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)

March 2006

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 twenty-eighth 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 March 2006 for Contract No. HY/2003/01, Lai Chi Kok Viaduct (the Project).

- The major site activities undertaken in the reporting month included construction of abutments and columns, excavation works and segment erection works.

Environmental Monitoring and Audit Works

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

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

Table I Summary Table for Events Recorded in the Reporting Month

Parameter	No. of Events		No. of Events Due to the Project	Action Taken
	Action Level	Limit Level		
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	2	2	Notices of exceedances were issued to all relevant parties

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). Five new CNPs were issued to the Project in the reporting month.

Key Information in the Reporting Month

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

Table II Summary Table for Key Information in the Reporting Month

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

Future Key Issues:

Major site activities for the coming month include:

- Construction of abutment and columns;
- Bulk excavation;
- Rock dowels installation;
- Soil nail installation;
- Retaining wall construction;
- Drainage works;
- Cast in-situ of slip roads; and
- Segment erection by lifting frame and launching gantry.

The anticipated environmental impacts will be mainly on noise impact from excavation works and water quality impact during rainy days.

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. An 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. David YEUNG of CH2M HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the twenty-eighth monthly EM&A report summarizing the EM&A works for the Project in March 2006.

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.

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 undertaken in the reporting month were:

- Construction of abutment at slip roads C and D, column at P21 and slip road D;
- Rock dowel installation and soil nail installation at slopes CCR-S1 and CCR-R2;
- Bulk excavation works at CCR-R1, CCR-R3, CCR-R6 and CCR-S4;
- Retaining wall construction at CCR-R1 to R3, R5 and R6;
- Drainage works at Rest Garden area, Hoi Lai Estate, Piers B1, P5, P9 and P10;
- Segment erection by lifting frame at Piers P4, P5 and slip road D;
- Segment erection at launching gantry at night at Piers P17 and P19.
- Segment erection by cranes at Piers P1, P5, P17 and P18;
- Cast in-situ of Slip Road C;
- Cast in-situ and precast segment erection at slip road D; and
- Backfilling slope at CCR-S5.

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. D.F. Lilliman	CRE	2959 0010	2959 0290
		Mr. Henry Liu	SRE	2991 1068	
		Mr. Joseph Chi	RE	2991 1034	
Cinotech	Environmental Team	Dr. Priscilla Choy	The ET Leader	2151 2089	3107 1388
		Mr. Alex Ngai	Audit Team Leader	2151 2090	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. David Yeung	Independent Environmental Checker	2872 2934	2507 2293
		Mr. Billy Yu	Assistant Independent Environmental Checker	2872 2949	
Acciona	Contractor	Mr. Rafael Rubio	Project Director	2956 3300	2956 3331
		Mr. Lawrence Kwok	QA/E Manager		
24-hour Emergency Hotline				2370 9200	-

Summary of EM&A Requirements

1.12 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.

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

1.14 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.

2.19 No Action/Limit Level exceedance was recorded for both 1-hr and 24-hr TSP monitoring.

2.20 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**.

2.21 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 Four designated noise monitoring stations, namely 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*	Description	Location
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) Renovation work was undertaken at the Lai Chi Kok Reception Centre (NM2) and the centre was found vacated. The noise monitoring was suspended since December 2004. Approval for the change of EM&A Programme was granted by EPD on 30th December 2004.

(2) 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 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

3.7 **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

3.8 **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
NM4	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
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

3.9 The microphone head of the sound level meter and calibrator was cleaned with soft cloth regularly.

3.10 The meters were sent to the supplier to check and calibrate on a yearly interval.

Results and Observations

3.11 Noise monitoring was performed at the four designated locations as scheduled in this reporting month.

3.12 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.

3.13 Noise monitoring results and graphical presentations are shown in **Appendix G**.

3.14 No Action Level (noise complaint) exceedance was recorded.

3.15 On 7th and 14th March 2006, noise limit level exceedances were recorded at NM4 (Mei Foo Sun Chuen). According to the field observations, the exceedances were considered related to the construction works of the LCKV Project, which involved the operations of excavator-mounted breakers and drilling machines at NTMM, S1 and S4. Notices of exceedances (NOEs) were issued to the related parties on 8th and 15th March 2006. No further exceedance was identified since 16th March 2006. The exceedance report is provided in **Appendix H**.

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

3.17 At Station 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 were conducted on 2nd, 9th, 16th, 23rd and 30th March 2006 by ET. The audit session on 2nd March 2006 was conducted with the representatives of HyD, IEC, ER, the Contractor and ET.

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 permits/licenses obtained for the Project are summarized in **Table 4.1**. Five 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; (c) 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-RW0648-05	07/10/05	06/04/06	*Location:* Ching Cheung Road and Castle Peak Road *Time Period:* General holidays between 0700-2300 hrs and any other days between 1900-2300 hrs	Valid
GW-RW0662-05	17/10/05	16/03/06	*Location:* Junction of Ching Cheung Road and Castle Peak Road *Time Period:* Any day not being a general holiday between 2100-0700 hrs	Expired
GW-RW0699-05	7/11/05	5/5/06	*Location:* Lai Po Road near West Kowloon Highway *Time Period:* Any day not being a general holiday between 2100-0700 hrs	Valid
GW-RW0716-05	9/11/05	31/3/06	*Location:* Kwai Chung Road and Butterfly Valley Road *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Expired
GW-RW0738-05	15/11/05	14/05/06	*Location:* Lai Po Road near Hoi Lai Estate *Time Period:* General holidays (including Sundays) between 0700-2300 hrs and any other days between 1900-2300 hrs	Valid
GW-RW0739-05	19/11/05	31/03/06	*Location:* Yuet Lun Street, Kwai Chung Road & Butterfly Valley Road *Time Period:* Any day not being a general holiday between 2100-0700 hrs	Expired

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0740-05	16/11/05	14/05/06	*Location:* Lai Po Road near Yuet Lun Street *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Valid
GW-RW0745-05	18/11/05	17/05/06	*Location:* Ching Cheung Road near LCK Swimming Pool *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Valid
GW-RW0757-05	23/11/05	31/03/06	*Location:* Ching Cheung Road near LCK Power Substation *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Expired
GW-RW0824-05	25/12/05	23/04/06	*Location:* Kwai Chung Road *Time Period:* General holidays (including Sundays) between 0900-2100 hrs	Valid
GW-RW0844-05	15/1/06	14/06/06	*Location:* Butterfly Valley *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Valid
GW-RW0867-05	3/2/06	2/8/06	*Location:* Hing Wah Street West (Jetty Area) *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Valid
GW-RW0046-06	3/2/06	2/8/06	*Location:* Butterfly Valley Road near LCK Reception Centre *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Valid
GW-RW0083-06	18/2/06	17/8/06	*Location:* Ching Cheung Road near Mei Foo Sun Chuen *Time Period:* General holidays (including Sundays) between 0700-2300 hrs and any other days between 1900-2300 hrs	Valid
GW-RW0090-06	21/2/06	19/8/06	*Location:* Castle Peak Road near Kom Tsun Street *Time Period:* Any day not being a general holiday between 2300-0700 hrs	Valid
GW-RW0091-06	19/2/06	13/8/06	*Location:* Ching Cheung Road near CLP Substation *Time Period:* General holidays (including Sundays) between 0900-2100 hrs	Valid
GW-RW0093-06	26/2/06	21/5/06	*Location:* Ching Cheung Road near Lai Wan Road *Time Period:* General holidays (including Sundays) between 0700-1900 hrs	Valid
GW-RW0121-06	11/3/06	6/9/06	*Location:* Ching Cheung Road near Castle Peak Road *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	Valid
GW-RW0135-06	16/3/06	15/9/06	*Location:* Butterfly Valley 20/03/06 to 31/03/06 *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day 1/4/06 to 15/9/06 *Time Period:* General holidays (including Sundays) between 0900-2300 hrs and any other days between 1900-0700 hrs on next day	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0142-06	22/3/06	15/9/06	*Location:* Lai Wan Road *Time Period:* Any day not being a general holiday between 2100-0700 hrs on next day	Valid
GW-RW0145-06	31/3/06	30/9/06	*Location: Lai Po Road and Yuet Lun Street* *Time Period:* Any day not being a general holiday between 2100-0700 hrs on next day	Valid
GW-RW0146-06	22/3/06	19/9/06	*Location:* Lai Wan Road *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hrs on next day	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**.

Summary of Exceedances

1-hr and 24-hr TSP Monitoring

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

Construction Noise Monitoring

4.8 On 7th and 14th March 2006, noise limit level exceedances were recorded at NM4 (Mei Foo Sun Chuen). According to the field observations, the exceedances were considered related to the construction works of the LCKV Project, which involved the operations of excavator-mounted breakers and drilling machines at NTMM, S1 and S4. Notices of exceedances (NOEs) were issued to the related parties on 8th and 15th March 2006. In order to rectify the situation, the Contractor had adopted several noise mitigation measures for the drilling and breaking works, including provision acoustic panels. No further exceedance was identified since 16th March 2006.

Implementation Status of Event Action Plans

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

Table 4.2 Observations and Recommendations of Site Audits

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	2-Mar-06	Standing water was observed at various locations (including S4 and Abutment A) of the site. The Contractor was reminded to remove the water as soon as possible to prevent mosquito breeding.	The situation was found improved / rectified during the audit on 9-Mar-06.
	30-Mar-06	Standing water was observed in the sand traps near NTMM. The Contractor was reminded to clear the water as soon as possible to prevent mosquito breeding.	The situation was found improved / rectified during the audit on 3-Apr-06.
Air Quality	2-Mar-06	The Contractor was reminded to provide wheel washing facility and the associated water treatment facilities at the exit at R3.	The situation was found improved / rectified during the audit on 9-Mar-06.
	30-Mar-06	The cement mixing work at NTMM was not properly enclosed. The Contractor was reminded to provide a 3-side and top cover for the works to minimize dust emission.	The situation was found improved / rectified during the audit on 3-Apr-06.
Chemical Management	9-Mar-06	Stain oil was observed on bare ground for the site at Lai Po Road.	The situation was found improved / rectified during the audit on 16-Mar-06.
	16-Mar-06	Leakage diesel oil was observed on bare ground form the generator at Slope 1. Good maintenance should be provided for the generator.	The situation was found improved / rectified during the audit on 23-Mar-06.
	23-Mar-06	Some diesel oil leaked from the air compressor to bare ground was observed in site at Lai Po Road. Good Maintenance and drip tray should be provided for the generator to avoid spillage.	The situation was found improved / rectified during the audit on 30-Mar-06.

Summary of Complaint and Prosecution

4.10 No environmental complaint or prosecution was received in the reporting month.

4.11 There were 22 environmental complaints 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 and drilling works at S1, S4 and R1 to R3.
- Surface runoff generated at the areas S4, R2 and R3 as well as Wai Man Tsuen Open Channel during rainy days;
- Dust generation from stockpiles of dusty materials, exposed slope surfaces, breaking works, excavation works and soil nail installations at S1, S4, R1 to R3;
- Standing water accumulated within the site after rains.
- Nighttime construction noise from segment transportation and segment erection at Lai Po Road.

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 in coming months include:

- Construction of abutment at slip roads C, D and column at pier P21 and slip road D;
- Bulk excavation works, rock dowels installation and soil nails installation at slope CCR-S1;
- Bulk excavation works and soil nails installation at slope CCR-S4;
- Bulk excavation works and retaining wall construction at CCR-R1, CCR-R3, CCR-R5 and CCR-R6;
- Drainage works at Rest Garden area, Hoi Lai Estate, piers B1 and P5;
- Segment erection by lifting frame at piers P1 and P4;
- Segment erection by launching gantry at night at piers P19 and P20;
- Cast in-situ of slip road C; and
- Cast in-situ and precast segment erection at slip road D.

5.4 The tentative construction program for the Project is provided in **Appendix L**.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

6.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.

6.2 Two project-related noise level exceedances were recorded at Station NM4 on 7th and 14th March 2006. Rectification actions were taken by the Contractor and no further exceedance was recorded since 16th March 2006.

6.3 No environmental complaint or prosecution was received in the reporting month.

Recommendations

6.4 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.

Noise Impact

- To provide temporary noise barriers for noisy activities, such as breaking works and drilling works at S1 and S4.
- 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.

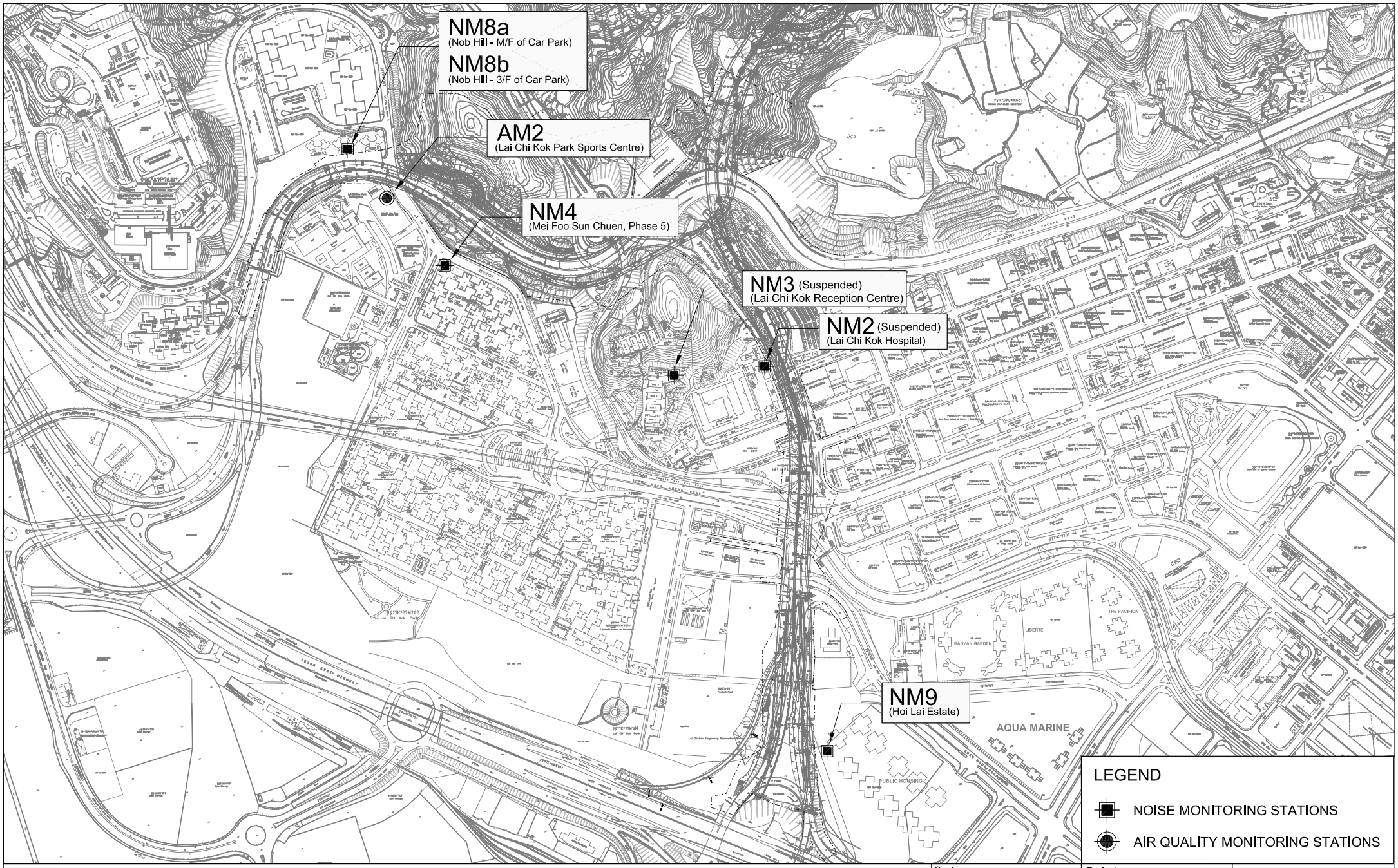
Dust Impact

- To ensure water spray is applied for the dust emissive works, such as soil nail installation, loading and unloading of soil materials, rock breaking works.
- To cover soil stockpiles and exposed slope surface by impervious sheets or other means.

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. MA3024/20/0015

Station: Lai Chi Kok Sport Centre (AM2) | Operator: WK
Date: 1-Feb-06 | Next Due Date: 31-Mar-06
Equipment No.: A-01-20 | Serial No. 0818

Ambient Condition			
Temperature, Ta (K)	295.3	Pressure, Pa (mmHg)	766.9

Orifice Transfer Standard Information					
Equipment No.:	A-04-03	Slope, mc	0.0572	Intercept, bc	0.0261
Last Calibration Date:	23-Apr-05	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	22-Apr-06	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	12.2	3.52	61.16	7.9	2.84
2	8.9	3.01	52.17	5.5	2.37
3	7.4	2.75	47.53	4.6	2.16
4	5.3	2.32	40.16	3.0	1.75
5	3.1	1.78	30.61	1.9	1.39

By Linear Regression of Y on X

Slope , mw = 0.0478 **Intercept, bw =** -0.1150

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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.70**

Remarks:

Conducted by: W.K. Tang Signature: Date: 1 Feb. 06

Checked by: Signature: Date: 1 Feb 06

F:\Equipment\Calibration\HVS\A-01-20\20060201

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/20/0016

Station: Lai Chi Kok Sport Centre (AM2) | Operator: KH
Date: 25-Mar-06 | Next Due Date: 24-May-06
Equipment No.: A-01-20 | Serial No. 0818

Ambient Condition			
Temperature, Ta (K)	296	Pressure, Pa (mmHg)	763.6

Orifice Transfer Standard Information					
Equipment No.:	A-04-03	Slope, mc	0.0572	Intercept, bc	0.0261
Last Calibration Date:	23-Apr-05	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	22-Apr-06	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	12.8	3.60	62.45	8.4	2.91
2	10.6	3.27	56.79	6.9	2.64
3	8.2	2.88	49.89	5.5	2.36
4	5.4	2.34	40.40	3.7	1.93
5	3.3	1.83	31.48	2.2	1.49

By Linear Regression of Y on X

Slope , mw = 0.0454 **Intercept, bw =** 0.0788

Correlation coefficient* = 0.9995

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.08**

Remarks:

Conducted by: KH Signature: Date: 25 Mar 06

Checked by: Signature: Date: 25 Mar 06

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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/05/50503
Date of Issue:	2005-05-03
Date Received:	2005-05-03
Date Tested:	2005-05-03
Date Completed:	2005-05-03
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
Project No.	: C13
Equipment No.	: A-03-01

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 70%
Pressure	: 100.8 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	20.0	20.1

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

Patrick.

PATRICK TSE
Operation Manager

D.04.03

Andersen Instruments, Inc.

Orifice Transfer Standard Certification Worksheet

Date: 04/23/2005 **Rootsmeter S/N:** 9736553 **Ta:** 22.00 C
Operator: RA **Calibrator S/N:** 1888A **Pa:** 761.0 mm Hg
Calibrator Model #: G25A **Placed in service:**

Run	Vol. Init. (m3)	Vol. Final (m3)	Δ Vol. (m3)	Δ Time (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1.00	2.00	1.00	1.404	3.08	2.00
2	3.00	4.00	1.00	0.997	6.17	4.00
3	5.00	6.00	1.00	0.889	7.85	5.00
4	7.00	8.00	1.00	0.848	8.59	5.50
5	9.00	10.00	1.00	0.700	12.42	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H(Ta / Pa)}$ (y-axis)
1.007	0.717	1.422	0.996	0.709	0.881
1.003	1.006	2.011	0.992	0.995	1.246
1.000	1.125	2.248	0.990	1.113	1.393
0.999	1.179	2.358	0.989	1.166	1.461
0.994	1.420	2.844	0.984	1.405	1.762
	m =	2.0208		m =	1.2658
	b =	-0.024947		b =	-0.015460
	r =	0.999989		r =	0.999989

Calculations

$$Vstd = \Delta Vol((Pa - \Delta P) / Pstd)(Tstd / Ta)$$
$$Qstd = Vstd / \Delta Time$$
$$Va = \Delta Vol((Pa - \Delta P) / Pa)$$
$$Qa = Va / \Delta Time$$

For subsequent flow rate calculations:

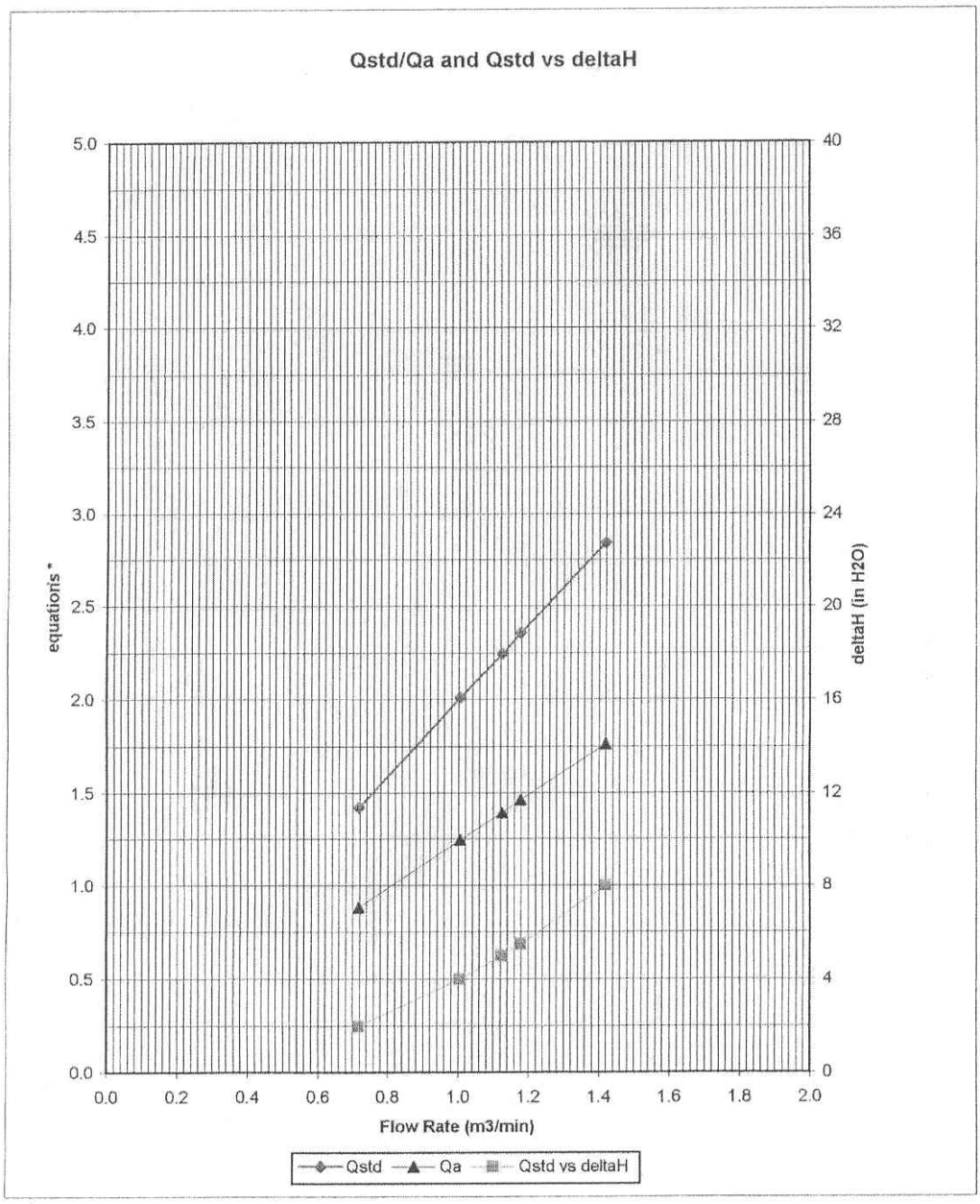
$$Qstd = 1 / m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right) - b\right)$$
$$Qa = 1 / m\left(\left(\sqrt{\Delta H(Ta / Pa)}\right) - b\right)$$

Standard Conditions:
Tstd: 298.18 ° K
Pstd: 760 mm Hg

where:
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (° K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

For additional information consult:
1. The Federal Register, Vol. 47, No.234, pp. 54896-54921, Dec. 6, 1982
2. Quality Assurance Handbook, Vol II (EPA 60074-77-277a), Section 2.11
3. Andersen Instruments, Inc. Instruction Manual

Notes:
1. Copies of this calibration are not kept on file.
2. EPA recommends calibrators should be recalibrated after one year of use.



* 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/51216/1
Date of Issue:	2005-12-16
Date Received:	2005-12-15
Date Tested:	2005-12-15
Date Completed:	2005-12-16
Next Due Date:	2006-12-15
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.	: 2337665
Microphone No.	: 2289749
Equipment No.	: N-01-01

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 63%

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

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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Test Report No.:	C/N/51116/1
Date of Issue:	2005-11-16
Date Received:	2005-11-15
Date Tested:	2005-11-15
Date Completed:	2005-11-16
Next Due Date:	2006-11-15
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	: 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

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TEST REPORT

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

Test Report No.:	C/N/50905-1
Date of Issue:	2005-09-06
Date Received:	2005-09-05
Date Tested:	2005-09-06
Date Completed:	2005-09-06
Next Due Date:	2006-09-05
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	: 22 degree Celsius
Relative Humidity	: 65%

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.**

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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3 On Yiu Street,
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ATTN: **Mr. Henry Leung**

Test Report No.:	C/N/50905-2
Date of Issue:	2005-09-06
Date Received:	2005-09-05
Date Tested:	2005-09-05
Date Completed:	2005-09-06
Next Due Date:	2006-09-05
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	: 21 degree Celsius
Relative Humidity	: 62%
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/51015/1
Date of Issue:	2005-10-15
Date Received:	2005-10-13
Date Tested:	2005-10-14
Date Completed:	2005-10-15
Next Due Date:	2006-10-14
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.	: 2394976
Microphone No.	: 2407349
Equipment No.	: N-01-05

Test conditions:

Room Temperatre	: 22 degree Celsius
Relative Humidity	: 65%

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.**

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
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Test Report No.:	C/05/1115-1
Date of Issue:	2005-11-15
Date Received:	2005-11-14
Date Tested:	2005-11-15
Date Completed:	2005-11-15
Next Due Date:	2006-11-14
Page:	1 of 1

ATTN: **Mr. Henry Leung**

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	: 65%
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.**

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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/06/60304
Date of Issue:	2006-03-04
Date Received:	2006-03-03
Date Tested:	2006-03-03
Date Completed:	2006-03-04
Next Due Date:	2007-03-04

ATTN: **Mr. Henry Leung**

Page: 1 of 1

Item for calibration:

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

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 71%
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.

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/50905-1A
Date of Issue:	2005-09-06
Date Received:	2005-09-05
Date Tested:	2005-09-05
Date Completed:	2005-09-06
Next Due Date:	2006-09-05

ATTN: **Mr. Henry Leung**

Page: 1 of 1

Item for calibration:

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

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 62%
Pressure	: 1006.5hPa

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
Air Quality and Noise Monitoring Schedule for March 2006

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

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

AM2	Lai Chi Kok Sports Centre
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 April 2006

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

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

AM2	Lai Chi Kok Sports Centre
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-Mar-2006	0:00	2.2	WSW
1-Mar-2006	1:00	2.7	W
1-Mar-2006	2:00	2.7	WSW
1-Mar-2006	3:00	2.2	W
1-Mar-2006	4:00	2.7	WSW
1-Mar-2006	5:00	2.7	SSW
1-Mar-2006	6:00	2.2	WSW
1-Mar-2006	7:00	1.8	SW
1-Mar-2006	8:00	2.2	W
1-Mar-2006	9:00	2.7	WSW
1-Mar-2006	10:00	3.1	WSW
1-Mar-2006	11:00	3.1	WSW
1-Mar-2006	12:00	4.5	WSW
1-Mar-2006	13:00	5.4	WSW
1-Mar-2006	14:00	4.5	SW
1-Mar-2006	15:00	3.1	WSW
1-Mar-2006	16:00	3.1	SW
1-Mar-2006	17:00	2.2	W
1-Mar-2006	18:00	2.2	WSW
1-Mar-2006	19:00	2.7	WSW
1-Mar-2006	20:00	3.1	WSW
1-Mar-2006	21:00	3.6	WSW
1-Mar-2006	22:00	2.2	SW
1-Mar-2006	23:00	2.2	SW
2-Mar-2006	0:00	2.7	WSW
2-Mar-2006	1:00	2.2	SW
2-Mar-2006	2:00	2.2	WSW
2-Mar-2006	3:00	2.7	WSW
2-Mar-2006	4:00	3.1	WSW
2-Mar-2006	5:00	2.2	WSW
2-Mar-2006	6:00	1.8	SW
2-Mar-2006	7:00	1.8	SW
2-Mar-2006	8:00	2.2	WSW
2-Mar-2006	9:00	2.2	WNW
2-Mar-2006	10:00	3.1	WNW
2-Mar-2006	11:00	2.7	WNW
2-Mar-2006	12:00	2.2	W
2-Mar-2006	13:00	3.1	WNW
2-Mar-2006	14:00	3.6	WNW
2-Mar-2006	15:00	1.8	WNW
2-Mar-2006	16:00	2.2	WNW
2-Mar-2006	17:00	2.2	W
2-Mar-2006	18:00	0.9	WSW
2-Mar-2006	19:00	0.9	NE
2-Mar-2006	20:00	0	ENE
2-Mar-2006	21:00	0	ENE
2-Mar-2006	22:00	0	---
2-Mar-2006	23:00	0	---
3-Mar-2006	0:00	0	---
3-Mar-2006	1:00	0	---
3-Mar-2006	2:00	0	---
3-Mar-2006	3:00	0	ENE
3-Mar-2006	4:00	0	---
3-Mar-2006	5:00	0	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Mar-2006	6:00	0	---
3-Mar-2006	7:00	0	---
3-Mar-2006	8:00	0	---
3-Mar-2006	9:00	0.4	WNW
3-Mar-2006	10:00	1.8	WNW
3-Mar-2006	11:00	2.7	WNW
3-Mar-2006	12:00	2.7	WNW
3-Mar-2006	13:00	2.2	WNW
3-Mar-2006	14:00	2.7	N
3-Mar-2006	15:00	2.7	N
3-Mar-2006	16:00	1.3	N
3-Mar-2006	17:00	2.7	N
3-Mar-2006	18:00	1.3	E
3-Mar-2006	19:00	0	SE
3-Mar-2006	20:00	0.4	S
3-Mar-2006	21:00	0	NE
3-Mar-2006	22:00	0.9	W
3-Mar-2006	23:00	0.4	W
4-Mar-2006	0:00	0	W
4-Mar-2006	1:00	1.3	W
4-Mar-2006	2:00	2.2	W
4-Mar-2006	3:00	1.8	WNW
4-Mar-2006	4:00	1.8	WNW
4-Mar-2006	5:00	1.3	WNW
4-Mar-2006	6:00	2.7	SSW
4-Mar-2006	7:00	1.8	WSW
4-Mar-2006	8:00	4	W
4-Mar-2006	9:00	3.1	W
4-Mar-2006	10:00	4.5	W
4-Mar-2006	11:00	3.6	WNW
4-Mar-2006	12:00	3.1	WNW
4-Mar-2006	13:00	3.1	WNW
4-Mar-2006	14:00	3.6	WNW
4-Mar-2006	15:00	2.7	WNW
4-Mar-2006	16:00	1.3	WNW
4-Mar-2006	17:00	0.9	WNW
4-Mar-2006	18:00	0.4	WNW
4-Mar-2006	19:00	1.8	W
4-Mar-2006	20:00	3.1	WNW
4-Mar-2006	21:00	2.2	WNW
4-Mar-2006	22:00	3.1	W
4-Mar-2006	23:00	3.1	WNW
5-Mar-2006	0:00	3.1	WNW
5-Mar-2006	1:00	1.8	WNW
5-Mar-2006	2:00	0.9	WNW
5-Mar-2006	3:00	0	WNW
5-Mar-2006	4:00	0	E
5-Mar-2006	5:00	0	SSE
5-Mar-2006	6:00	0	W
5-Mar-2006	7:00	0.4	SW
5-Mar-2006	8:00	0	WSW
5-Mar-2006	9:00	0.4	S
5-Mar-2006	10:00	0	ESE
5-Mar-2006	11:00	0.4	SSW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Mar-2006	12:00	2.2	SW
5-Mar-2006	13:00	2.7	WSW
5-Mar-2006	14:00	3.1	WSW
5-Mar-2006	15:00	2.2	WSW
5-Mar-2006	16:00	2.7	WSW
5-Mar-2006	17:00	2.2	SW
5-Mar-2006	18:00	2.2	W
5-Mar-2006	19:00	1.3	SSW
5-Mar-2006	20:00	2.7	SW
5-Mar-2006	21:00	2.7	WSW
5-Mar-2006	22:00	3.1	SW
5-Mar-2006	23:00	0.9	WSW
6-Mar-2006	0:00	2.7	WSW
6-Mar-2006	1:00	1.8	SSW
6-Mar-2006	2:00	3.1	WSW
6-Mar-2006	3:00	3.6	W
6-Mar-2006	4:00	3.1	WSW
6-Mar-2006	5:00	3.1	W
6-Mar-2006	6:00	2.2	W
6-Mar-2006	7:00	0.9	WSW
6-Mar-2006	8:00	1.3	WSW
6-Mar-2006	9:00	0.9	SSW
6-Mar-2006	10:00	1.8	W
6-Mar-2006	11:00	1.3	SW
6-Mar-2006	12:00	0.9	W
6-Mar-2006	13:00	1.8	W
6-Mar-2006	14:00	1.3	W
6-Mar-2006	15:00	0.4	W
6-Mar-2006	16:00	1.3	W
6-Mar-2006	17:00	0.4	W
6-Mar-2006	18:00	0.9	W
6-Mar-2006	19:00	0.4	WNW
6-Mar-2006	20:00	0	WNW
6-Mar-2006	21:00	0.4	WNW
6-Mar-2006	22:00	0	---
6-Mar-2006	23:00	0	---
7-Mar-2006	0:00	0	---
7-Mar-2006	1:00	0	---
7-Mar-2006	2:00	0	WNW
7-Mar-2006	3:00	0	WNW
7-Mar-2006	4:00	0	WNW
7-Mar-2006	5:00	0	---
7-Mar-2006	6:00	0	---
7-Mar-2006	7:00	0	SSW
7-Mar-2006	8:00	0.9	W
7-Mar-2006	9:00	2.7	WSW
7-Mar-2006	10:00	3.1	SW
7-Mar-2006	11:00	4	WSW
7-Mar-2006	12:00	4.9	WSW
7-Mar-2006	13:00	4.5	W
7-Mar-2006	14:00	4.5	W
7-Mar-2006	15:00	4.9	WNW
7-Mar-2006	16:00	3.6	W
7-Mar-2006	17:00	4	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Mar-2006	18:00	3.1	WSW
7-Mar-2006	19:00	3.6	W
7-Mar-2006	20:00	3.1	WNW
7-Mar-2006	21:00	4	W
7-Mar-2006	22:00	4	WSW
7-Mar-2006	23:00	4	WSW
8-Mar-2006	0:00	3.6	WSW
8-Mar-2006	1:00	4	WSW
8-Mar-2006	2:00	4	WSW
8-Mar-2006	3:00	3.6	WSW
8-Mar-2006	4:00	2.2	WSW
8-Mar-2006	5:00	2.7	WSW
8-Mar-2006	6:00	3.6	WSW
8-Mar-2006	7:00	3.6	WSW
8-Mar-2006	8:00	2.7	WSW
8-Mar-2006	9:00	3.6	WSW
8-Mar-2006	10:00	4.5	W
8-Mar-2006	11:00	4	WSW
8-Mar-2006	12:00	3.6	WSW
8-Mar-2006	13:00	4	WSW
8-Mar-2006	14:00	3.6	W
8-Mar-2006	15:00	3.6	WNW
8-Mar-2006	16:00	1.8	WNW
8-Mar-2006	17:00	1.8	W
8-Mar-2006	18:00	1.8	W
8-Mar-2006	19:00	2.2	W
8-Mar-2006	20:00	0	W
8-Mar-2006	21:00	0.4	WNW
8-Mar-2006	22:00	0.9	WNW
8-Mar-2006	23:00	0	WNW
9-Mar-2006	0:00	0.4	W
9-Mar-2006	1:00	0	---
9-Mar-2006	2:00	0	---
9-Mar-2006	3:00	0	---
9-Mar-2006	4:00	0	---
9-Mar-2006	5:00	0	---
9-Mar-2006	6:00	0	---
9-Mar-2006	7:00	0	---
9-Mar-2006	8:00	0	---
9-Mar-2006	9:00	0.9	WNW
9-Mar-2006	10:00	1.8	WNW
9-Mar-2006	11:00	1.3	WNW
9-Mar-2006	12:00	0.4	WNW
9-Mar-2006	13:00	2.7	W
9-Mar-2006	14:00	1.3	WNW
9-Mar-2006	15:00	1.8	NNE
9-Mar-2006	16:00	1.8	NE
9-Mar-2006	17:00	2.2	NE
9-Mar-2006	18:00	1.8	ENE
9-Mar-2006	19:00	1.3	E
9-Mar-2006	20:00	0	ESE
9-Mar-2006	21:00	0	ENE
9-Mar-2006	22:00	0	---
9-Mar-2006	23:00	0	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Mar-2006	0:00	0	---
10-Mar-2006	1:00	0	---
10-Mar-2006	2:00	0	---
10-Mar-2006	3:00	0	---
10-Mar-2006	4:00	0	---
10-Mar-2006	5:00	0	---
10-Mar-2006	6:00	0	ENE
10-Mar-2006	7:00	0	SSE
10-Mar-2006	8:00	0	---
10-Mar-2006	9:00	0	WNW
10-Mar-2006	10:00	2.2	W
10-Mar-2006	11:00	2.7	W
10-Mar-2006	12:00	4	WSW
10-Mar-2006	13:00	4.5	WSW
10-Mar-2006	14:00	3.6	WNW
10-Mar-2006	15:00	3.6	WNW
10-Mar-2006	16:00	4.5	WNW
10-Mar-2006	17:00	3.6	WNW
10-Mar-2006	18:00	3.6	W
10-Mar-2006	19:00	2.2	WSW
10-Mar-2006	20:00	2.2	WSW
10-Mar-2006	21:00	0.4	WNW
10-Mar-2006	22:00	0.4	WSW
10-Mar-2006	23:00	0.9	W
11-Mar-2006	0:00	1.8	SSW
11-Mar-2006	1:00	1.8	WSW
11-Mar-2006	2:00	0.4	W
11-Mar-2006	3:00	0.9	WNW
11-Mar-2006	4:00	1.3	W
11-Mar-2006	5:00	0.4	WSW
11-Mar-2006	6:00	2.2	W
11-Mar-2006	7:00	2.7	WNW
11-Mar-2006	8:00	3.1	W
11-Mar-2006	9:00	1.8	W
11-Mar-2006	10:00	3.1	W
11-Mar-2006	11:00	2.7	WSW
11-Mar-2006	12:00	1.3	WSW
11-Mar-2006	13:00	1.8	W
11-Mar-2006	14:00	3.6	WSW
11-Mar-2006	15:00	1.8	W
11-Mar-2006	16:00	0.9	W
11-Mar-2006	17:00	1.3	W
11-Mar-2006	18:00	1.3	WSW
11-Mar-2006	19:00	0.9	WSW
11-Mar-2006	20:00	1.3	S
11-Mar-2006	21:00	0.4	S
11-Mar-2006	22:00	1.3	SSW
11-Mar-2006	23:00	0.9	SSW
12-Mar-2006	0:00	0.4	SSW
12-Mar-2006	1:00	0.4	S
12-Mar-2006	2:00	0.4	SW
12-Mar-2006	3:00	0	WSW
12-Mar-2006	4:00	0	W
12-Mar-2006	5:00	0	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Mar-2006	6:00	0	---
12-Mar-2006	7:00	0.4	W
12-Mar-2006	8:00	0.4	W
12-Mar-2006	9:00	0	W
12-Mar-2006	10:00	0.9	SSW
12-Mar-2006	11:00	0.4	SW
12-Mar-2006	12:00	1.3	WNW
12-Mar-2006	13:00	2.2	W
12-Mar-2006	14:00	0.9	W
12-Mar-2006	15:00	0.9	WSW
12-Mar-2006	16:00	0.4	SSW
12-Mar-2006	17:00	0.4	W
12-Mar-2006	18:00	2.7	WNW
12-Mar-2006	19:00	4	WNW
12-Mar-2006	20:00	3.6	WNW
12-Mar-2006	21:00	3.1	W
12-Mar-2006	22:00	3.6	WSW
12-Mar-2006	23:00	4	WSW
13-Mar-2006	0:00	3.6	WNW
13-Mar-2006	1:00	4	WNW
13-Mar-2006	2:00	3.6	WSW
13-Mar-2006	3:00	5.8	WNW
13-Mar-2006	4:00	4.9	WNW
13-Mar-2006	5:00	3.1	WSW
13-Mar-2006	6:00	3.1	WSW
13-Mar-2006	7:00	2.7	SW
13-Mar-2006	8:00	2.7	WSW
13-Mar-2006	9:00	4	WNW
13-Mar-2006	10:00	4	WSW
13-Mar-2006	11:00	2.7	WSW
13-Mar-2006	12:00	2.7	WSW
13-Mar-2006	13:00	1.8	W
13-Mar-2006	14:00	3.1	WSW
13-Mar-2006	15:00	2.2	WSW
13-Mar-2006	16:00	2.2	SW
13-Mar-2006	17:00	2.7	WSW
13-Mar-2006	18:00	1.8	WSW
13-Mar-2006	19:00	2.2	WSW
13-Mar-2006	20:00	3.1	WSW
13-Mar-2006	21:00	3.1	WNW
13-Mar-2006	22:00	2.7	WNW
13-Mar-2006	23:00	3.6	WNW
14-Mar-2006	0:00	3.1	WNW
14-Mar-2006	1:00	1.3	WNW
14-Mar-2006	2:00	2.7	WNW
14-Mar-2006	3:00	3.6	WNW
14-Mar-2006	4:00	4	WNW
14-Mar-2006	5:00	4.9	WNW
14-Mar-2006	6:00	3.1	WNW
14-Mar-2006	7:00	3.1	WNW
14-Mar-2006	8:00	1.8	WNW
14-Mar-2006	9:00	2.2	WSW
14-Mar-2006	10:00	1.8	WNW
14-Mar-2006	11:00	3.1	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Mar-2006	12:00	4	WNW
14-Mar-2006	13:00	3.6	WNW
14-Mar-2006	14:00	2.7	WNW
14-Mar-2006	15:00	3.6	W
14-Mar-2006	16:00	3.6	WNW
14-Mar-2006	17:00	2.2	WNW
14-Mar-2006	18:00	1.8	WNW
14-Mar-2006	19:00	0.4	SSW
14-Mar-2006	20:00	0.4	SW
14-Mar-2006	21:00	0.9	SSW
14-Mar-2006	22:00	0.4	SSW
14-Mar-2006	23:00	0	WNW
15-Mar-2006	0:00	0	WNW
15-Mar-2006	1:00	0.4	WNW
15-Mar-2006	2:00	0	WNW
15-Mar-2006	3:00	0	---
15-Mar-2006	4:00	0	WSW
15-Mar-2006	5:00	0.9	WSW
15-Mar-2006	6:00	1.8	WSW
15-Mar-2006	7:00	1.8	SSW
15-Mar-2006	8:00	1.8	SW
15-Mar-2006	9:00	1.8	WSW
15-Mar-2006	10:00	1.3	WSW
15-Mar-2006	11:00	0.9	WNW
15-Mar-2006	12:00	1.8	WNW
15-Mar-2006	13:00	1.8	WSW
15-Mar-2006	14:00	1.8	W
15-Mar-2006	15:00	2.2	WNW
15-Mar-2006	16:00	1.3	WNW
15-Mar-2006	17:00	0.9	W
15-Mar-2006	18:00	0.4	WNW
15-Mar-2006	19:00	1.3	W
15-Mar-2006	20:00	0.9	W
15-Mar-2006	21:00	0	W
15-Mar-2006	22:00	0	---
15-Mar-2006	23:00	0.4	W
16-Mar-2006	0:00	0.4	NW
16-Mar-2006	1:00	0	---
16-Mar-2006	2:00	0	---
16-Mar-2006	3:00	0	---
16-Mar-2006	4:00	0.4	W
16-Mar-2006	5:00	0	---
16-Mar-2006	6:00	0	SSE
16-Mar-2006	7:00	0	---
16-Mar-2006	8:00	0	---
16-Mar-2006	9:00	0	SW
16-Mar-2006	10:00	0	NW
16-Mar-2006	11:00	1.3	WNW
16-Mar-2006	12:00	1.3	WNW
16-Mar-2006	13:00	1.3	WNW
16-Mar-2006	14:00	3.6	NE
16-Mar-2006	15:00	3.6	NE
16-Mar-2006	16:00	3.1	NE
16-Mar-2006	17:00	2.7	NE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Mar-2006	18:00	0.4	ENE
16-Mar-2006	19:00	0	NE
16-Mar-2006	20:00	0	ENE
16-Mar-2006	21:00	0	---
16-Mar-2006	22:00	0	---
16-Mar-2006	23:00	0	---
17-Mar-2006	0:00	0	---
17-Mar-2006	1:00	0	WNW
17-Mar-2006	2:00	0	W
17-Mar-2006	3:00	0	W
17-Mar-2006	4:00	0	---
17-Mar-2006	5:00	0	W
17-Mar-2006	6:00	0	---
17-Mar-2006	7:00	0	---
17-Mar-2006	8:00	1.8	WSW
17-Mar-2006	9:00	3.1	WSW
17-Mar-2006	10:00	3.1	WSW
17-Mar-2006	11:00	3.6	WSW
17-Mar-2006	12:00	3.6	WSW
17-Mar-2006	13:00	3.6	WSW
17-Mar-2006	14:00	3.1	WSW
17-Mar-2006	15:00	1.8	SSW
17-Mar-2006	16:00	1.8	SSW
17-Mar-2006	17:00	1.8	SSW
17-Mar-2006	18:00	2.2	WSW
17-Mar-2006	19:00	3.1	W
17-Mar-2006	20:00	1.3	WSW
17-Mar-2006	21:00	0.4	SSW
17-Mar-2006	22:00	0.4	SSW
17-Mar-2006	23:00	0	SSW
18-Mar-2006	0:00	0	SSW
18-Mar-2006	1:00	0	W
18-Mar-2006	2:00	1.3	W
18-Mar-2006	3:00	0.9	W
18-Mar-2006	4:00	0	---
18-Mar-2006	5:00	0	---
18-Mar-2006	6:00	0	---
18-Mar-2006	7:00	0	---
18-Mar-2006	8:00	0	---
18-Mar-2006	9:00	0	---
18-Mar-2006	10:00	0.4	W
18-Mar-2006	11:00	0.4	WNW
18-Mar-2006	12:00	0.9	WNW
18-Mar-2006	13:00	1.8	N
18-Mar-2006	14:00	1.8	N
18-Mar-2006	15:00	3.1	NE
18-Mar-2006	16:00	2.7	E
18-Mar-2006	17:00	3.6	NE
18-Mar-2006	18:00	2.2	NE
18-Mar-2006	19:00	0.4	ENE
18-Mar-2006	20:00	0	NE
18-Mar-2006	21:00	0	ESE
18-Mar-2006	22:00	0	---
18-Mar-2006	23:00	0	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Mar-2006	0:00	0	---
19-Mar-2006	1:00	0	---
19-Mar-2006	2:00	0	---
19-Mar-2006	3:00	0	---
19-Mar-2006	4:00	0	---
19-Mar-2006	5:00	0	---
19-Mar-2006	6:00	0	SW
19-Mar-2006	7:00	0.9	W
19-Mar-2006	8:00	0	WSW
19-Mar-2006	9:00	1.8	WNW
19-Mar-2006	10:00	3.1	WNW
19-Mar-2006	11:00	4.5	WSW
19-Mar-2006	12:00	4	WSW
19-Mar-2006	13:00	4.5	SSW
19-Mar-2006	14:00	4.5	SSW
19-Mar-2006	15:00	4	WSW
19-Mar-2006	16:00	4	SW
19-Mar-2006	17:00	4.5	WSW
19-Mar-2006	18:00	4.5	WSW
19-Mar-2006	19:00	5.4	WSW
19-Mar-2006	20:00	4.9	WSW
19-Mar-2006	21:00	4.5	WSW
19-Mar-2006	22:00	4	SW
19-Mar-2006	23:00	4	WSW
20-Mar-2006	0:00	3.6	W
20-Mar-2006	1:00	4.5	WNW
20-Mar-2006	2:00	4	WSW
20-Mar-2006	3:00	4.5	W
20-Mar-2006	4:00	3.1	W
20-Mar-2006	5:00	4	SW
20-Mar-2006	6:00	3.6	WSW
20-Mar-2006	7:00	3.6	WSW
20-Mar-2006	8:00	4	WSW
20-Mar-2006	9:00	4.9	WSW
20-Mar-2006	10:00	4.5	W
20-Mar-2006	11:00	4.5	W
20-Mar-2006	12:00	4	WSW
20-Mar-2006	13:00	4.5	W
20-Mar-2006	14:00	4	WSW
20-Mar-2006	15:00	4.5	W
20-Mar-2006	16:00	4	W
20-Mar-2006	17:00	4	WSW
20-Mar-2006	18:00	4	W
20-Mar-2006	19:00	3.6	W
20-Mar-2006	20:00	2.7	W
20-Mar-2006	21:00	3.6	WNW
20-Mar-2006	22:00	3.6	W
20-Mar-2006	23:00	3.6	W
21-Mar-2006	0:00	1.8	W
21-Mar-2006	1:00	1.8	W
21-Mar-2006	2:00	1.8	W
21-Mar-2006	3:00	1.8	WSW
21-Mar-2006	4:00	1.3	WSW
21-Mar-2006	5:00	0.4	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Mar-2006	6:00	0.4	W
21-Mar-2006	7:00	0.4	SW
21-Mar-2006	8:00	0.4	S
21-Mar-2006	9:00	0.9	W
21-Mar-2006	10:00	0	WSW
21-Mar-2006	11:00	0.4	SW
21-Mar-2006	12:00	0.4	WNW
21-Mar-2006	13:00	1.8	N
21-Mar-2006	14:00	2.7	WNW
21-Mar-2006	15:00	2.2	W
21-Mar-2006	16:00	1.8	W
21-Mar-2006	17:00	1.3	WNW
21-Mar-2006	18:00	0.9	W
21-Mar-2006	19:00	0.4	W
21-Mar-2006	20:00	1.3	W
21-Mar-2006	21:00	0	W
21-Mar-2006	22:00	0	---
21-Mar-2006	23:00	0	---
22-Mar-2006	0:00	0	WSW
22-Mar-2006	1:00	0.4	SSW
22-Mar-2006	2:00	0	SW
22-Mar-2006	3:00	0.4	W
22-Mar-2006	4:00	1.3	WNW
22-Mar-2006	5:00	0.9	WSW
22-Mar-2006	6:00	1.3	W
22-Mar-2006	7:00	1.3	WSW
22-Mar-2006	8:00	0.9	W
22-Mar-2006	9:00	0.4	SW
22-Mar-2006	10:00	1.3	SSW
22-Mar-2006	11:00	1.8	SW
22-Mar-2006	12:00	0.9	WSW
22-Mar-2006	13:00	1.3	NNE
22-Mar-2006	14:00	2.7	WNW
22-Mar-2006	15:00	1.3	W
22-Mar-2006	16:00	0.4	W
22-Mar-2006	17:00	2.7	NNE
22-Mar-2006	18:00	2.7	N
22-Mar-2006	19:00	0	NNE
22-Mar-2006	20:00	0	SW
22-Mar-2006	21:00	0.9	WNW
22-Mar-2006	22:00	0.4	WNW
22-Mar-2006	23:00	0	WSW
23-Mar-2006	0:00	0	---
23-Mar-2006	1:00	0	SSW
23-Mar-2006	2:00	0	---
23-Mar-2006	3:00	0	WSW
23-Mar-2006	4:00	0	---
23-Mar-2006	5:00	0	SSE
23-Mar-2006	6:00	0	SSW
23-Mar-2006	7:00	0	S
23-Mar-2006	8:00	0.9	N
23-Mar-2006	9:00	1.8	N
23-Mar-2006	10:00	2.7	NNE
23-Mar-2006	11:00	4	NNE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Mar-2006	12:00	4.9	NNE
23-Mar-2006	13:00	2.7	NNE
23-Mar-2006	14:00	3.6	NE
23-Mar-2006	15:00	0.4	ENE
23-Mar-2006	16:00	0.4	E
23-Mar-2006	17:00	0.9	E
23-Mar-2006	18:00	0.4	WSW
23-Mar-2006	19:00	0.4	WNW
23-Mar-2006	20:00	0.4	WNW
23-Mar-2006	21:00	0	WSW
23-Mar-2006	22:00	0.4	WSW
23-Mar-2006	23:00	2.7	SSW
24-Mar-2006	0:00	3.1	WSW
24-Mar-2006	1:00	4	WSW
24-Mar-2006	2:00	4.9	W
24-Mar-2006	3:00	3.6	WSW
24-Mar-2006	4:00	4.9	W
24-Mar-2006	5:00	3.1	W
24-Mar-2006	6:00	3.6	W
24-Mar-2006	7:00	3.1	W
24-Mar-2006	8:00	3.6	WNW
24-Mar-2006	9:00	4	WNW
24-Mar-2006	10:00	4.5	W
24-Mar-2006	11:00	3.1	WNW
24-Mar-2006	12:00	2.7	SSW
24-Mar-2006	13:00	2.2	WSW
24-Mar-2006	14:00	0.9	WNW
24-Mar-2006	15:00	1.3	WNW
24-Mar-2006	16:00	1.8	WNW
24-Mar-2006	17:00	2.2	W
24-Mar-2006	18:00	3.1	WSW
24-Mar-2006	19:00	3.6	WSW
24-Mar-2006	20:00	4	WSW
24-Mar-2006	21:00	3.6	SW
24-Mar-2006	22:00	3.1	WSW
24-Mar-2006	23:00	2.7	WNW
25-Mar-2006	0:00	3.1	WNW
25-Mar-2006	1:00	1.8	W
25-Mar-2006	2:00	1.3	WSW
25-Mar-2006	3:00	1.8	W
25-Mar-2006	4:00	3.1	WSW
25-Mar-2006	5:00	4.9	WSW
25-Mar-2006	6:00	4.5	WSW
25-Mar-2006	7:00	4	WSW
25-Mar-2006	8:00	3.6	WSW
25-Mar-2006	9:00	2.7	WSW
25-Mar-2006	10:00	2.2	WSW
25-Mar-2006	11:00	1.8	WSW
25-Mar-2006	12:00	2.7	WNW
25-Mar-2006	13:00	3.1	WNW
25-Mar-2006	14:00	2.7	WNW
25-Mar-2006	15:00	2.2	WSW
25-Mar-2006	16:00	2.2	W
25-Mar-2006	17:00	2.7	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Mar-2006	18:00	2.2	WNW
25-Mar-2006	19:00	3.1	SW
25-Mar-2006	20:00	3.1	WSW
25-Mar-2006	21:00	3.1	SW
25-Mar-2006	22:00	3.6	WSW
25-Mar-2006	23:00	2.7	WSW
26-Mar-2006	0:00	3.1	WSW
26-Mar-2006	1:00	2.7	WSW
26-Mar-2006	2:00	1.8	WSW
26-Mar-2006	3:00	0.4	W
26-Mar-2006	4:00	1.3	WNW
26-Mar-2006	5:00	1.8	WNW
26-Mar-2006	6:00	1.8	W
26-Mar-2006	7:00	1.8	WNW
26-Mar-2006	8:00	0.9	WNW
26-Mar-2006	9:00	0.4	WNW
26-Mar-2006	10:00	1.3	WSW
26-Mar-2006	11:00	1.3	WSW
26-Mar-2006	12:00	0.9	WSW
26-Mar-2006	13:00	3.6	WSW
26-Mar-2006	14:00	2.7	WSW
26-Mar-2006	15:00	1.3	SSW
26-Mar-2006	16:00	2.2	W
26-Mar-2006	17:00	1.8	W
26-Mar-2006	18:00	1.3	SSW
26-Mar-2006	19:00	2.2	WSW
26-Mar-2006	20:00	2.2	SW
26-Mar-2006	21:00	1.8	SW
26-Mar-2006	22:00	2.2	SSW
26-Mar-2006	23:00	2.2	SSW
27-Mar-2006	0:00	2.7	SSW
27-Mar-2006	1:00	2.2	SSW
27-Mar-2006	2:00	2.2	WSW
27-Mar-2006	3:00	1.8	WSW
27-Mar-2006	4:00	1.8	SW
27-Mar-2006	5:00	1.8	SW
27-Mar-2006	6:00	2.7	WSW
27-Mar-2006	7:00	2.2	WSW
27-Mar-2006	8:00	1.8	WSW
27-Mar-2006	9:00	0.9	SW
27-Mar-2006	10:00	1.3	SSW
27-Mar-2006	11:00	1.8	SSW
27-Mar-2006	12:00	2.2	W
27-Mar-2006	13:00	1.3	WNW
27-Mar-2006	14:00	1.3	WNW
27-Mar-2006	15:00	0.4	WNW
27-Mar-2006	16:00	0.4	WNW
27-Mar-2006	17:00	0	WNW
27-Mar-2006	18:00	0.4	WNW
27-Mar-2006	19:00	1.8	W
27-Mar-2006	20:00	1.3	WNW
27-Mar-2006	21:00	0.4	W
27-Mar-2006	22:00	4.5	WNW
27-Mar-2006	23:00	2.2	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Mar-2006	0:00	1.8	W
28-Mar-2006	1:00	0.9	SW
28-Mar-2006	2:00	1.3	WNW
28-Mar-2006	3:00	2.7	WNW
28-Mar-2006	4:00	1.3	SSW
28-Mar-2006	5:00	2.2	WNW
28-Mar-2006	6:00	3.1	W
28-Mar-2006	7:00	2.2	WSW
28-Mar-2006	8:00	2.2	WSW
28-Mar-2006	9:00	3.6	WNW
28-Mar-2006	10:00	4	WNW
28-Mar-2006	11:00	4	WNW
28-Mar-2006	12:00	3.6	WNW
28-Mar-2006	13:00	2.2	WNW
28-Mar-2006	14:00	2.2	WNW
28-Mar-2006	15:00	2.2	WNW
28-Mar-2006	16:00	1.8	NW
28-Mar-2006	17:00	2.2	W
28-Mar-2006	18:00	1.8	WSW
28-Mar-2006	19:00	0.9	W
28-Mar-2006	20:00	0	S
28-Mar-2006	21:00	0	S
28-Mar-2006	22:00	0	---
28-Mar-2006	23:00	0	---
29-Mar-2006	0:00	0	---
29-Mar-2006	1:00	0	---
29-Mar-2006	2:00	0	---
29-Mar-2006	3:00	0	---
29-Mar-2006	4:00	0	---
29-Mar-2006	5:00	0	---
29-Mar-2006	6:00	0	---
29-Mar-2006	7:00	1.3	W
29-Mar-2006	8:00	4.5	W
29-Mar-2006	9:00	4.5	WNW
29-Mar-2006	10:00	5.8	WNW
29-Mar-2006	11:00	4.5	WNW
29-Mar-2006	12:00	4.9	WNW
29-Mar-2006	13:00	4	WNW
29-Mar-2006	14:00	4	WNW
29-Mar-2006	15:00	4	WNW
29-Mar-2006	16:00	4	WNW
29-Mar-2006	17:00	4	W
29-Mar-2006	18:00	3.6	WSW
29-Mar-2006	19:00	3.6	WSW
29-Mar-2006	20:00	3.6	WSW
29-Mar-2006	21:00	2.7	WSW
29-Mar-2006	22:00	2.7	WSW
29-Mar-2006	23:00	2.7	SW
30-Mar-2006	0:00	2.7	WSW
30-Mar-2006	1:00	2.7	WSW
30-Mar-2006	2:00	3.1	WNW
30-Mar-2006	3:00	3.6	WNW
30-Mar-2006	4:00	2.2	WSW
30-Mar-2006	5:00	1.8	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Mar-2006	6:00	0.9	W
30-Mar-2006	7:00	0.4	WNW
30-Mar-2006	8:00	0.9	W
30-Mar-2006	9:00	1.8	WNW
30-Mar-2006	10:00	1.3	WSW
30-Mar-2006	11:00	1.3	W
30-Mar-2006	12:00	2.2	N
30-Mar-2006	13:00	4	W
30-Mar-2006	14:00	3.6	W
30-Mar-2006	15:00	3.1	W
30-Mar-2006	16:00	4	W
30-Mar-2006	17:00	3.1	W
30-Mar-2006	18:00	2.2	W
30-Mar-2006	19:00	2.2	W
30-Mar-2006	20:00	1.3	W
30-Mar-2006	21:00	1.3	SW
30-Mar-2006	22:00	2.7	WSW
30-Mar-2006	23:00	2.7	WNW
31-Mar-2006	0:00	2.7	WSW
31-Mar-2006	1:00	2.2	W
31-Mar-2006	2:00	1.8	SSW
31-Mar-2006	3:00	2.2	WSW
31-Mar-2006	4:00	2.2	WSW
31-Mar-2006	5:00	2.7	WSW
31-Mar-2006	6:00	1.8	W
31-Mar-2006	7:00	2.7	WSW
31-Mar-2006	8:00	3.1	WSW
31-Mar-2006	9:00	2.2	WSW
31-Mar-2006	10:00	1.8	WSW
31-Mar-2006	11:00	2.2	WSW
31-Mar-2006	12:00	2.7	WSW
31-Mar-2006	13:00	3.6	W
31-Mar-2006	14:00	2.7	W
31-Mar-2006	15:00	3.6	W
31-Mar-2006	16:00	3.6	W
31-Mar-2006	17:00	3.6	WSW
31-Mar-2006	18:00	2.7	W
31-Mar-2006	19:00	2.7	W
31-Mar-2006	20:00	3.6	WNW
31-Mar-2006	21:00	3.1	WSW
31-Mar-2006	22:00	2.7	WSW
31-Mar-2006	23:00	3.6	WSW

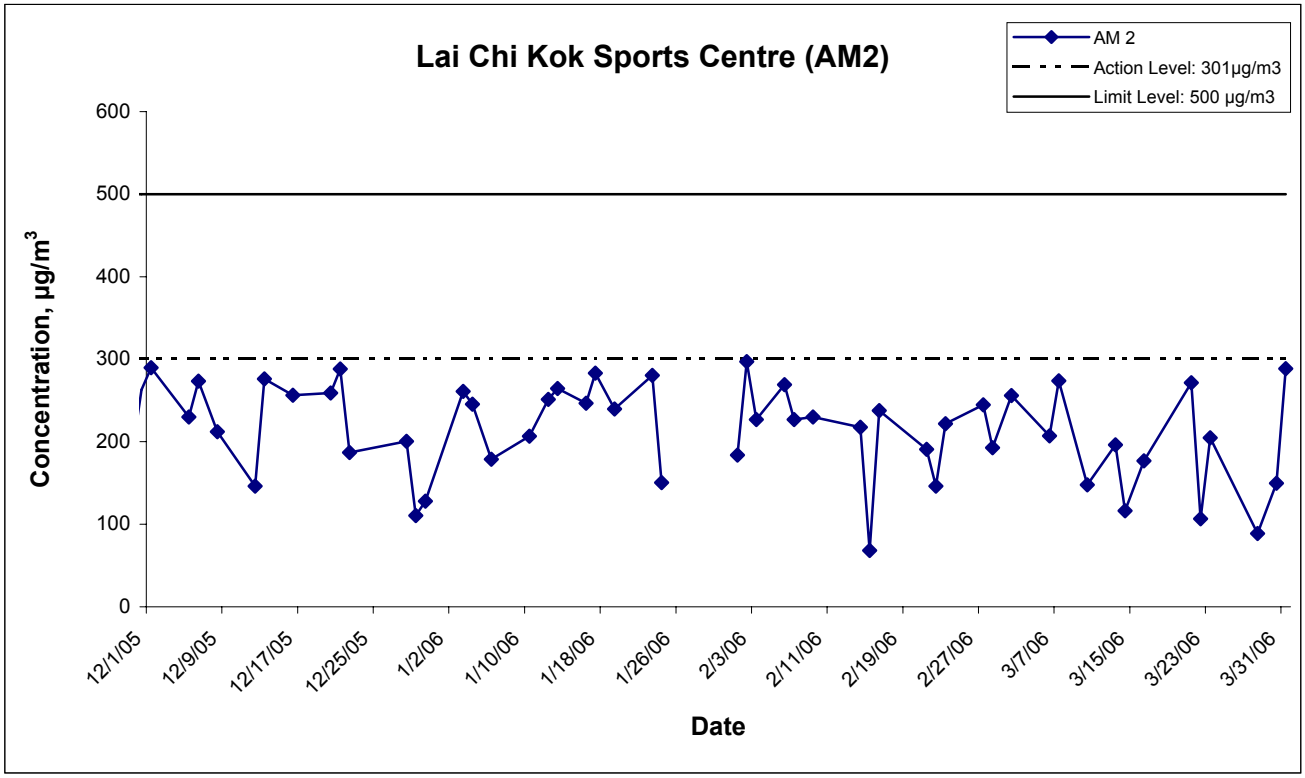
APPENDIX E
1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

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							
2-Mar-06	Sunny	2.8991	2.9182	1.24	1.24	3914.0	3915.0	283.3	769.4	0.0191	1.24	74.6	1.0	256.0
6-Mar-06	Cloudy	2.8774	2.8926	1.22	1.22	3939.0	3940.0	291.4	763.5	0.0152	1.22	73.3	1.0	207.3
7-Mar-06	Cloudy	2.8614	2.8816	1.22	1.22	3940.0	3941.0	293.8	763.5	0.0202	1.22	73.8	1.0	273.8
10-Mar-06	Sunny	2.8700	2.8807	1.21	1.21	3965.0	3966.0	298.4	762.5	0.0107	1.21	72.5	1.0	147.6
13-Mar-06	Cloudy	2.8966	2.9112	1.24	1.24	3966.0	3967.0	284.7	768.2	0.0146	1.24	74.4	1.0	196.3
14-Mar-06	Cloudy	2.8899	2.8986	1.24	1.24	3967.0	3968.0	283.2	770.2	0.0087	1.24	74.7	1.0	116.5
16-Mar-06	Sunny	2.9019	2.9149	1.23	1.23	3992.0	3993.0	289.5	762.9	0.0130	1.23	73.5	1.0	176.8
21-Mar-06	Cloudy	2.8805	2.9003	1.22	1.22	3993.0	3994.0	293.4	760.2	0.0198	1.22	73.0	1.0	271.4
22-Mar-06	Cloudy	2.8831	2.8909	1.22	1.22	4018.0	4019.0	295.1	769.3	0.0078	1.22	73.2	1.0	106.6
23-Mar-06	Cloudy	2.8635	2.8783	1.20	1.20	4019.0	4020.0	298.4	757.8	0.0148	1.20	72.3	1.0	204.8
28-Mar-06	Sunny	2.8579	2.8644	1.22	1.22	4044.0	4045.0	295.1	762.4	0.0065	1.22	73.3	1.0	88.7
30-Mar-06	Sunny	2.8477	2.8587	1.22	1.22	4045.1	4046.1	294.9	764.2	0.0110	1.22	73.4	1.0	149.9
31-Mar-06	Sunny	2.8886	2.9097	1.22	1.22	4046.1	4047.1	296.3	762.5	0.0211	1.22	73.1	1.0	288.5
													Min	88.7
													Max	288.5
													Average	191.1

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: Mar 06	Project No.: MA3024 Appendix: E	CINOTECH

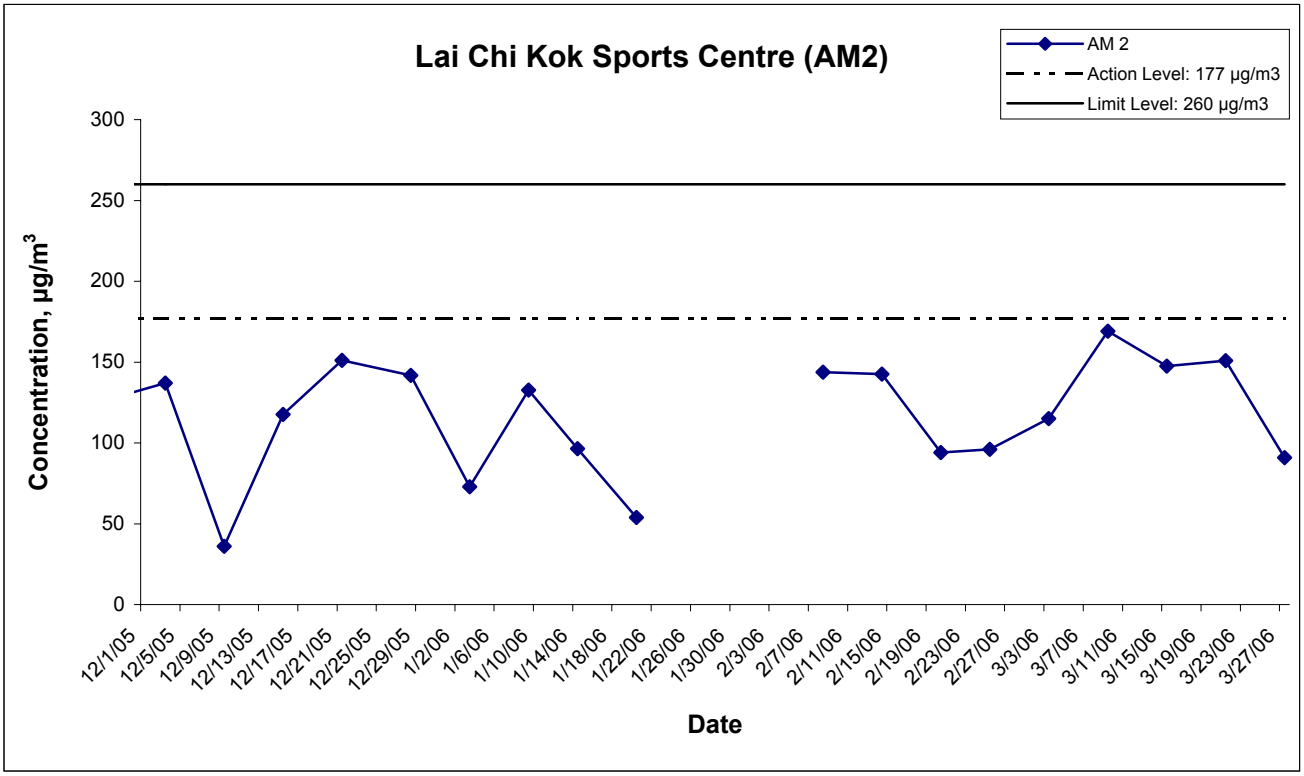
APPENDIX F
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

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							
3-Mar-06	Cloudy	2.8864	3.0909	1.23	1.23	3915.0	3939.0	287.0	766.9	0.2045	1.23	1776.6	24.0	115.1
9-Mar-06	Sunny	2.8868	3.1842	1.22	1.22	3941.0	3965.0	292.9	765.3	0.2974	1.22	1758.0	24.0	169.2
15-Mar-06	Cloudy	2.8639	3.1251	1.23	1.23	3968.0	3992.0	289.2	766.2	0.2612	1.23	1769.5	24.0	147.6
21-Mar-06	Cloudy	2.8951	3.1592	1.22	1.22	3994.0	4018.0	295.1	760.1	0.2641	1.22	1750.3	24.0	150.9
27-Mar-06	Cloudy	2.8541	3.0147	1.23	1.23	4020.0	4044.0	292.1	760.7	0.1606	1.23	1765.9	24.0	90.9
													Min	90.9
													Max	169.2
													Average	134.7

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: Mar 06	Project No.: MA3024 Appendix: F	CINOTECH

APPENDIX G
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix G - Noise Monitoring Results

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}	
1-Mar-06	16:00	Cloudy	76.8	79.0	74.0	73.8	73.8	Except on 7 & 14 Mar at when construction noise was found dominant, road traffic noise from Ching Cheung Road was identified as the major noise source during the monitoring.
7-Mar-06	11:00	Fine	80.2	82.0	76.0		**79.1**	
14-Mar-06	14:20	Cloudy	77.8	79.5	75.0		**75.6**	
16-Mar-06	13:04	Fine	75.9	79.0	72.0		71.7	
21-Mar-06	15:05	Cloudy	75.7	77.5	72.5		71.2	
21-Mar-06	15:40	Cloudy	76.5	78.5	75.5		73.1	
22-Mar-06	13:45	Cloudy	75.1	77.0	72.0		69.2	
30-Mar-06	15:00	Sunny	74.8	78.5	70.5		67.9	

Location NM8a - M/F of Nob Hill						
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks
			L_{eq}	L_{10}	L_{90}	
1-Mar-06	14:00	Cloudy	73.4	77.0	71.5	Road traffic noise from Ching Cheung Road was identified as the major noise source.
7-Mar-06	10:00	Fine	73.7	75.0	70.5	
14-Mar-06	13:35	Cloudy	72.0	75.5	69.0	
22-Mar-06	15:40	Cloudy	71.8	74.0	68.0	
30-Mar-06	13:00	Sunny	72.6	75.5	68.0	

Location NM8b - 3/F of Nob Hill						
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks
			L_{eq}	L_{10}	L_{90}	
1-Mar-06	14:50	Cloudy	75.1	76.5	70.5	Road traffic noise from Ching Cheung Road was identified as the major noise source.
7-Mar-06	9:15	Fine	76.5	77.5	72.0	
14-Mar-06	13:00	Cloudy	78.0	80.0	74.5	
22-Mar-06	15:00	Cloudy	76.7	79.0	73.0	
30-Mar-06	13:50	Sunny	74.8	76.5	68.5	

Location NM9 - Hoi Lai Estate						
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks
			L_{eq}	L_{10}	L_{90}	
1-Mar-06	11:00	Cloudy	66.4	68.5	63.5	-
7-Mar-06	13:20	Fine	68.7	71.0	64.5	
14-Mar-06	15:30	Cloudy	72.2	78.0	65.5	
22-Mar-06	11:25	Cloudy	68.9	71.5	65.0	
30-Mar-06	16:00	Sunny	70.6	74.5	69.5	

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

*Bolded value indicated limit level exceedance

Appendix G - Noise Monitoring Results

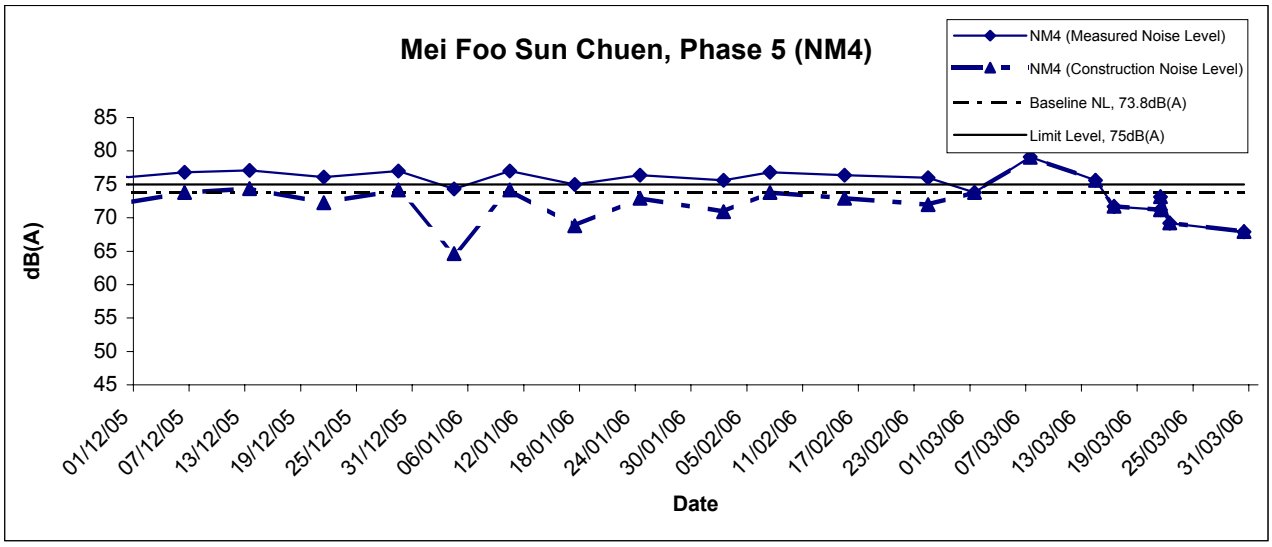
Restricted Hours - 19:00 to 23:00 on normal weekdays

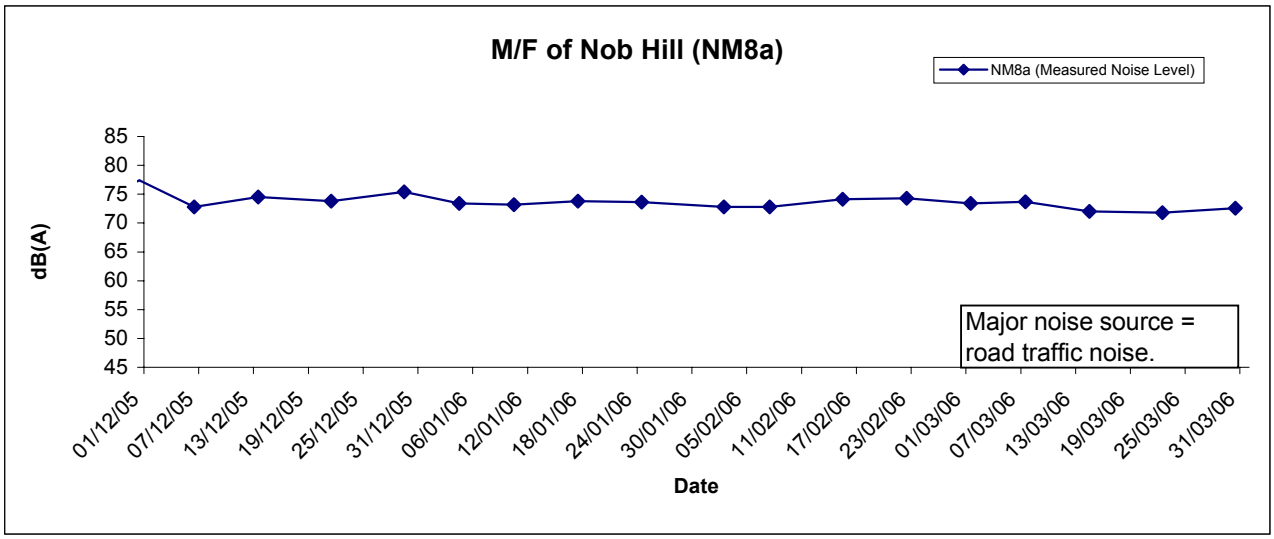
Location NM9 - Hoi Lai Estate						
Date	Time	Weather	dB (A) (5-min)			
			L_{eq}	L_{10}	L_{90}	Average L_{eq}
2-Mar-06	21:05	Cloudy	63.8	67.5	59.5	64.1
	21:10		64.0	67.5	60.0	
	21:15		64.4	68.0	60.5	
10-Mar-06	20:35	Cloudy	63.9	67.0	60.5	64.1
	20:40		64.4	67.5	61.0	
	20:45		64.0	67.5	61.0	
16-Mar-06	21:00	Cloudy	63.7	67.0	60.5	64.1
	21:05		63.9	67.5	60.5	
	21:10		64.7	67.5	61.5	
23-Mar-06	20:55	Cloudy	63.8	67.5	60.5	64.1
	21:00		64.5	68.5	61.0	
	21:05		64.0	68.0	60.5	
31-Mar-06	20:57	Cloudy	64.9	68.5	60.5	64.3
	21:02		64.0	67.0	61.0	
	21:07		63.9	67.5	61.0	

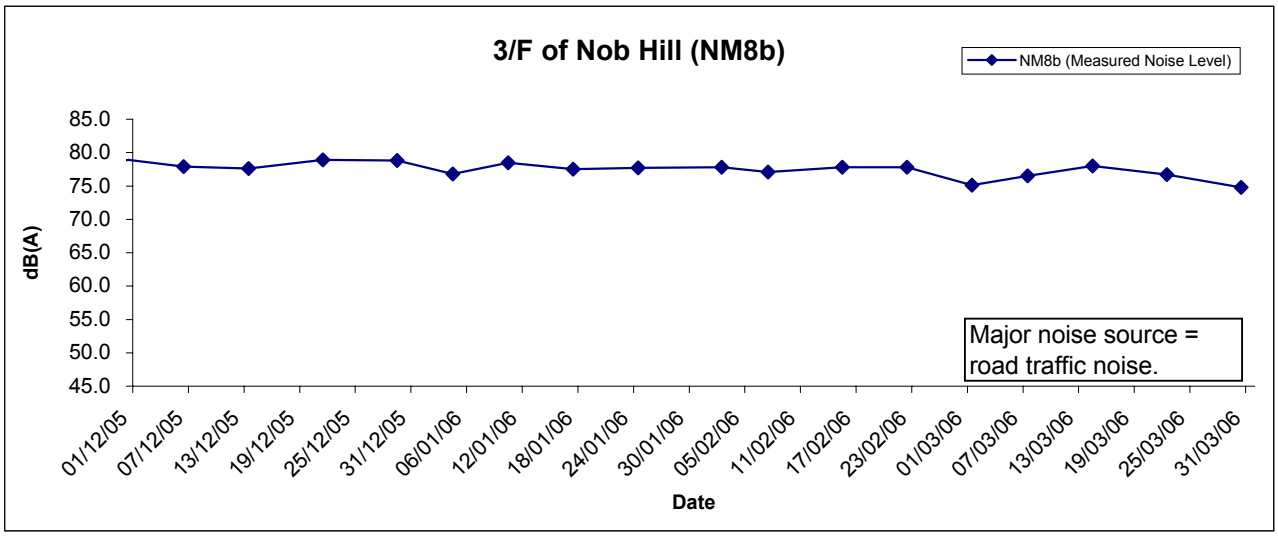
Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolded value indicated limit level exceedance

Noise Levels



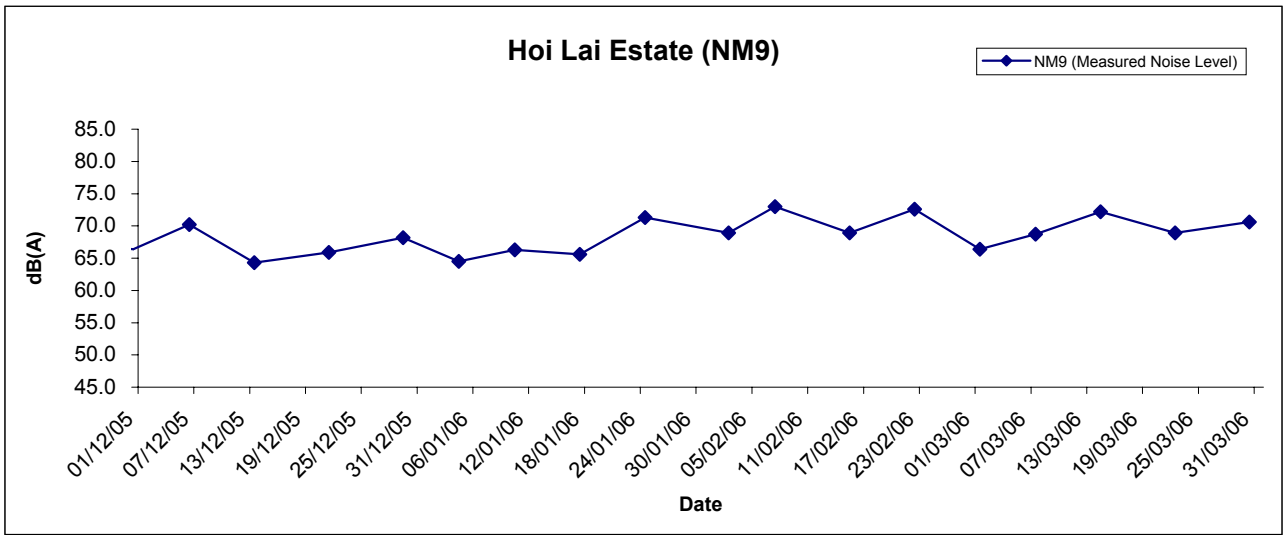




* Construction Noise Level = Measured Noise Level - Baseline Level
(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

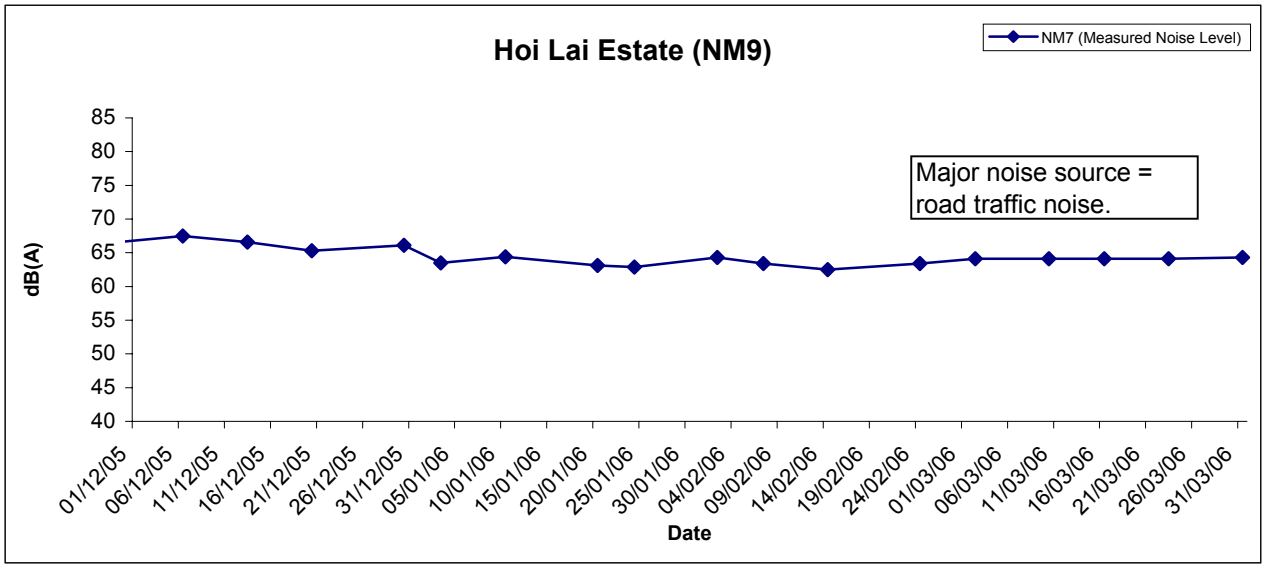
Title: Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: MA3024	CINOTECH
	Date: Mar 06	Appendix: G	

Noise Levels



Title: Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Mar 06	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: Mar 06	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)

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

c) Exceedance Report for Construction Noise

- No noise complaint (Action Level exceedance) was received in the reporting month.
- Two noise limit level exceedances were recorded on 7 and 14 March 2006, both at Station NM4 (Mei Foo Sun Chuen).

Report No. 60307_NM4

Date of Measurement: 7 March 2006
Time of Measurement: 11:00

Station No.	Parameter	Measured Level (Leq dB(A))	Baseline Level (Leq dB(A))	Construction Noise Level (Leq dB(A))	Action Level ($\mu g/m^3$)	Limit Level (Leq dB(A))	Level exceeded
NM4	Construction Noise	80.2	73.8	79.1	When one documented complaint is received	75.0	Limit
		80.1		78.9			Limit

(a) Statement of exceedance(s)

Construction noise at NM4 (Mei Foo Sun Chuen) exceeded the Limit level.

(b) Cause of exceedance(s)

The exceedance was considered related to the Project works:

- According to our field observation, the dominated noise source was from the operation of 2 excavator mounted breakers (one at S1 and one at NTMM) and drilling works at S1.

(c) Action required under the action plan

The Contractor is required to (1) implement mitigation measures; and (2) prove to the Environmental Team and ER the effectiveness of measures applied.

The Environmental Team is required to (1) notify the relevant parties of the exceedance; and (2) increase monitoring frequency to check mitigation effectiveness.

(d) Action taken under the action plan

Notification by ET is given through this exceedance report.

(e) ET's conclusions and recommendations for mitigation

The exceedance was considered related to the Project works. The Contractor is required to implement noise mitigation measures to rectify the problem. The Contractor is recommended to revise the works schedule to reduce the number of noisy equipment in concurrent use.

Report No. 603014_NM4

Date of Measurement: 14 March 2006
Time of Measurement: 14:20 & 14:55

Station No.	Parameter	Measured Level (Leq dB(A))	Baseline Level (Leq dB(A))	Construction Noise Level (Leq dB(A))	Action Level ($\mu g/m^3$)	Limit Level (Leq dB(A))	Level exceeded
NM4	Construction Noise	77.8	73.8	75.6	When one documented complaint is received	75.0	Limit
		79.5		78.1			Limit

(a) Statement of exceedance(s)

Construction noise at NM4 (Mei Foo Sun Chuen) exceeded the Limit level.

(b) Cause of exceedance(s)

The exceedance was considered related to the Project works:

Observations during the 1st measurement:
- 1 excavator mounted breakers were operated at S1 and temporary noise barrier was provided;
- Soil nailing works was carried out at S1 and was identified as the dominant noise source for the measurement.

Observations during the 2nd measurement:
- 2 excavator mounted breakers were operated (1 at S1 and 1 at S4) and temporary noise barriers were provided;
- Soil nailing works was carried out at S1 and was identified as the dominant noise source for the measurement.

(c) Action required under the action plan

The Contractor is required to (1) implement mitigation measures; and (2) prove to the Environmental Team and ER the effectiveness of measures applied.

The Environmental Team is required to (1) notify the relevant parties of the exceedance; and (2) increase monitoring frequency to check mitigation effectiveness.

(d) Action taken under the action plan

Notification by ET is given through this exceedance report.

(e) ET's conclusions and recommendations for mitigation

The exceedance was considered related to the Project works. The Contractor is required to implement noise mitigation measures to rectify the problem. The Contractor is recommended to revise the works schedule to reduce the number of noisy equipment in concurrent operation.

APPENDIX I
SITE AUDIT SUMMARY

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60302-LCKV
Date	2 March 2006 (Thu)
Time	0930 – 1130

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

Ref. No.	Remarks/Observations	Related Item No.
60302L-02	*A. Water Quality* • Standing water was observed at various locations (including S4 and Abutment A) of the site. The Contractor was reminded to remove the water as soon as possible to prevent mosquito breeding.	B14
	• Reminder: The Contractor was reminded to review the temporary drainage system and the associated water treatment facilities at the area of S4 for the upcoming wet season.	B1 & B7i
60302L-01	*B. Air Quality* • The Contractor was reminded to provide wheel washing facility and the associated water treatment facilities at the exit at R3.	C16i
	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 • No environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	KK Chan		3 March 2006
Checked by	Kenneth Lam		3 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60309-LCKV
Date	9 March 2006 (Thu)
Time	0930 – 1145

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

Ref. No.	Remarks/Observations	Related Item No.
60309L-1	*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* • Stain oil was observed on bare ground for the site at Lai Po Road. *E. Permit / Licenses* • No environmental deficiency was identified during the site inspection. *F. Others* • The deficiencies identified during last audit (ref. 60302-LCKV) on 2 March 2006 were rectified by the Contractor.	E12

	Name	Signature	Date
Recorded by	Tommy Ho		9 March 2006
Checked by	K.K. Chan		9 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60316-LCKV
Date	16 March 2006 (Thu)
Time	0930 – 1130

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

Ref. No.	Remarks/Observations	Related Item No.
60316L-01	***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*** • Leakage diesel oil was observed on bare ground form the generator at Slope 1. Good maintenance should be provided for the generator. ***E. Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***F. Others*** • No environmental deficiency was identified during the site inspection.	E13

	Name	Signature	Date
Recorded by	Tommy Ho		16 March 2006
Checked by	KK Chan		16 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60323-LCKV
Date	23 March 2006 (Thu)
Time	0930 – 1145

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

Ref. No.	Remarks/Observations	Related Item No.
60323L-1	*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* • Some diesel oil leaked from the air compressor to bare ground was observed in site at Lai Po Road. Good Maintenance and drip tray should be provided for the generator to avoid spillage. *E. Permit / Licenses* • No environmental deficiency was identified during the site inspection. *F. Others* • No environmental deficiency was identified during the site inspection.	E13

	Name	Signature	Date
Recorded by	Tommy Ho		23 March 2006
Checked by	KK Chan		23 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60330-LCKV
Date	30 March 2006 (Thu)
Time	9:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
60330L-2	• Standing water was observed in the sand traps near NTMM. The Contractor was reminded to clear the water as soon as possible to prevent mosquito breeding.	B14
Reminder	• The Contractor was recommended to provide a sand bag barrier along the open channel near P12 to prevent overflow of surface runoff into the channel.	B3
	B. Air Quality	
60330L-1	• The cement mixing work at NTMM was not properly enclosed. The Contractor was reminded to provide a 3-side and top cover for the works to minimize dust emission.	C1 & C17
Reminder	• Most of the stockpiles at W1 were covered, but part of them was open due to works in progress. The Contractor was reminded to cover all stockpiles after works to minimize dust emission.	C8
	C. Noise	
	• No environmental deficiency was identified during the site inspection.	
	D. Waste / Chemical Management	
	E. Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	F. Others	
	• The deficiencies identified during last audit (ref. 60323-LCKV) on 23 March 2006 were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	KK Chan		31 March 2006
Checked by	Alex Ngai		31 March 2006

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.	^ ^

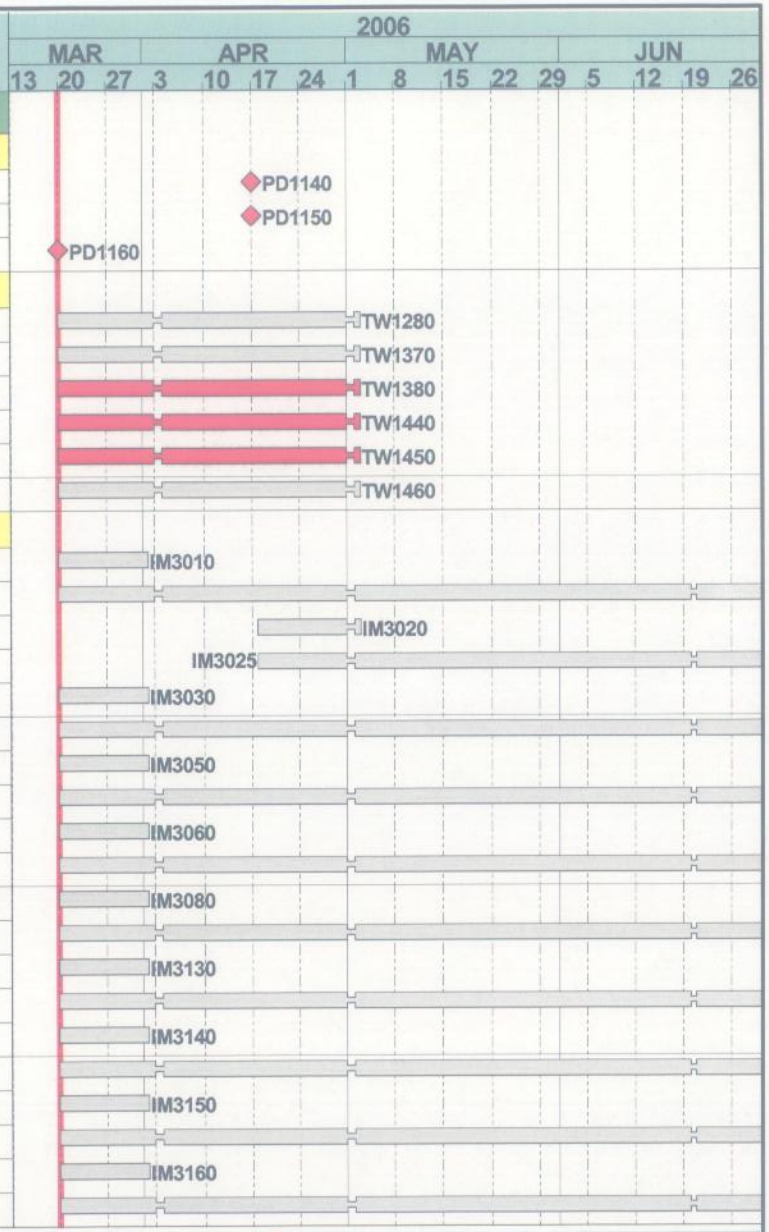
Types of Impacts	Mitigation Measures	Status
Ecology	• A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza. • Conduct a tree survey before commencement of the construction work. • All measures recommended in the approved landscape 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	Late Start	Late Finish
Preliminaries & General Requirments						
Portion Access Dates						
PD1140	Access to Portion F1	0	17APR06*		17APR06*	
PD1150	Access to Portion F2	0	17APR06*		17APR06*	
PD1160	Anticipated Access to Portion F3	0	20MAR06*		08DEC05*	
Design of Temporary Works						
TW1280	Design of Temp Works for Retaining Wall CCR-R4	36	20MAR06	02MAY06	13APR06	25MAY06
TW1370	Design of Temp Works for Feature 11NW-A/C66	36	20MAR06	02MAY06	27APR06	08JUN06
TW1380	Design of Temp Works for Feature 11NW-A/FR54&55	36	20MAR06	02MAY06	06JUN05	19JUL05
TW1440	Design of Temporary Works for Pumping Stations	36	20MAR06	02MAY06	21FEB06	04APR06
TW1450	Design of T/Works for Erection of Noise Encl'res	36	20MAR06	02MAY06	28SEP05	10NOV05
TW1460	Design of T/Works for Erection of Noise Barriers	36	20MAR06	02MAY06	09JUN06	22JUL06
Monitoring & Instrumentation - New Works						
IM3010	Install Instrumentation @ Cut Slope CCR-S1	12	20MAR06	01APR06	16MAY08	29MAY08
IM3015	Monitoring @ Cut Slope CCR-S1	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3020	Install Instrumentation @ Cut Slope CCR-S2	12	18APR06	02MAY06	16MAY08	29MAY08
IM3025	Monitoring @ Cut Slope CCR-S2	363*	18APR06	03JUL07	16MAY08	15MAY08
IM3030	Install Instrumentation @ Cut Slope CCR-S3	12	20MAR06	01APR06	16MAY08	29MAY08
IM3035	Monitoring @ Cut Slope CCR-S3	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3050	Install Instrumentation @ Cut Slope CCR-S5	12	20MAR06	01APR06	16MAY08	29MAY08
IM3055	Monitoring @ Cut Slope CCR-S5	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3060	Install Instrumentation @ Cut Slope CCR-S6	12	20MAR06	01APR06	16MAY08	29MAY08
IM3065	Monitoring @ Cut Slope CCR-S6	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3080	Install Instrumentation @ Slope 11NW-A/C26	12	20MAR06	01APR06	16MAY08	29MAY08
IM3085	Monitoring @ Slope 11NW-A/C26	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3130	Install Instrumentation @ Piers P1 to P6	12	20MAR06	01APR06	16MAY08	29MAY08
IM3135	Monitoring @ Piers P1 to P6	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3140	Install Instrumentation @ Piers P7 to P10	12	20MAR06	01APR06	16MAY08	29MAY08
IM3145	Monitoring @ Piers P7 to P10	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3150	Install Instrumentation @ Piers P11 to P15	12	20MAR06	01APR06	16MAY08	29MAY08
IM3155	Monitoring @ Piers P11 to P15	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3160	Install Instrumentation @ Piers P16 to P18	12	20MAR06	01APR06	16MAY08	29MAY08
IM3165	Monitoring @ Piers P16 to P18	387*	20MAR06	03JUL07	16MAY08	15MAY08



Start Date 23SEP03
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Data Date 20MAR06

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Highways Department Contract No. HY/2003/01
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from 20 March 2006

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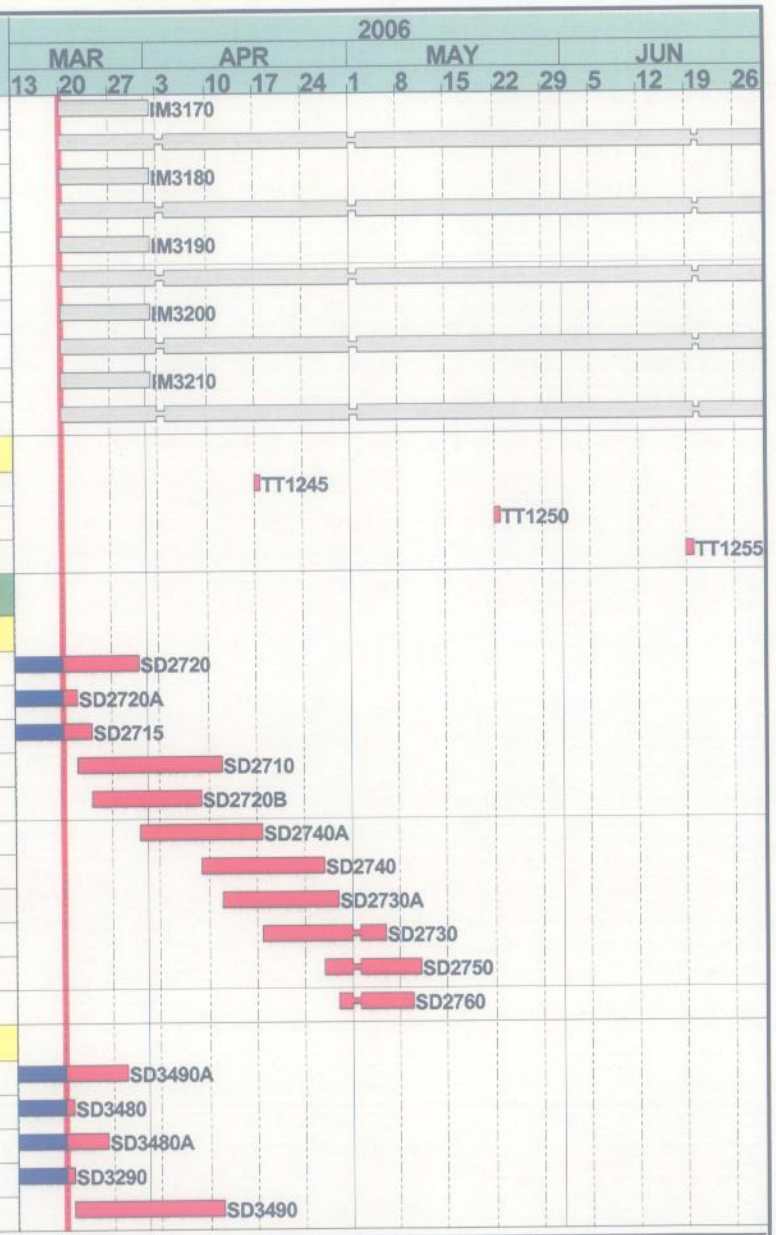
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
IM3170	Install Instrumentation @ Piers P19 to Abut. M	12	20MAR06	01APR06	16MAY08	29MAY08
IM3175	Monitoring @ Piers P19 to Abut. M	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3180	Install Instrumentation @ Piers on Slip Road A	12	20MAR06	01APR06	16MAY08	29MAY08
IM3185	Monitoring @ Piers on Slip Road A	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3190	Install Instrumentation @ Piers on Slip Road B	12	20MAR06	01APR06	16MAY08	29MAY08
IM3195	Monitoring @ Piers on Slip Road B	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3200	Install Instrumentation @ Piers on Slip Road C	12	20MAR06	01APR06	16MAY08	29MAY08
IM3205	Monitoring @ Piers on Slip Road C	387*	20MAR06	03JUL07	16MAY08	15MAY08
IM3210	Install Instrumentation @ Piers on Slip Road D	12	20MAR06	01APR06	16MAY08	29MAY08
IM3215	Monitoring @ Piers on Slip Road D	387*	20MAR06	03JUL07	16MAY08	15MAY08
Temporary Traffic Management Schemes						
TT1245	30th. TMLG Meeting	1	17APR06	17APR06	05MAR05	05MAR05
TT1250	31st. TMLG Meeting	1	22MAY06	22MAY06	04FEB06	04FEB06
TT1255	32nd. TMLG Meeting	1	19JUN06	19JUN06	11MAR06	11MAR06
Procurement						
Segmental Deck Casting (Type A Units)						
SD2720	P20/L (North)-Down - Cast 13 seg Type A	22	09MAR06A	30MAR06	09MAR06A	04FEB06
SD2720A	P20/L (North)-Up - Cast first 6 seg Type A	9	12MAR06A	21MAR06	12MAR06A	11JAN06
SD2715	P20/R (South)-Down - Cast 12 seg Type A	20	03MAR06A	23MAR06	03MAR06A	28JAN06
SD2710	P20/R (South)-Up - Cast 12 seg Type A	19	22MAR06	11APR06	12JAN06	04FEB06
SD2720B	P20/L (North)-Up - Cast last 7 seg Type A	14	24MAR06	08APR06	06FEB06	20FEB06
SD2740A	P21/R (South)-Up - Cast 9 seg Type A	16	31MAR06	17APR06	06FEB06	22FEB06
SD2740	P21/R (South)-Down - Cast 9 seg Type A	16	09APR06	26APR06	01MAR06	17MAR06
SD2730A	P21/L (North)-Up - Cast 8 seg Type A	15	12APR06	28APR06	23FEB06	11MAR06
SD2730	P21/L (North)-Down - Cast 8 seg Type A	15	18APR06	05MAY06	23FEB06	11MAR06
SD2750	Abutment M/L (South) - Cast 5 seg Type A	12	27APR06	10MAY06	22MAR06	04APR06
SD2760	Abutment M/R (North) - Cast 4 seg Type A	9	29APR06	09MAY06	25MAR06	04APR06
Segmental Deck Casting (Type B Units)						
SD3490A	P20 Slip C-Down - Cast 13 Segments Type B	20	04MAR06A	28MAR06	04MAR06A	22NOV05
SD3480	P20 Slip D-Up - Cast 12 Segments Type B	19	03MAR06A	20MAR06	03MAR06A	19JAN06
SD3480A	P20 Slip D-Down - Cast 12 Segments Type B	19	06MAR06A	25MAR06	06MAR06A	11NOV05
SD3290	PA/L (North) - Cast 8 seg Type B	16	03MAR06A	20MAR06	03MAR06A	25OCT05
SD3490	P20 Slip C-Up - Cast 13 Segments Type B	20	21MAR06	11APR06	20JAN06	14FEB06



Start Date 23SEP03
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from 20 March 2006

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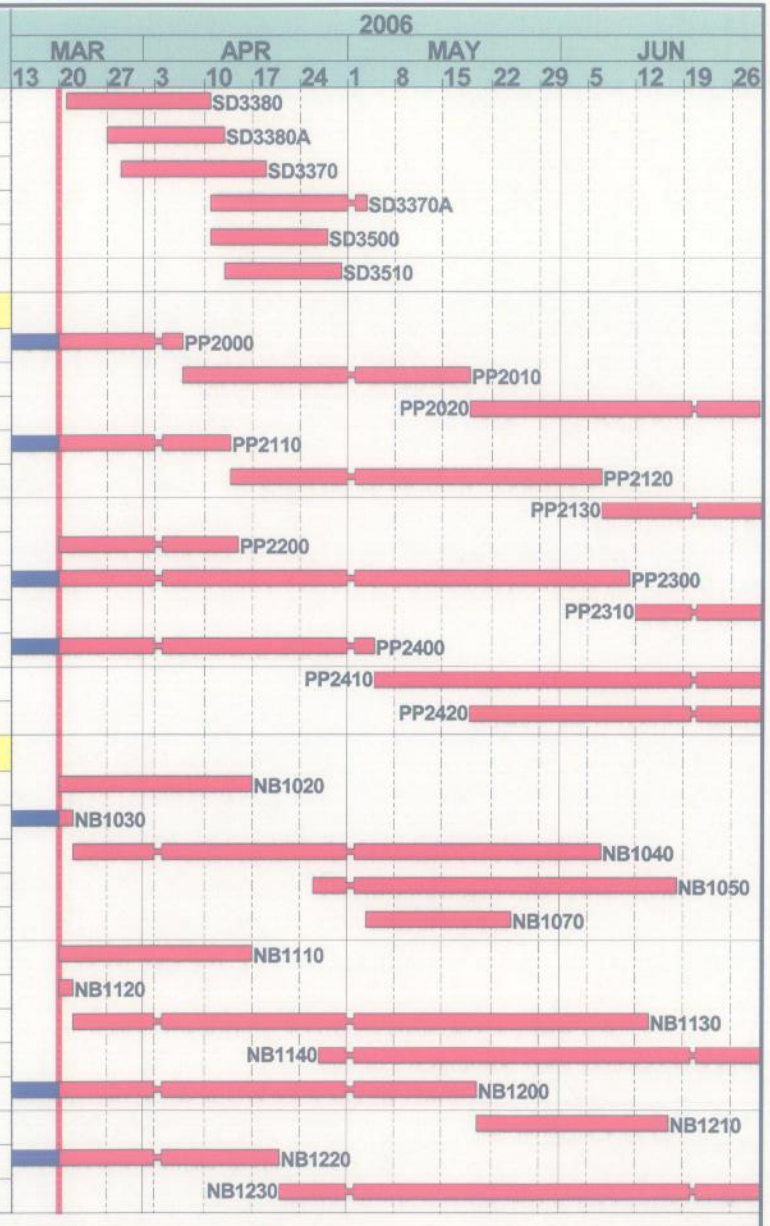
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
SD3380	D7-Up - Cast 12 segments Type B	19	21MAR06	10APR06	26OCT05	16NOV05
SD3380A	D7-Down - Cast 9 segments Type B	16	27MAR06	12APR06	12NOV05	29NOV05
SD3370	D8-Up - Cast 12 Segments Type B	19	29MAR06	18APR06	23NOV05	14DEC05
SD3370A	D8-Down - Cast 12 Segments Type B	19	11APR06	03MAY06	17NOV05	07DEC05
SD3500	P21 Slip C-Down - Cast 8 Segments Type B	15	11APR06	27APR06	07MAR06	22MAR06
SD3510	P21 Slip D-Down - Cast 8 Segments Type B	15	13APR06	29APR06	06MAR06	21MAR06
Precast Parapet Panel Casting						
PP2000	Casting Type I & VII Parapet Units 1 - 150	55	20OCT05A	06APR06	20OCT05A	19OCT05
PP2010	Casting Type I & VII Parapet Units 151 - 350	35	07APR06	18MAY06	01NOV05	10DEC05
PP2020	Casting Type I & VII Parapet Units 351 - 550	35	19MAY06	29JUN06	23DEC05	07FEB06
PP2110	Casting Type II Parapet Units 266 - 515	55	11FEB06A	13APR06	11FEB06A	16NOV05
PP2120	Casting Type II Parapet Units 516 - 765	45	14APR06	06JUN06	17NOV05	10JAN06
PP2130	Casting Type II Parapet Units 766 - 1099	60	07JUN06	18AUG06	11JAN06	24MAR06
PP2200	Casting Type IIII Parapet Units 1 - 22	22	20MAR06	14APR06	23SEP05	20OCT05
PP2300	Casting Type IV Parapet Units 1 - 227	80	20OCT05A	10JUN06	20OCT05A	15OCT05
PP2310	Casting Type IV Parapet Units 228 - 455	75	12JUN06	09SEP06	17OCT05	13JAN06
PP2400	Casting Type V & VI Parapet Units 1 - 260	65	21OCT05A	04MAY06	21OCT05A	13OCT05
PP2410	Casting Type V & VI Parapet Units 2611 - 520	65	05MAY06	21JUL06	14OCT05	29DEC05
PP2420	Casting Type V & VI Parapet Units 521 - 780	65	19MAY06	05AUG06	28OCT05	13JAN06
Noise Barriers & Enclosures						
NB1020	Noise Encl' - Slip Rd A - Eng. Review & Approval	28	20MAR06	16APR06	24OCT05	20NOV05
NB1030	Noise Encl' - Slip Rd A - Materials Purchasing	23	28FEB06A	21MAR06	28FEB06A	28SEP05
NB1040	Noise Encl' - Slip Rd A - Off-site Fabrication	64	22MAR06	06JUN06	29SEP05	14DEC05
NB1050	Noise Encl' - Slip Rd A - Delivery to Site	45	26APR06	17JUN06	04NOV05	27DEC05
NB1070	Erection of Noise barrier Mock Up Sample	18	04MAY06	24MAY06	14NOV05	03DEC05
NB1110	Noise Encl' - Slip Rd B - Eng. Review & Approval	28	20MAR06	16APR06	26NOV05	23DEC05
NB1120	Noise Encl' - Slip Rd B - Materials Purchasing	26	20MAR06	21MAR06	29SEP05	30SEP05
NB1130	Noise Encl' - Slip Rd B - Off-site Fabrication	70	22MAR06	13JUN06	03OCT05	23DEC05
NB1140	Noise Encl' - Slip Rd B - Delivery to Site	65	27APR06	14JUL06	08NOV05	24JAN06
NB1200	Noise Encl' - P8 to P11 - Design & Shop Drawings	74	10SEP05A	19MAY06	10SEP05A	08NOV05
NB1210	Noise Encl' - P8 to P11 - Eng. Review & Approval	28	20MAY06	16JUN06	09NOV05	06DEC05
NB1220	Noise Encl' - P8 to P11 - Materials Purchasing	30	28FEB06A	20APR06	28FEB06A	27SEP05
NB1230	Noise Encl' - P8 to P11 - Off-site Fabrication	78	21APR06	24JUL06	28SEP05	30DEC05



Start Date 23SEP03
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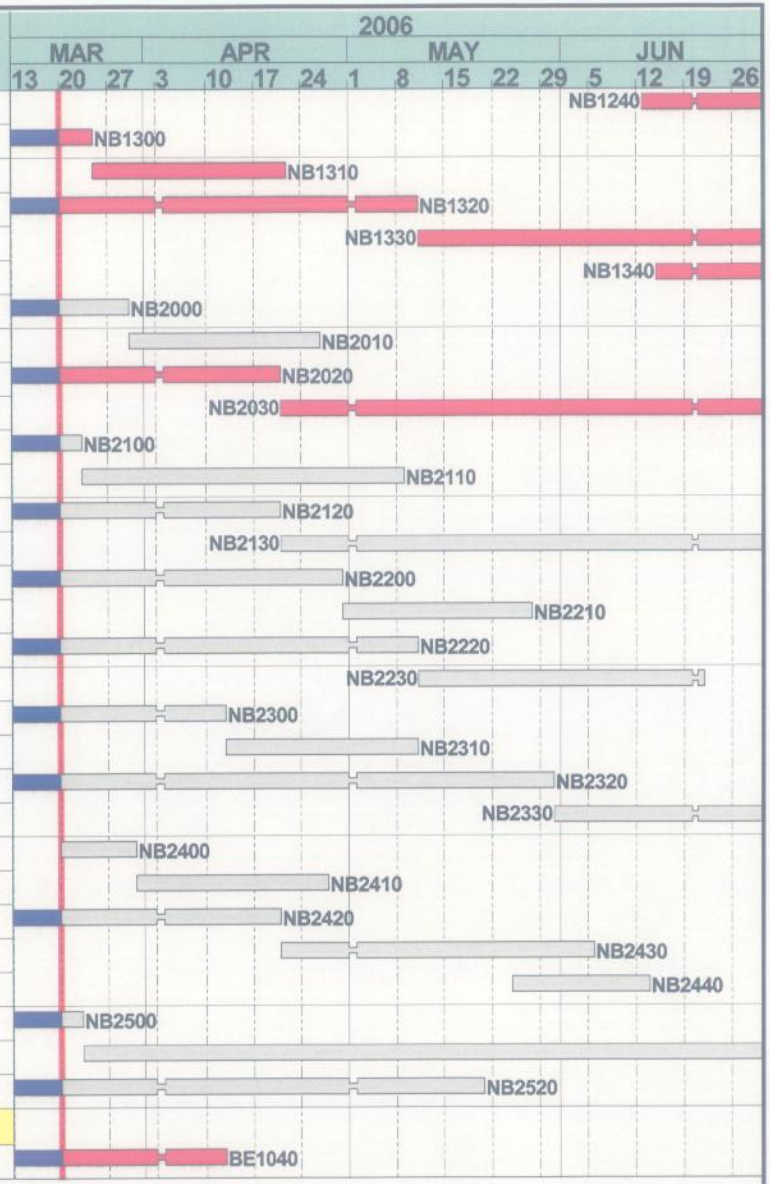
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
NB1240	Noise Encl' - P8 to P11 - Delivery to Site	41	13JUN06	02AUG06	21NOV05	09JAN06
NB1300	Noise Encl' - ENT Approach - Design & Shop Dwgs.	23	07JUL05A	24MAR06	07JUL05A	15NOV05
NB1310	Noise Encl' - ENT Approach - Eng. Review & Appro	28	25MAR06	21APR06	16NOV05	13DEC05
NB1320	Noise Encl' - ENT Approach - Material Purchasing	27	28FEB06A	10MAY06	28FEB06A	29OCT05
NB1330	Noise Encl' - ENT Approach - Off-site Fabricat'n	57	11MAY06	18JUL06	31OCT05	06JAN06
NB1340	Noise Encl' - ENT Approach - Delivery to Site	41	15JUN06	04AUG06	05DEC05	23JAN06
NB2000	Noise Barriers - PA to P4 - Design & Shop Dwgs.	147	19AUG05A	29MAR06	19AUG05A	24JUN06
NB2010	Noise Barriers - PA to P4 - Eng. Review & Appro'	28	30MAR06	26APR06	25JUN06	22JUL06
NB2020	Noise Barriers - PA to P4 - Materials Purchasing	39	28FEB06A	20APR06	28FEB06A	22MAR06
NB2030	Noise Barriers - PA to P4 - Off-site Fabrication	120	21APR06	12SEP06	23MAR06	15AUG06
NB2100	Noise Barriers - P5 to P8 - Design & Shop Dwgs.	147	05SEP05A	22MAR06	05SEP05A	11JUL06
NB2110	Noise Barriers - P5 to P8 - Eng. Review & Appro'	47	23MAR06	08MAY06	12JUL06	27AUG06
NB2120	Noise Barriers - P5 to P8 - Materials Purchasing	40	28FEB06A	20APR06	28FEB06A	11MAY06
NB2130	Noise Barriers - P5 to P8 - Off-site Fabrication	110	21APR06	31AUG06	12MAY06	20SEP06
NB2200	Noise Barriers - P11 to P13 - Design & Shop Dwgs	82	20JUL05A	29APR06	20JUL05A	12JUN06
NB2210	Noise Barriers - P11 to P13 -Eng Review & Approv	28	30APR06	27MAY06	13JUN06	10JUL06
NB2220	Noise Barriers - P11 to P13 - Materials Purchase	28	28FEB06A	10MAY06	28FEB06A	21JUN06
NB2230	Noise Barriers - P11 to P13 - Off-site Fabric'n	35	11MAY06	21JUN06	22JUN06	03AUG06
NB2300	Noise Barriers - ENT Approach -Des'n & Shop Dwgs	82	24AUG05A	12APR06	24AUG05A	03JUL06
NB2310	Noise Barriers - ENT Approach -Eng Rev & Approv	28	13APR06	10MAY06	04JUL06	31JUL06
NB2320	Noise Barriers - ENT Approach -Material Purchase	65	28FEB06A	30MAY06	28FEB06A	27JUN06
NB2330	Noise Barriers - ENT Approach -Off-site Fabric'n	48	31MAY06	27JUL06	28JUN06	24AUG06
NB2400	Noise Barriers - Slip Rd. C - Design & Shop Dwgs	10	20MAR06	30MAR06	20MAY06	31MAY06
NB2410	Noise Barriers - Slip Rd. C - Eng Rev & Approv	28	31MAR06	27APR06	01JUN06	28JUN06
NB2420	Noise Barriers - Slip Rd. C - Material Purchase	29	28FEB06A	20APR06	28FEB06A	06JUN06
NB2430	Noise Barriers - Slip Rd.C - Off-site Fabricat'n	38	21APR06	05JUN06	07JUN06	22JUL06
NB2440	Noise Barriers - Slip Rd. C - Delivery to Site	17	25MAY06	13JUN06	20JUL06	09AUG06
NB2500	Noise Barriers - Slip Rd. D - Design & Shop Dwgs	82	11JUL05A	22MAR06	11JUL05A	10MAY06
NB2510	Noise Barriers - Slip Rd. D - Eng Rev & Approv	125	23MAR06	25JUL06	11MAY06	12SEP06
NB2520	Noise Barriers - Slip Rd. D - Material Purchase	90	28FEB06A	20MAY06	28FEB06A	21AUG06
Bearings						
BE1040	Shipping of Bearings to Site	72	12JAN05A	12APR06	12JAN05A	31MAR05



Start Date 23SEP03
Finish Date 29MAY08
Data Date 20MAR06

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from 20 March 2006

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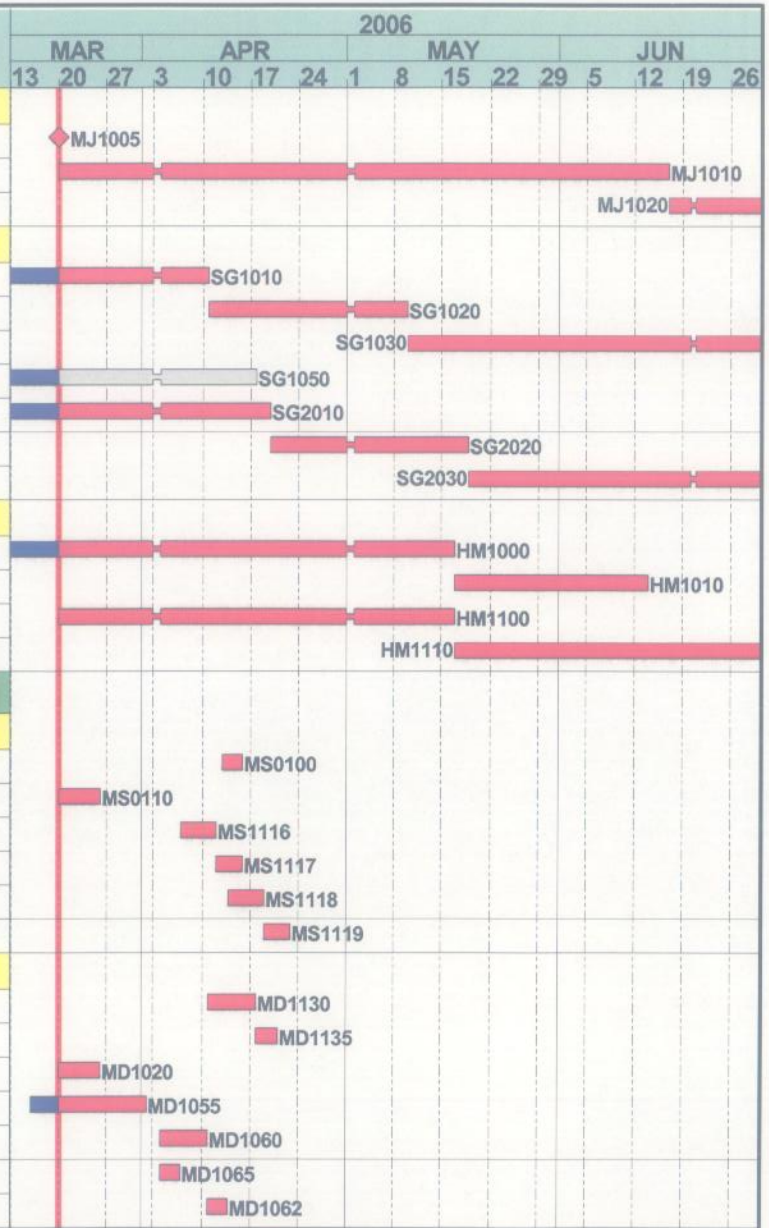
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Movement Joints						
MJ1005	Engineer's approval of Proprietary Type of M.J	0	20MAR06		04FEB06	
MJ1010	Detailed Design & Shop Drawings	75	20MAR06	16JUN06	04FEB06	04MAY06
MJ1020	Review & Approval of Design & Shop Drawings	24	17JUN06	17JUL06	05MAY06	01JUN06
Signage						
SG1010	Sign Gantries - Detailed Design & Shop Drawings	50	17NOV05A	10APR06	17NOV05A	06SEP05
SG1020	Sign Gantries - Review/Appro of Design & S/Dwgs.	24	11APR06	09MAY06	07SEP05	06OCT05
SG1030	Sign Gantries - Off-Site Fabrication of Gantries	75	10MAY06	08AUG06	07OCT05	05JAN06
SG1050	Sign Gantries - FADS7 - Design, Fab'n & Delivery	48	20OCT05A	17APR06	20OCT05A	22MAY08
SG2010	Signage - Shop Drawings	50	20OCT05A	19APR06	20OCT05A	13AUG05
SG2020	Signage - Review & Approval of Shop Drawings.	24	20APR06	18MAY06	15AUG05	10SEP05
SG2030	Signage - Off-Site Fabrication of Signs	50	19MAY06	18JUL06	12SEP05	11NOV05
High Mast Lighting						
HM1000	High Mast Lighting - Foundation Design	48	21OCT05A	16MAY06	21OCT05A	08SEP05
HM1010	High Mast Lighting - Approval of Found'n Design	24	17MAY06	13JUN06	18NOV05	15DEC05
HM1100	High Mast Lighting - Mast Design & Shop Drawings	48	20MAR06	16MAY06	15JUL05	08SEP05
HM1110	High Mast Lighting - Approval of Mast Design	56	17MAY06	11JUL06	09SEP05	03NOV05
Viaduct - Main Line - Piers PA to P6						
Substructure						
MS0100	PA/L - Install Bearings	3	13APR06	15APR06	26NOV05	29NOV05
MS0110	PA/R - Install Bearings	6	20MAR06	25MAR06	09MAR05	15MAR05
MS1116	P1/R - Remove Temp. Props for Up Span - Towers	4	07APR06	11APR06	26JAN05	29JAN05
MS1117	P1/R - Remove Temp. Props for Up Span - Founds	4	12APR06	15APR06	31JAN05	03FEB05
MS1118	P1/R - Remove Temp. Props for Down Span - Towers	4	14APR06	18APR06	26MAR05	30MAR05
MS1119	P1/R - Remove Temp. Props for Down Span - Founds	4	19APR06	22APR06	31MAR05	04APR05
Main Line - Segmental Deck Construction (Crane)						
MD1130	PA/L - 9 Segments Type B on Scaffold	6	11APR06	17APR06	24NOV05	30NOV05
MD1135	PA/L to P1/L - Insitu Stitch	3	18APR06	20APR06	01DEC05	03DEC05
MD1020	P4/R - 1st. Pair - 2 Segments Type C	6	20MAR06	25MAR06	29JUN05	06JUL05
MD1055	P1/R - 30 Segments Type C	15	16MAR06A	01APR06	16MAR06A	21JAN05
MD1060	PA/R - 9 Segments Type C on Scaffold	6	04APR06	10APR06	16MAR05	22MAR05
MD1065	P1/R to P2/R - Instiu Stitch	3	04APR06	06APR06	22JAN05	25JAN05
MD1062	PA/R to P1/R - Insitu Stitch	3	11APR06	13APR06	23MAR05	25MAR05



Start Date 23SEP03
Finish Date 29MAY08
Data Date 20MAR06

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Highways Department Contract No. HY/2003/01
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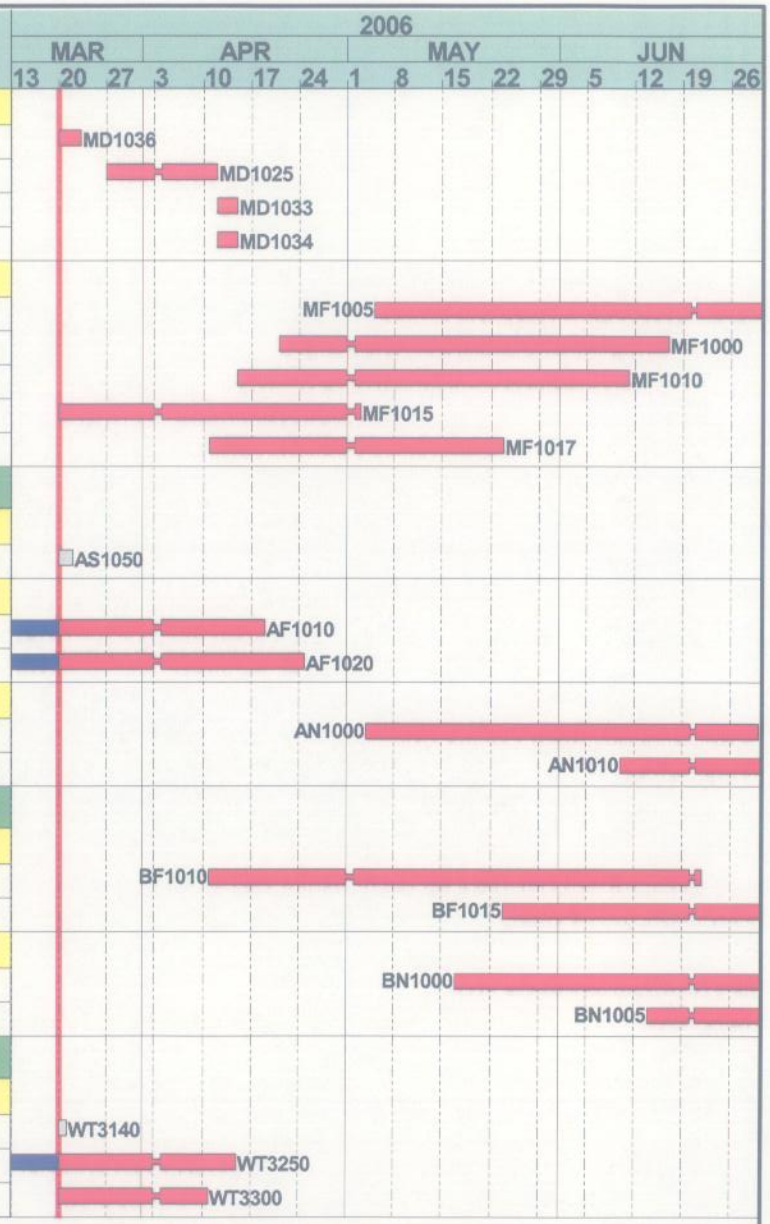
acciona Infraestructuras

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Main Line - Segmental Deck Const'n (Lift Frames)						
MD1036	P2/R to P3/R - Insitu Stitch	3	20MAR06	22MAR06	14NOV05	16NOV05
MD1025	P4/R - 28 Segments Type C	13	27MAR06	11APR06	07JUL05	21JUL05
MD1033	P4/R to P5/R - Insitu Stitch	3	12APR06	14APR06	28NOV05	30NOV05
MD1034	P3/R to P4/R - Insitu Stitch	3	12APR06	14APR06	17OCT05	19OCT05
Superstructure Finishing Works Required for TCSS						
MF1005	P3L to P6 - Parapets P3/L to P7/L (incl earthing	48	05MAY06	30JUN06	21NOV05	17JAN06
MF1000	PA to P6 - Parapets PA/L to P3/L (incl earthing)	48	21APR06	16JUN06	05DEC05	03FEB06
MF1010	PA to P6 - Parapets PA/R to P3/R (incl earthing)	48	15APR06	10JUN06	20OCT05	14DEC05
MF1015	PA to P6 - Insitu Slab to Under Median Barrier	36	20MAR06	02MAY06	14NOV05	24DEC05
MF1017	PA to P6 - Median Barrier (incl earthing)	36	11APR06	23MAY06	05DEC05	17JAN06
Viaduct - Slip Road A						
Substructure						
AS1050	Abutment A - Install Bearings	2	20MAR06	21MAR06	09NOV06	10NOV06
Superstructure Finishing Works Required for TCSS						
AF1010	Slip Rd.A to P7 -Parapets East Face (incl earth)	60	06JAN06A	18APR06	06JAN06A	10NOV05
AF1020	Slip Rd.A to P7- Parapets West Face (incl earth)	60	17JAN06A	24APR06	17JAN06A	23NOV05
Noise Barriers & Encl' (Sec.15 Excision)						
AN1000	Slip Rd. A - Full Enclosure Ch.1070 - Pier A2	48	04MAY06	29JUN06	11NOV05	07JAN06
AN1010	Slip Rd. A - Full Enclosure Pier A2 - 1280	48	10JUN06	08AUG06	19DEC05	17FEB06
Viaduct - Slip Road B						
Superstructure Finishing Works Required for TCSS						
BF1010	Slip Rd.B to P7 - Parapets East Face (incl earth	60	11APR06	21JUN06	08OCT05	17DEC05
BF1015	Slip Rd.B to P7 - Parapets West Face (incl earth	60	24MAY06	04AUG06	24NOV05	07FEB06
Remaining Noise Barriers & Enclosures						
BN1000	Slip Road B - Full Enclosure Ch.1038 - Pier B2	48	17MAY06	13JUL06	14NOV05	10JAN06
BN1005	Slip Road B - Full Enclosure Pier B2 - Ch. 1258	48	14JUN06	11AUG06	12DEC05	10FEB06
At Grade Works - Lai Po Road						
Temporary Traffic Management Schemes						
WT3140	Divert N/B & S/B Traffic to Divs'n No.1 (for B3)	1	20MAR06	20MAR06	29MAY08	29MAY08
WT3250	4th. TTMS Lai Po Rd (P4R,P5R,B4) -Implementation	61*	02FEB06A	14APR06	02FEB06A	30NOV05
WT3300	5th. TTMS Lai Po Rd (for N/B C/W)-Prepare Review	18	20MAR06	10APR06	12FEB05	04MAR05



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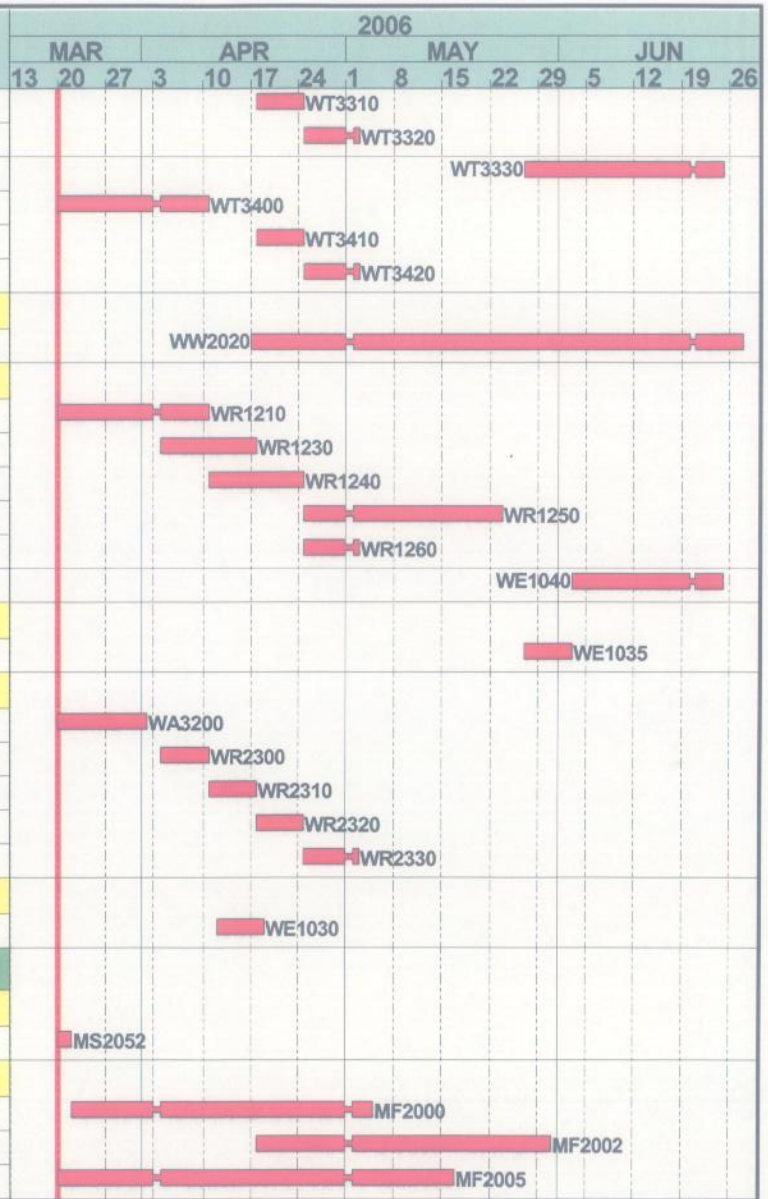
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
WT3310	5th. TTMS Lai Po Rd (for N/B C/W) -CRE Endorsm't	6	18APR06	24APR06	07MAR05	12MAR05
WT3320	5th. TTMS Lai Po Rd (for N/B C/W) -Roadwk Advice	6	25APR06	02MAY06	14MAR05	19MAR05
WT3330	5th. TTMS Lai Po Rd (for N/B C/W) - Site Prepare	24	27MAY06	24JUN06	21MAR05	18APR05
WT3400	6th. TTMS Lai Po Rd (for S/B C/W)-Prepare Review	18	20MAR06	10APR06	12FEB05	04MAR05
WT3410	6th. TTMS Lai Po Rd (for S/B C/W) - CRE Endors't	6	18APR06	24APR06	28JUL05	03AUG05
WT3420	6th. TTMS Lai Po Rd (for S/B C/W) -Roadwk Advice	6	25APR06	02MAY06	04AUG05	10AUG05
Retaining Wall LCK-R2						
WW2020	Ret. Wall LCK-R2 - Walls	60	17APR06	27JUN06	04FEB05	19APR05
Lai Po Road (D3) Roadworks - Stage 1						
WR1210	Lai Po Rd N/B Ch.1+250 - 1+360 - Formation	18	20MAR06	10APR06	03FEB05	26FEB05
WR1230	Lai Po Rd N/B Ch.1+250 - 1+360 - Sub-base	12	04APR06	17APR06	21FEB05	05MAR05
WR1240	Lai Po Rd N/B Ch.1+250 - 1+360 - Kerbs	12	11APR06	24APR06	28FEB05	12MAR05
WR1250	Lai Po Rd N/B Ch.1+250 - 1+360- Utilities	24	25APR06	23MAY06	17SEP05	18OCT05
WR1260	Lai Po Rd N/B Ch.1+250 - 1+360 - Road Pavement	6	25APR06	02MAY06	14MAR05	19MAR05
WE1040	Lai Po Rd S/B - Temporary Ramp at Slip Road B	18	03JUN06	24JUN06	26MAR05	16APR05
Lai Po Road (D3) Roadworks - Stage 2						
WE1035	Reduce Segment Storage Area for Temp Road Divs'n	6	27MAY06	02JUN06	12APR05	18APR05
Lai Po Road (D3) Roadworks - Stage 3						
WA3200	Lai Po Rd S/B Ch.1+300 - 1+360 - Drainage	12	20MAR06	01APR06	07MAR05	19MAR05
WR2300	Lai Po Rd S/B Ch.1+300 - 1+360 - Formation	6	04APR06	10APR06	21MAR05	26MAR05
WR2310	Lai Po Rd S/B Ch.1+300 - 1+360 - Sub-base	6	11APR06	17APR06	28MAR05	02APR05
WR2320	Lai Po Rd S/B Ch.1+300 - 1+360 - Kerbs	6	18APR06	24APR06	04APR05	11APR05
WR2330	Lai Po Rd S/B Ch.1+300 - 1+360 - Pavement	6	25APR06	02MAY06	12APR05	18APR05
Lai Po Road (D3) Roadworks - Stage 5						
WE1030	Lai Po Rd S/B - Remove Segment Storage Area	6	12APR06	18APR06	22JUL05	28JUL05
Viaduct - Main Line - Piers P7 to P10						
Substructure						
MS2052	P7 Install Bearings	2	20MAR06	21MAR06	28SEP05	29SEP05
Superstructure Finishing Works Required for TCSS						
MF2000	P7 to P10 - Parapets P7 to P8 (incl earthing)	36	22MAR06	04MAY06	30SEP05	12NOV05
MF2002	P7 to P10 - Parapets P8 to P10 (incl earthing)	36	18APR06	30MAY06	24OCT05	03DEC05
MF2005	P7 to P10 - Insitu Slab to Under Median Barrier	48	20MAR06	16MAY06	08SEP05	05NOV05



Start Date 23SEP03
Finish Date 29MAY08
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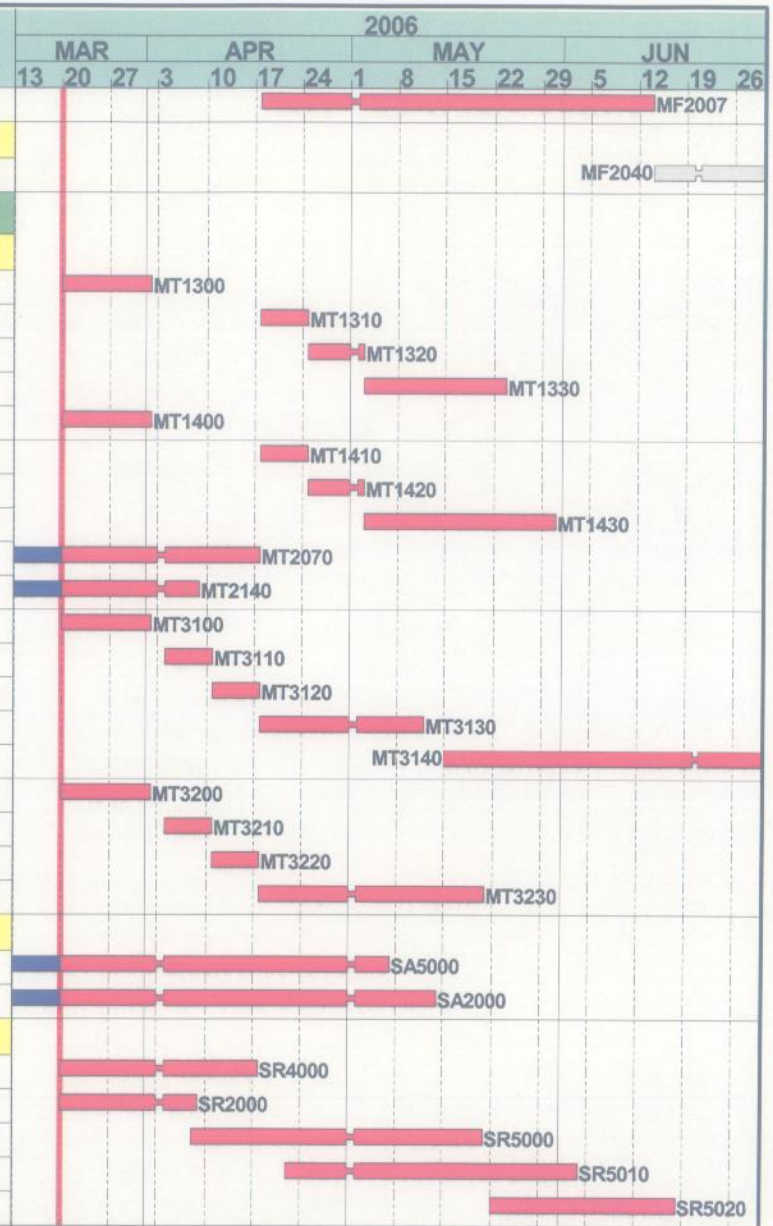
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
MF2007	P7 to P10 - Median Barrier (incl earthing)	48	18APR06	13JUN06	08OCT05	03DEC05
Remaining Superstructure Finishing Works						
MF2040	P7 to P10 - Deck Drainage	48	14JUN06	11AUG06	26SEP06	23NOV06
At Grade Works - Lai Chi Kok Interchange						
Temporary Traffic Management Schemes						
MT1300	2nd. TTMS Butterfly Valley Rd-Prepare for Review	12	20MAR06	01APR06	19FEB05	04MAR05
MT1310	2nd. TTMS Butterfly Valley Rd - CRE Endorsement	6	18APR06	24APR06	16JUN05	22JUN05
MT1320	2nd. TTMS Butterfly Valley Rd - Roadworks Advice	6	25APR06	02MAY06	23JUN05	29JUN05
MT1330	2nd. TTMS Butterfly Valley Rd - Prepare	18	03MAY06	23MAY06	30JUN05	21JUL05
MT1400	3rd TTMS Butterfly Valley Rd -Prepare for Review	12	20MAR06	01APR06	12FEB05	25FEB05
MT1410	3rd. TTMS Butterfly Valley Rd - CRE Endorsement	6	18APR06	24APR06	10SEP05	16SEP05
MT1420	3rd. TTMS Butterfly Valley Rd - Roadworks Advice	6	25APR06	02MAY06	17SEP05	24SEP05
MT1430	3rd. TTMS Butterfly Valley Rd - Prepare	24	03MAY06	30MAY06	26SEP05	25OCT05
MT2070	TTMS Case No.027 (P7 Piling) - Implementation	563*	03JUN04A	17APR06	03JUN04A	18JAN06
MT2140	TTMS for Pier P8/L - Implementation	641*	23FEB04A	08APR06	23FEB04A	11NOV05
MT3100	2nd. TTMS Kom Tsun Street - Prepare for Review	12	20MAR06	01APR06	19FEB05	04MAR05
MT3110	2nd. TTMS Kom Tsun Street - CRE Endorsement	6	04APR06	10APR06	23MAY05	28MAY05
MT3120	2nd. TTMS Kom Tsun Street - Roadworks Advice	6	11APR06	17APR06	30MAY05	04JUN05
MT3130	2nd. TTMS Kom Tsun Street - Site Preparation	20	18APR06	11MAY06	06JUN05	29JUN05
MT3140	2nd. TTMS Kom Tsun Street - Implementation	117*	15MAY06	03OCT06	14SEP05	18NOV05
MT3200	3rd. TTMS Kom Tsun Street - Prepare for Review	12	20MAR06	01APR06	12FEB05	25FEB05
MT3210	3rd. TTMS Kom Tsun Street - CRE Endorsement	6	04APR06	10APR06	03OCT05	08OCT05
MT3220	3rd. TTMS Kom Tsun Street - Roadworks Advice	6	11APR06	17APR06	10OCT05	17OCT05
MT3230	3rd. TTMS Kom Tsun Street - Site Preparation	28	18APR06	20MAY06	18OCT05	18NOV05
Drainage Works						
SA5000	Butterfly Valley Rd Stage1 - Stormwater Drainage	54	15JUN05A	06MAY06	15JUN05A	23MAY05
SA2000	Kom Tsun St. & Bus Terminal - St/water Drainage	54	14FEB05A	13MAY06	14FEB05A	29JUN05
Utilities & Roadworks						
SR4000	Kwai Chung Road (Pier 7) - Reinstatement	24	20MAR06	17APR06	20DEC05	18JAN06
SR2000	Castle Peak Road - Roadworks Reinstatement	17	20MAR06	08APR06	24OCT05	11NOV05
SR5000	Butterfly V. Rd (LCKI) Stage1-Excav. & Formation	36	08APR06	20MAY06	25APR05	06JUN05
SR5010	Butterfly V. Rd (LCKI) Stage 1 - Sub-base	36	22APR06	03JUN06	10MAY05	21JUN05
SR5020	Butterfly V. Rd (LCKI) Stage 11 - Kerbs	24	22MAY06	17JUN06	07JUN05	06JUL05



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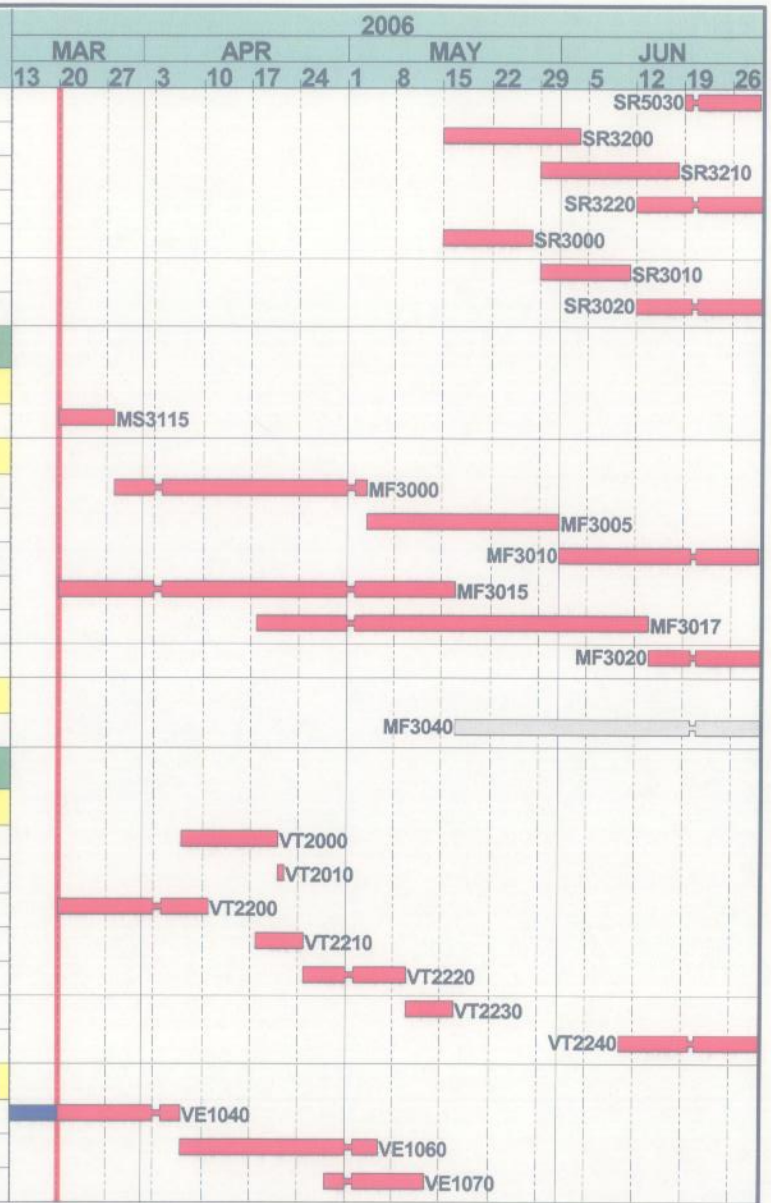
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
SR5030	Butterfly V. Rd (LCKI) Stage 1 - Pavement	9	19JUN06	29JUN06	07JUL05	16JUL05
SR3200	Kom Tsun Street Bus Stn. - Excavate & Formation	18	15MAY06	03JUN06	30JUN05	21JUL05
SR3210	Kom Tsun Street bus Stn. - Sub-base	18	29MAY06	17JUN06	15JUL05	04AUG05
SR3220	Kom Tsun Street Bus Stn. - Kerbs	24	12JUN06	11JUL06	29JUL05	25AUG05
SR3000	Kom Tsun Street L/H C/Way - Excavate & Formation	12	15MAY06	27MAY06	14SEP05	28SEP05
SR3010	Kom Tsun Street L/H C/Way - Sub-base	12	29MAY06	10JUN06	29SEP05	14OCT05
SR3020	Kom Tsun Street L/H C/Way - Kerbs	18	12JUN06	04JUL06	15OCT05	04NOV05
Viaduct - Main Line - Piers P11 to P15						
Substructure						
MS3115	P12 - Bearings	7	20MAR06	27MAR06	29SEP05	07OCT05
Superstructure Finishing Works Required for TCSS						
MF3000	P11 to P15 - Parapets P10 to P12 (incl earthing)	30	28MAR06	03MAY06	08OCT05	12NOV05
MF3005	P11 to P15 - Parapets P12 to P14 (incl earthing)	24	04MAY06	31MAY06	14NOV05	10DEC05
MF3010	P11 to P15 - Parapets P14 to P16 (incl earthing)	24	01JUN06	29JUN06	12DEC05	10JAN06
MF3015	P11 to P15 - Insitu Slab to Under Median Barrier	48	20MAR06	16MAY06	08SEP05	05NOV05
MF3017	P11 to P15 - Median Barrier (incl earthing)	48	18APR06	13JUN06	08OCT05	03DEC05
MF3020	P11 to P15 - Provision for E & M and TCSS	24	14JUN06	13JUL06	18JAN06	17FEB06
Remaining Superstructure Finishing Works						
MF3040	P11 to P15 - Deck Drainage	72	17MAY06	11AUG06	29AUG06	23NOV06
At Grade Works - Wai Man Tsuen						
Temporary Traffic Management Schemes						
VT2000	Temporary Slow Lane on Top of Slope CCR-R5	12	07APR06	20APR06	22JUL05	04AUG05
VT2010	B.V. Rd - Divert Traffic to Slow & Fast Lanes	1	21APR06	21APR06	05AUG05	05AUG05
VT2200	TTMS Slip RdD Deck@ CC Rd W/B-Prepare for Review	18	20MAR06	10APR06	12FEB05	04MAR05
VT2210	TTMS Slip Rd D Deck@ CC Rd W/B -CRE Endorsement	6	18APR06	24APR06	09NOV05	15NOV05
VT2220	TTMS Slip Rd D Deck@ CC Rd W/B -Roadworks Advice	12	25APR06	09MAY06	16NOV05	29NOV05
VT2230	TTMS Slip Rd D Deck@ CC Rd W/B -Site Preparation	6	10MAY06	16MAY06	30NOV05	06DEC05
VT2240	TTMS Slip Rd D Deck@ CC Rd W/B - Implementation	22*	10JUN06	07JUL06	07DEC05	03JAN06
Earthworks & Slope Works						
VE1040	Slope CCR-S5 - Compacted Filling	24	27FEB06A	06APR06	27FEB06A	21JUL05
VE1060	Slope CCR-S5 - Slope Drainage & Finishes	24	07APR06	05MAY06	01NOV05	28NOV05
VE1070	Slope CCR-S5 - Landscaping & Hydroseeding	12	28APR06	12MAY06	22NOV05	05DEC05



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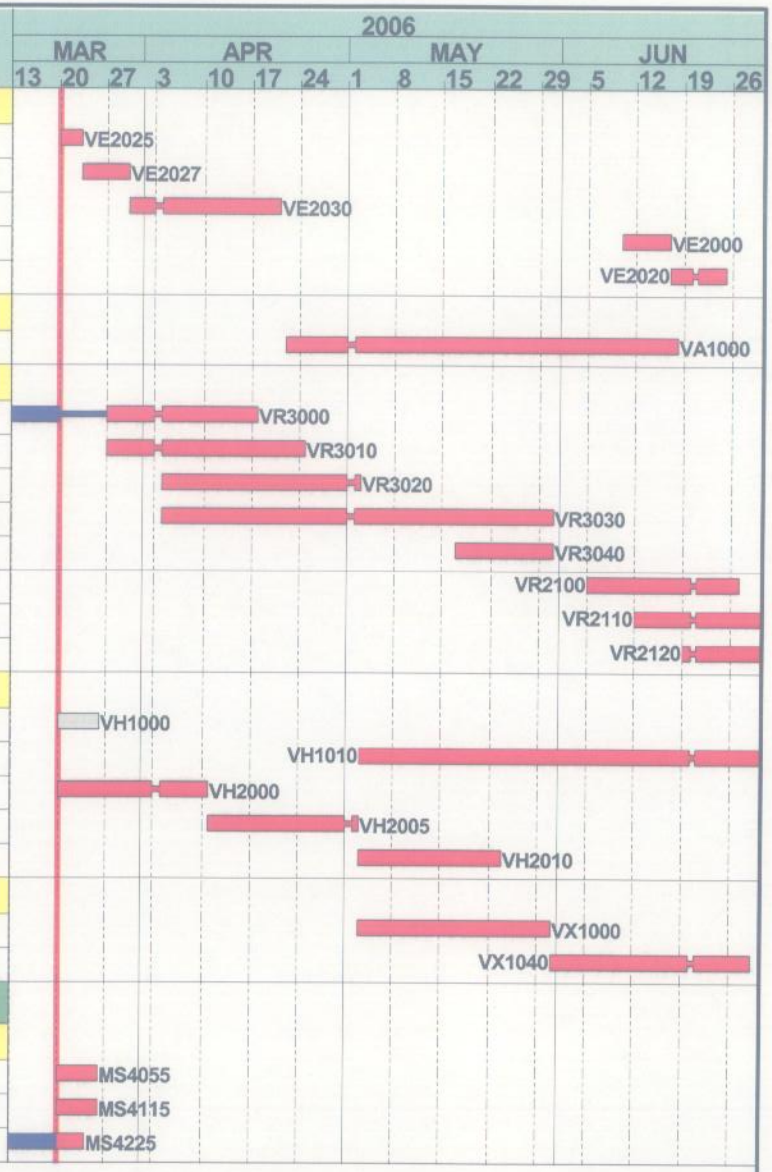
Earthworks & Slope Works - 11NW-A/C678 & CR679						
VE2025	Slope 11NW-A/C678 & CR679 - Platform for S.Nails	3	20MAR06	22MAR06	25NOV05	28NOV05
VE2027	Slope 11NW-A/C678 & CR679 - Test Soil Nail	6	23MAR06	29MAR06	29NOV05	05DEC05
VE2030	Slope 11NW-A/C678 & CR679 - Soil Nails	18	30MAR06	20APR06	06DEC05	27DEC05
VE2000	Slope 11NW-A/C678 & CR679 - Remove Temp Platform	6	10JUN06	16JUN06	28DEC05	04JAN06
VE2020	Slope 11NW-A/C678 & CR679 - Trim Original Slope	6	17JUN06	24JUN06	05JAN06	11JAN06
Drainage Works						
VA1000	Butterfly Valley Rd Stage3 - Stormwater Draiange	48	22APR06	17JUN06	06AUG05	03OCT05
Utilities & Roadworks						
VR3000	Drainage Maintenance Access Rd. - Formation	24	02MAR06A	17APR06	02MAR06A	07NOV05
VR3010	Drainage Maintenance Access Rd. - Sub-base	24	27MAR06	24APR06	18OCT05	14NOV05
VR3020	Drainage Maintenance Access Rd. - Kerbs	24	04APR06	02MAY06	25OCT05	21NOV05
VR3030	Drainage Maintenance Access Rd. - Pavement	48	04APR06	30MAY06	22NOV05	18JAN06
VR3040	Drainage Maintenance Access Rd. - Street Lights	12	17MAY06	30MAY06	05JAN06	18JAN06
VR2100	Butterfly V. Rd (WMT) Stage3- Excav. & Formation	18	05JUN06	26JUN06	17SEP05	10OCT05
VR2110	Butterfly V. Rd (WMT) Stage 3 - Sub-base	18	12JUN06	04JUL06	26SEP05	18OCT05
VR2120	Butterfly V. Rd (WMT) Stage 3 - Kerbs	18	19JUN06	11JUL06	04OCT05	25OCT05
Wai Man Tsuen Fire Hydrant Pump House						
VH1000	Wai Man Tsuen F/H Pump House - Plate Load Test	6	20MAR06	25MAR06	28MAR06	04APR06
VH1010	Wai Man Tsuen F/H Pump House - Structure	60	03MAY06	13JUL06	05APR06	14JUN06
VH2000	Fire Main - Pipework Along Maintenance Road	18	20MAR06	10APR06	10OCT05	31OCT05
VH2005	Fire Main - Pipework to Piers P10/R & P14	18	11APR06	02MAY06	04JAN06	24JAN06
VH2010	Fire Main - Valves & Connections	18	03MAY06	23MAY06	25JAN06	17FEB06
Landscape Works						
VX1000	Landscaping - Earthworks & Formation	24	03MAY06	30MAY06	22NOV05	19DEC05
VX1040	Landscaping - Soiling & Planting	24	31MAY06	28JUN06	20DEC05	18JAN06
Viaduct - Main Line - Piers P16 to P18						
Substructure						
MS4055	P16/L - Install Bearings	6	20MAR06	25MAR06	04JAN06	10JAN06
MS4115	P16/R - Install Bearings	6	20MAR06	25MAR06	05DEC05	10DEC05
MS4225	P17/L & P17/R - Cure & Strike Form/Falsework	24	21DEC05A	23MAR06	21DEC05A	20JUN05



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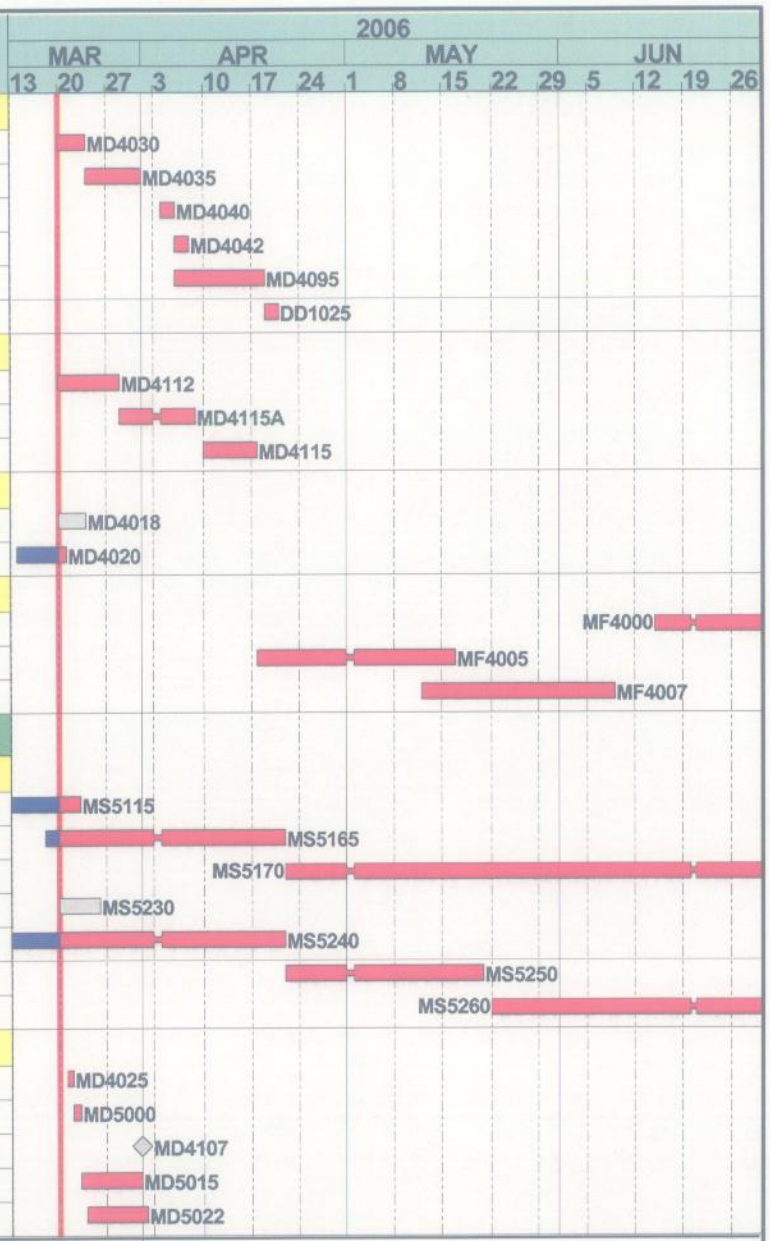
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Main Line - Segmental Deck Construction (Crane)						
MD4030	P17 Slip C - 1st. Pair - 2 Segments Type B	4	20MAR06	23MAR06	01DEC05	05DEC05
MD4035	P17 Slip C - 16 Segments Type B	7	24MAR06	31MAR06	06DEC05	13DEC05
MD4040	C6 Slip C - 3 Segments Type B	2	04APR06	05APR06	14DEC05	15DEC05
MD4042	C6 Slip C to P17 Slip C - Insitu Stitch	2	06APR06	07APR06	16DEC05	17DEC05
MD4095	P18 Slip D - 22 Segments Type B	11	06APR06	18APR06	07DEC05	19DEC05
DD1025	D10 to P18 - Insitu Stitch	2	19APR06	20APR06	31DEC05	03JAN06
Main Line - Segmental Deck Const'n (Lift Frames)						
MD4112	P18 Slip C - Install Lifting Frames	8	20MAR06	28MAR06	15NOV05	23NOV05
MD4115A	P18 Slip C - 2nd-4th. Pairs -6 Segments Type B	9	29MAR06	08APR06	24NOV05	03DEC05
MD4115	P18 Slip C - 5th-14th Pairs - 20 Segments Type B	7	10APR06	17APR06	05DEC05	12DEC05
Main Line - Segmental Deck Construction (Gantry)						
MD4018	Delivery of Segments at P17 Slip C	4	20MAR06	23MAR06	26MAY08	29MAY08
MD4020	Launch Gantry to P16/P17/P18 UNDER CLP O/H LINES	2	14MAR06A	20MAR06	14MAR06A	21NOV05
Superstructure Finishing Works Required for TCSS						
MF4000	P16 to P18 - Parapets at P16 - P18 incl earthing	24	15JUN06	14JUL06	27DEC05	24JAN06
MF4005	P16 to P18 - Insitu Slab to Under Median Barrier	24	18APR06	16MAY06	13DEC05	11JAN06
MF4007	P16 to P18 - Median Barrier (incl earthing)	24	12MAY06	08JUN06	07JAN06	07FEB06
Viaduct - Main Line - Piers 19 to Abutment M						
Substructure						
MS5115	P20 - Pier Head - Cure & Strip Falsework	30	02MAR06A	22MAR06	02MAR06A	25NOV05
MS5165	P21 - Pier Hammer Head	30	18MAR06A	21APR06	18MAR06A	01DEC05
MS5170	P21 - Pier Insitu Deck Segment	60	22APR06	04JUL06	02DEC05	15FEB06
MS5230	Abutment M - Install Bearings	6	20MAR06	25MAR06	23MAY08	29MAY08
MS5240	Abutment M - Insitu Deck Segment	60	14FEB06A	21APR06	14FEB06A	07DEC05
MS5250	Abutment M - Cure & Strip Falsework	24	22APR06	20MAY06	08DEC05	06JAN06
MS5260	Abutment M - End Wall and Wing Walls	36	22MAY06	04JUL06	07JAN06	21FEB06
Main Line - Segmental Deck Construction (Gantry)						
MD4025	Launch Gantry to P17/P18/P19 UNDER CLP O/H LINES	1	21MAR06	21MAR06	22NOV05	22NOV05
MD5000	Launch Gantry to P18/P19/P20 UNDER CLP O/H LINES	1	22MAR06	22MAR06	23NOV05	23NOV05
MD4107	CLP RESUME POWER - O/HEAD LINES NORTH &	0		31MAR06		29MAY08
MD5015	P19 Slip C - 18 Segments Type B	8	23MAR06	31MAR06	24NOV05	02DEC05
MD5022	P19/L - 16 Segments Type A	8	24MAR06	01APR06	25NOV05	03DEC05



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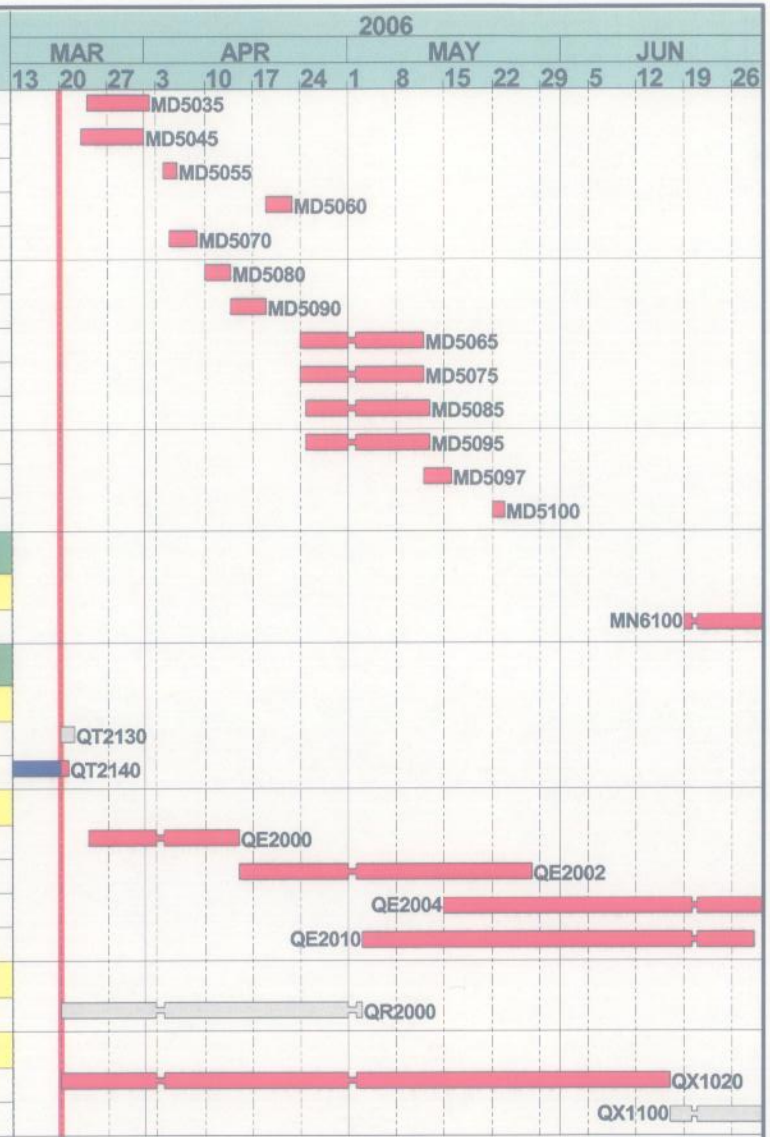
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
MD5035	P19/R - 18 Segments Type A	8	24MAR06	01APR06	25NOV05	03DEC05
MD5045	P19 Slip D - 14 Segments Type B	8	23MAR06	31MAR06	25NOV05	03DEC05
MD5055	P19/L&R to P18/L&R - Insitu Stitches	2	04APR06	05APR06	05DEC05	06DEC05
MD5060	P20 Slip D - 1st. Pair - 2 Segments Type B	4	19APR06	22APR06	11FEB06	15FEB06
MD5070	P20/R - 1st. Pair - 2 Segments Type A	4	05APR06	08APR06	25JAN06	28JAN06
MD5080	P20/L - 1st. Pair - 2 Segments Type A	4	10APR06	13APR06	02FEB06	06FEB06
MD5090	P20 Slip C - 1st. Pair - 2 Segments Type A	4	14APR06	18APR06	07FEB06	10FEB06
MD5065	P20 Slip D - 22 Segments Type B	15	24APR06	11MAY06	16FEB06	04MAR06
MD5075	P20/R - 22 Segments Type A	15	24APR06	11MAY06	16FEB06	04MAR06
MD5085	P20/L - 24 Segments Type A	15	25APR06	12MAY06	17FEB06	06MAR06
MD5095	P20 Slip C - 24 Segments Type B	15	25APR06	12MAY06	17FEB06	06MAR06
MD5097	P20/L&R to P19/L&R - Insitu Stitches	3	12MAY06	15MAY06	21MAR06	23MAR06
MD5100	Launch Gantry to P20/P21/Abut M	2	22MAY06	23MAY06	07MAR06	08MAR06
Viaduct - Main Line - Tunnel Approaches						
Noise Barriers & Encl' (Sec.10 Excision)						
MN6100	Semi Enclosure S/B Ch.2005 - 2200 - Frame	60	19JUN06	30AUG06	08DEC05	21FEB06
At Grade Works - Butterfly Valley						
Temporary Traffic Management Schemes						
QT2130	TTMS Slip RdD Deck@ CC Rd E/B - Site Preparation	2	20MAR06	21MAR06	28MAY08	29MAY08
QT2140	TTMS Slip Rd D Deck @ CC Rd E/B - Implementation	18*	28FEB06A	20MAR06	28FEB06A	30DEC05
Earthworks & Slope Works - 11NW-A/FR54 & F55						
QE2000	Slope 11NW-A/FR54 & FR55 - Remove Temp. Platform	18	24MAR06	14APR06	21JUN05	12JUL05
QE2002	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Bases	36	15APR06	27MAY06	13JUL05	23AUG05
QE2004	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Walls	48	15MAY06	11JUL06	10AUG05	06OCT05
QE2010	Slope 11NW-A/FR54 & FR55 - Install Temp Works	48	03MAY06	28JUN06	20JUL05	13SEP05
Utilities & Roadworks						
QR2000	WSD Access Road - New CLP 11Kv Cable Laying	36	20MAR06	02MAY06	17APR08	29MAY08
Landscape Works						
QX1020	Landscaping - Soiling & Planting on Slope CCR-S6	75	20MAR06*	16JUN06	21OCT05	18JAN06
QX1100	Landscape Establishment Works	301	17JUN06	18JUN07	04NOV06	03NOV07



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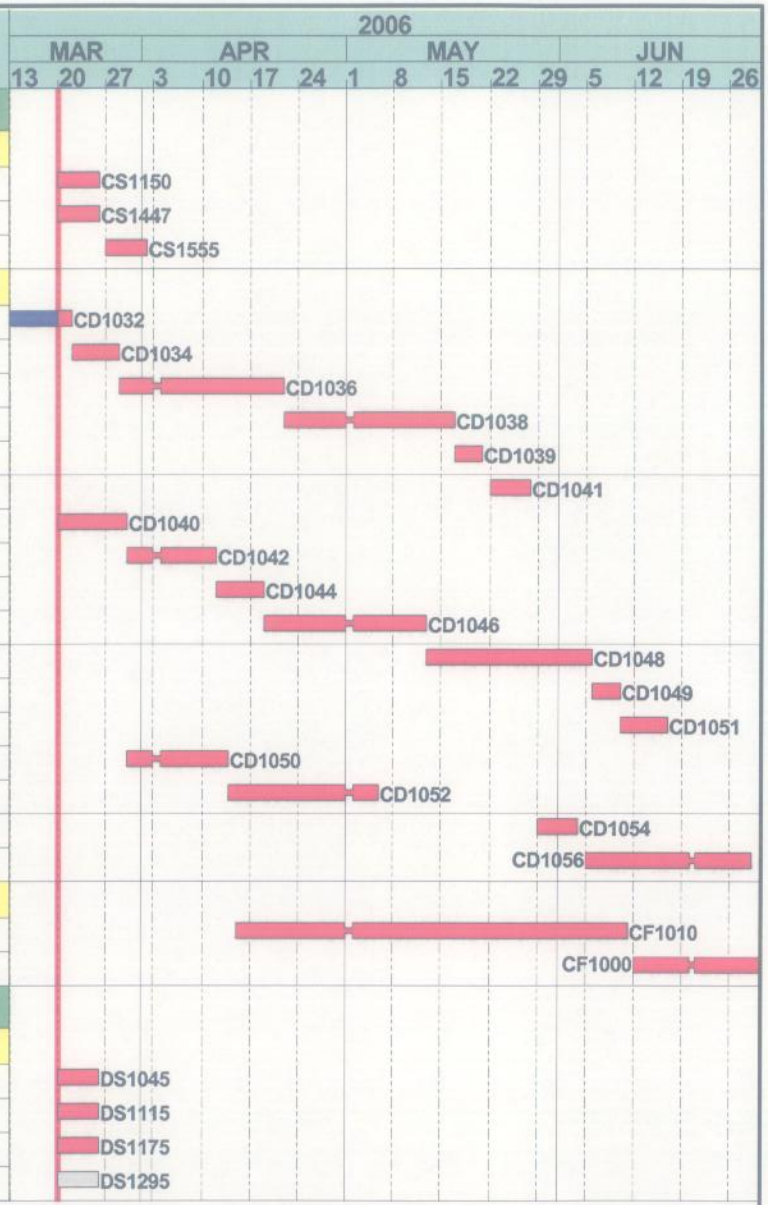
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Viaduct - Slip Road C						
Substructure						
CS1150	Abutment C - Install Bearings	6	20MAR06	18MAR06	26OCT05	25OCT05
CS1447	C5/L - C5/R Portal - Install Bearings	6	20MAR06	25MAR06	06OCT05	13OCT05
CS1555	C6/R & C6/L - Install Bearings on Portal Frame	6	27MAR06	01APR06	14OCT05	20OCT05
Slip Road C - Insitu Deck Construction						
CD1032	Slip Rd. C - Deck Span C3 to C4 - Falsework	12	27JAN06A	21MAR06	27JAN06A	26AUG05
CD1034	Slip Rd. C - Deck Span C3 to C4 - Soffit	6	22MAR06	28MAR06	27AUG05	02SEP05
CD1036	Slip Rd. C - Deck Span C3 to C4 - 1st. Pour	20	29MAR06	21APR06	03SEP05	27SEP05
CD1038	Slip Rd. C - Deck Span C3 to C4 - 2nd. Pour	20	22APR06	16MAY06	28SEP05	22OCT05
CD1039	Slip Rd. C - Deck Span C3 to C4 - Stressing	4	17MAY06	20MAY06	24OCT05	27OCT05
CD1041	Slip Rd. C - Deck Span C3 to C4 - Cure & Strip	6	22MAY06	27MAY06	28OCT05	03NOV05
CD1040	Slip Rd. C - Deck Span C4 to C5 - Ground Prep.	9	20MAR06	29MAR06	16SEP05	27SEP05
CD1042	Slip Rd. C - Deck Span C4 to C5 - Falsework	10	30MAR06	11APR06	30SEP05	13OCT05
CD1044	Slip Rd. C - Deck Span C4 to C5 - Soffit	6	12APR06	18APR06	21OCT05	27OCT05
CD1046	Slip Rd. C - Deck Span C4 to C5 - 1st. Pour	20	19APR06	12MAY06	28OCT05	19NOV05
CD1048	Slip Rd. C - Deck Span C4 to C5 - 2nd. Pour	20	13MAY06	05JUN06	21NOV05	13DEC05
CD1049	Slip Rd. C - Deck Span C4 to C5 - Stressing	4	06JUN06	09JUN06	14DEC05	17DEC05
CD1051	Slip Rd. C - Deck Span C4 to C5 - Cure & Strip	6	10JUN06	16JUN06	11JAN06	17JAN06
CD1050	Slip Rd. C - Deck Span C5 to C6 - Ground Prep.	12	30MAR06	13APR06	28SEP05	13OCT05
CD1052	Slip Rd. C - Deck Span C5 to C6 - Falsework	18	14APR06	05MAY06	14OCT05	03NOV05
CD1054	Slip Rd. C - Deck Span C5 to C6 - Soffit	6	29MAY06	03JUN06	04NOV05	10NOV05
CD1056	Slip Rd. C - Deck Span C5 to C6 - 1st. Pour	20	05JUN06	28JUN06	11NOV05	03DEC05
Superstructure Finishing Works Required for TCSS						
CF1010	Slip Rd. C - Parapets C2 to C4 (incl earthing)	48	15APR06	10JUN06	24OCT05	17DEC05
CF1000	Slip Rd. C - Parapets - Abut. C to C2 + earthing	24	12JUN06	11JUL06	19DEC05	17JAN06
Viaduct - Slip Road D						
Substructure						
DS1045	Abutment D - Install Bearings	6	20MAR06	25MAR06	26OCT05	01NOV05
DS1115	D1 - Install Bearings	6	20MAR06	25MAR06	29OCT05	04NOV05
DS1175	D2 - Install Bearings	6	20MAR06	25MAR06	05NOV05	11NOV05
DS1295	D4 - Install Bearings	6	20MAR06	25MAR06	23MAY08	29MAY08



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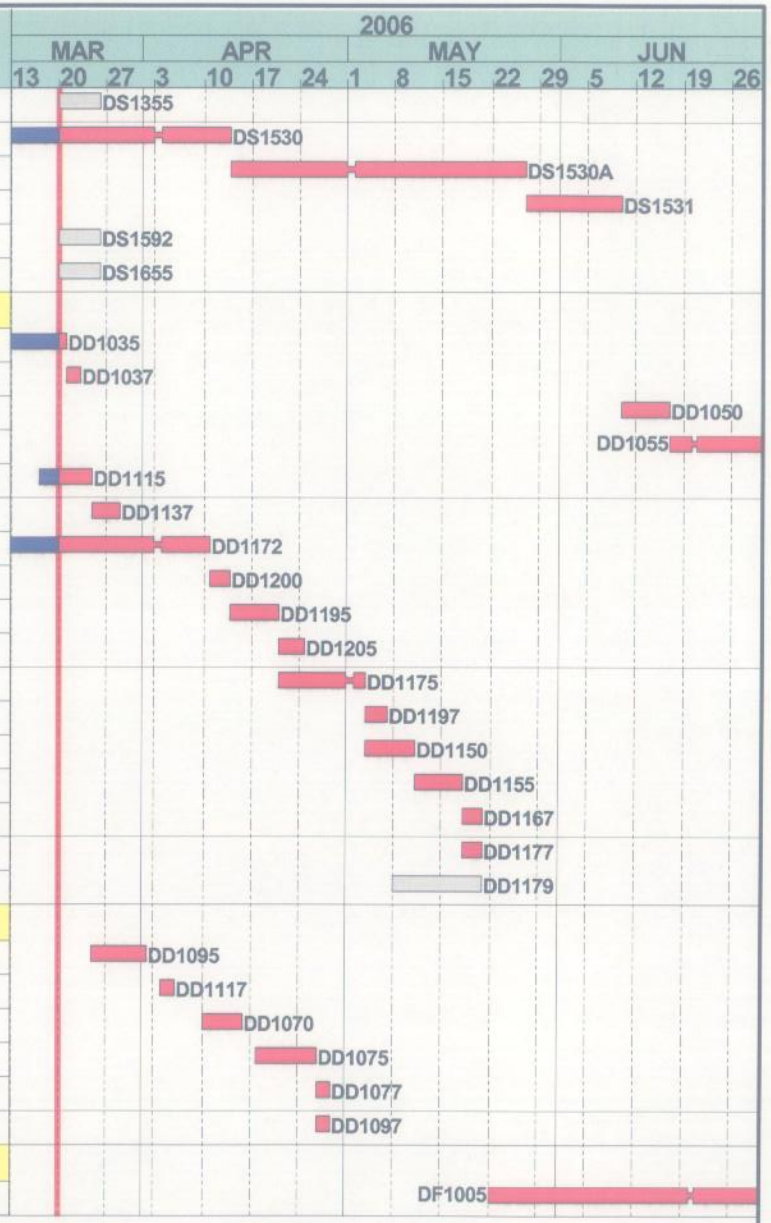
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
DS1355	D5 - Install Bearings	6	20MAR06	25MAR06	23MAY08	29MAY08
DS1530	D8 - Pier Head	24	03MAR06A	13APR06	03MAR06A	10OCT05
DS1530A	D8 - Pier Head - Insitu Segment	36	14APR06	26MAY06	12OCT05	22NOV05
DS1531	D8 - Pier Head - Cure & Strike Form/Falsework	12	27MAY06	09JUN06	23NOV05	06DEC05
DS1592	D9 - Install Bearings	6	20MAR06	25MAR06	23MAY08	29MAY08
DS1655	D10 - Install Bearings	6	20MAR06	25MAR06	23MAY08	29MAY08
Slip Road D - Segmental Deck Const'n (Crane)						
DD1035	D9 - 6 seg Type B	5	28FEB06A	20MAR06	28FEB06A	30DEC05
DD1037	D9 to D10 - Insitu Stitch	2	21MAR06	22MAR06	31DEC05	03JAN06
DD1050	D8 - 1st. Pair - 2 Segments Type B	6	10JUN06	16JUN06	07DEC05	13DEC05
DD1055	D8 - 28 Segments Type B	14	17JUN06	05JUL06	14DEC05	30DEC05
DD1115	D5 - 26 seg Type B	7	17MAR06A	24MAR06	17MAR06A	25NOV05
DD1137	D4 to D5 - Insitu Stitch	3	25MAR06	28MAR06	08DEC05	10DEC05
DD1172	Install Segment Sliding System Abut. D to D3	24	09MAR06A	10APR06	09MAR06A	01NOV05
DD1200	Abut D - 3 Segments Type B on scaff	3	11APR06	13APR06	02NOV05	04NOV05
DD1195	D1 - 21 Segments Type B (incl. Pierhead Seg)	6	14APR06	20APR06	05NOV05	11NOV05
DD1205	D1 to Abut D - Insitu Stitch	3	21APR06	24APR06	21DEC05	23DEC05
DD1175	D2 - 27 Segments Type B (incl. Pier Head Seg)	10	21APR06	03MAY06	12NOV05	23NOV05
DD1197	D1 to D2 - Insitu Stitch	3	04MAY06	06MAY06	08DEC05	10DEC05
DD1150	D3 - 1st. Pair - 2 Segments Type B	6	04MAY06	10MAY06	24NOV05	30NOV05
DD1155	D3 - 18 Segments Type B	6	11MAY06	17MAY06	01DEC05	07DEC05
DD1167	D3 to D4 - Instiu Stitch	3	18MAY06	20MAY06	08DEC05	10DEC05
DD1177	D2 to D3 - Insitu Stitch	3	18MAY06	20MAY06	08DEC05	10DEC05
DD1179	Dismantle Segment Sliding System (Abut. D to D3)	12	08MAY06	20MAY06	24JUN06	08JUL06
Slip Road D - Segmrntal Deck Const'n (L/Frames)						
DD1095	D6 - 16 seg Type B	7	25MAR06	01APR06	26NOV05	03DEC05
DD1117	D5-D6 Insitu Stitch	2	04APR06	05APR06	16DEC05	17DEC05
DD1070	D7 - 1st. pair - 2 seg Type B	6	10APR06	15APR06	28NOV05	03DEC05
DD1075	D7 - 16 seg Type B	8	18APR06	26APR06	05DEC05	13DEC05
DD1077	D7-D8 Insitu Stitch	2	27APR06	28APR06	16DEC05	17DEC05
DD1097	D6-D7 Insitu Stitch	2	27APR06	28APR06	16DEC05	17DEC05
Superstructure Finishing Works Required for TCSS						
DF1005	Slip Rd. D -Parapets D4 to Abut D (incl earthing	42	22MAY06	11JUL06	12DEC05	03FEB06



Start Date 23SEP03
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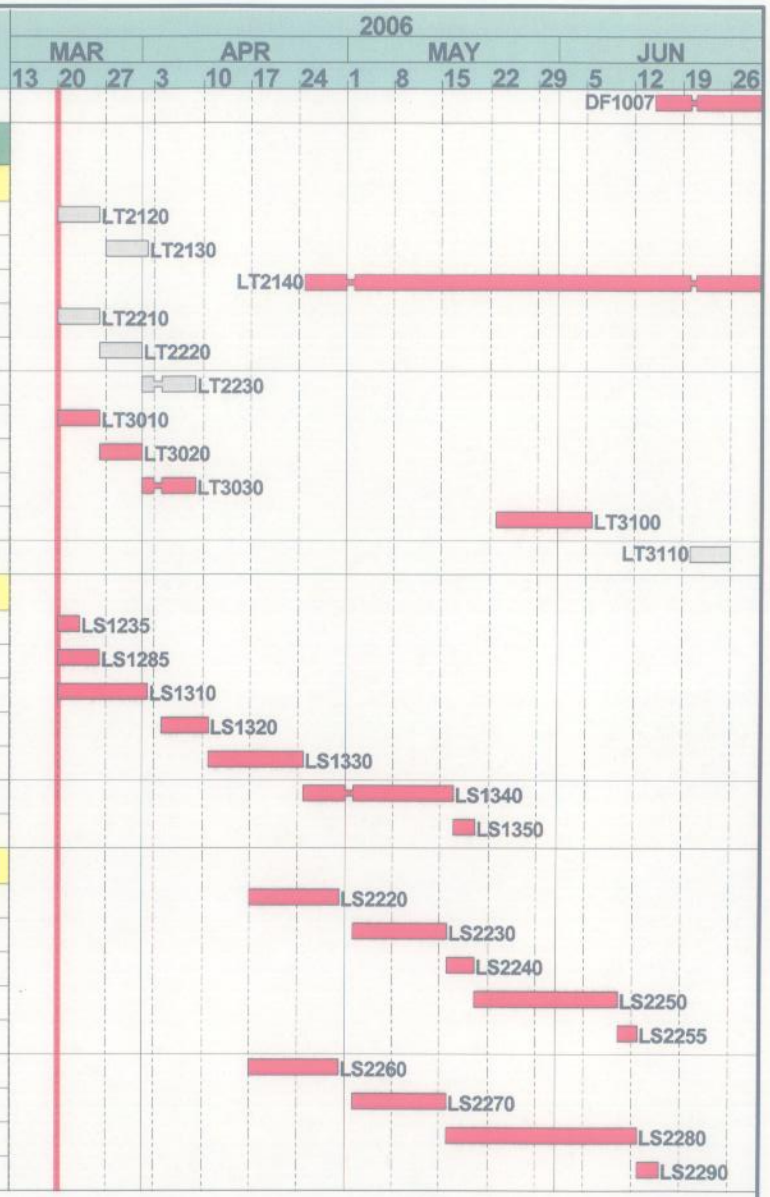
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
DF1007	Slip Rd. D -Parapets D4 to D8 (incl earthing)	36	15JUN06	28JUL06	19DEC05	03FEB06
Lai Wan Road Overpass						
Temporary Traffic Management Schemes						
LT2120	TTMS LW Rd (for W/B Deck) - Roadworks Advice	6	20MAR06	25MAR06	17MAY08	22MAY08
LT2130	TTMS LW Rd (for W/B Deck) - Site Preparation	6	27MAR06	01APR06	23MAY08	29MAY08
LT2140	TTMS LW Rd (for W/B Deck) - Implementation	121*	25APR06	16SEP06	17SEP05	11FEB06
LT2210	TTMS LW Rd (for E/B Deck) - CRE Endorsement	6	20MAR06	25MAR06	11MAY08	16MAY08
LT2220	TTMS LW Rd (for E/B Deck) - Roadworks Advice	6	26MAR06	31MAR06	17MAY08	22MAY08
LT2230	TTMS LW Rd (for E/B Deck) - Site Preparation	6	01APR06	08APR06	23MAY08	29MAY08
LT3010	TTMS CC Rd (on W/B Deck) - CRE Endorsement	6	20MAR06	25MAR06	11NOV05	16NOV05
LT3020	TTMS CC Rd (on W/B Deck) - Roadworks Advice	6	26MAR06	31MAR06	17NOV05	22NOV05
LT3030	TTMS CC Rd (on W/B Deck) - Site Preparation	6	01APR06	08APR06	23NOV05	29NOV05
LT3100	TTMS CC Rd (on E/B Deck) - Prepare for Review	12	23MAY06	05JUN06	18FEB06	03MAR06
LT3110	TTMS CC Rd (on E/B Deck) - CRE Endorsement	6	20JUN06	25JUN06	28JUL06	02AUG06
West Bound - Substructure						
LS1235	D13 - Install Bearings	3	20MAR06	22MAR06	29SEP05	03OCT05
LS1285	D14 - Install Bearings	6	20MAR06	25MAR06	26SEP05	03OCT05
LS1310	Abutment DA2 - Excavation in Rock for Footing	12	20MAR06	01APR06	13AUG05	26AUG05
LS1320	Abutment DA2 - Mass Concrete Fill Under Footing	6	04APR06	10APR06	27AUG05	02SEP05
LS1330	Abutment DA2 - Footing	12	11APR06	24APR06	03SEP05	16SEP05
LS1340	Abutment DA2 - Bearing Shelf & Walls	18	25APR06	16MAY06	17SEP05	10OCT05
LS1350	Abutment DA2 - Install Bearings	3	17MAY06	19MAY06	22OCT05	25OCT05
East Bound - Substructure						
LS2220	C14 - Excavate for Footing	12	17APR06	29APR06	10SEP05	24SEP05
LS2230	C14 - Footing & Pier Kicker	12	02MAY06	15MAY06	26SEP05	10OCT05
LS2240	C14 - Backfill & Remove Temporary Works	4	16MAY06	19MAY06	12OCT05	15OCT05
LS2250	C14 - Pier (incl. Pier Head)	18	20MAY06	09JUN06	17OCT05	05NOV05
LS2255	C14 - Install Bearings	2	10JUN06	12JUN06	07NOV05	08NOV05
LS2260	Abutment CA2 - Excavation in Rock for Footing	12	17APR06	29APR06	07SEP05	21SEP05
LS2270	Abutment CA2 - Footing	12	02MAY06	15MAY06	22SEP05	06OCT05
LS2280	Abutment CA2 - Bearing Shelf & Walls	24	16MAY06	12JUN06	07OCT05	04NOV05
LS2290	Abutment CA2 - Install Bearings	3	13JUN06	15JUN06	05NOV05	08NOV05



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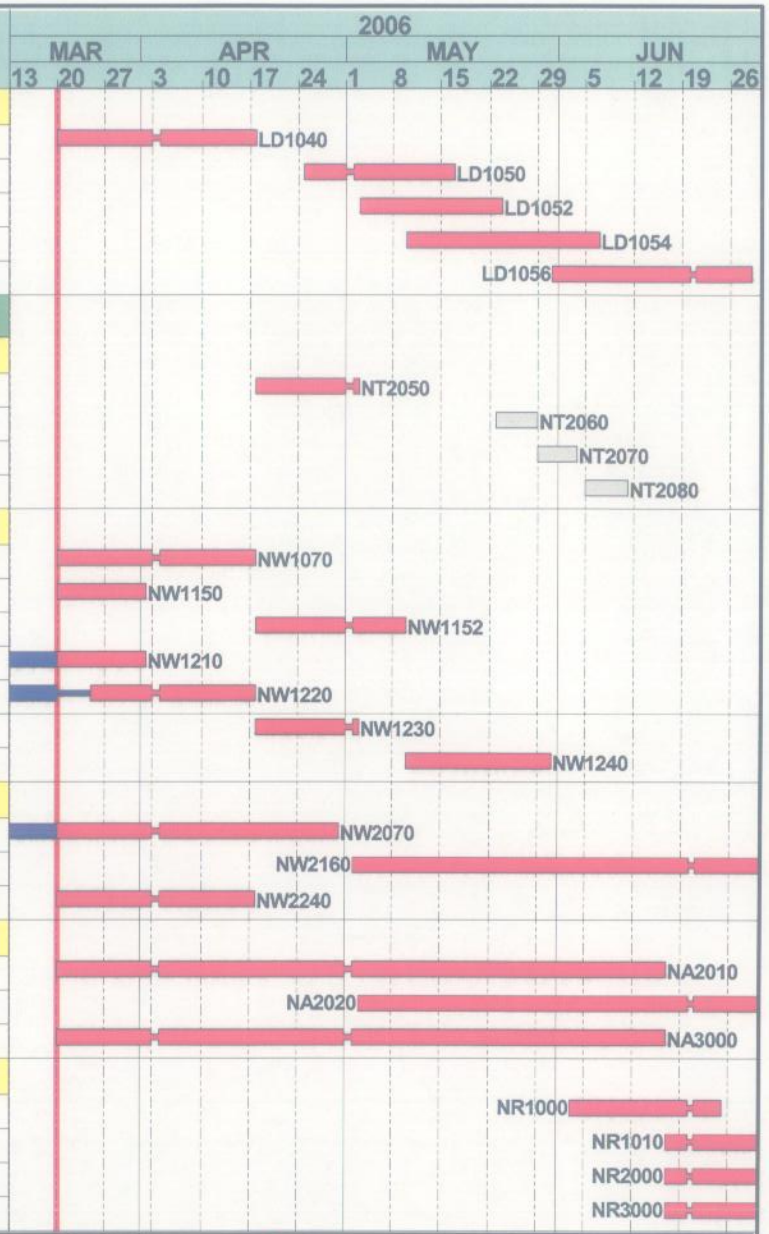
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
West Bound - Insitu Deck						
LD1040	Lai Wan O/pass W/B - Demolish F/p for Stage 3	24	20MAR06	17APR06	20AUG05	16SEP05
LD1050	Lai Wan O/pass W/B - Span St.3 - Ground Prep.	18	25APR06	16MAY06	17SEP05	10OCT05
LD1052	Lai Wan O/pass W/B - Span St.3 - Falsework	18	03MAY06	23MAY06	26SEP05	18OCT05
LD1054	Lai Wan O/pass W/B - Span St.3 - Soffit	24	10MAY06	06JUN06	04OCT05	01NOV05
LD1056	Lai Wan O/pass W/B - Span St.3 - 1st. Pour	24	31MAY06	28JUN06	26OCT05	22NOV05
At Grade Works - Ching Cheung Road at LCK Park						
Temporary Traffic Management Schemes						
NT2050	2nd. TTMS CC Rd (E/B C/Way) - Prepare for Review	12	18APR06	02MAY06	11JAN06	24JAN06
NT2060	2nd. TTMS CC Rd (E/B C/Way) - CRE Endorsement	6	23MAY06	28MAY06	29OCT06	03NOV06
NT2070	2nd. TTMS CC Rd (E/B C/Way) - Roadworks Advice	6	29MAY06	03JUN06	04NOV06	09NOV06
NT2080	2nd. TTMS CC Rd (E/B C/Way) - Site Preparation	6	05JUN06	10JUN06	10NOV06	16NOV06
Retaining Wall CCR-R1 West Bound						
NW1070	W/B Ret. Wall CCR-R1A East - Parapet on Wall	24	20MAR06	17APR06	31OCT05	26NOV05
NW1150	W/B Ret. Wall CCR-R1B - Backfill Behind Wall	12	20MAR06	01APR06	27SEP05	12OCT05
NW1152	W/B Ret. Wall CCR-R1B - Parapet on Wall	18	18APR06	09MAY06	28NOV05	17DEC05
NW1210	W/B Ret. Wall CCR-R1A West - Bases	18	27FEB06A	01APR06	27FEB06A	10SEP05
NW1220	W/B Ret. Wall CCR-R1A West - Walls	24	13MAR06A	17APR06	13MAR06A	26SEP05
NW1230	W/B Ret. Wall CCR-R1A West - B/fill Behind Wall	12	18APR06	02MAY06	27SEP05	12OCT05
NW1240	W/B Ret. Wall CCR-R1A West - Parapet on Wall	18	10MAY06	30MAY06	19DEC05	10JAN06
Retaining Wall CCR-R1 East Bound						
NW2070	W/B Ret. Wall CCR-R1C - Parapets on Wall	48	07JAN06A	29APR06	07JAN06A	22OCT05
NW2160	W/B Ret. Wall CCR-R1D -Parapets on Wall	60	02MAY06	12JUL06	24OCT05	03JAN06
NW2240	W/B Ret. Wall CCR-R1E - Parapets on Wall	24	20MAR06	17APR06	05DEC05	03JAN06
Drainage Works						
NA2010	C.C. Rd. W/B in New C/way - S/water Drainage E3	75	20MAR06	16JUN06	13OCT05	10JAN06
NA2020	C.C. Rd. W/B in New C/way - S/water Drainage J2	75	03MAY06	01AUG06	13OCT05	10JAN06
NA3000	C.C. Rd. E/B in New C/way - Stormwater Drainage	75	20MAR06	16JUN06	05OCT05	03JAN06
Utilities & Roadworks						
NR1000	C.C. Rd. W/B in Portion E3 - Formation	18	03JUN06	24JUN06	27DEC05	17JAN06
NR1010	C.C. Rd. W/B in Portion E3 - Sub-base	12	17JUN06	03JUL06	11JAN06	24JAN06
NR2000	C.C. Rd. E/B - Foundations to Sign Gantry ADS3	18	17JUN06	10JUL06	04JAN06	24JAN06
NR3000	C.C. Rd. E/B - Formation	24	17JUN06	17JUL06	27APR06	25MAY06



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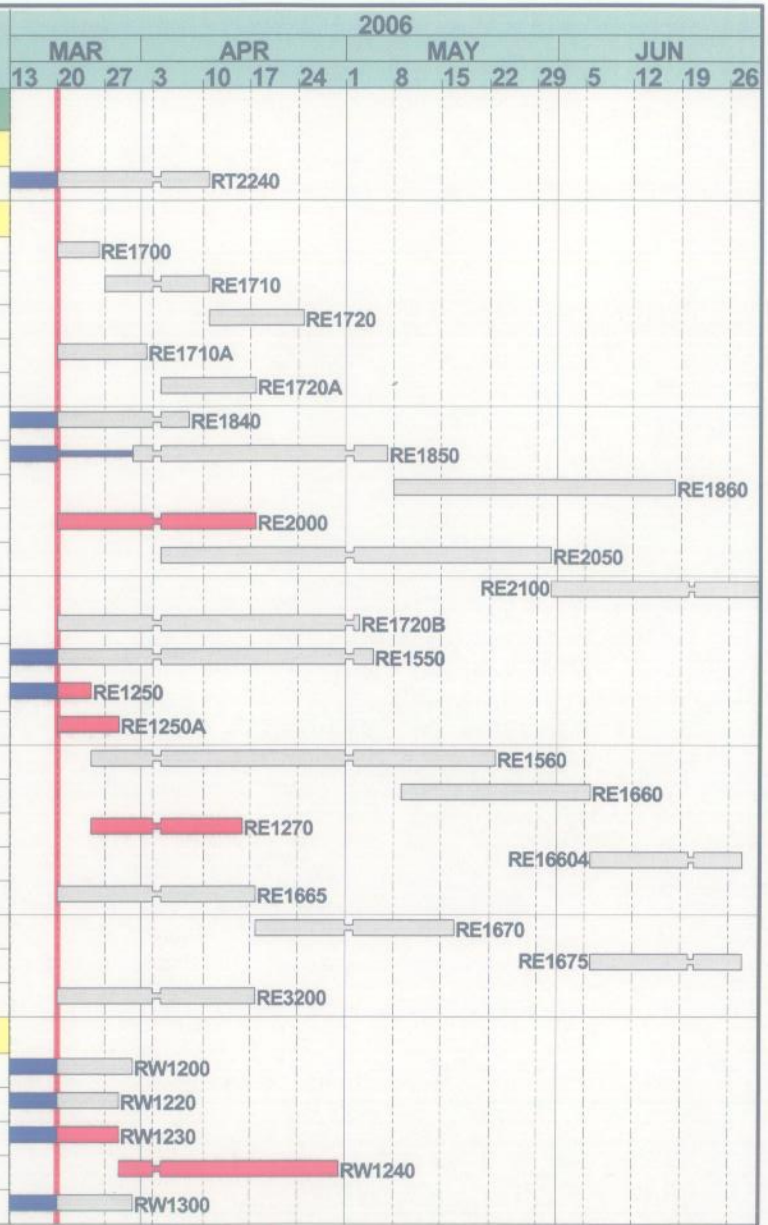
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
At Grade Work - Ching Cheung Road - Main Section						
Temporary Traffic Management Schemes						
RT2240	3rd. TTMS CC Rd (Slewing) - Implementation	385*	28DEC04A	10APR06	28DEC04A	23NOV06
Earthworks & Slope Works - CCR-S1, S2 & S3						
RE1700	Slope CCR-S1E - Finish Seed & Planting +62.3mPD	6	20MAR06*	25MAR06	19OCT06	26OCT06
RE1710	Slope CCR-S1E - Finish Seed & Planting +54.8mPD	12	27MAR06	10APR06	27OCT06	09NOV06
RE1720	Slope CCR-S1E - Finish Seed & Planting +47.3mPD	12	11APR06	24APR06	10NOV06	23NOV06
RE1710A	Slope CCR-S1C- Finish Seed & Planting +54.9mPD	12	20MAR06	01APR06	27OCT06	09NOV06
RE1720A	Slope CCR-S1C - Finish Seed & Planting +47.3mPD	12	04APR06	17APR06	10NOV06	23NOV06
RE1840	Slope CCR-S1E&C- Rock Stabilisation to +25.4mPD	48	24OCT05A	07APR06	24OCT05A	11SEP06
RE1850	Slope CCR-S1E&C - Drainage to Level +25.4mPD	48	24JAN06A	06MAY06	24JAN06A	11OCT06
RE1860	Slope CCR-S1E&C- Finish Seed & Planting to +25.4	36	08MAY06	17JUN06	12OCT06	23NOV06
RE2000	Slope CCR-S2 -Excavate Rock to Formation	24	20MAR06	17APR06	20OCT05	16NOV05
RE2050	Slope CCR-S2 - Rock Stabilisation	48	04APR06	30MAY06	08APR06	03JUN06
RE2100	Slope CCR-S2 - Drainage	42	31MAY06	20JUL06	05JUN06	25JUL06
RE1720B	Slope CCR-S1W - Seed & Planting to +39.95mPD	36	20MAR06	02MAY06	12OCT06	23NOV06
RE1550	Slope CCR-S1W - Rock Stabilisation to 24.9mPD	54	24OCT05A	04MAY06	24OCT05A	29MAY08
RE1250	Slope CCR-S1W - Bulk Excavate to Level +19.0mPD	18	25NOV05A	24MAR06	25NOV05A	16AUG05
RE1250A	Slope CCR-S1W -Detailed Excavate to Level +19.0m	18	20MAR06	28MAR06	08NOV05	16NOV05
RE1560	Slope CCR-S1W - Rock Stabilisation to 19.0mPD	48	25MAR06	22MAY06	08AUG06	04OCT06
RE1660	Slope CCR-S1W - Drainage to Level +19.0mPD	24	09MAY06	05JUN06	19SEP06	18OCT06
RE1270	Slope CCR-S1W - Excavate to Lai Wan Road O/pass	18	25MAR06	15APR06	17AUG05	06SEP05
RE16604	Slope CCR-S1W - Drainage to Level +16.8mPD	18	06JUN06	27JUN06	19OCT06	09NOV06
RE1665	Slope CCR-S1W - Seed & Planting to +32.4mPD	24	20MAR06	17APR06	22AUG06	18SEP06
RE1670	Slope CCR-S1W - Seed & Planting to +24.9mPD	24	18APR06	16MAY06	19SEP06	18OCT06
RE1675	Slope CCR-S1W - Seed & Planting to +19.0mPD	18	06JUN06	27JUN06	19OCT06	09NOV06
RE3200	Slope CCR-S3 - Additional Soil Nails (VO166)	24	20MAR06	17APR06	27OCT06	23NOV06
Retaining Wall CCR-R2 (Value Engineering Design)						
RW1200	Ch 02.13 to 41.71 -Excavate & Rock Stabilisation	36	04APR05A	30MAR06	04APR05A	29MAY08
RW1220	Ch 02.13 to 41.71 - Mass Concrete Facing Wall	24	24OCT05A	28MAR06	24OCT05A	29MAY08
RW1230	Ch 02.13 to 41.71 - Retaining Wall Base Slabs	12	06FEB06A	28MAR06	06FEB06A	27AUG05
RW1240	Ch 02.13 to 41.71 - Retaining Wall Stem & Coping	27	29MAR06	29APR06	29AUG05	29SEP05
RW1300	Ch 50.71 to 78.27 -Excavate & Rock Stabilisation	24	21OCT05A	30MAR06	21OCT05A	29MAY08



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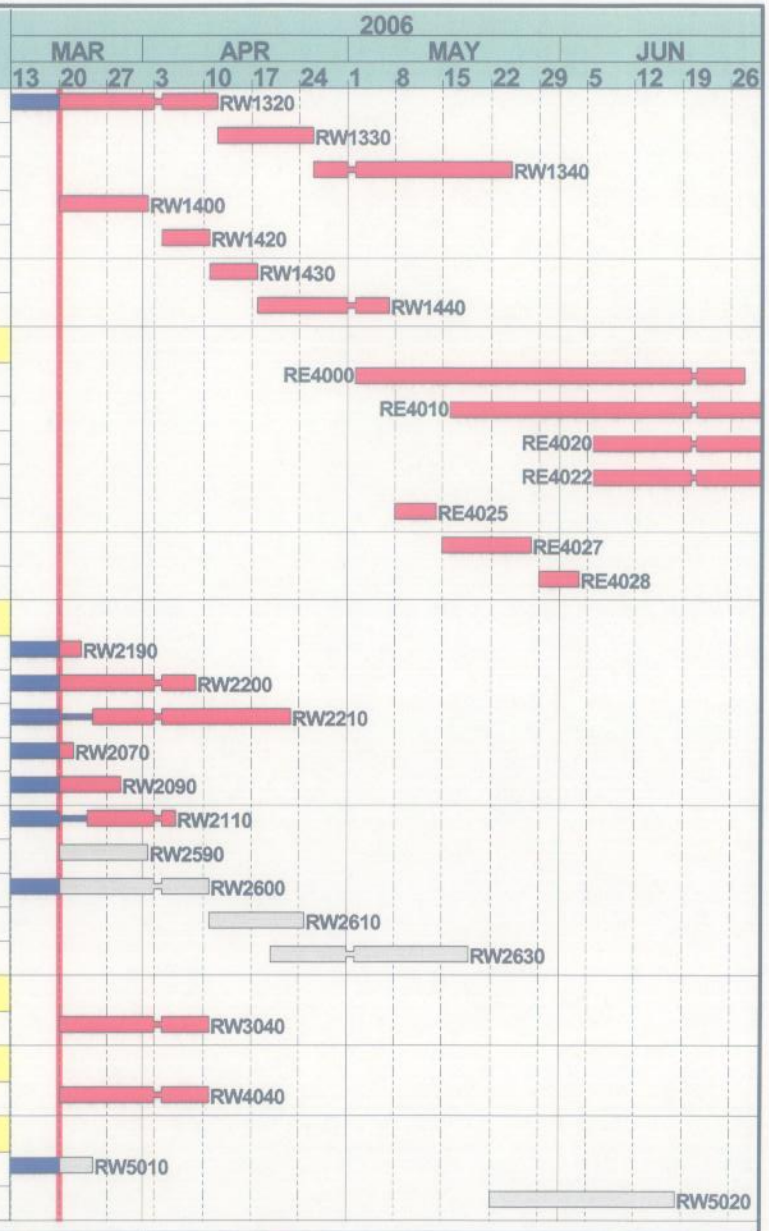
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
RW1320	Ch 50.71 to 78.27 - Mass Concrete Facing Wall	27	12NOV05A	11APR06	12NOV05A	25JAN06
RW1330	Ch 50.71 to 78.27 - Retaining Wall Base Slabs	12	12APR06	25APR06	26JAN06	11FEB06
RW1340	Ch 50.71 to 78.27 - Retaining Wall Stem & Coping	24	26APR06	24MAY06	13FEB06	11MAR06
RW1400	Ch 00.00 to 02.13 -Excavate & Rock Stabilisation	12	20MAR06	01APR06	06MAR06	18MAR06
RW1420	Ch 00.00 to 02.13 - Mass Concrete Facing Wall	6	04APR06	10APR06	20MAR06	25MAR06
RW1430	Ch 00.00 to 02.13 - Retaining Wall Base Slabs	6	11APR06	17APR06	27MAR06	01APR06
RW1440	Ch 00.00 to 02.13 - Retaining Wall Stem & Coping	16	18APR06	06MAY06	04APR06	21APR06
Slope Works Above Retaining Wall CCR-R2						
RE4000	Ch 00.00 to 78.27 - Excavate in Benches	48	02MAY06	27JUN06	30SEP05	26NOV05
RE4010	Ch 00.00 to 78.27 - Filter Layer	48	16MAY06	12JUL06	17OCT05	10DEC05
RE4020	Ch 02.13 to 41.71 - General Filling & Compaction	36	06JUN06	19JUL06	07NOV05	17DEC05
RE4022	Ch 50.71 to 78.27 - General Filling & Compaction	36	06JUN06	19JUL06	19JAN06	04MAR06
RE4025	Ch 00.00 to 2.13 - General Filling & Compaction	6	08MAY06	13MAY06	22APR06	28APR06
RE4027	Excavate & Demolish Existing Retaining Wall	12	15MAY06	27MAY06	29APR06	13MAY06
RE4028	Fill & Compact to Form Toe of Berm	6	29MAY06	03JUN06	15MAY06	20MAY06
Retaining Wall CCR-R3 Type D, E & F						
RW2190	Ret. Wall CCR-R3F - Break Down Top of Piles	36	03NOV05A	22MAR06	03NOV05A	27FEB06
RW2200	Ret. Wall CCR-R3F - Capping beam	42	12NOV05A	08APR06	12NOV05A	09MAR06
RW2210	Ret. Wall CCR-R3F - Stem Walls	48	30NOV05A	22APR06	30NOV05A	23MAR06
RW2070	Ret. Wall CCR-R3E - Break Down Top of Piles	12	07FEB06A	21MAR06	07FEB06A	09MAR06
RW2090	Ret. Wall CCR-R3E - Capping beam	18	27FEB06A	28MAR06	27FEB06A	16MAR06
RW2110	Ret. Wall CCR-R3E - Stem Walls	18	06MAR06A	05APR06	06MAR06A	23MAR06
RW2590	Ret. Wall CCR-R3D - Erect Noise Barriers	12	20MAR06	01APR06	16MAY08	29MAY08
RW2600	Ret. Wall CCR-R3D - Break Down Top of Piles	24	25FEB06A	10APR06	25FEB06A	06JUN06
RW2610	Ret. Wall CCR-R3D - Capping beam	12	11APR06	24APR06	07JUN06	21JUN06
RW2630	Ret. Wall CCR-R3D - Stem Walls	24	20APR06	18MAY06	16JUN06	15JUL06
Retaining Wall CCR-R3 Type A						
RW3040	Ret. Wall CCR-R3A - Backfill & Form Platform	18	20MAR06	10APR06	15SEP05	07OCT05
Retaining Wall CCR-R3 Type B						
RW4040	Ret. Wall CCR-R3B - Backfill & Form Platform	18	20MAR06	10APR06	28NOV05	17DEC05
Retaining Wall CCR-R3 Type C						
RW5010	Ret. Wall CCR-R3C - Temporay Works & Excavation	24	25JAN06A	24MAR06	25JAN06A	23NOV06
RW5020	Ret. Wall CCR-R3C - Bases	24	22MAY06	17JUN06	10JUL06	07AUG06



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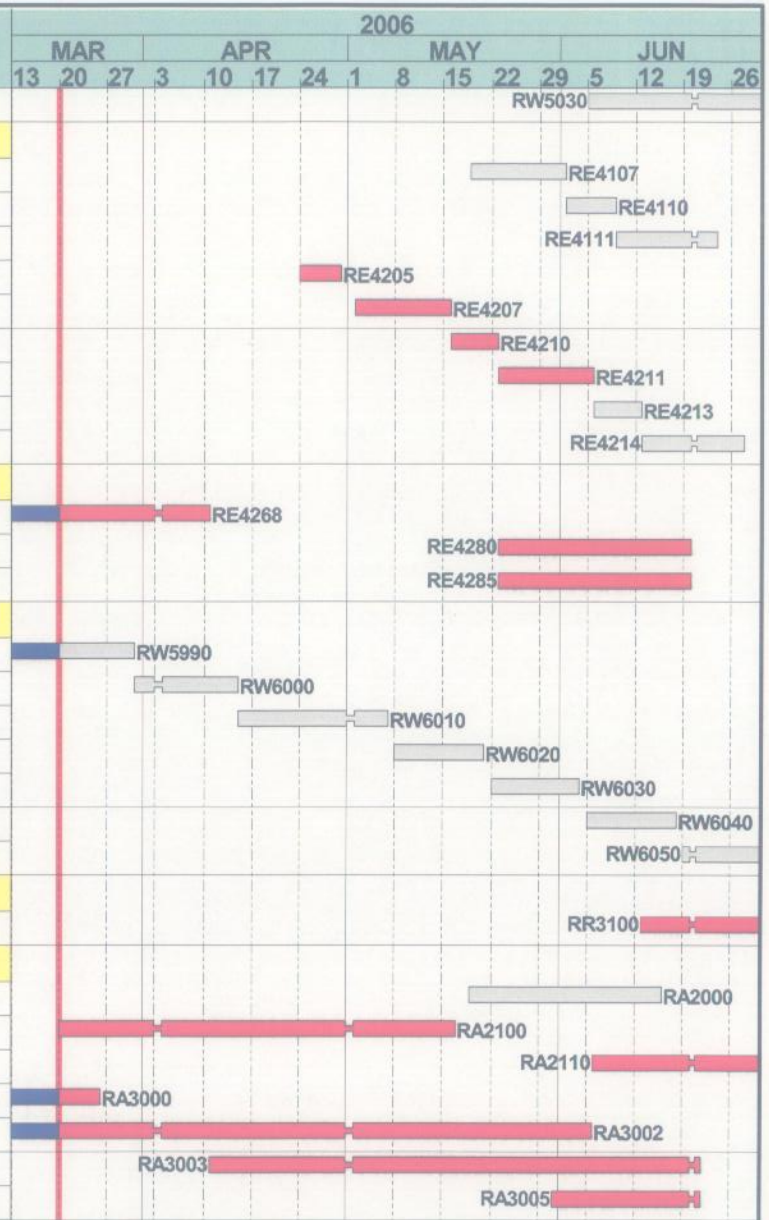
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
RW5030	Ret. Wall CCR-R3C - Walls	30	05JUN06	11JUL06	24JUL06	28AUG06
Slope Works Above Retaining Walls CCR-R3D, E & F						
RE4107	Slope above CCR-R3D-Excavate Slope	12	19MAY06	01JUN06	17JUL06	31JUL06
RE4110	Slope above CCR-R3D- Filter - Bottom to 1st Berm	6	02JUN06	08JUN06	01AUG06	07AUG06
RE4111	Slope above CCR-R3D- Rockfill - Bt'm to 1st Berm	12	09JUN06	23JUN06	08AUG06	21AUG06
RE4205	Slope above CCR-R3E&F -Remove Piling Platform	6	24APR06	29APR06	24MAR06	30MAR06
RE4207	Slope above CCR-R3E&F -Excavate Slope	12	02MAY06	15MAY06	31MAR06	14APR06
RE4210	Slope above CCR-R3E&F- Filter - Btm. to 1st Berm	6	16MAY06	22MAY06	15APR06	21APR06
RE4211	Slope above CCR-R3E&F -Rockfill-Bt'm to 1st Berm	12	23MAY06	05JUN06	22APR06	06MAY06
RE4213	Slope above CCR-R3E&F -Filter-1st Berm to +24mPD	6	06JUN06	12JUN06	15AUG06	21AUG06
RE4214	Slope above CCR-R3E&F-Rockfil-1st Berm to +24mPD	12	13JUN06	27JUN06	22AUG06	04SEP06
Earthworks & Slope Works - CCR-S4						
RE4268	Slope CCR-S4 - Excavate & Bench Upper Slope	48	03JAN06A	10APR06	03JAN06A	11FEB06
RE4280	Slope CCR-S4 - Fill and Compact	24	23MAY06	19JUN06	13FEB06	11MAR06
RE4285	Slope CCR-S4 - Form New Access Road at Footpath	24	23MAY06	19JUN06	13FEB06	11MAR06
Ching Cheung Road NTMM Retaining Wall A						
RW5990	NNTM Wall A - Excavate to Formation	36	09JAN06A	30MAR06	09JAN06A	20MAY06
RW6000	NNTM Wall A - Bases	12	31MAR06	14APR06	22MAY06	03JUN06
RW6010	NNTM Wall A - Walls	18	15APR06	06MAY06	05JUN06	26JUN06
RW6020	NNTM Wall A - Drainage & Fill Behind Walls	12	08MAY06	20MAY06	27JUN06	11JUL06
RW6030	NNTM Wall A - Excavate to +20.5mPD	12	22MAY06	03JUN06	12JUL06	25JUL06
RW6040	NNTM Wall A - Debris Callection Area Drainage	12	05JUN06	17JUN06	26JUL06	09AUG06
RW6050	NNTM Wall A - Debris Callection Area Access Ramp	12	19JUN06	04JUL06	10AUG06	23AUG06
Drainage Works						
RR3100	Ching Cheung Rd. E/B -S/Water S300-01 to S300-07	60	13JUN06	24AUG06	22MAR06	01JUN06
Utilities & Roadworks						
RA2000	Lai Wan Road - Footpath below Slope CCR-S4	24	19MAY06	15JUN06	27OCT06	23NOV06
RA2100	CLP Cable Trough - CC Rd. Rest Garden to CCR-R3D	48	20MAR06	16MAY06	10MAR06	06MAY06
RA2110	CLP Cable Trough - Behind CCR-R3D	24	06JUN06	05JUL06	08MAY06	03JUN06
RA3000	Ching Cheung Rd. W/B New C/Way -N/B Founds Bases	60	16DEC05A	25MAR06	16DEC05A	05NOV05
RA3002	Ching Cheung Rd. W/B New C/Way -N/B Founds Walls	72	07FEB06A	05JUN06	07FEB06A	03DEC05
RA3003	Ching Cheung Rd. W/B New C/Way - Filling	60	11APR06	21JUN06	08OCT05	17DEC05
RA3005	Ching Cheung Rd. W/B - S/Gantry FADS4 Founds	18	31MAY06	21JUN06	22DEC05	13JAN06



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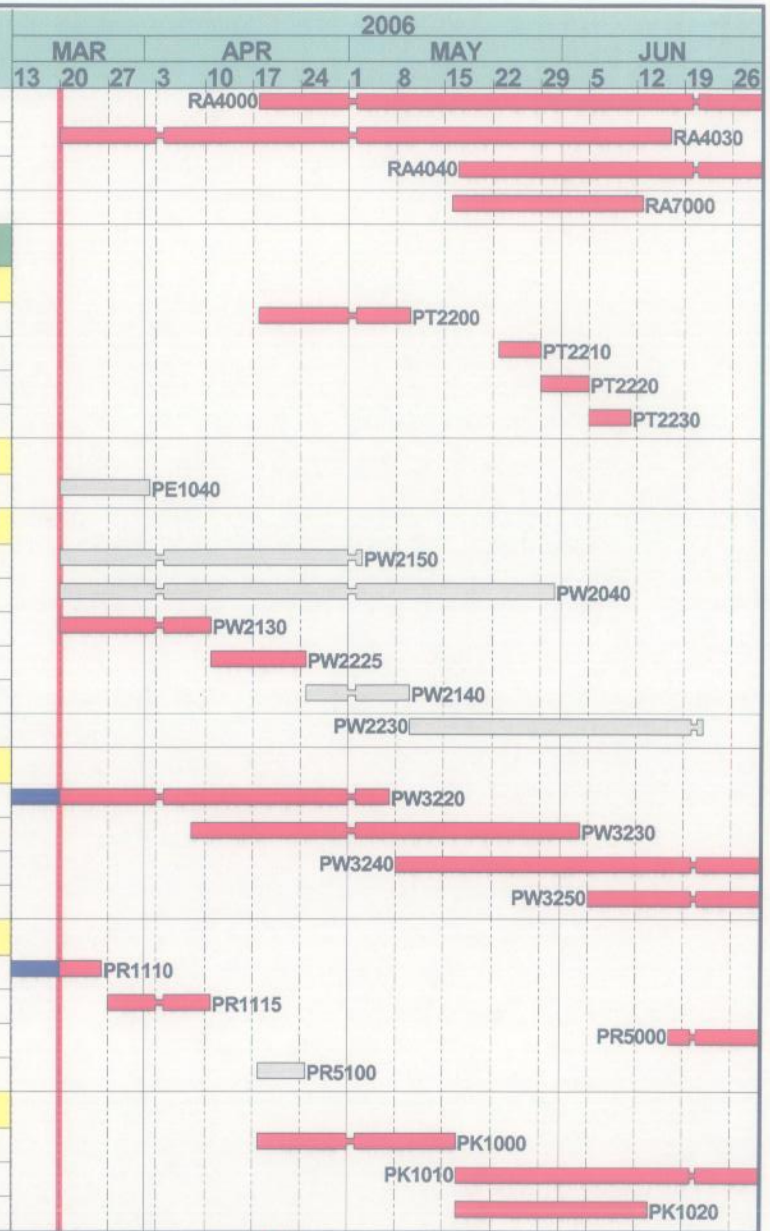
Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
RA4000	Ching Cheung Rd. New E/B Slip Road - E&M +TCSS	75	18APR06	17JUL06	17NOV05	17FEB06
RA4030	Ching Cheung Rd. New E/B - N/B Founds Base	75	20MAR06	16JUN06	08SEP05	07DEC05
RA4040	Ching Cheung Rd. New E/B - Fill Behind N/B Base	48	17MAY06	13JUL06	07NOV05	03JAN06
RA7000	Lai Wan Road - Watermains & Hydrants FH4 & FH5	24	16MAY06	12JUN06	22FEB06	21MAR06
At Grade Works - Butterfly Valley Interchange						
Temporary Traffic Management Schemes						
PT2200	TTMS CP Rd-KC S/B for Paving -Prepare for Review	18	18APR06	09MAY06	11JAN06	03FEB06
PT2210	TTMS CP Rd-KC S/B for Paving - CRE Endorsement	6	23MAY06	28MAY06	05FEB06	10FEB06
PT2220	TTMS CP Rd-KC S/B for Paving - Roadworks Advice	7	29MAY06	04JUN06	11FEB06	17FEB06
PT2230	TTMS CP Rd-KC S/B for Paving - Site Preparation	6	05JUN06	10JUN06	18FEB06	24FEB06
Earthworks & Slopeworks - 11NW-A/C26						
PE1040	Slope 11NW-A/C26 - Finishing Works	12	20MAR06	01APR06	10NOV06	23NOV06
Retaining Wall CCR-R5 (Pre-bored "H" Piles)						
PW2150	Ret. Wall CCR-R5 - R.C. Wall CCR-R5A	48	20MAR06	02MAY06	17APR08	29MAY08
PW2040	Ret. Wall CCR-R5 - Stage 1 - Fill Behind Wall	60	20MAR06	30MAY06	19MAR08	29MAY08
PW2130	Ret. Wall CCR-R5 - Stage 2 - Install "H" Piles	18	20MAR06	10APR06	12DEC05	03JAN06
PW2225	Ret. Wall CCR-R5 - Complete Coping & Facing	12	11APR06	24APR06	04JAN06	17JAN06
PW2140	Ret. Wall CCR-R5 - Complete Fill Behind Wall	12	25APR06	09MAY06	26SEP06	11OCT06
PW2230	Ret. Wall CCR-R5 - Slope Works Behind Wall	36	10MAY06	21JUN06	12OCT06	23NOV06
Retaining Wall CCR-R6 (Value Engineering Design)						
PW3220	Ret. Wall CCR-R6 - Excavate Slope	48	06MAR06A	06MAY06	06MAR06A	29OCT05
PW3230	Ret. Wall CCR-R6 - Reinstate Soil Nail Heads	48	08APR06*	03JUN06	30SEP05	26NOV05
PW3240	Ret. Wall CCR-R6 - Install T40 Tie Back Anchors	48	08MAY06*	04JUL06	31OCT05	24DEC05
PW3250	Ret. Wall CCR-R6 - Bases to R.C. Walls	48	05JUN06*	02AUG06	28NOV05	24JAN06
Utilities & Roadworks						
PR1110	CLP Slew 2No.132kva No.5 Behind Wall CCR-R5	36	21DEC05A	25MAR06	21DEC05A	24DEC05
PR1115	New CLP 11Kv Cable Laying behind CCR-R5	12	27MAR06	10APR06	28FEB06*	13MAR06
PR5000	C.P.Rd-K.C. S/B to C.C.Rd E/B - Excavate Road	18	17JUN06	10JUL06	18JAN06	10FEB06
PR5100	C.C. Rd. W/B - Sign Gantry FADS7 at P15-P16	6	18APR06	24APR06	23MAY08	29MAY08
Kiosk at Slip Road C						
PK1000	Kiosk at Slip Rd. C - Structure	24	18APR06	16MAY06	21NOV05	17DEC05
PK1010	Kiosk at Slip Rd. C - Building Finishes	48	17MAY06	13JUL06	19DEC05	17FEB06
PK1020	Kiosk at Slip Rd. C - MVAC Installation	24	17MAY06	13JUN06	19DEC05	17JAN06



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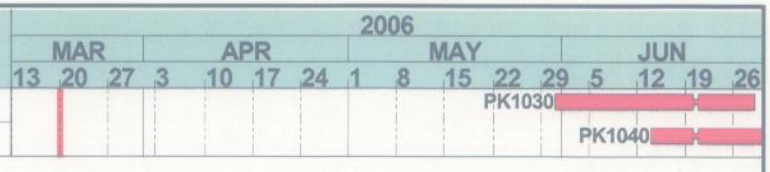
PK1030	Kiosk at Slip Rd. C - Electrical Works	24	31MAY06	28JUN06	04JAN06	03FEB06
PK1040	Kiosk at Slip Rd. C - Drainage Works	24	14JUN06	13JUL06	18JAN06	17FEB06



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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	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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 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	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				Road in front of Nob Hill. 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.	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	Closed

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			The complaint was raised by Mr. Chan, 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.	also noted that the back of profile barriers along the site boundary had been sealed up by cement as preventive measures. 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	***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***	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			Hill and Lai Chi Kok Park Swimming Pool 2. **Area B**: Works area between Ching Cheung Road and Mei Lai Road / Lai Wan Road opposite to Mei Foo Sun Cheung (Phase 5) and Lai Chi Kok Public Library.	The routine monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring</u> 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.	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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.	***Construction Activities*** During the weekly site inspection on 17 Feb 05, piling work was being conducted at the concerned. The major powered 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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.	***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 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 referred by the Resident Site Staff to the Environmental Team (ET) Leader on 30th, 31st March, 4th and 7th April 2005, respectively.	***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. ***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).	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 April 2005.	***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. ***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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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. The complainant was particularly concerned about the fugitive dust emission during rock / concrete breaking activities.	*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. *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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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. 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.	*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. *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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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.	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 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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.	***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, 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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.	***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 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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*** 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.	Closed