

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






1st Bi-Annual Construction Phase EM&A Report
April - September 2006

PREPARED FOR

Leader Civil Engineering Corporation Ltd

Quality Index

Date	Reference No.
21 October 2006	TCS/00310/06/600/R0106

Prepared by	Reviewed by	Certified by	Approved by	Verified by
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Executive Summary

- ES.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project requires an Environmental Monitoring and Audit (EM&A) program to be implemented by an Environmental Team (ET) throughout the contract period in compliance with the requirements as stated in the project Environmental Permit (EP-220/2005) and the project's Updated EM&A (Designated Elements) Manual.
- ES.02 This is the First Bi-Annual Construction Phase EM&A Report (April - September 2006, Report No. B1) reporting the environmental impact monitoring and audit (EM&A) conducted from 06 April to 25 September 2006. EM&A program implemented in this reporting period (April – September 2006) covered air quality, noise and waste management.

Breach of Action and Limit (AL) Levels

- ES.03 There was no breach of Action or Limit level for air and noise monitoring in the reporting period.

Complaint Log

- ES.04 No environmental complaint was received in the reporting period.

Notification of Any Summons and Successful Prosecution

- ES.05 There was no environmental summon or prosecution in the reporting period.

Reporting Changes

- ES.06 There are no changes to be reported in the reporting period.

Adequacy of EM&A

- ES.07 Based on the data collected and reviewed for the period between April to September 2006 (as reported herein), it can be confirmed that the monitoring work is effective and that it is generating data to categorically confirm the observe of impact attributable to the works.

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 First Bi-annual Construction Phase EM&A Report (April - September 2006, Report No. B1) summarizes the impact monitoring results and audit findings in the reporting period from April to September 2006.

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 for the Reporting Period

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

Management Structure

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

Works Undertaken during the Reporting Period

1.06 The major construction work undertaken during the reporting period under the Environmental Permit (EP-220/2005) is shown as follows:

Reporting Month	Construction Activities
April 2006	<ul style="list-style-type: none"> • Trial trench excavation and Sheet piling by vibration hammer at Nam Sang Wai Pumping Station (P3)
May 2006	<ul style="list-style-type: none"> • Sheet piling at NSW Pumping Station (Portion C), • Sheet piling and boreholes drilling on Nam Shan Wai Road (Portion F) and Pok Wai South Road (Portion F)
June 2006	<ul style="list-style-type: none"> • Sheet piling excavation for the pumping station and jacking pits at Item P3; and • Sheet piling and excavation for jacking and receiving pits at Items S4 & S5
July 2006	<ul style="list-style-type: none"> • Sheet piling and excavation for the pumping station and jacking pits at Item P3, • Sheet piling and shoring installation at Items S4 & S5, setting up pipe jacking at S5.
August 2006	<ul style="list-style-type: none"> • formation work for the pumping station, pipe jacking for drainage work at S4, • Sheet piling, trench excavation and sorting erection for drainage work at S5, S6 and S7.
September 2006	<ul style="list-style-type: none"> • Site hoarding erection at Kam Tin pumping station and formation work for the Nam Sang Wai pumping station, • Pipe jacking for drainage work at S4, sheet piling, trench excavation and sorting erection for drainage work at S5, S6 and S7.

2.0 ENVIRONMENTAL STATUS

Work Undertaken during the Reporting Period with Illustrations

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

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

Location	Description of Construction Activities	Environmental Mitigation Measures	EM&A Ref.
P3 (Nam Sang Wai Pumping Station)	<ul style="list-style-type: none"> Excavation and shoring installation 	<ul style="list-style-type: none"> Erect 2.4m high noise barrier hoarding around the works area Remove dust and spray water at the construction access Cover the stockpiles of dusty material properly Spray water to all dusty materials immediately before loading and unloading Wash the wheels of vehicles before leaving the site Install and use power-operated cover at the dump trucks Spray water at the pavement breaking locations Spray the working area of excavation frequently 	<p>A1 & F6 A2 A3 A4 A5 A6 A7 A8</p>
S5 (Pok Wai South Road)	<ul style="list-style-type: none"> Pipe Jacking Grouting for ground treatment 	<ul style="list-style-type: none"> Maximize the use of quiet PME on site Apply and obtain appropriate waste disposal licenses Handle, store and dispose of chemical wastes as per relevant regulations Implement trip-ticket system for waste disposal Restrict open fires and provide fire fighting equipment in the works area Perform weekly inspection with ET and monthly audit with IEC Conduct noise and dust monitoring as per EM&A manual during construction Recycle wheel washing water and provide sedimentation tanks for treating site discharge. Remove dust and spray water at the construction access Cover or provide shelters to the stockpiles / operation of dusty material properly Spray water to all dusty materials immediately before loading and unloading Wash the wheels of vehicles before leaving the site Install and use power-operated cover at the dump trucks Spray the working area of excavation frequently Maximize the use of quiet PME on site Apply and obtain appropriate waste disposal licenses 	<p>B1, B2 & F5 D1 D2, D3 & D4 D5 F9 H1 I1 & I2 - A2 A3 A4 A5 A6 A8 B1, B2 & F5 D1</p>
S4 (Nam Sang Wai Road)	Grouting for ground treatment	<ul style="list-style-type: none"> Handle, store and dispose of chemical wastes as per relevant regulations Implement trip-ticket system for waste disposal Restrict open fires and provide fire fighting equipment in the works area Perform weekly inspection with ET and monthly audit with IEC Conduct noise and dust monitoring as per EM&A manual during construction Provide sedimentation tanks for treating site discharge. Remove dust and spray water at the construction access Cover or provide shelters to the stockpiles / operation of dusty material properly Spray water to all dusty materials immediately before loading and unloading Wash the wheels of vehicles before leaving the site Spray the working area of excavation frequently Maximize the use of quiet PME on site Apply and obtain appropriate waste disposal licenses Handle, store and dispose of chemical wastes as per relevant regulations Restrict open fires and provide fire fighting equipment in the works area Perform weekly inspection with ET and monthly audit with IEC Conduct noise and dust monitoring as per EM&A manual during construction Provide sedimentation tanks for treating site discharge. 	<p>D2, D3 & D4 D5 F9 H1 I1 & I2 - A2 A3 A4 A5 A8 B1, B2 & F5 D1 D2, D3 & D4 F9 H1 I1 & I2 -</p>

- 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 and four noise monitoring stations under the project EP. In this reporting period, the monitoring was carried out at two designated air (AM1 & AM7) and two noise (NM3 & NM4) 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
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

- 2.05 The two remaining air (AM5 & AM6) and noise (NM6 & NM7) stations were selected and approved by IEC and RE in end September 2006. Based on the Contractor's revised construction progress, baseline monitoring at the remaining air monitoring station AM6 and noise monitoring station NM6 station will be undertaken in early October 2006, and air monitoring station AM5 and noise monitoring station NM7 will commence end October 2006.
- 2.06 Impact Monitoring at the two remaining air (AM5 & AM6) and noise (NM6 & NM7) stations will be carried out immediately after completion of baseline monitoring.

3.0 SUMMARY OF EM&A REQUIREMENTS

Monitoring Parameters

- 3.01 Environmental monitoring and audit requirements are set out in the Updated EM&A manual. Air quality and construction noise have been identified to be the key monitoring parameters during the impact phase for the construction of the project.
- 3.02 A summary of the impact EM&A requirements for air quality and construction noise as per the project Updated EM&A Manual are shown in **Table 3-1**.

Table 3-1 Summary of EM&A Requirements

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

Environmental Quality Performance Limits

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

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

Monitoring Location	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-Hr TSP	24-Hr TSP	1-Hr TSP	24-Hr TSP
AM1	391	184	500	260
AM7	383	204	500	260

Table 3-3 Action and Limit Levels for Construction Noise

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

Event and Action Plans

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

Environmental Mitigation Measures

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

Environmental Requirements in Contract Documents

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

4.0 IMPLEMENTATION STATUS

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

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

Table 4-1 Status of Environmental Licenses and Permits in the Reporting Period

Item	Item Description	Permit Status
1	Environmental Permit No.: EP-220/2005	Issued in June 2005
2	Air Pollution Control (Construction Dust)	Notified EPD on 24 Dec 2005
3	Chemical Waste Producer Registration (5213-528-L2544-08)	Registration on 27 Jan 2006
4	Water Pollution Control (Discharge license No. 1U434/1)	Applied to EPD on 7 Feb 2006
5	Account for Disposal of Construction Waste No. 5004959	Registration on 27 Dec 2005
6	Construction Noise Permit (CNP No. PP-RN0017-06)	Valid (1 Jun to 2 Dec 2006)
7	Construction Noise Permit (CNP No. GW-RN0250-06)	Valid (20 May to 03 Nov 2006)
8	Construction Noise Permit (CNP No. GW-RN0299-06)	Valid (08 Jun to 30 Sep 2006)

5.0 MONITORING RESULTS

PARAMETERS MONITORED

- 5.01 The environmental parameters monitoring in the reporting period is compliance with the monitoring requirements as in **Table 3-1**.

MONITORING LOCATIONS

- 5.02 There are four designated air quality and four noise monitoring stations under the project EP. For this reporting period, monitoring was carried out at two designated air (AM1 & AM7) and two noise (NM3 & NM4) monitoring stations. The two remaining air (AM5 & AM6) and noise (NM6 & NM7) stations were selected and approved by IEC and RE in end September 2006 and impact monitoring at these station will commence in the 4th quarter of 2006. The locations of the designated monitoring stations are shown in **Table 5-1** and geographically in **Annex E**.

Table 5-1 Location of Air Quality and Construction Noise Monitoring Stations

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

Remarks: Monitoring at AM5 & AM6 and NM6 & NM7 will commence in October 2006.

MONITORING FREQUENCY AND PERIOD

- 5.03 The impact 24-Hr TSP monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 62 monitoring events were carried out in the reporting period.
- 5.04 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 62 monitoring events were carried out in the reporting period.

MONITORING RESULTS AND GRAPHICAL PLOT IN THE REPORTING PERIOD

- 5.05 The graphical plot and monitoring results of air quality and construction noise for the reporting period are summarized in **Annex H**.

WEATHER CONDITIONS DURING THE MONITORING PERIOD

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

OTHER FACTORS INFLUENCING THE MONITORING RESULTS

- 5.07 There were no other noticeable external factors generally affecting the monitoring results in the reporting period.

QA/QC RESULTS AND DETECTION LIMITS

- 5.08 Not applicable.

6.0 SOLID AND LIQUID WASTE MANAGEMENT STATUS

SOLID AND LIQUID WASTE MANAGEMENT STATUS

- 6.01 The cumulative quantities of waste for disposal or reuse in the reporting period are summarized in **Tables 6-1** and **6-2**.

Table 6-1 Cumulative Quantities of Waste for Disposal in the Reporting Period

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (tons) – Disposed	25,230	Tuen Mun 38 Fill Bank
C&D Materials (Inert) (tons) – Reused	7,775	DSD Contract DC/2005/02
C&D Materials (Non-Inert) (kg)	10,960	NENT
Chemical Waste (Litres)	700	License Collector
General Refuse (tons)	379	Refuse Collector

Table 6-2 Cumulative Quantities of Waste for Reuse/Recycling

Type of Waste	Quantity	Disposal Location
Metals for Recycling (kg)	10,040	NA
Paper for Recycling (kg)	920	NA
Plastics for Recycling (kg)	0	NA

- 6.02 There was no site effluent discharged but an estimated volume of less than 50m³ of surface runoff was discharged for each reporting month.

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

RECORD OF NON-COMPLIANCE OF ACTION AND LIMIT LEVELS

7.01 No Project related Action or Limit Level exceedance was recorded in the reporting period. The summary of exceedance was presented in **Table 7-1**.

Table 7-1 Summaries of Exceedance in the Reporting Period

Reporting Month	Work-Related Exceedance (%) for 24-Hr TSP	Work-Related Exceedance (%) for Leq (30mins) Daytime
April 2006	0	0
May 2006	0	0
June 2006	0	0
July 2006	0	0
August 2006	0	0
September 2006	0	0

RECORD OF ENVIRONMENTAL COMPLAINTS RECEIVED

7.02 There was no environmental complaint received in the reporting period. The summary of environmental complaints was presented in **Table 7-2**.

Table 7-2 Summaries of Environmental Complaint in the Reporting Period

Reporting Month	Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
April 2006	0	0	NA
May 2006	0	0	NA
June 2006	0	0	NA
July 2006	0	0	NA
August 2006	0	0	NA
September 2006	0	0	NA

RECORD OF NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTION

7.03 There was no notification of summon or prosecution received in the reporting period. The summary of environmental summons and prosecution was presented in **Table 7-3**.

Table 7-3 Summaries of Environmental Summons and Prosecution in the Reporting Period

Reporting Month	Environmental Summons and Prosecution Statistics		
	Summons	Prosecution	Nature
April 2006	0	0	NA
May 2006	0	0	NA
June 2006	0	0	NA
July 2006	0	0	NA
August 2006	0	0	NA
September 2006	0	0	NA

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

7.04 No NC, complaints or NoS received in the reporting period.

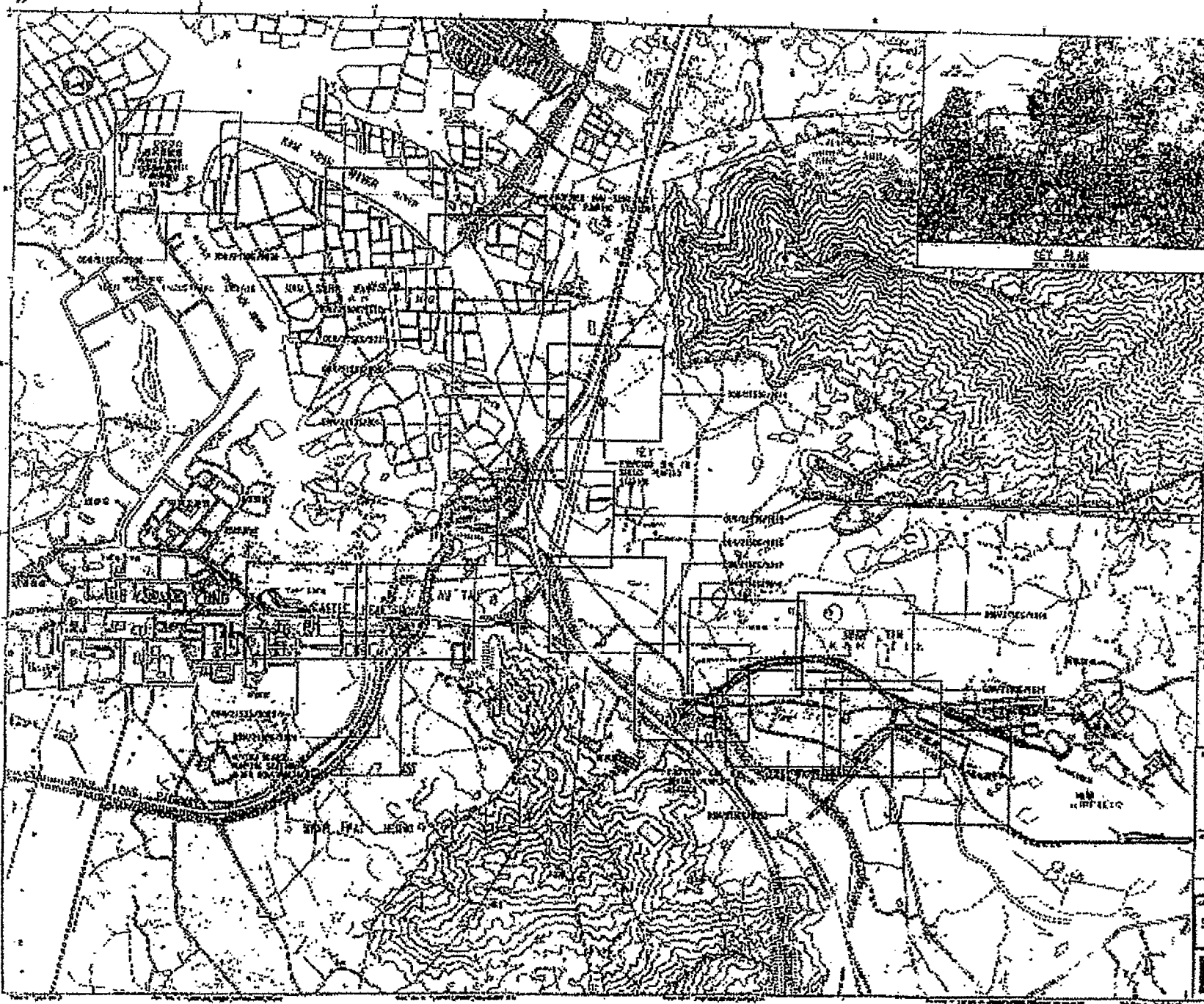
DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

7.05 No NC, complaints or NoS received in the reporting period.

8.0 CONCLUSIONS FOR THE PERIOD APRIL TO SEPTEMBER 2006

- 8.01 Based on the data collected and reviewed for the period between April to September 2006 (as reported herein), it can be confirmed that the monitoring work is effective and that it is generating data to categorically confirm the observe of impact attributable to the works.

Annex A
Project Site Layout



SHEET 1
 OF 2 SHEETS OF PLANS FOR
 THE SEWERAGE PROJECT
 IN THE CITY OF NEW YORK

SHEET 2
 OF 2 SHEETS OF PLANS FOR
 THE SEWERAGE PROJECT
 IN THE CITY OF NEW YORK

SHEET 3
 OF 2 SHEETS OF PLANS FOR
 THE SEWERAGE PROJECT
 IN THE CITY OF NEW YORK

FIRE FIGHTER PURPOSES ONLY

DATE	1944
BY	W. H. H. H.
CHECKED BY	J. H. H. H.
APPROVED BY	J. H. H. H.

TITLE: SEWERAGE PROJECT

SCALE: 1" = 100'

NOTES: SEE PLANS FOR DETAILS

DATE OF WORK:

DRAWING NO.: 004/215DS/300-

PROJECT NUMBER:

DIVISION: SEWERAGE PROJECTS DIVISION

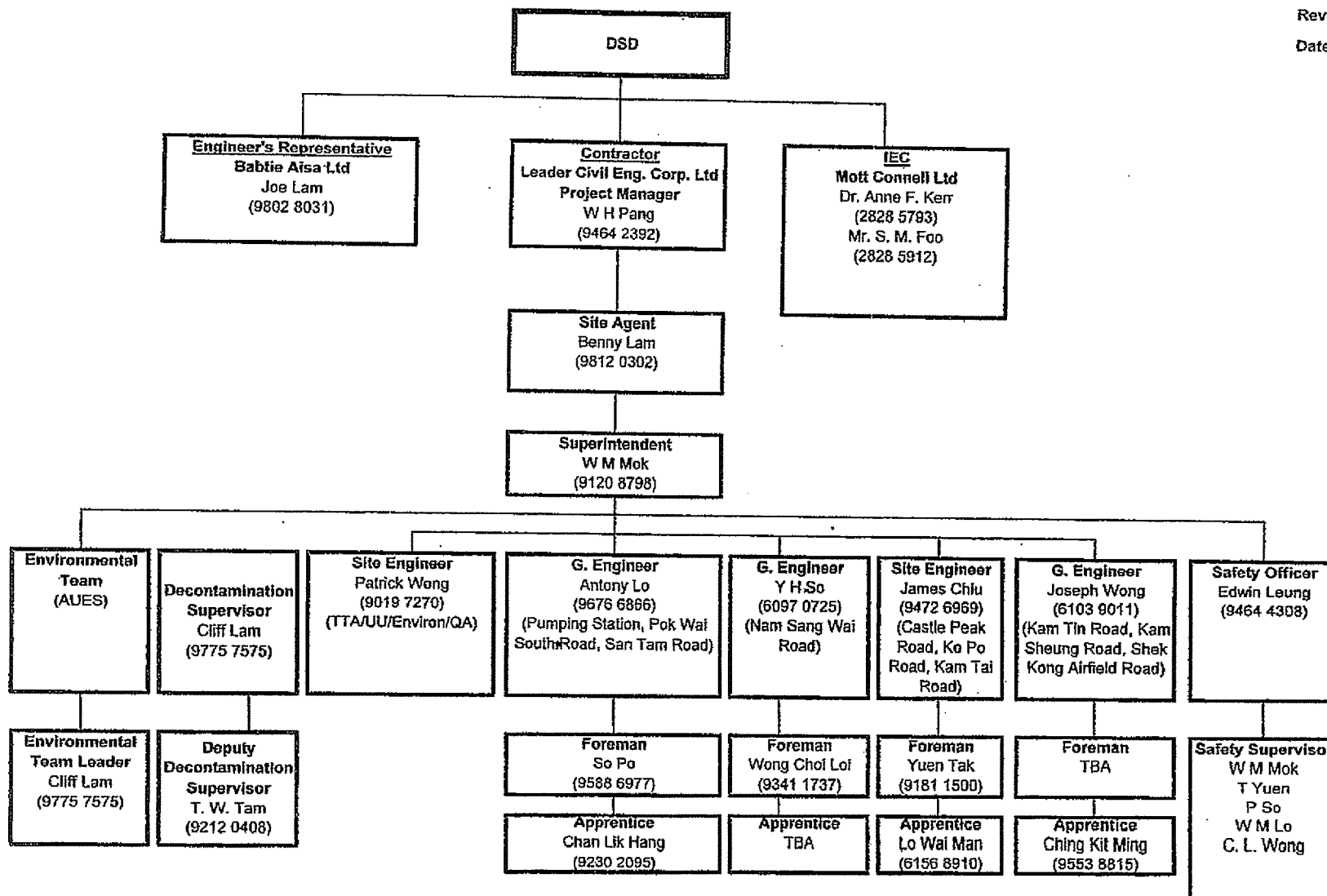
OFFICE: ENGINEERING DEPARTMENT
 120 WEST STREET
 NEW YORK, N. Y.

Annex B

Project Organization and Management Structure

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

Rev. : 01
 Date : 12-May-06



Annex C
Construction Program

Art ID	Description	Orig Dur	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006				
								MAR	APR	MAY	JUN	JUL
Submission												
Design Submission												
SUN1900	Approve Temp Work - Nam San Wai P/Station	6	90	01MAR06 A	28APR06	01MAR06 A	24MAY06					
SUN2100	Approve Temp Work - Sewerage Trench	6	90	01MAR06 A	28APR06	01MAR06 A	15APR06 *					
SUN2300	Approve Temp Work - Trenchless Pipelaying	6	50	08APR06 A	03MAY06	08APR06 A	15APR06 *					
Method Statement Submission												
SUD1500 Approve Temp Work - Nam San Wai P/Station												
SUD1500	Approve Temp Work - Nam San Wai P/Station	6	90	01MAR06 A	28APR06	01MAR06 A	24MAY06					
SUD1700	Approve Temp Work - Sewerage Trench	6	90	01MAR06 A	28APR06	01MAR06 A	15APR06 *					
SUD1900	Approve Temp Work - Trenchless Pipelaying	6	50	08APR06 A	03MAY06	08APR06 A	15APR06 *					
Preliminaries												
PR3100	Deliver Precast Concrete Pipe	800	1	24APR06 A	13DEC08	24APR06 A	10DEC08					
PR3300	Deliver Vitrified Clay Pipe	800	2	10APR06 A	03DEC08	10APR06 A	27DEC08					
PR3400	Structural Monitoring by ISE	835	3	06APR06 A	05JAN09	06APR06 A	27DEC08					
PR3500	Environmental monitoring by ET	814	3	08APR06 A	10DEC08	06APR06 A	04DEC08					
Section 3 - Nam San Wai Sewage Pumping Station												
Portion C												
Ground Investigation												
S3CB1200	Prepare & Submit Draft Final Report	6	5	27APR06 A	06MAY06	27APR06 A	18OCT06					
Earthworks												
S3CG1000	Drive Sheetpile	36	27	06APR06 A	30MAY06	06APR06 A	24MAY06					
Geotechnical works												
S3CP1000	Monitoring of Instruments	605	6	06APR06 A	17MAR08	06APR06 A	16APR08					
Section 4 - Sewers & RM in Portion D, F, G, H, I												
Portion F												
Ground Investigation												
S4FB1500	Install Settlement Markers	720	1	27APR06 A	08SEP08	27APR06 A	25SEP08					
Pipework - Rising Main												
Trenchless Method												
S4FFB1000	Construct Jack/Receive Pils (WOIC4 - ChC2639)	57	1	25APR06 A	21JUL06	25APR06 A	07AUG06					
Portion G												
Ground Investigation												
S4GB1500	Install Settlement Markers	738	1	21APR06 A	30SEP08	21APR06 A	27DEC08					
Pipework - Rising Main												
Trenchless Method												

Start date 19DEC05
 Finish date 07JAN08
 Data date 28APR06
 Page number 1A
 Number/Version Rev. 1
 Project name WP01
 c Primavera Systems, Inc.

Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 Master Programme WP01 (Rev. 1) (29 Mar 2006 - 28 Apr 2006)

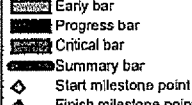
Legend:
 Early bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point



Act ID	Description	Orig Dur	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006							
								27	MAR	03	10	APR	17	24	
S4GFA1100	Twin Rising Main DN500 (ChB250 - ChB350)	90	5	22APR06 A	07SEP06	22APR06 A	25JUL07								
Geotechnical works															
S4GP1000	Monitoring of Instruments	729	1	22APR06 A	20SEP06	22APR06 A	27DEC06								
Portion H															
Pipework - Rising Main															
Trench Method															
S4HFA2600	Twin Rising Main DN700 (ChC1650 - ChC1750)	104	1	25APR06 A	16SEP06	25APR06 A	08OCT07								
Section 5 - Sewers & RM in Portion E															
Portion E															
Ground Investigation															
S5EB1300	Install Settlement Markers (Stage 1)	134	1	27APR06 A	04OCT06	27APR06 A	20SEP06								
Pipework - Rising Main															
Trench Method															
S5EFA2900	Twin Rising Main DN900 (ChA1150 - ChA1200)	32	2	17APR06 A	10JUN06	17APR06 A	29MAY06								
S5EFA4000	Twin Rising Main DN900 (ChA1700 - ChA1750)	32	2	17APR06 A	10JUN06	17APR06 A	29MAY06								
Trenchless Method															
S5EFB1000	Construct Jack/Receive Pits (ChA18 - ChA208)	42	2	17APR06 A	06JUL06	17APR06 A	23JUN06								
Section 6 - Sewers in Portion J															
Portion J															
Drainage and Ducts															
Trench Method															
S6JEA1100	DN1050 Pipe & Manhole (D2 - D4)	54	2	11APR06 A	10JUL06	11APR06 A	16NOV06								
Section 7 - Sewers in Portion K															
Portion K															
Drainage and Ducts															
Trenchless Method															
S7KEB1100	Construct Jack/Receive Pits (M8 - M20)	30	2	25APR06 A	22JUN06	25APR06 A	01AUG06								
Section 8 - Preservation and Protection of Trees															
All Portions															
Landscape Softworks and Establishment Works															
S8QR1100	Preservation & Protection of Preserved Trees	851	7	10APR06 A	29DEC06	10APR06 A	27DEC06								

Start date 19DEC05
 Finish date 07JAN09
 Data date 29APR06
 Page number 2A
 Number/Version Rev. 1
 Project name WP01
 c Primavera Systems, Inc.

Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 Master Programme WP01 (Rev. 1) (29 Mar 2006 - 28 Apr 2006)



 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	
Possession/Milestone Date									
PD2300	Area X1	0		100	03MAY06 A		03MAY06 A		◇ Area X1
PD2400	Area X2	0		100	03MAY06 A		03MAY06 A		◇ Area X2
PD2500	Area X3	0		100	03MAY06 A		03MAY06 A		◇ Area X3
PD2600	Area X4	0		100	03MAY06 A		03MAY06 A		◇ Area X4
PD2700	Area X5	0		100	03MAY06 A		03MAY06 A		◇ Area X5
PD2800	Area X6	0		100	03MAY06 A		03MAY06 A		◇ Area X6
PD2900	Area X7	0		100	03MAY06 A		03MAY06 A		◇ Area X7
PD3000	Area X8	0		100	03MAY06 A		03MAY06 A		◇ Area X8
PD3100	Area X9	0		100	03MAY06 A		03MAY06 A		◇ Area X9
PD3200	Area X10	0		100	03MAY06 A		03MAY06 A		◇ Area X10
PD3300	Area X11	0		100	03MAY06 A		03MAY06 A		◇ Area X11
PD3400	Area X12	0		100	03MAY06 A		03MAY06 A		◇ Area X12
PD3500	Area X13	0		100	03MAY06 A		03MAY06 A		◇ Area X13
PD3600	Area X14	0		100	03MAY06 A		03MAY06 A		◇ Area X14

Submission									
Design Submission									
SUN1400	Design/Submit Temp Work - Kam Tin P/Station	30	144d	10	20MAY06 A	28JUN06	20MAY06 A	19DEC05	
SUN1900	Approve Temp Work - Nam San Wai P/Station	6	24d	90	01MAR06 A	29MAY06	01MAR06 A	27JUN06	
SUN2100	Approve Temp Work - Sewerage Trench	6	-22d	90	01MAR06 A	29MAY06	01MAR06 A	03MAY06 *	
SUN2300	Approve Temp Work - Trenchless Pipelaying	6	-24d	50	08APR06 A	01JUN06	08APR06 A	03MAY06 *	

Methd Statement Submission									
SUO1500	Approve Temp Work - Nam San Wai P/Station	6	24d	90	01MAR06 A	29MAY06	01MAR06 A	27JUN06	
SUO1700	Approve Temp Work - Sewerage Trench	6	-22d	90	01MAR06 A	29MAY06	01MAR06 A	03MAY06 *	
SUO1900	Approve Temp Work - Trenchless Pipelaying	6	-24d	50	08APR06 A	01JUN06	08APR06 A	03MAY06 *	

Procurement									
PR2900	Deliver Ductile Iron Pipe	970	5d	3	29APR06 A	22DEC08	29APR06 A	27DEC08	
PR3100	Deliver Precast Concrete Pipe	969	10d	4	24APR06 A	17DEC08	24APR06 A	27DEC08	
PR3300	Deliver Vitrified Clay Pipe	968	26d	5	10APR06 A	01DEC08	10APR06 A	27DEC08	
PR3400	Structural Monitoring by ISE	581	16d	5	06APR06 A	11DEC08	06APR06 A	27DEC08	
PR3500	Environmental monitoring by ET	985	12d	5	06APR06 A	15DEC08	06APR06 A	27DEC08	

Section 3 - Nam Sang Wai Sewerage Pumping Station									
Position C									
Ground Investigation									
S3CB1200	Prepare & Submit Draft Final Report	6	143d	30	27APR06 A	02JUN06	27APR06 A	21NOV06	

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Legend
 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	2006																											
									APR							MAY							JUN							JUL						
									01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
S3CC1000	Remove Ext. Stormwater Drain	6	22d	40	05MAY06 A	02JUN06	08MAY06 A	28JUN06																												
S3CC1100	Remove Ext. Septic Tank & Soakway Pit	6	22d	40	18MAY06 A	07JUN06	18MAY06 A	04JUL06																												
Earthworks																																				
S3CG1000	Drive Sheetpile	36	13d	65	05APR06 A	12JUN06	06APR06 A	27JUN06																												
Piling Works - Rising Main																																				
S3CI1000	Construct Minipiles (DELETED)	20		100	19MAY06 A	19MAY06 A	19MAY06 A	19MAY06 A	Construct Minipiles (DELETED)																											
S3CF1100	Trim Pile Heads (DELETED)	10		100	19MAY06 A	19MAY06 A	19MAY06 A	19MAY06 A	Trim Pile Heads (DELETED)																											
Geotechnical works																																				
S3CP1000	Monitoring of Instruments	735	61d	15	06APR06 A	16FEB08	06APR06 A	16APR08																												
Testing																																				
S3CS1400	Pile Load Test (DELETED)	6		100	19MAY06 A	19MAY06 A	19MAY06 A	19MAY06 A	Pile Load Test (DELETED)																											
S3CS1500	Proof-drill (DELETED)	12		100	19MAY06 A	19MAY06 A	19MAY06 A	19MAY06 A	Proof-drill (DELETED)																											
Section 4 - Sewers & RM in Portion D, F, G, H																																				
Portion F																																				
Ground Investigation																																				
S4FB1020	Boreholes & Instrumentation (H2 - H1)	9	6d	50	19MAY06 A	13AUG08	19MAY06 A	20AUG08																												
S4FB1160	Boreholes & Instrumentation (WOIC4 - Jack Pit)	6	1d	30	27MAY06 A	02JUN06	27MAY06 A	03JUN06																												
S4FB1500	Install Settlement Markers	873	1d	4	27APR06 A	14SEP08	27APR06 A	15SEP08																												
Pipework - Rising Main																																				
S4FFB1000	Construct Jack/Receive Pits (WOIC4 - ChC2839)	57	1d	5	25APR06 A	05AUG06	25APR06 A	07AUG06																												
Portion G																																				
Ground Investigation																																				
S4GB1500	Install Settlement Markers	894	88d	4	21APR06 A	28SEP08	21APR06 A	27DEC08																												
Pipework - Rising Main																																				
S4GFA1100	Twin Rising Main DN500 (ChB250 - ChB350)	90	277d	20	22APR06 A	22AUG06	22APR06 A	25JUL07																												
Geotechnical works																																				
S4GP1000	Monitoring of Instruments	884	98d	4	22APR06 A	20SEP08	22APR06 A	27DEC08																												
Portion H																																				
Ground Investigation																																				
S4HB1300	Install Settlement Markers	869	-1d	1	26MAY06 A	04OCT08	26MAY06 A	03OCT08																												
Pipework - Rising Main																																				
S4HFA2600	Twin Rising Main DN700 (ChC1650 - ChC1750)	104	303d	5	25APR06 A	04OCT06	25APR06 A	08OCT07																												
Geotechnical works																																				
S4HPT000	Monitoring of Instruments	925	28d	1	26MAY06 A	29NOV08	26MAY06 A	27DEC08																												
Section 5 - Sewers & RM in Portion E																																				
Portion E																																				
Preconcretes																																				
S5EA1000	Non Work Period 29 Dec 05 - 31 Mar 06	76		100	28DEC05 A	30APR05 A	28DEC05 A	30APR05 A	Non Work Period 29 Dec 05 - 31 Mar 06																											

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



Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Gantt Chart (APR 01 to MAY 28)																												
Ground Investigation																																					
S5EB1300	Install Settlement Markers (Slage 1)	161	-34d	20	27APR06 A	04OCT06	27APR06 A	31AUG06																													
Pipework - Rising Main																																					
Trench Method																																					
S5EFA2900	Twin Rising Main DN900 (ChA1150 - ChA1200)	32	-28d	2	17APR06 A	05JUL06	17APR06 A	03JUN06																													
S5EFA4000	Twin Rising Main DN900 (ChA1700 - ChA1750)	32	-27d	2	17APR06 A	05JUL06	17APR06 A	02JUN06																													
Trench Method																																					
S5EPB1600	Construct Jack/Receive Pits (ChA18 - ChA208)	42	-26d	15	17APR06 A	27JUL06	17APR06 A	23JUN06																													
Section 6 - Sewers in Portion J																																					
Portion J																																					
Ground Investigation																																					
S6JB1500	Install Settlement Marker 1st Stage	897	-32d	3	02MAY06 A	14OCT06	02MAY06 A	12SEP06																													
Drainage and Ducts																																					
Trench Method																																					
S6JEA1100	DN1050 Pipe & Manhole (D2 - D4)	54	141d	30	11APR06 A	12JUL06	11APR06 A	28DEC06																													
S6JEA1200	DN1050 Pipe & Manhole (D4 - D6)	100	141d	35	11APR06 A	26SEP06	11APR06 A	19MAR07																													
Geotechnical works																																					
S6JP1000	Monitoring of Instruments	948	21d	3	04MAY06 A	06DEC06	04MAY06 A	27DEC06																													
Section 7 - Sewers in Portion K																																					
Portion K																																					
Ground Investigation																																					
S7KB1060	Boreholes & Instrumentation (M13 - M14)	16	27d	50	08MAY06 A	07JUN06	08MAY06 A	10JUL06																													
S7KB1500	Install Settlement Markers	488	14d	4	08MAY06 A	07SEP07	08MAY06 A	21SEP07																													
Drainage and Ducts																																					
Trench Method																																					
S7KEA1300	DN750 Pipe & Manhole (M5 - M8)	79	17d	5	19MAY06 A	23APR07	19MAY06 A	14MAY07																													
S7KEA1600	DN900 Pipe & Manhole (M11 - M12)	90	33d	15	24MAY06 A	26AUG06	24MAY06 A	05OCT06																													
Trench Method																																					
S7KEB1100	Construct Jack/Receive Pits (M8 - M20)	30	11d	10	29APR06 A	18JUL06	29APR06 A	01AUG06																													
Geotechnical works																																					
S7KP1000	Monitoring of Instruments	518	15d	4	27MAY06 A	04OCT07	27MAY06 A	19OCT07																													
Section 8 - Preservation and Protection of Trees																																					
All Portions																																					
Landscape Softworks and Establishment Works																																					
S8QR1100	Preservation & Protection of Preserved Trees	1041	0	8	10APR06 A	27DEC06	10APR06 A	27DEC06																													
Decontamination Works																																					
Portion G																																					
Ground Investigation																																					
S8GB1000	Trial Pits	7	32d	50	23MAY06 A	02JUN06	23MAY06 A	11JUL06																													
Portion H																																					
Ground Investigation																																					
S8HG1000	Trial Pits	17		100	10APR06 A	24MAY06 A	10APR06 A	24MAY06 A	Trial Pits																												

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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	2006 MAY JUN																												
Submission																																					
Design Submission																																					
SUN1400	Design/Submit Temp Work - Kam Tin P/Station	30	124d	30	20MAY06 A	24JUL06	20MAY06 A	19DEC06																													
SUN1900	Approve Temp Work - Nam San Wai P/Station	0	1d	95	01MAR06 A	28JUN06	01MAR06 A	29JUN06																													
SUN2300	Approve Temp Work - Trenchless Pipelaying	6	-62d	80	08APR06 A	29JUN06	08APR06 A	15APR06 *																													
Method Statement Submission																																					
SUO1600	Approve Temp Work - Nam San Wai P/Station	6	1d	95	01MAR06 A	28JUN06	01MAR06 A	29JUN06																													
SUO1900	Approve Temp Work - Trenchless Pipelaying	6	-62d	80	08APR06 A	29JUN06	08APR06 A	15APR06 *																													
Preliminaries																																					
PR2900	Deliver Ductile Iron Pipe	800	38d	11	29APR06 A	12NOV06	29APR06 A	27DEC06																													
PR3100	Deliver Precast Concrete Pipe	800	53d	12	24APR06 A	25OCT06	24APR06 A	27DEC06																													
PR3300	Deliver Vitrified Clay Pipe	800	23d	9	10APR06 A	29NOV06	10APR06 A	27DEC06																													
PR3400	Structural Monitoring by ISE	835	16d	12	06APR06 A	08DEC06	06APR06 A	27DEC06																													
PR3500	Environmental monitoring by ET	814	1d	14	05APR06 A	23OCT06	06APR06 A	24OCT06																													
Section 3 - Nam Sang Wai Sewage Pumping Station																																					
Portion C -																																					
Ground Investigation																																					
S3CB1200	Prepare & Submit Draft Final Report	6		100	27APR06 A	26JUN06 A	27APR06 A	26JUN06 A																													
S3CB1300	Comment on Draft Final Report from the Engineer	6	120d	10	27JUN06 A	05JUL06	27JUN06 A	25NOV06																													
Site Clearance																																					
S3CC1000	Remove Ext. Stormwater Drain	6		100	06MAY06 A	15JUN06 A	06MAY06 A	15JUN06 A	Remove Ext. Stormwater Drain																												
S3CC1100	Remove Ext. Septic Tank & Soakway Pit	6		100	18MAY06 A	20JUN06 A	18MAY06 A	20JUN06 A	Remove Ext. Septic Tank & So																												
Earthworks																																					
S3CG1000	Drive Sheetpile	36		100	05APR06 A	24JUN06 A	06APR06 A	24JUN06 A	Drive Sheetpi																												
S3CG1100	Excavate to Level of 1st Layer of Waling	5	1d	90	15JUN06 A	29JUN06	15JUN06 A	30JUN06																													
Geotechnical works																																					
S3CP1000	Monitoring of Instruments	632	17d	17	05APR06 A	26MAR06	06APR06 A	16APR06																													
Section 4 - Sewers & RM in Portion D/F, G & H																																					
Portion F -																																					
Ground Investigation																																					
S4FB1020	Boreholes & Instrumentation (H2 - H1)	9		100	11MAY06 A	05JUN06 A	11MAY06 A	05JUN06 A	Boreholes & Instrumentation (H2 - H1)																												
S4FB1040	Boreholes & Instrumentation (H3 - H2)	6		100	22MAY06 A	07JUN06 A	22MAY06 A	07JUN06 A	Boreholes & Instrumentation (H3 - H2)																												
S4FB1140	Boreholes & Instrumentation (H7 - H6)	4		100	29MAY06 A	12JUN06 A	29MAY06 A	12JUN06 A	Boreholes & Instrumentation (H7 - H6)																												

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- Progress bar
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Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006																														
									MAY	JUN																													
									29	30	31	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
S4FB1160	Boreholes & Instrumentation (WOIC4 - Jack Pit)	6		100	27MAY06 A	02JUN06 A	27MAY06 A	02JUN06 A	Boreholes & Instrumentation (WOIC4 - Jack Pit)																														
S4FB1500	Install Settlement Markers	720	16d	10	27APR06 A	18AUG08	27APR06 A	05SEP08																															
Pipework - Rising Main																																							
Trench Method																																							
S4FFB1000	Construct Jack/Receive Pits (WOIC4 - ChC2639)	57	16d	60	05JUN06 A	26JUL06	05JUN06 A	14AUG06																															
Geotechnical works																																							
S4FP1000	Monitoring of Instruments	803	11d	8	05JUN06 A	18DEC08	05JUN06 A	27DEC08																															
Portion G																																							
Ground Investigation																																							
S4GB1500	Install Settlement Markers	736	92d	10	21APR06 A	06SEP08	21APR06 A	27DEC08																															
Pipework - Rising Main																																							
Trench Method																																							
S4GFA1100	Twin Rising Main DN500 (ChB250 - ChB350)	90	278d	50	22APR06 A	21AUG06	22APR06 A	25JUL07																															
Geotechnical works																																							
S4GP1000	Monitoring of Instruments	729	51d	4	22APR06 A	28OCT08	22APR06 A	27DEC08																															
Portion H																																							
Ground Investigation																																							
S4HB1300	Install Settlement Markers	717	-17d	11	26MAY06 A	14AUG08	26MAY06 A	25JUL08																															
Drainage and Ducts																																							
Trench Method																																							
S4HEA1300	DN500 Pipe & Manhole (A12 - A14)	54	13d	5	16JUN06 A	28AUG06	16JUN06 A	12SEP06																															
Pipework - Rising Main																																							
Trench Method																																							
S4HFA2600	Twin Rising Main DN700 (ChC1650 - ChC1750)	104	286d	5	19JUN06 A	25OCT06	19JUN06 A	08OCT07																															
Geotechnical works																																							
S4HP1000	Monitoring of Instruments	764	50d	8	28MAY06 A	29OCT08	26MAY06 A	27DEC08																															
Portion I																																							
Ground Investigation																																							
S4IB1300	Install Settlement Markers	726	-2d	10	26JUN06 A	25AUG08	26JUN06 A	22AUG08																															
Drainage and Ducts																																							
Trench Method																																							
S4IEA2100	DN500 Pipe & Manhole (C25 - C27)	57	4d	5	20JUN06 A	26MAR08	20JUN06 A	31MAR08																															
Geotechnical works																																							
S4IP1000	Monitoring of Instruments	795	27d	9	28JUN06 A	25NOV08	28JUN06 A	27DEC08																															
Section 4 - Sewers & RM in Portion E																																							
Portion E																																							
Ground Investigation																																							
S5EB1300	Install Settlement Markers (Stage 1)	134	-60d	65	27APR06 A	08SEP06	27APR06 A	29JUN06																															

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 Data date 29JUN06
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- Early bar
- Progress bar
- Critical bar
- Summary bar
- Start milestone point
- Finish milestone point



Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006																												
									MAY	29	30	31	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Pipework - Rising Main																																					
Trench Method																																					
SSEFA2900	Twin Rising Main DN900 (ChA1150 - ChA1200)	32	-59d	5	17APR06 A	03AUG06	17APR06 A	24MAY06																													
SSEFA4000	Twin Rising Main DN900 (ChA1700 - ChA1750)	32	-80d	5	17APR06 A	03AUG06	17APR06 A	23MAY06																													
Trenchless Method																																					
SSEFB1000	Construct Jack/Receive Pits (ChA18 - ChA208)	42	-44d	40	17APR06 A	15AUG06	17APR06 A	23JUN06																													
Section 6 - Sewers in Portion J																																					
Portion J																																					
Ground Investigation																																					
S6JB1040	Boreholes & Instrumentation (D6 - D7)	13	18d	50	13JUN06 A	18JAN07	13JUN06 A	06FEB07																													
S6JB1500	Install Settlement Marker 1st Stage	741	-52d	10	20APR06 A	11SEP08	20APR06 A	12JUL08																													
Drainage and Ducts																																					
Trench Method																																					
S6JEA1200	DN1050 Pipe & Manhole (D4 - D6)	100	123d	60	21APR06 A	19OCT06	21APR06 A	19MAR07																													
Geotechnical works																																					
S6JP1000	Monitoring of Instruments	791	33d	9	04MAY06 A	18NOV08	04MAY06 A	27DEC08																													
Section 7 - Sewers in Portion K																																					
Portion K																																					
Ground Investigation																																					
S7KB1050	Boreholes & Instrumentation (M13 - M14)	16	4d	50	08MAY06 A	08JUL06	08MAY06 A	13JUL06																													
S7KB1500	Install Settlement Markers	402	-17d	19	08MAY06 A	30JUL07	08MAY06 A	10JUL07																													
Drainage and Ducts																																					
Trench Method																																					
S7KEA1300	DN750 Pipe & Manhole (M6 - M8)	79	-7d	10	19MAY06 A	22MAY07	19MAY06 A	14MAY07																													
S7KEA1600	DN900 Pipe & Manhole (M11 - M12)	90	33d	40	24MAY06 A	31AUG06	24MAY06 A	11OCT06																													
S7KEA1700	DN900 Pipe & Manhole (M12 - M13)	79	19d	10	06JUN06 A	30JAN07	06JUN06 A	24FEB07																													
Trenchless Method																																					
S7KEB1100	Construct Jack/Receive Pits (M8 - M20)	30	-17d	5	29APR06 A	21AUG06	29APR06 A	01AUG06																													
Geotechnical works																																					
S7KP1000	Monitoring of Instruments	427	35d	16	27MAY06 A	05SEP07	27MAY06 A	18OCT07																													
Section 8 - Preservation and Protection of Trees																																					
All Portions																																					
Landscape Softworks and Establishment Works																																					
S8QR1100	Preservation & Protection of Preserved Trees	861	0	12	10APR06 A	27DEC08	10APR06 A	27DEC08																													
Decontamination Works																																					
General Submission																																					
S9L1400	Prepare & Submit CAR & RAP - Portion F/G/H	18	40d	50	21JUN06 A	17JUL06	21JUN06 A	01SEP06																													
Portion G																																					
Ground Investigation																																					

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


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



Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006																														
									MAY	JUN																													
									29	30	31	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
S9GB1000	Trial Pits	7		100	01JUN06 A	05JUN06 A	01JUN06 A	05JUN06 A	Trial Pits																														
S9GB1100	Drill Boreholes	9		100	07JUN06 A	09JUN06 A	07JUN06 A	09JUN06 A	Drill Boreholes																														
S9GB1200	Testing of Soil Samples	18		100	10JUN06 A	20JUN06 A	10JUN06 A	20JUN06 A	Testing of Soil Samples																														
Section H																																							
Ground Investigation																																							
S9HB1100	Drill Boreholes	35		100	03JUN06 A	06JUN06 A	03JUN06 A	06JUN06 A	Drill Boreholes																														
S9HB1200	Testing of Soil Samples	30	31d	80	07JUN06 A	06JUL06	07JUN06 A	11AUG06																															

Start date	19DEC05
Finish date	03MAR09
Data date	29JUN06
Run date	10JUL06
Page number	4A
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Leader Civil Engineering Corp. Ltd.
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-  Early bar
-  Progress bar
-  Critical bar
-  Summary bar
-  Start milestone point
-  Finish milestone point


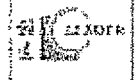


App ID	Description	QTY	UNIT	ESTIM	UNIT PRICE	TOTAL PRICE	DATE
Section I							
Section I.1							
9011001	Concrete Form Wall - 100mm Thick	20	M ²	21	15000.00	300000.00	200606
9011002	Concrete Form Wall - 150mm Thick	5	M ²	22	15000.00	75000.00	200606
9011003	Concrete Form Wall - 200mm Thick	5	M ²	23	15000.00	75000.00	200606
Section I.2							
9011004	Concrete Form Wall - 100mm Thick	5	M ²	24	15000.00	75000.00	200606
9011005	Concrete Form Wall - 150mm Thick	5	M ²	25	15000.00	75000.00	200606
Section II							
Section II.1							
902001	Excavated Clay Pipe	120	M	11	20000.00	2400000.00	200606
902002	Excavated Clay Pipe	120	M	12	20000.00	2400000.00	200606
902003	Excavated Clay Pipe	120	M	13	20000.00	2400000.00	200606
902004	Excavated Clay Pipe	120	M	14	20000.00	2400000.00	200606
902005	Excavated Clay Pipe	120	M	15	20000.00	2400000.00	200606
Section II.2							
902006	Excavated Clay Pipe	120	M	16	20000.00	2400000.00	200606
Section III							
Section III.1							
903001	Excavated Clay Pipe	120	M	17	20000.00	2400000.00	200606
903002	Excavated Clay Pipe	120	M	18	20000.00	2400000.00	200606
Section III.2							
903003	Excavated Clay Pipe	120	M	19	20000.00	2400000.00	200606
903004	Excavated Clay Pipe	120	M	20	20000.00	2400000.00	200606
Section IV							
Section IV.1							
904001	Excavated Clay Pipe	120	M	21	20000.00	2400000.00	200606
904002	Excavated Clay Pipe	120	M	22	20000.00	2400000.00	200606
Section IV.2							
904003	Excavated Clay Pipe	120	M	23	20000.00	2400000.00	200606
904004	Excavated Clay Pipe	120	M	24	20000.00	2400000.00	200606
Section V							
Section V.1							
905001	Excavated Clay Pipe	120	M	25	20000.00	2400000.00	200606
905002	Excavated Clay Pipe	120	M	26	20000.00	2400000.00	200606
Section V.2							
905003	Excavated Clay Pipe	120	M	27	20000.00	2400000.00	200606
905004	Excavated Clay Pipe	120	M	28	20000.00	2400000.00	200606
Section VI							
Section VI.1							
906001	Excavated Clay Pipe	120	M	29	20000.00	2400000.00	200606
906002	Excavated Clay Pipe	120	M	30	20000.00	2400000.00	200606
Section VI.2							
906003	Excavated Clay Pipe	120	M	31	20000.00	2400000.00	200606
906004	Excavated Clay Pipe	120	M	32	20000.00	2400000.00	200606

Site No: 10000
 Project No: 20000000
 Date: 20060601
 Rev: 1.0
 Scale: 1:100

Leader Civil Engineering Corp. Ltd.
 DSO Contract No. DC(2005)02
 Master Programme WP01 Rev. 2 (29 May 2006 - 28 June 2006)

Legend:
 [] Paved
 [] Proposed
 [] Site Use
 [] Boundary
 [] Boundary
 [] Boundary
 [] Boundary

Item No.	Description	Qty	Unit	Rate	Amount	Unit	Rate	Amount	Unit	Rate	Amount
Part A											
2400100	Supply & installation of 100mm dia. steel reinforcement bars	4	m	10000000	40000000	2400100	10000000	40000000			
2400101	Supply & installation of 100mm dia. steel reinforcement bars	780	m	10000000	7800000000	2400101	10000000	7800000000			
Part B											
2400200	Supply & installation of 100mm dia. steel reinforcement bars	57	m	10000000	570000000	2400200	10000000	570000000			
Part C											
2400300	Supply & installation of 100mm dia. steel reinforcement bars	725	m	10000000	7250000000	2400300	10000000	7250000000			
Part D											
2400400	Supply & installation of 100mm dia. steel reinforcement bars	70	m	10000000	700000000	2400400	10000000	700000000			
Part E											
2400500	Supply & installation of 100mm dia. steel reinforcement bars	720	m	10000000	7200000000	2400500	10000000	7200000000			
Part F											
2400600	Supply & installation of 100mm dia. steel reinforcement bars	710	m	10000000	7100000000	2400600	10000000	7100000000			
Part G											
2400700	Supply & installation of 100mm dia. steel reinforcement bars	70	m	10000000	700000000	2400700	10000000	700000000			
Part H											
2400800	Supply & installation of 100mm dia. steel reinforcement bars	700	m	10000000	7000000000	2400800	10000000	7000000000			
Part I											
2400900	Supply & installation of 100mm dia. steel reinforcement bars	700	m	10000000	7000000000	2400900	10000000	7000000000			
Part J											
2401000	Supply & installation of 100mm dia. steel reinforcement bars	700	m	10000000	7000000000	2401000	10000000	7000000000			

Scale: 1:100
 Date: 2006/06/28
 Drawn: [Name]
 Checked: [Name]
 Approved: [Name]

Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DG2005/02
 Master Programme WP01 Rev. 2 (29 May 2006 - 28 June 2006)

- Site to be used
- To be used
- Checked by
- Approved by
- Site to be used
- To be used




Item No.	Description	Org. Cost	Bill. Cost	Percent Complete	Est. Start	Est. Finish	Est. Cost	Est. Price
Section 1 - General								
1.01	General Excavation	10	10	100	1/01	1/01	10000	10000
1.02	General Backfill	20	20	100	1/01	1/01	20000	20000
1.03	General Paving	15	15	100	1/01	1/01	15000	15000
1.04	General Gravel	10	10	100	1/01	1/01	10000	10000
1.05	General Concrete	50	50	100	1/01	1/01	50000	50000
Section 2 - Foundation								
2.01	Foundation Excavation	10	10	100	1/01	1/01	10000	10000
2.02	Foundation Backfill	10	10	100	1/01	1/01	10000	10000
2.03	Foundation Paving	10	10	100	1/01	1/01	10000	10000
2.04	Foundation Gravel	10	10	100	1/01	1/01	10000	10000
2.05	Foundation Concrete	50	50	100	1/01	1/01	50000	50000
Section 3 - Structure								
3.01	Structure Excavation	10	10	100	1/01	1/01	10000	10000
3.02	Structure Backfill	10	10	100	1/01	1/01	10000	10000
3.03	Structure Paving	10	10	100	1/01	1/01	10000	10000
3.04	Structure Gravel	10	10	100	1/01	1/01	10000	10000
3.05	Structure Concrete	50	50	100	1/01	1/01	50000	50000
Section 4 - Finishes								
4.01	Finishes Excavation	10	10	100	1/01	1/01	10000	10000
4.02	Finishes Backfill	10	10	100	1/01	1/01	10000	10000
4.03	Finishes Paving	10	10	100	1/01	1/01	10000	10000
4.04	Finishes Gravel	10	10	100	1/01	1/01	10000	10000
4.05	Finishes Concrete	50	50	100	1/01	1/01	50000	50000

1.01 General Excavation
 1.02 General Backfill
 1.03 General Paving
 1.04 General Gravel
 1.05 General Concrete
 2.01 Foundation Excavation
 2.02 Foundation Backfill
 2.03 Foundation Paving
 2.04 Foundation Gravel
 2.05 Foundation Concrete
 3.01 Structure Excavation
 3.02 Structure Backfill
 3.03 Structure Paving
 3.04 Structure Gravel
 3.05 Structure Concrete
 4.01 Finishes Excavation
 4.02 Finishes Backfill
 4.03 Finishes Paving
 4.04 Finishes Gravel
 4.05 Finishes Concrete

Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC72003/02
 Master Programme WP01 Rev. 2 (29 May 2006 - 26 June 2006)

Legend:
 [Symbol] Approved for
 [Symbol] Proposed for
 [Symbol] On Hold
 [Symbol] Suspended
 [Symbol] Cancelled
 [Symbol] Deleted



Possession / Milestone Data

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
PD1000	Portion A	0	30d	0	26AUG06 *		25SEP06	
PD1100	Portion B	0	59d	0	26AUG06 *		24OCT06	
PD3700	Area "TOA"	0	29d	0	26AUG06 *		24SEP06	

Submission

Design Submission

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
SUN1400	Design/Submit Temp Work - Kam Tin P/Station	30	105d	50	20MAY06 A	15AUG06	20MAY06 A	19DEC06
SUN1500	Approve Temp Work - Kam Tin P/Station	6	105d	0	16AUG06	22AUG06	20DEC06	27DEC06
SUN1600	Design/Submit Temp Work - Sha Po P/Station	30	223d	0	16AUG06	19SEP06	15MAY07	18JUN07
SUN1900	Approve Temp Work - Nam San Wai P/Station	6	-4d	95	01MAR06 A	28JUL06	01MAR06 A	24JUL06
SUN2300	Approve Temp Work - Trenchless Pipelaying	6	-86d	95	08APR06 A	28JUL06	08APR06 A	15APR06 *
SUN2400	Design/Submit Cement Solidification Process	12	107d	0	29JUL06	11AUG06	05DEC06	18DEC06
SUN2500	Approve Cement Solidification Process	6	107d	0	12AUG06	18AUG06	19DEC06	26DEC06

Method Statement Submission

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
SUO1000	Prepare/Submit Temp Work - Kam Tin P/Station	30	105d	50	20MAY06 A	15AUG06	20MAY06 A	19DEC06
SUO1100	Approve Temp Work - Kam Tin P/Station	6	105d	0	16AUG06	22AUG06	20DEC06	27DEC06
SUO1200	Prepare/Submit Temp Work - Sha Po P/Station	30	223d	0	16AUG06	19SEP06	15MAY07	18JUN07
SUO1500	Approve Temp Work - Nam San Wai P/Station	6	-4d	95	01MAR06 A	28JUL06	01MAR06 A	24JUL06
SUO1900	Approve Temp Work - Trenchless Pipelaying	6	-86d	95	08APR06 A	28JUL06	08APR06 A	15APR06 *
SUO2000	Prepare/Submit Cement Solidification Process	12	107d	0	29JUL06	11AUG06	05DEC06	18DEC06
SUO2100	Approve Cement Solidification Process	6	107d	0	12AUG06	18AUG06	19DEC06	26DEC06

Preliminaries

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
PR2900	Deliver Ductile Iron Pipe	800	38d	14	29APR06 A	12NOV08	29APR06 A	27DEC08
PR3100	Deliver Precast Concrete Pipe	800	53d	16	24APR06 A	25OCT08	24APR06 A	27DEC08
PR3300	Deliver Vitrified Clay Pipe	800	23d	12	10APR06 A	29NOV08	10APR06 A	27DEC08
PR3400	Structural Monitoring by ISE	835	16d	15	06APR06 A	08DEC08	06APR06 A	27DEC08
PR3500	Environmental monitoring by ET	814	-4d	17	06APR06 A	24OCT08	06APR06 A	20OCT08

Section 1 - Kam Tin Sewage Pumping Station

Portion A

Preliminaries

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S1AA1000	Erect Hoarding	18	25d	0	26AUG06	15SEP06	25SEP06	17OCT06

Section 3 - Nam San Wai Sewage Pumping Station

Portion C

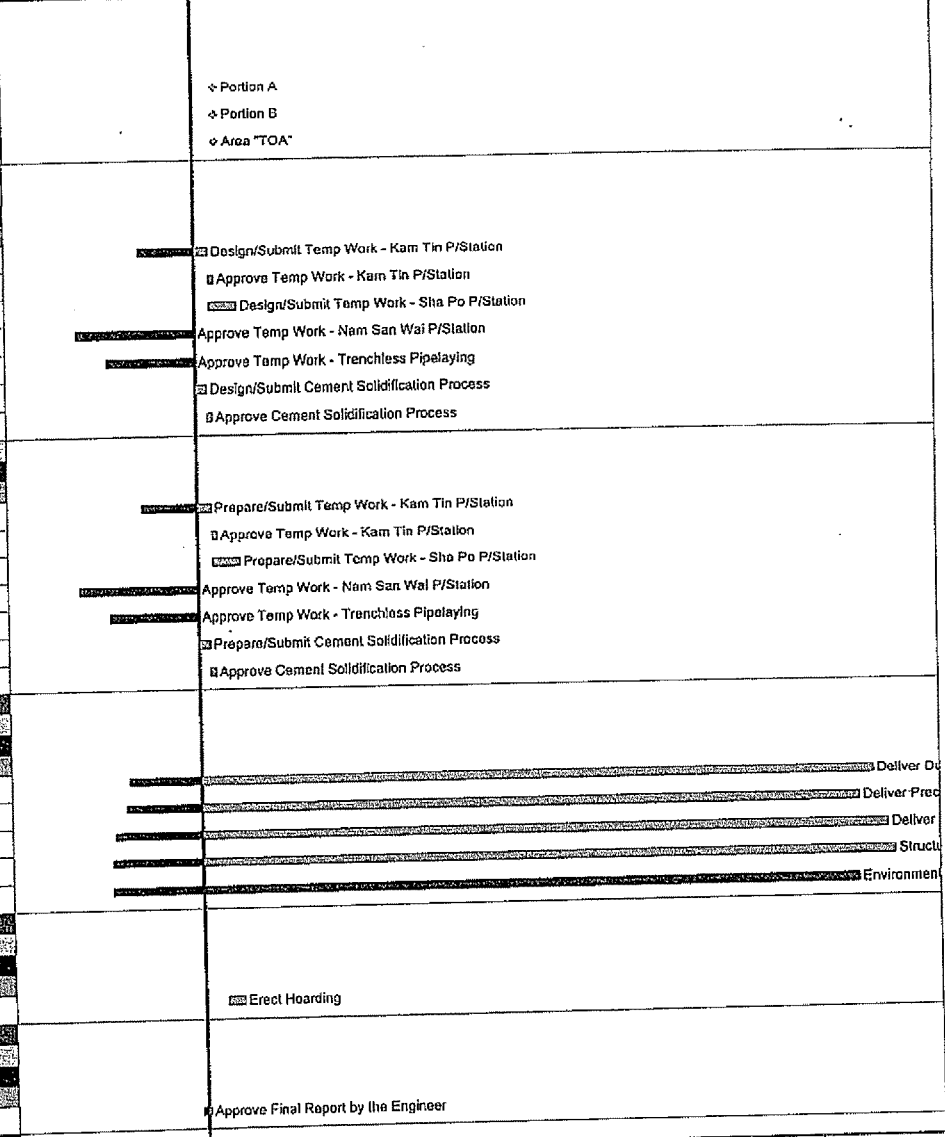
Ground Investigation

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S3CB1500	Approve Final Report by the Engineer	4	108d	50	22JUL06 A	31JUL06	22JUL06 A	07DEC06

Earthworks

Start date	19DEC05
Finish date	31MAR09
Data date	29JUL06
Run date	15AUG06
Page number	1A
Project name	WP01
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Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 Master Programme WP01 Rev. 2 - (29 July 2006 - 28 August 2006)




Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2005												2006												2007											
									DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
S3CG1200	Install 1st Layer of Waling & Strut	4	-4d	80	03JUL06 A	28JUL06	03JUL06 A	24JUL06																																				
S3CG1400	Install 2nd Layer of Waling & Strut	4	-4d	80	17JUL06 A	28JUL06	17JUL06 A	24JUL06																																				
S3CG1500	Excavate to Level of 3rd Layer of Waling	14	-4d	0	29JUL06	14AUG06	25JUL06	09AUG06																																				
S3CG1600	Install 3rd Layer of Waling & Strut	4	-4d	0	15AUG06	18AUG06	10AUG06	14AUG06																																				
S3CG1700	Excavate to Level of 4th Layer of Waling	18	-4d	0	19AUG06	08SEP06	15AUG06	04SEP06																																				
Geotechnical works																																												
S3CP1000	Monitoring of Instruments	832	16d	21	06APR06 A	27MAR06	06APR06 A	16APR06																																				
Section A - Sewers & RM in Portion D, F, G, H & I																																												
Portion D																																												
Ground Investigation																																												
S4DB1300	Install Settlement Markers	579	136d	0	28JUL06	30JUN08	10JAN07	10DEC08																																				
Geotechnical works																																												
S4DP1000	Monitoring of Instruments	567	162d	0	29JUL06 *	16JUN08	09FEB07	27DEC08																																				
Portion E																																												
Ground Investigation																																												
S4FB1500	Install Settlement Markers	720	109d	14	27APR06 A	18AUG08	27APR06 A	27DEC08																																				
Drainage and Culverts																																												
Top-down Method																																												
S4FEB1500	Construct Jack/Receive Pits (H7 - H6)	30	33d	30	22JUL06 A	22AUG06	22JUL06 A	29SEP06																																				
S4FEB1520	Jacking DN1200 (H7 - H6)	42	33d	0	23AUG06	12OCT08	30SEP06	21NOV06																																				
Pipework - Rising Main																																												
Top-down Method																																												
S4FFB1000	Construct Jack/Receive Pits (WOIC4 - ChC2639)	57	3d	80	05JUN06 A	10AUG06	05JUN06 A	14AUG06																																				
S4FFB1020	Jacking Twin DN700 (WOIC4 - ChC2639)	139	3d	0	11AUG06	25JAN07	15AUG06	29JAN07																																				
Geotechnical works																																												
S4FP1000	Monitoring of Instruments	803	11d	11	05JUN06 A	13DEC08	05JUN06 A	27DEC08																																				
Portion G																																												
Ground Investigation																																												
S4GB1500	Install Settlement Markers	738	91d	14	21APR06 A	08SEP08	21APR06 A	27DEC08																																				
Pipework - Rising Main																																												
Top-down Method																																												
S4GFA1100	Twin Rising Main DN500 (ChB250 - ChB350)	90	352d	74	22APR06 A	24AUG06	22APR06 A	26OCT07																																				
S4GFA1200	Twin Rising Main DN500 (ChB350 - ChB450)	89	352d	0	25AUG06	09DEC06	27OCT07	13FEB08																																				
S4GFA1400	Twin Rising Main DN500 (ChB550 - ChB650)	107	473d	2	27JUL06 A	01DEC06	27JUL06 A	28JUN08																																				
S4GFA1800	Construct AVIC3	30	411d	0	25AUG06	28SEP06	07JAN08	13FEB08																																				
Geotechnical works																																												
S4GP1000	Monitoring of Instruments	729	51d	7	22APR06 A	28OCT08	22APR06 A	27DEC08																																				
Portion H																																												
Ground Investigation																																												
S4HB1300	Install Settlement Markers	717	87d	11	26MAY06 A	12SEP08	26MAY06 A	27DEC08																																				

Start date 19DEC05
 Finish date 31MAR09
 Data date 29JUL06
 Run date 15AUG06
 Page number 2A
 Project name W/P01
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Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 Master Programme WP01 Rev. 2 - (29 July 2006 - 28 August 2006)

- 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	2006												2007											
									DEC J F M A M J J A S O N D J F M A M J J A S O N D JAN F M A M J J A S O N D												DEC J F M A M J J A S O N D JAN F M A M J J A S O N D											
Drainage and Ducts																																
Trench Method																																
S4HEA1200	DN500 Pipe & Manhole (A9 - A12)	90	3d	20	03JUL06 A	23OCT06	03JUL06 A	26OCT06	DN500 Pipe & Manhole (A9 - A12)																							
S4HEA1600	DN400 Pipe & Manhole (A18 - A21)	74	399d	5	19JUL06 A	20OCT06	19JUL06 A	19FEB06	DN400 Pipe & Manhole (A18 - A21)																							
Pipework - Rising Main																																
Trench Method																																
S4HFA2100	Twin Rising Main DN700 (ChC1150 - ChC1250)	84	104d	0	23AUG06	01DEC06	27DEC06	09APR07	Twin Rising Main DN700 (ChC1150 - ChC1250)																							
S4HFA2600	Twin Rising Main DN700 (ChC1650 - ChC1750)	104	268d	12	19JUN06 A	16NOV06	19JUN06 A	08OCT07	Twin Rising Main DN700 (ChC1650 - ChC1750)																							
Geotechnical works																																
S4HP1000	Monitoring of Instruments	764	50d	11	26MAY06 A	29OCT06	26MAY06 A	27DEC06	Monitoring of Instruments																							
Portion I																																
Ground Investigation																																
S4IB1300	Install Settlement Markers	726	103d	14	26JUN06 A	25AUG06	26JUN06 A	27DEC06	Install Settlement Markers																							
Drainage and Ducts																																
Trench Method																																
S4IEA1300	DN500 Pipe & Manhole (C8 - C11)	63	233d	2	21JUL06 A	11OCT06	21JUL06 A	21JUL07	DN500 Pipe & Manhole (C8 - C11)																							
S4IEA2100	DN500 Pipe & Manhole (C25 - C27)	57	464d	30	20JUN06 A	13SEP06	20JUN06 A	31MAR06	DN500 Pipe & Manhole (C25 - C27)																							
Geotechnical works																																
S4IP1000	Monitoring of Instruments	795	28d	12	28JUN06 A	24NOV06	28JUN06 A	27DEC06	Monitoring of Instruments																							
Section 5 - Sewers & RM in Portion E																																
Portion E																																
Ground Investigation																																
S5EB1020	Boreholes & Instrumentation (ChA18 - ChA208)	15	47d	0	23JUL06	15AUG06	22SEP06	11OCT06	Boreholes & Instrumentation (ChA18 - ChA208)																							
S5EB1300	Install Settlement Markers (Stage 1)	134	-93d	55	27APR06 A	10OCT06	27APR06 A	20JUN06	Install Settlement Markers (Stage 1)																							
Pipework - Rising Main																																
Trench Method																																
S5EFA1800	Twin Rising Main DN900 (ChA600 - ChA650)	32	-27d	0	29JUL06	04SEP06	27JUN06	03AUG06	Twin Rising Main DN900 (ChA600 - ChA650)																							
S5EFA2900	Twin Rising Main DN900 (ChA1150 - ChA1200)	32	-92d	5	17APR06 A	01SEP06	17APR06 A	15MAY06	Twin Rising Main DN900 (ChA1150 - ChA1200)																							
S5EFA4000	Twin Rising Main DN900 (ChA1700 - ChA1750)	32	-93d	5	17APR06 A	01SEP06	17APR06 A	13MAY06	Twin Rising Main DN900 (ChA1700 - ChA1750)																							
Trench Method																																
S5EFB1000	Construct Jack/Receive Pits (ChA18 - ChA208)	42	47d	40	17APR06 A	13SEP06	17APR06 A	10NOV06	Construct Jack/Receive Pits (ChA18 - ChA208)																							
Geotechnical works																																
S5EP1000	Monitoring of Instruments	629	-54d	0	23JUL06 *	28AUG06	25MAY06	25JUN06	Monitoring of Instruments																							
Section 6 - Sewers in Portion J																																
Portion J																																
Ground Investigation																																
S6JB1040	Boreholes & Instrumentation (D6 - D7)	13	3d	50	13JUN06 A	02FEB07	13JUN06 A	06FEB07	Boreholes & Instrumentation (D6 - D7)																							
S6JB1500	Install Settlement Marker 1st Stage	741	88d	14	20APR06 A	11SEP06	20APR06 A	27DEC06	Install Settlement Markers 1st Stage																							
S6JB2100	Install Settlement Markers 2nd Stage	589	163d	4	07JUL06 A	14JUN06	07JUL06 A	27DEC06	Install Settlement Markers 2nd Stage																							
Drainage and Ducts																																
Trench Method																																
S6JEA1200	DN1050 Pipe & Manhole (D4 - D6)	100	68d	30	21APR06 A	20OCT06	21APR06 A	11JAN07	DN1050 Pipe & Manhole (D4 - D6)																							
S6JEA1900	DN400 Pipe & Manhole (D19 - D21)	96	47d	0	29JUL06	21NOV06	22SEP06	17JAN07	DN400 Pipe & Manhole (D19 - D21)																							

Start date 19DEC05
 Finish date 31MAR09
 Data date 29JUL06
 Run date 15AUG06
 Page number 3A
 Project name WP01
 Primavera Systems, Inc.

Leader Civil Engineering Corp. Ltd.
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 Master Programme WP01 Rev. 2 - (29 July 2006 - 28 August 2006)

Legend:
 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	JUL 26 31	AUG 07 14 21 28 04	SEP 11 18 25	OCT 02 09 16 23 30 06	NOV 13 20 27
Submissions													
Design Submission													
SUN1400	Design/Submit Temp Work - Kam Tin P/Station	30	61d	80	20MAY06 A	06OCT06	20MAY06 A	19DEC06					
SUN1500	Approve Temp Work - Kam Tin P/Station	6	61d	0	09OCT06	14OCT06	20DEC06	27DEC06					
SUN1600	Design/Submit Temp Work - Sha Po P/Station	30	179d	0	09OCT06	13NOV06	15MAY07	18JUN07					
SUN1700	Approve Temp Work - Sha Po P/Station	6	179d	0	14NOV06	20NOV06	20JUN07	26JUN07					
SUN1900	Approve Temp Work - Nam San Wai P/Station	6	-47d	95	01MAR06 A	28SEP06	01MAR06 A	04AUG06					
SUN2300	Approve Temp Work - Trenchless Pipelaying	6	-139d	95	08APR06 A	28SEP06	08APR06 A	15APR06 *					
Method Statement Submission													
SUO1000	Prepare/Submit Temp Work - Kam Tin P/Station	30	61d	80	20MAY06 A	06OCT06	20MAY06 A	19DEC06					
SUO1100	Approve Temp Work - Kam Tin P/Station	6	61d	0	09OCT06	14OCT06	20DEC06	27DEC06					
SUO1200	Prepare/Submit Temp Work - Sha Po P/Station	30	179d	0	09OCT06	13NOV06	15MAY07	18JUN07					
SUO1300	Approve Temp Work - Sha Po P/Station	6	179d	0	14NOV06	20NOV06	20JUN07	26JUN07					
SUO1500	Approve Temp Work - Nam San Wai P/Station	6	-47d	95	01MAR06 A	28SEP06	01MAR06 A	04AUG06					
SUO1900	Approve Temp Work - Trenchless Pipelaying	6	-139d	95	08APR06 A	28SEP06	08APR06 A	15APR06 *					
Purchasing													
PR2900	Deliver Ductile Iron Pipe	800	11d	17	29APR06 A	13DEC06	29APR06 A	27DEC06					
PR3100	Deliver Precast Concrete Pipe	800	26d	19	24APR06 A	26NOV06	24APR06 A	27DEC06					
PR3300	Deliver Vitrified Clay Pipe	800	-4d	15	10APR06 A	02JAN09	10APR06 A	27DEC06					
PR3400	Structural Monitoring by ISE	835	-11d	18	05APR06 A	10JAN09	06APR06 A	27DEC06					
PR3500	Environmental monitoring by ET	014	28d	20	06APR06 A	24NOV06	06APR06 A	27DEC06					
Section 12 - Kam Tin Sewage Pumping Station													
Portion A													
Preliminaries													
S1AA1000	Erect Hoarding	18	30d	50	22AUG06 A	11OCT06	22AUG06 A	16NOV06					
Ground Investigation													
S1AB1100	Drill Boreholes	13		100	26AUG06 A	30AUG06 A	26AUG06 A	30AUG06 A					
S1AB1200	Install Inclinometers	2		100	28AUG06 A	30AUG06 A	28AUG06 A	30AUG06 A					
S1AB1300	Install Piezometer	1		100	28AUG06 A	30AUG06 A	28AUG06 A	30AUG06 A					
S1AB1400	Install Settlement Markers	1	40d	0	26OCT06	26OCT06	13DEC06	13DEC06					
Site Clearance													
S1AC1000	Demolish Existing Building	12	36d	0	12OCT06	25OCT06	24NOV06	07DEC06					
Earthworks													
S1AG1000	Drive Sheetpile	20	51d	0	27OCT06	20NOV06	28DEC06	20JAN07					
S1AG1100	Excavate to Level of 1st Layer of Waling	4	30d	0	15DEC06	19DEC06	22JAN07	25JAN07					
S1AG1200	Install 1st Layer Waling & Strut	4	30d	0	20DEC06	23DEC06	26JAN07	30JAN07					
S1AG1300	Excavate to Level of 2nd Layer of Waling	10	30d	0	26DEC06	06JAN07	31JAN07	10FEB07					

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



Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	JUL 24 31	AUG 7 14 21 28 34	SEP 11 18 25	2006 OCT 1 8 15 22 30	NOV 5 12 19 26 27
Geotechnical works													
S1AP1000	Monitoring of Instruments	476	40d	0	27OCT06	27MAY06	14DEC06	15JUL06					
Section 2 - She Pa Sewage Pumping Station													
Portion B													
Preliminaries													
S2BA1000	Erect Hoarding	18	30d	0	12OCT06	02NOV06	17NOV06	07DEC06					Erect Hoarding
S2BA1100	TOA - Water Sampling & Quality Analysis	18	30d	50	18SEP06 A	11OCT06	18SEP06 A	16NOV06					TOA - Water Sampling & Quality Analysis
S2BA1200	TOA - Prepare & Submit Water Quality Assessment	18	30d	0	12OCT06	02NOV06	17NOV06	07DEC06					TOA - Prepare & Submit Water C
Ground Investigation													
S2BB1000	Trial Pits	20	170d	0	03NOV06	25NOV06	29MAY07	21JUN07					Trial
S2BB1100	Drill Boreholes	11	170d	75	05SEP06 A	29NOV06	05SEP06 A	25JUN07					
S2BB1200	Install Inclinometers	2	170d	75	06SEP06 A	30NOV06	06SEP06 A	26JUN07					
S2BB1300	Install Settlement Markers	1	193d	0	03NOV06	03NOV06	26JUN07	26JUN07					Install Settlement Markers
Section 3 - Nam Sang Wa Sewage Pumping Station													
Portion C													
Ground Investigation													
S3CB1500	Approve Final Report by the Engineer	4	57d	90	22JUL06 A	28SEP06	22JUL06 A	19DEC06					Approve Final Report by the Engineer
Earthworks													
S3CG1200	Install 1st Layer of Waling & Strut	4	-47d	95	03JUL06 A	29SEP06	03JUL06 A	04AUG06					Install 1st Layer of Waling & Strut
S3CG1400	Install 2nd Layer of Waling & Strut	4	-47d	95	17JUL06 A	29SEP06	17JUL06 A	04AUG06					Install 2nd Layer of Waling & Strut
S3CG1500	Excavate to Level of 3rd Layer of Waling	14	-47d	0	29SEP06	18OCT06	05AUG06	21AUG06					Excavate to Level of 3rd Layer of Waling
S3CG1600	Install 3rd Layer of Waling & Strut	4	-47d	0	18OCT06	23OCT06	22AUG06	25AUG06					Install 3rd Layer of Waling & Strut
S3CG1700	Excavate to Level of 4th Layer of Waling	18	-47d	0	23OCT06	14NOV06	26AUG06	15SEP06					Excavate to Level
S3CG1800	Install 4th Layer of Waling & Strut	4	-47d	0	14NOV06	18NOV06	16SEP06	20SEP06					Install 4th Lay
S3CG1900	Excavate to Level of 5th Layer of Waling	22	-47d	0	18NOV06	14DEC06	21SEP06	18OCT06					
S3CG2000	Install 5th Layer of Waling & Strut	4	-47d	0	14DEC06	19DEC06	19OCT06	23OCT06					
S3CG2100	Excavate to Level of 6th Layer of Waling	22	-47d	0	19DEC06	16JAN07	24OCT06	18NOV06					
Geotechnical works													
S3CP1000	Monitoring of Instruments	632	17d	29	06APR06 A	26MAR06	06APR06 A	16APR06					
Section 4 - Sewage 2RM in Porich D.F.C. (H)													
Portion D													
Ground Investigation													
S4DB1010	Boreholes & Instrumentation (WOIC1 - ChA2095)	12	87d	50	23AUG06 A	24NOV06	23AUG06 A	12MAR07					Boreh
S4DB1300	Install Settlement Markers	579	97d	0	29SEP06	01SEP06	26JAN07	27DEC06					
Prework - Rising Main													
Trench Method													
S4DFA1000	Twin Rising Main DN900 (ChA1750 - ChA1850)	124	87d	0	13OCT06	13MAR07	26JAN07	26JUN07					
Geotechnical works													
S4DP1000	Monitoring of Instruments	567	109d	0	29SEP06 *	18AUG06	09FEB07	27DEC06					

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-  Early bar
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Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006													
									JUL	AUG	SEP	OCT	NOV									
S4FB1000	Boreholes & Instrumentation (H4 - H3)	9		100	15SEP06 A	22SEP06 A	15SEP06 A	22SEP06 A														
S4FB1080	Boreholes & Instrumentation (H6 - H4)	4		100	14SEP06 A	15SEP06 A	14SEP06 A	15SEP06 A														
S4FB1120	Boreholes & Instrumentation (H6 - H5)	8		100	15SEP06 A	26SEP06 A	15SEP06 A	26SEP06 A														
S4FB1500	Install Settlement Markers	720	109d	21	27APR06 A	18AUG06	27APR06 A	27DEC06														
Drainage and Ducts																						
Trench Method																						
S4FEB1400	Construct Jack/Receive Pits (H8 - H5)	30	12d	0	22DEC06	27JAN07	08JAN07	10FEB07														
S4FEB1520	Jacking DN1200 (H7 - H6)	42	12d	0	29SEP06	20NOV06	16OCT06	04DEC06														
S4FEB1540	Construct Manhole H7	27	12d	0	21NOV06	21DEC06	06DEC06	06JAN07														
Pipework - Rising Main																						
Trench Method																						
S4FFB1000	Construct Jack/Receive Pits (WOIC4 - ChC2639)	57	5d	95	05JUN06 A	03OCT06	05JUN06 A	10OCT06														
S4FFB1020	Jacking Twin DN700 (WOIC4 - ChC2639)	139	5d	5	26AUG06 A	14MAR07	26AUG06 A	20MAR07														
Geotechnical works																						
S4FP1000	Monitoring of Instruments	803	12d	17	05JUN06 A	12DEC06	05JUN06 A	27DEC06														
Portion G																						
Ground Investigation																						
S4GB1500	Install Settlement Markers	738	91d	21	21APR06 A	08SEP06	21APR06 A	27DEC06														
Pipework - Rising Main																						
Trench Method																						
S4GFA1100	Twin Rising Main DN500 (ChB250 - ChB350)	90		100	22APR06 A	27SEP06 A	22APR06 A	27SEP06 A														
S4GFA1200	Twin Rising Main DN500 (ChB350 - ChB450)	89	523d	22	05SEP06 A	21DEC06	05SEP06 A	17SEP06														
S4GFA1300	Twin Rising Main DN500 (ChB450 - ChB550)	84	523d	0	22DEC06	04APR07	18SEP06	27DEC06														
S4GFA1400	Twin Rising Main DN500 (ChB550 - ChB650)	107	465d	44	27JUL06 A	11DEC06	27JUL06 A	28JUN06														
S4GFA1500	Twin Rising Main DN500 (ChB650 - ChB750)	130	465d	0	12DEC06	19MAY07	30JUN06	02DEC06														
S4GFA1600	Construct AVIC2	30	565d	0	12DEC06	17JAN07	29OCT06	02DEC06														
S4GFA1700	Construct WOIC3	30	495d	0	29SEP06	06NOV06	24MAY06	28JUN06														
S4GFA1800	Construct AVIC3	30	562d	0	29SEP06	06NOV06	13AUG06	17SEP06														
Geotechnical works																						
S4GP1000	Monitoring of Instruments	729	51d	14	22APR06 A	28OCT06	22APR06 A	27DEC06														
Portion H																						
Ground Investigation																						
S4HB1300	Install Settlement Markers	717	112d	21	26MAY06 A	14AUG06	26MAY06 A	27DEC06														
Drainage and Ducts																						
Trench Method																						
S4HEA1200	DN500 Pipe & Manhole (A9 - A12)	90	4d	33	03JUL06 A	11DEC06	03JUL06 A	15DEC06														
S4HEA1600	DN400 Pipe & Manhole (A18 - A21)	74	251d	26	19JUL06 A	05DEC06	19JUL06 A	06OCT07														
Pipework - Rising Main																						
Trench Method																						
S4HFA1200	Twin Rising Main DN700 (ChC290 - ChC410)	45	4d	33	03JUL06 A	17JAN07	03JUL06 A	22JAN07														
S4HFA1600	Twin Rising Main DN700 (ChC650 - ChC780)	37	251d	26	19JUL06 A	08JAN07	19JUL06 A	08NOV07														
S4HFA2100	Twin Rising Main DN700 (ChC1150 - ChC1250)	84	21d	0	30SEP06	11JAN07	27OCT06	05FEB07														
S4HFA2600	Twin Rising Main DN700 (ChC1650 - ChC1750)	124	92d	38	19JUN06 A	02JAN07	19JUN06 A	24APR07														

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Legend:
 Early bar
 Progress bar
 Critical bar
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Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Jul 24	Aug 07	Aug 14	Aug 21	Aug 28	SEP 04	SEP 11	SEP 18	SEP 25	Oct 02	Oct 09	Oct 16	Oct 23	Oct 30	Nov 06	Nov 13	Nov 20	Nov 27	
Geotechnical works																											
S4HP1000	Monitoring of Instruments	76d	50d	18	26MAY06 A	29OCT08	26MAY06 A	27DEC08																			
Section I																											
Ground Investigation																											
S4IB1000	Install Settlement Markers	72d	103d	21	26JUN06 A	25AUG08	26JUN06 A	27DEC08																			
Drainage and Ducts																											
Trench Method																											
S4IEA1200	DN400 Pipe & Manhole (C7a - C7)	47	171d	0	18NOV06	13JAN07	14JUN07	09AUG07																			
S4IEA1300	DN500 Pipe & Manhole (C8 - C11)	63	171d	36	21JUL06 A	17NOV06	21JUL06 A	13JUN07																			
S4IEA1400	DN500 Pipe & Manhole (C11 - C13)	71	373d	0	18NOV06	10FEB07	16FEB08	10MAY08																			
S4IEA2000	DN500 Pipe & Manhole (C22 - C25)	70	439d	0	18OCT06	08JAN07	01APR08	24JUN08																			
S4IEA2100	DN500 Pipe & Manhole (C25 - C27)	57	269d	79	20JUN06 A	14OCT06	20JUN06 A	05SEP07																			
S4IEA2200	DN500 Pipe & Manhole (C27 - C29)	62	259d	0	16OCT06	28DEC06	06SEP07	20NOV07																			
Geotechnical works																											
S4IP1000	Monitoring of Instruments	78d	28d	19	26JUN06 A	24NOV08	26JUN06 A	27DEC08																			
Section II - Sewer (R/M) (Portion E)																											
Portion E																											
Preliminaries																											
SSEFA1100	Non Work Period 01 Nov 06 - 31 Mar 07	125	0	0	01NOV06 *	31MAR07	01NOV06	31MAR07 *																			
Ground Investigation																											
SSEB1300	Install Settlement Markers (Stage 1)	134		100	27APR06 A	08SEP06 A	27APR06 A	08SEP06 A																			
Pipework - Rising Main																											
Trench Method																											
SSEFA1500	Twin Rising Main DN900 (ChA450 - ChA500)	24	204d	0	28OCT06	25NOV06	05JUL07	01AUG07																			
SSEFA1600	Twin Rising Main DN900 (ChA500 - ChA550)	24	204d	5	26SEP06 A	27OCT06	28SEP06 A	04JUL07																			
SSEFA1700	Twin Rising Main DN900 (ChA550 - ChA600)	24		100	29JUL06 A	27SEP06 A	29JUL06 A	27SEP06 A																			
SSEFA2500	Twin Rising Main DN900 (ChA950 - ChA1000)	24	162d	0	17OCT06	14NOV06	03MAY07	30MAY07																			
SSEFA2600	Twin Rising Main DN900 (ChA1000 - ChA1050)	24	162d	50	09SEP06 A	14OCT06	09SEP06 A	30APR07																			
SSEFA2700	Twin Rising Main DN900 (ChA1050 - ChA1100)	24		100	29JUL06 A	08SEP06 A	29JUL06 A	08SEP06 A																			
SSEFA3100	Twin Rising Main DN900 (ChA1250 - ChA1300)	24	262d	0	02NOV06	29NOV06	03SEP07	02OCT07																			
SSEFA3200	Twin Rising Main DN900 (ChA1300 - ChA1350)	24	252d	0	03OCT06	01NOV06	05AUG07	01SEP07																			
SSEFA3300	Twin Rising Main DN900 (ChA1350 - ChA1400)	24	252d	91	08AUG06 A	30SEP06	08AUG06 A	04AUG07																			
SSEFA3800	Twin Rising Main DN900 (ChA1600 - ChA1650)	24	223d	0	11NOV06	08DEC06	09AUG07	05SEP07																			
SSEFA3900	Twin Rising Main DN900 (ChA1650 - ChA1700)	24	87d	60	22AUG06 A	12OCT06	22AUG06 A	25JAN07																			
SSEFA4000	Twin Rising Main DN900 (ChA1700 - ChA1750)	24	223d	0	13OCT06	10NOV06	12JUL07	08AUG07																			
SSEFA4200	Construct AVIC1	25	162d	0	16OCT06	14NOV06	02MAY07	30MAY07																			
Trenchless Method																											
SSEFB1000	Construct Jack/Receive Pits (ChA18 - ChA20B)	42	24d	95	17APR06 A	30SEP06	17APR06 A	01NOV06																			
SSEFB1020	Jacking DN1350 Conc Casing (ChA18 - ChA20B)	107	24d	0	03OCT06	08FEB07	02NOV06	12MAR07																			
Geotechnical works																											
SSEP1000	Monitoring of Instruments	62d	38d	23	01AUG06 A	10MAY08	01AUG06 A	25JUN08																			

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	Early bar
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Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	JUL 24 31	AUG 07 14 21 28 34	SEP 11 18 25	OCT 02 09 16 23 30	NOV 06 13 20 27
Portion J													
Ground Investigation													
S6JB1040	Boreholes & Instrumentation (D6 - D7)	13	5d	50	13JUN06 A	22MAR07	13JUN06 A	28MAR07					
S6JB1500	Install Settlement Marker 1st Stage	741	88d	21	20APR06 A	11SEP08	20APR06 A	27DEC08					
S6JB2100	Install Settlement Markers 2nd Stage	599	163d	13	07JUL06 A	14JUN08	07JUL06 A	27DEC08					
Drainage and Ducts													
Trench Method													
S6JEA1100	DN1050 Pipe & Manhole (D2 - D4)	62	62d	53	31AUG06 A	21DEC06	31AUG06 A	09MAR07					
S6JEA1200	DN1050 Pipe & Manhole (D4 - D6)	100	62d	60	21APR06 A	17NOV06	21APR06 A	31JAN07					
S6JEA1300	DN1050 Pipe & Manhole (D8 - D9)	62	62d	0	22DEC06	09MAR07	10MAR07	23MAY07					
S6JEA1900	DN400 Pipe & Manhole (D19 - D21)	124	-79d	2	04AUG06 A	27FEB07	04AUG06 A	21NOV06					
S6JEA2900	DN400 Pipe & Manhole (D33 - D35)	65	274d	36	06JUL06 A	20NOV06	06JUL06 A	18OCT07					
S6JEA3000	DN400 Pipe & Manhole (D35 - D38)	78	274d	0	21NOV06	24FEB07	20OCT07	21JAN08					
S6JEA3600	DN300 Pipe & Manhole (D51 - D55)	40	391d	0	23NOV06	10JAN07	13MAR08	29APR08					
S6JEA3700	DN300 Pipe & Manhole (D55 - D57)	31	391d	0	17OCT06	22NOV06	02FEB08	12MAR08					
S6JEA3800	DN300 Pipe & Manhole (D57 - D59)	36	391d	63	13JUL06 A	16OCT06	13JUL06 A	01FEB08					
S6JEA3900	DN750 Pipe & Manhole (D12 - E3)	88	-128d	2	24JUL06 A	12JAN07	24JUL06 A	16AUG06					
Geotechnical works													
S6JP1000	Monitoring of Instruments	791	32d	19	04MAY06 A	19NOV08	04MAY06 A	27DEC08					
Section 7 - Sewer in Portion K													
Portion K													
Ground Investigation													
S7KB1040	Boreholes & Instrumentation (M8 - M20)	16	-96d	0	29SEP06	19OCT06	08JUN06	26JUN06					
S7KB1060	Boreholes & Instrumentation (M13 - M14)	16	12d	50	08MAY06 A	10OCT06	08MAY06 A	24OCT06					
S7KB1500	Install Settlement Markers	402	65d	38	08MAY06 A	01AUG07	08MAY06 A	18OCT07					
Drainage and Ducts													
Trench Method													
S7KEA1200	DN750 Pipe & Manhole (M4 - M6)	126	124d	0	13DEC06	16MAY07	15MAY07	12OCT07					
S7KEA1300	DN750 Pipe & Manhole (M6 - M8)	79	124d	23	19MAY06 A	12DEC06	19MAY06 A	14MAY07					
S7KEA1600	DN900 Pipe & Manhole (M11 - M12)	90	118d	16	06JUN06 A	30DEC06	06JUN06 A	24MAY07					
S7KEA1700	DN900 Pipe & Manhole (M12 - M13)	79	50d	45	06JUN06 A	21NOV06	06JUN06 A	20JAN07					
S7KEA2500	Demolish Exl Sewer Adj. M4 - M6	30	220d	0	13DEC06	18JAN07	05SEP07	12OCT07					
Trenchless Method													
S7KEB1100	Construct Jack/Receive Pits (M8 - M20)	30	-96d	0	20OCT06	24NOV06	27JUN06	01AUG06					
S7KEB1120	Jacking DN450 (M8 - M20)	76	-96d	0	25NOV06	27FEB07	02AUG06	01NOV06					
S7KEB1200	Construct Jack/Receive Pit (M13 - M14)	30	12d	0	11OCT06	16NOV06	25OCT06	29NOV06					
S7KEB1220	Jacking DN900 (M13 - M14)	43	12d	0	16NOV06	06JAN07	30NOV06	20JAN07					
Geotechnical works													
S7KP1000	Monitoring of Instruments	427	35d	34	27MAY06 A	05SEP07	27MAY06 A	18OCT07					
Section 8 - Preparation and Protection of Trenches													
All Portions													
Landscape Softworks and Establishment Works													

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Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2006																											
									JUL	AUG							SEP							OCT							NOV					
									24	07	14	21	28	04	11	18	25	02	09	16	23	30	06	13	20	27										
S8QR1100	Preservation & Protection of Preserved Trees	861	0	22	29JUL06 A	27DEC06	29JUL06 A	27DEC06																												
Preconstruction Work																																				
General Submission																																				
S9L1000	Prepare & Submit CAR & RAP - Portion A/B	18	30d	0	10NOV06	30NOV06	15DEC06	06JAN07																												
S9L1100	Approve of CAR & RAP - Portion A/B	12	30d	0	01DEC06	14DEC06	08JAN07	20JAN07																												
S9L1200	Prepare & Submit Excavation Plan - Portion A/B	18	30d	0	10NOV06	30NOV06	15DEC06	06JAN07																												
S9L1300	Approve Excavation Plan - Portion A/B	12	30d	0	01DEC06	14DEC06	08JAN07	20JAN07																												
S9L1500	Approve of CAR & RAP - Portion F/G/H	12	21d	90	08AUG06 A	29SEP06	08AUG06 A	26OCT06	Approve of CAR & RAP - Portion F/G/H																											
S9L1700	Approve Excavation Plan - Portion F/G/H	12	21d	90	08AUG06 A	29SEP06	08AUG06 A	26OCT06	Approve Excavation Plan - Portion F/G/H																											
Portion A																																				
Ground Investigation																																				
S9AB1200	Testing of Soil Samples	12	30d	50	23AUG06 A	02NOV06	23AUG06 A	14DEC06	Testing of Soil Samples																											
Portion B																																				
Ground Investigation																																				
S9BB1200	Testing of Soil Samples	12	30d	50	24AUG06 A	09NOV06	24AUG06 A	14DEC06	Testing of Soil Samples																											

Start date 19DEC05
 Finish date 03JUN09
 Data date 29SEP06
 Run date 04OCT06
 Page number 5A
 c Primavera Systems, Inc.

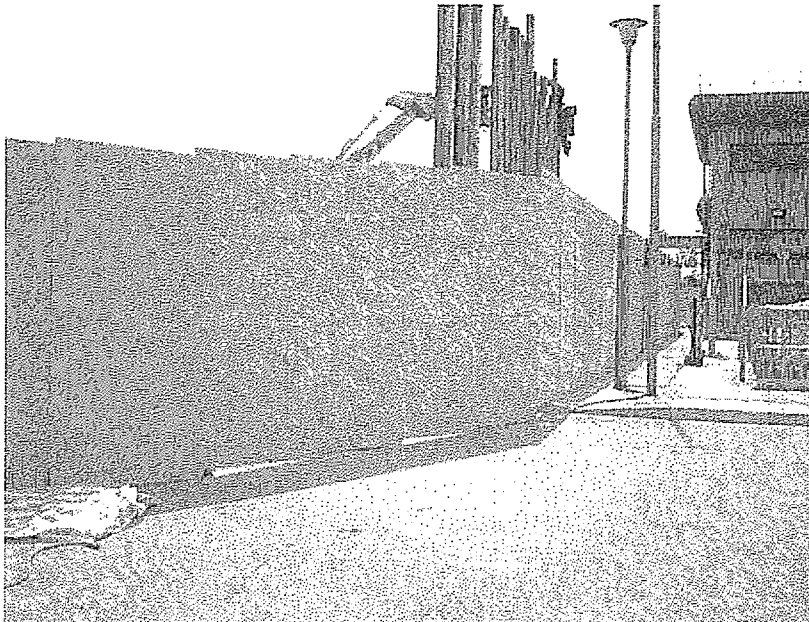
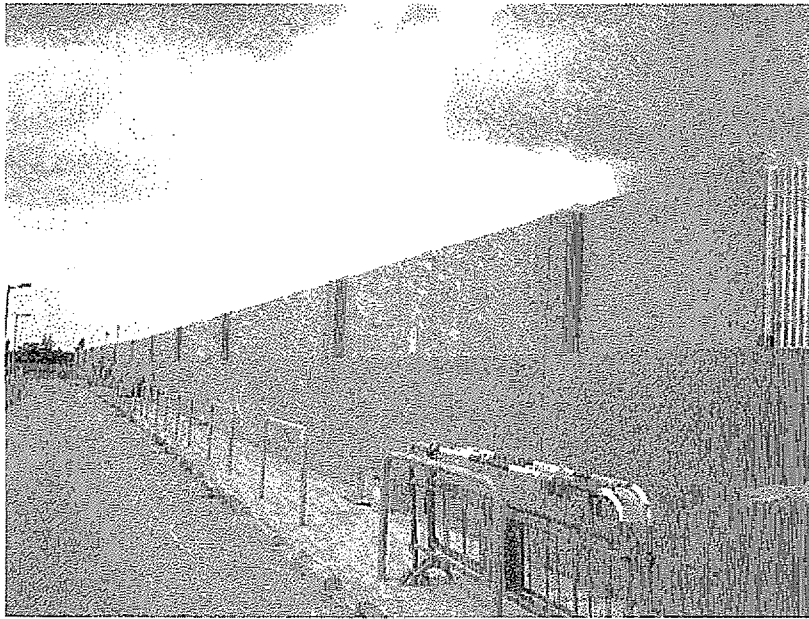
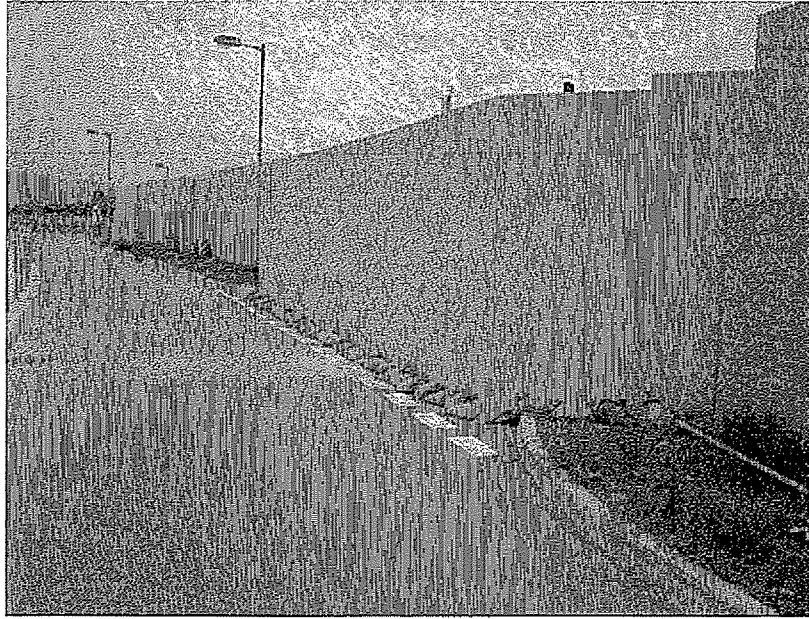
Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 3-Month Rolling Programme - 3M01 at 29 September 2006

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



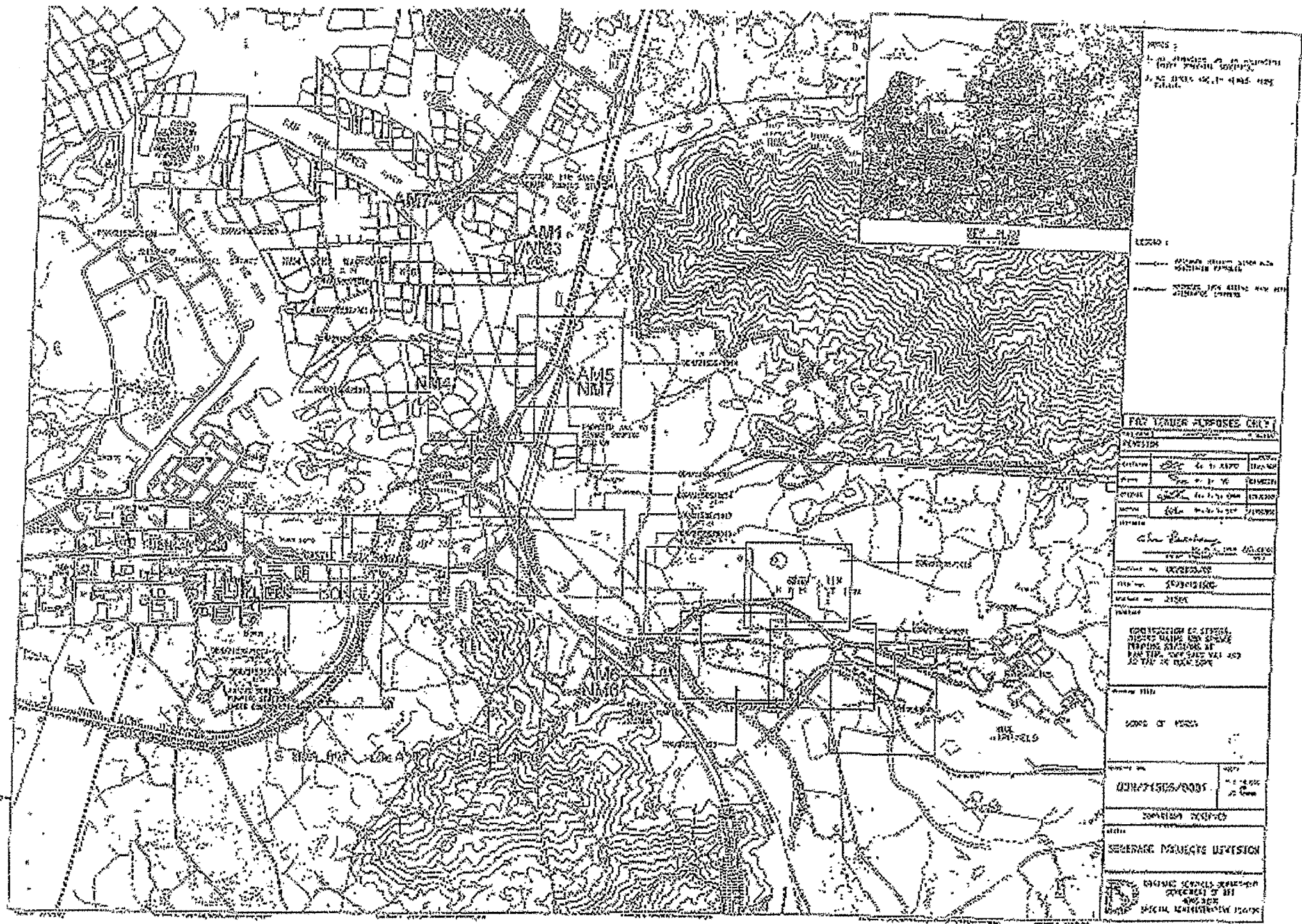
Annex D

Photographical Records – Noise Barrier On-Site



Annex E

Locations of Monitoring Stations



NOTE:
 1. ALL DISTANCES ARE MEASURED
 FROM THE POINT OF ORIGIN
 2. ALL DISTANCES ARE IN
 FEET.

LEGEND:
 --- DISTANCE FROM POINT OF ORIGIN
 --- DISTANCE FROM POINT OF ORIGIN

FOR USER'S PURPOSE ONLY

DATE	BY	REVISION
10/1/76	J. J. J.	1
10/1/76	J. J. J.	2
10/1/76	J. J. J.	3
10/1/76	J. J. J.	4

John J. J.
 PROJECT MANAGER

DATE OF REVISION
 DATE OF REVISION
 DATE OF REVISION

CONSTRUCTION OF THIS
 MAP WAS MADE BY
 THE U.S. GEOLOGICAL SURVEY
 IN THE YEAR 1976

SCALE OF MAP

UNIT STATES/8005

CONTRACT NUMBER

SEVENAGE DISTRICT DIVISION

ENGINEERING DEPARTMENT
 OFFICE OF THE
 DIRECTOR
 SPECIAL INVESTIGATION DIVISION

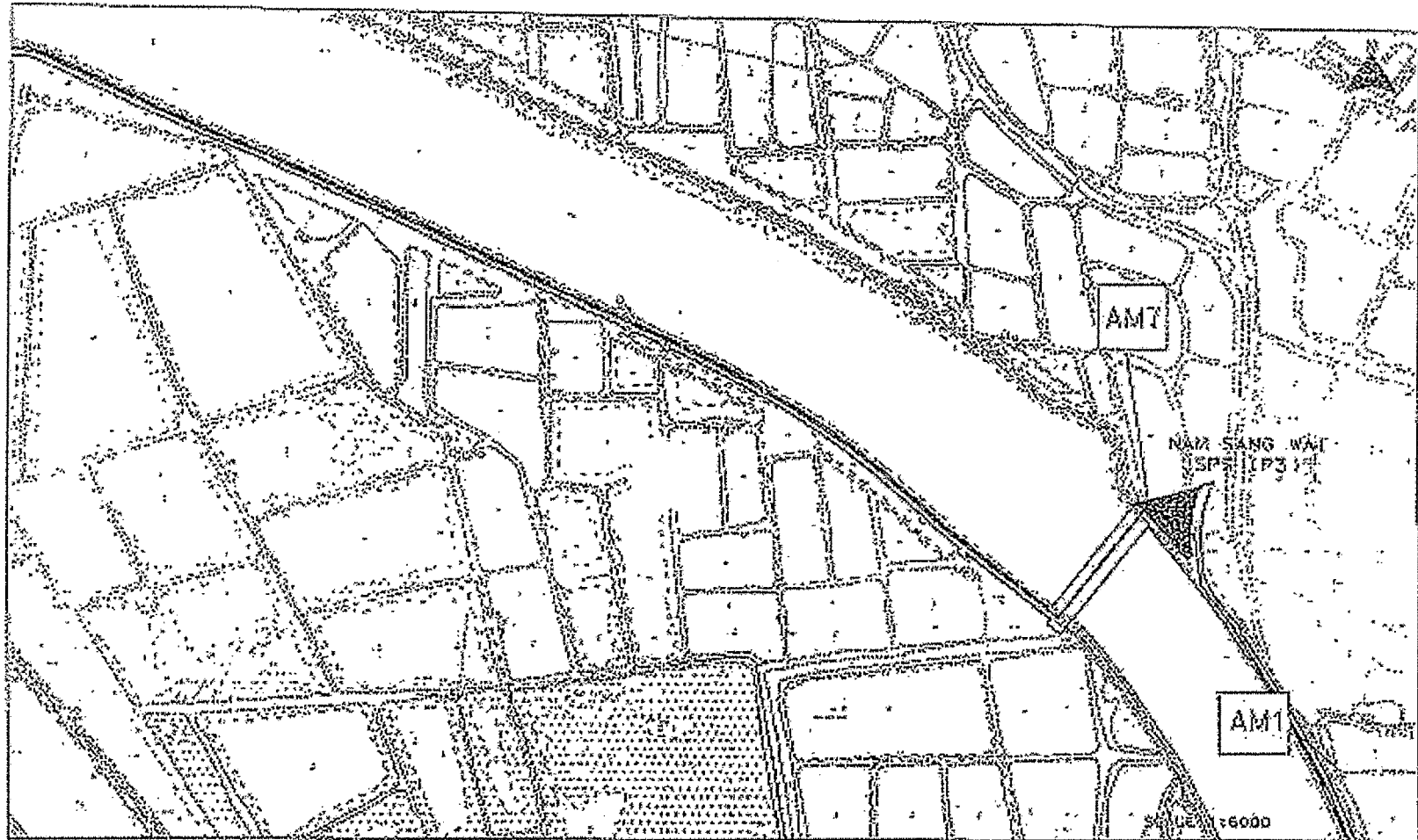


FIGURE C1

LOCATION OF BUSY MONITORING STATIONS (AM1, AM2 & AM3)

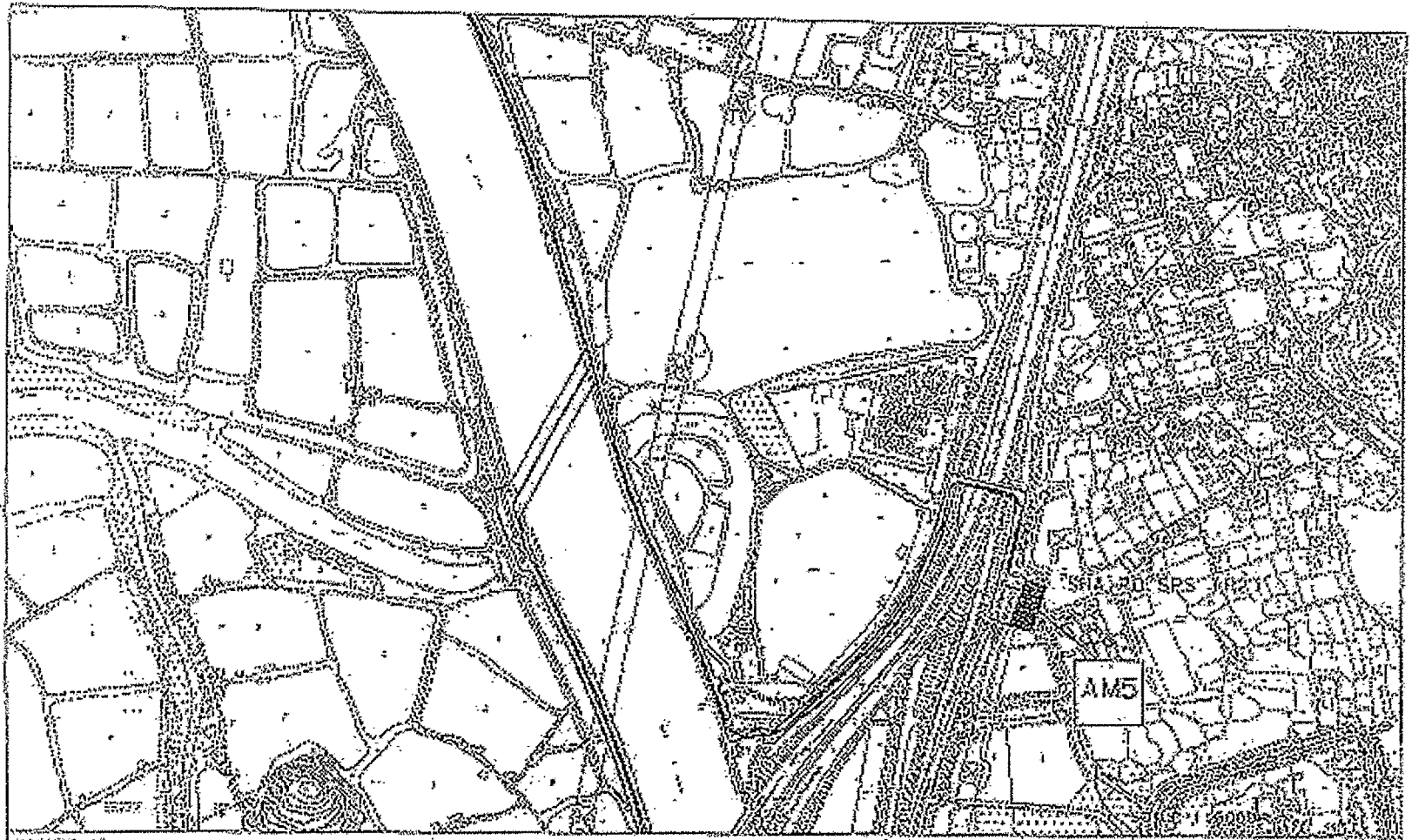


FIGURE C2

LOCATION OF DEBT MONITORING STATION (AM5)

AM5 FIRST MONITORING STATION
AND STATION

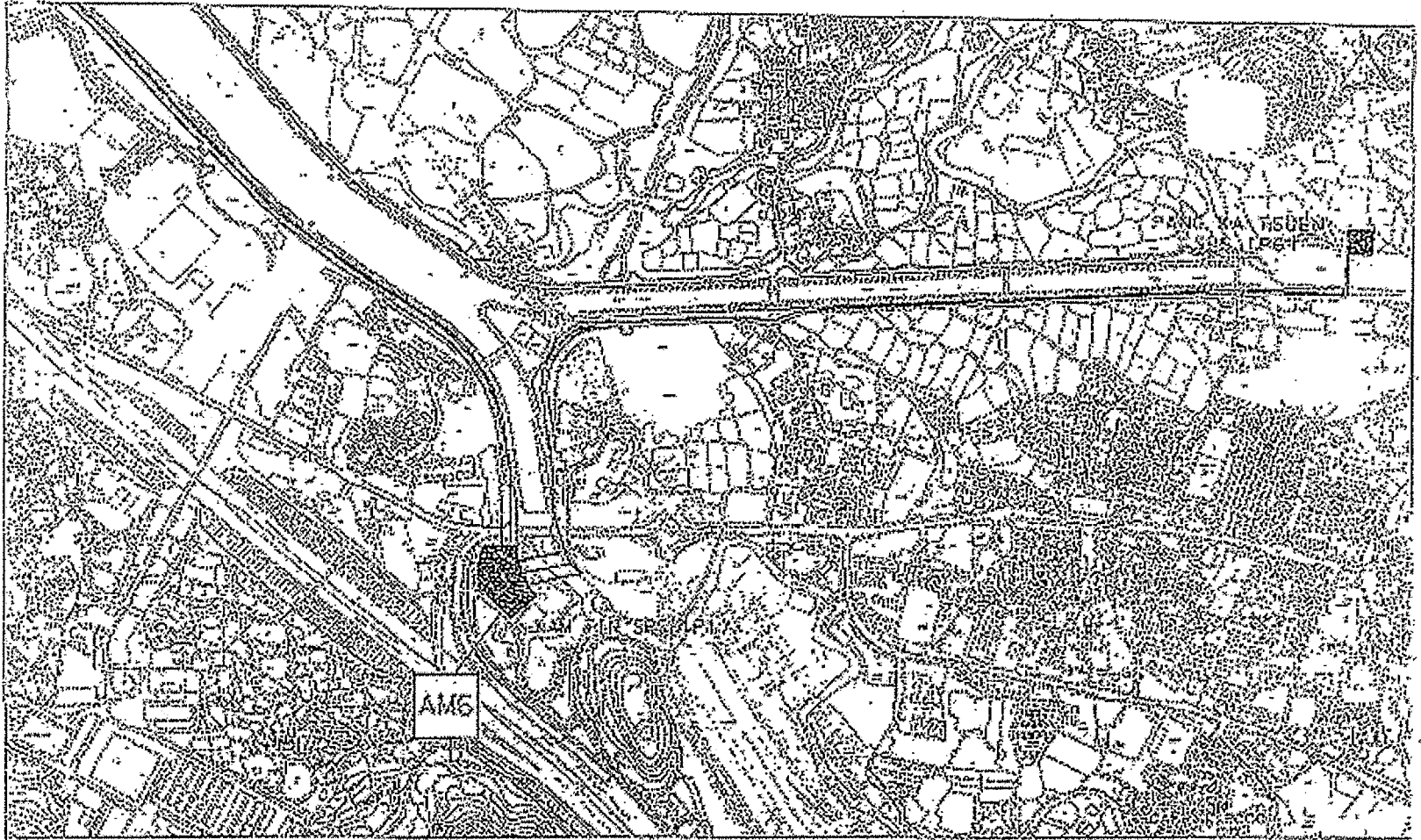


FIGURE 2A

LOCATION OF DUST MONITORING STATIONS (AMS, AMS & AMS)

DATE: 10/10/1981
SCALE: 1:10,000

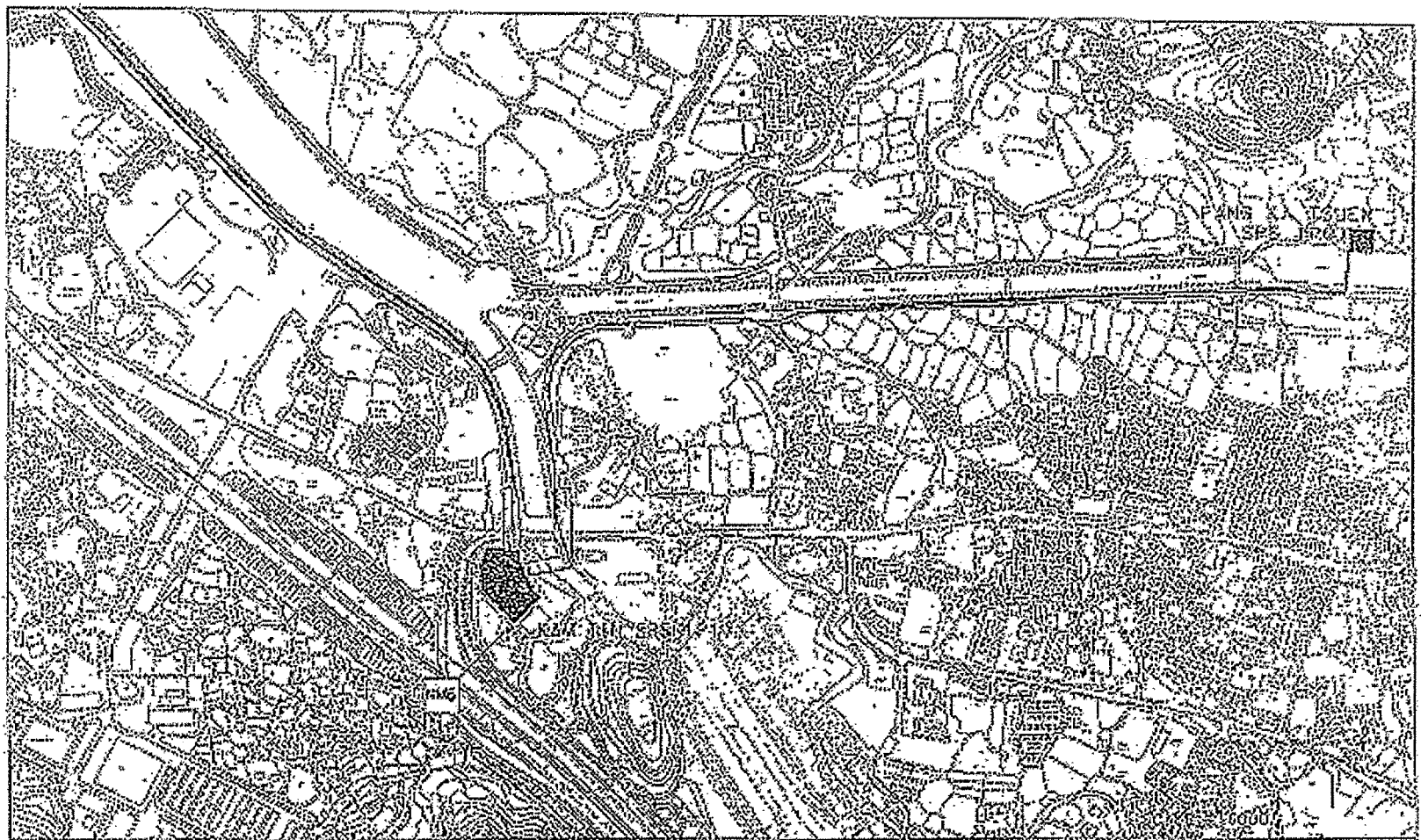


FIGURE 2)

LOCATION OF NOISE MONITORING STATIONS (SMB1, SMB2, SMB3)

MIN 1964 REPERMANENT-OF
BUREAU ENGINEER

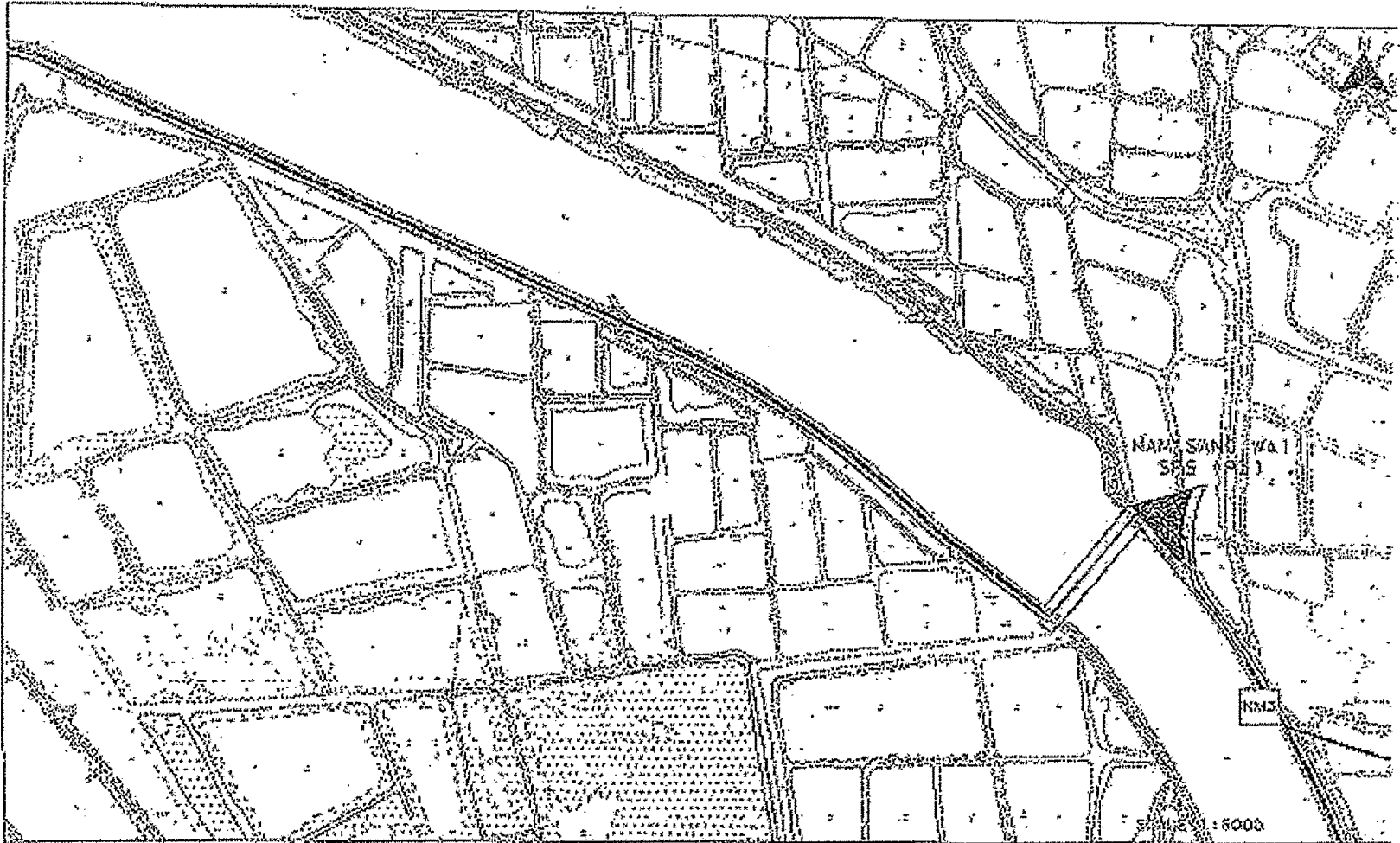


FIGURE 66

LOCATION OF NOISE MONITORING STATIONS TRU3, RVE1

U.S. GEOLOGICAL SURVEY
 WATER RESOURCES DIVISION

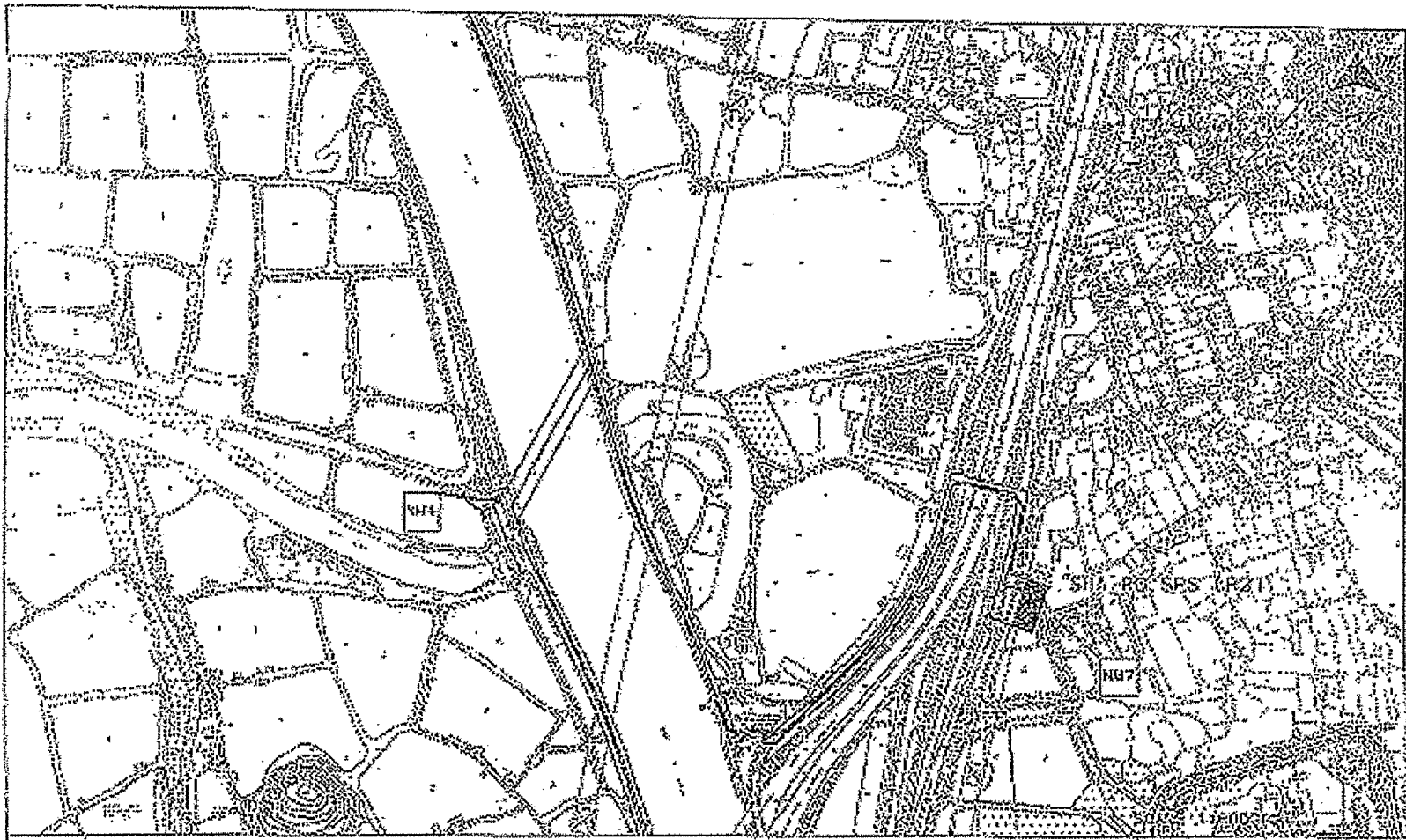


FIGURE C9.

LOCATION OF NOISE MONITORING STATIONS (144- 147)

ENVIRONMENTAL
SOUND CONSULTANTS

Annex F

Event and Action Plan

Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION			
	ET Leader	IEC	Engineer	Contractor
<i>Action Level</i>				
Exceedance for one sample	<ol style="list-style-type: none"> Identify source (s) of exceedance and inform IEC, Contractor and Engineer Repeat dust measurements to confirm findings Increase monitoring frequency to daily Assess efficacy of remedial measures and keep the Contractor, IEC, and Engineer informed 	<ol style="list-style-type: none"> Check monitoring data submitted by ET Check monitoring data trends and Contractors working methods Check and confirm Contractors proposed remedial actions and working methods are appropriate 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Remind the Contractor of his contractual obligations and review the Contractor's working methods Discuss remedial actions with the Contractor and IEC Inform complainant of actions taken, if necessary 	<ol style="list-style-type: none"> Rectify any unacceptable practice Liaise with Engineer and IEC to develop appropriate remedial measures to reduce dust impact Amend working methods and remedial proposals if required by the Engineer or IEC Implement the agreed remedial actions upon instruction from the Engineer and IEC
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> Identify source (s) of exceedance and inform IEC, Contractor and Engineer Repeat measurements to confirm findings Increase the monitoring frequency to daily to assess the efficacy of remedial measures and keep the Contractor informed Discuss remedial actions with IEC and Contractor If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions If exceedance stops, inform the Contractor and cease additional monitoring 	<ol style="list-style-type: none"> Check monitoring data submitted by ET Check monitoring data trends and Contractors working methods Discuss with Contractor and Engineer on possible remedial measures Check and confirm Contractors proposed remedial measures are appropriate Determine the efficacy of remedial actions and keep the Engineer informed 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Remind the Contractor of his contractual obligations and review the Contractor's working methods Discuss remedial actions with the Contractor and IEC Ensure remedial measures are properly implemented Inform complainant of actions taken, if necessary. 	<ol style="list-style-type: none"> Rectify any unacceptable practice, if possible Submit proposals for remedial actions to Engineer and IEC within three working days of notification Discuss and amend remedial actions, if required, by the Engineer and IEC 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
<i>Limit Level</i>				

Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION			
	ET Leader	IEC	Engineer	Contractor
Exceedance for one sample	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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
<p><i>Limit Level</i></p> <p>Exceedance for one sample</p>	<ol style="list-style-type: none"> Identify source (s) of exceedance and inform IEC, Contractor and Engineer Repeat dust measurements to confirm findings If repeat measurements confirm exceedance, increase monitoring frequency to daily Assess efficacy of remedial measures and keep the Contractor, IEC, and Engineer informed If exceedance stops, inform Contractor and cease additional noise monitoring 	<ol style="list-style-type: none"> Check monitoring data submitted by ET Check monitoring data trends and Contractors working methods Check and confirm Contractors proposed remedial actions and working methods are appropriate 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Remind the Contractor of his contractual obligations and review the Contractor's working methods Discuss remedial actions with the Contractor and IEC Inform complainant of actions taken, if necessary 	<ol style="list-style-type: none"> Rectify any unacceptable practice Liaise with Engineer and IEC to develop appropriate remedial measures to reduce noise impact Amend working methods and remedial proposals if required by the Engineer or IEC Implement the agreed remedial actions upon instruction from the Engineer and IEC
<p>Exceedance for two or more consecutive samples</p>	<ol style="list-style-type: none"> Identify source (s) of exceedance and inform IEC, Contractor and Engineer Repeat measurements to confirm findings Increase the monitoring frequency to daily Discuss remedial actions with IEC, Engineer and the EPD Assess the efficacy of remedial measures and keep the Contractor informed If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions If exceedance stops, inform the Contractor and cease additional monitoring. 	<ol style="list-style-type: none"> Check monitoring data submitted by ET Check monitoring data trends and Contractors working methods Discuss with Contractor and Engineer on possible remedial measures Check and confirm Contractors proposed remedial measures are appropriate Determine the efficacy of remedial actions and keep the Engineer informed 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Remind the Contractor of his contractual obligations and review the Contractor's working methods Discuss remedial actions with the Contractor and IEC Ensure remedial measures are properly implemented If exceedance continues, instruct the Contractor to stop the relevant portion of work until the exceedance is abated Inform complainant of actions taken, if necessary. 	<ol style="list-style-type: none"> Rectify any unacceptable practice, if possible Submit proposals for remedial actions to Engineer and IEC within three working days of notification Discuss and amend remedial actions, if required, by the Engineer and IEC 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 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 Concern	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Dec	Q	Q	Dec	
CONSTRUCTION PHASE										
AIR QUALITY - Construction Phase										
		The following measures are enforceable under the <i>Air Pollution Control (Construction Dust) Regulations</i>								
3.5	A1	Site boundary and entrance <ul style="list-style-type: none"> 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), <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A2	Access Road <ul style="list-style-type: none"> 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), <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A3	Stockpiling of Dusty Materials <ul style="list-style-type: none"> 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), <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A4	Loading, unloading or transfer of dusty materials <ul style="list-style-type: none"> 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, <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A5	Use of vehicles <ul style="list-style-type: none"> 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), <i>Air Pollution Control (Construction</i>

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	CG	OP	Dec	
3.5	A6	<ul style="list-style-type: none"> where a vehicle leaving a construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle; 	To control potential dust impacts during material transportation.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			Dust) Regulations Part IV, Clause 21, (2), Air Pollution Control (Construction Dust) Regulations
3.5	A7	<p>Power-driven drilling, and cutting</p> <ul style="list-style-type: none"> water should be continuously sprayed on the surface where any mechanical breaking operation that causes dust emission is carried out, unless the process is accompanied by the operation of an effective dusty extraction and filtering device; 	To control potential dust impacts during mechanical breaking.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			Part IV, Clause 22, Air Pollution Control (Construction Dust) Regulations
3.5	A8	<p>Excavation and earth moving</p> <ul style="list-style-type: none"> the working area of excavation should be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet; 	To control potential dust impacts arising from excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			Part IV, Clause 24, Air Pollution Control (Construction Dust) Regulations
3.5	A9	<p>Construction of the superstructure of a building</p> <ul style="list-style-type: none"> 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 at 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	<ul style="list-style-type: none"> 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	AC	O	DEC	
		NOISE - Construction Phase								
4.7.1	B1	General Site Clearance – Demolition Works <ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997</i> (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
4.7.1	B2	Construction of Sewage Pumping Stations P1, P2 & P3 <ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997</i>, Adoption of temporary noise barrier, in the form of a site hoarding (with a superficial density of at least 20kg/m², with no substantial gaps), along the site boundary of the pumping station sites. 	To minimise potential noise impacts arising during the construction of P1, P2 & P3	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			Annex 5 of EIAO-TM
4.7.1	B3	Sewers and Rising Mains using Open Trench Method <ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997</i>, 	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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Measure / Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	C	O	Der	
4.7.1	B6	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. <i>Sewers and Rising Mains using Pipe Jacking Method</i>	activities.	line of sight: Throughout the full duration of the road opening activities.	The Contractor					Annex 5 of EIAO-TM
4.7.1	B7	<i>Road Pavement and Finishes</i> • Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997,</i>	To control potential noise impacts from PME during construction works	Site wide and throughout the full duration of the construction contract.			✓			
		WATER QUALITY - Construction Phase No water quality monitoring is required under this study.								
6.6.2	D1	WASTE - Construction Phase 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 (<i>Waste Disposal (Chemical Waste) (General) Regulations</i>); and • Dumping Licence (<i>Land (Miscellaneous Provisions) Ordinance (Cap 28)</i>)	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	✓	✓			<i>Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354), the Land (Miscellaneous Provisions) Ordinance (Cap 28)</i>

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	
6.6.2	D2	<p>Chemical Waste Chemical waste that is produced, as defined by Schedule 1 of the <i>Waste Disposal (Chemical Waste) (General) Regulation</i>, 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.</p>	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		✓			<i>Part II, (6) Waste Disposal (Chemical Waste) (General) Regulation</i>
6.6.2	D3	<p>Storage, Packaging and Labelling of Chemical Waste Containers used for storage of chemical wastes should:</p> <ul style="list-style-type: none"> 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		✓			<i>Part IV, (9, 10, 11 & 12) Waste Disposal (Chemical Waste) (General) Regulation</i>
6.6.2	D4	<p>Storage of chemical waste The storage area for chemical wastes should:</p> <ul style="list-style-type: none"> 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		✓			<i>Part IV, (13, 14, 15, 16, 17, & 18) Waste Disposal (Chemical Waste) (General) Regulation</i>

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	G	O	Dec	
		adequately separate								
6.6.2	D5	<p>Disposal of chemical waste</p> <ul style="list-style-type: none"> The Contractor should ensure that the disposal of chemical waste is via a licensed Waste Collector and in accordance with the <i>Waste Disposal (Chemical Waste) (General) Regulations</i>. <p><i>Management of Waste Disposal</i></p> <p>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 <i>Land (Miscellaneous Provisions) Ordinance (Cap28)</i> and the <i>Works Bureau Technical Circular No. 5/99</i>.</p>	<p>To control the disposal of chemical waste in accordance with the Regulations.</p> <p>To monitor the disposal of C&DM and solid wastes at public filling facilities and landfills and to control fly-tipping.</p>	<p>To be implemented at all worksites throughout the full duration of the construction phase.</p> <p>To be implemented at all worksites throughout the full duration of the construction phase.</p>	<p>The Contractor</p> <p>The Engineer/ Contractor</p>		✓			<p><i>Part IV, (20 -25) Waste Disposal (Chemical Waste) (General) Regulation</i></p> <p><i>Land (Miscellaneous Provisions) Ordinance (Cap 295) and Works Bureau Technical Circular No. 5/99.</i></p>
7.5.6	E1	<p>LAND CONTAMINATION- Construction Phase</p> <p>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.</p> <p>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</p>	<p>To determine the presence of soil and groundwater contamination and remedy any potential concerns to acceptable levels.</p>	<p>To be implemented before the commencement of the construction works.</p>	<p>To be Implemented by DSD or their sub-consultants at the Detailed Design Stage, depending upon when site access can be gained.</p>		✓			<p><i>EIAO TM Annex 19/3.1.1 & 3.1.2</i></p>

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des.	C.	O.	Dec.	
		EPD, the contaminated site(s) shall be remediated in accordance with the approved CAR/RAP.								
8.7.1	F1	<p>ECOLOGY - Construction Phase Mitigation Measures Adopted - Avoidance Construction activities shall be prohibited during the winter season (November to March) along the section of the proposed sewerage alignment, which fall within the Deep Bay Wetland Conservation Area and the Deep Bay Wetland Buffer Area (WCA and WBA) and close to the locations of ecologically sensitive species (including Intermediate Egret, Black-faced Spoonbill, Buzzard, Imperial Eagle and Avocet). (See Figure 8.7a attached). Regular site inspections (at least twice a month) should be conducted by the Environmental Team during the winter season (November to March) to ensure proper implementation of this restriction</p>	To schedule construction works in order to minimise potential impacts to winter visiting birds. To be confirmed by regular site inspections.	At identified location (Figure 8.7a) for the full duration of the construction contract.	The Contractor		✓			
8.7.2	F2	<p>Mitigation Measures Adopted - Minimisation Pipe jacking method should be used instead of dredging where sewers and rising mains cross over existing MDC within the WCA and WBA.</p>	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	<p>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.</p> <p>The site inspections shall check and report the number of workfronts and implementation of</p>	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 Measure	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des	C	O	Dec	
8.7.3	F5	mitigation measures (i.e. erection of movable noise barriers with a suitable footing along the sites) in the monthly EM&A reports. <i>Mitigation Measures Adopted</i> 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.	Con.	Op.	Dec.	
8.7.4	F7	construction and provide temporary fire fighting equipment in the work areas. No filling and dumping to the remaining abandoned fishpond at P2.	minimising potential damage to trees and shrubs. To avoid disturbance to abandoned fishponds from construction activities and illegal dumping.	the full duration of the construction contract. At P2 for full duration of the construction contract	The Contractor		✓			(Open Burning) Regulation
8.7.4	F8	Installation and operation of silt removal facilities at construction sites of P1 to P3. The silt removal facilities should be designed in accordance with Appendix A1 of ProPECC Note PN1/94 Construction Site Drainage.	To install silt removal facilities in potentially impact streams and ponds to prevent sedimentation.	At P1 to P3 for full duration of the construction contract.	The Contractor		✓			
8.7.4	F9	No open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas.	To prohibit open fires, thereby minimising potential damage to trees and shrubs.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			Air Pollution Control (Open Burning) Regulation
		FISHERIES - Construction Phase No specific mitigation measures are required for inclusion in the EP.								
		CULTURAL HERITAGE - Not Applicable for Package 1A-1T (DC/2005/02)								
		LANDSCAPE AND VISUAL - Construction Phase								
	H1	The site inspections shall check and report the implementation of mitigation measures (i.e. top-soil are reused and new compensatory planting works are carried out immediately after the construction of the civil structure) in the monthly EM&A reports. The first monthly EM&A Report should also report the appearance of the temporary hoarding barriers.	To minimise potential landscape and visual impacts.	To be implemented during the construction phases of the project.	The Contractor		✓			
	H2	Prior to application for an Environmental Permit, a set of landscape plans and building elevations of the proposed pumping stations should be	To minimise potential landscape and visual impacts.	To be implemented during the design and construction phases of the	DSD and The Contractor	✓	✓			

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage				Relevant Legislation & Guidelines
						Des.	IC	O	De	
		submitted for approval by the EPD. The landscape plans and pumping station elevations should demonstrate that the following elements are considered: <ul style="list-style-type: none"> existing landscape elements (such as mature trees), transplantation of valuable trees, new compensatory planting 		project.						
		<ul style="list-style-type: none"> incorporate information on materials, details and textures so as to be as visually recessive as possible and in a style that fits with the surrounding village buildings. colour should be of low chromatic intensity to reduce the potential contrast between the structures and their background. The external finishing of the Pumping Stations shall be designed in conjunction with the landscape scheme. a minimum screen planting of 3m width and use of trees with a dense canopy of up to 5 m in height subject to constraints such as engineering and land availability. felling of mature trees are kept to a minimum. 								
3.7	11	EM&A REQUIREMENTS - Construction Phase Air Quality Subject to the Environmental Protection Departments (EPDs) agreement, construction phase dust monitoring shall be undertaken at the following locations in accordance with the recommendations of the EIA. <ul style="list-style-type: none"> 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		✓			<i>Air Pollution Control (Construction Dust) Regulations</i>

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	
4.9.1	12	<ul style="list-style-type: none"> at any additional locations, where considered necessary, in agreement with EPD. <p>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.</p> <ul style="list-style-type: none"> (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

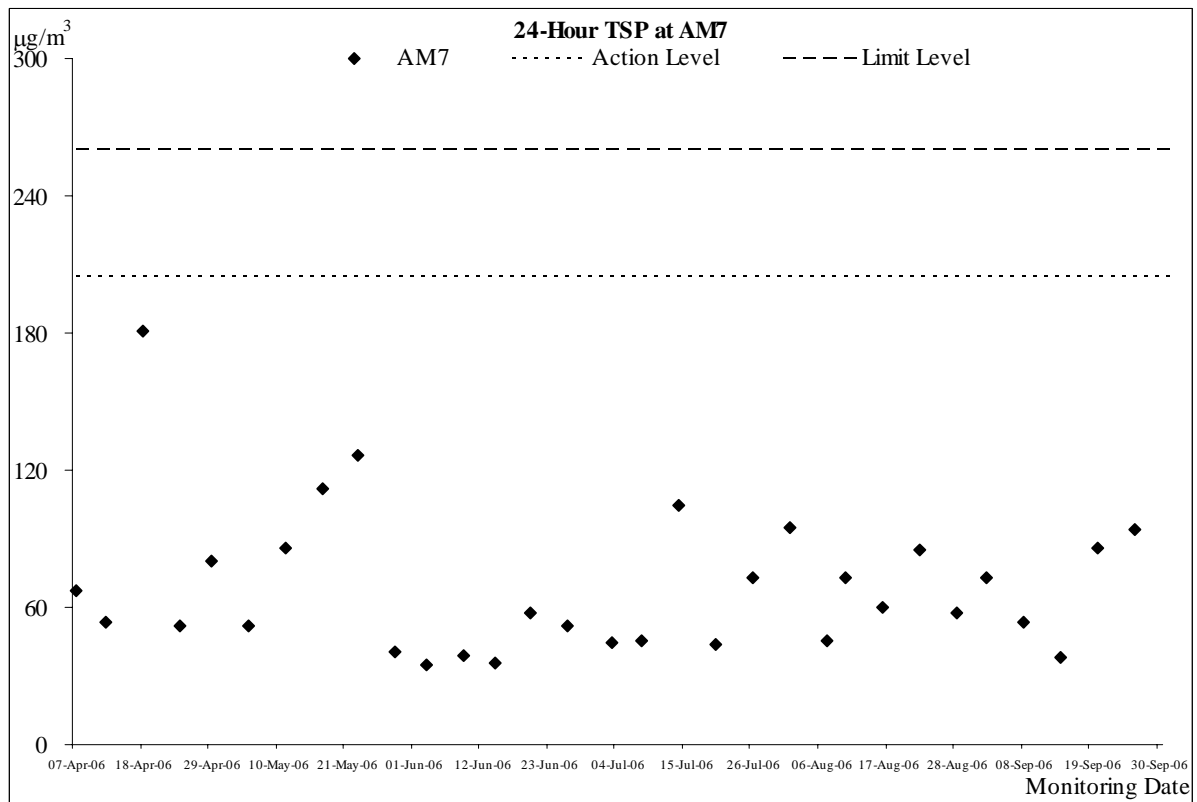
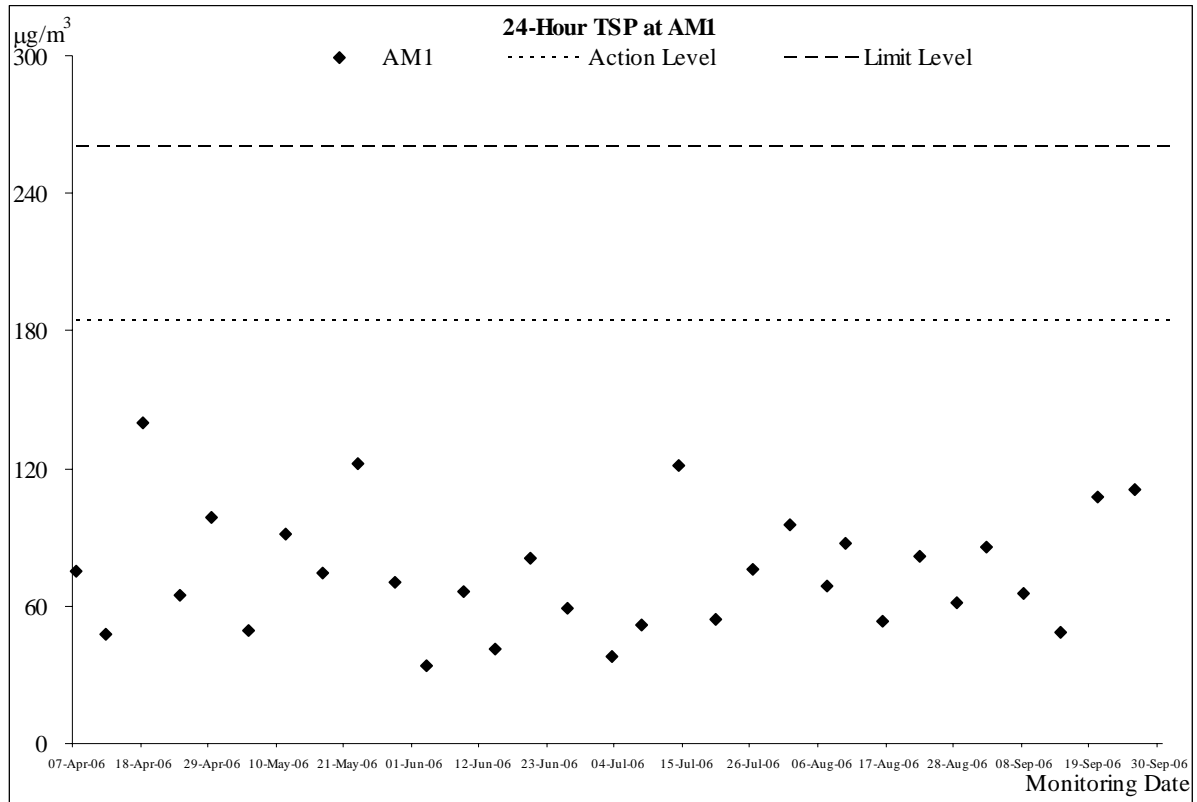
**Monitoring Results & Graphical Plots of Air Quality
and
Noise Monitoring Results**

Air Quality Monitoring Results & Graphical Plot

Date	24-Hr TSP (ug/m ³)	
	AM1	AM7
7-Apr-06	75	67
12-Apr-06	48	53
18-Apr-06	140 (Note 1)	181 (Note 1)
24-Apr-06	65	52
29-Apr-06	99	80
5-May-06	49	52
11-May-06	91	86
17-May-06	74	112
23-May-06	122	126
29-May-06	71	41
3-Jun-06	34	35
9-Jun-06	67	39
14-Jun-06	41	36
20-Jun-06	81	58
26-Jun-06	59	52
3-Jul-06	38	45
8-Jul-06	52	46
14-Jul-06	121	105
20-Jul-06	55	43
26-Jul-06	76	73
1-Aug-06	96	95
7-Aug-06	69	45
10-Aug-06	87	73
16-Aug-06	53	60
22-Aug-06	82	85
28-Aug-06	61	57
2-Sep-06	85	73
8-Sep-06	65	54
14-Sep-06	49	38
20-Sep-06	108	86
Average (Range)	75 (34 - 140)	69 (35 - 181)

All 24-Hr TSP monitoring were preset to start at 00:00 on each monitoring date.

Note 1: There was no AL exceedance recorded and the elevated levels are still within the baseline range. No noticeable dust source was observed at the time of monitoring and the weather condition on that day was sunny/moderate with API 62 recorded. The elevated levels at both monitoring locations are likely to be due to the ambient air conditions.



Construction Noise Monitoring Results & Graphical Plot

Noise Monitoring Results at NM3

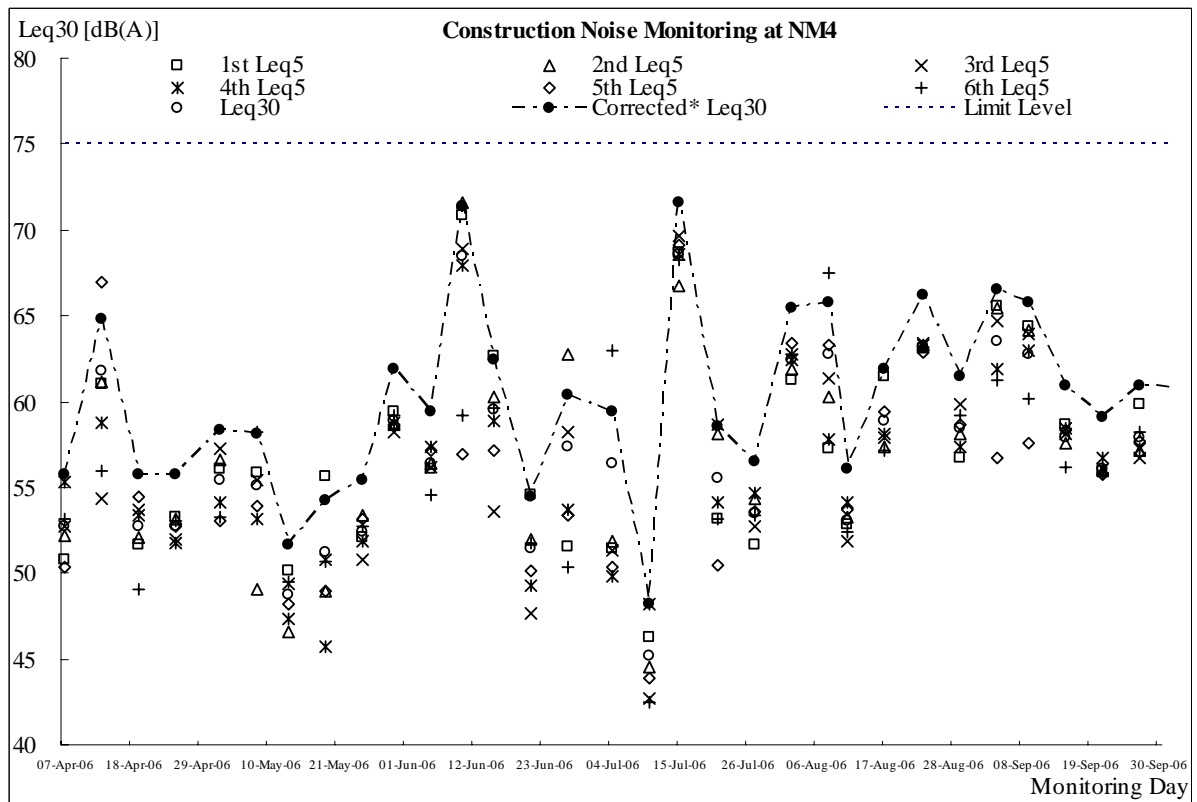
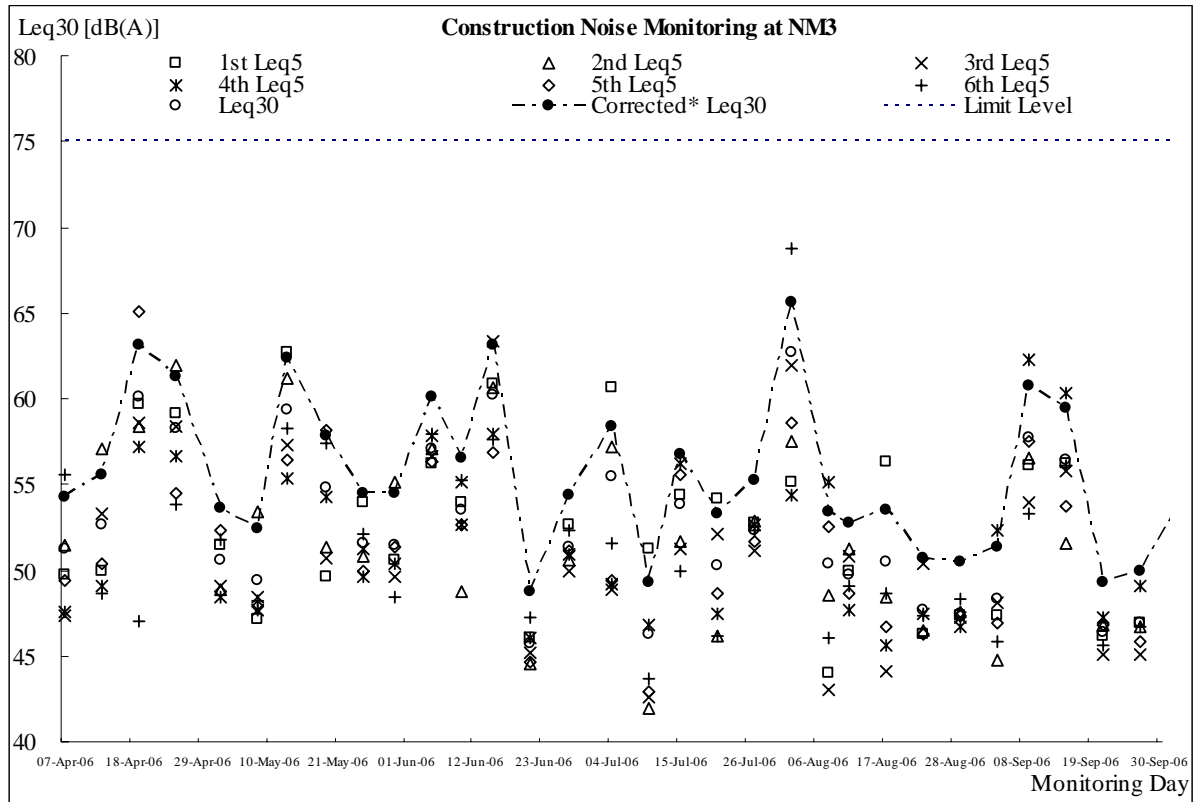
Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
7-Apr-06	14:35	49.7	51.5	47.4	47.6	49.4	55.6	51	54
13-Apr-06	13:09	50.0	57.1	53.3	49.1	50.4	48.7	53	56
19-Apr-06	13:02	59.7	58.4	58.6	57.2	65.1	47.0	60	63
25-Apr-06	09:37	59.1	62.0	58.4	56.7	54.5	53.8	58	61
2-May-06	15:01	51.5	48.9	49.1	48.4	52.3	51.8	50.6	53.6
8-May-06	13:18	47.1	53.4	48.4	47.7	47.9	48.2	49.4	52.4
13-May-06	10:46	62.7	61.2	57.3	55.3	56.4	58.3	59.4	62.4
19-May-06	13:47	49.6	51.3	50.7	54.3	58.2	57.4	54.8	57.8
25-May-06	14:03	54	50.8	51.2	49.6	49.9	52.1	51.5	54.5
30-May-06	14:04	50.6	55.1	49.6	50.4	51.3	48.4	51.5	54.5
5-Jun-06	15:08	56.2	57.1	56.6	57.8	56.3	58.0	57.1	60.1
10-Jun-06	13:58	53.9	48.8	55.1	52.6	52.7	55.2	53.5	56.5
15-Jun-06	13:49	60.9	60.6	63.4	58.0	56.9	57.6	60.2	63.2
21-Jun-06	13:01	46.1	44.5	45.2	46.1	44.6	47.2	45.7	48.7
27-Jun-06	10:18	52.6	50.6	50	50.9	51.1	52.3	51.3	54.3
4-Jul-06	13:47	60.7	57.2	48.9	49.2	49.4	51.6	55.4	58.4
10-Jul-06	14:31	51.2	42.0	42.6	46.8	42.9	43.7	46.3	49.3
15-Jul-06	10:16	54.4	51.7	51.2	56.2	55.6	50.0	53.8	56.8
21-Jul-06	14:16	54.2	46.2	52.1	47.5	48.6	46.2	50.3	53.3
27-Jul-06	10:28	52.8	52.9	51.1	52.6	51.7	52.3	52.3	55.3
2-Aug-06	10:43	55	58	62	54	59	69	63	66
8-Aug-06	10:02	44	49	43	55	53	46	50	53
11-Aug-06	14:33	50	51	51	48	49	49	50	53
17-Aug-06	10:14	56	48	44	46	47	49	51	54
23-Aug-06	10:17	46	47	50	48	46	47	48	51
29-Aug-06	09:55	47	48	47	47	47	48	47	50
04-Sep-06	11:01	47.4	44.8	48.1	52.3	46.9	45.8	48.3	51.3
09-Sep-06	11:19	56.1	56.5	53.9	62.3	57.5	53.3	57.7	60.7
15-Sep-06	13:48	56.2	51.6	55.8	60.3	53.7	56.1	56.5	59.5
21-Sep-06	13:47	46.2	46.8	45.1	47.2	46.8	45.6	46.3	49.3
Limit Level									75

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

Noise Monitoring Results at NM4

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
7-Apr-06	14:12	50.8	52.2	52.7	55.3	50.3	53.1	53	56
13-Apr-06	11:10	61.0	61.1	54.3	58.8	67.0	56.0	62	65
19-Apr-06	15:03	51.6	52.1	53.7	53.4	54.4	49.1	53	56
25-Apr-06	09:12	53.3	53.2	52.0	51.8	52.7	53.0	53	56
2-May-06	14:52	56.1	56.6	57.3	54.1	53	53.3	55.4	58.4
8-May-06	13:09	55.9	49.1	55.4	53.2	53.9	58.2	55.1	58.1
13-May-06	10:21	50.1	46.6	49.4	47.3	48.2	49.5	48.7	51.7
19-May-06	13:06	55.6	48.9	50.8	45.7	48.9	50.7	51.2	54.2
25-May-06	14:09	52.1	53.4	50.8	51.9	53.2	52.7	52.4	55.4
30-May-06	14:31	59.4	58.7	58.2	58.8	58.7	59.2	58.9	61.9
5-Jun-06	15:24	56.1	56.4	56.2	57.4	57.1	54.6	56.4	59.4
10-Jun-06	14:11	70.8	71.6	68.9	67.9	56.9	59.2	68.4	71.4
15-Jun-06	13:09	62.6	60.3	53.6	58.9	57.1	59.6	59.5	62.5
21-Jun-06	11:27	54.6	52	47.7	49.3	50.1	51.7	51.5	54.5
27-Jun-06	09:41	51.5	62.8	58.2	53.7	53.4	50.4	57.4	60.4
4-Jul-06	14:31	51.4	51.9	51.3	49.8	50.3	63.0	56.4	59.4
10-Jul-06	13:56	46.2	44.5	42.7	48.2	43.9	42.5	45.2	48.2
15-Jul-06	09:41	68.7	66.7	69.6	68.6	69.1	68.2	68.6	71.6
21-Jul-06	13:42	53.2	58.1	58.6	54.1	50.5	53.1	55.5	58.5
27-Jul-06	09:53	51.6	54.3	52.7	54.7	53.6	53.4	53.5	56.5
2-Aug-06	10:07	61	62	63	62	63	63	62	65
8-Aug-06	09:25	57	60	61	58	63	68	63	66
11-Aug-06	13:55	53	53	52	54	54	52	53	56
17-Aug-06	09:38	62	57	58	58	59	57	59	62
23-Aug-06	09:34	63	63	63	63	63	63	63	66
29-Aug-06	09:16	57	58	60	57	59	59	58	61
4-Sep-06	10:20	65.6	65.4	64.7	61.9	56.7	61.2	63.5	66.5
9-Sep-06	10:38	64.4	64.1	63.9	63	57.6	60.2	62.8	65.8
15-Sep-06	13:11	58.6	57.6	58.1	58.4	58.3	56.2	57.9	60.9
21-Sep-06	13:09	56	56	56.1	56.7	55.7	55.8	56.1	59.1
Limit Level									75

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



Annex I
Meteorological Data in the Reporting Period

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

April 2006

Date		Weather	Total Rainfall (mm)	Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative (%)	Wind Direction
1-Apr-06	Sat	sunny/ moderate	Trace	24.6	15	90	E/SE
2-Apr-06	Sun	sunny/ mist/ rain	0.1	23.1	8	85	SW/W
3-Apr-06	Mon	fine/ haze/ cloudy/ moderate	Trace	25.4	21	95	SE/S
4-Apr-06	Tue	cloudy/ sunny/ moderate	-	26.4	12	90	SE/S
5-Apr-06	Wed	sunny/ moderate	-	27	12	90	S/SW
6-Apr-06	Thu	cloudy/ rain/ moderate	Trace	25.7	15	95	NE/E
7-Apr-06	Fri	misty/ rain/ sunny/ cloudy	Trace	21.8	15	95	E
8-Apr-06	Sat	sunny/ cloudy/ moderate	-	22.8	12	90	E
9-Apr-06	Sun	misty/ sunny	Trace	24.8	25	90	SE/S
10-Apr-06	Mon	cloudy/ sunny/ showers	Trace	27.5	30	85	S/SW
11-Apr-06	Tue	hot/ sunny/ moderate	Trace	28.4	22	80	S/SW
12-Apr-06	Wed	sunny/ showers/ cloudy/ moderate	Trace	28.6	25	75	S/SW
13-Apr-06	Thu	cloudy	0.9	21.7	20	85	NW/N
14-Apr-06	Fri	cloudy	0.1	16.6	Holidays		
15-Apr-06	Sat	cloudy/ rain	1	14.5			
16-Apr-06	Sun	cloudy	Trace	16.3			
17-Apr-06	Mon	cloudy	-	19.9	12	65	E/SE
18-Apr-06	Tue	sunny/ cloudy/ moderate	-	24.1	15	85	E
19-Apr-06	Wed	fine/ haze	-	25.1	12	85	SW/W
20-Apr-06	Thu	cloudy/ moderate	0.2	25.4	21	85	E/SE
21-Apr-06	Fri	fine/ moderate	-	25.1	24	90	SE/S
22-Apr-06	Sat	fine/ cloudy/ moderate	-	27.3	15	90	SE/S
23-Apr-06	Sun	sunny/ showers	-	27.9	15	85	S/SW
24-Apr-06	Mon	cloudy/ moderate/ showers/ thunderstorms	109.4	25.7	19	95	SE/S
25-Apr-06	Tue	rain/ mist/ sunny	Trace	25.7	28	85	SE
26-Apr-06	Wed	cloudy/ moderate/ sunny/ showers	8	27.5	10	70	S/SW
27-Apr-06	Thu	cloudy/ showers/ moderate/ thunderstorms	11.9	27.7	25	90	S/SW
28-Apr-06	Fri	cloudy/ rain/ moderate	66	23.7	16	95	E
29-Apr-06	Sat	cloudy/ rain/ moderate	1.6	22.2	9	95	NE/E
30-Apr-06	Sun	sunny/ showers	-	25.7	-	-	-

May 2006

Date		Weather	Total Rainfall	Mean Air Temp.	Wind Speed	Mean Relative	Wind Direction
			(mm)	(°C)	(km/h)	(%)	
1-May-06	Mon	sunny/ showers	-	27.6	25	90	SW
2-May-06	Tue	cloudy/ showers/ moderate	70.1	26.7	20	95	S/SW
3-May-06	Wed	cloudy/ rain/ moderate/ thunderstorms	108.2	22.1	20	95	E/SE
4-May-06	Thu	cloudy/ misty/ bright/ moderate	0.2	25.4	6	95	E/SE
5-May-06	Fri	sunny/ showers	1.3	26.6	15	90	SE/E
6-May-06	Sat	fine/ hot/ moderate	-	28.3	20	85	S/SW
7-May-06	Sun	fine/ hot/ showers	-	28.2	13	85	SE/S
8-May-06	Mon	moderate/ fine/ hot/ showers	-	27.9	15	80	SE/S
9-May-06	Tue	fine/ hot/ moderate	-	28.8	24	90	S/SW
10-May-06	Wed	fine/ hot/ moderate	-	28.9	30	85	SW/W
11-May-06	Thu	cloudy/ moderate/ sunny/ showers	Trace	28.1	18	80	E/SE
12-May-06	Fri	cloudy/ sunny/ moderate	Trace	27.2	18	85	E
13-May-06	Sat	cloudy/ haze/ moderate	Trace	25.3	9	90	E/SE
14-May-06	Sun	sunny	Trace	23.5	17	50	NE/E
15-May-06	Mon	cloudy/ moderate/ showers/ sunny	Trace	24.1	20	60	NE/E
16-May-06	Tue	moderate/ cloudy/ showers	1.6	23.1	25	65	NE/E
17-May-06	Wed	gale/ cloudy/ showers	15	22.1	35	90	NW/N
18-May-06	Thu	fine/ moderate	Trace	25	25	75	NW/N
19-May-06	Fri	sunny/ dry/ fine/ moderate	-	25	15	50	E/SE
20-May-06	Sat	cloudy/ rain/ moderate	1	24.6	15	80	E/SE
21-May-06	Sun	cloudy/ rain	69.7	23.1	20	95	E/SE
22-May-06	Mon	showers/ cloudy/ thunderstorms	22.9	25.2	14	95	S
23-May-06	Tue	cloudy/ showers/ thunderstorms	30.9	25.3	3	95	SW/W
24-May-06	Wed	cloudy/ mist/ rain/ moderate	0.5	26.1	6	95	SE/S
25-May-06	Thu	cloudy/ sunny/ moderate	-	26.3	15	90	SE/S
26-May-06	Fri	cloudy/ showers/ sunny/ moderate	Trace	27.8	9	90	S/SW
27-May-06	Sat	moderate/cloudy/ rain/thunderstorms	5.5	25.9	15	95	S/SW
28-May-06	Sun	rain/ thunderstorms	59.7	23.6	10	95	W
29-May-06	Mon	cloudy/ rain/ moderate	4.2	21.3	10	95	NE/E
30-May-06	Tue	cloudy/moderate/ rain/thunderstorms	13	23.8	3	95	E
31-May-06	Wed	cloudy/ showers	27.7	26.1	20	85	S/SW

June 2006

Date		Weather	Total Rainfall (mm)	Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative (%)	Wind Direction
1-Jun-06	Thu	moderate/showers/ cloudy/thunderstorms	33.2	25.8	20	95	S/SW
2-Jun-06	Fri	cloudy/ moderate/ rain/ thunderstorms	80.2	25.8	9	100	S/SW
3-Jun-06	Sat	cloudy/thunderstorms/ showers/ moderate	0.6	26.6	18	95	S/SW
4-Jun-06	Sun	sunny/ showers	1.5	28.5	29	80	S/SW
5-Jun-06	Mon	cloudy/ showers/ sunny/ moderate	Trace	28.3	29	80	S/SW
6-Jun-06	Tue	cloudy/ showers/ sunny	0.8	28.7	30	85	S/SW
7-Jun-06	Wed	sunny/ showers	0.4	26.7	25	85	S/SW
8-Jun-06	Thu	cloudy/ showers/ thunderstorms	12.4	27.8	30	85	SW
9-Jun-06	Fri	rain/ thunderstorms/ moderate	136.7	25.3	5	100	SW
10-Jun-06	Sat	cloudy/ misty/ rain/ moderate	26.4	23.1	15	95	W/NW
11-Jun-06	Sun	cloudy/ showers/ thunderstorms	9.5	24.2	15	90	E/SE
12-Jun-06	Mon	cloudy/ moderate/ rain/ thunderstorms	9.4	23.9	12	95	E
13-Jun-06	Tue	cloudy/ showers/ sunny/ moderate	65.2	27.2	12	95	S
14-Jun-06	Wed	cloudy/ showers/ sunny/ moderate	0.4	28.3	19	85	S/SW
15-Jun-06	Thu	cloudy/thunderstorms/ moderate/ showers	0.2	28.1	15	90	S/SW
16-Jun-06	Fri	hot/ sunny/ showers/ moderate	0.1	29.2	10	85	SW/W
17-Jun-06	Sat	-	Trace	29	-		
18-Jun-06	Sun	-	Trace	28.6	10	90	E/SE
19-Jun-06	Mon	cloudy/ showers/ thunderstorms	0.6	25.2	10	95	NE/E
20-Jun-06	Tue	showers/ moderate/ sunny/ thunderstorms	Trace	26.3	9	95	E/SE
21-Jun-06	Wed	thunderstorms/cloudy/ moderate/ showers	10	27.6	9	95	SE/S
22-Jun-06	Thu	sunny/thunderstorms/moderate/showers	10.4	27.4	9	90	SE
23-Jun-06	Fri	fine/ moderate/ hot/ showers	1	28.5	6	75	SE/S
24-Jun-06	Sat	fine/ hot/ showers/ moderate	-	29.6	9	90	SE/S
25-Jun-06	Sun	fine/ hot/ showers	-	29.6	15	70	S
26-Jun-06	Mon	fine/ hot/ showers	-	29.7	12	75	SE/S
27-Jun-06	Tue	sunny/ showers/ thunderstorms	0.1	29.9	18	85	E/SE
28-Jun-06	Wed	cloudy/ showers/ thunderstorms	51	27.5	15	95	E
29-Jun-06	Thu	cloudy/thunderstorms/moderate/showers	16.6	27.4	30	85	SE
30-Jun-06	Fri	cloudy/ showers/ sunny/ moderate	2.5	29.6	14	85	SE

July 2006

Date		Weather	Total Rainfall	Mean Air Temp.	Wind Speed	Mean Relative	Wind Direction
			(mm)	(°C)	(km/h)	(%)	
1-Jul-06	Sat	sunny/ showers	2.9	29.8	Holiday		
2-Jul-06	Sun	sunny/ showers	5.3	29.4	12	85	E/SE
3-Jul-06	Mon	sunny/ showers/ moderate	6.3	29.7	15	85	SE
4-Jul-06	Tue	cloudy/ showers/ sunny/ moderate	14.8	28.4	15	85	SE
5-Jul-06	Wed	hot/ showers/ sunny/ moderate	1.5	29.6	15	90	SE/S
6-Jul-06	Thu	hot/ showers/ sunny/ moderate	2	29.6	14	85	SW
7-Jul-06	Fri	hot/thunderstorms/ sunny/showers	3.2	30.4	25	85	S/SW
8-Jul-06	Sat	cloudy/ showers/ moderate	19.5	28.7	12	85	SW
9-Jul-06	Sun	cloudy/ showers	7	27.7	15	90	SE/S
10-Jul-06	Mon	cloudy/ showers/ thunderstorms	6.8	29.1	15	90	SE/S
11-Jul-06	Tue	cloudy/ showers/ thunderstorms	32.3	28.3	12	90	SE/S
12-Jul-06	Wed	fine/ hot/ thunderstorms	-	29.4	21	90	SW/W
13-Jul-06	Thu	fine/hazy/hot/ showers/moderate	Trace	31.2	25	90	SW/W
14-Jul-06	Fri	sunny/ haze/ cloudy/ showers	0.2	31	25	80	SW
15-Jul-06	Sat	cloudy/ rain/ thunderstorms	7	27.9	40	95	SW
16-Jul-06	Sun	cloudy/ rain/ thunderstorms	195.6	26.7	24	95	S
17-Jul-06	Mon	cloudy/ showers	5.3	28.5	28	90	SE/S
18-Jul-06	Tue	showers/ hot/ sunny/ moderate	Trace	29.1	18	90	SE/S
19-Jul-06	Wed	fine/ hot/ showers/ moderate	Trace	28.9	9	90	SE
20-Jul-06	Thu	fine/ hot/ showers/ moderate	-	29.2	21	90	W
21-Jul-06	Fri	fine/ hot	-	29.2	18	70	SE
22-Jul-06	Sat	fine/ hot/ showers	-	29.5	6	90	E/SE
23-Jul-06	Sun	fine/ hot/ showers	Trace	30.2	21	70	W
24-Jul-06	Mon	fine/ hot/ showers	10.1	31	6	80	SW/W
25-Jul-06	Tue	hot/hazy/showers/ thundestorms	-	31.9	18	80	SW/W
26-Jul-06	Wed	cloudy/ rain/ thunderstorms	Trace	26.9	20	80	S/SW
27-Jul-06	Thu	cloudy/ rain/ thunderstorms	72.8	25.7	10	98	SE/S
28-Jul-06	Fri	cloudy/ showers/ thunderstorms	85.6	26.8	18	95	E/SE
29-Jul-06	Sat	cloudy/ showers/ thunerstorms	87.2	24.8	15	95	E
30-Jul-06	Sun	showery/ sunny	3.8	27.8	13	70	E/SE
31-Jul-06	Mon	fine/ hot/ moderate	Trace	29.2	19	85	E

August 2006

Date		Weather	Total Rainfall	Mean Air Temp.	Wind Speed	Mean Relative	Wind Direction
			(mm)	(°C)	(km/h)	(%)	
1-Aug-06	Tue	fine/ hot/ showers/ moderate	-	29	5	85	E/SE
2-Aug-06	Wed	cloudy/ showers	26	26.7	30	95	E
3-Aug-06	Thu	cloudy/ rain/ gale	54.2	25.6	40	90	E/SE
4-Aug-06	Fri	cloudy/ showers/ strong	18	27.7	25	85	SE
5-Aug-06	Sat	cloudy/ showers/ sunny/ moderate	5.9	27.4	11	30	E/SE
6-Aug-06	Sun	sunny/ showers	4.6	26.7	12	90	E/SE
7-Aug-06	Mon	fine/ hot	0.1	27.5	6	80	W
8-Aug-06	Tue	fine/ hot/ showers	-	27.6	6	85	SE/S
9-Aug-06	Wed	fine/ hot/ haze/ showers	Trace	28.6	6	85	SW/W
10-Aug-06	Thu	cloudy/ rain/ moderate	45.6	26.5	10	97	SW/W
11-Aug-06	Fri	cloudy/ showers/ moderate	3.7	28.3	15	80	E/SE
12-Aug-06	Sat	fine/ showers/ moderate	Trace	29.1	9	90	E/SE
13-Aug-06	Sun	fine/ hot	-	29.7	18	75	SE
14-Aug-06	Mon	fine/ showers/ hot/ moderate	-	29.6	9	90	E
15-Aug-06	Tue	fine/ hot/ showers/ moderate	-	28.7	12	75	E
16-Aug-06	Wed	fine/ hot/ showers/ moderate	-	29	9	80	SE/S
17-Aug-06	Thu	fine/ hot/ showers	-	29.3	9	85	SW/W
18-Aug-06	Fri	fine/ haze/ hot/ showers/ moderate	Trace	28.4	12	80	SW/W
19-Aug-06	Sat	fine/ hazy/ hot/ showers/ moderate	51.1	26.7	5	95	NW/N
20-Aug-06	Sun	fine/ hot/ hazy	0.1	28.1	12	90	SE/S
21-Aug-06	Mon	hazy/ hot/ showers/ sunny	-	29.5	9	90	E
22-Aug-06	Tue	fine/ hot/ hazy/ showers/moderate	Trace	29.2	9	90	E/SE
23-Aug-06	Wed	fine/ hazy/ showers/ moderate	-	29.2	9	85	SE/S
24-Aug-06	Thu	cloudy/thunderstorms/showers/moderate	38.8	27.6	12	90	E/SE
25-Aug-06	Fri	cloudy/ showers/ moderate	20.6	27.8	18	95	SE/S
26-Aug-06	Sat	cloudy/ showers/ sunny/ moderate	2.2	27.9	15	95	SE/S
27-Aug-06	Sun	sunny/ showers	2.3	28.1	9	85	E/SE
28-Aug-06	Mon	sunny/thunderstorms/moderate/showers	2.2	28.8	15	85	E/SE
29-Aug-06	Tue	fine/ showers/ moderate	Trace	29.4	21	65	SE/S
30-Aug-06	Wed	fine/ hot/ showers/ moderate	Trace	29.2	21	85	W
31-Aug-06	Thu	fine/ hot/ moderate	-	29.7	14	85	SW/W

September 2006

Date		Weather	Total Rainfall	Mean Air Temp.	Wind Speed	Mean Relative	Wind Direction
			(mm)	(°C)	(km/h)	(%)	
1-Sep-06	Fri	fine/ showers/ hot/ moderate	-	30	16	85	SW/W
2-Sep-06	Sat	hot/ showers/ sunny/ thunderstorms	Trace	30.3	9	90	SW/W
3-Sep-06	Sun	sunny/ showers	Trace	28.4	6	85	SW/W
4-Sep-06	Mon	cloudy/ showers/ thunderstorms	0.6	28.2	9	90	SE/S
5-Sep-06	Tue	hot/ sunny/ showers/ moderate	3.2	29.4	9	85	S/SW
6-Sep-06	Wed	showers/ sunny/ moderate	4.9	27.4	15	95	SW/W
7-Sep-06	Thu	cloudy/ showers/ thunderstorms	35.1	25.8	9	95	SE/S
8-Sep-06	Fri	cloudy/ showers/ thunderstorms	11.8	27.6	6	90	SE/S
9-Sep-06	Sat	-	92.4	25	-	-	-
10-Sep-06	Sun	-	3.5	23.5	23	75	N/NE
11-Sep-06	Mon	sunny/ cloudy/ moderate	Trace	23.5	20	80	N/NE
12-Sep-06	Tue	cloudy/ rain/ moderate	5	20.6	19	95	N/NE
13-Sep-06	Wed	cloudy/ rain/ thunderstorms	248.3	22.2	22	97	NE/E
14-Sep-06	Thu	cloudy/ showers/ moderate	12.9	26.1	12	90	E
15-Sep-06	Fri	hazy/ showers/ moderate/ sunny	1	27	15	95	NE/E
16-Sep-06	Sat	cloudy/ showers/ haze/ moderate	Trace	27	12	80	N/NE
17-Sep-06	Sun	fine/ haze/ showers	-	26	21	55	N/NE
18-Sep-06	Mon	sunny/ haze/ moderate	-	25.8	12	70	E
19-Sep-06	Tue	fine/ haze/ moderate	-	26.4	11	90	E
20-Sep-06	Wed	fine/ haze/ moderate	-	25.9	9	70	E/SE
21-Sep-06	Thu	fine/ dry/ moderate/ haze	-	26.7	6	75	E/SE
22-Sep-06	Fri	fine/ haze/ moderate	-	26.8	14	80	E/SE
23-Sep-06	Sat	fine/ dry	-	27.7	14	85	E
24-Sep-06	Sun	cloudy/ sunny/ rain	0.9	26	20	75	E/SE
25-Sep-06	Mon	cloudy/ sunny	Trace	27.1	19	75	E/SE