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)

July 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.

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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 Exceedancne
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 44th 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 July 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 Road and Butterfly Valley Interchange).

The major site activities for Traffic Control and Surveillance System (TCSS) works undertaken in the reporting month included:
- Cable-laying at Sections A, B, C, D, E and F and Kiosk K2;
- Field Equipment Installation at Sections A, B, C and D.

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	1	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). Total of 4 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	1	Noise	Complaint investigation	Investigation report was submitted	---
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;
- 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;
- Movement joints construction at 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 Road and Butterfly Valley Interchange).

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 44th monthly EM&A report summarizing the EM&A works for the Project in July 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 Road and Butterfly Valley Interchange).

1.12 The site activities for TCSS works undertaken in the reporting month included:

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

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. Jesse Yuen	Project Manager	2151 2091	
		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 m^3/min. and 1.4 m^3/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 ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±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 is 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 Leq – Baseline Leq = 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 Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving 1 noise complaint.

3.16 The complaint was referred by RSS on 23rd July 2007. It was raised by a resident of Mei Foo Sun Chuen via the ICC about the noise generated from the construction works in Monday to Friday at the area near Mei Lai Road and Tong Nai Kan College. The complaint was considered unjustifiable and the complaint investigation report was submitted to HyD on 26th July 2007.

3.17 At Stations NM8a and NM8b, the major noise source identified during the monitoring exercises was mainly the road traffic noise.

3.18 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 4th, 11th, 18th and 25th July 2007 by ET. A joint site audit for Civil works was conducted on 4th July 2007 with representatives from HyD, IEC, ER, the Contractor and ET while the joint site audit for TCSS works was conducted on 3rd July 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**. Total of 4 new CNPs 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	Construction and operation of (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; (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; © The permanent slope works above the northern portal of the Eagle's Nest Tunnel; (d) The architectural works (including fitting out and furnishings) of the portal buildings of the Sha Tin Heights Tunnel.	Valid
Registration of Chemical Waste Producer				
WPN 5213-261-N2413-04	17/11/03	N/A	N/A	Valid
Water Discharge Lisence				
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-RW0057-07	21/2/07	21/7/07	*Location:* Kwai Chung Road near Lai Chi Kok Interchange *Time Period:* any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 (not immediately following a general holiday).	Expired
GW-RW0058-07	25/2/07	19/8/07	*Location:* Ching Cheung Road section between Nob Hill to Castle Peak Road *Time Period:* any two days being a general holiday including Sundays for 0900-2100	Valid
GW-RW0072-07	27/2/07	27/7/07	*Location:* Ching Cheung Road near Mei Foo Sun Chuen *Time Period:* 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Expired
GW-RW0093-07	21/3/07	19/9/07	*Location:* Lai Po Road near Hoi Lai Estate *Time Period:* 0000-2400 (general holiday including Sundays) and 1900-0700 (any day not being a general holiday).	Valid
GW-RW0097-07	22/3/07	21/9/07	*Location:* Butterfly Valley Road, Lai Chi Kok *Time Period:* 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0121-07	27/3/07	27/9/07	*Location:* Butterfly Valley, Lai Chi Kok *Time Period:* 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0129-07	30/3/07	29/9/07	*Location:* Construction site at junction of Ching Cheung Road and Castle Peak Road *Time Period:* 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0130-07	4/04/07	3/10/07	*Location:* Castle Peak Road near Ching Cheung Road *Time Period:* 0000-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0140-07	5/04/07	4/09/07	*Location:* Butterfly Valley near O Pui Shan Boy's Home *Time Period:* 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0146-07	6/04/07	5/08/07	*Location:* Ching Cheung Road near Mei Foo Sun Chuen *Time Period:* 0900-1900 (general holiday including Sundays)	Valid
GW-RW0213-07	13/05/07	1/10/07	*Location:* Ching Cheung Road Near Nob Hill, Kowloon *Time Period:* 0900-2000 (general holiday including Sundays)	Valid
GW-RW0221-07	15/05/07	14/09/07	*Location:* Ching Cheung Road Near Nob Hill, Kowloon *Time Period:* 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	*Location:* Ching Cheung Road Near Nob Hill, Kowloon *Time Period:* 0900-2000 (general holiday including Sundays)	Valid
GW-RW0288-07	17/06/07	15/07/07	*Location:* Ching Cheung Road Near Lai Chi Kok Park, Kowloon *Time Period:* 0900-1600 (general holiday including Sundays)	Expired
GW-RW0291-07	21/06/07	29/09/07	*Location:* Ching Cheung Road Near Mei Foo Sun Cheun, Kowloon *Time Period:* 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	*Location:* Ching Cheung Road Near Butterfly Valley, Kowloon *Time Period:* 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	*Location:* Ching Cheung Road near Nob Hill, Lai Chi Kok, Kowloon *Time Period:* 0900-2300 (general holiday including Sundays).	Valid
GW-RW0329-07	08/07/07	02/12/07	*Location:* Ching Cheung Road near Mei Foo Sun Chuen,, Kowloon *Time Period:* 0900-1900 (general holiday including Sundays).	Valid
GW-RW0349-07	15/07/07	11/11/07	*Location:* Ching Cheung Road section between Nob Hill and Castle Peak Road *Time Period:* 0900-2100 (anyone day being a general holiday, including Sundays).	Valid
GW-RW0378-07	28/07/07	27/12/07	*Location:* Ching Cheung Road near Mei Foo Sun Cheun, Kowloon *Time Period:* 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	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
Water Quality	04/07/07	*Observation* - Untreated site runoff flowing in the gully was observed near C13-C14. The Contractor was recommended to extend the hinterland diversion pipe or install geotextile at the gully.-	Rectification / improvement was observed during the follow-up site inspection.
	11/07/07	*Observation* - Accumulated mud was observed on the surface of road sidenear C13 - C14. The Contractor was reminded to clear the mud or install geotextile at the gully.	Rectification / improvement was observed during the follow-up site inspection.
Air Quality	04/07/07	*Reminder* - Exposed slope was observed at Lai Po Road. The Contractor was recommended to cover it with tarpaulin sheet.	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
Water Quality	31/05/07	*Reminder* - Ponding water was observed inside cable pits along viaduct. The Contractor was reminded to spray larvicide regularly.	Rectification / improvement was observed during the follow-up site inspection.

Summary of Exceedances

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 Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving 1 noise complaint.

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 1 environmental complaint was received in the reporting month.

4.12 The complaint was referred by RSS on 23rd July 2007. It was raised by a resident of Mei Foo Sun Chuen via the ICC about the noise generated from the construction works in Monday to Friday at the area near Mei Lai Road and Tong Nai Kan College. The complaint was considered unjustifiable and the complaint investigation report was submitted to HyD on 26th July 2007.

4.13 No prosecution was received in the reporting month.

4.14 There was 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 to CCR-R3 & CC-R6 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, 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-multching, Hydroseeding and tree planting for slope CCR-S1 & S3.
- Roadwork at mainviaduct, slip roads C & D, Lai Po Road, Butterfly Valley Interchange and Butterfly Valley Road.
- Roadwork at slip roads C & D, Lai Po Road 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 Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving 1 noise complaint.

6.4 1 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.

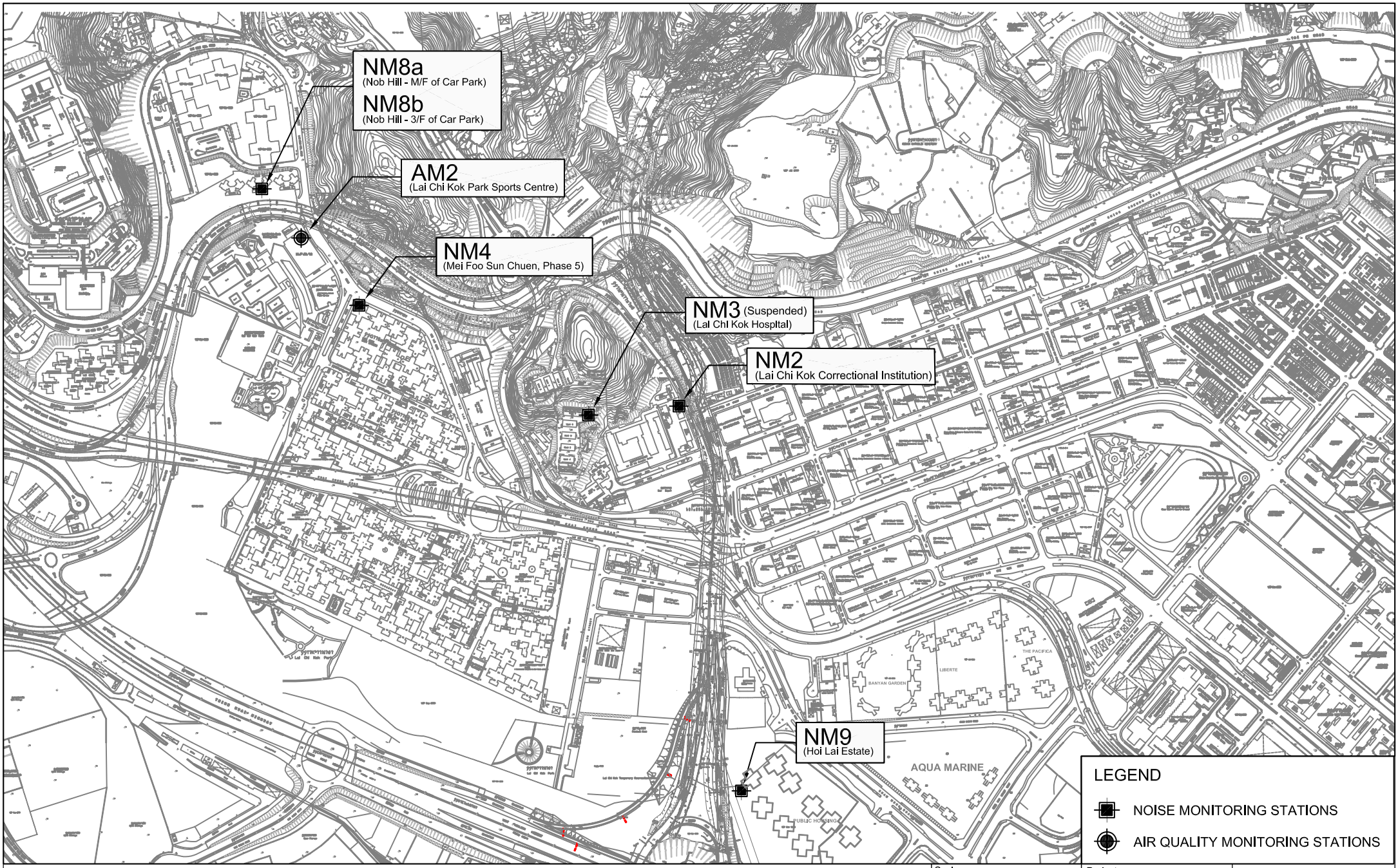
Dust Impact

- 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	Project No.
1 : 8000 (A4)	MA3024
Date	Figure No.
2006	1

CINOTECH consultants limited

F:\PROJECTS\MA3024\DRAWING\IMPACT\LCK\FIGURE 1_LAYOUT_2006.DWG

APPENDIX A
ACTION AND LIMIT LEVELS

Appendix A - Action and Limit Levels (LCKV)

1-Hour TSP

Location	Action Level, µg/m^3	Limit Level, µg/m^3
AM2	301	500

24-Hour TSP

Location	Action Level, µg/m^3	Limit Level, µg/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 CERTIFCATES

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/20/0023

Station: Lai Chi Kok Sport Centre (AM2) Operator: WK

Date: 15-May-07 Next Due Date: 14-Jul-07

Equipment No.: A-01-20 Serial No. 0818

Ambient Condition			
Temperature, Ta (K)	302.5	Pressure, Pa (mmHg)	761

Orifice Transfer Standard Information					
Equipment No.:	A-04-05	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	12-Mar-07	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	11-Mar-08	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.0	3.44	59.15	8.6	2.91
2	10.6	3.23	55.55	7.2	2.67
3	7.2	2.67	45.66	5.0	2.22
4	5.4	2.31	39.45	3.2	1.78
5	3.3	1.80	30.69	1.9	1.37

By Linear Regression of Y on X

Slope , mw = 0.0541 **Intercept, bw =** -0.3063

Correlation coefficient* = 0.9976

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.14**

Remarks:

Conducted by: W K Tang Signature: Date: 15/5/07

Checked by: Signature: Date: 15 May 2007

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/20/0024

Station: Lai Chi Kok Sport Centre (AM2) | Operator: WK
Date: 13-Jul-07 | Next Due Date: 12-Sep-07
Equipment No.: A-01-20 | Serial No. 0818

Ambient Condition			
Temperature, Ta (K)	303.8	Pressure, Pa (mmHg)	753

Orifice Transfer Standard Information					
Equipment No.:	A-04-05	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	12-Mar-07	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	11-Mar-08	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	11.6	3.36	57.71	7.9	2.77
2	9.7	3.07	52.71	6.6	2.53
3	6.6	2.53	43.36	4.6	2.11
4	5.3	2.27	38.78	3.3	1.79
5	3.0	1.71	29.01	1.7	1.29

By Linear Regression of Y on X

Slope , mw = 0.0519 **Intercept, bw =** -0.2029

Correlation coefficient* = 0.9980

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.24**

Remarks:

Conducted by: V.K. Tang Signature: Kwei Date: 13/7/07
Checked by: [illegible] Signature: [illegible] Date: 13 July 07

F:\Equipment\Calibration\HVS\A-01-20\20070713

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TEST REPORT

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

ATTN: **Mr. Henry Leung**

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
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

PATRICK TSE
Senior Chemist

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513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 12, 2007 Rootsmeter 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}

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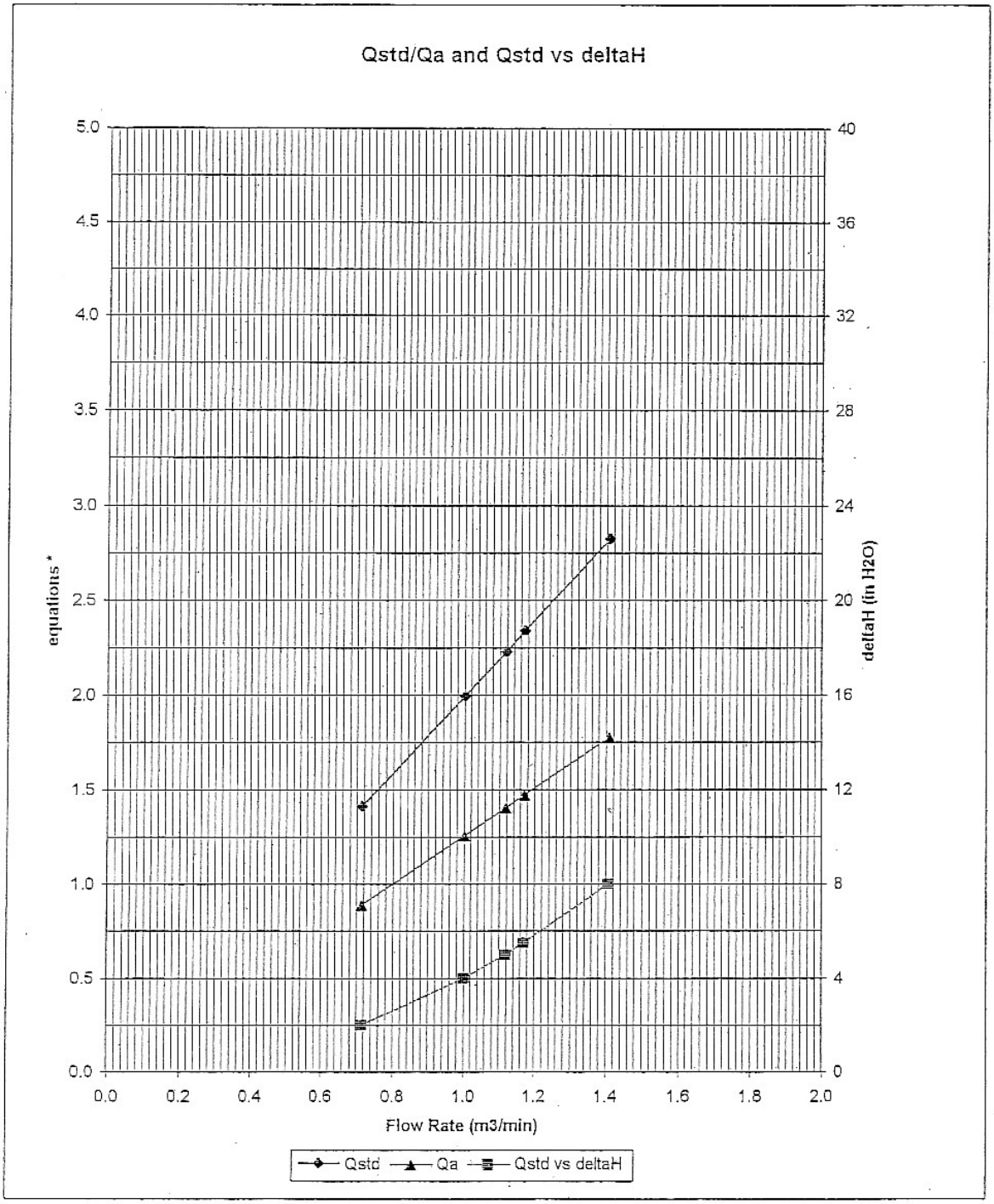
AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

Qstd series: $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$

Qa series: $\sqrt{(\Delta H\ (Ta\ /\ Pa))}$

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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ATTN: **Mr. Henry Leung**

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
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 Temperatre	: 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

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Operation Manager

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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ATTN: **Mr. Henry Leung**

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
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 Temperatre	: 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.

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
1601-1610 Delta House,
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ATTN: **Mr. Henry Leung**

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
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 Temperatre	: 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

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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ATTN: **Mr. Henry Leung**

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
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 Temperatre	: 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

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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ATTN: **Mr. Henry Leung**

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
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 Temperatre	: 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 .

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/61116/2
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 Temperatre	: 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
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Shatin, Hong Kong.
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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
Page:	1 of 1

ATTN: **Mr. Henry Leung**

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 Temperatre	: 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 .

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.

ATTN: **Mr. Henry Leung**

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
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 Temperatre	: 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.

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 July 2007

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

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 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

APPENDIX D
WIND DATA

Appendix D - Wind Data

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

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Jul-2007	06:00	1.8	WNW
3-Jul-2007	07:00	0.9	WSW
3-Jul-2007	08:00	0.9	W
3-Jul-2007	09:00	1.8	WNW
3-Jul-2007	10:00	1.3	WNW
3-Jul-2007	11:00	2.7	N
3-Jul-2007	12:00	3.1	WNW
3-Jul-2007	13:00	3.1	W
3-Jul-2007	14:00	2.2	WNW
3-Jul-2007	15:00	3.1	WNW
3-Jul-2007	16:00	3.1	WNW
3-Jul-2007	17:00	3.1	W
3-Jul-2007	18:00	3.1	W
3-Jul-2007	19:00	3.1	WNW
3-Jul-2007	20:00	2.7	WNW
3-Jul-2007	21:00	2.2	NW
3-Jul-2007	22:00	3.1	WNW
3-Jul-2007	23:00	3.6	WNW
4-Jul-2007	00:00	3.1	WNW
4-Jul-2007	01:00	2.7	WNW
4-Jul-2007	02:00	1.3	N
4-Jul-2007	03:00	1.3	W
4-Jul-2007	04:00	1.8	W
4-Jul-2007	05:00	1.8	WNW
4-Jul-2007	06:00	1.8	N
4-Jul-2007	07:00	1.3	WNW
4-Jul-2007	08:00	2.2	WNW
4-Jul-2007	09:00	0.9	NNE
4-Jul-2007	10:00	1.8	N
4-Jul-2007	11:00	1.3	N
4-Jul-2007	12:00	1.8	N
4-Jul-2007	13:00	1.3	WNW
4-Jul-2007	14:00	1.8	NW
4-Jul-2007	15:00	1.8	NNE
4-Jul-2007	16:00	1.3	E
4-Jul-2007	17:00	1.8	NNW
4-Jul-2007	18:00	1.3	W
4-Jul-2007	19:00	1.3	W
4-Jul-2007	20:00	2.2	W
4-Jul-2007	21:00	1.3	WNW
4-Jul-2007	22:00	2.2	WNW
4-Jul-2007	23:00	1.8	WNW
5-Jul-2007	00:00	1.3	NW
5-Jul-2007	01:00	1.3	WNW
5-Jul-2007	02:00	1.8	N
5-Jul-2007	03:00	1.3	W
5-Jul-2007	04:00	2.2	WNW
5-Jul-2007	05:00	1.8	W
5-Jul-2007	06:00	1.3	N
5-Jul-2007	07:00	1.3	N
5-Jul-2007	08:00	0.4	E
5-Jul-2007	09:00	1.3	N
5-Jul-2007	10:00	1.3	NW
5-Jul-2007	11:00	2.7	NNW

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Jul-2007	18:00	3.1	NE
16-Jul-2007	19:00	3.6	NE
16-Jul-2007	20:00	2.7	NE
16-Jul-2007	21:00	2.7	NE
16-Jul-2007	22:00	2.7	NE
16-Jul-2007	23:00	3.6	NE
17-Jul-2007	00:00	2.7	NE
17-Jul-2007	01:00	2.7	NE
17-Jul-2007	02:00	3.6	NNE
17-Jul-2007	03:00	3.6	NE
17-Jul-2007	04:00	3.1	NE
17-Jul-2007	05:00	2.7	NE
17-Jul-2007	06:00	2.2	NE
17-Jul-2007	07:00	2.7	NNE
17-Jul-2007	08:00	1.3	NE
17-Jul-2007	09:00	2.7	NNE
17-Jul-2007	10:00	3.6	N
17-Jul-2007	11:00	4.5	N
17-Jul-2007	12:00	4.5	NE
17-Jul-2007	13:00	4.0	N
17-Jul-2007	14:00	4.0	NE
17-Jul-2007	15:00	4.0	NE
17-Jul-2007	16:00	3.6	NNE
17-Jul-2007	17:00	3.6	NE
17-Jul-2007	18:00	3.1	NE
17-Jul-2007	19:00	2.7	NE
17-Jul-2007	20:00	2.7	NNE
17-Jul-2007	21:00	3.1	N
17-Jul-2007	22:00	3.6	NE
17-Jul-2007	23:00	2.7	NE
18-Jul-2007	00:00	2.7	NE
18-Jul-2007	01:00	2.2	NE
18-Jul-2007	02:00	2.7	NE
18-Jul-2007	03:00	2.7	NE
18-Jul-2007	04:00	2.7	NNE
18-Jul-2007	05:00	3.1	NE
18-Jul-2007	06:00	3.6	NE
18-Jul-2007	07:00	3.6	NNE
18-Jul-2007	08:00	3.6	NE
18-Jul-2007	09:00	4.0	NNE
18-Jul-2007	10:00	4.0	NNE
18-Jul-2007	11:00	4.5	NNE
18-Jul-2007	12:00	4.5	NNE
18-Jul-2007	13:00	4.5	NE
18-Jul-2007	14:00	4.5	NE
18-Jul-2007	15:00	4.5	NE
18-Jul-2007	16:00	4.0	NE
18-Jul-2007	17:00	4.0	NE
18-Jul-2007	18:00	4.0	NNE
18-Jul-2007	19:00	3.1	NNE
18-Jul-2007	20:00	3.1	NNE
18-Jul-2007	21:00	2.2	NNE
18-Jul-2007	22:00	2.2	NNE
18-Jul-2007	23:00	2.7	ENE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Jul-2007	00:00	2.2	ENE
19-Jul-2007	01:00	2.2	NE
19-Jul-2007	02:00	2.2	NE
19-Jul-2007	03:00	1.8	NNE
19-Jul-2007	04:00	2.7	ENE
19-Jul-2007	05:00	2.7	ENE
19-Jul-2007	06:00	1.3	ENE
19-Jul-2007	07:00	0.9	ENE
19-Jul-2007	08:00	1.3	NE
19-Jul-2007	09:00	2.7	NE
19-Jul-2007	10:00	3.6	NE
19-Jul-2007	11:00	4.5	NE
19-Jul-2007	12:00	4.0	NNE
19-Jul-2007	13:00	4.0	NNE
19-Jul-2007	14:00	4.9	NE
19-Jul-2007	15:00	4.0	NE
19-Jul-2007	16:00	3.6	NE
19-Jul-2007	17:00	4.0	NNE
19-Jul-2007	18:00	4.5	NNE
19-Jul-2007	19:00	3.6	NNE
19-Jul-2007	20:00	3.6	NNE
19-Jul-2007	21:00	3.1	NE
19-Jul-2007	22:00	3.1	NE
19-Jul-2007	23:00	2.7	NNE
20-Jul-2007	00:00	2.2	NE
20-Jul-2007	01:00	2.2	NE
20-Jul-2007	02:00	2.2	NE
20-Jul-2007	03:00	1.8	NE
20-Jul-2007	04:00	1.3	E
20-Jul-2007	05:00	0.9	ENE
20-Jul-2007	06:00	0.4	ENE
20-Jul-2007	07:00	1.8	NE
20-Jul-2007	08:00	2.7	NNE
20-Jul-2007	09:00	3.1	NE
20-Jul-2007	10:00	3.6	NNE
20-Jul-2007	11:00	4.0	NNE
20-Jul-2007	12:00	4.5	NNE
20-Jul-2007	13:00	4.5	NNE
20-Jul-2007	14:00	4.0	NE
20-Jul-2007	15:00	4.0	NNE
20-Jul-2007	16:00	4.0	NNE
20-Jul-2007	17:00	3.6	NNE
20-Jul-2007	18:00	3.1	NNE
20-Jul-2007	19:00	2.7	NNE
20-Jul-2007	20:00	1.8	NNE
20-Jul-2007	21:00	2.2	NE
20-Jul-2007	22:00	1.3	NE
20-Jul-2007	23:00	1.3	NNE
21-Jul-2007	00:00	0.9	NE
21-Jul-2007	01:00	0.4	NNE
21-Jul-2007	02:00	1.8	ENE
21-Jul-2007	03:00	1.8	ENE
21-Jul-2007	04:00	0.9	ENE
21-Jul-2007	05:00	1.3	ENE

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

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

Appendix D - Wind Data

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

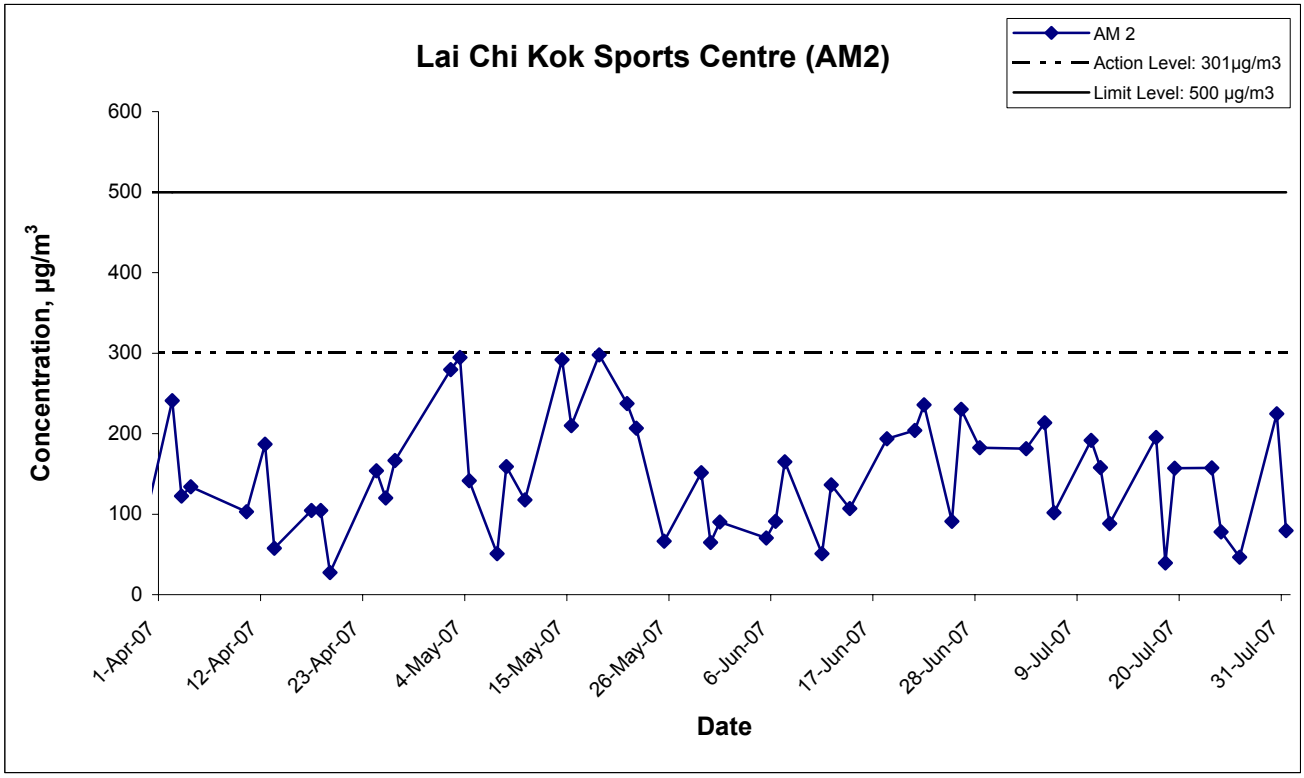
APPENDIX E
1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

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. ($\mu g/m^3$)
		Initial	Final	Initial	Final	Initial	Final							
3-Jul-07	Cloudy	2.7722	2.7854	1.21	1.21	6114.1	6115.1	301.1	758.1	0.0132	1.21	72.8	1.0	181.4
5-Jul-07	Sunny	2.7669	2.7824	1.21	1.21	6139.1	6140.1	302.4	758.0	0.0155	1.21	72.6	1.0	213.4
6-Jul-07	Cloudy	2.8047	2.8121	1.21	1.21	9140.1	9141.1	302.2	758.3	0.0074	1.21	72.7	1.0	101.9
10-Jul-07	Sunny	2.8284	2.8424	1.22	1.22	9141.1	9142.1	297.9	755.7	0.0140	1.22	73.0	1.0	191.8
11-Jul-07	Sunny	2.8134	2.8248	1.20	1.20	9166.1	9167.1	304.7	754.3	0.0114	1.20	72.2	1.0	157.8
12-Jul-07	Sunny	2.8322	2.8386	1.21	1.21	9167.1	9168.1	303.0	753.5	0.0064	1.21	72.4	1.0	88.4
17-Jul-07	Sunny	2.8341	2.8484	1.22	1.22	9192.1	9193.1	301.1	757.9	0.0143	1.22	73.3	1.0	195.2
18-Jul-07	Sunny	2.8550	2.8579	1.23	1.23	9193.1	9194.1	297.5	758.5	0.0029	1.23	73.7	1.0	39.4
19-Jul-07	Sunny	2.8304	2.8419	1.22	1.22	9194.1	9195.1	302.5	759.2	0.0115	1.22	73.2	1.0	157.2
23-Jul-07	Sunny	2.8057	2.8172	1.22	1.22	9219.1	9220.1	303.0	759.4	0.0115	1.22	73.1	1.0	157.3
24-Jul-07	Sunny	2.8185	2.8242	1.22	1.22	9220.1	9221.1	304.2	760.1	0.0057	1.22	73.0	1.0	78.1
26-Jul-07	Sunny	2.8287	2.8321	1.22	1.22	9221.1	9222.1	303.2	759.9	0.0034	1.22	73.1	1.0	46.5
30-Jul-07	Sunny	2.8167	2.8331	1.22	1.22	9245.1	9246.1	304.2	759.9	0.0164	1.22	73.0	1.0	224.7
31-Jul-07	Sunny	2.8232	2.8290	1.22	1.22	9246.1	9247.1	304.1	759.1	0.0058	1.22	73.0	1.0	79.5
													Min	39.4
													Max	224.7
													Average	136.6

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 Date: Jul 07	Project No.: MA3024 Appendix: E	CINOTECH

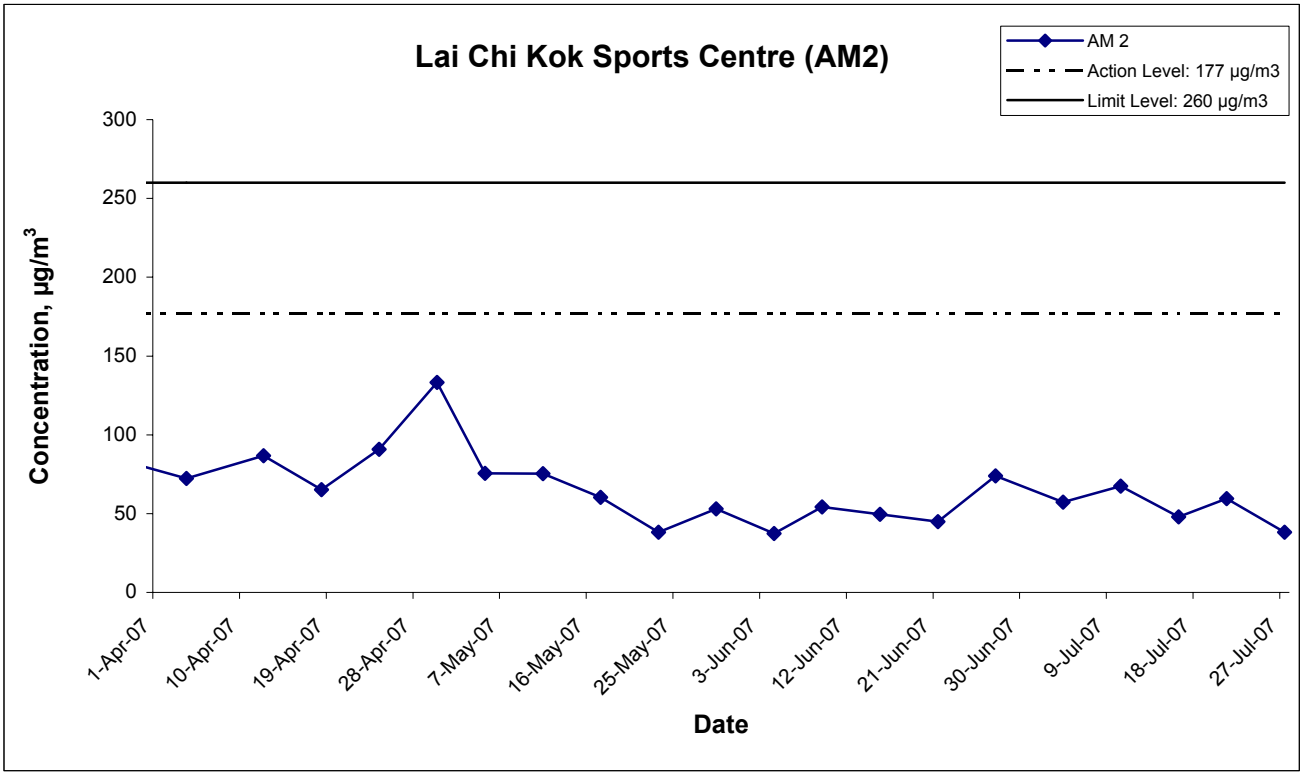
APPENDIX F
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

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. ($\mu g/m^3$)
		Initial	Final	Initial	Final	Initial	Final							
4-Jul-07	Sunny	2.7278	2.8277	1.21	1.21	6115.1	6139.1	301.4	757.0	0.0999	1.21	1744.4	24.0	57.3
10-Jul-07	Sunny	2.7886	2.9066	1.22	1.22	9142.1	9166.1	298.1	755.5	0.1180	1.22	1751.2	24.0	67.4
16-Jul-07	Sunny	2.8484	2.9328	1.22	1.22	9168.1	9192.1	300.1	757.5	0.0844	1.22	1760.2	24.0	47.9
21-Jul-07	Sunny	2.8329	2.9372	1.22	1.22	9195.1	9219.1	303.2	758.8	0.1043	1.22	1753.4	24.0	59.5
27-Jul-07	Sunny	2.8053	2.8723	1.22	1.22	9221.1	9245.1	302.6	760.3	0.0670	1.22	1756.5	24.0	38.1
													Min	38.1
													Max	67.4
													Average	54.0

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 Date: Jul 07	Project No.: MA3024 Appendix: F	CINOTECH

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}	
3-Jul-07	14:40	Cloudy	65.7	67.5	61.2	68.4	65.7, Measured ≤ Baseline	Resumed since September 2006
10-Jul-07	10:00	Sunny	63.9	66.7	58.2		63.9, Measured ≤ Baseline	
17-Jul-07	15:00	Sunny	64.7	68.0	61.5		64.7, Measured ≤ Baseline	
23-Jul-07	11:15	Sunny	64.8	69.0	61.0		64.8, Measured ≤ Baseline	
30-Jul-07	13:00	Sunny	60.3	62.7	48.7		60.3, Measured ≤ Baseline	

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}	
3-Jul-07	11:20	Cloudy	73.3	76.0	71.5	73.8	73.3, Measured ≤ Baseline	Road traffic noise from Ching Cheung Road was identified as the major noise source.
10-Jul-07	11:05	Sunny	75.2	78.0	70.0		69.6	
17-Jul-07	11:00	Sunny	70.8	72.5	68.5		70.8, Measured ≤ Baseline	
23-Jul-07	13:00	Sunny	74.2	77.0	72.0		63.6	
30-Jul-07	14:40	Sunny	73.6	75.0	70.0		73.6	

Location NM8a - M/F of Nob Hill						
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks
			L_{eq}	L_{10}	L_{90}	
3-Jul-07	09:50	Cloudy	71.9	73.5	69.5	Road traffic noise from Ching Cheung Road was identified as the major noise source.
10-Jul-07	13:00	Sunny	73.8	76.5	68.0	
17-Jul-07	10:20	Sunny	74.7	77.5	72.0	
23-Jul-07	13:40	Sunny	73.8	75.5	71.5	
30-Jul-07	15:30	Sunny	72.5	74.5	69.5	

Location NM8b - 3/F of Nob Hill						
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks
			L_{eq}	L_{10}	L_{90}	
3-Jul-07	10:24	Cloudy	77.0	79.0	73.0	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.
10-Jul-07	13:45	Sunny	77.2	79.0	68.0	
17-Jul-07	09:45	Sunny	75.3	78.5	73.5	
23-Jul-07	15:20	Sunny	74.5	77.0	71.5	
30-Jul-07	16:10	Sunny	75.9	78.0	72.5	

Location NM9 - Hoi Lai Estate						
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks
			L_{eq}	L_{10}	L_{90}	
3-Jul-07	13:15	Cloudy	69.5	72.0	64.0	-
10-Jul-07	14:38	Sunny	72.3	75.0	66.5	
17-Jul-07	09:00	Sunny	69.2	71.5	67.0	
23-Jul-07	16:00	Sunny	67.2	69.5	65.0	
30-Jul-07	16:50	Sunny	68.1	70.5	67.0	

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

*Bolded value indicated limit level exceedance

Appendix G - Noise Monitoring Results

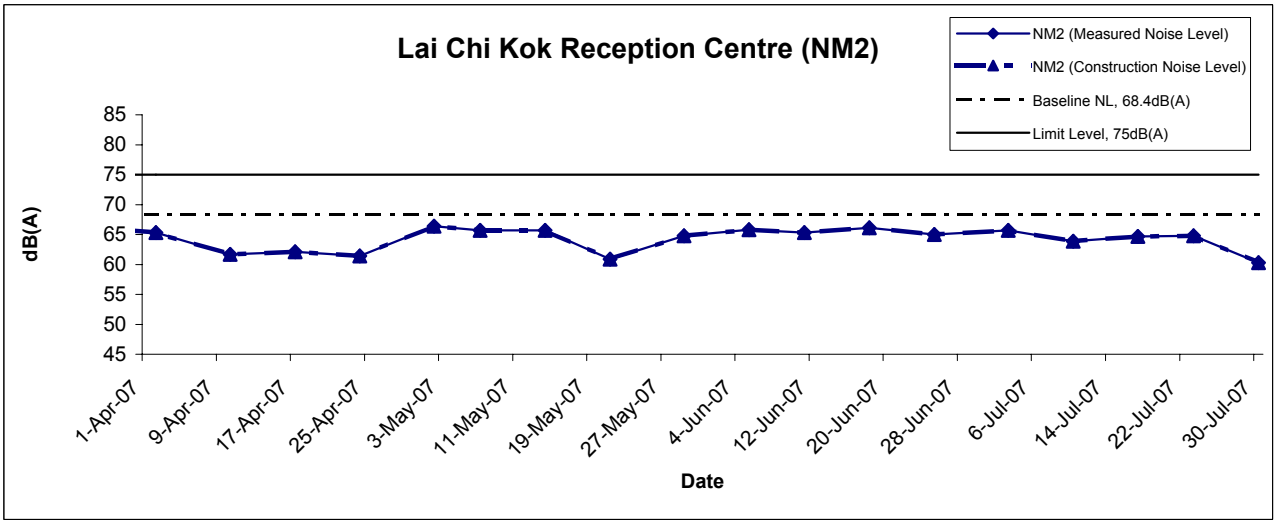
Restricted Hours - 19:00 to 23:00 on normal weekdays

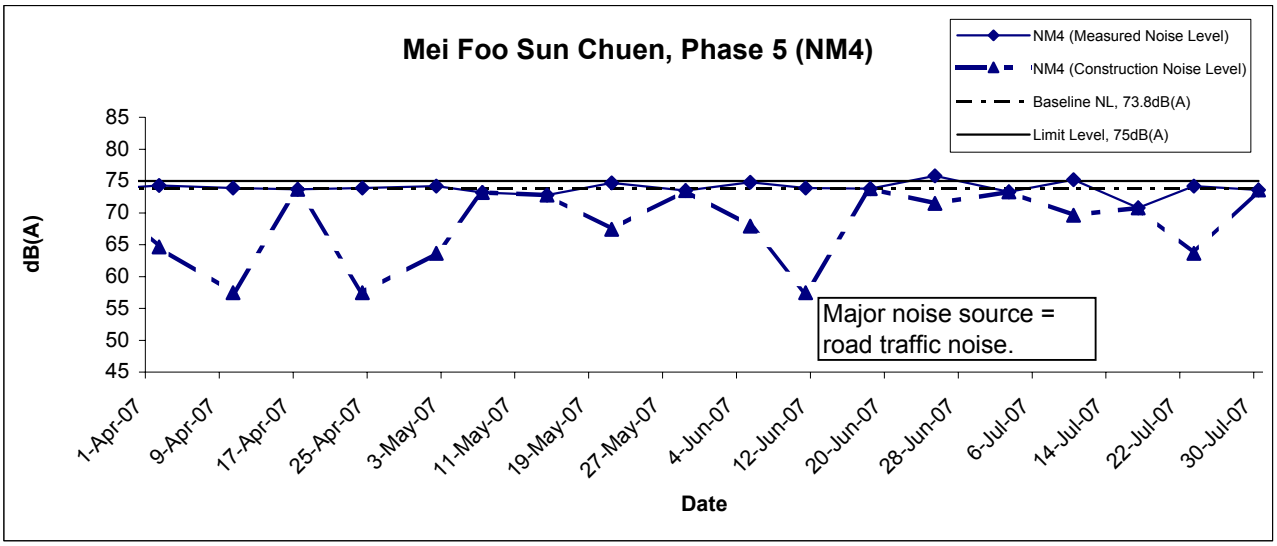
Location NM9 - Hoi Lai Estate						
Date	Time	Weather	dB (A) (5-min)			
			L_{eq}	L_{10}	L_{90}	Average L_{eq}
3-Jul-07	19:00	Cloudy	62.7	66.0	58.0	62.8
	19:05		62.8	66.0	58.0	
	19:10		62.8	66.0	58.0	
10-Jul-07	19:00	Cloudy	63.2	67.0	57.5	63.2
	19:05		63.5	67.0	57.5	
	19:10		63.0	67.0	57.5	
17-Jul-07	19:05	Cloudy	63.6	68.5	58.0	63.8
	19:10		63.8	68.5	58.5	
	19:15		63.9	68.5	58.5	
24-Jul-07	19:00	Cloudy	61.2	66.0	57.0	61.4
	19:05		61.6	66.0	57.5	
	19:10		61.5	66.0	57.5	
31-Jul-07	19:00	Cloudy	62.6	68.5	57.5	62.7
	19:05		62.9	68.5	57.5	
	19:10		62.7	68.5	57.5	

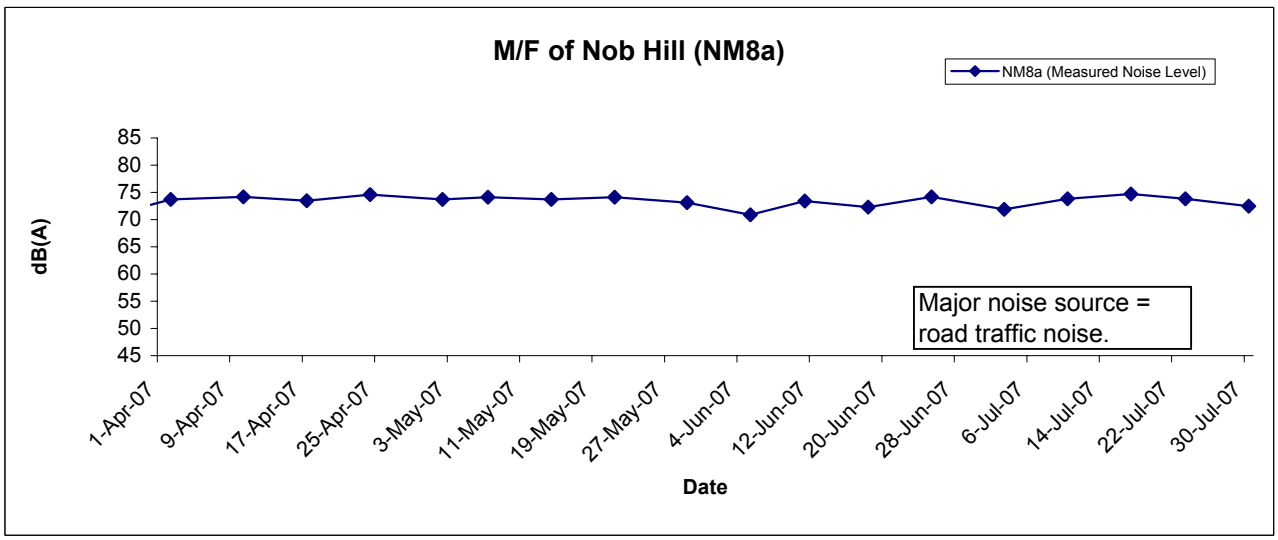
Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolded value indicated limit level exceedance

Noise Levels



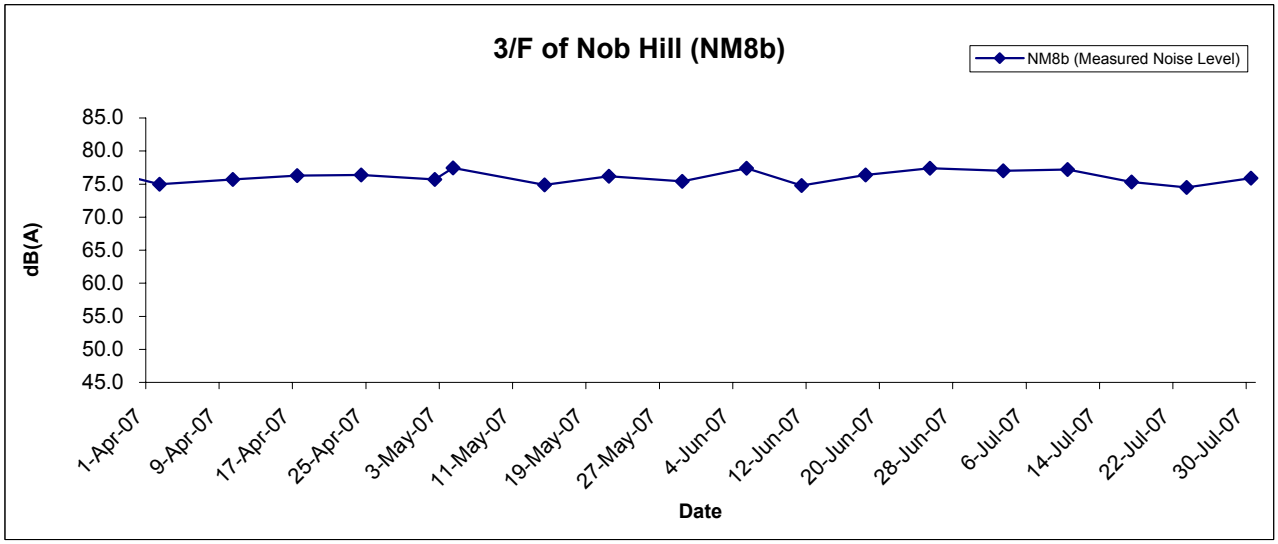


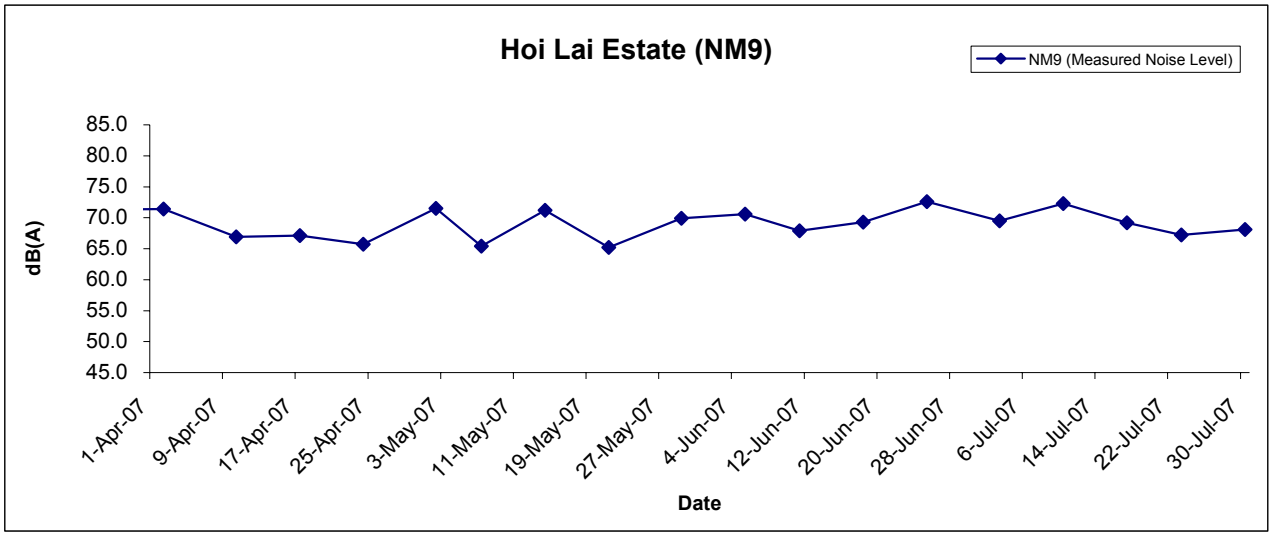


* Construction Noise Level = Measured Noise Level - Baseline Level
(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

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 Date: Jul 07	Project No.: MA3024 Appendix: G	CINOTECH

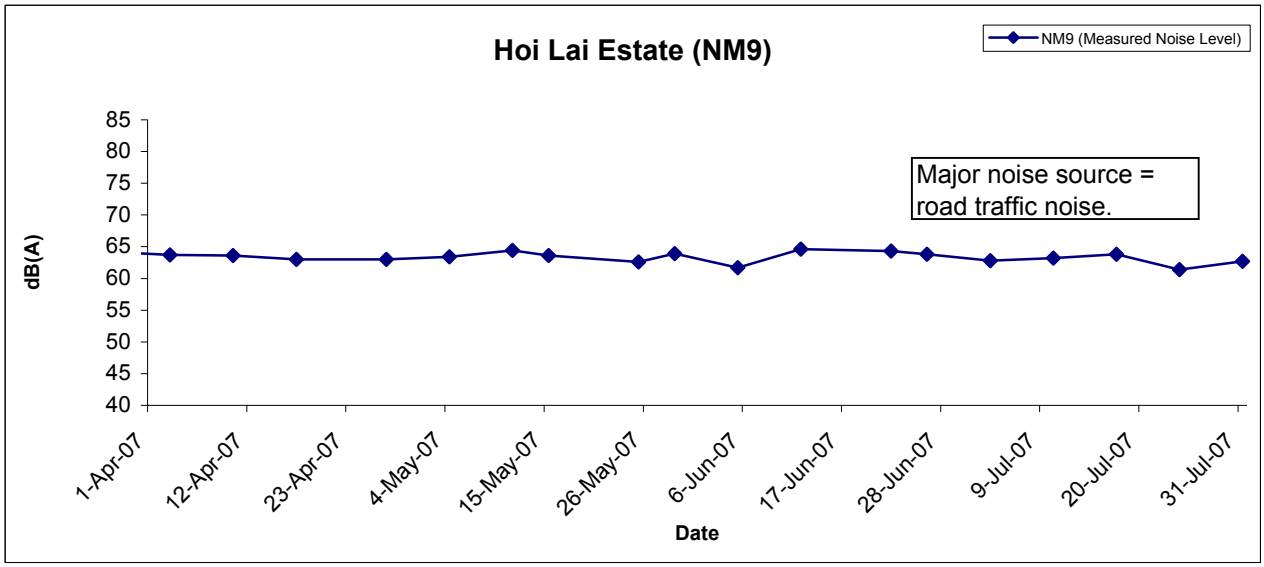
Noise Levels





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 Date: Jul 07	Project No.: MA3024 Appendix: G	CINOTECH

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 Date: Jul 07	Project No.: MA3024 Appendix: G	CINOTECH

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

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70703-LCKV-TCSS
Date	3 July 2007 (Tuesday)
Time	13:30 – 14:00

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

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality • No environmental deficiency was identified during the site inspection. ***B. Air Quality*** • No environmental deficiency was identified during the site inspection. ***C. Noise*** • No environmental deficiency was identified during the site inspection. ***D. Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***E. Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***F. Others*** • Follow-up on previous audit session (Ref. No.: 70531-LCKV-TCSS), the environmental deficiency was improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Edmond Wu		3 July 2007
Checked by	Dr. Priscilla Choy		3 July 2007

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70704-LCKV
Date	4 July 2007 (Wednesday)
Time	09:30 – 10:45

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

Ref. No.	Remarks/Observations	Related Item No.
70703L-01O	***A. Water Quality*** • Untreated site runoff flowing in the gully was observed near C13-C14. The Contractor was recommended to extend the hinterland diversion pipe or install geotextile at the gully.	B1
70703L-02R	***B. Air Quality*** • Exposed slope was observed at Lai Po Road. The Contractor was recommended to cover it with tarpaulin sheet.	C8
	C. Noise • No environmental deficiency was identified during the site inspection.	
	D. Waste / Chemical Management • No environmental deficiency was identified during the site inspection.	
	E. Permit / Licenses • No environmental deficiency was identified during the site inspection.	
	F. Others • Follow-up on previous audit (Ref. No.: 70627-LCKV), no environmental deficiency was observed during 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	Edmond Wu		4 July 2007
Checked by	Dr. Priscilla Choy		4 July 2007

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70711-LCKV
Date	11 July 2007 (Wednesday)
Time	1:30 – 2:45 p.m.

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

Ref. No.	Remarks/Observations	Related Item No.
70711L-01O	***A. Water Quality*** • Accumulated mud was observed on the surface of road sidenear C13 - C14. The Contractor was reminded to clear the mud or install geotextile at the gully. ***B. Air Quality*** • No environmental deficiency was identified during the site inspection. ***C. Noise*** • No environmental deficiency was identified during the site inspection. ***D. Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***E. Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***F. Others*** • Follow-up on previous audit (Ref. No.: 70704-LCKV), all environmental deficiencies were improved/rectified by the Contractor. • 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.	B7i

	Name	Signature	Date
Recorded by	Stanley Liu	S'tanley	11 July 2007
Checked by	Dr. Priscilla Choy		11 July 2007

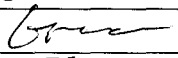
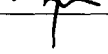
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70718-LCKV
Date	18 July 2007 (Wednesday)
Time	11:20 – 12:15

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

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality • No environmental deficiency was identified during the site inspection. ***B. Air Quality*** • No environmental deficiency was identified during the site inspection. ***C. Noise*** • No environmental deficiency was identified during the site inspection. ***D. Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***E. Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***F. Others*** • Follow-up on previous audit (Ref. No.: 70711-LCKV), all environmental deficiencies were improved/rectified by the Contractor. • 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		18 July 2007
Checked by	Dr. Priscilla Choy		18 July 2007

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	70725-LCKV
Date	25 July 2007 (Wednesday)
Time	13:30 – 14:50

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

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality • No environmental deficiency was identified during the site inspection. ***B. Air Quality*** • No environmental deficiency was identified during the site inspection. ***C. Noise*** • No environmental deficiency was identified during the site inspection. ***D. Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***E. Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***F. Others*** • Follow-up on previous audit (Ref. No.: 70718-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.	

	Name	Signature	Date
Recorded by	Grace Wong		25 July 2007
Checked by	Dr. Priscilla Choy		25 July 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	1. Identify source 2. Inform ER & IEC 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily	1. Check monitoring data submitted by ET 2. Check Contractor's working methods	1. Notify Contractor 2. Check monitoring data and Contractor's working methods	1. Rectify any unacceptable practice 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	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	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	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	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	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	1. Checking monitoring data submitted by ET 2. Check Contractor's working methods 3. Discuss with ET and Contractor on possible remedial measure	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	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	1. Discuss with the IEC and ER and seek to identify potential noise source 2. Undertake noise measurement to confirm the validity of complaint 3. Inform ER&IEC in writing Discuss remedial actions required with ER&IEC if an exceedance is recorded 4. Increase monitoring frequency to demonstrate efficacy of remedial measures 5. If exceedance continues, meet with ER&IEC to review implementation of appropriate mitigation measures. 6. If exceedance stops, cease additional monitoring	1. Review the analyzed results submitted by the ET 2. Review the proposed remedial measures by the Contractor and advise the ER & ET accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of complaint and notify Contractor immediately 2. Check monitoring data trends and Contractor's working methods 3. Remind the Contractor of his contractual obligations and discuss with ET, IEC and Contractor on proposed remedial actions 4. Assess the efficacy of remedial actions and keep the Contractor informed 5. Inform complainant of actions taken	1. Submit proposals for remedial actions to ER within three working days of notification 2. Amend proposals if required by the Engineer 3. Implement the remedial actions immediately upon instruction 4. Liaise with the ER to optimize the effectiveness of the agreed mitigation 5. Amend proposal if appropriate

Exceedance	ACTION			
	ET	IEC	ER	Contractor
Limit Level	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	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	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	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	• 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.	^
	• A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones.	^
	• Vehicle washing facilities should be provided at every exit point.	^
	• 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.	^
	• 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.	^
	• Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet.	^
	• 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.	^
	• Any stockpile of dusty materials should be either covered entirely be 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.	^
	• 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.	^
	• 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	• Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works.	^
	• Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	^
	• Plant know to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS.	^
	• Mobile plant should be sited as far away from NSRs as possible.	^
	• Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	^
	• Use quite plant and Working Method	^
	• 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	*Construction Runoff and Drainage*	
	• Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow.	^
	• 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.	^
	• 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	^
	• 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.	^
	• 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
	• Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.	^
	• 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.	^
	• 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.	^
	• 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.	^
	Tunnelling Work	
	• 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
	• 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
	• 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
	General Construction Activities	
	• 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).	^
	Sewage Effluent	
	• Construction work force sewage discharges form 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 form 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.	N/A
Waste	*General*	
	• 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.	^
	Storage, Collection and Transportation of Waste	
	• 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.	^
	• Maintain records of the quantities of wastes generated, recycled and disposed.	^
	Surplus Excavated Materials	
	• 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.	^
	Construction and Demolition (C&D) Waste	

Types of Impacts	Mitigation Measures	Status
	• 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.	^ N/A ^
	Chemical Waste	
	• 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: 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: 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).	^ ^ ^ ^
	General Refuse	
	• 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.	^ ^

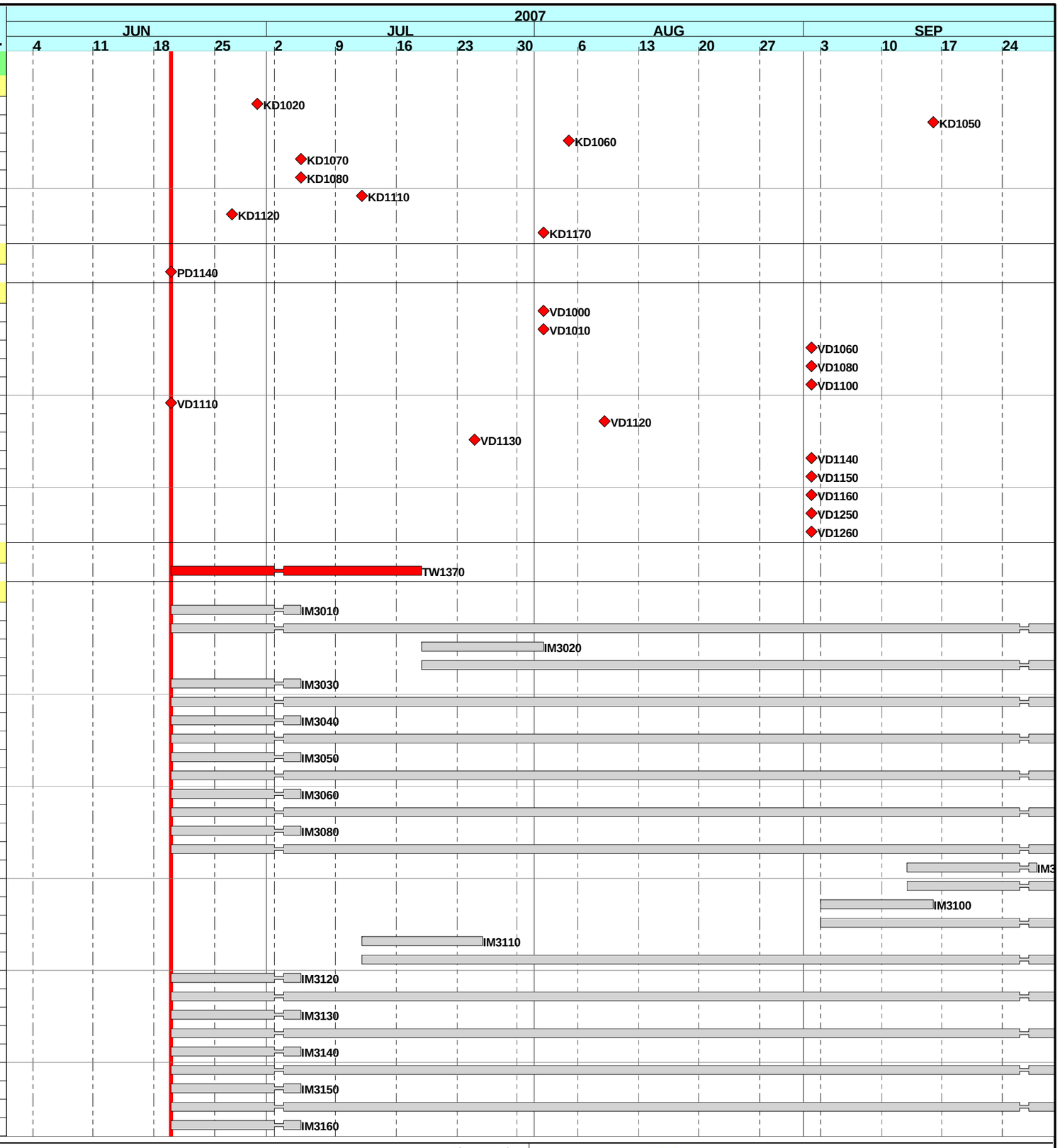
Types of Impacts	Mitigation Measures	Status
Ecology	• A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza. • Conduct a tree survey before commencement of the construction work. • All measures recommended in the approved landscape 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. • Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately. • 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 ^ ^ N/A ^ N/A
Landscape and Visual Impact	• 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. • 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. • 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.
Preliminaries & General Requirments						
Key Dates						
KD1020	KD-2: Achievement of Stage 2	0		29JUN07	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		04AUG07*	0	0
KD1070	KD-7: Completion of Section 5 of the Works	0		04JUL07*	0	0
KD1080	KD-8: Completion of Section 6 of the Works	0		04JUL07*	0	0
KD1110	KD-11: Completion of Section 9 of the Works	0		11JUL07*	0	0
KD1120	KD-12: Completion of Section 10 of the Works	0		26JUN07*	0	0
KD1170	KD-17: Completion of Section 15 of the Works	0		01AUG07*	0	0
Portion Access Dates						
PD1140	Access to Portion F1 (NOT USED)	0	20JUN07*		0	0
Portion Vacate Dates						
VD1000	Vacate Portion A	0		01AUG07*	0	0
VD1010	Vacate Portion B	0		01AUG07*	0	0
VD1060	Vacate Portion E2	0		01SEP07*	0	0
VD1080	Vacate Portion E4	0		01SEP07*	0	0
VD1100	Vacate Portion G1	0		01SEP07*	0	0
VD1110	Vacate Portion F1	0		19JUN07*	0	0
VD1120	Vacate Portion F2	0		08AUG07*	0	0
VD1130	Vacate Portion F3	0		24JUL07*	0	0
VD1140	Vacate Portion G2	0		01SEP07*	0	0
VD1150	Vacate Portion G3	0		01SEP07*	0	0
VD1160	Vacate Portion G4	0		01SEP07*	0	0
VD1250	Vacate Portion W	0		01SEP07*	0	0
VD1260	Vacate Portion R1	0		01SEP07*	0	0
Design of Temporary Works						
TW1370	Design of Temp Works for Feature 11NW-A/C66	24	20JUN07	18JUL07	0	24
Monitoring & Instrumentation - New Works						
IM3010	Install Instrumentation @ Cut Slope CCR-S1	12	20JUN07	04JUL07	0	12
IM3015	Monitoring @ Cut Slope CCR-S1	205*	20JUN07	23FEB08	0	205*
IM3020	Install Instrumentation @ Cut Slope CCR-S2	12	19JUL07	01AUG07	0	12
IM3025	Monitoring @ Cut Slope CCR-S2	181*	19JUL07	23FEB08	0	181*
IM3030	Install Instrumentation @ Cut Slope CCR-S3	12	20JUN07	04JUL07	0	12
IM3035	Monitoring @ Cut Slope CCR-S3	205*	20JUN07	23FEB08	0	205*
IM3040	Install Instrumentation @ Cut Slope CCR-S4	12	20JUN07	04JUL07	0	12
IM3045	Monitoring @ Cut Slope CCR-S4	205*	20JUN07	23FEB08	0	205*
IM3050	Install Instrumentation @ Cut Slope CCR-S5	12	20JUN07	04JUL07	0	12
IM3055	Monitoring @ Cut Slope CCR-S5	205*	20JUN07	23FEB08	0	205*
IM3060	Install Instrumentation @ Cut Slope CCR-S6	12	20JUN07	04JUL07	0	12
IM3065	Monitoring @ Cut Slope CCR-S6	205*	20JUN07	23FEB08	0	205*
IM3080	Install Instrumentation @ Slope 11NW-A/C26	12	20JUN07	04JUL07	0	12
IM3085	Monitoring @ Slope 11NW-A/C26	205*	20JUN07	23FEB08	0	205*
IM3090	Install Instrumentation @ Slope 11NW-A/FR54 & 55	12	13SEP07	27SEP07	0	12
IM3095	Monitoring @ Slope 11NW-A/FR54 & 55	133*	13SEP07	23FEB08	0	133*
IM3100	Install Instrumentation @ Slope11NW-A/C687 & 679	12	03SEP07	15SEP07	0	12
IM3105	Monitoring @ Slope 11NW-A/C687 & 679	142*	03SEP07	23FEB08	0	142*
IM3110	Install Instrumentation @ Slip Road A Embankment	12	12JUL07	25JUL07	0	12
IM3115	Monitoring @ Slip Road A Embankment	187*	12JUL07	23FEB08	0	187*
IM3120	Install Instrumentation @ Slip Road B Embankment	12	20JUN07	04JUL07	0	12
IM3125	Monitoring @ Slip Road B Embankment	205*	20JUN07	23FEB08	0	205*
IM3130	Install Instrumentation @ Piers P1 to P6	12	20JUN07	04JUL07	0	12
IM3135	Monitoring @ Piers P1 to P6	205*	20JUN07	23FEB08	0	205*
IM3140	Install Instrumentation @ Piers P7 to P10	12	20JUN07	04JUL07	0	12
IM3145	Monitoring @ Piers P7 to P10	205*	20JUN07	23FEB08	0	205*
IM3150	Install Instrumentation @ Piers P11 to P15	12	20JUN07	04JUL07	0	12
IM3155	Monitoring @ Piers P11 to P15	205*	20JUN07	23FEB08	0	205*
IM3160	Install Instrumentation @ Piers P16 to P18	12	20JUN07	04JUL07	0	12



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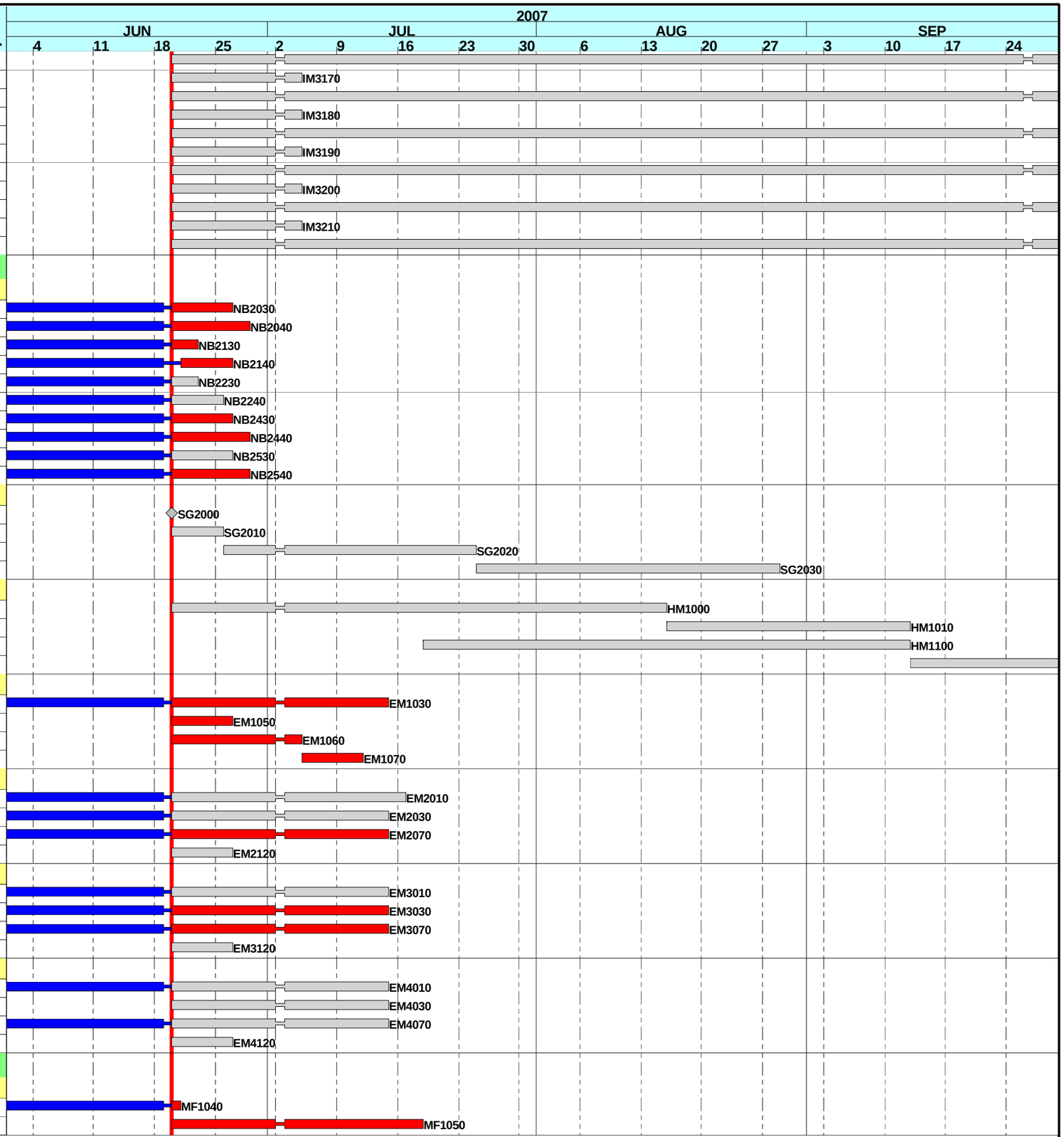
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
IM3165	Monitoring @ Piers P16 to P18	205*	20JUN07	23FEB08	0	205*
IM3170	Install Instrumentation @ Piers P19 to Abut. M	12	20JUN07	04JUL07	0	12
IM3175	Monitoring @ Piers P19 to Abut. M	205*	20JUN07	23FEB08	0	205*
IM3180	Install Instrumentation @ Piers on Slip Road A	12	20JUN07	04JUL07	0	12
IM3185	Monitoring @ Piers on Slip Road A	205*	20JUN07	23FEB08	0	205*
IM3190	Install Instrumentation @ Piers on Slip Road B	12	20JUN07	04JUL07	0	12
IM3195	Monitoring @ Piers on Slip Road B	205*	20JUN07	23FEB08	0	205*
IM3200	Install Instrumentation @ Piers on Slip Road C	12	20JUN07	04JUL07	0	12
IM3205	Monitoring @ Piers on Slip Road C	205*	20JUN07	23FEB08	0	205*
IM3210	Install Instrumentation @ Piers on Slip Road D	12	20JUN07	04JUL07	0	12
IM3215	Monitoring @ Piers on Slip Road D	205*	20JUN07	23FEB08	0	205*
Procurement						
Noise Barriers & Enclosures						
NB2030	Noise Barriers - PA to P4 - Off-site Fabrication	120	29NOV06A	26JUN07	90	6
NB2040	Noise Barriers - PA to P4 - Delivery to Site	62	17MAR07A	28JUN07	90	8
NB2130	Noise Barriers - P5 to P8 - Off-site Fabrication	110	07JAN07A	22JUN07	90	3
NB2140	Noise Barriers - P5 to P8 - Delivery to Site	8	15MAY07A	26JUN07	90	5
NB2230	Noise Barriers - P11 to P13 - Off-site Fabric'n	35	06DEC06A	22JUN07	95	3
NB2240	Noise Barriers - P11 to P13 - Delivery to Site	7	17MAY07A	25JUN07	95	5
NB2430	Noise Barriers - Slip Rd.C - Off-site Fabricat'n	38	02JAN07A	26JUN07	80	6
NB2440	Noise Barriers - Slip Rd. C - Delivery to Site	17	14MAY07A	28JUN07	30	8
NB2530	Noise Barriers - Slip Rd. D -Off-site Fabricat'n	38	02JAN07A	26JUN07	80	6
NB2540	Noise Barriers - Slip Rd. D - Delivery to Site	13	07MAY07A	28JUN07	5	8
Signage						
SG2000	Signage - Award of Sub-contract (NOT USED)	0	20JUN07		0	0
SG2010	Signage - Shop Drawings (NOT USED)	50	20JUN07	25JUN07	0	5
SG2020	Signage - Rev & Appro of Shop Dwgs. (NOT USED)	24	26JUN07	24JUL07	0	24
SG2030	Signage - Off-Site Fabr'n of Signs (NOT USED)	50	25JUL07	28AUG07	0	30
High Mast Lighting (NOT USED)						
HM1000	High Mast Lighting -Foundation Design (NOT USED)	48	20JUN07	15AUG07	0	48
HM1010	High Mast Lighting - Appr of Found'n (NOT USED)	24	16AUG07	12SEP07	0	24
HM1100	High Mast Lighting Design & Shop Dwgs (NOT USED)	48	19JUL07	12SEP07	0	48
HM1110	High Mast Lighting - Appro of Design (NOT USED)	56	13SEP07	07NOV07	0	56
Kiosk at Slip Road C						
EM1030	Procurement & Delivery of Fire AFA System	48	31JUL06A	14JUL07	90	21
EM1050	Procurement & Delivery of Air Conditioner Unit	12	20JUN07	26JUN07	0	6
EM1060	Submission & Approval for Sanitary Wear	24	20JUN07	04JUL07	0	12
EM1070	Procurement & Delivery of Sanitary Wear	12	05JUL07	11JUL07	0	6
Lai Po Road Fire Hydrant Pump House						
EM2010	Procurement & Delivery of Pumps Valves	75	26APR07A	16JUL07	25	22
EM2030	Procurement & Delivery of Pump Control Panel	48	16OCT06A	14JUL07	24	21
EM2070	Procurement & Delivery of Fire AFA System	48	31JUL06A	14JUL07	90	21
EM2120	Procurement & Delivery of Air Conditioner Unit	12	20JUN07	26JUN07	0	6
Wai Man Tsuen Fire Hydrant Pump House						
EM3010	Procurement & Delivery of Pumps Valves	75	26APR07A	14JUL07	25	21
EM3030	Procurement & Delivery of Pump Control Panel	48	16OCT06A	14JUL07	0	21
EM3070	Procurement & Delivery of Fire AFA System	48	31JUL06A	14JUL07	90	21
EM3120	Procurement & Delivery of Air Conditioner Unit	12	20JUN07	26JUN07	0	6
Lai Wan Overpass Irrigation Pump House						
EM4010	Procurement & Delivery of Pumps Valves	48	31JUL06A	14JUL07	80	21
EM4030	Procurement & Delivery of Pump Control Panel	48	20JUN07	14JUL07	90	21
EM4070	Procurement & Delivery of Fire AFA System	48	31JUL06A	14JUL07	90	21
EM4120	Procurement & Delivery of Air Conditioner Unit	12	20JUN07	26JUN07	0	6
Viaduct - Main Line - Piers PA to P6						
Remaining Superstructure Finishing Works						
MF1040	PA to P6 - Deck Drainage	60	22FEB07A	20JUN07	98	1
MF1050	PA to P6 - Top Rail to Parapets	24	20JUN07	18JUL07	0	24



Start Date 23SEP03
Finish Date 19JAN09
Data Date 20JUN07
Run Date 26JUN07 10:44

P3 File : LU45

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

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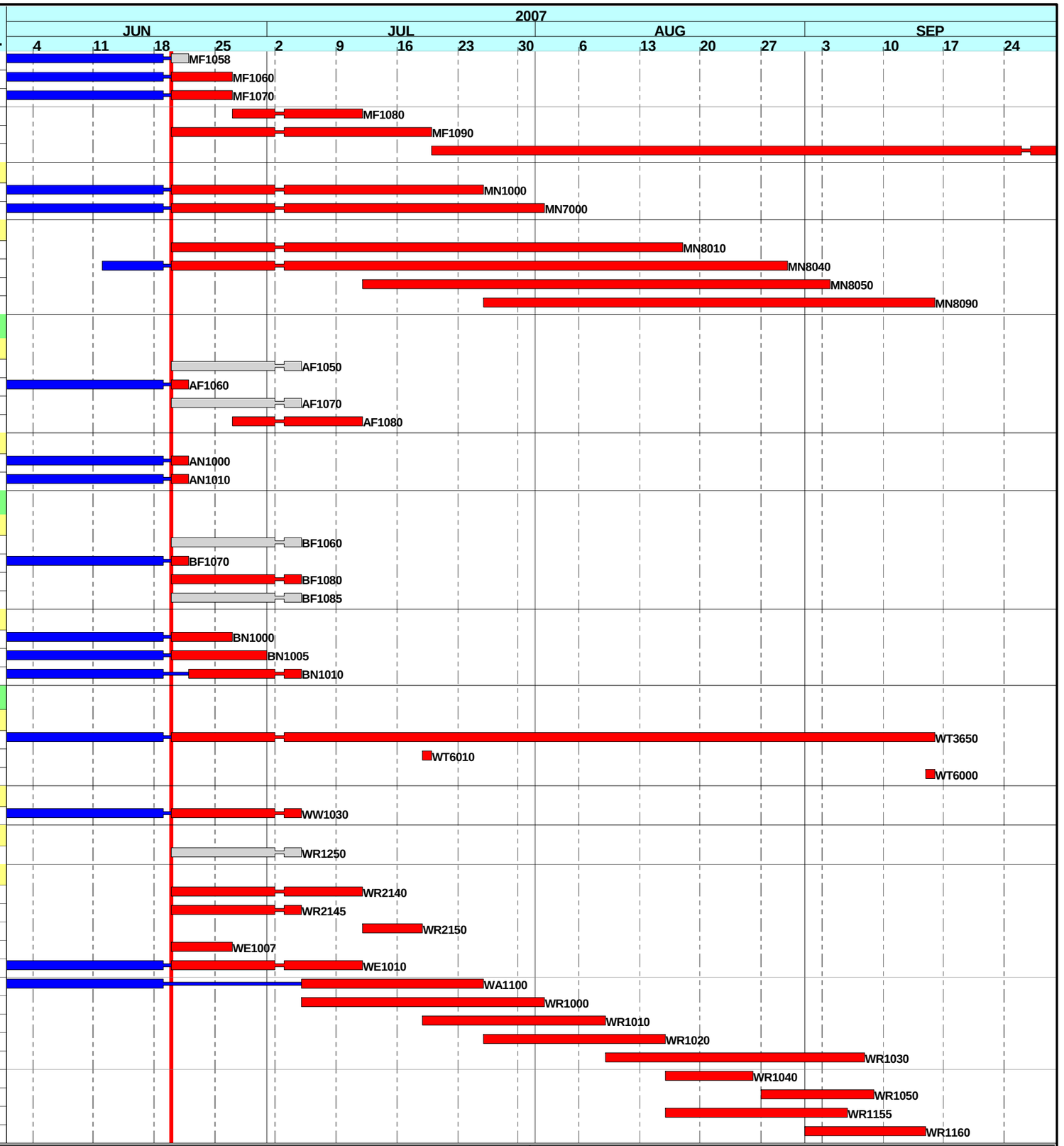
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
MF1058	PA to P6 - Waterproofing of Deck	10	26APR07A	21JUN07	95	2
MF1060	PA to P6 - Flexible Pavement	12	14MAY07A	26JUN07	70	6
MF1070	PA to P6 - Viaduct Road Lighting	18	07MAY07A	26JUN07	50	6
MF1080	PA to P6 - Road Marking & Traffic Signage	12	27JUN07	11JUL07	0	12
MF1090	P6 - Landscaping - Planting 0n Viaduct	25	20JUN07	19JUL07	0	25
MF1100	P6 - Landscape Establishment Works on Viaduct	301	20JUL07	18JUL08	0	301
Noise Barriers & Encl' (Sec.15 Excision)						
MN1000	Viaduct - 3m Absorptive Barriers N/B Ch.407-670	75	21MAR07A	25JUL07	60	30
MN7000	Viaduct - 3m Ref. Barriers N/B Ch.S1280-L938	75	22MAR07A	01AUG07	50	36
Remaining Noise Barriers & Enclosures						
MN8010	Viaduct - 3m Ref. Barrier S/B Ch.S1318-L826	50	20JUN07	17AUG07	0	50
MN8040	Viaduct - 5m Reflective Barrier N/B Ch.407 - 642	75	12JUN07A	29AUG07	15	60
MN8050	Viaduct - 5m Reflective Barrier S/B Ch.391 - 560	46	12JUL07	03SEP07	0	46
MN8090	Viaduct - 5m Reflective Barrier S/B Ch.560 - 712	45	26JUL07	15SEP07	0	45
Viaduct - Slip Road A						
Remaining Superstructure Finishing Works						
AF1050	Slip Rd. A - Top Rail to Parapets (NOT USED)	12	20JUN07	04JUL07	0	12
AF1060	Slip Rd. A - Flexible Pavement	4	19MAY07A	21JUN07	50	2
AF1070	Slip Rd. A - Viaduct Road Lighting (by Others)	12	20JUN07	04JUL07	0	12
AF1080	Slip Rd. A - Road Marking & Traffic Signage	12	27JUN07	11JUL07	0	12
Noise Barriers & Encl' (Sec.15 Excision)						
AN1000	Slip Rd. A - Full Enclosure Ch.1070 - Pier A2	48	26JUL06A	21JUN07	98	2
AN1010	Slip Rd. A - Full Enclosure Pier A2 - 1280	48	30SEP06A	21JUN07	90	2
Viaduct - Slip Road B						
Remaining Superstructure Finishing Works						
BF1060	Slip Rd. B - Top Rail to Parapets (NOT USED)	12	20JUN07	04JUL07	0	12
BF1070	Slip Rd. B - Flexible Pavement	4	14APR07A	21JUN07	70	2
BF1080	Slip Rd. B - Road Marking & Traffic Signage	12	20JUN07	04JUL07	0	12
BF1085	Slip Rd. B - Viaduct Road Lighting (by Others)	12	20JUN07	04JUL07	0	12
Remaining Noise Barriers & Enclosures						
BN1000	Slip Road B - Full Enclosure Ch.1038 - Pier B2	48	25OCT06A	26JUN07	85	6
BN1005	Slip Road B - Full Enclosure Pier B2 - Ch. 1258	48	22NOV06A	30JUN07	85	10
BN1010	Slip Road B - Semi Enclosures Ch.1258 - 1318	48	07NOV06A	04JUL07	85	10
At Grade Works - Lai Po Road						
Temporary Traffic Management Schemes						
WT3650	8th. TTMS Lai Po Rd (forS/B C/W) -Implementation	161*	08MAR07A	15SEP07	0	75*
WT6010	Open New Lai Po Rd. South Bound	1	19JUL07	19JUL07	0	1
WT6000	Open New Lai Po Road North Bound	1	15SEP07	15SEP07	0	1
Retaining Wall LCK-R1						
WW1030	Ret. Wall LCK-R1 - Insitu Parapets	24	21MAY07A	04JUL07	50	12
Lai Po Road (D3) Roadworks - Stage 1						
WR1250	Lai Po Rd N/B Ch.1+250-1+360 -Utilities NOT USED	12	20JUN07	04JUL07	0	12
Lai Po Road (D3) Roadworks - Stage 4						
WR2140	Lai Po Rd S/B Ch.1+000 - 1+360- Crash Barriers	18	20JUN07	11JUL07	0	18
WR2145	Lai Po Rd S/B Ch.1+000 - 1+360 -Street Lighting	12	20JUN07	04JUL07	0	12
WR2150	Lai Po Rd S/B Ch.1+000 - 1+360 -Marking & Signs	6	12JUL07	18JUL07	0	6
WE1007	Lai Po Rd N/B -Remove Temp Road Over Slip Rd A	12	20JUN07	26JUN07	0	6
WE1010	Lai Po Rd N/B Ch.0+946 - 1+250 - Fill Embankment	36	07MAY07A	11JUL07	25	18
WA1100	Lai Po Rd N/B Ch.0+946 - 1+250 - Drainage	30	22MAY07A	25JUL07	10	18
WR1000	Lai Po Rd N/B Ch.0+946 - 1+250 - Formation	24	05JUL07	01AUG07	0	24
WR1010	Lai Po Rd N/B Ch.0+946 - 1+250 - Sub-base	18	19JUL07	08AUG07	0	18
WR1020	Lai Po Rd N/B Ch.0+946 - 1+250 - Kerbs	18	26JUL07	15AUG07	0	18
WR1030	Lai Po Rd N/B Ch.0+946 - 1+250- Utilities	26	09AUG07	07SEP07	0	26
WR1040	Lai Po Rd N/B Ch.0+946 - 1+250 - Road Pavement	9	16AUG07	25AUG07	0	9
WR1050	Lai Po Rd N/B Ch.0+946 - 1+360 - Crash Barriers	12	27AUG07	08SEP07	0	12
WR1155	Lai Po Rd N/B Ch.0+946 - 1+360 - Street Lighting	18	16AUG07	05SEP07	0	18
WR1160	Lai Po Rd N/B Ch.0+946 - 1+360 - Marking & Signs	12	01SEP07	14SEP07	0	12



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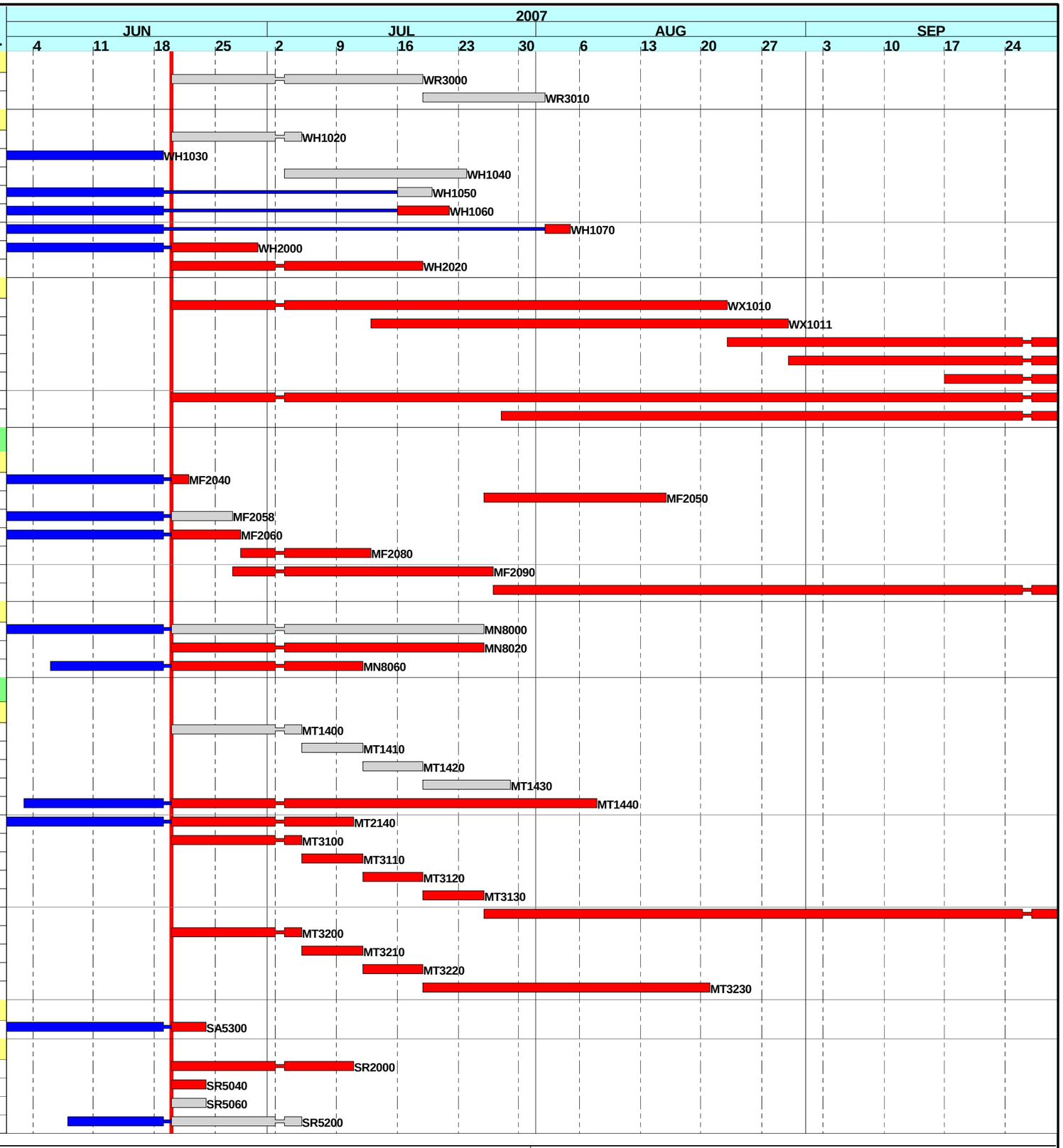
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
High Mast Lighting (NOT USED)						
WR3000	H/M Lighting (3 No. Mast) - Found's (NOT USED)	24	20JUN07	18JUL07	0	24
WR3010	H/MLighting (3 No. Mast) -Erect Masts (NOT USED)	12	19JUL07	01AUG07	0	12
Lai Po Road Fire Hydrant Pump House						
WH1020	Lai Po Rd. F/H Pump House - Waterproofing	12	20JUN07	04JUL07	0	12
WH1030	Lai Po Rd. F/H Pump House - Building Finishes	24	06APR07A	18JUN07	85	0
WH1040	Lai Po Rd. F/H Pump House - Mechanical Works	24	03JUL07	23JUL07	0	18
WH1050	Lai Po Rd. F/H Pump House - Electrical Works	24	25MAY07A	19JUL07	75	4
WH1060	Lai Po Rd. F/H Pump House - FS Installation	24	15MAY07A	21JUL07	75	6
WH1070	Lai Po Rd. F/H Pump House - Plumbing & Drainage	24	07MAY07A	04AUG07	70	3
WH2000	Fire Main at Lai Po Road - at Grade Pipework	18	24JUN06A	29JUN07	60	9
WH2020	Fire Main at Lai Po Road - Valves & Connections	24	20JUN07	18JUL07	0	24
Landscape Works						
WX1010	Landscaping - Dwarf Walls FW8, FW10 & FW13	54	20JUN07	22AUG07	0	54
WX1011	Landscaping - Dwarf Walls FW4 & FW6	41	13JUL07	29AUG07	0	41
WX1012	Landscaping - Dwarf Walls FW12 & FW14	34	23AUG07	03OCT07	0	34
WX1013	Landscaping - Dwarf Walls FW8, FW10 & FW13	34	30AUG07	10OCT07	0	34
WX1017	Landscaping - Dwarf Walls FW1 & FW2	36	17SEP07	31OCT07	0	36
WX1000	Landscaping - Earthworks & Formation	140	20JUN07	04DEC07	0	140
WX1018	Landscaping - Paving	120	28JUL07	18DEC07	0	120
Viaduct - Main Line - Piers P7 to P10						
Remaining Superstructure Finishing Works						
MF2040	P7 to P10 - Deck Drainage	48	10MAY06A	21JUN07	95	2
MF2050	P7 to P10 - Top Rail to Parapets	18	26JUL07	15AUG07	0	18
MF2058	P7 to P10 - Waterproofing of Deck	10	23MAY07A	26JUN07	40	6
MF2060	P7 to P10 - Flexible Pavement	9	30MAY07A	27JUN07	20	7
MF2080	P7 to P10 - Road Marking & Traffic Signage	12	28JUN07	12JUL07	0	12
MF2090	P7 to P10 - Landscaping - Planting 0n Viaduct	25	27JUN07	26JUL07	0	25
MF2091	P7 to P10 - Landscape Establish Works on Viaduct	301	27JUL07	25JUL08	0	301
Remaining Noise Barriers & Enclosures						
MN8000	Viaduct - Semi Enclosure N/B Ch.980 to 1181	60	28DEC06A	25JUL07	60	30
MN8020	Viaduct - 3m Reflective Barrier C/L Ch.845 - 980	30	20JUN07	25JUL07	0	30
MN8060	Viaduct - 5m Reflective Barrier N/B Ch.938 - 980	25	06JUN07A	11JUL07	20	18
At Grade Works - Lai Chi Kok Interchange						
Temporary Traffic Management Schemes						
MT1400	3rd TTMS Butterfly Valley Rd -Prepare for Review	12	20JUN07	04JUL07	0	12
MT1410	3rd. TTMS Butterfly Valley Rd - CRE Endorsement	6	05JUL07	11JUL07	0	6
MT1420	3rd. TTMS Butterfly Valley Rd - Roadworks Advice	6	12JUL07	18JUL07	0	6
MT1430	3rd. TTMS Butterfly Valley Rd - Prepare	9	19JUL07	28JUL07	0	9
MT1440	3rd. TTMS Butterfly Valley Rd - Implementation	54*	03JUN07A	07AUG07	0	41*
MT2140	TTMS for Pier P8/L - Implementation	1,017*	23FEB04A	10JUL07	29	17*
MT3100	2nd. TTMS Kom Tsun Street - Prepare for Review	12	20JUN07	04JUL07	0	12
MT3110	2nd. TTMS Kom Tsun Street - CRE Endorsement	6	05JUL07	11JUL07	0	6
MT3120	2nd. TTMS Kom Tsun Street - Roadworks Advice	6	12JUL07	18JUL07	0	6
MT3130	2nd. TTMS Kom Tsun Street - Site Preparation	6	19JUL07	25JUL07	0	6
MT3140	2nd. TTMS Kom Tsun Street - Implementation	63*	26JUL07	09OCT07	0	63*
MT3200	3rd. TTMS Kom Tsun Street - Prepare for Review	12	20JUN07	04JUL07	0	12
MT3210	3rd. TTMS Kom Tsun Street - CRE Endorsement	6	05JUL07	11JUL07	0	6
MT3220	3rd. TTMS Kom Tsun Street - Roadworks Advice	6	12JUL07	18JUL07	0	6
MT3230	3rd. TTMS Kom Tsun Street - Site Preparation	28	19JUL07	20AUG07	0	28
Drainage Works						
SA5300	Butterfly Valley Rd Stage4 - Stormwater Drainage	12	21SEP06A	23JUN07	75	4
Utilities & Roadworks						
SR2000	Castle Peak Road - Roadworks Reinstatement	17	20JUN07	10JUL07	0	17
SR5040	Butterfly V. Rd (LCKI) Stage 1 - Street Lighting	4	20JUN07	23JUN07	0	4
SR5060	Butterfly V. Rd (LCKI) Stage 1 - Road Marking	4	20JUN07	23JUN07	0	4
SR5200	Butterfly V. Rd (LCKI) Stage2-Excav. & Formation	18	08JUN07A	04JUL07	10	12



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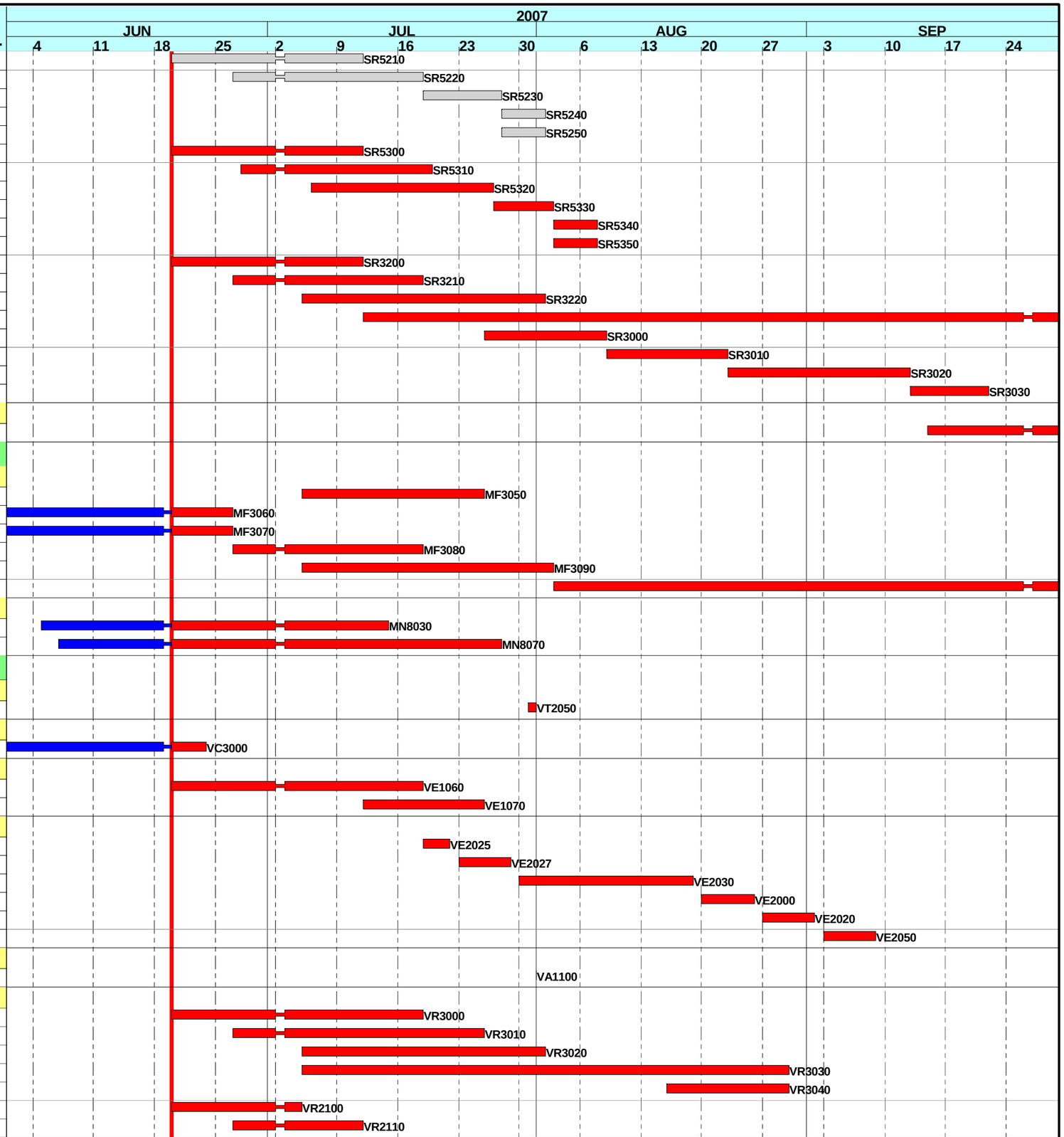
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
SR5210	Butterfly V. Rd (LCKI) Stage 2 - Sub-base	18	20JUN07	11JUL07	0	18
SR5220	Butterfly V. Rd (LCKI) Stage 2 - Kerbs	18	27JUN07	18JUL07	0	18
SR5230	Butterfly V. Rd (LCKI) Stage 2 - Pavement	8	19JUL07	27JUL07	0	8
SR5240	Butterfly V. Rd (LCKI) Stage 2 - Street Lighting	4	28JUL07	01AUG07	0	4
SR5250	Butterfly V. Rd (LCKI) Stage 2 - Road Marking	4	28JUL07	01AUG07	0	4
SR5300	Butterfly V. Rd (LCKI) Stage4-Excav. & Formation	18	20JUN07	11JUL07	0	18
SR5310	Butterfly V. Rd (LCKI) Stage 4 - Sub-base	18	28JUN07	19JUL07	0	18
SR5320	Butterfly V. Rd (LCKI) Stage 4 - Kerbs	18	06JUL07	26JUL07	0	18
SR5330	Butterfly V. Rd (LCKI) Stage 4 - Pavement	6	27JUL07	02AUG07	0	6
SR5340	Butterfly V. Rd (LCKI) Stage 4 - Street Lighting	4	03AUG07	07AUG07	0	4
SR5350	Butterfly V. Rd (LCKI) Stage 4 - Road Marking	4	03AUG07	07AUG07	0	4
SR3200	Kom Tsun Street Bus Stn. - Excavate & Formation	18	20JUN07	11JUL07	0	18
SR3210	Kom Tsun Street bus Stn. - Sub-base	18	27JUN07	18JUL07	0	18
SR3220	Kom Tsun Street Bus Stn. - Kerbs	24	05JUL07	01AUG07	0	24
SR3230	Kom Tsun Street Bus Stn. - Concrete Pavement	75	12JUL07	09OCT07	0	75
SR3000	Kom Tsun Street L/H C/Way - Excavate & Formation	12	26JUL07	08AUG07	0	12
SR3010	Kom Tsun Street L/H C/Way - Sub-base	12	09AUG07	22AUG07	0	12
SR3020	Kom Tsun Street L/H C/Way - Kerbs	18	23AUG07	12SEP07	0	18
SR3030	Kom Tsun Street L/H C/Way - Pavement	8	13SEP07	21SEP07	0	8
Landscape Works						
SX1010	Landscaping - Paving	50	15SEP07	15NOV07	0	50
Viaduct - Main Line - Piers P11 to P15						
Remaining Superstructure Finishing Works						
MF3050	P11 to P16 - Top Rail to Parapets	18	05JUL07	25JUL07	0	18
MF3060	P11 to P16 - Flexible Pavement	9	23MAY07A	26JUN07	35	6
MF3070	P11 to P16 - Viaduct Road Lighting	18	10MAY07A	26JUN07	50	6
MF3080	P11 to P16 - Road Marking & Traffic Signage	18	27JUN07	18JUL07	0	18
MF3090	P11 to P16 - Landscaping - Planting 0n Viaduct	25	05JUL07	02AUG07	0	25
MF3100	P11 to P16 - Landscape Establish W'ks on Viaduct	301	03AUG07	01AUG08	0	301
Remaining Noise Barriers & Enclosures						
MN8030	Viaduct - 3m Reflective Barrier S/B Ch.1181-1302	75	05JUN07A	14JUL07	20	21
MN8070	Viaduct - 5m Reflective Barrier N/B Ch.1181-1302	75	07JUN07A	27JUL07	25	32
At Grade Works - Wai Man Tsuen						
Temporary Traffic Management Schemes						
VT2050	B.V. Rd - Divert Traffic to Slow & Middle Lanes	1	31JUL07	31JUL07	0	1
Realigned Channel at Wai Man Tsuen						
VC3000	Channel - Modifications to Channel Floor -VO 299	12	30NOV05A	23JUN07	95	4
Earthworks & Slope Works						
VE1060	Slope CCR-S5 - Slope Drainage & Finishes	24	20JUN07	18JUL07	0	24
VE1070	Slope CCR-S5 - Landscaping & Hydroseeding	12	12JUL07	25JUL07	0	12
Earthworks & Slope Works - 11NW-A/C678 & CR679						
VE2025	Slope 11NW-A/C678 & CR679 - Platform for S.Nails	3	19JUL07	21JUL07	0	3
VE2027	Slope 11NW-A/C678 & CR679 - Test Soil Nail	6	23JUL07	28JUL07	0	6
VE2030	Slope 11NW-A/C678 & CR679 - Soil Nails	18	30JUL07	18AUG07	0	18
VE2000	Slope 11NW-A/C678 & CR679 - Remove Temp Platform	6	20AUG07	25AUG07	0	6
VE2020	Slope 11NW-A/C678 & CR679 - Trim Original Slope	6	27AUG07	01SEP07	0	6
VE2050	Slope 11NW-A/C678 & CR679 -Landscape & Hydroseed	6	03SEP07	08SEP07	0	6
Drainage Works						
VA1100	Butterfly Valley Rd Stage4 - Stormwater Draiange	0	01AUG07	31JUL07	0	0
Utilities & Roadworks						
VR3000	Drainage Maintenance Access Rd. - Formation	24	20JUN07	18JUL07	0	24
VR3010	Drainage Maintenance Access Rd. - Sub-base	24	27JUN07	25JUL07	0	24
VR3020	Drainage Maintenance Access Rd. - Kerbs	24	05JUL07	01AUG07	0	24
VR3030	Drainage Maintenance Access Rd. - Pavement	48	05JUL07	29AUG07	0	48
VR3040	Drainage Maintenance Access Rd. - Street Lights	12	16AUG07	29AUG07	0	12
VR2100	Butterfly V. Rd (WMT) Stage3- Excav. & Formation	12	20JUN07	04JUL07	0	12
VR2110	Butterfly V. Rd (WMT) Stage 3 - Sub-base	12	27JUN07	11JUL07	0	12



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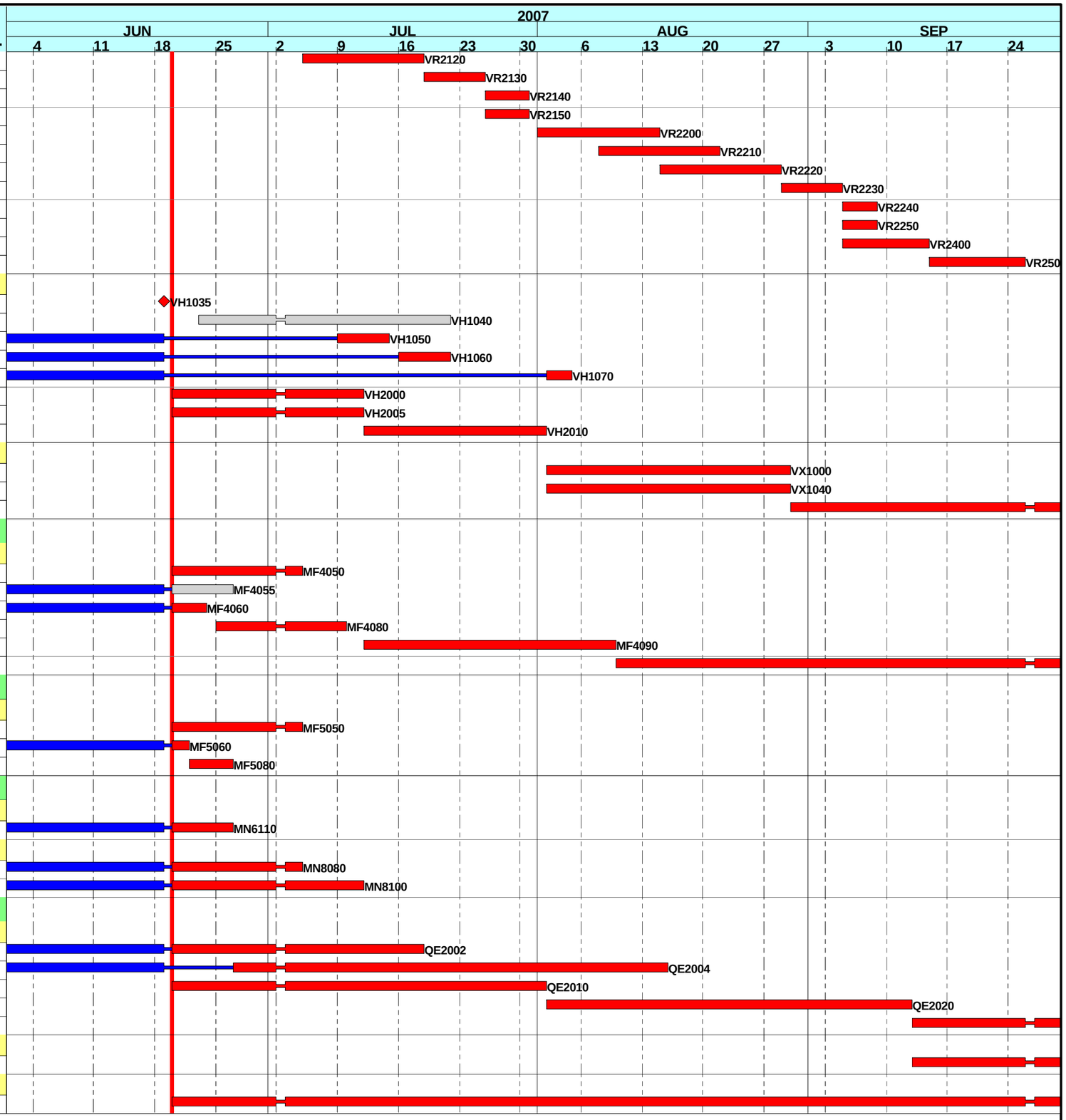
VR2120	Butterfly V. Rd (WMT) Stage 3 - Kerbs	12	05JUL07	18JUL07	0	12
VR2130	Butterfly V. Rd (WMT) Stage 3 - Pavement	6	19JUL07	25JUL07	0	6
VR2140	Butterfly V. Rd (WMT) Stage 3 - Street Lighting	4	26JUL07	30JUL07	0	4
VR2150	Butterfly V. Rd (WMT) Stage 3 - Road Marking	4	26JUL07	30JUL07	0	4
VR2200	Butterfly V. Rd (WMT) Stage4- Excav. & Formation	12	01AUG07	14AUG07	0	12
VR2210	Butterfly V. Rd (WMT) Stage 4 - Sub-base	12	08AUG07	21AUG07	0	12
VR2220	Butterfly V. Rd (WMT) Stage 4 - Kerbs	12	15AUG07	28AUG07	0	12
VR2230	Butterfly V. Rd (WMT) Stage 4- Pavement	6	29AUG07	04SEP07	0	6
VR2240	Butterfly V. Rd (WMT) Stage 4 - Street Lighting	4	05SEP07	08SEP07	0	4
VR2250	Butterfly V. Rd (WMT) Stage 4 - Road Marking	4	05SEP07	08SEP07	0	4
VR2400	Butterfly V. Rd (WMT) Stage 4 - Tie-in RHS	9	05SEP07	14SEP07	0	9
VR2500	Butterfly V. Rd (WMT) Stage 4 - Tie-in LHS	9	15SEP07	25SEP07	0	9
Wai Man Tsuen Fire Hydrant Pump House						
VH1035	Wai Man Tsuen F/H P/H - Provide for E & M Contr'	0		18JUN07	0	0
VH1040	Wai Man Tsuen F/H Pump House - Mechanical Works	24	23JUN07	21JUL07	0	24
VH1050	Wai Man Tsuen F/H Pump House - Electrical Work	24	14MAY07A	14JUL07	75	6
VH1060	Wai Man Tsuen F/H Pump House - FS Installation	24	15MAY07A	21JUL07	75	6
VH1070	Wai Man Tsuen F/H Pump House - Plumb & Drains	24	07MAY07A	04AUG07	70	3
VH2000	Fire Main - Pipework Along Maintenance Road	18	20JUN07	11JUL07	0	18
VH2005	Fire Main - Pipework to Piers P10/R & P14	18	20JUN07	11JUL07	0	18
VH2010	Fire Main - Valves & Connections	18	12JUL07	01AUG07	0	18
Landscape Works						
VX1000	Landscaping - Earthworks & Formation	24	02AUG07	29AUG07	0	24
VX1040	Landscaping - Soiling & Planting	24	02AUG07	29AUG07	0	24
VX1100	Landscape Establishment Works	300	30AUG07	27AUG08	0	300
Viaduct - Main Line - Piers P16 to P18						
Remaining Superstructure Finishing Works						
MF4050	P16 to P18 - Top Rail to Parapets	12	20JUN07	04JUL07	0	12
MF4055	P16 to P18 - Install Movement Joints at P16/L&R	12	04MAY07A	26JUN07	50	6
MF4060	P16 to P18 - Flexible Pavement	9	02MAY07A	23JUN07	40	4
MF4080	P16 to P18 - Road Marking & Traffic Signage	12	25JUN07	09JUL07	0	12
MF4090	P16 to P17 - Landscaping - Planting 0n Viaduct	25	12JUL07	09AUG07	0	25
MF4100	P16 to P17 - Landscape Establish W'ks on Viaduct	301	10AUG07	08AUG08	0	301
Viaduct - Main Line - Piers 19 to Abutment M						
Remaining Superstructure Finishing Works						
MF5050	P19 to Abut M - Top Rail to Parapets	12	20JUN07	04JUL07	0	12
MF5060	P19 to Abut M - Flexible Pavement	4	20APR07A	21JUN07	40	2
MF5080	P19 to Abut M - Road Marking & Traffic Signage	4	22JUN07	26JUN07	0	4
Viaduct - Main Line - Tunnel Approaches						
Noise Barriers & Encl' (Sec.10 Excision)						
MN6110	Semi Enclosure S/B Ch.2005 - 2200 - Panels	35	27FEB07A	26JUN07	90	6
Remaining Noise Barriers & Enclosures						
MN8080	At Grade - 7m Reflective Barrier S/B Ch1789-1989	75	11DEC06A	04JUL07	75	12
MN8100	At Grade - 5.5m Reflective Barrier Ch1799-1997	75	02MAR07A	11JUL07	50	18
At Grade Works - Butterfly Valley						
Earthworks & Slope Works - 11NW-A/FR54 & F55						
QE2002	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Bases	36	03MAY07A	18JUL07	20	24
QE2004	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Walls	48	28MAY07A	15AUG07	10	42
QE2010	Slope 11NW-A/FR54 & FR55 - Install Temp Works	36	20JUN07	01AUG07	0	36
QE2020	Slope 11NW-A/FR54 & FR55 - Excavate & Rockfill	36	02AUG07	12SEP07	0	36
QE2030	Slope 11NW-A/FR54 & FR55 - Remove Temp. Works	18	13SEP07	05OCT07	0	18
Utilities & Roadworks						
QR1060	WSD Access Road - Permanent C/Way P18 to P19	36	13SEP07	27OCT07	0	36
Landscape Works						
QX1100	Landscape Establishment Works	301	20JUN07	17JUN08	0	301



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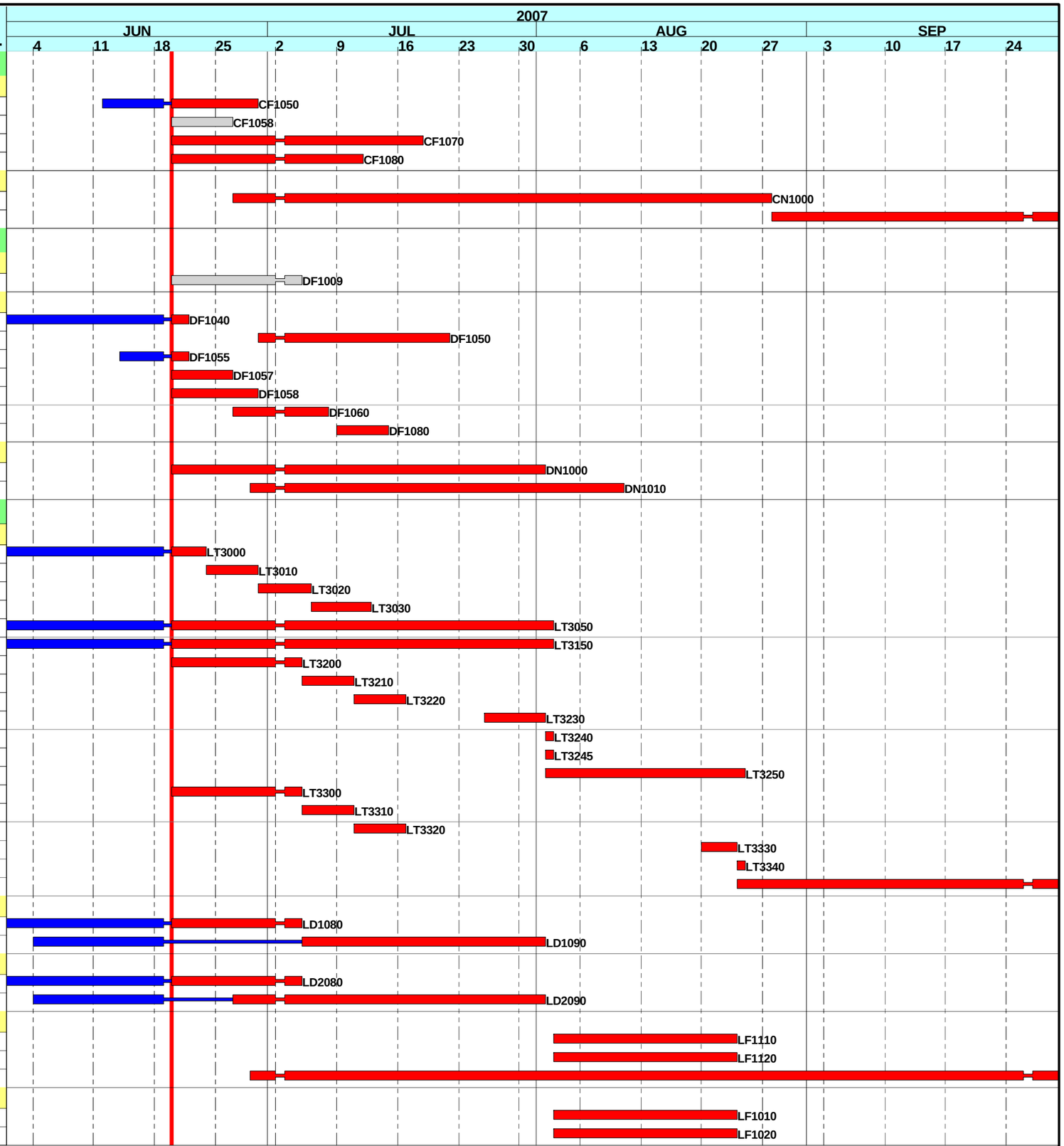
Viaduct - Slip Road C						
Remaining Superstructure Finishing Works						
CF1050	Slip Rd. C - Top Rail to Parapets	18	12JUN07A	29JUN07	50	9
CF1058	Slip Rd. C - Waterproofing of Deck (not used)	6	20JUN07	26JUN07	0	6
CF1070	Slip Rd. C - Viaduct Road Lighting	24	20JUN07	18JUL07	0	24
CF1080	Slip Rd. C - Road Marking & Traffic Signage	18	20JUN07	11JUL07	0	18
Remaining Noise Barriers & Enclosures						
CN1000	Slip Rd. C - 3m Absorptive Barriers Ch.665 - 730	52	27JUN07	27AUG07	0	52
CN1010	Slip Rd. C - 3m Absorptive Barriers Ch.730 - 790	50	28AUG07	27OCT07	0	50
Viaduct - Slip Road D						
Superstructure Finishing Works Required for TCSS						
DF1009	Slip Rd. D - Sign Gantry ADS4 at D6	12	20JUN07	04JUL07	0	12
Remaining Superstructure Finishing Works						
DF1040	Slip Rd. D - Deck Drainage	24	01SEP06A	21JUN07	65	2
DF1050	Slip Rd. D - Top Rail to Parapets	18	30JUN07	21JUL07	0	18
DF1055	Slip Rd. D - Movement Joint at D6	6	14JUN07A	21JUN07	60	2
DF1057	Slip Rd. D - Movement Joint at D9	6	20JUN07	26JUN07	0	6
DF1058	Slip Rd. D - Waterproofing of Deck	9	20JUN07	29JUN07	0	9
DF1060	Slip Rd. D - Flexible Pavement	9	27JUN07	07JUL07	0	9
DF1080	Slip Rd. D - Road Marking & Traffic Signage	6	09JUL07	14JUL07	0	6
Remaining Noise Barriers & Enclosures						
DN1000	Slip Rd. D - 3.5m Reflective Barrier Ch.805-881	36	20JUN07	01AUG07	0	36
DN1010	Slip Rd. D - 3m Reflective Barriers Ch.680 - 805	36	29JUN07	10AUG07	0	36
Lai Wan Road Overpass						
Temporary Traffic Management Schemes						
LT3000	TTMS CC Rd (on W/B Deck) - Prepare for Review	12	08DEC06A	23JUN07	50	4
LT3010	TTMS CC Rd (on W/B Deck) - CRE Endorsement	6	24JUN07	29JUN07	0	6
LT3020	TTMS CC Rd (on W/B Deck) - Roadworks Advice	6	30JUN07	05JUL07	0	6
LT3030	TTMS CC Rd (on W/B Deck) - Site Preparation	6	06JUL07	12JUL07	0	6
LT3050	TTMS CC Rd (on W/B Deck) - Implementation	149*	02FEB07A	02AUG07	0	37*
LT3150	TTMS CC Rd (on E/B Deck) - Implementation	120*	11MAR07A	02AUG07	0	37*
LT3200	TTMS CC Rd (on Both Decks) - Prepare for Review	12	20JUN07	04JUL07	0	12
LT3210	TTMS CC Rd (on Both Decks) - CRE Endorsement	6	05JUL07	10JUL07	0	6
LT3220	TTMS CC Rd (on Both Decks) - Roadworks Advice	6	11JUL07	16JUL07	0	6
LT3230	TTMS CC Rd (on Both Decks) - Site Preparation	6	26JUL07	01AUG07	0	6
LT3240	Divert 2 Lanes to Each New East Bound Bridge	1	02AUG07	02AUG07	0	1
LT3245	Divert 2 Lanes to Each New West Bound Bridge	1	02AUG07	02AUG07	0	1
LT3250	TTMS CC Rd (on Both Decks) - Implementation	20*	02AUG07	24AUG07	0	20*
LT3300	TTMS CC Rd (on Both Decks) - Prepare for Review	12	20JUN07	04JUL07	0	12
LT3310	TTMS CC Rd (on Both Decks) - CRE Endorsement	6	05JUL07	10JUL07	0	6
LT3320	TTMS CC Rd (on Both Decks) - Roadworks Advice	6	11JUL07	16JUL07	0	6
LT3330	TTMS CC Rd (on Both Decks) - Site Preparation	4	20AUG07	23AUG07	0	4
LT3340	Divert 1No. Lane to Each New Bridge	1	24AUG07	24AUG07	0	1
LT3350	TTMS CC Rd (on Both Decks) - Implementation	150*	24AUG07	23FEB08	0	150*
West Bound - Insitu Deck						
LD1080	Lai Wan Overpass WB - Demolish Existing Flanges	24	28MAY07A	04JUL07	85	12
LD1090	Lai Wan Overpass W/B - Construct New Flanges	36	04JUN07A	01AUG07	15	24
East Bound - Insitu Deck						
LD2080	Lai Wan O/Pass E/B - Demolish Existing Flanges	24	21MAY07A	04JUL07	85	12
LD2090	Lai Wan O/Pass E/B - Construct New Flanges	36	04JUN07A	01AUG07	5	30
West Bound - Superstructure Finishing Works						
LF1110	Lai Wan O/Pass W/B - Resurface Existing Deck	18	03AUG07	23AUG07	0	18
LF1120	Lai Wan O/Pass W/B - Reconstruct Deck Drainage	18	03AUG07	23AUG07	0	18
LF1130	Lai Wan O/Pass W/B - 6 Months Wait for Stitches	179	29JUN07	02FEB08	0	179
East Bound - Superstructure Finishing Works						
LF1010	Lai Wan O/Pass E/B - Resurface Existing Deck	18	03AUG07	23AUG07	0	18
LF1020	Lai Wan O/Pass E/B - Reconstruct Deck Drainage	18	03AUG07	23AUG07	0	18



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

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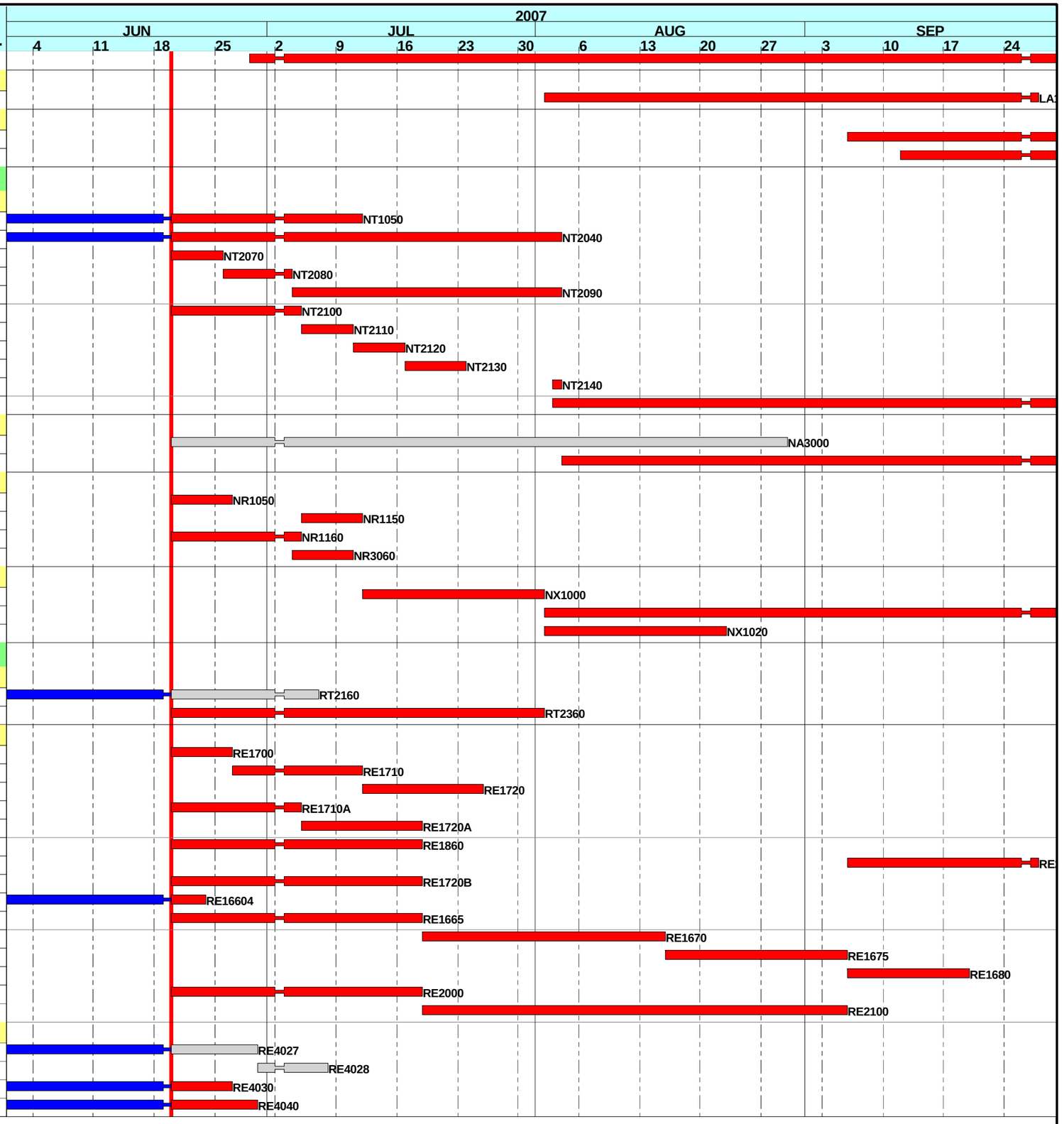
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
LF1040	Lai Wan O/Pass E/B - 6 Months Wait for Stitches	176	29JUN07	30JAN08	0	176
Drainage Works						
LA1000	Area Under Overpass - Stormwater Drainage	48	02AUG07	27SEP07	0	48
Landscape Works						
LX1000	Landscaping Under Overpass - Formation	36	06SEP07	20OCT07	0	36
LX1010	Landscaping - Hardworks (Walls etc.)	70	12SEP07	05DEC07	0	70
At Grade Works - Ching Cheung Road at LCK Park						
Temporary Traffic Management Schemes						
NT1050	TTMS CC Rd (W/B C/Way) - Implementation	1,033*	05FEB04A	11JUL07	33	18*
NT2040	1st. TTMS CC Rd (E/B C/Way) - Implementation	811*	22NOV04A	03AUG07	0	38*
NT2070	2nd. TTMS CC Rd (E/B C/Way) - Roadworks Advice	6	20JUN07	25JUN07	0	6
NT2080	2nd. TTMS CC Rd (E/B C/Way) - Site Preparation	6	26JUN07	03JUL07	0	6
NT2090	2nd. TTMS CC Rd (E/B C/Way) - Implementation	27*	04JUL07	03AUG07	0	27*
NT2100	3rd. TTMS CC Rd (E/B C/Way) - Prepare for Review	12	20JUN07	04JUL07	0	12
NT2110	3rd. TTMS CC Rd (E/B C/Way) - CRE Endorsement	6	05JUL07	10JUL07	0	6
NT2120	3rd. TTMS CC Rd (E/B C/Way) - Roadworks Advice	6	11JUL07	16JUL07	0	6
NT2130	3rd. TTMS CC Rd (E/B C/Way) - Site Preparation	6	17JUL07	23JUL07	0	6
NT2140	Divert 2 Lanes to New East Bound Carriageway	1	03AUG07	03AUG07	0	1
NT2150	3rd. TTMS CC Rd (E/B C/Way) - Implementation	82*	03AUG07	09NOV07	0	82*
Drainage Works						
NA3000	C.C. Rd. E/B in New C/way - not used	60	20JUN07	29AUG07	0	60
NA3010	C.C. Rd. E/B Existing C/way -Stormwater Drainage	75	04AUG07	02NOV07	0	75
Utilities & Roadworks						
NR1050	C.C. Rd. W/B in Portion E3 - Rd Marking & Signs	6	20JUN07	26JUN07	0	6
NR1150	C.C. Rd. W/B in Portion J2 - Rd Marking & Signs	6	05JUL07	11JUL07	0	6
NR1160	C.C. Rd. W/B in Portion J2 - Street Lighting	12	20JUN07	04JUL07	0	12
NR3060	C.C. Rd. E/B - Road Markings & Traffic Signs	6	04JUL07	10JUL07	0	6
Landscape Works						
NX1000	Landscaping - Formation	18	12JUL07	01AUG07	0	18
NX1010	Landscaping - Paving	50	02AUG07	29SEP07	0	50
NX1020	Landscaping - Irrigation System	18	02AUG07	22AUG07	0	18
At Grade Work - Ching Cheung Road - Main Section						
Temporary Traffic Management Schemes						
RT2160	2nd. TTMS CC Rd E/B (CCR-S1) - Implementation	946*	14MAY04A	06JUL07	16	14*
RT2360	4th. TTMS CC Rd E/B C/Way - Implementation	36*	20JUN07	01AUG07	0	36*
Earthworks & Slope Works - CCR-S1, S2 & S3						
RE1700	Slope CCR-S1E - Finish Seed & Planting +62.3mPD	6	20JUN07*	26JUN07	0	6
RE1710	Slope CCR-S1E - Finish Seed & Planting +54.8mPD	12	27JUN07	11JUL07	0	12
RE1720	Slope CCR-S1E - Finish Seed & Planting +47.3mPD	12	12JUL07	25JUL07	0	12
RE1710A	Slope CCR-S1C- Finish Seed & Planting +54.9mPD	12	20JUN07	04JUL07	0	12
RE1720A	Slope CCR-S1C - Finish Seed & Planting +47.3mPD	12	05JUL07	18JUL07	0	12
RE1860	Slope CCR-S1E&C- Finish Seed & Planting to +25.4	24	20JUN07	18JUL07	0	24
RE2130	Slope CCR-S2 - Finish Seeding & Planting	18	06SEP07	27SEP07	0	18
RE1720B	Slope CCR-S1W - Seed & Planting to +39.95mPD	24	20JUN07	18JUL07	0	24
RE16604	Slope CCR-S1W - Drainage to Level +16.8mPD	18	04DEC06A	23JUN07	75	4
RE1665	Slope CCR-S1W - Seed & Planting to +32.4mPD	24	20JUN07	18JUL07	0	24
RE1670	Slope CCR-S1W - Seed & Planting to +24.9mPD	24	19JUL07	15AUG07	0	24
RE1675	Slope CCR-S1W - Seed & Planting to +19.0mPD	18	16AUG07	05SEP07	0	18
RE1680	Slope CCR-S1W - Seed & Planting to +16.8mPD	12	06SEP07	19SEP07	0	12
RE2000	Slope CCR-S2 -Excavate Rock to Formation	24	20JUN07	18JUL07	0	24
RE2100	Slope CCR-S2 - Drainage	42	19JUL07	05SEP07	0	42
Slope Works Above Retaining Wall CCR-R2						
RE4027	Excavate & Demolish Existing Retaining Wall	12	14MAY07A	29JUN07	20	9
RE4028	Fill & Compact to Form Toe of Berm	6	30JUN07	07JUL07	0	6
RE4030	Slope Drainage above R/W CCR-R2	24	05MAR07A	26JUN07	75	6
RE4040	Slope Finishes above R/W CCR-R2	24	09APR07A	29JUN07	75	9



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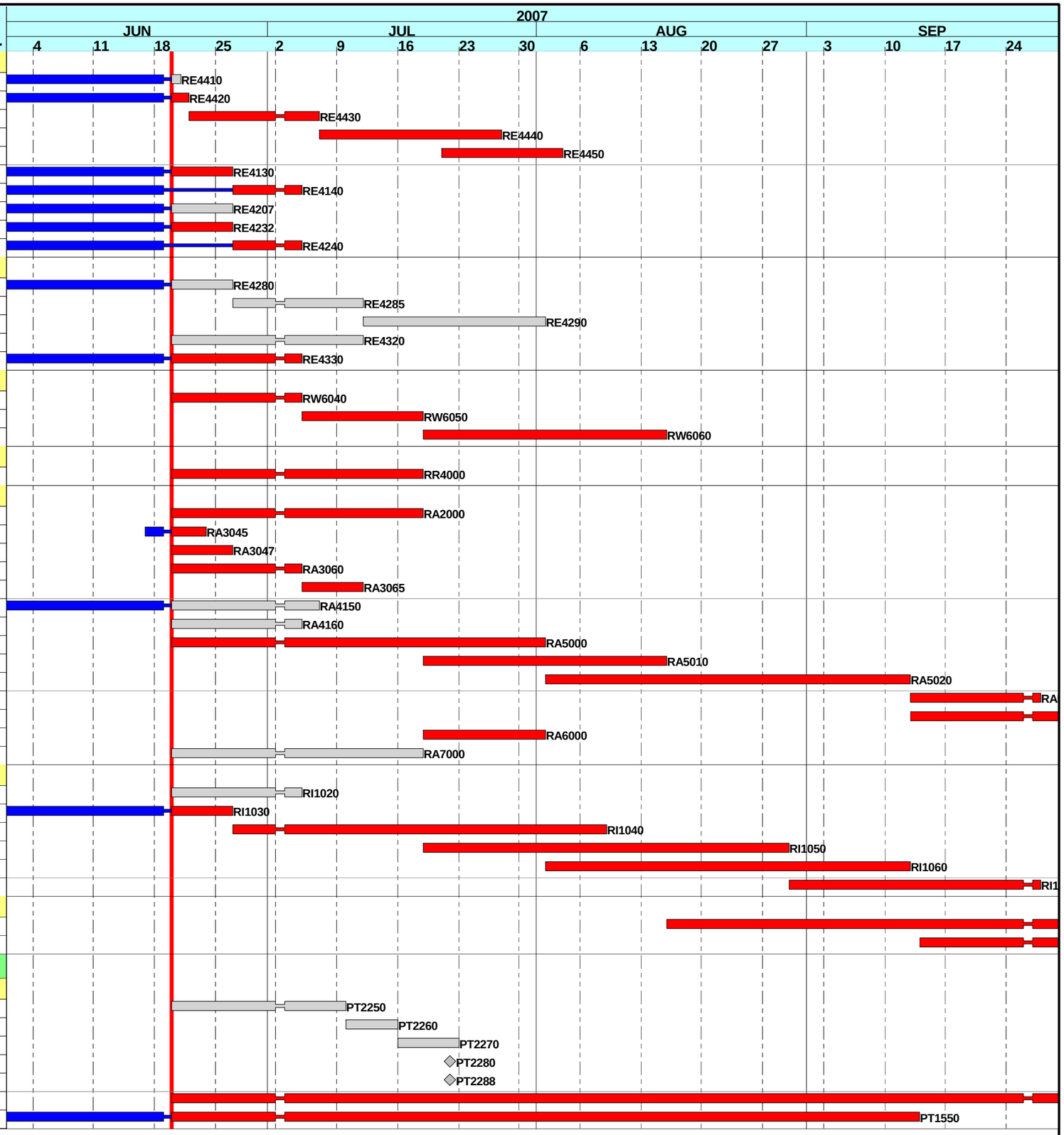
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
Slope Works Above Retaining Walls CCR-R3D, E & F						
RE4410	Slope Above CC Rest Garden - Excavate Slope	12	14JUL06A	20JUN07	95	1
RE4420	Slope Above CC Rest Garden - Benching	12	30SEP06A	21JUN07	80	2
RE4430	Slope Above CC Rest Garden - Rock Filling	12	22JUN07	06JUL07	0	12
RE4440	Slope Above CC Rest Garden - Slope Drainage	18	07JUL07	27JUL07	0	18
RE4450	Slope Above CC Rest Garden - Slope Finishes	12	21JUL07	03AUG07	0	12
RE4130	Slope above CCR-R3D- Slope Drainage	24	05MAR07A	26JUN07	90	6
RE4140	Slope above CCR-R3D - Slope Finishes	18	20MAR07A	04JUL07	90	6
RE4207	Slope above CCR-R3E&F -Excavate Slope	12	28DEC06A	26JUN07	50	6
RE4232	Slope above CCR-R3E&F- Slope Drainage	24	05MAR07A	26JUN07	90	6
RE4240	Slope above CCR-R3E&F - Slope Finishes	18	20MAR07A	04JUL07	90	6
Earthworks & Slope Works - CCR-S4						
RE4280	Slope CCR-S4 - Fill and Compact	24	23FEB06A	26JUN07	80	6
RE4285	Slope CCR-S4 - Form New Access Road at Footpath	12	27JUN07	11JUL07	0	12
RE4290	Slope CCR-S4 - Upper Slope Drainage	18	12JUL07	01AUG07	0	18
RE4320	Slope CCR-S4 - Lower Slope Drainage	18	20JUN07	11JUL07	0	18
RE4330	Slope CCR-S4 - Lower Slope Finishes	24	12MAR07A	04JUL07	50	12
Ching Cheung Road NTMM Retaining Wall A						
RW6040	NNTM Wall A - Debris Collection Area Drainage	12	20JUN07	04JUL07	0	12
RW6050	NNTM Wall A - Debris Collection Area Access Ramp	12	05JUL07	18JUL07	0	12
RW6060	NNTM Wall A - Debris Collection Area Finishes	24	19JUL07	15AUG07	0	24
Drainage Works						
RR4000	Ching Cheung Rd. E/B - Stormwater in Exist C/way	24	20JUN07	18JUL07	0	24
Utilities & Roadworks						
RA2000	Lai Wan Road - Footpath below Slope CCR-S4	24	20JUN07	18JUL07	0	24
RA3045	Ching Cheung Rd W/B New C/Way -Sign Gantry FADS4	6	17JUN07A	23JUN07	20	4
RA3047	Ching Cheung Rd. W/B -Sign Gantry ADS4	6	20JUN07	26JUN07	0	6
RA3060	Ching Cheung Rd. W/B - Street Lighting	12	20JUN07	04JUL07	0	12
RA3065	Ching Cheung Rd. Road Marking & Signs	6	05JUL07	11JUL07	0	6
RA4150	Ching Cheung Rd. New E/B Slip Road - C/Barriers	18	16APR07A	06JUL07	5	14
RA4160	Ching Cheung Rd. New E/B Slip Road - St. Lights	12	20JUN07	04JUL07	0	12
RA5000	Ching Cheung Rd. W/B Exist C/Way - Formation	36	20JUN07	01AUG07	0	36
RA5010	Ching Cheung Rd. W/B Exist C/Way - Sub-base	24	19JUL07	15AUG07	0	24
RA5020	Ching Cheung Rd. W/B Exist C/Way - Kerbs	36	02AUG07	12SEP07	0	36
RA5030	Ching Cheung Rd. Resurface Existing W/B C/way	12	13SEP07	27SEP07	0	12
RA5040	Ching Cheung Rd. W/B Exist C/Way - C/Barriers	24	13SEP07	12OCT07	0	24
RA6000	Ching Cheung Rd. Resurface Existing E/B C/way	12	19JUL07	01AUG07	0	12
RA7000	Lai Wan Road - Watermains & Hydrants FH4 & FH5	24	20JUN07	18JUL07	0	24
Lai Wan Overpass Irrigation Pump House						
RI1020	Lai Wan O/pass Irig P/H - Waterproofing NOT USed	12	20JUN07	04JUL07	0	12
RI1030	Lai Wan O/pass Irig Pump House - Building Works	75	01MAR07A	26JUN07	85	6
RI1040	Lai Wan O/pass Irig Pump House -Mechanical Works	36	27JUN07	08AUG07	0	36
RI1050	Lai Wan O/pass Irig Pump House - Electrical Work	36	19JUL07	29AUG07	0	36
RI1060	Lai Wan O/pass Irig Pump House - FS Installation	36	02AUG07	12SEP07	0	36
RI1070	Lai Wan O/pass Irig Pump House - Plumb & Drains	24	30AUG07	27SEP07	0	24
Landscape Works						
RX1000	Landscaping - Formation	72	16AUG07	10NOV07	0	72
RX1010	Landscaping - Paving	65	14SEP07	01DEC07	0	65
At Grade Works - Butterfly Valley Interchange						
Temporary Traffic Management Schemes						
PT2250	TTMS CP Rd-KC N/B for CCR-R4 -Prepare (NOT USED)	16	20JUN07	09JUL07	0	16
PT2260	TTMS CP Rd-KC N/B for CCR-R4 - CRE End(NOT USED)	6	10JUL07	15JUL07	0	6
PT2270	TTMS CP Rd-KC N/B for CCR-R4 - R/A (NOT USED)	7	16JUL07	22JUL07	0	7
PT2280	TTMS CP Rd-KC S/B - Re-open Slip Road (NOT USED)	0		21JUL07	0	0
PT2288	TTMS CP Rd-KC N/B-Close Loop to CC Rd(NOT USED)	0		21JUL07	0	0
PT2290	TTMS CP Rd-KC N/B for CCR-R4 - Implem(NOT USED)	479*	20JUN07	19JAN09	0	479*
PT1550	TTMS CP Rd-KC S/B for CCR-R5 - Implementation	981*	11JUN04A	13SEP07	10	73*



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

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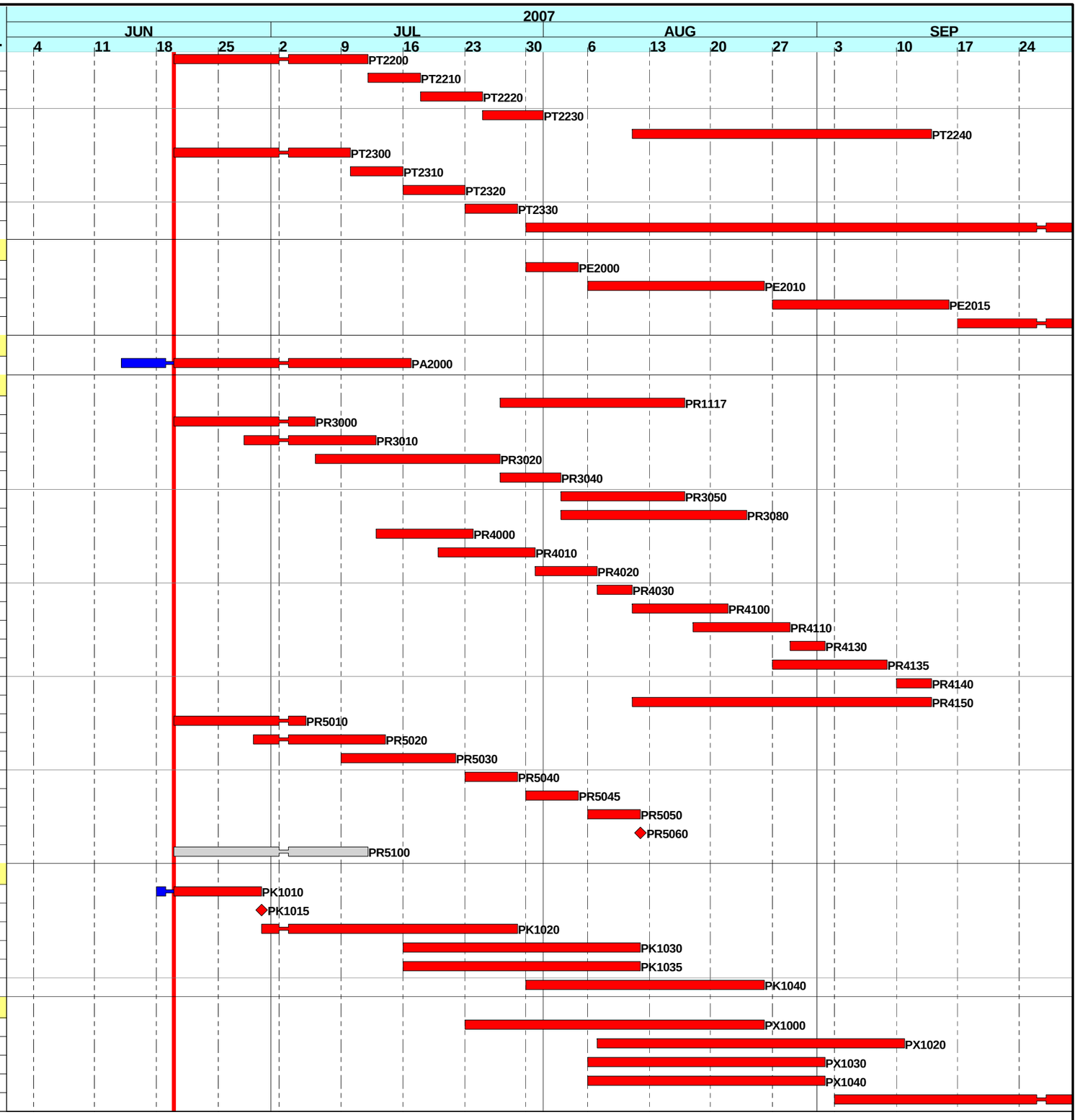
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.
PT2200	TTMS CP Rd-KC S/B for Paving -Prepare for Review	18	20JUN07	11JUL07	0	18
PT2210	TTMS CP Rd-KC S/B for Paving - CRE Endorsement	6	12JUL07	17JUL07	0	6
PT2220	TTMS CP Rd-KC S/B for Paving - Roadworks Advice	7	18JUL07	24JUL07	0	7
PT2230	TTMS CP Rd-KC S/B for Paving - Site Preparation	6	25JUL07	31JUL07	0	6
PT2240	TTMS CP Rd-KC S/B for Paving - Implementation	29*	11AUG07	13SEP07	0	29*
PT2300	TTMS CP Rd-KC N/B for 11NW-A/C66-Prep for Review	16	20JUN07	09JUL07	0	16
PT2310	TTMS CP Rd-KC N/B for 11NW-A/C66 - CRE Endorse	6	10JUL07	15JUL07	0	6
PT2320	TTMS CP Rd-KC N/B for 11NW-AC66 - Roadwks Advice	7	16JUL07	22JUL07	0	7
PT2330	TTMS CP Rd-KC N/B for 11NW-A/C66 - Site Prepare	6	23JUL07	28JUL07	0	6
PT2340	TTMS CP Rd-KC N/B for 11NW-A/C66 - Implement	144*	30JUL07	18JAN08	0	144*
Earthworks & Slopeworks - 11NW-A/C66						
PE2000	Slope 11NW-A/C66 - Hoardings / Fencing	6	30JUL07	04AUG07	0	6
PE2010	Slope 11NW-A/C66 - Trim Slope	18	06AUG07	25AUG07	0	18
PE2015	Slope 11NW-A/C66 - Platform for Soil Nailing	18	27AUG07	15SEP07	0	18
PE2017	Slope 11NW-A/C66 - Soil Nails - Test Nail	12	17SEP07	02OCT07	0	12
Drainage Works						
PA2000	C.P.Rd-K.C. S/B - Stormwater Drainage	24	14JUN07A	16JUL07	5	22
Utilities & Roadworks						
PR1117	New CLP 11Kv Cable Laying in front of CCR-R5	18	27JUL07	16AUG07	0	18
PR3000	C.P.Rd. Loop to Slip Road C - Formation	13	20JUN07	05JUL07	0	13
PR3010	C.P.Rd. Loop to Slip Road C - Sub-base	12	28JUN07	12JUL07	0	12
PR3020	C.P.Rd. Loop to Slip Road C - Kerbs	18	06JUL07	26JUL07	0	18
PR3040	C.P.Rd. Loop to Slip Road C - Pavement	6	27JUL07	02AUG07	0	6
PR3050	C.P.Rd. Loop to Slip Road C - Street Lighting	12	03AUG07	16AUG07	0	12
PR3080	C.P.Rd. Loop to Slip Road C - Crash Barriers	18	03AUG07	23AUG07	0	18
PR4000	C.P.Rd.-K.C. S/B L/H C/Way - Excavate & Format'n	9	13JUL07	23JUL07	0	9
PR4010	C.P.Rd.-K.C. S/B L/H C/Way - Sub-base	9	20JUL07	30JUL07	0	9
PR4020	C.P.Rd.-K.C. S/B L/H C/Way - Kerbs	6	31JUL07	06AUG07	0	6
PR4030	C.P.Rd.-K.C. S/B L/H C/Way - Pavement	4	07AUG07	10AUG07	0	4
PR4100	C.P.Rd.-K.C. S/B R/H C/Way - Excavate & Format'n	9	11AUG07	21AUG07	0	9
PR4110	C.P.Rd.-K.C. S/B R/H C/Way - Sub-base	9	18AUG07	28AUG07	0	9
PR4130	C.P.Rd.-K.C. S/B R/H C/Way - Pavement	4	29AUG07	01SEP07	0	4
PR4135	C.P.Rd.-K.C. S/B - Street Lighting	12	27AUG07	08SEP07	0	12
PR4140	C.P.Rd.-K.C. S/B - Road Markings & Signage	4	10SEP07	13SEP07	0	4
PR4150	Castle Peak Road - Reinstate Junction	29	11AUG07	13SEP07	0	29
PR5010	C.P.Rd-K.C. S/B to C.C.Rd E/B - Formation	12	20JUN07	04JUL07	0	12
PR5020	C.P.Rd-K.C. S/B to C.C.Rd E/B - Sub-base	12	29JUN07	13JUL07	0	12
PR5030	C.P.Rd-K.C. S/B to C.C.Rd E/B - Kerbs	12	09JUL07	21JUL07	0	12
PR5040	C.P.Rd-K.C. S/B to C.C.Rd E/B - Pavement	6	23JUL07	28JUL07	0	6
PR5045	C.P.Rd-K.C. S/B to C.C.Rd E/B - Street Lighting	6	30JUL07	04AUG07	0	6
PR5050	C.P.Rd-K.C. S/B to C.C.Rd E/B - Rd Marks & Signs	6	06AUG07	11AUG07	0	6
PR5060	C.P.Rd-K.C. S/B to C.C.Rd E/B - Re-open Road	0		11AUG07	0	0
PR5100	C.C. Rd. W/B - Sign Gantry FADS7 at P15-P16	18	20JUN07	11JUL07	0	18
Kiosk at Slip Road C						
PK1010	Kiosk at Slip Rd. C - Building Finishes	24	18JUN07A	29JUN07	10	9
PK1015	Kiosk at Slip Rd. C - Provision for E & M Contr'	0		29JUN07	0	0
PK1020	Kiosk at Slip Rd. C - MVAC Installations	24	30JUN07	28JUL07	0	24
PK1030	Kiosk at Slip Rd. C - Electrical Works	24	16JUL07	11AUG07	0	24
PK1035	Kiosk at Slip Rd. C - FS Installation	24	16JUL07	11AUG07	0	24
PK1040	Kiosk at Slip Rd. C - Drainage Works	24	30JUL07	25AUG07	0	24
Landscape Works						
PX1000	Landscaping - Earthworks & Formation	30	23JUL07	25AUG07	0	30
PX1020	Landscaping - Paving	30	07AUG07	10SEP07	0	30
PX1030	Landscaping - Irrigation System	24	06AUG07	01SEP07	0	24
PX1040	Landscaping - Soiling & Planting	24	06AUG07	01SEP07	0	24
PX1100	Landscape Establishment Works	302	03SEP07	02SEP08	0	302



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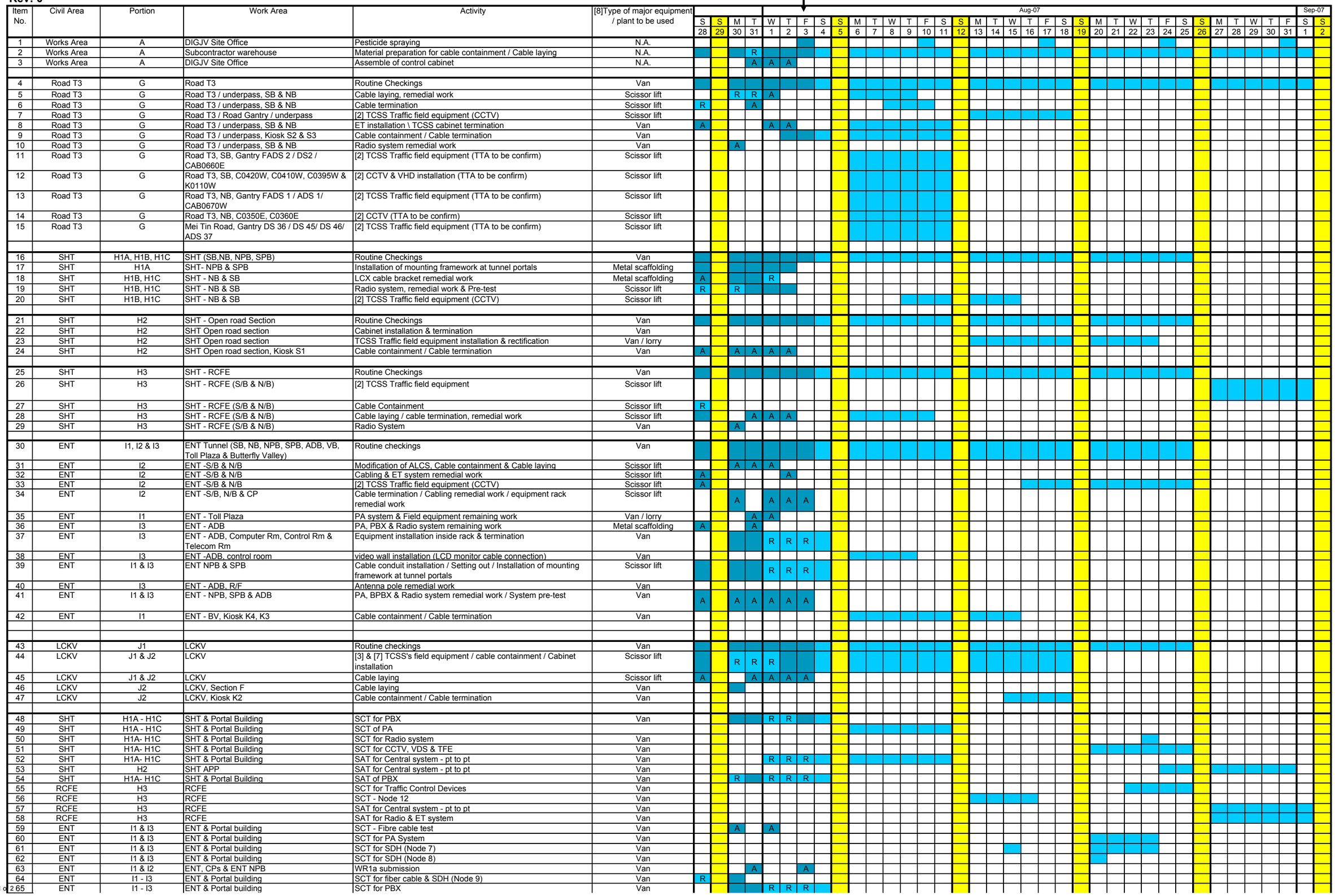
Delcan-Imtech-GTECH Joint Venture
Contract No. HY/2003/05
Route 8 - Traffic Control and Surveillance System

DIG 道易通聯營公司 DELCAN-IMTECH-GTECH JOINT VENTURE

Record Date: 03-08-2007

5-week Rolling Programme of Site Works
Rev: 0

Item No.	Civil Area	Portion	Work Area	Activity	[8]Type of major equipment / plant to be used
1	Works Area	A	DIGJV Site Office	Pesticide spraying	N.A.
2	Works Area	A	Subcontractor warehouse	Material preparation for cable containment / Cable laying	N.A.
3	Works Area	A	DIGJV Site Office	Assemble of control cabinet	N.A.
4	Road T3	G	Road T3	Routine Checkings	Van
5	Road T3	G	Road T3 / underpass, SB & NB	Cable laying, remedial work	Scissor lift
6	Road T3	G	Road T3 / underpass, SB & NB	Cable termination	Scissor lift
7	Road T3	G	Road T3 / Road Gantry / underpass	[2] TCSS Traffic field equipment (CCTV)	Scissor lift
8	Road T3	G	Road T3 / underpass, SB & NB	ET installation \ TCSS cabinet termination	Van
9	Road T3	G	Road T3 / underpass, Kiosk S2 & S3	Cable containment / Cable termination	Van
10	Road T3	G	Road T3 / underpass, SB & NB	Radio system remedial work	Van
11	Road T3	G	Road T3, SB, Gantry FADS 2 / DS2 / CAB0660E	[2] TCSS Traffic field equipment (TTA to be confirm)	Scissor lift
12	Road T3	G	Road T3, SB, C0420W, C0410W, C0395W & K0110W	[2] CCTV & VHD installation (TTA to be confirm)	Scissor lift
13	Road T3	G	Road T3, NB, Gantry FADS 1 / ADS 1/ CAB0670W	[2] TCSS Traffic field equipment (TTA to be confirm)	Scissor lift
14	Road T3	G	Road T3, NB, C0350E, C0360E	[2] CCTV (TTA to be confirm)	Scissor lift
15	Road T3	G	Mei Tin Road, Gantry DS 36 / DS 45/ DS 46/ ADS 37	[2] TCSS Traffic field equipment (TTA to be confirm)	Scissor lift
16	SHT	H1A, H1B, H1C	SHT (SB,NB, NPB, SPB)	Routine Checkings	Van
17	SHT	H1A	SHT- NPB & SPB	Installation of mounting framework at tunnel portals	Metal scaffolding
18	SHT	H1B, H1C	SHT - NB & SB	LCX cable bracket remedial work	Metal scaffolding
19	SHT	H1B, H1C	SHT - NB & SB	Radio system, remedial work & Pre-test	Scissor lift
20	SHT	H1B, H1C	SHT - NB & SB	[2] TCSS Traffic field equipment (CCTV)	Scissor lift
21	SHT	H2	SHT - Open road Section	Routine Checkings	Van
22	SHT	H2	SHT Open road section	Cabinet installation & termination	Van
23	SHT	H2	SHT Open road section	TCSS Traffic field equipment installation & rectification	Van / lorry
24	SHT	H2	SHT Open road section, Kiosk S1	Cable containment / Cable termination	Van
25	SHT	H3	SHT - RCFE	Routine Checkings	Van
26	SHT	H3	SHT - RCFE (S/B & N/B)	[2] TCSS Traffic field equipment	Scissor lift
27	SHT	H3	SHT - RCFE (S/B & N/B)	Cable Containment	Scissor lift
28	SHT	H3	SHT - RCFE (S/B & N/B)	Cable laying / cable termination, remedial work	Scissor lift
29	SHT	H3	SHT - RCFE (S/B & N/B)	Radio System	Van
30	ENT	I1, I2 & I3	ENT Tunnel (SB, NB, NPB, SPB, ADB, VB, Toll Plaza & Butterfly Valley)	Routine checkings	Van
31	ENT	I2	ENT -S/B & N/B	Modification of ALCS, Cable containment & Cable laying	Scissor lift
32	ENT	I2	ENT -S/B & N/B	Cabling & ET system remedial work	Scissor lift
33	ENT	I2	ENT -S/B & N/B	[2] TCSS Traffic field equipment (CCTV)	Scissor lift
34	ENT	I2	ENT -S/B, N/B & CP	Cable termination / Cabling remedial work / equipment rack remedial work	Scissor lift
35	ENT	I1	ENT - Toll Plaza	PA system & Field equipment remaining work	Van / lorry
36	ENT	I3	ENT - ADB	PA, PBX & Radio system remaining work	Metal scaffolding
37	ENT	I3	ENT - ADB, Computer Rm, Control Rm & Telecom Rm	Equipment installation inside rack & termination	Van
38	ENT	I3	ENT -ADB, control room	video wall installation (LCD monitor cable connection)	Van
39	ENT	I1 & I3	ENT NPB & SPB	Cable conduit installation / Setting out / Installation of mounting framework at tunnel portals	Scissor lift
40	ENT	I3	ENT - ADB, R/F	Antenna pole remedial work	Van
41	ENT	I1 & I3	ENT - NPB, SPB & ADB	PA, BPBX & Radio system remedial work / System pre-test	Van
42	ENT	I1	ENT - BV, Kiosk K4, K3	Cable containment / Cable termination	Van
43	LCKV	J1	LCKV	Routine checkings	Van
44	LCKV	J1 & J2	LCKV	[3] & [7] TCSS's field equipment / cable containment / Cabinet installation	Scissor lift
45	LCKV	J1 & J2	LCKV	Cable laying	Scissor lift
46	LCKV	J2	LCKV, Section F	Cable laying	Van
47	LCKV	J2	LCKV, Kiosk K2	Cable containment / Cable termination	Van
48	SHT	H1A - H1C	SHT & Portal Building	SCT for PBX	Van
49	SHT	H1A - H1C	SHT & Portal Building	SCT of PA	
50	SHT	H1A- H1C	SHT & Portal Building	SCT for Radio system	Van
51	SHT	H1A- H1C	SHT & Portal Building	SCT for CCTV, VDS & TFE	Van
52	SHT	H1A- H1C	SHT & Portal Building	SAT for Central system - pt to pt	Van
53	SHT	H2	SHT APP	SAT for Central system - pt to pt	Van
54	SHT	H1A- H1C	SHT & Portal Building	SAT of PBX	Van
55	RCFE	H3	RCFE	SCT for Traffic Control Devices	Van
56	RCFE	H3	RCFE	SCT - Node 12	Van
57	RCFE	H3	RCFE	SAT for Central system - pt to pt	Van
58	RCFE	H3	RCFE	SAT for Radio & ET system	Van
59	ENT	I1 & I3	ENT & Portal building	SCT - Fibre cable test	Van
60	ENT	I1 & I3	ENT & Portal building	SCT for PA System	Van
61	ENT	I1 & I3	ENT & Portal building	SCT for SDH (Node 7)	Van
62	ENT	I1 & I3	ENT & Portal building	SCT for SDH (Node 8)	Van
63	ENT	I1 & I2	ENT, CPs & ENT NPB	WR1a submission	Van
64	ENT	I1 - I3	ENT & Portal building	SCT for fiber cable & SDH (Node 9)	Van
65	ENT	I1 - I3	ENT & Portal building	SCT for PBX	Van



Delcan-Imtech-GTECH Joint Venture
Contract No. HY/2003/05
Route 8 - Traffic Control and Surveillance System

道易通聯營公司
DELCAN-IMTECH-GTECH
JOINT VENTURE

Record Date: 03-08-2007

5-week Rolling Programme of Site Works
Rev: 0

Item No.	Civil Area	Portion	Work Area	Activity	[8]Type of major equipment / plant to be used																																					
										Aug-07																															Sep-07	
						S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
						28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2
66	ENT	I1 - I3	ENT (ADB & Toll plaza)	SCT for PA	Van																																					
67	ENT	I1 - I3	ENT & Portal building	SCT for fibre cable test (Node 7 & 8)	Van				A	A	A	A																														
68	ENT	I1 - I3	ENT & Portal building	SCT for Radio system	Van																																					
69	ENT	I1	EBT BV, Kiosk K3	SCT for Radio system	Van																																					
70	ENT	I1 - I3	ENT & Portal building	SAT for Central system (AID, Video wall, TCS,CMCS, TMIS/TIS)	Van																																					
71	ENT	I1 - I3	ENT & Portal building	SAT for BPBX	Van			R		R	R	R																														
72	ENT	I1 - I3	ENT & Portal building	SAT for PA	Van																																					
73	ENT	I1 - I3	ENT & Portal building	SAT of Central System (AID, Video wall, TCS, CMCS & TMIS / TIS)	Van																																					
74	LCKV	J1 & J2	LCKV	SCT for fiber cable	Van																																					
75	Road T3	G	T3	SCT for SDH (Node 12)	Van																																					
76	T3 & RCFE	G & H3	T3 & RCFE	SCT for Traffic Control Devices	Van																																					
77	NSCV	D	NSCV	Routine checkings	Van																																					
78	NSCV	D	NSCV	[2] TCSS Traffic field equipment & Cabinet	Crane Lorry	R		R	R	R	R	R																														
79	NSCV	D	NSCV	Cable laying	Van																																					
80	WKH	D	WKH	[2] TCSS Traffic field equipment	Crane Lorry																																					
81	WKH	D	WKH, FVMS F9X (TTA)	[3] & [4] TCSS's field equipment and related cable containment installation	Van																																					
82	NWT	B & C	NWT (E/B, W/B & WEB)	Routine checkings	Van																																					
83	NWT	B	WTYV, Gantry	Installation of TCSS equipment	Scissor lift					R																																
84	NWT	D	WPB & WCB	Fill-up opening & PA system remedial work	Van				A	A	A																															
85	NWT	D	EPB	PA cable laying	Van							A																														

Legend :
= Planned activity
= Work Done
= Public Holiday

R - Re-scheduled
N - New activity
A - Awaiting spatial co-ordination for TCSS installation

Note:
[1] Works depends on spatial co-ordination among related Main Contractor and TCSS.
[2] Works Subject to Traffic Tube arrangement
[3] Works subject to condition of site access & civil provision.
[4] Works depend on Civil Contractor to complete / rectify their provision

Distribution: Arup-Johnny Mac, Hara,Alex C, Franco L, Hamlyn K, Joseph C, KT Chan, Patrick L, Simon Cheung,
Philip C, PF Li, Sharon H, Tony C, Wilson W, Winnie M, Donald L, Johnny L, Kenny C , Thomas Wong, Andy Wong

Remark: 1) The schedule only shows the anticipated works planned and shall be subject to changes which will be reported by daily labour forecast on ad-hoc bases.
2) Should it have any query on the above activity, please approach the following personnel.
R8K : KY Chan / J. Lam / A. Kwok / A. Luk ; R8T: KY Chan / A. Kan / CK Fung / A. Luk
R8K / R8T - SCT / SAT: KY Chan / YS Ma / HF Leung

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	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. The complaint was raised by the Citybase Property Management Ltd. (the management company of Nob Hill) and the Secretarty 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.	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: ▪ 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) 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. 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. 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. 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. 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	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				Cheung Road, which is located very close to this building, especially at or above the Podium Floor (i.e. 5/F). 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: • 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. 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.	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40330	Site Areas near Nob Hill	30 March 2004	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. 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.	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. 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: • 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	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. NECSO referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 6 April 2004	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. 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. 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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. 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). 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 • 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	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. 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. The complaint was raised by Mr. Chan,	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. 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. 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			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.	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. 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. Nevertheless, the Contractor was recommended to adopt the following measures to avoid re-occurrence of similar incidents: • 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	22-Jul-04 (by EPD) 09-Aug-04 (by ET Leader)	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. 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: 1. **Area A**: Works area between Nob Hill and Lai Chi Kok Park Swimming Pool 2. **Area B**: Works area between Ching	***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. **Area A:** ▪ 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) **Area B:** No construction activity was undertaken in the concerned period. ***Review of Environmental Monitoring Results*** The routine monitoring stations, which are in the vicinity of the concerned works areas, include: Noise Monitoring	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			Cheung Road and Mei Lai Road / Lai Wan Road opposite to Mei Foo Sun Cheung (Phase 5) and Lai Chi Kok Public Library.	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. ***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. ***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: • 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 8th Feb 2005 regarding construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project	***Construction Activities*** During the weekly site inspection on 17 Feb 05, piling work was being conducted at the concerned. The major powered	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			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. 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.	mechanical equipment (PME) in operation included a mobile crane, an air compressor, a reverse circulation drill and a generator. 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. ***Environmental Monitoring*** 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 threes 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)). 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). ***Conclusions*** 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. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise impacts.	
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	***Construction Activities*** 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	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			complaint to the Environmental Team (ET) Leader of the Project on 22 Mar 05. 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.	nail work and installation of u-channel and manholes. The major powered mechanical equipment included excavators, drilling machine and air compressor. 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. ***Environmental Monitoring*** 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. ***Conclusion*** 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.	
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	***Construction Activities*** 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			referred by the Resident Site Staff to the Environmental Team (ET) Leader on 30th, 31st March, 4th and 7th April 2005, respectively.	***Environmental Monitoring*** 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. ***Conclusion*** 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. ***Mitigation*** 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).	
50404-v2	Mei Foo Sun Chuen	4-Apr-05 (by ET Leader via RSS)	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	***Construction Activities*** 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			April 2005.	***Environmental Monitoring*** According to the EM&A Manual, Mei Foo Sun Chuen, Phase 5 (NM4) is designated as one of the noise monitoring stations. Since the commencement of the impact monitoring programme, the construction noise levels recorded at this station were all below the noise criterion. ***Conclusion*** 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. ***Mitigation*** 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.	
50613	Mei Foo Sun Chuen	7-Jun-05 (by EPD) 13-Jun-05 (by ET Leader)	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.	*Site Activities* 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			The complainant was particularly concerned about the fugitive dust emission during rock / concrete breaking activities.	*Observations* 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. 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. 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. ***Conclusion*** 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. However, corrective action had been taken by the Contractor and the situation was found improved during the follow-up inspections.	
50721	Hei Lai House, Wah Lai Estate	21-Jul-05 (by ET Leader)	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.	*Site Activities* 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. 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			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. 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.	*Noise Measurement* Ad-hoc measurements were carried out on the roof of Hei Lai House on 25 July 2005. 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. *Conclusion* Since the noise measurement results at Wah Lai Estate were below 75 dB(A), the complaint was considered not justifiable. Nevertheless, noise mitigation measures have been implemented by the Contractor to minimize the noise impact arising from the breaking activities: 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)	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. According to EPD, the complaint was	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. ***Site Inspection*** After receipt of the complaint, an ad-hoc site inspection was carried by ET on 9 November 2005 and the following	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			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.	observations were made: 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. *Environmental Monitoring* 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. *Conclusion* Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable.	
60118	Lai Po Road near Hoi Lai Estate	18-Jan-06 (by the ET Leader)	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. According to EPD, the complaint was lodged by a resident of Hoi Ming	***Site Activities*** 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: • 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. The above night works, which involved operation of tractor,	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			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.	mobile crane, lifting frame and generator, were undertaken under the two construction noise permits CNP no. GW-RW0739-05 and GW-RW0740-05. ***Environmental Monitoring*** 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). ***Conclusion*** Based on the information collected and the monitoring results, the complaint is considered not justifiable. Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community.	
60119	Mei Foo Sun Chuen (Phase 5)	18-Jan-06 (by the ET Leader)	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. According to EPD, the complaint was raised by a resident of Mei Foo Sun Chuen via a Sham Shui Po District	***Site Activities*** The site of concern was likely to be CCR-S4, CCR-R2 and CCR-R3. According to RSS's records, site activities included: • 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. ***Site Inspection*** After receipt of the complaint, an ad-hoc site inspection was carried by ET on 19 January 2006. No environmental deficiency	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			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.	regarding construction dust was identified during the inspection. ***Environmental Monitoring*** All monitoring results in Jan 06 revealed that no exceedance was recorded for the air quality (1-hr and 24-hr TSP) criteria. ***Contractor's Action*** The Contractor of R8-LCKV had implemented several dust mitigation measures: • 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. *Conclusion* 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.	
60213 60216 60220 60222	Hoi Lai Estate (Lai Po Road)	13-Feb-06 16-Feb-06 20-Feb-06 22-Feb-06 (by the ET Leader)	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. All about construction noise due to night works at Lai Po Road near Hoi Lai Estate.	***Site Activities*** Since around mid-January 2006, segments were transported to Piers P15 and B4, under the permission of construction noise permit (CNP). 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. ***Site Inspection***	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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). *Conclusion* Based on the information collected and the monitoring results, the complaints are considered not justifiable. It was suspected that the nuisance was caused by the alert sound of tractors during backward movement which servers 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.	
			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. 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.	***Site Activities*** 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 hours16 April 2006. The construction activities near Hoi Lai estate included: - • 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)		The above construction activities were undertaken under a construction noise permit CNP no. GW-RW0172-06. 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. ***Contractor's Action*** The Contractor had implemented a short term mitigation measures:- • 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. ***Conclusion*** Based on the information collected and the monitoring results, the complaints are considered not justified. 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. 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.	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)	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. The complaint was about the Contractor cu 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.	***Site Activities*** 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. 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. ***Contractor Action*** 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 tress. No follow up action was required for this complaint. ***Conclusion*** 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. Based on the information collected, the complaint is considered not justifiable. 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. Compensatory planting will be provided at the concerned area after completion of the construction works in order to improve the landscape and visual impacts. No follow up action will be required for this complaint.	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)	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. 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.	***Site Activities*** 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. 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). ***Contractor Action*** 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 Estaet. Besides, the above night works were undertaken with three construction noise permits. ***Site Inspection*** 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. Conclusion 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. Based on the information collected, the complaint is considered	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				not justifiable. 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.	
60609	Near Phase 5 of Mei Foo Sun Chuen	9-Jun-06 (by ET Leader)	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. 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).	***Site Activities*** As advised by the RSS, the site of concerned area was likely to be CCR-S4. According to the RSS's records, 1 number of excavator mounted breaker was unsed to carry out rock breaking work at CCR-S4 during the period between 9 a.m. and 6 p.m. The excavation and rock breaking activities at the concerned area will likely be completed by end of September 2006. ***Contractor Action*** The silent rock breaking equipment has been used and noise barriers were erected to minimize the noise impact generated from the breaking activity. ***Site Inspection and Environmental Monitoring*** 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. 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. Noise measurement was carried out during the inspection to	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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). 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). ***Conclusion*** Base on the information collection and the monitoring result, the complaint was considered not justifiable. 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. The environmental conditions of the site will be continuously reviewed by the RSS and the ET.	
60626	Near Phase 5 of Mei Foo Sun Chuen	26-Jun-06 (by ET Leader)	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. 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	***Site Activities*** As advised by the RSS, the site of concerned area was likely to be CCR-S4. According to the RSS's records, 1 number of excavator mounted breaker was unsed to carry out rock breaking work at CCR-S4 during the period between 9 a.m. and 6 p.m. The excavation and rock breaking activities at the concerned area will likely be completed by end of September 2006. ***Contractor Action*** The silent rock breaking equipment has been used and noise barriers were erected to minimize the noise impact generated from the breaking activity.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			and eventually reached the ET on 26 June 2006. 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). 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. 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.	***Site Inspection and Environmental Monitoring*** 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. 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. 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). 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) ***Conclusion*** 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. Base on the information collection and the monitoring result, the complaint was considered not justifiable. The Contractor had implemented noise mitigation measures to minimize the noise impact. Besides, the monitoring result were	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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. The environmental conditions of the site will be continuously reviewed by the RSS and the ET.	
60830	Near Mei Foo and Lai King Hill Road	30-Aug-06 (by ET Leader)	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. 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.	***Site Activities*** 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. ***Contractor Action*** After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:- • 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. ***Site Inspection and Environmental Monitoring*** 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. ***Conclusion*** Base on the information collected and the monitoring results, the complaints are considered not justifiable. It was because there was no exceedance of the air quality	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works. However, the Contractor was still reminded to take sufficient dust mitigation measures to minimize the environmental impact on the nearby community: • 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. The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.	
60831	Between Lai Wan Road and Lai King Hill Road	31-Aug-06 (by ET Leader)	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. 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	***Site Activities*** 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. ***Contractor Action*** 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. 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:- • Enclosing the rock dowel drilling work on three sides, i.e.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				top, back and the left hand side (LHS) with tarpaulin sheets; • Spraying water at the hole during drilling; • Wrapping the head of the drilling rig with a wet thick towel. ***Site Inspection and Environmental Monitoring*** 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. ***Conclusion*** Base on the information collected and the monitoring results, the complaint was considered not justifiable. 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. However, the Contractor was still recommended to take the following mitigation measures to minimize the environmental impact on the nearby community: <u>Dust Nuisance</u> • 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
				Construction Noise 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. Wastewater Discharge • 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. 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.	
60925	Near Ching Cheung Road, Nob Hill and Mei Lai Road	25-Sep-06 (by ET Leader)	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. 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	***Site Activities*** 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. ***Contractor Action*** After receiving the complaint, the Contractor has further enhanced the noise mitigation measures as follows:- • 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 ***Site Inspection and Environmental Monitoring***	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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. 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. ***Conclusion*** 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. 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: • 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; The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.	
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 25th October 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently	***Site Activities:*** 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			referred the complaint to the ET Leader on 25th October 2006. 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.	***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. ***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. 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. ***Conclusion*** Based on the information collected, the complaint is considered justifiable although the monitoring results complied with the noise criteria. Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community: • 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. The environmental conditions of the site will be continuously	

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)	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. 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.	***Site Activities*** 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. ***Environmental Monitoring*** 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. ***Conclusion*** Based on the information collected, the complaint is considered not justifiable. Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community: 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. The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental	Closed

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				Team.	
61121-1	Area near Lai Chi Kok Swimming Pool	21-Nov-06 (by ET Leader)	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. 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.	***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. 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. ***Environmental Monitoring*** During the weekly site inspections in November 2006, no non-compliance or observation on noise was recorded. 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. 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. ***Conclusion*** Base on the information collected and the monitoring results, the complaint was considered not justifiable. However, the Contractor was still reminded to finish the	Closed

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				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). The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.	
61121-2	Construction works opposite Tong Nai Kan College	21-Nov-06 (by ET Leader)	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. The complaint was concerned about dust and noise generated from the construction works opposite Tong Nai Kan College in the past years.	***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. 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. ***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. 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. The monitoring results revealed that no exceedance was recorded for the noise and air quality (1-hr and 24-hr TSP). ***Conclusion*** Base on the information collected and the monitoring results, the complaint was considered not justifiable. However, the Contractor was still reminded to continuously implement their practice, such as providing noise barrier with	Closed

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				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. The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.	
61205	Banyan Garden	5th December 2006 (by ET Leader)	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. The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 29th November 2006.	***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. As advised by the RSS, the Contractor has been requested to: - 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. According to the RSS, there is no evidence of hammering of metals on site. *Conclusion* Based on the information collected, the complaint is considered unjustifiable. Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community: - 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. The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.	Closed

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70117-1	P6 – P8 near Lai Chi Kok Road Interchange	17th January 2007 (by ET Leader)	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. The complaint was concerned about noise generated from the P6 – P8 near Lai Chi Kok Road Interchange in the past months.	***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. The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06. 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. *Conclusion* Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions. Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community: - 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	17th January 2007 (by ET Leader)	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. The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 11th January 2007.	***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. The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06. Based on the RSS's record of PME used in the concerned area from 1st December 2006 to 13th January 2007, the construction	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				works complied with the CNP no. GW-RW0624-06. *Conclusion* Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions. Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community: - 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	17th July 2007 (by ET Leader)	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. The complaint was concerned about noise generated from the construction works near Mei Lai Road and Tong Nai Kan College.	***Site Activities*** 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. 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. As advised by the RSS, noise mitigation measures implemented at the concerned site include: - 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. ***Environmental Monitoring*** During the weekly site inspections in July 2007, no non-compliance or observation on noise was recorded. Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) was set up in	Closed

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				order to monitor the noise level generated from the construction activities. 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. *Conclusion* Base on the information collected and the monitoring result, the complaints are considered not justifiable. 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.	