



CONTRACT NO: HK/2011/07

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

ENVIRONMENTAL PERMIT NO. EP-364/2009/C,
FURTHER ENVIRONMENTAL PERMIT NOS. FEP-01/364/2009,
FEP-02/364/2009, FEP-05/364/2009/A, FEP-06/364/2009/A, FEP-
07/364/2009/A, FEP-09/364/2009/B, FEP-10/364/2009/B AND
FEP-11/364/2009/B

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- AUGUST 2015 -

CLIENTS:

Civil Engineering and Development
Department

and

Highways Department

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DATE:

11 September 2015

Ref.: AACWBIECEM00_0_7125L.15

11 September 2015

AECOM Asia Company Limited
11/F Tower 2 Grand Central Plaza
138 Shatin Rural Committee Road
Shatin New Territories
Hong Kong

By Post and Fax (2691 2649)

Attention: Mr. Conrad Ng

Dear Mr. Ng,

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

**Monthly Environmental Monitoring and Audit Report (August 2015)
for EP-364/2009/C, FEP-01/364/2009, FEP-02/364/2009, FEP-
05/364/2009/A, FEP-06/364/2009/A, FEP-07/364/2009/A, FEP-
09/364/2009/B, FEP-10/364/2009/B & FEP-11/364/2009/B**

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for August 2015 received by e-mail on 11 September 2015 for our review and comment.

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

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

Yours sincerely,



David Yeung
Independent Environmental Checker

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	CEDD	Attn: Mr. Jason Cheung	by fax: 2577 5040
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EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – [August 2015](#) specific for Environmental Permit no. EP-364/2009/C, Further Environmental Permit nos. FEP-01/364/2009, FEP-02-364/2009, FEP-05/364/2009/A, FEP-06/364/2009/A FEP-07/364/2009/A, FEP-09/364/2009/B, FEP-10/364/2009/B and FEP-11/364/2009/B. The EM&A report is prepared by the Environmental Team (ET) employed under Contract No. HK/2011/07 – Wan Chai Development Phase II and Central Wanchai Bypass – Sampling, Field Measurement and Testing Works (Stage 2). This report presents the environmental monitoring findings and information recorded during the period of [August 2015](#). The cut-off date of reporting is at 27th of each reporting month.
- ii. In the reporting month, the principal work activities of individual contracts are included as follows:

Contract no. HY/2009/18 - Central - Wan Chai Bypass (CWB) - Central Interchange under FEP-05/364/2009/A

- [Drainage works](#)
- [Trough structure construction including excavation, concreting and waterproofing and backfill](#)
- [Road works](#)
- [Bridges construction](#)

Contract no. HK/2009/01 - Wan Chai Development Phase II - Central - Wan Chai Bypass at Hong Kong Convention and Exhibition Centre - Tunnel Works under FEP-02/364/2009

- [Stage 1 Defect rectification](#)
- [Stage 2 Construction of exhaust duct](#)
- [Stage 2 Construction of slip road 2 and 3](#)
- [Stage 2 Construction of Bay 10 and 9B](#)
- [Stage 3 RC structure for CWB Tunnel Bay 11 to 17](#)
- [Stage 3 Box culvert diversion](#)
- [Removal of abandoned cooling main \(P7/P9\) at Convention Avenue](#)
- [Reinstatement of outfall](#)
- [Roadworks /drains for Expo Drive East](#)
- [Stage 4 Piling works](#)

Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- [Removal of strut, clearance works was on going at OHVD at Tunnel Portion 1.](#)
- [base slabs and side walls construction at Tunnel Portion II](#)
- [Removal of strut layer S3 and S2](#)
- [Construction of OHVD Bay 5](#)
- [Excavation in Layer S3](#)
- [Struts installation for layer S3 in east side](#)
- [Excavation in layer S4](#)

Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

- Construction of OHVD at Mined Tunnel
- Permanent lining structure at Mined Tunnel
- Fabrication of ELS steel works for TPCWAW
- Excavation and installation of ELS at TPCWAW

Contract no. HY/2009/19 - Central - Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- Demolition of ELS for EVB
- Pile cap construction for IEC
- Saw cut of parapet at IEC West bound
- Construction of EVB and APS structure
- Column modification at F1 to F8
- Demolition of IEC west bound deck/crosshead/column/pile cap
- Bridge E pile cap/column/crosshead/deck construction
- Tunnel Bay 14 backfilling
- Watson Road laying of new water pipe
- Oil Street drainage works

Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West under FEP-09/364/2009B

- Diaphragm wall construction
- Grouting
- Construction of ELS at MVB
- Pre-bored H-pile construction

Contract no. HY/2010/08 –Central - Wan Chai Bypass (CWB) –Tunnel (Slip Road 8) under FEP-10/364/2009B

- Tree protection works next to existing BGO,
- Drainage improvement works,
- Sheet piling works,
- Excavation and Lateral Support for U-structure,
- Pipe piling & grouting works,
- Utility diversion works,
- Waterproofing works,
- Retaining wall works
- ELS works,
- Diaphragm Wall, Barrette construction and king post installation works

Contract no. HY/2011/08 –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- West Ventilation Building Construction
- East Ventilation Shaft Construction
- Install VE panels bracket and thermal barrier for Tunnel

Noise Monitoring

- iii. Noise monitoring during daytime was conducted at M1a - Harbour Road Sports Center; M2b - Noon-day gun area; M3a - Tung Lo Wan Fire Station; M4b - Victoria Center; M5b - City Garden, M6 - HK Baptist Church Henrietta Secondary School, M7e and M7w - International Financial Centre East Podium and International Finance Centre West Podium and M8 - City Hall on weekly basis in the reporting month.
- iv. No limit level exceedances at M6 - HK Baptist Church Henrietta Secondary School were recorded in this reporting month.
- v. 24-hour real time noise monitoring was conducted at RTN1 - FEHD Hong Kong Transport Section Whitfield Depot for construction activities at IEC bridge deck. No limit level exceedance was recorded in the reporting month.
- vi. 24-hour real time noise monitoring was conducted at RTN2a - Hong Kong Electric Centre. No limit level exceedance was recorded in the reporting month.
- vii. 24-hour real time noise monitoring was conducted at RTN3 - Yu Lee Mo Fan Memorial School. No limit level exceedance was recorded in the reporting month.
- viii. 24-hour real time noise monitoring was conducted at RTN4 - Causeway Bay Community Centre. No limit level exceedance was recorded in the reporting month.
- ix. Liaison was conducted with HK Baptist Church Henrietta Secondary School and Po Leung Kuk Yu Lee Mo Fan Memorial School regarding the set up of RTN3 real time noise monitoring station. Po Leung Kuk Yu Lee Mo Fan Memorial School grant permission for set up on 4 Sep 2012 and station set up was performed on 14 Sep 2012.
- x. Real time noise monitoring station at Oil Street Community Liaison Centre (RTN2- Oil Street Community Centre) was relocated from Oil Street Community Liaison Centre to Hong Kong Electric (RTN2a- Electric Centre) on 5 Oct 2012 which is a representative of the 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.
- xi. Real-time noise baseline capturing was conducted from 21 Sep 2012 to 04 Oct 2012 at RTN3-Po Leung Kuk Yu Lee Mo Fan Memorial School.
- xii. Real-time Noise Monitoring at RTN3- Po Leung Kuk Yu Lee Mo Fan Memorial School was commenced since 06 Oct 2012.
- xiii. Causeway Bay Community Centre has granted permission for set up of real time noise monitoring station on 21 Dec 2012 and station set up was performed on 27 Dec 2012. The Baseline noise level of RTN4- Causeway Bay Community Centre will adopt the results from the baseline noise monitoring report for EP/364/2009 in 22 April 2010 in which approved by EPD.
- xiv. According to clause 3.1 stated in EP-364/2009/B, "the real-time monitoring system shall be in place no later than two weeks before the commencement date of demolition works of the existing Island Eastern Corridor". IEC demolition associated construction works was commenced on 3 Feb 2013 and Real time noise monitoring at RTN4-Causeway Bay Community Centre was commenced on 13 Jan 2013.
- xv. Real-time noise monitoring station RTN1-FEHD Whitfield Depot was finely adjusted from 2/F to roof-top at FEHD Whitfield Depot on 24 June 2013 with respect to the commencement of advance works for IEC parapet demolition.



- xvi. With respect to the completion of Victoria Car Park refurbishment, the noise monitoring at M4b-Victoria Center was reverted from 3/F to 2/F since 24 June 2014.

Air Quality Monitoring

- xvii. 24hr TSP monitoring at CMA1b was rescheduled from 28 July 2015 and 26 August 2015 to 29 July 2015 and 27 August 2015 respectively.
- xviii. 24hr TSP monitoring at CMA2a was rescheduled from 27 August 2015 to 28 August 2015.
- xix. 24hr TSP monitoring at CMA6a was rescheduled from 26 August 2015 to 28 August 2015.
- xx. 24hr TSP monitoring at MA1e was rescheduled from 14 August 2015 to 15 August 2015.
- xxi. 1hr TSP monitoring at CMA6a was rescheduled from 27 August 2015 to 27 and 28 August 2015.
- xxii. 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.
- xxiii. Due to extension of site boundary by contractor of HY/2009/19, location of air quality monitoring station CMA1b – Oil Street Community Liaison Centre has been finely adjusted on 21 April 2012.
- xxiv. The location ID of air quality monitoring station CMA1b was updated as Oil Street Site Office in April 2013.
- xxv. 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; MA1e and MA1w – International Finance Centre eastern and western podium on every six days basis.
- xxvi. One action level exceedance during 24hr TSP monitoring was recorded at monitoring station CMA2a – Causeway Bay Community Centre on 26 August 2015 in the reporting month. Investigation found that the exceedance recorded was not related to the Project.
- xxvii. Two action level exceedances during 1hr TSP monitoring was recorded at monitoring station CMA2a – Causeway Bay Community Centre on 27 August 2015 in the reporting month. Investigation found that the exceedance recorded was not related to the Project.

Complaints, Notifications of Summons and Successful Prosecutions

- xxviii. No environmental complaint was received in the reporting month.

Site Inspections and Audit

- xxix. The Environmental Team (ET) conducted weekly site inspections for Contract no. HY/2009/15, HY/2009/18, HY/2009/19, HY/2010/08, HK/2009/01, HK/2009/02, HK/2012/08 and HY/2011/08 in this reporting period.
- xxx. Construction of bored pile E3B under HY/2009/17 was confirmed completed and the respective work area under FEP-03/364/2009 was handover and inspected under HY/2009/19 from 19 Dec 2012 onwards.
- xxxi. Construction works under HK/2010/06 was confirmed completed and the respective work area under FEP-08/364/2009/A was handover and inspected under HK/2012/08 from 22 Sep 2014 onwards.
- xxxii. The Contractors rectified major observations and recommendations made during the audit sessions. No non-conformance was identified during the site inspections.

Future Key Issues

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

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- Drainage works
- Retaining wall and trough structure construction including excavation, concreting, waterproofing and backfill
- Road works
- Bridges construction

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009

- Stage 2 Construction of slip road 2 and 3
- Stage 3 RC structure for CWB Tunnel Bay 11 to 17
- Stage 3 Box culvert diversion
- Removal of abandoned cooling main (P7/P9) at Convention Avenue
- Reinstatement of outfall
- Reinstatement of triangular planter at Fenwick Pier Street
- Roadworks /drains for Expo Drive East
- Stage 4 Pilling works

Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- Removal of strut, king post and clearance works was on going at OHVD at Tunnel Portion 1.
- Construction of road side barrier
- Tunnel structure works, i.e. OHVD base slab and top slab.
- Removal of Strut layer S3 and S2
- Construction of access shaft
- Strut layer S4 lateral support installation at both sides
- Strut layer S3 lateral support installation at both sides
- Excavation of layer S4 at both sides
- Breaking through bulkhead wall BW3

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

- Construction of OHVD at Mined Tunnel
- Construction of wall and arch lining at Mined Tunnel
- Fabrication of ELS steel works for TPCWAW
- Excavation and installation of ELS at TPCWAW

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- Demolition of ELS for EVB
- Pile cap construction for IEC
- Pre-bored H-pile for Approach Ramp
- Excavation / Construction of retaining wall/Approach Ramp
- Abutment D12 construction
- Construction of EVB and APS structure
- Column modification at F1 to F8
- Demolition of IEC west bound deck/crosshead/column/pile cap
- Bridge E column/crosshead/deck construction
- Watson Road laying of new water pipe
- Oil Street drainage works

Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West under FEP-09/364/2009/B

- Diaphragm wall construction
- Grouting
- Construction of ELS at MVB
- Pre-bored H-pile construction

Contract no. HY/2010/08 –Central - Wan Chai Bypass (CWB) –Tunnel (Slip Road 8) under FEP-10/364/2009

- Tree protection works next to existing BGO,
- Drainage improvement works,
- Sheet piling works,
- Excavation and Lateral Support for U-structure,
- Pipe piling & grouting works,
- Utility diversion works,
- Waterproofing works,
- Retaining wall works
- Provisional of Bowling Green,
- ELS works,
- Diaphragm Wall, Barrette construction and king post installation works

Contract no. HY/2011/08 – Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- West Ventilation Building Construction
- East Ventilation Shaft Construction
- Install VE panels bracket and thermal barrier for Tunnel

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-364/2009/C and Further Environmental permit nos. FEP-01/364/2009, FEP-02/364/2009, FEP-05/364/2009/A, FEP-06/364/2009/A, FEP-07/364/2009/A, FEP-09/364/2009/B, FEP-10/364/2009B and FEP-11/364/2009B 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 (EP) no. EP-364/2009/B, Further Environmental Permit (FEP) nos. FEP-01-364/2009, FEP-02/364/2009, FEP-05/364/2009/A, FEP-06/364/2009/A, FEP-07/364/2009/A, FEP-08/364/2009/A, FEP-09/364/2009B, FEP-10/364/2009B and FEP-11/364/2009B during the period [July 2015 to August 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 Designated 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. Design and Construction of Central – Wan Chai Bypass and Island Eastern Corridor Link under the Project involves the construction and operation of a trunk road and its road tunnel more than 800m in length between portals that is shown at Figure 2.1.
- 2.2.2. The study area encompasses existing developments from Central to North Point. The scope of the Central-Wanchai Bypass (CWB) and Island Eastern Corridor Link (IECL) includes:
- A dual three-lane trunk road, approximately 4.5 km in length, and tunnel approximately 3.7 km in length defined from the connection with the existing Rumsey Street Flyover in Central, through to a connection with the existing Island Eastern Corridor to the east of the Causeway Bay Typhoon Shelter (CBTS);
 - The Central Interchange near the Rumsey Street Flyover to provide road connections to the Central area;
 - Tunnel control buildings and ventilation buildings;
 - Slip roads to connect the CWB to the local road system in the Wan Chai North and Causeway Bay area;
 - Associated road lighting, road signing, traffic control and surveillance system; and
 - Other associated works.

2.2.3. 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 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
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
04/HY/2006	Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street	DP1	September 2010 (Completed)
HK/2009/01	Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works	DP1, DP2	25 August 2011

Contract No.	Contract Title	Associated DP(s)	Construction Commencement Date
HK/2009/02	Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East(CWB Tunnel)	DP1	26 April 2011
HY/2009/15	Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)	DP1,DP3	13 July 2011
HY/2009/19	Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link	DP1	24 March 2011
HK/2010/06	Wan Chai Development Phase II- Central-Wan Chai Bypass over MTR Tsuen Wan Line	DP3	22 March 2011 (Completed)
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	3922 3388	3912 3010
Chun Wo – Leader Joint Venture	Contractor under Contract no. HK/2009/01	Project Manager	Mr. Simon Liu	2162 9909	2634 1626
		Site Agent	Mr. Andy Yu	9648 4896	
		Construction Manager	Mr. Terry Wong	9757 9846	
		Construction Manager	Mr. Wyman Wong	9627 2467	

Party	Role	Post	Name	Contact No.	Contact Fax
		Construction Manager	Mr. Kenneth Chan	9160 3850	
		Environmental Officer	Ms. Wendy Ng	9103 2370	
		Assistant Environmental Engineer	Ms. Connie Chan	9047 6148	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Site Agent	Mr. K.K. Yuen	3658-3002	2827 9996
		Project Manager	Mr. Paul Yu	3658 3085	
		Environmental Officer	Mr. C.P. Ho	9191 8856	
Chun Wo - CRGL - MBEC_Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	Mr. David Lau	3758 8879	2570 8013
		Deputy Project Manager	Mr. William Luk	9456 9819	
		Deputy Site Agent	Eric Fong	6191 9337	
		Environmental Manager / Environmental Officer	Mr. M.H. Isa	9884 0810	
		Environmental Engineer	Mr. Calvin Leung	9286 9208	
Leighton Contractors (Asia) Limited	Contractor under Contract no. HY/2009/18	Site Agent	Mr. Jimmy Chu	2214 7700	2140 6799
		Deputy Site Agent	Mr. Bob Yeung	2214 7703	
		Environmental Officer	Ms. Lighting Chan	2823 1161	
		Assistant Environmental Engineer	Mr. Christy So	3937 1065	
China State Construction Engineering (HK) Ltd.	Contractor under Contract no. HY/2009/15	Project Director	Mr. Chris Leung	3557 6393	2865 5229
		Site Manager	Mr. Y. Huo	3557 6368	2566 2192
		Contractor's Representative	Mr. Andrew Wong	3557 6371	
		Environmental Officer	Mr. Andy Mak	3557 6215	
		Environmental Supervisor	Mr. Harry Wong	3557 6348	
China State-Leader JV	Contractor under Contract no. HK/2012/08	Project Director	Mr. C.N. Lai	9137 1811	2877 1522
		Project Manager	Mr. Eddie Chung	9193 8871	
		Site Agent	Mr. Keith Tse	9095 7922	
		Environmental Officer	Mr. James MA	9130 9549	



Party	Role	Post	Name	Contact No.	Contact Fax
		Environmental Supervisor	Mr. Y.L. Ho	6050 4919	
China State	Contractor under Contract no.HY/2010/08	Project Director	Cheung Kit Cheung	3557 6399	2566 8061
		Project Manager	Chan Ying Lun	9812 0592	
		Deputy Project Manager	Chris Leung	3467 4299	
		Site Agent	Dr. Dave Chan	3467 4277	
		Environmental Officer	Mr. C.M. Wong	3557 6464	
		Environmental Supervisor	Mr. Louis Lam Tsz Kwan	3557 6470	
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	Malcom Leung	3973 0850	
		Environmental Supervisor	Christy So	3973 1065	
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. In this reporting month, the principal work activities of individual contracts are included as follows:

Contract no. HY/2009/18 - Central - Wan Chai Bypass (CWB) - Central Interchange under FEP-05/364/2009/A

- Drainage works
- Trough structure construction including excavation, concreting and waterproofing and backfill
- Road works
- Bridges construction

Contract no. HK/2009/01 - Wan Chai Development Phase II - Central - Wan Chai Bypass at Hong Kong Convention and Exhibition Centre - Tunnel Works under FEP-02/364/2009

- Stage 1 Defect rectification
- Stage 2 Construction of exhaust duct
- Stage 2 Construction of slip road 2 and 3
- Stage 2 Construction of Bay 10 and 9B
- Stage 3 RC structure for CWB Tunnel Bay 11 to 17
- Stage 3 Box culvert diversion
- Removal of abandoned cooling main (P7/P9) at Convention Avenue
- Reinstatement of outfall
- Roadworks /drains for Expo Drive East
- Stage 4 Piling works

Contract no. HK/2009/02 - Wan Chai Development Phase II - Central - Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- Removal of strut, clearance works was on going at OHVD at Tunnel Portion 1.
- base slabs and side walls construction at Tunnel Portion II
- Removal of strut layer S3 and S2
- Construction of OHVD Bay 5
- Excavation in Layer S3
- Struts installation for layer S3 in east side
- Excavation in layer S4

Contract no. HY/2009/15 - Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

- Construction of OHVD at Mined Tunnel
- Permanent lining structure at Mined Tunnel
- Fabrication of ELS steel works for TPCWAW
- Excavation and installation of ELS at TPCWAW

Contract no. HY/2009/19 - Central - Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- Demolition of ELS for EVB
- Pile cap construction for IEC
- Saw cut of parapet at IEC West bound

- Construction of EVB and APS structure
- Column modification at F1 to F8
- Demolition of IEC west bound deck/crosshead/column/pile cap
- Bridge E pile cap/column/crosshead/deck construction
- Tunnel Bay 14 backfilling
- Watson Road laying of new water pipe
- Oil Street drainage works

Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West under FEP-09/364/2009B

- Diaphragm wall construction
- Grouting
- Construction of ELS at MVB
- Pre-bored H-pile construction

Contract no. HY/2010/08 –Central - Wan Chai Bypass (CWB) –Tunnel (Slip Road 8) under FEP-10/364/2009B

- Tree protection works next to existing BGO,
- Drainage improvement works,
- Sheet piling works,
- Excavation and Lateral Support for U-structure,
- Pipe piling & grouting works,
- Utility diversion works,
- Waterproofing works,
- Retaining wall works
- ELS works,
- Diaphragm Wall, Barrette construction and king post installation works

Contract no. HY/2011/08 –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- West Ventilation Building Construction
- East Ventilation Shaft Construction
- Install VE panels bracket and thermal barrier for Tunnel

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

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- Drainage works
- Retaining wall and trough structure construction including excavation, concreting, waterproofing and backfill
- Road works
- Bridges construction

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009

- Stage 2 Construction of slip road 2 and 3
- Stage 3 RC structure for CWB Tunnel Bay 11 to 17
- Stage 3 Box culvert diversion
- Removal of abandoned cooling main (P7/P9) at Convention Avenue
- Reinstatement of outfall
- Reinstatement of triangular planter at Fenwick Pier Street
- Roadworks /drains for Expo Drive East
- Stage 4 Pilling works

Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- Removal of strut, king post and clearance works was on going at OHVD at Tunnel Portion 1.
- Construction of road side barrier
- Tunnel structure works, i.e. OHVD base slab and top slab.
- Removal of Strut layer S3 and S2
- Construction of access shaft
- Strut layer S4 lateral support installation at both sides
- Strut layer S3 lateral support installation at both sides
- Excavation of layer S4 at both sides
- Breaking through bulkhead wall BW3

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

- Construction of OHVD at Mined Tunnel
- Construction of wall and arch lining at Mined Tunnel
- Fabrication of ELS steel works for TPCWAW
- Excavation and installation of ELS at TPCWAW

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- Demolition of ELS for EVB
- Pile cap construction for IEC
- Pre-bored H-pile for Approach Ramp
- Excavation / Construction of retaining wall/Approach Ramp
- Abutment D12 construction
- Construction of EVB and APS structure
- Column modification at F1 to F8
- Demolition of IEC west bound deck/crosshead/column/pile cap
- Bridge E column/crosshead/deck construction
- Watson Road laying of new water pipe
- Oil Street drainage works

Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West under FEP-09/364/2009/B

- Diaphragm wall construction
- Grouting
- Construction of ELS at MVB
- Pre-bored H-pile construction

Contract no. HY/2010/08 –Central - Wan Chai Bypass (CWB) –Tunnel (Slip Road 8) under FEP-10/364/2009

- Tree protection works next to existing BGO,
- Drainage improvement works,
- Sheet piling works,
- Excavation and Lateral Support for U-structure,
- Pipe piling & grouting works,
- Utility diversion works,
- Waterproofing works,
- Retaining wall works
- Provisional of Bowling Green,
- ELS works,
- Diaphragm Wall, Barrette construction and king post installation works

Contract no. HY/2011/08 – Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- West Ventilation Building Construction
- East Ventilation Shaft Construction
- Install VE panels bracket and thermal barrier for Tunnel

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	15 Nov 2010	Valid
Further Environmental Permit	FEP-05/356/2009	24 Mar 2011	Surrendered
Further Environmental Permit	FEP-06/356/2009	5 March 2013	Valid
Further Environmental Permit	FEP-07/356/2009	26 July 2013	Valid
Further Environmental Permit	FEP-01/364/2009	24 Mar 2010	Valid
Further Environmental Permit	FEP-02/364/2009	21 Apr 2010	Valid
Further Environmental Permit	FEP-03/364/2009	12 July 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/A	25 Feb 2011	Valid
Further Environmental Permit	FEP-08/364/2009/A	15 June 2012	Surrendered
Further Environmental Permit	FEP-09/364/2009/B	5 March 2013	Valid
Further Environmental Permit	FEP-10/364/2009/B	26 July 2013	Valid



Further Environmental Permit	FEP-11/364/2009/B	2 May 2014	Valid
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- 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. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

- 3.1.3. The construction works was completed and the FEP-03/364/2009 was surrendered by the Contractor on 28 March 2013.

Contract no. 04/HY/2006 – Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street under FEP-04/364/2009/A

- 3.1.4. The construction works was completed, and the FEP-04/HY/2006 was surrendered by the Contractor on 11 February 2011.

Contract no. HK/2010/06 - Wan Chai Development Phase II - Central - Wan Chai Bypass over MTR Tsuen Wan Line under FEP-08/364/2009/A

- 3.1.5. The construction works was completed, and the FEP-08/364/2009/A was surrendered by the Contractor on 3 October 2014.

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009

- 3.1.6. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-02/364/2009 for contract no. HK/2009/01 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-RS0243-15	16 Mar 2015	25 Mar 2015 to 24 Sept 2015	Valid
	GW-RS0079-15	27 Jan 2015	16 Feb 2015 to 14 Aug 2015	Cancelled
	GW-RS0074-15	22 Jan 2015	10 Feb 2015 to 9 Aug 2015	Cancelled
	GW-RS0104-15	3 Feb 2015	22 Feb 2015 to 21 Aug 2015	Cancelled
	GW-RS0101-15	3 Feb 2015	22 Feb 2015 to 21 Aug 2015	Cancelled
	GW-RS0269-15	16 Mar 2015	8 Apr 2015 to 7 Oct 2015	Valid
	GW-RS0408-15	13 Apr 2015	20 Apr 2015 to 19 Oct 2015	Cancelled
	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	02 May 2015 to 01 Nov 2015	Valid
	GW-RS0706-15	30 Jun 2015	02 Jul 2015 to 01 Jan 2016	Valid
	GW-RS0803-15	28 Jul 2015	21 Aug 2015 to 20 Feb 2016	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0804-15	28 Jul 2015	22 Aug 2015 to 21 Feb 2016	Valid
	GW-RS0868-15	13 Aug 2015	14 Aug 2015 to 13 Feb 2016	Valid
Discharge Licence	WT00009641- 2011	24 Jul 2011	31 Jul 2016	Valid
	WT00021138- 2015	17 Mar 2014	31 Mar 2020	Valid
Billing account under Waste Disposal Ordinance	7010069	21 Jan 2010	N/A	Valid
Registration as a Chemical Waste Producer	WPN5213-134- C3585-01	21 Jan 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP_MD_16-018	02 Jun 2015	06 Jun 2015 to 30 Sept 2015	Valid
Dumping Permit (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal)	EP/MD/16-046	15 Jul 2015	20 Jul 2015 to 19 Aug 2015	Expired

Table 3.3 Summary of submission status under FEP-02/364/2009

EP Condition	Submission	Date of Submission
Condition 2.7 & 2.8	Works Schedule and Location Plan	18 May 2011
Condition 2.6	Environmental Management Organization Chart	18 May 2011
Condition 1.12	Commencement Date of Works	20 Jun 2011
Condition 2.9	Noise Management Plan	10 Jun 2011
Condition 2.11	Landscape Plan (Rev.4)	8 July 2015

Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

3.1.7. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-01/364/2009 for contract no. HK/2009/02 are shown in **Table 3.4** and **Table 3.5**.

Table 3.4 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/02

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	N/A	Valid
	FEP-01/364/2009	24 Mar 2010	N/A	Valid
Notification of Works Under APCO	313962	2 Feb 2010	N/A	Valid
Construction Noise Permit (CNP) for non-pilling equipment	GW-RS0458-15	30 Apr 2015	2 May 2015 to 29 Oct 2015	Cancelled
	GW-RS0544-15	22 May 2015	26 May 2015 to 18 Nov 2015	Cancelled
	GW-RS0098-15	30 Jan 2015	1 Feb 2015 to 28 Jul 2015	Cancelled
	GW-RS0198-15	24 Feb 2015	26 Feb 2015 to 22 Aug 2015	Cancelled
	GW-RS0085-15	27 Jan 2015	14 Feb 2015 to 13 Aug 2015	Expired
	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-RS0446-15	30 Apr 2015	27 May 2015 to 26 Nov 2015	Valid
	GW-RS0447-15	30 Apr 2015	22 May 2015 to 21 Nov 2015	Valid
	GW-RS0454-15	30 Apr 2015	2 May 2015 to 28 Oct 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	02 July 2015 to 01 Jan 2016	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0716-15	30 June 2015	04 July 2015 to 27 Dec 2015	Valid
	GW-RS0723-15	2 July 2015	7 July 2015 to 06 Jan 2015	Valid
	GW-RS0831-15	31/7/2015	03 Aug 2015 to 28 Jan 2015	Valid
Water Discharge License	WT00007129-2010	28 July 2010	31 Jul 2015	Expired
	WT00008982-2011	26 April 2011	30 April 2016	Valid
	WT00009691-2011	01 Aug 2011	31 July 2016	Valid
	WT00022295-2015	12 Aug 2015	31 July 2020	Valid
Billing Account under Waste Disposal Ordinance (Land)	7010255	10 Feb 2010	N/A	Valid
Registration as Chemical Waste Producer (Wan Chai)	WPN5213-135-C3593-01	10 Mar 2010	N/A	Valid
Registration as Chemical Waste Producer (TKO 137)	WPN5213-839-C3593-02	22 Sep 2010	N/A	Valid
Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/16-034	26/06/2015	01 Jul 2015 to 31 Dec 2015	Valid

Table 3.5 Summary of submission status under FEP-01/364/2009

EP Condition	Submission	Date of Submission
Condition 2.7 and 2.8	Works Schedule and Location Plan	14 Jun 2011
Condition 2.6	Environmental Management Organization Chart	14 Jun 2011
Condition 1.12	Commencement Date of Works	21 Jun 2011
Condition 2.11	Landscape Plan (Revision B)	20 Nov 2012
Condition 2.9	Noise Management Plan (Revision B)	13 Jan 2012

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- 3.1.8. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-05/364/2009A for contract no. HY/2009/18 are shown in **Table 3.6** and **Table 3.7**.

Table 3.6 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/18

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-05/364/2009/A	15 Nov 2010	Permit issued	Valid
Notification of Works Under APCO	322293	07 Oct 2010	Notified	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0126-15	05 Feb 2015	07 Feb 2015 to 28 Jul 2015	Cancelled
	GW-RS0230-15	06 Mar 2015	09 Mar 2015 to 08 Sep 2015	Cancelled
	GW-RS0719-15	3 July 2015	06 Jul 2015 to 31 Dec 2015	Valid
	GW-RS0830-15	29 July 2014	30 Jul 2015 to 29 Jan 2016	Valid
Discharge Licenses	WT00012998-2012	25 May 2012	31 Jan 2016	Cancelled
	WT00013967-2012	17 Sep 2012	30 Sep 2017	Valid
	WT00014966-2013	08 Jan 2013	31 Jan 2018	Valid
	WT00020398-2014	21 Nov 2014	31 Jan 2016	Valid
Registration as a Chemical Waste Producer	WPN: 8335-121-L1048-04	17 Dec 2010	N/A	Registration completed
Billing Account under Waste Disposal Ordinance (Land)	Account No.: 7011587	11 Oct 2010	Account approved	Valid

Table 3.7 Summary of submission status under FEP-05/364/2009/A

EP Condition	Submission	Date of Submission
Condition 2.9	Noise Management Plan	01 March 2011
Condition 2.10	Landscape Plan (Rev. 6)	19 May 2014

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

3.1.9. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-06/364/2009/A for contract no. HY/2009/15 are shown in **Table 3.8** and **Table 3.9**.

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

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-06/364/2009/A	22 Nov 2010	N/A	Valid
	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 non-piling equipment	GW-RS0099-14	30 Jan 2015	1 Feb 2015 to 28 Jul 2015	Cancelled
	GW-RS0334-15	16 Mar 2015	1 Apr 2014 to 29 Sep 2015	Cancelled
	GW-RS0329-14	16 Mar 2015	1 Apr 2015 to 29 Sep 2015	Cancelled
	GW-RS0679-15	29 Jun 2015	01 Jul 2015 to 31 Dec 2015	Valid
	GW-RS0222-15	3 Mar 2015	10 Mar 2015 to 09 Sep 2015	Valid
	GW-RS0591-15	29 May 2015	31 May 2015 to 26 Nov 2015	Valid
	GW-RS0579-15	29 May 2015	31 May 2015 to 26 Nov 2015	Valid
	GW-RS893-15	17 Aug 2015	17 Aug 2015 to 16 Feb 2016	Valid
Registration as a Chemical Waste Producer	WPN: 5213-147-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
Water Discharge License (TS1)	WT00008780-2011	24 Nov 2011	24 Nov 2011 to 31 Mar 2016	Valid
Water Discharge License (Discharge at CHT area)	WT00019250-2014	6 Jun 2014	6 Jun 2014 to 31 May 2016	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Water Discharge License (Discharge at TPCWAE)	WT00018167-2014	17 Jan 2014	17 Jan 2014 to 31 Dec 2015	Valid
Water Discharge License (Discharge at TS4)	WT00018542-2014	17 Mar 2014	17 Mar 2014 to 31 Jan 2016	Valid
Water Discharge Licence (Discharge at TPCWAW)	WT00020601-2014	18 Mar 2015	18 Mar 2015 to 31 Mar 2017	Valid

Table 3.9 Summary of submission status under FEP-06/364/2009/A

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	11 Mar 2011
	Amendment for Management Organization of Main Construction Companies	16 May 2011
Condition 2.7	Works Schedule	15 Mar 2011
Condition 2.8	Location Plan	15 Mar 2011
Condition 2.9	Noise Management Plan	6 May 2011
Condition 2.10	Landscape Plan (Rev.3)	30 Jan 2015

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

3.1.10. The current status on licences and/or permits on environmental protection pertinent and submission under FEP-07/364/2009/A for contract no. HY/2009/19 are shown in **Table 3.10** and **Table 3.11**.

Table 3.10 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/19

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-07/364/2009/A	25 Feb 2011	N/A	Valid
Notification of Works Under APCO	326160	24 Jan 2011	N/A	Valid
Registration as a Waste Producer	7012306	10 Feb 2011	N/A	Valid
Registration as Chemical Waste Producer	5213-151-C3654-01	24 Mar 2011	N/A	Valid
Application for Vessel Disposal	7012306	21 July 2011	N/A	Valid
Construction Noise Permits (CNP) for non-piling equipment	GW-RS0199-15	27 Feb 2015	27 Feb 2015 to 26 Aug 2015	Expired
	GW-RS0324-15	24 Mar 2015	09 Apr 2015 to 08 Oct 2015	Valid
	GW-RS0671-15	18 Jun 2015	20 Jun 2015 to 17 Dec 2015	Valid
	GW-RS0741-15	10 Jul 2015	23 Jul 2015 to 22 Jan 2016	Valid
	GW-RS0702-15	29 Jun 2015	01 Jul 2015 to 31 Jul 2015	Valid
	GW-RS0869-15	13 Aug 2015	15 Aug 2015 to 12 Feb 2016	Valid
	GW-RS0909-15	21 Aug 2015	21 Aug 2015 to 20 Feb 2016	Valid
Water Discharge License	WT00010093-2011	17 Aug 2012	30 Sep 2016	Valid
	WT00010865-2011	03 Nov 2011	30 Nov 2016	Valid

Table 3.11 Summary of submission status under FEP-07/364/2009/A

EP Condition	Submission	Date of Submission
Condition 2.13	Landscape Plan (Rev.3)	19 May 2014
Condition 2.9	Noise Management Plan (Rev.4)	2 Feb 2015

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

3.1.11 The current status on licences and/or permits on environmental protection pertinent and submission under FEP-09/364/2009/B for contract no. HK/2012/08 showed in **Table 3.12 and Table 3.13**.

Table 3.12 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-09/364/2009/B	5 March 2013	N/A	Valid
	FEP-06/356/2009	5 March 2013	N/A	Valid
Notification of Works Under APCO	355439	4 Feb 2013	N/A	Valid
Registration as a Chemical Waste Producer	5213-134-C3790-01	8 Mar 2013	N/A	Valid
Billing Account under Waste Disposal Ordinance	7016883	18 Feb 2013	18 Jul 2017	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0105-15	5 Feb 2015	7 Feb 2015 to 4 Aug 2015	Cancelled
	GW-RS0145-15	11 Feb 2015	13 Feb 2015 to 12 Aug 2015	Expired
	GW-RS0296-15	19 Mar 2015	23 Mar 2015 to 22 Sep 2015	Valid
	GW-RS0838-15	31 Jul 2015	3 Aug 2015 to 2 Feb 2016	Valid
Water Discharge Licence	WT00018223-2014	28 Jan 2014	31 Jan 2019	Cancelled
	WT00020594-2014	22 Dec 2014	31 Jan 2019	Valid

Table 3.13 Summary of submission status under FEP-09/364/2009/B

EP Condition	Submission	Date of Submission
Condition 2.9	Noise Management Plan (Rev.2)	9 July 2013
Condition 2.14	Landscape Plan (Rev.4)	24 July 2015

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

3.1.12 The current status on licences and/or permits on environmental protection pertinent and submission under FEP-10/364/2009/B for contract no. HK/2012/08 showed in **Table 3.14 and Table 3.15**.

Table 3.14 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-10/364/2009/B	26 Jul 2013	NA	Valid
	FEP-07/356/2009	26 Jul 2013	NA	Valid
Notification of Works Under APCO	357176	2013-04-02	NIL	Valid
Registration as a Chemical Waste Producer	WPN5213-147-C1169-44	2013-03-27	NIL	Valid
Billing Account under Waste Disposal Ordinance	7017170	2013-03-27	NIL	Valid
Water Discharge License	WT0001651-2013	2013-07-09	2018-07-28	Cancelled
	WT00020468-2014	2014-12-03	2018-07-31	Valid
Construction Noise Permit (CNP) for non-pilling works	GW-RS0154-15	11 Feb 2015	12 Feb 2015 to 08 Aug 2015	Expired
	GW-RS0531-15	18 May 2015	18 May 2015 to 17 Nov 2015	Cancelled
	GW-RS0229-15	13 Mar 2015	16 Mar 2015 to 12 Sep 2015	Valid
	GW-RS0309-15	30 Mar 2015	21 Mar 2015 to 19 Sep 2015	Valid
	GW-RS0315-15	24 Mar 2015	25 Mar 2015 to 24 Sep 2015	Valid
	GW-RS0426-15	23 Apr 2015	23 April 2015 to 22 Oct 2015	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RW0238-15	19 May 2015	21 May 2105 to 17 Nov 2015	Valid
	GW-RS0620-15	11 Jun 2015	11 Jun 2015 to 10 Dec 2015	Valid
	GW-RS0673-15	19 Jun 2015	24 Jun 2015 to 24 Sep 2015	Valid
	GW-RS0765-15	13 Jul 2015	13 July 2015 to 12 Jan 2016	Valid
	GW-RS0811-15	24 Jul 2015	29 Jul 2015 to 28 Jan 2016	Valid
	GW-RS0920-15	26 Aug 2015	28 Aug 2015 to 24 Feb 2016	Valid
	GW-RS0938-15	26 Aug 2015	28 Aug 2015 to 24 Feb 2016	Valid

Table 3.15 Summary of submission status under FEP-10/364/2009/B

EP Condition	Submission	Date of Submission
Condition 2.9	Noise Management Plan (Rev.3)	03 January 2014
Condition 2.14	Landscape Plan (Rev.2)	19 May 2014
Condition 2.16	Additional Mitigation Plan (Rev.2)	18 February 2015

Contract no. HY/2011/08 –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

3.1.13 The current status on licenses and/or permits on environmental protection pertinent and submission under FEP-11/364/2009/B for contract no. HK/2012/08 showed in **Table 3.16 and Table 3.17**.

Table 3.16 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2011/08

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-11/364/2009/B	2 May 2014	N/A	Valid
Notification of Works Under APCO	355439	4 Feb 2013	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Registration as a Chemical Waste Producer	5213-134-C3790-01	8 Mar 2013	N/A	Valid
Billing Account under Waste Disposal Ordinance	7016883	18 Feb 2013	18 Jul 2017	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS-0174-15	18 Feb 2015	27 Feb 2015 to 26 Aug 2015	Cancelled
	GW-RS-0351-15	26 Mar 2015	27 Mar 2015 to 26 Aug 2015	Cancelled
	GW-RS-0431-15	20 Apr 2015	20 Apr 2015 to 22 Oct 2015	Cancelled
	GW-RS-0529-15	19 May 2015	19 May 2015 to 17 Nov 2015	Valid
	GW-RS-0678-15	19 June 2015	26 Jun 2015 to 25 Dec 2015	Valid
	GW-RS0738-15	06 July 2015	07 July 2015 to 31 Dec 2015	Valid
	GW-RS0758-15	07 July 2015	08 July 2015 to 31 Dec 2015	Valid
	GW-RS0856-15	10 Aug 2015	27 Aug 2015 to 26 Feb 2016	Valid
Water Discharge Licence	WT00019644-2014	29 Jul 2014	31 Jul 2019	Valid
	WT00020242-2014	04 Nov 2014	30 Nov 2019	Valid

Table 3.17 Summary of submission status under FEP-11/364/2009/B

EP Condition	Submission	Date of Submission
Condition 2.9	Noise Management Plan (Rev.2)	27 Jan 2015
Condition 2.14	Landscape Plan (Rev.2)	18 Feb 2015
Condition 2.13	Operational Air Quality Management Plan for West Ventilation Building (Rev.0)	25 Nov 2014
Condition 2.13	Operational Air Quality Management Plan for East Ventilation Building and East Vent Shaft (Rev.0)	18 Feb 2015

4 MONITORING REQUIREMENTS

4.1 Noise Monitoring

NOISE MONITORING STATIONS

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

Table 4.1 Noise Monitoring Stations

Station	Description
M1a	Harbour Road Sports Centre
M2b	Noon-day Gun Area
M3a	Tung Lo Wan Fire Station
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School
*M7e	International Finance Centre (Eastern End of Podium)
M7w	International Finance Centre (Western End of Podium)
*M8	City Hall

* Remark 1: Location ID has been updated from M7 to M8 for City Hall

* Remark 2: M7e has become a reference station starting from 7 Aug 2012

REAL TIME NOISE MONITORING STATIONS

- 4.1.2. The 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.

Table 4.2 Real Time Noise Monitoring Stations

District	Station	Description
Tin Hau	RTN1	FEHD Hong Kong Transport Section Whitfield Depot
North Point	RTN2a	Electric Centre
North Point	RTN3	Po Leung Kuk Yu Lee Mo Fan Memorial School
Tin Hau	RTN4	Causeway Bay Community Centre

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.1.3. 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 L_{10} and L_{90} shall also be obtained for reference.
- 4.1.4. 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.
- 4.1.5. Real time noise shall be carried out at the designated monitoring stations. The following is an initial guide on the regular monitoring frequency for each station on a 24 - hours basis when noise generating activities are underway:
- One set of measurements between 0700 and 1900 hours on normal weekdays.
 - One set of measurements between 1900 and 2300 hours on normal weekdays and 0700 and 2300 hours on public holidays.
 - One set of measurements between 2300 and 0700 hours on next day on everyday.
- 4.1.6. 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

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

4.2 Air Quality Monitoring

AIR QUALITY MONITORING STATIONS

- 4.2.1. The air quality 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 Quality Monitoring Stations

Station ID	Monitoring Location	Description
CMA1b	Oil Street Site Office**	North Point (Re-commenced on 14 November 2011)
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
MA1e	International Finance Centre (Eastern End of Podium)	Central
MA1w	International Finance Centre (Western End of Podium)	Central

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 QUALITY 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. 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.

4.2.9. 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.

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

4.2.11. Current calibration certificates of equipments are presented in **Appendix 4.2.**

5.0 MONITORING RESULTS

5.0.1. The environmental monitoring will be implemented based on the division of works areas of each designated 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. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section)
- Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange
- Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link
- Contract no. HY/2010/08 – Central- Wanchai Bypass Tunnel (Slip Road 8 Section)
- Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre
- Contract no. HK/2009/02 - Wan Chai Development Phase II – Central - Wan Chai Bypass at Wan Chai East
- Contract no. HK/2012/08 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West
- Contract no. HY/2011/08 – Central - Wan Chai Bypass (CWB)– Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning

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

5.1 Noise Monitoring Results

- 5.1.1 Monitoring for report of review baseline noise level was performed from 11 April 2011 to 8 June 2011. Then the report was submitted on the 20 June 2011, verified by IEC on 18 July 2011 and was approved by ER by January 2012. The new baseline is used for the noise calculation starting from January 2012.

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- 5.1.2 Noise monitoring for the Central Interchange works under contract no. HY/2009/18 was commenced on 22 April 2011. The proposed division of noise monitoring stations for Contract no. HY/2009/18 are summarized in **Table 5.1** below:

Table 5.1 Noise Monitoring Stations for Contract no. HY/2009/18

Station	Description
*M7e	International Finance Centre (Eastern End of Podium)
M7w	International Finance Centre (Western End of Podium)
M8	City Hall

* Remark: M7e has become a reference station starting from 7 Aug 2012

- 5.1.3 No action or limit level exceedance was recorded in this reporting month.
- 5.1.4 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**.

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009 and Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- 5.1.5 The commencement of construction works for Contract no. HK/2009/01 under FEP-02/364/2009 is on 25 August 2011 and HK/2009/02 under FEP-01/364/2009 is on 26 April 2011. The proposed division of noise monitoring stations are summarized in **Table 5.2** below.

Table 5.2 Noise Monitoring Station for Contract no HK/2009/01 and HK/2009/02

Station	Description
M1a	Harbour Road Sports Centre

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

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

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

- 5.1.8 The commencement of construction works for Contract no. HY/2009/15 under FEP-06/364/2009/A was on 13 July 2011. Noise monitoring was commenced on 13 July 2011. The proposed divisions of noise monitoring stations are summarized in **Table 5.3** below.

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

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

- 5.1.9 No action or limit level exceedance was recorded in this reporting month.
- 5.1.10 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**.

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- 5.1.11 Noise monitoring for the tunnel works under contract no. HY/2009/19 was commenced on 24 April 2011. The proposed division of noise monitoring stations are summarized in **Table 5.4** below.

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

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

- 5.1.12 No limit level exceedances were recorded at monitoring station M6 - HK Baptist Church Henrietta Secondary School in this reporting month.
- 5.1.13 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**. Details of the Notification of Exceedance can be referred in **Appendix 6.2**.

Contract no. HY/2010/08 – Central-Wanchai Bypass –Wanchai Bypass Tunnel (Slip Raod 8 Section) under FEP-09/364/2009/B

- 5.1.14 The commencement of construction works for Contract no. HY/2010/08 under FEP-10/364/2009/B was on 02 September 2013. Noise monitoring was commenced on 02 September 2013. The proposed divisions of noise monitoring stations are summarized in **Table 5.5** below.

Table 5.5 Noise Monitoring Stations for Contract no. HY/2010/08

Station	Description
M3a	Tung Lo Wan Fire Station

- 5.1.15 No action or limit level exceedance was recorded in this reporting month.
- 5.1.16 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/2011/08 – Central - Wan Chai Bypass (CWB) – Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning

- 5.1.17 Noise monitoring for the Central Interchange works under contract no. HY/2009/18 was commenced on 22 April 2011. The proposed division of noise monitoring stations for Contract no. HY/2011/08 are summarized in **Table 5.6** below:

Table 5.6 Noise Monitoring Stations for Contract no. HY/2011/08

Station	Description
M4b	Victoria Centre
*M7e	International Finance Centre (Eastern End of Podium)
M7w	International Finance Centre (Western End of Podium)
M8	City Hall

* Remark: M7e has become a reference station starting from 7 Aug 2012

- 5.1.18 No action or limit level exceedance was recorded in this reporting month.
- 5.1.19 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 Results

- 5.2.1. As confirmed by CWB RSS, the IECL parapet removal operations and associated construction work was commenced in June 2013. Liaison was conducted with HK Baptist Church Henrietta Secondary School, Po Leung Kuk Yu Lee Mo Fan Memorial School and Causeway Bay Community Centre regarding the set up of RTN3 real time noise monitoring station.
- 5.2.2. Causeway Bay Community Centre has granted permission for set up on 21 Dec 2012 and station set up was performed on 27 Dec 2012. The baseline noise level of RTN4- Causeway Bay Community Centre has adopted the results from the baseline noise monitoring report for EP/364/2009 in 22 April 2010 in which approved by EPD.
- 5.2.3. Real time noise monitoring at RTN4-Causeway Bay Community Centre was commenced on 13 Jan 2013.
- 5.2.4. Po Leung Kuk Yu Lee Mo Fan Memorial School granted permission for set up on 4 Sep 2012 and station set up was performed on 14 Sep 2012. Real time noise baseline capturing was conducted during time period without construction work from 21 Sep 2012 to 04 Oct 2012.
- 5.2.5. Real time noise monitoring at RTN3 – Po Leung Kuk Yu Lee Mo Fan Memorial School was commenced since 06 Oct 2012.
- 5.2.6. Oil Street Community Liaison Centre was confirmed to be demolished in mid-October by CWB RSS. This presented a need for relocation of RTN2 – Oil Street Community Liaison Centre. After liaison with Hong Kong Electric, permission was granted on 21 Sep 2012 for real time noise monitoring set up at City Garden Electric Centre (RTN2a – Electric Centre), which is a representative of the noise sensitive receiver City Garden.
- 5.2.7. RTN2 previously located at oil Street Community Liaison Centre was relocated to Hong Kong Electric Centre on 5 Oct 2012, which is a representative of the noise sensitive receiver City Garden. The baseline noise level of RTN2a will adopt the results derived from the baseline noise monitoring conducted at Electric Centre from 4 December 2009 to 17 December 2009.
- 5.2.8. Real-time noise monitoring station RTN1-FEHD Whitfield Depot was finely adjusted from 2/F to roof-top at FEHD Whitfield Depot on 24 June 2013 with respect to the commencement of advance works for IEC parapet demolition.

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- 5.2.9. The proposed division of noise monitoring stations are summarized in **Table 5.7** below. Real time noise monitoring for major construction works under contract no. HY/2009/19 was commenced on 24 April 2011.

Table 5.7 Real Time Noise Monitoring Stations for Contract no. HY/2009/19

Location ID	District	Description
RTN1	Tin Hau	FEHD Hong Kong Transport Section Whitfield Depot
RTN2a	North Point	Electric Centre
RTN3	North Point	Po Leung Kuk Yu Lee Mo Fan Memorial School
RTN4	Tin Hau	Causeway Bay Community Centre

* Real time noise monitoring results and graphical presentation during restrict hours and night time period are for information only and noise during CNP period shall be controlled under NCO.

- 5.2.10. No limit level exceedance was recorded at RTN1-FEHD Hong Kong Transport Section Whitfield Depot in the reporting month.
- 5.2.11. No limit level exceedance was recorded at RTN2a-Electric Centre in the reporting month.
- 5.2.12. No limit level exceedances were recorded at RTN3-Yue Lee Mo Fan Memorial School during in the reporting month.
- 5.2.13. No limit level exceedance was recorded at RTN4-Causeway Bay Community Centre in the reporting month.
- 5.2.14. Real time noise monitoring results measured in this reporting period are reviewed and summarized. Details of real time noise monitoring results and graphical presentation can be referred to **Appendix 5.4.**

Contract no. HY/2011/08 – Central - Wan Chai Bypass (CWB) – Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning

- 5.2.15. The proposed division of noise monitoring stations are summarized in **Table 5.7** below. Real time noise monitoring for major construction works under contract no. HY/2011/08 was commenced on 19 March 2015.

Table 5.7 Real Time Noise Monitoring Stations for Contract no. HY/2011/08

Location ID	District	Description
RTN1	Tin Hau	FEHD Hong Kong Transport Section Whitfield Depot

* Real time noise monitoring results and graphical presentation during restrict hours and night time period are for information only and noise during CNP period shall be controlled under NCO.

- 5.2.16. No limit level exceedance was recorded at RTN1-FEHD Hong Kong Transport Section Whitfield Depot in the reporting month.

5.3 Air Quality Monitoring Results

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- 5.3.1 Air quality monitoring for the Central Interchange works under contract no. HY/2009/18 was commenced on 21 April 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.8** below.

Table 5.8 Air Quality Monitoring Stations for Contract no. HY/2009/18

Station	Description
MA1e	International Finance Centre (Eastern End of Podium)
MA1w	International Finance Centre (Western End of Podium)

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

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009

- 5.3.4 The commencement of construction works for Contract no. HK/2009/01 under FEP-02/364/2009 is on 25 August 2011. Air quality monitoring was commenced on 25 August 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.9** below.

Table 5.9 Air Quality Monitoring Station for Contract no. HK/2009/01

Station	Description
CMA5b	Pedestrian Plaza

- 5.3.5 No exceedance was recorded in the reporting month.
- 5.3.6 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air quality 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 Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- 5.3.7 The commencement of construction works for HK/2009/02 under FEP-01/364/2009 is on 26 April 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.10** below.

Table 5.10 Air Quality Monitoring Station for Contract no. HK/2009/02

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

- 5.3.8 No exceedance was recorded in the reporting month.
- 5.3.9 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air quality 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) under FEP-06/364/2009/A

- 5.3.10 The commencement of construction works for Contract no. HY/2009/15 under FEP-06/364/2009/A was on 13 July 2011. Air quality monitoring was commenced on 14 July 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.11** below.

Table 5.11 Air Quality Monitoring Station for Contract no. HY/2009/15

Station	Description
CMA3a	CWB PRE Site Office

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

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- 5.3.13 The proposed division of air quality monitoring stations are summarized in **Table 5.12** below. Air quality monitoring for the tunnel works under contract no. HY/2009/19 was commenced on 26 April 2011.

Table 5.12 Air Quality Monitoring Stations for Contract no. HY/2009/19

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

- 5.3.14 One action level exceedance was recorded at monitoring station CMA2a on 26 August 2015 during 24hr TSP monitoring in the reporting month.
- 5.3.15 After investigation, it was found that external renovation at Causeway Bay Community Centre by non-CWB Contractor was the major contribution to air quality impact and contractor dust mitigation measures was in place. As such, the exceedance was considered as non-Project related.
- 5.3.16 Two action level exceedances were recorded at monitoring station CMA2a on 27 August 2015 during 1hr TSP monitoring in the reporting month.
- 5.3.17 After investigation, it was found that external renovation at Causeway Bay Community Centre by non-CWB Contractor was the major contribution to air quality impact and no construction works with considerable dust impact was undertaken by the Contractor on the monitoring date. As such, the exceedance was considered as non-Project related.
- 5.3.18 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air quality 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

- 5.3.19 The commencement of construction works for Contract no. HK/2012/08 under FEP-09/364/2009/C was on May 2014. Air quality monitoring was commenced on 25 August 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.13** below.

Table 5.13 Air Quality Monitoring Station for Contract no. HK/2012/08

Station	Description
CMA5b	Pedestrian Plaza

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

Contract no. HY/2010/08 – Central-Wanchai Bypass –Wanchai Bypass Tunnel (Slip Raod 8 Section) under FEP-09/364/2009/B

- 5.3.22 The commencement of construction works for Contract no. HY/2010/08 under FEP-09/364/2009/B was on July 2014. Air quality monitoring was commenced on 14 July 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.14** below.

Table 5.14 Air Quality Monitoring Station for Contract no. HY/2010/08

Station	Description
CMA3a	CWB PRE Site Office

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

Contract no. HY/2011/08 – Central - Wan Chai Bypass (CWB) – Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning

- 5.3.24 Air quality monitoring for the Central Interchange works under contract no. HY/2011/08 was commenced on 21 April 2011. The proposed division of air quality monitoring stations are summarized in **Table 5.15** below.

Table 5.15 Air Quality Monitoring Stations for Contract no. HY/2011/08

Station	Description
MA1e	International Finance Centre (Eastern End of Podium)
MA1w	International Finance Centre (Western End of Podium)
CMA1b	Oil Street Site Office
CMA2a	Causeway Bay Community Centre

- 5.3.25 One action level exceedance was recorded at monitoring station CMA2a on 26 August 2015 during 24hr TSP monitoring in the reporting month.
- 5.3.26 After investigation, it was found that external renovation at Causeway Bay Community Centre by non-CWB Contractor was the major contribution to air quality impact and no construction works with considerable dust impact was undertaken by the Contractor on the monitoring date. As such, the exceedance was considered as non-Project related.
- 5.3.27 Two action level exceedances were recorded at monitoring station CMA2a on 27 August 2015 during 1hr TSP monitoring in the reporting month.
- 5.3.28 After investigation, it was found that external renovation at Causeway Bay Community Centre by non-CWB Contractor was the major contribution to air quality impact and no construction works with considerable dust impact was undertaken by the Contractor on the monitoring date. As such, the exceedance was considered as non-Project related.
- 5.3.29 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air quality monitoring results and graphical presentation can be referred in **Appendix 5.3**.

5.4 Waste Monitoring Results

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009

- 5.4.1. Inert C&D wastes and non-inert C&D wastes were disposed in this reporting month. Details of the waste flow table are summarized in **Table 5.16**.

Table 5.16 Details of Waste Disposal for Contract no. HK/2009/01

Waste Type	Quantity this month	Cumulative-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	949.06	105834.47	TKO137, TM38
Inert C&D materials recycled, m ³	3555	79108.53	N/A
Non-inert C&D materials disposed, m ³	141.08	2758.71	SENT Landfill
Non-inert C&D materials recycled, kg	67038	684783	N/A
Chemical waste disposed, kg	Nil	10380	N/A
Marine Sediment (Type 1 – Open Sea Disposal), m ³	Nil	10375	South of Cheung Chau
Marine Sediment (Type 1 – Open Sea Disposal (Dedicate Sites) & Type 2 – Confined Marine Disposal), m ³	467	10704	East of Cha Chau South Brothers

Contract no. HK/2009/02 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel) under FEP-01/364/2009

- 5.4.2. Inert C&D & non-inert C&D wastes were disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.17**.

Table 5.17 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	13576	395655.412	TKO137 / TM 38
Inert C&D materials recycled, m ³	Nil	18161	N/A
Non-inert C&D materials disposed, m ³	47	2057.317	SENT Landfill
Non-inert C&D materials recycled, m ³	Nil	N/A	N/A
Chemical waste disposed, kg	Nil	18253	SENT Landfill
Marine Sediment (Type 1 – Open Sea Disposal) , m3	5757	25640	South Cheung Chau

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- 5.4.3. Inert C&D and non-inert C&D waste was disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.18**.

Table 5.18 Details of Waste Disposal for Contract no. HY/2009/18

Waste Type	Quantity this month	Cumulative-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	1815.33	156513.641	T.K.O. 137, TM 38
Inert C&D materials recycled, m ³	Nil	58787.05	N/A
Non-inert C&D materials disposed, m ³	32.04	3533.804	SENT Landfill
Non-inert C&D materials recycled, ton	7.77	871.36	N/A
Chemical waste disposed, kg	Nil	4440	N/A

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

- 5.4.4. Inert & Non-inert C&D wastes were disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.19**.

Table 5.19 Details of Waste Disposal for Contract no. HY/2009/15

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	2297 Nil	572747.47 243456.3	Tuen Mun Area 38 TKO137 FB
Inert C&D materials recycled, m ³	5956	344592.77	HY/2009/11 ex-PCWA TS4 /TS2 WDII Lun Ku Tan WENT
Non-inert C&D materials disposed, m ³	64.13	2830.74	SENT Landfill
Non-inert C&D materials recycled, m ³	Nil	5496446.2	Xun Xiang Metalware Skylight Recycle (paper)
Chemical waste disposed, kg	Nil	22755	Dunwell Group
Marine Sediment (Type1-Open Sea Disposal (Dedicate Sites) &Type 2 – Confined Marine Disposal), m ³	Nil	5684	South of the Brothers

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

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

Table 5.20 Details of Waste Disposal for Contract no. HY/2009/19

Waste Type*	Quantity this month	Cumulative-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	12021.51	624628.27	N/A
Inert C&D materials recycled, m ³	Nil	81822.39	N/A
Non-inert C&D materials disposed, m ³	243.71	3717.22	SENT Landfill
Non-inert C&D materials recycled, m ³	3.9	444.53	N/A
Chemical waste disposed, kg	0.03	9.42	N/A
Marine Sediment (Tunnel) (Type-1 Open Sea Disposal), m ³	Nil	20556	South of Cheung Chau
Marine Sediment (Tunnel) (Type 1- Open Sea Disposal (Dedicated Sites) & Type 2 – Confined Marine Disposal), m ³	Nil	30751	East of Sha Chau

Contract no. HK/2012/08 Wan Chai Development Phase II - Central-Wan Chai Bypass at Wan Chai West under FEP-09/364/2009/B

- 5.4.6. No inert and Non-inert C&D wastes were disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.21**.

Table 5.21 Details of Waste Disposal for Contract no. HK/2012/08

Waste Type*	Quantity this month	Cumulative-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	10150	90615	TKO 137
Inert C&D materials recycled, m ³	840	33160	N/A
Non-inert C&D materials disposed, m ³	50	645	SENT
Non-inert C&D materials recycled, m ³	Nil	Nil	N/A
Chemical waste disposed, kg	Nil	Nil	N/A
C Marine sediment (Type 1) disposal, m ³	0	3145	South of Cheung Chau / East of Sha Chau / South of The Brothers

RRemarks: The Contractor clarified the amount (3145m³) of Type 1 marine sediment disposed in July 2015.

Contract no. HY/2010/08 Central – Wan Chai Bypass (CWB) – Tunnel (Slip Road 8) under FEP-10/364/2009/B

- 5.4.7. No inert and Non-inert C&D wastes were disposed of 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/2010/08

Waste Type*	Quantity this month	Cumulative-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	50204 Nil	277142 363	TM 38 TKO 137
Inert C&D materials recycled, m ³	Nil	Nil	N/A
Non-inert C&D materials disposed, m ³	47	916	SENT
Non-inert C&D materials recycled, m ³	Nil	Nil	N/A
Chemical waste disposed, kg	144	879	N/A

Contract no. HY/2011/08 Central –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- 5.4.8. No inert and Non-inert C&D wastes were disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.23**.

Table 5.23 Details of Waste Disposal for Contract no. HY/2011/08

Waste Type*	Quantity this month	Cumulative-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	10.81	132.79	CWPF
Inert C&D materials recycled, m ³	Nil	Nil	N/A
Non-inert C&D materials disposed, m ³	67.78	261.22	SENT
Non-inert C&D materials recycled, ton	5.14	19.37	N/A
Chemical waste disposed, kg	Nil	3800	N/A

6.0 COMPLIANCE AUDIT

- 6.0.1. The Event Action Plan for construction noise, air qualities are presented in **Appendix 6.1**.

6.1 Noise Monitoring

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

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

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention Exhibition Centre – Tunnel Works under FEP-02/364/2009

- 6.1.2. 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) under FEP-01/364/2009

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

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A

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

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

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

Contract no. HY/2010/08 – Central-Wanchai Bypass – Tunnel (Slip Road 8 Section) under FEP-10/364/2009/B

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

Contract no. HY/2011/08 Central –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

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

Real Time Noise Monitoring

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- 6.1.8. No limit level exceedance was recorded at RTN1-FEHD Hong Kong Transport Section Whitfield Depot in the reporting month.
- 6.1.9. No limit level exceedance was recorded at RTN2a-Electric Centre in the reporting month.
- 6.1.10. No limit level exceedances were recorded at RTN3-Yue Lee Mo Fan Memorial School during in the reporting month.
- 6.1.11. No limit level exceedance was recorded at RTN4-Causeway Bay Community Centre in the reporting month.

Contract no. HY/2011/08 Central –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- 6.1.12. No limit level exceedance was recorded at RTN1-FEHD Hong Kong Transport Section Whitfield Depot in the reporting month.

6.2 Air Quality Monitoring

Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

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

Contract no. HK/2009/01 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong Kong Convention and Exhibition Centre – Tunnel Works under FEP-02/364/2009

- 6.2.2. 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) under FEP-01/364/2009

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

Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) FEP-06/364/2009/A

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

Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- 6.2.5. One action level exceedance during 24hr TSP monitoring was recorded at monitoring station CMA2a – Causeway Bay Community Centre on 26 August 2015 and two action level exceedances during 1hr TSP monitoring exceedances were recorded at monitoring station CMA2a – Causeway Bay Community Centre on 27 August 2015 in the reporting month.

- 6.2.6. External renovation undertaken at Causeway Bay Community Centre on 26, 27 August 2015 by non-CWB Contractor was considered as the major contribution to the air quality impact and the exceedances were considered as non-Project related

Contract no. HK/2012/08 Wan Chai Development Phase II - Central-Wan Chai Bypass at Wan Chai West under FEP-09/364/2009/B

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

Contract no. HY/2010/08 – Central-Wanchai Bypass – Tunnel (Slip Road 8 Section) under FEP-10/364/2009/B

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

Contract no. HY/2011/08 Central –Central - Wan Chai Bypass (CWB) –Tunnel Buildings, Systems and Fittings, and Works Associated with Tunnel Commissioning under FEP-11/364/2009B

- 6.2.9. One action level exceedance during 24hr TSP monitoring was recorded at monitoring station CMA2a – Causeway Bay Community Centre on 26 August 2015 and two action level exceedances during 1hr TSP monitoring exceedances were recorded at monitoring station CMA2a – Causeway Bay Community Centre on 27 August 2015 in the reporting month.

- 6.2.10. External renovation undertaken at Causeway Bay Community Centre on 26, 27 August 2015 by non-CWB Contractor was considered as the major contribution to the air quality impact and the exceedances were considered as non-Project related

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

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

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

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

7.0 CUMULATIVE CONSTRUCTION IMPACT DUE TO THE CONCURRENT PROJECTS

- 7.0.1. According to Condition 3.4 of the EP-364/2009/C, this section addresses the relevant cumulative construction impact due to the concurrent activities of the current projects including the Central Reclamation Phase III (CRIII), Wan Chai Development Phase II (WDII), Central-WanChai Bypass (CWB), Island Eastern Corridor Link projects (IECL) and Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai East (CWB Tunnel).
- 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. As such, it is considered that there were no cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) undertaken by contractor HK12/02 in the reporting month.
- 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 works were performed in August 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 retaining wall construction 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 quality impact from construction activities was anticipated in the reporting month. Besides, no project related exceedance was recorded during the air quality 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.

8.0 ENVIRONMENTAL SITE AUDIT

8.0.1. During this reporting month, weekly environmental site audits were conducted for Contracts no. HY/2009/15, HY/2009/18, HY/2009/19, HK/2012/08, HK/2009/01, HK/2009/02, HY/2010/08 and HY/2011/08. No non-conformance was identified during the site audits. The Contractors rectified major observations and recommendations made during the audit sessions. No non-conformance was identified during the site inspections.

8.0.2. Four site inspections for Contract no. HY/2009/15 was carried out during this reporting period. The results of these inspections and outcomes are summarized in **Table 8.1**.

Table 8.1 Summary of Environmental Inspections for Contract no. HY/2009/15

Item	Date	Observations	Action taken by Contractor	Completion date
150811_01	11-Aug-2015	Mud residue shall not directly washed into nearby waters using water stream (EX-PCWA North)	No further washing was observed and mud residue was cleared	Completed as observed on 18 August 2015
150811_02	11-Aug-2015	Floating refuses trapped within the construction area should be cleaned (EX-PCWA SE)	Floating refuses have been cleared	Completed as observed on 18 August 2015
150818_01	18-Aug-2015	Clear the leaked oil as chemical waste and provide regular maintenance to machinery on-site (EX-PCWAW)	Leaked oil was cleared as chemical waste.	Completed as observed on 18 August 2015
150825_01	25-Aug-2015	Provide drip tray to chemical containers (Ex-PCWA)	Drip tray was provided	Completed as observed on 25 August 2015

8.0.3. Five site inspections for Contract no. HY/2009/18 was carried out during this reporting period. No observation was found in the reporting month. The results of these inspections and outcomes are summarized in **Table 8.2**.

Table 8.2 Summary of Environmental Inspections for Contract no. HY/2009/18

Item	Date	Observations	Action taken by Contractor	Completion date
150806_1	6-Aug-15	Vehicle leave the site without wheel washing was observed. Contractor should ensure every vehicle use wheel washing system before leave the site (P1 Road)	Vehicle use wheel washing system before leave the site area	Completion as observed on 13 August 2015
150806_2	6-Aug-15	Protection shall be provided to public drainage system to prevent muddy water direct discharge (P1 Road)	No further muddy water discharge was observed	Completion as observed on 13 August 2015

Item	Date	Observations	Action taken by Contractor	Completion date
150820_1	20-Aug-15	Muddy trails was observed at site exit. Contractor should ensure vehicle use wheel washing system before leaving the site (P1 road)	Wheel washing was provided at site exit	Completion as observed on 27 August 2015

- 8.0.4. Four site inspections for Contract no. HY/2009/19 was carried out during this reporting period. No observation was found in the 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/2009/19

Item	Date	Observations	Action taken by Contractor	Completion date
150812_1	12/8/2015	Temporary noise barriers shall be provided to saw cutting process (Main Section)	Temporary noise barriers was provided to saw cutting process	Completion as observed on 19 August 2015

- 8.0.5. Four site inspections for Contract no. HK/2009/01 was carried out during this reporting period. The results of these inspections and outcomes are summarized in **Table 8.4**

Table 8.4 Summary of Environmental Inspections for Contract no. HK/2009/01

Item	Date	Observations	Action taken by Contractor	Completion date
150729_01	29-Jul-15	The drainage system at Stage 3 shall be properly maintain to avoid any direct effluent discharge to the water channel at Expo Drive East	The U channel was blocked and no direct effluent discharge was further observed.	Completion as observed on 5 August 2015
150805_1	5-Aug-15	Drip tray shall be provided for oil container at Stage 3.	Drip tray as provided for oil container at Stage 3.	Completion as observed on 12 August 2015

- 8.0.6. Five site inspections for Contract no. HK/2009/02 was carried out during this reporting period. No observation was found in the reporting month. The results of these inspections and outcomes are summarized in **Table 8.5**.

Table 8.5 Summary of Environmental Inspections for Contract no. HK/2009/02

Item	Date	Observations	Action taken by Contractor	Completion date
150813_01	13-Aug-15	Drip tray shall be provided for oil containers at Portion 3&4	Oil containers has been removed	Completion as observed on 19 August 2015
150819_01	19-Aug-15	Breaker shall be properly covered with acoustic material at Portion 2.	Breaker was properly covered with acoustic material at Portion 2.	Completion as observed on 27 August 2015

Item	Date	Observations	Action taken by Contractor	Completion date
150827_01	27-Aug-15	Drip tray shall be provided for oil containers at Portion 3 & 4	Drip tray was provided for oil containers at Portion 3 & 4	Completion as observed on 2 September 2015
150827_02	27-Aug-15	Chemical waste shall be properly handled and stored in chemical storage at Portion 3 & 4	Chemical waste was removed at Portion 3 & 4	Completion as observed on 2 September 2015
150827_03	27-Aug-15	Breaker shall be covered with acoustic material when operating at Portion 3&4	Breaker was properly covered with acoustic material at Portion 3 & 4	Completion as observed on 2 September 2015

8.0.7. As advised by WDII RSS. 3 nos. of tree (TA1169, TA1170 and TA1173 at Convention Avenue retained under HK/2009/02) have been removed by non-CWB Contractor.

8.0.8. Five site inspection for Contract no. HK/2012/08 was carried out during 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. HK/2012/08

Item	Date	Observations	Action taken by Contractor	Completion date
150728_01	28-Jul-15	Drip tray shall be provided for oil container at Portion 1A	Drip tray is provided for oil container	Completion as observed on 4 August 2015
150728_02	28-Jul-15	Adequate mitigation measure shall be provided at the rock bund of the water channel to mitigate the observed muddy runoff and dispersion.	Runoff control has been implemented and no muddy runoff was further observed.	Completion as observed on 4 August 2015
150804_01	4-Aug-15	Wheel washing shall be strengthen and controlled to avoid generation of muddy trail at Gate near HK Expo Center.	Street cleaning and wheel washing has properly implemented at Gate Exit.	Completion as observed on 11 August 2015
150804_02	4-Aug-15	Silt curtain shall be fully extended to seabed level and enclosed the excavated area at Zone D	Silt curtain is properly deployed and maintained at Zone D.	Completion as observed on 11 August 2015
150804_03	4-Aug-15	Drip tray shall be provided for oil container on site	Drip tray is provided for oil containers.	Completion as observed on 11 August 2015
150811_01	11-Aug-15	Floating refuses at HKCEC2W area shall be collected.	Floating refuses has collected at HKCEC2W area.	Completion as observed on 18 August 2015

150818_01	18-Aug-15	Wheel washing shall be strengthened at Gate Exit on Expo Drive West to avoid muddy trail on public road.	Wheel washing was conducted properly and no muddy trail was observed on the public road.	Completion as observed on 1 September 2015
150825_01	25-Aug-15	Drip tray shall be provided for oil container at Portion 1A.	Oil container was removed.	Completion as observed on 1 September 2015

8.0.9. Five site inspection for Contract no. HY/2010/08 was carried out during this reporting period. The results of these inspections and outcomes are summarized in **Table 8.7**

Table 8.7 Summary of Environmental Inspections for Contract no. HY/2010/08

Item	Date	Observations	Action taken by Contractor	Completion date
150521_1	21-May-15	Site hoarding shall be provided to area adjoining public area and area not installed with site hoarding shall be sustained with supporting document (Victoria Park)	Hoarding barrier for the area was provided	Completion as observed on 27 August 2015
150731_1	31-Jul-15	Muddy seepage was observed at southwest corner of TS3. The contractor was mitigate the source of seepage and provide additional silt curtain to and muddy dispersion (SW corner of TS3)	Additional silt curtain was provided and reinforcement was implemented to mitigate the muddy seepage	Completion as observed on 6 August 2015
150731_2	31-Jul-15	Covering shall be provided to cement bags stored on site	Covering was provided	Completion as observed on 6 August 2015
150806_1	6-Aug-15	Leaked oil shall be cleared as chemical waste and drip tray shall be provided to oil containers (TS3)	Leaked oil was cleared as chemical waste	Completion as observed on 14 August 2015
150814_1	14-Aug-15	Measures shall be provided to rectify the muddy seepage at the southwest area of TS3 (TS3)	The silt curtain condition was improved to avoid seepage	Completion as observed on 27 August 2015
150814_2	14-Aug-15	Protective wrapping fencing should be provided to retained trees near works area (Victoria Park)	Protecting wrapping was provided to the concerned trees	Completion as observed on 27 August 2015
150827_1	27-Aug-15	Proper three sides and top cover shall be provided to mixing station (TS3)	Three sides and top cover was provided to grouting station	Completion as observed on 2 September 2015

8.0.10. Four site inspections for Contract no. HY/2011/08 were carried out during this reporting period. No observation was found in the reporting month.

9.0 COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

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

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
August 2015	0
Sep 2010 – July 2015	47
Total	47

Table 9.2 Cumulative Statistics on Successful Prosecutions

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

10 CONCLUSION

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

10.0.2. The scheduled construction activities and the recommended mitigation measures for the coming month are listed in **Table 10.1**. The construction programmes of individual contracts are provided in [Appendix 10.1](#).

Table 10.1 Summary of Key Construction Activities of Individual Contract(s) to be commenced in Coming Reporting Month

Contract No.	Key Construction Works	Recommended Mitigation Measures
HY/2009/15	- Construction of OHVD at Mined Tunnel - Construction of wall and arch lining at Mined Tunnel - Fabrication of ELS steel works for TPCWAW - Excavation and installation of ELS at TPCWAW	- Dust control during dust generating activities - Provide protection works and adequate drainage system to ensure no direct discharge into public drainage system or the nearby water.
HY/2009/18	- Drainage works - Retaining wall and trough structure construction including excavation, concreting, waterproofing and backfill - Road works - Bridges construction	- Noise level shall be controlled by reducing the breaking operation rate. - Dust control during dust generating activities - Provide protection works to ensure no runoff out of site area or direct discharge into public drainage system. - Appropriate measures should be taken to ensure adequate protections are provided for trees being transplanted.

HY/2009/19	• Demolition of ELS for EVB • Pile cap construction for IEC • Pre-bored H-pile for Approach Ramp • Excavation / Construction of retaining wall/Approach Ramp • Abutment D12 construction • Construction of EVB and APS structure • Column modification at F1 to F8 • Demolition of IEC west bound deck/crosshead/column/pile cap • Bridge E column/crosshead/deck construction • Watson Road laying of new water pipe • Oil Street drainage works	• Noise level shall be controlled by reducing the breaking operation rate. • Noise barrier shall be implemented • Dust control during dust generating works • Provide protection works and adequate drainage system to ensure no direct discharge into public drainage system or the sea.
HK/2009/01	• Stage 2 Construction of slip road 2 and 3 • Stage 3 RC structure for CWB Tunnel Bay 11 to 17 • Stage 3 Box culvert diversion • Removal of abandoned cooling main (P7/P9) at Convention Avenue • Reinstatement of outfall • Reinstatement of triangular planter at Fenwick Pier Street • Roadworks /drains for Expo Drive East • Stage 4 Pilling works	• Provide protection works and adequate drainage system to ensure no direct discharge into public drainage system or the sea. • Dust control during dust generating works

HK/2009/02	• Removal of strut, king post and clearance works was on going at OHVD at Tunnel Portion 1. • Construction of road side barrier • Tunnel structure works, i.e. OHVD base slab and top slab. • Removal of Strut layer S3 and S2 • Construction of access shaft • Strut layer S4 lateral support installation at both sides • Strut layer S3 lateral support installation at both sides • Excavation of layer S4 at both sides • Breaking through bulkhead wall BW3	• Dust control during dust generating works • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system.
HK/2012/08	• Diaphragm wall construction • Grouting • Construction of ELS at MVB • Pre-bored H-pile construction	• Dust control during dust generating works • Provide protection works and adequate drainage system to ensure no direct discharge into public drainage system.
HY/2010/08	• Tree protection works next to existing BGO, • Drainage improvement works, • Sheet piling works, • Excavation and Lateral Support for U-structure, • Pipe piling & grouting works, • Utility diversion works, • Waterproofing works, • Retaining wall works • Provisional of Bowling Green, • ELS works, • Diaphragm Wall, Barrette construction and king post installation works	• Dust control during dust generating works • Appropriate measures should be taken to ensure adequate protections are provided for trees being transplanted and retained on site. • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system.



HY/2011/08	• West Ventilation Building Construction • East Ventilation Shaft Construction • Install VE panels bracket and thermal barrier for Tunnel	• Dust control during dust generating works
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10.0.3. The construction works of Contract no. 04/HY/2006 – Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street under FEP-04/364/2009/A was completed, and the FEP was surrendered by the Contractor on 11 February 2011.

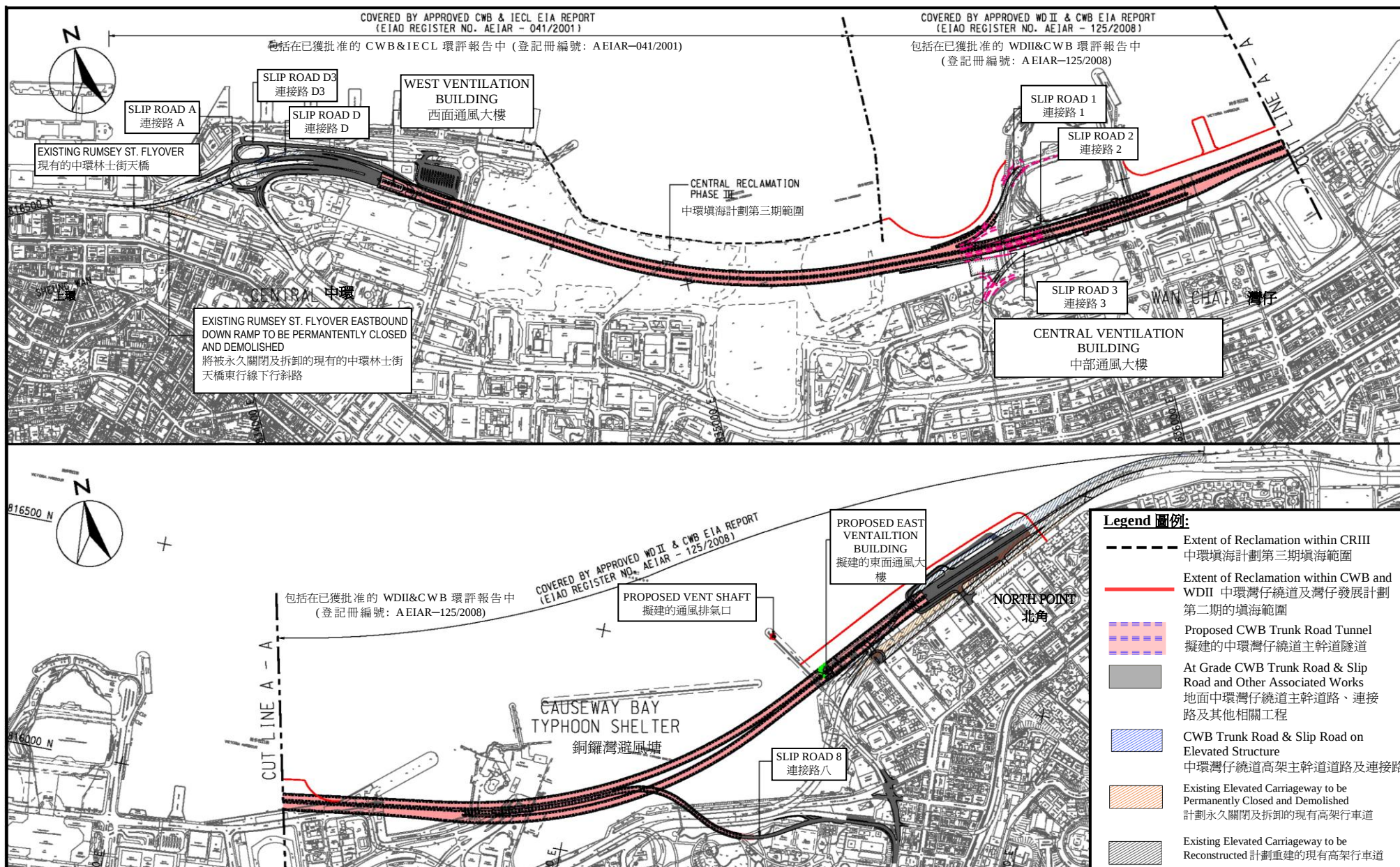
10.0.4. The construction works of Contract no. HY/2009/17 - Advance piling works at Whitfield Depot under FEP-03/264/2009 was completed, and the FEP was surrendered by the Contractor and found in order by EPD on 25 April 2013.

10.0.5. The construction works of Contract HK/2010/06 was completed, and the FEP-08/364/2009/A was surrendered by the Contractor on 3 October 2014.



Figure 2.1

Project Layout

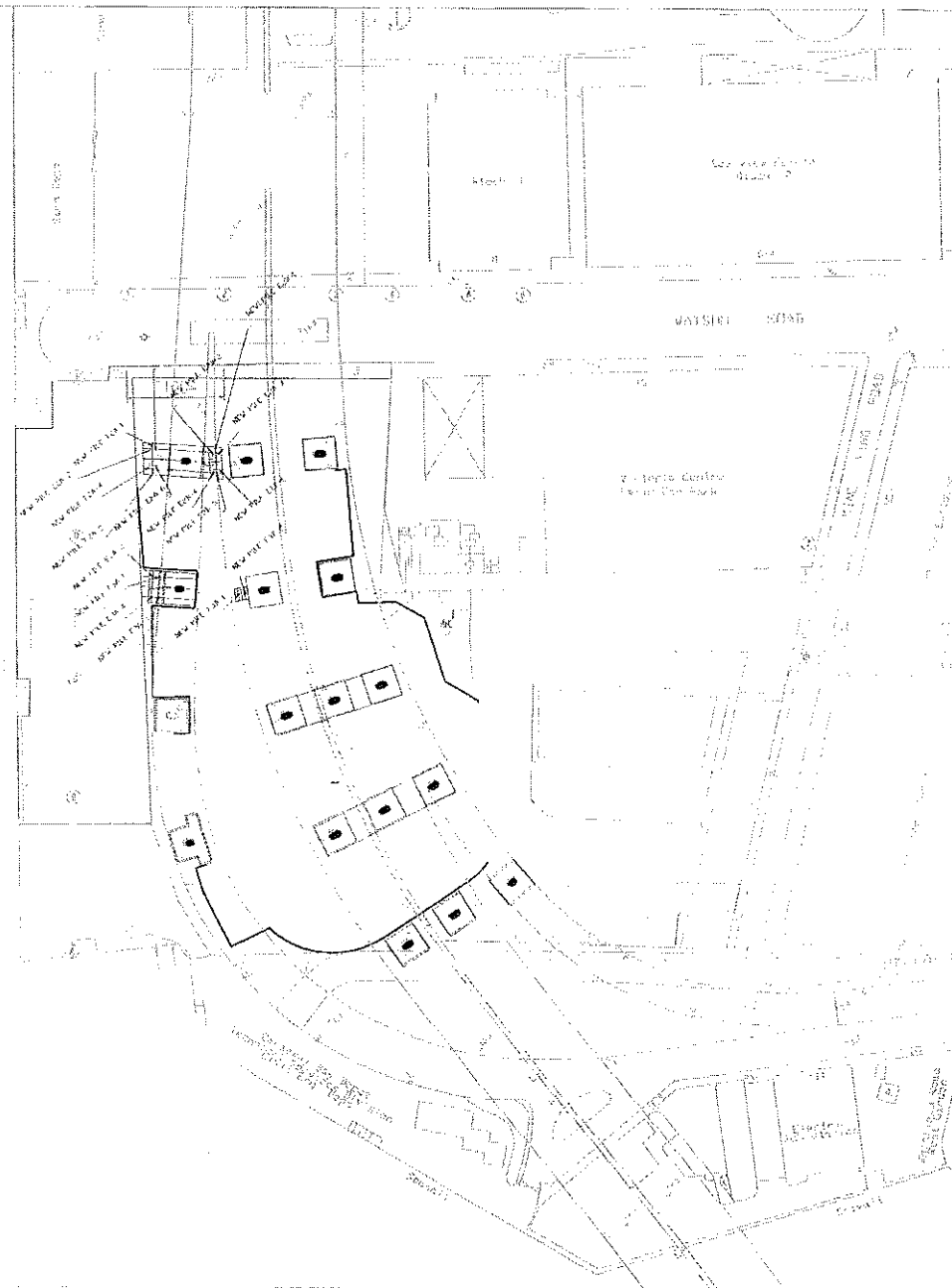


Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱: 中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No.: EP-364/2009/B
環境許可證編號: EP-364/2009/B

Figure 1: Location of the Project
圖 1: 工程項目位置

(This figure was prepared based on Figure 1.1 of the Application for Environmental Permit (Application No.: AEP-364/2009))
(本圖是根據環境許可證的申請(申請書編號 AEP-364/2009 圖 1.1 編製))



Drawn by: [Signature]
Checked by: [Signature]
Date: [Date]

Sheet 1 of 1

REV.	DATE	DESCRIPTION	CHKD BY	AUTH BY

Highways Department 路政署
Major Works Project Management Office 大型工程項目管理處

CENTRAL - WAN CHAI BYPASS AND IEC L/H

PWP ITEM NO. 579 TH
工程項目編號

Project:
CENTRAL - WAN CHAI BYPASS - ADD WATERLOO ROAD RE-PROPOSING WORKS

AECOM

Drawing Title
CENTRAL - WAN CHAI BYPASS AND IEC L/H

Contractor
LAM WOO & COMPANY LIMITED

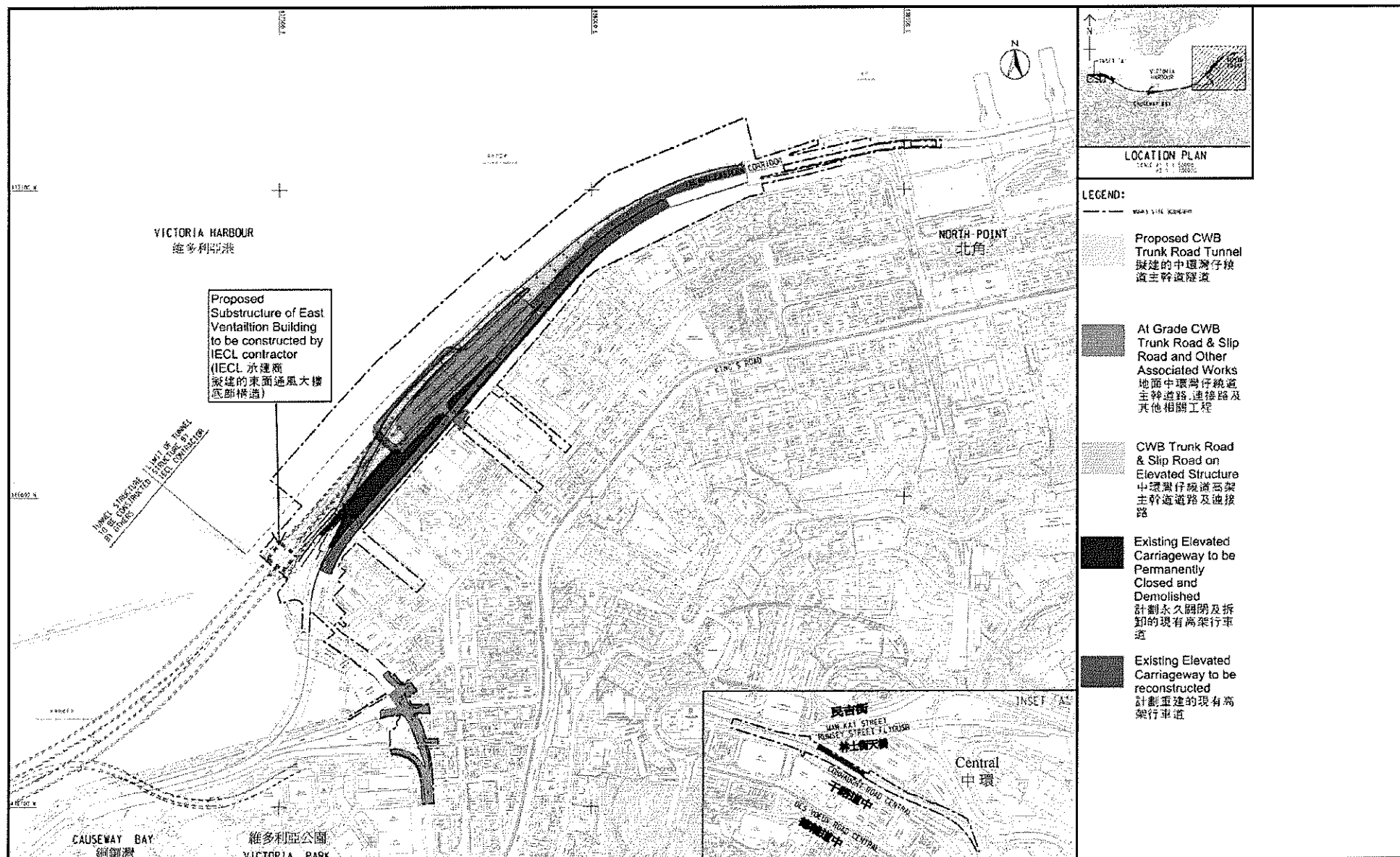
DRAWING NO. 0000

SURVEY DATE 12/20/2000

DRAWN BY K.L.K.

CHECKED BY

SCALE 1:100 SHEET 1



Project Title: Central-Wanchai Bypass (CWB) – Tunnel (North Point Section) and Island Eastern Corridor Link
 工程項目名稱：中環灣仔繞道—北角段隧道及東區走廊連接路
 Environmental Permit No. : FEP-07-364/2009/A
 環境許可證編號 : FEP-07-364/2009/A

Figure 1b: General Layout Plan
 圖 1b: 工程項目佈局圖

(This figure was prepared based on Sketch No. 60095653/IEC/DF0006 of Application for Further Environmental Permit (Application No.: FEP-120/2011))
 (本圖是根據申請新的環境許可證 (申請書編號 FEP-120/2011) 圖 60095653/IEC/DF0006 編製)



Figure 2.2

Project Organization Chart



Project Organization Chart

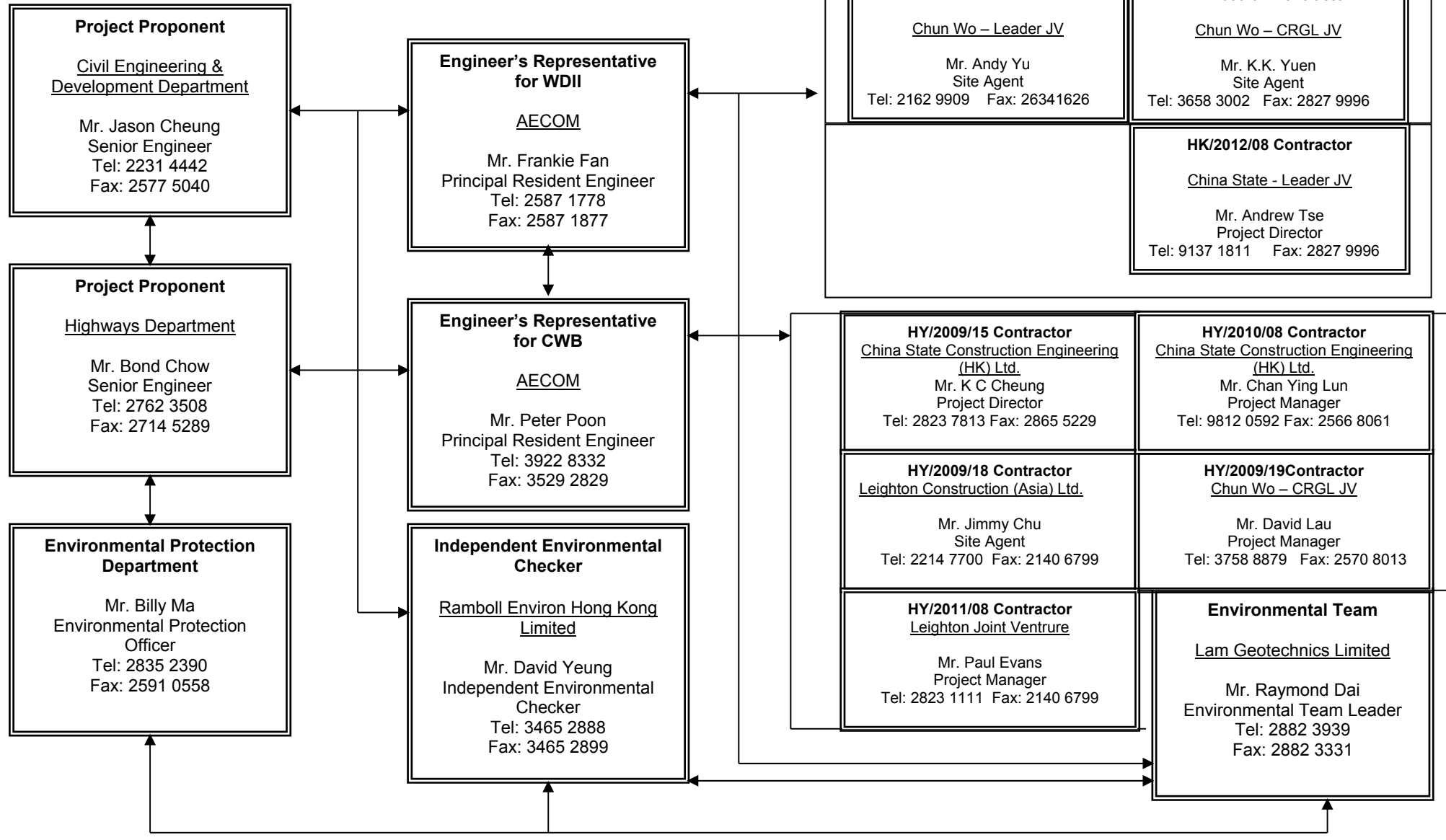


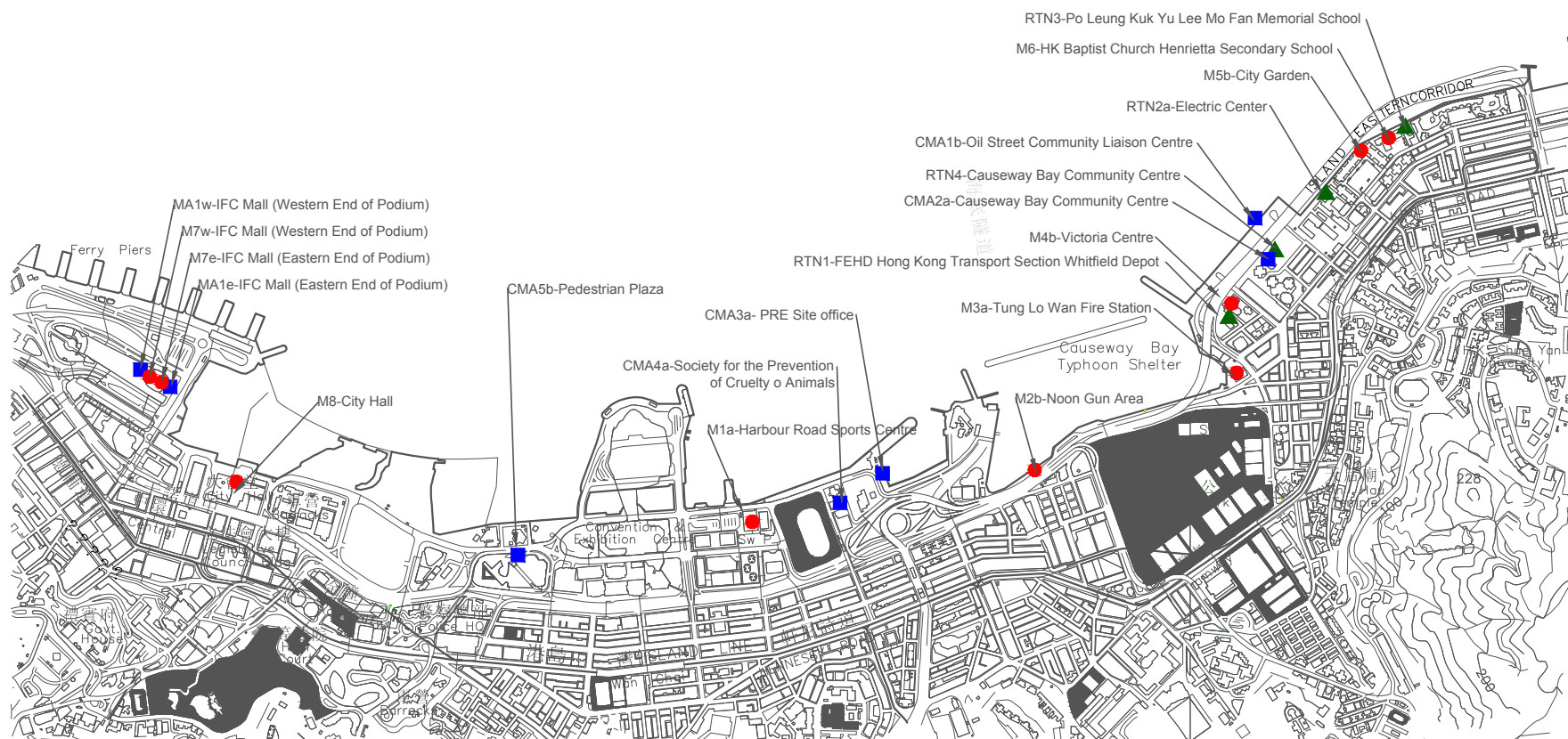


Figure 4.1

Locations of Monitoring Stations

Legend

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



LOCATIONS OF ENVIRONMENTAL MONITORING STATIONS



Appendix 3.1

Environmental Mitigation Implementation Schedule

IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES**Table A.1 Implementation Schedule for Air Quality Control**

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
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		√			
Operational Phase								
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 of Volume 1 of the WDII & CWB EIA Report.	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 A.2 Implementation Schedule for Noise Control

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
S4.9.3	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
S4.8.1 – S4.8.11	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	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	- 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							
Operation Phase								
S4.8.12 – S4.8.23	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 4.5m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC (amended under EP-364/2009/A) - 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

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	For Future/Planned NSRs - about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC - 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.	In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites. Near Causeway Bay Fire Station / During detailed design of the re-provisioned Tin Hau Temple	HyD 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 A.4 Implementation Schedule for Waste Management

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
S6.5.14	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 D9.3.	Work site / During the construction period	Contractor		√			
S6.6.1	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)

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.6.2	<i>Waste Reduction Measures</i> 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	√	√			

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.6.4	<i>General Refuse</i> 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)
S6.6.5	<i>Chemical Wastes</i> 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
S6.6.6	<i>Construction and Demolition Material</i> 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

WDH & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.6.7	In order to monitor the disposal of public fill and C&D waste at public fill reception 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
S6.6.8	<i>Bentonite Slurry</i> 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 A.5 Implementation Schedule for Land Contamination

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction and Operation Phase								
S.7.1.1	As no potential contaminative land uses were identified within the Study Area, adverse land contamination impacts associated with the construction and operation of the Project is not expected. As such, environmental protection and mitigation measures are considered not necessary and will not be covered in this EM&A Manual.	-	-					-

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

Table A.7 Implementation Schedule for Landscape and Visual

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures		Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
					Des	C	O	Dec	
Construction Phase									
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
Operation Phase									
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	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

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



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)/ 70 dB(A)/ 65 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 $\mu\text{g}/\text{m}^3$		24-hour TSP Level in $\mu\text{g}/\text{m}^3$	
	Action Level	Limit Level	Action Level	Limit Level
CMA1b	320.1	500	176.7	260
CMA2a	323.4	500	169.5	260
CMA3a	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5b	332.0	500	181.0	260
MA1e	325.1	500	173.4	260
MA1w	325.1	500	173.4	260



Appendix 4.2

Copies of Calibration Certificates



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 $\pm 20\%$.
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.

Test results

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

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

Actual Measurement data are documented on worksheets.

Approved Signatory:

Huang Jian Min/Feng Jun Qi

Date: 15-Dec-2014

Company Chop:

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



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 14CA1213 01

Page 2 of 2

1, Electrical Tests

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

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

2, Acoustic tests

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

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

3, Response to associated sound calibrator

N/A

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

Calibrated by:

Date:

Fung Chi Yip
13-Dec-2014

Checked by:

Date:

Lam Tze Wai
15-Dec-2014

- End -

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



CERTIFICATE OF CALIBRATION

Certificate No.: 15CA0528 04-03

Page: 1 of 2

Item tested

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

Item submitted by

Customer: Lam Geotechnics Ltd.
Address of Customer: -
Request No.: -
Date of receipt: 28-May-2015

Date of test: 30-May-2015

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	15-Apr-2016	SCL
Preamplifier	B&K 2673	2239857	22-Apr-2016	CEPREI
Measuring amplifier	B&K 2610	2346941	22-Apr-2016	CEPREI
Signal generator	DS 360	61227	16-Apr-2016	CEPREI
Digital multi-meter	34401A	US36087050	17-Apr-2016	CEPREI
Audio analyzer	8903B	GB41300350	17-Apr-2016	CEPREI
Universal counter	53132A	MY40003662	16-Apr-2016	CEPREI

Ambient conditions

Temperature: 21 ± 1 °C
Relative humidity: 60 ± 10 %
Air pressure: 1000 ± 5 hPa

Test specifications

- 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.
- The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 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: 01-Jun-2015

Company Chop:



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



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 15CA0528 04-03

Page: 2 of 2

1, Measured Sound Pressure Level

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

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	(Output level in dB re 20 µPa)
			Estimated Expanded Uncertainty dB
1000	94.00	94.06	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 = 966.3 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 = 0.5 %

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:

Date:

Fung Chi Yip

30-May-2015

Checked by:

Date:

Lam Tze Wai

01-Jun-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.

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

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

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

DATA TABULATION

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

CALCULATIONS

$$Vstd = \text{Diff. Vol}[(Pa - \text{Diff. Hg})/760] (298/Ta)$$

$$Qstd = Vstd/Time$$

$$Va = \text{Diff Vol} [(Pa - \text{Diff Hg})/Pa]$$

$$Qa = Va/Time$$

For subsequent flow rate calculations:

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

$$Qa = 1/m \{ [\text{SQRT } H2O(Ta/Pa)] - b \}$$



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA1b

Equipment no. : EL452

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _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	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	14-Jul-15				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/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

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA1b

Equipment no. : EL452

Calibration Date : 10-Aug-15

Calibration Due Date : 10-Oct-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	301	Kelvin	Pressure, P _a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.9	5.9	11.8	1.7074	60	59.4552
2	4.8	4.8	9.6	1.5406	52	51.5279
3	3.8	3.8	7.6	1.3714	45	44.5914
4	2.5	2.5	5.0	1.1135	36	35.6731
5	1.6	1.6	3.2	0.8920	28	27.7458

By Linear Regression of Y on X

Slope, m = 38.3067 Intercept, b = -6.9577

Correlation Coefficient* = 0.9980

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : LuLu Mar

Date : 10-Aug-15

Checked by : Derek Lo

Date : 10-Aug-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

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

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	303		Kelvin	Pressure, P _a	1007 mmHg	

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.9	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 Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

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

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	301		Kelvin	Pressure, P _a	1005 mmHg	

Orifice Transfer Standard Information						
Equipment No.	EL086		Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15		$\left(\frac{H \times P_a}{1013.3 \times 298 / T_a} \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16					

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.8	5.8	11.6	1.6929	59	58.4643
2	4.6	4.6	9.2	1.5083	50	49.5460
3	3.7	3.7	7.4	1.3534	43	42.6096
4	2.5	2.5	5.0	1.1135	34	33.6913
5	1.5	1.5	3.0	0.8639	22	21.8003

By Linear Regression of Y on X

Slope, m = 43.3899 Intercept, b = -15.4622

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-Aug-15 Date : 10-Aug-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA3a

Equipment no. : EL333

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	303	Kelvin	Pressure, P _a
			1007 mmHg

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.6	5.6	11.2	1.6613	52	51.4086
2	4.5	4.5	9.0	1.4893	48	47.4541
3	3.4	3.4	6.8	1.2946	40	39.5451
4	2.2	2.2	4.4	1.0414	34	33.6133
5	1.4	1.4	2.8	0.8308	28	27.6816

By Linear Regression of Y on X

Slope, m = 28.9984 Intercept, b = 3.3019

Correlation Coefficient* = 0.9964

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : LuLu Mar

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA3a

Equipment no. : EL333

Calibration Date : 10-Aug-15

Calibration Due Date : 10-Oct-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	301	Kelvin	Pressure, P _a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	5.6	5.6	11.2	1.6636	54	53.5097
2	4.6	4.6	9.2	1.5083	48	47.5642
3	3.6	3.6	7.2	1.3350	42	41.6187
4	2.4	2.4	4.8	1.0912	34	33.6913
5	2.0	2.0	4.0	0.9966	29	28.7367

By Linear Regression of Y on X

Slope, m = 35.9922 Intercept, b = -6.4472

Correlation Coefficient* = 0.9984

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : LuLu Mar

Date : 10-Aug-15

Checked by : Derek Lo

Date : 10-Aug-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA4a

Equipment no. : EL390

Calibration Date : 10-Jun-15

Calibration Due Date : 10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

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

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q_{std} ($m^3 / min.$)	Continuous Flow Recorder, W (CFM)	IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$)
	(up)	(down)	(difference)			
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

Date : 10-Jun-15

Checked by : Derek Lo

Date : 10-Jun-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA4a

Equipment no. : EL390

Calibration Date : 10-Aug-15

Calibration Due Date : 10-Oct-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	301	Kelvin	Pressure, P _a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.)	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)			
1	5.7	5.7	11.4	1.6783	58	57.4734
2	4.6	4.6	9.2	1.5083	51	50.5370
3	3.6	3.6	7.2	1.3350	45	44.5914
4	2.4	2.4	4.8	1.0912	34	33.6913
5	1.5	1.5	3.0	0.8639	25	24.7730
By Linear Regression of Y on X Slope, m = 40.2813 Intercept, b = -9.9646 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

Date : 10-Aug-15

Checked by : Derek Lo

Date : 10-Aug-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5b

Equipment no. : EL222

Calibration Date : 02-Jun-15

Calibration Due Date : 02-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	303	Kelvin	Pressure, P _a
			1009 mmHg

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std}	Continuous Flow	IC
	H (inches of water)			(m ³ / min.)	Recorder, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	6.3	6.3	12.6	1.7639	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

Date : 02-Jun-15

Checked by : Derek Lo

Date : 02-Jun-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5b

Equipment no. : EL222

Calibration Date : 01-Aug-15

Calibration Due Date : 01-Oct-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	302	Kelvin	Pressure, P _a
			1011 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std}	Continuous Flow	IC
	H (inches of water)			(m ³ / min.)	Recorder, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis
1	5.5	5.5	11.0	1.6509	60	59.5336
2	4.3	4.3	8.6	1.4604	55	54.5725
3	3.4	3.4	6.8	1.2993	49	48.6191
4	2.3	2.3	4.6	1.0697	40	39.6891
5	1.5	1.5	3.0	0.8650	32	31.7513

By Linear Regression of Y on X

Slope, m = 35.9878 Intercept, b = 1.1624

Correlation Coefficient* = 0.9974

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : LuLu Mar

Date : 01-Aug-15

Checked by : Derek Lo

Date : 01-Aug-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : MA1e **Calibration Date** : 10-Jun-15
Equipment no. : EL455 **Calibration Due Date** : 10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	303	Kelvin	Pressure, P _a	1007	mmHg	

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.3	6.3	12.6	1.7621	62	61.2949
2	5.0	5.0	10.0	1.5698	54	53.3859
3	3.7	3.7	7.4	1.3505	48	47.4541
4	2.3	2.3	4.6	1.0648	32	31.6361
5	1.3	1.3	2.6	0.8006	20	19.7725

By Linear Regression of Y on X

Slope, m = 43.4397 Intercept, b = -14.1778
 Correlation Coefficient* = 0.9950
 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 Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : MA1e **Calibration Date** : 10-Aug-15
Equipment no. : EL455 **Calibration Due Date** : 10-Oct-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	301	Kelvin	Pressure, P _a	1005	mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.3	6.3	12.6	1.7641	55	54.5006
2	5.1	5.1	10.2	1.5878	52	51.5279
3	3.9	3.9	7.8	1.3893	43	42.6096
4	2.5	2.5	5.0	1.1135	37	36.6641
5	1.6	1.6	3.2	0.8920	29	28.7367

By Linear Regression of Y on X

Slope, m = 29.8941 Intercept, b = 2.4698
 Correlation Coefficient* = 0.9933
 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-Aug-15 **Date** : 10-Aug-15



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : MA1w **Calibration Date** : 10-Jun-15
Equipment no. : EL080 **Calibration Due Date** : 10-Aug-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	303	Kelvin	Pressure, P _a	1007	mmHg	

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.2	6.2	12.4	1.7481	55	54.3745
2	4.9	4.9	9.8	1.5541	48	47.4541
3	3.7	3.7	7.4	1.3505	40	39.5451
4	2.3	2.3	4.6	1.0648	30	29.6588
5	1.4	1.4	2.8	0.8308	22	21.7498

By Linear Regression of Y on X

Slope, m = 35.6919 Intercept, b = -8.1867
 Correlation Coefficient* = 0.9997
 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 Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : MA1w

Equipment no. : EL080

Calibration Date : 10-Aug-15

Calibration Due Date : 10-Oct-15

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	301	Kelvin	Pressure, P _a
			1005 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.00072	Intercept, b _c	-0.01209
Last Calibration Date	30-Jun-15	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	30-Jun-16				

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	6.3	6.3	12.6	1.7641	55	54.5006
2	5.1	5.1	10.2	1.5878	50	49.5460
3	3.9	3.9	7.8	1.3893	42	41.6187
4	2.4	2.4	4.8	1.0912	32	31.7095
5	1.5	1.5	3.0	0.8639	25	24.7730

By Linear Regression of Y on X

Slope, m = 33.6445 Intercept, b = -4.6291

Correlation Coefficient* = 0.9991

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : LuLu Mar

Date : 10-Aug-15

Checked by : Derek Lo

Date : 10-Aug-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
August 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26-Jul		28-Jul	29-Jul	30-Jul	31-Jul	1-Aug
		24hr TSP	1hr TSP 24hr TSP (CMA1b)			
2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug
24hr TSP Noise (daytime) (M3a, M4b, M6)		1hr TSP Noise (daytime) (M1a, M2b, M5b, M7e, M7w, M8)				24hr TSP
9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug
1hr TSP Noise (daytime) (M2b, M3a, M4b)		Noise (daytime) (M1a, M5, M6, M7e, M7w, M8)			24hr TSP	1hr TSP 24hr TSP (MA1e)
16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug
Noise (daytime) (M1a, M2b)		Noise (daytime) (M3a, M4b, M5b, M6, M7e, M7w, M8)		24hr TSP	1hr TSP	
23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	
Noise (daytime)			24hr TSP	1hr TSP 24hr TSP (CMA1b, CMA2a)	1hr TSP (CMA6a) 24hr TSP (CMA1b, CMA6a)	

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
September 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					28-Aug	29-Aug
30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep
	Noise (daytime)	Noise (daytime) 24hr TSP	1hr TSP			
6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep
	Noise (daytime) 24hr TSP	Noise (daytime) 1hr TSP		Disney		24hr TSP
13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep
	Noise (daytime) 1hr TSP	Noise (daytime)			24hr TSP	1hr TSP
20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep
	Noise (daytime)	Noise (daytime)		24hr TSP	1hr TSP	
27-Sep						



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)					
04/08/15	13:17	Fine	72.9	75.5	68.5	72	65	75
11/08/15	13:27	Fine	72.7	75.5	66.5	72	63	75
17/08/15	9:00	Fine	72.1	74.6	69.3	72	72	75
24/08/15	14:35	Fine	73.4	76.0	68.5	72	67	75

Location: M2b - Noon-day gun area

Date	Time	Measurement Noise Level				Baseline Level	Construction Noise Level	Limit Level
		Weather	Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
04/08/15	13:55	Fine	69.2	71.0	66.0	68	64	75
10/08/15	13:00	Cloudy	67.0	69.0	65.5	68	67	75
17/08/15	10:15	Fine	69.7	72.3	66.4	68	66	75
24/08/15	15:10	Fine	66.9	68.0	64.0	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)					
03/08/15	9:28	Fine	65.4	66.5	63.5	69	65	75
10/08/15	13:35	Cloudy	67.2	69.0	64.5	69	67	75
18/08/15	13:00	Fine	66.1	67.3	65.0	69	66	75
24/08/15	15:50	Fine	66.3	67.0	65.0	69	66	75

Location: M4b - Victoria Centre

Date	Time	Weather	Measurement Noise Level			Baseline Noise Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)								
03/08/15	10:01	Fine	65.6	67.0	63.5	67	66	75
10/08/15	14:15	Cloudy	65.2	66.0	63.0	67	65	75
18/08/15	13:39	Fine	66.5	67.8	64.8	67	67	75
24/08/15	16:40	Fine	66.2	67.5	64.0	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)					
04/08/15	14:37	Fine	65.4	66.5	63.0	68	65	75
11/08/15	8:00	Fine	67.8	69.0	66.0	68	68	75
18/08/15	10:24	Fine	71.3	72.5	68.5	68	69	75
24/08/15	9:42	Fine	73.0	73.1	69.5	68	71	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)					
03/08/15	11:12	Fine	68.1	69.0	66.0	71	68	70
11/08/15	8:38	Fine	67.5	68.5	65.3	71	68	70
18/08/15	11:05	Fine	68.1	69.5	66.0	71	68	70
24/08/15	10:20	Fine	68.8	70.0	66.0	71	69	70



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: M7e - International Finance Centre (Eastern End of Podium) (Reference 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)					
04/08/15	9:03	Fine	67.9	69.5	65.0	67	61	N/A
11/08/15	9:36	Fine	66.6	68.5	63.0	67	67	N/A
18/08/15	15:35	Fine	69.4	71.0	65.0	67	66	N/A
24/08/15	8:00	Fine	65.2	66.7	63.5	67	65	N/A

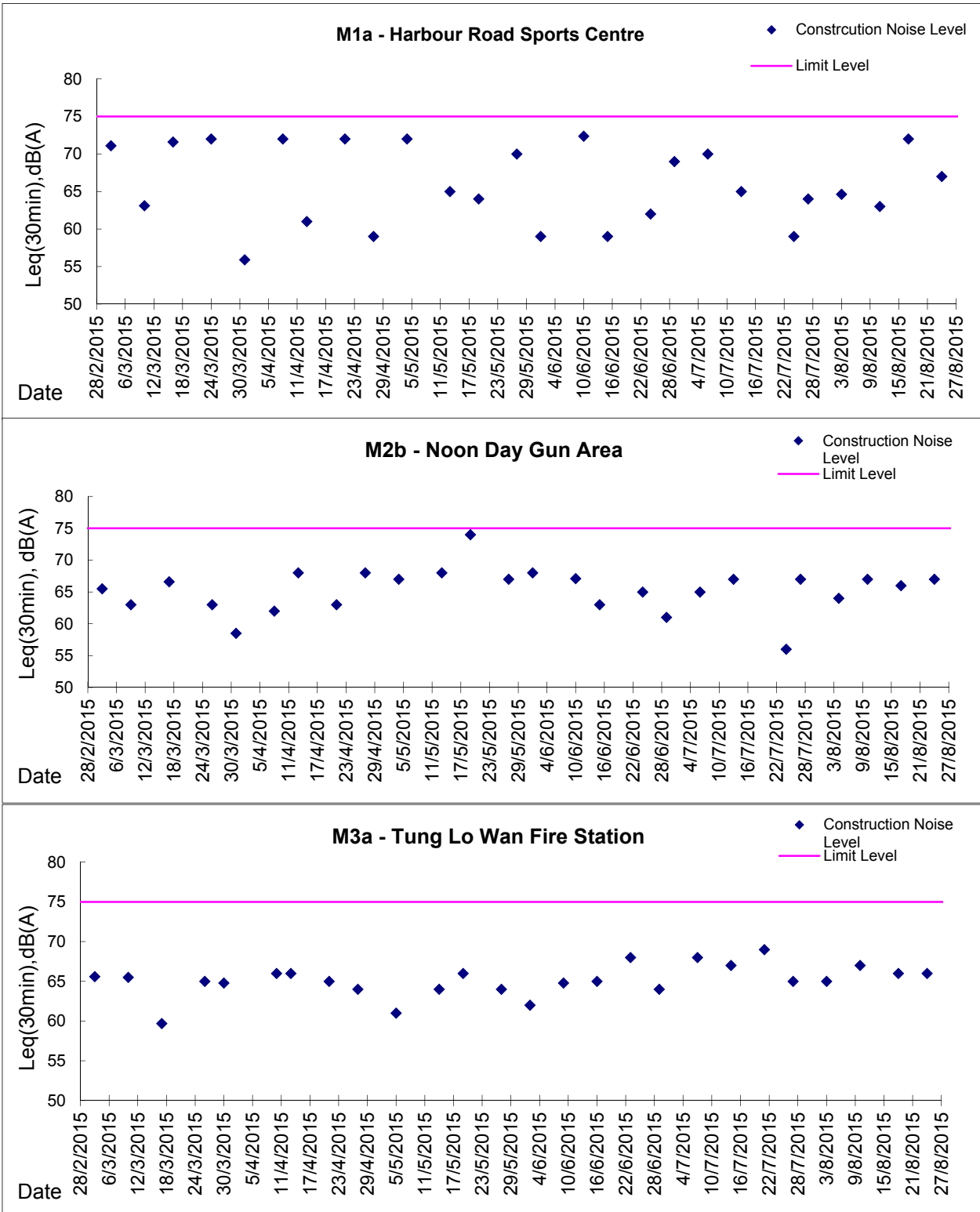
Location: M7w - International Finance Centre (Western End of Podium)

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
04/08/15	10:05	Fine	66.3	67.0	64.5	69	66	75
11/08/15	10:11	Fine	65.1	67.0	62.0	69	65	75
18/08/15	15:00	Fine	68.1	70.0	65.5	69	68	75
24/08/15	8:35	Fine	67.2	68.2	66.2	69	67	75

Location: M8 - City Hall

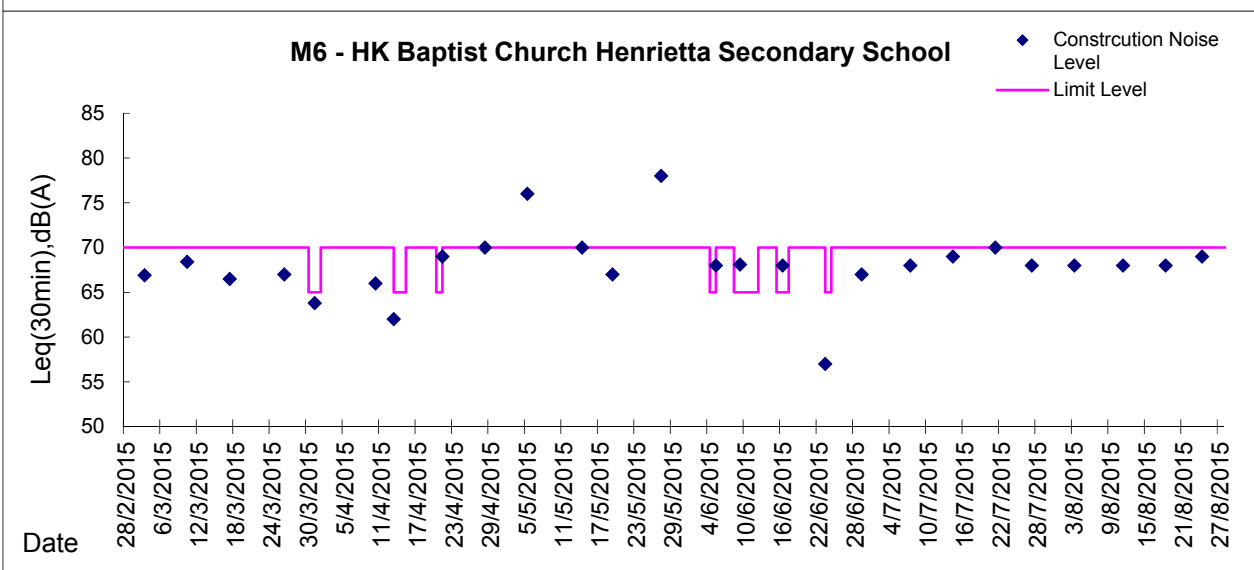
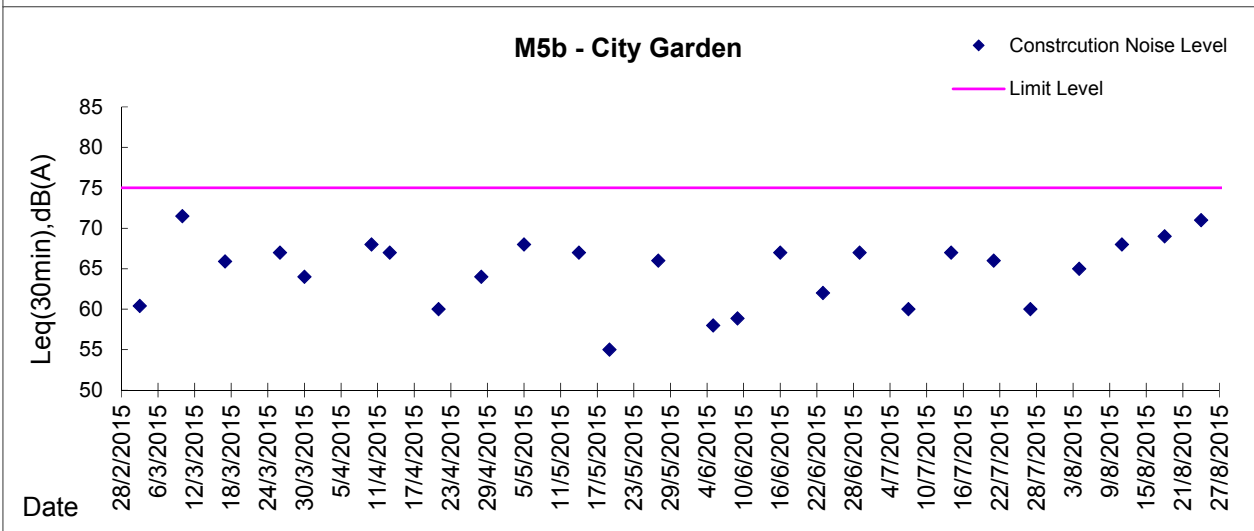
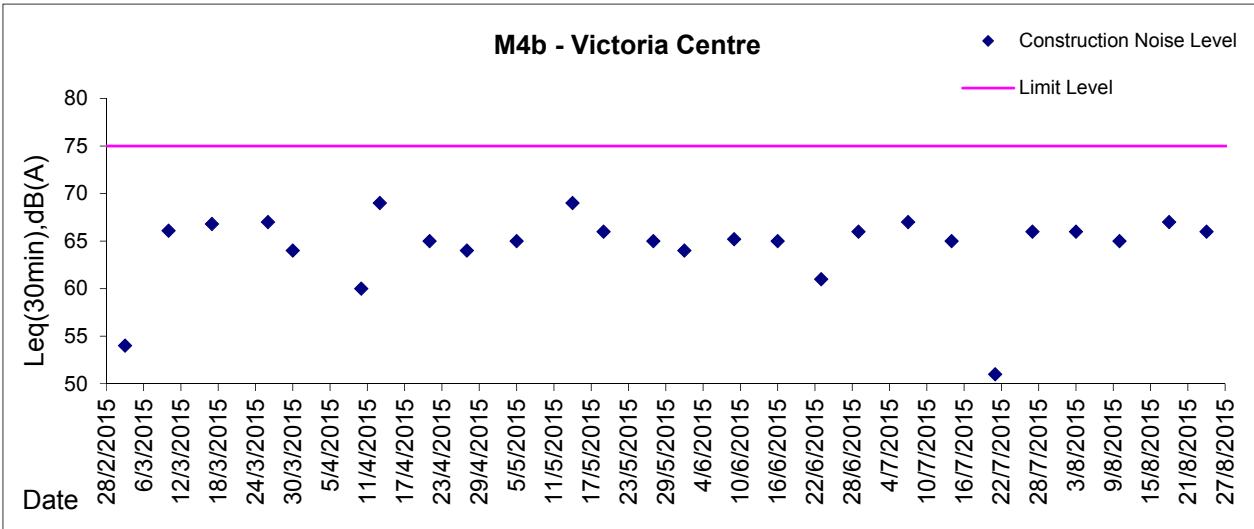
Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
04/08/15	11:05	Fine	59.4	61.5	56.0	64	59	70
11/08/15	10:59	Fine	62.0	63.5	56.0	64	62	70
18/08/15	8:15	Fine	59.5	60.5	58.5	64	60	70
24/08/15	13:45	Fine	62.6	65.5	57.5	64	63	70

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

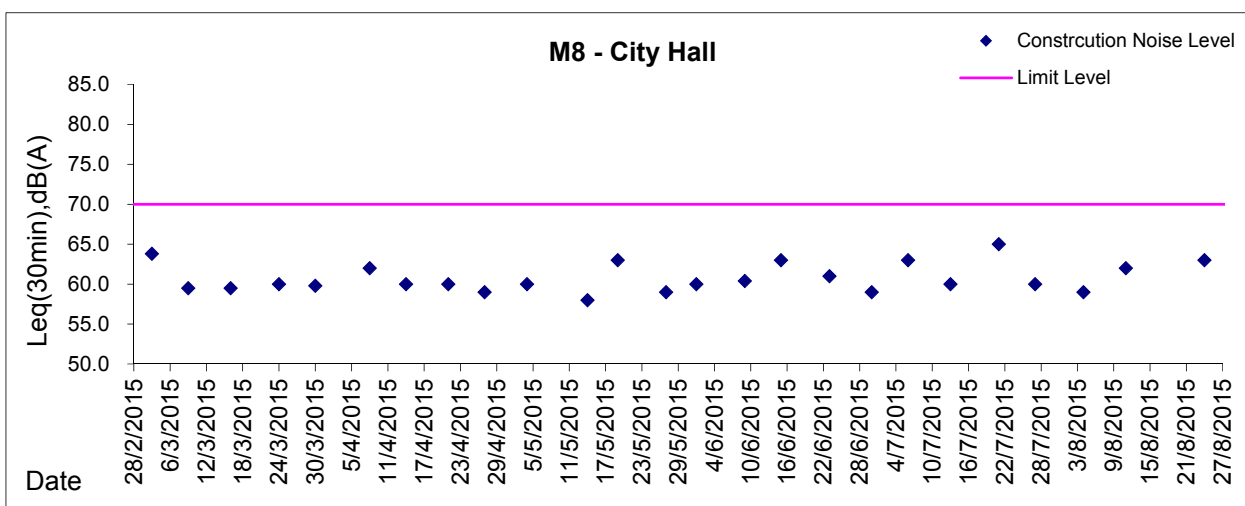
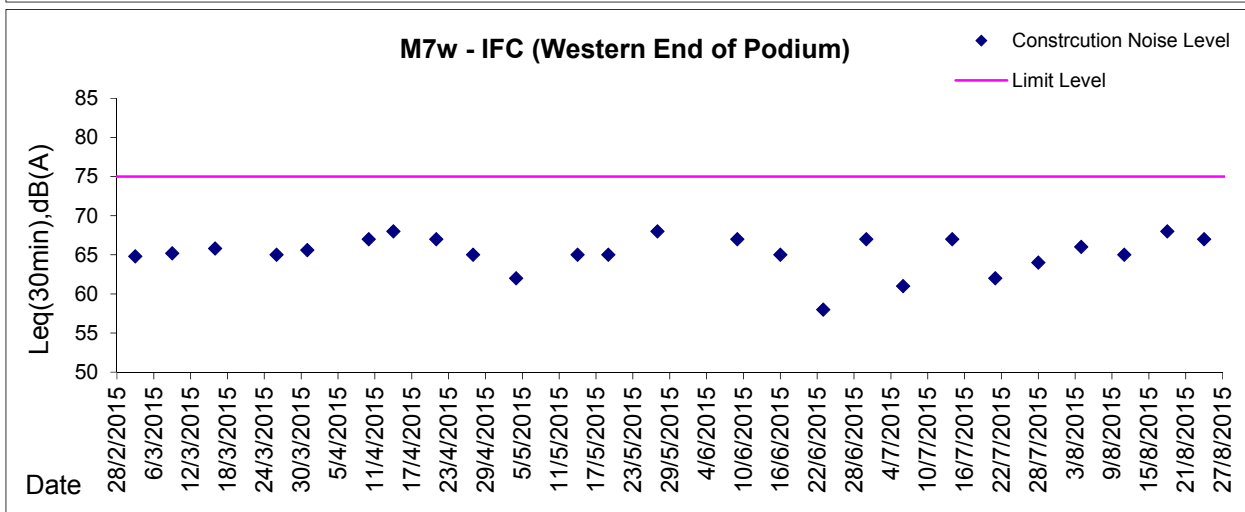
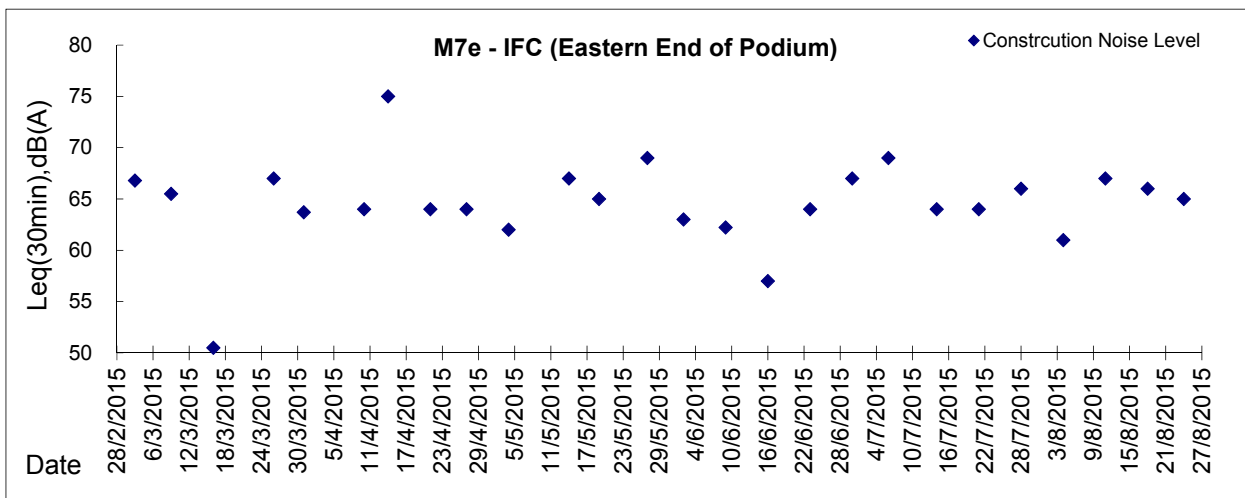


Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)



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



* Remark: M7e - IFC (Eastern End of Podium) is a reference monitoring station



Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations



Location: CMA1b - Oil Street Site Office

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	11:30	Fine	012793	2.8218	2.9064	16738.23	16762.23	24.00	1.14	1.14	1.14	1645	51.4
3-Aug-15	8:00	Fine	012727	2.8461	2.9852	16762.23	16786.23	24.00	1.14	1.14	1.14	1640	84.8
8-Aug-15	8:00	Fine	012723	2.8412	3.0555	6789.23	6813.23	24.00	1.22	1.22	1.22	1752	122.3
14-Aug-15	8:00	Cloudy	012807	2.8183	2.9880	6816.23	6840.23	24.00	1.23	1.23	1.23	1769	95.9
20-Aug-15	8:00	Cloudy	012659	2.8125	3.0637	6843.33	6867.33	24.00	1.22	1.22	1.22	1761	142.7
27-Aug-15	13:00	Cloudy	012997	2.7963	2.9870	6873.82	6897.82	24.00	1.23	1.23	1.23	1766	108.0

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 28 July and 26 August 2015 to 29 July and 27 August 2015 respectively.

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	8:02	Fine	012798	2.8297	2.8351	16735.22	16736.22	1.00	1.14	1.14	1.14	69	78.7
29-Jul-15	9:06	Fine	012796	2.8260	2.8311	16736.22	16737.22	1.00	1.14	1.14	1.14	69	74.4
29-Jul-15	10:13	Fine	012794	2.8363	2.8405	16737.22	16738.22	1.00	1.14	1.14	1.14	69	61.2
4-Aug-15	8:10	Fine	012728	2.8406	2.8552	16786.23	16787.23	1.00	1.14	1.14	1.14	68	213.7
4-Aug-15	9:13	Fine	012731	2.8593	2.8715	16787.23	16788.23	1.00	1.14	1.14	1.14	68	178.6
4-Aug-15	10:16	Fine	012454	2.8304	2.8372	16788.23	16789.23	1.00	1.14	1.14	1.14	68	99.5
10-Aug-15	9:07	Fine	012804	2.8052	2.8168	6813.23	6814.23	1.00	1.23	1.23	1.23	74	157.7
10-Aug-15	10:18	Fine	012013	2.7997	2.8120	6814.23	6815.23	1.00	1.23	1.23	1.23	74	167.3
10-Aug-15	13:00	Fine	012806	2.8237	2.8328	6815.23	6816.23	1.00	1.23	1.23	1.23	74	123.7
15-Aug-15	8:05	Rainy	012405	2.8182	2.8277	6840.23	6841.23	1.00	1.23	1.23	1.23	74	128.8
15-Aug-15	9:08	Rainy	012665	2.8229	2.8364	6841.23	6842.23	1.00	1.23	1.23	1.23	74	183.0
15-Aug-15	10:15	Rainy	012664	2.8077	2.8208	6842.23	6843.23	1.00	1.23	1.23	1.23	74	177.6
21-Aug-15	10:15	Cloudy	013038	2.8004	2.8133	6867.34	6868.34	1.00	1.22	1.22	1.22	73	176.1
21-Aug-15	13:00	Cloudy	013033	2.8194	2.8333	6868.34	6869.34	1.00	1.22	1.22	1.22	73	189.8
21-Aug-15	14:05	Cloudy	013031	2.7924	2.8157	6869.35	6870.35	1.00	1.22	1.22	1.22	73	318.1
27-Aug-15	8:00	Cloudy	012983	2.7980	2.8130	6870.35	6871.35	1.00	1.23	1.23	1.23	74	204.0
27-Aug-15	9:58	Cloudy	013027	2.8037	2.8188	6871.82	6872.82	1.00	1.23	1.23	1.23	74	205.3
27-Aug-15	11:00	Cloudy	013024	2.8359	2.8493	6872.82	6873.82	1.00	1.23	1.23	1.23	74	182.2



Location: CMA2a - Causeway Bay Community Centre

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
28-Jul-15	8:00	Fine	012739	2.8188	2.8785	16385.96	16409.96	24.00	1.20	1.21	1.21	1735	34.4
3-Aug-15	8:00	Fine	012792	2.8163	2.9108	16412.96	16436.96	24.00	1.20	1.20	1.20	1732	54.6
8-Aug-15	8:00	Fine	012456	2.8197	3.0110	16439.96	16463.96	24.00	1.18	1.18	1.18	1704	112.3
14-Aug-15	8:00	Cloudy	012011	2.8297	2.9172	16466.95	16490.95	24.00	1.19	1.19	1.19	1718	50.9
20-Aug-15	8:00	Cloudy	012407	2.8020	2.9513	16493.95	16517.95	24.00	1.19	1.19	1.19	1711	87.3
26-Aug-15	8:00	Cloudy	013002	2.8000	3.1742	16520.95	16544.95	24.00	1.19	1.19	1.19	1714	218.3

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	8:02	Fine	012800	2.8132	2.8183	16409.96	16410.96	1.00	1.16	1.16	1.16	70	73.2
29-Jul-15	9:05	Fine	012797	2.8488	2.8592	16410.96	16411.96	1.00	1.16	1.16	1.16	70	149.3
29-Jul-15	10:10	Fine	012795	2.8332	2.8362	16411.96	16412.96	1.00	1.16	1.16	1.16	70	43.1
4-Aug-15	8:05	Fine	012729	2.8391	2.8440	16436.96	16437.96	1.00	1.16	1.16	1.16	69	70.5
4-Aug-15	9:08	Fine	012732	2.8327	2.8356	16437.96	16438.96	1.00	1.16	1.16	1.16	69	41.7
4-Aug-15	10:11	Fine	012734	2.8344	2.8443	16438.96	16439.96	1.00	1.16	1.16	1.16	69	142.5
10-Aug-15	9:22	Fine	012805	2.8228	2.8293	16463.96	16464.96	1.00	1.28	1.28	1.28	77	84.8
10-Aug-15	10:30	Fine	012014	2.8356	2.8412	16464.96	16465.96	1.00	1.28	1.28	1.28	77	73.0
10-Aug-15	13:00	Fine	012012	2.8331	2.8413	16465.96	16466.96	1.00	1.28	1.28	1.28	77	106.9
15-Aug-15	8:02	Rainy	012419	2.8140	2.8157	16490.95	16491.95	1.00	1.19	1.19	1.19	72	23.7
15-Aug-15	9:05	Rainy	012386	2.8114	2.8146	16491.95	16492.95	1.00	1.19	1.19	1.19	72	44.7
15-Aug-15	10:10	Rainy	012416	2.8386	2.8457	16492.95	16493.95	1.00	1.19	1.19	1.19	72	99.2
21-Aug-15	10:04	Cloudy	013039	2.8314	2.8384	16517.95	16518.95	1.00	1.19	1.19	1.19	71	98.3
21-Aug-15	13:00	Cloudy	013034	2.8226	2.8275	16518.95	16519.95	1.00	1.19	1.19	1.19	71	68.8
21-Aug-15	14:05	Cloudy	013032	2.8057	2.8208	16519.95	16520.95	1.00	1.19	1.19	1.19	71	212.1
27-Aug-15	9:56	Cloudy	013048	2.8435	2.8707	16544.95	16545.95	1.00	1.19	1.19	1.19	71	380.9
27-Aug-15	11:00	Cloudy	013045	2.8235	2.8458	16545.95	16546.95	1.00	1.19	1.19	1.19	71	312.3
27-Aug-15	14:00	Cloudy	012998	2.9015	2.9265	16546.95	16547.95	1.00	1.19	1.19	1.19	71	350.1



Location: CMA3a - CWB PRE Site Office Area

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
28-Jul-15	8:00	Fine	011601	2.7373	2.8150	3845.25	3869.25	24.00	1.18	1.18	1.18	1702	45.7
3-Aug-15	8:00	Fine	012819	2.8766	2.9965	3872.24	3896.24	24.00	1.18	1.18	1.18	1697	70.6
8-Aug-15	8:00	Fine	012837	2.8338	2.9840	3899.24	3923.24	24.00	1.23	1.23	1.23	1774	84.7
14-Aug-15	8:00	Cloudy	012679	2.8376	2.9689	3926.24	3950.24	24.00	1.20	1.20	1.20	1722	76.3
20-Aug-15	8:00	Cloudy	012660	2.8013	3.0704	3953.24	3977.24	24.00	1.19	1.19	1.19	1714	157.0
26-Aug-15	8:00	Cloudy	012984	2.7982	2.9095	3980.26	4004.26	24.00	1.19	1.19	1.19	1718	64.8

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	9:27	Fine	012799	2.8181	2.8245	3869.25	3870.25	1.00	1.20	1.20	1.20	72	88.6
29-Jul-15	10:32	Fine	012031	2.8367	2.8422	3870.25	3871.25	1.00	1.20	1.20	1.20	72	76.1
29-Jul-15	13:00	Fine	012799	2.8181	2.8227	3871.25	3872.25	1.00	1.20	1.20	1.20	72	63.7
4-Aug-15	8:42	Fine	012831	2.8743	2.8785	3896.24	3897.24	1.00	1.20	1.20	1.20	72	58.4
4-Aug-15	9:45	Fine	012834	2.8725	2.8776	3897.24	3898.24	1.00	1.20	1.20	1.20	72	70.9
4-Aug-15	10:48	Fine	012835	2.8609	2.8663	3898.24	3899.24	1.00	1.20	1.20	1.20	72	75.0
10-Aug-15	8:30	Fine	012839	2.8540	2.8605	3923.24	3924.24	1.00	1.29	1.29	1.29	77	84.0
10-Aug-15	9:47	Fine	012841	2.8367	2.8402	3924.24	3925.24	1.00	1.29	1.29	1.29	77	45.2
10-Aug-15	13:00	Fine	012027	2.8347	2.8416	3925.24	3926.24	1.00	1.29	1.29	1.29	77	89.1
15-Aug-15	8:10	Rainy	012404	2.8198	2.8281	3950.24	3951.24	1.00	1.24	1.24	1.24	74	111.5
15-Aug-15	9:23	Rainy	012669	2.8292	2.8345	3951.24	3952.24	1.00	1.24	1.24	1.24	74	71.2
15-Aug-15	10:26	Rainy	012663	2.8305	2.8401	3952.24	3953.24	1.00	1.24	1.24	1.24	74	128.9
21-Aug-15	9:25	Cloudy	013040	2.8331	2.8387	3977.24	3978.24	1.00	1.23	1.23	1.23	74	75.7
21-Aug-15	11:00	Cloudy	013035	2.8011	2.8091	3978.24	3979.24	1.00	1.23	1.23	1.23	74	108.2
21-Aug-15	14:35	Cloudy	013005	2.7824	2.7911	3979.24	3980.24	1.00	1.23	1.23	1.23	74	117.6
27-Aug-15	9:45	Cloudy	013049	2.8094	2.8175	4004.26	4005.26	1.00	1.24	1.24	1.24	74	109.1
27-Aug-15	10:50	Cloudy	013025	2.7993	2.8092	4005.26	4006.26	1.00	1.24	1.24	1.24	74	133.4
27-Aug-15	13:00	Cloudy	013023	2.8120	2.8230	4006.26	4007.26	1.00	1.24	1.24	1.24	74	148.2



Location: CMA4a - SPCA

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
28-Jul-15	8:00	Fine	011602	2.7299	2.8133	20659.90	20683.90	24.00	1.23	1.24	1.23	1778	46.9
3-Aug-15	8:00	Fine	012803	2.8244	2.9195	20686.89	20710.89	24.00	1.23	1.23	1.23	1774	53.6
8-Aug-15	8:00	Fine	012836	2.8538	3.1005	20713.89	20737.89	24.00	1.23	1.23	1.23	1774	139.1
14-Aug-15	8:00	Cloudy	012680	2.8358	3.0324	20740.89	20764.89	24.00	1.15	1.15	1.15	1654	118.9
20-Aug-15	8:00	Cloudy	012406	2.8137	3.0565	20767.89	20791.89	24.00	1.24	1.24	1.24	1782	136.3
26-Aug-15	8:00	Cloudy	013003	2.8097	2.9403	20794.89	20818.89	24.00	1.24	1.24	1.24	1786	73.1

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	9:07	Fine	012028	2.8507	2.8579	20683.90	20684.90	1.00	1.24	1.24	1.24	74	97.1
29-Jul-15	10:17	Fine	012801	2.8111	2.8224	20684.90	20685.90	1.00	1.24	1.24	1.24	74	152.4
29-Jul-15	13:00	Fine	012029	2.8311	2.8362	20685.90	20686.90	1.00	1.24	1.24	1.24	74	68.8
4-Aug-15	8:25	Fine	012745	2.8463	2.8508	20710.89	20711.89	1.00	1.23	1.23	1.23	74	60.9
4-Aug-15	9:29	Fine	012832	2.8437	2.8477	20711.89	20712.89	1.00	1.23	1.23	1.23	74	54.1
4-Aug-15	10:36	Fine	012833	2.8601	2.8650	20712.89	20713.89	1.00	1.23	1.23	1.23	74	66.3
10-Aug-15	8:10	Fine	012838	2.8392	2.8485	20737.89	20738.89	1.00	1.24	1.24	1.24	74	125.0
10-Aug-15	10:00	Fine	012840	2.8585	2.8649	20738.89	20739.89	1.00	1.24	1.24	1.24	74	86.0
10-Aug-15	13:00	Fine	012802	2.8199	2.8275	20739.89	20740.89	1.00	1.24	1.24	1.24	74	102.1
15-Aug-15	8:02	Rainy	012674	2.8490	2.8518	20764.89	20765.89	1.00	1.24	1.24	1.24	75	37.5
15-Aug-15	9:16	Rainy	012670	2.8147	2.8186	20765.89	20766.89	1.00	1.24	1.24	1.24	75	52.3
15-Aug-15	10:26	Rainy	012415	2.8351	2.8425	20766.89	20767.89	1.00	1.24	1.24	1.24	75	99.2
21-Aug-15	9:15	Cloudy	013041	2.7930	2.8052	20791.89	20792.89	1.00	1.24	1.24	1.24	74	164.6
21-Aug-15	13:00	Cloudy	013036	2.8037	2.8155	20792.89	20793.89	1.00	1.24	1.24	1.24	74	159.2
21-Aug-15	14:27	Cloudy	013006	2.7901	2.8132	20793.89	20794.89	1.00	1.24	1.24	1.24	74	311.6
27-Aug-15	9:37	Cloudy	013000	2.8060	2.8159	20818.89	20819.89	1.00	1.24	1.24	1.24	74	133.1
27-Aug-15	10:50	Cloudy	013046	2.7985	2.8101	20819.89	20820.89	1.00	1.24	1.24	1.24	74	155.9
27-Aug-15	13:00	Cloudy	012996	2.8159	2.8272	20820.89	20821.89	1.00	1.24	1.24	1.24	74	151.9



Location: CMA5b - Pedestrian Plaza

Report on 24-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
28-Jul-15	8:00	Fine	012725	2.8283	3.0003	5146.87	5170.87	24.00	1.01	1.01	1.01	1460	117.8
3-Aug-15	8:00	Fine	012741	2.8125	2.9499	5197.89	5221.89	24.00	1.03	1.03	1.03	1477	93.0
8-Aug-15	8:00	Fine	012750	2.8281	3.0357	5224.89	5248.89	24.00	1.02	1.02	1.02	1465	141.7
14-Aug-15	8:00	Cloudy	012457	2.8115	2.8813	5251.88	5275.88	24.00	0.98	0.98	0.98	1406	49.7
20-Aug-15	8:00	Cloudy	012658	2.8185	2.9836	5278.88	5302.88	24.00	0.97	0.97	0.97	1397	118.2
26-Aug-15	8:00	Cloudy	013004	2.7839	2.8707	5305.88	5329.88	24.00	0.97	0.97	0.97	1401	61.9

Report on 1-hour TSP monitoring

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

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	13:00	Fine	012427	2.7979	2.8082	5194.89	5195.89	1.00	0.96	0.96	0.96	58	178.4
29-Jul-15	14:04	Fine	012825	2.8779	2.8853	5195.89	5196.89	1.00	0.96	0.96	0.96	58	128.2
29-Jul-15	15:16	Fine	012828	2.8761	2.8823	5196.89	5197.89	1.00	0.96	0.96	0.96	58	107.4
4-Aug-15	13:00	Fine	012460	2.7991	2.8060	5221.89	5222.89	1.00	1.03	1.03	1.03	62	112.1
4-Aug-15	14:16	Fine	012682	2.8420	2.8473	5222.89	5223.89	1.00	1.03	1.03	1.03	62	86.1
4-Aug-15	15:20	Fine	012747	2.8424	2.8490	5223.89	5224.89	1.00	1.03	1.03	1.03	62	107.2
10-Aug-15	9:15	Fine	012453	2.8273	2.8356	5248.89	5249.89	1.00	1.03	1.03	1.03	62	134.8
10-Aug-15	10:35	Fine	012753	2.8457	2.8506	5249.89	5250.89	1.00	1.03	1.03	1.03	62	79.6
10-Aug-15	13:00	Fine	012666	2.8320	2.8360	5250.89	5251.89	1.00	1.03	1.03	1.03	62	65.0
15-Aug-15	8:13	Rainy	012673	2.8544	2.8552	5275.88	5276.88	1.00	0.98	0.98	0.98	59	13.7
15-Aug-15	9:16	Rainy	012668	2.8315	2.8323	5276.88	5277.88	1.00	0.98	0.98	0.98	59	13.7
15-Aug-15	10:37	Rainy	012414	2.8242	2.8304	5277.88	5278.88	1.00	1.03	1.03	1.03	62	100.3
21-Aug-15	8:32	Cloudy	013042	2.8110	2.8198	5302.88	5303.88	1.00	0.97	0.97	0.97	58	151.4
21-Aug-15	10:52	Cloudy	013037	2.7899	2.7994	5303.88	5304.88	1.00	0.97	0.97	0.97	58	163.5
21-Aug-15	14:00	Cloudy	013029	2.7859	2.8016	5304.88	5305.88	1.00	0.97	0.97	0.97	58	270.2
27-Aug-15	8:47	Cloudy	013001	2.8017	2.8094	5329.88	5330.88	1.00	0.97	0.97	0.97	58	131.9
27-Aug-15	10:25	Cloudy	013047	2.8138	2.8220	5330.88	5331.88	1.00	1.03	1.08	1.05	63	129.9
27-Aug-15	13:11	Cloudy	012970	2.8022	2.8094	5331.88	5332.88	1.00	0.97	0.97	0.97	58	123.3



Location: MA1e - International Finance Centre (Eastern Wing)

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 173.4

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
28-Jul-15	8:00	Fine	012738	2.8124	2.8879	17346.38	17370.38	24.00	1.20	1.21	1.21	1736	43.5
3-Aug-15	8:00	Fine	012743	2.8310	2.9241	17373.38	17397.38	24.00	1.22	1.23	1.23	1764	52.8
8-Aug-15	8:00	Fine	012451	2.8394	3.0419	17400.38	17424.38	24.00	1.18	1.12	1.15	1655	122.4
15-Aug-15	11:30	Rainy	012808	2.8118	2.9065	17430.38	17454.38	24.00	1.20	1.19	1.19	1719	55.1
20-Aug-15	8:00	Cloudy	012448	2.8426	2.9795	17454.38	17478.38	24.00	1.13	1.12	1.12	1619	84.6
26-Aug-15	8:00	Cloudy	013011	2.7890	2.8860	17481.38	17505.38	24.00	1.19	1.19	1.19	1716	56.5

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 14 August 2015 to 15 August 2015.

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 325.1

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	9:00	Fine	011873	2.7206	2.7281	17370.39	17371.39	1.00	1.16	1.16	1.16	70	107.6
29-Jul-15	10:23	Fine	012435	2.8141	2.8176	17371.39	17372.39	1.00	1.21	1.21	1.21	72	48.4
29-Jul-15	13:00	Fine	012432	2.8228	2.8277	17372.39	17373.39	1.00	1.23	1.23	1.23	74	66.5
4-Aug-15	8:15	Fine	012707	2.8288	2.8338	17397.38	17398.38	1.00	1.16	1.16	1.16	70	71.9
4-Aug-15	9:20	Fine	012710	2.8287	2.8338	17398.38	17399.38	1.00	1.25	1.25	1.25	75	68.2
4-Aug-15	10:35	Fine	012463	2.8252	2.8309	17399.38	17400.38	1.00	1.16	1.16	1.16	70	81.9
10-Aug-15	8:40	Fine	012939	2.7945	2.8025	17424.38	17425.38	1.00	1.19	1.19	1.19	71	111.9
10-Aug-15	9:43	Fine	012936	2.7989	2.8053	17425.38	17426.38	1.00	1.19	1.19	1.19	71	89.5
10-Aug-15	13:00	Fine	012933	2.8046	2.8134	17426.38	17427.38	1.00	1.19	1.19	1.19	71	123.1
15-Aug-15	8:07	Rainy	012816	2.8755	2.8813	17427.38	17428.38	1.00	1.20	1.20	1.20	72	80.8
15-Aug-15	9:10	Rainy	012813	2.8442	2.8476	17428.38	17429.38	1.00	1.20	1.20	1.20	72	47.4
15-Aug-15	10:20	Rainy	012810	2.8109	2.8134	17429.38	17430.38	1.00	1.20	1.20	1.20	72	34.8
21-Aug-15	8:06	Cloudy	013020	2.8137	2.8208	17478.38	17479.38	1.00	1.12	1.12	1.12	67	105.4
21-Aug-15	9:11	Cloudy	013017	2.8167	2.8227	17479.38	17480.38	1.00	1.12	1.12	1.12	67	89.1
21-Aug-15	10:15	Cloudy	013014	2.7805	2.7851	17480.38	17481.38	1.00	1.12	1.12	1.12	67	68.3
27-Aug-15	8:02	Cloudy	012968	2.8120	2.8204	17505.38	17506.38	1.00	1.13	1.19	1.16	70	120.7
27-Aug-15	9:04	Cloudy	012980	2.8102	2.8178	17506.38	17507.38	1.00	1.13	1.13	1.13	68	112.3
27-Aug-15	10:06	Cloudy	012977	2.8051	2.8132	17507.38	17508.38	1.00	1.13	1.13	1.13	68	119.7



Location: MA1w - International Finance Centre (Western Wing)

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 173.4

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

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
28-Jul-15	8:00	Fine	012737	2.8171	2.8926	17371.00	17395.00	24.00	1.25	1.25	1.25	1794	42.1
3-Aug-15	8:00	Fine	012742	2.8201	2.8965	17398.00	17422.00	24.00	1.24	1.24	1.24	1790	42.7
8-Aug-15	8:00	Fine	012450	2.8356	3.0083	17425.00	17449.00	24.00	1.20	1.20	1.20	1734	99.6
14-Aug-15	8:00	Cloudy	012929	2.8156	2.8928	17452.00	17476.00	24.00	1.22	1.22	1.22	1751	44.1
20-Aug-15	8:00	Cloudy	011734	2.8340	2.9593	17479.00	17503.00	24.00	1.21	1.21	1.21	1742	71.9
26-Aug-15	8:00	Cloudy	013012	2.7955	2.8828	17506.00	17530.00	24.00	1.21	1.21	1.21	1747	50.0

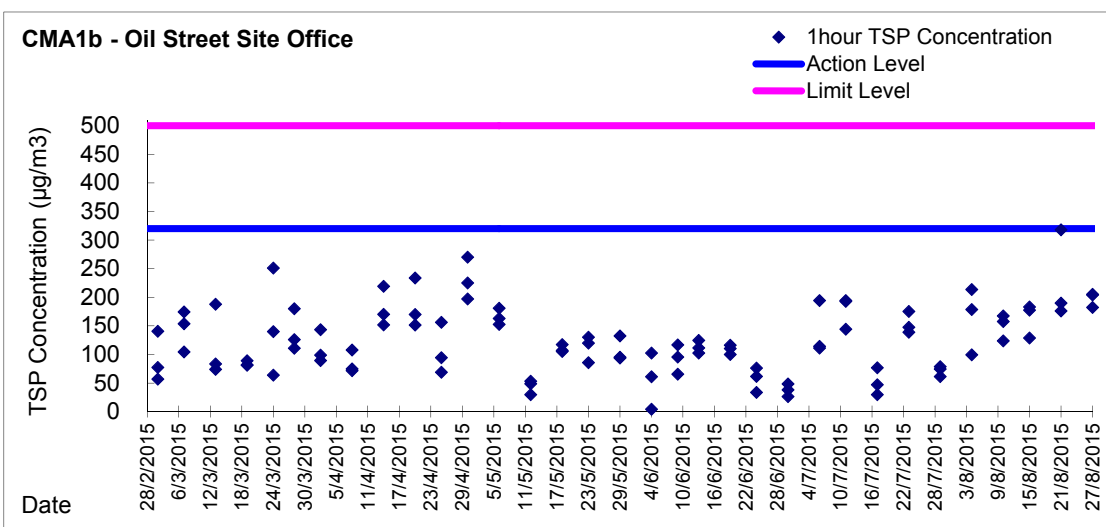
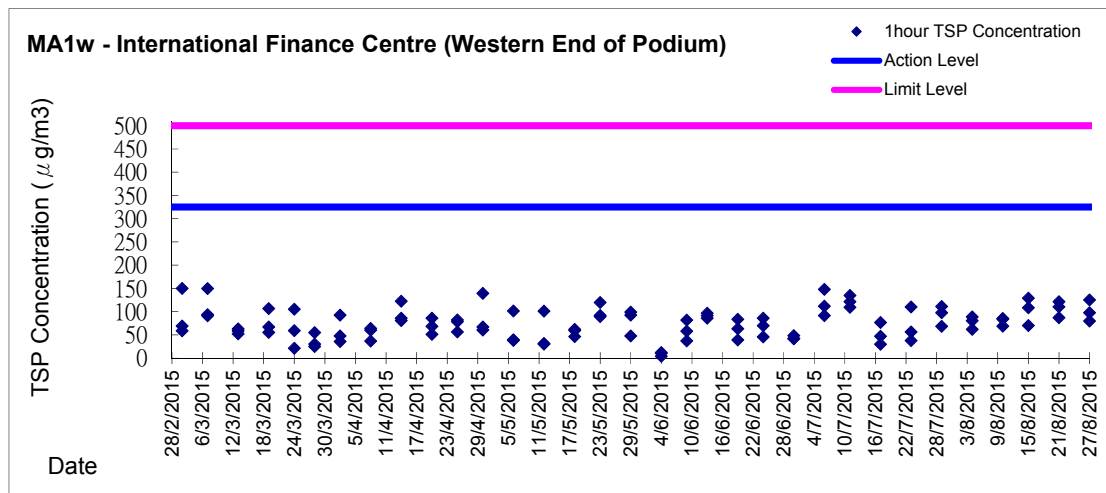
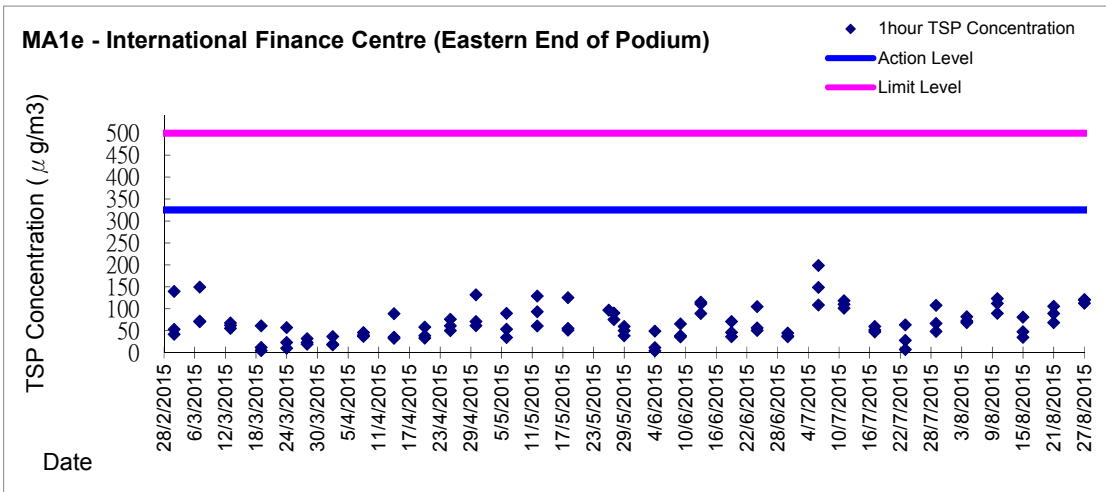
Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 325.1

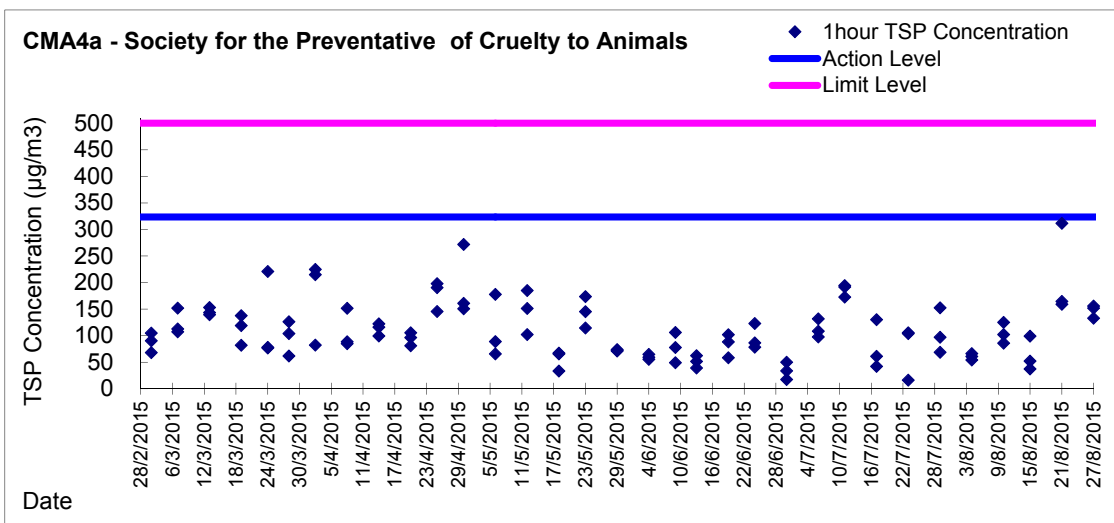
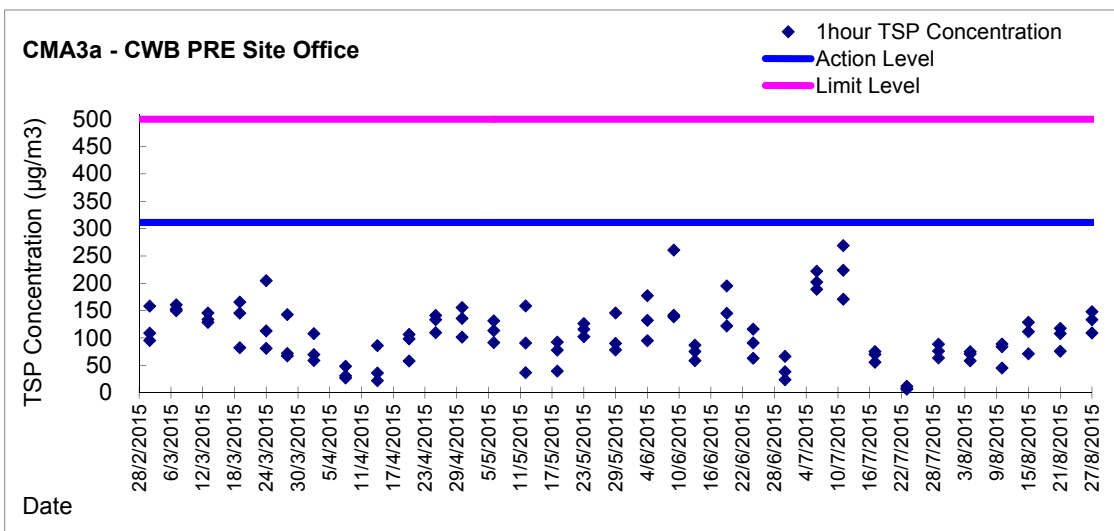
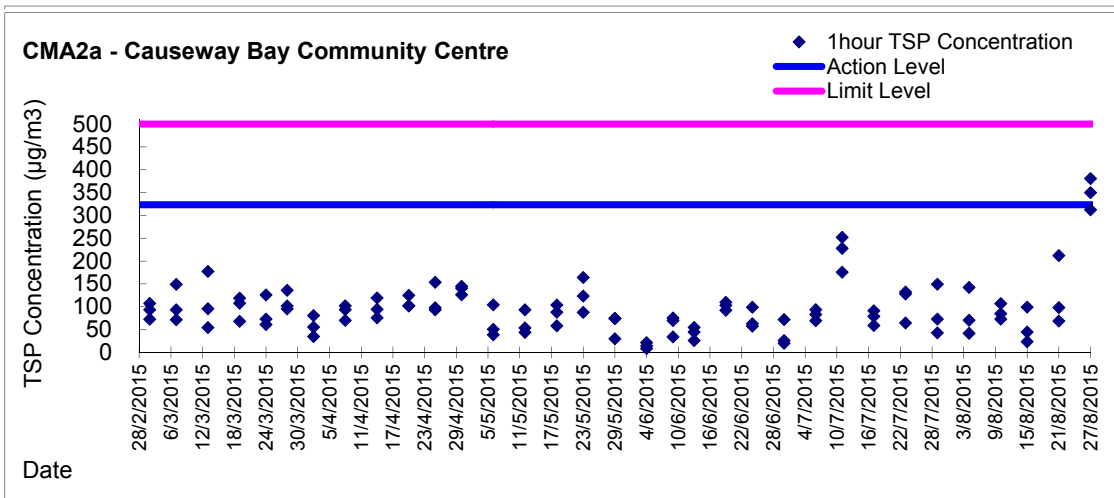
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Sampling Time	Weather Condition	Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, $\mu\text{g}/\text{m}^3$
				Initial	Final	Initial	Final		Initial, Q_{si}	Final, Q_{sf}	Average		
29-Jul-15	9:08	Fine	011973	2.8541	2.8614	17395.01	17396.01	1.00	1.25	1.25	1.25	75	97.6
29-Jul-15	10:20	Fine	012434	2.7985	2.8036	17396.01	17397.01	1.00	1.25	1.25	1.25	75	68.2
29-Jul-15	13:00	Fine	012431	2.8145	2.8228	17397.01	17398.01	1.00	1.25	1.25	1.25	75	111.0
4-Aug-15	8:04	Fine	012708	2.8234	2.8280	17422.00	17423.00	1.00	1.24	1.24	1.24	75	61.7
4-Aug-15	9:10	Fine	012711	2.8224	2.8284	17423.00	17424.00	1.00	1.24	1.24	1.24	75	80.4
4-Aug-15	10:15	Fine	012713	2.8253	2.8319	17424.00	17425.00	1.00	1.24	1.24	1.24	75	88.5
10-Aug-15	8:45	Fine	012938	2.7885	2.7947	17449.00	17450.00	1.00	1.21	1.21	1.21	73	85.2
10-Aug-15	9:48	Fine	012935	2.8026	2.8076	17450.00	17451.00	1.00	1.21	1.21	1.21	73	68.7
10-Aug-15	13:00	Fine	012932	2.8164	2.8225	17451.00	17452.00	1.00	1.21	1.21	1.21	73	83.8
15-Aug-15	8:03	Rainy	012032	2.8449	2.8543	17476.00	17477.00	1.00	1.22	1.22	1.22	73	128.8
15-Aug-15	9:06	Rainy	012814	2.8867	2.8946	17477.00	17478.00	1.00	1.22	1.22	1.22	73	108.2
15-Aug-15	10:15	Rainy	012811	2.8309	2.8360	17478.00	17479.00	1.00	1.22	1.22	1.22	73	69.9
21-Aug-15	8:03	Cloudy	013021	2.8198	2.8286	17503.00	17504.00	1.00	1.21	1.21	1.21	72	121.4
21-Aug-15	9:07	Cloudy	013018	2.8310	2.8373	17504.00	17505.00	1.00	1.21	1.21	1.21	72	86.9
21-Aug-15	10:11	Cloudy	013015	2.8320	2.8400	17505.00	17506.00	1.00	1.21	1.21	1.21	72	110.4
27-Aug-15	8:05	Cloudy	012967	2.8190	2.8281	17530.00	17531.00	1.00	1.21	1.21	1.21	73	125.0
27-Aug-15	9:07	Cloudy	012979	2.8144	2.8215	17531.00	17532.00	1.00	1.21	1.21	1.21	73	97.6
27-Aug-15	10:09	Cloudy	012976	2.8025	2.8083	17532.00	17533.00	1.00	1.21	1.21	1.21	73	79.7

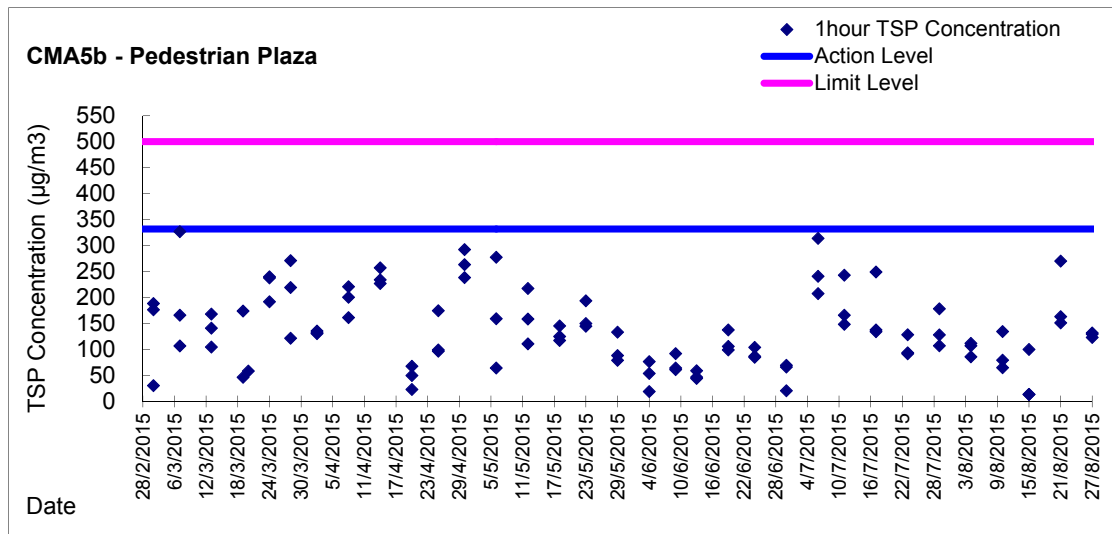
Graphic Presentation of 1 hour TSP Result



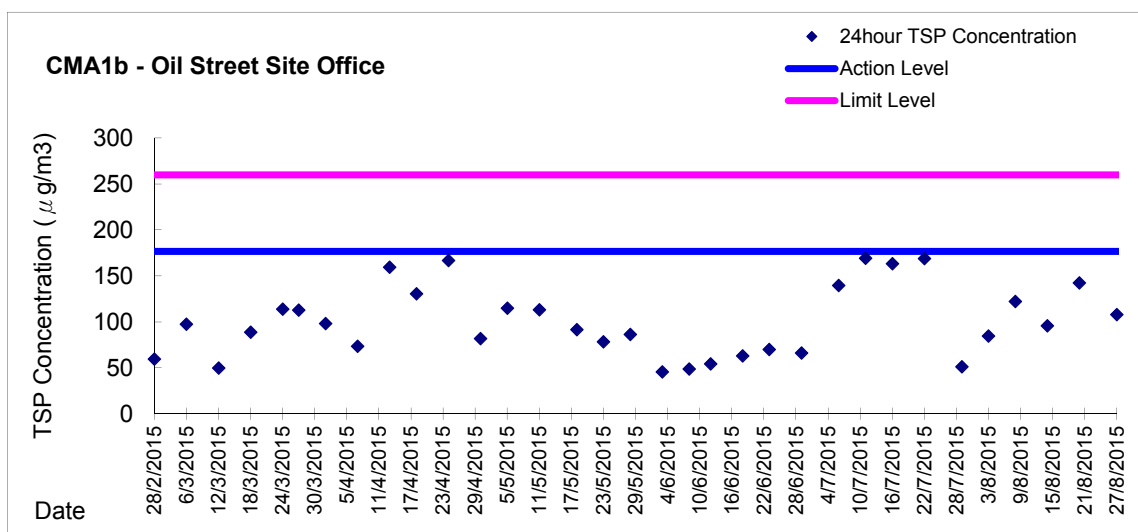
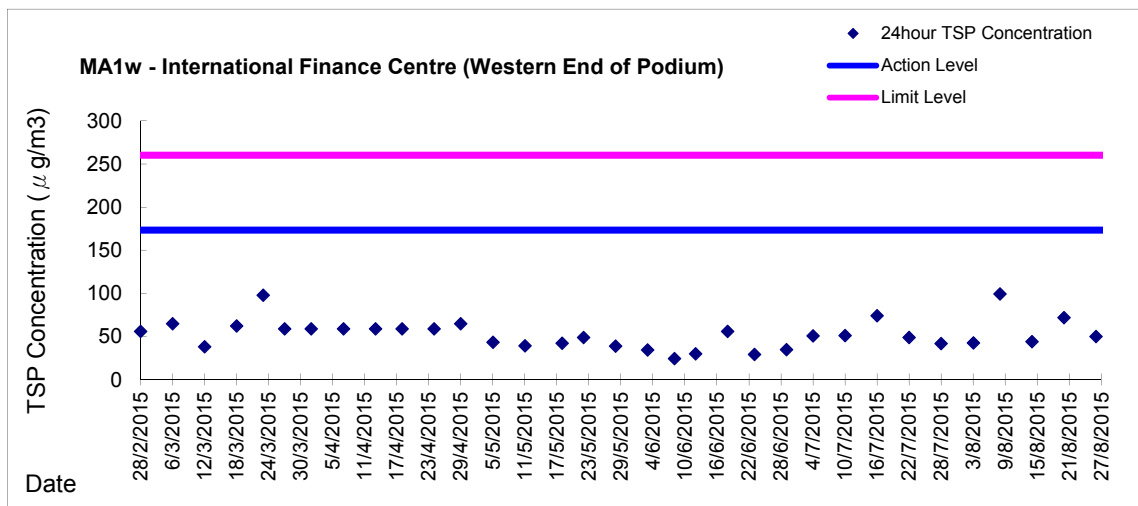
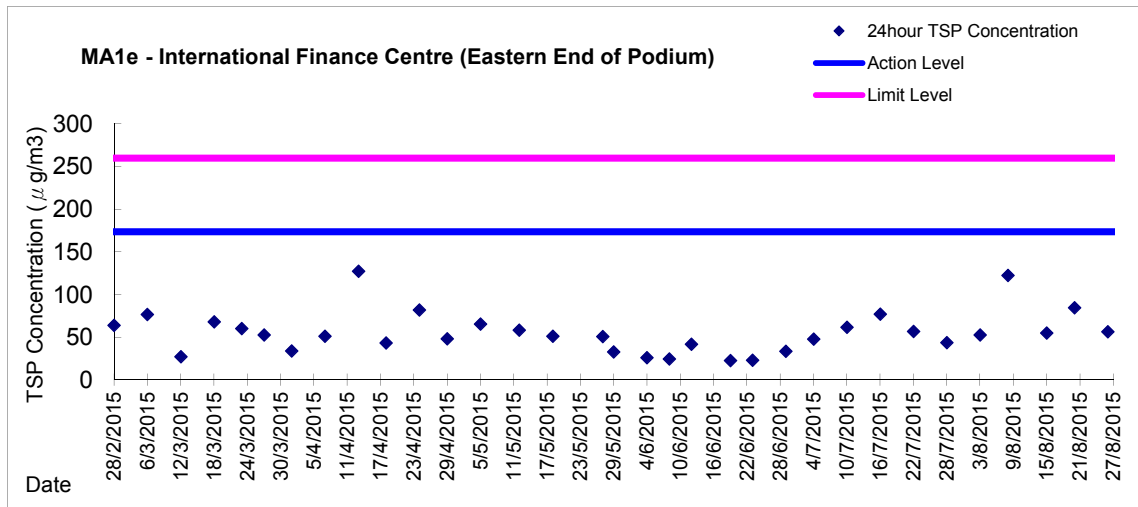
Graphic Presentation of 1 hour TSP Result



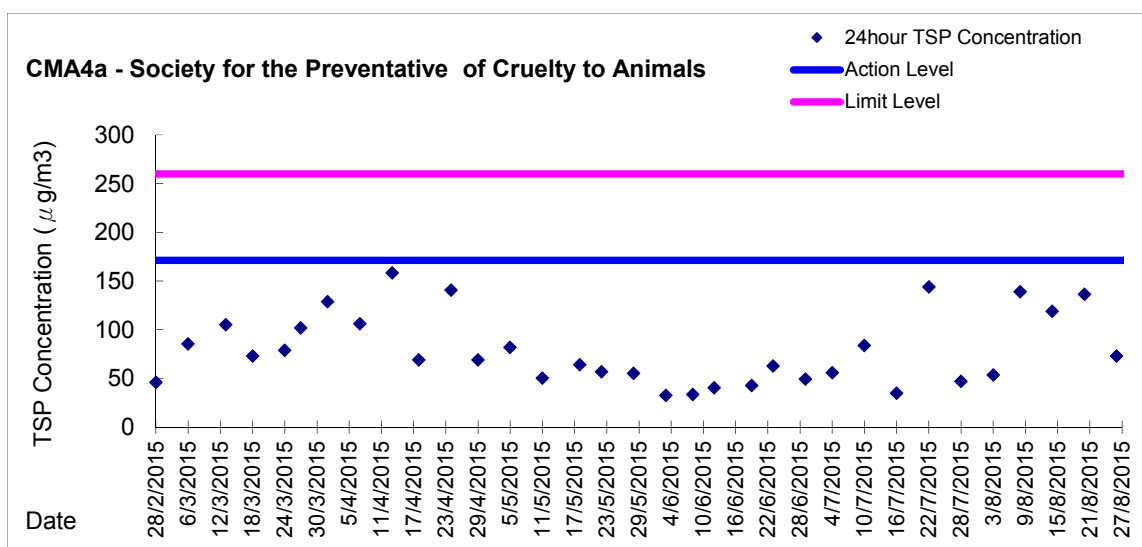
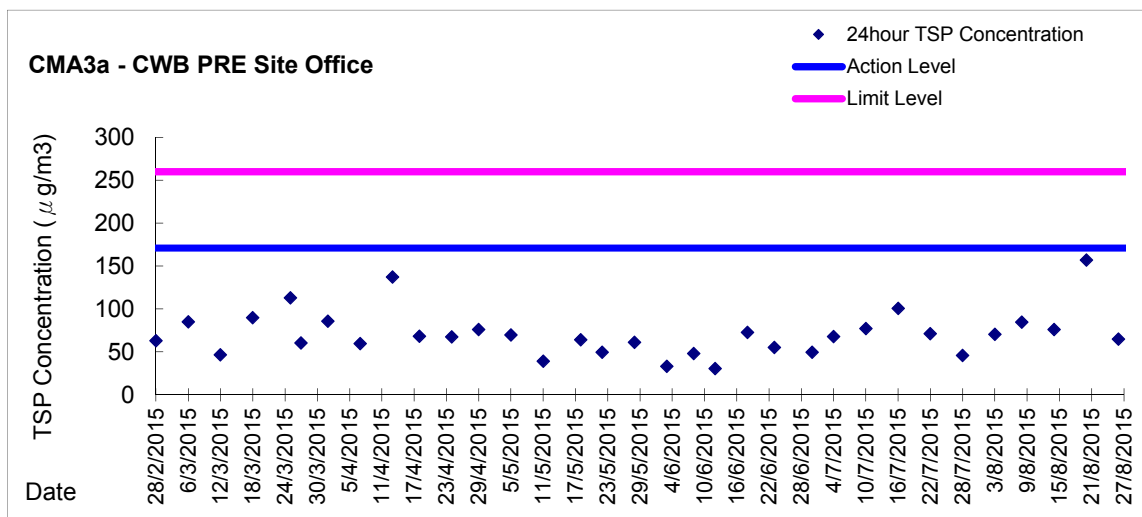
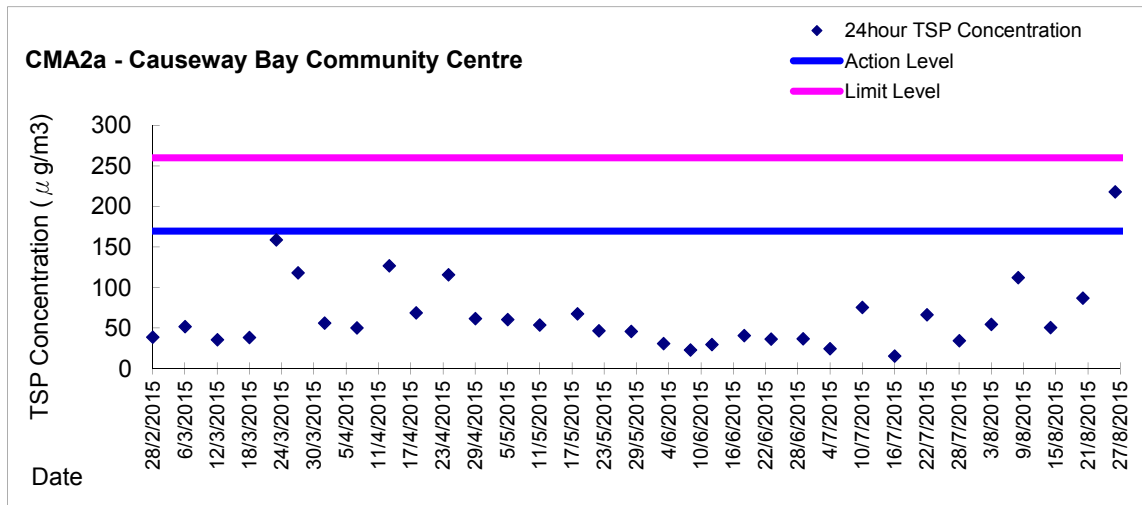
Graphic Presentation of 1 hour TSP Result



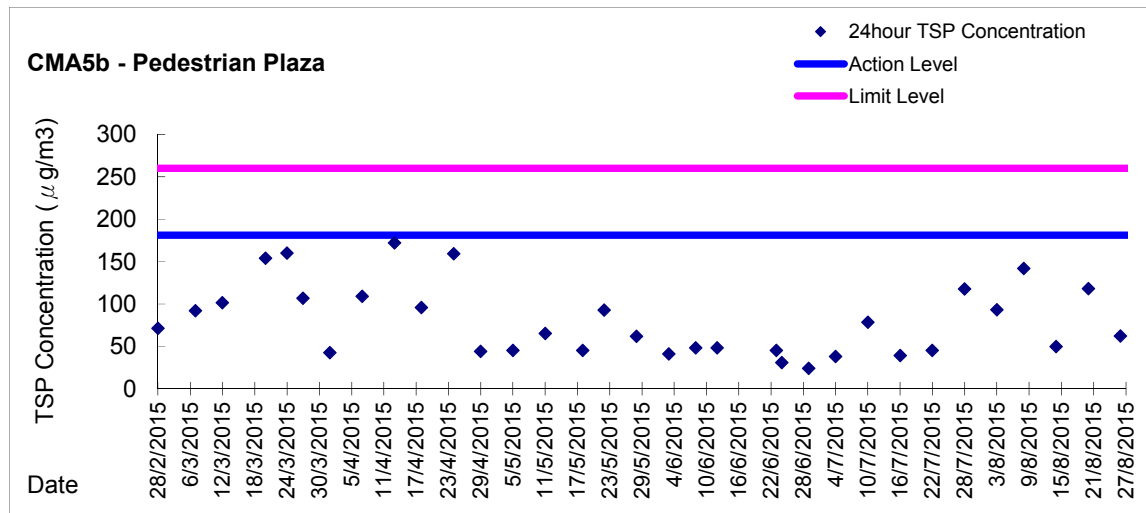
Graphic Presentation of 24 hour TSP Result



Graphic Presentation of 24 hour TSP Result



Graphic Presentation of 24 hour TSP Result





Appendix 5.4

Real Time Noise Monitoring Results and Graphical Presentations

Real-time Noise Data		RTN1 (Food and Environmental Hygiene Department Depot)									
9/8/2015 3:41	51	10/8/2015 4:46	62	11/8/2015 5:51	53	12/8/2015 6:56	61	14/8/2015 0:01	59	15/8/2015 1:06	58
9/8/2015 3:46	62	10/8/2015 4:51	61	11/8/2015 5:56	54	12/8/2015 23:01	59	14/8/2015 0:06	58	15/8/2015 1:11	58
9/8/2015 3:51	49	10/8/2015 4:56	61	11/8/2015 6:01	48	12/8/2015 23:06	59	14/8/2015 0:11	56	15/8/2015 1:16	58
9/8/2015 3:56	50	10/8/2015 5:01	61	11/8/2015 6:06	55	12/8/2015 23:11	60	14/8/2015 0:16	57	15/8/2015 1:21	58
9/8/2015 4:01	62	10/8/2015 5:06	62	11/8/2015 6:11	56	12/8/2015 23:16	59	14/8/2015 0:21	58	15/8/2015 1:26	59
9/8/2015 4:06	61	10/8/2015 5:11	62	11/8/2015 6:16	58	12/8/2015 23:21	59	14/8/2015 0:26	56	15/8/2015 1:31	58
9/8/2015 4:11	62	10/8/2015 5:16	62	11/8/2015 6:21	60	12/8/2015 23:26	59	14/8/2015 0:31	60	15/8/2015 1:36	58
9/8/2015 4:16	62	10/8/2015 5:21	62	11/8/2015 6:26	60	12/8/2015 23:31	59	14/8/2015 0:36	66	15/8/2015 1:41	56
9/8/2015 4:21	53	10/8/2015 5:26	62	11/8/2015 6:31	58	12/8/2015 23:36	59	14/8/2015 0:41	60	15/8/2015 1:46	60
9/8/2015 4:26	43	10/8/2015 5:31	48	11/8/2015 6:36	61	12/8/2015 23:41	59	14/8/2015 0:46	59	15/8/2015 1:51	58
9/8/2015 4:31	46	10/8/2015 5:36	62	11/8/2015 6:41	65	12/8/2015 23:46	58	14/8/2015 0:51	60	15/8/2015 1:56	58
9/8/2015 4:36	62	10/8/2015 5:41	50	11/8/2015 6:46	64	12/8/2015 23:51	61	14/8/2015 0:56	58	15/8/2015 2:01	56
9/8/2015 4:41	45	10/8/2015 5:46	54	11/8/2015 6:51	63	12/8/2015 23:56	58	14/8/2015 1:01	57	15/8/2015 2:06	53
9/8/2015 4:46	62	10/8/2015 5:51	54	11/8/2015 6:56	63	13/8/2015 0:01	54	14/8/2015 1:06	57	15/8/2015 2:11	55
9/8/2015 4:51	62	10/8/2015 5:56	54	11/8/2015 23:01	62	13/8/2015 0:06	55	14/8/2015 1:11	55	15/8/2015 2:16	52
9/8/2015 4:56	53	10/8/2015 6:01	53	11/8/2015 23:06	60	13/8/2015 0:11	55	14/8/2015 1:16	48	15/8/2015 2:21	54
9/8/2015 5:01	48	10/8/2015 6:06	56	11/8/2015 23:11	60	13/8/2015 0:16	54	14/8/2015 1:21	55	15/8/2015 2:26	57
9/8/2015 5:06	36	10/8/2015 6:11	58	11/8/2015 23:16	60	13/8/2015 0:21	54	14/8/2015 1:26	53	15/8/2015 2:31	58
9/8/2015 5:11	62	10/8/2015 6:16	57	11/8/2015 23:21	60	13/8/2015 0:26	59	14/8/2015 1:31	51	15/8/2015 2:36	55
9/8/2015 5:16	40	10/8/2015 6:21	59	11/8/2015 23:26	60	13/8/2015 0:31	55	14/8/2015 1:36	49	15/8/2015 2:41	55
9/8/2015 5:21	52	10/8/2015 6:26	59	11/8/2015 23:31	60	13/8/2015 0:36	55	14/8/2015 1:41	51	15/8/2015 2:46	50
9/8/2015 5:26	49	10/8/2015 6:31	59	11/8/2015 23:36	60	13/8/2015 0:41	54	14/8/2015 1:46	46	15/8/2015 2:51	53
9/8/2015 5:31	51	10/8/2015 6:36	60	11/8/2015 23:41	58	13/8/2015 0:46	53	14/8/2015 1:51	62	15/8/2015 2:56	49
9/8/2015 5:36	50	10/8/2015 6:41	61	11/8/2015 23:46	58	13/8/2015 0:51	47	14/8/2015 1:56	62	15/8/2015 3:01	52
9/8/2015 5:41	62	10/8/2015 6:46	62	11/8/2015 23:51	58	13/8/2015 0:56	49	14/8/2015 2:01	62	15/8/2015 3:06	48
9/8/2015 5:46	52	10/8/2015 6									

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)													
9/8/2015 3:41	58	10/8/2015 4:46	58	11/8/2015 5:51	51	12/8/2015 6:56	59	14/8/2015 0:01	58	15/8/2015 1:06	56				
9/8/2015 3:46	58	10/8/2015 4:51	57	11/8/2015 5:56	52	12/8/2015 23:01	58	14/8/2015 0:06	57	15/8/2015 1:11	55				
9/8/2015 3:51	58	10/8/2015 4:56	58	11/8/2015 6:01	51	12/8/2015 23:06	58	14/8/2015 0:11	54	15/8/2015 1:16	52				
9/8/2015 3:56	58	10/8/2015 5:01	57	11/8/2015 6:06	52	12/8/2015 23:11	58	14/8/2015 0:16	56	15/8/2015 1:21	53				
9/8/2015 4:01	58	10/8/2015 5:06	58	11/8/2015 6:11	54	12/8/2015 23:16	57	14/8/2015 0:21	56	15/8/2015 1:26	54				
9/8/2015 4:06	58	10/8/2015 5:11	57	11/8/2015 6:16	55	12/8/2015 23:21	57	14/8/2015 0:26	56	15/8/2015 1:31	56				
9/8/2015 4:11	51	10/8/2015 5:16	58	11/8/2015 6:21	57	12/8/2015 23:26	59	14/8/2015 0:31	59	15/8/2015 1:36	54				
9/8/2015 4:16	58	10/8/2015 5:21	58	11/8/2015 6:26	58	12/8/2015 23:31	57	14/8/2015 0:36	68	15/8/2015 1:41	54				
9/8/2015 4:21	58	10/8/2015 5:26	45	11/8/2015 6:31	58	12/8/2015 23:36	56	14/8/2015 0:41	67	15/8/2015 1:46	53				
9/8/2015 4:26	58	10/8/2015 5:31	58	11/8/2015 6:36	57	12/8/2015 23:41	57	14/8/2015 0:46	56	15/8/2015 1:51	56				
9/8/2015 4:31	58	10/8/2015 5:36	57	11/8/2015 6:41	62	12/8/2015 23:46	56	14/8/2015 0:51	59	15/8/2015 1:56	55				
9/8/2015 4:36	44	10/8/2015 5:41	58	11/8/2015 6:46	64	12/8/2015 23:51	58	14/8/2015 0:56	57	15/8/2015 2:01	55				
9/8/2015 4:41	58	10/8/2015 5:46	58	11/8/2015 6:51	61	12/8/2015 23:56	58	14/8/2015 1:01	56	15/8/2015 2:06	53				
9/8/2015 4:46	38	10/8/2015 5:51	49	11/8/2015 6:56	61	13/8/2015 0:01	53	14/8/2015 1:06	54	15/8/2015 2:11	51				
9/8/2015 4:51	58	10/8/2015 5:56	42	11/8/2015 23:01	64	13/8/2015 0:06	53	14/8/2015 1:11	56	15/8/2015 2:16	51				
9/8/2015 4:56	58	10/8/2015 6:01	50	11/8/2015 23:06	58	13/8/2015 0:11	54	14/8/2015 1:16	52	15/8/2015 2:21	52				
9/8/2015 5:01	45	10/8/2015 6:06	52	11/8/2015 23:11	57	13/8/2015 0:16	54	14/8/2015 1:21	53	15/8/2015 2:26	53				
9/8/2015 5:06	58	10/8/2015 6:11	54	11/8/2015 23:16	58	13/8/2015 0:21	56	14/8/2015 1:26	55	15/8/2015 2:31	54				
9/8/2015 5:11	58	10/8/2015 6:16	57	11/8/2015 23:21	57	13/8/2015 0:26	52	14/8/2015 1:31	52	15/8/2015 2:36	52				
9/8/2015 5:16	57	10/8/2015 6:21	56	11/8/2015 23:26	57	13/8/2015 0:31	57	14/8/2015 1:36	55	15/8/2015 2:41	52				
9/8/2015 5:21	58	10/8/2015 6:26	57	11/8/2015 23:31	57	13/8/2015 0:36	54	14/8/2015 1:41	54	15/8/2015 2:46	55				
9/8/2015 5:26	58	10/8/2015 6:31	58	11/8/2015 23:36	57	13/8/2015 0:41	54	14/8/2015 1:46	50	15/8/2015 2:51	51				
9/8/2015 5:31	32	10/8/2015 6:36	58	11/8/2015 23:41	56	13/8/2015 0:46	54	14/8/2015 1:51	37	15/8/2015 2:56</					

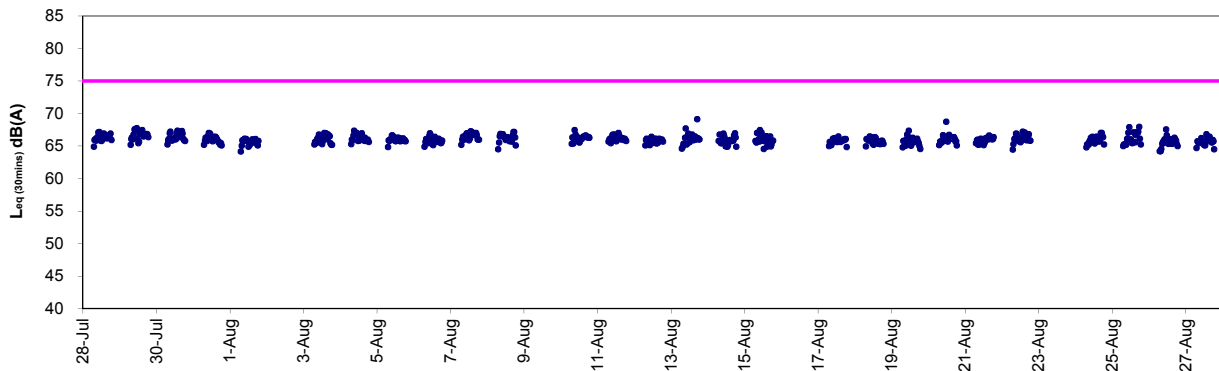
Real-time Noise Data		RTN4 (Causeway Bay Community Centre)									
16/8/2015 15:36	59	17/8/2015 20:41	58	19/8/2015 21:46	58	21/8/2015 22:51	58	23/8/2015 11:56	57	23/8/2015 21:01	59
16/8/2015 15:41	58	17/8/2015 20:46	58	19/8/2015 21:51	59	21/8/2015 22:56	59	23/8/2015 12:01	57	23/8/2015 21:06	59
16/8/2015 15:46	59	17/8/2015 20:51	59	19/8/2015 21:56	57	22/8/2015 19:01	60	23/8/2015 12:06	57	23/8/2015 21:11	59
16/8/2015 15:51	59	17/8/2015 20:56	59	19/8/2015 22:01	57	22/8/2015 19:06	60	23/8/2015 12:11	56	23/8/2015 21:16	59
16/8/2015 15:56	59	17/8/2015 21:01	59	19/8/2015 22:06	58	22/8/2015 19:11	59	23/8/2015 12:16	55	23/8/2015 21:21	57
16/8/2015 16:01	58	17/8/2015 21:06	60	19/8/2015 22:11	57	22/8/2015 19:16	59	23/8/2015 12:21	56	23/8/2015 21:26	57
16/8/2015 16:06	58	17/8/2015 21:11	58	19/8/2015 22:16	59	22/8/2015 19:21	60	23/8/2015 12:26	56	23/8/2015 21:31	58
16/8/2015 16:11	58	17/8/2015 21:16	58	19/8/2015 22:21	60	22/8/2015 19:26	59	23/8/2015 12:31	56	23/8/2015 21:36	58
16/8/2015 16:16	59	17/8/2015 21:21	58	19/8/2015 22:26	62	22/8/2015 19:31	60	23/8/2015 12:36	56	23/8/2015 21:41	57
16/8/2015 16:21	59	17/8/2015 21:26	58	19/8/2015 22:31	57	22/8/2015 19:36	59	23/8/2015 12:41	57	23/8/2015 21:46	57
16/8/2015 16:26	58	17/8/2015 21:31	57	19/8/2015 22:36	58	22/8/2015 19:41	59	23/8/2015 12:46	57	23/8/2015 21:51	57
16/8/2015 16:31	59	17/8/2015 21:36	56	19/8/2015 22:41	58	22/8/2015 19:46	58	23/8/2015 12:51	56	23/8/2015 21:56	57
16/8/2015 16:36	59	17/8/2015 21:41	57	19/8/2015 22:46	58	22/8/2015 19:51	58	23/8/2015 12:56	57	23/8/2015 22:01	57
16/8/2015 16:41	59	17/8/2015 21:46	57	19/8/2015 22:51	57	22/8/2015 19:56	58	23/8/2015 13:01	56	23/8/2015 22:06	57
16/8/2015 16:46	58	17/8/2015 21:51	56	19/8/2015 22:56	57	22/8/2015 20:01	60	23/8/2015 13:06	57	23/8/2015 22:11	57
16/8/2015 16:51	58	17/8/2015 21:56	57	20/8/2015 19:01	58	22/8/2015 20:06	58	23/8/2015 13:11	57	23/8/2015 22:16	57
16/8/2015 16:56	58	17/8/2015 22:01	57	20/8/2015 19:06	58	22/8/2015 20:11	58	23/8/2015 13:16	56	23/8/2015 22:21	57
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16/8/2015 17:06	59	17/8/2015 22:11	56	20/8/2015 19:16	59	22/8/2015 20:21	59	23/8/2015 13:26	58	23/8/2015 22:31	57
16/8/2015 17:11	58	17/8/2015 22:16	59	20/8/2015 19:21	59	22/8/2015 20:26	58	23/8/2015 13:31	58	23/8/2015 22:36	56
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16/8/2015 17:21	58	17/8/2015 22:26	56	20/8/2015 19:31	59	22/8/2015 20:36	60	23/8/2015 13:41	58	23/8/2015 22:46	57
16/8/2015 17:26	58	17/8/2015 22:31	56	20/8/2015 19:36	59	22/8/2015 20:41	57	23/8/2015 13:46	58	23/8/2015 22:51	57
16/8/2015 17:31	59	17/8/2015 22:36	57	20/8/2015 19:41	60	22/8/2015 20:46	57	23/8/2015 13:51	60	23/8/2015 22:56	57
16/8/2015 17:36	58	17/8/2015 22:41	57	20/8/2015 19:46							

Real-time Noise Data		RTN4 (Causeway Bay Community Centre)													
2/8/2015 5:11	54	3/8/2015 6:16	54	4/8/2015 23:21	56	6/8/2015 0:26	56	7/8/2015 1:31	54	8/8/2015 2:36	53				
2/8/2015 5:16	52	3/8/2015 6:21	54	4/8/2015 23:26	56	6/8/2015 0:31	56	7/8/2015 1:36	53	8/8/2015 2:41	54				
2/8/2015 5:21	52	3/8/2015 6:26	55	4/8/2015 23:31	56	6/8/2015 0:36	54	7/8/2015 1:41	54	8/8/2015 2:46	54				
2/8/2015 5:26	51	3/8/2015 6:31	55	4/8/2015 23:36	55	6/8/2015 0:41	56	7/8/2015 1:46	55	8/8/2015 2:51	53				
2/8/2015 5:31	53	3/8/2015 6:36	57	4/8/2015 23:41	55	6/8/2015 0:46	55	7/8/2015 1:51	55	8/8/2015 2:56	54				
2/8/2015 5:36	53	3/8/2015 6:41	56	4/8/2015 23:46	55	6/8/2015 0:51	55	7/8/2015 1:56	54	8/8/2015 3:01	53				
2/8/2015 5:41	52	3/8/2015 6:46	56	4/8/2015 23:51	55	6/8/2015 0:56	56	7/8/2015 2:01	53	8/8/2015 3:06	55				
2/8/2015 5:46	54	3/8/2015 6:51	56	4/8/2015 23:56	55	6/8/2015 1:01	55	7/8/2015 2:06	52	8/8/2015 3:11	55				
2/8/2015 5:51	53	3/8/2015 6:56	56	5/8/2015 0:01	55	6/8/2015 1:06	55	7/8/2015 2:11	52	8/8/2015 3:16	55				
2/8/2015 5:56	56	3/8/2015 23:01	56	5/8/2015 0:06	55	6/8/2015 1:11	54	7/8/2015 2:16	51	8/8/2015 3:21	54				
2/8/2015 6:01	53	3/8/2015 23:06	56	5/8/2015 0:11	55	6/8/2015 1:16	54	7/8/2015 2:21	53	8/8/2015 3:26	53				
2/8/2015 6:06	53	3/8/2015 23:11	56	5/8/2015 0:16	56	6/8/2015 1:21	55	7/8/2015 2:26	52	8/8/2015 3:31	53				
2/8/2015 6:11	55	3/8/2015 23:16	55	5/8/2015 0:21	55	6/8/2015 1:26	54	7/8/2015 2:31	53	8/8/2015 3:36	53				
2/8/2015 6:16	57	3/8/2015 23:21	56	5/8/2015 0:26	54	6/8/2015 1:31	53	7/8/2015 2:36	51	8/8/2015 3:41	52				
2/8/2015 6:21	54	3/8/2015 23:26	55	5/8/2015 0:31	55	6/8/2015 1:36	54	7/8/2015 2:41	52	8/8/2015 3:46	53				
2/8/2015 6:26	54	3/8/2015 23:31	56	5/8/2015 0:36	55	6/8/2015 1:41	56	7/8/2015 2:46	52	8/8/2015 3:51	53				
2/8/2015 6:31	54	3/8/2015 23:36	55	5/8/2015 0:41	54	6/8/2015 1:46	57	7/8/2015 2:51	52	8/8/2015 3:56	53				
2/8/2015 6:36	56	3/8/2015 23:41	55	5/8/2015 0:46	54	6/8/2015 1:51	55	7/8/2015 2:56	51	8/8/2015 4:01	52				
2/8/2015 6:41	56	3/8/2015 23:46	56	5/8/2015 0:51	55	6/8/2015 1:56	53	7/8/2015 3:01	51	8/8/2015 4:06	52				
2/8/2015 6:46	56	3/8/2015 23:51	54	5/8/2015 0:56	53	6/8/2015 2:01	52	7/8/2015 3:06	52	8/8/2015 4:11	52				
2/8/2015 6:51	54	3/8/2015 23:56	55	5/8/2015 1:01	54	6/8/2015 2:06	52	7/8/2015 3:11	54	8/8/2015 4:16	52				
2/8/2015 6:56	55	4/8/2015 0:01	54	5/8/2015 1:06	55	6/8/2015 2:11	53	7/8/2015 3:16	51	8/8/2015 4:16	52				
2/8/2015 23:01	55	4/8/2015 0:06	55	5/8/2015 1:11	53	6/8/2015 2:16	52	7/8/2015 3:21	52	8/8/2015 4:26	54				
2/8/2015 23:06	55	4/8/2015 0:11	54	5/8/2015 1:16	53	6/8/2015									

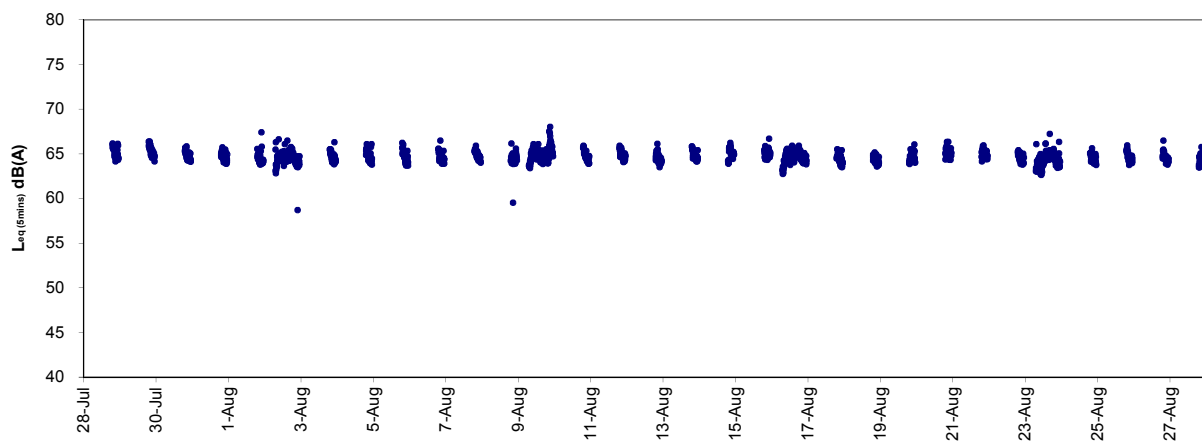


Graphic Presentation of Real Time Noise Monitoring Result (RTN1-Food and Environmental Hygiene Department Depot)

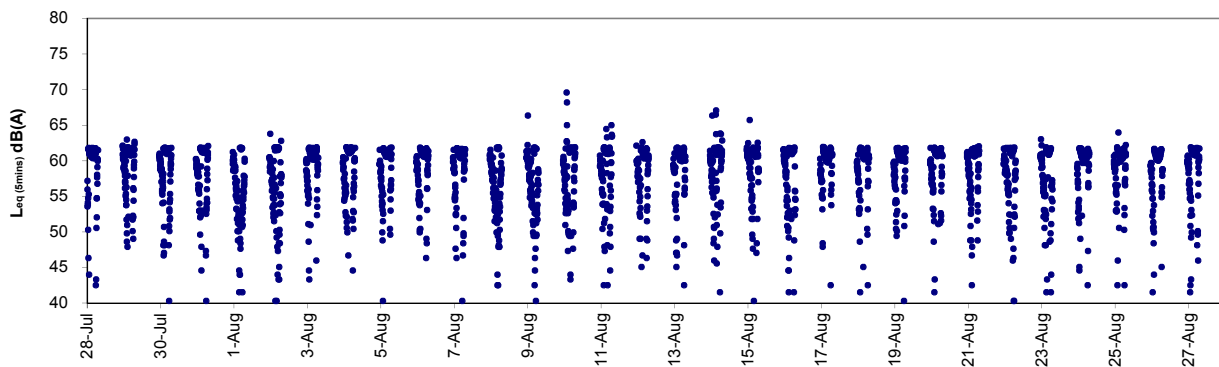
Day Time (0700 -1900 hrs on normal weekdays)



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

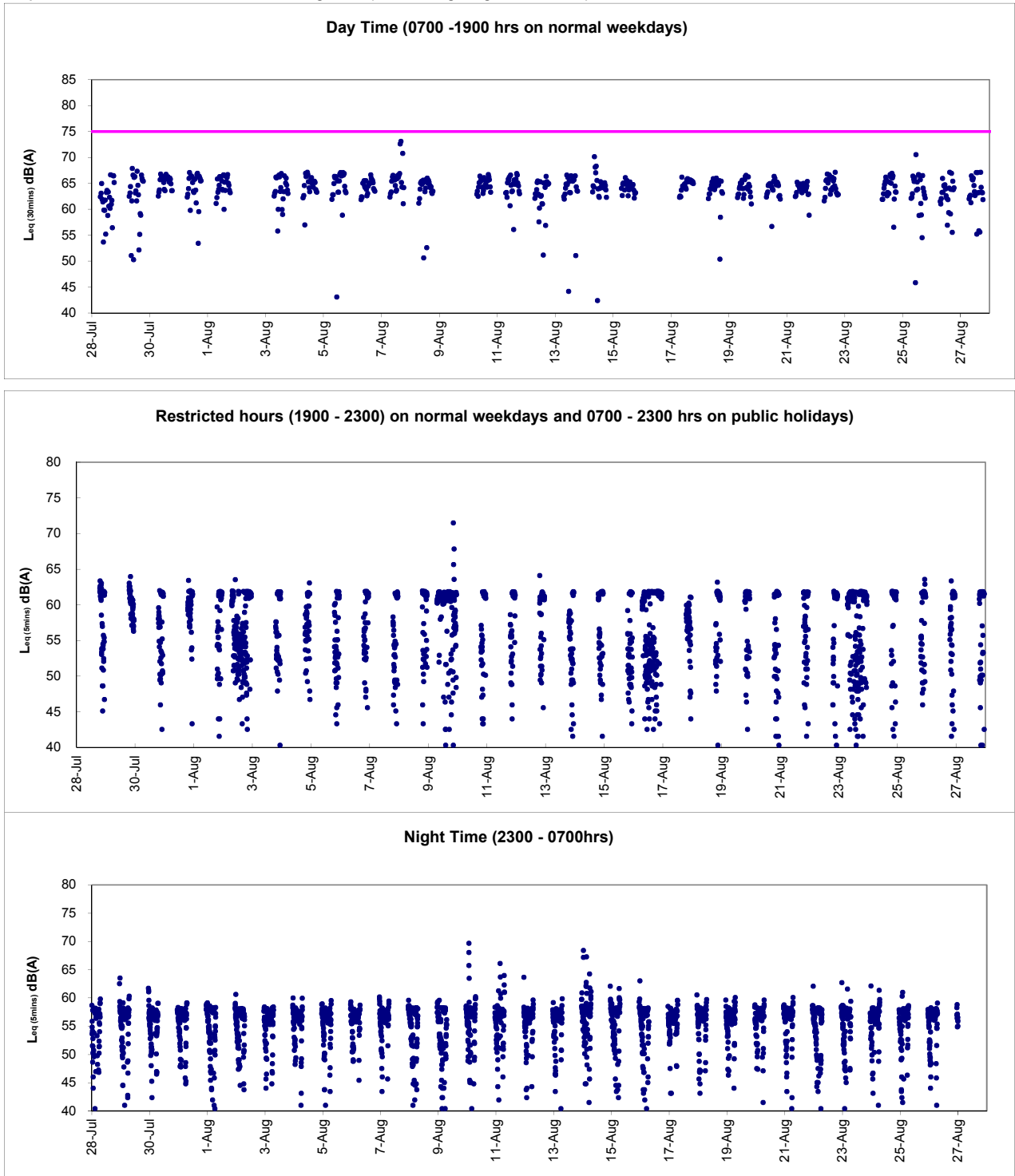


Night Time (2300 - 0700hrs)





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



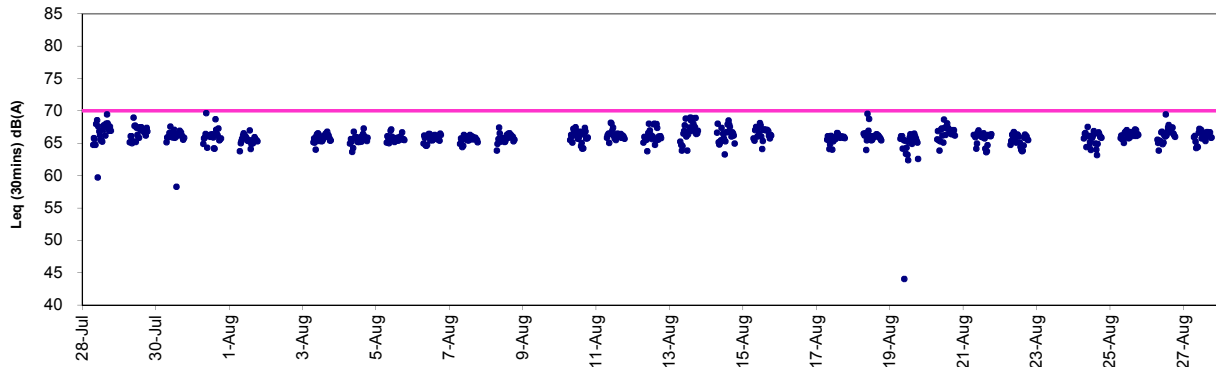


Contract no. HK/2011/07

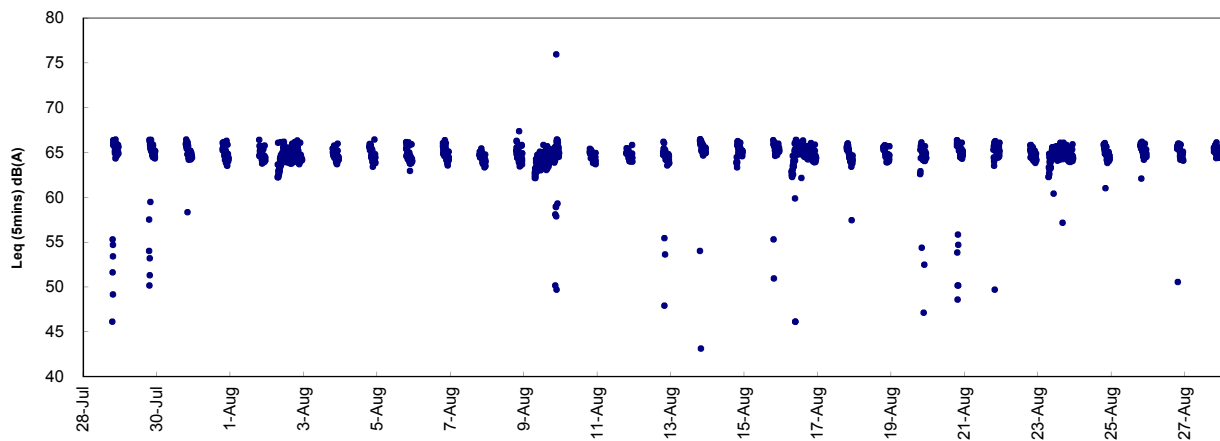
Wanchai Development Phase II and Central Wanchai Bypass
Sampling, Field Measurement and Testing Works (Stage 2)

Graphic Presentation of Real Time Noise Monitoring Result (RTN3-Yu Lee Mo Fan Memorial School)

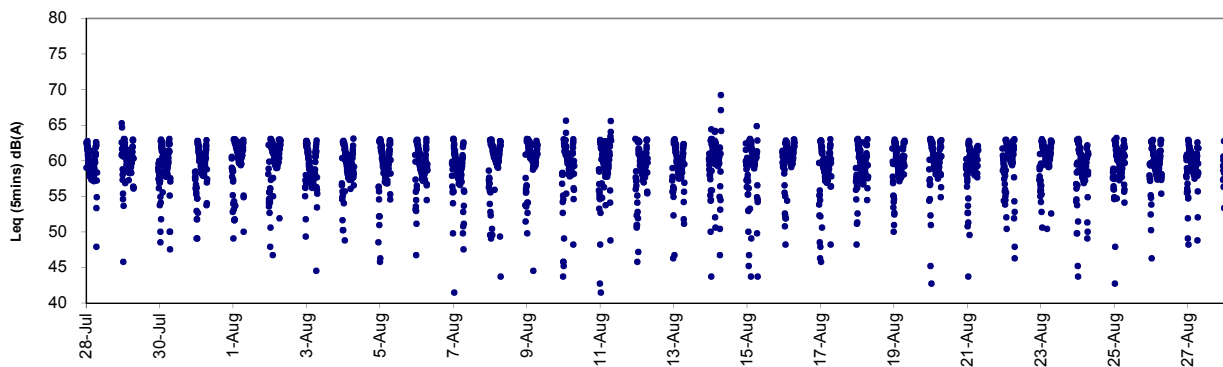
Day Time (0700 -1900 hrs on normal weekdays)



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



Night Time (2300 - 0700hrs)



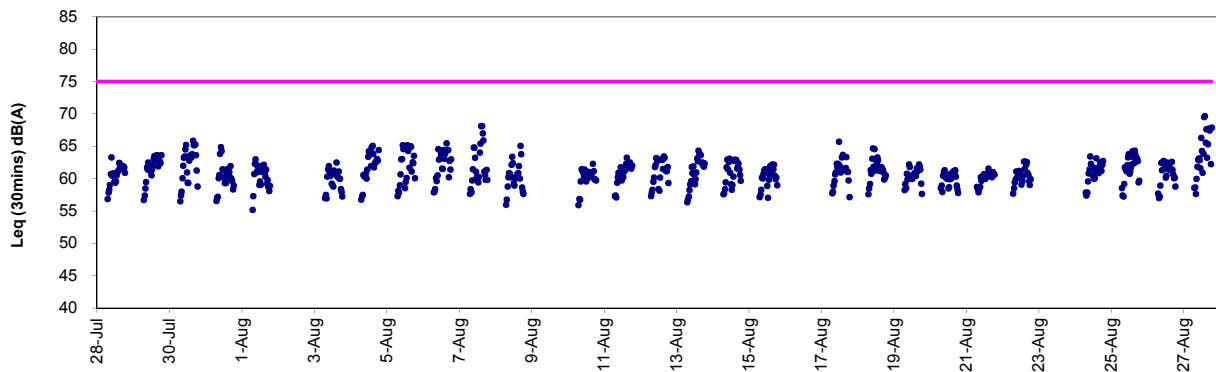


Contract no. HK/2011/07

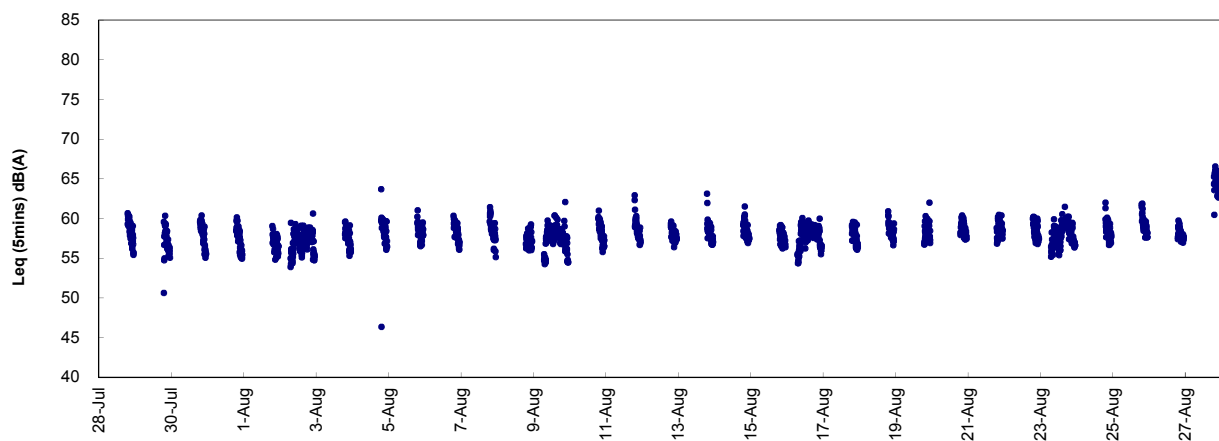
Wanchai Development Phase II and Central Wanchai Bypass
Sampling, Field Measurement and Testing Works (Stage 2)

Graphic Presentation of Real Time Noise Monitoring Result (RTN4-Causeway Bay Community Centre)

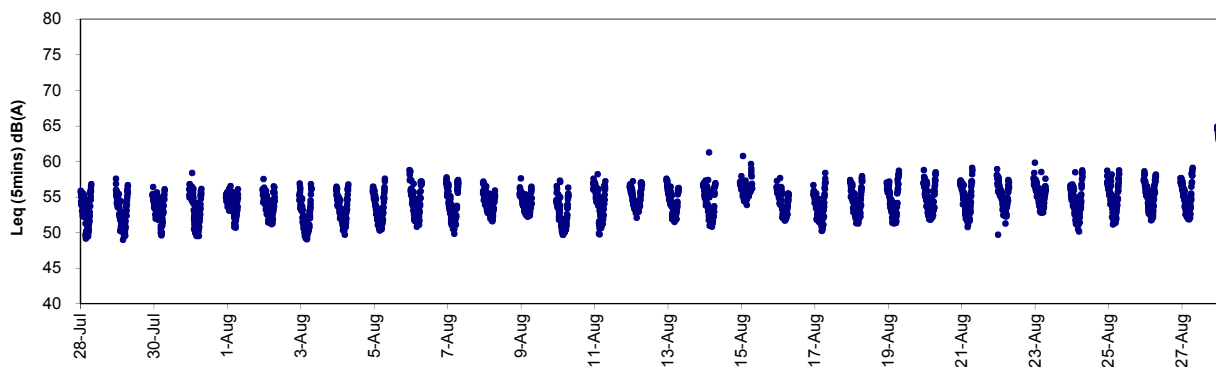
Day Time (0700 -1900 hrs on normal weekdays)



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

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

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



Appendix 6.2

Summary for Notification of Exceedance



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_15A016	26-Aug-15	8:00	CMA2a - Causeway Bay Community Bay	218.3	24hr TSP (ug/m ³)	169.5	260	Possible reason: Elevated TSP level in relate to the external wall renovation undertaken at Causeway Bay Community Centre by non-CWB Project Contractors. Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of Contractor's working procedures. Remarks / Other Obs: Although IEC bridge deck saw cutting and wire cutting were undertaken on the monitoring date at around Watson Road under Contractor of HY/2009/19, mitigation measure including watering during cutting works was generally implemented. According to the observation on the monitoring date, external wall renovation including tile removal using hand held breaker was undertaken by non-CWB Contractor at Causeway Bay Community Centre and considered as the major source of dust impact during monitoring. As such, the exceedance was considered not related to the Project.
X_15A017	26-Aug-15	8:00	CMA2a - Causeway Bay Community Bay	218.3	24hr TSP (ug/m ³)	169.5	260	Possible reason: Elevated TSP level in relate to the external wall renovation undertaken at Causeway Bay Community Centre by non-CWB Project Contractors. Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Remarks / Other Obs: In view of wall/ ceiling washing within a section tunnel area outside Watson with no considerable dust impact was conducted under the Contract of HY/2011/08 on the monitoring date while external wall renovation including tile removal using hand held breaker was undertaken by non-CWB Contractor at Causeway Bay Community Centre and considered as the major source of dust impact during monitoring, the exceedance was considered not related to the Project.



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_15A018	27-Aug-15	9:56	CMA2a - Causeway Bay Community Bay	380.9	1hr TSP (ug/m ³)	323.4	500	Possible reason: Elevated TSP level in relate to the external wall renovation undertaken at Causeway Bay Community Centre by non-CWB Project Contractors. Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Remarks / Other Obs: In view of IEC bridge deck lifting with crane around Watson road with no considerable dust impact was undertaken by the Contractor of HY/2009/19 on the monitoring date while external wall renovation including tile removal using hand held breaker was undertaken by non-CWB Contractor at Causeway Bay Community Centre and considered as the major source of dust impact during monitoring, the exceedance was considered not related to the Project.
X_15A019	27-Aug-15	14:00	CMA2a - Causeway Bay Community Bay	350.1	1hr TSP (ug/m ³)	323.4	500	Possible reason: Elevated TSP level in relate to the external wall renovation undertaken at Causeway Bay Community Centre by non-CWB Project Contractors. Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Remarks / Other Obs: In view of IEC bridge deck lifting with crane around Watson road with no considerable dust impact was undertaken by the Contractor of HY/2009/19 on the monitoring date while external wall renovation including tile removal using hand held breaker was undertaken by non-CWB Contractor at Causeway Bay Community Centre and considered as the major source of dust impact during monitoring, the exceedance was considered not related to the Project.
X_15A020	27-Aug-15	9:56	CMA2a - Causeway Bay Community Bay	380.9	1hr TSP (ug/m ³)	323.4	500	Possible reason: Elevated TSP level in relate to the external wall renovation undertaken at Causeway Bay Community Centre by non-CWB Project Contractors. Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Remarks / Other Obs: In view of wall/ ceiling washing within a section tunnel area outside Watson with considerable dust impact was undertaken by the Contract of HY/2011/08 on the monitoring date while external wall renovation including tile removal using hand held breaker was undertaken by non-CWB Contractor at Causeway Bay Community Centre and considered as the major source of dust impact during monitoring, the exceedance was considered not related to the Project.
X_15A021	27-Aug-15	14:00	CMA2a - Causeway Bay Community Bay	350.1	1hr TSP (ug/m ³)	323.4	500	Possible reason: Elevated TSP level in relate to the external wall renovation undertaken at Causeway Bay Community Centre by non-CWB Project Contractors. Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Remarks / Other Obs: In view of wall/ ceiling washing within a section tunnel area outside Watson with considerable dust impact was undertaken by the Contract of HY/2011/08 on the monitoring date while external wall renovation including tile removal using hand held breaker was undertaken by non-CWB Contractor at Causeway Bay Community Centre and considered as the major source of dust impact during monitoring, the exceedance was considered not related to the 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
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 'a Management office to their resident and the advice was only given on the extension construction works (for Contract HY/2009/15) to 7am-9pm 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 and evening time period while breaking and excavation works were observed 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) 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) With reference to the construction noise monitoring at Victoria Centre, no exceedance was recorded on 19 and 25 July 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. 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 monitoring station at Victoria Centre on 25 July and	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.	4 August 2011 during daytime and evening time period while breaking and excavation works were observed during monitoring. 5) 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
	07/08/2011				4) However, complainant did not satisfy with the response on the noise nuisance from the rock-breaking during morning in front of Victoria Centre and then further complaint via 1823 on 7 August 2011. 5) Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed. <i>Remarks: There will be counted as two complaints in this complaint log.</i>	
110730	30/07/2011	Mr. Tsui by ICC no. 1-305074350	Central	Construction noise generated by operations of Central-Interchange which is near the spa room at Four-Season Hotel. Also, the complaint enquired the commencement time of the construction on Saturday.	1) It was referred by AECOM to ET on 1 August 2011. 2) RSS confirmed that noisy plants from 2 vibratory hammers have been conducted in alternating manner for piling and drilling works for diaphragm wall construction. 3) With reference to the construction noise monitoring at IFC Western End of Podium, no exceedance was recorded on 4 August 2011 during monitoring while sheet piling works were undertaken during monitoring. 4) In order to reduce the noise impact to nearby noise sensitive receivers, Contractor has been implemented the following noise mitigation measures: - Erection of acoustic lining at the hoarding next to Four Seasons Hotel; - Temporary noise barrier with extended acoustic lining; - Reduced in plant such that only have one vibration hammer operating at the west side near Four	Closed



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					Seasons Hotel instead of 2 5) In conclusion, it was related to the construction works under Contract HY/2009/18 and mitigation measure was provided. The complainant was satisfied with the arrangement and no further complaint was received after proposed measures.	
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 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.	Closed
110817	17/08/2011	ICC no. 1-307657681	North Point	Visual impact generated by light from a large amount of spot-lights on the barge during mid-night nearby City Garden.	1) It was referred by AECOM to ET on 23 August 2011 2) RSS confirmed that some non-essential lights were turned on during night-time period which caused the nuisance to the nearby residents. In addition, absence of lighting shields at flood lights results in visual glare to the complaint at night-time. 3) Follow-up action had been taken by contractor that switches off all non-essential lights to minimized nuisance to the nearby residents. The complainant satisfied to the practice and no further complaint was received after that.	Closed
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	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	Closed



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				reclamation area.	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.	
110826A	26/08/2011	A complaint letter from Mr. Au of Cayley Property of City Garden	North Point	Harbor front adjacent to their 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 2) Confirmed with the Resident Site Staff that the construction works were referred to the Contractors HY/2009/11 and HY/2009/19. 3) The pump is located on the site area of HY/2009/19 4) A temporary garbage defender was installed on 23 July 2011 by HY/2009/11 and the shape of the defender was adjusted on 8 August 2011 in order to exclude the outfall. 5) An ad hoc inspection of the effectiveness of garbage defender was conducted with RSS (CWB project team), contractor of HY/2009/11 and HY/2009/19 and IECon 29 August 2011. Inspection report of it was submitted to RSS on 19 September 2011. 5) Daily cleaning near the water intake was conducted twice a day by contractor HY/2009/19. 6) 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 come from sea bed from entering the intake. 6) According to the complaint letter from Cayley Property, the outcomes of the preventive measures were not complying with their expectation. 7) During on-site inspection, floating refuses observed	Closed



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					occasionally outside the garbage defender. No conclusion could be made for the source of these floating refuses. On the other hand, some of the floating refuses were observed immigrating in the protective zone during investigation 8) All daily cleaning actions had been taken by contractor to minimize floating refuse inside the construction site. It was noted that the intake (land side) is open access to public, so that many activities such as fishing, feeding fish were conducted there 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. 9) 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. 10) 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 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.	Closed
111104	04/11/2011	Mr. Liu from	Wan Chai	Complain about a tree near the	1) ET confirmed with the Resident Site Staff that	Closed



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		LCSD complained via Contractor Complaint Hotline		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.	- 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.	
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 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	Closed



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					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. Furthermore, 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.	
111212	12/12/2011	The complainant, Mr Tsui from IFCII's management office complained via hotline 1823	Central	A visual impact complaint from hotline 1823 was received by ET on 9 January 2011 (ICC Ref. No.: ICC#1-333037096 dated on 12 December 2011). The complaint, Mr Tsui was reported that visual nuisance caused by lighting in the construction site during night time.	1) RSS notified ET on 9 Jan 2012. 2) ET confirmed with the Resident Site Staff that A joint inspection was conducted by Mr Tsui and contractor on that night to see whether there is any improvement. 3) Due to safety reason, igniting enough lights should not be avoided in construction site. However, the light sources were not directed away from pointing to the sensitive receiver and results in visual glare to the complaint. 4) Confirmed with the Resident Site Staff the complainant was satisfied the new arrangement of the lights with contractor after the joint inspection. No further complaint received after that.	Closed
111220	20/12/2011	The complainant, Ms. Poon complained via hotline 1823 (ICC Ref. No.: ICC#1-334683841)	North Point	Construction air and noise nuisance generated that many trucks carrying construction materials driving along Watson Road and Oil Street and possibly entering/leaving the construction site near the IEC during 0800 to 1900 hours.	1) RSS notified ET on 22 Dec 2011. 2) ET confirmed with the Resident Site Staff that the complainant cannot identify whether the trucks were working under the CWB project or not. 3) The dominant construction air and noise nuisances were emitted by the trucks along Oil Street and Waston Road, however, this is the public road for all vehicles. Reviewing the air quality monitoring and noise monitoring results. No exceedance was recorded during this period. 4) Confirmed with the Resident Site Staff that they provided a contact no. for any future enquiries regarding	Closed



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					CWB project to the complainant and she was satisfied on the arrangement and no further complaint was received after that.	
111230	30/12/2011	Residents of Harbour Heights	North Point	Construction air and noise nuisance generated by construction vehicles were found parked illegally at King Wah Road and lining up at Oil Street without the engine turning off.	1) RSS notified ET on 6 January 2011. 2) ET confirmed with the Resident Site Staff that a number of construction activities are concurrently proceeding in the vicinity of Oil Street, King Wah Street and a private development project in King Wah Street 3) The dominant construction air and noise nuisances were emitted by the trucks along Oil Street and King Wah Road, however, this is the public road for all vehicles. Reviewing the results of air quality monitoring station (CMA1b) and noise monitoring (M4b). No exceedance was recorded during this period. Site inspections for HY/2009/19 were conducted on 4 January 2012. The condition of the site access at Oil Street and the public road nearby were found satisfactory. It is noted that HyD also allow and encourage their contractors to maximize the use of marine access, where available, to work sites, so as to minimize burdening nearby public roads. When land trips are unavoidable, they require contractors to tidy up their construction vehicles before leaving works sites. No contractor under CWB project parked their vehicles illegally at King Wah Street, and HyD still reminded them not to commit such offence. 4) According to HyD's staff replied the complaint letter on 10 January 2012, there is a private development project under construction at King Wah Road. To access these works sites, construction vehicles have to use public roads nearby. No further complaint received after HyD's reply.	Closed
120118	18/01/2012	N/A	North Point	A complaint regarding a tree located in front of Victoria Centre under IECL was covered by one meter mud without any protection. The complainant concerns the health of the tree in such condition.	1) RSS notified ET on 20 January 2012. 2) ET confirmed with the Resident Site Staff that The tree is inside the site area of HY/2009/19 and The Botanical name of the tree is Ficus superba var. japonica and the I.D. of the tree is UT48 3) According to the information provided by RSS on 20 Jan 2012, the tree shall be felled that has been approved by DLO on 29 August 2011. Moreover, the tree was felled	Closed



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					by contractor on 19 January 2012. 4) No further complaint received after HyD's reply.	
120305	03/03/2012	Resident of Harbour Heights complained via hotline 1823 (ICC Ref. No.: ICC#1-344632511)	North Point	A complaint regarding excessive noise from construction sites of CWB was observed outside Harbour Heights from Monday to Saturday before 8am. The plants were frequently turned on before 7:30am creating nuisance. The complainant requested a speedy follow-up and reply from relevant department.	1) RSS notified ET on 5 March 2012. 2) ET confirmed with the Resident Site Staff that PME for diaphragm wall construction started to operate at about 7:30am whilst the other PME, including those for land bored piling work, started to operate after 8am. 3) After reviewing the results of noise monitoring (M4b), no exceedance was recorded during daytime period and the noise level were below 75dB(A). Site inspection for HY/2009/19 was conducted on 7 March 2012. The condition of noise mitigation measures near Harbour Heights was found satisfactory. RSS confirmed that no operation was active before 7:00am everyday. The suspected nuisance was to be considered caused by the PME for diaphragm wall construction. A surprise check was performed on 13 March 2012 by RSS. It was found that no noisy PME was in operation by Contractor of HY/2009/19 before 8am, and the construction noise level was minimal and not disturbing. The noise level and operation time both complied with statutory requirements set up in NCO. 4) Complainant called ICC on 8 March 2012 to confirm HyD has provided a response. No further complaint was received after the response.	Closed
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	Closed



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					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 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.	
120415	15/04/2012	The complainant Ms. Law, resident of Fu Lee Loy Mansion, complained via hotline 1823 (ICC Ref. No.: 1-351021108)	North Point	A complaint regarding excessive noise generated from a HyD project that is located at the connection point of CWB and IEC affecting nearby residents. Lately during the middle of the night (around 00:00 to 05:00), low frequency noise, which possibly came from the operating power generator and the barges which were parked along the Oil Street work site, were making a nuisance to the complainant and residents nearby. The complainant requested that relevant department should follow-up.	1) RSS notified ET on 17 April 2012. 2) ET confirmed with the Resident Site Staff that there was no operation of power generators for HY/2009/19 and HY/2009/17 (HY/2009/11 had no physical work on site) during the concerned period. Although there were a few barges mooring at the seafront of HY/2009/19, they were not in operation and hence no operational noise would be emitted. 3) After reviewing the results of noise monitoring (M4b and M5b), no exceedance was recorded during day time period and the noise level was below 75dB(A). Site inspection for HY/2009/19 was conducted on 18 April 2012. The condition of noise mitigation measures near Harbour Heights were found satisfactory. RSS confirmed that no operation of power generators for HY/2009/19 and HY/2009/17 (HY/2009/11 had no physical work on site) during the concerned period. Although there were a few barges mooring at the seafront of HY/2009/19, they were not in operation and hence no operational noise would be emitted. 4) HyD made a reply to the complainant on 30 April 2012 via email. HyD replied that the current works near Oil Street, North Point, included CWB tunnel works, IEC connections and associated foundation works. According to RSS records, no operations were performed during the early hours of March and April at Oil Street and the waterbody nearby, and so it was believed that the noise nuisance was not generated from the CWB project. Despite that, RSS would continue to monitor the Contractor on the operations and effectiveness of the environmental mitigation measures implemented on site, as not to affect daily life of local residents nearby. No further complaint was received after the response.	Closed



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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 Marc 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 mimize 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



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130606	30/5/2013	ICC Ref. No.: #1-430164728	Central – Man Kat Street	1. A number of trees (approximately more than ten) along Man Kat Street were found to be in poor health condition with withered and yellow leaves. The complainant has requested a follow-up by relevant department.	1) RSS notify ET on 6 June 2013 2) ET confirmed with the Resident Site Staff that According to the information provided by RSS, 13 no. of the trees - Roystonea regia (T1674, T1675, T1676, T1677, T1678, T1679, T1680, T1681, T1683, T1644, T1643, T1641, T1639) at the concerned location raised by the complainant was found to be with withered and yellow leaves and 1 no. of tree- Khaya senegalensis (T1712) raised by the complainant was found to be in poor health condition. No construction works was undertaken by Contract HY/2009/18 at the concerned planter area where the affected trees are located. It was also observed that an active CEDD construction works area under a separate contractor not related to Central Wan Chai Bypass Project was found to be located within the concerned planter area. 3) A follow-up joint inspection with RSS and Landscape specialist was conducted on 10 June 2013, it was considered that the withered and yellow leaves of the affected trees (T1674, T1675, T1676, T1677, T1678, T1679, T1680, T1681, T1683, T1644, T1643, T1641, T1639) at the concerned planter area were contributed by natural life cycle of the affected trees and the health condition of the affected trees were considered to be fair. It was also noted that an active CEDD works area was located within the concerned planter area in close proximity to few of the concerned trees (T1644, T1643, T1641, T1639) According to tree inspection records from Jan 2013 to May 2013 confirmed by RSS (Document Ref: CI-F1-043b, CI-F1-044b, CI-F1-045b, CI-F1-046b, CI-F1-047b), the affected tree (T1712) at the concerned planter area was considered to show sign of withering and considered to be in poor health condition in latest tree survey report confirmed by RSS.	Closed



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					During the follow-up inspection on 10 June 2013, It was observed that construction material and oil drum were placed near the the roots area of other trees within the CEDD works. Despite the above observation, no direct evidence was found on site which indicates the work front have contributed to the poor health condition of the affected tree (T1712) at the time of investigation. 4) The relevant contractor have removed the construction material near the root area of the trees retained on site and conduct pruning to remove the withered and yellow leaves retained on tree trunk to minimize impact on the trees appearance.In addition, safety supporting wire was provided for concerned tree (T1712) 5) ET recommended the contractor to keep in view the health condition of the concerned tree (T1712) and apply permission for tree felling together with tree compensation plan if considered necessary. Furthermore, the contractor was reminded to implement regular checking of tree health condition and regular removal of withered leaves to maintain the overall tree appearance.	



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130611	30 May 2013 and 1 June 2013	EPD Ref.:H04/RS/0001 1587-13	Area near Central Pier	1. Noise was emanated from the construction site near the Central Piers at around 0900 hrs on 30 May 2013 and other days and requested follow up action by relevant department.	1) RSS notify ET on 11 June 2013 2) ET confirmed with the Resident Site Staff that According the information confirmed by RSS, major noise generating construction activities undertaken at works area near Central Pier during the concerned time include - Breaking up existing D-wall concrete and excavation at portion 4B and 4C - Sheet piling works at Portion VI (Man Kat Street) 3) Total 1 no. of Backhoe with breaker, 1 no. of Backhoe with vibratory hammer and 4 no.s of pneumatic breakers were deployed for the above construction activities. Reviewing the noise monitoring data at monitoring stations (M7e- International Finance Centre Eastern End of Podium and M7w- International Finance Centre Western End of Podium), no limit level exceedances were recorded during routine noise monitoring event on 28 May 2013 and 03 June 2013. As similar construction works activities conducted on 30 May 2013 was continued across the above monitoring period, the noise emanated from the construction activities under Contract HY/2009/18 was considered to complied with the statutory requirement. In addition, weekly environmental site inspection was conducted on 30 May 2013 at around 10:00. According to the inspection record, no particular observation regarding noise impact was recorded and the mitigation measures including erection of of temporary noise barrier was observed in place. As such, no direct information associated with the noise concerned raised was considered available and no non-conformity was identified. 4) ET recommend the contractor to review the need of additional noise mitigation measures to further reduce the noise enmated during construction works for pier side public area.	Interim report submitted to EPD on 19 June 2013, EPD advised no further comment on 5 Aug 2013 and final report for case closing submitted on 6 Aug 2013.



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131010	03 Oct 2013	ICC Ref: No.1-467000768	Area between Central Pier and International Finance Centre	Noise and air quality impact was experienced at the area located between IFC and Central Pier during peak hours.	ET confirmed with the Resident Site Staff that 1) The major construction activities at the concerned location conducted over the past three months include; - Formwork, rebar and concreting - Backfilling - Water-proofing - Scaffolding erection 2) Mitigation measures implemented by the Contractor for the above construction works include - Select quiet plant and work methods; - Check plant and equipment for condition; - For use of powered mechanical equipment during restricted hours: Obtain necessary Construction Noise Permit and strictly comply with their conditions; - Frequently spray water to major haul road and stockpiles to suppress dust generation; and - Cover stockpiles with impervious sheets The construction activities including backfilling, concreting and other associated tunnel works were undertaken in the past three months. Having reviewing the monitoring data of the monitoring stations in the vicinity of the concerned location raised by the complainant, namely monitoring station M7e and M7w (Noise Monitoring Station) and MA1e and MA1w (Air Monitoring Station), no action or limit level exceedance was recorded. In addition, mitigations measures including water spraying and erection of noise barrier were observed during weekly site inspection in August and September 2013 and reminders on dust mitigations measures given during weekly site inspection to the contractor were rectified. As such, the construction activities under Contract HY/2009/18 were considered in compliance with the statutory requirement and no cumulative air/ noise quality impact was observed in the past three months.	Closed



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					Elevated noise level at monitoring station M7e (International Finance Centre East Podium) was noted on 24 September 2013. The Contractor is recommended to review the current measures and to implement additional noise mitigation measures to further avoid potential impact to nearby public area during construction works.	
131217	16 Dec 2013	ICC Case Ref.: 1-484998552	Victoria Park near Hing Fat Street Exit	Sweeping of muddy water into public drains.	ET confirmed with the Resident Site Staff that 1)The major construction activities around the concerned location conducted on 16 Dec 2013 a.m.includes: -Preparation work of rootball for tree transplanting According to the information provided by RSS, the construction activities around the concerned location on 16 Dec 2013 include preparation work of rootball for tree transplanting at Zone 17/18. A further investigation on the complaint was conducted on 19 Dec 2013 during weekly environmental inspection. It was observed that a tree worksarea comprised of mainly loosen soil was located near the concerned location. It was considered that the inclined surface and loosen soil nature of the concerned worksarea could have led to the muddy surface runoff in rain. Deposition of muddy runoff onto nearby public pavement outside worksarea was hence resulted and was subsequently cleaned into nearby public stormwater drain by the Contractor's workers on the complaint date. As such, the case was considered as works related. Sandbags, geotextile and gravels were immediately placed by the Contractor around the gullies at the concerned location to prevent leftover muddy runoff to the public stormwater drain as observed during the weekly inspection on 19 Dec 2013. With respect to the follow-up raised by the complainant on 19 Dec 2013, sandbags, geotextile and gravels placed at gullies located at public area were removed by the Contractor on the same day for maintaining passible public pavement. Follow up measures including sandbag bundle and covering of worksarea with impervious sheeting was immediately placed at the source of impact at the concerned worksarea boundary by the Contractor.	Final investigation report issued on 20 Dec 2013. Case closed on 3 Jan 2014.



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131224	24 Dec 2013	(ICC Case Ref.: 1-486434321	Victoria Park Children Playground	Odour and large amount of dust particles affecting the public user of the Victoria Park near Children playground	ET confirmed with the Resident Site Staff that 1) The major construction activities around the concerned location conducted on 24 Dec 2013 include: - Breaking up existing pillar box for new children playground Portion II - Pressing of sheet pile at bowling green for ELS works Portion XII - Welding work for preparation of sheetpiling work at bowling green Portion VI - Demolition of existing pavilion for bowling green Portion VI - Felling of tree TA50 at Victoria Park Zone 2) Mitigation measures implemented by the Contractor for the above construction works include - Water spraying for demolition and other dust generating works. According to the relevant site records, breaking up of existing pillar box, pressing of sheet pile, welding work for preparation of sheetpiling demolition of existing pavilion and felling of tree TA50 at Victoria Park Zone 13 were conducted at the concerned location during the time of complaint. Based on information and photo record provided by the RSS, dust mitigation measures including water spraying during dust generating works were implemented by the Contractor at the concerned location on 24 Dec 2013. Follow-up investigation was conducted on 27 Dec 2013 during weekly environmental inspection, dust mitigation measures including water spraying to dusty area and major dust generation works were confirmed in place despite a general reminder was given to the contractor to enhance the water spraying to dusty haul road during dry season. Based on on-going site inspection and the follow-up investigation, the site condition was considered generally satisfactory and no non-conformance was identified. Upon further review on the supplementary information provided by the complainant on 31 Dec 2013 and investigation conducted on 2 Jan 2014, the tree felling work of tree TA50 was located nearest to the location of the complainant. According to the location plan provided by the RSS and on site investigation, the tree felling work	Case closed and full investigation report issued on 3 Jan 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					for TA50 was immediately in front of the location of the complainant. Based on site observation, scrap material of bark and leaves inevitably generated from cutting of branches during tree felling work was considered to be the most probable cause for the observation raised by the complainant at the concerned location on 24 Dec 2013. Furthermore, welding work was observed near the concerned location and was considered to be the potential source for the smell and exhaust fumes as described by the complainant. Notwithstanding the above, welding work was not identified as a work activity with air quality impact under Project EIA report but it would be desirable to implement preventive measures to minimize potential nuisance to nearby public.	
140123	22 Jan 2014	ICC Case Ref.:1-494077682	Causeway Bay Typhoon Shelter	Construction works have been undertaken during restricted hours until 2300 hrs and occasionally the working hours were extended to around 0100 hrs at nighttime period over the last two to three months at a construction site located within Causeway Bay Typhoon Shelter. For instance, concreting and excavation works were conducted at the concerned location on 22 Jan 2014 during nighttime hours and generated noise impact to the complainant.	ET confirmed with the Resident Site Staff that No construction activity was undertaken at workzone TS1 under HY/2009/15 within Causeway Bay Typhoon Shelter after 1900 hrs on 21 Jan 2014. No construction activity was undertaken at workzone TS3 under HY/2010/08 within Causeway Bay Typhoon Shelter after 1900 hrs on 21 Jan 2014. Concreting for base slab and hanger wall was conducted at workzone TS2 under HY/2009/15 within Causeway Bay Typhoon Shelter from 1900 to 0000 hrs on 21 Jan 2014; Total 8 no.s of concrete lorry mixers, 1 no. of water pump, 2 no.s of concrete pumps (lorry mounted), 1 no. of mobile crane QPME (diesel) and 3 no.s of vibratory pokers were operating from 1900 to 0000hrs on 21 Jan 2014. Concreting for base slab and hanger wall was conducted at workzone TS2 under HY/2009/15 within Causeway Bay Typhoon Shelter from 0000 to 0700 hrs on 22 Jan 2014; Total 1. no of concrete lorry mixer, 1 no. of water pump, 1 no. of concrete pump (lorry mounted), 1 no. of vibratory poker were operating from 1900 to 0000hrs on 22 Jan 2014	Case closed and full investigation report issued on 4 Feb 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					According to the relevant site records, from 1900-0000hrs on 21 Jan 2014, concreting for base slab and hanger wall was conducted at workzone TS2 under HY/2009/15 within Causeway Bay Typhoon Shelter. Total 8 no.s of concrete lorry mixers, 1 no. of water pump, 2 no.s of concrete pumps (lorry mounted), 1 no. of mobile crane QPME (diesel) and 3 no.s of vibratory pokers were operating at the above period. From 0000 to 0700 hrs on 22 Jan 2014, concreting for base slab and hanger wall was conducted at workzone TS2 under HY/2009/15 within Causeway Bay Typhoon Shelter. Total 1. no of concrete lorry mixer, 1 no. of water pump, 1 no. of concrete pump (lorry mounted), 1 no. of vibratory poker were found operating at the above period. After reviewing relevant photo records and information verified by RSS and the Construction Noise Permit (CNP) no.GW-RS1384-13, it was considered that several conditions of CNP GW-RS1384-13 were not fulfilled by the Contractor in particular for the item(s) below, No acoustic installation was provided for the relevant PME(s) used as stated in CNP condition 3.d.during the concerned concreting works. From 1900 to 2300 hours on 21 Jan 2014, the PME(s) used on-site did not comply with any given PME grouping requirement(s) as stated in condition 3.a. and condition 3.d. in CNP no.GW-RS1384-13. From 0000 to 0700 hours on 22 Jan 2014, the PME(s) used by the Contractor on-site did not comply with any given PME grouping requirement(s) as stated in condition 3.a. and condition 3.d. in CNP no.GW-RS1384-13. From 1900 to 2300 hours on 21 Jan 2014 and from 0000 to 0700 hours on 22 Jan 2014, PME (Concrete Lorry Mixer) was deployed by the Contractor without barge enclosure and was unable to comply with condition 3.a. in CNP no.GW-RS1384-13.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
140127	24 Jan 2014	ICC Case Ref.: 1-494612639	Works area adjacent to the Victoria Park Bowling Green	Noise generated from piling works conducted at the works area adjacent to the Victoria Park Bowling Green have created nuisance to the Bowling Green users.	ET confirmed with the Resident Site Staff that The major construction activities around the concerned location conducted on 23 Jan 2014 include: Pressing of sheetpile Ch.279-285 (RHS) and Ch.317 for ELS works on 23 Jan 2014. Splicing of sheetpile Ch.275-285 (LHS) for ELS works on 23 Jan 2014. Mitigation measures implemented by the Contractor for the above construction works include: Installation of acoustic panels along hoarding line at East Bowling Green; Installation of addition noise barriers on top of hoarding at East Bowling Green; Display of publicity notices along hoarding line; and No noisy work shall be carried out at the areas adjoining East Bowling Green as if there is any Bowling Green competition event to be held (i.e. Saturday afternoon). According to relevant site records, pressing of sheetpile Ch.279-285 (RHS) and Ch.317 for ELS works and splicing of sheetpile Ch.275-285 (LHS) for ELS works were conducted at the concerned location during the time of complaint. Based on the photo records and information verified by RSS, noise mitigation measures including installation of acoustic panels along hoarding line at East Bowling Green and installation of addition noise barriers on top of hoarding at East Bowling Green were implemented by the Contractor at the concerned location. Furthermore, no noisy work was conducted by contractor at the areas adjoining	Case closed and full investigation report issued on 6 Feb 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					East Bowling Green when there is any Bowling Green competition event to be held. Follow-up investigation was conducted on 29 Jan 2014 during weekly environmental inspection, noise mitigation measures including noise barriers and acoustic panels were confirmed in place and maintained in good condition. According to previous environmental inspections recorded in Jan 2014, no particular observation regarding the noise impact was recorded. As such, no non-conformity was identified.	
140311	27 Feb 2014	EPD Complaint Case (Ref:H04/RS/00 04232-14) received by ET on 11 March 2014	Central IFC Area	Excessive noise (from the operation of compressors, other heavy machinery and concrete breaking) was emanated from the construction site near IFC in daytime on 27 Feb 2014.	ET confirmed with the Resident Site Staff that The major construction activities at the concerned location conducted on 27 Feb 2014 (Daytime) include: Backfilling works between north wall and sheetpiles and for roof slab; Site hoarding removal; Formwork erection and removal works, falsework erection; Concrete breaking works at roof slab and base slab and breaking up of existing tunnel corner; Concreting works for profile barrier inside cut and cover tunnel; and Rebar fixing works and WVB basement remediation works. Mitigation measures implemented by the Contractor for the above construction works include: Use of quiet plants (air compressor with a Noise Emission Label of 99 dB(A)).	Interim report submitted to EPD on 18 March 2014, EPD advised no further comment on 26 March 2014 and final report for case closing issued on 26 March 2014



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					According to relevant site records, major noise emanating construction activities conducted around the concerned location on 27 Feb 2014 include concrete breaking works at roof slab and base slab and breaking up of existing tunnel corner and concreting works. Based on information verified by the RSS, noise mitigation measure including utilization of quiet air compressor with noise emission label of 99 dB(A) was implemented by the Contractor on the 27 February 2014 to minimize the potential noise impact. Having reviewed the monitoring data of the monitoring stations in the vicinity of the construction site near IFC, namely noise monitoring stations M7e and M7w, no limit level exceedances were recorded on 24 Feb 2014 and 4 March 2014 and the major concrete breaking works at the concerned location conducted on 27 February 2014 was continued across the above monitoring period. In addition, no particular observations regarding noise impact were recorded during weekly site inspection conducted on 27 Feb 2014. No non-conformity was identified. As such, the construction activities under Contract HY/2009/18 were considered generally in compliance with the statutory requirement. Nevertheless, in view of the concern regarding noise nuisance raised by public, it is considered desirable for the Contractor to review and strengthen the noise mitigation measures around the concerned location. Follow-up inspection was conducted during weekly environmental inspection on 13 March 2014, additional noise mitigation measure including erection of noise blanket for concrete breaking works were implemented by the Contractor to further minimize the noise nuisance to nearby public	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
140623	11 June 2014	EPD Complaint Case (Ref:H04/RS/00 013590-14) received by ET on 23 June 2014	Foot Bridge to Central Pier 7	Excessive Paint Spray Odour	A public complaint regarding odour concern referred by EPD was received by ET on 23 June 2014. The complainant reported that excessive paint spray odour was detected at the foot-bridge to the Central Pier 7. ET confirmed with the Resident Site Staff that spraying of waterproofing membrane (integritank) from Ch1700 to Ch1705 was conducted at roof slab Bay12 on 11 June 2014 and Screeding concrete placing from Ch1700 to Ch1683 was conducted at roof slab Bay12 on 11 June 2014 and Backfilling and removal of concrete blocks was conducted at roof slab Bay 11 and Bay 10-north on 11 June 2014 According to relevant site records, major construction activities conducted around the concerned location on 11 June 2014 include spraying of waterproofing membrane (integritank) from Ch1700 to Ch1705; screeding concrete placing from Ch1700 to Ch1683 and backfilling and removal of concrete blocks. Having reviewed the relevant information verified by RSS, the chemicals applied at the concerned area on 11 June 2014 are waterproof paint and paint adhesives. In view of the concern regarding odour nuisance raised by the public, it is considered desirable for the Contractor to review the application method for waterproof layer nearby public area to minimize the nuisance caused to the surroundings.	Preliminary report issued on 25 June 2014. Interim report submitted to EPD on 30 June 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Follow-up inspection was conducted during weekly environmental inspection on 26 June 2014, no further spraying works was conducted by the Contractor at the concerned area and no particular odour was observed at the concerned location.	
20140723	21 July 2014	ICC complaint (ICC Case Ref.: 2-341537112) received by ET on 23 July 2014	Area opposite to Ngan Tao Building	Noise nuisance due to works and machine at opposite project site during nighttime	A public complaint regarding construction noise impact referred by RSS was received by ET on 25 July 2014 (ICC Case Ref.: 2-341537112 dated 21 July 2014). The complainant reported that : At 00:57hrs on 21 July 2014, he could not sleep due to work and machine at the project site opposite to the building (Ngan Tao Building), where he was living, were still going on and in operation. Noise traveled to his flat despite it was some distance away. ET confirmed with the Resident Site Staff that dewatering works was conducted under HY/2009/19 at the works area at Watson Road from around 23:00hrs on 20 July 2014 to 01:00hrs on 21 July 2014. Total 1 no. of generator and 23 nos. of dewatering pumps were in operation. Mobilization of telescopic arm excavator to trailer truck was performed under HY/2009/19 at the works area at Watson Road from around 00:15hrs to 01:00hrs on 21 July 2014. Total 1 no. of telescopic arm excavator and 1 no. of trailer truck were in operation. According to the relevant site records under Contract HY/2009/19, from around 23:00hrs on 20 July 2014 to 01:00hrs on 21 July 2014, dewatering works was conducted under HY/2009/19 at the works area at Watson Road. Total 1 no. of generator and 23 nos. of dewatering pump were in	Final Investigation report (Issue1) issued on 31 July 2014. Final investigation report (Issue 2) based on further follow-up issued on 12 Aug 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					operation at the above period. In addition, mobilization of telescopic arm excavator to trailer truck was performed under HY/2009/19 at the works area at Watson Road from around 00:15hrs to 01:00hrs on 21 July 2014. Total 1 no. of telescopic arm excavator and 1 no. of trailer truck were in operation. After reviewing relevant records and information verified by RSS and the Construction Noise Permit (CNP) no. GW-RS0152-14, it was considered that the below condition of CNP no.GW-RS0152-14 was not fulfilled by the Contractor of HY/2009/19. From 00:15hrs to 01:00hrs on 21 July 2014, the PME(s) (1 no. of telescopic arm excavator and 1 no. of trailer truck) operated under the Contractor of HY/2009/19 on-site could not follow any given PME grouping requirement(s) as stated in condition 3.a. and condition 3.d. in no.GW-RS0152-14. Notwithstanding the above, according to the information provided by the RSS, the telescopic arm excavator was mobilized at night time hours with consideration that passage of vehicle with large plant & machinery through cross harbour tunnel shall be conducted after mid-night. the Contractor of HY/2009/19 was advised to review the need to renew relevant CNP for PME grouping with respect to specific site operation requirements such that the Construction Noise Permit would be followed. Furthermore, the Contractor of HY/2009/19 was suggested to review the arrangement for PME mobilization with maintenance need to be conducted within specific period allowed under the relevant CNP(s).	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20140801	30 July 2014	ICC complaint (ICC Case Ref.: 2-360638977) received by ET on 01 August 2014	Area opposite to Harbour Heights	Noise of sand and gravel movements at area opposite to the Harbour Heights	A public complaint regarding construction noise impact referred by RSS was received by ET on 01 Aug 2014 (ICC Case Ref.: 2-360638977 dated 31 July 2014). The complainant reported that at 01:20hrs on 30 July 2014, the complainant was woken up by the noise of sand and gravel movements at area opposite to the Harbour Heights. ET confirmed with the Resident Site Staff that EVB excavation was undertaken at the works area around Watson Road under HY/2009/19 before 23:00hrs on 29 July 2014. (Total 1 no. of excavator, 1 no. of dump truck, 23 nos. of underground dewatering pump and 3 nos. of generator were in operation). Dewatering works was undertaken at works area around Watson Road under HY/2009/19 from 23:00hrs on 29 July 2104 to 01:00 hrs on 30 July 2014. (Total 23 nos. of underground dewatering pumps and 1 no. of generator were in operation). Mobilization of PMEs was performed at works area around Watson Road under HY/2009/19 from 00:45hrs to 01:30hrs on 30 July 2014. (1 no. of excavation machine and 1 no. of dump truck were in operation). No other construction activity or operation was performed at the area opposite to Harbour Heights from 23:00hrs on 29 July 2014 to 01:00hrs on 30 July 2014 under HY/2009/19. According to the relevant site records, before 2300hrs on 29 July 2014, EVB excavation at the works area around Watson Road was conducted under HY/2009/19. (Total 1 no. of dump truck , 1 no. of excavator, 3 nos. of generators and 23 nos. of dewatering pumps were in operation at the	Final investigation report issued on 12 Aug 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					above period). From around 23:00hrs on 29 July 2014 to 01:00hrs on 30 July 2014, dewatering works at works area around Watson Road was conducted under HY/2009/19. Total 23 nos. of dewatering pumps were operating at the above period. In addition, mobilization of PMEs was performed at works area around Watson Road under HY/2009/19 from 00:45hrs to 01:30hrs on 30 July 2014. Total 1 no. of excavation machine and 1 no. of dump truck were in operation. After reviewing relevant records and information verified by RSS and the Construction Noise Permit (CNP) no. GW-RS0152-14, it was considered the below condition of CNP GW-RS0152-14 was not fulfilled by the Contractor of HY/2009/19. From around 00:45hrs to 01:30hrs on 30 July 2014, the operation of PME(s) (1 no. of excavator and 1 no. of dump truck) under the Contractor of HY/2009/19 on-site could not follow any given PME grouping requirement(s) as stated in condition 3.a. and condition 3.d. in no. GW-RS0152-14. Notwithstanding the above, according to the information provided by the RSS, the excavator and dump truck were mobilized away from the edge of the temporary ELS structure towards the area opposite to the Harbour Heights after 23:00hrs under safety consideration. The Contractor of HY/2009/19 was advised to review the arrangement and location for retaining and securing PME(s)/ plants to minimize the movements of PME or plants after completion of works such that the Construction Noise Permit would be followed.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20140929	26 Sep 2014	ICC complaint (ICC Case Ref.: 2-466911619) received by ET on 29 September 2014	IEC flyover opposite to City Garden	Light originating from the flyover under Central-WanChai Bypass Project was emitted towards City Garden direction and caused light nuisance	A public complaint regarding visual impact referred by RSS was received by ET on 29 September 2014 (ICC Case Ref.: 2-466911619 dated 26 September 2014) The complainant reported that on 26 September 2014 at around 00:50hrs, light originating from the flyover under Central-WanChai Bypass Project was emitted towards City Garden direction and caused light nuisance. ET confirmed with the Resident Site Staff that the light emission on 25 and 26 September 2014 at the concerned area was originated from the temporary lighting provided at the soffit of the permanent noise enclosure at the new Island Eastern Corridor (IEC) Eastbound which was necessary to provide sufficient illumination for the traffic operation on the new IEC Eastbound after the traffic diversion on 28 September 2014. According to the relevant information provided by RSS, the light emission on 25 and 26 September 2014 at the concerned location was originated from the temporary lighting provided at the soffit of the permanent noise enclosure at the new Island Eastern Corridor Eastbound. The lighting was necessary to provide sufficient illumination for the traffic operation on the new IEC Eastbound after traffic diversion on 28 September 2014. Nevertheless, in view of the public concern regarding light nuisance raised by the public, it is considered desirable for the Contractor to review the lighting arrangement and implement additional measures to minimize the nuisance caused to the surrounding receivers as far as practicable.	Final Investigation report submitted on 9 October 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Follow-up inspection was conducted during weekly environmental inspection on 8 October 2014, additional measures including erection of green net and tarpaulin sheet were provided by the Contractor of HY/2009/19 at the concerned area as interim measure to minimize the nuisance caused to the surroundings. Further to the interim measure implemented by the Contractor of HY/2009/19, the Contractor of HY/2009/19 will replace the concerned temporary lighting with temporary lighting facing Victoria Harbour at the other side of the road to minimize the light nuisance to the surroundings. The Contractor of HY/2009/19 was suggested to review the lighting arrangement and implement additional measures to minimize the nuisance caused to the surroundings receivers as far as practicable. Additional measures including erection of green net and tarpaulin sheet were provided by the Contractor of HY/2009/19 at the concerned area as interim measure to minimize the nuisance caused to the surroundings and the Contractor of HY/2009/19 will replace the concerned temporary lighting with temporary lighting facing Victoria Harbour at the other side of the road to minimize the light nuisance to the surroundings.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20141006	25,26 Sep 2014	ICC complaint (ICC Case Ref.: 2-469099657) received by ET on 06 October 2014	IEC flyover opposite to City Garden	Light originating from the flyover under Central-WanChai Bypass Project was emitted towards City Garden direction and caused light nuisance	A public complaint regarding visual impact referred by RSS was received by ET on 6 October 2014 (ICC Case Ref.: 2-469099657 dated 26 September 2014). The complainant reported that on 25 September 2014 night and on 26 September 2014 at around 23:23 hrs, light originating from the flyover under Central-Wan Chai Bypass Project was emitted towards City Garden direction and caused light nuisance. ET confirmed with the Resident Site Staff that the light emission on 25 and 26 September 2014 at the concerned area was originated from the temporary lighting provided at the soffit of the permanent noise enclosure at the new Island Eastern Corridor (IEC) Eastbound which was necessary to provide sufficient illumination for the traffic operation on the new IEC Eastbound after the traffic diversion on 28 September 2014. According to the relevant information provided by RSS, the light emission on 25 and 26 September 2014 at the concerned location was originated from the temporary lighting provided at the soffit of the permanent noise enclosure at the new Island Eastern Corridor Eastbound. The lighting was necessary to provide sufficient illumination for the traffic operation on the new IEC Eastbound after traffic diversion on 28 September 2014. Nevertheless, in view of the public concern regarding light nuisance raised by the public, it is considered desirable for the Contractor to review the lighting arrangement and implement additional measures to minimize the nuisance caused to the surrounding receivers as far as practicable.	Final Investigation report submitted on 9 October 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Follow-up inspection was conducted during weekly environmental inspection on 8 October 2014, additional measures including erection of green net and tarpaulin sheet were provided by the Contractor of HY/2009/19 at the concerned area as interim measure to minimize the nuisance caused to the surroundings. Further to the interim measure implemented by the Contractor of HY/2009/19, the Contractor of HY/2009/19 will replace the concerned temporary lighting with temporary lighting facing Victoria Harbour at the other side of the road to minimize the light nuisance to the surroundings. The Contractor of HY/2009/19 was suggested to review the lighting arrangement and implement additional measures to minimize the nuisance caused to the surroundings receivers as far as practicable. Additional measures including erection of green net and tarpaulin sheet were provided by the Contractor of HY/2009/19 at the concerned area as interim measure to minimize the nuisance caused to the surroundings and the Contractor of HY/2009/19 will replace the concerned temporary lighting with temporary lighting facing Victoria Harbour at the other side of the road to minimize the light nuisance to the surroundings.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20141010	07 Oct 2014	ICC complaint (ICC Case Ref.: 2-487376144) received by ET on 10 October 2014	IEC flyover opposite to City Garden	Light originating from the flyover under Central-WanChai Bypass Project was emitted towards City Garden direction and caused light nuisance	ET confirmed with the Resident Site Staff that temporary lighting was provided at the concerned area at the soffit of the permanent noise enclosure at the new Island Eastern Corridor (IEC) Eastbound which was necessary to provide sufficient illumination for the traffic operation on the new IEC Eastbound after the traffic diversion on 28 September 2014. Temporary lighting was provided at the concerned area at the soffit of the permanent noise enclosure at the new Island Eastern Corridor (IEC) Eastbound which was necessary to provide sufficient illumination for the traffic operation on the new IEC Eastbound after the traffic diversion on 28 September 2014. In view of the public concern regarding light nuisance raised by the public, it is considered desirable for the Contractor to review the lighting arrangement and implement additional measures to minimize the nuisance caused to the surrounding receivers as far as practicable. During weekly environmental inspection on 8 October 2014, additional measures including erection of green net and tarpaulin sheet were provided by the Contractor of HY/2009/19 at the concerned area as interim measure to minimize the nuisance caused to the surroundings. Further to the interim measure implemented, on 13 October 2014 the Contractor of HY/2009/19 have replaced the concerned temporary lighting with temporary lighting facing Victoria Harbour at the other side of the road to minimize the light nuisance to the surroundings.	Final investigation report submitted on 14 Oct 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					The Contractor of HY/2009/19 was suggested to review the lighting arrangement and implement additional measures to minimize the nuisance caused to the surroundings receivers as far as practicable. Additional measures including erection of green net and tarpaulin sheet were provided by the Contractor of HY/2009/19 at the concerned area as interim measure and on 13 October 2014 the Contractor of HY/2009/19 have replaced the concerned temporary lighting with temporary lighting facing Victoria Harbour at the other side of the road to minimize the light nuisance to the surroundings.	
141016	14 Oct 2014	EPD complaint EPD Ref.:H05/RS/00 025795-14) received by ET on 16 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.	Updated interim investigation with supplementary information submitted to EPD on 17 November 2014. EPD advised no further comment on the updated interim report and case closed on 27 Nov 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					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. 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.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					From 23:00 hrs to 06:00hrs, panel replacement works was conducted under Contractor of HK/2009/02 at the Temporary Covered Walkway. Total one scissor platform and two hand held drills (battery) were in operation. From 23:00 hrs to 06:00hrs, trial pit works was conducted under Contractor of HK/2009/02 at Hung Hing Road. Total one crane lorry was in operation. In view of the above findings, no direct information associated with the noise concern was considered available.	
20141108	07 Nov 2014	EPD complaint (EPD Ref.: H05/RS/00027 815-14) 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.	Interim investigation report submitted to EPD on 17 November 2014. EPD advised no comment on the interim report and case closed on 1 Dec 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					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. 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.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20141113	12 Nov 2014	EPD complaint (EPD Ref.: H05/RS/00028 253-14) 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 that Malodour and dark smoke emission from an excavator located at the construction site at old Wan Chai Ferry Pier was observed that affecting the pedestrians. (Contract HK/2009/02) ET confirmed with the Resident Site Staff that demolition works was conducted under Contract HK/2009/02 on 12 November 2014 during daytime at old Wan Chai Ferry Pier. Total 2 nos. of excavators, 1 no. of derrick barge and 1 no. tug boat were operated. According to the relevant site records under Contract HK/2009/02, demolition works was conducted on 12 November 2014 during daytime at old Wan Chai Ferry Pier. Total 2 nos. of excavators, 1 no. of derrick barge and 1 no. tug boat were operated. In addition, investigation found that due to malfunctioning of one of the excavators deployed at old Wan Chai Ferry Pier, dark smoke was emitted from the defective excavator for a short period of approximately 30 seconds at around 15:00 hrs on 12 November 2014. The operation of excavator was immediately suspended and followed by repair works. The normal operation of the excavator was resumed after repair. Follow-up inspection was conducted during weekly environmental inspection on 13 November 2014, no dark smoke emission was observed from the PMEs operating on-site and the Contractor of HK/2009/02 was reminded to conduct regular checking on the condition of PMEs to ensure only well maintained PMEs are used on site.	Interim investigation report submitted to EPD on 19 November 2014. EPD advised no comment on the interim report and case closed on 8 Dec 2014.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20150127	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 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.	Interim report submitted to EPD on 9 February 2015, EPD advised no comment on 27 February 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					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. ET confirmed with the Resident Site Staff that the major construction activities under Contract HK/2009/02 around the concerned location conducted on 21 January 2015 include trenching grabbing for D-wall construction at temporary road eastward, shear pin installation at temporary road westward and ground Investigation drilling at temporary road westward	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Mitigation measures implemented by the Contractor of HK/2009/02 for the above construction works include regular water spraying at haul road, vehicle wheel-washing at the ingress/egress (Gate No. 4) to the temporary road, hard paving at the works area at temporary road northward and frequent water spraying at the ingress/egress (Gate No. 4) to the temporary road. According to the relevant site records, trenching grabbing for D-wall construction, shear pin installation and ground investigation drilling works were conducted at the concerned location. Dust mitigation measures including water spraying for haul road, vehicle wheel washing and hard paving for a section of works area nearby public road were implemented by the Contractor of HK/2009/02 near the concerned location on 21 January 2015. Follow-up investigation was conducted on 5 February 2015 during weekly environmental inspection, dust mitigation measures including water spraying for dusty haul road and major dust generation works and provision of wheel washing combine with cleaning of public road were confirmed in place and no dust related impact from the construction works was observed. The Air Quality Health Index (AQHI) recorded by EPD across Western District and Eastern District on 21 January 2015 was ranged from 4 to 10+ indicating a severely high concentration of ambient air pollutants. Based on reviewing relevant impact monitoring data, elevated TSP were recorded at monitoring stations across Wan Chai West area to North Point area and a non-Project related exceedance was recorded at nearby monitoring station CMA4a (at SPCA) on 21 January 2015 due to ambient air pollutant.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					In addition, it was noted that a section of the works area at the concerned location was not provided with site hoarding. Based on further review on relevant records it was noted that the works area at concerned section was either hard paved or have to maintain adequate line of sight due to traffic safety consideration. The Contractor of HK/2009/02 was advised to inform EPD with respect to the site constraint and provide relevant updated meeting records on the arrangement for review. In view of the public concern, the contractor has committed to conduct additional cleaning of the concerned public road section once a week to minimize potential nuisance caused to nearby road users. The contractor was also reminded to enhance the dust mitigation measures implemented to minimize potential nuisance to nearby public.	
20150409	07 April 2015 09 April 2015	EPD complaint (Ref.:H05/RS/00008074-15 dated 9 April 2015) received by ET on 09 April 2015	Construction site exit near Expo Drive Central; Construction site gate V2 & gate V8	Construction dust was generated from lorries transporting out of the construction via site exit without wheel washing	A public complaint regarding construction dust impact referred by EPD was received by ET on 09 April 2015 (EPD Ref.:H05/RS/00008074-15 dated 9 April 2015). The complainant reported that: Construction dust was generated from lorries transporting out of the construction via site exit near Expo Drive Central without wheel washing at the morning of 7 April 2015. Lorries were also found transporting out of the construction site via gates V2 and V8 without wheel washing and causing dust nuisance at about 10:30 hours on 9 April 2015. ET confirmed with the Resident Site Staff that on 7 April 2015, major vehicle movements included oil tanker passing at Gate V2 at Expo Drive East and dump truck passing at Gate V8 at Expo Drive Central under Contract HK/2009/01.	Interim report submitted to EPD on 17 April 2015, EPD advised no comment on 30 April 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					2. On 9 April 2015, major vehicle movements include oil tanker, crane lorry and dump truck passing at at Gate V2 at Expo Drive East and dump truck at Gate V8 at Expo Drive Central under Contract HK/2009/01. Mitigation measures adopted by the Contractor of HK/2009/01 at the above locations include water hose was provided for wheel washing at Gate V2 and Gate V8, concrete paving at site exit, dump truck fitted with mechanic cover and cleaned before leaving construction site, regular street washing at Expo Drive Central. According to the relevant site records under Contract HK/2009/01, on 7 April 2015, major vehicle movements included oil tanker passing at Gate V2 at Expo Drive East and dump truck passing at Gate V8 at Expo Drive Central under Contract HK/2009/01 while on 9 April 2015 major vehicle movements include oil tanker, crane lorry and dump truck passing at at Gate V2 at Expo Drive East and dump truck at Gate V8 at Expo Drive Central under Contract HK/2009/01. At the above locations, mitigation measures including water hose for wheel washing at Gate V2 and Gate V8; concrete paving at site exit; dump truck fitted with mechanic cover and cleaned before leaving construction site and regular street washing at Expo Drive Central were generally adopted by the Contractor of HK/2009/01. In view of the public concern on the complaint date, the Contractor of HK/2009/01 was advised to conduct cleaning at the concerned site exit point and the section of public road adjoining the site exit to clear any residue grit and silt desposit to avoid further dust impact.	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Follow up inspection was conducted on 16 April 2015 during weekly environmental inspection and mitigation measures including water spraying for dusty haul road and provision of wheel washing were in place. The construction site exit was observed clear from residue silt / grit at the concerned location. In view of the public concern, the contractor was advised to conduct training to the construction site workers to enhance the effectiveness of wheel washing and to ensure proper wheel washing is provided for dump truck and other vehicle prior to leaving the construction site to avoid generating any dust nuisance.	
20150409A	03 April 2015 to 07 April 2015	EPD complaint (Ref.:H05/RS/00007861-15 dated 9 April 2015) received by ET on 09 April 2015	Construction site at Convention Avenue near Renaissance Harbour View Hotel	Construction noise was emanated from the construction site at Convention Avenue near Renaissance Harbour View Hotel during the period of Easter Holiday	A public complaint regarding construction noise impact referred by EPD was received by ET on 09 April 2015 (EPD Ref.:H05/RS/00007861-15 dated 9 April 2015). The complainant reported that construction noise was emanated from the construction site at Convention Avenue near Renaissance Harbour View Hotel during the period of Easter Holiday, including April 3 at about 13:00 hours. ET confirmed with the Resident Site Staff that from 3 April 2015 to 7 April 2015, from 08:00 hours to 18:00 hours, and at about 13:00 hours on 3 April 2015 at area CWB Tunnel Stage 3, backfilling works was conducted under HK/2009/01. Either 1 no. of dump truck and 1. no. of excavator was operated on site at each given time during the concerned period. According to the relevant site records under Contract HK/2009/01, from across 08:00hrs to 18:00hrs during the period from 3 April 2015 to 7 April 2015, backfilling works was conducted under Contract HK/2009/01 at CWB Tunnel Stage 3. Either 1 no. of dump truck and 1 no. of excavator was operated on site at each given time during the	Interim report submitted to EPD on 17 April 2015, EPD advised no comment on 30 April 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					concerned period and the relevant Construction Noise Permit GW-RS0104-15 for the works was in place and the same construction activity was undertaken at around 13:00hrs on 3 April 2015. No other concurrent construction activity was undertaken at the concerned location during the concerned period under Contract HK/2009/01. The construction activity conducted under Contract HK/2009/01 during the concerned period was in compliance with the statutory requirement. Nevertheless, in view of the concern regarding the noise nuisance raised by the public at the concerned location, it is considered desirable for the Contractor of HK/2009/01 to review the truck unloading procedures of the specific construction task to minimize potential noise emanated during the course for work.	
20150415	13 April 2015	ICC complaint case (ICC Case Ref.: 2-885677297 dated 13 April 2015) received by ET on 15 April 2015	Construction Site at Causeway Bay Typhoon Bay Shelter	Unnecssary light nuisance from the construction site	A public complaint regarding visual impact received by the RSS was referred to the ET on 15 April 2015 (ICC Case Ref.: 2-885677297 dated 13 April 2015). The complainant reported that "I live in a building next to Gloucester Road in Causeway Bay. Recently, I am suffering from unnecessary light source from the construction site. The banners of the construction companies are always illuminated with very bright lights." ET confirmed with the Resident Site Staff that the concerned lighting for the banners was maintained under Contract HY/2010/08. The concerned lighting for the banners was maintained under Contract HY/2010/08 and the concerned lighting was subsequently switched off at all times since 13 April 2015 to alleviate the lighting nuisance caused to the surroundings.	Final Investigation report issued on 20 April 2015 and case closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20150423	21 April 2015	EPD complaint case (EPD Case Ref: :H05/RS/00009456-15 dated 23 April 2015) received by ET on 23 April 2015	Road work at Fleming Road and Convention Avenue near Renaissance Harbour View Hotel	Construction noise emanated from the road work at Fleming Road and Convention Avenue near Renaissance Harbour View Hotel causing nuisance	A public complaint regarding construction noise impact referred by EPD was received by ET on 23 April 2015 (EPD Ref.:H05/RS/00009456-15 dated 23 April 2015). The complainant reported that construction noise emanated from the road work at Fleming Road and Convention Avenue near Renaissance Harbour View Hotel almost every night recently causing nuisance. ET confirmed with the Resident Site Staff that from 21:00hrs on 20 April 2015 to 06:00hrs on 21 April 2015 and from 21:00hrs on 21 April 2015 to 06:00hrs on 22 April 2015, cooling main connection works was undertaken by the Contractor of Contract HK/2009/01 at the concerned location. Total 1 no. of crane lorry and 1 no. of excavator were in operation. According to the relevant site records under Contract HK/2009/01, from 21:00hrs on 20 April 2015 to 06:00hrs on 21 April 2015 and from 21:00hrs on 21 April 2015 to 06:00hrs on 22 April 2015, cooling main connection works was undertaken by the Contractor of Contract HK/2009/01 at the concerned location. Total 1 no. of crane lorry and 1 no. of excavator were in operation during the concerned period and the relevant Construction Noise Permit GW-RS0269-15 was confirmed in place. The construction activity conducted under Contract HK/2009/01 during the concerned period was in compliance with the statutory requirement. In view of the potential noise nuisance, a notice to affected parties was issued by the Contractor of Contract HK/2009/01 to the nearby residents including Renaissance Harbour View Hotel on 17 April 2015. Besides, construction works undertaken by other parties at the concerned location was observed at the concerned period.	Final Investigation report issued on 18 May 2015 and case closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
20150601	29 May 2015	EPD complaint case (EPD Case Ref: :H05/RS/00013254-15 dated 1 June 2015) received by ET on 23 April 2015	Construction site gates V2 and V3 near Expo Drive Central	Vehicle with plate no. TG2426 was found leaving the construction site at gate V2 near Expo Drive Central without wheel-washed	A public complaint regarding construction dust impact referred by EPD was received by ET on 01 June 2015 (EPD Ref.:H05/RS/00013254-15 dated 1 June 2015). The complainant reported that vehicle with plate no. TG2426 was found leaving the construction site at gate V2 near Expo Drive Central without wheel-washed at about 10:33hrs on 29 May 2015. The complainant also alleged that water spraying at the gates V2 and V3 near Expo Drive Central was insufficient causing dust nuisance to the public. ET confirmed with the Resident Site Staff that on 29 May 2015, vehicle record indicated that concerned vehicle TG 2426 has entered and exited the construction site via gate V3. Mitigation measures adopted by the Contractor of HK/2009/01 at the above locations include, water hose was provided for wheel washing at Gate V2 and Gate V3. According to the relevant site records under Contract HK/2009/01, vehicle record indicated that concerned vehicle TG 2426 has entered and exited the construction site via gate V3 on 29 May 2015 under Contract HK/2009/01. As confirmed by WDII RSS, the concerned construction site Gate V2 and Gate V3 have been closed from 31 May 2015 and formed part of the construction site area. Follow up inspection was conducted on 3 June 2015 during weekly environmental inspection and mitigation measures including wheel washing were implemented at construction exit gates around the concerned location despite a vehicle was observed leaving the construction site via Gate V8 without wheel washing. The Contractor was immediately advised to review and strengthen the control measures for vehicle exits to ensure wheel washing are provided for exiting vehicles.	Interim report submitted to EPD on 08 June 2015, EPD advised no comment on 22 June 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					In view of the public concern and the site observation, the Contractor of HK/2009/01 has implemented enhanced site exit control measures using red string to alert drivers to stop their vehicles for cleaning before leaving the construction site and wheel washing facilities including water hose were implemented at Gate V1 and Gate V10 around the concerned location and the vehicle gate V8 was subsequently closed. In addition, removal of spoil arising from wheel washing around site exit location would be conducted by the Contractor of HK/2009/01 as appropriate to alleviate for potential dust impact at construction site exits.	
20150608	04 June 2015	EPD Ref.:H05/RS/0013843-15 dated 8 June 2015	A portion of construction site of Contract HK/2012/08 outside Fleet Arcade	Construction noise was generated from the construction site of Contract HK/2012/08 at location outside Fleet Arcade during restricted hours including Sundays and General Holidays.	A public complaint regarding construction noise impact referred by EPD was received by ET on 8 June 2015 (EPD Ref.:H05/RS/00013843-15 dated 8 June 2015). The complainant reported that construction noise was generated from the construction site of Contract HK/2012/08 at location outside Fleet Arcade during restricted hours including Sundays and General Holidays. ET confirmed with the Resident Site Staff that from 08:00hrs to 18:00hrs on 31 May 2015 (Sunday), construction work including steel welding was conducted under Contract HK/2012/08 at site portion zone A1 opposite to Fleet Arcade. Total one welding machine was in operation. According to the relevant site records under Contract HK/2012/08, from 08:00hrs to 18:00hrs on 31 May 2015 (Sunday), construction work including steel welding was conducted under Contract HK/2012/08 site portion zone A1 opposite to Fleet Arcade. Total one welding machine was in operation and the relevant Construction Noise Permit GW-RS0296-15 was confirmed in place. The construction activity conducted under Contract	Interim report submitted to EPD on 16 June 2015 and EPD advised no comment on 20 July 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					HK/2012/08 during the concerned period was in compliance with the statutory requirement. Ad-hoc inspection was conducted during weekly environmental inspection on 9 June 2015 and it was noted that Construction Noise Permits under Contract HK/2012/08 were posted at site entrance locations for public inspection. In view of the potential noise nuisance, the Contractor was reminded to upkeep the site control system for construction works carrying out at restricted hours and night time for Construction Noise Permit compliance. Besides, other construction sites at the concerned location were observed. Furthermore, a meeting was held on 15 June 2015 between the EPD, Contractor of HK/2012/08, WDII RSS team and the Environmental Team on the public concern and the Contractor of HK/2012/08 has committed to review the re-application for the Construction Noise Permits GW-RS0223-15 and GW-RS0296-15 on usage of PMEs at a portion of site area outside the Fleet Arcade during public holiday including Sundays to minimize for the potential noise nuisance to nearby public.	
150622	18 June 2015	EPD Ref.:H05/RS/0015054-15 dated 22 June 2015	A mooring location near shore and at location outside Wan Chai Sports Ground	Dark smoke and malodour emission was observed from a hopper barge moored near shore and other construction plants under operation from the reclamation construction site	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 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.	Interim report submitted to EPD on 29 June 2015 and EPD advised no comment on 20 July 2015 on the interim report submitted and case closed.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					ET confirmed with the Resident Site Staff that reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 from 15 June 2015 to 19 June 2015. Total 3 nos. of mobile crane were in operation. On 17 June 2015, one no. of concrete pump truck and two nos. of concrete mixer were in operation. Excavation and Lateral Support was conducted at Portions 3 & 4 from 15 June 2015 to 19 June 2015. Total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. In addition, on 15 June 2015, 17 June 2015 and 19 June 2015, 1 no. of derrick barge was moored near Portions 3 & 4 for transportation of the excavated material away from site. According to the relevant site records under Contract HK/2009/02, from 15 June 2015 to 19 June 2015, reinforced bar fixing and concreting work (on 17 June 2015 only) were conducted at Portion 2 and total 3 nos. of mobile crane, one no. of concrete pump truck (on 17 June 2015 only) and two nos. of concrete mixer (on 17 June 2015 only) were in operation; excavation and lateral support was conducted at Portions 3 & 4 and total 4 nos. of excavator, 2 nos. of truck and 2 nos. of crawler crane were in operation. Based on relevant site record, no hopper barge was moored under Contract HK/2009/02 around the concerned location while 1 no. of derrick barge was moored under Contract HK/2009/02 near Portions 3 & 4 for transportation of the excavated material from Portions 3 & 4 away from site on 15 June 2015, 17 June 2015 and 19 June 2015 respectively. Follow-up inspection was conducted during weekly environmental inspection on 25 June 2015, no dark smoke and malodour emission was observed from the PMEs operating on-site. A derrick barge was	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					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.	
150714	11 July 2015	ICC Complaint (Ref:#2-1149562777) referred by RSS was received by ET on 14 July 2015	A portion of site area adjacent to Hing Fat Street Site entrance	Direct discharge of muddy effluent into marine waters	A public complaint regarding direct discharge of muddy effluent referred by RSS was received by ET on 14 July 2015 (ICC Ref.: #2-1149562777). The complainant reported that: Muddy effluent was directly discharged into nearby marine waters by Chun Wo worker. Further information was received by ET from RSS on 23 July 2015 and the complaint date was clarified to be 11 July 2015 and the concerned vehicle registration number shall be JV 7319. ET confirmed with the Resident Site Staff that no construction works was undertaken by the Contractors HY/2009/19 and adjacent Central WanChai Bypass Project construction site at the concerned location on 11 July 2015. No construction works was undertaken by the Contractor of HY/2009/19 and adjacent Central WanChai Bypass Project construction site at the concerned location on 11 July 2015 and the concerned vehicle (License Plate JV 7319 labelled as Chun Wo) was confirmed not belonging to the Contractor of HY/2009/19. Follow-up inspection was conducted during weekly environmental inspection on 14 July 2015, no direct discharge connection was further observed on site.	Updated Final investigation report submitted on 27 July 2015.



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					No construction works was undertaken by Central WanChai Bypass Project at the concerned location and no sump pit or works area under Central WanChai Bypass Project associated with potential muddy effluent discharge was identified. In addition, a construction area with excavated pit under WSD Contract 12/WSD/10 was noted at the concerned location behind the alleged vehicle responsible for direct discharge of muddy effluent. Based on the further review on the information received on 23 July 2015, the alleged direct discharge was observed originating from the works area under WSD Contract 12/WSD/10 and not related to the Central Wan Chai Bypass Project construction works.	
150723	20 July 2015	EPD Ref.:H05/RS/0018040-15 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.	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
					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. 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.	

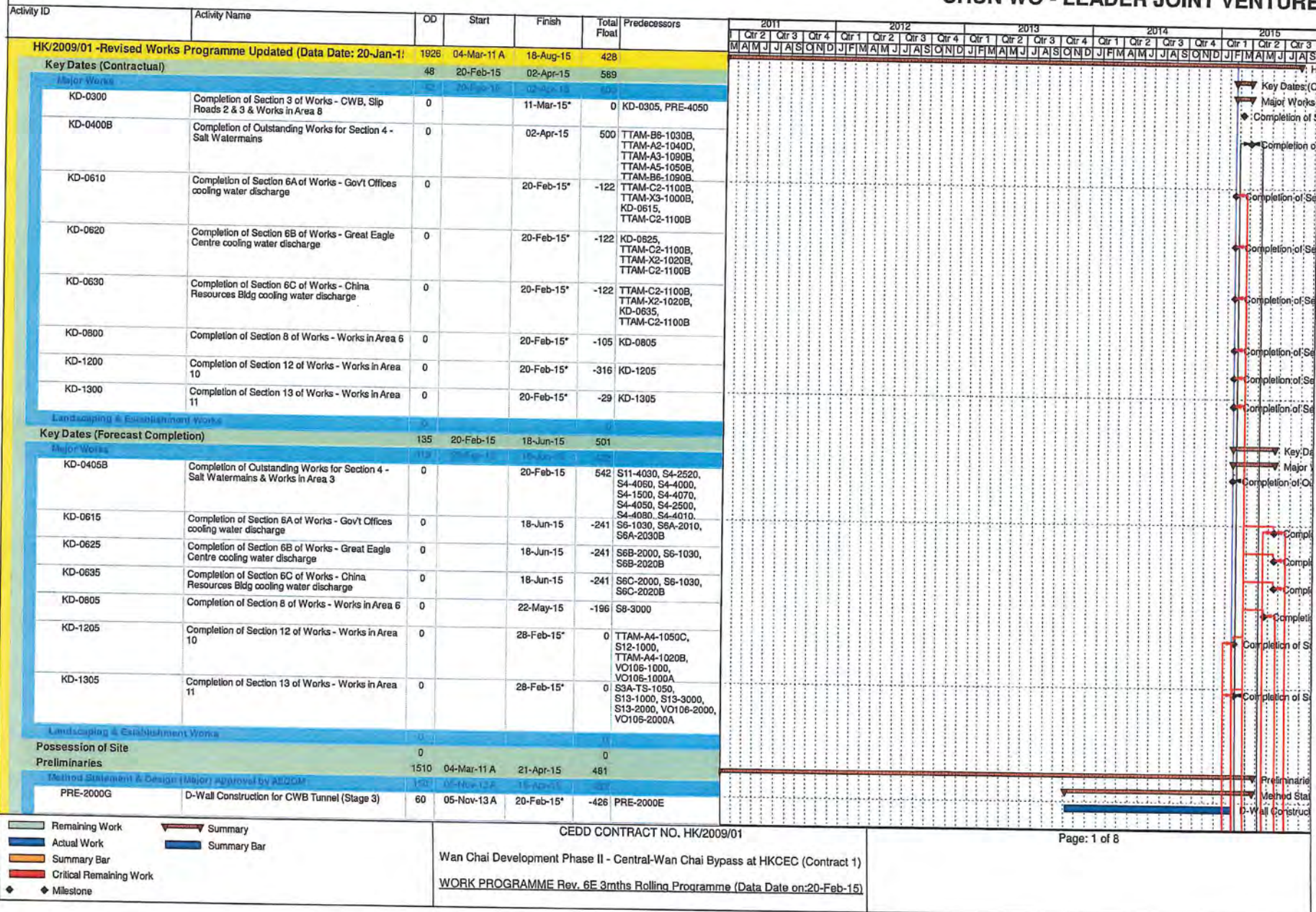


Appendix 10.1

Construction Programme of Individual Contracts

CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE



CHUN WO - LEADER JOINT VENTURE

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CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

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CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

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CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

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CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

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

CEDD CONTRACT NO. HK/2009/01

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

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

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CEDD CONTRACT HK/2009/01

CHUN WO - LEADER JOINT VENTURE

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Activity ID	Activity Name	OD	Start	Finish	Total Float	Predecessors	2011				2012				2013				2014				2015																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
							Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
							M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	S9-5500B	Zone X1-2 - S3 (5m)	0		09-May-15	442	S6A-1210																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</

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)

Page: 8 of 8

Activity ID	Activity Name	Orig Dur	Scheduled/ Actual Start	Scheduled/ Actual Finish	Total Float	Calendar	Aug	Sep	Oct	Nov	Dec
S9B-T2-B5-3190	Roof - Formwork	9	23-Sep-15	05-Oct-15	-46	HK Working Day					
S9B-T2-B5-3190	Roof - Rebar Fixing	10	06-Oct-15	16-Oct-15	-46	HK Working Day					
S9B-T2-B5-3200	Roof - Concrete & Curing	14	17-Oct-15	30-Oct-15	-56	Calendar Day					
S9B-T2-B5-3210	Roof - Waterproofing	4	31-Oct-15	04-Nov-15	-48	HK Working Day					
S9B-T2-B5-3220	Roof - Scaffolding Dismantling	3	31-Oct-15	03-Nov-15	-45	HK Working Day					
Bay 6											
S9B-T2-B6-3170	Roof - Scaffolding Erection for Roof	7	15-Sep-15	22-Sep-15	-46	HK Working Day					
S9B-T2-B6-3180	Roof - Formwork	9	23-Sep-15	05-Oct-15	-46	HK Working Day					
S9B-T2-B6-3190	Roof - Rebar Fixing	10	06-Oct-15	16-Oct-15	-46	HK Working Day					
S9B-T2-B6-3200	Roof - Concrete & Curing	14	17-Oct-15	30-Oct-15	-56	Calendar Day					
S9B-T2-B6-3210	Roof - Waterproofing	4	05-Nov-15	09-Nov-15	-48	HK Working Day					
S9B-T2-B6-3220	Roof - Scaffolding Dismantling	3	31-Oct-15	03-Nov-15	-45	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 (200,000m ³ soil and rock@1100m ³ /d) &...	182	13-Feb-15 A	14-Nov-15	-298	HK Working Day					
S9B-T34-3500	Rock Excavation and Rock Bolt Installation	21	10-Oct-15	04-Nov-15	-255	HK Working Day					
Bay 1											
S9B-T34-B1-1000	Trim Bored Pile & Blinding Layer for Bay 1 and Bay 2 Base Slab	5	02-Nov-15	06-Nov-15	-369	Calendar 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	09-Oct-15	-480	HK Working Day					
S11-R3-1500	2nd Stage Rockfilling after installation of Casson Seawall	40	09-Oct-15	25-Nov-15	-480	HK Working Day					
S11-R3-1600	1st Redamation to -7.0mPD	39	20-Aug-15	06-Oct-15	-438	HK Working Day					
S11-R3-1700	Installation of Permanent Seawall Block	14	09-Oct-15	26-Oct-15	-424	HK Working Day					
Formation and Hard Landscaping Works (except Area 10)											
S11-FM-2000A	Tunnel Portion 2 Backfilling (35,000m ³ ; 350m ³ /d)	95	10-Nov-15	12-Feb-16	64	Calendar Day					
Soft Landscaping & Establishment Works											
Section 8C of the Works - Landscape Softworks in Area 8											
S8C-0010	Carry out landscape soft work on new ferry pier	90	07-Oct-14 A	22-Aug-15	-560	Calendar Day					
Section 8D of the Works - Establishment Works in Area 8											
S8D-0010	Carry out establishment work on new ferry pier	365	23-Aug-15	21-Aug-16	-560	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	30-Oct-15	-56	Calendar Day					
SUM-CWB-24000	Backfilling for Tunnel Portion 2	95	10-Nov-15	12-Feb-16	64	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	-373	Calendar 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-Aug-15)

Date	Revision	Checked	Approved
20-Aug-15	3MRP		

Data Date: 30-Jun-15	  Current Milestone	Works Programme for Non-CRIII Zones (June to August 2015)	Date	Revision	Checked	Approved
	 Actual Work		03-Jul-15			
	 Critical Remaining Work					
	 Remaining Work					
	 Remaining Level of Effort					

Activity ID	Activity Name	Remaining Dur	Early Start	Early Finish	June 2015							July 2015							August 2015							September 2015							October 2015							November 2015							December 2015							January 2016							February 2016							March 2016							April 2016							May 2016							June 2016							July 2016							August 2016							September 2016						
					01	08	15	22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19																																											
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																																																																																																																				

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WP13-0

Layout: CWB - Working Layout for DWP Rev M

Date Printed 26-Sep-14 11

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015					2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
HY/2009/15 - Works Programme Rev. M (DD:20-Sep-12)														
Works in East Ventilation Adit - Based on Alternative Method														
Reinstatement of Breakwater														
S3_54840	Reinstatement works -west side	7d/wk-1	60d	21-Feb-14 08 A	30-Sep-14 18	-85d								
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-D18 & P3)														
A-3011	Marine removal of temporary reclamation and seawall blocks (Zones C)	7d/wk-2	21d	31-Aug-14 08 A	02-Oct-14 18	-353d								
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								

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

1 of 18

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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



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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015							2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
Stage 7 (Zones C & E - ME4-D06 to D01, SCL1 & TS4-D25)																
A-4000	Marine removal of temporary reclamation and seawall blocks (Zones C & E)	7d/wk-2	18d	06-Sep-14 08 A	06-Oct-14 18	-353d	■	■	■	■	■					
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 existing 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-5010	BAS submission and consent for commencement of superstructure	7d/wk-2	28d	20-Sep-14 08 A	16-Oct-14 18	-336d	■	■	■	■	■					

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

◆ Milestone

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China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza			
Date	Revision	Checked	Approved
26-Sep...	1st submission		

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

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

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

3 of 18

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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

中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

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

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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015								2016																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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S6_9070	TPCWAW Construct tunnel base slab	7d/wk-1	50d	23-Oct-15 08	11-Dec-15 18	-141d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

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

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

7 of 18

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD

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

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

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China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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



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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015							2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
A9870	From East, SR8 CH 4130 - 4125 = 1bay, lining	7d/wk-1a	5d	09-Jan-15 08	13-Jan-15 18	6d										
A9800	From East, SR8 CH 4125 - 4120 = 1bay, lining	7d/wk-1a	5d	14-Jan-15 08	18-Jan-15 18	143d										
A9860	From East, SR8 CH 4120 - 4115 = 1bay, lining	7d/wk-1a	5d	19-Jan-15 08	23-Jan-15 18	143d										
A9855	From East, SR8 CH 4115 - 4110 = 1bay, lining	7d/wk-1a	5d	24-Jan-15 08	28-Jan-15 18	143d										
A9850	From East, SR8 CH 4110 - 4105 = 1bay, lining	7d/wk-1a	5d	29-Jan-15 08	02-Feb-15 18	143d										
OHVD(10m/bay) / Utility Trough																
A8570	SR8 Tunnel OHVD and utility trough =, 167= 17 bays @ 10m/bay @ 7d/bay	7d/wk-1a	120d	09-Feb-15 08	13-Jun-15 18	137d										
EB Outer Tunnel Excavation																
From West (TPCWAE)																
Outer Bench Excavation (1.5d - 2d/m, 20m separation with heading)																
A9550	EB, Outer Bench From West, CH 4035- 4045 = 10m	7d/wk-1a	30d	07-Aug-14 08 A	20-Oct-14 18	135d										
A9555	EB, Outer Bench From West, CH 4045- 4055 = 10m (2d/m)	7d/wk-1a	20d	20-Oct-14 08	08-Nov-14 18	135d										
A9560	EB, Outer Bench From West, CH 4055- 4065 = 10m (2d/m)	7d/wk-1a	20d	09-Nov-14 08	28-Nov-14 18	135d										
A9565	EB, Outer Bench From West, CH 4065- 4075 = 10m (2d/m)	7d/wk-1a	20d	29-Nov-14 08	18-Dec-14 18	135d										
A9520	EB, Outer Bench From West, CH 4075- 4085 = 10m (2d/m)	7d/wk-1a	20d	19-Dec-14 08	09-Jan-15 18	135d										
A9545	EB, Outer Bench From West, CH 4085- 4095 = 10m 1.5d/m)	7d/wk-1a	15d	10-Jan-15 08	24-Jan-15 18	135d										
From East (TS4)																
Outer Bench Excavation (1.5d-2d/m, 20m separation with heading)																
A9605	EB, Outer Bench From East, CH 4147.5 - 4145 = 2.5m	7d/wk-1a	30d	20-Oct-14 08*	18-Nov-14 18	120d										
A9610	EB, Outer Bench From East, CH 4145- 4135 = 10m (2d/m)	7d/wk-1a	20d	19-Nov-14 08	08-Dec-14 18	120d										
A9615	EB, Outer Bench From East, CH 4135- 4125 = 10m (2d/m)	7d/wk-1a	20d	09-Dec-14 08	29-Dec-14 18	120d										
A9620	EB, Outer Bench From East, CH 4125- 4115 = 10m (2d/m)	7d/wk-1a	20d	30-Dec-14 08	19-Jan-15 18	120d										
A9625	EB, Outer Bench From East, CH 4115- 4105 = 10m (2d/m)	7d/wk-1a	20d	20-Jan-15 08	08-Feb-15 18	120d										
A9630	EB, Outer Bench From East, CH 4105- 4095 = 10m (1.5d/m)	7d/wk-1a	15d	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										

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

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

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China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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



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

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015							2016																					
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3																					
A8865	EB,Inner Bench From East, CH 4145- 4135 = 10m	7d/wk-1a	15d	12-Mar-15 08	26-Mar-15 18	11d			EB,Inner Bench From East, CH 4145- 4135 = 10m																										
A8870	EB,Inner Bench From East, CH 4135- 4125 = 10m	7d/wk-1a	15d	28-Mar-15 08	12-Apr-15 18	10d			EB,Inner Bench From East, CH 4135- 4125 = 10m																										
A8855	EB,Inner Bench From East, CH 4125- 4115 = 10m	7d/wk-1a	15d	18-Apr-15 08	03-May-15 18	5d			EB,Inner Bench From East, CH 4125- 4115 = 10m																										
A8875	EB,Inner Bench From East, CH 4115- 4105 = 10m	7d/wk-1a	15d	09-May-15 08	23-May-15 18	0d			EB,Inner Bench From East, CH 4115- 4105 = 10m																										
A9915	EB,Inner Bench From East, CH 4105- 4095 = 10m	7d/wk-1a	16d	24-May-15 08	08-Jun-15 18	0d			EB,Inner Bench From East, CH 4105- 4095 = 10m																										
Tunnel Lining Works																																			
From West Base Slab (10m/bay, 10m separation with benching excavation)																																			
A8900	EB From West, Base Slab CH 3990 - 3995 = 1 bay	7d/wk-1a	10d	04-Dec-14 08	13-Dec-14 18	33d			EB From West, Base Slab CH 3990 - 3995 = 1 bay																										
A8890	EB From West, Base Slab CH 3995 - 4005 = 10m/bay	7d/wk-1a	10d	04-Jan-15 08	13-Jan-15 18	14d			EB From West, Base Slab CH 3995 - 4005 = 10m/bay																										
A8905	EB From West, Base Slab CH 4005 - 4015 = 10m/bay	7d/wk-1a	10d	24-Jan-15 08	02-Feb-15 18	4d			EB From West, Base Slab CH 4005 - 4015 = 10m/bay																										
A8910	EB From West, Base Slab CH 4015 - 4025 = 10m/bay	7d/wk-1a	10d	13-Feb-15 08	25-Feb-15 18	14d			EB From West, Base Slab CH 4015 - 4025 = 10m/bay																										
A8915	EB From West, Base Slab CH 4025 - 4035 = 10m/bay	7d/wk-1a	10d	08-Mar-15 08	17-Mar-15 18	12d			EB From West, Base Slab CH 4025 - 4035 = 10m/bay																										
A8920	EB From West, Base Slab CH 4035 - 4045 = 10m/bay	7d/wk-1a	10d	28-Mar-15 08	07-Apr-15 18	8d			EB From West, Base Slab CH 4035 - 4045 = 10m/bay																										
A8925	EB From West, Base Slab CH 4045 - 4055 = 10m/bay	7d/wk-1a	10d	18-Apr-15 08	27-Apr-15 18	4d			EB From West, Base Slab CH 4045 - 4055 = 10m/bay																										
A8930	EB From West, Base Slab CH 4055 - 4065 = 10m/bay	7d/wk-1a	10d	04-May-15 08	13-May-15 18	5d			EB From West, Base Slab CH 4055 - 4065 = 10m/bay																										
A8880	EB From West, Base Slab CH 4065 - 4075 = 10m/bay	7d/wk-1a	10d	20-May-15 08	29-May-15 18	5d			EB From West, Base Slab CH 4065 - 4075 = 10m/bay																										
A8885	EB From West, Base Slab CH 4075 - 4085 = 10m/bay	7d/wk-1a	10d	04-Jun-15 08	13-Jun-15 18	0d			EB From West, Base Slab CH 4075 - 4085 = 10m/bay																										
A8895	EB From West, Base Slab CH 4085 - 4095 = 10m/bay	7d/wk-1a	10d	14-Jun-15 08	24-Jun-15 18	0d			EB From West, Base Slab CH 4085 - 4095 = 10m/bay																										
From East Base Slab (10m/bay, 10m separation with benching excavation)																																			
A9905	EB From East, Base Slab CH 4149.5 - 4145 = 4.5m	7d/wk-1a	10d	13-Apr-15 08	22-Apr-15 18	26d			EB From East, Base Slab CH 4149.5 - 4145 = 4.5m																										
A9900	EB From East, Base Slab CH 4145 - 4135 = 10m/bay	7d/wk-1a	10d	04-May-15 08	13-May-15 18	16d			EB From East, Base Slab CH 4145 - 4135 = 10m/bay																										
A9895	EB From East, Base Slab CH 4135 - 4125 = 10m/bay	7d/wk-1a	10d	24-May-15 08	02-Jun-15 18	6d			EB From East, Base Slab CH 4135 - 4125 = 10m/bay																										
A9890	EB From East, Base Slab CH 4125 - 4115 = 10m/bay	7d/wk-1a	10d	09-Jun-15 08	18-Jun-15 18	0d			EB From East, Base Slab CH 4125 - 4115 = 10m/bay																										
A9885	EB From East, Base Slab CH 4115 - 4105 = 10m/bay	7d/wk-1a	10d	19-Jun-15 08	29-Jun-15 18	0d			EB From East, Base Slab CH 4115 - 4105 = 10m/bay																										
A9880	EB From East, Base Slab CH 4105 - 4095 = 10m/bay	7d/wk-1a	10d	30-Jun-15 08	10-Jul-15 18	0d			EB From East, Base Slab CH 4105 - 4095 = 10m/bay																										
Lining (5m/bay, 15m separation with base slab)																																			
A9065	EB From West, Lining CH 3990 - 3995 = 1bay	7d/wk-1a	10d	03-Feb-15 08	12-Feb-15 18	4d			EB From West, Lining CH 3990 - 3995 = 1bay																										
A9005	EB From West, Lining CH 3995 - 4000 = 1bay	7d/wk-1a	10d	13-Feb-15 08	25-Feb-15 18	4d			EB From West, Lining CH 3995 - 4000 = 1bay																										
A9090	EB From West, Lining CH 4000 - 4005 = 1bay	7d/wk-1a	10d	26-Feb-15 08	07-Mar-15 18	4d			EB From West, Lining CH 4000 - 4005 = 1bay																										
Summary Bar Actual Level of Effort Actual Work Remaining Work Critical Remaining Work Milestone							11 of 18 China State Construction Engineering (Hong Kong) Ltd Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel (Causeway Bay Typhoon Shelter Section) WORKS PROGRAMME REV. M							Prepared by William Caluza <table><tr><td>Date</td><td>Revision</td><td>Checked</td><td>Approved</td></tr><tr><td>26-Sep...</td><td>1st submission</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				Date	Revision	Checked	Approved	26-Sep...	1st submission											CSCEC 中國建築工程(香港)有限公司CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.	
Date	Revision	Checked	Approved																																
26-Sep...	1st submission																																		

[illegible]

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

Summary Bar

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

Milestone

15 of 18

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Kaluza

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



中國建築工程(香港)有限公司

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015									2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
A9390	WB From West, Lining CH 4035 - 4040 = 1bay	7d/wk-1a	7d	22-Apr-15 08	28-Apr-15 18	30d												
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												

Activity ID	Activity Name	Calendar	Original Duration	Start	Finish	Total Float	2015						2016		
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
SB_5280	Provide access to CWB (CC) Contractor- TS4, TPCWA, Mined Tunnel	7d/wk-2	0d		31-Mar-16 18*	-124d									◆ Provide access to CWB (CC) C
Stage and Section Completion															
KD_5735	KD8 - Completion of Section 3, (1326d)	7d/wk-2	0d		30-Sep-14 18*	-86d	◆ KD8 - Completion of Section 3, (1326d)								
KD_5720	KD5 - Achievement of Stage 5, (1152d)	7d/wk-2	0d		16-Oct-14 18*	-323d	◆ KD5 - Achievement of Stage 5, (1152d)								
KD_5760	KD13 - Completion of Section 7B, (1152d)	7d/wk-2	0d		17-Nov-14 18*	-353d	◆ KD13 - Completion of Section 7B, (1152d)								
KD_5730	KD7 - Completion of Section 2, (1152d)	7d/wk-2	0d		17-Nov-14 18*	-297d	◆ KD7 - Completion of Section 2, (1152d)								
KD_5740	KD9 - Completion of Section 4, (1739d)	7d/wk-2	0d		10-Nov-15 18*	-132d						◆ KD9 - Completion of Section 4, (1739d)			
KD_5745	KD10 - Completion of Section 5, (1863d)	7d/wk-2	0d		25-Mar-16 18	-144d							◆ KD10 - Completion of Section 5,		
KD_5750	KD11 - Completion of Section 6, (1949d)	7d/wk-2	0d		23-May-16 18*	-121d							◆ KD11 - Completion of		
Portion Handover Date															
CD_5685	Portion Handover - Portion IV(4), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion IV(4), KD8 +28								
CD_5680	Portion Handover - Portion V (5), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion V (5), KD8 +28								
CD_5695	Portion Handover - Portion VI (6), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion VI (6), KD8 +28								
CD_5735	Portion Handover - Portion XIII B (13B), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion XIII B (13B), KD8 +28								
CD_5790	Portion Handover - Portion XXII (22), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion XXII (22), KD8 +28								
CD_5670	Portion Handover - Portion III (3), KD8 +28	7d/wk-2	0d		28-Oct-14 18*	-50d	◆ Portion Handover - Portion III (3), KD8 +28								
CD_5720	Portion Handover - Portion XIII A (13A), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XIII A (13A), KD7 +28								
CD_5705	Portion Handover - Portion VIII (8), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion VIII (8), KD7 +28								
CD_5730	Portion Handover - Portion XIVA (14A), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XIVA (14A), KD7 +28								
CD_5740	Portion Handover - Portion XV (15), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XV (15), KD7 +28								
CD_5805	Portion Handover - Portion XXIII (23), KD7 +28	7d/wk-2	0d		15-Dec-14 18*	-79d	◆ Portion Handover - Portion XXIII (23), KD7 +28								
CD_5775	Portion Handover - Portion XVIII (18), KD10 +28	7d/wk-2	0d		30-Nov-15 18*	0d							◆ Portion Handover - Portion XVIII (18), KD10 +28		
CD_5710	Portion Handover - Portion XI (11), KD9 +28	7d/wk-2	0d		27-Dec-15 18*	0d							◆ Portion Handover - Portion XI (11), KD9 +28		
CD_5700	Portion Handover - Portion IX (9), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d							◆ Portion Handover - Portion		
CD_5745	Portion Handover - Portion XIV B (14B), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d							◆ Portion Handover - Portion		
CD_5755	Portion Handover - Portion XVI (16), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d							◆ Portion Handover - Portion		
CD_5750	Portion Handover - Portion XVII (17), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d							◆ Portion Handover - Portion		
CD_5760	Portion Handover - Portion XIX (19), KD10 +28	7d/wk-2	0d		22-Apr-16 18*	-52d							◆ Portion Handover - Portion		

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

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

18 of 18

China State Construction Engineering (Hong Kong) Ltd

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

WORKS PROGRAMME REV. M

Prepared by William Caluza

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.

Data Date: 20-Aug-15

HY/2009/18 Central - Wan Chai Bypass (Central Interchange)
TASK filters: 3 Months_1, Not HL.

TASK filters: 3 Months_1, Not HL.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2015												
							Aug			Sep			Oct			Nov		
Update 2015-08-20 CWB - Central Interchange (2014-06-20)Revised DWP R7 with RFI																		
SECTION 3 - REMAINING WORKS IN PORTION IIIA & IIIB																		
Surface Works - East of Man Yiu Street																		
Road P1																		
P1 Road East Bound																		
VO089f	VO089 - Maintenance Section 1	906d	31-Jul-12 A	31-Aug-15	-162d													
VO089i	VO089 - Maintenance Section 2	299d	25-Aug-14 A	31-Aug-15	-162d													
VO175a	VO175	240d	06-Oct-14 A	01-Sep-15	-163d													
14960	P1 E/B - Footpath (VO158) - Material approval & procurement	116d	10-Mar-15 A	12-Aug-15 A														
14904	P1 E/B - Street Furniture / Sign (VO/192)	75d	27-Mar-15 A	30-Sep-15	-187d													
14960a	P1 E/B - Footpath (VO158) - Block fabrication and Site work	76d	14-Aug-15 A	31-Oct-15	-212d													
P1 Road West Bound																		
VO089b	VO089 - Maintenance Section 1	906d	31-Jul-12 A	31-Aug-15	-162d													
VO089d	VO089 - Maintenance Section 2	299d	25-Aug-14 A	31-Aug-15	-162d													
VO175b	VO175	240d	06-Oct-14 A	31-Jul-15 A														
14958	P1 W/B - Footpath (VO158) - Material approval & procurement	116d	10-Mar-15 A	12-Aug-15 A														
1520	P1 W/B - U Channel / Landscape works / Drainage (VO/192)	25d	01-Jun-15 A	31-Jul-15 A														
14958a	P1 W/B - Footpath (VO158) - Block fabrication and Site work	76d	14-Aug-15 A	31-Oct-15	-212d													
Man Yiu Street Northern Portion																		
VO175c	VO175	240d	06-Oct-14 A	01-Sep-15	-163d													
RFI453a	RFI 453 (Site Works)	199d	22-Nov-14 A	31-Jul-15 A														
RFI457a	RFI 457 (Site Works)	35d	27-Dec-14 A	31-Jul-15 A														
14962	MYS Nth - Footpath (VO/158 and VO/153) - Material approval & procurement	116d	10-Mar-15 A	12-Aug-15 A														
1514	MYS Nth - Drainage / Landscape (VO/192)	80d	04-Jun-15 A	19-Sep-15	-212d													
14962a	MYS Nth - Footpath (VO/158) - Block fabrication and Site work	76d	14-Aug-15 A	31-Oct-15	-212d													

 Current Milestone
  Critical Remaining Work

 Level of Effort
  Remaining Work

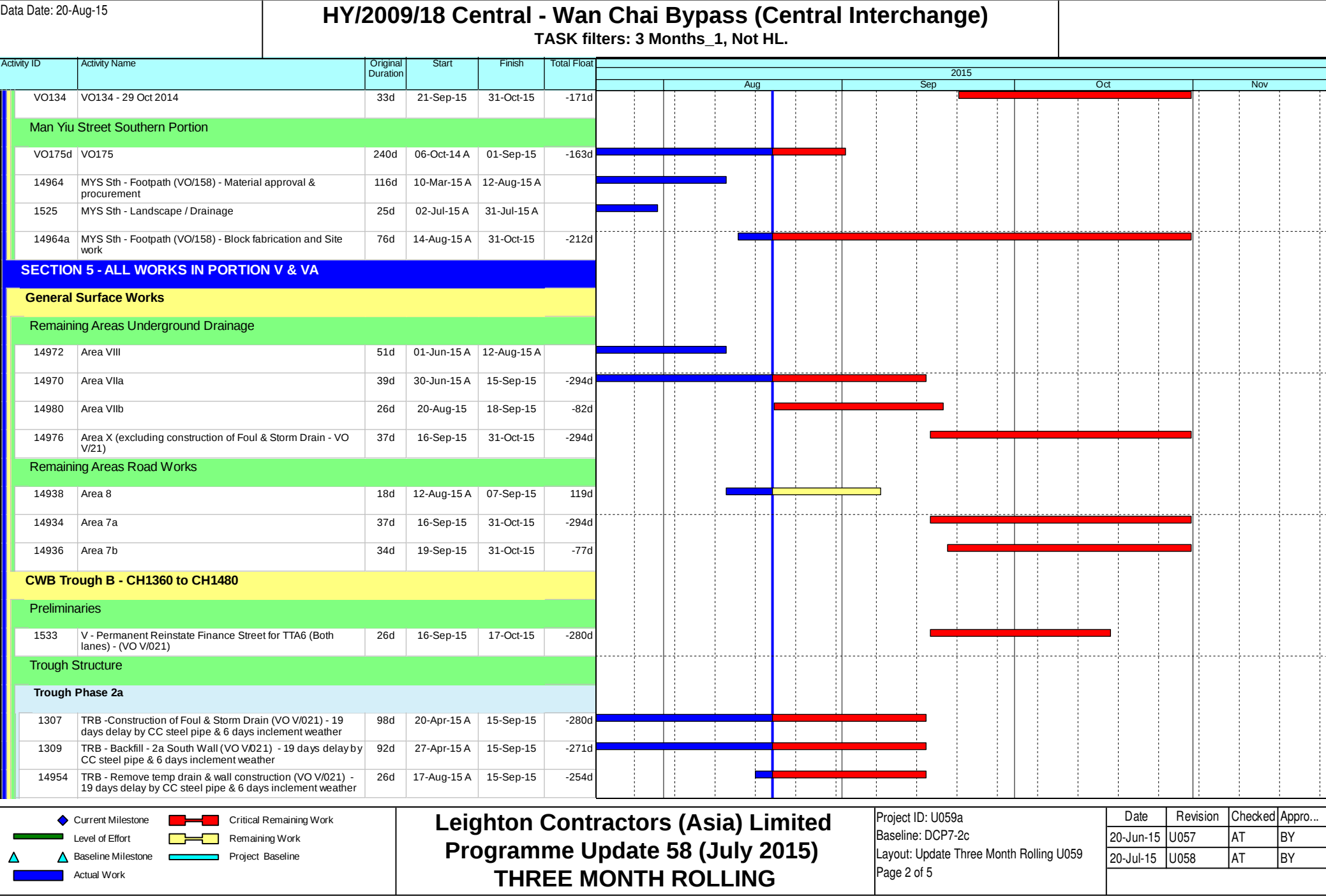
 Baseline Milestone
  Project Baseline

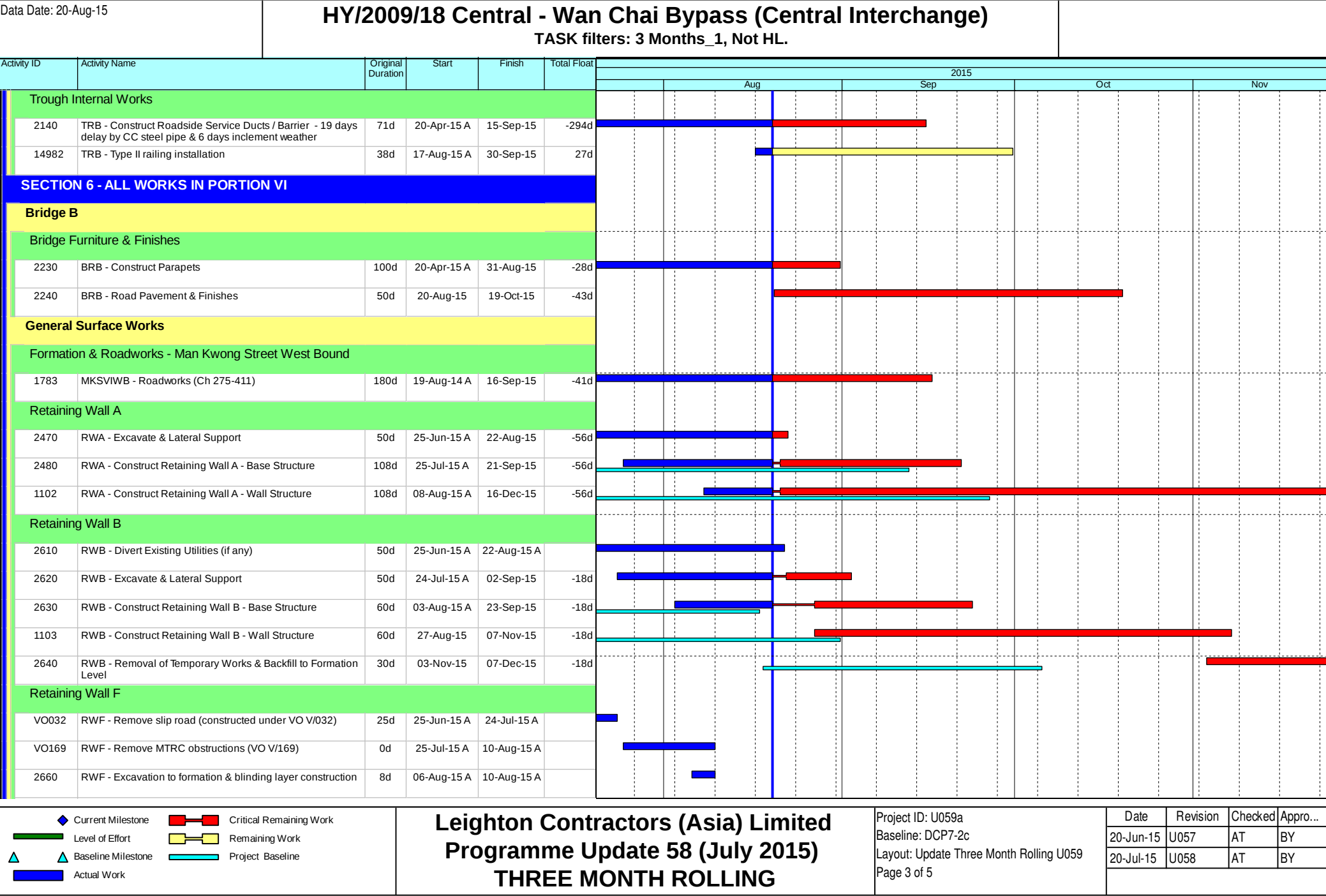
 Actual Work

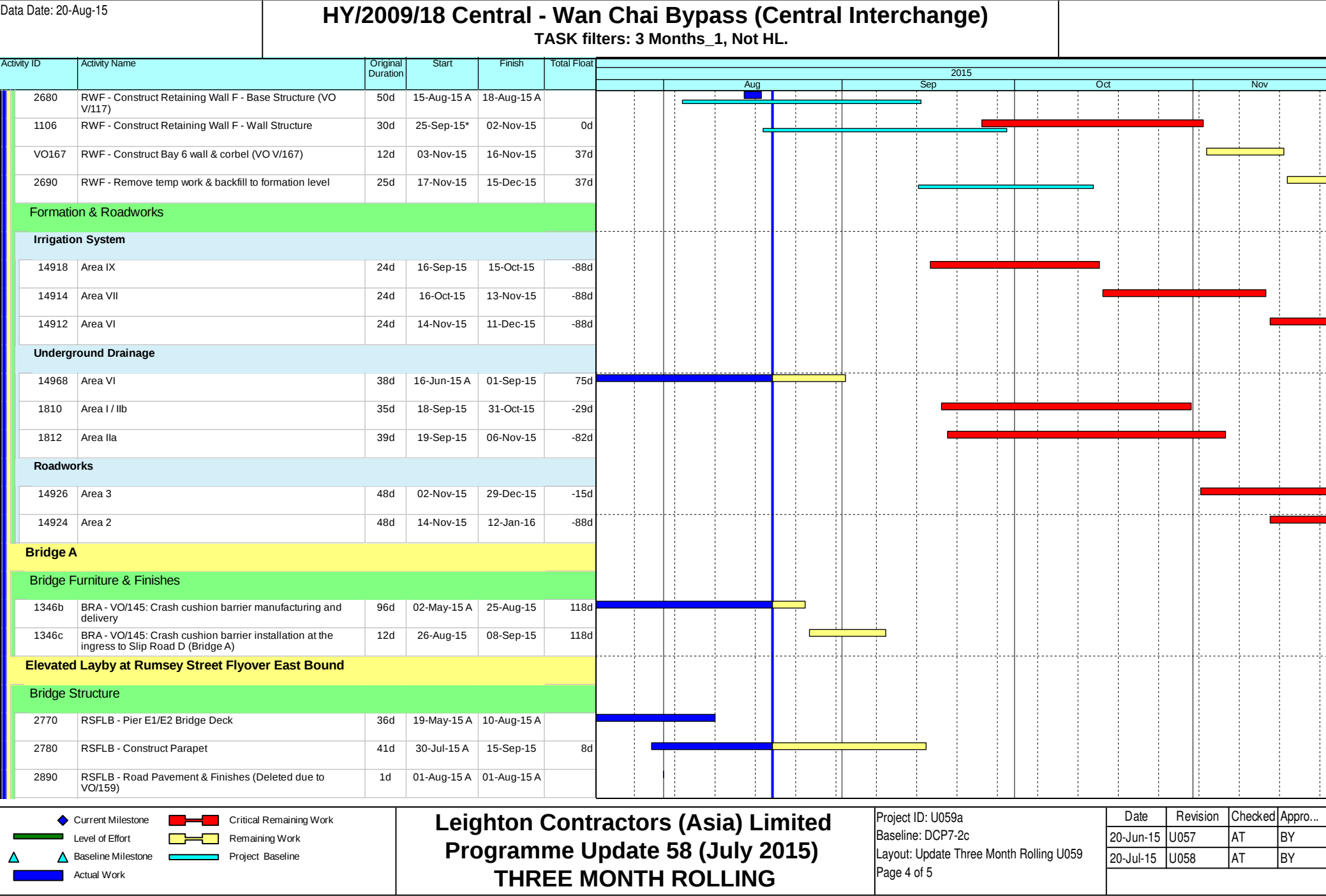
**Leighton Contractors (Asia) Limited
Programme Update 58 (July 2015)
THREE MONTH ROLLING**

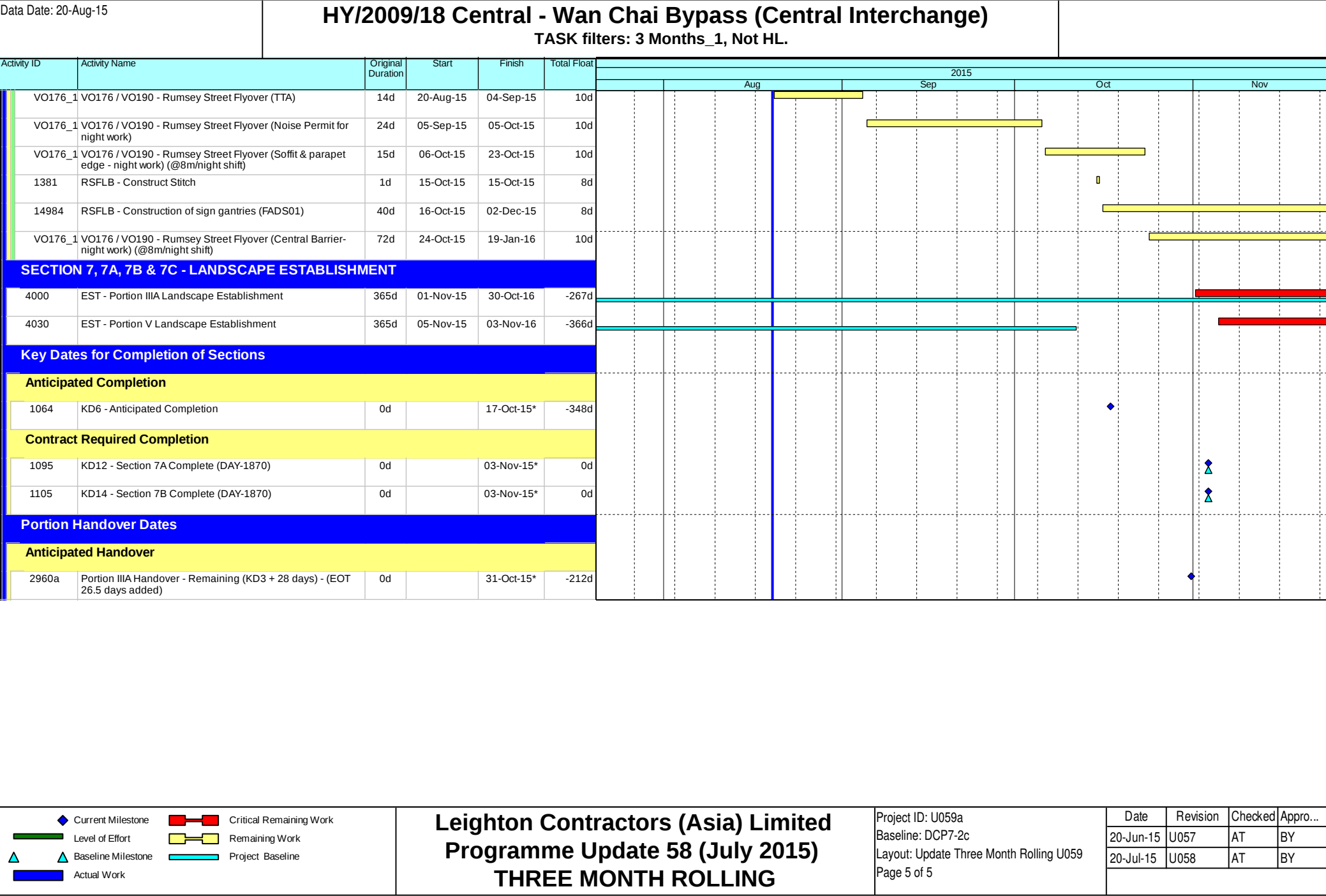
Project ID: U059a
Baseline: DCP7-2c
Layout: Update Three Month Rolling U059
Page 1 of 5

Date	Revision	Checked	Appro...
20-Jun-15	U057	AT	BY
20-Jul-15	U058	AT	BY









Activity ID	Activity Name	Remaining Duration	Start	Finish	2015									
					August					September				October
						09	16	23	30	06	13	20	27	
3MRP - Aug 2015 to Nov 2015														
02 - PRE-CONSTRUCTION WORKS														
02.3 - Method Statement / Shop Drawings														
0230-1380	MS Landscape Deck Structure - Submission	28	20-Aug-15	16-Sep-15										MS Landscape Deck Structure - Submission
0230-1390	MS Landscape Deck Structure - ER Review & Comment	28	17-Sep-15	14-Oct-15										
0230-1400	MS Landscape Deck Structure - Resubmission	28	15-Oct-15	11-Nov-15										
0230-1611	MS Noise Semi Enclosure - Submission	54	20-Jul-15 A	12-Oct-15										
0230-1612	MS Noise Semi Enclosure - ER Review / Comment	28	13-Oct-15	09-Nov-15										
0230-1690	MS Approach Ramp - ER Approval	14	01-Feb-15 A	02-Sep-15										MS Approach Ramp - ER Approval
0230-2280	MS EVB Basement & Mezzanine Construction - No Adverse Comment	0	20-Jul-15 A	02-Aug-15 A										
0230-2330	MS for Connection of EVB and EVA - Submission	10	10-Mar-15 A	29-Aug-15										MS for Connection of EVB and EVA - Submission
0230-2340	MS for Connection of EVB and EVA - ER Review & Comment	12	30-Aug-15	10-Sep-15										MS for Connection of EVB and EVA - ER Review & Comment
0230-2350	MS for Connection of EVB and EVA - Resubmission	6	11-Sep-15	16-Sep-15										MS for Connection of EVB and EVA - Resubmission
0230-2360	MS for Connection of EVB and EVA - ER No Adverse Comment	10	17-Sep-15	26-Sep-15*										MS for Connection of E
0230-2370	MS for Contruction of New IEC Westbound Bridge - Submission	0	20-Jul-15 A	29-Jul-15 A										IEC Westbound Bridge - Submission
0230-2380	MS for Contruction of New IEC Westbound Bridge - ER Review & Comment	0	30-Jul-15 A	10-Aug-15 A										MS for Contruction of New IEC Westbound Bridge - ER Review & Comment
0230-2390	MS for Contruction of New IEC Westbound Bridge - Resubmission	0	11-Aug-15 A	19-Aug-15 A										MS for Contruction of New IEC Westbound Bridge - Resubmission
0230-2400	MS for Contruction of New IEC Westbound Bridge - ER No Adverse Comment	0	20-Jul-15 A	29-Jul-15 A										IEC Westbound Bridge - ER No Adverse Comment
02.4 - Contractor's Design and Build Items														
0240-1180	HGHK Permanent Carpark Design - ER/HGHK Review and Comment	50	20-Aug-15	08-Oct-15										
0240-1190	HGHK Permanent Carpark Design - Resubmission	50	09-Oct-15	27-Nov-15										
0240-1270	Landscaping Design - Submission	90	20-Aug-15*	17-Nov-15										
0240-1630	Green Roof & Wall Minimum 2 years Establishment	501	18-Apr-15 A	19-Apr-17										
02.5 - Bridge Segment/Beam Off-site Precasting														
0250-2620	Precast Beam Bridge C1 2122-E	0	23-Jun-15 A	31-Jul-15 A										C1 2122-E
0250-2640	Precast Beam Bridge C1 2122-F	0	11-Jul-15 A	07-Aug-15 A										Precast Beam Bridge C1 2122-F
0250-2660	Precast Beam Bridge E E3E2-A	0	10-May-15 A	15-Aug-15 A										Precast Beam Bridge E E3E2-A
0250-2860	Precast Beam Bridge F5 - 14	0	01-Jun-15 A	13-Aug-15 A										Precast Beam Bridge F5 - 14
0250-2880	Precast Beam Bridge F5 - 15	0	08-Jun-15 A	31-Jul-15 A										F5 - 15
0250-2900	Precast Beam Bridge F5 - 03	0	23-Jun-15 A	27-Jul-15 A										
0250-2920	Precast Beam Bridge F5 - 04	0	30-Jun-15 A	27-Jul-15 A										
0250-2940	Precast Beam Bridge F5 - 05	0	10-Jul-15 A	13-Aug-15 A										Precast Beam Bridge F5 - 05
0250-2960	Precast Beam Bridge F5 - 06	0	15-Jul-15 A	07-Aug-15 A										Precast Beam Bridge F5 - 06
0250-2980	Precast Beam Bridge F5 - 07	0	22-Jul-15 A	14-Aug-15 A										Precast Beam Bridge F5 - 07
0250-3000	Precast Beam Bridge F5 - 08	0	28-Jul-15 A	16-Aug-15 A										Precast Beam Bridge F5 - 08
0250-3020	Precast Beam Bridge F5 - 09	0	04-Aug-15 A	14-Aug-15 A										Precast Beam Bridge F5 - 09
0250-3030	Precast Beam Bridge F5 - 10	0	08-Aug-15 A	16-Aug-15 A										Precast Beam Bridge F5 - 10
0250-3035	Completion of Beam Off-Site Pre casting	0		16-Aug-15 A										Completion of Beam Off-Site Pre casting
0250-3580	Bridge F1C Pier 36 T-span Segment Off-site Casting (13 nos.)	17	10-Jun-15 A	08-Sep-15										Bridge F1C Pier 36 T-span Segment Off-site Casting (13 nos.)
0250-3600	Bridge F1C Pier 37 T-span Segment Off-site Casting (11 nos.)	3	16-Jul-15 A	22-Aug-15										Bridge F1C Pier 37 T-span Segment Off-site Casting (11 nos.)
0250-3620	Bridge F1C Abut D12 End-span Segment Off-site Casting (7 nos.)	0	21-Jul-15 A	12-Aug-15 A										Bridge F1C Abut D12 End-span Segment Off-site Casting (7 nos.)
0250-3640	Bridge F1C Pier 38 End-span Segment Off-site Casting (6 nos.)	6	18-Jun-15 A	26-Aug-15										Bridge F1C Pier 38 End-span Segment Off-site Casting (6 nos.)
0250-3720	Bridge F3C Pier 41 T-span Segment Off-site Casting (13 nos.)	29	10-Apr-15 A	22-Sep-15										Bridge F3C Pier 41 T-span Segment O
0250-3740	Bridge F3C Pier 42 T-span Segment Off-site Casting (11 nos.)	15	18-Apr-15 A	05-Sep-15										Bridge F3C Pier 42 T-span Segment Off-site Casting (11 nos.)
0250-3760	Bridge F3C Pier 40 End-span Segment Off-site Casting (5 nos.)	16	10-Apr-15 A	07-Sep-15										Bridge F3C Pier 40 End-span Segment Off-site Casting (5 nos.)
0250-3780	Bridge F3C Pier 43 End-span Segment Off-site Casting (6 nos.)	19	22-May-15 A	10-Sep-15										Bridge F3C Pier 43 End-span Segment Off-site Casting (6 nos.)
0250-3860	Bridge F1B2 - Abut D12 Segment - 6 nos. (S2)	19	05-Sep-15	29-Sep-15										Bridge F1B2
0250-3880	Bridge F1B2 - Pier F1B2 Segment - 13 nos. (S1)	40	11-Sep-15	30-Oct-15										
0250-3920	Bridge F1B2 - Pier F3B2 Segment - 6 nos. (S2)	19	07-Oct-15	30-Oct-15										
0250-3940	Bridge F2B - Pier F3B2 Segment - 5 nos. (S2)	16	06-Nov-15	25-Nov-15										
02.6 - Fabrication & Delivery of Noise Enclosure														
0260-5000	Int. Noise Enclosure Main + Sub Frames Fab / Del	105	01-Jun-15 A	23-Dec-15										
0260-5010	Int. Noise Enclosure Noise Panel Fab / Del	122	19-Jan-15 A	14-Jan-16										
05 - SECTION 2 & 2A OF THE WORKS														
05.1 - Cut & Cover Tunnel Ch 4855-4932 (APS Footprint)														

Activity ID	Activity Name	Remaining Duration	Start	Finish	2015											
					August				September				October			
					09	16	23	30	06	13	20	27				
05.1.1 - D-Wall Construction																
0511-1600	D-Wall Interface Coring	0	16-May-15 A	25-Jul-15 A												
0511-1620	D-Wall Grouting/Pressure Grouting	0	26-Jul-15 A	31-Jul-15 A	sure Grouting											
05.1.3 - APS & Tunnel Structure																
0513-3060	APS Basement (Bay 21-South) - Staircase Landing 8 > Staircase Landing 12	11	07-Jul-15 A	01-Sep-15												
0513-3080	Tunnel Level - South Side Additional Beam at Bay 21	5	20-Aug-15	25-Aug-15												
0513-3100	Reinstate Temporary Opening of Base Slab > Bay 18	9	22-Aug-15	01-Sep-15												
0513-3105	Reinstate Temporary Opening of OHVD & Roof Slab > Bay 18	6	22-Aug-15	28-Aug-15*												
0513-3140	APS Basement (Bay 21-South) - Partition wall	0	07-Apr-15 A	31-Jul-15 A	21-South) - Partition wall											
05.1.4 - Tunnel Structure																
0514-2040	Weak Seam Rectification works for sub-standard D-Wall	0	10-Mar-15 A	31-Jul-15 A	ion works for sub-standard D-Wall											
05.1.5 - EVB Sub-structure & Tunnel																
0515-1060	Tunnel Roadside/Profile Barrier and Cable Trough Portion VIIIB & IXB	0	16-Jun-15 A	31-Jul-15 A	ile Barrier and Cable Trough Portion VIIIB & IXB											
0515-1061	Roadside Barrier - Service Trough/Steel Angle/Precast Concrete Cover	0	20-Jul-15 A	31-Jul-15 A	ervice Trough/Steel Angle/Precast Concrete Cover											
0515-1120	EVB Basement - Col/Partition Wall (Reb. Fix) > Zone 1A: GL1-2/A-E, 2-3/B-E, 3-6/C	4	13-Jul-15 A	24-Aug-15												
0515-1140	EVB Basement - Col/Partition Wall (Fwk) > Zone 1A to Mezz (-1.40) Soffit	7	03-Aug-15 A	27-Aug-15												
0515-1160	EVB Basement - Col/Partition Wall (Conc) > Zone 1A to Mezz (-1.40) Soffit	2	28-Aug-15	29-Aug-15												
0515-1180	EVB Basement - Mezz Slab & Beam (Lv -1.4) - (Falsework/Fwk) > Zone 1A	10	17-Aug-15 A	10-Sep-15												
0515-1200	EVB Basement - Mezz Slab & Beam (Lv -1.4) - (Reb. Fix) > Zone 1A	6	16-Sep-15 A	17-Sep-15												
0515-1220	EVB Basement - Mezz Slab & Beam (Lv -1.4) - (Conc) > Zone 1A	2	18-Sep-15	19-Sep-15												
0515-1240	EVB Basement - Col/Partition Wall (Reb. Fix) > Zone 2A: GL1-6/A-D (incl ST-04)	14	18-Sep-15	06-Oct-15												
0515-1260	EVB Basement - Col/Partition Wall (Fwk) > Zone 2A to Roof Soffit	14	03-Oct-15	19-Oct-15												
0515-1280	EVB Basement - Col/Partition Wall (Conc) > Zone 2A to Roof Soffit	2	20-Oct-15	22-Oct-15												
0515-1300	EVB Basement - Mezz Slab & Beam (Lv +2.65) - (Falsework/Fwk) > Zone 2A	6	23-Oct-15	29-Oct-15												
0515-1320	EVB Basement - Mezz Slab & Beam (Lv +2.65) - (Reb. Fix) > Zone 2A	3	30-Oct-15	02-Nov-15												
0515-1340	EVB Basement - Mezz Slab & Beam (Lv +2.65) - (Conc) > Zone 2A	1	03-Nov-15	03-Nov-15												
0515-1360	EVB Basement - Col/Partition Wall (Reb. Fix) > Zone 3A: GL1-6/E-H	6	12-Aug-15 A	13-Oct-15												
0515-1380	EVB Basement - Col/Partition Wall (Fwk) > Zone 3A to Roof Soffit	8	17-Aug-15 A	29-Oct-15												
0515-1400	EVB Basement - Col/Partition Wall (Conc) > Zone 3A to Roof Soffit	2	28-Oct-15	29-Oct-15												
0515-1420	EVB Basement - Col/Partition Wall (Reb. Fix) > Zone 4A: GL1-6/H-K	6	06-Aug-15 A	01-Sep-15												
0515-1440	EVB Basement - Col/Partition Wall (Fwk) > Zone 4A to Roof Soffit	9	12-Aug-15 A	08-Sep-15												
0515-1460	EVB Basement - Col/Partition Wall (Conc) > Zone 4A to Roof Soffit	2	09-Sep-15	10-Sep-15												
0515-1480	EVB Basement - Col/Partition Wall (Reb. Fix) > Zone 5A: GL1-6/K-O (incl ST-03)	3	07-Jul-15 A	22-Aug-15												
0515-1500	EVB Basement - Col/Partition Wall (Fwk) > Zone 5A to Roof Soffit	5	11-Jul-15 A	25-Aug-15												
0515-1520	EVB Basement - Col/Partition Wall (Conc) > Zone 5A to Roof Soffit	1	30-Jul-15 A	26-Aug-15												
0515-1540	EVB Basement - Roof Slab (Falsework/Fwk) > Zone 5B: GL1-6/K-O	21	08-Sep-15	03-Oct-15												
0515-1560	EVB Basement - Roof Slab (Reb Fix) > Zone 5B: GL1-6/K-O	14	02-Oct-15	17-Oct-15												
0515-1580	EVB Basement - Roof Slab (Conc) > Zone 5B: GL1-6/K-O	2	19-Oct-15	20-Oct-15												
0515-1600	EVB Basement - Roof Slab (Falsework/Fwk) > Zone 4B: GL1-6/H-K	21	05-Oct-15	29-Oct-15												
0515-1620	EVB Basement - Roof Slab (Reb Fix) > Zone 4B: GL1-6/H-K	14	28-Oct-15	12-Nov-15												
0515-1640	EVB Basement - Roof Slab (Conc) > Zone 4B: GL1-6/H-K	2	13-Nov-15	14-Nov-15												
0515-1660	EVB Basement - Roof Slab (Falsework/Fwk) > Zone 3B: GL1-6/E-H	21	30-Oct-15	23-Nov-15												
05.2 - Cut & Cover Tunnel Ch 4932-5149																
05.2.5 - Road & Miscellaneous Works																
0525-1240	Remedial Works - Bay 9 OHVD - WestBound	0	26-Jul-15 A	31-Jul-15 A	y 9 OHVD - WestBound											
0525-1260	Remedial Works - Concrete Repair Works / Trim overbreak Concrete Etc,Honeycoms	0	09-Mar-15 A	31-Jul-15 A	crete Repair Works / Trim overbreak Concrete Etc,Honeycoms/aitance, etc.											
0525-1280	Remedial Works - Sealing off Water Leakage at D-Wall	0	01-Jun-15 A	31-Jul-15 A	aling off Water Leakage at D-Wall											
06 - SECTION 3 OF THE WORKS																
06.1 - Westbound - Pier 29-34																
0610-1380	Construct W/B Bridge Pier 29 > Pile Cap	0	11-Jul-15 A	17-Aug-15 A	Construct W/B Bridge Pier 29 > Pile Cap											
0610-1400	Construct W/B Bridge Pier 29 > Column	5	18-Aug-15 A	25-Aug-15	Construct W/B Bridge Pier 29 > Column											
0610-1420	Construct W/B Bridge Pier 29 > Rebar Fixing - Crosshead	10	26-Aug-15	05-Sep-15	Construct W/B Bridge Pier 29 > Rebar Fixing - Crosshead											
0610-1440	Construct W/B Bridge Pier 29 > Formworks + Concreting - Crosshead	4	07-Sep-15	10-Sep-15	Construct W/B Bridge Pier 29 > Formworks + Concreting - Crosshead											
0610-1460	Construct W/B Bridge Pier 29 > Bearing	4	11-Sep-15	15-Sep-15	Construct W/B Bridge Pier 29 > Bearing											
0610-1480	Construct W/B Bridge Pier 30 > Pile Cap	0	06-Jul-15 A	01-Aug-15 A	dge Pier 30 > Pile Cap											

Remaining Level of Effort

Actual Level of Effort

Actual Work

Remaining Work

Critical Remaining Work

◆ ◆ Milestone

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Three Months Rolling Programme (20 Aug to 19 Nov 2015)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	2015												
					August						September						October
						09	16	23	30	06	13	20	27				
0610-1500	Construct W/B Bridge Pier 30 > Column	0	02-Aug-15 A	10-Aug-15 A	Construct W/B Bridge Pier 30 > Column												
0610-1520	Construct W/B Bridge Pier 30 > Rebar Fixing - Crosshead	9	19-Aug-15 A	29-Aug-15	Construct W/B Bridge Pier 30 > Rebar Fixing - Crosshead												
0610-1540	Construct W/B Bridge Pier 30 > Formworks + Concreting - Crosshead	4	31-Aug-15	03-Sep-15	Construct W/B Bridge Pier 30 > Formworks + Concreting - Crosshead												
0610-1560	Construct W/B Bridge Pier 30 > Bearing	6	04-Sep-15	10-Sep-15	Construct W/B Bridge Pier 30 > Bearing												
0610-1580	Construct W/B Bridge Pier 31 > Pile Cap	0	08-Jul-15 A	08-Aug-15 A	Construct W/B Bridge Pier 31 > Pile Cap												
0610-1600	Construct W/B Bridge Pier 31 > Column	0	09-Aug-15 A	18-Aug-15 A	Construct W/B Bridge Pier 31 > Column												
0610-1620	Construct W/B Bridge Pier 31 > Rebar Fixing - Crosshead	9	19-Aug-15 A	29-Aug-15	Construct W/B Bridge Pier 31 > Rebar Fixing - Crosshead												
0610-1640	Construct W/B Bridge Pier 31 > Formworks + Concreting - Crosshead	4	31-Aug-15	03-Sep-15	Construct W/B Bridge Pier 31 > Formworks + Concreting - Crosshead												
0610-1660	Construct W/B Bridge Pier 31 > Bearing	5	04-Sep-15	09-Sep-15	Construct W/B Bridge Pier 31 > Bearing												
0610-1680	Construct W/B Bridge Pier 32 > Pile Cap	0	14-Jul-15 A	01-Aug-15 A	Construct W/B Bridge Pier 32 > Pile Cap												
0610-1700	Construct W/B Bridge Pier 32 > Column	0	02-Aug-15 A	14-Aug-15 A	Construct W/B Bridge Pier 32 > Column												
0610-1720	Construct W/B Bridge Pier 32 > Rebar Fixing - Crosshead	10	19-Aug-15 A	31-Aug-15	Construct W/B Bridge Pier 32 > Rebar Fixing - Crosshead												
0610-1740	Construct W/B Bridge Pier 32 > Formworks + Concreting - Crosshead	4	01-Sep-15	04-Sep-15	Construct W/B Bridge Pier 32 > Formworks + Concreting - Crosshead												
0610-1760	Construct W/B Bridge Pier 32 > Bearing	5	05-Sep-15	10-Sep-15	Construct W/B Bridge Pier 32 > Bearing												
0610-1780	Construct W/B Bridge Pier 33 > Pile Cap	0	28-Jul-15 A	10-Aug-15 A	Construct W/B Bridge Pier 33 > Pile Cap												
0610-1800	Construct W/B Bridge Pier 33 > Column	0	11-Aug-15 A	14-Aug-15 A	Construct W/B Bridge Pier 33 > Column												
0610-1820	Construct W/B Bridge Pier 33 > Rebar Fixing - Crosshead	10	20-Aug-15	31-Aug-15	Construct W/B Bridge Pier 33 > Rebar Fixing - Crosshead												
0610-1840	Construct W/B Bridge Pier 33 > Formworks + Concreting - Crosshead	4	01-Sep-15	04-Sep-15	Construct W/B Bridge Pier 33 > Formworks + Concreting - Crosshead												
0610-1860	Construct W/B Bridge Pier 33 > Bearing	5	05-Sep-15	10-Sep-15	Construct W/B Bridge Pier 33 > Bearing												
0610-1880	W/B Bridge Pier 34 - Tie Beam > Breaking + Excav + Blinding	8	12-Nov-15	20-Nov-15													
0610-1920	Construct W/B Bridge Pier 34 Drilling of Starter Bars for Pier/Column	14	12-Nov-15	27-Nov-15													
06.3 - Admin Building																	
0630-1100	Grd. Beam - (GL > K-N) - Removal of Existing Sheet Piles	6	20-Aug-15	26-Aug-15	Grd. Beam - (GL > K-N) - Removal of Existing Sheet Piles												
0630-1101	Grd. Beam - (GL > K-N) - Excavate to formation level + Blinding Layer Casting	5	22-Aug-15	27-Aug-15	Grd. Beam - (GL > K-N) - Excavate to formation level + Blinding Layer Casting												
0630-1120	Grd. Beam - (GL > K-N) - Install Capping Plate	4	28-Aug-15	01-Sep-15	Grd. Beam - (GL > K-N) - Install Capping Plate												
0630-1140	Grd. Beam - (GL > K-N) - Rebar Fixing for Ground Beam	7	31-Aug-15	07-Sep-15	Grd. Beam - (GL > K-N) - Rebar Fixing for Ground Beam												
0630-1160	Grd. Beam - (GL > K-N) - Erect Formworks for Ground Beam	4	05-Sep-15	09-Sep-15	Grd. Beam - (GL > K-N) - Erect Formworks for Ground Beam												
0630-1180	Grd. Beam - (GL > K-N) - Cast Concrete for Ground Beam	1	10-Sep-15	10-Sep-15	Grd. Beam - (GL > K-N) - Cast Concrete for Ground Beam												
0630-1200	Grd. Beam - (GL > K-N) - Formworks Removal	1	11-Sep-15	11-Sep-15	Grd. Beam - (GL > K-N) - Formworks Removal												
0630-1600	Grd. Beam - (GL > D-G) - Removal of Existing Sheet Piles	1	10-Aug-15 A	20-Aug-15	Grd. Beam - (GL > D-G) - Removal of Existing Sheet Piles												
0630-1620	Grd. Beam - (GL > D-G) - Excavate to formation level + Blinding Layer Casting	5	21-Aug-15	26-Aug-15	Grd. Beam - (GL > D-G) - Excavate to formation level + Blinding Layer Casting												
0630-1640	Grd. Beam - (GL > D-G) - Install Capping Plate	4	26-Aug-15	29-Aug-15	Grd. Beam - (GL > D-G) - Install Capping Plate												
0630-1660	Grd. Beam - (GL > D-G) - Rebar Fixing for Ground Beam	7	28-Aug-15	04-Sep-15	Grd. Beam - (GL > D-G) - Rebar Fixing for Ground Beam												
0630-1700	Grd. Beam - (GL > D-G) - Erect Formworks for Ground Beam	4	05-Sep-15	09-Sep-15	Grd. Beam - (GL > D-G) - Erect Formworks for Ground Beam												
0630-1720	Grd. Beam - (GL > D-G) - Cast Concrete for Ground Beam	1	10-Sep-15	10-Sep-15	Grd. Beam - (GL > D-G) - Cast Concrete for Ground Beam												
0630-1740	Grd. Beam - (GL > D-G) - Formworks Removal	1	11-Sep-15	11-Sep-15	Grd. Beam - (GL > D-G) - Formworks Removal												
0630-2020	Grd. Beam - (GL > B-D) - Removal of Existing Sheet Piles	1	18-Aug-15 A	20-Aug-15	Grd. Beam - (GL > B-D) - Removal of Existing Sheet Piles												
0630-2021	Grd. Beam - (GL > B-D) - Excavate to formation level + Blinding Layer Casting	6	20-Aug-15	26-Aug-15	Grd. Beam - (GL > B-D) - Excavate to formation level + Blinding Layer Casting												
0630-2040	Grd. Beam - (GL > B-D) - Install Capping Plate	4	27-Aug-15	31-Aug-15	Grd. Beam - (GL > B-D) - Install Capping Plate												
0630-2080	Grd. Beam - (GL > B-D) - Rebar Fixing for Ground Beam	7	02-Sep-15	09-Sep-15	Grd. Beam - (GL > B-D) - Rebar Fixing for Ground Beam												
0630-2100	Grd. Beam - (GL > B-D) - Erect Formworks for Ground Beam	4	09-Sep-15	12-Sep-15	Grd. Beam - (GL > B-D) - Erect Formworks for Ground Beam												
0630-2120	Grd. Beam - (GL > B-D) - Cast Concrete for Ground Beam	1	14-Sep-15	14-Sep-15	Grd. Beam - (GL > B-D) - Cast Concrete for Ground Beam												
0630-2140	Grd. Beam - (GL > B-D) - Formworks Removal	1	15-Sep-15	15-Sep-15	Grd. Beam - (GL > B-D) - Formworks Removal												
A1000	Construction of pile cap for PC21	15	22-Oct-15	07-Nov-15													
A1010	Construction of pile cap for PC22	15	30-Oct-15	16-Nov-15													
A1020	Install underground drainage at Portion VB	12	27-Aug-15	09-Sep-15	Install underground drainage at Portion VB												
08 - SECTION 5 WORK																	
08.1 - Retaining Wall 'F' Substructure																	
0810-1640	Retaining Wall F > Pile Testing & prep for Caps Const	5	02-Oct-15*	07-Oct-15													
0810-1650	Retaining Wall F > Temp Excav Support/Open cut Excav works	21	08-Oct-15*	02-Nov-15													
0810-1660	Retaining Wall F > Excavation Works for Pile caps	25	19-Oct-15	17-Nov-15													
0810-1670	Construction of pile cap for Retaining Wall F @ C4-13	15	22-Oct-15	07-Nov-15													
0810-1680	Construction of pile cap for Retaining Wall F @ C4-14/C15-11	15	31-Oct-15	17-Nov-15													
0810-1700	Construction of pile cap for Retaining Wall F @ C5-12	15	10-Nov-15	26-Nov-15													

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

 Milestone

Contract HY/2009/19

Three Months Rolling Programme (20 Aug to 19 Nov 2015)

Activity ID	Activity Name	Remaining Duration	Start	Finish	2015										
					August					September					October
						09	16	23	30	06	13	20	27		
09 - SECTION 6 OF THE WORKS															
09.2 - Westbound - Pier 26-27															
0920-1080	Pier 27 Prepare C.J. and Modify Tie Beam	18	20-Aug-15	09-Sep-15	Pier 27 Prepare C.J. and Modify Tie Beam										
0920-1100	Pier 27 Construct Pier/Column	18	10-Sep-15	02-Oct-15											
0920-1120	Pier 27 Construct Crosshead	24	03-Oct-15	31-Oct-15											
0920-1140	Pier 27 Install Bearing	9	02-Nov-15	11-Nov-15											
0920-1160	Pier 26 Prepare C.J. + Drill in Re-bar + Modify Pilecap	18	20-Aug-15	09-Sep-15	Pier 26 Prepare C.J. + Drill in Re-bar + Modify Pilecap										
0920-1180	Pier 26 Construct Pier/Column	18	10-Sep-15	02-Oct-15											
0920-1200	Pier 26 Construct Crosshead	24	03-Oct-15	31-Oct-15											
0920-1220	Pier 26 Install Bearing	9	02-Nov-15	11-Nov-15											
10 - SECTION X OF THE WORKS															
10.4 - Bridge Deck Demolition															
10.4.1 - Existing W/B Bridge (Part 1)															
10410-1320	Excavate + Demolish W/B Bridge Pier 33 > Pile Cap	0	14-Jul-15 A	27-Jul-15 A	33 > Pile Cap										
10410-1440	Demolish W/B Bridge Pier 27 > Column > by Crane C	0	19-Jul-15 A	23-Jul-15 A											
10410-1480	Demolish W/B Bridge Deck Pier 25-26 (7 beams) > by Crane B & C	0	23-Jul-15 A	25-Jul-15 A	ms) > by Crane B & C										
10410-1500	Demolish W/B Bridge Pier 26 > Column > by Crane C	0	25-Jul-15 A	30-Jul-15 A	26 > Column > by Crane C										
10410-1520	Saw Cutting W/B Bridge Deck Pier 24-25	0	30-Jul-15 A	01-Aug-15 A	Bridge Deck Pier 24-25										
10410-1540	Demolish W/B Bridge Deck Pier 24-25 (7 beams) > by Crane B & C	0	31-Jul-15 A	03-Aug-15 A	W/B Bridge Deck Pier 24-25 (7 beams) > by Crane B & C										
10410-1560	Demolish W/B Bridge Pier 25 > Column > by Crane C	0	03-Aug-15 A	06-Aug-15 A	Demolish W/B Bridge Pier 25 > Column > by Crane C										
10410-1580	Saw Cutting W/B Bridge Deck Pier 23-24	0	04-Aug-15 A	07-Aug-15 A	Saw Cutting W/B Bridge Deck Pier 23-24										
10410-1600	Demolish W/B Bridge Deck Pier 23-24 (7 beams) > by Crane B & C	0	06-Aug-15 A	10-Aug-15 A	Demolish W/B Bridge Deck Pier 23-24 (7 beams) > by Crane B & C										
10410-1620	Demolish W/B Bridge Pier 24 > Column > by Crane C	0	10-Aug-15 A	15-Aug-15 A	Demolish W/B Bridge Pier 24 > Column > by Crane C										
10410-1640	Saw Cutting W/B Bridge Deck Pier 22-23	0	13-Aug-15 A	16-Aug-15 A	Saw Cutting W/B Bridge Deck Pier 22-23										
10410-1660	Demolish W/B Bridge Deck Pier 22-23 (7 beams) > by Crane B & C	0	15-Aug-15 A	19-Aug-15 A	Demolish W/B Bridge Deck Pier 22-23 (7 beams) > by Crane B & C										
10410-1680	Demolish W/B Bridge Pier 23 > Column > by Crane C	5	20-Aug-15	25-Aug-15	Demolish W/B Bridge Pier 23 > Column > by Crane C										
10410-1700	Saw Cutting W/B Bridge Deck Pier 21-22	3	19-Aug-15 A	22-Aug-15	Saw Cutting W/B Bridge Deck Pier 21-22										
10410-1701	Dem. W/B Bridge Deck Pier 21-22 (1 beam) w/ time constraint start up to 4Pm > by Crane B & C	1	24-Aug-15	24-Aug-15	Dem. W/B Bridge Deck Pier 21-22 (1 beam) w/ time constraint start up to 4Pm > by Crane B & C										
10410-1720	Demolish W/B Bridge Deck Pier 21-22 (5 beams) > by Crane B & C	3	25-Aug-15	27-Aug-15	Demolish W/B Bridge Deck Pier 21-22 (5 beams) > by Crane B & C										
10410-1740	Demolish W/B Bridge Pier 22 > Column > by Crane C	5	28-Aug-15	02-Sep-15	Demolish W/B Bridge Pier 22 > Column > by Crane C										
10410-1741	Saw Cutting W/B Bridge Deck Pier 20-21	2	28-Aug-15	29-Aug-15	Saw Cutting W/B Bridge Deck Pier 20-21										
10410-1742	Dem. W/B Bridge Deck Pier 20-21 (1 beam) w/ time constraint start up to 4Pm > by Crane B & C	2	31-Aug-15	01-Sep-15	Dem. W/B Bridge Deck Pier 20-21 (1 beam) w/ time constraint start up to 4Pm > by Crane B & C										
10410-1743	Demolish W/B Bridge Deck Pier 20-21 (2 beams) > by Crane B & C	1	02-Sep-15	02-Sep-15	Demolish W/B Bridge Deck Pier 20-21 (2 beams) > by Crane B & C										
10410-1743.1	Cutting of W/B Bridge Crosshead Wing at Pier 21 for Modification	2	03-Sep-15	04-Sep-15	Cutting of W/B Bridge Crosshead Wing at Pier 21 for Modification										
10410-1744	Demolish W/B Bridge Deck Pier 19-20 (2 beams) > Insatall Scaffoldldings to Support Beams	5	28-Aug-15	02-Sep-15	Demolish W/B Bridge Deck Pier 19-20 (2 beams) > Insatall Scaffoldldings to Support Beams										
10410-1745	Saw Cutting W/B Bridge Deck Pier 19-20 @ 2 Beams into 8Pcs(1x4X2)	4	03-Sep-15	07-Sep-15	Saw Cutting W/B Bridge Deck Pier 19-20 @ 2 Beams into 8Pcs(1x4X2)										
10410-1746	Dem. W/B Bridge Deck Pier 19-20 (1 beam) w/ time constraint start up to 4Pm > by Crane B & C	2	05-Sep-15	07-Sep-15	Dem. W/B Bridge Deck Pier 19-20 (1 beam) w/ time constraint start up to 4Pm > by Crane B										
10410-1747	Demolish W/B Bridge Deck Pier 19-20 (1 beam) > by Crane B	1	08-Sep-15	08-Sep-15	Demolish W/B Bridge Deck Pier 19-20 (1 beam) > by Crane B										
10410-1747.1	Cutting of W/B Bridge Crosshead Wing at Pier 20 for Modification	2	09-Sep-15	10-Sep-15	Cutting of W/B Bridge Crosshead Wing at Pier 20 for Modification										
10410-1747.5	Demolish W/B Bridge Deck Pier 17-18 (2 beams) > Insatall Scaffoldldings to Support Beams	5	02-Sep-15	07-Sep-15	Demolish W/B Bridge Deck Pier 17-18 (2 beams) > Insatall Scaffoldldings to Support Beams										
10410-1748	Saw Cutting W/B Bridge Deck Pier 17-18 @ 2 Beams into 8Pcs(1x4X2)	4	08-Sep-15	11-Sep-15	Saw Cutting W/B Bridge Deck Pier 17-18 @ 2 Beams into 8Pcs(1x4X2)										
10410-1749	Dem. W/B Bridge Deck Pier 17-18 (1 beam) > by Crane B	1	11-Sep-15	11-Sep-15	Dem. W/B Bridge Deck Pier 17-18 (1 beam) > by Crane B										
10410-1750	Demolish W/B Bridge Deck Pier 17-18 (1 beam) > by Crane B	1	12-Sep-15	12-Sep-15	Demolish W/B Bridge Deck Pier 17-18 (1 beam) > by Crane B										
10410-1751	Demolish W/B Bridge Deck Pier 18-19 (2 beams) > Construct Footing for Shoring of Beams	5	24-Aug-15	28-Aug-15	Demolish W/B Bridge Deck Pier 18-19 (2 beams) > Construct Footing for Shoring of Beams										
10410-1752	Demolish W/B Bridge Deck Pier 18-19 (2 beams) > Install Shoring + Fixing to hold Beams	5	29-Aug-15	03-Sep-15	Demolish W/B Bridge Deck Pier 18-19 (2 beams) > Install Shoring + Fixing to hold Beams										
10410-1753	Demolish W/B Bridge Deck Pier 18-19 (2 beams) > Saw Cutting of Bridge Deck & Pilecap	10	04-Sep-15	15-Sep-15	Demolish W/B Bridge Deck Pier 18-19 (2 beams) > Saw Cutting of										
10410-1754	Dem. W/B Bridge Deck Pier 18-19 (Half Beam-Eastside) w/ time constraint start at 4Pm	2	14-Sep-15	15-Sep-15	Dem. W/B Bridge Deck Pier 18-19 (Half Beam-Eastside) w/ time c										
10410-1755	Demolish W/B Bridge Deck Pier 18-19 (Half Beam-Eastside) > by Crane D	1	16-Sep-15	16-Sep-15	Demolish W/B Bridge Deck Pier 18-19 (Half Beam-Eastside) >										
10410-1756	Dem. W/B Bridge Deck Pier 18-19 (Half Beam-Westside) w/ time constraint start at 4Pm	1	17-Sep-15	17-Sep-15	Dem. W/B Bridge Deck Pier 18-19 (Half Beam-Westside)										
10410-1757	Demolish W/B Bridge Deck Pier 18-19 (Half Beam-Westside) > by Crane D	1	18-Sep-15	18-Sep-15	Demolish W/B Bridge Deck Pier 18-19 (Half Beam-We										
10410-1760	Cutting of W/B Bridge Crosshead Wing at Pier 19 for Modification > by Crane D	2	17-Sep-15	18-Sep-15	Cutting of W/B Bridge Crosshead Wing at Pier 19 for M										
10410-1761	Cutting of W/B Bridge Crosshead Wing at Pier 18 for Modification > by Crane D	2	19-Sep-15	21-Sep-15	Cutting of W/B Bridge Crosshead Wing at										
10410-1762	Removal of Shoring	2	19-Sep-15	21-Sep-15	Removal of Shoring										
10410-1763	Removal of Temporary Footing	5	22-Sep-15	26-Sep-15	Removal of Temporary										

Activity ID	Activity Name	Remaining Duration	Start	Finish	2015												
					August						September				October		
					09	16	23	30	06	13	20	27					
	10410-2180	Demolish Temp. W/B Bridge - Deck > Pier 42 to 43 (6 beams)	0	17-Jul-15 A	28-Jul-15 A	Demolish Temp. W/B Bridge - Deck > Pier 42 to 43 (6 beams)											
	10410-2200	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 43	0	29-Jul-15 A	07-Aug-15 A	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 43											
	10410-2220	Demolish Temp. W/B Bridge - Deck > Pier 41 to 42 (6 beams)	0	08-Aug-15 A	11-Aug-15 A	Demolish Temp. W/B Bridge - Deck > Pier 41 to 42 (6 beams)											
	10410-2240	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 42	0	12-Aug-15 A	18-Aug-15 A	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 42											
	10410-2260	Demolish Temp. W/B Bridge - Deck > Pier 40 to 41 (6 beams)	0	18-Aug-15 A	19-Aug-15 A	Demolish Temp. W/B Bridge - Deck > Pier 40 to 41 (6 beams)											
	10410-2280	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 41	7	20-Aug-15	27-Aug-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 41											
	10410-2300	Demolish Temp. W/B Bridge - Deck > Pier 39 to 40 (6 beams)	4	28-Aug-15	01-Sep-15	Demolish Temp. W/B Bridge - Deck > Pier 39 to 40 (6 beams)											
	10410-2320	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 40	7	02-Sep-15	09-Sep-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 40											
	10410-2340	Demolish Temp. W/B Bridge - Deck > Pier 38 to 39 (6 beams)	4	10-Sep-15	14-Sep-15	Demolish Temp. W/B Bridge - Deck > Pier 38 to 39 (6 beams)											
	10410-2360	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 39	7	15-Sep-15	22-Sep-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 39											
	10410-2380	Demolish Temp. W/B Bridge - Deck > Pier 37 to 38 (6 beams)	3	23-Sep-15	25-Sep-15	Demolish Temp. W/B Bridge - Deck > Pier 37 to 38 (6 beams)											
	10410-2400	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 38	7	26-Sep-15	06-Oct-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 38											
	10410-2420	Demolish Temp. W/B Bridge - Deck > Pier 36 to 37 (6 beams)	3	07-Oct-15	09-Oct-15	Demolish Temp. W/B Bridge - Deck > Pier 36 to 37 (6 beams)											
	10410-2440	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 37	7	10-Oct-15	17-Oct-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 37											
	10410-2460	Demolish Temp. W/B Bridge - Deck > Pier 35 to 36 (6 beams)	3	19-Oct-15	22-Oct-15	Demolish Temp. W/B Bridge - Deck > Pier 35 to 36 (6 beams)											
	10410-2480	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 36	7	23-Oct-15	30-Oct-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 36											
	10410-2500	Demolish Temp. W/B Bridge - Deck > Pier 34 to 35 (6 beams)	3	31-Oct-15	03-Nov-15	Demolish Temp. W/B Bridge - Deck > Pier 34 to 35 (6 beams)											
	10410-2520	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 35 (by crane)	7	04-Nov-15	11-Nov-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 35 (by crane)											
	10410-2540	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 34 (by crane)	7	04-Nov-15	11-Nov-15	Demolish Temp. W/B Bridge - Crosshead & Pier > Pier 34 (by crane)											
	10410-3020	Pier 22 Erect Falsework at existing W/B Bridge prior to demolition	0	14-Aug-15 A	16-Aug-15 A	Pier 22 Erect Falsework at existing W/B Bridge prior to demolition											
10.1 - E/B Bridges (Bridge D, E and F)																	
10.1.1 - Marine Pier Construction																	
Pier F01 to F02																	
	1011-8600	F1B Pier/Column Construction	12	07-Oct-15	20-Oct-15												
	1011-8620	F1B Crosshead Construction	18	22-Oct-15	11-Nov-15												
	1011-8640	Bearing installation pier F1B & F2B	12	12-Nov-15	25-Nov-15												
10.1.4 - Bridge E / Hing Fat Slip Road																	
Bridge Construction																	
	1014-1840	Construction (Pier E4 - Pier E2) > Construct Pile Cap at Pier E3	2	03-Aug-15 A	21-Aug-15	Construction (Pier E4 - Pier E2) > Construct Pile Cap at Pier E3											
	1014-1860	Construction (Pier E4 - Pier E2) > Construct Pier E3	9	22-Aug-15	01-Sep-15	Construction (Pier E4 - Pier E2) > Construct Pier E3											
	1014-1880	Construction (Pier E4 - Pier E2) > Construct Crosshead + Bearing at Pier E3	21	02-Sep-15	25-Sep-15	Construction (Pier E4 - Pier E2) > Construct Pier E3											
	1014-1900	Construction (Pier E4 - Pier E2) > Modification of Crosshead + Bearing at Pier E4 & E	14	20-Aug-15	05-Sep-15	Construction (Pier E4 - Pier E2) > Modification of Crosshead + Bearing at Pier E4 & E2											
	1014-1920	Construction (Pier E4 - Pier E2) > Erect 3nos Beams > Pier E3-E2	5	26-Sep-15	03-Oct-15												
	1014-1940	Construction (Pier E4 - Pier E2) > Erect 3nos Beams > Pier E4-E3	5	05-Oct-15	09-Oct-15												
	1014-1960	Construction (Pier E4 - Pier E2) > Erect Scaffoldings + Platform + Pre-cast Planking >	7	10-Oct-15	17-Oct-15												
	1014-1980	Construction (Pier E4 - Pier E2) > Rebar Fixing of Deck + Diaphragm + Concreting >	14	16-Oct-15	02-Nov-15												
	1014-2000	Construction (Pier E4 - Pier E2) > Construct Parapet D1-E2	14	15-Oct-15	02-Nov-15												
	1014-2020	Construction (Pier E4 - Pier E2) > Construct Parapet E2-E4	14	03-Nov-15	18-Nov-15												
	1014-2040	Construction (Pier E4 - Pier E2) > Install Street Furniture/GullyEtc.	14	03-Nov-15	18-Nov-15												
	1014-2060	Construction (Pier E4 - Pier E2) > Install MJ at Pier E2	7	09-Nov-15	16-Nov-15												
	1014-2080	Construction (Pier E4 - Pier E2) > Install MJ at Pier E3 & E4	8	12-Nov-15	20-Nov-15												
	1014-2100	Construction (Pier E4 - Pier E2) > Aspaht + Road Markings, Install Street Furniture/Si	4	21-Nov-15	25-Nov-15												
	1014-2940	Bridge E (Pier 19 - D1) - Noise Barrier > Post + Panel	14	02-Nov-15	17-Nov-15												
	1014-2960	Bridge E (Pier 19 - D1) - Green Panel Installation	2	18-Nov-15	20-Nov-15												
10.2 - W/B Bridges (Bridge C and F)																	
10.2.1 - Pier Construction																	
Pier 38 to 43																	
	1021-1820	Pier 38 (F3C) Prepare C.J. at Existing Pile Cap	11	07-Oct-15	19-Oct-15												
	1021-1840	Pier 38 (F3C) Construct Pier/Column	18	20-Oct-15	10-Nov-15												
	1021-1900	Pier 39 (F4C) Prepare C.J. at Existing Pile Cap	11	23-Sep-15	07-Oct-15												
	1021-1920	Pier 39 (F4C) Construct Pier/Column	18	08-Oct-15	29-Oct-15												
	1021-1940	Pier 39 (F4C) Construct Crosshead	24	30-Oct-15	26-Nov-15												
	1021-1980	Pier 40 (F5C) Prepare C.J. at Existing Pile Cap	11	10-Sep-15	22-Sep-15	Pier 40 (F5C) Prepare C.J. at Existing											
	1021-2000	Pier 40 (F5C) Construct Pier/Column	18	23-Sep-15	15-Oct-15												
	1021-2020	Pier 40 (F5C) Construct Crosshead	24	16-Oct-15	13-Nov-15												
	1021-2040	Pier 40 (F5C) Install Bearing	9	14-Nov-15	24-Nov-15												

Activity ID	Activity Name	Remaining Duration	Start	Finish	2015											
					August						September					
						09	16	23	30	06	13	20	27	October		
	1021-2060	Pier 41 (F6C) Prepare C.J. at Existing Pile Cap	11	28-Aug-15	09-Sep-15											
	1021-2080	Pier 41 (F6C) Construct Pier/Column	18	10-Sep-15	02-Oct-15											
	1021-2100	Pier 41 (F6C) Construct Crosshead	24	03-Oct-15	31-Oct-15											
	1021-2120	Pier 41 (F6C) Install Bearing	9	02-Nov-15	11-Nov-15											
	1021-2140	Pier 42 (F7C) Prepare C.J. at Existing Pile Cap	11	20-Aug-15	01-Sep-15											
	1021-2160	Pier 42 (F7C) Construct Pier/Column	18	02-Sep-15	22-Sep-15											
	1021-2180	Pier 42 (F7C) Construct Crosshead	24	23-Sep-15	23-Oct-15											
	1021-2200	Pier 42 (F7C) Install Bearing	9	24-Oct-15	03-Nov-15											
	1021-2220	Pier 43 (F8C) Prepare C.J. at Existing Pile Cap	5	08-Aug-15 A	25-Aug-15											
	1021-2240	Pier 43 (F8C) Construct Pier/Column	18	26-Aug-15	15-Sep-15											
	1021-2260	Pier 43 (F8C) Construct Crosshead	24	16-Sep-15	15-Oct-15											
	1021-2280	Pier 43 (F8C) Install Bearing	9	16-Oct-15	27-Oct-15											
	Pier 36 to 37															
	1021-1580	Pier 36 (F1C) Prepare CJ at Existing Pile Cap	11	31-Oct-15	12-Nov-15											
	1021-1660	Pier 37 (F2C) Prepare CJ at Existing Pile Cap	11	19-Oct-15	31-Oct-15											
	1021-1680	Pier 37 (F2C) Construct Pier/Column	18	02-Nov-15	21-Nov-15											
	Pier 28															
	1021-1740	Pier 28 Excav + Prepare C.J	0	10-Aug-15 A	14-Aug-15 A											
	1021-1760	Pier 28 Construct Pier/Column	6	20-Aug-15	26-Aug-15											
	1021-1780	Pier 28 Construct Crosshead	14	27-Aug-15	11-Sep-15											
	1021-1800	Pier 28 Install Bearing	9	12-Sep-15	22-Sep-15											
	Pier 20 to 25															
	1021-1060	Pier 22 Prepare C.J. and Modify Tie Beam	18	03-Sep-15	23-Sep-15											
	1021-1080	Pier 22 Reconstruct Column	18	24-Sep-15	16-Oct-15											
	1021-1100	Pier 22 Reconstruct Crosshead	24	17-Oct-15	14-Nov-15											
	1021-1120	Pier 22 Install Bearing	6	16-Nov-15	23-Nov-15											
	1021-1280	Pier 24 Prepare C.J. and Modify Tie Beam	18	20-Aug-15	09-Sep-15											
	1021-1300	Pier 24 Reconstruct Column	18	10-Sep-15	02-Oct-15											
	1021-1320	Pier 24 Reconstruct Crosshead	24	03-Oct-15	31-Oct-15											
	1021-1340	Pier 24 Install Bearing	9	02-Nov-15	11-Nov-15											
	1021-1360	Pier 25 Prepare C.J. and Modify Tie Beam	18	20-Aug-15	09-Sep-15											
	1021-1380	Pier 25 Reconstruct Column	18	10-Sep-15	02-Oct-15											
	1021-1400	Pier 25 Reconstruct Crosshead	24	03-Oct-15	31-Oct-15											
	1021-1420	Pier 25 Install Bearing	9	02-Nov-15	11-Nov-15											
	1021-1500	Pier 23 Prepare C.J. + Drill in Re-bar + Modify Pilecap	0	09-Jun-15 A	25-Jul-15 A											
	1021-1520	Pier 23 Reconstruct Column	18	26-Aug-15	15-Sep-15											
	1021-1540	Pier 23 Reconstruct Crosshead	24	16-Sep-15	15-Oct-15											
	1021-1560	Pier 23 Install Bearing	9	16-Oct-15	27-Oct-15											
	Pier 17 to 19															
	1021-1215	Modify Pier 21 Crosshead (south wing) + Bearing	20	05-Sep-15	29-Sep-15											
	1021-1225	Modify Pier 20 Crosshead (south wing) + Bearing	20	11-Sep-15	06-Oct-15											
	1021-1230	Modify Pier 19 Crosshead (south wing) + Bearing	20	19-Sep-15	14-Oct-15											
	1021-1235	Modify Pier 18 Crosshead (south wing) + Bearing	20	22-Sep-15	16-Oct-15											
	10.2.2 - Bridge Construction															
	Bridge C1															
	1022-1000	Bridge C1 - Precast Beams Pier 17-21 W/B (9 nos)	9	17-Oct-15	28-Oct-15											
	1022-1001	Construction (Pier 17 - 21) > Erect Scaffoldings + Platform + Pre-cast Planking	7	22-Oct-15	29-Oct-15											
	1022-1002	Construction (Pier 17 - 21) > Rebar Fixing of Deck + Diaphragm + Concreting	20	30-Oct-15	21-Nov-15											
	Bridge C2															
	1022-2750	Bridge C2 Erect 6nos Pre-cast Beams by Crane D	5	23-Nov-15	28-Nov-15											
	Bridge C4															
	1022-1067	Bridge C4 - Erect Pier Segment at Pier 28 (2 nos) > By Crane	3	24-Sep-15	26-Sep-15											
	1022-1068	Bridge C4 - Erect Pier Segment at Pier 29 (1 no) > By Crane	2	22-Sep-15	23-Sep-15											
	1022-1069	Bridge C4 - Erect Pier Segment at Pier 30 (1 no) > By Crane	2	19-Sep-15	21-Sep-15											
	1022-1070	Erect/Assemble LG2 at Piers 29 and 30 + T&C	39	29-Sep-15	14-Nov-15											
	1022-1070.3	Bridge C4 Erect T-Span Segment at Pier 30 by LG2 (10 nos)	8	16-Nov-15	24-Nov-15											

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

 Milestone

Contract HY/2009/19

Three Months Rolling Programme (20 Aug to 19 Nov 2015)

Activity ID	Activity Name	Remaining Duration	Start	Finish	2015									
					August					September				
						09	16	23	30	06	13	20	27	October
	1022-1070.5	Bridge C4 Stitching between Pier 30 and 31	3	27-Nov-15	30-Nov-15									
	1022-1451	Bridge C4 - Erect Pier Segment at Pier 31 (1 no) > By Crane	2	11-Sep-15	12-Sep-15									
	1022-1452	Bridge C4 - Erect Pier Segment at Pier 32(2 nos) > By Crane	3	14-Sep-15	16-Sep-15									
	1022-1453	Bridge C5 - Erect Pier Segment at Pier 33 (1 no) > By Crane	2	17-Sep-15	18-Sep-15									
	1022-1454	Erect Temp. Lowering Support on Top of Pier Segment P33, 32 & 31 (design TBC)	15	19-Sep-15	08-Oct-15									
	1022-1455	Move LG1 to Temp. Lowering Support at Pier 33-31 from Pier 34-35	4	09-Oct-15	13-Oct-15									
	1022-1456	Modify LG1 at Pier 31,32 and 33 for Segment Erection at Pier 32-44	26	14-Oct-15	13-Nov-15									
	1022-1457	Bridge C4 Erect T-Span Segment at Piers 31 by LG1 (12 nos)	11	14-Nov-15	26-Nov-15									
10.6 - Tunnel Approach Ramp														
10.6.1 - Approach Ramp (Excluding Portion IIB)														
Bored Piles														
	1061-1120	Bored Piles Testing Approach Ramp (112 nos)	80	01-Jun-15 A	24-Nov-15									
	1061-3980	Pre Bored H-Pile > Pile Ramp - BN14 A	10	20-Aug-15*	31-Aug-15									
	1061-4000	Pre Bored H-Pile > Pile Ramp - BN14 B	14	25-Aug-15	09-Sep-15									
	1061-4020	Pre Bored H-Pile > Pile Ramp - BN15 A	14	10-Sep-15*	25-Sep-15									
	1061-4040	Pre Bored H-Pile > Pile Ramp - BN15 B	14	15-Sep-15	02-Oct-15									
	1061-4060	Pre Bored H-Pile > Pile Ramp - BN16 A	14	19-Sep-15	07-Oct-15									
	1061-4080	Pre Bored H-Pile > Pile Ramp - BN16 B	14	24-Sep-15	12-Oct-15									
	1061-4100	Pre Bored H-Pile > Pile Ramp - BM07 A	14	30-Sep-15	16-Oct-15									
	1061-4120	Pre Bored H-Pile > Pile Ramp - BM07 B	14	06-Oct-15	22-Oct-15									
	1061-4140	Pre Bored H-Pile > Pile Ramp - BM08 A	14	10-Oct-15	27-Oct-15									
	1061-4160	Pre Bored H-Pile > Pile Ramp - BM08 B	14	15-Oct-15	31-Oct-15									
	1061-4180	Pre Bored H-Pile > Pile Ramp - BM06 A	14	20-Oct-15	05-Nov-15									
	1061-4200	Pre Bored H-Pile > Pile Ramp - BM06 B	14	26-Oct-15	10-Nov-15									
	1061-4220	Pre Bored H-Pile > Pile Ramp - BM05 A	14	30-Oct-15	14-Nov-15									
	1061-4240	Pre Bored H-Pile > Pile Ramp - BM05 B	14	04-Nov-15	19-Nov-15									
	1061-4260	Pre Bored H-Pile > Pile Ramp - BM04 A	14	09-Nov-15	24-Nov-15									
	1061-4280	Pre Bored H-Pile > Pile Ramp - BM04 B	14	13-Nov-15	28-Nov-15									
E.L.S														
	1061-1160	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D12 Northern	14	31-Aug-15*	15-Sep-15									
	1061-1180	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D10 Northern	14	16-Sep-15	03-Oct-15									
	1061-1200	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D10-D09 Northern	14	05-Oct-15	20-Oct-15									
	1061-1220	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D09-D08 Northern	14	22-Oct-15	06-Nov-15									
	1061-1240	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D08-D07 Northern	14	07-Nov-15	23-Nov-15									
	1061-1280	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D12 Southern	14	31-Aug-15	15-Sep-15									
	1061-1300	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D11-D10 Southern	14	16-Sep-15	03-Oct-15									
	1061-1320	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D10-D09 Southern	14	05-Oct-15	20-Oct-15									
	1061-1340	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D09-D08 Southern	14	22-Oct-15	06-Nov-15									
	1061-1360	Drive Sheet Pile for Trough A & B (excl IIB) - Appr. Ramp > Pier D08-D07 Southern	14	07-Nov-15	23-Nov-15									
	1061-1400	Install & Operate Dewatering System (excl IIB) - Appr. Ramp > Pier D06-D08	14	19-Oct-15	04-Nov-15									
	1061-1420	Install & Operate Dewatering System (excl IIB) - Appr. Ramp > Pier D08-D10	14	05-Nov-15	20-Nov-15									
Structure														
	1061-1860	Construct Retaining Wall E Pile Cap (7 nos)	28	31-Oct-15	02-Dec-15									
10.7 - Section X - Miscellaneous Works														
10.7.1 - TTM Stages														
	1071-1240	TTM Stage 5 - TMLG Consultation and Endorsement	98	29-Jun-15 A	25-Nov-15									
	1071-1260	TTM Stage 5 - TTM Enabling Works	1	26-Nov-15	26-Nov-15									
	1071-1280	TTM Stage 5 - Hing Fat Slip Road Divert 1 Lane through 'Bridge From Pier E4 to Pier	0		26-Nov-15									
10.7.2 - Oil Street/Watson Road (Portion III)														
	1072-1220	Drainage works - Manhole 1-49B,DN450 & Associate Gully Pipes > Portion VIIB > Watson Road	0	05-May-15 A	28-Jul-15 A									
	1072-1240	Drainage works - Manhole 1-49,DN300 & Associate Gully Pipes > Portion VIIB > Watson Road	0	15-May-15 A	30-Jul-15 A									
	1072-1260	Drainage works - Manhole 1-48B,DN450 & Associate Gully Pipes > Portion VIIB > Watson Road	0	31-Jul-15 A	03-Aug-15 A									
	1072-1280	Drainage works - Road Reinstatement > Portion VIIB > Watson Road	0	04-Aug-15 A	08-Aug-15 A									

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

Activity ID		Activity Name	Original Duration	Start	Finish	2015											
						May			Jun			Jul			Aug		
	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	Review and approval by AECOM											
	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	(01) ELS works method statement - submission											
	TS3W_2120	(01)ELS works method statement - review and approval by AECOM	24	04-Jul-15	31-Jul-15	(01)ELS works method statement - review a											
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	ELS Method statement - submission											
	SR8_2270	ELS Method statement - review and approval by AECOM	24	27-Jun-15	25-Jul-15	ELS Method statement - review and approval by AECOM											
CCT Structure																	
	SR8_2280	CCT Structure Method statement - submission	24	27-Jul-15	22-Aug-15	CCT											
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	Carry out Stage 3 - Sheet Pile Work											
	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	Demolish Part of EB Existing Abutment M and Part of the Central Divider											
	SR8.EB.1450	Carry out Stage 3 - Pipe Piling Work	60	05-Jun-15	15-Aug-15	Carry out Stage 3											
	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		◆ Commence Stage 4 (After Completion of reclamation works)											
	SR8.EB.1480	Carry out Stage 4 Sheet Piling Works	24	08-Jun-15	07-Jul-15	Carry out Stage 4 Sheet Piling Works											
	SR8.EB.1490	Carry out Stage 4 Pipe Piling Works	36	08-Jul-15	18-Aug-15	Carry out St											
	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	Carry out Stage 3 Pipe Piling Works											
	SR8.WB.3050	Carry out Stage 3 TAM Grout	26	20-May-15	19-Jun-15	Carry out Stage 3 TAM Grout											
	SR8.WB.3060	Install Dewatering Wells & Carry out Pump Test	20	22-Jun-15	15-Jul-15	Install Dewatering Wells & Carry out Pump Test											
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	ELS Layer 3 - Soft Excavation + Strut Installation											
	SR8.VP.5080	Soft Excavation down to Formation Level	16	30-May-15	17-Jun-15	Soft Excavation down to Formation Level											
Portal Structure																	

Actual Work

Remaining Work

Critical Remaining Work

Milestone

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

Activity ID		Activity Name	Original Duration	Start	Finish	2015											
						May			Jun			Jul			Aug		
	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													

Actual Work

Remaining Work

Critical Remaining Work

Milestone

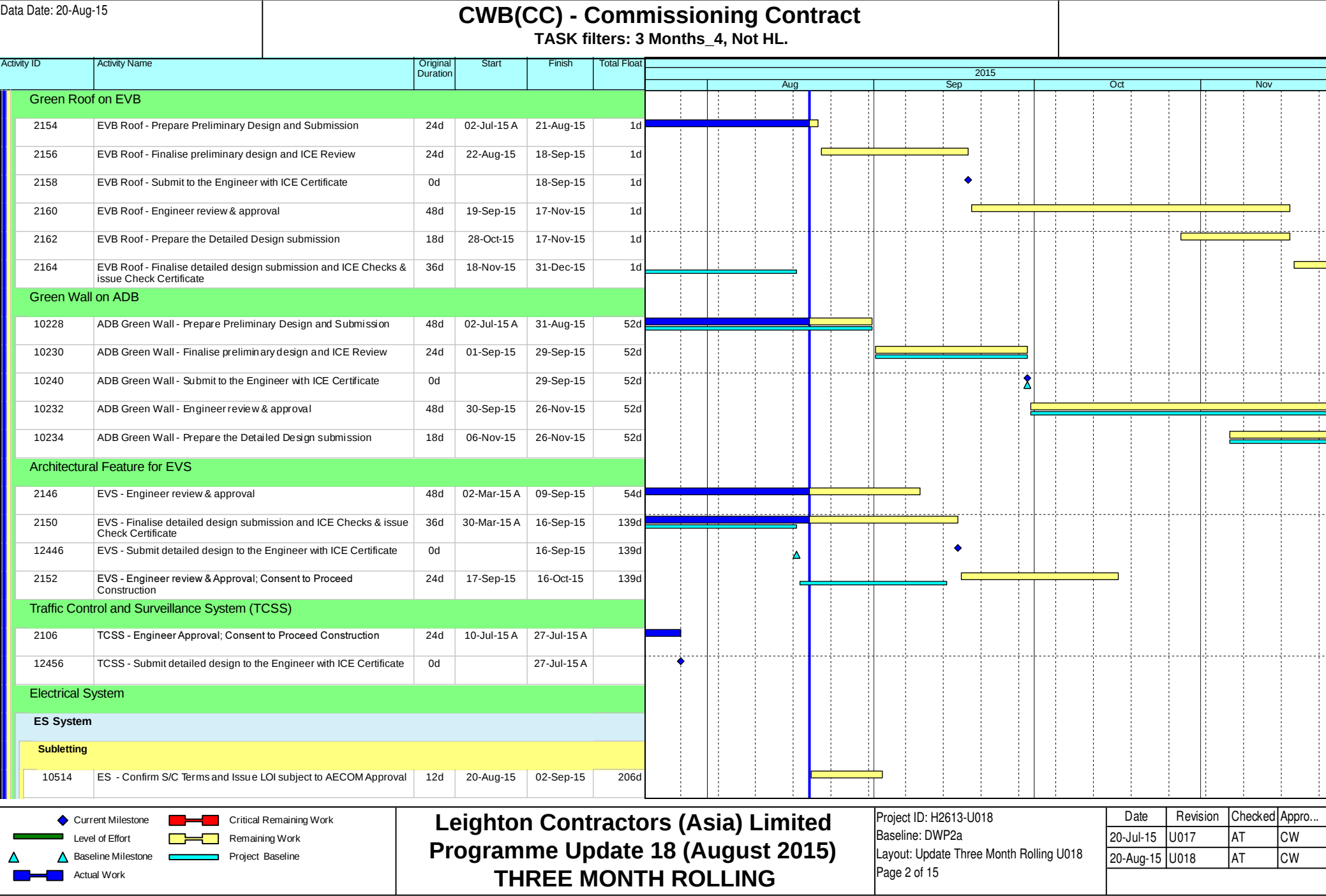
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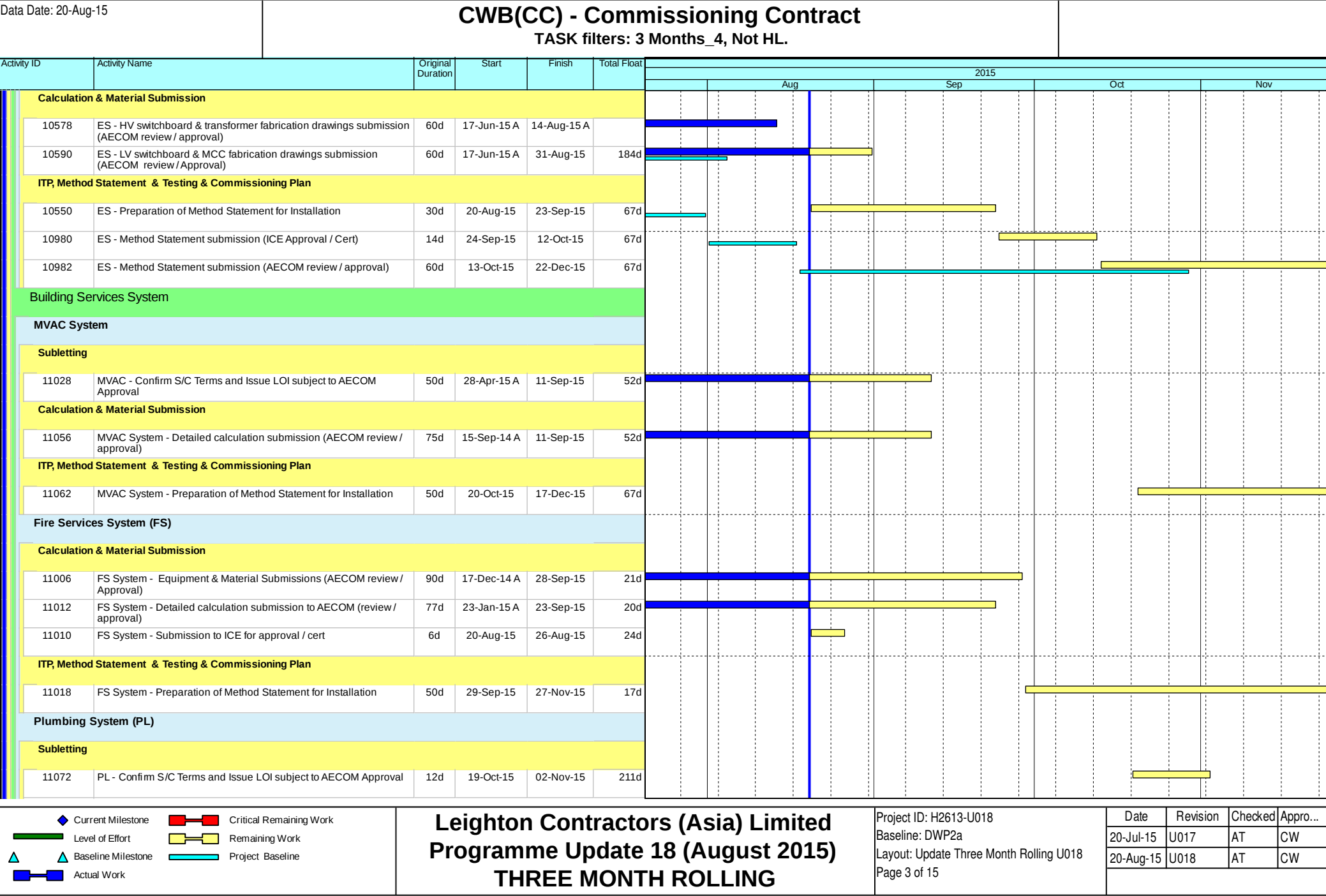
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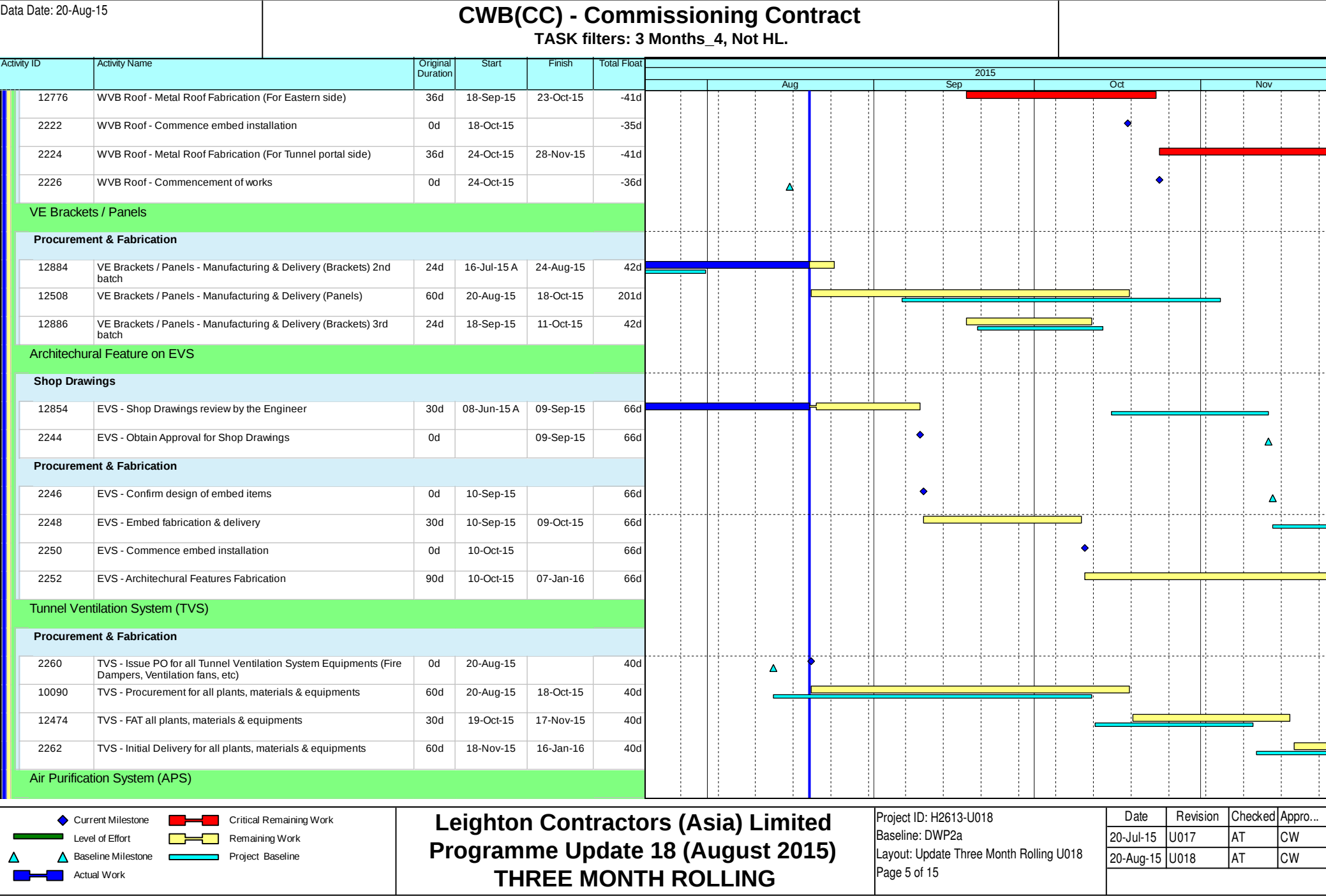
Contract No. HY/2010/08: Central - Wanchai Bypass Tunnel +(Slip Road 8 Section) - 3 Months Rolling Progamme

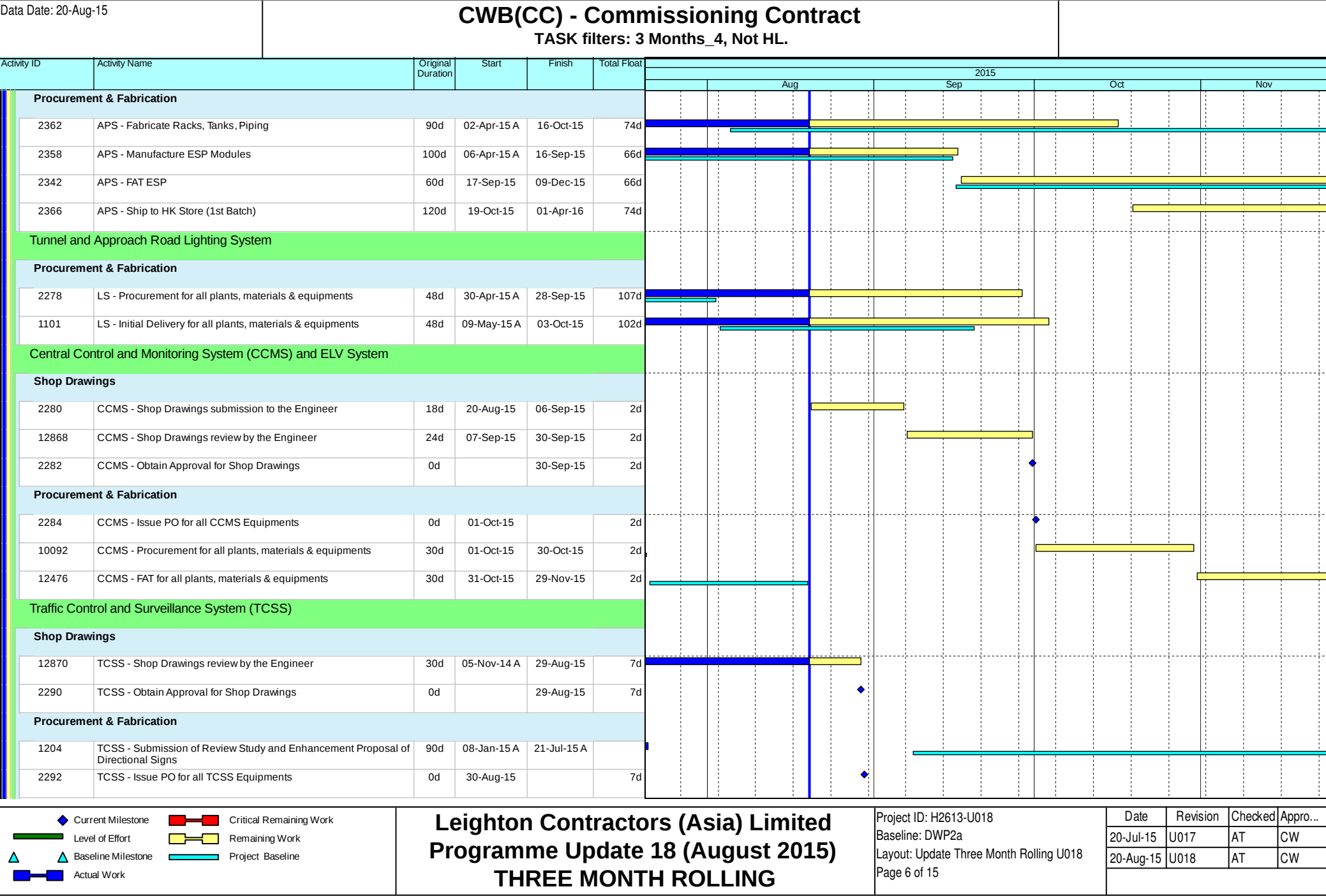
Date	Revision	Checked	Approved
20-May-15	Updated to 20th May 2015	DML/WC	

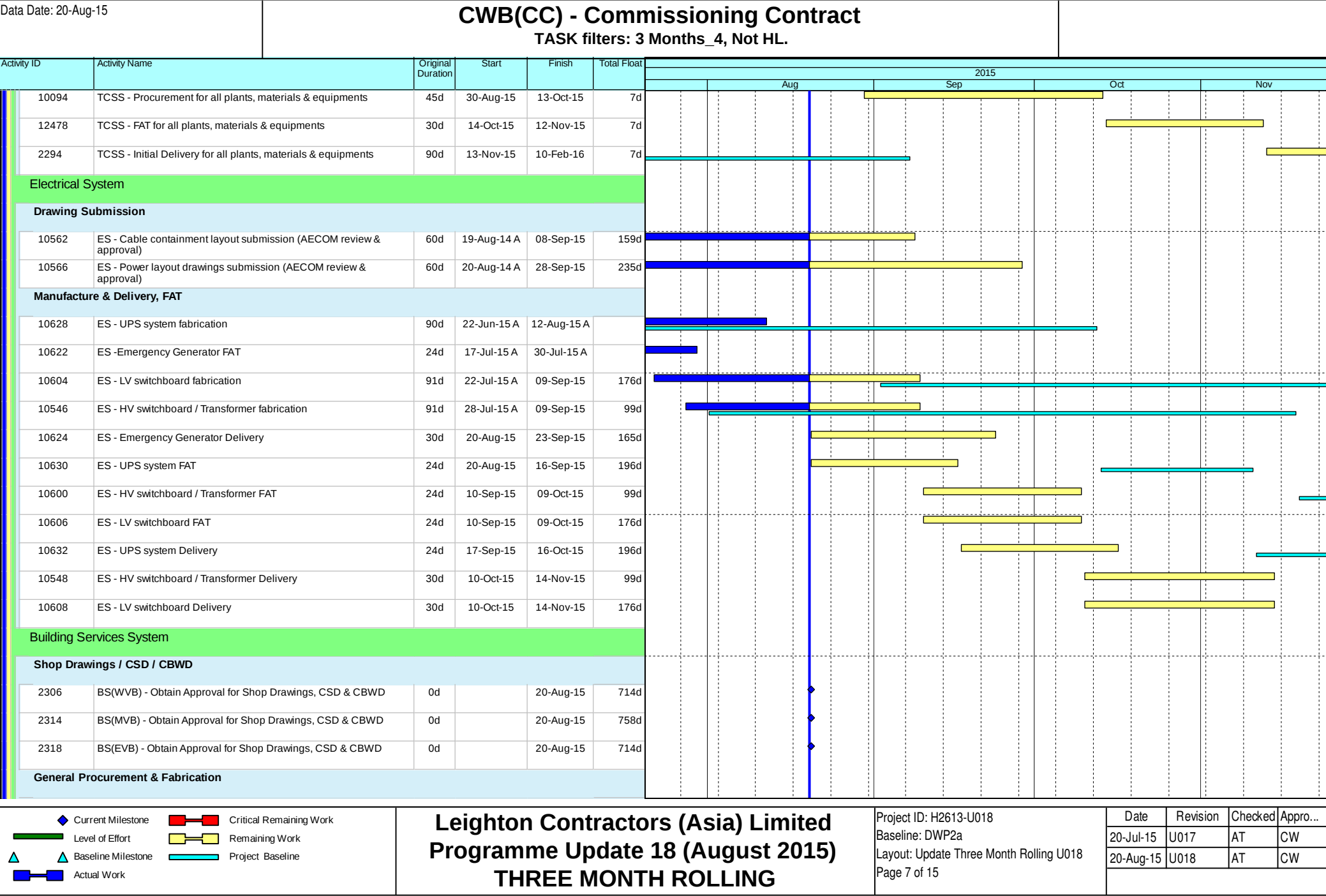
Activity ID	Activity Name	Original Duration	Start	Finish	2015											
					May			Jun			Jul			Aug		
VP_1730	BG - Install Irrigation System	24	04-Jun-15	03-Jul-15												
VP_1740	BG - Install Conduit and Lighting System	36	18-Jun-15	31-Jul-15												
VP_1450	BG - Re-provisioning works - Hardscape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

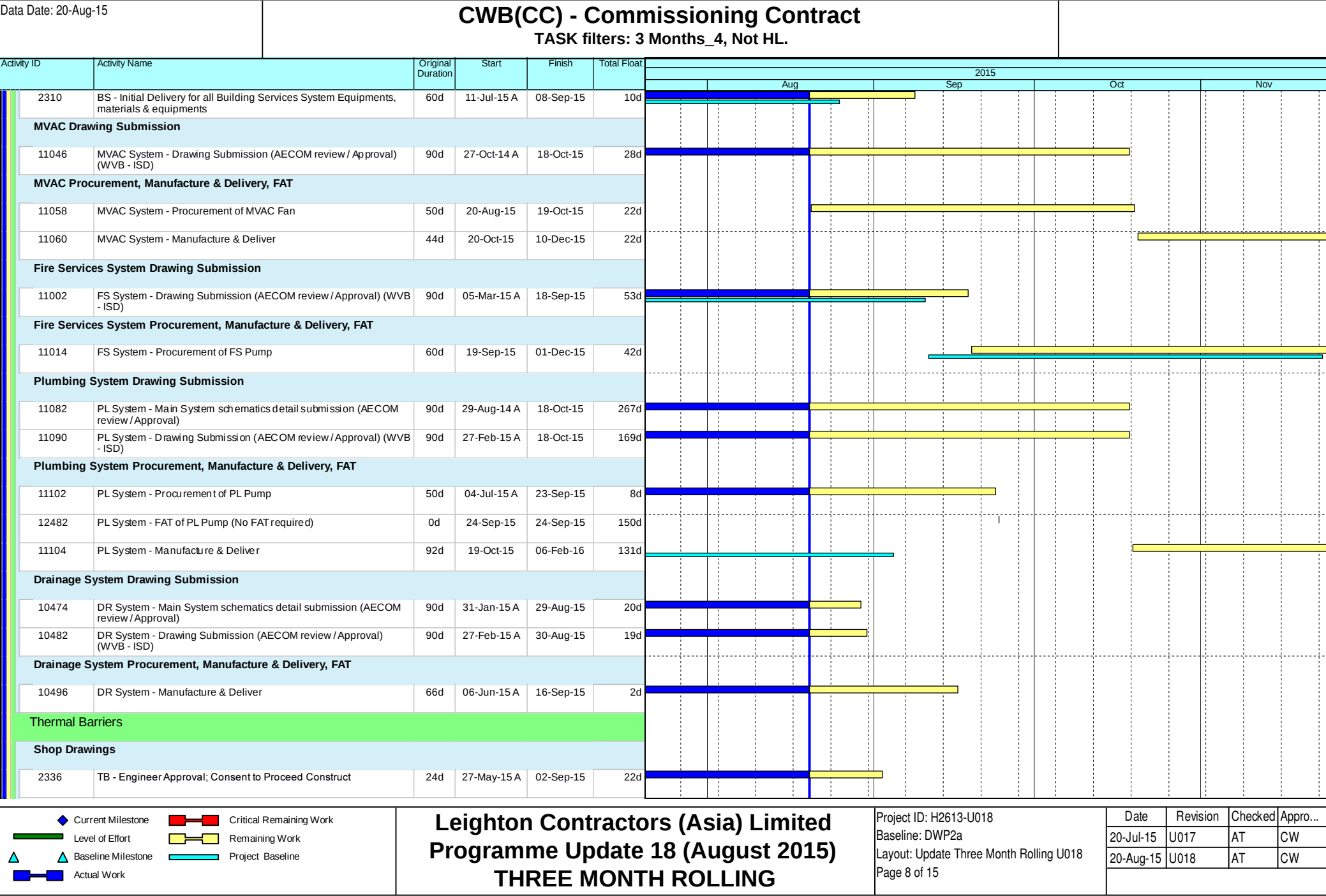










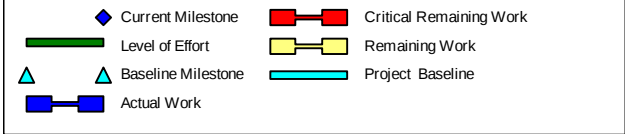


Data Date: 20-Aug-15

CWB(CC) - Commissioning Contract
TASK filters: 3 Months_4, Not HL.

CWB(CC) - Commissioning Contract
TASK filters: 3 Months_4, Not HL.

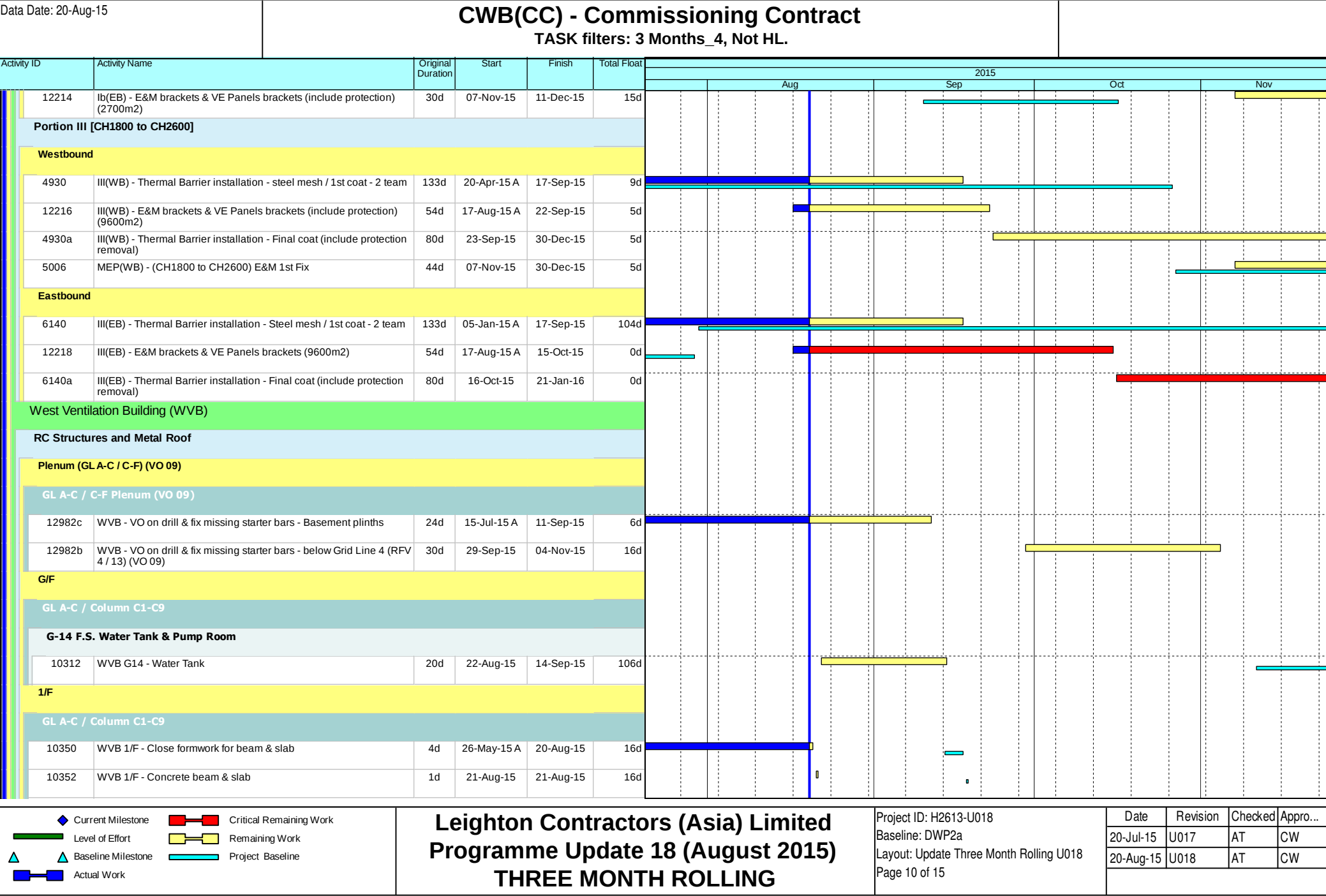
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2015											
						Aug			Sep			Oct			Nov		
Procurement & Fabrication																	
1218	TB - Submission of Off-site Fire Test Report to Engineer	0d		20-Aug-15	41d												
Petrol Filling System (Subject to construction details from AECOM)																	
Shop Drawings																	
12690	Petrol Filling System - Prepare detailed submission and shop drawings	24d	26-Oct-15	21-Nov-15	275d												
CONSTRUCTION																	
West Ventilation Building (WVB - related)																	
Tunnel Section (WVB-related)																	
Portion IIa, IIb & IIc [CH1360 to CH1580]																	
Westbound																	
12208	IIb&IIc(WB) - E&M brackets & VE Panels brackets (include protection) (1920m2)	21d	20-Jul-15 A	11-Sep-15	52d												
4924	IIb&IIc(WB) - Thermal Barrier installation (include protection removal) - 1st coat (1 team)	73d	03-Aug-15 A	20-Oct-15	21d												
4924a	IIb&IIc(WB) - Thermal Barrier installation (include protection removal) - Final coat (1 team)	73d	22-Oct-15	18-Jan-16	21d												
Eastbound																	
6124	IIb&IIc(EB) - Mobilisation & Setup	2d	12-Sep-15	14-Sep-15	110d												
12210	IIb&IIc(EB) - E&M brackets & VE Panels brackets (include protection) (1920m2)	21d	15-Sep-15	10-Oct-15	110d												
6126	IIb&IIc(EB) - Thermal Barrier installation (include protection removal) - 1 team	73d	13-Nov-15	16-Feb-16	83d												
Portion Ib [CH1580 to CH1800]																	
Westbound																	
4928	Ib(WB) - Thermal Barrier installation (include protection removal) - 1st coat (1 team)	73d	22-Jun-15 A	09-Sep-15	17d												
12212	Ib(WB) - E&M brackets & VE Panels brackets (include protection) (2700m2)	30d	20-Jul-15 A	05-Sep-15	20d												
4928a	Ib(WB) - Thermal Barrier installation (include protection removal) - Final coat (1 team)	73d	10-Sep-15	07-Dec-15	17d												
Eastbound																	
6152	Ib(EB) - Mobilisation & Setup	2d	31-Jul-15 A	01-Aug-15 A													
6154	Ib(EB) - Thermal Barrier installation (include protection removal) - 1st coat (1 team)	73d	03-Aug-15 A	06-Nov-15	15d												

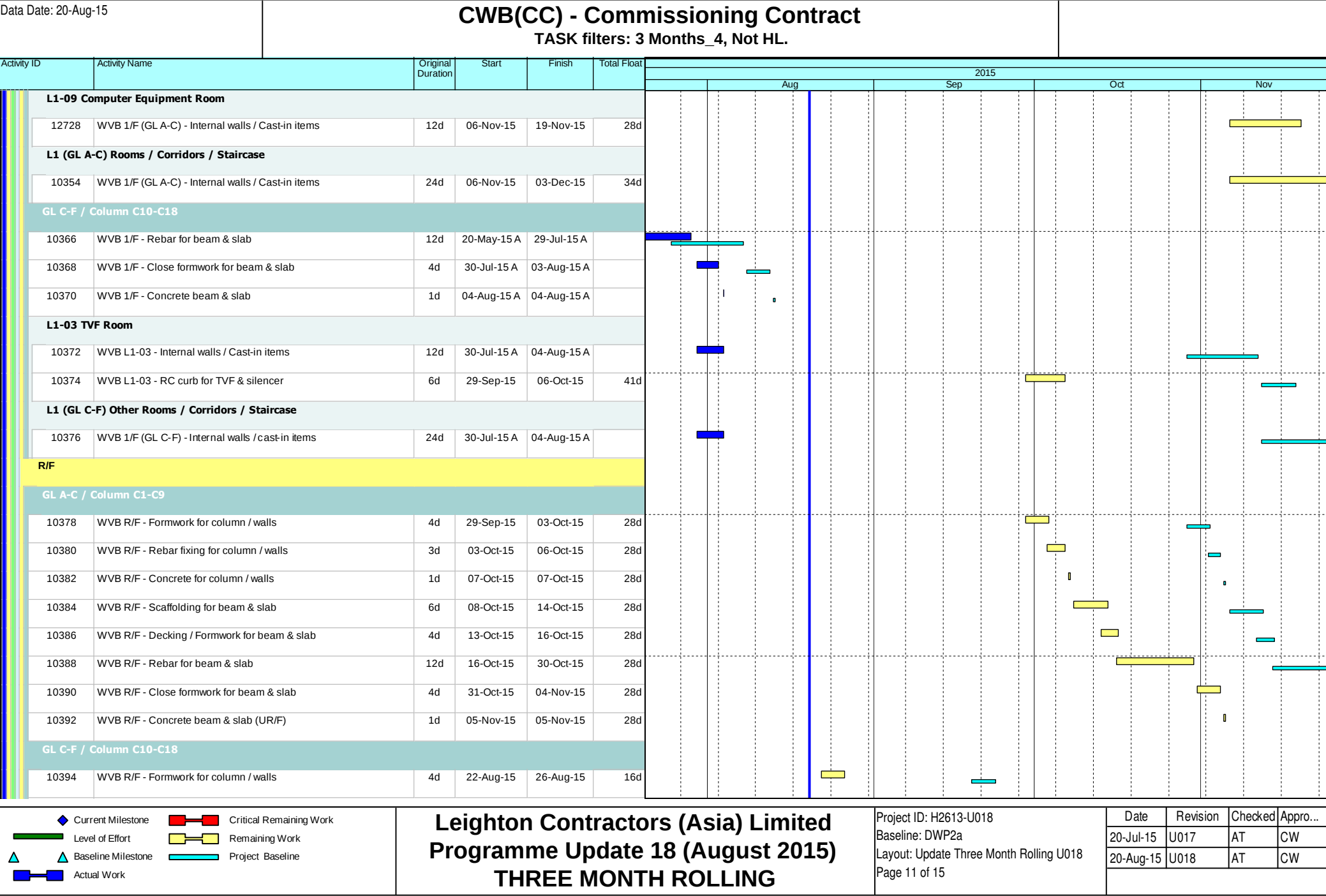


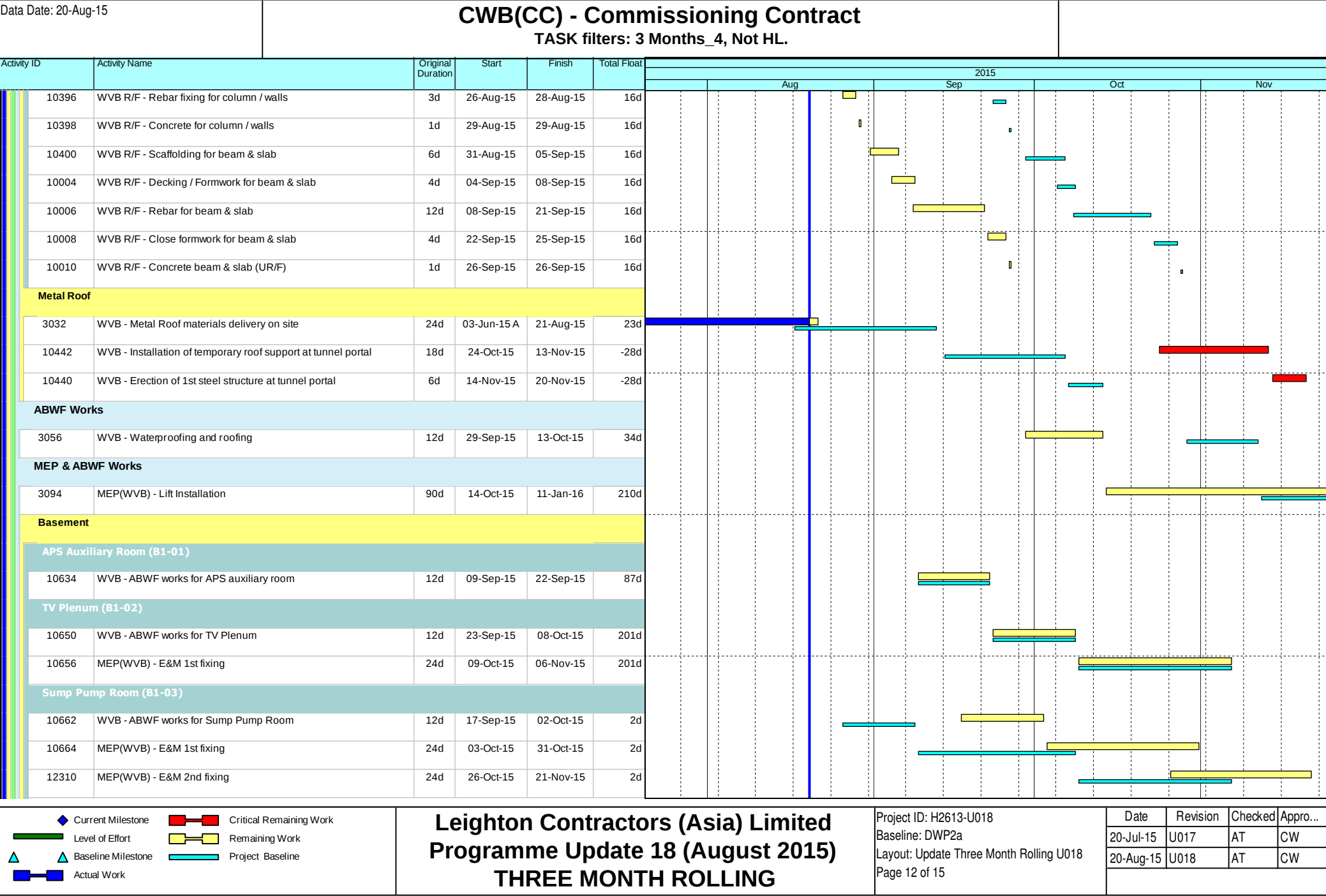
**Leighton Contractors (Asia) Limited
Programme Update 18 (August 2015)
THREE MONTH ROLLING**

Project ID: H2613-U018
Baseline: DWP2a
Layout: Update Three Month Rolling U018
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Date	Revision	Checked	Appro...
20-Jul-15	U017	AT	CW
20-Aug-15	U018	AT	CW







Data Date: 20-Aug-15		CWB(CC) - Commissioning Contract																
		TASK filters: 3 Months_4, Not HL.																
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2015												
						Aug			Sep			Oct			Nov			
G/F																		
HKE / HV Switch Room 1 & 2 (G-11 & G-12)																		
10670	WVB - ABWF works for HV Switch Rooms	12d	03-Oct-15	16-Oct-15	8d													
10680	MEP(WVB) - E&M 1st fixing	24d	17-Oct-15	14-Nov-15	8d													
Transformer Room 1 & 2 (G-09 & G-15)																		
10684	MEP(WVB) - ABWF Works	12d	17-Oct-15	31-Oct-15	26d													
10686	MEP(WVB) - E&M 1st fixing	24d	02-Nov-15	28-Nov-15	26d													
Emergency Generator & Fuel Tank Room (G-04, G05)																		
10694	MEP(WVB) - ABWF Works	12d	02-Nov-15	14-Nov-15	68d													
10696	MEP(WVB) - E&M 1st fixing	24d	16-Nov-15	12-Dec-15	68d													
Tunnel FS Pump Room (G-02)																		
10722	MEP(WVB) - ABWF Works	12d	16-Nov-15	28-Nov-15	80d													
1/F																		
TVF Room (L1-03)																		
10808	MEP(WVB) - ABWF Works	12d	07-Oct-15	20-Oct-15	41d													
10810	MEP(WVB) - E&M 1st fixing	24d	22-Oct-15	18-Nov-15	41d													
12338	MEP(WVB) - E&M 2nd fixing	24d	19-Nov-15	16-Dec-15	41d													
Middle Ventilation Building (MVB - related)																		
Tunnel Section (MVB-related)																		
Portion V [CH2950 to CH3250]																		
5142	Possession of Portion V	0d	28-Oct-15		4d													
5144	V - Initial Site Survey	12d	28-Oct-15	10-Nov-15	4d													
Westbound (Outer Lane)																		
5146	V(WB) - Mobilisation & Setup	6d	11-Nov-15	17-Nov-15	4d													
12226	V(WB) - E&M brackets & VE Panels brackets (include protection) (1800m2)	20d	18-Nov-15	10-Dec-15	4d													

