JOB NO.: TCS00310/06

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

MONTHLY EM&A REPORT FOR MARCH 2008 DESIGNATED ELEMENTS (NO. 24) (CONSTRUCTION PHASE)

Revision: 0

PREPARED FOR

LEADER CIVIL ENGINEERING CORPORATION LIMITED

Quality Index

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EXECUTIVE SUMMARY

ES.01 Leader Civil Engineering Corporation Limited (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 Monthly Environmental Monitoring & Audit (EM&A) Report for **March 2008 (No. 24)** present the environmental impact monitoring and audit (EM&A) program conducted from **01** to **31 March 2008** for the Designated Elements. The EM&A program in **March 2008** were covered air quality, construction 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 **April 2008** include backfilling, concreting and extract sheet pile at Kam Tin Pumping Station (P1); backing filling and concreting at Sha Po Pumping Station (P2); backfilling and concreting at Nam Sang Wai P/S(P3); sheet piling, excavation, pipe laying, backfilling, concreting, pipe jacking and extract sheet pile at both 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 24th Monthly Construction Phase EM&A Report for **March 2008 (Report No. 24)** summarizes the impact monitoring results and audit findings in the reporting month from **01** to **31 March 2008**.

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 MONTH

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**.

CONSTRUCTION ACTIVITIES UNDERTAKEN IN THE REPORTING MONTH

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

Kam Tin Pumping Station (P1)
- Backfilling
- Concreting

Sha Po Pumping Station (P2)
- Backfilling
- Concreting

Nam Sang Wai Pumping Station (P3)
- Backfilling
- Concreting

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

Pok Wai South Road (S5 and S6)

- Sheet piling
- Excavation
- Pipe laying
- Backfilling
- Concreting
- Pipe jacking
- Extract sheet pile

2.0 ENVIRONMENTAL STATUS

WORK UNDERTAKEN IN THE REPORTING MONTH 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 Month 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	A1 & F6
		• Remove dust and spray water at the construction access	A2
		• Cover the stockpiles of dusty material properly	A3
		• Spray water to all dusty materials immediately before loading and unloading	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	A6
		• Spray water at the pavement breaking locations	A7
		• Spray the working area of excavation frequently	A8
		• Maximize the use of quiet PME on site	B1, B2 & F5
S4 (Nam Sang Wai Road)	• Drilling and grouting	• Apply and obtain appropriate waste disposal licenses	D1
		• Handle, store and dispose of chemical wastes as per relevant regulations	D2, D3 & D4
		• Implement trip-ticket system for waste disposal	D5
		• Restrict open fires and provide fire fighting equipment in the works area	F9
S5 & S6 (Pok Wai South Road)	• Pipe jacking	• Perform weekly inspection with ET and monthly audit with IEC	H1
		• Conduct noise and dust monitoring as per EM&A manual during construction	I1 & I2
		• Provide sedimentation tanks for treating site discharge.	-
		• Recycle wheel washing water and provide sedimentation tanks for treating site discharge.	-

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 (NM3, NM4, NM6 & NM7) under the project EP. Locations of the monitoring stations and description are summary in the **Table 2-2**.

Table 2-2 Description of the Monitoring Stations

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 stations and four noise monitoring locations 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-Hour TSP
Construction Noise	Leq 30min 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 Locations	Action Level ($\mu g/m^3$)		Limit Level ($\mu g/m^3$)	
	1-Hour TSP	24-Hour TSP	1-Hour TSP	24-Hour 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

Monitoring Period	Action Level	Limit Level
0700-1900 hours 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 (EP-220/2005) 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 are summarized in **Table 2-1** and the implementation schedule as shown in **Annex G**.

4.02 The status of permits, licences, and/or notifications related to environmental protection under this Project during the reporting month is presented in **Table 4-1**.

Table 4-1 Status of Environmental Licenses and Permits

Items	Item Description	License/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-RN0004-07)	Valid (7 May 2007 to 06 Feb 2008)
7	Construction Noise Permit (CNP No. GW-RN0355-07)	Valid (24 Aug 2007 to 23 Feb 2008)
8	Construction Noise Permit (CNP No. GW-RN0379-07)	Valid (09 Sep 2007 to 02 Mar 2008)
9	Construction Noise Permit (CNP No. GW-RN0479-07)	Valid (06 Nov 2007 to 05 May 2008)
10	Construction Noise Permit (CNP No. GW-RN0480-07)	Valid (06 Nov 2007 to 05 May 2008)

5.0 MONITORING RESULTS

MONITORING METHODOLOGY OF AIR QUALITY MONITORING

5.01 The 24-Hour TSP monitoring was carried out by a High Volume Air Sampler (HVAS) in compliance with the updated EM&A Manual. The HVAS 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-Hour operation;
- Minimum exposed area of 63 in^2;
- Flow control accuracy of ±2.5% deviation over 24-Hour 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-Hour 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-Hour 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. The validation of all monitoring practices and data were following the in-house QA/QC procedures. Blank filters samples were collected and delivered to the HOKLAS-accredited laboratory for QA/QC check.

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

METHODOLOGY FOR 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-Hour TSP filter papers.

5.09 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

Env. Aspect	Parameters	Monitoring Equipment
Air Quality	24-Hour TSP	Greasby Anderson GMWS2310 High Volume Air Sampler
Noise	Leq30min	B&K Sound Level Meter Type 2238
	On-site Calibration	B&K Noise Calibrator Type 4231

EQUIPMENT CALIBRATION

5.10 Initial calibration of the HVAS 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 month 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/Locations

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 Locations)	
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-Hour TSP monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. Power supply was reported failure on 28 February 2008 at monitoring location AM 1. However, the power supply by the contractor at AM 1 had not been resumed for March 2008 and only **12** 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 **20** monitoring events were carried out in this reporting month.

MONITORING RESULTS WITH DATE AND TIME

5.17 Monitoring results in this reporting month for air quality and construction noise were summarized at **Table 5-3** to **5-7**. No Action/Limit Level exceedance of air quality and construction noise was recorded in this reporting month.

Table 5-3 Summary of Air Quality Monitoring Results

Date	24-Hour TSP (μg/m³)			
	AM1	AM5	AM6	AM7
05-Mar-08	Power failure	169	74	93
11-Mar-08		104	89	84
17-Mar-08		190	78	54
26-Mar-08		183	72	72
Average (Range)	-	162 (104-183)	78 (72-89)	76 (54-93)

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

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
01-Mar-08	10:37	46.6	43.6	44.0	45.3	58.3	45.8	51.5	54.5
07-Mar-08	10:30	54.3	53.8	54.6	54.5	52.7	55.2	54.3	57.3
13-Mar-08	14:37	48.6	55.6	55.6	56.7	48.7	49.6	53.8	56.8
19-Mar-08	11:15	50.2	46.0	43.9	44.6	45.6	47.2	46.8	49.8
27-Mar-08	15:50	57.3	50.5	51.5	49.9	51.6	51.0	52.9	55.9
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
01-Mar-08	9:21	49.7	48.4	49.5	47.4	65.6	56.7	58.7	61.7
07-Mar-08	10:23	59.8	60.1	59.5	59.4	62.5	59.0	60.2	63.2
13-Mar-08	13:22	63.2	60.1	55.1	51.6	52.7	51.6	58.1	61.1
19-Mar-08	10:15	53.7	60.1	60.9	60.3	60.4	60.6	59.9	62.9
27-Mar-08	14:17	53.8	49.2	52.7	50.3	51.3	50.7	51.6	54.6
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
01-Mar-08	13:02	54.7	53.5	55.0	56.6	60.2	58.4	57.0	No Correction Required
07-Mar-08	14:09	57.9	53.8	56.1	55.1	55.4	55.9	55.9	
13-Mar-08	16:10	59.6	59.4	59.5	58.7	58.2	62.7	60.0	
19-Mar-08	14:49	73.0	74.4	60.1	75.1	63.0	71.7	72.1	
27-Mar-08	11:28	65.3	69.0	64.0	66.3	69.3	70.9	68.1	
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
01-Mar-08	11:15	51.6	55.9	53.5	52.2	54.0	54.0	53.8	No Correction Required
07-Mar-08	10:55	53.4	54.5	52.9	56.3	53.1	53.6	54.1	
13-Mar-08	14:14	60.8	65.4	63.3	62.2	61.5	61.7	62.8	
19-Mar-08	10:53	56.4	56.0	55.3	54.7	54.7	52.7	55.1	
27-Mar-08	14:56	52.1	51.9	52.6	50.5	52.9	54.8	52.7	
Limit Level									**75**

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

5.18 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 30 min
1-Apr -08	Tue	■	
2-Apr -08	Wed		■
3-Apr -08	Thu		
4-Apr -08	Fri		
5-Apr -08	Sat		
6-Apr -08	Sun		
7-Apr -08	Mon	■	
8-Apr -08	Tue		
9-Apr -08	Wed		■
10-Apr -08	Thu		
11-Apr -08	Fri		
12-Apr -08	Sat	■	
13-Apr -08	Sun		
14-Apr -08	Mon		
15-Apr -08	Tue		■
16-Apr -08	Wed		
17-Apr -08	Thu		
18-Apr -08	Fri	■	
19-Apr -08	Sat		
20-Apr -08	Sun		
21-Apr -08	Mon		■
22-Apr -08	Tue		
23-Apr -08	Wed		
24-Apr -08	Thu	■	
25-Apr -08	Fri		
26-Apr -08	Sat		■
27-Apr -08	Sun		
28-Apr -08	Mon		
29-Apr -08	Tue		
30-Apr -08	Wed	■	

■	Monitoring Day
	Sunday or Public Holiday

WEATHER CONDITIONS DURING THE MONITORING MONTH

5.19 The meteorological data during the monitoring month are summarized in **Annex I**.

GRAPHICAL PLOTS OF TRENDS OF MONITORED PARAMETERS

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

WEATHER CONDITIONS THAT AFFECT THE MONITORING RESULTS

5.21 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

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

QA/QC RESULTS AND DETECTION LIMITS

5.23 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 summons 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 was received in this reporting month.

DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

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

7.0 OTHERS

FUTURE KEY ISSUES

7.01 Construction activities to be undertaken in **April 2008** include backfilling, concreting and extract sheet pile at Kam Tin Pumping Station (P1); backing filling and concreting at Sha Po Pumping Station (P2); backfilling and concreting at Nam Sang Wai P/S(P3); sheet piling, excavation, pipe laying, backfilling, concreting, pipe jacking and extract sheet pile at both 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 Waste Quantities for Disposal

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (tons) – Disposed	1,588	Tuen Mun 38 Fill Bank
C&D Materials (Inert) (tons) – Reused	310	DSD Contract DC/2005/02
C&D Materials (Non-Inert) (tons)	0	NA
Chemical Waste (Litres)	0	NA
General Refuse (tons)	17	Refuse Collector

Table 7-2 Summary of Waste Quantities 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.

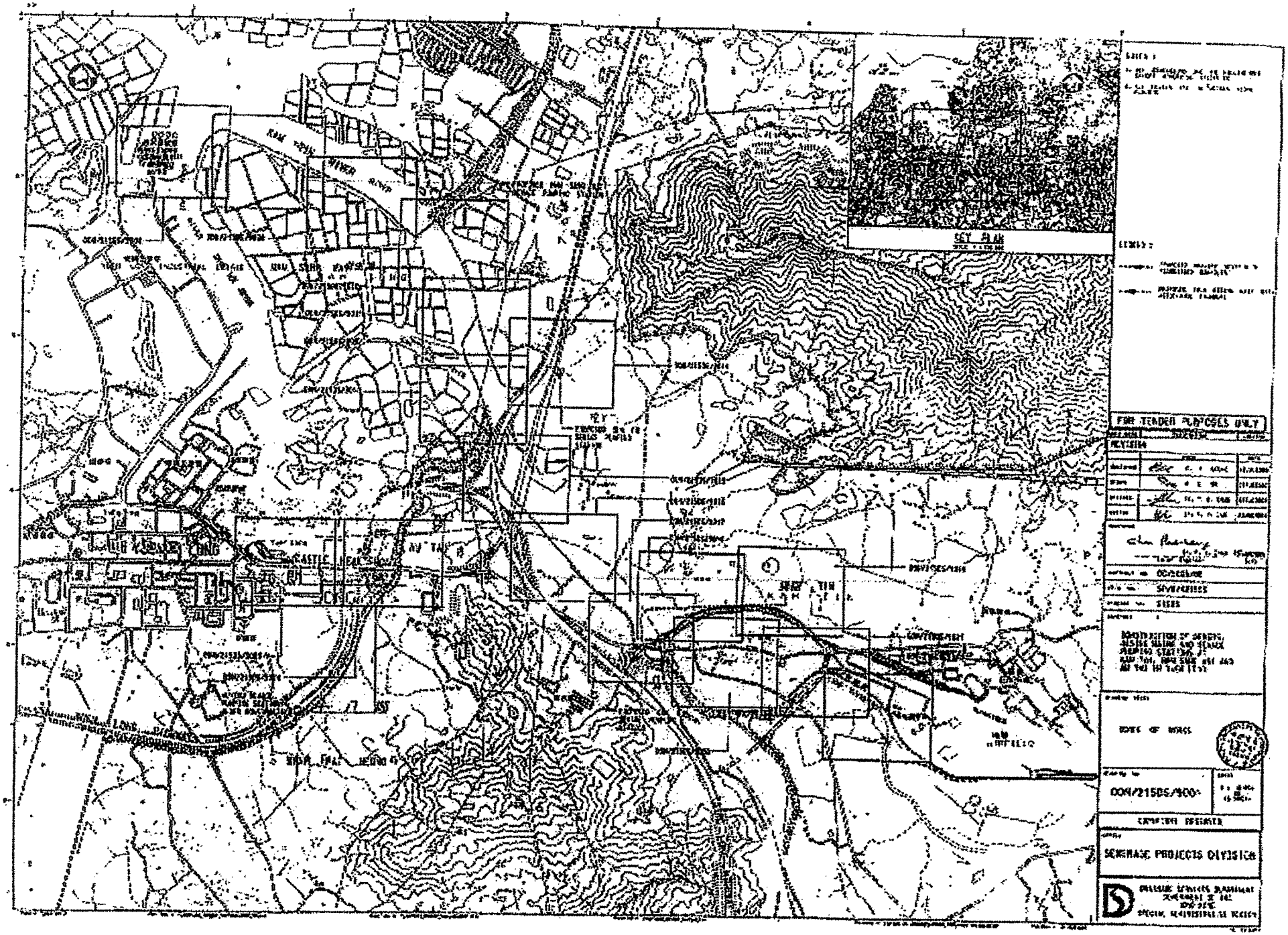
SUBMISSION OF PROFORMA

7.04 Representatives of the Engineer, the Contractor and ET carried out regular weekly joint site inspection on 04, 13, 18 and 28 March 2008 to evaluate the site environmental performance. The monthly IEC site audit for **March 2008** was completed on 13 March 2008. No non-compliance and observations were recorded in the monthly site inspection.

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

Annex A

Project Site Layout

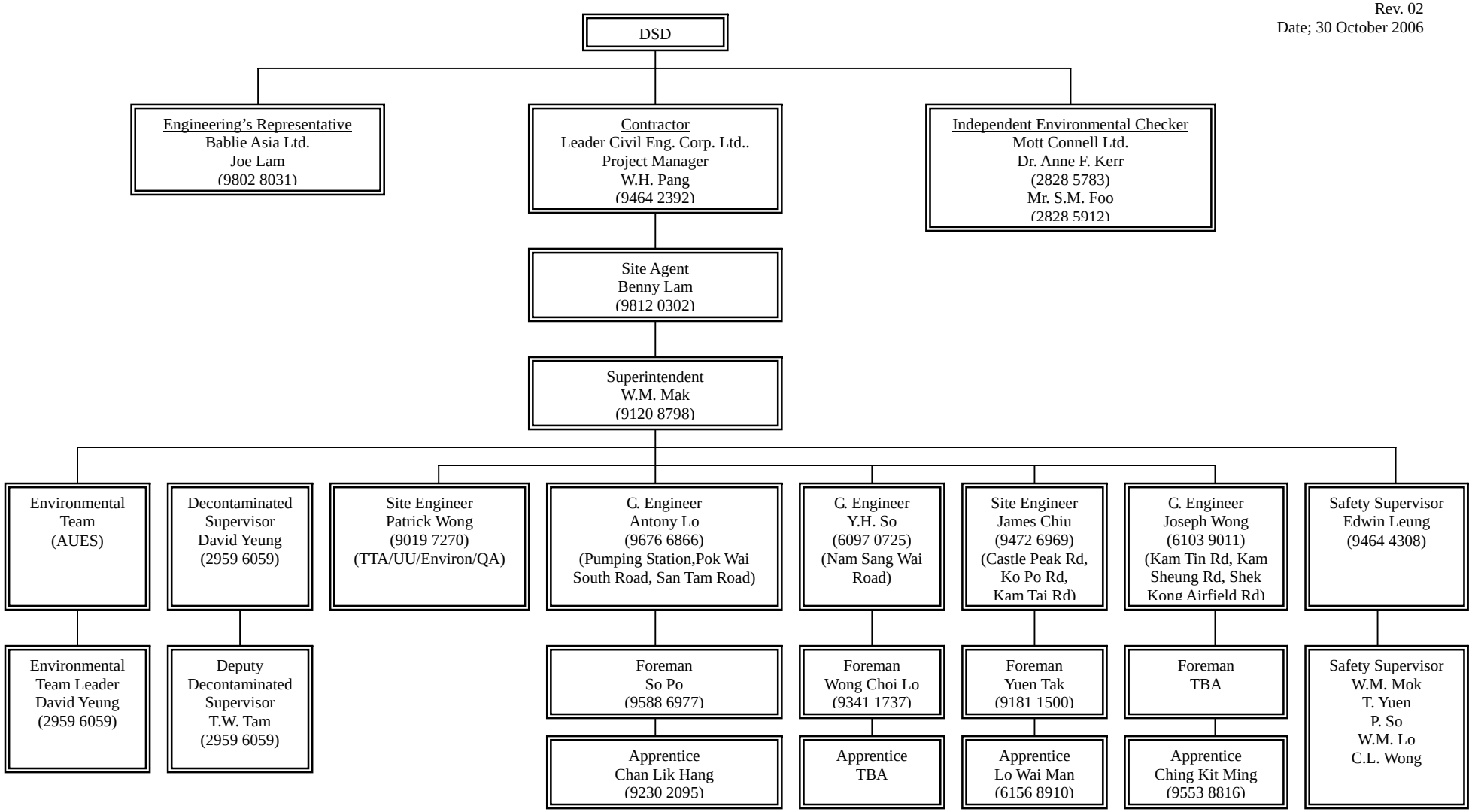

KEY PLAN
FOR TENDER PURPOSES ONLY
SEWERAGE PROJECTS DIVISION

Annex B

Project Organization and Management Structure

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

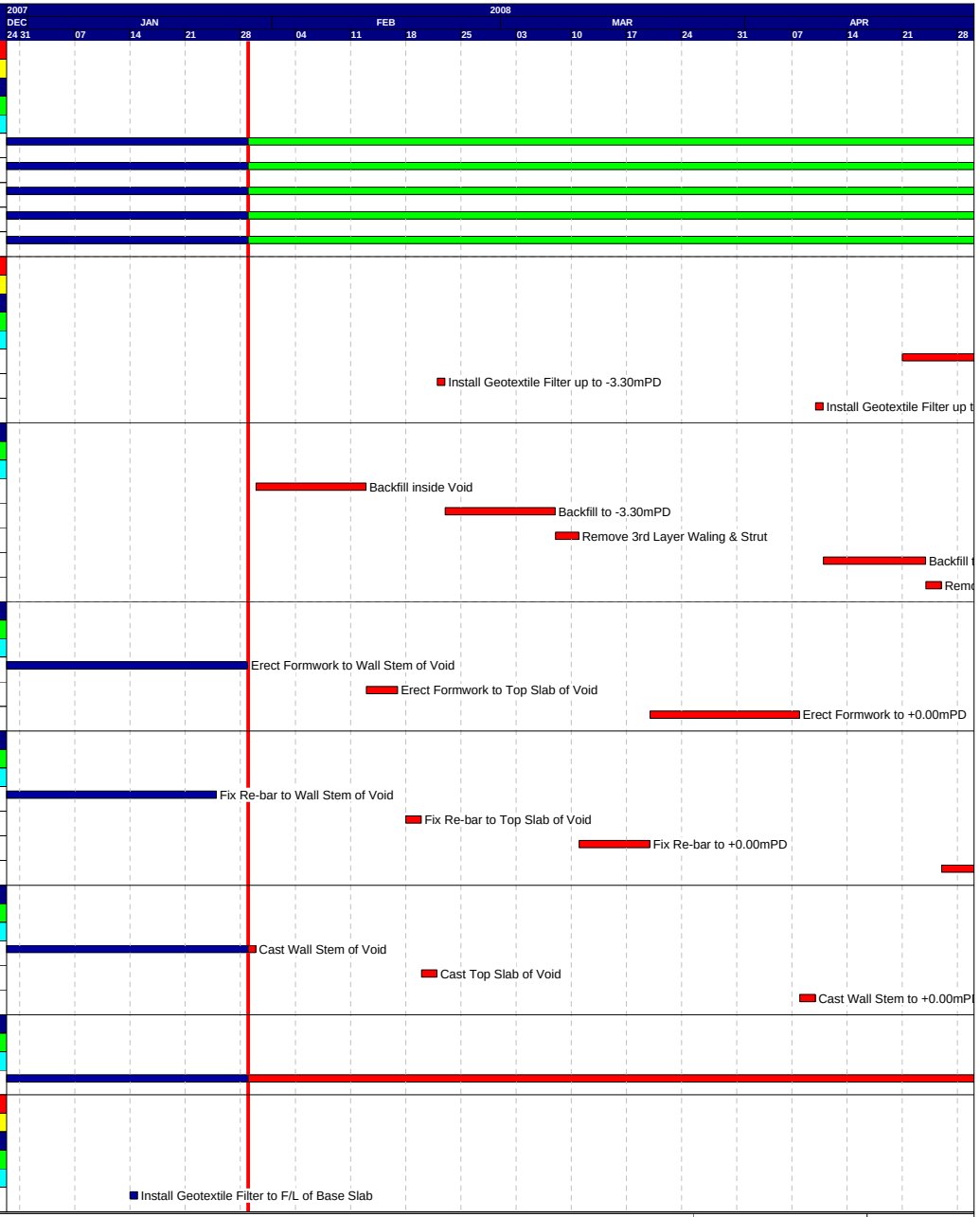
Rev. 02
Date; 30 October 2006



Annex C

Construction Program

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
Preliminaries								
PR2900	Deliver Ductile Iron Pipe	800	124d	70	29APR06 A	24NOV08	29APR06 A	24APR09
PR3100	Deliver Precast Concrete Pipe	800	139d	72	24APR06 A	05NOV08	24APR06 A	24APR09
PR3300	Deliver Vitrified Clay Pipe	800	109d	68	10APR06 A	10DEC08	10APR06 A	24APR09
PR3400	Structural Monitoring by ISE	835	102d	68	06APR06 A	18DEC08	06APR06 A	24APR09
PR3500	Environmental monitoring by ET	814	142d	72	06APR06 A	03NOV08	06APR06 A	24APR09
Section 1 - Kam Tin Sewage Pumping Station								
Portion A								
Drainage and Ducts								
Trench Method								
S1AEA1000	DN1050 Pipe & Manhole (D1 - P/S)	12	-58d	0	21APR08	05MAY08	05FEB08	21FEB08
S1AEA1650	Install Geotextile Filter up to -3.30mPD	1	-97d	0	22FEB08	22FEB08	25OCT07	25OCT07
S1AEA1700	Install Geotextile Filter up to +0.00mPD	1	-97d	0	10APR08	10APR08	07DEC07	07DEC07
Earthworks								
S1AG2300	Backfill inside Void	9	-97d	0	30JAN08	12FEB08	04OCT07	13OCT07
S1AG2320	Backfill to -3.30mPD	12	-97d	0	23FEB08	07MAR08	26OCT07	08NOV07
S1AG2350	Remove 3rd Layer Waling & Strut	2	-97d	0	08MAR08	10MAR08	09NOV07	10NOV07
S1AG2400	Backfill to +0.00mPD	11	-97d	0	11APR08	23APR08	08DEC07	20DEC07
S1AG2450	Remove 2nd Layer Waling & Strut	2	-97d	0	24APR08	25APR08	21DEC07	22DEC07
Formwork								
S1AJ1200	Erect Formwork to Wall Stem of Void	12		100	03DEC07 A	28JAN08 A	03DEC07 A	28JAN08 A
S1AJ1300	Erect Formwork to Top Slab of Void	4	-97d	0	13FEB08	16FEB08	15OCT07	18OCT07
S1AJ1400	Erect Formwork to +0.00mPD	12	-97d	0	20MAR08	07APR08	21NOV07	04DEC07
Steel Reinforcement								
S1AK1100	Fix Re-bar to Wall Stem of Void	8		100	01DEC07 A	24JAN08 A	01DEC07 A	24JAN08 A
S1AK1200	Fix Re-bar to Top Slab of Void	2	-97d	0	18FEB08	19FEB08	20OCT07	22OCT07
S1AK1300	Fix Re-bar to +0.00mPD	8	-97d	0	11MAR08	19MAR08	12NOV07	20NOV07
S1AK1400	Fix Re-bar to +5.00mPD	8	-97d	0	26APR08	06MAY08	24DEC07	04JAN08
In-Situ Concrete								
S1AL1200	Cast Wall Stem of Void	2	-97d	50	18DEC07 A	29JAN08	18DEC07 A	03OCT07
S1AL1300	Cast Top Slab of Void	2	-97d	0	20FEB08	21FEB08	23OCT07	24OCT07
S1AL1400	Cast Wall Stem to +0.00mPD	2	-97d	0	08APR08	09APR08	05DEC07	06DEC07
Geotechnical works								
S1AP1000	Monitoring of Instruments	525	-15d	63	16NOV06 A	24SEP08	16NOV06 A	05SEP08
Section 2 - Sha Po Sewage Pumping Station								
Portion B								
Drainage and Ducts								
Trench Method								
S2BEA1400	Install Geotextile Filter to F/L of Base Slab	1		100	14JAN08 A	14JAN08 A	14JAN08 A	14JAN08 A



Start date	19DEC05
Finish date	05MAY10
Data date	29JAN08
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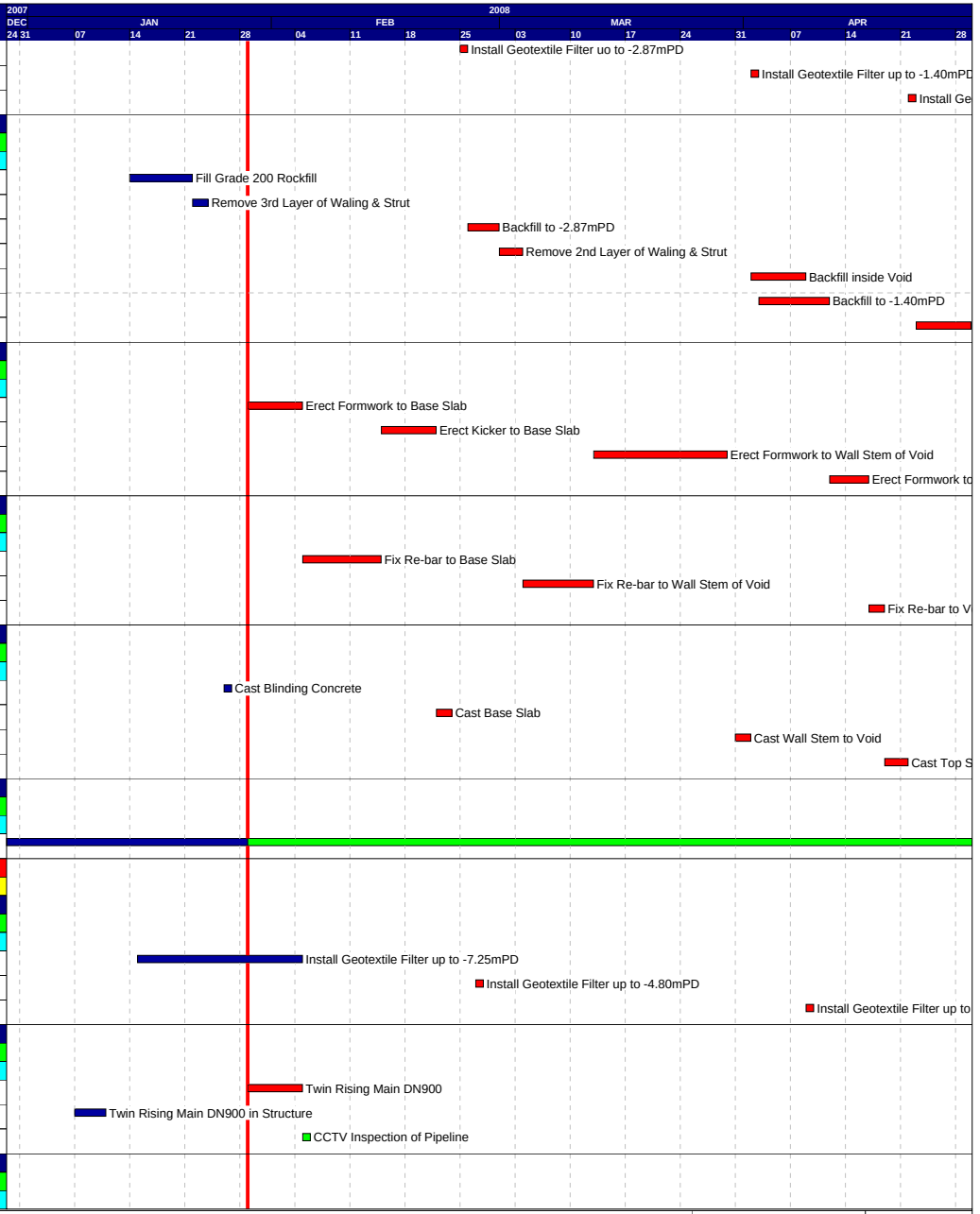
c Primavera Systems, Inc.	

Leader Civil Engineering Corp. Ltd.
DSD Contract No. DC/2005/02
3-Month Rolling Programme - 3M01 at 29 January 2008

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
S2BEA1450	Install Geotextile Filter uo to -2.87mPD	1	-308d	0	25FEB08	25FEB08	07FEB07	07FEB07
S2BEA1500	Install Geotextile Filter up to -1.40mPD	1	-308d	0	02APR08	02APR08	16MAR07	16MAR07
S2BEA1550	Install Geotextile Filter up to +0.00mPD	1	-308d	0	22APR08	22APR08	04APR07	04APR07
Earthworks								
S2BG1800	Fill Grade 200 Rockfill	8		100	14JAN08 A	21JAN08 A	14JAN08 A	21JAN08 A
S2BG1850	Remove 3rd Layer of Waling & Strut	2		100	22JAN08 A	23JAN08 A	22JAN08 A	23JAN08 A
S2BG1860	Backfill to -2.87mPD	4	-308d	0	26FEB08	29FEB08	08FEB07	12FEB07
S2BG1870	Remove 2nd Layer of Waling & Strut	2	-308d	0	01MAR08	03MAR08	13FEB07	14FEB07
S2BG1900	Backfill inside Void	5	-305d	0	02APR08	08APR08	20MAR07	24MAR07
S2BG2000	Backfill to -1.40mPD	7	-308d	0	03APR08	11APR08	17MAR07	24MAR07
S2BG2020	Backfil to +0.0mPD	6	-308d	0	23APR08	29APR08	10APR07	16APR07
Formwork								
S2BJ1000	Erect Formwork to Base Slab	6	-308d	0	29JAN08	04FEB08	15JAN07	20JAN07
S2BJ1100	Erect Kicker to Base Slab	6	-308d	0	15FEB08	21FEB08	29JAN07	03FEB07
S2BJ1200	Erect Formwork to Wall Stem of Void	12	-308d	0	13MAR08	29MAR08	28FEB07	13MAR07
S2BJ1300	Erect Formwork to Void T/Slab & V/Chamber B/Slab	4	-308d	0	12APR08	16APR08	26MAR07	29MAR07
Steel Reinforcement								
S2BK1000	Fix Re-bar to Base Slab	6	-308d	0	05FEB08	14FEB08	22JAN07	27JAN07
S2BK1100	Fix Re-bar to Wall Stem of Void	8	-308d	0	04MAR08	12MAR08	15FEB07	27FEB07
S2BK1200	Fix Re-bar to Void T/Slab & V/Chamber B/Slab	2	-308d	0	17APR08	18APR08	30MAR07	31MAR07
In-Situ Concrete								
S2BL1000	Cast Blinding Concrete	1		100	26JAN08 A	26JAN08 A	26JAN08 A	26JAN08 A
S2BL1100	Cast Base Slab	2	-308d	0	22FEB08	23FEB08	05FEB07	06FEB07
S2BL1200	Cast Wall Stem to Void	2	-308d	0	31MAR08	01APR08	14MAR07	15MAR07
S2BL1300	Cast Top Slab to Void & Base Slab of V/Chamber	2	-308d	0	19APR08	21APR08	02APR07	03APR07
Geotechnical works								
S2BP1000	Monitoring of Instruments	414	29d	67	26FEB07 A	21JUL08	26FEB07 A	23AUG08
Section 3 - Nam Sang Wai Sewage Pumping Station								
Portion C								
Drainage and Ducts								
Trench Method								
S3CEA1800	Install Geotextile Filter up to -7.25mPD	1	-168d	20	15JAN08 A	04FEB08	15JAN08 A	16JUL07
S3CEA1850	Install Geotextile Filter up to -4.80mPD	1	-168d	0	27FEB08	27FEB08	04AUG07	04AUG07
S3CEA1900	Install Geotextile Filter up to -2.50mPD	1	-168d	0	09APR08	09APR08	11SEP07	11SEP07
Pipework - Rising Main								
Trench Method								
S3CFA1000	Twin Rising Main DN900	6	-168d	0	29JAN08	04FEB08	10JUL07	16JUL07
S3CFA1100	Twin Rising Main DN900 in Structure	4		100	07JAN08 A	10JAN08 A	07JAN08 A	10JAN08 A
S3CFA1200	CCTV Inspection of Pipeline	1	133d	0	05FEB08	05FEB08	22JUL08	22JUL08
Earthworks								



Start date	19DEC05
Finish date	05MAY10
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c Primavera Systems, Inc.	

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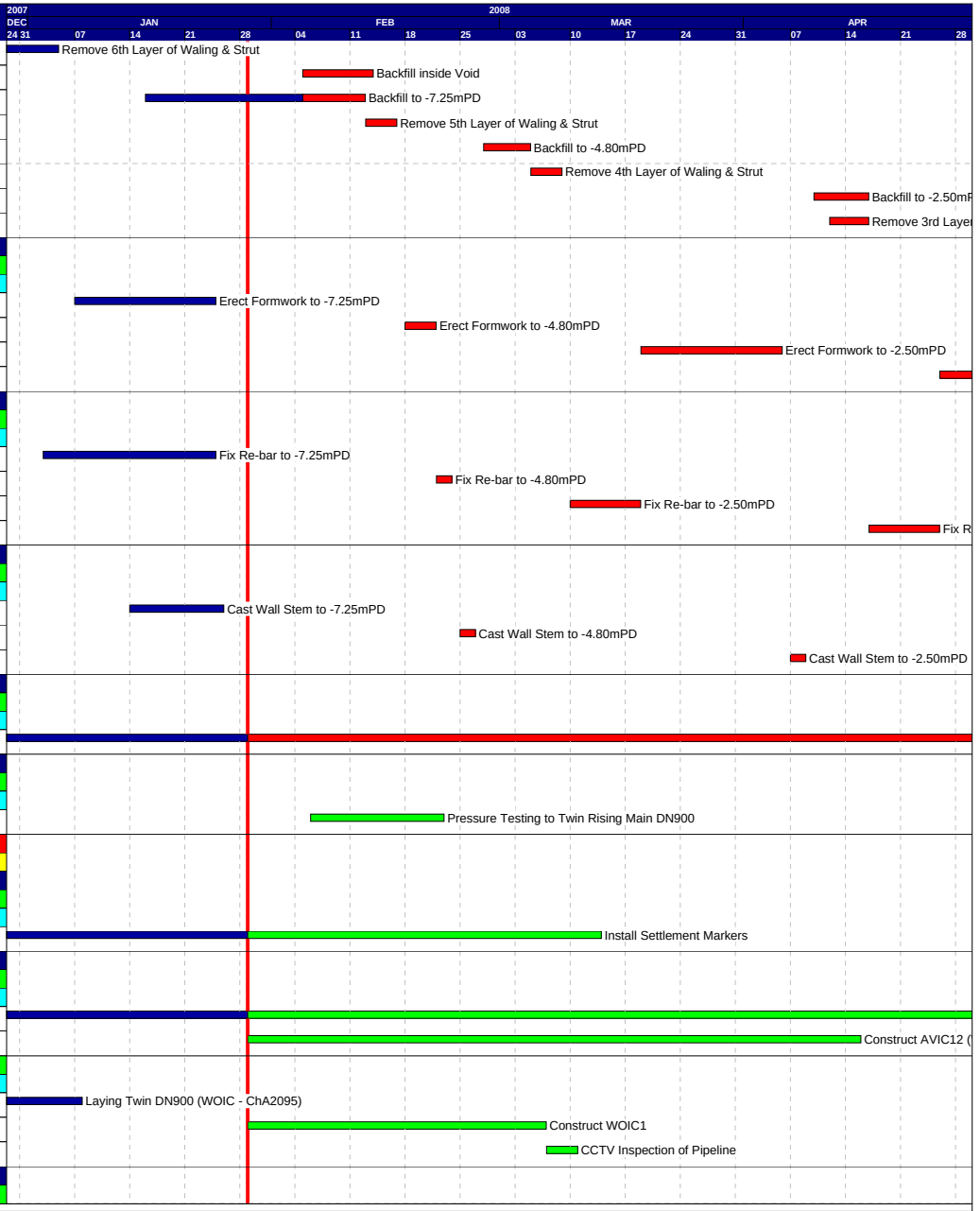
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S3CG2470	Remove 6th Layer of Waling & Strut	4		100	28DEC07 A	04JAN08 A	28DEC07 A	04JAN08 A
S3CG2500	Backfill inside Void	5	-165d	0	05FEB08	13FEB08	20JUL07	25JUL07
S3CG2600	Backfill to -7.25mPD	5	-168d	20	16JAN08 A	12FEB08	16JAN08 A	20JUL07
S3CG2620	Remove 5th Layer of Waling & Strut	4	-168d	0	13FEB08	16FEB08	21JUL07	25JUL07
S3CG2650	Backfill to -4.80mPD	5	-168d	0	28FEB08	04MAR08	06AUG07	10AUG07
S3CG2670	Remove 4th Layer of Waling & Strut	4	-168d	0	05MAR08	08MAR08	11AUG07	15AUG07
S3CG2700	Backfill to -2.50mPD	6	-168d	0	10APR08	16APR08	12SEP07	18SEP07
S3CG2720	Remove 3rd Layer of Waling & Strut	4	-168d	0	12APR08	16APR08	14SEP07	18SEP07
Formwork								
S3CJ1200	Erect Formwork to -7.25mPD	12		100	07JAN08 A	24JAN08 A	07JAN08 A	24JAN08 A
S3CJ1300	Erect Formwork to -4.80mPD	4	-168d	0	18FEB08	21FEB08	26JUL07	30JUL07
S3CJ1400	Erect Formwork to -2.50mPD	12	-168d	0	19MAR08	05APR08	25AUG07	07SEP07
S3CJ1500	Erect Formwork to +0.00mPD	12	-168d	0	26APR08	10MAY08	29SEP07	13OCT07
Steel Reinforcement								
S3CK1100	Fix Re-bar to -7.25mPD	8		100	03JAN08 A	24JAN08 A	03JAN08 A	24JAN08 A
S3CK1200	Fix Re-bar to -4.80mPD	2	-168d	0	22FEB08	23FEB08	31JUL07	01AUG07
S3CK1300	Fix Re-bar to -2.50mPD	8	-168d	0	10MAR08	18MAR08	16AUG07	24AUG07
S3CK1400	Fix Re-bar to +0.00mPD	8	-168d	0	17APR08	25APR08	19SEP07	28SEP07
In-Situ Concrete								
S3CL1200	Cast Wall Stem to -7.25mPD	2		100	14JAN08 A	25JAN08 A	14JAN08 A	25JAN08 A
S3CL1300	Cast Wall Stem to -4.80mPD	2	-168d	0	25FEB08	26FEB08	02AUG07	03AUG07
S3CL1400	Cast Wall Stem to -2.50mPD	2	-168d	0	07APR08	08APR08	08SEP07	10SEP07
Geotechnical works								
S3CP1000	Monitoring of Instruments	771	-80d	70	06APR06 A	10NOV08	06APR06 A	05AUG08
Testing								
S3CS1000	Pressure Testing to Twin Rising Main DN900	12	133d	0	06FEB08	22FEB08	23JUL08	05AUG08
Section 4 - Sewers & RM in Portion D, F, G, H, I								
Portion D								
Ground Investigation								
S4DB1300	Install Settlement Markers	589	316d	94	31OCT06 A	13MAR08	31OCT06 A	07APR09
Pipework - Rising Main								
Trench Method								
S4DFA1200	Twin Rising Main DN900 (ChA2095 - ChA2215)	148	171d	37	20DEC07 A	26MAY08	20DEC07 A	17DEC08
S4DFA1210	Construct AVIC12 (VO 100)	60	275d	0	29JAN08	15APR08	03JAN09	17MAR09
Trenchless Method								
S4DFB1030	Laying Twin DN900 (WOIC - ChA2095)	48		100	15OCT07 A	07JAN08 A	15OCT07 A	07JAN08 A
S4DFB1100	Construct WOIC1	30	234d	0	29JAN08	06MAR08	13NOV08	17DEC08
S4DFB1200	CCTV Inspection of Pipeline	3	307d	0	07MAR08	10MAR08	20MAR09	23MAR09
Geotechnical works								



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c Primavera Systems, Inc.	

Leader Civil Engineering Corp. Ltd.
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Early bar
Progress bar
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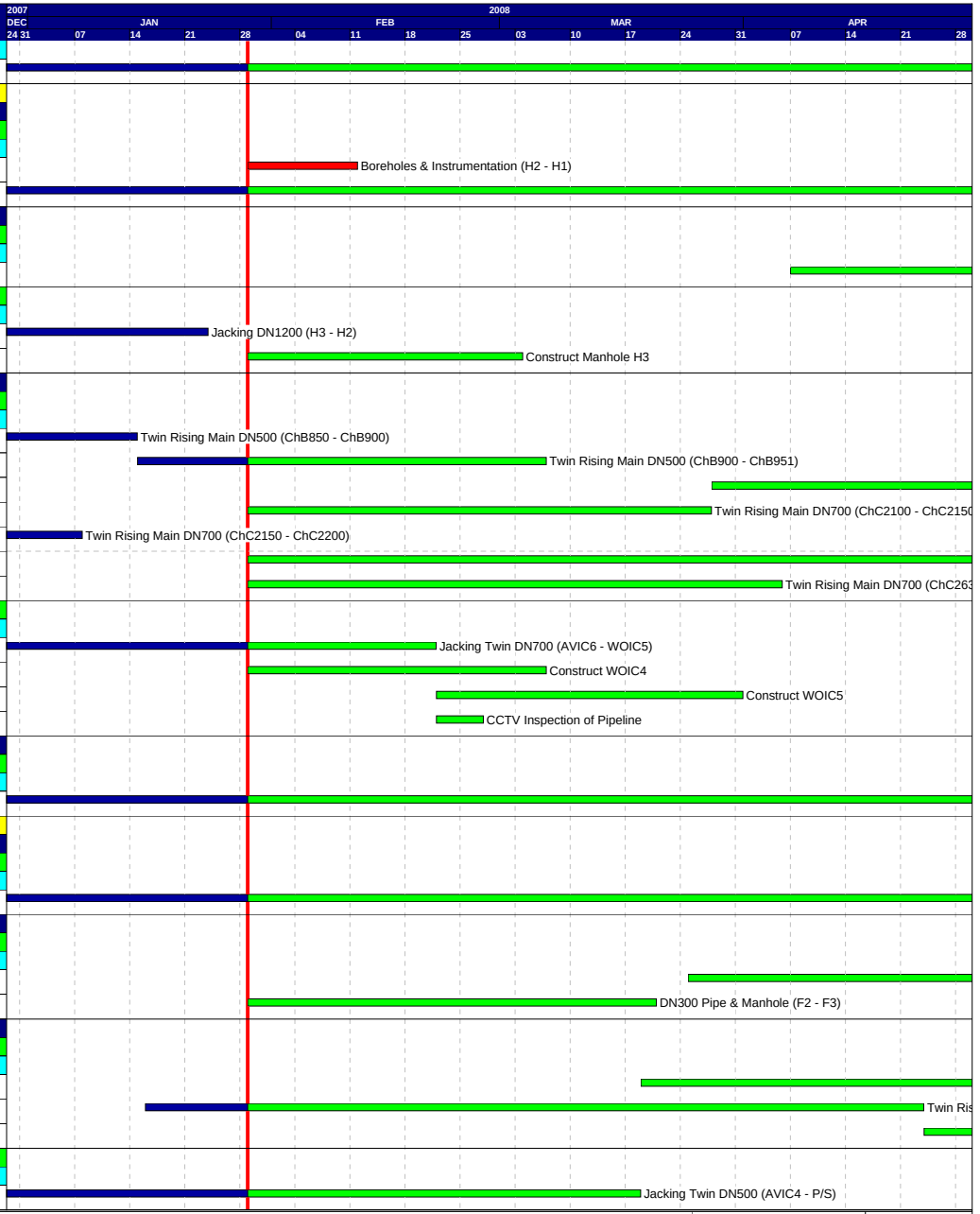
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S4DP1000	Monitoring of Instruments	556	165d	66	02NOV06 A	16SEP08	02NOV06 A	07APR09
Portion F								
Ground Investigation								
S4FB1020	Boreholes & Instrumentation (H2 - H1)	9	-44d	0	29JAN08	11FEB08	05DEC07	14DEC07
S4FB1500	Install Settlement Markers	730	177d	76	27APR06 A	01SEP08	27APR06 A	07APR09
Drainage and Ducts								
Trench Method								
S4FEA1000	DN900 Pipe & Manhole (H8 - H7) 1st Stage	53	146d	0	07APR08	10JUN08	30SEP08	02DEC08
Trenchless Method								
S4FEB1120	Jacking DN1200 (H3 - H2)	46		100	18JUL07 A	23JAN08 A	18JUL07 A	23JAN08 A
S4FEB1140	Construct Manhole H3	27	293d	0	29JAN08	03MAR08	24JAN09	27FEB09
Pipework - Rising Main								
Trench Method								
S4FFA1200	Twin Rising Main DN500 (ChB850 - ChB900)	50		100	17DEC07 A	14JAN08 A	17DEC07 A	14JAN08 A
S4FFA1210	Twin Rising Main DN500 (ChB900 - ChB951)	50	301d	40	15JAN08 A	06MAR08	15JAN08 A	12MAR09
S4FFA1500	Twin Rising Main DN700 (ChC2050 - ChC2100)	45	107d	0	28MAR08	22MAY08	06AUG08	27SEP08
S4FFA1600	Twin Rising Main DN700 (ChC2100 - ChC2150)	45	107d	0	29JAN08	27MAR08	13JUN08	05AUG08
S4FFA1700	Twin Rising Main DN700 (ChC2150 - ChC2200)	45		100	01DEC07 A	07JAN08 A	01DEC07 A	07JAN08 A
S4FFA2200	Twin Rising Main DN700 (ChC2400 - WOIC4)	93	149d	0	29JAN08	26MAY08	02AUG08	21NOV08
S4FFA2300	Twin Rising Main DN700 (ChC2639 - H7)	52	146d	0	29JAN08	05APR08	30JUL08	29SEP08
Trenchless Method								
S4FFB1120	Jacking Twin DN700 (AVIC6 - WOIC5)	90	128d	80	17OCT07 A	21FEB08	17OCT07 A	29JUL08
S4FFB1200	Construct WOIC4	30	212d	0	29JAN08	06MAR08	18OCT08	21NOV08
S4FFB1300	Construct WOIC5	30	284d	0	22FEB08	31MAR08	07FEB09	13MAR09
S4FFB1400	CCTV Inspection of Pipeline	5	317d	0	22FEB08	27FEB08	18MAR09	23MAR09
Geotechnical works								
S4FP1000	Monitoring of Instruments	774	70d	64	05JUN06 A	10JAN09	05JUN06 A	07APR09
Portion G								
Ground Investigation								
S4GB1500	Install Settlement Markers	748	161d	74	21APR06 A	20SEP08	21APR06 A	07APR09
Drainage and Ducts								
Trench Method								
S4GEA1000	DN900 Pipe & Manhole (F1 - F2)	49	88d	0	25MAR08	23MAY08	11JUL08	05SEP08
S4GEA1100	DN300 Pipe & Manhole (F2 - F3)	42	88d	0	29JAN08	20MAR08	21MAY08	10JUL08
Pipework - Rising Main								
Trench Method								
S4GFA1000	Twin Rising Main DN500 (AVIC4 - ChB250)	98	193d	0	19MAR08	19JUL08	12NOV08	12MAR09
S4GFA1300	Twin Rising Main DN500 (ChB450 - ChB550)	84	234d	20	16JAN08 A	23APR08	16JAN08 A	05FEB09
S4GFA1700	Construct WOIC3	30	234d	0	24APR08	30MAY08	06FEB09	12MAR09
Trenchless Method								
S4GFB1020	Jacking Twin DN500 (AVIC4 - P/S)	73	193d	45	15DEC07 A	18MAR08	15DEC07 A	11NOV08



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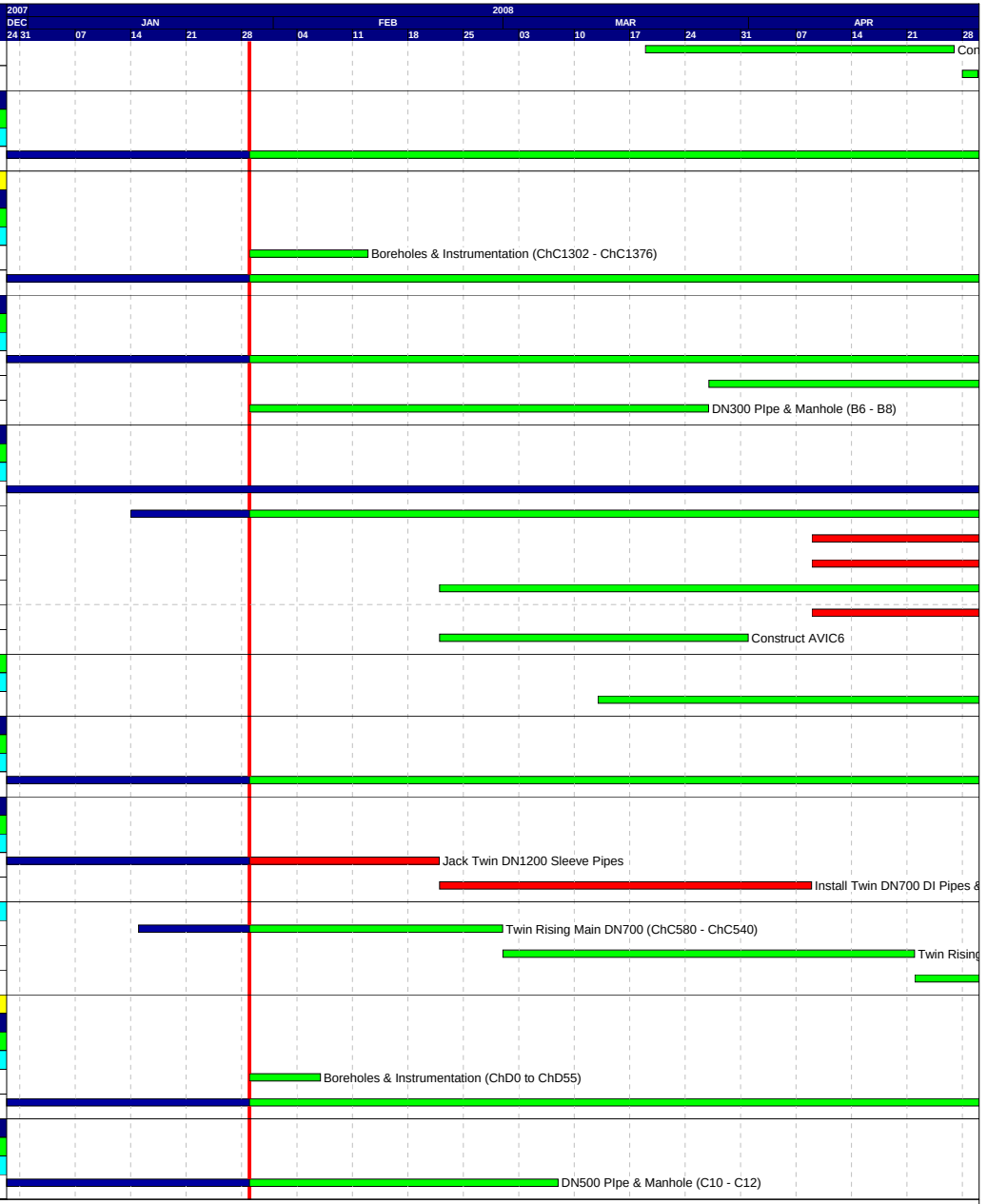
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S4GFB1100	Construct AVIC4	30	261d	0	19MAR08	26APR08	06FEB09	12MAR09
S4GFB1200	CCTV Inspection of Pipeline	2	268d	0	28APR08	29APR08	21MAR09	23MAR09
Geotechnical works								
S4GP1000	Monitoring of Instruments	768	113d	69	22APR06 A	18NOV08	22APR06 A	07APR09
Portion H								
Ground Investigation								
S4HB1040	Boreholes & Instrumentation (ChC1302 - ChC1376)	10	26d	0	29JAN08	12FEB08	03MAR08	13MAR08
S4HB1300	Install Settlement Markers	727	181d	77	26MAY06 A	27AUG08	26MAY06 A	07APR09
Drainage and Ducts								
Trench Method								
S4HEA1100	DN500 Pipe & Manhole (A6 - A9)	100	8d	23	25OCT07 A	06MAY08	25OCT07 A	16MAY08
S4HEA1900	DN300 Pipe & Manhole (B4 - B6)	67	75d	0	27MAR08	17JUN08	27JUN08	13SEP08
S4HEA2000	DN300 PIpe & Manhole (B6 - B8)	44	75d	0	29JAN08 *	26MAR08	05MAY08	26JUN08
Pipework - Rising Main								
Trench Method								
S4HFA1100	Twin Rising Main DN700 (ChC170 - ChC290)	50	8d	32	25OCT07 A	17JUN08	25OCT07 A	26JUN08
S4HFA2100	Twin Rising Main DN700 (ChC1150 - ChC1250)	91	66d	10	14JAN08 A	13MAY08	14JAN08 A	31JUL08
S4HFA2500	Twin Rising Main DN700 (ChC1600 - ChC1618)	44	-92d	0	09APR08	31MAY08	12DEC07	04FEB08
S4HFA2510	Twin Rising Main DN700 (WOIC6 - ChC1664)	47	-95d	0	09APR08	04JUN08	08DEC07	04FEB08
S4HFA2700	Twin Rising Main DN700 (ChC1750 - AVIC6)	124	128d	0	22FEB08	24JUL08	30JUL08	24DEC08
S4HFA3400	Construct WOIC6	20	-68d	0	09APR08	02MAY08	12JAN08	04FEB08
S4HFA3500	Construct AVIC6	30	222d	0	22FEB08	31MAR08	20NOV08	24DEC08
Trenchless Method								
S4HFB1100	Construct Jack/Receive Pits (AVIC8 - WOIC7)	57	1d	0	13MAR08	24MAY08	14MAR08	26MAY08
Geotechnical works								
S4HP1000	Monitoring of Instruments	846	9d	59	26MAY06 A	26MAR09	26MAY06 A	07APR09
Additonal Works / Disruption								
Twin R/M DN700 ChC1620 - ChC1661 (Claim No. 026)								
S4HV1100	Jack Twin DN1200 Sleeve Pipes	36	-95d	50	11DEC07 A	21FEB08	11DEC07 A	26OCT07
S4HV1110	Install Twin DN700 DI Pipes & Grouting	36	-95d	0	22FEB08	08APR08	27OCT07	07DEC07
Re-alignment btn ChC420 & ChC607 (Claim No. 118)								
S4HV1320	Twin Rising Main DN700 (ChC580 - ChC540)	50	35d	50	15JAN08 A	29FEB08	15JAN08 A	15APR08
S4HV1330	Twin Rising Main DN700 (ChC540 - ChC515)	40	35d	0	01MAR08	21APR08	16APR08	03JUN08
S4HV1390	DN500 Pipe & Manhole (A12 - A13)	30	35d	0	22APR08	28MAY08	04JUN08	10JUL08
Portion I								
Ground Investigation								
S4IB1040	Boreholes & Instrumentation (ChD0 to ChD55)	8	145d	0	29JAN08	06FEB08	29JUL08	06AUG08
S4IB1300	Install Settlement Markers	736	173d	76	26JUN06 A	05SEP08	26JUN06 A	07APR09
Drainage and Ducts								
Trench Method								
S4IEA1320	DN500 PIpe & Manhole (C10 - C12)	54	50d	41	21NOV07 A	07MAR08	21NOV07 A	10MAY08



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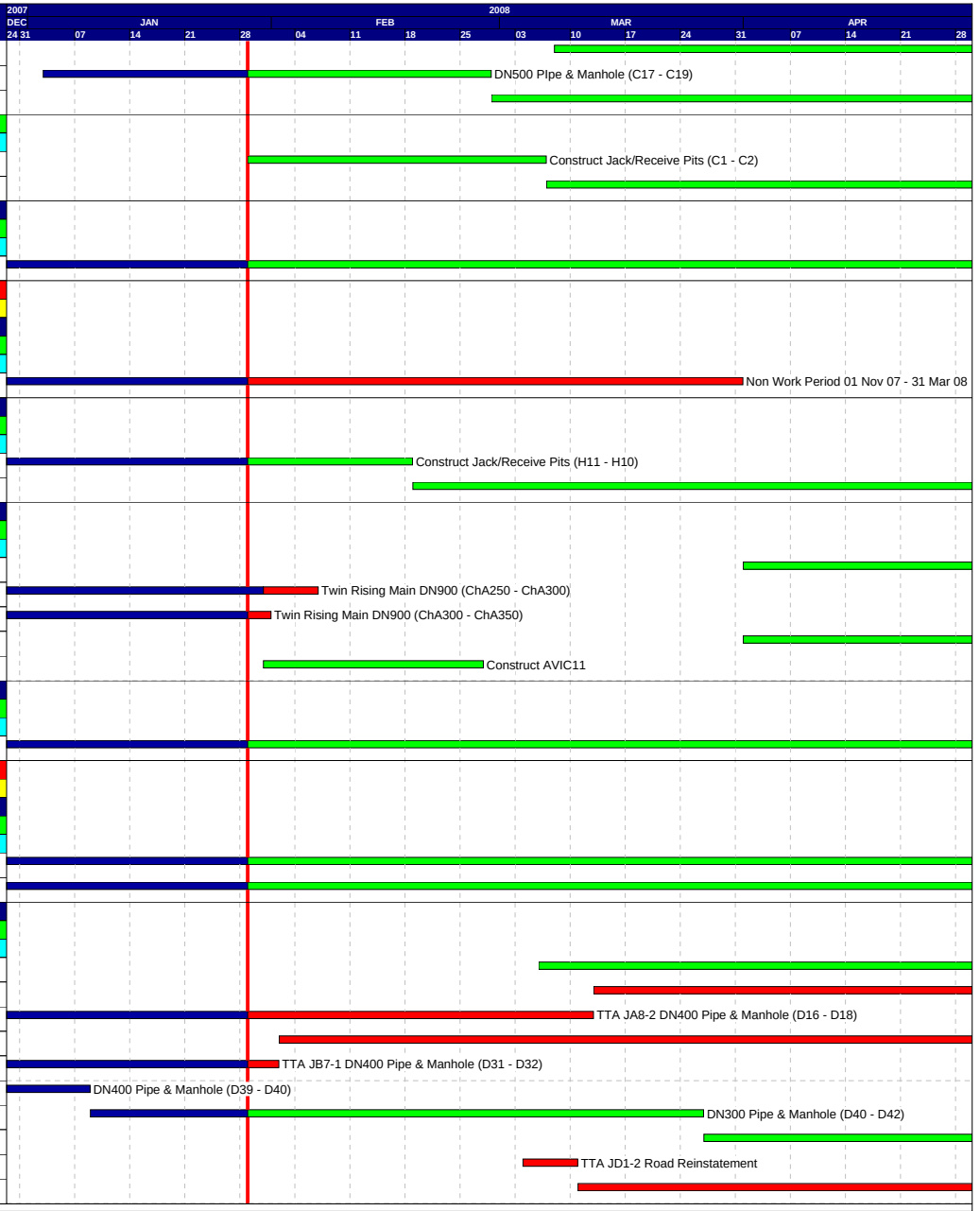
- Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S4IEA1600	DN500 PIpe & Manhole (C14 - C15)	45	50d	0	08MAR08	05MAY08	13MAY08	05JUL08
S4IEA1800	DN500 PIpe & Manhole (C17 - C19)	61	6d	60	03JAN08 A	28FEB08	03JAN08 A	06MAR08
S4IEA2320	DN500 PIpe & Manhole (C31 - C32)	53	6d	0	29FEB08	06MAY08	07MAR08	14MAY08
Trenchless Method								
S4IEB1000	Construct Jack/Receive Pits (C1 - C2)	30	145d	0	29JAN08	06MAR08	29JUL08	01SEP08
S4IEB1020	Jacking DN500 (C1 - C2)	78	145d	0	07MAR08	13JUN08	02SEP08	04DEC08
Geotechnical works								
S4IP1000	Monitoring of Instruments	766	62d	62	28JUN06 A	20JAN09	28JUN06 A	07APR09
Section 5 - Sewers & RM in Portion E								
Portion E								
Preliminaries								
S5EA1200	Non Work Period 01 Nov 07 - 31 Mar 08	121	0	61	01NOV07 A	31MAR08	01NOV07 A	31MAR08 *
Drainage and Ducts								
Trenchless Method								
S5EEB1000	Construct Jack/Receive Pits (H11 - H10)	30	45d	50	15OCT07 A	18FEB08	15OCT07 A	15APR08
S5EEB1020	Jacking DN600 (H11 - H10)	95	45d	0	19FEB08	16JUN08	16APR08	08AUG08
Pipework - Rising Main								
Trench Method								
S5EFA1000	Twin Rising Main DN900 (ChA208 - ChA250)	33	70d	0	01APR08 *	10MAY08	26JUN08	04AUG08
S5EFA1100	Twin Rising Main DN900 (ChA250 - ChA300)	26	-80d	80	08SEP07 A	06FEB08	08SEP07 A	31OCT07 *
S5EFA1200	Twin Rising Main DN900 (ChA300 - ChA350)	26	-80d	90	06AUG07 A	31JAN08	06AUG07 A	25OCT07
S5EFA3400	Twin Rising Main DN900 (ChA1400 - ChA1450)	26	77d	0	01APR08 *	02MAY08	05JUL08	04AUG08
S5EFA4100	Construct AVIC11	20	95d	0	31JAN08	27FEB08	02JUN08	25JUN08
Geotechnical works								
S5EP1000	Monitoring of Instruments	535	103d	85	01AUG06 A	10MAY08	01AUG06 A	10SEP08
Section 6 - Sewers in Portion J								
Portion J								
Ground Investigation								
S6JB1500	Install Settlement Marker 1st Stage	765	18d	70	20APR06 A	10NOV08	20APR06 A	01DEC08
S6JB2100	Install Settlement Markers 2nd Stage	600	221d	76	07JUL06 A	29JUL08	07JUL06 A	24APR09
Drainage and Ducts								
Trench Method								
S6JEA1210	DN1050 Pipe & Manhole (D5 - D6)	78	167d	0	06MAR08	12JUN08	27SEP08	31DEC08
S6JEA1720	TTA JA7-1 DN400 Pipe & Manhole (D15 - D16)	61	-289d	0	13MAR08	29MAY08	22MAR07	07JUN07
S6JEA1800	TTA JA8-2 DN400 Pipe & Manhole (D16 - D18)	81	-289d	56	30AUG07 A	12MAR08	30AUG07 A	21MAR07
S6JEA2500	TTA JB7-2 DN400 Pipe & Manhole (D30 - D31)	82	-308d	0	02FEB08	17MAY08	19JAN07	03MAY07
S6JEA2520	TTA JB7-1 DN400 Pipe & Manhole (D31 - D32)	94	-308d	95	11SEP07 A	01FEB08	11SEP07 A	18JAN07
S6JEA3110	DN400 Pipe & Manhole (D39 - D40)	29		100	30OCT07 A	08JAN08 A	30OCT07 A	08JAN08 A
S6JEA3200	DN300 Pipe & Manhole (D40 - D42)	65	18d	31	09JAN08 A	26MAR08	09JAN08 A	17APR08
S6JEA3300	DN300 Pipe & Manhole (D42 - D44)	72	18d	0	27MAR08	23JUN08	18APR08	15JUL08
S6JEA3930	TTA JD1-2 Road Reinstatement	6	-13d	0	04MAR08	10MAR08	18FEB08	23FEB08
S6JEA4220	TTA JD4-2 DN750 Pipe & Manhole (E7 - E9)	63	-13d	0	11MAR08	29MAY08	25FEB08	14MAY08



Start date	19DEC05
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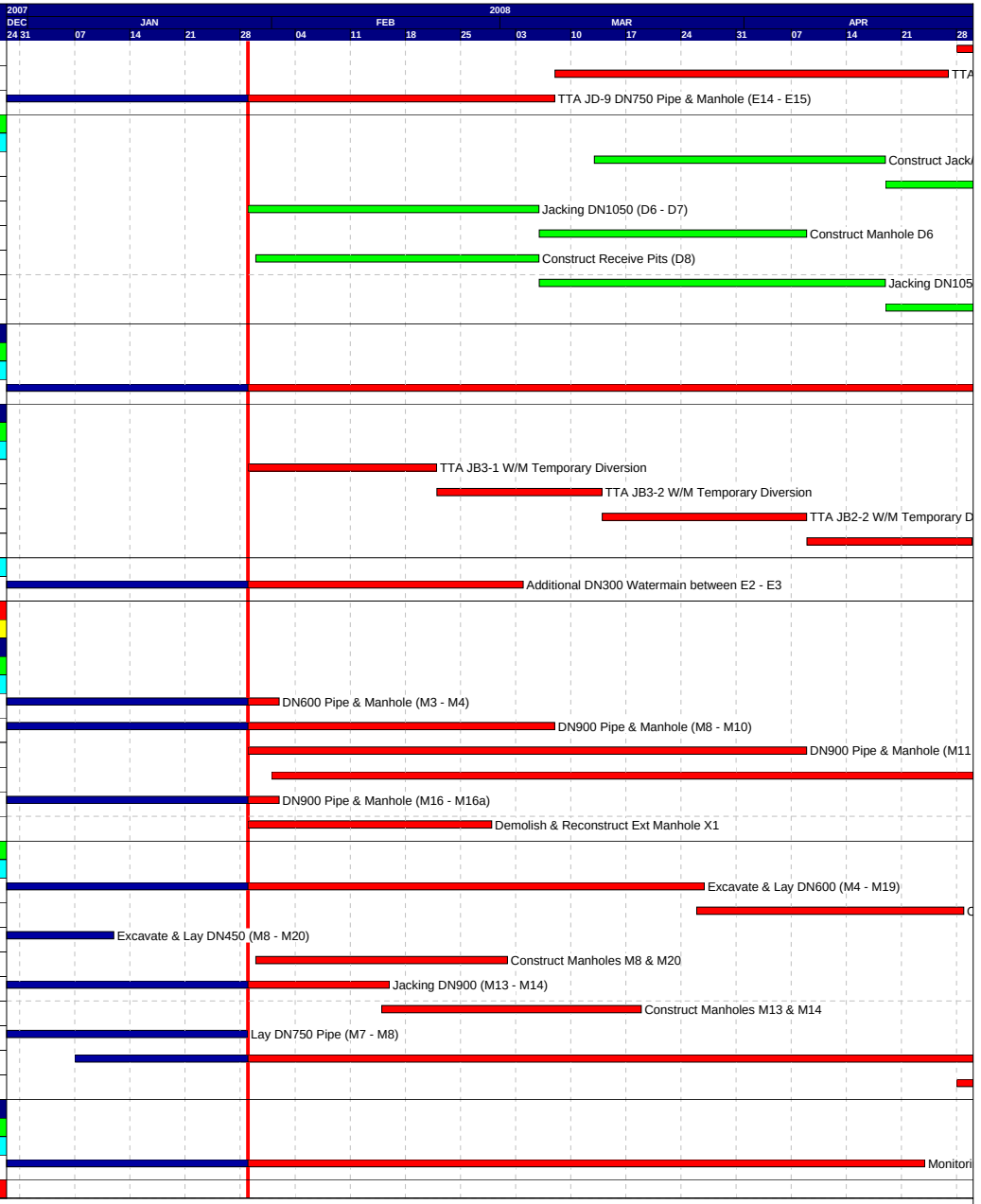
Leader Civil Engineering Corp. Ltd.
DSD Contract No. DC/2005/02
3-Month Rolling Programme - 3M01 at 29 January 2008

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
S6JEA4600	TTA JD8-2 DN750 Pipe & Manhole (E12 - E13)	40	-50d	0	28APR08	16JUN08	25FEB08	15APR08
S6JEA4620	TTA JD8-1 DN750 Pipe & Manhole (E13 - E14)	39	-50d	0	08MAR08	26APR08	07JAN08	23FEB08
S6JEA4700	TTA JD-9 DN750 Pipe & Manhole (E14 - E15)	69	-50d	54	13NOV07 A	07MAR08	13NOV07 A	05JAN08
Trenchless Method								
S6JEB1000	Construct Jack/Receive Pits (D1 - D2)	28	1d	0	13MAR08	18APR08	14MAR08	19APR08
S6JEB1020	Jacking DN1050 (D1 - D2)	29	1d	0	19APR08	24MAY08	21APR08	26MAY08
S6JEB1120	Jacking DN1050 (D6 - D7)	29	1d	0	29JAN08	05MAR08	30JAN08	06MAR08
S6JEB1140	Construct Manhole D6	25	311d	0	06MAR08	08APR08	24MAR09	22APR09
S6JEB1200	Construct Receive Pits (D8)	28	1d	0	30JAN08	05MAR08	31JAN08	06MAR08
S6JEB1220	Jacking DN1050 (D7 - D8)	34	1d	0	06MAR08	18APR08	07MAR08	19APR08
S6JEB1240	Construct Manholes D7 & D8	25	277d	0	19APR08	20MAY08	24MAR09	22APR09
Geotechnical works								
S6JP1000	Monitoring of Instruments	1178	-278d	45	21APR06 A	27MAR10	21APR06 A	24APR09
Additonal Works / Disruption								
Kam Tin Road A/C Watermain (Claim No. 019)								
S6JV1530	TTA JB3-1 W/M Temporary Diversion	18	-283d	0	29JAN08	21FEB08	13FEB07	08MAR07
S6JV1550	TTA JB3-2 W/M Temporary Diversion	18	-283d	0	22FEB08	13MAR08	09MAR07	29MAR07
S6JV1570	TTA JB2-2 W/M Temporary Diversion	18	-283d	0	14MAR08	08APR08	30MAR07	24APR07
S6JV1590	TTA JB2-1 W/M Temporary Diversion	18	-283d	0	09APR08	29APR08	25APR07	16MAY07
Additional DN300 W/M E2 - E3 (Claim No. 110)								
S6JV2900	Additional DN300 Watermain between E2 - E3	30	-13d	10	29DEC07 A	03MAR08	29DEC07 A	16FEB08
Section 7 - Sewers in Portion K								
Portion K								
Drainage and Ducts								
Trench Method								
S7KEA1110	DN600 Pipe & Manhole (M3 - M4)	35	-53d	90	27NOV07 A	01FEB08	27NOV07 A	27NOV07
S7KEA1400	DN900 Pipe & Manhole (M8 - M10)	51	-26d	40	26OCT07 A	07MAR08	26OCT07 A	01FEB08
S7KEA1610	DN900 Pipe & Manhole (M11 - M12) Stage 2	54	-50d	0	29JAN08	08APR08	28NOV07	01FEB08
S7KEA1900	DN900 Pipe & Manhole (M15 - M16)	93	-105d	0	01FEB08	30MAY08	25SEP07	17JAN08
S7KEA1910	DN900 Pipe & Manhole (M16 - M16a)	33	-105d	90	20DEC07 A	01FEB08	20DEC07 A	24SEP07
S7KEA2060	Demolish & Reconstruct Ext Manhole X1	24	-20d	0	29JAN08	28FEB08	05JAN08	01FEB08
Trenchless Method								
S7KEB1020	Excavate & Lay DN600 (M4 - M19)	72	-120d	40	27NOV07 A	26MAR08	27NOV07 A	26OCT07
S7KEB1040	Construct Manholes M4 & M19	27	-120d	0	26MAR08	28APR08	27OCT07	27NOV07
S7KEB1120	Excavate & Lay DN450 (M8 - M20)	97		100	18NOV06 A	11JAN08 A	18NOV06 A	11JAN08 A
S7KEB1140	Construct Manholes M8 & M20	27	-18d	5	30JAN08 A	01MAR08	30JAN08 A	05FEB08
S7KEB1220	Jacking DN900 (M13 - M14)	48	-32d	75	02DEC06 A	15FEB08	02DEC06 A	04JAN08
S7KEB1240	Construct Manholes M13 & M14	27	-32d	0	15FEB08	18MAR08	05JAN08	05FEB08
S7KEB1260	Lay DN750 Pipe (M7 - M8)	20		100	13DEC07 A	28JAN08 A	13DEC07 A	28JAN08 A
S7KEB1270	Set Up & Jack Casing (M4 - M5)	98	-164d	2	07JAN08 A	29MAY08	07JAN08 A	06NOV07
S7KEB1300	CCTV Inspection of Pipeline	2	-63d	0	28APR08	30APR08	06FEB08	11FEB08
Geotechnical works								
S7KP1000	Monitoring of Instruments	569	-57d	88	24MAY06 A	23APR08	24MAY06 A	11FEB08
Section 8 - Preservation and Protection of Trees								



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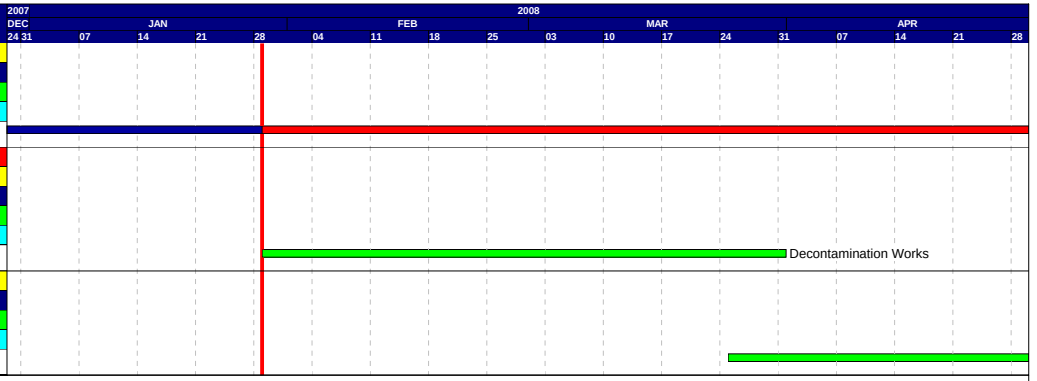
DSD Contract No. DC/2005/02
3-Month Rolling Programme - 3M01 at 29 January 2008

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
All Portions								
Landscape Softworks and Establishment Works								
S8QR1100	Preservation & Protection of Preserved Trees	744	0	60	29JUL06 A	29JAN09	29JUL06 A	29JAN09
Decontamination Works								
Portion B								
Decontamination								
S9BU1000	Decontamination Works	48	120d	0	29JAN08	31MAR08	28JUN08	23AUG08
Portion G								
Decontamination								
S9GU1000	Decontamination Works	48	262d	0	25MAR08	22MAY08	10FEB09	07APR09



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Finish date	05MAY10
Data date	29JAN08
Page number	8A
c Primavera Systems, Inc.	

Leader Civil Engineering Corp. Ltd.
DSD Contract No. DC/2005/02
3-Month Rolling Programme - 3M01 at 29 January 2008

- 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

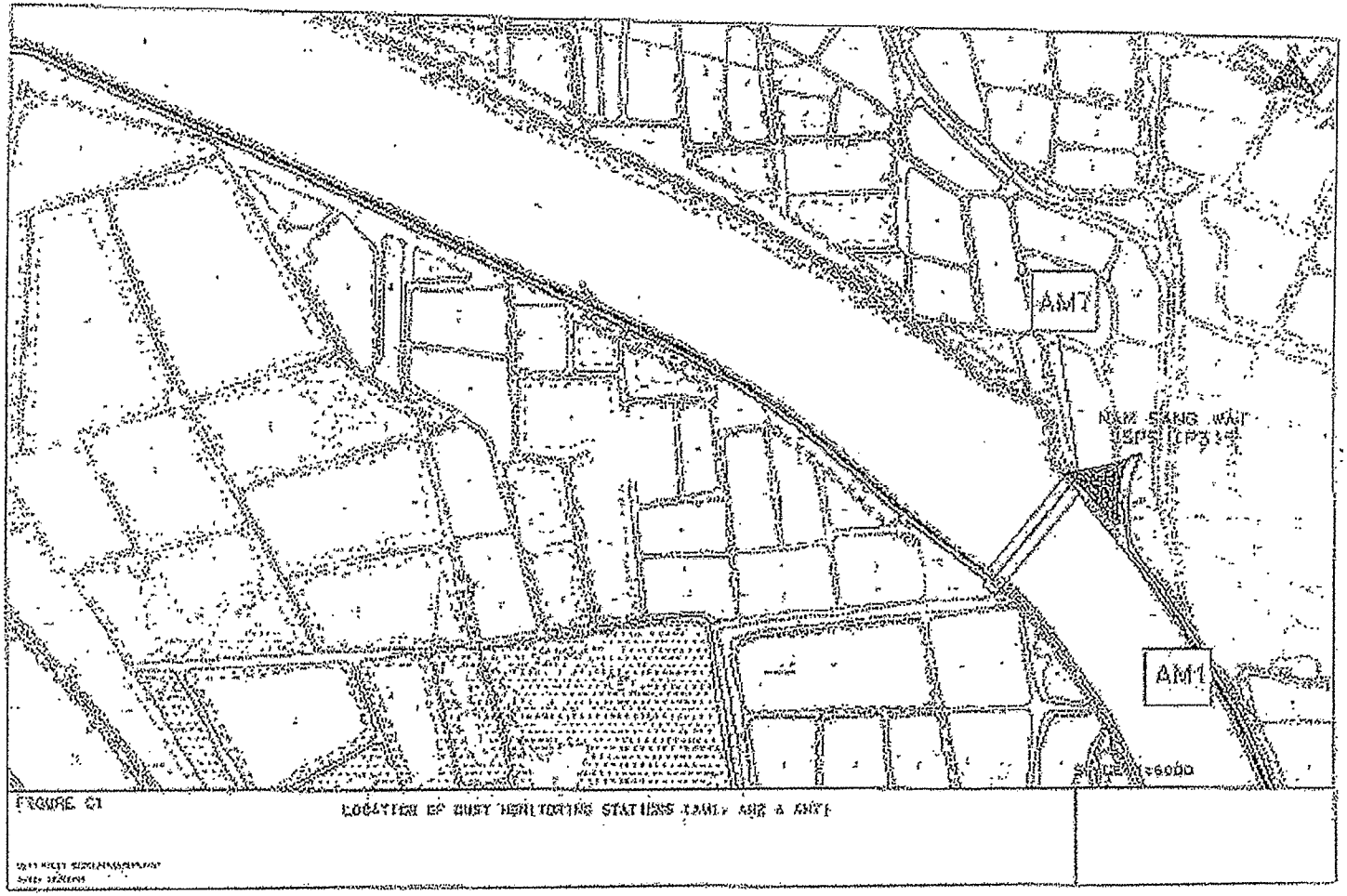


FIGURE 01 LOCATION OF DUST MONITORING STATIONS AM1 AND A AM1

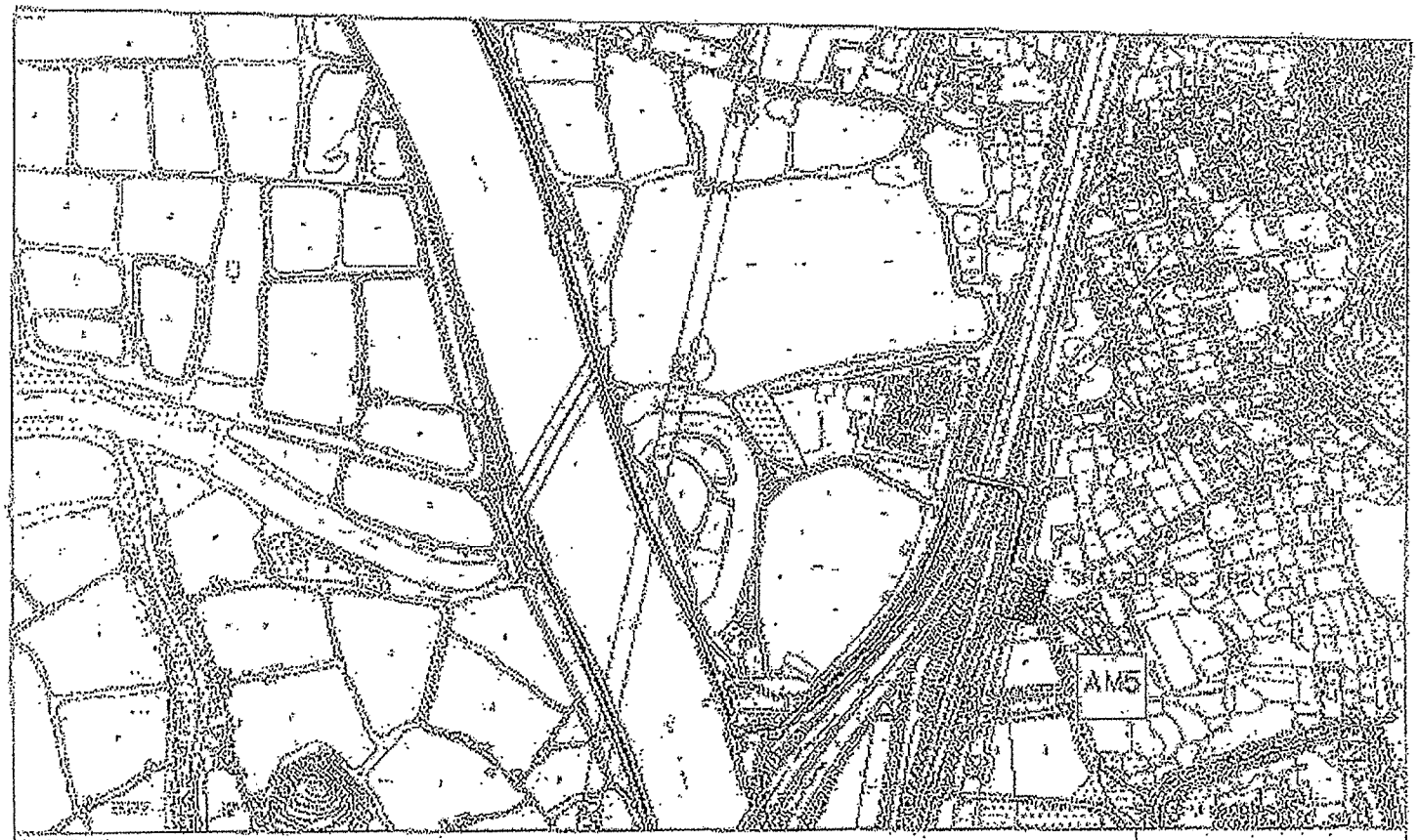


FIGURE 02 LOCATION OF DUST MONITORING STATION (AM5)

FIGURE 6.0 LOCATION OF DUST MONITORING STATIONS (AQM1, AM5 & AM10)

FIGURE 4.7 LOCATION OF NOISE MONITORING STATIONS (NM1, NM2, NM3, NM4)

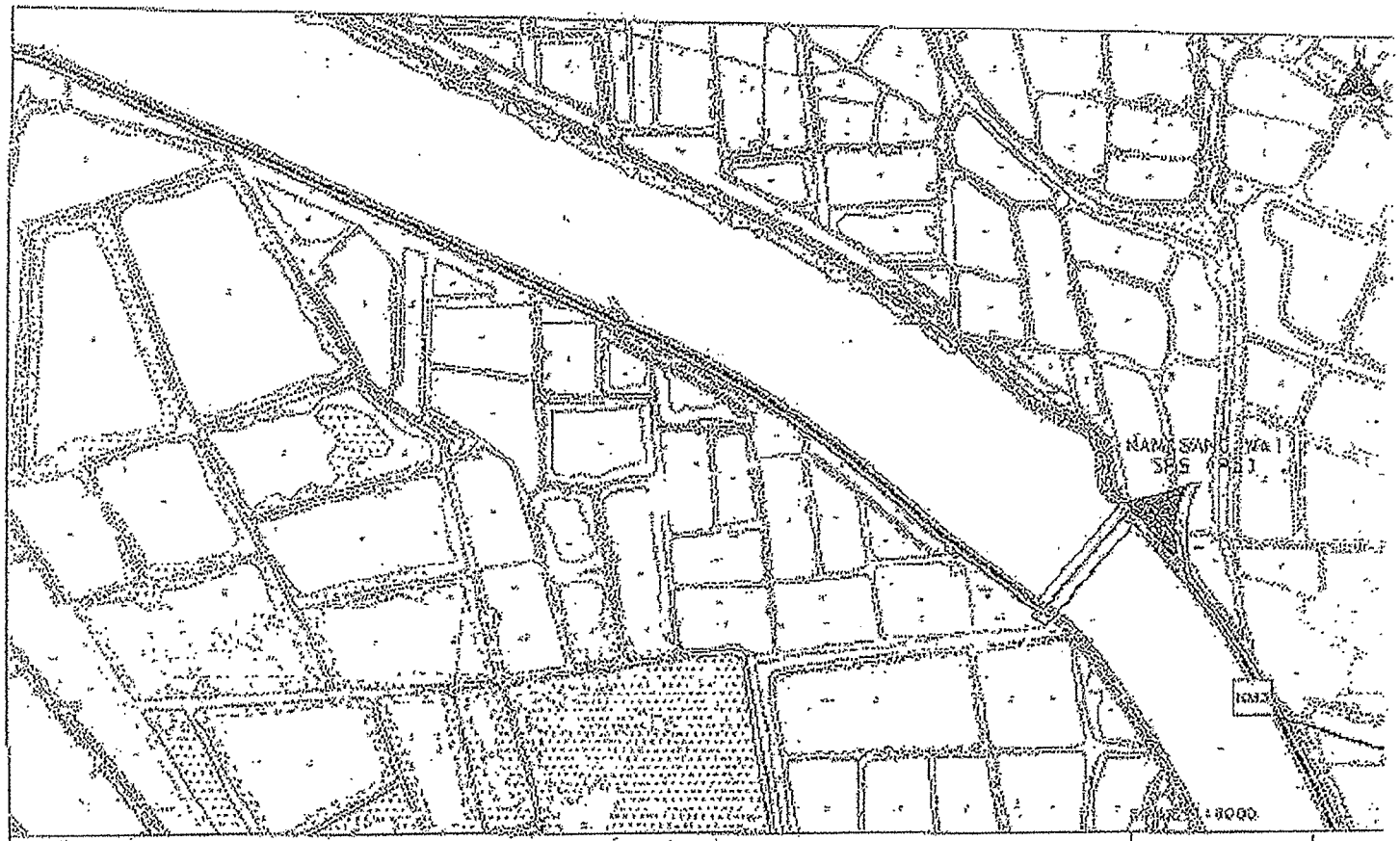


FIGURE C8

LOCATION OF NOISE MONITORING STATIONS (NMS. 6 & 7)

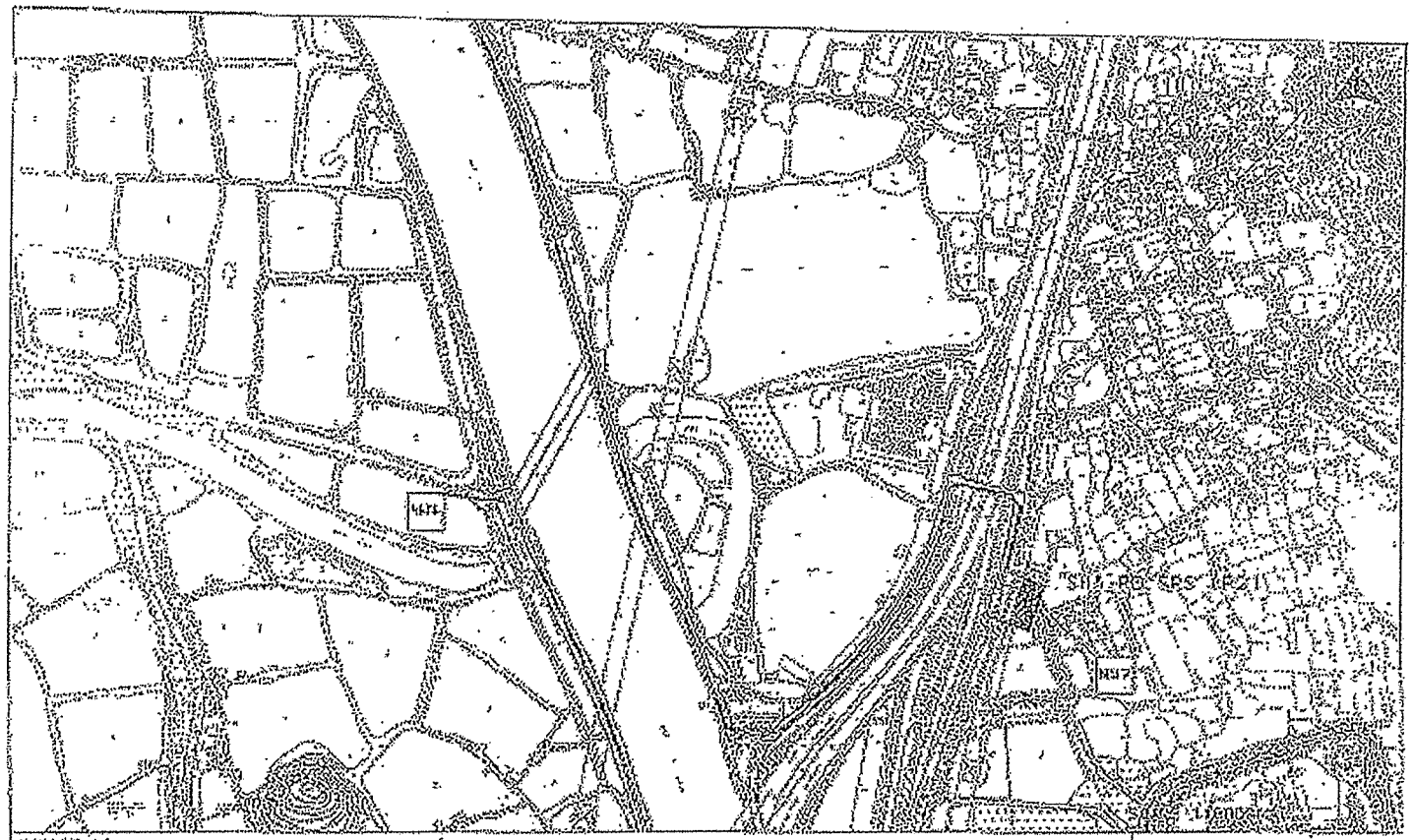


FIGURE 20.

LOCATION OF NOISE MONITORING STATIONS (NM1, NM2)

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*								
		Site boundary and entrance								
3.5	A1	• 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*
		Access Road								
3.5	A2	• 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*
		Stockpiling of Dusty Materials								
3.5	A3	• 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*
		Loading, unloading or transfer of dusty materials								
3.5	A4	• 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*
		Use of vehicles								
3.5	A5	• 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*
		Power-driven drilling, and cutting								
3.5	A7	• 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*
		Excavation and earth moving								
3.5	A8	• 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*
		Construction of the superstructure of a building								
3.5	A9	• 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*								
		General Site Clearance – Demolition Works								
4.7.1	B1	• 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 F2)*,	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*
		Construction of Sewage Pumping Stations P1, P2 & P3								
4.7.1	B2	• 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*
		Sewers and Rising Mains using Open Trench Method								
4.7.1	B3	• 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	C	O	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	C	O	Dec	
		Chemical Waste								
6.6.2	D2	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.	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*
		Storage, Packaging and Labelling of Chemical Waste								
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*
		Storage of chemical waste								
6.6.2	D4	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.								
		ECOLOGY - *Construction Phase*								
		Mitigation Measures Adopted - Avoidance								
8.7.1	F1	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		✓			
		Mitigation Measures Adopted - Minimisation								
8.7.2	F2	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.								
		Mitigation Measures Adopted								
8.7.3	F5	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	O	Dec	
		construction and provide temporary fire fighting equipment in the work areas.	minimising potential damage to trees and shrubs.	the full duration of the construction contract.						*(Open Burning) Regulation*
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.	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	C	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.								
		EM&A REQUIEMENTS - *Construction Phase* *Air Quality*								
3.7	I1	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 Stage**				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

Items	Aspect	Description of Equipment	Serial No.	Date of Calibration	Date of Next Calibration
1	Air	Greasby Anderson GMWS2310 High Volume Sampler	0329 (AM1)	19 Feb 08	19 May 08
2		Greasby Anderson GMWS2310 High Volume Sampler	0355 (AM5)	12 Jan 08	12 Apr 08
3		Greasby Anderson GMWS2310 High Volume Sampler	10394 (AM6)	02 Jan 08	02 Apr 08
4		Greasby Anderson GMWS2310 High Volume Sampler	1283 (AM7)	19 Feb 08	19 May 08
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

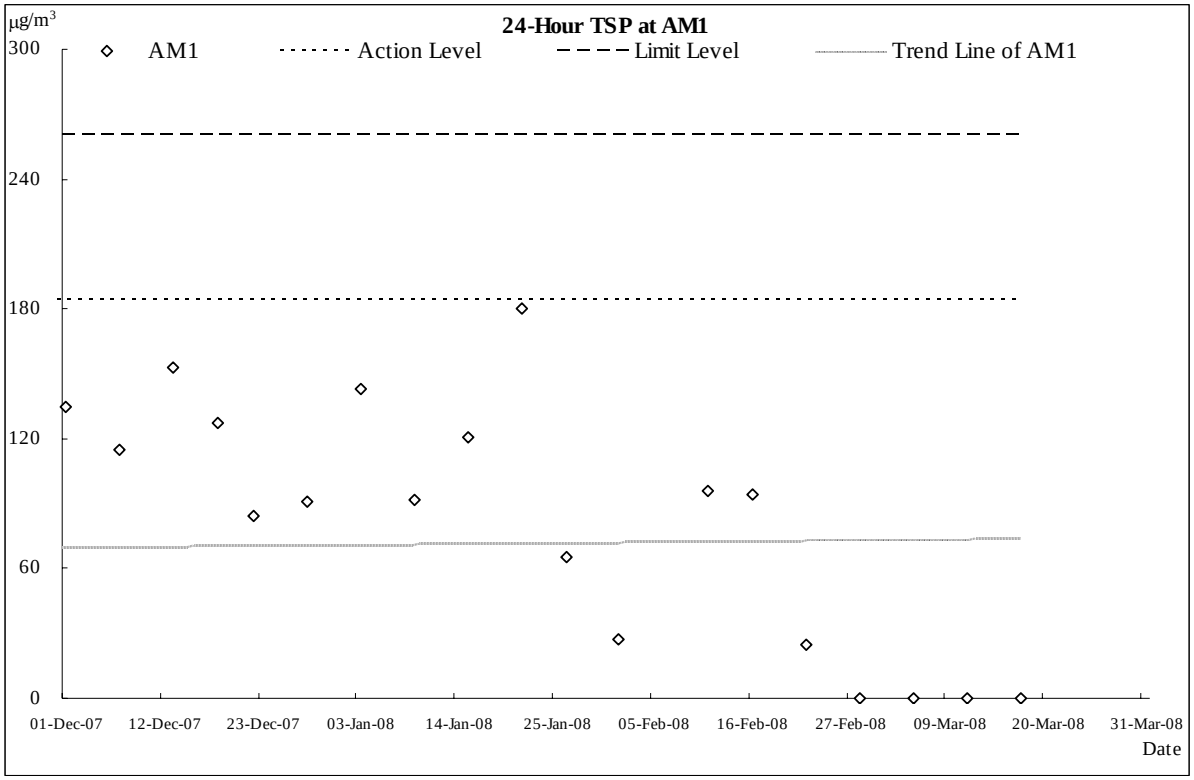
Date		Weather		Lau Fau Shan Station			
			Total Rainfall (mm)	Mean Air Temperature (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Mar-08	Sat	fine/dry/hazy/moderate	0	14.9	14.5	60	N
2-Mar-08	Sun	fine/dry/haze/moderate	0	17.2	9.5	49	SE
3-Mar-08	Mon	fine/hazy/very dry/moderate	0	17.3	9	49	E/SE
4-Mar-08	Tue	fine/very dry/haze/moderate/fresh	0	18.3	12.5	37.5	E/SE
5-Mar-08	Wed	fine/very dry/fresh/strong	0	19.1	15	46	E/SE
6-Mar-08	Thu	sunny periods/dry/moderate/fresh	0	18.7	12	44.5	E/SE
7-Mar-08	Fri	fine/dry/cloudy/rain/moderate/fresh	0	21.3	9.5	57.5	E/SE
8-Mar-08	Sat	fine/hazy/moderate/fresh	0	18.9	11	59.5	E
9-Mar-08	Sun	sunny periods/haze/cloudy/rain/moderate/fresh	0	18.4	16	73	W/SW
10-Mar-08	Mon	sunny periods/haze/cloudy/rain/moderate/fresh	0	18.6	7.5	75	E/SE
11-Mar-08	Tue	fine/hazy/moderate	0	19.3	10.5	73.5	E/SE
12-Mar-08	Wed	fine/moderate/fresh	0	22.3	10.5	63	E/SE
13-Mar-08	Thu	cloudy/sunny intervals/moderate	Trace	21.8	12.5	65	E
14-Mar-08	Fri	cloudy/rain/light winds	Trace	22.2	9.7	71	E/NE
15-Mar-08	Sat	fine/cloudy/moderate/fresh	0	21.9	10	58	E/SE
16-Mar-08	Sun	cloudy/rain/sunny periods/moderate	0	21	9	80.5	SE
17-Mar-08	Mon	cloudy/rain/sunny periods/moderate	0	22.5	9.5	77.5	E/NE
18-Mar-08	Tue	cloudy/rain/mist/moderate	Trace	23.5	11	78.5	E/SE
19-Mar-08	Wed	warm/sunny periods/light winds/rain	0	24.8	11.5	78.5	W/NW
20-Mar-08	Thu	cloudy/fresh/strong	Trace	22.1	15.5	65.5	E/SE
21-Mar-08	Fri	Holiday					
22-Mar-08	Sat	Holiday					
23-Mar-08	Sun	Holiday					
24-Mar-08	Mon	Holiday					
25-Mar-08	Tue	cloudy/rain/moderate	Trace	18.9	14	64.5	E/NE
26-Mar-08	Wed	cloudy/rain/moderate	10.7	17.8	8.5	80.5	E/NE
27-Mar-08	Thu	sunny periods/haze/cloudy/rain/moderate	0	19.2	5.7	78.5	E/SE
28-Mar-08	Fri	cloudy/mist/moderate/fresh	13.8	23	15.5	79.2	SE
29-Mar-08	Sat	cloudy/fog/sunny periods/moderate	0	26.3	15	75.5	SE
30-Mar-08	Sun	cloudy/rain/mist/fresh/strong	Trace	23.9	9.7	86	SW
31-Mar-08	Mon	cloudy/rain/mist/fresh/strong	4.7	19.3	12	91.5	E

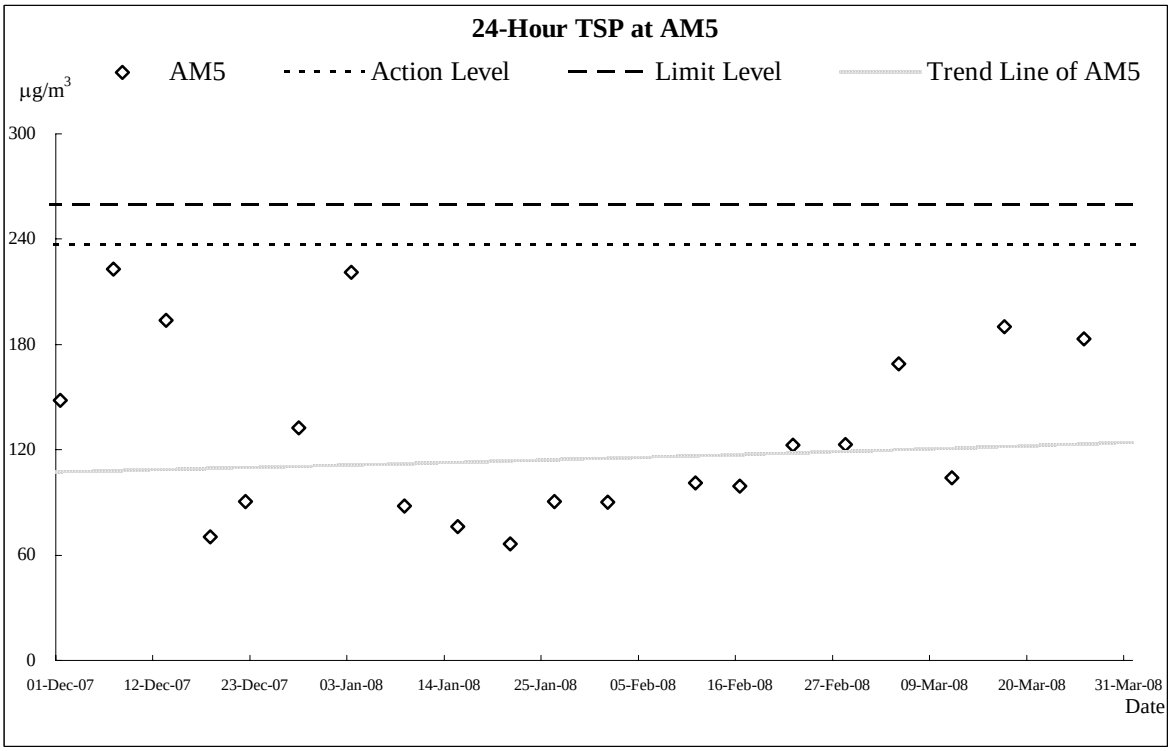
Annex J

Graphical Plots of Air Quality and Construction Noise Monitoring Results

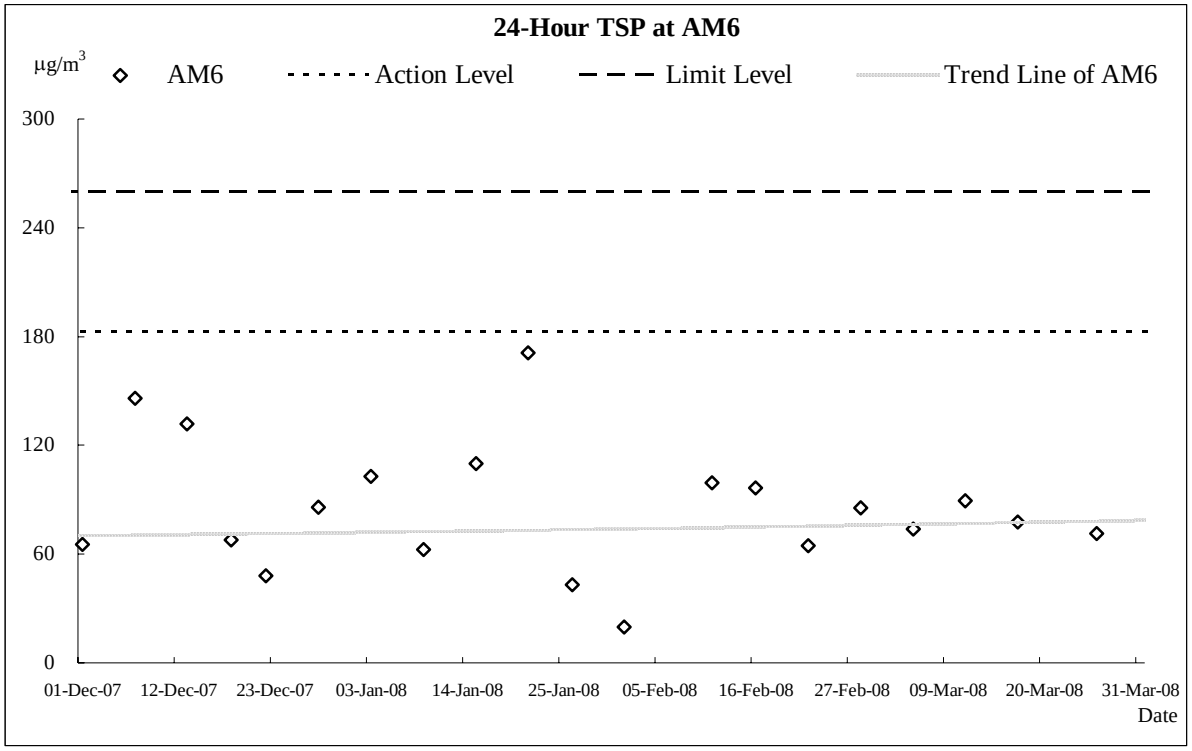
Air Quality

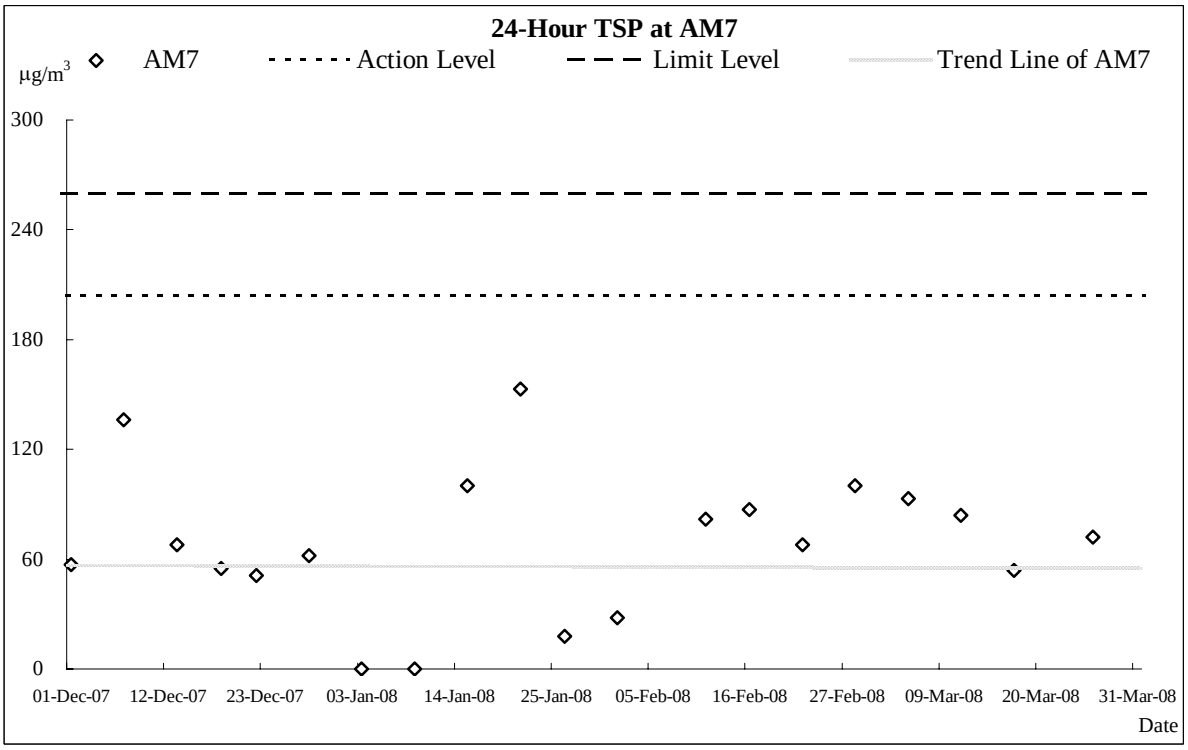
Air Quality Monitoring Results





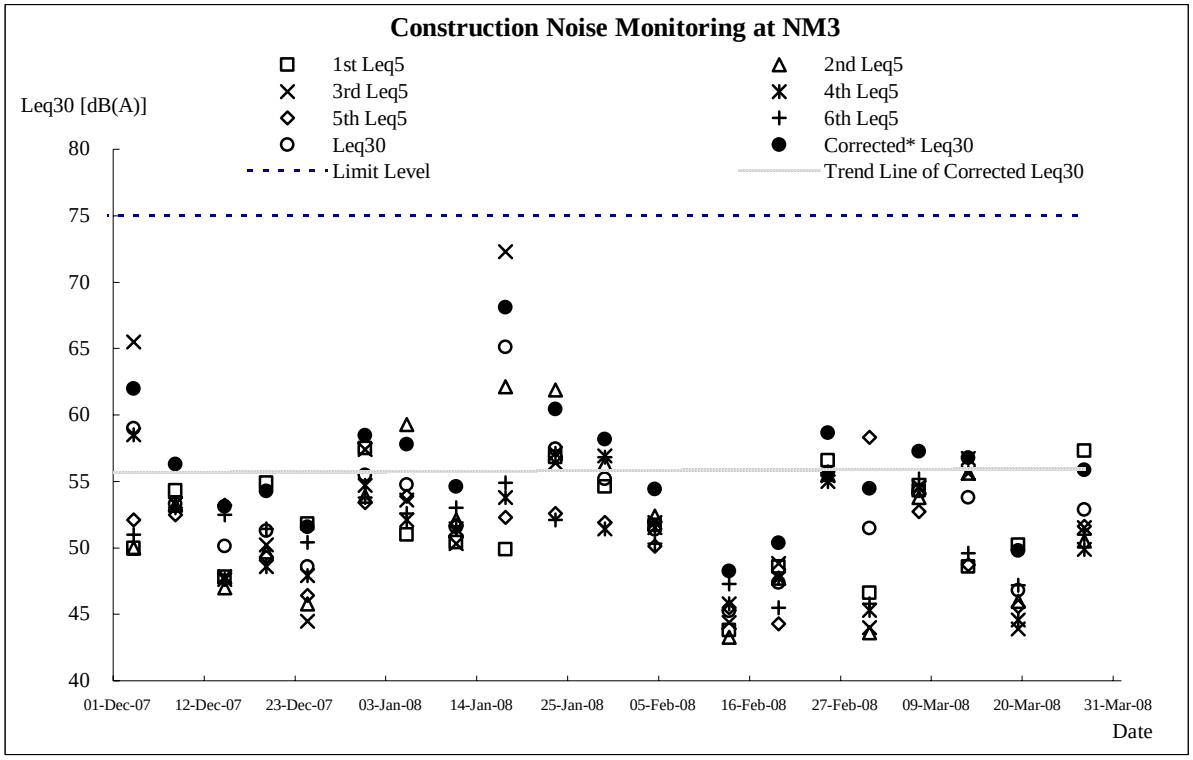
Air Quality Monitoring Results

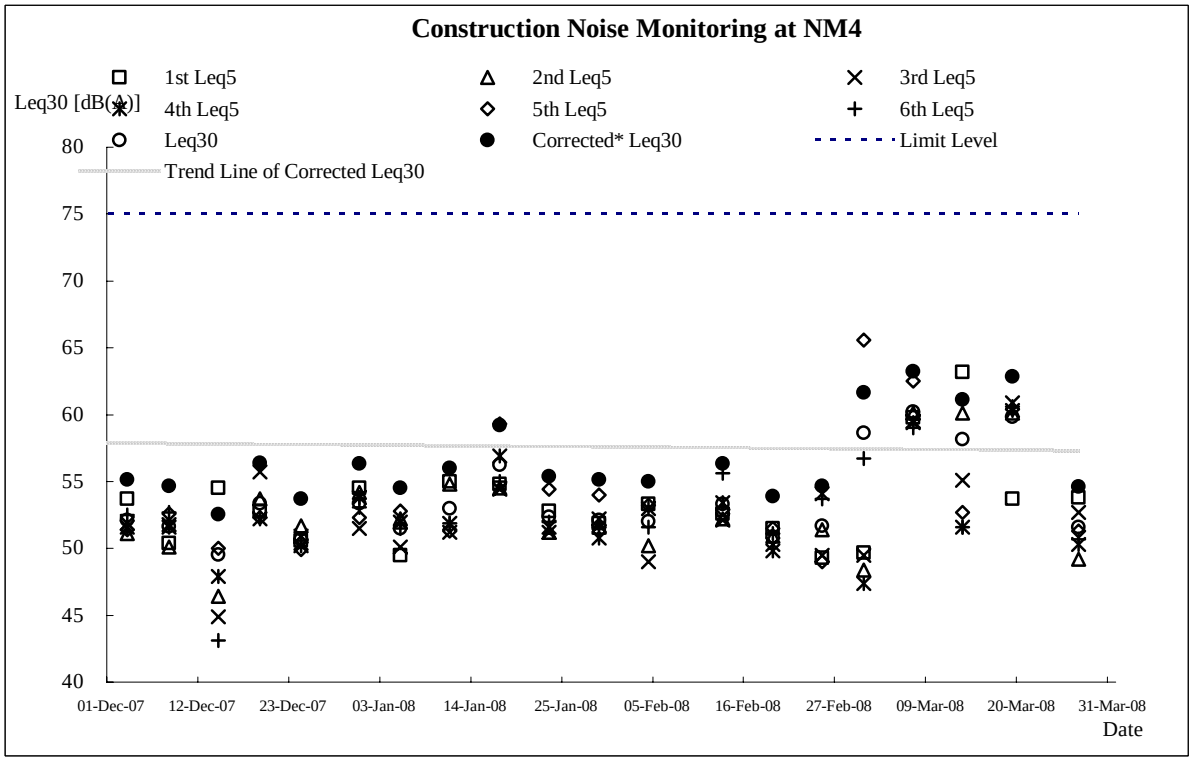




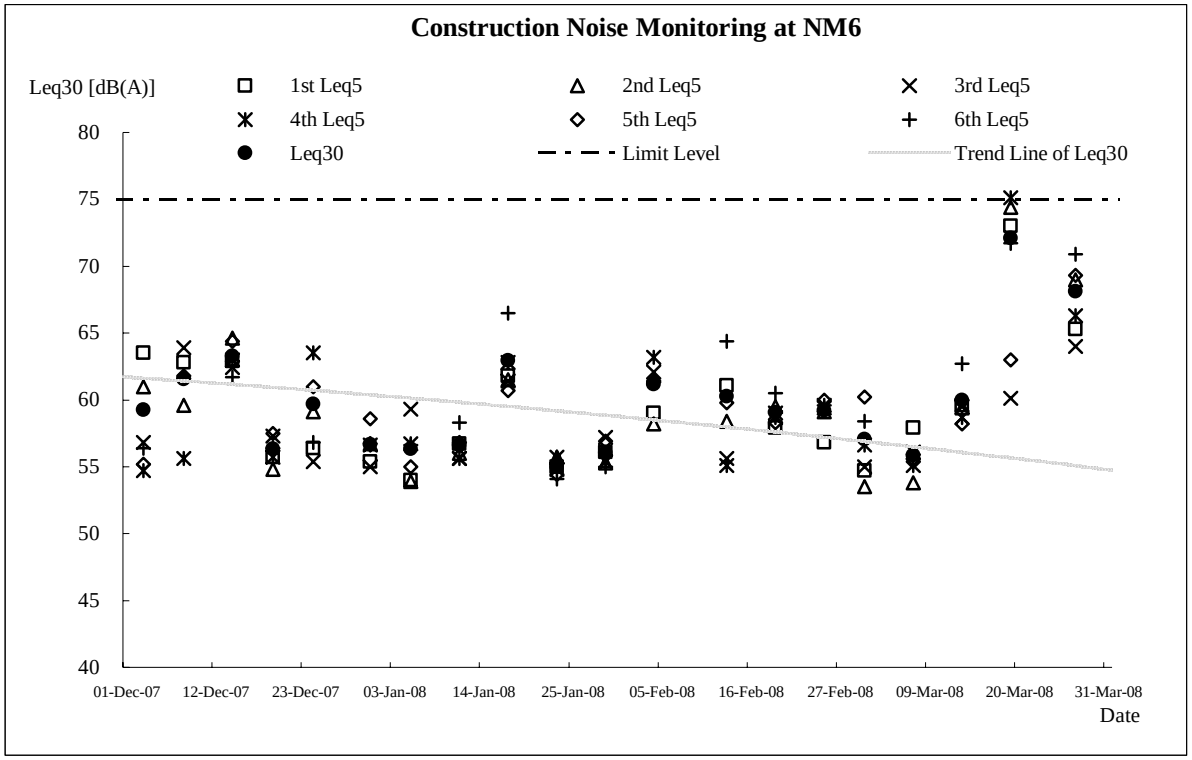
Construction Noise

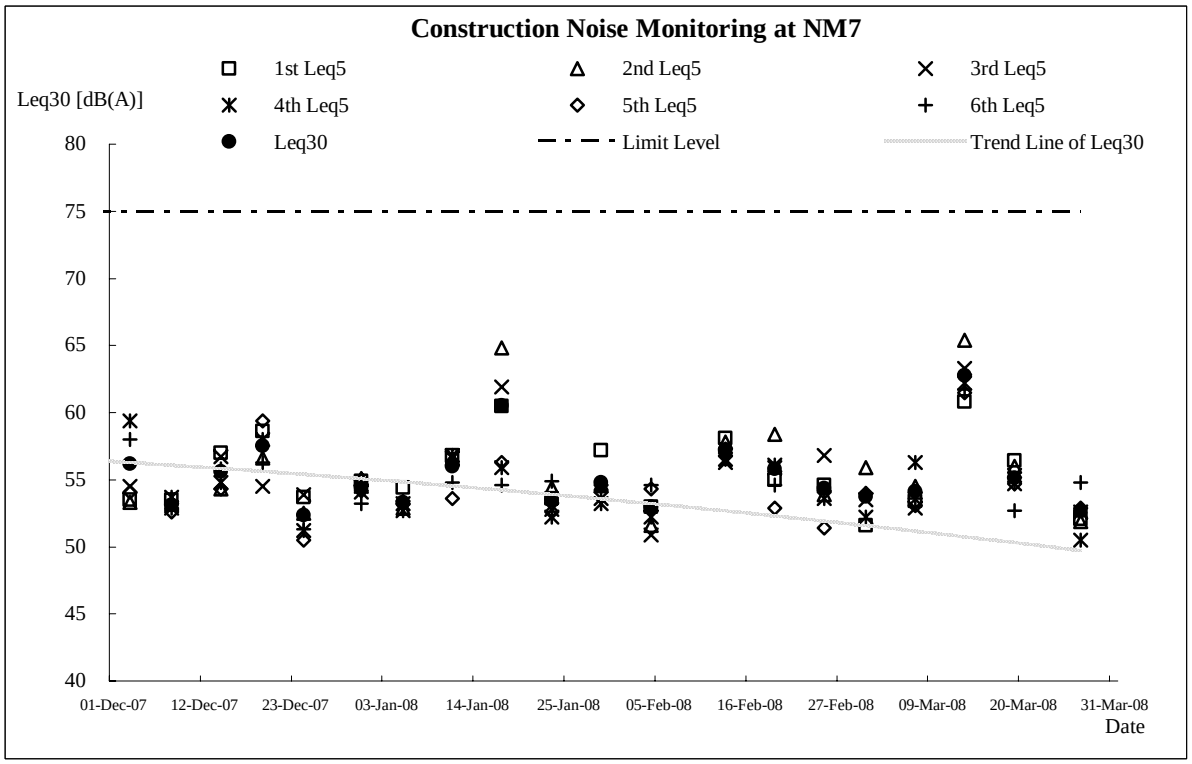
Construction Noise Monitoring Results





Construction Noise Monitoring Results





Annex K

Proforma of Site Inspection & IEC Audit in the Reporting Month

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: **Mr. Leung**	**Environmental Team:**	**Action-United Environmental Services & Consulting**
	IEC's Rep: –	**Inspection Date & Time:**	**04 March 2008 (10:00)**
	RE's Rep: –	**Checklist Reference No.:**	**DSD-AT040308**

General Meteorological Information

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

Temp: [19] °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 or covered by impermeable/tarpaulin sheet?	✓					
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?	✓					
Are 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 the site [ ] Construction activities outside of site [ ] Others Nil

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?		✓				Remarks 2
	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:

1. Sedimentation tank at Nam San Wai Road Portion H was full of sediment, the Contractor was reminded to clean more frequency to maintain the efficiency of the tank.
2. Free standing oil drum was observed at Sha Po Pumping Station, The Contractor was reminded to provide drip tray for all free standing oil drums.

Observations Recorded in this Site Inspection:

3. No observation in this site inspection, contractor was reminded to keep sites clean and tidy.

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:** **Sylvie Wong**	**IEC:**	**Mott Connell Ltd**
	Contractor Rep: **Mr. Leung**	**Environmental Team:**	**Action-United Environmental Services & Consulting**
	IEC's Rep: **Joseph Chan**	**Inspection Date & Time:**	**13 March 2008 (10:00)**
	RE's Rep: **Mr. Tsang**	**Checklist Reference No.:**	**DSD-AT130308**

General Meteorological Information

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

Temp: [19] °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 or covered by impermeable/tarpaulin sheet?	✓					
Is exposed area of ground covered or watered frequently?	✓					Remark 4
Are load on vehicles covered by clean impervious sheeting?	✓					
Are vehicles and equipment switched off while not in use?	✓					
Are 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 the site [ ] Construction activities outside of site [ ] Others Nil

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?	✓					Remark 3
	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?		✓				Remarks 2
	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:

1. Sedimentation tank at Nam San Wai Road Portion H was full of sediment, the Contractor was reminded to clean more frequency to maintain the efficiency of the tank.
2. Free standing oil drum was observed at Sha Po Pumping Station, The Contractor was reminded to provide drip tray for all free standing oil drums.

Observations Recorded in this Site Inspection:

3. Minor oil leakage was observed at Nam San Wai Road Portion H, and had been rectified by the Contractor immediately.
4. Contractor was reminded to implement dust control measures.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
			
Name :Sylvie 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:** **Sylvie Wong**	**IEC:**	**Mott Connell Ltd**
	Contractor Rep: **Mr. Leung**	**Environmental Team:**	**Action-United Environmental Services & Consulting**
	IEC's Rep: —	**Inspection Date & Time:**	**18 March 2008 (09:30)**
	RE's Rep: —	**Checklist Reference No.:**	**DSD-AT180308**

General Meteorological Information

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

Temp: [23] °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 or covered by impermeable/tarpaulin sheet?	✓					
Is exposed area of ground covered or watered frequently?	✓					Remark 4
Are load on vehicles covered by clean impervious sheeting?	✓					
Are vehicles and equipment switched off while not in use?	✓					
Are 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 the site [ ] Construction activities outside of site [ ] Others Nil

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 2
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?						✓	Remarks 3
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?		✓				Remarks 1
	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:

1. Free standing oil drum was observed at Sha Po Pumping Station, The Contractor was reminded to provide drip tray for all free standing oil drums.

Observations Recorded in this Site Inspection:

2. Sedimentation tank at Kam Tin and Kam Sheun Road was full of sediment, the Contractor was reminded to clean more frequency to maintain the efficiency of the tank.
3. Contractor was reminded to regularly manage the wheel washing facility at Kam Tin Pumping Station (P1).
4. Contractor was reminded to implement dust control measures.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
			
Name :Sylvie 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:** **Sylvie Wong**	**IEC:**	**Mott Connell Ltd**
	Contractor Rep: **Mr. Leung**	**Environmental Team:**	**Action-United Environmental Services & Consulting**
	IEC's Rep: —	**Inspection Date & Time:**	**28 March 2008 (09:30)**
	RE's Rep: —	**Checklist Reference No.:**	**DSD-AT280308**

General Meteorological Information

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

Temp: [21] °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 or covered by impermeable/tarpaulin sheet?		✓				Remarks 5
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?	✓					
Are 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 the site [ ] Construction activities outside of site [ ] Others Nil

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?			✓				Remarks 2
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?	✓					Remarks 4
	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:

1. Sedimentation tank at Kam Tin and Kam Sheun Road was full of sediment, the Contractor was reminded to clean more frequency to maintain the efficiency of the tank.
2. Contractor was reminded to regularly manage the wheel washing facility at Kam Tin Pumping Station (P1).

Observations Recorded in this Site Inspection:

3. Contractor was reminded to prevent stagnant water to form on site at Nam San Wan Road.
4. Contractor was reminded to prevent excavated material and rubbish to be accumulated on site (especially at Kam Po Road).
5. Stockpile materials should be covered at the storage area near Kam Po Road.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Staff
			
Name :Sylvie 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	13/3/2008	Time	1000-1700	Inspected By	Leader: Edwin Leung ET: Sylvia Wong DSD: W K Tsang IEC: Joseph Chan
Site Location	Sha Po Sewage Pumping Station Nam Chan Wai Sewage Pumping Station Nam Hang Mei Road				

Weather

Condition		Sunny		Fine	✓	Overcast		Drizzle		Rain		Storm		Hazy
Temperature	21°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?				✓	See photo IM9265
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?			✓		
	• 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

Nam Shan Wai Road

- NM-7658 = dusty material was observed deposited on the site entrance/exit. The Contractor was reminded to keep all site entrance/exit clean and regular cleaning needs to be arranged.
- No construction activity was observed along the Nam Shan Wai Road within the conservation area during the time of inspection.

DSD Representative	Contractor Representative	ETL	IEC
( )	( )	( )	( )

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
13 March 2008
Environmental Observations

This month's observations

This month's observations	This month's observations
General	
	
IMG2658: The Contractor has been reminded to make sure all the site entrances/exits are kept free from dusty materials/debris. Regular cleaning is needed.	