



Lam Geotechnics Limited

Contract No. HK/2009/05
Wanchai Development Phase II and Central Wanchai Bypass
Monthly EM&A Report (August 2011)

CONTRACT NO: HK/2009/05

WANCHAI DEVELOPMENT PHASE II AND CENTRAL
WANCHAI BYPASS
SAMPLING, FIELD MEASUREMENT AND TESTING WORK
(STAGE 1)

ENVIRONMENTAL PERMIT NO. EP-364/2009/A,
FURTHER ENVIRONMENTAL PERMIT NOS. FEP-01/364/2009,
FEP-02/364/2009, FEP-03/364/2009, FEP-04/364/2009/A, FEP-
05/364/2009/A, FEP-06/364/2009/A AND FEP-07/364/2009/A

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- AUGUST 2011 -

CLIENTS:

Civil Engineering and Development
Department

and

Highways Department

PREPARED BY:

Lam Geotechnics Limited

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CERTIFIED BY:

Raymond Dai
Environmental Team Leader

DATE:

16 September 2011

Ref.: AACWBIECEM00_0_1832L.11

16 September 2011

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

By Post and Fax (2691 2649)

Attention: Mr. Kelvin CHENG

Dear Sir,

**Re: Wan Chai Development Phase II and Central-Wan Chai Bypass
Monthly Environmental Monitoring and Audit Report (August 2011)
for EP-364/2009/A, FEP-01/364/2009, FEP-02/364/2009, FEP-03/364/2009,
FEP-04/364/2009/A, FEP-05/364/2009/A, FEP-06/364/2009/A and
FEP-07/364/2009/A**

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for August 2011 dated 16 September 2011.

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
	Lam	Mr. Raymond Dai	by fax: 2882 3331

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EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – August 2011 specific for Environmental Permit no. EP-364/2009/A, Further Environmental Permit nos. FEP-01/364/2009, FEP-02-364/2009, FEP-03-364/2009, FEP-04/364/2009/A, FEP-05/364/2009/A, FEP-06/364/2009/A and FEP-07/364/2009/A. The EM&A report is prepared by the Environmental Team (ET) employed under Contract No. HK/2009/05 –Wanchai Development Phase II and Central Wanchai Bypass. This report presents the environmental monitoring findings and information recorded during the period 28th July 2011 to 27th August 2011. 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/2009/17 - Central - Wan Chai Bypass (CWB) at FEHD Whitfield Depot - Advanced piling works under FEP-03/364/2009

- ELS works for basement construction for pile cap construction.

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

- Instrumentation Manholes and Intake Culvert Survey
- Excavation of trial pit
- Hoarding erection
- Tree transplanting
- Installation of coupler in CR3
- Drainage diversion works
- Site investigation and pre-drilling works
- Excavation in Trough B
- Sheet piling
- Guide wall construction near PTI
- Diaphragm wall
- Emergency exit construction at MTR by-law area

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

- Construction works were completed and a duly signed report on Completion of Works was issued by the Engineer dated on 1 March 2011. In addition, acknowledge of FEP surrender was under preparation by the Contractor

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 SCL Protection Works and CWB.
- Pre-bored H piling works.
- Ground treatment works for proposed diaphragm wall in SCL Tunnels Protection Works.

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

- Tunnel bored pile works at WCR1 area
- Diaphragm wall construction at WCR1 area

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

- Diaphragm wall preparation work at TS1 and TPCWAE
- Trial trench work at Hung Hing Road and POC

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

- Steel fabrication of temporary platform
- Erection of platform to enable marine pre-drilling
- Marine Pre-drilling
- Remove existing dolphin pier

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 on a weekly basis. One limit level exceedance was recorded at M1a - Harbour Road Sports Centre on 22 August 2011 during restricted hour. After checking contractors' work schedules and investigation found that construction works were conducted with a valid CNP during monitoring and traffic noises as major noise sources contributed in the noise monitoring. Two limit level exceedances were recorded at M6 - HK Baptist Church Henrietta Secondary School on 10 & 16 August 2011 during day time. After checking contractors' work schedules and investigation found that construction works were conducted with deployed noise barriers during monitoring and traffic noises as major noise sources contributed in the noise monitoring. It was considered that the exceedances were not related at M1a and M6. Also, three Action levels were recorded due to three recorded noise complaints on 30 July, 7 and 26 August 2011.
- iv. 24-hour real time noise monitoring was conducted at RTN1 - FEHD Hong Kong Transport Section Whitefield Depot for the pilling works in FEHD Whitfield Depot and RTN2 – Tunnel (North Point Section) and Island Eastern Corridor Link. No monitoring was conducted during the mentioned periods. Also, no project related action and limit level exceedance was recorded in the reporting period.

Air Monitoring

- v. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted at CMA1b - Oil Street Community Liaison Centre; 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. No action and limit level exceedance were recorded in the reporting period.

Complaints, Notifications of Summons and Successful Prosecutions

- vi. There were five environmental complaints received on 30 July, 7, 10, 17 and 26 August 2011. No further complaint was received after follow-up action and investigation.

Site Inspections and Audit

- vii. The Environmental Team (ET) conducted weekly site inspections for Contract no. HY/2009/15, HY/2009/17, HY/2009/18, HY/2009/19, HK/2009/01 and HK/2009/02 in this reporting period. The Contractors rectified major observations and recommendations made during the audit sessions. No non-conformance was identified during the site inspections.

Future Key Issues

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

Contract no. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

- ELS works for basement construction for pile cap construction.

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

- Instrumentation Manholes and Intake Culvert Survey
- Excavation of trial pit
- Hoarding erection
- Tree transplanting
- Installation of coupler in CR3
- Drainage diversion works
- Site investigation and pre-drilling works
- Excavation in Trough B
- Sheet piling
- Diaphragm wall
- Instrumentation at Man Yiu Street
- Slip road construction between Man Kwong Street and Finance Street

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

- Construction works were completed and a duly signed report on Completion of Works was issued by the Engineer dated on 1 March 2011. In addition, acknowledge of FEP surrender was under preparation by the Contractor

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 both CWB and SCL Protection Works.
- Preparatory works such as ground treatment, guide wall construction and plant establishment for the proposed diaphragm wall construction works within HKCEC1
- Installation of all outstanding geotechnical instrumentation for construction of CWB & SCL Protection Works.
- Pre-boring the existing seawall for subsequent diaphragm wall construction.

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

- Tunnel bored pile and diaphragm wall construction works.

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

- Diaphragm wall construction at TS1 and TPCWAE
- Construction of dewatering well at Hung Hing Road and POC

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

- Preparation works and removal of existing marine piles
- Pre-drilling works for bored pile and Diaphragm wall
- Marine Pre-drilling
- Remove existing dolphin pier
- Set up of Contractor's site office at Oil Street
- Temp. Traffic Diversion at Watson Road

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-364/2009A and Further Environmental permit nos. FEP-01/364/2009, FEP-02/364/2009, FEP-03/364/2009, FEP-04/364/2009/A, FEP-05/364/2009/A, FEP-06/364/2009/A and FEP-07/364/2009/A 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/A, Further Environmental Permit (FEP) nos. FEP-01-364/2009, FEP-02/364/2009, FEP-03/364/2009, FEP-04/364/2009/A, FEP-05/364/2009/A, FEP-06/364/2009/A and FEP-07/364/2009/A during the period 28th July to 27th August 2011. 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***

PROJECT BACKGROUND

2.1 Background

2.1.1. “Wan Chai Development phase II and Central-Wan Chai Bypass” and “Central-Wan Chai Bypass and Island Eastern Corridor Link” (hereafter called “the Project”) are Designed Project (DP) under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). The Environmental Impact Assessment (EIA) Reports for Central-Wan Chai Bypass and Island Eastern Corridor Link (Register No. AEIAR-041/2001) and Wan Chai Development phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008) have been approved on 31 August 2001 and 11 December 2008 respectively.

2.1.2. The key purpose of Wan Chai Development Phase II (WDII) is to provide land at Wan Chai North and North Point for construction of the Central-Wan Chai Bypass and Island Eastern Corridor Link (CWB). Land formed under the project will be developed as a world-class waterfront promenade joining that at the new Central waterfront for public enjoyment.

2.1.3. There is a compelling and present need for the CWB to provide relief to the very congested east-west Connaught Road Central/Harcourt Road / Gloucester Road Corridor (the Corridor) which is currently operating beyond its capacity. The CWB will provide relief to the existing congestion along the Corridor and cater for the anticipated growth of traffic on Hong Kong Island. Without the CWB and its access roads, there will not be sufficient capacity to serve the heavy traffic demands at both strategic and local levels.

2.2 Scope of the Project and Site Description

2.2.1. 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. In the reporting month, Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) was commenced on 13 July 2011. 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
HK/2009/01	Wan Chai Development Phase II – Central – Wan Chai Bypass at Hong	DP1, DP2	25 August 2011

Contract No.	Contract Title	Associated DP(s)	Construction Commencement Date
	Kong Convention and Exhibition Centre – Tunnel Works		
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

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 for WDII	Principal Resident Engineer	Mr. Frankie Fan	2587 1778	2587 1877
	Engineer for CWB	Principal Resident Engineer	Mr. Peter Poon	3916 1818	3529 2829
Lam Woo & CO., LTD.	Contractor under Contract no. HY/2009/17	Project Manager	Mr. K. S. Law	9090 1378	2566 7522
		Site Agent	Mr. Tony Au	9725 5874	
		Sub Agent	Mr. Johnny Wong	9725 5870	
Chiu Hing Construction & Transportation Co. Ltd.	Contractor under Contract no. 04/HY/2006	Contract Manager	Mr. Frederick Tsui	2967 6363	2967 6366
		Senior Site Agent	Mr. Alvin Ma	2967 6363	2967 6366
		Environmental Consultant	Mr. Jimmy Cheng	2965 0898	2556 9172
Chun Wo – Leader Joint Venture	Contractor under Contract no.	Site Agent	Mr. Paul Yu	9456 9819	2634 1626
		Operation Manager	Mr Lau Yee Ching	9466 3918	



Party	Role	Post	Name	Contact No.	Contact Fax
	HK/2009/01	Construction Manager	Mr Jerry Siu	9493 3664	
		Construction Manager	Mr Ricky Lai	9487 6549	
		Construction Manager	Mr KK Yuen	3498 1213	
		Environmental Officer (Compliance Manager)	Mr Andy Mak	9103 2370	
		Environmental Supervisor	Ms Kiwi Chan	6227 8840	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HK/2009/02	Project Manager	Mr. Chan Sing Cho	3658-3002	2827 9996
		Site Agent	Mr. Mak Kam Wing	3658-3044	
		Deputy Site Agent	Mr. Anthony Wu	3658-3004	
		Quality & Environmental Manager	Mr. C.P. Ho	3658-3000	
		Environmental Officer	Ms Flora Ng	3658-3064	
Chun Wo – CRGL Joint Venture	Contractor under Contract no. HY/2009/19	Project Manager	Mr. Rayland Lee	3758 8879	2570 8013
		Site Agent	Mr. Cheung Kit Cheung	6909 1555	
		Environmental Engineer	Mr. Simon Wong	9281 4346	
		Environmental Manager / Environmental Officer	Mr. M.H. Isa	9884 0810	
Leighton Contractors (Asia) Limited	Contractor under Contract no. HY/2009/18	Site Agent	Mr. Brian Gillon	2214 7700	2140 6799
		Deputy Site Agent	Mr. Desmond Sze	2214 7703	
		Environmental Officer	Mr. Anfernee Chow	2214 7721	
		Environmental Supervisor	Mr. Dennis Yu	2214 7738	
		Environmental Supervisor	Ryan Tsui	2214 7705	
China State Construction Engineering (HK) Ltd.	Contractor under Contract no. HY/2009/15	Project Manager	Mr. M Y Wong	2823 7879	2566 2192
		Site Agent	Mr. Simon Tang	3557 6358	
		Head of construction	Andrew Kwan	3557 6396	



Party	Role	Post	Name	Contact No.	Contact Fax
		Environmental Officer	Samuel Tsui	3557 6347	
		Environmental Officer	Daniel Sin	3557 6215	
		Environmental Supervisor	Kelven Yip	3557 6347	
		Environmental Supervisor	Tim Fung	3557 6349	
		Environmental Supervisor	Hilda Lau	3557 6378	
ENVIRON Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3743 0788	3548 6988
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. 04/HY/2006 – Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street under FEP-04/364/2009/A

- Construction works were completed and a duly signed report on Completion of Works was issued by the Engineer dated on 1 March 2011. In addition, acknowledge of FEP surrender was under preparation by the Contractor

Contract no. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

- ELS works for basement construction for pile cap construction.

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

- Instrumentation Manholes and Intake Culvert Survey
- Excavation of trial pit
- Hoarding erection
- Tree transplanting
- Installation of coupler in CR3
- Drainage diversion works
- Site investigation and pre-drilling works
- Excavation in Trough B
- Sheet piling
- Guide wall construction near PTI
- Diaphragm wall
- Emergency exit construction at MTR by-law area

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 SCL Protection Works and CWB.
- Pre-bored H piling works.
- Ground treatment works for proposed diaphragm wall in SCL Tunnels Protection Works.

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

- Tunnel bored pile works at WCR1 area
- Diaphragm wall construction at WCR1 area

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

- Diaphragm wall preparation work at TS1 and TPCWAE
- Trial trench work at Hung Hing Road and POC

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

- Steel fabrication of temporary platform
- Erection of platform to enable marine pre-drilling
- Marine Pre-drilling
- Remove existing dolphin pier

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

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

- Construction works were completed and a duly signed report on Completion of Works was issued by the Engineer dated on 1 March 2011. In addition, acknowledge of FEP surrender was under preparation by the Contractor

Contract no. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

- ELS works for basement construction for pile cap construction.

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

- Instrumentation Manholes and Intake Culvert Survey
- Excavation of trial pit
- Hoarding erection
- Tree transplanting
- Installation of coupler in CR3
- Drainage diversion works
- Site investigation and pre-drilling works



- Excavation in Trough B
- Sheet piling
- Diaphragm wall
- Instrumentation at Man Yiu Street
- Slip road construction between Man Kwong Street and Finance Street

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 both CWB and SCL Protection Works.
- Preparatory works such as ground treatment, guide wall construction and plant establishment for the proposed diaphragm wall construction works within HKCEC1
- Installation of all outstanding geotechnical instrumentation for construction of CWB & SCL Protection Works.
- Pre-boring the existing seawall for subsequent diaphragm wall construction.

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

- Tunnel bored pile and diaphragm wall construction works.

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

- Diaphragm wall construction at TS1 and TPCWAE
- Construction of dewatering well at Hung Hing Road and POC

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

- Preparation works and removal of existing marine piles
- Pre-drilling works for bored pile and Diaphragm wall
- Marine Pre-drilling
- Remove existing dolphin pier
- Set up of Contractor's site office at Oil Street
- Temp. Traffic Diversion at Watson Road

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	Valid
Environmental Permit	EP-376/2009	13 Nov 2010	Valid
Further Environmental Permit	FEP-01/356/2009	18 Feb 2010	Valid
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-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	Valid
Further Environmental Permit	FEP-04/364/2009/A	14 Oct 2010	Valid
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

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. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-03/364/2009 for contract no. HY/2009/17 showed in **Table 3.2** and **Table 3.3**.

Table 3.2 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/17

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-03/364/2009	12 Jul 2010	N/A	Valid
Notification of Works Under APCO	319348	13 Jul 2010	N/A	Valid
Discharge Licence	WT00007212-2010	5 Aug 2010	5 Aug 2010 – 31 Aug 2015	Valid
Registration as a Waste Producer	5213-151-L2608-05	13 July 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7010400	16 Mar 2010	N/A	Valid

Table 3.3 Summary of submission status under FEP-03/364/2009

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	18 September 2010
Conditions 2.7 and 2.8	Submission of works schedule and location plan	1 September 2010
Condition 2.9	Noise Management Plan	1 September 2010

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. Summary of the current status on licences and/or permits on environmental protection pertinent and submission under FEP-04/364/2009/A for contract no. 04/HY/2006 are shown in **Table 3.4** and **Table 3.5**.

Table 3.4 Cumulative Summary of Valid Licences and Permits under Contract no. 04/HY/2006

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-04/364/2009/A	14 Oct 2010	N/A	Valid
Notification of Works Under APCO	322225	7 Oct 2010	N/A	Valid
Billing Account under Waste Disposal Ordinance	7005123	9 Mar 2007	N/A	Valid

Table 3.5 Summary of submission status under FEP-04/364/2009/A

EP Condition	Submission	Date of Submission
Condition 2.6	Management Organization of Main Construction Companies	11 July 2010
Conditions 2.7 and 2.8	Submission of works schedule and location plan	11 July 2010 and 5 August 2010
Condition 2.9	Noise Management Plan	19 October 2010
Condition 2.10	Landscape Plan	26 November 2010

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 3.6** and **Table 3.7**

Table 3.6 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	6 Jan 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0107-11	8 Feb 2011	16 Mar 2011 to 15 Sep 2011	Valid
	GW-RS0384-11	29 Apr 2011	27 May 2011 to 26 Nov 2011	Valid
	GW-RS0680-11	22 Jul 2011	29 Jul 2011 to 19 Jan 2012	Valid
	GW-RS0689-11	28 Jul 2011	29 Jul 2011 to 28 Jan 2012	Valid
Discharge Licence	WT00006220-2010	18 Mar 2010	31 Mar 2015	Valid
	WT00009641-2011	24 Jul 2011	31 Jul 2016	Valid
Billing account under Waste Disposal Ordinance	7010069	21 Jan 2010	N/A	Valid
Registration as a Chemical Waste Producer	WPN5213-134-C3585-01	21 Jan 2010	N/A	Valid

Table 3.7 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	25 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 3.8** and **Table 3.9**.

Table 3.8 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 piling equipment	PP-RS0011-11	27 April 2011	1 June 2011 to 30 Nov 2011	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0716-11	2 Aug 2011	12 Aug 2011 to 11 Feb 2012	Valid
	GW-RS0722-11	2 Aug 2011	5 Aug 2011 to 5 Oct 2011	Valid
	GW-RS0723-11	12 Aug 2011	15 Aug 2011 to 14 Feb 2012	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0335-11	8 April 2011	11 Apr 2011 to 30 Sept 2011	Cancel
	GW-RS0343-11	11 April 2011	25 Apr 2011 to 10 Oct 2011	Valid
	GW-RS0369-11	21 April 2011	1 May 2011 to 31 Oct 2011	Valid
	GW-RS0377-11	27 April 2011	1 May 2011 to 31 Oct 2011	Valid



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
	GW-RE0311-11	4 May 2011	5 May 2011 to 31 Oct 2011	Valid
	GW-RS0401-11	3 May 2011	18 May 2011 to 17 Nov 2011	Valid
	GW-RS0414-11	3 May 2011	9 May 2011 to 8 Nov 2011	Valid
	GW-RS0423-11	9 May 2011	22 May 2011 to 21 Nov 2011	Valid
	GW-RS0430-11	9 May 2011	16 May 2011 to 15 Nov 2011	Cancel
	GW-RS0453-11	19 May 2011	23 May 2011 to 22 Nov 2011	Valid
	GW-RS0458-11	17 May 2011	21 May 2011 to 20 Nov 2011	Cancel
	GW-RS0461-11	19 May 2011	23 May 2011 to 22 Nov 2011	Valid
	GW-RS0473-11	27 May 2011	01 May 2011 to 30 Nov 2011	Cancel
	GW-RS0496-11	31 May 2011	07 Jun 2011 to 06 Dec 2011	Valid
	GW-RS0502-11	8 Jun 2011	13 Jun 2011 to 12 Dec 2011	Valid
	GW-RS0579-11	22 June 2011	17 July 2011 to 16 Jan 2012	Valid
	GW-RS0645-11	18 July 2011	22 Jul 2011 to 21 Jan 2012	Valid
	GW-RS0649-11	22 July 2011	1 Aug 2011 to 31 Jan 2012	Valid
	GW-RS0691-11	25 July 2011	27 July 2011 to 26 Jan 2012	Valid
	GW-RS0716-11	2 Aug 2011	12 Aug 2011 to 11 Feb 2012	Valid
	GW-RS0722-11	2 Aug 2011	5 Aug 2011 to 5 Oct 2011	Valid
	GW-RS0723-11	12 Aug 2011	15 Aug 2011 to 14 Feb 2012	Valid
Discharge Licence	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	Valid
	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
Billing Account under Waste Disposal Ordinance (Land)	7010255	10 Feb 2010	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
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 3.9 Summary of submission status under FEP-01/364/2009

EP Condition	Submission	Date of Submission
Special Conditions, Clause 2.7 & 2.8	Works Schedule and Location Plan	14 Jun 2011
Special Conditions, Clause 2.6	Environmental Management Organization Chart	14 Jun 2011
Special Conditions, Clause 2.6	Commencement Date of Works	21 Jun 2011
Special Conditions, Clause 2.9	Noise Management Plan	28 Jun 2011
Condition 2.11	Landscape Plan	23 Aug 2011

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 3.10 and Table 3.11.

Table 3.10 Cumulative Summary of Valid Licences and Permits under Contract no. HY/2009/18

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-05/364/2009/A	15 Nov 2010	N/A	Valid
Notification of Works Under APCO	322293	07 Oct 2010	N/A	Valid
Discharge Licence	WT00008229-2011	13 Jan 2011	31 Jan 2016	Valid
Billing Account under Waste Disposal Ordinance	7011587	11-Oct-10	N/A	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Registration as a Waste Producer	WPN: 8335-121-L1048-04	17 Dec 2010	N/A	Valid
Construction Noise Permit (CNP) for non-piling equipment	GW-RS0795-11	24 Aug 2011	24 Aug 2011 21:00 – 21 Jan 2012 06:00	Valid
	GW-RS0690-11	27 Jul 2011	27 Jul 2011 21:00 – 24 Aug 2011 21:00	Expired

Table 3.11 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. 4)	3 August 2011

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 3.12** and **Table 3.13**

Table 3.12 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
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	N/A	Valid
Water Discharge Licence (Discharge at Portion VII)	WT00008780-2011	22 Mar 2011	22 Mar 2011 to 31 Mar 2016	Valid
Water Discharge Licence (Discharge at Hung Hing Road)	WT00008905-2011	11 Apr 2011	11 Apr 2011 to 30 Apr 2016	Valid

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Construction Noise Permit (CNP) for Installation of Instrumentation	GW-RS0727-11	11 Aug 2011	24 Aug 2011 to 23 Feb 2012	Valid
Construction Noise Permit (CNP) for Site Office Generator (24 hr)	GW-RS0220-11	16 Mar 2011	16 Mar to 15 Sep 2011	Valid
Construction Noise Permit (CNP) for Diaphragm Wall Construction	GW-RS0308-11	1 Apr 2011	4 Apr to 27 Sep 2011	Valid
Construction Noise Permit (CNP) for Diaphragm Wall Construction	GW-RS0710-11	3 Aug 2011	5 Aug 2011 to 1 Feb 2012	Valid
Construction Noise Permit (CNP)	GW-RS0168-11	21 Feb 2011	24 Feb 2011 to 23 Aug 2011	Expired
Construction Noise Permit (CNP)	GW-RS0749-11	11 Aug 2011	15 Aug 2011 to 7 Feb 2012	Valid

Table 3.13 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 3.14** and **Table 3.15**.

Table 3.14 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



Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Application for Vessel Disposal	7012306	21 July 2011	N/A	Valid

Table 3.15 Summary of submission status under FEP-07/364/2009/A

EP Condition	Submission	Date of Submission
Condition 2.9	Noise Management Plan	02 Jun 2011
Condition 2.13	Landscape Plan	7 July 2011

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)

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 Whitefield Depot
North Point	RTN2	Oil Street Community Liaison 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}). $L_{eq(30\text{ minutes})}$ shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods, $L_{eq(5\text{ minutes})}$ 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 July be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

4.2 Air 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
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Station ID	Monitoring Location	Description
CMA1b	Oil Street Community Liaison Centre	North Point
CMA2a	Causeway Bay Community Centre	Causeway Bay
CMA3a	CWB PRE Site Office *	Causeway Bay
CMA4a	Society for the Prevention of Cruelty to Animals	Wan Chai
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.

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.**

MONITORING RESULTS

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

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

- Contract no. HY/2009/15 – Central-Wanchai Bypass – Tunnel (Causeway Bay Typhoon Shelter Section) under FEP-06/364/2009/A
- Contract no. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009
- 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

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. The noise monitoring at stations were M1a and M5b during day time, M1a, M7e and M7w during restricted hour were rescheduled on 11 July 2011 due to rain.

Contract no. HY/2009/17 –Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

5.1.2. The proposed division of noise monitoring stations for Contract no. HY/2009/17 are summarized in **Table 5.1** below:

Table 5.1 Noise Monitoring Stations for Contract no. HY/2009/17

Station	Description
M4b	Victoria Centre

5.1.3. No action and limit level exceedance was recorded during day time and restricted hour period in the reporting month. 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. 04/HY/2006 – Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street under FEP-04/364/2009/A and Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- 5.1.4. Construction activity under contract no. 04/HY/2006 was completed, no noise monitoring for the contract was conducted. 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 and 04/HY/2006 are summarized in **Table 5.2** below:

Table 5.2 Noise Monitoring Stations for Contract no. HY/2009/18 and 04/HY/2006

Station	Description
M7e	International Finance Centre (Eastern End of Podium)
M7w	International Finance Centre (Western End of Podium)

- 5.1.5. One action level exceedance was recorded due to a recorded noise complaint on 30 July 2011 for the contract of HY/2009/18 and no limit level exceedance was recorded during day time and restricted hour period in the reporting month. 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** and the complaints can be referred in **Appendix 9.1**.

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

- 5.1.6. 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

- 5.1.7. No noise monitoring for Contract no. HK/2009/01 was conducted in this reporting month. However, noise monitoring was conducted for Contract no. HK/2009/02 in the reporting month
- 5.1.8. One action level and one limit level exceedance was recorded at M1a – Harbour Road Sports Centre due to a recorded noise complaint on 26 August 2011 for the contractor of HK/2009/01 and on 22 August 2011 during restricted hour for the contractor of HK/2009/02. Major noise source was contributed from Tonnochy Road and water sport competition at Wan Chai

Training Swimming Pool. Details of the Notification of Exceedance can be referred in **Appendix 6.2**. 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** and the complaints can be referred in **Appendix 9.1**.

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

- 5.1.9. 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 division 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

- 5.1.10. One action level exceedance and no limit level exceedance was recorded during day time and restricted hour period due to a recorded noise complaint on 7 August 2011 in the reporting month. 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** and the complaints can be referred in **Appendix 9.1**.

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. No action level and two limit level exceedances were recorded at M6 – HK Baptist Church Henrietta Secondary School on 10 and 16 August 2011 during day time period. After checking contractor's work schedules and investigation found that traffic noises in IECL as major noise sources contributed in the noise monitoring. It was considered the exceedances were not related to the project. 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** and details of the Notification of Exceedance can be referred in **Appendix 6.2**.

5.2 Real Time Noise Monitoring Results

- 5.2.1. No construction activity with valid Construction Noise Permit was conducted during night time period (2300 to 0700) in this reporting month.

Contract no. HY/2009/17 –Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009 and Contract no. HY/2009/19 – Central – Wanchai Bypass Tunnel (North Point Section) and Island Eastern Corridor Link under FEP-07/364/2009/A

- 5.2.2. The proposed division of noise monitoring stations are summarized in **Table 5.6** below. Real time noise monitoring for the piling works under contract no. HY/2009/17 was commenced on 5 October 2010

Table 5.6 Real Time Noise Monitoring Stations for Contract no. HY/2009/17

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

Real time noise monitoring results and graphical presentation during night time period are for information only.

- 5.2.3. No project related action and limit level exceedance were recorded in the reporting period. 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**.

- 5.2.4. 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 Whitefield Depot
RTN2	North Point	Oil Street Community Liaison Center

Real time noise monitoring results and graphical presentation during night time period are for information only.

- 5.2.5. No project related action and limit level exceedance were recorded in the reporting period. 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 at station CMA1b, CMA2a CMA4a, the 24 hr-TSP monitoring were rescheduled to conduct on 2 August 2011, 19 August 2011, 8 August 2011 and 25 August 2011.

Contract no. HY/2009/17 –Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

- 5.3.1. The proposed division of air monitoring stations are summarized in **Table 5.8** below. Air monitoring for the piling works under contract no. HY/2009/17 was commenced on 8 October 2010.

Table 5.8 Air Monitoring Station for Contract no. HY/2009/17

Station	Description
CMA2a	Causeway Bay Community Centre

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

Contract no. 04/HY/2006 – Reconstruction of Bus Terminus near Man Yiu Street and Man Kwong Street under FEP-04/364/2009/A and Contract no. HY/2009/18 – Central – Wan Chai Bypass (CWB) – Central Interchange under FEP-05/364/2009/A

- 5.3.3. Construction activity under contract no. 04/HY/2006 was completed, no air monitoring for the contract was conducted. 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)

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

Contract no. 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

- 5.3.5. 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. Only 1-hr TSP monitoring was conducted in the reporting period. 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

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

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

5.3.9. 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 St Community Liaison Centre
CMA2a	Causeway Bay Community Centre

5.3.10. 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. HY/2009/17 –Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

- 5.4.1. No Inert C&D waste was recycled in the reporting month. Details of the waste flow table are summarized in **Table 5.14**

Table 5.14 Details of Waste Disposal for Contract no. HY/2009/17

Waste Type	Quantity this month, m ³	Cumulative Quantity-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	NIL	NIL	N/A
Inert C&D materials recycled	NIL	1354.82	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	N/A	N/A	N/A

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

- 5.4.2. No inert C&D waste was disposed of 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. 04/HY/2006

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	NIL	1288.5	Chai Wan and T.K.O. 137
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

Contract nos. 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

- 5.4.3. Inert and non-inert C&D waste was 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/2009/01

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	206.67	206.67	TKO137

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials recycled	NIL	NIL	N/A
Non-inert C&D materials disposed	35.92	35.92	SENT Landfill
Non-inert C&D materials recycled	NIL	NIL	N/A
Chemical waste disposed	NIL	NIL	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

- 5.4.4. 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. HK/2009/02

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	14,763	29,259	TM 38
Inert C&D materials recycled	NIL	NIL	N/A
Non-inert C&D materials disposed	NIL	NIL	SENT Landfill
Non-inert C&D materials recycled	NIL	NIL	N/A
Chemical waste disposed	1,104	1,104	N/A

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

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

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

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	15.9	3962.4	T.K.O. 137
Inert C&D materials recycled	0	58.5	N/A
Non-inert C&D materials disposed	7.2	152.0	SENT Landfill
Non-inert C&D materials recycled	0	0	N/A
Chemical waste	0	0	N/A

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
disposed			

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

- 5.4.6. Non-inert C&D waste was disposed and recycled of in this reporting month. Details of the waste flow table are summarized in **Table 5.19**.

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

Waste Type*	Quantity this month, m ³	Cumulative-to-Date, m ³	Disposal / Dumping Grounds
Inert C&D materials disposed	NIL	1,952	Tuen Mun Area 38
Inert C&D materials recycled	29	29	N/A
Non-inert C&D materials disposed	12.0	38.1	SENT Landfill
Non-inert C&D materials recycled	61.3	61.3	N/A
Chemical waste disposed	NIL	NIL	N/A

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

- 5.4.7. Inert and non-inert C&D waste was disposed of in this reporting month. Details of the waste flow table are summarized in **Table 5.20**.

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

Waste Type*	Quantity this month, 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	0.115	1.805	SENT Landfill
Non-inert C&D materials recycled	NIL	NIL	N/A
Chemical waste disposed	NIL	NIL	N/A

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/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

6.1.1. No exceedance was recorded in the reporting month.

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

6.1.2. No noise monitoring was undertaken in the reporting month.

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

6.1.3. One action level and no limit level exceedance was recorded due to a recorded noise complaint on 30 July 2011 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

6.1.4. No noise monitoring for Contract no. HK/2009/01 was conducted in this reporting month.

6.1.5. One action level exceedance was recorded at M1a – Harbour Road Sports Centre due to recorded noise complaint on 26 August 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

6.1.6. One limit level and no action level exceedance were recorded at M1a – Harbour Road Sports Centre on 22 August 2011 during restricted hour. Investigation found that major traffic noise was contributed in the noise monitoring and not related to the Project.

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

6.1.7. One action level exceedance and no limit level exceedance was recorded during day time and restricted hour period due to a recorded noise complaint on 7 August 2011 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

6.1.8. Two limit level and no action level exceedances were recorded at M6 – HK Baptist Church Henrietta Secondary School on 10 and 16 August 2011 during day time period. After checking contractor's work schedules and investigation found that no major construction works was conducted during monitoring on 10 August 2011 and per drilling work was conducted with noise barrier deployed and traffic noises in IECL as major noise sources contributed in the noise monitoring. It was considered the exceedance was not related to the Project.

6.2 Real Time Noise Monitoring

Contract no. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

6.2.1 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

6.2.2 No exceedance was recorded in the reporting month.

6.3 Air Monitoring

Contract no. HY/2009/17 – Central – Wan Chai Bypass (CWB) at FEHD Whitfield Depot – Advanced piling works under FEP-03/364/2009

6.3.1. No exceedance was recorded in the reporting month.

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

6.3.2. No air quality monitoring was undertaken in the reporting month.

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

6.3.3. 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

6.3.4. 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

6.3.5. 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

6.3.6. 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

6.3.1 No exceedance was recorded in the reporting month.

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

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

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

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

Cumulative Construction Impact due to the Concurrent Projects

- 7.0.1. According to Condition 3.4 of the EP-364/2009/A, 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. From the Monthly EM&A report (July 2011) of Central Reclamation Phase III the key works in August 2011 are as follows:
- Type A filling in FRAW and FRAE above +2.5mPD
 - General filling works above +2.5mPD in IRAE
 - Surcharging in FRAW and FRAE
 - Installation of removable panels at caisson
 - Installation of remaining seawall blocks and retaining wall on the west side of culvert F
 - Construction of storm and foul drainage and gullies in hinterlands for Road P2 and Road D9
 - Roadworks for Road P2
 - Construction of GPO boundary wall
 - Construction of PLA boundary wall and entrance
 - Construction of Promenade enhancement works
 - Construction of buildings at PLA berth
 - Road P2 Underpass structures
 - Construction of CWB structure
 - Backfilling and waterproofing works for CWB structure
 - Importation of fill material
 - Strengthening of Man Yiu Street Footbridge
- 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 was the seawall block construction at TCBR1w, reclamation works of HKCEC Water Channel, dredging for submarine outfall pipe, Advanced piling works at FEHD Whitfield Depot, Central Interchange, cross-harbour water mains and marine pre-drilling in the reporting month. The major environmental impact was water quality impact at Causeway Bay and Wan Chai. Land-based construction activity were advance piling works at FEHD Whitfield Depot, sheet piling and pre-drilling works at Central, marine pre-drilling at North Point in the reporting month and tunnel works at Wan Chai East.
- 7.0.4. The major environmental impacts generated from advanced piling works at FEHD Whitfield Depot were undertaken and sheet piling, pre-drilling and sheet piling works at Central and tunnel works at Wan Chai East in the reporting month. No significant air impact was anticipated in the reporting month. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Wan Chai Development Phase II was mainly insignificant.

Environmental Site Audit

8.0.1. During this reporting month, weekly environmental site audits were conducted for Contracts no. HY/2009/15, HY/2009/17, HY/2009/18, HY/2009/19 and HK/2009/02. No non-conformance was identified during the site audits.

8.0.2. A landscape inspection was conducted for Contractors HY/2009/18 on 22 August 2011. No observation was recorded in this inspection. The results of these inspections and outcomes are summarized in **Table 8.1**.

Table 8.1 Summary of Landscape Inspections for Contract no. HY/2009/18

Item	Date	Observations	Action taken by Contractor	Outcome
110822_01	22-Aug-11	The contractor was reminded to pay more attention for staking & watering of Tree 1356	Pay more attention for staking & watering of Tree 1356	Noted by Contractor

8.0.3. 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 8.2**.

Table 8.2 Summary of Environmental Inspections for Contract no. HY/2009/15

Item	Date	Observations	Action taken by Contractor	Outcome
110802_01	2-Aug-11	Waste water that is generated by mini-piling shall be collected and treated before discharged.	Treating the wastewater before discharge	Completion as observed on 9-Aug-11
110802_02	2-Aug-11	Drain hole of the drip trays shall be plugged	Plugging the drain hole of the drip tray	Completion as observed on 9-Aug-11
110802_03	2-Aug-11	Cements that are over 20 packs shall be covered well by tarpaulin.	Covering the cement bags with tarpaulin sheet	Completion as observed on 16-Aug-11
110809_01	9-Aug-11	The contractor was reminded that stagnant mud and water inside drip tray shall be cleared. It should be treated as chemical waste if oil spilled in them.(Abutment A)	Removal of the water and mud from drip tray and handling as chemical waste	Completion as observed on 16-Aug-11
110809_02	9-Aug-11	The contractor was reminded that Stockpiles at TS4 should be covered.	Covering the stockpile with tarpaulin sheet	Completion as observed on 16-Aug-11
110809_03	9-Aug-11	The contractor was reminded that enclosure of batching plant should be maintained at Abutment A.	Proving an enclosure to the batching plant	Completion as observed on 16-Aug-11
110816_01	16-Aug-11	Overflow of waste water was found at the pre-treat tank. The contractor was reminded to increase the volume.	Improvement of the design of the pre-treatment tank	Completion as observed on 23-Aug-11
110816_02	16-Aug-11	Drip tray shall be provided for chemical (Chlorine) storage.	Proving the drip tray to the chemical	Completion as observed on 23-Aug-11
110816_03	16-Aug-11	Water spraying shall be conducted at EXTCPWA.	Water spraying on the dusty surface	Completion as observed on 23-Aug-11
110823_01	23-Aug-11	The contractor was reminded that collect floating refuses near TS4 and TS1.	Removal of the floating refuse	Completion as observed on 23-Aug-11
110823_02	23-Aug-11	The contractor was reminded that tidy up the haul road outside the construction site (Hing Fat Street)	Tidying up the haul road	Completion as observed on 30-Aug-11

Item	Date	Observations	Action taken by Contractor	Outcome
110823_03	23-Aug-11	The contractor was reminded that increase the water spraying more frequently in the sunny day.	Water spraying on the dusty surface	Completion as observed on 30-Aug-11

8.0.4. Four site inspections for Contract no. HY/2009/17 were carried out during this reporting period. No observation was recorded in this reporting month.

8.0.5. Five site inspections for Contract no. HY/2009/18 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. HY/2009/18

Item	Date	Observations	Action taken by Contractor	Outcome
110728_01	28-Jul-11	The contractor was reminded to inspect the enclosure of grouting plant in good condition before grouting works began	Inspect the enclosure grouting works began	Completion as observed on 4 Aug 2011
110811_01	11-Aug-11	Drain hole of the drip trays shall be plugged	Plugging the drain hole of the drip tray	Completion as observed immediately

8.0.6. 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 8.4**.

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

Item	Date	Observations	Action taken by Contractor	Outcome
110803_01	3-Aug-11	The contractor was reminded to tie the silt curtain at portion 40 tightly.	To tie the silt curtain tightly.	Completion as observed on 10-Aug-11
110810_01	10-Aug-11	Muddy water was observed discharging through V channels to open channel T at the reclamation area. The as-built desilting measures shall be improved.	Improve the desilting measures at channel T	Completion as observed on 17-Aug-11
110810_02	10-Aug-11	The contractor was reminded to remove the stagnant water inside drip tray.	Removal of the water and mud from drip tray	Completion as observed on 17-Aug-11
110817_01	17-Aug-11	Drain hole of the drip trays shall be plugged	Plugging the drain hole of the drip tray	Completion as observed on 24-Aug-11
110824_01	24-Aug-11	The contractor was reminded to conduct water spraying at Portion VII.	Conduct water spraying	Completion as observed on 30-Aug-11

8.0.7. As construction works for Contract no.04/HY/2006 were completed, no site inspection was carried out since February 2011.

- 8.0.8. No site inspections for Contract no. HK/2009/01 was carried out during this reporting period as the commencement date of the project was on 25 August 2011.
- 8.0.9. Four site inspections for Contract no. HK/2009/02 was carried out during this reporting period. The results of these inspections and outcomes are summarized in **Table 8.5**.

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

Item	Date	Observations	Action taken by Contractor	Outcome
110728_01	28-Jul-11	Existing silt curtain for filling is insufficient to mitigate the water quality impact. Frame type silt curtain with adequate shall be provided.	Providing the proper silt curtain for the filling	Completion as observed on 4-Aug-11
110728_02	28-Jul-11	Silt at the vehicle wheel washing facility (Gate 1) shall be removed regularly.	Regular removal of the silt at the wheel washing facility	Completion as observed on 4-Aug-11
110728_03	28-Jul-11	Stockpile of C&D stockpile located at Wan Shing Street shall be covered with tarpaulin sheet.	Leveling down and cover the stockpile.	Completion as observed on 4-Aug-11
110804_01	4-Aug-11	A shelter with 3-sides and cover shall be provided for the grouting mixer. Also, sand bags shall be provided in the edge of grouting area.	Providing the proper shelter when grouting mixing. Sand bags were placed in the grouting area.	Completion as observed on 11-Aug-11
110804_02	4-Aug-11	Regular water spraying shall be applied on the dusty surface at Finger Pier.	Spraying water on the dusty surface	Completion as observed on 11-Aug-11
110817_01	17-Aug-11	Oil leakage was observed from the excavator at Wan Shing Street. Maintenance works for the excavator shall be provided.	Maintenance of the excavator and clearance of the oil stain.	Completion as observed on 25-Aug-11
110825_01	25-Aug-11	Silt curtain at western seawall shall be maintained in proper condition.	Maintenance of the silt curtain in proper condition.	Completion as observed on 1-Sept-11
110825_02	25-Aug-11	Drip tray shall be provided to the oil drums near Gate 1 at WCR 1.	Placement of the drip tray underneath the oil drums	Completion as observed on 1-Sept-11

COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

- 9.0.1. There were five complaints received in the reporting month.
- 9.0.2. A noise impact complaint ICC complaint no.1-305074350 by Mr. TSUI on 30 July 2011 referred by RSS to Environmental Team on 1 August 2011. He complained on the construction noise generated by the construction operations of Central-Interchange which is near the spa room. In addition, Mr. TSUI enquired the commencement time of the construction on Saturday. RSS confirmed the noisiest plant from 2 vibratory hammers has been conducted in alternating manner for sheet piling works to minimize noise due to current plant operation as one of the mitigation measures implemented by contractor for noise reduction. Further investigation revealed that no construction noise exceedance was recorded at noise monitoring station of IFC Western End of Podium on 25 July 2011 and 4 August 2011 during daytime period while sheet piling and excavation works were undertaken during monitoring. No further complaint from complainant was received after the liaison. In conclusion, it was related to the construction works under Contract HY/2009/18 and mitigation measure was provided.
- 9.0.3. A noise impact complaint ICC complaint no.1-304615409 by Ms. Chiu on 27 July 2011 referred by RSS to Environmental Team on 28 July 2011. She complained on the construction noise generated from the construction operations of Central-Wanchai Bypass in morning at 7am rather than at noon. RSS confirmed to start the rock breaking activities at 8m as a mitigation measure to minimize the noise nuisance in the vicinity of the residents. Further investigation revealed that no construction noise exceedance was recorded at noise monitoring station of Victoria Centre on 4 and 10 August 2011 during daytime period while breaking and excavation works were undertaken during monitoring. 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 complained via 1823 on 7 August 2011. Highways contacted the complainant on 15 August 2011 that the noisy rock breaking operation had been completed. No further complaint from complainant was received after the liaison. In conclusion, it was related to the construction works under Contract HY/2009/15 and mitigation measure was provided.
- 9.0.4. An ICC complaint no. 1 – 306740207 was received on 10 August 2011. The complainant, Mr. Yip complained that muddy water was discharged from work site to the seafront near Oil Street during heavy rain. According to the Hong Kong Observatory, there was amber rainstorm on August 2011. 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.
- 9.0.5. A visual complaint, ICC no. 1-307657681, was received on 23 August 2011. The complainant from City Garden complained that nuisance generated by light from a large amount of spot-lights on the barge during mid-night on 17 August 2011 in 0100 hrs. Confirmed with RE, due to the safety reason, flood lights shall be provided and functioned on the barge in accordance

with the provisions of the Merchant Shipping (Safety) Ordinance to prevent collisions and some non-essential lights were turned on during night-time period. Investigation found that these lights caused the nuisance to the nearby residents. Highways contacted the complainant on 17 August 2011 explaining the necessity of the lighting and requested the contractor of HY/2009/19 to switch off all non-essential lights to minimize nuisance to the nearby residents. A follow-up contact was made by Highways again on 18 August 2011 to confirm the efficiency of the mitigation measure and arrangement. The complainant was satisfied with them and no further complaint was received after that. In conclusion, it was related to the construction works under Contract HY/2009/19 and mitigation measure was provided.

- 9.0.6. A noise complaint was raised by Grand Hyatt and a complainant via 1823 on 26 August 2011 regarding construction noise and vibration nuisance generated from the works at Convention Avenue and inside the HKCEC1 reclamation area. Confirmed with the Resident Site Staff, the construction works were referred to the Contractor HK/2009/01 and the excavator mounted breaker at Convention Avenue and drilling rig at HKCEC1 reclamation area were the dominant construction noise source during this period. The drilling rig at HKCEC1 reclamation area and excavator mounted breaker at Convention Avenue were then temporarily suspended after received the complaint.
- 9.0.7. Investigation revealed that the erected noise barriers (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. 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. Further 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.
- 9.0.8. The details of cumulative complaint log and updated summary of complaints are presented in **Appendix 9.1**
- 9.0.9. Cumulative statistic on complaints and successful prosecutions are summarized in **Table 9.1** and **Table 9.2** respectively.

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
August 2011	5
Sep 10 to July 11	4
Total	9

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



Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
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	<ul style="list-style-type: none"> • Diaphragm wall construction at TS1 and TPCWAE • Construction of dewatering well at Hung Hing Road and POC 	<ul style="list-style-type: none"> • Watering any dust generating activities • Checking all drip trays frequently and clear any stagnant water and mud inside it.
HY/2009/17	<ul style="list-style-type: none"> • ELS works for basement construction for pile cap construction. 	<ul style="list-style-type: none"> • Noise barrier shall be implemented; and • Watering any dust generating activities
HY/2009/18	<ul style="list-style-type: none"> • Instrumentation Manholes and Intake Culvert Survey • Excavation of trial pit • Hoarding erection • Tree transplanting • Installation of coupler in CR3 • Drainage diversion works • Site investigation and pre-drilling works • Excavation in Trough B • Sheet piling • Diaphragm wall • Instrumentation at Man Yiu Street • Slip road construction between Man Kwong Street and Finance Street 	<ul style="list-style-type: none"> • 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 works
HY2009/19	<ul style="list-style-type: none"> • Steel fabrication of temporary platform • Erection of platform to enable marine pre-drilling • Marine pre-drilling • Remove existing dolphin pier 	<ul style="list-style-type: none"> • Noise level shall be controlled by reducing drilling rate. • Noise barrier shall be deployed for dolphin pier removal.



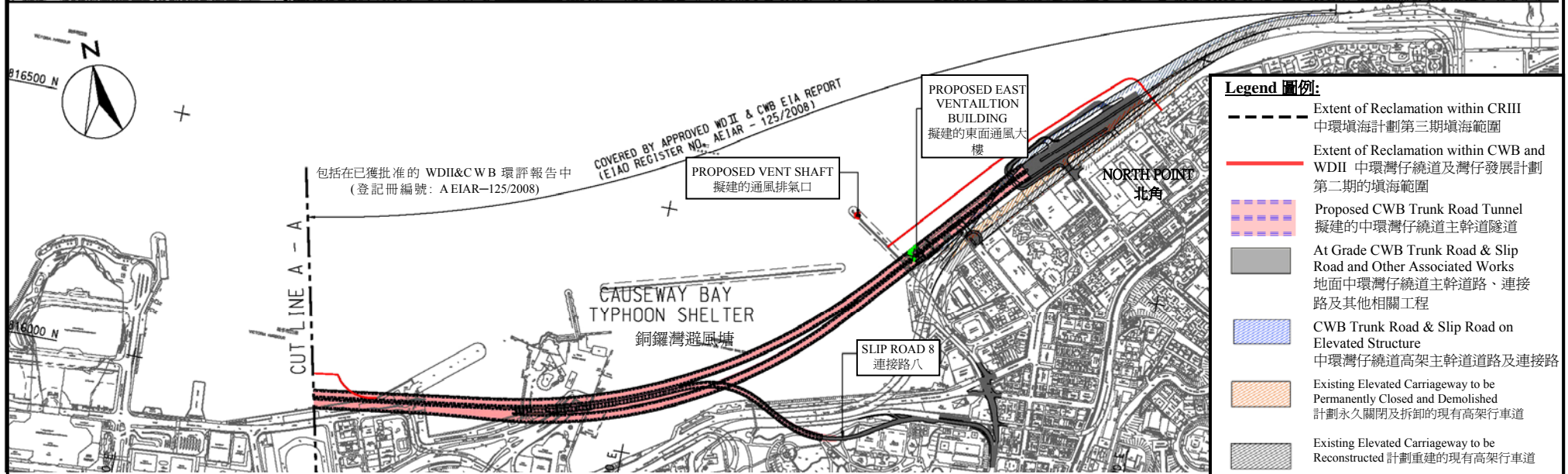
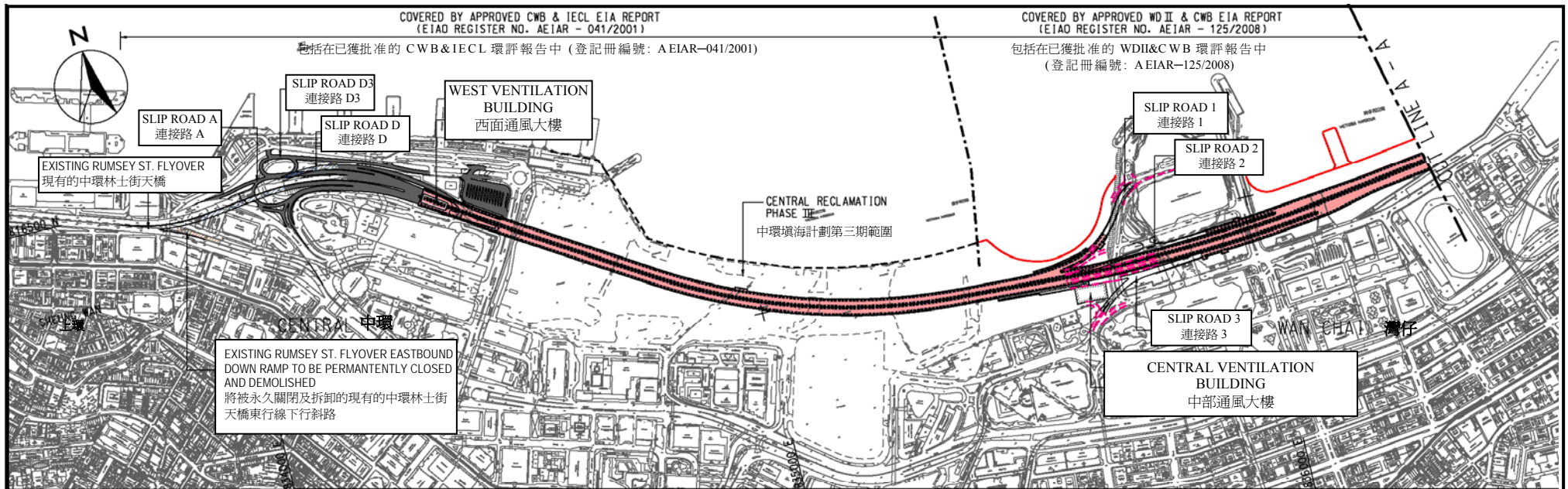
HK2009/01	<ul style="list-style-type: none">• Pre-drilling works for SCL Protection Works and CWB.• Pre-bored H piling works.• Ground treatment works for proposed diaphragm wall in SCL Tunnels Protection Works.•	<ul style="list-style-type: none">• Noise level shall be controlled by reducing pilling rate.• Well maintain the enclosures for grouting and bentonite mixing plants.
HK/2009/02	<ul style="list-style-type: none">• Tunnel bored pile and diaphragm wall construction works.	<ul style="list-style-type: none">• Noise level shall be controlled by reducing pilling rate.• Well maintain the enclosures for grouting and bentonite mixing plants.

10.0.3. Construction works were completed and a duly signed report on Completion of Works was issued by the Engineer dated on 1 March 2011. In addition, acknowledge of FEP surrender was under preparation by the Contractor



Figure 2.1

Project Layout

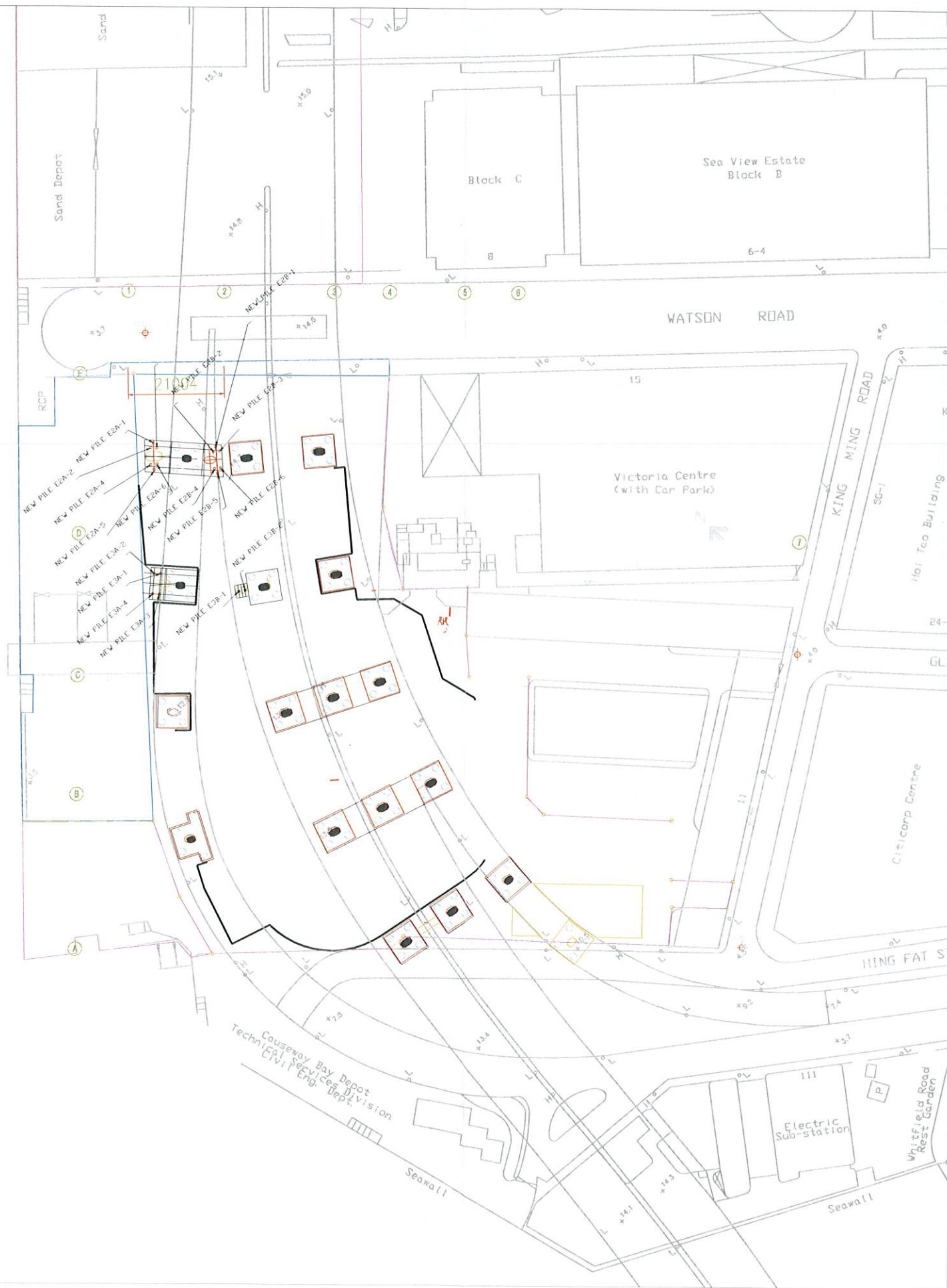


Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱: 中環灣仔繞道包括其行車隧道及連接路

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

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

(This figure was prepared 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)



1 Co-ordinates are relative to Hong Kong Metric Grid (1980)

Legend:

REV.	DATE	DESCRIPTION	CHK BY	AUTH BY

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LIN

PWP ITEM NO. 579 TH K
計劃項目編號

Project:
CENTRAL - WAN CHAI BYPASS - FEH WHITFIELD DEPOT RE-PROVISIONING WORKS



Drawing Title
PILING PLAN FOR MODIFIED ICE BRIDGE

Contractor
LAM WOO & COMPANY LIMITED

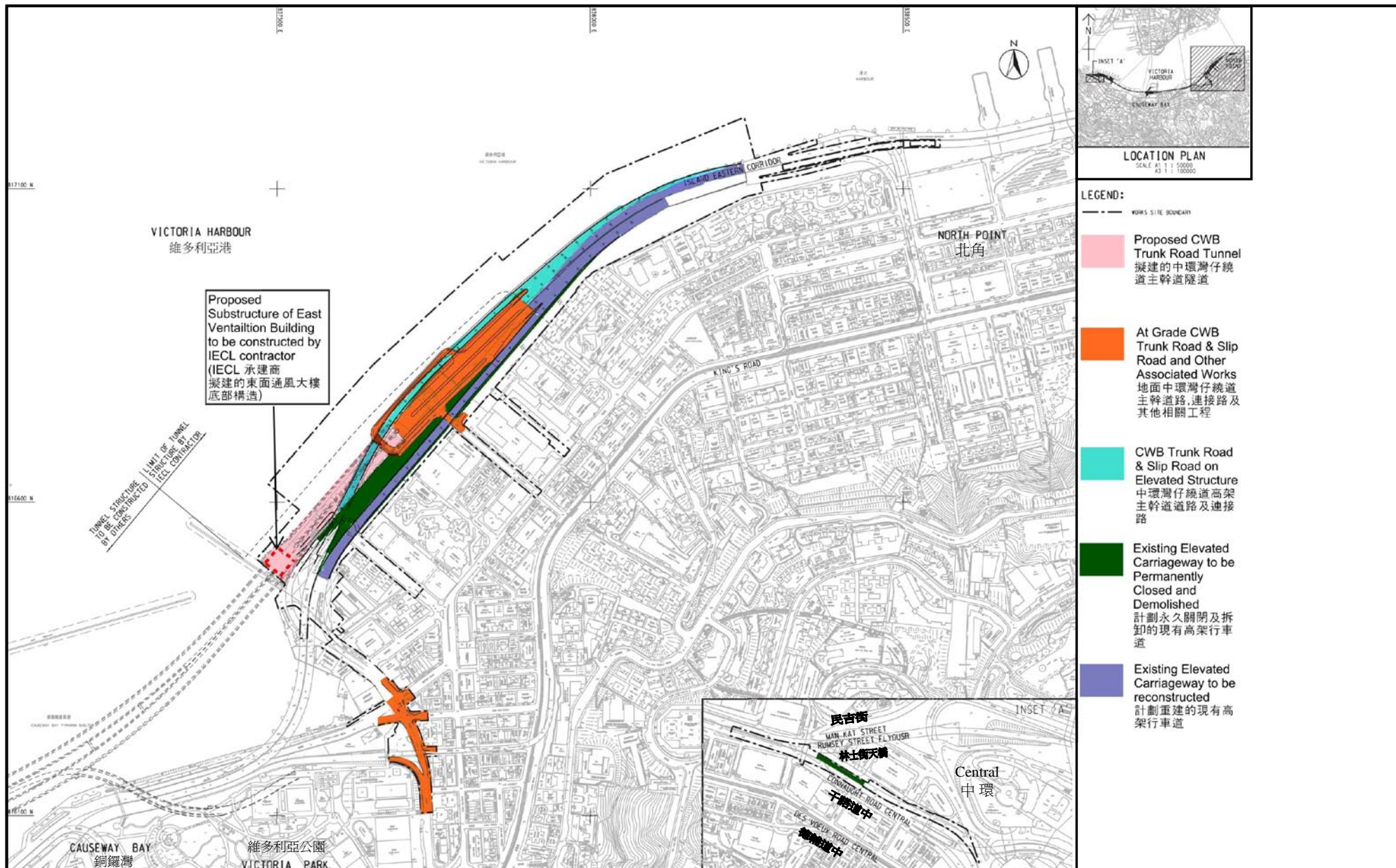
DRAWING NO. 0020

SURVEY DATE 12-06-2010

DRAWN BY KENG

CHECKED BY

SCALE 1:1000 SHEET 1



Project Title: Central-Wanchai Bypass (CWB) – Tunnel (North Point Section) and Island Eastern Corridor Link

工程項目名稱：中環灣仔繞道—北角段隧道及東區走廊連接路

Environmental Permit No. : FEP-07-364/2009/A

環境許可證編號 : FEP-07-364/2009/A

Figure 1b: General Layout Plan

圖 1b: 工程項目佈局圖

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



Figure 2.2

Project Organization Chart



Project Organization Chart

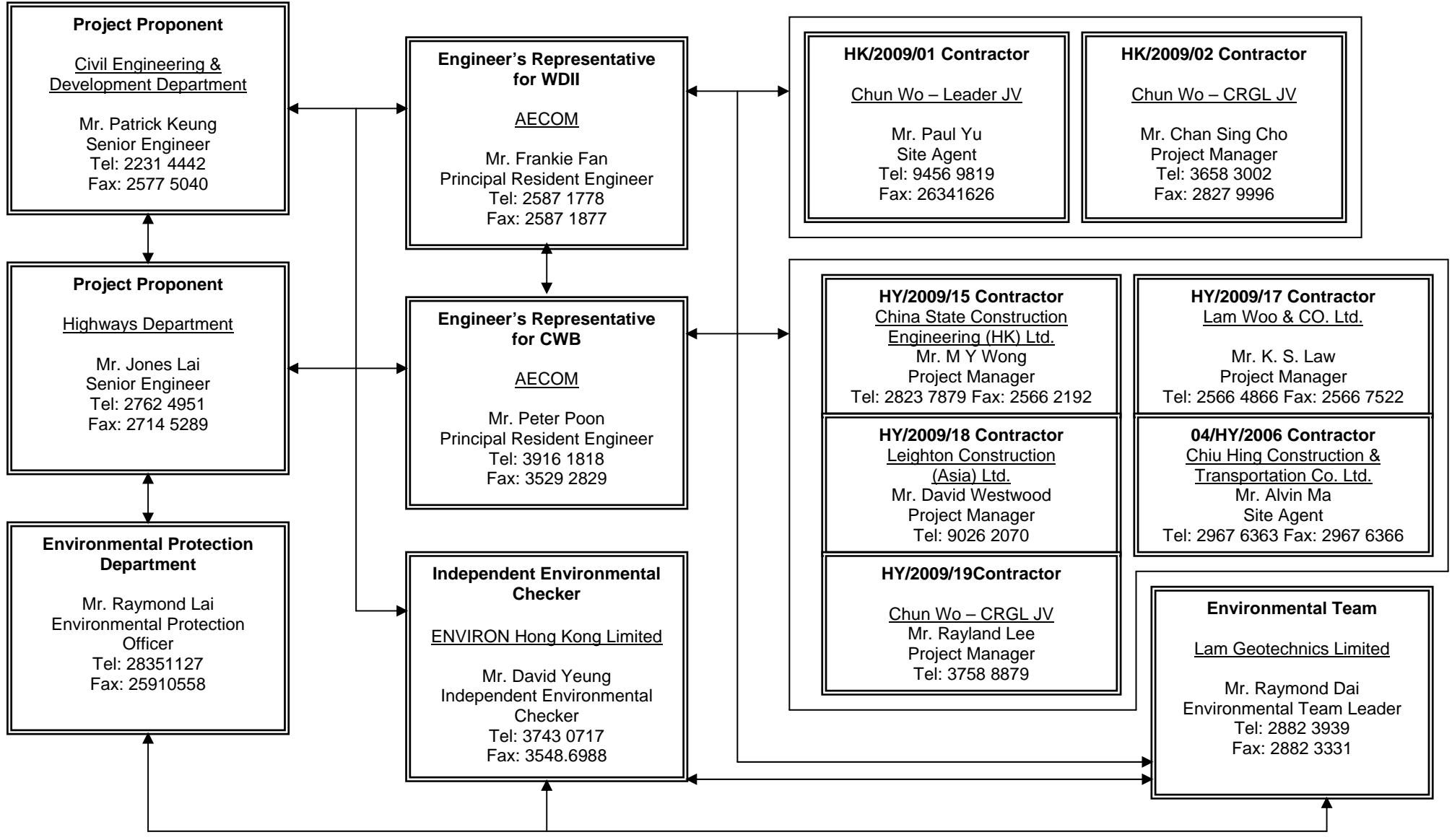
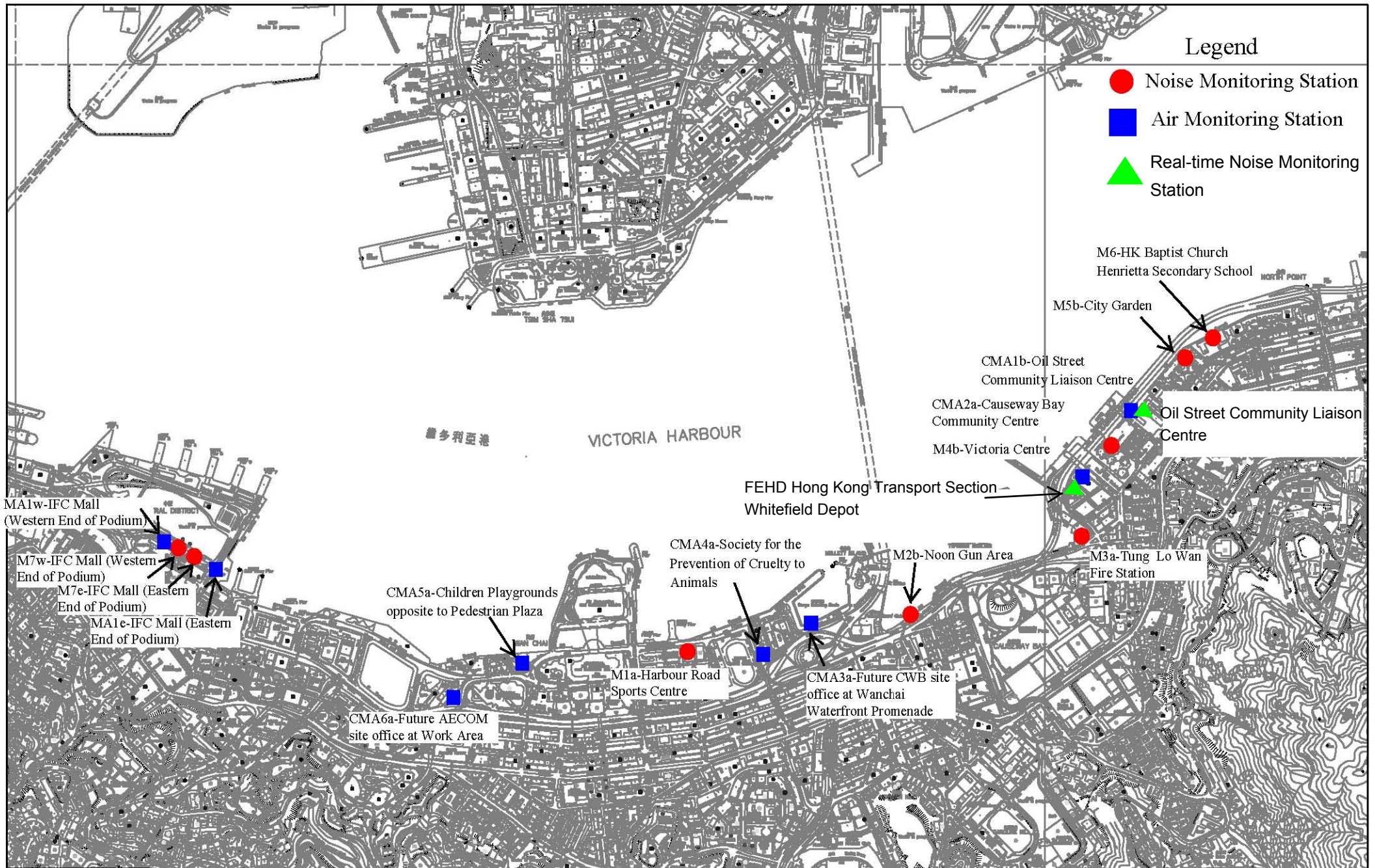




Figure 4.1

Locations of Monitoring Stations



Location plan of Environmental Monitoring Stations



Appendix 3.1

Environmental Mitigation Implementation Schedule

IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

Table A.1 Implementation Schedule for Air Quality Control

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. <ul style="list-style-type: none"> Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition; Watering during excavation and material handling; Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. 	Work site / during construction	Contractor		√			
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	<p>Good Site Practice:</p> <ul style="list-style-type: none"> Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program. Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program. Mobile plant, if any, shall be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum. Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
S4.8.1 – S4.8.11	<p>Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:</p> <ul style="list-style-type: none"> Slip road 8 tunnel Construction of diaphragm wall and substructures of the tunnel approach ramp Excavation Construction of slabs Backfill 	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	
	<ul style="list-style-type: none"> Demolition and construction of substructures for the IEC Demolition works of existing piers and crossheads of the marine section of the existing IEC <p>Use of PME grouping for the following tasks:</p> <ul style="list-style-type: none"> At-grade road construction Substructure for IECL connection 							
Operation Phase								
S4.8.12 – S4.8.23	<p>For Existing NSRs</p> <ul style="list-style-type: none"> 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

WDH & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>For Future/Planned NSRs</p> <ul style="list-style-type: none"> • 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. 	<p>In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.</p> <p>Near Causeway Bay Fire Station / During detailed design of the re-provisioned Tin Hau Temple</p>	<p>HyD</p> <p>Project Proponent for the re-provisioned Tin Hau Temple</p>	√	√ #			

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

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

Table A.4 Implementation Schedule for Waste Management

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
Construction Phase								
S6.5.14	Floating Refuse During the construction phase, the project proponent's contractor will be responsible for the collection of any refuse within their works area. Floating booms will be provided on the water surface to confine the refuse from the working barges as well as to avoid the accumulation of pollutants within temporary embayment as mentioned in Table D9.3.	Work site / During the construction period	Contractor		√			
S6.6.1	Good Site Practices Recommendations for good site practices during the construction activities include: <ul style="list-style-type: none"> • nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • training of site personnel in proper waste management and chemical waste handling procedures; • provision of sufficient waste disposal points and regular collection for disposal; • appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and • a recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites). 	Work site / During the construction period	Contractor		√			Waste Disposal Ordinance (Cap.354)

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

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	<p><i>General Refuse</i></p> <p>General refuse shall be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D material.</p> <p>A collection area shall be provided where wastes can be stored and loaded prior to removal from site. An enclosed and covered area is recommended to reduce the occurrence of 'wind blow' light material.</p>	Work site / During the construction period	Contractor		√			Public Health and Municipal Services Ordinance (Cap. 132)
S6.6.5	<p><i>Chemical Wastes</i></p> <p>After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals shall be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p>	Work site / During the construction period	Contractor		√			<p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</p>
S6.6.6	<p><i>Construction and Demolition Material</i></p> <p>C&D material shall be sorted on-site into inert C&D material (that is, public fill) and C&D waste. All the suitable inert C&D material shall be broken down to 250 mm in size for reuse as public fill in the WDII reclamation. C&D waste, such as wood, glass, plastic, steel and other metals shall be reused or recycled and, as a last resort, disposed of to landfill. A suitable area shall be designated to facilitate the sorting process and a temporary stockpiling area will be required for the separated materials.</p>	Work site / During the construction period	Contractor		√			ETWB TCW No. 33/2002, 31/2004, 19/2005

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	<p><i>Bentonite Slurry</i></p> <p>The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 “Construction Site Drainage” and listed as follows:</p> <ul style="list-style-type: none"> • If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis. • If the used bentonite slurry is intended to be disposed of through the public drainage system, it shall be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the Technical Memorandum of Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters. • If the used bentonite slurry is intended to be disposed to public fill reception facilities, it will be mixed with dry soil on site before disposal. 	Work site / During the construction period	Contractor		√			ProPECC PN 1/94

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

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
CMA3 _a	311.3	500	171.0	260
CMA4a	312.5	500	171.2	260
CMA5 _a	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. **12888**

Page 1 of 4 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q10982

Date of receipt : 25-May-11

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : Rion

Model : NL-14

Serial No. : 10303242

Test Conditions

Date of Test : 26-May-11

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 or IEC 804 Type 1 specification after adjustment.

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	04062	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 : 
Alan Chu

Date: 26-May-11

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. 12888

Page 2 of 4 Pages

Results :

1. SPL Accuracy

Level Range (dB)	UUT Setting			Applied Value (dB)	UUT Reading (dB)	
	Filter	Weight	Time Const.		Before adjust.	After adjust.
40 – 100	OFF	L _P	Fast	94.00	--	94.1
		L _{PA}	Fast		*95.0	94.1
			Slow		--	94.1
		L _{PC}	Fast		--	94.1
60 – 120	OFF	L _P	Fast	94.00	--	94.1
		L _{PA}	Fast		--	94.0
			Slow		--	94.0
		L _{PC}	Fast		--	94.0
60 – 120	OFF	L _P	Fast	114.00	--	114.0
		L _{PA}	Fast		--	113.9
			Slow		--	113.9
		L _{PC}	Fast		--	113.9

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.2 dB

2. Level Stability : 0.1 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.01 dB



Calibration Certificate

Certificate No. 12888

Page 3 of 4 Pages

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	113.9	-0.1	± 0.7 dB
130	104.0	103.8	-0.2	
120	94.0	94.0 (Ref.)	--	
110	84.0	83.9	-0.1	
100	74.0	74.1	+0.1	
90	64.0	64.1	+0.1	
80	54.0	54.3	+0.3	

Uncertainty : ± 0.1 dB

3.2 Differential level linearity

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

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.0	- 39.4 dB, ± 1.5 dB
63 Hz	-25.9	- 26.2 dB, ± 1.5 dB
125 Hz	-15.9	- 16.1 dB, ± 1 dB
250 Hz	-8.4	- 8.6 dB, ± 1 dB
500 Hz	-3.0	- 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	+0.8	+ 1.0 dB, ± 1 dB
8 kHz	-1.3	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-7.1	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 12888

Page 4 of 4 Pages

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	39.6	
1/10 ³	40.0	39.2	± 1.0 dB
1/10 ⁴	40.0	39.4	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test

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

3. Atmospheric Pressure : 1 004 hPa.

4. *Out of Specification

----- END -----



Calibration Certificate

Certificate No. **12889**

Page 1 of 2 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q10982

Date of receipt : 25-May-11

Item Tested

Description : Sound Level Calibrator

Manufacturer : Rion

Model : NC-73

Serial No. : 10465798

Test Conditions

Date of Test : 26-May-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification after adjustment.

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	03926	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR
S041	Universal Counter	04461	SCL-HKSAR
S206	Sound Level Meter	04462	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 : 
Alan Chu

Date: 26-May-11

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. 12889

Page 2 of 2 Pages

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value		Mfr's Spec.
	Before Adjust.	After Adjust.	
94 dB	*95.20 dB	93.94 dB	± 1 dB

Uncertainty : ± 0.2 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.994 kHz	± 2 %

Uncertainty : ± 0.1 %

3. Level Stability : 0.0 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.5 %

Mfr's Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

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

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

4. Atmospheric Pressure : 1 004 hPa

5. *Out of Specification

----- END -----



Calibration Certificate

Certificate No. **06680**

Page 1 of 4 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q02553

Date of receipt : 18-Nov-10

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : ACO

Model : Type 6224

Serial No. : 050112

Test Conditions

Date of Test : 19-Nov-10

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 & 804 Type I 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>
S017A	Multi-Function Generator	00804	SCL-HKSAR
S024	Sound Level Calibrator	04062	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

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

Date: 23-Nov-10



Calibration Certificate

Certificate No. **06680**

Page 2 of 4 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Time Const.		
20 – 100	L _A	Fast	94.0	94.3
		Slow		94.3
	L _C	Fast		94.3
30 – 120	L _A	Fast	94.0	94.4
		Slow		94.4
	L _C	Fast		94.4
30 – 120	L _A	Fast	114.0	94.3
		Slow		94.3
	L _C	Fast		94.3

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 Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
140	114.0	114.5	+0.1	± 0.7 dB
130	104.0	104.4	0.0	
120	94.0	94.4 (Ref.)	--	
110	84.0	84.1	-0.3	
100	74.0	74.2	-0.2	
90	64.0	64.1	-0.3	
80	54.0	54.1	-0.3	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. **06680**

Page 3 of 4 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.1	-0.3	± 0.4
	94.0	94.4 (Ref.)	- -	
	95.0	95.4	0.0	± 0.2

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.3	- 39.4 dB, ± 1.5 dB
63 Hz	-26.2	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 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	+0.9	+ 1.0 dB, ± 1 dB
8 kHz	-1.2	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-5.8	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 06680

Page 4 of 4 Pages

4. 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	39.9	
1/10 ³	40.0	40.3	± 1.0 dB
1/10 ⁴	40.0	40.3	

Uncertainty : ± 0.1 dB

- Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1 009 hPa.

----- END -----



Calibration Certificate

Certificate No. **06681**

Page 1 of 2 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q02553

Date of receipt : 18-Nov-10

Item Tested

Description : Sound Level Calibrator (EL469)

Manufacturer : ACO

Model : --

Serial No. : 050213

Test Conditions

Date of Test : 19-Nov-10

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 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	03926	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR
S041	Universal Counter	04461	SCL-HKSAR
S206	Sound Level Meter	04462	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: 23-Nov-10



Calibration Certificate

Certificate No. 06681

Page 2 of 2 Pages

Results :

1. Level

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	94.22	± 0.3 dB

The above measured values are the mean of 3 measurements.

Uncertainty : ± 0.1 dB

2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	0.9834 kHz	± 2 %

Uncertainty : ± 3.6 x 10⁻⁶

3. Level Stability : 0.0 dB

IEC 942 Class 1 Spec. : ± 0.1 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.2 %

IEC 942 Class 1 Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

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

3. Atmospheric Pressure : 1 009 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 11, 2011 Rootmeter S/N 0438320 Ta (K) - 298
 Operator Tisch Orifice I.D. - 0005 Pa (mm) - 749.3

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3710	3.2	2.00
2	NA	NA	1.00	0.9730	6.4	4.00
3	NA	NA	1.00	0.8690	7.9	5.00
4	NA	NA	1.00	0.8300	8.8	5.50
5	NA	NA	1.00	0.6860	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9817	0.7160	1.4042	0.9957	0.7263	0.8919
0.9775	1.0046	1.9859	0.9915	1.0190	1.2613
0.9754	1.1225	2.2203	0.9894	1.1385	1.4101
0.9743	1.1739	2.3286	0.9882	1.1907	1.4790
0.9690	1.4126	2.8084	0.9829	1.4328	1.7837
Qstd slope (m) = 2.01593			Qa slope (m) = 1.26234		
intercept (b) = -0.03978			intercept (b) = -0.02526		
coefficient (r) = 0.99999			coefficient (r) = 0.99999		
y axis = SQRT[H2O(Pa/760)(298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

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

For subsequent flow rate calculations:

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



Calibration Certificate

Certificate No. **13784**

Page 1 of 4 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q11569

Date of receipt : 6-Jul-11

Item Tested

Description : Sound Level Meter

Manufacturer : B&K

Model : 2250

Serial No. : 2722311

Test Conditions

Date of Test : 6-Jul-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 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	04062	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

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

Date: 6-Jul-11



Calibration Certificate

Certificate No. 13784

Page 2 of 4 Pages

Results :

1. SPL

UUT Setting				Applied Value (dB)	UUT Reading (dB)
Range	Freq. Wgt.	Time Const.	Center Freq.		
20 - 140	A (SPL)	Fast	--	94.0	93.9
		Slow	--		93.9
	C (SPL)	Fast	--	94.0	93.9
	A (SPL)	Fast	--	114.0	113.8
		Slow	--		113.8
	C (SPL)	Fast	--	114.0	113.8
	--	1/1 – Oct/Fast	1 kHz	94.0	93.8
				114.0	113.7
	--	1/3 – Oct/Fast	1 kHz	94.0	93.7
				114.0	113.6

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

Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec.
20~140	84.0	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)	--	
	95.0	95.0	+0.1	± 0.2 dB

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 13784

Page 3 of 4 Pages

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.8	- 39.4 dB, ± 1.5 dB
63 Hz	-26.5	- 26.2 dB, ± 1.5 dB
125 Hz	-16.5	- 16.1 dB, ± 1 dB
250 Hz	-9.0	- 8.6 dB, ± 1 dB
500 Hz	-3.5	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.1	+ 1.2 dB, ± 1 dB
4 kHz	+1.1	+ 1.0 dB, ± 1 dB
8 kHz	-1.3	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-5.9	- 6.6 dB, + 3 dB $\sim -\infty$

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	--	--
1/10	40.0	40.1	± 0.5 dB
1/10 ²	40.0	40.0	
1/10 ³	40.0	40.0	± 1.0 dB
1/10 ⁴	40.0	40.0	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 13784

Page 4 of 4 Pages

6. Filter Characteristics

6.1 1/1 – Octave Filter

Frequency	Attenuation (dB)	IEC 1260 Class 1 Spec. (dB)
125 Hz	-64.2	< - 61
250 Hz	-44.9	< - 42
500 Hz	-21.1	< - 17.5
707 Hz	-3.8	- 2 ~ - 5
1 kHz (Ref)	--	--
1.414 kHz	-3.6	- 2 ~ - 5
2 kHz	-20.9	< - 17.5
4 kHz	-56.0	< - 42
8 kHz	-86.0	< - 61

Uncertainty : ± 0.25 dB

6.2 1/3 – Octave Filter

Frequency	Attenuation (dB)	IEC 1260 Class 1 Spec.(dB)
326 Hz	-64.9	< - 61
530 Hz	-48.1	< - 42
772 Hz	-23.6	< - 17.5
891 Hz	-3.9	+ 0.3 ~ - 5.0
1 kHz (Ref)	--	--
1.122 kHz	-3.9	+ 0.3 ~ - 5.0
1.296 kHz	-23.7	< - 17.5
1.887 kHz	-48.8	< - 42
3.070 kHz	-70.4	< - 61

Uncertainty : ± 0.25 dB

Remarks : 1. UUT : Unit-Under-Test

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

3. Atmospheric pressure : 996 hPa.

----- END -----



Calibration Certificate

Certificate No. 13813

Page 1 of 4 Pages

Customer : Lam Geotechnics Limited

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

Order No. : Q11569

Date of receipt : 7-Jul-11

Item Tested

Description : Sound Level Meter

Manufacturer : B&K

Model : 2250

Serial No. : 2722310

Test Conditions

Date of Test : 8-Jul-11

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:

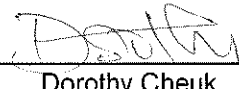
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017A	Multi-Function Generator	07279	SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR

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.

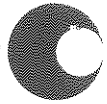
The test equipment used for calibration are traceable to International System of Units (SI).

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

Calibrated by : 
P. F. Wong

Approved by : 
Dorothy Cheuk

Date: 8-Jul-11



Calibration Certificate

Certificate No. **13813**

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Results :

1. SPL

UUT Setting				Applied Value (dB)	UUT Reading (dB)
Range	Freq. Wgt.	Time Const.	Center Freq.		
20 - 140	A (SPL)	Fast	--	94.0	93.8
		Slow	--		93.8
	C (SPL)	Fast	--	94.0	93.9
	A (SPL)	Fast	--	114.0	113.7
		Slow	--		113.7
	C (SPL)	Fast	--	114.0	113.7
	--	1/1 - Oct/Fast	1 kHz	94.0	93.8
				114.0	113.7
	--	1/3 - Oct/Fast	1 kHz	94.0	93.8
				114.0	113.7

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.2 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.01 dB

3. Linearity

Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.8	0.0	± 0.4 dB
	94.0	93.8 (Ref.)	--	
	95.0	94.8	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 13813

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4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.9	- 39.4 dB, ± 1.5 dB
63 Hz	-26.6	- 26.2 dB, ± 1.5 dB
125 Hz	-16.5	- 16.1 dB, ± 1 dB
250 Hz	-9.0	- 8.6 dB, ± 1 dB
500 Hz	-3.5	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.4	+ 1.2 dB, ± 1 dB
4 kHz	+1.2	+ 1.0 dB, ± 1 dB
8 kHz	-1.2	- 1.1 dB, + 1.5 dB \sim -3 dB
16 kHz	-5.8	- 6.6 dB, + 3 dB \sim - ∞

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	--	--
1/10	40.0	40.0	± 0.5 dB
1/10 ²	40.0	39.9	± 1.0 dB
1/10 ³	40.0	40.0	
1/10 ⁴	40.0	40.0	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 13813

Page 4 of 4 Pages

6. Filter Characteristics

6.1 1/1 – Octave Filter

Frequency	Attenuation (dB)	IEC 1260 Class 1 Spec. (dB)
125 Hz	-64.2	< - 61
250 Hz	-44.9	< - 42
500 Hz	-21.0	< - 17.5
707 Hz	-3.8	- 2 ~ - 5
1 kHz (Ref)	--	--
1.414 kHz	-3.5	- 2 ~ - 5
2 kHz	-20.8	< - 17.5
4 kHz	-55.9	< - 42
8 kHz	-85.7	< - 61

Uncertainty : ± 0.25 dB

6.2 1/3 – Octave Filter

Frequency	Attenuation (dB)	IEC 1260 Class 1 Spec.(dB)
326 Hz	-63.6	< - 61
530 Hz	-47.9	< - 42
772 Hz	-23.5	< - 17.5
891 Hz	-3.7	+ 0.3 ~ - 5.0
1 kHz (Ref)	--	--
1.122 kHz	-3.6	+ 0.3 ~ - 5.0
1.296 kHz	-23.4	< - 17.5
1.887 kHz	-48.1	< - 42
3.070 kHz	-69.8	< - 61

Uncertainty : ± 0.25 dB

Remarks : 1. UUT : Unit-Under-Test

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

3. Atmospheric pressure : 1 000 hPa.

----- END -----

**Calibration Data for High Volume Sampler (TSP Sampler)**

Location : CMA1b
 Equipment no. : EL452

Calibration Date : 25-Jun-11
 Calibration Due Date : 25-Aug-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	303	Kelvin	Pressure, P_a
			1015 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m_c	1.99628	Intercept, b_c	-0.00699
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-11				

Calibration of RSP						
Calibration Point	Manometer Reading			Q_{std} ($m^3 / min.$) X-axis	Continuous Flow Recorder, W (CFM)	IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$) Y-axis
	(up)	(down)	(difference)			
1	6.3	6.3	12.6	1.7684	59	58.5602
2	5.1	5.1	10.2	1.5914	52	51.6124
3	4.1	4.1	8.2	1.4273	44	43.6720
4	2.5	2.5	5.0	1.1153	31	30.7689
5	1.4	1.4	2.8	0.8355	19	18.8584

By Linear Regression of Y on X

Slope, m = 42.7572 Intercept, b = -16.9235
 Correlation Coefficient* = 0.9998
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Lam
 Date : 25-Jun-11

Checked by : Cherry Mak
 Date : 25-Jun-11

**Calibration Data for High Volume Sampler (TSP Sampler)**

Location : CMA2a
 Equipment no. : EL449

Calibration Date : 25-Jun-11
 Calibration Due Date : 25-Aug-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	303	Kelvin	Pressure, P _a
			1015 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	1.99628	Intercept, b _c	-0.00699
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-11				

Calibration of RSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC Y-axis (W(P _a /1013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)			
1	6.2	6.2	12.4	1.7543	59	58.5602
2	5.0	5.0	10.0	1.5758	52	51.6124
3	3.8	3.8	7.6	1.3742	40	39.7019
4	2.4	2.4	4.8	1.0928	26	25.8062
5	1.4	1.4	2.8	0.8355	14	13.8956

By Linear Regression of Y on X

Slope, m = 49.6280 Intercept, b = -27.9168
 Correlation Coefficient* = 0.9989
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Lam
 Date : 25-Jun-11

Checked by : Cherry Mak
 Date : 25-Jun-11

**Calibration Data for High Volume Sampler (TSP Sampler)**

Location : CMA4a
 Equipment no. : EL390

Calibration Date : 25-Jun-11
 Calibration Due Date : 25-Aug-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	303	Kelvin	Pressure, P_a
			1015 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m_c	1.99628	Intercept, b_c	-0.00699
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-11				

Calibration of RSP						
Calibration Point	Manometer Reading			Q_{std} ($m^3 / min.$) X-axis	Continuous Flow Recorder, W (CFM)	IC ($W(P_a/1013.3 \times 298 / T_a)^{1/2} / 35.31$) Y-axis
	(up)	(down)	(difference)			
1	5.8	5.8	11.6	1.6969	56	55.5826
2	4.6	4.6	9.2	1.5116	50	49.6273
3	3.5	3.5	7.0	1.3190	43	42.6795
4	2.3	2.3	4.6	1.0699	34	33.7466
5	1.4	1.4	2.8	0.8355	25	24.8137

By Linear Regression of Y on X

Slope, m = 35.8192 Intercept, b = -4.7936
 Correlation Coefficient* = 0.9996
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Lam
 Date : 25-Jun-11

Checked by : Cherry Mak
 Date : 25-Jun-11



Calibration Data for High Volume Sampler (TSP Sampler)

Location : CMA5a
 Equipment no. : EL380

Calibration Date : 25-Jun-11
 Calibration Due Date : 25-Aug-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	303	Kelvin	Pressure, P _a
			1015 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m _c	1.99628	Intercept, b _c	-0.00699
Last Calibration Date	28-Jun-10	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-11				

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	6.0	6.0	12	1.7258	54	53.5975
2	4.7	4.7	9.4	1.5279	49	48.6348
3	3.6	3.6	7.2	1.3376	43	42.6795
4	2.1	2.1	4.2	1.0225	34	33.7466
5	1.5	1.5	3.0	0.8647	26	25.8062

By Linear Regression of Y on X

Slope, m = 31.5137 Intercept, b = 0.0608

Correlation Coefficient* = 0.9945

Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Lam
 Date : 25-Jun-11

Checked by : Cherry Mak
 Date : 25-Jun-11

**Calibration Data for High Volume Sampler (TSP Sampler)**

Location : MA1w
 Equipment no. : EL080

Calibration Date : 25-Jun-11
 Calibration Due Date : 25-Aug-11

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	303	Kelvin	Pressure, P_a
			1015 mmHg

Orifice Transfer Standard Information					
Equipment No.	EL086	Slope, m_c	1.99628	Intercept, b_c	-0.00699
Last Calibration Date	28-Jun-10	$\left(H \times P_a / 1013.3 \times 298 / T_a \right)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-11				

Calibration of RSP						
Calibration Point	Manometer Reading			Q_{std} ($m^3 / min.$) X-axis	Continuous Flow Recorder, W (CFM)	IC ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$) Y-axis
	(up)	(down)	(difference)			
1	5.5	5.5	11.0	1.6525	52	51.6124
2	4.4	4.4	8.8	1.4784	45	44.6646
3	3.4	3.4	6.8	1.3000	38	37.7168
4	2.2	2.2	4.4	1.0464	28	27.7913
5	1.4	1.4	2.8	0.8355	19	18.8584

By Linear Regression of Y on X

Slope, m = 39.8848 Intercept, b = -14.2290
 Correlation Coefficient* = 0.9999
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : _____

Calibrated by : Sam Lam
 Date : 25-Jun-11

Checked by : Cherry Mak
 Date : 25-Jun-11



Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)
Tentative Environmental Monitoring Schedule
Aug-11

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				28-Jul	29-Jul	30-Jul
31-Jul	01-Aug 24hr TSP	02-Aug 1hr TSP x 3 24hr TSP (CMA1b)	03-Aug	04-Aug Noise (Day time) Noise (Restricted hr) 1900 - 2300	05-Aug	06-Aug 24hr TSP
07-Aug	08-Aug 1hr TSP x 3 24hr TSP (CMA4a)	09-Aug	10-Aug Noise (Day time) Noise (Restricted hr) 1900 - 2300	11-Aug Noise (Day time) (M1a, M5b) Noise (Restricted hr) (M1a, M7e, M7w)	12-Aug 24hr TSP	13-Aug 1hr TSP x 3
14-Aug	15-Aug	16-Aug Noise (Day time) Noise (Restricted hr) 1900 - 2300	17-Aug	18-Aug 24hr TSP	19-Aug 1hr TSP x 3 24hr TSP (CMA2a)	20-Aug
21-Aug	22-Aug Noise (Day time) Noise (Restricted hr) 1900 - 2300	23-Aug	24-Aug 24hr TSP	25-Aug 1hr TSP x 3	26-Aug	27-Aug

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)
Tentative Environmental Monitoring Schedule
September 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Aug	29-Aug	30-Aug 24hr TSP Noise (Day time) Noise (Restricted hr) 1900-2300	31-Aug 1hr TSP x 3	01-Sep	02-Sep	03-Sep
04-Sep	05-Sep 24hr TSP	06-Sep 1hr TSP x 3	07-Sep Noise (Day time) Noise (Restricted hr) 1900-2300	08-Sep	09-Sep	10-Sep 24hr TSP
11-Sep	12-Sep 1hr TSP x 3	13-Sep	14-Sep	15-Sep Noise (Day time) Noise (Restricted hr) 1900-2300	16-Sep 24hr TSP	17-Sep 1hr TSP x 3
18-Sep	19-Sep	20-Sep Noise (Day time) Noise (Restricted hr) 1900-2300	21-Sep	22-Sep 24hr TSP	23-Sep 1hr TSP x 3	24-Sep
25-Sep	26-Sep	27-Sep Noise (Day time) Noise (Restricted hr) 1900-2300	28-Sep 24hr TSP	29-Sep 1hr TSP x 3	30-Sep	01-Oct

Contract No. HK/2009/05
Wan Chai Development Phase II and Central-Wan Chai Bypass
Sampling, Field Measurement and Testing Works (Stage 1)
Tentative Environmental Monitoring Schedule
October 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25-Sep	26-Sep	27-Sep Noise (Day time) Noise (Restricted hr) 1900-2300	28-Sep 24hr TSP	29-Sep 1hr TSP x 3	30-Sep	1-Oct
2-Oct	3-Oct 24hr TSP	4-Oct 1hr TSP x 3	5-Oct	6-Oct	7-Oct Noise (Day time) Noise (Restricted hr) 1900-2300	8-Oct 24hr TSP
9-Oct	10-Oct 1hr TSP x 3	11-Oct Noise (Day time) Noise (Restricted hr) 1900-2300	12-Oct	13-Oct	14-Oct 24hr TSP	15-Oct 1hr TSP x 3
16-Oct	17-Oct	18-Oct Noise (Day time) Noise (Restricted hr) 1900-2300	19-Oct	20-Oct 24hr TSP	21-Oct 1hr TSP x 3	22-Oct
23-Oct	24-Oct	25-Oct Noise (Day time) Noise (Restricted hr) 1900-2300	26-Oct 24hr TSP	27-Oct 1hr TSP x 3	28-Oct	29-Oct

Remarks (Air)

1. Cut-off date is at the 27th of each reporting month
2. Actual monitoring will subject to change due to any safety concern or adverse weather condition.
3. Air Quality Monitoring Stations corresponding to active contracts are sub-divided below
 - Contract 04/HY/2006: MA1e and MA1w (major works were compelled, no monitoring was conducted)
 - Contract HK/2009/01: CMA5a
 - Contract HK/2009/02: CMA4a
 - Contract HY/2009/15: CMA3a
 - Contract HY/2009/17: CMA2a
 - Contract HY/2009/18: MA1e and MA1w
 - Contract HY/2009/19: CMA1b and CMA2a

Remarks (Noise)

1. Cut-off date is at the 27th of each reporting month.
2. Actual monitoring will subject to change due to any safety concern or adverse weather condition.
3. Noise Monitoring Stations corresponding to active contracts are sub-divided below:
 - Contract HK/2009/01 M1a
 - Contract HK/2009/02: M1a
 - Contract HY/2009/15: M2b
 - Contract HY/2009/17: M4b
 - Contract HY/2009/19: M3a, M4b, M5b, M6
 - Contract 04/HY/2006: M7e, M7w (major works were compelled, no monitoring was conducted)
 - Contract HY/2009/19: M3a, M4b M5b, M6
4. Day time noise will be monitored for Leq(30min) during the period between 07:00 and 19:00 for active contract(s). & Restricted hours noise (i.e. outside 07:00-19:00 of normal weekday) will be monitored for 3 nos. Leq(5min) as per the relevant Construction Noise Permit(s) in force



Appendix 5.2

Noise Monitoring Results and Graphical Presentations



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: M1a - Harbour Road Sports Centre

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
04/08/11	10:43	Sunny	73.1	75.6	68.8	69.2	71	75
11/8/2011*	15:07	Fine	73.3	75.2	70.1	69.2	71	75
16/08/11	17:43	Fine	72.9	75.5	68.0	69.2	70	75
22/08/11	15:07	Fine	73.3	75.3	69.8	69.2	71	75

Remark: Noise monitoring was rescheduled from 10 /8/2011 to 11/8/2011 due to rain

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)								
04/08/11	15:30	Sunny	67.0	68.4	64.9	-	67	75
10/08/11	10:50	Cloudy	68.0	69.4	66.2	-	68	75
16/08/11	18:30	Fine	66.5	68.0	64.0	-	67	75
22/08/11	15:55	Fine	70.1	71.5	68.0	-	70	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)								
04/08/11	13:00	Sunny	67.9	69.7	65.8	-	68	75
10/08/11	11:30	Cloudy	66.7	68.3	64.5	-	67	75
16/08/11	15:31	Sunny	67.5	69.2	65.3	-	68	75
22/08/11	9:18	Fine	70.9	72.1	68.2	-	71	75

Location: M4b - Victoria Centre

Date	Time	Weather	Measurement Noise Level			Baseline Noise Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)								
04/08/11	11:30	Sunny	68.7	70.2	66.4	-	69	75
10/08/11	15:45	Cloudy	70.8	71.7	68.4	-	71	75
16/08/11	13:33	Sunny	72.8	75.7	68.3	-	73	75
22/08/11	10:00	Fine	70.5	71.7	68.3	-	71	75

Location: M5b - City Garden

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)								
04/08/11	13:47	Sunny	69.6	70.4	68.4	-	70	75
11/8/2011*	16:20	Fine	70.0	70.9	68.8	-	70	75
16/08/11	17:45	Sunny	68.6	71.1	66.7	-	69	75
22/08/11	16:42	Fine	70.6	72.1	68.6	-	71	75

Remark: Noise monitoring was rescheduled from 10 /8/2011 to 11/8/2011 due to rain

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)								
04/08/11	14:36	Sunny	72.2	73.9	70.3	70.7	67	70
10/08/11	16:40	Cloudy	74.2	75.4	72.5	70.7	72	70
16/08/11	16:30	Sunny	74.9	76.2	72.6	70.7	73	70
22/08/11	10:55	Fine	73.5	74.6	71.7	70.7	70	70



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: M7e - International Finance Centre (Eastern End of Podium)

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
04/08/11	9:15	Sunny	71.5	74.0	67.9	-	72	75
10/08/11	9:34	Cloudy	71.2	72.1	67.4	-	71	75
16/08/11	9:27	Sunny	72.8	74.7	68.7	-	73	75
22/08/11	13:32	Fine	70.8	71.9	69.3	-	71	75

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

Date	Time	Weather	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)								
04/08/11	9:45	Sunny	66.4	68.8	63.0	-	66	75
10/08/11	8:55	Cloudy	66.5	67.8	64.5	-	67	75
16/08/11	10:07	Sunny	68.5	70.6	64.1	-	69	75
22/08/11	14:15	Fine	70.1	72.4	66.1	-	70	75



Noise Monitoring Result

Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)

Location: M1a - Harbour Road Sports Center

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
Unit: dB(A), (5-min)									
04/08/11	20:06	Fine	69.3	72.6	62.9	69.2	61.1	68	70
	20:11		69.8	72.9	63.1				
	20:16		68.5	71.5	62.5				
11/08/11	19:03	Fine	71.3	74.0	67.0	70.7	61.1	70	70
	19:08		70.3	73.0	64.5				
	19:13		70.4	72.9	65.1				
16/08/11	21:54	Fine	69.4	72.6	63.1	68.8	61.1	68	70
	22:02		68.9	71.6	63.3				
	22:07		68.1	71.2	61.8				
22/08/11	20:25	Fine	72.9	75.1	69.3	72.9	61.1	73	70
	20:30		72.8	74.9	70.1				
	20:35		73.0	75.7	69.1				

Location: M2b -Noon-day gun area

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
Unit: dB(A), (5-min)									
04/08/11	20:10	Fine	67.6	69.0	65.2	67.8	-	68	70
	20:15		66.9	68.6	64.5				
	20:20		67.6	69.3	64.6				
10/08/11	19:00	Cloudy	67.8	69.3	65.5	67.2	-	67	70
	19:06		66.9	68.0	65.1				
	19:12		67.0	68.2	65.4				
16/08/11	19:12	Fine	66.0	67.0	63.5	66.0	-	66	70
	19:17		66.6	68.0	64.5				
	19:22		65.5	67.0	63.5				
22/08/11	19:00	Fine	63.4	67.0	53.5	63.4	-	63	70
	19:05		51.3*	52.5	49.5				
	19:10		51.9*	53.5	49.5				

*Remarks: The abnormal data were discarded due to the low voltage supply of the battery.

Location: M3a - Tung Lo Wan Fire Station

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
Unit: dB(A), (5-min)									
04/08/11	20:38	Fine	64.9	66.4	62.5	65.3	-	65	70
	20:43		64.5	66.3	62.3				
	20:48		66.6	69.2	62.8				
10/08/11	19:37	Cloudy	65.6	67.9	62.7	65.5	-	66	70
	19:43		65.4	67.2	63.4				
	19:49		65.5	67.3	63.2				
16/08/11	19:50	Fine	71.9	73.5	66.0	70.1	-	70	70
	19:55		68.9	71.5	64.0				
	20:05		69.5	72.0	64.5				
22/08/11	19:30	Fine	65.5	67.5	62.5	65.0	-	65	70
	19:35		64.7	66.5	62.0				
	19:40		64.7	67.0	62.0				



Noise Monitoring Result

Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)

Location: M7e - International Finance Centre (Eastern End of Podium)

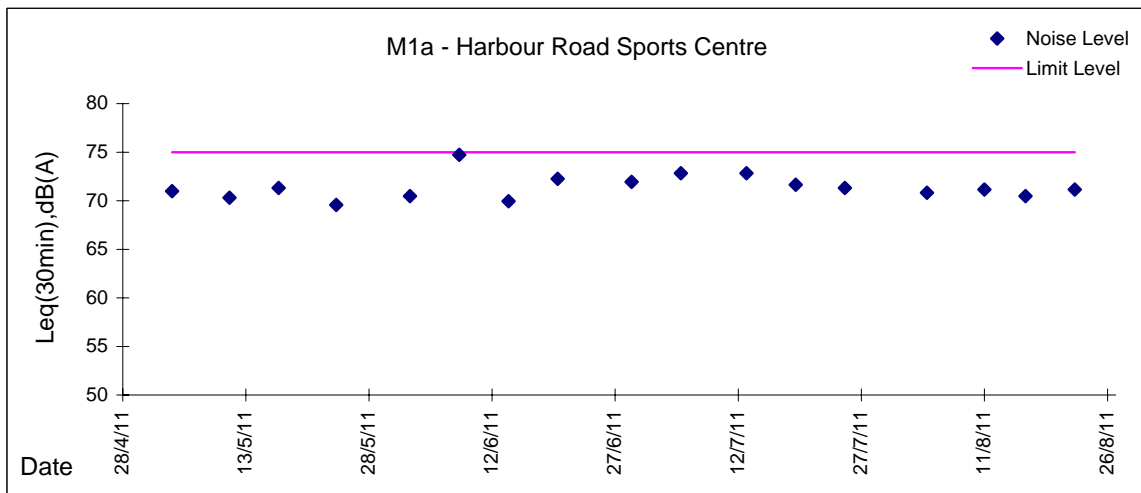
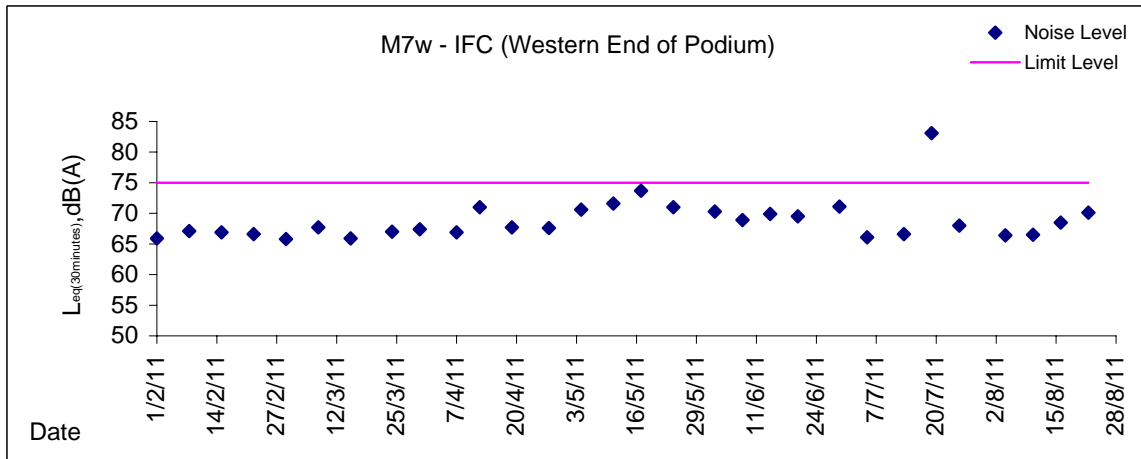
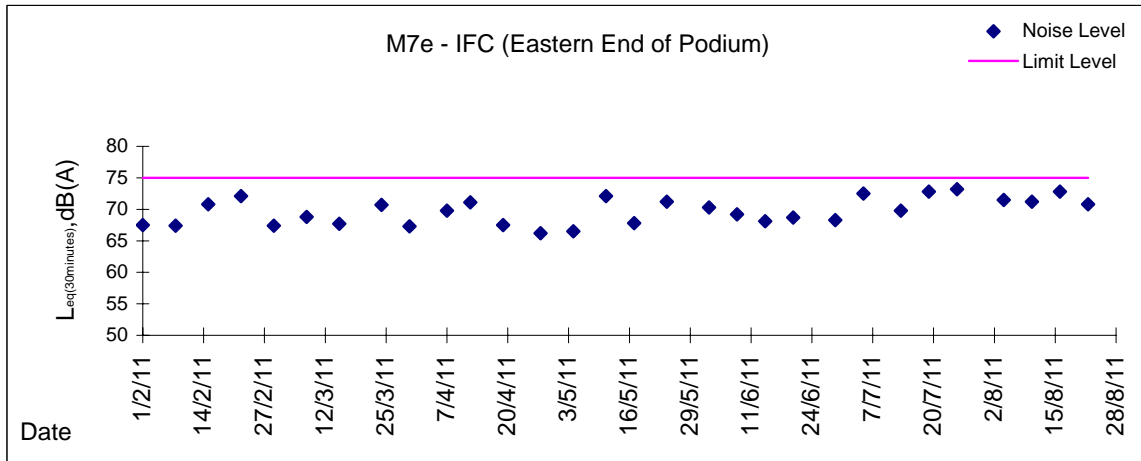
Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
Unit: dB(A), (5-min)									
04/08/11	19:00	Fine	65.8	67.7	63.5	65.2	-	65	70
	19:05		65.2	66.8	62.2				
	19:10		64.5	66.3	62.5				
11/08/11	19:52	Fine	64.4	66.5	61.7	65.0	-	65	70
	19:57		64.3	66.0	61.9				
	20:02		66.2	69.6	61.8				
16/08/11	19:55	Fine	64.8	66.7	61.7	64.3	-	64	70
	20:01		65.1	67.1	61.8				
	20:07		63.1	64.8	61.1				
22/08/11	19:10	Fine	64.8	66.6	62.1	65.5	-	66	70
	19:15		65.7	67.6	61.5				
	19:20		66.0	68.1	63.0				

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

Date	Time	Weather	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level
			Leq	L10	L90	Leq	Leq	Leq	Leq
Unit: dB(A), (5-min)									
04/08/11	19:28	Fine	64.7	67.0	61.9	63.6	-	64	70
	19:33		63.0	64.4	60.9				
	19:38		63.0	64.3	60.8				
11/08/11	19:27	Fine	64.3	65.5	62.4	65.0	-	65	70
	19:32		64.0	65.4	62.1				
	19:37		66.8	69.6	63.4				
16/08/11	19:15	Fine	64.1	65.5	61.8	63.4	-	63	70
	19:21		64.2	66.1	61.2				
	19:27		62.0	63.5	60.3				
22/08/11	19:38	Fine	64.1	65.3	62.4	64.3	-	64	70
	19:43		64.4	66.4	62.0				
	19:48		64.4	65.7	62.2				



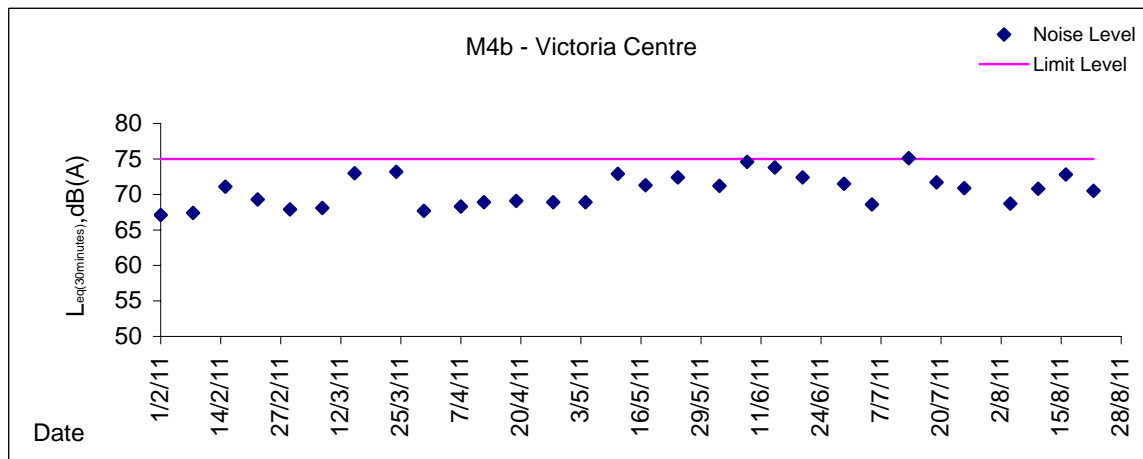
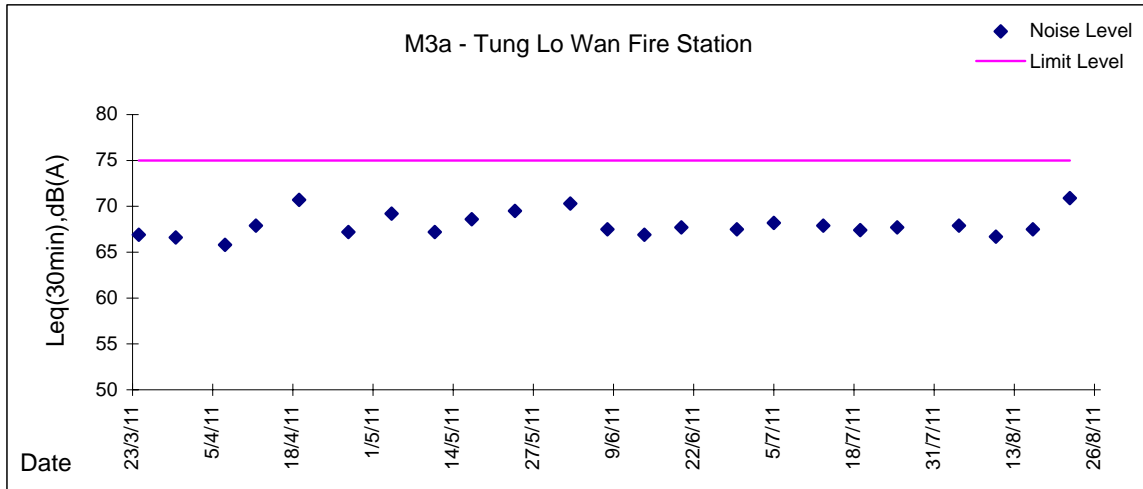
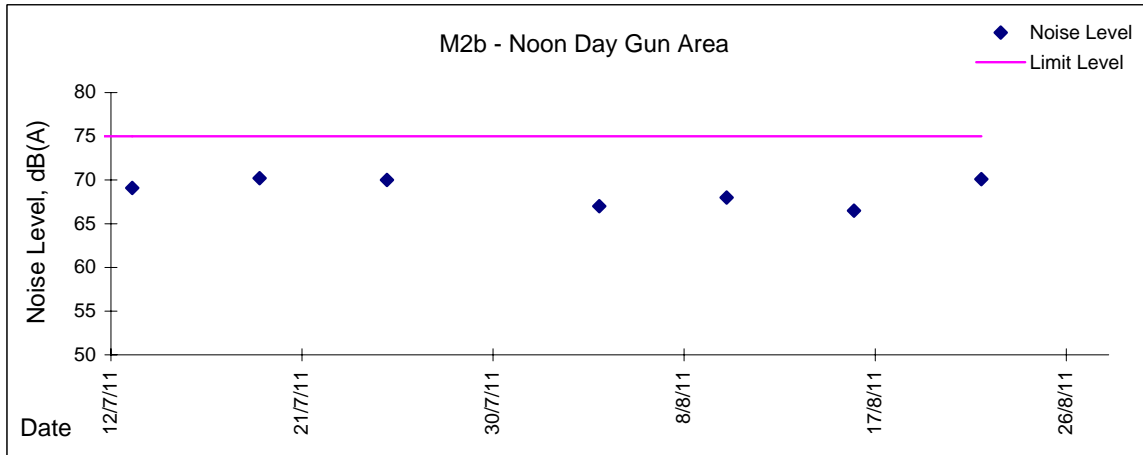
Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)





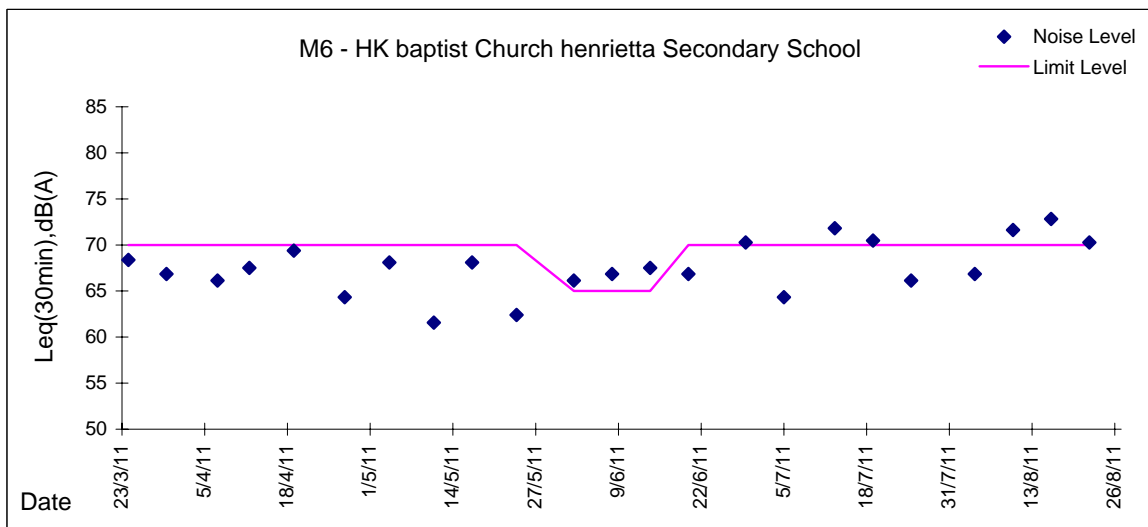
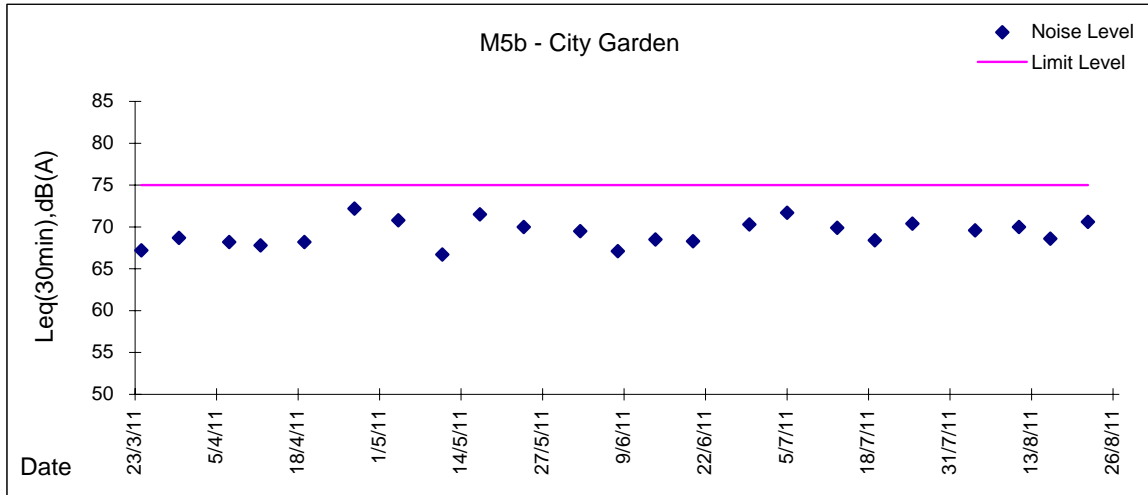
Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)





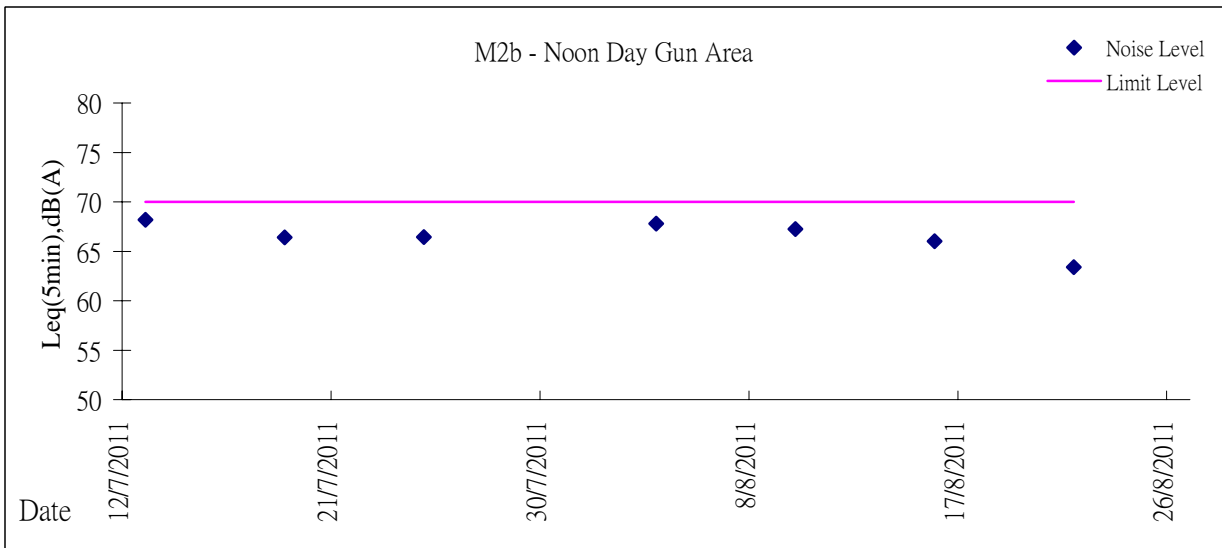
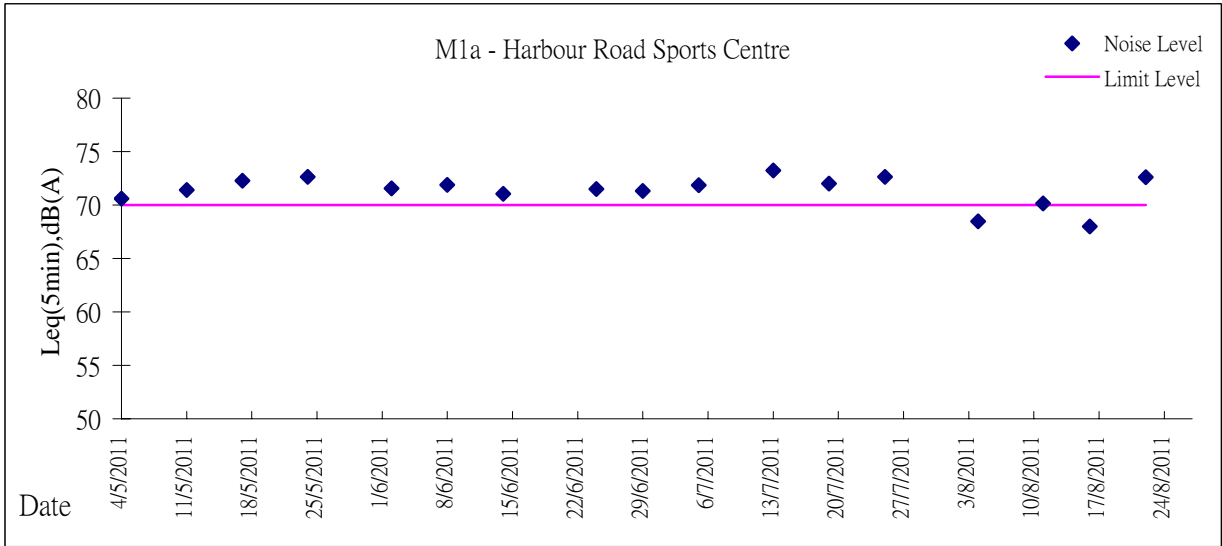
Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)

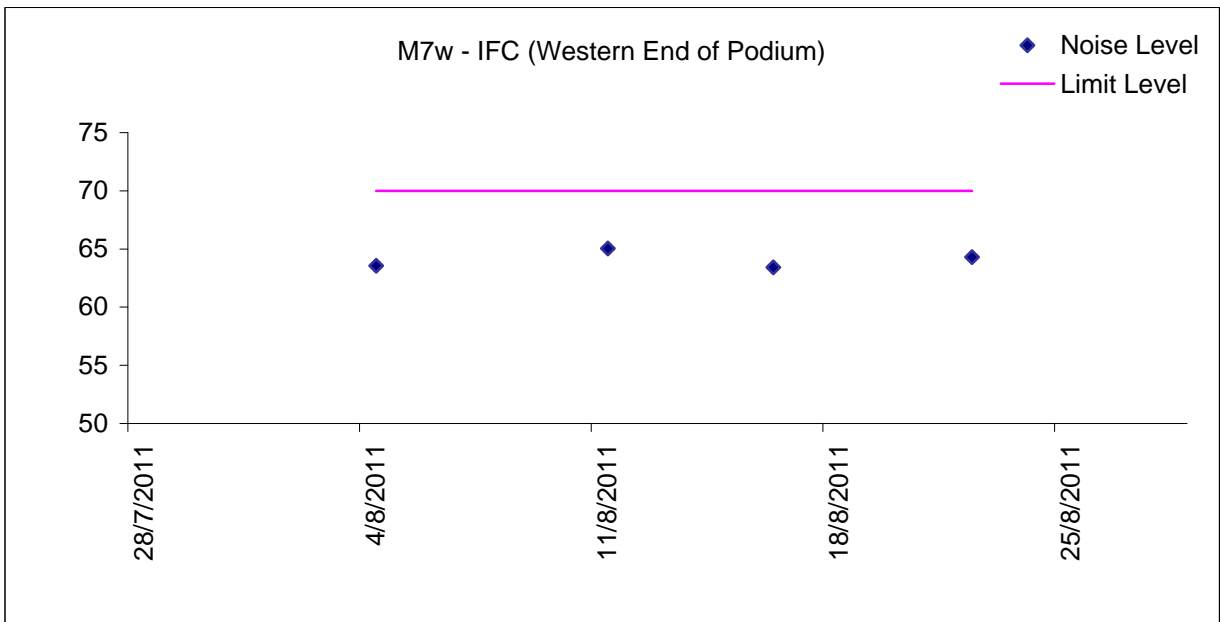
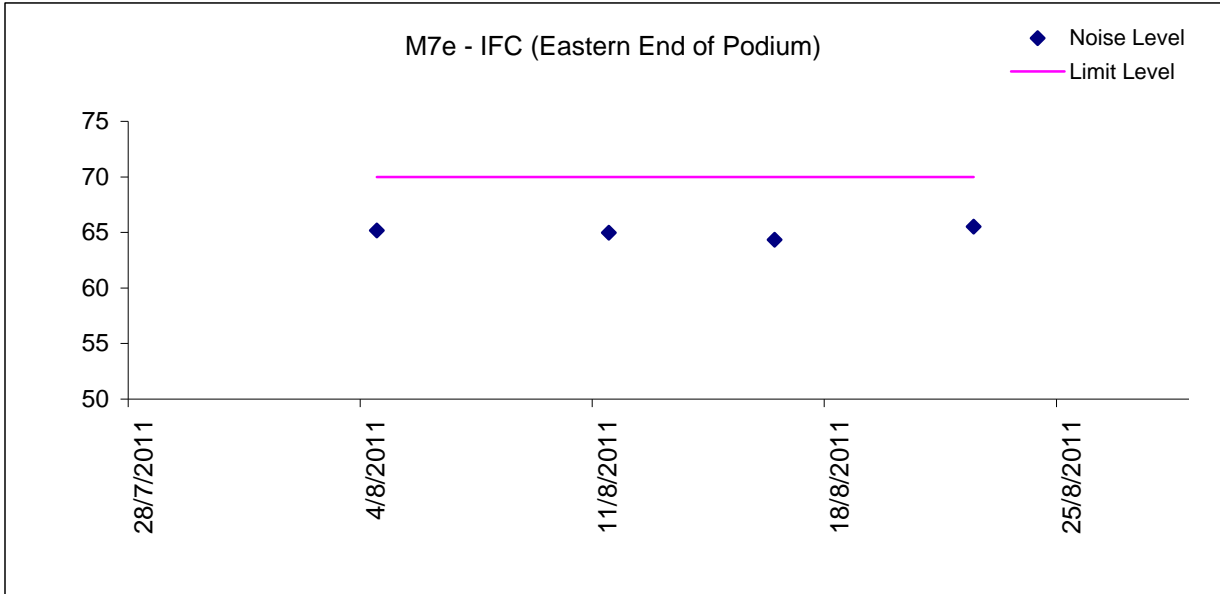




Graphic Presentation of Noise Monitoring Result

Restricted Time (1900 - 2300 hrs on normal weekdays and 0700-2300 on holiday)







Appendix 5.3

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



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		
1/8/2011	8:00	Fine	001009	2.8007	2.8910	7218.62	7242.62	24.00	1.41	1.41	1.41	2029	45
6/8/2011	8:00	Fine	000681	2.8112	2.8804	7242.62	7266.62	24.00	1.41	1.41	1.41	2029	34
12/8/2011	8:00	Fine	001055	2.8004	2.8686	7286.22	7310.26	24.04	1.41	1.41	1.41	2033	34
18/8/2011	8:00	Fine	000957	2.8123	2.8527	7310.26	7334.26	24.00	1.41	1.41	1.41	2035	20
24/8/2011	8:00	Fine	001018	2.7990	2.9205	7337.26	7361.26	24.00	1.31	1.31	1.31	1892	64

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		
2/8/2011	13:15	Fine	001015	2.7935	2.7999	7215.62	7216.62	1.00	1.37	1.37	1.37	82	78
2/8/2011	14:27	Fine	001010	2.7816	2.7917	7216.62	7217.62	1.00	1.37	1.37	1.37	82	123
2/8/2011	15:30	Fine	001011	2.8003	2.8082	7217.62	7218.62	1.00	1.37	1.37	1.37	82	96
8/8/2011	8:29	Sunny	000997	2.7791	2.7828	7266.62	7267.62	1.00	1.37	1.37	1.37	82	45
8/8/2011	9:58	Sunny	000999	2.7964	2.8004	7267.62	7268.62	1.00	1.37	1.37	1.37	82	49
8/8/2011	13:00	Sunny	001001	2.7608	2.7632	7268.62	7269.62	1.00	1.37	1.37	1.37	82	29
13/8/2011	9:00	Sunny	001058	2.7903	2.7983	7283.22	7284.22	1.00	1.17	1.17	1.17	70	114
13/8/2011	10:00	Sunny	001057	2.7730	2.7782	7284.22	7285.22	1.00	1.20	1.20	1.20	72	72
13/8/2011	13:00	Sunny	001056	2.7946	2.8002	7285.22	7286.22	1.00	1.20	1.20	1.20	72	78
19/8/2011	8:33	Sunny	000954	2.7971	2.7992	7334.26	7335.26	1.00	1.18	1.18	1.18	71	30
19/8/2011	9:38	Sunny	001006	2.7891	2.7926	7335.26	7336.26	1.00	1.20	1.20	1.20	72	49
19/8/2011	10:42	Sunny	001008	2.7964	2.7994	7336.26	7337.26	1.00	1.20	1.20	1.20	72	42
25/8/2011	9:00	Fine	001052	2.7992	2.8109	7361.26	7362.26	1.00	1.27	1.27	1.27	76	153
25/8/2011	10:10	Fine	001054	2.7731	2.7849	7362.26	7363.26	1.00	1.27	1.27	1.27	76	154
25/8/2011	13:00	Fine	001152	2.7475	2.7555	7363.26	7364.26	1.00	1.29	1.29	1.29	78	103



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		
1/8/2011	8:00	Fine	001003	2.7642	2.8676	10382.57	10406.56	23.99	1.28	1.28	1.28	1847	56
6/8/2011	8:00	Fine	001012	2.8190	2.8933	10409.56	10433.56	24.00	1.28	1.28	1.28	1848	40
12/8/2011	8:00	Fine	000600	2.7755	2.8439	10436.56	10460.57	24.01	1.26	1.26	1.26	1814	38
18/8/2011	8:00	Fine	000956	2.8161	2.8810	10488.57	10512.57	24.00	1.26	1.26	1.26	1819	36
24/8/2011	8:00	Fine	001019	2.7963	2.8946	10515.57	10539.57	24.00	1.26	1.26	1.26	1809	54

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		
2/8/2011	9:08	Fine	001016	2.7941	2.8002	10406.56	10407.56	1.00	1.31	1.31	1.31	79	78
2/8/2011	10:13	Fine	001014	2.7884	2.7930	10407.56	10408.56	1.00	1.31	1.31	1.31	79	59
2/8/2011	11:20	Fine	001013	2.7900	2.7946	10408.56	10409.56	1.00	1.31	1.31	1.31	79	59
8/8/2011	8:38	Fine	000998	2.7619	2.7649	10433.56	10434.56	1.00	1.31	1.31	1.31	78	38
8/8/2011	10:05	Fine	001000	2.7893	2.7924	10434.56	10435.56	1.00	1.31	1.31	1.31	78	40
8/8/2011	13:00	Fine	001002	2.7911	2.7934	10435.56	10436.56	1.00	1.31	1.31	1.31	78	29
13/8/2011	9:00	Sunny	001133	2.7805	2.7866	10460.57	10461.57	1.00	1.21	1.24	1.23	74	82
13/8/2011	10:00	Sunny	001050	2.7709	2.7775	10461.57	10462.57	1.00	1.21	1.21	1.21	73	91
13/8/2011	11:00	Sunny	001051	2.7677	2.7727	10462.57	10463.57	1.00	1.21	1.25	1.23	75	67
19/8/2011	8:40	Sunny	001005	2.7910	2.7953	10512.57	10513.57	1.00	1.22	1.26	1.24	74	58
19/8/2011	9:45	Sunny	001007	2.7947	2.7994	10513.57	10514.57	1.00	1.22	1.22	1.22	73	65
19/8/2011	10:49	Sunny	001017	2.7893	2.7946	10514.57	10515.57	1.00	1.24	1.26	1.25	75	71
25/8/2011	9:00	Cloudy	001053	2.7793	2.7890	10539.57	10540.57	1.00	1.26	1.16	1.21	73	134
25/8/2011	10:10	Cloudy	001151	2.7525	2.7614	10540.57	10541.57	1.00	1.16	1.09	1.13	68	132
25/8/2011	13:00	Cloudy	001153	2.7552	2.7639	10541.57	10542.57	1.00	1.21	1.21	1.21	73	120



Location: CMA1b - Oil St Community Liaison Centre

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		
2/8/2011*	14:02	Fine	000931	2.7784	2.8992	9650.66	9674.65	23.99	1.24	1.24	1.24	1781	67
6/8/2011	8:00	Sunny	000946	2.7627	2.9031	9677.64	9701.65	24.01	1.24	1.24	1.24	1783	79
12/8/2011	8:00	Sunny	000924	2.8012	2.8933	9704.60	9728.60	24.00	1.24	1.24	1.24	1786	52
18/8/2011	8:00	Sunny	000959	2.8025	2.8717	9731.60	9755.04	23.44	1.24	1.24	1.24	1745	40
24/8/2011	8:00	Fine	000741	2.7562	2.9104	9758.04	9782.03	23.99	1.18	1.18	1.18	1704	90

* Due to lack of electricity supply, 24-hr TSP rescheduled from 1 Aug 2011 to 2 Aug 2011

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		
2/8/2011	9:02	Fine	000876	2.8372	2.8438	9674.65	9675.65	1.00	1.28	1.24	1.26	76	87
2/8/2011	10:07	Fine	000852	2.7774	2.7856	9675.65	9676.65	1.00	1.28	1.24	1.26	76	108
2/8/2011	13:00	Fine	000853	2.7834	2.7935	9676.65	9677.65	1.00	1.24	1.24	1.24	74	136
8/8/2011	9:35	Fine	000821	2.8189	2.8236	9701.65	9702.65	1.00	1.06	1.09	1.06	64	74
8/8/2011	10:52	Fine	000923	2.8370	2.8404	9702.65	9703.60	0.95	1.20	1.17	1.18	67	50
8/8/2011	13:00	Fine	000926	2.7646	2.7689	9703.60	9704.60	1.00	1.19	1.15	1.17	70	61
13/8/2011	8:36	Sunny	000867	2.7507	2.7575	9728.60	9729.60	1.00	1.06	1.06	1.06	64	107
13/8/2011	9:53	Sunny	000868	2.7561	2.7639	9729.60	9730.60	1.00	1.20	1.17	1.18	71	110
13/8/2011	13:00	Sunny	000960	2.8243	2.8326	9730.60	9731.60	1.00	1.20	1.15	1.17	70	118
19/8/2011	8:45	Sunny	000970	2.8155	2.8242	9755.04	9756.04	1.00	1.22	1.22	1.22	73	119
19/8/2011	9:50	Sunny	000743	2.7735	2.7790	9756.04	9757.04	1.00	1.20	1.20	1.20	72	77
19/8/2011	10:53	Sunny	000742	2.7769	2.7822	9757.04	9758.04	1.00	1.20	1.20	1.20	72	74
25/8/2011	9:06	Fine	001025	2.8325	2.8559	9782.03	9783.03	1.00	1.28	1.19	1.23	74	317
25/8/2011	10:12	Fine	001027	2.7882	2.8048	9783.03	9784.03	1.00	1.30	1.19	1.24	75	223
25/8/2011	13:00	Fine	001029	2.7717	2.7830	9784.03	9785.03	1.00	1.21	1.19	1.20	72	157

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		
1/8/2011	8:00	Fine	000934	2.7861	2.8850	14123.91	14147.90	23.99	1.29	1.29	1.29	1854	53
6/8/2011	8:00	Sunny	000855	2.7628	2.8409	14150.90	14174.90	24.00	1.33	1.33	1.33	1910	41
12/8/2011	8:00	Sunny	000925	2.7730	2.8292	14177.90	14201.90	24.00	1.33	1.33	1.33	1913	29
19/8/2011*	12:15	Sunny	001112	2.8116	2.8752	14207.90	14231.90	24.00	1.33	1.33	1.33	1914	33
24/8/2011	8:00	Fine	001150	2.7496	2.8748	14231.90	14255.90	24.00	1.41	1.41	1.41	2037	61

* Due to lack of electricity supply, 24-hr TSP rescheduled from 18 Aug 2011 to 19 Aug 2011

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		
2/8/2011	8:54	Fine	000875	2.8496	2.8560	14147.90	14148.90	1.00	1.33	1.33	1.33	80	80
2/8/2011	9:57	Fine	000872	2.7527	2.7593	14148.90	14149.90	1.00	1.33	1.33	1.33	80	83
2/8/2011	13:00	Fine	000854	2.7843	2.7915	14149.90	14150.90	1.00	1.33	1.33	1.33	80	90
8/8/2011	9:20	Fine	000820	2.7950	2.8036	14174.90	14175.90	1.00	1.33	1.33	1.33	80	108
8/8/2011	10:40	Fine	000722	2.8066	2.8131	14175.90	14176.90	1.00	1.33	1.33	1.33	80	82
8/8/2011	13:00	Fine	000927	2.7661	2.7701	14176.90	14177.90	1.00	1.33	1.33	1.33	80	50
13/8/2011	8:48	Sunny	000601	2.7799	2.7882	14201.90	14202.90	1.00	1.33	1.33	1.33	80	104
13/8/2011	10:04	Sunny	000869	2.7396	2.7474	14202.90	14203.90	1.00	1.33	1.33	1.33	80	98
13/8/2011	13:00	Sunny	000870	2.7395	2.7473	14203.90	14204.90	1.00	1.33	1.33	1.33	80	98
19/8/2011	8:53	Sunny	000958	2.7956	2.8031	14204.91	14205.91	1.00	1.33	1.33	1.33	80	94
19/8/2011	9:56	Sunny	000744	2.7833	2.7857	14205.91	14206.91	1.00	1.33	1.33	1.33	76	32
19/8/2011	11:00	Sunny	000745	2.7839	2.7856	14206.91	14207.91	1.00	1.33	1.33	1.33	60	28
25/8/2011	8:56	Fine	001024	2.8158	2.8255	14255.90	14256.90	1.00	1.42	1.42	1.42	85	114
25/8/2011	10:01	Fine	001026	2.7759	2.7928	14256.90	14257.90	1.00	1.37	1.42	1.39	84	202
25/8/2011	13:00	Fine	001028	2.7826	2.7933	14257.90	14258.90	1.00	1.35	1.42	1.39	83	129



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		
1/8/2011	8:00	Fine	001004	2.7806	2.8980	9956.64	9980.64	24.00	1.46	1.47	1.46	2106	56
6/8/2011	8:00	Fine	000862	2.7578	2.8495	9983.64	10007.64	24.00	1.46	1.46	1.46	2106	44
12/8/2011	8:00	Sunny	001106	2.7988	2.8769	10010.65	10034.65	24.00	1.47	1.47	1.47	2111	37
18/8/2011	8:00	Sunny	001113	2.7832	2.8548	10037.65	10061.64	23.99	1.44	1.44	1.44	2070	35
24/8/2011	8:00	Fine	001078	2.7895	2.9081	10064.64	10088.64	24.00	1.36	1.36	1.36	1955	61

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		
2/8/2011	10:00	Fine	000941	2.7841	2.8028	9980.64	9981.64	1.00	1.35	1.35	1.35	81	231
2/8/2011	13:00	Fine	000945	2.7670	2.7784	9981.64	9982.64	1.00	1.35	1.35	1.35	81	141
2/8/2011	14:48	Fine	000858	2.7679	2.7753	9982.64	9983.64	1.00	1.35	1.35	1.35	81	91
8/8/2011	9:33	Fine	001101	2.7816	2.7842	10007.64	10008.64	1.00	1.35	1.35	1.35	81	32
8/8/2011	10:37	Fine	001102	2.7897	2.7955	10008.64	10009.64	1.00	1.35	1.35	1.35	81	72
8/8/2011	14:00	Fine	001105	2.7932	2.7981	10009.64	10010.64	1.00	1.35	1.35	1.35	81	61
13/8/2011	8:31	Sunny	001118	2.8283	2.8357	10034.65	10035.65	1.00	1.35	1.35	1.35	81	92
13/8/2011	9:35	Sunny	001109	2.8025	2.8092	10035.65	10036.65	1.00	1.35	1.35	1.35	81	83
13/8/2011	10:38	Sunny	001117	2.7971	2.8048	10036.65	10037.65	1.00	1.35	1.35	1.35	81	95
19/8/2011	8:25	Sunny	001082	2.7847	2.7886	10061.64	10062.64	1.00	1.35	1.35	1.35	81	48
19/8/2011	9:29	Sunny	001083	2.8050	2.8108	10062.64	10063.64	1.00	1.35	1.35	1.35	81	72
19/8/2011	10:33	Sunny	001075	2.7938	2.7988	10063.64	10064.64	1.00	1.35	1.35	1.35	81	62
25/8/2011	10:50	Cloudy	001162	2.7380	2.7474	10088.64	10089.64	1.00	1.41	1.41	1.41	85	111
25/8/2011	15:10	Cloudy	001161	2.7251	2.7380	10089.64	10090.64	1.00	1.41	1.41	1.41	85	152
25/8/2011	16:15	Cloudy	001160	2.7475	2.7587	10090.64	10091.64	1.00	1.41	1.41	1.41	85	132



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		
1/8/2011	8:00	Fine	000991	2.7708	2.8554	13558.28	13582.28	24.00	1.03	1.03	1.03	1487	57
8/8/2011*	8:00	Fine	001119	2.8217	2.8719	13636.27	13660.26	23.99	1.03	1.03	1.03	1488	34
12/8/2011	8:00	Sunny	001100	2.8013	2.8704	13660.26	13684.26	24.00	1.04	1.04	1.04	1491	46
18/8/2011	8:00	Sunny	001115	2.8047	2.8488	13687.56	13711.56	24.00	1.09	1.09	1.09	1569	28
24/8/2011	8:00	Fine	001079	2.7904	2.9056	13714.26	13738.26	24.00	1.12	1.12	1.12	1613	71

* Due to lack of electricity supply, 24-hr TSP rescheduled from 6 Aug 2011 to 8 Aug 2011

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		
2/8/2011	9:08	Fine	000940	2.7725	2.7774	13582.28	13583.28	1.00	1.09	1.09	1.09	65	75
2/8/2011	13:00	Fine	000948	2.7595	2.7676	13583.28	13584.28	1.00	1.09	1.09	1.09	65	124
2/8/2011	14:37	Fine	000856	2.7484	2.7556	13584.28	13585.28	1.00	1.09	1.09	1.09	65	110
8/8/2011	9:17	Fine	001120	2.7916	2.7959	13633.27	13634.27	1.00	1.09	1.09	1.09	65	66
8/8/2011	10:23	Fine	001103	2.8020	2.8063	13634.27	13635.27	1.00	1.09	1.09	1.09	65	66
8/8/2011	13:00	Fine	001104	2.7948	2.7977	13635.27	13636.27	1.00	1.09	1.09	1.09	65	44
13/8/2011	8:17	Sunny	001107	2.8141	2.8223	13684.26	13685.26	1.00	1.09	1.09	1.09	65	126
13/8/2011	9:20	Sunny	001108	2.8159	2.8245	13685.26	13686.26	1.00	1.09	1.09	1.09	65	132
13/8/2011	10:22	Sunny	001116	2.8271	2.8368	13686.26	13687.26	1.00	1.09	1.09	1.09	65	149
19/8/2011	8:11	Sunny	001081	2.7901	2.7923	13711.26	13712.26	1.00	1.09	1.09	1.09	65	34
19/8/2011	9:16	Sunny	001080	2.7780	2.7800	13712.26	13713.26	1.00	1.09	1.09	1.09	65	31
19/8/2011	10:21	Sunny	001074	2.7832	2.7857	13713.26	13714.26	1.00	1.09	1.09	1.09	65	38
25/8/2011	15:45	Cloudy	001155	2.7301	2.7383	13738.25	13739.25	1.00	1.17	1.12	1.15	69	119
25/8/2011	16:50	Cloudy	001156	2.7345	2.7432	13739.25	13740.25	1.00	1.17	1.15	1.16	69	125
25/8/2011	17:55	Cloudy	001157	2.7292	2.7369	13740.25	13741.25	1.00	1.17	1.16	1.16	69	111

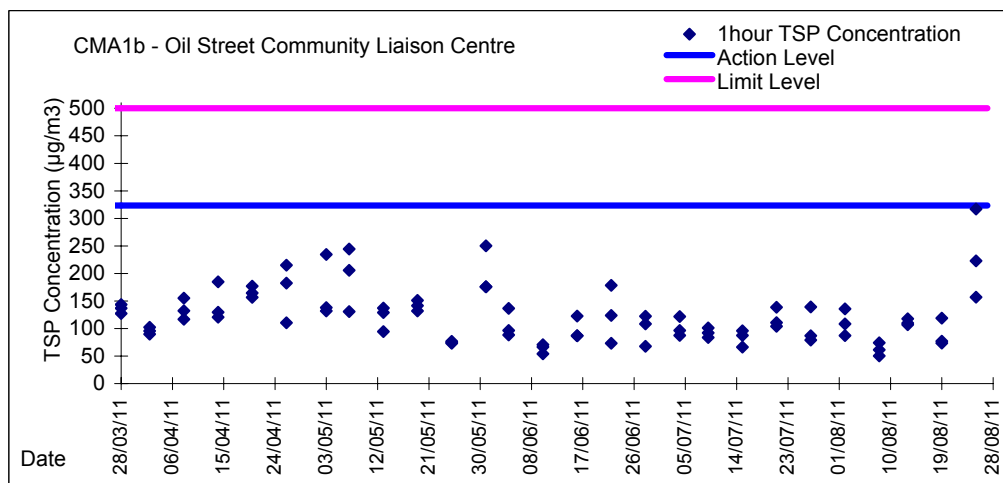
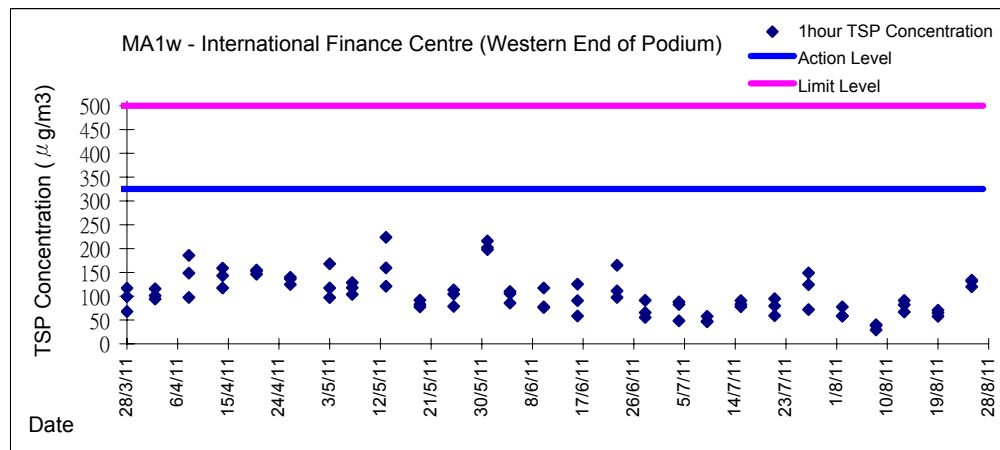
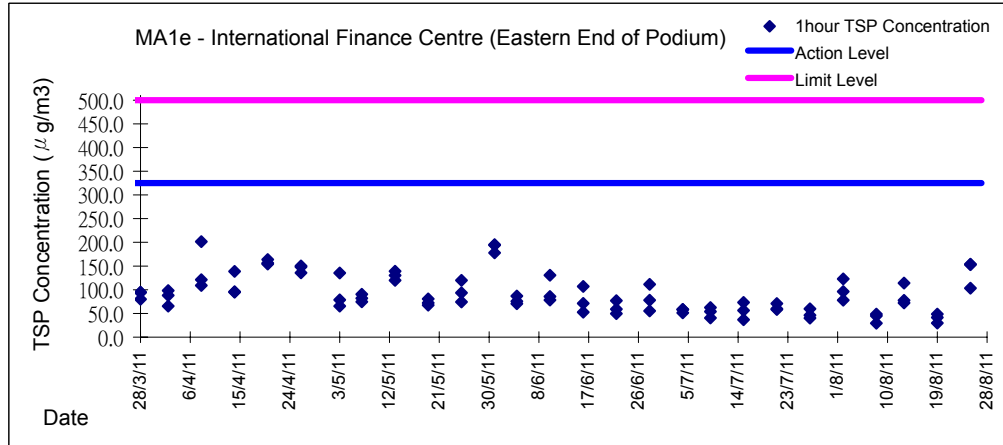


Location: CMA5a - Children Garden opposite to Pedestrian Plaza

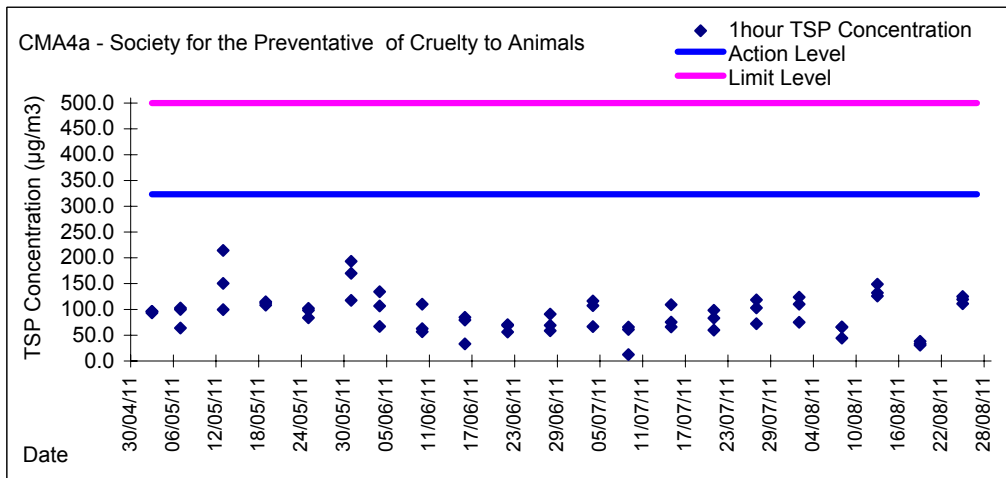
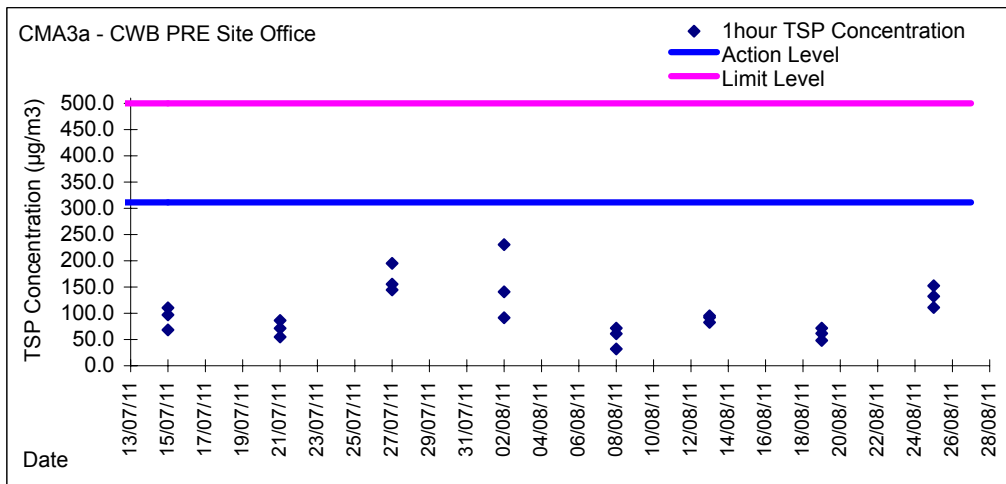
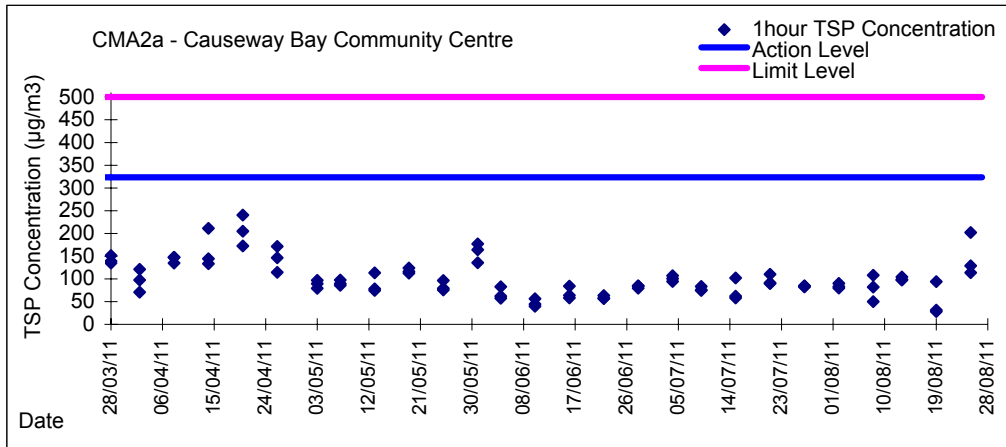
Report on 1-hour TSP monitoring
Action Level ($\mu\text{g}/\text{m}^3$) - 332
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

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		
25/8/2011	8:20	Fine	001173	2.7520	2.7613	14721.44	14722.44	1.00	1.12	1.12	1.12	67	138
25/8/2011	9:38	Fine	001174	2.7755	2.7871	14722.44	14723.44	1.00	1.15	1.15	1.15	69	168
25/8/2011	13:00	Fine	001175	2.7733	2.7799	14723.44	14724.44	1.00	0.98	0.98	0.98	59	113

Graphic Presentation of 1 hour TSP Result

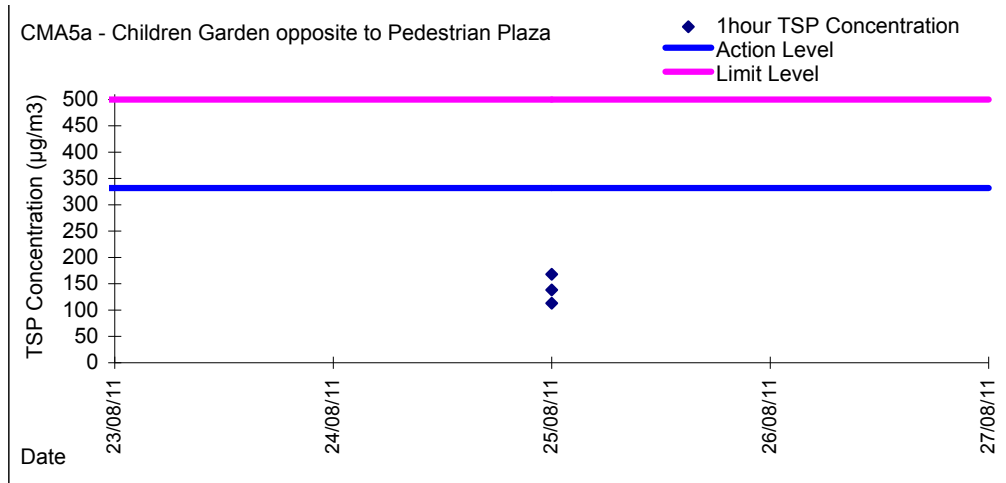


Graphic Presentation of 1 hour TSP Result



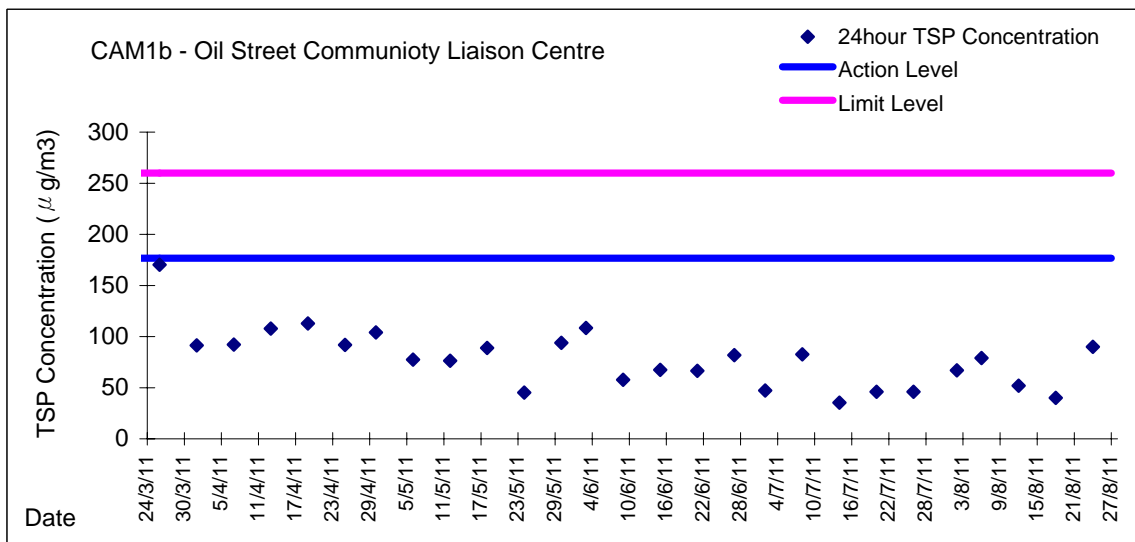
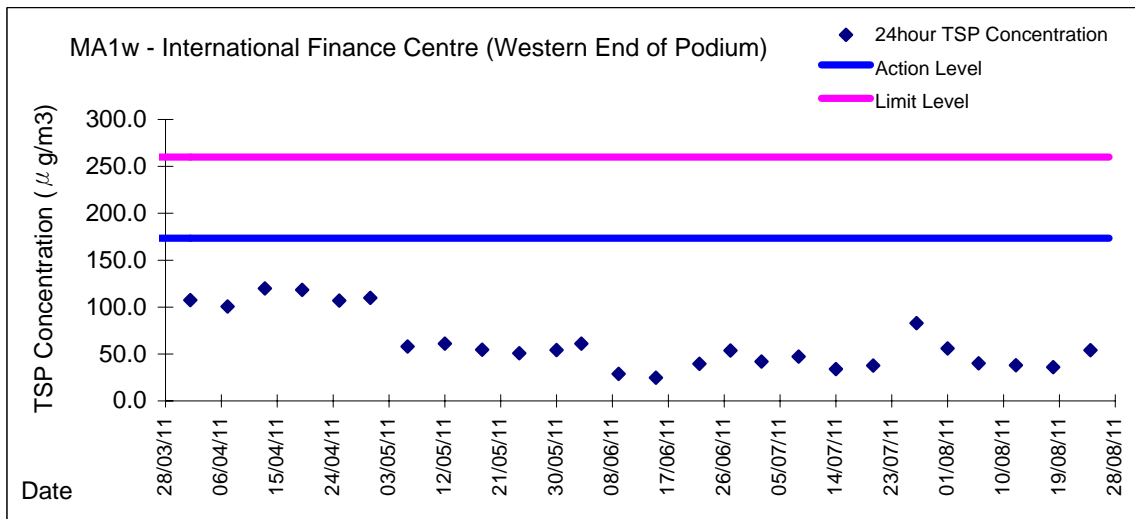
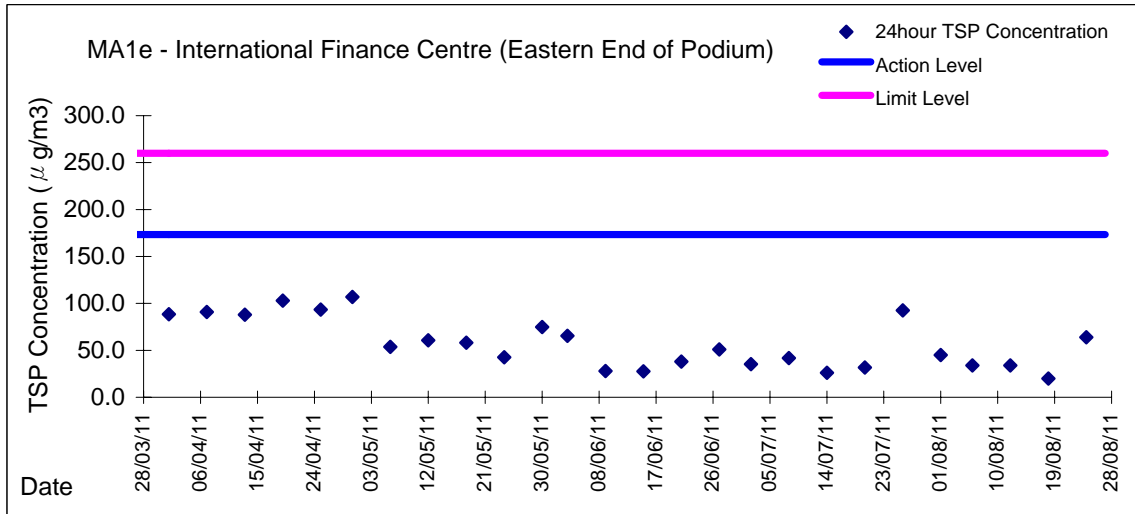


Graphic Presentation of 1 hour TSP Result

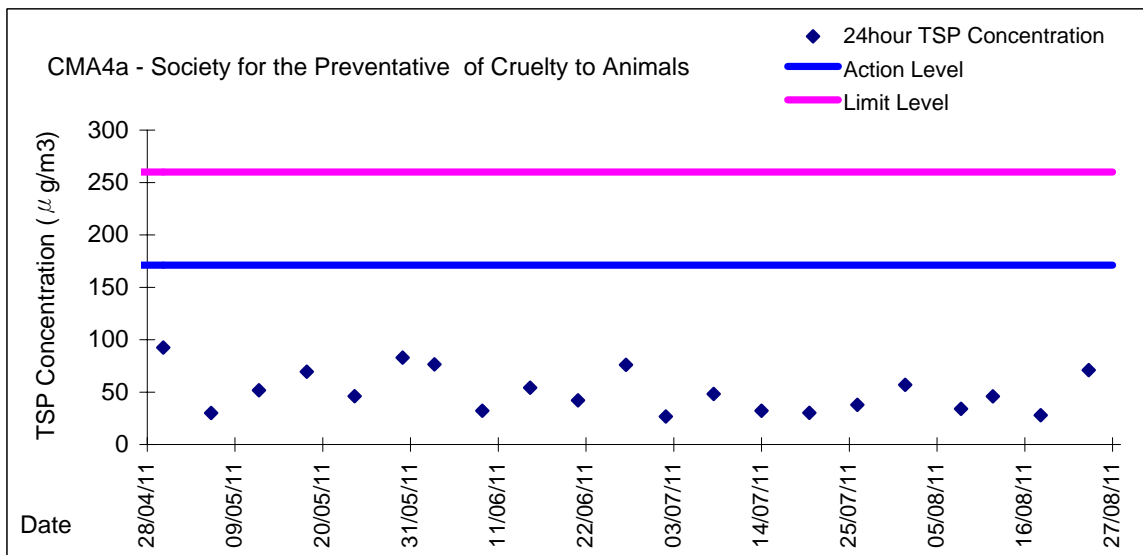
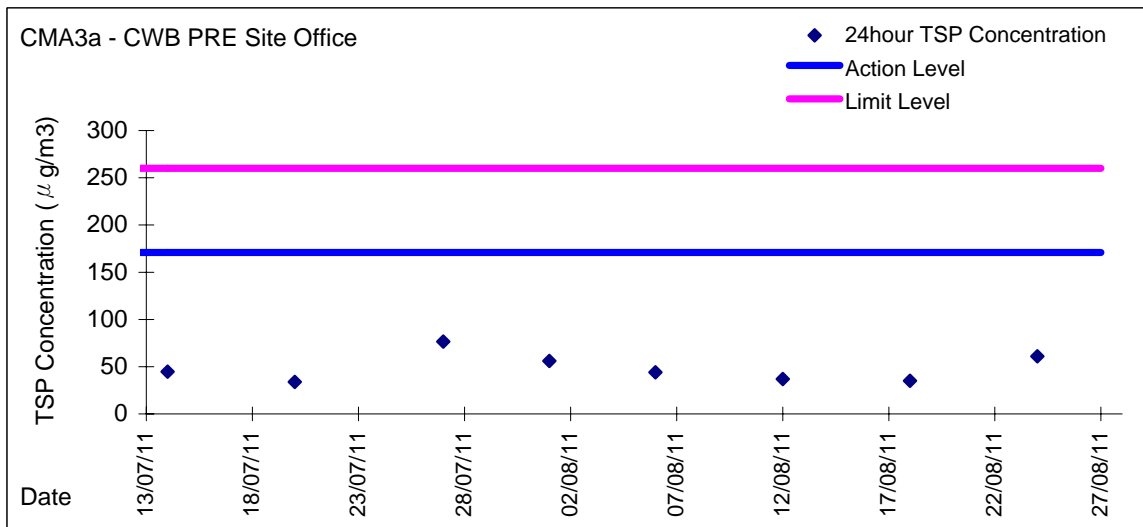
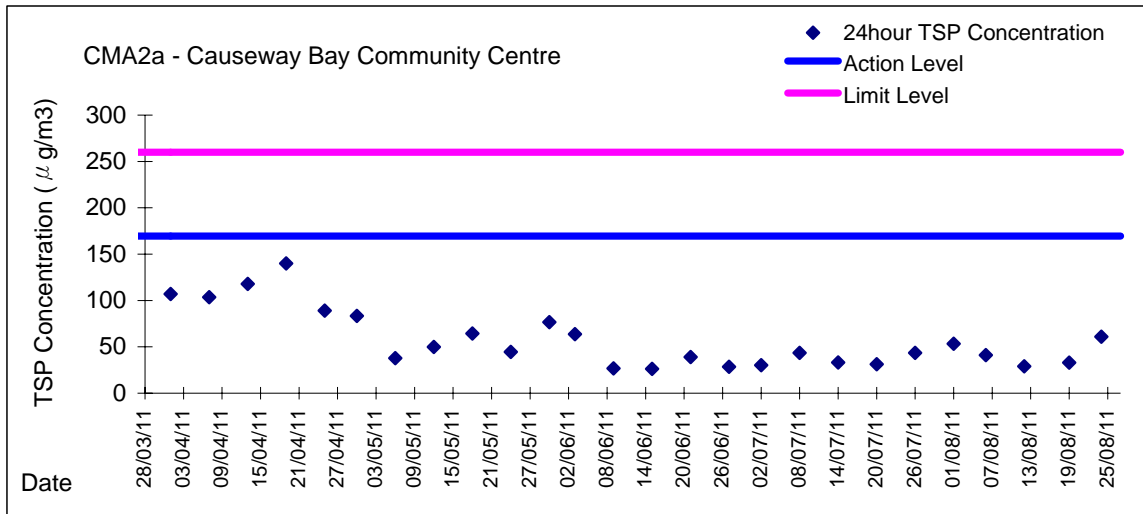




Graphic Presentation of 24 hour TSP Result



Graphic Presentation of 24 hour TSP Result





Appendix 5.4
Real Time Noise Monitoring Results and Graphical Presentations

Real-time Noise Data RTN1 / FEHD Hong Kong Transport Section Whitefield Depot

7/8/2011 10:40	64.5	7/8/2011 19:50	63.2	9/8/2011 21:00	64.3	11/8/2011 22:10	64.4	14/8/2011 7:20	62.2	14/8/2011 16:30	63.7
7/8/2011 10:45	64.3	7/8/2011 19:55	64.4	9/8/2011 21:05	63.8	11/8/2011 22:15	64.2	14/8/2011 7:25	62.9	14/8/2011 16:35	64.3
7/8/2011 10:50	63.5	7/8/2011 20:00	63.6	9/8/2011 21:10	64.2	11/8/2011 22:20	64.3	14/8/2011 7:30	62.4	14/8/2011 16:40	64.1
7/8/2011 10:55	64.0	7/8/2011 20:05	63.5	9/8/2011 21:15	64.1	11/8/2011 22:25	64.5	14/8/2011 7:35	63.5	14/8/2011 16:45	63.9
7/8/2011 11:00	63.0	7/8/2011 20:10	64.1	9/8/2011 21:20	64.3	11/8/2011 22:30	64.4	14/8/2011 7:40	62.9	14/8/2011 16:50	64.1
7/8/2011 11:05	63.4	7/8/2011 20:15	64.2	9/8/2011 21:25	64.7	11/8/2011 22:35	64.9	14/8/2011 7:45	63.6	14/8/2011 16:55	64.4
7/8/2011 11:10	63.8	7/8/2011 20:20	63.6	9/8/2011 21:30	64.4	11/8/2011 22:40	64.0	14/8/2011 7:50	63.6	14/8/2011 17:00	64.3
7/8/2011 11:15	63.2	7/8/2011 20:25	63.4	9/8/2011 21:35	64.3	11/8/2011 22:45	65.7	14/8/2011 7:55	63.7	14/8/2011 17:05	64.0
7/8/2011 11:20	63.4	7/8/2011 20:30	63.5	9/8/2011 21:40	65.2	11/8/2011 22:50	64.6	14/8/2011 8:00	63.0	14/8/2011 17:10	63.8
7/8/2011 11:25	65.5	7/8/2011 20:35	63.8	9/8/2011 21:45	63.8	11/8/2011 22:55	64.2	14/8/2011 8:05	63.7	14/8/2011 17:15	64.0
7/8/2011 11:30	64.8	7/8/2011 20:40	63.7	9/8/2011 21:50	63.6	12/8/2011 19:00	63.5	14/8/2011 8:10	64.3	14/8/2011 17:20	63.8
7/8/2011 11:35	65.0	7/8/2011 20:45	63.3	9/8/2011 21:55	66.6	12/8/2011 19:05	63.6	14/8/2011 8:15	62.4	14/8/2011 17:25	64.2
7/8/2011 11:40	64.4	7/8/2011 20:50	63.0	9/8/2011 22:00	67.3	12/8/2011 19:10	63.4	14/8/2011 8:20	62.5	14/8/2011 17:30	64.0
7/8/2011 11:45	64.1	7/8/2011 20:55	63.3	9/8/2011 22:05	64.9	12/8/2011 19:15	63.3	14/8/2011 8:25	63.7	14/8/2011 17:35	63.6
7/8/2011 11:50	63.8	7/8/2011 21:00	63.3	9/8/2011 22:10	64.4	12/8/2011 19:20	63.6	14/8/2011 8:30	62.8	14/8/2011 17:40	64.1
7/8/2011 11:55	64.0	7/8/2011 21:05	63.1	9/8/2011 22:15	64.7	12/8/2011 19:25	63.4	14/8/2011 8:35	63.7	14/8/2011 17:45	63.7
7/8/2011 12:00	63.8	7/8/2011 21:10	63.5	9/8/2011 22:20	64.7	12/8/2011 19:30	63.4	14/8/2011 8:40	63.9	14/8/2011 17:50	63.9
7/8/2011 12:05	63.9	7/8/2011 21:15	63.5	9/8/2011 22:25	64.2	12/8/2011 19:35	63.7	14/8/2011 8:45	64.0	14/8/2011 17:55	63.9
7/8/2011 12:10	63.5	7/8/2011 21:20	63.2	9/8/2011 22:30	64.2	12/8/2011 19:40	63.9	14/8/2011 8:50	64.1	14/8/2011 18:00	63.5
7/8/2011 12:15	63.5	7/8/2011 21:25	64.2	9/8/2011 22:35	64.2	12/8/2011 19:45	63.7	14/8/2011 8:55	63.4	14/8/2011 18:05	64.3
7/8/2011 12:20	63.8	7/8/2011 21:30	63.3	9/8/2011 22:40	63.8	12/8/2011 19:50	64.0	14/8/2011 9:00	64.0	14/8/2011 18:10	63.6
7/8/2011 12:25	63.6	7/8/2011 21:35	62.6	9/8/2011 22:45	65.8	12/8/2011 19:55	63.8	14/8/2011 9:05	63.9	14/8/2011 18:15	63.8
7/8/2011 12:30	63.9	7/8/2011 21:40	63.0	9/8/2011 22:50	65.0	12/8/2011 20:00	64.2	14/8/2011 9:10	64.0	14/8/2011 18:20	63.9
7/8/2011 12:35	64.0	7/8/2011 21:45	63.4	9/8/2011 22:55	64.7	12/8/2011 20:05	63.8	14/8/2011 9:15	64.5	14/8/2011 18:25	64.1
7/8/2011 12:40	63.1	7/8/2011 21:50	63.4	10/8/2011 19:00	62.3	12/8/2011 20:10	64.2	14/8/2011 9:20	64.7	14/8/2011 18:30	63.4
7/8/2011 12:45	63.6	7/8/2011 21:55	62.7	10/8/2011 19:05	62.4	12/8/2011 20:15	64.0	14/8/2011 9:25	64.4	14/8/2011 18:35	63.7
7/8/2011 12:50	64.3	7/8/2011 22:00	63.5	10/8/2011 19:10	62.1	12/8/2011 20:20	63.8	14/8/2011 9:30	63.9	14/8/2011 18:40	64.1
7/8/2011 12:55	64.5	7/8/2011 22:05	63.5	10/8/2011 19:15	62.7	12/8/2011 20:25	64.6	14/8/2011 9:35	64.4	14/8/2011 18:45	64.5
7/8/2011 13:00	63.7	7/8/2011 22:10	63.3	10/8/2011 19:20	62.2	12/8/2011 20:30	64.1	14/8/2011 9:40	64.7	14/8/2011 18:50	63.6
7/8/2011 13:05	64.4	7/8/2011 22:15	63.4	10/8/2011 19:25	62.6	12/8/2011 20:35	64.1	14/8/2011 9:45	64.4	14/8/2011 18:55	63.9
7/8/2011 13:10	64.2	7/8/2011 22:20	63.9	10/8/2011 19:30	63.8	12/8/2011 20:40	64.4	14/8/2011 9:50	64.4	14/8/2011 19:00	63.7
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7/8/2011 13:20	65.3	7/8/2011 22:30	63.8	10/8/2011 19:40	63.7	12/8/2011 20:50	63.8	14/8/2011 10:00	65.1	14/8/2011 19:10	63.5
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7/8/2011 15:35	64.0	8/8/2011 20:45	64.2	10/8/2011 21:55	64.7	13/8/2011 19:05	63.9	14/8/2011 12:15	63.4	14/8/2011 21:25	63.1
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7/8/2011 16:10	63.3	8/8/2011 21:20	64.1	10/8/2011 22:30	64.3	13/8/2011 19:40	64.0	14/8/2011 12:50	62.7	14/8/2011 22:00	64.2
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7/8/2011 16:20	63.7	8/8/2011 21:30	63.8	10/8/2011 22:40	65.1	13/8/2011 19:50	64.5	14/8/2011 13:00	62.4	14/8/2011 22:10	63.5
7/8/2011 16:25	63.9	8/8/2011 21:35	64.4	10/8/2011 22:45	63.8	13/8/2011 19:55	64.2	14/8/2011 13:05			

Real-time Noise Data RTN1 / FEHD Hong Kong Transport Section Whitefield Depot

15/8/2011 21:40	63.6	17/8/2011 22:50	64.1	20/8/2011 20:00	64.9	21/8/2011 13:10	63.5	21/8/2011 22:20	63.9	24/8/2011 19:30	64.9
15/8/2011 21:45	64.3	17/8/2011 22:55	63.8	20/8/2011 20:05	64.9	21/8/2011 13:15	66.2	21/8/2011 22:25	64.3	24/8/2011 19:35	65.4
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15/8/2011 22:30	63.5	18/8/2011 19:40	65.5	20/8/2011 20:50	64.3	21/8/2011 14:00	63.7	22/8/2011 19:10	64.7	24/8/2011 20:20	65.2
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16/8/2011 22:45	64.3	19/8/2011 19:55	65.3	21/8/2011 9:05	64.9	21/8/2011 18:15	64.6	23/8/2011 19:25	63.7	25/8/2011 20:35	64.7
16/8/2011 22:50	63.8	19/8/2011 20:00	65.2	21/8/2011 9:10	64.6	21/8/2011 18:20	64.0	23/8/2011 19:30	64.9	25/8/2011 20:40	64.5
16/8/2011 22:55	63.9	19/8/2011 20:05	65.8	21/8/2011 9:15	64.1	21/8/2011 18:25	64.8	23/8/2011 19:35	64.9	25/8/2011 20:45	64.6
17/8/2011 19:00	64.5	19/8/2011 20:10	64.2	21/8/2011 9:20	64.4	21/8/2011 18:30	64.4	23/8/2011 19:40	64.9	25/8/2011 20:50	64.8
17/8/2011 19:05	64.1	19/8/2011 20:15	64.7	21/8/2011 9:25	64.2	21/8/2011 18:35	64.5	23/8/2011 19:45	64.5	25/8/2011 20:55	64.5
17/8/2011 19:10	64.3	19/8/2011 20:20	63.5	21/8/2011 9:30	64.1	21/8/2011 18:40	64.5	23/8/2011 19:50	64.9	25/8/2011 21:00	64.7
17/8/2011 19:15	64.7	19/8/2011 20:25	64.5	21/8/2011 9:35	63.8	21/8/2011 18:45	64.2	23/8/2011 19:55	64.8	25/8/2011 21:05	64.8
17/8/2011 19:20	64.3	19/8/2011 20:30	64.4	21/8/2011 9:40	64.8	21/8/2011 18:50	64.0	23/8/2011 20:00	64.8	25/8/	

Real-time Noise Data RTN1 / FEHD Hong Kong Transport Section Whitefield Depot

26/8/2011 20:40	64.9	28/7/2011 2:40	58.6	29/7/2011 3:50	56.4	30/7/2011 5:00	58.2	31/7/2011 6:10	61.4	1/8/2011 23:20	63.2
26/8/2011 20:45	64.8	28/7/2011 2:45	60.1	29/7/2011 3:55	56.7	30/7/2011 5:05	58.3	31/7/2011 6:15	61.8	1/8/2011 23:25	63.0
26/8/2011 20:50	64.6	28/7/2011 2:50	59.9	29/7/2011 4:00	56.2	30/7/2011 5:10	59.1	31/7/2011 6:20	62.0	1/8/2011 23:30	61.9
26/8/2011 20:55	64.3	28/7/2011 2:55	59.4	29/7/2011 4:05	56.6	30/7/2011 5:15	59.6	31/7/2011 6:25	63.0	1/8/2011 23:35	62.8
26/8/2011 21:00	64.7	28/7/2011 3:00	58.9	29/7/2011 4:10	57.0	30/7/2011 5:20	59.2	31/7/2011 6:30	62.2	1/8/2011 23:40	63.0
26/8/2011 21:05	64.2	28/7/2011 3:05	59.1	29/7/2011 4:15	57.0	30/7/2011 5:25	59.7	31/7/2011 6:35	62.7	1/8/2011 23:45	62.5
26/8/2011 21:10	64.6	28/7/2011 3:10	59.1	29/7/2011 4:20	57.0	30/7/2011 5:30	60.4	31/7/2011 6:40	63.5	1/8/2011 23:50	62.5
26/8/2011 21:15	65.6	28/7/2011 3:15	58.4	29/7/2011 4:25	56.7	30/7/2011 5:35	60.6	31/7/2011 6:45	62.6	1/8/2011 23:55	62.8
26/8/2011 21:20	64.7	28/7/2011 3:20	58.4	29/7/2011 4:30	56.2	30/7/2011 5:40	61.1	31/7/2011 6:50	63.5	2/8/2011 0:00	62.7
26/8/2011 21:25	64.7	28/7/2011 3:25	60.3	29/7/2011 4:35	56.3	30/7/2011 5:45	61.0	31/7/2011 6:55	63.5	2/8/2011 0:05	62.8
26/8/2011 21:30	64.3	28/7/2011 3:30	58.5	29/7/2011 4:40	56.4	30/7/2011 5:50	60.7	31/7/2011 23:00	63.6	2/8/2011 0:10	62.0
26/8/2011 21:35	64.4	28/7/2011 3:35	58.7	29/7/2011 4:45	56.1	30/7/2011 5:55	61.5	31/7/2011 23:05	63.2	2/8/2011 0:15	62.1
26/8/2011 21:40	65.7	28/7/2011 3:40	59.8	29/7/2011 4:50	57.2	30/7/2011 6:00	61.5	31/7/2011 23:10	63.5	2/8/2011 0:20	61.6
26/8/2011 21:45	65.1	28/7/2011 3:45	58.0	29/7/2011 4:55	57.3	30/7/2011 6:05	61.7	31/7/2011 23:15	62.7	2/8/2011 0:25	62.9
26/8/2011 21:50	64.4	28/7/2011 3:50	58.6	29/7/2011 5:00	56.7	30/7/2011 6:10	62.6	31/7/2011 23:20	63.4	2/8/2011 0:30	62.2
26/8/2011 21:55	64.3	28/7/2011 3:55	59.0	29/7/2011 5:05	57.6	30/7/2011 6:15	62.9	31/7/2011 23:25	62.7	2/8/2011 0:35	61.4
26/8/2011 22:00	64.7	28/7/2011 4:00	63.0	29/7/2011 5:10	57.8	30/7/2011 6:20	62.6	31/7/2011 23:30	62.1	2/8/2011 0:40	61.3
26/8/2011 22:05	64.5	28/7/2011 4:05	58.9	29/7/2011 5:15	57.1	30/7/2011 6:25	62.9	31/7/2011 23:35	62.8	2/8/2011 0:45	61.8
26/8/2011 22:10	64.2	28/7/2011 4:10	59.3	29/7/2011 5:20	56.9	30/7/2011 6:30	63.0	31/7/2011 23:40	63.3	2/8/2011 0:50	61.6
26/8/2011 22:15	63.9	28/7/2011 4:15	61.8	29/7/2011 5:25	57.7	30/7/2011 6:35	63.9	31/7/2011 23:45	62.8	2/8/2011 0:55	60.4
26/8/2011 22:20	64.5	28/7/2011 4:20	58.7	29/7/2011 5:30	58.1	30/7/2011 6:40	65.0	31/7/2011 23:50	62.8	2/8/2011 1:00	60.8
26/8/2011 22:25	64.3	28/7/2011 4:25	58.9	29/7/2011 5:35	58.3	30/7/2011 6:45	64.4	31/7/2011 23:55	62.6	2/8/2011 1:05	60.7
26/8/2011 22:30	64.7	28/7/2011 4:30	58.2	29/7/2011 5:40	58.1	30/7/2011 6:50	63.6	1/8/2011 0:00	63.2	2/8/2011 1:10	60.5
26/8/2011 22:35	64.3	28/7/2011 4:35	58.8	29/7/2011 5:45	58.1	30/7/2011 6:55	64.3	1/8/2011 0:05	63.0	2/8/2011 1:15	61.1
26/8/2011 22:40	64.2	28/7/2011 4:40	58.7	29/7/2011 5:50	60.3	30/7/2011 23:00	64.2	1/8/2011 0:10	62.9	2/8/2011 1:20	61.1
26/8/2011 22:45	64.4	28/7/2011 4:45	58.6	29/7/2011 5:55	60.8	30/7/2011 23:05	63.5	1/8/2011 0:15	62.2	2/8/2011 1:25	60.5
26/8/2011 22:50	64.1	28/7/2011 4:50	58.8	29/7/2011 6:00	58.7	30/7/2011 23:10	64.3	1/8/2011 0:20	62.4	2/8/2011 1:30	59.9
26/8/2011 22:55	64.1	28/7/2011 4:55	58.9	29/7/2011 6:05	73.3	30/7/2011 23:15	64.1	1/8/2011 0:25	62.9	2/8/2011 1:35	60.9
27/8/2011 19:00	64.4	28/7/2011 5:00	59.7	29/7/2011 6:10	63.3	30/7/2011 23:20	64.0	1/8/2011 0:30	64.2	2/8/2011 1:40	60.8
27/8/2011 19:05	64.9	28/7/2011 5:05	59.6	29/7/2011 6:15	63.9	30/7/2011 23:25	63.9	1/8/2011 0:35	61.2	2/8/2011 1:45	60.9
27/8/2011 19:10	65.1	28/7/2011 5:10	59.3	29/7/2011 6:20	62.8	30/7/2011 23:30	63.7	1/8/2011 0:40	62.0	2/8/2011 1:50	60.9
27/8/2011 19:15	65.1	28/7/2011 5:15	59.1	29/7/2011 6:25	62.2	30/7/2011 23:35	63.8	1/8/2011 0:45	62.2	2/8/2011 1:55	60.6
27/8/2011 19:20	65.1	28/7/2011 5:20	60.3	29/7/2011 6:30	62.9	30/7/2011 23:40	63.5	1/8/2011 0:50	60.9	2/8/2011 2:00	60.1
27/8/2011 19:25	65.0	28/7/2011 5:25	60.5	29/7/2011 6:35	63.9	30/7/2011 23:45	63.9	1/8/2011 0:55	61.1	2/8/2011 2:05	59.1
27/8/2011 19:30	64.1	28/7/2011 5:30	60.1	29/7/2011 6:40	66.0	30/7/2011 23:50	63.2	1/8/2011 1:00	61.4	2/8/2011 2:10	60.2
27/8/2011 19:35	64.9	28/7/2011 5:35	60.2	29/7/2011 6:45	67.7	30/7/2011 23:55	63.0	1/8/2011 1:05	59.6	2/8/2011 2:15	59.0
27/8/2011 19:40	64.4	28/7/2011 5:40	60.7	29/7/2011 6:50	66.7	31/7/2011 0:00	63.6	1/8/2011 1:10	61.0	2/8/2011 2:20	59.3
27/8/2011 19:45	64.9	28/7/2011 5:45	61.1	29/7/2011 6:55	65.1	31/7/2011 0:05	63.8	1/8/2011 1:15	61.1	2/8/2011 2:25	58.9
27/8/2011 19:50	64.4	28/7/2011 5:50	61.5	29/7/2011 23:00	63.2	31/7/2011 0:10	63.4	1/8/2011 1:20	60.2	2/8/2011 2:30	59.7
27/8/2011 19:55	64.5	28/7/2011 5:55	61.2	29/7/2011 23:05	63.5	31/7/2011 0:15	63.2	1/8/2011 1:25	59.6	2/8/2011 2:35	59.9
27/8/2011 20:00	64.8	28/7/2011 6:00	61.4	29/7/2011 23:10	62.7	31/7/2011 0:20	63.2	1/8/2011 1:30	59.5	2/8/2011 2:40	59.1
27/8/2011 20:05	64.6	28/7/2011 6:05	61.5	29/7/2011 23:15	63.4	31/7/2011 0:25	63.9	1/8/2011 1:35	60.7	2/8/2011 2:45	59.3
27/8/2011 20:10	64.4	28/7/2011 6:10	61.9	29/7/2011 23:20	62.7	31/7/2011 0:30	62.8	1/8/2011 1:40	60.2	2/8/2011 2:50	58.5
27/8/2011 20:15	64.6	28/7/2011 6:15	61.9	29/7/2011 23:25	62.1	31/7/2011 0:35	62.9	1/8/2011 1:45	59.6	2/8/2011 2:55	59.0
27/8/2011 20:20	65.2	28/7/2011 6:20	62.0	29/7/2011 23:30	62.8	31/7/2011 0:40	63.0	1/8/2011 1:50	59.2	2/8/2011 3:00	58.8
27/8/2011 20:25	66.0	28/7/2011 6:25	62.2	29/7/2011 23:35	63.3	31/7/2011 0:45	62.1	1/8/2011 1:55	59.6	2/8/2011 3:05	58.9
27/8/2011 20:30	65.0	28/7/2011 6:30	63.1	29/7/2011 23:40	62.8	31/7/2011 0:50	61.5	1/8/2011 2:00	59.2	2/8/2011 3:10	59.3
27/8/2011 20:35	64.4	28/7/2011 6:35	63.0	29/7/2011 23:45	62.8	31/7/2011 0:55	62.3	1/8/2011 2:05	59.5	2/8/2011 3:15	58.5
27/8/2011 20:40	64.1	28/7/2011 6:40	64.1	29/7/2011 23:50	62.6	31/7/2011 1:00	61.5	1/8/2011 2:10	58.6	2/8/2011 3:20	60.3
27/8/2011 20:45	64.8	28/7/2011 6:45	63.7	29/7/2011 23:55	63.2	31/7/2011 1:05	62.4	1/8/2011 2:15	60.8	2/8/2011 3:25	59.8
27/8/2011 20:50	64.2	28/7/2011 6:50	64.0	30/7/2011 0:00	63.0	31/7/2011 1:10	62.7	1/8/2011 2:20	59.7	2/8/2011 3:30	58.1
27/8/2011 20:55	63.9	28/7/2011 6:55	64.5	30/7/2011 0:05	62.9	31/7/2011 1:15	61.4	1/8/2011 2:25	59.9	2/8/2011 3:35	57.8
27/8/2011 21:00	64.2	28/7/2011 23:00	61.1	30/7/2011 0:10	62.2	31/7/2011 1:20	61.5	1/8/2011 2:30	59.7	2/8/2011 3:40	59.3
27/8/2011 21:05	63.9	28/7/2011 23:05	61.8	30/7/2011 0:15	62.4	31/7/2011 1:25	61.4	1/8/2011 2:35	58.5	2/8/2011 3:45	58.8
27/8/2011 21:10	63.8	28/7/2011 23:10	60.9	30/7/2011 0:20	62.9	31/7/2011 1:30	61.4	1/8/2011 2:40	58.7	2/8/2011 3:50	58.9
27/8/2011 21:15	64.2	28/7/2011 23:15	61.7	30/7/2011 0:25	64.2	31/7/2011 1:35	61.2	1/8/2011 2:45	59.1	2/8/2011 3:55	58.4
27/8/2011 21:20	64.2	28/7/2011 23:20	61.8	30/7/2011 0:30	61.2	31/7/2011 1:40	62.6	1/8/2011 2:50	59.2	2/8/2011 4:00	58.4
27/8/2011 21:25	64.3	28/7/2011 23:25	61.3	30/7/2011 0:35	62.0	31/7/2011 1:45	61.2	1/8/2011 2:55	57.8	2/8/2011 4:05	58.1
27/8/2011 21:30	63.7	28/7/2011 23:30	63.2	30/7/2011 0:40	62.2	31/7/2011 1:50	61.4	1/8/2011 3:00	58.4	2/8/2011 4:10	58.4
27/8/2011 21:35	63.8	28/7/2011 23:35	61.7	30/7/2011 0:45	60.9	31/7/2011 1:55	60.5	1/8/2011 3:05	58.6	2/8/2011 4:15	58.6
27/8/2011 21:40	63.6	28/7/2011 23:40	61.6	30/7/2011 0:50	61.1	31/7/2011 2:00	61.2	1/8/2011 3:10	58.0	2/8/2011 4:20	58.7
27/8/2011 21:45	64.6	28/7/2011 23:45	60.8	30/7/2011 0:55	61.4	31/7/2011 2:05	61.0	1/8/2011 3:15	59.2	2/8/2011 4:25	58.3
27/8/2011 21:50	63.6	28/7/2011 23:50	60.9	30/7/2011 1:00	59.6	31/7/2011 2:10	61.4	1/8/2011 3:20	58.0	2/8/2011 4:30	58.6
27/8/2011 21:55	63.8	28/7/2011 23:55	60.9	30/7/2011 1:05	61.1	31/7/2011 2:15	61.3	1/8/2011 3:25	58.2	2/8/2011 4:35	58.0
27/8/2011 22:00	64.8	29/7/2011 0:00	60.0	30/7/2011 1:10	61.0	31/7/2011 2:20	60.7	1/8/2011 3:30	59.0	2/8/2011 4:40	58.7
27/8/2011 22:05	64.3	29/7/2011 0:05	60.8	30/7/2011 1:15	60.2	31/7/2011 2:25	60.7	1/8/2011 3:35	58.7	2/8/2011 4:45	58.4
27/8/2011 22:10	64.5	29/7/2011 0:10	60.4	30/7/2011 1:20	59.6	31/7/2011 2:30	61.0	1/8/2011 3:40	58.5	2/8/2011 4:50	59.0
27/8/2011 22:15	64.0	29/7/2011 0:15	60.7	30/7/2011 1:25	59.5	31/7/2011 2:35	60.6	1/8/2011 3:45	57.5	2/8/2011 4:55	59.3
27/8/2011 22:20	64.3	29/7/2011 0:20	61.1	30/7/2011 1:30	60.7	31/7/2011 2:40	61.6	1/8/2011 3:50	58.0	2/8/2011 5:00	59.5
27/8/2011 22:25	63.7	29/7/2011 0:25	60.2	30/7/2011 1:35	60.2	31/7/2011 2:45	60.2	1/8/2011 3:55	58.1	2/8/2011 5:05	59.6
27/8/2011 22:30	64.0	29/7/2011 0:30	60.8	30/7/2011 1:40	59.6	31/7/2011 2:50	61.1	1/8/2011 4:00	58.3	2/8/2011 5:10	58.7

Real-time Noise Data RTN1 / FEHD Hong Kong Transport Section Whitefield Depot

3/8/2011 0:30	63.4	4/8/2011 1:40	60.4	5/8/2011 2:50	60.5	6/8/2011 4:00	59.5	7/8/2011 5:10	59.8	8/8/2011 6:20	62.3
3/8/2011 0:35	62.7	4/8/2011 1:45	60.1	5/8/2011 2:55	59.3	6/8/2011 4:05	59.6	7/8/2011 5:15	60.2	8/8/2011 6:25	63.0
3/8/2011 0:40	62.8	4/8/2011 1:50	60.7	5/8/2011 3:00	59.2	6/8/2011 4:10	60.2	7/8/2011 5:20	60.2	8/8/2011 6:30	63.0
3/8/2011 0:45	63.1	4/8/2011 1:55	60.3	5/8/2011 3:05	58.6	6/8/2011 4:15	60.6	7/8/2011 5:25	60.1	8/8/2011 6:35	63.7
3/8/2011 0:50	61.2	4/8/2011 2:00	59.7	5/8/2011 3:10	59.2	6/8/2011 4:20	60.5	7/8/2011 5:30	60.5	8/8/2011 6:40	63.6
3/8/2011 0:55	62.1	4/8/2011 2:05	60.2	5/8/2011 3:15	59.7	6/8/2011 4:25	60.5	7/8/2011 5:35	59.8	8/8/2011 6:45	64.3
3/8/2011 1:00	61.4	4/8/2011 2:10	60.4	5/8/2011 3:20	60.3	6/8/2011 4:30	60.5	7/8/2011 5:40	59.9	8/8/2011 6:50	63.8
3/8/2011 1:05	61.8	4/8/2011 2:15	59.9	5/8/2011 3:25	59.1	6/8/2011 4:35	59.6	7/8/2011 5:45	61.0	8/8/2011 6:55	64.1
3/8/2011 1:10	60.7	4/8/2011 2:20	59.8	5/8/2011 3:30	59.4	6/8/2011 4:40	60.1	7/8/2011 5:50	60.7	8/8/2011 23:00	63.3
3/8/2011 1:15	60.9	4/8/2011 2:25	60.5	5/8/2011 3:35	59.2	6/8/2011 4:45	59.7	7/8/2011 5:55	61.1	8/8/2011 23:05	63.8
3/8/2011 1:20	61.7	4/8/2011 2:30	60.0	5/8/2011 3:40	58.8	6/8/2011 4:50	59.4	7/8/2011 6:00	61.2	8/8/2011 23:10	63.8
3/8/2011 1:25	60.9	4/8/2011 2:35	60.1	5/8/2011 3:45	59.1	6/8/2011 4:55	59.9	7/8/2011 6:05	62.3	8/8/2011 23:15	63.5
3/8/2011 1:30	60.6	4/8/2011 2:40	59.6	5/8/2011 3:50	58.8	6/8/2011 5:00	60.3	7/8/2011 6:10	61.6	8/8/2011 23:20	63.0
3/8/2011 1:35	59.8	4/8/2011 2:45	58.8	5/8/2011 3:55	59.0	6/8/2011 5:05	60.5	7/8/2011 6:15	61.2	8/8/2011 23:25	63.1
3/8/2011 1:40	60.7	4/8/2011 2:50	59.3	5/8/2011 4:00	59.2	6/8/2011 5:10	60.2	7/8/2011 6:20	63.7	8/8/2011 23:30	63.0
3/8/2011 1:45	60.0	4/8/2011 2:55	59.8	5/8/2011 4:05	58.6	6/8/2011 5:15	60.6	7/8/2011 6:25	62.0	8/8/2011 23:35	62.6
3/8/2011 1:50	60.9	4/8/2011 3:00	60.0	5/8/2011 4:10	58.8	6/8/2011 5:20	60.4	7/8/2011 6:30	62.7	8/8/2011 23:40	62.9
3/8/2011 1:55	60.7	4/8/2011 3:05	60.1	5/8/2011 4:15	58.4	6/8/2011 5:25	60.8	7/8/2011 6:35	62.3	8/8/2011 23:45	63.1
3/8/2011 2:00	60.0	4/8/2011 3:10	58.6	5/8/2011 4:20	58.2	6/8/2011 5:30	60.4	7/8/2011 6:40	61.6	8/8/2011 23:50	62.4
3/8/2011 2:05	59.4	4/8/2011 3:15	58.9	5/8/2011 4:25	59.2	6/8/2011 5:35	60.8	7/8/2011 6:45	62.8	8/8/2011 23:55	62.4
3/8/2011 2:10	59.2	4/8/2011 3:20	59.1	5/8/2011 4:30	58.6	6/8/2011 5:40	61.6	7/8/2011 6:50	62.5	9/8/2011 0:00	62.6
3/8/2011 2:15	59.5	4/8/2011 3:25	58.5	5/8/2011 4:35	58.5	6/8/2011 5:45	60.8	7/8/2011 6:55	62.5	9/8/2011 0:05	62.6
3/8/2011 2:20	60.0	4/8/2011 3:30	58.8	5/8/2011 4:40	58.8	6/8/2011 5:50	61.2	7/8/2011 23:00	63.1	9/8/2011 0:10	62.1
3/8/2011 2:25	59.7	4/8/2011 3:35	59.7	5/8/2011 4:45	60.2	6/8/2011 5:55	61.5	7/8/2011 23:05	63.1	9/8/2011 0:15	61.9
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3/8/2011 2:35	59.8	4/8/2011 3:45	58.8	5/8/2011 4:55	58.1	6/8/2011 6:05	62.6	7/8/2011 23:15	62.6	9/8/2011 0:25	62.7
3/8/2011 2:40	59.9	4/8/2011 3:50	59.6	5/8/2011 5:00	58.9	6/8/2011 6:10	61.9	7/8/2011 23:20	62.8	9/8/2011 0:30	61.9
3/8/2011 2:45	59.5	4/8/2011 3:55	59.6	5/8/2011 5:05	59.3	6/8/2011 6:15	62.0	7/8/2011 23:25	65.1	9/8/2011 0:35	61.9
3/8/2011 2:50	59.0	4/8/2011 4:00	58.8	5/8/2011 5:10	59.0	6/8/2011 6:20	62.6	7/8/2011 23:30	63.0	9/8/2011 0:40	62.3
3/8/2011 2:55	60.0	4/8/2011 4:05	58.7	5/8/2011 5:15	59.1	6/8/2011 6:25	62.7	7/8/2011 23:35	62.8	9/8/2011 0:45	61.3
3/8/2011 3:00	59.2	4/8/2011 4:10	60.1	5/8/2011 5:20	60.0	6/8/2011 6:30	62.2	7/8/2011 23:40	63.0	9/8/2011 0:50	61.7
3/8/2011 3:05	58.7	4/8/2011 4:15	59.4	5/8/2011 5:25	59.4	6/8/2011 6:35	62.5	7/8/2011 23:45	62.8	9/8/2011 0:55	61.2
3/8/2011 3:10	60.1	4/8/2011 4:20	57.2	5/8/2011 5:30	59.5	6/8/2011 6:40	63.1	7/8/2011 23:50	62.9	9/8/2011 1:00	61.4
3/8/2011 3:15	59.5	4/8/2011 4:25	58.6	5/8/2011 5:35	59.7	6/8/2011 6:45	63.2	7/8/2011 23:55	62.8	9/8/2011 1:05	61.0
3/8/2011 3:20	58.8	4/8/2011 4:30	58.9	5/8/2011 5:40	59.5	6/8/2011 6:50	64.3	8/8/2011 0:00	62.6	9/8/2011 1:10	60.8
3/8/2011 3:25	58.7	4/8/2011 4:35	58.1	5/8/2011 5:45	61.1	6/8/2011 6:55	63.8	8/8/2011 0:05	62.6	9/8/2011 1:15	60.8
3/8/2011 3:30	59.2	4/8/2011 4:40	58.2	5/8/2011 5:50	61.2	6/8/2011 23:00	62.5	8/8/2011 0:10	62.4	9/8/2011 1:20	61.0
3/8/2011 3:35	58.6	4/8/2011 4:45	59.1	5/8/2011 5:55	60.8	6/8/2011 23:05	63.0	8/8/2011 0:15	62.4	9/8/2011 1:25	60.3
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3/8/2011 3:45	59.9	4/8/2011 4:55	58.7	5/8/2011 6:05	62.5	6/8/2011 23:15	63.0	8/8/2011 0:25	62.1	9/8/2011 1:35	60.2
3/8/2011 3:50	58.9	4/8/2011 5:00	58.3	5/8/2011 6:10	62.4	6/8/2011 23:20	63.2	8/8/2011 0:30	62.5	9/8/2011 1:40	60.6
3/8/2011 3:55	58.9	4/8/2011 5:05	59.4	5/8/2011 6:15	62.0	6/8/2011 23:25	63.2	8/8/2011 0:35	61.2	9/8/2011 1:45	60.4
3/8/2011 4:00	58.9	4/8/2011 5:10	59.5	5/8/2011 6:20	62.2	6/8/2011 23:30	63.4	8/8/2011 0:40	61.6	9/8/2011 1:50	59.7
3/8/2011 4:05	58.7	4/8/2011 5:15	59.3	5/8/2011 6:25	62.1	6/8/2011 23:35	63.4	8/8/2011 0:45	61.6	9/8/2011 1:55	59.4
3/8/2011 4:10	59.2	4/8/2011 5:20	60.3	5/8/2011 6:30	62.9	6/8/2011 23:40	63.0	8/8/2011 0:50	61.6	9/8/2011 2:00	59.3
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3/8/2011 4:25	58.6	4/8/2011 5:35	60.4	5/8/2011 6:45	63.5	6/8/2011 23:55	62.9	8/8/2011 1:05	61.1	9/8/2011 2:15	59.3
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3/8/2011 4:35	58.4	4/8/2011 5:45	60.8	5/8/2011 6:55	63.5	7/8/2011 0:05	62.7	8/8/2011 1:15	61.2	9/8/2011 2:25	59.6
3/8/2011 4:40	58.8	4/8/2011 5:50	61.3	5/8/2011 23:00	63.6	7/8/2011 0:10	63.1	8/8/2011 1:20	60.4	9/8/2011 2:30	58.7
3/8/2011 4:45	59.9	4/8/2011 5:55	61.0	5/8/2011 23:05	63.8	7/8/2011 0:15	63.3	8/8/2011 1:25	60.3	9/8/2011 2:35	59.4
3/8/2011 4:50	58.6	4/8/2011 6:00	61.4	5/8/2011 23:10	63.1	7/8/2011 0:20	63.1	8/8/2011 1:30	60.9	9/8/2011 2:40	58.5
3/8/2011 4:55	58.5	4/8/2011 6:05	61.7	5/8/2011 23:15	63.5	7/8/2011 0:25	62.9	8/8/2011 1:35	60.7	9/8/2011 2:45	59.7
3/8/2011 5:00	58.1	4/8/2011 6:10	61.9	5/8/2011 23:20	63.1	7/8/2011 0:30	63.0	8/8/2011 1:40	59.8	9/8/2011 2:50	60.6
3/8/2011 5:05	60.1	4/8/2011 6:15	62.1	5/8/2011 23:25	63.2	7/8/2011 0:35	63.0	8/8/2011 1:45	59.7	9/8/2011 2:55	62.6
3/8/2011 5:10	60.3	4/8/2011 6:20	63.1	5/8/2011 23:30	63.5	7/8/2011 0:40	62.9	8/8/2011 1:50	60.5	9/8/2011 3:00	61.4
3/8/2011 5:15	60.3	4/8/2011 6:25	62.6	5/8/2011 23:35	63.0	7/8/2011 0:45	62.4	8/8/2011 1:55	59.9	9/8/2011 3:05	60.0
3/8/2011 5:20	59.6	4/8/2011 6:30	62.4	5/8/2011 23:40	63.1	7/8/2011 0:50	62.6	8/8/2011 2:00	59.5	9/8/2011 3:10	62.8
3/8/2011 5:25	59.6	4/8/2011 6:35	63.4	5/8/2011 23:45	62.9	7/8/2011 0:55	62.5	8/8/2011 2:05	60.2	9/8/2011 3:15	64.7
3/8/2011 5:30	60.5	4/8/2011 6:40	63.0	5/8/2011 23:50	63.3	7/8/2011 1:00	61.5	8/8/2011 2:10	59.1	9/8/2011 3:20	59.5
3/8/2011 5:35	60.8	4/8/2011 6:45	63.4	5/8/2011 23:55	63.5	7/8/2011 1:05	61.7	8/8/2011 2:15	59.0	9/8/2011 3:25	62.8
3/8/2011 5:40	59.8	4/8/2011 6:50	63.7	6/8/2011 0:00	63.3	7/8/2011 1:10	61.4	8/8/2011 2:20	59.2	9/8/2011 3:30	63.2
3/8/2011 5:45	61.4	4/8/2011 6:55	63.6	6/8/2011 0:05	63.0	7/8/2011 1:15	61.9	8/8/2011 2:25	59.1	9/8/2011 3:35	70.0
3/8/2011 5:50	60.9	4/8/2011 23:00	63.3	6/8/2011 0:10	63.1	7/8/2011 1:20	61.3	8/8/2011 2:30	59.0	9/8/2011 3:40	69.0
3/8/2011 5:55	61.3	4/8/2011 23:05	63.4	6/8/2011 0:15	62.2	7/8/2011 1:25	61.3	8/8/2011 2:35	59.1	9/8/2011 3:45	64.5
3/8/2011 6:00	63.2	4/8/2011 23:10	63.0	6/8/2011 0:20	63.3	7/8/2011 1:30	61.1	8/8/2011 2:40	58.7	9/8/2011 3:50	60.1
3/8/2011 6:05	62.4	4/8/2011 23:15	63.0	6/8/2011 0:25	63.0	7/8/2011 1:35	61.7	8/8/2011 2:45	58.5	9/8/2011 3:55	59.7
3/8/2011 6:10	62.3	4/8/2011 23:20	63.3	6/8/2011 0:30	62.4	7/8/2011 1:40	61.7	8/8/2011 2:50	58.7	9/8/2011 4:00	58.8
3/8/2011 6:15	63.8	4/8/2011 23:25	63.2	6/8/2011 0:35	62.7	7/8/2011 1:45	61.6	8/8/2011 2:55	59.5	9/8/2011 4:05	58.7
3/8/2011 6:20	62.7	4/8/2011 23:30	63.1	6/8/2011 0:40	62.4	7/8/2011 1:50	61.5	8/8/2011 3:00	58.1	9/8/2011 4:10	59.5
3/8/2011 6:25	62.4	4/8/2011 23:35	63.5	6/8/2011 0:45	62.9	7/8/2011 1:55	61.1	8/8/2011 3:05	58.3	9/8/2011 4:15	59.3
3/8/2011 6:30	63.0	4/8/2011 23:40	63.8	6/8/2011 0:50	62.6	7/8/2011 2:00	61.8	8/8/2011 3:10	58.1	9/8/2011 4:20	59.3
3/8/2011 6:35	62.6	4/8/2011 23:45									

Real-time Noise Data RTN1 / FEHD Hong Kong Transport Section Whitefield Depot

9/8/2011 23:30	63.6	11/8/2011 0:40	62.7	12/8/2011 1:50	61.0	13/8/2011 3:00	61.0	14/8/2011 4:10	60.2	15/8/2011 5:20	58.8
9/8/2011 23:35	63.6	11/8/2011 0:45	61.3	12/8/2011 1:55	61.1	13/8/2011 3:05	60.4	14/8/2011 4:15	59.8	15/8/2011 5:25	59.5
9/8/2011 23:40	63.3	11/8/2011 0:50	62.3	12/8/2011 2:00	61.2	13/8/2011 3:10	60.8	14/8/2011 4:20	59.6	15/8/2011 5:30	59.6
9/8/2011 23:45	64.1	11/8/2011 0:55	61.6	12/8/2011 2:05	60.4	13/8/2011 3:15	60.4	14/8/2011 4:25	59.7	15/8/2011 5:35	59.9
9/8/2011 23:50	63.8	11/8/2011 1:00	62.2	12/8/2011 2:10	60.4	13/8/2011 3:20	60.4	14/8/2011 4:30	60.4	15/8/2011 5:40	60.4
9/8/2011 23:55	63.3	11/8/2011 1:05	61.0	12/8/2011 2:15	61.1	13/8/2011 3:25	60.4	14/8/2011 4:35	60.2	15/8/2011 5:45	60.9
10/8/2011 0:00	63.8	11/8/2011 1:10	61.3	12/8/2011 2:20	60.2	13/8/2011 3:30	60.1	14/8/2011 4:40	60.4	15/8/2011 5:50	60.9
10/8/2011 0:05	63.6	11/8/2011 1:15	61.2	12/8/2011 2:25	63.0	13/8/2011 3:35	60.3	14/8/2011 4:45	59.6	15/8/2011 5:55	60.8
10/8/2011 0:10	63.4	11/8/2011 1:20	61.4	12/8/2011 2:30	59.2	13/8/2011 3:40	60.3	14/8/2011 4:50	59.4	15/8/2011 6:00	60.9
10/8/2011 0:15	62.9	11/8/2011 1:25	61.5	12/8/2011 2:35	60.2	13/8/2011 3:45	60.2	14/8/2011 4:55	59.6	15/8/2011 6:05	62.6
10/8/2011 0:20	63.6	11/8/2011 1:30	62.7	12/8/2011 2:40	62.3	13/8/2011 3:50	60.4	14/8/2011 5:00	59.9	15/8/2011 6:10	62.2
10/8/2011 0:25	63.4	11/8/2011 1:35	62.5	12/8/2011 2:45	59.7	13/8/2011 3:55	60.4	14/8/2011 5:05	60.4	15/8/2011 6:15	62.1
10/8/2011 0:30	63.8	11/8/2011 1:40	63.0	12/8/2011 2:50	59.4	13/8/2011 4:00	59.9	14/8/2011 5:10	59.7	15/8/2011 6:20	62.5
10/8/2011 0:35	64.1	11/8/2011 1:45	63.3	12/8/2011 2:55	59.5	13/8/2011 4:05	60.0	14/8/2011 5:15	60.3	15/8/2011 6:25	62.9
10/8/2011 0:40	63.0	11/8/2011 1:50	61.7	12/8/2011 3:00	59.2	13/8/2011 4:10	60.2	14/8/2011 5:20	59.9	15/8/2011 6:30	63.2
10/8/2011 0:45	61.8	11/8/2011 1:55	67.2	12/8/2011 3:05	59.8	13/8/2011 4:15	60.1	14/8/2011 5:25	59.7	15/8/2011 6:35	63.7
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10/8/2011 0:55	61.9	11/8/2011 2:05	69.2	12/8/2011 3:15	59.7	13/8/2011 4:25	60.2	14/8/2011 5:35	59.5	15/8/2011 6:45	64.2
10/8/2011 1:00	62.0	11/8/2011 2:10	62.8	12/8/2011 3:20	58.8	13/8/2011 4:30	59.9	14/8/2011 5:40	60.2	15/8/2011 6:50	64.0
10/8/2011 1:05	61.3	11/8/2011 2:15	61.9	12/8/2011 3:25	59.1	13/8/2011 4:35	59.9	14/8/2011 5:45	61.4	15/8/2011 6:55	64.5
10/8/2011 1:10	61.4	11/8/2011 2:20	61.4	12/8/2011 3:30	59.3	13/8/2011 4:40	59.9	14/8/2011 5:50	60.8	15/8/2011 7:00	58.7
10/8/2011 1:15	62.0	11/8/2011 2:25	61.1	12/8/2011 3:35	60.0	13/8/2011 4:45	59.9	14/8/2011 5:55	61.1	15/8/2011 7:05	60.1
10/8/2011 1:20	60.8	11/8/2011 2:30	59.9	12/8/2011 3:40	60.4	13/8/2011 4:50	59.6	14/8/2011 6:00	62.1	15/8/2011 7:10	58.3
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10/8/2011 1:50	61.2	11/8/2011 3:00	60.2	12/8/2011 4:10	59.3	13/8/2011 5:20	60.4	14/8/2011 6:30	62.0	15/8/2011 7:40	59.9
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10/8/2011 2:15	60.4	11/8/2011 3:25	59.3	12/8/2011 4:35	59.1	13/8/2011 5:45	61.0	14/8/2011 6:55	62.0	15/8/2011 8:05	61.6
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10/8/2011 3:35	60.7	11/8/2011 4:45	59.4	12/8/2011 5:55	60.5	13/8/2011 7:05	62.8	15/8/2011 8:15	62.3	15/8/2011 1:25	60.8
10/8/2011 3:40	58.5	11/8/2011 4:50	59.8	12/8/2011 6:00	61.0	13/8/2011 7:10	63.1	15/8/2011 8:20	63.1	15/8/2011 1:30	60.3
10/8/2011 3:45	59.4	11/8/2011 4:55	58.9	12/8/2011 6:05	61.6	13/8/2011 7:15	63.7	15/8/2011 8:25	62.1	15/8/2011 1:35	60.0
10/8/2011 3:50	60.2	11/8/2011 5:00	59.3	12/8/2011 6:10	62.3	13/8/2011 7:20	63.4	15/8/2011 8:30	61.3	15/8/2011 1:40	61.0
10/8/2011 3:55	59.7	11/8/2011 5:05	59.9	12/8/2011 6:15	62.4	13/8/2011 7:25	63.3	15/8/2011 8:35	60.8	15/8/2011 1:45	59.6
10/8/2011 4:00	59.7	11/8/2011 5:10	59.3	12/8/2011 6:20	62.3	13/8/2011 7:30	63.0	15/8/2011 8:40	61.2	15/8/2011 1:50	59.8
10/8/2011 4:05	58.4	11/8/2011 5:15	59.8	12/8/2011 6:25	62.5	13/8/2011 7:35	62.9	15/8/2011 8:45	59.8	15/8/2011 1:55	59.6
10/8/2011 4:10	59.2	11/8/2011 5:20	59.6	12/8/2011 6:30	62.6	13/8/2011 7:40	63.3	15/8/2011 8:50	61.1	15/8/2011 2:00	60.7
10/8/2011 4:15	58.5	11/8/2011 5:25	59.9	12/8/2011 6:35	63.2	13/8/2011 7:45	62.6	15/8/2011 8:55	60.4	15/8/2011 2:05	60.8
10/8/2011 4:20	58.8	11/8/2011 5:30	60.2	12/8/2011 6:40	63.2	13/8/2011 7:50	63.3	15/8/2011 9:00	60.6	15/8/2011 2:10	59.5
10/8/2011 4:25	59.4	11/8/2011 5:35	60.1	12/8/2011 6:45	63.6	13/8/2011 7:55	63.6	15/8/2011 9:05	60.2	15/8/2011 2:15	59.5
10/8/2011 4:30	59.1	11/8/2011 5:40	59.9	12/8/2011 6:50	64.5	14/8/2011 8:00	62.9	15/8/2011 9:10	60.3	15/8/2011 2:20	58.9
10/8/2011 4:35	58.9	11/8/2011 5:45	61.4	12/8/2011 6:55	63.7	14/8/2011 8:05	63.1	15/8/2011 9:15	60.7	15/8/2011 2:25	59.8
10/8/2011 4:40	59.5	11/8/2011 5:50	61.0	12/8/2011 7:00	63.7	14/8/2011 8:10	63.5	15/8/2011 9:20	60.0	15/8/2011 2:30	59.3
10/8/2011 4:45	59.9	11/8/2011 5:55	61.3	12/8/2011 7:05	63.8	14/8/2011 8:15	63.0	15/8/2011 9:25	60.0	15/8/2011 2:35	59.4
10/8/2011 4:50	59.5	11/8/2011 6:00	62.7	12/8/2011 7:10	63.4	14/8/2011 8:20	62.4	15/8/2011 9:30	59.3	15/8/2011 2:40	58.6
10/8/2011 4:55	59.0	11/8/2011 6:05	61.2	12/8/2011 7:15	63.7	14/8/2011 8:25	62.6	15/8/2011 9:35	60.0	15/8/2011 2:45	58.7
10/8/2011 5:00	59.3	11/8/2011 6:10	61.6	12/8/2011 7:20	63.7	14/8/2011 8:30	62.6	15/8/2011 9:40	60.0	15/8/2011 2:50	60.1
10/8/2011 5:05	60.0	11/8/2011 6:15	62.7	12/8/2011 7:25	63.7	14/8/2011 8:35	62.5	15/8/2011 9:45	58.6	15/8/2011 2:55	58.3
10/8/2011 5:10	59.5	11/8/2011 6:20	62.6	12/8/2011 7:30	64.0	14/8/2011 8:40	61.5	15/8/2011 9:50	60.1	15/8/2011 3:00	57.9
10/8/2011 5:15	59.7	11/8/2011 6:25	62.7	12/8/2011 7:35	63.9	14/8/2011 8:45	61.7	15/8/2011 9:55	59.5	15/8/2011 3:05	58.1
10/8/2011 5:20	60.5	11/8/2011 6:30	63.1	12/8/2011 7:40	63.8	14/8/2011 8:50	61.8	15/8/2011 10:00	58.2	15/8/2011 3:10	58.9
10/8/											

Real-time Noise Data RTN1 / FEHD Hong Kong Transport Section Whitefield Depot)

16/8/2011 6:30	63.1	17/8/2011 23:40	63.2	19/8/2011 0:50	62.6	20/8/2011 2:00	61.8	21/8/2011 3:10	59.9	22/8/2011 4:20	58.2
16/8/2011 6:35	63.4	17/8/2011 23:45	63.2	19/8/2011 0:55	61.7	20/8/2011 2:05	61.5	21/8/2011 3:15	60.2	22/8/2011 4:25	58.2
16/8/2011 6:40	63.7	17/8/2011 23:50	63.1	19/8/2011 1:00	62.1	20/8/2011 2:10	61.1	21/8/2011 3:20	59.6	22/8/2011 4:30	58.8
16/8/2011 6:45	64.0	17/8/2011 23:55	62.6	19/8/2011 1:05	61.3	20/8/2011 2:15	61.5	21/8/2011 3:25	60.0	22/8/2011 4:35	58.5
16/8/2011 6:50	64.3	18/8/2011 0:00	63.8	19/8/2011 1:10	61.1	20/8/2011 2:20	62.1	21/8/2011 3:30	60.0	22/8/2011 4:40	58.0
16/8/2011 6:55	65.2	18/8/2011 0:05	63.3	19/8/2011 1:15	61.3	20/8/2011 2:25	61.7	21/8/2011 3:35	60.6	22/8/2011 4:45	58.5
16/8/2011 23:00	63.2	18/8/2011 0:10	63.0	19/8/2011 1:20	61.4	20/8/2011 2:30	61.7	21/8/2011 3:40	60.8	22/8/2011 4:50	58.0
16/8/2011 23:05	63.6	18/8/2011 0:15	62.5	19/8/2011 1:25	61.2	20/8/2011 2:35	60.8	21/8/2011 3:45	59.7	22/8/2011 4:55	58.8
16/8/2011 23:10	63.8	18/8/2011 0:20	63.5	19/8/2011 1:30	61.2	20/8/2011 2:40	62.1	21/8/2011 3:50	60.3	22/8/2011 5:00	59.0
16/8/2011 23:15	63.6	18/8/2011 0:25	63.0	19/8/2011 1:35	61.4	20/8/2011 2:45	61.0	21/8/2011 3:55	60.2	22/8/2011 5:05	60.1
16/8/2011 23:20	64.4	18/8/2011 0:30	63.7	19/8/2011 1:40	60.9	20/8/2011 2:50	60.9	21/8/2011 4:00	59.8	22/8/2011 5:10	59.0
16/8/2011 23:25	63.9	18/8/2011 0:35	62.8	19/8/2011 1:45	61.6	20/8/2011 2:55	60.9	21/8/2011 4:05	60.0	22/8/2011 5:15	59.1
16/8/2011 23:30	63.3	18/8/2011 0:40	62.2	19/8/2011 1:50	60.7	20/8/2011 3:00	61.2	21/8/2011 4:10	60.3	22/8/2011 5:20	58.8
16/8/2011 23:35	63.9	18/8/2011 0:45	62.4	19/8/2011 1:55	61.6	20/8/2011 3:05	60.6	21/8/2011 4:15	60.0	22/8/2011 5:25	59.0
16/8/2011 23:40	63.0	18/8/2011 0:50	61.8	19/8/2011 2:00	60.2	20/8/2011 3:10	61.9	21/8/2011 4:20	60.4	22/8/2011 5:30	60.4
16/8/2011 23:45	63.2	18/8/2011 0:55	62.3	19/8/2011 2:05	60.3	20/8/2011 3:15	60.0	21/8/2011 4:25	61.1	22/8/2011 5:35	60.0
16/8/2011 23:50	63.2	18/8/2011 1:00	62.3	19/8/2011 2:10	59.6	20/8/2011 3:20	59.8	21/8/2011 4:30	60.0	22/8/2011 5:40	59.8
16/8/2011 23:55	62.9	18/8/2011 1:05	61.4	19/8/2011 2:15	60.1	20/8/2011 3:25	60.7	21/8/2011 4:35	59.8	22/8/2011 5:45	61.1
17/8/2011 0:00	63.1	18/8/2011 1:10	61.7	19/8/2011 2:20	60.2	20/8/2011 3:30	61.0	21/8/2011 4:40	60.5	22/8/2011 5:50	60.2
17/8/2011 0:05	63.0	18/8/2011 1:15	61.6	19/8/2011 2:25	60.3	20/8/2011 3:35	60.5	21/8/2011 4:45	60.7	22/8/2011 5:55	61.7
17/8/2011 0:10	63.1	18/8/2011 1:20	61.5	19/8/2011 2:30	59.1	20/8/2011 3:40	62.0	21/8/2011 4:50	60.1	22/8/2011 6:00	62.4
17/8/2011 0:15	62.9	18/8/2011 1:25	61.8	19/8/2011 2:35	59.6	20/8/2011 3:45	61.3	21/8/2011 4:55	60.4	22/8/2011 6:05	62.0
17/8/2011 0:20	63.1	18/8/2011 1:30	61.1	19/8/2011 2:40	59.8	20/8/2011 3:50	60.3	21/8/2011 5:00	59.7	22/8/2011 6:10	61.8
17/8/2011 0:25	63.4	18/8/2011 1:35	60.5	19/8/2011 2:45	59.7	20/8/2011 3:55	61.9	21/8/2011 5:05	60.4	22/8/2011 6:15	61.6
17/8/2011 0:30	64.0	18/8/2011 1:40	61.1	19/8/2011 2:50	59.6	20/8/2011 4:00	60.3	21/8/2011 5:10	60.6	22/8/2011 6:20	62.1
17/8/2011 0:35	63.0	18/8/2011 1:45	61.2	19/8/2011 2:55	59.1	20/8/2011 4:05	60.0	21/8/2011 5:15	61.0	22/8/2011 6:25	63.7
17/8/2011 0:40	61.7	18/8/2011 1:50	60.5	19/8/2011 3:00	59.4	20/8/2011 4:10	60.5	21/8/2011 5:20	60.8	22/8/2011 6:30	63.2
17/8/2011 0:45	61.9	18/8/2011 1:55	60.0	19/8/2011 3:05	59.1	20/8/2011 4:15	60.4	21/8/2011 5:25	60.6	22/8/2011 6:35	63.9
17/8/2011 0:50	61.8	18/8/2011 2:00	59.6	19/8/2011 3:10	59.3	20/8/2011 4:20	60.9	21/8/2011 5:30	60.5	22/8/2011 6:40	64.2
17/8/2011 0:55	62.2	18/8/2011 2:05	61.7	19/8/2011 3:15	59.2	20/8/2011 4:25	60.6	21/8/2011 5:35	60.8	22/8/2011 6:45	64.1
17/8/2011 1:00	61.9	18/8/2011 2:10	60.8	19/8/2011 3:20	59.2	20/8/2011 4:30	60.3	21/8/2011 5:40	61.4	22/8/2011 6:50	64.3
17/8/2011 1:05	61.0	18/8/2011 2:15	59.7	19/8/2011 3:25	59.0	20/8/2011 4:35	59.3	21/8/2011 5:45	61.1	22/8/2011 6:55	64.7
17/8/2011 1:10	62.0	18/8/2011 2:20	59.5	19/8/2011 3:30	59.0	20/8/2011 4:40	60.0	21/8/2011 5:50	61.3	22/8/2011 7:00	63.3
17/8/2011 1:15	61.9	18/8/2011 2:25	59.9	19/8/2011 3:35	58.3	20/8/2011 4:45	60.4	21/8/2011 5:55	61.5	22/8/2011 7:05	63.1
17/8/2011 1:20	62.0	18/8/2011 2:30	60.7	19/8/2011 3:40	59.5	20/8/2011 4:50	59.3	21/8/2011 6:00	61.2	22/8/2011 7:10	63.1
17/8/2011 1:25	64.1	18/8/2011 2:35	60.9	19/8/2011 3:45	58.6	20/8/2011 4:55	60.0	21/8/2011 6:05	61.8	22/8/2011 7:15	63.1
17/8/2011 1:30	60.2	18/8/2011 2:40	60.1	19/8/2011 3:50	59.1	20/8/2011 5:00	63.3	21/8/2011 6:10	61.5	22/8/2011 7:20	64.9
17/8/2011 1:35	60.5	18/8/2011 2:45	59.7	19/8/2011 3:55	58.7	20/8/2011 5:05	61.2	21/8/2011 6:15	62.2	22/8/2011 7:25	62.7
17/8/2011 1:40	60.8	18/8/2011 2:50	60.6	19/8/2011 4:00	58.7	20/8/2011 5:10	59.6	21/8/2011 6:20	62.6	22/8/2011 7:30	62.7
17/8/2011 1:45	60.4	18/8/2011 2:55	60.2	19/8/2011 4:05	58.1	20/8/2011 5:15	60.4	21/8/2011 6:25	62.3	22/8/2011 7:35	63.3
17/8/2011 1:50	60.5	18/8/2011 3:00	59.4	19/8/2011 4:10	59.3	20/8/2011 5:20	59.4	21/8/2011 6:30	61.7	22/8/2011 7:40	62.7
17/8/2011 1:55	60.6	18/8/2011 3:05	58.8	19/8/2011 4:15	58.7	20/8/2011 5:25	60.3	21/8/2011 6:35	63.6	22/8/2011 7:45	62.2
17/8/2011 2:00	60.2	18/8/2011 3:10	59.5	19/8/2011 4:20	58.8	20/8/2011 5:30	60.0	21/8/2011 6:40	63.0	22/8/2011 7:50	62.6
17/8/2011 2:05	60.7	18/8/2011 3:15	59.6	19/8/2011 4:25	59.2	20/8/2011 5:35	60.8	21/8/2011 6:45	62.4	22/8/2011 7:55	62.8
17/8/2011 2:10	59.8	18/8/2011 3:20	59.6	19/8/2011 4:30	58.4	20/8/2011 5:40	61.3	21/8/2011 6:50	64.1	22/8/2011 8:00	62.9
17/8/2011 2:15	59.7	18/8/2011 3:25	59.7	19/8/2011 4:35	58.8	20/8/2011 5:45	60.6	21/8/2011 6:55	62.8	22/8/2011 8:05	62.5
17/8/2011 2:20	59.7	18/8/2011 3:30	59.6	19/8/2011 4:40	59.6	20/8/2011 5:50	60.2	21/8/2011 7:00	63.1	22/8/2011 8:10	62.7
17/8/2011 2:25	59.4	18/8/2011 3:35	59.0	19/8/2011 4:45	59.3	20/8/2011 5:55	62.1	21/8/2011 7:05	63.1	22/8/2011 8:15	61.9
17/8/2011 2:30	60.4	18/8/2011 3:40	59.3	19/8/2011 4:50	58.1	20/8/2011 6:00	61.8	21/8/2011 7:10	63.1	22/8/2011 8:20	62.3
17/8/2011 2:35	59.2	18/8/2011 3:45	59.4	19/8/2011 4:55	58.9	20/8/2011 6:05	62.6	21/8/2011 7:15	63.2	22/8/2011 8:25	62.9
17/8/2011 2:40	59.2	18/8/2011 3:50	59.8	19/8/2011 5:00	60.2	20/8/2011 6:10	61.4	21/8/2011 7:20	62.7	22/8/2011 8:30	62.1
17/8/2011 2:45	58.7	18/8/2011 3:55	59.1	19/8/2011 5:05	59.3	20/8/2011 6:15	62.9	21/8/2011 7:25	62.7	22/8/2011 8:35	62.3
17/8/2011 2:50	58.8	18/8/2011 4:00	59.4	19/8/2011 5:10	59.6	20/8/2011 6:20	62.3	21/8/2011 7:30	62.7	22/8/2011 8:40	61.2
17/8/2011 2:55	59.7	18/8/2011 4:05	59.0	19/8/2011 5:15	59.8	20/8/2011 6:25	63.2	21/8/2011 7:35	63.3	22/8/2011 8:45	62.4
17/8/2011 3:00	58.8	18/8/2011 4:10	59.3	19/8/2011 5:20	61.4	20/8/2011 6:30	63.0	21/8/2011 7:40	62.7	22/8/2011 8:50	61.3
17/8/2011 3:05	58.4	18/8/2011 4:15	59.4	19/8/2011 5:25	60.0	20/8/2011 6:35	63.5	21/8/2011 7:45	64.8	22/8/2011 8:55	61.1
17/8/2011 3:10	59.7	18/8/2011 4:20	59.7	19/8/2011 5:30	61.1	20/8/2011 6:40	63.9	21/8/2011 7:50	62.2	22/8/2011 9:00	60.2
17/8/2011 3:15	59.0	18/8/2011 4:25	58.6	19/8/2011 5:35	60.5	20/8/2011 6:45	63.3	21/8/2011 7:55	62.3	22/8/2011 9:05	60.4
17/8/2011 3:20	59.0	18/8/2011 4:30	59.4	19/8/2011 5:40	60.9	20/8/2011 6:50	63.2	22/8/2011 8:00	62.8	22/8/2011 9:10	60.3
17/8/2011 3:25	59.9	18/8/2011 4:35	59.4	19/8/2011 5:45	60.9	20/8/2011 6:55	63.9	22/8/2011 8:05	62.2	22/8/2011 9:15	60.4
17/8/2011 3:30	59.1	18/8/2011 4:40	58.7	19/8/2011 5:50	61.3	20/8/2011 7:00	63.3	22/8/2011 8:10	62.1	22/8/2011 9:20	60.4
17/8/2011 3:35	59.0	18/8/2011 4:45	59.6	19/8/2011 5:55	61.5	20/8/2011 7:05	63.3	22/8/2011 8:15	62.4	22/8/2011 9:25	60.8
17/8/2011 3:40	60.0	18/8/2011 4:50	58.8	19/8/2011 6:00	61.4	20/8/2011 7:10	63.3	22/8/2011 8:20	62.1	22/8/2011 9:30	60.3
17/8/2011 3:45	59.6	18/8/2011 4:55	59.5	19/8/2011 6:05	62.0	20/8/2011 7:15	63.8	22/8/2011 8:25	61.7	22/8/2011 9:35	60.7
17/8/2011 3:50	59.0	18/8/2011 5:00	58.5	19/8/2011 6:10	61.6	20/8/2011 7:20	63.6	22/8/2011 8:30	62.0	22/8/2011 9:40	60.7
17/8/2011 3:55	58.5	18/8/2011 5:05	59.9	19/8/2011 6:15	62.9	20/8/2011 7:25	63.2	22/8/2011 8:35	61.6	22/8/2011 9:45	60.6
17/8/2011 4:00	58.9	18/8/2011 5:10	60.3	19/8/2011 6:20	63.2	20/8/2011 7:30	63.7	22/8/2011 8:40	61.2	22/8/2011 9:50	61.2
17/8/2011 4:05	58.4	18/8/2011 5:15	60.3	19/8/2011 6:25	62.3	20/8/2011 7:35	63.9	22/8/2011 8:45	61.9	22/8/2011 9:55	59.6
17/8/2011 4:10	59.0	18/8/2011 5:20	59.1	19/8/2011 6:30	62.4	20/8/2011 7:40	63.0	22/8/2011 8:50	61.3	22/8/2011 10:00	60.2
17/8/2011 4:15	58.7	18/8/2011 5:25	61.0	19/8/2011 6:35	63.0	20/8/2011 7:45	63.8	22/8/2011 8:55	60.4	22/8/2011 10:05	60.2
17/8/2011 4:20	58.8	18/8/2011 5:30	60.2	19/8/2011 6:40	64.1	20/8/2011 7:50	63.9	22/8/2011 9:00	61.1	22/8/2011 10:10	5

Real-time Noise Data RTN1 (FEHD Hong Kong Transport Section Whitefield Depot)

23/8/2011 5:30	60.3	24/8/2011 6:40	63.6	25/8/2011 23:50	63.8	27/8/2011 1:00	61.7
23/8/2011 5:35	61.9	24/8/2011 6:45	64.3	25/8/2011 23:55	63.8	27/8/2011 1:05	62.5
23/8/2011 5:40	60.3	24/8/2011 6:50	64.3	26/8/2011 0:00	63.4	27/8/2011 1:10	62.2
23/8/2011 5:45	60.5	24/8/2011 6:55	64.2	26/8/2011 0:05	64.4	27/8/2011 1:15	61.9
23/8/2011 5:50	60.8	24/8/2011 23:00	63.4	26/8/2011 0:10	63.4	27/8/2011 1:20	62.0
23/8/2011 5:55	62.4	24/8/2011 23:05	63.4	26/8/2011 0:15	63.5	27/8/2011 1:25	62.2
23/8/2011 6:00	61.2	24/8/2011 23:10	64.1	26/8/2011 0:20	63.0	27/8/2011 1:30	62.1
23/8/2011 6:05	61.9	24/8/2011 23:15	63.8	26/8/2011 0:25	63.2	27/8/2011 1:35	62.0
23/8/2011 6:10	61.4	24/8/2011 23:20	63.6	26/8/2011 0:30	63.1	27/8/2011 1:40	61.5
23/8/2011 6:15	61.9	24/8/2011 23:25	62.9	26/8/2011 0:35	63.2	27/8/2011 1:45	62.0
23/8/2011 6:20	62.4	24/8/2011 23:30	63.5	26/8/2011 0:40	62.7	27/8/2011 1:50	61.9
23/8/2011 6:25	62.1	24/8/2011 23:35	65.0	26/8/2011 0:45	62.5	27/8/2011 1:55	61.9
23/8/2011 6:30	62.4	24/8/2011 23:40	63.4	26/8/2011 0:50	61.4	27/8/2011 2:00	61.7
23/8/2011 6:35	63.5	24/8/2011 23:45	62.7	26/8/2011 0:55	62.0	27/8/2011 2:05	61.2
23/8/2011 6:40	64.4	24/8/2011 23:50	63.4	26/8/2011 1:00	61.6	27/8/2011 2:10	61.5
23/8/2011 6:45	64.0	24/8/2011 23:55	63.4	26/8/2011 1:05	60.9	27/8/2011 2:15	61.5
23/8/2011 6:50	64.1	25/8/2011 0:00	62.6	26/8/2011 1:10	61.6	27/8/2011 2:20	61.4
23/8/2011 6:55	64.0	25/8/2011 0:05	63.1	26/8/2011 1:15	61.6	27/8/2011 2:25	61.3
23/8/2011 23:00	63.5	25/8/2011 0:10	62.8	26/8/2011 1:20	62.1	27/8/2011 2:30	61.5
23/8/2011 23:05	63.6	25/8/2011 0:15	62.5	26/8/2011 1:25	61.7	27/8/2011 2:35	60.4
23/8/2011 23:10	63.9	25/8/2011 0:20	62.5	26/8/2011 1:30	60.9	27/8/2011 2:40	61.3
23/8/2011 23:15	62.9	25/8/2011 0:25	62.9	26/8/2011 1:35	60.5	27/8/2011 2:45	60.7
23/8/2011 23:20	63.4	25/8/2011 0:30	62.2	26/8/2011 1:40	61.3	27/8/2011 2:50	61.5
23/8/2011 23:25	63.1	25/8/2011 0:35	61.4	26/8/2011 1:45	60.6	27/8/2011 2:55	60.1
23/8/2011 23:30	63.3	25/8/2011 0:40	62.0	26/8/2011 1:50	60.8	27/8/2011 3:00	61.6
23/8/2011 23:35	63.1	25/8/2011 0:45	61.9	26/8/2011 1:55	61.2	27/8/2011 3:05	60.6
23/8/2011 23:40	62.2	25/8/2011 0:50	61.0	26/8/2011 2:00	60.9	27/8/2011 3:10	61.4
23/8/2011 23:45	62.5	25/8/2011 0:55	60.9	26/8/2011 2:05	60.6	27/8/2011 3:15	61.1
23/8/2011 23:50	62.9	25/8/2011 1:00	61.6	26/8/2011 2:10	60.1	27/8/2011 3:20	60.9
23/8/2011 23:55	62.7	25/8/2011 1:05	61.3	26/8/2011 2:15	60.3	27/8/2011 3:25	60.6
24/8/2011 0:00	63.3	25/8/2011 1:10	60.1	26/8/2011 2:20	60.1	27/8/2011 3:30	60.1
24/8/2011 0:05	62.7	25/8/2011 1:15	60.8	26/8/2011 2:25	59.6	27/8/2011 3:35	60.8
24/8/2011 0:10	62.2	25/8/2011 1:20	60.6	26/8/2011 2:30	60.8	27/8/2011 3:40	60.3
24/8/2011 0:15	63.0	25/8/2011 1:25	61.5	26/8/2011 2:35	59.7	27/8/2011 3:45	60.6
24/8/2011 0:20	62.5	25/8/2011 1:30	60.9	26/8/2011 2:40	60.2	27/8/2011 3:50	61.0
24/8/2011 0:25	62.6	25/8/2011 1:35	60.6	26/8/2011 2:45	60.5	27/8/2011 3:55	60.6
24/8/2011 0:30	63.1	25/8/2011 1:40	60.1	26/8/2011 2:50	60.8	27/8/2011 4:00	59.8
24/8/2011 0:35	62.2	25/8/2011 1:45	60.4	26/8/2011 2:55	60.1	27/8/2011 4:05	60.7
24/8/2011 0:40	61.4	25/8/2011 1:50	60.5	26/8/2011 3:00	59.6	27/8/2011 4:10	60.1
24/8/2011 0:45	61.2	25/8/2011 1:55	59.9	26/8/2011 3:05	59.7	27/8/2011 4:15	60.5
24/8/2011 0:50	61.5	25/8/2011 2:00	60.8	26/8/2011 3:10	59.1	27/8/2011 4:20	60.3
24/8/2011 0:55	61.6	25/8/2011 2:05	59.6	26/8/2011 3:15	59.6	27/8/2011 4:25	60.4
24/8/2011 1:00	61.4	25/8/2011 2:10	59.4	26/8/2011 3:20	59.3	27/8/2011 4:30	60.2
24/8/2011 1:05	60.4	25/8/2011 2:15	59.4	26/8/2011 3:25	58.1	27/8/2011 4:35	60.1
24/8/2011 1:10	61.6	25/8/2011 2:20	59.4	26/8/2011 3:30	59.7	27/8/2011 4:40	60.0
24/8/2011 1:15	60.9	25/8/2011 2:25	59.8	26/8/2011 3:35	59.2	27/8/2011 4:45	60.1
24/8/2011 1:20	60.7	25/8/2011 2:30	59.1	26/8/2011 3:40	59.7	27/8/2011 4:50	59.6
24/8/2011 1:25	60.8	25/8/2011 2:35	59.5	26/8/2011 3:45	61.0	27/8/2011 4:55	59.4
24/8/2011 1:30	61.1	25/8/2011 2:40	59.2	26/8/2011 3:50	59.7	27/8/2011 5:00	60.0
24/8/2011 1:35	60.7	25/8/2011 2:45	59.2	26/8/2011 3:55	59.6	27/8/2011 5:05	60.2
24/8/2011 1:40	60.4	25/8/2011 2:50	59.2	26/8/2011 4:00	59.9	27/8/2011 5:10	60.3
24/8/2011 1:45	60.3	25/8/2011 2:55	59.5	26/8/2011 4:05	59.1	27/8/2011 5:15	59.9
24/8/2011 1:50	60.0	25/8/2011 3:00	59.2	26/8/2011 4:10	59.0	27/8/2011 5:20	60.6
24/8/2011 1:55	59.5	25/8/2011 3:05	58.5	26/8/2011 4:15	59.4	27/8/2011 5:25	59.4
24/8/2011 2:00	61.0	25/8/2011 3:10	58.6	26/8/2011 4:20	59.5	27/8/2011 5:30	60.1
24/8/2011 2:05	59.7	25/8/2011 3:15	59.4	26/8/2011 4:25	59.5	27/8/2011 5:35	61.1
24/8/2011 2:10	58.9	25/8/2011 3:20	59.0	26/8/2011 4:30	60.4	27/8/2011 5:40	60.4
24/8/2011 2:15	58.9	25/8/2011 3:25	59.3	26/8/2011 4:35	60.0	27/8/2011 5:45	61.3
24/8/2011 2:20	59.5	25/8/2011 3:30	59.7	26/8/2011 4:40	59.3	27/8/2011 5:50	61.2
24/8/2011 2:25	58.8	25/8/2011 3:35	59.1	26/8/2011 4:45	60.0	27/8/2011 5:55	61.4
24/8/2011 2:30	59.0	25/8/2011 3:40	59.1	26/8/2011 4:50	59.2	27/8/2011 6:00	61.2
24/8/2011 2:35	59.8	25/8/2011 3:45	58.6	26/8/2011 4:55	59.5	27/8/2011 6:05	62.2
24/8/2011 2:40	59.5	25/8/2011 3:50	58.8	26/8/2011 5:00	60.4	27/8/2011 6:10	62.0
24/8/2011 2:45	58.9	25/8/2011 3:55	59.3	26/8/2011 5:05	58.7	27/8/2011 6:15	61.8
24/8/2011 2:50	59.4	25/8/2011 4:00	58.0	26/8/2011 5:10	59.5	27/8/2011 6:20	63.3
24/8/2011 2:55	58.7	25/8/2011 4:05	58.4	26/8/2011 5:15	59.6	27/8/2011 6:25	62.5
24/8/2011 3:00	58.8	25/8/2011 4:10	58.5	26/8/2011 5:20	59.4	27/8/2011 6:30	63.3
24/8/2011 3:05	58.6	25/8/2011 4:15	58.8	26/8/2011 5:25	59.7	27/8/2011 6:35	62.6
24/8/2011 3:10	58.7	25/8/2011 4:20	58.7	26/8/2011 5:30	59.9	27/8/2011 6:40	63.2
24/8/2011 3:15	59.2	25/8/2011 4:25	58.2	26/8/2011 5:35	60.2	27/8/2011 6:45	62.9
24/8/2011 3:20	58.6	25/8/2011 4:30	59.2	26/8/2011 5:40	60.9	27/8/2011 6:50	64.2
24/8/2011 3:25	58.3	25/8/2011 4:35	60.0	26/8/2011 5:45	60.8	27/8/2011 6:55	63.3
24/8/2011 3:30	58.5	25/8/2011 4:40	59.0	26/8/2011 5:50	61.0	27/8/2011 23:00	64.3
24/8/2011 3:35	58.1	25/8/2011 4:45	59.0	26/8/2011 5:55	60.7	27/8/2011 23:05	63.4
24/8/2011 3:40	59.5	25/8/2011 4:50	57.9	26/8/2011 6:00	60.8	27/8/2011 23:10	63.6
24/8/2011 3:45	59.7	25/8/2011 4:55	59.6	26/8/2011 6:05	60.7	27/8/2011 23:15	63.9
24/8/2011 3:50	58.5	25/8/2011 5:00	58.6	26/8/2011 6:10	61.8	27/8/2011 23:20	63.7
24/8/2011 3:55	58.9	25/8/2011 5:05	60.2	26/8/2011 6:15	62.3	27/8/2011 23:25	64.1
24/8/2011 4:00	58.8	25/8/2011 5:10	60.0	26/8/2011 6:20	62.8	27/8/2011 23:30	63.4
24/8/2011 4:05	58.8	25/8/2011 5:15	59.5	26/8/2011 6:25	63.1	27/8/2011 23:35	63.9
24/8/2011 4:10	58.9	25/8/2011 5:20	60.2	26/8/2011 6:30	63.8	27/8/2011 23:40	63.5
24/8/2011 4:15	57.5	25/8/2011 5:25	59.6	26/8/2011 6:35	64.3	27/8/2011 23:45	63.7
24/8/2011 4:20	59.0	25/8/2011 5:30	60.5	26/8/2011 6:40	64.2	27/8/2011 23:50	63.5
24/8/2011 4:25	58.3	25/8/2011 5:35	60.0	26/8/2011 6:45	64.0	27/8/2011 23:55	64.1
24/8/2011 4:30	58.5	25/8/2011 5:40	60.6	26/8/2011 6:50	65.0		
24/8/2011 4:35	58.3	25/8/2011 5:45	60.9	26/8/2011 6:55	64.4		
24/8/2011 4:40	59.3	25/8/2011 5:50	61.0	26/8/2011 23:00	63.6		
24/8/2011 4:45	58.7	25/8/2011 5:55	60.2	26/8/2011 23:05	63.5		
24/8/2011 4:50	59.2	25/8/2011 6:00	61.0	26/8/2011 23:10	64.1		
24/8/2011 4:55	58.9	25/8/2011 6:05	62.3	26/8/2011 23:15	63.1		
24/8/2011 5:00	59.5	25/8/2011 6:10	62.2	26/8/2011 23:20	63.8		
24/8/2011 5:05	59.3	25/8/2011 6:15	61.8	26/8/2011 23:25	64.0		
24/8/2011 5:10	59.1	25/8/2011 6:20	62.7	26/8/2011 23:30	64.2		
24/8/2011 5:15	59.8	25/8/2011 6:25	63.0	26/8/2011 23:35	63.8		
24/8/2011 5:20	59.7	25/8/2011 6:30	63.8	26/8/2011 23:40	63.8		
24/8/2011 5:25	60.6	25/8/2011 6:35	63.3	26/8/2011 23:45	63.9		
24/8/2011 5:30	59.9	25/8/2011 6:40	64.3	26/8/2011 23:50	63.6		
24/8/2011 5:35	59.7	25/8/2011 6:45	64.0	26/8/2011 23:55	63.6		
24/8/2011 5:40	61.3	25/8/2011 6:50	64.4	27/8/2011 0:00	63.5		
24/8/2011 5:45	61.4	25/8/2011 6:55	64.6	27/8/2011 0:05	63.5		
24/8/2011 5:50	60.8	25/8/2011 23:00	64.0	27/8/2011 0:10	64.3		
24/8/2011 5:55	61.6	25/8/2011 23:05	64.0	27/8/2011 0:15	63.9		
24/8/2011 6:00	61.1	25/8/2011 23:10	63.4	27/8/2011 0:20	63.2		
24/8/2011 6:05	62.3	25/8/2011 23:15	63.9	27/8/2011 0:25	64.2		
24/8/2011 6:10	61.9	25/8/2011 23:20	64.0	27/8/2011 0:30	63.4		
24/8/2011 6:15	62.2	25/8/2011 23:25	64.0	27/8/2011 0:35	63.5		
24/8/2011 6:20	62.9	25/8/2011 23:30	63.9	27/8/2011 0:40	63.3		
24/8/2011 6:25	62.7	25/8/2011 23:35	63.0	27/8/2011 0:45	63.2		
24/8/2011 6:30	63.1	25/8/2011 23:40	63.5	27/8/2011 0:50			

Real-time Noise Data RTN2 (Oil Street Community Liaison Centre)

Table with columns for date and time (e.g., 2/8/2011 13:31) and numerical noise data values. The table is organized in a grid with 10 columns of data. It includes a section for 'Normal Day 07:00-19:00' and ends with a section for 'Normal Day 19:00-23:00' and 'Sunday & Holiday 07:00-23:00'.

Real-time Noise Data RTN2 (Oil Street Community Liaison Centre)

7/8/2011 10:41	53.8	7/8/2011 19:51	60.6	9/8/2011 21:01	61.9	11/8/2011 22:11	61.8	14/8/2011 7:21	61.0	14/8/2011 16:31	63.4
7/8/2011 10:46	66.3	7/8/2011 19:56	61.4	9/8/2011 21:06	61.7	11/8/2011 22:16	61.7	14/8/2011 7:26	61.4	14/8/2011 16:36	64.1
7/8/2011 10:51	65.1	7/8/2011 20:01	60.9	9/8/2011 21:11	61.8	11/8/2011 22:21	62.4	14/8/2011 7:31	62.9	14/8/2011 16:41	63.4
7/8/2011 10:56	64.7	7/8/2011 20:06	60.8	9/8/2011 21:16	61.7	11/8/2011 22:26	62.3	14/8/2011 7:36	63.6	14/8/2011 16:46	63.4
7/8/2011 11:01	64.9	7/8/2011 20:11	61.0	9/8/2011 21:21	62.6	11/8/2011 22:31	62.6	14/8/2011 7:41	61.5	14/8/2011 16:51	62.3
7/8/2011 11:06	63.1	7/8/2011 20:16	63.1	9/8/2011 21:26	61.5	11/8/2011 22:36	61.4	14/8/2011 7:46	62.6	14/8/2011 16:56	62.6
7/8/2011 11:11	64.0	7/8/2011 20:21	61.6	9/8/2011 21:31	62.2	11/8/2011 22:41	63.3	14/8/2011 7:51	62.1	14/8/2011 17:01	62.6
7/8/2011 11:16	64.6	7/8/2011 20:26	61.1	9/8/2011 21:36	63.4	11/8/2011 22:46	62.2	14/8/2011 7:56	63.0	14/8/2011 17:06	63.2
7/8/2011 11:21	64.4	7/8/2011 20:31	61.4	9/8/2011 21:41	61.6	11/8/2011 22:51	62.4	14/8/2011 8:01	62.5	14/8/2011 17:11	62.1
7/8/2011 11:26	65.2	7/8/2011 20:36	61.1	9/8/2011 21:46	61.2	11/8/2011 22:56	62.1	14/8/2011 8:06	63.3	14/8/2011 17:16	62.2
7/8/2011 11:31	63.9	7/8/2011 20:41	60.9	9/8/2011 21:51	63.4	12/8/2011 19:01	67.8	14/8/2011 8:11	61.7	14/8/2011 17:21	63.0
7/8/2011 11:36	65.5	7/8/2011 20:46	60.5	9/8/2011 21:56	66.5	12/8/2011 19:06	66.3	14/8/2011 8:16	62.3	14/8/2011 17:26	62.7
7/8/2011 11:41	63.7	7/8/2011 20:51	61.9	9/8/2011 22:01	64.9	12/8/2011 19:11	66.2	14/8/2011 8:21	62.3	14/8/2011 17:31	62.7
7/8/2011 11:46	62.1	7/8/2011 20:56	61.3	9/8/2011 22:06	63.9	12/8/2011 19:16	65.5	14/8/2011 8:26	61.5	14/8/2011 17:36	63.2
7/8/2011 11:51	61.8	7/8/2011 21:01	60.9	9/8/2011 22:11	64.0	12/8/2011 19:21	65.9	14/8/2011 8:31	62.8	14/8/2011 17:41	62.8
7/8/2011 11:56	62.0	7/8/2011 21:06	60.7	9/8/2011 22:16	63.8	12/8/2011 19:26	66.5	14/8/2011 8:36	64.3	14/8/2011 17:46	62.0
7/8/2011 12:01	62.9	7/8/2011 21:11	61.0	9/8/2011 22:21	63.4	12/8/2011 19:31	65.6	14/8/2011 8:41	64.7	14/8/2011 17:51	61.9
7/8/2011 12:06	62.1	7/8/2011 21:16	61.5	9/8/2011 22:26	63.6	12/8/2011 19:36	65.1	14/8/2011 8:46	64.7	14/8/2011 17:56	61.5
7/8/2011 12:11	62.2	7/8/2011 21:21	61.9	9/8/2011 22:31	63.3	12/8/2011 19:41	65.0	14/8/2011 8:51	64.2	14/8/2011 18:01	62.5
7/8/2011 12:16	62.1	7/8/2011 21:26	60.9	9/8/2011 22:36	63.5	12/8/2011 19:46	65.5	14/8/2011 8:56	66.5	14/8/2011 18:06	62.7
7/8/2011 12:21	61.4	7/8/2011 21:31	60.7	9/8/2011 22:41	65.5	12/8/2011 19:51	65.3	14/8/2011 9:01	66.0	14/8/2011 18:11	63.2
7/8/2011 12:26	61.6	7/8/2011 21:36	60.2	9/8/2011 22:46	64.8	12/8/2011 19:56	64.9	14/8/2011 9:06	66.1	14/8/2011 18:16	62.6
7/8/2011 12:31	61.7	7/8/2011 21:41	60.3	9/8/2011 22:51	64.5	12/8/2011 20:01	65.4	14/8/2011 9:11	67.8	14/8/2011 18:21	62.5
7/8/2011 12:36	61.4	7/8/2011 21:46	60.7	9/8/2011 22:56	64.0	12/8/2011 20:06	65.5	14/8/2011 9:16	66.6	14/8/2011 18:26	61.5
7/8/2011 12:41	61.1	7/8/2011 21:51	60.7	10/8/2011 19:01	64.0	12/8/2011 20:11	65.3	14/8/2011 9:21	65.9	14/8/2011 18:31	61.8
7/8/2011 12:46	61.1	7/8/2011 21:56	59.9	10/8/2011 19:06	62.6	12/8/2011 20:16	64.8	14/8/2011 9:26	65.3	14/8/2011 18:36	62.2
7/8/2011 12:51	62.0	7/8/2011 22:01	60.9	10/8/2011 19:11	64.8	12/8/2011 20:21	64.9	14/8/2011 9:31	66.4	14/8/2011 18:41	62.0
7/8/2011 12:56	62.0	7/8/2011 22:06	60.6	10/8/2011 19:16	63.2	12/8/2011 20:26	65.0	14/8/2011 9:36	65.3	14/8/2011 18:46	64.2
7/8/2011 13:01	63.4	7/8/2011 22:11	60.4	10/8/2011 19:21	64.6	12/8/2011 20:31	64.6	14/8/2011 9:41	65.1	14/8/2011 18:51	64.0
7/8/2011 13:06	63.8	7/8/2011 22:16	60.6	10/8/2011 19:26	63.6	12/8/2011 20:36	64.8	14/8/2011 9:46	64.8	14/8/2011 18:56	63.8
7/8/2011 13:11	63.2	7/8/2011 22:21	61.1	10/8/2011 19:31	64.2	12/8/2011 20:41	64.8	14/8/2011 9:51	65.5	14/8/2011 19:01	62.3
7/8/2011 13:16	64.1	7/8/2011 22:26	60.1	10/8/2011 19:36	64.4	12/8/2011 20:46	64.8	14/8/2011 9:56	65.7	14/8/2011 19:06	62.1
7/8/2011 13:21	64.6	7/8/2011 22:31	60.8	10/8/2011 19:41	63.2	12/8/2011 20:51	65.2	14/8/2011 10:01	65.6	14/8/2011 19:11	61.8
7/8/2011 13:26	65.6	7/8/2011 22:36	60.9	10/8/2011 19:46	63.9	12/8/2011 20:56	64.9	14/8/2011 10:06	64.9	14/8/2011 19:16	61.8
7/8/2011 13:31	64.7	7/8/2011 22:41	61.5	10/8/2011 19:51	65.5	12/8/2011 21:01	64.8	14/8/2011 10:11	65.3	14/8/2011 19:21	61.3
7/8/2011 13:36	65.3	7/8/2011 22:46	61.6	10/8/2011 19:56	65.8	12/8/2011 21:06	64.8	14/8/2011 10:16	65.9	14/8/2011 19:26	61.7
7/8/2011 13:41	66.5	7/8/2011 22:51	61.0	10/8/2011 20:01	65.3	12/8/2011 21:11	65.2	14/8/2011 10:21	65.2	14/8/2011 19:31	62.7
7/8/2011 13:46	65.6	7/8/2011 22:56	61.0	10/8/2011 20:06	66.6	12/8/2011 21:16	64.9	14/8/2011 10:26	65.4	14/8/2011 19:36	60.9
7/8/2011 13:51	63.8	8/8/2011 19:01	67.3	10/8/2011 20:11	65.4	12/8/2011 21:21	63.5	14/8/2011 10:31	65.2	14/8/2011 19:41	61.5
7/8/2011 13:56	62.3	8/8/2011 19:06	67.0	10/8/2011 20:16	65.4	12/8/2011 21:26	62.2	14/8/2011 10:36	65.9	14/8/2011 19:46	61.2
7/8/2011 14:01	63.8	8/8/2011 19:11	67.0	10/8/2011 20:21	65.1	12/8/2011 21:31	62.4	14/8/2011 10:41	66.1	14/8/2011 19:51	61.3
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7/8/2011 16:26	62.8	8/8/2011 21:36	61.5	10/8/2011 22:46	62.4	13/8/2011 19:56	64.6	14/8/2011 13:06	64.4		

Real-time Noise Data RTN2 (Oil Street Community Liaison Centre)

Table with 15 columns and 95 rows. Each row contains a date and time in YYYY/MM/DD HH:MM format followed by a numerical value (e.g., 15/8/2011 21:41 61.0).

Real-time Noise Data RTN2 (Oil Street Community Liaison Centre)

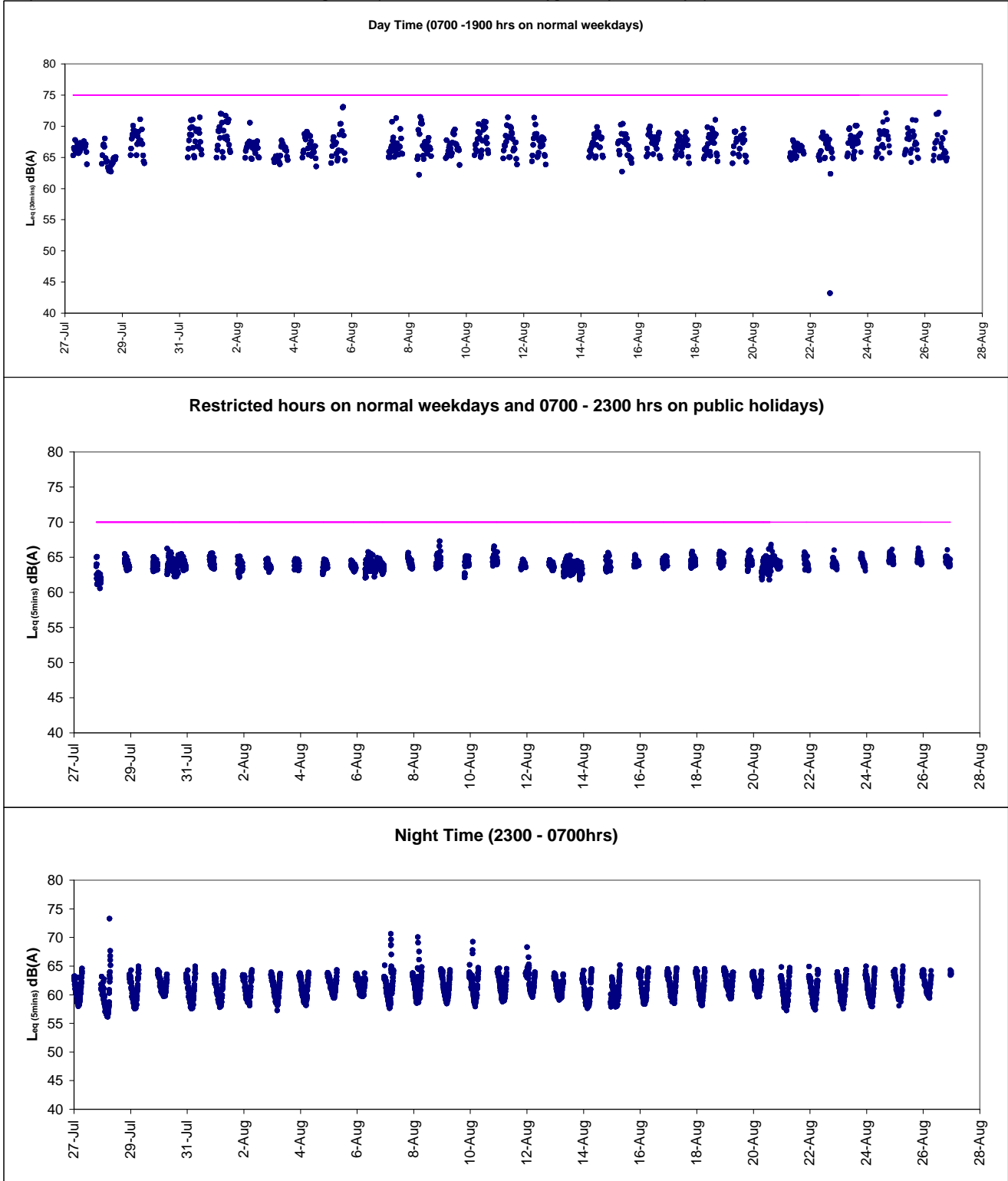
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3/8/2011 0:46	60.1	4/8/2011 1:56	57.6	5/8/2011 3:06	56.5	6/8/2011 4:16	58.1	7/8/2011 5:26	65.8	8/8/2011 6:36	62.3
3/8/2011 0:51	58.5	4/8/2011 2:01	56.8	5/8/2011 3:11	57.3	6/8/2011 4:21	57.7	7/8/2011 5:31	58.3	8/8/2011 6:41	64.4
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3/8/2011 6:16	61.8	4/8/2011 23:26	61.0	6/8/2011 0:36	59.6	7/8/2011 1:46	59.2	8/8/2011 2:56	56.1	9/8/2011 4:06	58.8
3/8/2011 6:21	68.7	4/8/2011 23:31	60.8	6/8/2011 0:41	59.8	7/8/2011 1:51	59.3	8/8/2011 3:01	54.9	9/8/2011 4:11	58.1
3/8/2011 6:26	60.2	4/8/2011 23:36	61.2	6/8/2011 0:46	60.0	7/8/2011 1:56	58.7	8/8/2011 3:06	55.2	9/8/2011 4:16	58.6
3/8/2011 6:31	61.2	4/8/2011 23:41	60.8	6/8/2011 0:51	60.0	7/8/2011 2:01	58.8	8/8/2011 3:11	55.3	9/8/2011 4:21	58.7
3/8/2011 6:36	60.5	4/8/2011 23:46	60.4	6/8/2011 0:56	59.9	7/8/2011 2:06	58.3	8/8/2011 3:16	56		

Real-time Noise Data RTN2 (Oil Street Community Liaison Centre)

23/8/2011 5:31	58.7	24/8/2011 6:41	61.4	25/8/2011 23:51	61.6	27/8/2011 1:01	59.8
23/8/2011 5:36	59.2	24/8/2011 6:46	61.8	25/8/2011 23:56	60.9	27/8/2011 1:06	60.0
23/8/2011 5:41	59.4	24/8/2011 6:51	61.8	26/8/2011 0:01	62.2	27/8/2011 1:11	60.1
23/8/2011 5:46	59.2	24/8/2011 6:56	61.3	26/8/2011 0:06	61.7	27/8/2011 1:16	60.8
23/8/2011 5:51	59.4	24/8/2011 23:01	61.8	26/8/2011 0:11	61.0	27/8/2011 1:21	61.4
23/8/2011 5:56	59.6	24/8/2011 23:06	62.1	26/8/2011 0:16	60.5	27/8/2011 1:26	60.6
23/8/2011 6:01	60.1	24/8/2011 23:11	62.9	26/8/2011 0:21	61.7	27/8/2011 1:31	60.2
23/8/2011 6:06	63.4	24/8/2011 23:16	61.8	26/8/2011 0:26	61.3	27/8/2011 1:36	59.6
23/8/2011 6:11	60.3	24/8/2011 23:21	61.1	26/8/2011 0:31	61.3	27/8/2011 1:41	59.7
23/8/2011 6:16	63.2	24/8/2011 23:26	61.2	26/8/2011 0:36	60.2	27/8/2011 1:46	59.2
23/8/2011 6:21	62.8	24/8/2011 23:31	61.6	26/8/2011 0:41	59.9	27/8/2011 1:51	59.1
23/8/2011 6:26	63.4	24/8/2011 23:36	61.3	26/8/2011 0:46	59.6	27/8/2011 1:56	58.8
23/8/2011 6:31	63.9	24/8/2011 23:41	61.3	26/8/2011 0:51	60.1	27/8/2011 2:01	58.7
23/8/2011 6:36	65.4	24/8/2011 23:46	61.3	26/8/2011 0:56	59.5	27/8/2011 2:06	58.5
23/8/2011 6:41	62.7	24/8/2011 23:51	61.0	26/8/2011 1:01	59.6	27/8/2011 2:11	59.1
23/8/2011 6:46	62.2	24/8/2011 23:56	61.2	26/8/2011 1:06	59.2	27/8/2011 2:16	58.7
23/8/2011 6:51	64.0	25/8/2011 0:01	61.1	26/8/2011 1:11	59.4	27/8/2011 2:21	58.8
23/8/2011 6:56	65.0	25/8/2011 0:06	60.8	26/8/2011 1:16	59.8	27/8/2011 2:26	57.9
23/8/2011 23:01	60.7	25/8/2011 0:11	60.4	26/8/2011 1:21	59.4	27/8/2011 2:31	59.0
23/8/2011 23:06	60.9	25/8/2011 0:16	60.2	26/8/2011 1:26	58.5	27/8/2011 2:36	58.3
23/8/2011 23:11	61.6	25/8/2011 0:21	60.2	26/8/2011 1:31	58.8	27/8/2011 2:41	59.6
23/8/2011 23:16	60.5	25/8/2011 0:26	61.1	26/8/2011 1:36	59.4	27/8/2011 2:46	58.1
23/8/2011 23:21	60.4	25/8/2011 0:31	59.7	26/8/2011 1:41	58.5	27/8/2011 2:51	59.4
23/8/2011 23:26	59.9	25/8/2011 0:36	59.0	26/8/2011 1:46	58.4	27/8/2011 2:56	58.9
23/8/2011 23:31	60.1	25/8/2011 0:41	59.8	26/8/2011 1:51	59.0	27/8/2011 3:01	60.2
23/8/2011 23:36	59.2	25/8/2011 0:46	59.7	26/8/2011 1:56	58.5	27/8/2011 3:06	57.9
23/8/2011 23:41	59.6	25/8/2011 0:51	58.9	26/8/2011 2:01	58.0	27/8/2011 3:11	58.3
23/8/2011 23:46	60.2	25/8/2011 0:56	59.1	26/8/2011 2:06	58.3	27/8/2011 3:16	58.0
23/8/2011 23:51	60.1	25/8/2011 1:01	59.1	26/8/2011 2:11	57.7	27/8/2011 3:21	57.5
23/8/2011 23:56	59.8	25/8/2011 1:06	59.1	26/8/2011 2:16	58.0	27/8/2011 3:26	57.8
24/8/2011 0:01	60.1	25/8/2011 1:11	58.7	26/8/2011 2:21	58.0	27/8/2011 3:31	57.9
24/8/2011 0:06	59.8	25/8/2011 1:16	58.7	26/8/2011 2:26	58.2	27/8/2011 3:36	57.7
24/8/2011 0:11	59.8	25/8/2011 1:21	58.4	26/8/2011 2:31	57.3	27/8/2011 3:41	58.4
24/8/2011 0:16	59.7	25/8/2011 1:26	59.4	26/8/2011 2:36	57.3	27/8/2011 3:46	57.2
24/8/2011 0:21	59.8	25/8/2011 1:31	58.9	26/8/2011 2:41	57.5	27/8/2011 3:51	57.2
24/8/2011 0:26	59.9	25/8/2011 1:36	59.0	26/8/2011 2:46	57.7	27/8/2011 3:56	57.9
24/8/2011 0:31	59.6	25/8/2011 1:41	58.4	26/8/2011 2:51	57.3	27/8/2011 4:01	57.8
24/8/2011 0:36	59.5	25/8/2011 1:46	58.7	26/8/2011 2:56	56.9	27/8/2011 4:06	58.3
24/8/2011 0:41	58.7	25/8/2011 1:51	58.8	26/8/2011 3:01	57.4	27/8/2011 4:11	57.7
24/8/2011 0:46	59.0	25/8/2011 1:56	58.2	26/8/2011 3:06	56.9	27/8/2011 4:16	57.6
24/8/2011 0:51	58.4	25/8/2011 2:01	58.7	26/8/2011 3:11	58.0	27/8/2011 4:21	58.0
24/8/2011 0:56	58.6	25/8/2011 2:06	58.9	26/8/2011 3:16	58.2	27/8/2011 4:26	57.2
24/8/2011 1:01	58.9	25/8/2011 2:11	58.6	26/8/2011 3:21	56.1	27/8/2011 4:31	57.3
24/8/2011 1:06	58.7	25/8/2011 2:16	57.4	26/8/2011 3:26	57.6	27/8/2011 4:36	57.4
24/8/2011 1:11	59.8	25/8/2011 2:21	57.3	26/8/2011 3:31	57.0	27/8/2011 4:41	56.7
24/8/2011 1:16	59.3	25/8/2011 2:26	57.8	26/8/2011 3:36	56.9	27/8/2011 4:46	56.8
24/8/2011 1:21	57.8	25/8/2011 2:31	57.3	26/8/2011 3:41	57.4	27/8/2011 4:51	57.4
24/8/2011 1:26	58.0	25/8/2011 2:36	57.3	26/8/2011 3:46	58.3	27/8/2011 4:56	58.1
24/8/2011 1:31	58.5	25/8/2011 2:41	57.0	26/8/2011 3:51	57.6	27/8/2011 5:01	58.2
24/8/2011 1:36	57.7	25/8/2011 2:46	58.0	26/8/2011 3:56	57.2	27/8/2011 5:06	59.6
24/8/2011 1:41	57.4	25/8/2011 2:51	57.2	26/8/2011 4:01	56.5	27/8/2011 5:11	58.8
24/8/2011 1:46	57.8	25/8/2011 2:56	58.2	26/8/2011 4:06	58.7	27/8/2011 5:16	58.1
24/8/2011 1:51	56.9	25/8/2011 3:01	58.2	26/8/2011 4:11	56.6	27/8/2011 5:21	58.1
24/8/2011 1:56	57.2	25/8/2011 3:06	57.4	26/8/2011 4:16	56.9	27/8/2011 5:26	58.2
24/8/2011 2:01	57.2	25/8/2011 3:11	56.5	26/8/2011 4:21	56.9	27/8/2011 5:31	57.4
24/8/2011 2:06	57.2	25/8/2011 3:16	57.6	26/8/2011 4:26	57.3	27/8/2011 5:36	58.6
24/8/2011 2:11	55.7	25/8/2011 3:21	57.0	26/8/2011 4:31	57.0	27/8/2011 5:41	58.5
24/8/2011 2:16	56.3	25/8/2011 3:26	57.5	26/8/2011 4:36	56.7	27/8/2011 5:46	58.9
24/8/2011 2:21	56.5	25/8/2011 3:31	58.4	26/8/2011 4:41	57.1	27/8/2011 5:51	58.3
24/8/2011 2:26	56.1	25/8/2011 3:36	57.6	26/8/2011 4:46	56.2	27/8/2011 5:56	59.2
24/8/2011 2:31	56.4	25/8/2011 3:41	57.1	26/8/2011 4:51	56.6	27/8/2011 6:01	59.7
24/8/2011 2:36	56.8	25/8/2011 3:46	56.9	26/8/2011 4:56	57.8	27/8/2011 6:06	58.8
24/8/2011 2:41	56.6	25/8/2011 3:51	57.9	26/8/2011 5:01	56.9	27/8/2011 6:11	60.7
24/8/2011 2:46	55.7	25/8/2011 3:56	57.1	26/8/2011 5:06	56.6	27/8/2011 6:16	59.3
24/8/2011 2:51	56.4	25/8/2011 4:01	56.1	26/8/2011 5:11	57.6	27/8/2011 6:21	61.0
24/8/2011 2:56	55.7	25/8/2011 4:06	57.1	26/8/2011 5:16	56.8	27/8/2011 6:26	60.2
24/8/2011 3:01	55.2	25/8/2011 4:11	56.8	26/8/2011 5:21	57.1	27/8/2011 6:31	61.5
24/8/2011 3:06	55.9	25/8/2011 4:16	56.9	26/8/2011 5:26	57.3	27/8/2011 6:36	60.5
24/8/2011 3:11	55.8	25/8/2011 4:21	56.7	26/8/2011 5:31	57.4	27/8/2011 6:41	61.0
24/8/2011 3:16	55.8	25/8/2011 4:26	56.8	26/8/2011 5:36	58.8	27/8/2011 6:46	60.5
24/8/2011 3:21	55.7	25/8/2011 4:31	57.5	26/8/2011 5:41	59.1	27/8/2011 6:51	61.4
24/8/2011 3:26	56.7	25/8/2011 4:36	57.7	26/8/2011 5:46	57.8	27/8/2011 6:56	61.9
24/8/2011 3:31	55.7	25/8/2011 4:41	57.1	26/8/2011 5:51	58.8	27/8/2011 23:01	61.4
24/8/2011 3:36	54.8	25/8/2011 4:46	58.0	26/8/2011 5:56	59.9	27/8/2011 23:06	61.5
24/8/2011 3:41	56.7	25/8/2011 4:51	57.6	26/8/2011 6:01	58.7	27/8/2011 23:11	61.8
24/8/2011 3:46	55.9	25/8/2011 4:56	65.7	26/8/2011 6:06	59.2	27/8/2011 23:16	61.3
24/8/2011 3:51	56.1	25/8/2011 5:01	57.5	26/8/2011 6:11	59.4	27/8/2011 23:21	61.2
24/8/2011 3:56	55.6	25/8/2011 5:06	58.6	26/8/2011 6:16	60.2	27/8/2011 23:26	61.4
24/8/2011 4:01	56.5	25/8/2011 5:11	57.7	26/8/2011 6:21	60.5	27/8/2011 23:31	61.1
24/8/2011 4:06	55.6	25/8/2011 5:16	59.1	26/8/2011 6:26	60.9	27/8/2011 23:36	62.0
24/8/2011 4:11	56.2	25/8/2011 5:21	60.0	26/8/2011 6:31	61.3	27/8/2011 23:41	61.8
24/8/2011 4:16	54.6	25/8/2011 5:26	58.7	26/8/2011 6:36	60.9	27/8/2011 23:46	60.9
24/8/2011 4:21	56.0	25/8/2011 5:31	59.8	26/8/2011 6:41	61.2	27/8/2011 23:51	61.6
24/8/2011 4:26	55.4	25/8/2011 5:36	59.7	26/8/2011 6:46	62.0	27/8/2011 23:56	61.1
24/8/2011 4:31	55.8	25/8/2011 5:41	58.6	26/8/2011 6:51	62.4		
24/8/2011 4:36	55.8	25/8/2011 5:46	59.1	26/8/2011 6:56	62.5		
24/8/2011 4:41	57.4	25/8/2011 5:51	60.0	26/8/2011 23:01	61.2	*Exceedance recorded during monitoring compliance check with NCO.	
24/8/2011 4:46	56.9	25/8/2011 5:56	58.1	26/8/2011 23:06	60.8		
24/8/2011 4:51	57.9	25/8/2011 6:01	60.3	26/8/2011 23:11	61.7		
24/8/2011 4:56	57.6	25/8/2011 6:06	59.4	26/8/2011 23:16	61.6		
24/8/2011 5:01	56.5	25/8/2011 6:11	59.8	26/8/2011 23:21	62.4		
24/8/2011 5:06	56.7	25/8/2011 6:16	59.5	26/8/2011 23:26	61.5		
24/8/2011 5:11	56.1	25/8/2011 6:21	60.5	26/8/2011 23:31	60.9		
24/8/2011 5:16	57.1	25/8/2011 6:26	60.9	26/8/2011 23:36	61.4		
24/8/2011 5:21	56.9	25/8/2011 6:31	60.6	26/8/2011 23:41	62.1		
24/8/2011 5:26	57.2	25/8/2011 6:36	65.9	26/8/2011 23:46	60.6		
24/8/2011 5:31	57.9	25/8/2011 6:41	63.8	26/8/2011 23:51	61.2		
24/8/2011 5:36	57.9	25/8/2011 6:46	68.3	26/8/2011 23:56	61.2		
24/8/2011 5:41	59.4	25/8/2011 6:51	61.9	27/8/2011 0:01	61.2		
24/8/2011 5:46	58.1	25/8/2011 6:56	63.2	27/8/2011 0:06	61.6		
24/8/2011 5:51	57.8	25/8/2011 23:01	62.1	27/8/2011 0:11	60.9		
24/8/2011 5:56	59.2	25/8/2011 23:06	61.3	27/8/2011 0:16	61.7		
24/8/2011 6:01	59.3	25/8/2011 23:11	61.4	27/8/2011 0:21	61.1		
24/8/2011 6:06	59.9	25/8/2011 23:16	61.5	27/8/2011 0:26	61.0		
24/8/2011 6:11	59.9	25/8/2011 23:21	62.2	27/8/2011 0:31	60.8		
24/8/2011 6:16	65.5	25/8/2011 23:26	61.6	27/8/2011 0:36	61.4		
24/8/2011 6:21	61.5	25/8/2011 23:31	61.0	27/8/2011 0:41	61.2		
24/8/2011 6:26	62.9	25/8/2011 23:36	61.3	27/8/2011 0:46	59.9		
24/8/2011 6:31	61.0	25/8/2011 23:41	61.8	27/8/2011			



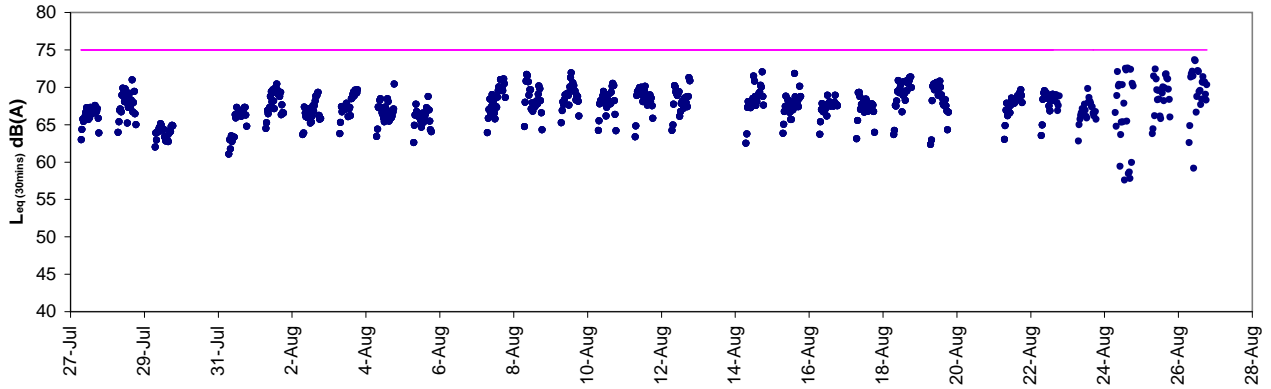
Graphic Presentation of Real Time Noise Monitoring Result (Food and Environmental Hygiene Department Depot)



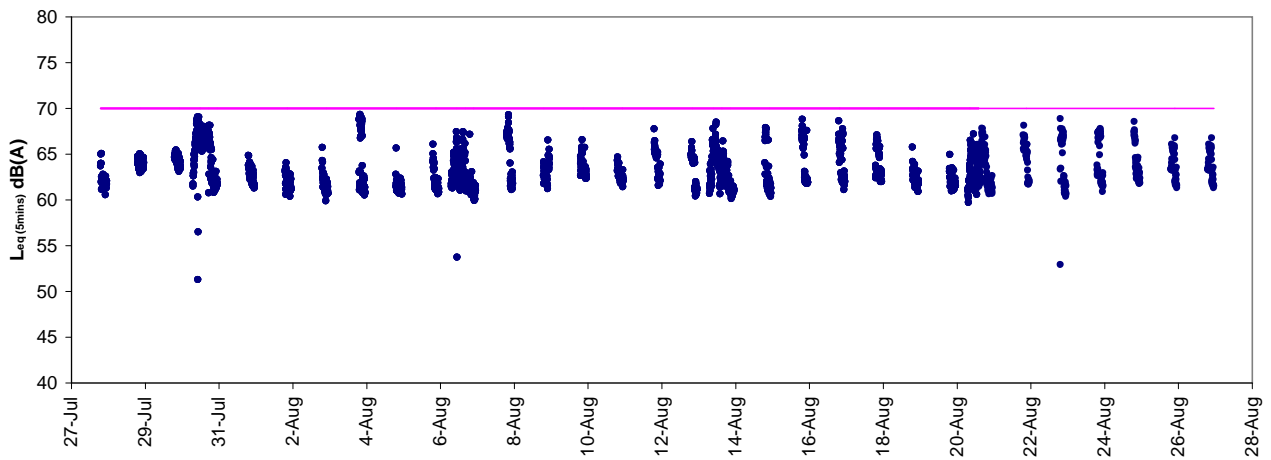


Graphic Presentation of Real Time Noise Monitoring Result (Oil Street Community Liaison Centre)

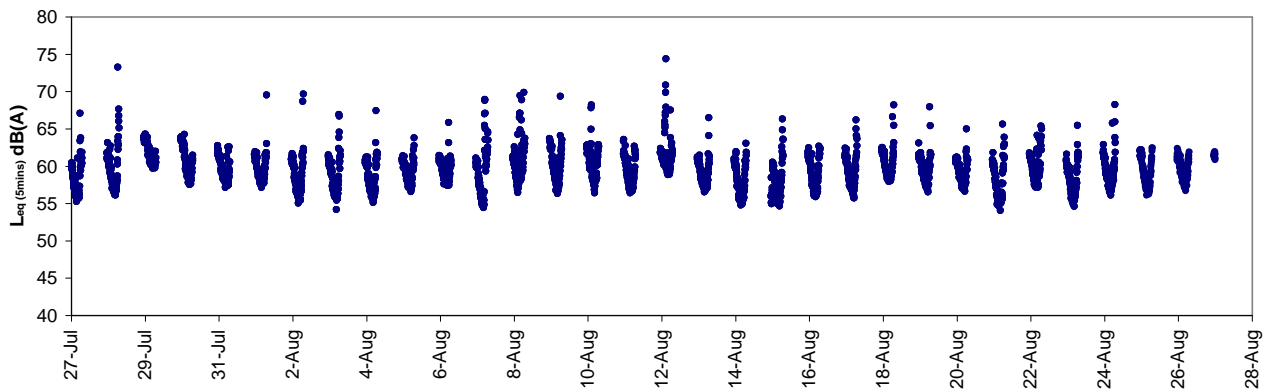
Day Time (0700 -1900 hrs on normal weekdays)



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



Night Time (2300 - 0700hrs)





Appendix 6.1

Event Action Plans



Event/Action Plan for Construction Noise

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



EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit Level being exceeded	<ol style="list-style-type: none"> 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) 	<ol style="list-style-type: none"> 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) 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 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) 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)



Event / Action Plan for Construction Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	<ol style="list-style-type: none"> Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Notify Contractor. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Rectify any unacceptable practice; Amend working methods if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> Identify source; Inform IEC and ER; Advise the ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and ER; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
LIMIT LEVEL				
1. Exceedance for one sample	<ol style="list-style-type: none"> Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)



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_10N063	10-Aug-11	16:40	M6 - HK baptist Church henrietta Secondary School	72	Leq(30-min)	when one documented complaint was received.	70	<p>Possible reason: Noisy traffic noise from Island Eastern Corridor (IEC) was contributed in the noise monitoring.</p> <p>Action taken / to be taken: Reviewed the trend of noise measurement results and analysis of contractor's working procedure. Repeated measurement was conducted after exceedance was recorded. The details as follow: 10 August 2011 17:17 72.0 dB(A). Breaking work was observed on site during monitoring period.</p> <p>Remarks / Other Obs: A hand held breaker was operated for existing dolphin removal work during monitoring. In addition, noise barrier with three sides and a top cover was deployed and fully enclosed towards HK baptist Church henrietta Secondary School during the operation. Major noise source was observed came from traffics on IEC therefore, breaking noise was not considered a dominant noise source during monitoring. It is concluded that the exceedance was not due to the Project.</p>
X_10N064	16-Aug-11	16:30	M6 - HK baptist Church henrietta Secondary School	73	Leq(30-min)	when one documented complaint was received.	70	<p>Possible reason: Noisy traffic noise from Island Eastern Corridor (IEC) and noise from helicopter appointed by ICBC for their product promotion were contributed in the noise monitoring.</p> <p>Action taken / to be taken: Reviewed the trend of noise measurement results and analysis of contractor's working procedure. Repeated measurement was conducted after exceedance was recorded. The details as follow: 16 August 2011 17:00 73.0 dB(A). was observed on site during monitoring period.</p> <p>Remarks / Other Obs: Pre-drilling was operated during monitoring. In addition, noise barrier was deployed towards HK baptist Church henrietta Secondary School during the operation. Major noise source was observed came from traffics on IEC and from helicopter appointed by ICBC for their product promotion and therefore, pre-drilling noise was not considered a dominant noise source during monitoring. It is concluded that the exceedance was not due to the Project.</p>
X_10N063	22-Aug-11	20:30	M1a - Harbour Road Sports Centre	73	Leq(5-min)	when one documented complaint was received.	70	<p>Possible reason: Noisy traffic noise from Tonnochy Road and noise from training activities at swimming pool were contributed in the noise monitoring.</p> <p>Action taken / to be taken: Reviewed the trend of noise measurement results and analysis of contractor's working procedure. Repeated measurement was conducted after exceedance was recorded. The details as follow: 22 August 2011 20:48, 73.0 dB(A). Excavation and Bored Piling were observed on site during monitoring period.</p> <p>Remarks / Other Obs: The construction works for Construct no. HK/2009/02 was complied with the conditions under valid Construction Noise Permit no. GW-RS0691-11. Moreover, PMEs used were observed following plant group D in the CNP. In addition, most of the construction noise was screened out by the noise from traffic and activities at swimming pool. It is concluded that the exceedance was not due to the Project.</p>



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 complainant 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.	Close
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.	



Appendix 10.1

Construction Programme of Individual Contracts

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
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	05-Mar-12																						
EV Adit Portion 1, 2, 6, 22	26d	22-Dec-11	16-Jan-12																						
EV Adit-based on Conforming 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

1 of 2

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 ENGR. (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
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	09-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)	235d	22-May-15	11-Jan-16																							

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

2 of 2

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)		



Activity ID	Activity Name	Rem Dur	Start	Finish	2011																
					August					September				October				November			
					25	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14
3MRP - Aug 2011 to Nov 2011																					
01 - CONTRACT DATES																					
01.2 - Possession of Site																					
0120-1100	Possession to Portion VIIA	0	04-Aug-11 A		◆ Possession to Portion VIIA																
0120-1200	Possession to Portion VIIB	0	04-Aug-11 A		◆ Possession to Portion VIIB																
0120-1300	Possession to Portion VIIC	0	04-Aug-11 A		◆ Possession to Portion VIIC																
0120-1400	Possession to Portion VIID	0	04-Aug-11 A		◆ Possession to Portion VIID																
0120-1500	Possession to Portion XI	0	05-Oct-11*											◆ Possession to Portion XI							
0120-1600	Possession to Portion IA	0	10-Nov-11*															◆ Possession			
0120-1700	Possession to Portion IB	0	10-Nov-11*															◆ Possession			
0120-1800	Possession to Portion IC	0	10-Nov-11*															◆ Possession			
0120-1900	Possession to Portion ID	0	10-Nov-11*															◆ Possession			
0120-2000	Possession to Portion X	0	10-Nov-11*															◆ Possession			
01.5 - Period of Site Possession for each Portion																					
0150-1000	Site possession Period Portion VI	2131	20-Jan-11 A	19-Jun-17	[Green bar]																
0150-1200	Site Possession Period Portion VIIB	914	04-Aug-11 A	18-Feb-14	[Green bar]																
0150-1300	Site Possession Period Portion VIIC	1293	04-Aug-11 A	04-Mar-15	[Green bar]																
0150-1400	Site Possession Period Portion VIID	914	04-Aug-11 A	18-Feb-14	[Green bar]																
0150-1500	Site Possession Period Portion XI	681	05-Oct-11	15-Aug-13	[Green bar]																
0150-1600	Site Possession Period Portion IA	2049	10-Nov-11	19-Jun-17	[Green bar]																
0150-1700	Site Possession Period Portion IB	832	10-Nov-11	18-Feb-14	[Green bar]																
0150-1800	Site Possession Period Portion IC	1211	10-Nov-11	04-Mar-15	[Green bar]																
0150-1900	Site Possession Period Portion ID	832	10-Nov-11	18-Feb-14	[Green bar]																
0150-2000	Site Possession Period Portion X	2049	10-Nov-11	19-Jun-17	[Green bar]																
02 - PRE-CONSTRUCTION WORKS																					
02.1 - Permit & Licence Application																					
0210-1300	Apply for XP from HyD	12	21-Mar-11 A	31-Aug-11	[Blue bar]					Apply for XP from HyD											
0210-1400	XP issued by HyD	0		31-Aug-11						◆ XP issued by HyD											
0210-1500	Dumping Permit from CEDD	42	10-Mar-11 A	30-Sep-11	[Blue bar]					Dumping Permit from CEDD											
02.2 - Contractor's Submission																					
0220-1150	Revise Detailed Works Programme	0	08-Jul-11 A	29-Jul-11 A	[Blue bar]					Revise Detailed Works Programme											
0220-1160	Detailed Works Programme - Approval from ER	1	30-Jul-11 A	20-Aug-11*	[Blue bar]					Detailed Works Programme - Approval from ER											
0220-1170	Temp. Drainage Management Plan Preparation	0	21-Jul-11 A	03-Aug-11 A	[Blue bar]					Temp. Drainage Management Plan Preparation											
0220-1180	Temp. Drainage Management Plan - Review & Comment by ER	0	04-Aug-11 A	09-Aug-11 A	[Blue bar]					Temp. Drainage Management Plan - Review & Comment by ER											
0220-1190	Revise Temp. Drainage Management Plan	7	10-Aug-11 A	26-Aug-11	[Blue bar]					Revise Temp. Drainage Management Plan											
0220-1200	Temp. Drainage Management Plan - Approval from ER	28	27-Aug-11	23-Sep-11	[Blue bar]					Temp. Drainage Management Plan - Approval from ER											
0220-1240	Concrete Ready Mix/Design Mix - ER Approval	0	16-Jul-11 A	03-Aug-11 A	[Blue bar]					Concrete Ready Mix/Design Mix - ER Approval											
0220-1250	Concrete Ready Mix/Design Mix - Concrete Plant Trials & Approval	30	20-Aug-11	18-Sep-11	[Blue bar]					Concrete Ready Mix/Design Mix - Concrete Plant Trials & Approval											
0220-1260	Drainage Pipes & Materials - Submission	28	20-Aug-11	16-Sep-11	[Blue bar]					Drainage Pipes & Materials - Submission											
0220-1270	Drainage Pipes & Materials - ER Review/Comment	28	17-Sep-11	14-Oct-11	[Blue bar]					Drainage Pipes & Materials - ER Review/Comment											
0220-1280	Drainage Pipes & Materials - Resubmission	14	15-Oct-11	28-Oct-11	[Blue bar]					Drainage Pipes & Materials - Resubmission											
0220-1290	Drainage Pipes & Materials - ER Approval	28	29-Oct-11	25-Nov-11	[Blue bar]					Drainage Pipes & Materials - ER Approval											
0220-1310	D-Wall Construction Materials - Submission	0	01-Aug-11 A	18-Aug-11 A	[Blue bar]					D-Wall Construction Materials - Submission											
0220-1320	D-Wall Construction Materials - ER Review/Comment	18	19-Aug-11 A	06-Sep-11	[Blue bar]					D-Wall Construction Materials - ER Review/Comment											
0220-1330	D-Wall Construction Materials - Resubmission	7	07-Sep-11	13-Sep-11	[Blue bar]					D-Wall Construction Materials - Resubmission											
0220-1340	D-Wall Construction Materials - ER Approval	14	14-Sep-11	27-Sep-11	[Blue bar]					D-Wall Construction Materials - ER Approval											
0220-1350	D-Wall Construction Materials - Procurement & Delivery	12	28-Sep-11	09-Oct-11	[Blue bar]					D-Wall Construction Materials - Procurement & Delivery											

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

Contract HY/2009/19

Three Month Rolling Programme (21 Aug - 20 Nov 2011)

3MRP

3MRP - Aug 2011 to Nov 2011

Activity ID	Activity Name	Rem Dur	Start	Finish	2011																
					August					September				October				November			
					25	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14
0220-1430	Bored Piles/H-piles Materials - Resubmission	0	17-Jun-11 A	25-Jul-11 A	Bored Piles/H-piles Materials - Resubmission																
0220-1440	Bored Piles/H-piles Materials - ER Approval	14	16-Jun-11 A	02-Sep-11	Bored Piles/H-piles Materials - ER Approval																
0220-1450	Bored Piles/H-piles Materials - Procurement & Delivery	42	03-Sep-11	14-Oct-11	Bored Piles/H-piles Materials - Procurement & Delivery																
0220-1460	Bridge Bearing - Submission	60	17-Sep-11	15-Nov-11	Bridge Bearing - Submission																
0220-1470	Bridge Bearing - ER Review/Comment	28	16-Nov-11	13-Dec-11	Bridge Bearing - ER Review/Comment																
02.3 - Method Statement / Shop Drawings																					
0230-1120	MS Marine Piling - Resubmission	14	20-Jul-11 A	02-Sep-11	MS Marine Piling - Resubmission																
0230-1130	MS Marine Piling - ER Approval	28	03-Sep-11	30-Sep-11	MS Marine Piling - ER Approval																
0230-1160	MS Dolphin Demolition - Resubmission	0	04-Jul-11 A	23-Jul-11 A	MS Dolphin Demolition - Resubmission																
0230-1170	MS Dolphin Demolition - ER Approval	0	25-Jul-11 A	12-Aug-11 A	MS Dolphin Demolition - ER Approval																
0230-1190	MS Ground Piling - ER Review & Comment	0	01-Jul-11 A	27-Jul-11 A	MS Ground Piling - ER Review & Comment																
0230-1200	MS Ground Piling - Resubmission	14	28-Jul-11 A	02-Sep-11	MS Ground Piling - Resubmission																
0230-1210	MS Ground Piling - ER Approval	14	06-Aug-11 A	16-Sep-11	MS Ground Piling - ER Approval																
0230-1220	MS Diaphragm Wall - Submission	0	13-Jul-11 A	16-Aug-11 A	MS Diaphragm Wall - Submission																
0230-1230	MS Diaphragm Wall - ER Review & Comment	18	17-Aug-11 A	06-Sep-11	MS Diaphragm Wall - ER Review & Comment																
0230-1240	MS Diaphragm Wall - Resubmission	12	07-Sep-11	18-Sep-11	MS Diaphragm Wall - Resubmission																
0230-1250	MS Diaphragm Wall - ER Approval	18	19-Sep-11	06-Oct-11	MS Diaphragm Wall - ER Approval																
0230-1620	MS Box Culvert T1 - Submission	6	09-Aug-11 A	25-Aug-11	MS Box Culvert T1 - Submission																
0230-1630	MS Box Culvert T1 - ER Review & Comment	14	26-Aug-11	08-Sep-11	MS Box Culvert T1 - ER Review & Comment																
0230-1640	MS Box Culvert T1 - Resubmission	7	09-Sep-11	15-Sep-11	MS Box Culvert T1 - Resubmission																
0230-1650	MS Box Culvert T1 - ER Approval	12	16-Sep-11	27-Sep-11	MS Box Culvert T1 - ER Approval																
02.4 - Contractor's Design and Build Items																					
0240-1090	Int. Noise Enclosure Design - Public Consultation	160	29-Jul-11 A	26-Jan-12	Int. Noise Enclosure Design - Public Consultation																
0240-1120	Noise Barrier Design - Public Consultation	160	29-Jul-11 A	26-Jan-12	Noise Barrier Design - Public Consultation																
0240-1340	Marine Bored Piling Platform Design - Prep & Submit	0	13-Jul-11 A	08-Aug-11 A	Marine Bored Piling Platform Design - Prep & Submit																
0240-1350	Marine Bored Piling Platform Design - ER review & comment	3	09-Aug-11 A	22-Aug-11	Marine Bored Piling Platform Design - ER review & comment																
0240-1360	Marine Bored Piling Platform Design - Resubmission	9	23-Aug-11	31-Aug-11	Marine Bored Piling Platform Design - Resubmission																
0240-1370	Marine Bored Piling Platform Design - ER Approval	12	01-Sep-11	12-Sep-11	Marine Bored Piling Platform Design - ER Approval																
03 - PRELIMINARY WORKS																					
03.1 - Site Establishment																					
0310-1290	Fabrication of Special Hoarding	75	04-Oct-11	30-Dec-11	Fabrication of Special Hoarding																
0310-1700	Temporary Cul-de-sac at Watson Road	10	08-Aug-11 A	31-Aug-11	Temporary Cul-de-sac at Watson Road																
03.2 - Geotechnical Instrumentation & Monitoring Works																					
0320-1000	Geotechnical Instrumentation Portion VIIB & VIID	13	04-Aug-11 A	03-Sep-11	Geotechnical Instrumentation Portion VIIB & VIID																
0320-1050	Geotechnical Instrumentation Portion IB, ID	30	10-Nov-11	14-Dec-11	Geotechnical Instrumentation Portion IB, ID																
03.3 - Interface Works																					
0330-1000	Develop Interface Management Plan with adjacent Contractors/Others	37	06-Apr-11 A	04-Oct-11	Develop Interface Management Plan with adjacent Contractors/Others																
0330-1100	Works at FEHD Permanent Depot (Stage 1)	36	10-Nov-11	21-Dec-11	Works at FEHD Permanent Depot (Stage 1)																
0330-1110	Submit to FEHD/ER Relocation Sequence & Programme	6	10-Nov-11	16-Nov-11	Submit to FEHD/ER Relocation Sequence & Programme																
04 - SECTION 1 OF THE WORKS (Subject to Excision)																					
04.1 - Drainage & Sewerage																					
0410-0980	Ground investigation + CAR & RAP approval	86	19-Jul-11 A	01-Dec-11	Ground investigation + CAR & RAP approval																
05 - SECTION 2 & 2A OF THE WORKS																					
05.2 - Cut & Cover Tunnel Ch 4932-5149																					
05.2.1 - D-Wall Construction																					
0521-1650	Site Survey & Setting Out (Portion VIIB and VIIC)	0	04-Aug-11 A	06-Aug-11 A	Site Survey & Setting Out (Portion VIIB and VIIC)																
0521-1660	Site Establishment (Portion VIIB and VIIC)	14	04-Aug-11 A	05-Sep-11	Site Establishment (Portion VIIB and VIIC)																
0521-1665	Construction of Temporary Barging Point/Jetty at Portion VIIA	34	08-Aug-11 A	29-Sep-11	Construction of Temporary Barging Point/Jetty at Portion VIIA																

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

Contract HY/2009/19

Three Month Rolling Programme (21 Aug - 20 Nov 2011)

3MRP

3MRP - Aug 2011 to Nov 2011

Activity ID	Activity Name	Rem Dur	Start	Finish	2011																
					August					September					October				November		
					25	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14
1011-1250	Predrilling pier F5	0	23-Jul-11 A	13-Aug-11 A	Predrilling pier F5																
1011-1270	Predrilling pier F7	3	30-Jul-11 A	23-Aug-11	Predrilling pier F7																
1011-1280	Predrilling pier F8	20	27-Aug-11	20-Sep-11	Predrilling pier F8																
1011-1285	Portion VI Marine Piles G.I. Final Report / Founding Level	41	12-Aug-11 A	10-Oct-11	Portion VI Marine Piles G.I. Final Report / Founding Le																
1011-1310	Dismantle Pre-drilling Platform pier F10	0	01-Aug-11 A	03-Aug-11 A	Dismantle Pre-drilling Platform pier F10																
1011-1340	Dismantle Pre-drilling Platform pier F14	0	01-Aug-11 A	03-Aug-11 A	Dismantle Pre-drilling Platform pier F14																
1011-1360	Dismantle Pre-drilling Platform pier F4	0	30-Jul-11 A	02-Aug-11 A	Dismantle Pre-drilling Platform pier F4																
1011-1370	Dismantle Pre-drilling Platform pier F5	0	13-Aug-11 A	16-Aug-11 A	Dismantle Pre-drilling Platform pier F5																
1011-1390	Dismantle Pre-drilling Platform pier F7	3	24-Aug-11	26-Aug-11	Dismantle Pre-drilling Platform pier F7																
1011-1400	Dismantle Pre-drilling Platform pier F8	3	21-Sep-11	23-Sep-11	Dismantle Pre-drilling Platform pier F8																
1011-1402	Extract Existing Dolphin Front Pile pier F12	6	27-Jul-11 A	10-Oct-11	Extract Existing Dolphin Front Pile pier F12																
1011-1405	Remove Existing Dolphin pier F12	6	14-Oct-11	20-Oct-11	Remove Existing Dolphin pier F12																
1011-1410	Extract Existing Dolphin Front Pile pier F11	6	06-Aug-11 A	13-Oct-11	Extract Existing Dolphin Front Pile pier F11																
1011-1415	Remove Existing Dolphin pier F11	6	21-Oct-11	27-Oct-11	Remove Existing Dolphin pier F11																
1011-1420	Extract Existing Dolphin Front Pile pier F9	9	28-Oct-11	07-Nov-11	Extract Existing																
1011-1425	Remove Existing Dolphin pier F9	9	08-Nov-11	17-Nov-11	Remove Existing Dolphin pier F9																
1011-1430	Extract Existing Dolphin Front Pile pier F10	9	18-Nov-11	28-Nov-11	Extract Existing Dolphin Front Pile pier F10																
1011-1470	Remove Existing Dolphin pier F3	0	12-Aug-11 A	17-Aug-11 A	Remove Existing Dolphin pier F3																
1011-1480	Remove Existing Dolphin pier F4	0	13-Aug-11 A	18-Aug-11 A	Remove Existing Dolphin pier F4																
1011-1490	Remove Existing Dolphin pier F5	9	05-Sep-11*	15-Sep-11	Remove Existing Dolphin pier F5																
1011-1500	Remove Existing Dolphin pier F6	0	15-Aug-11 A	19-Aug-11 A	Remove Existing Dolphin pier F6																
1011-1510	Remove Existing Dolphin pier F7	6	16-Sep-11	22-Sep-11	Remove Existing Dolphin pier F7																
1011-1520	Remove Existing Dolphin pier F8	6	24-Sep-11	30-Sep-11	Remove Existing Dolphin pier F8																
1011-1530	Erect marine piling platform pier F3	42	25-Aug-11	15-Oct-11	Erect marine piling platform pier F3																
1011-1540	Erect marine piling platform pier F4	42	25-Aug-11	15-Oct-11	Erect marine piling platform pier F4																
1011-1550	Erect marine piling platform pier F5	36	17-Oct-11	26-Nov-11	Erect marine piling platform pier F5																
1011-1560	Erect marine piling platform pier F6	36	17-Oct-11	26-Nov-11	Erect marine piling platform pier F6																
1011-1750	Pier F3 Dolphin Pile (team 1)	36	17-Oct-11	26-Nov-11	Pier F3 Dolphin Pile (team 1)																
1011-1850	Pier F4 Dolphin Pile (team 2)	36	17-Oct-11	26-Nov-11	Pier F4 Dolphin Pile (team 2)																
10.1.2 - Land Pier Construction																					
Pier D05 to D07																					
1012-1250	Site Survey & Setting Out at VIIB (possession VIIB on 03Aug11)	0	04-Aug-11 A	17-Aug-11 A	Site Survey & Setting Out at VIIB (possession VIIB on 03Aug11)																
1012-1260	Pre-drilling for 18 nos Piling at VIIB (2set)	30	08-Aug-11 A	24-Sep-11	Pre-drilling for 18 nos Piling at VIIB (2set)																
1012-1265	Portion VIIB Land Pile G.I. Final Report / Founding Level	30	26-Sep-11	01-Nov-11	Portion VIIB Land Pile																
1012-1270	Pier D07 Bored Piles (6 piles)	108	02-Nov-11	09-Mar-12	Pier D07 Bored Piles (6 piles)																
1012-1280	Pier D06 Bored Piles (6 piles)	108	02-Nov-11	09-Mar-12	Pier D06 Bored Piles (6 piles)																

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

Contract HY/2009/19

Three Month Rolling Programme (21 Aug - 20 Nov 2011)

3MRP

3MRP - Aug 2011 to Nov 2011

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Wan Chai Development Phase II - Central - Wan Chai Bypass at Wan Chai East CONTRACT HK/2009/02

CHUN WO - CRGL JV

Activity ID	Activity Name	OD	Start	Finish	% complete	2011												2012			2013			2014			2015			2016					
						J	A	J	J	A	J	J	A	J	J	A	J	J	A	J	J	A	J	J	A	J	J	A	J	J	A	J	J	A	
Wan Chai Development Phase II - Central - Wan Chai Bypass at Wan Chai East																																			
Expanded and More Detailed Initial Works Programme																																			
Section IX B Works - Central - Wan Chai Bypass Tunnel Structure from chainage 3400 to eastern tunnel																																			
Tunnel Portion 1																																			
S9B-T1-0005	Tunnel portion 1 Predrill & guide wall	10	18-Feb-11	13-Apr-11	40%	Tunnel portion 1 Predrill & guide wall																													
S9B-T1-0007	Tunnel Portion 1 Bored Piling works	105	09-Feb-11	08-Aug-11	0%	Tunnel Portion 1 Bored Piling works																													
S9B-T1-0010	Tunnel portion 1 diaphragm wall works	105	25-Apr-11	27-Aug-11	0%	Tunnel portion 1 diaphragm wall works																													
S9B-T1-0015	Tunnel portion 1 Pump Test and demobilization of Silos equipments	35	20-Aug-11	30-Sep-11	0%	Tunnel portion 1 Pump Test and demobilization of Silos equipments																													
S9B-T1-0020	Tunnel portion 1 ELSW excavation	130	03-Oct-11	07-Mar-12	0%	Tunnel portion 1 ELSW excavation																													
S9B-T1-0030	Tunnel portion 1 structure construction	100	08-Mar-12	09-Jul-12	0%	Tunnel portion 1 structure construction																													
S9B-T1-0040	Tunnel portion 1 backfilling and ELSW removal	54	10-Jul-12	10-Sep-12	0%	Tunnel portion 1 backfilling and ELSW removal																													
Tunnel Portion 2																																			
S9B-T1-0105	Tunnel portion 2 Predrill & guide wall	10	02-Aug-12	13-Aug-12	0%	Tunnel portion 2 Predrill & guide wall																													
S9B-T2-0010	Tunnel portion 2 diaphragm wall and bored pile works	100	14-Aug-12	10-Dec-12	0%	Tunnel portion 2 diaphragm wall and bored pile works																													
S9B-T2-0015	Tunnel portion 2 Pump Test	14	03-Dec-12	18-Dec-12	0%	Tunnel portion 2 Pump Test																													
S9B-T2-0020	Tunnel portion 2 ELSW excavation	80	11-Dec-12	19-Mar-13	0%	Tunnel portion 2 ELSW excavation																													
S9B-T2-0030	Tunnel portion 2 structure construction	100	20-Mar-13	22-Jul-13	0%	Tunnel portion 2 structure construction																													
S9B-T2-0040	Tunnel portion 2 backfilling and ELSW removal	80	23-Jul-13	25-Oct-13	0%	Tunnel portion 2 backfilling and ELSW removal																													
Tunnel Portion 3																																			
S9B-T3-0005	HEC 132kv diversion at Wan Shing Street Completed	0	01-Apr-12*		0%	HEC 132kv diversion at Wan Shing Street Completed																													
S9B-T3-0008	Tunnel portion 3 Predrill & guide wall	20	02-Oct-12	25-Oct-12	0%	Tunnel portion 3 Predrill & guide wall																													
S9B-T3-0010	Remaining diaphragm wall, bored piles and temporary pipe pile wall at tunnel portion 3	50	26-Oct-12	22-Dec-12	0%	Remaining diaphragm wall, bored piles and temporary pipe pile wall at tunnel port																													
S9B-T3-0015	Tunnel portion 3 Pump Test	30	15-Dec-12	22-Jan-13	0%	Tunnel portion 3 Pump Test																													
S9B-T3-0020	Tunnel portion 3 ELSW excavation	30	15-Jan-13	20-Feb-13	0%	Tunnel portion 3 ELSW excavation																													
S9B-T3-0030	Tunnel portion 3 structure construction	60	21-Feb-13	06-May-13	0%	Tunnel portion 3 structure construction																													
S9B-T3-0040	Tunnel portion 3 backfilling and ELSW removal	30	07-May-13	11-Jun-13	0%	Tunnel portion 3 backfilling and ELSW removal																													
Tunnel Portion 4																																			
S9B-T4-0005	Tunnel portion 4 Predrill & guide wall for section not at approach ramp	21	30-Aug-12	22-Sep-12	0%	Tunnel portion 4 Predrill & guide wall for section not at approach ramp																													
S9B-T4-0010	Diaphragm wall and bored pile for steel bridge no.1 above tunnel portion 4	40	24-Sep-12	10-Nov-12	0%	Diaphragm wall and bored pile for steel bridge no.1 above tunnel portion 4																													
S9B-T4-0020	Diaphragm wall & bored pile works at tunnel portion 4 (section not at approach ramp)	420	11-Sep-12	06-Feb-14	0%	Diaphragm wall & bored pile works at tunnel portion 4 (s																													
S9B-T4-0025	Tunnel portion 4 Predrill & guide wall (for section at approach ramp)	5	23-Dec-13	30-Dec-13	0%	Tunnel portion 4 Predrill & guide wall (for section at approa																													
S9B-T4-0030	Diaphragm wall works for remaining area of tunnel portion 4 (for section at approach ramp)	30	31-Dec-13	06-Feb-14	0%	Diaphragm wall works for remaining area of tunnel portio																													
S9B-T4-0035	Tunnel portion 4 Pump Test	14	28-Jan-14	14-Feb-14	0%	Tunnel portion 4 Pump Test																													
S9B-T4-0040	Tunnel portion 4 ELSW excavation	60	07-Feb-14	19-Apr-14	0%	Tunnel portion 4 ELSW excavation																													
S9B-T4-0050	Tunnel portion 4 structure construction	110	22-Apr-14	01-Sep-14	0%	Tunnel portion 4 structure construction																													
S9B-T4-0060	Tunnel portion 4 backfilling and ELSW removal	60	02-Sep-14	13-Nov-14	0%	Tunnel portion 4 backfilling and ELSW r																													
Section X Works - Central - Wan Chai Bypass Tunnel Structure from western tunnel to chainage 3400																																			
Tunnel Portion 5																																			
S10-T5-0005	Tunnel portion 5 Predrill & guide	21	23-Dec-14	19-Jan-15	0%	Tunnel portion 5 Predrill & guide																													
S10-T5-0010	Tunnel portion 5 diaphragm wall & bored pile works	110	20-Jan-15	04-Jun-15	0%	Tunnel portion 5 diaphragm																													
S10-T5-0015	Tunnel portion 5 pump test	14	13-Jun-15	30-Jun-15	0%	Tunnel portion 5 pump te																													
S10-T5-0020	Tunnel portion 5 tunnel ELSW excavation	45	04-Jul-15	25-Aug-15	0%	Tunnel portion 5 tunn																													
S10-T5-0030	Tunnel portion 5 tunnel structure construction	90	26-Aug-15	11-Dec-15	0%	Tunnel portion																													
Tunnel Portion 6																																			
S10-T6-0040	Tunnel portion 6 Predrill & guide	12	24-Apr-15	08-May-15	0%	Tunnel portion 6 Predrill & gu																													
S10-T6-0050	Tunnel portion 6 diaphragm wall & bored pile works at Area 10	45	09-May-15	03-Jul-15	0%	Tunnel portion 6 diaphrag																													
S10-T6-0055	Tunnel portion 6 pump test	14	25-Jun-15	11-Jul-15	0%	Tunnel portion 6 pump te																													
S10-T6-0060	Tunnel portion 6 tunnel ELSW excavation at Area 10	45	04-Jul-15	25-Aug-15	0%	Tunnel portion 6 tunn																													
S10-T6-0070	Tunnel portion 6 tunnel structure construction at Area 10	58	26-Aug-15	04-Nov-15	0%	Tunnel portion 6 t																													

 <p>俊和-中國中鐵聯營 CHUN WO - CRGL JOINT VENTURE</p>	<p>Remaining Level of Effort</p> <p>Actual Level of Effort</p> <p>Actual Work</p> <p>Remaining Work</p> <p>Critical Remaining Work</p>	<p>Milestone</p> <p>Summary</p>	<p>CEDD CONTRACT NO. HK/2009/02</p> <p>Wan Chai Development Phase II - Central Wan Chai Bypass at Wan Chai East (Contract 2)</p> <p>Revised Programme dated 7 April 2011</p>				Date	Revision	Checked	Approved
			07-Apr-11		KT	KY				