DRAINAGE SERVICES DEPARTMENT (DSD)
CONTRACT NO. DC/2005/02

CONSTRUCTION OF SEWERS, RISING MAINS & SEWAGE PUMPING STATION AT KAM TIN, NAM SANG WAI AND AU TAU IN YUEN LONG

14th Monthly Construction Phase EM&A Report for May 2007 (Designated Elements)

PREPARED FOR

Leader Civil Engineering Corporation Ltd

Quality Index

Date	Reference No.
05 June 2007	TCS/00310/06/600/R0320

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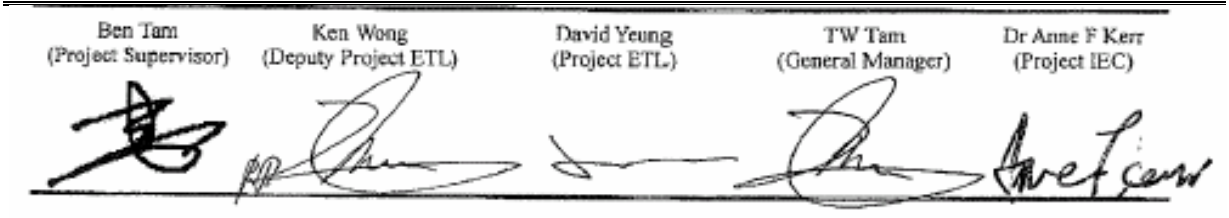

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Executive Summary

ES.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project requires an Environmental Monitoring and Audit (EM&A) program to be implemented by an Environmental Team (ET) throughout the contract period in compliance with the requirements as stated in the project Environmental Permit (EP-220/2005) and the project's Updated EM&A (Designated Elements) Manual.

ES.02 This is the 14th Monthly Construction Phase EM&A Report (May 2007, Report No. 14) reporting the environmental impact monitoring and audit (EM&A) conducted from 01 to 31 May 2007. The EM&A program in May 2007 were covered air quality, noise and waste management.

Breach of Action and Limit (AL) Levels

ES.03 No Action/Limit Level exceedance was recorded in this reporting month. All the monitoring results were complied with standard.

Complaint Log

ES.04 No environmental complaint was received in this reporting month.

Notification of Any Summons and Successful Prosecution

ES.05 There was no environmental summon or prosecution in this reporting month.

Reporting Changes

ES.06 There are no changes to be reported in this reporting month.

Future Key Issues

ES.07 Construction activities to be undertaken in June 2007 include bore hole at Sha Po pumping station (P2), excavation and piling at Nam Sang Wai pumping station (P3), sheeting piling, excavation, pipe laying, backfilling, concreting and extract sheet pile at Nam Sang Wai Road (S4) and Pok Wai South Road (S5 & S6). Potential environmental impacts arising from the works include air quality, noise and water quality (particularly site runoff). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

1.0 BASIC PROJECT INFORMATION

1.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project is part of the Yuen Long and Kam Tin Sewerage and Sewage Disposal (YLKTSSD) Scheme. A site layout map showing the site boundary and the work areas is shown in **Annex A**.

1.02 This 14th Monthly Construction Phase EM&A Report (May 2007, Report No. 14) summarizes the impact monitoring results and audit findings in the reporting month from 01 to 31 May 2007.

Project Organization

1.03 The organization chart and lines of communication with respect to the on-site environmental management and monitoring program are shown in **Annex B**.

Construction Program of the Reporting Period

1.04 A construction program showing the construction work undertaken in this reporting month was shown in **Annex C**. Environmental mitigation measures implemented are shown in **Table 2-1.**

Management Structure

1.05 The management structure of the Project is shown in **Annex B**.

Works Undertaken in the Reporting Period

1.06 The construction works undertaken during the reporting month under the Environmental Permit (EP-220/2005) were shown as follows:

Kam Tin Pumping Station (P1)
- Excavation

Sha Po Pumping Station (P2)
- Bore hole

Nam Sang Wai Pumping Station (P3)
- Pipe laying

Nam Sang Wai Road (S4)
- Sheet piling
- Excavation
- Pipe laying
- Backfilling
- Concreting
- Pipe jacking
- Grounting
- Extract sheet pile

Pok Wai South Road (S5 and S6)
- Sheet piling
- Excavation
- Pipe laying
- Backfilling
- Concreting
- Extract sheet pile

2.0 ENVIRONMENTAL STATUS

Work Undertaken in the Reporting Period with Illustrations

2.01 A summary of the work undertaken in this reporting month with illustrations and environmental mitigation measures implemented is shown in **Table 2-1**.

Table 2-1 Work Undertaken in the Reporting Period with Illustrations of Mitigation Measures

Location	Description of Construction Activities	Environmental Mitigation Measures	EM&A Ref.
P1 (Kam Tin Pumping Station)	• Sheet piling • Footing construction	• Erect 2.4m high noise barrier hoarding around the works area at P1, P2 and P3 • Remove dust and spray water at the construction access • Cover the stockpiles of dusty material properly • Spray water to all dusty materials immediately before loading and unloading	A1 & F6 A2 A3 A4
P2 (Sha Po Pumping Station)	• Hoarding erection	• Wash the wheels of vehicles before leaving the site	A5
P3 (Nam Sang Wai Pumping Station)	• Pipe jacking	• Install and use power-operated cover at the dump trucks • Spray water at the pavement breaking locations • Spray the working area of excavation frequently • Maximize the use of quiet PME on site	A6 A7 A8 B1, B2 & F5
S4 (Nam Sang Wai Road)	• Drilling and grouting	• Apply and obtain appropriate waste disposal licenses • Handle, store and dispose of chemical wastes as per relevant regulations • Implement trip-ticket system for waste disposal • Restrict open fires and provide fire fighting equipment in the works area	D1 D2, D3 & D4 D5 F9
S5 & S6 (Pok Wai South Road)	• Pipe jacking	• Perform weekly inspection with ET and monthly audit with IEC • Conduct noise and dust monitoring as per EM&A manual during construction • Provide sedimentation tanks for treating site discharge. • Recycle wheel washing water and provide sedimentation tanks for treating site discharge.	H1 I1 & I2 - -

2.02 Photographic records showing the implemented 2.4m high noise barrier at the pumping station (S3) are shown in **Annex D**.

Project Drawings

2.03 Drawings showing the work areas under EP-220/2005 and the locations of the designated monitoring stations are presented in **Annex E**.

2.04 There are four designated air quality (AM1, AM5, AM6 & AM7) and four noise monitoring stations (AM1, AM5, AM6 & AM7) under the project EP.

Station ID	Nature of Premise	Site Work Description	Station Coordinates
AM1	Site Boundary in NSW	Sheet piling and trench excavation.	835829 N 822910 E
AM5	Site Boundary in FKH		835121 N 823515 E
AM6	Site Boundary in KT		833308 N 823987 E
AM7	Site Boundary in NSW		836171 N 822586 E
NM3	Village House in NSW		835808 N 822817 E
NM4	Village House in NSW		835282 N 822811 E
NM6	Village House in KT		833288 N 823999 E
NM7	Village House in FKH		835121 N 823495 E

2.05 In this reporting month, the impact monitoring was carried out at four designated air and four noise monitoring stations in according to the monitoring schedule.

3.0 SUMMARY OF EM&A REQUIREMENTS

Monitoring Parameters

3.01 Environmental monitoring and audit requirements are set out in the Updated EM&A manual. Air quality and construction noise have been identified to be the key monitoring parameters during the impact phase for the construction of the project.

3.02 A summary of the impact EM&A requirements for air quality and construction noise as per the project Updated EM&A Manual are shown in **Table 3-1.**

Table 3-1 Summary of EM&A Requirements

Environmental Aspect	Monitoring Parameters
Air Quality	24-Hr TSP
Construction Noise	Leq 30min during day time 07:00 to 19:00
	Supplementary L10 and L90 for reference.

Environmental Quality Performance Limits

3.03 A summary of the Action/Limit (A/L) Levels for air quality and construction noise is shown in **Tables 3-2** and **3-3.**

Table 3-2 Action and Limit Levels for Air Quality Monitoring

Monitoring Location	Action Level ($\mu g/m^3$)		Limit Level ($\mu g/m^3$)	
	1-Hr TSP	24-Hr TSP	1-Hr TSP	24-Hr TSP
AM1	391	184	500	260
AM5	353	237	500	260
AM6	329	183	500	260
AM7	383	204	500	260

Table 3-3 Action and Limit Levels for Construction Noise

Parameter	Action Level in dB(A)	Limit Level in dB(A)
0700-1900 hrs on normal weekdays	When one or more documented complaints are received	> 75 dB(A)

Event and Action Plans

3.04 An Event Action Plan for air quality and construction noise has been implemented for this project. Details of the Event Action Plan are presented in **Annex F**.

Environmental Mitigation Measures

3.05 The project EIA report has recommended environmental mitigation measures to minimize potential environmental impacts arising from the construction of the project. A full list of the mitigation measures is detailed in **Annex G**.

Environmental Requirements in Contract Documents

3.06 The environmental requirements in the contract documents generally refer to the compliance of the requirements as stipulated in the project EP and the updated EM&A Manual.

4.0 IMPLEMENTATION STATUS

4.01 The implementation status of environmental protection and pollution control/mitigation measures as recommended in the project EIA report is summarized in **Table 2-1** and the implementation schedule as shown in **Annex G**.

4.02 A summary status of the permits, licences, and/or notifications on environmental protection for this Project in this reporting period is presented in **Table 4-1**.

Table 4-1 Status of Environmental Licenses and Permits

Item	Item Description	Permit Status
1	Environmental Permit No.: EP-220/2005	Issued in June 2005
2	Air Pollution Control (Construction Dust)	Notified EPD on 24 Dec 2005
3	Chemical Waste Producer Registration (No. 5213-528-L2544-08)	Registration on 27 Jan 2006
4	Water Pollution Control (Discharge License No. 1U434/1)	Issued on 08 May 2006
5	Account for Disposal of Construction Waste No. 5004959	Registration on 27 Dec 2005
6	Piling Permit (CNP No. PP-RN0036-06)	Valid (8 Dec 2006 to 03 Sep 2007)
7	Piling Permit (CNP No. PP-RN0001-07)	Valid (7 Mar 2007 to 06 Dec 2007)
8	Piling Permit (CNP No. PP-RN0004-07)	Valid (7 May 2007 to 06 Feb 2008)
9	Construction Noise Permit (CNP No. GW-RN0083-07)	Valid (8 Mar 2007 to 07 Sep 2007)
10	Construction Noise Permit (CNP No. GW-RN0118-07)	Valid (28 Mar 2007 to 27 Sep 2007)
11	Construction Noise Permit (CNP No. GW-RN0183-07)	Valid (03 May 2007 to 02 Nov 2007)

5.0 MONITORING RESULTS

MONITORING METHODOLOGY OF AIR QUALITY MONITORING

5.01 The 24-Hr TSP monitoring was carried out by a High volume sampler (HVS) in compliance with the updated EM&A Manual. The HVS employed complied with the PS specifications including.

- Power supply of 220v/50 hz for 24-hour continuous operation;
- 0.6-1.7 m^3/min (20-60 SCFM) adjustable flow rate;
- A 7-day mechanical timer for 24-hour operation;
- An elapsed time indicator with ±2 minutes accuracy for 24-Hr operation;
- Minimum exposed area of 63 in^2;
- Flow control accuracy of ±2.5% deviation over 24-Hr operation;
- An anodized aluminum shelter to protect the filter and sampler;
- A motor speed-voltage control to control mass flow rate with accuracy of ±2.5% deviation over 24-hr sampling period;
- Provision of a flow recorder for continuous monitoring;
- Provision of a peaked roof inlet;
- Incorporation with a manometer; and
- An 8"x10" stainless steel filter holder to hold, seal and easy to change the filter paper.

5.02 The filter papers used in 24-Hr TSP monitoring were of size 8"x10" and provided by a local HOKLAS-accredited laboratory, ALS Techichem Pty (HK) Limited (HOKLAS No. 66). The filters papers after measurements were returned to the laboratory for the required treatment and analysis. In house QA/QC procedures for all monitoring practices to ensure the validity of monitoring data. Blank filters samples were collected and delivered to the HOKLAS-accredited laboratory for QA/QC check.

5.03 The meteorological information during the reporting period was obtained from Lau Fau Shan Station of the Hong Kong Observatory (HKO).

MONITORING METHODOLOGY OF CONSTRUCTION NOISE MONITORING

5.04 Noise measurements were taken in terms of the A-weighted equivalent sound pressure level (Leq) measured in decibels (dB). Supplementary statistical results (L_{10} and L_{90}) were also obtained for reference.

5.05 Hand-held sound level meters (B&K Model 2238) and associated acoustical calibrators in compliance with the International Electrotechnical Commission (IEC) Publication 651:1979 (Type 1) and 804:1985 (Type 1) specification were used for taking the baseline noise measurements.

5.06 Windshield was fitted in all measurements. All noise measurements were made with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq).

5.07 No noise measurement was made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s.

LABORATORY AND MONITORING EQUIPMENT USED

5.08 A local HOKLAS-accredited laboratory, ALS Technichem (HK) Pty Ltd (HOKLAS No. 66), is responsible for the analytical testing of the 24-Hr TSP filter papers.

5.09 The monitoring equipment used in the impact EM&A program is presented in **Table 5-1**:

Table 5-1 Monitoring Equipment Used in Impact EM&A Program

Parameters	Monitoring Equipment	
Air Quality	24-Hr TSP	Greasby Anderson GMWS2310 High Volume Sampler
Noise	Leq30min	B&K Type 2238
	On-site Calibration	B&K Type 4231

EQUIPMENT CALIBRATION

5.10 Initial calibration of the HVS was performed upon installation and thereafter at a six month intervals in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A). The calibration data are properly documented and the records are maintained by ET for future reference**.**

5.11 The sound level meters were calibrated using an acoustic calibrator prior to and after measurements. The meters are regularly calibrated in accordance with the manufacturer's instructions. Prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were considered valid only if the calibration levels before and after the noise measurement agree to within 1.0 dB.

5.12 The renew calibration certificates of the monitoring equipment used during the impact monitoring program in this month are attached in **Annex H**.

PARAMETERS MONITORED

5.13 The environmental parameters monitoring in this reporting period were compliance with the monitoring requirements as in **Table 3-1**.

MONITORING LOCATIONS

5.14 There are four designated air quality and four noise monitoring stations under the project EP. For this reporting month, monitoring was carried out at four designated air (AM1, AM5, AM6 & AM7) and four noise (NM3, NM4, NM6 & NM7) monitoring stations. The locations of the designated monitoring stations are shown in **Table 5-2** and geographically in **Annex E**.

Table 5-2 Location of Air Quality and Construction Noise Monitoring Stations

Air Quality (4 Stations)	
AM1	Worksite boundary facing scattered house in Nam Sang Wai
AM5	Worksite boundary facing Fung Kat Heung
AM6	Worksite boundary facing scattered near Route 3
AM7	Worksite boundary facing scattered house in Nam Sang Wai
Construction Noise (4 Stations)	
NM3	Village House in Nam Sang Wai
NM4	Village House in Nam Sang Wai
NM6	Scattered House near Route 3
NM7	Fung Kat Heung

MONITORING FREQUENCY AND PERIOD

5.15 The impact 24-Hr TSP monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 20 monitoring events were carried out in this reporting month.

5.16 The impact noise monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 24 monitoring events were carried out in this reporting month.

MONITORING RESULTS WITH DATE AND TIME

5.17 The air quality monitoring data for this reporting period were summarized in **Table 5-3**.

Table 5-3 Summary of Air Quality Monitoring Results

Date	24-Hr TSP (μg/m^3)			
	AM1	**AM5**	**AM6**	**AM7**
4-May-07	64	100	37	43
10-May-07	94	93	66	54
16-May-07	85	106	58	54
22-May-07	21	44	29	25
28-May-07	24	51	32	31
Average (Range)	58 (21–94)	79 (44–106)	44 (29–66)	41 (25–54)

All 24-Hr TSP monitoring were preset to start at 00:00 on each monitoring date.
* Action/Limit Level exceedances were recorded.

5.18 No Action/Limit Level exceedance was recorded in this reporting month.

5.19 The impact noise monitoring results are summarized in **Tables 5-4** to **5-7**.

Table 5-4 Summary of Noise Monitoring Results at NM3

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
02-May-07	14:24	47.8	48.4	52.5	52.3	53.6	54.0	52.0	55.0
08-May-07	13:00	51.5	51.8	50.6	51.8	52.2	52.7	51.8	54.8
14-May-07	13:01	54.7	55.8	51.4	52.7	51.3	49.6	53.1	56.1
19-May-07	13:45	53.5	50.6	53.2	51.4	52.2	52.4	52.3	55.3
25-May-07	14:15	58.0	58.3	54.5	55.8	56.6	57.2	56.9	59.9
31-May-07	13:04	52.5	50.7	50.8	49.7	50.7	55.9	52.3	55.3
Limit Level									**75**

* A façade correction of +3 dB(A) has been added according to acoustical principles and EPD guidelines.

Table 5-5 Summary of Noise Monitoring Results at NM4

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
2-May-07	13:41	55.7	57.0	58.1	57.4	53.1	62.1	58.1	61.1
8-May-07	10:34	56.1	53.5	48.6	50.3	58.6	54.4	54.8	57.8
14-May-07	10:34	63.7	67.9	67.6	69.4	68.1	67.4	67.6	70.6
19-May-07	13:08	49.4	49.1	53.6	50.6	49.7	50.3	50.7	53.7
25-May-07	13:28	58.4	57.3	57.2	56.9	57.7	60.2	58.1	61.1
31-May-07	10:42	57.4	55.4	54.0	54.9	60.0	59.9	57.6	60.6
Limit Level									**75**

* A façade correction of +3 dB(A) has been added according to acoustical principles and EPD guidelines.

Table 5-6 Summary of Noise Monitoring Results at NM6

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
2-May-07	13:43	72.9	70.1	72.0	71.8	72.5	61.1	71.2	No
8-May-07	10:32	61.8	61.1	58.4	60.1	60.0	60.1	60.4	
14-May-07	10:30	60.3	61.2	63.0	61.8	60.9	60.3	61.4	
19-May-07	11:30	56.6	55.7	54.8	61.2	57.7	54.4	57.4	Correction
25-May-07	10:10	65.3	68.0	67.7	66.8	64.7	62.8	66.2	Required
31-May-07	14:50	64.0	61.0	64.4	58.1	63.8	60.8	62.5	
Limit Level									**75**

* Noise monitoring was undertaken at the façade, correction was not necessary.

Table 5-7 Summary of Noise Monitoring Results at NM7

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
2-May-07	15:03	56.8	56.6	55.2	64.3	56.2	55.7	59.0	No
8-May-07	13:54	54.6	53.4	50.7	52.4	52.0	53.2	52.9	
14-May-07	13:48	62.7	56.7	54.6	56.4	53.1	54.1	57.7	Correction
19-May-07	13:56	52.4	54.6	52.0	52.6	51.8	50.3	52.5	
25-May-07	15:03	55.3	54.7	55.5	55.9	52.8	51.6	54.6	Required
31-May-07	13:57	55.3	59.3	56.5	56.5	57.1	56.3	57.0	
Limit Level									**75**

* Noise monitoring was undertaken at the façade, correction was not necessary.

5.20 The monitoring schedule for the next reporting month is shown in **Table 5-8.**

Table 5-8 Monitoring Schedule for the Next Reporting Month

Date		Air Quality	Noise Leq 30min
1-Jun-07	Fri		
2-Jun-07	Sat		
3-Jun-07	Sun		
4-Jun-07	Mon		
5-Jun-07	Tue		
6-Jun-07	Wed		
7-Jun-07	Thu		
8-Jun-07	Fri		
9-Jun-07	Sat		
10-Jun-07	Sun		
11-Jun-07	Mon		
12-Jun-07	Tue		
13-Jun-07	Wed		
14-Jun-07	Thu		
15-Jun-07	Fri		
16-Jun-07	Sat		
17-Jun-07	Sun		
18-Jun-07	Mon		
19-Jun-07	Tue		
20-Jun-07	Wed		
21-Jun-07	Thu		
22-Jun-07	Fri		
23-Jun-07	Sat		
24-Jun-07	Sun		
25-Jun-07	Mon		
26-Jun-07	Tue		
27-Jun-07	Wed		
28-Jun-07	Thu		
29-Jun-07	Fri		
30-Jun-07	Sat		

	Monitoring Day
	Sunday or Public Holiday

WEATHER CONDITIONS DURING THE MONITORING PERIOD

5.21 The meteorological data on the monitoring dates are summarized in **Annex I**.

GRAPHICAL PLOTS OF TRENDS OF MONITORED PARAMETERS

5.22 The graphical plots of air quality and construction noise monitoring data are presented in **Annex J**.

MAJOR ACTIVITY CARRIED OUT DURING THE MONITORING PERIOD

5.23 There were construction activities of sheet piling and trench excavation undertaken during the monitoring period.

WEATHER CONDITIONS THAT AUGUST AFFECT THE MONITORING RESULTS

5.24 The weather conditions at the time of monitoring were considered acceptable for monitoring activities and did not have significant impact on the monitoring results obtained.

OTHER FACTORS INFLUENCING THE MONITORING RESULTS

5.25 There were no other noticeable external factors generally affecting the monitoring results in this reporting month.

QA/QC RESULTS AND DETECTION LIMITS

5.26 Not applicable.

6.0 REPORT ON NON-COMPLIANCE (NC), COMPLAINTS, NOTIFICATIONS OF SUMMONS (NoS) AND SUCCESSFUL PROSECUTIONS

RECORD OF NON-COMPLIANCE OF ACTION AND LIMIT LEVELS

6.01 There was no Action or Limit Level exceedance in this reporting month.

RECORD OF ENVIRONMENTAL COMPLAINTS RECEIVED

6.02 There was no environmental complaint received in this reporting month.

RECORD OF NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTION

6.03 There was no notification of summon or prosecution received in this reporting month.

REVIEW OF REASONS FOR AND IMPLICATIONS OF NC, COMPLAINTS AND NOS

6.04 No NC, complaints or NoS received in this reporting month.

DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

6.05 No NC, complaints or NoS received in this reporting month.

7.0 OTHERS

FUTURE KEY ISSUES

7.01 Construction activities to be undertaken in June 2007 include bore hole at Sha Po pumping station (P2), excavation and piling at Nam Sang Wai pumping station (P3), sheeting piling, excavation, pipe laying, backfilling, concreting and extract sheet pile at Nam Sang Wai Road (S4) and Pok Wai South Road (S5 & S6). Potential environmental impacts arising from the works include air quality, noise and water quality (particularly site runoff). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

SOLID AND LIQUID WASTE MANAGEMENT STATUS

7.02 The quantities of waste for disposal or reuse in this reporting month are summarized in **Tables 7-1** and **7-2.**

Table 7-1 Summary of Quantities of Waste for Disposal

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (tons) – Disposed	3,625	Tuen Mun 38 Fill Bank
C&D Materials (Inert) (tons) – Reused	0	DSD Contract DC/2005/02
C&D Materials (Non-Inert) (tons)	0	NA
Chemical Waste (Litres)	0	NA
General Refuse (tons)	2	Refuse Collector

Table 7-2 Summary of Quantities of Waste for Reuse/Recycling

Type of Waste	Quantity	Disposal Location
Metals for Recycling (kg)	0	NA
Paper for Recycling (kg)	0	NA
Plastics for Recycling (kg)	0	NA

7.03 There was no site effluent discharged but an estimated volume of less than $50m^3$ of surface runoff was discharged in the reporting month.

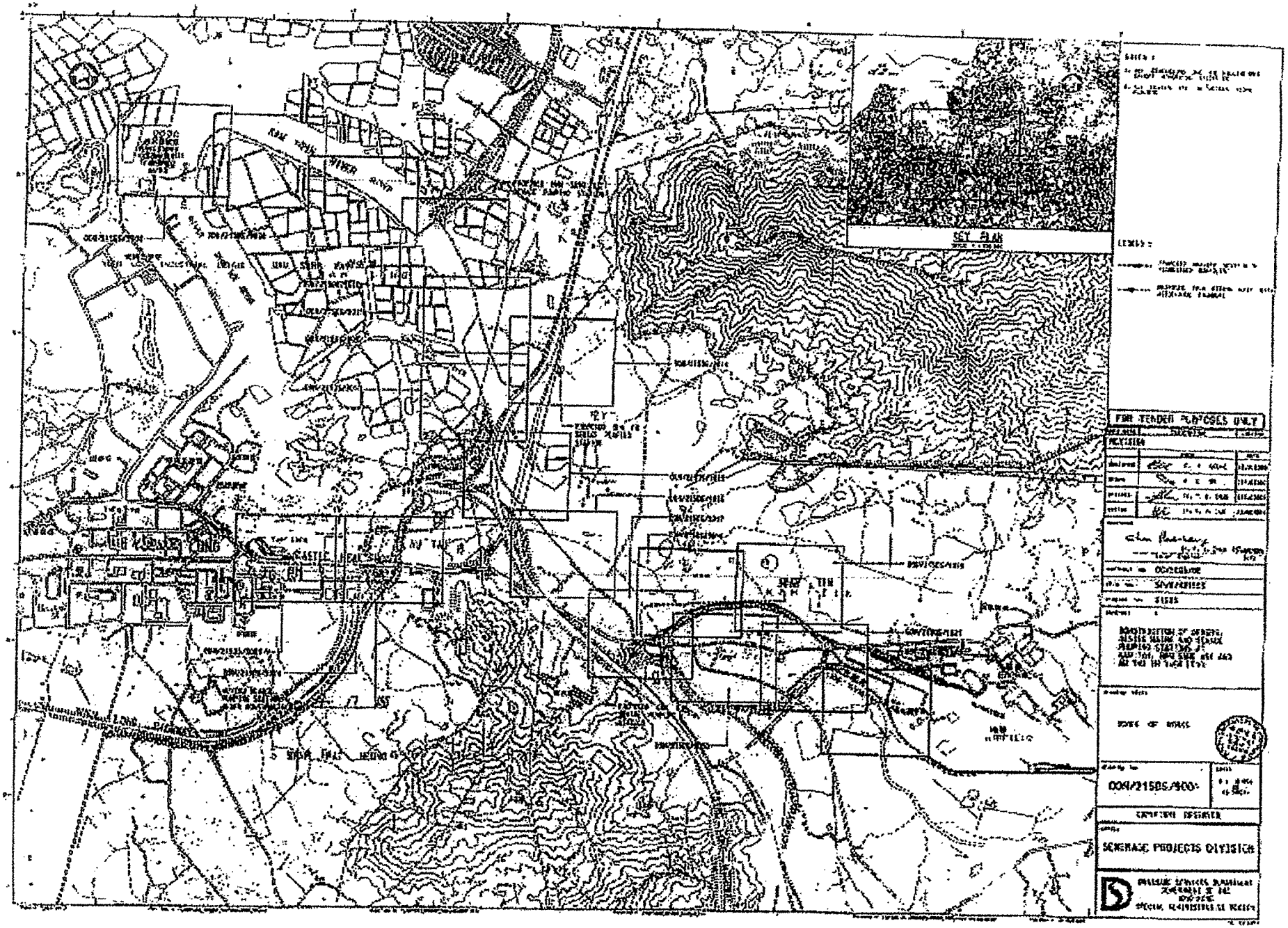
SUBMISSION OF PROFORMA

7.04 Representatives of the Engineer, the Contractor and ET carried out regular weekly joint site inspection on 04, 08, 19 and 25 May 2007 to evaluate the site environmental performance. The monthly IEC site inspection for May 2007 was held on 10 May 2007. No non-compliance was noted and six observations were recorded in weekly and monthly site inspection.

7.05 Proforma of the weekly ET site inspection activities are presented in **Annex K**.

Annex A

Project Site Layout

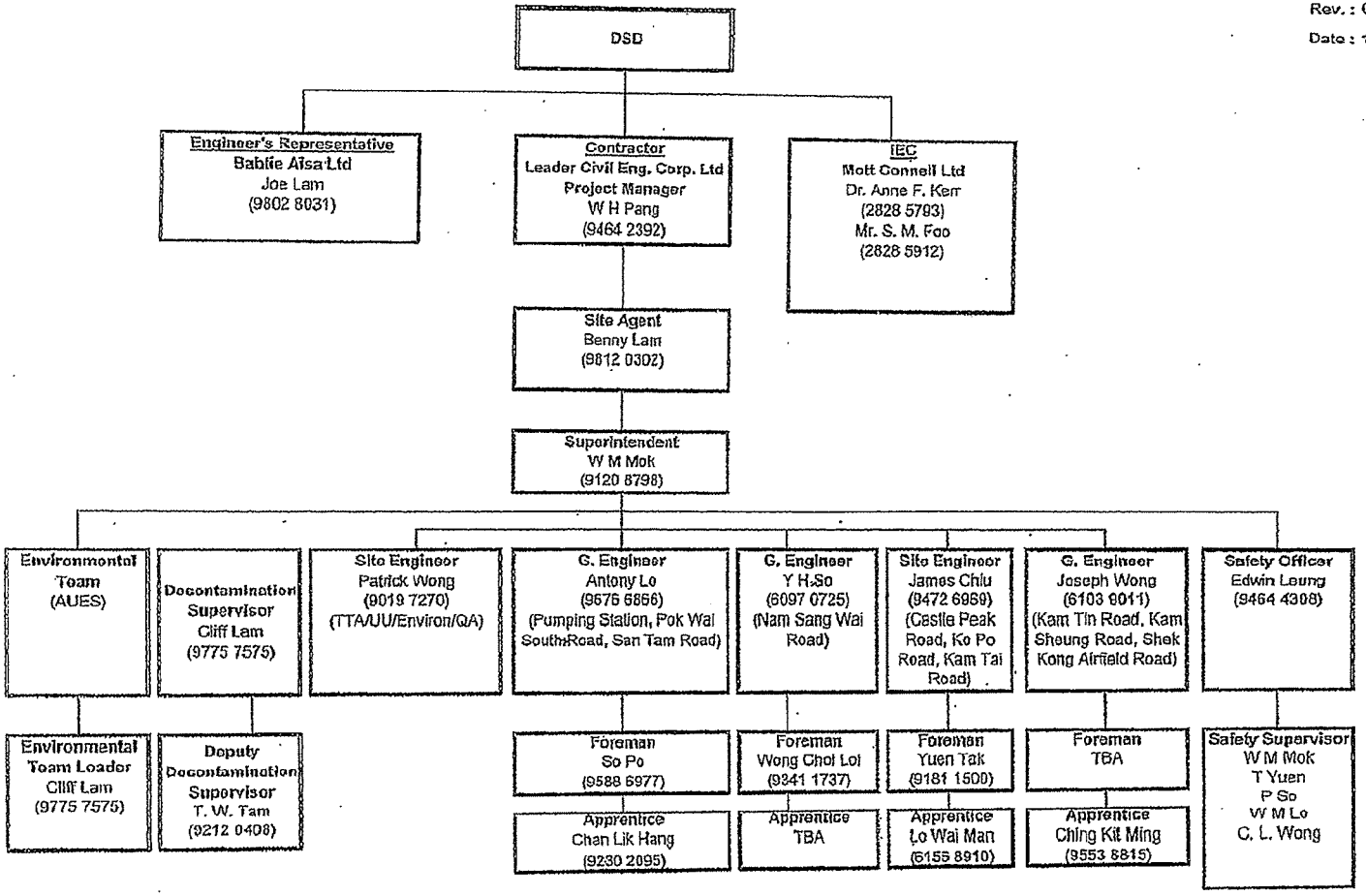

KEY PLAN
FOR TENDER PURPOSES ONLY
SEWERAGE PROJECTS DIVISION

Annex B

Project Organization and Management Structure

DSD Contract No. DC/2005/02
Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long
Project Environmental Organization Chart

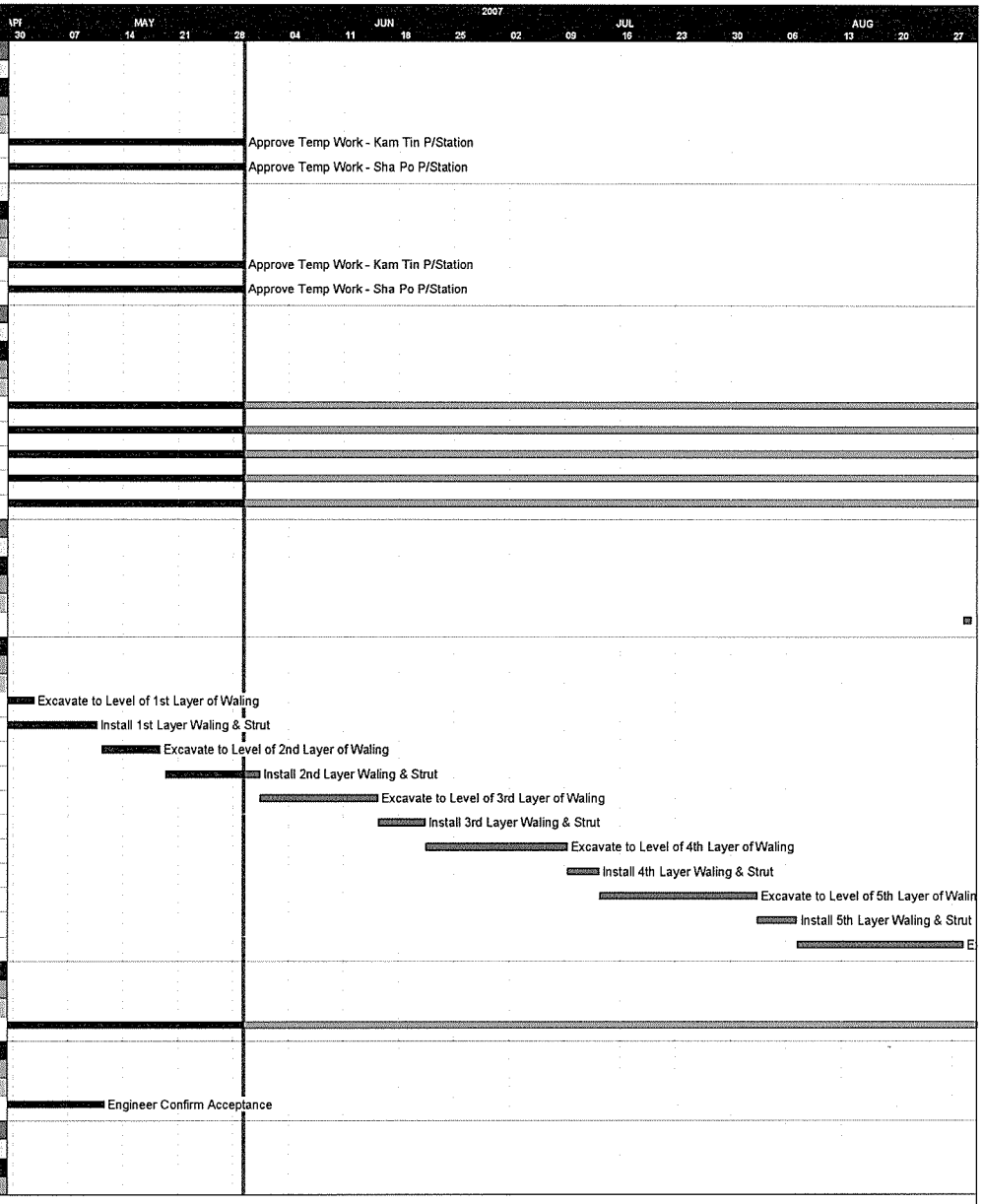
Rev. : 01
Date : 12-May-06



Annex C

Construction Program

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
Submission								
Design Submission								
SUN1500	Approve Temp Work - Kam Tin P/Station	6d	-78d	95	10NOV06 A	29MAY07	10NOV06 A	15FEB07
SUN1700	Approve Temp Work - Sha Po P/Station	6d	30d	95	11JAN07 A	29MAY07	11JAN07 A	04JUL07
Method Statement Submission								
SUO1100	Approve Temp Work - Kam Tin P/Station	6d	-78d	95	10NOV06 A	29MAY07	10NOV06 A	15FEB07
SUO1300	Approve Temp Work - Sha Po P/Station	6d	30d	95	21APR07 A	29MAY07	21APR07 A	04JUL07
Preliminaries								
PR2900	Deliver Ductile Iron Pipe	800d	54d	44	29APR06 A	21NOV08	29APR06 A	29JAN09
PR3100	Deliver Precast Concrete Pipe	800d	69d	46	24APR06 A	04NOV08	24APR06 A	29JAN09
PR3300	Deliver Vitrified Clay Pipe	800d	40d	43	10APR06 A	09DEC08	10APR06 A	29JAN09
PR3400	44.2	835d	32d	44	06APR06 A	17DEC08	06APR06 A	29JAN09
PR3500	Environmental monitoring by ET	814d	72d	48	06APR06 A	01NOV08	06APR06 A	29JAN09
Section 1 - Kam Tin Sewage Pumping Station								
Portion A								
Drainage and Ducts								
Trench Method								
S1AEA1600	Install Geotextile Filter to F/L of Base Slab	1d	-78d	0	28AUG07	29AUG07	26MAY07	26MAY07
Earthworks								
S1AG1100	Excavate to Level of 1st Layer of Waling	4d		100	24APR07 A	02MAY07 A	24APR07 A	02MAY07 A
S1AG1200	Install 1st Layer Waling & Strut	4d		100	26APR07 A	10MAY07 A	26APR07 A	10MAY07 A
S1AG1300	Excavate to Level of 2nd Layer of Waling	10d		100	11MAY07 A	18MAY07 A	11MAY07 A	18MAY07 A
S1AG1400	Install 2nd Layer Waling & Strut	4d	-78d	50	19MAY07 A	31MAY07	19MAY07 A	21FEB07
S1AG1500	Excavate to Level of 3rd Layer of Waling	13d	-78d	0	31MAY07	15JUN07	22FEB07	08MAR07
S1AG1600	Install 3rd Layer Waling & Strut	4d	-78d	0	15JUN07	21JUN07	09MAR07	13MAR07
S1AG1700	Excavate to Level of 4th Layer of Waling	14d	-78d	0	21JUN07	09JUL07	14MAR07	29MAR07
S1AG1800	Install 4th Layer Waling & Strut	4d	-78d	0	09JUL07	13JUL07	30MAR07	03APR07
S1AG1900	Excavate to Level of 5th Layer of Waling	17d	-78d	0	13JUL07	02AUG07	04APR07	27APR07
S1AG2000	Install 5th Layer Waling & Strut	4d	-78d	0	02AUG07	07AUG07	28APR07	03MAY07
S1AG2100	Excavate to Formation Level	18d	-78d	0	07AUG07	28AUG07	04MAY07	24MAY07
Geotechnical works								
S1AP1000	Monitoring of Instruments	384d	95d	41	16NOV06 A	03MAR08	16NOV06 A	27JUN08
Additonal Works / Disruption								
Pumping Test at KT P/S (Claim No. 023)								
S1AV1100	Engineer Confirm Acceptance	6d		100	17APR07 A	11MAY07 A	17APR07 A	11MAY07 A
Section 2 - Sha Po Sewage Pumping Station								
Portion B								
Earthworks								



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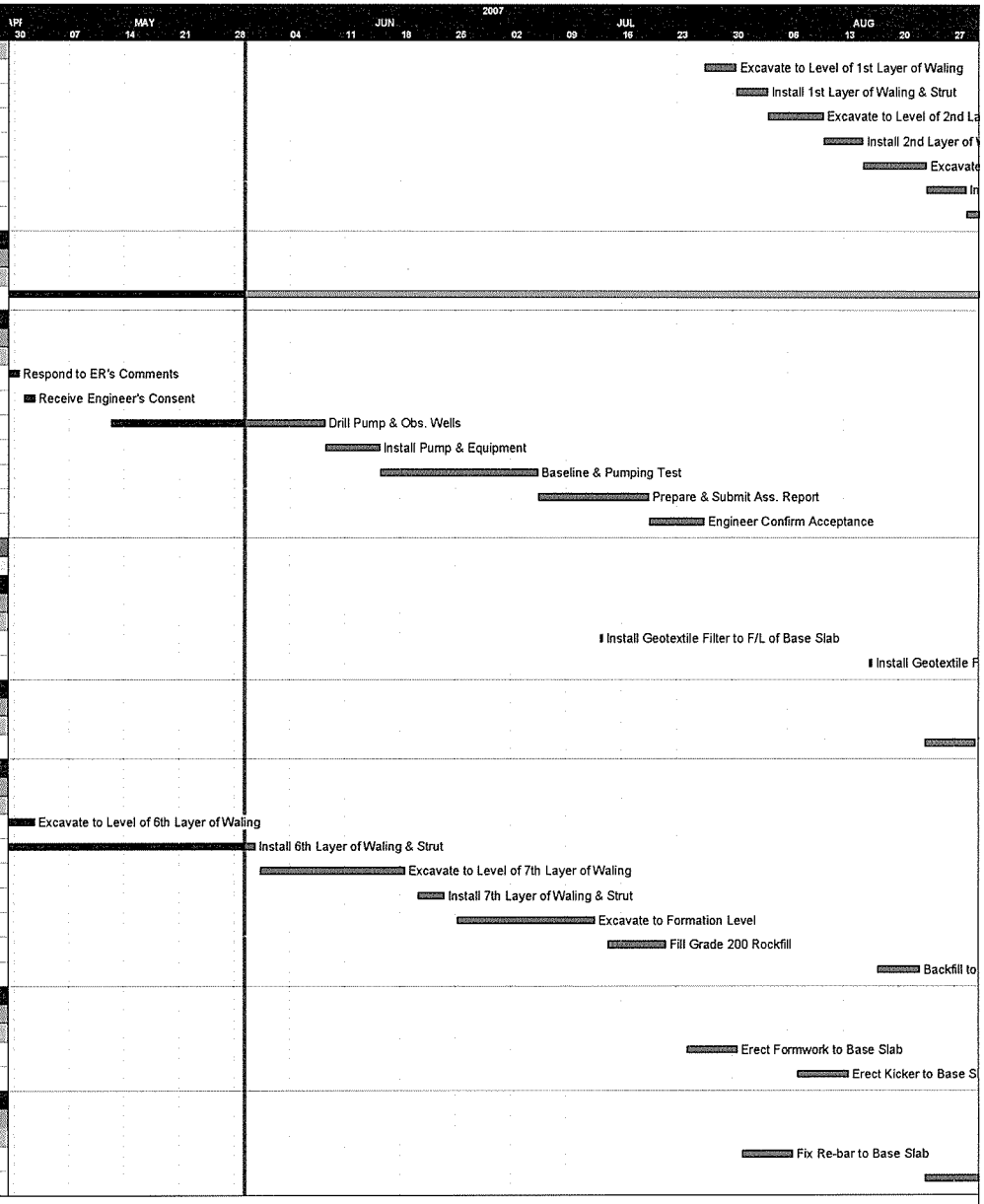
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S2BG1100	Excavate to Level of 1st Layer of Waling	3d	-19d	0	26JUL07	30JUL07	05JUL07	07JUL07
S2BG1200	Install 1st Layer of Waling & Strut	4d	-19d	0	30JUL07	03AUG07	09JUL07	12JUL07
S2BG1300	Excavate to Level of 2nd Layer of Waling	6d	-19d	0	03AUG07	10AUG07	13JUL07	19JUL07
S2BG1400	Install 2nd Layer of Waling & Strut	4d	-19d	0	10AUG07	15AUG07	20JUL07	24JUL07
S2BG1500	Excavate to Level of 3rd layer of Waling	7d	-19d	0	15AUG07	23AUG07	25JUL07	01AUG07
S2BG1600	Install 3rd Layer of Waling & Strut	4d	-19d	0	23AUG07	28AUG07	02AUG07	06AUG07
S2BG1700	Excavate to Formation Level	9d	-19d	0	28AUG07	07SEP07	07AUG07	16AUG07
Geotechnical works								
S2BP1000	Monitoring of Instruments	255d	142d	29	26FEB07 A	04JAN08	26FEB07 A	27JUN08
Additonal Works / Disruption								
Pumping Test at SP P/S (Claim No. 022)								
S2BV1040	Respond to ER's Comments	6d		100	14MAR07 A	30APR07 A	14MAR07 A	30APR07 A
S2BV1050	Receive Engineer's Consent	6d		100	01MAY07 A	02MAY07 A	01MAY07 A	02MAY07 A
S2BV1060	Drill Pump & Obs. Wells	28d	-19d	66	12MAY07 A	08JUN07	12MAY07 A	16MAY07
S2BV1070	Install Pump & Equipment	6d	-19d	0	08JUN07	15JUN07	17MAY07	23MAY07
S2BV1080	Baseline & Pumping Test	15d	-19d	0	15JUN07	05JUL07	24MAY07	11JUN07
S2BV1090	Prepare & Submit Ass. Report	12d	-19d	0	05JUL07	19JUL07	12JUN07	26JUN07
S2BV1100	Engineer Confirm Acceptance	6d	-19d	0	19JUL07	26JUL07	27JUN07	04JUL07
Section 3 - Nam Sang Wai Sewage Pumping Station								
Portion C								
Drainage and Ducts								
Trench Method								
S3CEA1700	Install Geotextile Filter to F/L of Base Slab	1d	-138d	0	13JUL07	13JUL07	20JAN07	20JAN07
S3CEA1750	Install Geotextile Filter up to -9.0mPD	1d	-138d	0	16AUG07	16AUG07	27FEB07	27FEB07
Pipework - Rising Main								
Trench Method								
S3CFA1000	Twin Rising Main DN900	6d	-128d	0	23AUG07	29AUG07	17MAR07	23MAR07
Earthworks								
S3CG2100	Excavate to Level of 6th Layer of Waling	22d		100	17APR07 A	02MAY07 A	17APR07 A	02MAY07 A
S3CG2200	Install 6th Layer of Waling & Strut	4d	-138d	50	20APR07 A	30MAY07	20APR07 A	06DEC06
S3CG2210	Excavate to Level of 7th Layer of Waling	16d	-138d	0	31MAY07	18JUN07	07DEC06	27DEC06
S3CG2220	Install 7th Layer of Waling & Strut	4d	-138d	0	20JUN07	23JUN07	28DEC06	02JAN07
S3CG2300	Excavate to Formation Level	15d	-138d	0	25JUN07	12JUL07	03JAN07	19JAN07
S3CG2400	Fill Grade 200 Rockfill	7d	-138d	0	14JUL07	21JUL07	22JAN07	29JAN07
S3CG2450	Backfill to -9.0mPD	5d	-138d	0	17AUG07	22AUG07	28FEB07	05MAR07
Formwork								
S3CJ1000	Erect Formwork to Base Slab	6d	-138d	0	24JUL07	30JUL07	31JAN07	06FEB07
S3CJ1100	Erect Kicker to Base Slab	6d	-138d	0	07AUG07	13AUG07	14FEB07	23FEB07
Steel Reinforcement								
S3CK1000	Fix Re-bar to Base Slab	6d	-138d	0	31JUL07	06AUG07	07FEB07	13FEB07
S3CK1100	Fix Re-bar to -6.8mPD	8d	-138d	0	23AUG07	31AUG07	06MAR07	14MAR07



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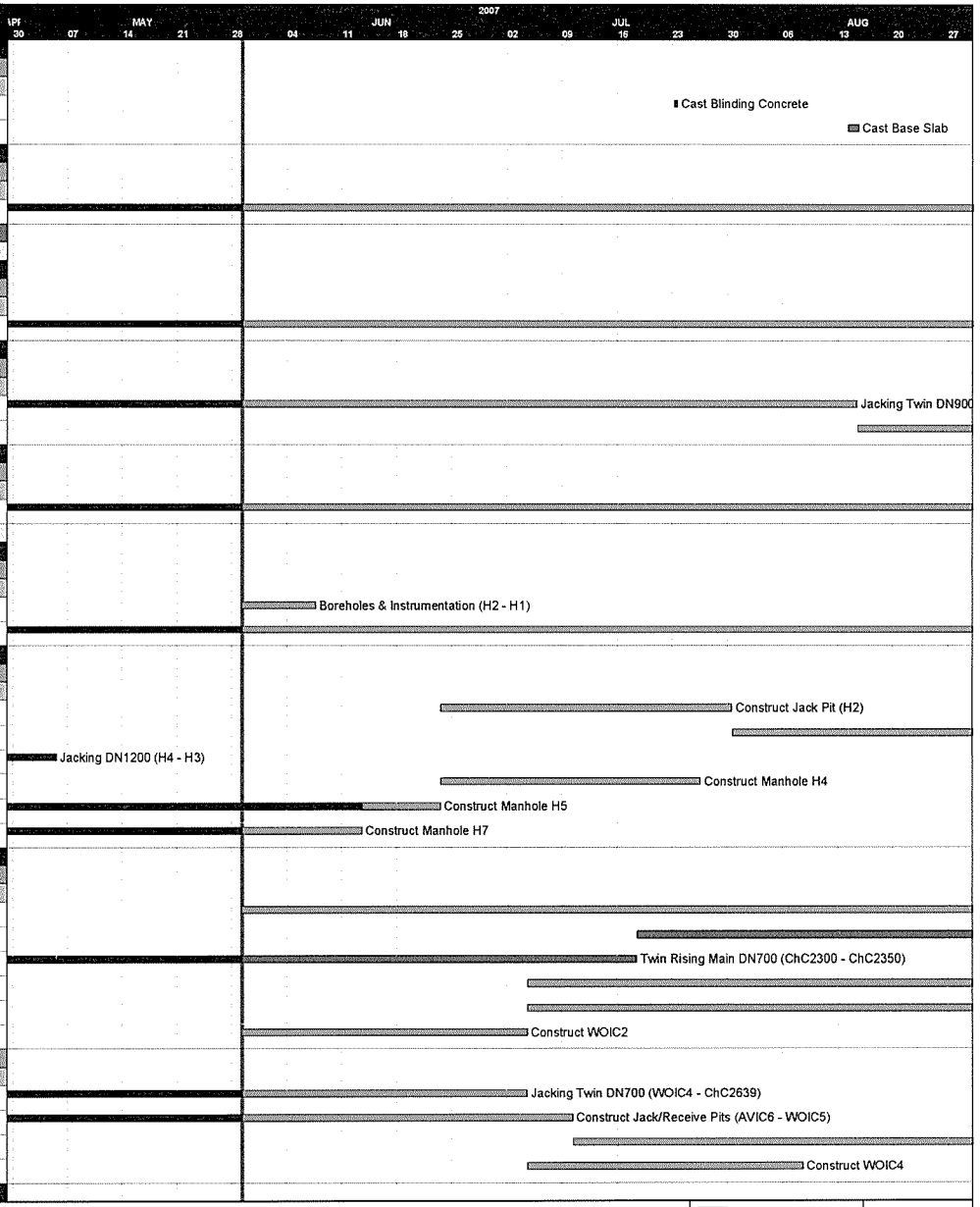
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
In-Situ Concrete								
S3CL1000	Cast Blinding Concrete	1d	-138d	0	23JUL07	23JUL07	30JAN07	30JAN07
S3CL1100	Cast Base Slab	2d	-138d	0	14AUG07	15AUG07	24FEB07	26FEB07
Geotechnical works								
S3CP1000	Monitoring of Instruments	657d4h	1d	57	06APR06 A	10MAY08	06APR06 A	12MAY08
Section 4 - Sewers & RM in Portion D, F, G, H, I								
Portion D								
Ground Investigation								
S4DB1300	Install Settlement Markers	589d4h	245d	60	31OCT06 A	14MAR08	31OCT06 A	08JAN09
Pipework - Rising Main								
Trenchless Method								
S4DFB1020	Jacking Twin DN900 (WOIC1 - ChA2095)	131d	79d	50	29MAR07 A	15AUG07	29MAR07 A	17NOV07
S4DFB1100	Construct WOIC1	30d	79d	0	15AUG07	19SEP07	19NOV07	22DEC07
Geotechnical works								
S4DP1000	Monitoring of Instruments	603d	57d	29	02NOV06 A	01NOV08	02NOV06 A	08JAN09
Portion F								
Ground Investigation								
S4FB1020	Boreholes & Instrumentation (H2 - H1)	9d	72d	0	29MAY07	07JUN07	23AUG07	01SEP07
S4FB1500	Install Settlement Markers	730d4h	108d	49	27APR06 A	30AUG08	27APR06 A	08JAN09
Drainage and Ducts								
Trenchless Method								
S4FEB1100	Construct Jack Pit (H2)	30d	13d	0	23JUN07	30JUL07	11JUL07	14AUG07
S4FEB1120	Jacking DN1200 (H3 - H2)	46d	13d	0	30JUL07	21SEP07	15AUG07	09OCT07
S4FEB1220	Jacking DN1200 (H4 - H3)	41d		100	03APR07 A	05MAY07 A	03APR07 A	05MAY07 A
S4FEB1240	Construct Manhole H4	27d	376d	0	23JUN07	26JUL07	26SEP08	29OCT08
S4FEB1340	Construct Manhole H5	27d	13d	70	18APR07 A	23JUN07	18APR07 A	10JUL07
S4FEB1540	Construct Manhole H7	34d4h	13d	60	13MAR07 A	13JUN07	13MAR07 A	29JUN07
Pipework - Rising Main								
Trench Method								
S4FFA1100	Twin Rising Main DN500 (ChB800 - ChB850)	120d	280d	0	29MAY07	20OCT07	08MAY08	27SEP08
S4FFA1900	Twin Rising Main DN700 (ChC2250 - ChC2300)	52d	-22d	0	18JUL07	17SEP07	22JUN07	22AUG07
S4FFA2000	Twin Rising Main DN700 (ChC2300 - ChC2350)	52d	-22d	20	14MAR07 A	18JUL07	14MAR07 A	21JUN07
S4FFA2200	Twin Rising Main DN700 (ChC2400 - WOIC4)	93d	1d	0	04JUL07	24OCT07	06JUL07	25OCT07
S4FFA2300	Twin Rising Main DN700 (ChC2639 - H7)	52d	212d	0	04JUL07	03SEP07	19MAR08	23MAY08
S4FFA2500	Construct WOIC2	30d	370d	0	29MAY07	04JUL07	23AUG08	27SEP08
Trenchless Method								
S4FFB1020	Jacking Twin DN700 (WOIC4 - ChC2639)	149d4h	1d	80	25NOV06 A	04JUL07	25NOV06 A	05JUL07
S4FFB1100	Construct Jack/Receive Pits (AVIC6 - WOIC5)	57d	9d	40	08JAN07 A	10JUL07	08JAN07 A	19JUL07
S4FFB1120	Jacking Twin DN700 (AVIC6 - WOIC5)	90d	9d	0	10JUL07	26OCT07	20JUL07	05NOV07
S4FFB1200	Construct WOIC4	30d	64d	0	04JUL07	08AUG07	18SEP07	25OCT07
Geotechnical works								



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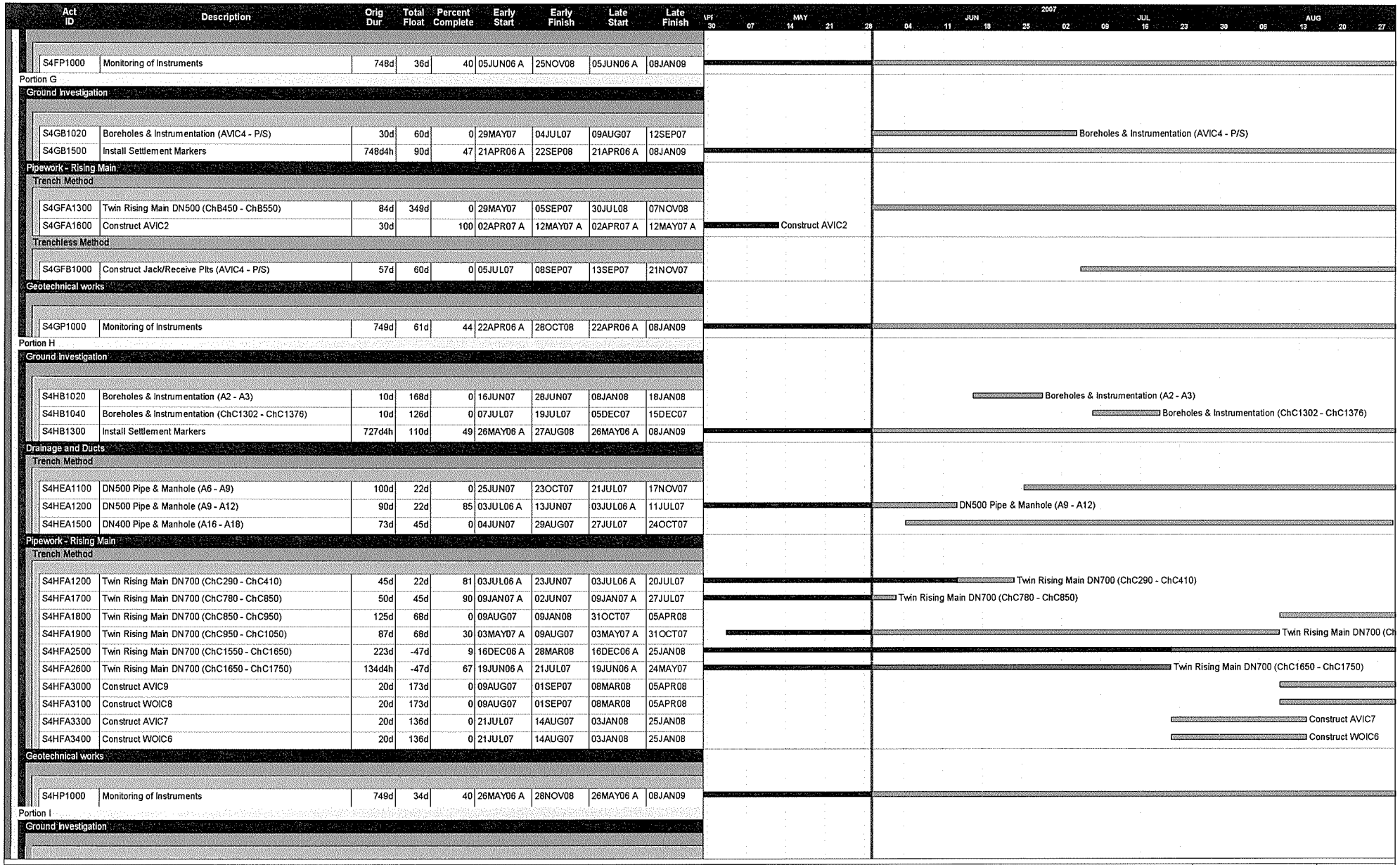
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point



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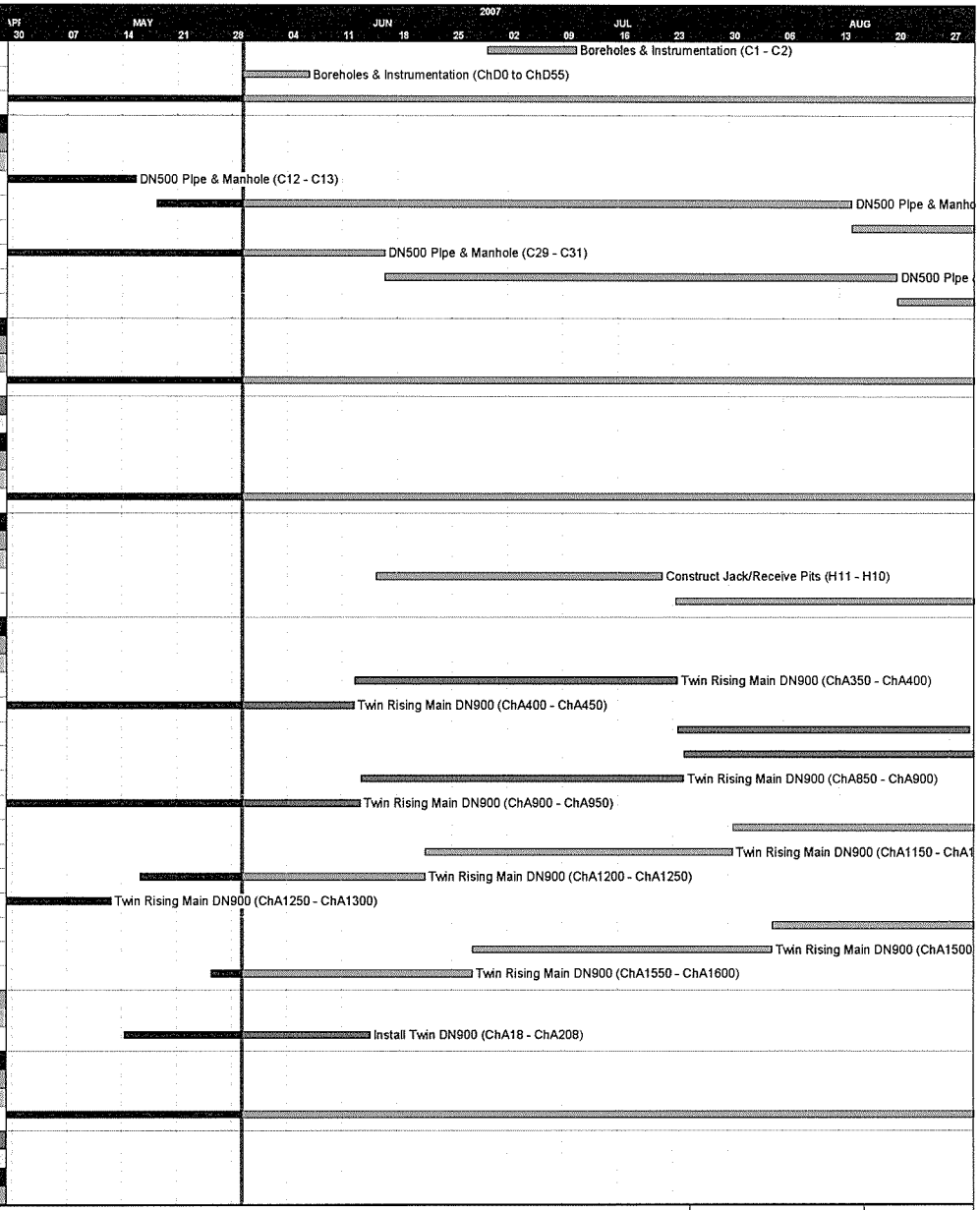
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S4IB1020	Boreholes & Instrumentation (C1 - C2)	9d	309d	0	29JUN07	10JUL07	14JUL08	23JUL08
S4IB1040	Boreholes & Instrumentation (ChD0 to ChD55)	8d	277d	0	29MAY07	06JUN07	05MAY08	13MAY08
S4IB1300	Install Settlement Markers	736d4h	79d	45	26JUN06 A	06OCT08	26JUN06 A	08JAN09
Drainage and Ducts								
Trench Method								
S4IEA1400	DN500 Pipe & Manhole (C12 - C13)	58d		100	05DEC06 A	15MAY07 A	05DEC06 A	15MAY07 A
S4IEA1500	DN500 Pipe & Manhole (C13 - C14)	81d	20d	20	18MAY07 A	14AUG07	18MAY07 A	06SEP07
S4IEA1600	DN500 Pipe & Manhole (C14 - C15)	45d	20d	0	14AUG07	08OCT07	07SEP07	01NOV07
S4IEA2300	DN500 Pipe & Manhole (C29 - C31)	54d	1d	70	08MAR07 A	16JUN07	08MAR07 A	16JUN07
S4IEA2320	DN500 Pipe & Manhole (C31 - C32)	53d	1d	0	16JUN07	20AUG07	18JUN07	20AUG07
S4IEA2400	DN500 Pipe & Manhole (C32 - C34)	70d	1d	0	20AUG07	13NOV07	21AUG07	13NOV07
Geotechnical works								
S4IP1000	Monitoring of Instruments	726d	38d	39	28JUN06 A	22NOV08	28JUN06 A	08JAN09
Section 5 - Sewers & RM in Portion E								
Portion E								
Ground Investigation								
S5EB1400	Install Settlement Markers (Stage 2)	138d	38d	34	29MAR07 A	14SEP07	29MAR07 A	31OCT07 *
Drainage and Ducts								
Trenchless Method								
S5EEB1000	Construct Jack/Receive Pits (H11 - H10)	30d	157d	0	15JUN07 *	21JUL07	21DEC07	28JAN08
S5EEB1020	Jacking DN600 (H11 - H10)	95d	157d	0	23JUL07	13NOV07	29JAN08	27MAY08
Pipework - Rising Main								
Trench Method								
S5EFA1300	Twin Rising Main DN900 (ChA350 - ChA400)	33d	-15d	0	12JUN07	23JUL07	26MAY07	05JUL07
S5EFA1400	Twin Rising Main DN900 (ChA400 - ChA450)	32d	-15d	60	10APR07 A	12JUN07	10APR07 A	24MAY07
S5EFA1800	Twin Rising Main DN900 (ChA600 - ChA650)	32d	-15d	0	23JUL07	29AUG07	06JUL07	11AUG07
S5EFA2200	Twin Rising Main DN900 (ChA800 - ChA850)	33d	-16d	0	24JUL07	31AUG07	05JUL07	11AUG07
S5EFA2300	Twin Rising Main DN900 (ChA850 - ChA900)	33d	-16d	0	13JUN07	24JUL07	24MAY07	04JUL07
S5EFA2400	Twin Rising Main DN900 (ChA900 - ChA950)	33d	-16d	60	02APR07 A	13JUN07	02APR07 A	23MAY07
S5EFA2800	Twin Rising Main DN900 (ChA1100 - ChA1150)	33d	44d	0	30JUL07	06SEP07	20SEP07	31OCT07 *
S5EFA2900	Twin Rising Main DN900 (ChA1150 - ChA1200)	32d	44d	0	21JUN07	30JUL07	14AUG07	19SEP07
S5EFA3000	Twin Rising Main DN900 (ChA1200 - ChA1250)	33d	44d	40	16MAY07 A	21JUN07	16MAY07 A	13AUG07
S5EFA3100	Twin Rising Main DN900 (ChA1250 - ChA1300)	33d		100	10APR07 A	12MAY07 A	10APR07 A	12MAY07 A
S5EFA3500	Twin Rising Main DN900 (ChA1450 - ChA1500)	33d	6d	0	04AUG07	12SEP07	13AUG07	19SEP07
S5EFA3600	Twin Rising Main DN900 (ChA1500 - ChA1550)	32d	6d	0	27JUN07	04AUG07	06JUL07	11AUG07
S5EFA3700	Twin Rising Main DN900 (ChA1550 - ChA1600)	33d	6d	25	25MAY07 A	27JUN07	25MAY07 A	05JUL07
Trenchless Method								
S5EFB1040	Install Twin DN900 (ChA18 - ChA208)	30d	-71d	50	14MAY07 A	14JUN07	14MAY07 A	16MAR07
Geotechnical works								
S5EP1000	Monitoring of Instruments	535d	43d	47	01AUG06 A	10MAY08	01AUG06 A	30JUN08
Section 6 - Sewers in Portion J								
Portion J								
Ground Investigation								



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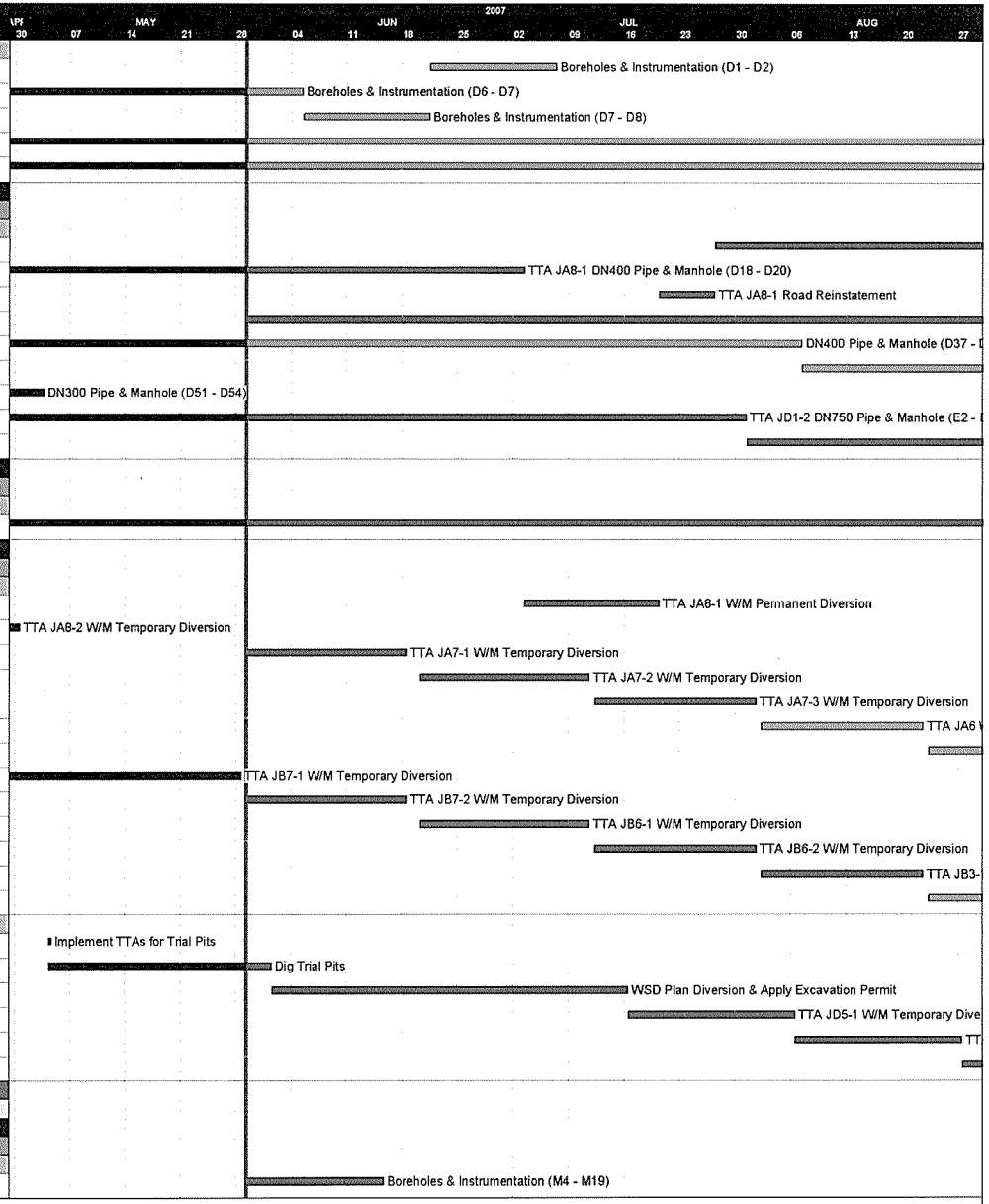
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S6JB1020	Boreholes & Instrumentation (D1 - D2)	13d	126d	0	21JUN07	07JUL07	20NOV07	04DEC07
S6JB1040	Boreholes & Instrumentation (D6 - D7)	13d	99d	50	13JUN06 A	05JUN07	13JUN06 A	02OCT07
S6JB1060	Boreholes & Instrumentation (D7 - D8)	13d	115d	0	05JUN07	21JUN07	23OCT07	06NOV07
S6JB1500	Install Settlement Marker 1st Stage	765d	58d	43	20APR06 A	11NOV08	20APR06 A	20JAN09
S6JB2100	Install Settlement Markers 2nd Stage	600d4h	143d	42	07JUL06 A	31JUL08	07JUL06 A	20JAN09
Drainage and Ducts								
Trench Method								
S6JEA1800	TTA JA8-2 DN400 Pipe & Manhole (D16 - D18)	75d	-276d	0	27JUL07	26OCT07	19AUG06	17NOV06
S6JEA1820	TTA JA8-1 DN400 Pipe & Manhole (D18 - D20)	81d	-276d	65	29JAN07 A	03JUL07	29JAN07 A	25JUL06
S6JEA1830	TTA JA8-1 Road Reinstatement	6d	-276d	0	20JUL07	27JUL07	12AUG06	18AUG06
S6JEA2520	TTA JB7-1 DN400 Pipe & Manhole (D31 - D32)	88d	-436d	0	29MAY07	10SEP07	03DEC05	21MAR06
S6JEA3100	DN400 Pipe & Manhole (D37 - D40)	87d	65d	33	28MAR07 A	07AUG07	28MAR07 A	25OCT07
S6JEA3200	DN300 Pipe & Manhole (D40 - D42)	65d	65d	0	07AUG07	25OCT07	25OCT07	12JAN08
S6JEA3600	DN300 Pipe & Manhole (D51 - D54)	30d		100	02JAN07 A	03MAY07 A	02JAN07 A	03MAY07 A
S6JEA3920	TTA JD1-2 DN750 Pipe & Manhole (E2 - E3)	55d	-431d	5	31MAR07 A	31JUL07	31MAR07 A	13FEB06
S6JEA4000	TTA JD2 DN750 Pipe & Manhole (E3 - E5)	74d	-431d	0	31JUL07	29OCT07	14FEB06	17MAY06
Geotechnical works								
S6JP1000	Monitoring of Instruments	1220d	-389d	28	21APR06 A	10MAY10	21APR06 A	20JAN09
Additonal Works / Disruption								
Kam Tin Road A/C Watermain (Claim No. 019)								
S6JV1260	TTA JA8-1 W/M Permanent Diversion	15d	-276d	0	03JUL07	20JUL07	26JUL06	11AUG06
S6JV1270	TTA JA8-2 W/M Temporary Diversion	18d		100	21MAR07 A	30APR07 A	21MAR07 A	30APR07 A
S6JV1290	TTA JA7-1 W/M Temporary Diversion	18d	-143d	0	29MAY07	18JUN07	29NOV06	19DEC06
S6JV1310	TTA JA7-2 W/M Temporary Diversion	18d	-85d	0	20JUN07	11JUL07	05MAR07	24MAR07
S6JV1330	TTA JA7-3 W/M Temporary Diversion	18d	-42d	0	12JUL07	01AUG07	21MAY07	11JUN07
S6JV1350	TTA JA6 W/M Temporary Diversion	18d	7d	0	02AUG07	22AUG07	10AUG07	30AUG07
S6JV1370	TTA JA5-2 W/M Temporary Diversion	18d	65d	0	23AUG07	12SEP07	10NOV07	30NOV07
S6JV1450	TTA JB7-1 W/M Temporary Diversion	103d		100	20MAR07 A	28MAY07 A	20MAR07 A	28MAY07 A
S6JV1470	TTA JB7-2 W/M Temporary Diversion	18d	-345d	0	29MAY07	18JUN07	25MAR06	19APR06
S6JV1490	TTA JB6-1 W/M Temporary Diversion	18d	-266d	0	20JUN07	11JUL07	26JUL06	15AUG06
S6JV1510	TTA JB6-2 W/M Temporary Diversion	18d	-183d	0	12JUL07	01AUG07	24NOV06	14DEC06
S6JV1530	TTA JB3-1 W/M Temporary Diversion	18d	-99d	0	02AUG07	22AUG07	30MAR07	24APR07
S6JV1550	TTA JB3-2 W/M Temporary Diversion	18d	26d	0	23AUG07	12SEP07	22SEP07	15OCT07
Kam Sheung Road A/C Watermain (Claim No. 018)								
S6JV2430	Implement TTAs for Trial Pits	1d		100	04MAY07 A	04MAY07 A	04MAY07 A	04MAY07 A
S6JV2440	Dig Trial Pits	18d	-179d	80	04MAY07 A	01JUN07	04MAY07 A	20OCT06
S6JV2450	WSD Plan Diversion & Apply Excavation Permit	36d	-179d	0	01JUN07	16JUL07	21OCT06	02DEC06
S6JV2460	TTA JD5-1 W/M Temporary Diversion	18d	-179d	0	16JUL07	06AUG07	04DEC06	23DEC06
S6JV2480	TTA JD5-2 W/M Temporary Diversion	18d	-114d	0	06AUG07	27AUG07	17MAR07	11APR07
S6JV2500	TTA JD6 W/M Temporary Diversion	18d	-54d	0	27AUG07	17SEP07	25JUN07	16JUL07
Section 7 - Sewers in Portion K								
Portion K								
Ground Investigation								
S7KB1020	Boreholes & Instrumentation (M4 - M19)	16d	-152d	0	29MAY07	15JUN07	18NOV06	06DEC06

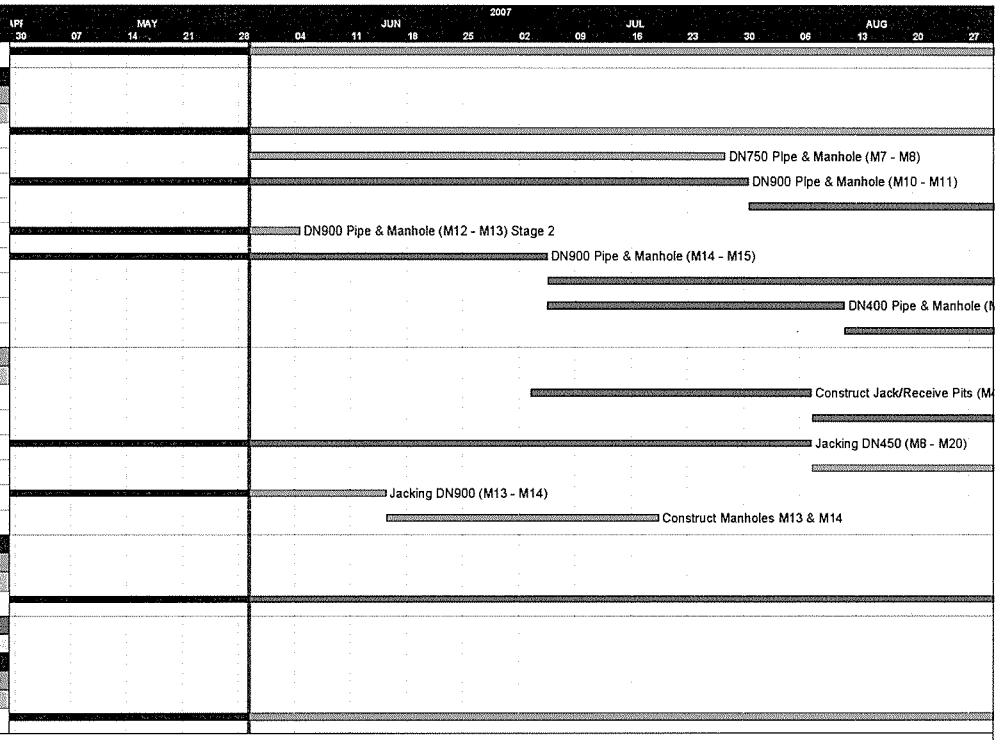


Start date	19DEC05
Finish date	04JUL10
Data date	29MAY07
Page number	6A

Leader Civil Engineering Corp. Ltd.
DSD Contract No. DC/2005/02
3-Month Rolling Programme - 3M01 at 29 May 2007

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S7KB1500	Install Settlement Markers	423d4h	53d	80	08MAY06 A	07SEP07	08MAY06 A	10NOV07
Drainage and Ducts								
Trench Method								
S7KEA1200	DN750 Pipe & Manhole (M4 - M6)	126d	32d	20	03APR07 A	25SEP07	03APR07 A	05NOV07
S7KEA1390	DN750 Pipe & Manhole (M7 - M8)	50d	32d	0	29MAY07	27JUL07	07JUL07	03SEP07
S7KEA1500	DN900 Pipe & Manhole (M10 - M11)	57d4h	-24d	10	23JAN07 A	30JUL07	23JAN07 A	30JUN07
S7KEA1610	DN900 Pipe & Manhole (M11 - M12) Stage 2	54d	-24d	0	30JUL07	03OCT07	03JUL07	03SEP07
S7KEA1710	DN900 Pipe & Manhole (M12 - M13) Stage 2	30d	130d	80	03APR07 A	04JUN07	03APR07 A	08NOV07
S7KEA1800	DN900 Pipe & Manhole (M14 - M15)	51d	-37d	40	27DEC06 A	05JUL07	27DEC06 A	19MAY07
S7KEA1900	DN900 Pipe & Manhole (M15 - M16)	93d	-37d	0	05JUL07	25OCT07	21MAY07	08SEP07
S7KEA2000	DN400 Pipe & Manhole (M21 - M16a)	32d	-2d	0	05JUL07	11AUG07	04JUL07	09AUG07
S7KEA2020	DN375 Pipe & Manhole (S1 - S2)	24d	-2d	0	11AUG07	08SEP07	10AUG07	06SEP07
Trenchless Method								
S7KEB1000	Construct Jack/Receive Pits (M4 - M19)	30d	-165d	0	03JUL07	07AUG07	07DEC06	13JAN07
S7KEB1020	Jacking DN600 (M4 - M19)	72d	-165d	0	07AUG07	02NOV07	15JAN07	16APR07
S7KEB1120	Jacking DN450 (M8 - M20)	97d4h	-165d	40	18NOV06 A	07AUG07	18NOV06 A	13JAN07
S7KEB1140	Construct Manholes M8 & M20	27d	51d	0	07AUG07	07SEP07	08OCT07	08NOV07
S7KEB1220	Jacking DN900 (M13 - M14)	48d4h	94d	68	02DEC06 A	15JUN07	02DEC06 A	06OCT07
S7KEB1240	Construct Manholes M13 & M14	27d	94d	0	15JUN07	19JUL07	08OCT07	08NOV07
Geotechnical works								
S7KP1000	Monitoring of Instruments	561d	-114d	55	24MAY06 A	02APR08	24MAY06 A	10NOV07
Section 8 - Preservation and Protection of Trees								
All Portions								
Landscape Softworks and Establishment Works								
S8QR1100	Preservation & Protection of Preserved Trees	885d	0	44	29JUL06 A	20JAN09	29JUL06 A	20JAN09



Start date	19DEC05
Finish date	04JUL10
Data date	29MAY07
Page number	7A

Leader Civil Engineering Corp. Ltd.
DSD Contract No. DC/2005/02
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Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Annex D

Photographical Records – Noise Barrier On-Site

Annex E

Locations of Monitoring Stations

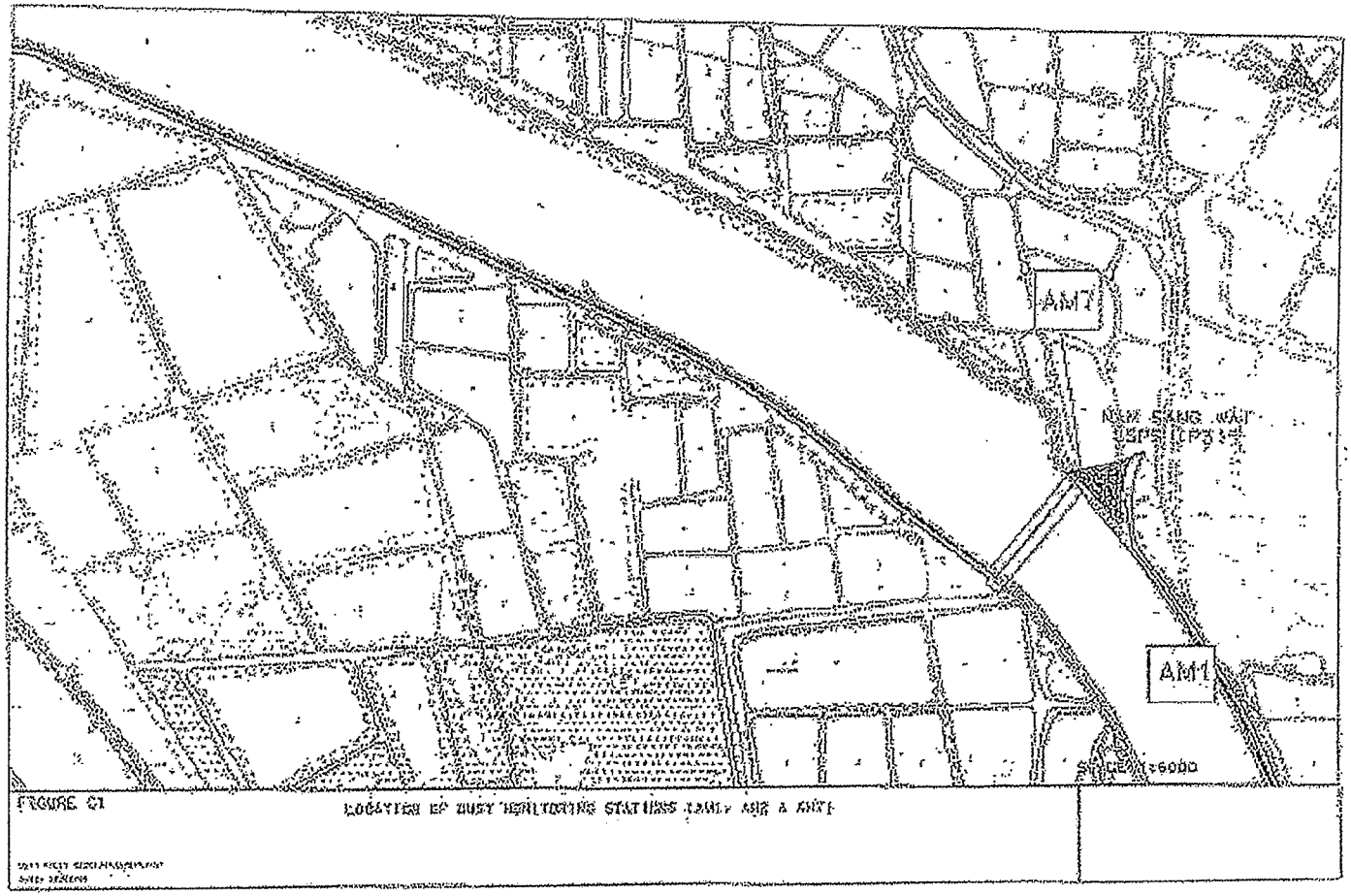


FIGURE 01 LOCATION OF DUST MONITORING STATIONS (AM1 AND AM1)

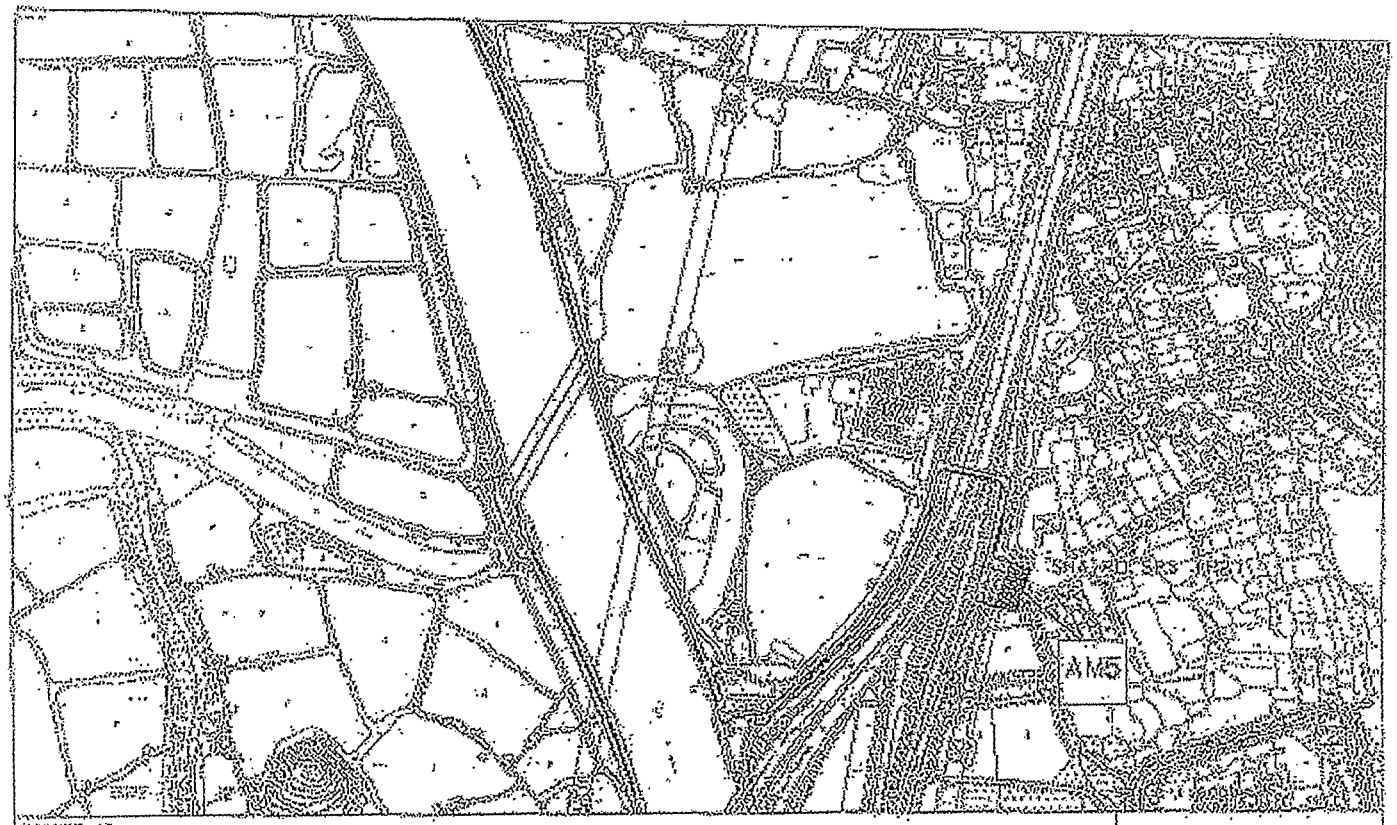


FIGURE 02 LOCATION OF DUST MONITORING STATION (AM5)

FIGURE 4.2 LOCATION OF DUST MONITORING STATIONS (AM4, AM5 & AM10)

FIGURE 27 LOCATION OF SOIL SAMPLING STATIONS (SB1, SB2, SB3, SB4)

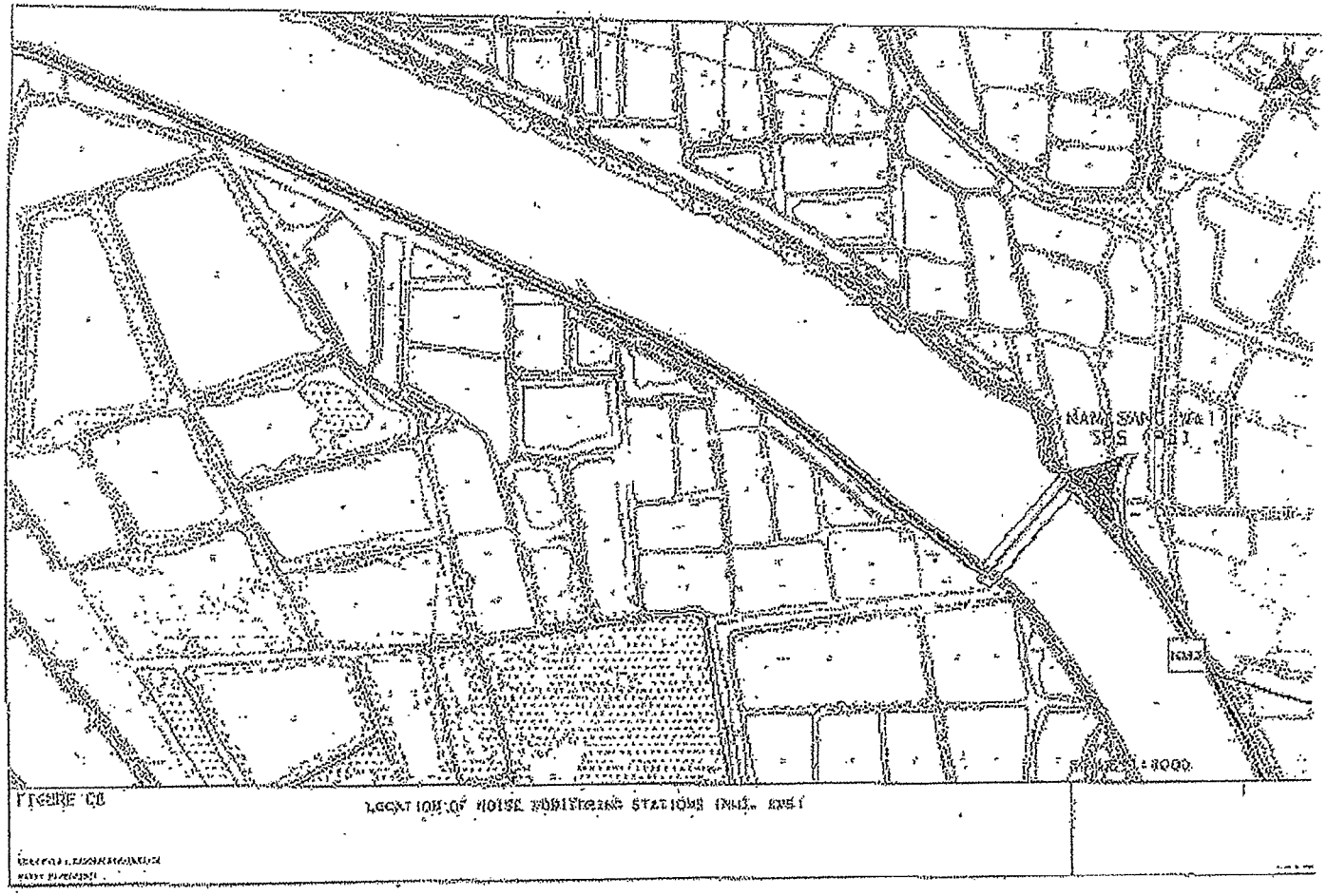


FIGURE C8

LOCATION OF NOISE MONITORING STATIONS (NMS) - EAST

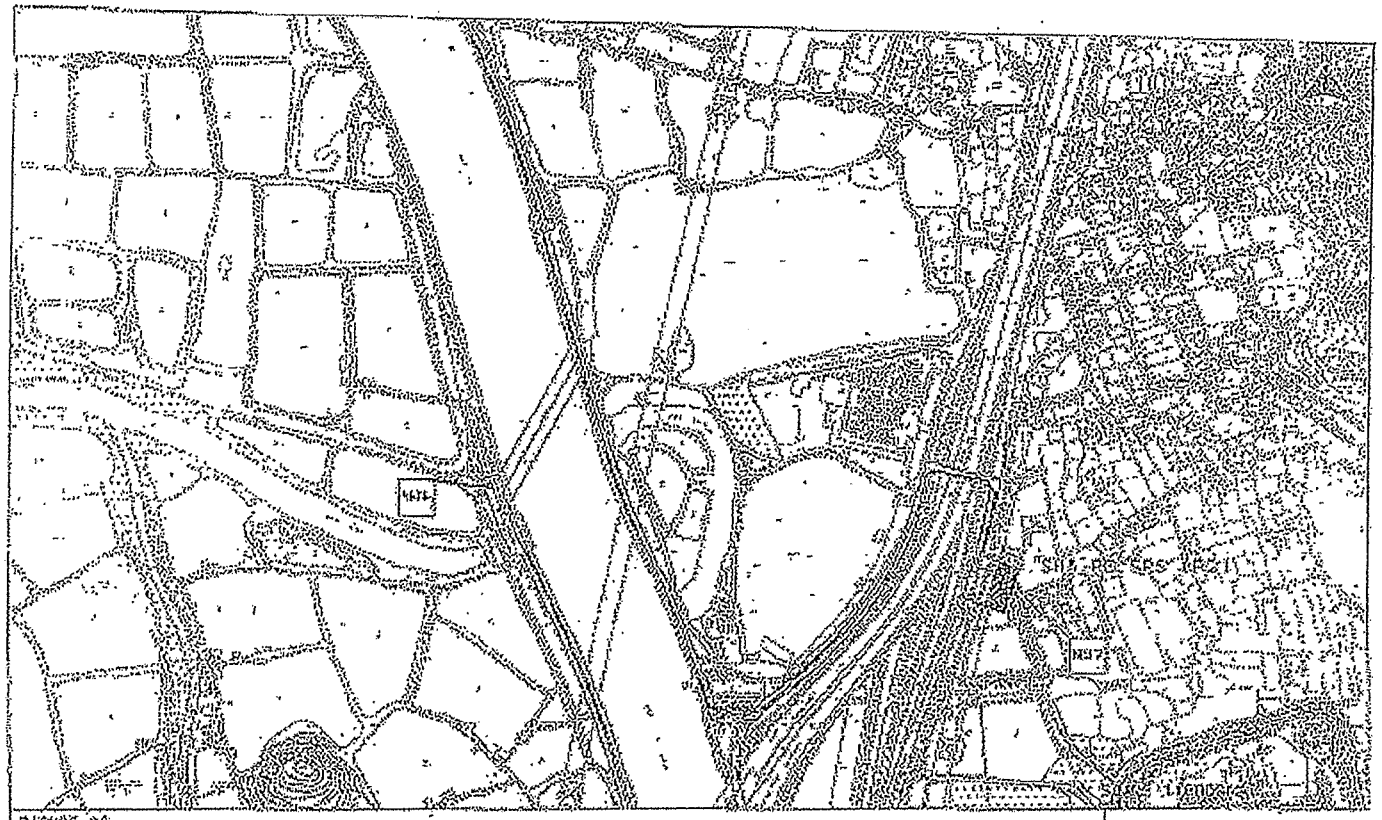


FIGURE 39.

LOCATION OF NOISE MONITORING STATIONS (1994 MAP)

Annex F

Event and Action Plan

Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION			
	ET Leader	IEC	Engineer	Contractor
Action Level				
Exceedance for one sample	1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat dust measurements to confirm findings 3. Increase monitoring frequency to daily 4. Assess efficacy of remedial measures and keep the Contractor, IEC, and Engineer informed	1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractors working methods 3. Check and confirm Contractors proposed remedial actions and working methods are appropriate	1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Inform complainant of actions taken, if necessary	1. Rectify any unacceptable practice 2. Liaise with Engineer and IEC to develop appropriate remedial measures to reduce dust impact 3. Amend working methods and remedial proposals if required by the Engineer or IEC 4. Implement the agreed remedial actions upon instruction from the Engineer and IEC
Exceedance for two or more consecutive samples	1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2 Repeat measurements to confirm findings 3. Increase the monitoring frequency to daily to assess the efficacy of remedial measures and keep the Contractor informed 4. Discuss remedial actions with IEC and Contractor 5. If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions 6. If exceedance stops, inform the Contractor and cease additional monitoring	1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractors working methods 3. Discuss with Contractor and Engineer on possible remedial measures 4. Check and confirm Contractors proposed remedial measures are appropriate 5. Determine the efficacy of remedial actions and keep the Engineer informed	1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Ensure remedial measures are properly implemented 5. Inform complainant of actions taken, if necessary.	1. Rectify any unacceptable practice, if possible 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions
Limit Level				

Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION			
	ET Leader	IEC	Engineer	Contractor
Exceedance for one sample	1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat dust measurements to confirm findings 3. Increase monitoring frequency to daily 4. Assess efficacy of remedial measures and keep the Contractor, IEC, Engineer and EPD informed	1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractors working methods 3. Check and confirm Contractors proposed remedial actions and working methods are appropriate 4. Check and confirm Contractors proposed remedial measures are appropriate 5. Determine the efficacy of remedial actions and keep the Engineer informed	1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC, 4. Ensure remedial measures are properly implemented 5. Inform complainant of actions taken, if necessary.	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions
Exceedance for two or more consecutive samples	1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat measurements to confirm findings 3. Increase the monitoring frequency to daily to assess the efficacy of remedial measures and keep the Contractor informed 4. Discuss remedial actions with IEC and Contractor 5. If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions 6. If exceedance stops, inform the Contractor and cease additional monitoring.	1. Discuss with Contractor and Engineer on possible remedial measures 2. Check and confirm Contractors proposed remedial measures are appropriate 3. Determine the efficacy of remedial actions and keep the Engineer informed	1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Ensure remedial measures are properly implemented 5. If exceedance continues, instruct the Contractor to stop the relevant portion of work until the exceedance is abated 6. Inform complainant of actions taken, if necessary.	1. Rectify any unacceptable practice, if possible 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions

Event and Action Plan for Construction Noise

EVENT	ACTION			
	ET Leader	IEC	Engineer	Contractor
Limit Level				
Exceedance for one sample	1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat dust measurements to confirm findings 3. If repeat measurements confirm exceedance ,increase monitoring frequency to daily 4. Assess efficacy of remedial measures and keep the Contractor, IEC, and Engineer informed 5. If exceedance stops, inform Contractor and cease additional noise monitoring	1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractors working methods 3. Check and confirm Contractors proposed remedial actions and working methods are appropriate	1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Inform complainant of actions taken, if necessary	1. Rectify any unacceptable practice 2. Liaise with Engineer and IEC to develop appropriate remedial measures to reduce noise impact 3. Amend working methods and remedial proposals if required by the Engineer or IEC 4. Implement the agreed remedial actions upon instruction from the Engineer and IEC
Exceedance for two or more consecutive samples	1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat measurements to confirm findings 3. Increase the monitoring frequency to daily 4. Discuss remedial actions with IEC, Engineer and the EPD 5. Assess the efficacy of remedial measures and keep the Contractor informed 6. If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions 7. If exceedance stops, inform the Contractor and cease additional monitoring.	1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractors working methods 3. Discuss with Contractor and Engineer on possible remedial measures 4. Check and confirm Contractors proposed remedial measures are appropriate 5. Determine the efficacy of remedial actions and keep the Engineer informed	1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Ensure remedial measures are properly implemented 5. If exceedance continues, instruct the Contractor to stop the relevant portion of work until the exceedance is abated 6. Inform complainant of actions taken, if necessary.	1. Rectify any unacceptable practice, if possible 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions 6. Stop the relevant portion of work as determined by the Engineer until the exceedance is abated

Annex G

Mitigation Implementation Schedule

EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	C	O	Dec	
		CONSTRUCTION PHASE								
		AIR QUALITY - *Construction Phase*								
		The following measures are enforceable under the *Air Pollution Control (Construction Dust) Regulations*								
3.5	A1	Site boundary and entrance • where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the boundaries of the seven pumping stations sites and the works area where the Engineer's site office and the Contractor's site office erected;	To prevent access to the site and control potential dust impacts from construction works.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part III, Clause 13 (c), Air Pollution Control (Construction Dust) Regulations*
3.5	A2	Access Road • the portion of any road leading only to a construction site that is within 30 m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials;	To control potential dust impacts from vehicle movements.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part III, Clause 14, (b), Air Pollution Control (Construction Dust) Regulations*
3.5	A3	Stockpiling of Dusty Materials • any stockpile of dusty materials should be either covered entirely by impervious sheeting and placed in an area sheltered on the top and the 3 sides or sprayed with water so as to maintain the entire surface wet;	To control potential dust impacts during excavation and stockpiling activities.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part IV, Clause 18, (a, b & c), Air Pollution Control (Construction Dust) Regulations*
3.5	A4	Loading, unloading or transfer of dusty materials • all dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading and unloading so as to maintain the dusty materials wet;	To control potential dust impacts during material handling and truck movements.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part IV, Clause 19, Air Pollution Control (Construction Dust) Regulations*
3.5	A5	Use of vehicles • every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site;	To control potential dust impacts from vehicle movements.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part IV, Clause 21, (1), Air Pollution Control (Construction*

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des.	C	O	Dec.	
3.5	A6	◦ where a vehicle leaving a construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle;	To control potential dust impacts during material transportation.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Dust) Regulations Part IV, Clause 21, (2), Air Pollution Control (Construction Dust) Regulations*
3.5	A7	Power-driven drilling, and cutting ◦ water should be continuously sprayed on the surface where any mechanical breaking operation that causes dust emission is carried out, unless the process is accompanied by the operation of an effective dusty extraction and filtering device;	To control potential dust impacts during mechanical breaking.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part IV, Clause 22, Air Pollution Control (Construction Dust) Regulations*
3.5	A8	Excavation and earth moving ◦ the working area of excavation should be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet;	To control potential dust impacts arising from excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Part IV, Clause 24, Air Pollution Control (Construction Dust) Regulations*
3.5	A9	Construction of the superstructure of a building ◦ where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the round floor level of the SPS, or if a canopy is provided a the first floor level, from the first floor level, up to the highest level of the scaffolding; and	To control potential dust impacts from SPS building construction works.	Full duration of SPS construction contract.	The Contractor		✓			*Part I, Clause 6, (a), Air Pollution Control (Construction Dust) Regulations*
3.5	A10	◦ any skip hoist for material transport should be totally enclosed by the impervious sheeting.	To control potential dust impacts during material transportation.	Full duration of SPS construction contract.	The Contractor		✓			*Part I, Clause 6, (b), Air Pollution Control (Construction Dust) Regulations*

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage*				Relevant Legislation & Guidelines
						Des.	C	O	Dec.	
		NOISE - *Construction Phase*								
4.7.1	B1	*General Site Clearance – Demolition Works* ◦ Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997 (Examples of these PME are shown in Table P2)*,	To control potential noise impacts during site clearance and demolition works	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
4.7.1	B2	*Construction of Sewage Pumping Stations P1, P2 & P3* ◦ Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997*,	To minimise potential noise impacts arising during the construction of *P1, P2 & P3*	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
		◦ Adoption of temporary noise barrier, in the form of a site hoarding (with a superficial density of at least 20kg/m2, with no substantial gaps), along the site boundary of the pumping station sites.	To minimise potential noise impacts arising during the construction of *P1, P2 & P3*	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
4.7.1	B3	*Sewers and Rising Mains using Open Trench Method* ◦ Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997*,	To control potential noise impacts during excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
4.7.1	B4	◦ Use of handheld breakers for all initial road opening activities, when breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached.	To control potential noise impacts during road opening activities.	Where there are NSRs located within 50m of the line of sight. Throughout the full duration of the road opening activities.	The Contractor		✓			
4.7.1	B5	◦ Use of movable noise barriers or 3 sided enclosures for all initial road opening activities	To control potential noise impacts during road opening	Where there are NSRs located within 50m of the	The Contractor		✓			

EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the Measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	Con	Op	Dec	
		enclosures for all initial road opening activities (breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached), where there are NSRs located within 50m of the line of sight from the works area.	activities.	line of sight: Throughout the full duration of the road opening activities.						
		Sewers and Rising Mains using Pipe Jacking Method								
4.7.1	B6	◦ Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997.*	To control potential noise impacts from PME during construction works	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
		Road Pavement and Finishes								
4.7.1	B7	◦ Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997.*	To control potential noise impacts from PME during pavement and finish works	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
		WATER QUALITY - *Construction Phase* No water quality monitoring is required under this study.								
		WASTE - *Construction Phase*								
6.6.2	D1	The Contractor shall obtain the necessary waste disposal permits from the appropriate authorities for the disposal of chemical and C&D waste, ◦ Chemical Waste Producer and Chemical Waste Disposal Licence *(Waste Disposal (Chemical Waste) (General) Regulations); and* ◦ Dumping Licence (*Land (Miscellaneous Provisions) Ordinance (Cap 28)*)	To monitor the collection, handling and disposal of chemical waste and C&D waste, and in compliance with relevant Hong Kong Standards and Regulations.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓	✓			*Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste)(General) Regulation (Cap 354), the Land (Miscellaneous Provisions) Ordinance (Cap 28))*

EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	Con	Op	Dec	
6.6.2	D2	*Chemical Waste* Chemical waste that is produced, as defined by Schedule 1 of the *Waste Disposal (Chemical Waste) (General) Regulation*, should be handled in accordance with the regulations and Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. All chemical waste producers should be registered with the EPD. Storage, Packaging and Labelling of Chemical Waste	To control the handling, storage and disposal of chemical waste, in order to minimise potential spillages/leakages and human health and environmental impacts.	To be implemented at all worksites throughout the full duration of the construction phase.	The Contractor		✓			*Part II, (6) Waste Disposal (Chemical Waste) (General) Regulation*
6.6.2	D3	Containers used for storage of chemical wastes should: • be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; • have a capacity of less than 450 L unless the specifications have been approved by the EPD; and • display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.	To ensure the proper storage, packaging and labelling of chemical waste in accordance with the Regulations.	To be implemented at all worksites throughout the full duration of the construction phase.	The Contractor		✓			*Part IV, (9, 10, 11 & 12) Waste Disposal (Chemical Waste) (General) Regulation*
6.6.2	D4	Storage of chemical waste The storage area for chemical wastes should: • be clearly labelled and used solely for the storage of chemical waste; • be enclosed on at least 3 sides; • have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest; • have adequate ventilation; • be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste, if necessary); and • be arranged so that incompatible materials are	To ensure the proper storage of chemical waste in accordance with the Regulations.	To be implemented at all worksites throughout the full duration of the construction phase.	The Contractor		✓			*Part IV, (13, 14, 15, 16, 17, & 18) Waste Disposal (Chemical Waste) (General) Regulation*

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	C	O	Dec	
		adequately separate								
		Disposal of chemical waste • The Contractor should ensure that the disposal of chemical waste is via a licensed Waste Collector and in accordance with the *Waste Disposal (Chemical Waste) (General) Regulations.*	To control the disposal of chemical waste in accordance with the Regulations.	To be implemented at all worksites throughout the full duration of the construction phase.	The Contractor		✓			*Part IV, (20 -25) Waste Disposal (Chemical Waste) (General) Regulation*
6.6.2	D5	*Management of Waste Disposal* A trip-ticket system should be established which monitors the disposal of C&DM and solid wastes at public filling facilities and landfills and to control fly-tipping, in accordance with *Land (Miscellaneous Provisions) Ordinance (Cap28)* and the *Works Bureau Technical Circular No. 5/99.*	To monitor the disposal of C&DM and solid wastes at public filling facilities and landfills and to control fly-tipping.	To be implemented at all worksites throughout the full duration of the construction phase.	The Engineer/ Contractor		✓			*Land (Miscellaneous Provisions) Ordinance (Cap 295) and Works Bureau Technical Circular No. 5/99.*
		LAND CONTAMINATION- *Construction Phase*								
7.5.6	E1	A revised CAP should be submitted to the EPD for approval before the commencement of the construction works. Following receipt of the EPD's approval, the CAP shall be implemented and the findings of the investigations will be reported in the Contaminated Assessment Report (CAR), before ground disturbance is allowed at the concerned sites. If land contamination is confirmed, a Remediation Action Plan (RAP) shall be prepared, and both the CAR and the RAP shall be submitted as a combined report to the EPD for approval before disturbing the ground of the concerned sites. If applicable and required in consultation with the	To determine the presence of soil and groundwater contamination and remedy any potential concerns to acceptable levels.	To be implemented before the commencement of the construction works.	To be implemented by DSD or their sub-consultants at the Detailed Design Stage, depending upon when site access can be gained.	✓				*EIAO TM Annex 19/3.1.1 & 3.1.2*

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the Measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des.	C.	O.	Dec.	
		EPD, the contaminated site(s) shall be remediated in accordance with the approved CAR/RAP.								
8.7.1	F1	ECOLOGY - *Construction Phase* *Mitigation Measures Adopted - Avoidance* Construction activities shall be prohibited during the winter season (November to March) along the section of the proposed sewerage alignment, which fall within the Deep Bay Wetland Conservation Area and the Deep Bay Wetland Buffer Area (WCA and WBA) and close to the locations of ecologically sensitive species (including Intermediate Egret, Black-faced Spoonbill, Buzzard, Imperial Eagle and Avocet). (See Figure 8.7a attached). Regular site inspections (at least twice a month) should be conducted by the Environmental Team during the winter season (November to March) to ensure proper implementation of this restriction	To schedule construction works in order to minimise potential impacts to winter visiting birds. To be confirmed by regular site inspections.	At identified location (*Figure 8.7a*) for the full duration of the construction contract.	The Contractor		✓			
8.7.2	F2	*Mitigation Measures Adopted - Minimisation* Pipe jacking method should be used instead of dredging where sewers and rising mains cross over existing MDC within the WCA and WBA.	To minimise potential construction noise impacts to ecological sensitive receivers within the WCA/WBA.	For the full duration of the construction contract.	The Contractor		✓			
8.7.2	F4	Regular inspections (at least twice a month) should be conducted by the ET during the winter season (November to March) for the remaining sections of the proposed sewerage alignment (including parts of S4, S5 and S6) within the WCA and WBA, where construction activities cannot be rescheduled. The site inspections shall check and report the number of workfronts and implementation of	To schedule noisy construction activities to minimise potential impacts to winter visiting birds.	Work fronts other than identified sections within WBA & WCA (see *Figure 8.7a* attached) throughout the full duration of the construction contract.	The Contractor		✓			

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des.	C	O	Dec	
		mitigation measures (i.e. erection of movable noise barriers with a suitable footing along the sites) in the monthly EM&A reports.								
8.7.3	F5	*Mitigation Measures Adopted* Quietened construction plant and equipment (as shown in *Table F2*) should be used for the construction of pumping stations (P3 and P2) and sewerage alignment (S4, S5 and S6) located within the WCA and WBA.	Quiet construction plant shall minimise potential noise impacts to the wildlife, particularly rare birds including Black-faced Spoonbill, Buzzard, Hobby, Imperial Eagle, Intermediate Egret, Avocet and Black-eared Kite	At described locations and throughout the full duration of the construction contract.	The Contractor		✓			
8.7.4	F6	Erection of fences along the boundary of pumping station construction sites (P1 to P3) before the commencement of construction works to prevent tipping, vehicle movements, and encroachment of personnel into adjacent areas, and P2 to avoid disturbance to the remaining pond areas (0.7 ha);	To erect fences to prevent encroachment of construction activities onto adjacent areas.	At P1 to P3 for full duration of the construction contract.	The Contractor		✓			
8.7.4	F7	No filling and dumping to the remaining abandoned fishpond at P2.	To avoid disturbance to abandoned fishponds from construction activities and illegal dumping.	At P2 for full duration of the construction contract	The Contractor		✓			
8.7.4	F8	Installation and operation of silt removal facilities at construction sites of P1 to P3. The silt removal facilities should be designed in accordance with Appendix A1 of ProPECC Note PN1/94 Construction Site Drainage. The minimal total combined volume of the silt removal facilities at Nam Sang Wai SPS (P3) should be 15m^3.	To install silt removal facilities in potentially impact streams and ponds to prevent sedimentation.	At P1 to P3 for full duration of the construction contract.	The Contractor		✓			
8.7.4	F9	No open fires within the site boundary during	To prohibit open fires, thereby	Site wide and throughout	The Contractor		✓			*Air Pollution Control*

EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	C	D	Dec	
8.7.4	F7	construction and provide temporary fire fighting equipment in the work areas. No filling and dumping to the remaining abandoned fishpond at P2.	minimising potential damage to trees and shrubs. To avoid disturbance to abandoned fishponds from construction activities and illegal dumping.	the full duration of the construction contract. At P2 for full duration of the construction contract	The Contractor		✓			*(Open Burning) Regulation*
8.7.4	F8	Installation and operation of silt removal facilities at construction sites of P1 to P3. The silt removal facilities should be designed in accordance with Appendix A1 of ProPECC Note PN1/94 Construction Site Drainage.	To install silt removal facilities in potentially impact streams and ponds to prevent sedimentation.	At P1 to P3 for full duration of the construction contract.	The Contractor		✓			
8.7.4	F9	No open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas.	To prohibit open fires, thereby minimising potential damage to trees and shrubs.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Air Pollution Control (Open Burning) Regulation*
		FISHERIES - *Construction Phase*								
		No specific mitigation measures are required for inclusion in the EP.								
		CULTURAL HERITAGE – Not Applicable for Package 1A-1T (DC/2005/02)								
		LANDSCAPE AND VISUAL - *Construction Phase*								
	H1	The site inspections shall check and report the implementation of mitigation measures (i.e. top-soil are reused and new compensatory planting works are carried out immediately after the construction of the civil structure) in the monthly EM&A reports. The first monthly EM&A Report should also report the appearance of the temporary hoarding barriers.	To minimise potential landscape and visual impacts.	To be implemented during the construction phases of the project.	The Contractor		✓			
	H2	Prior to application for an Environmental Permit, a set of landscape plans and building elevations of the proposed pumping stations should be	To minimise potential landscape and visual impacts.	To be implemented during the design and construction phases of the	DSD and The Contractor	✓	✓			

EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	Con	O	Dec	
		submitted for approval by the EPD. The landscape plans and pumping station elevations should demonstrate that the following elements are considered: • existing landscape elements (such as mature trees), transplantation of valuable trees, new compensatory planting		project.						
		• incorporate information on materials, details and textures so as to be as visually recessive as possible and in a style that fits with the surrounding village buildings. • colour should be of low chromatic intensity to reduce the potential contrast between the structures and their background. The external finishing of the Pumping Stations shall be designed in conjunction with the landscape scheme. • a minimum screen planting of 3m width and use of trees with a dense canopy of up to 5 m in height subject to constraints such as engineering and land availability. • felling of mature trees are kept to a minimum.								
3.7	I1	EM&A REQUIEMENTS - *Construction Phase* *Air Quality* Subject to the Environmental Protection Departments (EPDs) agreement, construction phase dust monitoring shall be undertaken at the following locations in accordance with the recommendations of the EIA. • Worksite boundary facing Scattered house in Nam Sang Wai (AM1); • Worksite boundary facing Fung Kat Heung (AM5); • Worksite boundary facing Scattered House near Route 3 (AM6);	Installations of the dust monitoring stations to ensure the action and limit levels are not exceeded.	At specified dust monitoring locations for the duration of the construction works.	To be undertaken by the Environmental Team (ET) and reviewed and audited by the Engineer /DSD		✓			*Air Pollution Control (Construction Dust) Regulations*

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stages				Relevant Legislation & Guidelines
						Des.	C	O	Dec	
		• at any additional locations, where considered necessary, in agreement with EPD.								
4.9.1	I2	*Construction Noise* Subject to the Environmental Protection Departments (EPDs) agreement, construction phase noise monitoring shall be undertaken at the following locations in accordance with the recommendations of the EIA. ◦ (NM3) Scattered House in Nam San Wai (D12); ◦ (NM4) Scattered House in Nam San Wai (D11); ◦ (NM6) Scattered House near Route 3 (D17); • (NM7) Fung Kat Heung (D19); • and at any additional locations, where considered necessary, in agreement with EPD	Installations of the noise monitoring stations to ensure the action and limit levels are not exceeded.	At specified noise monitoring locations throughout the duration of the construction works.	To be undertaken by the Environmental Team (ET) and reviewed and audited by the Engineer		✓			*Noise Control Ordinance*

Des = Design, C = Construction, O = Operation, Dec = Decommissioning

Annex H

Equipment Calibration Certificates

Equipment Calibration List for Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Project

Item	Aspect	Description of Equipment	Serial No.	Date of Calibration	Date of Next Calibration
1*	Air	Greasby Anderson GMWS2310 High Volume Sampler	0329 (AM1)	20 May 07	20 Aug 07
2		Greasby Anderson GMWS2310 High Volume Sampler	0355 (AM5)	14 Apr 07	14 Jul 07
3		Greasby Anderson GMWS2310 High Volume Sampler	10394 (AM6)	02 Apr 07	02 Jul 07
4*		Greasby Anderson GMWS2310 High Volume Sampler	1283 (AM7)	20 May 07	20 Aug 07
5	Noise	Bruel & Kjaer 4231 Acoustical Calibrator	2292168	17 Apr 07	17 Apr 08
6		Bruel & Kjaer 2238 Integrating Sound Level Meter	2285721	17 Apr 07	17 Apr 08

Note: Calibration certificates will only be provided if monitoring equipment is re-calibrated or new.
** Calibration done in this reporting month, see calibration certificate attached.*

Annex I

Meteorological Data in the Reporting Month

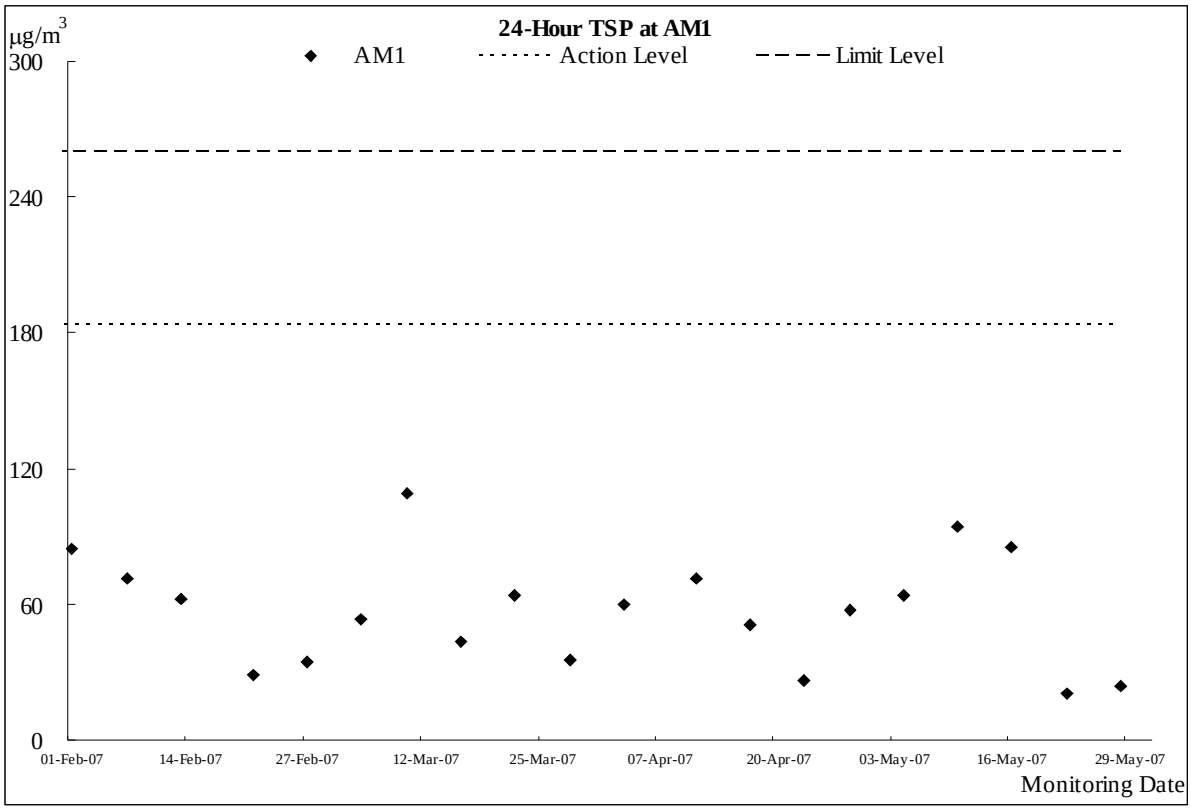
Meteorological Data Extracted From the HK Observatory at Lau Fau Shan Weather Station

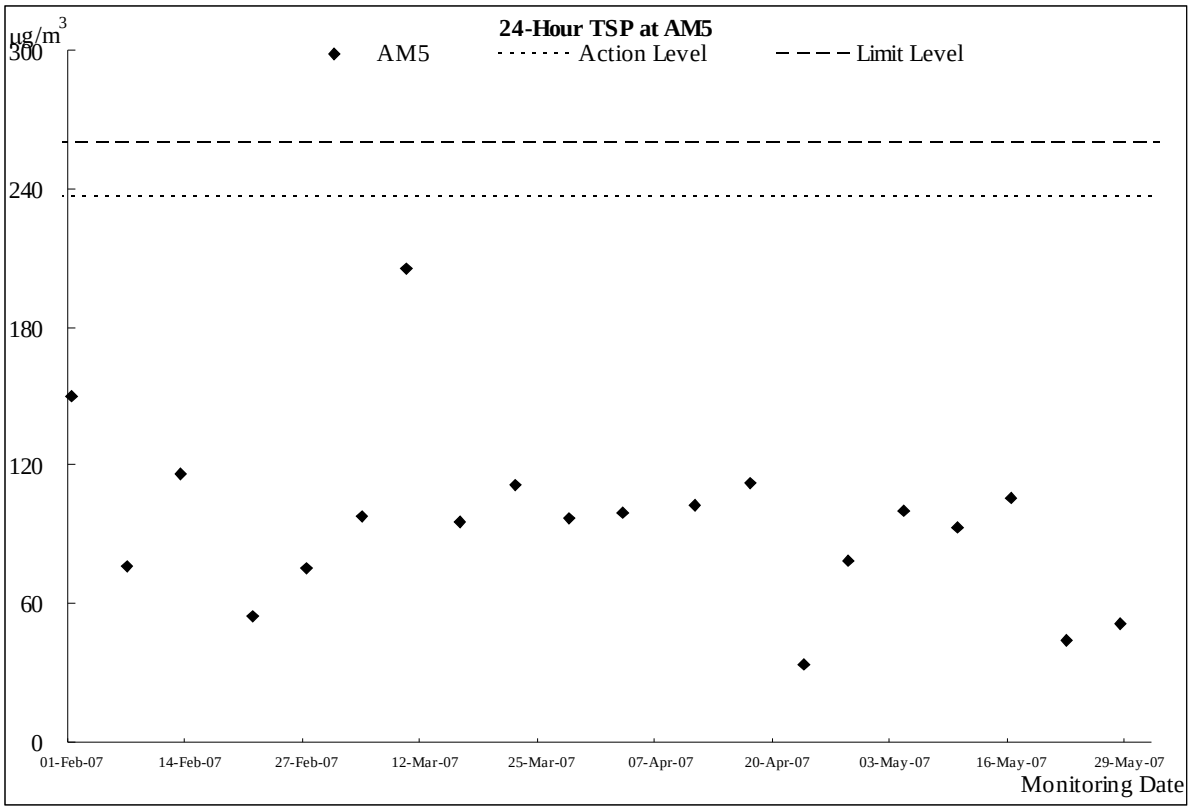
Date		Weather		Lau Fau Shan Station			
			Total Rainfall (mm)	Mean Air Temperature (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-May-07	Tue	fine / hot	0	26.6	13	57	SE
2-May-07	Wed	fine / haze / hot / light winds	0	25.3	5	52	N/NW
3-May-07	Thu	cloudy / sunny periods / light winds	Trace	25.6	11	67.5	E/SE
4-May-07	Fri	cloudy / rain	6.9	23.5	9	65	E
5-May-07	Sat	cloudy / rain / moderate	2.3	24.3	8.5	93.7	W/SW
6-May-07	Sun	fine / light winds / moderate	0	26.2	9	53.5	S/SE
7-May-07	Mon	fine / dry / haze / light winds / moderate	0	26.5	4.5	60.5	SE
8-May-07	Tue	fine / haze / hot/ dry	0	26.2	12	57.5	E
9-May-07	Wed	sunny periods / moderate / fresh	0	26.7	13.5	61	E
10-May-07	Thu	sunny periods / moderate / fresh strong	0	27.4	18.5	65	E
11-May-07	Fri	fine / hot / isolated showers	0	27.2	17.5	62.5	E
12-May-07	Sat	hot / fine / frest	0	26.7	9	69.5	E
13-May-07	Sun	hot / moderate / fresh / dry	0	27.4	12	72.5	E
14-May-07	Mon	fine / haze / moderate	0	25.8	7.5	62	SE
15-May-07	Tue	fine / lightwinds / hot	0	27.8	15.5	75.5	SE
16-May-07	Wed	hot / lightwinds	0.1	28.4	17.5	71.5	SE
17-May-07	Thu	hot / humid / gale	trace	28.3	15	75	N
18-May-07	Fri	hot / rain / moderate	13.8	28.3	11	70.5	W/SW
19-May-07	Sat	hot / rain / moderate	47.2	25.5	12.5	72.5	E
20-May-07	Sun	wild / rain / cloudy	81.6	22.3	13	82	E
21-May-07	Mon	warm / rain / cloudy	29.7	24.6	14	88.5	E
22-May-07	Tue	rain / moderate / fresh	37.3	32.5	15.5	89.5	E/SE
23-May-07	Wed	sunny intervals/a few showers/moderate/fresh	0.6	27.9	14.5	89	SE/E
24-May-07	Thu	hot / fine	0	29.6	16	75	S/SE
25-May-07	Fri	hot / fine / moderate	0	30.3	11.5	76	S
26-May-07	Sat	fine / hot / moderate / isolated showers	0	29.8	17	75	S
27-May-07	Sun	Rain / hot	53	27.5	37	86.5	W
28-May-07	Mon	fine / hot / moderate / isolated showers	10.9	27.3	35	86.5	E
29-May-07	Tue	fine / hot / moderate	0	28.4	13.5	81	SE/E
30-May-07	Wed	fine / showers / very hot / moderate	0	29.3	13	79.5	SE
31-May-07	Thu	isolated showers/sunny/intervals/moderate/hot	4.9	27.9	11.7	81	SE

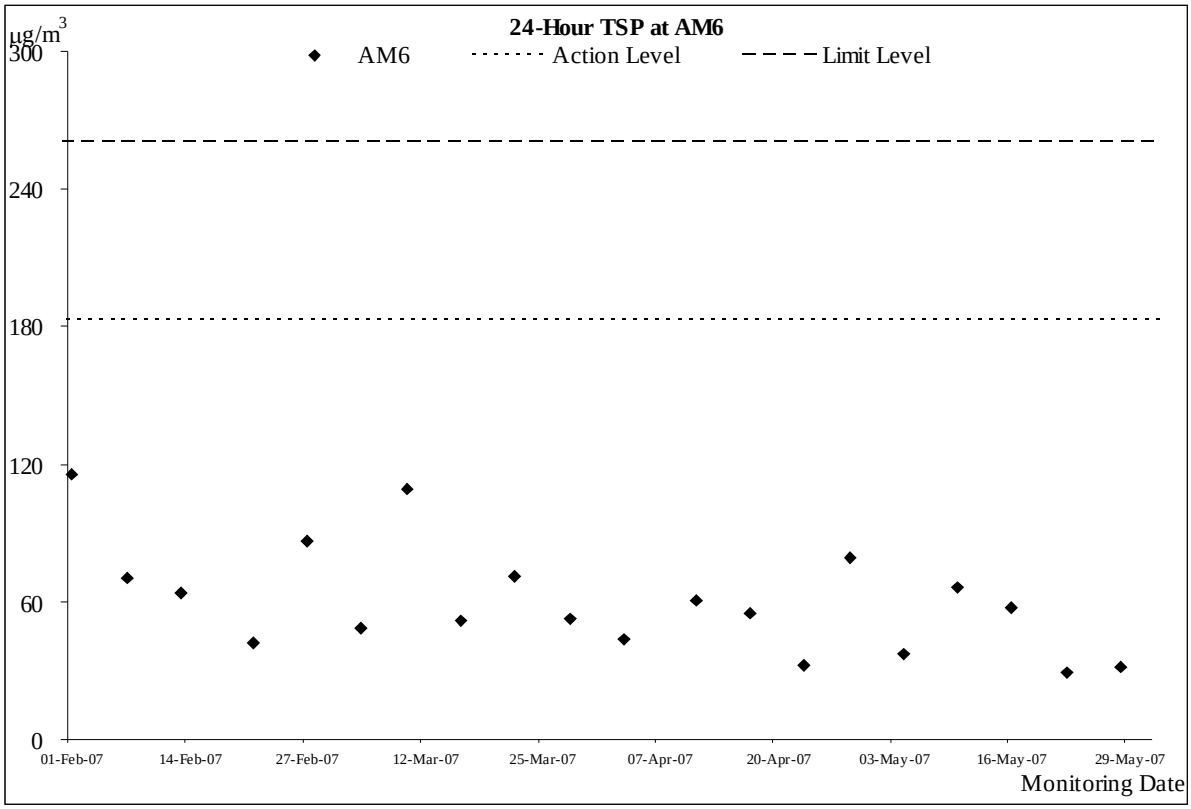
Annex J

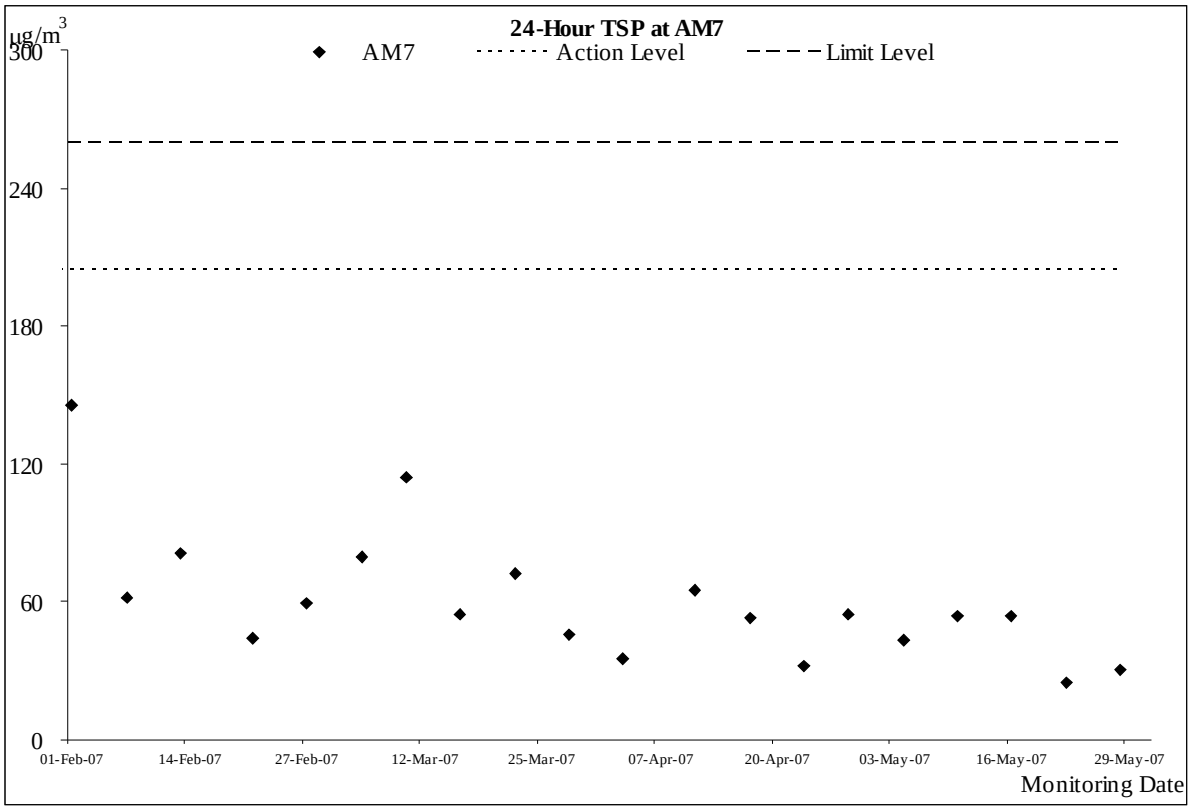
Graphical Plots of Air Quality
&
Noise Monitoring Results

Air Quality Monitoring Results

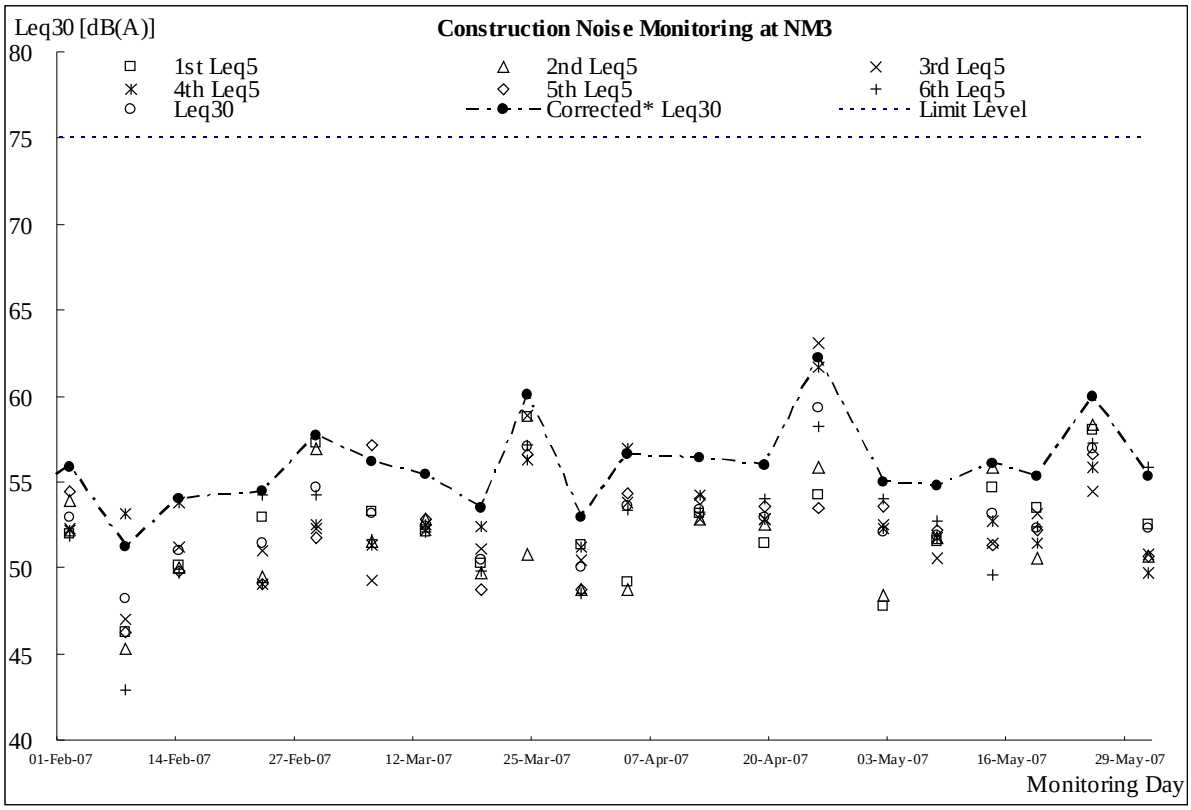


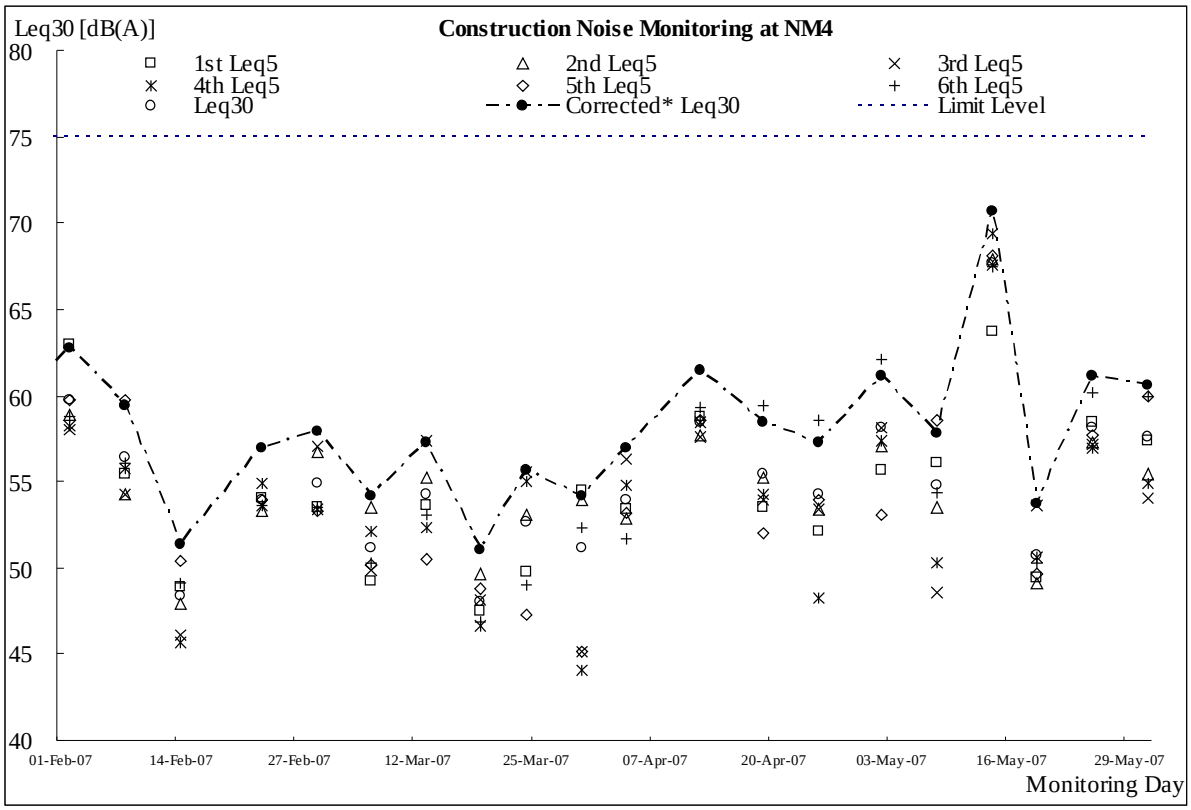


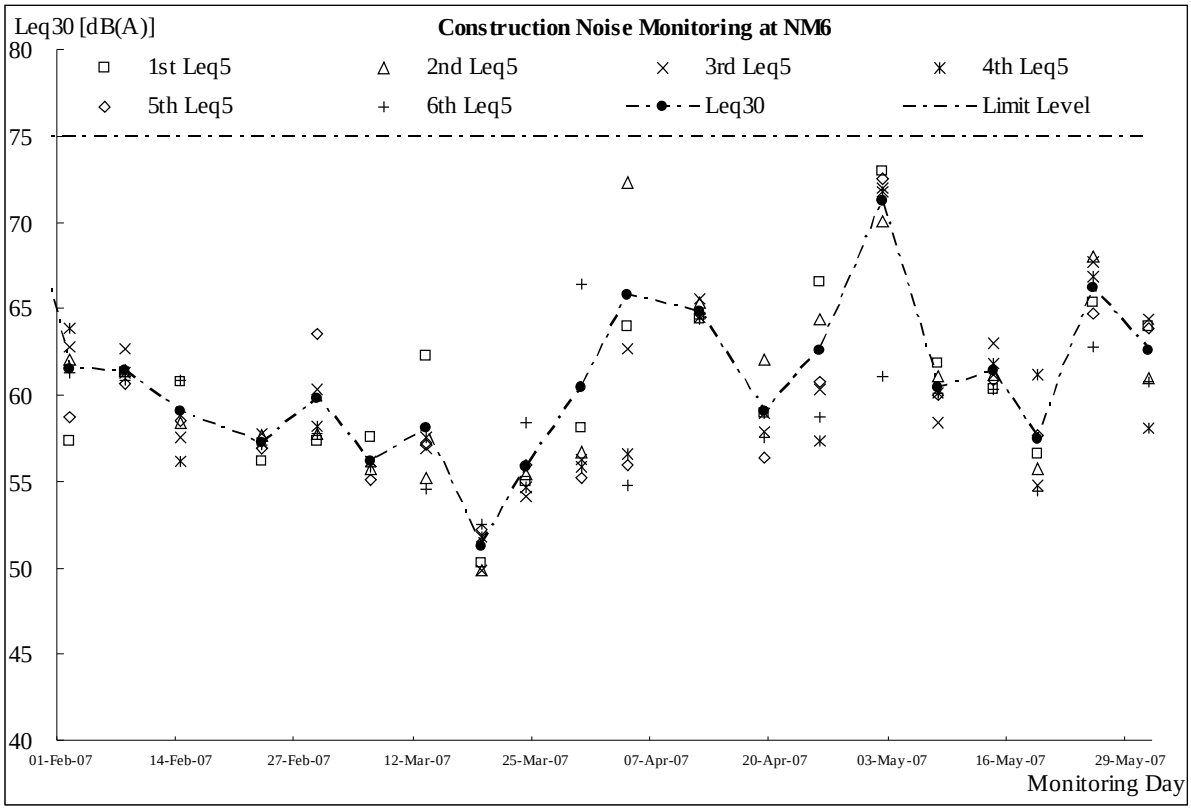

24-Hour TSP at AM6
µg/m3
AM6
Action Level
Limit Level
300
240
180
120
60
0
01-Feb-07
14-Feb-07
27-Feb-07
12-Mar-07
25-Mar-07
07-Apr-07
20-Apr-07
03-May-07
16-May-07
29-May-07
Monitoring Date

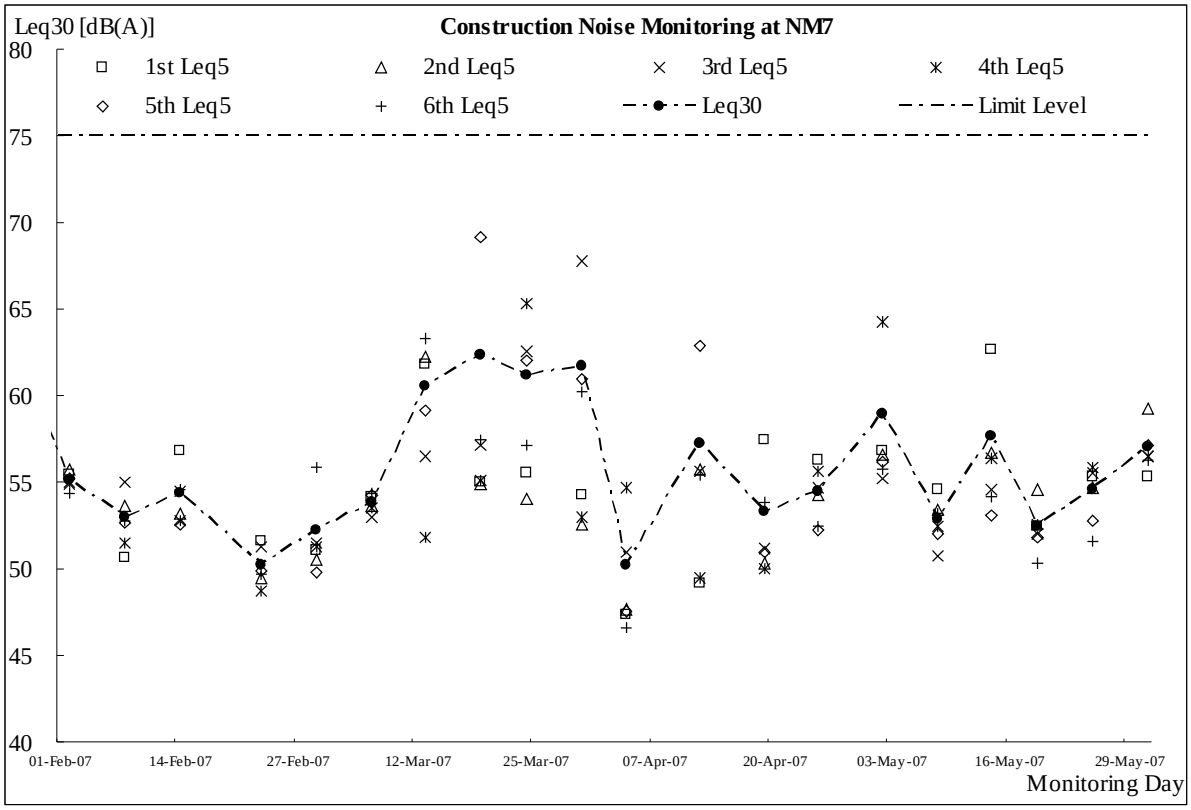

24-Hour TSP at AM7
µg/m3
AM7
Action Level
Limit Level
300
240
180
120
60
0
01-Feb-07
14-Feb-07
27-Feb-07
12-Mar-07
25-Mar-07
07-Apr-07
20-Apr-07
03-May-07
16-May-07
29-May-07
Monitoring Date

Construction Noise Monitoring Results






Leq30 [dB(A)]
Construction Noise Monitoring at NM6
1st Leq5
2nd Leq5
3rd Leq5
4th Leq5
5th Leq5
6th Leq5
Leq30
Limit Level
80
75
70
65
60
55
50
45
40
01-Feb-07
14-Feb-07
27-Feb-07
12-Mar-07
25-Mar-07
07-Apr-07
20-Apr-07
03-May-07
16-May-07
29-May-07
Monitoring Day


Leq30 [dB(A)]
Construction Noise Monitoring at NM7
1st Leq5
2nd Leq5
3rd Leq5
4th Leq5
5th Leq5
6th Leq5
Leq30
Limit Level
80
75
70
65
60
55
50
45
40
01-Feb-07
14-Feb-07
27-Feb-07
12-Mar-07
25-Mar-07
07-Apr-07
20-Apr-07
03-May-07
16-May-07
29-May-07
Monitoring Day

Annex K

Proforma of Site Inspection and IEC Audit in the Reporting Period

AUES

Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	**Contractor:**	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:	**ET Auditor:** Ben Tam	**IEC:**	Mott Connell Ltd
	Contractor Rep: Benny / Edwin	**Environmental Team:**	Action-United Environmental Services & Consulting
	IEC's Rep: Nil	**Inspection Date & Time:**	04 May 2007
	RE's Rep: Mr. S L Hui	**Checklist Reference No.:**	DSD-AT040507

General Meteorological Information

Weather [ ] Sunny [ ] Fine [ ] Cloudy [✓] Overcast [ ] Drizzle [ ] Rain [ ] Hazy

Temp: [24] °C

Humidity: [✓] High (RH > 90%) [ ] Moderate (90% > RH > 50%) [ ] Low (RH < 50%)

Wind: [ ] Calm [✓] Light [ ] Breeze [ ] Strong

Air Quality	**Yes**	**No**	**NA**	**NC**	**Follow-up**	**Remarks**
Is hoarding of not less than 2.4m provided?	✓					
Are site vehicles traveling within controlled speed limit?	✓					
Are site vehicles movement confined to designated haul roads?	✓					
Are public roads outside site exits kept clean and free from dust?	✓					
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	✓					
Are there wheel washing facilities provided at site exits?	✓					
Is water spraying used during the main dust-generating activities?	✓					
Are the excavated or stockpile of dusty materials kept wet?	✓					
Is exposed area of ground covered or watered frequently?	✓					
Are load on vehicles covered by clean impervious sheeting?			✓			
Are vehicles and equipment switched off while not in use?	✓					
Is smoky emissions from plants/equipment avoided?	✓					
Is open burning avoided?	✓					

Observable dust sources [ ] Wind erosion [ ] Vehicle/equipment movements

[ ] Loading/unloading of materials [✓] Others Nil

Construction Noise

Are the construction works scheduled to minimize noise nuisance?	✓					
Are the works or equipment sited to minimize noise nuisance?	✓					
Are all plant and equipment well maintained and in good operating condition?	✓					
Is idle equipment turned off or throttled down?	✓					
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	✓					
Is silenced equipment used where appropriate?	✓					
Are noise enclosures or noise barriers used where necessary?	✓					
Does specified equipment has valid noise label?	✓					
Are Construction Noise Permits (CNPs) available for inspection?			✓			

Major Noise Source [ ] Traffic [✓] Construction activities inside of site

[ ] Construction activities outside of site [ ] Others

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		✓					
Is site effluent discharged in accordance with the discharge license?		✓					
Is the discharge of silty water avoided?		✓					
Is drainage adequate?		✓					
Is drainage system well maintained?			✓				
Are there temporary ditches for runoff discharge into appropriate watercourse?		✓					
Are there sedimentation tanks for settling runoff prior to discharge?		✓					
Are the sedimentation tanks:	Constructed of pre-formed individual cells?	✓					
	With adequate capacity?	✓					
	Free from silt and sediment?	✓					
Are there neutralization tanks for concrete batching/mixing discharge?				✓			
Are there oil interceptors in drainage system?				✓			
Is wheel wash facility provided at every site exit?		✓					
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		✓					
Are wheel washing facilities regularly inspected and maintained?				✓			
Are toilets provided on site? If so, are they properly maintained?		✓					
Are manholes covered and sealed?		✓					
Is oil leakage or spillage avoided?		✓					
Waste Management and Potential Land Contamination							
General Refuse:	Are receptacles (rubbish bins) available?	✓					
	Is there regular and proper disposal?	✓					
	Is proper sorting and recycling implemented?	✓					
Construction Waste:	Is generation of construction waste minimized?	✓					
	Is waste sorting implemented on site?	✓					
	Is construction waste reused where practicable?	✓					
	Is construction waste properly disposed of?	✓					
	Are disposal records available for inspection?	✓					
Chemical waste/waste oil	Is there designated storage area?			✓			
	Is chemical waste stored properly?			✓			
	Is there proper disposal?			✓			
	Is chemical waste license available for inspection?			✓			
Excavated Materials	Do excavated materials appear uncontaminated?	✓					
	Are appropriate procedures followed if contaminated materials exist?	✓					
	Are disposal records available for inspection?	✓					
Chemical/Fuel	Is chemical/fuel stored in bunded area?	✓					
	Is bund capacity adequate (>110% of the largest tank)?	✓					
	Are storage areas lockable?	✓					
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		✓					

Remarks:

Previous Audit Follow-up:

Stagnant water accumulated in the U-channel at the Ko Po Raod work front was cleared.

Observations Recorded in this Site Inspection:

No environmental issue was observed during the inspection.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
Name :Ben Tam	Name:	Name:	Name:

AUES

Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	**Contractor:**	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:	**ET Auditor:** Ken Wong	**IEC:**	Mott Connell Ltd
	Contractor Rep: Benny / Edwin	**Environmental Team:**	Action-United Environmental Services & Consulting
	IEC's Rep: Nil	**Inspection Date & Time:**	08 May 2007
	RE's Rep: Mr. S L Hui	**Checklist Reference No.:**	DSD-AT080507

General Meteorological Information

Weather [ ] Sunny [ ] Fine [ ] Cloudy [✓] Overcast [ ] Drizzle [ ] Rain [ ] Hazy

Temp: [27] °C

Humidity: [ ] High (RH > 90%) [✓] Moderate (90% > RH > 50%) [ ] Low (RH < 50%)

Wind: [ ] Calm [✓] Light [ ] Breeze [ ] Strong

Air Quality	**Yes**	**No**	**NA**	**NC**	**Follow-up**	**Remarks**
Is hoarding of not less than 2.4m provided?	✓					
Are site vehicles traveling within controlled speed limit?	✓					
Are site vehicles movement confined to designated haul roads?	✓					
Are public roads outside site exits kept clean and free from dust?	✓					
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	✓					
Are there wheel washing facilities provided at site exits?	✓					
Is water spraying used during the main dust-generating activities?	✓					
Are the excavated or stockpile of dusty materials kept wet?	✓					
Is exposed area of ground covered or watered frequently?	✓					
Are load on vehicles covered by clean impervious sheeting?			✓			
Are vehicles and equipment switched off while not in use?	✓					
Is smoky emissions from plants/equipment avoided?	✓					
Is open burning avoided?	✓					

Observable dust sources [ ] Wind erosion [ ] Vehicle/equipment movements

[ ] Loading/unloading of materials [✓] Others Nil

Construction Noise

Are the construction works scheduled to minimize noise nuisance?	✓					
Are the works or equipment sited to minimize noise nuisance?	✓					
Are all plant and equipment well maintained and in good operating condition?	✓					
Is idle equipment turned off or throttled down?	✓					
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	✓					
Is silenced equipment used where appropriate?	✓					
Are noise enclosures or noise barriers used where necessary?	✓					
Does specified equipment has valid noise label?	✓					
Are Construction Noise Permits (CNPs) available for inspection?			✓			

Major Noise Source [ ] Traffic [✓] Construction activities inside of site

[ ] Construction activities outside of site [ ] Others

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		☑	☐	☐	☐	☐	
Is site effluent discharged in accordance with the discharge license?		☑	☐	☐	☐	☐	
Is the discharge of silty water avoided?		☑	☐	☐	☐	☐	
Is drainage adequate?		☑	☐	☐	☐	☐	
Is drainage system well maintained?		☑	☐	☐	☐	☐	
Are there temporary ditches for runoff discharge into appropriate watercourse?		☑	☐	☐	☐	☐	
Are there sedimentation tanks for settling runoff prior to discharge?		☑	☐	☐	☐	☐	
Are the sedimentation tanks:	Constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	
	With adequate capacity?	☑	☐	☐	☐	☐	
	Free from silt and sediment?	☐	☑	☐	☐	☐	Remarks 1
Are there neutralization tanks for concrete batching/mixing discharge?		☐	☐	☑	☐	☐	
Are there oil interceptors in drainage system?		☐	☐	☑	☐	☐	
Is wheel wash facility provided at every site exit?		☑	☐	☐	☐	☐	
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		☑	☐	☐	☐	☐	
Are wheel washing facilities regularly inspected and maintained?		☐	☐	☑	☐	☐	
Are toilets provided on site? If so, are they properly maintained?		☑	☐	☐	☐	☐	
Are manholes covered and sealed?		☑	☐	☐	☐	☐	
Is oil leakage or spillage avoided?		☑	☐	☐	☐	☐	
Waste Management and Potential Land Contamination							
General Refuse:	Are receptacles (rubbish bins) available?	☑	☐	☐	☐	☐	
	Is there regular and proper disposal?	☑	☐	☐	☐	☐	
	Is proper sorting and recycling implemented?	☑	☐	☐	☐	☐	
Construction Waste:	Is generation of construction waste minimized?	☑	☐	☐	☐	☐	
	Is waste sorting implemented on site?	☑	☐	☐	☐	☐	
	Is construction waste reused where practicable?	☑	☐	☐	☐	☐	
	Is construction waste properly disposed of?	☑	☐	☐	☐	☐	
	Are disposal records available for inspection?	☑	☐	☐	☐	☐	
Chemical waste/waste oil	Is there designated storage area?	☐	☐	☑	☐	☐	
	Is chemical waste stored properly?	☐	☐	☑	☐	☐	
	Is there proper disposal?	☐	☐	☑	☐	☐	
	Is chemical waste license available for inspection?	☐	☐	☑	☐	☐	
Excavated Materials	Do excavated materials appear uncontaminated?	☑	☐	☐	☐	☐	
	Are appropriate procedures followed if contaminated materials exist?	☑	☐	☐	☐	☐	
	Are disposal records available for inspection?	☑	☐	☐	☐	☐	
Chemical/Fuel	Is chemical/fuel stored in bunded area?	☑	☐	☐	☐	☐	
	Is bund capacity adequate (>110% of the largest tank)?	☑	☐	☐	☐	☐	
	Are storage areas lockable?	☑	☐	☐	☐	☐	
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		☑	☐	☐	☐	☐	

Remarks:

Previous Audit Follow-up:

Nil

Observations Recorded in this Site Inspection:

1. Sedimentation tanks at Nam San Wai Road were full of silt and sediment, contractor was reminded that to clean the tank regularly to maintain the good performances of the sedimentation tank.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
Name :Ken Wong	Name:	Name:	Name:

AUES

Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	**Contractor:**	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:	**ET Auditor:** Ben Tam	**IEC:**	Mott Connell Ltd
	Contractor Rep: Benny / Edwin	**Environmental Team:**	Action-United Environmental Services & Consulting
	IEC's Rep: Nil	**Inspection Date & Time:**	19 May 2007
	RE's Rep: Mr. S L Hui	**Checklist Reference No.:**	DSD-AT190507

General Meteorological Information

Weather [ ] Sunny [ ] Fine [ ] Cloudy [ ] Overcast [ ] Drizzle [✓] Rain [ ] Hazy

Temp: [27] °C

Humidity: [✓] High (RH > 90%) [ ] Moderate (90% > RH > 50%) [ ] Low (RH < 50%)

Wind: [ ] Calm [✓] Light [ ] Breeze [ ] Strong

Air Quality	**Yes**	**No**	**NA**	**NC**	**Follow-up**	**Remarks**
Is hoarding of not less than 2.4m provided?	✓					
Are site vehicles traveling within controlled speed limit?	✓					
Are site vehicles movement confined to designated haul roads?	✓					
Are public roads outside site exits kept clean and free from dust?	✓					
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	✓					
Are there wheel washing facilities provided at site exits?	✓					
Is water spraying used during the main dust-generating activities?	✓					
Are the excavated or stockpile of dusty materials kept wet?	✓					
Is exposed area of ground covered or watered frequently?	✓					
Are load on vehicles covered by clean impervious sheeting?		✓				Remarks 1
Are vehicles and equipment switched off while not in use?	✓					
Is smoky emissions from plants/equipment avoided?	✓					
Is open burning avoided?	✓					

Observable dust sources [ ] Wind erosion [ ] Vehicle/equipment movements

[ ] Loading/unloading of materials [✓] Others Nil

Construction Noise						
Are the construction works scheduled to minimize noise nuisance?	✓					
Are the works or equipment sited to minimize noise nuisance?	✓					
Are all plant and equipment well maintained and in good operating condition?	✓					
Is idle equipment turned off or throttled down?	✓					
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	✓					
Is silenced equipment used where appropriate?	✓					
Are noise enclosures or noise barriers used where necessary?	✓					
Does specified equipment has valid noise label?	✓					
Are Construction Noise Permits (CNPs) available for inspection?			✓			

Major Noise Source [ ] Traffic [✓] Construction activities inside of site

[ ] Construction activities outside of site [ ] Others

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		✓					
Is site effluent discharged in accordance with the discharge license?		✓					
Is the discharge of silty water avoided?		✓					
Is drainage adequate?		✓					
Is drainage system well maintained?		✓					
Are there temporary ditches for runoff discharge into appropriate watercourse?		✓					
Are there sedimentation tanks for settling runoff prior to discharge?		✓					
Are the sedimentation tanks:	Constructed of pre-formed individual cells?	✓					
	With adequate capacity?	✓					
	Free from silt and sediment?	✓					
Are there neutralization tanks for concrete batching/mixing discharge?				✓			
Are there oil interceptors in drainage system?				✓			
Is wheel wash facility provided at every site exit?		✓					
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		✓					
Are wheel washing facilities regularly inspected and maintained?				✓			
Are toilets provided on site? If so, are they properly maintained?		✓					
Are manholes covered and sealed?		✓					
Is oil leakage or spillage avoided?		✓					
Waste Management and Potential Land Contamination							
General Refuse:	Are receptacles (rubbish bins) available?	✓					
	Is there regular and proper disposal?	✓					
	Is proper sorting and recycling implemented?	✓					
Construction Waste:	Is generation of construction waste minimized?	✓					
	Is waste sorting implemented on site?	✓					
	Is construction waste reused where practicable?	✓					
	Is construction waste properly disposed of?	✓					
	Are disposal records available for inspection?	✓					
Chemical waste/waste oil	Is there designated storage area?			✓			
	Is chemical waste stored properly?			✓			
	Is there proper disposal?			✓			
	Is chemical waste license available for inspection?			✓			
Excavated Materials	Do excavated materials appear uncontaminated?	✓					
	Are appropriate procedures followed if contaminated materials exist?	✓					
	Are disposal records available for inspection?	✓					
Chemical/Fuel	Is chemical/fuel stored in bunded area?	✓					
	Is bund capacity adequate (>110% of the largest tank)?	✓					
	Are storage areas lockable?	✓					
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		✓					

Remarks:

Previous Audit Follow-up:

The sedimentation tanks at Nam San Wai Road had been properly clean, the contractor was reminded that to provide regular maintenance to perform the desilting system in properly efficiency.

Observations Recorded in this Site Inspection:

1. Stockpile without entirely covered by the tarpaulin sheet was observed at the Nam Sam Wai Road. The Contractor was reminded to maintain the stockpile cover by the tarpaulin sheet entirely.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
Name :Ben Tam	Name:	Name:	Name:

AUES

Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	**Contractor:**	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:	**ET Auditor:** Ken Wong	**IEC:**	Mott Connell Ltd
	Contractor Rep: Edwin	**Environmental Team:**	Action-United Environmental Services & Consulting
	IEC's Rep: Nil	**Inspection Date & Time:**	25 May 2007
	RE's Rep: Mr. Yu	**Checklist Reference No.:**	DSD-AT250507

General Meteorological Information

Weather [✓] Sunny [ ] Fine [ ] Cloudy [ ] Overcast [ ] Drizzle [ ] Rain [ ] Hazy

Temp: [29] °C

Humidity: [ ] High (RH > 90%) [✓] Moderate (90% > RH > 50%) [ ] Low (RH < 50%)

Wind: [ ] Calm [✓] Light [ ] Breeze [ ] Strong

Air Quality	**Yes**	**No**	**NA**	**NC**	**Follow-up**	**Remarks**
Is hoarding of not less than 2.4m provided?	✓					
Are site vehicles traveling within controlled speed limit?	✓					
Are site vehicles movement confined to designated haul roads?	✓					
Are public roads outside site exits kept clean and free from dust?	✓					
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	✓					
Are there wheel washing facilities provided at site exits?	✓					
Is water spraying used during the main dust-generating activities?	✓					
Are the excavated or stockpile of dusty materials kept wet?	✓					
Is exposed area of ground covered or watered frequently?	✓					
Are load on vehicles covered by clean impervious sheeting?	✓					
Are vehicles and equipment switched off while not in use?	✓					
Is smoky emissions from plants/equipment avoided?	✓					
Is open burning avoided?	✓					

Observable dust sources [ ] Wind erosion [ ] Vehicle/equipment movements

[ ] Loading/unloading of materials [✓] Others Nil

Construction Noise

Are the construction works scheduled to minimize noise nuisance?	✓					
Are the works or equipment sited to minimize noise nuisance?	✓					
Are all plant and equipment well maintained and in good operating condition?	✓					
Is idle equipment turned off or throttled down?	✓					
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	✓					
Is silenced equipment used where appropriate?	✓					
Are noise enclosures or noise barriers used where necessary?	✓					
Does specified equipment has valid noise label?	✓					
Are Construction Noise Permits (CNPs) available for inspection?			✓			

Major Noise Source [ ] Traffic [✓] Construction activities inside of site

[ ] Construction activities outside of site [ ] Others

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		☑	☐	☐	☐	☐	
Is site effluent discharged in accordance with the discharge license?		☑	☐	☐	☐	☐	
Is the discharge of silty water avoided?		☐	☑	☐	☐	☐	Remarks 1
Is drainage adequate?		☑	☐	☐	☐	☐	
Is drainage system well maintained?		☑	☐	☐	☐	☐	
Are there temporary ditches for runoff discharge into appropriate watercourse?		☑	☐	☐	☐	☐	
Are there sedimentation tanks for settling runoff prior to discharge?		☑	☐	☐	☐	☐	
Are the sedimentation tanks:	Constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	
	With adequate capacity?	☑	☐	☐	☐	☐	
	Free from silt and sediment?	☑	☐	☐	☐	☐	
Are there neutralization tanks for concrete batching/mixing discharge?		☐	☐	☑	☐	☐	
Are there oil interceptors in drainage system?		☐	☐	☑	☐	☐	
Is wheel wash facility provided at every site exit?		☑	☐	☐	☐	☐	
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		☑	☐	☐	☐	☐	
Are wheel washing facilities regularly inspected and maintained?		☐	☐	☑	☐	☐	
Are toilets provided on site? If so, are they properly maintained?		☑	☐	☐	☐	☐	
Are manholes covered and sealed?		☑	☐	☐	☐	☐	
Is oil leakage or spillage avoided?		☑	☐	☐	☐	☐	
Waste Management and Potential Land Contamination							
General Refuse:	Are receptacles (rubbish bins) available?	☑	☐	☐	☐	☐	
	Is there regular and proper disposal?	☑	☐	☐	☐	☐	
	Is proper sorting and recycling implemented?	☑	☐	☐	☐	☐	
Construction Waste:	Is generation of construction waste minimized?	☑	☐	☐	☐	☐	
	Is waste sorting implemented on site?	☑	☐	☐	☐	☐	
	Is construction waste reused where practicable?	☑	☐	☐	☐	☐	
	Is construction waste properly disposed of?	☑	☐	☐	☐	☐	
	Are disposal records available for inspection?	☑	☐	☐	☐	☐	
Chemical waste/waste oil	Is there designated storage area?	☐	☐	☑	☐	☐	
	Is chemical waste stored properly?	☐	☐	☑	☐	☐	
	Is there proper disposal?	☐	☐	☑	☐	☐	
	Is chemical waste license available for inspection?	☐	☐	☑	☐	☐	
Excavated Materials	Do excavated materials appear uncontaminated?	☑	☐	☐	☐	☐	
	Are appropriate procedures followed if contaminated materials exist?	☑	☐	☐	☐	☐	
	Are disposal records available for inspection?	☑	☐	☐	☐	☐	
Chemical/Fuel	Is chemical/fuel stored in bunded area?	☑	☐	☐	☐	☐	
	Is bund capacity adequate (>110% of the largest tank)?	☑	☐	☐	☐	☐	
	Are storage areas lockable?	☑	☐	☐	☐	☐	
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		☑	☐	☐	☐	☐	

Remarks:

Previous Audit Follow-up:

No stockpile with covered by the tarpaulin sheet was observed at the Nam Sam Wai Road.

Observations Recorded in this Site Inspection:

1. Silty water discharge from the sedimentation tank was found at the Castle Peak Road work front, the Contractor was reminded to provide regular clean to maintain the desilting system in proper efficiency.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
Name :Ken Wong	Name:	Name:	Name:

Agreement No. CE37/2005 (EP)
Environmental Monitoring and Audit for
Kam Tin Trunk Sewerage Phase 1 and Au Tau trunk sewers

MONTHLY SITE INSPECTION CHECKLIST

Inspection Date	10/05/2007	Time	9.30 am	Inspected By	Leader: Edwin ET: - DSD: S L Hui IEC: Florence Yuen
Site Location	Ko Po Road Kat Hing Wai Kam Tin Pumping Station				

Weather

Condition		Sunny	✓	Fine		Overcast		Drizzle		Rain		Storm		Hazy
Temperature	29 °C				Humidity		High		✓	Moderate		Low		
Wind	✓	Calm		Light		Breeze		Strong		Direction				

EIA ref:		Close-out on last comments Y/N	N/A or not obs	Yes	No	Photo/Remarks
	Construction Phase					
	Air Quality - Construction Phase					
3.5	• Are hoardings of not less than 2.4m high provided along the site boundary?			✓		
3.5	• Is the portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit kept clear of dusty materials?			✓		
3.5	• Are stockpiled dusty materials covered by impervious sheeting and placed in an area sheltered on top and 3 sides or sprayed with water?			✓		
3.5	• Are dusty material loads on vehicles sprayed with water prior to loading and unloading?			✓		
3.5	• Are all vehicles washed to remove dusty materials from its body and wheels before leaving site?			✓		
3.5	• Are vehicles which are carrying dusty materials covered entirely by impervious sheeting when leaving site?			✓		
3.5	• Are surfaces where any mechanical breaking operation takes place sprayed?		✓			
3.5	• Are working area of any excavation sprayed with water, immediately before, during and immediately after the operation?			✓		
3.5	• Where a scaffolding is erected around the perimeter of a building under construction, are effective dust screens, sheeting or netting provided to enclose the scaffolding from the ground floor level of the SPS, or a canopy from the first floor level up to the highest level of the scaffolding?		✓			
3.5	• Are skip hoists for material transport totally enclosed?		✓			

3.7	• Have dust monitors been provided at the following locations: • Boundary facing scattered house in NSW (AM1) • Boundary facing Fung Kat Heung (AM5) • Boundary facing scattered house near route 3 (AM6)			✓		
	Construction Noise					
	Demolition works					
4.7.1	• Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?		✓			
	Sewage Pumping Stations P1, P2 & P3					
4.7.1	• Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?			✓		
4.7.1	• Are temporary noise barrier, in the form of a site hoarding (with superficial density of at least 20kg/m2, with no substantial gaps), along the site boundaries of the pumping station sites adopted?			✓		
	Sewers and Rising Mains using Open Trench					
4.7.1	• Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?			✓		
4.7.1	• Are handheld breakers used for all initial road opening activities, when breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached?			✓		
4.7.1	• Are movable noise barriers or 3 sided enclosures installed for all initial road opening activities (breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached) where there NSRs within 50m of the line of sight?		✓			
	Sewers and Rising Mains using Pipe Jacking					
4.7.1	• Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?		✓			
	Road Pavement and Finishes					
4.7.1	• Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?			✓		
4.9.1	• Have noise monitors been provided at the following locations: • (NM3) Scattered house in NSW • (NM4) Scattered house in NSW • (NM6) Scattered house near Route 3 • (NM7) Fung Kat Heung			✓		
	Construction Runoff and Site Drainage					
	• Are perimeter cut-off drains to direct off-site water around the site constructed with internal drainage works and erosion and sedimentation control facilities implemented. Are channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers provided on site to direct stormwater to silt removal facilities?			✓		
	• Are dikes or embankments for flood protection implemented around the boundaries of earthwork areas. Are sediment/silt traps incorporated in the permanent drainage channels to enhance deposition rates?			✓		
	• Are silt removal facilities provided with retention time for silt/sand traps of 5 minutes under maximum flow conditions?				✓	P
	• Are construction works programmed to minimize surface excavation works during the rainy seasons (April to September)?			✓		
	• Are slopes minimised and erosion potential reduced?			✓		
	• Is deposited silt and grit removed regularly and disposed of by spreading evenly over stable, vegetated areas?		✓			

	• Are measures taken to minimise the ingress of site drainage into excavations? Is water pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?		✓			
	• Are open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 covered with tarpaulin or similar fabric during rainstorms?		✓			
	• Are manholes (including newly constructed ones) adequately covered and temporarily sealed?			✓		
	• Are precautions taken before rainstorms?		✓			
	• Are all vehicles and plant cleaned before leaving site?			✓		
	• Is solid waste, debris and rubbish on site appropriately collected, handled and disposed of properly to avoid water quality impacts?			✓		
	• Are all fuel tanks and storage areas provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby?			✓		
	Sewage Effluent - Construction Phase					
	1) Are portable chemical toilets and sewage holding tanks provided? Is handling the construction sewage generated for collection and disposal of this waste? Is a licensed contractor employed?			✓		
	Waste Management - Construction Phase					
6.6.2	• Are the necessary waste disposal permits from the appropriate authorities in placed for chemical and C&D wastes, in accordance with the Waste Disposal (Chemical Waste) (General) Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap 28)?			✓		
6.6.2	• Is chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, being handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes?			✓		
6.6.2	• Are containers used for the storage of chemical wastes suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation?			✓		
6.6.2	• Is the storage area for chemical wastes clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated?			✓		
6.6.2	• Is disposal of chemical waste via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD?		✓			
6.6.2	• Are trip tickets for disposal available to monitor disposal of C&DM and solid wastes at public filling and landfills, and to control fly tipping?			✓		

Land Contamination - *Construction Phase*

7.5.6	•	Is a revised CAP submitted to the EPD before commencement of construction works? Is the CAP implemented and findings of the investigations reported in the CAR, before ground disturbance is allowed?		✓		
7.5.6	•	If land contamination is confirmed, has a RAP been prepared and submitted to EPD?		✓		
7.5.6	•	Are contaminated sites remediated in accordance with the approved CAR/RAP?		✓		

Ecology - *Construction Phase*

8.7.1	•	Are construction activities prohibited during November to March for the sections of works within the WCA and WBA, and close to locations of ecologically sensitive species.		✓		
8.7.1	•	During November to March periods, are regular site inspections (at least twice a month) undertaken by ET to ensure proper implementation of this restriction?		✓		
8.7.2	•	Is pipe jacking method used for sewers and rising mains crossing over MDC within the WCA and WBA?		✓		
8.7.2	•	During November to March, are regular site inspections (at least twice a month) undertaken by ET for the remaining sewerage sections (including parts of S4, S5 and S6) within the WCA and WBA where construction activities cannot be rescheduled?		✓		
8.7.2	•	The site inspections shall check and report the number of workfronts and implementation of mitigation measures in the monthly EM&A Report.			✓	
8.7.3	•	Are quietened construction plant and equipment used for PS (P2 and P3) and sewers (S4, S5, S6) within the WCA and WBA?			✓	
8.7.4	•	For P1-P3, have fences along the boundary of the pumping stations construction sites been erected?			✓	
8.7.4	•	There shall be no filling and dumping to the remaining abandoned fishpond at P2.		✓		
8.7.4	•	Are silt removal facilities, designed to the ProPECC Note PN1/94, installed and operated at the P1 to P3 sites? The minimal total combined volume of the silt removal facilities at P3 (NSW SPS) should be 15m3.		✓		
8.7.4	•	There shall be no open fires within the site boundary.			✓	
8.7.4	•	Have temporary fire fighting equipment provided in the works areas.			✓	

Landscape and Visual - *Construction Phase*

	•	Have the implementation of mitigation measures (i.e., top soil reused, new compensatory planting) been reported in the monthly EM&A?		✓		
	•	The first monthly EM&A Report should report on the appearance of the temporary hoarding barriers.			✓	
	•	Are screen planting (3m wide) and trees with dense canopy (up to 5m) provided?		✓		
	•	Is felling of mature trees kept to a minimum?			✓	

OTHER OBSERVATIONS

Ko Po Road

P1020713 – Stagnant water was still observed in sedimentation tank which is not in operation. The Contractor was reminded to remove the water in the tanks as soon as possible.

P1020714 – Stagnant water was observed on bareground between the pipes. The Contractor was reminded to apply insecticides to avoid mosquito breeding.

Kat Hing Wai

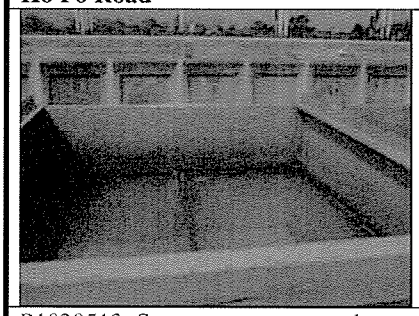
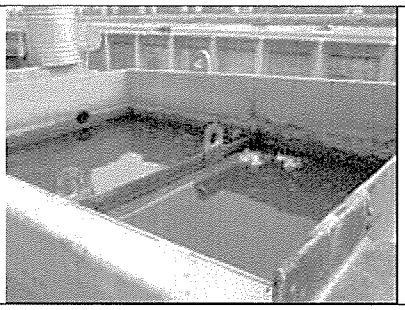
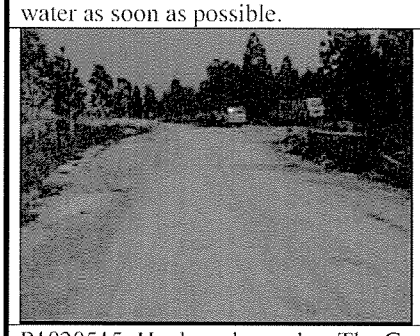
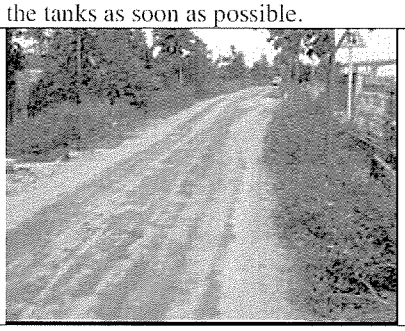
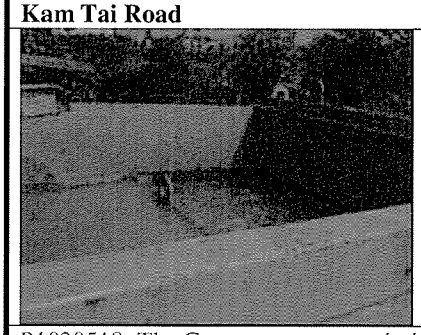
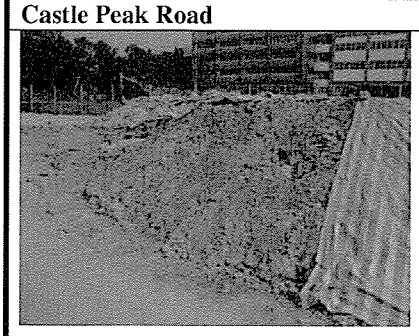
P1020716 – The Contractor was reminded to increase capacity of the sedimentation tanks and ensure the water discharge complied with WPCO standards and standards specified in the water discharge license.

DSD Representative	Contractor Representative	ETL	IEC
			Florence Yuen
( )	( )	( )	(Florence Yuen)

Agreement No. CE37/2005 (EP)
Environmental Monitoring and Audit for
Kam Tin Trunk Sewerage Phase 1 and Au Tau trunk sewers

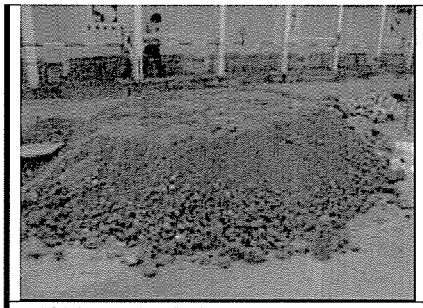
MONTHLY SITE INSPECTION PHOTOS
10 May 2007
Environmental Observations

Follow up last month's observations

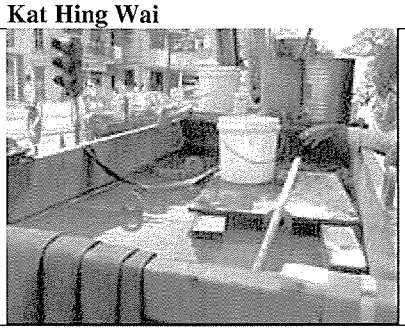
Last month's observations	This month's observations
Ko Po Road	
	
P1020513: Stagnant water was observed in sedimentation tank which is not in operation. The Contractor was reminded to remove the stagnant water as soon as possible.	P1020713: Stagnant water was still observed in sedimentation tank which is not in operation. The Contractor was reminded to remove the water in the tanks as soon as possible.
	
P1020515: Haul road was dry. The Contractor was reminded to provide water spray more frequently to suppress dust.	Closed - P1020712: Water spray was provided regularly to haul road to suppress dust.
Kam Tai Road	
	
P1020518: The Contractor was reminded to provide better maintenance to the sedimentation tanks.	To be followed up in the next site inspection.
Castle Peak Road	
	

Agreement No. CE37/2005 (EP)
Environmental Monitoring and Audit for
Kam Tin Trunk Sewerage Phase 1 and Au Tau trunk sewers

MONTHLY SITE INSPECTION PHOTOS
10 May 2007
Environmental Observations

	
P1020524 & 1020525: The Contractor was reminded to cover the stockpiles of dusty materials entirely with impervious sheeting.	To be followed up in the next site inspection.

This month's observations

This month's observations	This month's observations
Ko Po Road	**Kat Hing Wai**
	
P1020714: Stagnant water was observed on bare ground between the pipes. The Contractor was reminded to apply insecticides to avoid mosquito breeding.	P1020716: The Contractor was reminded to increase capacity of the sedimentation tanks and ensure the water discharge complied with WPCO standards and standards specified in the water discharge license.