

Highways Department

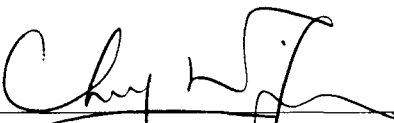
Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin

Contract No. HY/2003/10 - Environmental Team for
Lai Chi Kok Viaduct and Eagle's Nest Tunnel

Monthly EM&A Report Part I – Lai Chi Kok Viaduct (Version 1.0)

August 2007

Approved By


(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

CINOTECH CONSULTANTS LTD

Room 1602-1610, Delta House,
3 On Yiu Street,
Shatin, NT, Hong Kong
Tel: (852) 2151 2083 Fax: (852) 3107 1388
Email: info@cinotech.com.hk

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
Introduction	1
Environmental Monitoring and Audit Works	1
Environmental Licenses and Permits	2
Key Information in the Reporting Month	2
1. INTRODUCTION	3
Background	3
Project Organizations	4
Construction Programme	4
Summary of EM&A Requirements	5
2. AIR QUALITY	7
Monitoring Requirements	7
Monitoring Locations	7
Monitoring Equipment	7
Monitoring Parameters, Frequency and Duration	7
Monitoring Methodology and QA/QC Procedure	8
Results and Observations	9
3. NOISE	10
Monitoring Requirements	10
Monitoring Locations	10
Monitoring Equipment	11
Monitoring Parameters, Frequency and Duration	11
Monitoring Methodology and QA/QC Procedures	11
Maintenance and Calibration	12
Results and Observations	12
4. ENVIRONMENTAL AUDIT	13
Site Audits	13
Review of Environmental Monitoring Procedures	13
Status of Environmental Licensing and Permitting	13
Implementation Status of Environmental Mitigation Measures	13
Summary of Exceedances	16
Implementation Status of Event Action Plans	17
Summary of Complaint and Prosecution	17
5. FUTURE KEY ISSUES	18
Key Issues for the Coming Month	18
Monitoring Schedule for the Next Month	18
Construction Program for the Next Month	18
6. CONCLUSIONS AND RECOMMENDATIONS	19
Conclusions	19
Recommendations	19

LIST OF TABLES

Table I	Summary Table for Events Recorded in the Reporting Month
Table II	Summary Table for Key Information in the Reporting Month
Table 1.1	Key Project Contacts
Table 2.1	Locations for Air Quality Monitoring
Table 2.2	Air Quality Monitoring Equipment
Table 2.3	Impact Dust Monitoring Parameters, Frequency and Duration
Table 3.1	Noise Monitoring Stations
Table 3.2	Noise Monitoring Equipment
Table 3.3	Noise Monitoring Parameters, Frequency and Duration
Table 4.1	Summary of Environmental Licensing and Permit Status
Table 4.2	Observations and Recommendations of Site Audit for Civil Works
Table 4.3	Observations and Recommendations of Site Audits for TCSS
Table 4.4	Observations and Recommendations of Site Audits Followed up for Pervious Month for Civil Works
Table 4.5	Observations and Recommendations of Site Audits Followed up for Pervious Month for TCSS

LIST OF FIGURES

Figure 1	Locations of Monitoring Stations
----------	----------------------------------

LIST OF APPENDICES

A	Action and Limit Levels for Air Quality and Noise
B	Copies of Calibration Certificates
C	Environmental Monitoring Schedules
D	Wind Data
E	1-hour TSP Monitoring Results and Graphical Presentations
F	24-hour TSP Monitoring Results and Graphical Presentations
G	Noise Monitoring Results and Graphical Presentations
H	Summary of Exceedance
I	Site Audit Summary
J	Event Action Plans
K	Environmental Mitigation Implementation Schedule (EMIS)
L	Construction Programme
M	Complaint Log

ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
CEDD	Civil Engineering and Development Department
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
HVS	High Volume Sampler
HyD	Highways Department
IEC	Independent Environmental Checker
NOE	Notification of Exceedance
QA/QC	Quality Assurance / Quality Control
RE	Resident Engineer
RH	Relative Humidity
SLM	Sound Level Meter
TSP	Total Suspended Particulates

EXECUTIVE SUMMARY

Introduction

This is the 45th monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin, Lai Chi Kok Viaduct & Eagle’s Nest Tunnel”. This report documents the findings of EM&A Works conducted in August 2007 for Contract No. HY/2003/01, Lai Chi Kok Viaduct (the Project).

The major site activities for civil works undertaken in the reporting month included:

- Bulk excavation works at slope CCR-S4, LCK-R3 and CCR-R5 ;
- Retaining wall construction at CCR-R2 to CCR-R3 & CCR-R6 and LCK-R2 to LCK-R3 ;
- Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55 ;
- Drainage works at Lai Po Road ;
- Offsite fabrication of top rail of parapet ;
- Cast in-situ of slip roads C & D and Lai Wan Overpass ;
- Erection of noise barrier and signage at slip roads A, B C, D and Main Viaduct ;
- Construction of Wai Man Tsuen pump house, Irrigation Pump House near pier C14, kiosk at CCR-S1 and Lai Po Road pump house ;
- Hydro-mulching, hydroseeding and tree planting for slope CCR-S1 & S3 ;
- Roadwork at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Interchange and Butterfly Valley Road.

The major site activities for Traffic Control and Surveillance System (TCSS) works undertaken in the reporting month included:

- Cable-laying & Termination at Sections A, B, C, D, E, F and Kiosk K2;
- Field Equipment Installation at Sections A, B, C, D, E, F and Kiosk K2; and
- SCT and SAT at A, B, C, D, E, F and Kiosk K2.

Environmental Monitoring and Audit Works

Environmental monitoring and audit works for the Project was performed regularly as stipulated in the updated EM&A Manual and the results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

- Summary of the events and action taken in the reporting month is tabulated in **Table I**.

Table I Summary Table for Events Recorded in the Reporting Month

Parameter	No. of Events		No. of Events Due to the Project	Action Taken
	Action Level	Limit Level		
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A

Environmental Licenses and Permits

Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, the Water Discharge Licenses (WDLs) and the Construction Noise Permits (CNPs). Two new CNPs were issued to the Project by EPD in the reporting month.

Key Information in the Reporting Month

Summary of key information in this reporting month is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	0	---	N/A	N/A	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---

Future Key Issues:

Major site activities for civil works in the coming month include:

- Bulk excavation works at slope CCR-S4 and LCK-R3;
- Retaining wall construction at CCR-R2 & CCR-R3 and LCK-R2 to LCK-R3;
- Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55;
- Drainage works at Lai Po Road ;
- Offsite fabrication of top rail of parapet ;
- Cast in-situ of slip roads C & D and Lai Wan Overpass ;
- Erection of noise barrier and signage at slip roads A, B C, D and Main Viaduct ;
- Construction of Wai Man Tsuen pump house, Irrigation Pump House near pier C14, kiosk at CCR-S1 and Lai Po Road pump house ;
- Hydro-mulching and tree planting for slope CCR-S1 & S3 ;
- Roadwork at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Interchange and Butterfly Valley Road.

Major site activities for TCSS works in the coming month include:

- Cable-laying & Termination at Sections A, B, C, D, E, F and Kiosk K2;
- Field Equipment Installation at Sections A, B, C, D, E, F and Kiosk K2; and
- SCT and SAT at A, B, C, D, E, F and Kiosk K2.

The anticipated environmental issues will be mainly on surface runoff during rainy season, dust impact from bulk excavation works and noise nuisance from construction of Wai Man Tsuen Pump House and Irrigation Pump House near Pier C14, kiosk at CCR-S1 and Lai Po Road pump house.

1. INTRODUCTION

Background

- 1.1 Route 9 (Kowloon Section) (R9K) (hereinafter call the R9K-Project) forms part of the Route 9 between Cheung Sha Wan and Sha Tin (R9-CSWST) project, which will be a new expressway connecting West Kowloon and Sha Tin. It will be the fourth external link between Sha Tin and Kowloon and will form an important link between the northeast New Territories and the west Kowloon, Lantau Island and the western New Territories. R9K is being managed and implemented by the Highways Department (HyD).
- 1.2 The engineering design of R9K is covered under Agreement No. CE 50/98 “Route 9 between Cheung Sha Wan and Sha Tin – Design Construction Assignment”. The main consultant engaged under Agreement No. CE 50/98 is Maunsell Hyder Joint Venture (MHJV), who will act as the Engineer for the construction contracts. The works of R9K mainly comprise a 1.4km dual 3-lane Lai Chi Kok Viaduct from Lai Wan Interchange to Butterfly Valley; 0.5 km of dual 3-lane at-grade carriageway linking to the 2.1 km dual 3-lane twin-bore Eagle's Nest Tunnel with associated portal buildings; a toll plaza with an administration building located with the Sha Tin valley woodland; a ventilation building and an adit; associated noise barriers, noise enclosures, drainage, slope and landscape works; and electrical and mechanical works for the whole R9-CSWST. The remainder of the R9-CSWST forms the Sha Tin Section (R9S) of the project and is being managed and implemented separately by the Civil Engineering and Development Department (CEDD).
- 1.3 The R9-CSWST project is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An environmental impact assessment (EIA) report has been prepared in 1998 for the R9-CSWST project (1998 R9 EIA) to consider the key issues of noise, air quality, water quality, ecological, construction waste, landscape and visual, land use and cultural impacts, and identify possible mitigation measures.
- 1.4 An Updated Final EIA report was subsequently completed in August 1999 for the R9-CSWST project (1999 R9 EIA), to cater for some changes in R9K portion as mentioned in paragraph 1 in the report. The 1999 R9 EIA was endorsed by Environmental Protection Department (EPD) in November 1999. The 1998 R9 EIA and the 1999 R9 EIA (R9 EIA Reports) were included in the EIA register under the EIAO as report no. EIA-135/BC and AEIAR-022/1999 respectively. Environmental Monitoring and Audit (EM&A) Manuals for each of the R9 EIA Reports (EM&A Manuals) were also included as part of the EIA reports in the register.
- 1.5 Subsequent to the endorsement of the R9 EIA Reports by EPD in November 1999, the project programme was deferred to start in 2002/2003 for completion by 2006/07. The implementation of the project was then separated into the R9S and R9K portion. An Environmental Permit (EP) No. EP-103/2001 was issued on 17 September 2001 for R9K to the HyD as Permit Holder and a varied EP No. EP-103/2001/A was subsequently issued on 20 May 2003 for R9K (R9K EP) to HyD as Permit Holder. A varied EP-103/2001/C was recently issued on 22 July 2005.

- 1.6 The major construction activities of two civil contracts of the R9K project, Contract No. HY/2003/01 entitled “Route 9 – Lai Chi Kok Viaduct” and Contract No. HY/2003/02 entitled “Route 9 – Eagle’s Nest Tunnel and Associated Works”, were commenced in 15th December 2003 for completion in April 2007.
- 1.7 “Route 9” was recently re-titled as “Route 8 (previously known as Route 9)”. Cinotech Consultants Limited (Cinotech) was commissioned by HyD to undertake the Environmental Monitoring and Audit works for “Route 8 between Cheung Sha Wan and Sha Tin - Environmental Team (ET) for Lai Chi Kok Viaduct and Eagle’s Nest Tunnel (Contract No. HY/2003/10)”. Dr. Priscilla CHOY of Cinotech Consultants Ltd. was appointed as the ET Leader under Condition 2.2 of the EP. Mr. Kenneth LUK of CH2M HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the 45th monthly EM&A report summarizing the EM&A works for the Project in August 2007.

Project Organizations

- 1.8 Different parties with different levels of involvement in the project organization include:
- Project Proponent – Major Works Project Management Office (MWPMO) of Highways Department (HyD)
 - Engineer (E) / Engineer’s Representative (ER) – Maunsell-Hyder Joint Venture
 - Environmental Team (ET) – Cinotech Consultants Limited
 - Independent Environmental Checker (IEC) – CH2M HILL Hong Kong Limited
 - Contractor – Acciona Infraestructuras S.A.
 - Engineer’s Representative for TCSS works – Ove Arup & Partners Hong Hong Limited
 - Contractor for TCSS works – Delcan-Imtech-Gtech Joint Venture
- 1.9 The responsibilities of respective parties are detailed in Section 1.8.3 of the EM&A Manual (1999) of the Project.
- 1.10 The key contacts of the Project are shown in **Table 1.1**.

Construction Programme

- 1.11 The site activities for civil works undertaken in the reporting month included:
- Bulk excavation works at slope CCR-S4, LCK-R3 and CCR-R5 ;
 - Retaining wall construction at CCR-R2 to CCR-R3 & CCR-R6 and LCK-R2 to LCK-R3 ;
 - Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55 ;
 - Drainage works at Lai Po Road ;
 - Offsite fabrication of top rail of parapet ;
 - Cast in-situ of slip roads C & D and Lai Wan Overpass ;
 - Erection of noise barrier and signage at slip roads A, B C, D and Main Viaduct ;
 - Construction of Wai Man Tsuen pump house, Irrigation Pump House near pier C14, kiosk at CCR-S1 and Lai Po Road pump house ;
 - Hydro-mulching, hydroseeding and tree planting for slope CCR-S1 & S3 ;
 - Roadwork at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Interchange and Butterfly Valley Road.
- 1.12 The site activities for TCSS works undertaken in the reporting month included:

- Cable-laying & Termination at Sections A, B, C, D, E, F and Kiosk K2;
- Field Equipment Installation at Sections A, B, C, D, E, F and Kiosk K2; and
- SCT and SAT at A, B, C, D, E, F and Kiosk K2.

Table 1.1 Key Project Contacts

Party	Role	Name	Position	Phone No.	Fax No.
HyD	Permit Holder	Mr. Kroc Leung	SE2/R8K	2762 3662	2714 5198
		Mr. Esther Yung	E1/R8K	2762 3677	
		Mr. LC Chung	E2/R8K	2762 3613	
MHJV	Engineer	Mr. Conrad Ng	Project Manager	2605 6262	2691 2649
	Engineer's Representative	Mr. Peter Poon	CRE	2959 0010	2959 0290
		Mr. Henry Liu	SRE	2991 1068	
Mr. Joseph Chi	RE	2991 1034			
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089	3107 1388
		Mr. Edmond Wu	Audit Team Leader	2151 2092	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. Kenneth Luk	Independent Environmental Checker	2507 2209	2507 2293
		Mr. Billy Yu	Deputy Independent Environmental Checker	2872 2949	
Acciona	Contractor	Mr. William D. Payne	Project Director	2956 3300	2956 3331
		Mr. Lawrence Kwok	QA/E Manager		
ARUP	Engineer's Representative (TCSS)	Mr. Donald Leung	RE	2436 7489	2436 1803
		Mr. Daniel So	ARE	2436 7435	
DIGJV	Contractor (TCSS)	Ms. Joyce Chan	Quality Manager	2123 0845	2123 0889
24-hour Emergency Hotline				2370 9200	-

Summary of EM&A Requirements

1.13 The EM&A programme requires construction phase monitoring for air quality and construction noise, and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event Action Plans;
- Environmental mitigation measures, as recommended in the project EIA study final report; and
- Environmental requirements in contract documents.

1.14 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.

- 1.15 This report presents the environmental monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely dust and noise levels and audit works for the Project in the reporting month.

2. AIR QUALITY

Monitoring Requirements

- 2.1 Monitoring of 1-hour and 24-hour TSP was conducted to monitor the air quality. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

- 2.2 One designated monitoring station, AM2 was selected for impact dust monitoring for the Project. **Table 2.1** describes the air quality monitoring location, which is also depicted in **Figures 1**.

Table 2.1 Locations for Air Quality Monitoring

Monitoring Station	Description	Location
AM2	Lai Chi Kok Park Sports Centre	Rooftop

Monitoring Equipment

- 2.3 **Table 2.2** summarizes the equipment used for the air quality monitoring. Copies of calibration certificates are attached in **Appendix B**.

Table 2.2 Air Quality Monitoring Equipment

Equipment	Model and Make	Quantity
Calibrator	GMW25; S/N: 1536	1
HVS Sampler	Graseby GMW Model GS2310 High Volume TSP Sampler and associated equipment and shelter	1

Monitoring Parameters, Frequency and Duration

- 2.4 **Table 2.3** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting period is shown in **Appendix C**.

Table 2.3 Impact Dust Monitoring Parameters, Frequency and Duration

Parameters	Frequency
1-hr TSP	Three times / 6 days
24-hr TSP	Once / 6 days

Monitoring Methodology and QA/QC Procedure

Instrumentation

- 2.5 Graseby GMW Model GS2310 TSP High Volume Sampler (HVS) was employed for 1-hour & 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50). Moreover, the HVS also met all the requirements in Sections 2.2 to 2.4 of the EM&A Manual (1999).

Operating/Analytical Procedures

- 2.6 Operating/analytical procedures for the operation of HVS were as follows:
- A horizontal platform was provided with appropriate support to secure the samplers against gusty wind.
 - No two samplers were placed less than 2 meters apart.
 - The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
 - A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
 - A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
 - No furnaces or incineration flues were nearby.
 - Airflow around the sampler was unrestricted.
 - The sampler was more than 20 meters from the drip line.
 - Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- 2.7 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- 2.8 For TSP sampling, fiberglass filters (G810) were used.
- 2.9 The power supply was checked to ensure the sampler worked properly.
- 2.10 On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 2.11 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.12 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.

- 2.13 The shelter lid was closed and secured with the aluminum strip.
- 2.14 The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 2.15 After sampling, the filter was removed and sent to the laboratory for weighing. The elapsed time was also recorded.
- 2.16 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than $\pm 3^\circ\text{C}$; the relative humidity (RH) should be $< 50\%$ and not vary by more than $\pm 5\%$. A convenient working RH is 40%.

Maintenance/Calibration

- 2.17 The following maintenance/calibration was required for the HVS:
- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
 - High volume samplers were calibrated at bi-monthly intervals using GMW-25 Calibration Kit throughout all stages of the air quality monitoring.

Results and Observations

- 2.18 All TSP monitoring was conducted as scheduled in this reporting month. No Action/Limit Level exceedance for both 1-hr and 24-hr TSP was recorded in the reporting month.
- 2.19 Wind data monitoring equipment has been installed in Shatin Heights for logging wind speed and wind direction. These wind data for the reporting month are summarized in **Appendix D**.
- 2.20 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendices E** and **F**, respectively.

3. NOISE

Monitoring Requirements

- 3.1 Monitoring and audit of construction noise levels is required to be conducted, in accordance with the EM&A Manual, to ensure that any unacceptable noise impacts could be readily detected and timely and appropriate action be undertaken to rectify the situation.
- 3.2 The construction noise levels shall be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). Leq (30min) shall be used as the monitoring parameter for the time period between 0700-1900 hours on normal weekdays. For all other time periods, Leq (5min) shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. As supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
- 3.3 Five designated noise monitoring stations, namely NM2, NM4, NM8a, NM8b and NM9 were selected for impact monitoring. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

- 3.4 Noise monitoring was conducted at five designated monitoring stations as summarized in **Table 3.1**. **Figures 1** show the locations of these stations.

Table 3.1 Noise Monitoring Stations

Stations ⁽¹⁾	Description	Location
NM2	Lai Chi Kok Correctional Institution	Rooftop
NM4	Mei Foo Sun Chuen, Phase 5	Rooftop of Block 9
NM8a	Nob Hill	M/F of Car Park
NM8b	Nob Hill	3/F of Car Park
NM9	Hoi Lai Estate	G/F of Hoi Fai House

(1) The Lai Chi Kok Hospital (NM3) was also found vacated and noise monitoring has been suspended since January 2005, as approved by EPD on 15th March 2005.

- 3.5 Stations NM8a and NM8b were installed at Nob Hill in May 2004. Station NM8b is located at 3/F of the car park of Nob Hill, which is strongly influenced by traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check of construction noise. The measured noise level at Station NM8a, which is located at M/F of car park and closer to the construction site, acts as an indicator of the construction noise. Since the domestic premises are located above 5/F, noise assessment would be performed to assess the level of nuisance resulting from the construction noise at the domestic premises whenever the measured noise level at NM8a exceeds the noise limit level.

- 3.6 The noise monitoring at Lai Chi Kok Correctional Institution (NM2), which was formerly known as Lai Chi Kok Reception Centre, has been resumed since 8th September 2006 after the completion of the renovation works.
- 3.7 A new housing estate, Hoi Lai Estate, became one of the noise sensitive receivers close to the Project site. As recommended by the Regional (West) Office of EPD, noise monitoring at this location (Station NM9) was newly included in the EM&A programme. Approval for the change of EM&A programme was granted by EPD on 30th December 2004.

Monitoring Equipment

- 3.8 **Table 3.2** summarizes the noise monitoring equipment model being used. Copies of calibration certificates are attached in **Appendix B**.

Table 3.2 Noise Monitoring Equipment

Equipment	Model and Make	Qty.
Integrating Sound Level Meter	B&K Model 2238	5
Calibrator	B&K 4231	2
Wind Speed Anemometer	RS232 Integral Vane Digital Anemometer	1

Monitoring Parameters, Frequency and Duration

- 3.9 **Table 3.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix C**.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Stations	Parameter	Period	Frequency	Measurement
NM2	L ₁₀ (30 min.)dB(A) L ₉₀ (30 min.)dB(A) L _{eq} (30 min.)dB(A)	0700-1900 hrs. on weekdays	Once per week	Façade
NM4				Façade
NM8a				Façade
NM8b				Façade
NM9				Façade

Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was generally set on a tripod at a height of 1.2 m above the ground, depending to the actual monitoring condition.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - time measurement : 30 minutes / 5 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for

94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the L_{eq} , L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

Maintenance and Calibration

- 3.10 The microphone head of the sound level meter and calibrator was cleaned with soft cloth regularly.
- 3.11 The meters were sent to the supplier to check and calibrate on a yearly interval.

Results and Observations

- 3.12 Noise monitoring was performed at the five designated locations (NM2, NM4, NM8a, NM8b and NM9) as scheduled in the reporting month.
- 3.13 All the Construction Noise Levels (CNLs) reported in this report, except those collected at Stations NM8a, NM8b and NM9, were adjusted with the corresponding baseline level (i.e. Measured L_{eq} – Baseline L_{eq} = Measured CNL), in order to facilitate the interpretation of the noise exceedance.
- 3.14 Noise monitoring results and graphical presentations are shown in **Appendix G**.
- 3.15 No Action/Limit Level exceedance was recorded in the reporting month.
- 3.16 At Stations NM8a and NM8b, the major noise source identified during the monitoring exercises was mainly the road traffic noise.
- 3.17 At Stations NM2, NM4 and NM9, construction noise from the Project and occasionally the traffic noise were identified as the major noise source during monitoring.

4. ENVIRONMENTAL AUDIT

Site Audits

- 4.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix I**.
- 4.2 Site audits for Civil contract were conducted on 2nd, 8th, 15th, 22nd and 29th August 2007 by ET. A joint site audit for Civil works was conducted on 2nd August 2007 with representatives from, IEC, ER, the Contractor and ET while the joint site audit for TCSS works was conducted on 2nd August 2007 with the representatives from IEC, ER, the Contractor and ET. No environmental deficiency was recorded for TCSS contract during site inspections.

Review of Environmental Monitoring Procedures

- 4.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

Air Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations within and outside the construction site.
- The monitoring team recorded the temperature and weather conditions on the monitoring days.

Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

Status of Environmental Licensing and Permitting

- 4.4 All valid permits/licenses obtained for the Project are summarized in **Table 4.1**. Two new CNP were issued to the Project in the reporting month.

Implementation Status of Environmental Mitigation Measures

- 4.5 According to the Environmental Permit and the EM&A Manuals, the mitigation measures detailed in the documents are required to be implemented. An updated summary of the EMIS is provided in **Appendix K**.

Table 4.1 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Details	Status
	From	To		
Environmental Permit (EP)				
EP-103/2001/C	22/7/05	N/A	<p><u>Construction and operation of</u></p> <p>(a) All civil works (including highways, traffic, geotechnical, drainage, structural, architectural and landscaping works) for the Lai Chi Kok Viaduct, the interchange with Ching Cheung Road, the main road within Butterfly Valley and the Eagle's Nest Tunnel;</p> <p>(b) All E&M works (including ventilation, Traffic Control & Surveillance System (TCSS), toll collection system and lighting) for the whole Route 9 between Cheung Sha Wan and Sha Tin;</p> <p>© The permanent slope works above the northern portal of the Eagle's Nest Tunnel;</p> <p>(d) The architectural works (including fitting out and furnishings) of the portal buildings of the Sha Tin Heights Tunnel.</p>	Valid
Registration of Chemical Waste Producer				
WPN 5213-261-N2413-04	17/11/03	N/A	N/A	Valid
Water Discharge Licence				
EP482/260/251/1	05/12/03	31/12/08	Discharge of industrial trade effluent arising from the construction site at Route 9 – Lai Po Road Section of Lai Chi Kok Viaduct (Contract HY/2003/01).	Valid
EP482/260/251/2	15/12/03	31/12/08	Discharge of industrial trade effluent arising from the construction site at Route 9 – Lai Chi Kok Viaduct excluding Lai Po Road Section.	Valid
Construction Noise Permit (CNP)				
GW-RW0058-07	25/2/07	19/8/07	<p><i>Location:</i> Ching Cheung Road section between Nob Hill to Castle Peak Road</p> <p><i>Time Period:</i> any two days being a general holiday including Sundays for 0900-2100</p>	Expired
GW-RW0093-07	21/3/07	19/9/07	<p><i>Location:</i> Lai Po Road near Hoi Lai Estate</p> <p><i>Time Period:</i> 0000-2400 (general holiday including Sundays) and 1900-0700 (any day not being a general holiday).</p>	Valid
GW-RW0097-07	22/3/07	21/9/07	<p><i>Location:</i> Butterfly Valley Road, Lai Chi Kok</p> <p><i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid
GW-RW0121-07	27/3/07	27/9/07	<p><i>Location:</i> Butterfly Valley, Lai Chi Kok</p> <p><i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid
GW-RW0129-07	30/3/07	29/9/07	<p><i>Location:</i> Construction site at junction of Ching Cheung Road and Castle Peak Road</p> <p><i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid
GW-RW0130-07	4/04/07	3/10/07	<p><i>Location:</i> Castle Peak Road near Ching Cheung Road</p> <p><i>Time Period:</i> 0000-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid
GW-RW0140-07	5/04/07	4/09/07	<p><i>Location:</i> Butterfly Valley near O Pui Shan Boy's Home</p> <p><i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid
GW-RW0146-07	6/04/07	5/08/07	<p><i>Location:</i> Ching Cheung Road near Mei Foo Sun Chuen</p> <p><i>Time Period:</i> 0900-1900 (general holiday including Sundays)</p>	Expired

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0213-07	13/05/07	1/10/07	<i>Location:</i> Ching Cheung Road Near Nob Hill, Kowloon <i>Time Period:</i> 0900-2000 (general holiday including Sundays)	Valid
GW-RW0221-07	15/05/07	14/09/07	<i>Location:</i> Ching Cheung Road Near Nob Hill, Kowloon <i>Time Period:</i> 0000-0600 (any day not being a general holiday or not immediately following a general holiday including Sundays)	Valid
GW-RW0248-07	20/05/07	19/10/07	<i>Location:</i> Ching Cheung Road Near Nob Hill, Kowloon <i>Time Period:</i> 0900-2000 (general holiday including Sundays)	Valid
GW-RW0291-07	21/06/07	29/09/07	<i>Location:</i> Ching Cheung Road Near Mei Foo Sun Cheun, Kowloon <i>Time Period:</i> 0000-0600 (any day not being a general holiday or not immediately following a general holiday including Sundays)	Valid
GW-RW0292-07	27/06/07	27/10/07	<i>Location:</i> Ching Cheung Road Near Butterfly Valley, Kowloon <i>Time Period:</i> 0900-2100 (general holiday including Sundays) and 2100-0700 (any day not being a general holiday).	Valid
GW-RW0328-07	08/07/07	04/11/07	<i>Location:</i> Ching Cheung Road near Nob Hill, Lai Chi Kok, Kowloon <i>Time Period:</i> 0900-2300 (general holiday including Sundays).	Valid
GW-RW0329-07	08/07/07	02/12/07	<i>Location:</i> Ching Cheung Road near Mei Foo Sun Chuen,, Kowloon <i>Time Period:</i> 0900-1900 (general holiday including Sundays).	Valid
GW-RW0349-07	15/07/07	11/11/07	<i>Location:</i> Ching Cheung Road section between Nob Hill and Castle Peak Road <i>Time Period:</i> 0900-2100 (anyone day being a general holiday, including Sundays).	Cancelled from 19/08/07
GW-RW0378-07	28/07/07	27/12/07	<i>Location:</i> Ching Cheung Road near Mei Foo Sun Cheun, Kowloon <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0409-07	19/08/07	30/12/08	<i>Location:</i> Ching Cheung Road section between Nob Hill and Castle Peak Road, Lai Chi Kok <i>Time Period:</i> 0900-1900 (general holiday including Sundays).	Valid
GW-RW0419-07	23/08/07	20/02/08	<i>Location:</i> Ching Cheung Road near Castle Peak Road, Kowloon <i>Time Period:</i> 0000-0600(any day not being a general holiday or not immediately following a general holiday including Sundays).	Valid

4.6 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations are summarized in **Table 4.2** and **Table 4.3**.

Table 4.2 Observations and Recommendations of Site Audits for Civil Works

Parameters	Date	Observations and Recommendations	Follow-up
<i>Air Quality</i>	02/08/07	<i>Reminder</i> - Worn sandbags were observed around the manhole near Nob Hill at C13-C14. The Contractor was reminded to replace them.	Rectification / improvement was observed during the follow-up site inspection.

Table 4.3 Observations and Recommendations of Site Audits for TCSS

Parameters	Date	Observations and Recommendations	Follow-up
-	-	-	-

4.7 The observations and recommendations arising from pervious month and followed up in the reporting month are summarized in **Table 4.4** and **Table 4.5**.

Table 4.4 Observations and Recommendations of Site Audits Followed up for Pervious Month for Civil Works

Parameters	Date	Observations and Recommendations	Follow-up
-	-	-	-

Table 4.5 Observations and Recommendations of Site Audits Followed up for Pervious Month for TCSS

Parameters	Date	Observations and Recommendations	Follow-up

Summary of Exceedance

1-hr and 24-hr TSP Monitoring

4.8 No Action/Limit Level exceedance was recorded in the reporting month.

Construction Noise Monitoring

4.9 No Action/Limit Level exceedance was recorded in the reporting month.

Implementation Status of Event Action Plans

4.10 The Event Action Plans for air quality and construction noise are presented in **Appendix J**.

Summary of Complaint and Prosecution

4.11 No environmental complaint was received in the reporting month.

4.12 No prosecution was received in the reporting month.

4.13 There were 38 environmental complaints referred to the ET and 1 prosecution received since the commencement of the Project. The Complaint Log is attached in **Appendix M**.

5. FUTURE KEY ISSUES

Key Issues for the Coming Month

5.1 Key issues to be considered in the coming month include:

- Construction noise from excavation works, construction of pump station and retaining wall at CCR-R2 & CCR-R3 and LCK-R2 to LCK-R3;
- Surface runoff generated at the areas, CCR-S4 and LCK-R3; and
- Dust generation from stockpiles of dusty materials, exposed retaining wall and bulk excavation works and haul road.
- Stagnant water accumulated on site after heavy rainfall.

Monitoring Schedule for the Next Month

5.2 The tentative monitoring schedule for the next month is shown in **Appendix C**.

Construction Program for the Next Month

5.3 The major construction activities for civil works in the coming month include:

- Bulk excavation works at slope CCR-S4 and LCK-R3;
- Retaining wall construction at CCR-R2 & CCR-R3 and LCK-R2 to LCK-R3;
- Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55;
- Drainage works at Lai Po Road ;
- Offsite fabrication of top rail of parapet ;
- Cast in-situ of slip roads C & D and Lai Wan Overpass ;
- Erection of noise barrier and signage at slip roads A, B C, D and Main Viaduct ;
- Construction of Wai Man Tsuen pump house, Irrigation Pump House near pier C14, kiosk at CCR-S1 and Lai Po Road pump house ;
- Hydro-mulching and tree planting for slope CCR-S1 & S3 ;
- Roadwork at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Interchange and Butterfly Valley Road.

5.4 The tentative construction program for civil works is provided in **Appendix L**.

5.5 The major activities for TCSS works in the coming month include:

- Cable-laying & Termination at Sections A, B, C, D, E , F and Kiosk K2;
- Field Equipment Installation at Sections A, B, C, D, E, F and Kiosk K2; and
- SCT and SAT at A, B, C, D, E , F and Kiosk K2;

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 6.1 Environmental monitoring works were conducted in the reporting month and all monitoring results were checked and reviewed.
- 6.2 No Action/Limit Level exceedance for both 1-hour TSP and 24-hours TSP was recorded in the reporting month.
- 6.3 No Action/Limit Level exceedance for noise was recorded in the reporting month.
- 6.4 No environmental complaint was received in the reporting month.
- 6.5 No prosecution was received in the reporting month.

Recommendations

- 6.6 According to the environmental audit performed in the reporting month, the following recommendations were made:

Water Impact

- To ensure properly maintenance for de-silting facilities
- To review and implement temporary drainage system for the upcoming wet season.
- To review the capacity of de-silting facilities for discharge.
- To avoid stagnant water accumulation on site.

Noise Impact

- To provide temporary noise barriers for noisy activities, such as rock dowel installation.
- To review the works sequence of site activities so as to reduce the number of noisy equipment in concurrent operation.
- To employ quiet powered mechanical equipment if possible.
- To ensure compliance of CNP conditions during restricted-hour works.

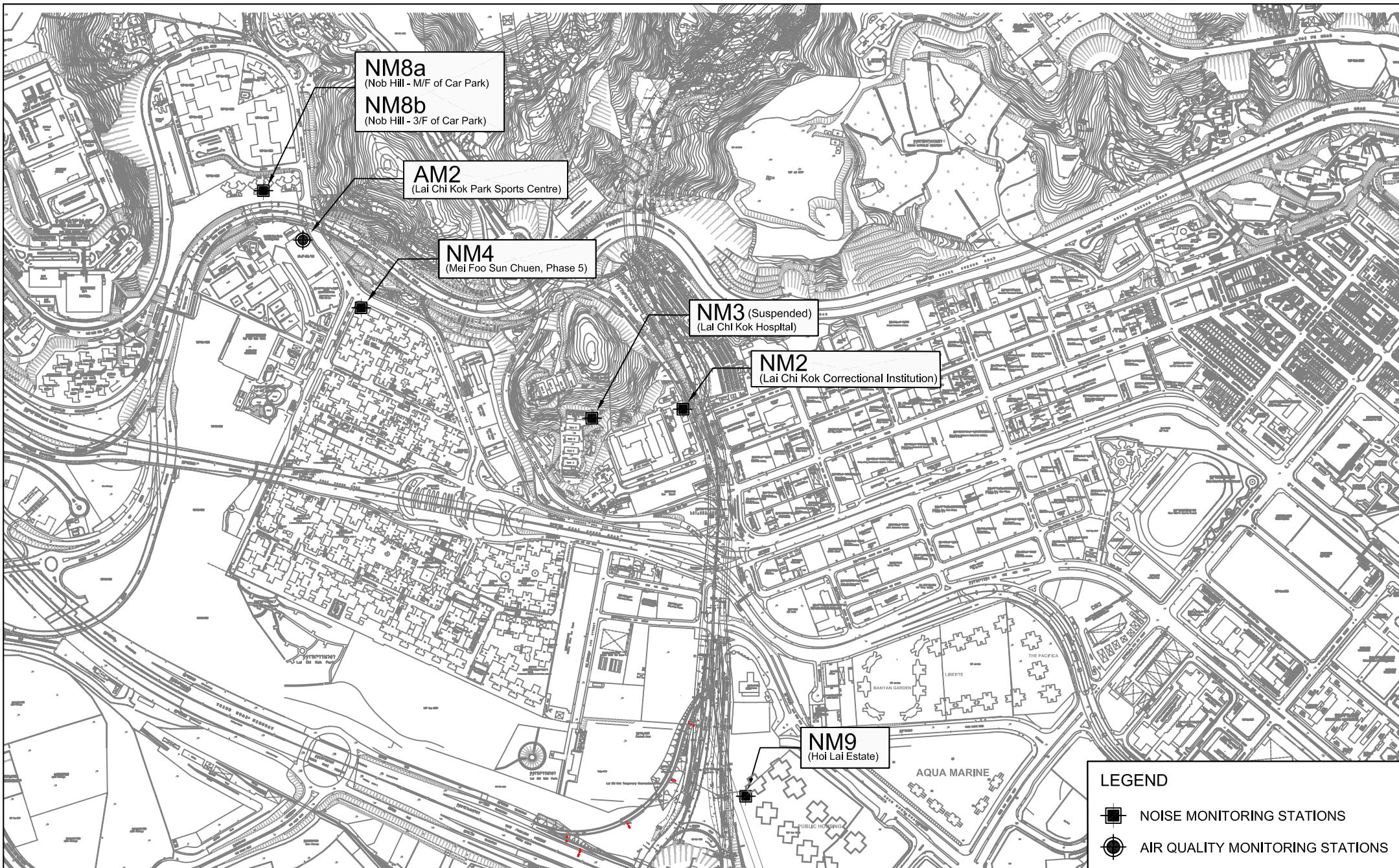
Dust Impact

- To ensure water spray is applied for the dust emissive works, such as soil nail installation, loading and unloading of soil materials, excavation works and rock dowel installation.
- To cover soil stockpiles and exposed slope surface by impervious sheets or other means.
- To ensure that all vehicles carrying dusty material are properly covered before leaving the site.

Waste / Chemical Management

- To ensure the performance of sorting of C&D materials at source (during generation);
- To carry out inspection of dump truck at site exit to ensure inert and non-inert C&D materials are properly segregated before removing off site.
- To ensure proper collection and disposal of rubbish generated on site.
- To avoid any discharge or accidental spillage of chemical waste directly from the site.

FIGURES





Title ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN
CONTRACT HY/2003/01 - LAI CHI KOK VIADUCT

LOCATIONS OF MONITORING STATIONS

Scale 1 : 8000 (A4)

Date 2006

LEGEND

-  NOISE MONITORING STATIONS
-  AIR QUALITY MONITORING STATIONS

Project No. MA3024

Figure No. 1



**APPENDIX A
ACTION AND LIMIT LEVELS**

Appendix A - Action and Limit Levels (LCKV)

1-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM2	301	500

24-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM2	177	260

Construction Noise

Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)
0700-2300 hrs on holidays & 1900-2300 hrs on all other days		70* dB(A)
2300-0700 hrs of next day		55* dB(A)

(*) The Area Sensitivity Rating for the noise monitoring stations (NM4, NM8a, NM8b and NM9) is taken as C, according to Table 1 of EPD's Technical Memorandum on Noise from Construction Work other than Percussive Piling.

**APPENDIX B
COPIES OF CALIBRATION
CERTIFICATES**

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/07/70502
Date of Issue:	2007-05-02
Date Received:	2007-05-01
Date Tested:	2007-05-01
Date Completed:	2007-05-02

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description : RS232 Integral Vane Digital Anemometer
Manufacturer : AZ Instrument
Model No. : 451104
Serial No. : 9020746
Equipment No. : A-03-01

Test conditions:

Room Temperature : 21 degree Celsius
Relative Humidity : 65%
Pressure : 101.3 kPa

Methodology:

The anemometer has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

	Reference Set Point	Instrument Readings
Measuring Air Velocity, m/s	2.00	2.00
Temperature, °C	21.0	21.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Senior Chemist



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 - Mar 12, 2007 Rootmeter S/N 9833640 Ta (K) - 294
 Operator Tisch Orifice I.D. - 0999 Pa (mm) - 746.76

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	1.3890	3.2	2.00
2	NA	NA	1.00	0.9850	6.3	4.00
3	NA	NA	1.00	0.8810	7.8	5.00
4	NA	NA	1.00	0.8410	8.6	5.50
5	NA	NA	1.00	0.6950	12.5	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9917	0.7139	1.4113	0.9957	0.7168	0.8874
0.9876	1.0026	1.9959	0.9916	1.0067	1.2549
0.9854	1.1185	2.2315	0.9894	1.1231	1.4030
0.9844	1.1706	2.3405	0.9884	1.1753	1.4715
0.9792	1.4090	2.8227	0.9832	1.4147	1.7747
Qstd slope (m) = 2.03154			Qa slope (m) = 1.27212		
intercept (b) = -0.03970			intercept (b) = -0.02496		
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

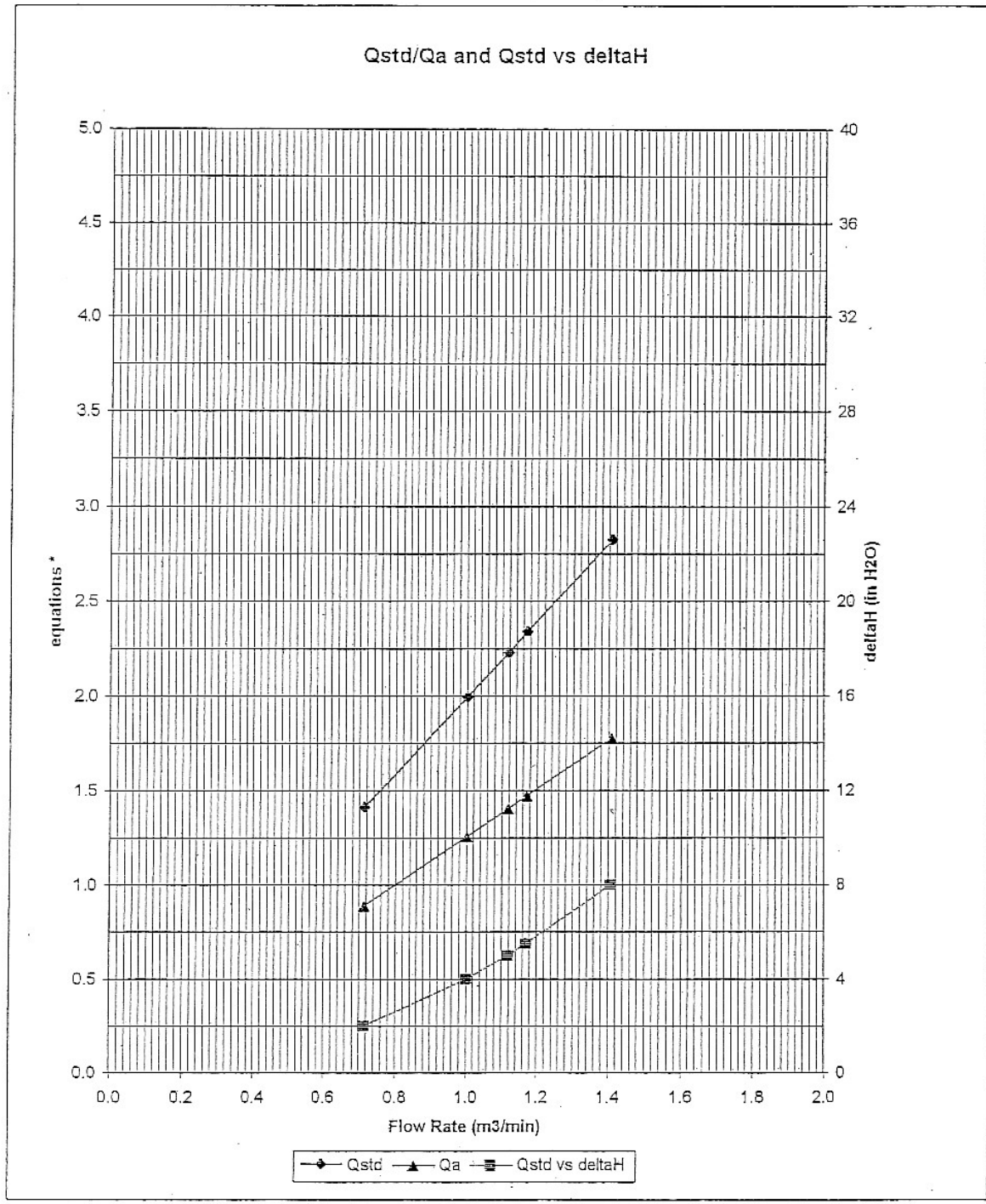
For subsequent flow rate calculations:

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



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE.
 VILLAGE OF CLEVELAND, OH 45002
 513.467.9000
 877.253.7610 TOLL FREE
 513.467.9009 FAX
 WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

Qstd series:
$$\sqrt{\Delta H \left(\frac{P_a}{P_{std}} \right) \left(\frac{T_{std}}{T_a} \right)}$$

Qa series:
$$\sqrt{(\Delta H (T_a / P_a))}$$

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/61215/1
Date of Issue:	2006-12-15
Date Received:	2006-12-14
Date Tested:	2006-12-15
Date Completed:	2006-12-15
Next Due Date:	2007-12-14

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337665
Microphone No.	: 2289749
Equipment No.	: N-01-01

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 60%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Operation Manager

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/61116/1
Date of Issue:	2006-11-16
Date Received:	2006-11-15
Date Tested:	2006-11-15
Date Completed:	2006-11-16
Next Due Date:	2007-11-15

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337666
Microphone No.	: 2289750
Equipment No.	: N-01-02

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 59%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Operation Manager

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1601-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/60904-1
Date of Issue:	2006-09-04
Date Received:	2006-09-02
Date Tested:	2006-09-02
Date Completed:	2006-09-04
Next Due Date:	2007-09-03

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2359311
Microphone No.	: 2346382
Equipment No.	: N-01-03

Test conditions:

Room Temperature	: 23 degree Celsius
Relative Humidity	: 64%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

Patrick

PATRICK TSE
Laborary Manager

This test document cannot be reproduced in any way, except in full context, without the prior approval in writing of the laboratory.

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/60904-2
Date of Issue:	2006-09-04
Date Received:	2006-09-02
Date Tested:	2006-09-02
Date Completed:	2006-09-04
Next Due Date:	2007-09-03

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2359303
Equipment No.	: N-01-04

Test conditions:

Room Temperature	: 23 degree Celsius
Relative Humidity	: 63%
Pressure	: 1006.5hPa

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Operation Manager

This test document cannot be reproduced in any way, except in full context, without the prior approval in writing of the laboratory.

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/61014/1
Date of Issue:	2006-10-14
Date Received:	2006-10-13
Date Tested:	2006-10-14
Date Completed:	2006-10-14
Next Due Date:	2007-10-13

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2394976
Microphone No.	: 2407349
Equipment No.	: N-01-05

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 60%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Operation Manager

This test document cannot be reproduced in any way, except in full context, without the prior approval in writing of the laboratory.

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/61116/2
Date of Issue:	2006-11-16
Date Received:	2006-11-15
Date Tested:	2006-11-15
Date Completed:	2006-11-16
Next Due Date:	2007-11-15

ATTN: Mr. Henry Leung

Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2326353
Project No.	: C13
Equipment No.	: N-02-01

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 59%
Pressure	: 1015.2 hPa

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

Patrick .

PATRICK TSE

Operation Manager

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/06/70305
Date of Issue:	2007-03-05
Date Received:	2007-03-03
Date Tested:	2007-03-03
Date Completed:	2007-03-05
Next Due Date:	2008-03-04

ATTN: Mr. Henry Leung

Page: 1 of 1

Item for calibration:

Description : Acoustical Calibrator
Manufacturer : Brüel & Kjær
Model No. : 4231
Serial No. : 2343007
Project No. : C13
Equipment No. : N-02-02

Test conditions:

Room Temperature : 20 degree Celsius
Relative Humidity : 65%
Pressure : 1020.1hPa

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.2 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Operation Manager

WELLAB LTD.

606 - 608 Cornell Centre,
50 Wing Tai Road,
Chai Wan, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1601-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/60904-3
Date of Issue:	2006-09-04
Date Received:	2006-09-02
Date Tested:	2006-09-02
Date Completed:	2006-09-04
Next Due Date:	2007-09-03

ATTN: Mr. Henry Leung

Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2412367
Equipment No.	: N-02-03

Test conditions:

Room Temperature	: 23 degree Celsius
Relative Humidity	: 63%
Pressure	: 1020.1hPa

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Operation Manager

**APPENDIX C
ENVIRONMENTAL MONITORING AND
AUDIT SCHEDULE**

**Environmental Monitoring for Lai Chi Kok Viaduct
Tentative Air Quality and Noise Monitoring Schedule for August 2007**

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

- AM2 Lai Chi Kok Sports Centre
- NM2 Lai Chi Kok Correctional Institution
- NM4 Mei Foo Sun Chuen, Phase 5
- NM8a M/F of Nob Hill
- NM8b 3/F of Nob Hill
- NM9 G/F, Hoi Fai House, Hoi Lai Estate

**Environmental Monitoring for Lai Chi Kok Viaduct
Tentative Air Quality and Noise Monitoring Schedule for September 2007**

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

- AM2 Lai Chi Kok Sports Centre
- NM2 Lai Chi Kok Correctional Institution
- NM4 Mei Foo Sun Chuen, Phase 5
- NM8a M/F of Nob Hill
- NM8b 3/F of Nob Hill
- NM9 G/F, Hoi Fai House, Hoi Lai Estate

APPENDIX D
WIND DATA

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Aug-2007	00:00	0.9	SW
1-Aug-2007	01:00	0.9	SW
1-Aug-2007	02:00	0.9	SW
1-Aug-2007	03:00	1.3	SW
1-Aug-2007	04:00	1.3	SW
1-Aug-2007	05:00	0.9	SW
1-Aug-2007	06:00	0.4	SW
1-Aug-2007	07:00	0.0	SW
1-Aug-2007	08:00	0.4	SW
1-Aug-2007	09:00	0.4	SW
1-Aug-2007	10:00	0.0	SW
1-Aug-2007	11:00	0.0	SW
1-Aug-2007	12:00	0.0	SW
1-Aug-2007	13:00	0.0	SW
1-Aug-2007	14:00	0.0	W
1-Aug-2007	15:00	0.0	W
1-Aug-2007	16:00	0.0	W
1-Aug-2007	17:00	0.0	W
1-Aug-2007	18:00	0.0	SW
1-Aug-2007	19:00	0.4	SW
1-Aug-2007	20:00	0.9	WSW
1-Aug-2007	21:00	0.9	W
1-Aug-2007	22:00	0.9	WSW
1-Aug-2007	23:00	1.3	NE
2-Aug-2007	00:00	1.8	NE
2-Aug-2007	01:00	1.3	NNE
2-Aug-2007	02:00	1.3	ENE
2-Aug-2007	03:00	0.4	ENE
2-Aug-2007	04:00	0.9	NE
2-Aug-2007	05:00	0.4	N
2-Aug-2007	06:00	0.0	ENE
2-Aug-2007	07:00	0.0	NE
2-Aug-2007	08:00	0.0	NE
2-Aug-2007	09:00	0.0	NE
2-Aug-2007	10:00	0.0	W
2-Aug-2007	11:00	0.0	N
2-Aug-2007	12:00	0.0	NE
2-Aug-2007	13:00	0.0	N
2-Aug-2007	14:00	0.0	N
2-Aug-2007	15:00	0.4	ENE
2-Aug-2007	16:00	0.0	ENE
2-Aug-2007	17:00	0.0	ENE
2-Aug-2007	18:00	0.0	ENE
2-Aug-2007	19:00	0.0	E
2-Aug-2007	20:00	0.4	ENE
2-Aug-2007	21:00	0.9	SE
2-Aug-2007	22:00	1.3	SSE
2-Aug-2007	23:00	0.9	S
3-Aug-2007	00:00	1.3	SE
3-Aug-2007	01:00	1.3	---
3-Aug-2007	02:00	0.9	SW
3-Aug-2007	03:00	0.9	NNE
3-Aug-2007	04:00	1.3	N
3-Aug-2007	05:00	0.4	NW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Aug-2007	06:00	0.0	NE
3-Aug-2007	07:00	0.0	ENE
3-Aug-2007	08:00	0.0	SSE
3-Aug-2007	09:00	0.4	SE
3-Aug-2007	10:00	0.0	WNW
3-Aug-2007	11:00	0.0	SW
3-Aug-2007	12:00	0.0	WSW
3-Aug-2007	13:00	0.0	WSW
3-Aug-2007	14:00	0.0	W
3-Aug-2007	15:00	0.0	WSW
3-Aug-2007	16:00	0.0	W
3-Aug-2007	17:00	0.0	WSW
3-Aug-2007	18:00	0.0	WSW
3-Aug-2007	19:00	0.0	W
3-Aug-2007	20:00	0.4	WSW
3-Aug-2007	21:00	1.3	WSW
3-Aug-2007	22:00	1.3	WSW
3-Aug-2007	23:00	1.8	S
4-Aug-2007	00:00	1.3	SSW
4-Aug-2007	01:00	1.3	WSW
4-Aug-2007	02:00	1.3	WNW
4-Aug-2007	03:00	1.3	WNW
4-Aug-2007	04:00	0.4	W
4-Aug-2007	05:00	0.4	S
4-Aug-2007	06:00	0.4	SSW
4-Aug-2007	07:00	0.0	S
4-Aug-2007	08:00	0.0	SSW
4-Aug-2007	09:00	0.0	S
4-Aug-2007	10:00	0.0	W
4-Aug-2007	11:00	0.9	WSW
4-Aug-2007	12:00	1.3	WSW
4-Aug-2007	13:00	1.3	SW
4-Aug-2007	14:00	1.8	SW
4-Aug-2007	15:00	1.3	SW
4-Aug-2007	16:00	1.3	SW
4-Aug-2007	17:00	0.9	SW
4-Aug-2007	18:00	0.4	SW
4-Aug-2007	19:00	0.4	SW
4-Aug-2007	20:00	2.7	SW
4-Aug-2007	21:00	0.4	SW
4-Aug-2007	22:00	0.9	SW
4-Aug-2007	23:00	0.4	SW
5-Aug-2007	00:00	0.0	W
5-Aug-2007	01:00	0.0	WSW
5-Aug-2007	02:00	0.4	W
5-Aug-2007	03:00	0.0	SSW
5-Aug-2007	04:00	0.0	SSW
5-Aug-2007	05:00	0.0	SW
5-Aug-2007	06:00	0.0	SW
5-Aug-2007	07:00	0.0	W
5-Aug-2007	08:00	0.0	W
5-Aug-2007	09:00	0.4	W
5-Aug-2007	10:00	0.0	W
5-Aug-2007	11:00	0.4	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Aug-2007	12:00	0.9	WNW
5-Aug-2007	13:00	0.9	W
5-Aug-2007	14:00	0.9	W
5-Aug-2007	15:00	0.9	W
5-Aug-2007	16:00	0.9	W
5-Aug-2007	17:00	0.4	W
5-Aug-2007	18:00	0.4	WSW
5-Aug-2007	19:00	0.4	W
5-Aug-2007	20:00	0.4	SSW
5-Aug-2007	21:00	0.4	---
5-Aug-2007	22:00	0.0	---
5-Aug-2007	23:00	0.0	---
6-Aug-2007	00:00	4.5	SSE
6-Aug-2007	01:00	4.0	---
6-Aug-2007	02:00	2.7	SSE
6-Aug-2007	03:00	2.7	---
6-Aug-2007	04:00	2.2	---
6-Aug-2007	05:00	1.8	SSE
6-Aug-2007	06:00	1.8	SSE
6-Aug-2007	07:00	0.9	---
6-Aug-2007	08:00	0.4	E
6-Aug-2007	09:00	1.3	W
6-Aug-2007	10:00	1.8	SW
6-Aug-2007	11:00	2.2	WSW
6-Aug-2007	12:00	1.3	W
6-Aug-2007	13:00	2.2	W
6-Aug-2007	14:00	0.4	W
6-Aug-2007	15:00	0.4	ENE
6-Aug-2007	16:00	1.3	ENE
6-Aug-2007	17:00	1.8	NE
6-Aug-2007	18:00	1.8	ENE
6-Aug-2007	19:00	1.3	ENE
6-Aug-2007	20:00	1.8	---
6-Aug-2007	21:00	0.9	---
6-Aug-2007	22:00	0.4	SW
6-Aug-2007	23:00	0.9	SW
7-Aug-2007	00:00	3.6	SW
7-Aug-2007	01:00	2.2	SW
7-Aug-2007	02:00	1.8	SW
7-Aug-2007	03:00	0.9	SW
7-Aug-2007	04:00	0.4	SW
7-Aug-2007	05:00	1.3	SW
7-Aug-2007	06:00	0.0	SW
7-Aug-2007	07:00	0.9	---
7-Aug-2007	08:00	1.3	E
7-Aug-2007	09:00	4.0	W
7-Aug-2007	10:00	5.8	WNW
7-Aug-2007	11:00	5.8	W
7-Aug-2007	12:00	6.7	W
7-Aug-2007	13:00	7.6	W
7-Aug-2007	14:00	7.6	N
7-Aug-2007	15:00	8.5	N
7-Aug-2007	16:00	7.2	NNE
7-Aug-2007	17:00	6.7	NNE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Aug-2007	18:00	4.0	ESE
7-Aug-2007	19:00	2.2	SSE
7-Aug-2007	20:00	2.7	WSW
7-Aug-2007	21:00	4.9	WSW
7-Aug-2007	22:00	4.9	NW
7-Aug-2007	23:00	2.7	WSW
8-Aug-2007	00:00	0.4	N
8-Aug-2007	01:00	0.0	WSW
8-Aug-2007	02:00	0.4	SSW
8-Aug-2007	03:00	0.4	WSW
8-Aug-2007	04:00	0.4	WSW
8-Aug-2007	05:00	0.4	WSW
8-Aug-2007	06:00	0.0	SSW
8-Aug-2007	07:00	0.0	SSW
8-Aug-2007	08:00	0.0	S
8-Aug-2007	09:00	0.0	SSW
8-Aug-2007	10:00	0.4	W
8-Aug-2007	11:00	0.0	WNW
8-Aug-2007	12:00	0.4	WNW
8-Aug-2007	13:00	1.3	WSW
8-Aug-2007	14:00	1.8	WSW
8-Aug-2007	15:00	1.3	W
8-Aug-2007	16:00	1.3	W
8-Aug-2007	17:00	0.9	W
8-Aug-2007	18:00	0.4	WSW
8-Aug-2007	19:00	0.0	W
8-Aug-2007	20:00	0.0	WSW
8-Aug-2007	21:00	0.0	WSW
8-Aug-2007	22:00	0.0	WSW
8-Aug-2007	23:00	0.0	SW
9-Aug-2007	00:00	0.4	WSW
9-Aug-2007	01:00	0.0	WSW
9-Aug-2007	02:00	0.0	SW
9-Aug-2007	03:00	0.4	WSW
9-Aug-2007	04:00	0.4	W
9-Aug-2007	05:00	0.4	W
9-Aug-2007	06:00	0.0	SW
9-Aug-2007	07:00	0.9	W
9-Aug-2007	08:00	0.0	SSW
9-Aug-2007	09:00	0.0	W
9-Aug-2007	10:00	0.9	W
9-Aug-2007	11:00	0.4	W
9-Aug-2007	12:00	0.0	W
9-Aug-2007	13:00	1.8	WSW
9-Aug-2007	14:00	0.9	W
9-Aug-2007	15:00	3.6	W
9-Aug-2007	16:00	2.2	WSW
9-Aug-2007	17:00	0.4	W
9-Aug-2007	18:00	0.9	W
9-Aug-2007	19:00	0.9	ESE
9-Aug-2007	20:00	0.9	ESE
9-Aug-2007	21:00	0.9	ESE
9-Aug-2007	22:00	1.3	NE
9-Aug-2007	23:00	0.4	NE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Aug-2007	00:00	0.4	NE
10-Aug-2007	01:00	0.9	NE
10-Aug-2007	02:00	0.4	NE
10-Aug-2007	03:00	0.4	NE
10-Aug-2007	04:00	1.8	NE
10-Aug-2007	05:00	0.9	NE
10-Aug-2007	06:00	2.2	NE
10-Aug-2007	07:00	1.8	---
10-Aug-2007	08:00	0.9	SSW
10-Aug-2007	09:00	1.8	W
10-Aug-2007	10:00	0.9	W
10-Aug-2007	11:00	1.3	W
10-Aug-2007	12:00	2.2	W
10-Aug-2007	13:00	2.2	W
10-Aug-2007	14:00	1.8	W
10-Aug-2007	15:00	2.7	SSW
10-Aug-2007	16:00	2.7	N
10-Aug-2007	17:00	3.1	NNE
10-Aug-2007	18:00	2.7	ENE
10-Aug-2007	19:00	2.7	ENE
10-Aug-2007	20:00	2.2	S
10-Aug-2007	21:00	0.9	S
10-Aug-2007	22:00	1.8	E
10-Aug-2007	23:00	1.8	E
11-Aug-2007	00:00	1.8	---
11-Aug-2007	01:00	1.8	---
11-Aug-2007	02:00	0.9	---
11-Aug-2007	03:00	0.4	---
11-Aug-2007	04:00	0.0	---
11-Aug-2007	05:00	0.9	---
11-Aug-2007	06:00	0.4	---
11-Aug-2007	07:00	0.0	---
11-Aug-2007	08:00	0.4	---
11-Aug-2007	09:00	2.7	E
11-Aug-2007	10:00	2.2	W
11-Aug-2007	11:00	1.8	W
11-Aug-2007	12:00	1.8	W
11-Aug-2007	13:00	3.1	W
11-Aug-2007	14:00	4.0	N
11-Aug-2007	15:00	2.7	N
11-Aug-2007	16:00	2.2	N
11-Aug-2007	17:00	2.2	E
11-Aug-2007	18:00	1.3	E
11-Aug-2007	19:00	0.4	ESE
11-Aug-2007	20:00	0.0	E
11-Aug-2007	21:00	0.0	E
11-Aug-2007	22:00	0.0	---
11-Aug-2007	23:00	0.0	---
12-Aug-2007	00:00	0.0	N
12-Aug-2007	01:00	0.0	N
12-Aug-2007	02:00	0.0	N
12-Aug-2007	03:00	0.0	N
12-Aug-2007	04:00	0.0	N
12-Aug-2007	05:00	0.0	N

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Aug-2007	06:00	0.0	N
12-Aug-2007	07:00	0.0	N
12-Aug-2007	08:00	0.0	E
12-Aug-2007	09:00	0.0	W
12-Aug-2007	10:00	0.9	W
12-Aug-2007	11:00	1.8	W
12-Aug-2007	12:00	3.1	WNW
12-Aug-2007	13:00	2.2	W
12-Aug-2007	14:00	1.8	W
12-Aug-2007	15:00	1.3	W
12-Aug-2007	16:00	1.3	W
12-Aug-2007	17:00	0.9	W
12-Aug-2007	18:00	1.3	W
12-Aug-2007	19:00	0.0	WSW
12-Aug-2007	20:00	0.0	W
12-Aug-2007	21:00	0.0	W
12-Aug-2007	22:00	0.0	W
12-Aug-2007	23:00	0.0	W
13-Aug-2007	00:00	0.0	W
13-Aug-2007	01:00	0.0	W
13-Aug-2007	02:00	0.0	WNW
13-Aug-2007	03:00	0.0	W
13-Aug-2007	04:00	0.0	W
13-Aug-2007	05:00	0.0	WNW
13-Aug-2007	06:00	0.0	W
13-Aug-2007	07:00	0.0	W
13-Aug-2007	08:00	0.0	WSW
13-Aug-2007	09:00	0.9	WSW
13-Aug-2007	10:00	2.2	W
13-Aug-2007	11:00	3.1	WNW
13-Aug-2007	12:00	2.7	W
13-Aug-2007	13:00	0.9	WNW
13-Aug-2007	14:00	0.9	W
13-Aug-2007	15:00	1.3	W
13-Aug-2007	16:00	0.9	W
13-Aug-2007	17:00	0.9	SW
13-Aug-2007	18:00	0.0	W
13-Aug-2007	19:00	0.9	W
13-Aug-2007	20:00	1.8	WSW
13-Aug-2007	21:00	0.9	W
13-Aug-2007	22:00	0.0	W
13-Aug-2007	23:00	0.4	W
14-Aug-2007	00:00	0.4	NNE
14-Aug-2007	01:00	0.9	WSW
14-Aug-2007	02:00	1.3	S
14-Aug-2007	03:00	0.4	S
14-Aug-2007	04:00	0.0	S
14-Aug-2007	05:00	0.4	S
14-Aug-2007	06:00	0.4	S
14-Aug-2007	07:00	0.4	---
14-Aug-2007	08:00	0.4	SW
14-Aug-2007	09:00	1.8	SSW
14-Aug-2007	10:00	1.3	W
14-Aug-2007	11:00	2.2	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Aug-2007	12:00	2.7	SW
14-Aug-2007	13:00	2.7	SSW
14-Aug-2007	14:00	1.3	SSW
14-Aug-2007	15:00	1.8	W
14-Aug-2007	16:00	2.2	WNW
14-Aug-2007	17:00	2.2	W
14-Aug-2007	18:00	0.9	W
14-Aug-2007	19:00	0.9	WSW
14-Aug-2007	20:00	0.0	W
14-Aug-2007	21:00	0.9	WSW
14-Aug-2007	22:00	1.8	SSW
14-Aug-2007	23:00	0.9	SSW
15-Aug-2007	00:00	0.0	SSW
15-Aug-2007	01:00	1.8	WSW
15-Aug-2007	02:00	1.3	WSW
15-Aug-2007	03:00	1.8	W
15-Aug-2007	04:00	1.3	WSW
15-Aug-2007	05:00	0.4	WSW
15-Aug-2007	06:00	0.0	W
15-Aug-2007	07:00	0.4	W
15-Aug-2007	08:00	0.9	W
15-Aug-2007	09:00	1.3	WSW
15-Aug-2007	10:00	1.8	W
15-Aug-2007	11:00	1.8	W
15-Aug-2007	12:00	2.7	W
15-Aug-2007	13:00	3.1	WSW
15-Aug-2007	14:00	2.2	WSW
15-Aug-2007	15:00	2.2	W
15-Aug-2007	16:00	1.8	SSE
15-Aug-2007	17:00	1.8	SSE
15-Aug-2007	18:00	0.9	ENE
15-Aug-2007	19:00	0.0	NE
15-Aug-2007	20:00	0.0	E
15-Aug-2007	21:00	0.0	S
15-Aug-2007	22:00	0.4	S
15-Aug-2007	23:00	0.0	WSW
16-Aug-2007	00:00	0.4	WSW
16-Aug-2007	01:00	1.3	SW
16-Aug-2007	02:00	0.4	WSW
16-Aug-2007	03:00	0.4	W
16-Aug-2007	04:00	0.0	W
16-Aug-2007	05:00	0.0	W
16-Aug-2007	06:00	0.0	SW
16-Aug-2007	07:00	0.0	W
16-Aug-2007	08:00	0.0	WSW
16-Aug-2007	09:00	0.9	WSW
16-Aug-2007	10:00	2.2	W
16-Aug-2007	11:00	2.2	WSW
16-Aug-2007	12:00	1.8	WSW
16-Aug-2007	13:00	2.2	W
16-Aug-2007	14:00	1.3	W
16-Aug-2007	15:00	0.0	WNW
16-Aug-2007	16:00	0.4	W
16-Aug-2007	17:00	0.0	WSW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Aug-2007	18:00	0.4	WSW
16-Aug-2007	19:00	1.3	S
16-Aug-2007	20:00	0.4	WSW
16-Aug-2007	21:00	0.4	SSW
16-Aug-2007	22:00	0.4	W
16-Aug-2007	23:00	0.0	S
17-Aug-2007	00:00	0.0	S
17-Aug-2007	01:00	0.0	W
17-Aug-2007	02:00	0.0	WSW
17-Aug-2007	03:00	0.0	WSW
17-Aug-2007	04:00	0.0	SW
17-Aug-2007	05:00	0.0	SW
17-Aug-2007	06:00	0.0	SSW
17-Aug-2007	07:00	0.0	SW
17-Aug-2007	08:00	0.0	WSW
17-Aug-2007	09:00	0.0	W
17-Aug-2007	10:00	1.8	W
17-Aug-2007	11:00	2.2	WSW
17-Aug-2007	12:00	2.2	W
17-Aug-2007	13:00	1.3	WSW
17-Aug-2007	14:00	0.9	W
17-Aug-2007	15:00	2.2	W
17-Aug-2007	16:00	1.3	W
17-Aug-2007	17:00	0.4	WNW
17-Aug-2007	18:00	0.4	WNW
17-Aug-2007	19:00	0.4	W
17-Aug-2007	20:00	0.4	W
17-Aug-2007	21:00	0.4	W
17-Aug-2007	22:00	0.0	W
17-Aug-2007	23:00	0.0	WNW
18-Aug-2007	00:00	0.0	W
18-Aug-2007	01:00	0.0	W
18-Aug-2007	02:00	0.0	W
18-Aug-2007	03:00	0.0	W
18-Aug-2007	04:00	0.0	WNW
18-Aug-2007	05:00	0.0	W
18-Aug-2007	06:00	0.0	W
18-Aug-2007	07:00	0.0	W
18-Aug-2007	08:00	0.0	W
18-Aug-2007	09:00	1.3	WNW
18-Aug-2007	10:00	2.2	W
18-Aug-2007	11:00	2.2	WNW
18-Aug-2007	12:00	2.7	W
18-Aug-2007	13:00	3.1	WNW
18-Aug-2007	14:00	3.6	WNW
18-Aug-2007	15:00	4.0	W
18-Aug-2007	16:00	4.0	WNW
18-Aug-2007	17:00	4.0	WNW
18-Aug-2007	18:00	3.6	S
18-Aug-2007	19:00	3.6	SSW
18-Aug-2007	20:00	2.7	SSW
18-Aug-2007	21:00	3.6	WNW
18-Aug-2007	22:00	4.5	SW
18-Aug-2007	23:00	4.9	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Aug-2007	00:00	3.6	W
19-Aug-2007	01:00	4.0	WNW
19-Aug-2007	02:00	3.6	W
19-Aug-2007	03:00	3.1	W
19-Aug-2007	04:00	3.1	WNW
19-Aug-2007	05:00	2.7	W
19-Aug-2007	06:00	2.7	S
19-Aug-2007	07:00	1.8	SW
19-Aug-2007	08:00	1.3	SSE
19-Aug-2007	09:00	2.7	S
19-Aug-2007	10:00	2.7	W
19-Aug-2007	11:00	2.7	W
19-Aug-2007	12:00	4.0	W
19-Aug-2007	13:00	4.0	W
19-Aug-2007	14:00	4.5	W
19-Aug-2007	15:00	4.0	W
19-Aug-2007	16:00	4.0	W
19-Aug-2007	17:00	3.1	W
19-Aug-2007	18:00	3.6	W
19-Aug-2007	19:00	3.6	W
19-Aug-2007	20:00	3.6	W
19-Aug-2007	21:00	3.1	W
19-Aug-2007	22:00	2.2	W
19-Aug-2007	23:00	2.7	ENE
20-Aug-2007	00:00	1.3	---
20-Aug-2007	01:00	0.9	---
20-Aug-2007	02:00	0.9	---
20-Aug-2007	03:00	0.4	---
20-Aug-2007	04:00	0.0	---
20-Aug-2007	05:00	0.0	ENE
20-Aug-2007	06:00	0.0	---
20-Aug-2007	07:00	0.0	ENE
20-Aug-2007	08:00	0.9	---
20-Aug-2007	09:00	2.2	NNE
20-Aug-2007	10:00	1.8	NW
20-Aug-2007	11:00	3.1	NW
20-Aug-2007	12:00	4.5	E
20-Aug-2007	13:00	4.5	NNE
20-Aug-2007	14:00	3.6	NE
20-Aug-2007	15:00	4.0	ENE
20-Aug-2007	16:00	3.6	ENE
20-Aug-2007	17:00	3.1	N
20-Aug-2007	18:00	3.1	ENE
20-Aug-2007	19:00	2.7	ENE
20-Aug-2007	20:00	2.7	---
20-Aug-2007	21:00	1.8	ENE
20-Aug-2007	22:00	1.3	ENE
20-Aug-2007	23:00	1.8	E
21-Aug-2007	00:00	2.7	---
21-Aug-2007	01:00	1.8	E
21-Aug-2007	02:00	3.1	---
21-Aug-2007	03:00	2.7	---
21-Aug-2007	04:00	2.7	---
21-Aug-2007	05:00	2.7	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Aug-2007	06:00	3.1	---
21-Aug-2007	07:00	2.7	---
21-Aug-2007	08:00	2.2	E
21-Aug-2007	09:00	2.7	W
21-Aug-2007	10:00	3.1	NE
21-Aug-2007	11:00	2.7	NE
21-Aug-2007	12:00	3.1	ENE
21-Aug-2007	13:00	2.7	N
21-Aug-2007	14:00	2.7	ENE
21-Aug-2007	15:00	1.8	ENE
21-Aug-2007	16:00	1.3	NE
21-Aug-2007	17:00	1.3	ENE
21-Aug-2007	18:00	0.9	E
21-Aug-2007	19:00	0.4	NE
21-Aug-2007	20:00	0.0	---
21-Aug-2007	21:00	0.4	ENE
21-Aug-2007	22:00	0.4	ENE
21-Aug-2007	23:00	1.8	ENE
22-Aug-2007	00:00	1.8	---
22-Aug-2007	01:00	1.3	---
22-Aug-2007	02:00	1.8	---
22-Aug-2007	03:00	2.7	ENE
22-Aug-2007	04:00	2.7	---
22-Aug-2007	05:00	3.1	---
22-Aug-2007	06:00	2.2	---
22-Aug-2007	07:00	3.1	---
22-Aug-2007	08:00	2.7	---
22-Aug-2007	09:00	4.0	ENE
22-Aug-2007	10:00	3.6	W
22-Aug-2007	11:00	3.6	SW
22-Aug-2007	12:00	4.0	WSW
22-Aug-2007	13:00	3.1	WSW
22-Aug-2007	14:00	2.7	SW
22-Aug-2007	15:00	3.1	SW
22-Aug-2007	16:00	3.6	WSW
22-Aug-2007	17:00	2.7	S
22-Aug-2007	18:00	3.1	S
22-Aug-2007	19:00	2.7	SSW
22-Aug-2007	20:00	3.1	SSW
22-Aug-2007	21:00	2.7	SSW
22-Aug-2007	22:00	2.2	NW
22-Aug-2007	23:00	1.8	NW
23-Aug-2007	00:00	1.8	NW
23-Aug-2007	01:00	3.1	NW
23-Aug-2007	02:00	3.6	NW
23-Aug-2007	03:00	3.6	NW
23-Aug-2007	04:00	3.1	NW
23-Aug-2007	05:00	3.1	NW
23-Aug-2007	06:00	3.1	NW
23-Aug-2007	07:00	4.0	NW
23-Aug-2007	08:00	4.0	NW
23-Aug-2007	09:00	5.4	NW
23-Aug-2007	10:00	5.4	NW
23-Aug-2007	11:00	7.2	NW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Aug-2007	12:00	8.5	NW
23-Aug-2007	13:00	8.0	W
23-Aug-2007	14:00	7.2	SW
23-Aug-2007	15:00	5.4	SSW
23-Aug-2007	16:00	6.7	SW
23-Aug-2007	17:00	5.4	SW
23-Aug-2007	18:00	4.5	WSW
23-Aug-2007	19:00	4.9	SW
23-Aug-2007	20:00	4.9	SW
23-Aug-2007	21:00	4.0	SW
23-Aug-2007	22:00	5.4	SSW
23-Aug-2007	23:00	4.5	SW
24-Aug-2007	00:00	4.0	SW
24-Aug-2007	01:00	4.5	WSW
24-Aug-2007	02:00	3.6	SW
24-Aug-2007	03:00	4.5	SW
24-Aug-2007	04:00	6.3	WSW
24-Aug-2007	05:00	6.3	WSW
24-Aug-2007	06:00	6.3	SW
24-Aug-2007	07:00	4.9	SW
24-Aug-2007	08:00	5.8	SW
24-Aug-2007	09:00	5.4	SW
24-Aug-2007	10:00	6.7	SW
24-Aug-2007	11:00	7.2	SSW
24-Aug-2007	12:00	5.8	SW
24-Aug-2007	13:00	5.8	SW
24-Aug-2007	14:00	0.9	SW
24-Aug-2007	15:00	0.9	SW
24-Aug-2007	16:00	0.4	SW
24-Aug-2007	17:00	2.2	SW
24-Aug-2007	18:00	3.1	W
24-Aug-2007	19:00	3.1	W
24-Aug-2007	20:00	3.1	W
24-Aug-2007	21:00	3.1	W
24-Aug-2007	22:00	1.8	W
24-Aug-2007	23:00	3.6	W
25-Aug-2007	00:00	4.0	W
25-Aug-2007	01:00	4.9	W
25-Aug-2007	02:00	3.6	WSW
25-Aug-2007	03:00	2.7	W
25-Aug-2007	04:00	3.1	WNW
25-Aug-2007	05:00	2.2	W
25-Aug-2007	06:00	0.4	W
25-Aug-2007	07:00	0.9	WNW
25-Aug-2007	08:00	0.9	WNW
25-Aug-2007	09:00	0.4	W
25-Aug-2007	10:00	2.2	WNW
25-Aug-2007	11:00	3.1	W
25-Aug-2007	12:00	3.1	W
25-Aug-2007	13:00	3.1	WNW
25-Aug-2007	14:00	3.6	WNW
25-Aug-2007	15:00	4.5	WNW
25-Aug-2007	16:00	4.0	WNW
25-Aug-2007	17:00	3.6	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Aug-2007	18:00	2.2	W
25-Aug-2007	19:00	1.8	WNW
25-Aug-2007	20:00	0.4	WNW
25-Aug-2007	21:00	0.0	W
25-Aug-2007	22:00	1.8	WNW
25-Aug-2007	23:00	0.4	W
26-Aug-2007	00:00	0.0	WNW
26-Aug-2007	01:00	0.0	WNW
26-Aug-2007	02:00	0.0	WNW
26-Aug-2007	03:00	0.0	WNW
26-Aug-2007	04:00	0.0	W
26-Aug-2007	05:00	0.0	WNW
26-Aug-2007	06:00	0.0	WNW
26-Aug-2007	07:00	0.0	WNW
26-Aug-2007	08:00	0.0	WNW
26-Aug-2007	09:00	0.4	WNW
26-Aug-2007	10:00	0.4	W
26-Aug-2007	11:00	0.4	W
26-Aug-2007	12:00	0.9	W
26-Aug-2007	13:00	0.9	W
26-Aug-2007	14:00	0.4	W
26-Aug-2007	15:00	0.4	W
26-Aug-2007	16:00	0.4	WNW
26-Aug-2007	17:00	0.0	WNW
26-Aug-2007	18:00	0.0	WNW
26-Aug-2007	19:00	0.0	WNW
26-Aug-2007	20:00	0.9	WNW
26-Aug-2007	21:00	0.4	WNW
26-Aug-2007	22:00	1.3	WNW
26-Aug-2007	23:00	0.9	WNW
27-Aug-2007	00:00	0.9	W
27-Aug-2007	01:00	0.0	WNW
27-Aug-2007	02:00	0.0	W
27-Aug-2007	03:00	0.0	W
27-Aug-2007	04:00	0.0	W
27-Aug-2007	05:00	0.0	W
27-Aug-2007	06:00	0.0	WNW
27-Aug-2007	07:00	0.0	W
27-Aug-2007	08:00	0.0	W
27-Aug-2007	09:00	0.0	NW
27-Aug-2007	10:00	0.9	WNW
27-Aug-2007	11:00	0.4	WNW
27-Aug-2007	12:00	1.3	WNW
27-Aug-2007	13:00	0.9	W
27-Aug-2007	14:00	0.9	WNW
27-Aug-2007	15:00	1.3	WNW
27-Aug-2007	16:00	0.4	WNW
27-Aug-2007	17:00	0.4	WNW
27-Aug-2007	18:00	0.0	W
27-Aug-2007	19:00	0.0	W
27-Aug-2007	20:00	0.0	W
27-Aug-2007	21:00	0.0	WSW
27-Aug-2007	22:00	0.0	WSW
27-Aug-2007	23:00	0.0	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Aug-2007	00:00	0.0	SW
28-Aug-2007	01:00	0.0	WSW
28-Aug-2007	02:00	0.0	SSW
28-Aug-2007	03:00	0.0	WSW
28-Aug-2007	04:00	0.0	W
28-Aug-2007	05:00	0.0	W
28-Aug-2007	06:00	0.0	SSW
28-Aug-2007	07:00	0.0	W
28-Aug-2007	08:00	0.0	W
28-Aug-2007	09:00	0.0	WSW
28-Aug-2007	10:00	0.9	WNW
28-Aug-2007	11:00	1.8	WNW
28-Aug-2007	12:00	1.8	WNW
28-Aug-2007	13:00	2.2	WNW
28-Aug-2007	14:00	2.2	NW
28-Aug-2007	15:00	2.2	WNW
28-Aug-2007	16:00	1.8	W
28-Aug-2007	17:00	1.8	W
28-Aug-2007	18:00	0.9	W
28-Aug-2007	19:00	1.3	W
28-Aug-2007	20:00	1.8	ESE
28-Aug-2007	21:00	1.8	S
28-Aug-2007	22:00	1.8	---
28-Aug-2007	23:00	3.6	N
29-Aug-2007	00:00	2.7	N
29-Aug-2007	01:00	2.2	N
29-Aug-2007	02:00	1.8	N
29-Aug-2007	03:00	2.7	N
29-Aug-2007	04:00	4.0	---
29-Aug-2007	05:00	4.5	---
29-Aug-2007	06:00	4.5	---
29-Aug-2007	07:00	4.5	---
29-Aug-2007	08:00	4.0	---
29-Aug-2007	09:00	4.5	W
29-Aug-2007	10:00	4.9	W
29-Aug-2007	11:00	4.5	NE
29-Aug-2007	12:00	4.0	NE
29-Aug-2007	13:00	4.0	NE
29-Aug-2007	14:00	2.7	NE
29-Aug-2007	15:00	2.7	NE
29-Aug-2007	16:00	3.1	NE
29-Aug-2007	17:00	4.0	NE
29-Aug-2007	18:00	0.0	NE
29-Aug-2007	19:00	0.0	NE
29-Aug-2007	20:00	0.9	NE
29-Aug-2007	21:00	0.4	NE
29-Aug-2007	22:00	1.3	NE
29-Aug-2007	23:00	0.9	NE
30-Aug-2007	00:00	0.9	---
30-Aug-2007	01:00	3.6	---
30-Aug-2007	02:00	4.5	SSW
30-Aug-2007	03:00	4.5	---
30-Aug-2007	04:00	4.0	---
30-Aug-2007	05:00	4.5	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Aug-2007	06:00	4.5	---
30-Aug-2007	07:00	4.0	---
30-Aug-2007	08:00	4.0	SSW
30-Aug-2007	09:00	4.5	WNW
30-Aug-2007	10:00	4.9	W
30-Aug-2007	11:00	6.3	W
30-Aug-2007	12:00	6.7	WNW
30-Aug-2007	13:00	6.7	WNW
30-Aug-2007	14:00	7.2	NE
30-Aug-2007	15:00	6.3	NE
30-Aug-2007	16:00	6.3	NE
30-Aug-2007	17:00	6.7	NE
30-Aug-2007	18:00	7.2	ENE
30-Aug-2007	19:00	8.0	NE
30-Aug-2007	20:00	8.5	ESE
30-Aug-2007	21:00	8.5	E
30-Aug-2007	22:00	9.8	---
30-Aug-2007	23:00	9.4	E
31-Aug-2007	00:00	0.4	SSW
31-Aug-2007	01:00	0.4	NNW
31-Aug-2007	02:00	0.4	WNW
31-Aug-2007	03:00	0.4	N
31-Aug-2007	04:00	0.4	W
31-Aug-2007	05:00	0.0	W
31-Aug-2007	06:00	0.0	---
31-Aug-2007	07:00	0.0	---
31-Aug-2007	08:00	0.0	W
31-Aug-2007	09:00	0.4	W
31-Aug-2007	10:00	0.4	SSW
31-Aug-2007	11:00	0.4	SW
31-Aug-2007	12:00	0.0	SW
31-Aug-2007	13:00	0.4	SW
31-Aug-2007	14:00	0.4	SW
31-Aug-2007	15:00	0.4	SW
31-Aug-2007	16:00	0.4	W
31-Aug-2007	17:00	0.4	N
31-Aug-2007	18:00	0.4	NE
31-Aug-2007	19:00	0.4	W
31-Aug-2007	20:00	0.0	S
31-Aug-2007	21:00	0.0	NE
31-Aug-2007	22:00	0.4	WNW
31-Aug-2007	23:00	0.4	NE

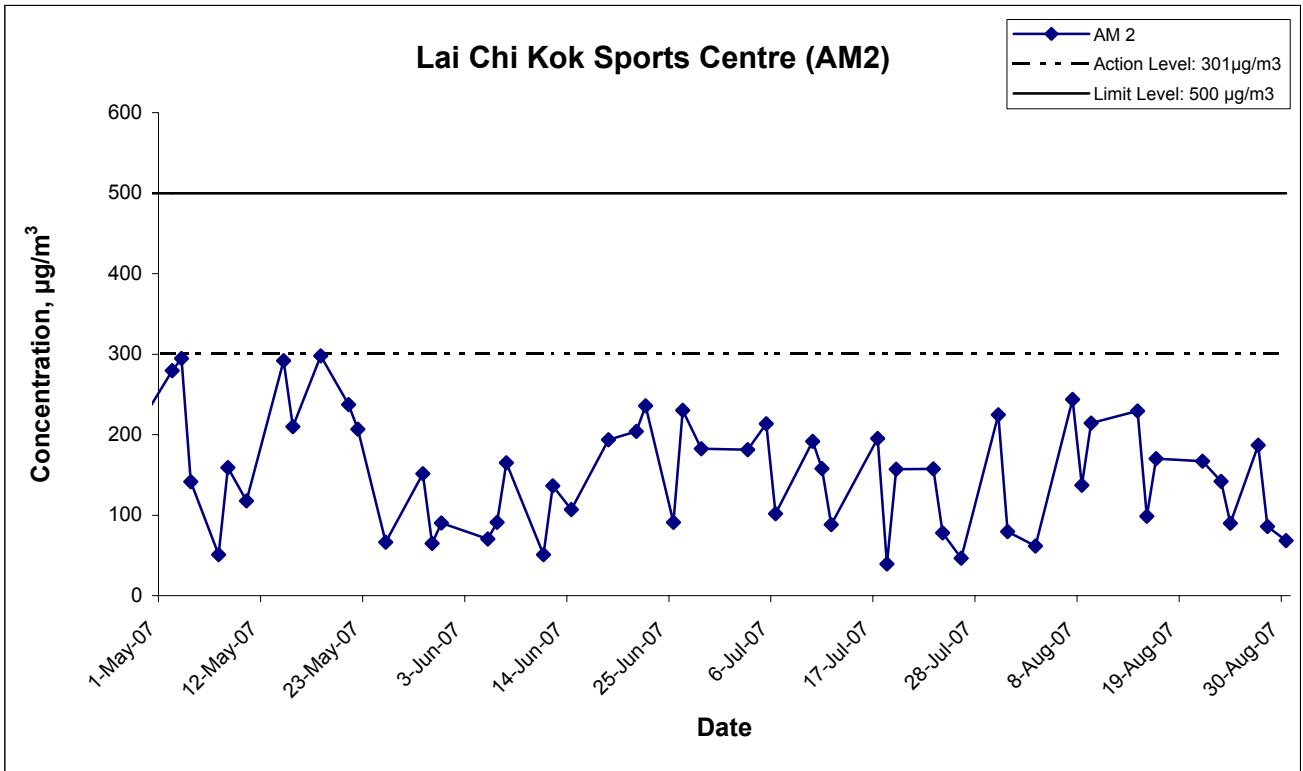
**APPENDIX E
1-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATION**

Appendix E - 1-hour TSP Monitoring Results

Location AM 2 - Lai Chi Kok Sports Centre

Date	Weather Condition	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)	Sampling Time(hrs.)	Conc. (µg/m ³)
		Initial	Final	Initial	Final	Initial	Final							
3-Aug-07	Sunny	2.8203	2.8248	1.21	1.21	9271.1	9272.1	304.3	757.1	0.0045	1.21	72.9	1.0	61.8
7-Aug-07	Sunny	2.8163	2.8341	1.22	1.22	9272.1	9273.1	302.6	755.4	0.0178	1.22	73.0	1.0	243.9
8-Aug-07	Cloudy	2.8449	2.8549	1.21	1.21	9273.1	9274.1	302.1	752.0	0.0100	1.21	72.9	1.0	137.2
9-Aug-07	Cloudy	2.8357	2.8513	1.21	1.21	9298.1	9299.1	301.4	748.8	0.0156	1.21	72.8	1.0	214.2
14-Aug-07	Sunny	2.8274	2.8442	1.22	1.22	9299.1	9300.1	298.8	752.7	0.0168	1.22	73.3	1.0	229.3
15-Aug-07	Cloudy	2.7895	2.7967	1.22	1.22	9324.1	9325.1	301.1	752.9	0.0072	1.22	73.0	1.0	98.6
16-Aug-07	Cloudy	2.7734	2.7859	1.22	1.22	9325.1	9326.1	297.9	753.3	0.0125	1.22	73.4	1.0	170.3
21-Aug-07	Sunny	2.7683	2.7805	1.22	1.22	9350.1	9351.1	302.1	755.0	0.0122	1.22	73.0	1.0	167.1
23-Aug-07	Sunny	2.7847	2.7951	1.22	1.22	9351.1	9352.1	301.3	758.7	0.0104	1.22	73.3	1.0	142.0
24-Aug-07	Sunny	2.7999	2.8065	1.22	1.22	9352.1	9353.1	300.3	760.7	0.0066	1.22	73.5	1.0	89.8
27-Aug-07	Cloudy	2.7894	2.8031	1.22	1.22	9377.1	9378.1	301.4	759.8	0.0137	1.22	73.3	1.0	186.9
28-Aug-07	Cloudy	2.8015	2.8078	1.22	1.22	9378.1	9379.1	301.1	760.5	0.0063	1.22	73.4	1.0	85.9
30-Aug-07	Sunny	2.8640	2.8690	1.22	1.22	9379.1	9380.1	302.4	759.2	0.0050	1.22	73.2	1.0	68.3
													Min	61.8
													Max	243.9
													Average	145.8

1-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of 1-hour TSP Impact Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Aug 07	Appendix E	

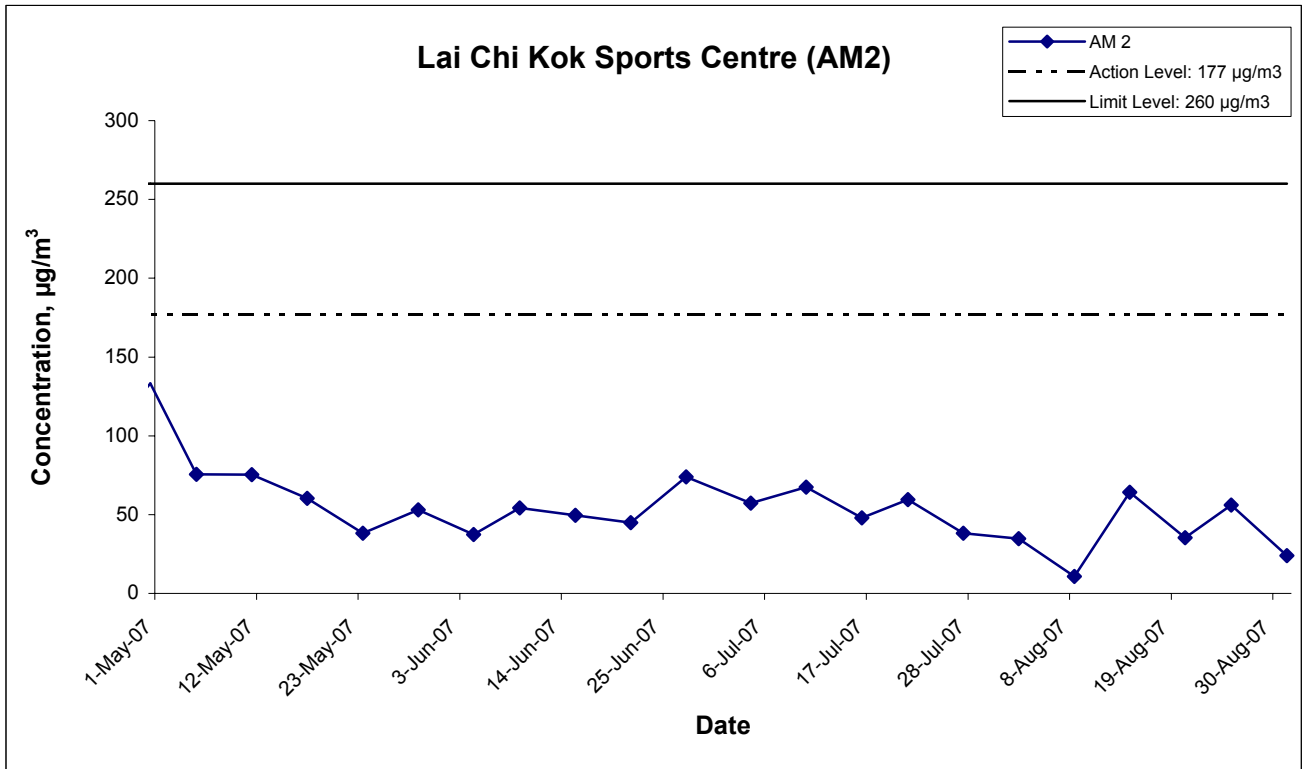
**APPENDIX F
24-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATION**

Appendix F - 24-hour TSP Monitoring Results

Location AM 2 - Lai Chi Kok Sports Centre

Date	Weather Condition	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)	Sampling Time(hrs.)	Conc. (µg/m ³)
		Initial	Final	Initial	Final	Initial	Final							
2-Aug-07	Sunny	2.8423	2.9032	1.22	1.22	9247.1	9271.1	303.1	757.8	0.0609	1.22	1752.6	24.0	34.7
8-Aug-07	Cloudy	2.8658	2.8846	1.21	1.21	9274.1	9298.1	302.6	751.6	0.0188	1.21	1747.4	24.0	10.8
14-Aug-07	Cloudy	2.8203	2.9333	1.22	1.22	9300.1	9324.1	299.0	752.5	0.1130	1.22	1757.9	24.0	64.3
20-Aug-07	Cloudy	2.7972	2.8593	1.22	1.22	9326.1	9350.1	302.0	755.4	0.0621	1.22	1753.0	24.0	35.4
25-Aug-07	Cloudy	2.7831	2.8819	1.22	1.22	9353.1	9377.1	301.1	759.9	0.0988	1.22	1760.1	24.0	56.1
31-Aug-07	Sunny	2.8261	2.8682	1.22	1.22	9380.1	9404.1	302.5	758.5	0.0421	1.22	1754.9	24.0	24.0
													Min	10.8
													Max	64.3
													Average	37.6

24-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Aug 07	Appendix F	

**APPENDIX G
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATION**

Appendix G - Noise Monitoring Results

Location NM2 - Lai Chi Kok Reception Centre								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀		L _{eq}	L _{eq}
7-Aug-07	09:00	Sunny	68.4	71.7	66.2	68.4	68.4, Measured ≤ Baseline	Resumed since September 2006
14-Aug-07	09:00	Cloudy	68.9	71.7	66.2		59.3	
21-Aug-07	14:00	Sunny	68.7	70.7	65.2		56.9	
27-Aug-07	09:00	Cloudy	69.4	72.2	66.7		62.5	

Location NM4 - Mei Foo Sun Chuen, Phase 5								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀		L _{eq}	L _{eq}
7-Aug-07	09:45	Sunny	69.7	71.5	66.0	73.8	69.7, Measured ≤ Baseline	Road traffic noise from Ching Cheung Road was identified as the major noise source.
14-Aug-07	09:45	Cloudy	75.1	78.5	72.5		69.2	
21-Aug-07	14:45	Fine	74.1	76.0	69.5		62.3	
27-Aug-07	09:40	Cloudy	74.3	77.5	71.5		64.7	

Location NM8a - M/F of Nob Hill								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀		L _{eq}	L _{eq}
7-Aug-07	10:40	Sunny	74.8	77.5	73.0	Road traffic noise from Ching Cheung Road was identified as the major noise source.		
14-Aug-07	10:30	Cloudy	73.2	76.5	71.0			
21-Aug-07	15:30	Fine	73.0	74.0	68.5			
27-Aug-07	10:30	Cloudy	72.2	77.5	70.0			

Location NM8b - 3/F of Nob Hill								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀		L _{eq}	L _{eq}
7-Aug-07	11:15	Sunny	74.3	77.5	72.5	This Station (NM8b) which is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise.		
14-Aug-07	11:10	Cloudy	74.1	77.5	71.5			
21-Aug-07	16:10	Fine	72.1	75.5	69.0			
27-Aug-07	11:10	Cloudy	76.1	78.0	74.5			

Location NM9 - Hoi Lai Estate								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀		L _{eq}	L _{eq}
7-Aug-07	13:00	Sunny	67.2	69.5	63.5	-		
14-Aug-07	13:00	Cloudy	68.2	70.5	65.5			
21-Aug-07	16:51	Fine	65.4	68.5	62.0			
27-Aug-07	13:00	Cloudy	61.2	63.5	58.5			

Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolted value indicated limit level exceedance

Appendix G - Noise Monitoring Results

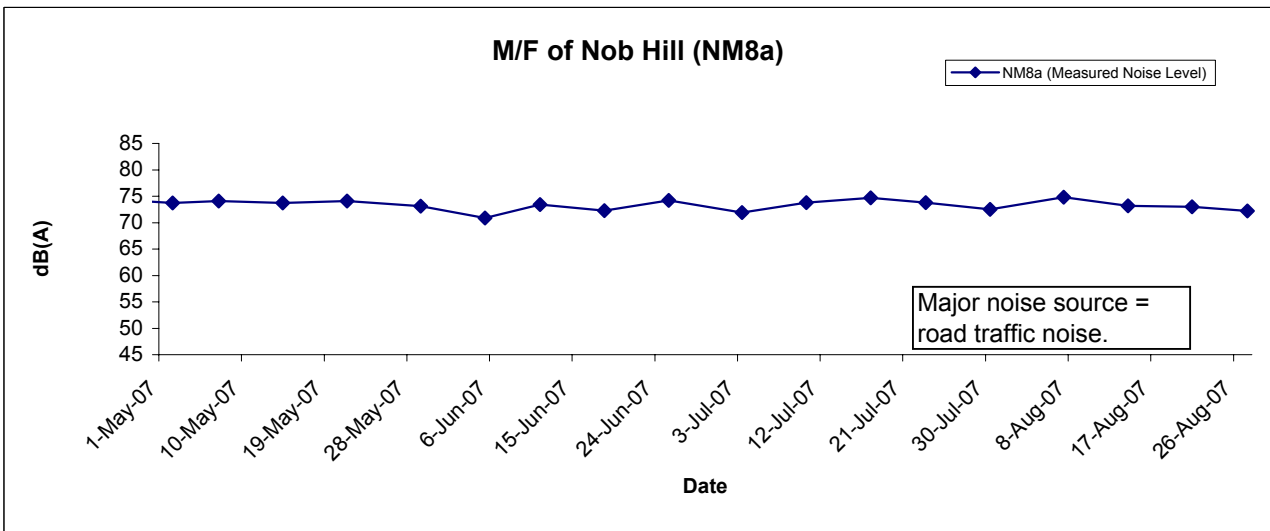
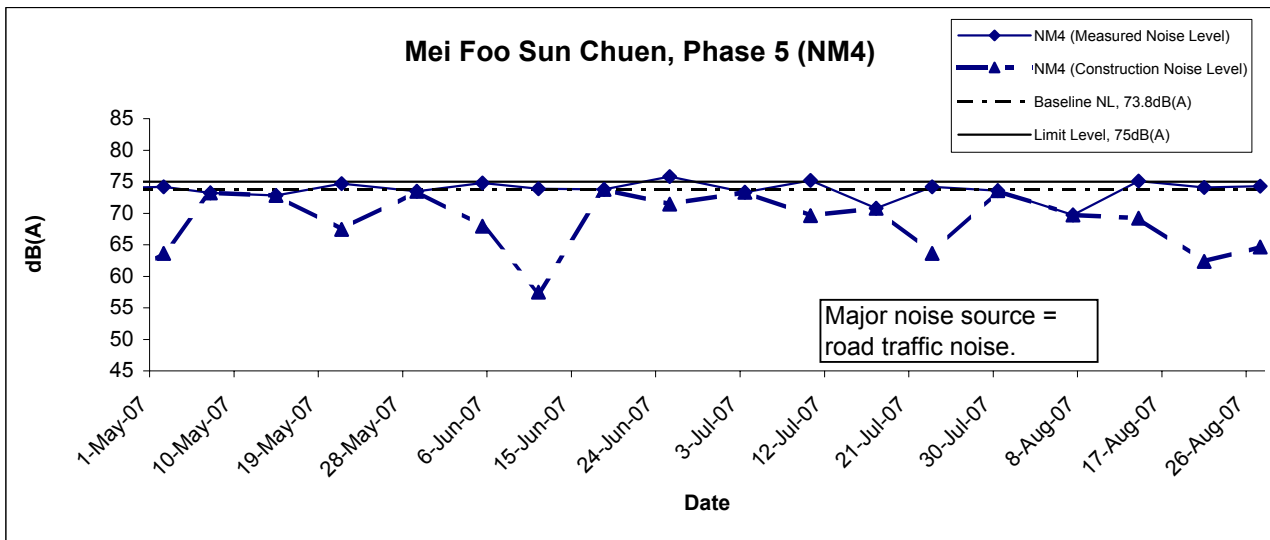
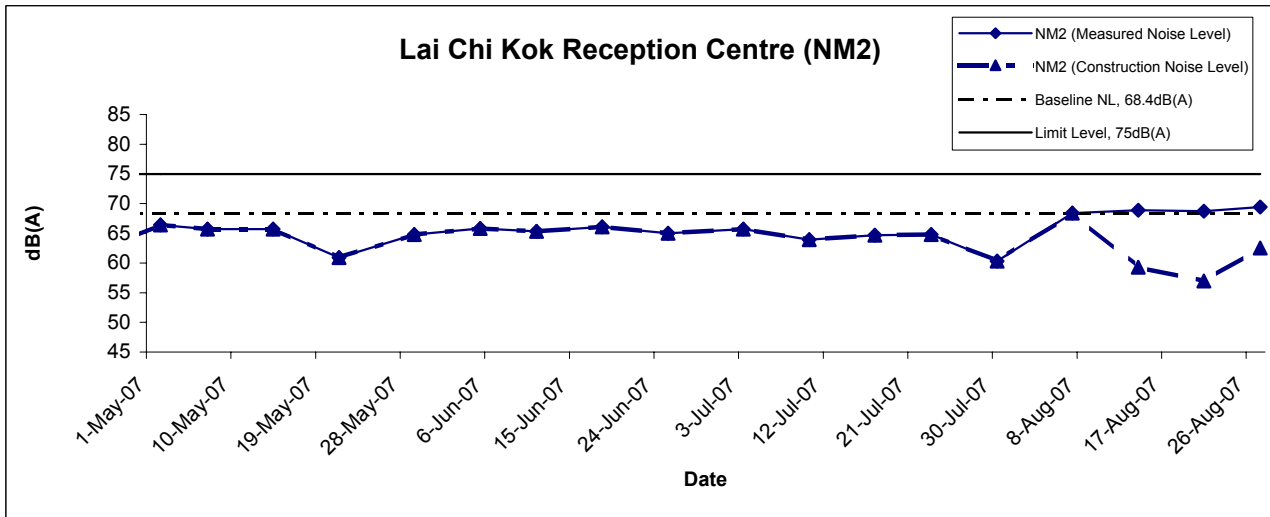
Restricted Hours - 19:00 to 23:00 on normal weekdays

Location NM9 - Hoi Lai Estate						
Date	Time	Weather	dB (A) (5-min)			
			L _{eq}	L ₁₀	L ₉₀	Average L _{eq}
7-Aug-07	19:00	Cloudy	64.1	69.0	61.5	64.2
	19:05		64.2	69.0	61.5	
	19:10		64.2	69.0	61.5	
14-Aug-07	19:20	Cloudy	62.8	68.5	59.0	63.0
	19:25		63.3	68.5	59.0	
	19:30		62.8	68.5	59.0	
21-Aug-07	19:15	Cloudy	63.0	69.0	59.5	63.2
	19:20		63.1	69.0	59.5	
	19:25		63.5	69.5	59.5	
28-Aug-07	19:00	Cloudy	62.7	68.5	58.0	62.6
	19:05		62.8	68.5	58.0	
	19:10		62.4	68.5	58.0	

Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolded value indicated limit level exceedance

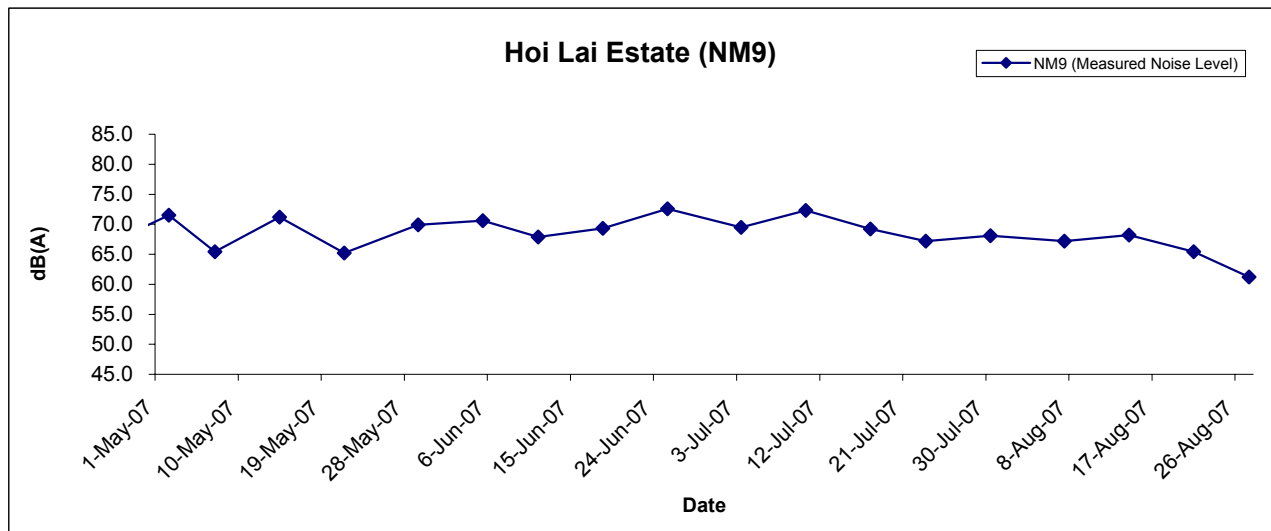
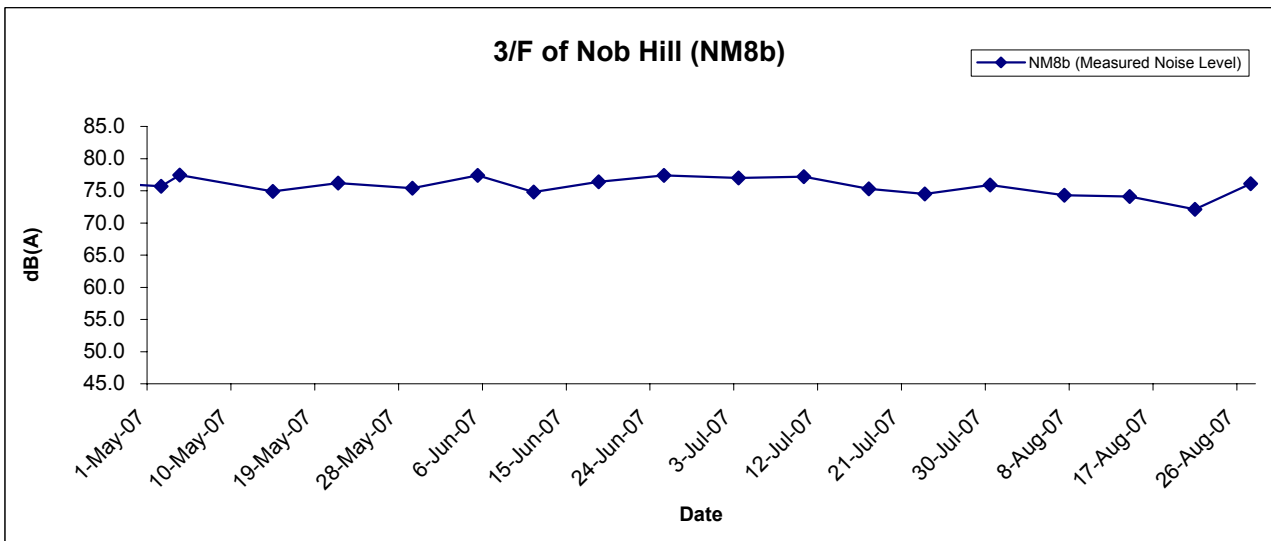
Noise Levels



* Construction Noise Level = Measured Noise Level - Baseline Level
 (If the measured noise level is lower than the baseline level, the construction noise level will be taken as the measured one)

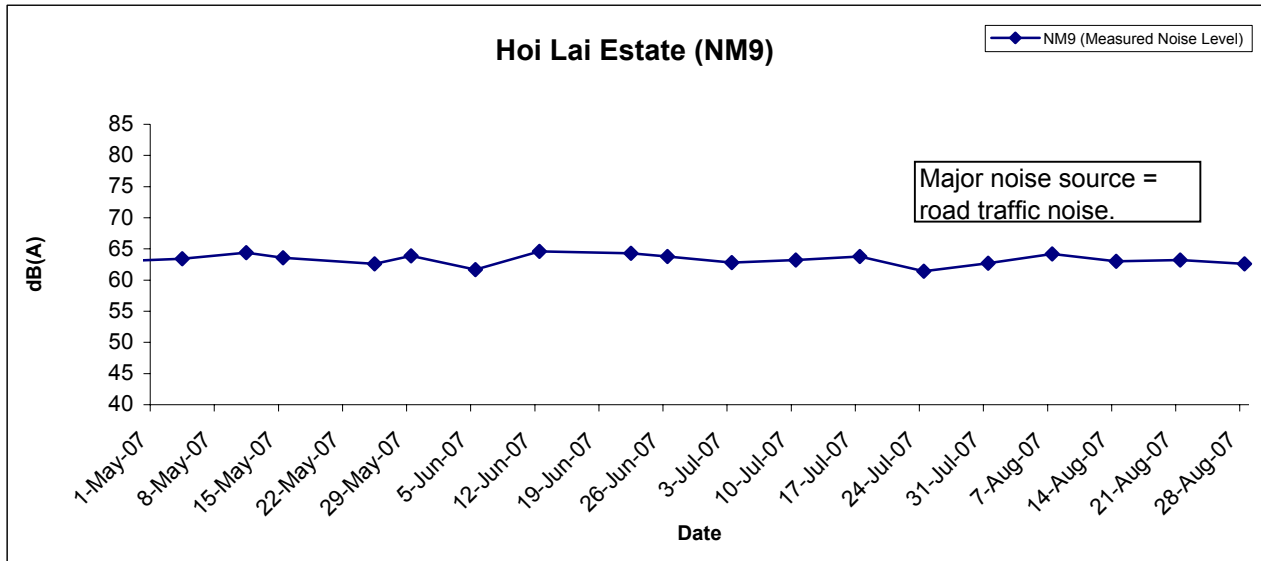
Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	CINOTECH
	Date Aug 07	Appendix G	

Noise Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Aug 07	Appendix G	

Restricted Hours (19:00 to 23:00) - Noise Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	CINOTECH
	Date Aug 07	Appendix G	

APPENDIX H
SUMMARY OF EXCEEDANCE

Summary of Exceedances Recorded in the Reporting Month

a) Exceedance Report for 1-hr TSP (NIL)

- No Action/Limit Level exceedance was recorded in the reporting month.

b) Exceedance Report for 24-hr TSP (NIL)

- No Action/Limit Level exceedance was recorded in the reporting month.

c) Exceedance Report for Construction Noise (NIL)

- No Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving 1 noise complaint.

**APPENDIX I
SITE AUDIT SUMMARY**

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

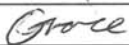

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70802-LCKV
Date	2 August 2007 (Thursday)
Time	9:30 – 10:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> Worn sandbags were observed around the manhole near Nob Hill at C13-C14. The Contractor was reminded to replace them. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit (Ref. No.: 70724-LCKV), there was no environmental deficiency was identified during the site inspection. Covering of loaded truck leaving the site was checked during the site inspection. No truck leaving the construction site was observed during the site inspection. 	B13

	Name	Signature	Date
Recorded by	Grace Wong		2 August 2007
Checked by	Dr. Priscilla Choy		2 August 2007

Route 8 - Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel
Contract No. HY/2003/05 – Traffic Control and Surveillance System

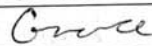
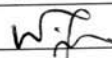
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70802-LCKV-TCSS
Date	2 August 2007 (Thursday)
Time	10:30 – 10:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> Follow-up for previous audit session (Ref. No.: 70703-LCKV-TCSS), no environmental deficiency was identified during the site inspection. 	

	Name	Signature	Date
Recorded by	Grace Wong		2 August 2007
Checked by	Dr. Priscilla Choy		2 August 2007

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**



Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70808-LCKV
Date	8 August 2007 (Wed)
Time	1330 - 1430

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit (Ref. No.:70802-LCKV), the worn sandbag near Nob Hill at C13-C14 was removed. The environmental deficiency items B13 was rectified by the Contractor. 	

	Name	Signature	Date
Recorded by	Jason Lai		8 August 2007
Checked by	Dr. Priscilla Choy		8 August 2007

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin
Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel
Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70815-LCKV
Date	15 August 2007 (Wed)
Time	1330 - 1440

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit (Ref. No.:70808-LCKV), there was no environmental deficiency was identified during the site inspection. Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was observed during the site inspection. 	

	Name	Signature	Date
Recorded by	Grace Wong	<i>Grace</i>	15 August 2007
Checked by	Dr. Priscilla Choy	<i>Priscilla</i>	15 August 2007

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70822-LCKV
Date	22 August 2007 (Wednesday)
Time	13:30 – 14:50

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit (Ref. No.:70815-LCKV), there was no environmental deficiency identified during the site inspection. Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was observed during the site inspection. 	

	Name	Signature	Date
Recorded by	Grace Wong	<i>Grace</i>	22 August 2007
Checked by	Dr. Priscilla Choy	<i>WFC</i>	22 August 2007

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

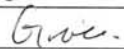

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70829-LCKV
Date	29 August 2007 (Wednesday)
Time	14:30 – 15:40

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit (Ref. No.: 70822-LCKV), no environmental deficiencies were observed during the site inspection. Covering of loaded truck leaving the site was checked during the site inspection. No truck leaving the construction site was observed during the site inspection. 	

	Name	Signature	Date
Recorded by	Grace Wong		29 August 2007
Checked by	Dr. Priscilla Choy		29 August 2007

APPENDIX J
EVENT ACTION PLANS

Appendix J - Event Action Plans

Event/Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	Contractor
ACTION LEVEL				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source 2. Inform ER & IEC 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET 2. Check Contractor's working methods 	<ol style="list-style-type: none"> 1. Notify Contractor 2. Check monitoring data and Contractor's working methods 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source 2. Inform ER & IEC 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Discuss with ER & for remedial actions required 6. If exceedance continues, arrange meeting with ER & IEC 7. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Checking monitoring data submitted by ET 2. Check Contractor's working methods 3. Discuss with ET and Contractor on possible remedial measure 4. Advise the ER & ET on the effectiveness of the proposed remedial measures 5. Supervise the implementation of the remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Check Contractor's working methods 4. Discuss with ET, IEC and Contractor on proposed remedial actions 5. Ensure remedial actions properly implemented 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to ER within 3 working days of notification 2. Implement the agreed proposals 3. Amend proposal if appropriate
LIMIT LEVEL				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source 2. Inform ER & IEC and EPD 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily 5. Assess effectiveness of Contractor's 	<ol style="list-style-type: none"> 1. Checking monitoring data submitted by ET 2. Check Contractor's working methods 3. Discuss with ET and Contractor on possible remedial measure 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Check Contractor's working methods 4. Discuss with ET, IEC and Contractor on 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to ER within 3 working days of notification

EVENT	ACTION			
	ET	IEC	ER	Contractor
	remedial actions and keep EPD and ER & IEC informed of the results	4. Advise the ER & ET on the effectiveness of the proposed remedial measures 5. Supervise the implementation of the remedial measures	proposed remedial actions 5. Ensure remedial actions properly implemented	3. Implement the agreed proposals 4. Amend proposal if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source 2. Inform ER, IEC, Contractor and EPD the cause & actions taken for the exceedances 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Investigate the causes of exceedance 6. Carry out analysis of contractor's working procedures to determine possible mitigation to be implemented. 7. Arrange meeting with EPD, IEC and ER to discuss the remedial actions to be taken 8. Assess effectiveness of Contractor's remedial actions and keep EPD and ER & IEC informed of the results 9. If exceedance stops, cease additional monitoring	1. Checking monitoring data submitted by ET 2. Discuss amongst ER, ET and Contractor on possible remedial measures 3. Review Contractor's remedial measures whenever necessary to ensure their effectiveness and advise the ER accordingly 4. Supervise the implementation of the remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 4. Discuss amongst ET, IEC and the Contractor on proposed remedial actions 5. In consultation with IEC, agree with the contractor remedial measures to be implemented 6. Ensure remedial measure are properly implemented 7. 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	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC, ER within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

Event/Action Plan for Construction Noise

Exceedance	ACTION			
	ET	.IEC	ER	Contractor
Action Level	<p>1. Discuss with the IEC and ER and seek to identify potential noise source</p> <p>2. Undertake noise measurement to confirm the validity of complaint</p> <p>3. Inform ER&IEC in writing Discuss remedial actions required with ER&IEC if an exceedance is recorded</p> <p>4. Increase monitoring frequency to demonstrate efficacy of remedial measures</p> <p>5. If exceedance continues, meet with ER&IEC to review implementation of appropriate mitigation measures.</p> <p>6. If exceedance stops, cease additional monitoring</p>	<p>1. Review the analyzed results submitted by the ET</p> <p>2. Review the proposed remedial measures by the Contractor and advise the ER & ET accordingly</p> <p>3. Supervise the implementation of remedial measures</p>	<p>1. Confirm receipt of notification of complaint and notify Contractor immediately</p> <p>2. Check monitoring data trends and Contractor's working methods</p> <p>3. Remind the Contractor of his contractual obligations and discuss with ET, IEC and Contractor on proposed remedial actions</p> <p>4. Assess the efficacy of remedial actions and keep the Contractor informed</p> <p>5. Inform complainant of actions taken</p>	<p>1. Submit proposals for remedial actions to ER within three working days of notification</p> <p>2. Amend proposals if required by the Engineer</p> <p>3. Implement the remedial actions immediately upon instruction</p> <p>4. Liaise with the ER to optimize the effectiveness of the agreed mitigation</p> <p>5. Amend proposal if appropriate</p>

Exceedance	ACTION			
	ET	IEC	ER	Contractor
Limit Level	<ol style="list-style-type: none"> 1. Repeat measurement to confirm findings 2. Investigate the cause of the exceedance and identify the main source(s) of impact 3. Inform ER&IEC and EPD in writing 4. Discuss remedial actions required with ER&IEC 5. Increase monitoring frequency to demonstrate efficacy of remedial measures 6. Assess efficacy of remedial actions and keep ER & IEC informed of the results 7. If exceedance continues, meet with ER&IEC to identify appropriate mitigation measures 8. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET 2. Review Contractor's remedial actions to assure their effectiveness and advise the ER &ET accordingly 3. Supervise the implementation of the remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance and notify Contractor 2. Check monitoring data trends and Contractor's working methods 3. Discuss with ET, IEC and Contractor on proposed remedial actions to be implemented 4. Assess the efficacy of remedial actions and keep the Contractor informed 5. If exceedance continuous, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is aborted 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to ER immediately not more than 3 working days of notification 3. Amend proposals if required by the ER 4. Implement remedial actions immediately upon instruction 5. Liaise with the ER to optimize the effectiveness of the agreed mitigation 6. Resubmit proposals if problem still not under control 7. Stop the relevant portion of works as determined by the ER until the exceedance is aborted

**APPENDIX K
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)**

Appendix K - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
Construction Dust	<ul style="list-style-type: none"> Any stockpile of dusty materials or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet. 	^
	<ul style="list-style-type: none"> A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones. 	^
	<ul style="list-style-type: none"> Vehicle washing facilities should be provided at every exit point. 	^
	<ul style="list-style-type: none"> The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. 	^
	<ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	^
	<ul style="list-style-type: none"> Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet. 	^
	<ul style="list-style-type: none"> The portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials. 	^
	<ul style="list-style-type: none"> Any stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet. 	^
	<ul style="list-style-type: none"> All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet. 	^
	<ul style="list-style-type: none"> Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site. The working area of any excavation should be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet. 	^
Construction Noise	<ul style="list-style-type: none"> Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works. 	^
	<ul style="list-style-type: none"> Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. 	^
	<ul style="list-style-type: none"> Plant known to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS. 	^
	<ul style="list-style-type: none"> Mobile plant should be sited as far away from NSRs as possible. 	^
	<ul style="list-style-type: none"> Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. Use quiet plant and Working Method 	^
<ul style="list-style-type: none"> Reduce the number of plant operating in critical areas close NSRs. Construct temporary and movable noise barriers 	^	

Types of Impacts	Mitigation Measures	Status
Water Quality	<i>Construction Runoff and Drainage</i>	
	<ul style="list-style-type: none"> Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow. 	^
	<ul style="list-style-type: none"> Boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilities runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. 	^
	<ul style="list-style-type: none"> All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment traps should be regularly cleaned and maintained. The temporarily diverted drainage should be reinstated to its original condition when the construction works has finished or the temporary diversion is no longer required 	^
	<ul style="list-style-type: none"> Sand silt in the wash water from the wheel washing facilities, which ensure no earth, mud and debris is deposited on roads, should be settled out the removed before discharging into storm drains. A section of the road between the wheel washing bay and the public road should be paved with backfill to prevent wash water or other site runoff form entering public road drains. 	^
	<ul style="list-style-type: none"> Oil interceptors should be provided in the drainage system and regularly emptied to prevent the release of oils and grease into the storm water drainage system after accidental spillage. The interceptor should have a bypass to prevent flushing during periods of heavy rain. 	N/A
	<ul style="list-style-type: none"> Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks. 	^
	<ul style="list-style-type: none"> Silt removal facilities, channels and manholes shall be suitably maintained with the deposited silt and grit being removed at least once a week, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. 	^
	<ul style="list-style-type: none"> Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate intercepting channels shall be provided along the site boundary or at the locations agreed with the ET Leader. Rainwater pumped out from trenches or foundation excavations shall be discharged into silt removal facilities before discharge into storm drains. 	^
	<ul style="list-style-type: none"> All generators, fuel and oil storage shall be within bunded areas. Drainage from the areas shall be connected to storm drains via a petrol interceptor. 	^
	<i>Tunnelling Work</i>	
	<ul style="list-style-type: none"> Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials form the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps. 	N/A
	<ul style="list-style-type: none"> Ground water pumped out of tunnels should be discharged into the drainage channels which incorporated sediment traps to enhance deposition rates and to remove silt. 	N/A
	<ul style="list-style-type: none"> Spend grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill. 	N/A

Types of Impacts	Mitigation Measures	Status
	<i>General Construction Activities</i>	
	<ul style="list-style-type: none"> • Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts. • All fuel tanks and storage areas will be provided with locks and be located on sealed areas (within bunds of a capacity equal to 110% of the storage capacity of the largest tank or 20% by volume of the fuel stored in that areas, whichever in the greatest). 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<i>Sewage Effluent</i>	
	<ul style="list-style-type: none"> • Construction work force sewage discharges from fixed toilet facilities on-site should be connected to the nearby existing trunk sewer wherever feasible. However, for areas where existing trunk sewer is not available, it is recommended that appropriate and adequate on site portable chemical toilets should be provided by a licensed contractor who will be responsible for appropriate disposal and maintenance of these facilities. • It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away from streams and catchments and other requirements for the proposed septic tank and soakaway should be referred to EPD's Practice Note for Professional Persons, Drainage Plans. 	<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p>
Waste	<i>General</i>	
	<ul style="list-style-type: none"> • Training and instruction shall be given at a site to construction staff to increase awareness and draw attention to waste management issues and the need to minimise waste generation. The training requirement shall be included in the site waste management plan. 	<p style="text-align: center;">^</p>
	<i>Storage, Collection and Transportation of Waste</i>	
	<ul style="list-style-type: none"> • Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage. • Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits. • Waste shall be removed on a daily basis. • Waste storage area shall be maintained and cleaned on a daily basis. • Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers. • Obtain necessary waste disposal permits from the appropriate authorities if they are required. • Wastes shall be disposed of at licensed waste disposal facilities. • Develop procedure such as ticketing system to facilitate tracking of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur. 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<ul style="list-style-type: none"> • Maintain records of the quantities of wastes generated, recycled and disposed. 	<p style="text-align: center;">^</p>
	<i>Surplus Excavated Materials</i>	
	<ul style="list-style-type: none"> • Due to the high risk of loose material being washed into the existing nullah, stockpile materials should be properly compacted and covered from water erosion and located at least 10m away from the nullah wall. 	<p style="text-align: center;">^</p>
<i>Construction and Demolition (C&D) Waste</i>		

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> • Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts. • The handling and disposal of bentonite slurries shall be undertaken in accordance with Practice Note for Professional Persons – Construction Site Drainage (ProPECC PN 1/94) on construction site drainage. • Construction and demolition (C&D) material shall be segregated to inert and non-inert parts. The inert portion shall re-used at areas of reclamation or land formation, or to public filling area shall such allocation is deemed necessary. The non-inert portion shall be disposed of to landfill. 	<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">^</p>
	<p><i>Chemical Waste</i></p> <ul style="list-style-type: none"> • Chemical waste that is produce during construction shall be handled in accordance with the Cod of Practice on the Packaging, Handling and Storage of Chemical Wastes. • Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; c. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations. • The storage area for chemical wastes should: <ul style="list-style-type: none"> a. Be clearly labelled and used solely for the storage of chemical waste; b. Be enclosed on at least 3 sides; c. Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is largest; d. Have adequate ventilation; e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); f. Be arranged so that incompatible materials are adequately separated. • Disposal of chemical waste shall be via a licensed waste collector; and to a facility licensed to receive chemical waste; or a reuser of the waste (under approval from EPD). 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<p><i>General Refuse</i></p> <ul style="list-style-type: none"> • General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D and chemical wastes, on a daily for every second day basis to minimise odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law. • Reusable rather than disposable dishware shall be used if feasible. 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>

Types of Impacts	Mitigation Measures	Status
Ecology	<ul style="list-style-type: none"> • A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza. 	N/A
	<ul style="list-style-type: none"> • Conduct a tree survey before commencement of the construction work. 	^
	<ul style="list-style-type: none"> • All measures recommended in the approved landscape proposals under Condition 2.4 in EP above shall be fully implemented in accordance with the details and time schedule set out in the submission. 	^
	<ul style="list-style-type: none"> • Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately. 	N/A
	<ul style="list-style-type: none"> • Wild and uncontrolled fire shall be strictly prohibited • Fences shall be erected along the boundary of the construction sites at the Toll Plaza before commencement of works, to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent wooded areas. 	^ N/A
Landscape and Visual Impact	<ul style="list-style-type: none"> • Landscape mitigation measure 1 (LMM1) – Construction programming and management. The periphery of the works areas at street level shall be managed so that they do not appear cluttered, untidy and unattractive and inconvenient to pedestrians. For example, all hoarding shall be colorfully designed with interesting motifs demonstrating the work of Highways Department. Hoardings with bland colours shall be avoided. 	^
	<ul style="list-style-type: none"> • Landscape mitigation measure 2 (LMM2) – Advanced planting and erosion control works. Where possible, the transplantation of existing valuable trees, the stockpiling of topsoil, new planting and erosion control works shall be carried out as early as possible in the construction period instead of at the end. This will assist in maximizing the time for carrying out transplantation and new planting, resulting in a higher success rate for the survival of transplantation and new planting, resulting in a higher success rate for the survival of transplanted trees and the establishment of new screen trees. The stockpiling of topsoil will provide an abundant use of on-site material for growing media. During detailed design, the issue of stockpiling of topsoil in a manner that would avoid washing into the drainage scheme should be examined comprehensively. 	^
	<ul style="list-style-type: none"> • Measurement of vibration would also be carried out on a need basis during the piling work 	^

Remarks:

- | | | | |
|-----|-----------------------------------|---|--|
| ^ | Compliance of mitigation measure; | X | Non-compliance of mitigation measure; |
| N/A | Not Applicable; | • | Non-compliance but rectified by the contractor |

APPENDIX L
CONSTRUCTION PROGRAMME

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem. Durn.	2007															
							AUG			SEP			OCT			NOV						
							13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26
Preliminaries & General Requirements																						
Key Dates																						
KD1020	KD-2: Achievement of Stage 2	0		23AUG07	0	0																
KD1050	KD-5: Completion of Section 3 of the Works	0		15SEP07*	0	0																
KD1060	KD-6: Completion of Section 4 of the Works	0		13SEP07*	0	0																
KD1070	KD-7: Completion of Section 5 of the Works	0		30AUG07*	0	0																
KD1080	KD-8: Completion of Section 6 of the Works	0		30AUG07*	0	0																
KD1110	KD-11: Completion of Section 9 of the Works	0		20AUG07*	0	0																
KD1120	KD-12: Completion of Section 10 of the Works	0		22AUG07*	0	0																
KD1170	KD-17: Completion of Section 15 of the Works	0		15SEP07*	0	0																
Portion Access Dates																						
PD1140	Access to Portion F1 (NOT USED)	0	20AUG07*		0	0																
Portion Vacate Dates																						
VD1000	Vacate Portion A	0		27SEP07*	0	0																
VD1010	Vacate Portion B	0		27SEP07*	0	0																
VD1020	Vacate Portion C	0		13OCT07*	0	0																
VD1030	Vacate Portion D1	0		13OCT07*	0	0																
VD1040	Vacate Portion D2	0		13OCT07*	0	0																
VD1050	Vacate Portion E1	0		13OCT07*	0	0																
VD1060	Vacate Portion E2	0		11OCT07*	0	0																
VD1080	Vacate Portion E4	0		11OCT07*	0	0																
VD1100	Vacate Portion G1	0		11OCT07*	0	0																
VD1110	Vacate Portion F1	0		19AUG07*	0	0																
VD1120	Vacate Portion F2	0		17SEP07*	0	0																
VD1130	Vacate Portion F3	0		19SEP07*	0	0																
VD1140	Vacate Portion G2	0		11OCT07*	0	0																
VD1150	Vacate Portion G3	0		11OCT07*	0	0																
VD1160	Vacate Portion G4	0		11OCT07*	0	0																
VD1170	Vacate Portion K1	0		13OCT07*	0	0																
VD1180	Vacate Portion K2 & K3	0		13OCT07*	0	0																
VD1190	Vacate Portion K4 & K8	0		13OCT07*	0	0																
VD1200	Vacate Portion K5 & K6	0		13OCT07*	0	0																
VD1220	Vacate Portion K7, K9, K10	0		13OCT07*	0	0																
VD1250	Vacate Portion W	0		11OCT07*	0	0																
VD1260	Vacate Portion R1	0		11OCT07*	0	0																
Design of Temporary Works																						
TW1370	Design of Temp Works for Feature 11NW-A/C66	24	20AUG07	15SEP07	0	24																
Monitoring & Instrumentation - New Works																						
IM3010	Install Instrumentation @ Cut Slope CCR-S1	12	20AUG07	01SEP07	0	12																
IM3015	Monitoring @ Cut Slope CCR-S1	177*	20AUG07	21MAR08	0	177*																
IM3020	Install Instrumentation @ Cut Slope CCR-S2	12	20AUG07	01SEP07	0	12																
IM3025	Monitoring @ Cut Slope CCR-S2	177*	20AUG07	21MAR08	0	177*																
IM3030	Install Instrumentation @ Cut Slope CCR-S3	12	20AUG07	01SEP07	0	12																
IM3035	Monitoring @ Cut Slope CCR-S3	177*	20AUG07	21MAR08	0	177*																
IM3040	Install Instrumentation @ Cut Slope CCR-S4	12	20AUG07	01SEP07	0	12																
IM3045	Monitoring @ Cut Slope CCR-S4	177*	20AUG07	21MAR08	0	177*																
IM3050	Install Instrumentation @ Cut Slope CCR-S5	12	20AUG07	01SEP07	0	12																
IM3055	Monitoring @ Cut Slope CCR-S5	177*	20AUG07	21MAR08	0	177*																
IM3060	Install Instrumentation @ Cut Slope CCR-S6	12	20AUG07	01SEP07	0	12																
IM3065	Monitoring @ Cut Slope CCR-S6	177*	20AUG07	21MAR08	0	177*																
IM3080	Install Instrumentation @ Slope 11NW-A/C26	12	20AUG07	01SEP07	0	12																
IM3085	Monitoring @ Slope 11NW-A/C26	177*	20AUG07	21MAR08	0	177*																
IM3090	Install Instrumentation @ Slope 11NW-A/FR54 & 55	12	15NOV07	28NOV07	0	12																
IM3095	Monitoring @ Slope 11NW-A/FR54 & 55	105*	15NOV07	21MAR08	0	105*																
IM3100	Install Instrumentation @ Slope 11NW-A/C687 & 679	12	05NOV07	17NOV07	0	12																
IM3105	Monitoring @ Slope 11NW-A/C687 & 679	114*	05NOV07	21MAR08	0	114*																
IM3110	Install Instrumentation @ Slip Road A Embankment	12	27AUG07	08SEP07	0	12																
IM3115	Monitoring @ Slip Road A Embankment	171*	27AUG07	21MAR08	0	171*																
IM3120	Install Instrumentation @ Slip Road B Embankment	12	20AUG07	01SEP07	0	12																
IM3125	Monitoring @ Slip Road B Embankment	177*	20AUG07	21MAR08	0	177*																
IM3130	Install Instrumentation @ Piers P1 to P6	12	20AUG07	01SEP07	0	12																

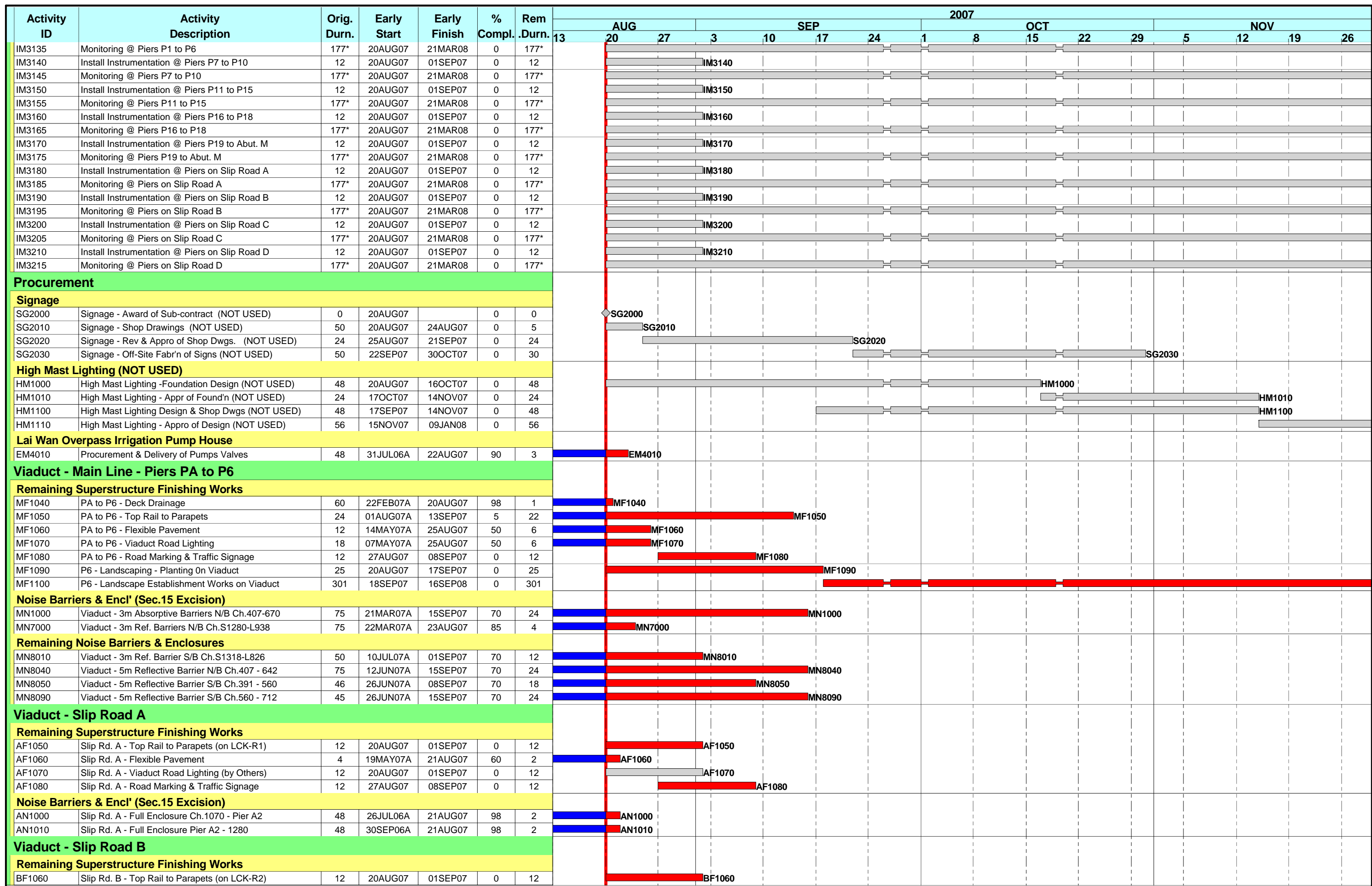
Start Date 23SEP03
 Finish Date 17FEB09
 Data Date 20AUG07
 Run Date 27AUG07 08:56

P3 File : LU47

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 August 2007

Sheet 1 of 9





Start Date 23SEP03
 Finish Date 17FEB09
 Data Date 20AUG07
 Run Date 27AUG07 08:56

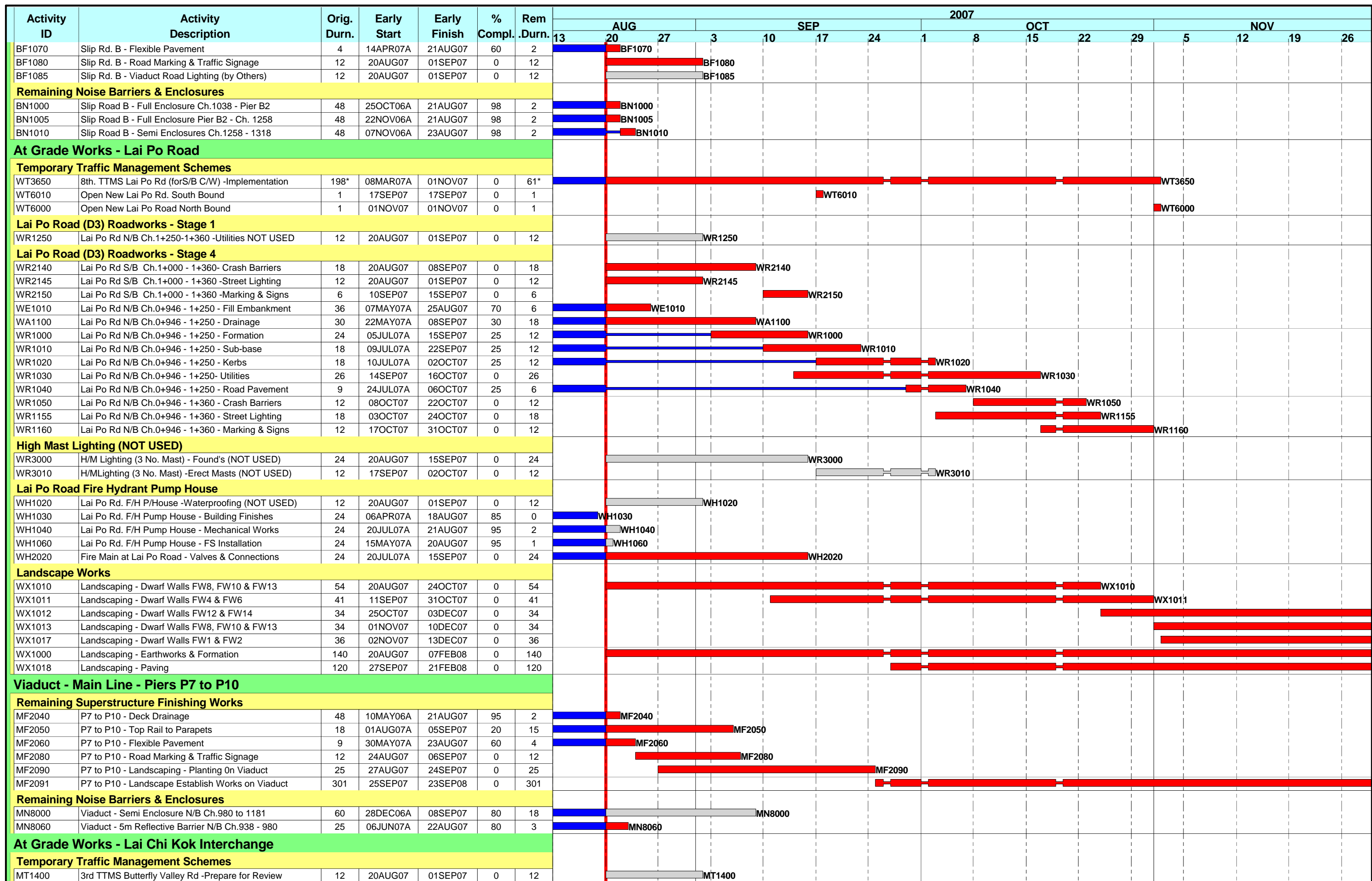
© Primavera Systems, Inc.

P3 File : LU47

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 August 2007

Sheet 2 of 9





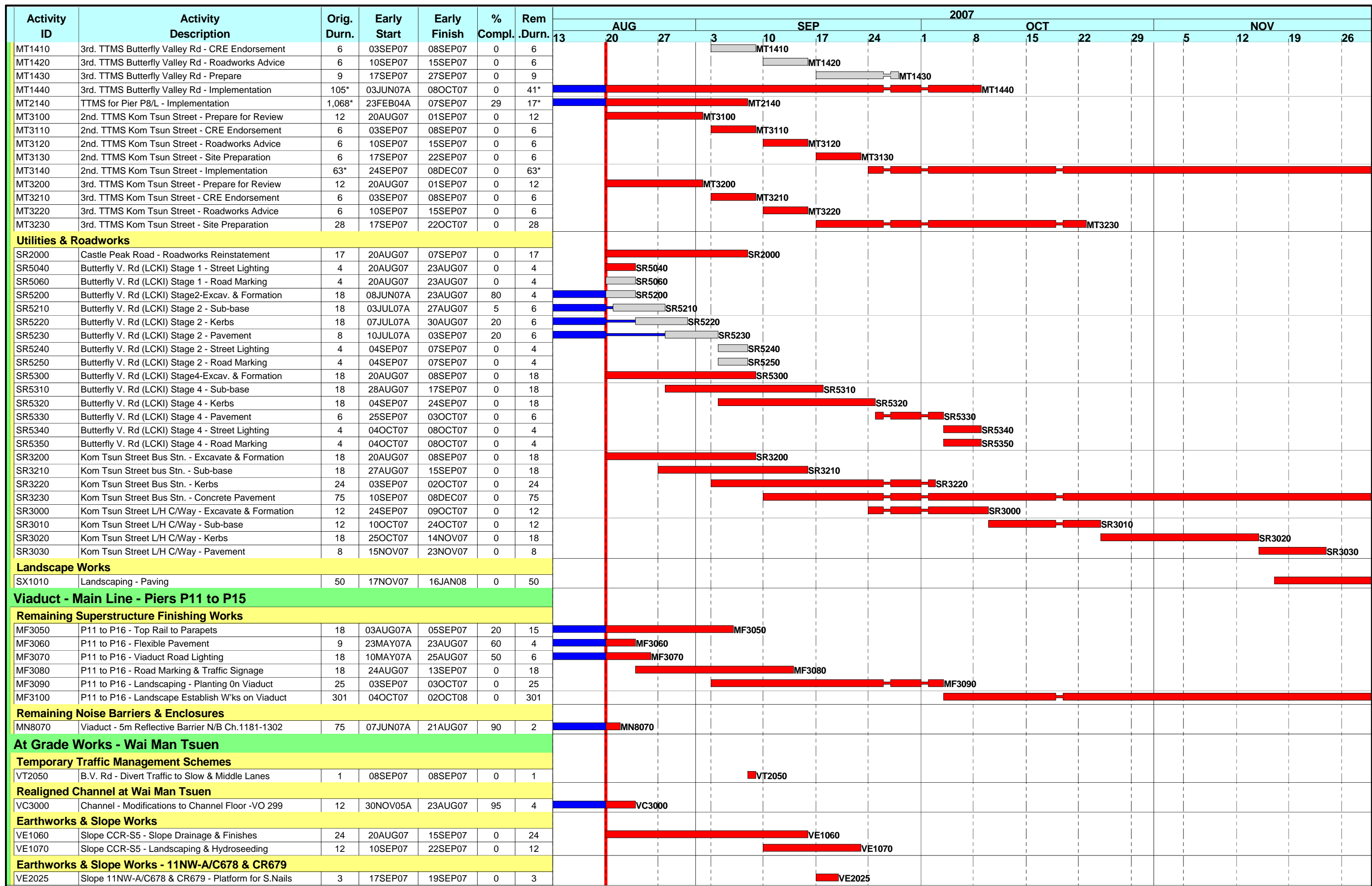
Start Date 23SEP03
 Finish Date 17FEB09
 Data Date 20AUG07
 Run Date 27AUG07 08:56

P3 File : LU47

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 August 2007

Sheet 3 of 9





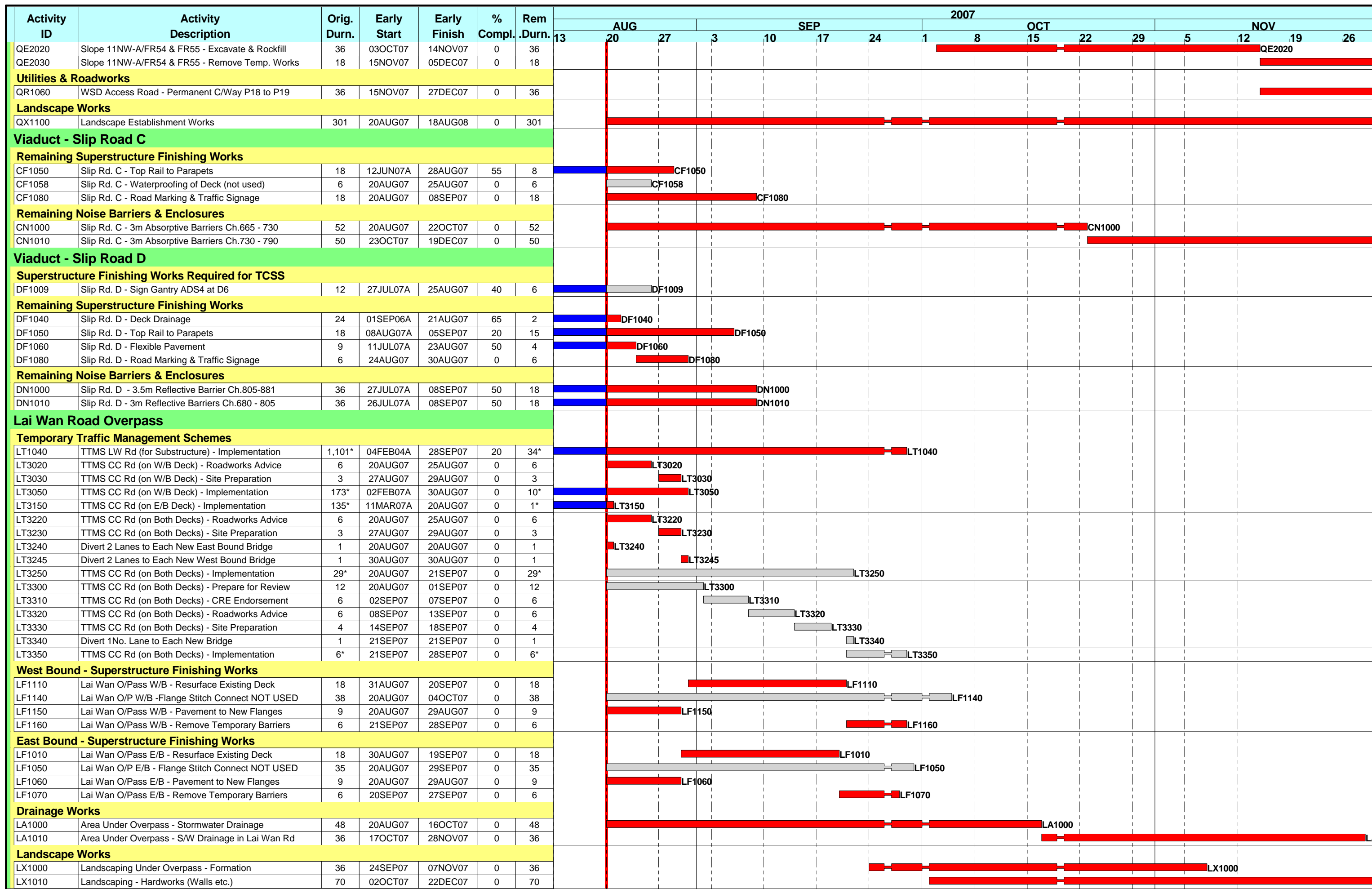
Start Date 23SEP03
 Finish Date 17FEB09
 Data Date 20AUG07
 Run Date 27AUG07 08:56

P3 File : LU47

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 August 2007

Sheet 4 of 9





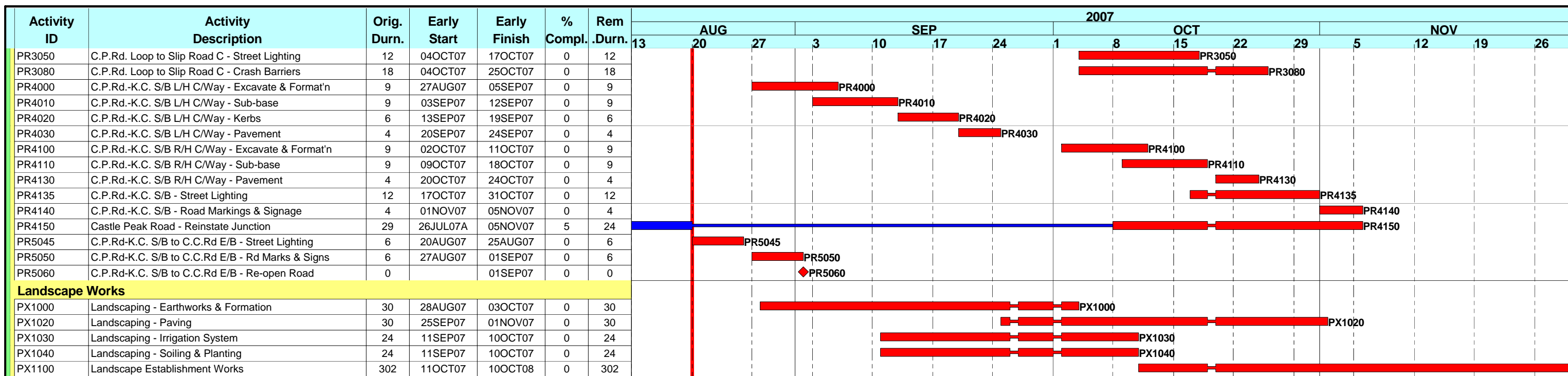
Start Date 23SEP03
 Finish Date 17FEB09
 Data Date 20AUG07
 Run Date 27AUG07 08:56

P3 File : LU47

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 August 2007

Sheet 6 of 9





Start Date 23SEP03
 Finish Date 17FEB09
 Data Date 20AUG07
 Run Date 27AUG07 08:56

P3 File : LU47

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 August 2007

Sheet 9 of 9



**APPENDIX M
COMPLAINT LOG**

Appendix M - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40318	Nob Hill	18 March 2004	<p>Kwai Tsing District Officer (KTDO) recently received a public noise complaint about construction noise generated from the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok. KTDO referred the complaint to the Highways Department (HyD) on the same day. HyD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 18 March 2004.</p> <p>The complaint was raised by the Citybase Property Management Ltd. (the management company of Nob Hill) and the Secretary of Nob Hill Owners Committee (Mr. Kevin Tse) about construction noise generated from the R8-LCKV Project at the work areas near Nob Hill. Mr. Kevin Tse mentioned that residents living in Nob Hill have greatly been affected by the noise impacts generating from the R8-LCKV construction works. He also requested relevant government departments to consider installing noise barrier along Ching Cheung Road and to work out possible measures to minimize the noise nuisances to the residents living in the vicinity.</p>	<p>Based on the information provided by the ER, the construction activities conducted in the vicinity of Nob Hill in the period between 2 and 18 March 2004 were:</p> <ul style="list-style-type: none"> ▪ Item 1 – Breaking off existing planter and excavate trial trench to expose underground utilities (using one to two backhoes) ▪ Item 2 – Erect rock fall fence & forming platform for pre-drilling (using one backhoe and occasionally one crane lorry) ▪ Item 4 – Excavate further to expose all underground utilities (using hand tools) ▪ Item 5 – Pre-drilling works (using one drilling rig) <p>Considering the scale of work and the PMEs adopted, the ET believed that the construction noise impact at Nob Hill from the above construction activities of R8-LCKV was not significant.</p> <p>The bored piling work (Item 3) using one crawler crane and one oscillator was started on 19 March 2004, which was two days after the issue date of this complaint, so this activity was not considered in this report.</p> <p>According to the EM&A Manuals, Nob Hill was not selected as Noise Monitoring Location (NML) for the Project. Therefore, no direct noise monitoring data could be provided for the complaint investigation. However, there was no noise level exceedance recorded at the nearby NML (NM4 – Mei Foo Sun Chuen, Phase 5) since the commencement of the project according to ET's inventory.</p> <p>During ET's weekly environmental site inspections on 3, 10, 17 March 2004, no serious noise nuisance induced by the Project works was observed at the sites near Nob Hill.</p> <p>Based on the joint site visit with the representative of HyD, IEC, RSS and ET to the Nob Hill on 30 March 2004, the major noise source at Nob Hill was identified as traffic noise on Ching</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p data-bbox="1227 225 1843 284">Cheung Road, which is located very close to this building, especially at or above the Podium Floor (i.e. 5/F).</p> <p data-bbox="1227 316 1883 432">Based on the information obtained, this noise complaint is not considered due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as:</p> <ul data-bbox="1227 437 1912 644" style="list-style-type: none"> <li data-bbox="1227 437 1912 491">• To space out noisy equipment and position it as far away as possible from the sensitive receivers; <li data-bbox="1227 496 1912 550">• To avoid concurrent uses of noisy equipment near the sensitive area; <li data-bbox="1227 555 1912 609">• To ensure the equipment are maintaining in good operation condition; and <li data-bbox="1227 614 1912 644">• To turned off any idle equipment on site. <p data-bbox="1227 676 1890 788">Adding to that, ET is proposed to install one to two noise monitoring stations at Nob Hill in order to monitor the noise impact generated from the R8-LCKV Project to the resident of Nob Hill or the nearby buildings.</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40330	Site Areas near Nob Hill	30 March 2004	<p>Highways Department (HyD) recently received a public noise complaint about construction noise generated from the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok. HyD referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 30 March 2004.</p> <p>The complaint was raised by Mr. Yau, the Office of DCV Member Mr. Cheung Wing Shum, regarding the high pitch construction noise generated at the R8-LCKV site which cause serious nuisance to the residents at Mei Foo.</p>	<p>Based on the information provided by the RSS, the Contractor was not aware of any high pitched construction noise arising from plant employed for their works. The noise complaint referred to may be originated from the damage of a gas main valve on the afternoon of 29 March 2004 in the vicinity of the junction of Mai Lai Road with Lai King Hill Road. The high pitched whistle apparently resulted from the damage which was repaired by TownGas in that afternoon.</p> <p>Based on the information obtained, this noise complaint is considered not due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as:</p> <ul style="list-style-type: none"> • To space out noisy equipment and position it as far away as possible from the sensitive receivers; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; and • To turned off any idle equipment on site. 	Closed
40402	Nob Hill	06 April 2004	<p>A public noise complaint was received by the Contractor (NECSO) on 02 April 2004 regarding the noise generated from the Ching Cheung Road Widening Works of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok.</p> <p>NECSO referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 6 April 2004</p>	<p>The complaint was raised by Ms Wong, regarding the noise generated from the Ching Cheung Road Widening Works of the R8-LCKV Project, which cause serious nuisance to her.</p> <p>Based on the information provided by the RSS, the plants employed by the Contractor for carrying out bored piling works in front of Nob Hill should not generate excessive noise. The RSS had also checked against the site records that no piling works was in progress in front of Nob Hill on 1-3 April 2004.</p> <p>According to telephone communication between the complainant (Ms Wong) and the RSS on 8 April 2004, the RSS reported that Ms Wong was not complaining about the construction noise generated by the R8-LCKV Project. She was actually complaining about the traffic noise she anticipated to be generated after completion of widening work at Ching Cheung Road in front of Nob Hill.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>During ET's weekly environmental site inspections on 17, 24 & 31 March 2004 and 7 April 2004, no serious noise nuisance induced by the Project works was observed at the construction sites near Nob Hill.</p> <p>Based on the joint site visit with the representative of HyD, IEC, RSS and ET to the Nob Hill on 30 March 2004, the major noise source at Nob Hill was identified as traffic noise on Ching Cheung Road, which is located very close to this building, especially at or above the Podium Floor (i.e. 5/F).</p> <p>Based on the information obtained, this noise complaint is considered not due to the construction activities of the Project.</p> <p>Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as</p> <ul style="list-style-type: none"> • To space out noisy equipment and position it as far away as possible from the sensitive receivers; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; and • To turned off any idle equipment on site. 	
40710	Pier P7 in Portion E1	10 July 2004	<p>A public complaint was raised on 30th June 2004 regarding the washout of muddy water from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, at Pier P7 onto Lai Chi Kok Road.</p> <p>The complaint was referred to the RSS on 3rd July 2004 and subsequently referred to the ET Leader of the Project on 10th July 2004.</p> <p>The complaint was raised by Mr. Chan,</p>	<p>Based on the information provided by the RSS, the spillage of muddy water was in fact due to a burst in a temporary water pipe being utilized in the piling operations at Pier P7 in Portion E1.</p> <p>Emergency remedial works were undertaken preventing further spillage of muddy water. The remaining ponding water within the works area arising from the burst was all removed from the area on 5th July 2004.</p> <p>During ET's weekly environmental site inspection on 14th July 2004, no serious water quality nuisance induced by the Project works was observed at the construction sites near Pier P7. It was also noted that the back of profile barriers along the site boundary had been sealed up by cement as preventive measures.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>regarding the washout of muddy water from the works area of the R8-LCKV Project onto Lai Chi Kok Road. The washout caused nuisance to the drivers utilizing the road, and may also cause danger to the motorbikes.</p>	<p>During ET's weekly environmental site inspections on 17, 24 & 31 March 2004 and 7 April 2004, no serious noise nuisance induced by the Project works was observed at the construction sites near Nob Hill.</p> <p>Based on the information obtained, the complaint is considered due to the construction activities of the Project. Emergency remedial works had been taken by the Contractor to rectify the situation and preventive measures had also been implemented.</p> <p>Nevertheless, the Contractor was recommended to adopt the following measures to avoid re-occurrence of similar incidents:</p> <ul style="list-style-type: none"> • to enhance surface runoff control measures along the site boundary; • to provide adequate training to the frontline workers; and • to regularly inspect temporary water supply equipment, such as hose pipe to make sure the equipment is in good condition. 	
40809	Ching Cheung Road area near Nob Hill	<p>22-Jul-04 (by EPD)</p> <p>09-Aug-04 (by ET Leader)</p>	<p>EPD received a public noise complaint on 22 July 2004 about construction noise and dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, at the Ching Cheung Road Area near Nob Hill. EPD subsequently referred the complaint to the ET Leader of the Project on 9 August 2004.</p> <p>The complaint was about the construction noise and dust observed at the Ching Cheung Road area near Nob Hill. The locations of the works areas being concerned by the complainant include:</p> <ol style="list-style-type: none"> 1. Area A: Works area between Nob Hill and Lai Chi Kok Park Swimming Pool 2. Area B: Works area between Ching 	<p>Information Provided by RSS Information (construction activities and equipment adopted) in a 2-week period before the date of complaint, i.e. 7 to 21 July 2004, was obtained from the Resident Site Staff.</p> <p>Area A:</p> <ul style="list-style-type: none"> ▪ Item 1 – Drainage works by using 1 x backhoe; ▪ Item 2 – Bored piling works by using 1 x crawler crane, 1 x air compressor, 1 x reverse circulation drill and 1 x power pack; ▪ Item 3 – Trial trench excavation by man power; ▪ Item 4 – Gas main diversion by 1 x backhoe (performed by TGC's Contractor) <p>Area B: No construction activity was undertaken in the concerned period.</p> <p>Review of Environmental Monitoring Results The routine monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring</u></p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Cheung Road and Mei Lai Road / Lai Wan Road opposite to Mei Foo Sun Cheung (Phase 5) and Lai Chi Kok Public Library.</p>	<p>NM4: R/F of Mei Foo Sun Chuen (Phase 5) NM8a: M/F of Nob Hill NM8b: 3/F of Nob Hill <u>Air Quality (1-hr TSP / 24-hr TSP) Monitoring</u> AM2: R/F of Lai Chi Kok Sports Centre No Action / Limit level exceedance was identified in July 2004.</p> <p>Environmental Site Inspection During the ET site inspections on 8th, 14th and 20th July 04, no major environmental deficiency with regard to noise and air quality was identified by the auditors.</p> <p>Conclusions Based on the RSS's information, environmental monitoring results as well as the observations made during site inspections, this complaint is considered to be invalid and not due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise and dust impacts, such as:</p> <ul style="list-style-type: none"> • To space out noisy equipment and position it as far away as possible from the sensitive receivers; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; • To turn off any idle equipment on site. • To cover excavated dusty materials by impervious sheeting; • To provide water spray for haul roads, loading/unloading and concrete breaking operations; • To perform wheel wash for every vehicle immediately before leaving the site. 	
50215	Mei Foo Sun Chuen, Phase 5 (Retaining Wall CC-R3)	15-Feb-05 (by ET Leader)	A public complaint was raised on 8 th Feb 2005 regarding construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project	<p>Construction Activities</p> <p>During the weekly site inspection on 17 Feb 05, piling work was being conducted at the concerned. The major powered</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>near Mei Foo Sun Chuen. The complaint was referred to the Resident Site Staff on 14th Feb 2005 and subsequently referred to the ET Leader of the Project on 15th Feb 2005.</p> <p>The complaint was raised by a resident in Mei Foo Sun Chuen, regarding the noise generation from the piling work at Retaining Wall CC-R3, adjacent to Po Leung Kuk Tong Nai Kan College.</p>	<p>mechanical equipment (PME) in operation included a mobile crane, an air compressor, a reverse circulation drill and a generator.</p> <p>In view of the separation of the site area and the residential building (around 40 m) and also the high traffic noise from Ching Cheung Road as well as Mei Lai Road, the noise generated from the operation of the PME was believed to be insignificant.</p> <p>Environmental Monitoring</p> <p>The noise monitoring results at Station NM4 (Mei Foo Sun Chuen, Phase 5) for the last 3 months were reviewed in order to evaluate the noise impact from the Project on the noise sensitive receiver. The measured noise levels in last three months were ranged from 70.8 to 75.8 dB(A). It was observed that the measured noise levels were well within the range of baseline noise levels (69.2 to 75.8 dB(A)).</p> <p>The corrected construction noise levels were found to be ranged from 63.5 to 71.5 dB(A), which were well below the noise criterion of 75 dB(A).</p> <p>Conclusions</p> <p>Based on the information obtained and the noise monitoring results, this complaint is considered to be invalid and not due to the construction activities of the Project.</p> <p>Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise impacts.</p>	
50322	Seung Lai House, Wah Lai Estate (Slope S1)	11-Mar-05 (by EPD) 22-Mar-05 (by ET Leader)	Environmental Protection Department (EPD) received a public noise complaint on 11 Mar 05 about daytime construction noise generation from R8-LCKV. EPD subsequently referred the	<p>Construction Activities</p> <p>As advised by the RSS, the major construction work during 25 Feb 05 to 11 Mar 05 (2 weeks before the date of complaint) in the vicinity of Wah Lai Estate included excavation work, soil</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>complaint to the Environmental Team (ET) Leader of the Project on 22 Mar 05.</p> <p>The complaint was raised by a resident of Seung Lai House of Wah Lai Estate, regarding the daytime (0800-1800 hrs) construction noise generated from the slope work and road work of R8-LCKV Project. As advised by EPD, the complainant is living on 20/F or above in Seung Lai House.</p>	<p>nail work and installation of u-channel and manholes. The major powered mechanical equipment included excavators, drilling machine and air compressor.</p> <p>In view of the separation of the site area (Slope S1) and the Seung Lai House (around 140 m) and also the traffic noise from Ching Cheung Road, the noise generated from the construction activities at Slope S1 was believed to be insignificant.</p> <p>Environmental Monitoring</p> <p>Ad-hoc noise measurement was conducted at Seung Lai House on 30th Mar 05 and the measured noise level (Leq-30min) was 66.9 dB(A), which was well below the criterion for daytime construction noise of 75 dB(A). The construction noise level (with reduction of background noise level) is expected to be even lower.</p> <p>Conclusion</p> <p>Based on the information obtained and the noise measurement results, this complaint is considered not justifiable. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise impact.</p>	
50330, 50331, 50404 & 50407	Wah Lai Estate	30-Mar-05, 31-Mar-05, 4-Apr-05 & 7-Apr-05 (by ET Leader via RSS)	Four public complaints were lodged by the residents of Wah Lai Estate regarding the construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Wah Lai Estate. The complaints were	<p>Construction Activities</p> <p>The site of concern was likely to be Slope S1, which is around 140 m away from Wah Lai Estate. The major construction work at Slope S1 included trimming of slope, soil nail work and erection of u-channels and step channels.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>referred by the Resident Site Staff to the Environmental Team (ET) Leader on 30th, 31st March, 4th and 7th April 2005, respectively.</p>	<p><i>Environmental Monitoring</i></p> <p>Ad-hoc noise measurement was conducted at Seung Lai House on 30th Mar 05 and 7th Apr 05 and the measured noise levels (Leq-30min) were ranged from 66.9 to 69.1 dB(A), which were well below the criterion for daytime construction noise of 75 dB(A). The construction noise level (with reduction of background noise level) is expected to be even lower.</p> <p><i>Conclusion</i></p> <p>Based on the results of the ad-hoc noise measurements at Wah Lai Estate, no exceedance of daytime noise criterion of 75 dB(A) was recorded. The complaints lodged are therefore considered not justifiable.</p> <p><i>Mitigation</i></p> <p>The Contractor agreed to arrange the noisy activities to commence after 8:00 am. This arrangement could effectively reduce the disturbance to the residents within the more sensitive time period (7:00 am to 8:00 am).</p>	
50404-v2	Mei Foo Sun Chuen	4-Apr-05 (by ET Leader via RSS)	<p>A public complaint was raised on 1st April 2005 regarding construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Mei Foo Sun Chuen. The complaint was referred to the Resident Site Staff and the ET Leader on 4th</p>	<p><i>Construction Activities</i></p> <p>The site of concern was likely to Retaining Wall CC-R3, adjacent to Po Leung Kuk Tong Nai Kan College. The major construction works at this area included bored piling works and excavation works.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			April 2005.	<p>Environmental Monitoring</p> <p>According to the EM&A Manual, Mei Foo Sun Chuen, Phase 5 (NM4) is designated as one of the noise monitoring stations.</p> <p>Since the commencement of the impact monitoring programme, the construction noise levels recorded at this station were all below the noise criterion.</p> <p>Conclusion</p> <p>Based on the noise monitoring results at Station NM4 (Mei Foo Sun Chuen), no exceedance of daytime noise criterion of 75 dB(A) was recorded since the commencement of the impact monitoring programme. The complaint lodged is therefore considered not justifiable.</p> <p>Mitigation</p> <p>The Contractor has agreed to arrange the noisy activities to commence after 8:00 am. This arrangement could effectively reduce the disturbance to the residents within the more sensitive time period (7:00 am to 8:00 am). The Contractor also agreed to provide some temporary noise barriers for the noisy machinery if found necessary.</p>	
50613	Mei Foo Sun Chuen	<p>7-Jun-05 (by EPD)</p> <p>13-Jun-05 (by ET Leader)</p>	According to EPD, the complaint was raised by a resident of Mei Foo Sun Chuen (Block 7, Phase 5) on 7 June 2005. It was about construction dust emitted intermittently from the slope works undertaken on the other side of Mei Lai Road.	<p>Site Activities</p> <p>The site of concern was likely to be CCR-R3. Bored piling works and demolition of existing retaining walls were undertaken at this area in the period between 1 and 7 June 2005. It was believed that the demolition of existing retaining wall, which involved concrete breaking, was the activity of concern.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>The complainant was particularly concerned about the fugitive dust emission during rock / concrete breaking activities.</p>	<p><i>Observations</i></p> <p>On 1 Jun 05, one of the environmental deficiencies noted by the ET was about fugitive dust emission from breaking activities at CCR-R3. The Contractor was reminded to provide sufficient dust mitigation measures for the breaking works. Immediate action was taken by the Contractor to apply water spray for the works as observed during the audit session.</p> <p>On 9 Jun 05, the breaking works were still being taken at CCR-R3. Water spray as a dust mitigation measure was being adopted by the Contractor during the audit. No observable dust emission was noted from the breaking works or other site activities.</p> <p>On 15 Jun 05, the same area was re-inspected due to the receipt of the complaint from EPD. The demolition works had been finished and no other dust emissive activity was being taken. No other dust source from the construction site was observed during the inspection.</p> <p><i>Conclusion</i></p> <p>Based on the observations noted during our site inspections, this complaint is considered to be valid and related to the construction activities of the Project.</p> <p>However, corrective action had been taken by the Contractor and the situation was found improved during the follow-up inspections.</p>	
50721	Hei Lai House, Wah Lai Estate	21-Jul-05 (by ET Leader)	<p>The complaint was lodged by a resident of Hei Lai House of Wah Lai Estate through a Legislative Council member. The complaint was about construction noise nuisance caused by rock breaking work, which claimed to be started from 8:30am daily, carried out at Ching Cheung Road near Wah Lai Estate.</p>	<p><i>Site Activities</i></p> <p>The slope work at Slope S1 was likely to be the activity of concern. The work at Slope S1 recently included the operation of excavator mounted breakers, excavators and dump trucks.</p> <p>The time period of concern was within normal working hours (7am to 7pm) on a weekday not being a public holiday. The noise criterion is 75 dB(A) for domestic premises.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>The complainant hoped that the rock breaking work could start later i.e. be carried out from noon to afternoon and the site could be fully enclosed.</p> <p>The Environmental Team (ET) of the Project received the complaint on 21 July 2005 and forwarded it to the Resident Site Staff (RSS) to obtain necessary information.</p>	<p><i>Noise Measurement</i></p> <p>Ad-hoc measurements were carried out on the roof of Hei Lai House on 25 July 2005.</p> <p>The results show that the measured noise level is well below the noise criterion of 75 dB(A). The construction noise level (with reduction of background noise) is expected to be even lower.</p> <p><i>Conclusion</i></p> <p>Since the noise measurement results at Wah Lai Estate were below 75 dB(A), the complaint was considered not justifiable.</p> <p>Nevertheless, noise mitigation measures have been implemented by the Contractor to minimize the noise impact arising from the breaking activities:</p> <ol style="list-style-type: none"> 1. Employment of silenced-type breakers; 2. Temporary noise barriers, attached with sound adsorption materials, were erected to screen the site of breaking from sensitive receivers 3. While the permitted hours for construction works are 7am to 7pm on non-holidays, the Contractor has commenced the rock breaking activity after 8:30am. 	
51107	Ching Cheung Road near Mei Foo Sun Chuen	7-Nov-05 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 7 November 2005.</p> <p>According to EPD, the complaint was</p>	<p>The site of concern was likely to be CCR-S4 and CCR-R3. According to RSS's records, bored piling works and soil nail drilling at CCR-R3, excavation works at CCR-S4 in the concerned period.</p> <p><i>Site Inspection</i></p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 9 November 2005 and the following</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>raised by a resident of Mei Foo Sun Chuen. The complaint was about dark smoke, dust and noise nuisance caused by the construction work of R8-LCKV near Mei Foo Sun Chuen.</p>	<p>observations were made:</p> <ol style="list-style-type: none"> 1. Breaking activities were undertaken at CCR-R2 and R3. Continuous water spray was applied by the workers for dust suppression. Movable noise barriers were erected to alleviate the noise impact. 2. The haul roads and exposed works areas were observed wet. A water sprinkler was installed at the CCR-S4 for water spraying. 3. Most of the slope was shot-creted to avoid wind erosion. 4. Bored piling work was carried out near the site exit of CCR-R3. Since bored piling mainly involves handling of wet materials, dust nuisance causing by this type of work is not anticipated. Gas exhaust from the machines was visually clear and no dark smoke was identified. <p><i>Environmental Monitoring</i></p> <p>Air quality monitoring was conducted at Lai Chi Kok Sports Centre and noise monitoring is conducted at Mei Foo Sun Chuen. No exceedance was recorded for both monitoring.</p> <p><i>Conclusion</i></p> <p>Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable.</p>	
60118	Lai Po Road near Hoi Lai Estate	18-Jan-06 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 18 January 2006.</p> <p>According to EPD, the complaint was lodged by a resident of Hoi Ming</p>	<p><i>Site Activities</i></p> <p>According to the RSS's records, night works were carried out by the Contractor between 2000 hrs on 14 January 2006 and 0530 hrs on 15 January 2006:</p> <ul style="list-style-type: none"> • Delivery of segment from storage yard near Pier P5/L to Pier 15 for erection; • Stressing to temporary PT bars of segments at Pier B3. <p>The above night works, which involved operation of tractor,</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>House of Hoi Lai Estate. The complaint was about construction noise nuisance caused by construction work of R8-LCKV carried out at Lai Po Road near Hoi Lai Estate. The noise nuisance was noted since 14 January 2006 during the periods from 2330 hrs to 0600 hrs.</p>	<p>mobile crane, lifting frame and generator, were undertaken under the two construction noise permits CNP no. GW-RW0739-05 and GW-RW0740-05.</p> <p>Environmental Monitoring</p> <p>In order to evaluate the noise impact onto the residents of Hoi Lai Estate, nighttime noise monitoring was carried out on 18 January 2006 at 23:00. The above monitoring results revealed that the measured noise levels were close to the reference background levels. After correction of the mean background level, all corrected noise levels were below the noise criterion of 55 dB(A).</p> <p>Conclusion</p> <p>Based on the information collected and the monitoring results, the complaint is considered not justifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community.</p>	
60119	Mei Foo Sun Chuen (Phase 5)	18-Jan-06 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 19 January 2006.</p> <p>According to EPD, the complaint was raised by a resident of Mei Foo Sun Chuen via a Sham Shui Po District</p>	<p>Site Activities</p> <p>The site of concern was likely to be CCR-S4, CCR-R2 and CCR-R3. According to RSS's records, site activities included:</p> <ul style="list-style-type: none"> • Trimming of existing rock slope at CCR-S4; • Excavation and rock dowel installation at CCR-R2; and • Construction of cable trough at CCR-R3 by CLP's contractor. <p>Site Inspection</p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 19 January 2006. No environmental deficiency</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Council Member's Office. The complaint mentioned that residents of Mei Foo Sun Chuen Stage 5 were adversely affected by construction dust caused by the Route 8 work carried out at the slopes adjacent to Ching Cheung Road.</p>	<p>regarding construction dust was identified during the inspection.</p> <p>Environmental Monitoring</p> <p>All monitoring results in Jan 06 revealed that no exceedance was recorded for the air quality (1-hr and 24-hr TSP) criteria.</p> <p>Contractor's Action</p> <p>The Contractor of R8-LCKV had implemented several dust mitigation measures:</p> <ul style="list-style-type: none"> • Haul roads, exposed slope surface and soil stockpiles were watered regularly by hose pipes and sprinklers; • Idled exposed slope were shot-creted; and • Watering was applied for the dust emissive activities, such as loading and unloading of dusty materials, excavation and breaking works. <p>Conclusion</p> <p>Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable. Nevertheless, the Contractor was reminded to keep on the dust mitigation measures being implemented and step up the measures if necessary.</p>	
<p>60213 60216 60220 60222</p>	<p>Hoi Lai Estate (Lai Po Road)</p>	<p>13-Feb-06 16-Feb-06 20-Feb-06 22-Feb-06</p> <p>(by the ET Leader)</p>	<p>Four environmental complaints were received in this reporting month. Three of them were referred by EPD on 13th, 20th and 22nd Feb 06 and the other one was referred by HyD via MHJV on 16th Feb 06.</p> <p>All about construction noise due to night works at Lai Po Road near Hoi Lai Estate.</p>	<p>Site Activities</p> <p>Since around mid-January 2006, segments were transported to Piers P15 and B4, under the permission of construction noise permit (CNP).</p> <p>It was suspected that the sound of concern was generated from tractors for precast segment transportation. In view of the safety of workers, an alert sound and flashing are maintained during backing action of the tractors.</p> <p>Site Inspection</p>	<p>Closed</p>

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the ET Leader on 20 April 2006.</p> <p>The complaint is about construction noise nuisance caused by construction work of night works at location near both Hoi Lai Estate and West Kowloon Highway between 14 and 17 April 2006.</p>	<p>An ad-hoc inspection was carried out by the ET on 16 Feb 06 from 00:30 to 02:30 am. Noise measurement was carried out during the inspection to evaluate the noise impact onto the residents of Hoi Lai Estate. During the monitoring, the major noise source identified was the road traffic noise from Sham Mong Road and Lai Po Road. No alarm sound or alike from the construction equipment was noted. The above monitoring results revealed that the measured noise levels were close to the reference baseline level. After correction of the mean background level, most of data were below the noise criterion of 55 dB(A).</p> <p><i>Conclusion</i></p> <p>Based on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was suspected that the nuisance was caused by the alert sound of tractors during backward movement which serves as a safety measure. However, the RSS and the Contractor are considering the possibility of lowering the alert sound level or replacing by a less disturbing pitch in order to minimize the noise nuisance to residents of Hoi Lai Estate.</p> <p><i>Site Activities</i></p> <p>According to the Resident Site Staff (RSS)'s records, the construction works were carried out by the Contractor from daytime to 2230 hours on 14 April and from 2000 hours to 0600 hours 16 April 2006.</p> <p>The construction activities near Hoi Lai estate included: -</p> <ul style="list-style-type: none"> • Erecting segments at column PA/R; • Stressing of top tendon wires of segments and erecting segments at column P1/R; and • Transporting segments to storage yard. 	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60420	Near both Hoi Lai Estate and West Kowloon Highway	20-Apr-06 (by the ET Leader)		<p>The above construction activities were undertaken under a construction noise permit CNP no. GW-RW0172-06.</p> <p>Base on the RSS's preliminary investigation, it was suspected that the noise nuisance of concern was caused by loading and unloading of materials, hammering and/or dropping of materials on ground during the stressing works and transportation of precast segment by tractors.</p> <p>Contractor's Action</p> <p>The Contractor had implemented a short term mitigation measures:-</p> <ul style="list-style-type: none"> • Turned off the alert sound of tractors during backward movement in order to reduce the potential for noise impact; • Strengthened their management on worker's working manner such as avoid dropping of material on ground, wrapping up of hammering equipment and etc.; and • Conducted training of worker in order to reducing noise nuisance during the night works. <p>Conclusion</p> <p>Based on the information collected and the monitoring results, the complaints are considered not justified.</p> <p>It was suspected that the nuisance was caused by loading and unloading of materials, hammering and/or dropping of materials on ground during the stressing works and transportation of precast segment by tractors.</p> <p>The Contractor has strictly complied with PME allowed in the CNP No. GW-RW0172-06. Besides, night work at the concerned location was completed. No further construction work at night at this location is anticipated.</p>	Close

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60428	Between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Chuen)	28-Apr-06 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about tree cutting in the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Chuen). EPD subsequently referred the complaint to the ET Leader on 28 April 2006.</p> <p>The complaint was about the Contractor cut trees in the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Chuen). This had removed the traffic noise barrier effect of the trees and hence made the residents of Mei Foo Sun Chuen becoming being seriously affected by the traffic noise nuisance.</p>	<p>Site Activities</p> <p>According to the Resident Site Staff (RSS)'s records, current construction activities included segment erection works for Slip Road D, excavation works for cut slope CCR-S4 and retaining wall construction at CCR-R2 and CCR-R3.</p> <p>Since excavation for cut slopes and construction of slip road D are required at this area, tree cutting is unavoidable. Tree felling application was approved by DLO/KW.</p> <p>Contractor Action</p> <p>Under the EP condition and EIA, there is no need for this project to mitigate the traffic noise barrier effect due to the removal of trees.</p> <p>No follow up action was required for this complaint.</p> <p>Conclusion</p> <p>Under the EP conditions and EIAO, there is no need for this project to mitigate the traffic noise barrier effect due to the removal of trees.</p> <p>Based on the information collected, the complaint is considered not justifiable.</p> <p>Since excavation for cut slopes and construction of slip road D are required at this area, tree cutting is unavoidable. Tree felling application was approved by DLO/KW.</p> <p>Compensatory planting will be provided at the concerned area after completion of the construction works in order to improve the landscape and visual impacts.</p> <p>No follow up action will be required for this complaint.</p>	Close

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60522	Hoi Lai Estate (Hoi Fai House)	22-May-06 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaints about noise nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 22 May 2006.</p> <p>The complaint was concerned about the noise produced from construction work during the period between 2300 hours and 0100 hours every night since 3 weeks ago. The complaint described the noise being like sound of poring concrete.</p>	<p>Site Activities</p> <p>According to the RSS's records, only precast segment transportation works at the concerned area which was used as the segment storage yard near Pier P5L to Piers near Mui Kong Tsuen.</p> <p>No concreting activities were carried out at the abovementioned area between 2300 hours and 0100 hours every night in concerned period. In addition, the transportation works were usually carried out from 2000 hours to 0300 hours (or before 0300 hours).</p> <p>Contractor Action</p> <p>The idle and backup equipments such as tractors has turned off or throttled down in order to reduce the noise impact since the last complaint on this issue near Hoi Lai Estae. Besides, the above night works were undertaken with three construction noise permits.</p> <p>Site Inspection</p> <p>An ad-hoc inspection was carried out by the ET at 2300 on 26 May 2006. During the inspection, no construction activities were carried out at the concerned area, where the tractor and mobile crane were throttled down.</p> <p>Conclusion</p> <p>According to RSS's information, no concreting activities were carried out at the concerned area. Therefore, the major noise nuisance (pouring concrete) might not be generated from the abovementioned area. Besides, the Contractor strictly complied with PME allowed in the CNP No. GW-RW0172-06. In addition, the Contractor had turned off the alert sound of tractors during backward movement.</p> <p>Based on the information collected, the complaint is considered</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>not justifiable.</p> <p>However, the Contractor was reminded to continuously implement their practice to prevent noise nuisance generation due to the construction works. The site situation will be continuously reviewed by ET and RSS also.</p>	
60609	Near Phase 5 of Mei Foo Sun Chuen	9-Jun-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LVKC). Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 9 June 2006.</p> <p>The complaint was about the noise generated from rock excavation work from 9 a.m. to 6 p.m. at the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Cheun).</p>	<p>Site Activities</p> <p>As advised by the RSS, the site of concerned area was likely to be CCR-S4.</p> <p>According to the RSS's records, 1 number of excavator mounted breaker was used to carry out rock breaking work at CCR-S4 during the period between 9 a.m. and 6 p.m.</p> <p>The excavation and rock breaking activities at the concerned area will likely be completed by end of September 2006.</p> <p>Contractor Action</p> <p>The silent rock breaking equipment has been used and noise barriers were erected to minimize the noise impact generated from the breaking activity.</p> <p>Site Inspection and Environmental Monitoring</p> <p>An ad-hoc inspection was carried out by ET on 14 June 2006 from 1:30 p.m. to 4:30 p.m. and 16 June 2006 from 4:00 p.m. to 4:45 p.m.</p> <p>During the inspections, the construction activities at CCR-S4 included handheld breaking, excavation and rock breaking activities were carried out at CCR-S4. However, the temporary noise barriers were erected at the abovementioned location as same as RSS's mentioned.</p> <p>Noise measurement was carried out during the inspection to</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>evaluate the noise impact onto the residents of Mei Foo Sun Chuen. The monitoring location was original monitoring location NM4 (Mei Foo Sun Chuen Phase 5).</p> <p>The measured monitoring results were close to the reference baseline level. After correction of the mean background level, the monitoring data were below the noise criterion of 75 dB(A).</p> <p>Conclusion</p> <p>Base on the information collection and the monitoring result, the complaint was considered not justifiable.</p> <p>The Contractor had implemented noise mitigation measures to minimize the noise impact. Besides, the monitoring result were below the noise criteria of 75dB(A). However, the Contractor was still reminded to continuously implement their practice to prevent noise nuisance generation from the construction works.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the ET.</p>	
60626	Near Phase 5 of Mei Foo Sun Chuen	26-Jun-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through a facsimile on 12 June 2006 about an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 26 June 2006.</p> <p>According to the explanation from the RSS, this complaint was indeed the same as that received by the ET on 9 June 2006. The complaint initiated the complaint verbally to the ICC on 8 June 2006 and then also issued a facsimile to the ICC. The facsimile was transferred to the RSS on 12 June 06</p>	<p>Site Activities</p> <p>As advised by the RSS, the site of concerned area was likely to be CCR-S4.</p> <p>According to the RSS's records, 1 number of excavator mounted breaker was used to carry out rock breaking work at CCR-S4 during the period between 9 a.m. and 6 p.m.</p> <p>The excavation and rock breaking activities at the concerned area will likely be completed by end of September 2006.</p> <p>Contractor Action</p> <p>The silent rock breaking equipment has been used and noise barriers were erected to minimize the noise impact generated from the breaking activity.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>and eventually reached the ET on 26 June 2006.</p> <p>The complaint was about the noise generated from rock excavation work from 9 a.m. to 6 p.m. at the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Cheun).</p> <p>This complaint was made by the same complainant to the ICC through two different channels (by phone and by facsimile) and the ET of the Project was firstly notified on 9 June 2006. A complaint investigation report was issued on 22 June 06.</p> <p>As the ET received this separate complaint after the issue of the complaint investigation report and considered the nature of the complained event (general construction during daytime but not single event at a particular moment), the complaint investigation procedures were initiated.</p>	<p><i>Site Inspection and Environmental Monitoring</i></p> <p>As the complaint was identical to the one received on 9 June 06 by the ET, the ad-hoc inspections carried out on 14 June 2006 from 1:30 p.m. to 4:30 p.m. and 16 June 2006 from 4:00 p.m. to 4:45 p.m. were still applicable to this report. In addition, further ad-hoc inspections were carried out on 28 June 2006 from 1:30 p.m. to 4 :00 p.m. and 3 July 2006 from 9:30 a.m. to 11:30 a.m.</p> <p>During the aforesaid inspections, the construction activities at CCR-S4 included handheld breaking, excavation and rock breaking activities were carried out at CCR-S4. However, the temporary noise barriers were erected at the abovementioned location.</p> <p>In addition to the noise measurement conducted on 14 and 16 June 2006, further noise measurement was carried out on 30 June 2006 to evaluate the noise impact onto the residents of Mei Foo Sun Chuen. The monitoring location was original monitoring location NM4 (Mei Foo Sun Chuen Phase 5).</p> <p>Noise measurement carried out on 30 June 06, after correction of the mean background level, the monitoring data were below the noise criterion of 75 dB(A)</p> <p><i>Conclusion</i></p> <p>This complaint was identical to the one received by the ET on 9 June 06 because the complainant addressed the complaint to the ICC through two different channels (by phone and by facsimile). The facsimile was transferred to the RSS on 12 June 06 and eventually reached the ET on 26 June 06.</p> <p>Base on the information collection and the monitoring result, the complaint was considered not justifiable.</p> <p>The Contractor had implemented noise mitigation measures to minimize the noise impact. Besides, the monitoring result were</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>below the noise criteria of 75dB(A). However, the Contractor was still reminded to continuously implement their practice to prevent noise nuisance generation from the construction works.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the ET.</p>	
60830	Near Mei Foo and Lai King Hill Road	30-Aug-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 August 2006 about an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 30 August 2006.</p> <p>The complaint was concerned about dust generated from the rock drilling works affected the nearby ASRs. The complaint described that spraying of water during rock drilling works was not implemented.</p>	<p>Site Activities</p> <p>According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 22 August 2006 and would likely last for at least 6 months.</p> <p>Contractor Action</p> <p>After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> • Enclosing the rock dowel drilling work on three sides, i.e. top, back and the left hand side, with tarpaulin sheets; • Spraying of water at the hole during drilling; • Wrapping the head of the drilling rig with a wet thick towel. <p>Site Inspection and Environmental Monitoring</p> <p>During the monthly site inspection on 4th September 2006, rock drilling at the slope CCR-S1 was carrying out. The ET observed that the work area was enclosed by tarpaulin sheets at three sides. Water was sprayed continuously at the drilling hole and head of the drilling rig was enclosed with a wet thick towel. All the mitigation measures mentioned by the RSS were implemented.</p> <p>Conclusion</p> <p>Base on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was because there was no exceedance of the air quality</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works.</p> <p>However, the Contractor was still reminded to take sufficient dust mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> • Enclose dusty activity such as rock drilling with tarpaulin sheet; • Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials; • Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets. <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
60831	Between Lai Wan Road and Lai King Hill Road	31-Aug-06 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 31 August 2006.</p> <p>The complaint was concerned about construction noise, dust and waste water generated from the construction work affect the nearby NSRs after 19.00 hrs, the nearby ASRs and discharged to exiting road respectively</p>	<p>Site Activities</p> <p>According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 22 August 2006 and would likely last for at least 6 months.</p> <p>Contractor Action</p> <p>With reference to RSS's site diary, all site activities including drilling works at the concerned area were conducted between 8:00 and 18:00 daily. Ad hoc site observation carried out by the RSS confirmed that no construction activity was carried out after 18:00.</p> <p>As advised by the RSS, tarpaulin sheet covering and water spraying were provided by the Contractor to mitigate the dust nuisance generated from the rock drilling works. On 31 August 2006, the Contractor was further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> • Enclosing the rock dowel drilling work on three sides, i.e. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>top, back and the left hand side (LHS) with tarpaulin sheets;</p> <ul style="list-style-type: none"> • Spraying water at the hole during drilling; • Wrapping the head of the drilling rig with a wet thick towel. <p>Site Inspection and Environmental Monitoring</p> <p>During the monthly site inspection on 4th September 2006, rock drilling at the slope CCR-S1 was carrying out. The ET observed that the work area was enclosed by tarpaulin sheets at three sides. Water was sprayed continuously at the drilling hole and head of the drilling rig was enclosed with a wet thick towel. All the mitigation measures mentioned by the RSS were implemented.</p> <p>Conclusion</p> <p>Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>It was because there was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works. No construction activities were carried after 18:00 in the period mentioned by the complainant. In addition, no wastewater discharge was observed.</p> <p>However, the Contractor was still recommended to take the following mitigation measures to minimize the environmental impact on the nearby community:</p> <p><u>Dust Nuisance</u></p> <ul style="list-style-type: none"> • Enclose dusty activity such as rock drilling by tarpaulin sheet; • Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials; • Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets. 	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p><u>Construction Noise</u></p> <p>The Contractor was reminded that construction activities during restricted hours could only be carried out with a valid Construction Noise Permit (CNP). In addition, appropriate noise mitigation measures described in the CNP should be implemented in order to minimize the noise impact on the nearby noise sensitive receivers.</p> <p><u>Wastewater Discharge</u></p> <ul style="list-style-type: none"> • Fill up the gaps under the footings of hoarding fence along Lai King Hill Road so as to prevent spillage of muddy water during heavy rain onto the existing road. <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team through site inspections and monitoring exercises.</p>	
60925	Near Ching Cheung Road, Nob Hill and Mei Lai Road	25-Sep-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 September 2006 about the an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 25 September 2006.</p> <p>The complaint was concerned about the noise generated from the construction works after 19:00 at the area near Ching Cheung Road, Nob Hill and Mei Lai Road</p>	<p><i>Site Activities</i></p> <p>According to RSS's record, rock dowel installation for slope stabilization at the Slope CCR-S1 was commenced on 22 August 2006 and would last for at least 6 months and the first batch of rock drilling works at the Slope CCR-S4 was commenced on 19 September 2006 and completed on 23 September 2006.</p> <p><i>Contractor Action</i></p> <p>After receiving the complaint, the Contractor has further enhanced the noise mitigation measures as follows:-</p> <ul style="list-style-type: none"> • Placing of a wooden box to cover the head of drilling; • Spraying of water at the hole during drilling and erecting of nylon sheets; • Providing silent type drilling rigs for the drilling works at both Slopes CCR-S1 and CCR-S4 <p><i>Site Inspection and Environmental Monitoring</i></p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>During the weekly site inspection on 27 September 2006, rock drilling at the Slope CCR-S1 was not carrying out. The ET observed that the work area was enclosed by tarpaulin sheets at three sides. Temporary noise barrier was erected at the working platform of the Slope CCR-S1.</p> <p>The ET also undertook an ad hoc site inspection at the concerned areas after 19:00 on 27 September 2006. No construction activities were observed and noise monitoring was not conducted.</p> <p>Conclusion</p> <p>Base on the information collected and the monitoring results, there was no exceedance of the noise monitoring results and noise mitigation measures were implemented by the Contractor during the rock drilling works.</p> <p>However, the Contractor was still reminded to carry out construction activities only within the permitted working hours (i.e. 07:00 – 19:00 on weekday) and to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> • Provide silent type drilling rigs for the drilling works; • Placing of wooden box to cover the head of drilling; • Apply water spraying for at the hole during drilling; <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61025	Lai Chi Kok Road Flyover near PCCW building	25-Oct-06 (by ET Leader)	The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 th October 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently	<p>Site Activities:</p> <p>According to RSS's record, installation of catchfan at Pier P5/L to P6 near PCCW was carried out at around 0115 to 0500 at both nights of 19th and 20th October 2006. The construction equipment used in both nights included one mobile crane, one crane lorry and one generator.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>referred the complaint to the ET Leader on 25th October 2006.</p> <p>The complaint was concerned about the noise nuisance generated from workers and construction vehicles during the mid-night between 0100 and 0200 on both 19th and 20th October 2006 at Lai Chi Kok Road Flyover near PCCW building.</p>	<p>Contractor Action According to RSS' record, acoustic material wrapping the head of chain blocks and hessian bags placing on ground around catchfans to suppress noise generation when hand tools were dropped onto ground.</p> <p>Environmental Monitoring An ad-hoc site observation and noise monitoring at Hoi Fai House of Hoi Lai Estate were conducted by the Contractor on 26th October 2006 between 0100 and 0130. The ET also carried out an ad-hoc inspection on 28th October 2006 from 0100 to 0200. During the inspection, segment erection work was carried out at Pier P5 to P6, which involved the operation of mobile crane and movement of lorry and trucks.</p> <p>During the monitoring, the major noise source identified was the road traffic noise. The monitoring results revealed that the measured noise levels were close to the reference background levels. After correction of the mean background level, all corrected noise levels were below the noise criterion of 55 dB (A) which consists with the noise monitoring results from the Contractor.</p> <p>Conclusion Based on the information collected, the complaint is considered justifiable although the monitoring results complied with the noise criteria.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> • To strengthen management on worker's working manner, such as avoiding dropping materials on ground; • No hammering is allowed during restricted hours; and • To provide adequate training to workers working, esp. for night works. <p>The environmental conditions of the site will be continuously</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				reviewed by the Resident Site Staff and the Environmental Team.	
61103	Pier C13 and C14 at Lai Wan Road Overpass	3-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 28th October 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 3rd November 2006.</p> <p>The complaint was concerned about noise generated from the general cleaning work of deck surface using water jet between Pier C13 and C14 at Lai Wan Road Overpass, at the evening of 28th October 2006.</p>	<p>Site Activities</p> <p>According to the RSS's record, there is a CNP (CNP no. GW-RW0563-06) at the concerned location. Construction activities were allowed to be carried out between 19:00hr and 23:00hr (any day not being a general holiday) under the CNP.</p> <p>Environmental Monitoring</p> <p>During the weekly site inspections in October 2006, no non-compliance or observation on noise was recorded. Accordance to the EM&A program, two noise monitoring stations at Nob Hill, namely (NM8a and NM8b), have been set up in order to monitor the noise level generated from the construction activities. The Station (NM8b) is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise. All measured value were lower than the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in October 2006. Moreover, based on our site observation record during monitoring, road traffic noise from Ching Cheung Road was the major noise source.</p> <p>Conclusion</p> <p>Based on the information collected, the complaint is considered not justifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <p>As the general cleaning work could be carried out during normal working hours (i.e. 07:00 to 19:00hr) instead as the work was not critical. RSS would remind the Contractor to programme their works better in order to minimize nuisance to nearby residents.</p> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
61121-1	Area near Lai Chi Kok Swimming Pool	21-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 18th November 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 21st November 2006.</p> <p>The complaint was concerned about noise generated from the construction works between 09:00 and 18:30 at the area near Lai Chi Kok Swimming Pool.</p>	<p>Team.</p> <p>Site Activities According to RSS's record, rebar fixing, formwork erection, placing concrete and preparation work for construction joint were carried out at the concerned site during the period of 13th to 18th November 2006 and the construction works within the mentioned period were occasionally finished at 18:30.</p> <p>As advised by the RSS, the RSS has recommended the Contractor to finish the construction works at the concerned areas before 18:00 in order to minimize the noise nuisance to the public.</p> <p>Environmental Monitoring During the weekly site inspections in November 2006, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) and two noise monitoring stations at Nob Hill, namely (NM8a and NM8b), were set up in order to monitor the noise level generated from the construction activities. The Station (NM8b) is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise.</p> <p>The noise monitoring results in the period between 1st and 21st November 2006 at the M/F of Nob Hill and at Mei Foo Sun Chuen, Phase 5 are all lower than or equal to the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period. Moreover, based on our site observation record during monitoring, road traffic noise from Ching Cheung Road was the major noise source.</p> <p>Conclusion Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>However, the Contractor was still reminded to finish the</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>construction works at the concerned areas before 18:00 and to carry out construction activities only within the permitted working hours (i.e. 07:00 – 19:00 on weekday).</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61121-2	Construction works opposite Tong Nai Kan College	21-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 17th November 2006 regarding dust and noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 21st November 2006.</p> <p>The complaint was concerned about dust and noise generated from the construction works opposite Tong Nai Kan College in the past years.</p>	<p>Site Activities According to RSS's record, construction works adjacent to Tong Nai Kan College in the past years included the construction of Retaining Wall CCR-R3 and Slip Road D.</p> <p>As advised by the RSS, noise and dust mitigation measures such as provision of noise barriers and acoustic materials at drill pit, dust suppression system and water browser were provided in order to minimize the noise and dust nuisance generated from the above mentioned construction activities.</p> <p>Environmental Monitoring During the weekly site inspections in November 2006, no non-compliance or observation on noise and air at the concerned site was recorded.</p> <p>Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) and one air monitoring station at Lai Chi Kok Sports Centre (AM2), were set up in order to monitor the noise and dust level generated from the construction activities.</p> <p>The monitoring results revealed that no exceedance was recorded for the noise and air quality (1-hr and 24-hr TSP).</p> <p>Conclusion Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>However, the Contractor was still reminded to continuously implement their practice, such as providing noise barrier with</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>acoustic materials at drill pit and applying water spraying for any dust emissive activities to minimize the noise and dust nuisance generated from these construction activities.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61205	Banyan Garden	5 th December 2006 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 5th December 2006.</p> <p>The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 29th November 2006.</p>	<p>Site Activities According to RSS's record, a catchfan was moved from bay (AL-62) to (AL-58) from 22:00 to 02:00hr. Installation of catchfan at parapet bay (MS-R-74) was carried out from 00.00 to 04:00hr on 29th November 2006.</p> <p>As advised by the RSS, the Contractor has been requested to:</p> <ul style="list-style-type: none"> - Wrapping of tools with acoustic material - Erection of noise barrier (mill barrier with acoustic material) adjacent to isolated noise source - Placing of hessin bags on ground to mitigate noise generated as a result of the dropping of tools on ground. <p>According to the RSS, there is no evidence of hammering of metals on site.</p> <p>Conclusion Based on the information collected, the complaint is considered unjustifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - To strengthen management on worker's working manner, such as avoiding dropping materials on ground; - No hammering is allowed during restricted hours; and - To provide adequate training to workers working, esp. for night works. <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
70117-1	P6 – P8 near Lai Chi Kok Road Interchange	17 th January 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 16th January 2007 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 17th January 2007.</p> <p>The complaint was concerned about noise generated from the P6 – P8 near Lai Chi Kok Road Interchange in the past months.</p>	<p>Site Activities According to RSS's record, the construction activities at the concerned area was mainly central stitch construction and parapet erection and similar works will be carried out in the concerted site in coming one month.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06.</p> <p>Based on the RSS's record of PME used in the concerned area from 15 November 2006 to 30 December 2006, the construction works complied with the CNP no. GW-RW0624-06.</p> <p>Conclusion Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - To strengthen management on worker's working manner, such as avoiding dropping materials on ground; - No hammering is allowed during restricted hours; and - To provide adequate training to workers working, esp. for night works. 	Closed
70117-2	P3 – P6 near Banyan Garden	17 th January 2007 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 17th January 2007.</p> <p>The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 11th January 2007.</p>	<p>Site Activities According to RSS's record, the construction activities at the concerned area was mainly central stitch construction and parapet erection and similar works will be carried out in the concerned site in coming one month.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06.</p> <p>Based on the RSS's record of PME used in the concerned area from 1st December 2006 to 13th January 2007, the construction</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>works complied with the CNP no. GW-RW0624-06.</p> <p><i>Conclusion</i> Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - To strengthen management on worker's working manner, such as avoiding dropping materials on ground; - No hammering is allowed during restricted hours; and - To provide adequate training to workers working, esp. for night works. 	
70723	Construction site near Mei Lai Road and Tong Nai Kan College	17 th July 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 21 July 2007 about an environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 July 2007.</p> <p>The complaint was concerned about noise generated from the construction works near Mei Lai Road and Tong Nai Kan College.</p>	<p><i>Site Activities</i> The concerned site was likely the Slope CCR-S4 near Ching Cheung Road. A location plan is provided in Appendix A and the work programme near Slope CCR-S4 from February 2007 to September 2007 is provided in Appendix B.</p> <p>According to RSS's record and the above mentioned work programme, excavation and rock breaking works for slope stabilization near the Slope CCR-S4 was begun on early of July 2007 and to be completed on early of August 2007.</p> <p>As advised by the RSS, noise mitigation measures implemented at the concerned site include:</p> <ul style="list-style-type: none"> - installing a line of noise barriers formed by acoustic materials in front of the noise sources; - warping the breaker with acoustic material; and - deploying silence type of breaker. <p><i>Environmental Monitoring</i> During the weekly site inspections in July 2007, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) was set up in</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>order to monitor the noise level generated from the construction activities.</p> <p>The noise monitoring results in the period between 3rd and 23rd July 2007 at Mei Foo Sun Chuen, Phase 5 are all lower than or equal to the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period.</p> <p><i>Conclusion</i> Base on the information collected and the monitoring result, the complaints are considered not justifiable.</p> <p>It was suspected that the nuisance was caused by the breaking activities. However, the Contractor has implemented the mitigation measures to minimize the noise generation from construction activities.</p>	