

**Civil Engineering and Development
Department**

Contract No. ST 77/01

**Sha Tin New Town, Stage II
Road D15 Linking Lok Shun Path
and Tai Po Road**

**Monthly Environmental Monitoring & Audit Report -
June 2004**

**Sha Tin New Town, Stage II Road D15 Linking Lok Shun Path and
Tai Po Road (Contract No. ST 77/01)**

**Monthly Environmental Monitoring & Audit Report –
June 2004**

Checked in accordance with EML QA Procedure PQP-04 _____
Environmental Team Leader

EXECUTIVE SUMMARY

This impact environmental monitoring report has been prepared by Environmental Management Limited (EML) for Environmental Monitoring & Audit (EM&A) Services of Sha Tin New Town, Stage II Road D15 Linking Lok Shun Path and Tai Po Road. The EM&A services carried out in June 2004 are included in this report.

The environmental monitoring for this Project included both air quality and noise measurements. The parameters measured for air quality were 24-hour and 1-hour Total Suspended Particulate (TSP) and for noise monitoring were the A-weighted continuous sound pressure level (L_{eq}) and percentile levels (L_{10} and L_{90}).

Over the reporting period, all monitored 24-hour TSP, 1-hour TSP and noise ($L_{eq}(5min)$) monitoring data were below the Action and Limit Levels and no remedial actions as listed in the Event and Action Plan (**Appendix G**) were required.

The major construction activities in this reporting period included:

- Construction of Bridges A, B and C, including bridge decks (Bridges A, B and C), installation of precast beams of Bridge A;
- Retaining walls 1, 2 and 7;
- Noise barrier construction for noise barrier No. 1, 4B, 4C and 5;
- Box culvert extension of 1500 pipe;
- Underground drainage and water pipes at Lok Shun Path Roundabout; and
- Landscaping.

Regular site inspection was conducted in this reporting month and the mitigation measures, as discussed in Section 3.4, were assessed.

In regard to the environmental issues in the last reporting month, it was noted from site inspections that the stagnant water near Lok Lo Ha Village House No. 97 was cleared. In addition, gullies at the Lok Lo Ha roundabout were provided with fabric mesh.

In this month, however, spots of stagnant water were observed near Contractor's Site Office, noise barrier NB1 and 4C, Bridge A1 and retaining wall RW1 which was prone to mosquito breeding. Also, rubbish was found near Bridge A and Contractor's Site Office.

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1. INTRODUCTION

1.1 Background

Environmental Management Limited (EML) was appointed by Maunsell Consultants Asia Ltd. as the Environmental Specialist for the project *Sha Tin New Town, Stage II Road Linking Lok Shun Path and Tai Po Road* (Contract No. ST 77/01).

The responsibilities of the Environmental Team are to:

- Monitor the noise and air quality data as required in the Environmental Monitoring and Audit (EM&A) Manual;
- Analyse the monitoring data and review the success of EM&A program to cost effectively confirm the adequacy of mitigatory measures implemented and validity of the Environmental Impact Assessment Study predictions and to identify any adverse environmental impacts arising;
- Carry out site inspection to investigate and audit the Contractor's site practice, equipment and work methodologies with respect to pollution control and environmental mitigation, and anticipate environmental issues for proactive action before problems arise;
- Review the proposal for mitigation measures submitted by Contractor in accordance with Event and Action Plans;
- Propose any improvement or other alternative mitigation measures should Contractor's proposal be found to be inadequate;
- Adhere to the procedures for carrying out complaint investigation;
- Audit and prepare EM&A reports on environmental monitoring data and site environmental conditions; and
- Report on EM&A results to Engineer, the ER and EPD.

This monthly EM&A report is for the monitoring period in June 2004. In this report, the results of the impact air quality and noise monitoring works in the reporting period as well as the environmental status and issues of Road D15 Construction Site are included. In addition, if required, any remedial/follow-up actions undertaken as a result of non-compliance with relevant environmental criteria or complaints related to Road D15 Construction Site would also be discussed.

The project area of Road D15 Construction Site is shown in **Figure 1.1**. **Appendix H** lists the project organization and contacts of key personnel.

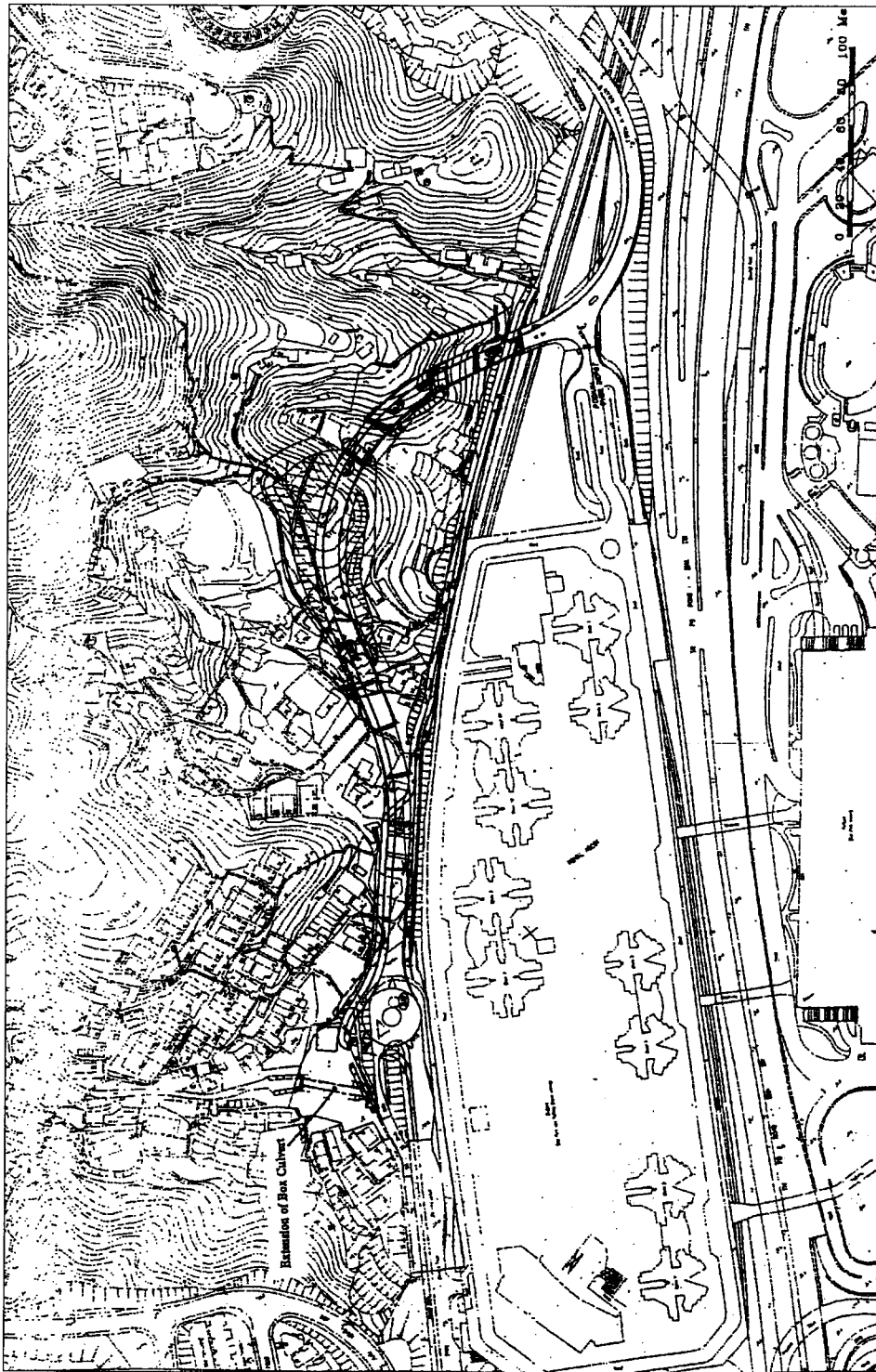


Figure 1.1 Project Area

2. ENVIRONMENTAL STATUS

2.1 Air Quality

2.1.1 Monitoring Requirements

In accordance with the EM&A Manual, air quality impact monitoring was conducted in terms of 1-hour and 24-hour TSP at the designated monitoring locations.

Continuous 24-hour TSP monitoring was performed once in every six days while 1-hour TSP monitoring was performed 3 times in every 6 days. The Action and Limit (AL) levels for air quality are included in **Appendix A**. The time schedule for the current reporting month and the tentative monitoring schedule for the next reporting month are attached in **Appendix B**.

2.1.2 Monitoring Locations

The designated impact air quality monitoring stations are listed in **Table 2.1** and are shown in **Figure 2.1**.

Table 2.1 Air Quality Monitoring Locations

Monitoring Station	Location
A1	Village house at Lok Lo Ha Village
A2	Lok Lo Ha Village House No. 104
A3	Village House near Tsun King Road

2.1.3 Summary of Monitoring Results

In this report, the results for the impact air quality monitoring conducted in June 2004 at the three designated locations were evaluated. **Table 2.2** summarises the ranges and mean of the 24-hour and 1-hour TSP monitoring results carried out in the reporting period. Detailed results, including graphical plots and relevant field logs, are presented in **Appendices C and D**. **Appendix F** shows the meteorological conditions during the monitoring days.

Table 2.2 Summary of 24 and 1-hour TSP Monitoring Results

Parameter	Monitoring Location	Mean TSP Levels ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	No. of Exceedance	
				Action Levels	Limit Levels
24 – hour TSP	A1	81.3	47 – 121	0	0
	A2	94.7	60 – 154	0	0
	A3	74.5	53 – 101	0	0
1 – hour TSP	A1	128.6	90 – 251	0	0
	A2	148.3	95 – 231	0	0
	A3	114.8	74 – 146	0	0

In **Table 2.2**, all the recorded air monitoring data were below the criteria as set out in the Action and Limit Levels in **Appendix A**. There was no exceedance of air monitoring results at all the monitoring stations during the month of June 2004

Over the reporting period, the local weather conditions during the monitoring were mainly fine or cloudy. From field logs, the major dust sources during samplings near the designated stations included road dusts, vehicle emissions from traffic in Lok Shun Path and construction works at Road D15 Site. The major construction works carried out at Road D15 Site over the reporting

period included construction of Bridges A, B and C, retaining walls, noise barrier, box culvert extension, underground drainage and water pipes. It was also observed that there were construction activities carried out on the other construction sites that were not related to this Project in the vicinity of the monitoring stations.

Comparing with the monitoring results from those of the last month, the calculated mean 24-hour TSP levels at all stations were slightly higher in this reporting month, while the calculated mean 1-hour TSP levels at all stations were lower. The highest mean TSP level was recorded at Station A2 (1-hour TSP) with a value of $148.3\mu\text{g}/\text{m}^3$ which was lower than the value of $170.3\mu\text{g}/\text{m}^3$ recorded in May.



Figure 2.1 Air Quality Monitoring Locations

2.2 Noise

2.2.1 Monitoring Requirements

Impact noise monitoring was conducted once in every six days at the five designated monitoring locations in accordance with the specifications in the EM&A Manual. The duration of sampling was 30 minutes. The Action and Limit levels for noise monitoring are attached in **Appendix A**. The time schedule for the current monitoring reporting month and the tentative monitoring schedule for the next reporting month are attached in **Appendix B**.

2.2.2 Monitoring Locations

The impact noise monitoring locations are presented in **Table 2.3** and are shown in **Figure 2.2**.

Table 2.3 Noise Monitoring Locations

Monitoring Location	Measurement	Location
N1	Façade	Lok Lo Ha Village House No. 3B
N2	Façade	Lok Lo Ha Village House No. 32A
N3	Façade	Royal Ascot Block 9, Flat C
N4	Façade	Lok Lo Ha Village House No. 97
N5	Façade	Village near Royal Ascot

2.2.3 Summary of Monitoring Results

In this report, the results for the impact noise monitoring conducted in June 2004 at the five designated locations were evaluated. The monitoring results obtained are summarised in **Table 2.4**. Detailed results, including graphical plots and relevant field logs, are presented in **Appendix E**. **Appendix F** shows the meteorological conditions during the monitoring days.

Table 2.4 Summary of Noise Monitoring Results

Parameter	Monitoring Location	Range of Results dB(A)	No. of Exceedance	
			Action Levels	Limit Levels
30-minute Noise Measurement (Leq)	N1	59.6 – 62.9	0	0
	N2	60.3 – 62.8	0	0
	N3	54.2 – 55.1	0	0
	N4	59.6 – 68.4	0	0
	N5	58.5 – 59.6	0	0

In **Table 2.4**, all the recorded noise monitoring data were below the criteria as set out in the Action and Limit Levels in **Appendix A**. There was no exceedance of noise level at all the monitoring stations during the month of June 2004

Over the reporting period, the local weather conditions during the sampling were mainly fine or cloudy. All the monitoring was conducted with wind speeds of about 0.5 m/s. Traffic and construction activities were the major noise sources identified at the five monitoring locations. It was noted from field log that activities of excavating and breaking were present in the vicinity of the monitoring stations during the monitoring period.

Comparing with the monitoring results recorded in the last reporting period, the ranges of measured noise levels during this reporting month were not significantly different from those in May. The highest level was recorded at Station N4 (68.4 dB(A)) and occurred in the morning of 25 June. According to the field log, the major noise source at that time was excavation work as well as traffic noise.



Figure 2.2 Noise Monitoring Locations

3. ENVIRONMENTAL AUDIT

3.1 General

In the last monthly EM&A report, the following two environmental issues were raised:

- Stagnant water near Lok Lo Ha Village House No. 97 shall be cleared.
- Gullies at the Lok Lo Ha roundabout shall be provided with fabric mesh.

It was noted from site inspections that the stagnant water near Lok Lo Ha Village House No. 97 was cleared. In addition, gullies at the Lok Lo Ha roundabout were provided with fabric mesh.

Table 3.1 summarises the date and type of site inspections carried out during the reporting period.

Table 3.1 Summary of Site Inspection during the Reporting Period

Date	Type of Inspection
3 June 2004 (Thursday)	Regular Site Inspection
10 June 2004 (Thursday)	Regular Site Inspection
18 June 2004 (Friday)	Regular Site Inspection
24 June 2004 (Thursday)	Regular Site Inspection

Over the reporting period, the major construction work at the Site included:

- Construction of Bridges A, B and C, including bridge decks (Bridges A, B and C), installation of precast beams of Bridge A;
- Retaining walls 1, 2 and 7;
- Noise barrier construction for noise barrier No. 1, 4B, 4C and 5;
- Box culvert extension of 1500 pipe;
- Underground drainage and water pipes at Lok Shun Path Roundabout; and
- Landscaping.

3.2 Assessment of Environmental Monitoring Results

In this reporting month, there was no incident where the monitoring results exceeded the Action Level specified in **Appendix A**. The monitoring results were discussed in Section 2 of this report and are summarised in **Table 3.2** and **Table 3.3** below.

Table 3.2 Summary of Environmental Monitoring

Item	Parameter	Monitoring Period	Total No. of Samples Taken (on all stations)	No. of Exceedance	
				Action Levels	Limit Levels
1	24 – hour TSP	01/6/04 to 30/6/04	18	0	0
2	1 – hour TSP	01/6/04 to 30/6/04	48	0	0
3	30-minute Noise Measurement (Leq)	01/6/04 to 30/6/04	25	0	0

3.3 Environmental Complaints

No environmental complaint was received by the Environmental Team against the construction site in this reporting month. **Table 3.3** shows the summary record for this reporting month. **Table 3.4** summarises the complaint statistics from the commencement of the Project to date. **Appendix I** lists details of all the received complaints relating to the activities carried out on the construction site.

Table 3.3 Environmental Complaints / Enquiry Received in the Reporting Month

Complaint No.	Received date & Time	Description (inc. location/nature of complaint)	Follow-up Action Taken	Recommended Mitigation Measures	Status/Remarks
N/a	N/a	N/a	N/a	N/a	N/a

Table 3.4 Summary of Total Number of Complaints Received to date

Total No. of Complaints to date	No. of Complaints in this reporting period	No. of Active Complaints	No. of Inactive/Closed Complaints
2	0	N/a	2

3.4 Assessment of Mitigation Measures

Table 3.5 presents the status of the major mitigation measures identified during site inspection.

Table 3.6 Summary of Major Mitigation Measures at the Site

Type	Mitigation Measure	Comments
Noise	Temporary purposed-built Noise Barrier	No longer required
Water	Wheel Washing Facility	New wheel washing bay being constructed at new location
	Sand/Silt Removal Facilities	No longer required
	Measures along stream-banks north-east of Lok Shun Path Roundabout	No longer required
	Diversion of Stream Course via drainage pipe	Sand trap was installed at downstream end of stream course
Wastewater	Water reuse at wheel washing facility and site investigation drilling works.	No longer implemented
Land Contamination	Metal trays are placed underneath stationary machines where there are potential of oil leakage	Implemented
Air	Provide plastic sheeting covers on exposed soils	Implemented
	Regular water spraying on areas where there is likely generation of dust	Implemented
	Impervious sheeting was placed around the working area near monitoring station A1	Implemented as necessary

In this month, however, spots of stagnant water were observed near Contractor's Site Office, noise barrier NB1 and 4C, Bridge A1 and retaining wall RW1 which was prone to mosquito breeding. Also, rubbish was found near Bridge A and Contractor's Site Office.

4. FUTURE KEY ISSUE AND RECOMMENDATION

There are two environmental issues that need to be addressed in the next reporting month:

- Stagnant water within the site, especially near Contractor's Site Office, noise barrier NB1 and 4C, Bridge A1 and retaining wall RW1, shall be removed or sprayed with larvicide;
- Construction debris within the site shall either be covered with tarpaulin or removed;

The updated work program for the following months is attached in **Appendix J**. The monitoring tentative schedule for the next reporting month is attached in **Appendix B**.

APPENDIX A:

Action and Limit Levels

Action and Limit Levels for 24-hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A1	156	260
A2	155	
A3	153	

Action and Limit Levels for 1-hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A1	371	500
A2	378	
A3	368	

Action / Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700-1900 hours on normal weekdays	When one documented complaint is received	75* dB(A)
0700-2300 hours on holidays; and 1900-2300 hours on all other days		60/65/70** dB(A)
2300- 0700 hours of next day		45/50/55** dB(A)

** to be selected based on Area Sensitivity Rating

Note: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

APPENDIX B:

**Tentative Schedule for Impact
Air Quality and Noise
Monitoring**

1. Time Schedule for the Current Reporting Month – June 2004

Contract No. ST77/01

Sha Tin New Town, Stage II

Road D15 Linking Lok Shun Path and Tai Po Road

Time Schedule for Construction Phase Dust Monitoring for June 2004

Jun-04	Day	Start Time	
		24-hr TSP	1-hr TSP
1	Tue	x	x
2	Wed	09:30	08:00
3	Thu	x	09:50,11:00
4	Fri	x	x
5	Sat	x	x
6	Sun	x	x
7	Mon	x	x
8	Tue	09:30	08:00
9	Wed	x	09:50,11:00
10	Thu	x	x
11	Fri	x	x
12	Sat	x	x
13	Sun	x	x
14	Mon	09:30	08:00
15	Tue	x	09:50,11:00
16	Wed	x	x
17	Thu	x	x
18	Fri	09:30	08:00
19	Sat	x	x
20	Sun	x	x
21	Mon	X	09:00,11:00
22	Tue	X	x
23	Wed	X	x
24	Thu	09:30	08:00
25	Fri	X	09:50,11:00
26	Sat	X	x
27	Sun	X	x
28	Mon	X	x
29	Tue	X	x
30	Wed	09:30	08:00

Contract No. ST77/01

Sha Tin New Town, Stage II

Road D15 Linking Lok Shun Path and Tai Po Road

Time Schedule for Construction Phase Noise Monitoring for June 2004

Jun-04	Day	Start Time				
		N1	N2	N3	N4	N5
1	Tue	x	x	x	x	x
2	Wed	x	x	x	x	x
3	Thu	09:50	11:15	13:00	10:25	09:00
4	Fri	x	x	x	x	x
5	Sat	x	x	x	x	x
6	Sun	x	x	x	x	x
7	Mon	x	x	x	x	x
8	Tue	x	x	x	x	x
9	Wed	09:50	11:15	13:00	10:25	09:00
10	Thu	x	x	x	x	x
11	Fri	x	x	x	x	X
12	Sat	x	x	x	x	x
13	Sun	x	x	x	x	X
14	Mon	x	x	x	x	x
15	Tue	09:50	11:15	13:00	10:25	09:00
16	Wed	x	x	x	x	X
17	Thu	x	x	x	x	X
18	Fri	x	x	x	x	x
19	Sat	x	x	x	x	X
20	Sun	x	x	x	x	X
21	Mon	09:50	11:15	13:00	10:25	09:00
22	Tue	x	x	x	x	X
23	Wed	x	x	x	x	X
24	Thu	x	x	x	x	x
25	Fri	09:50	11:15	13:00	10:25	09:00
26	Sat	x	x	x	x	X
27	Sun	x	x	x	x	X
28	Mon	x	x	x	x	x
29	Tue	x	x	x	x	X
30	Wed	x	x	x	x	X

2. Tentative Schedule for the Next Reporting Month – July 2004

Contract No. ST77/01
 Sha Tin New Town, Stage II
 Road D15 Linking Lok Shun Path and Tai Po Road

Tentative Time Schedule for Construction Phase Dust Monitoring for July 2004

Jul-04	Day	Start Time	
		24-hr TSP	1-hr TSP
1	Thu	x	x
2	Fri	X	09:00,11:00
3	Sat	x	x
4	Sun	x	x
5	Mon	x	x
6	Tue	09:30	08:00
7	Wed	x	09:50,11:00
8	Thu	x	x
9	Fri	x	x
10	Sat	x	x
11	Sun	x	x
12	Mon	09:30	08:00
13	Tue	x	09:50,11:00
14	Wed	x	x
15	Thu	x	x
16	Fri	09:30	08:00
17	Sat	x	x
18	Sun	x	x
19	Mon	x	09:00,11:00
20	Tue	x	x
21	Wed	x	x
22	Thu	09:30	08:00
23	Fri	x	09:50,11:00
24	Sat	x	x
25	Sun	x	x
26	Mon	x	x
27	Tue	x	x
28	Wed	09:30	08:00
29	Thu	x	09:50,11:00
30	Fri	x	x
31	Sat	x	x

Contract No. ST77/01

Sha Tin New Town, Stage II

Road D15 Linking Lok Shun Path and Tai Po Road

Tentative Time Schedule for Construction Phase Noise Monitoring for Jul 2004

Jul-04	Day	Start Time				
		N1	N2	N3	N4	N5
1	Thu	x	x	x	x	x
2	Fri	09:50	11:15	13:00	10:25	09:00
3	Sat	x	x	x	x	x
4	Sun	x	x	x	x	x
5	Mon	x	x	x	x	x
6	Tue	x	x	x	x	x
7	Wed	09:50	11:15	13:00	10:25	09:00
8	Thu	x	x	x	x	x
9	Fri	x	x	x	x	x
10	Sat	x	x	x	x	x
11	Sun	x	x	x	x	x
12	Mon	x	x	x	x	x
13	Tue	09:50	11:15	13:00	10:25	09:00
14	Wed	x	x	x	x	x
15	Thu	x	x	x	x	x
16	Fri	x	x	x	x	x
17	Sat	x	x	x	x	x
18	Sun	x	x	x	x	x
19	Mon	09:50	11:15	13:00	10:25	09:00
20	Tue	x	x	x	x	x
21	Wed	x	x	x	x	x
22	Thu	x	x	x	x	x
23	Fri	09:50	11:15	13:00	10:25	09:00
24	Sat	x	x	x	x	x
25	Sun	x	x	x	x	x
26	Mon	x	x	x	x	x
27	Tue	x	x	x	x	x
28	Wed	x	x	x	x	x
29	Thu	09:50	11:15	13:00	10:25	09:00
30	Fri	x	x	x	x	x
31	Sat	x	x	x	x	x

APPENDIX C:

**24-Hour TSP Impact
Monitoring Results and Plots**

1. 24-hour TSP Monitoring Results

Monitoring Station A1 (Lok Lo Ha Village House No. 3B)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Total Sampling Time (min.)	Conc. (µg/m ³)	Weather Condition
	Initial	Final	Initial	Final	Initial	Final			
02-Jun-04	2.8622	2.9669	1.11	1.11	13355.17	13379.17	1440	66	Fine
08-Jun-04	2.8456	2.9607	1.11	1.11	13382.17	13406.17	1440	72	Cloudy
14-Jun-04	2.9125	3.0865	1.11	1.11	13409.17	13433.17	1440	109	Fine
18-Jun-04	2.9256	3.0417	1.11	1.11	13436.17	13460.17	1440	73	Fine
24-Jun-04	2.8775	2.9523	1.11	1.11	13463.17	13487.17	1440	47	Fine
30-Jun-04	2.8683	3.0612	1.11	1.11	13490.17	13514.17	1440	121	Fine
							Min	47	
							Max	121	
							Average	81.3	

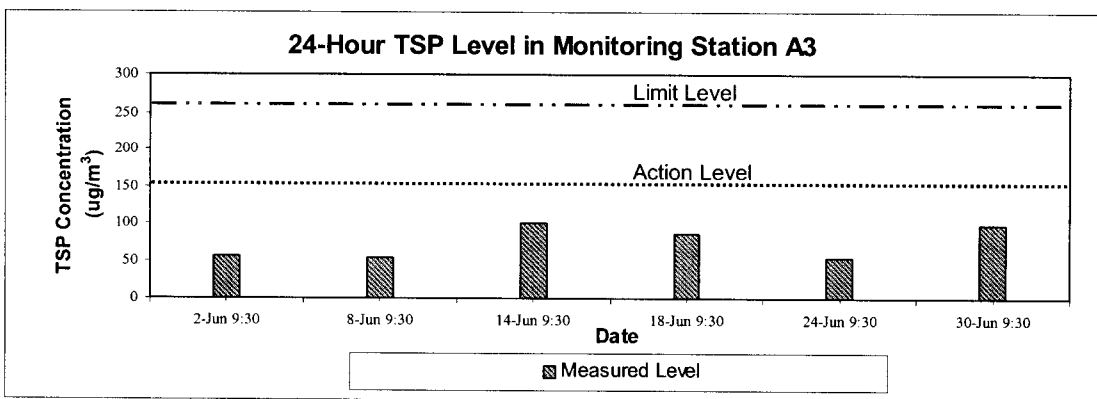
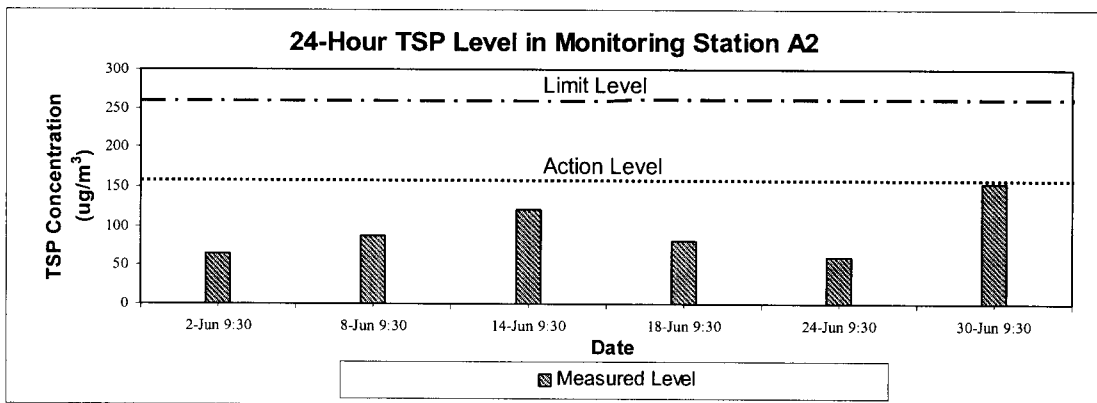
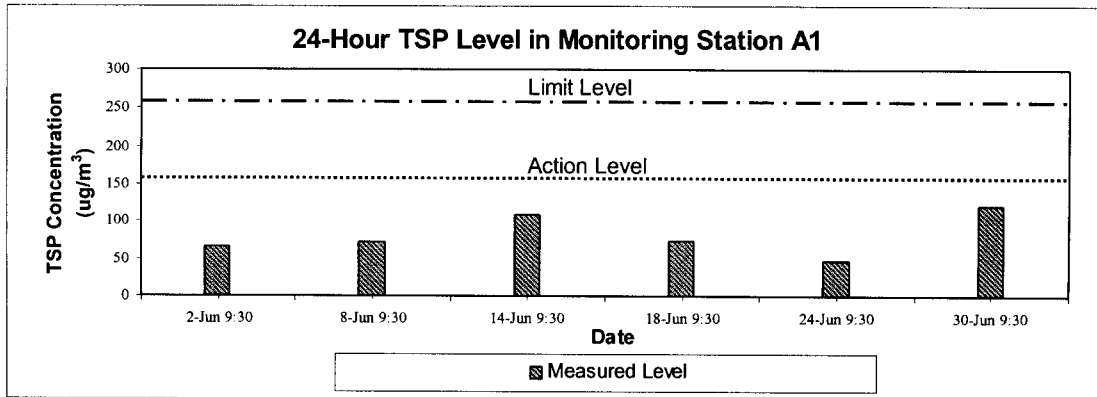
Monitoring Station A2 (Lok Lo Ha Village House No. 104)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Total Sampling Time (min.)	Conc. (µg/m ³)	Weather Condition
	Initial	Final	Initial	Final	Initial	Final			
02-June-04	2.8617	2.9633	1.11	1.11	4028.75	4052.75	1440	64	Fine
08-June-04	2.8377	2.9760	1.11	1.11	4055.75	4079.75	1440	87	Cloudy
14-June-04	2.9330	3.1259	1.11	1.11	4082.75	4106.75	1440	121	Fine
18-June-04	2.9249	3.0558	1.11	1.11	4109.75	4133.75	1440	82	Fine
24-June-04	2.9529	3.0212	1.11	1.11	4136.75	4160.75	1440	60	Fine
30-June-04	2.8519	3.0977	1.11	1.11	4163.75	4187.75	1440	154	Fine
							Min	60	
							Max	154	
							Average	94.7	

Monitoring Station A3 (Village House near Tsun King Road)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Total Sampling Time (min.)	Conc. (µg/m ³)	Weather Condition
	Initial	Final	Initial	Final	Initial	Final			
02-June-04	2.8428	2.9315	1.11	1.11	1543.07	1567.07	1440	55	Fine
08-June-04	2.8459	2.9322	1.11	1.11	1570.07	1594.07	1440	54	Cloudy
14-June-04	2.8951	3.0560	1.11	1.11	1597.07	1621.07	1440	101	Fine
18-June-04	2.9626	3.1012	1.11	1.11	1624.07	1648.07	1440	86	Fine
24-June-04	2.8911	2.9755	1.11	1.11	1651.07	1675.07	1440	53	Fine
30-June-04	2.8702	3.0261	1.11	1.11	1678.07	1702.07	1440	98	Fine
							Min	53	
							Max	101	
							Average	74.5	

2. Plots for 24-hour Monitoring Results



APPENDIX D:

**1-Hour TSP Impact
Monitoring Results and Plots**

1. 1-hour TSP Monitoring Results

Station A1 (Lok Lo Ha Village House No. 3B)

Date	Time of sampling	Concentration, $\mu\text{g}/\text{m}^3$
02-Jun-04	0800 – 0900	110
03-Jun-04	0950 – 1050	117
03-Jun-04	1100 – 1200	122
08-Jun-04	0800 – 0900	90
09-Jun-04	0950 – 1050	180
09-Jun-04	1100 – 1200	188
14-Jun-04	0800 – 0900	129
15-Jun-04	0950 – 1050	251
15-Jun-04	1100 – 1200	105
18-Jun-04	0800 – 0900	98
21-Jun-04	0900 – 1000	110
21-Jun-04	1100 – 1200	90
24-Jun-04	0800 – 0900	107
25-Jun-04	0950 – 1050	110
25-Jun-04	1100 – 1200	131
30-Jun-04	0800 – 0900	119
	Average	128.6
	Min	90
	Max	251

Station A2 (Lok Lo Ha Village House No. 104)

Date	Time of sampling	Concentration, $\mu\text{g}/\text{m}^3$
02-Jun-04	0800 – 0900	120
03-Jun-04	0950 – 1050	129
03-Jun-04	1100 – 1200	138
08-Jun-04	0800 – 0900	164
09-Jun-04	0950 – 1050	188
09-Jun-04	1100 – 1200	219
14-Jun-04	0800 – 0900	134
15-Jun-04	0950 – 1050	231
15-Jun-04	1100 – 1200	186
18-Jun-04	0800 – 0900	176
21-Jun-04	0900 – 1000	95
21-Jun-04	1100 – 1200	96
24-Jun-04	0800 – 0900	122
25-Jun-04	0950 – 1050	104
25-Jun-04	1100 – 1200	122
30-Jun-04	0800 – 0900	149
	Average	148.3
	Min	95
	Max	231

Station A3 (Village House near Tsun King Road)

Date	Time of sampling	Concentration, $\mu\text{g}/\text{m}^3$
02-Jun-04	0800 – 0900	105
03-Jun-04	0950 – 1050	114
03-Jun-04	1100 – 1200	138
08-Jun-04	0800 – 0900	74
09-Jun-04	0950 – 1050	119
09-Jun-04	1100 – 1200	146
14-Jun-04	0800 – 0900	122
15-Jun-04	0950 – 1050	95
15-Jun-04	1100 – 1200	125
18-Jun-04	0800 – 0900	135
21-Jun-04	0900 – 1000	134
21-Jun-04	1100 – 1200	126
24-Jun-04	0800 – 0900	95
25-Jun-04	0950 – 1050	89
25-Jun-04	1100 – 1200	117
30-Jun-04	0800 – 0900	102
	Average	114.8
	Min	74
	Max	146

1. Noise Monitoring Results

Monitoring Station N1 (Lok Lo Ha Village House No.3B)

Date	Noise Level for 30 min, dB(A)			
	Time of Sampling	L _{eq}	L ₁₀	L ₉₀
03-Jun-04	0911 – 0941	59.6	62.2	57.5
09-Jun-04	0910 – 0940	60.9	63.5	58.4
15-Jun-04	1005 – 1035	60.7	62.9	57.7
21-Jun-04	0945 – 1015	62.6	65.1	60.4
25-Jun-04	0912 – 0942	62.9	65.2	59.8

Min	59.6	62.2	57.5
Max	62.9	65.2	60.4

Monitoring Station N2 (Lok Lo Ha Village House No.32A)

Date	Noise Level for 30 min, dB(A)			
	Time of Sampling	L _{eq}	L ₁₀	L ₉₀
03-Jun-04	1040 – 1110	62.8	64.8	60.8
09-Jun-04	1040 – 1110	60.3	62.9	57.9
15-Jun-04	1300 – 1330	61.1	63.5	58.5
21-Jun-04	1042 – 1112	60.6	63.1	58.0
25-Jun-04	1040 – 1110	61.8	64.1	58.7

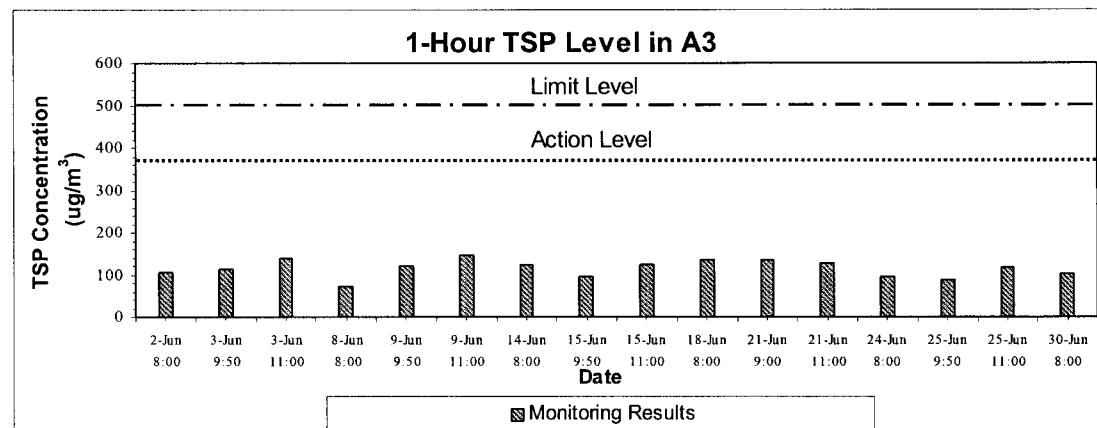
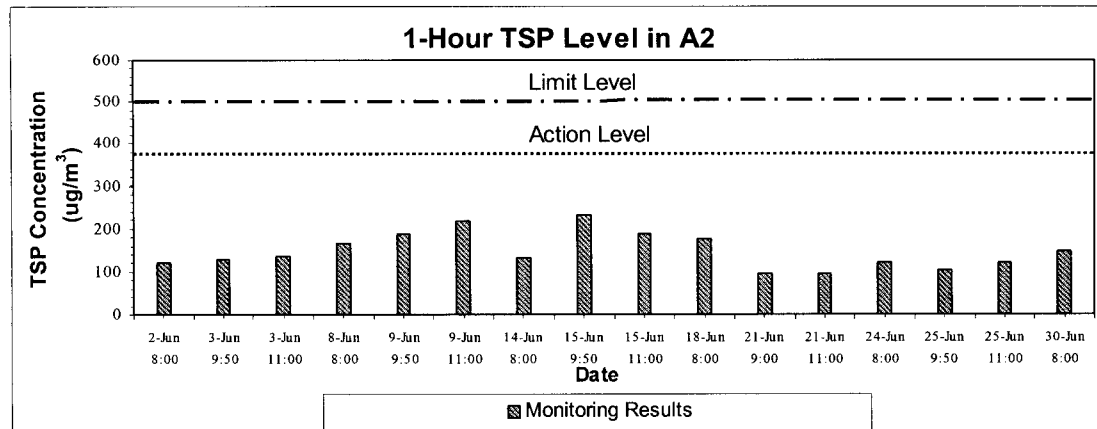
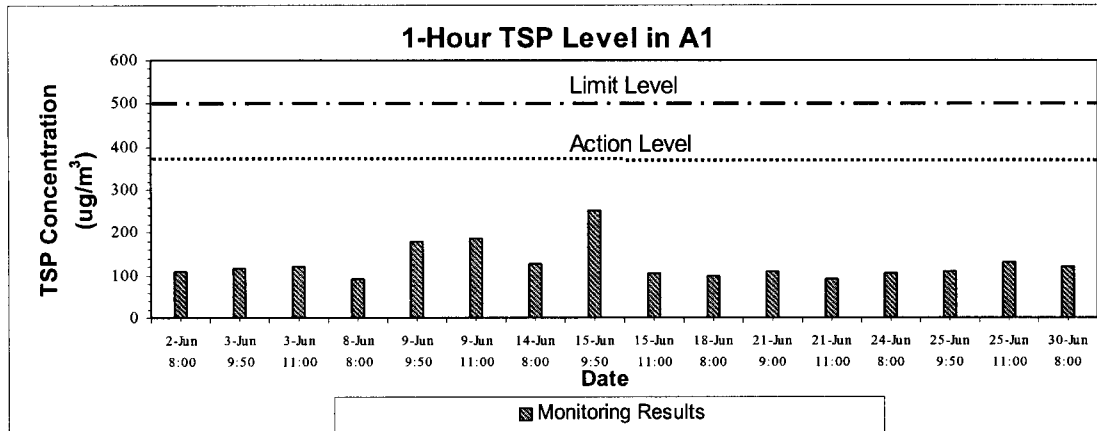
Min	60.3	62.9	57.9
Max	62.8	64.8	60.8

Monitoring Station N3 (Royal Ascot Block 9, Flat C)

Date	Noise Level for 30 min, dB(A)			
	Time of Sampling	L _{eq}	L ₁₀	L ₉₀
03-Jun-04	1127 – 1157	55.1	56.9	52.5
09-Jun-04	1127 – 1157	55.1	57.0	52.1
15-Jun-04	1342 – 1412	55.0	57.0	51.9
21-Jun-04	1127 – 1157	54.8	56.7	51.7
25-Jun-04	1127 – 1157	54.2	56.1	52.0

Min	54.2	56.1	51.7
Max	55.1	57.0	52.5

2. Plots of 1-hour TSP Monitoring Results



APPENDIX E:

**Daytime 07:00 -19:00Hrs
Impact Noise Monitoring
Results and Plots**

Monitoring Station N4 (Lok Lo Ha Village House No.97)

Date	Noise Level for 30 min, dB(A)			
	Time of Sampling	L _{eq}	L ₁₀	L ₉₀
03-Jun-04	1002 – 1032	60.5	62.6	57.8
09-Jun-04	1002 – 1032	59.6	62.3	57.4
15-Jun-04	1115 – 1145	60.7	63.3	58.0
21-Jun-04	0907 – 0937	59.9	62.0	56.8
25-Jun-04	1002 – 1032	68.4	70.2	66.6

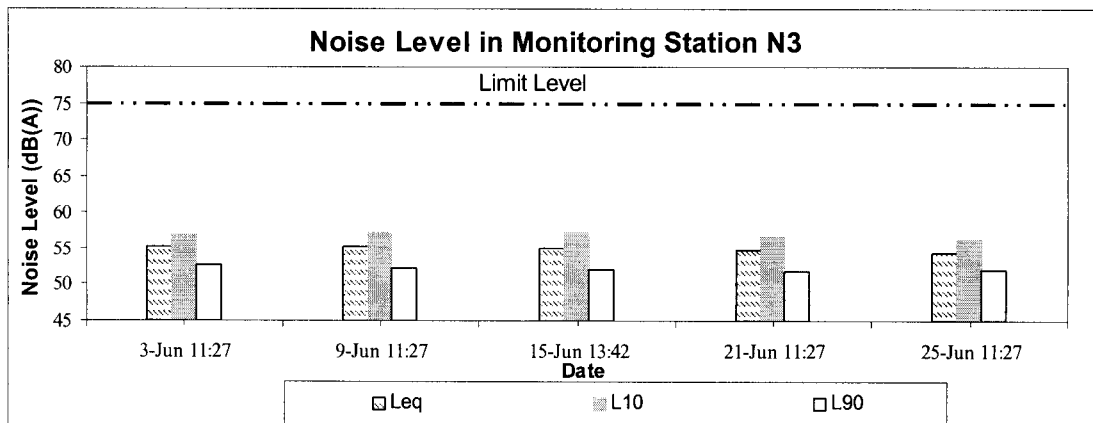
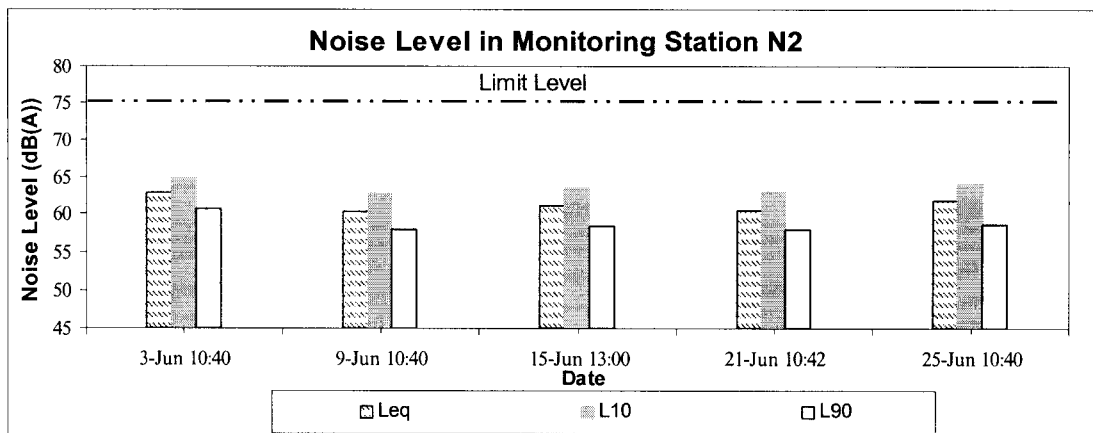
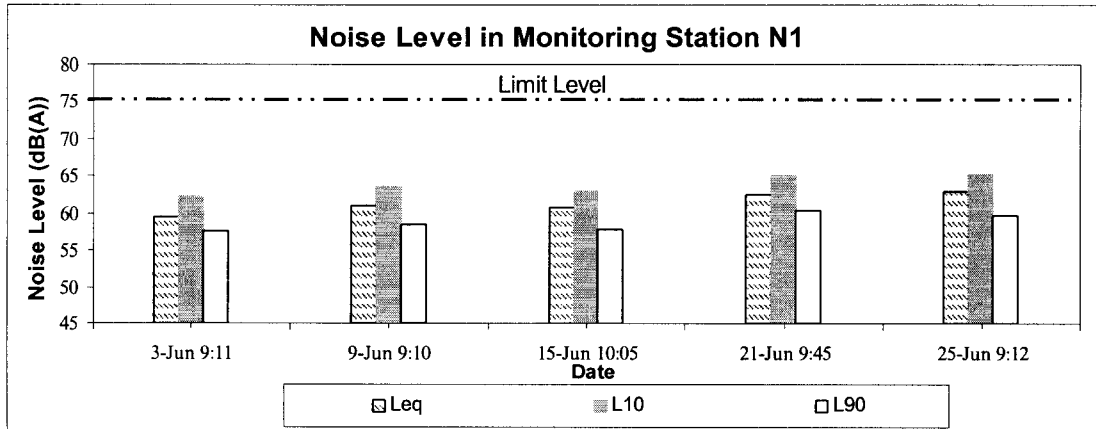
Min 59.6 62.0 56.8
 Max 68.4 70.2 66.6

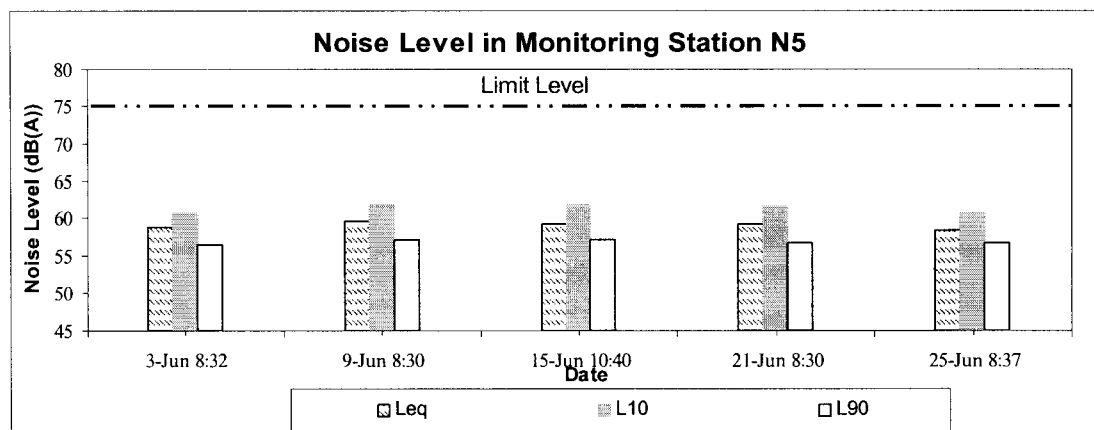
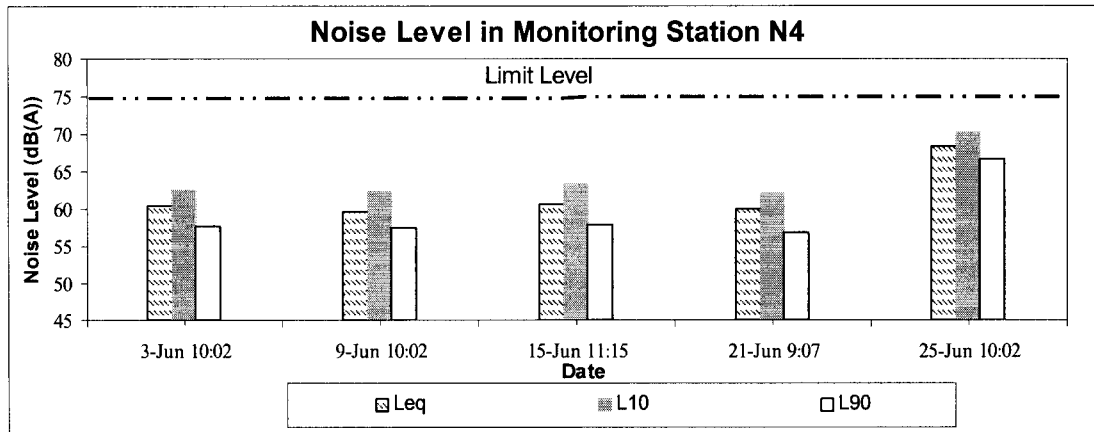
Monitoring Station N5 (Village House near Royal Ascot)

Date	Noise Level for 30 min, dB(A)			
	Time of Sampling	L _{eq}	L ₁₀	L ₉₀
03-Jun-04	0832 – 0902	58.9	60.7	56.6
09-Jun-04	0830 – 0900	59.6	61.8	57.1
15-Jun-04	1040 – 1110	59.2	61.7	57.1
21-Jun-04	0830 – 0900	59.3	61.6	56.8
25-Jun-04	0837 – 0907	58.5	60.7	56.7

Min 58.5 60.7 56.6
 Max 59.6 61.8 57.1

2. Plots of Noise Monitoring Results





APPENDIX F:

**Weather Conditions During
Monitoring Periods**

**Weather Condition during Monitoring Period
(From 1 to 30 June 2004)**

Date	Weather	Mean Air Temperature (°C)	Wind Speed (m/s)	Mean Relative Humidity (%)
02-Jun-04	Fine	27.9	0 - 0.5	84
03-Jun-04	Fine	28.1	0 - 0.5	82
08-Jun-04	Cloudy	27.1	0	78
09-Jun-04	Sunny	27.9	0 - 0.5	77
14-Jun-04	Fine	27.6	0	74
15-Jun-04	Rainy	27.0	0	88
18-Jun-04	Fine	29.1	0	79
21-Jun-04	Cloudy	28.6	0	85
24-Jun-04	Fine	30.2	0	76
25-Jun-04	Fine	30.2	0 - 0.5	75
30-Jun-04	Fine	30.4	0	81

APPENDIX G:

**Event and Action Plan for Air
Quality and Noise**

Event / Action Plan for Air Quality

EVENT	ACTION		
	ET	Engineer	CONTRACTOR
ACTION LEVEL			
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source; 2. Inform the Engineer and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Notify Contractor; and 2. Check monitoring data and Contractor's working methods. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice, if any; and 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform the Engineer and Contractor; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily. 5. Discuss with Engineer for remedial actions required; 6. If exceedance continues, arrange meeting with the engineer; and 7. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Check monitoring data and Contractor's working methods; 4. Discuss with ET and Contractor on potential remedial actions; and 5. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for mitigation measures to the Engineer within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.
LIMIT LEVEL			
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source; 2. Inform the Engineer and Contractor; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep EPD and the Engineer informed of results. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Check monitoring data and Contractor's working methods; 4. Discuss with ET and Contractor on potential remedial actions; and 5. Ensure remedial action properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the Engineer within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform the Engineer and Contractor; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily. 5. Investigate the causes of exceedance; 6. Arrange meeting with EPD and the Engineer to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep EPD and the Engineer informed of the results; and 8. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 4. Discuss among ET and Contractor on potential remedial actions; 5. Review Contractor's remedial action whenever necessary to assure their effectiveness; and 6. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the Engineer within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the Engineer until the exceedance is abated.

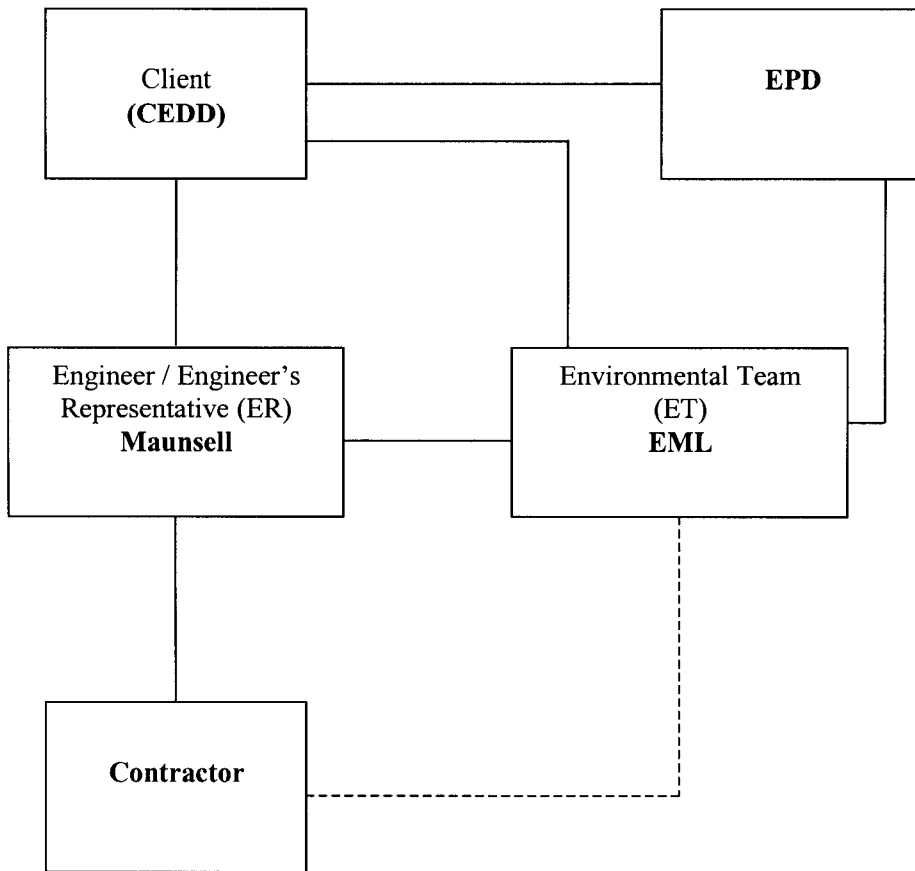
Event / Action Plan for Construction Noise

EVENT	ACTION	
	ET	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify the Engineer and Contractor; 2. Analyze investigation; 3. Require Contractor to propose measures for the analyzed noise problem; and 4. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to Environmental Team and the Engineer; and 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Notify the Engineer and Contractor; 2. Notify EPD; and 3. Require Contractor to implement mitigation measures; and increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Implement mitigation measures; and 2. Prove to Environmental Team and the Engineer effectiveness of measures applied.

APPENDIX H:

**Project Organization and
Contacts of Key Personnel**

Figure H.1: Project Management Structure



Contacts of Key Personnel:

Organisation	Nature of Duty	Contact Personnel	Contact Number	
			Telephone	Fax
Civil Engineering and Development Department (CEDD)	Client	Mr. K.K. Law	2301-1397	2739-0076
Maunsell Consultants Asia Ltd. (MCAL)	Engineer	Mr. Conrad Ng	2685-6107	2691-2649
Environmental Management Ltd. (EML)	Environmental Team	Mr. W. K. Ng	2839-2800	2890-6901

APPENDIX I:

**Summary Records of
Complaints Received**

Complaint No.	Received date & Time	Description (inc. location/ nature of complaint)	Follow-up Action Taken	Recommended Measures	Status/ Remarks
C02-N1	Morning, 29/7/2002	<ul style="list-style-type: none"> Around 9:30am on 29/7/02, police came on site to investigate a complaint of noise pollution emitted during rock breaking which carried out by the Contractor near the Site Office (near the box culvert and north Lok Shun Path Roundabout). The Contractor immediately halted the activity in response to police's advice 	<ul style="list-style-type: none"> Ad hoc site inspection was carried out on 31/7/02, jointly with the Engineer and Contractor The complaint log sheet, the investigation findings and recommendations on mitigation measures were submitted to the Engineer and Contractor. A letter, addressing to the complainant, had been sent to the police. 	<p>Mitigation actions:</p> <ul style="list-style-type: none"> Excavator-mounted breaker shall not be carried out within 125m from any nearby noise sensitive receivers and; Temporary purposed built barrier should be installed whenever there are high noise level construction activities. 	<p>The complaint was considered as ad hoc rather than continuous. It was therefore considered not necessary to increase the noise monitoring frequency</p> <p>File Closed.</p>
C02-N2	Night-time, 7 April, 2002	<ul style="list-style-type: none"> Nearby residents complained to police that a generator in Road D15 Site was operating in night-time near Lok Lo Ha Village. Police came to the site to investigate the complaint and inform watchmen to turn off the operating generator at around 8:30pm. The complaint was valid as it concerned with construction noise during the restricted hours. 	<ul style="list-style-type: none"> Ad hoc site inspection was carried out on 8 April 02, jointly with the Engineer and Contractor and ET. The complaint log sheet, the investigation findings and recommendations on mitigation measures were submitted to the Engineer and Contractor. A letter in both English and Chinese, addressing to the complainant, had been sent to the police. 	<p>Mitigation actions:</p> <ul style="list-style-type: none"> Under the Noise Control Ordinance, the carrying out of general construction work using powered mechanical equipment (including generators) during the restricted hours (between 7 p.m. and 7 a.m. or at any time on a general holiday (including Sunday) is prohibited unless a valid Construction Noise Permit is in force; A watchmen or site staff should be employed to check daily that all generators and plats are switched off after the permissible working hours. 	<p>File Closed.</p>

APPENDIX J:

**Updated Construction
Program**

Sha Tin New Town Stage II Contract No. ST77/01, Road D15 Linking Lok Shun Faith and Tai Po Road

MASTER PROGRAMME (ST77/01/MP/13B)

ID	Task Name	Duration	Start	Finish	2004	2005											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
0	Road D15 Master Programme	1326 days	Wed 12/12/01	Fri 02/06/06													
1	1.0 Original Contract Period	1187 days	Wed 12/12/01	Sat 12/03/05													
2	1.1 Works in Section I (345 days)	345 days	Wed 12/12/01	Thu 21/11/02													
3	1.2 Works in Section IA (475 Days)	475 days	Wed 12/12/01	Mon 31/03/03													
4	1.3 Works in Section II (822 days)	822 days	Wed 12/12/01	Fri 12/03/04													
5	1.4 Landscape Work in Section III (1187 Days)	1187 days	Wed 12/12/01	Sat 12/03/05													
6	2.0 Anticipated Dates	1289 days	Fri 22/11/02	Fri 02/06/06													
7	2.1 Anticipated EOT for Section I	249.5 days	Fri 22/11/02	Tue 29/07/03													
8	2.2 Anticipated Completion Date for Section IA	0 days	Mon 31/03/03	Mon 31/03/03													
9	2.3 Anticipated Completion Date for Section II	141 days	Thu 13/01/05	Thu 02/06/05													
10	2.4 Anticipated Completion Date for Section III	365 days	Fri 03/06/05	Fri 02/06/06													
11	3 Preliminary & Site Establishment	689 days	Wed 12/12/01	Tue 06/04/04													
29	4 Earthworks	473 days	Fri 10/05/02	Fri 05/12/03													
35	5 Entrustment Works (Section I & IA)	455 days	Wed 12/12/01	Thu 26/06/03													
45	6 Bridge A & General	1007 days	Wed 12/12/01	Fri 06/05/05													
46	6.1 Design Submission of Alternative Design (I Beam)	180 days	Wed 12/12/01	Wed 24/07/02													
47	6.2 Procurement, manufacturing and testing of bridge bearing	63.2 days	Thu 25/07/02	Tue 08/10/02													
48	6.3 Engineer's Approval of Off Site Casting Yard	180 days	Sat 19/01/02	Wed 28/08/02													
49	6.4 Fabrication of precast beams	150 days	Thu 29/08/02	Thu 27/02/03													
50	6.5 Fabrication PC panel permanent formwork	200 days	Thu 29/08/02	Fri 02/05/03													
51	6.6 Ground Investigation	62 days	Wed 12/12/01	Thu 28/02/02													
52	6.7 Piling Works at A1 to A5	121 days	Wed 12/12/01	Mon 13/05/02													
58	6.8 Pile Caps Construction A1 to A5	546 days	Sat 16/03/02	Tue 13/01/04													
59	6.8.1 A1 Pile Cap	50 days	Mon 25/03/02	Mon 27/05/02													
60	6.8.2 A2 Pile Cap	24 days	Sat 16/03/02	Tue 16/04/02													
61	6.8.3 A3 Pile Cap	22 days	Wed 08/05/02	Mon 03/06/02													
62	6.8.4 A4 Pile Cap	24 days	Fri 19/04/02	Fri 17/05/02													
63	6.8.5 A5 Pile Cap	247 days	Mon 17/03/03	Tue 13/01/04													
64	6.8.5.1 A5 Pile Cap (1st Portion)	110 days	Mon 17/03/03	Thu 31/07/03													
65	6.8.5.2 A5 Pile Cap (2nd Portion)	22 days	Tue 16/12/03	Tue 13/01/04													
66	6.9 Abutment Wall A1 to A5	547 days	Wed 17/04/02	Sat 14/02/04													
67	6.9.1 A1 Abutment Wall	427 days	Tue 26/05/02	Wed 29/10/03													
68	6.9.1.2 A1 (1st portion to allow site access to C2)	30 days	Tue 28/05/02	Wed 03/07/02													
69	6.9.1.2 A1 (upper portion)	55 days	Mon 25/08/03	Wed 29/10/03													
70	6.9.2 A2 Pier & Cross Head	434 days	Wed 17/04/02	Sat 27/09/03													
71	6.9.2.1 Pier only to allow access to C2	22 days	Wed 17/04/02	Mon 13/05/02													
72	6.9.2.2 A2 Crosshead	29 days	Mon 25/08/03	Sat 27/09/03													
73	6.9.3 A3 Pier & Cross Head	30 days	Tue 04/06/02	Wed 10/07/02													
74	6.9.4 A4 Pier & Cross Head	12 days	Thu 11/07/02	Wed 24/07/02													
75	6.9.5 A5 Abutment Wall	148 days	Mon 18/08/03	Sat 14/02/04													
76	6.9.5.1 A5 Abutment wall (Portion 1 to allow site access)	50 days	Mon 18/08/03	Thu 16/10/03													
77	6.9.5.2 A5 Abutment wall (Portion 2)	25 days	Wed 14/01/04	Sat 14/02/04													
78	6.10 Install bridge bearings A1 to A5	474 days	Mon 29/07/02	Fri 27/02/04													
79	6.10.1 A1 - A2 Bridge Bearings	6 days	Wed 05/11/03	Wed 12/11/03													
80	6.10.2 A2 - A3 Bridge Bearings	6 days	Wed 05/11/03	Wed 12/11/03													
81	6.10.3 A3 - A4 Bridge Bearings	6 days	Mon 29/07/02	Mon 05/08/02													
82	6.10.4 A4 - A5 Bridge Bearings	6 days	Fri 20/02/04	Fri 27/02/04													
83	6.11 Install Precast Beams A1 to A5	352 days	Thu 20/11/03	Wed 26/01/05													
84	6.11.1 A1 to A2 PC Beams	6 days	Thu 20/11/03	Thu 27/11/03													

2.3 Anticipated Completion Date for Section II: 2.4 Anticipated

08 April 2004

September 2003

13 January 2004

13 January 2004

13 January 2004

14 February 2004

14 February 2004

27 February 2004

27 February 2004

ber 2003

Date: 18/10/2003

Task Progress: Task Progress Summary:

Critical Task Progress: Critical Task Progress Summary:

Milestone: Milestone Summary:

Summary: Summary:

Rollled Up Task: Rollled Up Critical Task:

Rollled Up Progress: Rollled Up Milestone:

Split: Split:

External Tasks: External Tasks:

Sha Tin New Town Stage II Contract No. ST77/01, Road D15 Linking Lok Shun Path and Tai Po Road

MASTER PROGRAMME (ST77/01/MP/13B)

ID	Task Name	Duration	Start	Finish	2004	2005											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
320	10.2 RW2	928 days	Wed 12/12/01	Wed 26/01/05													
321	10.2.1 RW2 Bay 1	60 days	Wed 10/09/03	Thu 20/11/03													
333	10.2.2 RW2 Bay 2	28 days	Mon 10/11/03	Thu 11/12/03													
344	10.2.3 RW2 Bay 3	17 days	Sat 07/11/03	Thu 20/11/03													
355	10.2.4 RW2 Bay 4	23 days	Tue 04/11/03	Sat 29/11/03													
366	10.2.5 RW2 Bay 5	20 days	Wed 12/12/01	Sat 09/02/02													
367	10.2.6 RW2 Bay 6	605 days	Wed 15/01/03	Wed 26/01/05													
378	10.2.7 RW2 Bay 7	374 days	Sat 25/10/03	Wed 26/01/05													
390	10.3 RW3	545 days	Wed 12/12/01	Mon 13/10/03													
397	10.4 RW4	100 days	Wed 12/12/01	Wed 17/04/02													
401	10.5 RW5	115 days	Fri 01/08/03	Mon 15/12/03													
402	10.6 RW6	48 days	Sat 13/12/03	Fri 13/02/04													
403	10.6.1 Install temporary work	3 days	Sat 13/12/03	Tue 16/12/03													
404	10.6.2 Excavation to +16.5	5 days	Wed 17/12/03	Mon 22/12/03													
405	10.6.3 Bay 1	24 days	Tue 23/12/03	Mon 26/01/04													
406	10.6.4 Bay 2	24 days	Mon 05/01/04	Wed 04/02/04													
407	10.6.5 Backfill to +22	6 days	Thu 05/02/04	Wed 11/02/04													
408	10.6.6 Remove temporary work	2 days	Thu 12/02/04	Fri 13/02/04													
409	10.7 RW7	615 days	Thu 06/06/02	Tue 29/06/04													
410	10.7.1 Pre-drill holes (21 nos)	47 days	Thu 06/06/02	Thu 01/08/02													
411	10.7.2 Forming working platform	24 days	Fri 02/08/02	Thu 29/08/02													
412	10.7.3 Install bored pile (21 nos)	544 days	Fri 30/06/02	Tue 29/06/04													
413	10.7.3.0 Completed Bore Piles	183 days	Fri 30/08/02	Fri 28/02/03													
414	10.7.3.1 B4 Bore Pile	6 days	Mon 14/04/03	Wed 23/04/03													
415	10.7.3.2 B10/B11, B13/B14	61 days	Mon 31/03/03	Tue 17/06/03													
416	10.7.4 Bore Pile Sonic Test	14 days	Mon 18/08/03	Tue 02/09/03													
417	10.7.5 Bore Pile Core Test	28 days	Wed 03/09/03	Tue 07/10/03													
418	10.7.5 Construct lagging/concrete decorative wall	30 days	Sat 14/02/04	Fri 19/03/04													
419	10.7.6 Construct extension section above bored pile	56 days	Sat 20/03/04	Mon 31/05/04													
420	10.7.7 Construct Capping Beam	24 days	Tue 01/05/04	Tue 29/05/04													
421	10.8 RW8	218 days	Tue 08/10/02	Fri 04/07/03													
427	10.9 RW11	190 days	Wed 12/12/01	Mon 05/08/02													
430	10.10 RW12	220 days	Mon 21/07/03	Mon 12/04/04													
431	Temp. diversion of 150mm dia water main	107 days	Fri 01/08/03	Fri 05/12/03													
432	10.10.1 RW12 Bay 1	20 days	Wed 14/01/04	Mon 09/02/04													
433	10.10.2 RW12 Bay 2	20 days	Wed 24/12/03	Mon 19/01/04													
434	10.10.3 RW12 Bay 3	35 days	Mon 21/07/03	Fri 29/08/03													
435	10.10.4 Drainage works in vicinity of pier C2 of Bridge C	25 days	Tue 10/02/04	Tue 09/03/04													
436	10.10.5 Water works in vicinity of RW 12	30 days	Wed 24/12/03	Tue 03/02/04													
437	10.10.6 Laying new utilities	30 days	Wed 04/02/04	Tue 09/03/04													
438	10.10.7 Drainage & Roadworks	28 days	Wed 10/03/04	Mon 12/04/04													
439	11.0 Noise Barriers Preliminary	1029 days	Wed 12/12/01	Thu 02/06/05													
440	11.1 Temporary Work Submission & Approval	300 days	Wed 12/12/01	Fri 13/12/02													
441	11.2 Noise Barrier Structures	736 days	Wed 12/12/01	Sat 05/06/04													
442	11.2.1 Noise Barrier No. 1	666 days	Wed 12/12/01	Tue 09/03/04													
443	11.2.1.1 Site investigation	30 days	Wed 12/12/01	Tue 22/01/02													
444	11.2.1.2 Traffic Diversion at Lok Shun Path	1 day	Wed 21/05/03	Wed 21/05/03													
445	11.2.1.3 Demolish Ex'g Retaining Wall Footing	60 days	Mon 17/02/03	Fri 09/05/03													
446	11.2.1.4 Temporary earth platform for Bore Pile Equipment	6 days	Thu 22/05/03	Thu 29/05/03													
447	11.2.1.5 Bore Piles SPT to SP4	35 days	Fri 30/05/03	Thu 17/07/03													

Date: 18/10/2003

Task
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 External Tasks

MASTER PROGRAMME (ST77/01/MP/13B)

Sha Tin New Town Stage II Contract No. ST7701, Road D15 Linking Lok Shun Path and Tai Po Road

ID	Task Name	Duration	Start	Finish	2004	2005											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
448	11.2.1.6 Bore Piles Coring Test (4nos)	10 days	Fri 22/08/03	Thu 04/09/03													
449	11.2.1.8 RW Panel 1	80 days	Thu 27/11/03	Fri 05/03/04													
457	11.2.1.9 RW Panel 2	80 days	Thu 27/11/03	Fri 05/03/04													
459	11.2.1.10 RW Panel 3	34 days	Mon 01/12/03	Tue 09/03/04													
484	11.2.1.11 RW Panel 4	65 days	Fri 10/10/03	Wed 24/12/03													
500	11.2.1.12 RW Panel 5	49 days	Mon 29/09/03	Tue 25/11/03													
515	11.2.1.13 RW Panel 6	46 days	Tue 28/10/03	Wed 27/09/03													
530	11.2.1.14 RW Panel 7	70 days	Thu 10/07/03	Tue 21/10/03													
545	11.2.2 Additional Bore Piles	9 days	Mon 21/07/03	Fri 01/08/03													
546	11.2.2.1 Mobilisation of RCD	11 days	Mon 21/07/03	Fri 01/08/03													
547	11.2.2.1 ABP1	17 days	Mon 21/07/03	Fri 01/08/03													
559	11.2.2.2 ABP2	12 days	Wed 17/09/03	Tue 30/09/03													
571	11.2.2.3 Bore Piles Tests	1 day	Wed 17/09/03	Wed 17/09/03													
572	11.2.2.3.1 Sonic Test	7 days	Sat 20/09/03	Tue 27/09/03													
573	11.2.2.3.2 Core Test (2nos)	2 days	Mon 29/09/03	Tue 30/09/03													
574	11.2.2.3 Grouting Sonic Tubes and core holes	120 days	Thu 08/01/04	Sat 05/06/04													
575	11.2.3 Noise Barrier No. 4B	45 days	Wed 20/03/02	Wed 15/05/02													
581	11.2.3a Concrete Footing for Noise Barrier 4C	89 days	Thu 16/05/02	Wed 07/08/02													
582	11.2.4 Noise Barrier No. 5	12 days	Thu 16/05/02	Thu 30/05/02													
583	11.2.4.1 Excavation	45 days	Fri 31/05/02	Wed 24/07/02													
584	11.2.4.2 Construct Footing and Walls	12 days	Thu 25/07/02	Wed 07/08/02													
585	11.2.4.3 Backfill to Foundation of Noise Barrier No 5	1029 days	Wed 12/12/01	Thu 02/06/05													
586	11.3 Noise Barrier Steel Post & Panels	150 days	Wed 12/12/01	Tue 18/06/02													
587	11.3.1 Procurement and Fabrication of Noise barrier	250 days	Wed 19/06/02	Wed 16/04/03													
588	11.4.1 Design. Submission for approval	200 days	Thu 17/04/03	Tue 16/12/03													
589	11.4.2 Fabrication and Delivery	363 days	Wed 10/03/04	Thu 02/06/05													
590	11.4.3 Noise Barrier Installation	60 days	Wed 10/03/04	Mon 24/05/04													
591	11.4.3.1 Noise Barrier No.1	40 days	Mon 07/03/05	Tue 26/04/05													
592	11.4.3.2 Noise Barrier No. 2	40 days	Mon 11/04/05	Thu 02/06/05													
593	11.4.3.3 Noise Barrier No. 3	18 days	Fri 29/04/05	Sat 21/05/05													
594	11.4.3.4 Noise Barrier No. 4A	30 days	Mon 07/06/04	Tue 13/07/04													
595	11.4.3.5 Noise Barrier No. 4B	10 days	Wed 20/04/05	Mon 07/06/05													
596	11.4.3.6 Noise Barrier No. 4B at Bridge A, A2 to A3	30 days	Mon 03/05/04	Mon 07/06/04													
597	11.4.3.6 Noise Barrier No. 4C	40 days	Tue 08/06/04	Mon 26/07/04													
598	11.4.3.7 Noise Barrier No. 5	745 days	Wed 12/12/01	Wed 16/06/04													
599	12 Box Culvert Extension	158 days	Wed 12/12/01	Thu 27/06/02													
600	12.1 Remove existing inlet, water diversion	156 days	Mon 31/12/01	Fri 12/07/02													
601	12.2 Box culvert	29 days	Thu 30/05/02	Thu 04/07/02													
602	12.3 Flood Wall	166 days	Thu 10/04/03	Wed 12/11/03													
603	12.4 Construct 1400 box culvert (5 bays)	188 days	Tue 28/10/03	Wed 18/06/04													
604	12.5 Construct 1500 pipe	100 days	Tue 28/10/03	Fri 27/02/04													
605	12.5.1 Construct 1500 pipe CH 0 to CH 30 (MHA64 to MH31)	44 days	Sat 28/02/04	Fri 23/04/04													
606	12.5.2 Construct 1500 pipe CH 30 to CH 60	44 days	Sat 24/04/04	Wed 16/06/04													
607	12.5.3 Construct 1500 pipe CH 60 to CH 82	0 days	Sat 15/03/03	Sat 15/03/03													
608	12.6 Construct CPT15 (Deleted)	60 days	Mon 22/09/03	Mon 01/12/03													
609	12.7 Construct M/H31	90 days	Mon 14/04/03	Mon 04/08/03													
610	12.8 Construct 1400 Box Culvert Extension (Bay A, B & manhole)	655 days	Wed 15/01/03	Tue 29/03/05													
611	13.0 Underground Drainage & Utilities	651 days	Wed 15/01/03	Thu 24/03/05													
612	13.1 Drainage & Roadworks at Lok Ha Lo roundabout																
613																	

Date: 18/10/2003

Task Legend:
 Task Progress: [Solid Black Bar]
 Critical Task Progress: [Hatched Bar]
 Milestone: [Vertical Line]
 Summary: [Dotted Line]
 Task: [White Bar]
 Critical Task: [Hatched Bar]
 Milestone: [Vertical Line]
 Summary: [Dotted Line]

Task Status Legend:
 Rolled Up Progress: [Solid Black Bar]
 Rolled Up Critical Task: [Hatched Bar]
 Rolled Up Milestone: [Vertical Line]

Other Legend:
 Spill: [Dotted Line]
 External Tasks: [Dotted Line]

Project Summary: [Empty Box]

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MASTER PROGRAMME (ST77/01/MP/13B)

Sha Tin New Town Stage II Contract No. ST77/01, Road D15 Linking Lok Shun Path and Tai Po Road

ID	Task Name	Duration	2004												2005			
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan			
614	13.1.1 Drainage & roadworks at stage 2 & 2A of ITM	263 days	Wed 15/01/03	Mon 01/12/03														
615	13.1.2 Drainage and roadworks at stage 2b of ITM	95 days	Tue 02/12/03	Mon 29/03/04														
616	13.1.3 Drainage and roadworks at stage 4 of ITM (Deleted)	0 days	Mon 29/03/04	Mon 29/03/04														
617	13.1.3 Drainage and roadworks at stage 5 of ITM	54 days	Tue 30/03/04	Sat 05/06/04														
618	13.1.4 Drainage and roadworks at stage 6 of ITM	46 days	Thu 27/01/05	Thu 24/03/05														
619	13.2 New Utilities and Drainage Near Noise Barrier NO 1	126 days	Wed 22/10/03	Fri 26/03/04														
620	13.2.1 Construct M/H24 pipe 225 dia and MH10 at stage 2b ITM	19 days	Wed 22/10/03	Wed 12/11/03														
621	13.2.2 Construct M/H 12 & 2nd portion pipe 450 dia at stage 2b of ITM	19 days	Wed 22/10/03	Wed 12/11/03														
622	13.2.1 PCCW - At Stage 2b ITM Lay cable duct near Noise Barrier No 1 Panel 7 & 6	7 days	Thu 13/11/03	Thu 20/11/03														
623	13.2.3 CABLE TV - At Stage 2b ITM Lay cable duct near Noise Barrier No 6 & 7	7 days	Fri 21/11/03	Fri 28/11/03														
624	13.2.3 CABLE TV - After Completion of Noise Barrier No 1 panel 1-5	14 days	Wed 10/03/04	Fri 26/03/04														
625	13.3 Water pipes and associated Works	482 days	Sat 16/08/03	Tue 29/03/05														
626	13.3.1 Water Mains for irrigation system	120 days	Fri 14/11/03	Fri 09/04/04														
627	13.3.2 Fire Service Pipe & Hydrant	50 days	Thu 27/01/05	Tue 29/03/05														
628	13.3.3 Water Main Diversion (400 Box Culvert)	45 days	Tue 11/11/03	Mon 05/01/04														
629	13.3.4 Along stair 8	20 days	Sat 16/08/03	Mon 15/09/03														
630	13.4 Telephone Ducts	40 days	Thu 21/08/03	Wed 08/10/03														
631	13.5 Existing Utilities Diversion	161 days	Sat 06/09/03	Sat 20/03/04														
632	13.5.1 RW1, RW2 and 1400 Box Culvert	90 days	Mon 01/12/03	Sat 20/03/04														
633	13.5.2 Abutment A1 to RW11	130 days	Sat 06/09/03	Fri 13/02/04														
634	13.5.3 RW11 to C2	100 days	Wed 10/09/03	Fri 09/01/04														
635	13.5.4 At Lok King Street	100 days	Wed 10/09/03	Fri 09/01/04														
636	14 Staircases	782 days	Wed 12/12/01	Sat 31/07/04														
637	14.1 Stair 1 (NB 4C)	12 days	Fri 09/04/04	Mon 26/04/04														
638	14.2 Stair 2 (RW8)	50 days	Thu 13/03/03	Fri 16/05/03														
639	14.3 Stair 3 (RW3)	90 days	Thu 24/04/03	Fri 15/08/03														
640	14.4 Stair 4 (RW11)	117 days	Thu 04/08/03	Tue 27/01/04														
641	14.4.1 Stair 4 Bay 1 (to allow access Bridge C PC beams)	24 days	Thu 04/09/03	Fri 03/10/03														
642	14.4.2 Stair 4 Bay 2	24 days	Wed 24/12/03	Tue 27/01/04														
643	14.5 Stair 5 (RW5)	69 days	Fri 01/08/03	Wed 22/10/03														
644	14.6 Stair 6 (Abutment B1)	24 days	Wed 28/04/04	Thu 27/05/04														
645	14.7 Stair 7 (RW7)	24 days	Mon 05/07/04	Sat 31/07/04														
646	14.8 Stair 8 (Level +3)	50 days	Tue 16/09/03	Thu 13/11/03														
647	14.9 Stair 9 (CH300) (deleted)	12 days	Wed 28/01/04	Tue 10/02/04														
648	14.10 Stair 10 (RW12)	20 days	Tue 10/02/04	Wed 03/03/04														
649	14.11 Stair 11 (Abutment A5)	20 days	Tue 10/02/04	Tue 10/02/04														
650	14.12 Stair 12 (House 102)	20 days	Fri 20/02/04	Sat 13/03/04														
651	14.13 Stair 13 (Slope CH350 - 400)	24 days	Tue 13/04/04	Fri 14/05/04														
652	15 Standard Refuse Collection Point	18 days	Wed 12/12/01	Fri 04/01/02														
653	16 Rain Shelter no.1&2	45 days	Mon 28/02/05	Mon 25/04/05														
654	17 Landscaping	60 days	Tue 25/11/03	Mon 09/02/04														
655	17.1 Tree Planting	329 days	Tue 13/04/04	Thu 26/05/05														
656	17.2 Turfing	42 days	Wed 23/03/05	Tue 17/05/05														
657	17.3 Tree Planting in the vicinity of RW 12	42 days	Fri 01/04/05	Thu 26/05/05														
658	17.4 Turfing in the vicinity of RW12	25 days	Tue 13/04/04	Sat 15/05/04														
659	17.5 Hard Landscaping	15 days	Mon 17/05/04	Thu 03/06/04														
660	18 Project Completion & Handover	50 days	Tue 13/04/04	Tue 15/06/04														
661	18.1 Section I Completion	1269 days	Wed 12/12/01	Thu 02/06/05														
662	18.2 Section IA Completion	0 days	Tue 04/02/03	Tue 04/02/03														
663	18.3 Section II Completion	0 days	Thu 26/06/03	Thu 26/06/03														
663	18.3 Section II Completion	0 days	Thu 02/06/05	Thu 02/06/05														

Date: 18/10/2003

Project Summary

Task Progress

Critical Task Progress

Milestone

Summary

Rollled Up Progress

Rollled Up Critical Task

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Split

External Tasks




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

Sha Tin New Town Stage II Contract No. ST77/01, Road D15 Linking Lok Shun Path and Tai Po Road



MASTER PROGRAMME (ST77/01/MP/13B)



ID	Task Name	Duration	Start	Finish	2004	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2005
664	18.4 Section III Completion	0 days	wed 12/12/01	wed 12/12/01														

Date: 18/10/2003

Task:  Task Progress:  Critical Task: 

Critical Task Progress:  Milestone Summary: 

Rolled Up Task:  Rolled Up Milestone: 

Rolled Up Progress Split:  External Tasks: 

Project Summary: 