



Territory Development Department

Contract No. ST77/01

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

**Monthly Environmental Monitoring & Audit Report -
December, 2003**

January, 2004



Environmental Management Limited

美 華 環 協 管 理 有 限 公 司

**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 –
December 2003**

Checked in accordance with EML QP22
Environmental Team Leader



Peter Lee

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EXECUTIVE SUMMARY

The impact environmental monitoring report was 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. This report discusses the EM&A services that had been carried out in December 2003.

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

The major construction activities in this reporting period included:

- Construction of Bridge A, B and C, including pile caps (Bridge A), abutment walls (Bridge A), abutment (Bridge B) and bridge decks (Bridge A and C);
- Retaining wall 1 and 7;
- Noise barrier construction for noise barrier No.1, noise barrier No.4B and noise barrier No.5;
- Box culvert extension of 1500 diameter pipe;
- Underground drainage and water pipes at Lok Shun Path Roundabout; and
- Construction of staircase 1, 4 and 12.

Over the reporting period, two exceedances in Action Level were noted for the monitored 24-hour TSP level. The exceedances were measured at stations A1 and A3 respectively from 09:30 to 09:30 of next day on 23 December 2003. An Ad-hoc site inspection was carried out on 30 December 2003 by ET, MCAL and BCCL to investigate the matter. It was noted that at the time of the exceedance, excavation work was carried out near Station A1 and shotcreting works was carried out by CED at a slope adjacent to Station A3. It is believed that the exceedance at Station A3 was caused by the slope works rather than the site works under this contract. Regarding the exceedance at Station A1, BCCL was reminded that proper dust control measures should be implemented, and in particular all exposed excavation face should be properly covered.

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

In regard to the environmental issues in the last reporting month, it was noted from site inspections that the oils on oil drum and stagnant water in Area A2, retaining wall 1&2 were removed and water spraying was carried out around stockpiles.

In this month, however, it was noted that some exposed soil faces and the excavation trench near Lok Lo Ha roundabout were not properly covered with tarpaulic sheeting for dust control. The Contractor was reminded to provide adequate dust control measures on site. In addition, it was noted that the Wetsep pump sump was not properly maintained and some sand bags holding back site drainage were missing. The Contractor was reminded to carry out regular checks on the performance of the Wetsep unit.

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 included:

- 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 is the monthly EM&A report for December 2003. This monthly report describes 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. 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**.

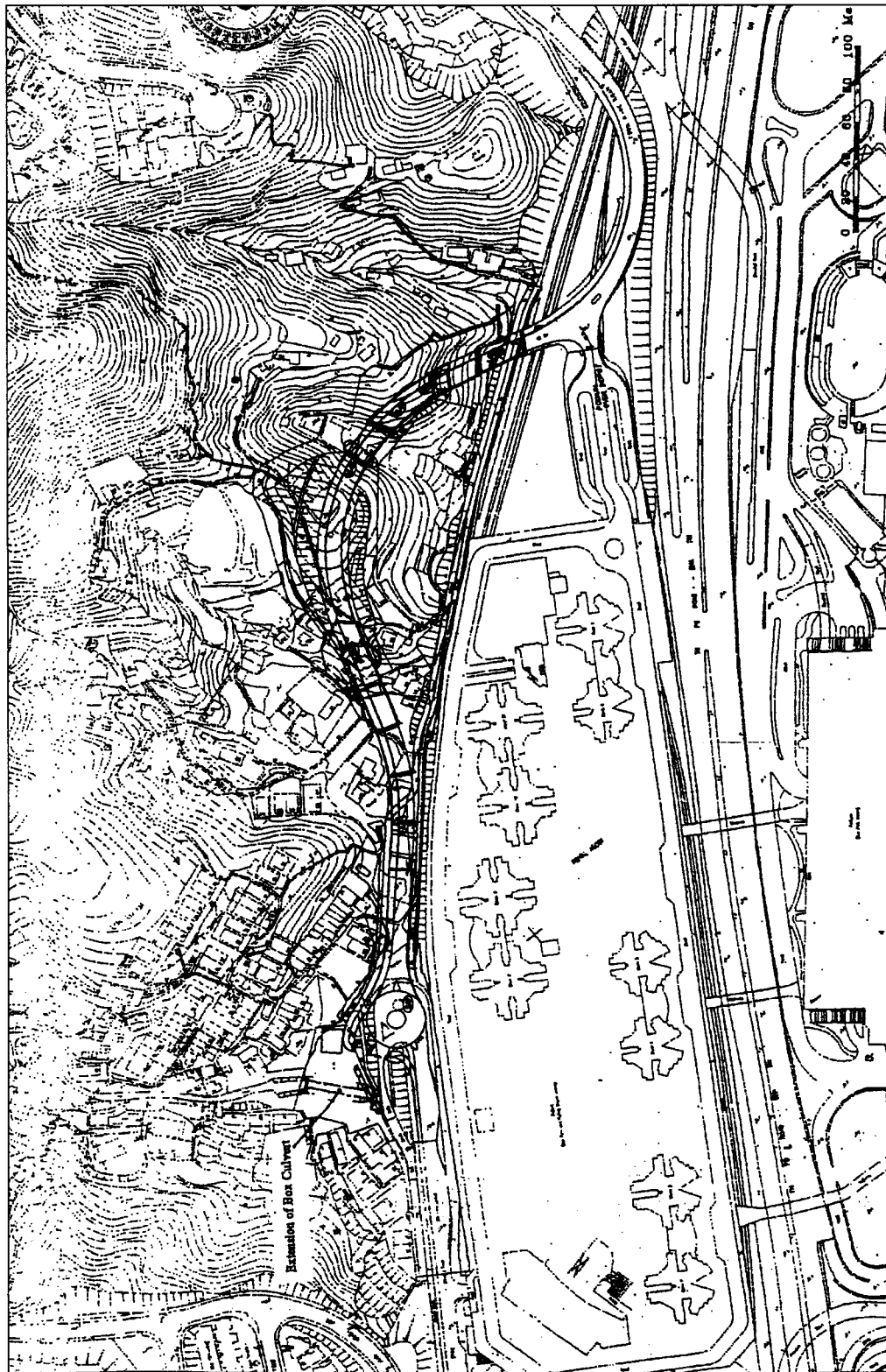


Figure 1.1 Project Area

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 is attached in **Appendix A** while the tentative monitoring schedules for the current and next reporting months 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 December 2003 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 **Appendix C** and **D**. Meanwhile, **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	113.0	81 – 159	1	0
	A2	112.5	78 – 144	0	0
	A3	118.5	85 – 171	1	0
1 – hour TSP	A1	233.4	161 -- 312	0	0
	A2	213.3	120 – 299	0	0
	A3	233.3	92 – 319	0	0

From **Table 2.2** above, two measured 24-hour TSP monitoring data at Stations A1 and A3 had exceeded the relevant Action Levels shown in **Appendix A**. The measured level of $159\mu\text{g}/\text{m}^3$ was $3\mu\text{g}/\text{m}^3$ above the Action Level at Station A1 and the measured level of $171\mu\text{g}/\text{m}^3$ was $18\mu\text{g}/\text{m}^3$ above the Action Level at Station A3 on 23 December 2003 (Time: 09:30 to 09:30 of next day). Consequently, the Event and Action Plan for Air Quality as set out in **Appendix G** was triggered and details were discussed in **Section 3.2** of this report.

Over the reporting period, the local weather conditions during the monitoring were mainly fine. 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 include construction of Bridge A, B and C, retaining wall, noise barrier, box culvert extension, underground drainage and water pipes and staircases. Meanwhile, it was also observed that there were construction activities carried out by sites that were not related to this Project in the vicinity of the monitoring stations.

Comparing with the monitoring results from last month, the calculated mean 24-hour and 1-hour TSP levels at all stations were generally higher in this reporting month. The highest mean TSP levels were recorded at Station A1 (1-hour TSP) with values of $233.4\mu\text{g}/\text{m}^3$ which was relatively higher than the levels recorded in November ($200.9\mu\text{g}/\text{m}^3$).



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 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** while the tentative monitoring schedules for the current and next reporting months are attached in **Appendix B**.

2.2.2 Monitoring Locations

The impact noise monitoring locations are presented in **Table 2.3** and 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 December 2003 at the five designated locations were evaluated. The monitoring results obtained are summarised in **Table 2.4** below. Detailed results, including graphical plots and relevant field logs, are presented in **Appendix E**. Meanwhile, **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	63.9 – 72.7	0	0
	N2	65.3 – 74.4	0	0
	N3	60.3 – 61.5	0	0
	N4	61.4 – 68.8	0	0
	N5	58.3 – 63.0	0	0

From **Table 2.4** above, all noise monitoring data recorded were below the criteria as set out in the Action and Limit Levels in **Appendix A**.

Over the reporting period, the local weather conditions during the sampling were mainly fine, while all monitoring was conducted with wind speed of below 1.9 m/s. Traffic and construction activities were the major noise sources identified at the five monitoring locations. Meanwhile it was noted from field log that activities of piling, excavating, hammering and concreting, as well as operations of construction vehicles and machines including cranes, dump truck, hand-held breakers, were present in the vicinity of the monitoring stations during the monitoring period.

Comparing with the monitoring results recorded in last reporting period, the range of measured noise level during this reporting month at all stations were similar. The highest level was recorded at Station N2 (74.4dB(A)) and occurred in the morning of 8 December. According to the field log, the major noise source at that time was excavation as well as traffic noise.

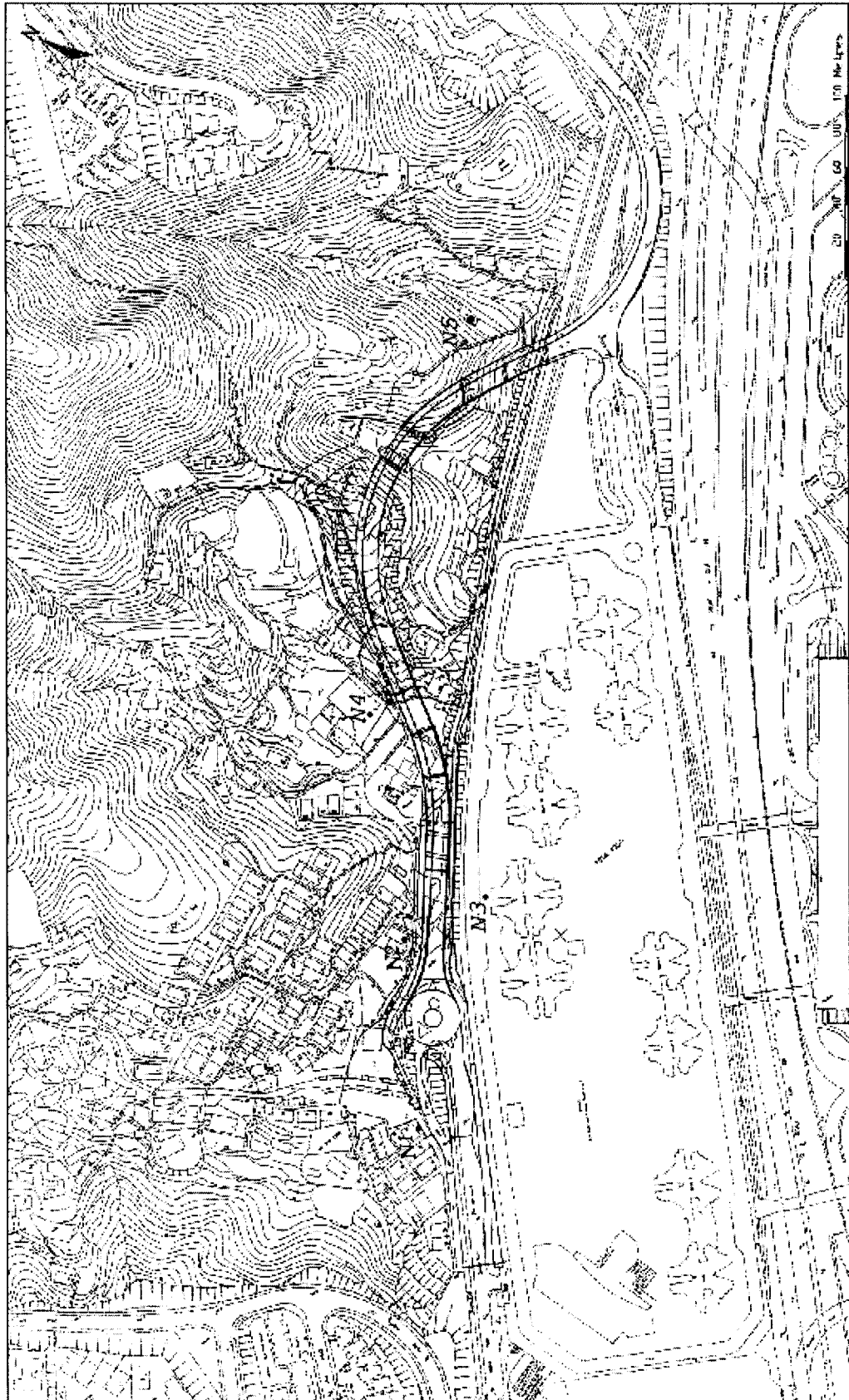


Figure 2.2 Noise Monitoring Locations

3. ENVIRONMENTAL AUDIT

3.1 General

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

- Oils left on the top of oil drum should be removed and properly disposed;
- Stagnant water in Area A2, retaining wall 1 & 2 should be removed to avoid the spread of Dengue Fever; and
- Stockpiles should be sprayed with water and covered with tarpaulic sheeting.

It was noted from site inspections that the oils on oil drum and stagnant water in Area A2, retaining wall 1&2 were removed and water spraying was carried out around stockpiles.

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
4 December 2003 (Thursday)	Regular Site Inspection
11 December 2003 (Thursday)	Regular Site Inspection
17 December 2003 (Wednesday)	Regular Site Inspection
23 December 2003 (Tuesday)	Regular Site Inspection
30 December 2003 (Tuesday)	Regular Site Inspection

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

- Construction of Bridge A, B and C, including pile caps (Bridge A), abutment walls (Bridge A), abutment (Bridge B) and bridge decks (Bridge A and C);
- Retaining wall 1 and 7;
- Noise barrier construction for noise barrier No.1, noise barrier No.4B and noise barrier No.5;
- Box culvert extension of 1500 diameter pipe;
- Underground drainage and water pipes at Lok Shun Path Roundabout; and
- Construction of staircase 1, 4 and 12.

3.2 Assessment of Environmental Monitoring Results

In this reporting month, there were two incidents where the monitoring results had exceeded the Action Level specified in **Appendix A**. The exceedances occurred for 24-hour TSP measured at Stations A1 and A2 respectively on 23 December 2003. The monitoring results were discussed in **Section 2** of the report and are summarised in **Tables 3.2** and **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	01/12/03 to 31/12/03	18	2	0
2	1 – hour TSP	01/12/03 to 31/12/03	54	0	0
3	30-minute Noise Measurement (Leq)	01/12/03 to 31/12/03	30	0	0

Table 3.3 Summary of Non-Compliance with Relevant Criteria

Location	Parameter	Data & Time of Exceedance	Measured Level ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Type of Exceedance
Lok Lo Ha Village	24 – hour TSP Measurement ($\mu\text{g}/\text{m}^3$)	23 December (09:30 to 09:30 of next day)	159.0	156.0	Action Level (by $3\mu\text{g}/\text{m}^3$)
Village House near Tsun King Road	24 – hour TSP Measurement ($\mu\text{g}/\text{m}^3$)	23 December (09:30 to 09:30 of next day)	171.0	153.0	Action Level (by $18\mu\text{g}/\text{m}^3$)

As shown in **Table 3.3**, the measured levels of $159.0 \mu\text{g}/\text{m}^3$ at Station A1 and $171.0 \mu\text{g}/\text{m}^3$ at Station A3 are $3 \mu\text{g}/\text{m}^3$ and $18 \mu\text{g}/\text{m}^3$ above the Action Levels respectively. Since exceedances in Action Levels had occurred, the Event and Action Plan for Air Quality attached in **Appendix G** was triggered. An Ad-hoc site inspection was carried out on 30 December 2003 by ET, MCAL and BCCL to investigate the matter. It was noted that at the time of the exceedance, excavation work was carried out near Station A1 and shotcreting works was carried out by CED at a slope adjacent to Station A3. It is believed that the exceedance at Station A3 was caused by the slope works rather than the site works under this contract. Regarding the exceedance at Station A1, BCCL was reminded that proper dust control measures should be implemented, and in particular all exposed excavation face should be properly covered.

3.3 Environmental Complaints

No environmental complaints had been received by the Environmental Team against the construction site in this reporting month. **Table 3.4** shows the summary record for this reporting month while **Table 3.5** summarises the complaint statistics from the commencement of the Project to date. **Appendix I** listed the details of all the complaints received on the construction site.

Table 3.4 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 3.5 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 3.6 presented 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	Installed and in operation.
	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	Installed at the existing channel.
Wastewater	Water Reuse at wheel washing facility and site investigation drilling works.	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

In this month, it was noted from site inspections that some exposed soil faces and the excavation trench near Lok Lo Ha roundabout were not properly covered with tarpaulic sheeting for dust control. The Contractor was reminded to provide adequate dust control measures on site. In addition, it was noted that the Wetsep pump sump was not properly maintained and some sand bags holding back site drainage were missing. The Contractor was reminded to carry out regular checks on the performance of the Wetsep unit.

4. FUTURE KEY ISSUE AND RECOMMENDATION

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

- Exposed soil faces and excavation trenches should be covered with tarpaulic sheeting;
- The Wetsep unit shall be properly maintained and regularly checked on site to ensure that it is functioning.

The updated work program for the following months are attached in **Appendix J** while the monitoring tentative schedule for the next reporting month are 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. Tentative Schedule for Current Reporting Month – December 2003

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 Dec 2003

Dec-03	Day	Start Time	
		24-hr TSP	1-hr TSP
1	Mon	09:30	08:00
2	Tue	x	09:50,11:00
3	Wed	x	x
4	Thu	x	x
5	Fri	09:30	08:00
6	Sat	x	x
7	Sun	x	x
8	Mon	x	08:00,11:00
9	Tue	x	x
10	Wed	x	x
11	Thu	09:30	08:00
12	Fri	x	09:50,11:00
13	Sat	x	x
14	Sun	x	x
15	Mon	x	x
16	Tue	x	x
17	Wed	09:30	08:00
18	Thu	x	09:50,11:00
19	Fri	x	x
20	Sat	x	x
21	Sun	x	x
22	Mon	x	x
23	Tue	09:30	08:00
24	Wed	x	09:50,11:00
25	Thu	x	x
26	Fri	x	x
27	Sat	x	x
28	Sun	x	x
29	Mon	09:30	08:00
30	Tue	x	09:50,11:00
31	Wed	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 Dec 2003

Dec-03	Day	Start Time				
		N1	N2	N3	N4	N5
1	Mon	x	x	x	x	x
2	Tue	09:50	11:15	13:00	10:25	09:00
3	Wed	x	x	x	x	x
4	Thu	x	x	x	x	x
5	Fri	x	x	x	x	x
6	Sat	x	x	x	x	x
7	Sun	x	x	x	x	x
8	Mon	09:50	11:15	13:00	10:25	09:00
9	Tue	x	x	x	x	x
10	Wed	x	x	x	x	x
11	Thu	x	x	x	x	x
12	Fri	09:50	11:15	13:00	10:25	09:00
13	Sat	x	x	x	x	x
14	Sun	x	x	x	x	x
15	Mon	x	x	x	x	x
16	Tue	x	x	x	x	x
17	Wed	x	x	x	x	x
18	Thu	09:50	11:15	13:00	10:25	09:00
19	Fri	x	x	x	x	x
20	Sat	x	x	x	x	x
21	Sun	x	x	x	x	x
22	Mon	x	x	x	x	x
23	Tue	x	x	x	x	x
24	Wed	09:50	11:15	13:00	10:25	09:00
25	Thu	x	x	x	x	x
26	Fri	x	x	x	x	x
27	Sat	x	x	x	x	x
28	Sun	x	x	x	x	x
29	Mon	x	x	x	x	x
30	Tue	09:50	11:15	13:00	10:25	09:00
31	Wed	x	x	x	x	x

2. Tentative Schedule for Next Reporting Month – January 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 Jan 2004

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

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 Road D15 Linking Lok Shun Path and Tai Po Road
 Tentative Time Schedule for Construction Phase Noise Monitoring for Jan 2004

Jan-04	Day	Start Time				
		N1	N2	N3	N4	N5
1	Thu	x	x	x	x	x
2	Fri	x	x	x	x	x
3	Sat	x	x	x	x	x
4	Sun	x	x	x	x	x
5	Mon	09:50	11:15	13:00	10:25	09:00
6	Tue	x	x	x	x	x
7	Wed	x	x	x	x	x
8	Thu	x	x	x	x	x
9	Fri	09:50	11:15	13:00	10:25	09:00
10	Sat	x	x	x	x	x
11	Sun	x	x	x	x	x
12	Mon	x	x	x	x	x
13	Tue	x	x	x	x	x
14	Wed	x	x	x	x	x
15	Thu	09:50	11:15	13:00	10:25	09:00
16	Fri	x	x	x	x	x
17	Sat	x	x	x	x	x
18	Sun	x	x	x	x	x
19	Mon	x	x	x	x	x
20	Tue	x	x	x	x	x
21	Wed	09:50	11:15	13:00	10:25	09:00
22	Thu	x	x	x	x	x
23	Fri	x	x	x	x	x
24	Sat	x	x	x	x	x
25	Sun	x	x	x	x	x
26	Mon	x	x	x	x	x
27	Tue	09:50	11:15	13:00	10:25	09:00
28	Wed	x	x	x	x	x
29	Thu	x	x	x	x	x
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			
1-Dec-03	2.7954	2.9696	1.11	1.11	12464.17	12488.17	1440	109	Fine
5-Dec-03	2.8376	2.9695	1.11	1.11	12491.17	12515.17	1440	83	Fine
11-Dec-03	2.8270	3.0733	1.11	1.11	12518.17	12542.17	1440	154	Fine
17-Dec-03	2.7791	2.9086	1.11	1.11	12545.17	12569.17	1440	81	Fine
23-Dec-03	2.7934	3.0480	1.11	1.11	12572.17	12596.17	1440	159	Fine
29-Dec-03	2.8059	2.9525	1.11	1.11	12599.17	12623.17	1440	92	Fine
							Min	81	
							Max	159	
							Average	113.0	

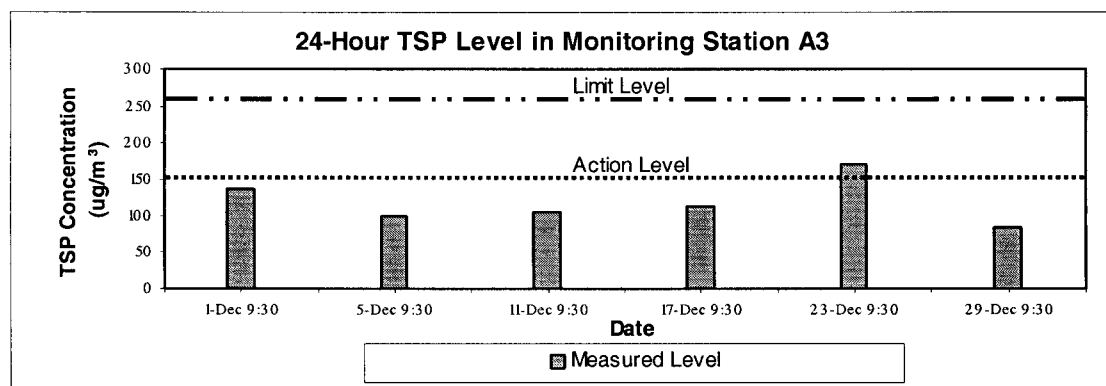
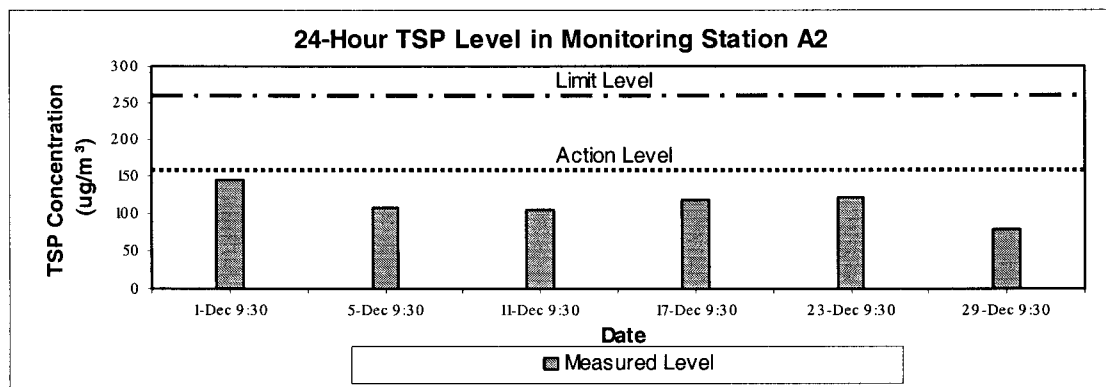
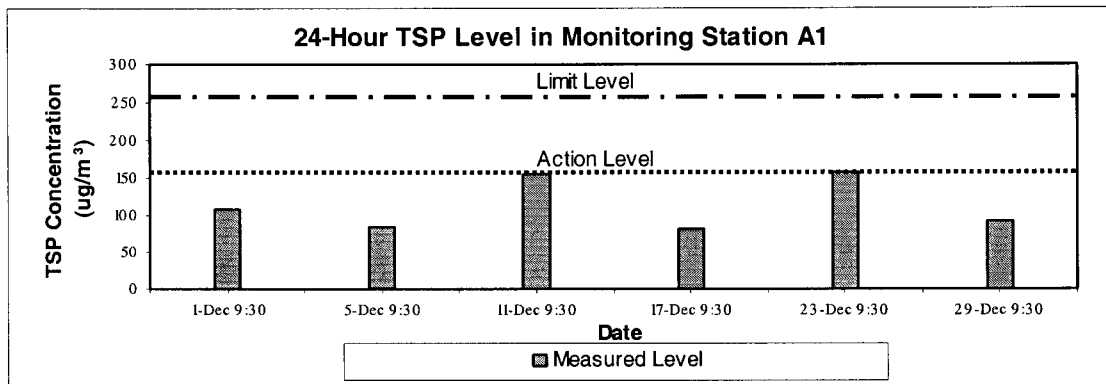
Monitoring Station A2 (Lok Lo Ha Village House No. 104)

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			
1-Dec-03	2.7913	3.0216	1.11	1.11	3137.75	3161.75	1440	144	Fine
5-Dec-03	2.8189	2.9920	1.11	1.11	3164.75	3188.75	1440	108	Fine
11-Dec-03	2.8231	2.9919	1.11	1.11	3191.75	3215.75	1440	106	Fine
17-Dec-03	2.7789	2.9683	1.11	1.11	3218.75	3242.75	1440	118	Fine
23-Dec-03	2.8148	3.0087	1.11	1.11	3245.75	3269.75	1440	121	Fine
29-Dec-03	2.8106	2.9353	1.11	1.11	2172.75	3296.75	1440	78	Fine
							Min	78	
							Max	144	
							Average	112.5	

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			
1-Dec-03	2.7998	3.0192	1.11	1.11	11652.07	11676.07	1440	137	Fine
5-Dec-03	2.8249	2.9826	1.11	1.11	11679.07	11703.07	1440	99	Fine
11-Dec-03	2.7997	2.9694	1.11	1.11	11706.07	11730.07	1440	106	Fine
17-Dec-03	2.7893	2.9700	1.11	1.11	11733.07	11757.07	1440	113	Fine
23-Dec-03	2.8123	3.0861	1.11	1.11	11760.07	11784.07	1440	171	Fine
29-Dec-03	2.7931	2.9282	1.11	1.11	11787.07	11811.07	1440	85	Fine
							Min	85	
							Max	171	
							Average	118.5	

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, $\mu\text{g}/\text{m}^3$
1-Dec-03	8000 – 9000	231
2-Dec-03	0950 – 1050	161
2-Dec-03	1100 – 1200	182
5-Dec-03	0800 – 0900	171
8-Dec-03	0950 – 1050	221
8-Dec-03	1100 – 1200	230
11-Dec-03	0800 – 0900	306
12-Dec-03	0950 – 1050	177
12-Dec-03	1105 – 1205	231
17-Dec-03	0800 – 0900	276
18-Dec-03	0950 – 1050	243
18-Dec-03	1105 – 1205	173
23-Dec-03	0800 – 0900	312
24-Dec-03	0950 – 1050	240
24-Dec-03	1100 – 1200	297
29-Dec-03	0800 – 0900	287
30-Dec-03	0950 – 1050	248
30-Dec-03	1110 – 1210	215
	Average	233.4
	Min	161
	Max	312

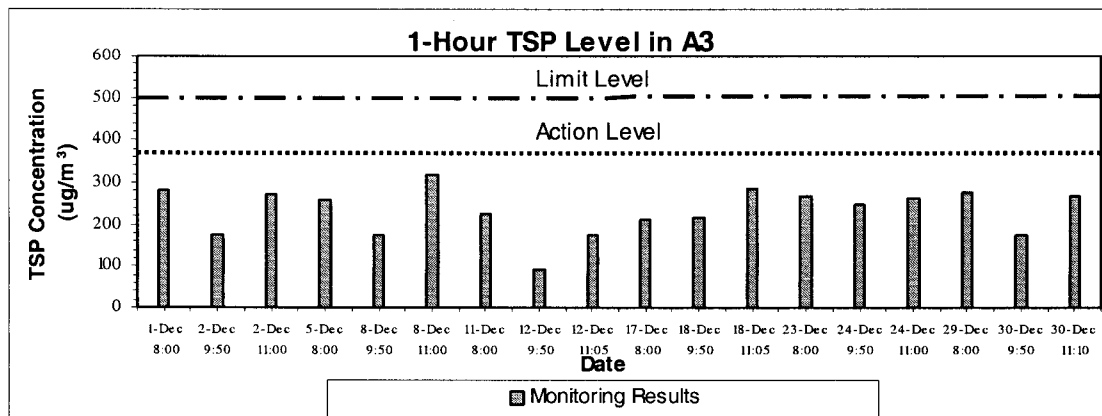
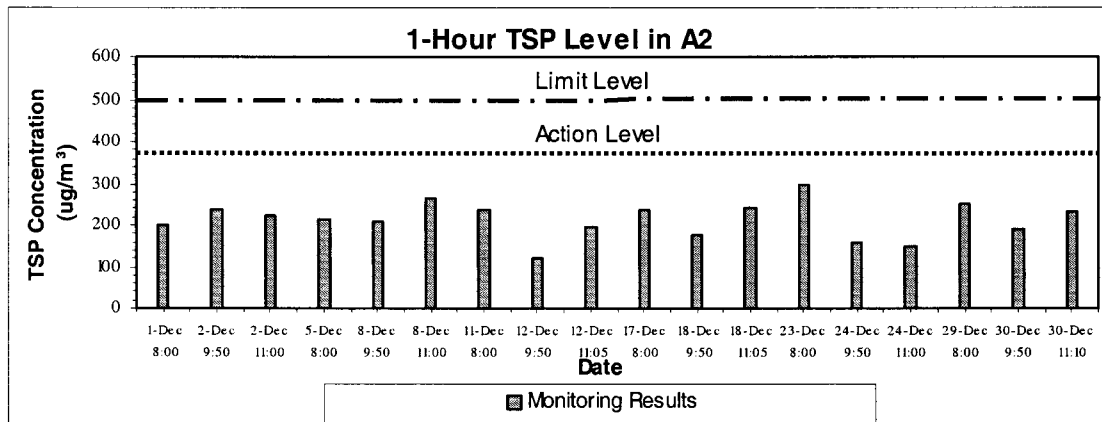
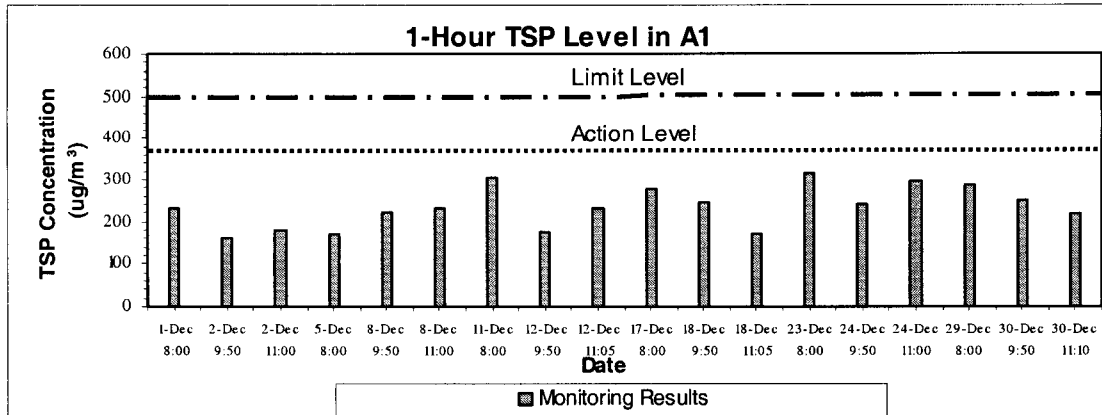
Station A2 (Lok Lo Ha Village House No. 104)

Date	Time of sampling	Concentration, $\mu\text{g}/\text{m}^3$
1-Dec-03	8000 – 9000	201
2-Dec-03	0950 – 1050	239
2-Dec-03	1100 – 1200	224
5-Dec-03	0800 – 0900	213
8-Dec-03	0950 – 1050	207
8-Dec-03	1100 – 1200	264
11-Dec-03	0800 – 0900	239
12-Dec-03	0950 – 1050	120
12-Dec-03	1105 – 1205	197
17-Dec-03	0800 – 0900	236
18-Dec-03	0950 – 1050	176
18-Dec-03	1105 – 1205	240
23-Dec-03	0800 – 0900	299
24-Dec-03	0950 – 1050	159
24-Dec-03	1100 – 1200	147
29-Dec-03	0800 – 0900	252
30-Dec-03	0950 – 1050	192
30-Dec-03	1110 – 1210	234
	Average	213.3
	Min	120
	Max	299

Station A3 (Village House near Tsun King Road)

Date	Time of sampling	Concentration, $\mu\text{g}/\text{m}^3$
1-Dec-03	8000 – 9000	282
2-Dec-03	0950 – 1050	176
2-Dec-03	1100 – 1200	272
5-Dec-03	0800 – 0900	258
8-Dec-03	0950 – 1050	177
8-Dec-03	1100 – 1200	319
11-Dec-03	0800 – 0900	228
12-Dec-03	0950 – 1050	92
12-Dec-03	1105 – 1205	177
17-Dec-03	0800 – 0900	213
18-Dec-03	0950 – 1050	216
18-Dec-03	1105 – 1205	288
23-Dec-03	0800 – 0900	267
24-Dec-03	0950 – 1050	248
24-Dec-03	1100 – 1200	264
29-Dec-03	0800 – 0900	275
30-Dec-03	0950 – 1050	177
30-Dec-03	1110 – 1210	270
	Average	233.3
	Min	92
	Max	319

2. Plots of 1-hour TSP Monitoring Results



APPENDIX E:

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

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
2-Dec-03	0930 – 1000	72.3	75.0	68.2
8-Dec-03	0930 – 1000	66.1	67.9	62.7
12-Dec-03	0930 – 1000	65.8	67.5	64.0
18-Dec-03	0930 – 1000	64.6	66.7	58.7
24-Dec-03	0930 – 1000	72.7	75.9	66.0
30-Dec-03	0925 – 0955	63.9	66.3	59.8

Min	63.9	66.3	58.7
Max	72.7	75.9	68.2

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
2-Dec-03	1047 – 1117	70.3	73.3	65.3
8-Dec-03	1050 – 1020	74.4	76.9	68.8
12-Dec-03	1049 – 1119	70.9	72.8	68.3
18-Dec-03	1053 – 1123	65.3	68.9	60.4
24-Dec-03	1050 – 1120	69.1	72.7	62.0
30-Dec-03	1050 – 1120	66.2	69.4	61.0

Min	65.3	68.9	60.4
Max	74.4	76.9	68.8

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
2-Dec-03	1300 – 1330	61.0	63.8	56.3
8-Dec-03	1300 – 1330	60.3	63.3	56.8
12-Dec-03	1300 – 1330	60.7	62.9	55.4
18-Dec-03	1300 – 1330	60.9	63.1	56.6
24-Dec-03	1300 – 1330	61.5	64.0	54.3
30-Dec-03	1300 – 1330	60.7	62.6	56.7

Min	60.3	62.6	54.3
Max	61.5	64.0	56.8

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
2 -Dec-03	1123 – 1153	61.4	64.4	55.3
8-Dec-03	1125 – 1155	62.1	64.2	55.9
12-Dec-03	1125 – 1155	62.2	63.5	56.9
18-Dec-03	1128 – 1158	66.4	68.9	58.8
24-Dec-03	1125 – 1155	68.8	72.4	59.8
30-Dec-03	1125 – 1155	68.1	72.2	55.0

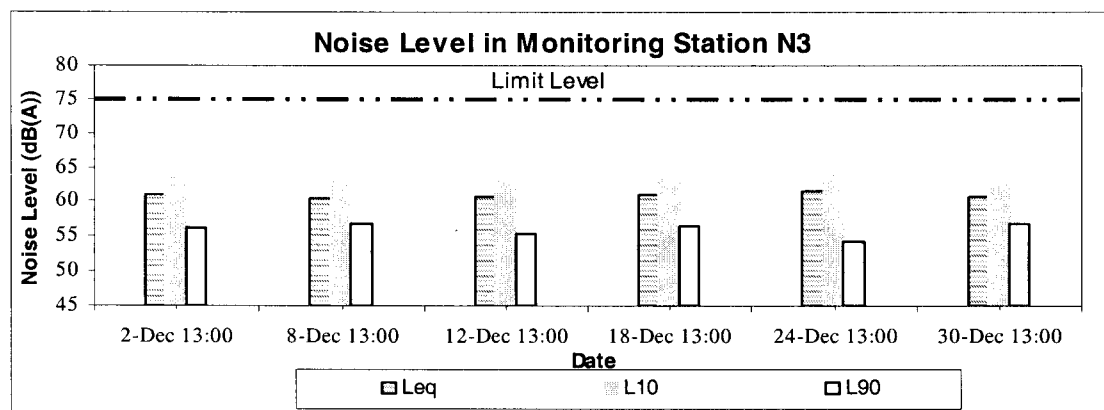
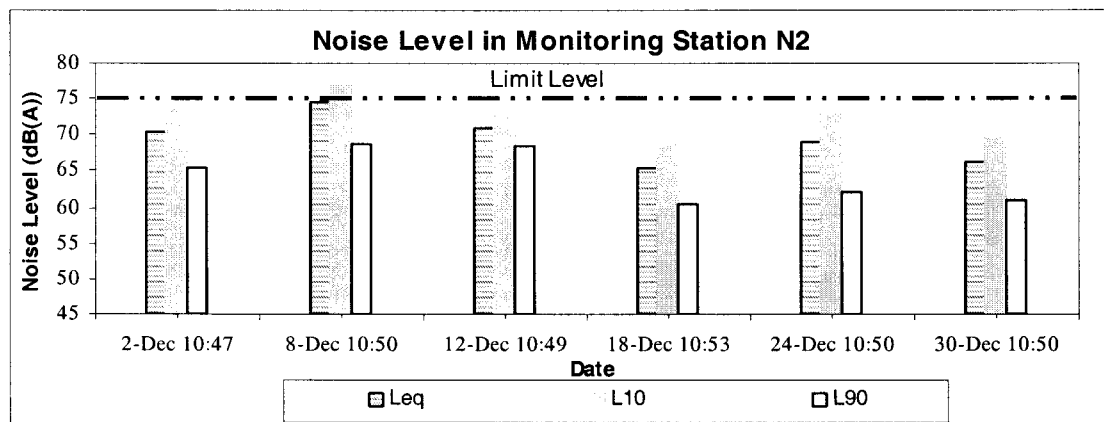
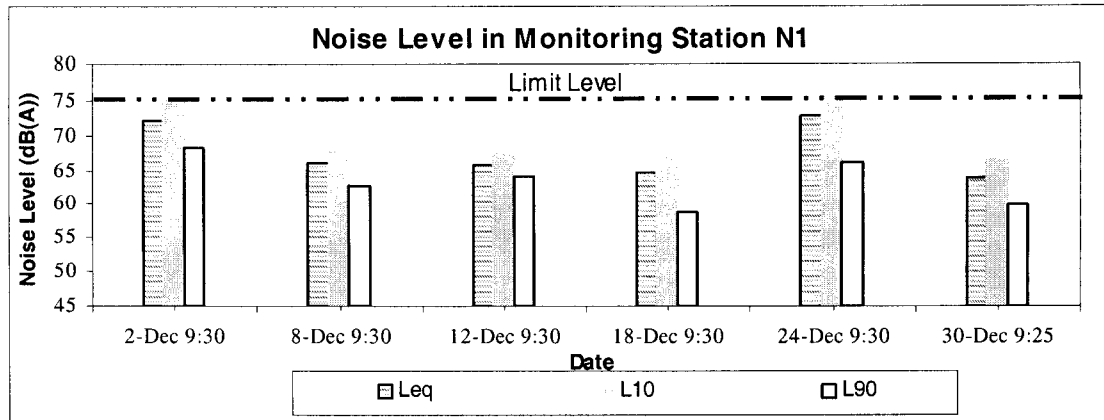
Min	61.4	63.5	55.0
Max	68.8	72.4	59.8

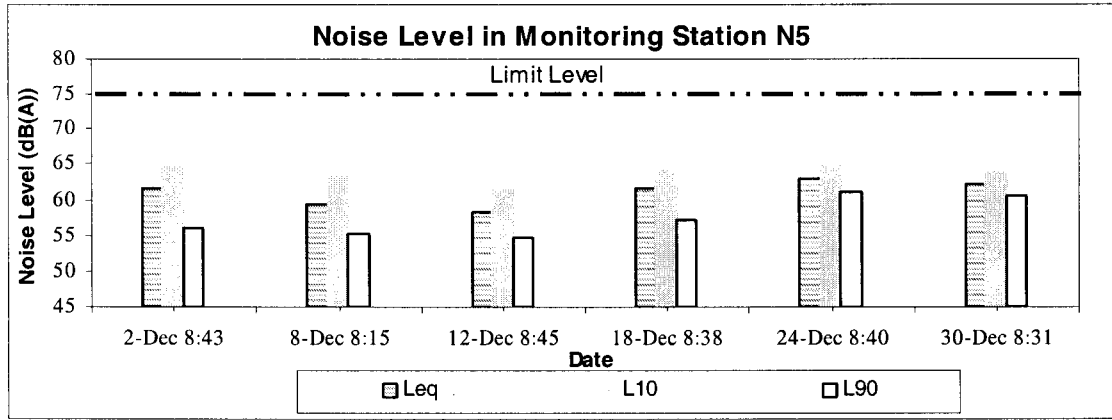
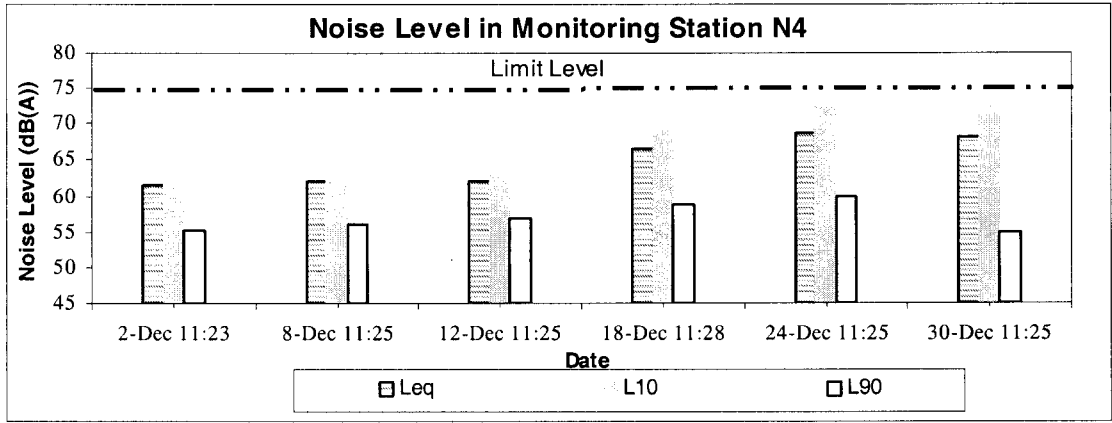
Monitoring Station N5 (Village House near Royal Ascot)

Date	Noise Level for 30 min, dB(A)			
	Time of Sampling	L _{eq}	L ₁₀	L ₉₀
2 -Dec-03	0843 – 0913	61.6	64.7	55.9
8-Dec-03	0815 – 0845	59.2	63.1	55.1
12-Dec-03	0845 – 0915	58.3	61.3	54.7
18-Dec-03	0838 – 0908	61.5	64.0	57.2
24-Dec-03	0840 – 0910	63.0	64.8	61.0
30-Dec-03	0831 – 0901	62.1	63.7	60.5

Min	58.3	61.3	54.7
Max	63.0	64.8	61.0

2. Plots of Noise Monitoring Results





APPENDIX F:

**Weather Conditions During
Monitoring Periods**

**Weather Condition during Monitoring Period
(From 1 to 31 December 2003)**

Date	Weather	Mean Air Temperature (°C)	Wind Speed (m/s)	Mean Relative Humidity (%)
1-Dec-03	Fine	18.1	1.0	72
2-Dec-03	Fine	18.3	1.0	68
5-Dec-03	Fine	20.6	1.0	77
8-Dec-03	Fine – Cloudy	19.1	1.0 – 1.3	73
11-Dec-03	Fine	17.8	1.7	65
12-Dec-03	Fine	16.1	1.0 – 1.8	56
17-Dec-03	Fine	17.3	1.6 – 1.7	70
18-Dec-03	Fine	18.0	1.0 – 1.8	64
23-Dec-03	Fine	17.2	1.0	78
24-Dec-03	Fine	18.2	1.0	72
29-Dec-03	Fine	17.9	1.0	73
30-Dec-03	Fine	18.7	1.0	72

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.

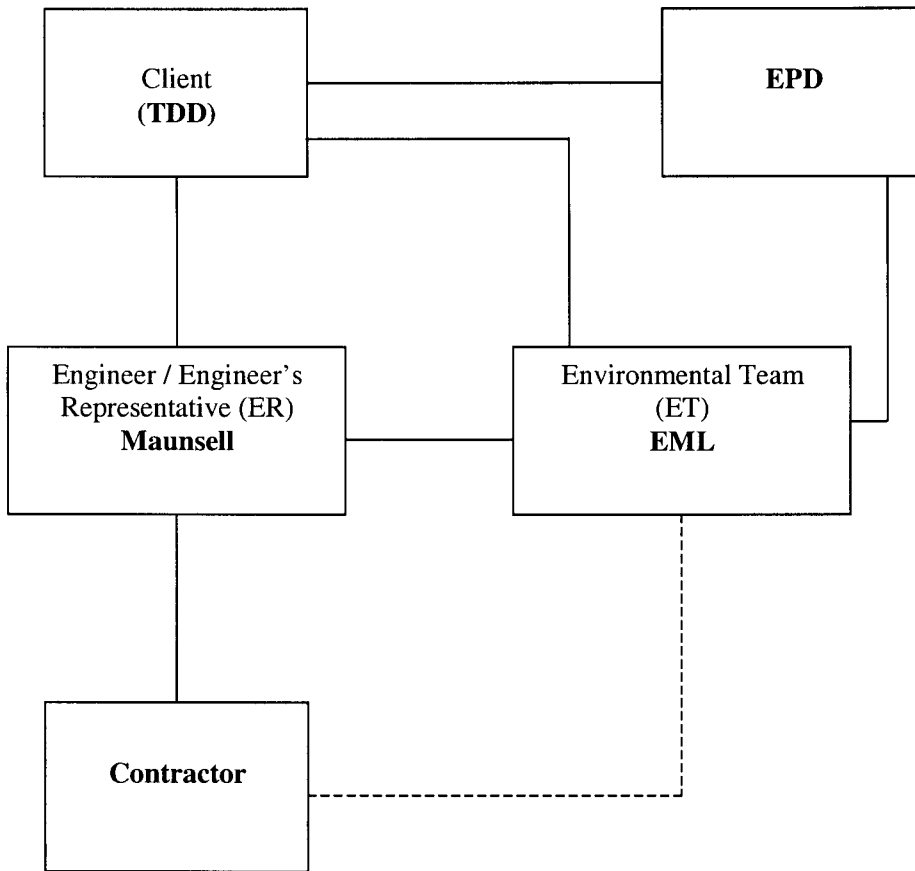
Event / Action Plan for Construction Noise

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 Organisation 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
Territory Development Department (TDD)	Client	Mr. Stephen Wong	2301-1376	2721-8630
Maunsell Consultants Asia Ltd. (MCAL)	Engineer	Mr. Alan Kwong	2602-3433	2691-2649
Environmental Management Ltd. (EML)	Environmental Team	Mr. Lawrence Tso	2890-1090	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	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, will be 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. 	The complaint was considered as ad hoc rather than continuous. It is therefore considered not necessary to increase the noise monitoring frequency File Closed.
C02-N2	Night-time, 7 December, 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 December 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, has 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 plants are switched off after the permissible working hours. 	File Closed.

APPENDIX J:

**Updated Construction
Program**

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

MASTER PROGRAMME (ST7701/MP/13B)

ID	Task Name	Start	Duration	2004	2004	2004	2004
ID	Task Name	Start	Duration	Oct	Nov	Dec	Jan
0	Road D15 Acceleration Programme	Wed 12/12/01	1077 days				Feb
1	1.0 Original Contract Period	Wed 12/12/01	1197 days				
2	1.1 Works in Section I (345 days)	Wed 12/12/01	345 days				
3	1.2 Works in Section IA (475 Days)	Wed 12/12/01	475 days				
4	1.3 Works in Section II (622 days)	Wed 12/12/01	822 days				
5	1.4 Landscape Work in Section III (187 Days)	Wed 12/12/01	1187 days				
6	2.0 Anticipated Dates	Fri 22/11/02	983 days				
7	2.1 Anticipated BOT for Section I	Fri 22/11/02	249.5 days				
8	2.2 Anticipated Completion Date for Section IA	Mon 31/03/03	0 days				
9	2.3 Anticipated Completion Date for Section II	Sat 13/06/04	141 days				
10	2.4 Anticipated Completion Date for Section III	Sun 01/06/04	365 days				
11	3 Preliminary & Site Establishment	Wed 12/12/01	626 days				19 January 2004
29	4 Earthworks	Thu 13/06/02	445 days			05 December 2003	
35	5 Entranchment Works (Section I & IA)	Tue 15/01/02	453 days				
45	6 Bridge A & General	Wed 12/12/01	761 days				
46	6.1 Design Submission of Alternative Design (I Beam)	Wed 12/12/01	180 days				
47	6.2 Procurement, manufacturing and testing of bridge bearings	Tue 14/05/02	63.2 days				
48	6.3 Engineer's Approval of Off Site Casting Yard	Mon 04/02/02	180 days				
49	6.4 Fabrication of precast beams	Wed 13/11/02	150 days				
50	6.5 Fabricate PC panned permanent formwork	Fri 24/01/03	200 days				
51	6.6 Ground Investigation	Fri 17/05/02	62 days				
52	6.7 Piling Works at A1 to A5	Fri 10/05/02	76 days				
58	6.8 Pile Caps Construction A1 to A5	Sat 19/10/02	368 days				13 January 2004
59	6.8.1 A1 Pile Cap	Thu 13/02/03	30 days				
60	6.8.2 A2 Pile Cap	Thu 12/12/02	24 days				
61	6.8.3 A3 Pile Cap	Sat 19/10/02	22 days				
62	6.8.4 A4 Pile Cap	Fri 25/10/02	24 days				
63	6.8.5 A5 Pile Cap	Mon 17/08/03	247 days				13 January 2004
64	6.8.5.1 A5 Pile Cap (1st Portion)	Mon 17/08/03	110 days				
65	6.8.5.2 A5 Pile Cap (2nd Portion)	Tue 16/12/03	22 days				13 January 2004
66	6.9 Abutment Wall A1 to A5	Fri 29/11/02	359 days				14 February 2004
67	6.9.1 A1 Abutment Wall	Mon 14/04/03	162 days				
68	6.9.1.2 A1 (1st portion to allow site access to C2)	Mon 14/04/03	30 days				
69	6.9.1.2 A1 (upper Portion)	Mon 25/06/03	55 days				
70	6.9.2 A2 Pier & Cross Head	Wed 29/01/03	197 days				
71	6.9.2.1 Pier only To allow access to C2	Wed 29/01/03	22 days				
72	6.9.2.2 A2 Crosshead	Mon 25/06/03	29 days				
73	6.9.3 A3 Pier & Cross Head	Thu 02/01/03	30 days				
74	6.9.4 A4 Pier & Cross Head	Fri 29/11/02	12 days				
75	6.9.5 A5 Abutment Wall	Mon 18/06/03	148 days				14 February 2004
76	6.9.5.1 A5 Abutment wall (Portion 1 to allow site access)	Mon 18/06/03	50 days				
77	6.9.5.2 A5 Abutment wall (Portion 2)	Wed 14/01/04	25 days				14 February 2004
78	6.10 Install bridge bearings A1 to A5	Thu 23/01/03	326 days				14 February 2004
79	6.10.1 A1 - A2 Bridge Bearings	Wed 05/11/03	6 days				
80	6.10.2 A3 - A3 Bridge Bearings	Wed 05/11/03	6 days				
81	6.10.3 A3 - A4 Bridge Bearings	Thu 23/01/03	6 days				
82	6.10.4 A4 - A5 Bridge Bearings	Fri 20/02/04	6 days				
83	6.11 Install Precast Beams A1 to A5	Fri 14/02/03	349 days				14 February 2004
84	6.11.1 A1 to A2 PC Beams	Thu 20/11/03	6 days				

Date: 18/10/2003

Task Progress: Task Progress: Critical Task Progress: Critical Task Progress:

Milestone Summary: Milestone Summary:

Roll Up Task: Roll Up Task: Roll Up Critical Task: Roll Up Critical Task:

Roll Up Milestone: Roll Up Milestone:

Split External Tasks: Split External Tasks:

Project Summary: Project Summary:

MASTER PROGRAMME (S17701/MP/13B)
 She Tin New Town Stage II Contract No. S17701 - Road D15 Linking Lok Shun Path and Tai Po Road

ID	Task Name	Duration	Start	Oct	Nov	Dec	Jan	Feb
85	6.11.2 A3 to A3 PC Beams	3 days	Tue 13/04/04					
86	6.11.3 A3 to A4 PC Beams	3 days	Fri 14/02/03					
87	6.11.4 A4 to A5 PC Beams (Storage on Span A3 to A4)	6 days	Mon 29/7/03					
88	6.11.4 A4 to A5 PC Beams	6 days	Tue 02/03/04					
89	6.12 Bridge Deck Construction A1 to A5	375 days	Mon 24/02/03					
90	6.12.1 A1 to A2 Bridge Deck	50 days	Fri 28/1/03					
91	6.12.2 A2 to A3 Bridge Deck	32 days	Fri 16/04/04					
92	6.12.3 A3 to A4 Bridge Deck	95 days	Mon 24/02/03					
93	6.12.4 A4 to A5 Bridge Deck	50 days	Wed 10/03/04					
94	6.13 Bridge Deck Drainage	104 days	Fri 20/02/04					
95	6.13.1 A1 to A2 Drainage Pipe, MH cover & Gully	18 days	Fri 14/05/04					
96	6.13.2 A2 to A3 Drainage Pipe, MH cover & Gully	18 days	Wed 03/03/04					
97	6.13.3 A3 to A4 Drainage Pipe, MH cover & Gully	18 days	Thu 03/06/04					
98	6.13.4 A4 to A5 Drainage Pipe, MH cover & Gully	18 days	Mon 15/09/03					
99	6.14 Bridge deck Parapet & Curb	240 days	Mon 15/09/03					
100	6.14.1 A1 to A2 Parapet & Curb	30 days	Fri 06/02/04					
101	6.14.2 A2 to A3 Parapet & Curb	27 days	Tue 01/06/04					
102	6.14.3 A3 to A4 Parapet & Curb	60 days	Mon 15/09/03					
103	6.14.4 A4 to A5 Parapet & Curb	30 days	Wed 19/05/04					
104	7 Bridge B	527 days	Wed 11/09/02					
105	7.1 Ground Investigation	36 days	Wed 11/09/02					
106	7.2 Pre Bore H-Piles	230 days	Fri 13/7/2002					
107	7.2.1 B1 H Piles	29 days	Fri 13/7/2002					
108	7.2.2 B2 H Piles	27 days	Mon 11/08/03					
109	7.2.3 Loading test on Pile	12 days	Tue 09/09/03					
110	7.3 Pile Cap & Abutment Wall B1 & B2	51 days	Wed 24/09/03					
111	7.3.1 Temp. works for B1 Pile Cap	35 days	Wed 24/09/03					
112	7.3.2 Construct B1 Pile Cap	16 days	Wed 05/11/03					
127								
128	7.3.3 B1 Abutment	19 days	Mon 24/11/03					
135	Remove temp work and backfilling at B1 Abutment	10 days	Tue 16/12/03					
136								
137	7.3.4 Temp. works for B2 Pile Cap	94 days	Wed 15/10/03					
139								
148	7.4 Install Bridge Bearings	8 days	Fri 06/02/04					
169	7.4.1 B1 bridge Bearings	6 days	Fri 06/02/04					
170	7.4.2 B2 bridge Bearings	6 days	Mon 09/02/04					
171	7.5 Install Precast Beams B1 to B2	6 days	Wed 18/02/04					
172	7.6 Bridge Deck Construction B1 to B2	50 days	Wed 25/02/04					
173	7.7 Bridge deck Drainage B1 to B2	25 days	Wed 28/04/04					
174	7.8 Bridge Deck Parapet & Curb B1 to B2	20 days	Sat 29/05/04					
175	7.9 Remove Temp Platform (Underneath Bridge Deck)	30 days	Wed 28/02/04					
176	7.10 Reinstatate Exg Valley	60 days	Sat 27/03/04					
177	8 Bridge C	582 days	Thu 01/08/02					
178	8.1 Ground Investigation	62 days	Thu 01/08/02					
179	8.2 Pre Bore H-Piles	224 days	Mon 18/11/02					
180	8.2.1 C1 H Piles	35 days	Fri 11/07/03					
181	8.2.2 C2 H Piles	52 days	Mon 18/11/02					
182	8.3 Pile Cap & Abutment Wall C1 & C2	260 days	Tue 23/02/03					
183	8.3.1 Temp. works and Construct C1 Pile Cap	39 days	Mon 29/09/03					

Date: 18/10/2003

Task Progress: [Progress bar]

Critical Task Progress: [Progress bar]

Milestone Summary: [Progress bar]

Roll Up Task: [Progress bar]

Roll Up Critical Task: [Progress bar]

Roll Up Milestone: [Progress bar]

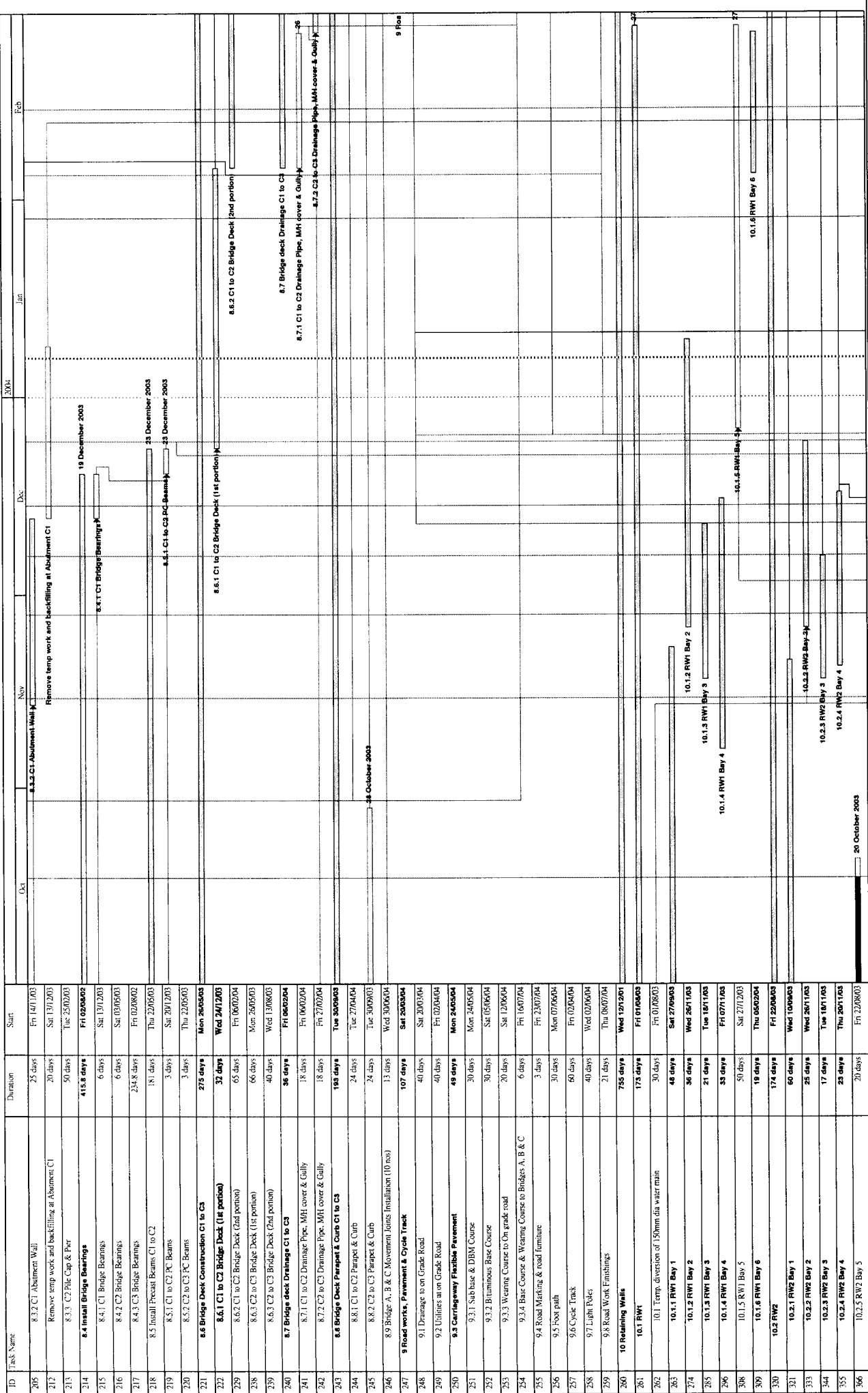
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Project Summary: [Progress bar]

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MASTER PROGRAMME (S177/01/MP/13B)

Sha Tin New Town Stage II Contract No. S177/01 Road D15 Linking Lok Shun Path and Tai Po Road



Date: 18/10/2003

Task Progress: [Progress Bar]

Task: [Task Name]

Critical Task Progress: [Progress Bar]

Critical Task: [Task Name]

Milestone Summary: [Progress Bar]

Milestone: [Task Name]

Roll Up Task Progress: [Progress Bar]

Roll Up Task: [Task Name]

Roll Up Critical Task Progress: [Progress Bar]

Roll Up Critical Task: [Task Name]

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External Tasks Progress: [Progress Bar]

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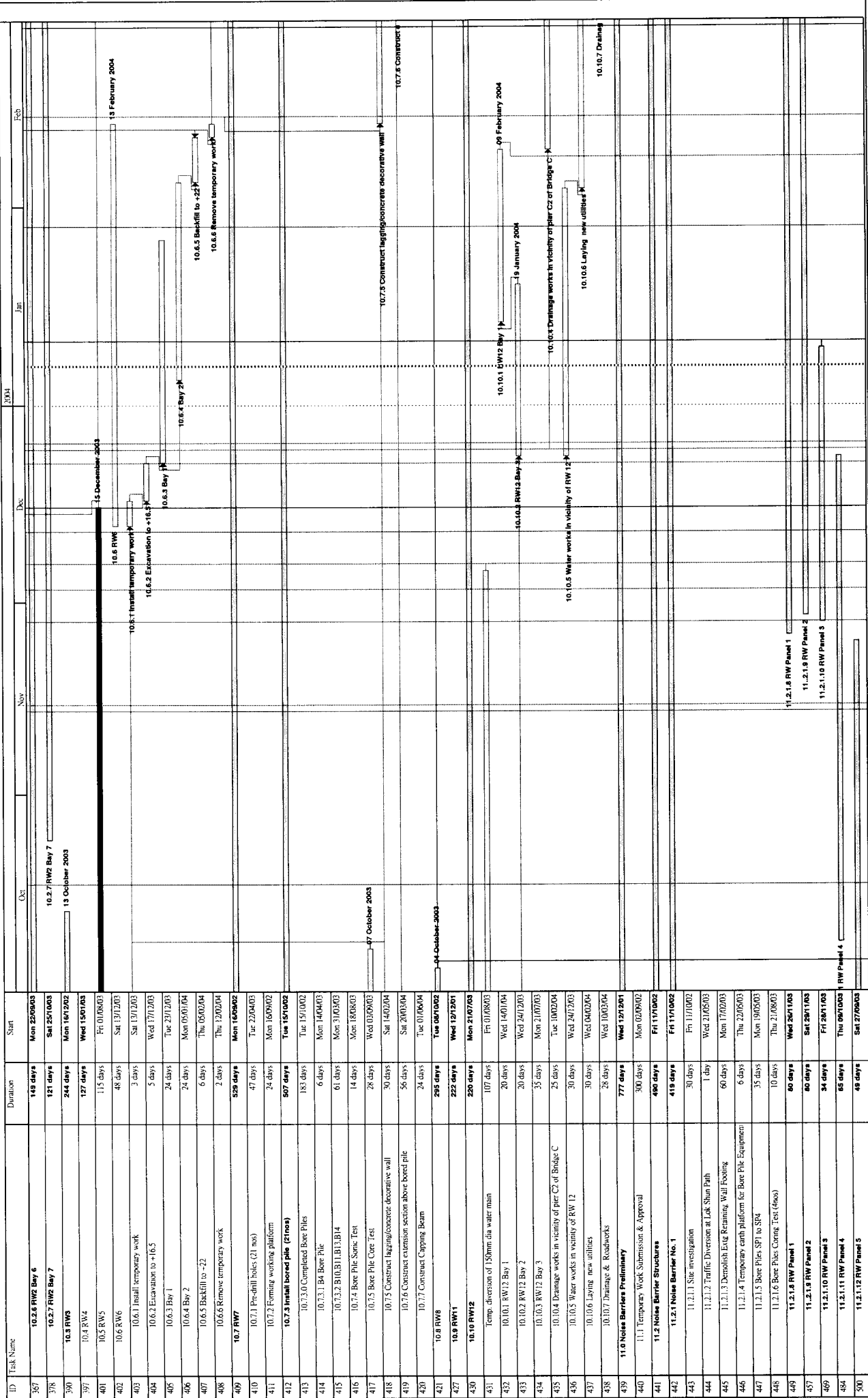
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Project Summary: [Progress Bar]

Project Summary: [Task Name]

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

Sha Tin New Town Stage II Contract No. ST77/01, Road D19 Linking Lok Shun Path and Tai Po Road



Date: 18/10/2003

Task Progress: [Progress bar]

Critical Task Progress: [Progress bar]

Milestone Summary: [Progress bar]

Roll Up Task: [Progress bar]

Roll Up Critical Task: [Progress bar]

Roll Up Milestone: [Progress bar]

Split: [Progress bar]

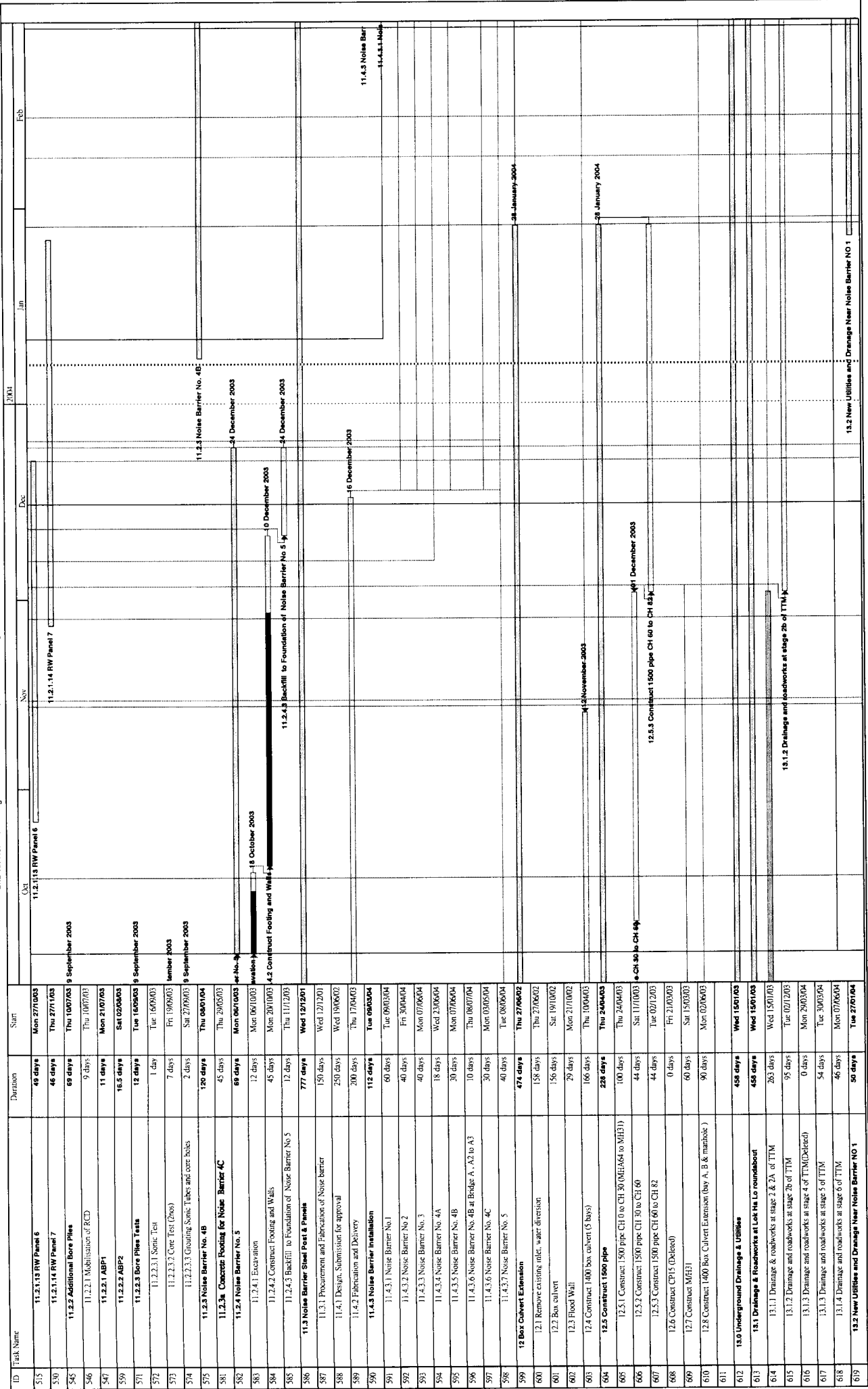
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Project Summary: [Progress bar]

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

Sha Tin New Town Stage II Contract No. ST77/01, Road D19 Linking Lok Shun Path and Tai Po Road



Date: 18/10/2003

Task Progress: ██████████

Critical Task Progress: ██████████

Milestone Summary: ██████████

Roll Up Milestone: ██████████

Roll Up Critical Task: ██████████

Roll Up Progress: ██████████

External Tasks: ██████████

Split: ██████████

Project Summary: ██████████

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MASTER PROGRAMME (S177/01/MP/13B)

Sha Tin New Town Stage II Contract No. S177/01, Road D15 Linking Lok Shun Path and Tai Po Road

ID	Task Name	Duration	Start	Oct	Nov	Dec	Jan	Feb
620	13.2.1 Construct MH124 pipe 225 dia and MH10 at stage 2b T	19 days	Tue 27/01/04					
621	13.2.2 Construct MH 12 & 2nd portion pipe 450 dia at stage 2b	19 days	Tue 27/01/04					
622	13.2.1 PCCW -AI Stage 2b TTM Lay cable duct near Noise Bar	7 days	Wed 18/02/04					
623	13.2.2 CABLE TV -AI Stage 2b TTM Lay cable duct near Noise	7 days	Thu 26/02/04					
624	13.2.3 CABLE TV -After Completion of Noise Barrier No 1	14 days	Tue 09/03/04					
625	13.3 Water mains and associated works	225 days	Sat 16/03/04					
626	13.3.1 Water Mains for irrigation system	120 days	Fri 14/11/03					
627	13.3.2 Fire Service Pipe & Hydrant	50 days	Mon 22/02/04					
628	13.3.3 Water Main Diversion (400 Box Culvert)	45 days	Wed 17/12/03					
629	13.3.4 Along street 8	25 days	Sat 16/08/03					
630	13.4 Telephone Ducts	40 days	Fri 21/11/03					
631	13.5 Existing Utilities Diversion	175 days	Sat 06/09/03					
632	13.5.1 RW1, RW2 and 400 Box Culvert	90 days	Wed 17/12/03					
633	13.5.2 Abutment A1 to RW11	130 days	Sat 06/09/03					
634	13.5.3 RW11 to C2	100 days	Wed 10/09/03					
635	13.5.4 At Lok King Street	100 days	Wed 03/12/03					
636	14 Staircases	447 days	Tue 25/01/03					
637	14.1 Stair (NB 4C)	12 days	Fri 09/04/04					
638	14.2 Stair 2 (RW8)	50 days	Sun 29/06/03					
639	14.3 Stair 3 (RW 3)	90 days	Thu 15/05/03					
640	14.4 Stair 4 (RW11)	117 days	Thu 04/09/03					
641	14.4.1 Stair 4 Bay 1 (to allow access Bridge C PC beams)	24 days	Thu 04/09/03					
642	14.4.2 Stair 4 Bay 2	24 days	Wed 24/12/03					
643	14.5 Stair 5 (RW5)	69 days	Fri 05/09/03					
644	14.6 Stair 6 (Abutment B1)	24 days	Wed 26/04/04					
645	14.7 Stair 7 (RW7)	24 days	Mon 05/07/04					
646	14.8 Stair 8 (Level +39)	50 days	Tue 16/09/03					
647	14.9 Stair 9 (CH100) (de-beck)	12 days	Sat 10/01/04					
648	14.10 Stair 10 (RW12)	20 days	Tue 10/02/04					
649	14.11 Stair 11 (Abutment A5)	20 days	Fri 20/02/04					
650	14.12 Stair 12 (House 102)	24 days	Tue 13/04/04					
651	14.13 Stair 13 (Slope CH150 - 400)	18 days	Tue 28/01/03					
652	15 Standard Refuse Collection Point	45 days	Wed 12/05/04					
653	16 Rain Shelter no.1&2	60 days	Mon 01/03/04					
654	17 Landscaping	88 days	Tue 13/04/04					
655	17.1 Tree Planting	42 days	Thu 05/06/04					
656	17.2 Turfing	42 days	Fri 11/06/04					
657	17.3 Tree Planting in the vicinity of RW 12	25 days	Tue 13/04/04					
658	17.4 Turfing in the vicinity of RW12	15 days	Mon 17/05/04					
659	17.5 Hard Landscaping	50 days	Tue 13/04/04					
660	18 Project Completion & Handover	965 days	Wed 12/12/01					
661	18.1 Section I Completion	0 days	Fri 25/07/03					
662	18.2 Section IA Completion	0 days	Thu 26/06/03					
663	18.3 Section II Completion	0 days	Sat 31/07/04					
664	18.4 Section III Completion	0 days	Wed 12/12/01					

Task
 Task Progress
 Milestone
 Summary
 Critical Task
 Critical Task Progress
 Rolled Up Task
 Rolled Up Critical Task
 Rolled Up Milestone
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 Split
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