



Lam Geotechnics Limited

Contract No. HK/2011/07
Wan Chai Development Phase II and Central Wanchai Bypass
- Sampling, Field Measurement and Testing Works (Stage 2)
Monthly EM&A Report (May 2013)

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/B,
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-08/364/2009/A AND FEP-09/364/2009/B**

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- MAY 2013 -

CLIENTS:

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and

Highways Department

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DATE:

13 June 2013

Ref.: AACWBIECEM00_0_4020L.13

13 June 2013

By Post and Fax (2691 2649)

AECOM Asia Company Limited
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Shatin, New Territories
Hong Kong

Attention: Mr. Conrad Ng

Dear Sir,

**Re: Wan Chai Development Phase II and Central-Wan Chai Bypass
Monthly Environmental Monitoring and Audit Report (May 2013) for
EP-364/2009/B, 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 and FEP-09/364/2009/B**

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for May 2013 received by email on 13 June 2013.

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

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

Yours sincerely,



David Yeung
Independent Environmental Checker

c.c.	HyD	Mr. Jones Lai	by fax: 2714 5289
	CEDD	Mr. Patrick Keung	by fax: 2577 5040
	AECOM	Mr. Francis Leong / Mr. Stephen Lai	by fax: 2691 2649
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EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – May 2013 specific for Environmental Permit no. EP-364/2009/B, 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-08/364/2009/A and FEP-09/364/2009/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 May 2013. 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

- Excavation of trial pit
- Transplanting of trees
- Hoarding erection and modification
- Installation of couplers, UU detection, trial trench, pre-drilling
- Excavation
- Drainage works
- Tunnel works
- Trough structure construction and associated drilling and grouting
- Road works
- OHVD installation
- Pre-bored H-piling
- Bridges construction
- Scaffolding / false-work erection

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

- Pre-drilling works for CWB (Stage 2)
- Diaphragm wall construction works at Stage 2 (North)
- Temporary bulkhead wall construction works between Stage1 / Stage2
- Pre-bored H piling works for CWB (Stage1b)
- 3rd Piling rig for pre-bored H piling works under atrium

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

- Remedial works for P7 & P8 at WCR1 area.
- Excavation works for pile cap construction
- Remedial works of concrete plug at Bay 1B of Salt Water Intake Culvert

- Reinforcement fixing at Bay 1B base slab
- Steel pile cutting works at Bay 2A/2B interface of Salt Water Culvert
- Casting of Base slab at Bay 2B of Salt Water Intake Culvert and steel fixing for its wall and top slab.
- Installation of HDPE pipes from Bay 4 to Bay 11 (except Bay 7)
- The HDPE pipe at Bay 3 would be carried out after the completion of Intake Culvert Bay 1B & Bay 2B.
- Construction of Bay 4 base slab of Box Culvert N1c
- Concreting of Eastern Bulkhead Wall, Panel BHC4, BHC10, BHP13 and BHC14
Excavation for Panel BHC2
- Preparation works for BHC12
- Casting of base slab (Bay 14)
- Rebar fixing for base slab Bay 1 & Bay 2 at WCR1 of Tunnel Portion 1 and that for Bay 15 & Bay 16 was in progress.
- Bored piles PN14, PN15, PN16, PC13, PC15, PC17 & PS17 were concreted
Excavation for bored pile PN17

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

- ELS works and pipe roofing works at TS4
- RC structure works at TPCWAE
- Tunnel works at TS1
- Excavation for mined tunnel
- Construction of Diaphragm Wall at TS2

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

- Road works at Watson Road
- Bored piling (Land)
- D-wall and Barrette Construction
- Construction works for Box Culvert T1
- Construction works for Culvert U1
- Construction of pile cap, column & cross head (Marine)
- D8-D9 Gantry Fabrication for precast segment
- ELS for Cut & Cover Tunnel
- Laying of 1500φ pipe
- Portal gantry works
- Launching of girder
- Launching of segments
- Unloading segments from derrick
- Extraction of temporary pile from marine section

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

- Nil

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

- Site preparation works
- Site survey

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 Finance Centre Eastern and Western End of Podium, and M8 - City Hall on a weekly basis.
- iv. No action and 3 limit level exceedances at M6 – HK Baptist Church Henrietta Secondary School were recorded on 2, 7 and 21 May 2013 in this reporting month. The exceedances were concluded as non-project related.
- v. Due to adverse weather condition, the noise monitoring at the following stations were rescheduled:
M3a: from 16 May 2013 to 18 May 2013
M4b: from 16 May 2013 to 18 May 2013
M5b: from 16 May 2013 to 18 May 2013
M6: from 30 Apr 2013 to 2 May 2013 and from 16 May 2013 to 18 May 2013
- vi. 24-hour real time noise monitoring was conducted at RTN1 - FEHD Hong Kong Transport Section Whitfield Depot for construction activities under IECL bridge deck. No project related exceedance was recorded in the reporting month.
- vii. 24-hour real time noise monitoring was conducted at RTN2a – Hong Kong Electric Centre. No project related exceedance was recorded in the reporting month.
- viii. 24-hour real time noise monitoring was conducted at RTN3 – Yu Lee Mo Fan Memorial School. No project related exceedance was recorded in the reporting month.
- ix. 24-hour real time noise monitoring was conducted at RTN4 – Causeway Bay Community Centre. No limit level exceedance was recorded in the reporting month.
- x. As confirmed by CWB RSS, the IECL parapet removal operations will commence in May 2013. 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.
- xi. 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.
- xii. 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.

- xiii. Real-time Noise Monitoring at RTN3- Po Leung Kuk Yu Lee Mo Fan Memorial School was commenced since 06 Oct 2012.
- xiv. 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.
- xv. According to clause 3.1 stated in EP-364/2009B, "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.

Air Monitoring

- xvi. Due to extension of site boundary by contractor of HY/2009/19, location of air monitoring station CMA1b – Oil Street Community Liaison Centre has been finely adjusted on 21 April 2012.
- xvii. The location ID of air monitoring station CMA1b was updated as Oil Street Site Office in April 2013.
- xviii. Due to lack of electricity supply, the 24-hr TSP monitoring at the following stations were Rescheduled,
[CMA3a: from 1 May 2013 to 2 May 2013](#)
[CMA4a: from 18 May 2013 to 20 May 2013](#)
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; CMA5a - Children Garden opposite to Pedestrian Plaza; MA1e and MA1w – International Finance Centre eastern and western wing on every six days basis.

Complaints, Notifications of Summons and Successful Prosecutions

- xix. There was no environmental complaint received in this reporting month.

Site Inspections and Audit

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

Future Key Issues

- xxi. 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

- Excavation of trial pit
- Transplanting of trees
- Hoarding erection and modification
- Installation of couplers, UU detection, trial trench, pre-drilling
- Excavation
- Drainage works
- Tunnel works
- Trough structure construction and associated drilling and grouting
- Road works
- OHVD installation
- Pre-bored H-piling
- Bridges construction
- Scaffolding / false-work erection
- Profile barrier 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

- Installation of pre-bored H-pile in CWB Stage 1B under the atrium link (from Ch80 to Ch220)
- Installation of pre-bored H-pile in CWB Stage 1B under the atrium link (from Ch120 to Ch220)
- 3rd Piling rig for pre-bored H piling works under atrium.
- CWB diaphragm wall construction under the atrium link.
- Construction of bulkhead Wall at Ch120.
- Pre-drilling works for CWB (Stage 3).
- Demolition of the promenade deck and pumping stations at HKCEC Water Channel

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

- Remedial works and subsequent T&C for CRB intake pipes within WCR1 area.
- Subsequent construction of Bay 1B and Bay 2B Intake Culvert.
- Complete leakage test for the installed stoplog at Bay 2A of Intake Culvert and commence bulkhead demolition works.
- Backfilling to Bay 6 to Bay 11 of Intake Culvert
- Construction of Bay 4 Box Culvert N1.
- Construction of Eastern Bulkhead wall.

- Base slab construction and commence the subsequent wall construction from Bay 1 to Bay 5.
- Bored pile construction except PS15 & PS16 at WCR2 area.
- Plant mobilization for D-wall construction at WCR2.

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

- ELS works and pipe roofing works at TS4
- Cut and cover tunnel construction at TPCWAE
- Tunnel works at TS1
- Excavation for mined tunnel
- Construction of Diaphragm Wall at TS2

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

- Road works at Watson Road
- Bored piling (Land)
- D-wall and Barrette Construction
- Construction works for Box Culvert T1
- Construction works for Culvert U1
- Construction of Pile cap (Land)
- Demolition of parapet at IEC Link
- Construction of dewatering well for Cut & Cover Tunnel
- Construction of pile cap, column & cross head (Marine)
- ELS for Cut & Cover Tunnel
- Laying of 1500 pipe
- Launching of segments
- Unloading segments from derrick
- Extraction of temporary pile from marine section

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

- Installation works of Precast Concrete Box Unit
- Remaining works in box unit (Installation of foam concrete)

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

- Hoarding erection
- ELS for box culvert L at Lung King Street

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/B 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-08/364/2009/A and FEP-09/364/2009/B 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-014/2001).
- 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 and FEP-09/364/2009B during the period [April to May 2013](#). 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** ***Site Inspection*** – 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***

22 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
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	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
HK/2012/08	Wan Chai Development Phase II- Central-Wan Chai Bypass at Wan Chai West	DP1,DP2, DP3	DP works under EP-364 to be commenced tentatively in June 2013.

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
Lam Woo & CO., LTD.	Contractor under Contract no. HY/2009/17	General Manager	Mr. Thomas Tang	6111 5351	2566 7522
		Contractor's Representative	Mr. Chung Man Shek	2566 4866	
		Site Agent	Mr. Tong Au	9725 5874	
		Environmental Officer	Dr. Priscilla Choy	9161 7287	
		Environmental Supervisor	Mr. Tam Chun Pong	6461 3062	

Party	Role	Post	Name	Contact No.	Contact Fax
Chun Wo – Leader Joint Venture	Contractor under Contract no. HK/2009/01	Joint Venture Board Representative	Mr. PL Yue	2162 9909	2634 1626
		Construction Manager	Mr. Terry Wong	9757 9846	
		Deputy Site Agent	Mr. Andy Yu	9648 4896	
		Construction Manager	Mr. Wyman Wong	9627 2467	
		Construction Manager	Mr. Jack Chu	9775 2467	
		Environmental Officer (Compliance Manager)	Mr. Andy Mak	9103 2370	
		Environmental Supervisor	Mr. Kwong Weng Kit	6253 3356	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Site Agent	Mr. Chan Sing Cho	3658-3002	2827 9996
		Quality & Environmental Manager (Environmental Officer)	Mr. C.P. Ho	3658-3000	
Chun Wo - CRGL - MBEC_Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	Mr. Rayland Lee	3758 8879	2570 8013
		Site Agent	Mr. Paul Yu	9456 9819	
		Environmental Manager / Environmental Officer	Mr. M.H. Isa	9884 0810	
		Environmental Engineer	Mr. Calvin Leung	9286 9208	
		Construction Manager (Marine)	Mr. William Luk	9610 1101	
		Construction Manager (Land)	Mr. Patrick Cheung	9643 3012	
		Construction Manager (Land)	Mr. Eric Fong	6191 9337	
		Operation Manager (Land)	Mr. Yung Kwok Wah	9834 1010	
Leighton Contractors (Asia) Limited	Contractor under Contract no. HY/2009/18	Site Agent	Mr. Jimmy Chu	2214 7700	2140 6799
		Deputy Site Agent	Mr. Roger Wong	2214 7703	
		Environmental Officer	Mr. Anfernee Chow	2214 7721	

Party	Role	Post	Name	Contact No.	Contact Fax
		Environmental Engineer Graduate	Mr. Phil Mak	2214 7738	
		Environmental Supervisor	Mr. K. P. Lai	6461 4660	
		Environmental Supervisor	Mr. Ray Cheng	2214 7742	
		Environmental Supervisor	Mr. K. W. Lee	6461 4623	
		Environmental Supervisor	Mr. Ryan Tsui	2214 7705	
		Environmental Supervisor	Mr. Bosco Lee	2214 7711	
China State Construction Engineering (HK) Ltd.	Contractor under Contract no. HY/2009/15	Project Director	Mr. K C Cheung	2823 7813	2865 5229
		Site Manager	Mr. J.H. Chen	3557 6368	2566 2192
		Contractor's Representative	Mr. Andrew Wong	3557 6407	
		Head of construction	Mr. Roger Cheung	3557 6371	
		Environmental Officer	Mr. Daniel Sin	3557 6215	
		Environmental Supervisor	Ms. Esther Choi	35576348	
Gammon - Leader JV	Contractor under Contract no. HK/2010/06	Project Manager	Mr. Paul Lui	9095 7922	2529 2880
		Site Agent	Mr. Keith Tse	2529 2068	
		Environmental Officer	Mr. Clement Pang	9481 6024	
		Environmental Supervisor	Mr. Jacky Cheung	9735 9200	
China State-Leader JV	Contractor under Contract no. HK/2012/08	Project Director	Mr. Andrew TSE	9137 1811	2877 1522
		Project Manager	Mr. Victor WU	9193 8871	
		Deputy Project Manager	Mr. George CHEUNG	9268 1918	
		Site Agent	Mr. Paul LUI	9095 7922	
		Environmental Officer	Mr. James MA	9130 9549	
		Environmental Supervisor	Mr. Ching Man, CHAN	6050 4919	
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

- Excavation of trial pit
- Transplanting of trees
- Hoarding erection and modification
- Installation of couplers, UU detection, trial trench, pre-drilling
- Excavation
- Drainage works
- Tunnel works
- Trough structure construction and associated drilling and grouting
- Road works
- OHVD installation
- Pre-bored H-piling
- Bridges construction
- Scaffolding / false-work erection

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

- Pre-drilling works for CWB (Stage 2)
- Diaphragm wall construction works at Stage 2 (North)
- Temporary bulkhead wall construction works between Stage1 / Stage2
- Pre-bored H piling works for CWB (Stage1b)
- 3rd Piling rig for pre-bored H piling works under atrium

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

- Remedial works for P7 & P8 at WCR1 area.
- Excavation works for pile cap construction
- Remedial works of concrete plug at Bay 1B of Salt Water Intake Culvert
- Reinforcement fixing at Bay 1B base slab
- Steel pile cutting works at Bay 2A/2B interface of Salt Water Culvert
- Casting of Base slab at Bay 2B of Salt Water Intake Culvert and steel fixing for its wall and top slab.
- Installation of HDPE pipes from Bay 4 to Bay 11 (except Bay 7)
- The HDPE pipe at Bay 3 would be carried out after the completion of Intake Culvert Bay 1B & Bay 2B.
- Construction of Bay 4 base slab of Box Culvert N1c
- Concreting of Eastern Bulkhead Wall, Panel BHC4, BHC10, BHP13 and BHC14
- Excavation for Panel BHC2
- Preparation works for BHC12
- Casting of base slab (Bay 14)

- Rebar fixing for base slab Bay 1 & Bay 2 at WCR1 of Tunnel Portion 1 and that for Bay 15 & Bay 16 was in progress.
- Bored piles PN14, PN15, PN16, PC13, PC15, PC17 & PS17 were concreted
Excavation for bored pile PN17

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

- ELS works at TS4
- Rock trimming and concrete works at TPCWAE
- Tunnel works at TS1
- Horizontal drilling for mined tunnel
- Construction of Diaphragm Wall at TS2

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

- Road works at Watson Road
- Bored piling (Land)
- D-wall and Barrette Construction
- Construction works for Box Culvert T1
- Construction works for Culvert U1
- Construction of pile cap, column & cross head (Marine)
- D8-D9 Gantry Fabrication for precast segment
- ELS for Cut & Cover Tunnel
- Laying of 1500 ϕ pipe
- Portal gantry works
- Launching of girder
- Launching of segments
- Unloading segments from derrick
- Extraction of temporary pile from marine section

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

- Nil

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

- Site preparation works
- Site survey

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

- Excavation of trial pit
- Transplanting of trees
- Hoarding erection and modification
- Installation of couplers, UU detection, trial trench, pre-drilling
- Excavation
- Drainage works
- Tunnel works
- Trough structure construction and associated drilling and grouting
- Road works
- OHVD installation
- Pre-bored H-piling
- Bridges construction
- Scaffolding / false-work erection
- Profile barrier 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

- Installation of pre-bored H-pile in CWB Stage 1B under the atrium link (from Ch80 to Ch220)
- Installation of pre-bored H-pile in CWB Stage 1B under the atrium link (from Ch120 to Ch220)
- 3rd Piling rig for pre-bored H piling works under atrium.
- CWB diaphragm wall construction under the atrium link.
- Construction of bulkhead Wall at Ch120.
- Pre-drilling works for CWB (Stage 3).
- Demolition of the promenade deck and pumping stations at HKCEC Water Channel

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

- Remedial works and subsequent T&C for CRB intake pipes within WCR1 area.
- Subsequent construction of Bay 1B and Bay 2B Intake Culvert.
- Complete leakage test for the installed stoplog at Bay 2A of Intake Culvert and commence bulkhead demolition works.
- Backfilling to Bay 6 to Bay 11 of Intake Culvert
- Construction of Bay 4 Box Culvert N1.
- Construction of Eastern Bulkhead wall.
- Base slab construction and commence the subsequent wall construction from Bay 1 to Bay 5.
- Bored pile construction except PS15 & PS16 at WCR2 area.

- Plant mobilization for D-wall construction at WCR2.

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

- ELS works and pipe roofing works at TS4
- RC structure works at TPCWAE
- Tunnel works at TS1
- Excavation for mined tunnel
- Construction of Diaphragm Wall at TS2

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

- Road works at Watson Road
- Bored piling (Land)
- D-wall and Barrette Construction
- Construction works for Box Culvert T1
- Construction works for Culvert U1
- Construction of Pile cap (Land)
- Demolition of parapet at IEC Link
- Construction of dewatering well for Cut & Cover Tunnel
- Construction of pile cap, column & cross head (Marine)
- ELS for Cut & Cover Tunnel
- Laying of 1500 pipe
- Launching of segments
- Unloading segments from derrick
- Extraction of temporary pile from marine section

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

- Installation works of Precast Concrete Box Unit
- Remaining works in box unit (Installation of foam concrete)

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

- Hoarding erection
- ELS for box culvert L at Lung King Street

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	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	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	Valid
Further Environmental Permit	FEP-09/364/2009/B	5 March 2013	Valid

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

Contract no. 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 was surrendered by the Contractor on 25 April 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 was surrendered by the Contractor on 11 February 2011.

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

- 3.1.5. 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 3.4** and **Table 3.5**

Table 3.4 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-RS-1293-12	10 Dec 2012	10 Dec 2012 to 9 June 2013	Valid
	GW-RS0166-13	14 Feb 2013	16 Feb 2013 to 13 Aug 2013	Valid
	GW-RS0310-13	25 Mar 2013	27 Mar 2013 to 25 Sept 2013	Valid
	GW-RE0274-13	26 Mar 2013	30 Mar 2013 to 29 Sept 2013	Valid
	GW-RS0274-13	19 Mar 2013	25 Mar 2013 to 24 Sep 2013	Valid
	GW-RS-0052-13	18 Jan 2013	20 Jan 2013 to 19 July 2013	Valid
	GW-RE-0371-13	9 Apr 2013	13 Apr 2013 to 12 Oct 2013	Valid
	GW-RE-0372-13	12 Apr 2013	15 Apr 2013 to 7 Oct 2013	Valid
	GW-RS0368-13	12 Apr 2013	15 Apr 2013 to 7 Oct 2013	Valid
	GW-RS1177-12	15 Nov 2012	17 Nov 2012 to 10 May 2013	Expired
	GW-RS1184 -12	15 Nov 2012	17 Nov 2012 to 8 May 2013	Cancelled
	GW-RS1185-12	19 Nov 2012	21 Nov 2012 to 8 May 2013	Expired
	GW-RS1179-12	20 Nov 2012	22 Nov 2012 to 21 May 2013	Cancelled
	GW-RS1187-12	20 Nov 2012	27 Nov 2012 to 26 May 2013	Expired
	GW-RS1199-12	20 Nov 2012	26 Nov 2012 to 25 May 2013	Cancelled
	GW-RS0470-13	29 Apr 2013	9 May 2013 to 24 Oct 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS0501-13	9 May 2013	11 May 2013 to 8 Nov 2013	Valid
	GW-RS0510-13	14 May 2013	15 May 2013 to 13 Nov 2013	Valid
Discharge Licence	WT00009641-2011	24 Jul 2011	31 Jul 2016	Valid
	WT00006220-2010	18 Mar 2010	31 Mar 2015	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

Table 3.5 Summary of submission status under FEP-02/364/2009

EP Condition	Submission	Date of Submission
Special Conditions, Clause 2.7 & 2.8	Works Schedule and Location Plan	18 May 2011
Special Conditions, Clause 2.6	Environmental Management Organization Chart	18 May 2011
Special Conditions, Clause 2.6	Commencement Date of Works	20 Jun 2011
Special Conditions, Clause 2.9	Noise Management Plan	10 Jun 2011

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

- 3.1.6. 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 3.6** and **Table 3.7**.

Table 3.6 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2009/02

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-03/356/2009	24 Mar 2010	N/A	Valid
	FEP-01/364/2009	24 Mar 2010	N/A	Valid
Notification of Works Under APCO	313962	2 Feb 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS1038-12	10 Oct 2012	10 Oct 2012 to 9 Apr 2013	Valid
	GW-RS1076-12	25 Oct 2012	1 Nov 2012 to 30 Apr 2013	Expired
	GW-RS1204-12	9 Nov 2012	29 Nov 2012 to 23 May 2013	Valid
	GW-RS1272-12	5 Dec 2012	5 Dec 2012 to 26 May 2013	Valid
	GW-RS1223-12	27 Nov 2012	7 Dec 2012 to 5 June 2013	Valid
	GW-RS1243-12	3 Dec 2012	5 Dec 2012 to 29 May 2013	Valid
	GW-RE1055-12	30 Nov 2012	3 Dec 2012 to 29 May 2013	Valid
	GW-RS1228-12	30 Nov 2012	30 Nov 2012 to 29 May 2013	Valid
	GW-RS1245-12	5 Dec 2012	6 Dec 2012 to 5 May 2013	Valid
	GW-RS1363-12	24 Dec 2012	9 Jan 2013 to 7 July 2013	Cancelled
	GW-RS1381-12	31 Dec 2012	9 Jan 2013 to 7 July 2013	Valid
	GW-RS1384-12	31 Dec 2012	17 Jan 2013 to 16 July 2013	Valid
	GW-RS0206-13	22 Feb 2013	24 Feb 2013 to 19 Aug 2013	Valid
	GW-RS0061-13	17 Jan 2013	1 Feb 2013 to 31 July 2013	Cancelled
	GW-RS0062-13	17 Jan 2013	21 Jan 2013 to 15 July 2013	Valid
	GW-RS0241-13	11 Mar 2013	13 Mar 2013 to 10 Sept 2013	Valid
	GW-RS0251-13	11 Mar 2013	26 Mar 2013 to 24 Sept 2013	Valid
	GW-RS0340-13	28 Mar 2013	10 Apr 2013 to 8 Oct 2013	Valid
	GW-RS0373-13	9 Apr 2013	19 Apr 2013 to 17 Oct 2013	Valid
	GW-RS0437-13	26 Apr 2013	1 May 2013 to 29 Oct 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS1084-12	25 Oct 2012	1 Nov 2012 to 30 Apr 2013	Expired
	GW-RS1174-12	9 Nov 2012	11 Nov 2012 to 10 May 2013	Valid
	GW-RS1158-12	16 Nov 2012	18 Nov 2012 to 16 May 2013	Valid
	GW-RS1167-12	16 Nov 2012	23 Nov 2012 to 21 May 2013	Valid
	GW-RS0155-13	15 Feb 2013	16 Feb 2013 to 14 Aug 2013	Valid
	GW-RS0269-13	23 Mar 2013	23 Mar 2013 to 19 Sept 2013	Valid
	GW-RS0467-13	6/5/2013	17/5/2013 to 16/11/2013	Valid
	GW-RS0517-13	20/5/2013	27/5/2013 to 26/11/2013	Valid
	GW-RS0521-13	20/5/2013	22/5/2013 to 21/11/2013	Valid
	GW-RS0530-13	20/5/2013	28/5/2013 to 27/11/2013	Valid
	GW-RE0508-13	21/5/2013	30/5/2013 to 29/11/2013	Valid
	GW-RS0525-13	21/5/2013	30/5/2013 to 29/11/2013	Valid
	GW-RS0538-13	21/5/2013	30/5/2013 to 29/11/2013	Valid
	GW-RS0539-13	23/5/2013	6/6/2013 to 5/12/2013	Valid
	GW-RS0554-13	23/5/2013	6/6/2013 to 5/12/2013	Valid
	GW-RS0586-13	27/5/2013	28/5/2013 to 22/11/2013	Valid
Discharge Licenses	WT00006249-2010	22 Mar 2010	31 Mar 2015	Valid
	WT00006436-2010	15 Apr 2010	30 Apr 2015	Valid
	WT00006673-2010	14 May 2010	31 Mar 2015	Cancelled
	WT00006757-2010	28 May 2010	31 May 2015	Valid
	WT00007129-2010	28 July 2010	31 Jul 2015	Valid
	WT00008982-2011	26 April 2011	30 April 2016	Valid
	WT00009691-2011	1 Aug 2011	31 July 2016	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
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

Table 3.7 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 2.6	Commencement Date of Works	21 Jun 2011
Condition 2.11	Landscape Plan (Revision B)	20 Nov 2012
Condition 2.9	Noise Management Plan (Revision A)	13 Jan 2012

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

3.1.7. 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 3.8 and Table 3.9.

Table 3.8 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-RS0833-12	09 Aug 2012	09 Aug 2012 – 02 May 2013	Expired
	GW-RS0396-13	16 Apr 2013	22 Apr 2013- 21 Oct 2013	Valid
	GW-RS-0459-13	30 Apr 2013	03 May 2013- 02 Nov 2013	Valid
	GW-RS1382-12	02 Jan 2013	04 Jan 2013 to 30 Jun 2013	Valid
	GW-RS0068-13	18 Jan 2013	05 Feb 2013 to 03 Aug 2013	Valid
	GW-RS0036-13	11 Jan 2013	23 Jan 2013 to 22 Jul 2013	Cancelled
	GW-RS1286-12	07 Dec 2012	11 Dec 2012- 05 Jun 2013	Cancelled
Discharge Licence	WT00012998-2012	25 May 2012	31 Jan 2016	Valid
	WT00013967-2012	17 Sep 2012	30 Sep 2017	Valid
	WT00014966-2013	08 Jan 2013	31 Jan 2018	Valid

Permit / Licence / Notification / Approval	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Registration as a 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 3.9 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. 5)	12 March 2012

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

3.1.8. 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 3.10** and **Table 3.11**

Table 3.10 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/15

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-04/356/2009	22 Nov 2010	N/A	Valid
	FEP-06/364/2009/A	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-RS0434-13	23 Apr 2013	23 Apr 2013 to 16 Oct 2013	Valid
	GW-RS1153-12	15 Nov 2012	15 Nov 2012 to 06 May 2013	Expired
	GW-RS1191-12	26 Nov 2012	26 Nov 2012 to 11 May 2013	Cancelled
	GW-RS0038-13	17 Jan 2013	26 Jan 2013 to 25 Jul 2013	Cancelled
	GW-RS0087-13	24 Jan 2013	26 Jan 2013 to 20 July 2013	Valid
	GW-RS0399-13	18 Apr 2013	18 Apr 2013 to 10 Oct 2013	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RS1345-12	21 Dec 12	24 Dec 12 to 23 Jun 2013	Cancelled
	GW-RS1342-12	21 Dec 2012	26 Dec 2012 to 25 Jun 2013	Valid
	GW-RS1391-12	8 Jan 2013	8 Jan 2013 to 24 Jun 2013	Cancelled
	GW-RS1257-12	4 Dec 2012	8 Dec 2012 to 7 Jun 2013	Cancelled
	GW-RS0175-13	25 Feb 2013	27 Feb 2013 to 13 Aug 2013	Valid
	GW-RS0306-13	26 Mar 2013	27 Mar 2013 to 22 Sep 2013	Valid
	GW-RS0276-13	19 Mar 2013	19 Mar 2013 to 7 Sep 2013	Cancelled
	GW-RS0231-13	6 Mar 2013	6 Mar 2013 to 21 Aug 2013	Cancelled
	GW-RS0217-13	28 Feb 2013	28 Feb 2013 to 30 Jun 2013	Valid
	GW-RS0463-13	6 May 2013	7 May 2013 to 6 Nov 2013	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 (Dumping by Vessel)	7011761	10 Oct12	17 Jan 2013 to 16 Apr 2013	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)	WT00012941-2012	10 May 2012	10 May 2012 to 31 May 2014	Valid
Water Discharge License (Discharge at TPCWAE)	WT00011322-2011	15 Dec 2011	15 Dec 2011 to 31 Dec 2013	Valid
Water Discharge License (Discharge at TS4)	WT00011718-2012	16 Jan 2012	16 Jan 2012 to 31 Jan 2014	Valid
Water Discharge License (Discharge at TS2)	WT00014974-2013	10 Jan 2013	10 Jan 2013 to 31 Jan 2015	Valid



Table 3.11 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 2.23	Noise Management Plan	6 May 2011

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

3.1.9. 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 3.12** and **Table 3.13**

Table 3.12 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 Permit (CNP)	GW-RS1230-12	28 Nov 2012	28 Nov 12 to 25 May 13	Expired
	GW-RS0013-13	08 Jan 2013	07 Jul 2013	Valid
	GW-RS0503-13	20 May 2013	21 May 13- 20 Nov 13	Valid
	GW-RS0528-13	16 May 2013	26 May 13- 25 Nov 13	Valid
	GW-RS0286-13	15 Mar 2013	15-Mar-12 to 14 -Sep-13	Cancelled
	GW-RS0046-13	18 Jan 2013	10 Jul 2013	Valid
	GW-RS0365-13	21 Apr 2013	21-Apr-13 to 20-Oct-13	Valid
	GW-RS0337-13	05 May 2013	05-May-13 to 01- Oct-13	Valid
	GW-RS1210-12	29 Nov 2012	29 Nov 12 to 28 May 13	Cancelled
	GW-RS0010-13	08 Jan 2013	08 Jan 12 to 07 Jul 13	Cancelled
Water Discharge Licence	WT00010093-2011	31-Aug-11	30-Sep-16	Cancelled
	WT00010093-2011	17-Aug-12	30-Sep-16	Valid
	WT00010865-2011	3-Nov-11	30-Nov-16	Valid

Table 3.13 Summary of submission status under FEP-07/364/2009/A

EP Condition	Submission	Date of Submission
Condition 2.13	Landscape Plan	16 March 2012
Condition 2.9	Noise Management Plan (Rev.3)	15 March 2013

Contract no. HK/2010/06 - Wan Chai Development Phase II – Central –Wanchai Bypass over MTR Tsuen Wan Line

3.1.10. The current status on licences and/or permits on environmental protection pertinent and submission under FEP-08/364/2009/A for contract no. HK/2010/06 showed in **Table 3.14** and **Table 3.15**.

Table 3.14 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2010/06

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-08/364/2009/A	15 June 2012	N/A	Valid
Notification of Works Under APCO	326344	18 Jan 2011	N/A	Valid
Construction Noise Permit (CNP)	GW-RS0056-13	14 Jan 2013	16 Jan 2013 – 12 Jul 2013	Valid

Table 3.15 Summary of submission status under FEP-08/364/2009

EP Condition	Submission	Date of Submission
	Acknowledgement letter of FEP-08/364/2009A	14 Aug 2012
Condition 2.9	Noise Management Plan	26 Nov 2012

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-09/264/2009/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. 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
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

Table 3.17 Summary of submission status under FEP-09/364/2009

EP Condition	Submission	Date of Submission
	Acknowledgement letter of FEP-08/364/2009A	14 Aug 2012
Condition 2.9	Noise Management Plan (Rev.1)	27 May 2013
Condition 2.14	Landscape Plan (Rev.1)	31 May 2013

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 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. Review of feasibility on the real time noise monitoring stations was conducted in July with IEC. Station, RTN1a, Tung Lo Wan fireboat Station was found not appropriate to be a monitoring station for monitoring the IECL Piling works and Demolition after visited.

- 4.1.3. 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

- 4.1.4. 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.
- 4.1.5. 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.
- 4.1.6. 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 daily 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.
- 4.1.7. If construction works are extended to include works during the hours of 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring shall be carried out during respective restricted hours periods. Applicable permits under NCO shall be obtained by the Contractor.

MONITORING EQUIPMENT

- 4.1.8. As referred to in the Technical Memorandum 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.
- 4.1.9. Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.
- 4.1.10. 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.

Air Monitoring

AIR QUALITY MONITORING STATIONS

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

Table 4.3 Air Monitoring 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
CMA5a	Children Garden opposite to 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.

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.2.2. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality. The 24-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.
- 4.2.3. All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any other local atmospheric factors affecting or affected by site conditions, etc., shall be recorded down in detail.
- 4.2.4. For regular impact monitoring, the sampling frequency of at least once in every six-days, shall be strictly observed at all the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

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

- 0.6 – 1.7 m³ per minute adjustable flow range;
- Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
- Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
- Capable of providing a minimum exposed area of 406 cm²;
- Flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
- Equipped with a shelter to protect the filter and sampler;
- Incorporated with an electronic mass flow rate controller or other equivalent devices;
- Equipped with a flow recorder for continuous monitoring;
- Provided with a peaked roof inlet;
- Incorporated with a manometer;
- Able to hold and seal the filter paper to the sampler housing at horizontal position;
- Easily changeable filter; and
- Capable of operating continuously for a 24-hour period.

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

LABORATORY MEASUREMENT / ANALYSIS

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

4.2.8. 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) under FEP-06/364/2009/A
- Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A
- Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009
- 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/2010/06 - Wan Chai Development Phase II – Central - Wan Chai Bypass over MTR Tsuen Wan Line
- Contract no. HK/2012/08 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West

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 5.2** below:

Table 5.2 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 during daytime period in the 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 5.3** below.

Table 5.3 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 5.4** below.

Table 5.4 Noise Monitoring Stations for Contract no. HY/2009/15

Station	Description
M2b	Noon Gun Area

M3a	Tung Lo Wan Fire Station
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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 5.5** below.

Table 5.5 Noise Monitoring Stations for Contract no. HY/2009/19

Station	Description
M3a	Tung Lo Wan Fire Station
M4b	Victoria Centre
M5b	City Garden
M6	HK Baptist Church Henrietta Secondary School

5.1.12. Three limit level exceedances were recorded on 2, 7 and 21 May 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month.

5.1.13. Major traffic noise observed during monitoring on 2, 7 and 21 May 2013 and it was considered as the major noise contribution. As such, the limit level exceedances were concluded as non-project related.

5.1.14. Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 5.2**. Details of the Notification of Exceedance can be referred in **Appendix 6.2**.

5.2 Real Time Noise Monitoring Results

5.2.1. As confirmed by CWB RSS, the IECL parapet removal operations and associated construction work will commence 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 will adopt 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 grant 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.

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

- 5.2.8. 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 night time period are for information only.*

**Real-time noise monitoring results and graphical presentation for RTN3 during restricted hours are for information only as no night classes were conducted at the educational institute.*

- 5.2.9. Limit level exceedances were recorded at RTN1-FEHD Hong Kong Transport Section Whitfield Depot during restricted hours on 28 April 2013. After checking with contractor, no major noisy construction works was conducted at the concerned location during the recorded period. The exceedances were non-continuous and considered to be contributed by nearby IEC traffic.

- 5.2.10. Limit level exceedance was recorded at RTN2a-Electric Centre during restricted hours on 20 May 2013 and during daytime on 21 May 2013. After checking with contractor, no construction work was conducted 20 May 2013 at the concerned location during the recorded period and no major noisy construction work was conducted at the concerned location on 21 May 2013. The exceedances were non-continuous and considered to be contributed by near by IEC traffic.
- 5.2.11. Limit Level exceedance was recorded at RTN3-Yu Lee Mo Fan Memorial School during daytime on 21 May 2013. After checking with the contractor, rebar fixing and concrete pile head breaking works were conducted during the recorded period. Mitigation measures including erection of noise barrier was confirmed in place. The exceedance was non-continuous and considered to be contributed by nearby IEC traffic.
- 5.2.12. No Limit level exceedance was recorded at RTN4-Causeway Bay Community Centre in the reporting month.
- 5.2.13. 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.**

5.3 Air Monitoring Results

- 5.3.1 Due to lack of electricity supply, the 24hr-TSP monitoring at the following stations were rescheduled:

CMA3a: from 1 May 2013 to 2 May 2013

CMA4a: from 18 May 2013 to 20 May 2013

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

- 5.3.2 Air monitoring for the Central Interchange works under contract no. HY/2009/18 was commenced on 21 April 2011. The proposed division of air monitoring stations are summarized in **Table 5.9** below.

Table 5.9 Air Monitoring Stations for Contract no. HY/2009/18

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

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

Contract no. HK/2009/01 – 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 monitoring stations are summarized in **Table 5.10** below.

Table 5.10 Air Monitoring Station for Contract no. HK/2009/01

Station	Description
CMA5a	Children Playgrounds opposite to Pedestrian Plaza

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

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

- 5.3.6 The commencement of construction works for HK/2009/02 under FEP-01/364/2009 is on 26 April 2011. The proposed division of air monitoring stations are summarized in **Table 5.11** below.

Table 5.11 Air Monitoring Station for Contract no. HK/2009/02

Station	Description
CMA4a	Society for the Prevention of Cruelty to Animals

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

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

- 5.3.8 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 monitoring stations are summarized in **Table 5.12** below.

Table 5.12 Air Monitoring Station for Contract no. HY/2009/15

Station	Description
CMA3a	CWB PRE Site Office

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

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

- 5.3.10 The proposed division of air monitoring stations are summarized in **Table 5.13** below. Air monitoring for the tunnel works under contract no. HY/2009/19 was commenced on 26 April 2011.

Table 5.13 Air Monitoring Stations for Contract no. HY/2009/19

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

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

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 5.15**.

Table 5.15 Details of Waste Disposal for Contract no. HK/2009/01

Waste Type	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	5427.7	27810.845	TKO137, TM38
Inert C&D materials recycled	Nil	5104.5	N/A
Non-inert C&D materials disposed	34.18	1273.5	SENT Landfill
Non-inert C&D materials recycled	Nil	205943	N/A
Chemical waste disposed	150	9550	N/A

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 5.16**.

Table 5.16 Details of Waste Disposal for Contract no. HK/2009/02

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds	Remarks
Inert C&D materials disposed, m ³	1544.6	236556.94	TKO137 / TM 38	N/A
Inert C&D materials recycled, m ³	0	18161	n/a	N/A
Non-inert C&D materials disposed, m ³	36.38	922.19	SENT Landfill	N/A
Non-inert C&D materials recycled, m ³	N/A	N/A	N/A	N/A
Chemical waste disposed, kg	700	7971	SENT Landfill	N/A

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 5.17**.

Table 5.17 Details of Waste Disposal for Contract no. HY/2009/18

Waste Type*	Quantity this month, (m3)	Cumulative-to-Date, (m3)	Disposal / Dumping Grounds
Inert C&D materials disposed	3306	94015	T.K.O. 137, TM 38
Inert C&D materials recycled	0	55989	N/A
Non-inert C&D materials disposed	105	1160	SENT Landfill
Non-inert C&D materials recycled (tonnes)	Nil	77.84	N/A
Chemical waste disposed (kg)	Nil	3565	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 5.18**.

Table 5.18 Details of Waste Disposal for Contract no. HY/2009/15

Waste Type	Quantity this month(m ³)	Cumulative Quantity-to-Date(m ³)	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	20786.1 13706.8	333973.3 197189.6	Tuen Mun Area 38 TKO137 FB
Inert C&D materials recycled, m ³	4957.9	217596.2	HY/2009/11 ex-PCWA TS4 TS2 WDII Lun Ku Tan
Non-inert C&D materials disposed, m ³	40.6	809	SENT Landfill
Non-inert C&D materials recycled, m ³	0	543000.8	Xun Xiang Metalware Skylight Recycle (paper)
Chemical waste disposed, kg	3090	17211	Dunwell Group

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 5.19**.

Table 5.19 Details of Waste Disposal for Contract no. HY/2009/19

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	6226.36	295116.71	N/A
Inert C&D materials recycled	21614.27	49264.18	N/A
Non-inert C&D materials disposed	28.71	827.79	SENT Landfill
Non-inert C&D materials recycled	14.45	282.03	N/A
Chemical waste disposed	Nil	4.59	N/A

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

- 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 5.20**.

Table 5.20 Details of Waste Disposal for Contract no. HK/2010/06

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	NIL	NIL	TM38
Inert C&D materials recycled	NIL	NIL	N/A
Non-inert C&D materials disposed	NIL	NIL	N/A
Non-inert C&D materials recycled	NIL	NIL	Recyclers
Chemical waste disposed	NIL	NIL	N/A

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

- 5.4.7. 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 5.21**.

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

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	NIL	NIL	N/A
Inert C&D materials recycled	NIL	NIL	N/A
Non-inert C&D materials disposed	NIL	NIL	N/A
Non-inert C&D materials recycled	NIL	NIL	N/A
Chemical waste disposed	NIL	NIL	N/A

6 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 exceedance was recorded in the 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. Three limit level exceedances were recorded on 2, 7 and 21 May 2013 at M6 – HK Baptist Church Henrietta Secondary School in the reporting month. Investigations found that on 2, 7 and 21 May 2013, major traffic noise was contributed in the noise monitoring and exceedances were not related to the Project.

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

- 6.1.6. Non project related limit level exceedance was recorded at RTN1-FEHD Hong Kong Transport Section Whitfield Depot on 28 Apr 2013. Investigation found that exceedances were contributed by IEC traffic.
- 6.1.7. Non project related limit level exceedance was recorded at RTN2a- Electric Centre on 20 and 21 May 2013. Investigation found that exceedances were contributed by IEC traffic.
- 6.1.8. Non project related limit level exceedance was recorded at RTN3- Yu Lee Mo Fan Memorial School on 21 May 2013. Investigation found that the exceedance was contributed by IEC traffic.
- 6.1.9. No limit level exceedances were recorded at RTN4- Causeway Bay Community Centre in this reporting month.

6.2 Air 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

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

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 in the reporting period. The observations and recommendations made in each individual site audit session were presented in Section 8.
- 6.3.2. No project-related non-compliance from monitoring was recorded in the reporting month.

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 in the reporting period.

7 Cumulative Construction Impact due to the Concurrent Projects

- 7.0.1. According to Condition 3.4 of the EP-364/2009/B, 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 Monthly EM&A report (April 2013) of Central Reclamation Phase III (CRIII), Installation of cable wall at PLA berth, footpath construction and Modification to the junction of Road D8 and Road P2 were performed in the May 2013 reporting month. The water quality monitoring was completed in October 2011 and no Project-related exceedance was recorded for air and noise monitoring. It can be concluded that cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was insignificant.
- 7.0.3. According to the construction programme of Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects, the major construction activity under Wan Chai Development Phase II were marine works at HKCEC areas, cross-harbour Watermains, Fresh Watermains and Cooling Watermains Installations, tunnel works at Wan Chai East, ELS work at TS4 and deep excavation at TPCWAE TCBR1W. Excavation and tunnel works at Central Interchange, ELS and box culvert construction at North Point area. The major environmental impact was water quality impact at Causeway Bay and Wan Chai. Land-based construction activities were diaphragm wall construction at TS2, ELS work at TS4, deep excavation at TPCWAE TCBR1W, tunnel works at Central and ELS work at North Point and tunnel works at Wan Chai East in the reporting month.
- 7.0.4. The major environmental impacts generated from tunnel works at Central and tunnel works at Wan Chai East, IECL and Causeway Bay Typhoon Shelter were undertaken in the reporting month. No significant air impact from construction activities was anticipated in the reporting month. Besides, no project-related exceedances were recorded during the air and noise environmental monitoring events in the reporting month. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Wan Chai Development Phase II was insignificant.

8 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 and HK/2010/06. 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

Date	Item	Observations	Action taken by Contractor	Outcome
130430_01	30-Apr-13	Floating up silt curtain leading to dispersion of muddy water to nearby water. (Eastern Breakwater)	Silt curtain was properly deployed	Completion as observed on 7 May 2013.
130507_01	7-May-13	Clear the stagnant muddy water. (TS2)	Stagnant muddy water was removed.	Completion as observed on 14 May 2013.
130514_01	14-May-13	Drip tray should be provided to oil drums. (TS2)	Oil drums were removed.	Completion as observed on 22 May 2013
130522_01	22-May-13	Tarpaulin sheet should be provided for barge during transfer of mud. (TS2)	Tarpaulin sheet was provided at the transfer location.	Completion as observed on 28 May 2013.

8.0.3. Four site inspections for Contract no. HY/2009/18 was carried out during this reporting period. No observation is found in the reporting month.

8.0.4. Four site inspections for Contract no. HY/2009/19 was carried out during this reporting period. The results of these inspections and outcomes are summarized in **Table 8.2**.

Table 8.2 Summary of Environmental Inspections for Contract no. HY/2009/19

Date	Item	Observations	Action taken by Contractor	Outcome
130503_01	3-May-13	Tighten the acoustic blanket surrounding marine pier works area to avoid gap	The acoustic blanket was tightened	Completion as observed on 8 May 2013

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 8.3**

Table 8.3 Summary of Environmental Inspections for Contract no. HK/2009/01

Item	Date	Observations	Action taken by Contractor	Outcome
130508_01	8-May-13	Haul road should be kept clean (Expo. Drive Central)	The Haul road was cleaned	Completion as observed on 16 May 13

8.0.6. Four site inspections for Contract no. HK/2009/02 was carried out during this reporting period. No observation is found in the reporting month.

8.0.7. Five site inspections for Contract no. HK/2010/06 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/2010/06

Item	Date	Observations	Action taken by Contractor	Outcome
130520_01	20-May-13	Chemical container should be properly stored or clean up as chemical waste(Portion 2)	Chemical container have been removed	Completion as observed on 27 May 2013

8.0.8. Four site inspections for Contract no. HK/2012/08 was carried out during this reporting period. No observation is found in the reporting month.

9 COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

- 9.0.1. No environmental complaint was received in the reporting period.
- 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
May 2013	0
Sep 2010 – April 2013	20
Total	20

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	ELS works and pipe roofing works at TS4	- Watering any dust generating activities - Checking all drip trays frequently and clear any stagnant water and mud inside it. - Noise control measures shall be provided during restricted hours
HY/2009/18	- Excavation of trial pit - Transplanting of trees - Hoarding erection and modification - Installation of couplers, UU detection, trial trench, pre-drilling - Excavation - Drainage works - Tunnel works - Trough structure construction and associated drilling and grouting - Road works - OHVD installation - Pre-bored H-piling - Bridges construction - Scaffolding / false-work erection - Profile barrier construction	- Noise barrier shall be implemented; and - Noise level shall be controlled by reducing piling rate and no. of plants working in parallel. - 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 plants and measures should be taken to ensure adequate protections are provided for trees being transplanted.

HY2009/19	• Road works at Watson Road • Bored piling (Land) • D-wall and Barrette Construction • Construction works for Box Culvert T1 • Construction works for Culvert U1 • Construction of Pile cap (Land) • Demolition of parapet at IEC Link • Construction of dewatering well for Cut & Cover Tunnel • Construction of pile cap, column & cross head (Marine) • ELS for Cut & Cover Tunnel • Laying of 1500 pipe • Launching of segments • Unloading segments from derrick • Extraction of temporary pile from marine section	• 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.
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HK2009/01	• Installation of pre-bored H-pile in CWB Stage 1B under the atrium link (from Ch80 to Ch220) • Installation of pre-bored H-pile in CWB Stage 1B under the atrium link (from Ch120 to Ch220) • 3rd Piling rig for pre-bored H piling works under atrium. • CWB diaphragm wall construction under the atrium link. • Construction of bulkhead Wall at Ch120. • Pre-drilling works for CWB (Stage 3). • Demolition of the promenade deck and pumping stations at HKCEC Water Channel	• Noise level shall be controlled by reducing no. of plants working in parallel. • Well maintained enclosures for grouting mixing plants. • 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
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HK/2009/02	• Remedial works and subsequent T&C for CRB intake pipes within WCR1 area. • Subsequent construction of Bay 1B and Bay 2B Intake Culvert. • Complete leakage test for the installed stoplog at Bay 2A of Intake Culvert and commence bulkhead demolition works. • Backfilling to Bay 6 to Bay 11 of Intake Culvert • Construction of Bay 4 Box Culvert N1. • Construction of Eastern Bulkhead wall. • Base slab construction and commence the subsequent wall construction from Bay 1 to Bay 5. • Bored pile construction except PS15 & PS16 at WCR2 area. • Plant mobilization for D-wall construction at WCR2.	• 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/2010/06	• Installation works of Precast Concrete Box Unit • Remaining works in box unit (Installation of foam concrete)	• Dust control during dust generating works.
HK/2012/08	• Hoarding erection • ELS for box culvert L at Lung King Street	• Dust control during dust generating works • Provide protection works and adequate drainage system to ensure no direct discharge into public drainage system.

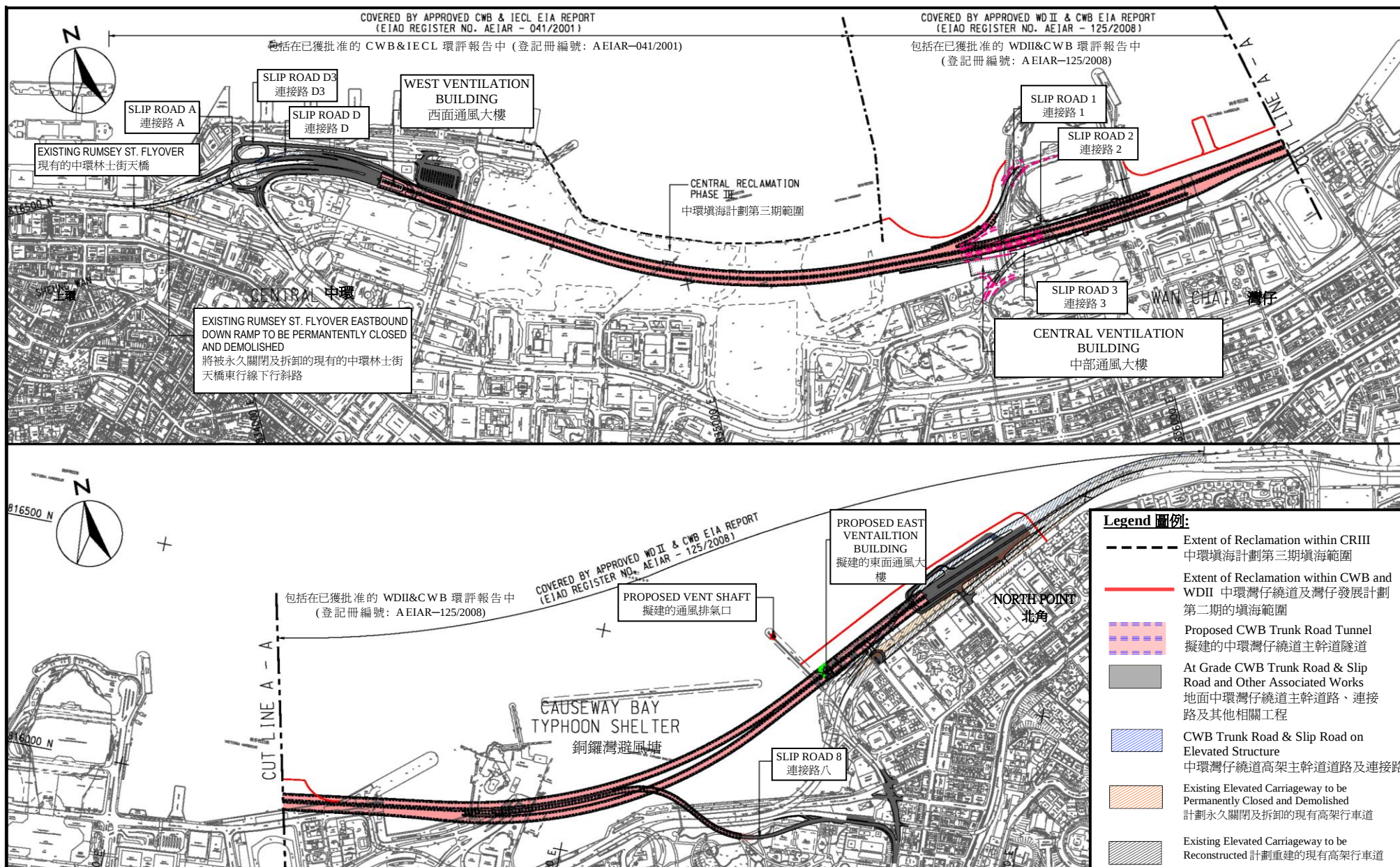
10.0.3. The construction works of Contract no. 04/HY/2006 – Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street under FEP-04/364/2009/A was completed, and the FEP was surrendered by the Contractor on 11 February 2011.

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.



Figure 2.1

Project Layout

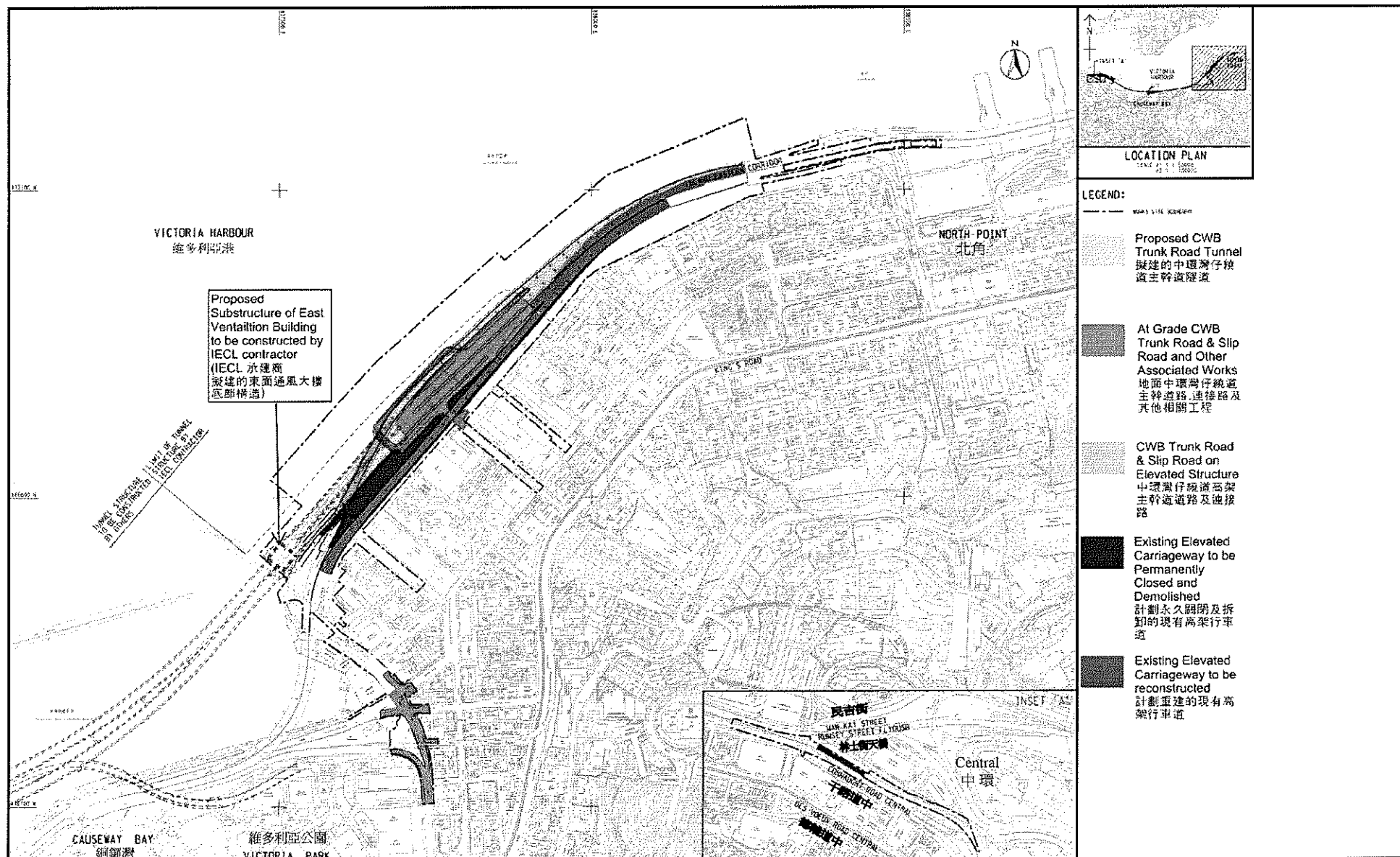


Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱: 中環灣仔繞道包括其行車隧道及連接路

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))



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

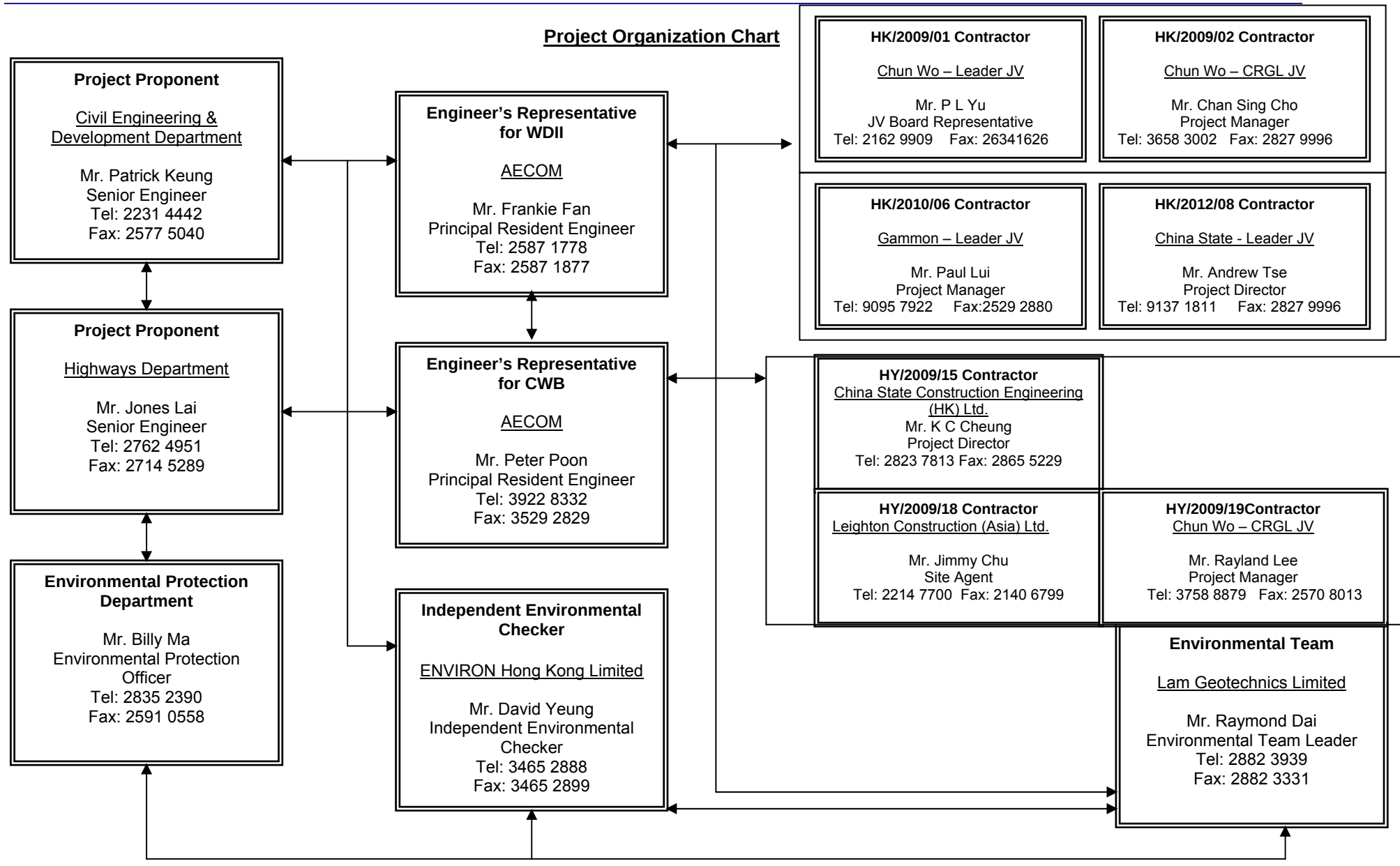
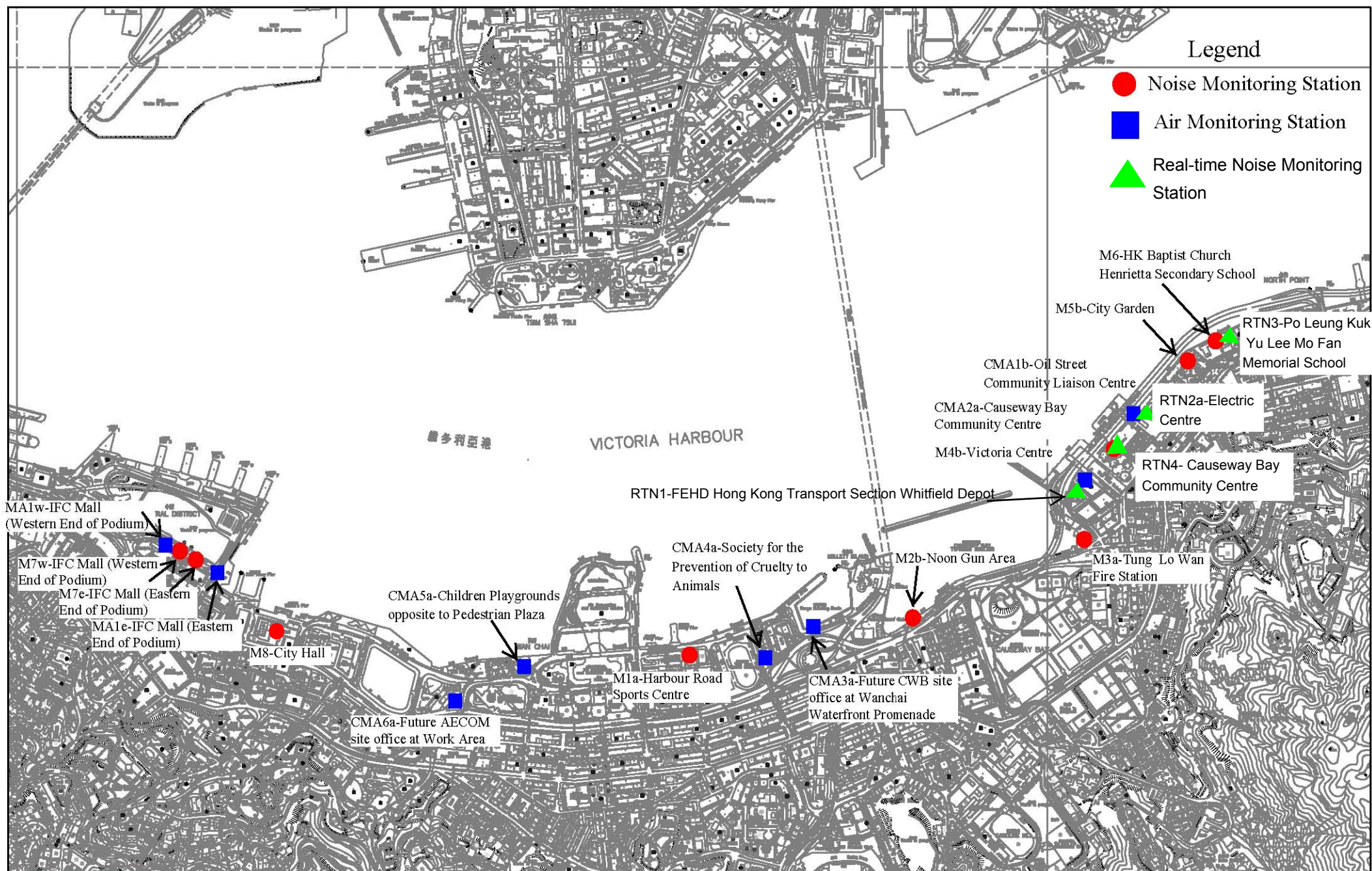




Figure 4.1

Locations of Monitoring Stations





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	<i>Floating Refuse</i> 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	<i>Good Site Practices</i> 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.

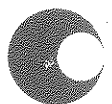
Action and Limit Level for Air Monitoring

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
CMA5a	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



Calibration Certificate

Certificate No. **23551**

Page **1** of **4** Pages

Customer : Lam Geotechnics Limited

Address : 11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong.

Order No. : Q21462

Date of receipt : 11-Jun-12

Item Tested

Description : Digital Sound Level Meter

Manufacturer : B&K

Model : Type 2236

Serial No. : 2100736

Test Conditions

Date of Test : 12-Jun-12

Supply Voltage : --

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type 1, IEC 804 Type 1 & IEC 1260 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

Calibrated by : 
P. F. Wong

Approved by : 
Dorothy Cheuk

Date: 12-Jun-12

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 23551

Page 2 of 4 Pages

Results :

1. SPL Accuracy

UUT Setting				Applied Value (dB)	UUT Reading (dB)
Range	Parameter	Frequency Wt.	Freq. Response		
20 - 100	SPL	dBA	F	94.0	93.8
			S		93.8
		dBC	F		93.9
		dBL	F		93.9
		1 kHz	F		93.9
40 - 120	SPL	dBA	F	94.0	93.9
		1 kHz	F		94.0
	SPL	dBA	F	114.0	114.0
			S		114.0
		dBC	F		114.0
		dBL	F		114.1
		1 kHz	F		114.0

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
140	114.0	113.8	-0.1	± 0.7 dB
130	104.0	103.9	0.0	
120	94.0	93.9 (Ref.)	--	
110	84.0	83.9	0.0	
100	74.0	73.9	0.0	
90	64.0	63.9	0.0	
90	54.0	53.9	0.0	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. **23551**

Page 3 of 4 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)	--	
	95.0	94.8	-0.1	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.4	- 39.4 dB, ± 1.5 dB
63 Hz	-26.1	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1 dB
250 Hz	-8.6	- 8.6 dB, ± 1 dB
500 Hz	-3.2	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.3	+ 1.2 dB, ± 1 dB
4 kHz	+1.0	+ 1.0 dB, ± 1 dB
8 kHz	-1.1	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-6.7	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.9	± 0.5 dB
1/10 ²	40.0	39.8	
1/10 ³	40.0	39.7	± 1.0 dB
1/10 ⁴	40.0	39.5	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 23551

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6. Filter Response

Filter Setting		Attenuation (dB)	IEC 1260 Class 1 Spec.
125	Hz	-63.5	< - 61
250	Hz	-44.7	< - 42
500	Hz	-20.8	< - 17.5
707	Hz	-3.5	- 2 ~ - 5
1	kHz (Ref.)	0.0 (Ref.)	--
1.414	kHz	-3.9	- 2 ~ - 5
2	kHz	-21.2	< - 17.5
4	kHz	-44.9	< - 42
8	kHz	-63.7	< - 61

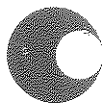
Uncertainty : ± 0.2 dB

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 992 hPa

----- END -----



Calibration Certificate

Certificate No. **25144**

Page **1** of **2** Pages

Customer : Lam Geotechnics Limited

Address : 11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong.

Order No. : Q22033

Date of receipt : 2-Aug-12

Item Tested

Description : Sound Level Calibrator

Manufacturer : B & K

Model : Type 4230

Serial No. : 1411076

Test Conditions

Date of Test : 10-Aug-12

Supply Voltage : --

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

Test Specifications

Calibration check.

Ref. Document/Procedure: F21, Z02.

Test Results

All results were within the IEC 942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	13535	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR
S041	Universal Counter	15610	SCL-HKSAR
S191	6½ dgt. Multimeter	20033	NIM-PRC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

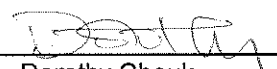
The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

Calibrated by :


Stephen Chu

Approved by :


Dorothy Cheuk

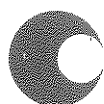
Date: 10-Aug-12

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646



Calibration Certificate

Certificate No. **25144**

Page 2 of 2 Pages

Results :

1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	93.96	± 0.3 dB

Uncertainty : ± 0.2 dB

2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	1.000 kHz	± 2 %

Uncertainty : $\pm 3.6 \times 10^{-6}$

3. Level Stability : 0.0 dB

IEC 942 Class 1 Spec. : ± 0.1 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 1.5 %

IEC 942 Class 1 Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The above measured values are the mean of 3 measurement.

3. The uncertainty claimed is for a confidence probability of not less than 95%.

4. Atmospheric Pressure : 995 hPa.

----- END -----



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE.
 VILLAGE OF CLEVELAND, OH 45002
 513.467.9000
 877.263.7610 TOLL FREE
 513.467.9009 FAX
 WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jul 19, 2012 Rootmeter S/N 0438320 Ta (K) - 298
 Operator Tisch Orifice I.D. - 0005 Pa (mm) - 751.84

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	1.3840	3.2	2.00
2	NA	NA	1.00	0.9760	6.4	4.00
3	NA	NA	1.00	0.8730	7.9	5.00
4	NA	NA	1.00	0.8340	8.8	5.50
5	NA	NA	1.00	0.6890	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9850	0.7117	1.4066	0.9957	0.7194	0.8903
0.9809	1.0050	1.9892	0.9915	1.0159	1.2591
0.9788	1.1212	2.2240	0.9894	1.1333	1.4078
0.9777	1.1723	2.3326	0.9883	1.1850	1.4765
0.9725	1.4115	2.8132	0.9831	1.4268	1.7807
Qstd slope (m) = 2.01145			Qa slope (m) = 1.25953		
intercept (b) = -0.02803			intercept (b) = -0.01774		
coefficient (r) = 0.99995			coefficient (r) = 0.99995		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

$$Qstd = Vstd/\text{Time}$$

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

$$Qa = Va/\text{Time}$$

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 : MA1e Calibration Date : 6-Apr-13
 Equipment no. : EL455 Calibration Due Date : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294		Kelvin	Pressure, P _a	1008 mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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	1.7718 62	63	63.2610
2	5.2	5.2	10.4	1.6239	55	55.2279
3	3.9	3.9	7.8	1.4082	44	44.1823
4	2.6	2.6	5.2	1.1523	31	31.1284
5	1.6	1.6	3.2	0.9070	20	20.0829

By Linear Regression of Y on X

Slope, m = 50.0672 Intercept, b = -25.9471

Correlation Coefficient* = 0.9995

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Checked by : Derek Lo
 Date : 6-Apr-13 Date : 6-Apr-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : MA1w

Equipment no. : EL080

Calibration Date : 6-Apr-13

Calibration Due Date : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	294	Kelvin	Pressure, P _a
			1008 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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
	H (inches of water) (up)	(down)	(difference)			
1	6.0	6.0	12.0	1.7433	60	60.2486
2	5.1	5.1	10.2	1.6083	52	52.2155
3	4.0	4.0	8.0	1.4259	42	42.1740
4	2.5	2.5	5.0	1.1302	26	26.1077
5	1.5	1.5	3.0	0.8786	14	14.0580

By Linear Regression of Y on X

Slope, m = 53.4851 Intercept, b = -33.6323

Correlation Coefficient* = 0.9994

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam

Date : 6-Apr-13

Checked by : Derek Lo

Date : 6-Apr-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5a **Calibration Date** : 6-Apr-13
Equipment no. : EL380 **Calibration Due Date** : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294	Kelvin	Pressure, P _a	1008	mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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
	H (inches of water)					
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7576	60	60.2486
2	5.1	5.1	10.2	1.6083	52	52.2155
3	4.0	4.0	8.0	1.4259	44	44.1823
4	2.5	2.5	5.0	1.1302	32	32.1326
5	1.5	1.5	3.0	0.8786	22	22.0912

By Linear Regression of Y on X

Slope, m = 42.8348 Intercept, b = -16.0869

Correlation Coefficient* = 0.9987

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam **Checked by** : Derek Lo
Date : 6-Apr-13 **Date** : 6-Apr-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA4a

Equipment no. : EL390

Calibration Date : 6-Apr-13

Calibration Due Date : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	294	Kelvin	Pressure, P _a
			1008 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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)	X-axis		Y-axis
1	6.1	6.1	12.2	1.7576	61	61.2527
2	5.0	5.0	10.0	1.5926	52	52.2155
3	4.1	4.1	8.2	1.4435	44	44.1823
4	2.5	2.5	5.0	1.1302	29	29.1202
5	1.5	1.5	3.0	0.8786	19	19.0787

By Linear Regression of Y on X

Slope, m = 48.0621 Intercept, b = -24.2184

Correlation Coefficient* = 0.9983

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam

Date : 6-Apr-13

Checked by : Derek Lo

Date : 6-Apr-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA3a Calibration Date : 6-Apr-13
 Equipment no. : EL888 Calibration Due Date : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294		Kelvin	Pressure, P _a	1008 mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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	1.7576	55	55.2279
2	5.0	5.0	10.0	1.5926	47	47.1947
3	4.0	4.0	8.0	1.4259	40	40.1657
4	2.4	2.4	4.8	1.1077	26	26.1077
5	1.3	1.3	2.6	0.8189	15	15.0622

By Linear Regression of Y on X

Slope, m = 42.7628 Intercept, b = -20.5735

Correlation Coefficient* = 0.9993

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Checked by : Derek Lo
 Date : 6-Apr-13 Date : 6-Apr-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA2a Calibration Date : 6-Apr-13
 Equipment no. : EL449 Calibration Due Date : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	294		Kelvin	Pressure, P _a	1008 mmHg	

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(\frac{H \times P_a}{1013.3 \times 298 / T_a} \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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	1.7576	57	57.2362
2	5.0	5.0	10.0	1.5926	50	50.2072
3	4.1	4.1	8.2	1.4435	43	43.1782
4	2.5	2.5	5.0	1.1302	28	28.1160
5	1.5	1.5	3.0	0.8786	17	17.0704

By Linear Regression of Y on X

Slope, m = 46.1851 Intercept, b = -23.6731

Correlation Coefficient* = 0.9998

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Checked by : Derek Lo
 Date : 6-Apr-13 Date : 6-Apr-13



Lam Geotechnics Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA1b

Equipment no. : EL452

Calibration Date : 6-Apr-13

Calibration Due Date : 6-Jun-13

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	294	Kelvin	Pressure, P _a
			1008 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	2.01145	Intercept, b _c	-0.02803
Last Calibration Date	19-Jul-12	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	19-Jul-13				

Calibration of RSP						
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
	H (inches of water) (up)	(down)	(difference)			
1	5.9	5.9	11.8	1.7288	60	60.2486
2	5.1	5.1	10.2	1.6083	54	54.2237
3	4.0	4.0	8.0	1.4259	46	46.1906
4	2.5	2.5	5.0	1.1302	33	33.1367
5	1.4	1.4	2.8	0.8493	22	22.0912

By Linear Regression of Y on X

Slope, m = 43.3289 Intercept, b = -15.2509

Correlation Coefficient* = 0.9994

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam

Date : 6-Apr-13

Checked by : Derek Lo

Date : 6-Apr-13



Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

**Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 2)**

**Environmental Monitoring Schedule
May 2013**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Apr	29-Apr	30-Apr	1-May	2-May	3-May	4-May
		Noise (Daytime)	24hr TSP	24hr TSP(CMA3a) 1hr TSP Noise (Daytime) (M6)		
5-May	6-May	7-May	8-May	9-May	10-May	11-May
		24hr TSP Noise (Daytime)	1hr TSP			
12-May	13-May	14-May	15-May	16-May	17-May	18-May
	24hr TSP	1hr TSP		Noise (Daytime)		24hr TSP Noise (Daytime) (M3,M4b,M5b,M6)
19-May	20-May	21-May	22-May	23-May	24-May	25-May
	1hr TSP 24hr TSP (CMA4a)	Noise (Daytime)			24hr TSP	1hr TSP
26-May	27-May					

**Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 2)**

**Tentative Environmental Monitoring Schedule
June 2013**

		28-May	29-May	30-May	31-May	1-Jun
		Noise (Daytime)	24hr TSP	1hr TSP		
2-Jun	3-Jun	4-Jun	5-Jun	6-Jun	7-Jun	8-Jun
Noise (Daytime)		24hr TSP	1hr TSP			
9-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun
24hr TSP	1hr TSP Noise (Daytime)				24hr TSP	
16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun
1hr TSP		Noise (Daytime)		24hr TSP	1hr TSP	
23-Jun	24-Jun	25-Jun	26-Jun	27-Jun		
	Noise (Daytime)		24hr TSP			



Appendix 5.2

Noise Monitoring Results and Graphical Presentations



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: M1a - Harbour Road Sports Centre

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/04/13	10:25	Fine	72.7	75.5	68.0	72	63	75
07/05/13	8:42	Cloudy	74.3	76.5	70.0	72	70	75
16/05/13	11:18	Cloudy	73.1	75.5	68.0	72	66	75
21/05/13	15:40	Fine	71.6	73.5	68.5	72	72	75

Location: M2b - Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/04/13	10:50	Fine	71.0	72.0	69.0	68	68	75
07/05/13	9:44	Cloudy	73.5	76.0	70.0	68	72	75
16/05/13	13:00	Cloudy	69.5	70.5	68.0	68	65	75
21/05/13	16:15	Fine	74.5	78.0	70.0	68	74	75

Location: M3a - Tung Lo Wan Fire Station

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/04/13	13:40	Fine	67.3	69.0	64.5	69	67	75
07/05/13	13:00	Cloudy	66.7	68.0	64.5	69	67	75
18/05/13	9:56	Cloudy	67.3	69.0	64.5	69	67	75
21/05/13	8:00	Fine	68.4	69.0	64.5	69	68	75

* Due to adverse weather condition, daytime noise monitoring at M3a was rescheduled from 16 May 2013 to 18 May 2013.

Location: M4b - Victoria Centre

Date	Time	Weather	Measurement Noise Level			Baseline Noise Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
30/04/13	13:00	Fine	70.5	72.0	67.5	67	68	75
07/05/13	10:41	Cloudy	68.9	70.0	67.0	67	64	75
18/05/13	10:45	Cloudy	69.0	70.0	67.5	67	64	75
21/05/13	9:00	Fine	68.8	70.0	67.0	67	63	75

* Due to adverse weather condition, daytime noise monitoring at M4b was rescheduled from 16 May 2013 to 18 May 2013.

Location: M5b - City Garden

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30min)					
30/04/13	14:35	Fine	73.0	74.0	70.5	68	71	75
07/05/13	11:30	Fine	67.6	68.5	64.0	68	68	75
18/05/13	11:28	Cloudy	70.1	70.5	69.0	68	66	75
21/05/13	9:45	Cloudy	73.4	75.0	70.5	68	72	75

* Due to adverse weather condition, daytime noise monitoring at M5b was rescheduled from 16 May 2013 to 18 May 2013.



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

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)					
02/05/13	15:05	Fine	74.9	76.0	72.9	71	73	70
07/05/13	14:04	Cloudy	74.0	75.0	72.0	71	71	70
18/05/13	14:13	Cloudy	72.9	74.0	70.5	71	69	70
21/05/13	10:30	Fine	74.6	76.0	72.0	71	72	70

* Due to adverse weather condition, daytime noise monitoring at M6 was rescheduled from 30 Apr 2013 to 2 May 2013 and from 16 May 2013 to 18 May 2013.

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)					
30/04/13	9:49	Fine	72.3	73.5	69.5	67	71	N/A
07/05/13	15:47	Cloudy	71.3	73.0	69.5	67	69	N/A
16/05/13	9:07	Cloudy	76.9	81.0	70.0	67	76	N/A
21/05/13	13:00	Fine	75.9	77.0	73.5	67	75	N/A

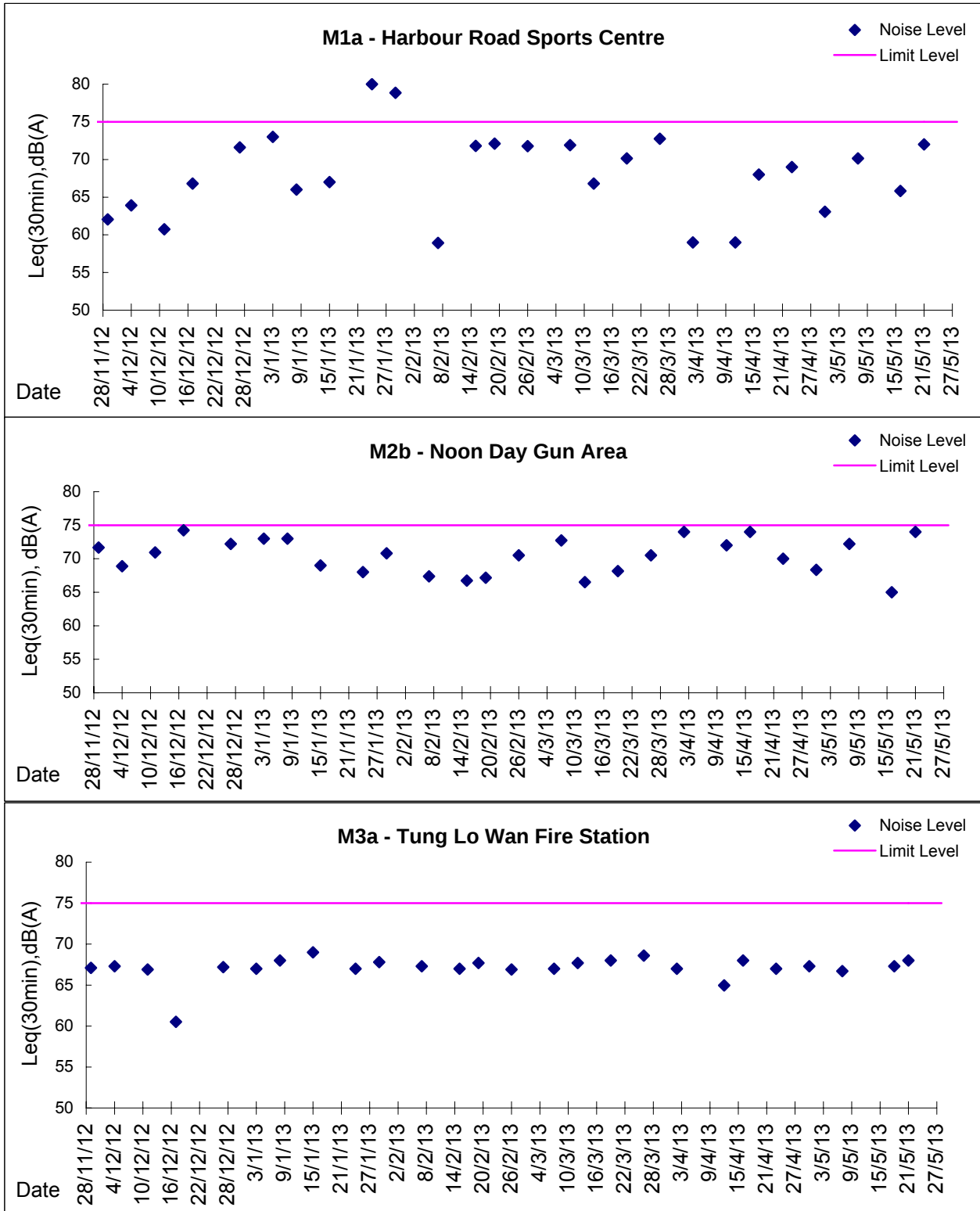
Location: M7w - International Finance Centre (Western End of Podium)

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/04/13	8:15	Fine	67.7	69.0	65.0	69	68	75
07/05/13	16:28	Cloudy	67.3	68.5	65.0	69	67	75
16/05/13	8:30	Cloudy	69.4	71.5	66.0	69	69	75
21/05/13	13:30	Cloudy	72.0	76.5	66.0	69	69	75

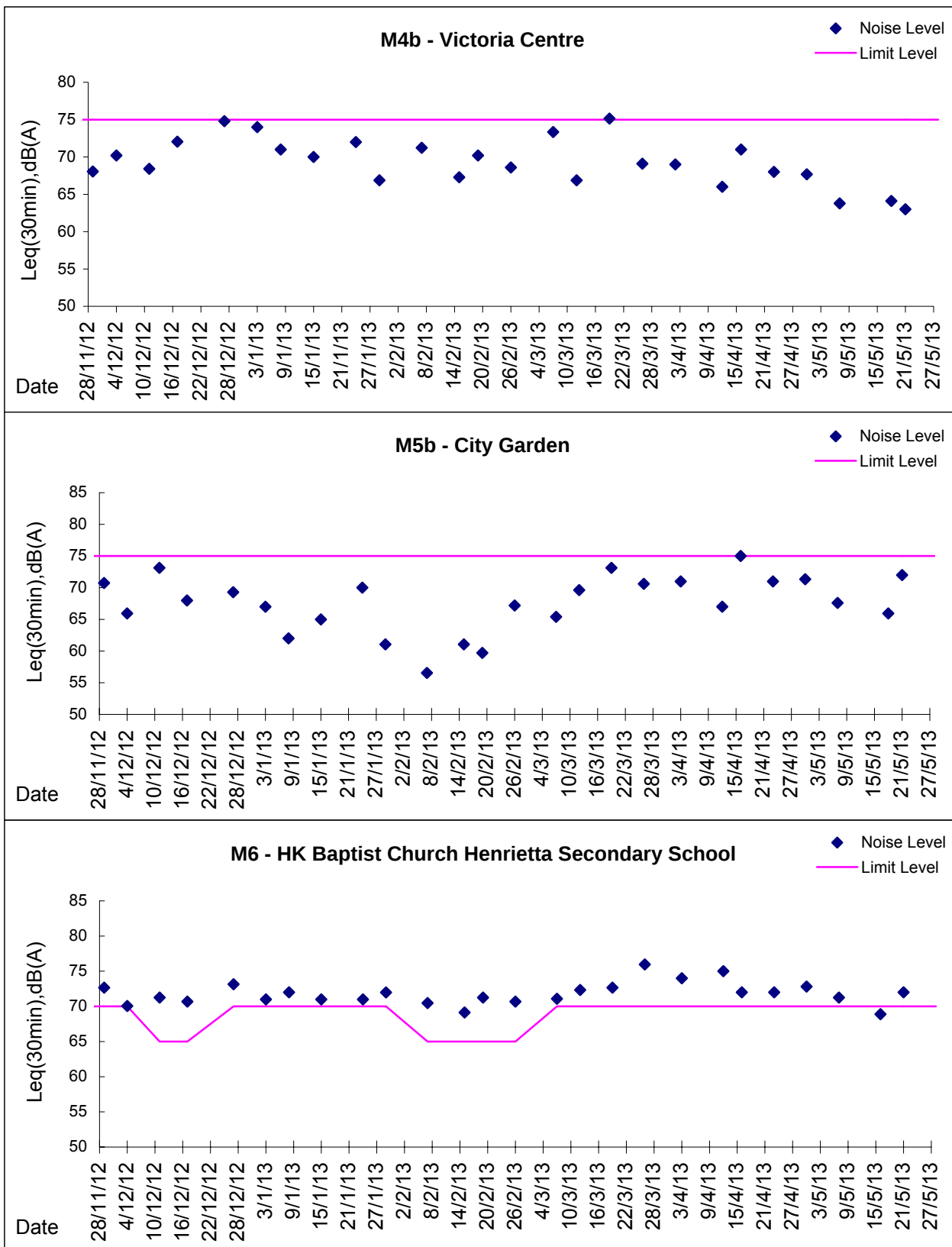
Location: M8 - City Hall

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
			Unit: dB(A), (30-min)					
30/04/13	10:25	Fine	61.2	62.0	58.0	64	61	70
07/05/13	17:21	Cloudy	59.3	61.5	55.5	64	59	70
16/05/13	10:30	Cloudy	60.3	62.0	57.5	64	60	70
21/05/13	14:45	Cloudy	60.5	62.0	57.5	64	61	70

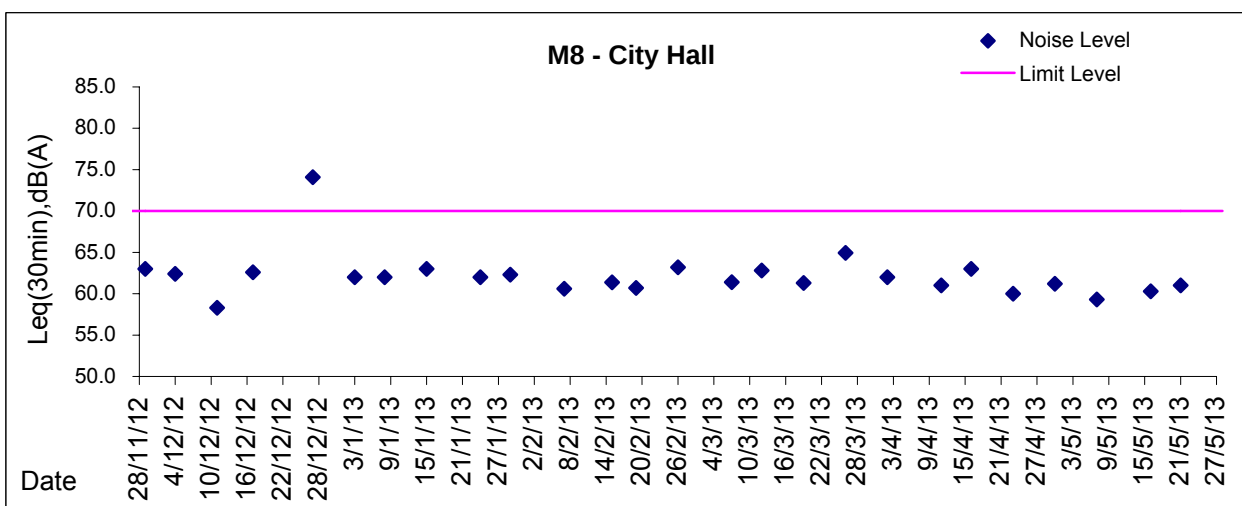
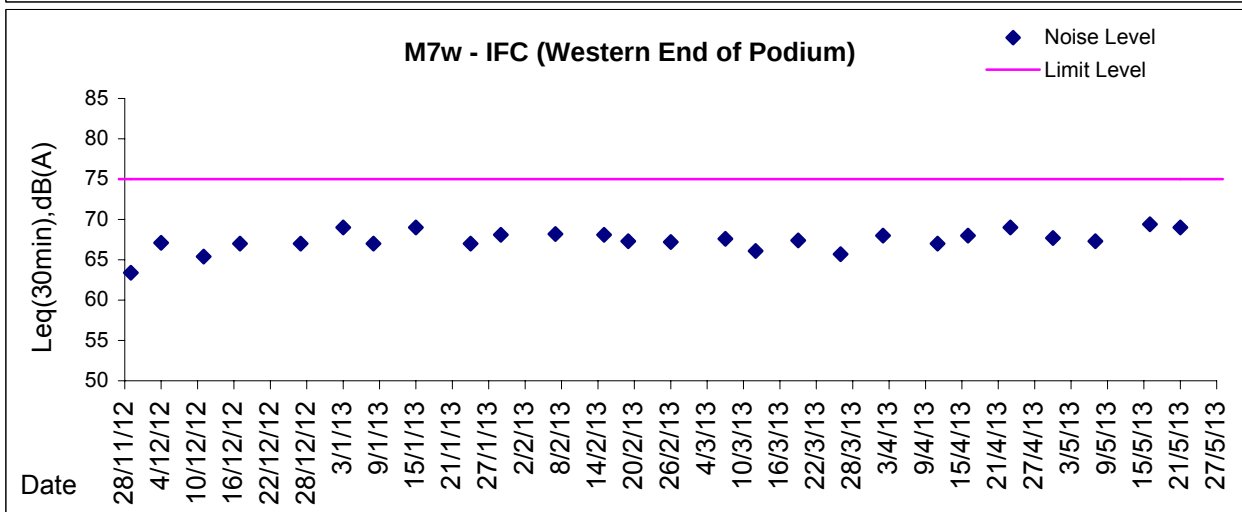
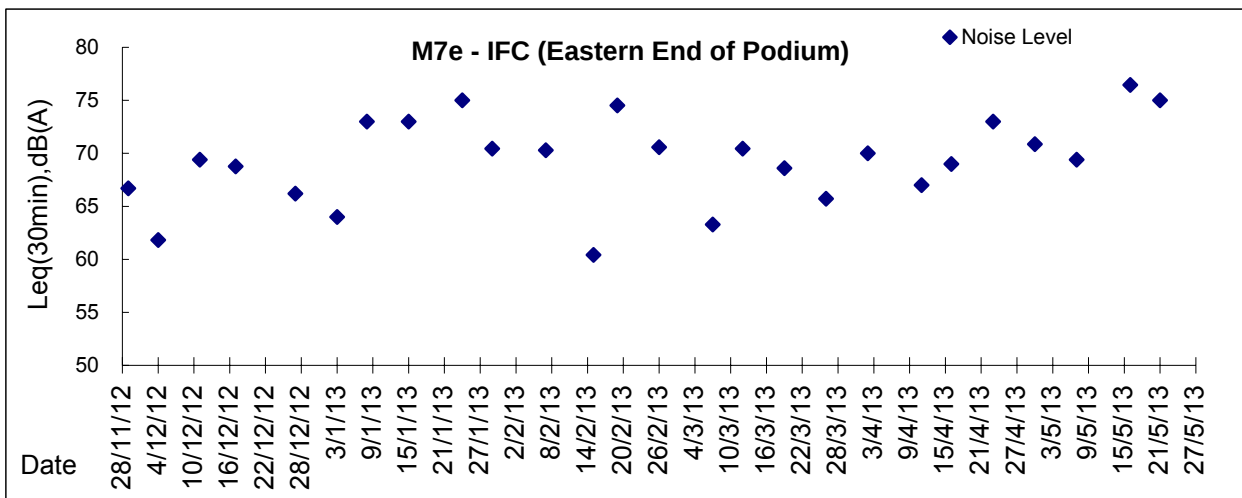
Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)



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



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		
1-May-13	8:00	Cloudy	004686	2.6912	2.7527	2758.18	2782.18	24.00	1.24	1.25	1.24	1791	34
7-May-13	8:00	Cloudy	006142	2.6387	2.6954	2785.18	2809.18	24.00	1.24	1.24	1.24	1787	32
13-May-13	8:00	Cloudy	006177	2.6477	2.7991	2812.18	2836.18	24.00	1.24	1.23	1.23	1778	85
18-May-13	8:00	Cloudy	005595	2.8764	2.9555	2839.18	2863.18	24.00	1.23	1.23	1.23	1772	45
24-May-13	8:00	Cloudy	005615	2.7458	2.8424	2869.07	2893.07	24.00	1.23	1.23	1.23	1776	54

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		
2-May-13	8:02	Cloudy	006159	2.6640	2.6745	2782.18	2783.18	1.00	1.29	1.29	1.29	77	136
2-May-13	9:25	Cloudy	006161	2.6612	2.6738	2783.18	2784.18	1.00	1.29	1.29	1.29	77	163
2-May-13	13:00	Cloudy	006162	2.6585	2.6733	2784.18	2785.18	1.00	1.29	1.29	1.29	77	191
8-May-13	8:03	Cloudy	006155	2.6538	2.6656	2809.18	2810.18	1.00	1.20	1.20	1.20	72	164
8-May-13	9:05	Cloudy	006153	2.6769	2.6860	2810.18	2811.18	1.00	1.24	1.24	1.24	74	122
8-May-13	10:10	Cloudy	006151	2.6504	2.6591	2811.18	2812.18	1.00	1.24	1.24	1.24	74	117
14-May-13	8:10	Cloudy	005587	2.8678	2.8806	2836.18	2837.18	1.00	1.23	1.23	1.23	74	173
14-May-13	9:20	Cloudy	005590	2.8726	2.8830	2837.18	2838.18	1.00	1.23	1.23	1.23	74	140
14-May-13	10:30	Cloudy	005593	2.8735	2.8824	2838.18	2839.18	1.00	1.23	1.23	1.23	74	120
20-May-13	8:05	Cloudy	005621	2.7355	2.7400	2863.18	2864.18	1.00	1.23	1.23	1.23	74	61
20-May-13	13:10	Cloudy	005619	2.7254	2.7315	2864.18	2865.18	1.00	1.23	1.23	1.23	74	83
20-May-13	15:15	Cloudy	005603	2.8759	2.8814	2865.18	2866.18	1.00	1.23	1.23	1.23	74	75
25-May-13	8:15	Hazy	005693	2.7374	2.7434	2893.07	2894.07	1.00	1.24	1.24	1.24	74	81
25-May-13	9:25	Hazy	005695	2.7720	2.7761	2894.07	2895.07	1.00	1.24	1.24	1.24	74	55
25-May-13	10:30	Hazy	005697	2.7342	2.7394	2895.07	2896.07	1.00	1.24	1.24	1.24	74	70



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		
1-May-13	8:00	Cloudy	004778	2.8198	2.9706	12497.67	12521.67	24.00	1.45	1.46	1.45	2093	72
7-May-13	8:00	Cloudy	006147	2.6531	2.7829	12524.67	12548.67	24.00	1.39	1.39	1.39	1999	65
13-May-13	8:00	Cloudy	006176	2.6551	2.7822	12551.66	12575.66	24.00	1.38	1.38	1.38	1990	64
18-May-13	8:00	Cloudy	005596	2.8875	2.9994	12578.66	12602.67	24.01	1.38	1.38	1.38	1985	56
24-May-13	8:00	Cloudy	005614	2.8438	2.9184	12605.69	12629.69	24.00	1.30	1.30	1.30	1869	40

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		
2-May-13	8:16	Cloudy	006156	2.6642	2.6739	12521.67	12522.67	1.00	1.44	1.44	1.44	86	113
2-May-13	9:50	Cloudy	006160	2.6685	2.6782	12522.67	12523.67	1.00	1.41	1.41	1.41	85	114
2-May-13	13:00	Cloudy	006157	2.6634	2.6719	12523.67	12524.67	1.00	1.27	1.27	1.27	76	112
8-May-13	8:04	Cloudy	006154	2.6443	2.6548	12548.66	12549.67	1.01	1.43	1.43	1.43	87	121
8-May-13	9:07	Cloudy	006152	2.6608	2.6701	12549.67	12550.67	1.00	1.37	1.37	1.37	82	113
8-May-13	10:10	Cloudy	002585	2.7349	2.7473	12550.67	12551.67	1.00	1.41	1.41	1.41	85	147
14-May-13	8:05	Cloudy	005586	2.8806	2.8874	12575.67	12576.67	1.00	1.38	1.38	1.38	83	82
14-May-13	9:10	Cloudy	005589	2.8599	2.8684	12576.67	12577.67	1.00	1.38	1.38	1.38	83	103
14-May-13	10:20	Cloudy	005592	2.8692	2.8761	12577.67	12578.67	1.00	1.38	1.38	1.38	83	83
20-May-13	8:10	Cloudy	005624	2.7402	2.7483	12602.69	12603.68	0.99	1.34	1.34	1.34	79	102
20-May-13	14:05	Cloudy	005618	2.7395	2.7436	12603.68	12604.68	1.00	1.34	1.34	1.34	80	51
20-May-13	13:10	Cloudy	005620	2.7297	2.7340	12604.68	12605.68	1.00	1.34	1.34	1.34	80	54
25-May-13	8:05	Hazy	005697	2.7440	2.7504	12629.69	12630.69	1.00	1.34	1.34	1.34	81	79
25-May-13	9:15	Hazy	005694	2.7506	2.7556	12630.69	12631.69	1.00	1.22	1.22	1.22	73	68
25-May-13	10:25	Hazy	005696	2.7487	2.7530	12631.69	12632.69	1.00	1.34	1.34	1.34	81	53



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		
2-May-13	14:30	Cloudy	003718	2.7647	2.9433	13335.88	13359.88	24.00	1.63	1.64	1.63	2352	76
7-May-13	8:00	Cloudy	006148	2.6268	2.8688	13359.83	13383.83	24.00	1.52	1.52	1.52	2184	111
13-May-13	8:00	Cloudy	006171	2.6742	2.8444	13387.29	13411.29	24.00	1.60	1.60	1.60	2303	74
18-May-13	8:00	Cloudy	003711	2.7602	2.8591	13414.67	13438.61	23.94	1.60	1.59	1.59	2290	43
24-May-13	8:00	Cloudy	005052	2.7482	2.8756	13441.66	13465.65	23.99	1.60	1.60	1.60	2299	55

*Due to lack of electricity supply, the 24hr-TSP monitoring was rescheduled from 01 May 2013 to 02 May 2013.

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		
2-May-13	8:00	Cloudy	004945	2.7766	2.7885	13332.88	13333.88	1.00	1.57	1.57	1.57	94	126
2-May-13	9:03	Cloudy	004942	2.7773	2.7909	13333.88	13334.88	1.00	1.59	1.59	1.59	95	142
2-May-13	13:00	Cloudy	004941	2.7915	2.8043	13334.88	13335.88	1.00	1.52	1.52	1.52	91	140
8-May-13	9:35	Cloudy	006093	2.6288	2.6460	13383.73	13384.73	1.00	1.52	1.52	1.52	91	189
8-May-13	10:56	Cloudy	006137	2.6409	2.6607	13384.73	13385.73	1.00	1.52	1.52	1.52	91	218
8-May-13	13:00	Cloudy	006170	2.6810	2.6974	13385.73	13386.73	1.00	1.52	1.52	1.52	91	180
14-May-13	11:00	Cloudy	006130	2.6438	2.6564	13411.62	13412.62	1.00	1.69	1.69	1.69	101	124
14-May-13	13:15	Cloudy	004271	2.6866	2.6974	13412.62	13413.62	1.00	1.67	1.67	1.67	100	108
14-May-13	14:30	Cloudy	005599	2.8848	2.8946	13413.62	13414.62	1.00	1.51	1.51	1.51	91	108
20-May-13	8:30	Cloudy	005657	2.7501	2.7591	13438.61	13439.61	1.00	1.50	1.50	1.50	90	100
20-May-13	9:35	Cloudy	005656	2.7423	2.7513	13440.61	13441.61	1.00	1.50	1.50	1.50	90	100
20-May-13	10:42	Cloudy	005655	2.7496	2.7592	13441.61	13442.61	1.00	1.50	1.50	1.50	90	106
25-May-13	9:00	Hazy	006872	2.6170	2.6253	13465.65	13466.65	1.00	1.47	1.47	1.47	88	94
25-May-13	10:50	Hazy	006874	2.6331	2.6362	13466.65	13467.65	1.00	1.47	1.47	1.47	88	35
25-May-13	13:00	Hazy	006876	2.6200	2.6257	13467.65	13468.65	1.00	1.47	1.47	1.47	88	65



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		
1-May-13	8:00	Cloudy	004689	2.7239	2.8645	16647.58	16671.58	24.00	1.35	1.35	1.35	1941	72
7-May-13	8:00	Cloudy	004937	2.7830	2.9463	16674.58	16698.58	24.00	1.35	1.34	1.35	1937	84
13-May-13	8:00	Cloudy	006139	2.6434	2.7520	16701.58	16725.58	24.00	1.30	1.30	1.30	1872	58
20-May-13	15:12	Cloudy	005651	2.7545	2.8303	16731.59	16755.59	24.00	1.30	1.30	1.30	1869	41
24-May-13	8:00	Cloudy	005646	2.7520	2.8251	16755.60	16779.59	23.99	1.26	1.26	1.26	1812	40

*Due to lack of electricity supply, the 24hr-TSP monitoring was rescheduled from 18 May 2013 to 20 May 2013.

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		
2-May-13	8:20	Cloudy	004949	2.7781	2.7861	16671.58	16672.58	1.00	1.31	1.31	1.31	79	102
2-May-13	9:25	Cloudy	004943	2.8048	2.8144	16672.58	16673.58	1.00	1.31	1.31	1.31	79	122
2-May-13	13:00	Cloudy	004940	2.8050	2.8121	16673.58	16674.58	1.00	1.37	1.37	1.37	82	86
8-May-13	8:45	Cloudy	006092	2.6222	2.6303	16648.58	16649.58	1.00	1.34	1.34	1.34	81	100
8-May-13	9:50	Cloudy	006135	2.6533	2.6642	16649.58	16650.58	1.00	1.34	1.34	1.34	81	135
8-May-13	10:55	Cloudy	006138	2.6507	2.6631	16650.58	16651.58	1.00	1.34	1.34	1.34	81	154
14-May-13	8:10	Cloudy	006126	2.6809	2.6883	16725.58	16726.58	1.00	1.32	1.32	1.32	79	93
14-May-13	9:30	Cloudy	006128	2.6737	2.6813	16726.58	16727.59	1.01	1.22	1.26	1.24	75	101
14-May-13	13:00	Cloudy	006129	2.6580	2.6643	16727.58	16728.59	1.01	1.14	1.14	1.14	69	91
20-May-13	10:01	Cloudy	004272	2.6911	2.7037	16728.59	16729.59	1.00	1.26	1.26	1.26	75	167
20-May-13	13:00	Cloudy	005654	2.7346	2.7393	16729.59	16730.59	1.00	1.14	1.14	1.14	68	69
20-May-13	14:09	Cloudy	005653	2.7302	2.7373	16730.59	16731.59	1.00	1.26	1.26	1.26	75	94
25-May-13	9:05	Hazy	005616	2.7203	2.7243	16779.59	16780.59	1.00	1.22	1.22	1.22	73	55
25-May-13	10:40	Hazy	006873	2.6286	2.6314	16780.59	16781.59	1.00	1.18	1.18	1.18	71	40
25-May-13	13:00	Hazy	006875	2.6409	2.6441	16781.59	16782.59	1.00	1.22	1.28	1.25	75	43



Location: CMA5a - Children Garden opposite to 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		
1-May-13	8:00	Cloudy	006143	2.6775	2.7871	17646.57	17670.57	24.00	1.39	1.39	1.39	2002	55
7-May-13	8:00	Cloudy	006105	2.6222	2.7151	17673.57	17697.57	24.00	1.32	1.32	1.32	1900	49
13-May-13	8:00	Cloudy	006124	2.6813	2.7793	17700.57	17724.57	24.00	1.36	1.36	1.36	1955	50
18-May-13	8:00	Cloudy	005685	2.7308	2.8015	17727.57	17751.57	24.00	1.33	1.33	1.33	1917	37
24-May-13	8:00	Cloudy	005690	2.7566	2.8512	17754.57	17778.57	24.00	1.33	1.33	1.33	1921	49

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		
2-May-13	13:00	Cloudy	006168	2.6669	2.6731	17670.57	17671.57	1.00	1.23	1.23	1.23	74	84
2-May-13	14:13	Cloudy	006101	2.6095	2.6139	17671.57	17672.57	1.00	1.39	1.39	1.39	84	53
2-May-13	15:16	Cloudy	006103	2.6094	2.6150	17672.57	17673.57	1.00	1.42	1.42	1.42	85	66
8-May-13	8:20	Cloudy	006119	2.6784	2.6860	17697.57	17698.57	1.00	1.36	1.36	1.36	82	93
8-May-13	9:25	Cloudy	006121	2.6717	2.6791	17698.57	17699.57	1.00	1.36	1.36	1.36	82	90
8-May-13	10:30	Cloudy	006125	2.6739	2.6833	17699.57	17700.57	1.00	1.36	1.36	1.36	82	115
14-May-13	8:45	Cloudy	006173	2.6740	2.6936	17724.57	17725.57	1.00	1.36	1.36	1.36	81	241
14-May-13	9:50	Cloudy	005658	2.7456	2.7519	17725.57	17726.57	1.00	1.36	1.36	1.36	81	77
14-May-13	13:00	Cloudy	005660	2.7379	2.7466	17726.57	17727.57	1.00	1.36	1.36	1.36	81	107
20-May-13	8:25	Cloudy	005186	2.7169	2.7242	17751.57	17752.57	1.00	1.33	1.33	1.33	80	91
20-May-13	9:30	Cloudy	005688	2.7571	2.7630	17752.57	17753.57	1.00	1.33	1.33	1.33	80	74
20-May-13	10:55	Cloudy	005689	2.7541	2.7600	17753.57	17754.57	1.00	1.33	1.33	1.33	80	74
25-May-13	8:05	Hazy	005606	2.8883	2.8940	17778.57	17779.57	1.00	1.31	1.31	1.31	79	72
25-May-13	9:08	Hazy	005682	2.7396	2.7439	17779.57	17780.57	1.00	1.31	1.31	1.31	79	55
25-May-13	10:11	Hazy	005733	2.8574	2.8617	17780.57	17781.57	1.00	1.31	1.31	1.31	79	55



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		
1-May-13	8:00	Cloudy	006192	2.6878	2.7900	10314.37	10338.37	24.00	1.33	1.33	1.33	1913	53
7-May-13	8:00	Cloudy	005774	2.8547	3.0084	10341.37	10365.37	24.00	1.33	1.33	1.33	1909	81
13-May-13	8:00	Cloudy	005772	2.8438	2.9345	10368.37	10392.37	24.00	1.30	1.30	1.30	1874	48
18-May-13	8:00	Cloudy	005662	2.7288	2.8447	10395.37	10419.36	23.99	1.28	1.28	1.28	1841	63
24-May-13	8:00	Cloudy	005739	2.8539	2.9415	10422.36	10446.35	23.99	1.24	1.24	1.24	1789	49

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		
2-May-13	8:30	Cloudy	005780	2.8521	2.8599	10338.37	10339.37	1.00	1.33	1.33	1.33	80	98
2-May-13	9:33	Cloudy	005778	2.8371	2.8440	10339.37	10340.37	1.00	1.33	1.33	1.33	80	86
2-May-13	10:35	Cloudy	005776	2.8324	2.8403	10340.37	10341.37	1.00	1.33	1.33	1.33	80	99
8-May-13	8:40	Cloudy	005770	2.8816	2.8887	10365.37	10366.37	1.00	1.33	1.33	1.33	80	89
8-May-13	9:43	Cloudy	005771	2.8635	2.8704	10366.37	10367.37	1.00	1.33	1.33	1.33	80	87
8-May-13	10:45	Cloudy	005758	2.7913	2.7988	10367.37	10368.37	1.00	1.29	1.29	1.29	77	97
14-May-13	8:30	Cloudy	005750	2.8547	2.8618	10392.37	10393.37	1.00	1.32	1.30	1.31	79	90
14-May-13	9:33	Cloudy	005749	2.8607	2.8678	10393.37	10394.37	1.00	1.32	1.30	1.31	79	90
14-May-13	10:56	Cloudy	005725	2.7946	2.8001	10394.37	10395.37	1.00	1.32	1.30	1.31	79	70
20-May-13	8:45	Cloudy	005742	2.8665	2.8744	10419.36	10420.36	1.00	1.20	1.20	1.20	72	110
20-May-13	9:50	Cloudy	005729	2.8362	2.8482	10420.36	10421.36	1.00	1.24	1.24	1.24	74	161
20-May-13	10:53	Cloudy	005740	2.8673	2.8748	10421.36	10422.36	1.00	1.28	1.28	1.28	77	98
25-May-13	8:11	Hazy	005644	2.7274	2.7310	10446.35	10447.35	1.00	1.28	1.28	1.28	77	47
25-May-13	9:16	Hazy	05642	2.7328	2.7362	10447.35	10448.35	1.00	1.28	1.28	1.28	77	44
25-May-13	10:28	Hazy	005640	2.7485	2.7533	10448.35	10449.35	1.00	1.28	1.28	1.28	77	62



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		
1-May-13	8:00	Cloudy	006191	2.6654	2.7800	13432.59	13456.59	24.00	1.37	1.37	1.37	1972	58
7-May-13	8:00	Cloudy	005773	2.8516	3.0286	13459.59	13483.59	24.00	1.33	1.37	1.35	1942	91
13-May-13	8:00	Cloudy	005745	2.8618	2.9718	13486.59	13510.59	24.00	1.38	1.38	1.38	1987	55
18-May-13	8:00	Cloudy	005661	2.7336	2.8329	13513.59	13537.59	24.00	1.34	1.34	1.34	1931	51
24-May-13	8:00	Cloudy	005731	2.8583	2.9577	13540.75	13564.75	24.00	1.38	1.38	1.38	1985	50

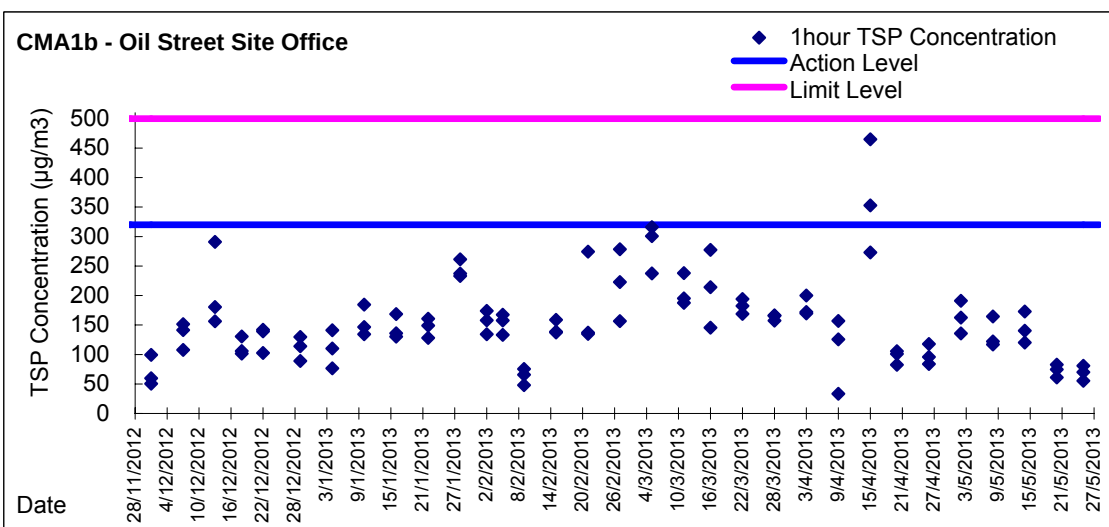
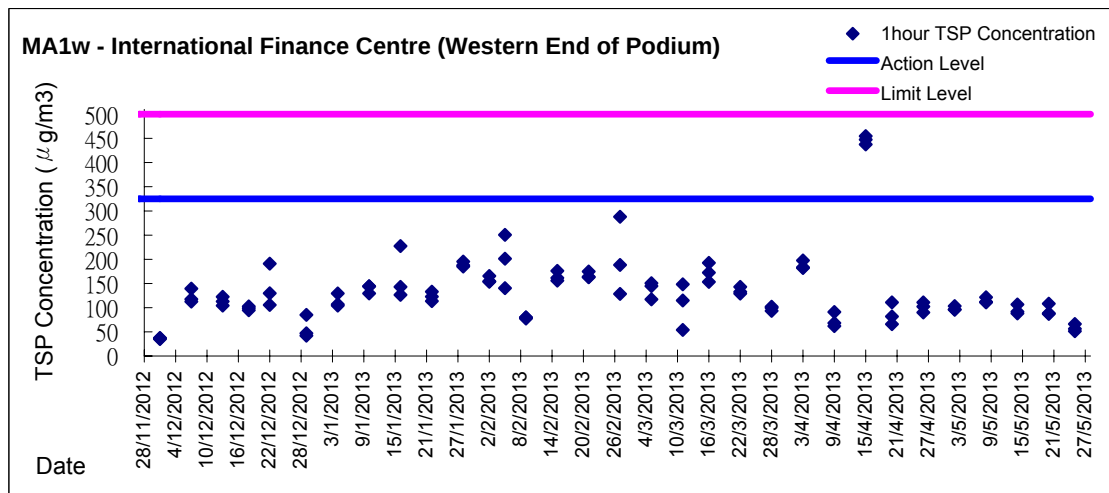
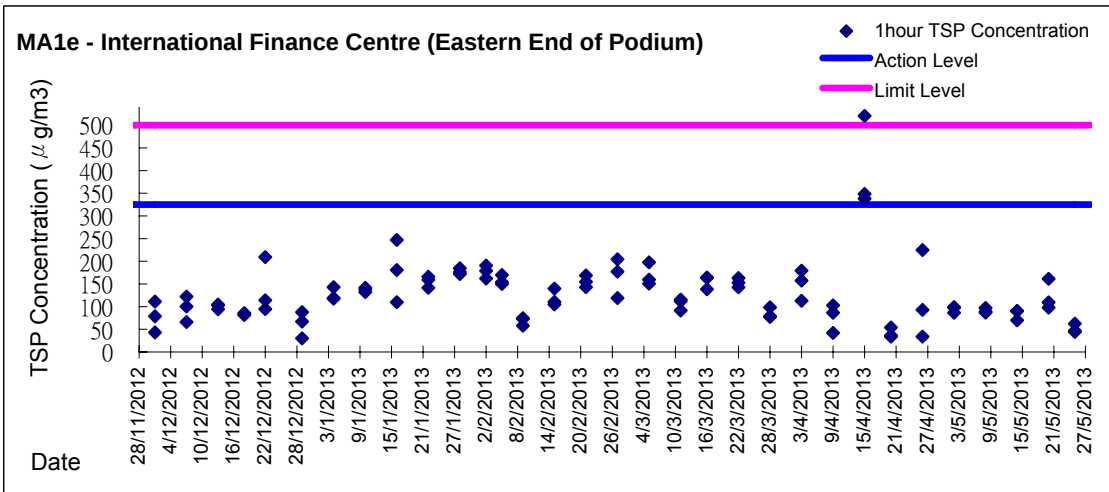
Report on 1-hour TSP monitoring

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

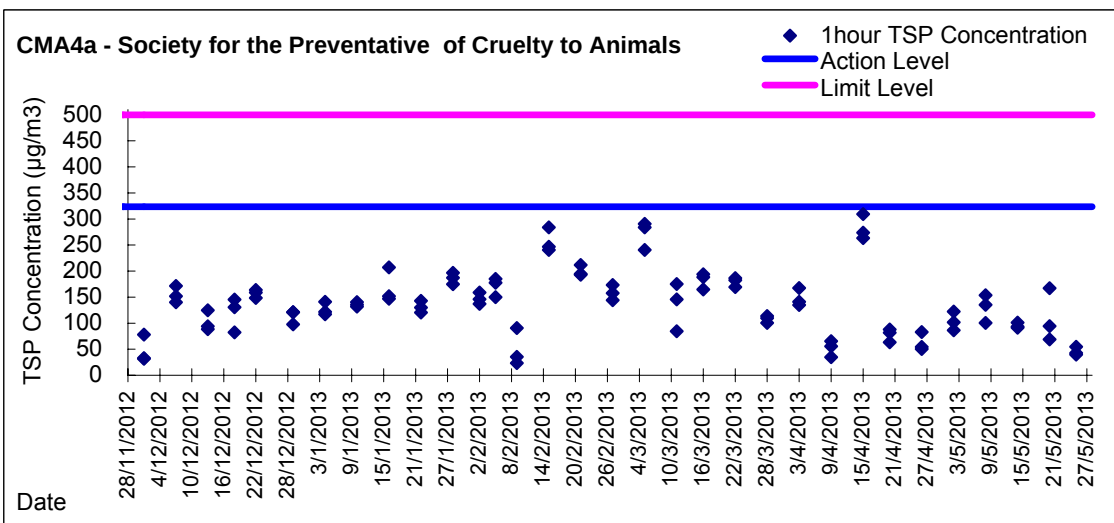
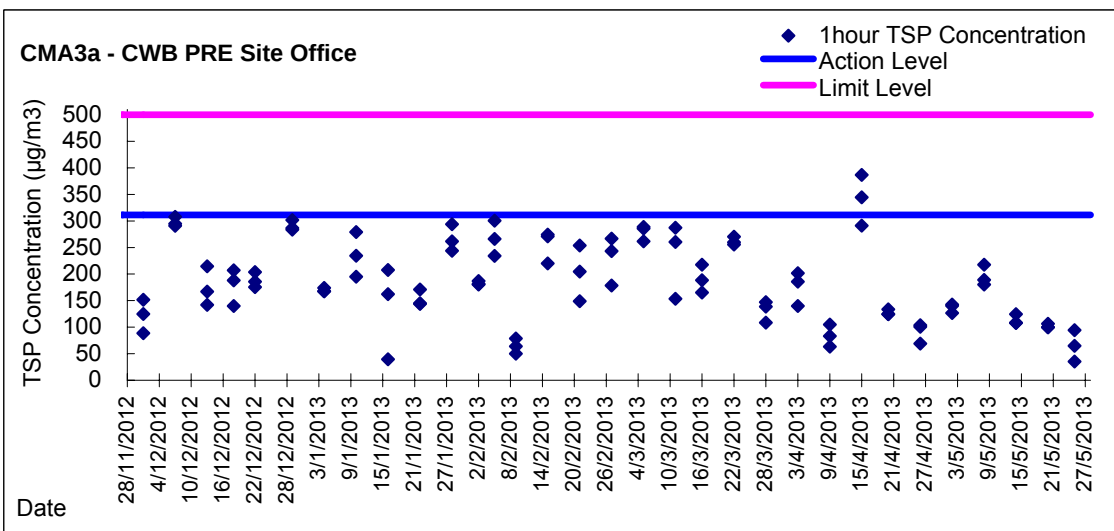
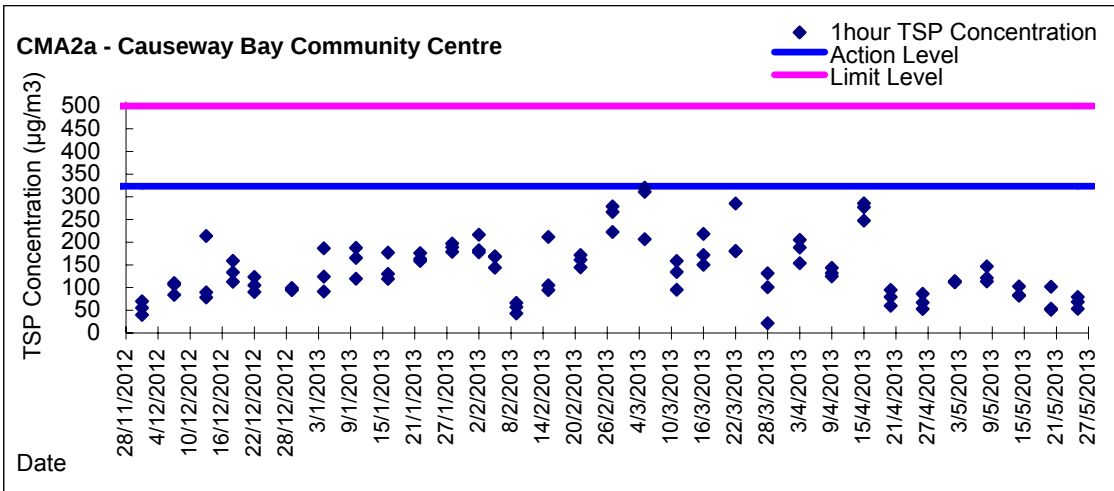
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

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		
2-May-13	8:40	Cloudy	005779	2.8421	2.8501	13456.59	13457.59	1.00	1.39	1.39	1.39	83	96
2-May-13	9:43	Cloudy	005777	2.8365	2.8445	13457.59	13458.59	1.00	1.39	1.39	1.39	83	96
2-May-13	10:50	Cloudy	005775	2.8508	2.8594	13458.59	13459.59	1.00	1.39	1.39	1.39	83	103
8-May-13	8:45	Cloudy	005760	2.7913	2.8006	13483.59	13484.59	1.00	1.38	1.38	1.38	83	112
8-May-13	9:47	Cloudy	005759	2.7884	2.7985	13484.59	13485.59	1.00	1.38	1.38	1.38	83	122
8-May-13	10:50	Cloudy	005757	2.7816	2.7908	13485.59	13486.59	1.00	1.38	1.38	1.38	83	111
14-May-13	8:40	Cloudy	005743	2.8546	2.8621	13510.59	13511.59	1.00	1.36	1.36	1.36	82	92
14-May-13	9:43	Cloudy	005748	2.8598	2.8685	13511.59	13512.59	1.00	1.36	1.36	1.36	82	106
14-May-13	10:50	Cloudy	005744	2.8472	2.8544	13512.59	13513.59	1.00	1.36	1.36	1.36	82	88
20-May-13	8:50	Cloudy	005728	2.8257	2.8328	13537.59	13538.59	1.00	1.34	1.34	1.34	80	88
20-May-13	9:55	Cloudy	005741	2.8583	2.8670	13538.59	13539.59	1.00	1.34	1.34	1.34	80	108
20-May-13	10:58	Cloudy	005730	2.8495	2.8565	13540.59	13541.59	1.00	1.34	1.34	1.34	80	87
25-May-13	8:18	Hazy	005643	2.7464	2.7518	13564.75	13565.75	1.00	1.36	1.36	1.36	82	66
25-May-13	9:23	Hazy	005641	2.7298	2.7340	13565.75	13566.75	1.00	1.36	1.36	1.36	82	51
25-May-13	10:36	Hazy	005639	2.7287	2.7333	13566.75	13567.75	1.00	1.36	1.36	1.36	82	56

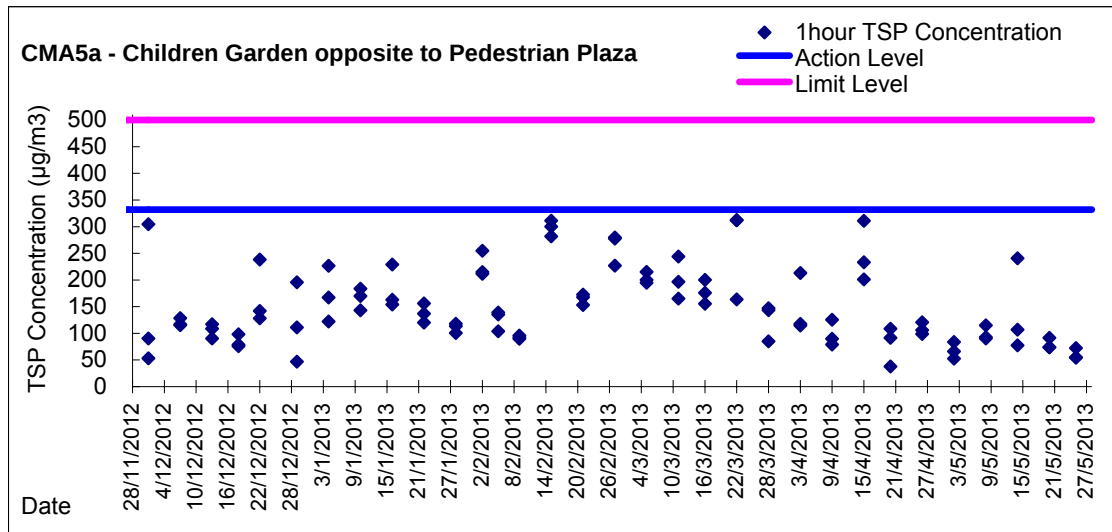
Graphic Presentation of 1 hour TSP Result



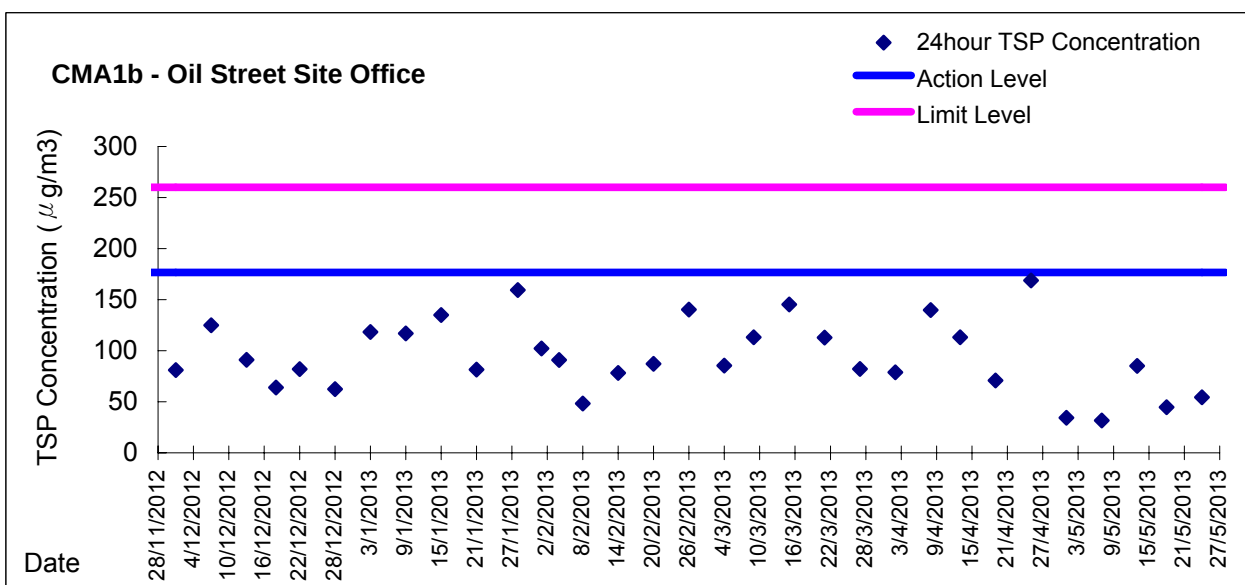
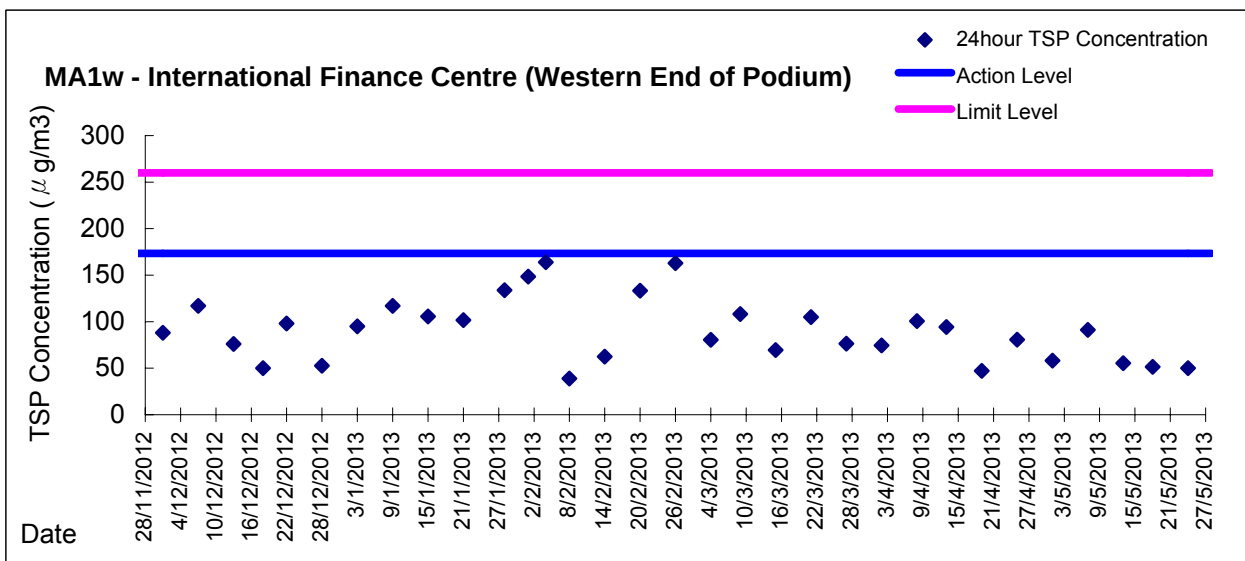
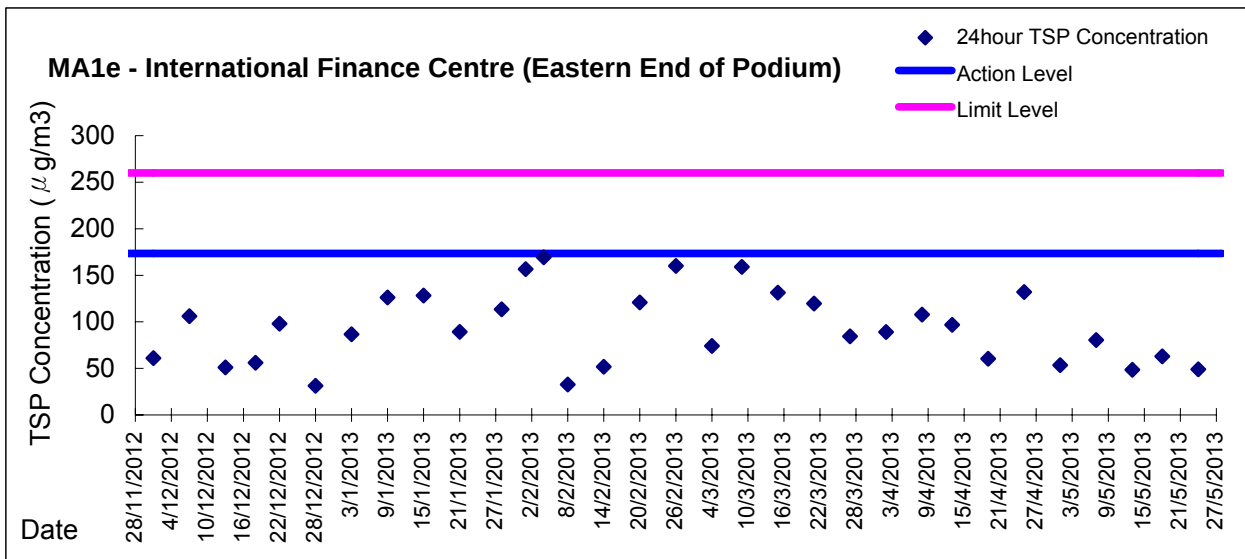
Graphic Presentation of 1 hour TSP Result



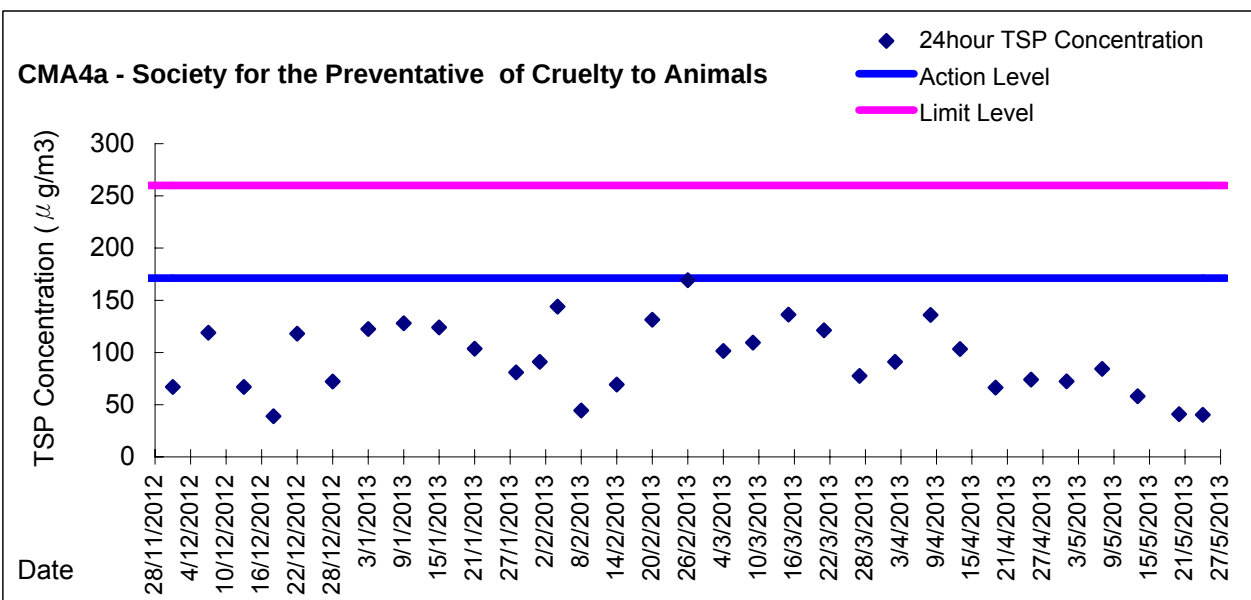
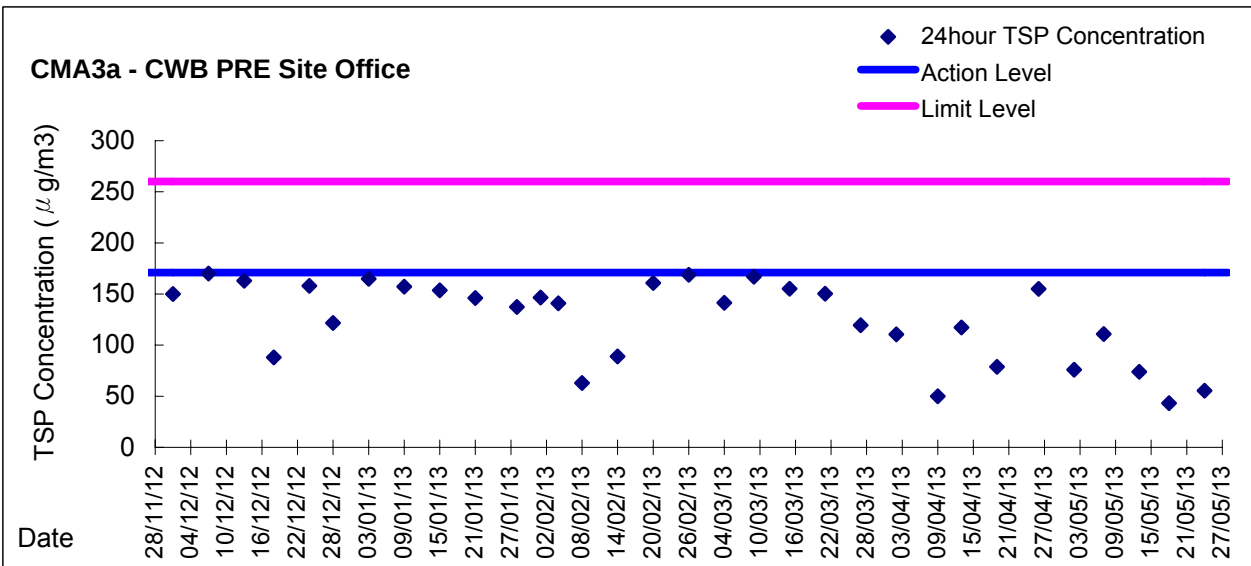
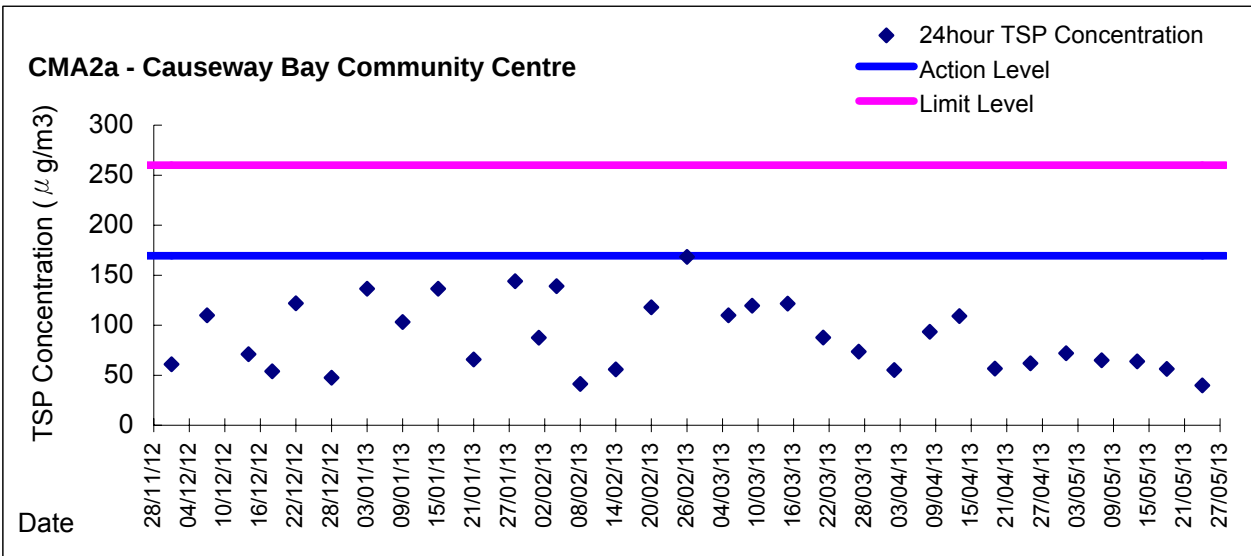
Graphic Presentation of 1 hour TSP Result



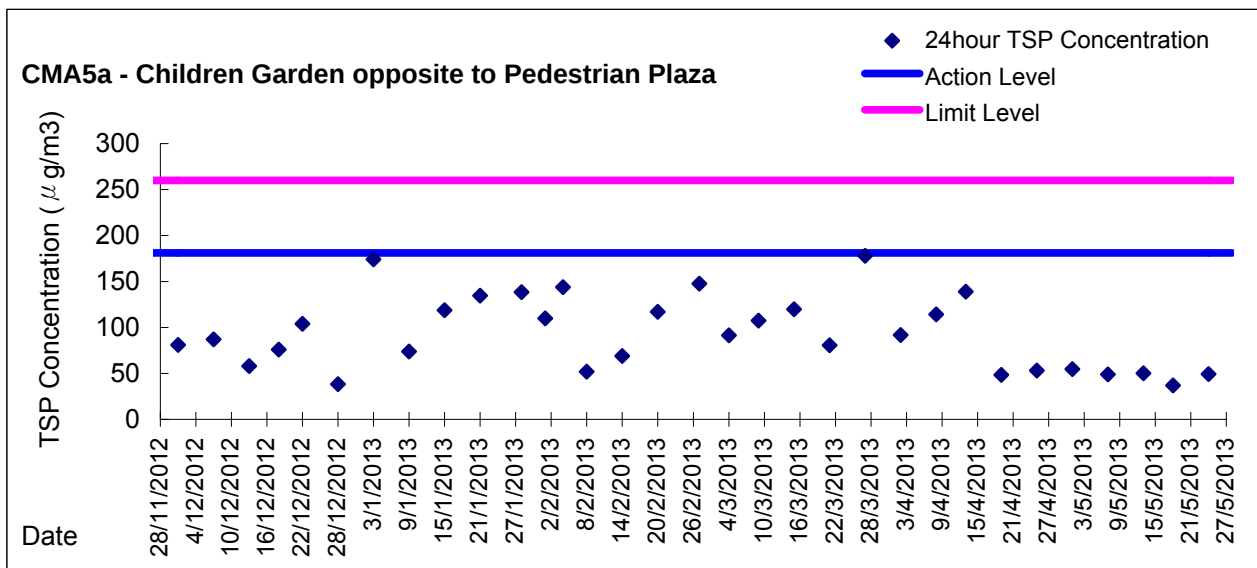
Graphic Presentation of 24 hour TSP Result



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)
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27/5/2013 23:41	61.9
27/5/2013 23:46	61.8
27/5/2013 23:51	61.6
27/5/2013 23:56	61.7

Real-time Noise Data		RTN2a (Hong Kong Electric Centre)													
Normal Day 07:00-19:00		4/5/2013 12:01	66.2	9/5/2013 18:31	66.3	15/5/2013 13:01	66.6	22/5/2013 7:31	66.8	27/5/2013 14:01	66.9				
		4/5/2013 12:31	66.7	10/5/2013 7:01	65.5	15/5/2013 13:31	67.2	22/5/2013 8:01	66.8	27/5/2013 14:31	66.4				
		4/5/2013 13:01	66.9	10/5/2013 7:31	66.7	15/5/2013 14:01	66.9	22/5/2013 8:31	62.3	27/5/2013 15:01	66.8				
29/4/2013 7:01	65.8	4/5/2013 13:31	67.0	10/5/2013 8:01	62.3	15/5/2013 14:31	66.3	22/5/2013 9:01	48.4	27/5/2013 15:31	66.0				
29/4/2013 7:31	66.8	4/5/2013 14:01	66.9	10/5/2013 8:31	65.2	15/5/2013 15:01	66.0	22/5/2013 9:31	48.0	27/5/2013 16:01	66.2				
29/4/2013 8:01	54.2	4/5/2013 14:31	51.9	10/5/2013 9:01	65.8	15/5/2013 15:31	65.9	22/5/2013 10:01	67.1	27/5/2013 16:31	66.5				
29/4/2013 8:31	58.1	4/5/2013 15:01	65.9	10/5/2013 9:31	63.8	15/5/2013 16:01	66.7	22/5/2013 10:31	53.8	27/5/2013 17:01	66.5				
29/4/2013 9:01	60.8	4/5/2013 15:31	65.7	10/5/2013 10:01	62.7	15/5/2013 16:31	48.4	22/5/2013 11:01	66.8	27/5/2013 17:31	66.1				
29/4/2013 9:31	63.5	4/5/2013 16:01	65.8	10/5/2013 10:31	64.2	15/5/2013 17:01	66.6	22/5/2013 11:31	66.2	27/5/2013 18:01	65.7				
29/4/2013 10:01	59.6	4/5/2013 16:31	65.5	10/5/2013 11:01	66.9	15/5/2013 17:31	66.5	22/5/2013 12:01	66.6	27/5/2013 18:31	65.6				
29/4/2013 10:31	63.8	4/5/2013 17:01	66.4	10/5/2013 11:31	63.6	15/5/2013 18:01	66.2	22/5/2013 12:31	67.0						
29/4/2013 11:01	64.3	4/5/2013 17:31	66.6	10/5/2013 12:01	59.8	15/5/2013 18:31	65.1	22/5/2013 13:01	66.8					Normal Day 19:00-23:00	
29/4/2013 11:31	67.2	4/5/2013 18:01	66.0	10/5/2013 12:31	66.9	16/5/2013 7:01	64.6	22/5/2013 13:31	66.9					Sunday & Holiday	
29/4/2013 12:01	66.6	4/5/2013 18:31	65.7	10/5/2013 13:01	66.8	16/5/2013 7:31	65.6	22/5/2013 14:01	66.8					07:00-23:00	
29/4/2013 12:31	66.9	6/5/2013 7:01	64.3	10/5/2013 13:31	63.9	16/5/2013 8:01	66.2	22/5/2013 14:31	66.9						
29/4/2013 13:01	48.7	6/5/2013 7:31	65.0	10/5/2013 14:01	65.2	16/5/2013 8:31	66.7	22/5/2013 15:01	66.8	28/4/2013 7:01	59.6				
29/4/2013 13:31	57.1	6/5/2013 8:01	66.1	10/5/2013 14:31	68.6	16/5/2013 9:01	65.8	22/5/2013 15:31	66.6	28/4/2013 7:06	59.3				
29/4/2013 14:01	59.8	6/5/2013 8:31	66.6	10/5/2013 15:01	64.1	16/5/2013 9:31	66.1	22/5/2013 16:01	67.1	28/4/2013 7:11	60.7				
29/4/2013 14:31	57.8	6/5/2013 9:01	66.9	10/5/2013 15:31	56.1	16/5/2013 10:01	50.9	22/5/2013 16:31	67.0	28/4/2013 7:16	60.9				
29/4/2013 15:01	56.6	6/5/2013 9:31	66.5	10/5/2013 16:01	57.0	16/5/2013 10:31	60.5	22/5/2013 17:01	66.7	28/4/2013 7:21	64.1				
29/4/2013 15:31	58.8	6/5/2013 10:01	66.7	10/5/2013 16:31	64.4	16/5/2013 11:01	59.7	22/5/2013 17:31	66.6	28/4/2013 7:26	61.8				
29/4/2013 16:01	50.7	6/5/2013 10:31	67.0	10/5/2013 17:01	66.4	16/5/2013 11:31	65.4	22/5/2013 18:01	66.8	28/4/2013 7:31	63.6				
29/4/2013 16:31	67.2	6/5/2013 11:01	66.6	10/5/2013 17:31	59.0	16/5/2013 12:01	65.2								

Real-time Noise Data	RTN2a (Hong Kong Electric Centre)
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27/5/2013 23:41	61.8
27/5/2013 23:46	62.4
27/5/2013 23:51	61.4
27/5/2013 23:56	61.3

Real-time Noise Data	RTN3 (Po Leung Kuk Yu Lee Mo Fan Memorial School)
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27/5/2013 23:41	62.8
27/5/2013 23:46	62.9
27/5/2013 23:51	61.4
27/5/2013 23:56	62.5

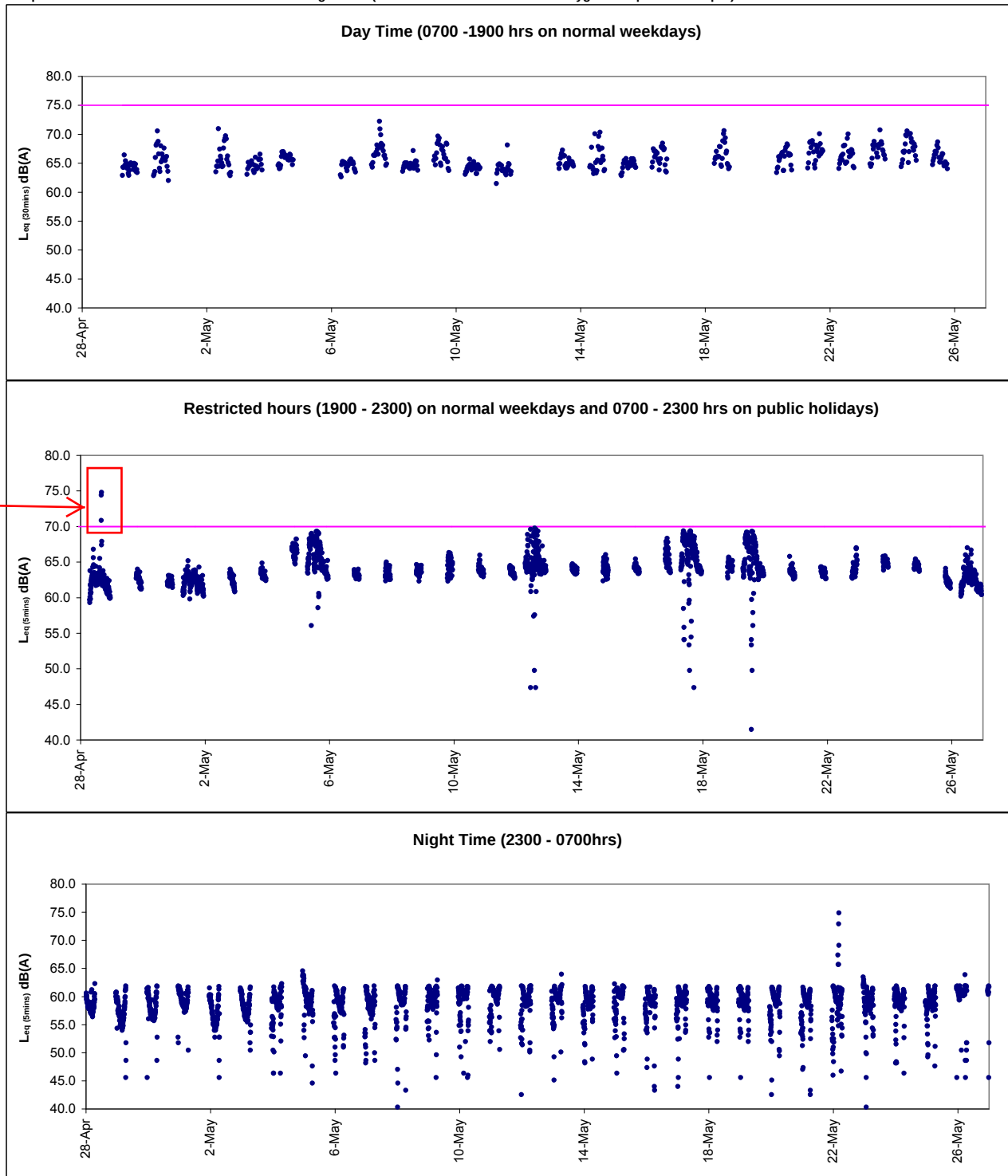
Real-time Noise Data	RTN4 (Causeway Bay Community Centre)						
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22/5/2013 22:26 62.9	25/5/2013 19:31 61.9	26/5/2013 12:36 62.7	26/5/2013 21:41 61.2	28/4/2013 3:36 58.9	29/4/2013 4:41 54.9		
22/5/2013 22:31 62.0	25/5/2013 19:36 62.7	26/5/2013 12:41 62.6	26/5/2013 21:46 61.3	28/4/2013 3:41 58.4	29/4/2013 4:46 54.4		
22/5/2013 22:36 61.5	25/5/2013 19:41 62.9	26/5/2013 12:46 62.5	26/5/2013 21:51 61.1	28/4/2013 3:46 59.5	29/4/2013 4:51 54.9		
22/5/2013 22:41 61.6	25/5/2013 19:46 62.6	26/5/2013 12:51 62.9	26/5/2013 21:56 61.7	28/4/2013 3:51 58.3	29/4/2013 4:56 54.7		
22/5/2013 22:46 61.4	25/5/2013 19:51 62.4	26/5/2013 12:56 62.5	26/5/2013 22:01 61.3	28/4/2013 3:56 57.1	29/4/2013 5:01 54.4		
22/5/2013 22:51 62.0	25/5/2013 19:56 63.1	26/5/2013 13:01 62.3	26/5/2013 22:06 61.2	28/4/2013 4:01 58.5	29/4/2013 5:06 53.8		
22/5/2013 22:56 61.4	25/5/2013 20:01 62.7	26/5/2013 13:06 62.5	26/5/2013 22:11 61.8	28/4/2013 4:06 57.2	29/4/2013 5:11 55.5		
23/5/2013 19:01 59.8	25/5/2013 20:06 62.1	26/5/2013 13:11 62.3	26/5/2013 22:16 61.5	28/4/2013 4:11 57.6	29/4/2013 5:16 54.1		
23/5/2013 19:06 60.9	25/5/2013 20:11 62.1	26/5/2013 13:16 62.5	26/5/2013 22:21 61.2	28/4/2013 4:16 57.7	29/4/2013 5:21 54.0		
23/5/2013 19:11 60.3	25/5/2013 20:16 62.7	26/5/2013 13:21 62.1	26/5/2013 22:26 60.9	28/4/2013 4:21 59.5	29/4/2013 5:26 53.7		
23/5/2013 19:16 60.5	25/5/2013 20:21 62.4	26/5/2013 13:26 62.5	26/5/2013 22:31 60.9	28/4/2013 4:26 57.6	29/4/2013 5:31 55.4		
23/5/2013 19:21 60.2	25/5/2013 20:26 62.5	26/5/2013 13:31 62.6	26/5/2013 22:36 61.4	28/4/2013 4:31 58.6	29/4/2013 5:36 52.3		
23/5/2013 19:26 61.1	25/5/2013 20:31 62.6	26/5/2013 13:36 62.5	26/5/2013 22:41 61.2	28/4/2013 4:36 58.4	29/4/2013 5:41 56.0		
23/5/2013 19:31 61.8	25/5/2013 20:36 62.1	26/5/2013 13:41 62.6	26/5/2013 22:46 60.3	28/4/2013 4:41 58.9	29/4/2013 5:46 54.2		
23/5/2013 19:36 61.9	25/5/2013 20:41 62.1	26/5/2013 13:46 62.5	26/5/2013 22:51 60.5	28/4/2013 4:46 57.1	29/4/2013 5:51 53.7		
23/5/2013 19:41 61.7	25/5/2013 20:46 61.7	26/5/2013 13:51 63.6	26/5/2013 22:56 60.1	28/4/2013 4:51 57.2	29/4/2013 5:56 55.0		
23/5/2013 19:46 61.9	25/5/2013 20:51 61.4	26/5/2013 13:56 63.2	28/12/2012 0:00 63.3	28/4/2013 4:56 57.8	29/4/2013 6:01 52.8		
23/5/2013 19:51 62.5	25/5/2013 20:56 61.3	26/5/2013 14:01 62.9	27/5/2013 19:06 62.9	28/4/2013 5:01 58.2	29/4/2013 6:06 54.8		
23/5/2013 19:56 61.5	25/5/2013 21:01 62.2	26/5/2013 14:06 63.0	27/5/2013 19:11 62.9	28/4/2013 5:06 57.5	29/4/2013 6:11 54.7		
23/5/2013 20:01 60.9	25/5/2013 21:06 62.1	26/5/2013 14:11 63.2	27/5/2013 19:16 62.5	28/4/2013 5:11 58.3	29/4/2013 6:16 54.0		
23/5/2013 20:06 62.0	25/5/2013 21:11 61.8	26/5/2013 14:16 62.6	27/5/2013 19:21 62.7	28/4/2013 5:16 57.5	29/4/2013 6:21 55.6		
23/5/2013 20:11 62.3	25/5/2013 21:16 61.5	26/5/2013 14:21 62.2	27/5/2013 19:26 62.4	28/4/2013 5:21 56.8	29/4/2013 6:26 52.8		
23/5/2013 20:16 62.1	25/5/2013 21:21 61.8	26/5/2013 14:26 62.9	27/5/2013 19:31 62.4	28/4/2013 5:26 56.9	29/4/2013 6:31 54.5		
23/5/2013 20:21 61.8	25/5/2013 21:26 61.4	26/5/2013 14:31 62.9	27/5/2013 19:36 62.7	28/4/2013 5:31 57.1	29/4/2013 6:36 53.9		
23/5/2013 20:26 62.5	25/5/2013 21:3						

Real-time Noise Data		RTN4 (Causeway Bay Community Centre)									
14/5/2013 2:41	57.3	15/5/2013 3:46	55.7	16/5/2013 4:51	57.2	17/5/2013 5:56	58.1	18/5/2013 23:01	60.9	20/5/2013 0:06	60.7
14/5/2013 2:46	55.6	15/5/2013 3:51	54.9	16/5/2013 4:56	54.8	17/5/2013 6:01	58.2	18/5/2013 23:06	46.6	20/5/2013 0:11	59.6
14/5/2013 2:51	56.6	15/5/2013 3:56	54.6	16/5/2013 5:01	57.1	17/5/2013 6:06	59.0	18/5/2013 23:11	49.9	20/5/2013 0:16	60.1
14/5/2013 2:56	55.7	15/5/2013 4:01	54.8	16/5/2013 5:06	56.1	17/5/2013 6:11	58.1	18/5/2013 23:16	52.1	20/5/2013 0:21	59.4
14/5/2013 3:01	57.3	15/5/2013 4:06	54.0	16/5/2013 5:11	58.3	17/5/2013 6:16	59.1	18/5/2013 23:21	49.1	20/5/2013 0:26	60.0
14/5/2013 3:06	56.6	15/5/2013 4:11	54.4	16/5/2013 5:16	56.4	17/5/2013 6:21	59.5	18/5/2013 23:26	43.0	20/5/2013 0:31	60.5
14/5/2013 3:11	55.4	15/5/2013 4:16	55.2	16/5/2013 5:21	55.2	17/5/2013 6:26	59.5	18/5/2013 23:31	52.3	20/5/2013 0:36	58.3
14/5/2013 3:16	56.0	15/5/2013 4:21	55.1	16/5/2013 5:26	55.9	17/5/2013 6:31	59.2	18/5/2013 23:36	50.7	20/5/2013 0:41	58.9
14/5/2013 3:21	58.9	15/5/2013 4:26	54.7	16/5/2013 5:31	57.4	17/5/2013 6:36	59.5	18/5/2013 23:41	52.2	20/5/2013 0:46	59.5
14/5/2013 3:26	56.3	15/5/2013 4:31	54.5	16/5/2013 5:36	57.2	17/5/2013 6:41	60.4	18/5/2013 23:46	46.1	20/5/2013 0:51	58.0
14/5/2013 3:31	57.1	15/5/2013 4:36	56.9	16/5/2013 5:41	58.6	17/5/2013 6:46	60.5	18/5/2013 23:51	49.6	20/5/2013 0:56	58.9
14/5/2013 3:36	56.1	15/5/2013 4:41	55.4	16/5/2013 5:46	58.1	17/5/2013 6:51	60.1	18/5/2013 23:56	60.8	20/5/2013 1:01	58.9
14/5/2013 3:41	55.4	15/5/2013 4:46	56.2	16/5/2013 5:51	58.2	17/5/2013 6:56	45.0	19/5/2013 0:01	52.9	20/5/2013 1:06	57.9
14/5/2013 3:46	55.9	15/5/2013 4:51	54.9	16/5/2013 5:56	57.9	17/5/2013 23:01	56.2	19/5/2013 0:06	53.8	20/5/2013 1:11	57.8
14/5/2013 3:51	54.8	15/5/2013 4:56	55.7	16/5/2013 6:01	58.1	17/5/2013 23:06	53.0	19/5/2013 0:11	60.9	20/5/2013 1:16	59.7
14/5/2013 3:56	55.9	15/5/2013 5:01	55.8	16/5/2013 6:06	59.1	17/5/2013 23:11	54.5	19/5/2013 0:16	45.0	20/5/2013 1:21	58.5
14/5/2013 4:01	55.3	15/5/2013 5:06	57.3	16/5/2013 6:11	59.7	17/5/2013 23:16	55.0	19/5/2013 0:21	60.8	20/5/2013 1:26	57.7
14/5/2013 4:06	55.6	15/5/2013 5:11	56.4	16/5/2013 6:16	59.6	17/5/2013 23:21	43.6	19/5/2013 0:26	59.7	20/5/2013 1:31	56.6
14/5/2013 4:11	56.8	15/5/2013 5:16	56.4	16/5/2013 6:21	59.4	17/5/2013 23:26	47.6	19/5/2013 0:31	37.5	20/5/2013 1:36	56.6
14/5/2013 4:16	55.8	15/5/2013 5:21	56.7	16/5/2013 6:26	60.1	17/5/2013 23:31	53.8	19/5/2013 0:36	60.1	20/5/2013 1:41	58.0
14/5/2013 4:21	56.2	15/5/2013 5:26	56.4	16/5/2013 6:31	48.8	17/5/2013 23:36	50.3	19/5/2013 0:41	53.2	20/5/2013 1:46	55.6
14/5/2013 4:26	54.7	15/5/2013 5:31	56.0	16/5/2013 6:36	60.5	17/5/2013 23:41	50.5	19/5/2013 0:46	59.3	20/5/2013 1:51	56.4
14/5/2013 4:31	55.8	15/5/2013 5:36	58.4	16/5/2013 6:41	60.3	17/5/2013 23:46	60.7	19/5/2013 0:51	60.1	20/5/2013 1:56	57.3
14/5/2013 4:36	57.2	15/5/2013 5:41	57.1								

Real-time Noise Data	RTN4 (Causeway Bay Community Centre)
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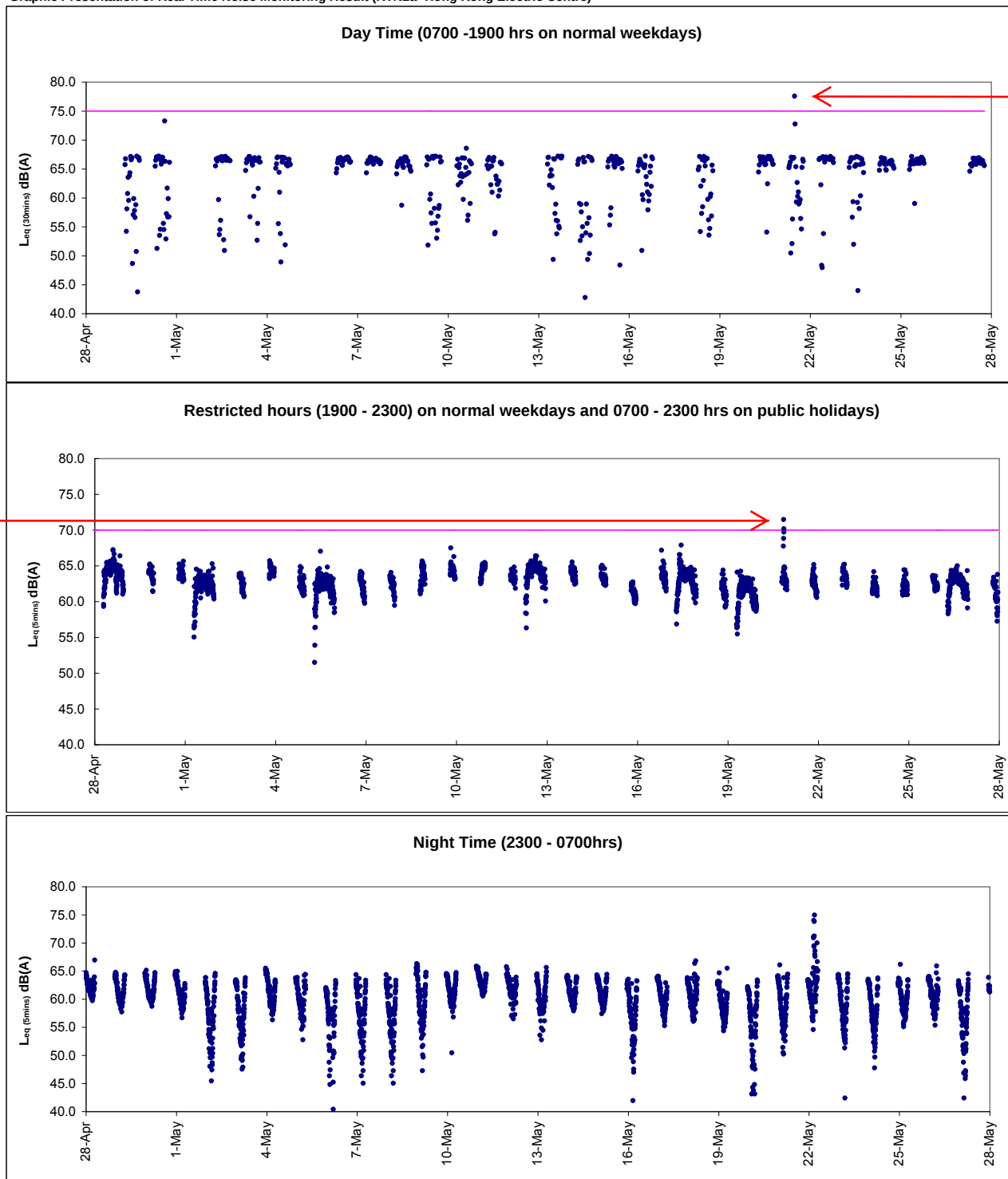
27/5/2013 23:41	60.7
27/5/2013 23:46	51.1
27/5/2013 23:51	43.0
27/5/2013 23:56	60.9

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



After checking with contractor HY/2009/19, no major noisy construction works were conducted at the concerned location during the recorded period and the exceedance was non-continuous. As such, the exceedances were considered to be contributed by nearby IEC traffic

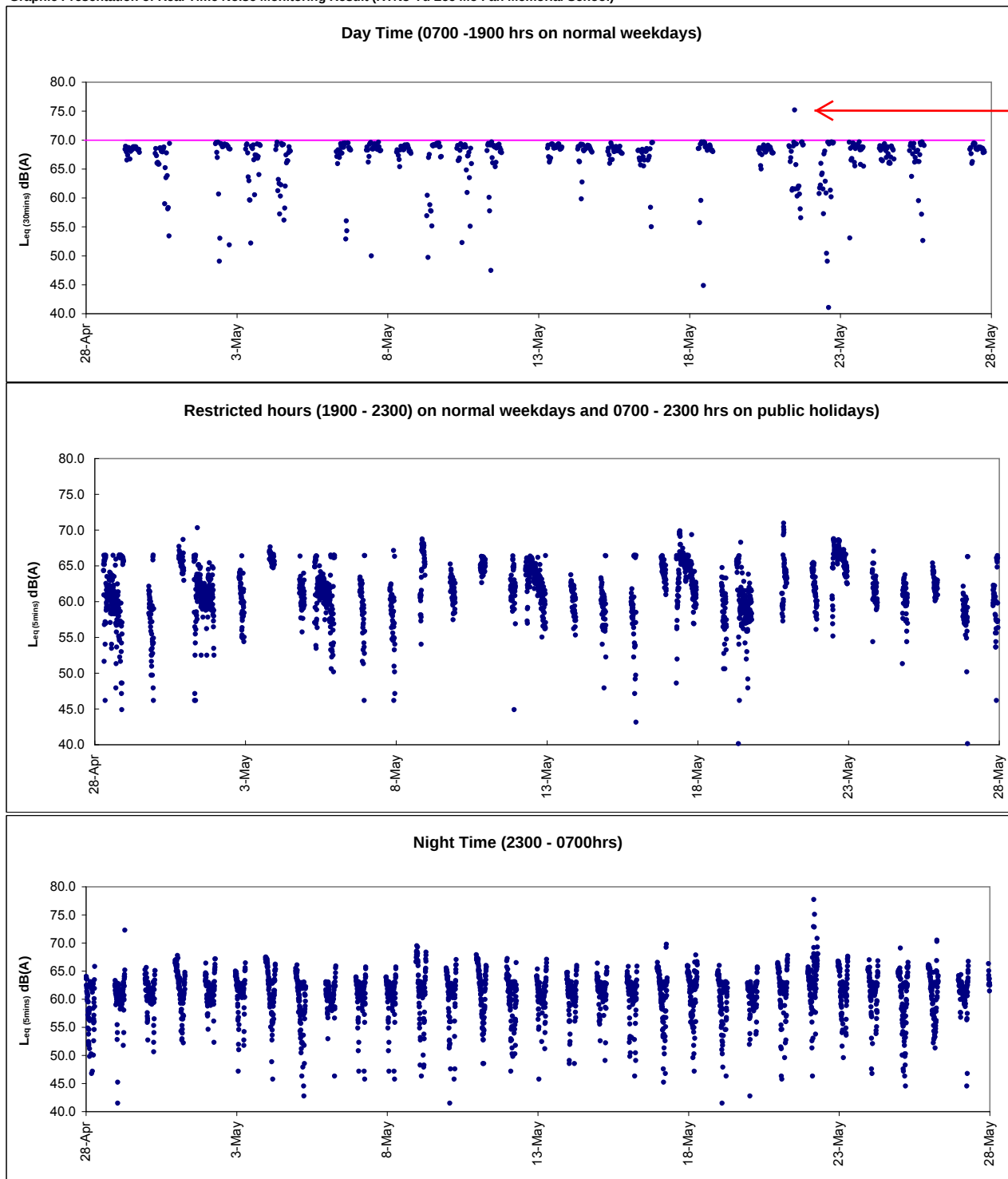
Graphic Presentation of Real Time Noise Monitoring Result (RTN2a- Hong Kong Electric Centre)



After checking with contractor HY/2009/19, no construction works were conducted at the concerned location during the recorded period. As such, the exceedances were considered to be contributed by nearby IEC traffic

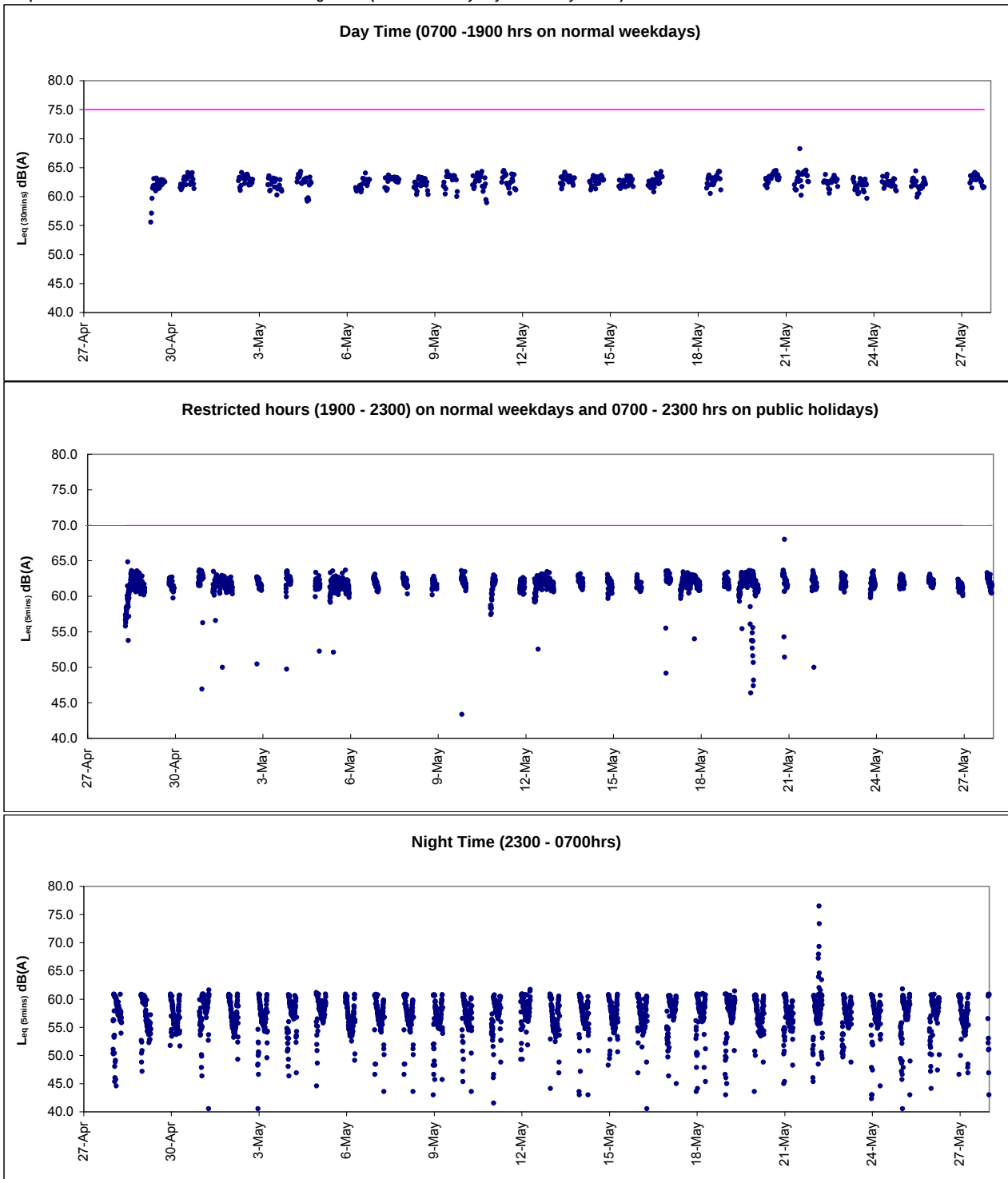
After checking with contractor HY/2009/19, no noisy construction works were conducted at the concerned location during the recorded period and the exceedance was non-continuous. As such, the exceedances were considered to be contributed by nearby IEC traffic

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



After checking with contractor HY/2009/19, Re-bar fixing and pile head breaking works were conducted at the concerned location during the recorded period. Mitigation measures by the contractor including erection of noise barrier was confirmed in place and the exceedance was non-continuous. As such, the exceedances were considered to be contributed by nearby IEC traffic

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





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	Construction Noise Level	Unit	Action Level	Limit Level	Follow-up action
X_10N128	2-May-13	15:05	M6 - HK Baptist Church Henrietta Secondary School	73	Leq(30-min)	when one documented complaint was received.	70	Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution. Action taken / to be taken: Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure. Remarks / Other Obs: Concreting works for Contract HY/2009/19 was conducted during the measurement. It was observed that traffic noise was a major noise source during monitoring. It is concluded that the exceedance was not due to project but to traffic noise nearby.
X_10N129	7-May-13	14:04	M6 - HK Baptist Church Henrietta Secondary School	71	Leq(30-min)	when one documented complaint was received.	70	Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution. Action taken / to be taken: Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure. Remarks / Other Obs: No construction works for Contract HY/2009/19 was conducted during the measurement. It was observed that traffic noise was a major noise source during monitoring. Breaking works at nearby City Garden was noted at the monitoring period. It is concluded that the exceedance was not due to project but to traffic noise nearby.
X_10N130	21-May-13	10:30	M6 - HK Baptist Church Henrietta Secondary School	72	Leq(30-min)	when one documented complaint was received.	70	Possible reason: Traffic nearby was observed during monitoring and was considered as the major noise contribution. Action taken / to be taken: Repeat measurement to confirm result and reviewed the trend of noise measurement. Analysis of contractor's working procedure. Noise mitigation measures by contractor including erection of temporary noise barrier was confirmed in place. Remarks / Other Obs: Pile head breaking works for Contract HY/2009/19 was conducted during the measurement. It was observed that traffic noise was a major noise source during monitoring. It is concluded that the exceedance was not due to project but to traffic noise nearby.



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



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



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



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



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



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



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



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



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



Appendix 10.1

Construction Programme of Individual Contracts

Activity Name	Original Duration	Planned Start	Planned Finish	2011								2012				2013				2014				2015			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
HY/2009/15 - CWB TUNNEL (CBTS SECTION)																											
SUBMISSIONS COMPLYING WITH EPs																											
EM&A Manual (rely on the Master EP's submission EP-364/2009/A Condition 2.5)																											
Baseline Monitoring Report (rely on the Master EP's submission EP-364/2009 Condition 3.3)																											
Monthly EM&A (rely on the masters EP's Submission, EP-364/2009/A Condition 3.4)																											
A dedicated website (rely on the master EP's submission, EP-364/2009/A Condition 4.2)																											
Management organization of main construction companies (FEP Condition 2.6)	1d	02-Oct-10	02-Oct-10																								
Work Schedule (FEP Condition 2.7)	1d	27-Oct-10	27-Oct-10																								
Location Plan (FEP Condition 2.8)	1d	27-Oct-10	27-Oct-10																								
Noise Management plan (FEP Condition 2.9)	1d	27-Oct-10	27-Oct-10																								
Landscape plan (FEP condition 2.10)	1d	31-Jan-11	31-Jan-11																								
EAST VENTILATION ADIT																											
CCT @ Portion 1, 2, 4, 6, 22	1315d	27-Sep-10	03-May-14																								
EV Adit @ Portion 4-Advance Works	526d	27-Sep-10	06-Mar-12																								
EV Adit Portion 1, 2, 6, 22	26d	22-Dec-11	16-Jan-12																								
EV Adit-based on Confirming Design	323d	15-Feb-12	02-Jan-13																								
TCBR1E (TS1 Area)																											
Diaphragm Wall Construction (incl. SI, & tests after completion)	107d	26-Apr-11	10-Aug-11																								
Excavation & Lateral Support, ELS	99d	16-Jul-11	22-Oct-11																								
Cut & Cover Tunnel Construction (incl. backfill)	78d	22-Oct-11	07-Jan-12																								
OHVD and Cable Trough (access from Portion 22)	76d	18-Dec-13	03-Mar-14																								
TCBR2 + TCBR3 (TS2 Area)																											
Diaphragm Wall Construction	118d	06-Jul-12	31-Oct-12																								
Excavation & Lateral Support, ELS	248d	06-Jul-12	10-Mar-13																								
Cut & Cover Tunnel Construction	164d	11-Mar-13	21-Aug-13																								
OHVD Cable Trough (Access from Portion 22)	150d	05-Aug-13	01-Jan-14																								
TCBR1W (TS4 Area)																											
Diaphragm Wall Construction	148d	28-Jun-11	22-Nov-11																								
Excavation & Lateral Support, ELS	319d	28-Jun-11	11-May-12																								
Landing Steps - Demolition/Reconstruct as footpath.	40d	28-Jun-11	23-Aug-11																								

Milestone

Milestone

Remaining Work

Critical Remaining Work

Actual Work

China State Construction Engineering (Hong Kong) Ltd.
Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel
(CBTS Section)

Prepared by William Caluza

Date

Revision

Checked

Approved

14-Mar-11

Revision C

ST

KL

File: 0001a

(Layout:HY/2009/15: CWB - Summary)

中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING HONG KONG LTD

Activity Name	Original Duration	Planned Start	Planned Finish	2011				2012				2013				2014				2015				2016			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Rock Excavation	235d	25-Apr-12	15-Dec-12																								
ME4-Diaphragm Wall	114d	10-May-12	19-Oct-12																								
AS Logistics Area for Mined Tunneling Works	174d	01-Jun-12	07-Feb-13																								
ME4-ELS Works	212d	01-Jun-12	02-Apr-13																								
SCL Entrusted Works	291d	18-Jul-12	08-Sep-13																								
Cut & Cover Tunnel Construction (w/o TS4 +)	111d	17-Dec-12	06-Apr-13																								
ME4-RC Structure	146d	28-Jan-13	21-Aug-13																								
OHVD and Cable Trough (Access from TZ5/TPCWAE/TPCWAW)	180d	17-Jun-13	13-Dec-13																								
MINED TUNNEL																											
CHT Protection Works @ location A, B, C	342d	27-Sep-10	01-Feb-12																								
Tunnel works from West Portal (access from TPCWAE& TZ5)	418d	12-Mar-12	30-Oct-13																								
Tunnel Works from East Portal (Access from TS4 Area)	214d	30-Mar-12	01-Feb-13																								
Tunnel OHVD & Cable Trough	384d	02-Dec-13	22-May-15																								
TPCWAE																											
Drainage Diversion works along Hung Hing Road (Portion 19)	176d	15-Oct-10	24-Jun-11																								
Diaphragm Wall Construction	147d	20-May-11	13-Oct-11																								
Excavation & Lateral Support, ELS	421d	20-May-11	13-Jul-12																								
Rock Excavation	206d	12-Mar-12	03-Oct-12																								
AS Logistics Area for Mined Tunneling works	342d	12-May-12	18-Apr-13																								
Cut & Cover Tunnel Construction	130d	28-Jan-13	06-Jun-13																								
OHVD and Cable Trough (Access from TZ5/TPCWAW)	182d	18-Feb-15	18-Aug-15																								
TPCWAW & PORTION 11																											
Diaphragm Wall Construction + Portion 11	222d	25-Oct-13	03-Jun-14																								
Excavation & Lateral Support, ELS	478d	25-Oct-13	14-Feb-15																								
Cut & Cover Tunnel Construction	143d	30-Dec-14	21-May-15																								
OHVD and Cable Trough Installation (Access from Portion 11)	236d	22-May-15	11-Jan-16																								

2 of 2

China State Construction Engineering (Hong Kong) Ltd.

Contract No. HY/2009/15 - Central Wan Chai By Pass - Tunnel

(CBTS Section)

Date

14-Mar-11

Revision

Revision C

File: 0001a

(Layout: HY/2009/15: CWB - Summary)

Checked

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Approved

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中國建築工程(香港)有限公司

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

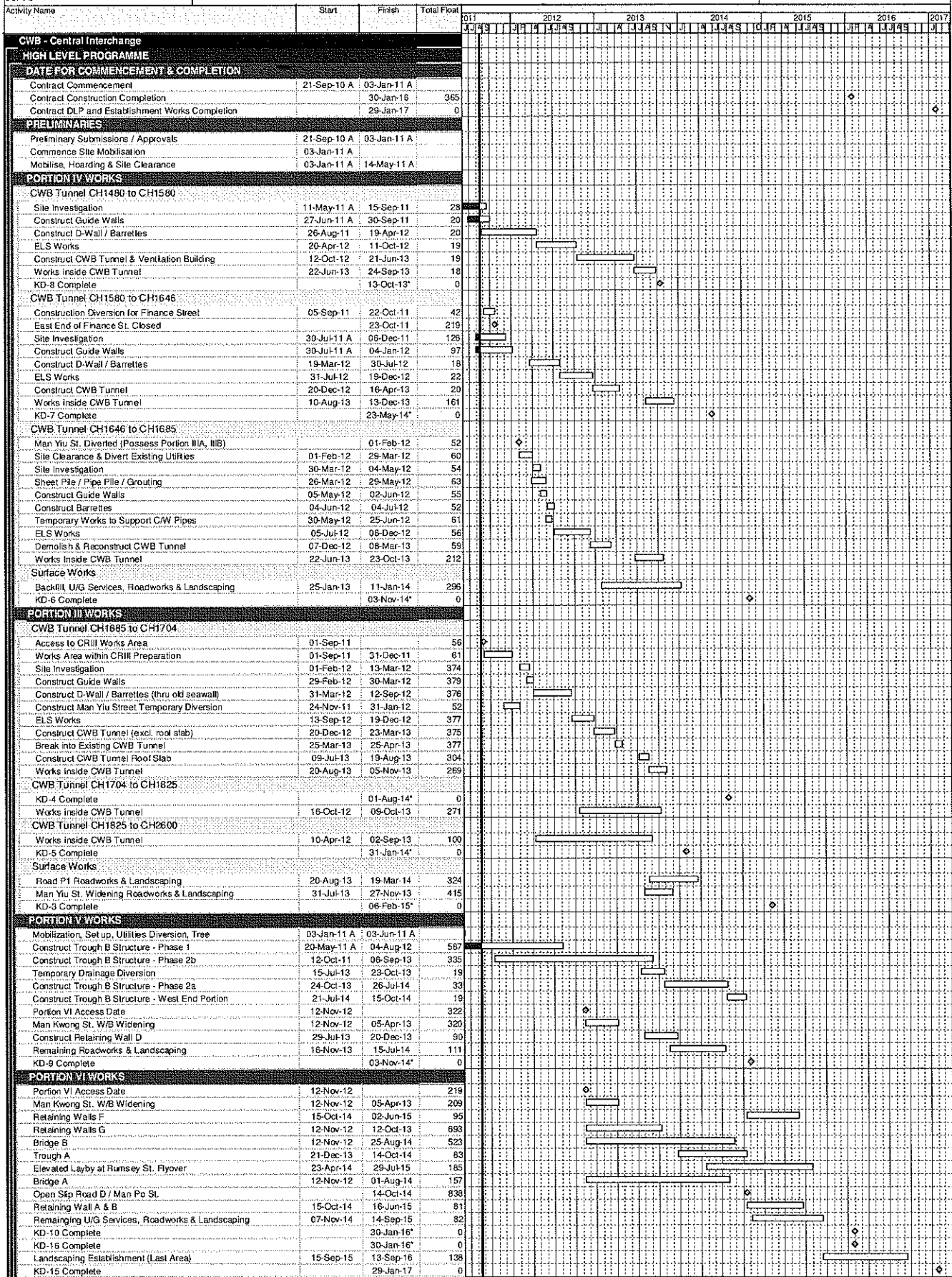
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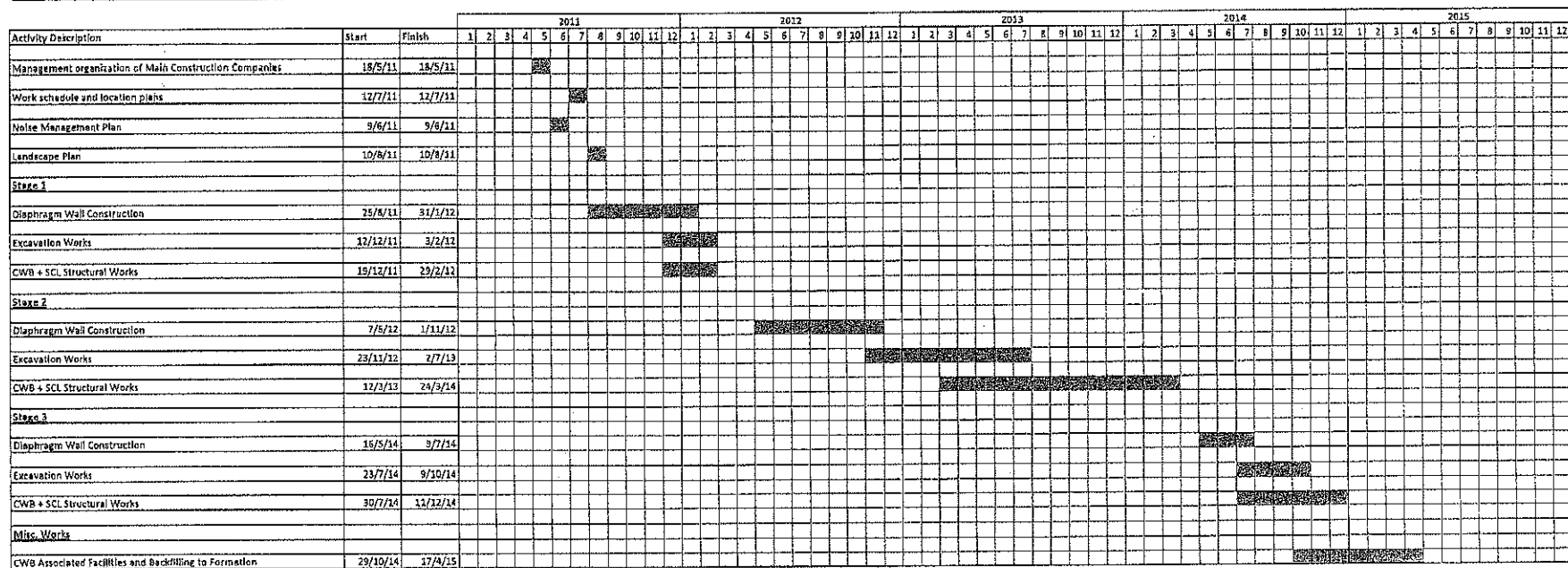
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Print Date: 29-Aug-11
DCP3-2

HY/2009/18 Central - Wan Chai Bypass (Central Interchange)

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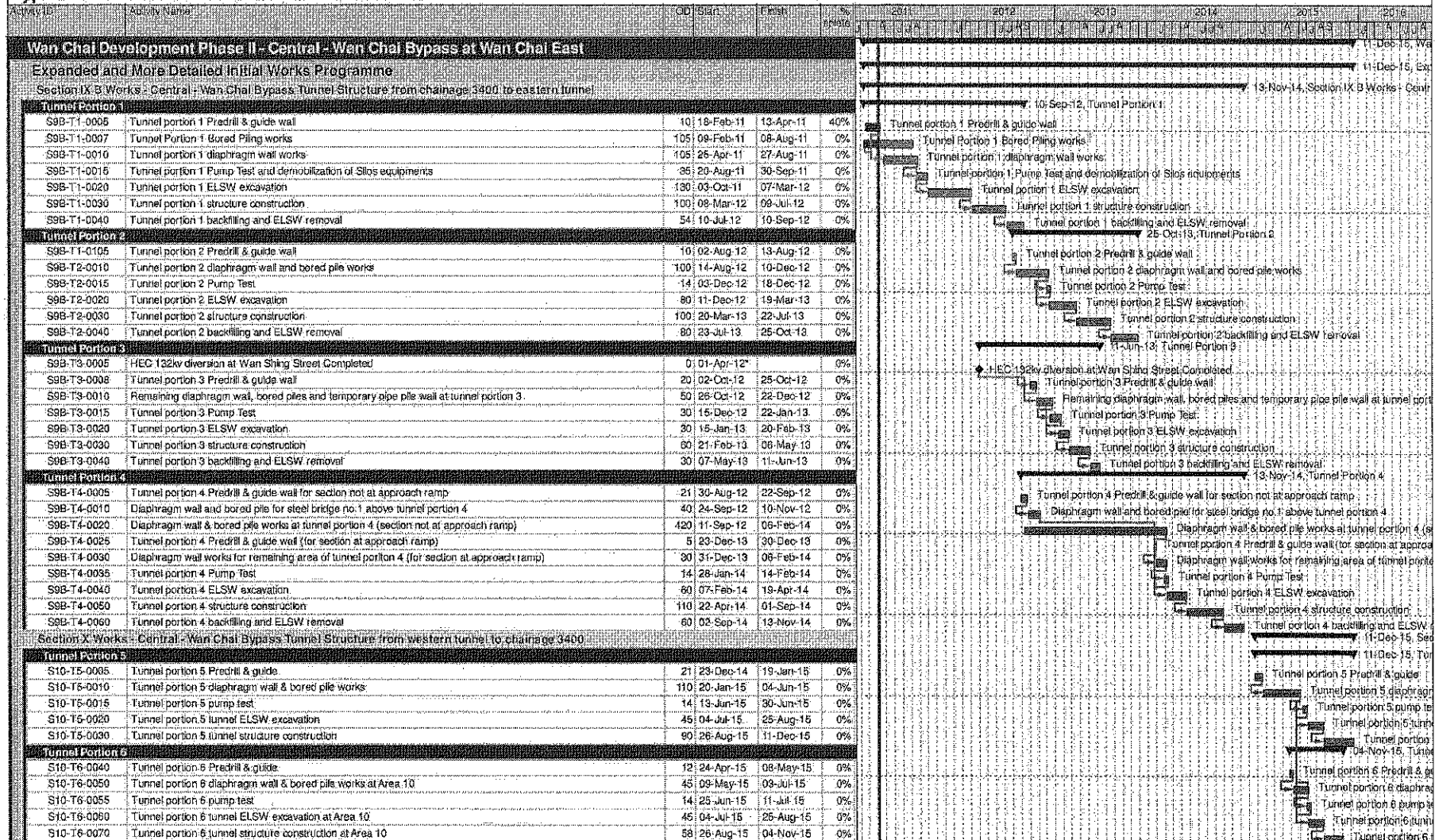


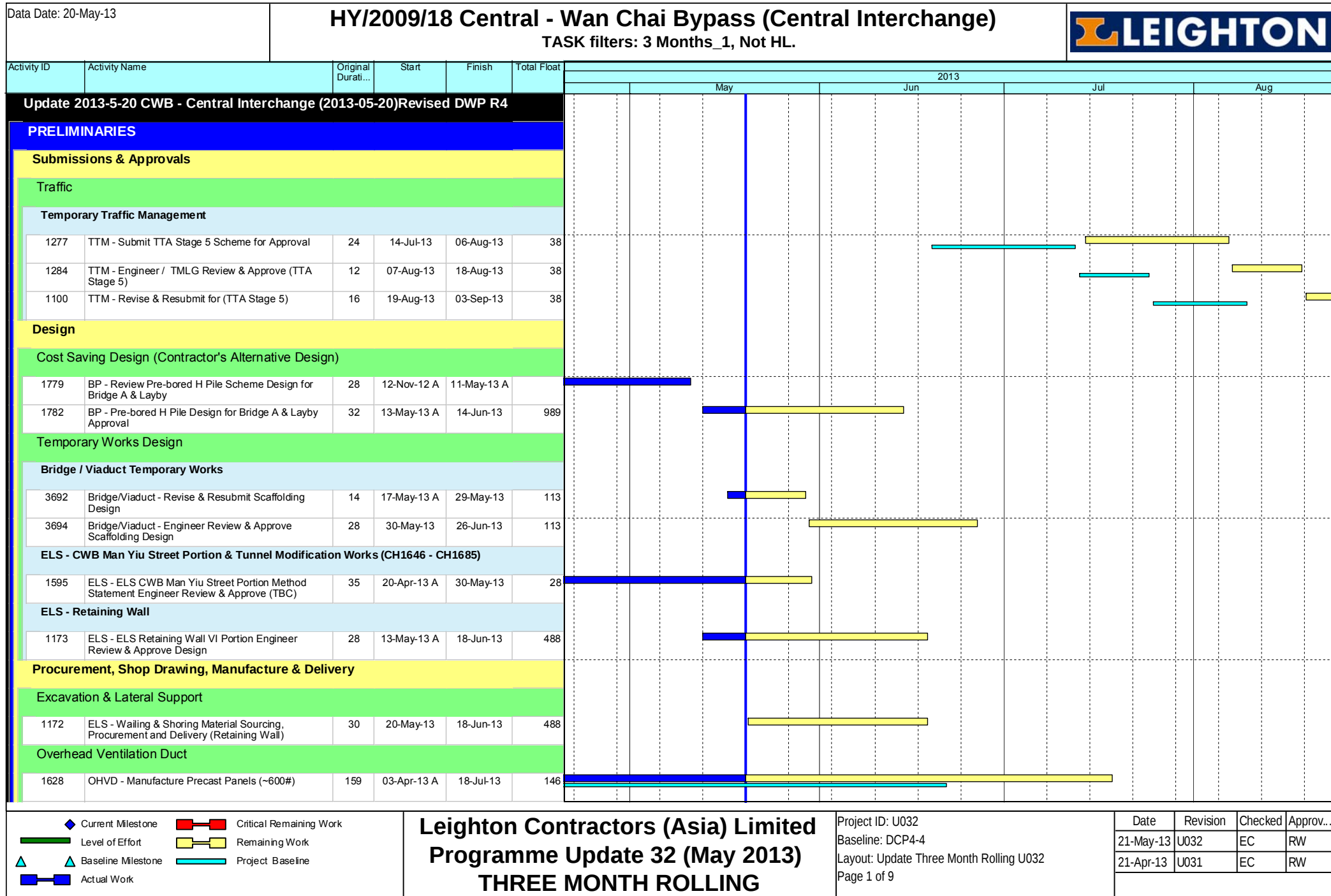


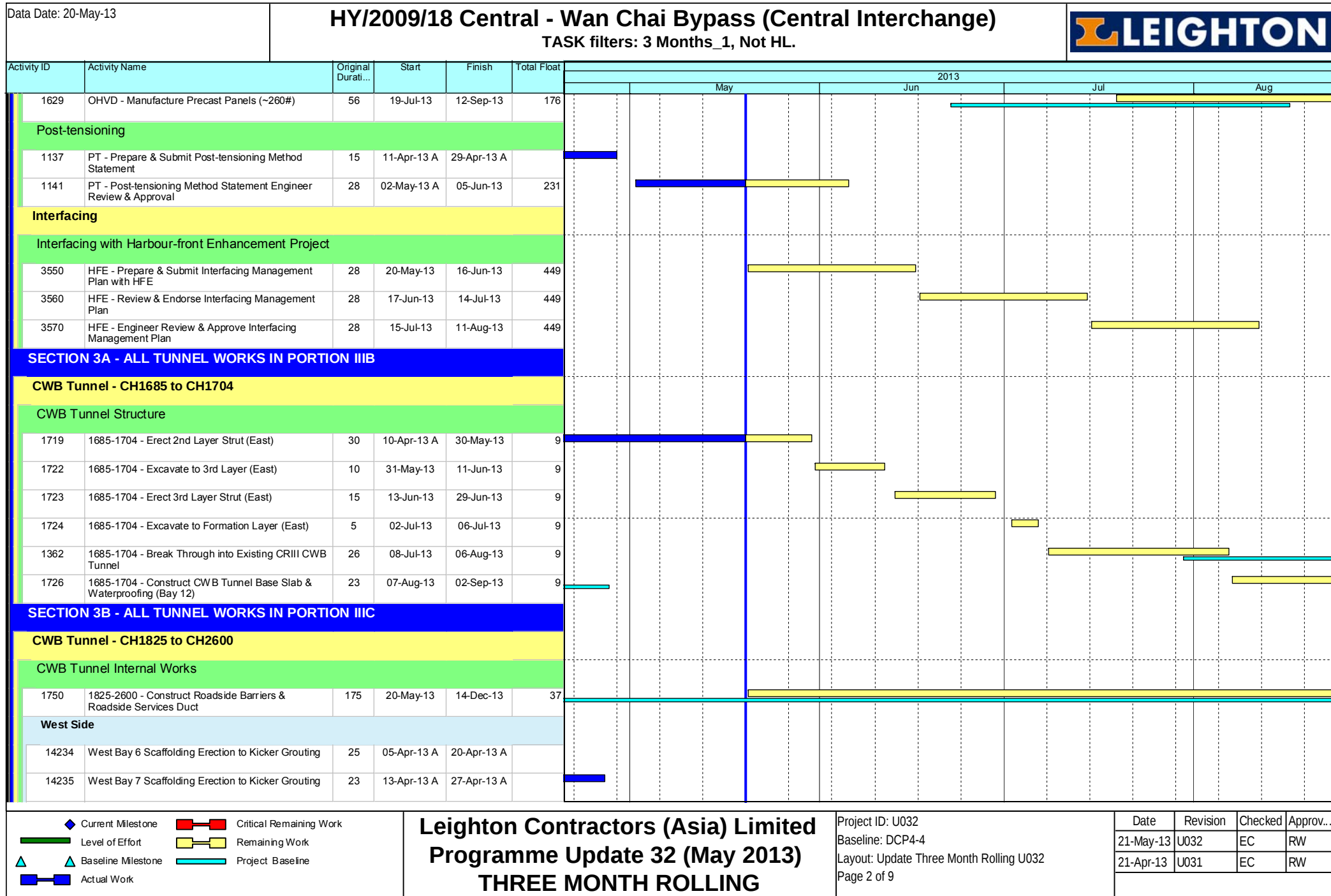
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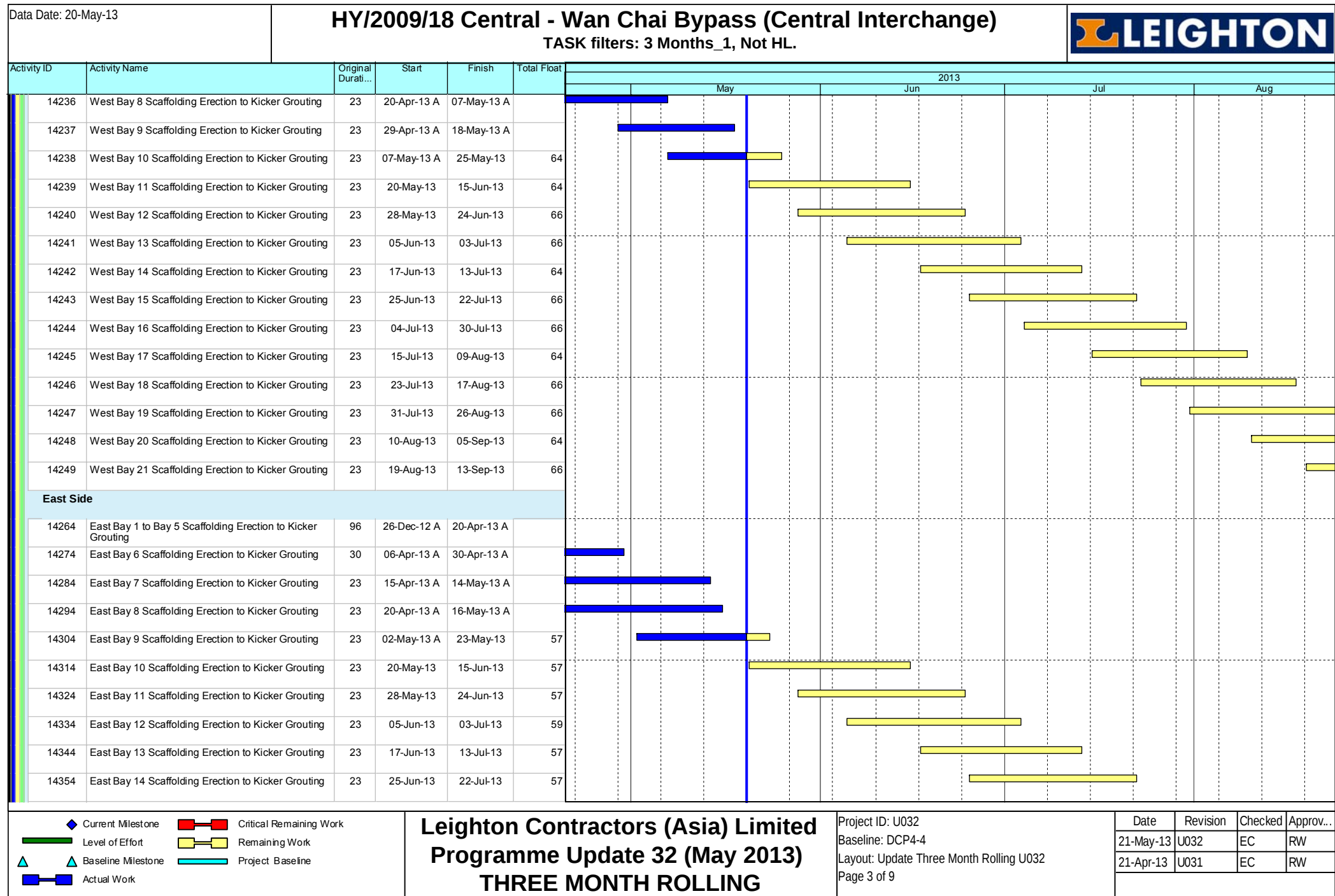
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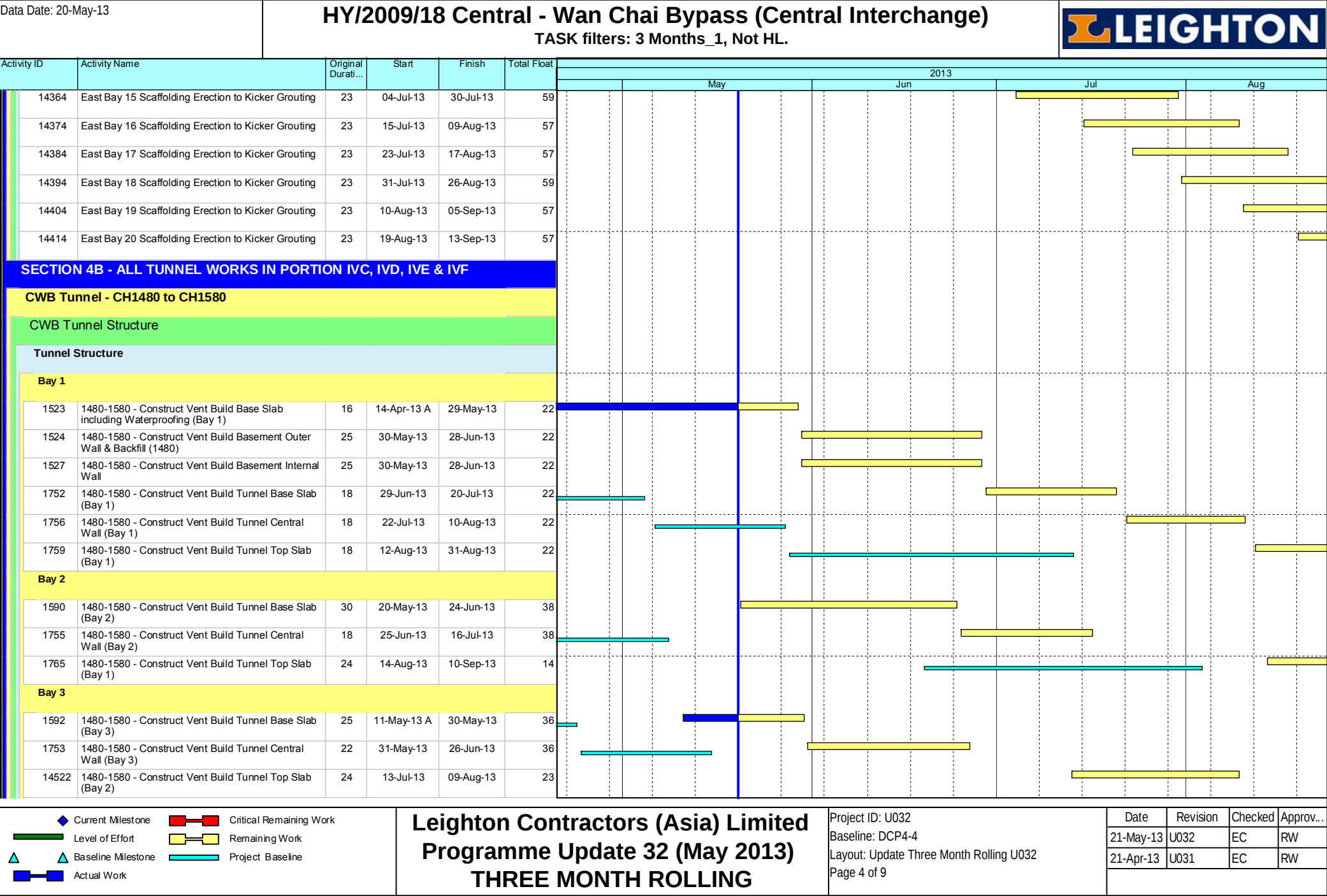
CHUN WO - CRGL JV

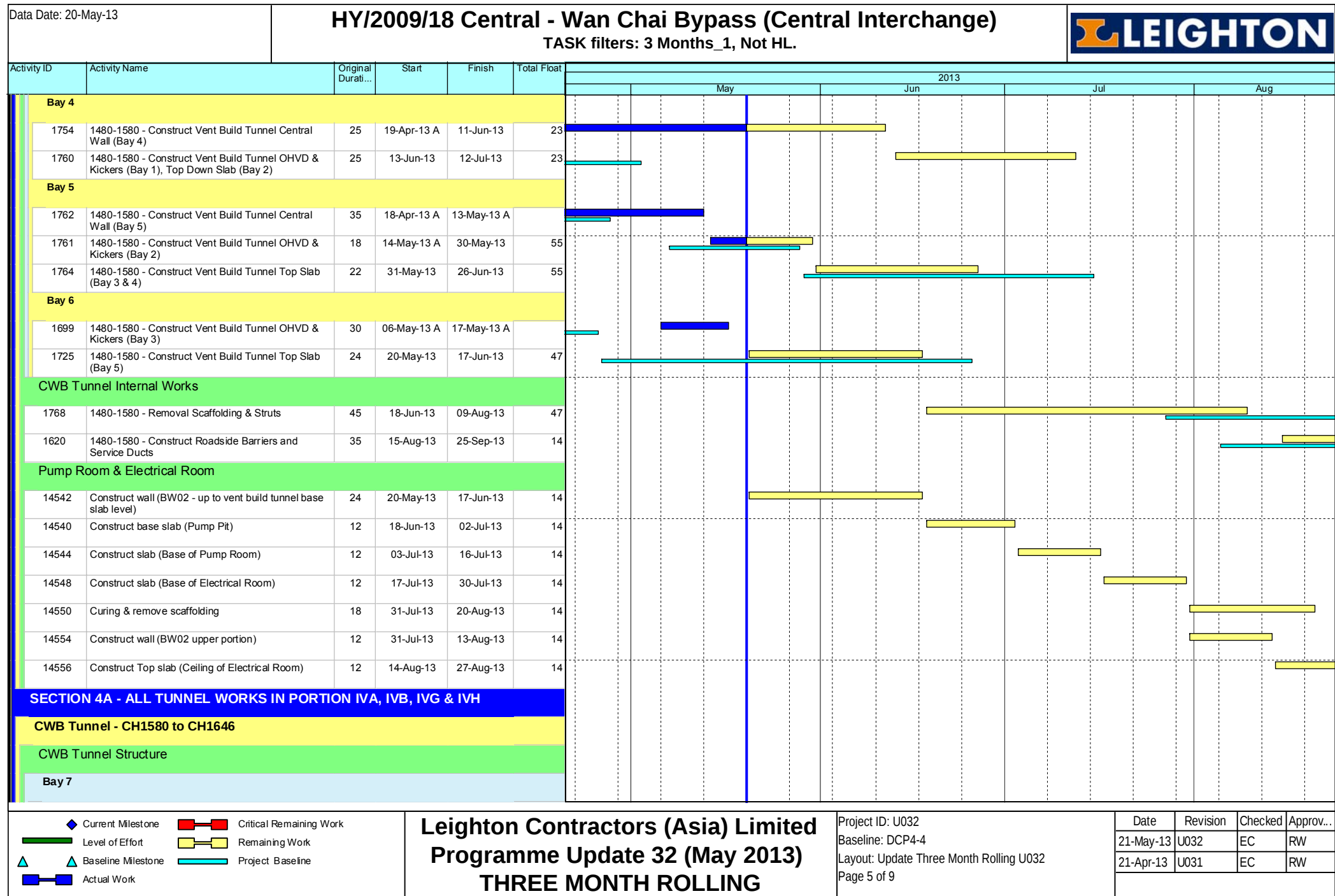


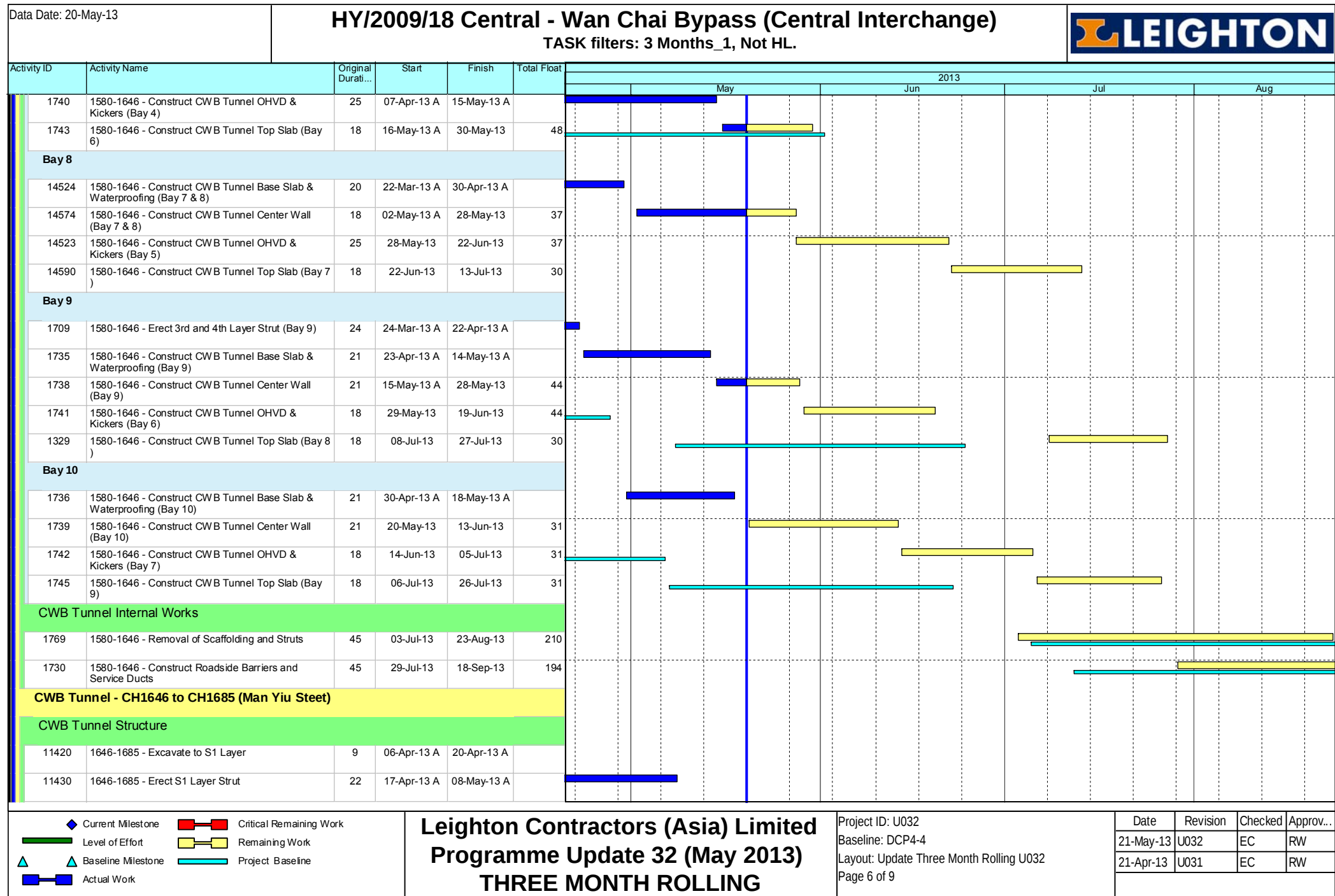


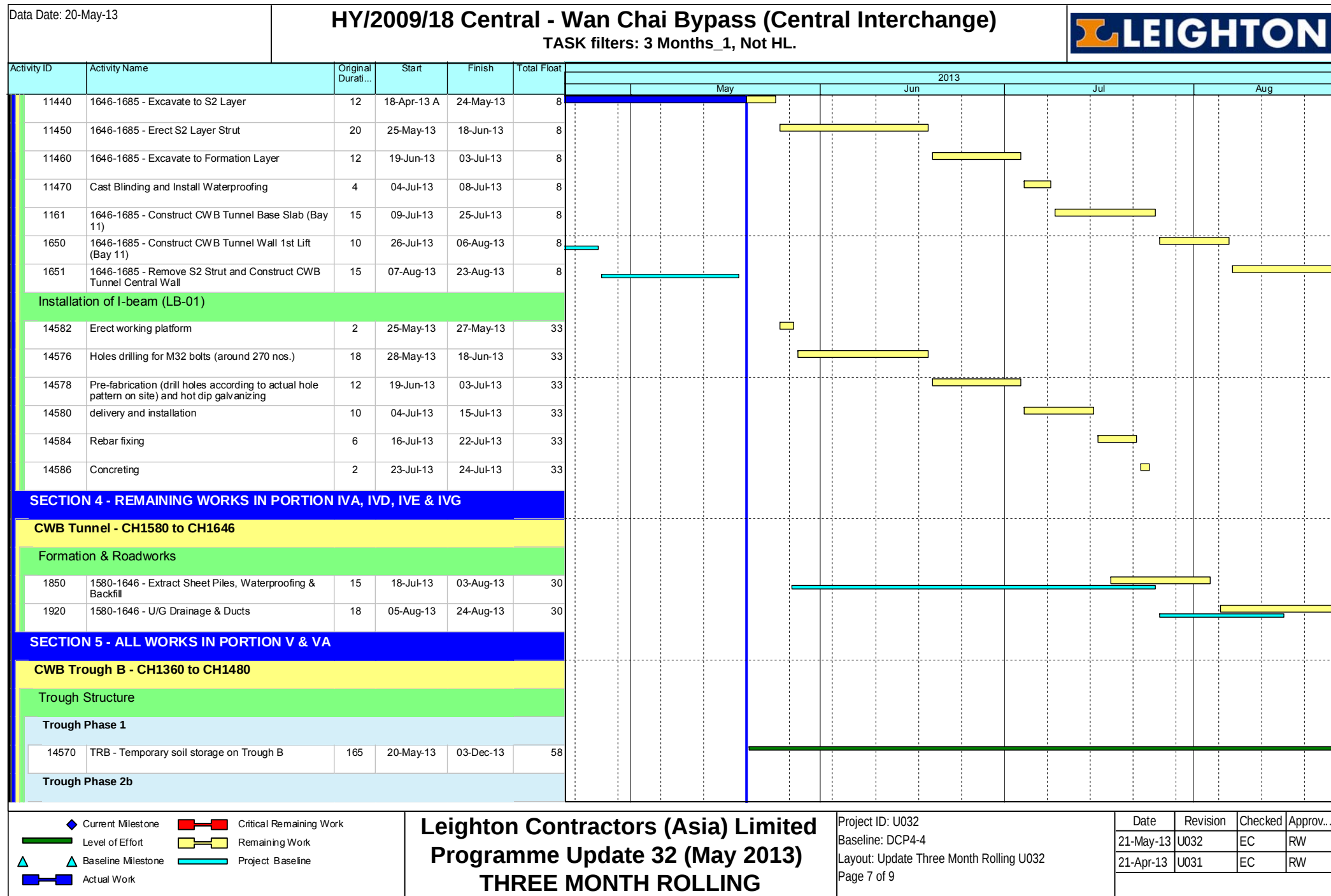


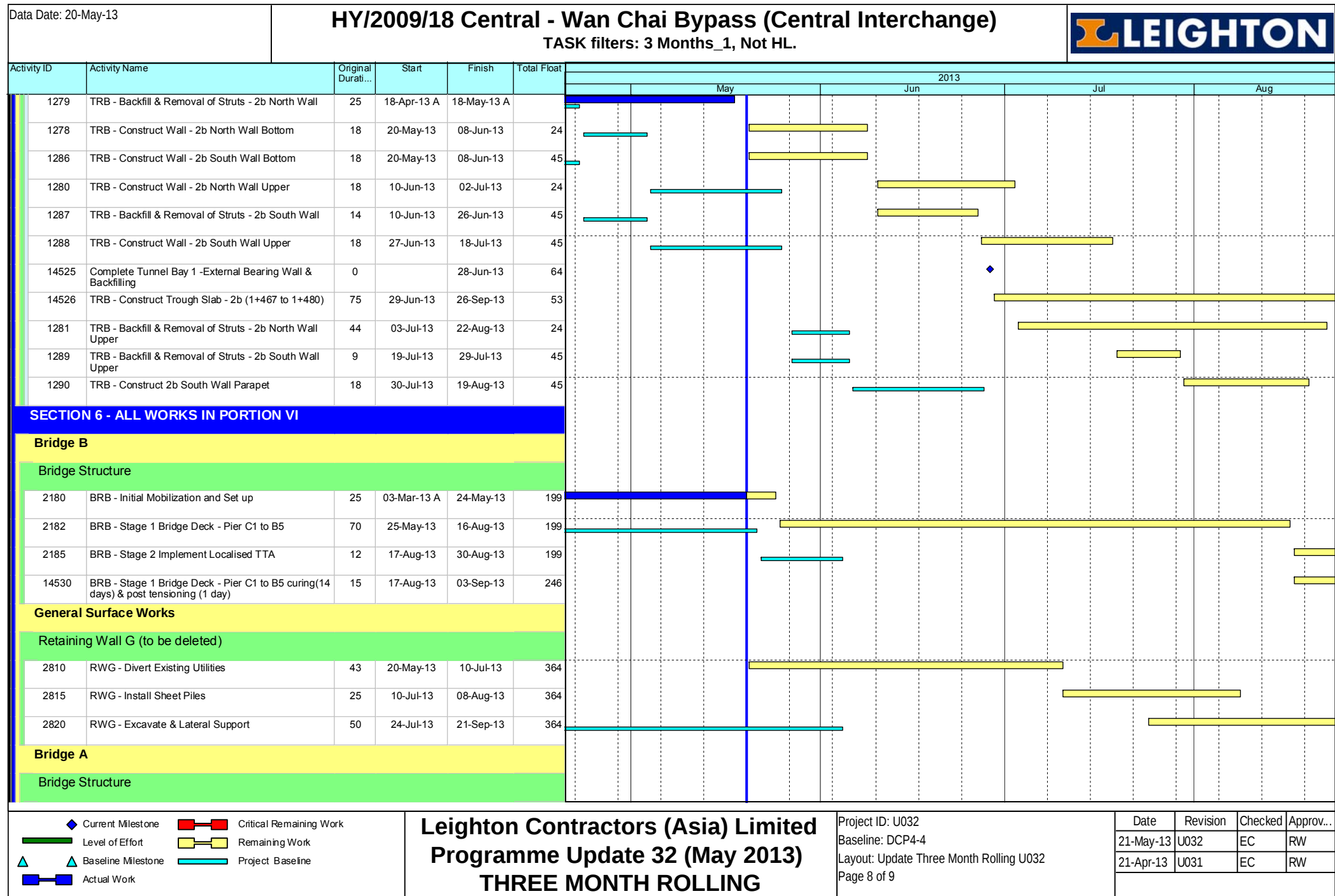


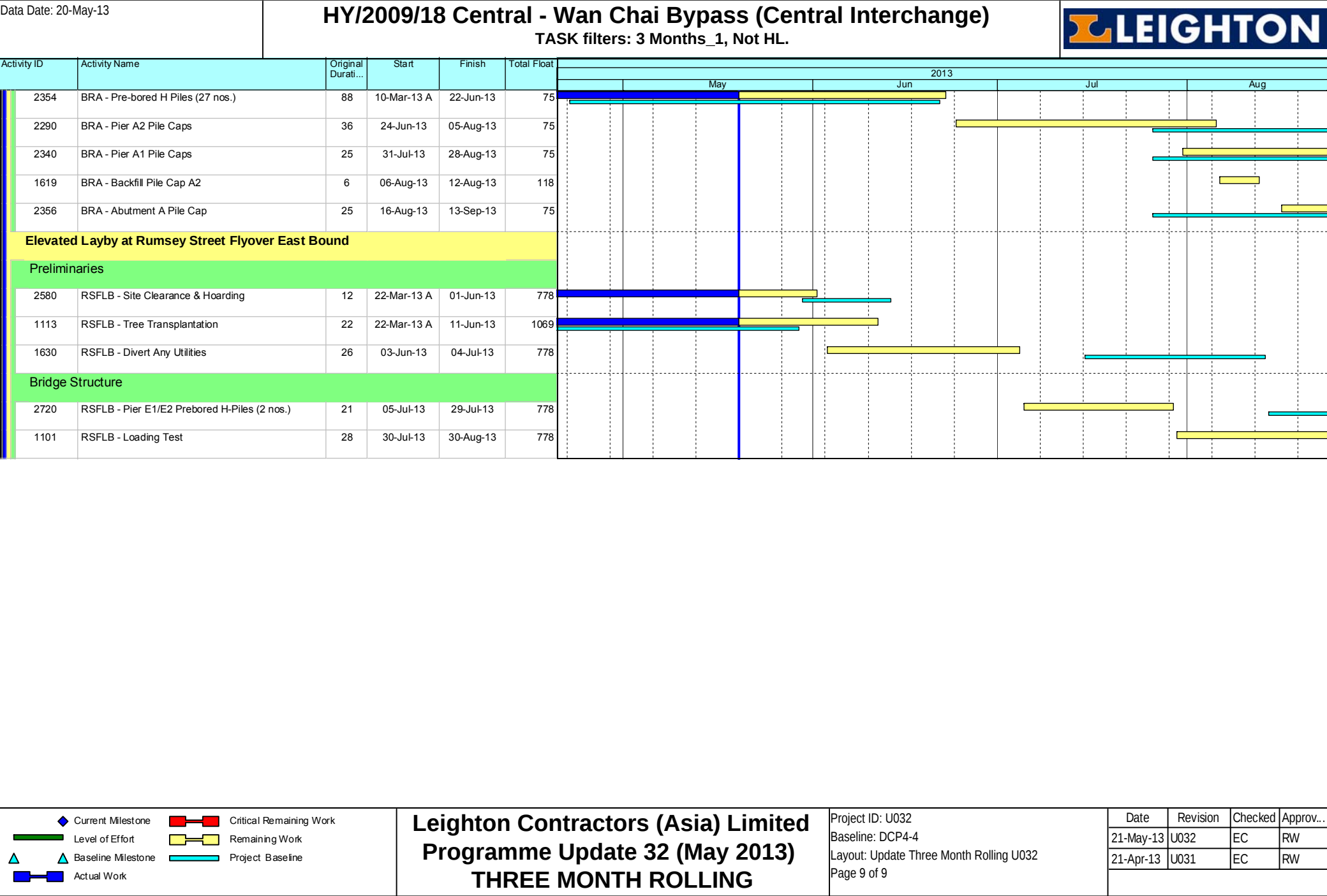












Activity ID		Activity Name	Rem Dur	Start	Finish	2013																	
						May						June				July				August			
						22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	
3MRP - May 2013 to Aug 2013																							
02 - PRE-CONSTRUCTION WORKS																							
02.2 - Contractor's Submission																							
0220-1360	Tunnel Structures Materials - Submission	6	19-Jul-12 A	25-May-13		Tunnel Structures Materials - Submission																	
0220-1370	Tunnel Structures Materials - ER Review/Comment	12	14-Jan-13 A	31-May-13		Tunnel Structures Materials - ER Review/Comment																	
0220-1380	Tunnel Structures Materials - Resubmission	18	28-Jan-13 A	06-Jun-13		Tunnel Structures Materials - Resubmission																	
0220-1390	Tunnel Structures Materials - ER Approval	18	15-Mar-13 A	18-Jun-13		Tunnel Structures Materials - ER Approval																	
0220-1400	Tunnel Structures Materials - Procurement & Delivery	42	19-Jun-13	30-Jul-13		Tunnel Structures Materials - Procurement & Delivery																	
02.3 - Method Statement / Shop Drawings																							
0230-1370	MS Pre-cast Segment Launching by LG - ER Approval	0	28-Feb-13 A	28-Apr-13 A		MS Pre-cast Segment Launching by LG - ER Approval																	
0230-1700	MS Temporary Bridge TA1 - Submission	12	15-May-13 A	31-May-13		MS Temporary Bridge TA1 - Submission																	
0230-1710	MS Temporary Bridge TA1 - ER Review & Comment	12	01-Jun-13	12-Jun-13		MS Temporary Bridge TA1 - ER Review & Comment																	
0230-1720	MS Temporary Bridge TA1 - Resubmission	6	13-Jun-13	18-Jun-13		MS Temporary Bridge TA1 - Resubmission																	
0230-1730	MS Temporary Bridge TA1 - ER Approval	18	19-Jun-13	06-Jul-13		MS Temporary Bridge TA1 - ER Approval																	
0230-1920	MS Marine Temp Pile Removal - Resubmission	9	20-May-13	28-May-13		MS Marine Temp Pile Removal - Resubmission																	
0230-1930	MS Marine Temp Pile Removal - ER Approval	9	29-May-13	06-Jun-13		MS Marine Temp Pile Removal - ER Approval																	
02.4 - Contractor's Design and Build Items																							
0240-1030	Temp Bridge "TA1" Design - Resubmission	12	19-Mar-13 A	31-May-13		Temp Bridge "TA1" Design - Resubmission																	
0240-1035	Temp Bridge "TA1" Design - ER Approval	21	01-Jun-13	21-Jun-13		Temp Bridge "TA1" Design - ER Approval																	
0240-1040	Temp Bridge "TA1" - Fabrication	48	01-Jun-13	18-Jul-13		Temp Bridge "TA1" - Fabrication																	
0240-1041	Temp Bridge "TD" Design - Submission	30	01-Mar-13 A	18-Jun-13		Temp Bridge "TD" Design - Submission																	
0240-1042	Temp Bridge "TD" Design - ER review and comment	28	19-Jun-13	16-Jul-13		Temp Bridge "TD" Design - ER review and comment																	
0240-1043	Temp Bridge "TD" Design - Resubmission	36	17-Jul-13	21-Aug-13		Temp Bridge "TD" Design - Resubmission																	
0240-1105	Int. Noise Enclosure Structural Design - Submission	9	20-Mar-13 A	28-May-13		Int. Noise Enclosure Structural Design - Submission																	
0240-1110	Int. Noise Enclosure Structural Design - ER Review/Resubmission	48	29-May-13	15-Jul-13		Int. Noise Enclosure Structural Design - ER Review/Resubmission																	
0240-1112	Int. Noise Enclosure Structural Design - ER Approval	28	16-Jul-13	12-Aug-13		Int. Noise Enclosure Structural Design - ER Approval																	
0240-1126	Noise Barrier Design Structural Design - Submission	8	20-Mar-13 A	27-May-13		Noise Barrier Design Structural Design - Submission																	
0240-1127	Noise Barrier Design Structural Design - ER Review/Resubmission	48	28-May-13	14-Jul-13		Noise Barrier Design Structural Design - ER Review/Resubmission																	
0240-1128	Noise Barrier Design Structural Design - ER Approval	28	15-Jul-13	11-Aug-13		Noise Barrier Design Structural Design - ER Approval																	
0240-1150	Perm. Noise Enclosure Structural Design - Submission	9	20-Mar-13 A	28-May-13		Perm. Noise Enclosure Structural Design - Submission																	
0240-1160	Perm. Noise Enclosure Structural Design - ER Review/Resubmission	48	29-May-13	15-Jul-13		Perm. Noise Enclosure Structural Design - ER Review/Resubmission																	
0240-1161	Perm. Noise Enclosure Structural Design - ER Approval	28	16-Jul-13	12-Aug-13		Perm. Noise Enclosure Structural Design - ER Approval																	
02.5 - Bridge Segment/Beam Off-site Precasting																							
0250-1700.02	Bridge Precast Beam Casting Bridge Beam F5-2	0	04-May-13 A	18-May-13 A		Bridge Precast Beam Casting Bridge Beam F5-2																	
0250-1700.04	Bridge Precast Beam Casting Bridge F4 Beam 1-2	0	08-Apr-13 A	03-May-13 A		Bridge Precast Beam Casting Bridge F4 Beam 1-2																	
0250-1700.005	Bridge Precast Beam Casting Bridge F4 Beam 2-1	14	20-May-13	02-Jun-13		Bridge Precast Beam Casting Bridge F4 Beam 2-1																	
0250-1700.06	Bridge Precast Beam Casting Bridge F4 Beam 2-2	14	03-Jun-13	16-Jun-13		Bridge Precast Beam Casting Bridge F4 Beam 2-2																	
0250-1700.07	Bridge Precast Beam Casting Bridge F4 Beam 3-1	14	17-Jun-13	30-Jun-13		Bridge Precast Beam Casting Bridge F4 Beam 3-1																	
0250-1700.08	Bridge Precast Beam Casting Bridge F4 Beam 4-1	14	01-Jul-13	14-Jul-13		Bridge Precast Beam Casting Bridge F4 Beam 4-1																	
0250-1700.09	Bridge Precast Beam Casting Bridge F4 Beam 5-1	14	01-Jul-13	14-Jul-13		Bridge Precast Beam Casting Bridge F4 Beam 5-1																	
0250-1700.10	Bridge Precast Beam Casting Bridge F4 Beam 6-1	14	15-Jul-13	28-Jul-13		Bridge Precast Beam Casting Bridge F4 Beam 6-1																	
0250-1700.11	Bridge Precast Beam Casting Bridge E Beam E2E1-A	14	15-Jul-13	28-Jul-13		Bridge Precast Beam Casting Bridge E Beam E2E1-A																	
0250-1700.21	Bridge Precast Beam Casting Bridge E Beam E2E1-B	14	29-Jul-13	11-Aug-13		Bridge Precast Beam Casting Bridge E Beam E2E1-B																	
0250-1700.31	Bridge Precast Beam Casting Bridge E Beam E2E1-C	14	29-Jul-13	11-Aug-13		Bridge Precast Beam Casting Bridge E Beam E2E1-C																	

Contract HY/2009/19

Three Month Rolling Programme (20 May 2013 to 19 Aug 2013)

Activity ID	Activity Name	Rem Dur	Start	Finish	2013															
					May				June				July				August			
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05
0250-1600.10	Bridge F1 Pier F1A Precasting Segment (1-13) - Mould S1	9	22-Apr-13 A	28-May-13	Bridge F1 Pier F1A Precasting Segment (1-13) - Mould S1															
0250-1600.11	Bridge F2 Pier F04 Precasting Segment (1-13) - Mould S1	28	29-May-13	25-Jun-13	Bridge F2 Pier F04 Precasting Segment (1-13) - Mould S1															
0250-1600.12	Bridge D2 Pier D07 Precasting Segment (1-17) - Mould S1	42	26-Jun-13	06-Aug-13	Bridge D2 Pier D07 Precasting Segment (1-17) - Mould S1															
0250-1600.13	Bridge D2 Pier D06 Precasting Segment (1-17) - Mould S1	42	07-Aug-13	17-Sep-13	Bridge D2 Pier D06 Precasting Segment (1-17) - Mould S1															
0250-1650.02	Bridge D3 Pier D12 Precasting Segment (1-4) - Mould S2	0	24-Mar-13 A	27-Apr-13 A	Bridge D3 Pier D12 Precasting Segment (1-4) - Mould S2															
0250-1650.06	Bridge F1 Pier F2A Precasting Segment (1-11) - Mould S1	0	18-Mar-13 A	04-May-13 A	Bridge F1 Pier F2A Precasting Segment (1-11) - Mould S1															
0250-1650.03	Bridge F1 Pier D12 Precasting Segment (1-5) - Mould S2	17	18-May-13 A	05-Jun-13	Bridge F1 Pier D12 Precasting Segment (1-5) - Mould S2															
0250-1650.04	Bridge F1 Pier F03 Precasting Segment (1-6) - Mould S2	21	06-Jun-13	26-Jun-13	Bridge F1 Pier F03 Precasting Segment (1-6) - Mould S2															
0250-1650.05	Bridge F2 Pier F03 Precasting Segment (1-5) - Mould S2	18	27-Jun-13	14-Jul-13	Bridge F2 Pier F03 Precasting Segment (1-5) - Mould S2															
0250-1650.16	Bridge F2 Pier F05 Precasting Segment (1-6) - Mould S2	21	15-Jul-13	04-Aug-13	Bridge F2 Pier F05 Precasting Segment (1-6) - Mould S2															
0250-1650.17	Bridge D2 Pier D08 Precasting Segment (1-8) - Mould S2	24	05-Aug-13	28-Aug-13	Bridge D2 Pier D08 Precasting Segment (1-8) - Mould S2															
0250-1655.01	Bridge F3 - F05 Segment - Pier Segment +1 (2 nos) - Mould T	7	13-May-13 A	26-May-13	Bridge F3 - F05 Segment - Pier Segment +1 (2 nos) - Mould T															
0250-1655.02	Bridge F3 - F05 Segment - Remaining (4 nos) - Mould T	12	27-May-13	07-Jun-13	Bridge F3 - F05 Segment - Remaining (4 nos) - Mould T															
0250-1655.03	Bridge F3 - F06 Segment - Pier Segment + 2 (3 nos) - Mould T	10	08-Jun-13	17-Jun-13	Bridge F3 - F06 Segment - Pier Segment + 2 (3 nos) - Mould T															
0250-1655.04	Bridge F3 - F06 Segment - Remaining (10 nos) - Mould T	30	18-Jun-13	17-Jul-13	Bridge F3 - F06 Segment - Remaining (10 nos) - Mould T															
0250-1655.014	Bridge F3 - F07 Segment - Pier Segment +2 (3 nos) - Mould T	10	18-Jul-13	27-Jul-13	Bridge F3 - F07 Segment - Pier Segment +2 (3 nos) - Mould T															
0250-1655.024	Bridge F3 - F07 Segment - Remaining (10 nos) - Mould T	30	28-Jul-13	26-Aug-13	Bridge F3 - F07 Segment - Remaining (10 nos) - Mould T															
0250-1830	Segment Storage - Portal Gantry Foundation + Rail Stage 3	6	22-May-13	28-May-13	Segment Storage - Portal Gantry Foundation + Rail Stage 3															
0250-1860	Segment Unloading Derrick - Assembly + T&C + RPE Cert	8	18-Apr-13 A	28-May-13	Segment Unloading Derrick - Assembly + T&C + RPE Cert															
0250-1880	Commence Segments Delivery to Site	0	30-Apr-13 A		◆ Commence Segments Delivery to Site															
03 - PRELIMINARY WORKS																				
03.3 - Interface Works																				
0330-1110	Submit to FEHD/ER Relocation Sequence & Programme	18	20-May-13	08-Jun-13	Submit to FEHD/ER Relocation Sequence & Programme															
0330-1100	Works at FEHD Permanent Depot (Stage 1)	36	10-Jun-13*	23-Jul-13	Works at FEHD Permanent Depot (Stage 1)															
0330-1120	Relocate FEHD to Permanent Depot at Portions IA & X	12	24-Jul-13	06-Aug-13	Relocate FEHD to Permanent Depot at Portions IA & X															
05 - SECTION 2 & 2A OF THE WORKS																				
05.1 - Cut & Cover Tunnel Ch 4855-4932 (APS Footprint)																				
05.1.1 - D-Wall Construction																				
0511-1088	Dinsmantle Bentonite Plant - EVB Area	18	13-May-13 A	08-Jun-13	Dinsmantle Bentonite Plant - EVB Area															
0511-1090	Install Dewatering Well - EVB Area	18	24-Jun-13	15-Jul-13	Install Dewatering Well - EVB Area															
0511-1095	Install King Post - EVB Area	36	24-Jun-13	05-Aug-13	Install King Post - EVB Area															
0511-1091	Install Observation Well - EVB Area	18	05-Jul-13	25-Jul-13	Install Observation Well - EVB Area															
0511-1092	Install Recharging Well - EVB Area	18	16-Jul-13	05-Aug-13	Install Recharging Well - EVB Area															
0511-1110	Pump Test - EVB Area	9	06-Aug-13	15-Aug-13	Pump Test - EVB Area															
05.2 - Cut & Cover Tunnel Ch 4932-5149																				
05.2.1 - D-Wall Construction																				
0521-1990.74	D-wall South Panel S60 Construction	0	10-Apr-13 A	07-May-13 A	D-wall South Panel S60 Construction															
0521-2176	Install Additional Dewatering Well (5 nos.)	0	19-Apr-13 A	07-May-13 A	Install Additional Dewatering Well (5 nos.)															
0521-2177	Install Additional Observation Well (7 nos.)	0	27-Apr-13 A	14-May-13 A	Install Additional Observation Well (7 nos.)															
0521-2178	Pump Test C&C Tunnel Stage 2	9	23-May-13	01-Jun-13	Pump Test C&C Tunnel Stage 2															
0521-1880	D-wall N71-N73 Grouting for Existing Seawall Rubble Mound	15	02-Jul-13	18-Jul-13	D-wall N71-N73 Grouting for Existing Seawall Rubble Mound															
0521-2140	D-wall S78-S80 Guide Wall	12	02-Jul-13	15-Jul-13	D-wall S78-S80 Guide Wall															
0521-1890	D-wall N71-N73 Guide Wall	12	19-Jul-13	01-Aug-13	D-wall N71-N73 Guide Wall															
0521-2145.10	D-wall Panel S78	10	19-Jul-13	30-Jul-13	D-wall Panel S78															

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

Contract HY/2009/19

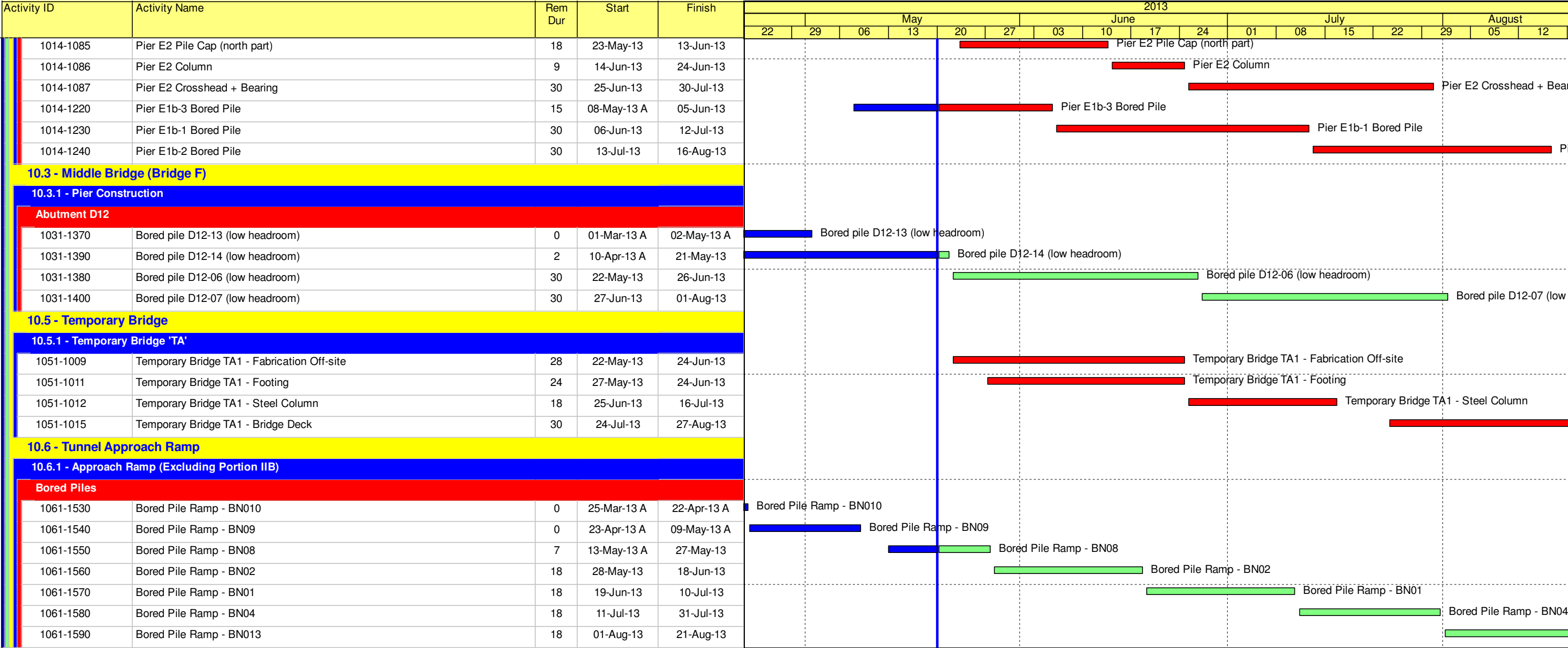
Three Month Rolling Programme (20 May 2013 to 19 Aug 2013)

3MRP

3MRP - May 2013 to Aug 2013

Page 2 of 7

Activity ID	Activity Name	Rem Dur	Start	Finish	2013																
					May				June				July				August				
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12
	1011-2995	Bridge F1A Bearing Installation	12	20-May-13	01-Jun-13																
	1011-2835	F2B Pile Cap Construction	12	11-Mar-13 A	01-Jun-13																
	1011-2840	F2B Pier/Column Construction	12	03-Jun-13	17-Jun-13																
	1011-2850	F2B Crosshead Construction	18	18-Jun-13	09-Jul-13																
	1011-2965	Extract Temp Pile at F1 and F2	15	01-Jun-13	19-Jun-13																
10.1.2 - Land Pier Construction																					
Pier D05 to D07																					
	1012-1290.20	Pier D05 Bored Pile D05-1	20	11-Jun-13	05-Jul-13																
	1012-1300	Pier D05 Bored Piles Testing	18	06-Jul-13	26-Jul-13																
	1012-1500	Pier D05 Drive Sheetpiles + ELS	18	27-Jul-13	16-Aug-13																
	1012-1335	Pier D07 Drive Sheet Pile + ELS	18	20-May-13	08-Jun-13																
	1012-1340	Pier D07 Construct Pile Cap	12	10-Jun-13	24-Jun-13																
	1012-1350	Pier D07 Construct Pier/Column	12	25-Jun-13	09-Jul-13																
	1012-1360	Pier D07 Construct Crosshead	18	10-Jul-13	30-Jul-13																
	1012-1305	Pier D06 Drive Sheet Pile + ELS	18	01-Aug-13*	21-Aug-13																
10.1.3 - E/B Bridge Construction																					
Bridge D3																					
	1013-1020	Segment and Beam Launching Girder - Assembly	0	18-Mar-13 A	26-Apr-13 A																
	1013-1025	Segment and Beam Launching Girder - Erection	0	26-Mar-13 A	15-May-13 A																
	1013-1030	Segment and Beam Launching Girder - Load Test	8	16-May-13 A	28-May-13																
	1013-1050	Bridge D3 Segment Launching from Pier D09 (16 nos)	5	29-May-13	03-Jun-13																
	1013-1055	Bridge D3 Segment Launching from Pier D08 (7 nos)	2	04-Jun-13	05-Jun-13																
	1013-1090	Bridge D3 Stitching at midspan between D8 and D9	3	06-Jun-13	08-Jun-13																
	1013-1060	Bridge D3 Segment Launching from Pier D10 (17 nos)	6	10-Jun-13	17-Jun-13																
	1013-1100	Bridge D3 Stitching at midspan between D9 and D10	3	18-Jun-13	20-Jun-13																
	1013-1070	Bridge D3 Segment Launching from Pier D11 (17 nos)	6	21-Jun-13	27-Jun-13																
	1013-1110	Bridge D3 Stitching at midspan between D10 and D11	3	28-Jun-13	02-Jul-13																
	1013-1080	Bridge D3 Segment Launching from Abutment D12 (4 nos)	3	03-Jul-13	05-Jul-13																
	1013-1120	Bridge D3 Stitching at midspan between D11 and D12	3	06-Jul-13	09-Jul-13																
	1013-1130	Bridge D3 Permanent Stressing	6	10-Jul-13	16-Jul-13																
Bridge F1A																					
	1013-1155	Bridge F1A Pier Segments at D12+F1A+F2A	3	17-Jul-13	19-Jul-13																
	1013-1170	Bridge F1A Segment Launching from Pier F1A (12 nos)	5	20-Jul-13	25-Jul-13																
	1013-1160	Bridge F1A Segment Launching from Abutment D12 (4 nos)	2	26-Jul-13	27-Jul-13																
	1013-1180	Bridge F1A Segment Launching from Pier F2A (11 nos)	7	26-Jul-13	02-Aug-13																
	1013-1200	Bridge F1A Stitching at midspan between D12 and F1A	3	29-Jul-13	31-Jul-13																
	1013-1190	Bridge F1A Segment Launching from Pier F3 (6 nos)	7	03-Aug-13	10-Aug-13																
	1013-1210	Bridge F1A Stitching at midspan between F1A and F2A	3	03-Aug-13	06-Aug-13																
	1013-1220	Bridge F1A Stitching at midspan between F2A and F3	3	12-Aug-13	14-Aug-13																
Bridge F2A																					
	1013-1260	Bridge F2A Segment Launching from Pier F3 (5 nos)	5	06-Aug-13	10-Aug-13																
	1013-1270	Bridge F2A Segment Launching from Pier F4 (13 nos)	8	12-Aug-13	20-Aug-13																
10.1.4 - Bridge E / Hing Fat Slip Road																					
Pier Construction																					



利達 LEADER 中國建築 - 利達聯營 CHINA STATE - LEADER JOINT VENTURE		CEDD Contract No. HK/2012/08 Wan Chai Development Phase II Central - Wan Chai Bypass at Wan Chai West					Page : 1 / 2											
Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	2013												
							Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
HK/2012/08 Reviewd Programme for Progress Meeting - Updated to 20 May 2013																		
Key Dates and Milestone Dates																		
Key Dates																		
C100000	Letter of Acceptance	0	22-Jan-13 A															
C100020	Commencement of Works	0	31-Jan-13 A															
Dredging and Reclamation																		
Design and Engineering																		
C105100	Marine - assessment report on impact to MTR-TWL tunnel - prepare and submit to ICE	60	01-Apr-13 A	30-Apr-13 A														
C105120	Marine - assessment report on impact to MTR-TWL tunnel - ICE check and issue ICE cert	14	20-May-13	02-Jun-13	29													
C105140	Marine - assessment report on impact to MTR - TWL tunnel - Eng comment and approve	28	03-Jun-13	30-Jun-13	29													
Submission and Approval																		
C102400	Marine - Marine Notice to Marine Dept (Dredging) - prepare and submit	14	01-Feb-13 A	25-Feb-13 A														
C102420	Marine - Marine Notice to Marine Dept (Dredging) - MD comment & accept	30	26-Feb-13 A	25-Apr-13 A														
Construction																		
General Work for Marine Work																		
W0001500	Marine - Initial Hydrographic Survey and issue survey report (Portion 1)	14	26-Feb-13 A	19-Apr-13 A														
W0001505	Marine - Initial Hydrographic Survey and issue survey report (Portion 1C)	14	31-May-13	17-Jun-13	25													
W0001510	Marine - Initial Hydrographic Survey and issue survey report (Portion 1A, 1B)	14	31-May-13	17-Jun-13	9													
W0001520	Marine - Install Silt Curtain	10	08-Jul-13	18-Jul-13	9													
W0001522	Marine - Vibrocore - Area C	4	31-May-13	04-Jun-13	24													
W0001524	Marine - Vibrocore - Area B	3	12-May-13 A	13-May-13 A														
W0001526	Marine - Vibrocore - Area A1	3	15-May-13 A	21-May-13 A														
W0001530	Marine - Continous Piezocone Penetration Test (CPPT) - Area C	21	05-Jun-13	29-Jun-13	24													
W0001535	Marine - Continous Piezocone Penetration Test (CPPT) - Area B	15	03-May-13 A	21-May-13 A														
W0001542	Marine - Continous Piezocone Penetration Test (CPPT) - Area A2	12	02-Jul-13	15-Jul-13	76													
W0001545	Marine - Continous Piezocone Penetration Test (CPPT) - Areae A1 & CRIII	12	15-May-13 A	21-May-13 A														
W0001546	Marine - Continous Piezocone Penetration Test (CPPT) - Area D	11	18-Jun-13	29-Jun-13	151													
Zone C - Demolish Expo Drive West Bridge																		
A10136	Area C - Expo Drive - remove street funiture and asphalt surface	10	20-May-13	30-May-13	16													
A10140	Area C - Expo Drive - erect temporary support frame for demolition work	20	01-Jun-13	25-Jun-13	15													
A10160	Area C - Expo Drive - saw cut and remove (portion 1)	5	26-Jun-13	02-Jul-13	15													
A10180	Area C - Expo Drive - saw cut and remove (portion 2)	5	03-Jul-13	08-Jul-13	15													
A10200	Area C - Expo Drive - saw cut and remove (portion 3)	5	09-Jul-13	13-Jul-13	15													
A10220	Area C - Expo Drive - saw cut and remove (portion 4)	5	15-Jul-13	19-Jul-13	15													
A10240	Area C - Expo Drive - saw cut and remove (portion 5)	5	20-Jul-13	25-Jul-13	15													
A10260	Area C - Expo Drive - saw cut and remove (portion 6)	5	26-Jul-13	31-Jul-13	15													
A10280	Area C - Expo Drive - saw cut and remove (portion 7)	5	01-Aug-13	06-Aug-13	15													
A10300	Area C - Expo Drive - saw cut and remove (portion 8)	5	07-Aug-13	12-Aug-13	15													
A10320	Area C - Expo Drive - saw cut and remove (portion 9)	5	13-Aug-13	17-Aug-13	15													
A10340	Area C - Expo Drive - saw cut and remove (portion 10)	5	19-Aug-13	23-Aug-13	15													
Zone C																		
W0003150	Area C - temp. seawall - form rock fill foundation	8	17-Aug-13	26-Aug-13	9													
W0003160	Area C - temp. seawall - place temp concrete block	8	27-Aug-13	04-Sep-13	9													
W0003170	Area C - C4 unit - Grade 75 Rockfill along C4 unit	8	27-Aug-13	04-Sep-13	9													
W0003180	Area C - WDII Box 1 temp SW - place temporary rock mount	2	27-Aug-13	28-Aug-13	11													

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Current Milestone

■

Remaining Level of Effort

■

Actual Work

■

Critical Remaining Work

■

Remaining Work

■

% Complete

Reviewed 3M Rolling Programme for Wan Chai Development Phase II

(Updated Date 20-May-13)

Date	Revision	Checked	Approved
21-May-13			

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float
W0003185	Area C - WDII Box 1 temp SW - place temp. concrete block	3	30-Aug-13	02-Sep-13	11
Zone C - Outside Bridge Area					
W0003100	Area C - outside Expo bridge - Dredging	15	19-Jul-13	05-Aug-13	9
W0003102	Area C - outside Expo Bridge - remove existing rock armour	8	06-Aug-13	14-Aug-13	9
W0003124	Area C - outside Expo Bridge - Final Hydrographic Suvey	2	15-Aug-13	16-Aug-13	9
Zone C - Under Bridge Area					
W0003121	Area C - under Expo Bridge - Dredging	16	20-Jul-13	07-Aug-13	15
W0003122	Area C - under Expo Bridge - remove existiing rock armour	12	15-Aug-13	28-Aug-13	9
W0003128	Area C - under Expo Bridge - Final Hydrographic Suvey	6	29-Aug-13	04-Sep-13	9
Zone B					
W0002100	Area B - Dredging [within 25m MTRC TWL fill control zone]	15	19-Jul-13	05-Aug-13	12
W0002110	Area B - Dredging [non 25m MTRC TWL fill control zone]	28	31-Jul-13	31-Aug-13	12
W0002112	Area B - Remove Armour/Berm Stones	21	31-Jul-13	23-Aug-13	12
Zone A2					
W0001160	Area A2 - Complete discommissioning of Submarine Sewage Outfall (by others)	0	31-May-13		142
W0001180	Area A2 - Complete discommissioning of Cross Harbour Watermains (by others)	0	31-May-13		142
Zone A1					
W0001204	Area A1 - Cut Down Bored Piles to -2.51mPD below box structure	30	19-Jul-13	22-Aug-13	123
Works for Section Completion					
Construction					
Box Culvert / Structure					
Area A1 - Box Culvert L and Temporary Diversion of Culvert L					
Z12280	Culvt - Stage 1 - LKS - TTA, Exc & ELS, ug utilities diversion [lighting & cable TV]	120	23-May-13	15-Oct-13	8