CONTRACT NO: HK/2011/07

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

ENVIRONMENTAL PERMIT NO. EP-356/2009, FURTHER 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

- JULY 2015 -

CLIENTS:

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and

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10 August 2015

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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:
- Excavation and trimming trenches for caisson seawall at WCR3
- Rock filling works at WCR3

iv. During this reporting period, the major work activities for Contract no. HY/2009/15 included:
- Reinstatement of vertical seawall at TPCWAE

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

vii. During this reporting period, the major work activities for Contract no. HY/2010/08.
- Diversion pipe maintenance

Noise Monitoring

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

ix. Noise monitoring during daytime and restricted hour were conducted at the stations M1a, M2b, M3a, M4b, M5b and M6 on a weekly basis in the reporting month.

Real-time Noise Monitoring

x. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at RTN1 -

FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.

xi. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.

xii. 24-hour real time noise monitoring was conducted at RTN2a – Hong Kong Electric Centre. No limit level exceedance was recorded in the reporting month.

Air Quality Monitoring

xiii. Due to electricity interruption, the 24hr TSP monitoring of the following stations were rescheduled as below:
CMA1b was rescheduled from 4 and 10 July 2015 to 6 and 11 July 2015 respectively.
CMA3a was rescheduled from 29 June 2015 to 30 June 2015.
CMA6a was rescheduled from 29 June 2015 to 30 June 2015.

xiv. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 7 and 21 July 2015 at the concerned hours (afternoon for higher daily temperature). No Action and Limit Level was recorded during this reporting month.

xv. With respect to the area handover, the air quality monitoring station CMA5a at Children Playgrounds opposite to the Pedestrian Plaza was relocated to the Pedestrian Plaza on 3 December 2014. The station reference and location ID of the air quality monitoring station CMA5a was updated as CMA5b and Pedestrian Plaza respectively

xvi. Due to extension of site boundary by contractor of HY/2009/19, location of air monitoring station CMA1b – Oil Street Community Liaison Centre has been finely adjusted on 21 April 2012.

xvii. The location ID of air monitoring station CMA1b was updated as Oil Street Site Office in April 2013.

xviii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted at CMA1b – Oil Street Site Office; CMA2a – Causeway Bay Community Center; CMA3a – CWB PRE Site Office Area; CMA4a – Society for the Prevention of Cruelty to Animals; CMA5b – Pedestrian Plaza; CMA6a – WDII PRE Site Office.

Water Quality Monitoring

xix. Action and Limit level of water quality monitoring was transited from dry season to wet season from 1 April 2015.

xx. Due to the hoisting of amber rainstorm warning signal, the water quality monitoring on 22 July 2015 during flood tide and ebb tide were cancelled.

xxi. With respect to the maintenance works for the diverted seawater supply system to Windsor House Cooling water intake and the suspension of seawater supply to Windsor House from the water storage tank for water quality sampling from 7 July 2015 to 13 July 2015. The respective water quality monitoring at WQM station C7 was cancelled on 8 July 2015 and was

temporarily suspended from 9 July 2015 to 13 July 2015. The aforesaid monitoring station was resumed on 15 July 2015 upon completion of the maintenance works.

xxii. With respect to the construction works undertaken at Ex-PCWAW and the forthcoming wet season DO concern, the suspended Enhance DO monitoring within Ex-PCWAW area at the Enhance DO monitoring station Ex-PCWA-SW was resumed on 30 March 2015 at the finely adjusted monitoring location.

xxiii. With respect to the commencement of seawall modification works at Ex-PCWAE and the location of the Enhance DO monitoring stations would form an active construction area, the Enhance DO monitoring at monitoring station EX-PCWA SW and SE were temporarily suspended from 2 March 2015 ebb tide and the monitoring at the location is tentatively to be resumed by early April 2015 to cater for the potential DO concern during Wet Season.

xxiv. As informed by CWB RSS, the operation of the diverted Windsor House cooling intake was commenced on 20 Dec 2014 and the water quality monitoring at monitoring station C7 for Windsor House Cooling water intake was resumed on 22 Dec 2014.

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

xxvi. With respect to the commencement of marine dredging works at WCR3 under contract HK/2009/02. The respective water quality monitoring station C1 were associated with HK/2009/01 and HK/2009/02.

xxvii. As confirmed by CWB RSS, the operation of the pump station for Windsor House Cooling Water was suspended from 22 Oct 2014 for the Windsor House intake cooling intake scheme and temporary supply of freshwater from WSD water mains was provided to cooling water intake. The water quality monitoring for the respective cooling water intake at WQM station C7 was temporarily suspended from 22 Oct 2014.

xxviii. With respect to the commencement of filling works at TS3 and the formation of TZ3 reclamation zone, the enhance DO monitoring at Enhance monitoring station C7 was temporarily suspended from 22 Oct 2014.

xxix. As confirmed by WDII RSS and IEC, the cross harbor dredging works have completed since 16 March 2012 while the dredging works for submarine outfall pipeline has completed since 29 November 2011, considering current construction stage and dredging Scenario, the water quality monitoring at stations WSD9 and WSD17 was temporarily suspended since 8 September 2014 flood tide.

xxx. With respect to the switching over of cooling water intake location, the water quality monitoring at the relocated intake station RW21-P789 under HK/2009/02 was commenced since 29 July 2013 and monitoring station C5e and C5w were temporarily suspended and switched over to monitoring station RW21-P789 on 29 July 2013 due to suspension of pump house operation.

xxxi. As advised by WDII RSS, the water quality monitoring for WSD21 pump station with respect to HK/2009/02 was switched over to the relocated location since 12 March 2014. According to the EM&A Manual, the water quality monitoring station WSD21 was relocated to station RW21-P789 and the water quality monitoring at station WSD21 was temporarily suspended since 12 March 2014.

xxxii. With respect to the commencement of marine dredging works under contract HY/2010/08. The respective water quality monitoring station C7 were associated with HY/2009/15 and HY/2010/08.

xxxiii. With respect to the commencement of marine dredging works under contract HK/2012/08/ The respective water quality monitoring station WSD19, P1, P3, P4, and P5 were associated with Contract HK/2012/08 Since September 2013.

xxxiv. WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended. Upon confirmation with WDII RSS and the IEC, water quality monitoring at relocated intakes monitoring location P1, P3, P4 and P5 were commenced since 24 April 2013.

xxxv. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.

xxxvi. As confirmed by CWB RSS, the marine pilling works under contract HY/2009/19 was confirmed completed by 4 March 2013. The water quality monitoring at the respective monitoring stations C8 and C9 were temporarily suspended since 30 March 2013.

xxxvii. RSS confirmed that all Type III Dredging works under HK/2009/01 have been completed since Oct 2012.

xxxviii. Due to the presence of obstacle within the inner silt curtain frame at sampling point, water quality point at C7 was finely adjusted to the outside of the inner silt curtain frame since 29 Dec 2012.

xxxix. With respect to the trial dredging at WCR2 was scheduled on 20, 22, 24, 25 March and 1, 3 , 11, 13, 15, 17, 19, 20 Apr and 3 May 2012, on-going water quality monitoring results at WSD21 during this period was checked and indicated that there was no contribution due to the trial dredging operation. Enhanced review of water quality around WCR2 was also implemented and no deterioration in the water quality was observed.

xl. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.

xli. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others remain unchanged.

xlii. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui-DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7 and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration. Water quality monitoring at WSD10 and WSD15 was temporary suspended while water quality monitoring at WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 12 onwards;

xliii. Based on the joint inspection on 4 Jan 2012 for the NPR area, the 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 to confirm no water deterioration with respect to NPR was commenced since 7 Jan 2012 and it was completed on 6 February 2012.

xliv. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.

xlv. Water quality monitoring at C8 and C9 have been implemented with respect to HY/2009/19 since the marine bore piling work started on 28 Jan 12.

Table I Summary of Water Quality Monitoring Exceedances in Reporting Month

Contract no.	Water Monitoring Station	Mid-flood						Mid-ebb					
		DO		Turbidity		SS		DO		Turbidity		SS	
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01 & HK/2009/02	C1	0	0	0	0	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	0	0	0	0	0	0	0	0	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	RW21-P789	0	0	0	0	0	0	0	0	0	0	0	0
HY/2009/15 & HY/2010/08	C7	0	0	0	1	0	0	0	0	0	0	0	0
Total		0	0	0	1	0	0	0	0	0	0	0	0

Remarks: -
- The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
- 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8 and C9 were completed on 6 Feb 2012.
- C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
- C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
- WSD7 and WSD20 water quality monitoring were temporarily suspended from 27 Apr 2012.
- C2, C3 C4e and C4w water quality monitoring station was temporarily suspended since 24 Apr 2013
- C5e and C5w water quality monitoring station was temporarily suspended since 29 July 2013
- WSD21 water quality monitoring station was temporarily suspended since 12 March 2014
- Maintenance responsibility of silt screen C1, WSD19, P3, P4 and P5 are under Contract HK/2009/01.
- WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 September 2014 flood tide.
- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme and was resumed since 22 December 2014.
- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

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

xlvii. Enhanced DO monitoring at 4 monitoring stations in Causeway Bay Typhoon Shelter and Ex-Public Cargo Works Area was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in ***Table II***.

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

Contract no.	Water Monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15	C6	0	0	0	0
	C7	0	0	0	0
	Ex-WPCWA SW	0	2	0	2
	Ex-WPCWA SE	0	0	0	0
Total		0	2	0	2

xlviii. There were no action level and 4 limit level exceedances of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedances were not related to Project works. The details of the recorded exceedances can be referred to the ***Section 6.4***.

xlix. 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.

l. 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.

li. With respect to the commencement of filling works at TS3 and the formation of TZ3 reclamation zone, the enhance DO monitoring at Enhance monitoring station C7 was temporarily suspended from 22 Oct 2014.

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

Complaints, Notifications of Summons and Successful Prosecutions

liii. There was one environmental complaint received in this reporting month.

liv. 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.

lv. 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.

Site Inspections and Audit

lvi. 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.

lvii. Construction works under HK/2010/06 was confirmed completed and the respective work area under FEP-05/356/2009 was handover and inspected under HK/2012/08 from 22 September 2014 onwards.

Future Key Issues

lviii. 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

- Construction of Seawall At WCR3
- Reclamation at WCR3
- Demolition of remaining part of existing Wan Chai Ferry Pier

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

- Reinstatement of vertical seawall at TPCWAE

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

- Nil

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

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

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

- Diversion pipe maintenance

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 June 2015 to July 2015. The cut-off date of reporting is at 27th 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	
		Engineer Manager	Mr. Terry Wong	9757 9846	
		Construction Manager	Mr. Wyman Wong	9627 2467	
		Construction Manager	Mr. Kenneth Chan	9160 3850	
		Environmental Officer	Ms. Wendy Ng	9803 0057	
		Assistant Environmental Engineer	Miss. Connie Chan	6157 7057	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Project Manager	Mr. 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	Andrew Wong	3557 6371	
		Contractor's Representative	Gene Cheung	3557 6395	
		Environmental Officer	Andy Mak	3557 6347	
Chun Wo – CRGL – MBEC_ Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	David Lau	3758 8879	2570 8013
		Site Agent	Paul Yu	9456 9819	
		Deputy Site Agent	Eric Fong	6191 9337	
		Environmental Manager / Environmental Officer	M.H. Isa	9884 0810	
		Construction Manager (Marine)	Andy Chan	9879 4325	
		Construction Manager (Land)	Bear Ding	6483 6198	
		Operation Manager (Land)	Yung Kwok Wah	9834 1010	
China	Contractor	Project Director	C. N. Lai	9106 5806	2877 1522

Party	Role	Post	Name	Contact No.	Contact Fax
State-Leader JV	under Contract no. HK/2012/08	Project Manager	Eddie Chung	9189 8118	
		Site Agent	Keith Tse	9037 1839	
		Environmental Officer	James Ma	9130 9549	
		Environmental Supervisor	Y. L. Ho	9856 5669	
China State	Contractor under Contract no. HY/2010/08	Project Director	Chris Leung	3467 4299	2566 8061
		Project Manager	Chan Ying Lun	3418 3001	
		Site Agent	Dave Chan	3467 4277	
		Environmental Officer	C.M. Wong	3557 6464	
		Environmental Supervisor	Desmond Ho Tsz Ho	3557 6466	
Leighton Joint Venture	Contractor under Contract no. HY/2011/08	Project Manager	Paul Evans	2823 1111	21406799
		Site Agent	Colman Wong	9730 0806	
		Environmental Officer	David Hung	9765 6161	
		Environmental Supervisor	Penny Yiu	2214 7738	
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:

- Excavation and trimming trenches for caisson seawall at WCR3
- Rock filling work at WCR3

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

- Reinstatement of vertical seawall at TPCWAE

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:

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

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

- Diversion pipe maintenance

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

- Construction of seawall at WCR3
- Reclamation at WCR3
- Demolition of remaining part of existing Wan Chai Ferry Pier

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

- Reinstatement of vertical seawall at TPCWAE

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

- Nil

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

- Dry dock construction
- Installation of pipe pile wall

- Removal of temporary piling platform for culvert diversion
- Construction of culvert

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

- Diversion pipe maintenance

3 Status of Regulatory Compliance

3.1 Status of Environmental Licensing and Permitting under the Project

3.1.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in ***Table 3.1***.

Table 3.1 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project

Permits and/or Licences	Reference No.	Issued Date	Status
Environmental Permit	EP-356/2009	30 Jul 2009	Valid
Environmental Permit	EP-364/2009	17 Aug 2009	Superseded
Environmental Permit	EP-364/2009/A	4 Aug 2010	Superseded
Environmental Permit	EP-364/2009/B	20 Sep 2012	Superseded
Environmental Permit	EP-364/2009/C	11 Jul 2014	Valid
Environmental Permit	EP-376/2009	13 Nov 2010	Valid
Further Environmental Permit	FEP-01/356/2009	18 Feb 2010	Surrendered
Further Environmental Permit	FEP-02/356/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	Valid
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	Surrendered
Further Environmental Permit	FEP-01/364/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-02/364/2009	21 Apr 2010	Valid
Further Environmental Permit	FEP-03/364/2009	12 Jul 2010	Surrendered
Further Environmental Permit	FEP-04/364/2009/A	14 Oct 2010	Surrendered
Further Environmental Permit	FEP-05/364/2009/A	15 Nov 2010	Valid
Further Environmental Permit	FEP-06/364/2009/A	22 Nov 2010	Valid
Further Environmental Permit	FEP-07/364/2009/B	20 Sep 2012	Valid
Further Environmental Permit	FEP-08/364/2009/A	15 Jun 2012	Surrendered
Further Environmental Permit	FEP-06/356/2009	5 Mar 2013	Valid
Further Environmental Permit	FEP-07/356/2009	26 July 2013	Valid
Further Environmental Permit	FEP-09/364/2009/B	5 March 2013	Valid
Further Environmental Permit	FEP-10/364/2009/B	26 July 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Status
Further Environmental Permit	FEP-11/364/2009/B	2 May 2014	Valid

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

Contract no. HK/2010/06 – Wan Chai Development Phase II – Central – Wan Chai Bypass over MTR Tsuen Wan Line under FEP-05/356/2009

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

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

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

Table 3.2 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/01

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-02/356/2009	24 Mar 2010	N/A	Valid
	FEP-02/364/2009	21 Apr 2010	N/A	Valid
Notification of Works Under APCO	313088	06 Jan 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0079-15	27 Jan 2015	16 Feb 2015 to 14 Aug 2015	Valid
	GW-RS0104-15	3 Feb 2015	22 Feb 2015 to 21 Aug 2015	Valid
	GW-RS0101-15	3 Feb 2015	22 Feb 2015 to 21 Aug 2015	Valid
	GW-RS0074-15	22 Jan 2015	10 Feb 2015 to 9 Aug 2015	Valid
	GW-RS0243-15	16 Mar 2015	25 Mar 2015 to 24 Sept 2015	Valid
	GW-RS-269-15	16 Mar 2015	8 Apr 2015 to 7 Oct 2015	Valid
	GW-RS0408-15	13 Apr 2015	20 Apr 2015 to 19 Oct 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0416-15	16 Apr 2015	8 May 2015 to 7 Nov 2015	Valid
	GW-RS0445-15	30 Apr 2015	26 May 2015 to 25 Nov 2015	Valid
	GW-RS0462-15	30 Apr 2015	2 May 2015 to 1 Nov 2015	Valid
Discharge Licence	WT00021138-2015	13 Apr 2015	31 Mar 2020	Valid
	WT00009641-2011	24 Jul 2011	31 Jul 2016	Valid
Billing account under Waste Disposal Ordinance	7010069	21 Jan 2010	N/A	Valid
Registration as a Chemical Waste Producer	WPN5213-134-C3585-01	21 Jan 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-018	2 Jun 2015	6 Jun 2015 to 30 Sept 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/16-019	3 Jun 2015	6 Jun 2015 to 5 Jul 2015	Expired
	EP/MD/16-046	15 Jul 2015	20 Jul 2015 to 19 Aug 2015	Valid

Table 3.3 Summary of submission status under FEP-02/356/2009 Condition

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	13 Apr 2010
Condition 2.7	Works Schedule and Location Plan	8 Apr 2010
Condition 2.8	Silt Curtain Deployment Plan (Rev. 5)	24 Aug 2012
	Silt Curtain Deployment Plan (Rev. 4)	12 July 2012
	Silt Curtain Deployment Plan (Rev. 3)	27 June 2012
	Silt Curtain Deployment Plan	19 Apr 2010
Condition 2.9	Silt Screen Deployment Plan (Rev. 7)	21 Nov 2014

EP Condition	Submission	Date of Submission
	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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	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-RS0085-15	27 Jan 2015	14 Feb 2015 to 13 Aug 2015	Valid
	GW-RS0014-15	7 Jan 2015	8 Jan 2015 to 1 Jul 2015	Expired
	GW-RS0198-15	24 Feb 2015	26 Feb 2015 to 22 Aug 2015	Valid
	GW-RS0236-15	13 Mar 2015	25 Mar 2015 to 24 Sep 2015	Valid
	GW-RS0246-15	13 Mar 2015	22 Mar 2015 to 13 Sep 2015	Valid
	GW-RS0366-15	2 April 2015	7 Apr 2015 to 7 Jul 2015	Expired
	GW-RS0446-15	30 April 2015	27 May 2015 to 26 Nov 2015	Valid
	GW-RS0447-15	30 April 2015	22 May 2015 to 21 Nov 2015	Valid
	GW-RS0454-15	30 April 2015	2 May 2015 to 28 Oct 2015	Valid
	GW-RS0454-15	30 April 2015	2 May 2015 to 29 Oct 2015	Valid
	GW-RS0544-15	22 May 2015	26 May 2015 to 18 Nov 2015	Valid
	GW-RS0610-15	10 Jun 2015	22 Jun 2015 to 21 Dec 2015	Valid
	GW-RS0637-15	11 Jun 2015	18 Jun 2015 to 8 Dec 2015	Valid
	GW-RS0709-15	30 June 2015	2 Jul 2015 to 1 Jan2016	Valid
	GW-RS0716-15	30 June 2015	4 Jul 2015 to 27 Dec 2015	Valid
	GW-RS0723-15	2 July 2015	7 Jul 2015 to 6 Jan 2015	Valid
Discharge Licence	WT00006757-2010	28 May 2010	31 May 2015	Expired
	WT00007129-2010	28 July 2010	31 Jul 2015	Valid
	WT00008982-2011	26 Apr 2011	30 April 2016	Valid
	WT00009691-2011	1 Aug 2011	31 July 2016	Valid
Billing Account under Waste Disposal Ordinance (Land)	7010255	10 Feb 2010	N/A	Valid
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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/15-181	29 Dec 2014	1 Jan 2015 to 30 Jun 2015	Expired
	EP/MD/16-034	26 Jun 2015	1 Jul 2015 to 21 Dec 2015	Valid

Table 3.5 Summary of submission status under FEP-03/356/2009 Condition

EP Condition	Submission	Date of Submission
Condition 1.12	Commencement Date of Construction of Marine Works	8 April 2010
Condition 2.6	Management Organization of Main Construction Companies	10 April 2010
Condition 2.7	Works Schedule and Location Plans	8 April 2010
Condition 2.8	Silt Curtain Deployment Plan (Revision A)	20 April 2010
	Silt Curtain Deployment Plan (Revision B)	25 May 2010
	Silt Curtain Deployment Plan (Revision C)	14 Jun 2010
	Silt Curtain Deployment Plan (Revision H)	15 Feb 2011
	Silt Curtain Deployment Plan (Revision I)	17 Nov 2011
	Silt Curtain Deployment Plan (Revision J)	15 Feb 2012
	Silt Curtain Deployment Plan (Revision K)	3 May 2012
	Silt Curtain Deployment Plan (Revision L)	25 Oct 2012
	Silt Curtain Deployment Plan (Revision M)	30 Nov 2012
Condition 2.9	Silt Screen Deployment Plan	21 April 2010
	Supplementary Information for Existing WSD Salt Water Intakes at Quarry Bay and Sai Wan Ho	5 Oct 2010
	Silt Screen Deployment Plan (Revision B)	15 Feb 2012
	Silt Screen Deployment Plan (Revision C)	3 May 2012
	Silt Screen Deployment Plan (Revision D)	10 Dec 2012
Condition 2.17	Noise Management Plan	6 May 2010
Condition 2.18	Landscape Plan (Decorative Screen Hoarding)	11 May 2010
	Landscape Plan (Control of Night Time Lighting)	2 June 2010

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

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

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

Table 3.6 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/15

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	N/A	Valid
Notification of Works Under APCO	321822	24 Sep 2010	N/A	Valid
Construction Noise Permit (CNP) for seawall removal works at TS4/ME4	GW-RS0021-15	13 Jan 2015	16 Jan 2015 to 15 Jul 2015	Expired
Construction Noise Permit (CNP) for concreting works at Eastern Breakwater of CBTS	GW-RS0150-15	11 Feb 2015	13 Feb 2015 to 10 Aug 2015	Valid
Construction Noise Permit (CNP) for reclamation and d-wall works at Ex-PCWA	GW-RS0579-15	29 May 2015	31 May 2015 to 26 Nov 2015	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C1169-35	15 Nov 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7011553	30 Sep 2010	27 Sep 2010 to 27 Jan 2016	Valid
Billing Account under Waste Disposal Ordinance (Disposal by Vessel)	7011761	26 Jun 2015	17 Jul 2015 to 16 Oct 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/15-205	19 Jan 2015	28 Jan 2015 to 27 Jul 2015	Expired
Dumping Permit (Type 1 – Open Sea Disposal(Dedicated Site) and Type 2 – Confined Marine Disposal)	EP/MD/16-028	12 Jun 2015	15 Jun 2015 to 14 Jul 2015	Expired
	EP/MD/16-041	10 Jul 2015	15 Jul 2015 to 14 Aug 2015	Valid

Table 3.7 Summary of submission status under FEP-04/356/2009 Condition

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

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

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

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

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

Permit / Licence / Notification / Approval	**Reference No.**	**Issued Date**	**Valid Period / Expiry date**	**Status**
Further Environmental Permit	FEP-07/364/2009/A	20 Sep 2012	Granted	Valid

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period / Expiry date	Status
Notification of Works Under APCO	326160	24 Jan 2011	Notified	Valid
Construction Noise Permit (CNP) (For Portion Vi Marine)	GW-RS0076-15	21 Jan 2015	23 Jan 2015 to 22 Jul 2015	Expired
	GW-RS0741-15	10 Jul 2015	23 Jul 2015 to 22 Jan 2016	Valid
Discharge License (Sea)	WT00010865-2011	03 Nov 2011	30-Nov-16	Valid
C&D Waste Disposal	7012306	10 Feb 2011	Registered	-
Vessel Disposal	7013285	21 July 2011	Registered	-
Registration as Chemical Waste Producer	5213-151-C3654-01	24 Mar 2011	Registered	-

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

3.1.9. Summary of the current status on licences and/or permits on environmental protection pertinent and submission for contract no. HK/2012/08 under FEP-06/356/2009 are shown in ***Table 3.9*** and ***Table 3.10***.

Table 3.9 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2012/08

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-06/356/2009	5 Mar 2013	N/A	Valid
Notification of Works Under APCO	355439	4 Feb 2013	N/A	Valid
Registration as a Chemical Waste Producer	5213-134-C3790-01	8 Mar 2013	N/A	Valid
Billing Account under Waste Disposal Ordinance	7016883	18 Feb 2013	18 Jul 2017	Valid
Water Discharge Licence	WT00018223-2014	28 Jan 2014	31 Jan 2019	Superseded by WT00020594-2014
	WT00020594-2014	22 Dec 2014	31 Jan 2019	Valid
Construction Noise Permit	GW-RS0295-15	19 Mar 2015	27 Mar 2015 to 26 Sep 2015	Valid
	GW-RS0296-15	19 Mar 2015	23 Mar 2015 to 22 Sep 2015	Valid
	PP-RS0008-15	10 Mar 2015	12 Mar 2015 to 11 Sep 2015	Valid
	GW-RS0145-15	11 Feb 2015	13 Feb 2015 to 12 Aug 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0144-15	12 Feb 2015	13 Feb 2015 to 12 Aug 2015	Valid
	GW-RS0223-15	3 Mar 2015	9 Mar 2015 to 8 Sep 2015	Valid
	GW-RS-0360-15	1 Apr 2015	2 May 2015 to 31 Oct 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-037	30 Jun 2015	2 Jul 2015 to 1 Aug 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	EP/MD/16-038	30 Jun 2015	2 Jul 2015 to 1 Jan 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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
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-RS0154-15	11 Feb 2015	12 Feb 2015 to 8 Aug 2015	Valid
	GW-RS0309-15	20 Mar 2015	21 Mar 2015 to 19 Sep 2015	Valid
	GW-RS0531-15	18 May 2015	18 May 2015 to 17 Nov 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/15-169	9 Feb 2015	8 Aug 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine disposal)	NIL	NIL	NIL	NIL

Table 3.12 Summary of submission status under EP-356/2009 and FEP-07/356/2009 Condition

FEP Condition	Submission	Date of Submission
Condition 2.8	Silt Curtain Deployment Plan (rev03)	24 Dec 2014
Condition 2.9	Silt Screen Deployment Plan (rev02)	18 Feb 2015
Condition 2.23	Noise Management Plan (rev02)	25 Mar 2014
Condition 2.24	Landscape Plant (rev04)	23 Sep 2014

Monitoring Requirements

4.1 Noise Monitoring

NOISE MONITORING STATIONS

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

Table 4.1 Noise Monitoring Station

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

REAL-TIME NOISE MONITORING STATIONS

4.1.2. The real-time noise monitoring stations for the Project are listed and shown in ***Table 4.2*** and ***Figure 4.1***. ***Appendix 4.1*** shows the established Action/Limit Levels for the monitoring works.

4.1.3. The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.

4.1.4. As the land-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at RTN1 - FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.

Table 4.2 Real Time Noise Monitoring Station

District	Station	Description
North Point	RTN2a	Electric Centre

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

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

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

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

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

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

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

MONITORING EQUIPMENT

4.1.8. As referred to in the Technical Memorandum ™ issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

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

4.2 Air Monitoring

AIR QUALITY MONITORING STATIONS

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

Table 4.3 Air Monitoring Station

Station ID	Monitoring Location	Description
CMA1b	Oil Street Site Office**	North Point
CMA2a	Causeway Bay Community Centre	Causeway Bay
CMA3a	CWB PRE Site Office *	Causeway Bay
CMA4a	Society for the Prevention of Cruelty to Animals	Wan Chai
CMA5b	Pedestrian Plaza***	Wan Chai
CMA6a	WDII PRE Site Office *	Wan Chai

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

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

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

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

4.2.2. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality. The 24-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.

4.2.3. All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any other local atmospheric factors affecting or affected by site conditions, etc., shall be recorded down in detail.

4.2.4. For regular impact monitoring, the sampling frequency of at least once in every six-days, shall be strictly observed at all the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

4.2.5. High volume samplers (HVSs) in compliance with the following specifications shall be used for carrying out the 1-hour and 24-hour TSP monitoring:

- 0.6 – 1.7 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. It is proposed to monitor the water quality at 1 WSD salt water intakes and 7 cooling water intakes along the seafront of the Victoria Harbour. The proposed water quality monitoring stations of the Project are shown in ***Table 4.4*** and ***Figure 4.1***. ***Appendix 4.1*** shows the established Action/Limit Levels for the monitoring works.

Table 4.4 Marine Water Quality Stations for Water Quality Monitoring

Station Ref.	Location	Easting	Northing
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

Station Ref.	Location	Easting	Northing
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	836268.0	816020.0

WATER QUALITY PARAMETERS

4.3.4. Monitoring of dissolved oxygen (DO), turbidity and suspended solids (SS) shall be carried out at WSD flushing water intakes and cooling water intakes. DO and Turbidity are measured in-situ while SS is determined in laboratory.

4.3.5. In association with the water quality parameters, other relevant data shall also be measured, such as monitoring location/position, time, sampling depth, water temperature, pH, salinity, dissolved oxygen (DO) saturation, weather conditions, sea conditions, tidal stage, and any special phenomena and work underway at the construction site etc.

SAMPLING PROCEDURES AND MONITORING EQUIPMENT

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

Table 4.5 Marine Water Quality Monitoring Frequency and Parameters

Activities	Monitoring Frequency[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 4.6*** and ***Figure 4.1***.

Table 4.6 Marine Water Quality Stations for Enhanced Water Quality Monitoring

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

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

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

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

DAILY SS MONITORING AND 24 HOURS TURBIDITY MONITORING SYSTEM

4.3.24. During dredging of the sediment at the south-western corner of the Causeway Bay Typhoon Shelter, daily monitoring of suspended solids and 24 hour monitoring of turbidity at the cooling water intakes (C6 and C7) shall be conducted.

4.3.25. The 24 hours monitoring of 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 Real-time Noise Monitoring

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

5.2.1 As the marine-based piling and filling works- DP3 at Tin Hau had been completed on 3 September 2012 and confirmed by RSS, the real-time noise monitoring results at FEHD Hong Kong Transport Section Whitfield Depot was excluded under EP-356/2009 since 28 November 2012.

5.2.2 The real-time noise monitoring at RTN2-Oil Street Community Liaison Centre has been relocated to City Garden Electric Centre (RTN2a- Electric Centre) on 5 Oct 2012, which is a representative of noise sensitive receiver- City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted in Electric Centre from 4 December 2009 to 17 December 2009.

5.2.3 The major work activities for Contract no. HY/2009/11 was confirmed substantial complete by RSS on 4 January 2012. The construction site was handed over to contractor HY/2009/19 on 31 December 2011 and the FEP-01/356/2009 was surrendered on 22 Oct 2012.

5.2.4 Real-time noise monitoring at FEHD Hong Kong Transport Section Whitfield Depot commenced external wall renovation since 1 June 2012

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

District	Station	Description
North Point	RTN2a	Electric Centre

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

5.2.5 No limit level exceedance was recorded in this reporting month.

5.2.6 Details of real time noise monitoring results and graphical presentation can be referred to ***Appendix 5.5.***

5.3 Air Monitoring Results

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

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

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

Station	Description
CMA5b	Pedestrian Plaza
CMA6a	WDII PRE Site Office

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

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

5.3.3. Air monitoring was commenced in mid-January 2011 for the land-filling work for Contract no. HK/2009/02. The proposed division of air monitoring stations are summarized in ***Table 5.7*** below. No exceedance was recorded in the reporting month.

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

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

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

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

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

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

Station	Description
CMA3a	CWB PRE Site Office

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

5.3.7. The odour patrol along the odour route with 7 sniffing locations was conducted by a qualified odour patrol member on 7 and 21 July 2015 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

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

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

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

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

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

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

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

Station	Description
CMA5b	Pedestrian Plaza

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

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

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

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

Station	Description
CMA3a	CWB PRE Site Office

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

5.4 Water Monitoring Results.

5.4.1. Action and Limit level of water quality monitoring was transited from dry season to wet season from 1 April 2015.

5.4.2. Due to the hoisting of amber rainstorm warning signal, the water quality monitoring on 22 July 2015 during flood tide and ebb tide were cancelled.

5.4.3. With respect to the maintenance works for the diverted seawater supply system to Windsor House Cooling water intake and the suspension of seawater supply to Windsor House from the water storage tank for water quality sampling from 7 July 2015 to 13 July 2015. The respective water quality monitoring at WQM station C7 was cancelled on 8 July 2015 and was temporarily suspended from 9 July 2015 to 13 July 2015. The aforesaid monitoring station was resumed on 15 July 2015 upon completion of the maintenance works.

5.4.4. With respect to the commencement of seawall modification works at Ex-PCWAE and the location of the Enhance DO monitoring stations would form an active construction area, the Enhance DO monitoring at monitoring station EX-PCWA SW and SE were temporarily suspended from 2 March 2015 ebb tide and the monitoring at the location is tentatively to be resumed by early April 2015 to cater for the potential DO concern during Wet Season.

5.4.5. As informed by CWB RSS, the operation of the diverted Windsor House cooling intake was commenced on 20 Dec 2014 and the water quality monitoring at monitoring station C7 for Windsor House Cooling water intake was resumed on 22 Dec 2014

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

5.4.7. With respect to the commencement of marine dredging works at WCR3 under contract HK/2009/02. The respective water quality monitoring station C1 were associated with HK/2009/01 and HK/2009/02.

5.4.8. As confirmed by CWB RSS, the operation of the pump station for Windsor House Cooling Water was suspended from 22 Oct 2014 for the Windsor House intake cooling intake scheme and temporary supply of freshwater from WSD water mains was provided to cooling water intake The water quality monitoring for the respective cooling water intake at WQM station C7 was temporarily suspended from 22 Oct 2014.

5.4.9. With respect to the commencement of filling works at TS3 and the formation of TZ3 reclamation zone, the enhance DO monitoring at Enhance monitoring station C7 was temporarily suspended from 22 Oct 2014.

5.4.10. As confirmed by WDII RSS and IEC, the cross harbour dredging works have completed since 16 March 2012 while the dredging works for submarine outfall pipeline has completed since 29

November 2011, considering current construction stage and dredging Scenario, the water quality monitoring at stations WSD9 and WSD17 was temporarily suspended since 8 September 2014 flood tide.

5.4.11. With respect to the switching over of cooling water intake location, the water quality monitoring at the relocated intake station RW21-P789 under HK/2009/02 was commenced since 29 July 2013 and monitoring station C5e and C5w were temporarily suspended and switched over to monitoring station RW21-P789 on 29 July 2013 due to suspension of pump house operation.

5.4.12. As advised by WDII RSS, the water quality monitoring for WSD21 pump station with respect to HK/2009/02 was switched over to the relocated location since 12 March 2014. According to the EM&A Manual, the water quality monitoring station WSD21 was relocated to station RW21-P789 and the water quality monitoring at station WSD21 was temporarily suspended since 12 March 2014.

5.4.13. With respect to the commencement of marine dredging works under contract HY/2010/08. The respective water quality monitoring station C7 were associated with HY/2009/15 and HY/2010/08.

5.4.14. With respect to the commencement of marine dredging works under contract HK/2012/08/ The respective water quality monitoring station WSD19, P1, P3, P4, and P5 were associated with Contract HK/2012/08 Since September 2013.

5.4.15. WQM events on 22 April 2013 at monitoring stations C2, C3, C4e and C4w were temporarily suspended. Upon confirmation with WDII RSS and the IEC, water quality monitoring at relocated intakes monitoring location P1, P3, P4 and P5 were commenced since 24 April 2013.

5.4.16. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.

5.4.17. As confirmed by CWB RSS, the marine pilling works under contract HY/2009/19 was confirmed completed by 4 March 2013. The water quality monitoring at the respective monitoring stations C8 and C9 were temporarily suspended since 30 March 2013.

5.4.18. RSS confirmed that all Type III Dredging works under HK/2009/01 have been completed since Oct 2012.

5.4.19. Due to the presence of obstacle within the inner silt curtain frame at sampling point, water quality point at C7 was finely adjusted to the outside of the inner silt curtain frame since 29 Dec 2012.

5.4.20. With respect to the trial dredging at WCR2 was scheduled on 20, 22, 24, 25 March and 1, 3 , 11, 13, 15, 17, 19, 20 Apr and 3 May 2012, on-going water quality monitoring results at WSD21 during this period was checked and indicated that there was no contribution due to the trial dredging operation. Enhanced review of water quality around WCR2 was also implemented and no deterioration in the water quality was observed.

5.4.21. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.

5.4.22. WDII/RSS advised that the dredging works for submarine pipeline at Victoria Harbour had been completed in January 2012. Therefore, the concurrent dredging activities at Sewage Pipeline Zone and reclamation shoreline zone TCBR under the EP-356/2009 scenario 2B no longer exist. As such, with reference to Table 5.39 of the EIA Report for Wan Chai Development Phase II and Central-Wan Chai Bypass, the application of silt screen for cooling water intakes for Queensway Government Offices was suspended and the others remain unchanged.

5.4.23. Due to the dredging works for Cross Harbour Water Mains from Wan Chai to Tsim Sha Tsui-DP6 was completed on 26 March 2012, the temporary suspension of impact water quality monitoring at WSD7 and WSD20 after 27 April 2012 for the water quality monitoring at WSD7 and WSD20 have been monitored for 4-week period after the completion of DP6 to confirm no water deterioration. Water quality monitoring at WSD10 and WSD15 was temporary suspended while water quality monitoring at WSD9 and WSD17 was implemented with respect to HK/2009/02 from 8 Feb 12 onwards;

5.4.24. Based on the joint inspection on 4 Jan 2012 for the NPR area, the 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 to confirm no water deterioration with respect to NPR was commenced since 7 Jan 2012 and it was completed on 6 February 2012.

5.4.25. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Centre (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.

5.4.26. Water quality monitoring at C8 and C9 have been implemented with respect to HY/2009/19 since the marine bore piling work started on 28 Jan 12.

Table 5.12 Water Monitoring Stations for contracts with respect to remaining DP3 work areas after the completion of DP5 & DP6 in 2012 and intake diversion in 2013

Contract No.	Remaining DP3 and work area(s)	Relevant Water Monitoring Stations,	Division of WQM w.r.t tentative works commenced / to be commenced
HK/2009/01	WCR3	C1[1]	Apr 2013
HK/2009/02	WCR3, WCR4, TWCR4	RW21-P789[1], 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:

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

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

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

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

- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

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

5.4.27. Water monitoring for Contract no. HK/2009/01 was commenced on 23 July 2010. The proposed division of water monitoring stations are summarized in ***Table 5.13*** below.

Table 5.13 Water Monitoring Stations for Contract no. HK/2009/01

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

Remarks:

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

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

5.4.28. Water monitoring for Contract no. HK/2009/02 was commenced on 8 July 2010. The proposed division of water monitoring stations are summarized in ***Table 5.14*** below.

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

Station Ref.	Location	Easting	Northing
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	836268.0	816020.0

Remarks:

- The water monitoring stations for the dredging works under Contract No. HK/2009/01 should also include WSD9, WSD17, WSD 21 and C5 if water quality monitoring at these locations have not been carried out by others. Similarly, the water monitoring stations for the dredging works under Contract No. HK/2009/02 should also include WSD7, WSD9, WSD17, WSD 19, C1, C2, C3 and C4 if water quality monitoring at these locations has not been carried out by others.
- Water quality monitoring at WSD9 and WSD 17 was implemented with respect to HK/2009/02 from 8 Feb 2012.
- C5e and C5w water quality monitoring station was temporarily suspended since 29 July 2013
- WSD21 water quality monitoring station was temporarily suspended since 12 March 2014
- WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 September 2014 flood tide.
- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area.

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

5.4.29. Water monitoring for Contract no. HK/2012/08 was commenced on 5 March 2013. The proposed division of water monitoring stations are summarized in ***Table 5.15*** below.

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

Station Ref.	Location	Easting	Northing
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

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

5.4.30. As the removal of reclamation work of TS1 at CBTS has been completed, all procedures have been rectified and complied with the conditions set in EP-356/2009 and FEP-04/356/2009.

5.4.31. Due to the commencement of the maintenance dredging on 10 November 2010, water quality monitoring for Contract no. HY/2009/15 was commenced on 9 November 2010. The proposed division of water monitoring stations are summarized in Table 5.16 below.

5.4.32. Due to the presence of obstacle within the inner silt curtain frame at sampling point, water quality point at C7 was finely adjusted to the outside of the inner silt curtain frame since 29 Dec 2012.

Table 5.16 Water Monitoring Stations for Contract no. HY/2009/15

Station Ref.	Location	Easting	Northing
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 monitoring at C6 was then terminated since 17 May 2011.
- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme and was resumed since 22 December 2014.

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

5.4.33. Due to the commencement of the marine bored piling on 28 Jan 2012, water quality monitoring for Contract no. HY/2009/19 was commenced on 28 Jan 2012.

5.4.34. Due to the marine piling under Contract no. HY/2009/19 was completed on 4 March 2013, the temporary suspension of impact water quality monitoring at C8 and C9 from 4 March 2013 have been monitored for 4-week period after the completion of marine works to confirm no water deterioration.

5.4.35. Based on the safety concern when external façade refurbishment was conducted by contractor employed by Provident Center (C9) between 9 January 2012 to 30 July 2012 which caused to the inaccessibility of sampling either land and marine since 3 Feb 2012, there is a fine adjustment of the sampling location of water quality monitoring at C9 since 10 March 2012 to the closest accessible point prior to the completion of the external façade refurbishment work.

5.4.36. Due to the access of water monitoring station at WSD19 was blocked by LCSD construction works from 3 April 2012 to 2 May 2012 and lead to the inaccessibility of sampling either land and marine, there is a fine adjustment of the sampling point of WSD 19 since 5 April 2012 to the closest accessible point prior to the completion of the construction activities.

5.4.37. As per the meeting with the representative of Excelsior Hotel and World Trade Centre on 17 May 2011, they confirmed that the seawater intake for The Excelsior was no longer in use and replaced by the connected permanent water supply from WSD pipelines since 11 January 2011. Thus, the impact water quality monitoring for the cooling intake - C6 was terminated effective from 26 May 2011.

5.4.38. 24 hours monitoring of turbidity at the cooling water intakes at C7 was conducted. With respect to the seawall collapsing at TS4 on 17 November 2011, the 24 hours turbidity monitoring and was kept in November 2011. Since the reinstating the seawall was completed on 13 January 2012 and no any water deterioration was performed, 24 hour turbidity monitoring was then suspended on 27 January 2012.

5.4.39. Water monitoring results measured in this reporting period are reviewed and summarized. Details of water quality monitoring results and graphical presentation can be referred in **Appendix 5.4**.

Table 5.17 Summary of Water Quality Monitoring Exceedances in Reporting Month

Contract no.	Water Monitoring Station	Mid-flood						Mid-ebb					
		DO		Turbidity		SS		DO		Turbidity		SS	
		AL	LL	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
HK/2009/01 & HK/2009/02	C1	0	0	0	0	0	0	0	0	0	0	0	0
HK/2012/08	WSD19	0	0	0	0	0	0	0	0	0	0	0	0
	P1	0	0	0	0	0	0	0	0	0	0	0	0
	P3	0	0	0	0	0	0	0	0	0	0	0	0
	P4	0	0	0	0	0	0	0	0	0	0	0	0
	P5	0	0	0	0	0	0	0	0	0	0	0	0
HK/2009/02	RW21-P789	0	0	0	0	0	0	0	0	0	0	0	0
HY/2009/15 & HY/2010/08	C7	0	0	0	1	0	0	0	0	0	0	0	0
Total		0	0	0	1	0	0	0	0	0	0	0	0

Remarks: -
- The cessation of seawater intake operation for C6 was confirmed on 17 May 2011, the water monitoring at C6 was then terminated since 17 May 2011.
- WSD9 and WSD17 were implemented with respect to HK/2009/02 from 8 Feb 2012.
- 4-week water quality monitoring at WSD9, WSD10, WSD15, WSD17, C8, C9 were completed on 6 Feb 2012.
- C8 and C9 were implemented with respect to HY/2009/19 from 28 Jan 2012.
- C8 & C9 was temporary suspended on 30 March 2013 due to the marine works for Contract no. HY/2009/19 had been completed on 4 March 2013
- WSD7 and WSD20 were temporarily suspended from 27 Apr 2012
- C2, C3 C4e and C4w water quality monitoring station was temporarily suspended since 24 Apr 2013
- C5e and C5w water quality monitoring station was temporarily suspended since 29 July 2013
- WSD21 water quality monitoring station was temporarily suspended since 12 March 2014
- Maintenance responsibility of silt screen C1, WSD19, P3, P4 and P5 are under Contract HK/2009/01.
- WSD9 and WSD17 water quality monitoring station was temporarily suspended since 8 September 2014 flood tide.
- Water quality monitoring for Windsor House Cooling (Station Ref: C7) was temporarily suspended since 22 October 2014 with respect to the diversion scheme and was resumed since 22 December 2014.
- The water monitoring station C1 shall be associated with Contract No. HK/2009/02 upon commencement of marine works under DP3 at WCR3 area

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

5.4.41. Enhanced DO monitoring at 4 monitoring stations in Causeway Bay Typhoon Shelter and Ex-Public Cargo Works Area was conducted three days per week during the reporting period. The action and limit level exceedances of water quality monitoring are summarized in ***Table 5.18***.

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

Contract no.	Water Monitoring Station	Mid-flood		Mid-ebb	
		DO		DO	
		AL	LL	AL	LL
HY/2009/15	C6	0	0	0	0
	C7	0	0	0	0
	Ex-WPCWA SW	0	2	0	2
	Ex-WPCWA SE	0	0	0	0
Total		0	2	0	2

5.4.42. There were no action level and 4 limit level exceedances of enhanced dissolved oxygen recorded in this reporting month. Investigation found that the exceedances were not related to Project works. The details of recorded exceedances can be referred to the **Section 6.4**.

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

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

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

5.5 Waste Monitoring Results

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

5.5.1. No inert C&D waste and non- inert C&D waste disposed in this reporting month. Details of the waste flow table are summarized in ***Table 5.19.***

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds

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

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

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

5.5.3. No inert C&D waste and Non-inert C&D waste disposed of in this reporting month. Details of the waste flow table are summarized in ***Table 5.20.***

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m^3	NIL	276075.1	TKO137 / TM 38
Inert C&D materials	NIL	18161	N/A

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
recycled, m^3			
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	434	244249 (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

Remarks: The cumulative quantity of Type 1 – Open Sea Disposal (Delicate Sites) & Type 2 – Confined Marine Disposal has been updated in this reporting month.

5.5.4. There was marine sediment Type 1 – Open Sea Disposal (Dedicate Sties) disposed in this reporting month. 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)

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

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds	Remarks
Inert C&D materials disposed, m^3	NIL	141579.2	Tuen Mun Area 38	NIL
	NIL	65216	TKO137 FB	NIL
Inert C&D materials recycled, m^3	NIL	304	Ex-PCWA	NIL
	NIL	111.9	TS4	NIL
Non-inert C&D materials disposed, m^3	NIL	252.2	SENT Landfill	NIL
Non-inert C&D materials recycled, kg	NIL	299361.5	N/A	NIL
Chemical waste disposed, kg	NIL	8,200	N/A	NIL

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds	Remarks
Marine Sediment (Type 1 – Open Sea Disposal), m^3	NIL (Bulk Volume)	126298 (Bulk Volume)	Cheung Chau South	Dredging from TCBR1E / TCBR1W / TCBR2/ TCBR3 / TCBR4 / Maintenance dredging
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m^3	9830 (Bulk Volume)	298445 (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

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

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

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

Table 5.22 Details of Waste Disposal for Contract no. HY/2009/19

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m^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	

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

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

5.5.9. There was no Inert C&D waste and no non-inert C&D waste disposed in this reporting month. Details of the waste flow table are summarized in ***Table 5.23.***

Table 5.23 Details of Waste Disposal for Contract no. HK/2012/08

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

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Marine Sediment (Type 1 – Open Sea Disposal), m^3	3145 (Bulk volume)	34904 (Bulk volume)	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal) , m3	NIL (Bulk volume)	108485 (Bulk volume)	South of The Brothers (from 27 Aug 2013 onwards)

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

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

5.5.11. Inert C&D waste was disposed and no non-inert C&D waste disposed in this reporting month. Details of the waste flow table are summarized in ***Table 5.24***

Table 5.24 Details of Waste Disposal for Contract no. HY/2010/08

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

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

5.5.12. There was no Type 1 – Open Sea Disposal, Type 3 – Special Treatment and Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal disposed in this reporting month.

6. Compliance Audit

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

6.1 Noise Monitoring

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

6.1.1 No exceedance was recorded in the reporting month.

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

6.1.2 No exceedance was recorded in the reporting month.

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

6.1.3 No exceedance was recorded in the reporting month.

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

6.1.4 No exceedance was recorded in the reporting month.

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

6.1.5 No exceedance was recorded in the reporting month.

6.2 Real-time noise Monitoring

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

6.2.1. No limit level exceedance was recorded in the reporting month.

6.3 Air Monitoring

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

6.3.1 No exceedance was recorded in the reporting month.

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

6.3.2 No exceedance was recorded in the reporting month.

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

6.3.3 No exceedance was recorded in the reporting month.

6.3.4 No action and limit level was recorded for odour patrol during this reporting month.

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

6.2.1. No exceedance was recorded in the reporting month.

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

6.2.2. No exceedance was recorded in the reporting month.

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

6.2.3. No exceedance was recorded in the reporting month.

6.4 Water Quality Monitoring

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

6.4.1 No exceedance was recorded in the reporting month.

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

6.4.2 No exceedance was recorded in the reporting month.

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

6.4.3 There were occasionally limit exceedance was recorded at Ex-WPCWA SW on 4, 15 and 20 July 2015 in the reporting month.

6.4.4 After checking with contractor, no marine activities were conducted at Ex-WPCWA on 4, 15 and 20 July 2015 and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, it was considered the exceedances were not related to Project.

6.4.5 Despite mud transhipment was conducted at Ex-WPCWA on 20 July 2015. Upstream discharge at the concern location were consistently observed. In view of no exceedance on the subsequent monitoring. It was considered the exceedance was not related to Project.

6.4.6 There was limit exceedances of turbidity recorded at C7 on 29 June 2015.

6.4.7 After checking with contractor, no marine activities were conducted in the vicinity of C7 monitoring station on 29 June 2015. In view of no marine work activity was conducted and no exceedance was recorded in the subsequence monitoring, it was considered the exceedances were not related to Project.

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

6.4.8 No exceedance was recorded in this reporting month.

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

6.4.9 No exceedance was recorded in this reporting month.

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

6.4.10 There was limit exceedances of turbidity recorded at C7 on 29 June 2015.

6.4.11 After checking with contractor, no marine activities were conducted in the vicinity of C7 monitoring station on 29 June 2015. In view of no marine work activity was conducted and no exceedance was recorded in the subsequence monitoring, it was considered the exceedances were not related to Project.

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

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

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

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

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

7. Cumulative Construction Impact due to the Concurrent Projects

7.0.1. According to Condition 3.4 of the EP-356/2009, this section addresses the relevant cumulative construction impact due to the concurrent activities of the current projects including the Central Reclamation Phase III, Central-Wanchai Bypass and Island Eastern Corridor Link projects.

7.0.2. According to the Final EM&A Report of Central Reclamation Phase III (CRIII) for Contract HK 12/02, the major construction activities were completed by end of January 2014 and no construction activities were undertaken thereafter and the water quality monitoring was completed in October 2011 and no Project-related exceedance was recorded for air and noise monitoring. It can be concluded that cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was insignificant.

7.0.3. According to the construction programme of Central-Wanchai Bypass at Wanchai West at the Central Reclamation Phase III area, construction of ELS and pipe pile wall, road works and drainage were performed in July 2015 reporting month. As no project related exceedance were recorded during the reporting period, cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was considered as insignificant.

7.0.4. According to the construction programme of Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects, the major construction activities under Wan Chai Development Phase II were tunnel works, ELS works and culvert construction at Wan Chai East and removal of L-shape wall, D-wall construction and ELS works at Wan Chai West. The major construction activities under Central-Wan Chai Bypass and Island Eastern Corridor Link Projects were bridge construction and road works at Central Interchange, ELS works at Ex-PCWAW, ELS works and bowling green office demolition at Victoria Park, D- wall construction and ELS works at TS3, IEC demolition and tunnel works at North Point area in the reporting month.

7.0.5. No significant air impact from construction activities was anticipated in the reporting month. Besides, no project related exceedance was recorded during the air and noise environmental monitoring events in the reporting month. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Central Reclamation Phase III (CRIII), Wan Chai Development Phase II (WDII), Central-WanChai Bypass (CWB), Island Eastern Corridor Link projects (IECL) was insignificant.

8. Environmental Site Audit

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

8.0.2. Four site inspections for Contract no. HK/2009/01 were conducted on 2, 8, 16 and 22 July 2015 in reporting month. Results of these inspections and outcomes are summarized in ***Table 8.1.***

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

Item	Date	Observations	Action taken by Contractor	Outcome
150702_01	2-Jul-15	Drip tray shall be provided for oil container at Stage 3.	Oil container has been relocated to designated chemical storage area.	Completion as observed on 8 July 2015
150716_01	16-Jul-15	Drip tray shall be provided for oil container at Stage 3.	Oil container were taken away and disposed.	Completion as observed on 22 July 2015

8.0.3. Four site inspections for Contract no. HK/2009/02 were carried out on 2, 9, 15 and 23 July 2015 in reporting month. No particular finding was observed in this reporting month.

8.0.4. Four site inspections for Contract no. HY/2009/15 were carried out on 29 June, 7, 14 and 21 July 2015 in reporting month. The results of these inspections and outcomes are summarized in ***Table 8.3***.

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

Item	Date	Observations	Action taken by Contractor	Outcome
150629_1	29-Jun-2015	Provide covering to cement bags stored on site (EX-PCWAW)	Proper covering for cement bags was provided	Completion as observed on 7 July 2015
150707_1	7-Jul-2015	Clean the mud / dirt sitting on the edge of seawall and close to drainage system to prevent drop off and cause contamination to nearby water (EX-PCWA)	Mud residue at the edge of seawall was cleared	Completion as observed on 14 July 2015
150721_1	21-Jul-2015	The exhaust filter unit of the derrick barge was observed damaged with dark smoke emission	No further dark smoke emission was observed.	Completion as observed on 28 July 2015
150721_2	21-Jul-2015	Mud / Sediment resting at the edge of hopper barge shall be shovelled back into barge unit and avoid direct wash-off	No further direct wash off of mud residue was observed	Completion as observed on 28 July 2015

8.0.5. Four site inspections for Contract no. HY/2009/19 were carried out on 30 June, 8, 15 and 23 July 2015 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
150630_1	30-Jun-15	Movable noise barrier shall be enhanced of north side of the saw cutting works near City Garden	Movable noise barrier for shielding saw cutting works was provided	Completion as observed on 8 July 2015

8.0.6. Four site inspections for Contract no. HK/2012/08 were carried out on 30 June, 7, 14 and 21 July 2015 in this reporting period. The results of these inspections and outcomes are summarized in ***Table 8.5***

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

Item	Date	Observations	Action taken by Contractor	Outcome
150630_01	30-Jun-15	Drip tray shall be provided for oil container at MVB area.	Oil container has taken away and disposed at MVB area	Completion as observed on 7 July 2015
150630_02	30-Jun-15	Breaker shall be covered more properly with acoustic material at the area near the Hong Kong Convention and Exhibition Centre	Breaker is covered with acoustic material properly to mitigate construction noise impact near the Hong Kong Convention and Exhibition Centre	Completion as observed on 7 July 2015
150630_03	30-Jun-15	Muddy trail on public road at site exit in Portion 2 shall be cleaned up and wheel washing shall conduct more adequately to avoid any generation of muddy trail to the public.	Wheel washing conducted properly and no muddy trail was observed on the public road.	Completion as observed on 21 July 2015
150630_04	30-Jun-15	Pilling rig and excavator at Zone B shall check and monitor for dark smoke emission	Pilling rig and excavator were checked and no dark smoke emission was further noted.	Completion as observed on 7 July 2015
150630_05	30-Jun-15	Silt curtains at water channel shall properly maintain to mitigate the water quality impact more effectively.	Silt curtain was properly deployed along the water channel.	Completion as observed on 7 July 2015
150707_01	7-Jul-15	Drip tray shall be provided for oil containers at Zone B	Drip tray is provided for oil container at Zone B	Completion as observed on 14 July 2015
150707_02	7-Jul-15	Floating refuses shall be collected at regular interval at HKCEC2W area	Floating refuses are cleared at HKCEC2W area.	Completion as observed on 14 July 2015
150721_01	21-Jul-15	Mitigation measure shall be implemented on the excavated slope at the water channel in order to protect the slop and	Silt curtain was deployed at the opening of the sheet pile enclosing the	Completion as observed on 28 July 2015

Item	Date	Observations	Action taken by Contractor	Outcome
		avoid potential runoff impact and generation of muddy dispersion.	excavated area.	
150721_02	21-Jul-15	Floating debris from culvert L shall be cleaned.	Floating debris has removed at the water channel.	Completion as observed on 28 July 2015

8.0.7. Four site inspections for Contract no. HY/2010/08 were carried out on 2, 10, 16 and 23 July 2015 in this reporting period. The results of these inspections and outcomes are summarized in ***Table 8.6***

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

Item	Date	Observations	Action taken by Contractor	Outcome
150702_1	2-Jul-15	Hoarding provided along the covered pedestrian walkway shall be of at least 2.4m tall according to the APCO requirement (TS3)	--	Pending for Contractor follow up action
150710_1	10-Jul-15	Chemical containers shall be provided with drip tray on properly planed within chemical storage area (TS3)	Chemical waste container have been removed	Completion as observed on 16 July 2015
150710_2	10-Jul-15	Muddy effluent and mud residue at the edge of seawall shall be cleaned to avoid runoff impact (TS3)	Mud residue and effluent at the critical area has been cleared	Completion as observed on 23 July 2015
150710_3	10-Jul-15	Three side and top cover shall be provided to grouting station(TS3)	Three side and top cover was provided to grouting station	Completion as observed on 16 July 2015
150716_1	16-Jul-15	Chemical containers shall be provided with drip tray (TS3)	Chemical waste container have been removed.	Completion as observed on 23 July 2015
150723_1	23-Jul-15	Cleaning of muddy water seepage shall be provided to covered pedestrian walkway (TS3)	The pedestrian walkway was cleared from muddy water.	Completion as observed on 31 July 2015

9. Complaints, Notification of Summons and Prosecution

9.0.1. There was one environmental complaint received in the reporting month.

9.0.2. 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.

9.0.3. 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.

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

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

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works (Mar 2010) to last reporting month	36
July 2015	1
Total	**37**

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.

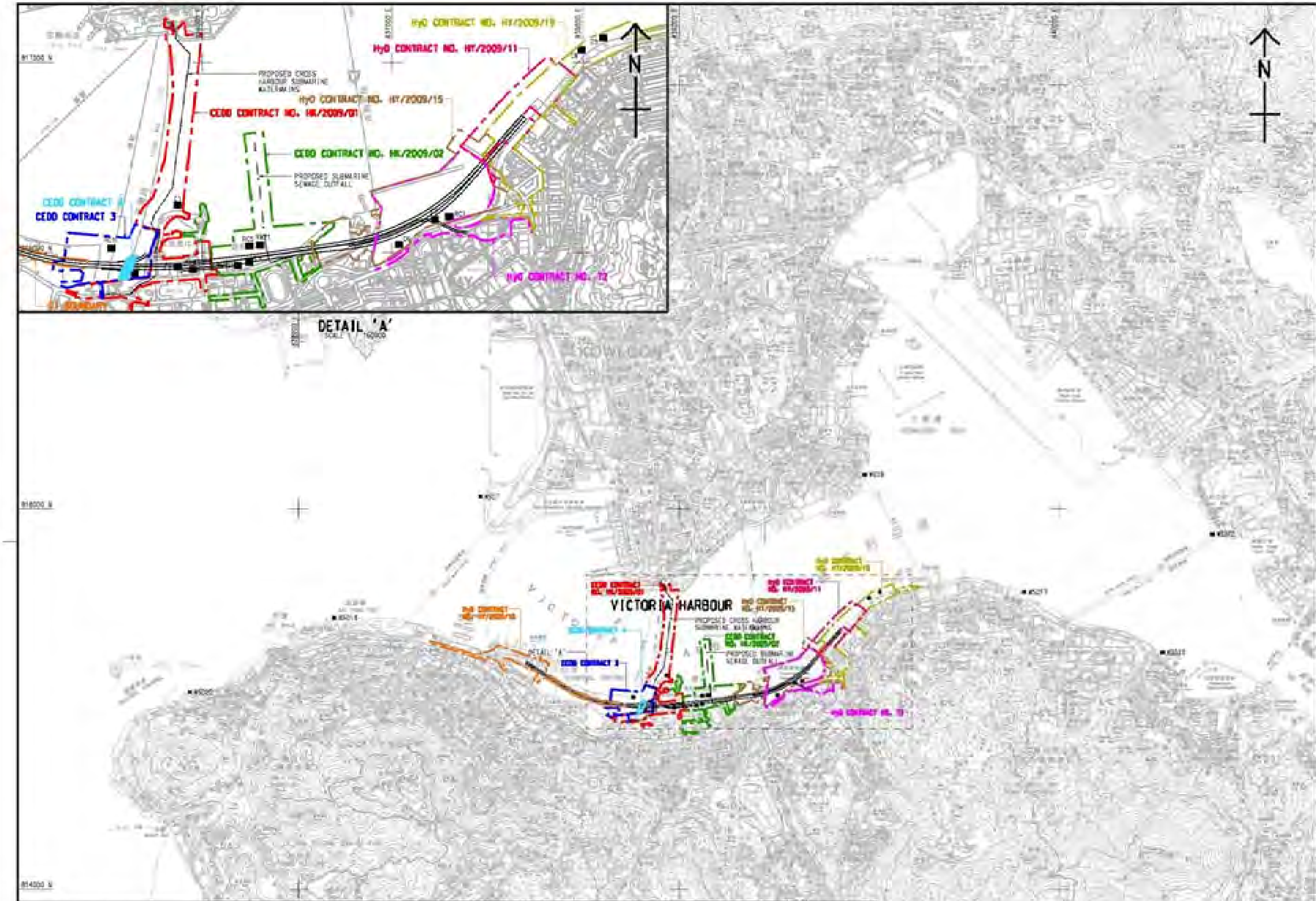
10.0.2. The scheduled construction activities and the recommended mitigation measures for the coming month are listed in ***Table 10.1***.

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	• Construction of Seawall at WCR3 • Reclamation at WCR3 • Demolition of remaining part of existing Wan Chai Ferry Pier	• Nil
HY/2009/15	• Reinstatement of vertical seawall at TPCWAE	• 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	• To space out noisy equipment and position as far as possible from sensitive receiver.
HK/2012/08	• Dry dock construction • Installation of pipe pile wall • Removal of temporary piling platform for culvert diversion • Construction of culvert	• 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	• 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
RW1	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 - 356/2021

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	DP3	2015
HyD CONTRACT NO. HY/2009/11	DP3	19 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 T2	DP1, DP3	MID 2013

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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 1:20000

DIMENSIONS IN METRES

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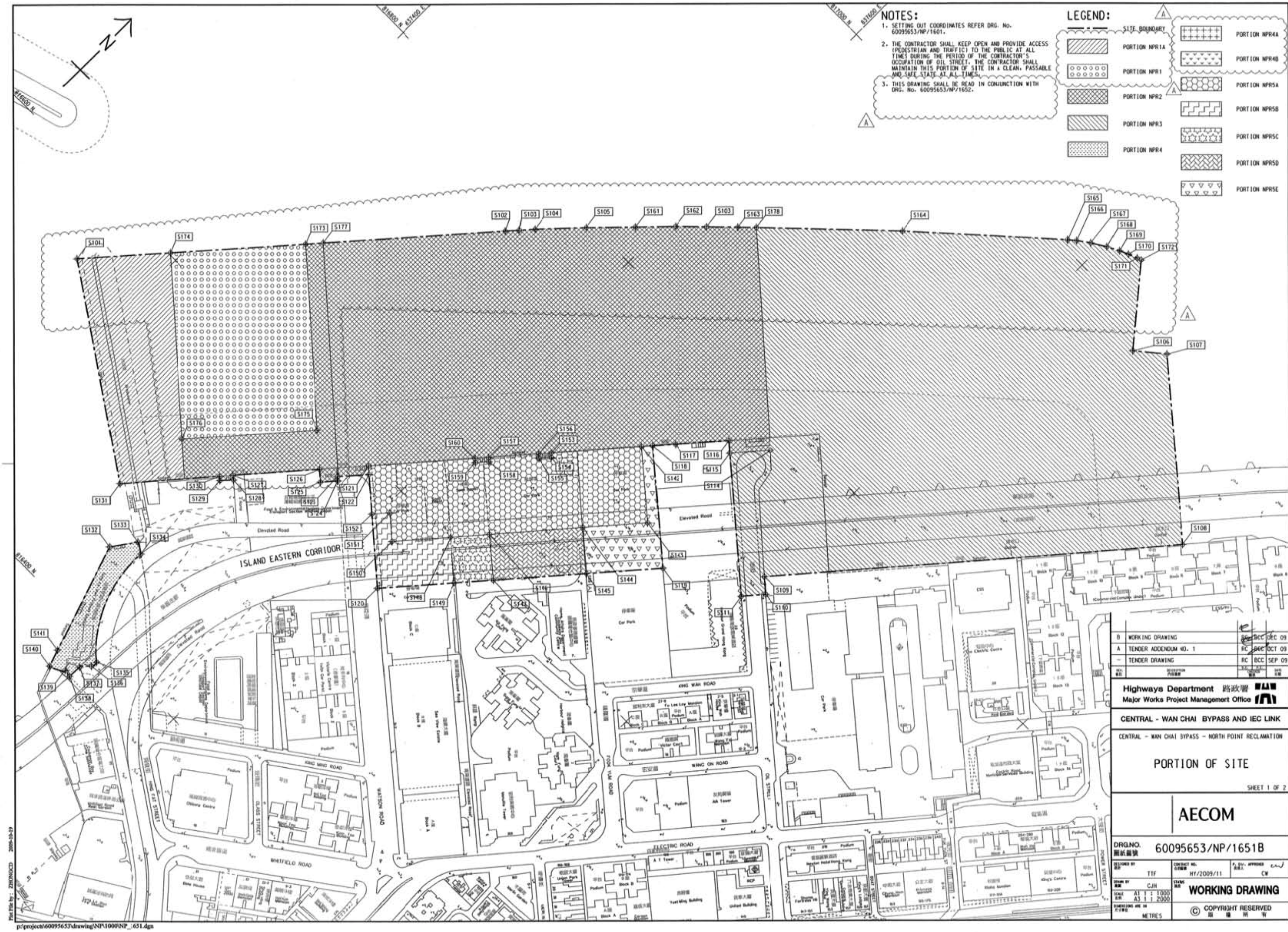

NOTES:
1. SETTING OUT COORDINATES REFER DRG. No. 60095653/NP/1601.
2. THE CONTRACTOR SHALL KEEP OPEN AND PROVIDE ACCESS (PEDESTRIAN AND TRAFFIC) TO THE PUBLIC AT ALL TIMES DURING THE PERIOD OF THE CONTRACTOR'S OCCUPATION OF OIL STREET. THE CONTRACTOR SHALL MAINTAIN THIS PORTION OF SITE IN A CLEAN, PASSABLE AND SAFE STATE AT ALL TIMES.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. No. 60095653/NP/1652.
LEGEND:
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
ISLAND EASTERN CORRIDOR
Elevated Road
KING WAH ROAD
WANG ON ROAD
KING MING ROAD
WATSON ROAD
FOOK YUM ROAD
OIL STREET
ELECTRIC ROAD
WHITFIELD ROAD
CLASS STREET
HING FAT STREET
POWER STREET
Car Park
B | WORKING DRAWING | RC | BCC | DEC 09
A | TENDER ADDENDUM NO. 1 | RC | BCC | 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
APPROVED CW
DRAWN BY CJH
STATUS WORKING DRAWING
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DIMENSIONS ARE IN METRES
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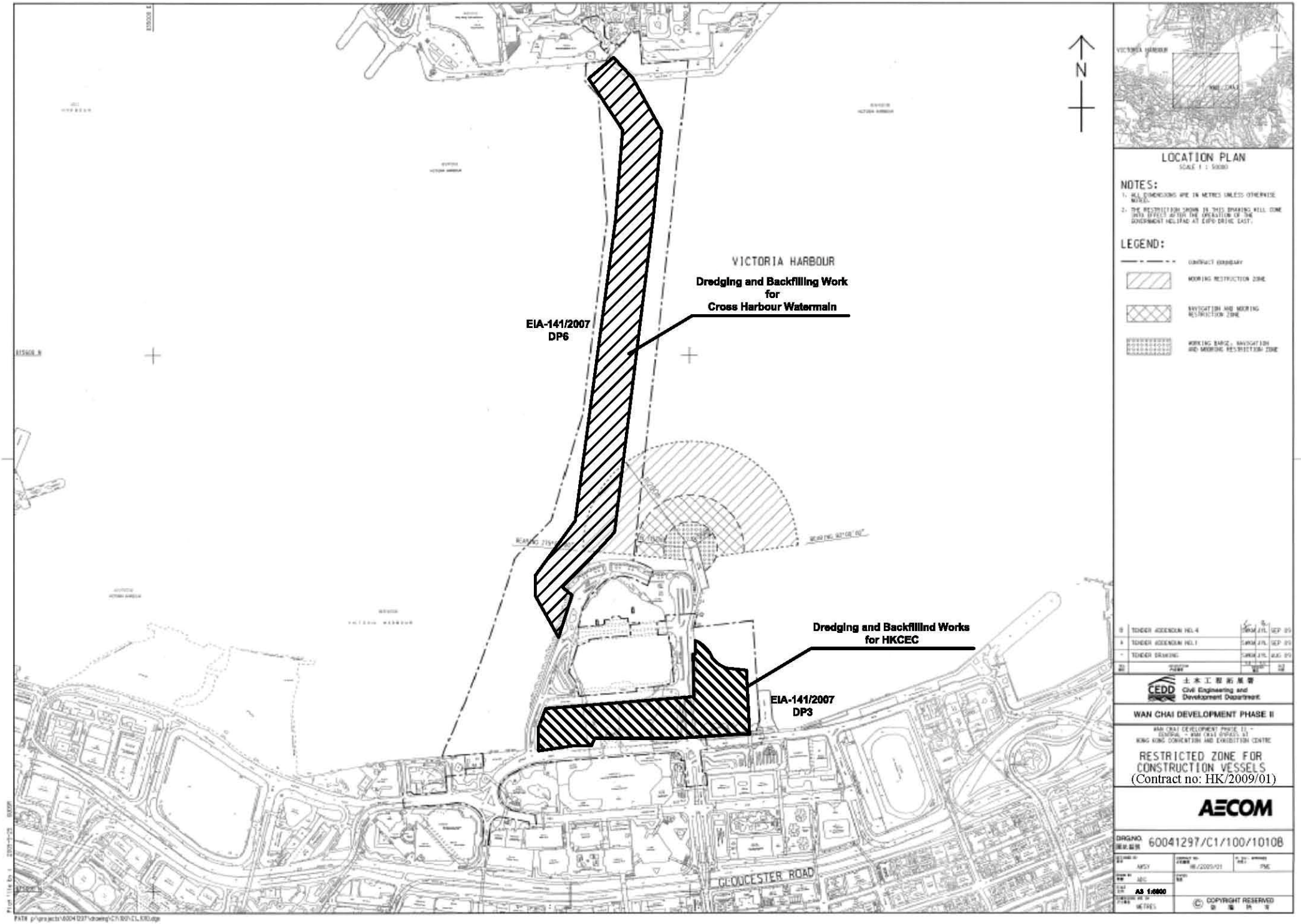
VICTORIA HARBOUR
Dredging and Backfilling Work
for
Cross Harbour Watermain
EIA-141/2007
DP6
Dredging and Backfillind Works
for HKCEC
EIA-141/2007
DP3
GLOUCESTER ROAD
N
LOCATION PLAN
SCALE 1 : 50000
NOTES:
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
2. THE RESTRICTION SHOWN IN THIS DRAWING 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
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METRES
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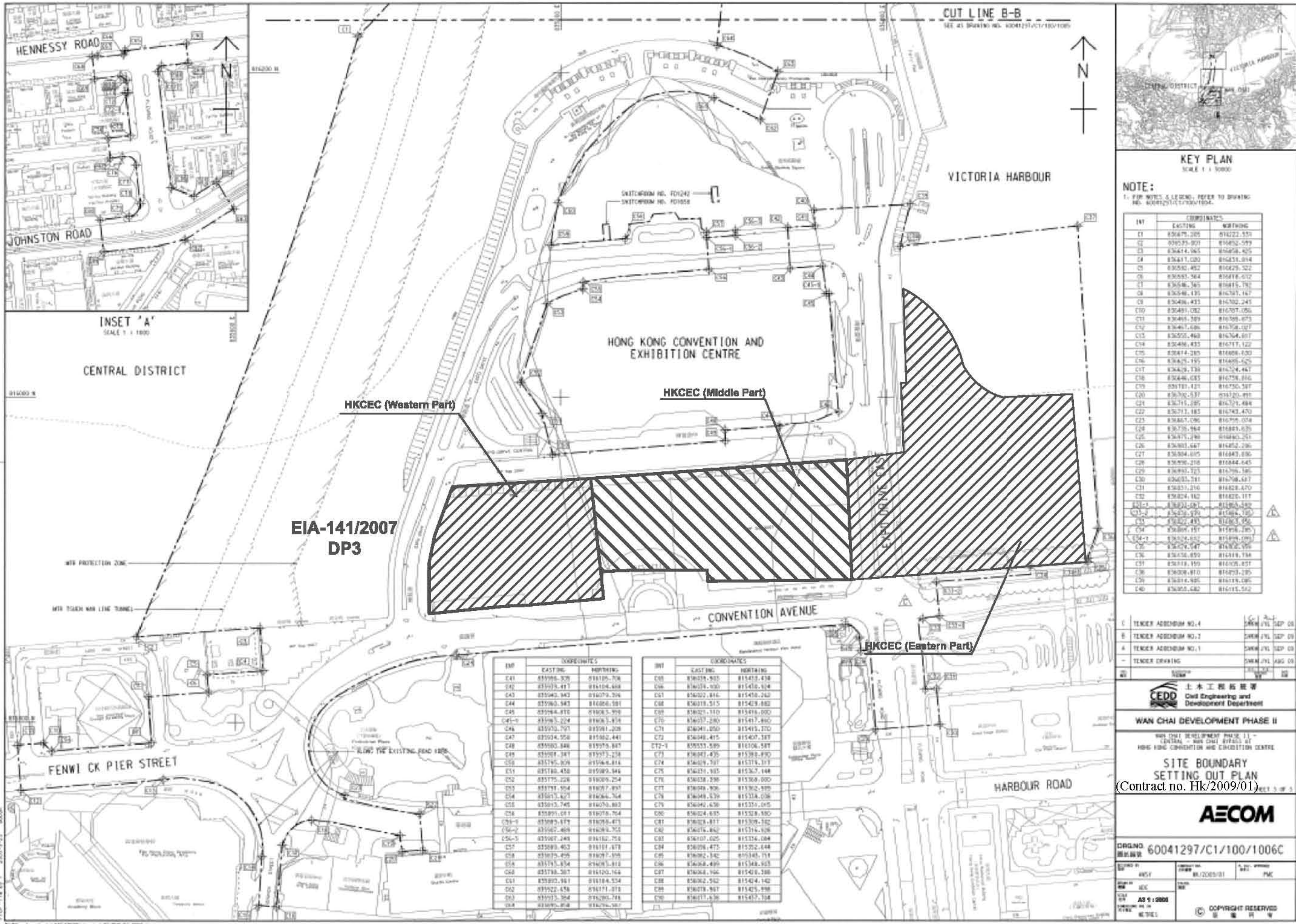

CUT LINE B-B
HENNESSY ROAD
JOHNSTON ROAD
INSET 'A'
CENTRAL DISTRICT
VICTORIA HARBOUR
HONG KONG CONVENTION AND EXHIBITION CENTRE
HKCEC (Western Part)
HKCEC (Middle Part)
HKCEC (Eastern Part)
EIA-141/2007
DP3
CONVENTION AVENUE
FENWICK PIER STREET
HARBOUR ROAD
KEY PLAN
NOTE:
COORDINATES
EASTING
NORTHING
TENDER ADDENDUM NO.4
TENDER ADDENDUM NO.2
TENDER ADDENDUM NO.1
TENDER DRAWING
土木工程拓展署
CEDD 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
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OVERALL Working Schedule

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

Stage 1 - Overall Working Schedule on Reclamation Area of WCR1 and Associated Area (Days 1 to 830)

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 ELSW
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
IVA, IVB, IVC V, VI, VII	B4	Construct all drainage system, pipeworks of intakes and cooling system on public road
VI	B5	Dredging and construct the submarine outfall pipes
VIIIA	B6	Construct new Wan Chai Ferry Pier
III	B7	Construct new permanent 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 Expos 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 / Tonnochy 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

N

N 816230

N 816030

N 815830

GOLDEN BAUHINIA SQUARE

VICTORIA HARBOUR

RECLAMATION WORKS BY OTHERS

TUNNEL WORKS BY OTHERS

35m CLEAR SPACE

P7 P8 P9

EXISTING WATER INTAKES

DIRECTION OF TUNNEL WORKS

DRAINAGE DIVERSION OF 1800 PIPE

EXISTING SUBMARINE OUTFALL (SEWAGE)

EXISTING DISCHARGE

B1 B2 B3 B4 B5 B6 B7 B8

A1 A2 A3 A4 A5 A6

C1 C2 C3 C4 C6 C7

D1

0 20 40 60m

1 : 2000 SCALE BAR

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

CLIENT

ENGINEER'S REPRESENTATIVE

CONTRACTOR

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

PROJECT

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

DRAWING TITLE

DETAILED WORKS SCHEDULE AND LOCATION PLAN - STAGE 1

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

DRAWING NO. CWCRJV/HK200902/SK0031 REV C

SCALE 1 : 2000 (A3)

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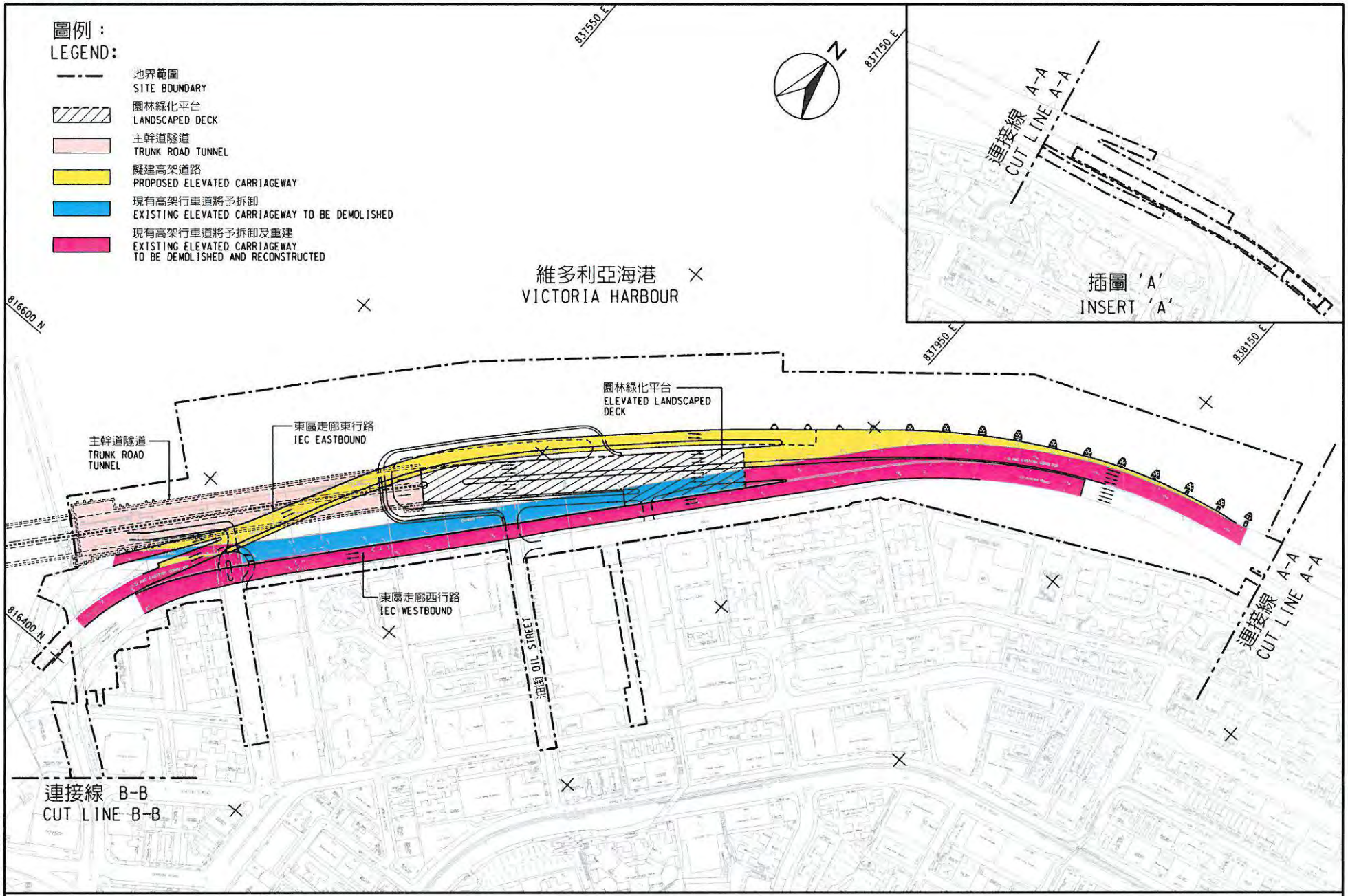
P:\01_Construction Team\CAD (sketch working)\2010_05_19 SK0031C\CWCRJV-HK200902-SK0031C.dwg, 20/5/2010 9:34:20



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

Plot File by : ZHOUNL 2011-1-12

P:\projects\60095653\Drawing\SKETCH\SK5241.dgn

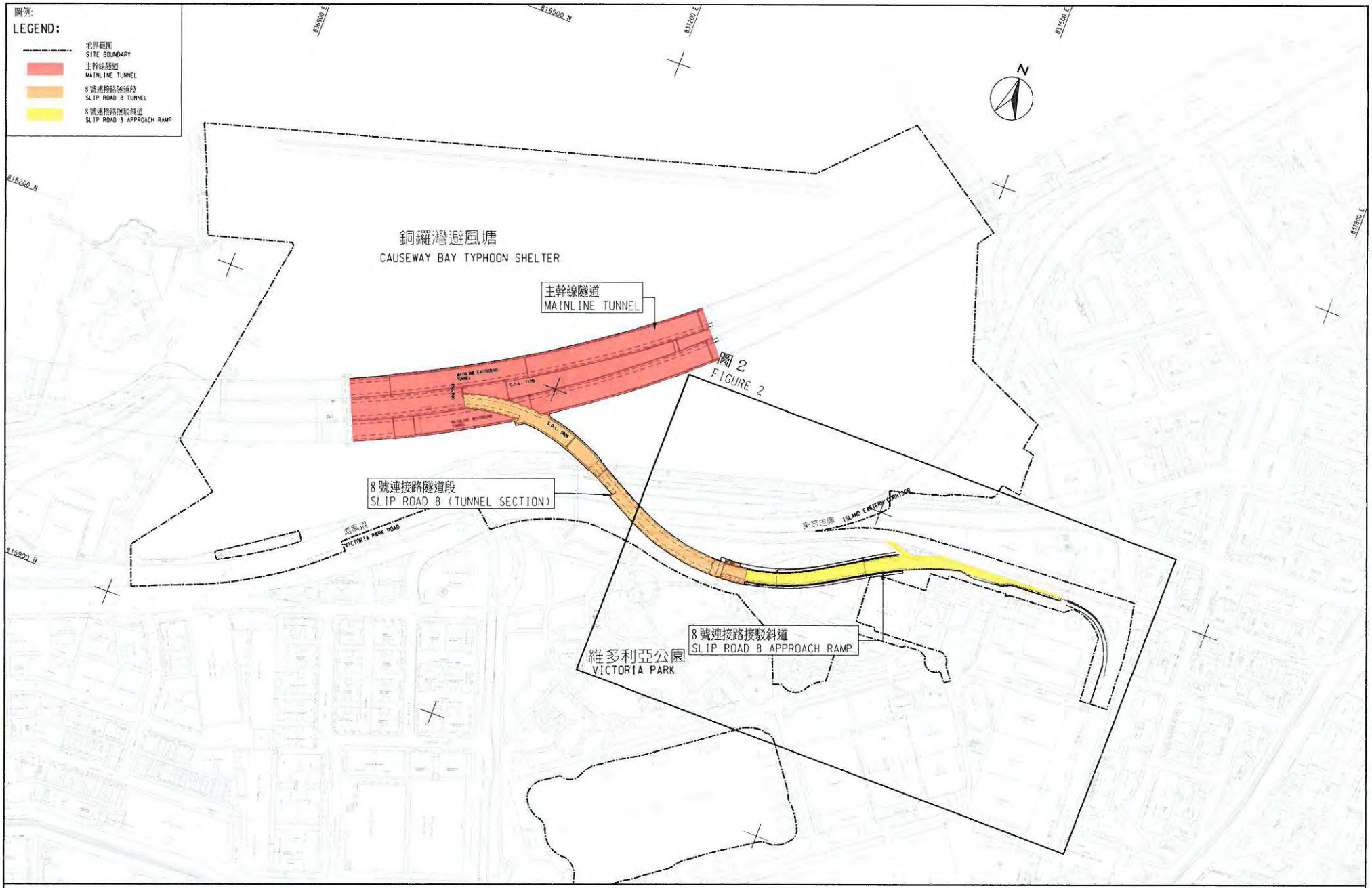


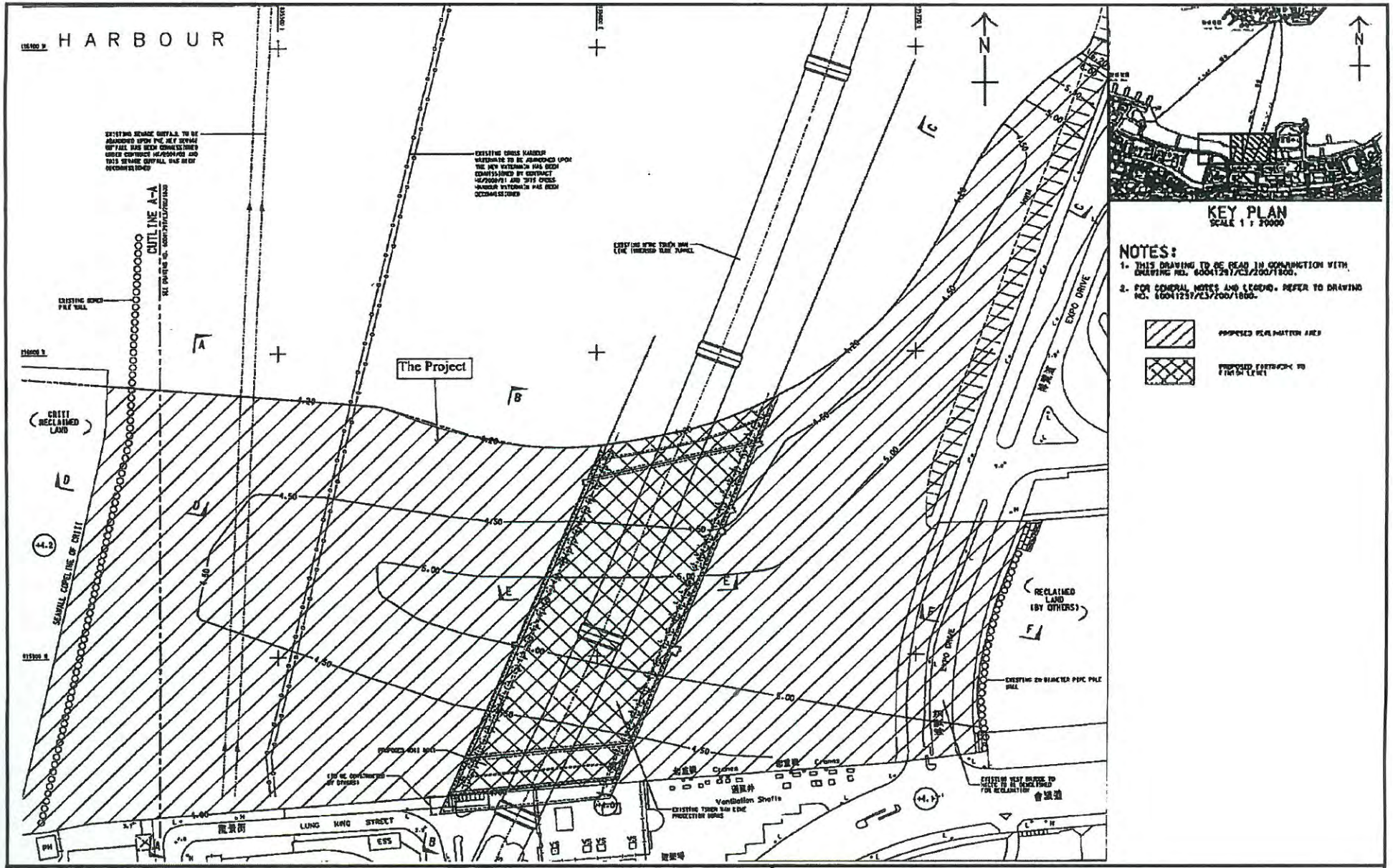
圖1- 合約編號 HY/2010/08 中環灣仔繞道-8號連接路段隧道

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

SCALE 1 : 3000

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


LEGEND:
WORKS AREA
DREDGING AREA FOR MITGATION OF ODOUR(DP3)
SITE BOUNDARY
N
TCBR1E
TCBR2 AND TCBR3
TCBR4
TCBR1W
TPCWAW
TPCWAE
DP3
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



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)

Figure 2.2

Project Organization Chart

Project Organization Chart

Project Proponent

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Fax: 2577 5040

Project Proponent

Highways Department

Mr. Bond Chow
Senior Engineer
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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
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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

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Site Agent
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HK/2009/02 Contractor

Chun Wo – CRGL JV

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Site Agent
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HK/2012/08 Contractor

China State - Leader JV

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Fax: 2865 5229

HY/2009/19 Contractor

Chun Wo- CRGL JV

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HY/2010/08 Contractor

China State Construction Engineering (HK) Ltd.

Mr. Chan Ying Lun
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Fax: 2566 8061

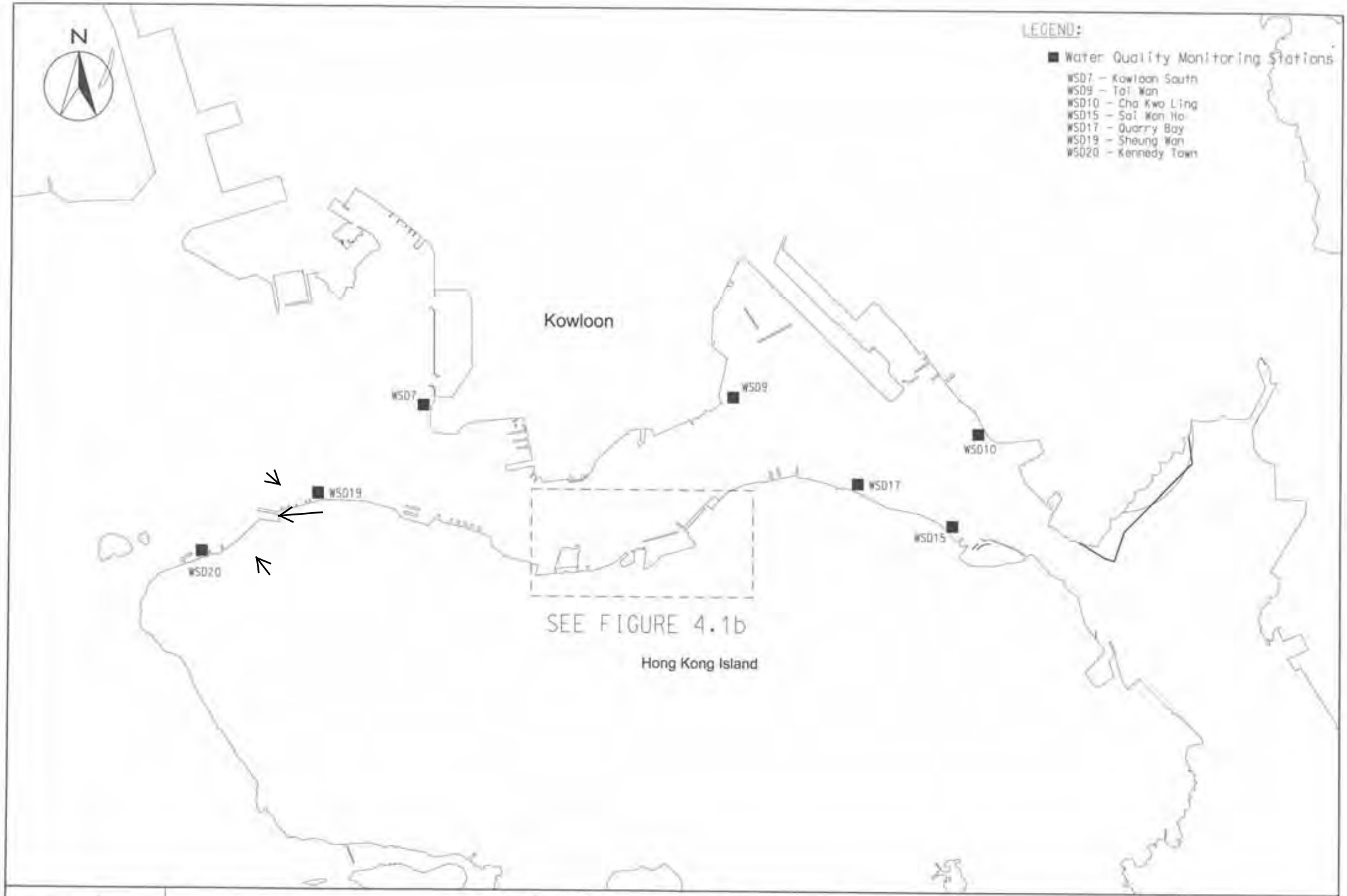
Environmental Team

Lam Geotechnics Limited

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

Figure 4.1

Locations of Monitoring Stations



MAUNSELL AECOM
Maunsell Consultants Asia Ltd

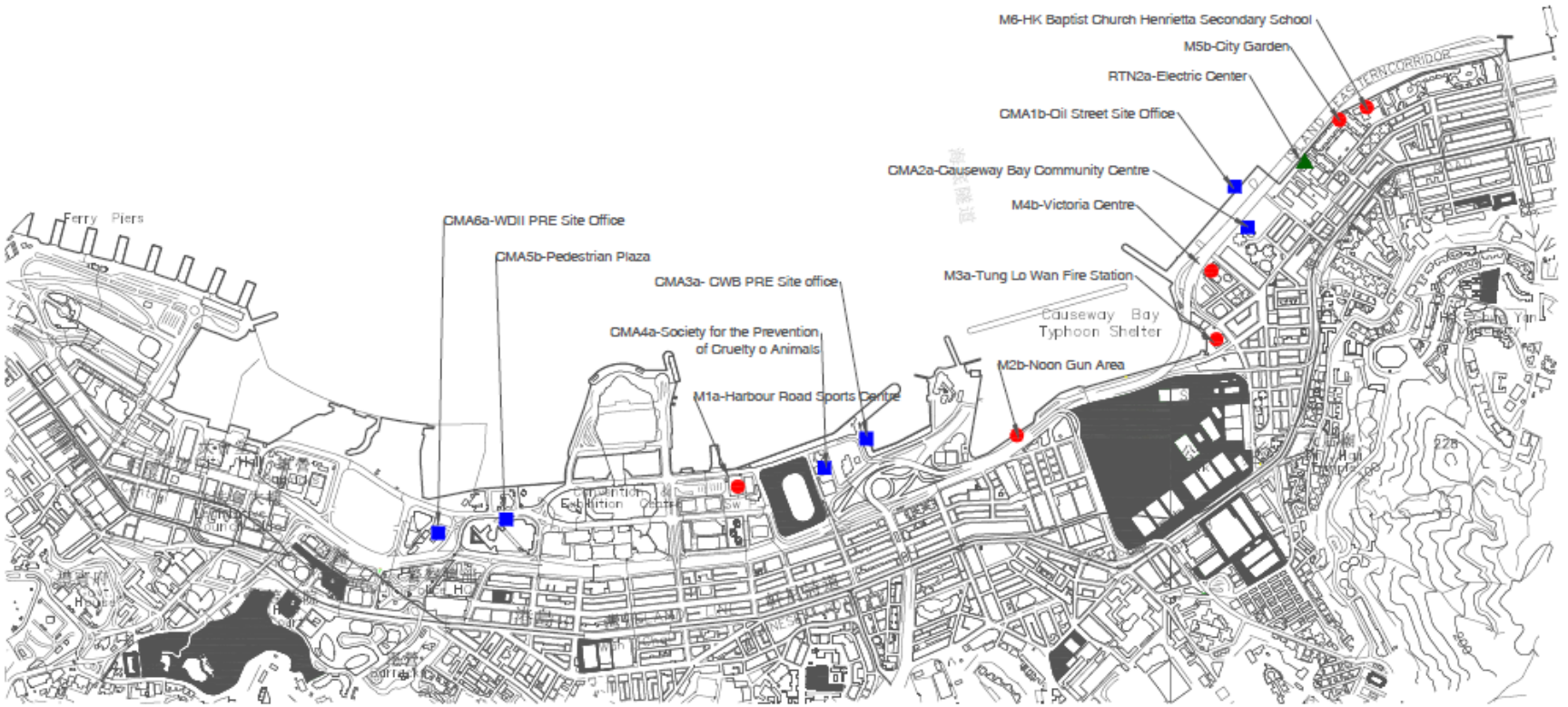
WAN CHAI DEVELOPMENT PHASE II - PLANNING AND ENGINEERING REVIEW

LOCATIONS OF WATER QUALITY MONITORING STATIONS

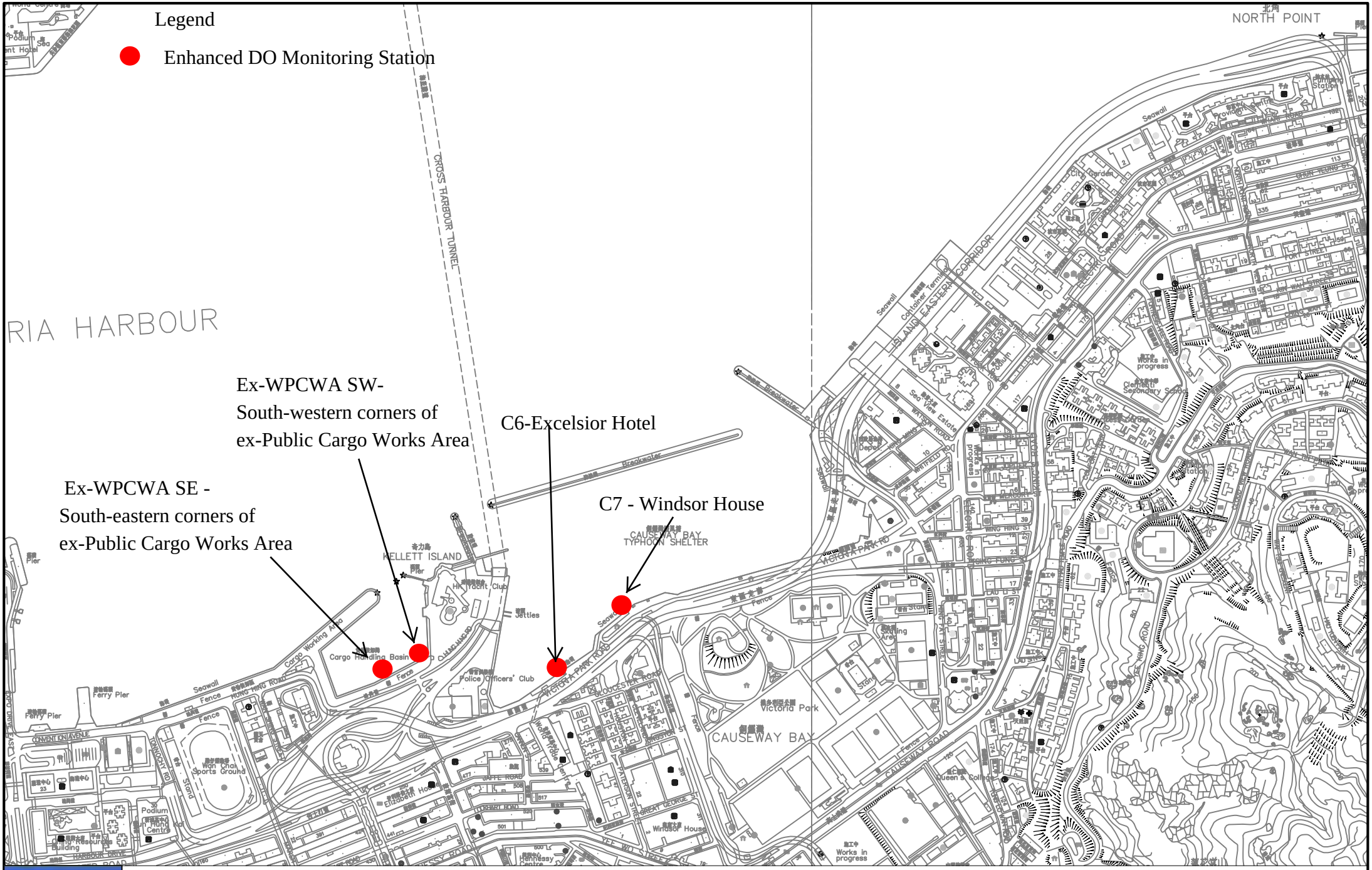
(SHEET 1 OF 2)

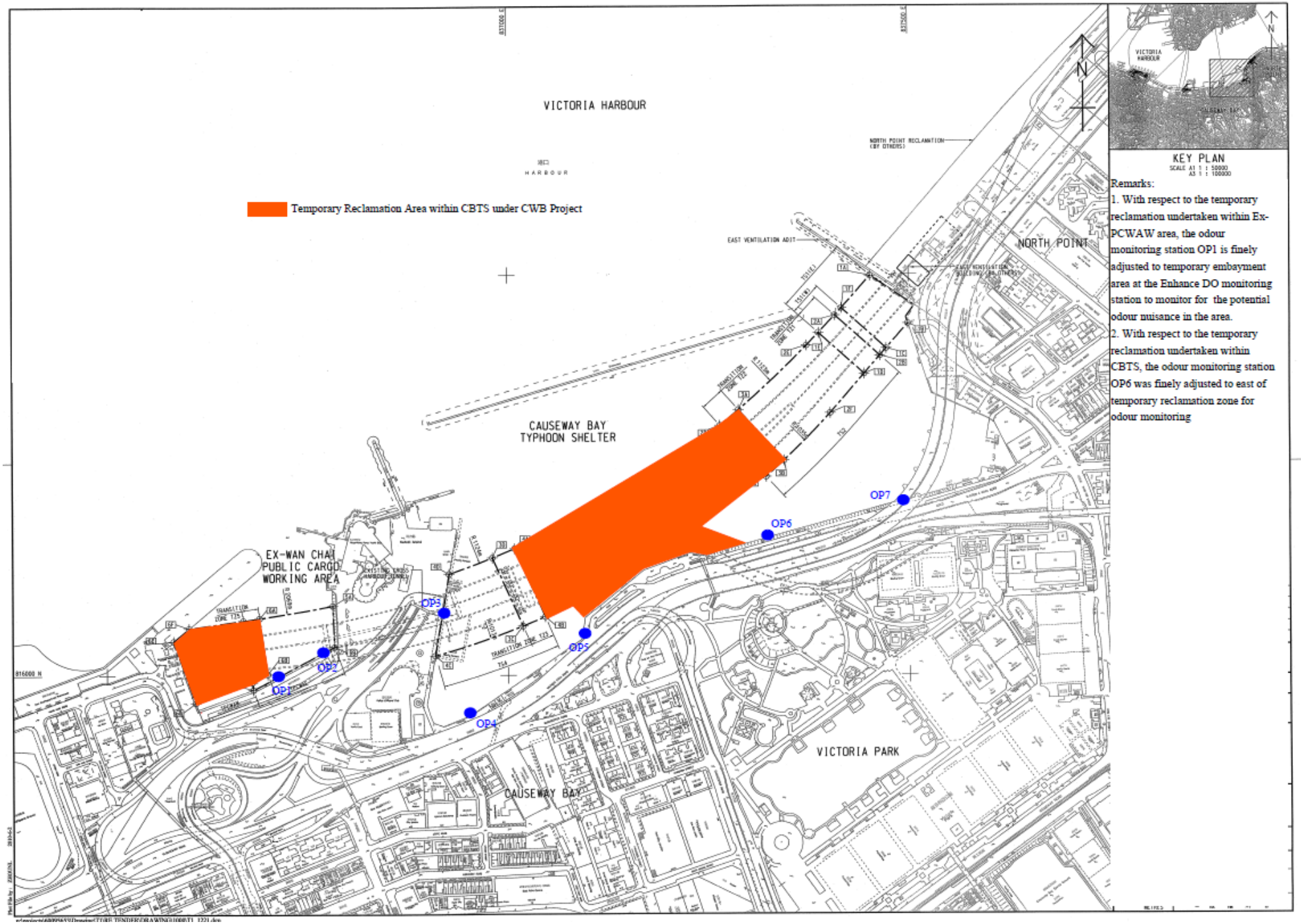
FIGURE 4.1a

P:/60017193/REPORT/DRAWINGS/EM&A-0708/WQ/4.1A.DGN SCALE: N.T.S. (A3)



LOCATIONS OF ENVIRONMENTAL MONITORING STATIONS

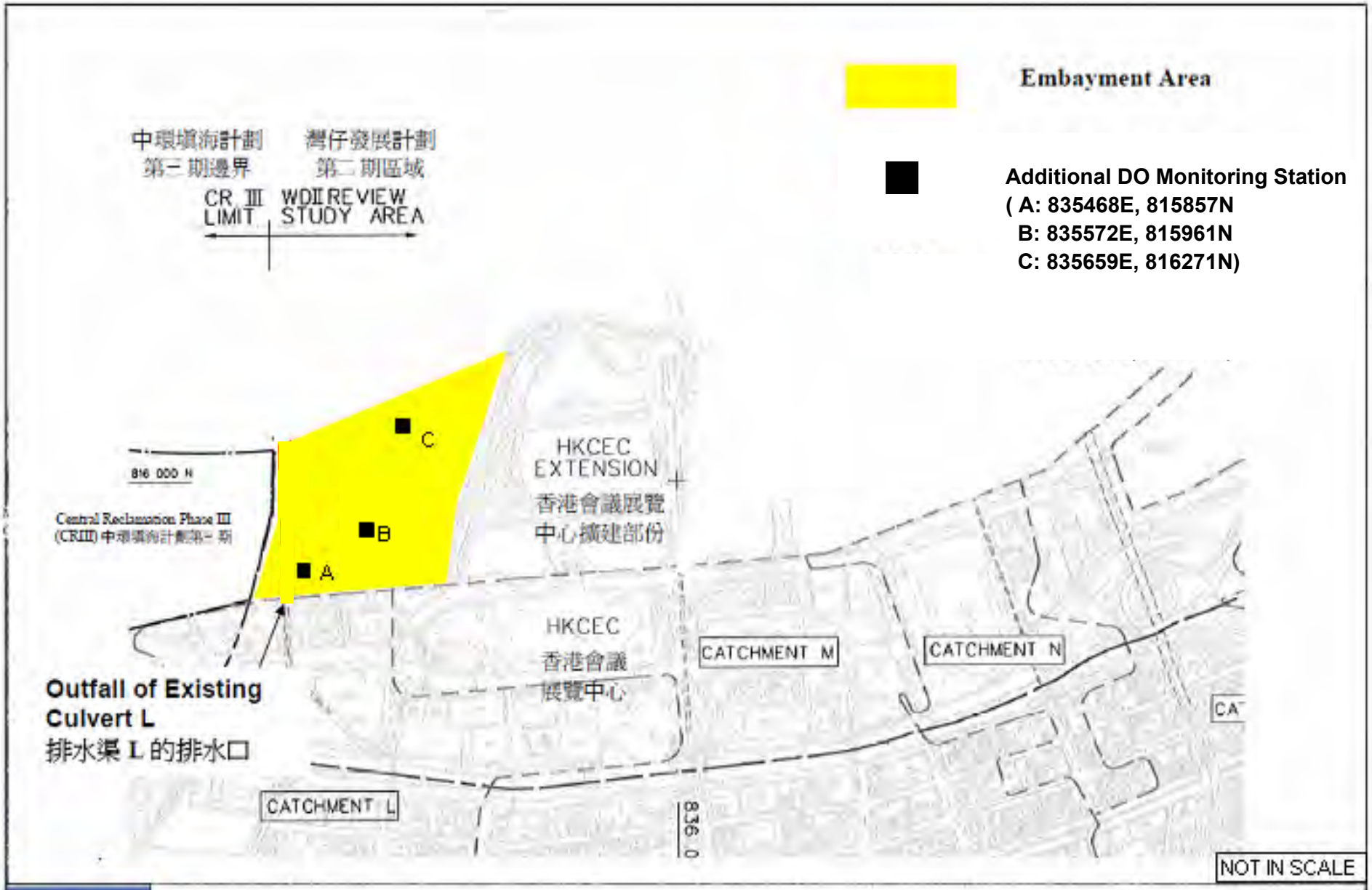

Legend
Enhanced DO Monitoring Station
Ex-WPCWA SW-
South-western corners of
ex-Public Cargo Works Area
C6-Excelsior Hotel
Ex-WPCWA SE -
South-eastern corners of
ex-Public Cargo Works Area
C7 - Windsor House
NORTH POINT
CROSS HARBOUR TUNNEL
HARBOUR
HKUST
HKUST Jockey Club Sustainability Lab
Breakwater
Seawall
Container Terminal
EASTERN CORRIDOR
Sea View Estate
WATERFRONT ROAD
KING WING
WHITFIELD RD
Depot
Works in progress
Clementi Secondary School
Fence
Stand
Skating Area
Victoria Park
CAUSEWAY BAY
CAUSEWAY BAY TYPHOON SHELTER
KELLETT ISLAND
Pier
HK Yacht Club
Jetties
Cargo Working Area
Cargo Handling Basin
Police Officers' Club
VICTORIA PARK ROAD
HONG KONG
Ferry Pier
CONVENT ON AVENUE
Wan Chai Sports Ground
Elizabeth House
GAP ROAD
WORCESTER ROAD
JOHNSTON
PATERSON STREET
KENT STREET
GEORGE ST
YEE WO STREET
Windsor House
Hennessy Centre
Queen's College
Works in progress
Lam
Locations of Enhance DO Monitoring Station



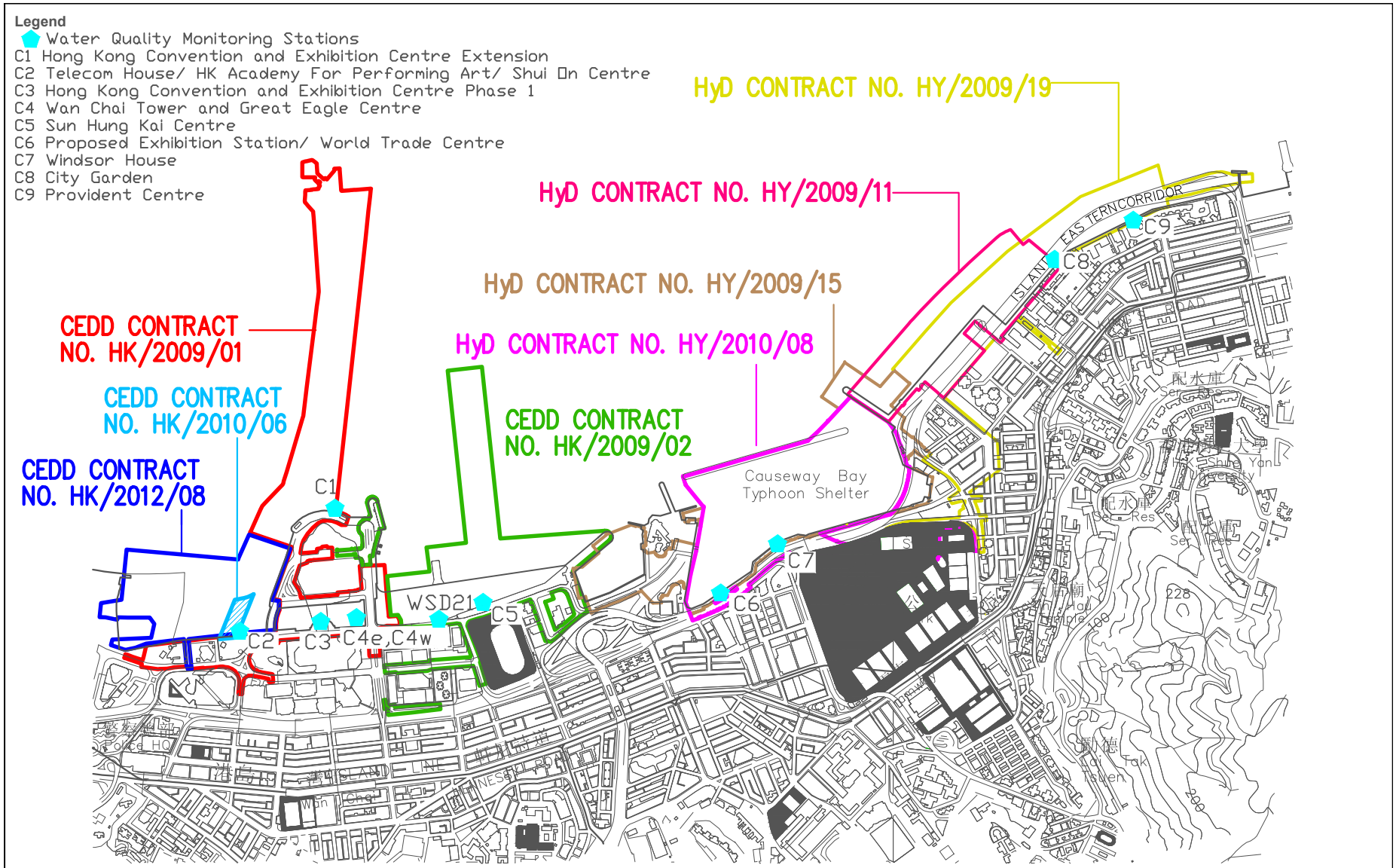
KEY PLAN
SCALE A1 1 : 50000
A3 1 : 100000

Remarks:

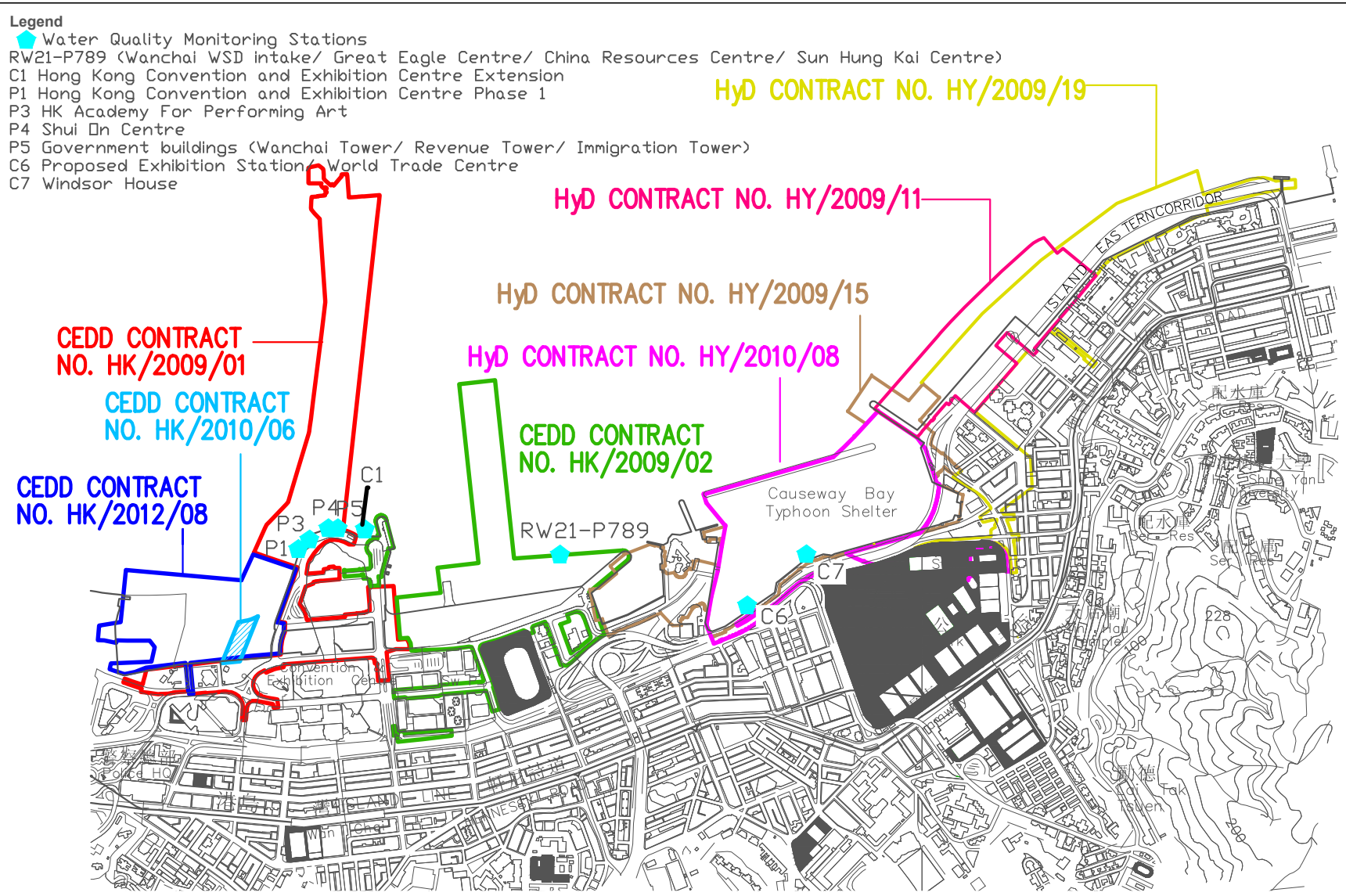
1. With respect to the temporary reclamation undertaken within Ex-PCWAW area, the odour monitoring station OP1 is finely adjusted to temporary embayment area at the Enhance DO monitoring station to monitor for the potential odour nuisance in the area.
2. With respect to the temporary reclamation undertaken within CBTS, the odour monitoring station OP6 was finely adjusted to east of temporary reclamation zone for odour monitoring



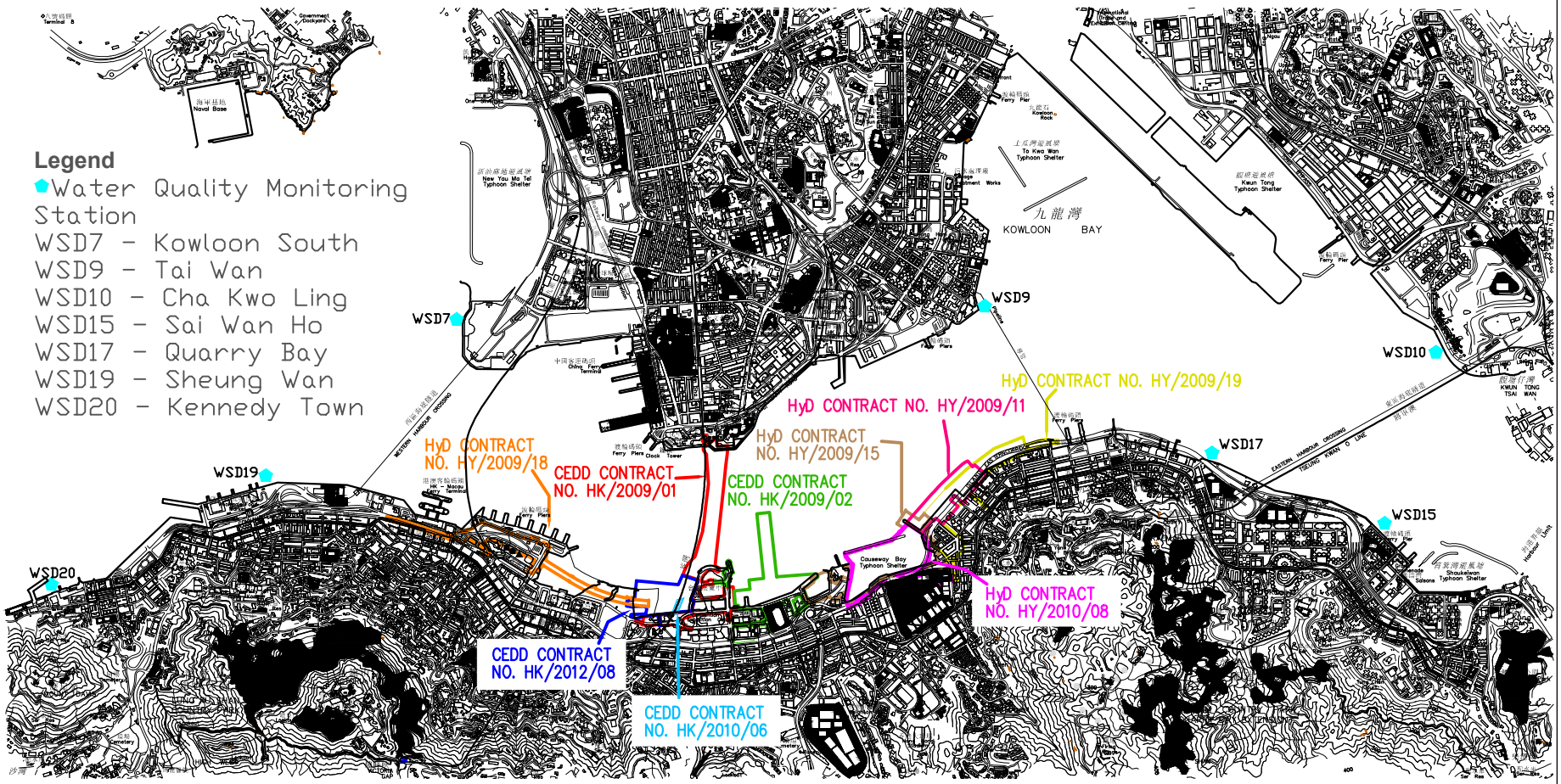
Location Plan of Additional Dissolved Oxygen Monitoring Stations for Culvert L Water Discharge Flow



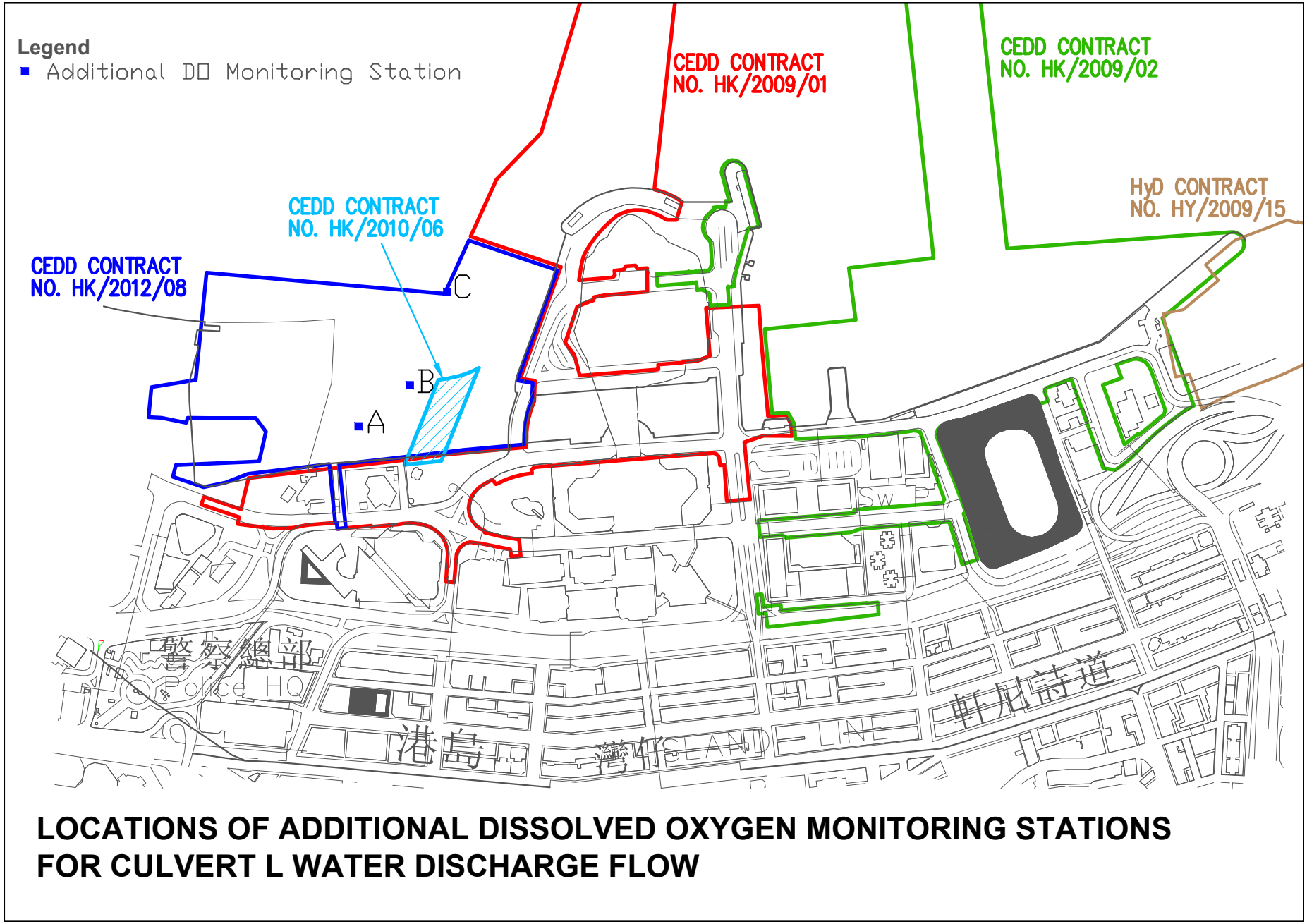
LOCATIONS OF WATER QUALITY MONITORING STATIONS



LOCATIONS OF WATER QUALITY MONITORING STATIONS



LOCATIONS OF WATER QUALITY MONITORING STATIONS



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

Appendix 3.1

Environmental Mitigation Implementation Schedule

Environmental Mitigation Implementation Schedule

Implementation Schedule for Air Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
For the Whole Project								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. • 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.

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 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 [Note 2]	320.1	500	176.7	260
CMA2a	323.4	500	169.5	260
CMA3a [Note 2]	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5b [Note 2]	332.0	500	181.0	260
CMA6a [Note 2]	300.1	500	187.3	260

Note 2:

- *As per facing owner's rejection in allowing the implementation of long-term air quality impact monitoring at their premises, alternative monitoring stations and justification were proposed for IEC verification and EPD approval.*
- *The established Action and Limit Levels from the baseline air monitoring will be adopted to the alternative monitoring stations.*

Action and Limit Level for Water Monitoring

Parameters	Dry Season		Wet Season	
	Action	Limit	Action	Limit
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 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

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: SAM LAM **WORK ORDER: HK1510147**
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 2015-05-22
DATE OF ISSUE: 2015-06-01
ADDRESS: 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD, WANCHAI, HONG KONG
PROJECT: ---

METHOD OF PERFORMANCE CHECK/ CALIBRATION:
Ref: APHA22nd ed 2130B

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

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203010
Equipment No.:	---
Date of Calibration:	22-May-15

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

Mr. Peter Lee
Director

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1510147
DATE OF ISSUE: 2015-06-01
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203010
Equipment No.:	---
Date of Calibration:	22-May-15
Date of next Calibation:	22-Aug-15

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.86	-3.5
10	10.1	1.0
40	40.0	0.0
100	101	1.0
400	399	-0.3
1000	1000	0.0
	Tolerance Limit (±%)	10.0

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT:	**SAM LAM**	**WORK ORDER:**	**HK1510130**
CLIENT:	**LAM GEOTECHNICS LIMITED**		
DATE RECEIVED:	**08/04/2015**		
DATE OF ISSUE:	**15/04/2015**		
ADDRESS:	**11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD, WANCHAI, HONG KONG**		
PROJECT:	**---**		

METHOD OF PERFORMANCE CHECK/ CALIBRATION:
Ref: APHA22nd ed 2130B

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

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	08/04/2015

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

Mr. Peter Lee
Director

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1510130
DATE OF ISSUE: 15/04/2015
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	08/04/2015
Date of next Calibation:	08/07/2015

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	4.22	5.5
10	9.77	-2.3
40	40.9	2.3
100	99	-1.0
400	412	3.0
1000	983	-1.7
	Tolerance Limit (±%)	10.0

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: SAM LAM **WORK ORDER:** HK1510256
CLIENT: LAM GEOTECHNICS LIMITED
DATE RECEIVED: 08/07/2015
DATE OF ISSUE: 15/07/2015
ADDRESS: 11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD, WANCHAI, HONG KONG
PROJECT: ---

METHOD OF PERFORMANCE CHECK/ CALIBRATION:
Ref: APHA22nd ed 2130B

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

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	08/07/2015

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

Mr. Peter Lee
Director

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1510256
DATE OF ISSUE: 15/07/2015
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1203015
Equipment No.:	---
Date of Calibration:	08/07/2015
Date of next Calibation:	08/10/2015

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.92	-2.0
10	10.3	3.0
40	38.5	-3.8
100	95.4	-4.6
400	387	-3.3
1000	996	-0.4
	Tolerance Limit (±%)	10.0

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

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

METHOD OF PERFORMANCE CHECK/ CALIBRATION:
Ref: APHA22nd ed 2130B

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

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	08/04/2015

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

Mr. Peter Lee
Director

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1510131
DATE OF ISSUE: 15/04/2015
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	08/04/2015
Date of next Calibation:	08/07/2015

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	3.89	-2.8
10	10.3	3.0
40	41.5	3.8
100	97	-3.0
400	394	-1.5
1000	978	-2.2
	Tolerance Limit (±%)	10.0

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

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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

Information supplied by customer:

CONTACT:	**SAM LAM**	**WORK ORDER:**	**HK1510257**
CLIENT:	**LAM GEOTECHNICS LIMITED**		
DATE RECEIVED:	**08/07/2015**		
DATE OF ISSUE:	**15/07/2015**		
ADDRESS:	**11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD, WANCHAI, HONG KONG**		
PROJECT:	**---**		

METHOD OF PERFORMANCE CHECK/ CALIBRATION:
Ref: APHA22nd ed 2130B

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

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	08/07/2015

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

Mr. Peter Lee
Director

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: HK1510257
DATE OF ISSUE: 15/07/2015
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1309192
Equipment No.:	---
Date of Calibration:	08/07/2015
Date of next Calibation:	08/10/2015

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)
0	0.00	---
4	4.11	2.8
10	9.79	-2.1
40	42.4	6.0
100	103	3.0
400	387	-3.3
1000	982	-1.8
	Tolerance Limit (±%)	10.0

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

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PILOT TESTING

EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No.	:	HK1510133
Project Name	:	EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue	:	21/04/2015
Customer	:	LAM GEOTECHNICS LIMITED
Address	:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG

Calibration Job No.	:	HK1510133
Test Item No.	:	HK1510133-01
Test Item Details		
Test Item Description	:	Multifunctional Meter
Manufacturer	:	YSI
Model No.	:	Professional Plus
Serial No.	:	14E100105
Performance Method	:	Checked according to in-house method CAL005 (References: Temperature (Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B) , Dissolved oxygen (APHA 19e 4500-O,C))
Test Item Receipt Date	:	14-Apr-15
Test Item Calibration Date	:	15-Apr-15
Test Period	:	14/04/2015 - 21/04/2015

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 : 

Mr. Peter Lee
(Director)

Issue Date: 21/04/2015

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

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

Parameters:

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

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

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

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

Conductivity (Method Ref: APHA 19e, 2510)

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

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

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

Remarks:
(1) 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.

- End of Report -

PILOT TESTING

EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No.	:	HK1510258
Project Name	:	EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue	:	20/07/2015
Customer	:	LAM GEOTECHNICS LIMITED
Address	:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG

Calibration Job No.	:	HK1510258
Test Item No.	:	HK1510258-01
Test Item Details		
Test Item Description	:	Multifunctional Meter
Manufacturer	:	YSI
Model No.	:	Professional Plus
Serial No.	:	14E100105
Performance Method	:	Checked according to in-house method CAL005 (References: Temperature (Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B) , Dissolved oxygen (APHA 19e 4500-O,C))
Test Item Receipt Date	:	14-Jul-15
Test Item Calibration Date	:	15-Jul-15
Test Period	:	14/07/2015 - 20/07/2015

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

Approved Signatory : 

Mr. Peter Lee
(Director)

Issue Date: 20/07/2015

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: HK1510258
DATE OF ISSUE: 20/07/2015
CLIENT: LAM GEOTECHNICS LIMITED

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

Parameters:

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

Reference Reading (°C)	Display Reading (°C)	Deviation (°C)
9.6	10.5	+0.9
19.9	20.3	+0.4
32.0	31.5	-0.5
	Tolerance Limit	±2.0

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

Expected Reading (pH unit)	Reference Reading (pH unit)	Display Reading (pH unit)	Deviation (pH unit)
4.0	3.92	4.07	+0.15
7.0	6.94	6.97	+0.03
10.0	9.91	10.03	+0.12
	Tolerance Limit		±0.20

Conductivity (Method Ref: APHA 19e, 2510)

KCl concentration (mol/L)	Reference Reading (ms/cm)	Display Reading (ms/cm)	Deviation (%)
0.0000	0.00	0.00	--
0.1000	12.89	12.70	-1.45
0.2000	24.80	24.53	-1.08
0.5000	58.67	58.09	-0.99
	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)
8.41	8.46	+0.05
3.18	3.36	+0.18
1.06	1.09	+0.03
	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.

- End of Report -

PILOT TESTING

EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No.	:	HK1510134
Project Name	:	EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue	:	24/04/2015
Customer	:	LAM GEOTECHNICS LIMITED
Address	:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG

Calibration Job No.	:	HK1510134
Test Item No.	:	HK1510134-01
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 Intermational 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	:	17-Apr-15
Test Item Calibration Date	:	17-Apr-15
Test Period	:	17/04/2015 - 24/04/2015

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

Approved Signatory : 

Mr. Peter Lee
(Director)

Issue Date: 24/04/2015

Pilot Testing Limited
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Tel: (852) 2527 6691 email: test@pilot-testing.com

PILOT TESTING

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

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

Parameters:

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

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

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

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

Conductivity (Method Ref: APHA 19e, 2510)

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

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

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

Remarks:
(1) Maxium tolerance and calibration frequency stated in the report, unless 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.

- End of Report -

PILOT TESTING

EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No.	:	HK1510261
Project Name	:	EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue	:	24/07/2015
Customer	:	LAM GEOTECHNICS LIMITED
Address	:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG

Calibration Job No.	:	HK1510261
Test Item No.	:	HK1510261-01
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	:	17-Jul-15
Test Item Calibration Date	:	17-Jul-15
Test Period	:	17/07/2015 - 24/07/2015

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

Approved Signatory : 

Mr. Peter Lee
(Director)

Issue Date: 24/07/2015

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PILOT TESTING

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1510261
DATE OF ISSUE: 24/07/2015
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type	Multifunctional Meter
Manufacturer	YSI
Model No.	Professional Plus
Serial No.	14M100277
Date of Calibration	17-Jul-15
Date of next Calibation	17-Oct-15

Parameters:

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

Reference Reading (°C)	Display Reading (°C)	Deviation (°C)
10.3	10.4	+0.1
19.9	20.0	+0.1
29.5	29.4	-0.1
	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	4.02	4.04	+0.02
7.0	6.98	7.07	+0.09
10.0	9.94	10.06	+0.12
	Tolerance Limit		±0.20

Conductivity (Method Ref: APHA 19e, 2510)

KCl concentration (mol/L)	Reference Reading (ms/cm)	Display Reading (ms/cm)	Deviation (%)
0.0000	0.00	0.00	--
0.1000	12.89	12.66	-1.79
0.2000	24.80	25.12	+1.29
0.5000	58.67	58.77	+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)
6.34	6.42	+0.08
3.10	3.17	+0.07
1.51	1.43	-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.

- End of Report -

PILOT TESTING

EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No.	:	HK1510132
Project Name	:	EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue	:	21/04/2015
Customer	:	LAM GEOTECHNICS LIMITED
Address	:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG

Calibration Job No.	:	HK1510132
Test Item No.	:	HK1510132-01
Test Item Details		
Test Item Description	:	Multifunctional Meter
Manufacturer	:	YSI
Model No.	:	Professional Plus
Serial No.	:	11F100420
Performance Method	:	Checked according to in-house method CAL005 (References: Temperature (Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B) , Dissolved oxygen (APHA 19e 4500-O,C))
Test Item Receipt Date	:	14-Apr-15
Test Item Calibration Date	:	15-Apr-15
Test Period	:	14/4/2015 - 21/4/2015

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

Approved Signatory : 

Mr. Peter Lee
(Director)

Issue Date: 21/04/2015

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PILOT TESTING

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

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

Parameters:

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

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

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

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

Conductivity (Method Ref: APHA 19e, 2510)

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

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

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

Remarks:
(1) Maxium tolerance and calibration frequency stated in the report, unless 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.

- End of Report -

PILOT TESTING

EQUIPMENT PERFORMANCE CHECK / CALIBRATION REPORT

Report No.	:	HK1510259
Project Name	:	EQUIPMENT PERFORMANCE CHECK/CALIBRATION REPORT
Date of Issue	:	20/07/2015
Customer	:	LAM GEOTECHNICS LIMITED
Address	:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG

Calibration Job No.	:	HK1510259
Test Item No.	:	HK1510259-01
Test Item Details		
Test Item Description	:	Multifunctional Meter
Manufacturer	:	YSI
Model No.	:	Professional Plus
Serial No.	:	11F100420
Performance Method	:	Checked according to in-house method CAL005 (References: Temperature (Section 6 of Intermational Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure), pH value (APHA 21e 4500H:B), Salinity (Refer to Conductivity APHA 19e 2510B) , Dissolved oxygen (APHA 19e 4500-O,C))
Test Item Receipt Date	:	14-Jul-15
Test Item Calibration Date	:	15-Jul-15
Test Period	:	14/7/2015 - 20/7/2015

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

Approved Signatory : 

Mr. Peter Lee
(Director)

Issue Date: 20/07/2015

Pilot Testing Limited
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Tel: (852) 2527 6691 email: test@pilot-testing.com

PILOT TESTING

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1510259
DATE OF ISSUE: 20/07/2015
CLIENT: LAM GEOTECHNICS LIMITED

Equipment Type	Multifunctional Meter
Manufacturer	YSI
Model No.	Professional Plus
Serial No.	11F100420
Date of Calibration	15-Jul-15
Date of next Calibation	15-Oct-15

Parameters:

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

Reference Reading (°C)	Display Reading (°C)	Deviation (°C)
9.8	10.1	+0.3
20.2	20.3	+0.1
30.1	29.5	-0.6
	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	4.02	4.08	+0.06
7.0	6.92	6.87	-0.05
10.0	10.10	9.98	-0.12
	Tolerance Limit		±0.20

Conductivity (Method Ref: APHA 19e, 2510)

KCl concentration (mol/L)	Reference Reading (ms/cm)	Display Reading (ms/cm)	Deviation (%)
0.0000	0.00	0.00	--
0.1000	12.89	12.92	+0.23
0.2000	24.80	24.52	-1.13
0.5000	58.67	59.10	+0.73
	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)
8.83	8.90	+0.07
5.23	5.26	+0.03
1.17	1.24	+0.07
	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.

- End of Report -

綜合試驗有限公司
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Tel : (852) 2873 6860
Fax : (852) 2555 7533

CERTIFICATE OF CALIBRATION

Certificate No.: 15CA0312 02-02 **Page:** 1 **of** 2

Item tested

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

Item submitted by

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

Date of test: 13-Mar-2015

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.

2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.

3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

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

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

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 13-Mar-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 conditon of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

綜合試驗有限公司
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E-mail: smec@cigismec.com Website: www.cigismec.com

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 15CA0312 02-02 **Page:** 2 **of** 2

1, Measured Sound Pressure Level

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

(Output level in dB re 20 μPa)

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	94.22	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

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

At 1000 Hz **STF = 0.002 dB**

Estimated expanded uncertainty 0.005 dB

3, Actual Output Frequency

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

At 1000 Hz **Actual Frequency = 965.3 Hz**

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4, Total Noise and Distortion

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

At 1000 Hz **TND = 0.7 %**

Estimated expanded uncertainty 0.7 %

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

- End -

Calibrated by: Fung Chi Yip **Date:** 13-Mar-2015

Checked by: Lam Tze Wai **Date:** 13-Mar-2015

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

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

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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

Certificate No.: 14CA1213 01 **Page** 1 **of** 2

Item tested

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

Item submitted by

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

Date of test: 13-Dec-2014

Reference equipment used in the calibration

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

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	60 ± 5 %
Air pressure:	1010 ± 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:** 15-Dec-2014 **Company Chop:**

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

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

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CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 14CA1213 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:** 13-Dec-2014

Checked by: Lam Tze Wai **Date:** 15-Dec-2014

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.

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TISCH Environmental

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

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jun 30, 2015 Rootsmeter S/N 0438320 Ta (K) - 296
Operator Tisch Orifice I.D. - 0005 Pa (mm) - 749.3

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3930	3.2	2.00
2	NA	NA	1.00	0.9800	6.4	4.00
3	NA	NA	1.00	0.8790	7.9	5.00
4	NA	NA	1.00	0.8350	8.7	5.50
5	NA	NA	1.00	0.6900	12.7	8.00

DATA TABULATION

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

CALCULATIONS

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

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

For subsequent flow rate calculations:

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

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA1b	**Calbration Date**	:	10-Jun-15
Equipment no.	:	EL452	**Calbration Due Date**	:	10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

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

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

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	6.1	6.1	12.2	1.7339	60	59.3176
2	4.7	4.7	9.4	1.5220	54	53.3859
3	3.8	3.8	7.6	1.3686	48	47.4541
4	2.3	2.3	4.6	1.0648	38	37.5678
5	1.4	1.4	2.8	0.8308	30	29.6588

By Linear Regression of Y on X

Slope, m	=	33.1850	Intercept, b	=	2.2031
Correlation Coefficient*	=	0.9994			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks : _____

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

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

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

CALIBRATION OF CONTINUOUS FLOW RECORDER

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

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

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

By Linear Regression of Y on X

Slope, m = 42.7672 Intercept, b = -13.3484

Correlation Coefficient* = 0.9900

Calibration Accepted = Yes/~~No~~**

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

** Delete as appropriate.

Remarks :

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

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA3a	**Calbration Date**	:	10-Jun-15
Equipment no.	:	EL333	**Calbration Due Date**	:	10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

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

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

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

By Linear Regression of Y on X

Slope, m	=	28.9984	Intercept, b	=	3.3019
Correlation Coefficient*	=	0.9964			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks : _____

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

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	**Calbration Date**	:	10-Jun-15
Equipment no.	:	EL390	**Calbration Due Date**	:	10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

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

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

Calibration of TSP						
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	5.9	5.9	11.8	1.7053	57	56.3517
2	4.7	4.7	9.4	1.5220	52	51.4086
3	3.6	3.6	7.2	1.3321	44	43.4996
4	2.3	2.3	4.6	1.0648	34	33.6133
5	1.4	1.4	2.8	0.8308	26	25.7043

By Linear Regression of Y on X

Slope, m = 35.8979 Intercept, b = -4.2281

Correlation Coefficient* = 0.9988

Calibration Accepted = Yes/~~No~~**

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

** Delete as appropriate.

Remarks : _____

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

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA5b	**Calbration Date**	:	02-Jun-15
Equipment no.	:	EL222	**Calbration Due Date**	:	02-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	303	Kelvin	**Pressure, P_a**	1009	mmHg

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

Calibration of TSP						
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	6.3	6.3	12.6	1.7639	65	64.3245
2	4.8	4.8	9.6	1.5397	58	57.3973
3	3.6	3.6	7.2	1.3334	52	51.4596
4	2.3	2.3	4.6	1.0658	42	41.5636
5	1.4	1.4	2.8	0.8316	30	29.6883

By Linear Regression of Y on X

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

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

** Delete as appropriate.

Remarks : _____

Calibrated by	:	LuLu Mar	**Checked by**	:	Derek Lo
Date	:	02-Jun-15	**Date**	:	02-Jun-15

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA6a	**Calbration Date**	:	10-Jun-15
Equipment no.	:	EL448	**Calbration Due Date**	:	10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

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

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

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

By Linear Regression of Y on X

Slope, m	=	31.6381	Intercept, b	=	1.3862
Correlation Coefficient*	=	0.9990			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks : _____

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

Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

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

Environmental Monitoring Schedule
July 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Jun	29-Jun 24hr TSP Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6) Impact WQM Mid-ebb 10:29 Mid-flood 17:29	30-Jun 24hr TSP (CMA3a, CMA6a) 1hr TSP	1-Jul	2-Jul Impact WQM Mid-ebb 12:27 Mid-flood 19:32	3-Jul	4-Jul 24hr TSP Impact WQM Mid-ebb 13:55 Mid-flood 20:57
5-Jul	6-Jul 24hr TSP (CMA1a) 1hr TSP Noise (daytime) (M1a, M2b) Impact WQM Mid-ebb 15:26 Mid-flood 22:28	7-Jul Noise (daytime) (M3a, M4b, M5b, M6)	8-Jul Impact WQM Mid-flood 10:48 Mid-ebb 17:10	9-Jul	10-Jul 24hr TSP Impact WQM Mid-flood 13:45 Mid-ebb 19:27	11-Jul 24hr TSP (CMA1a) 1hr TSP
12-Jul	13-Jul Noise (daytime) (M1a, M2b) Impact WQM Mid-ebb 10:36 Mid-flood 17:28	14-Jul Noise (daytime) (M3a, M4b, M5b, M6)	15-Jul Impact WQM Mid-ebb 12:01 Mid-flood 19:00	16-Jul 24hr TSP	17-Jul 1hr TSP Impact WQM Mid-ebb 13:18 Mid-flood 20:12	18-Jul
19-Jul	20-Jul Impact WQM Mid-flood 8:18 Mid-ebb 14:59	21-Jul Noise (daytime) (M3a, M4b, M5b, M6)	22-Jul 24hr TSP Impact WQM Mid-flood 9:31 Mid-ebb 16:00	23-Jul 1hr TSP	24-Jul Noise (daytime) (M1a, M2b)	25-Jul Impact WQM Mid-flood 0:19 Mid-ebb 7:05
26-Jul	27-Jul Noise (daytime) (M1a, M2b, M3a, M4b, M5b, M6)	28-Jul				

Remarks: Due to the hoisting of amber rainstorm warning signal, the water quality monitoring on 22 July 2015 during flood tide and ebb tide were cancelled.

With respect to the maintenance works for the diverted seawater supply system to Windsor House Cooling water intake and suspension of seawater supply to Windsor House from the water storage tank for water quality sampling from 7 July 2015 to 13 July 2015, the WQM station C7 was cancelled on 8 July 2015 and was temporarily suspended from 9 July 2015 to 13 July 2015. The aforesaid monitoring station was resumed

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

Tentative Environmental Monitoring Schedule
August 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		28-Jul	29-Jul	30-Jul	31-Jul	1-Aug
		24hr TSP	1hr TSP			
		Impact WQM		Impact WQM		Impact WQM
		Mid-ebb 10:04		Mid-ebb 11:25		Mid-ebb 12:55
		Mid-flood 17:21		Mid-flood 18:35		Mid-flood 19:48
2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug
	24hr TSP	1hr TSP				
	Noise (daytime)	Noise (daytime)				
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb 14:23		Mid-flood 9:39		Mid-flood 12:06	
	Mid-flood 21:08		Mid-ebb 15:55		Mid-ebb 17:52	
9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug
					24hr TSP	1hr TSP
	Noise (daytime)	Noise (daytime)				
	Impact WQM		Impact WQM		Impact WQM	
	Mid-ebb 9:35		Mid-ebb 11:07		Mid-ebb 12:22	
	Mid-flood 16:40		Mid-flood 18:06		Mid-flood 19:08	
16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug
				24hr TSP	1hr TSP	
	Noise (daytime)	Noise (daytime)				
	Impact WQM		Impact WQM		Impact WQM	
	Mid-flood 7:29		Mid-flood 8:44		Mid-flood 10:15	
	Mid-ebb 14:00		Mid-ebb 15:04		Mid-ebb 16:18	
23-Aug	24-Aug	25-Aug	26-Aug	27-Aug		
			24hr TSP	1hr TSP		
	Noise (daytime)	Noise (daytime)				
		Impact WQM		Impact WQM		
		Mid-ebb 8:49		Mid-ebb 10:16		
		Mid-flood 16:22		Mid-flood 17:33		

Appendix 5.2

Noise Monitoring Results and Graphical Presentations

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: M1a - Harbour Road Sports Centre

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
29/06/15	13:40	Fine	74.0	76.5	69.5	72	69	75
06/07/15	14:00	Fine	74.1	76.0	70.0	72	70	75
13/07/15	14:22	Fine	73.0	75.5	69.0	72	65	75
24/07/15	13:10	Cloudy	72.4	75.0	67.0	72	59	75
27/07/15	10:11	Fine	72.8	75.5	67.5	72	64	75

Location: M2b - Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
29/06/15	14:22	Fine	68.5	69.5	66.5	68	61	75
06/07/15	14:31	Fine	69.6	72.0	65.5	68	65	75
13/07/15	15:05	Fine	66.7	67.5	64.0	68	67	75
24/07/15	14:14	Cloudy	67.9	69.5	65.5	68	56	75
27/07/15	13:35	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)					
29/06/15	15:00	Fine	64.4	66.0	62.0	69	64	75
07/07/15	8:00	Fine	68.3	69.5	65.6	69	68	75
14/07/15	21:30	Fine	67.3	68.5	64.5	69	67	75
21/07/15	13:00	Cloudy	68.8	69.5	67.2	69	69	75
27/07/15	14:17	Fine	64.8	66.5	62.5	69	65	75

Location: M4b - Victoria Centre

Date	Time	Weather	Measurement Noise Level			Baseline Noise Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
29/06/15	15:42	Fine	69.8	73.0	64.0	67	66	75
07/07/15	8:35	Fine	70.3	72.4	68.1	67	67	75
14/07/15	10:15	Fine	65.4	67.5	63.0	67	65	75
21/07/15	13:35	Cloudy	67.4	68.5	64.5	67	51	75
27/07/15	14:59	Fine	65.6	66.5	63.5	67	66	75

Location: M5b - City Garden

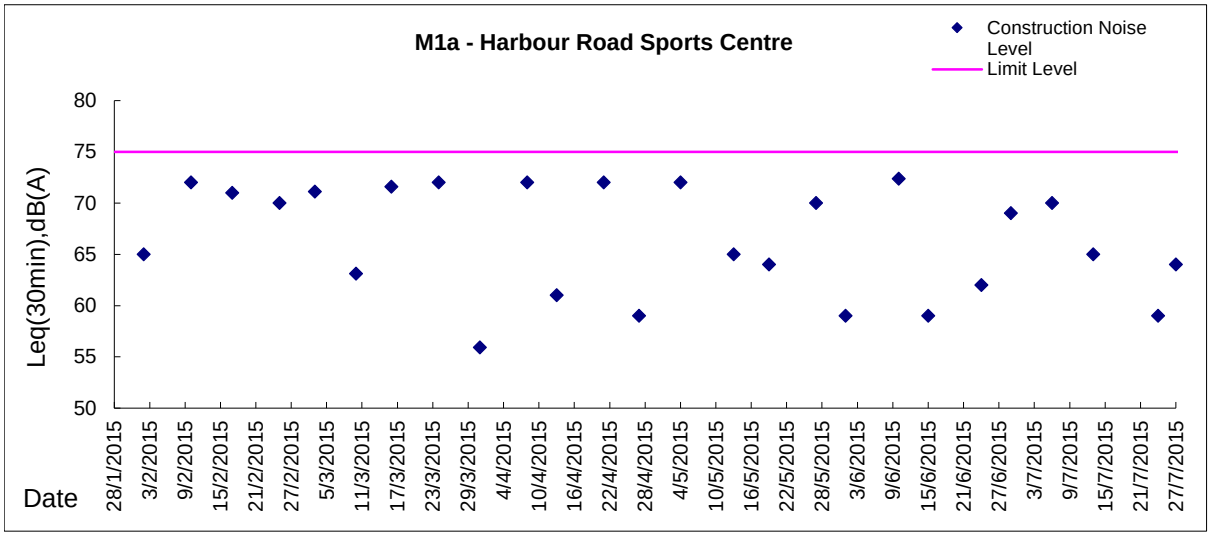
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
29/06/15	16:27	Fine	70.6	75.0	64.0	68	67	75
07/07/15	9:25	Fine	68.6	69.5	66.5	68	60	75
14/07/15	10:50	Fine	70.5	72.0	68.5	68	67	75
21/07/15	14:15	Cloudy	70.3	71.5	68.0	68	66	75
27/07/15	15:35	Fine	68.7	69.5	67.0	68	60	75

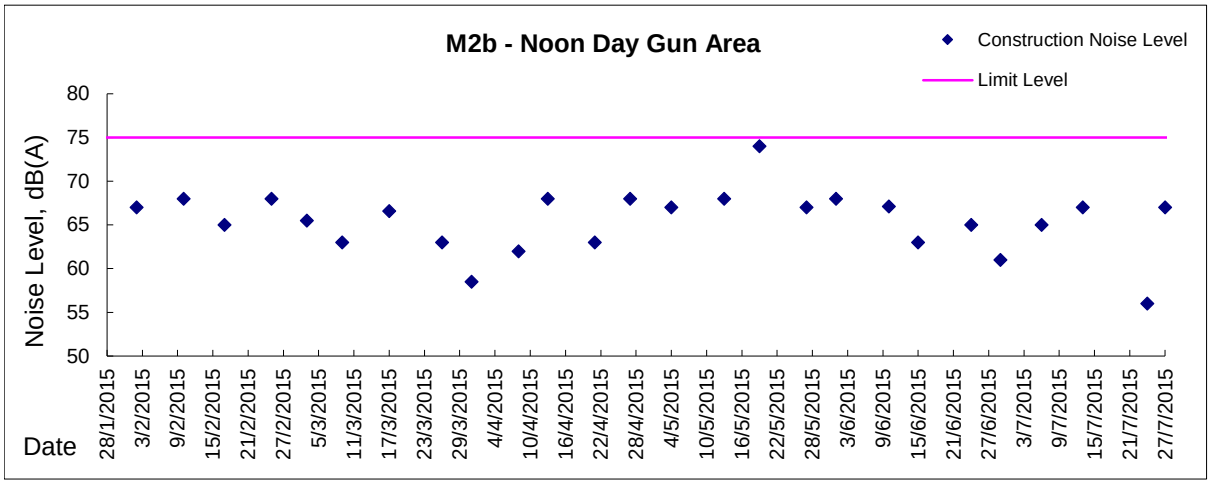
Location: M6 - HK Baptist Church Henrietta Secondary School

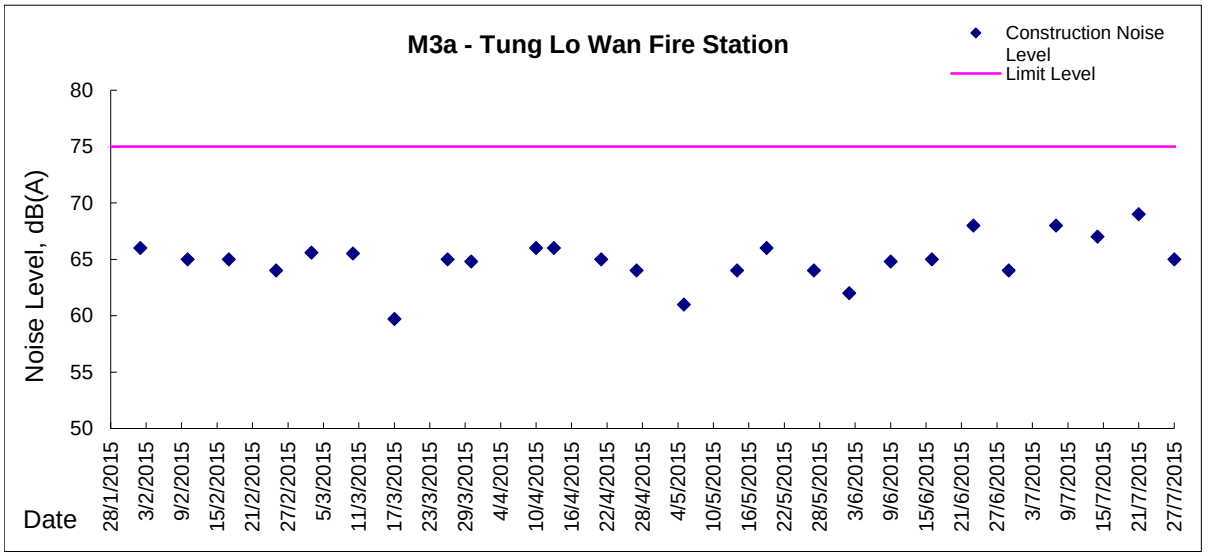
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
29/06/15	17:03	Fine	72.1	74.5	67.5	71	67	70
07/07/15	10:10	Fine	67.5	68.5	65.5	71	68	70
14/07/15	11:25	Fine	68.9	70.0	67.0	71	69	70
21/07/15	14:51	Cloudy	69.6	70.5	67.5	71	70	70
27/07/15	11:10	Fine	67.8	70.5	63.5	71	68	70

Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

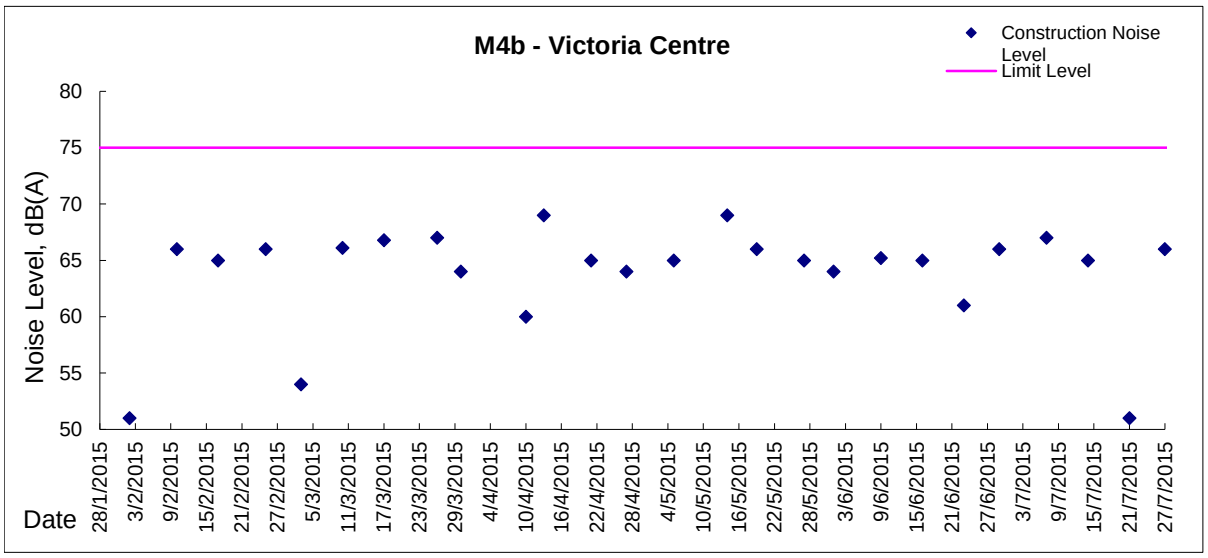


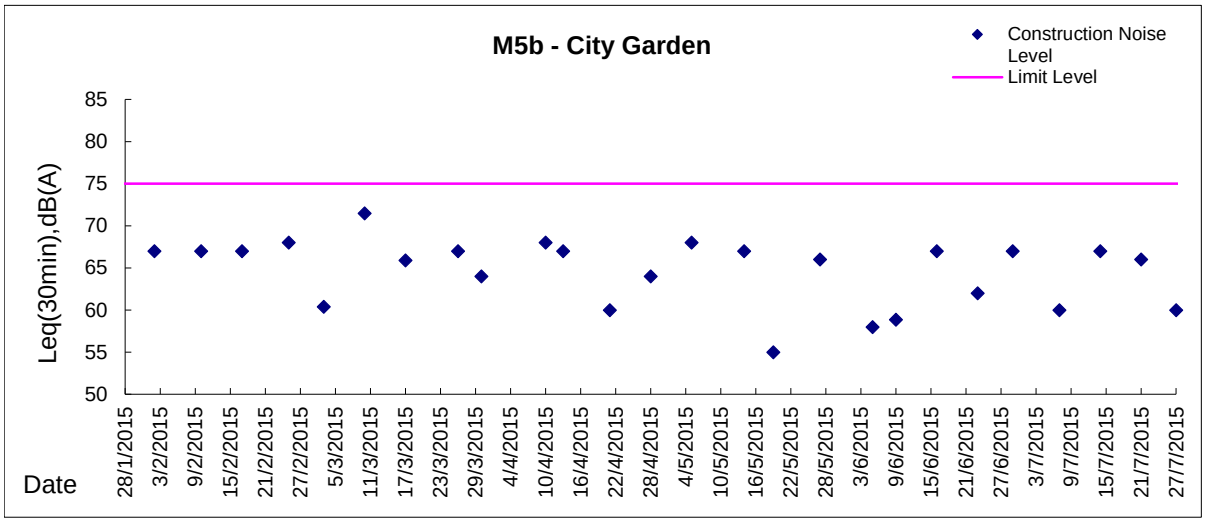


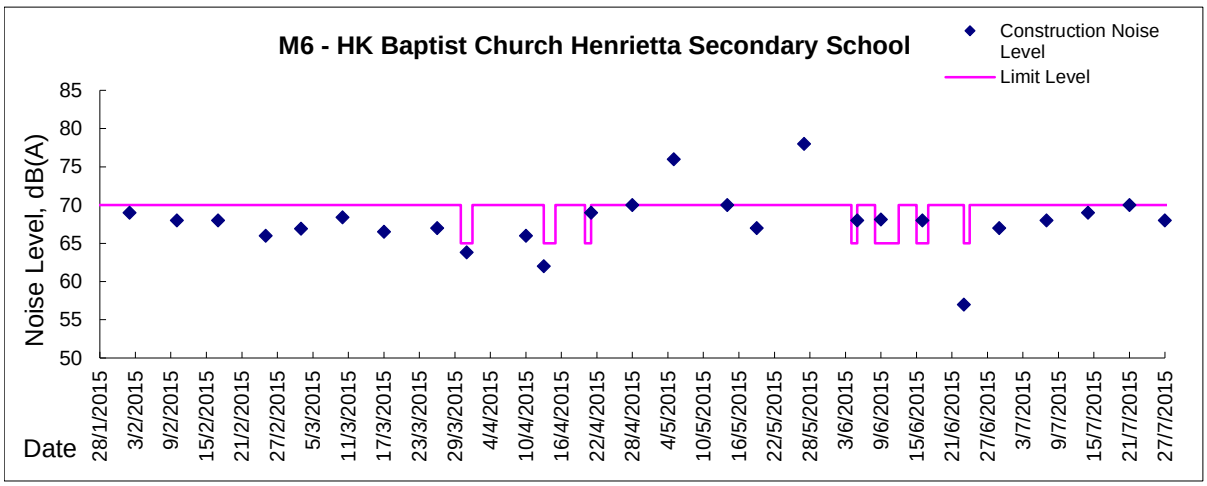


Graphic Presentation of Noise Monitoring Result

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		
29-Jun-15	8:00	Fine	012282	2.8020	2.9106	6594.54	6618.54	24.00	1.13	1.14	1.14	1635	66.4
6-Jul-15	11:30	Fine	012500	2.8514	3.0681	6624.54	6648.54	24.00	1.08	1.08	1.08	1551	139.7
11-Jul-15	11:20	Fine	012602	2.8305	3.1063	6657.22	6681.22	24.00	1.13	1.13	1.13	1629	169.3
16-Jul-15	8:00	Cloudy	012596	2.8406	3.1074	6681.22	6705.22	24.00	1.13	1.14	1.13	1633	163.4
22-Jul-15	8:00	Rainy	012697	2.8224	3.0723	6708.22	6732.22	24.00	1.03	1.03	1.03	1478	169.1

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 4 and 10 July 2015 to 6 and 11 July 2015 respectively.

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		
30-Jun-15	8:10	Fine	012331	2.8186	2.8212	6618.54	6619.54	1.00	1.14	1.14	1.14	68	38.2
30-Jun-15	9:12	Fine	012328	2.8265	2.8283	6619.54	6620.54	1.00	1.14	1.14	1.14	68	26.4
30-Jun-15	10:14	Fine	012344	2.8513	2.8546	6620.54	6621.54	1.00	1.14	1.14	1.14	68	48.4
6-Jul-15	8:05	Fine	012480	2.8142	2.8261	6621.54	6622.54	1.00	1.02	1.02	1.02	61	194.4
6-Jul-15	9:07	Fine	012505	2.8424	2.8494	6622.54	6623.54	1.00	1.02	1.02	1.02	61	114.4
6-Jul-15	10:09	Fine	012502	2.8407	2.8475	6623.54	6624.54	1.00	1.02	1.02	1.02	61	111.1
11-Jul-15	8:00	Fine	012496	2.8350	2.8482	6654.22	6655.22	1.00	1.13	1.13	1.13	68	194.3
11-Jul-15	9:08	Fine	012494	2.8184	2.8282	6655.22	6656.22	1.00	1.13	1.13	1.13	68	144.3
11-Jul-15	10:10	Fine	012490	2.8320	2.8451	6656.22	6657.22	1.00	1.13	1.13	1.13	68	192.9
17-Jul-15	8:02	Cloudy	012595	2.8362	2.8417	6705.22	6706.22	1.00	1.14	1.14	1.14	68	80.8
17-Jul-15	9:05	Cloudy	012700	2.8288	2.8368	6706.22	6707.22	1.00	1.14	1.14	1.14	68	117.5
17-Jul-15	10:07	Cloudy	012698	2.8375	2.8427	6707.22	6708.22	1.00	1.14	1.14	1.14	68	76.4
23-Jul-15	8:02	Rainy	012687	2.8221	2.8341	6732.22	6733.22	1.00	1.14	1.14	1.14	68	175.4
23-Jul-15	9:05	Rainy	012685	2.8405	2.8500	6733.22	6734.22	1.00	1.14	1.14	1.14	68	138.8
23-Jul-15	10:15	Rainy	012705	2.8224	2.8325	6734.22	6735.22	1.00	1.14	1.14	1.14	68	147.6

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		
29-Jun-15	8:00	Fine	012281	2.8085	2.8702	16250.94	16274.94	24.00	1.16	1.16	1.16	1664	37.1
4-Jul-15	8:00	Fine	012479	2.8158	2.8598	16277.95	16301.95	24.00	1.24	1.24	1.24	1790	24.6
10-Jul-15	8:00	Cloudy	012501	2.8616	2.9967	16304.95	16328.95	24.00	1.24	1.24	1.24	1791	75.5
16-Jul-15	8:00	Cloudy	012597	2.8339	2.8612	16331.95	16355.95	24.00	1.15	1.24	1.20	1727	15.8
22-Jul-15	8:00	Rainy	012696	2.8286	2.9439	16358.97	16382.97	24.00	1.21	1.20	1.20	1735	66.5

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		
30-Jun-15	8:05	Fine	012332	2.8349	2.8367	16274.94	16275.94	1.00	1.16	1.16	1.16	69	26.0
30-Jun-15	9:07	Fine	012329	2.8268	2.8318	16275.94	16276.94	1.00	1.16	1.16	1.16	69	72.1
30-Jun-15	10:09	Fine	012343	2.8224	2.8238	16276.94	16277.94	1.00	1.16	1.16	1.16	69	20.2
6-Jul-15	8:05	Fine	012360	2.8461	2.8513	16301.95	16302.95	1.00	1.24	1.24	1.24	75	69.7
6-Jul-15	9:15	Fine	012504	2.8413	2.8483	16302.95	16303.95	1.00	1.24	1.24	1.24	75	93.8
6-Jul-15	10:25	Fine	012503	2.8424	2.8486	16303.95	16304.95	1.00	1.24	1.24	1.24	75	83.1
11-Jul-15	8:02	Fine	012495	2.8397	2.8528	16328.95	16329.95	1.00	1.24	1.24	1.24	75	175.8
11-Jul-15	9:10	Fine	012521	2.8393	2.8563	16329.95	16330.95	1.00	1.24	1.24	1.24	75	228.1
11-Jul-15	10:15	Fine	012519	2.8130	2.8318	16330.95	16331.95	1.00	1.24	1.24	1.24	75	252.3
17-Jul-15	8:05	Cloudy	012702	2.8292	2.8336	16355.95	16356.95	1.00	1.24	1.24	1.24	75	58.9
17-Jul-15	9:20	Cloudy	012701	2.8290	2.8349	16356.95	16357.95	1.00	1.24	1.24	1.24	75	79.0
17-Jul-15	10:45	Cloudy	01699	2.8447	2.8515	16357.95	16358.95	1.00	1.24	1.24	1.24	75	91.1
23-Jul-15	8:05	Rainy	012688	2.8291	2.8380	16382.97	16383.97	1.00	1.16	1.16	1.16	70	127.9
23-Jul-15	9:09	Rainy	012686	2.8444	2.8536	16383.97	16384.97	1.00	1.16	1.16	1.16	70	132.3
23-Jul-15	10:19	Rainy	012704	2.8419	2.8464	16384.97	16385.97	1.00	1.16	1.16	1.16	70	64.7

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		
30-Jun-15	15:22	Fine	012472	2.8029	2.8904	3713.25	3737.25	24.00	1.23	1.23	1.23	1768	49.5
4-Jul-15	8:00	Fine	012536	2.8396	2.9595	3737.26	3761.26	24.00	1.23	1.23	1.23	1767	67.9
10-Jul-15	8:00	Cloudy	012465	2.8411	2.9776	3764.27	3788.27	24.00	1.23	1.23	1.23	1767	77.2
16-Jul-15	8:00	Cloudy	012599	2.8319	3.0101	3791.26	3815.26	24.00	1.23	1.23	1.23	1767	100.8
22-Jul-15	8:00	Rainy	012689	2.8331	2.9597	3818.26	3842.26	24.00	1.24	1.23	1.23	1777	71.2

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 29 June 2015 to 30 June 2015.

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		
30-Jun-15	11:30	Fine	012346	2.8397	2.8415	3710.25	3711.25	1.00	1.26	1.26	1.26	76	23.8
30-Jun-15	13:00	Fine	012349	2.8501	2.8527	3711.25	3712.25	1.00	1.13	1.13	1.13	68	38.3
30-Jun-15	14:20	Fine	012471	2.8165	2.8210	3712.25	3713.25	1.00	1.13	1.13	1.13	68	66.3
6-Jul-15	8:55	Fine	012352	2.8306	2.8449	3761.26	3762.26	1.00	1.26	1.26	1.26	76	189.1
6-Jul-15	9:58	Fine	012354	2.8415	2.8583	3762.26	3763.26	1.00	1.26	1.26	1.26	76	222.2
6-Jul-15	13:00	Fine	012356	2.8341	2.8494	3763.26	3764.26	1.00	1.26	1.26	1.26	76	202.3
11-Jul-15	8:05	Fine	012493	2.8310	2.8479	3788.27	3789.27	1.00	1.26	1.26	1.26	75	224.0
11-Jul-15	9:15	Fine	012489	2.8248	2.8451	3789.27	3790.27	1.00	1.26	1.26	1.26	75	269.0
11-Jul-15	10:25	Fine	012601	2.8182	2.8311	3790.27	3791.27	1.00	1.26	1.26	1.26	75	171.0
17-Jul-15	9:04	Cloudy	012607	2.8201	2.8254	3815.26	3816.26	1.00	1.26	1.26	1.26	76	70.0
17-Jul-15	10:08	Cloudy	012605	2.8237	2.8279	3816.26	3817.26	1.00	1.26	1.26	1.26	76	55.5
17-Jul-15	13:00	Cloudy	012703	2.8304	2.8361	3817.26	3818.26	1.00	1.26	1.26	1.26	76	75.3
23-Jul-15	8:51	Rainy	012365	2.8160	2.8165	3842.26	3843.26	1.00	1.27	1.27	1.27	76	6.6
23-Jul-15	9:56	Rainy	012363	2.8337	2.8343	3844.26	3845.26	1.00	1.27	1.27	1.27	76	7.9
23-Jul-15	13:00	Rainy	012361	2.8366	2.8375	3845.26	3846.26	1.00	1.27	1.27	1.27	76	11.8

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		
29-Jun-15	8:00	Fine	012285	2.8073	2.8943	20524.90	20548.90	24.00	1.23	1.23	1.23	1769	49.2
4-Jul-15	8:00	Fine	012350	2.8206	2.9192	20551.90	20575.90	24.00	1.23	1.23	1.23	1767	55.8
10-Jul-15	8:00	Cloudy	012403	2.8096	2.9575	20578.91	20602.91	24.00	1.23	1.23	1.23	1767	83.7
16-Jul-15	8:00	Cloudy	012513	2.8441	2.9055	20605.90	20629.90	24.00	1.23	1.23	1.23	1767	34.7
22-Jul-15	8:00	Rainy	012594	2.8298	3.0857	20632.90	20656.90	24.00	1.24	1.23	1.23	1777	144.0

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		
30-Jun-15	8:54	Fine	012345	2.8602	2.8639	20548.90	20549.90	1.00	1.23	1.23	1.23	74	50.2
30-Jun-15	10:19	Fine	012347	2.8459	2.8472	20549.90	20550.90	1.00	1.23	1.23	1.23	74	17.6
30-Jun-15	13:00	Fine	012348	2.8473	2.8498	20550.90	20551.90	1.00	1.23	1.23	1.23	74	33.9
6-Jul-15	8:42	Fine	012351	2.8410	2.8482	20575.91	20576.91	1.00	1.23	1.23	1.23	74	97.7
6-Jul-15	9:46	Fine	012353	2.8496	2.8576	20576.91	20577.91	1.00	1.23	1.23	1.23	74	108.6
6-Jul-15	10:50	Fine	012355	2.8311	2.8408	20577.91	20578.91	1.00	1.23	1.23	1.23	74	131.7
11-Jul-15	8:15	Fine	012523	2.8242	2.8385	20602.91	20603.91	1.00	1.23	1.23	1.23	74	194.5
11-Jul-15	9:20	Fine	012520	2.8401	2.8528	20603.91	20604.91	1.00	1.23	1.23	1.23	74	172.7
11-Jul-15	10:25	Fine	012516	2.8292	2.8433	20604.91	20605.91	1.00	1.23	1.23	1.23	74	191.7
17-Jul-15	8:55	Cloudy	012608	2.8263	2.8294	20629.90	20630.90	1.00	1.23	1.23	1.23	74	42.1
17-Jul-15	9:58	Cloudy	012606	2.8244	2.8289	20630.90	20631.90	1.00	1.23	1.23	1.23	74	61.1
17-Jul-15	13:00	Cloudy	012604	2.8315	2.8411	20631.90	20632.90	1.00	1.23	1.23	1.23	74	130.2
23-Jul-15	8:52	Rainy	012572	2.8311	2.8389	20656.90	20657.90	1.00	1.23	1.23	1.23	74	105.4
23-Jul-15	9:56	Rainy	012364	2.8187	2.8264	20657.90	20658.90	1.00	1.23	1.23	1.23	74	104.0
23-Jul-15	13:00	Rainy	012363	2.8085	2.8097	20658.90	20659.90	1.00	1.23	1.23	1.23	74	16.2

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		
29-Jun-15	8:00	Fine	012335	2.8218	2.8585	5011.82	5035.82	24.00	1.06	1.06	1.06	1527	24.0
4-Jul-15	8:00	Fine	012357	2.8365	2.8886	5038.83	5062.83	24.00	0.95	0.96	0.95	1374	37.9
10-Jul-15	8:00	Cloudy	012396	2.8287	2.9365	5065.84	5089.84	24.00	0.96	0.95	0.95	1375	78.4
16-Jul-15	8:00	Cloudy	012512	2.8213	2.8751	5092.83	5116.83	24.00	0.95	0.96	0.95	1375	39.1
22-Jul-15	8:00	Rainy	012692	2.8226	2.8852	5119.87	5143.87	24.00	0.96	0.96	0.96	1384	45.2

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		
30-Jun-15	13:00	Fine	012476	2.7973	2.8011	5035.82	5036.82	1.00	0.96	0.96	0.96	57	66.2
30-Jun-15	14:10	Fine	012473	2.8017	2.8029	5036.83	5037.83	1.00	0.96	0.96	0.96	57	20.9
30-Jun-15	15:30	Fine	012468	2.8458	2.8498	5037.83	5038.83	1.00	0.96	0.96	0.96	57	69.7
6-Jul-15	13:00	Fine	012497	2.8549	2.8668	5062.84	5063.84	1.00	0.96	0.96	0.96	57	207.6
6-Jul-15	14:06	Fine	012402	2.7924	2.8104	5063.84	5064.84	1.00	0.96	0.96	0.96	57	314.0
6-Jul-15	15:08	Fine	012399	2.8231	2.8309	5064.84	5065.84	1.00	1.06	0.02	0.54	32	241.0
11-Jul-15	8:20	Fine	012522	2.8378	2.8517	5089.84	5090.84	1.00	0.95	0.95	0.95	57	243.0
11-Jul-15	9:30	Fine	012519	2.8192	2.8277	5090.84	5091.84	1.00	0.95	0.95	0.95	57	148.6
11-Jul-15	10:32	Fine	012515	2.8314	2.8409	5091.84	5092.84	1.00	0.95	0.95	0.95	57	166.1
17-Jul-15	13:00	Cloudy	012584	2.8217	2.8296	5116.83	5117.83	1.00	0.96	0.96	0.96	57	137.7
17-Jul-15	14:05	Cloudy	012694	2.8127	2.8204	5117.83	5118.83	1.00	0.96	0.96	0.96	57	134.3
17-Jul-15	15:30	Cloudy	012588	2.8273	2.8416	5118.83	5119.83	1.00	0.96	0.96	0.96	57	249.3
23-Jul-15	13:00	Rainy	012714	2.8252	2.8309	5143.87	5144.87	1.00	1.01	1.01	1.01	61	93.8
23-Jul-15	14:02	Rainy	012718	2.8418	2.8492	5144.87	5145.87	1.00	0.96	0.96	0.96	58	128.4
23-Jul-15	15:27	Rainy	012720	2.8446	2.8499	5145.87	5146.87	1.00	0.96	0.96	0.96	58	92.0

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		
30-Jun-15	16:20	Fine	012467	2.8226	2.9169	20110.61	20134.61	24.00	1.22	1.21	1.22	1750	53.9
4-Jul-15	8:00	Fine	012359	2.8497	2.9604	20134.61	20158.61	24.00	1.22	1.22	1.22	1750	63.2
10-Jul-15	8:00	Cloudy	012394	2.8373	3.0146	20161.62	20185.62	24.00	1.22	1.21	1.22	1750	101.3
16-Jul-15	8:00	Cloudy	012598	2.8436	3.0209	20188.62	20212.62	24.00	1.21	1.22	1.22	1750	101.3
22-Jul-15	8:00	Rainy	012691	2.8335	3.0038	20215.62	20239.62	24.00	1.22	1.22	1.22	1761	96.7

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 29 June 2015 to 30 June 2015.

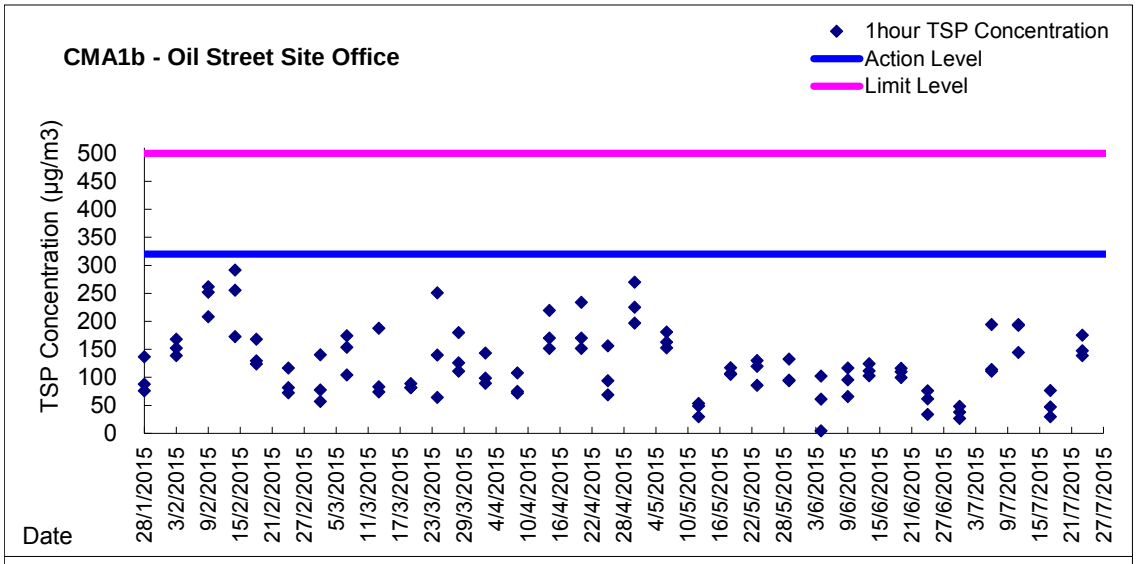
Report on 1-hour TSP monitoring

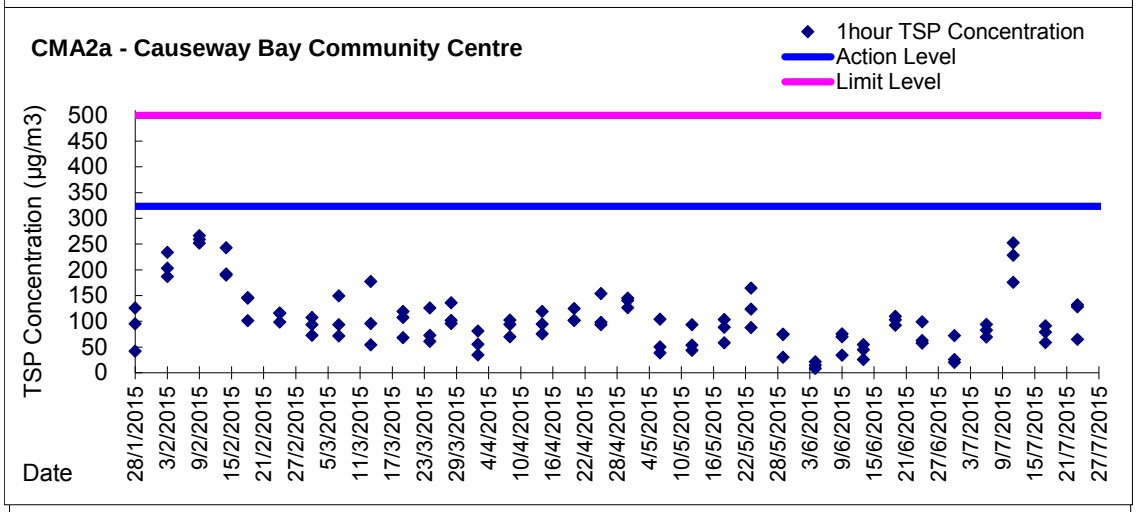
Action Level - 300.1 $\mu g/m^3$

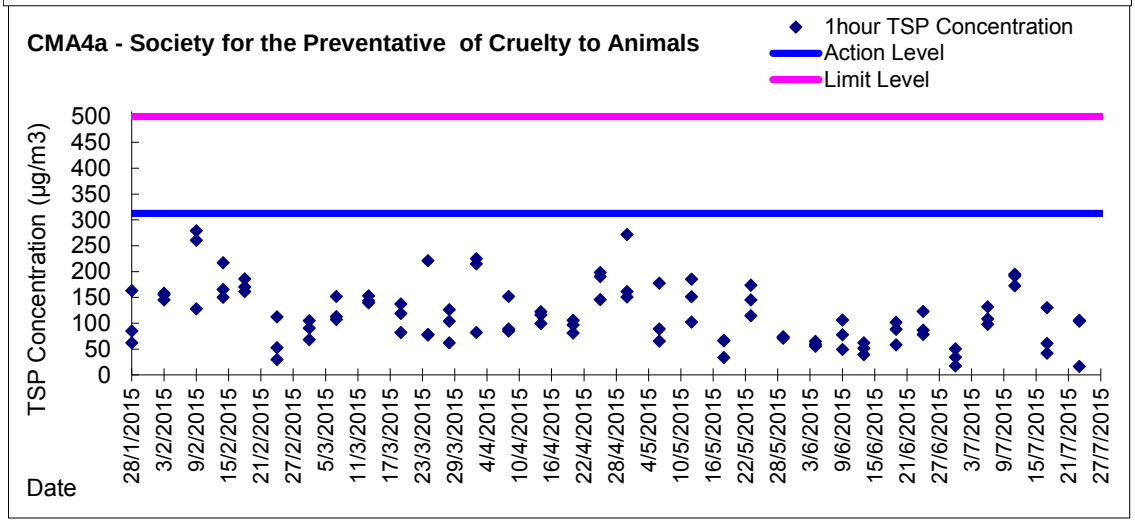
Limit Level - 500 $\mu g/m3$

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		
30-Jun-15	13:00	Fine	012478	2.8258	2.8321	20104.61	20105.61	1.00	1.22	1.22	1.22	73	86.3
30-Jun-15	14:03	Fine	012475	2.8291	2.8362	20108.61	20109.61	1.00	1.22	1.22	1.22	73	97.2
30-Jun-15	15:07	Fine	012470	2.8302	2.8369	20109.61	20110.61	1.00	1.22	1.22	1.22	73	91.8
6-Jul-15	13:00	Fine	012499	2.8309	2.8456	20158.62	20159.62	1.00	1.22	1.22	1.22	73	201.5
6-Jul-15	14:20	Fine	012400	2.8147	2.8331	20159.62	20160.62	1.00	1.22	1.22	1.22	73	252.2
6-Jul-15	15:23	Fine	012397	2.8219	2.8404	20160.62	20161.62	1.00	1.22	1.22	1.22	73	253.6
11-Jul-15	8:20	Fine	012492	2.8267	2.8392	20185.62	20186.62	1.00	1.21	1.21	1.21	73	171.7
11-Jul-15	9:40	Fine	012603	2.8226	2.8334	20186.62	20187.62	1.00	1.21	1.21	1.21	73	148.4
11-Jul-15	10:42	Fine	012600	2.8299	2.8412	20187.62	20188.62	1.00	1.21	1.21	1.21	73	155.2
17-Jul-15	13:00	Cloudy	012586	2.8306	2.8383	20212.62	20213.62	1.00	1.22	1.22	1.22	73	105.5
17-Jul-15	14:03	Cloudy	012695	2.8201	2.8327	20213.62	20214.62	1.00	1.22	1.22	1.22	73	172.6
17-Jul-15	15:40	Cloudy	012693	2.8421	2.8556	20214.62	20215.62	1.00	1.22	1.22	1.22	73	185.0
23-Jul-15	13:00	Rainy	012715	2.8338	2.8414	20239.62	20240.62	1.00	1.22	1.22	1.22	73	103.6
23-Jul-15	14:05	Rainy	012717	2.8298	2.8387	20240.62	20241.62	1.00	1.22	1.22	1.22	73	121.4
23-Jul-15	15:25	Rainy	012721	2.8475	2.8534	20242.62	20243.62	1.00	1.22	1.22	1.22	73	80.5

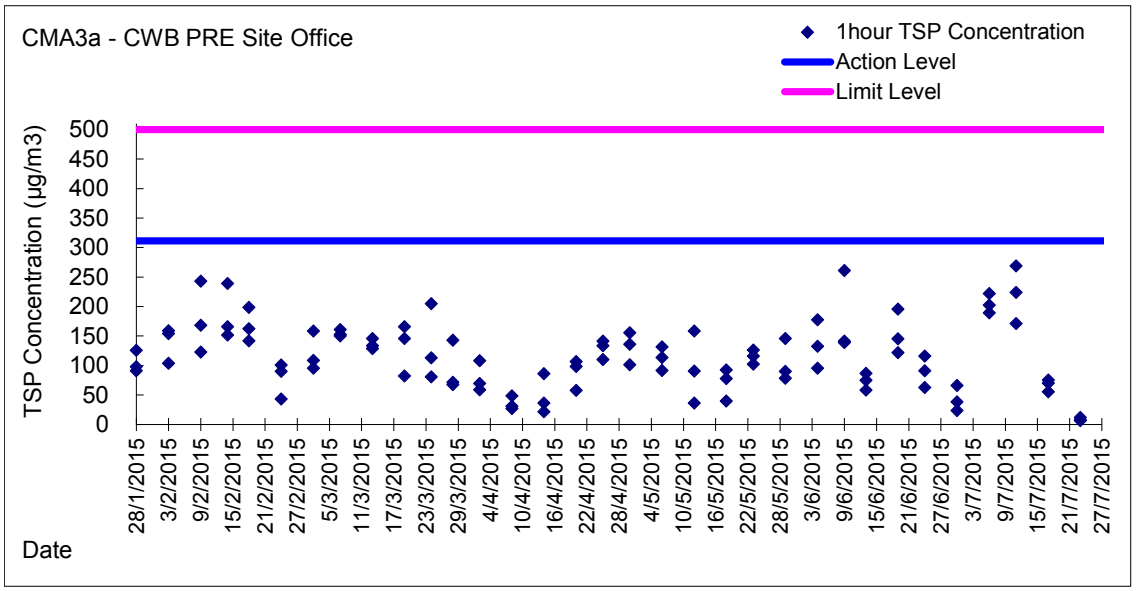
Graphic Presentation of 1 hour TSP Result

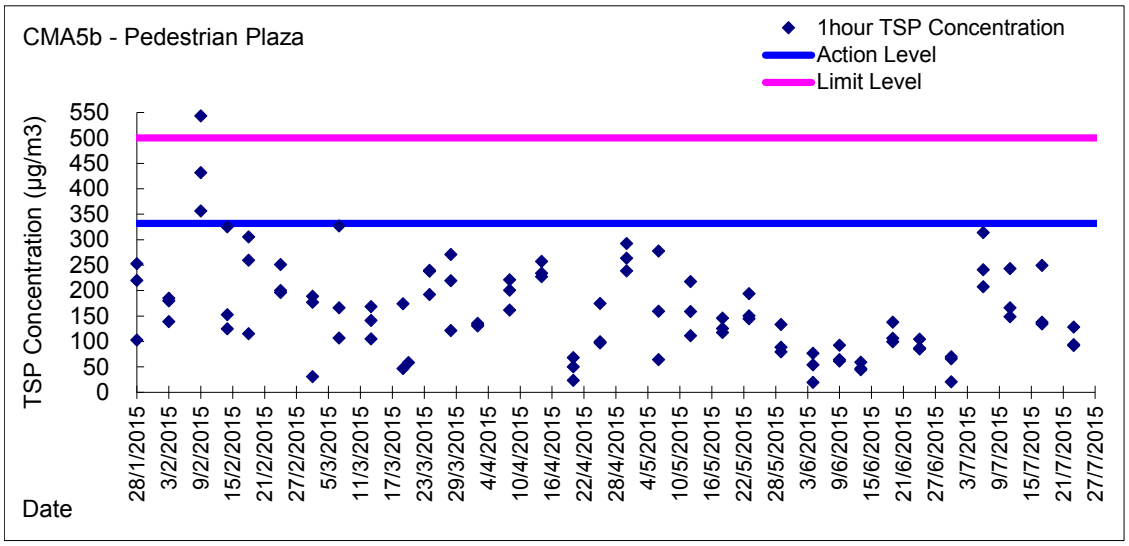


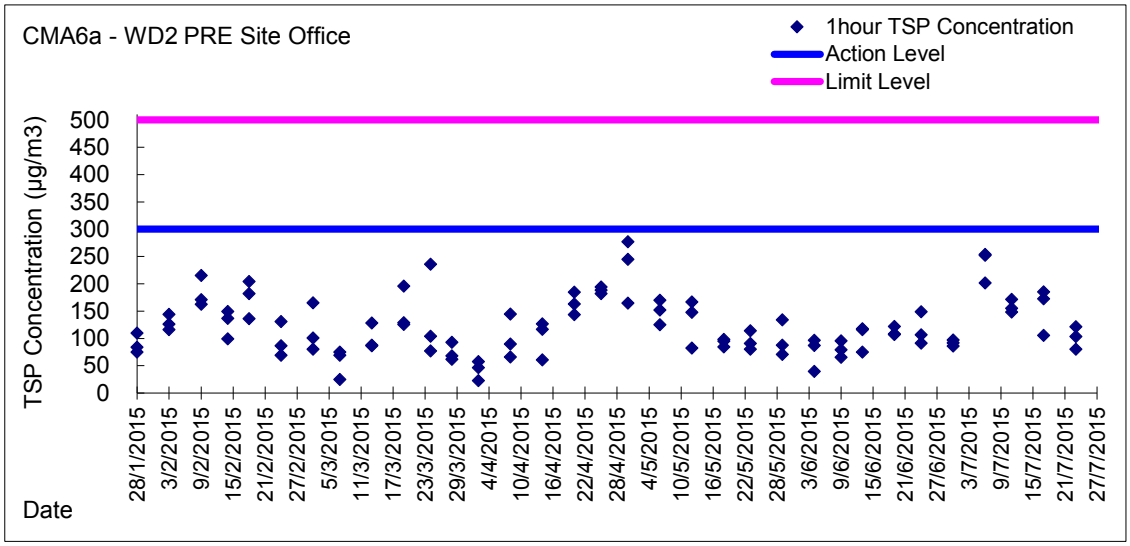




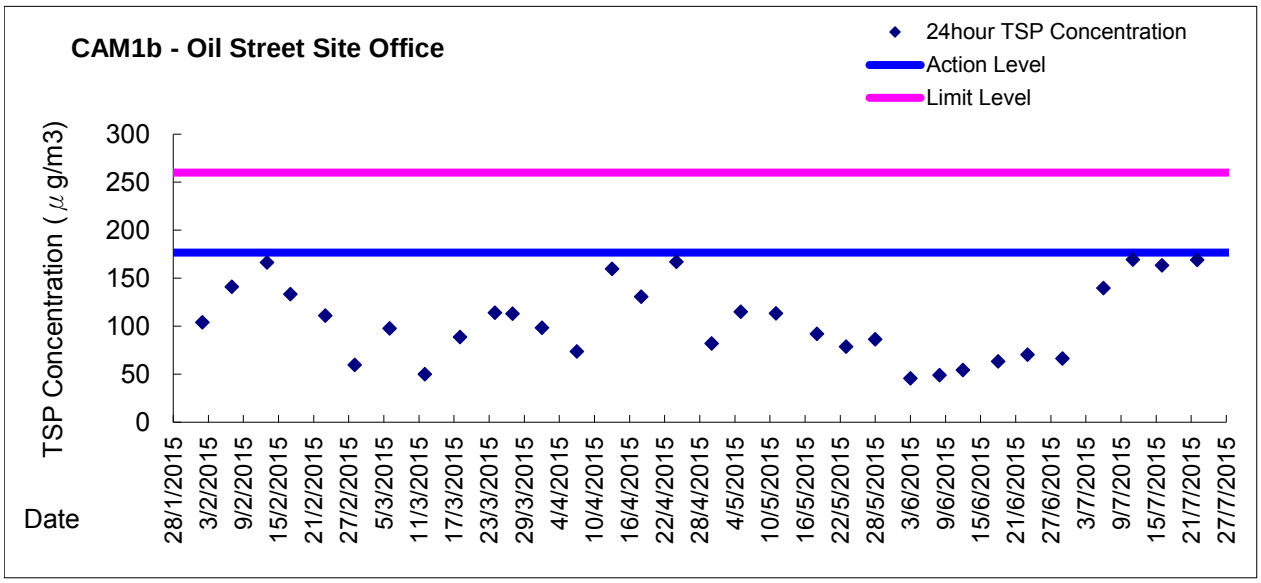
Graphic Presentation of 1 hour TSP Result

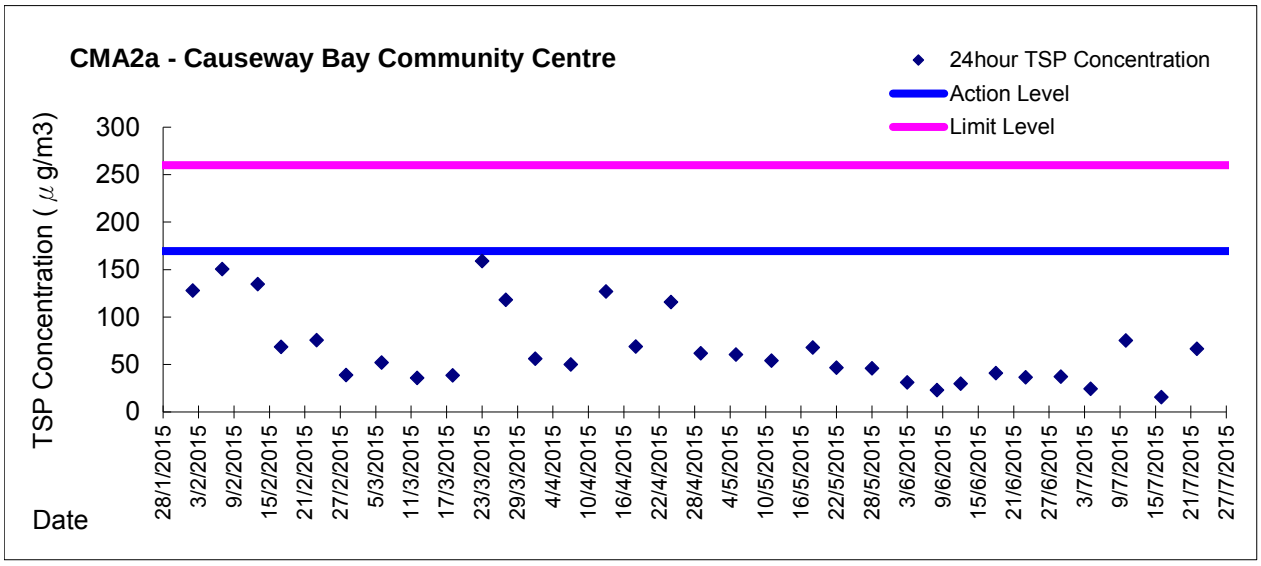


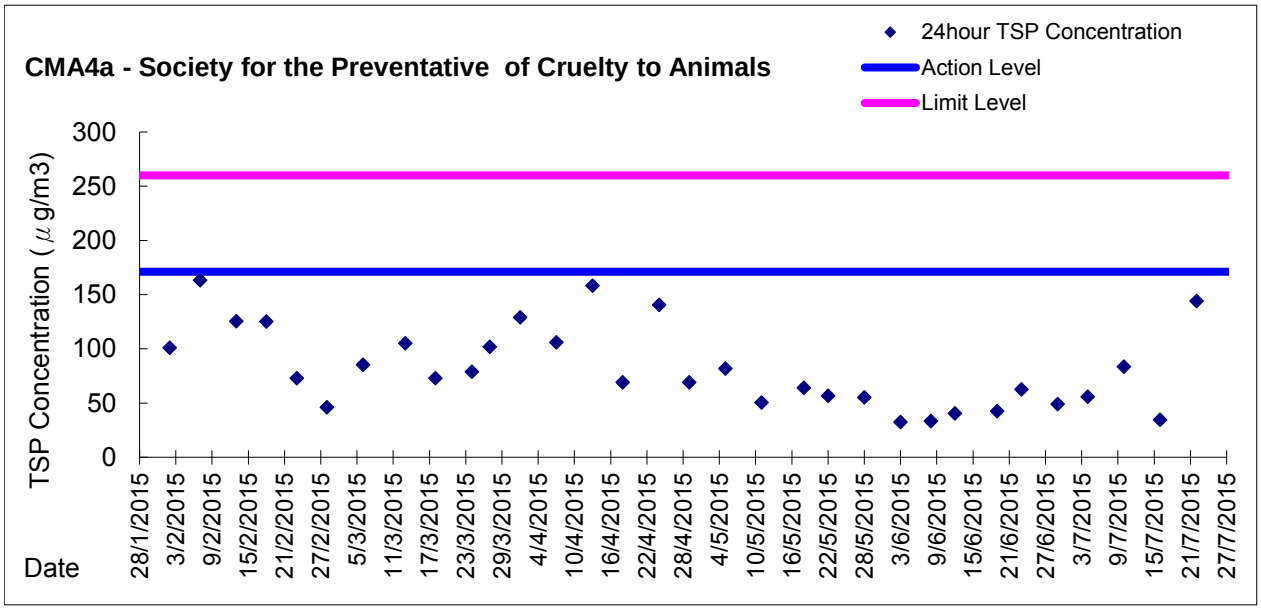




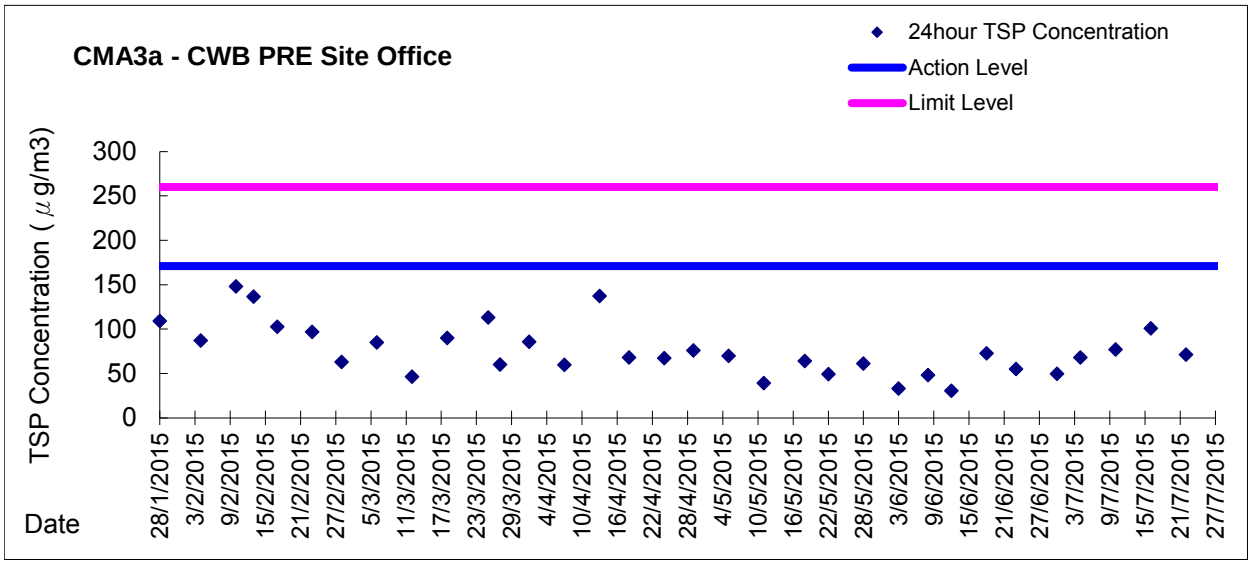
Graphic Presentation of 24 hour TSP Result

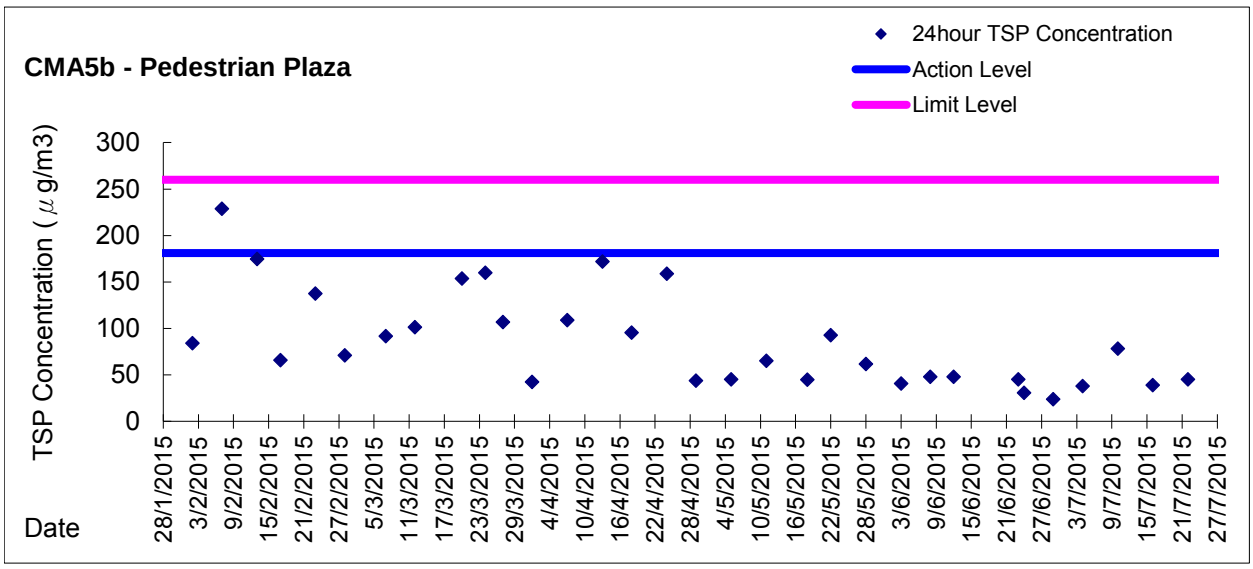


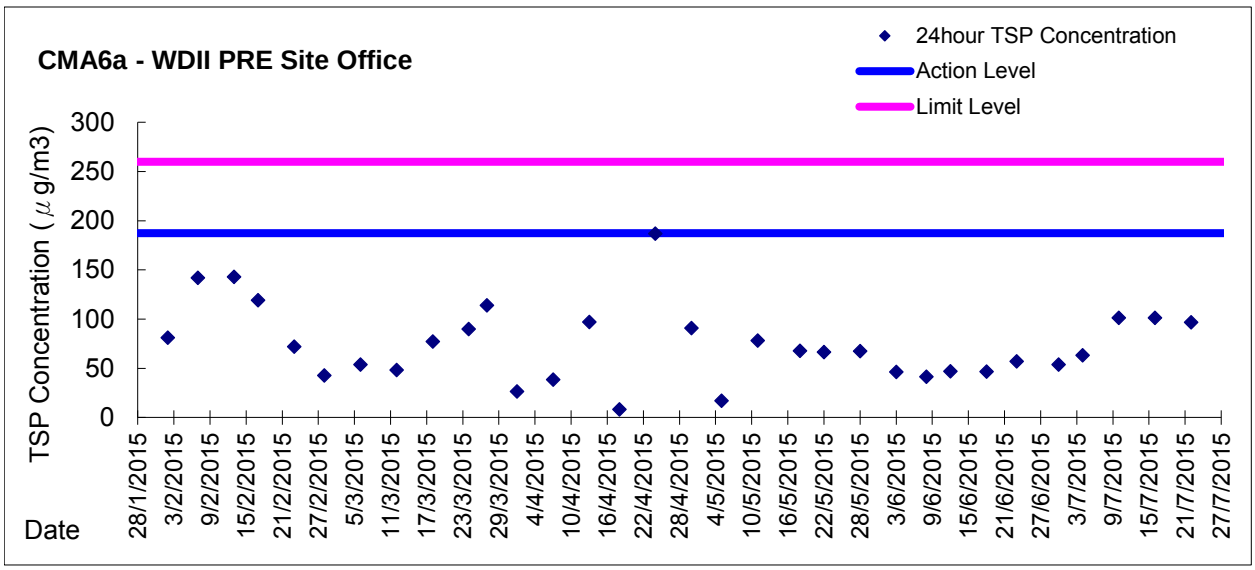




Graphic Presentation of 24 hour TSP Result







Field Data Record Sheet

Monitoring Date: 7 July 2015 **Weather Condition:** Fine **Tidal Condition:** Ebb

Temperature: 32.0^{0}C – 34.9^{0}C **Relative Humidity:** 52.2% - 58.2%

Location	Time	Temperature (℃)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:15	32.0	57.7	0-1	Seawater	Sea	Persistent	0.9	NNE	
OP6	13:20	33.0	55.5	0	/	/	/	1.2	ENE	
OP5	13:25	34.3	52.2	0-1	Sewage	Sea	Intermittent	0.4	WSW	
OP4	13:30	33.6	53.2	0	/	/	/	1.7	NE	
OP3	13:35	32.9	55.1	0	/	/	/	0.5	ESE	
OP2	13:40	34.9	54.4	0-1	Seawater	Sea	Persistent	0.6	NE	
OP1	13:45	32.2	58.2	0-1	Seawater	Sea	Persistent	1.4	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

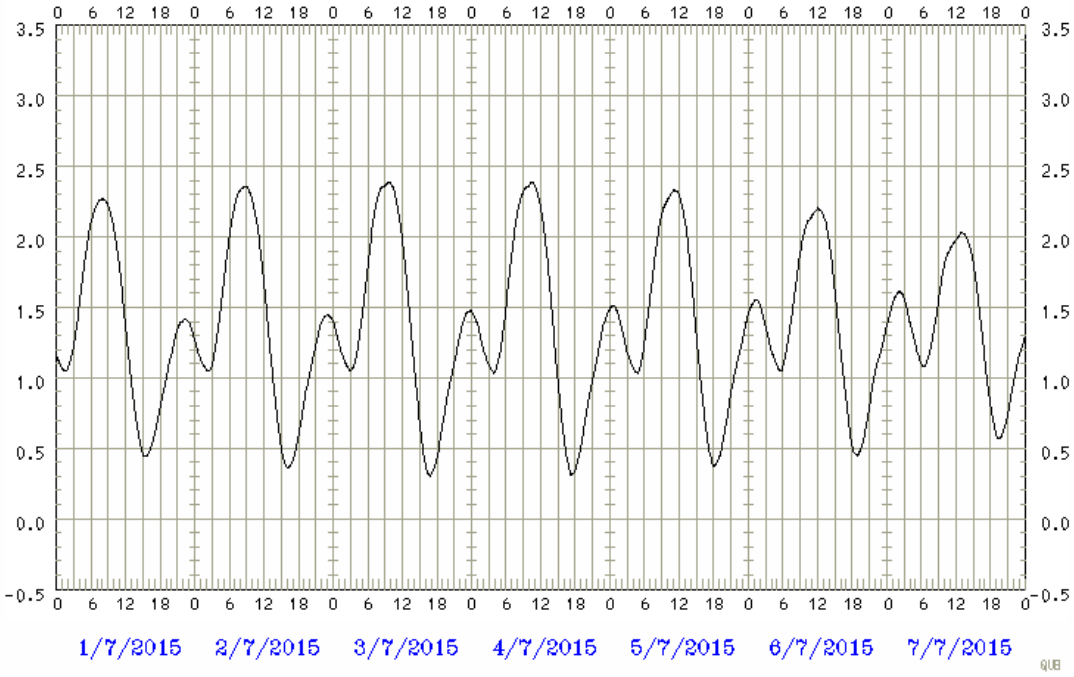
Meteorological Conditions on 7 July 2015

- **Hong Kong Observatory Weather Station at Hong Kong Observatory**
  Air Temperature: **26.7 – 32.7** ℃ Relative humidity: **57 - 71%**

- **Hong Kong Observatory Weather Station at Hong Kong Park**
  Air Temperature: **26.6 – 33.0** ℃

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

Tide Time	Tide Height (m)
02:13	1.6
06:25	1.1
13:03	2.0
19:26	0.6



Field Data Record Sheet

Monitoring Date: 21 July 2015 **Weather Condition:** Cloudy **Tidal Condition:** Ebb

Temperature: 28.4^{0}C – 29.1^{0}C **Relative Humidity:** 79.2% - 84.1%

Location	Time	Temperature (℃)	Relative Humidity (%)	Odour Intensity	Odour Nature	Possible Odour Sources	Duration	Wind Speed(m/s)	Wind Direction	Remarks
OP7	13:20	28.4	84.1	0	/	/	/	0.8	NNW	
OP6	13:15	29.1	82.1	0	/	/	/	0.6	N	
OP5	13:30	28.6	79.2	0-1	Sewage	Sea	Persistent	1.5	WSW	
OP4	13:35	28.6	79.7	0	/	/	/	3.5	N	
OP3	13:40	28.4	80.3	0	/	/	/	2.5	ESE	
OP2	13:45	29.0	79.7	0-1	Seawater	Sea	Persistent	0.7	NNE	
OP1	13:50	28.4	81.4	0-1	Sewage	Sea	Persistent	1.4	NNE	

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

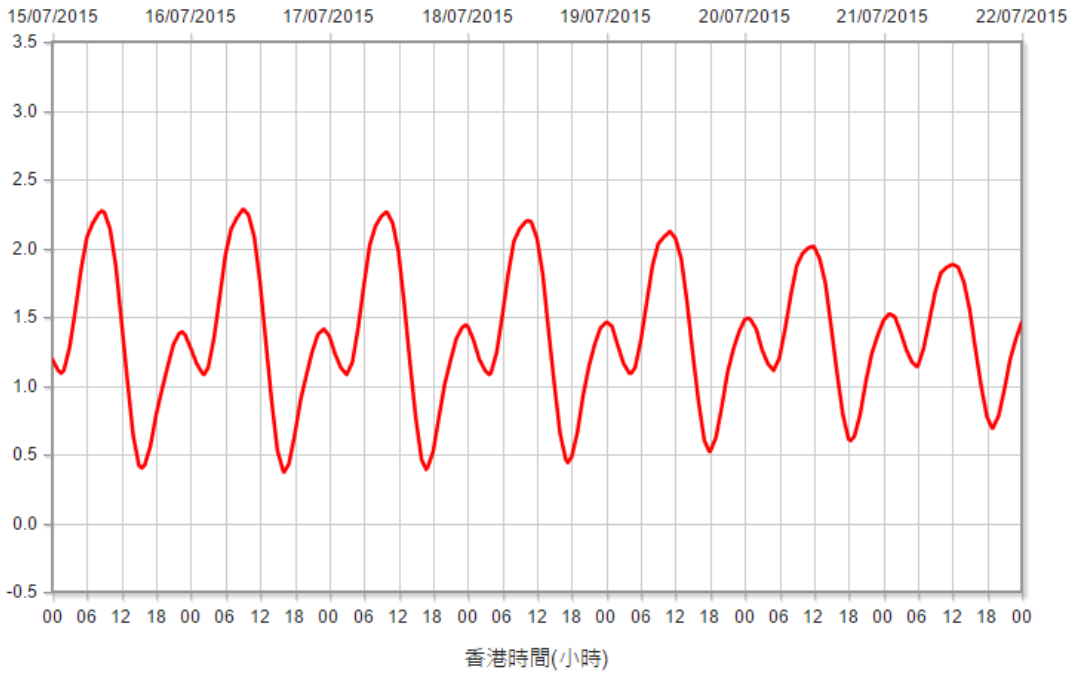
Meteorological Conditions on 21 July 2015

- **Hong Kong Observatory Weather Station at Hong Kong Observatory**
  Air Temperature: **25.2 – 27.9** ℃ Relative humidity: **77 – 96%**

- **Hong Kong Observatory Weather Station at Hong Kong Park**
  Air Temperature: **24.8 – 27.9** ℃

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

Tide Time	Tide Height (m)
01:09	1.5
05:42	1.1
12:09	1.9
18:53	0.7



Appendix 5.4

Water Quality and Additional Dissolved Oxygen Monitoring Results and Graphical Presentations

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/6/2015	17:43	Fine	Middle	-	29.10	29.10	29.15	8.37	8.37	8.38	23.33	23.33	23.32	77.9	76.3	74.7	5.26	5.15	5.04	14.24	13.17	**13.73**	10	10.00
	17:45		Middle	-	29.20	29.20		8.39	8.39		23.31	23.31		73.4	71.3		4.95	4.81		14.24	13.28		10	
2/7/2015	21:05	Fine	Middle	-	28.00	28.00	28.05	8.07	8.07	8.08	26.46	26.46	26.46	79.9	81.9	80.2	5.37	5.52	5.39	7.89	7.00	7.31	8	7.50
	21:06		Middle	-	28.10	28.10		8.08	8.08		26.46	26.46		80.5	78.5		5.41	5.27		7.16	7.20		7	
4/7/2015	22:17	Fine	Middle	-	27.80	27.80	27.90	8.11	8.11	8.11	29.14	29.13	29.13	77.4	77.1	75.8	5.12	5.10	5.02	2.27	2.24	2.25	<2	<2
	22:18		Middle	-	28.10	27.90		8.10	8.10		29.13	29.10		75.3	73.5		5.01	4.86		2.20	2.29		<2	
6/7/2015	22:26	Cloudy	Middle	-	26.46	26.46	26.45	7.80	7.80	7.80	17.35	17.35	17.36	92.5	92.5	92.3	6.75	6.75	6.73	3.35	3.45	3.30	4	3.50
	22:27		Middle	-	26.44	26.44		7.80	7.80		17.36	17.36		92.3	92.0		6.73	6.70		3.19	3.21		3	
8/7/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
10/7/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
13/7/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
15/7/2015	18:28	Cloudy	Middle	-	28.16	28.16	28.16	7.51	7.51	7.51	25.25	25.25	25.28	90.0	89.4	89.2	6.11	6.07	6.05	1.49	1.53	1.52	<2	<2
	18:29		Middle	-	28.15	28.15		7.50	7.50		25.30	25.30		88.9	88.5		6.03	6.00		1.56	1.51		<2	
17/7/2015	18:27	Cloudy	Middle	-	28.62	28.62	28.58	7.54	7.54	7.54	30.42	30.42	30.42	90.8	90.6	90.6	5.95	5.93	5.93	1.57	1.59	1.56	4	3.50
	18:28		Middle	-	28.54	28.54		7.53	7.53		30.42	30.42		90.6	90.4		5.93	5.91		1.55	1.52		3	
20/7/2015	10:25	Cloudy	Middle	-	26.50	26.50	26.50	8.11	8.11	8.12	32.09	32.09	32.09	68.3	67.7	68.9	4.45	4.40	4.56	3.88	3.87	3.92	3	3.00
	10:27		Middle	-	26.50	26.50		8.13	8.13		32.08	32.08		69.6	70.0		4.67	4.70		3.95	3.96		3	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	23:46	Cloudy	Middle	-	27.58	27.58	27.58	7.50	7.50	7.50	25.30	25.30	25.30	86.3	86.2	86.2	5.91	5.90	5.90	1.84	1.64	1.71	3	3.00
	23:47		Middle	-	27.58	27.58		7.49	7.50		25.30	25.30		86.0	86.4		5.88	5.92		1.68	1.66		3	

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

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

Date	Time	Weater Condition	Sampling Depth (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
29/6/2015	16:56	Fine	Middle	2.5	28.50	28.50	28.60	8.45	8.45	8.45	24.58	24.58	24.57	83.2	82.7	82.2	5.62	5.59	5.55	3.71	3.87	3.82	7	6.00
	16:58		Middle	2.5	28.70	28.70		8.45	8.45		24.56	24.56		81.2	81.6		5.49	5.51		3.94	3.75		5	
2/7/2015	17:46	Fine	Middle	2.5	28.80	28.80	28.85	8.50	8.50	8.50	25.83	25.83	25.88	90.0	90.7	87.8	6.02	6.06	5.84	3.73	3.64	3.66	7	7.50
	17:48		Middle	2.5	28.90	28.90		8.49	8.49		25.92	25.92		88.3	82.1		5.80	5.49		3.64	3.64		8	
4/7/2015	21:59	Fine	Middle	2.5	27.10	27.10	27.15	8.21	8.21	8.21	29.96	29.96	29.96	72.9	73.7	73.3	4.90	4.95	4.93	3.38	3.46	3.39	3	3.50
	22:00		Middle	2.5	27.20	27.20		8.21	8.21		29.95	29.95		74.0	72.6		4.97	4.88		3.30	3.42		4	
6/7/2015	1:50	Cloudy	Middle	2.5	25.49	25.49	25.54	7.38	7.38	7.40	30.74	30.74	30.74	92.2	92.1	92.0	6.34	6.33	6.32	2.71	2.64	2.66	<2	<2
	1:51		Middle	2.5	25.59	25.59		7.41	7.41		30.74	30.73		92.0	91.8		6.32	6.30		2.68	2.61		<2	
8/7/2015	10:54	Fine	Middle	2.5	25.60	25.60	25.65	8.26	8.26	8.26	32.50	32.50	32.50	72.3	73.3	72.1	4.92	4.93	4.89	3.37	3.31	3.30	4	4.50
	10:56		Middle	2.5	25.70	25.70		8.25	8.25		32.49	32.49		72.0	70.6		4.89	4.80		3.27	3.25		5	
10/7/2015	14:21	Fine	Middle	3.0	26.30	26.30	26.35	8.26	8.26	8.26	32.73	32.73	32.73	74.3	74.0	73.9	4.99	4.97	4.96	4.16	4.05	4.16	4	4.50
	14:23		Middle	3.0	26.40	26.40		8.26	8.26		32.73	32.73		73.3	74.0		4.92	4.96		4.14	4.27		5	
13/7/2015	17:21	Fine	Middle	2.5	27.70	27.70	27.70	8.23	8.23	8.23	31.75	31.75	31.75	73.2	73.3	72.8	4.83	4.83	4.80	4.68	4.29	4.39	3	3.00
	17:23		Middle	2.5	27.70	27.70		8.22	8.22		31.75	31.75		74.2	70.5		4.89	4.65		4.28	4.29		3	
15/7/2015	16:44	Cloudy	Middle	2.5	28.00	28.00	28.05	8.25	8.25	8.23	30.97	30.97	30.97	70.4	70.7	70.1	4.63	4.65	4.63	3.35	3.47	3.39	5	4.00
	16:46		Middle	2.5	28.10	28.10		8.21	8.21		30.97	30.97		70.7	68.4		4.65	4.60		3.38	3.37		3	
17/7/2015	21:40	Cloudy	Middle	2.5	27.78	27.78	27.78	7.55	7.55	7.55	30.72	30.72	30.73	78.2	78.1	78.6	5.09	5.09	5.10	2.48	2.50	2.53	5	5.00
	21:41		Middle	2.5	27.77	27.77		7.55	7.55		30.73	30.73		79.0	78.9		5.10	5.10		2.58	2.55		5	
20/7/2015	8:35	Cloudy	Middle	2.5	27.20	27.20	27.27	8.16	8.16	8.19	32.09	32.09	32.09	74.0	75.4	74.7	4.90	4.99	4.95	5.47	5.43	5.37	4	4.00
	8:37		Middle	2.5	-	27.40		8.22	8.22		32.09	32.09		75.8	73.5		5.02	4.87		5.36	5.22		4	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	2:53	Cloudy	Middle	2.5	27.22	27.22	27.23	7.49	7.49	7.49	26.52	26.52	26.53	81.3	81.4	81.2	5.56	5.57	5.56	2.94	2.84	2.86	4	3.50
	2:54		Middle	2.5	27.23	27.23		7.49	7.49		26.54	26.54		81.1	81.0		5.55	5.54		2.83	2.81		3	

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
29/6/2015	16:40	Fine	Middle	2.5	30.00	30.00	30.05	8.31	8.31	8.35	23.38	23.38	23.62	78.0	81.4	79.1	5.17	5.39	5.25	4.07	4.06	4.00	6	6.50
	16:42		Middle	2.5	30.10	30.10		8.39	8.39		23.85	23.85		80.7	76.1		5.35	5.07		3.98	3.87		7	
2/7/2015	17:30	Fine	Middle	2.5	29.20	29.20	29.45	8.49	8.49	8.52	25.73	25.73	25.73	103.2	102.6	102.7	6.83	6.78	6.79	4.15	4.21	4.20	5	4.50
	17:32		Middle	2.5	29.70	29.70		8.55	8.55		25.72	25.72		104.7	100.3		6.92	6.62		4.21	4.24		4	
4/7/2015	21:30	Fine	Middle	2.5	27.90	27.90	27.90	8.21	8.21	8.21	29.62	29.62	29.62	73.4	74.0	73.7	4.88	4.92	4.90	2.84	2.68	2.71	3	3.00
	21:31		Middle	2.5	27.90	27.90		8.21	8.21		29.62	29.62		73.2	74.1		4.87	4.93		2.70	2.63		3	
6/7/2015	1:26	Cloudy	Middle	2.5	25.87	25.87	25.87	7.57	7.57	7.57	30.74	30.74	30.75	91.8	91.6	91.5	6.28	6.27	6.26	3.76	3.66	3.52	4	4.00
	1:27		Middle	2.5	25.86	25.86		7.57	7.57		30.75	30.75		91.6	91.0		6.26	6.22		3.29	3.35		4	
8/7/2015	10:38	Fine	Middle	2.5	26.60	26.60	26.70	8.20	8.20	8.21	32.19	32.19	32.13	76.2	77.8	76.5	5.09	5.20	5.11	3.17	3.15	3.12	2	2.50
	10:40		Middle	2.5	26.80	26.80		8.21	8.21		32.07	32.07		77.0	74.9		5.14	5.00		3.06	3.11		3	
10/7/2015	14:05	Fine	Middle	3.0	27.70	27.70	27.90	8.19	8.19	8.20	32.62	32.62	32.61	77.0	77.1	75.5	5.04	5.04	4.94	3.99	3.99	3.93	3	3.50
	14:07		Middle	3.0	28.10	28.10		8.21	8.21		32.60	32.60		75.0	73.0		4.90	4.77		3.88	3.87		4	
13/7/2015	17:05	Fine	Middle	2.5	28.80	28.80	28.95	8.20	8.20	8.21	31.79	31.79	31.78	75.8	75.1	75.2	4.89	4.84	4.85	8.53	8.43	8.38	9	9.50
	17:07		Middle	2.5	29.10	29.10		8.21	8.21		31.77	31.77		75.4	74.3		4.86	4.79		8.35	8.22		10	
15/7/2015	16:28	Cloudy	Middle	2.5	29.20	29.20	29.30	8.24	8.24	8.24	30.94	30.94	30.93	74.5	73.8	73.9	4.81	4.76	4.77	2.76	2.74	2.75	3	3.00
	16:30		Middle	2.5	29.40	29.40		8.24	8.24		30.92	30.92		73.8	73.3		4.76	4.73		2.74	2.75		3	
17/7/2015	21:10	Cloudy	Middle	2.5	27.41	27.41	27.38	7.56	7.56	7.57	30.73	30.73	30.75	79.4	79.3	79.5	5.12	5.11	5.13	2.29	2.30	2.27	5	4.50
	21:11		Middle	2.5	27.35	27.35		7.57	7.57		30.76	30.76		79.6	79.8		5.14	5.16		2.21	2.26		4	
20/7/2015	8:39	Cloudy	Middle	2.5	27.20	27.20	27.20	8.21	8.21	8.21	32.05	32.05	32.05	70.8	71.7	71.1	4.70	4.76	4.72	4.32	4.30	4.30	4	4.50
	8:41		Middle	2.5	27.20	27.20		8.21	8.21		32.04	32.04		71.1	70.9		4.72	4.70		4.29	4.29		5	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	2:32	Cloudy	Middle	2.5	27.30	27.30	27.30	7.52	7.52	7.52	26.41	26.41	26.41	84.4	84.3	84.2	5.77	5.76	5.76	3.18	3.05	3.06	3	3.50
	2:33		Middle	2.5	27.29	27.29		7.52	7.52		26.41	26.41		84.2	84.0		5.76	5.74		3.02	2.98		4	

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

Water Monitoring Result at P3 - APA
Mid-Flood Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/6/2015	16:44	Fine	Middle	2.5	29.10	29.10	29.15	8.39	8.39	8.38	24.10	24.10	24.08	81.6	85.6	83.7	5.47	5.75	5.64	2.83	2.79	2.79	6	6.00
	16:46		Middle	2.5	29.20	29.20		8.36	8.36		24.06	24.06		84.9	82.6		5.70	5.64		2.77	2.76		6	
2/7/2015	17:34	Fine	Middle	2.5	28.70	28.70	28.80	8.56	8.56	8.56	25.65	25.65	25.65	103.0	103.7	102.5	6.90	6.94	6.85	2.64	2.63	2.60	3	4.00
	17:36		Middle	2.5	28.90	28.90		8.56	8.56		25.65	25.65		101.6	101.6		6.80	6.76		2.57	2.54		5	
4/7/2015	21:34	Fine	Middle	2.5	27.40	27.40	27.40	8.19	8.19	8.19	29.70	29.70	29.70	70.1	71.9	71.5	4.70	4.82	4.79	2.71	2.65	2.67	3	3.00
	21:35		Middle	2.5	27.40	27.40		8.19	8.19		29.70	29.70		72.9	71.0		4.89	4.75		2.69	2.61		3	
6/7/2015	1:30	Cloudy	Middle	2.5	25.80	25.80	25.86	7.50	7.50	7.50	30.86	30.86	30.86	87.0	86.8	86.7	5.95	5.93	5.92	2.83	2.72	2.71	2	2.50
	1:31		Middle	2.5	25.92	25.92		7.50	7.50		30.86	30.86		86.4	86.6		5.90	5.91		2.67	2.62		3	
8/7/2015	10:42	Fine	Middle	2.5	25.80	25.80	25.80	8.21	8.21	8.21	32.25	32.25	32.23	65.8	65.0	64.3	4.46	4.40	4.36	2.68	2.47	2.53	4	3.50
	10:44		Middle	2.5	25.80	25.80		8.20	8.20		32.21	32.21		63.6	62.7		4.31	4.26		2.47	2.49		3	
10/7/2015	14:09	Fine	Middle	3.0	26.80	26.80	26.95	8.21	8.21	8.20	32.69	32.69	32.69	72.3	71.5	70.3	4.81	4.75	4.67	2.76	2.75	2.75	3	3.00
	14:11		Middle	3.0	27.10	27.10		8.18	8.18		32.68	32.68		66.7	70.6		4.43	4.69		2.75	2.75		3	
13/7/2015	17:09	Fine	Middle	2.5	27.90	27.90	28.00	8.19	8.19	8.17	31.75	31.75	31.75	68.9	70.8	69.6	4.52	4.64	4.56	2.89	2.88	2.83	<2	<2
	17:11		Middle	2.5	28.10	28.10		8.14	8.14		31.75	31.75		69.1	69.6		4.53	4.56		2.80	2.76		<2	
15/7/2015	16:32	Cloudy	Middle	2.5	28.50	28.50	28.55	8.25	8.25	8.24	30.87	30.87	30.84	73.4	72.4	72.1	4.80	4.74	4.71	2.86	3.04	3.03	2	2.50
	16:34		Middle	2.5	28.60	28.60		8.23	8.23		30.81	30.81		71.4	71.0		4.67	4.64		3.02	3.19		3	
17/7/2015	21:15	Cloudy	Middle	2.5	28.08	28.08	28.09	7.58	7.58	7.58	30.29	30.29	30.28	85.0	85.1	85.2	5.52	5.53	5.54	2.45	2.47	2.45	6	5.50
	21:16		Middle	2.5	28.09	28.09		7.58	7.58		30.27	30.27		85.3	85.4		5.55	5.55		2.53	2.36		5	
20/7/2015	8:45	Cloudy	Middle	2.5	27.00	27.00	27.05	8.18	8.18	8.18	30.80	30.80	30.84	63.8	68.8	67.9	4.27	4.59	4.52	3.13	3.04	3.07	2	3.00
	8:47		Middle	2.5	27.10	27.10		8.17	8.17		30.88	30.88		70.5	68.5		4.70	4.50		3.02	3.07		4	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	2:37	Cloudy	Middle	2.5	27.19	27.19	88.70	7.50	7.50	7.51	26.44	26.44	26.44	75.4	75.3	75.2	5.17	5.16	5.15	3.64	3.91	3.81	3	2.50
	2:38		Middle	2.5	27.20	273.20		7.51	7.51		26.43	26.43		75.2	75.0		5.15	5.13		3.86	3.83		2	

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
29/6/2015	16:48	Fine	Middle	2.5	29.00	29.00	29.00	8.42	8.42	8.44	24.47	24.47	24.46	83.9	82.9	82.6	5.64	5.57	5.55	3.89	3.88	3.90	6	6.50
	16:50		Middle	2.5	29.00	29.00		8.46	8.46		24.45	24.45		81.8	81.9		5.50	5.50		3.86	3.95		7	
2/7/2015	17:38	Fine	Middle	2.5	29.00	29.00	29.05	8.54	8.54	8.54	25.83	25.83	25.84	98.0	101.4	98.2	6.52	6.75	6.54	2.74	2.74	2.74	5	4.50
	17:40		Middle	2.5	29.10	29.10		8.53	8.53		25.84	25.84		98.8	94.6		6.58	6.30		2.74	2.74		4	
4/7/2015	21:42	Fine	Middle	2.5	27.30	27.30	27.30	8.22	8.22	8.22	29.71	29.71	29.71	71.4	71.1	70.8	4.79	4.77	4.75	3.71	3.62	3.59	4	4.00
	21:43		Middle	2.5	27.30	27.30		8.22	8.22		29.71	29.71		70.2	70.3		4.71	4.72		3.54	3.49		4	
6/7/2015	1:34	Cloudy	Middle	2.5	25.82	25.82	25.82	7.53	7.53	7.53	30.06	30.06	30.06	95.3	95.2	95.2	6.55	6.54	6.53	2.13	2.29	2.18	<2	2.00
	1:35		Middle	2.5	25.82	25.82		7.53	7.53		30.06	30.06		95.1	95.0		6.53	6.51		2.19	2.10		2	
8/7/2015	10:46	Fine	Middle	2.5	25.60	25.60	25.65	8.21	8.21	8.22	32.35	32.35	32.34	66.4	65.8	65.5	4.52	4.46	4.45	2.83	2.85	2.81	5	4.00
	10:48		Middle	2.5	25.70	25.70		8.22	8.22		32.32	32.32		65.0	64.9		4.42	4.41		2.79	2.77		3	
10/7/2015	14:13	Fine	Middle	3.0	26.50	26.50	26.60	8.21	8.21	8.22	32.69	32.69	32.70	79.9	79.3	78.8	5.34	5.29	5.26	3.78	3.75	3.71	6	6.00
	14:15		Middle	3.0	26.70	26.70		8.23	8.23		32.70	32.70		77.3	78.8		5.16	5.26		3.64	3.68		6	
13/7/2015	17:13	Fine	Middle	2.5	27.80	27.80	27.85	8.18	8.18	8.20	31.76	31.76	31.76	77.9	80.1	78.3	5.12	5.26	5.14	4.40	4.40	4.36	2	2.00
	17:15		Middle	2.5	27.90	27.90		8.22	8.22		31.75	31.75		79.2	75.8		5.21	4.98		4.33	4.31		2	
15/7/2015	16:36	Cloudy	Middle	2.5	28.30	28.30	28.30	8.24	8.24	8.25	30.78	30.79	30.78	76.1	74.7	74.9	5.00	4.90	4.91	2.86	2.89	3.02	2	2.50
	16:38		Middle	2.5	28.30	28.30		8.25	8.25		30.77	30.77		74.8	73.8		4.91	4.81		3.13	3.20		3	
17/7/2015	21:24	Cloudy	Middle	2.5	28.32	28.32	28.31	7.60	7.60	7.60	30.63	30.63	30.64	86.8	86.6	86.4	5.61	5.59	5.58	4.13	3.80	3.89	5	5.50
	21:25		Middle	2.5	28.30	28.30		7.60	7.60		30.64	30.64		86.1	86.0		5.57	5.56		3.77	3.84		6	
20/7/2015	8:50	Cloudy	Middle	2.5	27.10	27.10	27.10	8.21	8.21	8.23	32.27	32.27	32.27	78.6	78.0	78.4	5.22	5.18	5.21	5.45	5.35	5.43	5	5.00
	8:52		Middle	2.5	27.10	27.10		8.24	8.24		32.27	32.27		79.1	77.9		5.25	5.17		5.47	5.44		5	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	2:41	Cloudy	Middle	2.5	27.20	27.20	27.20	7.52	7.52	7.52	26.37	26.37	26.37	84.8	84.7	84.7	5.81	5.80	5.80	3.37	3.27	3.29	4	3.50
	2:42		Middle	2.5	27.20	27.20		7.52	7.52		26.37	26.37		84.7	84.5		5.80	5.78		3.30	3.23		3	

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

Water Monitoring Result at P5 - WCT / RT / IT
Mid-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
29/6/2015	16:52	Fine	Middle	2.5	28.80	28.80	28.85	8.46	8.46	8.46	24.55	24.55	24.55	82.7	82.3	80.3	5.57	5.54	5.41	4.23	4.56	4.30	6	6.00
	16:54		Middle	2.5	28.90	28.90		8.46	8.46		24.54	24.54		79.3	76.9		5.34	5.19		4.37	4.05		6	
2/7/2015	17:42	Fine	Middle	2.5	29.00	29.00	29.05	8.52	8.52	8.52	25.90	25.90	25.88	97.1	96.9	96.2	6.46	6.46	6.40	3.86	3.84	3.88	5	5.50
	17:44		Middle	2.5	29.10	29.10		8.51	8.51		25.80	25.90		95.7	95.2		6.37	6.32		3.85	3.95		6	
4/7/2015	21:51	Fine	Middle	2.5	27.30	27.30	27.30	8.17	8.17	8.17	29.81	29.81	29.81	71.1	71.3	71.3	4.77	4.78	4.78	2.92	2.94	2.81	3	2.50
	21:52		Middle	2.5	27.30	27.30		8.17	8.17		29.82	29.81		70.5	72.3		4.73	4.84		2.77	2.61		2	
6/7/2015	1:44	Cloudy	Middle	2.5	25.72	25.72	25.73	7.55	7.55	7.55	31.12	31.12	31.12	91.8	91.7	91.6	6.28	6.27	6.26	2.51	2.41	2.27	2	2.50
	1:45		Middle	2.5	25.73	25.73		7.55	7.55		31.11	31.11		91.5	91.2		6.26	6.22		2.07	2.10		3	
8/7/2015	10:50	Fine	Middle	2.5	25.70	25.70	25.75	8.24	8.24	8.25	32.40	32.40	32.40	69.1	65.2	66.1	4.69	4.50	4.51	3.72	3.72	3.73	4	4.00
	10:52		Middle	2.5	25.80	25.80		8.26	8.26		32.39	32.39		65.6	64.6		4.46	4.39		3.73	3.73		4	
10/7/2015	14:17	Fine	Middle	3.0	26.30	26.30	26.45	8.25	8.25	8.26	32.73	32.73	32.73	74.4	73.8	73.8	4.99	4.94	4.94	4.57	4.49	4.54	5	5.50
	14:19		Middle	3.0	26.60	26.60		8.26	8.26		32.73	32.73		73.4	73.6		4.91	4.92		4.54	4.55		6	
13/7/2015	17:17	Fine	Middle	2.5	27.80	27.80	27.85	8.22	8.22	8.23	31.72	31.72	31.73	71.6	70.9	71.6	4.72	4.67	4.71	5.10	5.08	5.12	2	2.00
	17:19		Middle	2.5	27.90	27.90		8.23	8.23		31.74	31.74		72.1	71.6		4.75	4.71		5.22	5.09		<2	
15/7/2015	16:40	Cloudy	Middle	2.5	28.10	28.10	28.15	8.27	8.27	8.27	30.84	30.84	30.84	72.8	73.0	71.7	4.79	4.80	4.72	2.87	2.87	2.91	4	4.00
	16:42		Middle	2.5	28.20	28.20		8.27	8.27		30.83	30.83		71.1	70.0		4.67	4.61		2.94	2.95		4	
17/7/2015	21:29	Cloudy	Middle	2.5	28.21	28.21	28.24	7.60	7.60	7.60	30.66	30.66	30.67	87.8	87.7	87.7	5.63	5.62	5.62	3.31	3.36	3.04	5	5.00
	21:30		Middle	2.5	28.27	28.27		7.60	7.60		30.67	30.67		87.6	87.5		5.62	5.61		2.79	2.69		5	
20/7/2015	8:55	Cloudy	Middle	2.5	27.20	27.20	27.10	8.25	8.25	8.25	31.27	31.27	31.27	71.8	74.1	73.9	4.78	4.93	4.92	5.62	5.78	5.74	5	5.00
	8:57		Middle	2.5	27.00	27.00		8.25	8.25		31.27	31.27		74.2	75.5		4.93	5.02		5.77	5.79		5	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	2:48	Cloudy	Middle	2.5	27.26	27.26	27.26	7.51	7.51	7.51	26.52	26.52	26.52	79.0	78.8	78.7	5.40	5.39	5.39	3.58	3.55	3.53	4	4.00
	2:49		Middle	2.5	27.26	27.26		7.51	7.51		26.52	26.52		78.6	78.5		5.38	5.37		3.50	3.48		4	

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

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

Date	Time	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
29/6/2015	17:14	Fine	Middle	3.5	28.70	28.70	28.80	8.41	8.41	8.42	24.29	24.29	24.26	72.5	73.3	74.6	4.90	4.95	5.04	3.27	3.24	3.20	3	3.00
	17:16		Middle	3.5	28.90	28.90		8.43	8.43		24.23	24.23		75.2	77.3		5.08	5.22		3.14	3.14		3	
2/7/2015	20:13	Fine	Middle	3.5	27.70	27.70	27.75	8.29	8.29	8.29	27.09	27.09	27.09	82.2	82.0	80.8	5.55	5.52	5.45	3.27	3.96	3.43	6	5.50
	20:14		Middle	3.5	27.80	27.80		8.29	8.29		27.09	27.09		78.3	80.7		5.28	5.44		3.30	3.19		5	
4/7/2015	19:45	Fine	Middle	3.0	27.60	27.60	27.75	8.10	8.10	8.10	29.28	29.28	29.28	74.9	76.1	75.0	5.01	5.08	5.01	2.66	2.78	2.74	<2	≤2
	19:46		Middle	3.0	27.90	27.90		8.10	8.10		29.28	29.28		74.8	74.3		4.99	4.96		2.82	2.68		<2	
6/7/2015	23:40	Cloudy	Middle	3.0	26.24	26.24	26.24	7.56	7.56	7.56	29.88	29.88	29.88	87.4	87.3	87.5	5.97	5.96	5.97	3.18	3.21	3.16	4	4.00
	23:41		Middle	3.0	26.24	26.24		7.56	7.56		29.88	29.88		87.5	87.6		5.98	5.98		3.16	3.10		4	
8/7/2015	11:06	Fine	Middle	3.5	25.60	25.60	25.60	8.25	8.25	8.25	32.15	32.15	32.12	62.2	61.3	62.3	4.24	4.18	4.24	2.73	2.76	2.69	5	4.50
	11:08		Middle	3.5	25.60	25.60		8.25	8.25		32.08	32.08		63.1	62.5		4.29	4.25		2.64	2.64		4	
10/7/2015	14:20	Fine	Middle	3.5	26.30	26.30	26.30	8.24	8.24	8.25	32.80	32.80	32.80	75.1	75.5	74.9	5.02	5.04	5.01	5.02	5.26	5.18	8	7.50
	14:22		Middle	3.5	26.30	26.30		8.26	8.26		32.80	32.80		75.1	74.0		5.01	4.96		5.29	5.13		7	
13/7/2015	17:45	Fine	Middle	3.0	27.40	27.40	27.45	8.22	8.22	8.23	31.70	31.70	31.70	76.4	76.6	76.1	5.05	5.08	5.06	4.19	4.21	4.19	<2	≤2
	17:47		Middle	3.0	27.50	27.50		8.23	8.23		31.70	31.70		75.5	75.9		5.07	5.03		4.19	4.17		<2	
15/7/2015	19:05	Cloudy	Middle	3.0	27.58	27.58	27.59	7.38	7.38	7.30	27.15	27.14	27.16	94.9	95.3	95.4	6.43	6.45	6.46	3.89	3.97	3.99	6	6.50
	19:06		Middle	3.0	27.59	27.59		7.21	7.21		27.18	27.18		95.6	95.8		6.47	6.49		4.07	4.03		7	
17/7/2015	19:11	Cloudy	Middle	3.0	27.42	27.42	27.43	7.55	7.55	7.55	29.99	29.99	29.99	83.9	83.7	83.3	5.61	5.59	5.56	4.22	4.39	4.25	5	6.00
	19:12		Middle	3.0	27.43	27.43		7.55	7.55		29.98	29.98		82.0	83.5		5.46	5.57		4.20	4.17		7	
20/7/2015	9:25	Cloudy	Middle	3.0	26.60	26.60	26.60	8.19	8.19	8.19	31.69	31.69	31.68	64.2	64.0	63.9	4.33	4.32	4.30	4.40	4.40	4.41	4	4.00
	9:27		Middle	3.0	26.60	26.60		8.19	8.19		31.67	31.67		62.7	64.7		4.21	4.34		4.41	4.42		4	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	2:06	Cloudy	Middle	3.5	27.32	27.32	27.32	7.52	7.52	7.52	27.28	27.28	27.28	80.1	79.8	79.6	5.77	5.47	5.53	2.94	3.04	2.98	3	3.00
	2:07		Middle	3.5	27.31	27.31		7.51	7.51		27.28	27.28		79.3	79.1		5.44	5.42		2.96	2.98		3	

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			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
29/6/2015	16:03	Fine	Middle	3.5	29.80	29.80	29.85	8.61	8.61	8.63	23.03	23.03	23.03	104.3	103.2	102.7	6.96	6.89	6.85	4.60	4.57	4.64	7	7.00
	16:05		Middle	3.5	29.90	29.90		8.65	8.65		23.02	23.02		102.0	101.1		6.81	6.75		4.56	4.82		7	
2/7/2015	19:10	Fine	Middle	2.5	28.60	28.60	28.63	8.13	8.13	8.14	27.24	27.24	27.24	80.8	80.6	80.0	5.36	5.30	5.29	3.75	3.65	3.71	5	5.50
	19:11		Middle	2.5	28.70	28.60		8.15	8.15		27.24	27.24		79.0	79.4		5.24	5.26		3.70	3.73		6	
4/7/2015	20:35	Fine	Middle	2.5	27.30	27.30	27.35	7.91	7.91	7.93	29.52	29.52	29.53	71.9	73.6	73.1	4.80	4.90	4.87	4.90	4.63	4.71	3	3.00
	20:36		Middle	2.5	27.40	27.40		7.95	7.95		29.54	29.54		74.6	72.4		4.97	4.82		4.61	4.70		3	
6/7/2015	0:27	Cloudy	Middle	3.0	26.10	26.10	26.12	7.58	7.58	7.58	30.24	30.24	30.24	94.4	94.3	94.2	6.44	6.43	6.42	4.98	4.87	4.86	4	4.00
	0:28		Middle	3.0	26.13	26.13		7.58	7.58		30.24	30.24		94.2	94.0		6.43	6.39		4.80	4.77		4	
8/7/2015	9:47	Fine	Middle	3.5	26.10	26.10	26.20	8.19	8.19	8.18	32.16	32.16	32.16	54.8	54.5	54.3	3.70	3.68	3.67	3.87	3.95	3.87	4	4.00
	9:49		Middle	3.5	26.30	26.30		8.17	8.17		32.16	32.16		54.2	53.7		3.66	3.62		3.88	3.79		4	
10/7/2015	13:18	Fine	Middle	3.5	27.10	27.10	27.40	8.42	8.42	8.33	32.90	32.90	32.91	69.3	66.5	65.9	4.64	4.37	4.35	3.24	3.14	3.12	4	4.00
	13:20		Middle	3.5	27.70	27.70		8.24	8.24		32.91	32.91		64.1	63.8		4.21	4.19		3.06	3.04		4	
13/7/2015	16:03	Fine	Middle	3.0	27.70	27.70	27.90	8.20	8.20	8.20	31.75	31.75	31.75	66.6	67.3	66.5	4.37	4.42	4.37	5.01	4.92	4.89	3	4.00
	16:05		Middle	3.0	28.10	28.10		8.19	8.19		31.74	31.74		65.7	66.5		4.31	4.37		4.86	4.76		5	
15/7/2015	20:04	Cloudy	Middle	3.0	27.99	27.99	28.05	7.58	7.58	7.58	29.66	29.66	29.66	92.8	93.3	93.1	6.15	6.18	6.17	6.34	6.44	6.38	5	5.00
	20:05		Middle	3.0	28.11	28.11		7.58	7.58		29.66	29.66		93.3	93.1		6.18	6.16		6.61	6.12		5	
17/7/2015	20:03	Cloudy	Middle	3.0	27.17	27.17	27.17	7.39	7.39	7.40	30.52	30.52	30.52	93.1	93.0	93.1	6.24	6.23	6.24	5.02	4.48	4.63	6	6.00
	20:04		Middle	3.0	27.17	27.17		7.40	7.40		30.51	30.51		93.3	92.8		6.26	6.22		4.43	4.59		6	
20/7/2015	7:49	Cloudy	Middle	3.5	26.90	26.90	27.00	8.20	8.20	8.19	32.06	32.06	32.06	58.3	57.1	57.2	3.88	3.80	3.81	7.76	7.89	7.87	4	4.50
	7:51		Middle	3.5	27.10	27.10		8.17	8.17		32.05	32.05		57.0	56.5		3.79	3.75		7.91	7.93		5	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	3:09	Cloudy	Middle	3.0	27.26	27.26	27.28	7.55	7.55	7.56	24.92	24.92	24.93	89.5	89.4	89.3	6.17	6.17	6.16	3.81	3.85	3.67	4	4.00
	3:10		Middle	3.0	27.29	27.29		7.56	7.56		24.93	24.93		89.1	89.0		6.14	6.14		3.50	3.53		4	

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

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

Date	Time	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
29/6/2015	10:15	Fine	Middle	-	29.30	29.30	29.35	8.32	8.32	8.32	23.69	23.69	23.69	77.4	79.4	78.0	5.19	5.32	5.24	3.08	3.19	3.12	4	3.50
	10:17		Middle	-	29.40	29.40		8.31	8.31		23.68	23.68		77.4	77.6		5.19	5.26		3.19	3.02		3	
2/7/2015	10:35	Fine	Middle	-	27.90	27.90	28.00	8.21	8.21	8.19	27.86	27.86	27.86	65.3	65.7	65.4	4.39	4.41	4.39	5.03	5.04	5.14	4	5.00
	10:37		Middle	-	28.10	28.10		8.16	8.16		27.86	27.86		65.4	65.0		4.39	4.35		5.21	5.29		6	
4/7/2015	14:14	Fine	Middle	-	27.80	27.80	28.00	8.06	8.06	8.06	29.65	29.65	29.63	74.7	74.1	73.9	4.96	4.91	4.90	1.85	1.85	1.86	<2	<2
	14:16		Middle	-	28.20	28.20		8.05	8.05		29.61	29.61		73.3	73.3		4.86	4.86		1.86	1.86		<2	
6/7/2015	14:50	Fine	Middle	-	27.30	27.30	27.40	8.13	8.13	8.12	31.20	31.20	31.20	73.6	74.9	73.5	4.89	4.98	4.88	3.02	3.00	2.96	4	3.50
	14:52		Middle	-	27.50	27.50		8.11	8.11		31.20	31.20		72.4	73.2		4.81	4.85		2.89	2.94		3	
8/7/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
10/7/2015	-	Cloudy	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
13/7/2015	-	Fine	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
15/7/2015	12:25	Fine	Middle	-	28.50	28.50	28.65	8.09	8.09	8.09	31.50	31.50	31.50	68.1	69.2	69.1	4.43	4.50	4.49	1.53	1.56	1.56	3	3.50
	12:27		Middle	-	28.80	28.80		8.08	8.08		31.50	31.50		68.8	70.1		4.48	4.56		1.56	1.60		4	
17/7/2015	11:05	Fine	Middle	-	27.80	27.80	27.70	8.17	8.17	8.16	31.21	31.21	31.21	67.6	68.6	68.8	4.48	4.50	4.54	1.93	1.95	1.93	3	3.50
	11:07		Middle	-	27.60	27.60		8.14	8.14		31.21	31.21		70.1	68.9		4.65	4.52		1.96	1.89		4	
20/7/2015	15:32	Cloudy	Middle	-	26.70	26.70	26.75	8.08	8.08	8.09	31.68	31.68	31.71	64.8	65.4	64.0	4.34	4.38	4.29	1.51	1.64	1.66	<2	<2
	15:34		Middle	-	26.80	26.80		8.09	8.09		31.74	31.74		63.4	62.5		4.24	4.19		1.74	1.75		<2	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	9:06	Cloudy	Middle	-	27.10	27.10	27.05	7.99	7.99	8.00	24.94	24.94	24.90	67.7	66.5	66.7	4.09	4.00	4.03	1.51	1.51	1.79	2	2.00
	9:08		Middle	-	27.00	27.00		8.01	8.01		24.86	24.86		66.5	66.1		4.01	4.02		2.07	2.06		2	

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

Water Monitoring Result at C1 - HKCEC
Mid-Ebb Tide

Date	Time	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
29/6/2015	10:55	Fine	Middle	2.5	28.40	28.40	28.40	8.43	8.43	8.43	22.55	22.56	22.57	76.0	74.1	73.3	5.21	5.08	5.02	3.71	3.65	3.59	5	5.00
	10:57		Middle	2.5	28.40	28.40		8.42	8.42		22.58	22.58		72.0	70.9		4.93	4.86		3.50	3.49		5	
2/7/2015	14:35	Fine	Middle	2.5	28.60	28.60	28.65	8.44	8.44	8.44	25.92	25.92	25.92	90.5	91.7	92.4	6.06	6.17	6.20	3.99	3.99	3.98	3	3.50
	14:37		Middle	2.5	28.70	28.70		8.44	8.44		25.92	25.92		93.9	93.5		6.29	6.26		3.98	3.97		4	
4/7/2015	16:00	Fine	Middle	2.5	27.70	27.70	27.75	8.25	8.25	8.26	28.76	28.76	28.76	73.1	74.1	73.6	4.90	4.96	4.93	2.97	2.78	2.82	2	2.00
	16:02		Middle	2.5	27.80	27.80		8.26	8.26		28.75	28.75		74.1	73.2		4.97	4.90		2.77	2.76		2	
6/7/2015	15:51	Fine	Middle	3.5	26.80	26.80	26.85	8.28	8.28	8.28	30.10	30.10	30.11	77.1	77.6	77.5	5.21	5.24	5.23	2.37	2.38	2.61	3	3.00
	15:53		Middle	3.5	26.90	26.90		8.27	8.27		30.12	30.12		77.9	77.3		5.26	5.22		3.00	2.67		3	
8/7/2015	16:56	Fine	Middle	2.5	26.50	26.50	26.55	8.29	8.29	8.29	32.36	32.36	32.36	73.2	72.3	72.5	4.90	4.84	4.85	3.13	3.04	2.99	3	3.50
	16:58		Middle	2.5	26.60	26.60		8.28	8.28		32.36	32.36		73.7	70.6		4.94	4.73		2.89	2.88		4	
10/7/2015	17:47	Cloudy	Middle	2.5	26.20	26.20	26.25	8.26	8.26	8.26	32.71	32.71	32.71	63.3	61.8	61.3	4.25	4.15	4.12	2.45	2.38	2.41	6	5.00
	17:49		Middle	2.5	26.30	26.30		8.26	8.26		32.70	32.70		60.3	59.8		4.05	4.02		2.42	2.40		4	
13/7/2015	10:17	Fine	Middle	2.5	27.30	27.30	27.35	8.24	8.24	8.24	31.87	31.87	31.87	67.4	69.1	68.7	4.47	4.58	4.55	2.73	2.74	2.81	<2	<2
	10:19		Middle	2.5	27.40	27.40		8.23	8.23		31.86	31.86		69.1	69.1		4.58	4.57		2.79	2.97		<2	
15/7/2015	11:20	Fine	Middle	2.5	27.80	27.80	27.85	8.26	8.26	8.26	31.25	31.25	31.25	62.0	61.2	60.8	4.09	4.04	4.01	3.39	3.37	3.34	2	2.50
	11:22		Middle	2.5	27.90	27.90		8.26	8.26		31.25	31.25		60.4	59.5		3.98	3.91		3.31	3.29		3	
17/7/2015	14:56	Fine	Middle	2.5	27.50	27.50	27.50	8.26	8.26	8.26	30.67	30.67	30.63	67.3	68.3	66.0	4.48	4.55	4.39	3.22	3.23	3.21	2	2.50
	14:58		Middle	2.5	27.50	27.50		8.26	8.26		30.58	30.58		64.4	63.8		4.28	4.25		3.23	3.14		3	
20/7/2015	14:40	Cloudy	Middle	3.0	26.80	26.80	26.85	8.26	8.26	8.26	31.07	31.07	31.04	74.7	73.5	73.6	4.98	4.90	4.91	4.16	4.32	4.23	5	5.00
	14:42		Middle	3.0	26.90	26.90		8.26	8.26		31.00	31.00		72.9	73.2		4.89	4.88		4.20	4.22		5	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	8:16	Cloudy	Middle	2.5	27.70	27.70	27.70	8.16	8.16	8.16	25.11	25.11	25.11	69.4	70.1	68.6	4.74	4.79	4.69	2.75	2.75	2.78	3	2.50
	8:18		Middle	2.5	27.70	27.70		8.15	8.15		25.11	25.11		68.2	66.5		4.66	4.55		2.77	2.86		2	

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
29/6/2015	11:17	Fine	Middle	2.5	28.50	28.50	28.55	8.34	8.34	8.36	23.02	23.02	23.03	80.5	76.4	75.8	5.49	5.21	5.17	3.04	3.03	3.05	5	5.50
	11:19		Middle	2.5	28.60	28.60		8.38	8.38		23.04	23.04		73.9	72.5		5.04	4.95		3.00	3.11		6	
2/7/2015	14:15	Fine	Middle	2.5	29.90	29.90	29.90	8.46	8.46	8.45	26.01	26.01	26.01	99.5	98.5	98.6	6.51	6.43	6.44	2.48	2.46	2.42	4	4.00
	14:17		Middle	2.5	29.90	29.90		8.44	8.44		26.00	26.00		99.2	97.2		6.47	6.34		2.37	2.37		4	
4/7/2015	15:44	Fine	Middle	2.5	29.20	29.20	29.35	8.21	8.21	8.24	28.73	28.73	28.80	78.3	80.8	79.4	5.12	5.27	5.18	2.71	2.72	2.73	3	2.50
	15:46		Middle	2.5	29.50	29.50		8.26	8.26		28.86	28.86		80.6	77.8		5.26	5.08		2.73	2.74		2	
6/7/2015	15:35	Fine	Middle	3.5	27.30	27.30	27.50	8.21	8.21	8.24	30.16	30.16	30.15	83.8	83.3	79.8	5.59	5.56	5.32	2.35	2.36	2.36	3	3.00
	15:37		Middle	3.5	27.70	27.70		8.26	8.26		30.14	30.14		73.8	78.1		4.92	5.20		2.36	2.36		3	
8/7/2015	16:40	Fine	Middle	2.5	26.80	26.80	26.95	8.23	8.23	8.25	32.41	32.41	32.35	76.0	76.5	75.8	5.06	5.09	5.04	3.69	3.71	3.67	3	3.50
	16:42		Middle	2.5	27.10	27.10		8.27	8.27		32.28	32.28		76.0	74.6		5.05	4.96		3.64	3.64		4	
10/7/2015	17:31	Cloudy	Middle	2.5	27.70	27.70	27.70	8.21	8.21	8.22	32.89	32.89	32.86	65.7	65.8	65.7	4.32	4.32	4.32	3.69	3.71	3.59	5	5.00
	17:33		Middle	2.5	27.70	27.70		8.22	8.22		32.83	32.83		66.0	65.3		4.33	4.29		3.56	3.38		5	
13/7/2015	10:05	Fine	Middle	2.5	28.20	28.20	28.30	8.21	8.21	8.22	32.06	32.06	32.04	62.0	61.4	61.3	4.04	4.00	3.99	2.54	2.63	2.53	<2	<2
	10:07		Middle	2.5	28.40	28.40		8.22	8.22		32.01	32.01		61.2	60.5		3.99	3.93		2.56	2.40		<2	
15/7/2015	11:04	Fine	Middle	2.5	28.30	28.30	28.40	8.21	8.21	8.22	31.37	31.37	31.36	74.1	77.3	76.1	4.84	5.04	4.96	2.74	2.74	2.74	5	4.00
	11:06		Middle	2.5	28.50	28.50		8.23	8.23		31.34	31.34		77.0	76.0		5.02	4.95		2.74	2.74		3	
17/7/2015	14:40	Fine	Middle	2.5	28.60	28.60	28.70	8.25	8.25	8.26	30.09	30.09	30.38	58.6	56.8	56.6	3.82	3.70	3.68	3.64	3.70	3.71	3	3.50
	14:42		Middle	2.5	28.80	28.80		8.26	8.26		30.67	30.67		55.9	54.9		3.62	3.58		3.72	3.76		4	
20/7/2015	14:20	Cloudy	Middle	3.0	27.00	27.00	27.00	8.25	8.25	8.26	31.78	31.78	31.84	77.2	77.7	77.3	5.17	5.20	5.19	4.51	4.90	4.60	4	5.00
	14:22		Middle	3.0	27.00	27.00		8.26	8.26		31.89	31.89		78.0	76.1		5.23	5.16		4.28	4.72		6	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	8:00	Cloudy	Middle	2.5	27.20	27.20	27.20	8.02	8.02	8.05	24.88	24.88	24.90	70.6	70.9	71.3	4.88	4.90	4.93	3.72	3.72	3.73	3	2.50
	8:02		Middle	2.5	27.20	27.20		8.08	8.08		24.92	24.92		71.9	71.7		4.97	4.95		3.73	3.73		2	

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

Water Monitoring Result at P3 - APA
Mid-Ebb Tide

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/6/2015	11:10	Fine	Middle	2.5	28.60	28.60	28.65	8.39	8.39	8.39	22.72	22.72	22.70	71.4	70.7	70.7	4.89	4.83	4.84	3.13	3.15	3.17	4	4.00
	11:12		Middle	2.5	28.70	28.70		8.38	8.38		22.68	22.68		70.4	70.2		4.82	4.81		3.18	3.20		4	
2/7/2015	14:30	Fine	Middle	2.5	29.20	29.20	29.25	8.45	8.45	8.45	26.88	26.88	26.88	95.3	95.1	95.7	6.34	6.31	6.36	2.52	2.52	2.51	3	3.50
	14:32		Middle	2.5	29.30	29.30		8.45	8.45		26.88	26.88		97.0	95.4		6.44	6.33		2.51	2.48		4	
4/7/2015	15:48	Fine	Middle	2.5	28.20	28.20	28.25	8.29	8.29	8.29	28.63	28.63	28.62	71.4	73.0	72.3	4.75	4.85	4.81	2.71	2.85	2.80	3	2.50
	15:50		Middle	2.5	28.30	28.30		8.29	8.29		28.60	28.60		73.1	71.8		4.86	4.79		2.89	2.75		2	
6/7/2015	15:39	Fine	Middle	3.5	27.00	27.00	27.10	8.28	8.28	8.28	30.02	30.02	30.02	81.6	82.2	81.5	5.49	5.53	5.48	2.92	2.66	2.69	3	3.00
	15:41		Middle	3.5	27.20	27.20		8.28	8.28		30.01	30.01		81.4	80.7		5.47	5.42		2.55	2.63		3	
8/7/2015	16:44	Fine	Middle	2.5	26.20	26.20	26.25	8.30	8.30	8.31	32.13	32.13	32.12	78.1	77.0	77.2	5.27	5.19	5.21	3.53	3.51	3.51	3	3.50
	16:46		Middle	2.5	26.30	26.30		8.31	8.31		32.11	32.11		77.5	76.3		5.22	5.14		3.51	3.50		4	
10/7/2015	17:35	Cloudy	Middle	2.5	26.40	26.40	26.50	8.22	8.22	8.22	32.73	32.73	32.73	67.6	65.4	65.2	4.52	4.38	4.36	2.30	2.31	2.30	4	4.00
	17:37		Middle	2.5	26.60	26.60		8.22	8.22		32.72	32.72		65.7	61.9		4.40	4.14		2.29	2.28		4	
13/7/2015	10:08	Fine	Middle	2.5	27.60	27.60	27.70	8.23	8.23	8.24	31.97	31.97	31.89	69.7	70.0	69.2	4.59	4.61	4.56	2.28	2.28	2.28	<2	<2
	10:10		Middle	2.5	27.80	27.80		8.24	8.24		31.81	31.81		70.1	67.0		4.62	4.42		2.27	2.27		<2	
15/7/2015	11:08	Fine	Middle	2.5	27.80	27.80	27.85	8.25	8.25	8.26	31.37	31.37	31.24	75.6	73.6	75.5	5.00	4.87	4.99	2.73	2.64	2.61	2	2.50
	11:10		Middle	2.5	27.90	27.90		8.27	8.27		31.11	31.11		76.9	75.9		5.07	5.01		2.55	2.53		3	
17/7/2015	14:44	Fine	Middle	2.5	28.00	28.00	28.05	8.27	8.27	8.27	30.69	30.69	30.68	67.3	66.6	67.6	4.44	4.39	4.46	4.32	4.30	4.37	3	3.00
	14:46		Middle	2.5	28.10	28.10		8.27	8.27		30.66	30.66		67.6	68.7		4.46	4.53		4.35	4.49		3	
20/7/2015	14:25	Cloudy	Middle	3.0	26.70	26.70	26.65	8.26	8.26	8.26	30.92	30.92	30.91	78.4	77.7	77.9	5.25	5.21	5.22	5.05	5.00	4.93	5	5.50
	14:27		Middle	3.0	26.60	26.60		8.26	8.26		30.90	30.90		78.1	77.3		5.24	5.18		4.84	4.84		6	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	8:04	Cloudy	Middle	2.5	27.20	27.20	27.20	8.10	8.10	8.12	24.97	24.97	24.97	75.2	74.5	74.0	5.19	5.14	5.11	3.01	3.00	3.00	2	2.50
	8:06		Middle	2.5	27.20	27.20		8.13	8.13		24.97	24.97		73.9	72.2		5.11	4.99		3.00	3.00		3	

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		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
29/6/2015	11:03	Fine	Middle	2.5	28.60	28.60	28.65	8.42	8.42	8.42	22.57	22.48	22.54	71.9	69.8	68.6	4.90	4.72	4.68	2.55	2.53	2.52	4	5.00
	11:05		Middle	2.5	28.70	28.70		8.41	8.41		22.54	22.55		67.8	65.0		4.62	4.49		2.49	2.51		6	
2/7/2015	14:25	Fine	Middle	2.5	28.90	28.90	28.90	8.44	8.44	8.45	26.00	26.00	26.00	93.0	92.9	92.1	6.20	6.19	6.14	2.28	2.27	2.27	3	3.50
	14:27		Middle	2.5	28.90	28.90		8.45	8.45		26.00	26.00		90.8	91.5		6.05	6.10		2.27	2.27		4	
4/7/2015	15:52	Fine	Middle	2.5	28.00	28.00	28.05	8.28	8.28	8.28	28.58	28.58	28.58	71.1	70.9	72.2	4.75	4.73	4.82	1.77	1.78	1.86	2	2.00
	15:54		Middle	2.5	28.10	28.10		8.27	8.27		28.58	28.58		73.3	73.3		4.89	4.89		1.93	1.94		<2	
6/7/2015	15:43	Fine	Middle	3.5	26.90	26.90	26.95	8.28	8.28	8.29	29.98	29.98	29.98	82.2	81.7	80.1	5.54	5.51	5.42	2.52	2.53	2.58	2	2.00
	15:45		Middle	3.5	27.00	27.00		8.29	8.29		29.97	29.97		79.4	76.9		5.46	5.18		2.62	2.63		2	
8/7/2015	16:48	Fine	Middle	2.5	26.10	26.10	26.15	8.30	8.30	8.30	32.22	32.22	32.22	76.4	75.4	74.6	5.16	5.08	5.03	2.72	2.73	2.77	4	3.50
	16:50		Middle	2.5	26.20	26.20		8.30	8.30		32.21	32.21		73.5	73.2		4.96	4.93		2.84	2.77		3	
10/7/2015	17:39	Cloudy	Middle	2.5	26.30	26.30	26.35	8.24	8.24	8.25	32.57	32.57	32.58	66.9	68.2	67.4	4.48	4.57	4.52	2.64	2.56	2.57	5	4.00
	17:41		Middle	2.5	26.40	26.40		8.25	8.25		32.58	32.58		67.4	67.0		4.52	4.49		2.53	2.53		3	
13/7/2015	10:11	Fine	Middle	2.5	27.40	27.40	27.40	8.24	8.24	8.24	31.81	31.81	56.81	71.1	73.5	71.9	4.76	4.87	4.78	3.04	3.00	2.96	<2	2.00
	10:12		Middle	2.5	27.40	27.40		8.24	8.24		81.82	81.81		73.0	70.1		4.84	4.64		2.87	2.92		2	
15/7/2015	11:12	Fine	Middle	2.5	27.60	27.60	27.65	8.27	8.27	8.27	31.16	31.16	31.15	68.1	69.8	68.8	4.51	4.62	4.56	2.14	2.14	2.14	2	2.50
	11:14		Middle	2.5	27.70	27.70		8.27	8.27		31.14	31.14		69.2	68.2		4.58	4.51		2.14	2.14		3	
17/7/2015	14:48	Fine	Middle	2.5	27.70	27.70	27.75	8.27	8.27	8.27	30.67	30.67	30.66	71.7	71.4	71.4	4.76	4.73	4.74	3.65	3.69	3.67	3	3.50
	14:50		Middle	2.5	27.80	27.80		8.27	8.27		30.65	30.65		71.2	71.3		4.72	4.73		3.67	3.65		4	
20/7/2015	14:30	Cloudy	Middle	3.0	26.60	26.60	26.65	8.26	8.26	8.26	31.77	31.77	31.89	73.8	75.9	75.1	4.94	5.08	5.04	4.41	4.40	4.35	4	5.00
	14:32		Middle	3.0	26.70	26.70		8.26	8.26		32.01	32.01		75.7	75.1		5.07	5.05		4.31	4.29		6	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	8:08	Cloudy	Middle	2.5	27.10	27.10	27.10	8.14	8.14	8.15	24.94	24.94	24.94	74.3	74.5	74.0	5.14	5.15	5.12	3.14	3.14	3.09	3	3.00
	8:10		Middle	2.5	27.10	27.10		8.15	8.15		24.94	24.94		74.0	73.3		5.11	5.07		3.03	3.06		3	

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

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

Date	Time	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
29/6/2015	10:50	Fine	Middle	2.5	28.50	28.50	28.60	8.45	8.45	8.45	22.69	22.70	22.70	76.3	74.1	73.3	5.20	5.05	4.99	2.32	2.30	2.27	4	4.00
	10:52		Middle	2.5	28.70	28.70		8.45	8.45		22.70	22.70		72.8	70.0		4.95	4.77		2.23	2.21		4	
2/7/2015	14:20	Fine	Middle	2.5	28.70	28.70	28.80	8.44	8.44	8.44	26.90	26.90	26.90	92.3	92.1	91.5	6.17	6.15	6.11	2.51	2.64	2.64	4	4.50
	14:22		Middle	2.5	28.90	28.90		8.44	8.44		26.89	26.89		91.1	90.3		6.09	6.03		2.69	2.71		5	
4/7/2015	15:56	Fine	Middle	2.5	27.90	27.90	27.95	8.26	8.26	8.26	28.67	28.67	28.68	68.0	72.0	69.9	4.54	4.81	4.67	3.06	3.05	3.07	2	2.00
	15:58		Middle	2.5	28.00	28.00		8.25	8.25		28.69	28.69		70.1	69.4		4.68	4.64		3.03	3.12		2	
6/7/2015	15:47	Fine	Middle	3.5	26.80	26.80	26.85	8.28	8.28	8.28	30.03	30.03	30.04	79.7	79.8	79.6	5.38	5.39	5.37	2.49	2.48	2.45	2	2.00
	15:49		Middle	3.5	26.90	26.90		8.28	8.28		30.04	30.04		79.1	79.7		5.34	5.38		2.46	2.37		2	
8/7/2015	16:52	Fine	Middle	2.5	26.40	26.40	26.45	8.30	8.30	8.30	32.32	32.32	32.32	70.0	69.1	68.8	4.70	4.94	4.69	3.13	3.44	3.32	5	4.50
	16:54		Middle	2.5	26.50	26.50		8.30	8.30		32.32	32.32		68.4	67.5		4.59	4.53		3.39	3.32		4	
10/7/2015	17:43	Cloudy	Middle	2.5	26.40	26.40	26.40	8.25	8.25	8.26	32.67	32.67	32.67	67.2	65.7	66.2	4.50	4.41	4.44	3.14	3.20	3.20	4	4.00
	17:45		Middle	2.5	26.40	26.40		8.26	8.26		32.67	32.67		65.6	66.2		4.41	4.44		3.23	3.24		4	
13/7/2015	10:13	Fine	Middle	2.5	27.40	27.40	27.45	8.23	8.23	8.24	31.84	31.84	31.84	69.7	71.2	70.4	4.61	4.70	4.65	3.20	3.00	3.04	<2	<2
	10:15		Middle	2.5	27.50	27.50		8.24	8.24		31.83	31.83		70.4	70.1		4.66	4.64		2.98	2.98		<2	
15/7/2015	11:16	Fine	Middle	2.5	27.80	27.80	27.85	8.26	8.26	8.26	31.20	31.20	31.20	61.4	59.4	59.1	4.05	3.92	3.90	3.37	3.37	3.31	3	3.00
	11:18		Middle	2.5	27.90	27.90		8.26	8.26		31.19	31.19		58.2	57.4		3.84	3.79		3.34	3.14		3	
17/7/2015	14:52	Fine	Middle	2.5	27.70	27.70	27.65	8.27	8.27	8.27	30.11	30.11	30.40	73.4	73.8	73.4	4.88	4.91	4.88	3.80	3.86	3.91	3	3.00
	14:54		Middle	2.5	27.60	27.60		8.27	8.27		30.68	30.68		73.6	72.6		4.90	4.82		3.96	4.00		3	
20/7/2015	14:35	Cloudy	Middle	3.0	27.10	27.10	27.10	8.23	8.23	8.24	31.88	31.88	31.89	71.7	71.6	71.8	4.77	4.77	4.78	6.49	6.52	6.52	5	5.00
	14:37		Middle	3.0	27.10	27.10		8.24	8.24		31.89	31.89		72.2	71.7		4.81	4.78		6.52	6.53		5	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	8:12	Cloudy	Middle	2.5	27.80	27.80	27.70	8.15	8.15	8.15	25.03	25.03	25.04	73.9	74.3	74.0	5.07	5.09	5.07	3.37	3.35	3.33	3	3.00
	8:14		Middle	2.5	27.60	27.60		8.15	8.15		25.05	25.05		74.3	73.6		5.09	5.01		3.31	3.29		3	

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		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
29/6/2015	9:45	Fine	Middle	3.0	29.30	29.30	29.45	8.35	8.35	8.37	24.22	24.22	24.24	88.7	86.7	88.3	5.92	5.78	5.90	3.80	3.75	3.72	8	8.00
	9:47		Middle	3.0	29.60	29.60		8.39	8.39		24.26	24.26		89.2	88.7		5.96	5.92		3.64	3.68		8	
2/7/2015	10:04	Fine	Middle	3.0	27.80	27.80	27.95	8.27	8.27	8.28	28.57	28.57	28.57	78.3	78.5	77.7	5.23	5.24	5.19	4.40	4.40	4.40	4	4.00
	10:06		Middle	3.0	28.10	28.10		8.28	8.28		28.56	28.56		76.5	77.4		5.10	5.17		4.41	4.40		4	
4/7/2015	13:49	Fine	Middle	3.0	28.70	28.70	29.10	8.26	8.26	8.23	29.50	29.50	29.46	83.8	77.7	79.7	5.46	5.06	5.19	2.30	2.33	2.34	2	2.00
	13:50		Middle	3.0	29.50	29.50		8.19	8.19		29.42	29.42		79.1	78.1		5.15	5.08		2.35	2.36		2	
6/7/2015	14:05	Fine	Middle	4.0	27.40	27.40	27.45	8.25	8.25	8.25	31.26	31.26	31.26	75.8	78.1	76.8	5.04	5.18	5.10	2.89	2.87	2.88	2	2.00
	14:07		Middle	4.0	27.50	27.50		8.25	8.25		31.26	31.26		76.2	77.2		5.06	5.12		2.87	2.87		2	
8/7/2015	17:15	Fine	Middle	3.5	26.30	26.30	26.35	8.29	8.29	8.30	32.49	32.49	32.48	66.4	67.3.	67.6	4.46	4.55	4.54	2.64	2.63	2.61	4	4.00
	17:17		Middle	3.5	26.40	26.40		8.30	8.30		32.46	32.46		68.2	68.1		4.58	4.57		2.58	2.57		4	
10/7/2015	18:40	Cloudy	Middle	3.0	26.38	26.38	26.43	7.63	7.63	7.62	32.60	32.61	32.61	96.7	96.5	96.3	6.42	6.41	6.39	2.43	2.38	2.33	4	4.00
	18:41		Middle	3.0	26.47	26.47		7.61	7.61		32.61	32.60		96.0	95.8		6.37	6.36		2.29	2.22		4	
13/7/2015	10:38	Fine	Middle	3.5	27.10	27.10	27.15	8.21	8.21	8.16	32.16	32.16	32.13	62.5	62.5	62.1	4.15	4.15	4.12	3.71	3.81	3.74	2	2.00
	10:40		Middle	3.5	27.20	27.20		8.11	8.11		32.10	32.10		62.0	61.2		4.12	4.06		3.79	3.65		2	
15/7/2015	11:42	Fine	Middle	3.5	27.60	27.60	27.70	8.24	8.24	8.24	31.70	31.70	31.68	67.8	68.5	67.8	4.47	4.52	4.47	3.46	3.49	3.38	4	3.00
	11:44		Middle	3.5	27.80	27.80		8.24	8.24		31.66	31.66		67.6	67.2		4.46	4.43		3.29	3.26		2	
17/7/2015	10:37	Fine	Middle	3.5	27.30	27.30	27.35	8.21	8.21	8.22	31.83	31.83	31.83	72.9	71.4	73.6	4.83	4.78	4.89	4.13	4.07	4.07	5	4.00
	10:39		Middle	3.5	27.40	27.40		8.23	8.23		31.83	31.83		74.9	75.2		4.96	4.98		4.05	4.04		3	
20/7/2015	14:55	Cloudy	Middle	3.0	26.80	26.80	26.80	8.27	8.27	8.27	31.72	31.72	31.72	72.2	72.8	72.3	4.84	4.87	4.84	3.50	3.47	3.48	4	4.00
	14:57		Middle	3.0	26.80	26.80		8.27	8.27		31.72	31.72		72.1	72.1		4.83	4.83		3.47	3.49		4	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	8:48	Cloudy	Middle	3.5	27.10	27.10	27.10	8.14	8.14	8.14	25.10	25.10	25.11	76.1	75.4	74.7	5.25	5.20	5.15	2.74	2.74	2.74	3	3.00
	8:50		Middle	3.5	27.10	27.10		8.14	8.14		25.11	25.11		74.3	73.0		5.13	5.03		2.74	2.74		3	

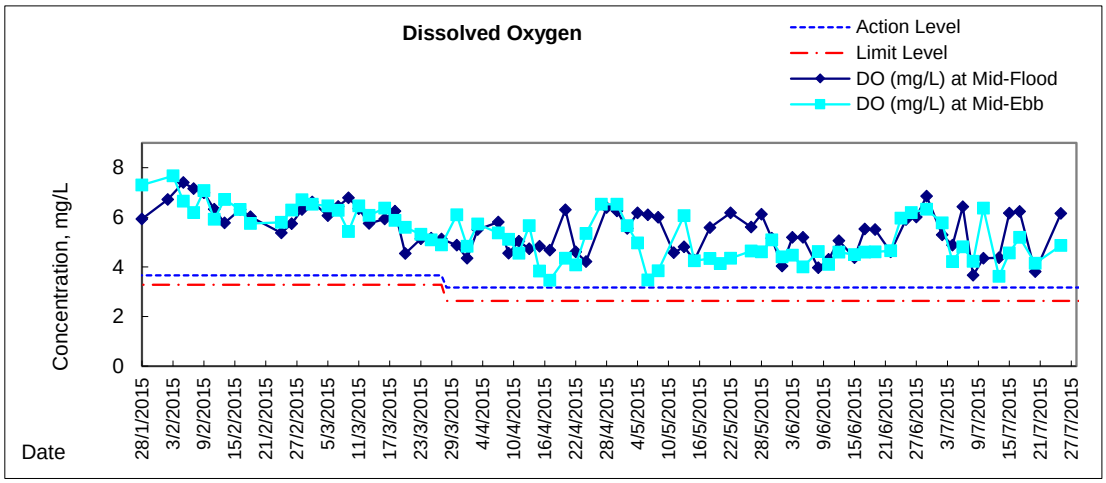
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

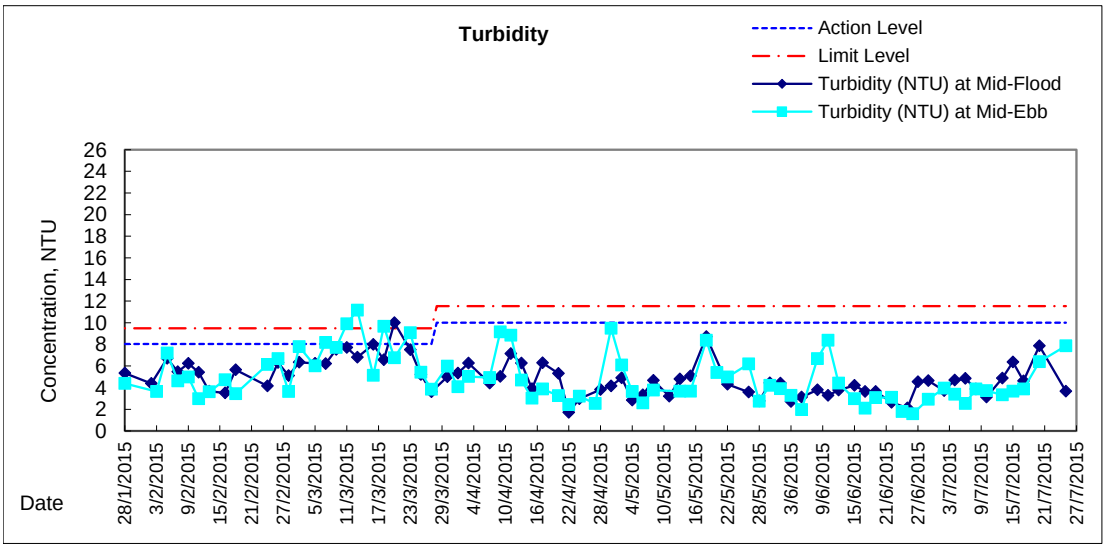
Water Monitoring Result at WSD19 - Sheung Wan
Mid-Ebb Tide

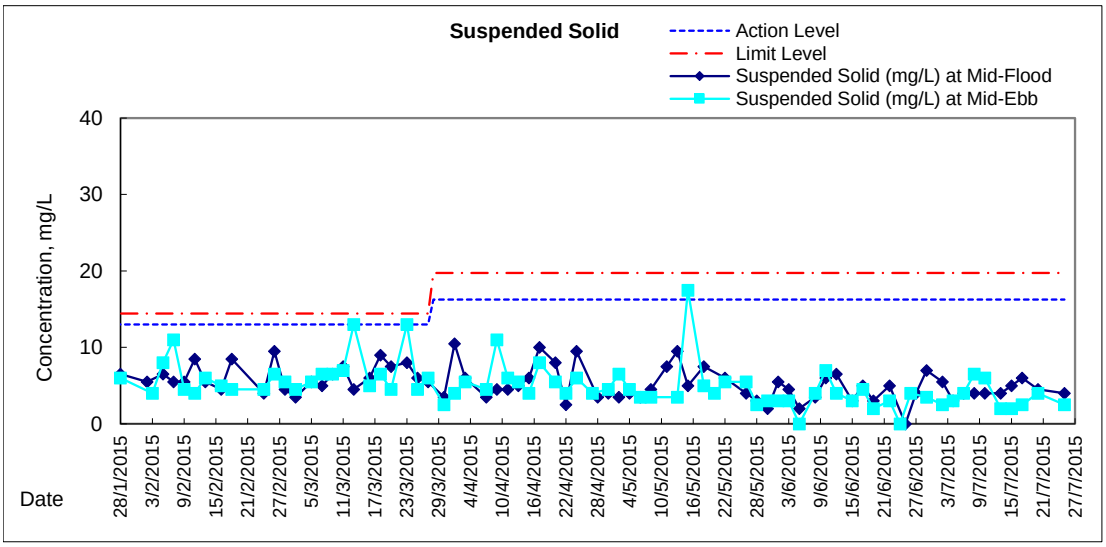
Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity			Suspended Solids	
			m		°C			-			ppt			%			mg/L			NTU			mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
29/6/2015	10:50	Fine	Middle	3.0	29.30	29.30	29.40	8.43	8.43	8.46	21.67	21.67	21.67	93.9	92.0	93.2	6.36	6.23	6.32	3.00	2.90	2.92	3	3.50
	10:52		Middle	3.0	29.50	29.50		8.49	8.49		21.67	21.67		92.7	94.3		6.27	6.43		2.89	2.88		4	
2/7/2015	11:06	Fine	Middle	3.5	29.00	29.00	29.15	8.34	8.34	8.37	26.00	26.00	26.00	87.0	87.5	86.9	5.78	5.81	5.77	3.94	3.94	3.96	2	2.50
	11:08		Middle	3.5	29.30	29.30		8.40	8.40		26.00	26.00		87.1	86.1		5.78	5.72		3.96	3.99		3	
4/7/2015	14:39	Fine	Middle	3.5	28.70	28.70	28.70	8.09	8.09	8.12	28.85	28.85	28.66	63.9	64.1	63.7	4.23	4.24	4.21	3.30	3.33	3.38	3	3.00
	14:41		Middle	3.5	28.70	28.70		8.14	8.14		28.46	28.46		63.6	63.2		4.21	4.17		3.43	3.44		3	
6/7/2015	13:25	Fine	Middle	3.5	27.20	27.20	27.55	8.27	8.27	8.22	30.67	30.67	30.69	74.3	71.7	72.5	4.94	4.75	4.80	2.54	2.52	2.53	4	4.00
	13:27		Middle	3.5	27.90	27.90		8.17	8.17		30.71	30.71		73.1	70.7		4.84	4.68		2.52	2.52		4	
8/7/2015	16:05	Fine	Middle	3.5	27.50	27.50	27.50	8.24	8.24	8.24	31.97	31.97	32.00	64.1	63.5	64.0	4.23	4.19	4.23	3.62	3.85	3.89	6	6.50
	16:07		Middle	3.5	27.50	27.50		8.23	8.23		32.02	32.02		63.9	64.6		4.22	4.26		4.20	3.87		7	
10/7/2015	19:37	Cloudy	Middle	3.5	26.11	26.11	26.14	7.55	7.55	7.56	31.80	31.82	31.80	94.6	94.5	94.3	6.39	6.38	6.37	3.88	3.68	3.72	6	6.00
	19:38		Middle	3.5	26.17	26.17		7.56	7.56		31.80	31.79		94.2	94.0		6.37	6.35		3.63	3.70		6	
13/7/2015	9:27	Fine	Middle	3.5	27.70	27.70	27.85	8.24	8.24	8.23	31.91	31.91	31.94	53.6	55.7	54.9	3.53	3.67	3.62	3.50	3.49	3.34	2	2.00
	9:29		Middle	3.5	28.00	28.00		8.21	8.21		31.96	31.96		56.2	54.2		3.69	3.57		3.20	3.17		2	
15/7/2015	10:27	Fine	Middle	3.5	28.40	28.40	28.55	8.26	8.26	8.26	30.97	30.97	30.96	69.3	70.7	69.9	4.53	4.62	4.57	3.64	3.64	3.67	2	2.00
	10:29		Middle	3.5	28.70	28.70		8.26	8.26		30.94	30.94		69.7	69.8		4.56	4.55		3.68	3.70		2	
17/7/2015	11:50	Fine	Middle	3.5	27.30	27.30	27.35	8.26	8.26	8.26	30.47	30.47	30.48	78.4	77.3	77.8	5.23	5.16	5.19	4.06	4.00	3.88	2	2.50
	11:52		Middle	3.5	27.40	27.40		8.25	8.25		30.48	30.48		77.3	78.2		5.16	5.22		3.74	3.71		3	
20/7/2015	13:25	Cloudy	Middle	3.5	26.50	26.50	26.50	8.15	8.15	8.17	31.68	31.68	31.68	63.5	61.7	61.7	4.27	4.15	4.15	6.17	6.29	6.39	4	4.00
	13:27		Middle	3.5	26.50	26.50		8.18	8.18		31.68	31.68		60.3	61.1		4.05	4.11		6.42	6.68		4	
22/7/2015	-	Amber Rainstorm	Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
	-		Middle	-	-	-		-	-		-	-		-	-		-	-		-	-		-	
25/7/2015	6:45	Cloudy	Middle	3.5	27.40	27.40	27.45	7.59	7.59	7.68	24.77	24.77	24.76	71.2	71.3	70.7	4.90	4.90	4.86	7.98	8.00	7.87	2	2.50
	6:47		Middle	3.5	27.50	27.50		7.76	7.76		24.74	24.74		70.4	70.0		4.84	4.81		7.90	7.61		3	

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

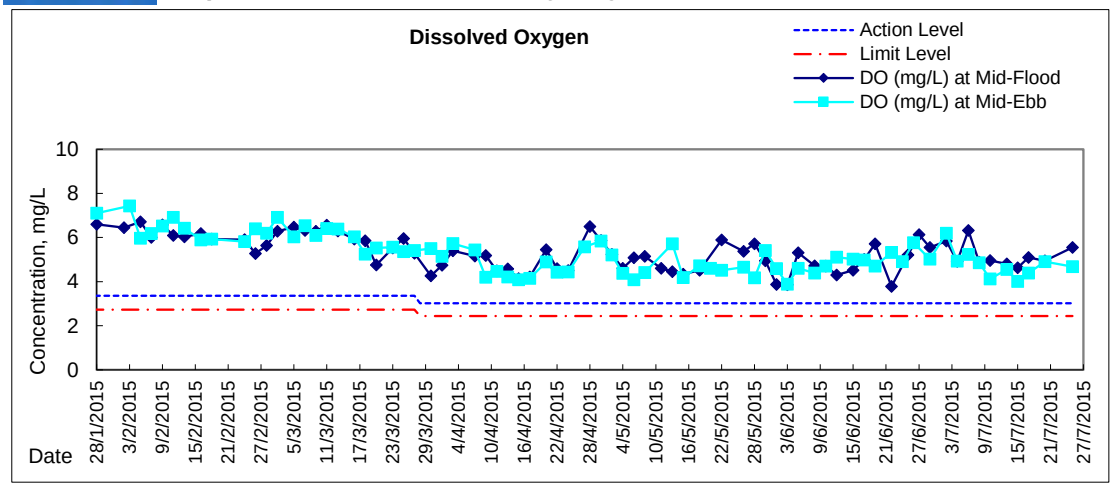
Graphic Presentation of Water Quality Result of WSD19 - Sheung Wan

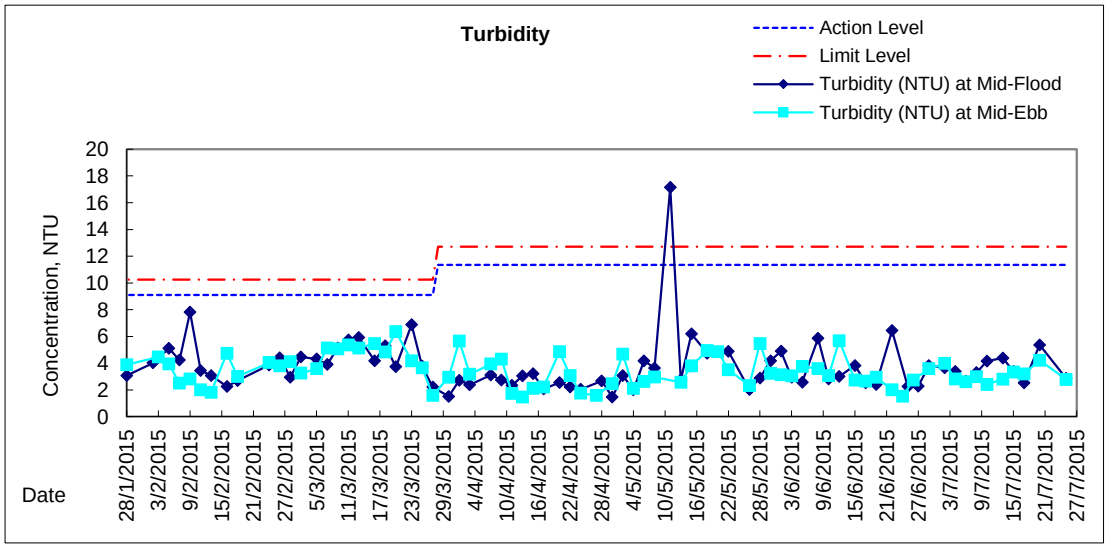


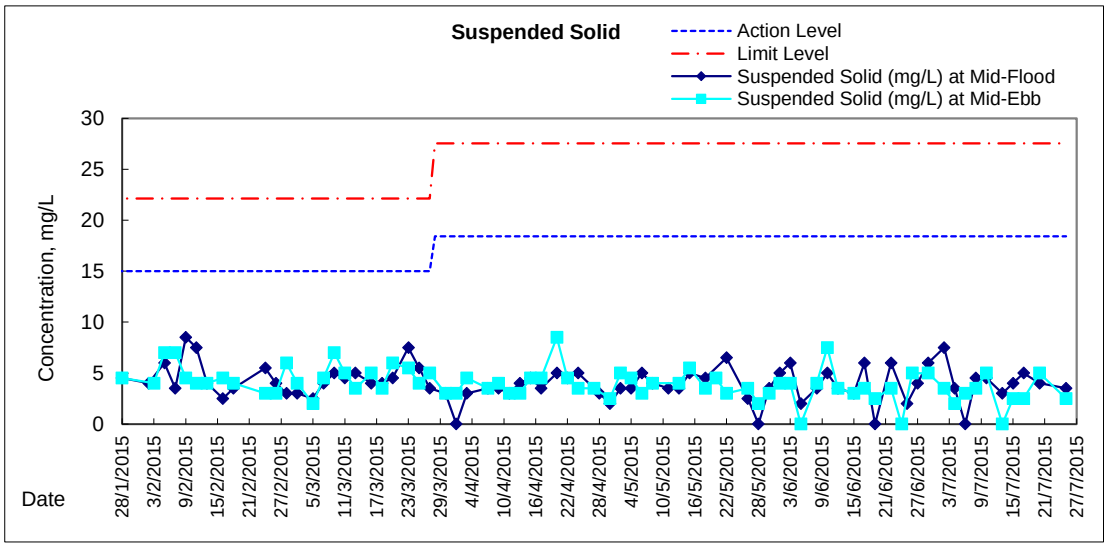




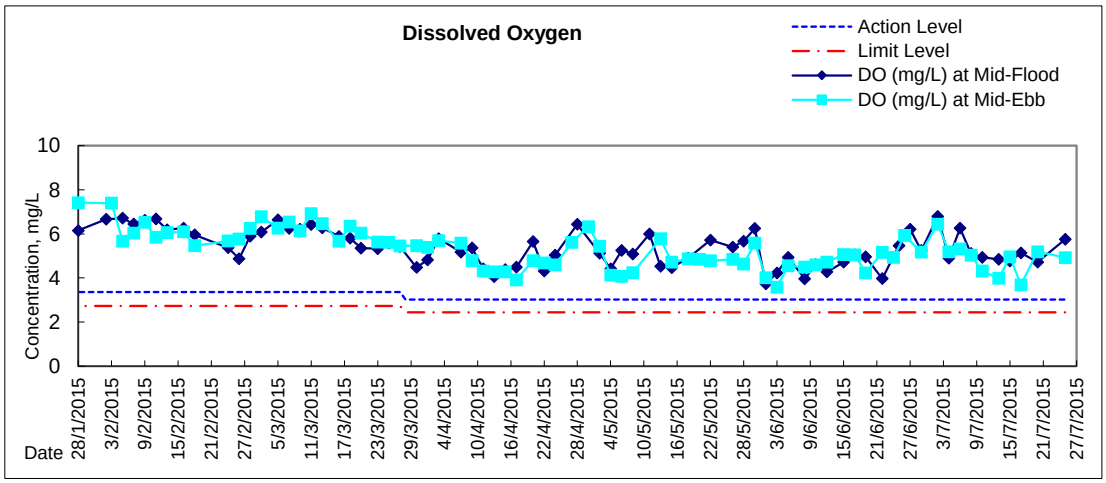
Graphic Presentation of Water Quality Result of C1 - HKCEC

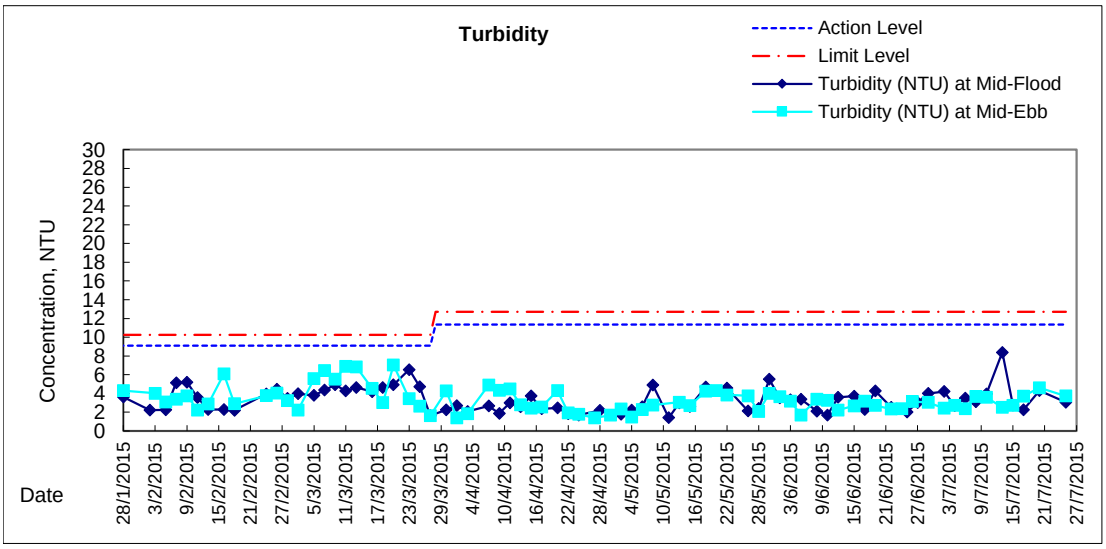


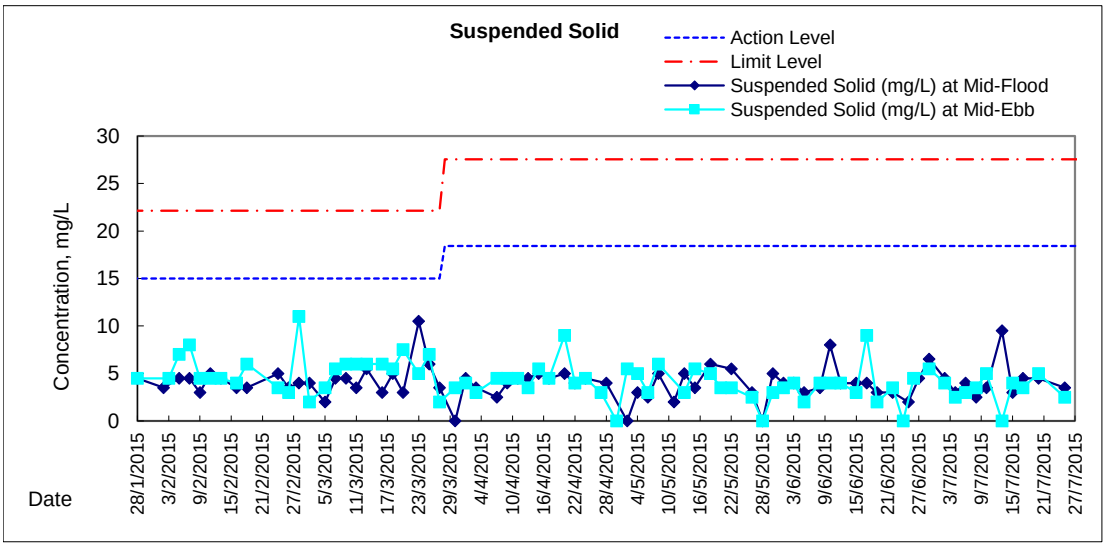




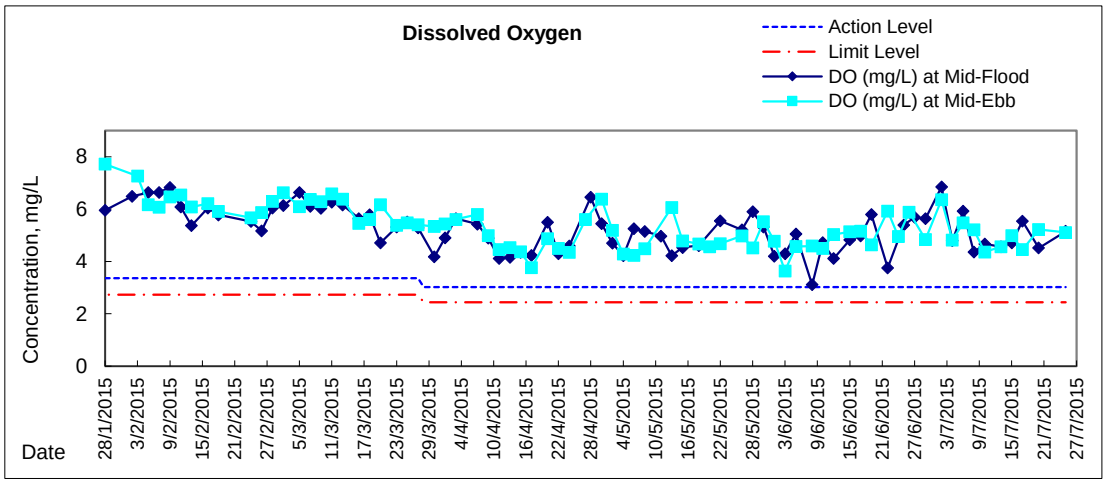
Graphic Presentation of Water Quality Result of P1 - HKCEC Phase I

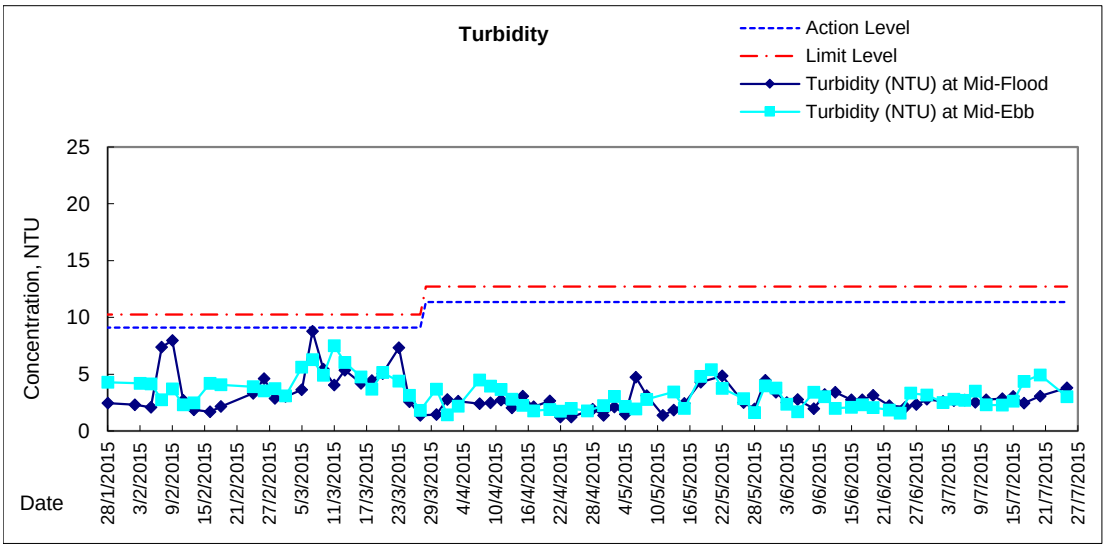


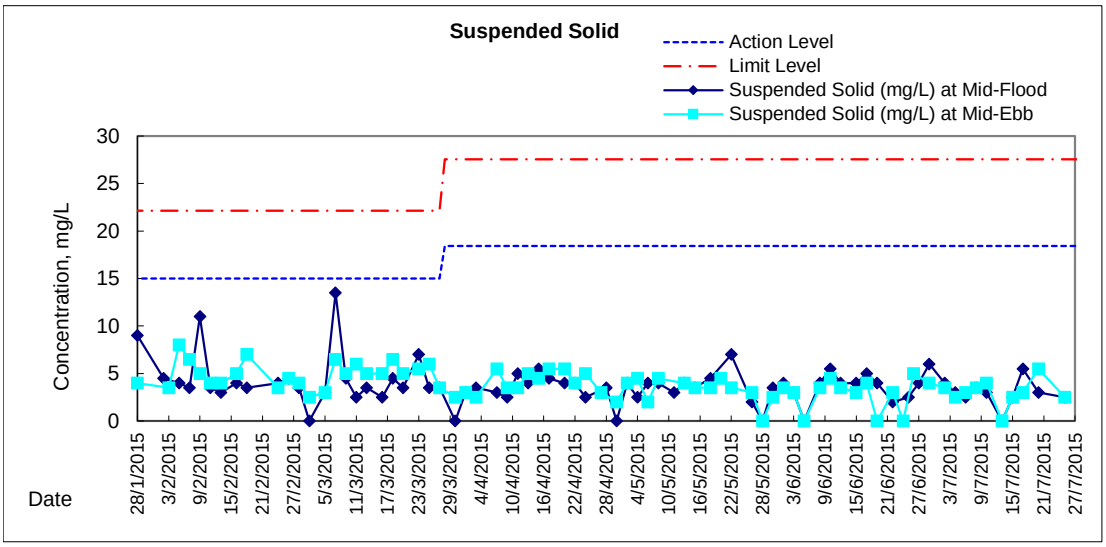




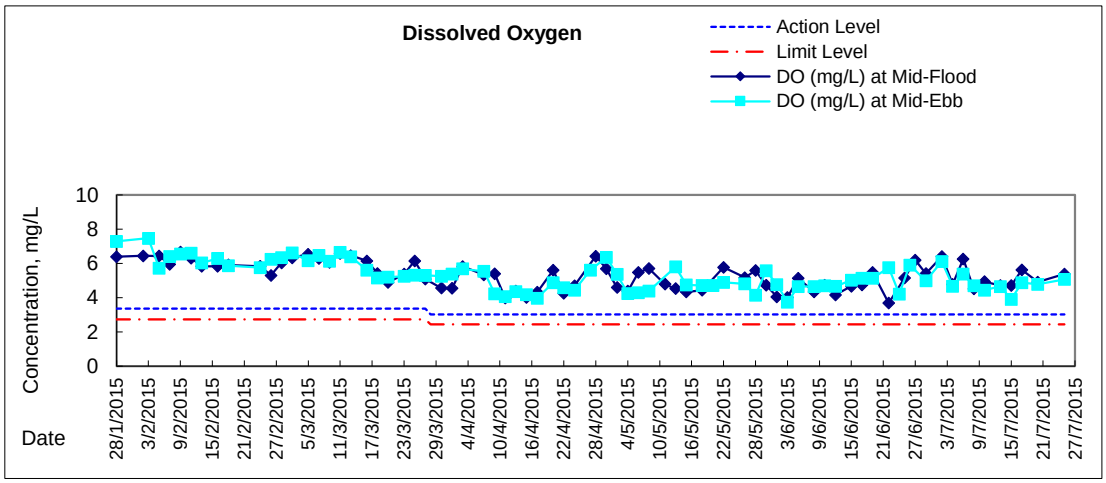
Graphic Presentation of Water Quality Result of P3 - APA

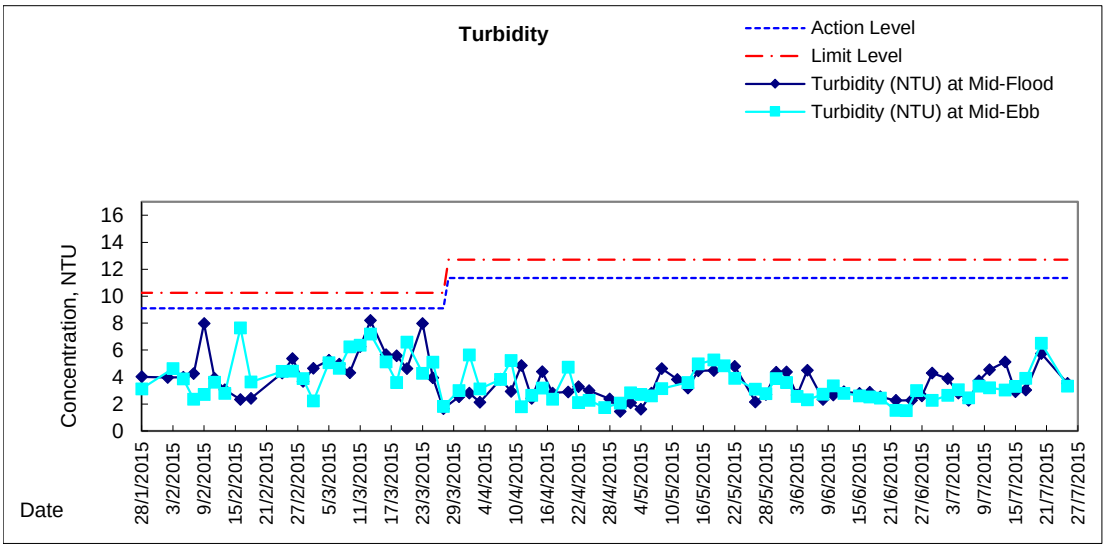


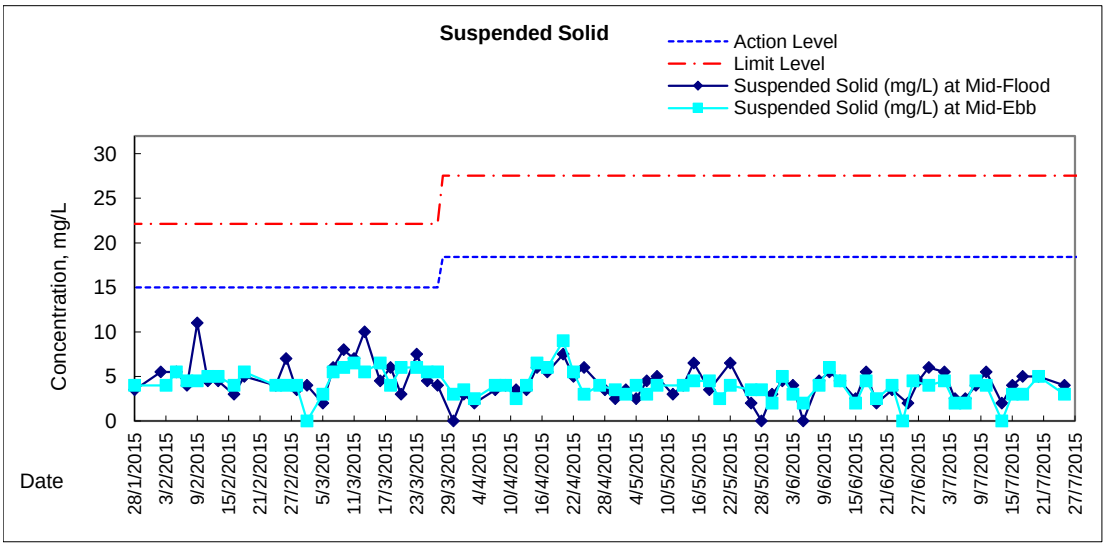




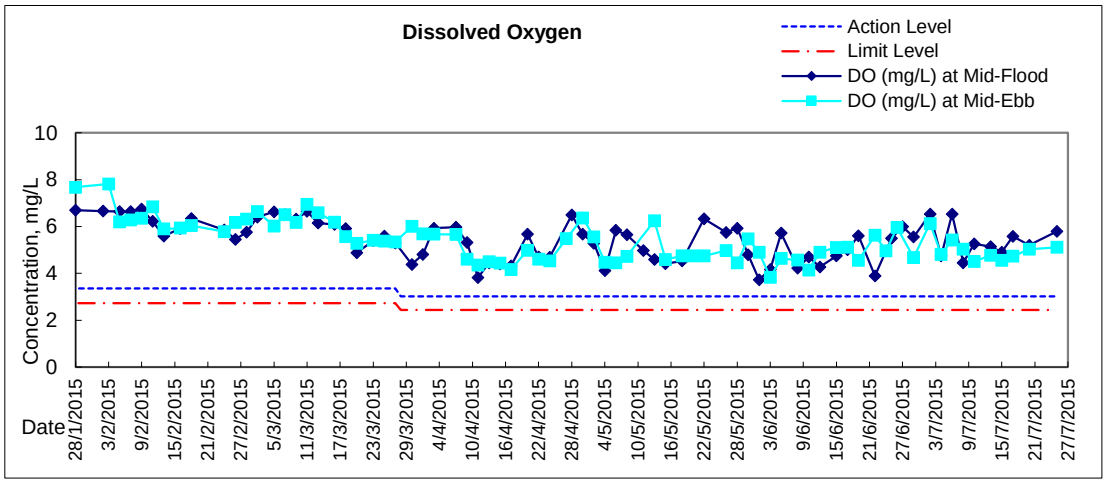
Graphic Presentation of Water Quality Result of P5 - WCT / RT / IT

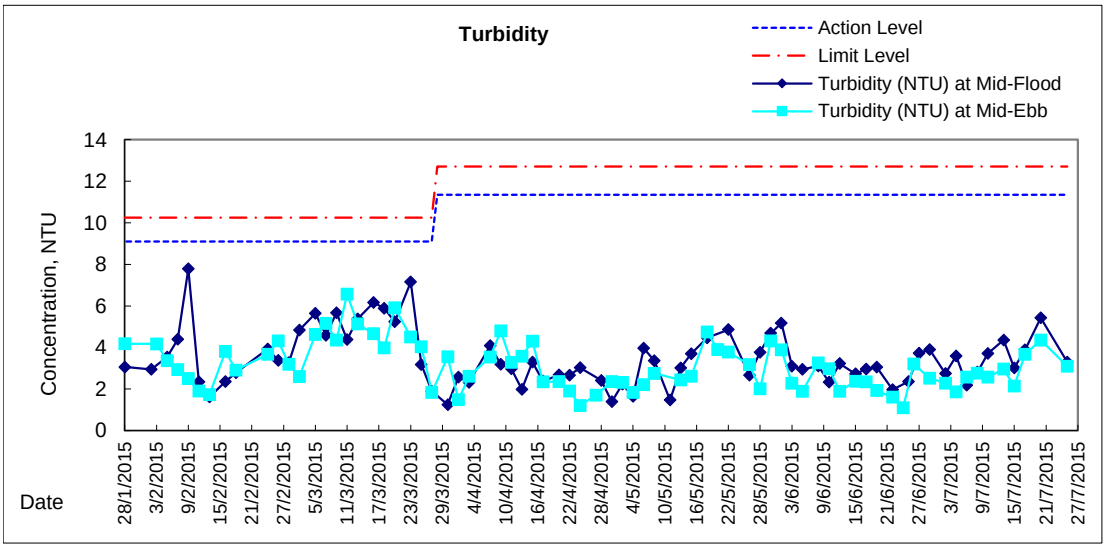


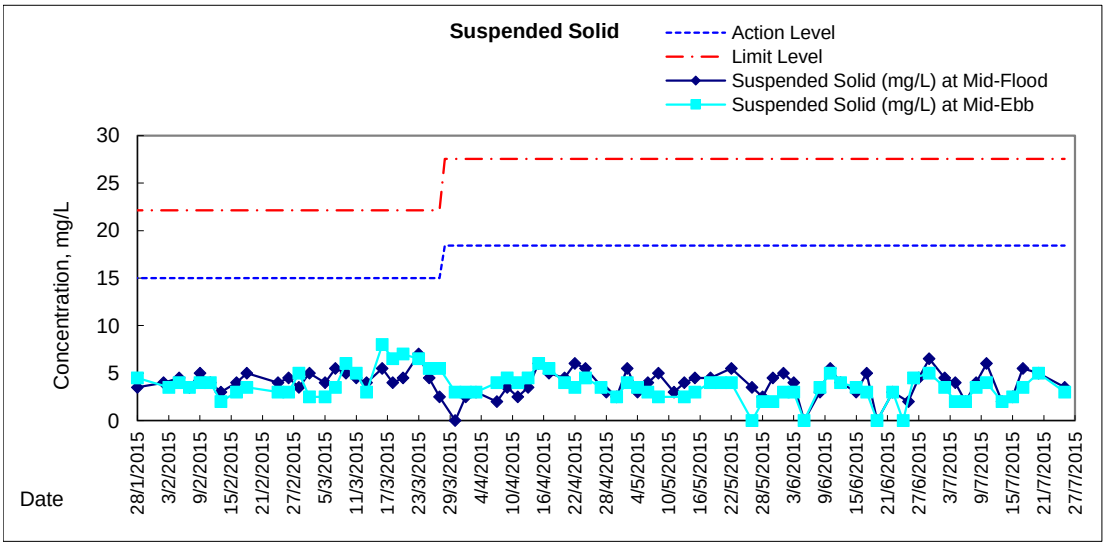




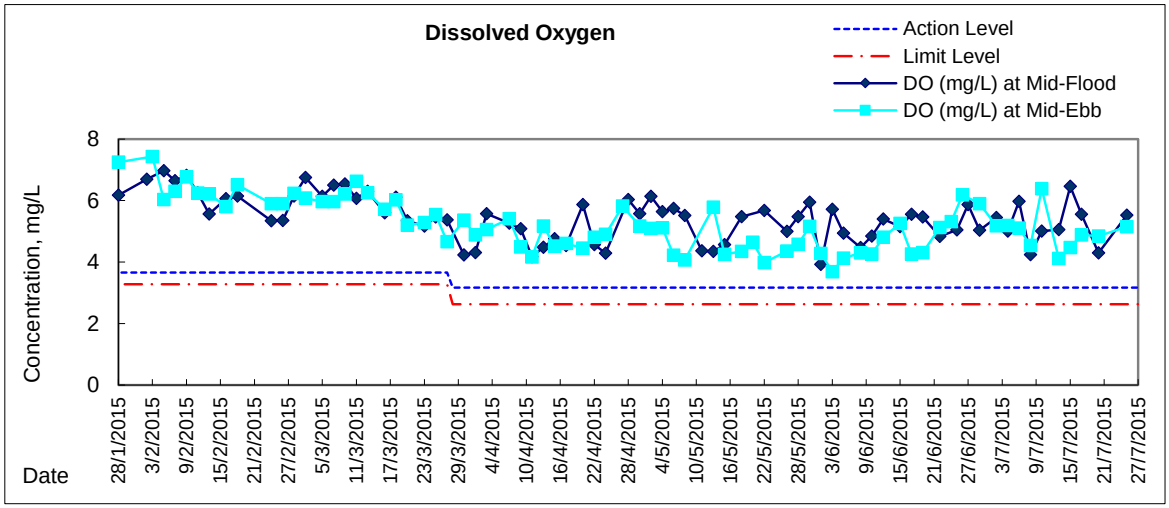
Graphic Presentation of Water Quality Result of P4 - SOC

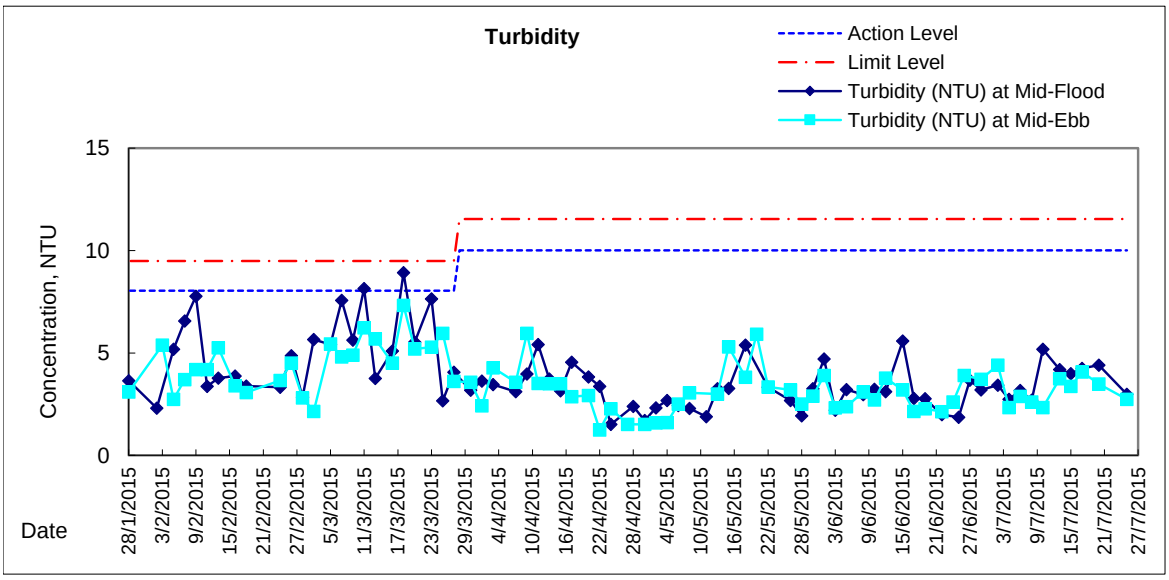


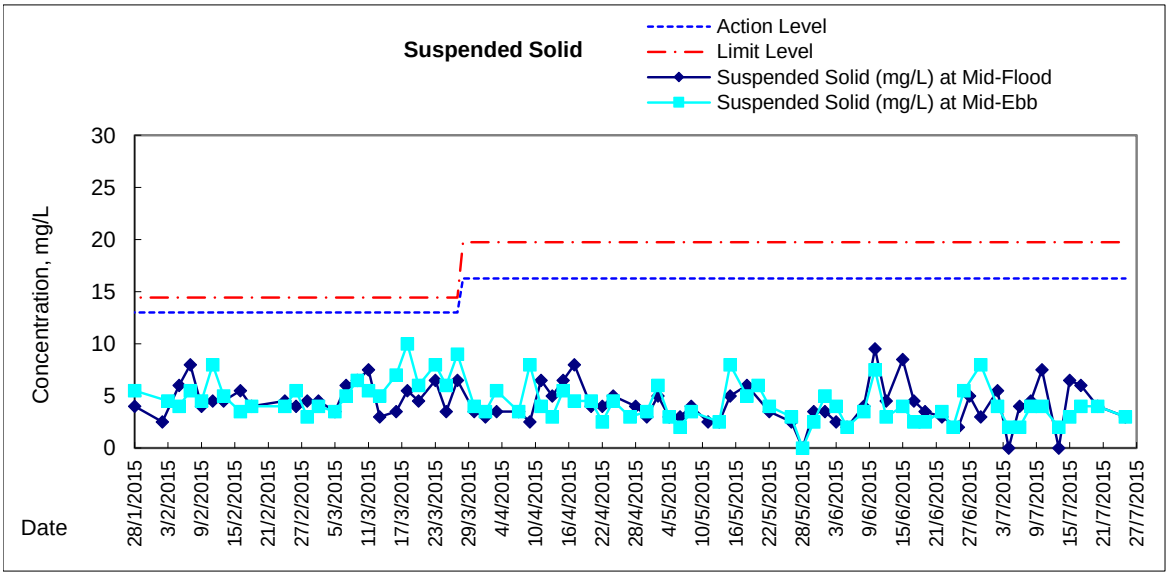




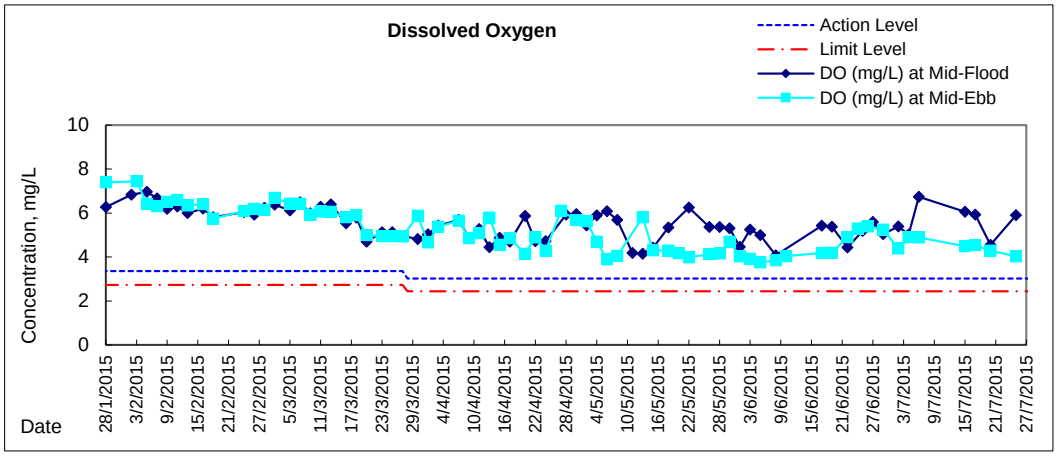
Graphic Presentation of Water Quality Result of RW21-P789 - GEC/CRC/SHK

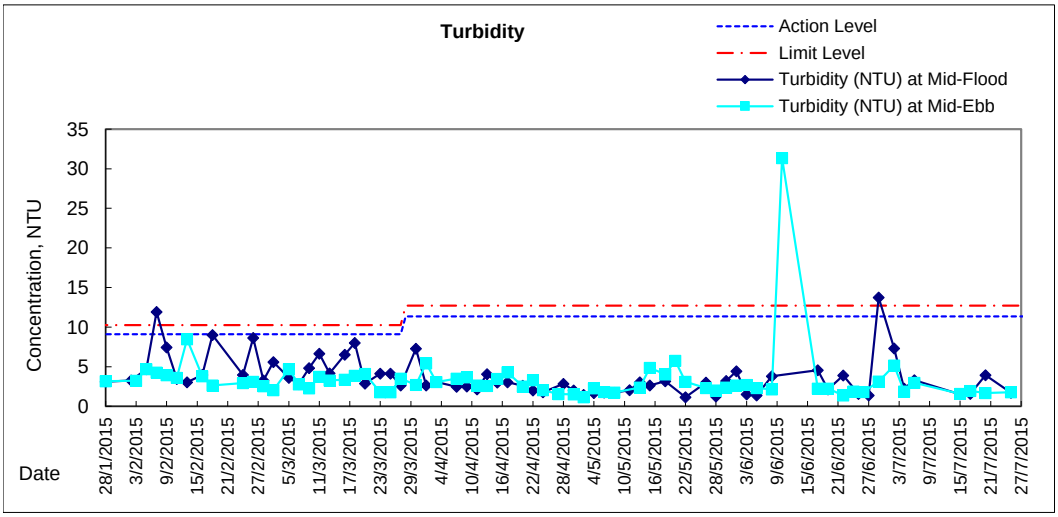


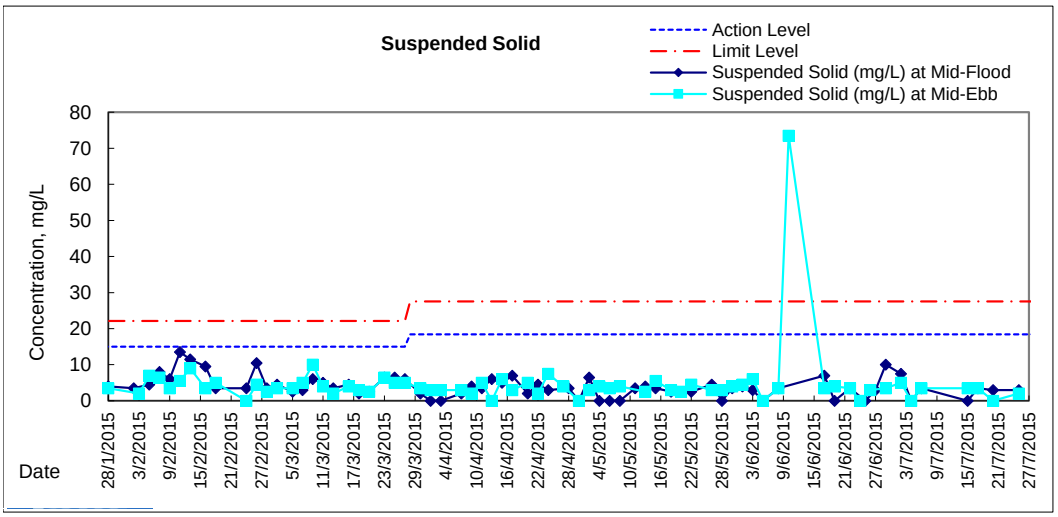




Graphic Presentation of Water Quality Result of C7 - Windsor House







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
29/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:36		Middle	1.5	28.90	28.90	28.9	8.35	8.35	8.4	22.34	22.34	22.3	79.9	82.1	81.0	5.44	5.58	5.51
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:52		Middle	1.0	28.10	28.10	28.1	7.84	7.84	7.8	24.27	24.27	24.3	76.8	77.1	77.0	5.22	5.24	5.23
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:10		Middle	1.5	27.40	27.40	27.4	8.14	8.14	8.1	28.31	28.31	28.3	65.9	67.8	66.9	4.45	4.58	4.52
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22:01		Middle	1.5	26.78	26.78	26.8	7.50	7.50	7.5	28.39	28.40	28.4	91.5	91.3	91.4	6.24	6.22	6.23
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:28		Middle	1.5	25.90	25.90	25.9	8.21	8.21	8.2	30.94	30.94	30.9	66.0	66.3	66.2	4.50	4.52	4.51
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:45		Middle	1.5	26.60	26.60	26.6	8.17	8.17	8.2	31.97	31.97	32.0	78.0	77.1	77.6	5.21	5.14	5.18
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:40		Middle	1.5	28.90	28.90	28.9	8.18	8.18	8.2	31.06	31.06	31.1	65.3	65.8	65.6	4.22	4.25	4.24
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:40		Middle	1.0	27.89	27.88	27.9	7.62	7.62	7.6	29.49	29.49	29.5	83.8	82.5	83.2	5.58	5.49	5.54
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:45		Middle	1.0	28.07	27.98	28.0	7.54	7.54	7.5	28.65	28.66	28.7	89.0	88.5	88.8	5.95	5.92	5.94
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:15		Middle	1.5	26.40	26.40	26.4	8.00	8.00	8.0	31.14	31.14	31.1	71.0	70.8	70.9	4.80	4.79	4.80
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2015	-	Amber Rainstorm	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:03		Middle	1.0	27.72	27.71	27.7	7.92	7.92	7.9	23.83	23.75	23.8	87.5	86.5	87.0	5.99	5.96	5.98
	-		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	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
29/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:25		Middle	1.5	28.40	28.40	28.4	8.43	8.43	8.4	21.60	21.60	21.6	77.5	77.1	77.3	5.33	5.31	5.32
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:29		Middle	1.0	27.90	27.90	27.9	8.21	8.21	8.2	13.77	13.77	13.8	61.0	62.3	61.7	4.45	4.51	4.48
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20:05		Middle	1.0	27.70	27.60	27.7	8.20	8.18	8.2	16.95	16.94	16.9	41.7	42.0	41.9	2.97	2.99	2.98
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0:03		Middle	1.5	26.72	26.72	26.7	7.48	7.48	7.5	25.01	25.01	25.0	82.6	80.5	81.6	5.75	5.60	5.68
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:14		Middle	1.5	25.40	25.40	25.4	8.24	8.24	8.2	31.11	31.11	31.1	60.0	59.4	59.7	4.12	4.07	4.10
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:30		Middle	1.5	26.10	26.10	26.1	8.24	8.24	8.2	32.04	32.04	32.0	60.9	61.8	61.4	4.10	4.17	4.14
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:00		Middle	1.5	27.30	27.30	27.3	8.23	8.23	8.2	30.56	30.56	30.6	58.3	57.8	58.1	3.89	3.86	3.88
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:15		Middle	1.0	28.12	28.12	28.1	7.60	7.58	7.6	14.65	14.64	14.6	65.1	64.1	64.6	4.66	4.61	4.64
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19:30		Middle	1.0	27.53	27.53	27.5	7.50	7.50	7.5	22.90	22.90	22.9	77.6	77.2	77.4	5.39	5.37	5.38
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:36		Middle	1.5	27.10	27.10	27.1	8.41	8.41	8.4	13.85	13.85	13.9	15.6	15.8	15.7	1.15	1.15	1.15
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2015	-	Amber Rainstorm	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2:19		Middle	1.5	27.43	27.40	27.4	7.66	7.66	7.7	18.39	18.39	18.4	80.1	80.3	80.2	5.72	5.74	5.73
	-		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
29/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2015	-	Amber Rainstorm	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:10		Middle	2	28.70	28.70	28.7	8.31	8.31	8.3	23.63	23.63	23.6	76.6	76.9	76.8	5.18	5.20	5.19
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:25		Middle	2	28.20	28.20	28.2	8.22	8.22	8.2	25.79	25.79	25.8	74.8	74.7	74.8	5.04	5.08	5.06
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:09		Middle	2	28.00	28.00	28.0	7.94	7.94	7.9	27.21	27.21	27.2	57.5	55.1	56.3	3.86	3.69	3.78
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:40		Middle	2	26.90	26.90	26.9	8.13	8.13	8.1	30.31	30.31	30.3	71.8	72.0	71.9	4.83	4.83	4.83
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:35		Middle	2	26.10	26.10	26.1	8.22	8.22	8.2	31.34	31.34	31.3	63.7	65.9	64.8	4.32	4.47	4.40
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:15		Middle	2	26.78	26.78	26.8	7.62	7.62	7.6	31.51	31.51	31.5	94.5	95.0	94.8	6.27	6.32	6.30
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:00		Middle	2	27.40	27.40	27.4	8.15	8.15	8.2	31.26	31.26	31.3	52.1	51.8	52.0	3.46	3.44	3.45
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:05		Middle	2	28.20	28.20	28.2	8.12	8.12	8.1	28.91	28.91	28.9	58.8	58.6	58.7	3.89	3.84	3.87
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:55		Middle	2	27.20	27.20	27.2	8.19	8.19	8.2	30.91	30.91	30.9	74.7	73.7	74.2	4.99	4.92	4.96
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:45		Middle	2	26.70	26.70	26.7	8.16	8.16	8.2	28.42	28.42	28.4	61.1	59.4	60.3	4.18	4.08	4.13
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2015	-	Amber Rainstorm	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:10		Middle	2	27.10	27.10	27.1	8.02	8.02	8.0	24.13	24.13	24.1	63.6	61.6	62.6	4.42	4.29	4.36
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		
			m		°C			-			ppt			%			mg/L		
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
29/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:55		Middle	1.5	28.70	28.70	28.7	8.37	8.37	8.4	23.09	23.09	23.1	89.3	90.0	89.7	6.06	6.10	6.08
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:10		Middle	1.5	27.00	27.00	27.0	8.24	8.24	8.2	25.99	25.99	26.0	64.3	65.7	65.0	3.73	3.82	3.78
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:55		Middle	1.5	27.50	27.50	27.5	8.26	8.26	8.3	14.60	14.60	14.6	25.1	24.9	25.0	1.82	1.80	1.81
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:25		Middle	1.5	27.10	27.10	27.1	8.23	8.23	8.2	26.29	26.29	26.3	72.6	73.0	72.8	4.92	4.99	4.96
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:23		Middle	1.5	25.60	25.60	25.6	8.26	8.26	8.3	30.92	30.92	30.9	54.6	53.1	53.9	3.74	3.63	3.69
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:50		Middle	1.5	26.36	26.36	26.4	7.62	7.62	7.6	24.23	24.23	24.2	81.1	82.4	81.8	5.71	5.79	5.75
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:45		Middle	1.5	27.00	27.00	27.0	8.19	8.19	8.2	30.68	30.68	30.7	49.9	50.3	50.1	3.35	3.37	3.36
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:52		Middle	1.5	27.50	27.50	27.5	8.20	8.20	8.2	27.66	27.65	27.7	38.9	39.6	39.3	2.63	2.67	2.65
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:45		Middle	1.5	27.10	27.10	27.1	8.18	8.18	8.2	30.75	30.75	30.8	61.1	61.1	61.1	4.09	4.09	4.09
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:05		Middle	1.5	26.70	26.70	26.7	8.36	8.36	8.4	24.67	24.67	24.7	50.3	50.4	50.4	3.51	3.52	3.52
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2015	-	Amber Rainstorm	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:58		Middle	1.5	26.80	26.80	26.8	8.24	8.24	8.2	13.97	13.97	14.0	50.7	49.7	50.2	3.75	3.68	3.72
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

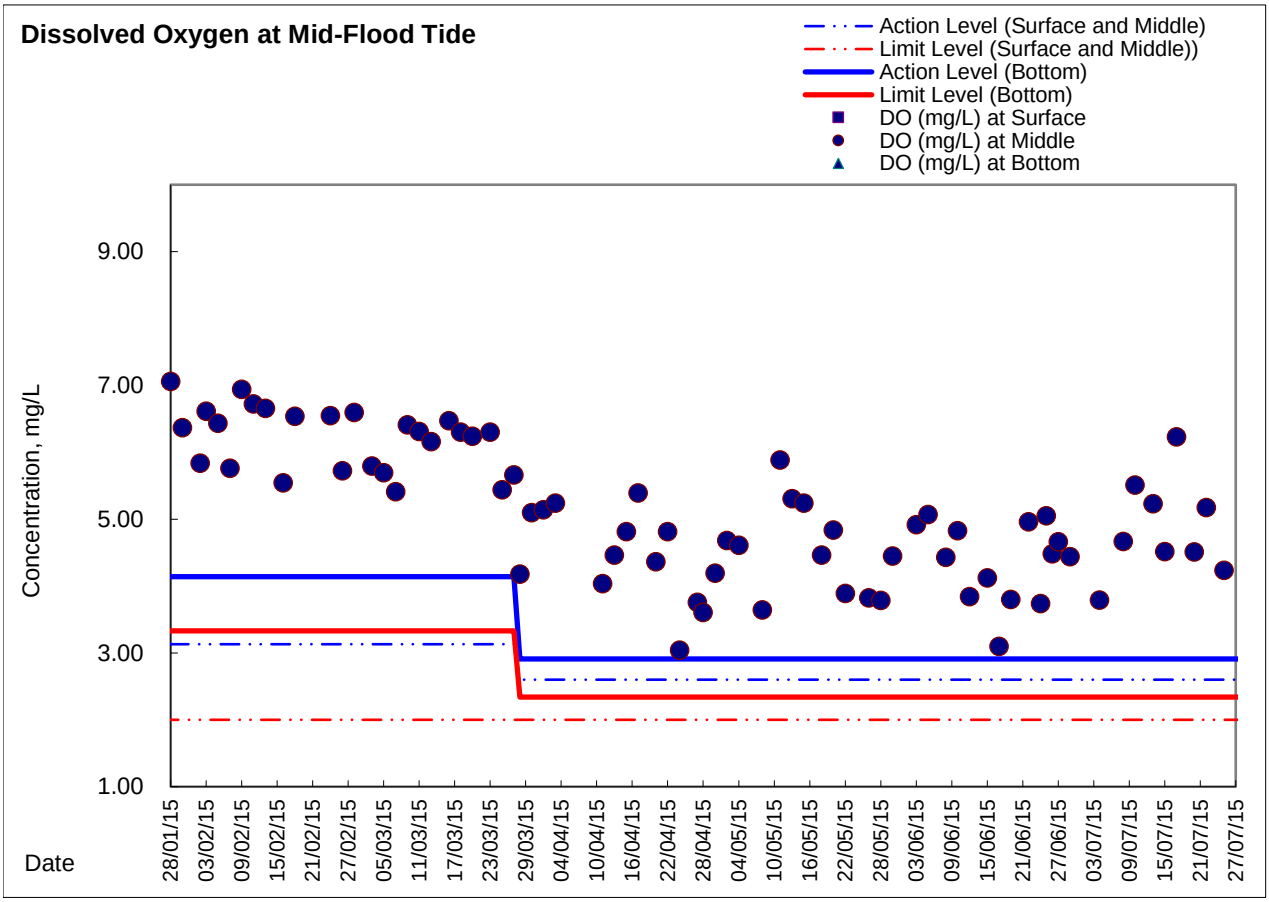
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

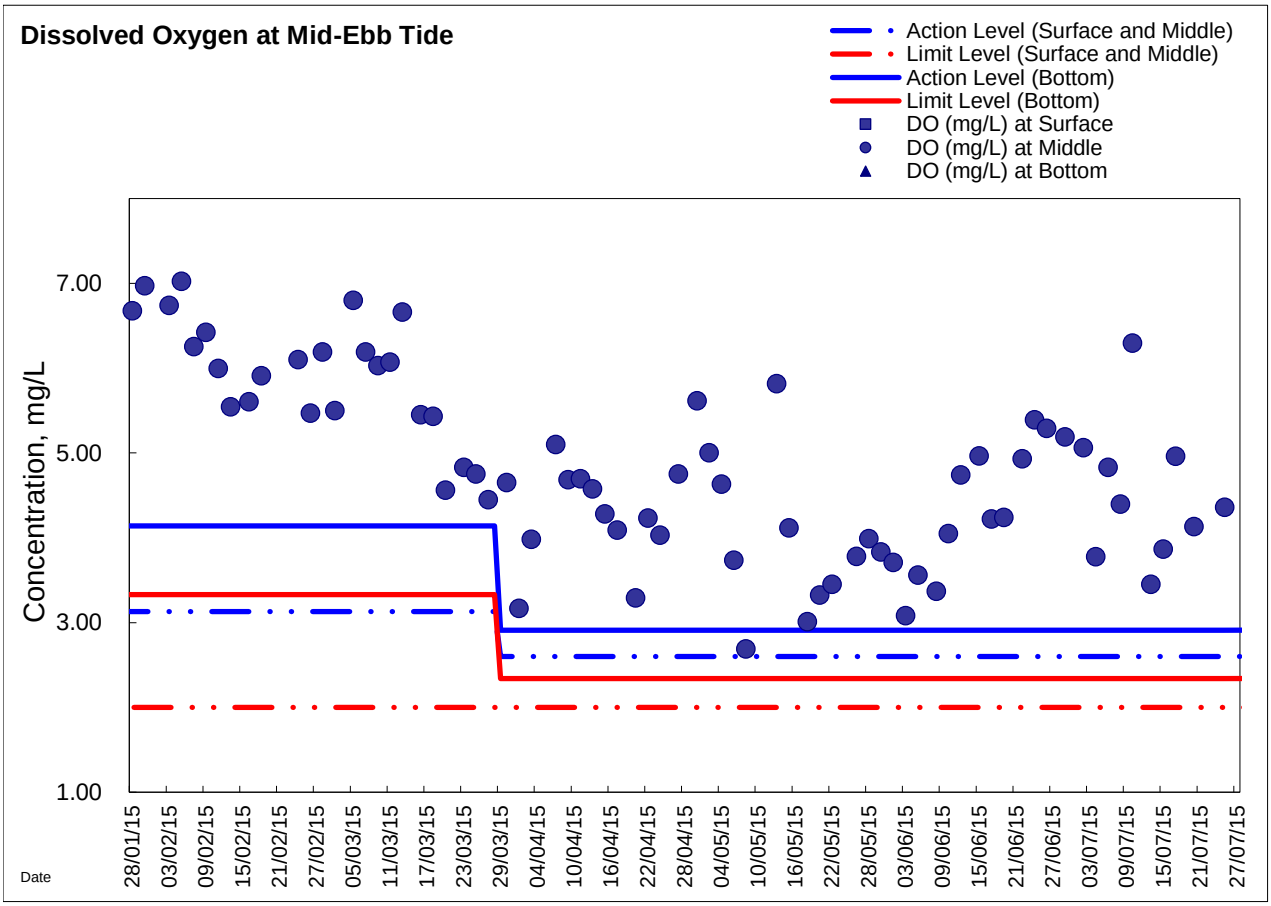
Water Monitoring Result at Ex-WPCWA SE - South-eastern corners of ex-Public Cargo Works Area
Mid-Ebb Tide

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
29/6/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17/7/2015	-	Fine	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/7/2015	-	Amber Rainstorm	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/7/2015	-	Cloudy	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-		Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

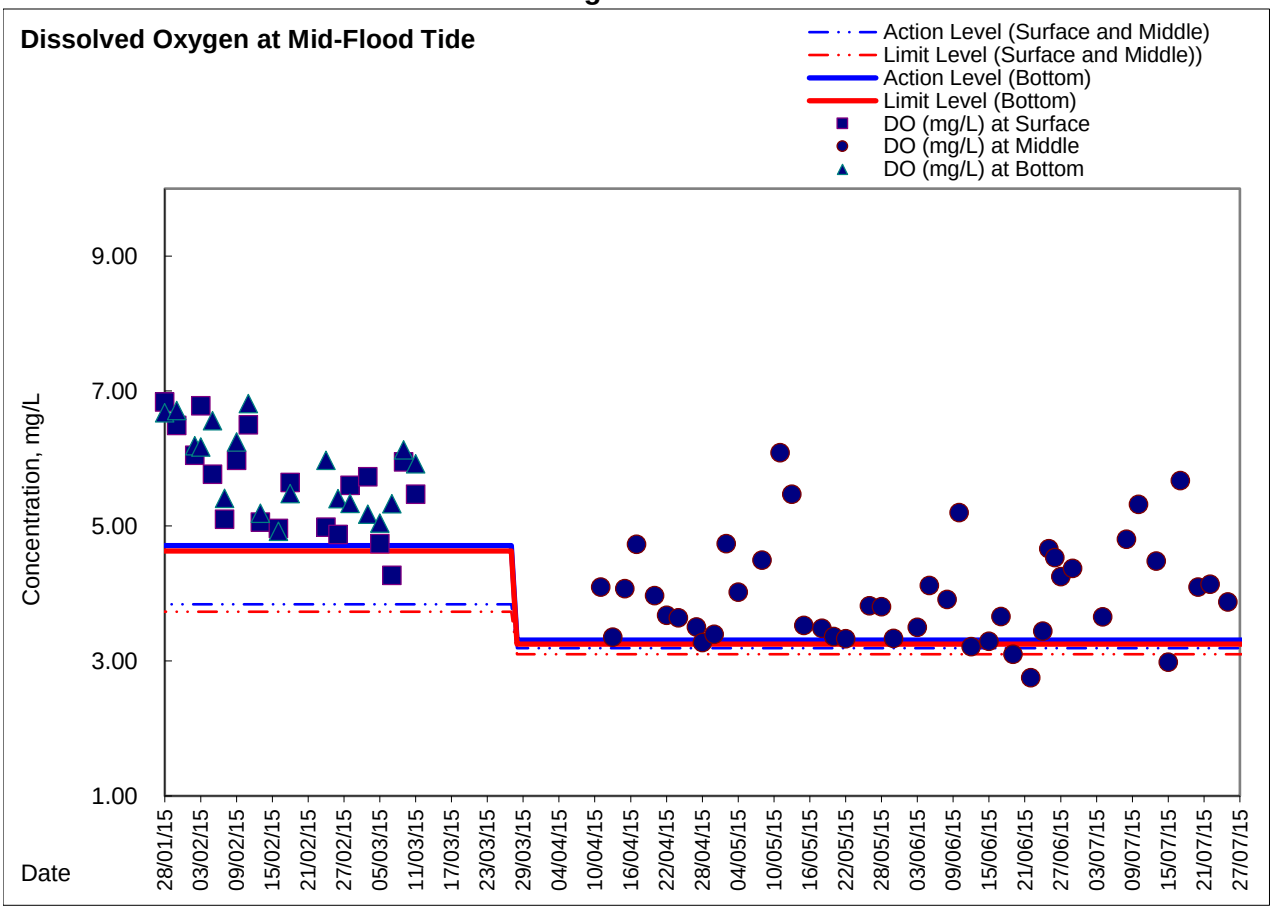
Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

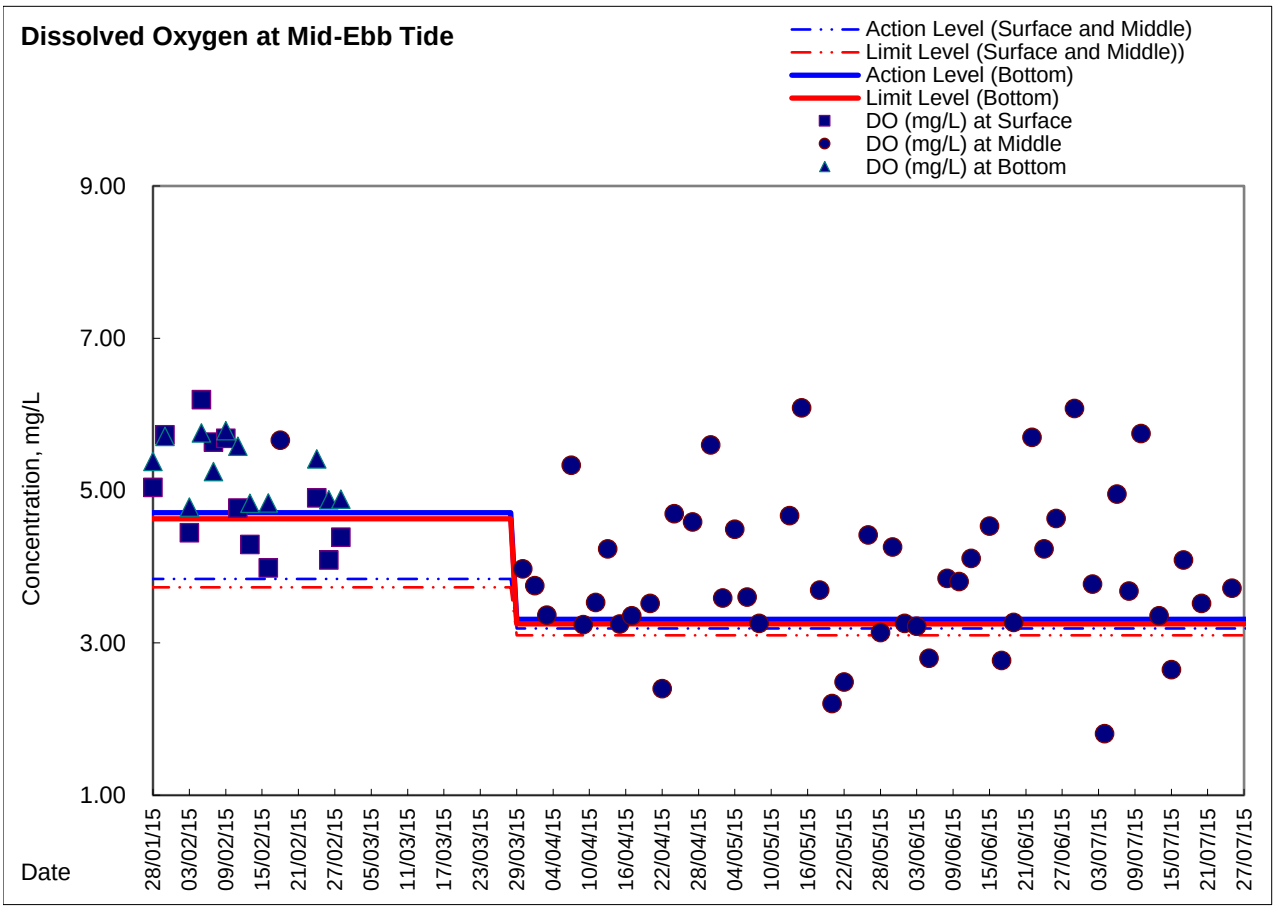
Graphic Presentation of Enhanced Water Monitoring Results (DO) at C6 - Excelsior Hotel



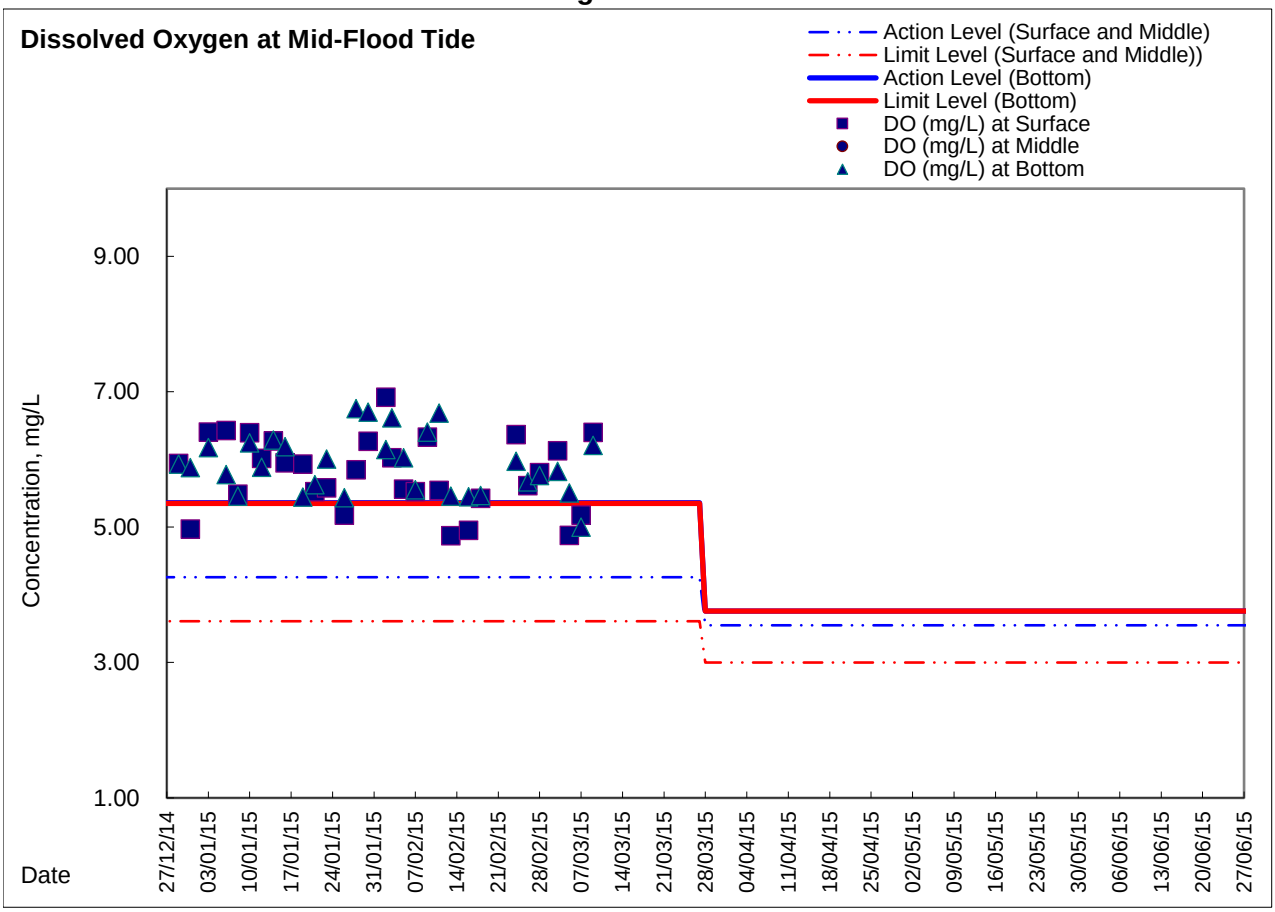


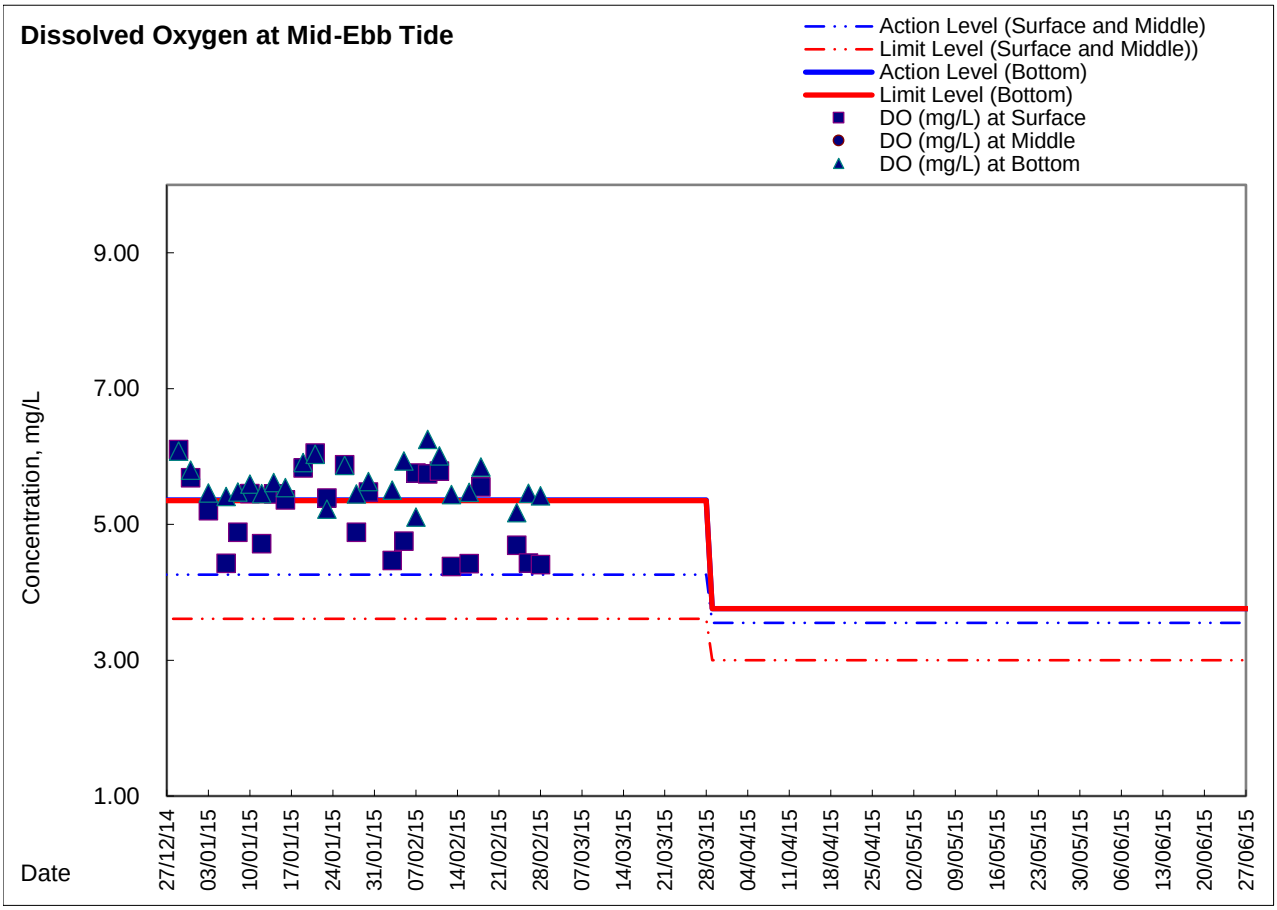
Graphic Presentation of Enhanced Water Monitoring Results (DO) at Ex-WPCWA SW - South-western corners of ex-Public Cargo Works Area





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





Appendix 5.5

Real-time Noise Monitoring Results and Graphical Presentations

Real-time Noise Data

RTN2a (Hong Kong Electric Centre)

Normal Day 07:00-19:00

29/6/2015 7:01	63
29/6/2015 7:31	64
29/6/2015 8:01	69
29/6/2015 8:31	74
29/6/2015 9:01	74
29/6/2015 9:31	71
29/6/2015 10:01	70
29/6/2015 10:31	74
29/6/2015 11:01	73
29/6/2015 11:31	71
29/6/2015 12:01	69
29/6/2015 12:31	65
29/6/2015 13:01	70
29/6/2015 13:31	72
29/6/2015 14:01	70
29/6/2015 14:31	71
29/6/2015 15:01	68
29/6/2015 15:31	69
29/6/2015 16:01	72
29/6/2015 16:31	70
29/6/2015 17:01	71
29/6/2015 17:31	72
29/6/2015 18:01	74
29/6/2015 18:31	68
30/6/2015 7:01	63
30/6/2015 7:31	64
30/6/2015 8:01	73
30/6/2015 8:31	73
30/6/2015 9:01	71
30/6/2015 9:31	71
30/6/2015 10:01	71
30/6/2015 10:31	72
30/6/2015 11:01	71
30/6/2015 11:31	70
30/6/2015 12:01	67
30/6/2015 12:31	69
30/6/2015 13:01	71
30/6/2015 13:31	70
30/6/2015 14:01	68
30/6/2015 14:31	68
30/6/2015 15:01	70
30/6/2015 15:31	69
30/6/2015 16:01	70
30/6/2015 16:31	71
30/6/2015 17:01	70
30/6/2015 17:31	70
30/6/2015 18:01	70
30/6/2015 18:31	57
2/7/2015 7:01	63
2/7/2015 7:31	63
2/7/2015 8:01	69
2/7/2015 8:31	73
2/7/2015 9:01	73
2/7/2015 9:31	73
2/7/2015 10:01	72
2/7/2015 10:31	71
2/7/2015 11:01	72
2/7/2015 11:31	71
2/7/2015 12:01	70
2/7/2015 12:31	67
2/7/2015 13:01	72
2/7/2015 13:31	71
2/7/2015 14:01	68
2/7/2015 14:31	71
2/7/2015 15:01	72
2/7/2015 15:31	72
2/7/2015 16:01	66
2/7/2015 16:31	65
2/7/2015 17:01	69
2/7/2015 17:31	71
2/7/2015 18:01	65
2/7/2015 18:31	65
3/7/2015 7:01	62
3/7/2015 7:31	63
3/7/2015 8:01	66
3/7/2015 8:31	68
3/7/2015 9:01	54
3/7/2015 9:31	70
3/7/2015 10:01	72
3/7/2015 10:31	73
3/7/2015 11:01	72
3/7/2015 11:31	73
3/7/2015 12:01	69
3/7/2015 12:31	71
3/7/2015 13:01	68
3/7/2015 13:31	71
3/7/2015 14:01	70
3/7/2015 14:31	69
3/7/2015 15:01	70
3/7/2015 15:31	71
3/7/2015 16:01	70
3/7/2015 16:31	70
3/7/2015 17:01	72
3/7/2015 17:31	70
3/7/2015 18:01	68
3/7/2015 18:31	53
4/7/2015 7:01	63
4/7/2015 7:31	64
4/7/2015 8:01	68
4/7/2015 8:31	71
4/7/2015 9:01	72
4/7/2015 9:31	67
4/7/2015 10:01	70
4/7/2015 10:31	69
4/7/2015 11:01	70
4/7/2015 11:31	57
4/7/2015 12:01	65
4/7/2015 12:31	64
4/7/2015 13:01	66
4/7/2015 13:31	69
4/7/2015 14:01	67
4/7/2015 14:31	70
4/7/2015 15:01	69
4/7/2015 15:31	69
4/7/2015 16:01	68
4/7/2015 16:31	69
4/7/2015 17:01	70
4/7/2015 17:31	68
4/7/2015 18:01	63
4/7/2015 18:31	65
6/7/2015 7:01	62
6/7/2015 7:31	63
6/7/2015 8:01	56
6/7/2015 8:31	60
6/7/2015 9:01	68
6/7/2015 9:31	73
6/7/2015 10:01	73
6/7/2015 10:31	72
6/7/2015 11:01	72
6/7/2015 11:31	69
6/7/2015 12:01	67
6/7/2015 12:31	66
6/7/2015 13:01	69
6/7/2015 13:31	72
6/7/2015 14:01	72
6/7/2015 14:31	72
6/7/2015 15:01	72
6/7/2015 15:31	71
6/7/2015 16:01	71
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25/7/2015 16:01	65
25/7/2015 16:31	64
25/7/2015 17:01	63
25/7/2015 17:31	52
25/7/2015 18:01	60
25/7/2015 18:31	66

Normal Day 19:00-23:00, Sunday & Holiday 07:00-23:00

28/6/2015 7:01	61
28/6/2015 7:06	61
28/6/2015 7:11	61
28/6/2015 7:16	61
28/6/2015 7:21	62
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28/6/2015 7:46	62
28/6/2015 7:51	61
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28/6/2015 8:06	62
28/6/2015 8:11	48
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28/6/2015 8:26	62
28/6/2015 8:31	62
28/6/2015 8:36	51
28/6/2015 8:41	62
28/6/2015 8:46	51
28/6/2015 8:51	50
28/6/2015 8:56	51
28/6/2015 9:01	54
28/6/2015 9:06	43
28/6/2015 9:11	49
28/6/2015 9:16	53
28/6/2015 9:21	53
28/6/2015 9:26	51
28/6/2015 9:31	55
28/6/2015 9:36	50
28/6/2015 9:41	54
28/6/2015 9:46	52
28/6/2015 9:51	56
28/6/2015 9:56	55
28/6/2015 10:01	58
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28/6/2015 11:26	62
28/6/2015 11:31	61
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28/6/2015 11:51	61
28/6/2015 11:56	62
28/6/2015 12:01	61
28/6/2015 12:06	61
28/6/2015 12:11	61
28/6/2015 12:16	61
28/6/2015 12:21	61
28/6/2015 12:26	62
28/6/2015 12:31	62
28/6/2015 12:36	43
28/6/2015 12:41	62
28/6/2015 12:46	59

Real-time Noise Data RTN2a (Hong Kong Electric Centre)

28/6/2015 12:51	52	28/6/2015 21:56	61	1/7/2015 7:01	55	1/7/2015 16:06	48	2/7/2015 21:11	61	4/7/2015 22:16	62
28/6/2015 12:56	52	28/6/2015 22:01	61	1/7/2015 7:06	60	1/7/2015 16:11	55	2/7/2015 21:16	61	4/7/2015 22:21	61
28/6/2015 13:01	62	28/6/2015 22:06	44	1/7/2015 7:11	62	1/7/2015 16:16	57	2/7/2015 21:21	61	4/7/2015 22:26	61
28/6/2015 13:06	51	28/6/2015 22:11	62	1/7/2015 7:16	61	1/7/2015 16:21	54	2/7/2015 21:26	61	4/7/2015 22:31	61
28/6/2015 13:11	53	28/6/2015 22:16	61	1/7/2015 7:21	65	1/7/2015 16:26	51	2/7/2015 21:31	61	4/7/2015 22:36	61
28/6/2015 13:16	57	28/6/2015 22:21	61	1/7/2015 7:26	60	1/7/2015 16:31	53	2/7/2015 21:36	62	4/7/2015 22:41	61
28/6/2015 13:21	62	28/6/2015 22:26	61	1/7/2015 7:31	61	1/7/2015 16:36	54	2/7/2015 21:41	61	4/7/2015 22:46	61
28/6/2015 13:26	45	28/6/2015 22:31	61	1/7/2015 7:36	62	1/7/2015 16:41	54	2/7/2015 21:46	62	4/7/2015 22:51	61
28/6/2015 13:31	52	28/6/2015 22:36	61	1/7/2015 7:41	60	1/7/2015 16:46	46	2/7/2015 21:51	61	4/7/2015 22:56	61
28/6/2015 13:36	54	28/6/2015 22:41	62	1/7/2015 7:46	60	1/7/2015 16:51	53	2/7/2015 21:56	61	5/7/2015 7:01	59
28/6/2015 13:41	62	28/6/2015 22:46	61	1/7/2015 7:51	60	1/7/2015 16:56	52	2/7/2015 22:01	52	5/7/2015 7:06	60
28/6/2015 13:46	54	28/6/2015 22:51	61	1/7/2015 7:56	61	1/7/2015 17:01	48	2/7/2015 22:06	61	5/7/2015 7:11	60
28/6/2015 13:51	54	28/6/2015 22:56	61	1/7/2015 8:01	53	1/7/2015 17:06	45	2/7/2015 22:11	61	5/7/2015 7:16	61
28/6/2015 13:56	52	29/6/2015 19:01	56	1/7/2015 8:06	61	1/7/2015 17:11	44	2/7/2015 22:16	61	5/7/2015 7:21	65
28/6/2015 14:01	55	29/6/2015 19:06	60	1/7/2015 8:11	46	1/7/2015 17:16	51	2/7/2015 22:21	61	5/7/2015 7:26	61
28/6/2015 14:06	56	29/6/2015 19:11	57	1/7/2015 8:16	54	1/7/2015 17:21	56	2/7/2015 22:26	61	5/7/2015 7:31	57
28/6/2015 14:11	57	29/6/2015 19:16	55	1/7/2015 8:21	62	1/7/2015 17:26	58	2/7/2015 22:31	61	5/7/2015 7:36	60
28/6/2015 14:16	59	29/6/2015 19:21	58	1/7/2015 8:26	50	1/7/2015 17:31	57	2/7/2015 22:36	61	5/7/2015 7:41	60
28/6/2015 14:21	52	29/6/2015 19:26	56	1/7/2015 8:31	62	1/7/2015 17:36	51	2/7/2015 22:41	61	5/7/2015 7:46	61
28/6/2015 14:26	53	29/6/2015 19:31	56	1/7/2015 8:36	62	1/7/2015 17:41	57	2/7/2015 22:46	61	5/7/2015 7:51	60
28/6/2015 14:31	55	29/6/2015 19:36	54	1/7/2015 8:41	54	1/7/2015 17:46	51	2/7/2015 22:51	61	5/7/2015 7:56	61
28/6/2015 14:36	59	29/6/2015 19:41	48	1/7/2015 8:46	53	1/7/2015 17:51	52	2/7/2015 22:56	61	5/7/2015 8:01	62
28/6/2015 14:41	57	29/6/2015 19:46	49	1/7/2015 8:51	55	1/7/2015 17:56	62	3/7/2015 19:01	58	5/7/2015 8:06	60
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28/6/2015 14:51	51	29/6/2015 19:56	50	1/7/2015 9:01	55	1/7/2015 18:06	50	3/7/2015 19:11	58	5/7/2015 8:16	62
28/6/2015 14:56	49	29/6/2015 20:01	42	1/7/2015 9:06	51	1/7/2015 18:11	54	3/7/2015 19:16	56	5/7/2015 8:21	51
28/6/2015 15:01	49	29/6/2015 20:06	62	1/7/2015 9:11	51	1/7/2015 18:16	51	3/7/2015 19:21	54	5/7/2015 8:26	52
28/6/2015 15:06	53	29/6/2015 20:11	56	1/7/2015 9:16	53	1/7/2015 18:21	50	3/7/2015 19:26	56	5/7/2015 8:31	56
28/6/2015 15:11	56	29/6/2015 20:16	43	1/7/2015 9:21	58	1/7/2015 18:26	61	3/7/2015 19:31	59	5/7/2015 8:36	62
28/6/2015 15:16	56	29/6/2015 20:21	61	1/7/2015 9:26	54	1/7/2015 18:31	62	3/7/2015 19:36	57	5/7/2015 8:41	53
28/6/2015 15:21	52	29/6/2015 20:26	61	1/7/2015 9:31	55	1/7/2015 18:36	62	3/7/2015 19:41	57	5/7/2015 8:46	50
28/6/2015 15:26	54	29/6/2015 20:31	62	1/7/2015 9:36	56	1/7/2015 18:41	51	3/7/2015 19:46	55	5/7/2015 8:51	54
28/6/2015 15:31	62	29/6/2015 20:36	52	1/7/2015 9:41	56	1/7/2015 18:46	46	3/7/2015 19:51	58	5/7/2015 8:56	52
28/6/2015 15:36	62	29/6/2015 20:41	46	1/7/2015 9:46	53	1/7/2015 18:51	40	3/7/2015 19:56	55	5/7/2015 9:01	50
28/6/2015 15:41	49	29/6/2015 20:46	43	1/7/2015 9:51	57	1/7/2015 18:56	49	3/7/2015 20:01	60	5/7/2015 9:06	53
28/6/2015 15:46	45	29/6/2015 20:51	61	1/7/2015 9:56	56	1/7/2015 19:01	62	3/7/2015 20:06	60	5/7/2015 9:11	52
28/6/2015 15:51	50	29/6/2015 20:56	62	1/7/2015 10:01	57	1/7/2015 19:06	54	3/7/2015 20:11	56	5/7/2015 9:16	53
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28/6/2015 20:01	49	30/6/2015 21:06	62	1/7/2015 14:11	53	2/7/2015 19:16	57	4/7/2015 20:21	47	5/7/2015 13:26	57
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28/6/2015 20:11	62	30/6/2015 21:16	62	1/7/2015 14:21	55	2/7/2015 19:26	58	4/7/2015 20:31	46	5/7/2015 13:36	55
28/6/2015 20:16	61	30/6/2015 21:21	62	1/7/2015 14:26	52	2/7/2015 19:31	53	4/7/2015 20:36	57	5/7/2015 13:41	55
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28/6/2015 20:41	61	30/6/2015 21:46	39	1/7/2015 14:51	50	2/7/2015 19:56	62	4/7/2015 21:01	62	5/7/2015 14:06	55
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28/6/2015 21:16	61	30/6/2015 22:21	62	1/7/2015 15:26	62	2/7/2015 20:31	61	4/7/2015 21:36	61	5/7/2015 14:41	51
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28/6/2015 21:46	61	30/6/2015 22:51	62	1/7/2015 15:56	50	2/7/2015 21:01	61	4/7/2015 22:06	61	5/7/2015 15:11	56
28/6/2015 21:51	61	30/6/2015 22:56	62	1/7/2015 16:01	62	2/7/2015 21:06	61	4/7/2015 22:11	61	5/7/2015 15:16	51

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Real-time Noise Data RTN2a (Hong Kong Electric Centre)

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16/7/2015 22:51 36	19/7/2015 7:56 61	19/7/2015 17:01 58	20/7/2015 22:06 62	23/7/2015 19:11 59	25/7/2015 20:16 62

Real-time Noise Data RTN2a (Hong Kong Electric Centre)

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25/7/2015 22:51	60	26/7/2015 15:56	56	27/7/2015 21:01	46	28/6/2015 6:51	57	29/6/2015 23:56	56	1/7/2015 1:01	55
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26/7/2015 10:41	59	26/7/2015 19:46	62	28/6/2015 1:36	46	29/6/2015 2:41	57	30/6/2015 3:46	56	1/7/2015 4:51	58
26/7/2015 10:46	59	26/7/2015 19:51	62	28/6/2015 1:41	58	29/6/2015 2:46	57	30/6/2015 3:51	57	1/7/2015 4:56	58
26/7/2015 10:51	56	26/7/2015 19:56	45	28/6/2015 1:46	58	29/6/2015 2:51	57	30/6/2015 3:56	57	1/7/2015 5:01	58
26/7/2015 10:56	57	26/7/2015 20:01	62	28/6/2015 1:51	48	29/6/2015 2:56	57	30/6/2015 4:01	56	1/7/2015 5:06	58
26/7/2015 11:01	60	26/7/2015 20:06	62	28/6/2015 1:56	53	29/6/2015 3:01	57	30/6/2015 4:06	57	1/7/2015 5:11	58
26/7/2015 11:06	59	26/7/2015 20:11	62	28/6/2015 2:01	56	29/6/2015 3:06	57	30/6/2015 4:11	57	1/7/2015 5:16	58
26/7/2015 11:11	59	26/7/2015 20:16	62	28/6/2015 2:06	49	29/6/2015 3:11	57	30/6/2015 4:16	57	1/7/2015 5:21	52
26/7/2015 11:16	57	26/7/2015 20:21	51	28/6/2015 2:11	50	29/6/2015 3:16	57	30/6/2015 4:21	57	1/7/2015 5:26	50
26/7/2015 11:21	59	26/7/2015 20:26	46	28/6/2015 2:16	58	29/6/2015 3:21	56	30/6/2015 4:26	56	1/7/2015 5:31	54
26/7/2015 11:26	57	26/7/2015 20:31	62	28/6/2015 2:21	45	29/6/2015 3:26	57	30/6/2015 4:31	56	1/7/2015 5:36	52
26/7/2015 11:31	60	26/7/2015 20:36	62	28/6/2015 2:26	58	29/6/2015 3:31	57	30/6/2015 4:36	57	1/7/2015 5:41	52
26/7/2015 11:36	61	26/7/2015 20:41	62	28/6/2015 2:31	58	29/6/2015 3:36	57	30/6/2015 4:41	57	1/7/2015 5:46	49
26/7/2015 11:41	60	26/7/2015 20:46	62	28/6/2015 2:36	43	29/6/2015 3:41	57	30/6/2015 4:46	57	1/7/2015 5:51	52
26/7/2015 11:46	58	26/7/2015 20:51	62	28/6/2015 2:41	58	29/6/2015 3:46	58	30/6/2015 4:51	57	1/7/2015 5:56	53
26/7/2015 11:51	58	26/7/2015 20:56	48	28/6/2015 2:46	47	29/6/2015 3:51	57	30/6/2015 4:56	57	1/7/2015 6:01	51
26/7/2015 11:56	58	26/7/2015 21:01	51	28/6/2015 2:51	41	29/6/2015 3:56	57	30/6/2015 5:01	57	1/7/2015 6:06	53
26/7/2015 12:01	59	26/7/2015 21:06	61	28/6/2015 2:56	58	29/6/2015 4:01	57	30/6/2015 5:06	57	1/7/2015 6:11	56
26/7/2015 12:06	58	26/7/2015 21:11	62	28/6/2015 3:01	58	29/6/2015 4:06	57	30/6/2015 5:11	57	1/7/2015 6:16	58
26/7/2015 12:11	59	26/7/2015 21:16	61	28/6/2015 3:06	58	29/6/2015 4:11	58	30/6/2015 5:16	57	1/7/2015 6:21	53
26/7/2015 12:16	56	26/7/2015 21:21	62	28/6/2015 3:11	57	29/6/2015 4:16	57	30/6/2015 5:21	58	1/7/2015 6:26	54
26/7/2015 12:21	59	26/7/2015 21:26	62	28/6/2015 3:16	57	29/6/2015 4:21	57	30/6/2015 5:26	58	1/7/2015 6:31	54
26/7/2015 12:26	57	26/7/2015 21:31	62	28/6/2015 3:21	44	29/6/2015 4:26	57	30/6/2015 5:31	58	1/7/2015 6:36	54
26/7/2015 12:31	59	26/7/2015 21:36	62	28/6/2015 3:26	58	29/6/2015 4:31	57	30/6/2015 5:36	58	1/7/2015 6:41	55
26/7/2015 12:36	58	26/7/2015 21:41	36	28/6/2015 3:31	58	29/6/2015 4:36	57	30/6/2015 5:41	58	1/7/2015 6:46	56
26/7/2015 12:41	57	26/7/2015 21:46	62	28/6/2015 3:36	58	29/6/2015 4:41	57	30/6/2015 5:46	45	1/7/2015 6:51	58
26/7/2015 12:46	58	26/7/2015 21:51	62	28/6/2015 3:41	58	29/6/2015 4:46	57	30/6/2015 5:51	48	1/7/2015 6:56	56
26/7/2015 12:51	57	26/7/2015 21:56	61	28/6/2015 3:46	58	29/6/2015 4:51	58	30/6/2015 5:56	46	1/7/2015 23:01	58
26/7/2015 12:56	55	26/7/2015 22:01	47	28/6/2015 3:51	58	29/6/2015 4:56	57	30/6/2015 6:01	49	1/7/2015 23:06	57
26/7/2015 13:01	55	26/7/2015 22:06	62	28/6/2015 3:56	57	29/6/2015 5:01	57	30/6/2015 6:06	45	1/7/2015 23:11	58
26/7/2015 13:06	59	26/7/2015 22:11	62	28/6/2015 4:01	58	29/6/2015 5:06	57	30/6/2015 6:11	53	1/7/2015 23:16	58
26/7/2015 13:11	59	26/7/2015 22:16	62	28/6/2015 4:06	57	29/6/2015 5:11	57	30/6/2015 6:16	55	1/7/2015 23:21	57
26/7/2015 13:16	60	26/7/2015 22:21	62	28/6/2015 4:11	57	29/6/2015 5:16	58	30/6/2015 6:21	54	1/7/2015 23:26	56
26/7/2015 13:21	56	26/7/2015 22:26	61	28/6/2015 4:16	43	29/6/2015 5:21	57	30/6/2015 6:26	56	1/7/2015 23:31	57

Real-time Noise Data RTN2a (Hong Kong Electric Centre)

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

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Real-time Noise Data RTN2a (Hong Kong Electric Centre)

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16/7/2015 5:06	57	17/7/2015 6:11	53	18/7/2015 23:16	58	20/7/2015 0:21	47	21/7/2015 1:26	57	22/7/2015 2:31	57
16/7/2015 5:11	58	17/7/2015 6:16	54	18/7/2015 23:21	57	20/7/2015 0:26	40	21/7/2015 1:31	57	22/7/2015 2:36	58
16/7/2015 5:16	58	17/7/2015 6:21	55	18/7/2015 23:26	58	20/7/2015 0:31	48	21/7/2015 1:36	57	22/7/2015 2:41	58
16/7/2015 5:21	58	17/7/2015 6:26	54	18/7/2015 23:31	57	20/7/2015 0:36	44	21/7/2015 1:41	55	22/7/2015 2:46	57
16/7/2015 5:26	43	17/7/2015 6:31	57	18/7/2015 23:36	56	20/7/2015 0:41	51	21/7/2015 1:46	54	22/7/2015 2:51	58
16/7/2015 5:31	58	17/7/2015 6:36	57	18/7/2015 23:41	58	20/7/2015 0:46	45	21/7/2015 1:51	56	22/7/2015 2:56	57
16/7/2015 5:36	58	17/7/2015 6:41	57	18/7/2015 23:46	58	20/7/2015 0:51	47	21/7/2015 1:56	62	22/7/2015 3:01	57

Real-time Noise Data RTN2a (Hong Kong Electric Centre)

22/7/2015 3:06	57	23/7/2015 4:11	57	24/7/2015 5:16	58	25/7/2015 6:21	54	26/7/2015 23:26	56
22/7/2015 3:11	58	23/7/2015 4:16	57	24/7/2015 5:21	57	25/7/2015 6:26	52	26/7/2015 23:31	57
22/7/2015 3:16	57	23/7/2015 4:21	58	24/7/2015 5:26	58	25/7/2015 6:31	54	26/7/2015 23:36	57
22/7/2015 3:21	58	23/7/2015 4:26	58	24/7/2015 5:31	58	25/7/2015 6:36	55	26/7/2015 23:41	55
22/7/2015 3:26	57	23/7/2015 4:31	58	24/7/2015 5:36	45	25/7/2015 6:41	58	26/7/2015 23:46	56
22/7/2015 3:31	57	23/7/2015 4:36	57	24/7/2015 5:41	49	25/7/2015 6:46	56	26/7/2015 23:51	56
22/7/2015 3:36	61	23/7/2015 4:41	58	24/7/2015 5:46	49	25/7/2015 6:51	58	26/7/2015 23:56	55
22/7/2015 3:41	66	23/7/2015 4:46	57	24/7/2015 5:51	58	25/7/2015 6:56	58	27/7/2015 0:01	57
22/7/2015 3:46	58	23/7/2015 4:51	58	24/7/2015 5:56	52	25/7/2015 23:01	59	27/7/2015 0:06	54
22/7/2015 3:51	67	23/7/2015 4:56	58	24/7/2015 6:01	49	25/7/2015 23:06	60	27/7/2015 0:11	53
22/7/2015 3:56	63	23/7/2015 5:01	58	24/7/2015 6:06	47	25/7/2015 23:11	63	27/7/2015 0:16	53
22/7/2015 4:01	61	23/7/2015 5:06	58	24/7/2015 6:11	52	25/7/2015 23:16	59	27/7/2015 0:21	54
22/7/2015 4:06	58	23/7/2015 5:11	58	24/7/2015 6:16	55	25/7/2015 23:21	59	27/7/2015 0:26	53
22/7/2015 4:11	57	23/7/2015 5:16	58	24/7/2015 6:21	54	25/7/2015 23:26	58	27/7/2015 0:31	53
22/7/2015 4:16	60	23/7/2015 5:21	58	24/7/2015 6:26	56	25/7/2015 23:31	58	27/7/2015 0:36	52
22/7/2015 4:21	57	23/7/2015 5:26	42	24/7/2015 6:31	55	25/7/2015 23:36	58	27/7/2015 0:41	54
22/7/2015 4:26	57	23/7/2015 5:31	51	24/7/2015 6:36	58	25/7/2015 23:41	57	27/7/2015 0:46	51
22/7/2015 4:31	58	23/7/2015 5:36	58	24/7/2015 6:41	59	25/7/2015 23:46	57	27/7/2015 0:51	52
22/7/2015 4:36	57	23/7/2015 5:41	49	24/7/2015 6:46	64	25/7/2015 23:51	57	27/7/2015 0:56	50
22/7/2015 4:41	59	23/7/2015 5:46	47	24/7/2015 6:51	66	25/7/2015 23:56	57	27/7/2015 1:01	58
22/7/2015 4:46	61	23/7/2015 5:51	52	24/7/2015 6:56	66	26/7/2015 0:01	58	27/7/2015 1:06	58
22/7/2015 4:51	63	23/7/2015 5:56	51	24/7/2015 23:01	58	26/7/2015 0:06	57	27/7/2015 1:11	54
22/7/2015 4:56	65	23/7/2015 6:01	55	24/7/2015 23:06	58	26/7/2015 0:11	56	27/7/2015 1:16	58
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22/7/2015 5:06	59	23/7/2015 6:11	56	24/7/2015 23:16	60	26/7/2015 0:21	56	27/7/2015 1:26	50
22/7/2015 5:11	58	23/7/2015 6:16	57	24/7/2015 23:21	59	26/7/2015 0:26	58	27/7/2015 1:31	58
22/7/2015 5:16	58	23/7/2015 6:21	56	24/7/2015 23:26	60	26/7/2015 0:31	57	27/7/2015 1:36	42
22/7/2015 5:21	56	23/7/2015 6:26	58	24/7/2015 23:31	59	26/7/2015 0:36	56	27/7/2015 1:41	46
22/7/2015 5:26	56	23/7/2015 6:31	58	24/7/2015 23:36	58	26/7/2015 0:41	54	27/7/2015 1:46	57
22/7/2015 5:31	57	23/7/2015 6:36	59	24/7/2015 23:41	57	26/7/2015 0:46	55	27/7/2015 1:51	58
22/7/2015 5:36	65	23/7/2015 6:41	59	24/7/2015 23:46	58	26/7/2015 0:51	58	27/7/2015 1:56	57
22/7/2015 5:41	67	23/7/2015 6:46	59	24/7/2015 23:51	57	26/7/2015 0:56	55	27/7/2015 2:01	57
22/7/2015 5:46	63	23/7/2015 6:51	60	24/7/2015 23:56	57	26/7/2015 1:01	55	27/7/2015 2:06	58
22/7/2015 5:51	62	23/7/2015 6:56	60	25/7/2015 0:01	58	26/7/2015 1:06	53	27/7/2015 2:11	58
22/7/2015 5:56	62	23/7/2015 23:01	58	25/7/2015 0:06	57	26/7/2015 1:11	56	27/7/2015 2:16	57
22/7/2015 6:01	59	23/7/2015 23:06	59	25/7/2015 0:11	57	26/7/2015 1:16	56	27/7/2015 2:21	57
22/7/2015 6:06	61	23/7/2015 23:11	60	25/7/2015 0:16	58	26/7/2015 1:21	55	27/7/2015 2:26	57
22/7/2015 6:11	63	23/7/2015 23:16	60	25/7/2015 0:21	56	26/7/2015 1:26	53	27/7/2015 2:31	56
22/7/2015 6:16	63	23/7/2015 23:21	58	25/7/2015 0:26	56	26/7/2015 1:31	55	27/7/2015 2:36	57
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22/7/2015 6:26	67	23/7/2015 23:31	58	25/7/2015 0:36	56	26/7/2015 1:41	54	27/7/2015 2:46	57
22/7/2015 6:31	64	23/7/2015 23:36	58	25/7/2015 0:41	55	26/7/2015 1:46	53	27/7/2015 2:51	57
22/7/2015 6:36	63	23/7/2015 23:41	59	25/7/2015 0:46	56	26/7/2015 1:51	53	27/7/2015 2:56	57
22/7/2015 6:41	64	23/7/2015 23:46	57	25/7/2015 0:51	55	26/7/2015 1:56	55	27/7/2015 3:01	56
22/7/2015 6:46	64	23/7/2015 23:51	57	25/7/2015 0:56	53	26/7/2015 2:01	60	27/7/2015 3:06	56
22/7/2015 6:51	64	23/7/2015 23:56	57	25/7/2015 1:01	55	26/7/2015 2:06	63	27/7/2015 3:11	57
22/7/2015 6:56	67	24/7/2015 0:01	57	25/7/2015 1:06	55	26/7/2015 2:11	60	27/7/2015 3:16	57
22/7/2015 23:01	59	24/7/2015 0:06	54	25/7/2015 1:11	53	26/7/2015 2:16	55	27/7/2015 3:21	56
22/7/2015 23:06	67	24/7/2015 0:11	56	25/7/2015 1:16	54	26/7/2015 2:21	57	27/7/2015 3:26	57
22/7/2015 23:11	59	24/7/2015 0:16	55	25/7/2015 1:21	55	26/7/2015 2:26	55	27/7/2015 3:31	55
22/7/2015 23:16	58	24/7/2015 0:21	54	25/7/2015 1:26	56	26/7/2015 2:31	54	27/7/2015 3:36	56
22/7/2015 23:21	59	24/7/2015 0:26	57	25/7/2015 1:31	54	26/7/2015 2:36	51	27/7/2015 3:41	57
22/7/2015 23:26	58	24/7/2015 0:31	56	25/7/2015 1:36	53	26/7/2015 2:41	49	27/7/2015 3:46	55
22/7/2015 23:31	58	24/7/2015 0:36	55	25/7/2015 1:41	54	26/7/2015 2:46	52	27/7/2015 3:51	57
22/7/2015 23:36	59	24/7/2015 0:41	55	25/7/2015 1:46	52	26/7/2015 2:51	51	27/7/2015 3:56	56
22/7/2015 23:41	58	24/7/2015 0:46	55	25/7/2015 1:51	55	26/7/2015 2:56	53	27/7/2015 4:01	56
22/7/2015 23:46	59	24/7/2015 0:51	57	25/7/2015 1:56	51	26/7/2015 3:01	64	27/7/2015 4:06	56
22/7/2015 23:51	58	24/7/2015 0:56	54	25/7/2015 2:01	53	26/7/2015 3:06	62	27/7/2015 4:11	57
22/7/2015 23:56	56	24/7/2015 1:01	53	25/7/2015 2:06	53	26/7/2015 3:11	61	27/7/2015 4:16	57
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23/7/2015 0:06	57	24/7/2015 1:11	53	25/7/2015 2:16	52	26/7/2015 3:21	53	27/7/2015 4:26	57
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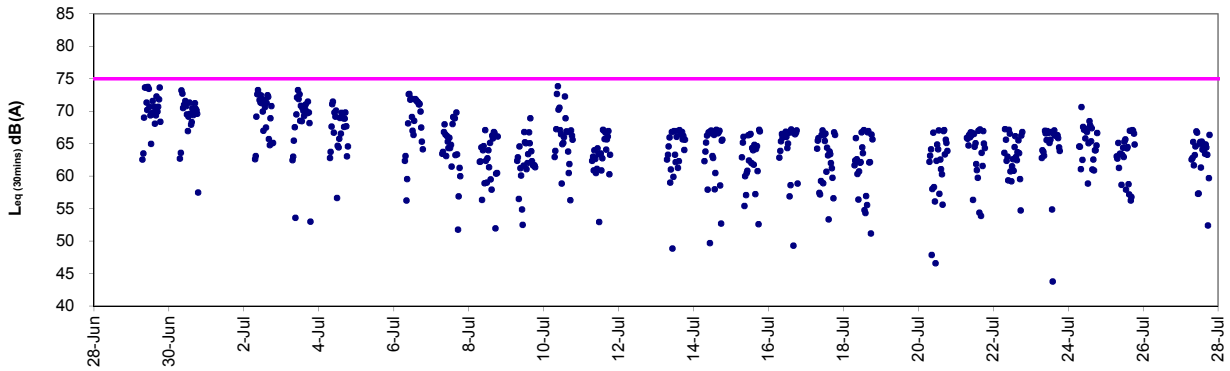
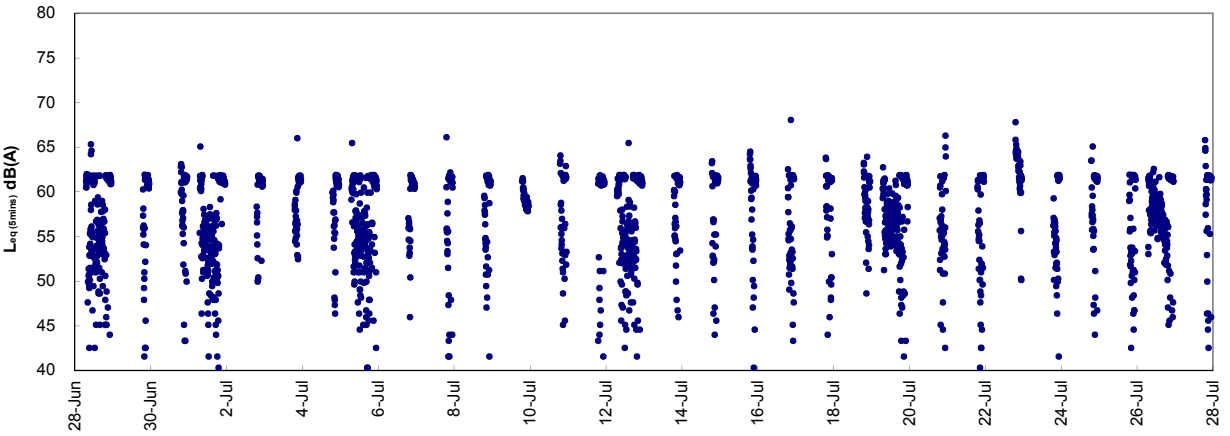
23/7/2015 0:21	56	24/7/2015 1:26	51	25/7/2015 2:31	52	26/7/2015 3:36	52	27/7/2015 4:41	57
23/7/2015 0:26	57	24/7/2015 1:31	51	25/7/2015 2:36	51	26/7/2015 3:41	55	27/7/2015 4:46	56
23/7/2015 0:31	58	24/7/2015 1:36	48	25/7/2015 2:41	58	26/7/2015 3:46	47	27/7/2015 4:51	57
23/7/2015 0:36	54	24/7/2015 1:41	55	25/7/2015 2:46	47	26/7/2015 3:51	51	27/7/2015 4:56	57
23/7/2015 0:41	55	24/7/2015 1:46	57	25/7/2015 2:51	48	26/7/2015 3:56	44	27/7/2015 5:01	57
23/7/2015 0:46	53	24/7/2015 1:51	48	25/7/2015 2:56	50	26/7/2015 4:01	35	27/7/2015 5:06	57
23/7/2015 0:51	55	24/7/2015 1:56	58	25/7/2015 3:01	58	26/7/2015 4:06	58	27/7/2015 5:11	56
23/7/2015 0:56	54	24/7/2015 2:01	52	25/7/2015 3:06	45	26/7/2015 4:11	58	27/7/2015 5:16	57
23/7/2015 1:01	54	24/7/2015 2:06	47	25/7/2015 3:11	58	26/7/2015 4:16	53	27/7/2015 5:21	58
23/7/2015 1:06	53	24/7/2015 2:11	58	25/7/2015 3:16	49	26/7/2015 4:21	58	27/7/2015 5:26	40
23/7/2015 1:11	53	24/7/2015 2:16	58	25/7/2015 3:21	49	26/7/2015 4:26	52	27/7/2015 5:31	57
23/7/2015 1:16	51	24/7/2015 2:21	42	25/7/2015 3:26	58	26/7/2015 4:31	50	27/7/2015 5:36	58
23/7/2015 1:21	49	24/7/2015 2:26	58	25/7/2015 3:31	58	26/7/2015 4:36	50	27/7/2015 5:41	58
23/7/2015 1:26	54	24/7/2015 2:31	58	25/7/2015 3:36	58	26/7/2015 4:41	58	27/7/2015 5:46	58
23/7/2015 1:31	52	24/7/2015 2:36	58	25/7/2015 3:41	48	26/7/2015 4:46	41	27/7/2015 5:51	45
23/7/2015 1:36	45	24/7/2015 2:41	58	25/7/2015 3:46	40	26/7/2015 4:51	58	27/7/2015 5:56	49
23/7/2015 1:41	51	24/7/2015 2:46	58	25/7/2015 3:51	58	26/7/2015 4:56	55	27/7/2015 6:01	58
23/7/2015 1:46	48	24/7/2015 2:51	57	25/7/2015 3:56	58	26/7/2015 5:01	59	27/7/2015 6:06	46
23/7/2015 1:51	50	24/7/2015 2:56	57	25/7/2015 4:01	58	26/7/2015 5:06	54	27/7/2015 6:11	54
23/7/2015 1:56	44	24/7/2015 3:01	57	25/7/2015 4:06	58	26/7/2015 5:11	51	27/7/2015 6:16	53
23/7/2015 2:01	58	24/7/2015 3:06	58	25/7/2015 4:11	58	26/7/2015 5:16	58	27/7/2015 6:21	55
23/7/2015 2:06	58	24/7/2015 3:11	58	25/7/2015 4:16	58	26/7/2015 5:21	46	27/7/2015 6:26	56
23/7/2015 2:11	58	24/7/2015 3:16	57	25/7/2015 4:21	58	26/7/2015 5:26	46	27/7/2015 6:31	56
23/7/2015 2:16	58	24/7/2015 3:21	57	25/7/2015 4:26	42	26/7/2015 5:31	46	27/7/2015 6:36	58
23/7/2015 2:21	58	24/7/2015 3:26	58	25/7/2015 4:31	48	26/7/2015 5:36	43	27/7/2015 6:41	58
23/7/2015 2:26	45	24/7/2015 3:31	58	25/7/2015 4:36	58	26/7/2015 5:41	53	27/7/2015 6:46	58
23/7/2015 2:31	58	24/7/2015 3:36	58	25/7/2015 4:41	58	26/7/2015 5:46	53	27/7/2015 6:51	61
23/7/2015 2:36	64	24/7/2015 3:41	57	25/7/2015 4:46	37	26/7/2015 5:51	54	27/7/2015 6:56	60
23/7/2015 2:41	53	24/7/2015 3:46	57	25/7/2015 4:51	51	26/7/2015 5:56	63	27/7/2015 23:01	57
23/7/2015 2:46	58	24/7/2015 3:51	57	25/7/2015 4:56	58	26/7/2015 6:01	72	27/7/2015 23:06	57
23/7/2015 2:51	58	24/7/2015 3:56	58	25/7/2015 5:01	57	26/7/2015 6:06	67	27/7/2015 23:11	59
23/7/2015 2:56	57	24/7/2015 4:01	58	25/7/2015 5:06	58	26/7/2015 6:11	62	27/7/2015 23:16	59
23/7/2015 3:01	58	24/7/2015 4:06	57	25/7/2015 5:11	58	26/7/2015 6:16	61	27/7/2015 23:21	57
23/7/2015 3:06	58	24/7/2015 4:11	57	25/7/2015 5:16	58	26/7/2015 6:21	58	27/7/2015 23:26	60
23/7/2015 3:11	58	24/7/2015 4:16	57	25/7/2015 5:21	37	26/7/2015 6:26	57	27/7/2015 23:31	57
23/7/2015 3:16	58	24/7/2015 4:21	57	25/7/2015 5:26	54	26/7/2015 6:31	58	27/7/2015 23:36	58
23/7/2015 3:21	58	24/7/2015 4:26	57	25/7/2015 5:31	58	26/7/2015 6:36	57	27/7/2015 23:41	57
23/7/2015 3:26	58	24/7/2015 4:31	57	25/7/2015 5:36	58	26/7/2015 6:41	58	27/7/2015 23:46	57
23/7/2015 3:31	57	24/7/2015 4:36	57	25/7/2015 5:41	58	26/7/2015 6:46	57	27/7/2015 23:51	56
23/7/2015 3:36	57	24/7/2015 4:41	57	25/7/2015 5:46	32	26/7/2015 6:51	65	27/7/2015 23:56	55
23/7/2015 3:41	57	24/7/2015 4:46	58	25/7/2015 5:51	51	26/7/2015 6:56	60		
23/7/2015 3:46	57	24/7/2015 4:51	57	25/7/2015 5:56	49	26/7/2015 23:01	58		
23/7/2015 3:51	57	24/7/2015 4:56	56	25/7/2015 6:01	52	26/7/2015 23:06	57		
23/7/2015 3:56	58	24/7/2015 5:01	57	25/7/2015 6:06	52	26/7/2015 23:11	59		
23/7/2015 4:01	57	24/7/2015 5:06	57	25/7/2015 6:11	52	26/7/2015 23:16	59		
23/7/2015 4:06	41	24/7/2015 5:11	57	25/7/2015 6:16	54	26/7/2015 23:21	56		

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

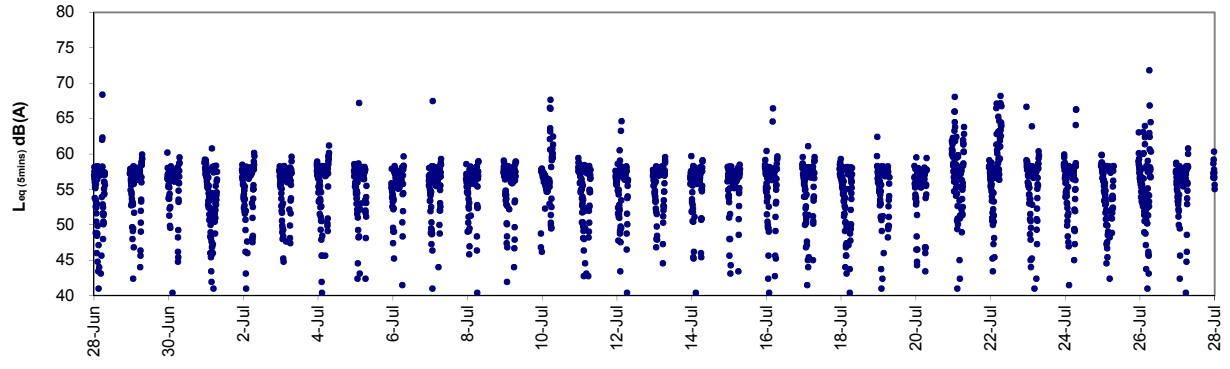
Day Time (0700 -1900 hrs on normal weekdays)



Restricted hours (1900 - 2300) on normal weekdays and 0700 - 2300 hrs on public holidays)



Night Time (2300 - 0700hrs)



Appendix 6.1

Event Action Plans

Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level being exceeded	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	Tidal	Location	Depth	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10D518	4-Jul-15	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	1.81	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted , It was considered the exceedance was not related to Project.
X_10D519	4-Jul-15	Mid-flood	Ex-WPCWA SW	Middle	DO(mg/l)	2.96	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, It was considered the exceedance was not related to Project.
X_10D520	15-Jul-15	Mid-ebb	Ex-WPCWA SW	Middle	DO(mg/l)	2.65	3.19	3.10	Possible reason:	Possible in relation to the upstream organic discharge.
									Action taken/ to be taken:	Repeated the measurement to confirm the result. No odour nuisance was noted during the DO monitoring. Checking with contractor works and review previous monitoring data.
									Remarks/ Other Obs:	No marine work was conducted at Ex-WPCWA on the monitoring date and upstream discharge at the concerned location were consistently observed. In view of no marine work activity was conducted and no exceedance on the subsequent monitoring, It was considered the exceedance was not related to Project.
X_10D521	20-Jul-15	Mid-flood	Ex-WPCWA SW	Middle	DO(mg/l)	1.15	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:	Despite mud transhipment was conducted at Ex-WPCWA on the monitoring date. Upstream discharge at the concerned location were consistently observed. In view of no exceedance on the subsequent monitoring, It was considered the exceedance was not related to Project. DO level was restored to normal level above WQO on 20 July 2015 during ebb tide.

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	
X_10C631	29-Jun-15	Mid-flood	C7	DO(mg/l)	5.04	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	13.73	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	10.00	18.42	27.54	Remarks/ Other Obs:	No marine works was conducted in the vicinity of the water quality monitoring station under Contract HY/2009/15 and Contract HY/2010/08 on the monitoring date. In view of no marine activity was conducted on the monitoring date and no exceedance was recorded in subsequence monitoring, the exceedance was considered not related to Project.

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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
101108	8/11/2010	Mr. Nip received by ICC (CC Case)	Sai Wan Ho	Visual concern around the seaside silt screen outside the WSD freshwater intake pump at Sai Wan Ho (Monitoring station ref no.. WSD15)	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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
		Garden by ICC (ICC case: 1-266039336)		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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
110419	19/04/2011	Ms Chiu at Victoria Centre at Victoria Centre by ICC (ICC# 1-272874759)	North Point	The episode of night noise on 19/4/11 and 20/4/11 at 2:50 am and the noise lasted for 30 minutes per night.	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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
110709	09/07/2011	Mr. Au from City Garden Management Office	North Point	A complaint letter to Contractor HY/2009/11 was raised by Cayley Property Management Limit on 9 July 2011 regarding a series of pump breakdown events at seawater intake of City Garden on 4, 6, 7 and 8 July 2011. A lot of rubbish such as plastic bags, nylon bags, nylon-wire mesh was observed sucking from the seawater intake at the seawater front of Block 7 of City Garden affecting the operation of seawater pump plant.	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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					so as to prevent recurrent by barge defect	
110723a	23/07/2011	Ms. Law at Victoria Centre by ICC no. 1-303887687	North Point	She concerned that Highways Department published a notice in their Management Office about construction works will be conducted from 0700 hours to 2300 hours during July to December 2011 including Saturday, Sunday and public holiday.	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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
				Central-Wanchai Bypass at noon rather than in morning at 7am.	monitoring station at Victoria Centre on 25 July and 4 August 2011 during daytime while breaking and excavation works were undertaken during monitoring. 4) In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided. No further complaint from complainant was received after proposed the mitigation measure.	
110727b	27/07/2011	Ms. Chiu by ICC no.1-304615409	North Point	Noise nuisance from the excavation works for the Highways Department adjacent to the Victoria Centre was conducted from 7am	1) It was referred by AECOM to ET on 28 July 2011 2) With reference to the construction noise monitoring at Vitoria Centre, no exceedance was recorded on 25 July and 4 and 10 August 2011 during daytime while breaking and excavation works were undertaken during monitoring. 3) As a mitigation measure to minimize the noise nuisance in the vicinity of the residents, rock breaking activities will be started at 8am.	Closed
	08/08/2011				4) However, complainant did not satisfy with the response on the noise nuisance from the rock-breaking during morning in front of Victoria Centre and then further complaint via 1823 on 7 August 2011. 5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed. *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.	Waiting RSS respond
111106	06/11/2011	Police officer	Wan Chai	Construction noise generated from the site at about 6:30 a.m on 6 November 2011 and require to stop the machine operation	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	Keep in view for three months from the date of complaint recevied

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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	Interim Report was submitted to EPD on 20 June 2014.

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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

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					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.	

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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.

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					Based on the relevant information provided by RSS, despite no information associated with the malodour concern was identified after investigation, the Contractor was reminded to conduct regular checking on the condition of PME used on site to ensure only well maintained PME are used on site The interim report would be submitted to EPD on 17 November 2014.	
141113	12/11/2014	EPD Ref.: H05/RS/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.

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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/00001 725-15) 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

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					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

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		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	

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

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Nevertheless, the Contractor was reminded to review the handling procedures in case of any future marine sediment handling at the concerned location and to consider the implementation of mitigation measures as appropriate to minimize potential malodour impact to nearby public.	

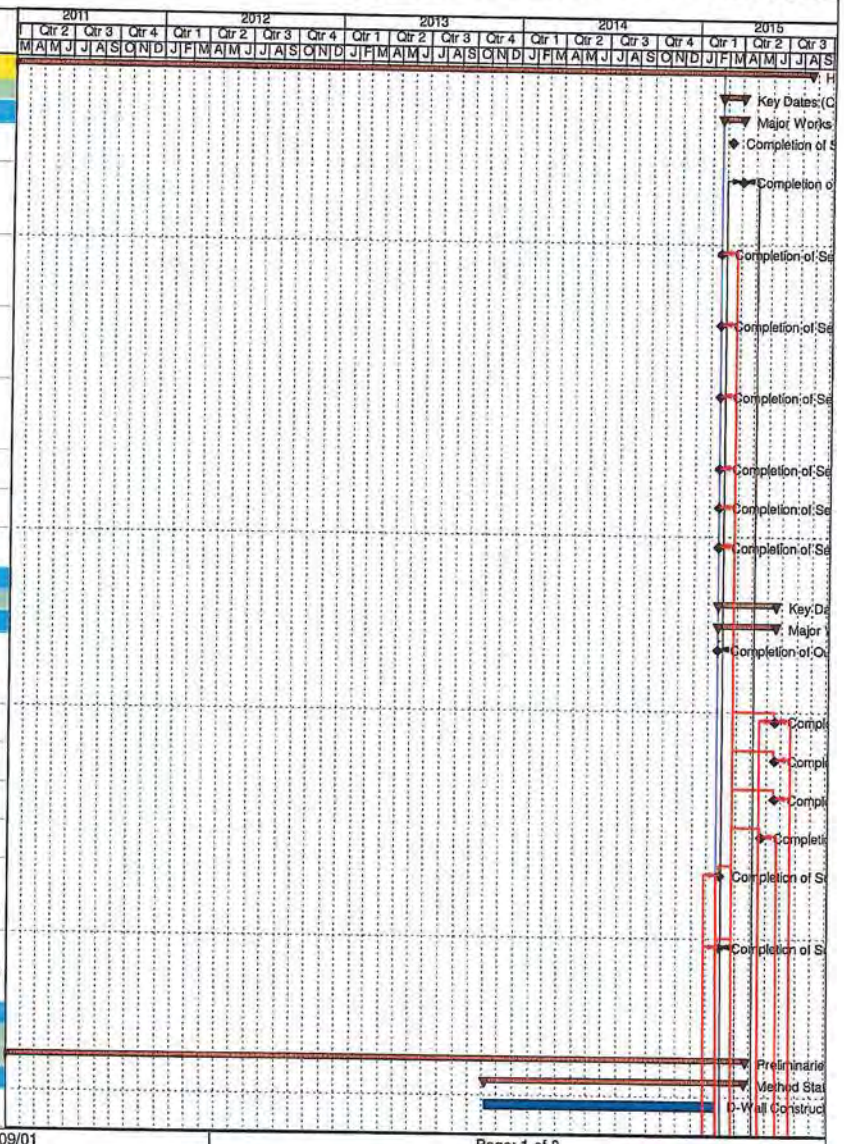
Appendix 10.1

Construction Programme of Individual Contracts

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
HK/2009/01 -Revised Works Programme Updated (Data Date: 20-Jan-1		1926	04-Mar-11 A	18-Aug-15	428	
Key Dates (Contractual)		48	20-Feb-15	02-Apr-15	589	
Major Works						
KD-0300	Completion of Section 3 of Works - CWB, Slip Roads 2 & 3 & Works in Area 8	0		11-Mar-15*	0	KD-0305, PRE-4050
KD-0400B	Completion of Outstanding Works for Section 4 - Salt Watermains	0		02-Apr-15	500	TTAM-B6-1030B, TTAM-A2-1040D, TTAM-A3-1090B, TTAM-A5-1050B, TTAM-B6-1090B
KD-0610	Completion of Section 6A of Works - Gov't Offices cooling water discharge	0		20-Feb-15*	-122	TTAM-C2-1100B, TTAM-X3-1000B, KD-0615, TTAM-C2-1100B
KD-0620	Completion of Section 6B of Works - Great Eagle Centre cooling water discharge	0		20-Feb-15*	-122	KD-0625, TTAM-C2-1100B, TTAM-X2-1020B, TTAM-C2-1100B
KD-0630	Completion of Section 6C of Works - China Resources Bldg cooling water discharge	0		20-Feb-15*	-122	TTAM-C2-1100B, TTAM-X2-1020B, KD-0635, TTAM-C2-1100B
KD-0800	Completion of Section 8 of Works - Works in Area 6	0		20-Feb-15*	-105	KD-0805
KD-1200	Completion of Section 12 of Works - Works in Area 10	0		20-Feb-15*	-316	KD-1205
KD-1300	Completion of Section 13 of Works - Works in Area 11	0		20-Feb-15*	-29	KD-1305
Landscaping & Establishment Works		0			0	
Key Dates (Forecast Completion)		135	20-Feb-15	18-Jun-15	501	
Major Works						
KD-0405B	Completion of Outstanding Works for Section 4 - Salt Watermains & Works in Area 3	0		20-Feb-15	542	S11-4030, S4-2520, S4-4060, S4-4000, S4-1500, S4-4070, S4-4050, S4-2500, S4-4080, S4-4010,
KD-0615	Completion of Section 6A of Works - Gov't Offices cooling water discharge	0		18-Jun-15	-241	S6-1030, S6A-2010, S6A-2030B
KD-0625	Completion of Section 6B of Works - Great Eagle Centre cooling water discharge	0		18-Jun-15	-241	S6B-2000, S6-1030, S6B-2020B
KD-0635	Completion of Section 6C of Works - China Resources Bldg cooling water discharge	0		18-Jun-15	-241	S6C-2000, S6-1030, S6C-2020B
KD-0805	Completion of Section 8 of Works - Works in Area 6	0		22-May-15	-196	S8-3000
KD-1205	Completion of Section 12 of Works - Works in Area 10	0		28-Feb-15*	0	TTAM-A4-1050C, S12-1000, TTAM-A4-1020B, VO106-1000, VO106-1000A
KD-1305	Completion of Section 13 of Works - Works in Area 11	0		28-Feb-15*	0	S3A-TS-1050, S13-1000, S13-3000, S13-2000, VO106-2000, VO105-2000A
Landscaping & Establishment Works		0			0	
Possession of Site		0			0	
Preliminaries		1510	04-Mar-11 A	21-Apr-15	481	
Method Statement & Design (Major) Approved by ASCOM		120	07-Nov-13 A	19-Aug-15	427	
PRE-2000G	D-Wall Construction for CWB Tunnel (Stage 3)	60	05-Nov-13 A	20-Feb-15*	-426	PRE-2000E



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

CEDD CONTRACT NO. HK/2009/01

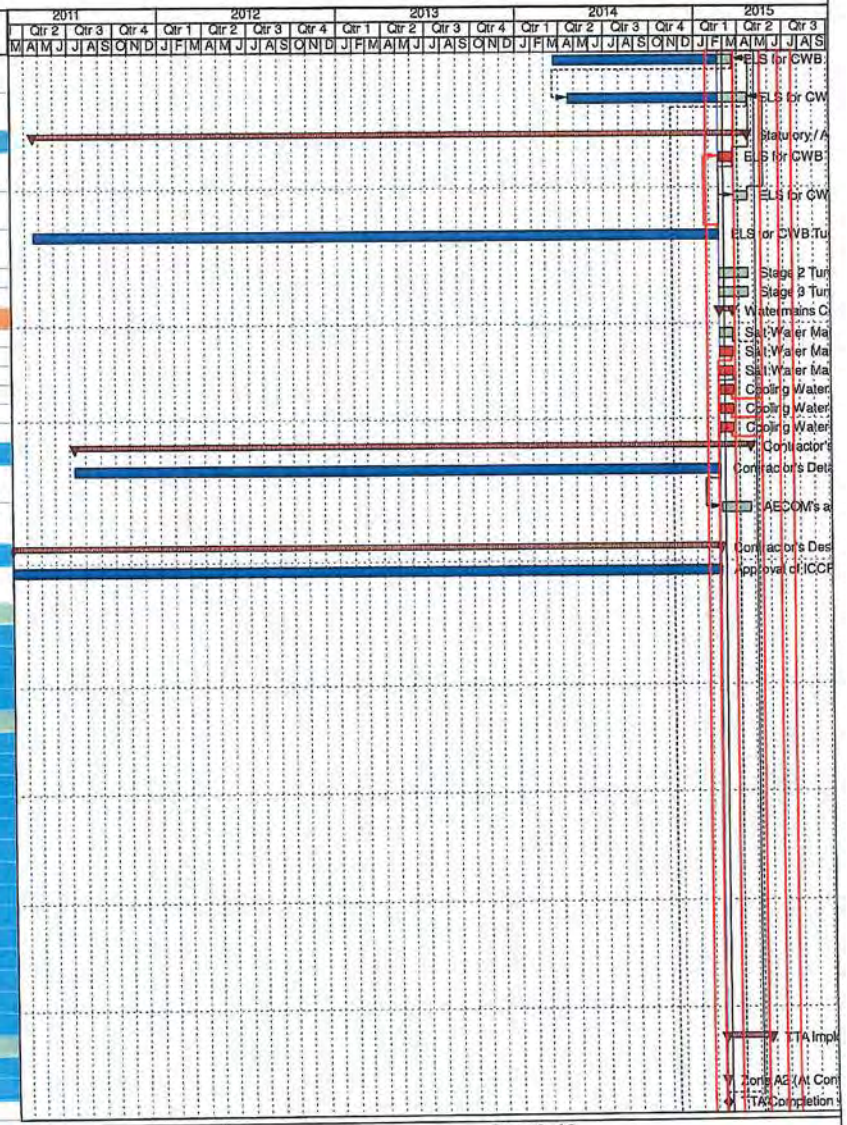
Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

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

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
PRE-2030B	ELS for CWB Stage 2	30	20-Mar-14 A	20-Mar-15	513	PRE-2030A, PRE-3050B
PRE-2030C	ELS for CWB Stage 3	30	19-Apr-14 A	19-Apr-15	483	PRE-3050C, PRE-2030B
Statutory / Authority Approval		640	20-Apr-11 A	20-Apr-15	482	
PRE-3050B	ELS for CWB Tunneling Works Stage 2 (GEO)	28	21-Feb-15*	20-Mar-15	-601	PRE-3050D, PRE-3050A
PRE-3050C	ELS for CWB Tunneling Works Stage 3 (GEO)	28	23-Mar-15	19-Apr-15	483	PRE-3050D, PRE-3050B
PRE-3050D	ELS for CWB Tunneling Works Stage 1B (GEO) for Bottom Up	28	20-Apr-11 A	20-Feb-15	-601	PRE-3050A
PRE-3310	Stage 2 Tunnel Structure Design	60	20-Feb-15	20-Apr-15	482	S3B-TS-1000
PRE-3320	Stage 3 Tunnel Structure Design	60	20-Feb-15	20-Apr-15	482	S3C-TS-1100
Watermains Connection Submission Approval by WSD/Stakeholders		28	20-Feb-15	19-Mar-15	507	
PRE-3200C	Salt Water Mains (S3)	28	20-Feb-15*	19-Mar-15	507	KD-0010
PRE-3200D	Salt Water Mains (S8)	28	20-Feb-15*	19-Mar-15	-207	KD-0010
PRE-3200E	Salt Water Mains (S9)	28	20-Feb-15*	19-Mar-15	-629	KD-0010
PRE-3200O	Cooling Watermains (BF)	28	20-Feb-15*	19-Mar-15	-151	KD-0010
PRE-3200P	Cooling Watermains (BG)	28	20-Feb-15*	19-Mar-15	-151	KD-0010
PRE-3200Q	Cooling Watermains (BI)	28	20-Feb-15*	19-Mar-15	-151	KD-0010
Contractor's Design (CWB Diaphragm Wall)		1361	09-Jul-11 A	21-Apr-15	481	
PRE-4020	Contractor's Detailed Design	30	09-Jul-11 A	20-Feb-15	481	PRE-4000
PRE-4030	AECOM's and GEO's approval on Detailed Design	60	21-Feb-15	21-Apr-15	481	PRE-4010, PRE-4020
Contractor's Design (PSt.94)		9	04-Mar-11 A	20-Feb-15	542	
PRE-5100C	Approval of ICCP of Cross-Harbour Mains - by AECOM & Relevant Authorities	9	04-Mar-11 A	20-Feb-15	542	
Major Materials Manufacture & Site Delivery		0			0	
Section 1 - Cross Harbour Mainlaying		0			0	
Section 2A to 2D - T&M for Cooling Water Pumping Stations		0			0	
Section 2A to 2D - Inlet Screens for Cooling Water Pumping Stations (WO)		0			0	
Section 3 - CWB Tunnel		0			0	
Temporary Traffic Arrangement (TTA) Submission & Approval		0			0	
Zone A1 (Junction between Convention Avenue and Expo Drive)		0			0	
Zone A2 (At Convention Avenue)		0			0	
Zone A3 (At Fenwick Pier Street)		0			0	
Zone A4 (At Convention Avenue)		0			0	
Zone A5 (At Harbour Road)		0			0	
Zone B1 (At HKCEC VIP Drop-Off Area and Passenger Drop-Off Area, and Ex)		0			0	
Zone B2 (At HKCEC VIP Drop-Off Area and Expo Drive Central)		0			0	
Zone B3 (At Water Channel)		0			0	
Zone B4 (At Golden Bauhinia Square)		0			0	
Zone B5 (At Expo Drive Central North)		0			0	
Zone B6 (North & West of HKCEC + Sewage System)		0			0	
Area X1 (At Fleming Road and Junction btw Fleming Road & Convention Av		0			0	
Area X2 (At Convention Avenue near Expo Drive East)		0			0	
Zone C (Expo Drive East)		0			0	
TTA Implementation and Completion Summary Milestone		103	20-Feb-15	22-May-15	534	
Zone A1 (Junction between Convention Avenue and Expo Drive)		0			0	
Zone A2 (At Convention Avenue)		0	20-Feb-15	20-Feb-15	542	
TTAM-A2-1040D	TTA Completion - Zone A2-4B	0		20-Feb-15	542	S4-2080



Remaining Work
Actual Work
Summary Bar
Critical Remaining Work
Milestone
Summary
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CEDD CONTRACT NO. HK/2009/01

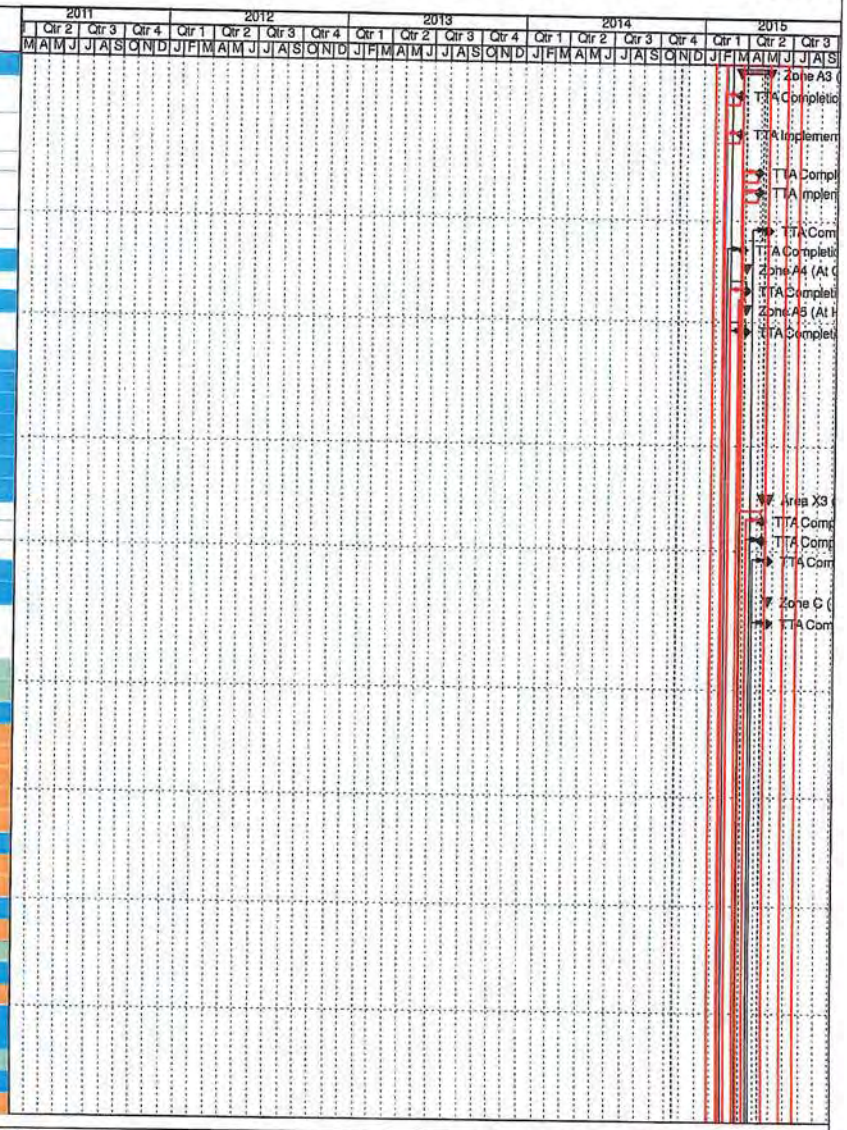
Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

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

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
Zone A2 (At Fenwick Pier Street)		52	19-Mar-15	16-May-15	457	
TTAM-A3-1030	TTA Completion - Combination of Zone A3-5D & A3-4D (Sewer)	0		19-Mar-15	-195	S8-1030
TTAM-A3-1040	TTA Implementation - Zone A3-2C (Sewer)	0	19-Mar-15		-195	TTA-A3-6050, TTAM-A3-1030
TTAM-A3-1050	TTA Completion - Zone A3-2C (Sewer)	0		26-Apr-15	-196	S8-1040
TTAM-A3-1060	TTA Implementation - Zone A3-2D (Sewer)	0	26-Apr-15		-196	TTA-A3-6060, TTAM-A3-1050
TTAM-A3-1070	TTA Completion - Zone A3-2D (Sewer)	0		16-May-15	457	S8-1050
TTAM-A3-1090B	TTA Completion - Zone A3-5C - Salt Water	0		26-Mar-15	507	S4-2520, S4-2120
Zone A4 (At Convention Avenue)		0	26-Apr-15	02-Apr-15	-207	
TTAM-A4-1120B	TTA Completion - Zone A4-2C	0		02-Apr-15	-207	S4-1000, S4-1520
Zone A5 (At Harbour Road)		0	02-Apr-15	02-Apr-15	500	
TTAM-A5-1050B	TTA Completion - Zone A5-6	0		02-Apr-15	500	S4-1100, S4-1510, S4-1520
Zone B1 (At HKCEC VIP Drop-Off Area and Passenger Drop-Off Area, and Ext)		0			0	
Zone B2 (At HKCEC VIP Drop-Off Area and Expo Drive Central)		0			0	
Zone B3 (At Water Channel)		0			0	
Zone B4 (At Golden Bauhinia Square)		0			0	
Zone B5 (At Expo Drive Central North)		0			0	
Zone B6 (North & West of HKCEC - Sewage System)		0			0	
Area X3 (Fleming Road b/w Harbour Road & Convention Avenue)		13	09-May-15	09-May-15	463	
TTAM-X3-1000B	TTA Completion - Zone X1-1	0		09-May-15	-201	S6A-1200, S9-5500A
TTAM-X3-1010B	TTA Completion - Zone X1-2	0		09-May-15	463	S9-5500B, S6A-1210
TTAM-X3-1020B	TTA Completion - Zone X1-3	0		22-May-15	450	S9-5500C, S6A-1220
Area X2 (Junction between Fleming Road and Convention Avenue)		0			0	
Zone C (Expo Drive East)		0	22-May-15	22-May-15	450	
TTAM-C3-1000B	TTA Completion - Zone C3-1	0		22-May-15	450	S6B-1220, TTAM-C3-1000A, S6C-1600, S6A-1240
Trial Pit Construction Schedule		0			0	
Section 1 of the Works - Cross Harbour Watermains, Works in Area 1 & 2		0			0	
Submarine Section (CHA & CHB)		0			0	
Preliminaries		0			0	
CHA & CHB 500 to 1160 (Wan Chai Side)		0			0	
CHA & CHB -0.1 to 500 (TST Side)		0			0	
Impressed Current Cathodic Protection (ICCP) System		0			0	
Testing & Commissioning		0			0	
Wan Chai Section (CHC & CHD)		0			0	
Maintaying at Zone B1-5 (Conventional Trench Excavation)		0			0	
Testing & Commissioning		0			0	
Tsim Sha Tsui Section (CHE & CHF)		0			0	
Testing & Commissioning		0			0	
Section 2A of the Works - Cooling Water Intake & Discharge System (Con		0			0	
Pipeworks		0			0	
Testing & Commissioning		0			0	
E&M Works		0			0	
Installation of inlet Screen		0			0	
Section 2B of the Works - Cooling Water Intake & Discharge System (HK/		0			0	
Pipeworks		0			0	
Testing & Commissioning		0			0	



Remaining Work
Actual Work
Summary Bar
Critical Remaining Work
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CEDD CONTRACT NO. HK/2009/01

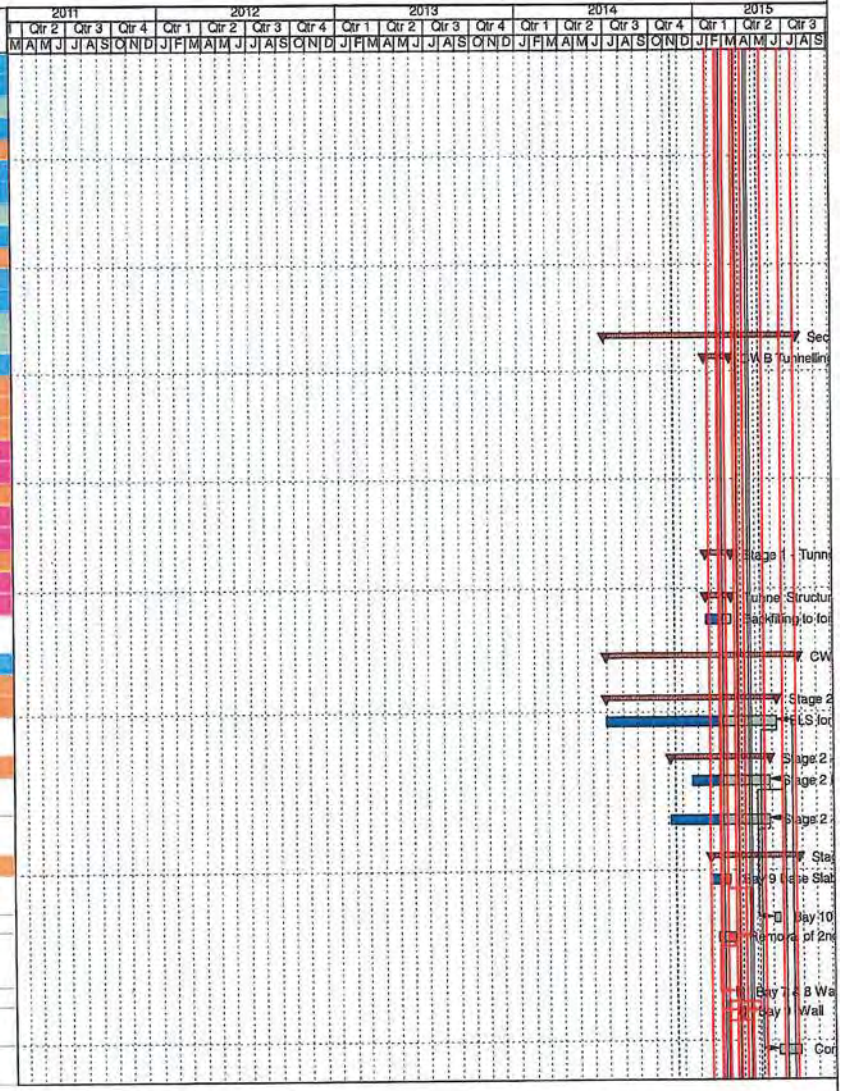
Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

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

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
	E&M Works	0			0	
	Installation of Inlet Screen	0			0	
	Section 2C of the Works - Cooling Water Intake & Discharge System (Shu	0			0	
	Pipeworks	0			0	
	Testing & Commissioning	0			0	
	E&M Works	0			0	
	Installation of Inlet Screen	0			0	
	Section 2D of the Works - Cooling Water Intake System (3 nos. Govt Towe	0			0	
	Pipeworks	0			0	
	Testing & Commissioning	0			0	
	E&M Works	0			0	
	Installation of Inlet Screen	0			0	
	Common E&M Works for Sections 2A, 2B, 2C & 2D (LV Switch Board at H	0			0	
	Section 3 of the Works - CWB Tunnel, Slip Roads 2 & 3, Works in Area 8	452	27-Jun-14 A	25-Jul-15	458	
	CWB Tunnelling Works (Stage 1 : CH2947 - CH3045)	37	19-Jan-15 A	10-Mar-15	213	
	Pipe Pile Wall P1	0			0	
	Stage 1 - Reclamation Works (Marine Chainage : CH0 - CH120)	0			0	
	Stage 1 - Foundation Works (CH2947 - CH3045 / CH0 - CH120)	0			0	
	Foundation Works at Stage 1A (Top Down Method : CH2947 - CH2988)	0			0	
	Foundation Works at Stage 1B (Bottom Up Method : CH2988 - CH3045)	0			0	
	Stage 1 - Excavation Works (Ch2947 - Ch 3045)	0			0	
	Excavation Works at Stage 1A (For Top Slab Construction : CH2947 - C	0			0	
	Excavation Works at Stage 1A & 1B (For Bottom Slab Construction : CI	0			0	
	Stage 1 - Tunnel Structure Works (Bay 1 to Bay 7 : CH2947 - Ch 3045)	37	19-Jan-15 A	10-Mar-15	213	
	Tunnel Structure at Stage 1A (Top Slab Construction : CH2947 - CH2988)	0			0	
	Tunnel Structure at Stage 1A & 1B (CH2947 - CH3045)	30	19-Jan-15 A	10-Mar-15	183	
S3A-TS-2080	Backfilling to formation level for Stage 1B (CH 80 to CH 120)	30	19-Jan-15 A	10-Mar-15	183	S3A-TS-1060, S3A-TS-2000
	CWB Tunnelling Works (Stage 2 : Ch3045 - Ch3129)	452	27-Jun-14 A	25-Jul-15	458	
	Stage 2 - Reclamation Works (Marine Chainage : CH120 - CH225)	0			0	
	Stage 2 - Foundation Works (Bottom Up Method : CH3045 - CH3129 / CH1	170	27-Jun-14 A	10-Jun-15	386	
S3B-FW-1040C	ELS for Exhaust Duct CH2988 to CH3045 (~-5.0mPD)	170	27-Jun-14 A	10-Jun-15	386	S3B-FW-1040B, S3B-TS-2000A
	Stage 2 - Excavation Works (For Bottom Slab Construction : CH3045 - CH	75	06-Nov-14 A	27-May-15	339	
S3B-EW-1000E	Stage 2 ELS - excavate to approx. -10.0mPD at Bay 10	32	19-Dec-14 A	27-May-15	339	S3C-EW-1010E
S3B-EW-1030	Stage 2 - Breaking of Bulk Head Wall at Bay 10 Ch3129	35	06-Nov-14 A	27-May-15	339	S3B-EW-1000E
	Stage 2 - Tunnel Structure Works (Bay 1 to Bay 10 : CH3045 - CH3129)	170	27-Jun-14 A	25-Jul-15	386	
S3B-TS-1030	Bay 9 Base Slab	14	27-Jan-15 A	05-Mar-15	-141	S3B-TS-1020
S3B-TS-1040	Bay 10 Base Slab	14	03-Jun-15	16-Jun-15	381	S3B-EW-1000E
S3B-TS-1050	Removal of 2nd and 3rd layer of Strut/Waling at Bay 7, 8 & 9	15	09-Feb-15 A	15-Mar-15	-141	S3B-TS-1010, S3B-TS-1020, S3B-TS-1030
S3B-TS-1060	Bay 7 & 8 Wall	14	16-Mar-15	29-Mar-15	-141	S3B-TS-1050
S3B-TS-1070	Bay 9 Wall	14	21-Mar-15	03-Apr-15	-141	S3B-TS-1050, S3B-TS-1060
S3B-TS-1080	Construction of Exhaust Duct (CH2988 - CH3045)	45	11-Jun-15	25-Jul-15	386	S3B-FW-1040C



Remaining Work
Actual Work
Summary Bar
Critical Remaining Work
Milestone
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CEDD CONTRACT NO. HK/2009/01

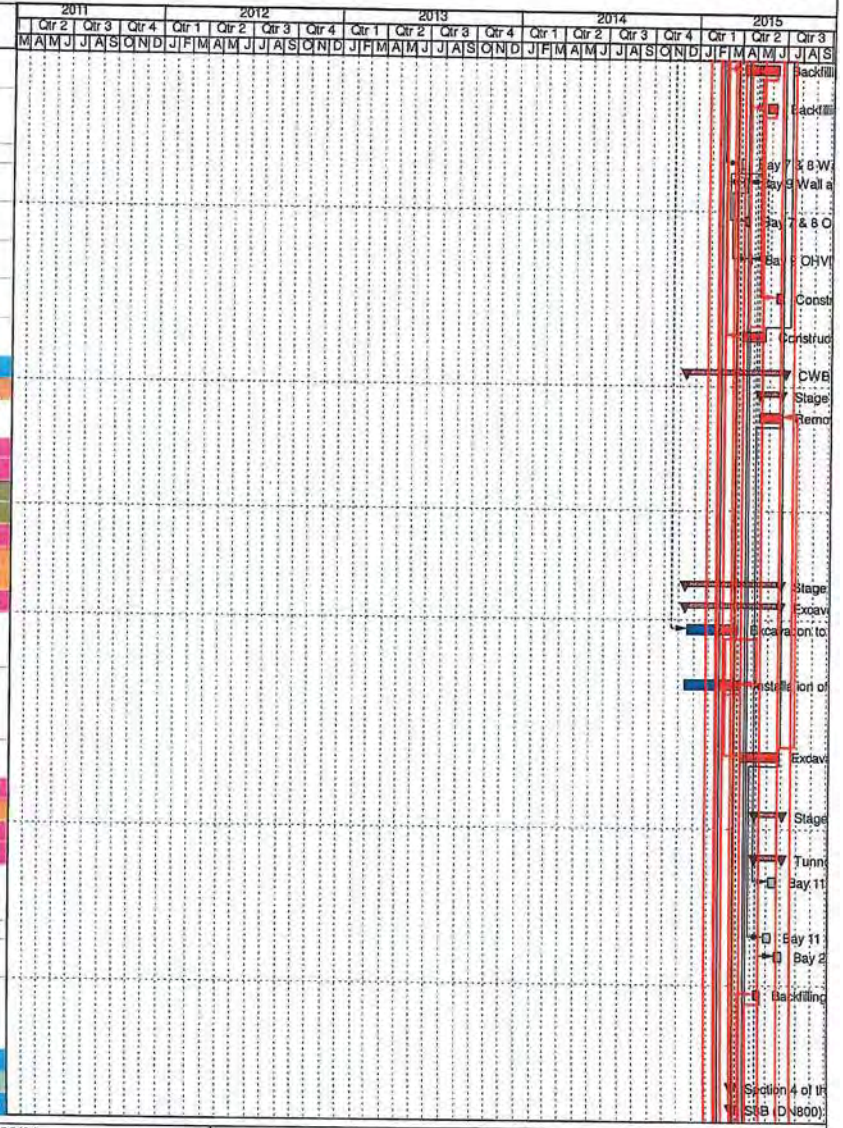
Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

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

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
S3B-TS-1090	Backfilling at Northern Side from -10mPD to -2mPD (Slip Road 2 - 4700cu.m)	70	04-Apr-15	12-Jun-15	-141	S3B-TS-1060, S3B-TS-1070
S3B-TS-1100	Backfilling at Southern Side from -10mPD to -2mPD (Slip Road 3 - 4000cu.m)	21	22-May-15	11-Jun-15	-140	S3B-TS-1060, S3B-TS-1070, S3B-TS-2000A
S3B-TS-1110	Bay 7 & 8 Wall and OHVD Base Slab	10	30-Mar-15	08-Apr-15	459	S3B-TS-1060
S3B-TS-1120	Bay 9 Wall and OHVD Base Slab	10	04-Apr-15	13-Apr-15	459	S3B-TS-1070, S3B-TS-1110
S3B-TS-1130	Bay 7 & 8 OHVD Wall Stem and Bay 7 & 8 Top Slab	10	09-Apr-15	18-Apr-15	484	S3B-TS-1110
S3B-TS-1140	Bay 9 OHVD Wall Stem and Bay 9 Top Slab	10	14-Apr-15	23-Apr-15	459	S3B-TS-1110, S3B-TS-1120
S3B-TS-1160	Construction of Slip Road 2 & 3 Base Slab	14	13-Jun-15	26-Jun-15	-141	S3B-TS-1090, S3B-TS-1100
S3B-TS-2000A	Construction of Exhaust Duct (CH3045 - CH3129) including waterproofing works	48	04-Apr-15	21-May-15	-140	S3B-TS-1070
CWB Tunnelling Works (Stage 3 - CH3129 - CH3245)		0			0	
Stage 3 - Reclamation Works		56	12-May-15	25-Jun-15	-242	
S3C-MW-1400	Removal of Remaining Type II & I Material during Stage 3 Excavation	45	12-May-15	25-Jun-15	-242	S3C-EW-1010E
Discharge Pipelines Outfall and Seawall Construction		0			0	
Demolition Works		0			0	
Demolition Works - Stage 2		0			0	
Demolition Works - Stage 3		0			0	
Expo Drive East (Diversion and Reprovision)		0			0	
Stage 3 - Foundation Works		0			0	
Stage 3 - Excavation Works (CH3129 - CH3245)		126	12-Dec-14 A	25-Jun-15	-242	
Excavation Works at Stage 3		96	12-Dec-14 A	25-Jun-15	-242	
S3C-EW-1010	Excavation to -4.0 mPD (approx 26,600m3) including strut/waling installation	96	18-Dec-14 A	31-Mar-15	-236	S3C-FW-1040B, PRE-2030C, S3C-EW-1000
S3C-EW-1010B	Installation of Dewatering Well (45nos.) and Pumping Test	45	12-Dec-14 A	06-Apr-15	-242	PRE-2000H, S3C-FW-1050C, S3C-FW-1040B, S3C-EW-1010
S3C-EW-1010E	Excavation to -16mPD (approx 55,000m3)	80	07-Apr-15	25-Jun-15	-242	S3C-EW-1010, S3C-EW-1010B
Excavation Works at Stage 3A & 3B (For Bottom Slab Construction : Cl		0			0	
Stage 3 - Tunnel Structure Works (Bay 11 to Bay 28 : Ch3129 - Ch3245)		56	08-May-15	02-Jul-15	355	
Tunnel Structure at Stage 3A (Top Slab Construction : CH3165 - CH3246)		0			0	
Tunnel Structure at Stage 3A & 3B (CH3129 - CH3245)		56	08-May-15	02-Jul-15	355	
S3C-TS-2000	Bay 11 Slip Road 3 Sump Pit Base Slab	14	06-Jun-15	19-Jun-15	329	S3C-MW-1400, S3C-EW-1010E, S3B-EW-1030
S3C-TS-2000F	Bay 11 CWB Base Slab	14	27-May-15	09-Jun-15	330	S3C-EW-1010E
S3C-TS-2090A	Bay 20 CWB & Slip Road 2 Base Slab and Slip Road 3 Wall	14	19-Jun-15	02-Jul-15	355	S3C-EW-1010E
S3C-TS-2160	Backfilling up to Formation Level of Cooling Mains & Construction of Surface Drainage incl. strut/waling removal	15	06-May-15	20-May-15	-241	S9-1050, S9-1040B, S9-1040A
Works in Area 3		0			0	
Section 4 of the Works - Salt Water Mains, Works in Area 3		8	20-Mar-15	26-Mar-15	598	
S3B (DN800) Salt Watermains		0			0	



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

CEDD CONTRACT NO. HK/2009/01

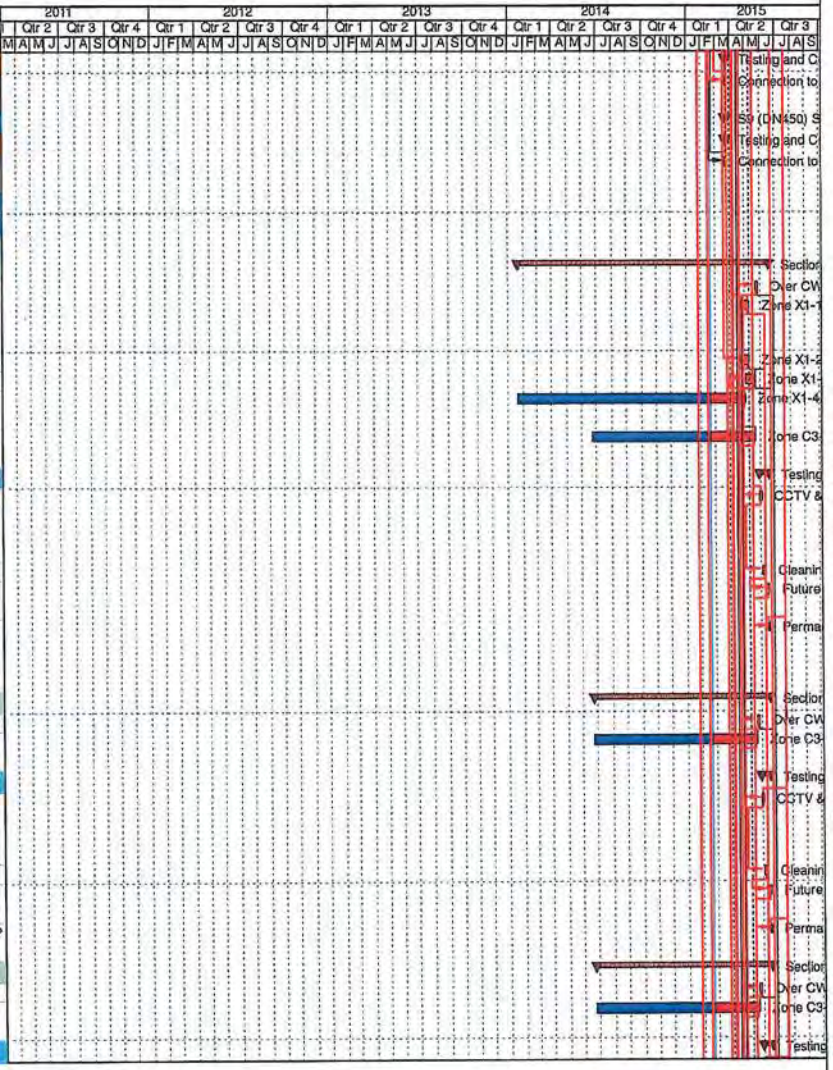
Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

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

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
	Testing and Commissioning					
S4-1520	Connection to Existing Mains (S8B)	7	20-Mar-15	26-Mar-15	-207	S4-1510, TP-1210, TP-1200, PRE-3200D
	S9 (DN450) Salt Watermains & Sewer					
	Testing and Commissioning					
S4-2520	Connection to Existing Mains (S9)	7	20-Mar-15	26-Mar-15	507	S4-2510, PRE-3200E, TP-1110
	Stormwater Drainage	0			0	
	Sewage System for Re-Provisioned Cooling Water Pumping Stations	0			0	
	Section 5 of the Works - Works in Area 7 & Pipe Pile Wall P2	0			0	
	Section 6A of the Works - Cooling Water Discharge System (3 nos. Govt T	455	20-Jan-14 A	17-Jun-15	-241	
S6A-1100	Over CWB - CHBF (92m)	7	21-May-15	27-May-15	-241	S3C-TS-2160, S9-1050
S6A-1200	Zone X1-1 - CHBF (11m)	21	19-Apr-15	09-May-15*	-223	TTAM-X3-1030A, TTAM-X3-1000A, S4-1000
S6A-1210	Zone X1-2 - CHBF (5m)	21	19-Apr-15	09-May-15*	-223	TTAM-A4-1120B
S6A-1220	Zone X1-3 - CHBF (7m)	21	02-May-15	22-May-15*	-236	S6A-1230
S6A-1230	Zone X1-4A - CHBF (21m) & S3 (21m) Connection Point	24	20-Jan-14 A	01-May-15	-236	TTAM-X3-1030A
S6A-1240	Zone C3-1 - CHBF (16m) Test and Connection Point	60	22-Jun-14 A	22-May-15	-236	TTAM-C3-1000A
	Testing & Commissioning	21	28-May-15	17-Jun-15	-241	
S6A-2010	CCTV & Pressure Test of CHBF	7	28-May-15	03-Jun-15	-241	S6A-1100, S6A-1050, S6A-1040, S6A-1200, S6A-1020, S6A-1030, S6A-1240, S6A-1210, S6A-1010, S6A-1230
S6A-2020	Cleaning & Sterilization of CHBF	7	04-Jun-15	10-Jun-15	-241	S6A-2010
S6A-2030A	Future Connection to Existing Mains (CHBF) at temporary water channel	7	11-Jun-15	17-Jun-15	-241	S6A-2020
S6A-2030B	Permanent Diversion of Discharge Water to Proposed Discharge Main	0		17-Jun-15	-241	S6A-2020, S6A-2010, TP-1310, TP-1350, S6A-2030A, PRE-3200O
	Section 6B of the Works - Cooling Water Intake & Discharge System (Gre	344	22-Jun-14 A	17-Jun-15	-241	
S6B-1100	Over CWB - CHBG (92m)	7	21-May-15	27-May-15	-241	S3C-TS-2160, S9-1050
S6B-1220	Zone C3-1 - CHBG (16m) Test and Connection Point	60	22-Jun-14 A	22-May-15	-236	TTAM-C3-1000A
	Testing & Commissioning	21	28-May-15	17-Jun-15	-241	
S6B-2000	CCTV & Pressure Test of CHBG	7	28-May-15	03-Jun-15	-241	S6B-1020, S6B-1220, S6B-1200A, S6B-1210, S6B-1200, S6B-1020A, S6B-1000, S6B-1010, S6B-1030, S6B-1050
S6B-2010	Cleaning & Sterilization of CHBG	7	04-Jun-15	10-Jun-15	-241	S6B-2000
S6B-2020A	Future Connection to Existing Mains (CHBG) at temporary water channel	7	11-Jun-15	17-Jun-15	-241	S6B-2010
S6B-2020B	Permanent Diversion of Discharge Water to Proposed Discharge Main	0		17-Jun-15	-241	S6B-2020A, PRE-3200P
	Section 6C of the Works - Cooling Water Discharge System (China Resou	344	22-Jun-14 A	17-Jun-15	-241	
S6C-1100	Over CWB - CHBI (100m)	7	21-May-15	27-May-15	-241	S3C-TS-2160, S9-1050
S6C-1600	Zone C3-1 - CHBI (16m) Test and Connection Point	60	22-Jun-14 A	22-May-15	-236	TTAM-C3-1000A
	Testing & Commissioning	21	28-May-15	17-Jun-15	-241	



Remaining Work
Actual Work
Summary Bar
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CEDD CONTRACT NO. HK/2009/01

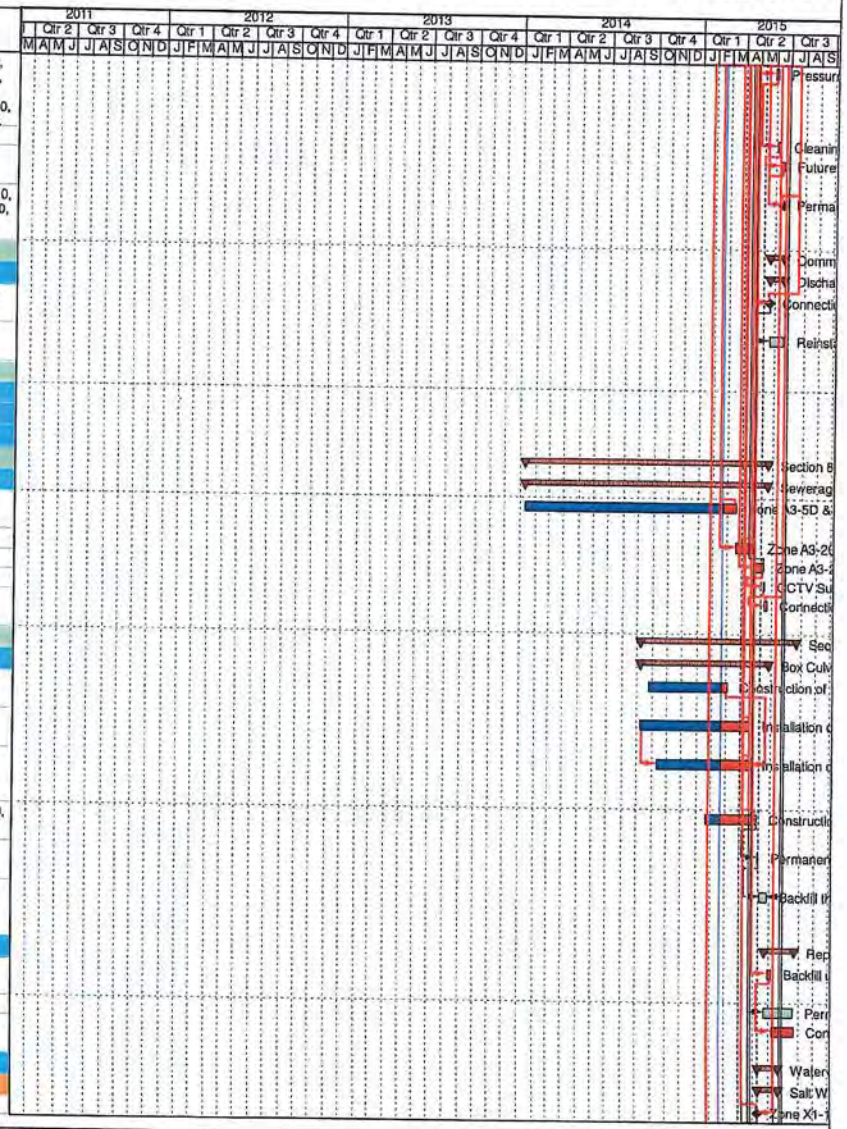
Wan Chai Development Phase II - Central-Wan Chai Bypass at HKCEC (Contract 1)

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

CEDD CONTRACT HK/2009/01

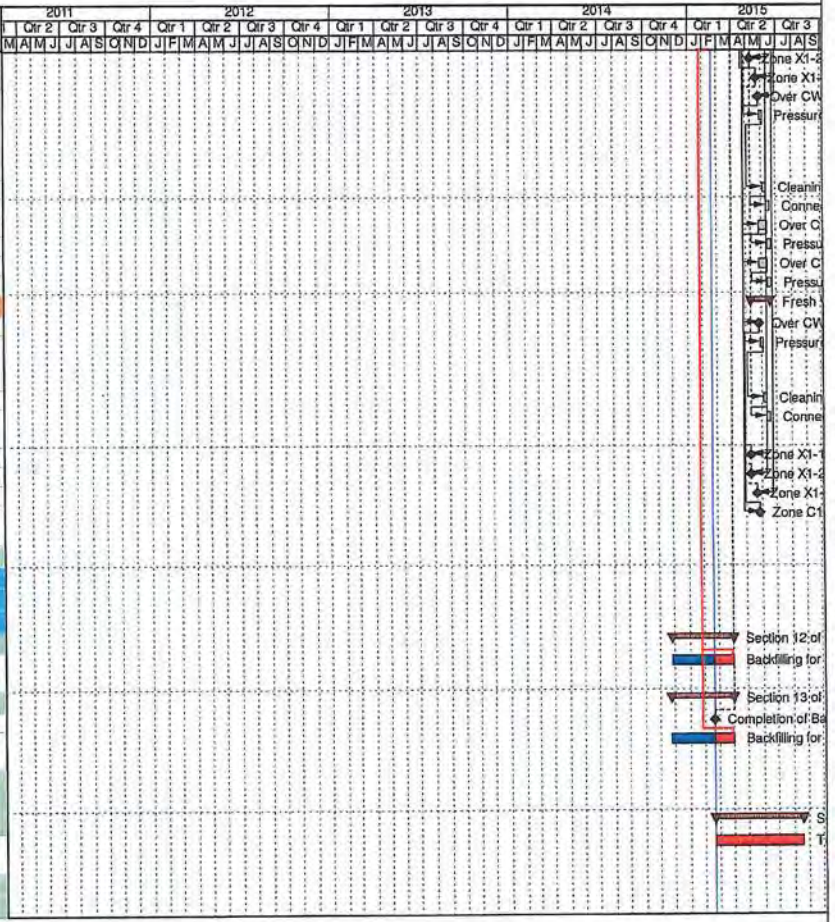
CHUN WO - LEADER JOINT VENTURE

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
S6C-2000	Pressure Test of CHBI	7	28-May-15	03-Jun-15	-241	S6C-1030, S6C-1600, S6C-1040, S6C-1100, S6C-1020A, S6C-1020A, S6C-1020, S6C-1050, S6C-1300,
S6C-2010	Cleaning & Sterilization of CHBI	7	04-Jun-15	10-Jun-15	-241	S6C-2000
S6C-2020A	Future Connection to Existing Mains (CHBI) at temporary water channel	7	11-Jun-15	17-Jun-15	-241	S6C-2010
S6C-2020B	Permanent Diversion of Discharge Water to Proposed Discharge Main	0		17-Jun-15	-241	PRE-3200Q, S6C-2010, S6C-2020A, S6C-2000, TP-1330
Common Works for Sections 6A, 6B & 6C		30	22-May-15	21-Jun-15	420	
Drainage Outfall Construction						
S6-1030	Connection of the Completed Cooling Mains to Precast Outfall Unit	0		22-May-15	-250	S6C-1600, S8A-1240, S6B-1220, S6-1010
S6-1040	Reinstatement of Existing Seawall after Connection	30	23-May-15	21-Jun-15	420	S6-1030
Section 7 of the Works - Trial Bored Piles in Area 5		0			0	
ADMS Installation						
Trial Bored Piling						
Testing & Commissioning						
Section 8 of the Works - Works in Area 5 (Utilities other than Watermains		583	10-Jan-14 A	22-May-15	-228	
Sewerage Works						
S8-1030	Zone A3-5D & A3-4D	23	10-Jan-14 A	19-Mar-15	-228	TTAM-A3-1020
S8-1040	Zone A3-2C	23	19-Mar-15	26-Apr-15	-228	TTAM-A3-1040
S8-1050	Zone A3-2D	23	26-Apr-15	15-May-15	-228	TTAM-A3-1060
S8-2500	CCTV Survey	1	15-May-15	16-May-15	-228	S8-1000, S8-1050
S8-3000	Connection with Upstream Existing Manhole & Abandon Used Pipe	7	16-May-15	22-May-15	-228	S8-2500
Section 9 of the Works - Remaindar of the Works		214	07-Sep-14 A	21-Jul-15	390	
Box Culvert Construction						
S9-1030	Construction of Precast Bay 1	76	25-Sep-14 A	03-Mar-15	-208	DW3-1020AA, EDE-1010A
S9-1040A	Installation of Sheet Pile / ELS and Construction for Bay 7	180	07-Sep-14 A	20-Apr-15	-226	S3C-FW-1040B
S9-1040B	Installation of Sheet Pile / ELS and Construction for Bay 2	180	11-Oct-14 A	20-Apr-15	-226	S9-1040A, S3C-FW-1050E, S9-1030
S9-1050	Construction of Bay 3 to Bay 6 incl. top slab waterproofing works	75	20-Jan-15 A	05-May-15	-241	S9-1020, S3C-TS-1100, S9-1010
S9-1060	Permanent Diversion of Storm Water to New Provided Box Culvert	5	06-May-15	10-May-15	107	S9-1050
S9-1070	Backfill the Temporary Water Channel from East to West (BG/BI Connection Point at Water Channel)	15	13-May-15	27-May-15	105	S9-1050, S6C-1100, S6B-1100, S6A-1100, S9-1060
Reprovision of Expo Drive East						
S9-2000	Backfill up to Formation Level for Reprovision of Expo Drive East	10	28-May-15	06-Jun-15	-35	S6C-1100, S6B-1100, S6A-1100
S9-2000A	Permanent UU Connection/Change Over	60	21-May-15	20-Jul-15	391	S3C-TS-2160
S9-2010	Construction of New Road and Surface Drainage	45	07-Jun-15	21-Jul-15	-35	S9-2000
Waterworks in Area 5						
Salt Water Mains (ST, SSA & SSB)						
S9-5500A	Zone X1-1 - S3 (5m)	0		09-May-15	-201	S6A-1200



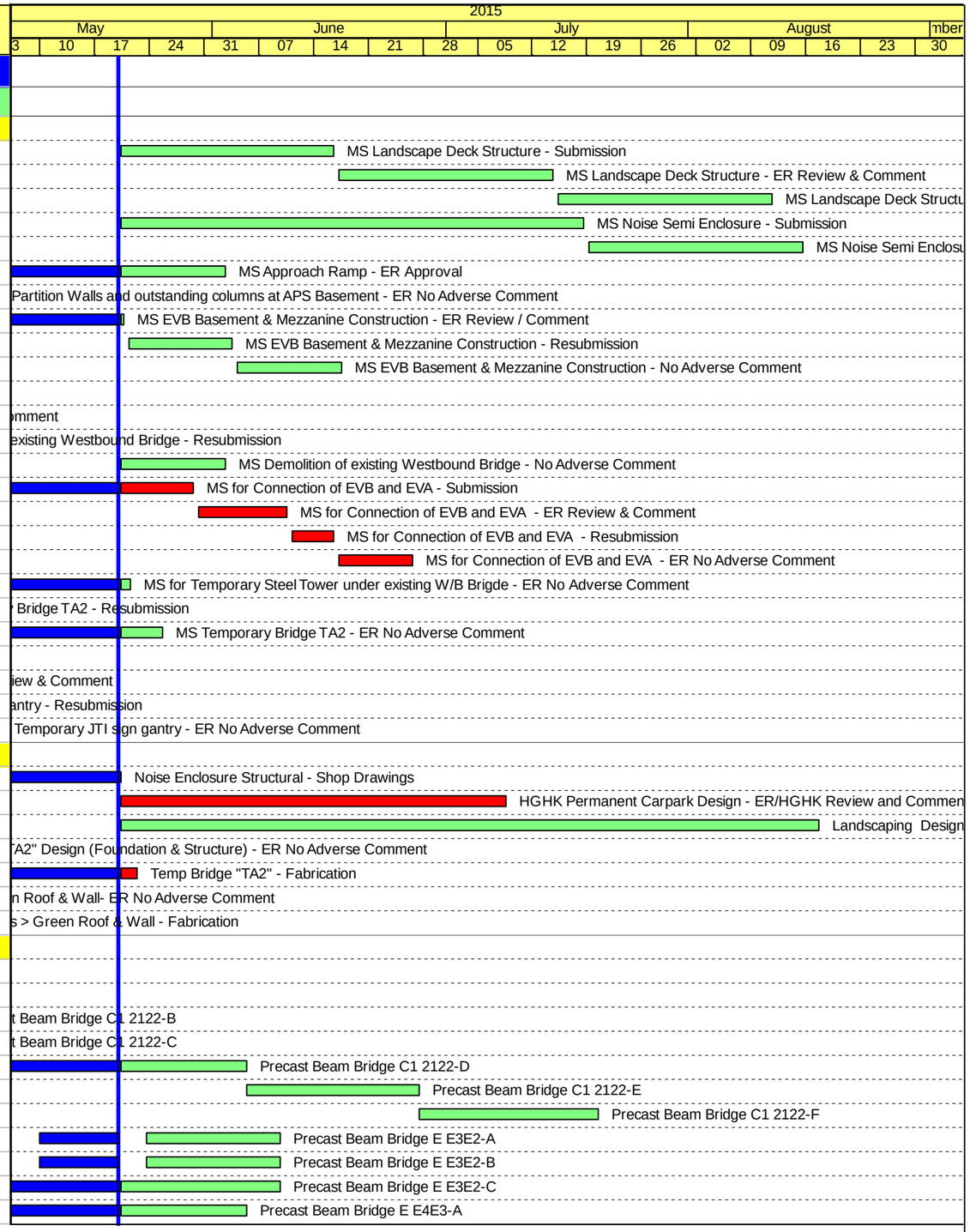
Remaining Work
Actual Work
Summary Bar
Critical Remaining Work
Milestone
Summary
Summary Bar

Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors
S9-5500B	Zone X1-2 - S3 (5m)	0		09-May-15	442	S6A-1210
S9-5500C	Zone X1-3 - S3 (5m)	0		22-May-15	429	S6A-1220
S9-5510	Over CWB - S3 (92m)	0		27-May-15	79	S6A-1100
S9-5530	Pressure Test of S3	7	28-May-15	03-Jun-15	424	S9-5500A, S9-5500D, S9-5500C, S9-5500B, S9-5510, S9-5520
S9-5540	Cleaning & Sterilization of S3	7	04-Jun-15	10-Jun-15	424	S9-5530
S9-5550	Connection to Existing Mains (S3)	7	11-Jun-15	17-Jun-15	424	PRE-3200C, S9-5540
S9-5600	Over CWB - S5A (30m)	20	27-May-15	12-Jun-15	79	S9-5510
S9-5610	Pressure Test of S5A	7	13-Jun-15	19-Jun-15	65	S9-5600
S9-5700	Over CWB - S5B (30m)	20	27-May-15	12-Jun-15	79	S9-5600
S9-5710	Pressure Test of S5B	7	13-Jun-15	19-Jun-15	65	S9-5700
Fresh Water Mains (F3)		34	28-May-15	17-Jun-15	424	
S9-7000	Over CWB - F3 (100m)	0		27-May-15	503	S6A-1100
S9-7010	Pressure Test of F3	7	28-May-15	03-Jun-15	424	S9-7000, S9-7040, S9-7050, S9-7070, S9-7060
S9-7020	Cleaning & Sterilization of F3	7	04-Jun-15	10-Jun-15	424	S9-7010
S9-7030	Connection to Existing Mains (F3) at Zone C1-3	7	11-Jun-15	17-Jun-15	424	S9-7020, PRE-3200C
S9-7040	Zone X1-1 - F3 (5m)	0		09-May-15	442	S6A-1200
S9-7050	Zone X1-2 - F3 (5m)	0		09-May-15	442	S6A-1210
S9-7060	Zone X1-3 - F3 (5m)	0		22-May-15	429	S6A-1220
S9-7070	Zone C1-5, C1-7 & C1-9 - Expo Drive East - S3 (20m)	0		27-May-15	503	S6A-1100
Section 11 of the Works - SCL Protection Works		0			0	
Foundation Works		0			0	
Excavation Works		0			0	
Structural Works		0			0	
Section 12 of the Works - Works in Area 10 (other than Section 4)		40	24-Nov-14 A	31-Mar-15	-32	
VO106-1000A	Backfilling for Kiu Lok Pump House	40	24-Nov-14 A	31-Mar-15	-32	VO106-1000
Section 13 of the Works - Works in Area 11 (other than Section 11)		40	24-Nov-14 A	31-Mar-15	-32	
S13-3000	Completion of Backfilling to +5.0mPD	0		20-Feb-15	8	VO106-2000
VO106-2000A	Backfilling for Kiu Lok Pump House	40	24-Nov-14 A	31-Mar-15	-32	VO106-2000
Section 1A of the Works - Landscape Softworks in Areas 2 & 4		0			0	
Section 1B of the Works - Establishment Works in Areas 2 & 4		0			0	
Section 9A of the Works - Landscape Softworks in Area 9		180	20-Feb-15	18-Aug-15	-3	
S9A-1000	Transplanting at Expo Drive East and Convention Avenue Junction	180	20-Feb-15	18-Aug-15	-3	PRE-2130, PS-P4, EDE-1050
Section 9B of the Works - Establishment Works in Area 9		0			0	
Section 10 of the Works - Protection and Preservation of Existing Trees		0			0	



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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
3MRP - May 2015 to Aug 2015					
02 - PRE-CONSTRUCTION WORKS					
02.3 - Method Statement / Shop Drawings					
0230-1380	MS Landscape Deck Structure - Submission	28	20-May-15	16-Jun-15	811
0230-1390	MS Landscape Deck Structure - ER Review & Comment	28	17-Jun-15	14-Jul-15	811
0230-1400	MS Landscape Deck Structure - Resubmission	28	15-Jul-15	11-Aug-15	811
0230-1611	MS Noise Semi Enclosure - Submission	60	20-May-15	18-Jul-15	131
0230-1612	MS Noise Semi Enclosure - ER Review / Comment	28	19-Jul-15	15-Aug-15	131
0230-1690	MS Approach Ramp - ER Approval	14	01-Feb-15 A	02-Jun-15	304
A10110	MS for Partition Walls and outstanding columns at APS Basement - ER No Adverse (	0	01-Feb-15 A	28-Apr-15 A	
A10500	MS EVB Basement & Mezzanine Construction - ER Review / Comment	1	16-Jan-15 A	20-May-15	26
A10510	MS EVB Basement & Mezzanine Construction - Resubmission	14	21-May-15	03-Jun-15	26
A10520	MS EVB Basement & Mezzanine Construction - No Adverse Comment	14	04-Jun-15	17-Jun-15	26
A10640	MS for Demolition of existing Westbound Bridge - Submission	0	20-Feb-15 A	28-Feb-15 A	
A10650	MS Demolition of existing Westbound Bridge - ER Review / Comment	0	01-Mar-15 A	15-Mar-15 A	
A10660	MS Demolition of existing Westbound Bridge - Resubmission	0	16-Mar-15 A	20-Apr-15 A	
A10670	MS Demolition of existing Westbound Bridge - No Adverse Comment	14	20-May-15	02-Jun-15	13
A10680	MS for Connection of EVB and EVA - Submission	10	10-Mar-15 A	29-May-15	0
A10690	MS for Connection of EVB and EVA - ER Review & Comment	12	30-May-15	10-Jun-15	0
A10700	MS for Connection of EVB and EVA - Resubmission	6	11-Jun-15	16-Jun-15	0
A10710	MS for Connection of EVB and EVA - ER No Adverse Comment	10	17-Jun-15	26-Jun-15*	0
A5940	MS for Temporary Steel Tower under existing W/B Brigde - ER No Adverse Comme	2	15-Feb-15 A	21-May-15	27
A7580	MS Temporary Bridge TA2 - Resubmission	0	16-Mar-15 A	22-Apr-15 A	
A7590	MS Temporary Bridge TA2 - ER No Adverse Comment	6	23-Apr-15 A	25-May-15	6
A8931	MS for installation of Temporary JTI sign gantry- Submission	0	10-Mar-15 A	15-Mar-15 A	
A8941	MS for installation of Temporary JTI sign gantry - ER Review & Comment	0	16-Mar-15 A	19-Mar-15 A	
A8951	MS for installation of Temporary JTI sign gantry - Resubmission	0	20-Mar-15 A	31-Mar-15 A	
A8961	MS for installation of Temporary JTI sign gantry - ER No Adverse Comment	0	01-Apr-15 A	18-Apr-15 A	
02.4 - Contractor's Design and Build Items					
0240-1113	Noise Enclosure Structural - Shop Drawings	0	02-Jan-14 A	20-May-15	50
0240-1180	HGHK Permanent Carpark Design - ER/HGHK Review and Comment	50	20-May-15	08-Jul-15	1
0240-1270	Landscaping Design - Submission	90	20-May-15*	17-Aug-15	659
A5890	Temp Bridge "TA2" Design (Foundation & Structure) - ER No Adverse Comment	0	01-Dec-14 A	22-Apr-15 A	
A5900	Temp Bridge "TA2" - Fabrication	2	01-Dec-14 A	22-May-15	4
A8991	Design for Trial Panels > Green Roof & Wall- ER No Adverse Comment	0	28-Feb-15 A	10-Apr-15 A	
A9001	Design for Trial Panels > Green Roof & Wall - Fabrication	0	01-Mar-15 A	17-Apr-15 A	
02.5 - Bridge Segment/Beam Off-site Precasting					
0250-1720.19	Precast Beam Bridge C1 2021-C	0	26-Jan-15 A	25-Mar-15 A	
0250-1720.20	Precast Beam Bridge C1 2122-A	0	11-Feb-15 A	25-Mar-15 A	
0250-1720.21	Precast Beam Bridge C1 2122-B	0	12-Feb-15 A	29-Apr-15 A	
0250-1720.22	Precast Beam Bridge C1 2122-C	0	12-Feb-15 A	29-Apr-15 A	
0250-1720.23	Precast Beam Bridge C1 2122-D	14	15-Apr-15 A	05-Jun-15	153
0250-1720.25	Precast Beam Bridge C1 2122-E	18	05-Jun-15	27-Jun-15	153
0250-1720.26	Precast Beam Bridge C1 2122-F	18	27-Jun-15	20-Jul-15	153
0250-1720.27	Precast Beam Bridge E E3E2-A	14	10-May-15 A	09-Jun-15	89
0250-1720.28	Precast Beam Bridge E E3E2-B	14	10-May-15 A	09-Jun-15	89
0250-1720.29	Precast Beam Bridge E E3E2-C	18	14-Apr-15 A	09-Jun-15	89
0250-1720.30	Precast Beam Bridge E E4E3-A	14	06-Apr-15 A	05-Jun-15	89

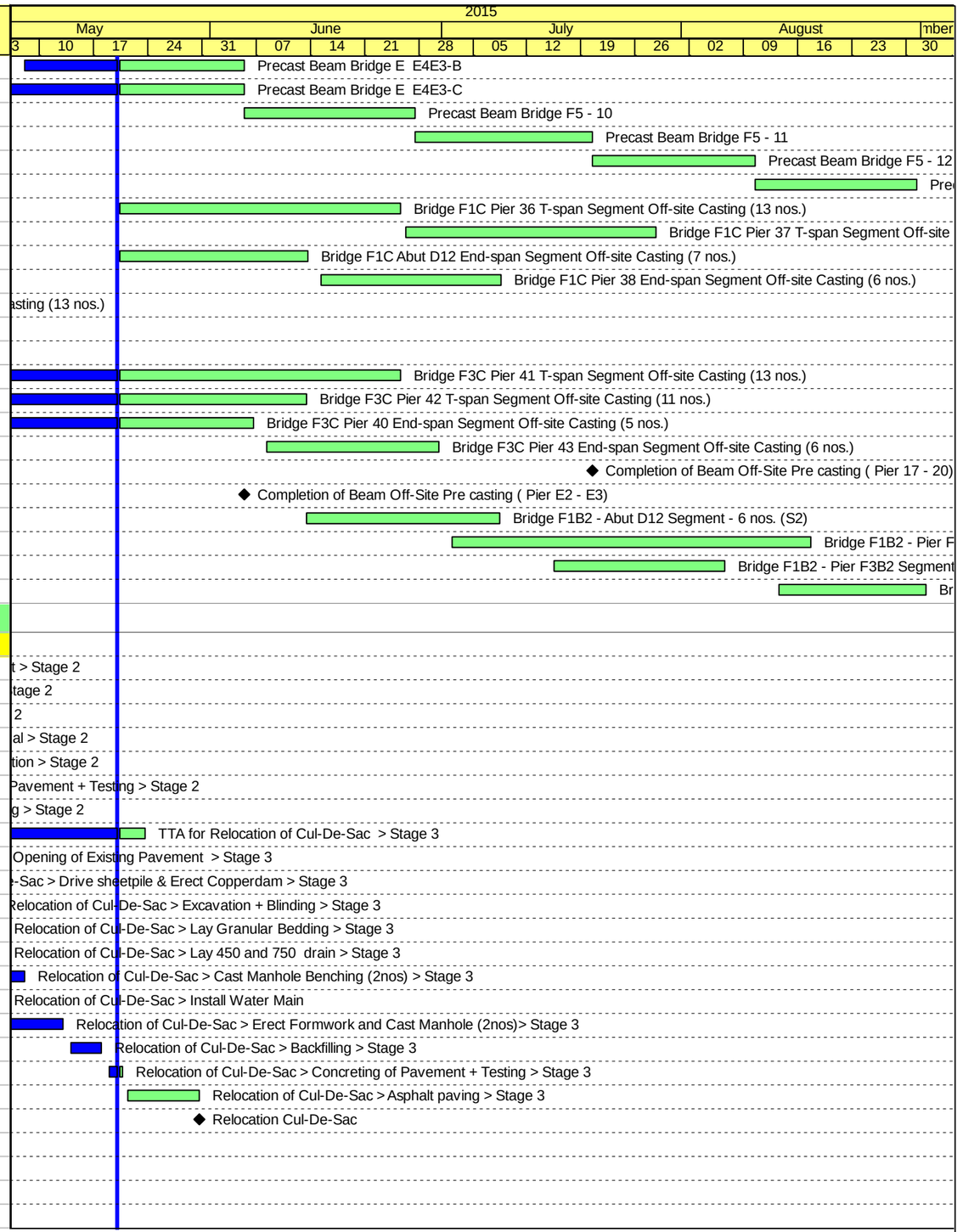


Remaining Level of Effort ◆ ◆ Milestone
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract HY/2009/19

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

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

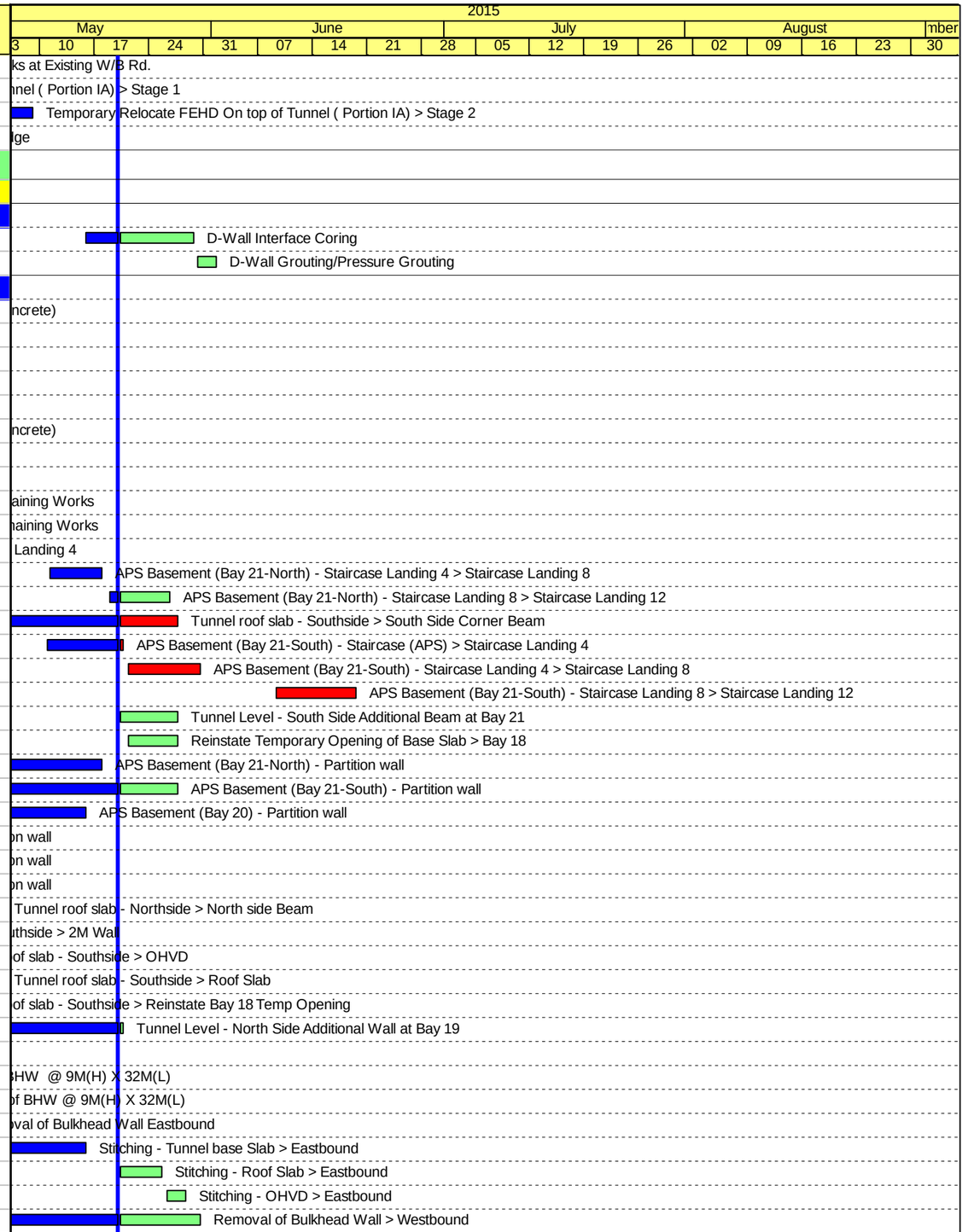


Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract HY/2009/19

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

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

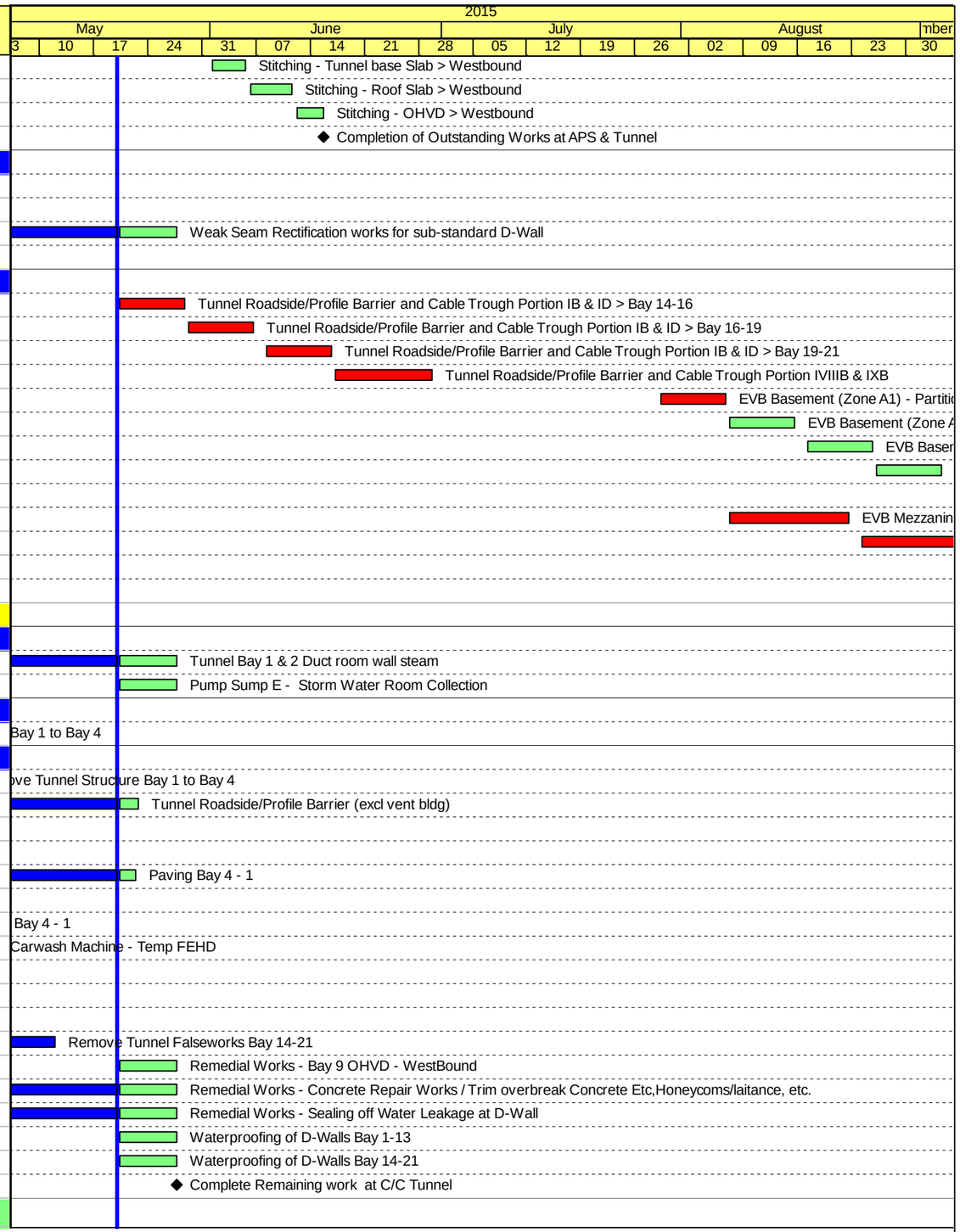


Remaining Level of Effort ◆ ◆ Milestone
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract HY/2009/19

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
A5830.7	Stitching - Tunnel base Slab > Westbound	5	01-Jun-15	05-Jun-15	11
A5830.8	Stitching - Roof Slab > Westbound	5	06-Jun-15	11-Jun-15	11
A5830.9	Stitching - OHVD > Westbound	3	12-Jun-15	15-Jun-15	11
A5830.9.1	Completion of Outstanding Works at APS & Tunnel	0		15-Jun-15	11
05.1.4 - Tunnel Structure					
A5393	Tunnel Bay 16 -Tunnel Roof - Steel Fixing	0	14-Feb-15 A	07-Mar-15 A	
A5394	Tunnel Bay 16 -Tunnel Roof - (Concrete)	0	08-Mar-15 A	08-Mar-15 A	
A5395	Weak Seam Rectification works for sub-standard D-Wall	7	10-Mar-15 A	27-May-15	27
A5396	Complete Tunnel Roof	0		08-Mar-15 A	
05.1.5 - EVB Sub-structure & Tunnel					
A10530	Tunnel Roadside/Profile Barrier and Cable Trough Portion IB & ID > Bay 14-16	8	20-May-15	28-May-15	0
A10540	Tunnel Roadside/Profile Barrier and Cable Trough Portion IB & ID > Bay 16-19	8	29-May-15	06-Jun-15	0
A5513	Tunnel Roadside/Profile Barrier and Cable Trough Portion IB & ID > Bay 19-21	8	08-Jun-15	16-Jun-15	0
A5514	Tunnel Roadside/Profile Barrier and Cable Trough Portion IVIIIB & IXB	10	17-Jun-15	29-Jun-15	0
A5524	EVB Basement (Zone A1) - Partition Wall (Reb. Fix + Concreting) > CH4850-CH487	8	29-Jul-15	06-Aug-15	3
A5534	EVB Basement (Zone A1) - Staircase-2nos.(Reb. Fix + Concreting) >CH4850-CH48	8	07-Aug-15	15-Aug-15	41
A5544	EVB Basement (Zone A2) - Partition Wall (Reb. Fix + Concreting)> CH4875-CH490	8	17-Aug-15	25-Aug-15	41
A5554	EVB Basement (Zone A2) - Staircase-1nos.(Reb. Fix + Concreting)> CH4875-CH49	8	26-Aug-15	03-Sep-15	45
A5564	EVB Basement (Zone B1) - Partition Wall (Reb. Fix + Concreting)> CH4900-CH492	8	09-Sep-15	17-Sep-15	41
A5744	EVB Mezzanine (Zone A1) - (Reb. Fix + Concreting)> CH4850-CH4875	14	07-Aug-15	22-Aug-15	3
A5754	EVB Mezzanine (Zone A1) - Staircase-2nos.(Reb. Fix + Concreting)> CH4850-CH48	14	24-Aug-15	08-Sep-15	3
A5764	EVB Mezzanine (Zone A2) - (Reb. Fix + Concreting)> CH4875-CH4900	14	09-Sep-15	24-Sep-15	3
A5784	EVB Mezzanine (Zone B1) - Partition Wall (Reb. Fix + Concreting)> CH4900-CH492	14	25-Sep-15	13-Oct-15	3
05.2 - Cut & Cover Tunnel Ch 4932-5149					
05.2.3 - ELS					
A10400	Tunnel Bay 1 & 2 Duct room wall steam	7	13-Mar-15 A	27-May-15	27
A4192	Pump Sump E - Storm Water Room Collection	7	20-May-15	27-May-15	27
05.2.4 - Tunnel Structure					
0524-2535	Waterproof Top Slab Bay 1 to Bay 4	0	16-Apr-15 A	17-Apr-15 A	
05.2.5 - Road & Miscellaneous Works					
0525-2882	Backfill above Tunnel Structure Bay 1 to Bay 4	0	18-Apr-15 A	26-Apr-15 A	
0525-2900	Tunnel Roadside/Profile Barrier (excl vent bldg)	3	05-Aug-14 A	22-May-15	31
0525-2940	Backfill above Tunnel Structure Bay 5 to Bay 9	0	28-Nov-14 A	17-Mar-15 A	
A10410	Paving Bay 13 - 5	0	16-Feb-15 A	19-Mar-15 A	
A10420	Paving Bay 4 - 1	2	27-Apr-15 A	22-May-15	44
A10430	Drainage Bay 13 - 5	0	23-Feb-15 A	16-Mar-15 A	
A10440	Drainage Bay 4 - 1	0	20-Apr-15 A	27-Apr-15 A	
A10450	Provisioning of Carwash Machine - Temp FEHD	0	08-Apr-15 A	22-Apr-15 A	
A10460	Road & Carpark Marking - Temp. FEHD	0	18-Mar-15 A	29-Mar-15 A	
A10470	Lighting - Temp FEHD	0	20-Mar-15 A	31-Mar-15 A	
A10480	Portal Wall at top of tunnel	0	09-Feb-15 A	25-Feb-15 A	
A10527	Remove Tunnel Falseworks Bay 14-21	0	20-Mar-15 A	12-May-15 A	
A10589.2	Remedial Works - Bay 9 OHVD - WestBound	7	20-May-15	27-May-15	27
A10589.6	Remedial Works - Concrete Repair Works / Trim overbreak Concrete Etc,Honeycon	7	09-Mar-15 A	27-May-15	27
A10589.6.7	Remedial Works - Sealing off Water Leakage at D-Wall	7	19-Mar-15 A	27-May-15	27
A10589.8	Waterproofing of D-Walls Bay 1-13	7	20-May-15	27-May-15	27
A10589.9	Waterproofing of D-Walls Bay 14-21	7	20-May-15	27-May-15	27
A10590	Complete Remaining work at C/C Tunnel	0		27-May-15	27
06 - SECTION 3 OF THE WORKS					

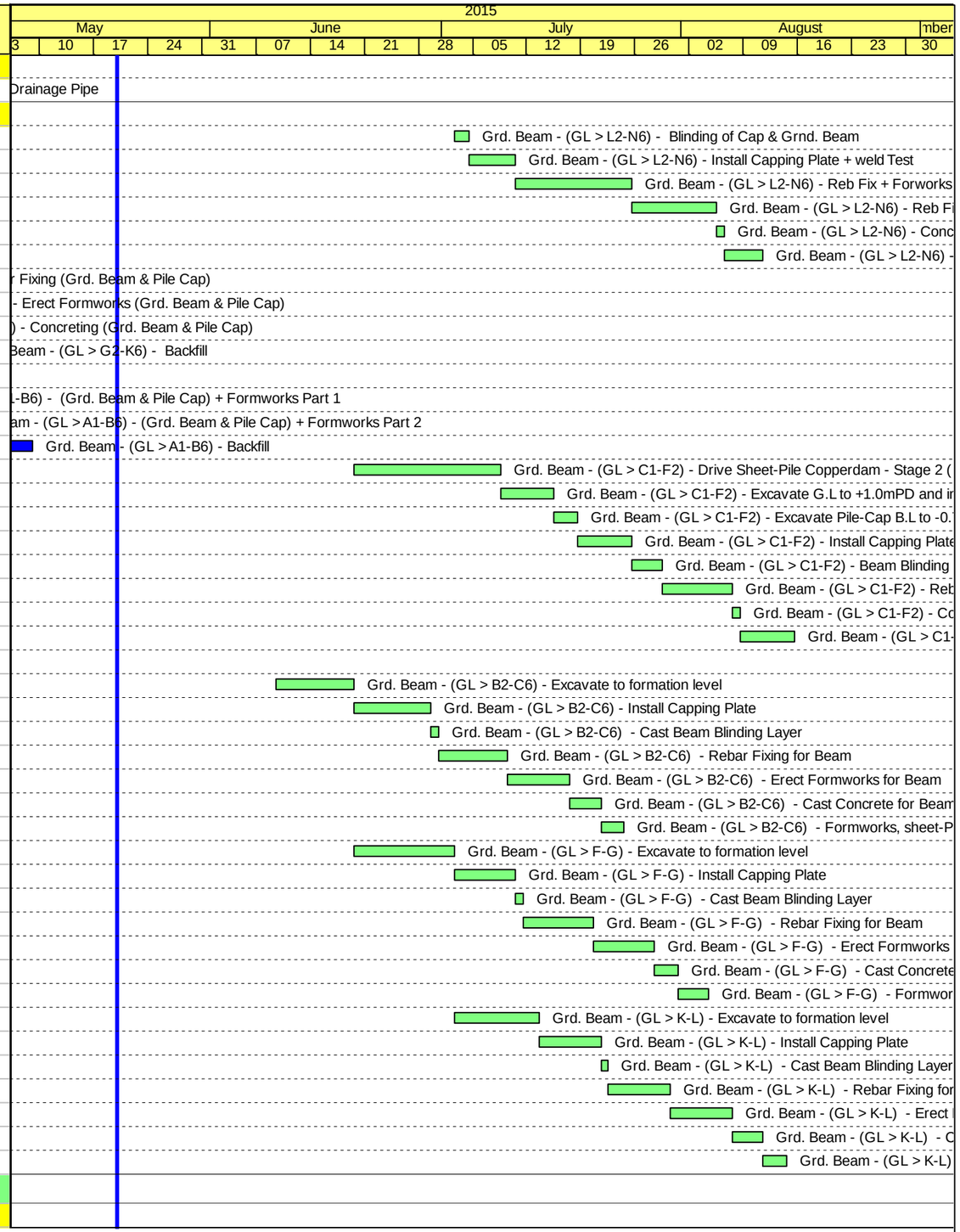


Remaining Level of Effort ◆ ◆ Milestone
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract HY/2009/19

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
06.2 - Box Culvert U1					
A9180	In-Situ Testing of Drainage Pipe	0	19-Jan-15 A	20-Apr-15 A	
06.3 - Admin Building					
0630-3119.13.1	Grd. Beam - (GL > L2-N6) - Blinding of Cap & Grnd. Beam	2	02-Jul-15	04-Jul-15	27
0630-3119.13.2	Grd. Beam - (GL > L2-N6) - Install Capping Plate + weld Test	5	04-Jul-15	10-Jul-15	27
0630-3119.14	Grd. Beam - (GL > L2-N6) - Reb Fix + Forworks (Grd. Beam & Pile Cap) > Part1	13	10-Jul-15	25-Jul-15	27
0630-3119.15	Grd. Beam - (GL > L2-N6) - Reb Fix + Forworks (Grd. Beam & Pile Cap) > Part2	9	25-Jul-15	05-Aug-15	27
0630-3119.16	Grd. Beam - (GL > L2-N6) - Concreting (Grd. Beam & Pile Cap)	1	05-Aug-15	06-Aug-15	27
0630-3119.18	Grd. Beam - (GL > L2-N6) - Formworks, sheet-Pile Removal and Backfill	4	06-Aug-15	11-Aug-15	27
0630-3119.24	Grd. Beam - (GL > G2-K6) - Rebar Fixing (Grd. Beam & Pile Cap)	0	03-Mar-15 A	06-Apr-15 A	
0630-3119.25	Grd. Beam - (GL > G2-K6) - Erect Formworks (Grd. Beam & Pile Cap)	0	07-Apr-15 A	12-Apr-15 A	
0630-3119.26	Grd. Beam - (GL > G2-K6) - Concreting (Grd. Beam & Pile Cap)	0	13-Apr-15 A	13-Apr-15 A	
0630-3119.27	Grd. Beam - (GL > G2-K6) - Backfill	0	14-Apr-15 A	30-Apr-15 A	
0630-3119.84	Grd. Beam - (GL > A1-B6) - Install Capping Plate	0	06-Mar-15 A	21-Mar-15 A	
0630-3119.85	Grd. Beam - (GL > A1-B6) - (Grd. Beam & Pile Cap) + Formworks Part 1	0	22-Mar-15 A	17-Apr-15 A	
0630-3119.86	Grd. Beam - (GL > A1-B6) - (Grd. Beam & Pile Cap) + Formworks Part 2	0	17-Apr-15 A	28-Apr-15 A	
0630-3119.87	Grd. Beam - (GL > A1-B6) - Backfill	0	18-Apr-15 A	09-May-15 A	
0630-3119.91.1	Grd. Beam - (GL > C1-F2) - Drive Sheet-Pile Copperdam - Stage 2 (Subject to CC	14	19-Jun-15	08-Jul-15	23
0630-3119.92	Grd. Beam - (GL > C1-F2) - Excavate G.L to +1.0mPD and install Waling/Strut	6	08-Jul-15	15-Jul-15	23
0630-3119.93	Grd. Beam - (GL > C1-F2) - Excavate Pile-Cap B.L to -0.7mPD and Cast Vert/Hor E	3	15-Jul-15	18-Jul-15	23
0630-3119.94	Grd. Beam - (GL > C1-F2) - Install Capping Plate	6	18-Jul-15	25-Jul-15	23
0630-3119.95	Grd. Beam - (GL > C1-F2) - Beam Blinding Layer	3	25-Jul-15	29-Jul-15	23
0630-3119.96	Grd. Beam - (GL > C1-F2) - Rebar Fixing (Grd. Beam & Pile Cap) + Formworks	8	29-Jul-15	07-Aug-15	23
0630-3119.97	Grd. Beam - (GL > C1-F2) - Concreting (Grd. Beam & Pile Cap)	1	07-Aug-15	08-Aug-15	23
0630-3119.98	Grd. Beam - (GL > C1-F2) - Formworks, Sheet-Pile Removal and Backfill	6	08-Aug-15	15-Aug-15	23
0630-3121.49	Grd. Beam - (GL > P3-R6) - Back Fill	0	07-Feb-15 A	06-Mar-15 A	
0630-3121.57.11	Grd. Beam - (GL > B2-C6) - Excavate to formation level	9	09-Jun-15	19-Jun-15	42
0630-3121.57.12	Grd. Beam - (GL > B2-C6) - Install Capping Plate	7	19-Jun-15	29-Jun-15	42
0630-3121.57.13	Grd. Beam - (GL > B2-C6) - Cast Beam Blinding Layer	1	29-Jun-15	30-Jun-15	42
0630-3121.57.14	Grd. Beam - (GL > B2-C6) - Rebar Fixing for Beam	7	30-Jun-15	09-Jul-15	42
0630-3121.57.15	Grd. Beam - (GL > B2-C6) - Erect Formworks for Beam	7	09-Jul-15	17-Jul-15	42
0630-3121.57.16	Grd. Beam - (GL > B2-C6) - Cast Concrete for Beam	3	17-Jul-15	21-Jul-15	42
0630-3121.57.17	Grd. Beam - (GL > B2-C6) - Formworks, sheet-Pile Removal and Backfill	3	21-Jul-15	24-Jul-15	42
0630-3121.57.21	Grd. Beam - (GL > F-G) - Excavate to formation level	9	19-Jun-15	02-Jul-15	33
0630-3121.57.22	Grd. Beam - (GL > F-G) - Install Capping Plate	7	02-Jul-15	10-Jul-15	33
0630-3121.57.23	Grd. Beam - (GL > F-G) - Cast Beam Blinding Layer	1	10-Jul-15	11-Jul-15	33
0630-3121.57.24	Grd. Beam - (GL > F-G) - Rebar Fixing for Beam	7	11-Jul-15	20-Jul-15	33
0630-3121.57.25	Grd. Beam - (GL > F-G) - Erect Formworks for Beam	7	20-Jul-15	28-Jul-15	33
0630-3121.57.26	Grd. Beam - (GL > F-G) - Cast Concrete for Beam	3	28-Jul-15	31-Jul-15	33
0630-3121.57.27	Grd. Beam - (GL > F-G) - Formworks, sheet-Pile Removal and Backfill	3	31-Jul-15	04-Aug-15	33
0630-3121.57.31	Grd. Beam - (GL > K-L) - Excavate to formation level	9	02-Jul-15	13-Jul-15	24
0630-3121.57.32	Grd. Beam - (GL > K-L) - Install Capping Plate	7	13-Jul-15	21-Jul-15	24
0630-3121.57.33	Grd. Beam - (GL > K-L) - Cast Beam Blinding Layer	1	21-Jul-15	22-Jul-15	24
0630-3121.57.34	Grd. Beam - (GL > K-L) - Rebar Fixing for Beam	7	22-Jul-15	30-Jul-15	24
0630-3121.57.35	Grd. Beam - (GL > K-L) - Erect Formworks for Beam	7	30-Jul-15	07-Aug-15	24
0630-3121.57.36	Grd. Beam - (GL > K-L) - Cast Concrete for Beam	3	07-Aug-15	11-Aug-15	24
0630-3121.57.37	Grd. Beam - (GL > K-L) - Formworks, sheet-Pile Removal and Backfill	3	11-Aug-15	14-Aug-15	24
08 - SECTION 5 WORK					
08.1 - Retaining Wall 'F' Substructure					



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Actual Level of Effort
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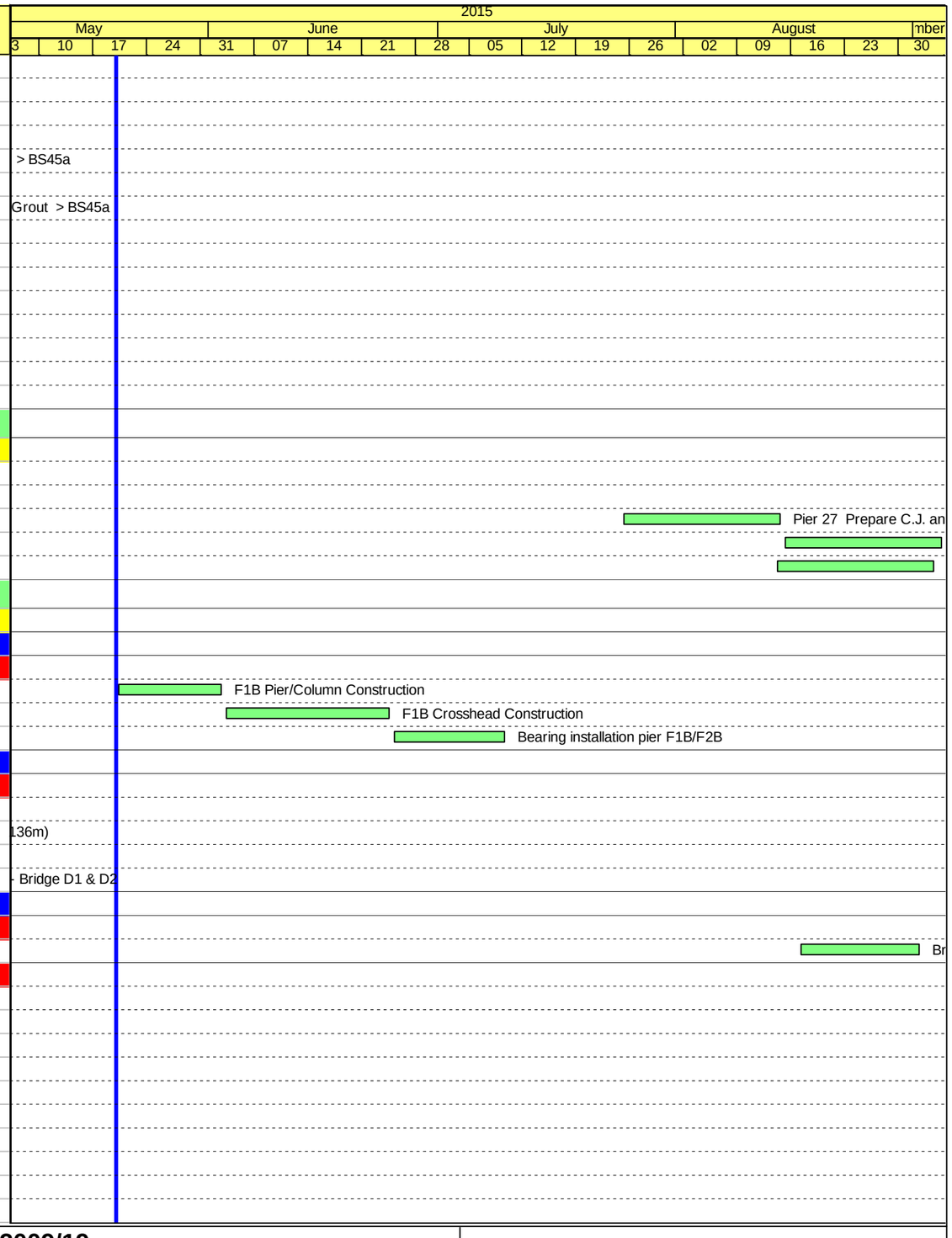
Contract HY/2009/19

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

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



Remaining Level of Effort ◆ ◆ Milestone
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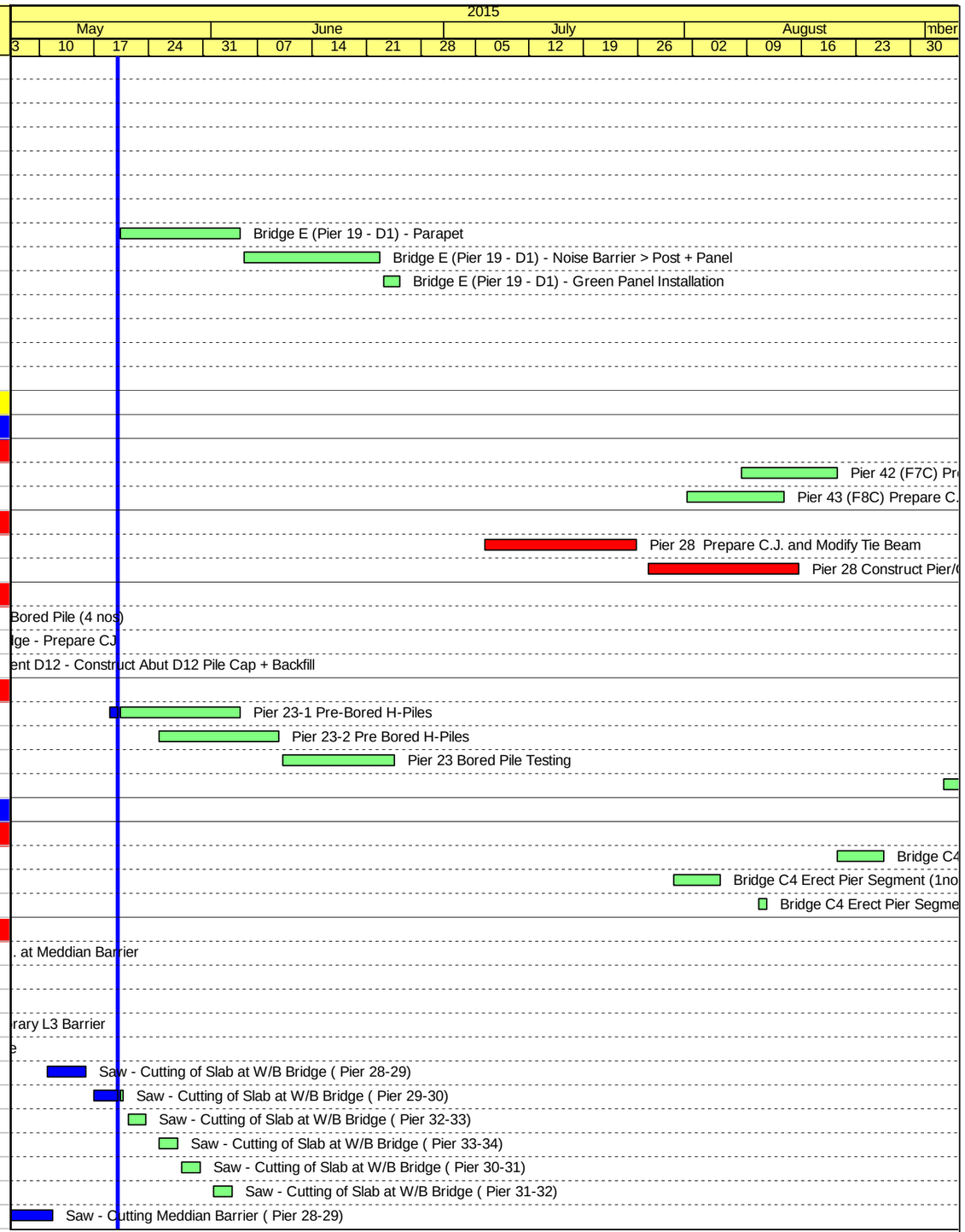
Contract HY/2009/19

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

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



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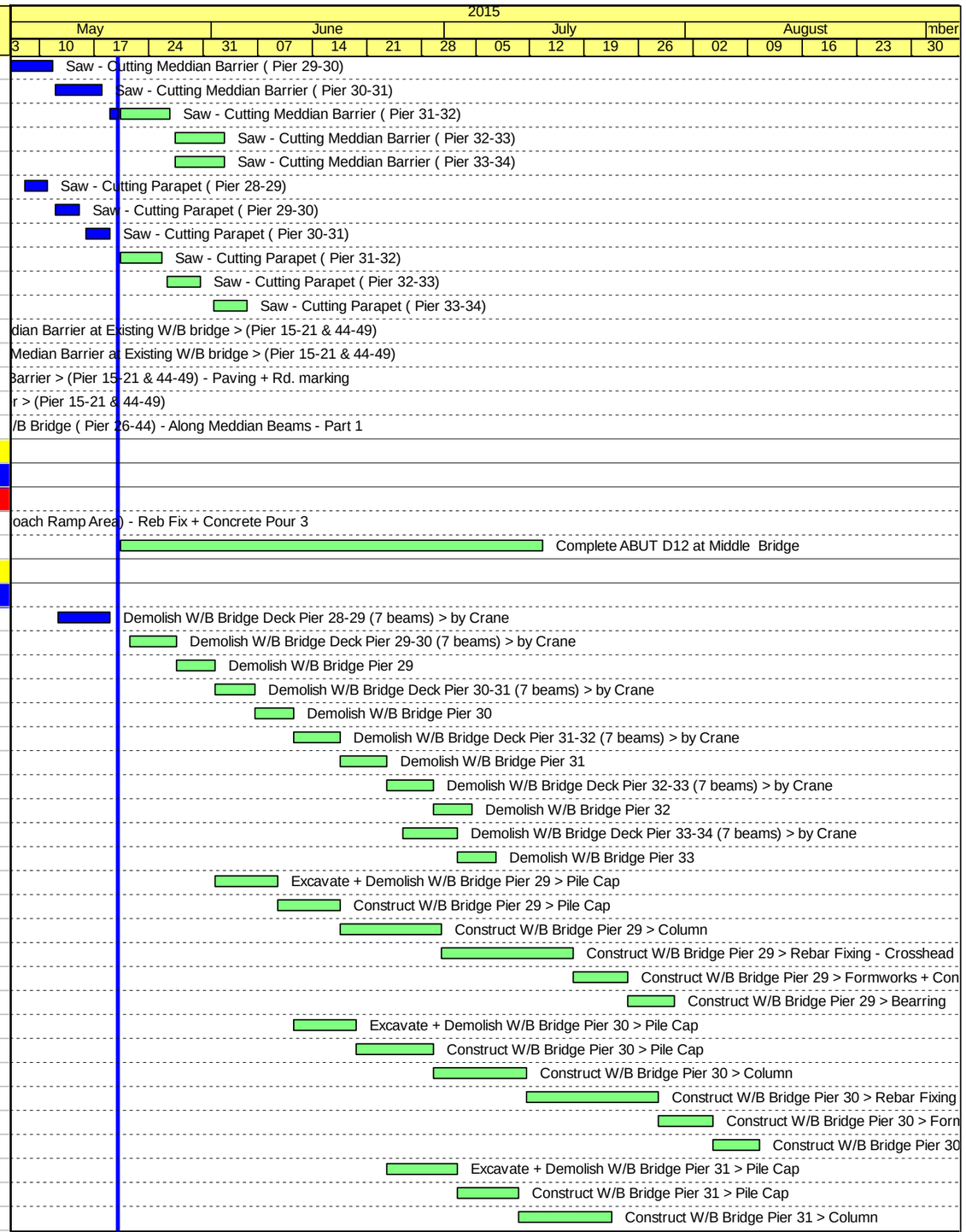
3 Months Rolling Program (20 May 2015 - 19 Aug 2015)

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
A12990	Saw - Cutting Meddian Barrier (Pier 29-30)	0	05-May-15 A	11-May-15 A	
A12990.1	Saw - Cutting Meddian Barrier (Pier 30-31)	0	12-May-15 A	18-May-15 A	
A12990.2	Saw - Cutting Meddian Barrier (Pier 31-32)	6	19-May-15 A	26-May-15	38
A13000	Saw - Cutting Meddian Barrier (Pier 32-33)	6	27-May-15	02-Jun-15	67
A13010	Saw - Cutting Meddian Barrier (Pier 33-34)	6	27-May-15	02-Jun-15	69
A13040	Saw - Cutting Parapet (Pier 28-29)	0	08-May-15 A	11-May-15 A	
A13050	Saw - Cutting Parapet (Pier 29-30)	0	12-May-15 A	15-May-15 A	
A13050.1	Saw - Cutting Parapet (Pier 30-31)	0	16-May-15 A	19-May-15 A	
A13050.2	Saw - Cutting Parapet (Pier 31-32)	5	20-May-15	25-May-15	39
A13060	Saw - Cutting Parapet (Pier 32-33)	5	26-May-15	30-May-15	66
A13070	Saw - Cutting Parapet (Pier 33-34)	5	01-Jun-15	05-Jun-15	66
A8060	Saw Cutting/Opening of Median Barrier at Existing W/B bridge > (Pier 15-21 & 44-4	0	16-Mar-15 A	12-Apr-15 A	
A8060.1	Complete Demolition of Median Barrier at Existing W/B bridge > (Pier 15-21 & 44-49	0	30-Mar-15 A	15-Apr-15 A	
A8061	Opening of Median Barrier > (Pier 15-21 & 44-49) - Paving + Rd. marking	0	11-Apr-15 A	18-Apr-15 A	
A8061.1	Install Precast Barrier > (Pier 15-21 & 44-49)	0	13-Apr-15 A	18-Apr-15 A	
A8061.2	Saw - Cutting of Slab at W/B Bridge (Pier 26-44) - Along Meddian Beams - Part 1	0	15-Nov-14 A	13-Apr-15 A	
10.3 - Middle Bridge (Bridge F)					
10.3.1 - Pier Construction					
Abutment D12					
1031-1058	Abut D12 (Approach Ramp Area) - Reb Fix + Concrete Pour 3	0	27-Dec-14 A	22-Apr-15 A	
A14460	Complete ABUT D12 at Middle Bridge	45	20-May-15	13-Jul-15	63
10.4 - Bridge Deck Demolition					
10.4.1 - Existing W/B Bridge (Part 1)					
A11840	Demolish W/B Bridge Deck Pier 28-29 (7 beams) > by Crane	0	12-May-15 A	19-May-15 A	
A11850	Demolish W/B Bridge Deck Pier 29-30 (7 beams) > by Crane	5	21-May-15	27-May-15	23
A11860	Demolish W/B Bridge Pier 29	4	27-May-15	01-Jun-15	23
A11860.0	Demolish W/B Bridge Deck Pier 30-31 (7 beams) > by Crane	5	01-Jun-15	06-Jun-15	23
A11860.01	Demolish W/B Bridge Pier 30	4	06-Jun-15	11-Jun-15	23
A11860.02	Demolish W/B Bridge Deck Pier 31-32 (7 beams) > by Crane	5	11-Jun-15	17-Jun-15	24
A11860.03	Demolish W/B Bridge Pier 31	4	17-Jun-15	23-Jun-15	24
A11860.04	Demolish W/B Bridge Deck Pier 32-33 (7 beams) > by Crane	5	23-Jun-15	29-Jun-15	50
A11860.05	Demolish W/B Bridge Pier 32	4	29-Jun-15	04-Jul-15	50
A11860.2	Demolish W/B Bridge Deck Pier 33-34 (7 beams) > by Crane	5	25-Jun-15	02-Jul-15	50
A11860.3	Demolish W/B Bridge Pier 33	4	02-Jul-15	07-Jul-15	50
A11860.4	Excavate + Demolish W/B Bridge Pier 29 > Pile Cap	7	01-Jun-15	09-Jun-15	42
A11960	Construct W/B Bridge Pier 29 > Pile Cap	7	09-Jun-15	17-Jun-15	42
A11970	Construct W/B Bridge Pier 29 > Column	10	17-Jun-15	30-Jun-15	42
A11980	Construct W/B Bridge Pier 29 > Rebar Fixing - Crosshead	14	30-Jun-15	17-Jul-15	42
A11980.1	Construct W/B Bridge Pier 29 > Formworks + Concreting - Crosshead	6	17-Jul-15	24-Jul-15	42
A11990	Construct W/B Bridge Pier 29 > Bearring	5	24-Jul-15	30-Jul-15	42
A12000	Excavate + Demolish W/B Bridge Pier 30 > Pile Cap	7	11-Jun-15	19-Jun-15	23
A12010	Construct W/B Bridge Pier 30 > Pile Cap	7	19-Jun-15	29-Jun-15	37
A12020	Construct W/B Bridge Pier 30 > Column	10	29-Jun-15	11-Jul-15	37
A12030	Construct W/B Bridge Pier 30 > Rebar Fixing - Crosshead	14	11-Jul-15	28-Jul-15	37
A12040	Construct W/B Bridge Pier 30 > Formworks + Concreting - Crosshead	6	28-Jul-15	04-Aug-15	37
A12050	Construct W/B Bridge Pier 30 > Bearring	5	04-Aug-15	10-Aug-15	37
A12070	Excavate + Demolish W/B Bridge Pier 31 > Pile Cap	7	23-Jun-15	02-Jul-15	24
A12080	Construct W/B Bridge Pier 31 > Pile Cap	7	02-Jul-15	10-Jul-15	54
A12090	Construct W/B Bridge Pier 31 > Column	10	10-Jul-15	22-Jul-15	54



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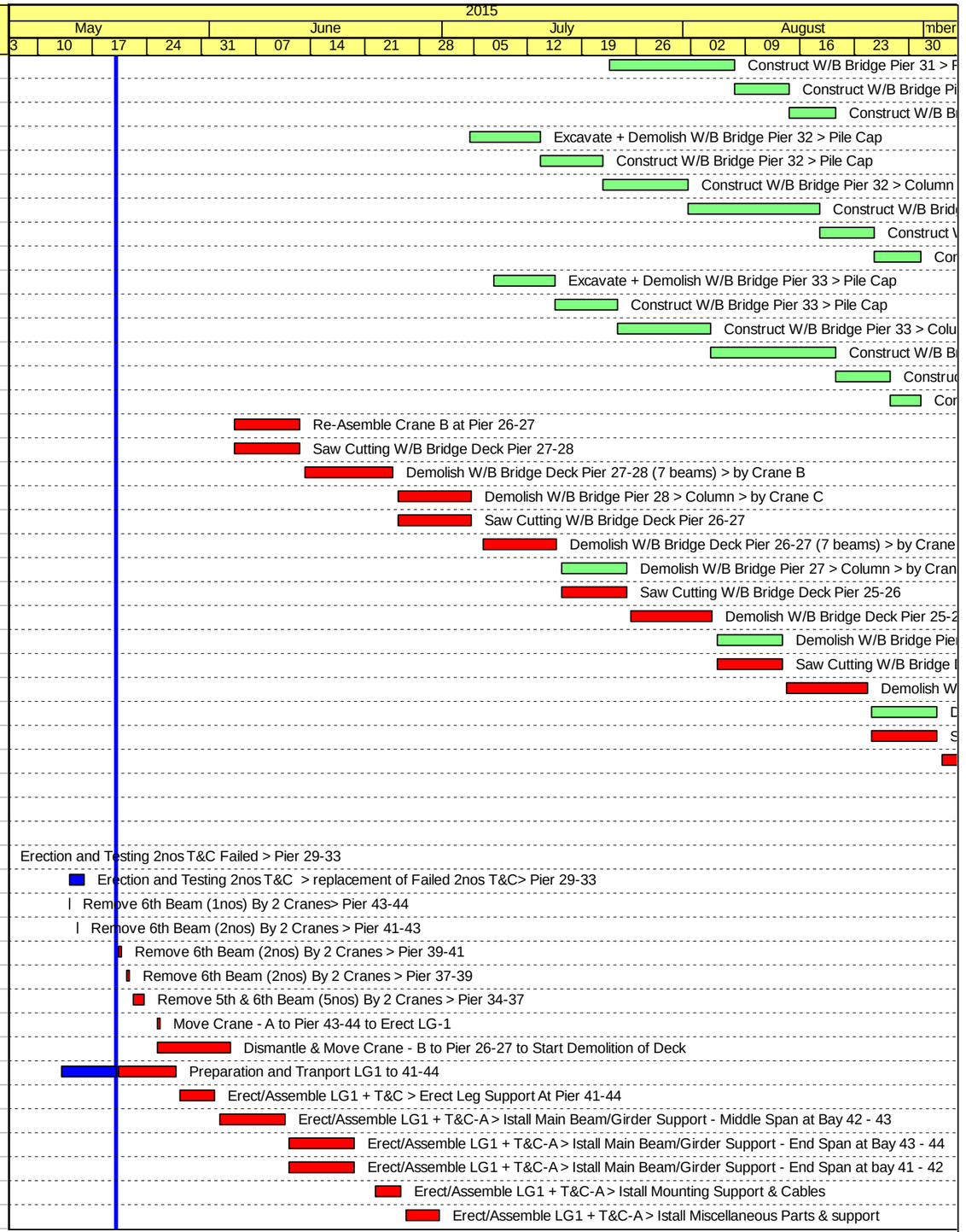
3 Months Rolling Program (20 May 2015 - 19 Aug 2015)

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



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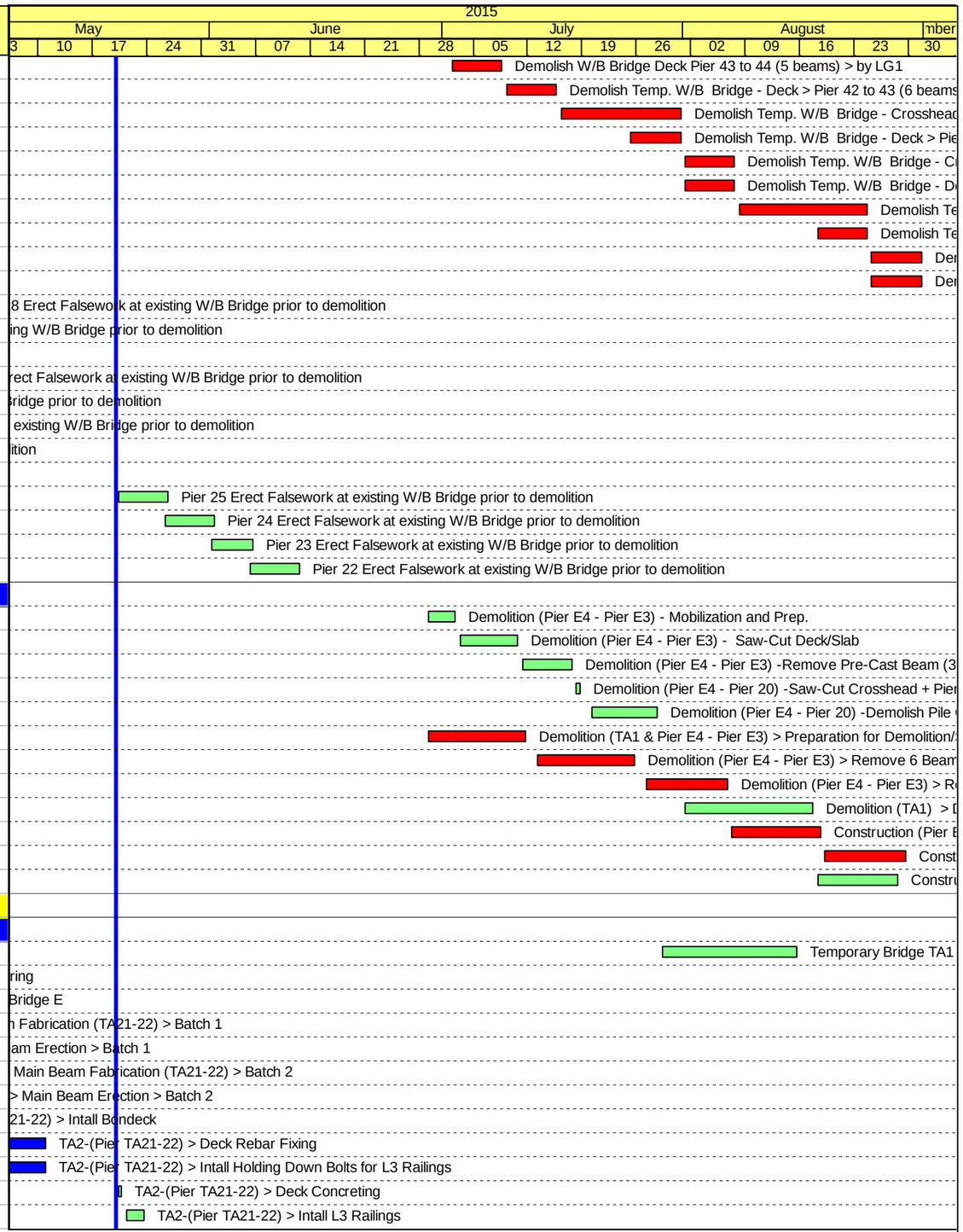
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
A13160.7	Demolish W/B Bridge Deck Pier 43 to 44 (5 beams) > by LG1	6	02-Jul-15	08-Jul-15	0
A13650	Demolish Temp. W/B Bridge - Deck > Pier 42 to 43 (6 beams)	6	09-Jul-15	15-Jul-15	0
A13660	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 43	14	16-Jul-15	31-Jul-15	0
A13670	Demolish Temp. W/B Bridge - Deck > Pier 41 to 42 (6 beams)	6	25-Jul-15	31-Jul-15	0
A13680	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 42	6	01-Aug-15	07-Aug-15	0
A13690	Demolish Temp. W/B Bridge - Deck > Pier 40 to 41 (6 beams)	6	01-Aug-15	07-Aug-15	0
A13700	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 41	14	08-Aug-15	24-Aug-15	0
A13710	Demolish Temp. W/B Bridge - Deck > Pier 39 to 40 (6 beams)	6	18-Aug-15	24-Aug-15	0
A13720	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 40	6	25-Aug-15	31-Aug-15	0
A13730	Demolish Temp. W/B Bridge - Deck > Pier 38 to 39 (6 beams)	6	25-Aug-15	31-Aug-15	0
A8079.1	Pier 28 Erect Falsework at existing W/B Bridge prior to demolition	0	23-Apr-15 A	30-Apr-15 A	
A8079.11	Pier 29 Erect Falsework at existing W/B Bridge prior to demolition	0	30-Mar-15 A	09-Apr-15 A	
A8079.12	Pier 30 Erect Falsework at existing W/B Bridge prior to demolition	0	26-Feb-15 A	07-Mar-15 A	
A8079.14	Pier 32 Erect Falsework at existing W/B Bridge prior to demolition	0	13-Apr-15 A	27-Apr-15 A	
A8079.15	Pier 33 Erect Falsework at existing W/B Bridge prior to demolition	0	11-Mar-15 A	01-Apr-15 A	
A8079.16	Pier 34 Erect Falsework at existing W/B Bridge prior to demolition	0	11-Apr-15 A	13-Apr-15 A	
A8079.18	Pier 27 Erect Falsework at existing W/B Bridge prior to demolition	0	09-Mar-15 A	16-Mar-15 A	
A8079.19	Pier 26 Erect Falsework at existing W/B Bridge prior to demolition	0	04-Mar-15 A	09-Mar-15 A	
A8079.2	Pier 25 Erect Falsework at existing W/B Bridge prior to demolition	6	20-May-15	26-May-15	39
A8079.21	Pier 24 Erect Falsework at existing W/B Bridge prior to demolition	6	26-May-15	01-Jun-15	39
A8079.22	Pier 23 Erect Falsework at existing W/B Bridge prior to demolition	6	01-Jun-15	06-Jun-15	39
A8079.3	Pier 22 Erect Falsework at existing W/B Bridge prior to demolition	6	06-Jun-15	12-Jun-15	85
10.4.2 - Existing E/B Bridge					
A12660.1	Demolition (Pier E4 - Pier E3) - Mobilization and Prep.	3	29-Jun-15	02-Jul-15	16
A12660.2	Demolition (Pier E4 - Pier E3) - Saw-Cut Deck/Slab	7	03-Jul-15	10-Jul-15	16
A12660.3	Demolition (Pier E4 - Pier E3) -Remove Pre-Cast Beam (3nos)	6	11-Jul-15	17-Jul-15	16
A12660.4	Demolition (Pier E4 - Pier 20) -Saw-Cut Crosshead + Pier(Pier E3)	1	18-Jul-15	18-Jul-15	16
A12660.5	Demolition (Pier E4 - Pier 20) -Demolish Pile Cap + Pile Trimming(Pier E3)	8	20-Jul-15	28-Jul-15	16
A12660.6	Demolition (TA1 & Pier E4 - Pier E3) > Preparation for Demolition/Saw Cutting, Etc.	11	29-Jun-15	11-Jul-15	0
A12660.7	Demolition (Pier E4 - Pier E3) > Remove 6 Beams, Crosshead & Pier A3	12	13-Jul-15	25-Jul-15	0
A12660.8	Demolition (Pier E4 - Pier E3) > Remove Pile Cap Pier A3	10	27-Jul-15	06-Aug-15	0
A12660.9	Demolition (TA1) > Deck & Steel Tower Removal	14	01-Aug-15	17-Aug-15	18
A12670	Construction (Pier E4 - Pier E2) > Construct Pile Cap at Pier E3	10	07-Aug-15	18-Aug-15	0
A12680	Construction (Pier E4 - Pier E2) > Construct Pier E3	10	19-Aug-15	29-Aug-15	0
A12770	Construction (Pier E4 - Pier E2) > Construct Parapet D1-E2	10	18-Aug-15	28-Aug-15	53
10.5 - Temporary Bridge					
10.5.1 - Temporary Bridge 'TA'					
1051-2036	Temporary Bridge TA1 Removal	16	29-Jul-15	15-Aug-15	16
A10750	TA2-(Pier TA21-22) > Intall Bearing	0	19-Mar-15 A	09-Apr-15 A	
A10760	TA2-(Pier TA21-22) > Parapet Removal @ Bridge E	0	25-Mar-15 A	30-Mar-15 A	
A10770	TA2-(Pier TA21-22) > Main Beam Fabrication (TA21-22) > Batch 1	0	31-Mar-15 A	08-Apr-15 A	
A10780	TA2-(Pier TA21-22) > Main Beam Erection > Batch 1	0	10-Apr-15 A	10-Apr-15 A	
A10790	TA2-(Pier TA21-22) > Main Beam Fabrication (TA21-22) > Batch 2	0	11-Apr-15 A	17-Apr-15 A	
A10800	TA2-(Pier TA21-22) > Main Beam Erection > Batch 2	0	17-Apr-15 A	18-Apr-15 A	
A10810	TA2-(Pier TA21-22) > Intall Bondeck	0	18-Apr-15 A	24-Apr-15 A	
A10820	TA2-(Pier TA21-22) > Deck Rebar Fixing	0	25-Apr-15 A	11-May-15 A	
A10830	TA2-(Pier TA21-22) > Intall Holding Down Bolts for L3 Railings	0	04-May-15 A	11-May-15 A	
A10840	TA2-(Pier TA21-22) > Deck Concreting	1	20-May-15	20-May-15	28
A10850	TA2-(Pier TA21-22) > Intall L3 Railings	3	21-May-15	23-May-15	28

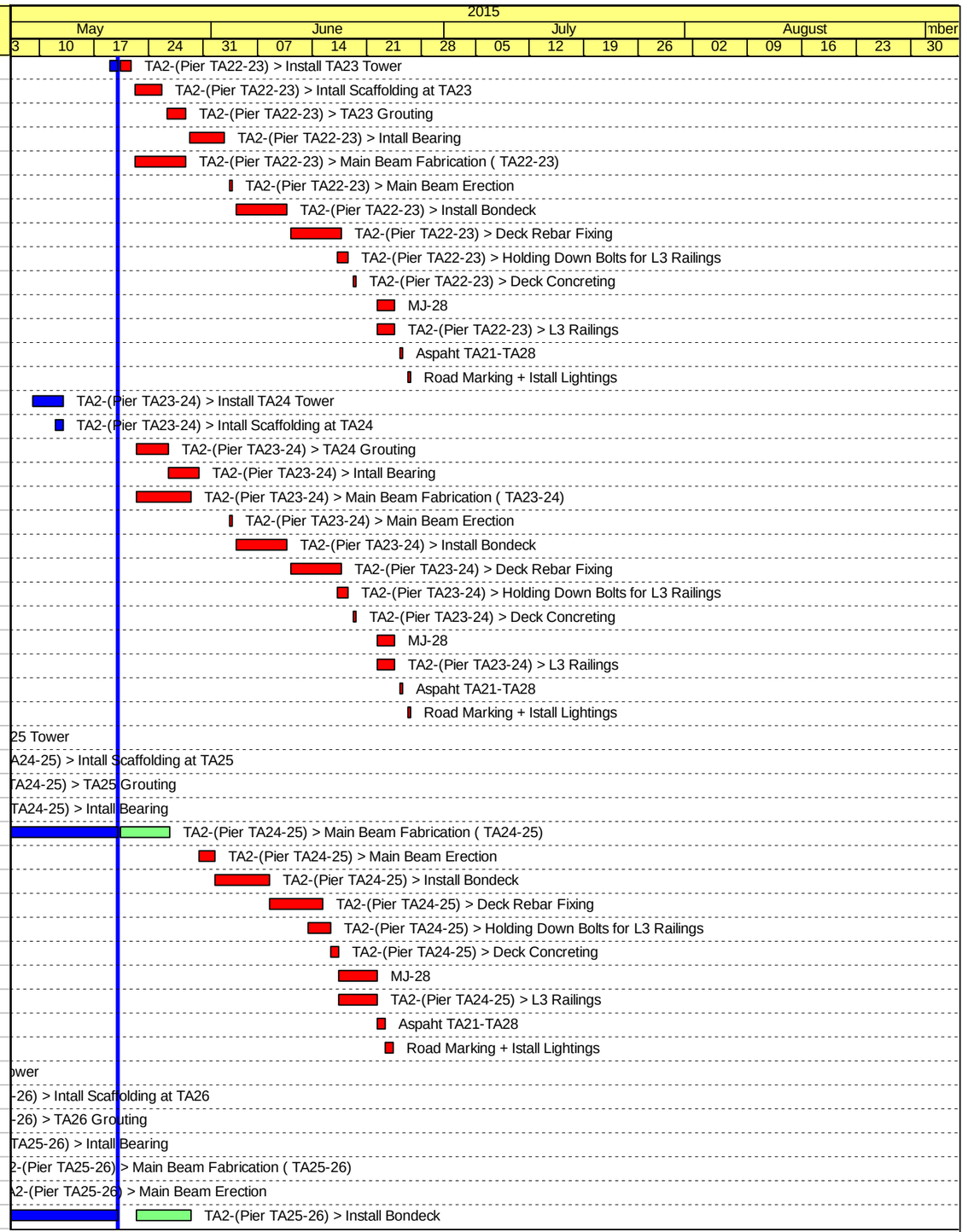


Remaining Level of Effort ◆ Milestone
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract HY/2009/19

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
A10860	TA2-(Pier TA22-23) > Install TA23 Tower	2	19-May-15 A	21-May-15	0
A10870	TA2-(Pier TA22-23) > Intall Scaffolding at TA23	3	22-May-15	25-May-15	0
A10880	TA2-(Pier TA22-23) > TA23 Grouting	3	26-May-15	28-May-15	0
A10890	TA2-(Pier TA22-23) > Intall Bearing	4	29-May-15	02-Jun-15	0
A10900	TA2-(Pier TA22-23) > Main Beam Fabrication (TA22-23)	6	22-May-15	28-May-15	5
A10910	TA2-(Pier TA22-23) > Main Beam Erection	1	03-Jun-15	03-Jun-15	0
A10920	TA2-(Pier TA22-23) > Install Bondeck	6	04-Jun-15	10-Jun-15	0
A10930	TA2-(Pier TA22-23) > Deck Rebar Fixing	6	11-Jun-15	17-Jun-15	0
A10940	TA2-(Pier TA22-23) > Holding Down Bolts for L3 Railings	2	17-Jun-15	18-Jun-15	0
A10950	TA2-(Pier TA22-23) > Deck Concreting	1	19-Jun-15	19-Jun-15	0
A10950.1	MJ-28	3	22-Jun-15	24-Jun-15	0
A10960	TA2-(Pier TA22-23) > L3 Railings	3	22-Jun-15	24-Jun-15	2
A10960.1	Aspaht TA21-TA28	1	25-Jun-15	25-Jun-15	0
A10960.2	Road Marking + Istall Lightings	1	26-Jun-15	26-Jun-15	0
A11210	TA2-(Pier TA23-24) > Install TA24 Tower	0	09-May-15 A	13-May-15 A	
A11220	TA2-(Pier TA23-24) > Intall Scaffolding at TA24	0	12-May-15 A	13-May-15 A	
A11230	TA2-(Pier TA23-24) > TA24 Grouting	3	22-May-15	26-May-15	3
A11240	TA2-(Pier TA23-24) > Intall Bearing	4	26-May-15	30-May-15	3
A11250	TA2-(Pier TA23-24) > Main Beam Fabrication (TA23-24)	6	22-May-15	29-May-15	5
A11260	TA2-(Pier TA23-24) > Main Beam Erection	1	03-Jun-15	03-Jun-15	0
A11270	TA2-(Pier TA23-24) > Install Bondeck	6	04-Jun-15	10-Jun-15	0
A11280	TA2-(Pier TA23-24) > Deck Rebar Fixing	6	11-Jun-15	17-Jun-15	0
A11290	TA2-(Pier TA23-24) > Holding Down Bolts for L3 Railings	2	17-Jun-15	18-Jun-15	0
A11300	TA2-(Pier TA23-24) > Deck Concreting	1	19-Jun-15	19-Jun-15	0
A11300.1	MJ-28	3	22-Jun-15	24-Jun-15	0
A11310	TA2-(Pier TA23-24) > L3 Railings	3	22-Jun-15	24-Jun-15	2
A11310.1	Aspaht TA21-TA28	1	25-Jun-15	25-Jun-15	0
A11310.2	Road Marking + Istall Lightings	1	26-Jun-15	26-Jun-15	0
A11320	TA2-(Pier TA24-25) > Install TA25 Tower	0	07-Apr-15 A	09-Apr-15 A	
A11330	TA2-(Pier TA24-25) > Intall Scaffolding at TA25	0	23-Apr-15 A	25-Apr-15 A	
A11340	TA2-(Pier TA24-25) > TA25 Grouting	0	23-Apr-15 A	25-Apr-15 A	
A11350	TA2-(Pier TA24-25) > Intall Bearing	0	23-Apr-15 A	26-Apr-15 A	
A11360	TA2-(Pier TA24-25) > Main Beam Fabrication (TA24-25)	6	23-Apr-15 A	26-May-15	7
A11370	TA2-(Pier TA24-25) > Main Beam Erection	1	30-May-15	01-Jun-15	3
A11380	TA2-(Pier TA24-25) > Install Bondeck	6	01-Jun-15	08-Jun-15	3
A11390	TA2-(Pier TA24-25) > Deck Rebar Fixing	6	08-Jun-15	15-Jun-15	3
A11400	TA2-(Pier TA24-25) > Holding Down Bolts for L3 Railings	2	13-Jun-15	16-Jun-15	3
A11410	TA2-(Pier TA24-25) > Deck Concreting	1	16-Jun-15	17-Jun-15	3
A11410.1	MJ-28	3	17-Jun-15	22-Jun-15	3
A11420	TA2-(Pier TA24-25) > L3 Railings	3	17-Jun-15	22-Jun-15	5
A11420.0	Aspaht TA21-TA28	1	22-Jun-15	23-Jun-15	3
A11420.01	Road Marking + Istall Lightings	1	23-Jun-15	24-Jun-15	3
A11430	TA2-(Pier TA25-26) > Install TA26 Tower	0	03-Apr-15 A	05-Apr-15 A	
A11440	TA2-(Pier TA25-26) > Intall Scaffolding at TA26	0	20-Apr-15 A	22-Apr-15 A	
A11450	TA2-(Pier TA25-26) > TA26 Grouting	0	20-Apr-15 A	22-Apr-15 A	
A11460	TA2-(Pier TA25-26) > Intall Bearing	0	23-Apr-15 A	26-Apr-15 A	
A11470	TA2-(Pier TA25-26) > Main Beam Fabrication (TA25-26)	0	23-Apr-15 A	02-May-15 A	
A11480	TA2-(Pier TA25-26) > Main Beam Erection	0	01-May-15 A	03-May-15 A	
A11490	TA2-(Pier TA25-26) > Install Bondeck	6	30-Apr-15 A	29-May-15	11



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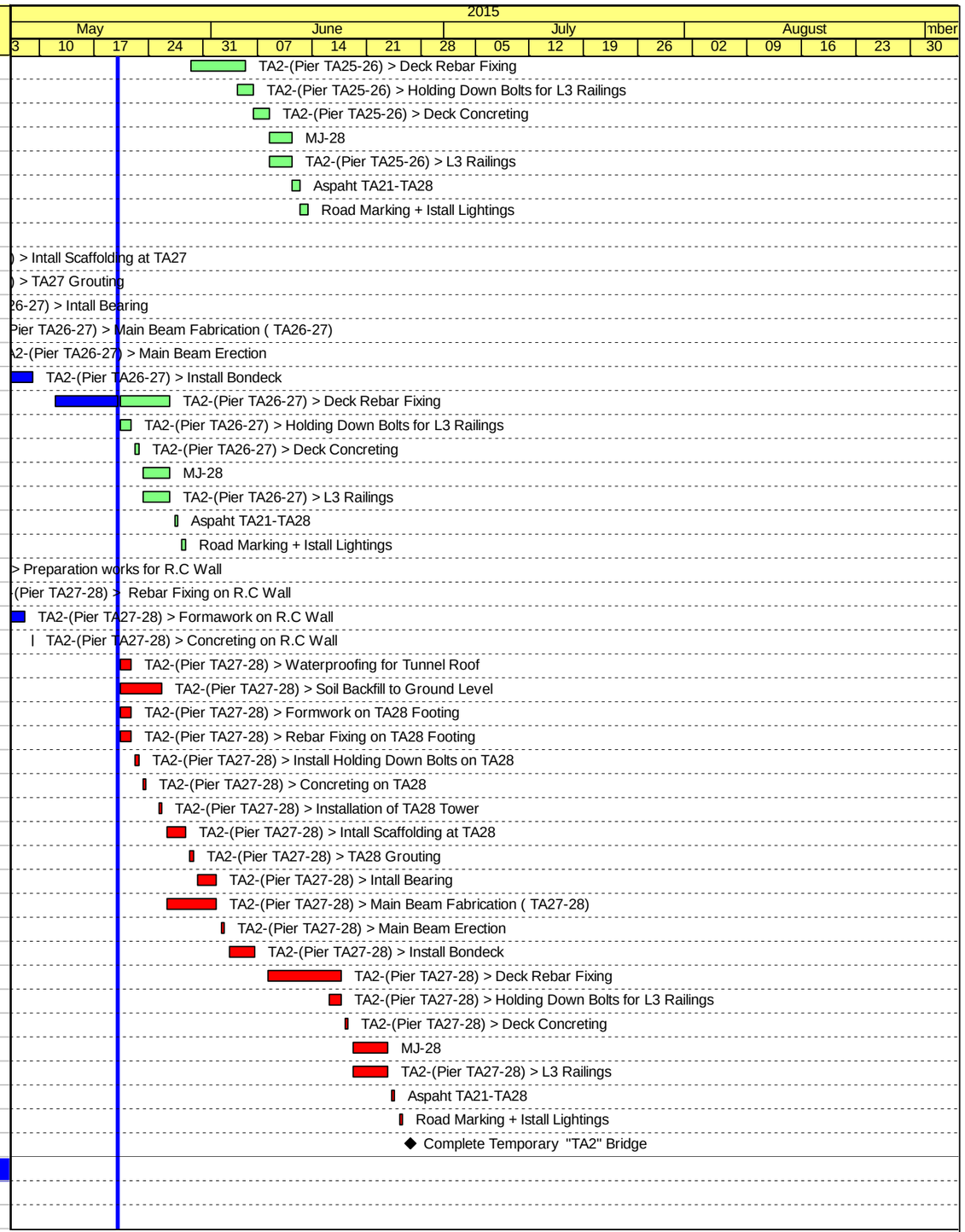
Critical Remaining Work

Contract HY/2009/19

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
A11500	TA2-(Pier TA25-26) > Deck Rebar Fixing	6	29-May-15	05-Jun-15	11
A11510	TA2-(Pier TA25-26) > Holding Down Bolts for L3 Railings	2	04-Jun-15	06-Jun-15	11
A11520	TA2-(Pier TA25-26) > Deck Concreting	1	06-Jun-15	08-Jun-15	11
A11520.1	MJ-28	3	08-Jun-15	11-Jun-15	11
A11530	TA2-(Pier TA25-26) > L3 Railings	3	08-Jun-15	11-Jun-15	13
A11530.1	Aspaht TA21-TA28	1	11-Jun-15	12-Jun-15	11
A11530.2	Road Marking + Istall Lightings	1	12-Jun-15	13-Jun-15	11
A11540	TA2-(Pier TA26-27) > Install TA27 Tower	0	25-Mar-15 A	27-Mar-15 A	
A11550	TA2-(Pier TA26-27) > Intall Scaffolding at TA27	0	17-Apr-15 A	19-Apr-15 A	
A11560	TA2-(Pier TA26-27) > TA27 Grouting	0	17-Apr-15 A	19-Apr-15 A	
A11570	TA2-(Pier TA26-27) > Intall Bearing	0	20-Apr-15 A	23-Apr-15 A	
A11580	TA2-(Pier TA26-27) > Main Beam Fabrication (TA26-27)	0	21-Apr-15 A	29-Apr-15 A	
A11590	TA2-(Pier TA26-27) > Main Beam Erection	0	01-May-15 A	03-May-15 A	
A11600	TA2-(Pier TA26-27) > Install Bondeck	0	02-May-15 A	09-May-15 A	
A11610	TA2-(Pier TA26-27) > Deck Rebar Fixing	6	12-May-15 A	26-May-15	24
A11620	TA2-(Pier TA26-27) > Holding Down Bolts for L3 Railings	2	20-May-15	21-May-15	24
A11630	TA2-(Pier TA26-27) > Deck Concreting	1	22-May-15	22-May-15	24
A11630.1	MJ-28	3	23-May-15	26-May-15	24
A11640	TA2-(Pier TA26-27) > L3 Railings	3	23-May-15	26-May-15	26
A11640.0	Aspaht TA21-TA28	1	27-May-15	27-May-15	24
A11640.01	Road Marking + Istall Lightings	1	28-May-15	28-May-15	24
A11640.1	TA2-(Pier TA27-28) > Preparation works for R.C Wall	0	16-Apr-15 A	18-Apr-15 A	
A11640.2	TA2-(Pier TA27-28) > Rebar Fixing on R.C Wall	0	19-Apr-15 A	01-May-15 A	
A11640.3	TA2-(Pier TA27-28) > Formawork on R.C Wall	0	02-May-15 A	08-May-15 A	
A11640.4	TA2-(Pier TA27-28) > Concreting on R.C Wall	0	09-May-15 A	09-May-15 A	
A11640.5	TA2-(Pier TA27-28) > Waterproofing for Tunnel Roof	2	20-May-15	21-May-15	1
A11640.6	TA2-(Pier TA27-28) > Soil Backfill to Ground Level	5	20-May-15	25-May-15	1
A11640.7	TA2-(Pier TA27-28) > Formwork on TA28 Footing	2	20-May-15	21-May-15	1
A11640.8	TA2-(Pier TA27-28) > Rebar Fixing on TA28 Footing	2	20-May-15	21-May-15	1
A11640.9	TA2-(Pier TA27-28) > Install Holding Down Bolts on TA28	1	22-May-15	22-May-15	1
A11640.91	TA2-(Pier TA27-28) > Concreting on TA28	1	23-May-15	23-May-15	1
A11650	TA2-(Pier TA27-28) > Installation of TA28 Tower	1	25-May-15	25-May-15	1
A11660	TA2-(Pier TA27-28) > Intall Scaffolding at TA28	3	26-May-15	28-May-15	1
A11670	TA2-(Pier TA27-28) > TA28 Grouting	1	29-May-15	29-May-15	1
A11680	TA2-(Pier TA27-28) > Intall Bearing	2	30-May-15	01-Jun-15	1
A11690	TA2-(Pier TA27-28) > Main Beam Fabrication (TA27-28)	6	26-May-15	01-Jun-15	2
A11700	TA2-(Pier TA27-28) > Main Beam Erection	1	02-Jun-15	02-Jun-15	1
A11710	TA2-(Pier TA27-28) > Install Bondeck	4	03-Jun-15	06-Jun-15	1
A11720	TA2-(Pier TA27-28) > Deck Rebar Fixing	9	08-Jun-15	17-Jun-15	1
A11730	TA2-(Pier TA27-28) > Holding Down Bolts for L3 Railings	2	16-Jun-15	17-Jun-15	1
A11740	TA2-(Pier TA27-28) > Deck Concreting	1	18-Jun-15	18-Jun-15	1
A11740.1	MJ-28	3	19-Jun-15	23-Jun-15	1
A11750	TA2-(Pier TA27-28) > L3 Railings	3	19-Jun-15	23-Jun-15	3
A11750.3	Aspaht TA21-TA28	1	24-Jun-15	24-Jun-15	1
A11750.4	Road Marking + Istall Lightings	1	25-Jun-15	25-Jun-15	1
A11760	Complete Temporary "TA2" Bridge	0		26-Jun-15	0
10.5.2 - Temporary Bridge 'TB'					
A10280	TB > (Pier 16-17) - Stitching	0	02-Mar-15 A	02-Mar-15 A	
A10290	TB > (Pier TB1-16) - L3 Railing Installation	0	03-Mar-15 A	06-Mar-15 A	



Remaining Level of Effort ◆ ◆ Milestone
Actual Level of Effort
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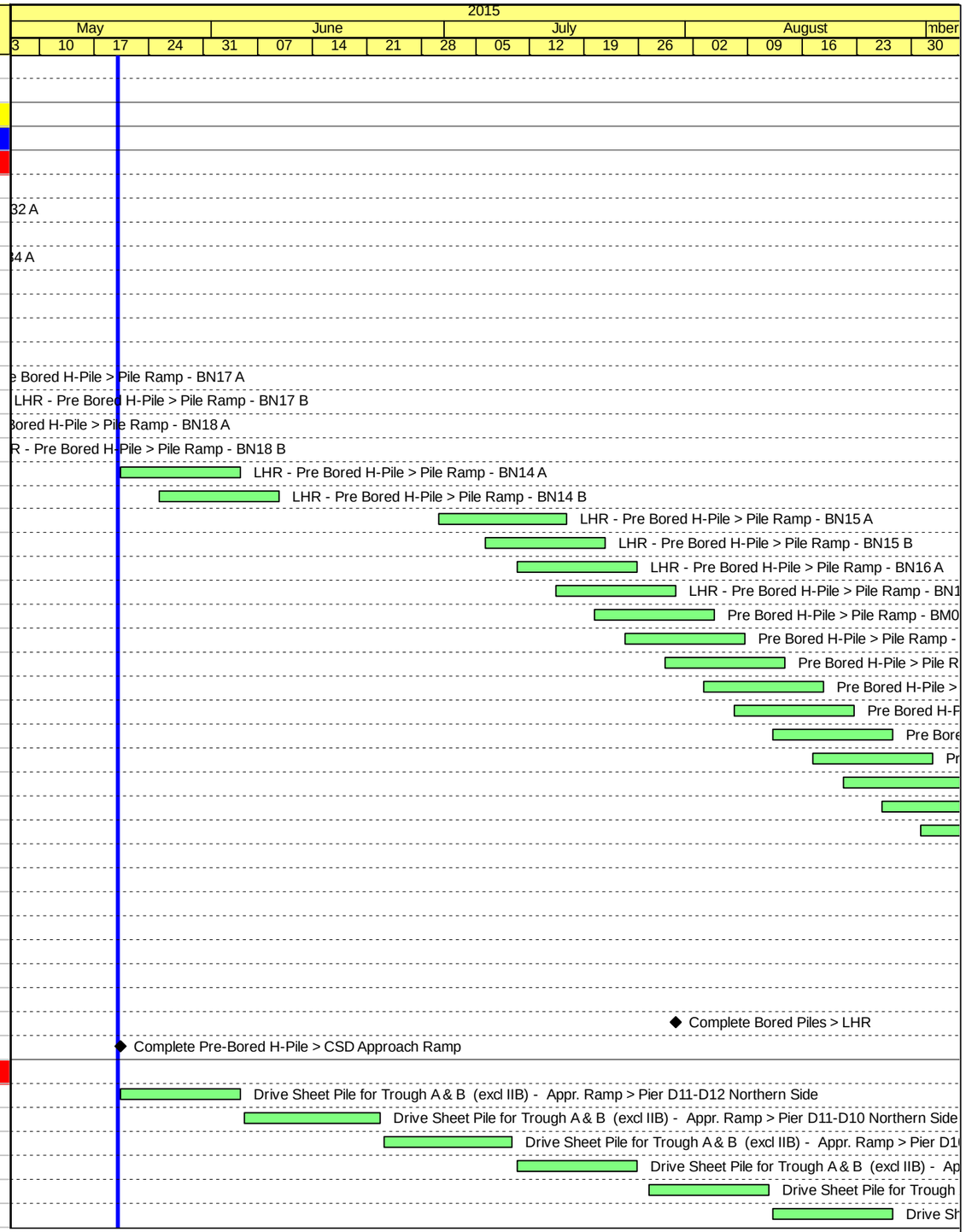
Contract HY/2009/19

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

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



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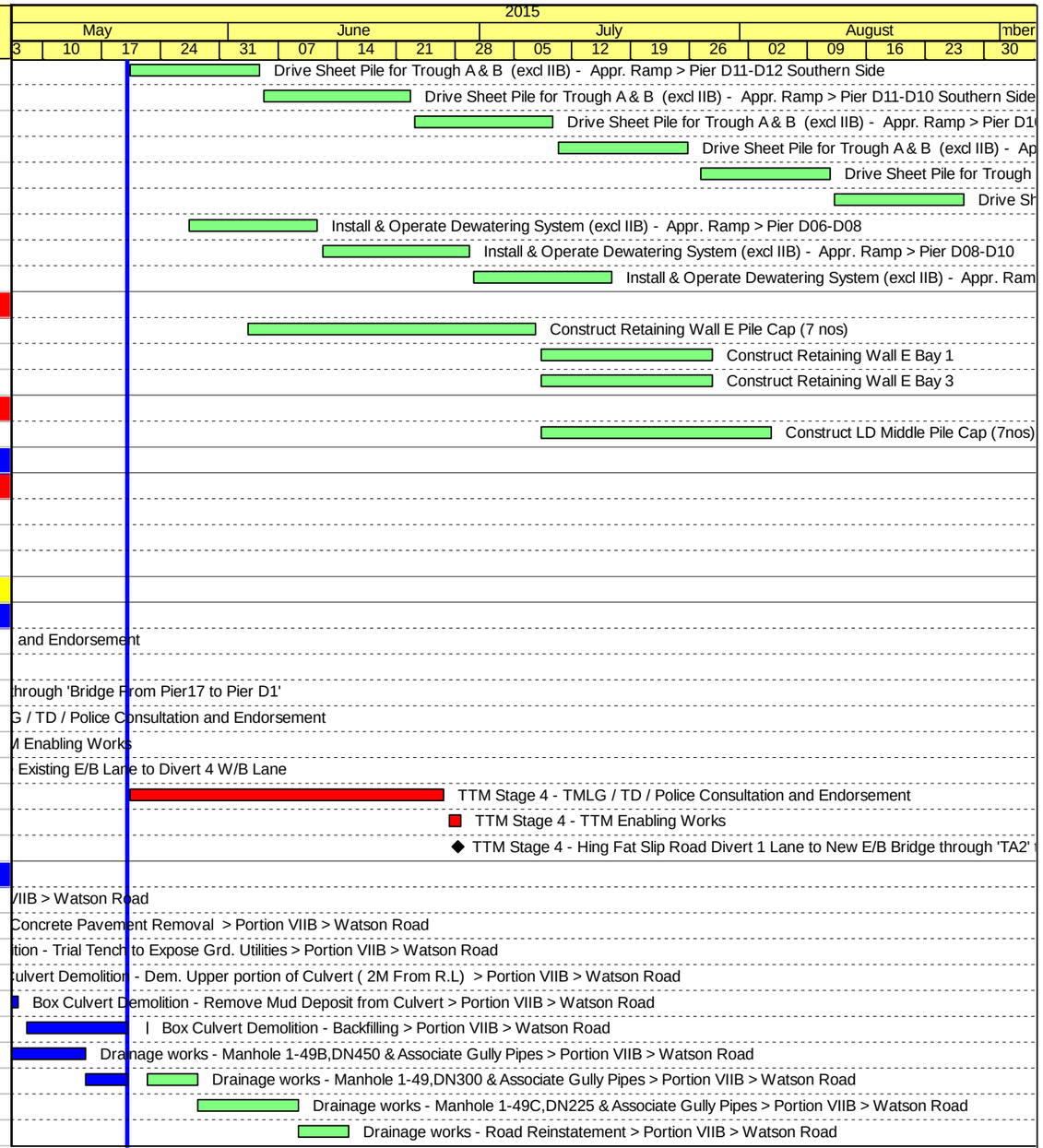
3 Months Rolling Program (20 May 2015 - 19 Aug 2015)

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float
1061-1065.6.1	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D12 Southerr	14	20-May-15	04-Jun-15	251
1061-1065.6.2	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D10 Southerr	14	05-Jun-15	22-Jun-15	251
1061-1065.6.3	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D10-D09 Southerr	14	23-Jun-15	09-Jul-15	251
1061-1065.6.4	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D09-D08 Southerr	14	10-Jul-15	25-Jul-15	251
1061-1065.6.5	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D08-D07 Southerr	14	27-Jul-15	11-Aug-15	251
1061-1065.6.6	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D07-D06 Southerr	14	12-Aug-15	27-Aug-15	251
1061-1068	Install & Operate Dewatering System (excl IIB) - Appr. Ramp > Pier D06-D08	14	27-May-15	11-Jun-15	287
1061-1068.1	Install & Operate Dewatering System (excl IIB) - Appr. Ramp > Pier D08-D10	14	12-Jun-15	29-Jun-15	287
1061-1068.2	Install & Operate Dewatering System (excl IIB) - Appr. Ramp > Pier D10-D12	14	30-Jun-15	16-Jul-15	287
Structure					
1061-1200	Construct Retaining Wall E Pile Cap (7 nos)	28	03-Jun-15	07-Jul-15	32
1061-1210	Construct Retaining Wall E Bay 1	18	08-Jul-15	28-Jul-15	32
1061-1230	Construct Retaining Wall E Bay 3	18	08-Jul-15	28-Jul-15	50
Landscape Deck					
A8260	Construct LD Middle Pile Cap (7nos)	24	08-Jul-15	04-Aug-15	44
10.6.2 - Approach Ramp (Within Portion IIB)					
Bored Piles					
1061-1045	LHR - Pre Bored H-Pile > Pile Ramp - BN01 A	14	26-Aug-16	12-Sep-16	221
1061-1046	LHR - Pre Bored H-Pile > Pile Ramp - BN01 B	14	12-Sep-16	29-Sep-16	221
1061-1047	LHR - Pre Bored H-Pile > Pile Ramp - BN05 A	14	29-Sep-16	18-Oct-16	221
10.7 - Section X - Miscellaneous Works					
10.7.1 - TTM Stages					
1071-1025	TTM Stage 2 - TMLG / TD / Police Consultation and Endorsement	0	29-Sep-14 A	27-Mar-15 A	
1071-1030	TTM Stage 2 - TTM Enabling Works	0	27-Mar-15 A	29-Mar-15 A	
1071-1040	TTM Stage 2 - Divert 3 Lanes to E/B Bridge through 'Bridge From Pier17 to Pier D1'	0		29-Mar-15 A	
1071-1041	TTM Stage 3 - TMLG / TD / Police Consultation and Endorsement	0	30-Mar-15 A	18-Apr-15 A	
1071-1042	TTM Stage 3 - TTM Enabling Works	0	19-Apr-15 A	19-Apr-15 A	
1071-1043	TTM Stage 3 - Use Existing E/B Lane to Divert 4 W/B Lane	0		19-Apr-15 A	
1071-1045	TTM Stage 4 - TMLG / TD / Police Consultation and Endorsement	32	20-May-15	26-Jun-15	0
1071-1046	TTM Stage 4 - TTM Enabling Works	2	27-Jun-15	28-Jun-15	0
1071-1047	TTM Stage 4 - Hing Fat Slip Road Divert 1 Lane to New E/B Bridge through 'TA2' to	0		28-Jun-15	0
10.7.2 - Oil Street/Watson Road (Portion III)					
A12510	Box Culvert Demolition > Portion VIIB > Watson Road	0	01-Apr-15 A	07-Apr-15 A	
A12520	Box Culvert Demolition - Concrete Pavement Removal > Portion VIIB > Watson Ro	0	08-Apr-15 A	14-Apr-15 A	
A12530	Box Culvert Demolition - Trial Tench to Expose Grd. Utilities > Portion VIIB > Watson	0	15-Apr-15 A	19-Apr-15 A	
A12540	Box Culvert Demolition - Dem. Upper portion of Culvert (2M From R.L) > Portion V	0	20-Apr-15 A	30-Apr-15 A	
A12550	Box Culvert Demolition - Remove Mud Deposit from Culvert > Portion VIIB > Watso	0	01-May-15 A	07-May-15 A	
A12560	Box Culvert Demolition - Backfilling > Portion VIIB > Watson Road	0	08-May-15 A	22-May-15	525
A12570	Drainage works - Manhole 1-49B,DN450 & Associate Gully Pipes > Portion VIIB > W	0	05-May-15 A	15-May-15 A	
A12590	Drainage works - Manhole 1-49,DN300 & Associate Gully Pipes > Portion VIIB > Wa	5	15-May-15 A	28-May-15	525
A12600	Drainage works - Manhole 1-49C,DN225 & Associate Gully Pipes > Portion VIIB > W	10	28-May-15	09-Jun-15	525
A12610	Drainage works - Road Reinstatement > Portion VIIB > Watson Road	5	09-Jun-15	15-Jun-15	525



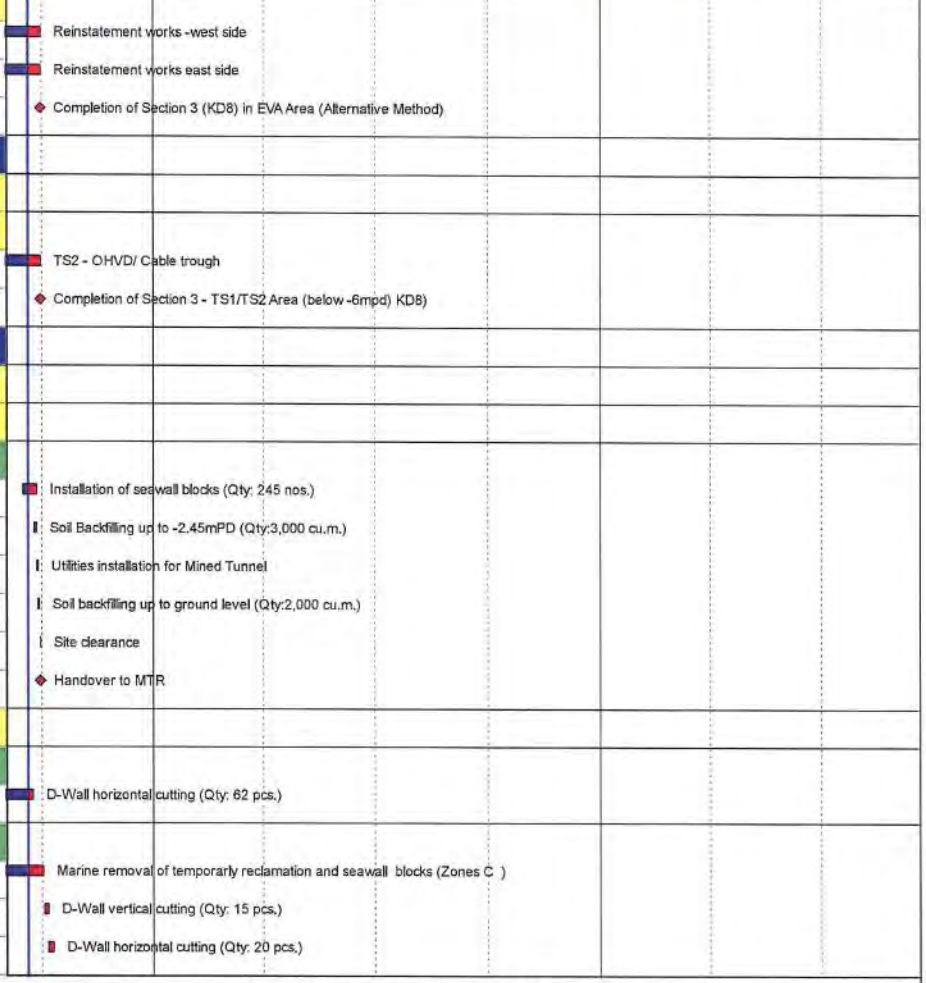
Remaining Level of Effort ◆ Milestone
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract HY/2009/19

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

WP13-0 | Layout: CWB - Working Layout for DWP Rev M | Date Printed 26-Sep-14 15

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float
HY/2009/15 - Works Programme Rev. M (DD:20-Sep-12)						
Works in East Ventilation Adit - Based on Alternative Method						
Reinstatement of Breakwater						
S3_54840	Reinstatement works -west side	7d/wk-1	60d	21-Feb-14 08 A	30-Sep-14 18	-85d
S3_60085	Reinstatement works east side	7d/wk-1	60d	31-May-14 08 A	30-Sep-14 18	-85d
S3_54845	Completion of Section 3 (KD8) in EVA Area (Alternative Method)	7d/wk-2	0d		30-Sep-14 18	-86d
Works in TS1/TS2 - OHVD and Cable Trough/Maintenance Walkway						
TS2 - OHVD and Cable Trough/Maintenance Walkway						
OHVD Slab and Cable Trough Construction						
S3_6210	TS2 - OHVD/ Cable trough	7d/wk-1	40d	20-May-14 08 A	30-Sep-14 18	-85d
S3_6212	Completion of Section 3 - TS1/TS2 Area (below -6mpd) KD8)	7d/wk-2	0d		30-Sep-14 18	-86d
Works in TS4/ME4 Area (Portion 14A, 14B, 15, 23)						
TS4/ME4 - Removal of Temporary Reclamation						
Remaining Works at TZ6						
Stage 4 - Seawall and Reclamation at TZ6						
A-2010	Installation of seawall blocks (Qty: 245 nos.)	7d/wk-2	6d	15-Sep-14 08 A	26-Sep-14 18	-332d
A-2020	Soil Backfilling up to -2.45mPD (Qty:3,000 cu.m.)	7d/wk-2	2d	25-Sep-14 08	26-Sep-14 18	-332d
A-2030	Utilities installation for Mined Tunnel	7d/wk-2	1d	27-Sep-14 08	27-Sep-14 18	-332d
A-2040	Soil backfilling up to ground level (Qty:2,000 cu.m.)	7d/wk-2	2d	28-Sep-14 08	29-Sep-14 18	-332d
A-2050	Site clearance	7d/wk-2	1d	30-Sep-14 08	30-Sep-14 18	-305d
A-2060	Handover to MTR	7d/wk-2	0d		30-Sep-14 18	-305d
Removal of Temporary Reclamation at TS4/ME4						
Stage 5 (Zones A, D & F - TS4-D33 to D-26, SCL2 & ME4-D19 to D13)						
A-3000	D-Wall horizontal cutting (Qty: 62 pcs.)	7d/wk-2	21d	29-Aug-14 08 A	23-Sep-14 18	-340d
Stage 6 (Zone C - P4, ME4-D12 to ME4-D10 & P3)						
A-3011	Marine removal of temporarly reclamation and seawall blocks (Zones C)	7d/wk-2	21d	31-Aug-14 08 A	02-Oct-14 18	-353d
A-3030	D-Wall vertical cutting (Qty: 15 pcs.)	7d/wk-2	4d	03-Oct-14 08	06-Oct-14 18	-353d
A-3040	D-Wall horizontal cutting (Qty: 20 pcs.)	7d/wk-2	5d	06-Oct-14 08	10-Oct-14 18	-352d



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China State Construction Engineering (Hong Kong) Ltd

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

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Prepared by William Caluza

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CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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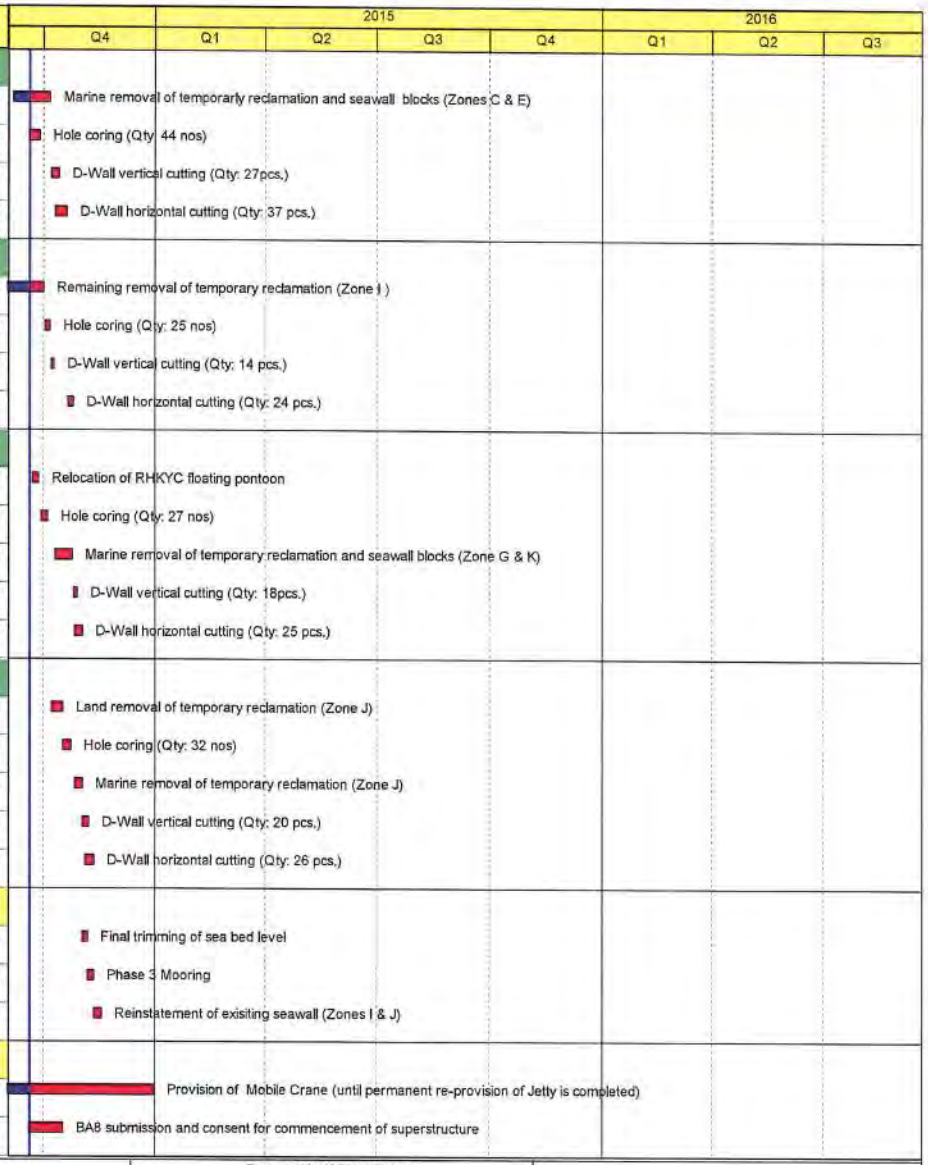
Stage 7 (Zones C & E - ME4-D06 to D01, SCL1 & TS4-D25)						
A-4000	Marine removal of temporarly reclamation and seawall blocks (Zones C & E)	7d/wk-2	18d	06-Sep-14 08 A	06-Oct-14 18	-353d
A-3090	Hole coring (Qty: 44 nos)	7d/wk-2	9d	20-Sep-14 08*	28-Sep-14 18	-346d
A-4010	D-Wall vertical cutting (Qty: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



Summary Bar
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China State Construction Engineering (Hong Kong) Ltd

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

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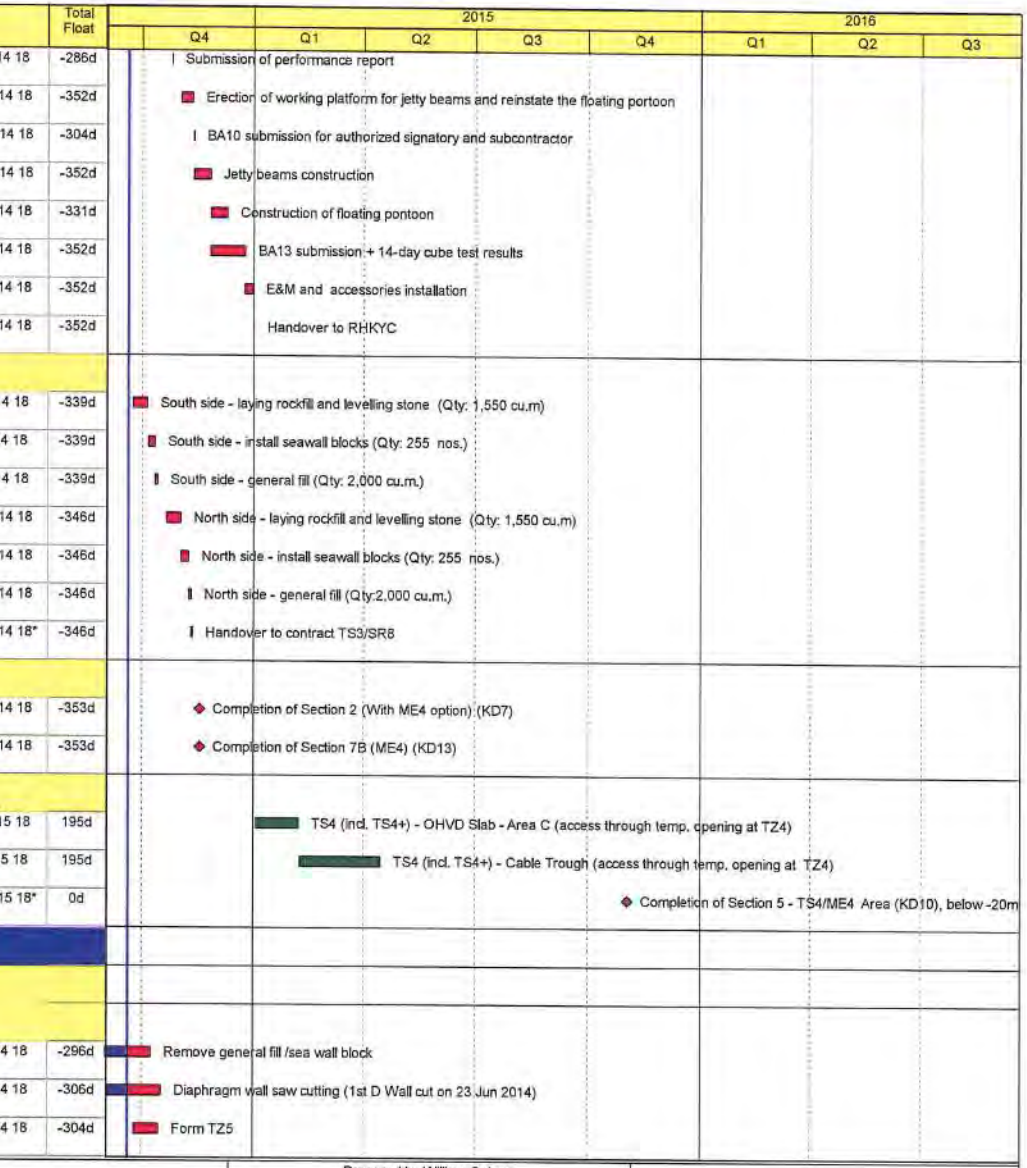
A-6012	Submission of performance report	7d/wk-2	1d	25-Oct-14 08*	25-Oct-14 18	-286d
A-6020	Erection of working platform for jetty beams and reinstate the floating portoon	7d/wk-2	10d	02-Nov-14 08	11-Nov-14 18	-352d
A-6040	BA10 submission for authorized signatory and subcontractor	7d/wk-2	1d	12-Nov-14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



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

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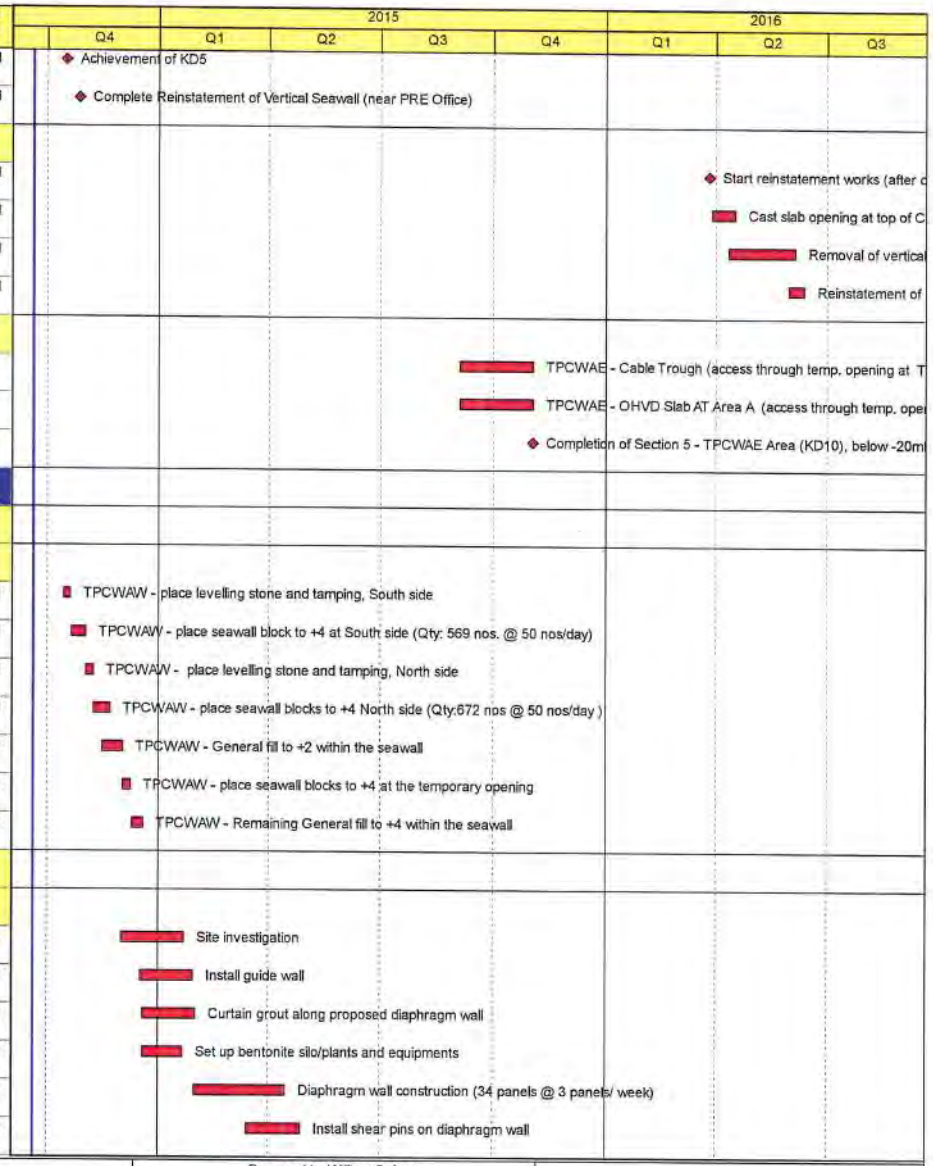
Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float
S67685	Achievement of KD5	7d/wk-2	0d		16-Oct-14 18	-323d
S67687	Complete Reinstatement of Vertical Seawall (near PRE Office)	7d/wk-2	0d		27-Oct-14 18	-322d
Reinstate Mucking Out Access Shaft "C"						
S67240	Start reinstatement works (after completion of TPCWAW OHVD works)	6d/wk	0d	26-Mar-16 08		-102d
S67225	Cast slab opening at top of CCT West bound (access shaft)	6d/wk	18d	28-Mar-16 08	16-Apr-16 18	-102d
S67230	Removal of vertical shaft and backfilling	6d/wk	48d	11-Apr-16 08	04-Jun-16 18	-102d
S67235	Reinstatement of pavement	6d/wk	12d	30-May-16 08	11-Jun-16 18	-102d
TPCWAE - OHVD / Cable Trough						
S5_7405	TPCWAE - Cable Trough (access through temp. opening at TZ5 & Portion 19)	6d/wk	48d	04-Sep-15 08	02-Nov-15 18	0d
S5_7400	TPCWAE - OHVD Slab AT Area A (access through temp. opening at TZ5 & Portion 19)	6d/wk	48d	04-Sep-15 08	02-Nov-15 18	0d
S5_59840	Completion of Section 5 - TPCWAE Area (KD10), below -20mPD	7d/wk-2	0d		02-Nov-15 18*	0d
Works in TPCWAW Area						
TPCWAW - Temporary Reclamation						
Temporary Reclamation -						
S6_9440	TPCWAW - place levelling stone and tamping, South side	7d/wk-1	6d	15-Oct-14 08	20-Oct-14 18	-122d
S6_9450	TPCWAW - place seawall block to +4 at South side (Qty: 569 nos. @ 50 nos/day)	7d/wk-1	12d	21-Oct-14 08	01-Nov-14 18	-122d
S6_9465	TPCWAW - place levelling stone and tamping, North side	7d/wk-1	6d	02-Nov-14 08	07-Nov-14 18	-122d
S6_9470	TPCWAW - place seawall blocks to +4 North side (Qty:672 nos @ 50 nos/day)	7d/wk-1	14d	08-Nov-14 08	21-Nov-14 18	-122d
S6_9495	TPCWAW - General fill to +2 within the seawall	7d/wk-1	17d	15-Nov-14 08	01-Dec-14 18	-122d
S6_9490	TPCWAW - place seawall blocks to +4 at the temporary opening	7d/wk-1	7d	02-Dec-14 08	08-Dec-14 18	-122d
S6_9475	TPCWAW - Remaining General fill to +4 within the seawall	7d/wk-1	10d	09-Dec-14 08	18-Dec-14 18	-122d
TPCWAW - Diaphragm Wall						
Diaphragm Wall						
S6_9385	Site investigation	7d/wk-1	49d	01-Dec-14 08	21-Jan-15 18	-113d
S6_8960	Install guide wall	7d/wk-1	40d	17-Dec-14 08	28-Jan-15 18	-120d
S6_8955	Curtain grout along proposed diaphragm wall	7d/wk-1	40d	19-Dec-14 08	30-Jan-15 18	-122d
S6_9382	Set up bentonite silo/plants and equipments	7d/wk-1	30d	19-Dec-14 08	20-Jan-15 18	-112d
S6_9345	Diaphragm wall construction (34 panels @ 3 panels/ week)	7d/wk-1	68d	30-Jan-15 08	14-Apr-15 18	-141d
S6_9350	Install shear pins on diaphragm wall	7d/wk-1	40d	14-Mar-15 08	26-Apr-15 18	-133d



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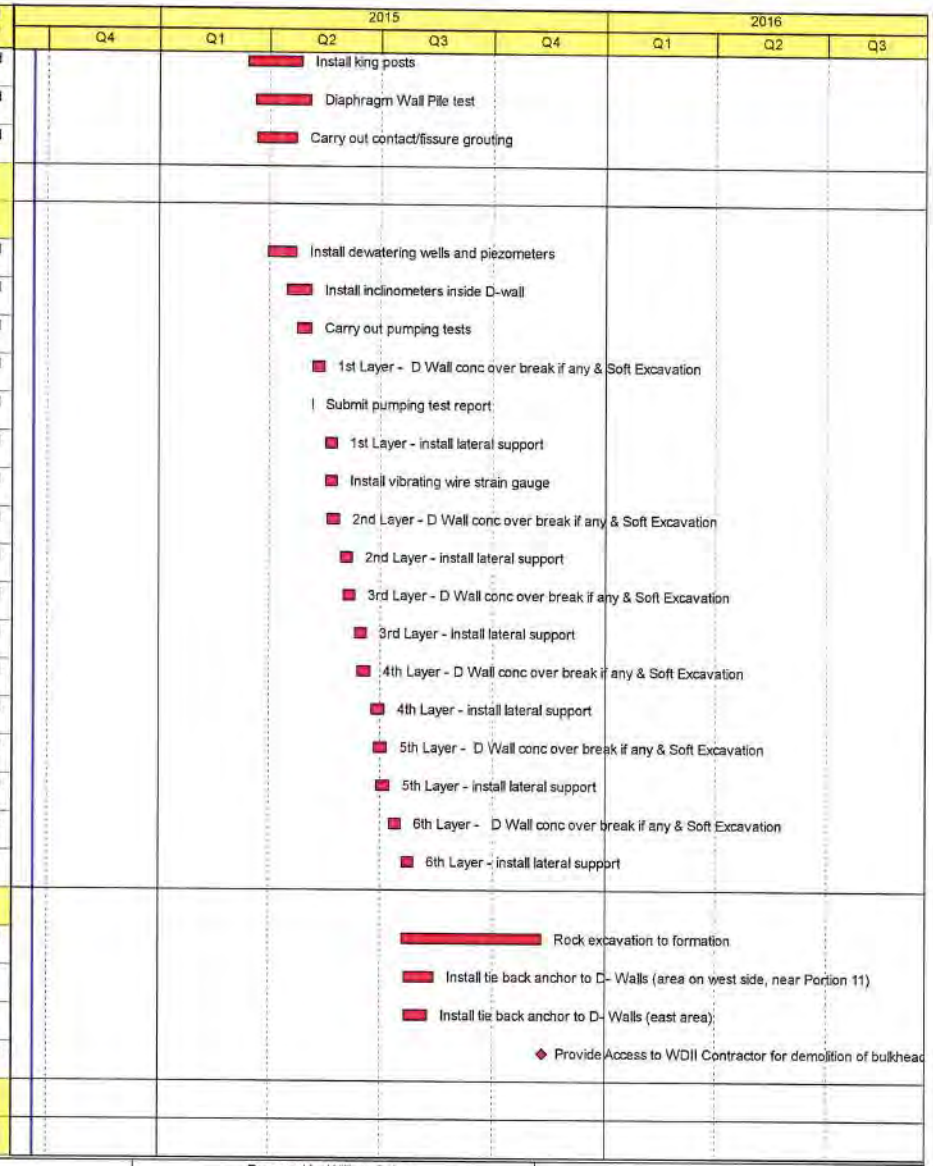
S6_9355	Install king posts	7d/wk-1	40d	14-Mar-15 08	26-Apr-15 18	-133d
S6_8970	Diaphragm Wall Pile test	7d/wk-1	40d	20-Mar-15 08	03-May-15 18	-129d
S6_9375	Carry out contact/fissure grouting	7d/wk-1	29d	21-Mar-15 08	22-Apr-15 18	-141d
TPCWAW- ELS Works						
ELS Works						
S6_9360	Install dewatering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



Summary Bar
Actual Level of Effort
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Milestone

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

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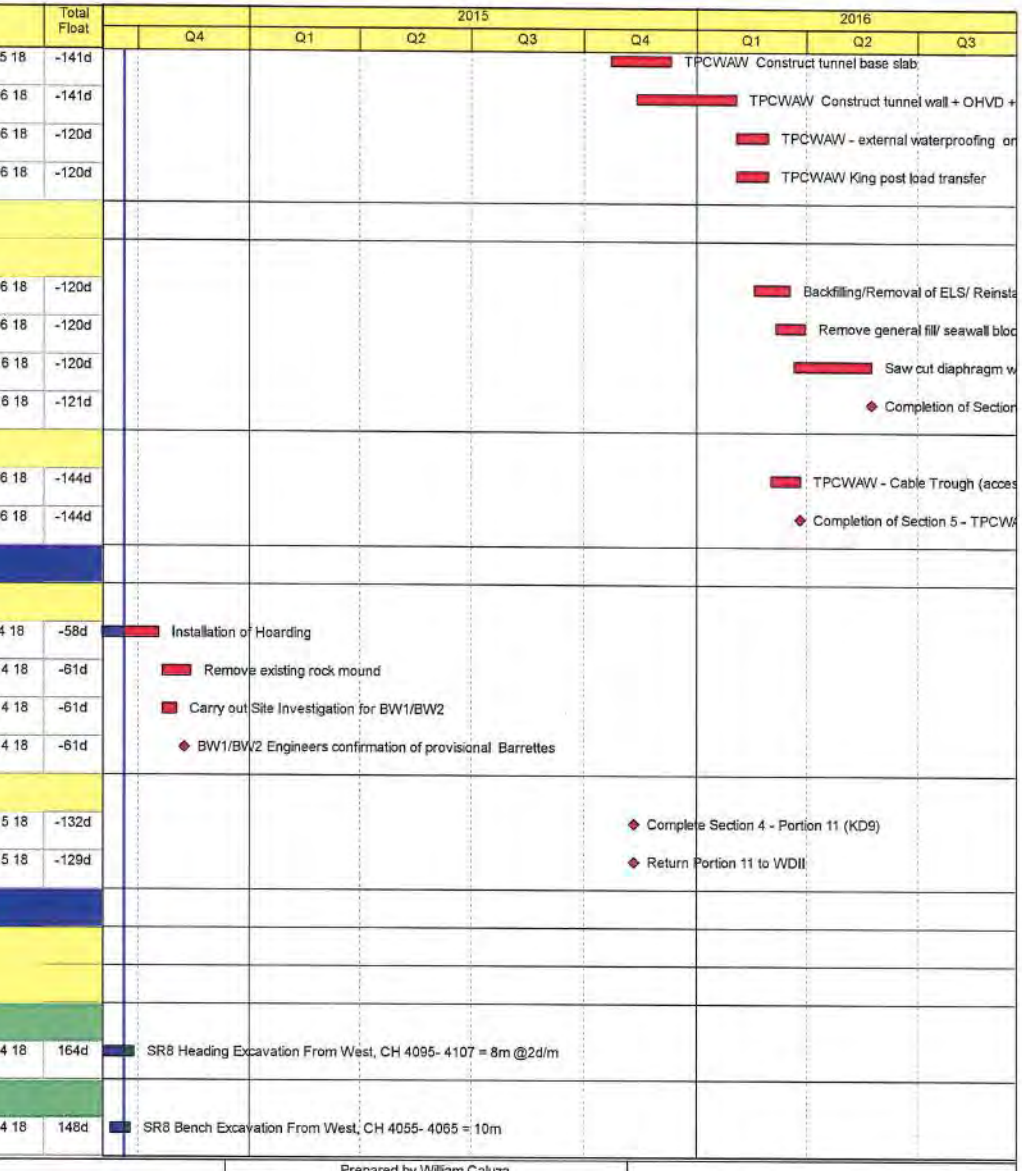
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float
S6_9070	TPCWAW Construct tunnel base slab	7d/wk-1	50d	23-Oct-15 08	11-Dec-15 18	-141d
S6_9075	TPCWAW Construct tunnel wall + OHVD + roof slab	7d/wk-1	80d	13-Nov-15 08	02-Feb-16 18	-141d
S6_9077	TPCWAW - external waterproofing on top of completed CCT box (incl. screeding)	7d/wk-1	26d	03-Feb-16 08	28-Feb-16 18	-120d
S6_9076	TPCWAW King post load transfer	7d/wk-1	26d	03-Feb-16 08	28-Feb-16 18	-120d
	TPCWAW - Removal of Temporary Reclamation					
	Removal of Temporary Reclamation					
S6_9140	Backfilling/Removal of ELS/ Reinstatement of sea wall at Portion 11 (concurrent activities)	7d/wk-1	30d	17-Feb-16 08	17-Mar-16 18	-120d
S6_9105	Remove general fill/ seawall block (concurrent activities)	7d/wk-1	25d	06-Mar-16 08	30-Mar-16 18	-120d
S6_9120	Saw cut diaphragm wall	7d/wk-1	63d	21-Mar-16 08	23-May-16 18	-120d
S6_7550	Completion of Section 6- (KD11), above - 20mPD	7d/wk-2	0d		23-May-16 18	-121d
	TPCWAW -Cable Trough/ Maintenance Walkway					
S6_9085	TPCWAW - Cable Trough (access through temp. opening at Portion 19)	7d/wk-2	24d	02-Mar-16 08	25-Mar-16 18	-144d
S6_9135	Completion of Section 5 - TPCWAW Area (KD10), below -20mPD	7d/wk-2	0d		25-Mar-16 18	-144d
	Works in Wan Chai PCWA (Portion 11)					
	Initial Works & Utilities Works					
S4_2810	Installation of Hoarding	7d/wk-1	24d	05-May-14 08 A	17-Oct-14 18	-58d
S4_2720	Remove existing rock mound	7d/wk-1	24d	21-Oct-14 08	13-Nov-14 18	-61d
S4_2750	Carry out Site Investigation for BW1/BW2	7d/wk-1	12d	21-Oct-14 08	01-Nov-14 18	-61d
S4_2755	BW1/BW2 Engineers confirmation of provisional Barrettes	7d/wk-1	0d		07-Nov-14 18	-61d
	Allow Access to WDII					
S4_2785	Complete Section 4 - Portion 11 (KD9)	7d/wk-2	0d		10-Nov-15 18	-132d
S4_2775	Return Portion 11 to WDII	7d/wk-1	0d		10-Nov-15 18	-129d
	Works for Mined Tunnel (Portion 16, 17, 18)					
	SR8 (Tunnel Excavation + Lining)					
	From West (TPCWAE)					
	Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)					
A8676	SR8 Heading Excavation From West, CH 4095- 4107 = 8m @2d/m	7d/wk-1a	16d	03-Sep-14 08 A	28-Sep-14 18	164d
	Bench Excavation (1.5d-2d/m, 20m separation with heading)					
A8700	SR8 Bench Excavation From West, CH 4055- 4065 = 10m	7d/wk-1a	20d	08-Sep-14 08 A	24-Sep-14 18	148d



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China State Construction Engineering (Hong Kong) Ltd

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CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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

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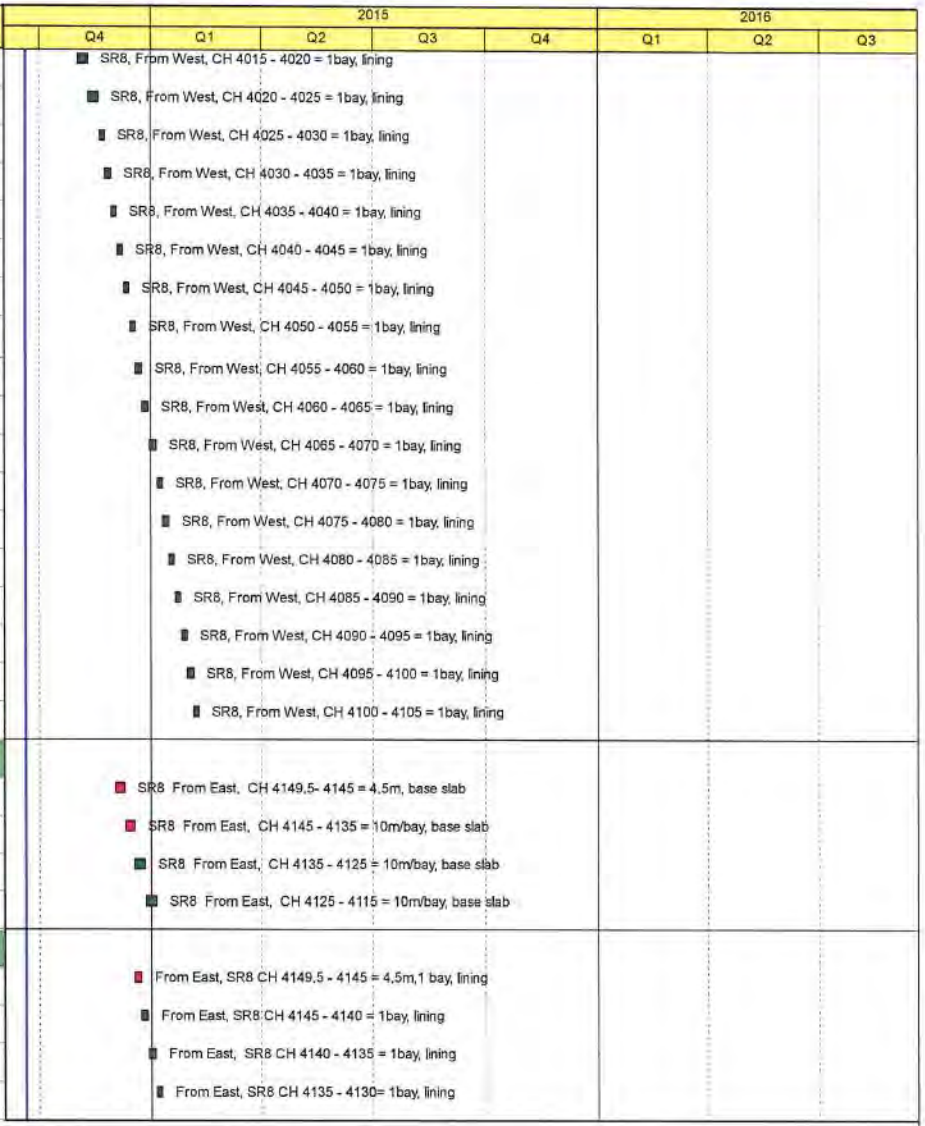
A8595	SR8, From West, CH 4015 - 4020 = 1bay, lining	7d/wk-1a	9d	01-Nov-14 08	09-Nov-14 18	137d
A8600	SR8, From West, CH 4020 - 4025 = 1bay, lining	7d/wk-1a	9d	10-Nov-14 08	18-Nov-14 18	137d
A8605	SR8, From West, CH 4025 - 4030 = 1bay, lining	7d/wk-1a	5d	19-Nov-14 08	23-Nov-14 18	137d
A8610	SR8, From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



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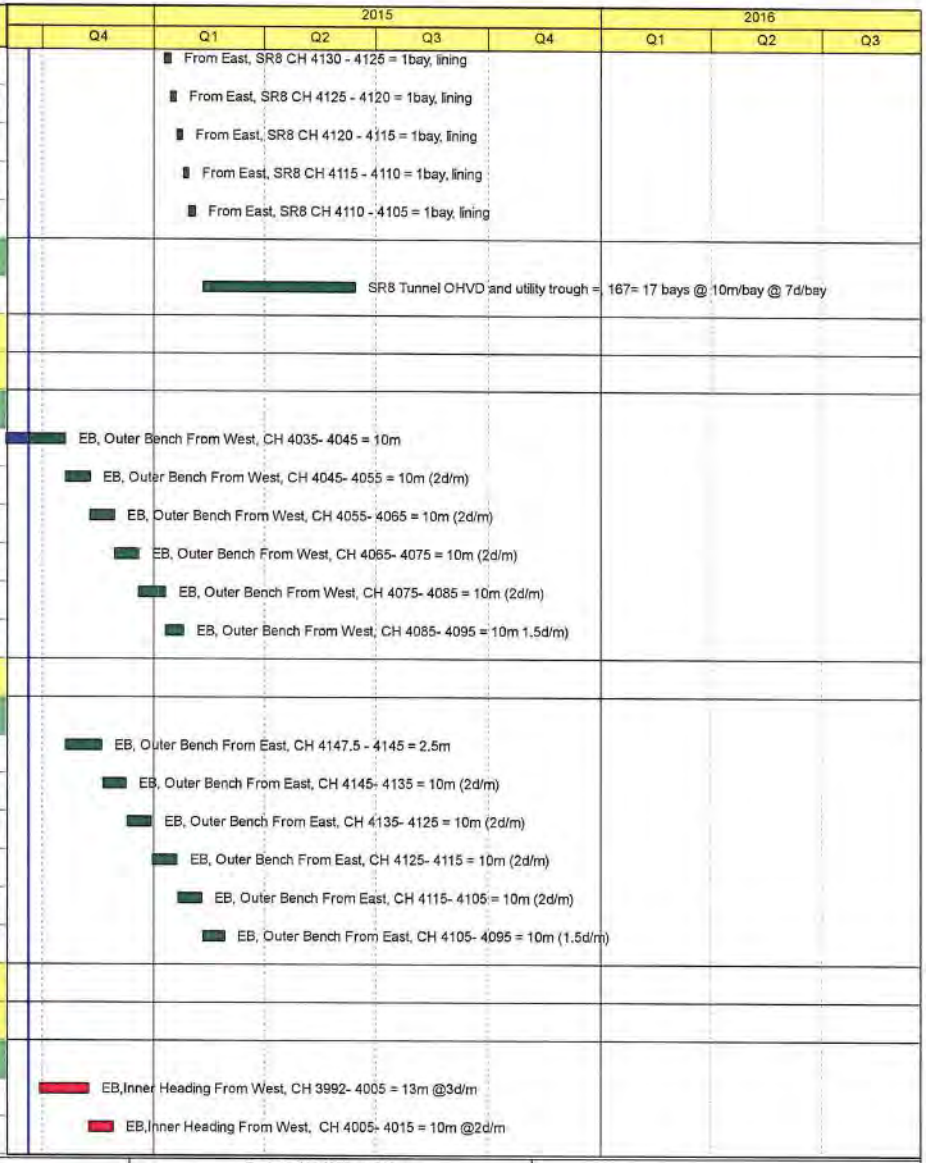
A9870	From East, SR8 CH 4130 - 4125 = 1bay, lining	7d/wk-1a	5d	09-Jan-15 08	13-Jan-15 18	6d
A9800	From East, SR8 CH 4125 - 4120 = 1bay, lining	7d/wk-1a	5d	14-Jan-15 08	18-Jan-15 18	143d
A9860	From East, SR8 CH 4120 - 4115 = 1bay, lining	7d/wk-1a	5d	19-Jan-15 08	23-Jan-15 18	143d
A9855	From East, SR8 CH 4115 - 4110 = 1bay, lining	7d/wk-1a	5d	24-Jan-15 08	28-Jan-15 18	143d
A9850	From East, SR8 CH 4110 - 4105 = 1bay, lining	7d/wk-1a	5d	29-Jan-15 08	02-Feb-15 18	143d
OHVD(10m/bay) / Utility Trough						
A8570	SR8 Tunnel OHVD and utility trough =, 167= 17 bays @ 10m/bay @ 7d/bay	7d/wk-1a	120d	09-Feb-15 08	13-Jun-15 18	137d
EB Outer Tunnel Excavation						
From West (TPCWAE)						
Outer Bench Excavation (1.5d - 2d/m, 20m separation with heading)						
A9550	EB, Outer Bench From West, CH 4035- 4045 = 10m	7d/wk-1a	30d	07-Aug-14 08 A	20-Oct-14 18	135d
A9555	EB, Outer Bench From West, CH 4045- 4055 = 10m (2d/m)	7d/wk-1a	20d	20-Oct-14 08	08-Nov-14 18	135d
A9560	EB, Outer Bench From West, CH 4055- 4065 = 10m (2d/m)	7d/wk-1a	20d	09-Nov-14 08	28-Nov-14 18	135d
A9565	EB, Outer Bench From West, CH 4065- 4075 = 10m (2d/m)	7d/wk-1a	20d	29-Nov-14 08	18-Dec-14 18	135d
A9520	EB, Outer Bench From West, CH 4075- 4085 = 10m (2d/m)	7d/wk-1a	20d	19-Dec-14 08	09-Jan-15 18	135d
A9545	EB, Outer Bench From West, CH 4085- 4095 = 10m 1.5d/m)	7d/wk-1a	15d	10-Jan-15 08	24-Jan-15 18	135d
From East (TS4)						
Outer Bench Excavation (1.5d-2d/m, 20m separation with heading)						
A9605	EB, Outer Bench From East, CH 4147.5 - 4145 = 2.5m	7d/wk-1a	30d	20-Oct-14 08*	18-Nov-14 18	120d
A9610	EB, Outer Bench From East, CH 4145- 4135 = 10m (2d/m)	7d/wk-1a	20d	19-Nov-14 08	08-Dec-14 18	120d
A9615	EB, Outer Bench From East, CH 4135- 4125 = 10m (2d/m)	7d/wk-1a	20d	09-Dec-14 08	29-Dec-14 18	120d
A9620	EB, Outer Bench From East, CH 4125- 4115 = 10m (2d/m)	7d/wk-1a	20d	30-Dec-14 08	19-Jan-15 18	120d
A9625	EB, Outer Bench From East, CH 4115- 4105 = 10m (2d/m)	7d/wk-1a	20d	20-Jan-15 08	08-Feb-15 18	120d
A9630	EB, Outer Bench From East, CH 4105- 4095 = 10m (1.5d/m)	7d/wk-1a	15d	09-Feb-15 08	26-Feb-15 18	120d
EB (Inner Tunnel Excavation + Lining)						
From West (TPCWAE)						
Inner Heading Excavation (2d/m, 24h/day work shift, 7d/week, no work on statutory holiday)						
A8805	EB,Inner Heading From West, CH 3992- 4005 = 13m @3d/m	7d/wk-1a	39d	29-Sep-14 08	07-Nov-14 18	0d
A8815	EB,Inner Heading From West, CH 4005- 4015 = 10m @2d/m	7d/wk-1a	20d	08-Nov-14 08	27-Nov-14 18	0d



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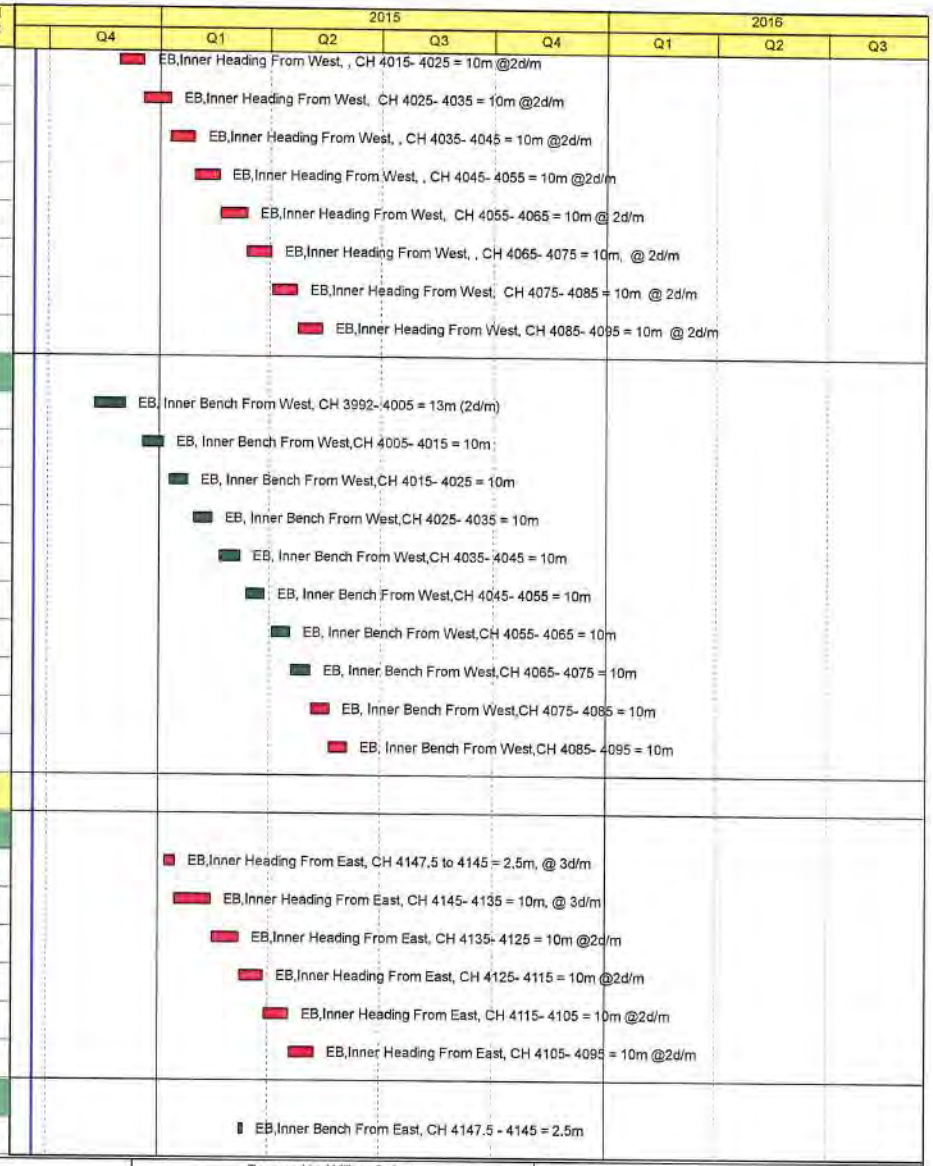
A8820	EB,Inner Heading From West, , CH 4015- 4025 = 10m @2d/m	7d/wk-1a	20d	28-Nov-14 08	17-Dec-14 18	0d
A8780	EB,Inner Heading From West, CH 4025- 4035 = 10m @2d/m	7d/wk-1a	20d	18-Dec-14 08	08-Jan-15 18	0d
A8810	EB,Inner Heading From West, , CH 4035- 4045 = 10m @2d/m	7d/wk-1a	20d	09-Jan-15 08	28-Jan-15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



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

China State Construction Engineering (Hong Kong) Ltd

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

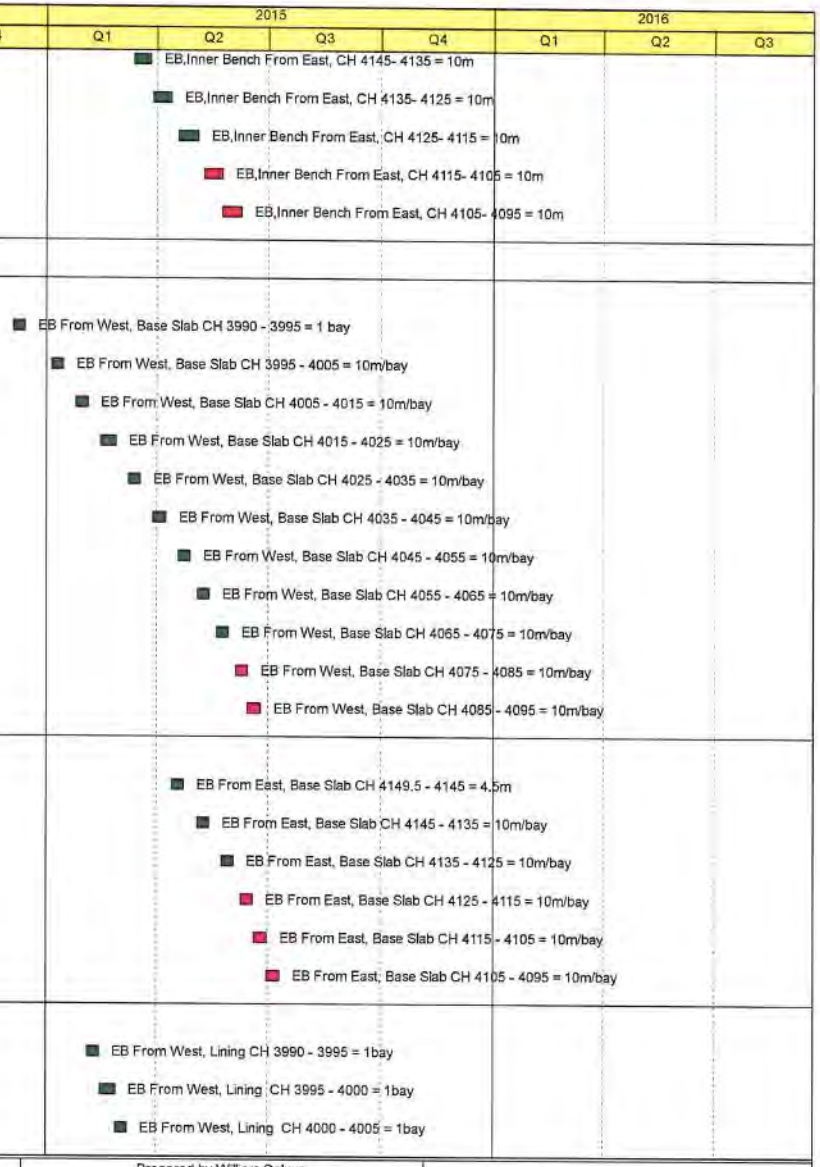
WORKS PROGRAMME REV. M

Prepared by William Caluza

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

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

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



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

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float
A9050	EB From West, Lining CH 4005 - 4010 = 1bay	7d/wk-1a	10d	08-Mar-15 08	17-Mar-15 18	4d
A9055	EB From West, Lining CH 4010 - 4015 = 1bay	7d/wk-1a	10d	18-Mar-15 08	27-Mar-15 18	4d
A9060	EB From West, Lining CH 4015 - 4020 = 1bay	7d/wk-1a	10d	26-Mar-15 08	05-Apr-15 18	4d
A9070	EB From West, Lining CH 4020 - 4025 = 1bay	7d/wk-1a	10d	03-Apr-15 08	13-Apr-15 18	4d
A9075	EB From West, Lining CH 4025 - 4030 = 1bay	7d/wk-1a	10d	12-Apr-15 08	21-Apr-15 18	4d
A9080	EB From West, Lining CH 4030 - 4035 = 1bay	7d/wk-1a	10d	20-Apr-15 08	29-Apr-15 18	4d
A9085	EB From West, Lining CH 4035 - 4040 = 1bay	7d/wk-1a	10d	28-Apr-15 08	08-May-15 18	4d
A9015	EB From West, Lining CH 4040 - 4045 = 1bay	7d/wk-1a	10d	07-May-15 08	16-May-15 18	4d
A9020	EB From West, Lining CH 4045 - 4050 = 1bay	7d/wk-1a	10d	15-May-15 08	24-May-15 18	4d
A9025	EB From West, Lining CH 4050 - 4055 = 1bay	7d/wk-1a	10d	23-May-15 08	01-Jun-15 18	4d
A9030	EB From West, Lining CH 4055 - 4060 = 1bay	7d/wk-1a	10d	31-May-15 08	09-Jun-15 18	4d
A9035	EB From West, Lining CH 4060 - 4065 = 1bay	7d/wk-1a	10d	07-Jun-15 08	16-Jun-15 18	4d
A9040	EB From West, Lining CH 4065 - 4070 = 1bay	7d/wk-1a	10d	14-Jun-15 08	24-Jun-15 18	4d
A9045	EB From West, Lining CH 4070 - 4075 = 1bay	7d/wk-1a	10d	25-Jun-15 08	05-Jul-15 18	0d
A8955	EB From West, Lining CH 4075 - 4080 = 1bay	7d/wk-1a	10d	30-Jun-15 08	10-Jul-15 18	0d
A8960	EB From West, Lining CH 4080 - 4085 = 1bay	7d/wk-1a	5d	11-Jul-15 08	15-Jul-15 18	0d
A8970	EB From West, Lining CH 4085 - 4090 = 1bay	7d/wk-1a	5d	16-Jul-15 08	20-Jul-15 18	0d
A8975	EB From West, Lining CH 4090 - 4095 = 1bay	7d/wk-1a	5d	21-Jul-15 08	25-Jul-15 18	0d
A8980	EB From West, Lining CH 4095 - 4100 = 1bay	7d/wk-1a	5d	26-Jul-15 08	30-Jul-15 18	0d
A8985	EB From West, Lining CH 4100 - 4105 = 1bay	7d/wk-1a	5d	31-Jul-15 08	04-Aug-15 18	0d
A8990	EB From West, Lining CH 4105 - 4110 = 1bay	7d/wk-1a	5d	05-Aug-15 08	09-Aug-15 18	0d
A8995	EB From West, Lining CH 4110 - 4115 = 1bay	7d/wk-1a	5d	10-Aug-15 08	14-Aug-15 18	0d
A9000	EB From West, Lining CH 4115 - 4120 = 1bay	7d/wk-1a	5d	15-Aug-15 08	19-Aug-15 18	0d
A9010	EB From West, Lining CH 4120 - 4125 = 1bay	7d/wk-1a	5d	20-Aug-15 08	24-Aug-15 18	0d
A8965	EB From West, Lining CH 4125 - 4130 = 1bay	7d/wk-1a	5d	25-Aug-15 08	29-Aug-15 18	0d
A8935	EB From West, Lining CH 4130 - 4135 = 1bay	7d/wk-1a	5d	30-Aug-15 08	03-Sep-15 18	0d
A8940	EB From West, Lining CH 4135 - 4140 = 1bay	7d/wk-1a	5d	04-Sep-15 08	08-Sep-15 18	0d
A8945	EB From West, Lining CH 4140 - 4145 = 1bay	7d/wk-1a	5d	09-Sep-15 08	13-Sep-15 18	0d
A8950	EB From West, Lining CH 4145 - 4149.5 = 4.5m	7d/wk-1a	5d	14-Sep-15 08	18-Sep-15 18	0d

Summary Bar
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China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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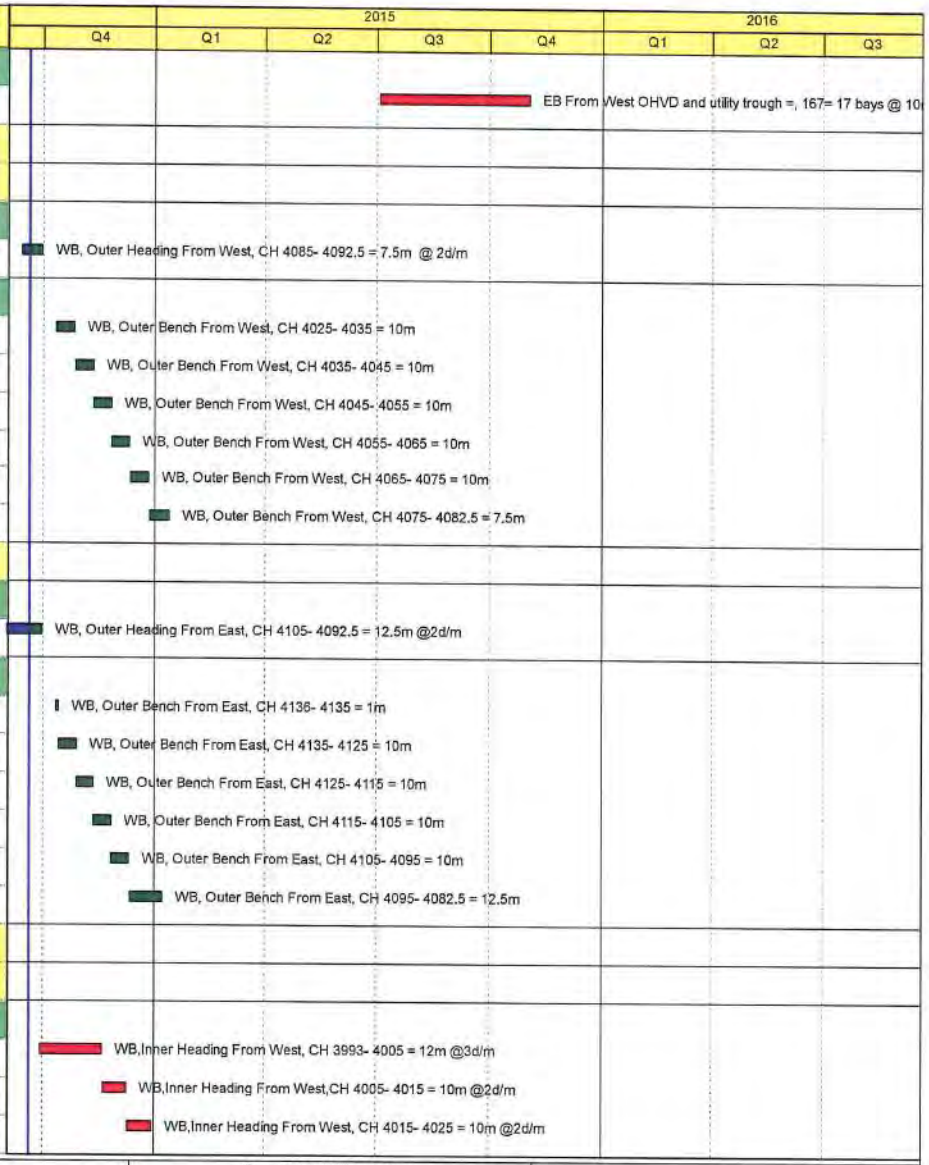
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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



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

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CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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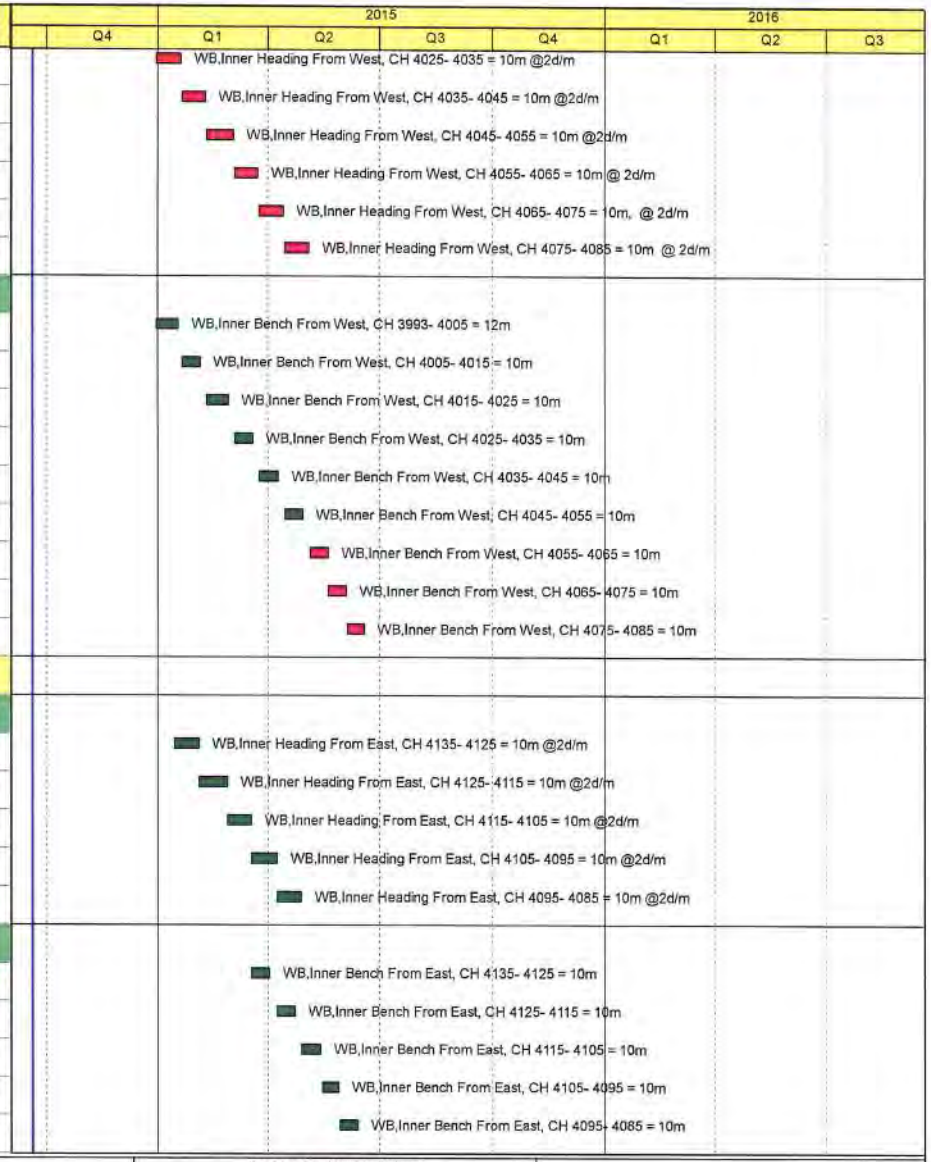
A9100	WB,Inner Heading From West, CH 4025- 4035 = 10m @2d/m	7d/wk-1a	20d	30-Dec-14 08	19-Jan-15 18	0d
A9105	WB,Inner Heading From West, CH 4035- 4045 = 10m @2d/m	7d/wk-1a	20d	20-Jan-15 08	08-Feb-15 18	0d
A9110	WB,Inner Heading From West, CH 4045- 4055 = 10m @2d/m	7d/wk-1a	20d	09-Feb-15 08	03-Mar-15 18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



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CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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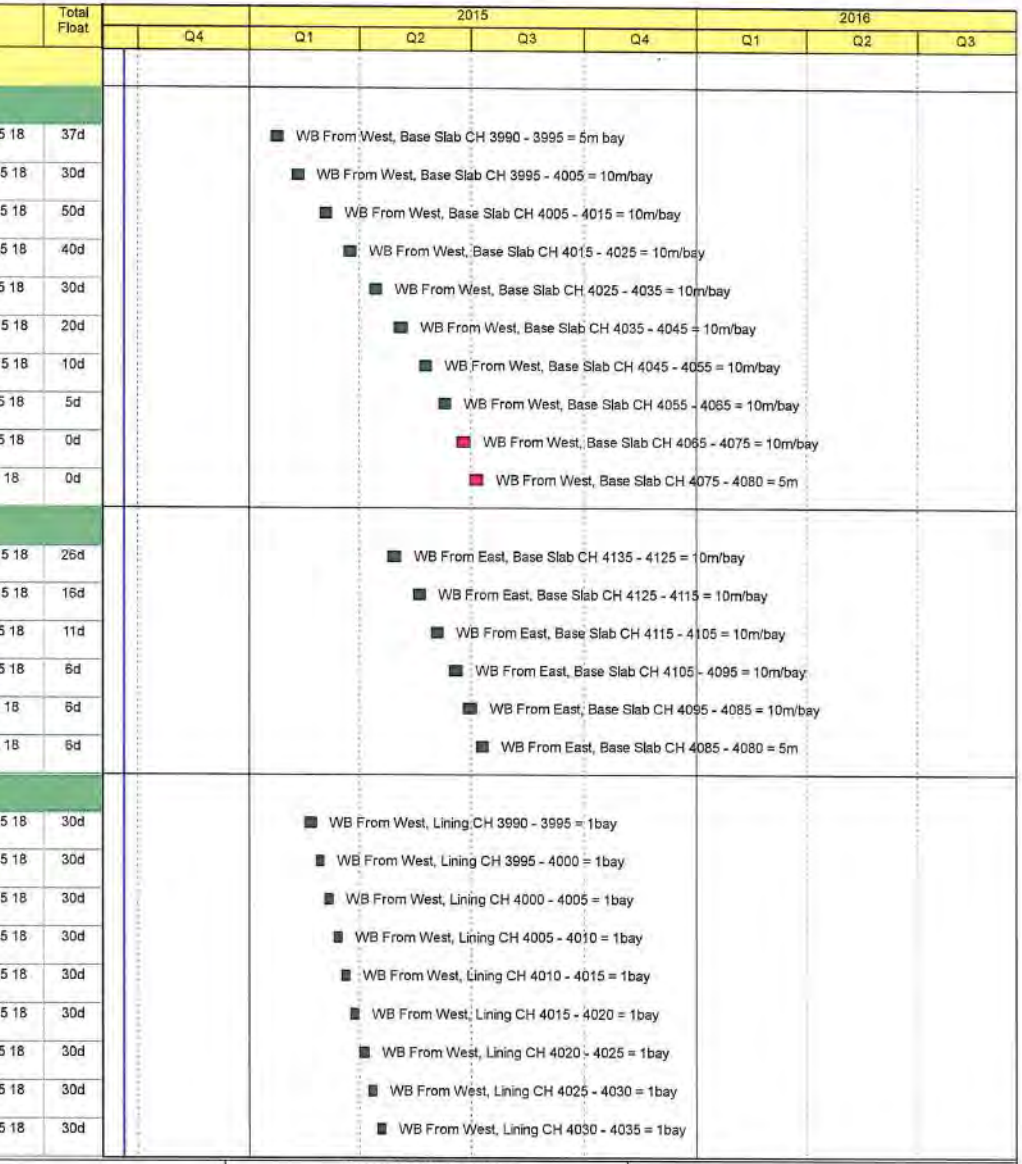
Tunnel Lining Works						
From West Base Slab (10m/bay, 10m separation with benching excavation)						
A9295	WB From West, Base Slab CH 3990 - 3995 = 5m bay	7d/wk-1a	10d	18-Jan-15 08	27-Jan-15 18	37d
A9320	WB From West, Base Slab CH 3995 - 4005 = 10m/bay	7d/wk-1a	10d	04-Feb-15 08	13-Feb-15 18	30d
A9255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



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

China State Construction Engineering (Hong Kong) Ltd

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

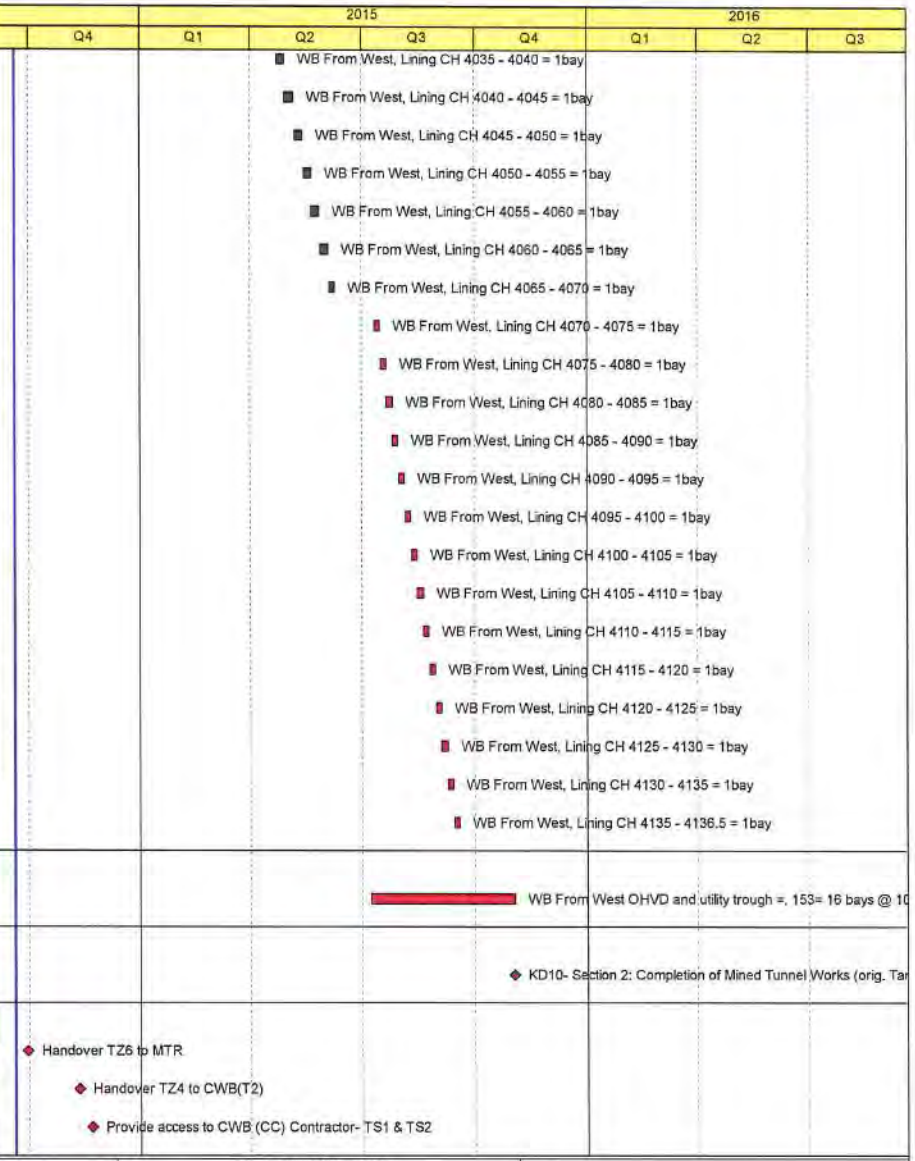
WORKS PROGRAMME REV. M

Prepared by William Caluza

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

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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float
A9390	WB From West, Lining CH 4035 - 4040 = 1bay	7d/wk-1a	7d	22-Apr-15 08	28-Apr-15 18	30d
A9330	WB From West, Lining CH 4040 - 4045 = 1bay	7d/wk-1a	7d	29-Apr-15 08	06-May-15 18	30d
A9335	WB From West, Lining CH 4045 - 4050 = 1bay	7d/wk-1a	7d	07-May-15 08	13-May-15 18	30d
A9340	WB From West, Lining CH 4050 - 4055 = 1bay	7d/wk-1a	7d	14-May-15 08	20-May-15 18	30d
A9345	WB From West, Lining CH 4055 - 4060 = 1bay	7d/wk-1a	7d	21-May-15 08	27-May-15 18	30d
A9350	WB From West, Lining CH 4060 - 4065 = 1bay	7d/wk-1a	7d	28-May-15 08	03-Jun-15 18	30d
A9355	WB From West, Lining CH 4065 - 4070 = 1bay	7d/wk-1a	5d	04-Jun-15 08	08-Jun-15 18	30d
A9415	WB From West, Lining CH 4070 - 4075 = 1bay	7d/wk-1a	5d	11-Jul-15 08	15-Jul-15 18	0d
A9475	WB From West, Lining CH 4075 - 4080 = 1bay	7d/wk-1a	5d	16-Jul-15 08	20-Jul-15 18	0d
A9440	WB From West, Lining CH 4080 - 4085 = 1bay	7d/wk-1a	5d	21-Jul-15 08	25-Jul-15 18	0d
A9445	WB From West, Lining CH 4085 - 4090 = 1bay	7d/wk-1a	5d	26-Jul-15 08	30-Jul-15 18	0d
A9450	WB From West, Lining CH 4090 - 4095 = 1bay	7d/wk-1a	5d	31-Jul-15 08	04-Aug-15 18	0d
A9455	WB From West, Lining CH 4095 - 4100 = 1bay	7d/wk-1a	5d	05-Aug-15 08	09-Aug-15 18	0d
A9420	WB From West, Lining CH 4100 - 4105 = 1bay	7d/wk-1a	5d	10-Aug-15 08	14-Aug-15 18	0d
A9425	WB From West, Lining CH 4105 - 4110 = 1bay	7d/wk-1a	5d	15-Aug-15 08	19-Aug-15 18	0d
A9460	WB From West, Lining CH 4110 - 4115 = 1bay	7d/wk-1a	5d	20-Aug-15 08	24-Aug-15 18	0d
A9465	WB From West, Lining CH 4115 - 4120 = 1bay	7d/wk-1a	5d	25-Aug-15 08	29-Aug-15 18	0d
A9395	WB From West, Lining CH 4120 - 4125 = 1bay	7d/wk-1a	5d	30-Aug-15 08	03-Sep-15 18	0d
A9400	WB From West, Lining CH 4125 - 4130 = 1bay	7d/wk-1a	5d	04-Sep-15 08	08-Sep-15 18	0d
A9405	WB From West, Lining CH 4130 - 4135 = 1bay	7d/wk-1a	5d	09-Sep-15 08	13-Sep-15 18	0d
A9410	WB From West, Lining CH 4135 - 4136.5 = 1bay	7d/wk-1a	5d	14-Sep-15 08	18-Sep-15 18	0d
OHVD(10m/bay) / Utility Trough						
A9480	WB From West OHVD and utility trough =, 153= 16 bays @ 10m/bay @ 7d/bay	7d/wk-1a	115d	08-Jul-15 08	02-Nov-15 18	0d
Completion of KD10- Section 5						
A8445	KD10- Section 2: Completion of Mined Tunnel Works (orig. Target KD10- 2 Nov 2015)	7d/wk-2	0d		02-Nov-15 18*	0d
Interface works with other Contracts						
S5_60115	Handover TZ6 to MTR	7d/wk-2	0d		30-Sep-14 18	-249d
S6_5283	Handover TZ4 to CWB(T2)	7d/wk-2	0d		10-Nov-14 18	-290d
S6_5275	Provide access to CWB (CC) Contractor- TS1 & TS2	7d/wk-2	0d		21-Nov-14 18*	-85d



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

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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

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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float
S6_5280	Provide access to CWB (CC) Contractor- TS4, TPCWA, Mined Tunnel	7d/wk-2	0d		31-Mar-16 18*	-124d
Stage and Section Completion						
KD_5735	KD8 - Completion of Section 3, (1326d)	7d/wk-2	0d		30-Sep-14 18*	-86d
KD_5720	KD5 - Achievement of Stage 5, (1152d)	7d/wk-2	0d		16-Oct-14 18*	-323d
KD_5760	KD13 - Completion of Section 7B, (1152d)	7d/wk-2	0d		17-Nov-14 18*	-353d
KD_5730	KD7 - Completion of Section 2, (1152d)	7d/wk-2	0d		17-Nov-14 18*	-297d
KD_5740	KD9 - Completion of Section 4, (1739d)	7d/wk-2	0d		10-Nov-15 18*	-132d
KD_5745	KD10 - Completion of Section 5, (1863d)	7d/wk-2	0d		25-Mar-16 18	-144d
KD_5750	KD11 - Completion of Section 6, (1949d)	7d/wk-2	0d		23-May-16 18*	-121d
Portion Handover Date						
CD_5685	Portion Handover - Portion IV(4), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d
CD_5680	Portion Handover - Portion V (5), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d
CD_5695	Portion Handover - Portion VI (6), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d
CD_5735	Portion Handover - Portion XIIIB (13B), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d
CD_5790	Portion Handover - Portion XXII (22), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d
CD_5670	Portion Handover - Portion III (3), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d
CD_5720	Portion Handover - Portion XIIIA (13A), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d
CD_5705	Portion Handover - Portion VIII (8), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d
CD_5730	Portion Handover - Portion XIVA (14A), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d
CD_5740	Portion Handover - Portion XV (15), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d
CD_5805	Portion Handover - Portion XXIII (23), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d
CD_5775	Portion Handover - Portion XVIII (18), KD10 +28	7d/wk-2	0d		30-Nov-15 18*	0d
CD_5710	Portion Handover - Portion XI (11), KD9 +28	7d/wk-2	0d		27-Dec-15 18*	0d
CD_5700	Portion Handover - Portion IX (9), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d
CD_5745	Portion Handover - Portion XIVB (14B), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d
CD_5755	Portion Handover - Portion XVI (16), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d
CD_5750	Portion Handover - Portion XVII (17), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d
CD_5760	Portion Handover - Portion XIX (19), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d
CD_5780	Portion Handover - Portion XXB (20B), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d

Summary Bar
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China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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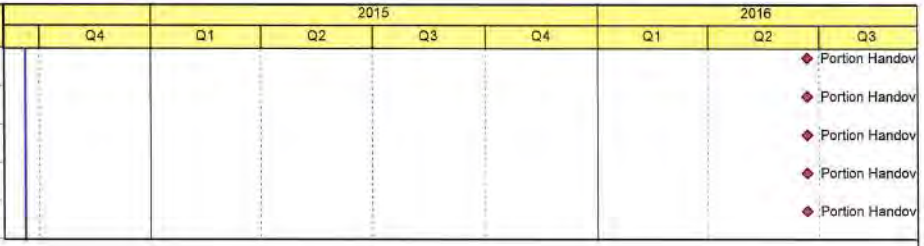
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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



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

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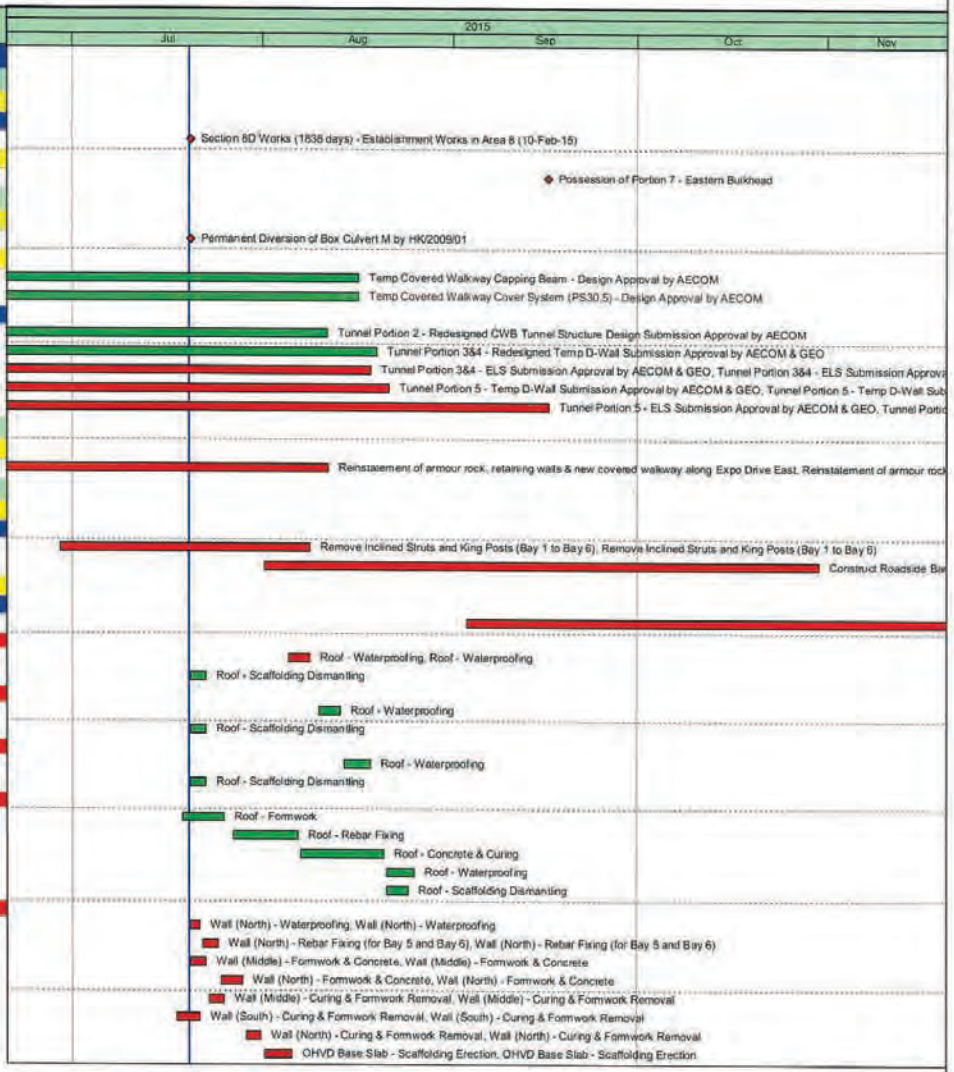
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

CEDD CONTRACT HK/2009/02

Activity ID	Activity Name	Orig Dur	Scheduled/ Actual Start	Scheduled/ Actual Finish	Total Float	Calendar
Three Months Rolling Programme 2015-07-20 (dd 20-Jul-15)						
Programme Milestones (Revised up to EOTO No.12 Issued on 15-Jun-15)						
Contractual Completion Dates						
Soft Landscaping & Establishment Key Dates						
KDC0150	Section 8D Works (1838 days) - Establishment Works in Area 8 (10-Feb-15)	0		20-Jul-15*	-161	Calendar Day
Possession of Site						
PS0070	Possession of Portion 7 - Eastern Bulkhead	0	16-Sep-15*		-50	Calendar Day
Preliminaries						
Interface with Others						
PRE0950	Permanent Diversion of Box Culvert M by HK/2009/01	0		20-Jul-15*	-427	Calendar Day
Critical Submission & Approval						
PRE-SUB-1000B	Temp Covered Walkway Capping Beam - Design Approval by AECOM	30	19-Jun-13 A	16-Aug-15	379	Calendar Day
PRE-SUB-1010B	Temp Covered Walkway Cover System (PS30.5) - Design Approval by AECOM	30	12-Jun-14 A	16-Aug-15	379	Calendar Day
CSD for CWB Tunnel						
PRE-CSD-2030B	Tunnel Portion 2 - Redesigned CWB Tunnel Structure Design Submission Approval by AEC...	60	16-Nov-13 A	11-Aug-15	84	Calendar Day
PRE-CSD-3000B	Tunnel Portion 3&4 - Redesigned Temp D-Wall Submission Approval by AECOM & GEO	30	08-Jun-13 A	19-Aug-15	76	Calendar Day
PRE-CSD-3010B	Tunnel Portion 3&4 - ELS Submission Approval by AECOM & GEO	60	17-Jan-14 A	18-Aug-15	-225	Calendar Day
PRE-CSD-5000B	Tunnel Portion 5 - Temp D-Wall Submission Approval by AECOM & GEO	60	15-Aug-13 A	21-Aug-15	-358	Calendar Day
PRE-CSD-5010B	Tunnel Portion 5 - ELS Submission Approval by AECOM & GEO	60	09-Apr-15 A	16-Sep-15	-332	Calendar Day
Section 3 of the Works - Reprovisioning of Government Helipad and Public Toilet						
Outstanding Works						
S3-0070-1499	Reinstatement of armour rock, retaining walls & new covered walkway along Expo Drive East	254	11-Aug-12 A	11-Aug-15*	-20	HK Working Day
Section 9B of the Works - CWB Tunnel Structure (CH3400 - CH3796)						
Tunnel Portion 1 (CH3500-CH3630)						
CWB Structural Works						
S9B-T1-4600	Remove Inclined Struts and King Posts (Bay 1 to Bay 6)	45	29-Jun-15 A	08-Aug-15	-15	HK Working Day
S9B-T1-5100	Construct Roadside Barriers (Bay 1 to Bay 6)	75	01-Aug-15	30-Oct-15	-15	HK Working Day
Tunnel Portion 2 (CH3425-CH3500)						
CWB Structural Works						
S9B-T2-5100	Construct Roadside Barriers (Bay 1 to Bay 6)	65	03-Sep-15	20-Nov-15	-15	HK Working Day
Bay 1						
S9B-T2-B1-3260	Roof - Waterproofing	4	05-Aug-15*	08-Aug-15	0	HK Working Day
S9B-T2-B1-3270	Roof - Scaffolding Dismantling	3	20-Jul-15	22-Jul-15	41	HK Working Day
Bay 2						
S9B-T2-B2-3210	Roof - Waterproofing	4	10-Aug-15	13-Aug-15	116	HK Working Day
S9B-T2-B2-3220	Roof - Scaffolding Dismantling	3	20-Jul-15	22-Jul-15	41	HK Working Day
Bay 3						
S9B-T2-B3-3210	Roof - Waterproofing	4	14-Aug-15	18-Aug-15	116	HK Working Day
S9B-T2-B3-3220	Roof - Scaffolding Dismantling	3	20-Jul-15	22-Jul-15	41	HK Working Day
Bay 4						
S9B-T2-B4-3180	Roof - Formwork	9	19-Jul-15 A	25-Jul-15	13	HK Working Day
S9B-T2-B4-3190	Roof - Rebar Fixing	10	27-Jul-15	06-Aug-15	13	HK Working Day
S9B-T2-B4-3200	Roof - Concrete & Curing	14	07-Aug-15	20-Aug-15	15	Calendar Day
S9B-T2-B4-3210	Roof - Waterproofing	4	21-Aug-15	25-Aug-15	110	HK Working Day
S9B-T2-B4-3220	Roof - Scaffolding Dismantling	3	21-Aug-15	24-Aug-15	13	HK Working Day
Bay 5						
S9B-T2-B5-3020	Wall (North) - Waterproofing	2	20-Jul-15	21-Jul-15	-30	HK Working Day
S9B-T2-B5-3040	Wall (North) - Rebar Fixing (for Bay 5 and Bay 6)	3	22-Jul-15	24-Jul-15	-30	HK Working Day
S9B-T2-B5-3050	Wall (Middle) - Formwork & Concrete	3	20-Jul-15	22-Jul-15	-25	HK Working Day
S9B-T2-B5-3070	Wall (North) - Formwork & Concrete	3	25-Jul-15	28-Jul-15	-30	HK Working Day
S9B-T2-B5-3080	Wall (Middle) - Curing & Formwork Removal	3	23-Jul-15	25-Jul-15	-32	Calendar Day
S9B-T2-B5-3090	Wall (South) - Curing & Formwork Removal	3	18-Jul-15 A	21-Jul-15	-28	Calendar Day
S9B-T2-B5-3100	Wall (North) - Curing & Formwork Removal	3	29-Jul-15	31-Jul-15	-38	Calendar Day
S9B-T2-B5-3110	OHVD Base Slab - Scaffolding Erection	4	01-Aug-15	05-Aug-15	-30	HK Working Day



◆ Milestone
◆ Critical Milestones
Current Works
Critical Works

CHUN WO - CRGL

JOINT VENTURE

CEDD CONTRACT NO. HK/2009/02

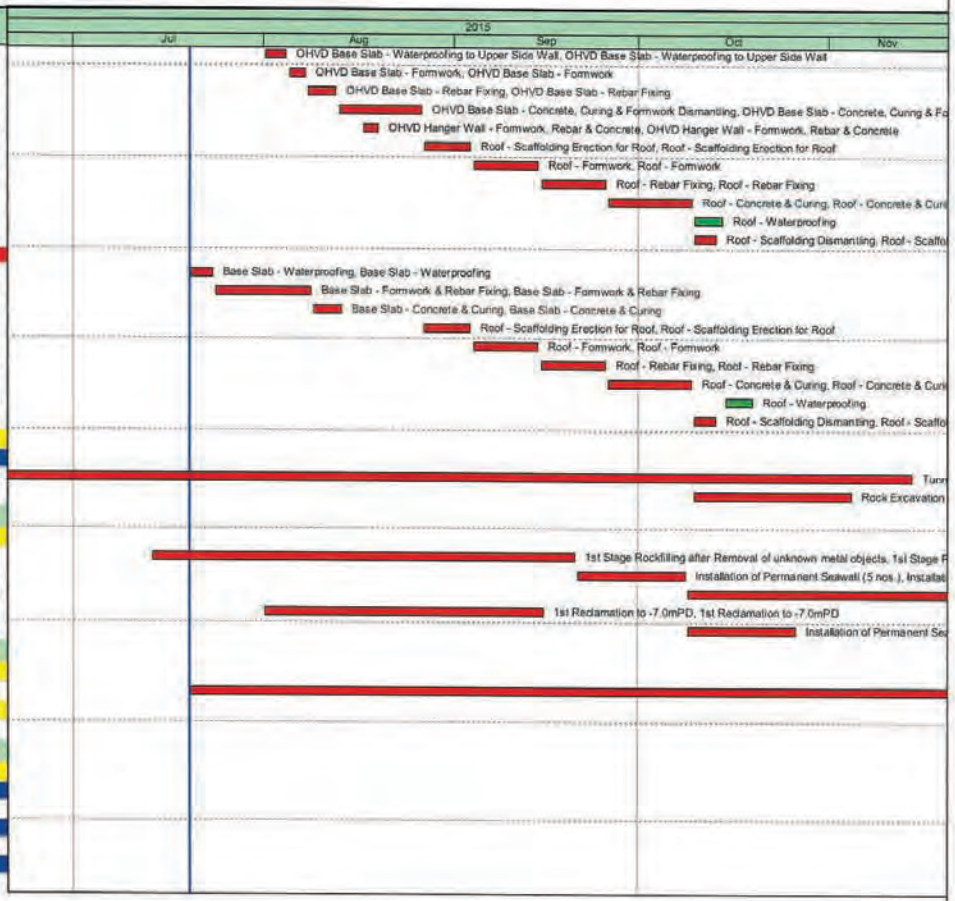
WD II - Central Wanchai Bypass at Wan Chai East (Contract 2)

3-MONTH ROLLING PROGRAMME (dd 20-Jul-15)

Date	Revision	Checked	Approved
20-Jul-15	3MRP		

CEDD CONTRACT HK/2009/02

Activity ID	Activity Name	Orig Dur	Scheduled/ Actual Start	Scheduled/ Actual Finish	Total Float	Calendar
S9B-T2-B5-3120	OHVD Base Slab - Waterproofing to Upper Side Wall	3	01-Aug-15	04-Aug-15	-30	HK Working Day
S9B-T2-B5-3130	OHVD Base Slab - Formwork	3	05-Aug-15	07-Aug-15	-30	HK Working Day
S9B-T2-B5-3140	OHVD Base Slab - Rebar Fixing	4	08-Aug-15	12-Aug-15	-30	HK Working Day
S9B-T2-B5-3150	OHVD Base Slab - Concrete, Curing & Formwork Dismantling	14	13-Aug-15	26-Aug-15	-35	Calendar Day
S9B-T2-B5-3160	OHVD Hanger Wall - Formwork, Rebar & Concrete	3	17-Aug-15	19-Aug-15	-24	HK Working Day
S9B-T2-B5-3170	Roof - Scaffolding Erection for Roof	7	27-Aug-15	03-Sep-15	-30	HK Working Day
S9B-T2-B5-3180	Roof - Formwork	9	04-Sep-15	14-Sep-15	-30	HK Working Day
S9B-T2-B5-3190	Roof - Rebar Fixing	10	15-Sep-15	25-Sep-15	-30	HK Working Day
S9B-T2-B5-3200	Roof - Concrete & Curing	14	26-Sep-15	09-Oct-15	-35	Calendar Day
S9B-T2-B5-3210	Roof - Waterproofing	4	10-Oct-15	14-Oct-15	65	HK Working Day
S9B-T2-B5-3220	Roof - Scaffolding Dismantling	3	10-Oct-15	13-Oct-15	-28	HK Working Day
Bay 6						
S9B-T2-B6-1010	Base Slab - Waterproofing	4	20-Jul-15	23-Jul-15	-19	HK Working Day
S9B-T2-B6-1020	Base Slab - Formwork & Rebar Fixing	14	24-Jul-15	08-Aug-15	-19	HK Working Day
S9B-T2-B6-1030	Base Slab - Concrete & Curing	5	09-Aug-15	13-Aug-15	-22	Calendar Day
S9B-T2-B6-3170	Roof - Scaffolding Erection for Roof	7	27-Aug-15	03-Sep-15	-30	HK Working Day
S9B-T2-B6-3180	Roof - Formwork	9	04-Sep-15	14-Sep-15	-30	HK Working Day
S9B-T2-B6-3190	Roof - Rebar Fixing	10	15-Sep-15	25-Sep-15	-30	HK Working Day
S9B-T2-B6-3200	Roof - Concrete & Curing	14	26-Sep-15	09-Oct-15	-35	Calendar Day
S9B-T2-B6-3210	Roof - Waterproofing	4	15-Oct-15	19-Oct-15	65	HK Working Day
S9B-T2-B6-3220	Roof - Scaffolding Dismantling	3	10-Oct-15	13-Oct-15	-28	HK Working Day
Tunnel Portion 3 & Tunnel Portion 4 (CH3630-CH3790)						
CWB Structural Works						
S9B-T34-2000B	Tunnel Portion 3 & 4 Excavation to Formation Level (200,000m3 soil and rock@1100m3/d) &...	182	13-Feb-15 A	14-Nov-15	-250	HK Working Day
S9B-T34-3500	Rock Excavation and Rock Bolt Installation	21	10-Oct-15	04-Nov-15	-174	HK Working Day
Section 11 of the Works - Remainder of Works						
Marine Works at WCR3						
S11-R3-1300	1st Stage Rockfilling after Removal of unknown metal objects	40	14-Jul-15 A	20-Sep-15	-602	Calendar Day
S11-R3-1400	Installation of Permanent Seawall (5 nos.)	14	21-Sep-15	08-Oct-15	-480	HK Working Day
S11-R3-1500	2nd Stage Rockfilling after Installation of Caisson Seawall	40	09-Oct-15	25-Nov-15	-480	HK Working Day
S11-R3-1600	1st Reclamation to -7.0mPD	39	01-Aug-15	15-Sep-15	-422	HK Working Day
S11-R3-1700	Installation of Permanent Seawall Block	14	09-Oct-15	28-Oct-15	-424	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	365	20-Jul-15	16-Jul-16	526	Calendar Day
Section 12 of the Works - Protection and Preservation of Existing Trees						
S12-0010	Protection and preservation of existing trees	2375	24-Feb-10 A	29-Aug-16	0	Calendar Day
SUMMARY PROGRAMME						
CWB Tunnel Construction & Remaining Works (Section 9A, 9B, 10 & 11)						
CWB Tunnel Works in WCR2						
SUM-CWB-23000	CWB Tunnel Portion 2 Construction	261	19-Jan-15 A	09-Oct-15	-35	Calendar Day
CWB Tunnel Works in WCR3						
SUM-CWB-30000C	Reclamation at WCR3	174	14-Jul-15 A	28-Jan-16	-600	Calendar Day
CWB Tunnel Works in WCR4/TWCR4						
SUM-CWB-42000	Pump Test & Excavation for Tunnel Portion 3&4	230	13-Feb-15 A	14-Nov-15	-313	Calendar Day



◆ Milestone
◆ Critical Milestones
Current Works
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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)

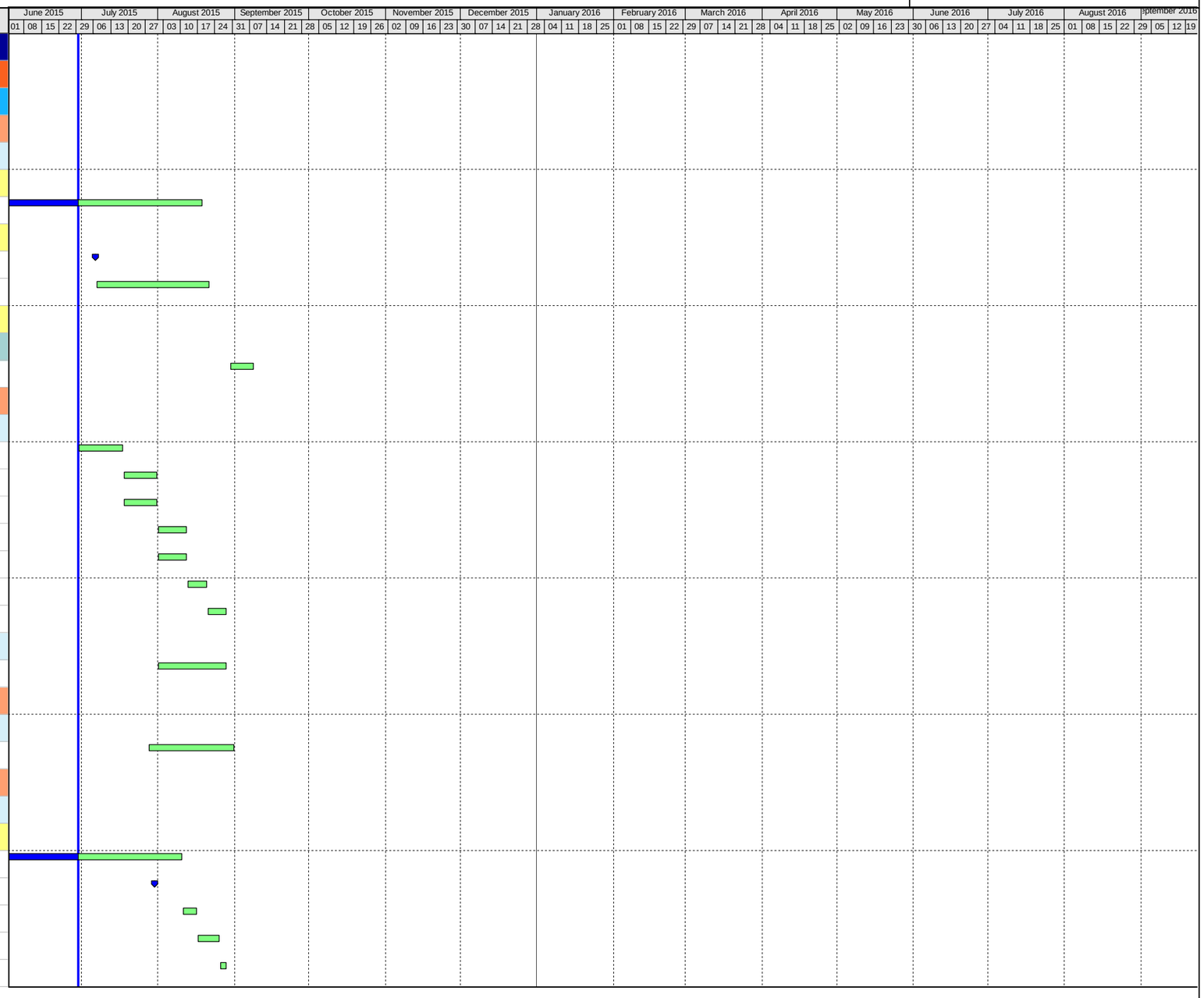
3-MONTH ROLLING PROGRAMME (dd 20-Jul-15)

Date	Revision	Checked	Approved
20-Jul-15	3MRP		

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
HK/2012/08 Revised Works Programme Rev.4_1(Final)				
Dredging and Reclamation				
Marine Work Construction				
Zone CRIII				
Dredging - Zone CRIII				
CRIII - Temporary Pipe Pile Wave Wall (1st Stage)				
MAR12360	CRIII - temp pipe pile wall (34-197) - install 610 dia. pipe pile [Remaining 28 nos. @750c/c]	42	18-Oct-14 A	18-Aug-15
CRIII - Temporary Pipe Pile Wave Wall (2nd Stage)				
MAR10035	CRIII - temp pipe pile wall (1-33) - relocate interim landing steps	0		06-Jul-15*
MAR10040	CRIII - temp pipe pile wall (1-33) - install 610 dia. pipe pile [33nos. @750c/c]	40	07-Jul-15	21-Aug-15
Dredging at Zone CRIII				
2nd Stage of Work (Types 1B(4) & 2D)				
MAR16095	Zone CRIII - 2nd stage - Remove existing rock armour [B5-E5] after relocating interim landing steps	10	30-Aug-15	08-Sep-15
Zone A2				
Seawall Construction - Zone A2				
MAR10775	Zone A2 - seawall - Type 4, 13 - lay toe block and leveling stone in line with backfilling in zone A2(2)	18	30-Jun-15	17-Jul-15
MAR10780	Zone A2 - seawall - install block seawall Type 4 to -1.5mPD	14	18-Jul-15	31-Jul-15
MAR10800	Zone A2 - seawall - install block seawall Type 13 to -1.5mPD	14	18-Jul-15	31-Jul-15
MAR10805	Zone A2 - seawall - install block seawall Type 4 from -1.5 to +4.0mPD	10	01-Aug-15	12-Aug-15
MAR10807	Zone A2 - seawall - install block seawall Type 13 from -1.5 to +4.0mPD	10	01-Aug-15	12-Aug-15
MAR10815	Zone A2 - seawall - place type A behind seawall Type 4 and Type 13 up to -1.5 mPD	7	13-Aug-15	20-Aug-15
MAR10817	Zone A2 - seawall - lay geotextile and filter behind seawall Type 4 and Type 13 up to -1.5 mPD	7	21-Aug-15	28-Aug-15
Filling - Zone A2				
MAR20365	Zone A2(2) - Public Fill -4.0 to +4.0mPD (behind Type 4 & 13 for temp channel outlet)	28	01-Aug-15	28-Aug-15
Zone C				
Dredging - Zone C				
MAR11520	Zone C - Cut existing pipe pile (2 nos.)	30	28-Jul-15	31-Aug-15
Zone D				
Seawall Construction - Zone D				
Seawall 2C-L				
MAR12264	Zone D - Pipe Pile & demolish existing seawall	35	01-Feb-15 A	10-Aug-15
MAR12265	Zone D - complete fabrication of Caisson Seawall 2C-L and ready for delivery	0		30-Jul-15*
MAR12270	Zone D - fill rock mound for Seawall 2C-L	6	11-Aug-15	16-Aug-15
MAR12275	Zone D - lay toe block and level stone for Seawall 2C-L	8	17-Aug-15	25-Aug-15
MAR12280	Zone D - Install Caisson Seawall 2C-L	3	26-Aug-15	28-Aug-15



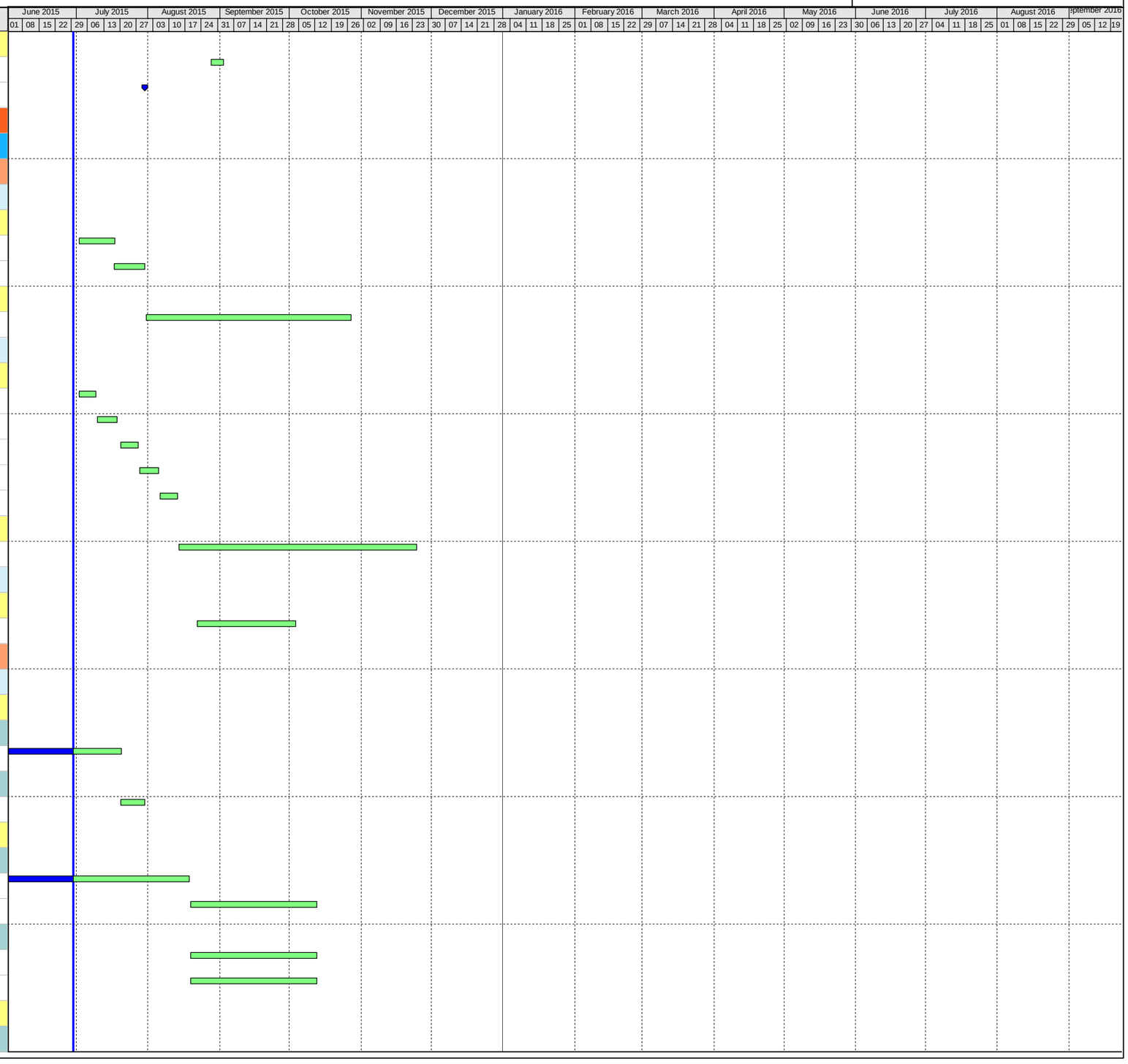
Data Date:
30-Jun-15

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

Works Programme for Non-CRIII Zones (June to August 2015)

Date	Revision	Checked	Approved
03-Jul-15			

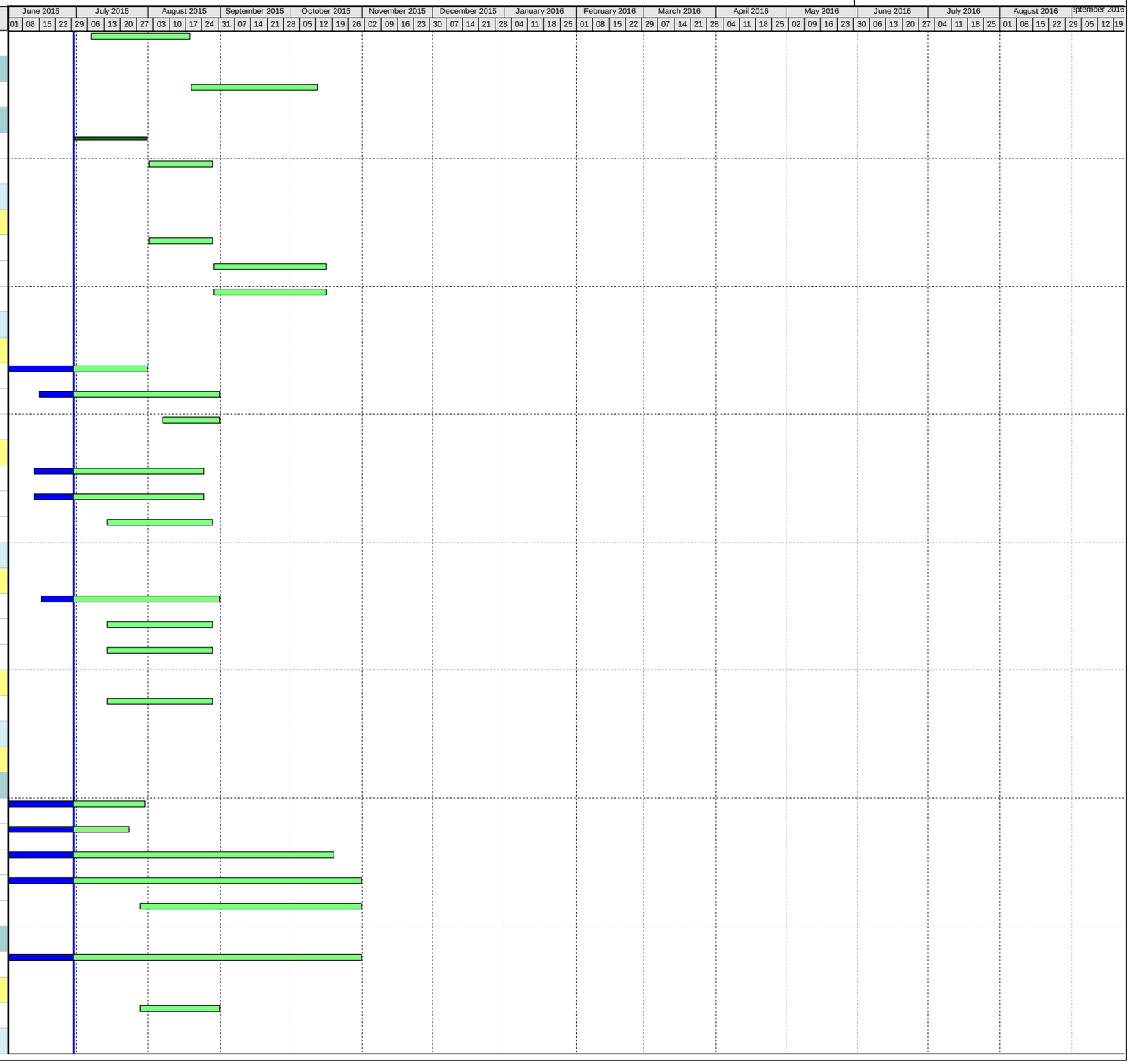
Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish
	Seawall 2C-R			
MAR12245	Zone D - fill rock mound for Seawall 2C-L	6	28-Aug-15	02-Sep-15
MAR12250	Zone D - complete fabrication of Caisson Seawall 2C-R and ready for delivery	0		30-Jul-15*
	Works for Section Completion			
	Construction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



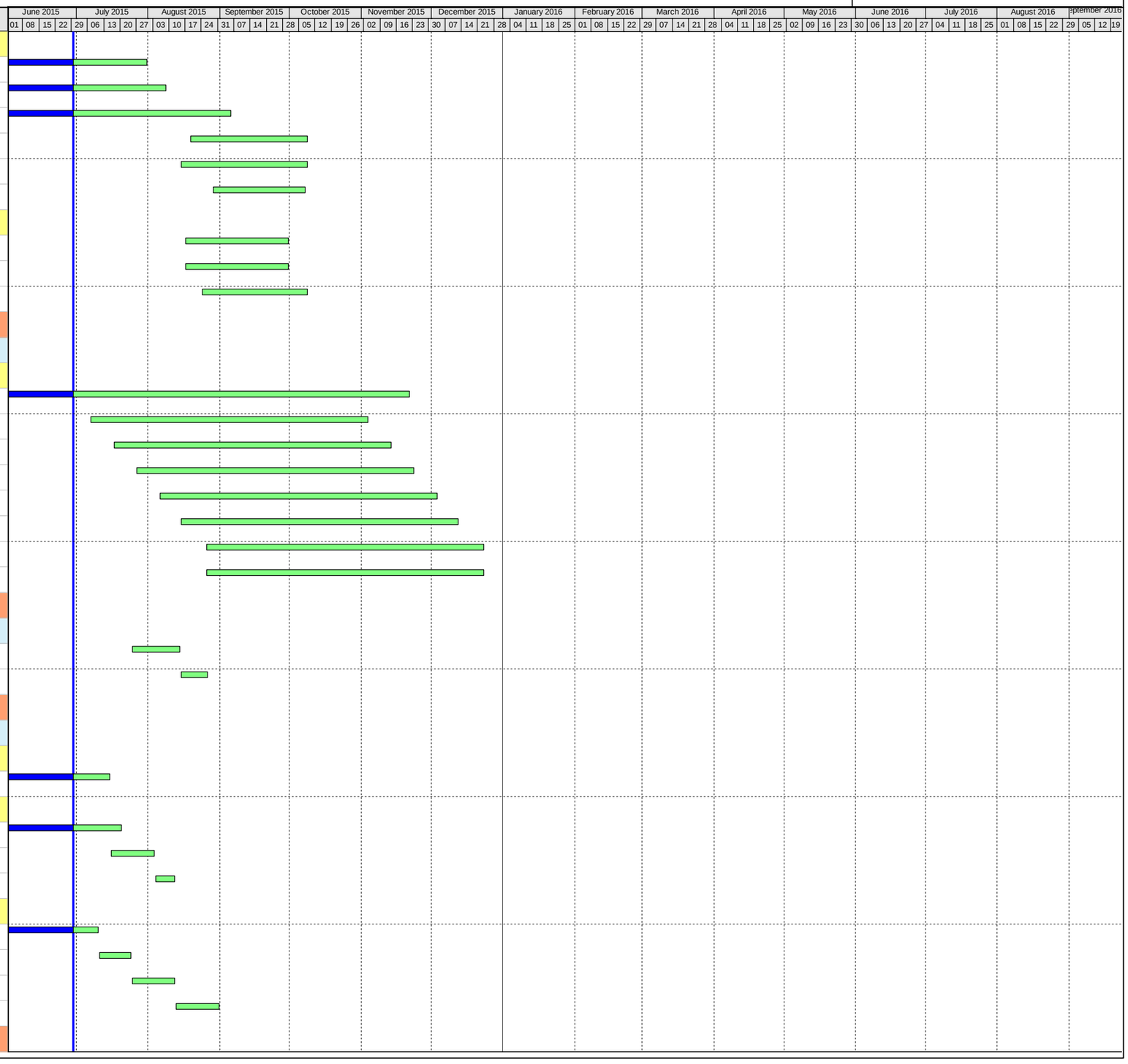
中國建築-利達聯營
CHINA STATE - LEADER JOINT VENTURE

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

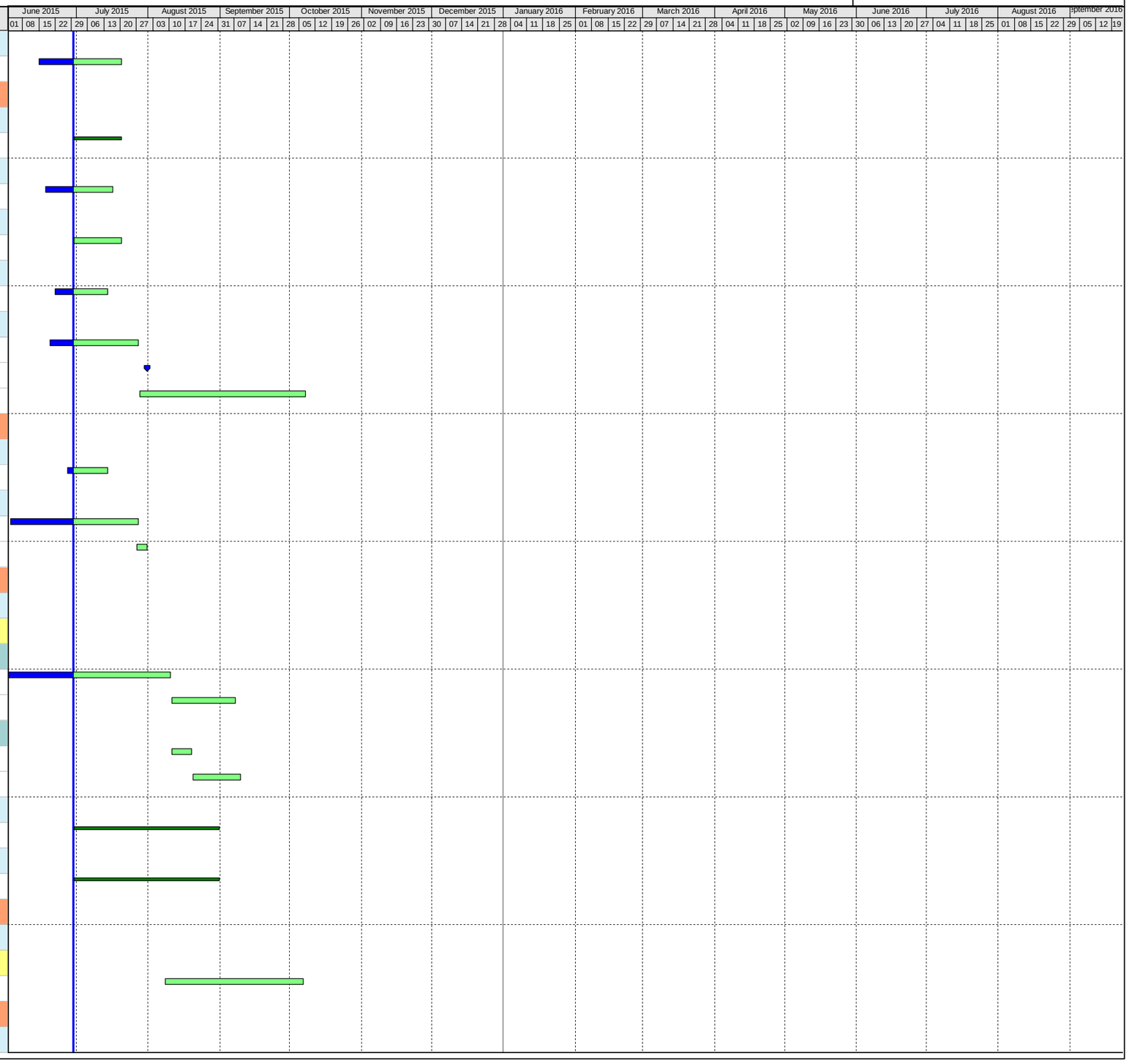
Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish
SIIA11286	Sec IIA - CWB A1 : Shoring & Excavation (Remaining)	37	07-Jul-15	18-Aug-15
	CWB A1 - Tunnel Structure Remaining			
SIIA13045	Sec II A - CWB A1: Pile head + trough + base & wall + OHVD unit (1st bay)	45	19-Aug-15	12-Oct-15
	CWB A1 - Other Works			
SIIA15480	Culvert L - [Summary] Bay 9 to Bay 11 on top of CWB A1 and divert flow	27	08-Jun-15 A	31-Jul-15
SIIA15500	Zone A2(2) - Public Fill -4.0 to +4.0mPD (behind Type 4 & 13 for temp channel outlet)	28	01-Aug-15	28-Aug-15
	CWB A2(2)			
	CWB A2 (2) - Dwall & Piling			
SIIA13500	Sec II A - CWB A2 : backfill to +4.0mPD	28	01-Aug-15	28-Aug-15
SIIA15260	Sec II A - CWB A2 : Predrilling for Dwall & piles	40	29-Aug-15	16-Oct-15
SIIA15280	Sec II A - CWB A2 : Ground treatment	40	29-Aug-15	16-Oct-15
	CWB B (& A2(1))			
	CWB B - Dwall & Piling			
SIIA11540	Sec II A - CWB B (&A2(1)) : Construct pre-bored H-pile	27	30-Apr-15 A	31-Jul-15
SIIA11560	Sec II A - CWB B: Ground treatment to Stop End (MTR CWL)	53	15-Jun-15 A	31-Aug-15
SIIA11565	Sec II A - CWB B: Sheetpile Bulkhead Wall for "Delink"	21	07-Aug-15	31-Aug-15
	CWB B - Pumping Test Preparation			
SIIA11580	Sec II A - CWB B: Dwall sonic test / interface core	47	13-Jun-15 A	24-Aug-15
SIIA11600	Sec II A - CWB B: Dwall precaution grout / fissure grout / grout curtain	47	13-Jun-15 A	24-Aug-15
SIIA11620	Sec II A - CWB B: Install dewatering/ recharging/ observation well	40	14-Jul-15	28-Aug-15
	CWB C (W)			
	CWB C(W) - Dwall Construction			
SIIA11960	Sec II A - CWB CW: Ground treatment to Stop End (MTR TWL)	53	16-Jun-15 A	31-Aug-15
SIIA11980	Sec II A - CWB CW: D-wall contact grout / fissure grout	40	14-Jul-15*	28-Aug-15
SIIA12000	Sec II A - CWB CW: Dwall sonic test / interface core	40	14-Jul-15	28-Aug-15
	CWB C(W) - Pumping Test Preparation/ Pumping Test			
SIIA12020	Sec II A - CWB CW: Install dewatering/ recharging/ observation wells	40	14-Jul-15	28-Aug-15
	CWB C (E)			
	CWB C(E) & Enabling Work - Dwall Construction			
	CWB C(E) - Dwall Construction			
SIIA12980	Sec II A - CWB CE: ground pre-treatment	26	30-Mar-15 A	30-Jul-15
SIIA13000	Sec II A - CWB CE: construct Guide Wall	20	01-Apr-15 A	23-Jul-15
SIIA13010	Sec II A - CWB CE: construct barrette (1.2m thk)	93	07-Apr-15 A	19-Oct-15
SIIA13020	Sec II A - CWB CE: construct Dwall (1.5m thk) (on rock)	103	29-Apr-15 A	31-Oct-15
SIIA13030	Sec II A - CWB CE: construct temp Dwall (1.2m)	80	28-Jul-15	31-Oct-15
	SCL Enabling Work - Dwall Construction			
SIIA15520	Sec II - SCL Enabling Works - construct Dwall - Remaining [7 panels]	103	18-Feb-15 A	31-Oct-15
	CWB C(E) - Pumping Test Preparation/ Pumping Test			
SIIA13085	Sec II A - CWB CE: Cut existing pipe piles (2 nos.)	30	28-Jul-15	31-Aug-15
	CWB D - Slip Road 1			



Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish
	CWB D - Slip Road 1 - Dwall Construction & Piling			
SIIA12260	Sec II A - CWB SR1: ground pre-treatment	27	17-Jan-15 A	31-Jul-15
SIIA12280	Sec II A - CWB SR1: Guide Wall	30	10-Feb-15 A	08-Aug-15
SIIA12305	Sec II A - CWB SR1: construct Permanent DWall (1.2m thk)	58	07-Apr-15 A	05-Sep-15
SIIA12310	Sec II A - CWB SR1: construct pre-bored H-pile	42	19-Aug-15	08-Oct-15
SIIA12320	Sec II A - CWB SR1: Temp. Cut-off Wall at Both Ends	45	15-Aug-15	08-Oct-15
SIIA12340	Sec II A - CWB SR1: Ground treatment to Stop End (MTR CWL)	32	29-Aug-15	07-Oct-15
	CWB D - Slip Road 1 - Pumping Test Preparation/ Pumping Test			
SIIA12360	Sec II A - CWB SR1: Grout curtain / contact grout for Dwall	38	17-Aug-15	30-Sep-15
SIIA12380	Sec II A - CWB SR1: Dwall sonic test / interface core	38	17-Aug-15	30-Sep-15
SIIA12400	Sec II A - CWB SR1: Install dewatering/ recharging/ observation wells	38	24-Aug-15	08-Oct-15
	Section III - Road D11 & Part of Road P2, Area 4, Implement 1st Stage ITA			
	Roadwork & Utilities			
	General			
SIII10040	Sec III - roadwork & utilities - storm water drain & subsoil drain	121	01-May-15 A	21-Nov-15
SIII10060	Sec III - roadwork & utilities - Watermain & Irrigation Mains	100	07-Jul-15*	03-Nov-15
SIII10080	Sec III - roadwork & utilities - gas main and valve chamber	100	17-Jul-15	13-Nov-15
SIII10100	Sec III - roadwork & utilities - HEC cable duct and catchpit	100	27-Jul-15	23-Nov-15
SIII10120	Sec III - roadwork & utilities - sub-base	100	06-Aug-15	03-Dec-15
SIII10140	Sec III - roadwork & utilities - Road kerb	100	15-Aug-15	12-Dec-15
SIII10160	Sec III - roadwork & utilities - flexible pavement	100	26-Aug-15	23-Dec-15
SIII10180	Sec III - roadwork & utilities - Road Lighting, TCSS Ducts &Traffic Signs	100	26-Aug-15	23-Dec-15
	Section VI A - Box Culvert La, L1 & FRP-L Construction			
	Sec VI C - Box Culvert La bay 4 (North)			
CUL11652	Sec VI C - Culvert L - bay 4 (north half) - excavate to formation level	18	25-Jul-15	14-Aug-15
CUL11655	Sec VI C - Culvert L - bay 4 (north half) - place granular fill and lay geotextile filter	10	15-Aug-15	26-Aug-15
	Box Culvert L1 & FRP-L Construction (Bay 5 - Bay 7)			
	Box Culvert L1 & FRP-L - Bay 5 to 7 Structure			
	Box Culvert L1 & FRP-L - Precast Unit Fabrication (Pile Cap)			
CUL10866	Sec VI C - Culvert L - bay 5-7 - PC1 to PC6 Construct precast Pile Cap	13	02-Jun-15 A	15-Jul-15
	Box Culvert L1 & FRP-L - Precast Unit Fabrication (Box Structure)			
CUL10870	Sec VI C - Culvert L - bay 5, 6 & 7 - Construct precast culvert units with Bulkhead	17	18-Apr-15 A	20-Jul-15
CUL10872	Sec VI C - Culvert L - bay 4b - Construct precast culvert units with Bulkhead	16	16-Jul-15	03-Aug-15
CUL10873	Sec VI C - Culvert L - bay 4b, 5-7 - dismantle formwork and curing for precast culvert units	8	04-Aug-15	12-Aug-15
	Box Culvert L1 & FRP-L - Precast Unit Installation			
CUL10864	Sec VI C - Culvert L - bay 5-7 - Demolition of Piling Platform	9	30-May-15 A	10-Jul-15
CUL10865	Sec VI C - Culvert L - bay 5-7 - Install precast pile caps PC1 to PC6	12	11-Jul-15	24-Jul-15
CUL10874	Sec VI C - Culvert L - bay 5-7 - Demolition of Temp Platform & Cofferdam ready for towing precast culvert	16	25-Jul-15	12-Aug-15
CUL10875	Sec VI C - Culvert L - bay 5-7 (& Bay 4b) - install precast culvert units & Touch Up	16	13-Aug-15	31-Aug-15
	Box Culvert L1 & FRP-L - Bay 8			



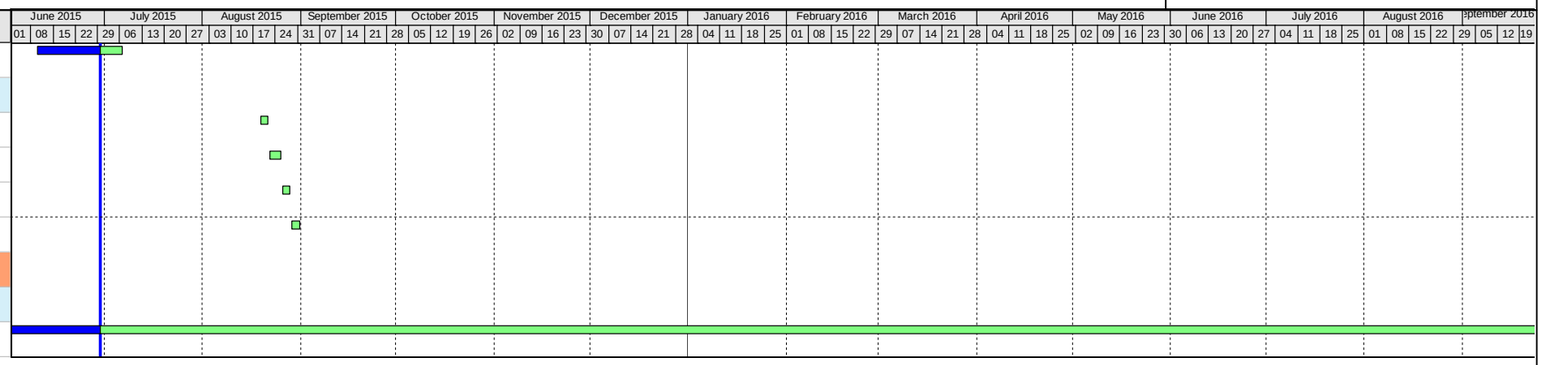
Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish
	Box Culvert L1 & FRP-L - Bay 8 Temp Work & ELS			
CUL10200	Culvert L - bay 8 - ELS and bulk excavation & Dwall Break Through ready for Flow Diversion	17	15-Jun-15 A	20-Jul-15
	Box Culvert L1 & FRP-L - Bay 9 to 11			
	Box Culvert L1 & FRP-L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



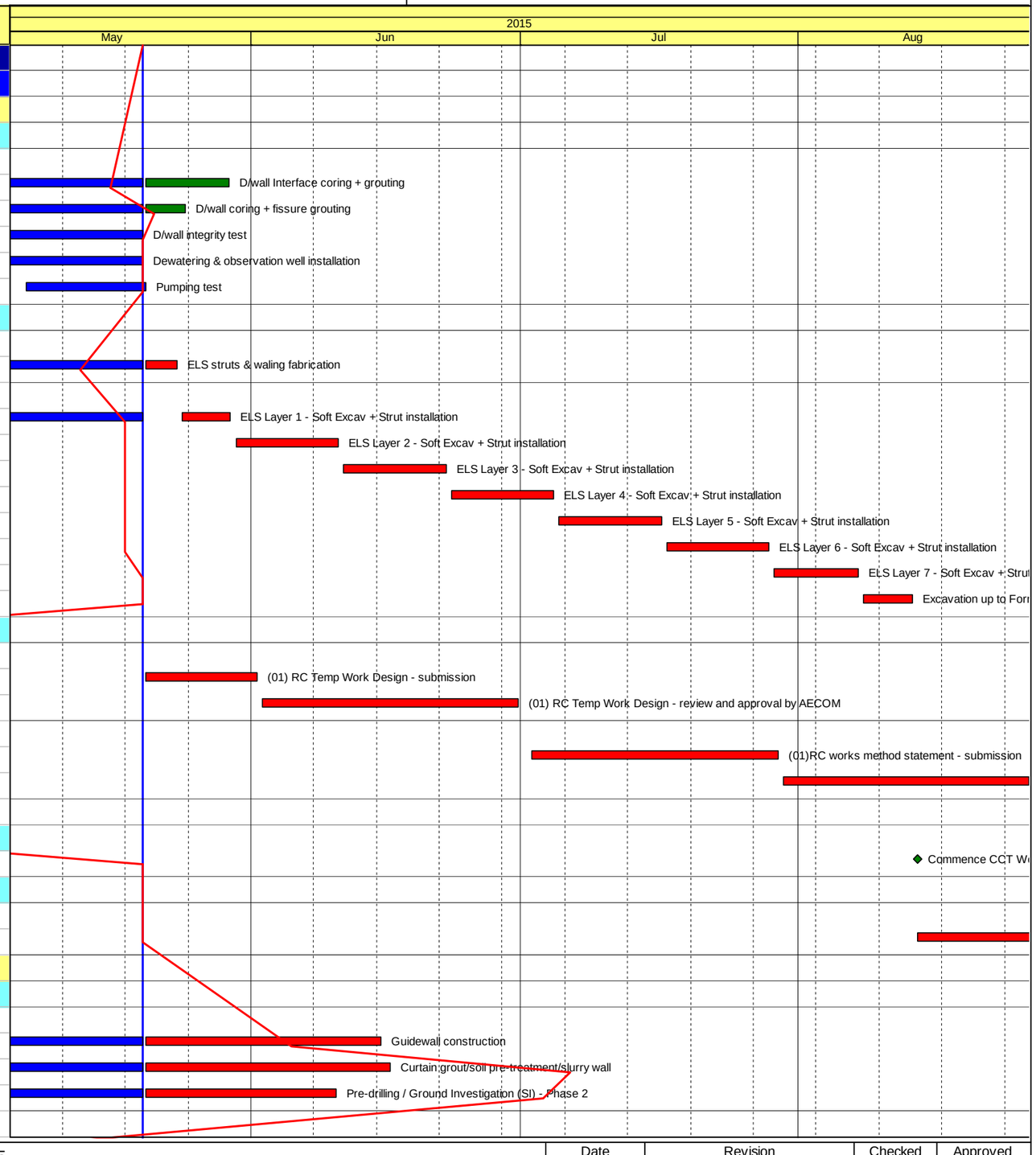
中國建築-利達聯營
CHINA STATE - LEADER JOINT VENTURE

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
SVII11180	Sec VII - Landing Steps - form temporary access from landing steps to Fleet Acade	5	10-Jun-15 A	06-Jul-15
Demolition of Interim Landing Steps and Construct Permanent Seawall at CRIII				
SVII10160	Sec VII - remove interim landing steps - install silt curtain	3	19-Aug-15	21-Aug-15
SVII10180	Sec VII - remove interim landing steps - break and remove seawall coping	3	22-Aug-15	25-Aug-15
SVII10200	Sec VII - remove interim landing steps - open cut behind interim landing steps	3	26-Aug-15	28-Aug-15
SVII10220	Sec VII - remove interim landing steps - protect open cut slope	2	29-Aug-15	31-Aug-15
Section X - Protection & Preservation of Trees				
Soft Landscaping Works				
SX10020	Sec X - Protection & Preservation of Trees	753	31-Jan-13 A	21-Jul-17



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

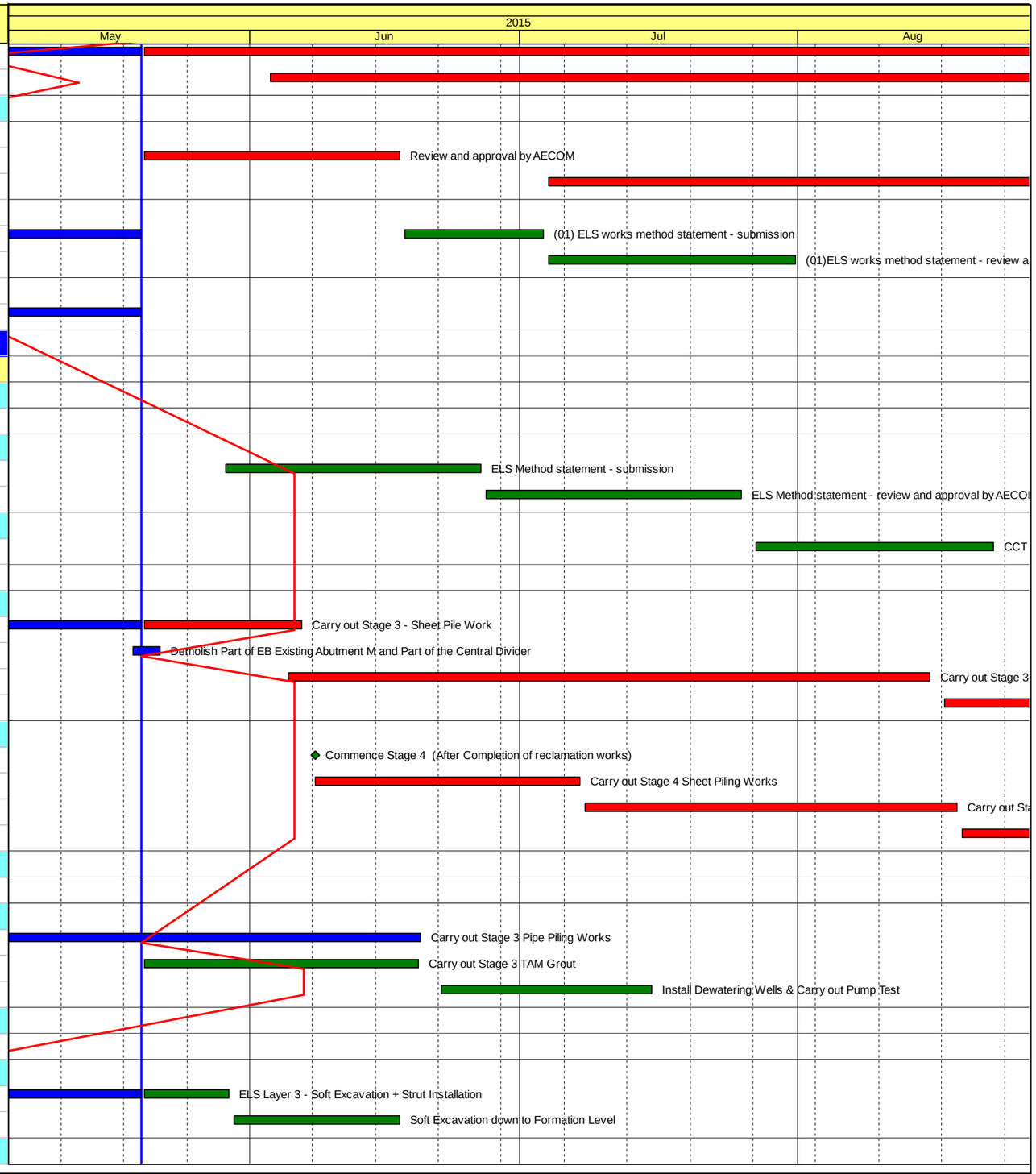


Actual Work
Remaining Work
Critical Remaining Work
Milestone

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

Date	Revision	Checked	Approved
20-May-15	Updated to 20th May 2015	DML/WC	

Activity ID	Activity Name	Original Duration	Start	Finish
TS3W_3110	Diaphragm wall construction Phase 1 (53/137 panels-Include SR8)	145	25-Mar-15 A	20-Sep-15
TS3W_3120	Diaphragm wall construction Phase 2 (84/137 panels)	152	03-Jun-15	01-Nov-15
ELS & Rock Excavation				
ELS Fabrication Works				
TS3W_2110	Review and approval by AECOM	24	20-May-15	17-Jun-15
TS3W_4510	ELS struts & waling fabrication	75	04-Jul-15	30-Sep-15
Method Statement				
TS3W_2115	(01) ELS works method statement - submission	24	06-Feb-15 A	03-Jul-15
TS3W_2120	(01)ELS works method statement - review and approval by AECOM	24	04-Jul-15	31-Jul-15
TS3-West ELS Works				
TS3W_4515	King Post installation	45	18-Mar-15 A	17-Oct-15
Works in SR8 (Open Cut Method)				
SR8 - Cofferdam & Cut & Cover Tunnel Works				
SR8 East Bound - (Seaside to Victoria Road / IEC Central Divider)				
Method Statement				
ELS				
SR8_2260	ELS Method statement - submission	24	29-May-15	26-Jun-15
SR8_2270	ELS Method statement - review and approval by AECOM	24	27-Jun-15	25-Jul-15
CCT Structure				
SR8_2280	CCT Structure Method statement - submission	24	27-Jul-15	22-Aug-15
TTA Stage 2 - East Bound				
Stage 3 - East Bound (Ref. DRG. No.CDD/SR8/084)				
SR8.EB.1440	Carry out Stage 3 - Sheet Pile Work	21	25-Apr-15 A	06-Jun-15
SR8.EB.1420	Demolish Part of EB Existing Abutment M and Part of the Central Divider	12	19-May-15 A	22-May-15 A
SR8.EB.1450	Carry out Stage 3 - Pipe Piling Work	60	05-Jun-15	15-Aug-15
SR8.EB.1460	Carry out Stage 3 - TAM Grout	12	17-Aug-15	29-Aug-15
Stage 4 - East Bound (Ref. DRG. No.CDD/SR8/084)				
SR8.EB.1470	Commence Stage 4 (After Completion of reclamation works)	0	08-Jun-15	
SR8.EB.1480	Carry out Stage 4 Sheet Piling Works	24	08-Jun-15	07-Jul-15
SR8.EB.1490	Carry out Stage 4 Pipe Piling Works	36	08-Jul-15	18-Aug-15
SR8.EB.1500	Carry out Stage 4 Tam Grout	14	19-Aug-15	03-Sep-15
SR8 West Bound - Ch. 459.000 to 385.000 (Victoria Road / IEC Central Divider)				
TTA Stage 2 - West Bound				
Stage 3 - West Bound (Ref. DRG. No.CDD/SR8/087)				
SR8.WB.3040	Carry out Stage 3 Pipe Piling Works	45	20-Mar-15 A	20-Jun-15 A
SR8.WB.3050	Carry out Stage 3 TAM Grout	26	20-May-15	19-Jun-15
SR8.WB.3060	Install Dewatering Wells & Carry out Pump Test	20	22-Jun-15	15-Jul-15
SR8 Ch.385.000 to Ch.317.500 - (Inside Victoria Park to Tunnel Portal)				
SR8 Tunnel - ELS / CCT / BF Works (7 Bays Ch. 385.000 to Ch.317.500)				
ELS				
SR8.VP.5070A	ELS Layer 3 - Soft Excavation + Strut Installation	8	11-Feb-15 A	29-May-15
SR8.VP.5080	Soft Excavation down to Formation Level	16	30-May-15	17-Jun-15
Portal Structure				



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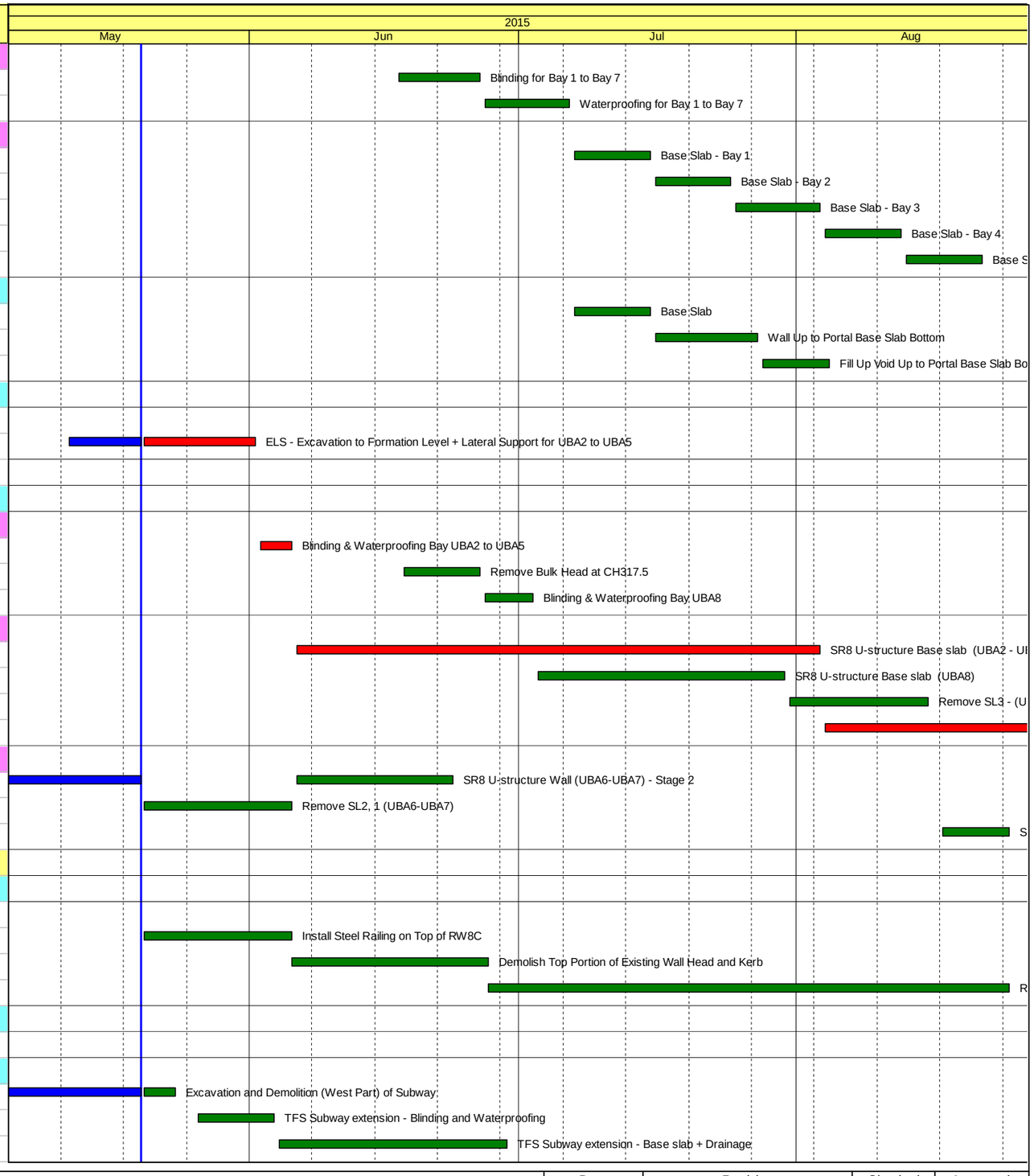
Activity ID	Activity Name	Original Duration	Start	Finish
Blinding + Waterproofing				
SR8.VP.5030	Blinding for Bay 1 to Bay 7	7	17-Jun-15	26-Jun-15
SR8.VP.5090	Waterproofing for Bay 1 to Bay 7	7	27-Jun-15	06-Jul-15
Base Slab + Drainage				
SR8.VP.5100	Base Slab - Bay 1	8	07-Jul-15	15-Jul-15
SR8.VP.5110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



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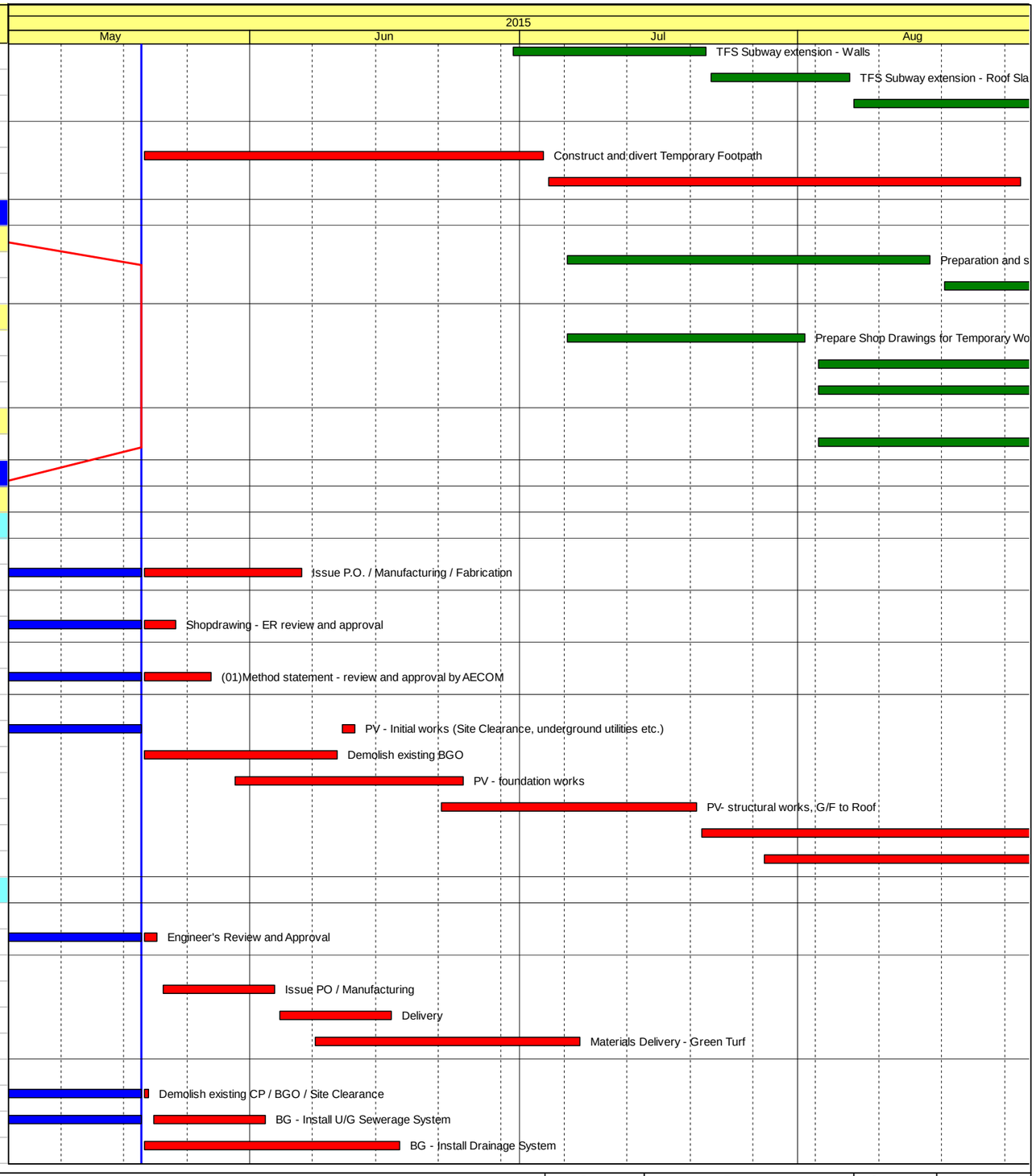
VP_1375.30	TFS Subway extension - Walls	18	30-Jun-15	21-Jul-15
VP_1375.40	TFS Subway extension - Roof Slab	14	22-Jul-15	06-Aug-15
VP_1375.70	Remove Soffit formwork for Roof Slab	32	07-Aug-15	12-Sep-15
RC Works - Toe Wall (RW8E)				
VP_6152	Construct and divert Temporary Footpath	36	20-May-15	03-Jul-15
VP_6160	Sheet Piling and Excavation to Formation level	45	04-Jul-15	25-Aug-15
Protection Works for IEC Abutment M				
TTA (Submissions, Approvals and Implementation)				
ABUTM_0910	Preparation and submission	36	06-Jul-15	15-Aug-15
ABUTM_0915	TMLG - review and approval	24	17-Aug-15	12-Sep-15
Design Submissions				
ABUTM_0945	Prepare Shop Drawings for Temporary Works	24	06-Jul-15	01-Aug-15
ABUTM_0955	Engineer's Review and Approval - Temp Works	24	03-Aug-15	29-Aug-15
ABUTM_0965	Prepare Shop Drawings for Permanent Works	24	03-Aug-15	29-Aug-15
Method Statement				
ABUTM_0900	(01)Protection works method statement - submission	24	03-Aug-15	29-Aug-15
Works in Victoria Park				
Re-Provisioning Works				
Pavilion				
Materials Submission				
VP_6660	Issue P.O. / Manufacturing / Fabrication	48	29-Apr-15 A	06-Jun-15
Shop Drawings				
VP_0215	Shopdrawing - ER review and approval	24	13-Apr-15 A	23-May-15
Method Statement				
VP_6690	(01)Method statement - review and approval by AECOM	24	20-Apr-15 A	27-May-15
Construction Works - BG Pavillion				
VP_1300	PV - Initial works (Site Clearance, underground utilities etc.)	24	09-Apr-15 A	12-Jun-15
VP_1340	Demolish existing BGO	24	20-May-15 A	10-Jun-15
VP_1360	PV - foundation works	21	30-May-15	24-Jun-15
VP_1380	PV- structural works, G/F to Roof	24	22-Jun-15	20-Jul-15
VP_1420	PV - ABWF	36	21-Jul-15	31-Aug-15
VP_1430	PV - E&M Works	36	28-Jul-15	07-Sep-15
Bowling Green				
Design Submissions for Bowling Green Lighting				
VP_0330	Engineer's Review and Approval	24	23-Sep-14 A	21-May-15
Procurement				
VP_1010.184	Issue PO / Manufacturing	10	22-May-15	03-Jun-15
VP_1010.194	Delivery	11	04-Jun-15	16-Jun-15
VP_6670	Materials Delivery - Green Turf	24	08-Jun-15	07-Jul-15
Construction Works				
VP_1170	Demolish existing CP / BGO / Site Clearance	24	09-Apr-15 A	20-May-15
VP_1710	BG - Install U/G Sewerage System	24	29-Apr-15 A	02-Jun-15
VP_1720	BG - Install Drainage System	24	20-May-15	17-Jun-15



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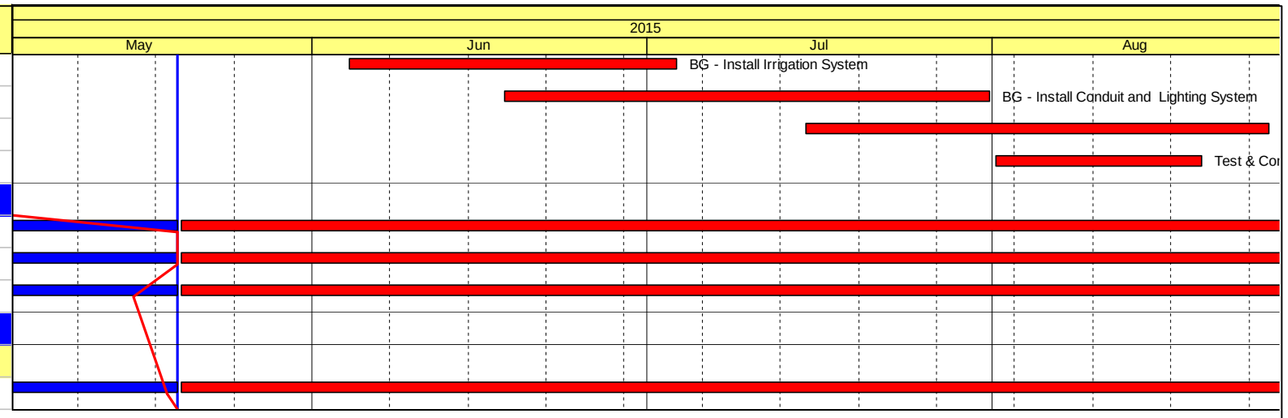
VP_1730	BG - Install Irrigation System	24	04-Jun-15	03-Jul-15
VP_1740	BG - Install Conduit and Lighting System	36	18-Jun-15	31-Jul-15
VP_1450	BG - Re-provisioning works - Hardscape & Furnitures (Green Turf/ Granite Tiles)	36	15-Jul-15	25-Aug-15
VP_1745	Test & Commission - Lighting System	16	01-Aug-15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



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