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

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

3rd Monthly Construction Phase EM&A Report JUNE 2006

PREPARED FOR

Leader Civil Engineering Corporation Ltd

### Quality Index

Date	Reference No.	Prepared by	Certified by	Verified by
10 July 2008	TCS/00310/05/500/R0055	Ben Tam. (Project Supervisor)	Cliff Lam (Project ET Leader)	Dr Anne F Kerr (Project IEC)
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# Executive Summary

- ES.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project requires an Environmental Monitoring and Audit (EM&A) program to be implemented by an Environmental Team (ET) throughout the contract period in compliance with the requirements as stated in the project Environmental Permit (EP-220/2005) and the project's Updated EM&A (Designated Elements) Manual.
- ES.02 This is the 3rd Monthly Construction Phase EM&A Report (June 2006, Report No. 3) reporting the environmental impact monitoring and audit (EM&A) conducted from 1 to 30 June 2006. The EM&A in June 2006 covered air quality, noise and waste management.

# Breach of Action and Limit (AL) Levels

ES.03 There was no breach of Action or Limit level for air and noise monitoring in this reporting month.

# **Complaint Log**

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

# Notification of Any Summons and Successful Prosecution

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

# **Reporting Changes**

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

# Future Key Issues

ES.07 Construction activities to be undertaken in July 2006 include sheetpiling and excavation for the pumping station and jacking pits at Item P3, sheetpiling and shoring installation at Items S4 & S5, setting up pipe jacking at S5. Potential environmental impacts arising from the works include air quality, noise and water quality (particularly site runoff). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

# 1.0 BASIC PROJECT INFORMATION

- 1.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project is part of the Yuen Long and Kam Tin Sewerage and Sewage Disposal (YLKTSSD) Scheme. A site layout map showing the site boundary and the work areas is shown in *Annex A*.
- 1.02 This 3rd Monthly Construction Phase EM&A Report (June 2006, Report No. 3) summarizes the impact monitoring results and audit findings in the reporting period from 1 to 30 June 2006.

# **Project Organization**

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

# **Construction Program for the Reporting Month**

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

# **Management Structure**

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

# Works Undertaken during the Month

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

Nam Sang Wai Pumping Station (P3)

- Sheet piling
- Excavation and shoring installation

Nam Sang Wai Road (S4)

Sheet piling

Pok Wai South Road (S5)

- Sheet piling
- Excavation and shoring installation

# 2.0 ENVIRONMENTAL STATUS

# Work Undertaken during the Month with Illustrations

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

Table 2-1 Work Undertaken in June 2006 with Illustrations of Mitigation Measures

Location	Description of Construction Activities	Environmental Mitigation Measures	EM&A Ref.
Nam Sang Wai	Sheet Piling	<ul> <li>Erect 2.4m high noise barrier hoarding around the</li> </ul>	A1 & F6
Pumping Station (P3)	Excavation & Shoring     Installation	<ul><li>works area</li><li>Remove dust and spray water at the construction</li></ul>	A2
		<ul> <li>access</li> <li>Cover the stockpiles of dusty material properly</li> </ul>	A3
		• Spray water to all dusty materials immediately before	A4
		<ul><li>loading and unloading</li><li>Wash the wheels of vehicles before leaving the site</li></ul>	A5
		Install and use power-operated cover at the dump trucks	A6
		<ul> <li>Spray water at the pavement breaking locations</li> </ul>	A7
		Spray the working area of excavation frequently	A8
		<ul> <li>Maximize the use of quiet PME on site</li> <li>Apply and obtain appropriate waste disposal licenses</li> </ul>	B1, B2 & F5 D1
			D2, D3 & D4
		<ul> <li>Implement trip-ticket system for waste disposal</li> </ul>	D5
		<ul> <li>Restrict open fires and provide fire fighting equipment in the works area</li> </ul>	F9
		<ul> <li>Perform weekly inspection with ET and monthly audit with IEC</li> </ul>	H1
		<ul> <li>Conduct noise and dust monitoring as per EM&amp;A manual during construction</li> </ul>	1 &  2
		Recycle wheel washing water and provide	-
Nam Sang Wai	Sheet Piling	<ul> <li>sedimentation tanks for treating site discharge.</li> <li>Remove dust and spray water at the construction</li> </ul>	A2
Road (S4)	Check I ming	access	/ 2
		<ul> <li>Wash the wheels of vehicles before leaving the site</li> </ul>	A5
		Maximize the use of quiet PME on site	B1, B2 & F5
			D1 D2, D3 & D4
		Implement trip-ticket system for waste disposal	D5
		Restrict open fires and provide fire fighting equipment	F9
		<ul> <li>in the works area</li> <li>Perform weekly inspection with ET and monthly audit with IEC</li> </ul>	H1
		<ul> <li>Conduct noise and dust monitoring as per EM&amp;A</li> </ul>	11 & 12
Pok Wai South	Sheet Piling     Everyotion & choring	<ul> <li>manual during construction</li> <li>Remove dust and spray water at the construction</li> </ul>	A2
Road (S5)	<ul> <li>Excavation &amp; shoring installation</li> </ul>	<ul> <li>access</li> <li>Cover the stockpiles of dusty material properly</li> </ul>	A3
		• Spray water to all dusty materials immediately before	A4
		loading and unloading	A.C.
		<ul> <li>Wash the wheels of vehicles before leaving the site</li> <li>Install and use power-operated cover at the dump trucks</li> </ul>	A5 A6
		<ul> <li>Spray the working area of excavation frequently</li> </ul>	A8
		Maximize the use of quiet PME on site	B1, B2 & F5
			D1 D2, D3 & D4
		<ul><li>relevant regulations</li><li>Implement trip-ticket system for waste disposal</li></ul>	D5
		Restrict open fires and provide fire fighting equipment	-
		<ul><li>in the works area</li><li>Perform weekly inspection with ET and monthly audit</li></ul>	H1
		with IEC	
		<ul> <li>Conduct noise and dust monitoring as per EM&amp;A manual during construction</li> </ul>	11 & 12
		<ul> <li>Provide sedimentation tanks for treating site</li> </ul>	-
		discharge.	

2.02 Photographic records showing the work activities undertaken at the pumping station and the implemented 2.4m high noise barrier are shown in *Annex D*.

# **Project Drawings**

- 2.03 Drawings showing the work areas under EP-220/2003 and the locations of the designated monitoring stations are presented in *Annex E*.
- 2.04 There are four designated air quality and four noise monitoring stations under the project EP. In this reporting month, the monitoring was carried out at two designated air (AM1 & AM7) and two noise (NM3 & NM4) monitoring stations.

Station ID	Nature of Premise	Site Work Description	Station Coordinates
AM1	Site Boundary in NSW		835829 N 822910 E
AM7	Site Boundary in NSW	Sheetpiling and trench	836171 N 822586 E
NM3	Village House in NSW	excavation.	835808 N 822817 E
NM4	Village House in NSW		835282 N 822811 E

2.05 Monitoring at the remaining two air (AM5 & AM6) and noise (NM6 & NM7) stations will commence once the work areas are handed over to the Contractor (later this year).

# 3.0 SUMMARY OF EM&A REQUIREMENTS

# Monitoring Parameters

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

#### Table 3-1 Summary of EM&A Requirements

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

### **Environmental Quality Performance Limits**

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

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

Monitoring Location	Action Level (μg /m <sup>3</sup> )		Limit Level (µg/m <sup>3</sup> )	
Wontoning Location	1-Hr TSP	24-Hr TSP	1-Hr TSP	24-Hr TSP
AM1	391	184	500	260
AM7	383	204	500	260

#### Table 3-3 Action and Limit Levels for Construction Noise

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

### **Event and Action Plans**

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

### **Environmental Mitigation Measures**

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

### **Environmental Requirements in Contract Documents**

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

# 4.0 IMPLEMENTATION STATUS

- 4.01 The implementation status of environmental protection and pollution control/mitigation measures as recommended in the project EIA report is summarized in **Table 2-1** and the implementation schedule as shown in **Annex G**.
- 4.02 A summary status of the permits, licences, and/or notifications on environmental protection for this Project in this reporting month is presented in *Table 4-1*.

Table 4-1 Status of Environmental Licenses and Permits

Item	Item Description	Permit Status
1	Environmental Permit No.: EP-220/2005	Issued in June 2005
2	Air Pollution Control (Construction Dust)	Notified EPD on 24 Dec 2005
3	Chemical Waste Producer Registration	Registration on 27 Jan 2006
4	Water Pollution Control (Discharge license)	Applied to EPD on 7 Feb 2006
5	Account for Disposal of Construction Waste No. 5004959	Registration on 27 Dec 2005
6	Construction Noise Permit (Sheet Piling at NSW Station)	Valid (2 Jun to 12 Dec 2006)
7	Construction Noise Permit (General Works at NSW Station)	Valid (7 Apr to 7 Oct 2006)

# 5.0 MONITORING RESULTS

# MONITORING METHODOLOGY OF AIR QUALITY MONITORING

- 5.01 The 24-Hr TSP monitoring was carried out by a High volume sampler (HVS) in compliance with the updated EM&A Manual. The HVS employed complied with the PS specifications including.
  - Power supply of 220v/50 hz for 24-hour continuous operation;
  - 0.6-1.7 m<sup>3</sup>/min (20-60 SCFM) adjustable flow rate;
  - A 7-day mechanical timer for 24-hour operation;
  - An elapsed time indicator with ±2 minutes accuracy for 24-Hr operation;
  - Minimum exposed area of 63 in<sup>2</sup>;
  - Flow control accuracy of ±2.5% deviation over 24-Hr operation;
  - An anodized aluminum shelter to protect the filter and sampler;
  - A motor speed-voltage control to control mass flow rate with accuracy of ±2.5% deviation over 24-hr sampling period;
  - Provision of a flow recorder for continuous monitoring;
  - Provision of a peaked roof inlet;
  - Incorporation with a manometer; and
  - An 8"x10" stainless steel filter holder to hold, seal and easy to change the filter paper.
- 5.02 The filter papers used in 24-Hr TSP monitoring were of size 8"x10" and provided by a local HOKLAS-accredited laboratory, ALS Techichem Pty (HK) Limited (HOKLAS No. 66). The filters papers after measurements were returned to the laboratory for the required treatment and analysis.
- 5.03 The meteorological information during the reporting period was obtained from Lau Fau Shan Station of the Hong Kong Observatory (HKO).

### MONITORING METHODOLOGY OF CONSTRUCTION NOISE MONITORING

- 5.04 Noise measurements were taken in terms of the A-weighted equivalent sound pressure level (Leq) measured in decibels (dB). Supplementary statistical results (L<sub>10</sub> and L<sub>90</sub>) were also obtained for reference.
- 5.05 Hand-held sound level meters (B&K Model 2238) and associated acoustical calibrators in compliance with the International Electrotechnical Commission (IEC) Publication 651:1979 (Type 1) and 804:1985 (Type 1) specification were used for taking the baseline noise measurements.
- 5.06 Windshield was fitted in all measurements. All noise measurements were made with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq).
- 5.07 No noise measurement was made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s.

### LABORATORY AND MONITORING EQUIPMENT USED

- 5.08 A local HOKLAS-accredited laboratory, ALS Technichem (HK) Pty Ltd (HOKLAS No. 66), is responsible for the analytical testing of the 24-Hr TSP filter papers.
- 5.09 The monitoring equipment used in the impact EM&A program is presented in *Table 5-1*:

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

Parameters	Monitoring Equipment		
Air Quality	24-Hr TSP	Tisch High Volume Sampler 515N	
Noise	Leq30min	B&K Type 2238	
	On-site Calibration	B&K Type 4231	

# EQUIPMENT CALIBRATION

- 5.10 Initial calibration of the HVS was performed upon installation and thereafter at a six month intervals in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A). The calibration data are properly documented and the records are maintained by ET for future reference.
- 5.11 The sound level meters were calibrated using an acoustic calibrator prior to and after measurements. The meters are regularly calibrated in accordance with the manufacturer's instructions. Prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were considered valid only if the calibration levels before and after the noise measurement agree to within 1.0 dB.
- 5.12 The calibration certificates of the monitoring equipment used during the impact monitoring program are attached in *Annex H*.

# PARAMETERS MONITORED

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

### **MONITORING LOCATIONS**

5.14 There are four designated air quality and four noise monitoring stations under the project EP. For this reporting month, monitoring was carried out at two designated air (AM1 & AM7) and two noise (NM3 & NM4) monitoring stations. Monitoring at the remaining two air (AM5 & AM6) and noise (NM6 & NM7) stations will commence once the work areas are handed over to the Contractor (later this year). The locations of the designated monitoring stations are shown in **Table 5-2** and geographically in **Annex E**.

Air Quality (4 Stat	tions)
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
<b>Construction Noi</b>	se (4 Stations)
NM3	Village House in Nam Sang Wai
NM4	Village House in Nam Sang Wai
NM6*	Scattered House near Route 3
NM7*	Fung Kat Heung

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

Remarks: Monitoring at AM5 & AM6 and NM6 & NM7 will commence once the work areas are handed over to the Contractor (later this year).

### MONITORING FREQUENCY AND PERIOD

- 5.15 The impact 24-Hr TSP monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 5 monitoring events were carried out in this reporting month.
- 5.16 The impact noise monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 5 monitoring events were carried out in this reporting month.

# **MONITORING RESULTS WITH DATE AND TIME**

#### 5.17 The air quality monitoring data for this reporting month are summarized in Table 5-3.

#### Table 5-3 Summary of Air Quality Monitoring Results

Date	24-Hr TS	P (ug/m³)
Dale	AM1	AM7
3-Jun-06	34	35
9-Jun-06	67	39
14-Jun-06	41	36
20-Jun-06	81	58
26-Jun-06	59	52
Average (Range)	81.4 (49 - 122)	83.3 (41 - 126)

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

#### 5.19 The impact noise monitoring results are summarized in Tables 5-4 & 5-5.

Table 5-4	Summary of Noise Monitoring Results at NM3						
	-	-					-

Date	Start Time	1st Leq5	Leq30	Corrected * Leq30					
5-Jun-06	15:08	56.2	57.1	56.6	57.8	56.3	58.0	57.1	60.1
10-Jun-06	13:58	53.9	48.8	55.1	52.6	52.7	55.2	53.5	56.5
15-Jun-06	13:49	60.9	60.6	63.4	58.0	56.9	57.6	60.2	63.2
21-Jun-06	13:01	46.1	44.5	45.2	46.1	44.6	47.2	45.7	48.7
27-Jun-06	10:18	52.6	50.6	50	50.9	51.1	52.3	51.3	54.3
Limit Level									75

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

#### Table 5-5 Summary of Noise Monitoring Results at NM4

Date Start Time		1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30	
5-Jun-06	15:24	56.1	56.4	56.2	57.4	57.1	54.6	56.4	59.4	
10-Jun-06	14:11	70.8	71.6	68.9	67.9	56.9	59.2	68.4	71.4	
15-Jun-06	13:09	62.6	60.3	53.6	58.9	57.1	59.6	59.5	62.5	
21-Jun-06	11:27	54.6	52	47.7	49.3	50.1	51.7	51.5	54.5	
27-Jun-06	09:41	51.5	62.8	58.2	53.7	53.4	50.4	57.4	60.4	
Limit Le	Limit Level									

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

# WEATHER CONDITIONS DURING THE MONITORING PERIOD

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

### **GRAPHICAL PLOTS OF TRENDS OF MONITORED PARAMETERS**

The graphical plots of air quality and construction noise monitoring data are presented in 5.21 Annex J.



### MAJOR ACTIVITY CARRIED OUT DURING THE MONITORING PERIOD

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

### WEATHER CONDITIONS THAT MAY AFFECT THE MONITORING RESULTS

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

### **OTHER FACTORS INFLUENCING THE MONITORING RESULTS**

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

# **QA/QC** RESULTS AND DETECTION LIMITS

5.25 Not applicable.



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

# RECORD OF NON-COMPLIANCE OF ACTION AND LIMIT LEVELS

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

# **RECORD OF ENVIRONMENTAL COMPLAINTS RECEIVED**

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

### RECORD OF NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTION

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

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

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

# DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

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

# 7.0 OTHERS

# FUTURE KEY ISSUES

7.01 Construction activities to be undertaken in July 2006 include sheetpiling and excavation for the pumping station and jacking pits at Item P3, sheetpiling and shoring installation at Items S4 & S5, setting up pipe jacking at S5. Potential environmental impacts arising from the works include air quality, noise and water quality (including site runoff). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

### SOLID AND LIQUID WASTE MANAGEMENT STATUS

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

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (tons)	6,035	Tuen Mun 38 Fill Bank
C&D Materials (Non-Inert) (tons)	-	NA
Chemical Waste (Litres)	-	NA
General Refuse (tons)	80	Refuse Collector

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

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

7.03 There was no site effluent discharged but an estimated volume of 50m<sup>3</sup> of surface runoff was discharged in this reporting month.

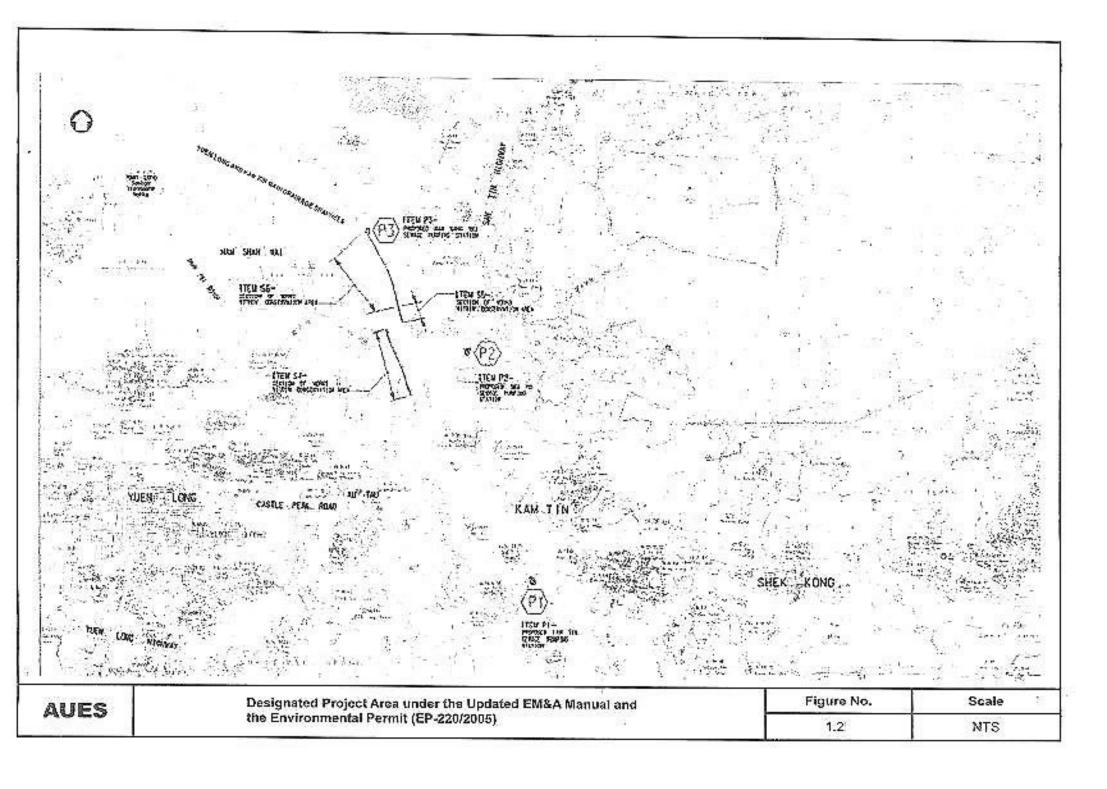
# SUBMISSION OF PROFORMA

- 7.01 Representatives of the Engineer, the Contractor and ET carried out joint site inspection every week to evaluate the site environmental performance. A monthly audit with RE, Contractor, IEC and ET was carried out on 22 June 2006. No non-compliance was noted and one observation was recorded.
- 7.02 Proforma of the weekly ET site inspection and monthly IEC audit activities are presented in *Annex K*.



Annex A

# **Project Site Layout**





Annex B

# **Project Organization and Management Structure**

#### DSD Contract No. DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long **Project Environmental Organization Chart** Rev. : 01 DSD Engineer's Representative Contractor IEG **Babtie Aisa Ltd** Leader Civil Eng. Corp. Ltd Mott Connell Ltd Dr. Anne F. Kerr Joe Lam **Project Manager** (2828 5793) (9902 8031) W H Pang Mr. S. M. Fco (9464 2392) (2828 5912) Site Agent Benny Lam (9812 0302) Superintendent W M Mok (9120 8798) Site Engineer Safety Officer G. Engineer G. Engineer Site Engineer G. Engineer Patrick Wong Antony Lo YHSO James Chiu Joseph Wong Edwin Leung Decontamination (9676 6856) (6097 0725) (9472 5959) (6103 9011) (9464 4308) (9018 7270) Supervisor (TTA/UU/Environ/QA) (Pumping Station, Pok Wai (Nam Sang Wai (Castle Peak (Kam Tin Road, Kam CiffLam South Road, San Tam Read) Read, Ke Pa Sheung Road, Shek Read) (9775 7575) Kong Airfield Road) Read, Kam Tai Road's

Foreman

So Fo

(9588 6977)

Apprentice

Chan Lik Hang

(9230 2095)

Environmental

Team

(AUES)

Environmental

Team Leader

Cliff Lam

(9775 7575)

Deputy

Decontamination

Supervisor

T. W. Tam

(9212 0408)

Date : 12-May-06

Safety Supervisor

W M Mok

T Yuen

P So

W M La

C. L. Wong

Foreman

TBA.

Apprentice

Ching KR Ming

(9553-8815)

Foreman Foreman Wang Choi Loi Yuen Tak (9341 1737) (9181 1500) Apprentice Apprentice

Lo Wai Man

(6156 8910)

TBA.



Annex C

# **Construction Program**

Agt ID	Description	Orig Dur	Float C	Percent Early Complete Start	Carly Finish	Late Stort	Late Finish	8/87 28 56 51 51 50 50	on os os e7 es s9	996 HUL 10 HI 10 DI 10 <u>10 10</u>	18 17 18 19 25 21 22 23	
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isign Subri sa a	00	and the second second	-	and the second second	-	-	-					10
10000		10000	11100	AND 14 STATE		28-1-7/23 7/23						- 12
SUN1401	Design/Such i Tend Work - Kent Tin P/Station	30	24d	30 30WAY06 A	24JUL00	20MA Y08 A	19126036	4				1
Sub 1900	Approve Terre Work - Nam San Wat PrStation	· 0	10	95 D1MAR00 A	26.11.100	01M4R06-4	2930800					10
BUN2900	Approve Tamp Work - Trenchless Plastoying	ð	059	37 06AFB06 A	284UN00	016PR06-6	154P306*					-
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SU01510	Approve Terrs Work - Nam San Wa (2)Station	5	1.1	St. DIWARDSA	25.1.100	OIMARCS 4	2110806		1	_		
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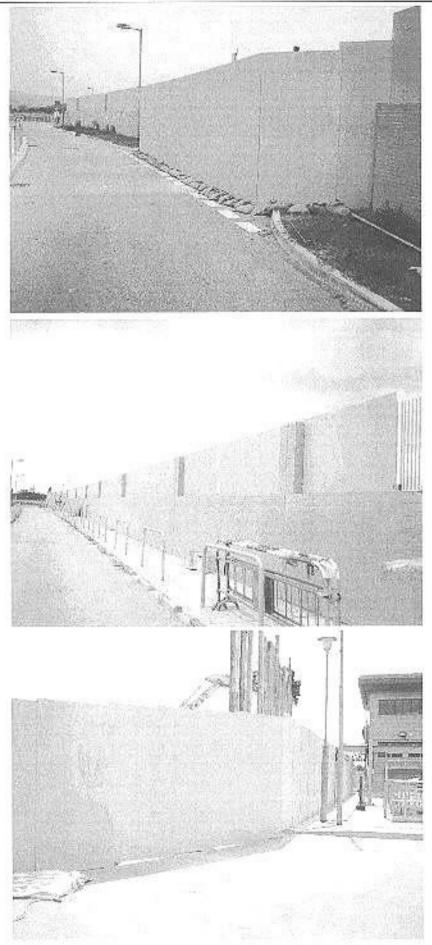
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Annex D

Photographical Records – Noise Barrier On-Site

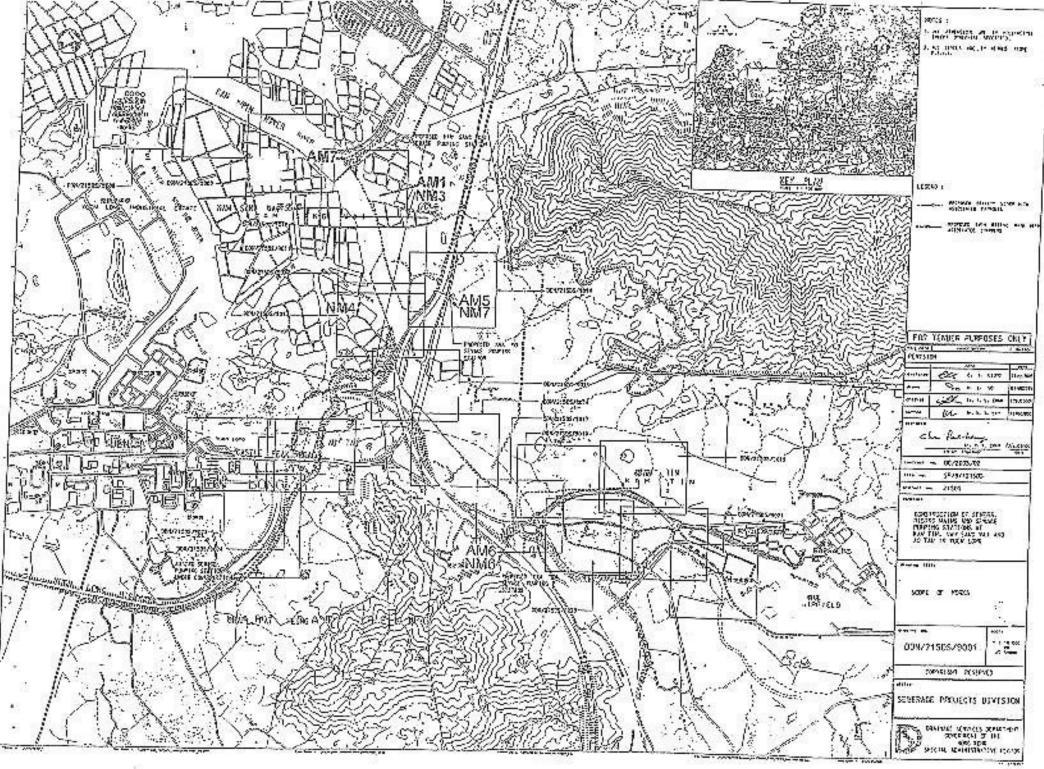


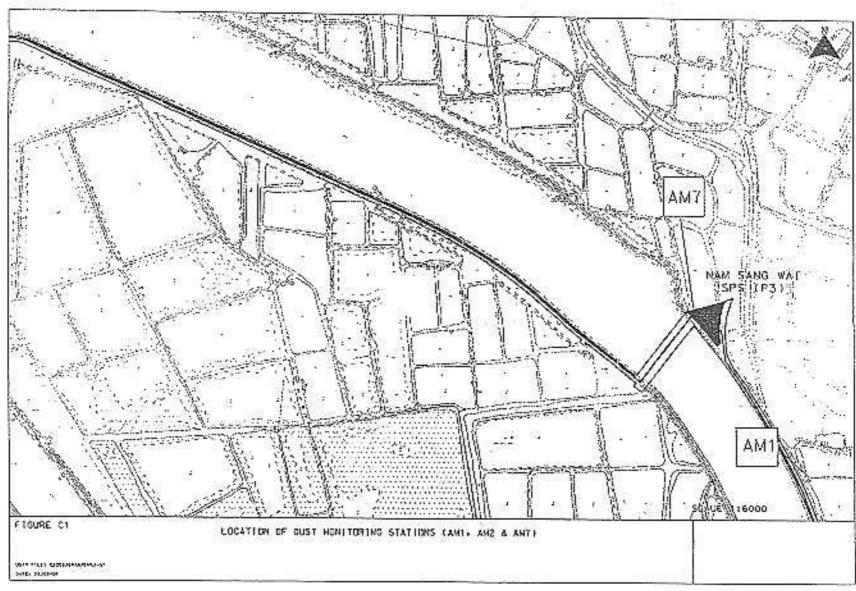


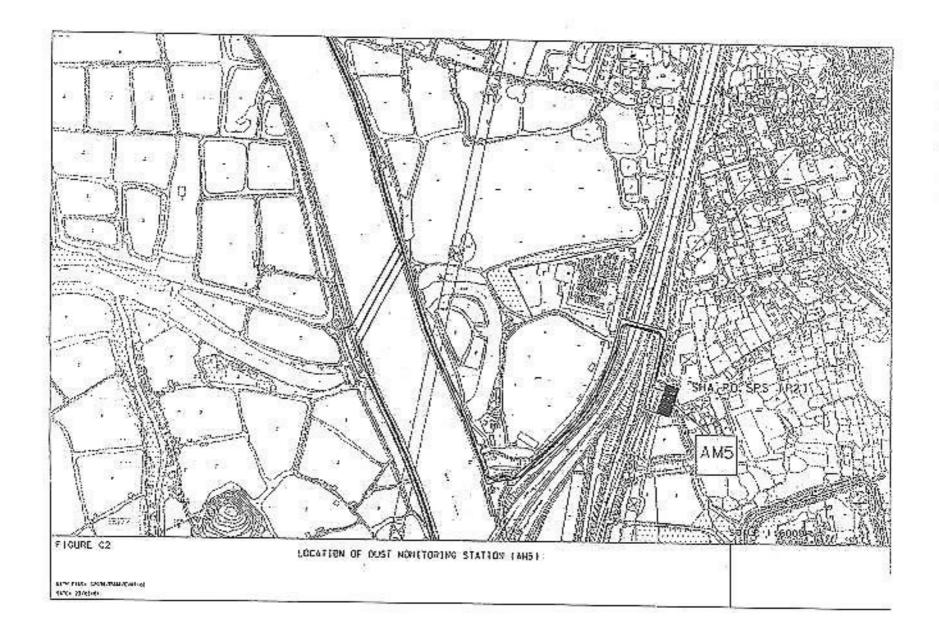


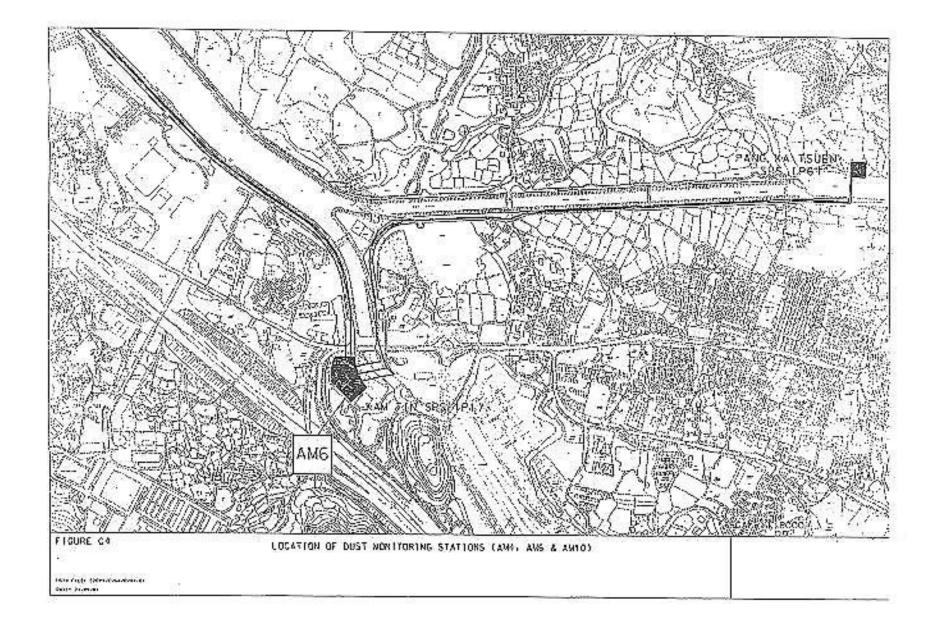
Annex E

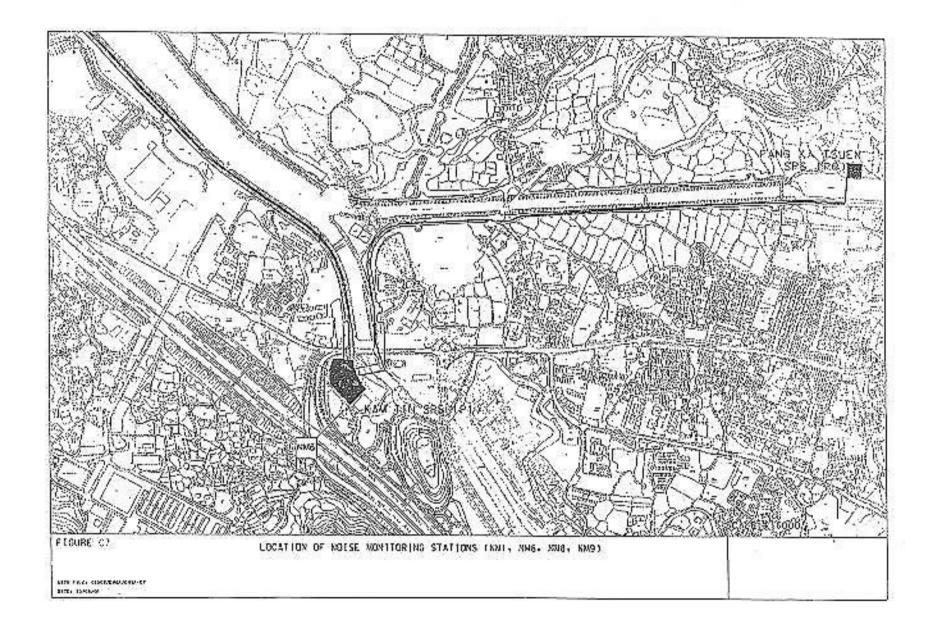
# **Locations of Monitoring Stations**

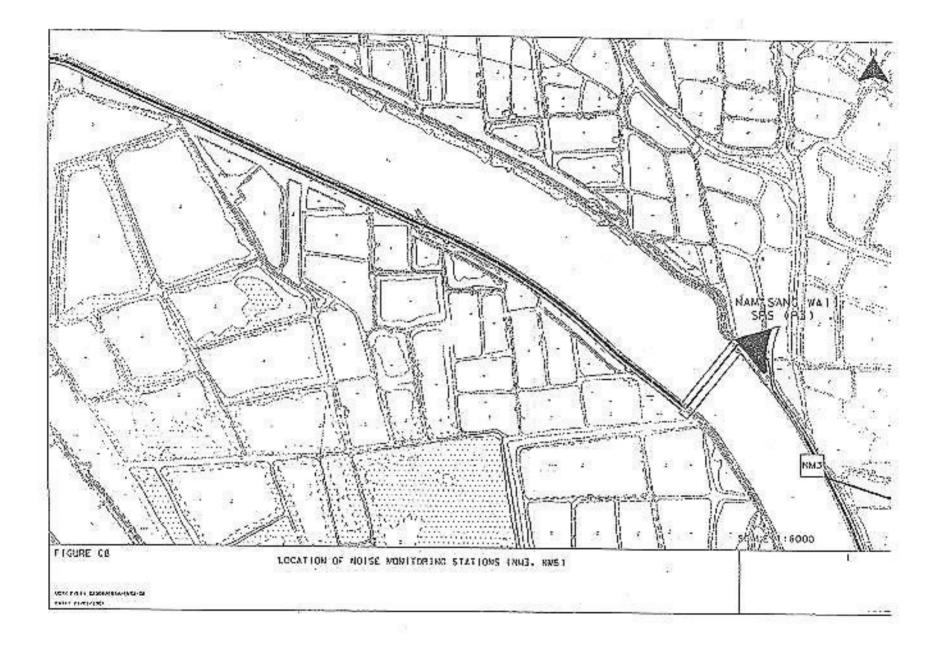


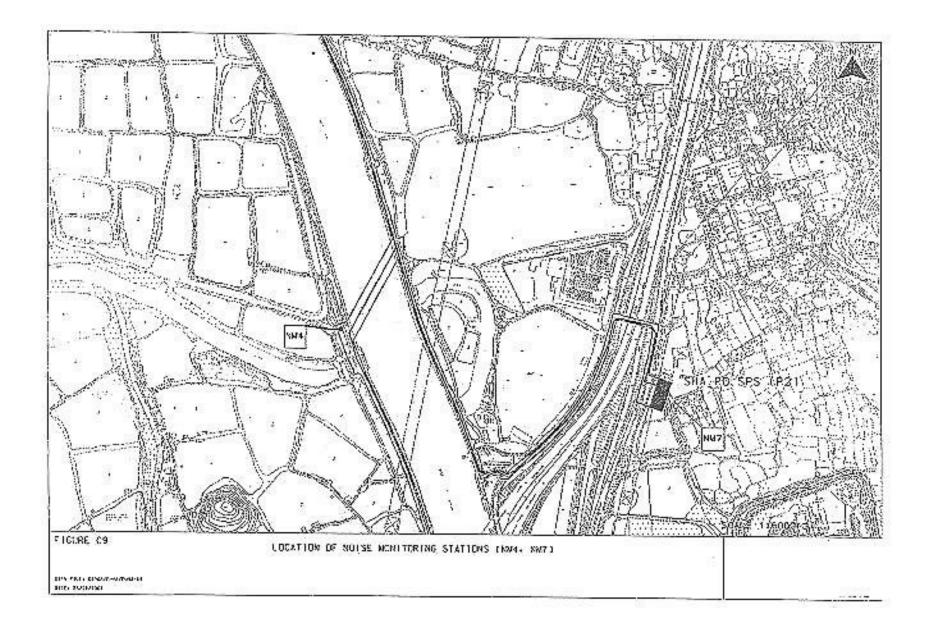














Annex F

# **Event and Action Plan**

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# Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION												
20107 - 20 - 20 - 2	ET Leader	IEC	Engineer	Contractor									
Action Level	Control of the local												
Exceedance for one sample	<ol> <li>Identify source (s) of exceedance and inform IEC, Contractor and Engineer</li> <li>Repeat dust measurements to continm findings</li> <li>Increase monitoring frequency to daily</li> <li>Assess efficacy of remodial measures and keep the Contractor, IEC, and Engineer informed</li> </ol>	<ol> <li>Check monitoring data submitted by ET</li> <li>Check monitoring data irends and Contractors working methods</li> <li>Check and confirm Contractors proposed remedial actions and working methods are appropriate</li> </ol>	<ol> <li>Confirm receipt of notification of exceedance in writing</li> <li>Remind the Contractor of his contractual obligations and review the Contractor's working methods</li> <li>Discuss remedial actions with the Contractor and IEC</li> <li>Inform complainant of actions taken. If necessary</li> </ol>	<ol> <li>Rectify any unacceptable practice</li> <li>Liaise with Engineer and IEC to develop appropriate remodial measures to reduce dust impact</li> <li>Amend working methods and remedial proposals if required by the Engineer or IEC</li> <li>Implement the agreed remedial actions upon instruction from the Engineer and IEC</li> </ol>									
Exceedance for two or more consecutive samples	<ol> <li>Identify source (s) of exceedance and inform IEC. Contractor and Engineer</li> <li>Repeat measurements to confirm findings</li> <li>Increase the monitoring frequency to daily to assess the efficacy of remedial measures and keep the Contractor informed</li> <li>Discuss remedial actions with IEC and Contractor</li> <li>If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions</li> <li>If exceedance stops, inform the Contractor and cease additional monitoring</li> </ol>	<ol> <li>Check monitoring data submitted by ET</li> <li>Check monitoring data trends and Contractors working methods</li> <li>Discuss with Contractor and Engineer on possible remedial measures</li> <li>Check and confirm Contractors proposed remedial measures are appropriate</li> <li>Determine the efficacy of remedial actions and keep the Engineer informed</li> </ol>	<ol> <li>Confirm receipt of notification of exceedance in writing</li> <li>Remind the Contractor of his contractual obligations and review the Contractor's working methods</li> <li>Discuss remedial actions with the Contractor and IEG</li> <li>Ensure remedial measures are properly implemented</li> <li>Inform complainant of actions taken, if necessary.</li> </ol>	<ol> <li>Rectify any unacceptable practice, if possible</li> <li>Submit proposals for remedial actions to Engineer and IEC within three working days of holification</li> <li>Discuss and amend remedial actions, if required, by the Engineer and IEC</li> <li>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</li> </ol>									
Limit Level													

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Event and Action Plan for Construction Phase Air Quality

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

EVENT	6.5 (2011) M (2)	ACTIO	1	
	ET Leader	IEC	Engineer	Contractor
Limit Level	101 00 10 × 101			
Exceedance for one sample	<ol> <li>Identify source (s) of exceedance and inform IEC, Contractor and Engineer</li> <li>Repeat dust measurements to confirm findings</li> <li>If repeat measurements confirm exceedance , increase monitoring frequency to daily</li> <li>Assess efficiely of remedial measures and keep the Contractor, IEC, and Engineer informed</li> <li>If exceedance stops, inform Contractor and cease additional noise monitoring</li> </ol>	<ol> <li>Check monitoring data submitted by ET</li> <li>Check monitoring data trends and Contractors working methods</li> <li>Check and confirm Contractors proposed remedial actions and working methods are appropriate</li> </ol>	<ol> <li>Confirm receipt of notification of exceedance in writing</li> <li>Remind the Contractor of his contractual obligations and review the Contractor's working methods</li> <li>Discuss remedial actions with the Contractor and IEC</li> <li>Inform complainant of actions taken, if necessary</li> </ol>	<ol> <li>Rectify any unacceptable practice</li> <li>Liaise with Engineer and IEC to develop appropriate remedial measures to reduce noise impact</li> <li>Amend working methods and remedial proposals if required by the Engineer or IEC</li> <li>Inclement the agreed remedial actions upon instruction from the Engineer and IEC</li> </ol>
Exceedance for two or more consecutive samples	<ol> <li>Identify source (s) of exceedance and inform IEC. Contractor and Engineer</li> <li>Repeat measurements to confirm findings</li> <li>Increase the monitoring frequency to daily</li> <li>Discuss remedial actions with IEC, Engineer and the EPD</li> <li>Assets the efficacy of remedial measures and keep the Contractor informed</li> <li>If exceedance continues, arrange meeting with Engineer; IEC and Contractor to review working practices and identify further remedial actions</li> <li>If exceedance slops, inform the Contractor and cease additional monitoring.</li> </ol>	<ol> <li>Check monitoring data submitted by ET</li> <li>Check monitoring data trends and Contractors working methods</li> <li>Discuss with Contractor and Engineer on possible remodial measures</li> <li>Check and confirm Contractors proposed remedial measures are appropriate</li> <li>Determine the efficacy of remodial actions and keep the Engineer informed</li> </ol>	<ol> <li>Confirm receipt of notification of exceedance in writing</li> <li>Remind the Contractor of his contractor's working methods</li> <li>Discuss remedial actions with the Contractor and IEC</li> <li>Ensure remedial measures are properly implemented</li> <li>If exceedance continues, instruct the Contractor to stop the relevant portion of work until the exceedance is abated</li> <li>Inform complainant of actions taken, if necessary.</li> </ol>	<ol> <li>Roctify any unacceptable cractice, if possible</li> <li>Submit processls for remedial actions to Engineer and IEC within three working days of notification</li> <li>Discuss and amend remedial actions, if required, by the Engineer and IEC</li> <li>Implement the remedial action (s) immediately upon instruction from the Engineer</li> <li>Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions</li> <li>Stop the relevant portion of work as determined by the Engineer until the exceedance is abared</li> </ol>



Annex G

## **Mitigation Implementation Schedule**

### DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuon Long Updated Environmental Monitoring and Audit (Designated Elements) Manual

EIA* Rof.	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	lm pli Stag		itatio	n	Relevant Legislation & Guidelines
115.0					Section Section	Des	C	0	Dec	1100年10月1日
	1.52 OF 101 10	CONSTRUCTION PHASE	Address and the state of the state of the state of the	Construction of and the second of	And the second s	226322	-167(2)	Store's	1000	15 Hold States (States)
	C	AIR QUALITY - Construction Phase					-	-		
	2010	The following measures are enforceable under the Air Pollution Control (Construction Dust) Regulations Site boundary and entrance								
3.5	A1	<ul> <li>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;</li> </ul>	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		1			Part III, Clouse 13 (c), Air Pollulion Control (Construction Dust) Regulations
		Access Road								
3.5	A2	<ul> <li>the portion of any road leading only to a construction site that is within 30 m of a discomble or designated vehicle entrance or exit should be kept clear of dusty materials;</li> </ul>	To control potential dust impacts from vehicle movements.	Site wide and throughout Inc full duration of the construction contract.	The Coniracior		1			Part III, Clouse 14, (b), Air Pollution Control (Construction Oust) Regulations
		Stockpiling of Dusty Materials								
3.5	A3	<ul> <li>any stockpile of dusty materials should be sither covered entirely by inporvious 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 wot;</li> </ul>	To control potential dust impacts during excavation and stockpiling activities.	Site wide and throughout the full duration of the construction contract.	The Contractor		1			Part IV, Clause 18, (a, b & c), Air Pollulian Contral (Construction Dust) Regulations
		Loading, unloading or transfer of dusty materials	6							
3.5	Α4	<ul> <li>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;</li> </ul>	To control potential dust impacts during material handling and truck movements	Sile wide and throughout the full duration of the construction contract.	The Contractor		1			Pail IV, Glause 19, Air Pollution Control (Gonstruction Dust) Regulations
	2000	Use of vehicles	tra we are descented	500 AD207 50000						
3.5	A5	<ul> <li>every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site;</li> </ul>	To control potential dust impacts from vehicle movements.	Sile wide and throughout the full duration of the construction contract.	The Contractor		~			Part IV, Clouse 21, (1), Air Pollution Control (Construction

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3.5	A6	<ul> <li>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;</li> </ul>	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 Pallution Control (Construction Dust) Regulations
3.5	λ7	<ul> <li>Power-driven drilling, and cutting</li> <li>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;</li> </ul>	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 Pallution Control (Construction Dust) Regulations
3.5	A8	<ul> <li>Excavation and earth moving</li> <li>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;</li> </ul>	To control potential dust impacts arising from excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor	×	J			Part IV, Clause 24, Air Pollution Control (Construction Dost) Regulations
3.5	A9	<ul> <li>Construction of the superstructure of a building</li> <li>where a scalfolding is crected 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</li> </ul>	To control potential dust impacts from SPS building construction works.	Full duration of SPS construction contract.	The Contractor		~			Part I, Clouse 6, (a). Air Pollution Control (Construction Dust) Regulations
3.5	A10	<ul> <li>any skip hoist for material transport should be fotally enclosed by the impervious sheeting.</li> </ul>	To control potential dust impacts during material transportation.	Full duration of SPS construction contract.	The Contractor		~			Part I, Clause 6, (b), Air Pollation 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	lmpk Stag	amén o⇔	tatio	n	Relevant Legislation & Guidelines
						Des	c	0	Dec	
4.7.1	B1	NOISE - Construction Phase General Site Clearance – Demolition Works • Use of quiet PME which meet the SWLs taken from Brilish 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		7			Annex 5 of EIAO-TM
4.7,1	B2	Construction of Sewage Pumping Stations P1, P2 & P3 • Use of quiet PME which much the SWLs taken from British Slandard, <i>Noise and Vibration</i> <i>Control on Construction Open Siles, BS</i> 5228: Part 1: 1997,	To minimise potential noise impacts arising during the construction of <i>P1</i> , <i>P2</i> & <i>P3</i>	Site wide and throughout the full duration of the construction contract.	The Contractor		~			Annex 5 of EIAO-TM
		<ul> <li>Adoption of temporary noise barrier, in the form of a site hearding (with a superficial density of at least 20kg/m2, with no substantial gaps), along the site boundary of the pumping station sites.</li> </ul>	To minimise potential noise impacts arising during the construction of <i>P1</i> , <i>P2</i> & <i>P3</i>	Site wide and throughout the full duration of the construction contract.	The Contractor		*	10		Annex 5 of EIAO-TM
4.7.1	1222-017	<ul> <li>Sewers and Rising Mains using Open Trench Method</li> <li>Use of quiet PME which meet the SWLs taken from British Standard, Noise and Vibration Control on Construction Open Siles, BS 5228: Part 1: 1997,</li> </ul>	To control potential noise impacts during excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor		~		100	Annex 5 of EIAO-TM
4,7,1	84	<ul> <li>Use of handheld breakers for all initial road opening activities, when breaking farmac/concrete road surface to a depth of 300mm or when granular material is reached.</li> </ul>	To control potential noise impacts during road opening activilies.	Where there are NSRs located within 50m of the line of sight. Throughout the full duration of the road opening activities.	The Contractor		1			
4.7.1	B5	<ul> <li>Use of movable noise barriers or 3 sided enclosures for all initial road opening activities</li> </ul>	To control potential noise impacts during road opening	Where there are NSRs located within 50m of the	The Contractor		~			

EIA* Ref.	EM&A Rof	A Rof Environmental Protection Measures Recommended Measures & Location of the Main Concerns		Location of the measure	Implementation Agent	lmpl Stag		tatio		Relevant Legislation & Guidelines
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		enclosures for all initial road opening activities (breaking farmac/concrete road surface to a depth of 300mm or when granular material is roached), 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.		10100	12043	adapti.		
	1.0	Sewers and Rising Mains using Pipe Jacking								
4.7.1	D6	Method • Use of quiet PME which most the SWLs taken from British Standard, Noise and Vibration Control on Construction Open Sites, 8S 5228: Part 1: 1997, Road Payement and Finishes	To control potential noise impacts from PME during construction works	Site wide and throughout the full duration of the construction contract.	The Contractor		1			Annox 5 of EIAO-TM
4.7.1	87	<ul> <li>Use of quiet PME which meet the SWLs laken from Brilish Standard, Noise and Vibration Control on Construction Open Siles, BS 5228: Part 1: 1997,</li> </ul>	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		1			Annex 5 of EIAO-TM
		WATER QUALITY - Construction Phase						-		
		No water quality monitoring is required under this study.								
		WASTE - Construction Phase					-	-	-	
3.6.2	Dī	<ul> <li>The Contractor shall obtain the necessary waste disposal permits from the appropriate authorities for the disposal of chemical and C&amp;D waste.</li> <li>Chemical Waste Producer and Chemical Waste Disposal Licence (Waste Disposal (Chemical Weste) (General) Régulations); and</li> <li>Dumping Licence (Land (Miscellaneous Proviations) Ordinance (Cap 28))</li> </ul>	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	V	×			Wasto Disposal Ordinance (Cap 354), Wasto Disposal (Chemical Waste)(General) Regulation (Cap 354), the Land (Miscellansous Provisions) Ordinance (Cap 28))

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EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent			tatio	n	Relevant Legislation & Guidelines
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D2	Chemical Waste Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the regulations and Gode 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 otemical waste, in order to minimise potential spilages/leakages and human health and environmental impacts.	To be implemented at all worksites throughout the full duration of the construction phase.	The Contractor		~			Parl II, (6) Waste Disposal (Cheotical Waste) (General) Regulation
D3	<ul> <li>Storage, Packaging and Labelling of Chemical Waste</li> <li>Containers used for storage of chemical wastes should:</li> <li>be saitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;</li> <li>have a capacity of less than 450 L unless the specifications have been approved by the EPD; and</li> <li>display a label in English and Chinese in</li> </ul>	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	+2	1			Part IV, (9, 10, 11 & 12) Weste Disposal (Chemical Waste) (General) Regulation
D4	<ul> <li>accordance with instructions prescribed in Schedule 2 of the Regulations.</li> <li>Storage of chemical waste</li> <li>The storage area for chemical wastes should:</li> <li>be clearly labelled and used solely for the storage of chemical waste;</li> <li>be enclosed on at least 3 sides;</li> <li>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;</li> <li>have adequate ventilation;</li> <li>be covered to prevent rainfall entering (water collected within the bund must be tested and</li> </ul>	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, 8 18) Waste Disposai (Chemical Waste) (General) Regulation
	D2	D2       Chemical Waste Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the regulations and Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. All chemical waste producers should be registered with the EPD.         D3       Storage, Packaging and Labelling of Chemical Waste         D3       Containers used for storage of chemical wastes should:         03       Containers used for storage of chemical wastes should:         04       be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;         04       they a capacity of lass than 450 L unless the specifications have been approved by the EPD; and         04       Storage of chemical waste The storage area for chemical wastes should:         04       be clearly labeled and used solely for the storage of chemical waste;         04       The storage area for chemical wastes the orden at least 3 sides;         04       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;         05       be covered to prevent rainfall emeting (water	EM8.A Ref     Environmental Protection Measures     Recommended Measures & Main Concerns       D2     Chemical Waste     To control the handling.       D2     Chemical Waste     To control the handling.       D3     Schedule 1 of the Waste Disposal (Chaonical Waste) (Ceneral) Regulations and Code of Practice an the Packaging, Handling and Slorage of Chemical Wastes as follows. All chemical waste producers should be registered with the EPD.     To control the handling.       D3     Storage, Packaging and Labelling of Chemical Waste     To ensure the proper storage, packaging and Labelling of chemical waste 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 instructions prescribed in Schedule 2 of the Regulations.       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To control the handling, storage and disposal of chemical waste producers should be registered with the EPD.         To as implemented at all worksites throughout the grapher backages and human health and environmental impacts.           03         Storage, Packaging and Labelling of Chemical Waste should: <ul> <li>to estilable for the substance they are holding, estistant to corresion, maintained in a good condition, and socurely closed;</li> <li>have a capacity of lass than 450 L unless the specifications have been approved by the EPD; and</li> <li>display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.</li> </ul> <li>D4</li> <li>The storage of chemical waste; for and bunding, of capacity to asche the and bunding, of capacity to asche the induced waste; in accordance with the storage of chemical waste; the volume of the largest container or 20% by volume of the chemical waste; in accordance with the area, whichever is the greatest;</li> <li>have a deguate ventilation;</li> <li>be covered to prevent rainfall entering (wale collo</li>	EM&A Ref         Environmental Protection Measures         Recommended Measures 3. Main Concerns         Location of the measure Main Concerns         Implementation Agent           D2         Chemical Waste Chemical waste that is produced, as defined by Schedule 1 of the Waste Devices and Measures 1 of the Waste Dispace/ (Chemical Waste) (Chemical Regulations, shuld be handlid in accordance with the regulations and Code of Practice on the Packaging, Handling and Storential producers shuld be registered with the EPD.         To control the handling attractive and the Packaging, Handling and Storential storage of Chemical Wastes is follows, All chemical wastes producers shuld be registered with the EPD.         To ensure the proper storage, packaging and Labelling of chamical waste, in accordance with the Regulations.         To be implemented at all worksites throughout the full duration of the constructor phase.         The Centractor           D3         Storage of actions have been approved by the EPD; and 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 Centractor           D4         Storage of chemical wastes storage of chemical wastes storage of chemical wastes should be constructed at all accordance with the Storage of chemical wastes should be constructed at all accordance.         To be implemented at all worksites throughout the full duration of the construction phase.         The Contractor           D4         Storage of chemical wastes be enclosed on al local 3 acide; be enclosed on all local 3 acide; be enclosed on a	EM8A Ref     Environmental Protection Measures     Recommended Measures 3 Main Concerns     Location of the measure Agent     Implementation Agent     Implementation Stagent       02     Chemical Waste Chemical waste that is produced, as defined by Schedule 1 of the Waxe Disposed (Chemical Waste) (Ceneral Regulations and Code of Practice on the Packaging, Hanchuld be handled in accordance with the regulations and Code of Practice on the Packaging and Labelling and Blorage of Chemical Wastes as follows. All chemical waste producers should be registered with the EPD.     To control the handling singage and Esposed of the minimise protectial splinger/Restagos and human health and environmental impacts.     To be implemented at all workiles throughout the subalizing and Labelling of Chemical Waste     The Contractor     The Contractor       03     Storage, Packaging and Labelling of Chemical Waste     To ensure the proper storage practinging and labelling of chemical waste in accordance with the Regulations.     To be implemented at all workiles throughout the full duration of the construction phase.     The Contractor       03     Storage of chemical waste have a capacity of lass throughout the storage of chemical waste be capacity to accordance with storage of chemical waste be chearly labeled and used soluty for the storage of chemical waste have adequate waste; have adequate vertilations.     To be implemented at all workiles throughout the full duration of the construction phase.     The Contractor       04     Storage of chemical waste have adequate vertilations.     To ensure the proper storage of chemical waste in accordance with the Regulations.     To be implemented at all workiles throughout the construction phase.    <	EM&A Ref     Environmental Protection Measures     Recommended Measures 3. Main Concerns     Location of the measure Agent     Implementation of the super- transmission of the measure Agent       02     Chemical Waste Chemical waste that is produced, as cofined by Recentule 1 of the Waste Agent Chemical Waste (Chemical Waste in the replacing of the measure Producers should the replaced with the EPO.     To control the handling of Chemical Wastes as follows. All chemical waste producers should the replaced with the EPO.     To control the handling of Chemical Wastes as follows. All chemical wastes should:     To control the handling of Chemical Wastes as follows. All chemical wastes should:     To control the handling of Chemical Wastes as follows. All chemical wastes should:     To control the produced at all worksites throughout the splagestate to corresor, maintained in a good condition, and socurely closed;     To ensure the proper storage, packaging and labelling of chemical waste in accordance with instruction greecribe in Schedule 2 of the Regulations.     To ensure the proper storage, packaging and labelling of chemical waste in accordance with instruction greecribe in Schedule 2 of the Regulations.     To ensure the proper storage, packaging and labelling of chemical waste in accordance with instruction greecribe in Schedule 2 of the Regulations.     To ensure the proper storage, of chemical waste in accordance with instruction greecribe in schedule 2 of the Regulations.     To be implemented at all with the Regulations.     The Contractor       D4     Storage of chemical waste stored in the contract or the demical waste stored in the contract or the chemical waste stored in the contract or the chemical waste stored in the contract or the targe of chemical waste stored in the chemical waste in	EM&A Ref       Environmental Protection Measures       Recommended Measures a       Location of the measure Main Concerns       Location of the measure Report       Implementation Report       Implementation Report         02       Chemical Waste Chemical waste that is produced, as defined by Second as other Mode Disposed of Chemical Waste or contract with the cropulations and Code of maccordence with the cropulations of Chemical Wastes as follows. All chemical wastes should:       To cancel the handling close and the measures and close and the addition of the maining proteinal wastes and the cropulation and Code of maining proteinal producers should the transfer and good condition. The submatch for the substance they are holding the submatch and Chinese in according with the EPD. and       To ensure the proper storage prochestions have been approved by the EPD; and       To ensure the proper storage of chemical waste in according with the Regulations.       To be implemented at all worksites throughout the construction phase.       The Contractor       I, I	EM&A Ref       Environmental Protection Measures       Recommended Measures a       Location of the measure Agent       Implementation Agent       Implementati Al Al Al Al Al Al Al Al Al Al Al Al Al Al Al A

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		adequately separate				1.1000	11000		1 power	
		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 forcughout the full duration of the construction phase.	The Contractor		×			Part IV, (20 -25) Wisste Disposal (Chamical Waste) (General) Regulation
6.6.2	D5	Management of Waste Disposal A trip-toket 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 Barcao Technical Circular No. 5/99, LAND CONTAMINATION- Construction Phase	To monitor the disposal of C&DM and solid wastes at public filling facilities and landfills and to control Ry-tipping.	To be implemented at all worksites throughout the full duration of the construction phase.	The Engineer/ Contractor		v			Land (Miscellageous Provisions) Ordinarce (Cep 295) and Works Bureau Technical Circular No. 5/99.
7.5.6	EI	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 fand 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 193.1.1 & 3.1.2

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15185	NUL STAT					Des	C	0	Déc	The second states of the
		EPD, the contaminated site(s) shall be remediated in accordance with the approved CAR/RAP.					2001320	194		Value of Latency to a set
8.7.1	F1	ECOLOGY - Construction Phase Mitigation Measures Adopted - Avoidance Construction activities shall be prohibited during the winter season (November to March) along the section of the proposed severage alignment, which fail within the Deep Bay Welfand Conservation Area and the Deep Bay Welfand 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 altached). Regular site inspections (at least twice a month) should be conducted by the Environmental Team during the winter season (November to March) to ensure proper implementation of this restriction	To schedule construction works in order to minimise potential impacts to winter visiting birds. To be confirmed by regular site inspections.	At identified location (Figure 8.7a) for the full duration of the construction contract.	The Contractor		~			
8.7.2	F2	Mitigation Measures Adopted - Minimisation Pipe jacking method should be used instead of dredging where sewers and rising mains cross over existing MDC within the WCA and WBA.	To minimise potential construction noise impacts to coological 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 severage 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 8.7e attached) throughout the full duration of the construction contract.	The Contractor		~			

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8.7.3	F5	miligation measures (i.e. erection of movable noise barriers with a suitable footing along the sites) in the monthly EM&A reports. <i>Mitigation Measures Adopted</i> Quietened construction plant and equipment (as shown in <i>Tablo F2</i> ) should be used for the construction of pumping stations (P3 and P2) and sowerage alignment (S4, S5 and S6) located within the WGA and WBA.	Quiet construction plant shail minimise potential noise impacts to the wildlife, particularly rare birds including Black-faced Spoonbil, Buzzard, Hobby, Impedial Eagle, Intermediate Egret, Avocet and Black-cared Kite	At described locations and throughout the full duration of the construction contract.	The Contractor		~		1.0000.0	
8.7.4	FG .	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 poind areas (0,7 ha);	To crect fonces to prevent encroachment of construction activities onto adjacent areas.	At P1 to P3 for full duration of the construction contract.	The Contractor		۷.			
8.7.4	F7	No filing and dumping to the remaining abandoned fishpond at P2.	To avoid disturbance to abandoned fishpands from construction activities and illegal dumping.	At P2 for full duration of the construction contract	The Contractor		1			
8.7.4		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 <sup>3</sup> .		At P1 to P3 for fuil duration of the construction contract.	The Contractor		1			
8.7.4	F9	No open fires within the site boundary during	To prohibit open fires, thereby	Site wide and throughout	The Contractor		1			Air Pollution Control

EIA* Ref.	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	lmpi Stag	emen e**	tatio	n	Relevant Logislation & Guidelines
1408	gaune and					Des	С	0	Dec	and the second second
8.7.4	F7	construction and provide temporary fire fighting opuipment in the work areas. No filling and dumping to the remaining abandoned fishpond at P2.	minimising potential damage to trees and shrubs. To avoid disturbance to abandoned lishponds from construction activities and illegal dumping.	the full duration of the construction contract. At P2 for full duration of the construction contract.	The Contractor	THERE	~	10,245		(Open Burning) Regulation
8.7.4	Fð	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 polontially impact streams and ponds to provent sodimentation.	At P1 to P3 for full duration of the construction contract.	The Contractor		1			
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 strubs.	Site wide and throughout the full duration of the construction contract.	The Confractor		1			Air Pollution Contrat (Open Burning) Regulation
		FISHERIES - Construction Phase				1.2	_	-		
		No specific miligation measures are required for inclusion in the EP.								
		CULTURAL HERITAGE - Not Applicable for Package 1A-1T (DC/2005/02)							-	
	-	LANDSCAPE AND VISUAL - Construction Phase				-	-	-	1	· · · · · · · · · · · · · · · · · · ·
	HI	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 hearding barriers.	To minimise potential landscape and visual impacts.	To be implemented during the construction phases of the project	The Contractor		~			
3		Prior to application for an Environmental Permit, a set of landscape clans 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 chases of the	DSD and The Contractor	~	*			

### DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Updated Environmental Monitoring and Audit (Designated Elements) Manual

EIA* Ref.	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measures & Main Concerns	Location of the measure	Implementation Agent	lmpl Stag	emer e**	ntatio		Relevant Legislation & Guidelines
No.						Des	c	o	Dec	
		submitted for approval by the SPD.	CONTRACTOR CONTRACTOR CONTRACTOR	project	TEMPORAL SCHOOL BOOK	11220-02	150002	100.04	Settles	State of the Designation of the State
		The landscape plans and pumping station elevations should domonstrate that the following elements are considered: • Existing landscape elements (such as mature trees), transplantation of valuable trees, new compensatory planting								
		<ul> <li>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.</li> <li>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.</li> <li>a minimum screen glanting 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.</li> <li>felling of mature trees are kept to a minimum.</li> </ul>								
3.7	8	<ul> <li>EM&amp;A REQUIEMENTS - Construction Phase</li> <li>Air Quality</li> <li>Subject to the Environmental Protection</li> <li>Departments (EPDs) agreement, construction phase dust monitoring shall be undertaken at the following locations in accordance with the recommendations of the EIA.</li> <li>Warksite boundary facing Scattered house in Nam Sang Wai (AM1);</li> <li>Worksite boundary facing Fung Kat Heung (AM5);</li> <li>Worksite boundary facing Scattered House near Route 3 (AM6);</li> </ul>	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

### DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Updated Environmental Monitoring and Audit (Designated Elements) Manual

EIA* Ref.	EM&A Ref	Environmental Protection Measures Objectives of the Recommended Measures & Location of the measure Agent		re Agent Stage			Relevant Legislation & Guidelines			
		THE REPORT OF A DESCRIPTION OF A DESCRIPTION OF A DESCRIP			· 如何,如今10月1	Des	c	0	Dec	
4.9.1	12	<ul> <li>at any additional locations, where considered necessary, in agreement with EPD.</li> <li>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.</li> <li>(NM3) Scattered House in Nam San Wai (D12);</li> <li>(NM4) Scattered House in Nam San Wai (D11);</li> <li>(NM5) Scattered House near Route 3 (D17);</li> <li>(NM5) Scattered House near Route 3 (D17);</li> <li>(NM7) Fung Kat Heung (D19);</li> <li>and at any additional locations, where considered necessary, in agreement with EPD.</li> </ul>	Installations of the noise monitoring stations to ensure the action and limit lovels 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		V	Lossig		Noise Control Ordinance



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

Note: Calibration certificates will only be provided if monitoring equipment is re-calibrated or new.

Item	Aspect	Description of Equipment	Serial No.	Date of Calibration	Date of Next Calibration
1	Air	Greasby Anderson GMWS2310 High Volume Sampler	AM1	22 May 06	21 Aug 06
2	All	Greasby Anderson GMWS2310 High Volume Sampler	AM7	22 May 06	21 Aug 06
3	Noise	Bruel & Kjaer 4231 Acoustical Calibrator	2292167	13 Apr 06	13 Apr 07
4	NUISE	Bruel & Kjaer 2238 Integrating Sound Level Meter	2285762	8 Jul 05	8 Jul 06

\* Calibration done in this reporting month, see calibration certificate attached.



Annex I

**Meteorological Data** 

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

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

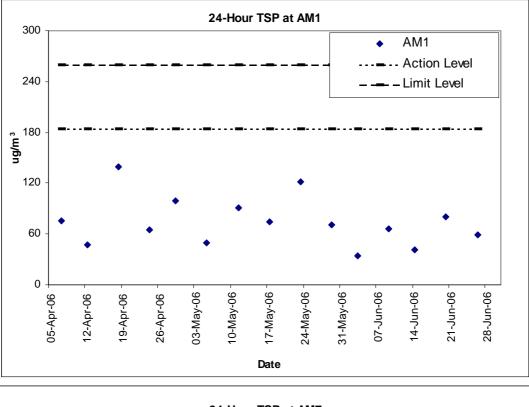


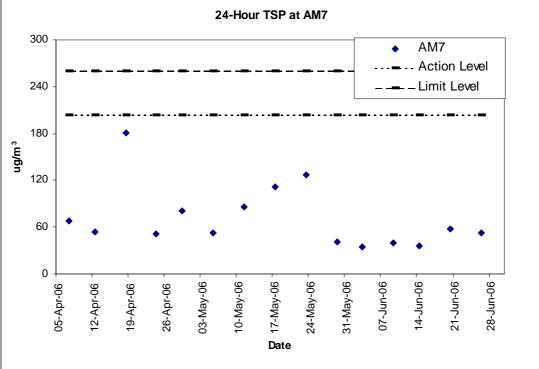
Annex J

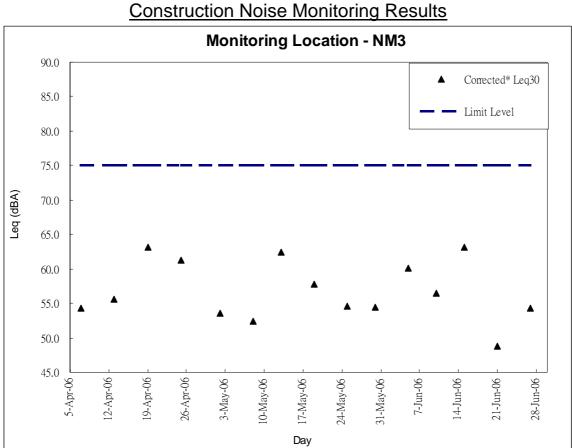
Graphical Plots of Air Quality and Noise Monitoring Results

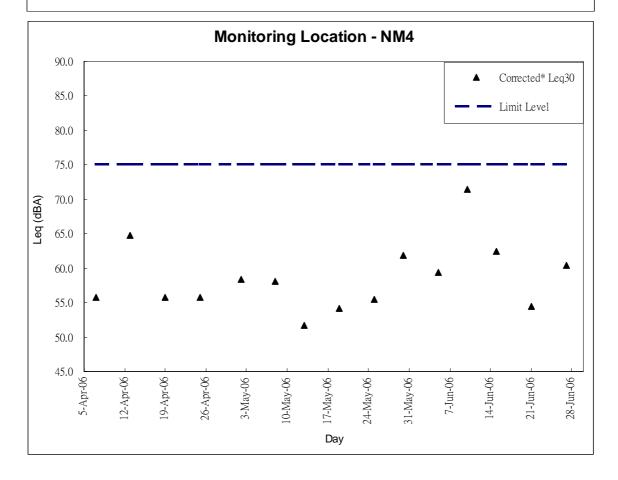


### Air Quality Monitoring Results













Annex K

### **Proforma of Site Inspection and IEC Audit in June 2006**

# AUES

### Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Severs, Rosing Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long			Contractor:			Leader Gral Engineering Corp. Ltd.				
				Engineer:		Babbe Asia Ltd					
Inspected by:	ET Auditor:	Ben Tam		IEC:			Mott Connell Ltd				
	Contractor Rep:	Patrick Wong		Env. Team:			Acton-United Env. Services & Consulting				
	IEC's Rep: Ni			Inspec	ction Date	& Time:					
	RE's Rep:	Mr. S L Hu		Inspe	tion Ref:		EM&A (06June08)				
~	-						-				
General Meteor	relogical information	0									
Weather	Sunny	Eine E	Cloudy		Overcast		Drizzle	1	Ran	Hazy	
Temp:	26 °C										
Humidity:	High (RH > 9	0%)	Moderate (6	0% > RH =	50%)	Ē	Low (RH	< 60%)			
Wind:	Calm	Light [	Breeze		Strong						
Air Quality					Yes	No	NA	NC	Follow-up	Remarks	
Is hoarding of no	x less than 2.4m provid	jed?								official second	
Are site vehicles	traveling within control	fed speed limit?									
Are site vehicles	movement confined to	designated haut roads?									
Are public roads	outside site exits kept	clean and free from dust.	>		7					2	
Are haul roads a	ind unpaved surfaces w	vatered regularly to avoid	oust generation?		171						
Are there wheel	washing facilities prove	ded at site exits?	0.02.519/00/270/0							×	
Is water spraying	used during the main	dust generating activities	2		1	$\Xi$					
	ed or stockpile of dusty				171	Ξ					
	of ground covered or w					Ξ		H	_		
	des covered by clean i					H	1	—	$\equiv$		
	l equipment switched o	19 Contractor (19 Con				H		H	$\equiv$		
	ons from plants/equipm							Ξ	$\equiv$		
Is open burning a	approving and a second							—	—		
Observable dust	2 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Wind erosion				hinio/enuit	pment moven	ente o	<u>.</u>		
		Leading/unloading of ma	intigle		1 Ott	10050000000		inen to			
					1. Jon	1013		55			
Construction No	cise										
		a minimize naise nuisano	R7	51							
Are the works or	equipment sited to min	timize noise nuisance?									
		uned and in good operation	ig condition?								
Is tole equipment	t turned off or throttled	down?									
Is powered mech	sanical equipment cove	ared or shielded by approp	oriate acclustic ma	terials?	$\overline{\mathbf{x}}$						
Is silenced equip	ment used where appr	opnate?			$\boxed{}$			$\Box$			
Are noise enclosi	ures or noise barners u	used where necessary?			$\boxed{\checkmark}$						
Does specified et	cuipment has valid not	se label?						$\Box$			
Are Construction	Noise Permits (GNPs)	available for inspection?	ŝ				$\mathbf{V}$	$\Box$			
Major Norse Sour	rce	Traffic			Co	nstruction	activities ins	de of site			
		Construction activities of	rsida of site		00	ers _					

# AUES

### Site Inspection Checklist (SF-17)

Water Quality & Drainage	8	Yes	No	NA	NG	Follow-up	Bemarks
Is a wastewater discharge	Icense obtained for the Project?	×					
Is site effluent discharged	n accordance with the discharge license?	$\overline{[\mathbf{v}]}$					
Is the discharge of sity wa	ter svoided?	V.					
Is trainage adequate?		~	Ė.				
is drainage system well ma	antained?	~					
Are there temporary ditche	s for runoff discharge into appropriate watercourse?						
Are there sedimentation ta	nks for settling runoff prior to discharge?						
Are the sedimentation tank	s Constructed of pre-formed individual cells?		$\Box$				
	With adequate capacity?						
	Free from silt and sed ment?		$\Box$		$\Box$		_
Are there neutralization tar	iks for concrete batching/mung discharge?		$\Box$	$\square$			
Are there all interceptors in	i drainage system?		$\Box$	$\overline{\mathbf{X}}$	$(\Box)$	1_1	100000
is wheel wash facility provi	ded at every site exit?	$\left[ \times \right]$	$\Box$			II.	
Are vehicles and plant clea	aned of earth, mud & debris before leaving the site?	[7]	$\Box$				
Are wheel washing faolitie	s regularly inspected and maintained?		$\Box$	1	$\Box$	<u>[]</u>	
Are toriets provided on site	? If so, are they properly maintained?	$\square$	$\Box$		$\Box$	$\Box$	
Are manholes covered and	i sealed?				$\Box$	1_1	
Is cilleakage or spillage a	roided?		$\Box$		$(\Box)$		
Waste Management and	Potential Land Contamination						
Waste Management and General Refuse	Are receptacies (rubbish bins) available?						
A CONTRACTOR OF THE OWNER OF							
A CONTRACTOR OF THE OWNER OF	Are receptacies (rubbish bins) available?	0					
A CONTRACTOR OF THE OWNER OF	Are receptacies (rubbish bins) available? Is there regular and proper disposal?						
General Refuse	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented?						
General Refuse	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction wasle minimized?	999			000000		
General Refuse	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction wasle minimized? Is waste sorting implemented on she?	<u> </u>					Remarks 2
General Refuse	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precisable?	<u> </u>			000000000	00000000	Remarks 2
General Refuse	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycing implemented? Is generation of construction waste minimized? Is waste sorting implemented on she? Is construction waste reused where precisable? Is construction waste properly disposed of?	<u> </u>			00000000000		Remarks 2
Goneral Rofuse Construction Waster	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precticable? Is construction waste properly disposed of? Are disposal records available for inspection?	<u> </u>					Remarks 2
Goneral Rofuse Construction Waster	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precisable? Is construction waste reused where precisable? Is construction waste property disposed of? Are disposal records available for inspection? Is there designated storage area?	<u> </u>					Remarks 2
Goneral Rofuse Construction Waster	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction wasle minimized? Is waste sorting implemented on site? Is construction waste reused where precioable? Is construction waste reused where precioable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there designated storage area? Is chemical waste stored properly?	<u> </u>					Remarks 2
Goneral Rofuse Construction Waster	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precicable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there designated storage area? Is chemical waste stored properly? Is there proper disposal?	<u> </u>					Remarks 2
General Refuse Construction Waste:	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precisable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there dasignated storage area? Is chemical waste stored properly? Is there proper disposal? Is chemical waste license available for inspection?						
General Refuse Construction Waste:	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycing implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precioable? Is construction waste reused where precioable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there designated storage area? Is chemical waste stored properly? Is there proper disposal? Is chemical waste license available for inspection? Do excavated materials appear uncontaminated? Are appropriate procedures followed if contaminated						Remarks 2
General Refuse Construction Waste:	Are receptacies (rubbish bins) available? Is there requiar and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precisable? Is construction waste reused where precisable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there dasignated storage area? Is chemical waste stored properly? Is there proper disposal? Is chemical waste license available for inspection? Do excavated materials appear uncontaminated? Are appropriate procedures followed if contaminated						Remarks 2
General Refuse Construction Waste: Chemical waste/waste off	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precioable? Is construction waste reused where precioable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there designated storage area? Is chemical waste stored properly? Is there proper disposal? Is chemical waste license available for inspection? Do excavated materials appear uncontaminated? Are appropriate procedures followed if contaminated materials exist? Are disposal records available for inspection?						Remarks 2
General Refuse Construction Waste: Chemical waste/waste off	Are receptacies (rubbish bins) available? Is there regular and proper disposal? Is proper sorting and recycling implemented? Is generation of construction waste minimized? Is waste sorting implemented on site? Is construction waste reused where precicable? Is construction waste reused where precicable? Is construction waste properly disposed of? Are disposal records available for inspection? Is there designated storage area? Is chemical waste stored properly? Is there proper disposal? Is chemical waste license available for inspection? Do excavated materials appear uncontaminated? Are disposal records available for inspection? Are disposal records available for inspection?						Remarks 2

Page 2 of 3



### Remarks:

### Previous Audit Follow-up:

1. Stagnant water near the sheet pile was removed.

### Observation:

Nil

#### Signatures:

Env. Auditor



Name: K F Tam

Name:

Contractor's Representative

Nama:

IC(E) Auditor

Name

Resident Site Staff

2

## AUES

## Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewars, Rising Mains & Sewage Pumping Station at Karn Tin, Nam Sang Wai and Au Tau In Yuen Long			Contracto	a,	Leade: Civ	Leader Civil Engineering Corp. Ltd				
	180 11 1081 001	<u>y</u>		Engineer:		Batyle Asia	Satvie Asia Ltd				
inspected by:	ET Auditor:	Ben Tam		IEC:		Mott Conn:	Mot Connel Lie				
	Contractor Rep: Palick Wong IEC/s Rep: Nil			Env. Team	Env. Team:		Action-United Env. Services & Consulting				
				inspection	Date & Time	: 14 June 20	14 June 2006 at 02:00pm				
	RE's Rep:	Mr. S.L. Hat		Inspection	Ref:	EM8A (14.	EM8A (14June06)				
								_			
General Meteor	rological informatio	on									
Weather	V Sunny	Fine	Globby	Gver	cast [	0.izz/e		Rein	Hezy		
Temp:	30 °C										
Humidity:	Hაერ (RH :	> 90%)	Moderate (9	0% > RH > 505	ຄ 🗌	Low (R)	i < 50%)				
Wind:	Celm	Light	Breeze	Stron	0						
Air Quality				Ye	s No	ŇA	NC	Follow-up	Remarks		
is hearding of no	ot less than 2.4m pro	ovided?		5	a 🗆						
Are site vehicles	r traveling within con	ntrolled speed fimil?		0					10000		
Are site vehicles	a movement confine	d to designated hauf	oads?								
Are public roads	outside site exits ka	ept clean and free fro	m dusl?	5							
Are haul roads a	and unpaved surface	ss watered regularly b	avoid dust generation?			i 🗆					
Are there wheel	washing facilities pr	ovided at site exits?									
ta water spraying	g used during the m	ain dust-generating a	ctivities?	E							
Are the excevate	ed or stockpile of du	sty materials kept we	12	C	-						
Is exposed area	of ground covered o	or watered frequently/	,	E							
Are load on vehi	cles covered by clea	an impervious sheetin	s?			1 1					
Are vehicles and	sequipment switche	d off while not in use'	9 C	Ŀ	2 E				11 c		
Is amoky emissio	ons from plants/equi	ipment avoided?		62	2 E						
ls open burning :	svoided?			L.					2		
Observable dust	t sources	Wind erceion			Vehicle/equ	utoment move	ments				
	C	Loading/unicedin	g of materials		Oners	Nil					
Gonstruction N	nise										
Are the construct	tion works schedule	of to minimize noise in	uisanco?								
Are the works of	equipment sited to	minimize noise nuisa	nce?								
Are all plant and	equipment well mail	intained and in good (	operating condition?	13					8		
Is idle equipmen	t turned off or thrott	led down?		-							
Is powered med	hanical equipment o	overed or shielded by	appropriate accustic ma	tonais?	a 🗆				840		
Is silenced equip	ament used where a	ppropriate?		C	ġ 🗆				<u></u>		
Are noise encros	tures or noise barrie	is used where neces	sary?		1 .				S		
Does specified e	equipment has valid	ncise label?		E	3 🗆						
Are Construction	Noise Permits (CN	Ps) avařable (crinsp	ecten?						62 73 20		
Major Noise Sou	nce [	]Tra≝c		C	Constructo	n activities ins	ide of ste				
		Construction activ	thes outside of silia		Others						

## AUES

## Site Inspection Checklist (SF-17)

Water Quality & Drainag	0	Yes	No	NA	NC	Fallow-up	Remarks
ls a wastewater discharge	ficense obtained for the Project?						
Is site effluent discharged	in accordance with the discharge ficanse?	$\mathbb{Z}$					
Is the discharge of sity wa	iter avoided?	$\mathbf{\Sigma}$					
Is crainage adequate?							
is drainage system well m	sintained?						
Are there temporary ditch	es for runoff discharge into appropriate watercourse?						
Are there sedimentation ta	enks for setting runoff prior to discharge?			$\square$			
Are the sedimentation lan	ks Constructed of pre-formed individual cets?						
	With adequate capacity?						
	Free from sit and seciment?		$\square$				
Are there neutralization is	nks for concrete batching/mixing discharge?						
Are there oil interceptors i	n drainage system?						-
Is wheel wash facility prov	ided at every site exit?	2					
Are vehicles and plant cleve	shed of earth, mud & dobris before leaving the site?	2					
Are wheel washing facilitie	is regularly inspected and maintained?						
Are tailets provided on site	? If so, are they properly maintained?	~					
Are manholes covered any	d scaled?						
Is oil leskage or spillage a	voided?	<b>(</b>	$\Box$				
Waste Management and	Potential Land Contamination						
General Refuse:	Are receptacies (rubbish bins) available?						
	Is there regular and proper disposal?						8. X
	is proper sorting and rocycling implemented?						
Construction Waste:	is generation of construction waste minimized?						
	Is waste sorting implemented on site?						45
	is construction wash raised where practicable?		$\square$				8
	is construction washe properly disposed of?						
	Are disposal records available for inspection?						
Citemical waste/waste of	is there designated storage area?			$[\mathbf{Z}]$			
	Is chemical waste stored property?			$[\mathbf{Z}]$			1.1.2
	Is there proper disposal?		$\Box$	171			
	Is chemical wastelloonse available for inspection?						
Excavated Materials	Do excavated materials appear uncontaminated?						
	Are appropriate procedures followed if contaminated materials exist?						
	Am disposal records available for inspection?	$ \mathbf{X} $					
Chemical/Fuel	Is chamicalWuel slored in bunded area?	127					
	is bund capacity adequate (+110% of the largest tank)?	11					Remarks283
	Are storage areas lookable?	12					
Is foam, oil, grease or othe wanted?	r objectionable matters in water or nearby drains of sewer	171					-

ble matters in water or nearby drains of sewer avoided?



### Remarks:

### Previous Audit Follow-up:

Nil

Observations:

- Stagnant water was cumulated near the sheet pile at Portions F and J. The contractor was reminded to clean up the stagnant water.
- Stagnant water was cumulated inside a drip tray at Portion G. The contractor was reminded to clean up the stagnant water.
- Oil drum was observed without a drip tray at Portion K. The contractor was reminded to provide drip trays for all free-standing oil drums.

Signatures:

Env. Auditor

Name: K F,Tem

Nante

Contractor's Representative

Name:

IC(E) Auditor

Nan'er

Resident Site Staff

## AUES

### Site Inspection Checklist (SF-17)

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Walland An Taulin Xian Long			Contractor:	Leader Civil Engineering Corp. Lid				
	An Tan in Yoen I	Long		Engineer:	Bablic Asia Ltd Mott Connell Ltd				
Inspected by:	ET Auditor:	Øen Tam		IEG:					
	Contractor Rep	; Patrick Worg		Env. Team:		Action-United Env. Services & Consulting			
	IEC's Rop: NI			Inspection Date	e & Time:	: 20 June 2006 at 00:30am			
	RE's Rep:	Mr. S.L.Hui		Inspection Ref.		EM&A (20)	lune06)		
General Meteor	rologizal informati	оп							
Weather	Sunny	Fice	Cloudy	Cvercest		Crizz'e		Rain	Mary
Temp:	28 °C			20 - 1000 000 20					
Humidity:	High (RH	> 90%)	Moderate (\$0	% > RH > 50%)	100	Low (RI)	< 50'5)		
Winds	Ceim	Lig₩	Breeze	Strong	0100	9000000	19373321		
Air Quality				Yes	No	NA	NC	Fallow+ up	Remarks
Is hearing of no	d less than 2,4m pr	rovided?		Z					
Are site vehicles	traveling within co	ntrolled speed 1mit?		$\square$					
Are site vehicles	movement confine	lusri betangiseb of b	roads?						
Are public roads	outside sité exite k	ept clean and free fro	m dust?						
Are had made a	nd unpeved surfac	es watered regically (	to avoid dust generation?			<b>E</b>			105
Are there wheel	washing facilities p	revided at site exits?							13. SZ
is water spraying	used curing the m	hain dust-generating a	esivities?						
Are the excavele	ed or stockpile of du	usty materials kept we	17						10 S
is exposed area.	of ground covered	or watered frequently	7						61 - S
Are losd on vehic	dex covered by de	en impervious sheeti	rg?						
Are vehicles and	dequipment switch	ad off white out in use	°						
is smoky emissio	ons from plants/equ	ipmont avoided?							
is open burning a	avoiced7								
Observable dust	sources	Wind crosion		()Ve	hiclewigni	ament move	ments		
	D	Loading/Unloadin	g of materials	<u>[ &lt; ]</u> 00	hera <u>b</u>	ŧ	N		
Construction N	oise								
Are the construct	tion works schedub	ed to minimize no set	nuisance?				$\Box$		-
Am the works or	equipment sited to	erinimize noise ruise	moe?						
Are all plant and	equipment well ma	lintained and in good	operating condition?	1		1			
is idle equipment	t lumed off or thraft	l'ed dawn7							
Is powered mech materials?	ranical equipment o	covered or shielded b	y appropriate acoust o	$\square$					
ls sienced equip	ment used where a	appropriate?							14: GA
Are noise enclos	ums or noise barri	secen erediw beau and	isary?	[2]					
Does specified e	quipment has valid	noise isbel?							
Are Construction	Noise Permits (Ch	Ps) available for insp	anclion?			~			-
Major Noise Sou	iros E	Traffic			estudion	activities ins	ide of site	39 <u>7 - 17</u> 7	
	Ľ	Construction activ	rites outside of site		hors _				

## AUES

### Site Inspection Checklist (SF-17)

Water Quality & Drainage	N	Yes	No	NA	NG	Follow- up	Bamarka
is a wastewater discharge	license obtained for the Project?	$\overline{\mathbf{\nabla}}$					
Is ale effuent discharged i	n accordance with the discharge liberase?						s <u></u>
is the discharge of sity wa	ter avoide0?		i				
ta drainage adequeos?		$\mathbf{T}$					92.1
la drainėge ayatem well ota	insino0?	1					
Are there temporary diche	s far runoff discharge into appropriate watercourse?						-
Are there sedimentation ta	nis for setting runoff prior to discharge?						-
Are the sedimentation tank	s: Constructed of pre-formed and vidual cells7						-
	With adequate capacity?			$[\mathbf{Z}]$			
	Free from all and aed ment?			$\square$			3 <u></u>
Are there neutralization tax	ka for concrete hatching/mixing discharge?						
Are there oil interceptors in	crainega system?			1			
is wheel wash facility previ-	ded at every she exil?	1					1
Are vehicles and plant clea	ned of earth, mud & debris before leaving the site?	X					
Are wheel washing fadities	s regularly inspected and maintaineo?			$\square$			
Are tollets provided on site	7 If so, are they properly maintained?						
Are manholes ovvered and sealed?		$[\overline{\mathcal{T}}]$					
is oil leakage or spillage av	oded?	[Ž]					3 <del>.</del>
Waste Management and I	Patential Land Contamination						
General Refuse:	Are receptacles (rubbish bins) available?	$\boxed{}$					
	Is there regular and proper clspesal7						
	is proper sorting and recycling implemented?	$\square$					-
Construction Waste:	is generation of construction waste minimized?	$\square$					
	a weste sorting implemented on site?						<u>8</u>
	is construction waste roused where predicable?				$\Box$		<u> </u>
	is construction waste property disposed of?	$\overline{[\underline{\mathcal{A}}]}$	()	$\Box$	$\Box$		<u>e - s</u>
	Are disposel records available for inspection?				$\Box$		
Chemical waste/waste of	Is there designated storage area?				$\Box$		
	ts chemical waste stored property?	$\Box$			$\Box$		
	is there proper disposal?			D.	$\Box$		
	Is chemical visate license available for inspection?	$\Box$	Ţ		$\Box$		
Excavated Materials	Do excavaled materials appear uncomaminated?	<u> </u>			$\Box$		
	Are appropriate procedures followed if contaminated materials exist?						
	Are disposal records available for inspection?				$\Box$		
ChemicaWFuel	is chemicalifuel slored in bunded area?				$\Box$		
	is band capacity adequate (>110% of the largest tank)?	$[ \square ]$					Remarks283
	Ans storage snew lockable?				$\Box$		
Is foam, cli, grease of othe avoided?	r objectionable matters in water or nearby drains of sewer						



### Remarks:

Previous Audit Follow-up:

- Stagnant water was cumulated near the sheet pile at Portions F and J. The contractor was reminded to clean up the stagnant water.
  - Stagnant water was removed.
- 2. Stagnant water was cumulated inside a drip tray at Portion G. The contractor was reminded to clean up the stagnant water.
  - Stagnant water was removed.
- Oil drum was observed without a drip tray at Portion K. The contractor was reminded to provide drip trays for all free-standing oil drums.
  - Drip tray was provided for all free-standing oil drums.

Observations:

Nil

Signatures;			
Env. Auditor	Contractor's Representative	IC(E) Auditor	Resident Site Statt
-2-			
B			
Name: K.F.Tam	Name	Name	Name:

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

#### MONTHLY SITE INSPECTION PHOTO 26 June 2006 PART 1 – Environmental Observations

### Close out of previous month's observations (May 2006)

This month's observations
None

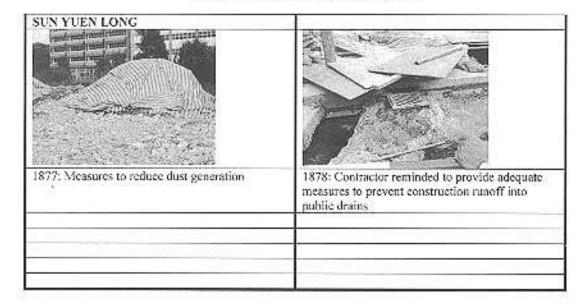
This week's observations	This week's observations
NAM SANG WAI ROAD	
1853: Protection to drains from construction	1857: Protection provided to exposed surface to
านทบมี.	minimise runoff during rain.
NAM SANG WAI PUMP STATION	
1861: Wheel washing provided	1862: sorting facilities provided.
2001	
PORTION GA1	
1869: Contractor advised to review tank design to improve silt removal efficiency	1870: Measures to prevent runoff discharges
а́.	

### This month's observations

P/Hong Kong/UNF/Projects2/225181-KomT in IEC/monthly site and taksite photosyune 2006/Site Walk Photo-20060626.doc

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

#### MONTHLY SITE INSPECTION PHOTO 26 June 2006 PART 1 – Environmental Observations



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

### MONTHLY SITE INSPECTION CHECKLIST

insposition Site Local		un .	nspected By	et: Cliff 12 :080	Loader: Gerviy Lain ET: Cliff Tam OSO: S <u>I H</u> at, IEC: SM Fou		
Weather							
Condition	Sorry Fire	Overcast	Oncde	Ra: 1	Sconn	Razy	
Temperatur	8012.	Hurzdły	Hgh	t/oderate	Lan		
Wint	CXm ught	G-e+ce	Sirong	Direction			
EIA zet:	Construction Phase Air Quality - Construction Phase		Glose-out on fast comments WN	N/A Yos or not obs	Na	Photo/Remarks	
3.5	Are beamings of not less than 2.4m site boundary?	high provided along t	he	1			
3.5	<ul> <li>Is the portion of any read 'anding a that is within 30m of a vehicle entrar dusty materials?</li> </ul>	enly to construction t too or exit kept clear	al	1			
3.5	<ul> <li>Are stockpiled dusty materials of sheeting and placed in an area shell or sprayed with water?</li> </ul>			1			
35	<ul> <li>Are dusty material loads on vehicles a to loading and unleading?</li> </ul>	sprayed with water p	ior	1			
3.5	<ul> <li>Are all vehicles washed to remove a body and wheels before leaving she?</li> </ul>		its				
3.5	<ul> <li>Are vehicles which are carrying d entirely by impanyous sheating when</li> </ul>		ed	1			
3.5	<ul> <li>Are surfaces where any mechanical b place sprayed?</li> </ul>	working operation tak	ies	1			
3.5	<ul> <li>Are working area of any excevatio immediately betwee, during and operation?</li> </ul>			/			
3.5	<ul> <li>Where a scaffulding is erected and building under construction, are a sheating or netting provided to enclo the ground floor level of the SPS, or floor level up to the nighest level of th</li> </ul>	dective dust scree use the scaffolding in a caropy from the f	n5, 2m	1			
3.5	Are skip holists for material transport b	otally onclosed?		161			

3.7	<ul> <li>Have dust monitors been crevided at the following locations:</li> <li>Boundary facing scattered house in NSW (AMI)</li> <li>Boundary facing Fung Kat Heung (AM5)</li> <li>Boundary facing scattered house near route 3 (AM6)</li> </ul>		2	
	Construction Noise Demolition works	133		
4.7.1	<ul> <li>Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?</li> </ul>		//	
	Sewage Pamping Stations P1, P2 & P3			
4,7.1	<ul> <li>Are quist PME which meet the SWLs from BS 5228/Part 1: 1997 used?</li> </ul>		1	<u></u>
2,7.1	<ul> <li>Are temporary noise barrier, in the form of a site hearding (with superficial density of at least 20kg/m2, with no substantial gaps), along the site boundaries of the pumping station sites adopted?</li> </ul>		1	
	Sewers and Rising Mains using Open Trench			
4.7.1	<ul> <li>Are quiel PME which meet the SWLs from BS 5228(Part 1: 1997 used)</li> </ul>		<	
4.7.1	<ul> <li>Are handheld breakers used for all initial road opening activities, when breaking farmac/concrete road surface to a depth of \$00mm or when granular material is reached?</li> </ul>	×		
271	<ul> <li>Are movable noise barriers or 3 sided endosures installed for all initial road opening activities (breaking termso/concrete tood surface to a depth of 300mm or when greaular material is reached) where there NSRs within 50m of the line of eight?</li> </ul>	Z		
	Sewers and Bising Mains using Pipe Jacking			
4.7.1	<ul> <li>Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used?</li> </ul>			
	Road Pavement and Finishes			
4.7.1	<ul> <li>Are quiet PME which meet the SWLs from BS 5228 Part 1: 1997 used?</li> </ul>			
4.9.1	<ul> <li>Have noise monitors been provided at the following locations:         <ul> <li>(NM3) Scattered house in NSW</li> <li>(NM4) Scattered house in NSW</li> <li>(NM6) Scattered house near Route 3.</li> <li>(NM7) Fung Kat Heung</li> </ul> </li> </ul>		2	
	Construction Runoff and Site Drainage			
	<ul> <li>Are porimeter out-off drains to direct off-site water around the site constructed with internal drainings works and erosion and sedimentation control facilities implemented. Are channels (both temporary and permanent drainage pipes and culverts), earth bunds or solid bag barriers provided on site to direct stormwater to sit removal facilities?</li> </ul>		1	
	<ul> <li>Are dives or emparisments for flood pretection implemented instant the boundaries of earthwork areas. Are sediment/sill traps incorporated in the permanent drainage channels to exhance deposition rates?</li> </ul>		2	Management of the second state
	<ul> <li>Are sit removal facilities provided with ratemion time for sit/sand traps of 5 minutes under maximum flow conditions?</li> </ul>	14		Check Jasubin perjanis
2	<ul> <li>Are construction works programmed to minimize surface excavation works during the rainy seasons (April to September)?</li> </ul>	·   _	/	
	Are slopes minimised and erosion potential reduced?		1	
	<ul> <li>Is deposited sit and grit removed regularly and disposed of by spreading evenly over stable, vegatated areas?</li> </ul>		/	

Philosog Kong (2019) rejects/2020101-80 or Final Converting and and SCO, Cherry Cal, provider stor

	<ul> <li>Are measures taken to minimise the ingress of site drainage into excavations? Is water pumped out from trenches or foundation excavations discharged into storm drains via site removal facilities?</li> </ul>	2	
	<ul> <li>Are open stockpiles of construction metarials (for example; aggregates, sand and fit material; of more than 50m3 coveced with tarpaulti or similar table during reinstorms?</li> </ul>	2	
	<ul> <li>Are manholes (including newly constructed ones) adaptately covered and temporarily sealed?</li> </ul>	1	]
	Are precautions taken before rainstorms?	 12	1
	Are all vehicles and plant elegand before insving site?		]
	<ul> <li>Is solid waste, dobris and rubbish on nitri appropriately collected, handled and disposed of property to avoid water quality impacts?</li> </ul>	~	
	<ul> <li>Are all loci tanks and storage areas provided with locks and stad on sealed areas, within burds of a capacity equal to 110% of the storage capacity of the largent tank to prevent spliled fuel rils from reaching water sensitive receivers nearby?</li> </ul>	×	
	Sewage Effluent - Construction Phase		
	<ol> <li>Are portable chemical tailets and sowage holding tanks provided? is handling the construction sewage generated for collection and disposel of this waste? Is a licensed contractor employed?</li> </ol>	1	
	Waste Management - Construction Phase		
6.6.2	<ul> <li>Are the necessary waste disposal permits from the appropriate authorities in placed for chemical and C&amp;D wastes, in accordance with the Waste Disposal (Chemical Waste) (General) Regulations and the Land (Miscellaneous Provisions) Ordinance (Can 28/7)</li> </ul>	20	

- 6.6.2 Is crientical waste that is produced, as defined by Schedule 1 of the Waste Discosal (Chemical Waste) (General) Regulation, being handled in accordance with the Code of Practice on the Packaging, Labeling and Storage of Chemical Wastes?
- 5.6.2 Are containers used for the storage of chemical wastes suitable for the substance they are holding, resistant to corresion, meintained in a good condition, and securely closed; have a capacity of tess than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation?
- 6.6.2 Is the storage area for chemical wastes clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 stors; have an impermeable floor and bunching of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated?
- 6.6.2 Is disposal of chemical waste via a licensed wasto colloctor, the trip a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a othermical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD?
- Are life tickets for disposal available to monitor disposal of C&DM and solid wastes at public filling and landfills, and to centrol illy tipping?

2			20		
	8	-			
			~		
			×		
			/		

P Hung Kong/KIP Projects/2215361-Kam Im IEC mentally site australs/\_Chiek List\_matrix dec

3

7.5.6 7.5.6 7.5.6 3.7.1 3.7.1 3.7.2 5.7.2	least price a month) unitertaken by ET for the remaining							
7.5.6 · 3.7.1 · 3.7.1 ·	prepared and submitted to EPD?     Are contaminated situs remodiated in accordance with the approved GAR/FAP?     Ecology - Const/violion Phase     Are construction activities prolibiled during November to March for the sections of works within the WCA and WBA, and ouse to locations of ecologically sensitive species.     During November to March pariods, are regular site inspections (at locat twice a month) undertaken by ET to ensure proper implementation of this restriction?     Is prop (acking method used for severe and rising mains crossing over MDC within the WCA and WBA?     During November to March, are regular site inspections (at locat twice a month) undertaken?							
3.7.1 · 3.7.1 ·	approved CAR/FAP? Ecology - Constituction Phase Are construction activities prolitited during November to March for the sections of works within the WCA and WBA, and ofuse to locations of ecologically sensitive species. During November to March partodo, are regular site inspections (at locat twice a month) undertakep by ET to ensure proper implementation of this restriction? Is pipe jacking mothed used for sewers and rising mains crossing over March, are regular site inspections (at least twice a month) undertakep by ET to ensure proper implementation of this restriction?							
3.7.1 • 3.7.1 • 3.7.2 •	Are construction activities proaibiled during Novamber to March for the sections of works within the WCA and WBA, and ofuse to locations of ecologically sensitive species. During November to March carlodo, are regular site inspections (at locat twice a month) undertaken by ET to ensure proper implementation of this restriction? Is pro-jacking method used for severe and rising mains crossing over MDC within the WCA and WBA? During November to March, are regular site inspections (st less) twice a month) undertaken by ET for the remaining		×					
3.71 • 3.71 • 3.72 •	Are construction activities proaibiled during Novamber to March for the sections of works within the WCA and WBA, and ofuse to locations of ecologically sensitive species. During November to March carlodo, are regular site inspections (at locat twice a month) undertaken by ET to ensure proper implementation of this restriction? Is pro-jacking method used for severe and rising mains crossing over MDC within the WCA and WBA? During November to March, are regular site inspections (st less) twice a month) undertaken by ET for the remaining		/					
3.72 .	inspections (at least twice a month) undertaked by ET to ensure proper implementation of this restriction? Is pipe (acking method used for sewers and rising mains crossing over MDC within the WCA and WBA? During November to March, are regular site inspections (st least twice a month) undertaken by ET for the remaining							
6	crossing over MDC within the WCA and WBA? During November to March, are regular site inspections (st less), twice a month) unifertaken by ET for the remaining		1	T				
6	crossing over MDC within the WCA and WBA? During November to March, are regular site inspections (st less), twice a month) unifertaken by ET for the remaining		2	1				
\$.7.2 <i>•</i>	least twice a month) unifertaken by ET for the remaining			-	_			
	severage sections (including pains of S4, S5 and S6) within the WCA and WBA where construction activities cannot be reacheduled?		×.					
8,7.2 •	<ul> <li>The site inspections shall check and report the number of workfronte and implementation of mitigation measures in the monthly EMSA Report.</li> </ul>			20		-		
8.7.3	Are quictered construction plant and equipment used for PS (P2 and P3) and servers (S4, S5, S6) within the WCA and WBA?			/		1990		
8.7.4	<ul> <li>For P1-P3, have lences along the boundary of the pumping stations construction sites been erected?</li> </ul>		~			-	_	
8,7.4	There shall be no filling and duriping to the remaining ebandoned dishpond at P2.	1	1					
8.7 4 •	And all ternaval facilities, designed to the ProPECC Note PN1/94, installed and operated at the P1 to P3 sizes? The minimal total combined voture of the silt received facilities at P3 (NSW SP3) should be (figm3.			~				
8.7.4	There shall be no open lines willing the sito boundary.		21			_		
8.7.4 ,	Have temporary fire fighting equipment provided in the			2				
	andscape and Visual - Construction Phase							
	<ul> <li>Have the implementation of mitigation measures (i.e., top soil reused, new compensatory planting) been reported in the monthly EMSA?</li> </ul>		2					
23	The first menthly EMXA Report should report on the appearance of the temporary loainling harrises.			×				
	Are screen planting (3m while) and trees with dance canopy (up to 5m) provided?		1					
	Is felling of mature trees kept to a minimum?		25	1				
13	recount of more classes where a printing in		_					

Providing Rong-NOT-Programs (#231) BI-Kamilian (ECContrality size publics), Cherk Lip, musice data

### OTHER OBSERVATIONS

1 Contractor addressed to review and task design/performance to improve and offering (GAI)

DSD Réprésemative Contractor Representative. CTL. W.C. T Smpo (CLIPT UNI Berny 51 14301 (

P.Phing Sci.gl/SPPrepark/228131-Konffm1pCoronity Colourd/281,Check Up, march.doc 5