JOB NO.: TCS00310/06

VERSION NO.: 2

DRAINAGE SERVICES DEPARTMENT
CONTRACT NO.: DC/2005/02

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

MONTHLY ENVIRONMENTAL MONITORING & AUDIT (EM&A) REPORT FOR JULY 2010 (NO. 52) (DESIGNATED ELEMENTS)

PREPARED FOR

LEADER CIVIL ENGINEERING CORPORATION LIMITED

Quality Index

Date	Reference No.		
12 August 2010	TCS00310/06/600/R1111v2		
Prepared By	**Certified By**	**Approved By**	**Verified By**
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Version No.	Date	Remarks
1	9 August 2010	First Submission
2	12 August 2010	Amended against IEC's comments

EXECUTIVE SUMMARY

ES01. Leader Civil Engineering Corporation Limited (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project requires an Environmental Monitoring and Audit (EM&A) program to be implemented by an Environmental Team (ET) throughout the contract period in compliance with the requirements as stated in the project Environmental Permit (EP-220/2005) and the Project's Updated EM&A (Designated Elements) Manual.

ES02. This Monthly Environmental Monitoring and Audit (EM&A) Report for **July 2010 (No. 52)** presents the environmental impact monitoring and audit (EM&A) program conducted from **1 to 31 July 2010** for the Designated Elements. The EM&A program in **July 2010** covered air quality, construction noise and waste management only.

BREACH OF ACTION AND LIMIT (AL) LEVELS

ES03. There were no breaches of Action or Limit level for air monitoring in this reporting month.

ES04. No construction noise complaint (Action Level) or exceedance was recorded in this reporting month.

COMPLAINT LOG

ES05. No environmental complaint was received in this month.

NOTIFICATION OF ANY SUMMONS AND SUCCESSFUL PROSECUTION

ES06. There was no environmental summons or prosecution in this month.

REPORTING CHANGES

ES07. There are no changes in the reporting format or content in this month.

FUTURE KEY ISSUES

ES08. Construction activities to be undertaken in **August 2010** include concreting in Kam Tin Pumping Station (P1) only. Potential environmental impacts arising from the works include construction waste, air quality, noise and water quality (particularly site runoff during rainy seasons). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

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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 Monthly EM&A Report for **July 2010 (No. 52)** (Designated Elements – Construction Phase) summarizes the impact monitoring results and audit findings from **1 to 31 July 2010**.

PROJECT ORGANIZATION

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

CONSTRUCTION PROGRAM OF THIS MONTH

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

MANAGEMENT STRUCTURE

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

CONSTRUCTION ACTIVITIES UNDERTAKEN IN THIS MONTH

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

Location	Construction Activities					
	Sheet piling	Excavation	Pipe laying	Backfilling	Concreting	Extract Sheet Pile
Kam Tin Pumping Station(P1)				X	X	

2.0 ENVIRONMENTAL STATUS

WORKS UNDERTAKEN IN THIS MONTH

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

Table 2-1 Work Undertaken and Illustrations of Mitigation Measures

Locations	Description of Construction Activities	Environmental Mitigation Measures	EM&A Ref.
P1 (Kam Tin Pumping Station)	● Backfilling ● Concreting	• Erect 2.4m high noise barrier hoarding around the works area at P1, P2 and P3 • Remove dust and spray water at the construction access • Cover the stockpiles of dusty material properly • Spray water to all dusty materials immediately before loading and unloading	A1 & F6 A2 A3 A4
P2 (Sha Po Pumping Station) and	Nil	Nil	
P3 (Nam Sang Wai Pumping Station	Nil	Nil	
S4 (Nam Sang Wai Road) and	Nil	Nil	
S5 & S6 (Pok Wai South Road)	Nil	Nil	

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 monitoring stations (AM1, AM5, AM6 & AM7) and four noise monitoring stations (NM3, NM4, NM6 & NM7) under the project EP. Locations of the monitoring stations and description are summarized in **Table 2-2**.

Table 2-2 Description of the Monitoring Stations

Station ID	Nature of Premise	Site Work Description	Station Coordinates	
			Northern	Eastern
AM1	Site Boundary in NSW	excavation; sheet piling;	835829	822910
AM5	Site Boundary in FKH		835121	823515

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

Table 2-2 Description of the Monitoring Stations

Station ID	Nature of Premise	Site Work Description	Station Coordinates	
			Northern	Eastern
AM1	Site Boundary in NSW	excavation; sheet piling; backfilling; pipe laying; concreting; and extract sheet pile	835829	822910
AM5	Site Boundary in FKH		835121	823515
AM6	Site Boundary in KT		833308	823987
AM7	Site Boundary in NSW		836171	822586
NM3	Village House in NSW		835808	822817
NM4	Village House in NSW		835282	822811
NM6	Village House in KT		833288	823999
NM7	Village House in FKH		835121	823495

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 as the key monitoring parameters during the construction phase of the project.

3.02 A summary of the impact EM&A requirements for air quality and construction noise is shown in **Table 3-1**.

Table 3-1 Summary of EM&A Requirements

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

ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

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

Table 3-2 Action and Limit Levels for Air Quality

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

Table 3-3 Action and Limit Levels for Construction Noise

Monitoring Period	Action Level	Limit Level
0700-1900 hours on normal weekdays	When one or more documented complaints are received	> 75 dB(A)

EVENT AND ACTION PLANS

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

ENVIRONMENTAL MITIGATION MEASURES

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

ENVIRONMENTAL REQUIREMENTS IN CONTRACT DOCUMENTS

3.06 The environmental requirements in the contract documents generally refer to the compliance of the requirements as stipulated in the project EP (EP-220/2005) and the updated EM&A Manual.

4.0 IMPLEMENTATION STATUS

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

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

Table 4-1 Status of Environmental Licenses and Permits

Items	Item Description	License/Permit Status
1	Environmental Permit No.: EP-220/2005	Issued in June 2005
2	Air Pollution Control (Construction Dust)	Notified EPD on 24 Dec 2005
3	Chemical Waste Producer Registration (No. 5213-528-L2544-08)	Registration on 27 Jan 2006
4	Water Pollution Control (Discharge License No. 1U434/1)	Issued on 8 May 2006
5	Account for Disposal of Construction Waste No. 5004959	Registration on 27 Dec 2005

5.0 MONITORING RESULTS

MONITORING METHODOLOGY OF AIR QUALITY MONITORING

5.01 The 24-hour TSP monitoring was carried out by a High Volume Air Sampler (HVAS) in compliance with the updated EM&A Manual. The HVAS employed complies with the PS specifications including.

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

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

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

METHODOLOGY FOR CONSTRUCTION NOISE MONITORING

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

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

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

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

LABORATORY AND MONITORING EQUIPMENT USED

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

5.09 Monitoring equipment used in the impact EM&A program is presented in **Table 5-1**.

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

Env. Aspect	Parameters	Monitoring Equipment
Air Quality	24-hour TSP	Greasby Anderson GMWS2310 High Volume Air Sampler
Noise	Leq(30mins)	B&K Sound Level Meter (Type 2238) and Acoustics Calibrator (Type 4231)

EQUIPMENT CALIBRATION

5.10 Initial calibration of the HVAS was performed upon installation and thereafter at a six month intervals in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A). The calibration data are properly documented and the records are maintained by ET for future reference. HVAS of AM5 and AM6 was required calibration in this month, HVAS of AM5 and AM6 monitoring equipment required to calibrate in next month. Updated calibration certificate and schedule is shown in **Annex H**.

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

5.12 Calibration certificates of the sound level meters will provide depend on the annual calibration had undertaken.

PARAMETERS MONITORED

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

MONITORING LOCATIONS

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

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

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

MONITORING FREQUENCY AND PERIOD

5.15 The impact 24-hour TSP monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A Manual.

5.16 In this reporting period, a total of **5** monitoring days were scheduled at designated station AM1, AM5, AM6 and AM7. However, there are **13** events of unsuccessful 24-hour

monitoring due to the power failure of HVS occurred at AM1, AM6 and AM7.

MONITORING RESULTS AND SCHEDULE

5.17 Monitoring results in this month for air quality is summarized at **Table 5-3**.

Table 5-3 Summary of Air Quality Monitoring Results

Date	24-hour TSP (μg/m^3)			
	AM1	AM5	AM6	AM7
5-Jul-10	Power failure#	38	Power failure#	Power failure#
10-Jul-10	Power failure#	25	81	Power failure#
16-Jul-10	Power failure#	29	Power failure#	Power failure#
22-Jul-10	Power failure#	30	Power failure#	Power failure#
28-Jul-10	Power failure#	TBA	75	Power failure#
Average (Range)	NA	TBA	78 (75 – 81)	NA
Action / Limit	**> 184 / >260**	**> 237 / >260**	**> 183 / >260**	**> 204 / >260**

Note: All 24-hour TSP monitoring present was start at 00:00 on each monitoring date.
Monitoring was affected due to power failure.

5.18 In this reporting period, there were no breaches of Action/ Limit level in 24-hour TSP air monitoring. However, a total of **13** events of power failure incident were happened at Station AM1, AM6 and AM7 as presented in Table 5-3. The ET has liaised with the Contractor for the power supply provision issue.

5.19 Results of construction Noise monitoring in this month were summarized at **Tables 5-4 to 5-7**.

Table 5-4 Summary of Noise Monitoring Results at NM3

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected* Leq30
6-Jul-10	10:42	54.7	53.4	54.3	54.5	55.6	54.3	54.5	57.5
12-Jul-10	9:13	57.8	56.9	57.1	57.4	57.3	56.9	57.2	60.2
17-Jul-10	11:21	58.3	57.6	56.4	57.1	57.4	57.4	57.4	60.4
23-Jul-10	14:26	54.7	55.2	56.1	56.3	55.8	56.0	55.7	58.7
29-Jul-10	13:10	54.3	55.7	54.9	55.6	55.8	56.1	55.4	58.4
Limit Level									**75**

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

Table 5-5 Summary of Noise Monitoring Results at NM4

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected* Leq30
6-Jul-10	14:37	58.9	60.2	60.7	61.4	60.3	60.2	60.3	63.3
12-Jul-10	13:19	60.2	59.8	57.6	57.4	57.4	58.1	58.6	61.6
17-Jul-10	10:20	56.7	55.8	56.3	56.4	57.1	56.3	56.5	59.5
23-Jul-10	13:41	53.7	54.1	55.6	58.4	54.2	54.6	55.4	58.4
29-Jul-10	10:07	57.3	56.4	56.8	57.6	57.7	57.9	57.3	60.3
Limit Level									**75**

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

Table 5-6 Summary of Noise Monitoring Results at NM6

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30
6-Jul-10	13:09	67.8	68.2	67.9	68.0	68.4	67.7	68.0
12-Jul-10	13:04	67.4	66.2	67.1	66.9	66.4	66.7	66.8
17-Jul-10	13:15	68.2	67.4	67.6	67.9	68.4	68.1	67.9
23-Jul-10	13:06	67.4	68.2	67.9	67.9	68.3	68.6	68.1
29-Jul-10	13:14	66.2	67.0	66.8	66.7	66.3	66.5	66.6
Limit Level								**75**

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

Table 5-7 Summary of Noise Monitoring Results at NM7

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30
6-Jul-10	11:30	60.3	61.2	61.7	60.4	60.8	61.7	61.1
12-Jul-10	10:12	61.2	60.7	61.8	63.9	61.2	60.8	61.8
17-Jul-10	14:10	61.7	62.3	62.5	62.7	62.4	61.7	62.2
23-Jul-10	16:02	63.4	62.7	62.8	63.0	63.4	63.1	63.1
29-Jul-10	15:08	62.7	61.6	65.4	65.9	61.2	62.3	63.6
Limit Level								**75**

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

5.20 No construction noise complaint (Action Level) was received; and also construction noise monitoring above the Limit Level was recorded in this month.

5.21 The tentative monitoring schedule for the coming month (**August 2010**) is shown in **Table 5-8**.

Table 5-8 Tentative Schedule of Monitoring for Next Month

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

Fri	27-Aug-10		
Sat	28-Aug-10		
Sun	29-Aug-10		
Mon	30-Aug-10		
Tue	31-Aug-10		

	Monitoring Day
	Sunday or Public

WEATHER CONDITIONS DURING THE MONITORING MONTH

5.22 The meteorological data during the monitoring date are summarized in **Annex I**.

GRAPHICAL PLOTS OF TRENDS OF MONITORED PARAMETERS

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

WEATHER CONDITIONS THAT AFFECT THE MONITORING RESULTS

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

OTHER FACTORS INFLUENCING THE MONITORING RESULTS

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

QA/QC RESULTS AND DETECTION LIMITS

5.26 Not applicable.

6.0 REPORT ON NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

RECORD OF NON-COMPLIANCE OF ACTION AND LIMIT LEVELS

6.01 There were no breaches of Action or Limit level for air monitoring in this reporting month.

6.02 No construction noise complaint (Action Level) or monitoring noise level exceeding the Limit Level was recorded in this reporting month.

RECORD OF ENVIRONMENTAL COMPLAINTS RECEIVED

6.03 There were no environmental complaints received in this month.

RECORD OF NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTION

6.04 There were no notifications of summons or prosecutions received in this month.

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

6.05 No complaint, notification of summons or non-compliance was received in this month.

DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

6.06 As mention in Section 6.05, no non-compliance, complaints or notification of summons was received in this month. Therefore, no follow-up action was needed. The Contractor was reminded to implement the environmental mitigation measures as present in **Table 2-1** as necessary.

7.0 OTHERS

FUTURE KEY ISSUES

7.01 Construction activities to be undertaken in **August 2010** include concreting in Kam Tin Pumping Station (P1) only. Potential environmental impacts arising from the works include construction waste, air quality, noise and water quality (particularly site runoff during rainy seasons). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

SOLID AND LIQUID WASTE MANAGEMENT STATUS

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

Table 7-1 Summary of Waste Quantities for Disposal

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (tons) – Disposed	521	Tuen Mun 38 Fill Bank
C&D Materials (Inert) (tons) – Reused	0	DSD Contract DC/2005/02
C&D Materials (Non-Inert) (tons)	0	NA
Chemical Waste (kg)	200	License Collector
General Refuse (tons)	22	Refuse Collector

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

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

7.03 There was no site effluent discharged only the surface runoff was discharged in the month. The sampling of effluent had been carried out by the Contractor in compliance with the Discharge License (No.1U434/1) requirement in this month.

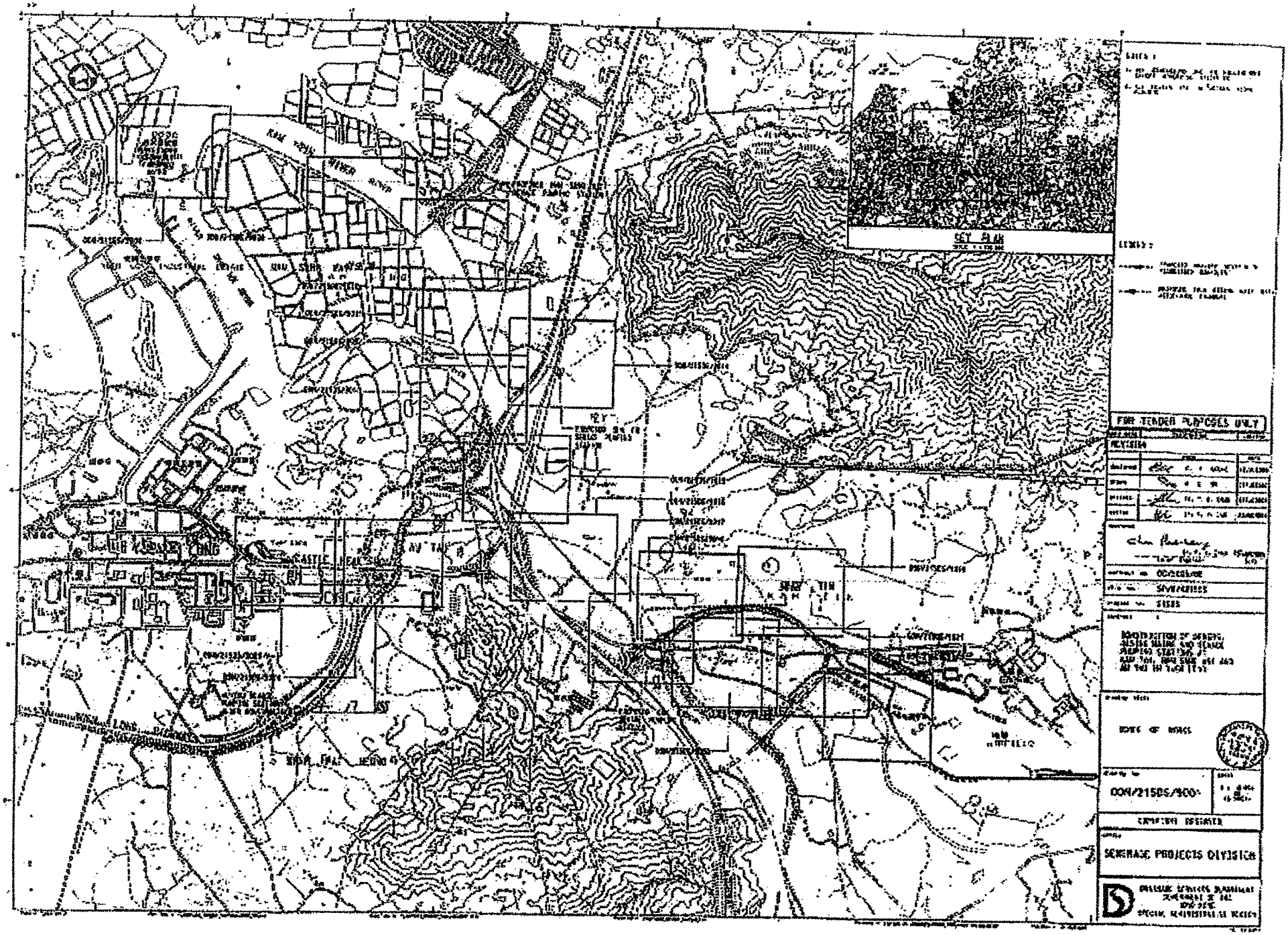
SUBMISSION OF PROFORMA

7.04 Representatives of the Engineer, the Contractor and ET carried out regular weekly site inspection on **8, 15, 20 and 27 July 2010** to evaluate the site environmental performance. No non-compliance was found in this month. **Three** observations were recorded from the ET weekly site inspections. The monthly site audit by the IEC in this reporting month was undertaken on **20 July 2010**. No non-compliance but **three** observations was issued by IEC.

7.05 Records of the weekly site inspection and joint IEC site audit are presented in **Annex K**.

ANNEX A

PROJECT SITE LAYOUT

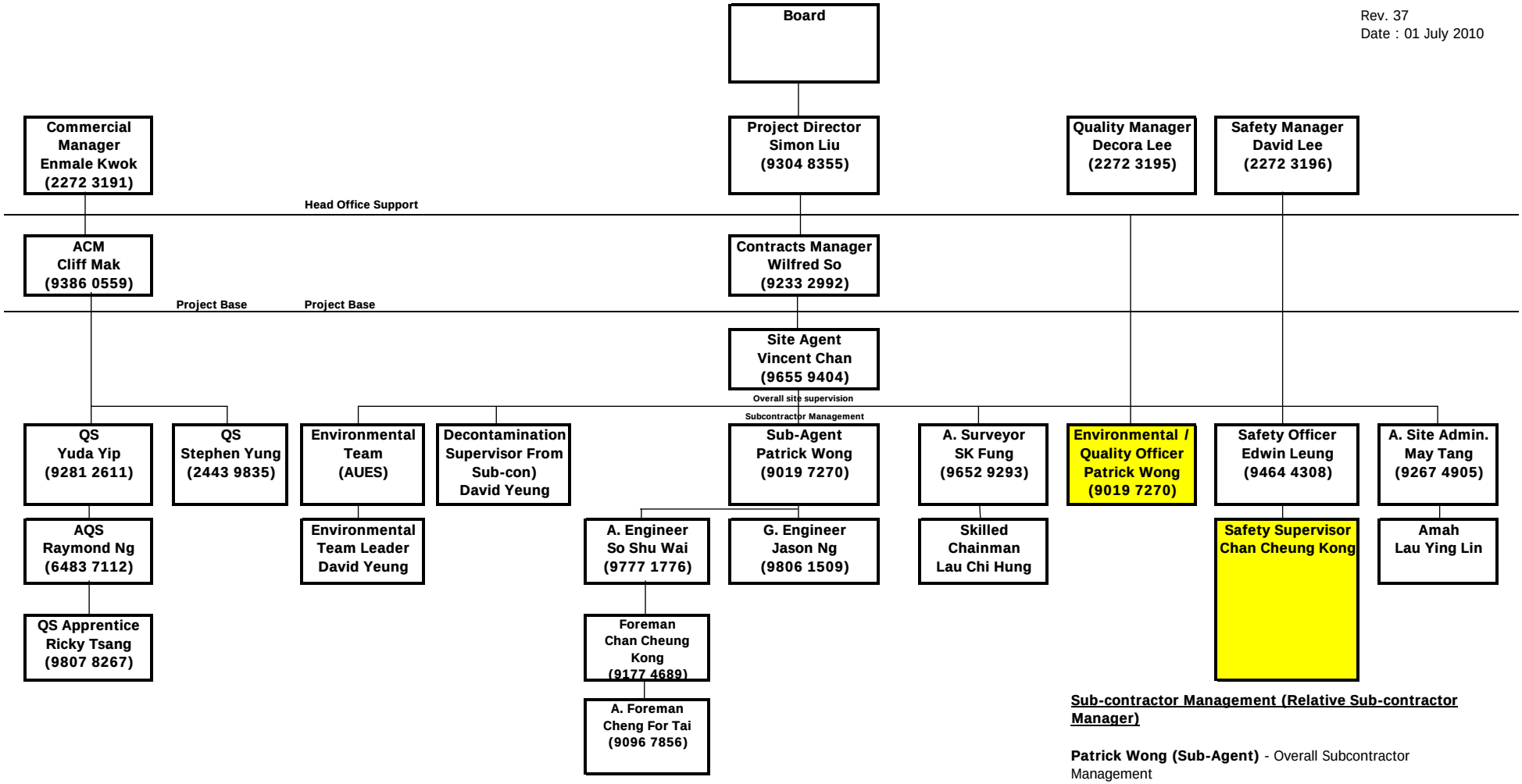

KEY PLAN
FOR TENDER PURPOSES ONLY
SEWERAGE PROJECTS DIVISION

ANNEX B

PROJECT ORGANIZATION AND MANAGEMENT STRUCTURE

DSD Contract No. DC/2005/02
Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin Nam Sang Wai and Au Tau in Yuen Long
Contractor's Site Organization Chart
(Internal Use Only)

Rev. 37
Date : 01 July 2010



Sub-contractor Management (Relative Sub-contractor Manager)

Patrick Wong (Sub-Agent) - Overall Subcontractor Management
Edwin Leung (Safety Officer) - Sub-contractor Safety Management

ANNEX C

CONSTRUCTION PROGRAM

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
Section Completion / Key Date								
CD9000	Handover of TOA	0	0	0		30MAR10		30MAR10 *
Section 1 - Kam Tin Sewage Pumping Station								
Portion A								
Fencing								
S1AD1000	Install Pedestrian Gate	2	0	0	28APR10	29APR10	28APR10	29APR10
S1AD1100	Install Vehicle Gates	6	0	0	21APR10	27APR10	21APR10	27APR10
S1AD1200	Install Chain Link Fence	4	0	0	16APR10	20APR10	16APR10	20APR10
S1AD1300	Install GMS Panel Fence	8	0	60	24SEP09 A	15APR10	24SEP09 A	15APR10
Drainage and Ducts								
Trench Method								
S1AEA1200	DN1050 Pipe & Manhole (P/S - Outfall)	20		100	20MAR10 A	21APR10 A	20MAR10 A	21APR10 A
S1AEA1400	Construct U-Channel & Catchpits	20	0	60	22APR10 A	30APR10	22APR10 A	30APR10
S1AEA1500	Lay Ducts & Construct Drawpits	14	0	0	22APR10	08MAY10	22APR10	08MAY10
S1AEA1900	CCTV Inspection of Pipeline	1	0	50	22APR10 A	22APR10	22APR10 A	22APR10
Pipework - Rising Main								
Trench Method								
S1AFA1000	Twin Rising Main DN700	20		100	15APR10 A	12APR10 A	15APR10 A	12APR10 A
Earthworks								
S1AG2700	Trim & Compact Formation of Paved Areas	6	0	90	05MAY10 A	05MAY10	05MAY10 A	05MAY10
Roads and Pavings								
S1AH1000	Lay 250mm Granular Fill Material Base	4		100	08MAY10 A	12MAY10 A	08MAY10 A	12MAY10 A
S1AH1100	Construct Concrete Paved Areas	18	0	20	13MAY10 A	29MAY10	13MAY10 A	29MAY10
S1AH1200	Lay Kerb	4	0	20	11MAY10 A	14MAY10	11MAY10 A	14MAY10
In-Situ Concrete								
S1AL2110	Construct Boundary Wall (stage 2)	10	0	50	31MAR10 A	10APR10	31MAR10 A	10APR10
Landscape Softworks and Establishment Works								
S1AR1000	Preparation Works	6	0	0	15MAY10	21MAY10	15MAY10	21MAY10
S1AR1100	Planting Works	12	0	0	22MAY10	04JUN10	22MAY10	04JUN10
Testing								
S1AS1000	Pressure Testing to Twin Rising Main DN700	12	0	50	01APR10 A	12APR10	01APR10 A	12APR10
Additonal Works / Disruption								
Combine A4/AIC10 (Claim No. 183)								

2006 2007 2008 2009 2010

Handover of TOA
Install Pedestrian
Install Vehicle Ga
Install Chain Link
Install GMS Panel
DN1050 Pipe & M
Construct U-Cha
Lay Ducts & Co
CCTV Inspection
Twin Rising Main
Trim & Compact
Lay 250mm Gra
Construct Co
Lay Kerb
Construct Boundar
Preparation W
Planting Work
Pressure Testing

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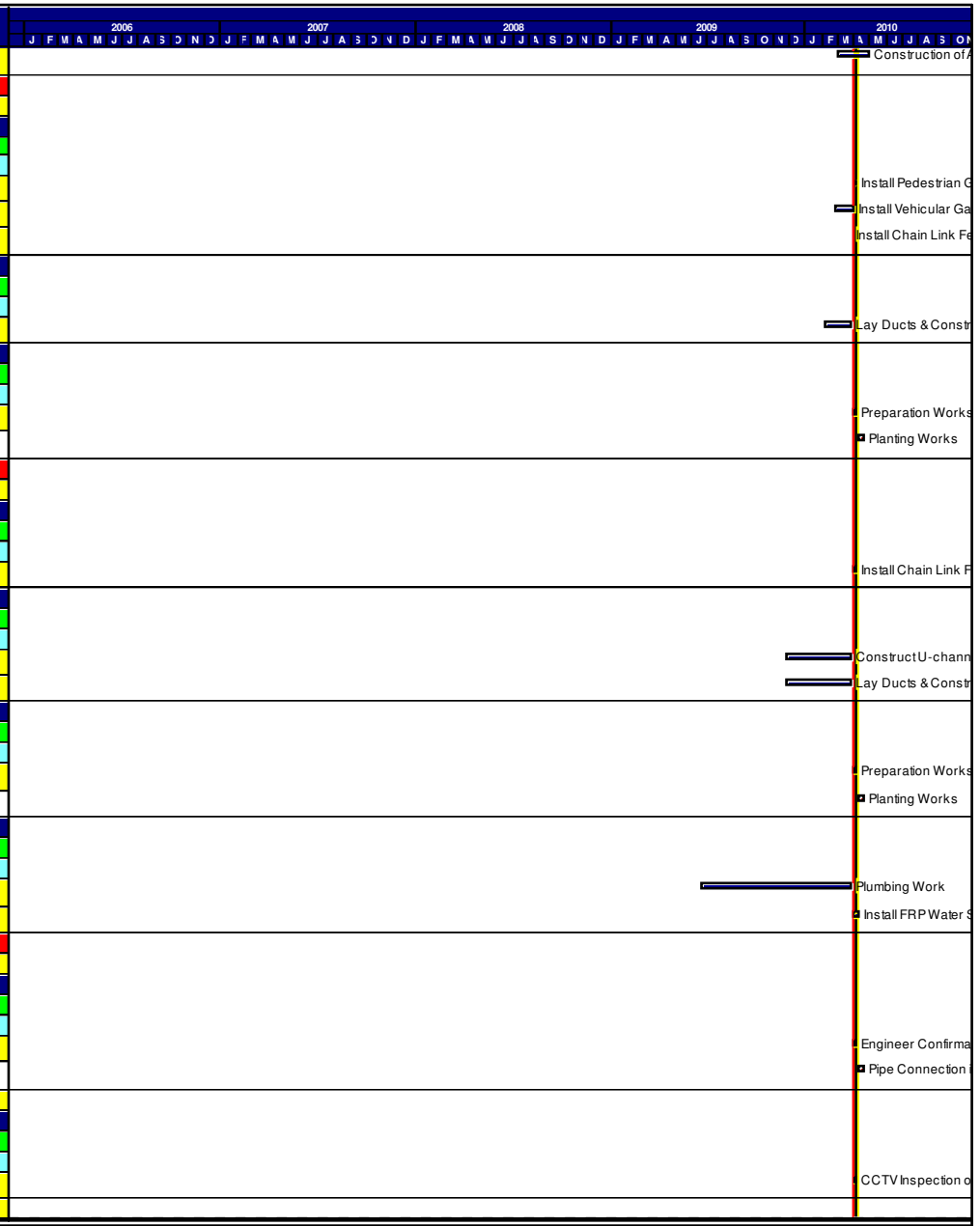
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S1AV1250	Construction of AIC13	30		100	01MAR10 A	03MAY10 A	01MAR10 A	03MAY10 A
Section 2 - Sha Po Sewage Pumping Station								
Portion B								
Fencing								
S2BD1000	Install Pedestrian Gates	4		100	03APR10 A	08APR10 A	03APR10 A	08APR10 A
S2BD1100	Install Vehicular Gates	6		100	26FEB10 A	02APR10 A	26FEB10 A	02APR10 A
S2BD1200	Install Chain Link Fence	2		100	31MAR10 A	01APR10 A	31MAR10 A	01APR10 A
Drainage and Ducts								
Trench Method								
S2BEA1300	Lay Ducts & Construct Drawpit	6		100	05FEB10 A	31MAR10 A	05FEB10 A	31MAR10 A
Landscape Softworks and Establishment Works								
S2BR1000	Preparation Works	6		100	01APR10 A	08APR10 A	01APR10 A	08APR10 A
S2BR1100	Planting Works	12	0	0	09APR10	22APR10	09APR10	22APR10
Section 3 - Nam Sang Wai Sewage Pumping Station								
Portion C								
Fencing								
S3CD1000	Install Chain Link Fence	4	0	0	02APR10	07APR10	02APR10	07APR10
Drainage and Ducts								
Trench Method								
S3CEA1500	Construct U-channel, Dish Channel & Catchpit	27		100	26NOV09 A	01APR10 A	26NOV09 A	01APR10 A
S3CEA1600	Lay Ducts & Construct Drawpit	6		100	26NOV09 A	01APR10 A	26NOV09 A	01APR10 A
Landscape Softworks and Establishment Works								
S3CR1000	Preparation Works	6		100	02APR10 A	09APR10 A	02APR10 A	09APR10 A
S3CR1100	Planting Works	12	0	0	10APR10	23APR10	10APR10	23APR10
Miscellaneous								
S3CT1300	Plumbing Work	24		100	18JUN09 A	31MAR10 A	18JUN09 A	31MAR10 A
S3CT1500	Install FRP Water Storage Tanks	12		100	31MAR10 A	14APR10 A	31MAR10 A	14APR10 A
Section 4 - Sewers & RM in Portion D, F, G, H, I								
Portion D								
Additonal Works / Disruption								
AIC2								
S4DV1630	Engineer Confirmation of Pipe Connection	7		100	31MAR10 A	08APR10 A	31MAR10 A	08APR10 A
S4DV1640	Pipe Connection in AIC2	12	0	0	09APR10	22APR10	09APR10	22APR10
Portion F								
Pipework - Rising Main								
Trench Method								
S4FFA2600	CCTV Inspection of Pipeline	8	0	50	31MAR10 A	09APR10	31MAR10 A	09APR10
Portion G								



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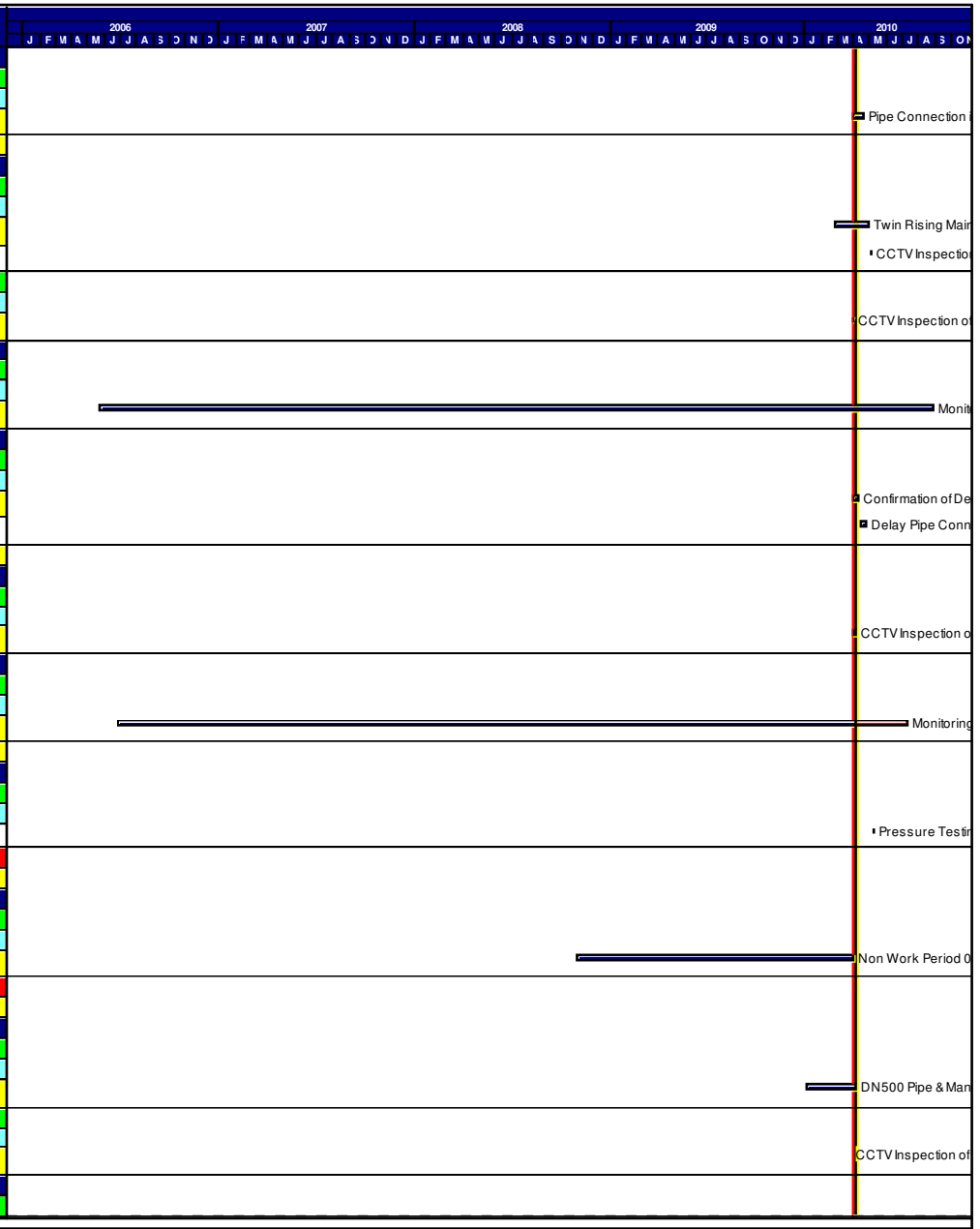
- Early bar
- Progress bar
- Critical bar
- Summary bar
- Start milestone point
- Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
Additonal Works / Disruption								
AIC6								
S4GV1040	Pipe Connection inside Chamber	20		100	31MAR10 A	23APR10 A	31MAR10 A	23APR10 A
Portion H								
Pipework - Rising Main								
Trench Method								
S4HFA2410	Twin Rising Main DN700 (ChC1550 - ChC1600)	45		100	25FEB10 A	04MAY10 A	25FEB10 A	04MAY10 A
S4HFA3600	CCTV Inspection of Pipeline	4	0	50	05MAY10 A	06MAY10	05MAY10 A	06MAY10
Trenchless Method								
S4HFB1300	CCTV Inspection of Pipeline	2		100	31MAR10 A	06APR10 A	31MAR10 A	06APR10 A
Geotechnical works								
S4HP1000	Monitoring of Instruments	947		100	26MAY06 A	03SEP10 A	26MAY06 A	03SEP10 A
Additonal Works / Disruption								
S4HV5050	Confirmation of Delay Pipe connection	14		100	31MAR10 A	16APR10 A	31MAR10 A	16APR10 A
S4HV5060	Delay Pipe Connection	10		100	17APR10 A	28APR10 A	17APR10 A	28APR10 A
Portion I								
Drainage and Ducts								
Trench Method								
S4IEA2500	CCTV Inspection of Pipeline	8		100	31MAR10 A	09APR10 A	31MAR10 A	09APR10 A
Geotechnical works								
S4IP1000	Monitoring of Instruments	827	0	90	28JUN06 A	13JUL10	28JUN06 A	13JUL10
Miscellaneous								
Testing								
S4PS1200	Pressure Testing to Twin Rising Main DN700	12	0	90	10MAY10 A	11MAY10	10MAY10 A	11MAY10
Section 5 - Sewers & RM in Portion E								
Portion E								
Preliminaries								
S5EA1300	Non Work Period 01 Nov 08 - 31 Mar 09	121		100	01NOV08 A	02APR10 A	01NOV08 A	02APR10 A
Section 6 - Sewers in Portion J								
Portion J								
Drainage and Ducts								
Trench Method								
S6JEA1000	DN500 Pipe & Manhole (C1 - D2) (Deleted SA2)	0		100	02JAN10 A	09APR10 A	02JAN10 A	09APR10 A
Trenchless Method								
S6JEB1300	CCTV Inspection of Pipeline	2	0	0	31MAR10	01APR10	31MAR10	01APR10
Geotechnical works								



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- Start milestone point
- Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
S6JP1000	Monitoring of Instruments	1152	0	98	21APR06 A	27APR10	21APR06 A	27APR10
Section 8 - Preservation and Protection of Trees								
All Portions								
Landscape Softworks and Establishment Works								
S8QR1100	Preservation & Protection of Preserved Trees	1192	0	95	29JUL06 A	15JUN10	29JUL06 A	15JUN10
Decontamination Works								
Portion F								
Decontamination								
S9FU1000	Decontamination Works	48		100	28AUG09 A	01APR10 A	28AUG09 A	01APR10 A
S9FU1010		1		100	31MAR10 A	31MAR10 A	31MAR10 A	31MAR10 A

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

ANNEX D

PHOTOGRAPHICAL RECORDS – NOISE BARRIER ON-SITE

ANNEX E

LOCATIONS OF MONITORING STATIONS

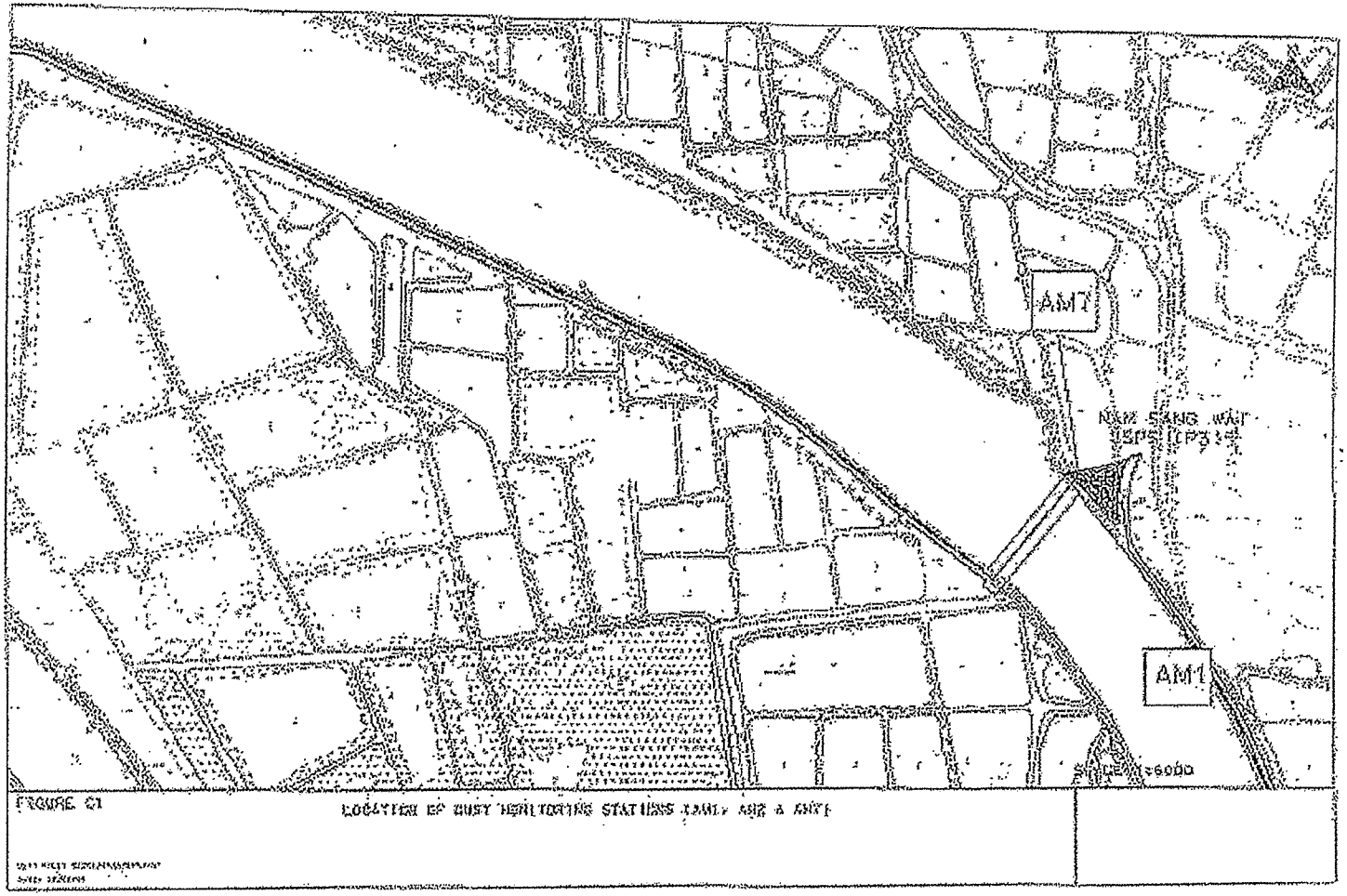


FIGURE 01 LOCATION OF DUST MONITORING STATIONS AM1 AND A AM1

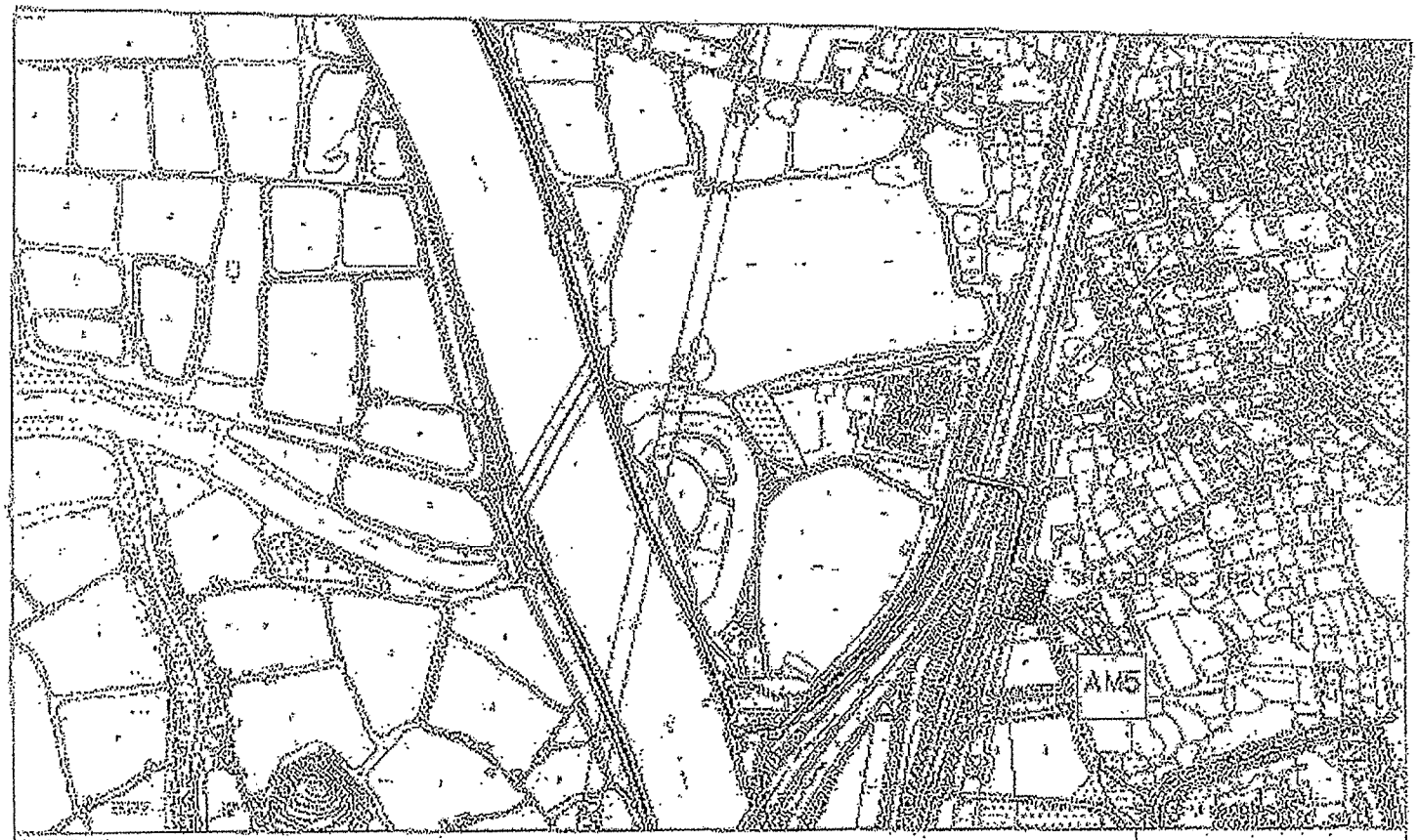


FIGURE 02 LOCATION OF DUST MONITORING STATION (AM5)

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

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

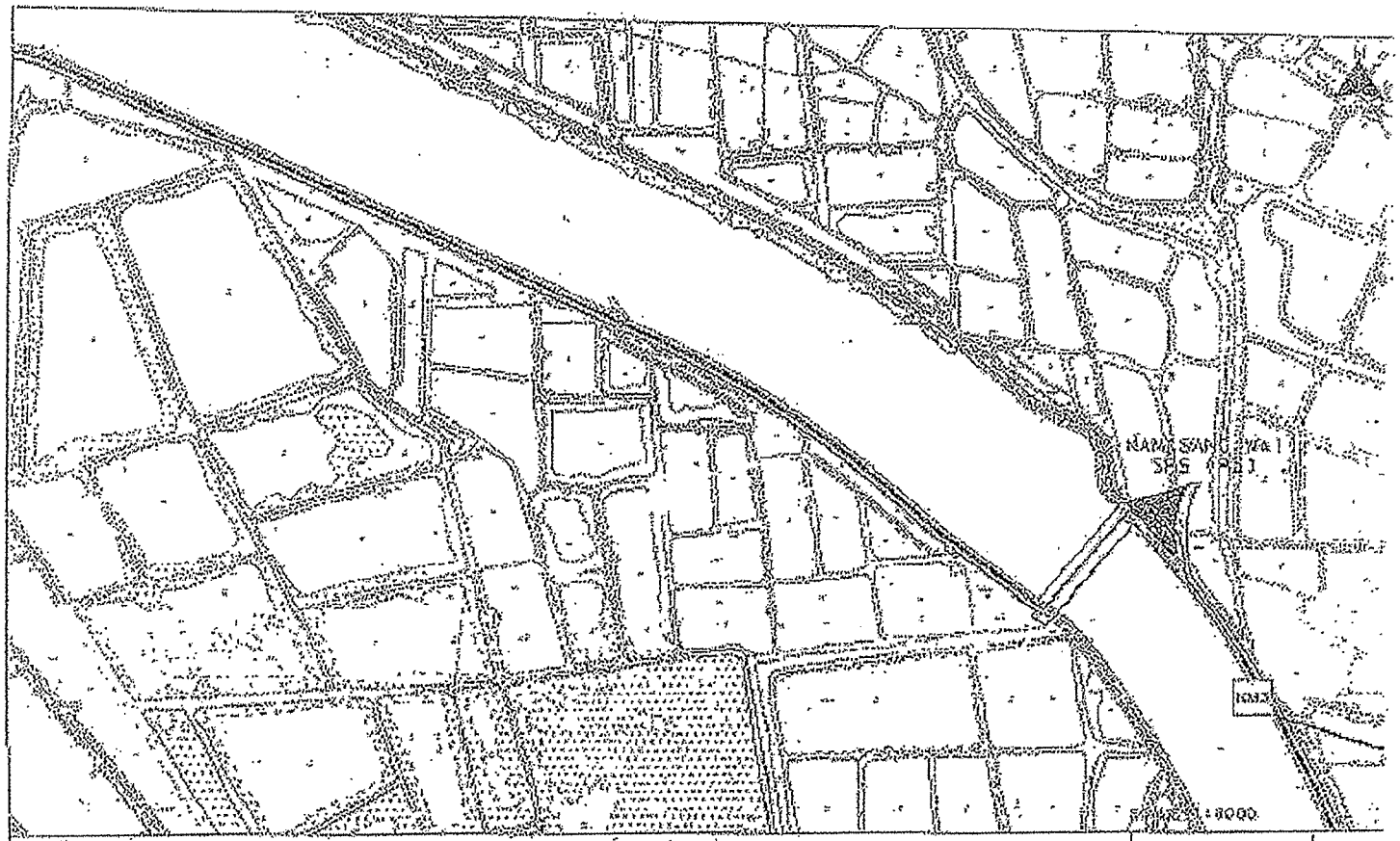


FIGURE C8

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

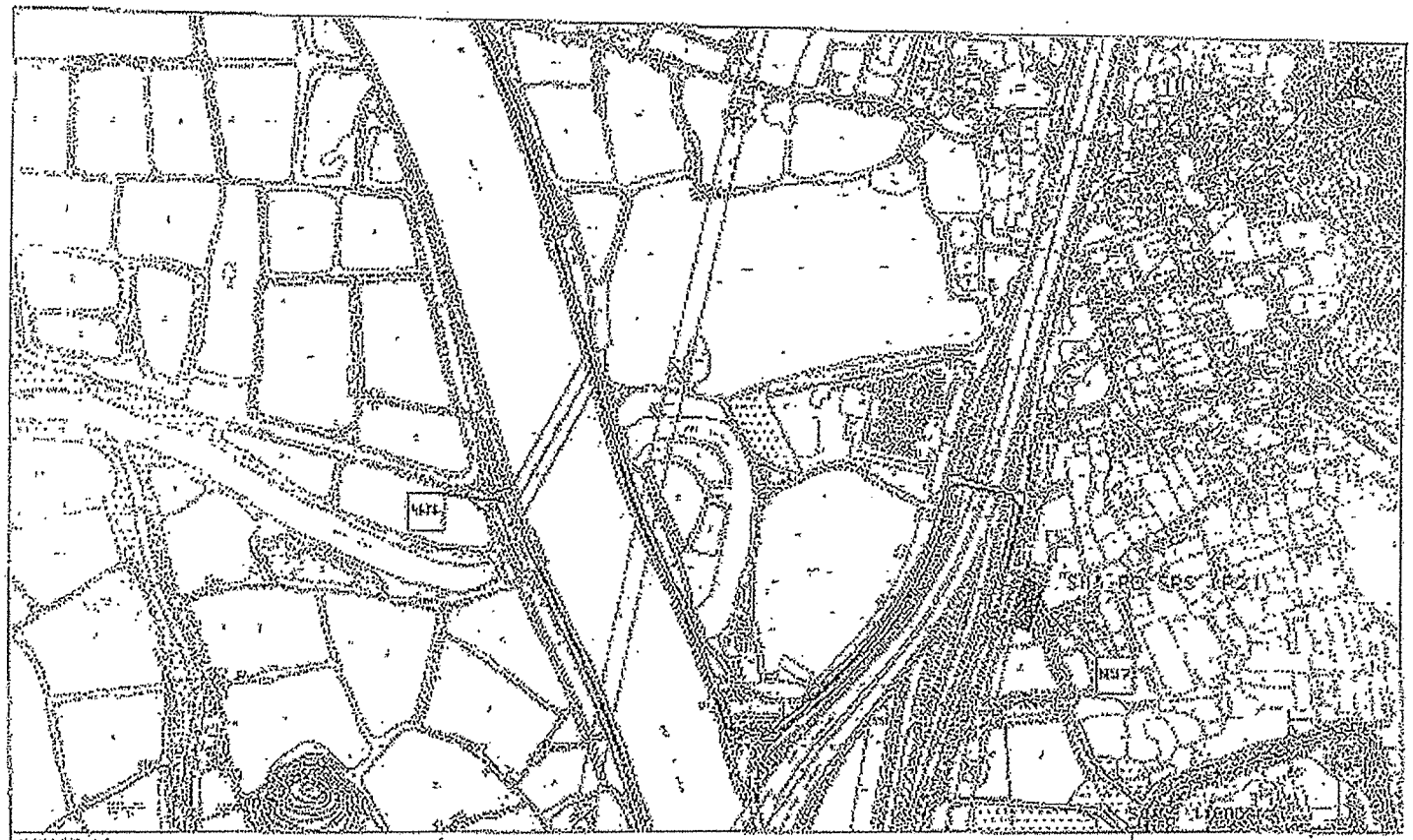


FIGURE 20.

LOCATION OF NOISE MONITORING STATIONS (NM1, NM2)

ANNEX F

EVENT AND ACTION PLAN

Event and Action Plan for Construction Phase Air Quality

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

Event and Action Plan for Construction Phase Air Quality

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

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

ANNEX G

MITIGATION IMPLEMENTATION SCHEDULE

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

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

EIA* Ref.	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	Implementation Stage**				Relevant Legislation & Guidelines
						Des	C	O	Dec	
		NOISE - *Construction Phase*								
		General Site Clearance – Demolition Works								
4.7.1	B1	• Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997 (Examples of these PME are shown in Table F2)*,	To control potential noise impacts during site clearance and demolition works	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
		Construction of Sewage Pumping Stations P1, P2 & P3								
4.7.1	B2	• Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997*,	To minimise potential noise impacts arising during the construction of *P1, P2 & P3*	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
		• Adoption of temporary noise barrier, in the form of a site hoarding (with a superficial density of at least 20kg/m2, with no substantial gaps), along the site boundary of the pumping station sites.	To minimise potential noise impacts arising during the construction of *P1, P2 & P3*	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
		Sewers and Rising Mains using Open Trench Method								
4.7.1	B3	• Use of quiet PME which meet the SWLs taken from British Standard, *Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997*,	To control potential noise impacts during excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor		✓			*Annex 5 of EIAO-TM*
4.7.1	B4	• Use of handheld breakers for all initial road opening activities, when breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached.	To control potential noise impacts during road opening activities.	Where there are NSRs located within 50m of the line of sight. Throughout the full duration of the road opening activities.	The Contractor		✓			
4.7.1	B5	• Use of movable noise barriers or 3 sided enclosures for all initial road opening activities	To control potential noise impacts during road opening	Where there are NSRs located within 50m of the	The Contractor		✓			

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

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

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

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

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

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

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

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

ANNEX H

EQUIPMENT CALIBRATION CERTIFICATES

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

Items	Aspect	Description of Equipment	Serial No.	Date of Calibration	Date of Next Calibration
1#	Air	Greasby Anderson GMWS2310 High Volume Sampler	0329 (AM1)	26 Apr 10	26 Jun 10
2		Greasby Anderson GMWS2310 High Volume Sampler	(AM5)	1 Jun 10	1 Aug 10
3		Greasby Anderson GMWS2310 High Volume Sampler	(AM6)	1 Jun 10	1 Aug 10
4#		Greasby Anderson GMWS2310 High Volume Sampler	1283 (AM7)	26 Apr 10	26 Jun 10
5	Noise	Bruel & Kjaer 4231 Acoustical Calibrator	2285762	27 Apr 10	27 Apr 11
6		Bruel & Kjaer 2238 Integrating Sound Level Meter	2326408	27 Apr 10	27 Apr 11

Note:
* Calibration certificates will only be provided if monitoring equipment is re-calibrated or new.
* Calibration done in this reporting month, see calibration certificate attached.
** Calibration will be done in next reporting month.
\# No power was received, thus equipment could not be re-calibrated.

ANNEX I

METEOROLOGICAL DATA

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

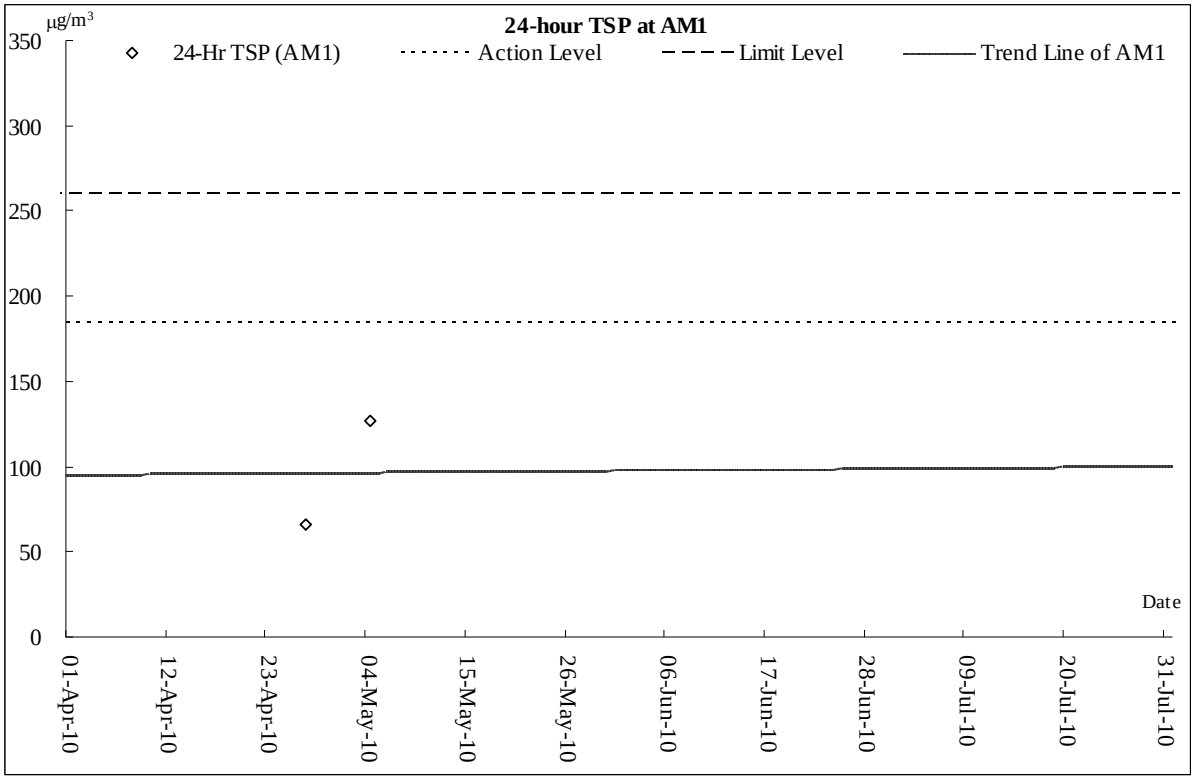
Date		Weather	Total Rain fall (mm)	Lau Fau Shan Weather Station			
				Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Jul-10	Thu	Fine and hot. Moderate west to southwesterly winds.	0	29.3	13	76.5	W
2-Jul-10	Fri	Fine and very hot.	0	30.2	13.5	77.5	W
3-Jul-10	Sat	Moderate southwesterly winds	0	30.7	14.2	75	W/SW
4-Jul-10	Sun	Occasionally fresh over offshore waters.	Trace	31.1	20.7	76.5	SW
5-Jul-10	Mon	Mainly fine and hot.	0	31.4	18.7	73.7	SW
6-Jul-10	Tue	Moderate southwesterly winds,	Trace	30.8	20.7	76	SW
7-Jul-10	Wed	Occasionally fresh over offshore waters.	Trace	30.6	16	72.5	SW
8-Jul-10	Thu	Fine and very hot. Moderate southwesterly winds.	0.4	31.3	18	72.5	SW
9-Jul-10	Fri	It will be hot.	1.7	30.5	18.7	77	S/SW
10-Jul-10	Sat	Mainly fine apart from isolated showers at first.	3.9	30.6	15.2	70.7	S
11-Jul-10	Sun	Light to moderate southerly winds.	1.8	31.3	20	67	W/SW
12-Jul-10	Mon	Fine and very hot.	Trace	29.8	15	73.5	S/SE
13-Jul-10	Tue	Moderate easterly winds.	Trace	29.6	13.5	74.7	S/SE
14-Jul-10	Wed	Mainly fine and very hot apart from isolated showers.	0	29.4	11.2	79.5	E
15-Jul-10	Thu	Isolated showers and one or two thunderstorms.	8.4	29.4	11.5	78	E
16-Jul-10	Fri	Sunny periods and showers. There are swells over the sea.	17.8	28.4	24.5	77.2	SE
17-Jul-10	Sat	Fine and very hot apart from a few showers.	40	27.5	13.7	80.5	S/SE
18-Jul-10	Sun	Moderate east to southeasterly winds.	1.1	27.7	14.2	76.7	S/SE
19-Jul-10	Mon	Fine and very hot apart from a few showers.	0	29	13.5	78	S/SE
20-Jul-10	Tue	Moderate easterly winds.	0	29.5	12.7	78.5	SE
21-Jul-10	Wed	Fresh easterly winds, occasionally strong over offshore waters. Gale on high ground.	29.6	28.2	15.5	8.5	E
22-Jul-10	Thu	Cloudy with showers and a few squally thunderstorms.	182.4	27.1	18.5	86.7	SE
23-Jul-10	Fri	Cloudy with showers and a few squally thunderstorms.	14.6	28.2	14.5	83.2	S/SE
24-Jul-10	Sat	Mainly cloudy with a few showers and isolated squally thunderstorms.	1.1	28.6	14	83	E
25-Jul-10	Sun	Moderate east to southeasterly winds.	0	28.6	12	78	S/SE
26-Jul-10	Mon	Mainly cloudy with scattered heavy showers	0	29.5	13.7	78.5	S/SE
27-Jul-10	Tue	Cloudy with showers. Moderate to fresh southwesterly winds.	33.6	26.3	17.5	90.5	SW
28-Jul-10	Wed	Moderate southwesterly winds, occasionally fresh over offshore waters.	122.5	26.4	16.5	92	SW
29-Jul-10	Thu	Mainly cloudy with a few showers.	4.6	27.6	29.2	84	SW
30-Jul-10	Fri	Sunny periods and a few showers.	5.1	27.9	15	80.5	W/SW
31-Jul-10	Sat	A few showers. Hot with sunny periods in the afternoon.	0.8	29.6	14	78.5	S/SE

ANNEX J

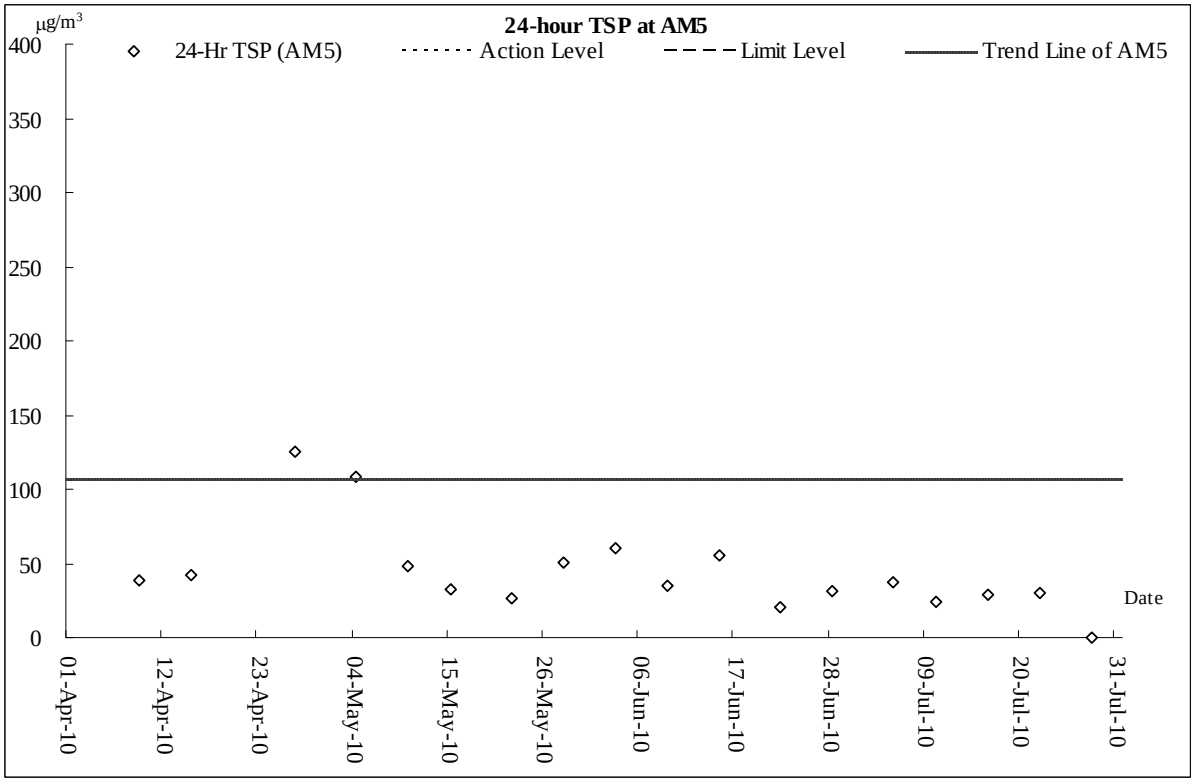
GRAPHICAL PLOTS OF AIR QUALITY AND CONSTRUCTION NOISE MONITORING RESULTS

AIR QUALITY

Air Quality Monitoring Results

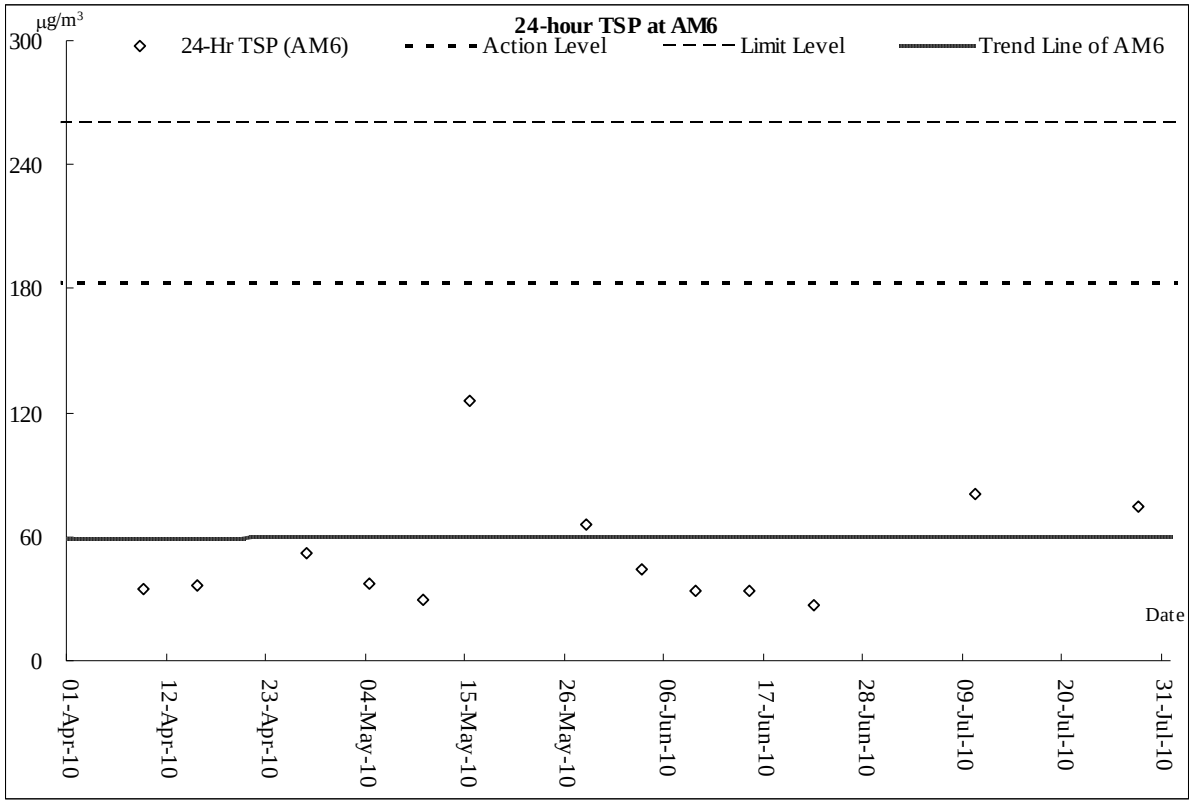


Note: power failure occurred on 22 January, 3, 18, 24 February, 8, 13, 19, 25 March, 9, 15, 21April 2010 and 10 June to 31 July 2010, therefore no result on plotting is shown.

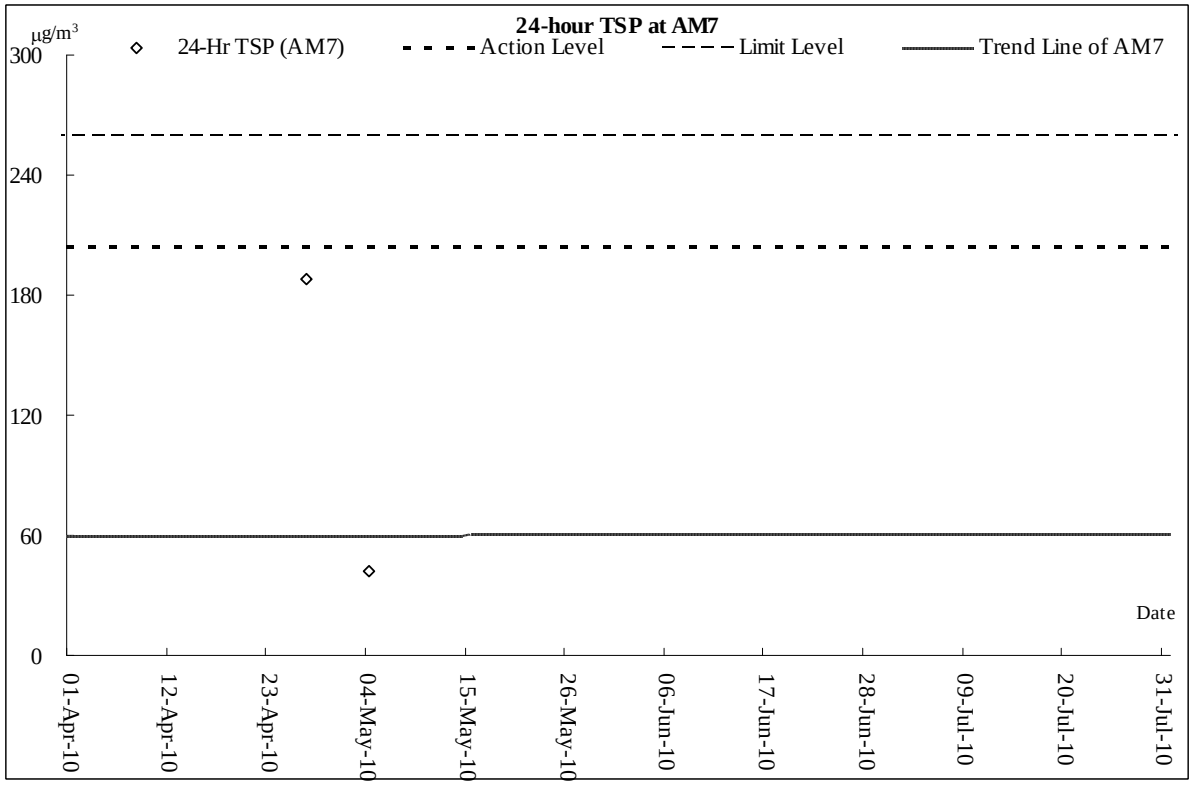


Note: cannot access the monitoring location between 4 and 24 February 2010 due to Lunar New Year holiday landowner's workshop closed and power failure occurred on 21 April 2010 therefore no result on plotting is shown.

Air Quality Monitoring Results



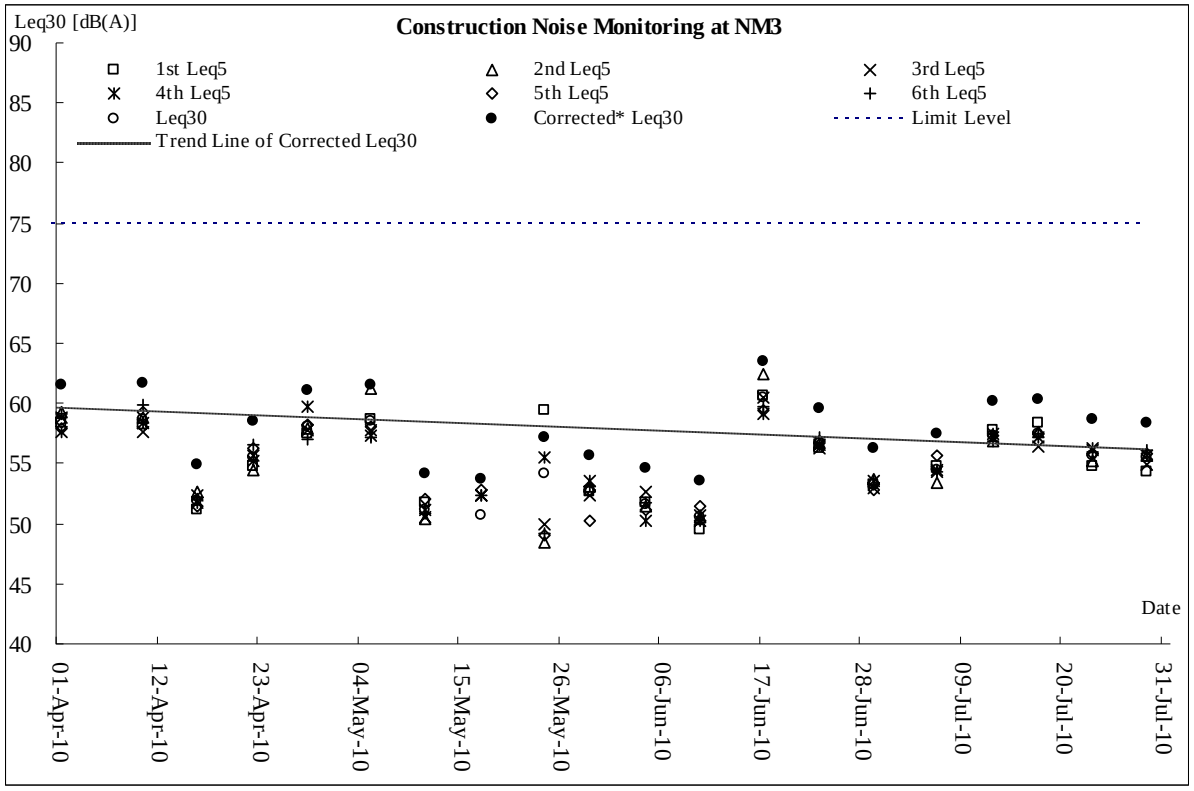
Note: power failure occurred on 9 February; 21 April, 22 May, 28 June, 5,16 and 22 July 2010 therefore no result on plotting is shown.

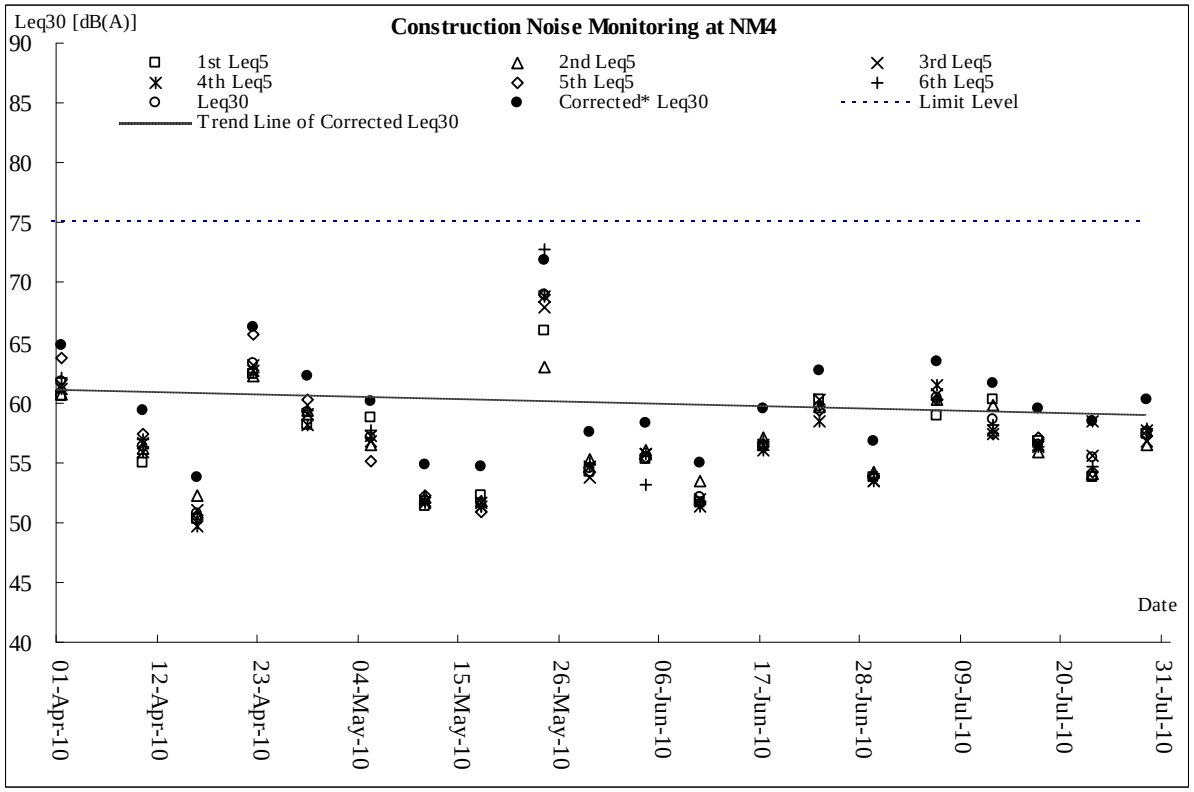


Note: power failure occurred between 16 November 2009 and 25 April 2010 and from 10 June to 31 July2010, therefore no result on plotting is shown.

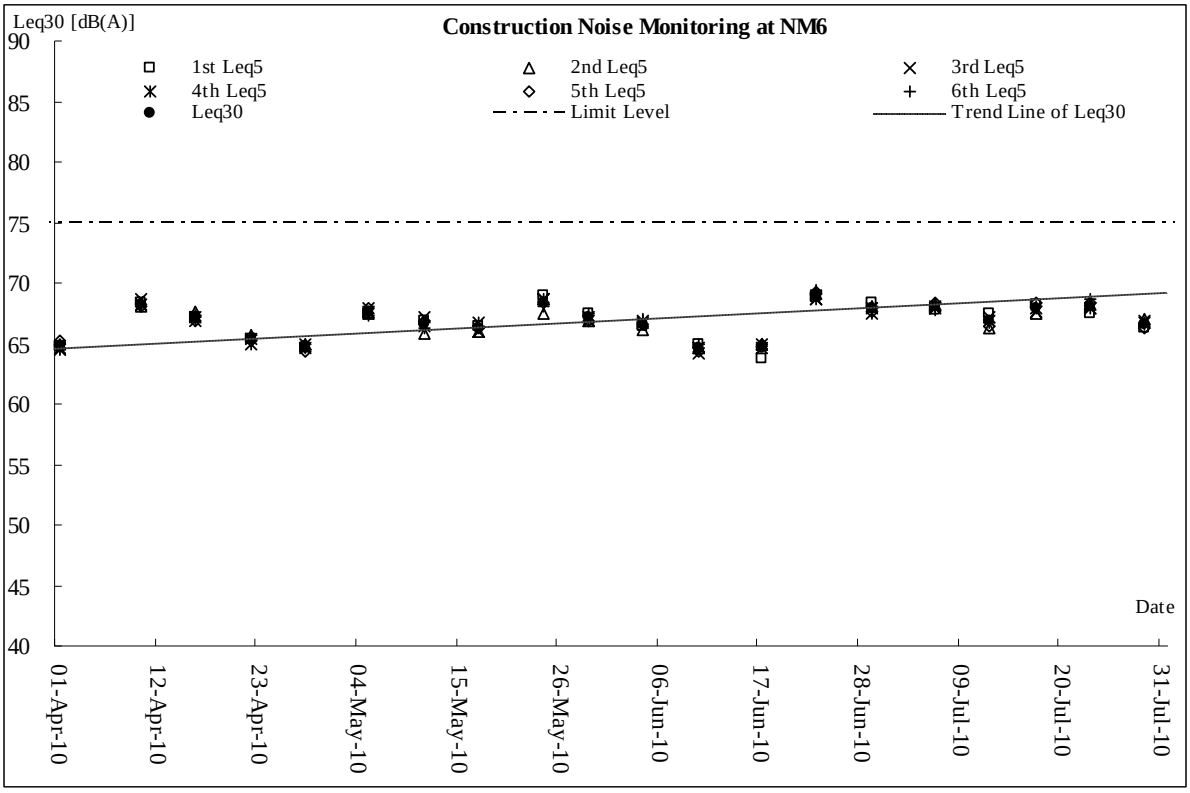
CONSTRUCTION NOISE

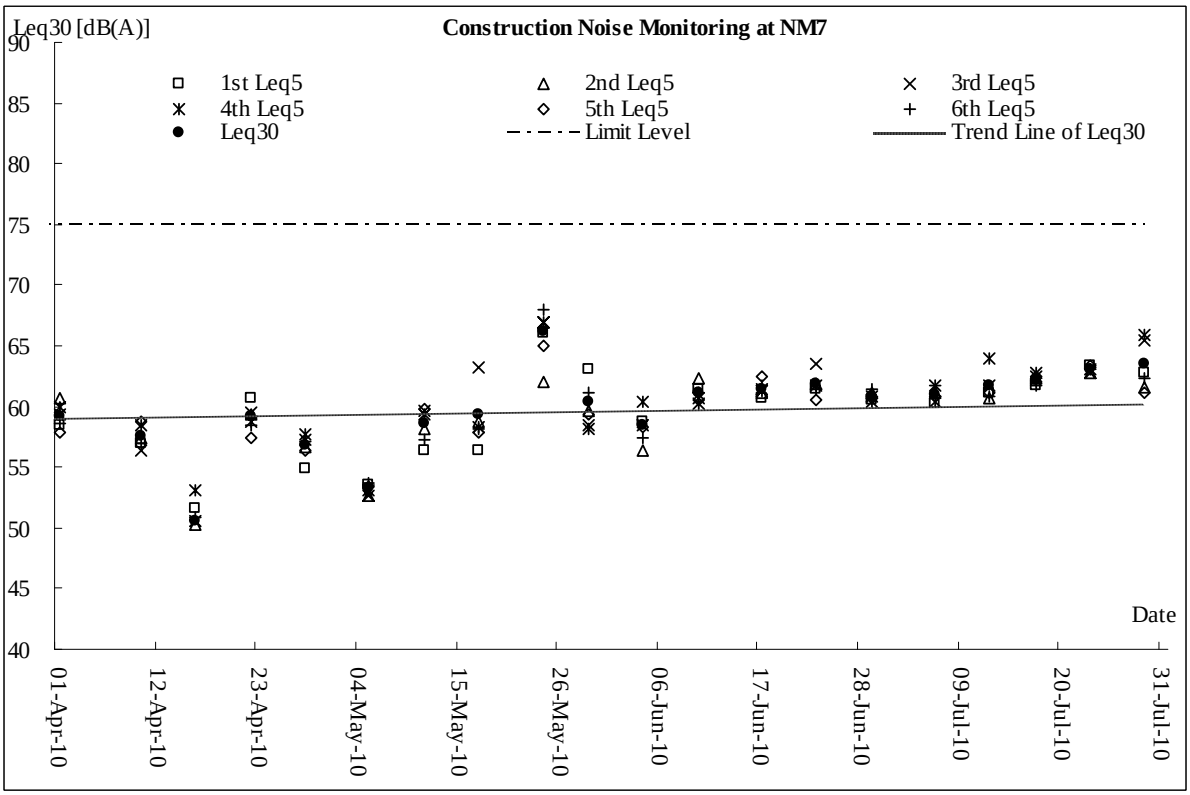
Construction Noise Monitoring Results





Construction Noise Monitoring Results





ANNEX K

PROFORMA OF SITE INSPECTION & IEC AUDIT

AUES

Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	Contractor:	Leader Civil Engineering Corp. Ltd
Inspected by:		Engineer:	Babtie Asia Ltd
ET Auditor:	Ben Tam	IEC:	Mott MacDonald Hong Kong Ltd
Contractor Rep:	Edwin Leung	Environmental Team:	Action-United Environmental Services & Consulting
IEC's Rep:	-	Inspection Date & Time:	8 July 2010 (14:00pm)
RE's Rep:	Y M Lau	Checklist Reference No.:	DSD-AT080710

General Meteorological Information

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

Temp: 31 °C

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

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

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

Observable dust sources: [ ] Wind erosion [✓] NA

[ ] Loading/unloading of materials [ ] Others

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

Major Noise Source: [ ] Traffic [✓] Construction activities inside the site

[ ] Construction activities outside of site [ ] Others Nil

AUES

Site Inspection Checklist (SF-17)

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

AUES

Site Inspection Checklist (SF-17)

Remarks:

Follow up

1. No stagnant water was observed at Kam Tin pumping Station.

Observations Recorded in this Site Inspection:

No environmental was observed during the site inspection.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Witness by RE's Representative
Name :Ben Tam	Name: Edwin Leung	Name:	Name.

AUES

Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	**Contractor:**	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:		**IEC:**	Mott MacDonald Hong Kong Ltd
ET Auditor:	Ben Tam	**Environmental Team:**	Action-United Environmental Services & Consulting
Contractor Rep:	Edwin Leung	**Inspection Date & Time:**	16 July 2010 (10:00am)
IEC's Rep:	-	**Checklist Reference No.:**	DSD-AT150710
RE's Rep:	Y M Lau		

General Meteorological Information

Weather: ☐ Sunny ☐ Fine ☑ Cloudy ☐ Overcast ☐ Drizzle ☐ Rain ☐ Hazy

Temp: 32 °C

Humidity: ☐ High (RH > 90%) ☑ Moderate (90% > RH > 50%) ☐ Low (RH < 50%)

Wind: ☐ Calm ☐ Light ☑ Breeze ☐ Strong

Air Quality

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

Observable dust sources: ☐ Wind erosion ☑ NA

☐ Loading/unloading of materials ☐ Others

Construction Noise

	Yes	NO	NA	NC	Follow-up	Remarks
Are the construction works scheduled to minimize noise nuisance?	☑	☐	☐	☐	☐	
Are the works or equipment sited to minimize noise nuisance?	☑	☐	☐	☐	☐	
Are all plant and equipment well maintained and in good operating condition?	☑	☐	☐	☐	☐	
Is idle equipment turned off or throttled down?	☑	☐	☐	☐	☐	
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	☐	☐	☑	☐	☐	
Is silenced equipment used where appropriate?	☐	☐	☑	☐	☐	
Are noise enclosures or noise barriers used where necessary?	☐	☐	☑	☐	☐	
Does specified equipment has valid noise label?	☐	☐	☑	☐	☐	
Are Construction Noise Permits (CNPs) available for inspection?	☐	☐	☑	☐	☐	

Major Noise Source: ☐ Traffic ☑ Construction activities inside the site

☐ Construction activities outside of site ☐ Others Nil

AUES

Site Inspection Checklist (SF-17)

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

AUES **Site Inspection Checklist (SF-17)**

Remarks:

Follow up

Nil

Observations Recorded in this Site Inspection:

No environmental was observed during the site inspection.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Witness by RE's Representative
Name :Ben Tam	Name: Edwin Leung	Name:	Name:

AUES

Site Inspection Checklist (SF-17)

Project	DC/2006/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	Contractor:	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:		IEC:	Mott MacDonald Hong Kong Ltd
RT Auditor:	Ben Tam	Environmental Team:	Action-United Environmental Services & Consulting
Contractor Rep:	Edwin Leung	Inspection Date & Time:	20 July 2010 (10:00am)
IEC's Rep:		Checklist Reference No.:	DSD-AT200710
RE's Rep:	Y M Lau		

General Meteorological Information

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

Temp: [32] °C

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

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

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

Observable dust sources: [ ] Wind erosion [✓] NA

[ ] Loading/unloading of materials [ ] Others

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

Major Noise Source: [ ] Traffic [✓] Construction activities inside the site

[ ] Construction activities outside of site [ ] Others Nil

AUES

Site Inspection Checklist (SF-17)

Water Quality & Drainage		Yes	NO	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		☑	☐	☐	☐	☐	
Is site effluent discharged in accordance with the discharge license?		☑	☐	☐	☐	☐	
Is the discharge of silty water avoided?		☑	☐	☐	☐	☐	
Is drainage adequate?		☑	☐	☐	☐	☐	
Is drainage system well maintained?		☑	☐	☐	☐	☐	
Are there temporary ditches for runoff discharge into appropriate watercourse?		☐	☐	☐	☐	☑	Remarks 1 & 3
Are there sedimentation tanks for settling runoff prior to discharge?		☑	☐	☐	☐	☐	
Are the sedimentation tanks:	Constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	
	With adequate capacity?	☑	☐	☐	☐	☐	
	Free from silt and sediment?	☐	☐	☐	☐	☑	Remarks 2
Are there neutralization tanks for concrete batching/mixing discharge?		☐	☐	☑	☐	☐	
Are there oil interceptors in drainage system?		☐	☐	☑	☐	☐	
Is wheel wash facility provided at every site exit?		☑	☐	☐	☐	☐	
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		☑	☐	☐	☐	☐	
Are wheel washing facilities regularly inspected and maintained?		☑	☐	☐	☐	☐	
Are toilets provided on site? If so, are they properly maintained?		☑	☐	☐	☐	☐	
Are manholes covered and sealed?		☐	☐	☑	☐	☐	
Is oil leakage or spillage avoided?		☑	☐	☐	☐	☐	
Waste Management and Potential Land Contamination							
General Refuse:	Are receptacles (rubbish bins) available?	☑	☐	☐	☐	☐	
	Is there regular and proper disposal?	☑	☐	☐	☐	☐	
	Is proper sorting and recycling implemented?	☑	☐	☐	☐	☐	
Construction Waste:	Is generation of construction waste minimized?	☑	☐	☐	☐	☐	
	Is waste sorting implemented on site?	☑	☐	☐	☐	☐	
	Is construction waste reused where practicable?	☑	☐	☐	☐	☐	
	Is construction waste properly disposed of?	☑	☐	☐	☐	☐	
	Are disposal records available for inspection?	☑	☐	☐	☐	☐	
Chemical waste/waste oil	Is there designated storage area?	☑	☐	☐	☐	☐	
	Is chemical waste stored properly?	☑	☐	☐	☐	☐	
	Is there proper disposal?	☑	☐	☐	☐	☐	
	Is chemical waste license available for inspection?	☑	☐	☐	☐	☐	
Excavated Materials	Do excavated materials appear uncontaminated?	☑	☐	☐	☐	☐	
	Are appropriate procedures followed if contaminated materials exist?	☐	☐	☑	☐	☐	
	Are disposal records available for inspection?	☑	☐	☐	☐	☐	
Chemical/Fuel	Is chemical/fuel stored in bounded area?	☑	☐	☐	☐	☐	
	Is bund capacity adequate (>110% of the largest tank)?	☑	☐	☐	☐	☐	
	Are storage areas lockable?	☑	☐	☐	☐	☐	
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		☑	☐	☐	☐	☐	

AUES **Site Inspection Checklist (SF-17)**

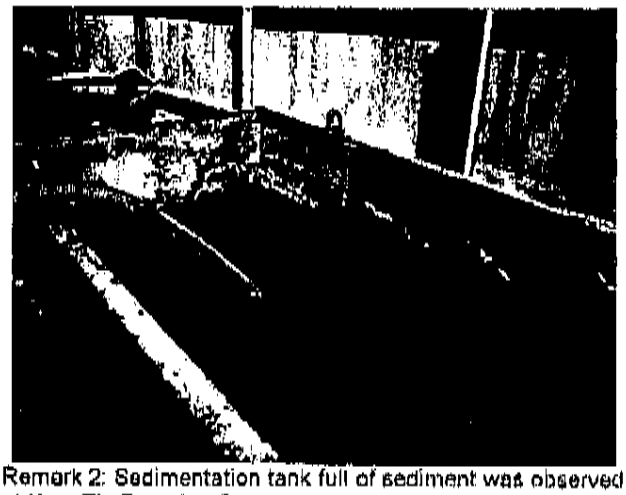
Remarks:

Follow up

Nil

Observations Recorded in this Site Inspection:

Remark 1: Stagnant water was observed in Kam Tin Pumping Station after rainstorm, it is reminded that wastewater generated from the site shall be treated in the sedimentation tank prior to discharge.



Remark 2: Sedimentation tank full of sediment was observed at Kam Tin Pumping Station, the contractor was reminded to clean to maintain the tank functionally.

Remark 3: Stagnant water was observed at the U-channel near the Kam Tin Pumping Station after rainstorm, the contractor was reminded to clean to prevent mosquito breeding

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Witness by IE's Representative
Name :Ben Tam	Name: Edwin Leung	Name	Name

AUES

Site Inspection Checklist (SF-17)

Project	DC/2006/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	Contractor:	Leader Civil Engineering Corp. Ltd
		Engineer:	Babtie Asia Ltd
Inspected by:		IEC:	Mott MacDonald Hong Kong Ltd
ET Auditor:	Ren Tam	Environmental Team:	Action-United Environmental Services & Consulting
Contractor Rep:	Edwin Leung	Inspection Date & Time:	27 July 2010 (10:00am)
IEC's Rep:	-	Checklist Reference No.:	DSD-AT200710
RE's Repr	Y M Lau		

General Meteorological Information

Weather: ☐ Sunny ☐ Fine ☐ Cloudy ☐ Overcast ☐ Drizzle ☑ Rain ☐ Hazy

Temp: 28 °C

Humidity: ☐ High (RH > 90%) ☑ Moderate (90% > RH > 50%) ☐ Low (RH < 50%)

Wind: ☐ Calm ☐ Light ☑ Breeze ☐ Strong

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

Observable dust sources: ☐ Wind erosion ☑ NA ☐ Loading/unloading of materials ☐ Others

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

Major Noise Source: ☐ Traffic ☑ Construction activities inside the site ☐ Construction activities outside of site ☐ Others Nil

AUES

Site Inspection Checklist (SF-17)

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

AUES

Site Inspection Checklist (SF-17)

Remarks:

Follow up

1. Sediment inside the sedimentation tank was cleaned.

Observations Recorded in this Site Inspection:

No environmental issue was observed during the site inspection.

Signatures:

Env. Auditor	Contractor's Representative	IC(E) Auditor	Witness by RE's Representative
Name :Ben Tam	Name: Edwin Leung	Name:	Name