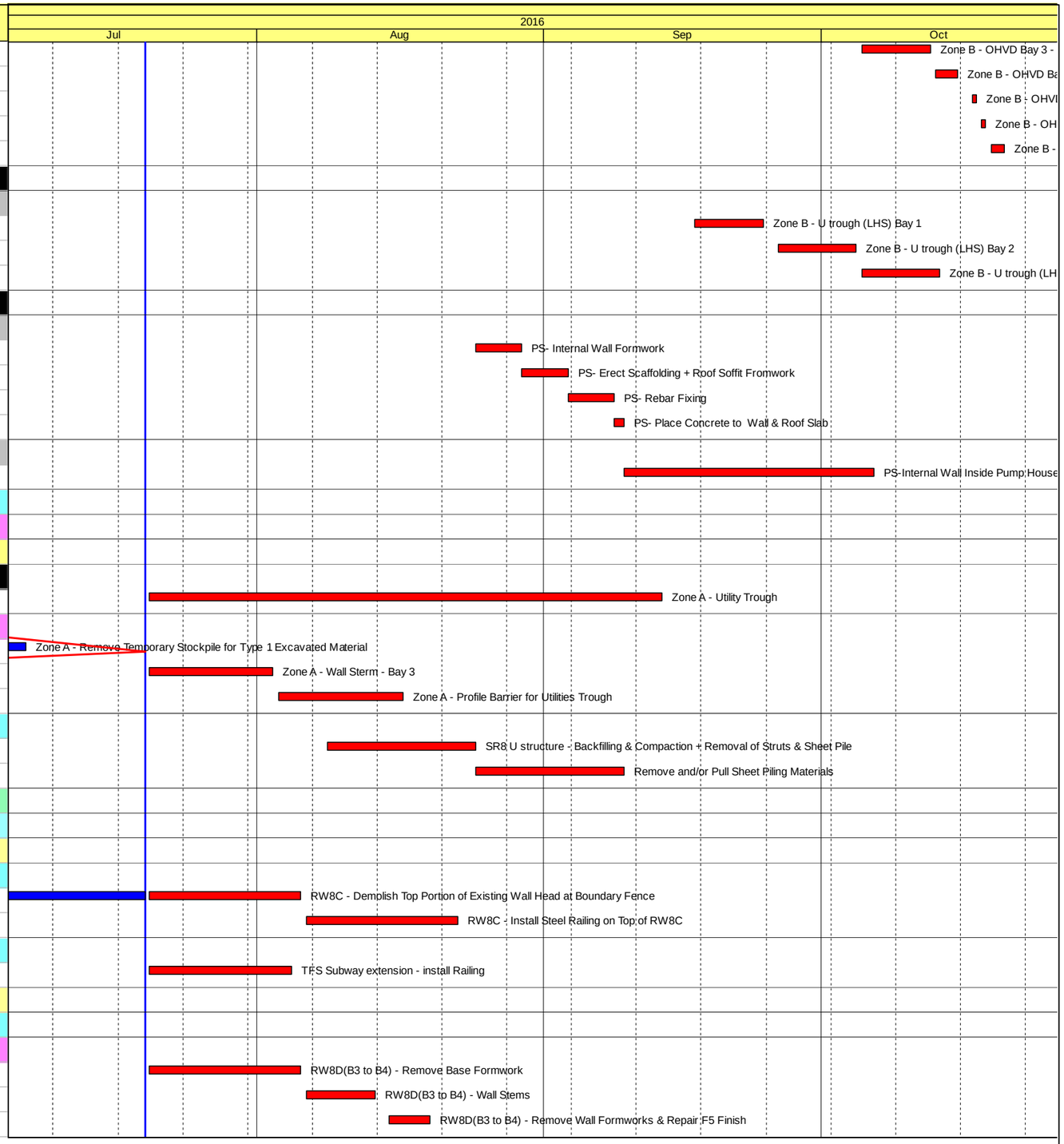
Activity ID	Activity Name	Original Duration	Start	Finish
SR8_S_1170	SR8 - Bay SR4 - Utility Trough	4d	14-Oct-16	18-Oct-16
SR8_S_1180	SR8 - Bay SR4 - OHVD Slab & Hanger Wall	11d	18-Oct-16	29-Oct-16
Bay SR5 (Within Zone W1)		21d	30-Sep-16	21-Oct-16
SR8_S_1200	SR8 - Bay SR5 - Base Slab	10d	30-Sep-16	10-Oct-16
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



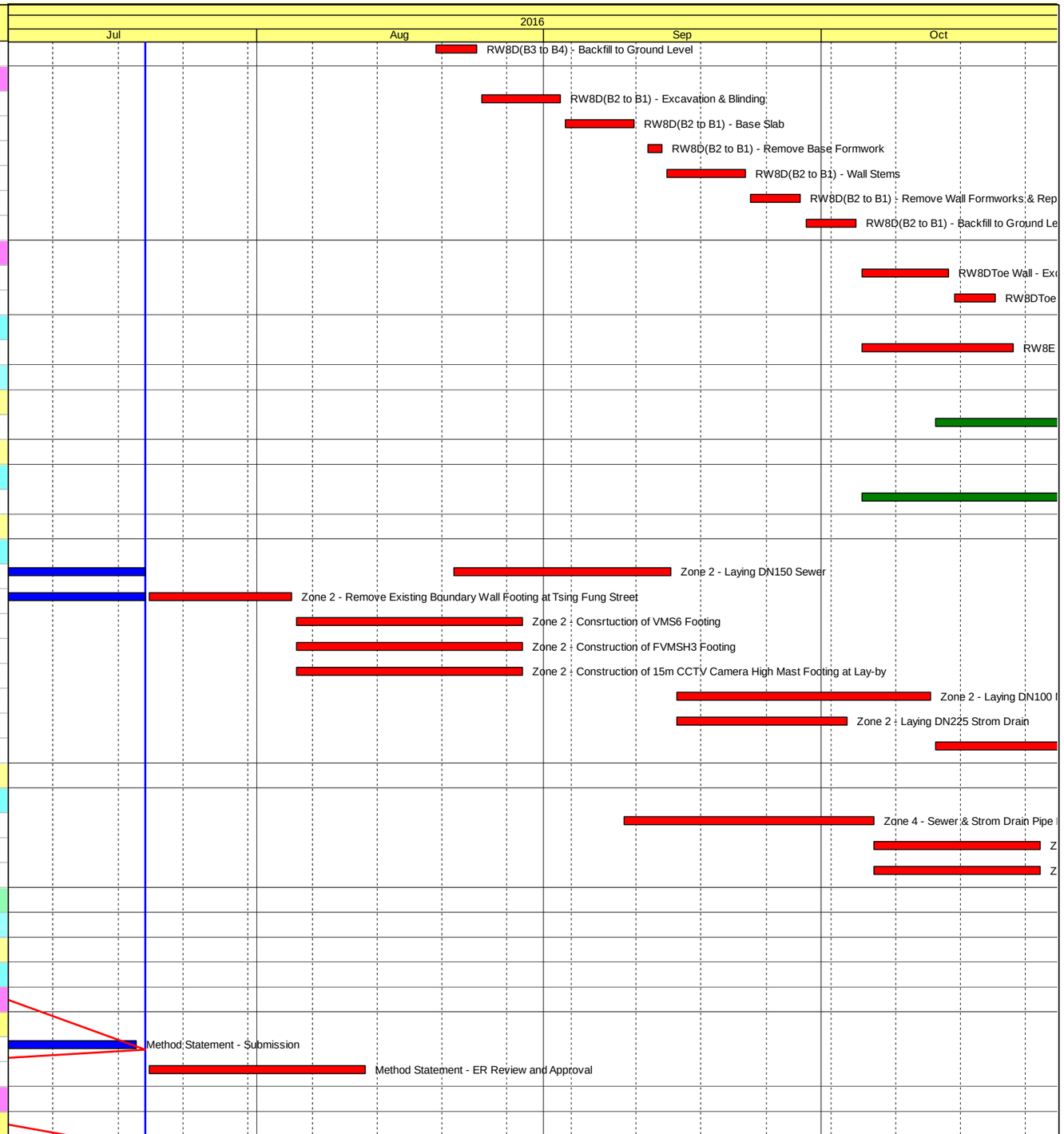
Activity ID	Activity Name	Original Duration	Start	Finish
Bay C1		17d	07-Oct-16	24-Oct-16
SR8_ZC_1430	Bay C1 - Concrete for Gap of Base Slab & Waterproofing	3d	07-Oct-16	10-Oct-16
SR8_ZC_1440	Bay C1 - Base Slab & Drinage Pipe	5d	10-Oct-16	15-Oct-16
SR8_ZC_1450	Bay C1 - Remove Strut SL5	3d	15-Oct-16	18-Oct-16
SR8_ZC_1460	Bay C1 - Install T-Grid Waterproofing for Wall & Vertical Blinding	6d	18-Oct-16	24-Oct-16
Bay C2		10d	10-Oct-16	20-Oct-16
SR8_ZC_1570	Bay C2 - Concrete for Gap of Base Slab & Waterproofing	3d	10-Oct-16	13-Oct-16
SR8_ZC_1580	Bay C2 - Base Slab & Drinage Pipe	5d	15-Oct-16	20-Oct-16
Bay C3		17d	07-Oct-16	24-Oct-16
SR8_ZC_1710	Bay C3 - Concrete for Gap of Base Slab & Waterproofing	3d	07-Oct-16	10-Oct-16
SR8_ZC_1720	Bay C3 - Base Slab & Drinage Pipe	5d	10-Oct-16	15-Oct-16
SR8_ZC_1730	Bay C3 - Remove Strut SL5	3d	15-Oct-16	18-Oct-16
SR8_ZC_1740	Bay C3 - Install T-Grid Waterproofing for Wall & Vertical Blinding	6d	18-Oct-16	24-Oct-16
Bay C4		13d	10-Oct-16	23-Oct-16
SR8_ZC_1850	Bay C4 - Concrete for Gap of Base Slab & Waterproofing	3d	10-Oct-16	13-Oct-16
SR8_ZC_1860	Bay C4 - Base Slab & Drinage Pipe	4d	19-Oct-16	23-Oct-16
Bay C5		12d	10-Oct-16	22-Oct-16
SR8_ZC_2000	Bay C5 - Concrete for Gap of Base Slab & Waterproofing	3d	10-Oct-16	13-Oct-16
SR8_ZC_2010	Bay C5 - Base Slab & Drinage Pipe	6d	13-Oct-16	19-Oct-16
SR8_ZC_2020	Bay C5 - Remove Strut SL5	3d	19-Oct-16	22-Oct-16
Bay C6		12d	13-Oct-16	25-Oct-16
SR8_ZC_2120	Bay C6 - Waterproofing	2d	13-Oct-16	15-Oct-16
SR8_ZC_2130	Bay C6 - Base Slab & Drinage Pipe	6d	19-Oct-16	25-Oct-16
SR8 (Zone B) - Ch.385.000 to Ch.317.500 - (Inside Victoria Park to Tunnel Portal)		185d	19-Apr-16 A	20-Oct-16
SR8 (Zone B) Tunnel - ELS / CCT / BF Works (7 Bays Ch. 385.000 to Ch.317.500)		185d	19-Apr-16 A	20-Oct-16
Portal Structure		185d	19-Apr-16 A	20-Oct-16
Roof Slab Construction		4d	08-Jun-16 A	20-Jun-16 A
Bay B3 (CH351.8 to CH368)		4d	08-Jun-16 A	20-Jun-16 A
SR8_ZB_1340	B3 - Remove Upper Struts inside Tunnel Box	4d	08-Jun-16 A	20-Jun-16 A
Backfill & Remove Struts		128d	19-Apr-16 A	24-Aug-16
SR8_ZB_1350	Zone B - Backfill Gap between Structural Wall & Pipe Piles	4d	19-Apr-16 A	05-Aug-16
SR8_ZB_1360	Zone B - Remove Remaining Struts near Ground Level	8d	06-Aug-16	15-Aug-16
SR8_ZB_1380	Zone B - Remove Top Layer of Strut for Pump House Shaft Construction	8d	15-Aug-16	24-Aug-16
OHVD		34d	17-Sep-16	20-Oct-16
Bay B2 (CH338.625 to CH351.8)		34d	17-Sep-16	20-Oct-16
SR8_ZB_1390	Zone B - OHVD Bay 2 - Erect Scaffolding & Soffit Formwork	6d	17-Sep-16*	23-Sep-16
SR8_ZB_1400	Zone B - OHVD Bay 2 - Rebar Fixing for Slab of OHVD	3d	24-Sep-16	27-Sep-16
SR8_ZB_1410	Zone B - OHVD Concrete of Slab of OHVD	1d	28-Sep-16	28-Sep-16
SR8_ZB_1420	Zone B - OHVD Rebar Fixing to Wall	1d	29-Sep-16	29-Sep-16
SR8_ZB_1430	Zone B - OHVD Erect Wall Formwork for OHVD	2d	30-Sep-16	03-Oct-16
SR8_ZB_1440	Zone B - OHVD Concrete Hanger Wall of OHVDV	1d	04-Oct-16	04-Oct-16
SR8_ZB_1450	Zone B - OHVD Curing Period for OHVD Slab	10d	04-Oct-16	14-Oct-16
SR8_ZB_1460	Zone B - OHVD Remove Soffit Formwork & Scaffolding	5d	14-Oct-16	20-Oct-16
Bay B3 (CH351.8 to CH368)		13d	05-Oct-16	20-Oct-16



Activity ID	Activity Name	Original Duration	Start	Finish
SR8_ZB_1470	Zone B - OHVD Bay 3 - Erect Scaffolding & Soffit Formwork	6d	05-Oct-16	12-Oct-16
SR8_ZB_1480	Zone B - OHVD Bay 3 - Rebar Fixing for Slab of OHVD	3d	13-Oct-16	15-Oct-16
SR8_ZB_1490	Zone B - OHVD Bay 3 - Concrete of Slab of OHVD	1d	17-Oct-16	17-Oct-16
SR8_ZB_1500	Zone B - OHVD Bay 3 - Rebar Fixing to Wall	1d	18-Oct-16	18-Oct-16
SR8_ZB_1510	Zone B - OHVD Bay 3 - Erect Wall Formwork for OHVD	2d	19-Oct-16	20-Oct-16
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
SR8_ZB_1560	Zone B - U trough (LHS) Bay 2	7d	26-Sep-16	04-Oct-16
SR8_ZB_1570	Zone B - U trough (LHS) Bay 3	7d	05-Oct-16	13-Oct-16
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
SR8_ZB_1810	PS- Erect Scaffolding + Roof Soffit Fromwork	5d	29-Aug-16	03-Sep-16
SR8_ZB_1820	PS- Rebar Fixing	4d	03-Sep-16	08-Sep-16
SR8_ZB_1830	PS- Place Concrete to Wall & Roof Slab	1d	08-Sep-16	09-Sep-16
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
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
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
SR8_2090B	Zone A - Wall Sterm - Bay 3	14d	20-Jul-16	02-Aug-16
SR8_2090C	Zone A - Profile Barrier for Utilities Trough	14d	03-Aug-16	16-Aug-16
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_1930	Remove and/or Pull Sheet Piling Materials	14d	24-Aug-16	09-Sep-16
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
VP_1370A	RW8C - Install Steel Railing on Top of RW8C	14d	06-Aug-16	22-Aug-16
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
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_1030	RW8D(B3 to B4) - Wall Stems	7d	06-Aug-16	13-Aug-16
RW8D_1040	RW8D(B3 to B4) - Remove Wall Formworks & Repair F5 Finish	5d	15-Aug-16	19-Aug-16



Activity ID	Activity Name	Original Duration	Start	Finish
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 Foothpath		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 - Consrtuction 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



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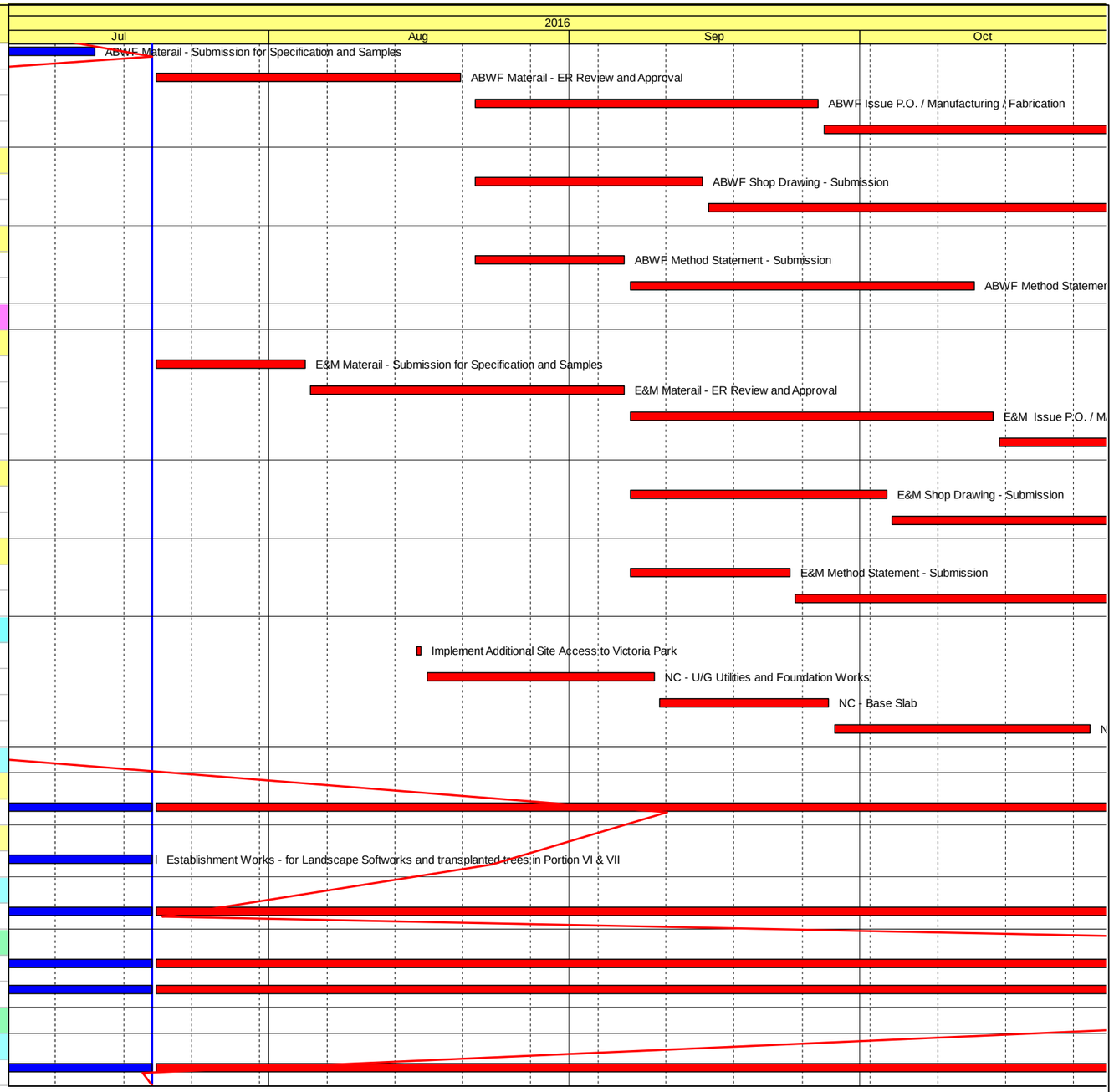
VP_NC_1040	ABWF Materail - Submission for Specification and Samples	14d	22-Jun-16 A	14-Jul-16 A
VP_NC_1050	ABWF Materail - ER Review and Approval	28d	20-Jul-16	20-Aug-16
VP_NC_1060	ABWF Issue P.O. / Manufacturing / Fabrication	30d	22-Aug-16	26-Sep-16
VP_NC_1070	ABWF Materail Delivery	30d	27-Sep-16	02-Nov-16
Shop Drawing		81d	22-Aug-16	26-Nov-16
VP_NC_1080	ABWF Shop Drawing - Submission	21d	22-Aug-16	14-Sep-16
VP_NC_1090	ABWF Shop Drawing - ER Review and Approval	60d	15-Sep-16	26-Nov-16
Method Statement		42d	22-Aug-16	12-Oct-16
VP_NC_1100	ABWF Method Statement - Submission	14d	22-Aug-16	06-Sep-16
VP_NC_1110	ABWF Method Statement - ER Review and Approval	28d	07-Sep-16	12-Oct-16
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
VP_NC_1130	E&M Materail - ER Review and Approval	28d	05-Aug-16	06-Sep-16
VP_NC_1140	E&M Issue P.O. / MAnufacturing / Fabrication	30d	07-Sep-16	14-Oct-16
VP_NC_1150	E&M Materail Delivery	30d	15-Oct-16	18-Nov-16
Shop Drawing		81d	07-Sep-16	13-Dec-16
VP_NC_1160	E&M Shop Drawing - Submission	21d	07-Sep-16	03-Oct-16
VP_NC_1170	E&M Shop Drawing - ER Review and Approval	60d	04-Oct-16	13-Dec-16
Method Statement		42d	07-Sep-16	28-Oct-16
VP_NC_1180	E&M Method Statement - Submission	14d	07-Sep-16	23-Sep-16
VP_NC_1190	E&M Method Statement - ER Review and Approval	28d	24-Sep-16	28-Oct-16
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
VP_NC_1220	NC - U/G Utilities and Foundation Works	21d	17-Aug-16	09-Sep-16
VP_NC_1230	NC - Base Slab	14d	10-Sep-16	27-Sep-16
VP_NC_1240	NC - Walls	21d	28-Sep-16	24-Oct-16
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
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
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
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
MAR_3020	Mooring Upkeep at Portion X(10) & XVI(16) - CBTS	979d	15-May-14 A	17-Jan-17
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



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

Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract No. HY/2010/08: Central - Wanchai Bypass Tunnel +(Slip Road 8 Section) - 3 Months Rolling Progamme

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