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

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

June to August 2005

Approved By _____

(Environmental Team Leader)

REMARKS:

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

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

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

TABLE OF CONTENTS

Page

LIST OF TABLE

LIST OF FIGURES

LIST OF APPENDICES

EXECUTIVE SUMMARY

- This is the seventh Quarterly 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 summary report documents the findings of EM&A works performed in the period between June and August 2005 for Contract No. HY/2003/01, Route 8 – Lai Chi Kok Viaduct (the Project).

- The major site activities undertaken in the reporting month included piling works, construction of pile caps and piers, bulk excavation and segment erection works.

Environmental Monitoring Works

- Environmental monitoring for the Project was performed regularly as stipulated in the EM&A Manuals and the results were checked and reviewed. Environmental 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 quarter is tabulated in **Table I**.

Table I Summary Table for Events Recorded in the Reporting Quarter

Parameter	No. of Exceedance		No. of Events due to the Project	Action Taken
	Action Level	Limit Level		
June 2005				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A
July 2005				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	1	0	0	Complaint investigation
August 2005				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A

Environmental Licensing and Permitting

- Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, Construction Noise Permits (CNP) and Water Discharge Licenses (WDL). The Contractor had also registered as a Chemical Waste Producer.

Key Information in the Reporting Quarter

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

Table II Summary Table for Key Information in the Reporting Quarter

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	2	One on dust and one on noise	Complaint Investigation	Closed	---
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 quarter include:

- Utility diversions;
- Pre-drilling works;
- Piling works;
- Construction of abutment, pile caps and columns;
- Bulk excavation;
- Soil nail installation;
- Retaining wall construction;
- Drainage works;
- Segment erection; and
- Launching gantry works.

The anticipated environmental impacts will be mainly on water quality impact from surface runoff in rainy days and construction noise from slope works.

1. INTRODUCTION

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. 449) (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. 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 (previously known as Route 9) 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 was appointed as the ET Leader under Condition 2.2 of the EP. Mr. David YEUNG of CH2M-IDC Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the seventh quarterly EM&A report summarizing the EM&A works for the LCKV Project between June and August 2005.

2 PROJECT CHARACTERISTICS

Project Organization and Contacts of Key Management

2.1 An organization structure and the line of communication were set up for the Project between the Project Proponent, Engineer's Representative (ER), Independent Environmental Checker (IEC), the Contractor and Environmental Team (ET). The organization chart and contact details are shown in **Figure 2** and **Appendix A**.

Construction Programme and Synopsis of Work

2.2 The construction programme is presented in **Appendix B**. The site activities during the reporting period include:

- Utility diversions for piling works at Slip Road C and Piers D14;
- Pre-drilling works for R6 and D9;
- Piling works for Main Viaduct at Mui Kong Tsuen, for Slip Roads C and D;
- Construction of abutment, pile caps and columns at Slip Roads B, C and D, Lai Wan Overpass and Main Viaduct;
- Bulk excavation works and retaining wall construction at CCR-R1;
- Bulk excavation works and soil nails installation at slope CCR-S1;
- Bulk excavation works at CCR-R3;
- Drainage works at Rest Garden area;
- Segment erection for Main Viaduct, Slip Roads A and B;
- In-situ construction for slip roads C and D;
- Pre-bored H piling work at R5;
- Bored piling work at R3;
- Retaining wall construction for 11NW-A/C678 & CR679;
- Launching gantry works at night.

3 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

Monitoring Parameters and Monitoring Locations

3.1 The EM&A Manuals designate locations for the ET to monitor environmental impacts in terms of noise and air quality due to the Project. The monitoring locations are depicted in **Figure 1**. **Appendix C** gives details of monitoring requirements.

Monitoring Methodology and Calibration Details

3.2 Monitoring works/equipments were conducted/calibrated regularly in accordance with the EM&A Manual. Copies of calibration certificates are attached in the appendices of the Monthly EM&A Reports.

Environmental Quality Performance Limits (Action and Limit Levels)

3.3 The environmental quality performance limits, i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective Event Action Plans would be implemented. The Action/Limit Levels for each environmental parameter are provided in **Appendix D**.

Environmental Mitigation Measures

3.4 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the EM&A Manual for the Contractor to implement. A list of mitigation measures is provided in **Appendix G**.

4 MONITORING RESULTS

Weather Conditions

4.1 The weather during monitoring sessions was mainly sunny or cloudy. The weather conditions for each individual monitoring session were presented in the field record sheets.

Air Quality

<u>1-hr TSP Monitoring</u>

4.2 All 1-hr TSP monitoring was conducted as scheduled in this reporting quarter. No Action / Limit Level exceedance was recorded in the reporting quarter.

24-hr TSP Monitoring

4.3 All 24-hr TSP monitoring was conducted as scheduled in this reporting quarter. No Action / Limit Level exceedance was recorded in the reporting quarter.

4.4 As observed by the monitoring team, road traffic dust from Ching Cheung Road was identified as the major dust source at the monitoring station during the monitoring.

4.5 The monitoring data of 1-hr and 24-hr TSP Levels are attached in the appendices of the Monthly Reports for June to August 2005. The graphical presentations of the monitoring results are shown in **Appendix E**.

Construction Noise

4.6 All construction noise monitoring was conducted as scheduled in this reporting quarter, except that the monitoring in the week of 20 to 25 June 2005 was cancelled due to severe rainstorms.

4.7 One public noise complaint was received on 21 July 2005, triggering an Action Level exceedance for construction noise. The details can refer to **Appendix I**.

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

4.9 At Stations NM4, NM8a and NM8b, the major noise source identified during the monitoring exercises was mainly road traffic noise. At Station NM9, construction noise from the Project was identified as the major noise source during monitoring.

4.10 All the Construction Noise Levels (CNLs) reported in this report 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.

4.11 The monitoring data of construction noise are attached in the appendices of the Monthly Reports for June to August 2005. The graphical presentations of the monitoring results are shown in **Appendix F**.

5 ENVIRONMENTAL AUDIT

Implementation Status of Environmental Mitigation Measures

5.1 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 Environmental Mitigation Implementation Status (EMIS) is provided in **Appendix G**.

Site Audit Summary

5.2 ET's weekly site audits were conducted on 1, 9, 15, 22 and 29 June, 7, 14, 21 and 27 July, 5, 11, 18, 25 and 31 August 2005. IEC's monthly site audits were conducted on 9 June, 7 July and 5 August 2005 together with ET.

5.3 During site inspections in the reporting period, no non-conformance was identified. The observations and recommendations are summarized in **Table 5.1**.

Table 5.1 Observations and Recommendations of the Site Audits

Parameters	Date	Observations and Recommendations	Remedial Actions
Water Quality	09-Jun-05	The Contractor was recommended to provide additional desilting tank at S1.	Rectification was observed during the audit session on 15-Jun-05.
	09-Jun-05	The Contractor was reminded to clear the deposit at the desilting tank at NTMN.	Rectification was observed during the audit session on 22-Jun-05.
	07-Jul-05	The effluent discharge at NTMM was observed silty. The Contractor was recommended to improve the de-silting efficiency of the sedimentation system. Same recommendation was applied at Slope S1.	Rectification was observed during the audit session on 14-Jul-05.
	21-Jul-05	Some surface runoff was observed discharging without passing through the sedimentation tank. The contractor was reminded to provide the temporary channel to divert the runoff to the sedimentation tank before discharge.	Rectification was observed during the audit session on 27-Jul-05.
	18-Aug-05	A burst in water pipe for bored piling equipment was observed at R3. The contractor stopped the leakage immediately during the audit session. The contractor was reminded to prevent further leakage to avoid sub-standard effluent discharge into public drains.	Rectification was observed during the audit session on 25-Aug-05.

Parameters	Date	Observations and Recommendations	Remedial Actions
Air Quality	14-Jul-05	Deposition of sand and silt was observed on the access road at Mui Kong Tsuen. The contractor was reminded to prevent the dust emission from the access roads.	Rectification was observed during the audit session on 21-Jul-05.
	05-Aug-05	Fugitive dust emission was observed from breaking activity at Pier D2. The Contractor was reminded to provide water spray for the work.	Rectification was observed during the audit session on 11-Aug-05.
Chemical Management	27-Jul-05	Oil leakage from an air compressor was observed at Wai Man Tsuen. The contractor was reminded to provide well maintenance for equipment.	Rectification was observed during the audit session on 05-Aug-05.
	05-Aug-05	A generator was found placing on bare ground at Pier 14. The Contractor was reminded to provide a drip tray for the generator.	Rectification was observed during the audit session on 11-Aug-05.
	05-Aug-05	Rubbish was found scattering on Slope S1. The Contractor was reminded to remove the rubbish as soon as possible and maintain good house keeping on site.	Rectification was observed during the audit session on 11-Aug-05.
	18-Aug-05	Chemical/fuel without provision of drip tray was observed at Lai Po Road. The contractor was reminded to provide a drip tray for oil spillage prevention.	Rectification was observed during the audit session on 25-Aug-05.
	25-Aug-05	Oil stained soil was observed near the wheel-washing bay at Wai Man Tsuen. The contractor was reminded to remove the oil stained soil.	Rectification was observed during the audit session on 31-Aug-05.
Others	09-Jun-05	The Contractor was reminded to clear the stand water at NTMN and Pier D11.	Rectification was observed during the audit session on 15-Jun-05.
	29-Jun-05	Stand water was observed on the surface of concrete block at Nob Hill and in the U-channel at R3. The contractor was reminded to prevent the water accumulated in rainy season.	Rectification was observed during the audit session on 07-Jul-05.
	05-Aug-05	Standing water was observed at various locations of the site (Pier 14, Piers A1 to A2 and Pier D11). The Contractor was reminded to remove the water as soon as possible and avoid standing water to prevent mosquito breeding.	Rectification was observed during the audit session on 11-Aug-05.
	31-Aug-05	Stagnant water was observed under the sub-contractor office at Lai Po Road. The contractor was reminded to avoid the standing water.	Rectification was observed during the audit session on 08-Sep-05.

Status of Environmental Licensing and Permitting

5.4 Environmental licenses and permits including the Environmental Permit for the Project were in place and valid during the reporting quarter. The status of all licenses and permits obtained for the Project is summarized in **Appendix H**.

6 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

Summary of Exceedances

Air Quality

6.1 No Action/Limit Level exceedance was recorded for both 1-hr and 24-hr TSP monitoring in this reporting quarter.

Construction Noise

6.2 No Limit Level exceedance was recorded in the reporting month. One Action Level exceedance was triggered by a public noise complaint received on 21 July 2005.

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

6.3 There was no non-compliance from the site audits in the reporting quarter. As mentioned previously in the Section 5.2 of this report, the observations and recommendations made in each individual site audit session were presented.

7 ENVIRONMENTAL COMPLAINTS

7.1 Two environmental related complaints were received by the ET Leader in the reporting month. The investigation results are summarized in Table 7.1.

Table 7.1 Summary of Complaints Received in the Reporting Period

Received Date	Area of Concern	Investigation	Status
07-Jun-05	Construction dust affecting Mei Foo Sun Chuen	Fugitive dust emission was observed during the breaking works at CCR-R3 on 1 June 2005. The complaint was therefore considered valid and related to the construction activities of the Project. Corrective actions, such as water spray, were immediately implemented by the Contractor. The situation was found improved in the follow-up audit session.	Closed
21-Jul-05	Construction noise near Wah Lai Estate	Ad-hoc noise measurement was carried out on the roof of Hei Lai House on 25 July 2005 and the measured noise levels were found well below the daytime construction noise criterion of 75 dB(A). The complaint was therefore considered not justifiable. Nevertheless, the Contractor would implement noise mitigation measures, such as use of quiet breakers and temporary noise barriers, in order to minimize the impact of the nearby residents.	Closed

7.2 There were 14 complaints received since the Project commencement. All complaints have been handled in accordance with the EM&A Manuals. The implementation status of the complaint handling procedure is summarized in **Appendix I**.

8 NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

8.1 No notification of summon or successful prosecution was recorded in this reporting quarter.

8.2 There was no notification of summon or successful prosecution received since the Project commencement.

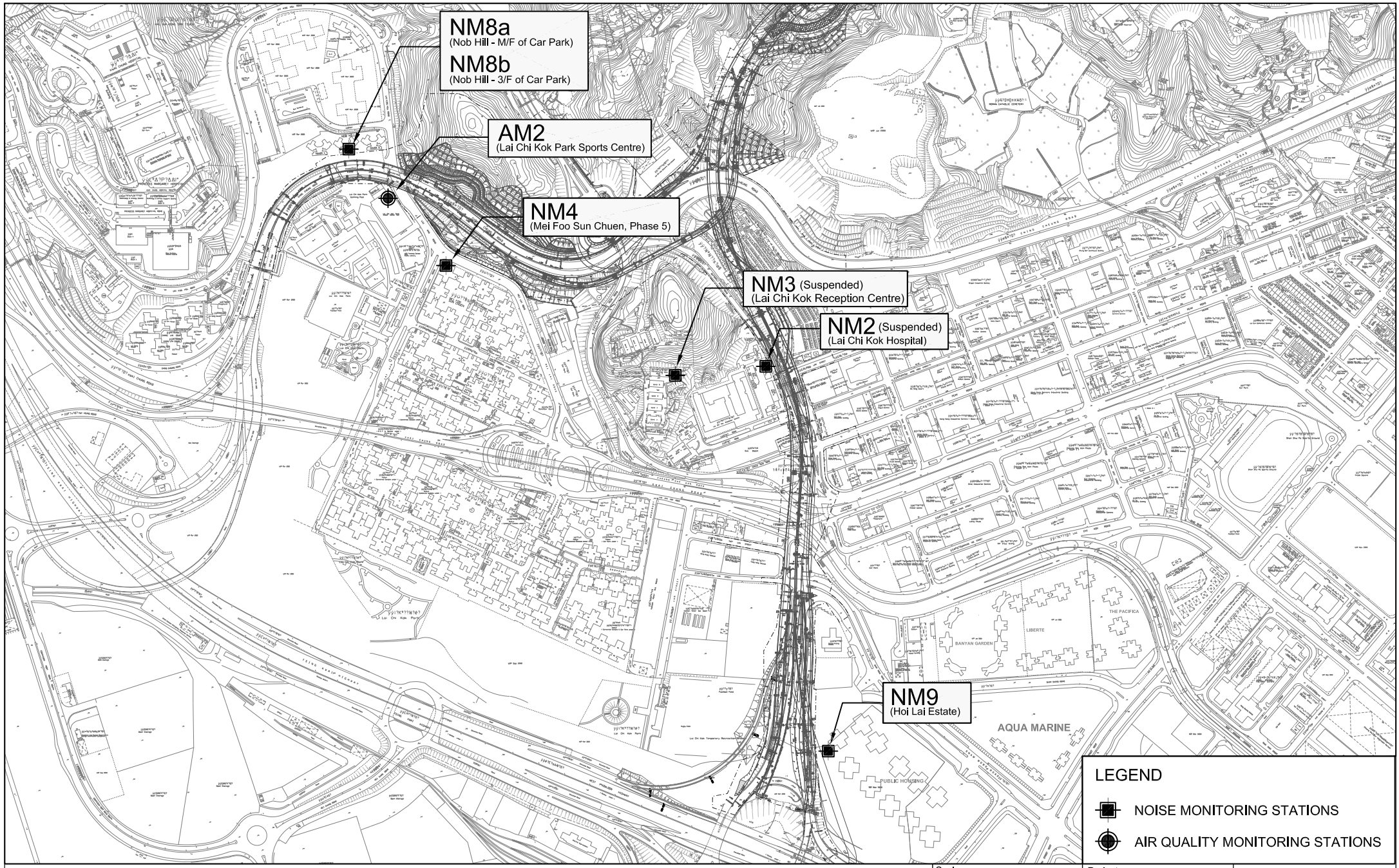
9 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

9.1 Major site activities for the coming quarter include:

- Utility diversions for piling works at slip road C.
- Pre-drilling works for R6.
- Piling works for slip road D.
- Construction of abutment, pile caps and columns at slip roads C, D and Lai Wan Overpass and Main Viaduct.
- Bulk excavation works and soil nails installation at slopes CCR-S1.
- Bulk excavation works and retaining wall construction at CCR-R1.
- Bulk excavation works at CCR-R3.
- Drainage works at Rest Garden area.
- Offsite fabrication of pre-cast deck segment moulds and segment casting.
- Segment erection by lifting frame at slip road A & B.
- Segment erection at Main Viaduct by launching gantry at night at Pier P6 and P7.
- Bored piling work at R3.

9.2 The anticipated environmental impacts will be mainly on water quality impact from surface runoff in rainy days and nighttime construction noise from segment transportation and erection works.

FIGURES



Title

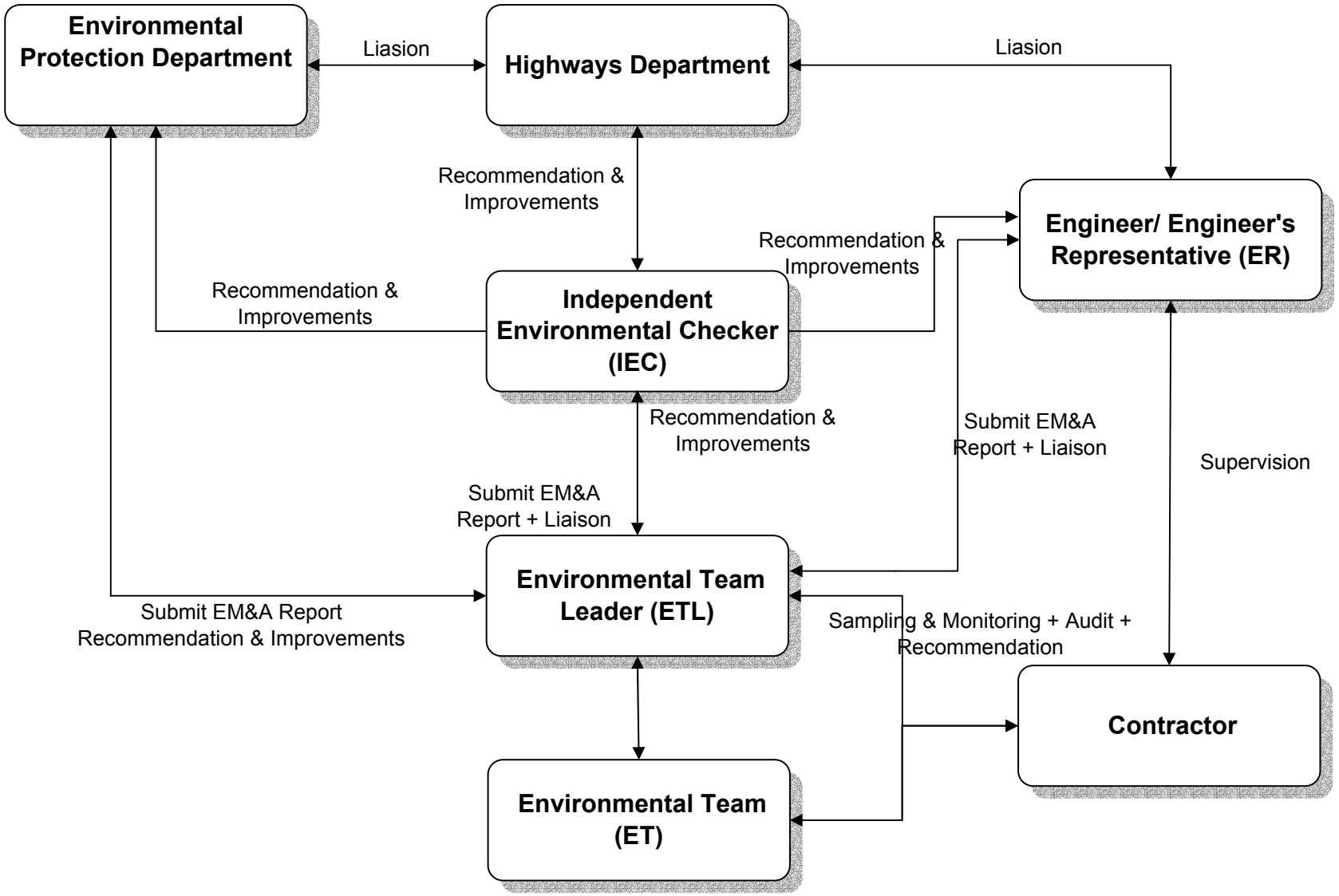
ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN
CONTRACT HY/2003/01 - LAI CHI KOK VIADUCT

LOCATIONS OF MONITORING STATIONS

Scale	Project No.
1 : 8000 (A4)	MA3024
Date	Figure No.
2005	1

CINOTECH consultants limited

F:\PROJECTS\MA3024\DRAWING\IMPACT\LCK\FIGURE 1_LAYOUT_05.DWG



Title	ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN CONTRACT NO. HY/2003/01 - LAI CHI KOK VIADUCT Environmental Monitoring and Audit Organization Chart	Scale: N.T.S	Project No.: MA3024	CINOTECH
		Date: 2005	Figure: 2	

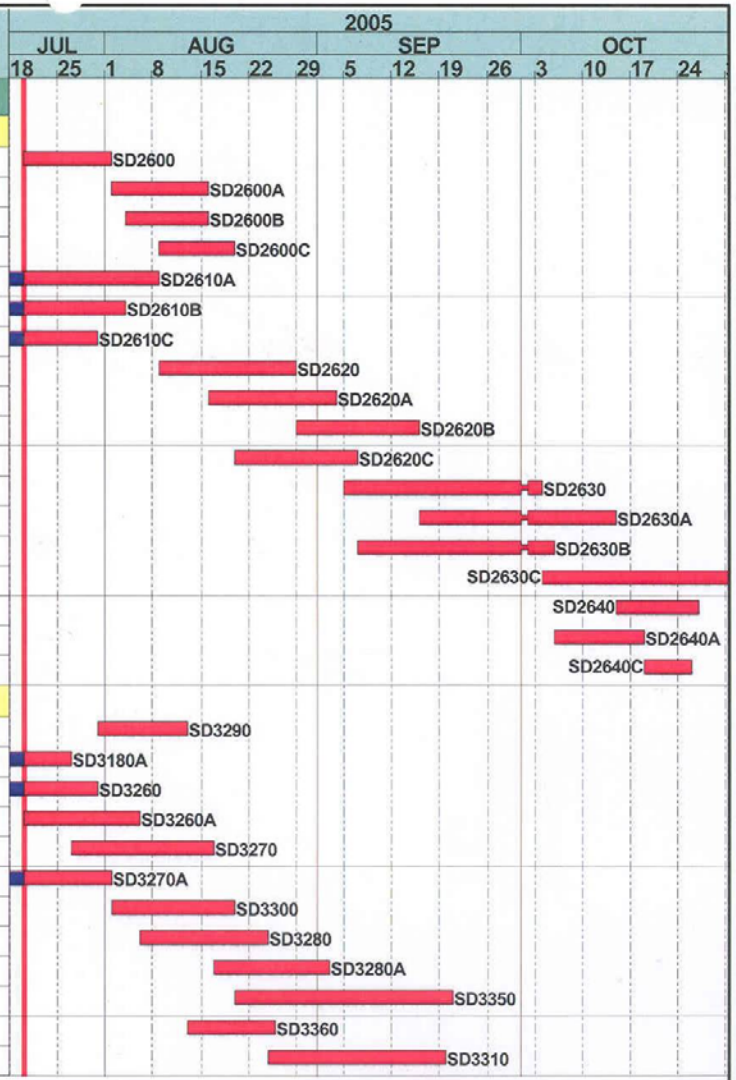
APPENDIX A
CONTACT DETAILS OF THE PROJECT ORGANISATION

Appendix A - Contact Details of the Project Organisation (LCKV)

Party	Role	Name	Position	Phone No.	Fax No.
HyD	Permit Holder	Mr. K.T. Lee	SE3/R9K	2762 3684	2714 5198
		Mr. Albert Cheung	E6/R9K	2762 3598	
		Mr. L.C. Chung	E4/R9K	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. KK Chan	Audit Team Leader	2151 2077	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M-IDC	Independent Environmental Checker	Mr. David Yeung	Independent Environmental Checker	2872 2934	2507 2293
		Mr. Billy Yu	Assistant Independent Environmental Checker	2872 2949	
NECSO	Contractor	Mr. Rafael Rubio	Project Director	2956 3300	2956 3331
		Mr. Lawrence Kwok	QA/E Manager		
24-hour Emergency Hotline				2370 9200	-

APPENDIX B
CONSTRUCTION PROGRAMME

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Procurement						
Segmental Deck Casting (Type A Units)						
SD2600	P12/L (North)-Up - Cast 7 segs Type A	12	20JUL05	01AUG05	24MAR04	06APR04
SD2600A	P12/L (North)-Down - Cast 7 segs Type A	12	02AUG05	15AUG05	07APR04	20APR04
SD2600B	P12/R (South)-Up - Cast 6 segs Type A	10	04AUG05	15AUG05	08MAY04	19MAY04
SD2600C	P12/R (South)-Down - Cast 6 segs Type A	10	09AUG05	19AUG05	08MAY04	19MAY04
SD2610A	P13/L (North)-Down - Cast 16 seg Type A	25	27JUN05A	08AUG05	27JUN05A	28APR04
SD2610B	P13/R (South)-Up - Cast 17 seg Type A	27	06JUL05A	03AUG05	06JUL05A	20APR04
SD2610C	P13/R (South)-Down - Cast 17 seg Type A	27	30JUN05A	30JUL05	30JUN05A	19MAY04
SD2620	P14/L (North)-Up - Cast 11 seg Type A	18	09AUG05	28AUG05	29APR04	19MAY04
SD2620A	P14/L (North)-Down - Cast 11 seg Type A	18	16AUG05	03SEP05	21APR04	11MAY04
SD2620B	P14/R (South)-Up - Cast 10 seg Type A	16	29AUG05	15SEP05	20MAY04	07JUN04
SD2620C	P14/R (South)-Down - Cast 10 seg Type A	16	20AUG05	06SEP05	20MAY04	07JUN04
SD2630	P15/L (North)-Up - Cast 16 seg Type A	25	05SEP05	03OCT05	12MAY04	09JUN04
SD2630A	P15/L (North)-Down - Cast 16 seg Type A	25	16SEP05	14OCT05	08JUN04	06JUL04
SD2630B	P15/R (South)-Up - Cast 16 seg Type A	25	07SEP05	05OCT05	08JUN04	06JUL04
SD2630C	P15/R (South)-Down - Cast 16 seg Type A	25	04OCT05	31OCT05	10JUN04	08JUL04
SD2640	P16/L (North)-Up - Cast 6 seg Type A	11	15OCT05	26OCT05	07JUL04	19JUL04
SD2640A	P16/L (North)-Down - Cast 6 seg Type A	11	06OCT05	18OCT05	07JUL04	19JUL04
SD2640C	P16/R (South)-Down - Cast 4 seg Type A	7	19OCT05	25OCT05	20JUL04	27JUL04
Segmental Deck Casting (Type B Units)						
SD3290	PA/L (North) - Cast 9 seg Type B	12	31JUL05	12AUG05	31MAR04	13APR04
SD3180A	B1-Down - Cast 15 seg Type B	20	28JUN05A	26JUL05	28JUN05A	16JUN04
SD3260	B2-Up - Cast 12 seg Type B	17	12JUL05A	30JUL05	12JUL05A	30MAR04
SD3260A	B2-Down - Cast 12 seg Type B	16	20JUL05	05AUG05	14MAY04	01JUN04
SD3270	B3-Up - Cast 15 seg Type B	19	27JUL05	16AUG05	17JUN04	08JUL04
SD3270A	B3-Down - Cast 15 seg Type B	19	15JUL05A	01AUG05	15JUL05A	05MAY04
SD3300	P5/R-Up (South) - Cast 12 seg Type B	16	02AUG05	19AUG05	06MAY04	24MAY04
SD3280	P5/R (B4) Slip B-Up - Cast 12 seg Type B	16	06AUG05	24AUG05	10JUL04	28JUL04
SD3280A	P5/R (B4) Slip B-Down - Cast 12 seg Type B	16	17AUG05	02SEP05	29JUL04	16AUG04
SD3350	D10 - Cast 22 seg Type B	28	20AUG05	20SEP05	25MAY04	25JUN04
SD3360	D9 - Cast 8 seg Type B	11	13AUG05	25AUG05	31AUG04	11SEP04
SD3310	P17 Slip C - Cast 18 seg Type B	23	25AUG05	19SEP05	29JUL04	24AUG04



Start Date	23SEP03
Finish Date	15MAY08
Data Date	20JUL05

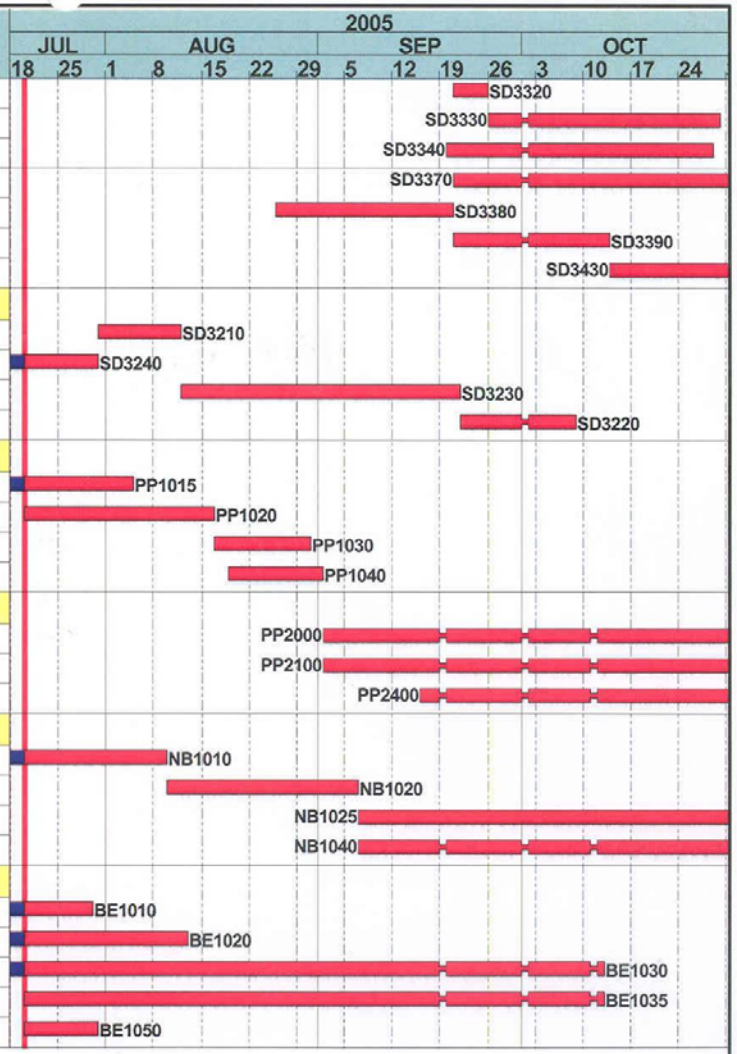
P3 File : LU22

Sheet 1 of 19

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
SD3320	C6 Slip C - Cast 3 seg Type B	5	21SEP05	25SEP05	26JUN04	01JUL04
SD3330	P18 Slip D - Cast 24 seg Type B	30	26SEP05	29OCT05	02JUL04	05AUG04
SD3340	P18 Slip C - Cast 28 segs Type B	35	20SEP05	28OCT05	25AUG04	04OCT04
SD3370	D8 - Cast 30 seg Type B	37	21SEP05	01NOV05	30AUG04	11OCT04
SD3380	D7 - Cast 18 seg Type B	23	26AUG05	20SEP05	13SEP04	08OCT04
SD3390	D6 - Cast 16 seg Type B	20	21SEP05	13OCT05	09OCT04	30OCT04
SD3430	D2 - Cast 26 seg Type B	32	14OCT05	18NOV05	03NOV04	08DEC04
Segmental Deck Casting (Type C Units)						
SD3210	PA/R (South) - Cast 9 seg Type C	11	31JUL05	11AUG05	16APR04	28APR04
SD3240	P3/R (South) - Cast 24 seg Type C	29	15JUN05A	30JUL05	15JUN05A	15APR04
SD3230	P4/R (South) - Cast 30 seg Type C	36	12AUG05	21SEP05	29APR04	09JUN04
SD3220	P5/R (South)-Down - Cast 12 seg Type C	15	22SEP05	08OCT05	09JUL04	26JUL04
Precast Parapet Panel Casting Cells						
PP1015	Casting Cells - Engineer's Review & Approval	24	09JUN05A	04AUG05	09JUN05A	29JAN05
PP1020	Casting Cells - Fabrication Off-Site	24	20JUL05	16AUG05	03JAN05	29JAN05
PP1030	Casting Cells - Deliver to Casting Yard	12	17AUG05	30AUG05	31JAN05	16FEB05
PP1040	Casting Cells - Erect & Commission	12	19AUG05	01SEP05	02FEB05	18FEB05
Precast Parapet Panel Casting						
PP2000	Casting Type I Parapet Units 1 - 265	70	02SEP05	25NOV05	19FEB05	13MAY05
PP2100	Casting Type II Parapet Units 1 - 265	70	02SEP05	25NOV05	03MAR05	25MAY05
PP2400	Casting Type V Parapet Units 1 - 180	70	16SEP05	09DEC05	09APR05	02JUL05
Noise Barriers & Encls' Not Subject to Excision						
NB1010	Detailed Design	23	28MAY05A	09AUG05	28MAY05A	29DEC04
NB1020	Shop Drawings	24	10AUG05	06SEP05	30DEC04	27JAN05
NB1025	Design - Engineer's Review & Approval	60	07SEP05	05NOV05	20MAR05	18MAY05
NB1040	Off-Site Manufacturing of Panels - PA to P8	60	07SEP05	18NOV05	28JAN05	12APR05
Bearings						
BE1010	Detailed Design & Shop Drawings	60	16JAN04A	29JUL05	16JAN04A	23APR04
BE1020	Review & Approval of Design & Shop Drawings	24	05JUN04A	12AUG05	05JUN04A	08MAY04
BE1030	Off-Site Manufacturing of Bearings	70	07SEP04A	12OCT05	07SEP04A	05JUN04
BE1035	Engineer's Approval of Bearings Before Delivery	42	20JUL05	12OCT05	15MAR04	05JUN04
BE1050	Trial of Bearing Installation Method	10	20JUL05	30JUL05	23MAR04	02APR04



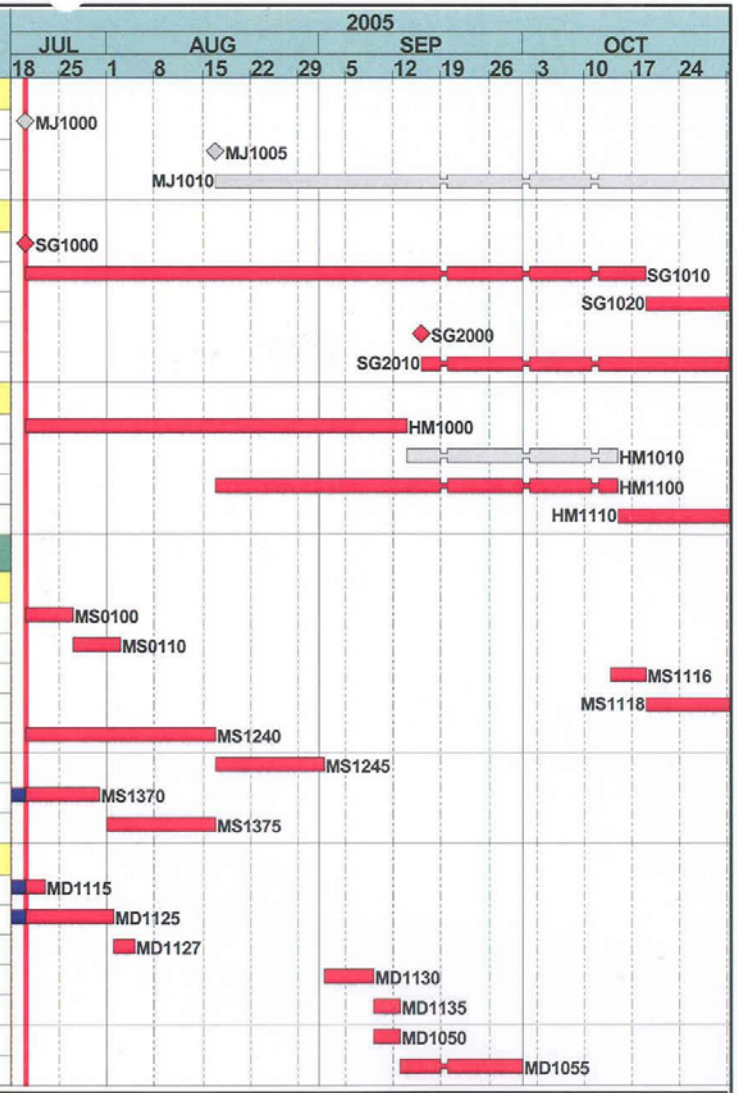
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Movement Joints						
MJ1000	Award of Sub-contract	0	20JUL05		22DEC05	
MJ1005	Engineer's approval of Proprietary Type of M.J	0	17AUG05		21JAN06	
MJ1010	Detailed Design & Shop Drawings	75	17AUG05	15NOV05	21JAN06	22APR06
Signage						
SG1000	Sign Gantries - Award of Sub-contract	0	20JUL05		27OCT04	
SG1010	Sign Gantries - Detailed Design & Shop Drawings	75	20JUL05	18OCT05	29MAR05	27JUN05
SG1020	Sign Gantries - Review/Appro of Design & S/Dwgs.	24	19OCT05	15NOV05	28JUN05	26JUL05
SG2000	Signage - Award of Sub-contract	0	16SEP05		24DEC04	
SG2010	Signage - Shop Drawings	50	16SEP05	16NOV05	24DEC04	25FEB05
High Mast Lighting						
HM1000	High Mast Lighting - Foundation Design	48	20JUL05*	13SEP05	16JUN05	11AUG05
HM1010	High Mast Lighting - Approval of Found'n Design	24	14SEP05	14OCT05	04NOV05	01DEC05
HM1100	High Mast Lighting - Mast Design & Shop Drawings	48	17AUG05	14OCT05	15JUL05	08SEP05
HM1110	High Mast Lighting - Approval of Mast Design	56	15OCT05	09DEC05	09SEP05	03NOV05
Viaduct - Main Line - Piers PA to P6						
Substructure						
MS0100	PA/L - Install Bearings	6	20JUL05	26JUL05	27APR04	04MAY04
MS0110	PA/R - Install Bearings	6	27JUL05	02AUG05	26MAY04	01JUN04
MS1116	P1/R (S) - Remove Temp. Props for Spans - Towers	4	14OCT05	18OCT05	21SEP05	24SEP05
MS1118	P1/R (S) - Remove Temp. Props for Spans - Towers	24	19OCT05	15NOV05	26SEP05	25OCT05
MS1240	P2/R - Upper Portal Frame (P2/R & B1)	24	20JUL05	16AUG05	14JUN04	13JUL04
MS1245	P2/R - Upper Portal Frame - Cure & Strke F/work	14	17AUG05	01SEP05	14JUL04	29JUL04
MS1370	B2 - Upper Portal Frame (P3/R & B2)	24	11MAY05A	30JUL05	11MAY05A	11MAY04
MS1375	B2 - Upper Portal Frame - Cure & Strike F/work	14	01AUG05	16AUG05	12MAY04	27MAY04
Main Line - Segmental Deck Construction (Crane)						
MD1115	P2/L (North) - 28 seg Type B	14	30MAY05A	22JUL05	30MAY05A	22JUN05
MD1125	P1/L (North) - 22 seg Type B	11	12JUL05A	01AUG05	12JUL05A	04MAY04
MD1127	P1/L - P2/L (North) Insitu Stitch	3	02AUG05	04AUG05	23JUN05	25JUN05
MD1130	PA/L (North) - 9 seg Type B on scaff	6	02SEP05	08SEP05	05MAY04	11MAY04
MD1135	PA/L -P1/L (North) Insitu Stitch	3	09SEP05	12SEP05	23JUN05	25JUN05
MD1050	P1/R (South) - 1st. Pair - 2 seg Type C	3	09SEP05	12SEP05	12MAY04	14MAY04
MD1055	P1/R (South) - 30 seg Type C	15	13SEP05	30SEP05	15MAY04	01JUN04



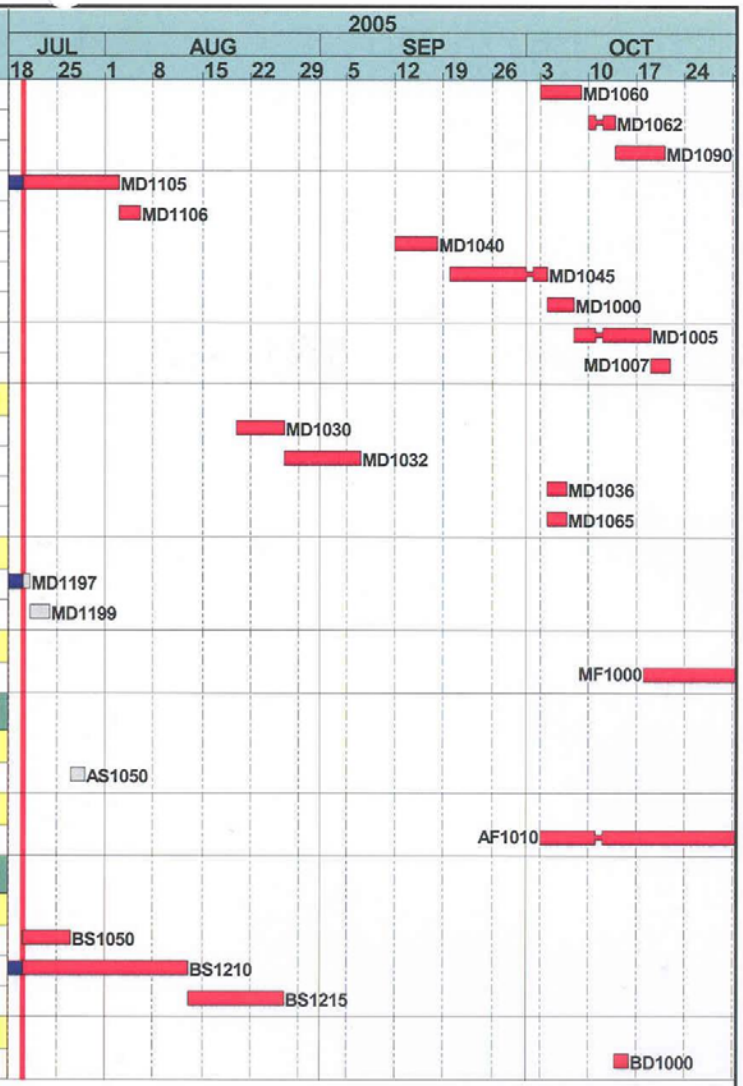
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
MD1060	PA/R (South) - 9 seg Type C on scaff	6	03OCT05	08OCT05	02JUN04	08JUN04
MD1062	PA/R - P1/R (South) Insitu Stitch	3	10OCT05	13OCT05	09JUN04	11JUN04
MD1090	P4/L (North) - 1st. Pair - 2 seg Type B	6	14OCT05	20OCT05	11AUG05	17AUG05
MD1105	P3/L (North) - 22 seg Type B	15	13JUL05A	02AUG05	13JUL05A	13JUL04
MD1106	P2/L - P3/L (North) Insitu stitch	3	03AUG05	05AUG05	03AUG05	05AUG05
MD1040	P2/R (South) - 1st. Pair - 2 seg Type C	6	12SEP05	17SEP05	30JUL04	05AUG04
MD1045	P2/R (South) - 26 seg Type C	11	20SEP05	03OCT05	06AUG04	18AUG04
MD1000	P5/R (B4) Slip B - 1st. Pair - 2 seg Type B	4	04OCT05	07OCT05	19AUG04	23AUG04
MD1005	P5/R (B4) Slip B - 22 seg Type B	8	08OCT05	18OCT05	03JUN05	13JUN05
MD1007	P5/R (B4) Slip B - P6 Slip B Insitu Stitch	3	19OCT05	21OCT05	14JUN05	16JUN05
Main Line - Segmental Deck Const'n (Lift Frames)						
MD1030	P3/R (South) - 1st. pair - 2 seg Type C	6	20AUG05	26AUG05	28MAY04	03JUN04
MD1032	P3/R (South) - 22 seg Type C	9	27AUG05	06SEP05	04JUN04	14JUN04
MD1036	P2/R - P3/R (South) Insitu Stitch	3	04OCT05	06OCT05	04AUG05	06AUG05
MD1065	P1/R - P2/R (South) Instiu Stitch	3	04OCT05	06OCT05	22JUN05	24JUN05
Main Line - Segmental Deck Construction (Gantry)						
MD1197	P6 Slip A - P5/L Slip A Insitu Stitch	3	02JUL05A	20JUL05	02JUL05A	30AUG05
MD1199	P5L (North) - P6/L (North) Insitu Stitch	3	21JUL05	23JUL05	31AUG05	02SEP05
Superstructure Finishing Works Required for TCSS						
MF1000	PA to P6 - Parapets PA/L to P3/L (incl earthing)	58	18OCT05	23DEC05	27JUN05	02SEP05
Viaduct - Slip Road A						
Substructure						
AS1050	Abutment A - Install Bearings	2	27JUL05	28JUL05	14MAY08	15MAY08
Superstructure Finishing Works Required for TCSS						
AF1010	Slip Rd. A -Parapets Eastern Face (incl earthing	50	03OCT05	30NOV05	16JUL05	12SEP05
Viaduct - Slip Road B						
Substructure						
BS1050	Abutment B - Install Bearings	6	20JUL05	26JUL05	05JUN04	11JUN04
BS1210	B3 - Pier Insitu Deck Segment	30	28APR05A	12AUG05	28APR05A	06JUL04
BS1215	B3 - Pier Head - Cure & Strike Fmwk/Falsework	12	13AUG05	26AUG05	07JUL04	20JUL04
Slip Road B -Segmental Deck Construction (Crane)						
BD1000	Abut B - 3 seg Type B on scaff	2	14OCT05	15OCT05	12JUN04	14JUN04



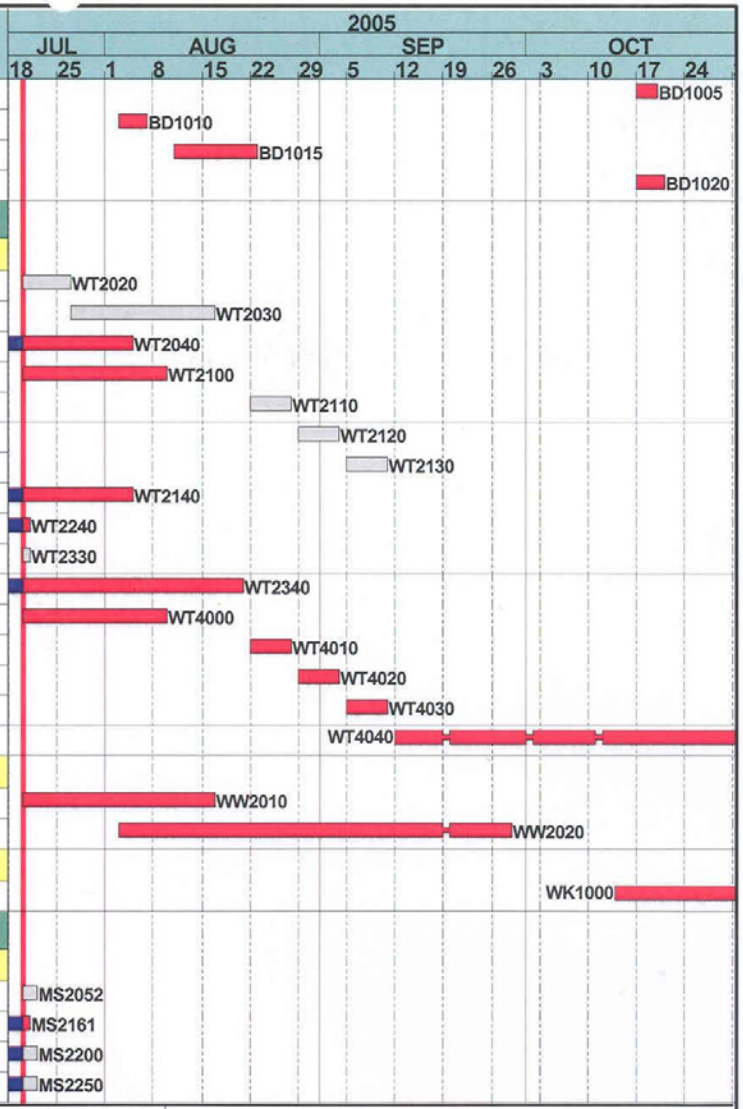
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
BD1005	Abut B - B1 Insitu Stitch	3	17OCT05	19OCT05	14JUN05	16JUN05
BD1010	B1 - 1st. Pair - 2 seg Type B	4	03AUG05	06AUG05	14JUL04	17JUL04
BD1015	B1 - 28 seg Type B	10	11AUG05	22AUG05	19JUL04	29JUL04
BD1020	B2 - 1st. Pair - 2 seg Type B	4	17OCT05	20OCT05	15JUN04	18JUN04
At Grade Works - Lai Po Road						
Temporary Traffic Management Schemes						
WT2020	TTMS Deck Erection over Rd G - Roadworks Advice	6	20JUL05	26JUL05	17APR08	23APR08
WT2030	TTMS Deck Erection over Rd G - Site Preparation	18	27JUL05	16AUG05	24APR08	15MAY08
WT2040	TTMS Deck Erection over Rd G - Implementation	66*	18MAY05A	04AUG05	18MAY05A	25JUN05
WT2100	TTMS Deck Erect'n @ Rd D N/B -Prepare for Review	18	20JUL05	09AUG05	03MAY04	22MAY04
WT2110	TTMS Deck Erect'n @ Rd D N/B - CRE Endorsement	6	22AUG05	27AUG05	24APR08	30APR08
WT2120	TTMS Deck Erect'n @ Rd D N/B - Roadworks Advice	6	29AUG05	03SEP05	02MAY08	08MAY08
WT2130	TTMS Deck Erect'n @ Rd D N/B - Site Preparation	6	05SEP05	10SEP05	09MAY08	15MAY08
WT2140	TTMS Deck Erect'n @ Rd D N/B - Implementation	48*	08JUN05A	04AUG05	08JUN05A	25JUN05
WT2240	TTMS Deck Erect'n @ Sham Mong Rd -Implementation	98*	24MAR05A	20JUL05	24MAR05A	27FEB04
WT2330	TTMS Deck Erect'n @ LaiChiKok Rd - Site Prepare	1	20JUL05	20JUL05	15MAY08	15MAY08
WT2340	TTMS Deck Erect'n @ LaiChiKok Rd -Implementation	75*	24MAY05A	20AUG05	24MAY05A	30MAR04
WT4000	TTMS Deck Erect'n @ Rd D S/B -Prepare for Review	18	20JUL05	09AUG05	03MAY04	22MAY04
WT4010	TTMS Deck Erect'n @ Rd D S/B - CRE Endorsement	6	22AUG05	27AUG05	25MAY04	31MAY04
WT4020	TTMS Deck Erect'n @ Rd D S/B - Roadworks Advice	6	29AUG05	03SEP05	01JUN04	07JUN04
WT4030	TTMS Deck Erect'n @ Rd D S/B - Site Preparation	6	05SEP05	10SEP05	08JUN04	14JUN04
WT4040	TTMS Deck Erect'n @ Rd D S/B - Implementation	85*	12SEP05	22DEC05	15JUN04	13JUN05
Retaining Wall LCK-R2						
WW2010	Ret. Wall LCK-R2 - Bases	24	20JUL05	16AUG05	01MAR05	28MAR05
WW2020	Ret. Wall LCK-R2 - Walls	48	03AUG05	28SEP05	15MAR05	11MAY05
Kiosk at Lai Wan Interchange						
WK1000	Kiosk at Lai Wan Interchange - Structure	48	14OCT05	08DEC05	07JUL05	31AUG05
Viaduct - Main Line - Piers P7 to P10						
Substructure						
MS2052	P7 Install Bearings	2	20JUL05	21JUL05	14MAY08	15MAY08
MS2161	P8/R - Portal Frame - Cure & Strike Form/Falsewk	12	03JUN05A	20JUL05	03JUN05A	27FEB04
MS2200	P9/L - Backfill & Remove Temporary Works	3	16APR05A	21JUL05	16APR05A	15MAY08
MS2250	P9/R - Backfill & Remove Temporary Works	4	20APR05A	21JUL05	20APR05A	15MAY08



Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

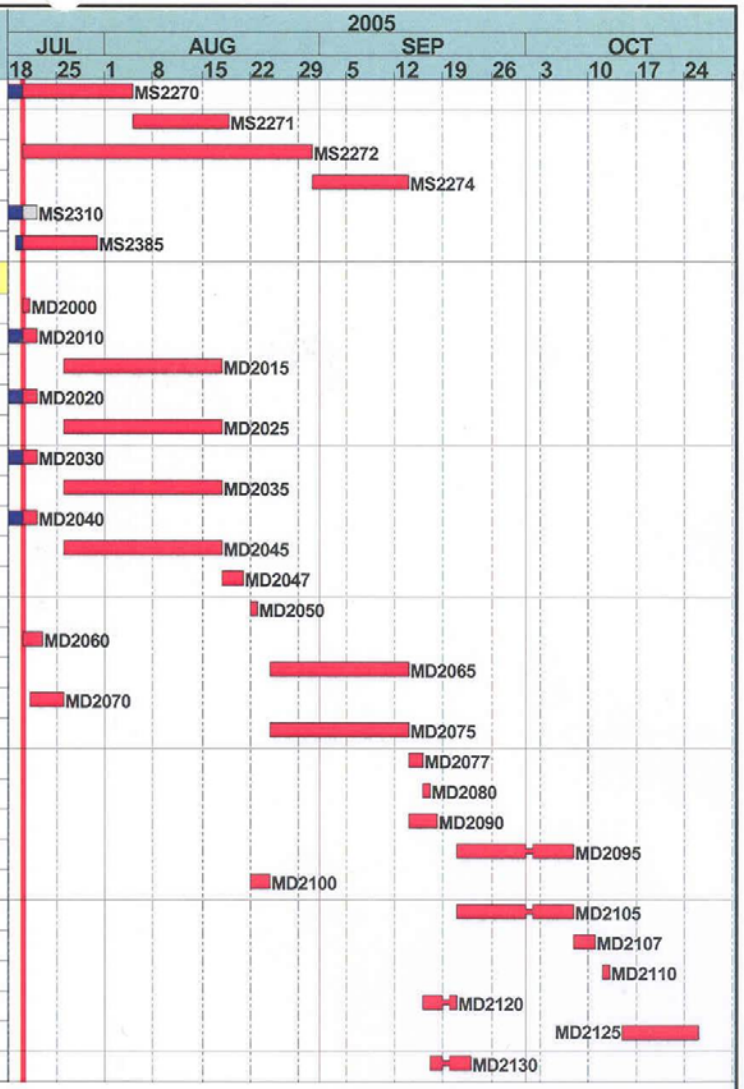
P3 File : LU22

Sheet 5 of 19

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
MS2270	P9/R - Portal Frame (P9/L & P9/R)	38	30APR05A	04AUG05	30APR05A	16MAR04
MS2271	P9/R - Portal Frame - Cure & Strike Form/Falsewk	12	05AUG05	18AUG05	17MAR04	30MAR04
MS2272	P9/R - Temporary Props for Spans - Foundations	36	20JUL05	30AUG05	28FEB04	10APR04
MS2274	P9/R - Temporary Props for Spans - Towers	12	31AUG05	13SEP05	12APR04	24APR04
MS2310	P10/L - Backfill & Remove Temporary Works	4	18APR05A	21JUL05	18APR05A	15MAY08
MS2385	P10/R - Portal Frame -Cure & Strike Form/Falsewk	14	19JUL05A	30JUL05	19JUL05A	26APR04
Main Line - Segmental Deck Construction (Gantry)						
MD2000	Launch Gantry to P6/P7/P8	1	20JUL05	20JUL05	27FEB04	27FEB04
MD2010	P7/R (South) - 1st. Pair - 1 Type A & 1 Type B	3	09JUL05A	21JUL05	09JUL05A	03MAR04
MD2015	P7/R (South) - 9 seg Type A & 9 Seg Type B	20	26JUL05	17AUG05	04MAR04	26MAR04
MD2020	P7 Slip B - 1st. seg Type B	3	05JUL05A	21JUL05	05JUL05A	03MAR04
MD2025	P7 Slip B - 9 seg Type B	20	26JUL05	17AUG05	04MAR04	26MAR04
MD2030	P7/L (North) - 1st. Pair - 1 Type A & 1 Type B	3	09JUL05A	21JUL05	09JUL05A	03MAR04
MD2035	P7/L (North) - 9 seg Type A & 9 seg Type B	20	26JUL05	17AUG05	04MAR04	26MAR04
MD2040	P7 Slip A - 1st. seg Type B	4	16JUL05A	21JUL05	16JUL05A	03MAR04
MD2045	P7 Slip A - 9 seg Type B	20	26JUL05	17AUG05	04MAR04	26MAR04
MD2047	P6-P7 Insitu Stitches	3	18AUG05	20AUG05	27MAR04	30MAR04
MD2050	Launch Gantry to P7/P8/P9	1	22AUG05	22AUG05	31MAR04	31MAR04
MD2060	P8/L (North) - 1st. Pair - 2 seg Type A	3	20JUL05	22JUL05	27FEB04	01MAR04
MD2065	P8/L (North) - 30 seg Type A	17	25AUG05	13SEP05	03APR04	23APR04
MD2070	P8/R (South) - 1st. Pair - 2 seg Type A	4	21JUL05	25JUL05	28FEB04	03MAR04
MD2075	P8/R (South) - 30 seg Type A	17	25AUG05	13SEP05	03APR04	23APR04
MD2077	P7-P8 Insitu Stiches	2	14SEP05	15SEP05	24APR04	26APR04
MD2080	Launch Gantry to P8/P9/P10	1	16SEP05	16SEP05	27APR04	27APR04
MD2090	P9/R (South) - 1st. Pair - 2 seg Type A	4	14SEP05	17SEP05	26APR04	29APR04
MD2095	P9/R (South) - 28 seg Type A	14	21SEP05	07OCT05	30APR04	17MAY04
MD2100	P9/L Nth - 1st. Pair - 2 seg Type A	3	22AUG05	24AUG05	31MAR04	02APR04
MD2105	P9/L Nth - 24 seg Type A	14	21SEP05	07OCT05	30APR04	17MAY04
MD2107	P8-P9 Insitu Stiches	2	08OCT05	10OCT05	18MAY04	19MAY04
MD2110	Launch Gantry to P9/P10/P11	1	12OCT05	12OCT05	20MAY04	20MAY04
MD2120	P10/L (North) - 1st. Pair - 2 seg Type A	3	16SEP05	20SEP05	27APR04	29APR04
MD2125	P10/L (North) - 26 seg Type A	9	15OCT05	25OCT05	24MAY04	02JUN04
MD2130	P10/R (South) - 1st. Pair - 2 seg Type A	4	17SEP05	22SEP05	19MAY04	22MAY04



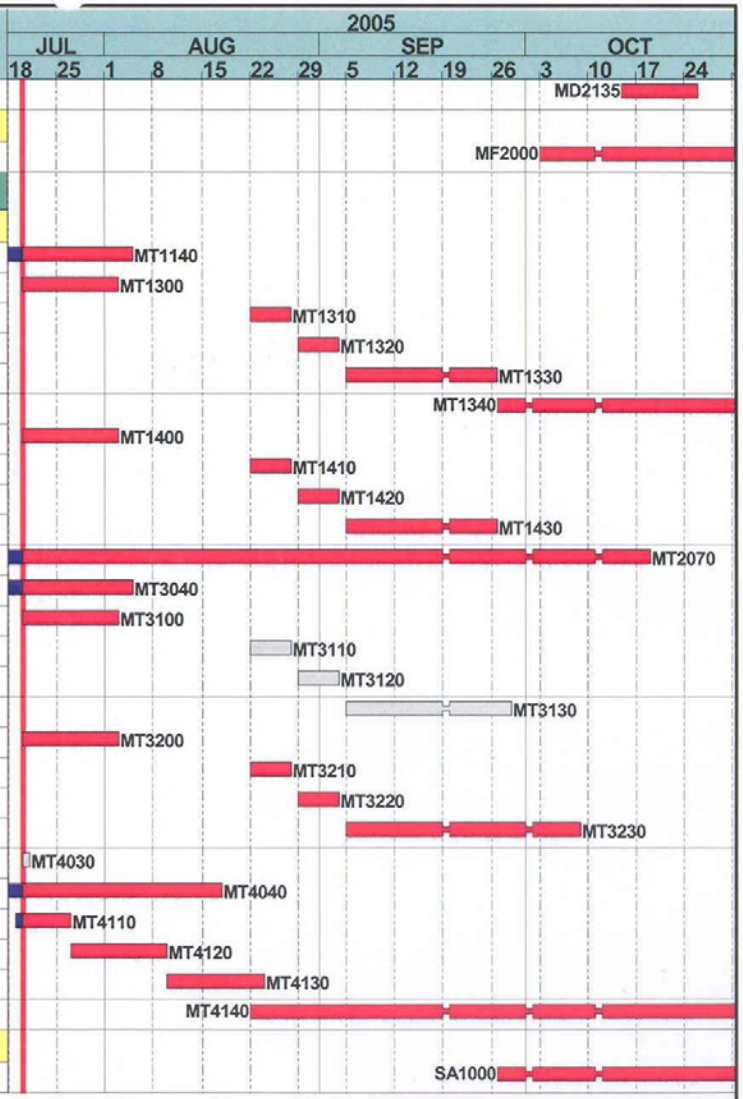
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
MD2135	P10/R (South) - 24 seg Type A	9	15OCT05	25OCT05	24MAY04	02JUN04
Superstructure Finishing Works Required for TCSS						
MF2000	P7 to P10 - Parapets P7 to P8 (incl earthing)	60	03OCT05	12DEC05	05SEP05	16NOV05
At Grade Works - Lai Chi Kok Interchange						
Temporary Traffic Management Schemes						
MT1140	1st. TTMS Butterfly Valley Rd - Implement St.2	435*	26FEB04A	04AUG05	26FEB04A	16MAR04
MT1300	2nd. TTMS Butterfly Valley Rd-Prepare for Review	12	20JUL05	02AUG05	10MAY04	22MAY04
MT1310	2nd. TTMS Butterfly Valley Rd - CRE Endorsement	6	22AUG05	27AUG05	22DEC04	29DEC04
MT1320	2nd. TTMS Butterfly Valley Rd - Roadworks Advice	6	29AUG05	03SEP05	30DEC04	06JAN05
MT1330	2nd. TTMS Butterfly Valley Rd - Prepare	18	05SEP05	26SEP05	07JAN05	27JAN05
MT1340	2nd. TTMS Butterfly Valley Rd - Implementation	102*	27SEP05	27JAN06	28JAN05	01JUN05
MT1400	3rd TTMS Butterfly Valley Rd -Prepare for Review	12	20JUL05	02AUG05	03MAY04	15MAY04
MT1410	3rd. TTMS Butterfly Valley Rd - CRE Endorsement	6	22AUG05	27AUG05	27APR05	04MAY05
MT1420	3rd. TTMS Butterfly Valley Rd - Roadworks Advice	6	29AUG05	03SEP05	05MAY05	11MAY05
MT1430	3rd. TTMS Butterfly Valley Rd - Prepare	18	05SEP05	26SEP05	12MAY05	01JUN05
MT2070	TTMS Case No.027 (P7 Piling) - Implementation	414*	03JUN04A	18OCT05	03JUN04A	01AUG05
MT3040	1st. TTMS Kom Tsun Street - Implementation	426*	08MAR04A	04AUG05	08MAR04A	16MAR04
MT3100	2nd. TTMS Kom Tsun Street - Prepare for Review	12	20JUL05	02AUG05	10MAY04	22MAY04
MT3110	2nd. TTMS Kom Tsun Street - CRE Endorsement	6	22AUG05	27AUG05	08APR08	14APR08
MT3120	2nd. TTMS Kom Tsun Street - Roadworks Advice	6	29AUG05	03SEP05	15APR08	21APR08
MT3130	2nd. TTMS Kom Tsun Street - Site Preparation	20	05SEP05	28SEP05	22APR08	15MAY08
MT3200	3rd. TTMS Kom Tsun Street - Prepare for Review	12	20JUL05	02AUG05	03MAY04	15MAY04
MT3210	3rd. TTMS Kom Tsun Street - CRE Endorsement	6	22AUG05	27AUG05	15APR05	21APR05
MT3220	3rd. TTMS Kom Tsun Street - Roadworks Advice	6	29AUG05	03SEP05	22APR05	28APR05
MT3230	3rd. TTMS Kom Tsun Street - Site Preparation	28	05SEP05	08OCT05	29APR05	01JUN05
MT4030	TTMS Deck Erect'n @ CSWan Rd - Site Preparation	1	20JUL05	20JUL05	15MAY08	15MAY08
MT4040	TTMS Deck Erect'n @ CSWan Rd - Implementation	85*	09MAY05A	17AUG05	09MAY05A	26MAR04
MT4110	TTMS Deck Erect'n @ B.V. Rd - CRE Endorsement	6	19JUL05A	26JUL05	19JUL05A	27MAR04
MT4120	TTMS Deck Erect'n @ B.V. Rd - Roadworks Advice	12	27JUL05	09AUG05	29MAR04	12APR04
MT4130	TTMS Deck Erect'n @ B.V. Rd - Site Preparation	12	10AUG05	23AUG05	13APR04	26APR04
MT4140	TTMS Deck Erect'n @ B.V. Rd - Implementation	69*	22AUG05	12NOV05	31MAR04	21JUN04
Drainage Works						
SA1000	Butterfly Valley Road - Stormwater Drainage	54	27SEP05	30NOV05	28JAN05	04APR05



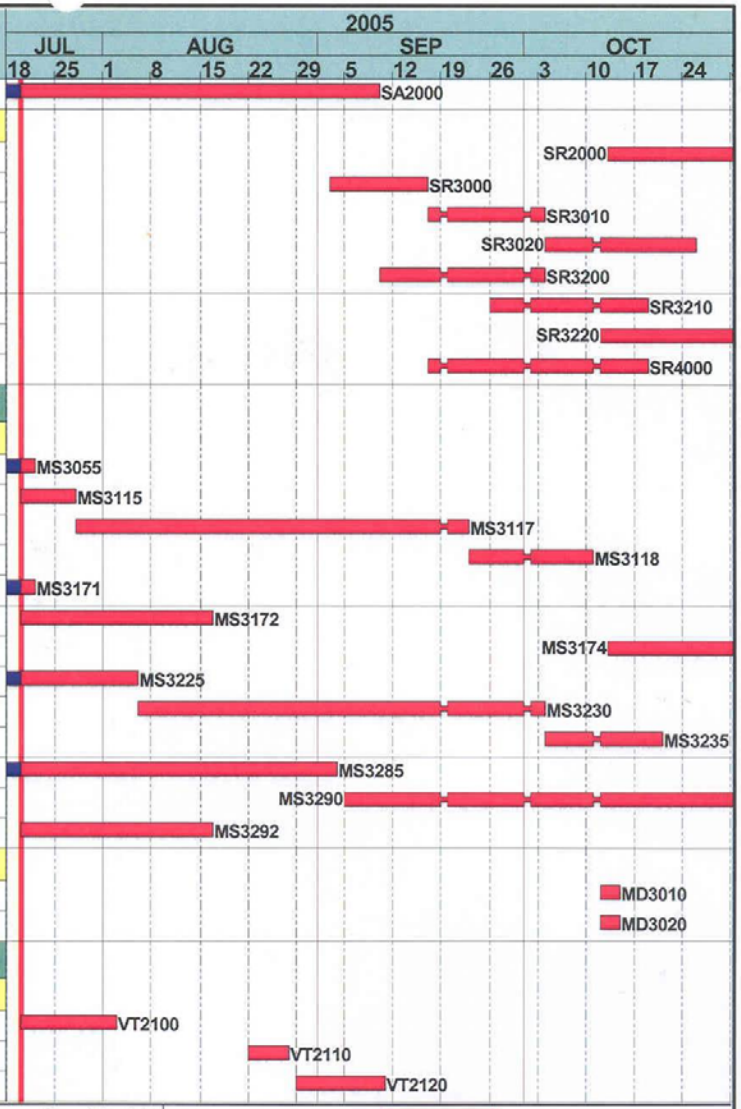
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
SA2000	Kom Tsun St. & Bus Terminal - St/water Drainage	54	14FEB05A	09SEP05	14FEB05A	04APR05
Utilities & Roadworks						
SR2000	Castle Peak Road - Roadworks Reinstatement	17	13OCT05	01NOV05	06MAY05	25MAY05
SR3000	Kom Tsun Street L/H C/Way - Excavate & Formation	12	03SEP05	16SEP05	29MAR05	12APR05
SR3010	Kom Tsun Street L/H C/Way - Sub-base	12	17SEP05	03OCT05	13APR05	26APR05
SR3020	Kom Tsun Street L/H C/Way - Kerbs	18	04OCT05	25OCT05	27APR05	18MAY05
SR3200	Kom Tsun Street Bus Stn. - Excavate & Formation	18	10SEP05	03OCT05	06APR05	26APR05
SR3210	Kom Tsun Street bus Stn. - Sub-base	18	26SEP05	18OCT05	20APR05	11MAY05
SR3220	Kom Tsun Street Bus Stn. - Kerbs	24	12OCT05	08NOV05	05MAY05	01JUN05
SR4000	Kwai Chung Road (Pier 7) - Reinstatement	24	17SEP05	18OCT05	05JUL05	01AUG05
Viaduct - Main Line - Piers P11 to P15						
Substructure						
MS3055	P11 - Pier Head - Cure & Strike Form/Falsework	14	30JUN05A	21JUL05	30JUN05A	18MAY04
MS3115	P12 - Bearings	7	20JUL05	27JUL05	15MAR04	22MAR04
MS3117	P12 - Insitu Deck Segments at Movement Joint	48	28JUL05	22SEP05	23MAR04	19MAY04
MS3118	P12 - Cure & Strike Formwork/Falsework	14	23SEP05	10OCT05	20MAY04	04JUN04
MS3171	P13 - Pier Head - Cure & Strike Form/Falsework	14	28JUN05A	21JUL05	28JUN05A	21JUN04
MS3172	P13 - Temporary Props for Spans - Foundations	24	20JUL05	16AUG05	12MAY04	08JUN04
MS3174	P13 - Temporary Props for Spans - Towers	18	13OCT05	02NOV05	09JUN04	30JUN04
MS3225	P14 - Pier Hammer Head	24	30MAY05A	05AUG05	30MAY05A	19APR04
MS3230	P14 - Pier Insitu Deck Segment	48	06AUG05	03OCT05	20APR04	15JUN04
MS3235	P14 - Pier Head - Cure & Strike Form/Falsework	14	04OCT05	20OCT05	16JUN04	03JUL04
MS3285	P15 - Pier Hammer Head	48	14JUL05A	03SEP05	14JUL05A	21APR04
MS3290	P15 - Pier Insitu Deck Segment	60	05SEP05	16NOV05	22APR04	03JUL04
MS3292	P15 - Temporary Props for Spans - Foundations	24	20JUL05	16AUG05	10JUN04	09JUL04
Main Line - Segmental Deck Construction (Gantry)						
MD3010	P11 Sth - 1st pair - 2 segs Type A	3	12OCT05	14OCT05	20MAY04	22MAY04
MD3020	P11 Nth - 1st pair - 2 segs Type A	3	12OCT05	14OCT05	20MAY04	22MAY04
At Grade Works - Wai Man Tsuen						
Temporary Traffic Management Schemes						
VT2100	TTMS MainLine Deck@ CC Rd W/B-Prepare for Review	12	20JUL05	02AUG05	03MAY04	15MAY04
VT2110	TTMS MainLine Deck@ CC Rd W/B - CRE Endorsement	6	22AUG05	27AUG05	06JUL04	12JUL04
VT2120	TTMS MainLine Deck@ CC Rd W/B - Roadworks Advice	12	29AUG05	10SEP05	13JUL04	26JUL04



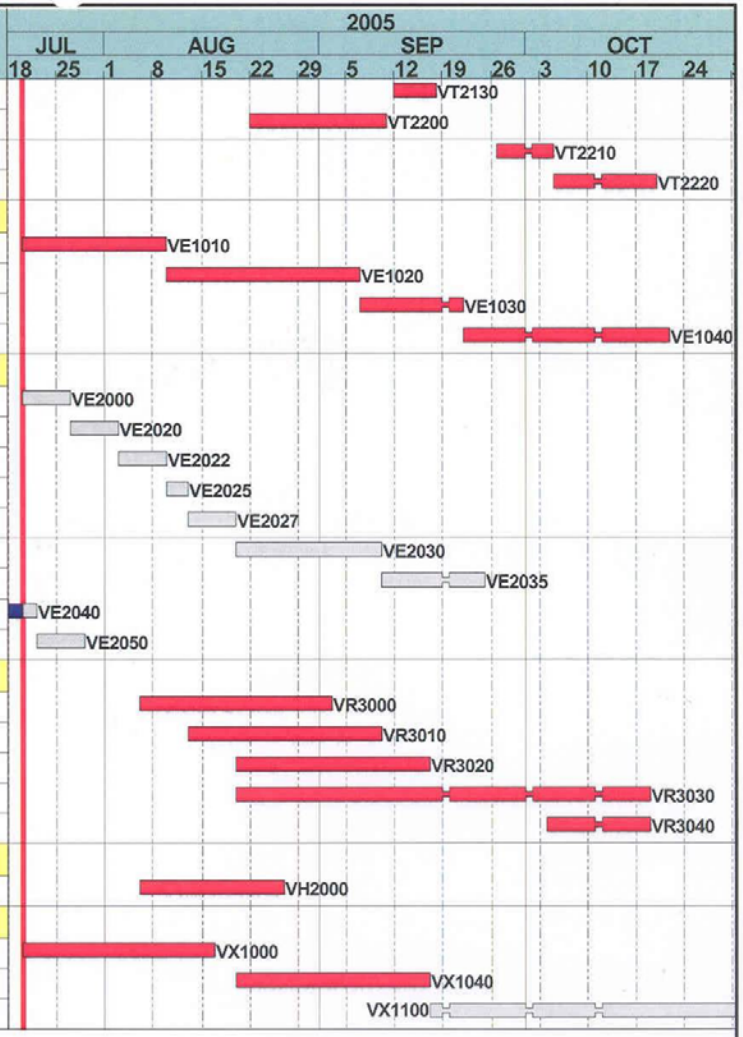
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Sheet 8 of 19

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
VT2130	TTMS MainLine Deck@ CC Rd W/B - Site Preparation	6	12SEP05	17SEP05	27JUL04	02AUG04
VT2200	TTMS Slip RdD Deck@ CC Rd W/B-Prepare for Review	18	22AUG05	10SEP05	19AUG04	08SEP04
VT2210	TTMS Slip Rd D Deck@ CC Rd W/B -CRE Endorsement	6	27SEP05	04OCT05	17SEP04	23SEP04
VT2220	TTMS Slip Rd D Deck@ CC Rd W/B -Roadworks Advice	12	05OCT05	19OCT05	24SEP04	09OCT04
Earthworks & Slope Works						
VE1010	Slope CCR-S5 - Form Temporary Access	18	20JUL05	09AUG05	27JAN05	19FEB05
VE1020	Slope CCR-S5 - Install Temporary Works	24	10AUG05	06SEP05	21FEB05	19MAR05
VE1030	Slope CCR-S5 - Excavate Existing Slope	12	07SEP05	21SEP05	21MAR05	02APR05
VE1040	Slope CCR-S5 - Compacted Filling	24	22SEP05	21OCT05	04APR05	03MAY05
Earthworks & Slope Works - 11NW-A/C678 & CR679						
VE2000	Slope 11NW-A/C678 & CR679 - Remove Temp Platform	6	20JUL05	26JUL05	08MAR08	14MAR08
VE2020	Slope 11NW-A/C678 & CR679 - Trim Original Slope	6	27JUL05	02AUG05	15MAR08	21MAR08
VE2022	Slope 11NW-A/C678 & CR679 - Rock Stabilisation	6	03AUG05	09AUG05	22MAR08	28MAR08
VE2025	Slope 11NW-A/C678 & CR679 - Platform for S.Nails	3	10AUG05	12AUG05	29MAR08	01APR08
VE2027	Slope 11NW-A/C678 & CR679 - Test Soil Nail	6	13AUG05	19AUG05	02APR08	09APR08
VE2030	Slope 11NW-A/C678 & CR679 - Soil Nails	18	20AUG05	09SEP05	10APR08	30APR08
VE2035	Slope 11NW-A/C678 & CR679 - Soil Nail - Testing	12	10SEP05	24SEP05	02MAY08	15MAY08
VE2040	Slope 11NW-A/C678 & CR679 - Fill Behind Ret Wall	6	11JUL05A	21JUL05	11JUL05A	25JUL05
VE2050	Slope 11NW-A/C678 & CR679 -Landscape & Hydroseed	6	22JUL05	28JUL05	26JUL05	01AUG05
Utilities & Roadworks						
VR3000	Drainage Maintenance Access Rd. - Formation	24	06AUG05	02SEP05	21MAY05	18JUN05
VR3010	Drainage Maintenance Access Rd. - Sub-base	24	13AUG05	09SEP05	28MAY05	25JUN05
VR3020	Drainage Maintenance Access Rd. - Kerbs	24	20AUG05	16SEP05	04JUN05	04JUL05
VR3030	Drainage Maintenance Access Rd. - Pavement	48	20AUG05	18OCT05	04JUN05	01AUG05
VR3040	Drainage Maintenance Access Rd. - Street Lights	12	04OCT05	18OCT05	19JUL05	01AUG05
Wai Man Tsuen Fire Hydrant Pump House						
VH2000	Fire Main - Pipework Along Maintenance Road	18	06AUG05	26AUG05	21MAY05	10JUN05
Landscape Works						
VX1000	Landscaping - Earthworks & Formation	24	20JUL05	16AUG05	04MAY05	31MAY05
VX1040	Landscaping - Soiling & Planting	24	20AUG05	16SEP05	05JUL05	01AUG05
VX1100	Landscape Establishment Works	301	17SEP05	18SEP06	04NOV06	03NOV07



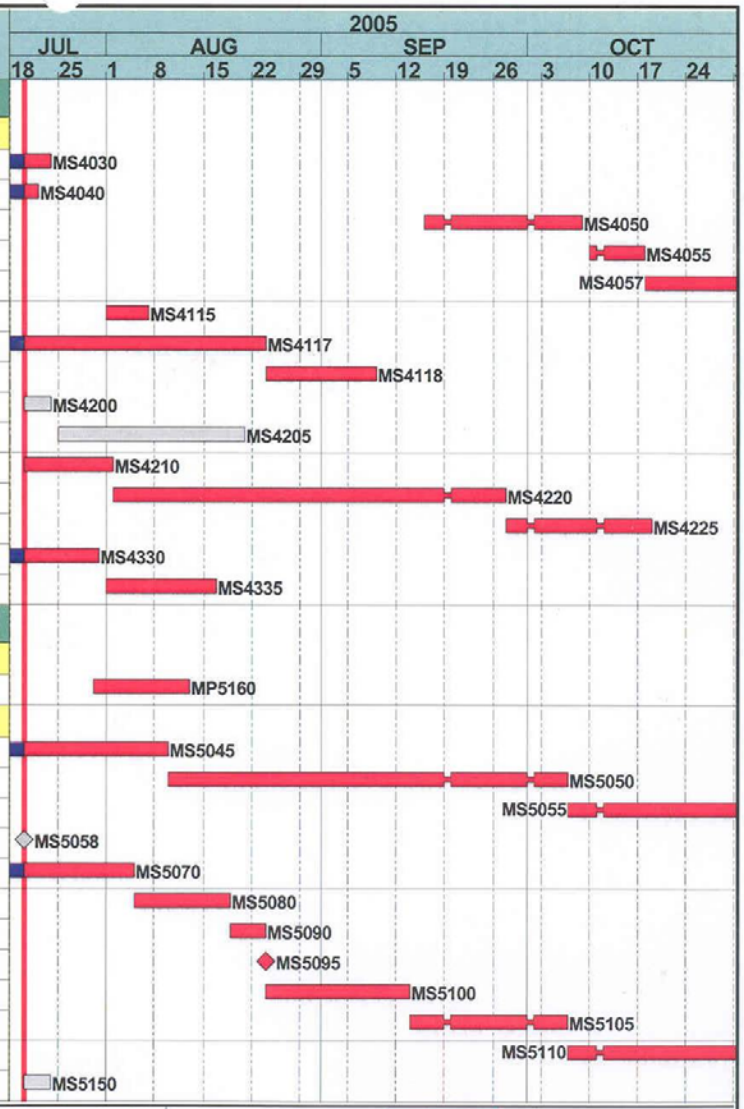
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Viaduct - Main Line - Piers P16 to P18						
Substructure						
MS4030	P16/L - Backfill & Remove Temporary Works	4	08JUL05A	23JUL05	08JUL05A	17JAN05
MS4040	P16/L - Pier	12	11JUL05A	21JUL05	11JUL05A	27APR04
MS4050	P16/L - Pier Hammer Head	18	16SEP05	08OCT05	06MAY04	26MAY04
MS4055	P16/L - Install Bearings	6	10OCT05	17OCT05	27MAY04	02JUN04
MS4057	P16/L - Insitu Deck at Movement Joint	36	18OCT05	28NOV05	03JUN04	16JUL04
MS4115	P16/R - Install Bearings	6	01AUG05	06AUG05	03APR04	10APR04
MS4117	P16/R - Insitu Deck at Movement Joint	36	11JUL05A	23AUG05	11JUL05A	10APR04
MS4118	P16/R - Cure & Strike Formwork & Falsework	14	24AUG05	08SEP05	12APR04	27APR04
MS4200	P17/R - Backfill & Remove Temporary Works	4	20JUL05	23JUL05	21MAR08	25MAR08
MS4205	P17 - Form Platform for Pier/Portal Construction	24	25JUL05	20AUG05	26MAR08	23APR08
MS4210	P17/R - Pier	12	20JUL05A	01AUG05	20JUL05A	11JUN04
MS4220	P17/L & P17/R - Portal Frame	48	02AUG05	27SEP05	12JUN04	09AUG04
MS4225	P17/L & P17/R - Cure & Strike Form/Falsework	16	28SEP05	18OCT05	10AUG04	27AUG04
MS4330	P18/L & P18/R - Portal Frame	30	08APR05A	30JUL05	08APR05A	13AUG04
MS4335	P18/L & P18/R - Cure & Strike Form/Falsework	14	01AUG05	16AUG05	14AUG04	30AUG04
Viaduct - Main Line - Piers 19 to Abutment M						
Enabling & Piling Works						
MP5160	Abutment M - Pile Testing	12	30JUL05	12AUG05	30NOV04	13DEC04
Substructure						
MS5045	P19 - Pier Hammer Head	24	12MAY05A	09AUG05	12MAY05A	16NOV04
MS5050	P19 - Pier Insitu Deck Segment	48	10AUG05	06OCT05	17NOV04	13JAN05
MS5055	P19 - Pier Head - Cure & Strip Falsework	20	07OCT05	31OCT05	14JAN05	05FEB05
MS5058	P20 - 2nd. Site Access from ENT Contractor	0	20JUL05*		16MAY08	
MS5070	P20 - Excavate, Strut & Break Down Piles	24	03JUN05A	04AUG05	03JUN05A	25SEP04
MS5080	P20 - Footing & Pier Kicker	12	05AUG05	18AUG05	27SEP04	12OCT04
MS5090	P20 - Backfill & Remove Temporary Works	4	19AUG05	23AUG05	13OCT04	16OCT04
MS5095	P20 - 3rd. Site Access from ENT Contractor	0	24AUG05*		18OCT04	
MS5100	P20 - Pier	18	24AUG05	13SEP05	18OCT04	08NOV04
MS5105	P20 - Pier Hammer Head	18	14SEP05	06OCT05	09NOV04	29NOV04
MS5110	P20 - Pier Insitu Deck Segment	42	07OCT05	25NOV05	30NOV04	19JAN05
MS5150	P21 - Backfill & Remove Temporary Works	4	20JUL05	23JUL05	26MAR08	29MAR08



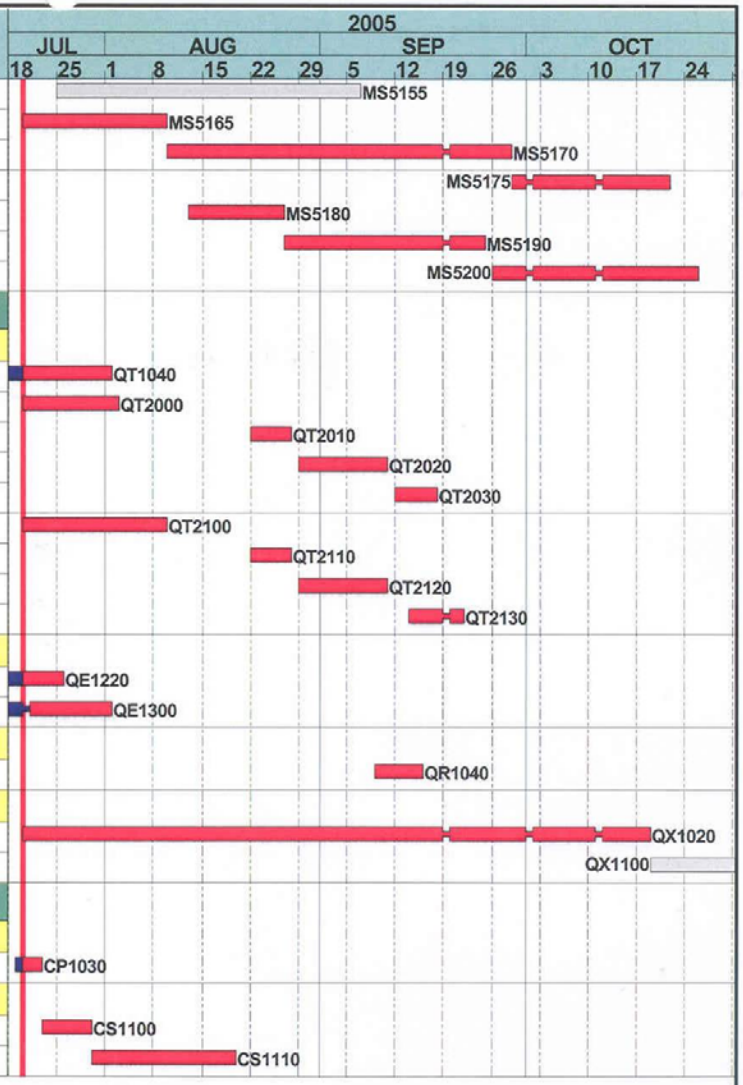
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
MS5155	P21 - Perm. Filling to Slope & Working Platform	38	25JUL05	06SEP05	31MAR08	15MAY08
MS5165	P21 - Pier Hammer Head	18	20JUL05	09AUG05	04DEC04	24DEC04
MS5170	P21 - Pier Insitu Deck Segment	42	10AUG05	28SEP05	27DEC04	17FEB05
MS5175	P21 - Pier Head - Cure & Strip Falsework	18	29SEP05	21OCT05	18FEB05	10MAR05
MS5180	Abutment M - Install Temporary Sheet Piles	12	13AUG05	26AUG05	14DEC04	28DEC04
MS5190	Abutment M - Excavate, Strut & Break Down Piles	24	27AUG05	24SEP05	29DEC04	26JAN05
MS5200	Abutment M - Pile Cap & Wall Kicker	24	26SEP05	25OCT05	27JAN05	26FEB05
At Grade Works - Butterfly Valley						
Temporary Traffic Management Schemes						
QT1040	TTA Butterfly Valley (CCR-S6) - Implementation	448*	07FEB04A	01AUG05	07FEB04A	14MAY05
QT2000	TTMS MainLine Deck@ CC Rd E/B-Prepare for Review	12	20JUL05	02AUG05	10MAY04	22MAY04
QT2010	TTMS MainLine Deck@ CC Rd E/B - CRE Endorsement	6	22AUG05	27AUG05	31JUL04	06AUG04
QT2020	TTMS MainLine Deck@ CC Rd E/B - Roadworks Advice	12	29AUG05	10SEP05	07AUG04	20AUG04
QT2030	TTMS MainLine Deck@ CC Rd E/B - Site Preparation	6	12SEP05	17SEP05	21AUG04	27AUG04
QT2100	TTMS Slip RdD Deck@ CC Rd E/B-Prepare for Review	18	20JUL05	09AUG05	03MAY04	22MAY04
QT2110	TTMS Slip Rd D Deck@ CC Rd E/B - CRE Endorsement	6	22AUG05	27AUG05	08SEP04	14SEP04
QT2120	TTMS Slip RdD Deck@ CC Rd E/B - Roadworks Advice	12	29AUG05	10SEP05	15SEP04	28SEP04
QT2130	TTMS Slip RdD Deck@ CC Rd E/B - Site Preparation	6	14SEP05	21SEP05	04OCT04	09OCT04
Earthworks & Slope Works - CCR-S6						
QE1220	Slope CCR-S6 - Slope Drainage +48.5 to +36.0mPD	50	07JUN05A	25JUL05	07JUN05A	07MAY05
QE1300	Slope CCR-S6 - Slope Finishes	75	04MAR05A	01AUG05	04MAR05A	14MAY05
Utilities & Roadworks						
QR1040	WSD Acces Road - Divert Junction to Clear P16/L	6	09SEP05	15SEP05	28APR04	05MAY04
Landscape Works						
QX1020	Landscaping - Planting on Slope CCR-S6	75	20JUL05*	18OCT05	04MAY05	01AUG05
QX1100	Landscape Establishment Works	301	19OCT05	18OCT06	04NOV06	03NOV07
Viaduct - Slip Road C						
Enabling & Piling Works						
CP1030	Abutment C - Pile Testing	6	19JUL05A	22JUL05	19JUL05A	21APR05
Substructure						
CS1100	Abutment C - Install Temporary Sheet Piles	6	23JUL05	29JUL05	22APR05	28APR05
CS1110	Abutment C - Excavate, Strut & Break Down Piles	18	30JUL05	19AUG05	29APR05	20MAY05



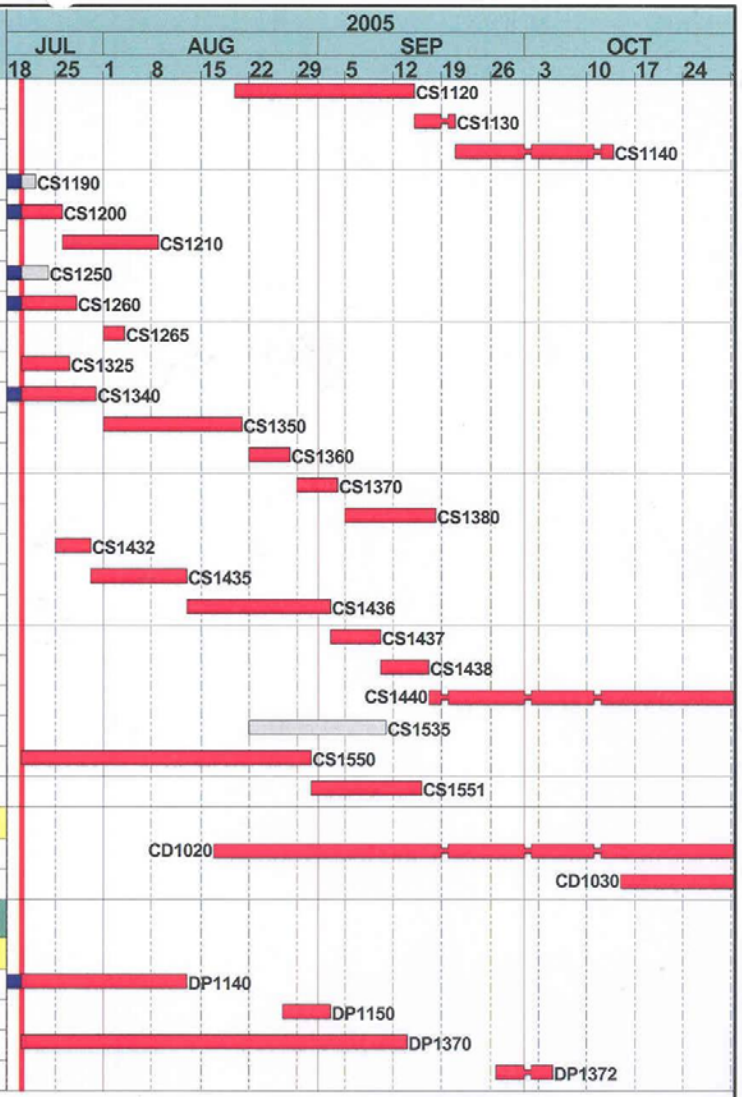
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
CS1120	Abutment C - Pile Cap & Wall Kicker	22	20AUG05	14SEP05	21MAY05	16JUN05
CS1130	Abutment C - Backfill & Remove Temporary Works	4	15SEP05	20SEP05	17JUN05	21JUN05
CS1140	Abutment C - Bearing Shelf & Walls	18	21SEP05	13OCT05	22JUN05	13JUL05
CS1190	C1 - Backfill & Remove Temporary Works	4	18JUL05A	21JUL05	18JUL05A	15MAY08
CS1200	C1 - Pier	6	18JUL05A	25JUL05	18JUL05A	06JUL05
CS1210	C1 - Pier Head	12	26JUL05	08AUG05	07JUL05	20JUL05
CS1250	C2 - Backfill & Remove Temporary Works	8	16JUN05A	23JUL05	16JUN05A	15MAY08
CS1260	C2 - Bearing Shelf	20	06JUL05A	27JUL05	06JUL05A	21JAN05
CS1265	C2 - Install Bearings	3	01AUG05	03AUG05	22JAN05	25JAN05
CS1325	C3 - Install Bearings	6	20JUL05	26JUL05	19JAN05	25JAN05
CS1340	C4 - Excavate, Strut & Break Down Piles	18	13JUL05A	30JUL05	13JUL05A	01FEB05
CS1350	C4 - Pile Cap & Pier Kicker	18	01AUG05	20AUG05	02FEB05	25FEB05
CS1360	C4 - Backfill & Remove Temporary Works	6	22AUG05	27AUG05	26FEB05	04MAR05
CS1370	C4 - Pier	6	29AUG05	03SEP05	05MAR05	11MAR05
CS1380	C4 - Pier Head	12	05SEP05	17SEP05	12MAR05	25MAR05
CS1432	C5/R - Install Sheet Temporary Piles	5	25JUL05	29JUL05	18JAN05	22JAN05
CS1435	C5/R - Excavate, Strut & Break Down Piles	12	30JUL05	12AUG05	24JAN05	05FEB05
CS1436	C5/R - Pile Cap & Pier Kicker	18	13AUG05	02SEP05	07FEB05	02MAR05
CS1437	C5/R - Backfill & Remove Temporary Works	6	03SEP05	09SEP05	03MAR05	09MAR05
CS1438	C5/R - Pier	6	10SEP05	16SEP05	10MAR05	16MAR05
CS1440	C5/L - C5/R Portal	36	17SEP05	01NOV05	17MAR05	28APR05
CS1535	C6/L&R - Form Platform for C6 Piers / Portal	18	22AUG05	10SEP05	24APR08	15MAY08
CS1550	C6/R & C6/L - Portal Frame (C6/L & C6/R)	36	20JUL05	30AUG05	25AUG04	07OCT04
CS1551	C6/R & C6/L - Portal Frame - Cure & Strike F/wk	14	31AUG05	15SEP05	08OCT04	25OCT04
Slip Road C - Insitu Deck Construction						
CD1020	Slip Rd. C - Insitu Deck - Span C2 to C3	72	17AUG05	11NOV05	26JAN05	23APR05
CD1030	Slip Rd. C - Insitu Deck - Span C3 to C4	72	15OCT05	09JAN06	26MAR05	21JUN05
Viaduct - Slip Road D						
Enabling & Piling Works						
DP1140	D3 - Piling	48	01JUN05A	12AUG05	01JUN05A	21JUN04
DP1150	D3 - Pile Testing	6	27AUG05	02SEP05	08JUL04	14JUL04
DP1370	D9 - Piling	48	20JUL05	13SEP05	15MAR04	11MAY04
DP1372	D9 - Pile Testing	6	27SEP05	04OCT05	24MAY04	29MAY04



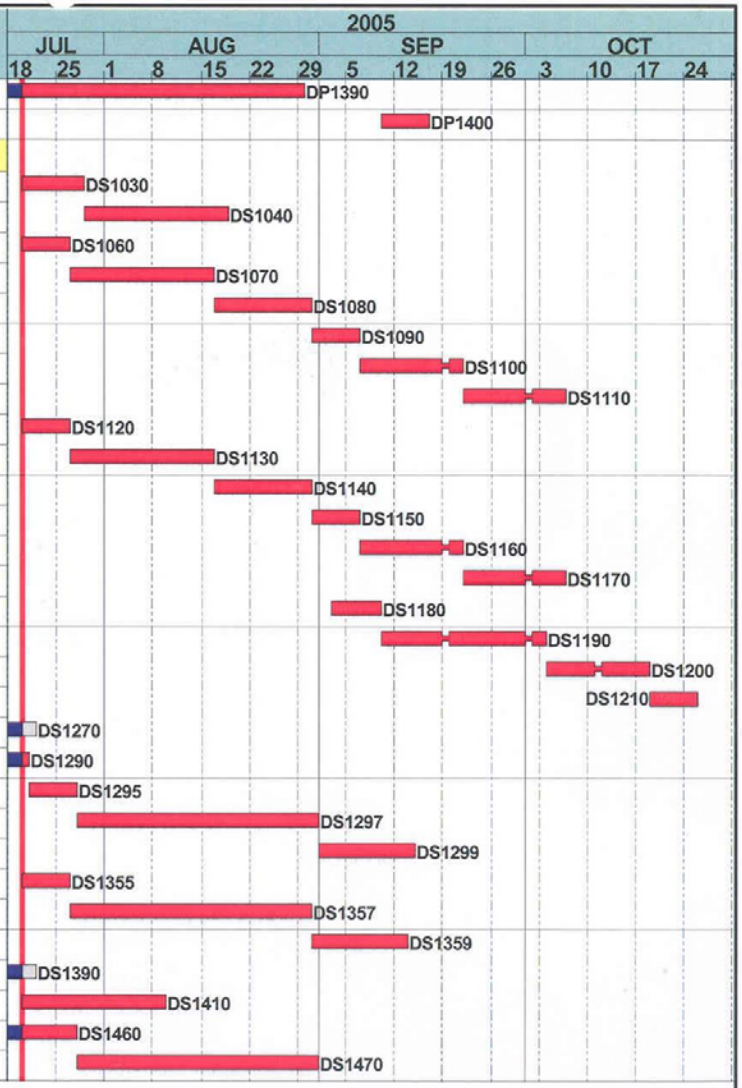
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
DP1390	D10 - Piling	40	13JUL05A	29AUG05	13JUL05A	08MAY04
DP1400	D10 - Pile Testing	6	10SEP05	16SEP05	21MAY04	27MAY04
Substructure						
DS1030	Abutment D - Backfill & Remove Temporary Works	8	20JUL05	28JUL05	13AUG04	21AUG04
DS1040	Abutment D - Bearing Shelf & Walls	18	29JUL05	18AUG05	20DEC04	11JAN05
DS1060	D1 - Install Sheet Temporary Piles	6	20JUL05	26JUL05	04JUN04	10JUN04
DS1070	D1 - Excavate, Strut & Break Down Piles	18	27JUL05	16AUG05	11JUN04	03JUL04
DS1080	D1 - Pile Cap & Pier Kicker	12	17AUG05	30AUG05	05JUL04	17JUL04
DS1090	D1 - Backfill & Remove Temporary Works	6	31AUG05	06SEP05	19JUL04	24JUL04
DS1100	D1 - Pier	12	07SEP05	21SEP05	26JUL04	07AUG04
DS1110	D1 - Pier Head	12	22SEP05	06OCT05	09AUG04	21AUG04
DS1120	D2 - Install Sheet Temporary Piles	6	20JUL05	26JUL05	04JUN04	10JUN04
DS1130	D2 - Excavate, Strut & Break Down Piles	18	27JUL05	16AUG05	11JUN04	03JUL04
DS1140	D2 - Pile Cap & Pier Kicker	12	17AUG05	30AUG05	05JUL04	17JUL04
DS1150	D2 - Backfill & Remove Temporary Works	6	31AUG05	06SEP05	19JUL04	24JUL04
DS1160	D2 - Pier	12	07SEP05	21SEP05	26JUL04	07AUG04
DS1170	D2 - Pier Head	12	22SEP05	06OCT05	09AUG04	21AUG04
DS1180	D3 - Install Sheet Temporary Piles	6	03SEP05	09SEP05	15JUL04	21JUL04
DS1190	D3 - Excavate, Strut & Break Down Piles	18	10SEP05	03OCT05	22JUL04	11AUG04
DS1200	D3 - Pile Cap & Pier Kicker	12	04OCT05	18OCT05	12AUG04	25AUG04
DS1210	D3 - Backfill & Remove Temporary Works	6	19OCT05	25OCT05	26AUG04	01SEP04
DS1270	D4 - Backfill & Remove Temporary Works	6	18APR05A	21JUL05	18APR05A	15MAY08
DS1290	D4 - Pier Head	6	06JUN05A	20JUL05	06JUN05A	02OCT04
DS1295	D4 - Install Bearings	6	21JUL05	27JUL05	04OCT04	09OCT04
DS1297	D4 - Pier Head - Insitu Deck Segment	30	28JUL05	31AUG05	11OCT04	15NOV04
DS1299	D4 - Pier Head - Cure & Strike Fmwk/Falsework	12	01SEP05	14SEP05	16NOV04	29NOV04
DS1355	D5 - Install Bearings	6	20JUL05	26JUL05	21SEP04	27SEP04
DS1357	D5 - Pier Head - Insitu Deck Segment	30	27JUL05	30AUG05	28SEP04	04NOV04
DS1359	D5 - Pier Head - Cure & Strike Fmwk/Falsework	12	31AUG05	13SEP05	05NOV04	18NOV04
DS1390	D6 - Backfill & Remove Temporary Works	5	11JUL05A	21JUL05	11JUL05A	15MAY08
DS1410	D6 - Pier Head	18	20JUL05	09AUG05	21AUG04	10SEP04
DS1460	D7 - Pier	42	30MAY05A	27JUL05	30MAY05A	03SEP04
DS1470	D7 - Pier Head	30	28JUL05	31AUG05	04SEP04	11OCT04



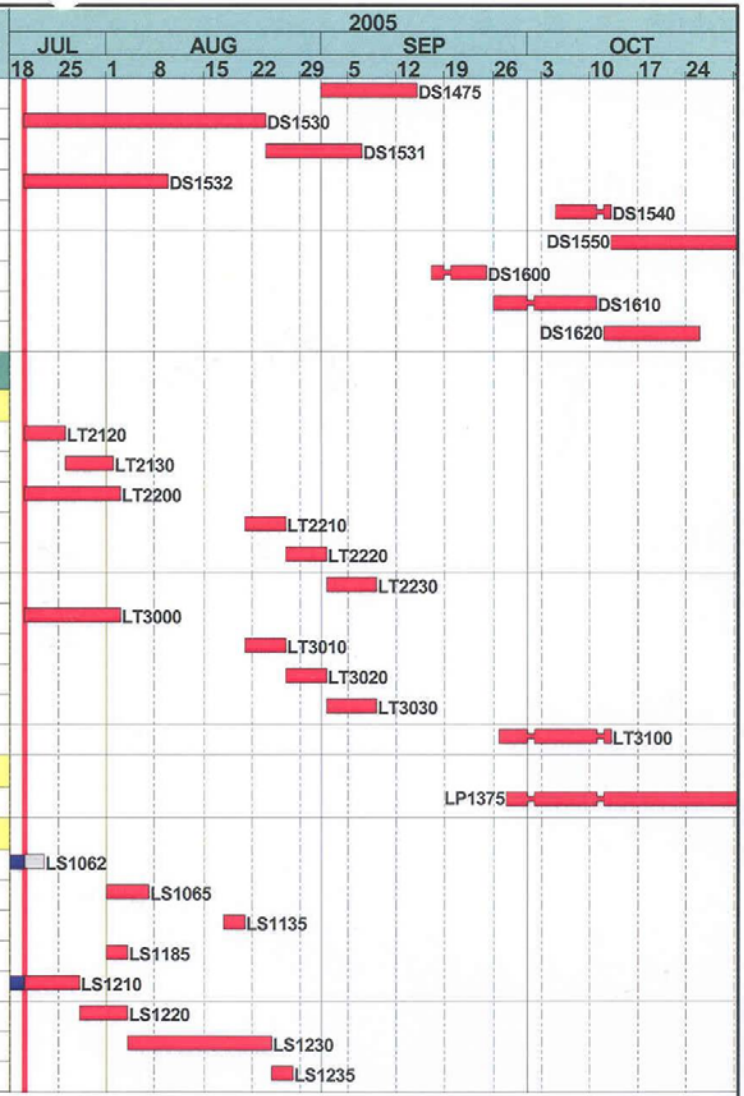
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
DS1475	D7 - Pier Head - Cure & Strike Form/Falsework	12	01SEP05	14SEP05	12OCT04	26OCT04
DS1530	D8 - Pier Head	30	20JUL05	23AUG05	27AUG04	02OCT04
DS1531	D8 - Pier Head - Cure & Strike Form/Falsework	12	24AUG05	06SEP05	04OCT04	16OCT04
DS1532	D8 - Temp. Towers for Launching Gantry - Founds	18	20JUL05	09AUG05	27AUG04	16SEP04
DS1540	D9 - Install Sheet Temporary Piles	6	05OCT05	12OCT05	31MAY04	05JUN04
DS1550	D9 - Excavate, Strut & Break Down Piles	18	13OCT05	02NOV05	07JUN04	28JUN04
DS1600	D10 - Install Sheet Temporary Piles	6	17SEP05	24SEP05	28MAY04	03JUN04
DS1610	D10 - Excavate, Strut & Break Down Piles	12	26SEP05	10OCT05	04JUN04	17JUN04
DS1620	D10 - Pile Cap & Pier Kicker	12	12OCT05	25OCT05	18JUN04	03JUL04
Lai Wan Road Overpass						
Temporary Traffic Management Schemes						
LT2120	TTMS LW Rd (for W/B Deck) - Roadworks Advice	6	20JUL05	25JUL05	09MAR05	14MAR05
LT2130	TTMS LW Rd (for W/B Deck) - Site Preparation	6	26JUL05	01AUG05	15MAR05	21MAR05
LT2200	TTMS LW Rd (for E/B Deck) - Prepare for Review	12	20JUL05	02AUG05	03MAY04	15MAY04
LT2210	TTMS LW Rd (for E/B Deck) - CRE Endorsement	6	21AUG05	26AUG05	18JUL05	23JUL05
LT2220	TTMS LW Rd (for E/B Deck) - Roadworks Advice	6	27AUG05	01SEP05	24JUL05	29JUL05
LT2230	TTMS LW Rd (for E/B Deck) - Site Preparation	6	02SEP05	08SEP05	30JUL05	05AUG05
LT3000	TTMS CC Rd (on W/B Deck) - Prepare for Review	12	20JUL05	02AUG05	03MAY04	15MAY04
LT3010	TTMS CC Rd (on W/B Deck) - CRE Endorsement	6	21AUG05	26AUG05	08AUG05	13AUG05
LT3020	TTMS CC Rd (on W/B Deck) - Roadworks Advice	6	27AUG05	01SEP05	14AUG05	19AUG05
LT3030	TTMS CC Rd (on W/B Deck) - Site Preparation	6	02SEP05	08SEP05	20AUG05	26AUG05
LT3100	TTMS CC Rd (on E/B Deck) - Prepare for Review	12	27SEP05	12OCT05	13DEC04	27DEC04
West Bound - Enabling & Piling Works						
LP1375	D14 - Remove Buttress Suporting Footpath	36	28SEP05	10NOV05	11MAR05	22APR05
West Bound - Substructure						
LS1062	Abutment DA1 - Backfill Behind Abutment	12	30MAY05A	22JUL05	30MAY05A	07OCT05
LS1065	Abutment DA1 - Install Bearings	6	01AUG05	06AUG05	15MAR05	21MAR05
LS1135	D11 - Bearings	3	18AUG05	20AUG05	18MAR05	21MAR05
LS1185	D12 - Install Bearings	3	01AUG05	03AUG05	18MAR05	21MAR05
LS1210	D13 - Footing & Pier Kicker	24	12JUL05A	27JUL05	12JUL05A	15APR05
LS1220	D13 - Backfill & Remove Temporary Works	6	28JUL05	03AUG05	16APR05	22APR05
LS1230	D13 - Pier (incl. Pier Head)	18	04AUG05	24AUG05	23APR05	14MAY05
LS1235	D13 - Install Bearings	3	25AUG05	27AUG05	16MAY05	18MAY05



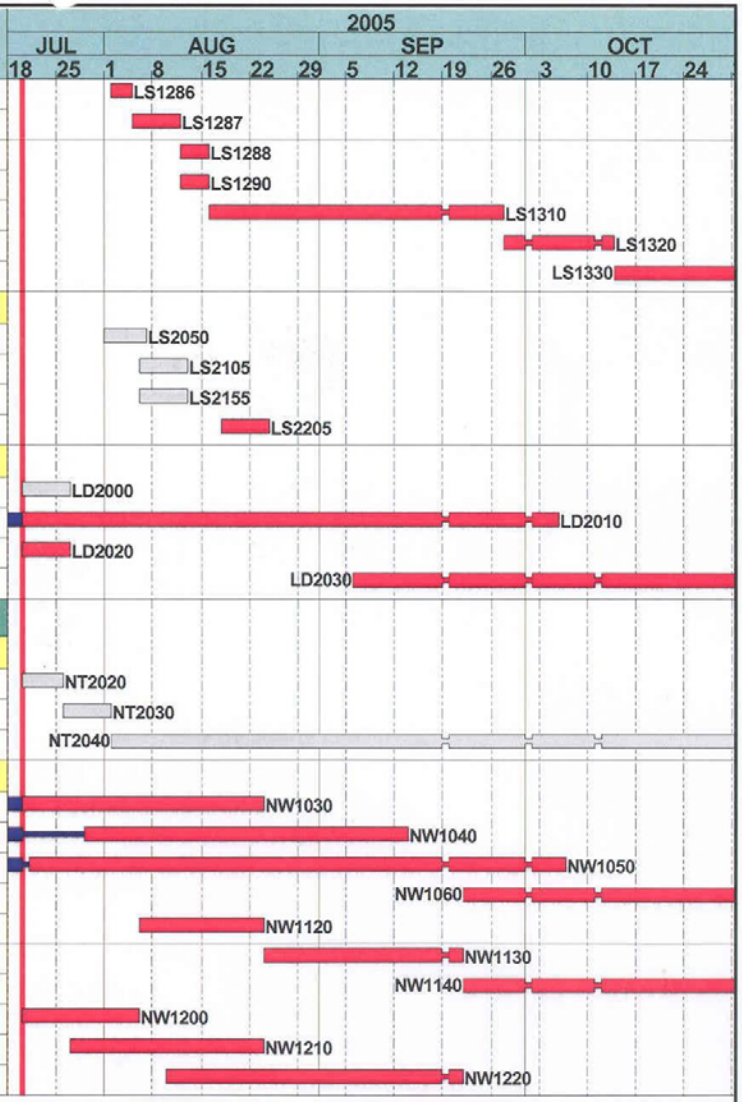
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
LS1286	Abutment DA2 - Remove Existig Rockfall Fence	3	02AUG05	04AUG05	08DEC04	10DEC04
LS1287	Abutment DA2 - Remove Existing Footpath	6	05AUG05	11AUG05	11DEC04	17DEC04
LS1288	Abutment DA2 - Re-instate Rockfall Fence	3	12AUG05	15AUG05	18DEC04	21DEC04
LS1290	Abutment DA2 - Utility Trial Trenches	3	12AUG05	15AUG05	18DEC04	21DEC04
LS1310	Abutment DA2 - Excavation in Rock for Footing	36	16AUG05	27SEP05	22DEC04	03FEB05
LS1320	Abutment DA2 - Mass Concrete Fill Under Footing	12	28SEP05	13OCT05	04FEB05	21FEB05
LS1330	Abutment DA2 - Footing	18	14OCT05	03NOV05	22FEB05	14MAR05
East Bound - Substructure						
LS2050	Abutment CA1 - Install Bearings	6	01AUG05	06AUG05	09MAY08	15MAY08
LS2105	C11 - Install Bearings	6	06AUG05	12AUG05	09MAY08	15MAY08
LS2155	C12 - Install Bearings	6	06AUG05	12AUG05	09MAY08	15MAY08
LS2205	C13 - Install Bearings	6	18AUG05	24AUG05	19MAY05	25MAY05
East Bound - Insitu Deck						
LD2000	Lai Wan Overpass E/B - Demolish F/P for Stage 1	6	20JUL05	26JUL05	09MAY08	15MAY08
LD2010	Lai Wan Overpass E/B - Insitu Span - Stage 1	72	15APR05A	05OCT05	15APR05A	23JUN05
LD2020	Lai Wan Overpass E/B - Demolish F/P for Stage 2	6	20JUL05	26JUL05	26MAY05	01JUN05
LD2030	Lai Wan Overpass E/B - Insitu Span - Stage 2	72	06SEP05	01DEC05	26MAY05	19AUG05
At Grade Works - Ching Cheung Road at LCK Park						
Temporary Traffic Management Schemes						
NT2020	1st. TTMS CC Rd (E/B C/Way) - Roadworks Advice	6	20JUL05	25JUL05	04APR08	09APR08
NT2030	1st. TTMS CC Rd (E/B C/Way) - Site Preparation	6	26JUL05	01AUG05	10APR08	16APR08
NT2040	1st. TTMS CC Rd (E/B C/Way) - Implementation	288*	02AUG05	17JUL06	17APR08	16APR08
Retaining Wall CCR-R1 West Bound						
NW1030	W/B Ret. Wall CCR-R1A East - Excavate	48	24JUN05A	23AUG05	24JUN05A	13APR05
NW1040	W/B Ret. Wall CCR-R1A East - Bases	48	04JUL05A	13SEP05	04JUL05A	05MAY05
NW1050	W/B Ret. Wall CCR-R1A East - Walls	72	13JUL05A	06OCT05	13JUL05A	26MAY05
NW1060	W/B Ret. Wall CCR-R1A East - B/fill & Remove T/W	36	22SEP05	04NOV05	13MAY05	24JUN05
NW1120	W/B Ret. Wall CCR-R1B - Excavate	15	06AUG05	23AUG05	28DEC04	14JAN05
NW1130	W/B Ret. Wall CCR-R1B - Bases	24	24AUG05	21SEP05	05JAN05	01FEB05
NW1140	W/B Ret. Wall CCR-R1B - Walls	36	22SEP05	04NOV05	02FEB05	18MAR05
NW1200	W/B Ret. Wall CCR-R1A West - Excavate	15	20JUL05	05AUG05	29NOV04	15DEC04
NW1210	W/B Ret. Wall CCR-R1A West - Bases	24	27JUL05	23AUG05	06DEC04	04JAN05
NW1220	W/B Ret. Wall CCR-R1A West - Walls	36	10AUG05	21SEP05	20DEC04	01FEB05



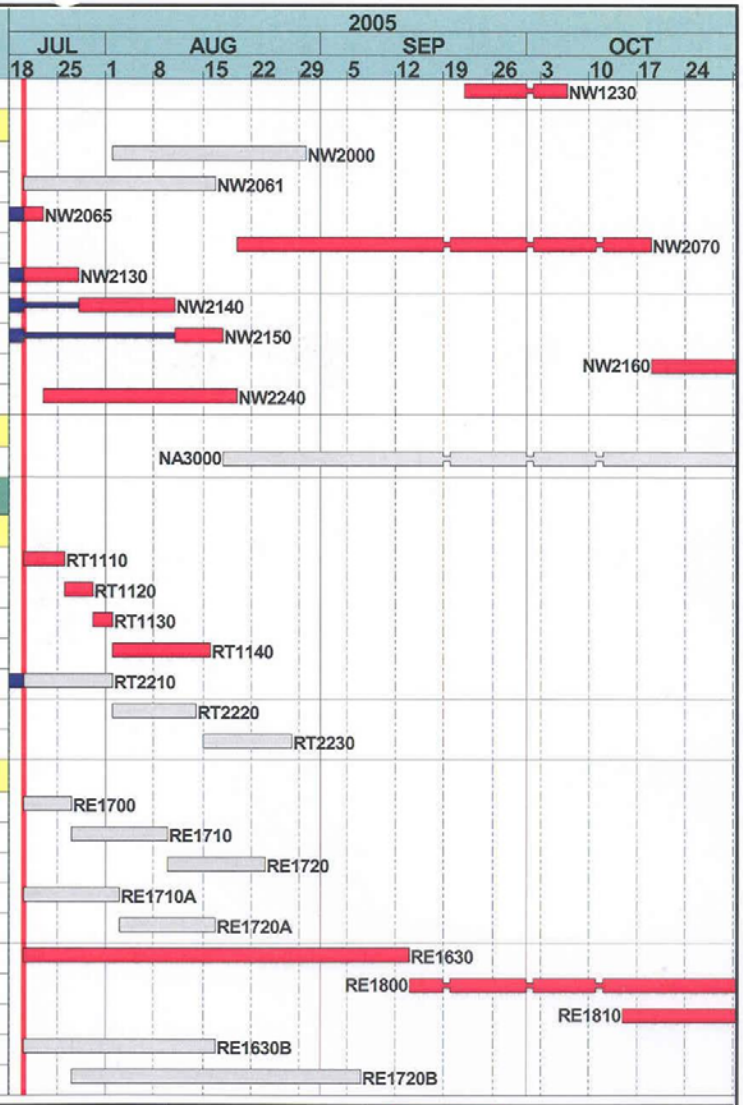
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
NW1230	W/B Ret. Wall CCR-R1A West - B/fill Behind Wall	12	22SEP05	06OCT05	02APR05	16APR05
Retaining Wall CCR-R1 East Bound						
NW2000	W/B Ret. Wall CCR-R1C - Remove Abandoned Drains	24	02AUG05	29AUG05	17APR08	15MAY08
NW2061	W/B Ret. Wall CCR-R1 - 400 Gas Main Diversion	24	20JUL05	16AUG05	17APR08	15MAY08
NW2065	W/B Ret. Wall CCR-R1C (Bays 1 & 2) -Backfill	24	30MAY05A	22JUL05	30MAY05A	23MAY05
NW2070	W/B Ret. Wall CCR-R1C - Parapets on Wall	48	20AUG05	18OCT05	22JUN05	17AUG05
NW2130	W/B Ret. Wall CCR-R1D - Bases	48	03JAN05A	27JUL05	03JAN05A	27JUL05
NW2140	W/B Ret. Wall CCR-R1D - Walls	72	25JAN05A	10AUG05	25JAN05A	10AUG05
NW2150	W/B Ret. Wall CCR-R1D -Backfill Behind Wall	24	30MAY05A	17AUG05	30MAY05A	17AUG05
NW2160	W/B Ret. Wall CCR-R1D -Parapets on Wall	60	19OCT05	28DEC05	18AUG05	29OCT05
NW2240	W/B Ret. Wall CCR-R1E - Parapets on Wall	24	23JUL05	19AUG05	24MAY05	21JUN05
Drainage Works						
NA3000	C.C. Rd. E/B in New C/way - Stormwater Drainage	75	18AUG05	16NOV05	11JAN06	12APR06
At Grade Work - Ching Cheung Road - Main Section						
Temporary Traffic Management Schemes						
RT1110	TTMS Lai Wan Rd - (Abut DA2) - CRE Endorsement	6	20JUL05	25JUL05	26NOV04	01DEC04
RT1120	TTMS Lai Wan Rd - (Abut DA2) - Roadworks Advice	4	26JUL05	29JUL05	02DEC04	05DEC04
RT1130	TTMS Lai Wan Rd - (Abut DA2) - Site Preparation	2	30JUL05	01AUG05	06DEC04	07DEC04
RT1140	TTMS Lai Wan Rd - (Abut DA2) - Implementation	12*	02AUG05	15AUG05	08DEC04	21DEC04
RT2210	3rd. TTMS CC Rd (Slewing) -CRE Endorsement	6	22SEP04A	01AUG05	22SEP04A	19APR08
RT2220	3rd. TTMS CC Rd (Slewing) - Roadworks Advice	12	02AUG05	13AUG05	20APR08	01MAY08
RT2230	3rd. TTMS CC Rd Slewing) - Site Preparation	12	15AUG05	27AUG05	02MAY08	15MAY08
Earthworks & Slope Works - CCR-S1, S2 & S3						
RE1700	Slope CCR-S1E - Finish Seed & Planting +62.3mPD	6	20JUL05*	26JUL05	09OCT06	14OCT06
RE1710	Slope CCR-S1E - Finish Seed & Planting +54.8mPD	12	27JUL05	09AUG05	16OCT06	30OCT06
RE1720	Slope CCR-S1E - Finish Seed & Planting +47.3mPD	12	10AUG05	23AUG05	31OCT06	13NOV06
RE1710A	Slope CCR-S1C- Finish Seed & Planting +54.9mPD	12	20JUL05	02AUG05	16OCT06	30OCT06
RE1720A	Slope CCR-S1C - Finish Seed & Planting +47.3mPD	12	03AUG05	16AUG05	31OCT06	13NOV06
RE1630	Slope CCR-S1E&C - Drainage to level +39.8mPD	48	20JUL05	13SEP05	26JAN05	25MAR05
RE1800	Slope CCR-S1E&C -Excavate Rock to Level +32.4mPD	48	14SEP05	11NOV05	26MAR05	23MAY05
RE1810	Slope CCR-S1E&C - Rock Stabilisation to +32.3mPD	48	15OCT05	09DEC05	25APR05	21JUN05
RE1630B	Slope CCR-S1W - Drainage to Levell +39.95mPD	24	20JUL05	16AUG05	22SEP06	23OCT06
RE1720B	Slope CCR-S1W - Seed & Planting to +39.95mPD	36	27JUL05	06SEP05	30SEP06	13NOV06



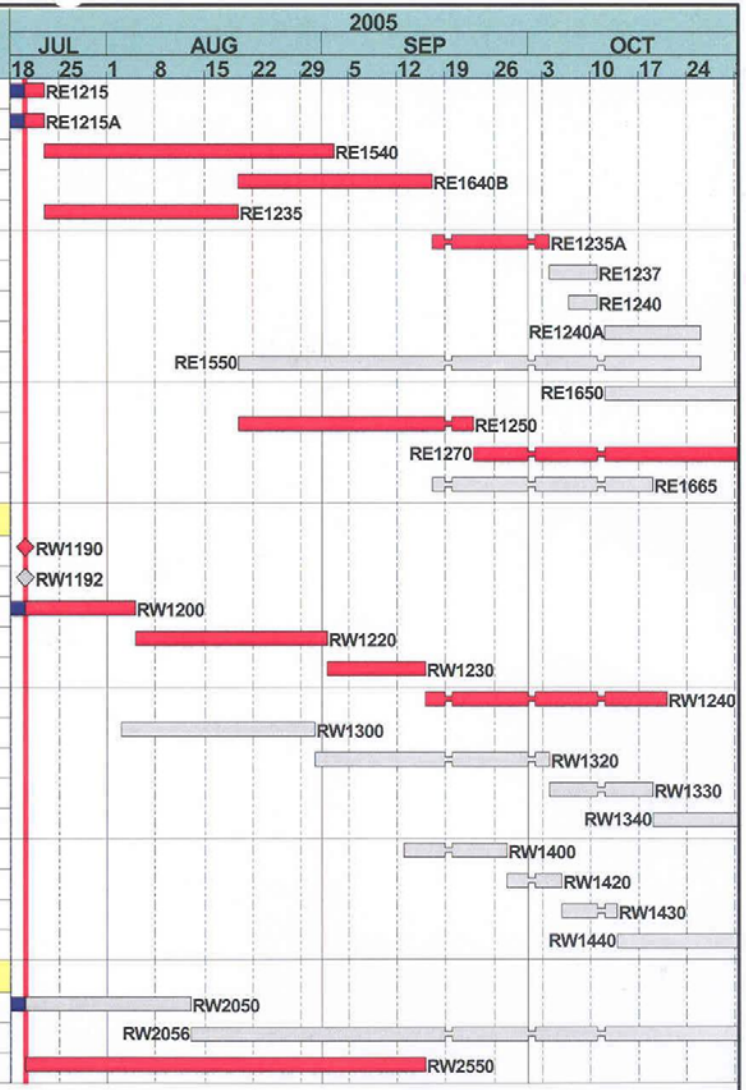
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
RE1215	Slope CCR-S1W - Bulk Excavate to Level +32.3mPD	24	11APR05A	22JUL05	11APR05A	26MAR05
RE1215A	Slope CCR-S1W -Detailed Excavate to Level +32.3m	12	21MAY05A	22JUL05	21MAY05A	16JUL05
RE1540	Slope CCR-S1W - Rock Stabilisation to 32.4mPD	36	23JUL05	02SEP05	04JUL05	13AUG05
RE1640B	Slope CCR-S1W - Drainage to Level +32.4mPD	24	20AUG05	16SEP05	01AUG05	27AUG05
RE1235	Slope CCR-S1W - Bulk Excavate to Level +24.9mPD	24	23JUL05	19AUG05	28MAR05	25APR05
RE1235A	Slope CCR-S1W -Detailed Excavate to Level +24.9m	12	17SEP05	03OCT05	29AUG05	10SEP05
RE1237	Slope CCR-S1W -Platform for Soil Nails R 3 & 4	6	04OCT05	10OCT05	06JUL06	12JUL06
RE1240	Slope CCR-S1W -Soil Nails (R. 3 & 4) Test Nail	3	07OCT05	10OCT05	10JUL06	12JUL06
RE1240A	Slope CCR-S1W - Soil Nails (Row 3 & 4) Working	12	12OCT05	25OCT05	13JUL06	26JUL06
RE1550	Slope CCR-S1W - Rock Stabilisation to 24.9mPD	54	20AUG05	25OCT05	23MAY06	26JUL06
RE1650	Slope CCR-S1W - Drainage to Level +24.9mPD	24	12OCT05	08NOV05	13JUL06	10AUG06
RE1250	Slope CCR-S1W - Bulk Excavate to Level +19.0mPD	28	20AUG05	22SEP05	26APR05	28MAY05
RE1270	Slope CCR-S1W - Excavate to Lai Wan Road O/pass	36	23SEP05	05NOV05	30MAY05	12JUL05
RE1665	Slope CCR-S1W - Seed & Planting to +32.4mPD	24	17SEP05	18OCT05	11AUG06	07SEP06
Retaining Wall CCR-R2 (Value Engineering Design)						
RW1190	Latest Date for Acceptance of Value Eng. Design	0	20JUL05*		07DEC04	
RW1192	Latest Date for GEO Approval of Alternate Design	0	20JUL05*		16MAY08	
RW1200	Ch 02.13 to 41.71 -Excavate & Rock Stabilisation	36	04APR05A	04AUG05	04APR05A	06DEC04
RW1220	Ch 02.13 to 41.71 - Mass Concrete Facing Wall	24	05AUG05	01SEP05	07DEC04	05JAN05
RW1230	Ch 02.13 to 41.71 - Retaining Wall Base Slabs	12	02SEP05	15SEP05	06JAN05	19JAN05
RW1240	Ch 02.13 to 41.71 - Retaining Wall Stem & Coping	27	16SEP05	20OCT05	20JAN05	23FEB05
RW1300	Ch 50.71 to 78.27 -Excavate & Rock Stabilisation	24	03AUG05	30AUG05	22NOV05	19DEC05
RW1320	Ch 50.71 to 78.27 - Mass Concrete Facing Wall	27	31AUG05	03OCT05	20DEC05	21JAN06
RW1330	Ch 50.71 to 78.27 - Retaining Wall Base Slabs	12	04OCT05	18OCT05	23JAN06	08FEB06
RW1340	Ch 50.71 to 78.27 - Retaining Wall Stem & Coping	24	19OCT05	15NOV05	09FEB06	08MAR06
RW1400	Ch 00.00 to 02.13 -Excavate & Rock Stabilisation	12	13SEP05	27SEP05	02MAR06	15MAR06
RW1420	Ch 00.00 to 02.13 - Mass Concrete Facing Wall	6	28SEP05	05OCT05	16MAR06	22MAR06
RW1430	Ch 00.00 to 02.13 - Retaining Wall Base Slabs	6	06OCT05	13OCT05	23MAR06	29MAR06
RW1440	Ch 00.00 to 02.13 - Retaining Wall Stem & Coping	16	14OCT05	01NOV05	30MAR06	18APR06
Retaining Wall CCR-R3 Type D, E & F						
RW2050	Ret. Wall CCR-R3E & R3F - 17No Bored Piles Piles	75	27JAN05A	12AUG05	27JAN05A	21OCT05
RW2056	Ret. Wall CCR-R3E & R3F - 17No Bored Piles Piles	75	13AUG05	11NOV05	22OCT05	19JAN06
RW2550	Ret. Wall CCR-R3D - 10No Bored Piles Piles	50	20JUL05	15SEP05	27JUN05	24AUG05



Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

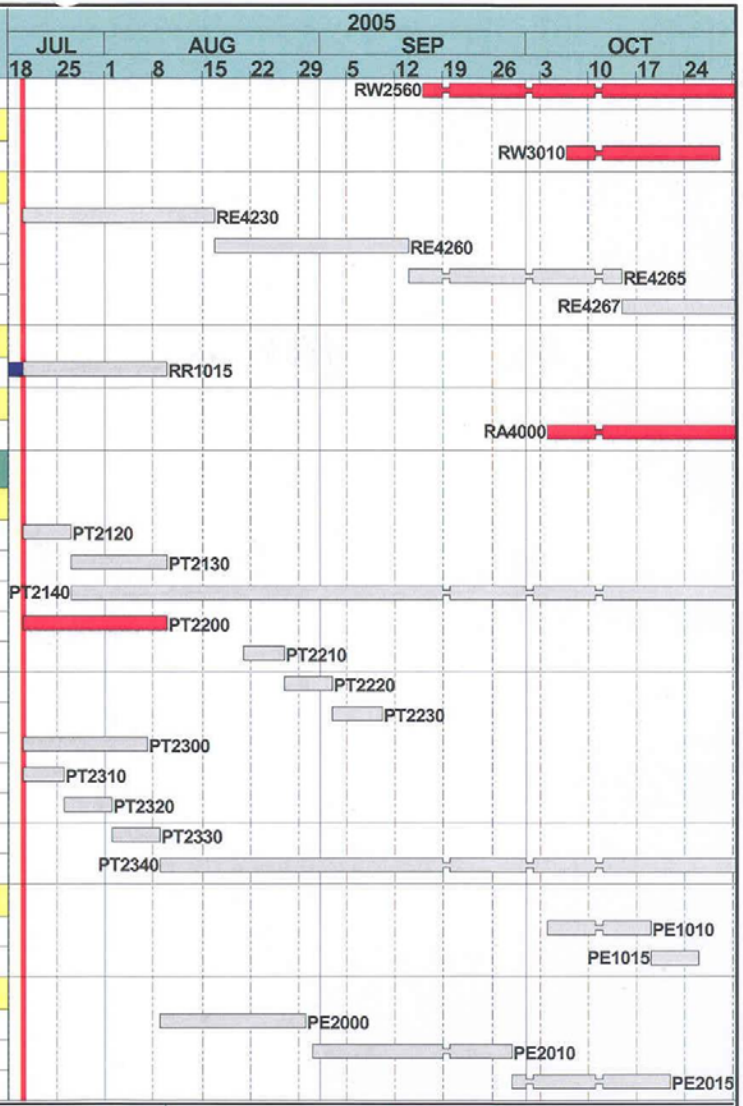
P3 File : LU22

Sheet 17 of 19

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas
acciona

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
RW2560	Ret. Wall CCR-R3D - 10No Bored Piles Piles	50	16SEP05	16NOV05	25AUG05	25OCT05
Retaining Wall CCR-R3 Type A						
RW3010	Ret. Wall CCR-R3A - Excavation & Blinding	18	07OCT05	28OCT05	23AUG04	11SEP04
Earthworks & Slope Works - CCR-S4						
RE4230	Slope CCR-S4 - Rock Fence Between CCR-R2 & R3	24	20JUL05	16AUG05	13SEP05	13OCT05
RE4260	Slope CCR-S4 - Excavate & Bench East of Abut. D	24	17AUG05	13SEP05	14OCT05	10NOV05
RE4265	Slope CCR-S4 - Excavate & Bench West of Abut. D	24	14SEP05	14OCT05	11NOV05	08DEC05
RE4267	Slope CCR-S4 - Relocate Tem Rock Fence	24	15OCT05	11NOV05	09DEC05	07JAN06
Drainage Works						
RR1015	1200 dia. Stormwater Diversion at Pier D4	58	21JUN05A	09AUG05	21JUN05A	15MAY08
Utilities & Roadworks						
RA4000	Ching Cheung Rd. New E/B Slip Road - E&M +TCSS	75	04OCT05	31DEC05	12SEP05	10DEC05
At Grade Works - Butterfly Valley Interchange						
Temporary Traffic Management Schemes						
PT2120	TTMS CP Rd-KC S/B for CCR-R6 - Roadworks Advice	7	20JUL05	26JUL05	17APR08	23APR08
PT2130	TTMS CP Rd-KC S/B for CCR-R6 - Site Preparation	12	27JUL05	09AUG05	24APR08	08MAY08
PT2140	TTMS CP Rd-KC S/B for CCR-R6 - Implementation	239*	27JUL05	12MAY06	24APR08	23APR08
PT2200	TTMS CP Rd-KC S/B for Paving -Prepare for Review	18	20JUL05	09AUG05	03MAY04	22MAY04
PT2210	TTMS CP Rd-KC S/B for Paving - CRE Endorsement	6	21AUG05	26AUG05	22JAN06	27JAN06
PT2220	TTMS CP Rd-KC S/B for Paving - Roadworks Advice	7	27AUG05	02SEP05	28JAN06	03FEB06
PT2230	TTMS CP Rd-KC S/B for Paving - Site Preparation	6	03SEP05	09SEP05	04FEB06	10FEB06
PT2300	TTMS CP Rd-KC N/B for 11NW-A/C66-Prep for Review	16	20JUL05	06AUG05	26APR08	15MAY08
PT2310	TTMS CP Rd-KC N/B for 11NW-A/C66 - CRE Endorse	6	20JUL05	25JUL05	30DEC05	04JAN06
PT2320	TTMS CP Rd-KC N/B for 11NW-AC66 - Roadwks Advice	7	26JUL05	01AUG05	05JAN06	11JAN06
PT2330	TTMS CP Rd-KC N/B for 11NW-A/C66 - Site Prepare	6	02AUG05	08AUG05	12JAN06	18JAN06
PT2340	TTMS CP Rd-KC N/B for 11NW-A/C66 - Implement	246*	09AUG05	02JUN06	19JAN06	13NOV06
Earthworks & Slopeworks - 11NW-A/C26						
PE1010	Slope 11NW-A/C26 - Trim slope	12	04OCT05	18OCT05	11AUG06	24AUG06
PE1015	Slope 11NW-A/C26 - Platform for Soil Nailing	6	19OCT05	25OCT05	25AUG06	31AUG06
Earthworks & Slopeworks - 11NW-A/C66						
PE2000	Slope 11NW-A/C66 - Hoardings / Fencing	18	09AUG05	29AUG05	19JAN06	11FEB06
PE2010	Slope 11NW-A/C66 - Trim Slope	24	31AUG05	28SEP05	13FEB06	11MAR06
PE2015	Slope 11NW-A/C66 - Platform for Soil Nailing	18	29SEP05	21OCT05	13MAR06	01APR06



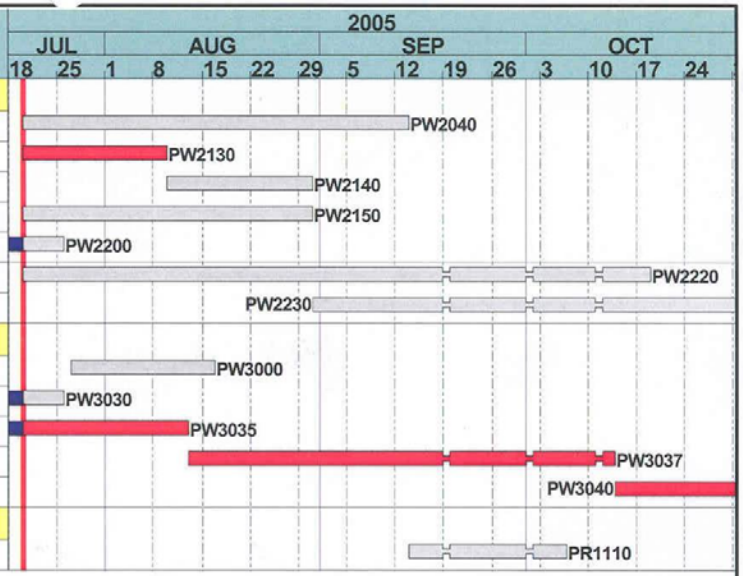
Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	Late Start	Late Finish
Retaining Wall CCR-R5 (Pre-bored "H" Piles)						
PW2040	Ret. Wall CCR-R5 - Stage 1 - Fill Behind Wall	48	20JUL05	13SEP05	19MAR08	15MAY08
PW2130	Ret. Wall CCR-R5 - Stage 2 - Install "H" Piles	18	20JUL05	09AUG05	11APR05	30APR05
PW2140	Ret. Wall CCR-R5 - Stage 2 - Fill Behind Wall	18	10AUG05	30AUG05	24JUL06	14AUG06
PW2150	Ret. Wall CCR-R5 - R.C. Wall CCR-R5A	36	20JUL05	30AUG05	18MAR06	29APR06
PW2200	Ret. Wall CCR-R5 - Excavate in Front of Ret Wall	12	14JUN05A	25JUL05	14JUN05A	19JAN06
PW2220	Ret. Wall CCR-R5 - Coping & Facing to Ret Wall	75	20JUL05	18OCT05	22FEB06	22MAY06
PW2230	Ret. Wall CCR-R5 - Slope Works Behind Wall	75	31AUG05	29NOV05	15AUG06	13NOV06
Retaining Wall CCR-R6 (Pre-bored "H" Piles)						
PW3000	Ret. Wall CCR-R6 - Hoardings	18	27JUL05	16AUG05	24APR08	15MAY08
PW3030	Ret. Wall CCR-R6 -Temporary Pre-driling Platform	30	16DEC04A	25JUL05	16DEC04A	15MAY08
PW3035	Ret. Wall CCR-R6 - Pre-boring for Piling	75	14JAN05A	12AUG05	14JAN05A	13MAY05
PW3037	Ret. Wall CCR-R6 -Temporary Piling Platform	50	13AUG05	13OCT05	14MAY05	13JUL05
PW3040	Ret. Wall CCR-R6 - Install "H" Piles Stage 1	50	14OCT05	10DEC05	14JUL05	09SEP05
Utilities & Roadworks						
PR1110	CLP Slew 2No.132kva No.5 Behind Wall SSR-R5	18	14SEP05	13SEP05	16MAY08	15MAY08



Start Date 23SEP03
Finish Date 15MAY08
Data Date 20JUL05

P3 File : LU22

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 month Rolling Programme
From 20 July 2005

necso
entrecanales cubiertas

APPENDIX C
MONITORING REQUIREMENTS

Appendix C - Environmental Impact Monitoring Requirements for Lai Chi Kok Viaduct

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Air Quality	1-hour TSP	3 times every 6 days	• AM2 (Lai Chi Kok Park Sports Centre)	• Rooftop facing the site area
	24-hour TSP	Once every 6 days		
Noise	L_{eq}, L_{90} & L_{10} at 30 minute intervals during (0700 to 1900 on normal weekdays)	Once per week	• NM2 (Lai Chi Kok Reception Centre) [2] • NM3 (Lai Chi Kok Hospital) [3] • NM4 (Mei Foo Sun Chuen, Phase 5) • NM8a (M/F of Nob Hill) • NM8b (3/F of Nob Hill) • NM9 (Hoi Lai Estate)	• NM2 – Roadside (Façade measurement) • NM3 – Rooftop of Block L (Façade measurement) • NM4 – Rooftop of Block 9 (Façade measurement) • NM8a – M/F of Nob Hill (Façade measurement) • NM8b – 3/F of Nob Hill (Façade measurement) • NM9 – G/F of Hoi Fai House
	L_{eq}, L_{90} & L_{10} at 5 minute intervals during (1900 to 2300) [1]	Once per week (include 3 consecutive 5-min measurements)		
	L_{eq}, L_{90} & L_{10} at 5 minute intervals during (2300 to 0700 of next day) [1]	Once per week (include 3 consecutive 5-min measurements)		
	L_{eq}, L_{90} & L_{10} at 5 minute intervals during (0700 to 1900 on holidays) [1]	Once per week (include 3 consecutive 5-min measurements)		

[1] – Conduct noise monitoring only when construction work is carried out.

[2] – 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 30 December 2004.

[3] - The Lai Chi Kok Hospital (NM3) was also found vacated and noise monitoring could not be conducted since January 05. EPD's approval for suspension of noise monitoring at this station was received on 15th March 2005.

APPENDIX D
ENVIRONMENTAL QUALITY PERFORMANCE (ACTION/LIMIT) LEVELS

Appendix D - 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

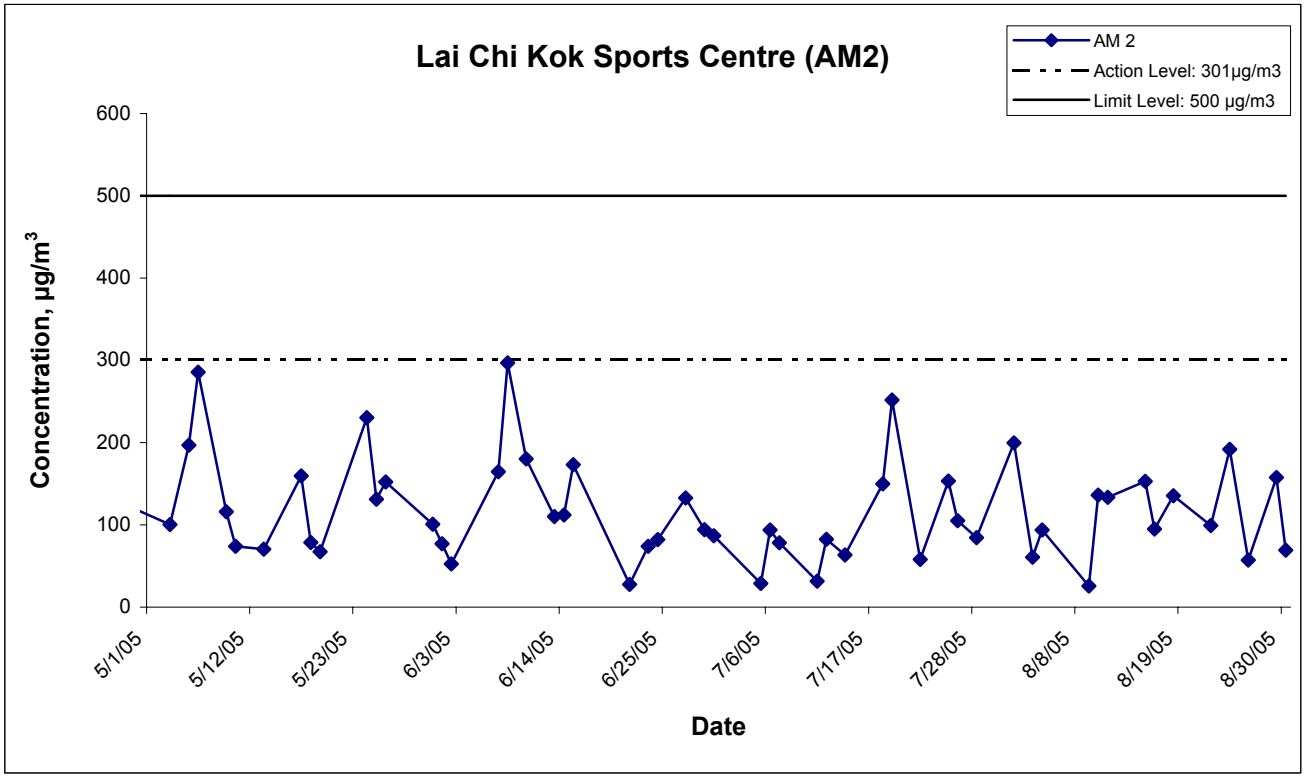
Construction Noise

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 (NM3, 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.

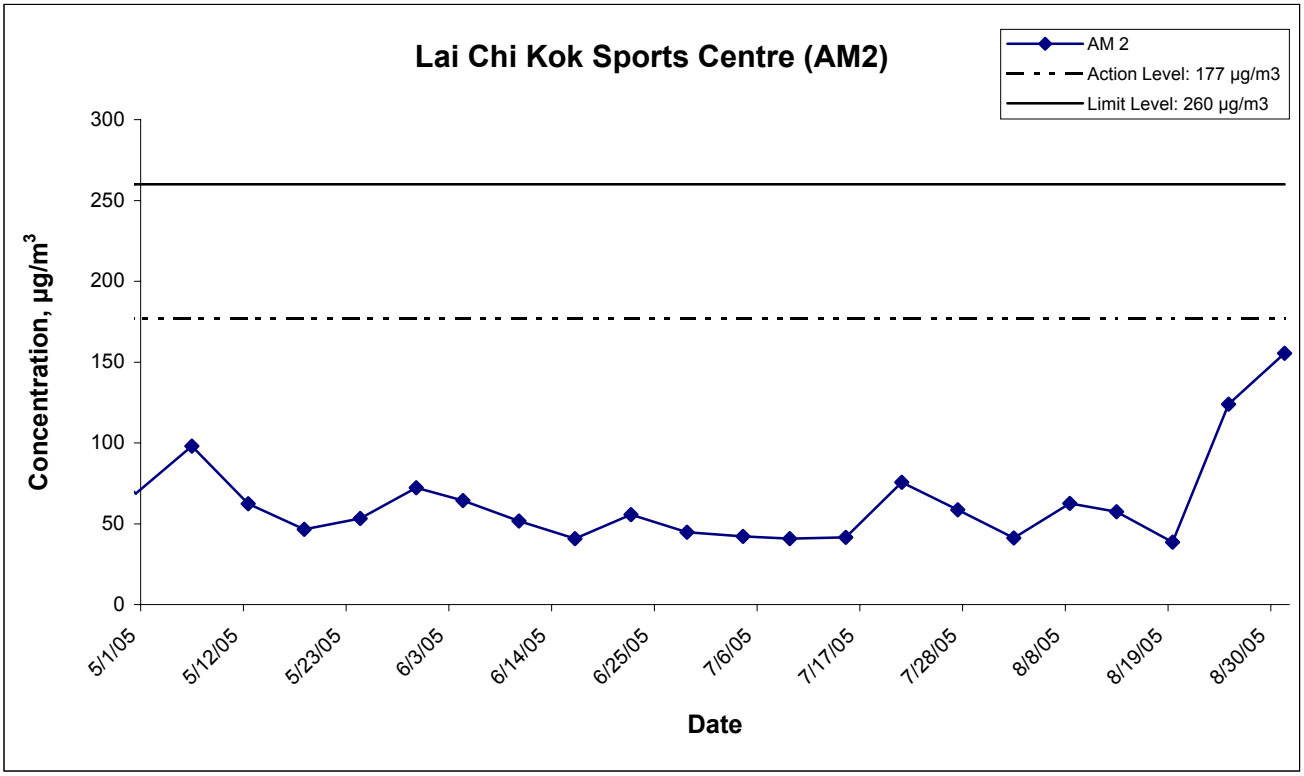
APPENDIX E
GRAPHICAL PRESENTATION OF AIR QUALITY MONITORING RESULTS

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: Aug 05	Project No.: MA3024 Appendix: E	CINOTECH

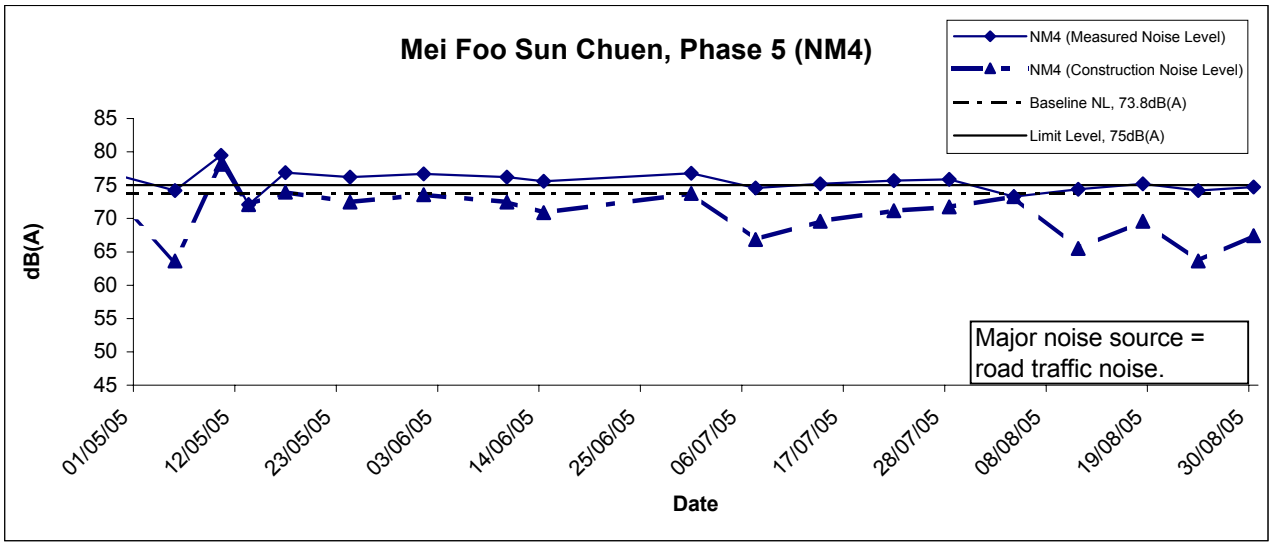
24-hr TSP Levels

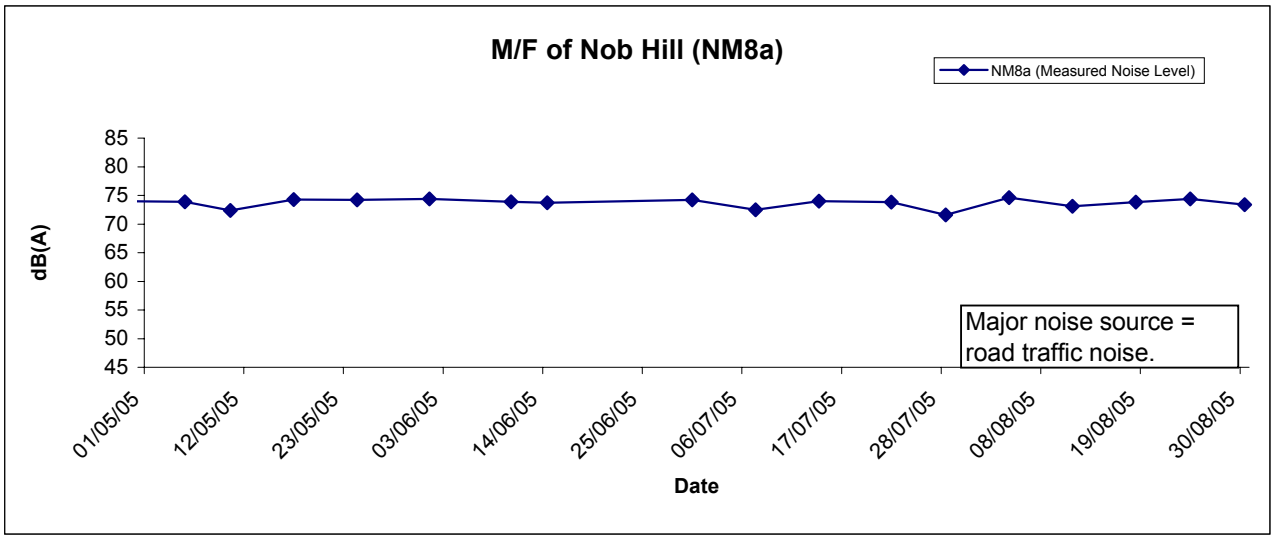


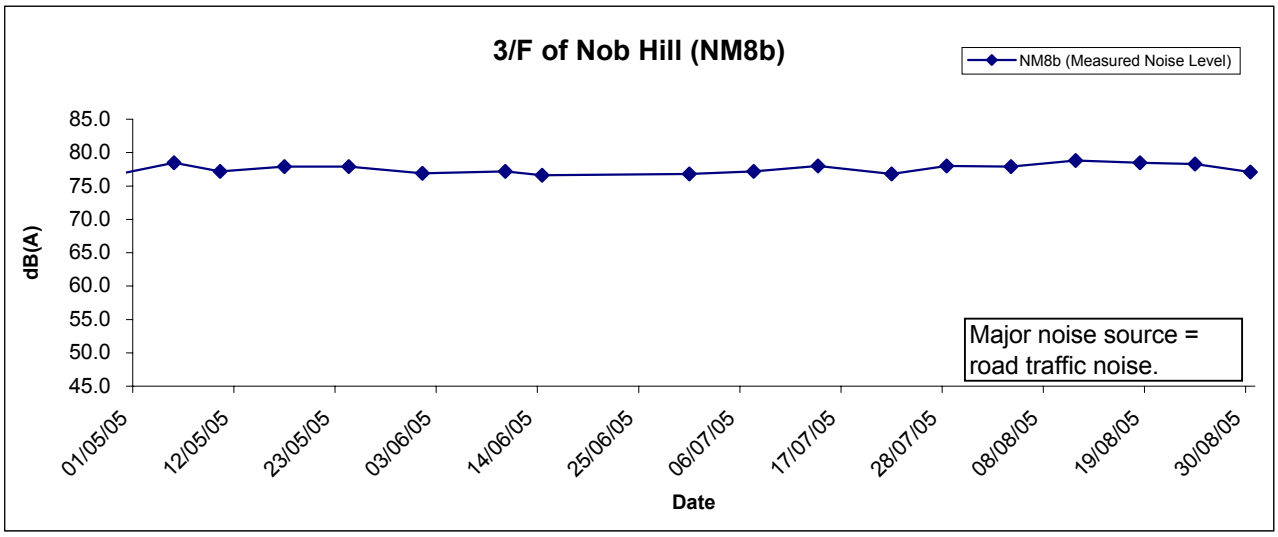
Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale: N.T.S Date: Aug 05	Project No.: MA3024 Appendix: E	CINOTECH

APPENDIX F
GRAPHICAL PRESENTATION OF NOISE MONITORING RESULTS

Noise Levels



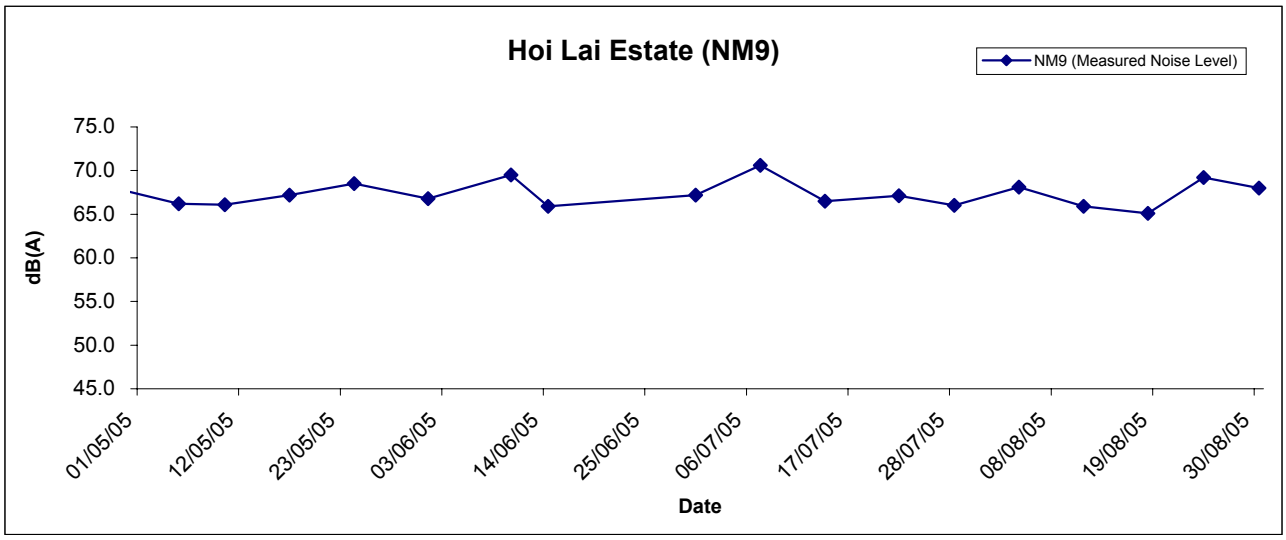




* Construction Noise Level = Measured Noise Level - Baseline Level
(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

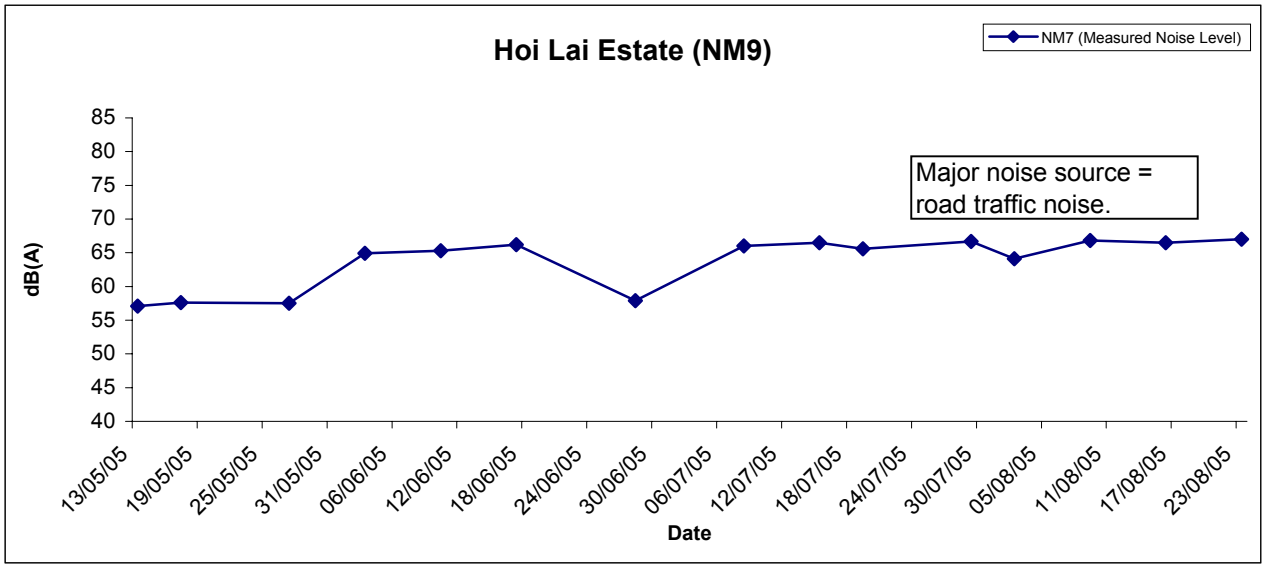
Title: Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: MA3024	CINOTECH
	Date: Aug 05	Appendix: F	

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: Aug 05	Project No.: MA3024 Appendix: F	CINOTECH

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



Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Aug 05	Project No.: MA3024 Appendix: F	CINOTECH

APPENDIX G
IMPLEMENTATION SCEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

Appendix G - 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	^

Types of Impacts	Mitigation Measures	Status
	• Reduce the number of plant operating in critical areas close NSRs.	^
	• Construct temporary and movable noise barriers	^
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.	^
	• 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

Types of Impacts	Mitigation Measures	Status
	• 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
	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.	^

Types of Impacts	Mitigation Measures	Status
	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	
	• 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	

Types of Impacts	Mitigation Measures	Status
	• 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.	N/A
Ecology	• A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza.	N/A
	• Conduct a tree survey before commencement of the construction work.	N/A
	• 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.	N/A
	• Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately.	N/A
	• Wild and uncontrolled fire shall be strictly prohibited	^
	• Fences shall be erected along the boundary of the construction sites at the Toll Plaza before commencement of works, to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent wooded areas.	N/A
Landscape and Visual Impact	• 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.	N/A
	• 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.	N/A
	• Measurement of vibration would also be carried out on a need basis during the piling work	N/A

Remarks:

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

APPENDIX H
SUMMARY OF ENVIRONMENTAL LICENCES AND PERMITS

Appendix H - Summary of Environmental Licensing and Permit Status (LCKV)

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-RW0109-05	02/03/05	01/10/05	*Location*: Butterfly Valley (P16-P18) *Time Period:* General holidays (including Sundays) between 0700-1900 hours and any other days between 1900-2300 hours	Valid
GW-RW0110-05	02/03/05	01/09/05	*Location*: Ching Cheung Road near Mei Foo Sun Chuen *Time Period:* General holidays (including Sundays) between 0700-1900 hours and any other days between 1900-2300 hours	Expired
GW-RW0130-05	16/03/05	15/09/05	*Location*: Castle Peak Road (R6) *Time Period:* Any day not being a general holiday between 2300-0700 hours	Valid
GW-RW0169-05	29/03/05	28/09/05	*Location*: Kom Tsun Street near LCK Interchange *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid
GW-RW0176-05	25/03/05	19/09/05	*Location*: Ching Cheung Road near Nob Hill *Time Period:* General holidays (including Sundays) between 0700-1900 hours	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0211-05	07/04/05	06/10/05	*Location*: Junction of Ching Cheung Road and Castle Peak Road *Time Period:* General holidays (including Sundays) between 0700-2300 hours and any other days between 1900-2300 hours	Valid
GW-RW0226-05	14/04/05	13/10/05	*Location*: Butterfly Valley Road near Kwai Chung Road *Time Period:* General holidays (including Sundays) between 0700-2300 hours and any other days between 1900-2300 hours	Valid
GW-RW0251-05	21/04/05	20/10/05	*Location*: Butterfly Valley *Time Period:* General holidays (including Sundays) between 0700-2300 hours and any other days between 1900-2300 hours	Valid
GW-RW0296-05	09/05/05	08/11/05	*Location*: Butterfly Valley near Kwai Chung Road *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid
GW-RW0301-05	10/05/05	08/11/05	*Location*: Butterfly Valley Road near LCK Reception Centre *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid
GW-RW0310-05	17/05/05	16/11/05	*Location*: Lai Po Road (Pier B3) *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid
GW-RW0354-05	08/06/05	05/11/05	*Location*: Lai Po Road (P1/L segment erection) *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid
GW-RW0401-05	27/06/05	22/12/05	*Location*: Butterfly Valley Road near LCK Interchange *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid
GW-RW0402-05	27/06/05	23/12/05	*Location*: Butterfly Valley Road near LCK Fire Station *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid
GW-RW0416-05	29/06/05	28/12/05	*Location*: Lai Po Road near Hoi Lai Estate *Time Period:* General holidays (including Sundays) between 0700-2300 hours and any other days between 1900-2300 hours	Valid
GW-RW0445-05	08/07/05	07/01/06	*Location*: Carriageway (east bound) of Kwai Chung Road near LCK Fire Station *Time Period:* General holidays (including Sundays) between 0700-2100 hours and any other days between 1900-2100 hours	Valid
GW-RW0465-05	23/7/05	20/01/06	*Location*: Butterfly Valley near LCK Reception Center *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0501-05	03/08/05	02/02/06	*Location*: Hing Wah Street West (Jetty Area) *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid
GW-RW0502-05	06/08/05	03/02/06	*Location*: Yuet Lun Street and Kwai Chung Road *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid
GW-RW0519-05	13/08/05	12/02/06	*Location*: Butterfly Valley Road near LCK Reception Center *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid
GW-RW0526-05	14/08/05	05/02/06	*Location*: Cheung Sha Wan Road near Butterfly Valley Road *Time Period:* General holidays (including Sundays) between 0900-2300 hours	Valid
GW-RW0527-05	13/08/05	12/02/06	*Location*: Butterfly Valley near LCK Reception Center *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid
GW-RW0534-05	17/08/05	16/02/06	*Location*: Lai Po Road near Yuet Lun Street *Time Period:* Whole day of general holidays (including Sundays) and any other days between 1900-0700 hours on next day	Valid
GW-RW0535-05	17/08/05	15/02/06	*Location*: Butterfly Valley Road and Kom Tsun Street *Time Period:* Any day not being a general holiday between 2100-0700 hours	Valid

APPENDIX I
COMPLAINT LOGS

Appendix I - 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

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

APPENDIX J
SUMMARY OF EXCEEDANCES

Summary of Exceedances Recorded in the Reporting Quarter

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

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

c) Exceedance Report for Construction Noise

- One action level exceedances for noise monitoring was triggered by a public noise complaint received by the ET Leader on 21 July 2005. The details of the complaint can refer to Appendix I.
- No limit level exceedance was recorded.