

Certified by

PROJECT NO.: TCS00409/08

DSD CONTRACT NO. DC/2007/08
DRAINAGE IMPROVEMENTS WORKS IN TAI PO TIN,
PING CHE, MAN UK PIN AND LIN MA HANG

12TH MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT FOR THE DESIGNATED WORKS UNDER THE PROJECT – FEBRUARY 2010 CHANNELS MUP03A&B, MUP04A&B, MUP05 AND LMH01

PREPARED FOR

Reference No.

CHIU HING CONSTRUCTION & TRANSPORTATION COMPANY LIMITED

Quality Index Date

11 March 2010 TCS00409/08/600/R0721v2

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Version	Date	Remarks	
1	9 Mar 2010	First Submission	
2	11 Mar 2010	Amended against IEC's comments on 10 Mar 2010	

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ENVIRON

Ref.: DSDFANLGEM01 0 0640L.10

15 March 2010

By Fax (26598323) and By Post

Engineer's Representative Office Black & Veatch Hong Kong Ltd 503 Tai Po Tin, Ta Kwu Ling Fanling, New Territories

Attention: Mr. Gilbert Ying

Dear Mr. Ying,

Re: Contract No. DC/2007/08 (EP No. EP-277/2007/A)
Drainage Improvement Works at Tai Po Tin, Ping Che,
Man Uk and Lin Ma Hang
Monthly EM&A Report for Channels MUP03A&B, MUP04A&B, MUP05 and
LMH01 for February 2010 (Rev. 2)

With reference to the 12th Monthly EM&A Report (February 2010, Rev. 2) for the Designated Project Channels MUP03A&B, MUP04A&B, MUP05 and LMH01 provided by the Environmental Team by email on 11 March 2010.

We would like to inform that we have no comment on the captioned report.

Please also note that the Monthly EM&A Report had been verified in accordance with the Condition 3.4 of the Environmental Permit No. EP-277/2007/A.

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

David Yeung

Independent Environmental Checker

c.c. AUES

Attn: Mr. T.W.Tam

Fax: 29596079

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EXECUTIVE SUMMARY

- ES.01 This is the 12th monthly EM&A Report for Channels MUP03A&B, MUP04A&B, MUP05 and LMH01 covering a period from 26 January to 25 February 2010 (the Reporting Period). These works are classified as Designated Projects under the Environmental Impact Assessment Ordinance (Cap. 499) and Environmental Permit No.EP277/2007/A.
- ES.02 As construction works were undertaken only at Channels MUP03A&B, MUP04A&B, MUP05 during the Reporting Period, environmental monitoring of air quality, construction noise, water quality and ecology was therefore performed at those channels only.
- ES.03 The monitored results of air quality, construction noise and water quality demonstrated were in full compliance with the environmental quality criteria and no associated corrective actions were therefore required.
- ES.04 Four ecological general audits were performed in this reporting month at the nominated construction channel (MUP05). It was noticed that sediment-loaded water was drained into the natural stream after passing through the sedimentation tank, and the contractor has been reminded to carry out routine inspection/maintenance to ensure the effectiveness of the facilities, and make sure the capacity of the sedimentation tank could meet the volume of the water extracted from the work site.
- ES.05 No written or verbal complaint, notification of summons or successful prosecution was received (written or verbal) for each media during the Reporting Period. No adverse environmental impacts were observed during the weekly site inspection and environmental audit which indicated that the implemented mitigation measures for air quality, construction noise, water quality and ecology were effective. Minor deficiencies found during the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.
- ES.06 Due to the coming excavation works of the channels, ingression of surface runoff into the river within MUP Channels continues to be the key issue in future months. Mitigation measures for water quality and ecology should therefore be fully implemented.
- ES.07 During dry season, dust control measures to avoid dust emissions should be properly provided and maintained, as appropriate.
- ES.08 In addition, attention should also be paid to dust emission and noise impact during the construction work progress, and with other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the Environmental Study Report (ESR) and summarized in Mitigation Measure Implementation Schedule should continually be applied.



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1. INTRODUCTION

The Chiu Hing Construction & Transportation Company Limited (CHCT) was appointed by the Drainage Services Department (DSD) to perform a contract – Contract No. DC/2007/08 *Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang* (the Project). Total construction time is approximately 32 months.

The Project involves construction of various river channels: some classified as Designated Project (DP) and some Non-designated Project (Non-DP) under the Environmental Impact Assessment Ordinance (Cap. 499), as summarized in *Table 1-1*.

Table 1-1 Summary of the Channels under the Project

Channel ID	Location	Designated / Non-Designated
TKL02	Tai Po Tin	Non-Designated
TKL07	Ping Che / Ta Kwu Ling	Non-Designated
MUP01		Non-Designated
MUP02		Non-Designated
MUP03A and MUP03B	Man Uk Pin	Designated (EP277/2007/A)
MUP04A and MUP04B		Designated (EP277/2007/A)
MUP05		Designated (EP277/2007/A)
LMH01	Lin Ma Hang	Designated (EP277/2007/A)

This is the 12th monthly report covering data from 26 January to 25 February 2010 to present the monitoring results of air quality, construction noise, water quality and ecology for the Designated Project of Channels MUP03A&B, MUP04A&B, MUP05 and LMH01 under the Environmental Monitoring & Audit Manual [382486/73//lssue2]. A set of location plans showing all DP works covered in this report are illustrated in *Appendix A*. Details of EM&A requirements for the Designated Project are summarized below:

- (a) Channel MUP03A&B NA
- (b) Channel MUP04A&B the scope of environmental monitoring includes construction noise, air quality and water quality
- (c) Channel MUP05 the scope of environmental monitoring includes construction noise, air quality, water quality and ecology
- (d) Channel LMH01 the scope of environmental monitoring includes construction noise, air quality, water quality and ecology

It has been agreed among the Engineer's Representative (ER), the Independent Environmental Checker (IEC), the Contractor (CHCT), the Environmental Team (ET) and the Environmental Protection Department (EPD) that 25th of each month is the cut-off day of each reporting month. Data collected after the 26th of every month will be reported in the next issue.

1.1 REPORT STRUCTURE

This report has been written in accordance with the requirements set out in the *Environmental Monitoring and Audit Manual* (the EM&A Manual) with the following structure:

Section 1	Introduction
Section 2	Basic Project Information
Section 3	Environmental status
Section 4	Summary of Impact EM&A Requirements
Section 5	Impact Monitoring Results
Section 6	Report on Non-Compliance (NC), Complaint, Notification of Summons (NOS) and Successful prosecution
Section 7	Conclusions and Recommendations



2. BASIC PROJECT INFORMATION

2.1 PROJECT ORGANIZATION

The organization chart and lines of communication with respect to the on-site environmental management and the management structure are shown in *Appendix B*.

2.2 MASTER CONSTRUCTION PROGRAM FOR THE PROJECT

The master construction program of the Project is shown in *Appendix C*. Environmental mitigation measures implemented are shown in *Appendix C*.

2.3 WORKS UNDERTAKEN DURING THE REPORTING MONTH

During this reporting month, the construction work undertaken at the designated work areas is listed as follows:

<u>Channel</u>	Construction Work Activities	
MUP03A&B, MUP04A&B and MUP05	 Survey setting out Construction of site access Site clearance Construction of footbridge, retaining wall, access ramps, inlet chambers and gabion wall Installation of Site Hoardings and boundary wall 	
LMH01	Not yet commenced	

Future construction works is provided in Appendix C.



3. ENVIRONMENTAL STATUS

3.1 WORK UNDERTAKEN DURING THE MONTH WITH ILLUSTRATIONS

In this reporting month, the construction work was undertaken at Channels MUP03A&B, MUP04A&B and MUP05. All proposed construction channels are located at Man Uk Pin. The environmental mitigation Implement is shown in *Table 3-1*.

Table 3-1 Environmental Mitigation Measures Undertake in the Reporting Month

Location	Construction Activities		Environmental Mitigation Measures to be deployed
MUP03A&B, MUP04A&B and	Survey setting out	•	Trees will be properly protected before works commenced.
MUP05	Construction of site access	•	Excavated area and stockpile of soil material will be dampened/covered before dispose off-site
	Site clearance	•	Water spraying will be provided before and during handling of excavated material.
	Construction of Access Ramp, footbridge, retaining wall and gabion wall		Excavated area and stockpile of soil material will be dampened/covered before dispose off-site Water spraying will be provided before and during handling of excavated material. Retained tree will be properly protected before works commenced
	Installation of Site Hoardings and boundary wall	•	Excavated area and stockpile of soil material will be dampened/covered before dispose off-site Water spraying will be provided before and during handling of excavated material. Trees will be properly protected before works commenced.

3.2 IMPLEMENTATION OF ENVIRONMENTAL PROTECTION AND POLLUTION CONTROL

The implementation of environmental protection and pollution control/mitigation measures as recommended in the EM&A Manual or ES is shown in *Appendix C*.

A summary status of the permits, licences, and/or notifications on environmental protection for this Project in this reporting month is presented in *Table 3-2*.

Table 3-2 Status of Environmental Licenses and Permits

Item	Item Description	Permit Status
1	Environmental Permit No.EP277/2007/A	Issued on 1 Dec 2009
2	Air Pollution Control (Construction Dust)	Notification to EPD on 27/12/2007
3	Chemical Waste Producer Registration	
	• 5213-652-C3251-04	Valid date: 23 July 2008
	• 5213-652-C3251-05	Valid date: 15 August 2008
4	Water Pollution Control (Discharge license)	
	• W5/1G34/1	Expiry date: 31 August 2013
	• W5/1G35/1	Expiry date: 31 August 2013
	• W5/1I324/1	Expiry date: 31 August 2013
	• W5/1I325/1	Expiry date: 31 August 2013
5	Account for Disposal of Construction Waste No. 7006522	Valid date: 9 January 2008
6	Construction Noise Permit	Nil



4. SUMMARY OF IMPACT MONITORING REQUIREMENTS

Environmental monitoring and audit for air quality, noise, water quality and ecology have been recommended in the EM&A Manual. They are summarized below.

4.1 Monitoring Parameters

The monitoring parameters are summarized in Table 4-1.

Table 4-1 Summary of Monitoring Parameters

Environmental Issue	Parameters		
Air Quality	1-hour Total Suspended Particulate (1-hour TSP); and24-hour Total Suspended Particulate (24-hour TSP)		
Construction Noise	 A-weighted equivalent continuous sound pressure level (30min) (Leq(30min)) during the normal working hours; and A-weighted equivalent continuous sound pressure level (5min) (Leq(5min)) for construction work during the Restricted Hours 		
Water Quality • In-situ temperature, dissolved oxygen (DO), dissolved oxygen Measurement pH value, water depth, temperature & turbidity • Laboratory Analysis • In-situ temperature, dissolved oxygen (DO), dissolved oxygen pH value, water depth, temperature & turbidity			
Ecology	MUP05 and LMH01	 The stream conditions monitoring (in-situ measurements of DO, pH and turbidity; laboratory testing of SS); General site audit to reporting the mitigation measures are properly implemented during the construction phase 	

4.2 MONITORING LOCATIONS

4.2.1 Monitoring Locations Proposed in the EM&A manuals

Monitoring locations have been identified in the EM&A Manual. They are shown in *Appendix D* and summarized in *Table 4-2*.

Table 4-2 Monitoring Locations Proposed in the EM&A Manuals

Issue	Channel	Sensitive Receiver	Monitoring Location ID	Detailed Address
	MUP04A	MUP04A-2	MUP-A3	Village house near Loi Tung
Air	MUP05	MUP05-2 (same as MUP01/02-1)	MUP-A1 (same as MUP01/02-A1)	Village north of Loi Tung (same as Village house at Man Uk Pin)
	MUP05	MUP05-4	MUP-A2a#	Village north of Loi Tung
	MUP04A	MUP04A-2	MUP-N4	Village house near Loi Tung
	MUP05	MUP05-2 (same as MUP01/02-1)	MUP-N1 (same as MUP01/02-N1)	Village north of Loi Tung (same as Village house at Man Uk Pin)
	MUPUS	MUP05-4	MUP-N2	Village north of Loi Tung
Noise		MUP05-6	MUP-N3	Village north of Loi Tung
NOISE		LMH01-1 LMH01-2		Village of Lin Ma Hang(* Remark: Mobile station
	LMH01	LMH01-3	LMH-N1*	subject to the location of the construction works to be measured at Sensitive Receiver LMH01-1 or LMH01-2 or LMH01-3 or LMH01-4 or LMH01-5)
		LMH01-4		
		LMH01-5		,
	MUP04A	Control Station	MUP-W3	Upstream of MUP04A works
		Control Station	MUP-W1 (same as MUP01/02-W1)	Upstream of MUP01 works
	MUP05	Control Station	MUP-W2 (same as MUP01/02-W2)	Upstream of MUP02 works
Water		Impact Station	MUP-W4	Downstream of MUP05 works immediately at the discharge point to River Indus
		Temporary / Mobile Station	MUP-W5	Within MUP05, downstream of the discharge point of MUP01/02 and upstream of the discharge point of MUP04A
		Temporary / Mobile Station	MUP-W6	Within MUP05, downstream of the discharge point of MUP01/02 and MUP04A



Issue	Channel	Sensitive Receiver	Monitoring Location ID	Detailed Address
		Control Station	LMH-W1	Upstream of LMH01 works
		Control Station	LMH-W2	Upstream of LMH01 works
		Impact Station	LMH-W3	Downstream of all LMH01 works immediately at the discharge point to Shenzhen River
Water	LMH01	Temporary / Mobile Station	LMH-W4	Upstream and downstream of particular group of LMH01 works
		Temporary / Mobile Station	LMH-W5	Upstream and downstream of particular group of LMH01 works
		Temporary / Mobile Station	LMH-W6	Upstream and downstream of particular group of LMH01 works
	MUP05	Water Quality of Str	ream	Upstream and downstream of Construction site
Ecology	and LMH01	General Site audit (with emphasis or ecological mitigation measures)		Along stream channel, within 100m upstream and downstream of construction site
	LMH01	Surveys of fish spe	cies	Along stream channel, within 100m upstream and downstream of construction site

Access to the original air quality monitoring location MUP-A2 has been denied. The nearby air quality sensitive receiver MUP05-4 is recommended to be the replacement of the denied MUP-A2 and named MUP-A2a for ease of reference.

4.3 MONITORING FREQUENCY

The impact monitoring should be conducted during the construction activities pass through the contract period to ensure the ambient environmental conditions compliance with the environmental performance criteria i.e. Action and Limit Levels for the Project. The impact monitoring frequency specified in the EM&A Manual is summarized below.

Air Quality

Parameters: 24-hour TSP and 1-hour TSP.

Frequency: Once every 6 days for 24-hour TSP & three times every 6 days for 1-hour TSP.

<u>Duration</u>: During the course of construction works

Construction Noise

<u>Parameters:</u> Leq(30 min) in six consecutive Leq(5 min) measurements.. <u>Frequency:</u> Once a week during 0700-1900 on normal weekdays:

<u>Duration</u>: During the course of construction works

Water Quality

<u>Parameters</u>: Duplicate in-situ measurements of water depth, temperature, DO, pH & turbidity;

and laboratory testing of SS. Relevant data will also be measured time of

sampling, DO Saturation, weather conditions and special phenomena.

<u>Depths</u>: All measurements will be carried out at three water depths, namely, 1 m below

water surface, mid-water depth, and 1 m above river bed. If the water depth is less than 6 m, the mid-depth measurement will be omitted. If the depth is less

than 3 m, only the mid-depth measurement will be taken.

Frequency: 3 days a week with an interval of at least 36 hours between two consecutive

sampling days

<u>Duration</u>: During the construction period of the channel works

Ecology

According to the EM&A Manual [382486/73/Issue2], ecology monitoring is only performed at the Channels MUP05 and LMH01 during the construction phase, the monitoring requirements are listed as following:

Parameters:

- (a) General site audit with emphasis on ecology mitigation measure;
- (ii) Water quality of stream (DO, pH, turbidity and SS); and
- (iii) Survey of fish species, which is only requested at Channel LMH01

Frequency:

- (b) Once a week for general site audit throughout the construction period;
- (ii) Three times per week for stream monitoring; and
- (iii) Once per week for survey of fish species.



Duration:

Throughout the whole construction period

4.4 MONITORING EQUIPMENT

The monitoring equipments for air quality, construction noise, stream water quality and ecology are summarized below.

4.4.1 Air Quality

A list of air quality monitoring equipments is shown in *Table 4-3*.

Table 4-3 Air Quality Monitoring Equipment

Equipment	Model	
24-hour TSP		
High Volume Air Sampler (herein after 'HVS')	Grasby Anderson GMWS 2310 HVS	
Calibration Kit	TISCH Model TE-5025A	
1-hour TSP		
Portable Dust Meter	TSI DustTrak Model 8520	

4.4.2 Construction Noise

A list of construction noise monitoring equipments is shown in Table 4-4.

Table 4-4 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2236
Calibrator	B&K Type 4231
Portable Wind Speed Indicator	Testo Anemometer

4.4.3 Water Quality

Monitoring Equipments for water quality are shown in Table 4-5.

Table 4-5 Water Quality Monitoring Equipment

Equipment	Model / Description
In-situ Measurement	
Water Depth Detector	Eagle Sonar or steel ruler
Water Sampler	Teflon bailer / bucket
Thermometer & DO meter	YSI Multimeter
pH meter	Extech pH EC 500
Turbidimeter	Hach 2100p
Sample Container	High density polythene bottles (provided by laboratory)
Storage Container	'Willow' 33-litter plastic cool box
Laboratory Analysis	
Suspended Solids	HOKLAS accredited Laboratory

4.4.4 Equipment Calibration

The calibrations certificate of all monitoring equipments are used during the impact monitoring program are attached in *Appendix E* and the calibration requirement are described in below:

Air Quality

The calibration of the HVS is performed at a two month intervals in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model No.TE-5025A). The calibration data are properly documented and the associated records are maintained by the ET for future reference.

The 1-hour TSP meter is calibrated at a year intervals in accordance with the in-house method. Zero response of the equipment is checked before and after each monitoring event.



Noise

The sound level meters are calibrated using an acoustic calibrator prior to and after spot checking measurements. The meters are regularly calibrated by HOKLAS accredited laboratory. Prior to and following each noise measurement, the accuracy of the sound level meter is checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements are considered valid only if the calibration levels before and after the noise measurement agree to within 1.0 dB.

Water Quality

In-situ monitoring instruments are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at 3 monthly intervals.

4.4.5 Ecology

The following equipment will be used for monitoring:-

- General: field note books and survey forms, digital camera; and
- Binoculars (7-10x and 8 x 30 magnification);

4.4.6 Others EM&A Requirement

Landscape & Visual and Cultural Heritage impact monitoring are also required for the Designated Project and stipulated in EM&A manual [382486/73//Issue2] **Section 7** and **Section 8** accordingly

Landscape & Visual

Landscape and visual mitigation measures should be implemented during construction phase according to the EM&A Manual. The construction phase landscape and visual EM&A shall be carried out as part of the site audit program. Site inspection will be undertaken at least once every two weeks throughout the construction period.

Cultural Heritage

Cultural heritage of the Terrance Wall (AAHB-855) at Lin Ma Hang (LMH01) is required to be carried out during the construction phase in accordance with the EM&A Manual [382486/73//lssue2].

4.5 MONITORING PROCEDURE

The monitoring methodology and procedure during the impact monitoring are presented as below:

4.5.1 Air Quality

1-hour TSP

Operation of the 1-hour TSP meter is follow manufacturer's Operation and Service Manual. The 1-hour TSP monitor, a TSI Dust Track Aerosol Monitor Model 8520, or Sibata LD-3 Laser Dust Meter is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:

- A pump to draw sample aerosol through the optic chamber where TSP is measured;
- A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and
- A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

The 1-hour TSP meter using was within the valid period, calibrated by the manufacturer prior to purchasing. Zero response of the instrument was checked before and after each monitoring event.

24 -hour TSP

The equipment used for 24-hour TSP measurement is the HVS brand named Thermo Andersen, Model GS2310 TSP high volume air sampling system, which complied with EPA Code of Federal Regulation, Appendix B to Part 50. The HVS consists of the following:

- An anodized aluminum shelter:
- A 8"x10" stainless steel filter holder;



- A blower motor assembly;
- A continuous flow/pressure recorder;
- A motor speed-voltage control/elapsed time indicator;
- A 6-day mechanical timer, and
- A power supply of 220v/50 Hz

The HVS is calibrated prior the impact monitoring to following the manufacturer's instruction using the NIST-certified standard calibrator brand named Tisch Calibration Kit Model TE-5028A. Regular HVS operation and maintenance as well as filter paper installation and collection was performed by the ET's competent technicians, whereas laboratory analyses were conducted in a local HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (hereinafter 'ALS'). The analyzed 24-hour TSP filters were kept in ALS for six months prior to disposal.

Meteorological Information

All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper is recorded in detail.

Meteorological information is sourced from the Hong Kong Observatory (Ta Kwu Ling Station). The data included wind direction, wind speed, humidity, rainfall, air pressure and temperature etc that in general is required for evaluating the air quality for air quality monitoring.

4.5.2 Construction Noise

Sound level meters listed above comply with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications, as recommended in Technical Memorandum BE issued under the Noise Control Ordinance (NCO).

All noise measurements are performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq). Leq(30min) measurements are used as the monitoring parameter for the time period throughout the construction phase.

The sound level meter is set higher than 1.2m above the existing ground. The microphone is pointed to the site with the microphone facing perpendicular to the line of sight. The windshield is fitted for all measurements. The measurement point at impact locations is normally set close to the exterior of the building.

Immediately prior to and following each noise measurement the accuracy of the sound level meter is checked using an acoustic calibrator generating a known sound pressure level at a known frequency (94dBA). Measurements are accepted as valid due to the calibration levels from before and after the noise measurement agree to within 1.0dB.

4.5.3 Water Quality

Water quality monitoring is conducted at the middle of the water columns (Mid-Depth) due to water columns at all sampling locations are less than 3.0 meters during monitoring.

Water Depth

Water depths are determined prior to measurement and sampling. A steel ruler with a suitable weight was dropped to the bottom of the water column to measure the water depth which is actually well below 1 meter.

Dissolved Oxygen (DO)

A portable Extech Instrument, $ExStik^R DO600 DO Meter$ is used for in-situ DO measurement. The DO meter is capable of measuring DO in the range of 0 - 20 mg/L and 0 - 200 % saturation and checked against water saturated ambient air on each monitoring day prior to monitoring.

Although the DO Meter automatically compensates ambient water temperature to a standard temperature of 20°C for ease of comparison of the data under the changing reality, the temperature readings of the DO Meter is recorded.



рΗ

A portable Extech Instrument, $ExStik^{TM}$ Models pH EC 500 or a Hanna HI98107 pH Meter is used for in-situ pH measurement. The pH meter is capable of measuring pH in the range of 0 – 14 and readable to 0.1. Standard buffer solutions of pH 7 and pH 10 are used for calibration of the instrument before and after measurement.

Turbidity

A portable Hach 2100p turbidity Meter is used for in-situ turbidity measurement. The turbidity meter is capable of measuring turbidity in the range of 0 – 1000 NTU.

Suspended Solids (SS)

SS is determined by ALS using HOKLAS accredited analytical methods namely ALS Method EA-025. The limit of report is 2mg/L

Water Sampler

Water samples are collected by the ET using a plastic sampler to avoid metal contamination. Due to water depth for both sampling locations are lesser than 0.5m, a cleaned plastic beaker is used for sample collection. The sampler is rinsed before collection with the sample to be taken. 1,000mL water sample is collected from depth for laboratory analyses.

Sample Container

Water samples are contained in screw-cap PE (Poly-Ethylene) bottles as provided by ALS. The PE bottles are pretreated by laboratory in accordance with the corresponding analytical requirements of HOKLAS. Where appropriate, the sampling bottles are rinsed with the water to be contained. Water sample is transferred from the sampler to the sample bottles to 95% bottle capacity to allow possible volume expansion during delivery and storage.

Sample Storage and delivery

A 'Willow' 33-litter plastic cool box packed with ice is used to preserve the collected water samples prior to arrival at the laboratory. The temperature of the cool box is maintained as close to 4°C as possible without being frozen. Samples are delivered to the laboratory end of sampling day or following day within the maximum storage time requirement.

Chemical Analysis

ALS Technichem (HK) Pty Ltd (HOKLAS No. 66) is appointed by ET to provide analytical services for this project. The analysis of suspended solids is carried out to follow the APHA Standard Methods for the Examination of Water and Wastewater 19ed 2540D. The sample preparation and analysis under the QA/QC control is follow the HOKLAS QA/QC requirements and undertaken by the laboratory.

4.5.4 Ecology

Weekly site audit covering the whole assessment area is conducted during the construction work at Channels MUP05 and LMH01, focusing on the status/condition of the study area and its immediate vicinity, especially those sensitive habitats that have been identified in the ESR and/or habitats of conservation importance as stated in the EIAO TM.

Any changes found during the site audit have been marked and reported in the Monthly EM&A Report, and for those changes will be predicted to possibly or probably have had an impact on flora and fauna distribution or numbers should be highlighted in the Monthly EM&A report.

Ecology of water quality monitoring at the stream as requested to undertake in upstream and downstream of construction site Channels MUP05 and LMH01. The location of monitoring stations and requirements are same as the Water Quality Monitoring at the Channels MUP05 and LMH01. The procedure of water monitoring is same as the Water Quality monitoring.

4.6 ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

Baseline EM&A monitoring was carried out from17 September to 13 October 2008, and ecological baseline monitoring for the habitat updating was performed on 16 September 2008 in accordance with the EM&A Manuals requirements. A summary of Action/Limit (A/L) Levels for air quality, construction noise, stream water quality, ecology and Landscape & Visual are shown in *Tables 4-6*, *4-7*, *4-8*, *4-9* and *4-10* respectively.



Table 4-6 Action and Limit Levels for Air Quality

Monitoring Station	Action Lev	/el (μg /m³)	Limit Level (µg/m³)		
Worldoning Station	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP	
MUP-A1	>307	>194	> 500	> 260	
MUP-A2a	>300	>178	> 500	> 260	
MUP-A3	>299	>178	> 500	> 260	

Table 4-7 Action and Limit Levels for Construction Noise

Time Period	Action Level in dB(A)	Limit Level in dB(A)
0700-1900 hours on normal weekdays	When one documented complaint is received	> 75* dB(A)

Note: * Reduces to 70 dB(A) for schools and 65 dB(A) during the school examination periods.

Table 4-8 Action and Limit Levels for Water Quality

Monitoring Location			O g/L)		oidity TU)	pH (Unit)			S ₃ /L)
ID	Station Type	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
MUP-W1	Control	NA	NA	NA	NA	NA	NA	NA	NA
MUP-W2	Control	NA	NA	NA	NA	NA	NA	NA	NA
MUP-W3	Control	NA	NA	NA	NA	NA	NA	NA	NA
MUP-W4	Impact	5.27	5.18	18.03	24.81	6.5 – 8.5	6.0 – 9.0	15.8	17.6
MUP-W5	Mobile	4.42	4.37	7.88	8.54	6.5 – 8.5	6.0 – 9.0	6.0	6.0
MUP-W6	Mobile	4.54	4.51	11.81	14.84	6.5 – 8.5	6.0 – 9.0	3.9	4.8
LMH-W1	Control	NA	NA	NA	NA	NA	NA	NA	NA
LMH-W2	Control	NA	NA	NA	NA	NA	NA	NA	NA
LMH-W3	Impact	3.96	3.62	11.31	12.10	6.5 – 8.5	6.0 – 9.0	8.8	10.6
LMH-W4	Mobile	4.34	3.98	5.33	5.95	6.5 – 8.5	6.0 – 9.0	3.0	3.0
LMH-W5	Mobile	2.14	2.07	31.46	35.33	6.5 – 8.5	6.0 – 9.0	25.0	29.8
LMH-W6	Mobile	2.67	2.65	12.32	13.02	6.5 – 8.5	6.0 – 9.0	4.8	6.6

Note: - For DO, non-compliance of water quality limits occurs when monitoring result is lower than the limits.

Table 4-9 Action and Limit Levels for Ecology in Construction Phase at Channels MUP05 and LMH01

Parameter	Action Level	Limit Level
 Any construction works do not cause adverse ecological impacts outside the work site of Channels Where natural banks are to be retained are protected from adverse effects of engineering works, including impacts to riparian vegetation along these banks The existing natural stream channel is protected from adverse effect of engineering works, including potential indirect impacts through increased sedimentation Rock/fines used to form the bottom of the widened channel have the appropriate physical characteristics to permit reestablishment of semi-natural stream conditions The recommended mitigation measures are properly implemented by the Contractor 	Non- conformity on one occasion	Repeated Non- conformity

⁻ For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

⁻ For pH, non-compliance of water quality limits occurs when monitoring result is exceeded the range of limits.



Table 4-10 Action Level for Landscape and Visual Impact in Construction Phase

Parameter	Action Level	Limit Level
Any trespass by the contractor outside the limit of the works,	Non-conformity	Repeated non-
including any damage to existing trees, woodland and vegetation	on one occasion	conformity

4.7 EVENT AND ACTION PLANS

An Event Action Plan for air quality, construction noise, water quality and ecology has been implemented for this designated project. Details of the Event Action Plan are presented in **Appendix F**.

4.8 Environmental Mitigation Measures

The project ESR 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 *Appendix C*.

4.9 DATA MANAGEMENT AND DATA QA/QC CONTROL

The impact monitoring data is handled by the ET's systematic data recording and management, which complies with an in-house certified (ISO 9001:2000) Quality Management System. Standard Field Data Sheets (FDS) are used in the EM&A program.

The monitoring data recorded in the equipment e.g. 1-hour TSP meters and noise meters are downloaded directly at the end of each monitoring day. The downloaded monitoring data are input into a computerized database properly maintained by the ET. The laboratory results are input directly into the computerized database and QA/QC checked by personnel other than those who input the data.

For monitoring activities which require laboratory analysis, the responsible laboratory, ALS, follows the QA/QC requirements as set out under their HOKLAS scheme for all laboratory testing.



5. IMPACT MONITORING RESULTS

In this reporting month, construction works and therefore monitoring had started at Channels MUP03A&B, MUP04A&B and MUP05 located in Man Uk Pin. No impact monitoring has yet been undertaken at Channel LMH01 due to no construction activities during the month. In the future when the EM&A programme will cover all four channels once works in Channel LMH01 start.

The scheduled impact monitoring in this month is shown in *Appendix G* and the monitoring results are detailed in the following sub-sections. The meteorological data during the Reporting Period are summarized in *Appendix J*.

5.1 AIR QUALITY

According to the EM&A Manual, air monitoring is only required to conduct at Channels MUP04A and MUP05 during the construction phase. In this repoting period, the results of impact air quality monitoring for 24-hour and 1-hour TSP are summarized in *Tables 5-1* and *5-2*. The detailed 24-hour TSP monitoring data are shown in *Appendix H* and the graphic plots are shown in *Appendix I*.

Table 5-1 Summary of 1-hour TSP Monitoring Results (µg/m³)

MUP-A1 (MUP05)				IV	MUP-A2a (MUP05)				MUP-A3 (MUP04A)			
Date	Start	Me	Measurement			M	easurem	ent	Start	Me	easurem	ent
	Time	1st	2 nd	3 rd	Time	1st	2 nd	3 rd	Time	1st	2 nd	3 rd
26-Jan-10	13:39	92	94	90	13:00	87	89	85	13:21	83	85	80
1-Feb-10	13:39	89	91	87	13:17	94	97	92	13:04	89	92	87
6-Feb-10	13:41	86	89	84	13:14	89	91	86	13:29	92	95	90
12-Feb-10	13:39	82	84	80	13:01	76	79	74	13:14	79	81	77
22-Feb-10	13:41	89	92	87	13:14	87	89	85	13:27	86	88	83
Average	88			87				8				
(range)		(80 –	92)			(74	– 97)			(77 -	- 95)	

Table 5-2 Summary of 24-hour TSP Monitoring Results (µg/m³)

Date	MUP-A1 (MUP05)	MUP-A2a (MUP05)	MUP-A3 (MUP04A)
30-Jan-10	122	Power failure#	66
5-Feb-10	78	65	37
11-Feb-10	36	37	30
20-Feb-10	23	59	47
Average	65	54	45
(range)	(23 - 122)	(37 - 65)	(30 – 66)

[#] Power failure and no make up of lose samples.

As shown in *Tables 5-1* and *5-2*, the results of 1-hour and 24-hour TSP monitoring fluctuated well below the corresponding Action Levels. No exceedance of Action and Limit Levels was recorded during the period. No Notifications of Environmental Quality Limit Exceedances (NOE) or corrective actions were therefore required for these parameters. There was 1 power failure incident recorded at MUP-A2a. We have liaised with the Contractor to rectify the power supply and it has been reconnected on 5 February 2010.

5.2 CONSTRUCTION NOISE

According to the EM&A Manual, noise monitoring is only required at Channels MUP04A and MUP05 during the construction phase. All noise monitoring results are summarized in *Tables 5-3* to *5-6* and graphic plot are shown in *Appendix I*.

Table 5-3 Results of Construction Noise Monitoring at Channels MUP-N1 / MUP01/02-N1 (MUP05)

Date	Start Time	1st Leq5	2 nd Leq5	3 rd Leq5	4 th Leq5	5 th Le q 5	6 th Leq5	Leq30 dB(A)
26-Jan-10	14:49	65.4	63.9	64.2	64.3	64.7	63.8	64.4
1-Feb-10	15:13	67.9	67.4	67.0	66.9	67.4	68.1	67.5
6-Feb-10	14:51	64.9	65.1	64.7	64.3	64.5	64.6	64.7
12-Feb-10	14:37	61.9	61.0	62.0	61.4	61.3	61.3	61.5
22-Feb-10	14:45	67.2	67.4	67.1	67.0	67.6	67.2	67.3
Limit Level (Leq30) 75 dB(A)								



Table 5-4 Results of Construction Noise Monitoring at Channels MUP-N2 (MUP05)

Date	Start Time	1st Leq5	2 nd Leq5	3 rd Leq5	4 th Leq5	5 th Leq5	6 th Leq5	Leq30 dB(A)
26-Jan-10	13:07	67.1	66.9	67.2	67.4	66.3	66.9	67.0
1-Feb-10	13:35	66.2	66.7	65.9	66.4	65.9	65.3	66.1
6-Feb-10	13:14	64.1	64.7	64.3	64.3	64.9	64.5	64.5
12-Feb-10	13:04	61.9	61.4	61.7	61.5	61.2	61.3	61.5
22-Feb-10	13:41	65.9	65.7	65.6	65.8	65.6	65.8	65.7
Limit Level (Leq30) 75 dB(A)								

Table 5-5 Results of Construction Noise Monitoring at Channels MUP-N3 (MUP05)

Date	Start Time	1st Leq5	2 nd Leq5	3 rd Leq5	4 th Leq5	5 th Leq5	6 th Leq5	Leq30 dB(A)
26-Jan-10	14:11	72.1	71.9	71.4	70.7	71.2	71.4	71.5
1-Feb-10	14:41	70.1	70.4	70.1	69.9	70.2	70.3	70.2
6-Feb-10	14:21	70.1	70.4	70.2	70.3	70.2	70.5	70.3
12-Feb-10	14:05	64.7	65.9	65.2	65.4	65.3	65.1	65.3
22-Feb-10	14:12	70.4	70.1	70.3	70.1	70.6	70.2	70.3
Limit Level (Leq30)					75 dB(A)			

Table 5-6 Results of Construction Noise Monitoring at Channels MUP-N4 (MUP04A)

Date	Start Time	1st Leq5	2 nd Leq5	3 rd Leq5	4 th Leq5	5 th Leq5	6 th Leq5	Leq30 dB(A)
26-Jan-10	13:40	67.1	68.9	68	67.7	67.4	67.5	67.8
1-Feb-10	14:09	65.9	67.1	66.3	66.4	67.4	65.9	66.5
6-Feb-10	13:51	62.1	62.4	62.4	62.5	62.7	62.3	62.4
12-Feb-10	13:34	59.7	59.2	59.7	59.2	59.4	60.1	59.6
22-Feb-10	13:10	60.1	60.4	60	60.3	60.2	60.7	60.3
Limit Level (Leq30)					75 dB(A)			

As shown in *Tables 5-3* to *5-6*, the construction noise levels fluctuated well below the Limit Level. No documented complaints against the construction noise were registered during the Reporting Period. No NOE or corrective actions were therefore required for the parameter

5.3 WATER QUALITY

In this reporting month, a total of 11 sampling days were performed for stream water quality monitoring according to the EM&A Manual requirements. Detailed in-situ measurements and laboratory results are shown in **Appendix H** and graphic plots given in **Appendix I**.

There was no exceedances of stream water quality (Limit Levels) recorded.

For pH measurements, the results shown that the range of pH unit were within 6.9 -7.8 and within the lower or upper bounds of Action Limit Level.

Since the exceedances were not obtained, no corrective actions were therefore required for all parameters. However CHCT should be reminded to enhance their water quality mitigation measures in order to minimize any potential water quality impacts as a good practice.



5.4 ECOLOGY

According to the EM&A Manual [382486/73//lssue2], ecology monitoring is required for Channels MUP05 and LMH01 during the construction phase. In this reporting period, the construction works of Channels MUP05 has already been commenced on 10 March 2009. However construction works in Channel LHM01 has not yet started. So ecology monitoring was only undertaken for Channel MUP05 only. Once construction activities at Channel LMH01 start, ecology monitoring of the stream water will immediately take place.

In this reporting month, four site visits were carried out on 28 January 2010, 4 February 2010, 11 February 2010 and 20 February 2010 by an ecological specialist. No non-compliance was observed during the auditing period and it is understood that the temporary sedimentation tank which has been found loaded with sediment in the past few months will no longer be used and new drainage measures/facilities/discharge outlet will be installed. The detailed findings are listed in the table below and the checklists are attached in *Appendix L*.

Table 5-8 Summary of Defects and Deficiencies Identified and Follow-up Actions and Remedies Taken

Date of	Defects and Deficiencies	Recommendation	Follow-up Actions and
Audit	Identified		Remedies Taken
28 Jan 10 4 Feb 10 11 Feb 10	Although no water was found discharged into the stream during the site audits, the temporary sedimentation tank installed was found loaded with sediment.	tank before further operation and carry out routine inspection/ maintenance of the	Maintenance and clearance of sediment in the tank is pending; and it is understood on the latest audit (20/2/2010) that new facilities/discharge point will be installed; whereas the temporary sedimentation tank installed will be abandoned

5.5 OTHER FACTORS INFLUENCING THE MONITORING RESULTS

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

5.6 QA/QC RESULTS AND DETECTION LIMITS

Not applicable.



6. REPORT ON NON-COMPLIANCE, COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

6.1 RECORD OF NON-COMPLIANCE OF ACTION AND LIMIT LEVELS

No Action or Limit Level exceedance was identified for stream water quality, air quality and construction noise monitoring in this reporting month.

6.2 ENVIRONMENTAL COMPLAINTS

No written or verbal complaints were received (written or verbal) for each medium during the Reporting Period.

6.3 RECORD OF NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

No notification of summons or successful prosecutions was recorded during the Reporting Period.

6.4 REVIEW OF REASONS FOR AND IMPLICATION OF NON-COMPLIANCE, COMPLAINT AND NOTICE OF SUMMONS No non-compliance, complaint or Notice of Summons was received in this reporting month.

6.5 DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

It follows from **Sections 6.1** and **6.4** that no follow-up actions were necessary.

6.6 OTHERS

6.6.1 Solid and Liquid Waste Management Status

The quantity of waste for disposal or reuse is summarized in **Tables 6-1** and **6-2.** The monthly summary of waste flow table is shown in **Appendix M**.

Table 6-1 Summary of Quantities of Waste for Disposal

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (m ³)	-	Tuen Mun 38 Fill Bank
Cab Materials (intert) (intert)	5335	Reused in other Projects
C&D Materials (Non-Inert) (m ³)	0	NENT
Chemical Waste (Litres)	0	NA
General Refuse (m³)	0	NA

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

Type of Waste	Quantity	Disposal Location
Metals for Recycling (kg)	150	NA
Paper for Recycling (kg)	0	NA
Plastics for Recycling (kg)	0	NA

There was no known site effluent discharged but it was assumed that an estimated volume of 50m³ of waste water was discharged in this reporting month.

6.6.2 Site Inspection and Environmental Audit

A total of **5** weekly environmental site inspection and audit were conducted jointly by the ER, EO and ET during the Reporting Period on **28 January 2009**, **5**, **10**, **19 and 25 February 2010** and there was also an IEC audit undertaken on **10 February 2009**. No adverse environmental impacts were observed which indicated that the mitigation measures implemented were effective. Minor deficiencies found in the site inspections and audit were promptly rectified within the specified deadlines. Findings of the site inspection and environmental audit are summarized below.



Table 6-3 Summary of Findings of Site Inspection and Environmental Audit

Date	Findings / Deficiencies	Follow-Up Status
28 January 2010	Exposed slope has hard paved in some area, However, the Contractor is reminded to enhance the water mitigation measures, such as sand bag should be erected under loose open slope.o the down- gradient	The deficiencies have been improved during site inspection on 5 February 2010.
5 February 2010	Dry haul road was observed, the Contractor was reminded to provide water spraying more frequently.area.	The deficiencies have been improved during site inspection on 10 February 2010.
10 February 2010	 The stagnant water accumulated is observed. The Contractor was reminded to drain water away or apply larvidical oil to prevent mosquitoes breeding. 	The deficiencies have been improved during site inspection on 19 February 2010.
19 February 2010	Stagnant water was observed. The Contractor is reminded to remove it to prevent mosquito breeding.	The deficiencies have been improved during site inspection on 25 February 2010.
25 February 2010	Stagnant water was observed during the site inspection. Pump out the stagnant water or level off the land was reminded to be undertaken to prevent mosquitoes breeding	Will be reported on next month

Performa of the weekly ET site inspection and audit activities are presented in Appendix K.

6.6.3 Works to be Undertaken in the Forth-Coming Month

Works to be undertaken next month are shown in the construction program enclosed in *Appendix C*. In addition, the activities undertaken in the Reporting Period including construction, preparation and site clearance activities will also continue in the future. They are summarized below:

The forthcoming activities in the next two months:

- (a) Survey setting out;
- (b) Tree transplant;
- (c) Construction of site access, footbridge, access ramp, inlet chambers
- (d) Site clearance;
- (e) Construction of access ramp and gabion wall; and
- (f) Installation of site hoardings and boundary wall.

6.6.4 Future Key Issues and Mitigation Measures for the Forth-Coming Month

During dry season dust control measures to avoid dust emissions should be properly provided and maintained, as appropriate.

As wet season is coming soon, the water implemented mitigation measures such as stacking of sand bags at downstream of the excavation site should be maintained and improved as necessary as preventative measures. Mitigation measures for air and water quality should therefore be properly maintained and improved as necessary. Temporary drainage plans should be implemented ahead.

Attention should also be paid to construction noise and other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the ESR and summarized in Mitigation Measure Implementation Schedule should be fully implemented.



7 CONCLUSIONS AND RECOMMENDATIONS

This is the 12th monthly EM&A Report for Channels MUP03A&B, MUP04A&B, MUP05 and LMH01 - Designated Project, covering a period from 26 January 2010 to 25 February 2010.

The monitored results demonstrated no exceedance of Action and Limit Levels of air quality, construction noise and stream water quality; and also no non-conformance of ecology during the Reporting Period. Therefore, no corrective actions were necessary for these environmental issues.

No written or verbal complaints, notifications of summons or successful prosecutions were received during the Reporting Period. No adverse environmental impacts were observed during the weekly site inspection and environmental audit, which indicated that the implemented mitigation measures for air quality, construction noise and water quality were effective. A few minor deficiencies found in the weekly site inspection and they were rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

During dry season, dust control measures to avoid dust emissions should be properly provided and maintained, as appropriate.

Attention should also be paid to construction noise and other environmental issues identified in the EM&A Manual. Other mitigation measures recommended in the ESR and summarized in Mitigation Measure Implementation Schedule should be fully implemented.

As wet season is coming soon, the water implemented mitigation measures such as stacking of sand bags at downstream of the excavation site should be maintained and improved as necessary as preventative measures.

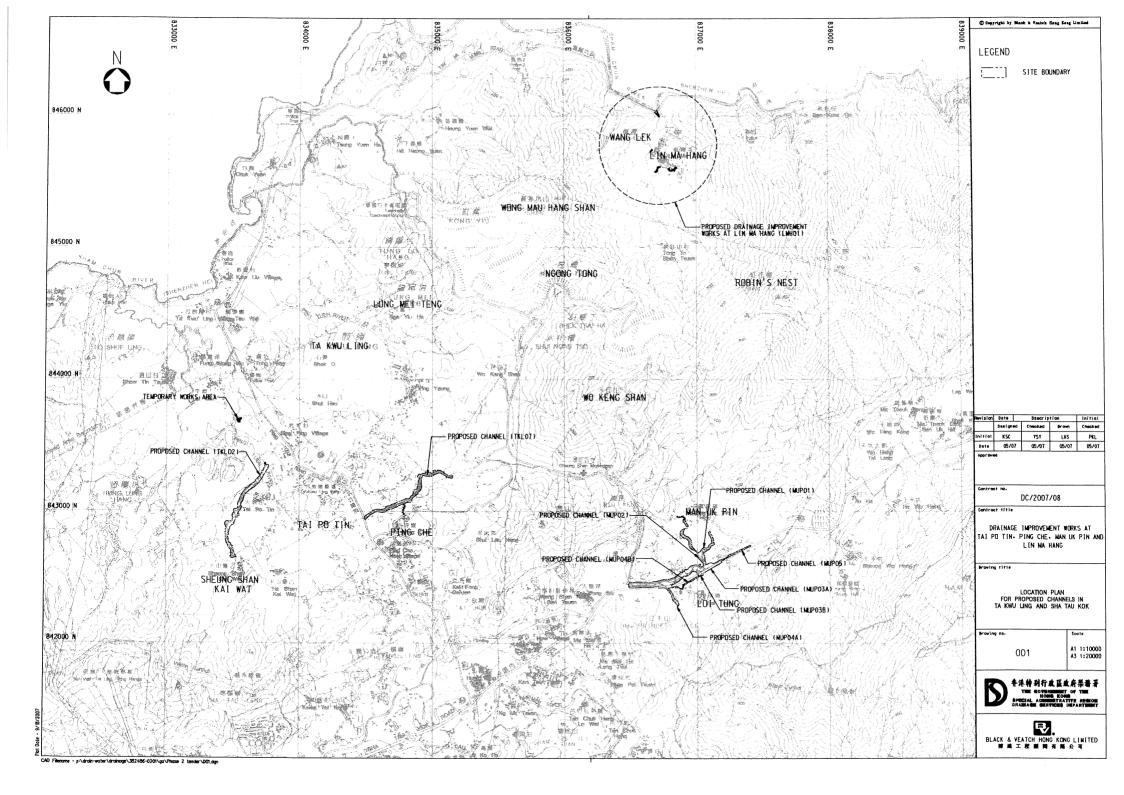
Impact monitoring should be immediately undertaken upon the construction works commencement at Channel LMH01 and will be reported in the coming month.

- End of Text -



Appendix A

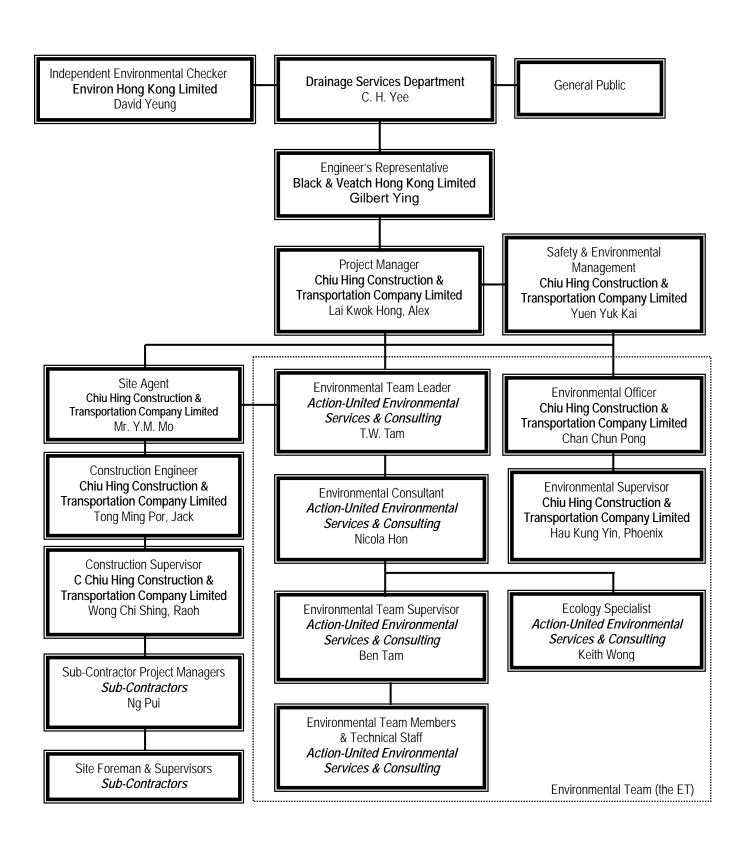
Site Location Plan





Appendix B

Environmental Management Organization and Contacts of Key Personnel



Environmental Management Organization



Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
DSD	Employer	Mr. C. H. Yee	2594-7347	2827-8700
B&V	Engineer's Representative	Mr. Gilbert Ying	2659-8787	2659-8323
Environ	Independent Environmental Checker	Mr. David Yeung	3743-0788	3548-6988
CHCT	Project Manager	Mr. Lai Kwok Hong, Alex	2659-8221	2659-8232
СНСТ	Safety & Environmental Manager	Mr. Yuen Yuk Kai	2659-8221	2659-8232
СНСТ	Site Agent	Mr. Y.M. Mo	2659-8221	2659-8232
CHCT	Construction Engineer	Mr. Tong Ming Por, Jacky	2659-8221	2659-8232
CHCT	Construction Supervisor	Mr. Roah Wong	2659-8221	2659-8232
CHCT	Structural Engineer	Mr. Kwok Chin Ming	2659-8221	2659-8232
CHCT	Site Forman	Mr. Chung Ping Kai	2659-8221	2659-8232
CHCT	Environmental Officer	Mr. C. P. Chan	2659-8221	2659-8232
CHCT	Environmental Supervisor	Miss Phoenix Hau	2659-8221	2659-8232
Kin Tat	Sub-contractor Project Manager	Mr. Ng Pui	2659-8221	2659-8232
AUES	Environmental Team Leader	Mr. Andrew Lau	2959-6059	2959-6079
AUES	Environmental Consultant	Miss Nicola Hon	2959-6059	2959-6079
AUES	Environmental Team Supervisor	Mr. Ben Tam	2959-6059	2959-6079
AUES	Ecologist	Dr. Keith Wong	2959-6059	2959-6079

Legends:

DSD (Employer) – Drainage Services Department

B&V (Engineer) – Black & Veatch Hong Kong Limited

CHCT (Main Contractor) – Chiu Hing Construction & Transportation Company Limited

Environ (IEC) – Environ Hong Kong Limited

AUES (ET) – Action-United Environmental Services & Consulting



Appendix C

Master Construction Program
Future Construction Works &
Environmental Mitigation Implementation Schedule

DSD Contract DC/2007/08 – Drainage Improvement Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang 12th Monthly EM&A Report for the Designated Works – February 2010



Master Construction Program

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd MASTER PROGRAMME 05 (Section 1 of works) CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG Duration 2009, Half 1 2009, Half 2 2010, Half 1 2010, Half 2 2011, Half 1 2008, Half 2008, Half 2 MJJASOND CONTRACT: DC/2007/08 (The Woks) 1045 days Wed 08-4-30 Thu 11-3-10 Wed 08-4-30 Thu 11-3-10 Section 1 - Tai Po Tin (Portion B) 1045 days 0 days Wed 08-4-30 Wed 08-4-30 Commencement Date Wed 08-4-30 Wed 08-4-30 0 days Handover of Portion B River TKL02 with section 5 of works 1045 days Wed 08-4-30 Thu 11-3-10 Wed 08-4-30 Tue 09-3-31 Prelim Works 336 days 180 days Wed 08-4-30 Sun 08-10-26 Baseline Monitoring Tue 08-12-2 Fri 09-1-30 Initial survery 60 days Mobilisation 10 days Mon 09-2-2 Wed 09-2-11 Thu 09-2-12 Sun 09-3-1 10 18 days Site clearance 11 170 days Wed 08-4-30 Thu 08-10-16 Tree survey + report 12 Mon 09-3-2 Sat 09-3-21 Construct Access Road 20 days 13 Remove and Transplant trees 60 days Fri 08-10-17 Mon 08-12-15 14 Mon 09-3-2 Tue 09-3-31 Implement Drainage Improvement measures 30 days 15 150 days Mon 08-10-27 Wed 09-3-25 Utility Survey/diversion Sun 09-3-22 Thu 10-7-1 16 Main River Constructioin 467 days 50 days Sun 09-3-22 Sun 09-5-10 Temporary Flow Diversion 18 Mon 09-5-11 Wed 09-10-7 Open cut excavation 150 days Rock & ganular filling for the base of gabion 170 days Sat 09-6-20 Sun 09-12-6 20 Blinding layer for the gabion construction 170 days Wed 09-7-22 Thu 10-1-7 21 Backfilling and gabion constrution by layers 200 days Sun 09-8-16 Wed 10-3-3 22 Gabion block constuction in the middle of the river 170 days Fri 09-9-25 Sat 10-3-13 23 90 days Sun 10-1-3 Fri 10-4-2 200 Rip Rap filling 24 Sat 10-1-23 Thu 10-4-22 granular fill for the maintenance access 90 days 25 100 days Fri 10-2-12 Sat 10-5-22 Construction of maintenance access 26 Rip Rap filling inside the maintenance access 90 days Sun 10-3-14 Fri 10-6-11 27 90 days Thu 10-4-22 Grassed cellular concrete paving Sat 10-1-23 28 Thu 10-7-1 Construction of concrete transition channel 30 days Wed 10-6-2 29 527 days Wed 09-9-30 Thu 11-3-10 River Associated Works Sun 10-3-14 Fri 10-8-20 30 Footbridge construction 160 days 31 Sun 10-3-14 Thu 10-4-22 FBT02-3 at CH 406 approximate 32 VBT02-1 at CH507 approximate 40 days Fri 10-4-23 Tue 10-6-1 FBTB2-2 at CH510 approximate 40 days Wed 10-6-2 Sun 10-7-1 33 Mon 10-7-12 Fri 10-8-20 34 FBT02-1 at CH662 approximate 40 days 35 Wed 09-9-30 Mon 10-10-4 370 days Ramp construction Wed 09-9-30 Mon 09-11-30 36 At CHO Approximate 62 days 20 days Wed 09-9-30 Mon 09-10-19 Granular filling with geotextile filter 37 Mon 09-10-5 Sat 09-10-24 38 Concrete for the blinding laver 20 days Base slab construcion for the ramp 30 days Sat 09-10-10 Sun 09-11-8 40 Wall construction for the ramp 45 days Sat 09-10-17 Mon 09-11-30 Fri 10-4-23 Mon 10-6-21 41 At CH406 Approximate 60 days Wed 10-5-12 Fri 10-4-23 42 Granular filling with geotextile filter 20 days Wed 10-4-28 Mon 10-5-17 20 days 43 Concrete for the blinding layer 44 Mon 10-5-3 Tue 10-6-1 Base slab construcion for the ramp 30 days Sat 10-5-8 Mon 10-6-21 Wall construction for the ramp 45 days 45 Sat 10-7-31 46 At CH501 Approximate 60 days Wed 10.6.2 47 Granular filling with geotextile filter 20 days Wed 10-6-2 Mon 10-6-21 48 Sat 10-6-26 Concrete for the blinding layer 20 days Mon 10-6-7 Sat 10-6-12 Sun 10-7-1 Base slab construcion for the ramp 30 days 49 Thu 10-6-17 Sat 10-7-3 50 Wall construction for the ramp 45 days 51 45 days Sat 10-8-21 Mon 10-10-4 At CH662 Approximate Thu 10-9-9 52 Granular filling with geotextile filte 20 days Sat 10-8-21 20 days Thu 10-8-26 Tue 10-9-14 53 Concrete for the blinding layer 54 Base slab construcion for the ramp 30 days Tue 10-8-31 Wed 10-9-20 55 30 days Sun 10-9-5 Mon 10-10-4 Wall construction for the ramp 56 Verge/footpath construction Mon 09-10-5 Thu 10-4-22 200 days 57 Mon 09-10-5 Subase construction for the verges 180 days Mon 10-4-12 58 Gassed cellular concrete/concrete paving 180 days Thu 09-10-15 180 days Sun 09-10-25 Thu 10-4-22 59 Type 2 railing construction 60 Thu 09-10-15 Sat 10-1-2 80 days Retaining wall construction 61 Thu 09-10-15 Mon 09-11-23 At CHO Approximate 40 days 62 Type D L-shaped RW construction 20 days Thu 09-10-15 Tue 09-11-Wed 09-11-4 Fri 09-11-13 63 Preforated pipe installation 10 days Backfilling the RW 10 days Sat 09-11-14 Mon 09-11-23 Rolled Up Critical Task Group By Summary Progress Summary Rolled Up Progress External Tasks Task Project: Master Programme (Rev.05) Date: 01/2009 Rolled Up Milestone Project Summary Deadline Milestone Rolled Up Task Critical Task Page 1

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd
MASTER PROGRAMME 05 (Section 2 of works)
CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG

Task Name	Duration	Start		2008 2008, Half 21 D	2008, Half 2 J A S O N	2009 2009, Half I D J F M A	2009, Half 2 M J J A S O	2010 2010, Half 1 N D J F M A M	2010, Half 2 J J A S O N	2011 2011, Half I N D J F M
CONTRACT: DC/2007/08 (The Woks)	1226 days	Fri 07-12-21	Fri 11-4-29			1				
Handover of Portion A Section 2 & 5- Ping Che (Portion C & F)	0 days	Fri 07-12-21	Fri 07-12-21	◆ 12-21		18	i	1		i
Section 2 & 5- Ping Che (Portion C & E)	1095 days	Wed 08-4-30	Fri 11-4-29			18	1	The state of the s	T.	1
Commencement Date	0 days	Wed 08-4-30	Wed 08-4-30	4-30						
Hand over of Portion C & E	0 days	Wed 08-4-30	Wed 08-4-30	4-30		18	1	1	1	t t
River TKL07 (Portion C & E)	900 days	Wed 08-4-30	Sat 10-10-16							
Prelim Works	400 days	Wed 08-4-30	Wed 09-6-3					1	·	i
Basline monitoring	210 days	Wed 08-4-30	Tue 08-11-25	[BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB		h !:	· · · · · · · · · · · · · · · · · · ·			
Initial Survery	80 days	Fri 08-5-2	Sun 08-7-20			1				
Mobilisation	10 days	Wed 08-11-26	Fri 08-12-5	i i		Å. ·		i.		
Site clearance	30 days	Sat 08-12-6	Sun 09-1-4	1 1		THE STATE OF THE S	L.	1		1
Site clearance Tree survey	10 days	Fri 08-8-1	Sun 08-8-10	1	日		r r	1	1	1
Construct Access Road	20 days	Sat 08-12-6	Thu 08-12-25			· 情心:				
		Fri 08-12-26	Wed 09-3-25			[PROPERTY CONTRACTOR	r.	1	1	1
Remove and Transplant the trees	90 days			1		* (-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	10101			1
Utility Survey/diversion	180 days	Sat 08-12-6	Wed 09-6-3	1	Facultation	[0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+	13-3-3	1		1
Design submissions to PS 1.68	180 days	Wed 08-9-17	Sun 09-3-15				4			
Implement Drainage Improvement Measures Main River Construction (CH0 to CH80)	50 days	Wed 08-12-24	Wed 09-2-11			Establish	1	1 1		1
	96 days	Tue 10-7-13	Sat 10-10-16	1		18		1.		
Temporary Flow Diversion	20 days	Tue 10-7-13	Sun 10-8-1	1		14	1	\$		4
Open cut excavation Rock & ganular filling for the base of gabion	20 days	Mon 10-8-2	Sat 10-8-21			18				
Rock & ganular filling for the base of gabion	40 days	Sun 10-7-18	Thu 10-8-26			18		1	E E E	1
Blinding layer for the gabion construction	40 days	Fri 10-7-23	Tue 10-8-31	- i		19	1	i	4 25 55 5	1
Backfilling and gabion constrution by layers	46 days	Wed 10-7-28	Sat 10-9-11			1.6	i i	3.	₩	1
Ganular Filling for the river	25 days	Tue 10-9-7	Fri 10-10-1	1		12		3	i iii	1
Grassed cellular concrete paving	25 days	Wed 10-9-22	Sat 10-10-16	/						
Main River Construction (CH150 to CH270 approx	125 days	Fri 09-11-20	Wed 10-3-24	1		1.8				1
		Fri 09-11-20	Wed 10-3-24 Wed 09-12-9	1		i.K	1	EFEL.	1	1
Temporary new drivings	20 days			1		1.8		↑ F-2-2-1	i	1
Open cut excavation	35 days	Thu 09-12-10	Wed 10-1-13							
Rock & ganular filling for the base of gabion	40 days	Thu 09-12-10	Mon 10-1-18	1		1.6		1000000	1	1
Blinding layer for the gabion construction	30 days	Fri 09-12-25	Sat 10-1-23	1		18	i i	12:2:3	î	· · · · ·
Backfilling and gabion constrution by layers	65 days	Wed 09-12-30	Thu 10-3-4	1		1.0			1	
Ganular Filling for the river	35 days	Mon 10-2-8	Sun 10-3-14							
Grassed cellular concrete paving	30 days	Tue 10-2-23	Wed 10-3-24			1.8		■ ■		4
River associated Works	224 days	Fri 10-3-5	Thu 10-10-14			1.5	:			1
Box culvert construction at CH230 approximate	144 days	Fri 10-3-5	Mon 10-7-26	1		1.8	1			1
Temporary flow diversion	14 days	Fri 10-3-5	Thu 10-3-18	1		11		E3 ₁	1	1
7 Open cut excavation	30 days	Fri 10-3-19	Sat 10-4-17							
8 Granular filling with geotextile filter	30 days	Mon 10-3-29	Tue 10-4-27			12	1	1 1 1 1 1 1	1	1
	30 days	Thu 10-4-8	Fri 10-5-7	i i		18		1-1-1-14	2	1
Concrete for officially fityer			Wed 10-6-16			18		MOTORIAL MATERIAL MAT	रहत है	1
0 Base slab construction	60 days	Sun 10-4-18							### / - -	
Wall & Top Slab construction	60 days	Wed 10-4-28	Sat 10-6-26	1		19.	i	7.2222	22222)
Backfilling Backfilling	30 days	Sun 10-6-27	Mon 10-7-26	1		1.5	1	1	[222.5]	1
Footbridge construction	196 days	Fri 10-3-19	Thu 10-9-30	1		15	1	Marian Marian	*	1
FBT07-1 at CH 35 approximate	60 days	Mon 10-8-2	Thu 10-9-30							
FBT07-2 at CH250 approximate	55 days	Fri 10-3-19	Wed 10-5-12	1		18		la l	4	1
Verge/footpath construction	60 days	Thu 10-5-13	Sun 10-7-11	1		18	i i			1
Subase construction for the verges	20 days	Thu 10-5-13	Tue 10-6-1	1		1.0			L	1
Gassed cellular concrete/concrete paving	20 days	Wed 10-6-2	Mon 10-6-21	i i		14	i i		Ha.	
Type 2 railing construction	20 days	Tue 10-6-22	Sun 10-7-11			18			11	
Retaining wall construction	50 days	Thu 10-5-13	Thu 10-7-1	1		18	i.			1
1 At CH230 Approximate	50 days	Thu 10-5-13	Thu 10-7-1	i i		18.	1			1
Type D L-shaped RW construction	30 days	Thu 10-5-13	Fri 10-6-11	4 1		18.	1	E	13h V	1
		Sat 10-6-12	Mon 10-6-21			18				
	10 days			4		18	i		The second	
Backfilling the RW	10 days	Tue 10-6-22	Thu 10-7-1	1		18.	1			1
U Channel construction	105 days	Fri 10-7-2	Thu 10-10-14	i i		(1)		1		1
375 UC at CH230 Approximate	105 days	Fri 10-7-2	Thu 10-10-14							
Trench excavation	60 days	Fri 10-7-2	Mon 10-8-30	1 1		18) in the later of the	1
Concrete for the U channel	45 days	Tue 10-8-31	Thu 10-10-14			18	1	1		1
Inlet Pipes	25 days	Thu 10-3-25	Sun 10-4-18	1		10			1	i
Inlet pipe at CH270 Approximate	25 days	Thu 10-3-25	Sun 10-4-18	1		(8	1		1	
Main River Construction (CH80 to CH150 approximate	110 days	Thu 10-3-25	Mon 10-7-12							
2 Temporary Flow Diversion	15 days	Thu 10-3-25	Thu 10-4-8			18	1	in h		
3 Open cut excavation	30 days	Fri 10-4-9	Sat 10-5-8	1		18	,	1000	. 1	1
			Tue 10-5-18			18	Ti di	[2:2:3]	L :	1
Rock & ganular filling for the base of gabion	30 days	Mon 10-4-19	Tue 10-5-18					(ESSEEN		
cct: Master Programme (Rev.05) Critical Task Critical Task Mill Mill	gress estone		nmary Hed Up Task	Rolled Up Critical Task Rolled Up Milestone	Rolled Split	Up Progress	External Tasks , , Project Summary	Group By Summary Deadline	n,	

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd
MASTER PROGRAMME 05 (Section 2 of works)
CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG

ID Task Name		Duration	Start	Finish	2008 2009 2010 2011 2008, Half 1 2008, Half 2 2009, Half 1 2009, Half 2 2010, Half 1 2010, Half 2 2011, Half 1 2011, Half 1 2011, Half 2 2011, Half 2 2011, Half 3 2011
					2008, Fig. 2008, Fig. 2009, Fig. 200
	Blinding layer for the gabion construction	20 days	Sun 10-5-9	Fri 10-5-28	
	Backfilling and gabion constrution by layers	45 days	Wed 10-5-19	Fri 10-7-2	
	Ganular Filling for the river	25 days	Sun 10-6-13	Wed 10-7-	
	Grassed cellular concrete paving	25 days	Fri 10-6-18	Mon 10-7-12	
	n River Construction (CH270 to CH670 approxima	195 days	Tue 09-5-19	Sun 09-11-29	
	Temporary Flow Diversion	25 days	Tue 09-5-19	Fri 09-6-17	
	Open cut excavation	60 days	Sat 09-6-13	Tue 09-8-1	
	Rock & ganular filling for the base of gabion	60 days	Tue 09-6-23	Fri 09-8-2	
	Blinding layer for the gabion construction	60 days	Fri 09-7-3	Mon 09-8-3	
	Backfilling and gabion constrution by layers	75 days	Mon 09-7-13	Fri 09-9-2:	
	Gabion block constuction in the middle of the river	50 days	Mon 09-8-17	Mon 09-10-	
	200 Rip Rap filling	40 days	Sun 09-9-6	Thu 09-10-1:	
	Granular fill for the Maintenance access	35 days	Tue 09-9-1	Mon 09-10-	
	Construction of Maintenance access	65 days	Fri 09-9-11	Sat 09-11-14	
	Rip Rap filling inside the Maintenance access	45 days	Tue 09-10-6	Thu 09-11-19	
	Grassed cellular concrete paving	45 days	Fri 09-10-16	Sun 09-11-29	
	er Associated Works	838 days	Mon 09-1-12	Fri 11-4-29	
2	Box culvert construction at (CH670 to CH838 appr	127 days	Mon 09-1-12	Mon 09-5-18	
	Temporary flow diversion	20 days	Thu 09-3-26	Tue 09-4-14	
1	Open cut excavation	30 days	Mon 09-1-12	Tue 09-2-10	
	Granular filling with geotextile filter	30 days	Thu 09-1-22	Fri 09-2-20	
5	Concrete for blindling layer	20 days	Sun 09-2-1	Fri 09-2-20	
	Base slab construction	80 days	Wed 09-2-11	Fri 09-5-	
3	Wall & Top Slab construction	80 days	Wed 09-2-18	Fri 09-5-	4
9	Backfilling	20 days	Wed 09-4-29	Mon 09-5-1	
	Footbridge construction	180 days	Fri 09-11-20	Tue 10-5-1	
1	FBT07-3 at CH317 approximate	45 days	Fri 09-11-20	Sun 10-1-	
2	FBT07-4 at CH445 approximate	45 days	Mon 10-1-4	Wed 10-2-1	
3	FBT07-5 at CH600 approximate	45 days	Thu 10-2-18	Sat 10-4-	
1	FBT07-6 at CH687 approximate	45 days	Sun 10-4-4	Tue 10-5-1	
	Ramp construction	120 days	Sat 09-9-26	Sat 10-1-2.	
6	At CH517 Approximate	60 days	Sat 09-9-26	Tue 09-11-2	
7	Granular filling with geotextile filter	20 days	Sat 09-9-26	Thu 09-10-1	
8	Concrete for the blinding layer	20 days	Thu 09-10-1	Tue 09-10-20	
9	Base slab construcion for the ramp	30 days	Tue 09-10-6	Wed 09-11-	
00	Wall construction for the ramp	45 days	Sun 09-10-11	Tue 09-11-2	
01	At CH600 Approximate	60 days	Wed 09-11-25	Sat 10-1-2:	
)2	Granular filling with geotextile filter	20 days	Wed 09-11-25	Mon 09-12-1-	
03	Concrete for the blinding layer	20 days	Mon 09-11-30	Sat 09-12-1	
04	Base slab construcion for the ramp	30 days	Sat 09-12-5	Sun 10-1-	
05	Wall construction for the ramp	45 days	Thu 09-12-10	Sat 10-1-2	
	Verge/footpath construction	140 days	Fri 09-10-16	Thu 10-3-	
07	Subase construction for the verges	120 days	Fri 09-10-16	Fri 10-2-1	
18	Gassed cellular concrete/concrete paving	120 days	Mon 09-10-26	Mon 10-2-2	
09	Type 2 railing construction	120 days	Thu 09-11-5	Thu 10-3-	
10	Retaining wall construction	50 days	Fri 09-10-16	Fri 09-12-	
1	At CH687 Approximate	50 days	Fri 09-10-16	Fri 09-12-	
2	Type D L-shaped RW construction	30 days	Fri 09-10-16	Sat 09-11-1	
13	Preforated pipe installation	10 days	Sun 09-11-15	Tue 09-11-2	
14	Backfilling the RW	10 days	Wed 09-11-25	Fri 09-12-	
5	U Channel construction	120 days	Sat 09-12-5	Sat 10-4-	
6	375&525 UC at CH352 Approximate	40 days	Sat 09-12-5	Wed 10-1-1	
7	Trench excavation	20 days	Sat 09-12-5	Thu 09-12-2	
8	Concrete for the U channel	30 days	Tue 09-12-15	Wed 10-1-1	
9	525UC at CH552 Approximate	40 days	Thu 10-1-14	Mon 10-2-2	
0	Trench excavation	20 days	Thu 10-1-14	Tue 10-2-	
1	Concrete for the U channel	30 days	Sun 10-1-24	Mon 10-2-2	
2	525&600 UC at CH690 Approximate	40 days	Tue 10-2-23	Sat 10-4-	
3	Trench excavation	20 days	Tue 10-2-23	Sun 10-3-1	
14	Concrete for the U channel	30 days	Fri 10-3-5	Sat 10-4-	
	Inlet Pipes	581 days	Sat 09-9-26	Fri 11-4-2	
26	Inlet pipe at CH100 Approximate	25 days	Sat 09-9-26	Tue 09-10-2	
27	Inlet pipe at CH400 Approximate	25 days	Wed 09-10-21	Sat 09-11-1	
28	Inlet pipe at CH408 Approximate	25 days	Sun 09-11-15	Wed 09-12-	作 · · · · · · · · · · · · · · · · · · ·
		_			DATE OF THE PROPERTY OF THE PR
ect: Master Program e: 01/2009	me (Rev.05)	gress		mmary	Rolled Up Critical Task Rolled Up Progress External Tasks Group By Summary
2: 01/2009	Critical Task	estone	Ro	lled Up Task	Rolled Up Milestone Split Project Summary Deadline
					Page 2

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd MASTER PROGRAMME 05 (Section 2 of works)

CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG

ID.	Task Name	Duration	Start	Finish	2008		2009		2010		2011
					2008, Half I	2008, Half 2	2009, Half 1	2009, Half 2	2010, Half 1	2010, Half 2	2011, Half 1
					N D J F M A M	J J A S O N	D J F M A M	J J A S O N D	J F M A M	JJASON	DJFMA
129	Inlet pipe at CH450 Approximate	25 days	Thu 09-12-10	Sun 10-1-3		i i	18	E			4
130	Inlet pipe at CH570 Approximate	25 days	Mon 10-1-4	Thu 10-1-28	1	÷	16	ì			,
131	Inlet pipe at CH630 Approximate	25 days	Fri 10-1-29	Mon 10-2-22	4	1	18		HHI,	·	1
132	Inlet pipe at CH750 Approximate	25 days	Tue 10-2-23	Fri 10-3-19							
133							16		1	1	
134	Section 5 of works for TKL07	195 days	Sun 10-10-17	Fri 11-4-29			18	1	¥	1 1	

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd MASTER PROGRAMME 05 (Section 3 of works) CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG Duration 2010, Half 2 2008, Half 2008, Half 2 2009, Half 2009, Half 2 2010, Half 1 2011, Half 1 J A S O N D J F M A M 66 600mm dia. pipe construction Tue 10-5-18 Wed 10-6-16 65 Fri 10-7-16 66 67 900mm dia. pipe construction 30 days Thu 10-6-17 B.C. at CH E+93 30 days Mon 09-3-2 Tue 09-3-31 68 152 days Tue 10-2-2 69 Fri 09-9-4 River MUP03B (Portion D) 70 Temporary Flow Diversion 20 days Fri 09-9-4 Wed 09-9-23 53 Fri 09-10-23 70 71 Thu 09-9-24 Open cut excavation 30 days 30 days Tue 09-9-29 Wed 09-10-28 71FF+5 days 72 Rock & ganular filling for the base of gabion 73 30 days Sun 09-10-4 Mon 09-11-2 72FF+5 days Blinding layer for the gabion construction 74 Backfilling and gabion constrution by layers 57 days Fri 09-10-9 Fri 09-12-4 73SS+5 days 75 Fri 09-11-20 Wed 09-12-9 74FF+5 days Gabion block constuction in the middle of the river 20 days 76 15 days Mon 09-11-30 Mon 09-12-14 75FF+5 days 200 Rip Rap filling Mon 10-1-18 74 77 Sat 09-12-5 FBM03-1 footbridge at CH E+60 Approximate 45 days 78 60 days Sat 09-12-5 Tue 10-2-2 Verge/footpath construction Thu 09-12-24 74 79 Subase construction for the verges 20 days Sat 09-12-5 80 Gassed cellular concrete/concrete paving 20 days Fri 09-12-25 Wed 10-1-13 79 Tue 10-2-2 80 81 Type 2 railing construction 20 days Thu 10-1-14 82 River MUP04A (Portion D) 342 days Wed 10-2-17 Mon 11-1-24 83 Temporary Flow Diversion 20 days Wed 10-2-17 Mon 10-3-8 64SS Tue 10-3-9 Sat 10-4-17 83 40 days 84 Open cut excavation Mon 10-5-17 84SS+10 day 85 Rock & ganular filling for the base of gabion 60 days Fri 10-3-19 86 60 days Mon 10-3-29 Thu 10-5-27 85SS+10 days Blinding layer for the gabion construction 87 Backfilling and gabion constrution by layers 100 days Thu 10-4-8 Fri 10-7-16 86SS+10 day Thu 10-4-8 Sat 10-6-26 87SS 88 Gabion block constuction in the middle of the river 80 days Tue 10-8-10 88 89 200 Rip Rap filling 45 days Sun 10-6-27 90 VBM04-2 vehicular bridge at CHD+11 Approximate 52 days Wed 10-8-11 Fri 10-10-1 89 91 VBM04-1 vehicular bridge at CH D+48 Approximate 55 days Sat 10-10-2 Thu 10-11-25 90 Construct 4X1650mm dia. pipes at CH D+185 Approximate 60 days Fri 10-11-26 Mon 11-1-24 91 92 93 Verge/footpath construction 58 days Sat 10-7-17 Sun 10-9-12 Sat 10-7-17 Mon 10-8-23 87 94 Subase construction for the verses 38 days 95 Gassed cellular concrete/concrete paving 38 days Tue 10-7-27 Thu 10-9-2 94FF+10 day Fri 10-8-6 Sun 10-9-12 95FF+10 days 96 Type 2 railing construction 38 days 97 River MUP04B (Portion D) 207 days Tue 09-12-15 Fri 10-7-9 Thu 09-12-24 76 10 days Tue 09-12-15 98 Temporary Flow Diversion 99 30 days Fri 09-12-25 Sat 10-1-23 98 Open cut excavation Wed 09-12-30 Thu 10-1-28 99FF+5 days 100 Rock & ganular filling for the base of gabion 30 days 101 30 days Mon 10-1-4 Tue 10-2-2 100FF+5 day Blinding layer for the gabion construction 102 77 days Sat 10-1-9 Fri 10-3-26 101SS+5 days Backfilling and gabion constrution by layers 103 Gabion block constuction in the middle of the river 20 days Fri 10-3-12 Wed 10-3-31 102FF+5 days Thu 10-4-1 Thu 10-4-15 103 104 15 days 200 Rip Rap filling 105 Construct 1350mm dia. pipes 25 days Fri 10-4-16 Mon 10-5-10 104 80 days Sun 10-1-24 Tue 10-4-13 99 106 Manhole MH1 to MH7 construction 107 Verge/footpath construction 60 days Tue 10-5-11 Fri 10-7-9 Tue 10-5-11 108 Subase construction for the verges 20 days Sun 10-5-30 105 109 Gassed cellular concrete/concrete paying 20 days Mon 10-5-31 Sat 10-6-19 108 Fri 10-7-9 109 110 Type 2 railing construction 20 days Sun 10.6-20 111 River MUP05 (Portion D) 610 days Sat 09-3-14 Sat 10-11-13 Main River Construction (CH C+0.00 to C+974 approxima 340 days 112 Sat 09-3-14 Tue 10-2-16 113 40 days Sat 09-3-14 Wed 09-4-22 9 Temporary flow diversion Thu 09-4-23 Wed 09-8-5 113 114 Open cut excavation 105 days 115 Rock & ganular filling for the base of gabion 260 days Thu 09-4-23 Thu 10-1-7 114SS

rogramme (Rev.05)			Progress Milestone	•	Summary Rolled Up Task		Rolled Up Critical Task Rolled Up Milestone	Rolled Up Progress Split	remente	External Tasks Project Summary		Group By Summary Deadline	ij.		
rogramme (Rev.05)			Progress										m		
VBM	405-1at CH C+70 approximate		30 days	Wed 10-2-17	Thu 10-3-18 117	1	1	1 %	***************************************	1		With			1
Footbridg	ge/Vehicular Bridge Construction	on	270 days	Wed 10-2-17	Sat 10-11-13			18				4	1		1
Back	filling		30 days	Wed 10-7-7	Thu 10-8-5 127										
Wall	& Top Slab construction		90 days	Thu 10-4-8	Tue 10-7-6 126SS+10 day	1		18			1	→			1
			60 days	Mon 10-3-29	Thu 10-5-27 125SS+10 day			**		1	1	H EEREE	1		1
			24 days	Fri 10-3-19	Sun 10-4-11 124FF+10 day					Ŷ		A 11			
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		pproximate						1.8		1		FIL.	3		u.
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			180 days			1	T.	10		100000000000000000000000000000000000000		K	i		- 1
Ganular Fi	illing for the river		180 days	Fri 09-8-21	Tue 10-2-16 117FF	1	1	18.				+	į.		1
Backfilling	g and gabion constrution by layer	S	300 days	Thu 09-4-23	Tue 10-2-16 116SS			18	H			Н	1		
	Backfillin Ganular F Grassed e River associat Box culv Tem Oper Gran Cone Base Wall Back Footbrids	Backfilling and gabion constrution by layer Granular Filling for the river Grassed cellular concrete paving River associated Works Box culvert construction at CH C+190 a Temporary flow diversion Open cut excavation Granular filling with geotextile filter Concrete for blindling layer Base slab construction Wall & Top Slab construction Backfilling	Backfilling and gabion constrution by layers Canular Filling for the river Crassed cellular concrete proving River associated Works Box culvert construction at CH C+190 approximate Temporary flow diversion Open cut excavation Granular filling with geotextile filter Concrete for blindling layer Base slab construction Wall & Top Slab construction Backfilling Feotbridge/Vehicular Bridge Construction	Backfilling and gabion construction by layers 300 days	Ganular Filling for the river 180 days Fri 09-8-21 Grassed cellular concrete paving 180 days Fri 09-8-21 River associated Works 270 days Wed 10-2-17 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Temporary flow diversion 10 days Wed 10-2-17 Open cut excavation 24 days Sat 10-2-27 Granular filling with geotextile filter 24 days Fri 10-3-9 Concrete for blindling layer 24 days Fri 10-3-9 Base slab construction 60 days Mon 10-3-20 Wall & Top Slab construction 90 days Thu 10-4-8 Backfilling 30 days Wed 10-2-17 Footbridge/Vehicular Bridge Construction 270 days Wed 10-2-17	Backfilling and gabion construction by layers 300 days Thu 09-4-23 The 10-2-16 116SS Gamular Filling for the river 180 days Fin 09-8-21 The 10-2-16 117FF Grassed cellular concrete revirus 180 days Fin 09-8-21 The 10-2-16 118FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-5 Temporary flow diversion 10 days Wed 10-2-17 Fin 10-2-26 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 122 Granular filling with geotestile filter 24 days The 10-3-9 Thu 10-4-1 123FF+10 day Concrete for blindling layer 24 days Fin 10-3-19 San 10-4-1 124FF+10 day Base slab construction 60 days Mon 10-3-29 Thu 10-5-27 12SSS+10 day Wall & Top Slab construction 90 days Thu 10-4-7 The 10-7-6 126SS+10 day Footbridge/Vehicular Bridge Construction 270 days Wed 10-2-17 Sat 10-11-13	Backfilling and gabion construction by layers 300 days Thu 09-4-23 Tue 10-2-16 116SS Gamular Filling for the river 180 days Fi 09-8-21 Tue 10-2-16 117FF Grassed cellular concrete priving 180 days Fi 09-8-21 Tue 10-2-16 118FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-5 Temporary flow diversion 24 days Sat 10-2-27 Thu 10-2-26 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 122 Granular filling with geotettile filter 24 days Tue 10-3-9 Thu 10-4-1 123FF-10 day Concrete for bindling layer 24 days Fi 10-3-19 San 10-41 123FF-10 day Base slab construction 60 days Mon 10-3-29 Thu 10-5-27 12SSS-10 day Wall & Top Slab construction 90 days Thu 10-4-8 Tue 10-7-6 126SS-10 day Backfilling 30 days Wed 10-2-17 Thu 10-8-5 127 Footbridge/Vehicular Bridge Construction 270 days Wed 10-2-17 Sat 10-11-13	Backfilling and gabion construction by layers 300 days Thu 09-4-23 The 10-2-16 168S Gambar Filling for the river 180 days Fir 09-8-21 True 10-2-16 118FF Grassed cellular concrete paving 180 days Fir 09-8-21 True 10-2-16 118FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-5 Temporary flow diversion 10 days Wed 10-2-17 Fir 10-2-26 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 122 Granular filling with geotestile filter 24 days Tue 10-3-9 Thu 10-4-1 123FF-10 day Concrete for bindling layer 24 days Mon 10-3-29 Thu 10-5-27 125SS-10 day Base slab construction 60 days Mon 10-3-29 Thu 10-5-27 125SS-10 day Well & Top Slab construction 90 days Thu 10-4-8 Tue 10-7-6 126SS-10 day Backfilling 30 days Well 10-7-7 Thu 10-8-5 127 Footbridge/Vehicular Bridge Construction 270 days Well 10-7-7 Sat 10-11-13	Backfilling and gabion construction by layers 300 days Thu 09-4-23 Tue 10-2-16 1685 Gambar Filling for the river 180 days Fir 09-8-21 Tue 10-2-16 17FF Grassed cellular concrete paving 180 days Fir 09-8-21 Tue 10-2-16 18FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-5 Temporary flow diversion 10 days Wed 10-2-17 Fir 10-2-5 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 122 Granular filling with geotestile filter 24 days Tue 10-3-9 Tau 10-4-1 123FF-10 day Concrete for bindling layer 24 days Mon 10-3-29 Tau 10-5-27 25SS+10 day Base slab construction 60 days Mon 10-3-29 Tau 10-5-27 125SS+10 day Well & Top Slab construction 90 days Thu 10-48 Tue 10-7-6 126SS+10 day Backfilling 30 days Well 10-7-7 Thu 10-8-5 127 Footbridge/Vehicular Bridge Construction 270 days Well 10-2-17 Sat 10-11-13	Backfilling and gabion construction by layers 300 days Thu 09-4-23 Tue 10-2-16 1685 Gamular Filling for the river 180 days Fin 09-8-21 Tue 10-2-16 17FF Grassal cellular concrete puving 180 days Fin 09-8-21 Tue 10-2-16 17FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-5 Temporary flow diversion 10 days Wed 10-2-17 Fin 10-2-26 17 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 12 Granular filling with geotetile filter 24 days Tue 10-3-9 Thu 10-4-1 123FF+10 day Concrete for bindling layer 24 days Mon 10-3-29 Thu 10-5-27 25SS+10 day Base slab construction 60 days Mon 10-3-29 Thu 10-5-27 25SS+10 day Wall & Top Slab construction 90 days Thu 10-48 Tue 10-7-6 126SS+10 day Backfilling 30 days Wed 10-2-17 Thu 10-8-5 127 Footbridge/Vehicular Bridge Construction 270 days Wed 10-2-17 Sat 10-11-3 127 Thu 10-8-5 127 Thu 10-8-5 127 Thu 10-8-7 Thu 10-8-5 127 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Thu 10-8-7 Th	Backfilling and gabion construction by layers 300 days Thu 09-4-23 The 10-2-16 16SS Gamilar Filling for the river 180 days Fri 09-8-21 Tue 10-2-16 11FF Grassac cellular concrete priving 180 days Fri 09-8-21 Tue 10-2-16 11FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-5 Temporary flow diversion 10 days Wed 10-2-17 Fri 10-2-50 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 122 Granular filling with geotestile filter 24 days The 10-3-9 Thu 10-8-5 Thu 10-4-1 12FF-10 day Concrete for bindling layer 24 days Mon 10-3-29 Thu 10-5-27 12FSS-10 day Base slab construction 60 days Mon 10-3-29 Thu 10-5-27 12SSS-10 day Base filling with geotestic filter 30 days Wed 10-2-17 Thu 10-8-5 Th	Backfilling and gabion construction by layers 300 days Thu 09-4-23 Tue 10-2-16 1168S Gamular Filling for the river 180 days Fi 09-8-21 Tue 10-2-16 118FF Grassac cellular concete proving 180 days Fi 09-8-21 Tue 10-2-16 118FF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 S Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Thu 10-8-26 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 125 Granular filling with geotestile filter 24 days Tue 10-3-9 Thu 10-8-27 128SS+10 day Base slab construction 66 days Mon 10-3-29 Thu 10-5-27 128SS+10 day Wall & Top Slab construction 99 days Thu 10-4-8 Tue 10-7-6 126SS+10 day Backfilling and gabion construction 190 days Wed 10-2-17 Thu 10-8-5 127 Backfilling and gabion construction 190 days Wed 10-2-17 Thu 10-8-5 127 Backfilling and gabion construction 270 days Wed 10-2-17 Thu 10-8-5 127 Backfilling and gabion construction 270 days Wed 10-2-17 Sat 10-11-13	Backfilling and gabien construction by layers 300 days Thu 09-4-23 Tue 10-2-16 116SS Gambar Filling for the river 180 days Fri 09-8-21 Tue 10-2-16 118FF Grassac cellular concrete proving 180 days Pri 09-8-21 Tue 10-2-16 118FF River associated Works 270 days Wed 10-2-17 Tue 10-2-16 118FF Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Tue 10-2-16 117 ——————————————————————————————————	Backfilling and gabion construction by layers 300 days Thu 09-4-23 Tue 10-2-16 11/SF Gambar Filling for the river 180 days Fri 09-8-21 Tue 10-2-16 11/SF Grassed cellular concrete paving 180 days Fri 09-8-21 Tue 10-2-16 11/SF River associated Works 270 days Wed 10-2-17 Sat 10-11-13 Box culvert construction at CH C+190 approximate 170 days Wed 10-2-17 Fri 10-8-5 Temporary flow diversion 10 days Wed 10-2-17 Fri 10-3-20 117 Open cut excavation 24 days Sat 10-2-27 Mon 10-3-22 122 Gambar Filling with geotestile filter 24 days Tue 10-3-9 Tue 10-3-9 Tue 10-4-11 12/SF+10 day Sassed beonstruction 66 days Mon 10-3-29 Tue 10-4-11 12/SF+10 day Sassed beonstruction 90 days Tue 10-4-8 Tue 10-7-6 12/SSS+10 day Sassed filling 30 days Wed 10-2-17 Tue 10-8-5 127 Footbridge/Vehicular Bridge Construction 270 days Wed 10-2-17 Sat 10-1-13 Sat 10-1-1-13 Sat 10-1-1-13 Sat 10-1-1-1 Sat 10-1-1-1 Sat 10-1-1-1 Sat 10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Backfilling and gabien construction by layers 300 days Thu 09-4-23 Tue 10-2-16 115F

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd MASTER PROGRAMME 05 (Section 3 of works) CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS At TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG 2009 2010, Half 2 2009, Half 2 2010, Half 2008, Half 2 2009, Half 1 131 FBM05-1at CH C+139 approximate 30 days Fri 10-3-19 Sat 10-4-17 130 Mon 10-5-17 131 132 VBM05-2 at CH C+190 approximate 30 days Sun 10-4-18 133 VBM05-3 at CH C+264 approximate 30 days Tue 10-5-18 Wed 10-6-16 132 Fri 10-7-16 133 134 VBM05-4 at CH C+398 approximate 30 days Thu 10-6-17 135 FBM05-2 at CH C+561 approximate 30 days Sat 10-7-17 Sun 10-8-15 134 FBM05-3 at CH C+661 approximate 30 days Mon 10-8-16 Tue 10-9-14 135 136 137 FBM05-4 at CH C+894 approximate 30 days Wed 10-9-15 Thu 10-10-14 136 138 FBM05-5 at CH C+942 approximate 30 days Fri 10-10-15 Sat 10-11-13 137 139 Ramp construction 245 days Wed 10-2-17 Tue 10-10-19 140 At CH C+398 Approximate Wed 10-2-17 Sun 10-5-2 75 days 141 Granular filling with geotextile filter 20 days Wed 10-2-17 Mon 10-3-8 117 Thu 10-3-18 141FF+10 day 142 20 days Sat 10-2-27 Concrete for the blinding layer 143 Base slab construcion for the ramp 30 days Tue 10-3-9 Wed 10-4-7 142SS+10 da 144 Wall construction for the ramp 45 days Fri 10-3-19 Sun 10-5-2 143SS+10 da 145 At CH C+500 Approximate 75 days Mon 10-5-3 Fri 10-7-16 Mon 10-5-3 Sat 10-5-22 144 146 Granular filling with geotextile filter 20 days 147 Concrete for the blinding layer 20 days Thu 10-5-13 Tue 10-6-1 146FF+10 day Sun 10-5-23 Mon 10-6-21 147SS+10 day 148 30 days Base slab construcion for the ramp 149 45 days Wed 10-6-2 Fri 10-7-16 148SS+10 da 150 Tue 10-3-9 Sat 10-5-22 75 days At CH C + 561 Approximate 151 Granular filling with geotextile filter 20 days Tue 10-3-9 Sun 10-3-28 141 Wed 10-4-7 151FF+10 day 152 Concrete for the blinding laver 20 days Fri 10-3-19 30 days Mon 10-3-29 Tue 10-4-27 152SS+10 day 153 Base slab construcion for the ramp Sat 10-5-22 153SS+10 day 154 45 days Thu 10-4-8 Wall construction for the ramp 155 At CH C + 894 Approximate 75 days Sun 10-5-23 Thu 10-8-5 Fri 10-6-11 154 156 Granular filling with geotextile filter 20 days Sun 10-5-23 157 20 days Wed 10-6-2 Mon 10-6-21 156FF+10 day Concrete for the blinding layer 158 Sat 10-6-12 Sun 10-7-11 157SS+10 day Base slab construcion for the ramp 30 days 159 Wall construction for the ramp 45 days Tue 10-6-22 Thu 10-8-5 158SS+10 day 160 At CH C + 942 Approximate 75 days Fri 10-8-6 Tue 10-10-19 20 days Fri 10-8-6 Wed 10-8-25 159 161 Granular filling with geotextile filter Mon 10-8-16 Sat 10-9-4 161FF+10 da 162 Concrete for the blinding layer 20 days Thu 10-8-26 Fri 10-9-24 162SS+10 day 163 Base slab construcion for the ramp 30 days 164 Wall construction for the ramp 45 days Sun 10-9-5 Tue 10-10-19 163SS+10 day 165 Verge/footpath construction 222 days Wed 10-2-17 Sun 10-9-26 166 Subase construction for the verges 202 days Wed 10-2-17 Mon 10-9-6 117 Thu 10-9-16 166FF+10 day 167 Gassed cellular concrete/concrete paving 202 days Sat 10-2-27 Sun 10-9-26 167FF+10 day 168 Type 2 railing construction 202 days Tue 10-3-9 Wed 10-6-16 117 120 days Wed 10-2-17 169 Retaining wall construction Thu 10-10-14 169 170 U Channel construction 120 days Thu 10-6-17 171 Inlet Pines 120 days Wed 10-2-17 Wed 10-6-16 117 Tue 08-6-17 172 Handover of Portion E 0 days Tue 08-6-17 River MUPOS (Portion E) 803 days Mon 09-2-16 Fri 11-4-29 174 Temporary flow diversion 10 days Mon 09-2-16 Wed 09-2-25 66 days Thu 09-2-26 Sat 09-5-2 174 175 Open cut excavation 176 Retangular Channel 85 days Sun 09-5-3 Sun 09-7-26 177 Rock & ganular filling for the base of gabion 20 days Sun 09-5-3 Fri 09-5-22 175 178 Blinding layer for the gabion construction 20 days Wed 09-5-13 Mon 09-6-1 177FF+10 da 30 days Sat 09-5-23 Sun 09-6-21 178SS+10 day 179 Base slab construction 180 Wall construction 45 days Tue 09-6-2 Thu 09-7-16 179SS+10 day Fri 09-7-17 Sun 09-7-26 180FF+10 day 181 Granular filling inside the channel 10 days 182 170 days Sun 09-5-3 Mon 09-10-19 30 days Sun 09-5-3 Mon 09-6-1 175 183 Rock & ganular filling for the base of gabion 184 Blinding layer for the gabion construction 30 days Wed 09-5-13 Thu 09-6-11 183FF+10 day Sat 09-9-19 184SS+10 day 185 Sat 09-5-23 Backfilling and gabion constrution by layers 120 days 186 Gabion block constuction in the middle of the river 60 days Sat 09-8-1 Tue 09-9-29 185FF+10 day 187 200 Rin Ran filling 20 days Wed 09-9-30 Mon 09-10-19 186 188 Verge/footpath construction 557 days Tue 09-10-20 Fri 11-4-29 45 days Tue 09-10-20 Thu 09-12-3 187 189 Subase construction for the verges 190 45 days Fri 09-10-30 Sun 09-12-13 189FF+10 day Gassed cellular concrete/concrete paving

roject: Master Programme (Rev.05)	Task	Progress			Rolled Up Critical Task			***************************************	Group By Summary	
tate: 01/2009	Critical Task	Milestone	•	Rolled Up Task	Rolled Up Milestone	Split	 Project Summary	A.	Deadline	

Wed 09-12-23 190FF+10 day

Fri 11-4-29 92

Mon 09-11-9

Tue 11-1-25

45 days

95 days

191

192

193

Type 2 railing construction

the Remaining section 5 of works of MUP

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd MASTER PROGRAMME 05 (Section 4 of works) CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG

ID	Task Name	Duration	Start	2008			2009				2010		
				2008, Half I		2008, Half 2	2009, H	alf l	2009,	Half 2	2010, Half 1	2010, Half 2	
				N D J F	M A M	I J A S	O N D J	F M A	M J J	ASON	D J F M A M	J J A S O N	D
1	CONTRACT: DC/2007/08 (The Woks)	1095 days	Fri 07-12-21				13		-				_
2	Handover of Portion A	0 days	Fri 07-12-21	12-21		,	13				i	i	
3	Section 4 & 5 of works - Lin Man Hang (Portion F)	1095 days	Fri 07-12-21	1		1	1.8		1		,	T.	_
4	Commencement Date	0 days	Fri 07-12-21			,	is						
5	Handover of Portion F	0 days	Fri 07-12-21	♦ 12-21		1	1.0		1				
6	Prelim Works	345 days	Wed 08-4-30	1					i.		i	i	
7	Baseline Monitoring	130 days	Wed 08-4-30	1	66666		1.5	L	1		1	1	
8	Mobilisation	10 days	Mon 09-2-9					<u> </u>					
9	Site clearance	14 days	Thu 09-2-19		000000000		7.8			727000000000000	1	k.	
10	Initial site survey	14 days	Thu 09-3-5			1	18	J (1)	ĵ.		1		
11	Tree survey	20 days	Thu 09-2-19	The state of the s			15		1		i	i.	
12	Construct Access Road	20 days	Thu 09-3-5	1			18	111	- 1		1	i.	
13	Remove and Transplant the trees	30 days	Wed 09-3-11									7	
14	Underground Utility Survey	30 days	Thu 09-3-5			1	1.5	ŠEES)	X.		1		
15	River LMH01	625 days	Sat 09-4-4	1		1	18						
16	Temporary flow diversion	26 days	Sat 09-4-4	1			1	(iii)	1		1	Ē.	
17	Open excavation and construction for CH P+0 to CH P+35.	110 days	Thu 09-4-30				18			111-	,		
18	Open excavation and construction for CH 0+0 to CH 0+35.	110 days	Thu 09-4-30	1		1	18	[1	L.	
19	Open excavation and construction for CH R+0 to CH R+35	110 days	Thu 09-4-30	1		1	1.8			33		1	
20	Open excavation and construction for CH T+0 to CH T+35	110 days	Thu 09-4-30	T.		T.	18			110 m	Î		
21	Rock & ganular filling for the base of gabion	110 days	Thu 09-4-30				18			11) -			
22	Blinding layer for the gabion construction	110 days	Thu 09-5-7	1		1	1.8			555EM	1	1	
23	Backfilling and gabion constrution by layers	150 days	Thu 09-5-14				1.8		X		1	1	
24	Ganular Filling for the river	100 days	Sun 09-10-11			1	18			lieuwene.	18181818	1	
25	Rip Rap lining to stabilise the river	80 days	Sun 09-10-11								Talah		
26	Verge/footpath construction	355 days	Wed 09-12-30			1	1.0		¥				-
27	Subase construction for the verges	150 days	Wed 09-12-30			1	1.8					-	
28	Gassed cellular concrete/concrete paving	150 days	Mon 10-1-4			T .	19		1		(#202020202020202020202020	14	
29	Type 2 railing	150 days	Sat 10-1-9										
30	1790 2 1111115	110 days				ř	1.8		i.				
31	Section 5 of works for Lin Ma Hang	195 days	Tue 10-6-8			T T	1.8		i i				111111

CHIU HING CONSTRUCTION & TRANSPORTATION Co., Ltd MASTER PROGRAMME 05 (Section 3 of works) CONTRACT: DC/2007/8. DRAINAGE IMPROVEMENT WORKS at TAI PO TIN, PING CHE, MAN UK PIN AND LIN MA HANG ID Task Name Duration 2008, Half 2008, Half 2 2009, Half 1 Fri 07-12-21 CONTRACT: DC/2007/08 (The Woks) 1226 days Fri 11-4-29 Fri 07-12-21 Fri 07-12-21 Handover of Portion A 0 days 12-21 1095 days Wed 08-4-30 Fri 11-4-29 Section 3 - Man Uk Ping (Portion D & E) Wed 08-4-30 Wed 08-4-30 Commencement Date 0 days Handover of Portion D 0 days Wed 08-4-30 Wed 08-4-30 6 398 days Wed 08-4-30 Mon 09-6-1 Prelim Works 130 days Wed 08-4-30 Sat 08-9-6 5 Baseline Monitoring 10 days Mon 09-2-2 Wed 09-2-11 Mobilisation Site clearance 30 days Thu 09-2-12 Fri 09-3-13 8 10 50 days Mon 08-12-1 Mon 09-1-19 Initial site survey Sun 08-8-17 Sun 08-8-17 Application of XP 1 day 11 Fri 08-5-30 12 Wed 08-6-18 5SS+30 day Tree survey 20 days 13 Construct Access Road 20 days Sat 09-3-14 Thu 09-4-2 9 Mon 09-6-1 13 14 Removal and Transplanting of trees 60 days Fri 09-4-3 15 Underground Utility Survey 30 days Sat 09-3-14 Sun 09-4-12 9 River MUP01 (Portion D) 429 days Mon 09-2-2 Tue 10-4-6 17 Temporary Flow Diversion 20 days Mon 09-2-2 Sat 09-2-21 18 Open cut excavation 95 days Sun 09-2-22 Wed 09-5-27 1 Fri 09-2-27 Sat 09-6-6 18FF+10 days 19 Rock & ganular filling for the base of gabion 100 days Tue 09-6-16 19FF+10 day 20 Blinding layer for the gabion construction 100 days Mon 00-3-0 Backfilling and gabion constrution by layers 180 days Thu 09-3-19 Mon 09-9-14 20SS+10 day 21 22 Verge/footpath construction 204 days Tue 09-9-15 Tue 10-4-6 Tue 09-9-15 Sat 09-11-21 21 23 Subase construction for the verges 68 days Thu 10-1-28 23 24 Gassed cellular concrete/concrete paving 68 days Sun 09-11-22 25 Type 2 railing construction 68 days Fri 10-1-29 Tue 10-4-6 24 26 300UC construction 60 days Tue 09-9-15 Fri 09-11-13 21 River MUP02 (Portion D) 294 days Mon 09-4-13 Sun 10-1-31 27 28 Stabilise existing river bank 225 days Mon 09-4-13 Mon 09-11-23 29 10 days Mon 09-4-13 Wed 09-4-22 15 Temporary flow diversion 30 Sheet pile installation 20 days Thu 09-4-23 Tue 09-5-12 29 30 days Wed 09-5-13 Thu 09-6-11 30 31 Excavate & erect shoring support 32 Rock & ganular filling for the base of gabion 30 days Fri 09-6-12 Sat 09-7-11 31 33 30 days Sun 09-7-12 Mon 09-8-10 32 Blinding layer for the gabion construction 34 Backfilling and gabion constrution by layers 95 days Tue 09-8-11 Fri 09-11-13 33 Sat 09-11-14 Mon 09-11-23 34 35 Removal of the sheet piles 10 days 36 MUP02 Bypass 175 days Mon 09-4-13 Sun 09-10-4 37 10 days Mon 09-4-13 Wed 09-4-22 15 Temporary Flow Diversion 38 Open cut excavation 20 days Thu 09-4-23 Tue 09-5-12 37 Wed 09-5-13 Mon 09-6-1 38 Rock & ganular filling for the base of gabion 20 days 40 Blinding layer for the gabion construction 20 days Tue 09-6-2 Sun 09-6-21 39 Mon 09-6-22 Tue 09-7-21 40 41 30 days Backfilling and gabion constrution by layers 42 Filling of Rip Rap 15 days Wed 09-7-22 Wed 09-8-5 41 43 60 days Sun 09-10-4 Verge/footpath construction Thu 09-8-6 44 Subase construction for the verges 20 days Thu 09-8-6 Tue 09-8-25 42 45 Mon 09-9-14 44 Gassed cellular concrete/concrete paving 20 days Wed 09-8-26 46 Type 2 railing construction 20 days Tue 09-9-15 Sun 09-10-4 45 47 Main River of MUP02 294 days Mon 09-4-13 Sun 10-1-31 48 14 days Mon 09-4-13 Sun 09-4-26 37SS Temporary Flow Diversion Mon 09-4-27 Thu 09-6-25 48 Open cut excavation 60 days 50 Rock & ganular filling for the base of gabion 60 days Thu 09-5-7 Sun 09-7-5 49FF+10 days 51 Blinding layer for the gabion construction 60 days Sun 09-5-17 Wed 09-7-15 S0FF+10 days 52 Wed 09-5-27 Mon 09-8-24 51SS+10 days Backfilling and gabion constrution by layers 90 days Thu 09-9-3 5255+10 day 53 Gabion block constuction in the middle of the river 90 days Sat 00-6-6 54 200 Rip Rap filling 30 days Fri 09-9-4 Sat 09-10-3 53 55 FBM02-1 footbridge at CH 8+455 Approximate 45 days Sun 09-10-4 Tue 09-11-17 54 56 Wed 09-11-18 Fri 10-1-1 55 FBM02-2 footbridge at CH 8+260 Approximate 45 days Sun 10-1-31 56 RW type D at CH8+525 Approximate 30 days Sat 10-1-2 58 Verge/footnath construction 90 days Tuc 09-8-25 Sun 09-11-22 59 Subase construction for the verges 70 days Tue 09-8-25 Mon 09-11-2 52 60 70 days Fri 09-9-4 Thu 09-11-12 59SS+10 days Gassed cellular concrete/concrete paving 61 Type 2 railing construction 70 days Mon 09-9-14 Sun 09-11-22 60SS+10 day 62 300 & 375 UC at CH8+400 Approximate 30 days Mon 09-11-23 Tue 09-12-22 61 63 River MUP03A (Portion D) 502 days Mon 09-3-2 Fri 10-7-16 Wed 10-2-17 Fri 10-5-7 117 64 600UC construction 80 days

DSD Contract DC/2007/08 – Drainage Improvement Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang 12th Monthly EM&A Report for the Designated Works – February 2010



Future Construction Program

Three Month (03,04,05)/2010 Rolling Programme (No.26) Sun 7/3/10 Tue 2/3/10 Tue 2/3/10 rue 17/8/10 Mon 11/1/10 Aon 15/2/10 Fri 20/8/10 Thu 15/4/10 Thu 8/4/10 Thu 8/4/10 Tue 1/12/09 Mon 21/12/09 Thu 17/12/09 'ue 22/12/09 Thu 25/2/10 Sun 20/9/09 Thu 15/4/10 Fri 8/1/10 Thu 28/1/10 Wed 17/2/10 Wed 21/10/09 Mon 30/11/09 Wed 30/12/09 Tue 9/2/10 Thu 26/11/09 Tue 9/2/10 Sun 20/9/09 Ned 7/10/09 Mon 18/1/10 Fri 19/2/10 Sat 19/12/09 Wed 30/12/09 Wed 7/10/09 Sun 22/11/09 Thu 12/11/09 Thu 12/11/09 Thu 3/12/09 Thu 3/12/09 Tue 16/2/10 Sat 9/1/10 Tue 17/11/09 Sat 12/12/09 Tue 8/12/09 Sun 13/12/09 Sat 2/1/10 Pri 18/12/09 Pri 18/12/09 Fri 18/12/09 Mon 28/9/09 Thu 10/12/09 Thu 10/12/09 Fri 29/1/10 lhu 22/10/09 Tue 1/12/09 Fri 21/12/07 Tue 23/6/09 Tue 23/6/09 Tue 23/6/09 Fri 10/7/09 Sun 2/8/09 Thu 3/9/09 rue 17/11/09 Sun 20/12/09 Thu 18/2/10 Mon 21/9/09 Mon 21/9/09 60 days 20 days 20 days 30 days 90 days 15 days 15 days 60 days 90 days 15 days 15 days 30 days 80 days 60 days 10 days 90 days 20 days 50 days 31 days? 243 days 974 days 90 days 90 days 170 days 150 days 120 days 10 days 30 days 107 days 01 days? 40 days? 70 days? 200 days? Duration Contract Name: Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Indentification of conflicted electricity poles liaise with CLP VBT02-1at CH507 & FBT02-1 at CH661 approximate Rock & granular filling for the base of the FB &VB Diversion for CLP Conflicted poles at Channel TKL02 Right Bank of G.W. Foundation CH507 to CH591 Left Bank of G.W. Foundation CH710 to CH787 Left Bank of G.W. Foundation CH669 to CH706 Diversion of cnflicted electricity poles by CLP Ramp Construction at CH638 to 683 APProximate Gabion block constuction in the middle of the river VBT02-1 & FBT02-1 at CH507 approximate Ramp Construction at CH23 to 55 APProximate Formwork & concreting for the FB & VB Chlu Hing Construction & Transportation Co. Ltd. Contract No. DC/2007/08 Waiting for CLP's Diversion Preparation Backfilling and gabion construction by layers Type D L-shaped RW construction Rock & ganular filling for the base of gabion Blinding layer for the gabion constraction Granular filling with geotextile filter Granular filling with geotextile filter Base slab construction for the ramp Base slab construction for the ramp Preforated pipe installation At CH808 to 700 Approximate Blinding layer for the FB & VB Wall Construction for the ramp Concrete for the blinding layer Wall Construction for the ramp Concrete for the blinding layer A: Seection 1-Tai Po Tin (TKL02) Retaining wall construction Open cut excavation Excavation Task Name 13 12 7

May 2010 May 2010 Jun 28 Feb 7 Mar 14 Mar 21 Mar 28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma 0 Ma Deadline April 2010 External Milestone External Tasks Sun 7/3/10 Project Summary Fri 26/2/10 Summary Page 1 10 days Milestone Progress Three Month 03,04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo Tue 2/3/10 Task Split Project: Project Thre Month Rolling no Date: Tue 2/3/10 Backfilling the RW

28 Feb 7 Mar 14 Mar21 Mar28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma 0 Ma Deadline April 2010 Three Month (03,04,05)/2010 Rolling Programme (No.26) External Milestone March 2010 External Tasks Sat 27/3/10 Sun 7/3/10 Wed 17/3/10 Sat 27/3/10 Fri 16/4/10 Sat 27/3/10 Tue 6/4/10 Fri 16/4/10 Tue 17/8/10 Fri 16/4/10 Wed 12/5/10 Wed 12/5/10 Ved 12/5/10 Fri 16/4/10 Wed 12/5/10 Tue 17/8/10 Tue 17/8/10 Mon 5/7/10 Sat 24/7/10 Wed 9/12/09 Tue 29/12/09 Tue 23/2/10 Sun 3/1/10 Pri 8/1/10 Tue 19/1/10 Mon 8/2/10 Tue 23/2/10 Sat 23/1/10 Mon 1/6/09 Wed 26/5/10 Wed 26/5/10 Mon 30/11/09 Sat 23/1/10 Tue 16/2/10 Fue 16/2/10 Mon 8/3/10 Thu 18/3/10 Mon 8/3/10 Mon 8/3/10 Sun 28/3/10 Wed 7/4/10 Mon 8/3/10 Mon 8/3/10 Mon 8/3/10 Wed 24/3/10 Mon 8/3/10 Mon 8/3/10 Wed 24/3/10 Sat 17/4/10 Sat 17/4/10 Fri 21/12/07 Fri 20/11/09 Fri 20/11/09 Thu 10/12/09 Project Summary Wed 25/11/09 Mon 30/11/09 Fri 15/1/10 Sat 5/12/09 Sat 30/1/10 Tue 26/5/09 Tue 2/6/09 Tue 26/5/09 Tue 1/12/09 Pri 20/11/09 Summary Page 2 20 days 10 days 10 days 40 days 20 days 10 days 10 days 163 days 66 days 40 days 50 days 40 days Duration 66 days 50 days 123 days 947 days? 80 days 20 days 20 days 96 days 40 days 40 days 46 days 25 days 25 days 7 days? 243 days? 182 days? 54 days? 188 days 188 days Chlu Hing Construction & Transportation Co. Ltd.
Contract No. DC/2007/08
Contract Name: Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Milestone Progress Identification of Conflicted Electrical poles,liaise with CLP Diversion Diversion for CLP poles at Channel TKL07(around CH220) Main River Construction (CH150 to CH270 approximate) Diversion of Conflicted Electrical Poles by CLP Type D L-shaped RW construction Rock & ganular filling for the base of gabion Type D L-shaped RW construction Backfilling and gabion constrution by layers Blinding layer for the gabion construction Three Month 03,04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo Tue 2/3/10 450 UC at CH501 Approximate 300 UC at CH800 Approximate Concrete for the U channel Waiting for CLP's Diversion Preparation 600 UC at CH0 Approximate Concrete for the U channel Main River Construction (CH0 to CH80) Concrete for the U channel Preforated pipe installation Preforated pipe installation B: Section 2 & 5 - Ping Che (TKL07) Task Split Grassed cellular concrete paving Trench excavation At CH501 Approximate Trench excavation Trench excavation At CH800 Approximate Backfilling the RW Backfilling the RW U Channel construction Temporary Flow Diversion Ganular Filling for the river Temporary flow diversion Project: Project Thre Month Rolling no Date: Tue 2/3/10 Open cut excavation Task Name A 33 39 40 44 46 47 48 49 50 50 51 52 53 55 55 58 59 60 62 63 \$ 65 8 68

28 Feb 7 Mar 14 Mar21 Mar28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma @ Ma 1 | 0 Ma 2 | Deadline April 2010 Three Month (03,04,05)/2010 Rolling Programme (No.26) External Milestone March 2010 External Tasks Wed 13/1/10 Mon 18/1/10 Thu 4/3/10 Sat 23/1/10 Sun 14/3/10 Wed 24/3/10 Pri 8/1/10 Fri 12/6/09 Aon 28/9/09 Mon 28/9/09 Mon 28/9/09 Fri 21/8/09 Mon 31/8/09 Fri 8/1/10 Fri 8/1/10 Sat 24/7/10 Pri 16/10/09 Tue 19/5/09 Thu 18/6/09 Sat 18/7/09 Wed 16/9/09 Sat 18/7/09 Sun 4/4/10 Mon 4/1/10 Sat 26/9/09 Pri 16/10/09 Sun 24/1/10 Sat 13/2/10 Sun 4/4/10 Von 15/6/09 Tue 30/6/09 Sun 13/9/09 Wed 15/7/09 3/9/09 nn 13/9/09 Thu 10/12/09 Thu 10/12/09 Fri 25/12/09 Ved 30/12/09 Tue 23/2/10 Mon 8/2/10 Tue 19/5/09 Pue 19/5/09 Mon 1/6/09 Mon 1/6/09 Mon 1/6/09 Tue 23/6/09 Pri 3/7/09 Mon 13/7/09 Wed 21/10/09 Thu 30/4/09 Thu 30/4/09 Thu 30/4/09 Wed 20/5/09 Fri 19/6/09 Mon 29/6/09 Thu 9/7/09 Project Summary Sun 1977/09 Sun 27/9/09 Wed 16/12/09 Wed 16/12/09 Tue 5/1/10 Mon 25/1/10 Sun 14/2/10 Mon 1/6/09 Sat 15/8/09 Mon 1/6/09 Wed 1/7/09 Fue 16/6/09 Summary Page 3 40 days 35 days 30 days 65 days 35 days 30 days 235 days 25 days 120 days 120 days 120 days 60 days 80 days 60 days 170 days 20 days 180 days 451 days? 30 days 30 days 20 days 70 days Duration 70 days 20 days 20 days 110 days 20 days 20 days 50 days 105 days 15 days 15 days 15 days Chiu Hing Construction & Transportation Co. Ltd.
Contract No. DC/2007/08
Contract Name: Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Milestone Progress Left Bank of G.W. Foundation CHSS2 to CH687 Left Bank of G.W. Foundation CH125 to CH228 Construction of Gabion Transition (CH228, CH250) Gabion block constuction in the middle of the river Box culvert construction at CH230 approximate Rock & granular filling for the base of the FB Rock & gunular filling for the base of gabion Rock & granular filling for the buse of the FB Backfilling and gablon constrution by layers Rock & ganular filling for the buse of gabion Backfilling and gubion constrution by layers Blinding layer for the gabion construction Main River Construction(CH270 to CH670) Blinding layer for the gabion construction Granular filling with geotextile filter Three Month 03,04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo Tue 2/3/10 Grassed cellular concrete paving Wall & Top Slab construction Concrete for blindling layer FBT07-1 at CH 35 approximate FBT07-2 at CH250 approximate Task Ganular Filling for the river Temporary flow diversion lemporary Flow Diversion Blinding layer for the FB Blinding layer for the FB Formwork & concreting Base slab construction Formwork & concreting Open cut excavation Open cut excuvation Open cut excavation Project: Project Thre Month Rolling no Date: Tue 2/3/10. River associated Works Backfilling Excavation Excavation Tusk Name 73 778 778 778 80 80 81 82 83 84 86 87 88 88 89 8 6 8 8 8 101

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28 Feb 7 Mar 14 Mar21 Mar28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma 0 Ma Deadline External Milestone Three Month (03,04,05)/2010 Rolling Programme (No.26) External Tasks Thu 17/9/09 Sat 1/5/10 Thu 4/2/10 Sat 1/5/10 Thu 6/5/10 Fri 21/5/10 Sat 5/6/10 Thu 6/5/10 Tue 18/8/09 Pri 1777/09 Sat 1/8/09 Mon 31/8/09 Mon 21/12/09 Tue 22/9/09 Mon 12/10/09 Sun 1/11/09 Aon 21/12/09 Fri 6/11/09 Sat 8/8/09 Fri 28/8/09 Thu 17/9/09 Fri 6/11/09 Thu 17/6/10 Sat 5/6/10 Ved 26/5/10 Wed 26/5/10 Mon 11/5/09 Fri 15/1/10 Thu 4/2/10 Mon 31/8/09 Thu 2/7/09 Sat 17/10/09 Fri 6/11/09 Tue 5/1/10 Finish Project Summary Sun 9/8/09 Mon 12/4/10 Tue 27/4/10 Mon 12/4/10 Mon 12/4/10 Sat 17/4/10 Thu 22/4/10 Tue 27/4/10 Thu 3/9/09 Wed 23/9/09 Mon 2/11/09 Mon 20/7/09 Fri 18/9/09 Mon 12/4/10 Mon 12/4/10 Sat 17/4/10 Thu 22/4/10 Mon 11/5/09 Thu 30/7/09 Wed 19/8/09 Fri 18/9/09 Sat 7/11/09 Sar 16/1/10 Thu 18/6/09 Thu 18/6/09 Fri 3/7/09 Sat 18/7/09 Sun 2/8/09 Thu 3/9/09 'ue 13/10/09 Mon 20/7/09 Sat 29/8/09 Mon 11/5/09 60/01/81 uns Ved 28/10/09 Summary Page 4 20 days 67 days 20 days 30 days 15 days 15 days 15 days 10 days 20 days 20 days 20 days 50 days 110 days 20 days 20 days 20 days 50 days 55 days 20 days 20 days 30 days 40 days 45 days 30 days 1 day? 20 days 30 days. 20 days 70 days 70 days 20 days 75 days 30 days 30 days 270 days? Chiu Hing Construction & Transportation Co. Ltd.
Contract No. DC/2007/08
Contract No. DC/2007/08
Contract Name : Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Milestone Progress Box culvert & FBT07-6 construction at (CH670 to CH838 approximate) Box culvert (CH688 to CH762) & FBT(77-6 completed & handed over Rock & granular filling for the base of the FB Rock & granular filling for the base of the FB Rock & granular filling for the buse of the FB Granular filling with geotextile filter Granular filling with geotextile filter Three Month 03,04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo. Tue 2/3/10 Open cut excavation (CH762 to CH838) Base slab construction for the ramp Base slab construcion for the rump Concrete for the blinding layer Granular filling with geotextile filter Concrete for the blinding layer Wall construction for the ramp Wall construction for the ramp Task Wall & Top Slab construction FBT07-3 at CH317 approximate FBT07-4 at CH445 approximate FBT07-5 at CH600 approximate Concrete for blindling layer At CH600 Approximate Blinding layer for the FB Blinding layer for the FB At CH517 Approximate Blinding layer for the FB Formwork & concreting Formwork & concreting Formwork & concreting Base slab construction Project: Project Thre Month Rolling no Date: Tue 2/3/10 Ramp construction Excavation Excavation Backfilling Excuvation Task Name 120 121 122 123 124 127 128 128 139 131 134 134 134 134 138 138 115 901 112 114 A

28 Feb 7 Mar 14 Mar 21 Mar 28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma 0 Ma May 2010 Deadline April 2010 Three Month (03,04,05)/2010 Rolling Programme (No.26) External Milestone External Tasks Pri 21/5/10 Mon 31/5/10 Thu 10/6/10 Thu 17/6/10 Fri 21/5/10 Sun 7/3/10 Sun 7/3/10 Mon 15/2/10 Phu 17/6/10 Mon 31/5/10 Thu 17/6/10 Thu 25/2/10 Sun 7/3/10 Thu 10/6/10 Thu 10/6/10 Fri 21/5/10 Thu 10/6/10 Fri 21/5/10 Mon 31/5/10 Mon 31/5/10 Thu 10/6/10 Sat 17/4/10 Fri 21/5/10 Thu 10/6/10 Mon 1/2/10 Fri 26/2/10 Tue 23/3/10 Sat 17/4/10 Mon 1/2/10 Fri 8/1/10 Tue 23/3/10 Sat 24/7/10 Sat 24/7/10 Mon 12/4/10 Mon 12/4/10 Thu 22/4/10 Sun 2/5/10 Sun 2/5/10 Sun 2/5/10 Sun 2/5/10 Sat 22/5/10 Tue 1/6/10 Fri 18/12/09 Pri 18/12/09 Fri 18/12/09 Sun 2/5/10 Project Summary Tue 16/2/10 Fri 26/2/10 Sun 2/5/10 Sun 2/5/10 Wed 12/5/10 Sun 2/5/10 Sun 2/5/10 Wed 12/5/10 Sun 2/5/10 Sun 2/5/10 Wed 12/5/10 Fri 20/11/09 Fri 8/1/10 Tue 2/2/10 Sat 27/2/10 Ved 24/3/10 Fri 8/1/10 Fri 20/11/09 Sat 27/2/10 Wed 24/3/10 Wed 24/3/10 Summary Page 5 40 days 40 days 67 days 47 days 40 days 10 days 47 days 20 days 17 days 80 days 60 days 10 days 40 days 80 days 10 days 40 days 20 days 30 days 30 days 30 days 20 days 20 days 40 days 20 days 149 days 25 days 25 days 25 days 25 days 25 days 123 days 50 days 25 days Duration 123 days Chlu Hing Construction & Transportation Co. Ltd.
Contract No. DC/2007/08
Contract Name: Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Milestone Progress Gassed cellular concrete/concrete paving Completion of Section 5 of works for TKL07 Subase construction for the verges Type D L-shaped RW construction Type D L-shaped RW construction 375&525 UC at CH352 Approximate 525&600 UC at CH690 Approximate Three Month 03,04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo Tue 2/3/10 Retaining wall construction Type 2 railing construction Preforated pipe installation 525UC at CH552 Approximate Inlet pipe at CH408 Approximate Preforated pipe installation Inlet pipe at CH100 Approximate Inlet pipe at CH400 Approximate Inlet pipe at CH450 Approximate Inlet pipe at CH570 Approximate Inlet pipe at CH630 Approximate Inlet pipe at CH750 Approximate At CH35 to 104 Approximate Concrete for the U channel Concrete for the U channel Concrete for the U channel Verge/footpath construction Task Split At CH687 Approximate Backfilling the RW Backfilling the RW Retaining wall construction Section 5 of works for TKL07 Trench excavation Irench excavation Trench excavation U Channel construction Project: Project Thre Month Rolling no Date: Tue 2/3/10 Inlet Pipes Task Name 143 144 145 146 147 147 149 50 151 152 155 157 158 159 160 161 162 163 164 165 167 168 691 171 172 172 173

28 Feb 7 Mar 14 Mar 21 Mar 28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma 0 Ma May 2010 Deadline April 2010 Three Month (03,04,05)/2010 Rolling Programme (No.26) External Milestone External Tasks Wed 19/1/11 Sun 20/12/09 Tue 19/1/10 Wed 21/10/09 Tue 19/1/10 Tue 6/4/10 Sun 24/1/10 fon 26/10/09 Tue 28/7/09 Fri 16/10/09 Sun 31/1/10 ue 13/10/09 Mon 23/11/09 Fri 14/8/09 Sur 13/9/09 Sat 16/1/10 Ved 28/10/09 Sun 9/8/09 Sat 29/8/09 Sun 31/1/10 Fri 18/9/09 Ved 28/10/09 Sun 27/12/09 Wed 6/1/10 ue 26/1/10 Fri 5/2/10 Sat 13/11/10 Wed 31/3/10 Sat 16/1/10 Tue 16/2/10 Pri 21/12/07 Mon 21/9/09 Mon 21/9/09 Phu 22/10/09 Aon 21/12/09 Mon 2/2/09 Mon 29/6/09 Thu 9/7/09 90/1791 nus Wed 29/7/09 Mon 13/4/09 Project Summary Mon 13/4/09 Thu 16/7/09 Sat 15/8/09 Ved 14/10/09 Vion 14/9/09 Mon 13/4/09 Tue 21/7/09 Tue 21/7/09 Mon 10/8/09 Sun 30/8/09 Sat 19/0/09 Thu 29/10/09 Thu 29/10/09 Sat 14/3/09 Sun 8/11/09 Ved 18/11/09 Sun 8/11/09 Sat 14/3/09 Wed 23/9/09 Summary Page 6 121 days? 126 days? 860 days 100 days 30 days 180 days 31 days? 30 days 29 days? 100 days 294 days 225 days 30 days 30 days 30 days 294 days? 60 days 95 days 20 days 40 days 100 days 20 days 20 days 60 days 90 days 60 days 90 days 340 days? 610 days? Duration 190 days Chiu Hing Construction & Transportation Co. Ltd.
Contract No. DC/2007/08
Contract Name: Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Boundry Wall Construction approximate CHB575 to CHC653 & CHC304 to CHC 360 Milestone Progress Open cut excavation of Left Bank of G.W. Foundation CH0 to CH93 Indentification of conflicted electricity poles liaise with CLP Diversion for CLP Conflicted poles at Channel TKL02 Diversion of enflicted electricity poles by CLP Rock & granular filling for the base of the FB Gabion block constuction in the middle of the river Main River Construction (CH C 0+000 to 0+974) C: Section 3 - Man Uk Ping (Portion D & E) Three Month 03.04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo Tue 2/3/10 Waiting for CLP's Diversion Preparation Rock & ganular filling for the base of gabion Rock & ganular filling for the base of gabion Backfilling and gabion constrution by layers Backfilling and gabion constrution by layers Rock & ganular filling for the base of gabion Backfilling and gabion constrution by layers Blinding layer for the gabion construction Blinding layer for the gabion construction Blinding layer for the gabion construction Task Split Excavate & erect shoring support 1. River MUP01 (Portion D) Stabilise existing river bank 2. River MUP02 (Portion D) 4. River MUP05 (Portion D) Blinding layer for the FB Project: Project Thre Month Rolling no Date: Tue 2/3/10 Formwork & concreting 3. Main River of MUP03 Open cut excavation Open cut excavation Excavation Tusk Name A 179 081 181 22 88 86 06 161 192 193 194 203 204 205 206 207 208 209

28 Feb 7 Mar 14 Mar21 Mar28 Mar 4 Apr 11 Apr 18 Apr 25 Apr 2 May 9 May 6 Ma 3 Ma 0 Ma May 2010 Deadline April 2010 40 External Milestone Three Month (03,04,05)/2010 Rolling Programme (No.26) External Tasks Ved 31/3/10 Sat 10/4/10 Mon 25/1/10 Sun 19/12/10 Sun 8/8/10 Sat 6/11/10 Aon 25/1/10 Phu 31/12/09 Mon 25/1/10 Sat 21/11/09 Fri 11/12/09 Thu 31/12/09 Wed 24/3/10 Thu 28/1/10 Sun 14/3/10 Wed 24/3/10 Fri 10/9/10 Fri 23/4/10 Fri 23/4/10 Thu 22/7/10 Thu 22/7/10 Mon 25/5/09 Mon 25/5/09 Mon 25/1/10 Sat 21/11/09 Fri 11/12/09 Mon 25/1/10 Mon 18/1/10 Wed 17/2/10 Fri 10/9/10 Fri 29/4/11 Project Summary Sat 12/12/09 Sat 9/1/10 Mon 15/3/10 Sun 11/4/10 Sun 22/11/09 Sat 12/12/09 Wed 30/12/09 rue 19/1/10 Fri 29/1/10 Thu 25/3/10 Mon 25/5/09 Mon 25/5/09 Wed 23/9/09 Sat 12/12/09 Wed 21/4/10 Mon 2/11/09 Mon 2/11/09 Mon 2/11/09 Wed 2/12/09 Mon 2/11/09 Mon 2/11/09 Sun 22/11/09 Wed 2/12/09 Mon 16/2/09 Wed 30/12/09 Thu 25/3/10 Thu 25/3/10 Thu 25/3/10 Thu 25/3/10 Fri 23/7/10 Fri 21/12/07 Summary Page 7 150 days 150 days 20 days 20 days 20 days 45 days 20 days 20 days 30 days 45 days 85 days 20 days 30 days 10 days 170 days 50 days 1 day? 1 day? 1095 days? 120 days 200 days 85 days 85 days 30 days 85 days 20 days 45 days 30 days 30 days 120 days 120 days 803 days? Duration Contract No. DC/2007/08 Contract Name : Drainage Improvement Works at Tai Po Tin, Pin Che, Man Uk Pin and Lin Ma Hang Milestone Progress Tree Transplanted & Handed Over for One year maintenance Gabion block constuction in the middle of the river Left Bank of G.W. Foundation CH650 to CH760 Left Bank of G.W, Foundation CH960 to CH990 Rock & ganular filling for the base of gabion Rock & ganular filling for the base of gabion Three Month 03,04,05/2010 Rolling Programme (No. 26) Prepared by Y. M. Mo Tue 2/3/10 Backfilling and gabion constrution by layers D. Section 4 & 5 of Works - LMH (Portion F) Blinding layer for the gabion construction Chiu Hing Construction & Transportation Co. Ltd. Blinding layer for the gabion construction At CH + 894 to CH + 942 Approximate Granular filling with geotextile filter Granular filling with geotextile filter Rock & ganular filling for the base of gabion At CH C+398 to CH500 Approximate Base slab construcion for the Wall Base slab construcion for the Wall Backfilling and gabion constrution by layers Blinding layer for the gabion construction Concrete for the blinding layer Concrete for the blinding layer Task Granular filling inside the channel Project: Project Thre Month Rolling no Date: Tue 2/3/10 Retaining Wall construction 5. River MUP05 (Portion E) Base slab construction Wall construction Wall construction 200 Rip Rap filling Wo Keng Shan Garden Wall construction Rectangular Channel Gabion Construction rask Name 240 241 242 243 244 245 246 247

DSD Contract DC/2007/08 – Drainage Improvement Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang 12th Monthly EM&A Report for the Designated Works – February 2010



Environmental Mitigation Implementation Schedule

APPENDIX A IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

Table A1 Implementation Schedule of Air Quality Mitigation Measures

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main	Location / Timing	Implementation	Im	plementa Stages*	tion	Relevant
	- "4		Agent	D	С	0	Legislation & Guidelines		
AIF QI	iality - Col	astruction Phase					-l		<u> </u>
3.6.1	2.9.2	In order to comply with Air Pollution Control Ordinance (APCO), the Contractor should undertake at all times measures to prevent dust nuisance as a results of his activities. The Contractors are required to follow all the requirements for dust control stipulated in the Air Pollution Control (Construction Dust) Regulation. Dust suppression measures should be installed as part of good construction practice, and they should be incorporated in the Contract Specification and implemented to minimize dust nuisance to within acceptable levels arising from the works. The followings are examples of the dust suppression measures. (i) The area in which excavation takes place shall be sprayed with water immediately prior to, during and immediately after the excavation to minimise dust generation.	To prevent dust nuisance on ASRs during construction	All works site / during construction	Construction Contractor		4		Air Pollution Control Ordinand Air Pollution Control (Construction Dust) Regulation
		(ii) The Contractor shall frequently clean and water the site to minimize fugitive dust emissions.							

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EIA	EM&A	1&A	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	olementa Stages*	tion	Relevant
Ref	Ref		Recommended Wittgatton Weasawes	Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
		(iii)	Effective water sprays shall be used during the delivery and handling of aggregate, and other similar materials, when dust is likely to be created and to dampen all stored materials during dry and windy weather.							
		(iv)	Watering of exposed surfaces shall be conducted at least 2 times per day especially during dry and windy weather.							
		(v)	Areas within the site where there is a regular movement of vehicles must be regularly watered as often as necessary for effective suppression of dust or as often as directed by the Engineer.							
		(vi)	Where dusty material are being discharged to vehicle from a conveying system at a fixed transfer point, a three-sided roofed enclosure with a flexible curtain across the entry shall be provided. Exhaust fans shall be provided for this enclosure and vented to a suitable fabric filter system.							·
		(vii)	The Contractor shall restrict all motorised vehicles within the site, excluding those on public roads, to a maximum speed of 15 km per hour and confine haulage and delivery vehicles to designated roadways inside the site.		·					
s		(viii) Wheel washing facilities shall be installed and used by all vehicles leaving the site. No earth, mud, debris, dust and the like shall be deposited on public roads. Water in the wheel cleaning							

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	In	plementa Stages*		Relevant
			Measures and Main Concerns to addressed	Timing	Agent	D	.C	0	Legislation & Guidelines
		facility shall be changed at frequent intervals and sediments shall be removed regularly. The Contractor shall submit details of proposals for the wheel cleaning facility. Such wheel washing facilities shall be usable prior to any earthworks excavating activity on the site. The Contractor shall also provide a hard-surfaced road between any washing facility and the public road.	·						Galaviiii
		(ix) All vehicle exhausts should be directly vertically upwards or directed away from the ground.						,	
		(x) Any materials dropped on paved roads will need to be cleaned up immediately to prevent dust nuisance.							
		Odour -							
.6.2	2.9.3	In the event that excavated materials are found to be odourous, the following measures should be implemented by the Contractor.	To prevent odour nuisance on ASRs during construction	All works site / during construction	Construction Contractor		√		Air Pollution Control Ordinand Environmental
ĺ		(i) Place odorous excavated material as far away (say, at least 20m) from air sensitive receivers as possible.							Impact Assessme Ordinance
		(ii) Temporary stockpiles of odorous excavated material should be properly covered with tarpaulin and should be removed off-site as soon as practically possible within 24 hours to							

DSD Contract DC/2007/08 – Drainage Improvement Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang The Designated Works under the Project

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EIA	EM&A	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Imp	plementa Stages*		Relevant Legislation &
Ref	Ref	Accommodical Caracteristics	Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Guidelines
		avoid any odour nuisance arising.							
Air Qı	uality - Op	erational Phase				···	Т	I .	T
		N/A							

Table A2 Implementation Schedule of Noise Mitigation Measures

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location / Implementation Implementation Stages*			Relevant		
	Construction	The state of the s	Measures and Main Concerns to addressed	Timing	Agent	D	С	0	Legislation & Guidelines
110136 **	Constructio						•		
4.6.2 – 4.6.5	Table 3.4	effective ways of alleviating construction noise impact. The Contractor should use quiet plant with sound power level lower than that stipulated in the TM-GW as the Level 1 mitigation for construction noise. The quiet plant used in the construction noise calculation is shown in Appendix B. The Contractor can propose other suitable alternative equipment with similar or lower sound power level.	noise during construction	All works site / during construction	Construction Contractor		.1	:	Environmental Impact Assessmen Ordinance ETWB TCW No. 19/2005
		The use of mini or lower power rating equipment (e.g. mini excavator) should also be considered where practical. This technique would be feasible and practical at some locations given the limited space available for using large size construction equipment and the small scale works involved (e.g. localised bank improvement at LMH01, U-channel and drainage pipes at MUP03 & 04B). The contractor should take note of ETWB TCW No. 19/2005 on the use of QPME.							

EIA	EM&A	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*	tion	Relevant
Ref	Ref		Measures and Main Concerns to addressed	Timing	Agent	D	C	О	Legislation & Guidelines Environmental
		Level 2 Mitigation - Use of Temporary Noise Barriers							1
4.6.7 — 4.6.8	Table 3.4	Since most of the NSRs within the Project area are typically low-rise village houses of not more than 3 storeys tall, it would be effective to have noise screening structures or temporary noise barriers purposely-built along the site boundary to provide additional protection to NSRs close to the construction site boundary. This could be in the form of purposely-built site hoarding constructed from appropriate materials with a minimum superficial density of 7 kg/m². Noise barrier should be provided for noisy construction activities that would be undertaken close (about 25m or less) to NSRs. With the exception of NSRs MUP04A-2 and MUP05-6, the noise barrier should have a vertical height of at least 2.5 m or (depending on the height of the NSRs to be protected) a height ensuring that the operating equipment can be shielded from the view of the NSRs. For NSR MUP04A-2, the temporary noise barrier should have a minimum height of 3.5m with a small cantilevered upper portion. For MUP05-6, the temporary noise barrier should have a minimum height of 3m with a small cantilevered upper portion. The temporary noise barrier should have no gaps or opening at joints. The Contractor should regularly inspect and maintain the noise		All works site located at 25m or less from NSRs as shown in Figures 4.4 – 4.6 / during construction	Construction Contractor				Impact Assessment

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main	Location /	Implementation	Im	plement: Stages*		Relevant
			Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
		barrier to ensure its effectiveness.							
		For the construction works which have the potential to exceed the noise standards on nearby NSR and whose line of sight cannot be effectively blocked by the temporary noise barrier, movable (mobile) barriers should be provided. Movable barriers of at least 2.5 m height with a small cantilevered upper portion and skid footing can be located within a few meters of stationary plant (e.g. generator, compressor) and within about 5 m or more of a mobile equipment (e.g. excavator, mobile crane), such that the line of sight to the NSR is blocked by the barriers.							
		Good Site Practices						. .	
4.6.11	Table 3.4	In general, potential construction noise impact can be minimised or avoided by imposing a combination of the following good site practices as mitigation measures:	To protect NSRs from noise during construction	All works site / during construction	Construction Contractor	. ;	4		Environmental Impact Assessment Ordinance
		(a) Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction period.	•	·			٠	:	
		(b) Construction plant should be sited away from NSRs.							

EIA	EM&A		Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	olementa Stages*		Relevant
Ref	Ref		Recommended Friegation Freasures	Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
1		(c)	Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.		·					
		(d)	Equipment known to emit sound strongly in one direction should be orientated such that the noise is directed away from nearby NSRs.							
		(e)	Material stockpiles and other structures (such as site offices) should be effectively utilised to shield on-site construction activities.							
		(f)	Stationary equipment should be located within the channel when weather conditions permit (e.g. dry season).							
		(g)	The Contractor shall devise, arrange methods of working and carrying out the works in such manner as to minimise noise impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these measures are implemented properly.							
		(h)	In the event that new schools are built near the works area, the Contractor should minimize construction noise exposure to the schools (especially during examination periods). The Contractor should liaise with the school and the Examination Authority to							

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*		Relevant
	100		Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
		ascertain the exact dates and times of all examination periods during the course of the contract and to avoid noisy activities during these periods.	One of the gardy cystu						
4.6.13 - 4.6.14	Table 3.4	To adopt good public relation with the local communities and maintain effective communication channel with the public such as setting up a 24-hour hotline system for enquiry and complaint.	To promote good public relation and maintain effective communication during construction	All works site / during construction	Project Office (Engineer) & Construction Contractor		1		Environmental Impact Assessment Ordinance
4.6.17 & 4.6.18	Table 3.4	Further mitigation by restricting concurrent usage of several equipment at the same time.	To further mitigate construction noise at NSRs MUP04A-2 & MUP04B-2	For works within 20m of NSRs MUP04A-2 & MUP04B-2 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance
4.6.19	Table 3.4	The use of purpose built temporary noise barriers would not be practicable for works at LMH01 as the works are small scale, short duration and within village environs with very limited working space. It may also hamper access causing inconvenience to the villagers. The process of installing and dismantling the noise barriers itself would create additional noise nuisance. The use of light-weight mobile barrier is considered more preferable.	To protect NSRs at LMH01 from noise during construction	All works site located at 25m or less from NSRs as shown in Figure 4.6 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance

EIA	EM&A	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	olementa Stages*	tion	Relevant Legislation &
Ref	Ref	Accommended Parigation Paragress	Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Guidelines
4.6.20 - 4.6.21	Table 3.4	Employ quiet working method (e.g. mini-concrete crusher, saw & lift) during demolition works of crossings, restrict concurrent usage of several equipment at the same time such as parking dump truck, concrete lorry mixer outside main village area. The use of dump truck or concrete lorry mixer will be limited to only about 1 trip every few days.	To further mitigate construction noise at NSRs for LMH01	Construction works at LMH01 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance
4.8.4	Table 3.4	It is recommended that works programme should be scheduled such that only one crossing is constructed at any one time. Bank improvement work can be conducted concurrently.	To mitigate cumulative noise impact at LMH01	Crossing construction at LMH01 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance
4.9.1	3.8.1	The Contractor should design, construct, operate and maintain the mitigation measures throughout the construction stage and as required by the Engineer. Before commencement of the works, the Contractor should submit to the Engineer for approval (as part of their method statement) details of the mitigation measures to be employed under the works. The Contractor's proposed mitigation measures should also be certified by the ET Leader and verified by the IEC to ensure the intended noise reduction effectiveness can be achieved.		All works site / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation		plementa Stages*		Relevant
			Measures and Main Concerns to addressed	Timing	Agent	D	C	О	Legislation & Guidelines
loise - O	perational	Phase							
		N/A							

* D=Design, C=Construction, O=Operation
N/A Not applicable

D = Design, C = Construction, O = Operation

Table A3 Implementation Schedule of Water Quality Mitigation Measures

EIA	EM&A		Objectives of the Recommended	Location /	Implementation	Imp	lementa Stages*	tion	Relevant
Ref	Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	Č	0	Legislation & Guidelines
Water (Quality - (Construction Phase							
17.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		General		415 las aire 1	Construction		٦ ا		Water Pollution
5.6.2	4.9.2	The contractor shall observe and comply with the Water Pollution Control Ordinance (WPCO) and its subsidiary regulations. The contractor shall carry out the works in such a manner as to minimise adverse impacts on the water quality during execution of the works. In particular the contractor shall arrange his method of working to minimise the effects on the water quality within and outside the site and on the transport routes.	To minimize adverse water quality impact during construction	All works site / during construction	Contractor				Control Ordinance
5.6.3	4.9.3	The contractor shall follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures below and as specified in ProPECC PN 1/94 - Construction Site Drainage. In particular, the contractor shall submit and implement an Erosion Control Plan (as part of the Environmental Management Plan) which shall incorporate details of the mitigation measures recommended below to reduce water quality impacts arising from construction works. The design of the mitigation measures and the Plan shall be submitted by the contractor to the Engineer for approval.	during construction	All works site / during construction	Construction Contractor		1		ProPECC PN 1/94 ETWB TCW No. 19/2005

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*		Relevant
			Measures and Main Concerns to addressed	Timing	Agent	D	С	0	Legislation & Guidelines
		Site Surface Runoff					 		
5.6.4	4.9.4	Proper construction site drainage management measures shall be implemented to control site runoff and drainage, and thereby prevent high sediment loadings from reaching downstream sections of the river and adjacent agricultural land.	To minimize adverse water quality impact during construction	All works site / during construction	Construction Contractor		√		ProPECC PN 1/94
5.6.5	4.9.5	Turbid water from construction sites must be treated to minimise the solids content before being discharged. Advice on the handling and disposal of site discharge is given in the ProPECC Note PN 1/94 - Construction Site Drainage.	To minimize adverse water quality impact during construction	All works site / during construction	Construction Contractor		1		ProPECC PN 1/94
5.6.6	4.9.6	In general, surface run-off from construction sites should be discharged into waterbodies via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided to intercept storm run-off from outside the site so that it will not wash across the site (or into the proposed channel works area). Catchpits and perimeter channels should be constructed in advance of earthworks.	To minimize adverse water quality impact during construction	All works site / during construction	Construction Contractor	,	1		ProPECC PN 1/94

EIA	EM&A		Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*	tion	Relevant
Ref	Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	Č	0	Legislation & Guidelines
5.6.7	4.9.7	Silt removal facilities, channels should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure proper functioning of these facilities at all times.	To minimize adverse water quality impact during construction	All works site / during construction	Construction Contractor				ProPECC PN 1/94
5.6.8	4.9.8	Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into the nearby waterbodies. Open stockpiles susceptible to erosion should be covered with tarpaulin or similar fabric and provided with containment such as bunds, sand bag barriers or equivalent measures, especially during the wet season (April — September) or when heavy rainstorm is predicted. Runoff to watercourses should be reduced by minimising flat exposed areas of permeable soil, and by forming pits or diversion channels into which runoff can flow to suitable treatment facilities before discharge.	water quality impact	All works site / during construction	Construction Contractor		1		ProPECC PN 1/94
ì		De-watering / Excavation of Streams and Removal of Sediment							
5.6.9	4.9.9	The use of containment structures such as earth bund or sand bag barriers wrapped with geotextile fabric or similar material or diversion channels is recommended to facilitate a dry or at least confined excavation within watercourses.		All works site / during construction	Construction Contractor		1		Water Pollution Control Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plement: Stages*		Relevant
			Measures and Main Concerns to addressed	Timing	Agent	D	С	О	Legislation & Guidelines
5.6.10	4.9.10	Excavation works at the existing stream section of MUP05 should be programmed to be carried out during periods of low flow (dry season from 1st October to 31st March) to minimise impacts on downstream water quality and sensitive receivers. For the ecologically sensitive stream of LMH01, the restriction period should be further extended for an additional month (i.e. excavation works allowed from 1st November to 31st March) to protect the aquatic fauna from silty runoff due to possible heavy rain during the transitional period of the wet / dry seasons.	To minimize adverse water quality impact from excavation works during wet season	MUP05 & LMH01 / during construction	Construction Contractor		1		Water Pollution Control Ordinance
5.6.11	4.9.11	In addition, the excavation works should be carried out in sections to reduce the area of exposed surfaces as described below. For MUP05, the first 300m upstream section will have no restriction. For the remaining sections of MUP05 (within existing stream course), the length would be restricted to 300m at any one time. For MUP04A, a 100m restriction should be imposed for the entire stream works area to cater for potential cumulative impact on MUP05.	Restrict length of excavation work to minimise impacts on downstream water quality and sensitive receivers	MUP05 & MUP04A / during construction	Construction Contractor		. 1		Water Pollution Control Ordinance
5.6.12	4.9.12	As for LMH01, given its relatively small scale works but sensitive nature of the stream, it is recommended that only either one portion of bank	To minimize adverse water quality impact on LMH01 during	LMH01 / during construction	Construction Contractor		√		Water Pollution Control Ordinance

EIA	EM&A		Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*		Relevant
Ref	Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
		improvement works or one vehicular crossing reconstruction should be carried out at any one time.	construction						
5.6.14	4.9.14	After dewatering of the streams, the sediments should be allowed to dry before excavation (yet still maintain a moist state to avoid dust nuisance). This will facilitate excavation of the sediments and also minimise the risk of drained water flowing back into watercourses as the sediment is handled. Where time or weather constraints require handling of wet sediment, care should be taken in the removal of sediment and the storage area should be bunded to prevent silty runoff entering watercourses. Given its small quantity, all excavated sediment should be reused on-site as backfilling material.	To minimize adverse water quality impact during construction (in particular when excavating and handling sediments)	All works site where sediment removal is required / during construction	Construction Contractor		1		Water Pollution Control Ordinance
5.6.15	4.9.15	Excavated sediment will likely be temporarily stored on-site for reuse as backfilling material. This should be stored in a bunded area and covered during wet season or when rainstorm is forecasted to avoid inadvertent release of silts and suspended solids to nearby water bodies.	water quality impact during construction (in particular when	All works site where sediment removal is required / during construction	Construction Contractor		1		Water Pollution Control Ordinance
5.6.16	4.9.16	Regular monitoring of suspended solids and turbidity should be conducted during excavation works. Any exceedance of water quality in the	water quality impact	All works site / during construction	Construction Contractor		√		Water Pollution Control Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plements Stages*		Relevant
	Kei	<i>w</i>	Measures and Main Concerns to addressed	Timing	Agent	D	Č	0	Legislation & Guidelines
	-	nearby water bodies caused by inadvertent release of site runoff should be rectified in accordance with EM&A programme for this Project.							
		Concreting Work				_ ·			
5.6.17	4.9.17	Runoff should be carefully channelled to prevent concrete-contaminated water from entering watercourses. Adjustment of pH can be achieved by adding a suitable neutralising reagent to wastewater prior to discharge. Re-use of the supernatant from the sediment pits for washing out of concrete lorries should be practised.	To minimize adverse water quality impact during construction (in particular concreting works)	All works site / during construction	Construction Contractor		1		Water Pollution Control Ordinance
5.6.18	4.9.18	Any exceedance of acceptable range of pH levels in the nearby water bodies caused by inadvertent release of site runoff containing concrete should be monitored and rectified under the EM&A programme for this Project.	To minimize adverse water quality impact during construction (in particular concreting works)	All works site / during construction	Construction Contractor		. 1		Water Pollution Control Ordinance
5.6.19	4.9.19	To protect the sensitive stream of Lin Ma Hang, no concrete should be used during bank improvement works at LMH01.	To minimize adverse water quality impact on LMH01 during construction	LMH01 bank improvement works / during construction	Construction Contractor		. √		Environmental Impact Assessment Ordinance
		Site Workshop or Depot					-		•
5.6.20	4.9.20	Any contractor generating waste oil or other	To minimize adverse	All works site /	Construction		1		Water Pollution

EIA	EM&A		Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*		Relevant
Ref	Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	Ĉ	0	Legislation & Guidelines
, i		chemicals as a result of his activities should register as a chemical waste producer and provide a safe storage area for chemicals on site. The storage site should be located away from existing water courses.	water quality impact during construction	during construction	Contractor				Control Ordinance
5.6.21	4.9.21	All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds where necessary to allow interception and controlled release of settled/treated water; and provision of bunding for all potentially hazardous materials on site including fuels. Hard standing compounds should drain via an oil interceptor. To prevent spillage of fuels or other chemicals to water courses, all fuel tanks and storage areas should be sited on sealed areas, within a bund of a capacity equal to 110% of the storage capacity of the largest tank. Disposal of the waste oil should be done by a licensed collector. Oil interceptors should be regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A bypass should be provided to avoid overload of the interceptor's capacity. Good housekeeping practices should be implemented to minimise careless spillage and to keep the storage and the work space in a tidy and clean condition. Appropriate training including safety codes and relevant manuals should be given to the personnel who regularly handle the chemicals on site.	To minimize adverse water quality impact during construction	All works site / during construction	Construction Contractor		1		Water Pollution Control Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*		Relevant
Rei	Kei		Measures and Main Concerns to addressed	Timing	Agent	D	С	0	Legislation & Guidelines
				•					-
5.6.22	4.9.22	The contractor should prepare an emergency contingency plan (spill action plan) for the Project to contain and remove all accidental spillage of chemicals and hazardous materials on-site including fuels at short notice and to prevent or minimize the quantities of contaminants entering the stream water and affecting the habitats. The contractor should submit the emergency contingency plan to the ET for review & comment and the engineer for approval.	To prevent or minimize the quantities of contaminants entering the stream water and affecting the habitats in case of accidental spillage of chemicals and hazardous materials	All works site / during construction	Construction Contractor		√		Water Pollution Control Ordinance
5.6.24	4.9.24	Presence of Additional Population (Workers) Sewage arising from the additional population of workers on site should be collected in a suitable storage facility, such as portable chemical toilets. An adequate number of portable toilets should be provided for the construction workforce. The portable toilets should be maintained in a state that will not deter the workers from using them. The collected wastewater from sewage facilities and also from eating areas or washing facilities must be disposed of properly, in accordance with the WPCO requirements. Wastewater collected should be discharged into foul sewers and collected by licensed collectors.	To minimize adverse water quality impact during construction	All works site / during construction	Construction Contractor		1		ProPECC PN 1/94 Water Pollution Control Ordinance

Table A4 Implementation Schedule of Waste Management Measures

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plement: Stages*		Relevant
			Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
Waste	- Construc	tion Phase					J	·	
		General					<u> </u>	1	
6.5.2 - 6.5.3	5.1.2 – 5.1.3	Upon appointment, the main contractor of each construction contract should prepare and implement an Environmental Management Plan (EMP) in accordance with ETWB TCW No. 19/2005 — Environmental Management on Construction Sites which should describe the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The contractor shall implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated (preferably monthly) by the contractor. The EMP should take into account the recommended mitigation measures in the EIA Report. The contractor also should refer to the Construction and Demolition Material Management Plan (C&DMMP) in Appendix D1 (of the EIA) to facilitate him in the preparation of the EMP of the Contract.	Waste reduction, reuse, recycling and proper disposal of waste	All works site / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005

EIA	EM&A	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*	tion	Relevant
Ref	Ref	Recommended Maganon Measures	Measures and Main Concerns to addressed	Timing	Agent	D	Č	0	Legislation & Guidelines
6.5.4	5.1.4	Training of construction staff should be undertaken by the contractor about the concept of site cleanliness and appropriate waste management procedures. The contractor should develop and provide toolbox talk for on-site sorting of C&D materials to enhance worker's awareness in handling, sorting, reuse and recycling of C&D materials. Requirements for staff training should be included in the EMP.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005
6.5.5	5.1.5	Good planning and site management practice should be employed to eliminate over ordering or mixing of construction materials to reduce wastage. Proper storage and site practices will minimise the damage or contamination of construction materials.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		√		Waste Disposal Ordinance ETWB TCW No. 19/2005
6.5.6	5.1.6	Where waste generation is unavoidable, the potential for recycling or reuse should be rigorously explored. If wastes cannot be recycled, disposal routes described in the EMP should be followed. A recoding system for the amount of waste generated, recycled and disposed (including the disposal sites) should be implemented. In order to monitor the disposal of C&D material and solid wastes at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be included.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005 31/2004
6.5.7	5.1.7	Regular cleaning and maintenance of the waste storage area should be provided.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Im	plementa Stages*		Relevant
	1		Measures and Main Concerns to addressed	Timing	Agent	D	C	О	Legislation & Guidelines
			,						ETWB TCW No. 19/2005
		On-site Sorting, Reuse and Recycling							
6.5.8	5.1.8	All waste materials should be segregated into categories covering:	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance
		excavated materials suitable for reuse on-site;							ETWB TCW No.
		excavated materials suitable for public filling facilities;							19/2005
		remaining C&D waste for landfill;							
		chemical waste; and							
		general refuse for landfill.							
6.5.9	5.1.9	Proper segregation and disposal of construction waste should be implemented. Separate containers	Waste reduction, reuse, recycling and proper	All work sites / during	Construction Contractor		1		Waste Disposal Ordinance
		should be provided for inert and non-inert wastes.	disposal of waste	construction		j			ETWB TCW No. 19/2005
· · · · · · · · · · · · · · · · · · ·				1			<u>-</u> _		
6.5.10	5.1.10	Sorting is important to recover materials for reuse and recycling. Specific area should be allocated for on-site sorting of C&D materials and to provide a	Waste reduction, reuse, recycling and proper	All work sites / during construction	Construction Contractor		. 1		Waste Disposal Ordinance
		temporary storage area for those sorted materials	disposal of waste	construction				ĺ	ETWB TCW No. 19/2005, 31/2004

EIA	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main Concerns to addressed	Location / Timing	Implementation Agent	Implementation Stages*			Relevant
Ref						D	C	О	Legislation & Guidelines
İ		such as metals, concrete, timber, plastics, glass, excavated spoils, bricks / tiles and waste papers. If area is limited, all C&D materials should at least be sorted on-site into inert and non-inert component. Non-inert materials (C&D waste) such as bamboo, timber, vegetation, packaging waste and other organic materials should be reused and recycled wherever possible and disposed of to designated landfill only as a last resort. Inert materials (public fill) such as concrete, stone, clay, brick, soil, asphalt and the like should be separated and reuse in this or other projects (subject to approval by the relevant parties in accordance with the ETWB TCW No. 31/2004) before disposed of at a public filling facility operated by Civil Engineering and Development Department (CEDD). Steel and other metals should be recovered from demolition waste stream and recycled.							
6.5.11	5.1.11	The reuse of inert materials such as soil, rock and broken concrete should be maximised. Waste should be separated into fine, soft and hard materials. With the use of a crusher coarse material can be crushed to make it suitable for use as fill material where fill is required in the works. This minimises the use of imported material and maximises use of the C&D material produced.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005
6.5.12	5.1.12	Prior to export of material from the site, the	Waste reduction, reuse,	All work sites /	Construction		1		Waste Disposal

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main Concerns to addressed	Location / Timing	Implementation Agent	Implementation Stages*			Relevant
Rei						D	С	0	Legislation & Guidelines
		potential for it to be reused should be assessed. With the exception of excavated clay most C&D material can easily be reused. Waste separation methods should be followed to ensure that C&D waste is separated at source. Suitable soft materials should be used for landscaping and grading of embankments. Fine material should be separated out and used as topsoil.	recycling and proper disposal of waste	during construction	Contractor				Ordinance ETWB TCW No. 19/2005
6.5.13	5.1.13	The feasibility of using recycled aggregates in lieu of virgin materials should be rigorously considered during the detailed design and construction stages as stipulated in WBTC No. 12/2002 and ETWB TCW No. 24/2004. In general, recycled aggregates are suitable for use as fill materials in earthworks, road sub-base formation, and drainage works. Recycled aggregates can also be used in concrete (up to Grade 35) for mass concrete walls and other minor structures such as planter boxes, toe wall planters and pavement, etc.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005, 24/2004 WBTC No. 12/2002
6.5.14	5.1.14	Recycled inert C&D material should be used in the works as sub-bases for access roads and footpaths of the proposed channels. Recycled aggregates should be considered for use in concrete as outlined in the above mentioned technical circulars. Some recycled rock material can be reused in the gabions, as rock fill or as stream bed material. This is dependent on size of rock fragments but can be	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor	-	1		Waste Disposal Ordinance ETWB TCW No. 19/2005

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main Concerns to addressed	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation &
						D	С	0	Guidelines 1
		achieved by appropriate use of a crusher.							
		Site Clearance / Demolition Materials				* ******			,
		Excavated Materials							
6.5.15	5.1.15	All C&D materials should be sorted on-site into	· ·	All work sites / during	Construction Contractor	İ	√		Waste Disposal Ordinance
		inert and non-inert components by the contractor. Non inert materials (C&D waste) such as wood, glass and plastic should be reuse and recycle before disposal to a designated landfill as a last resort (currently assume to be the nearby NENT Landfill). Inert materials (public fill) such as soil, rubble, sand, rock, brick and concrete should be separated and where appropriate broken down to size suitable for subsequent filling. Suitable C&D material should be use as pipe bedding or for backfilling of retaining walls, box culvert and formation of channel embankments. Excavated rocks from existing streams should be reuse for rip-rap lining and gabion lining. Inert materials should be reused	recycling and proper disposal of waste	construction	Contractor				ETWB TCW No. 19/2005, 31/2004
		on-site or in other projects approved by relevant parties in accordance with the ETWB TCW No. 31/2004 before disposed of at public filling facilities. Steel and other metals should be recovered from C&D materials and recycled.							
6.5.16	5.1.16	Excavated sediment from existing stream should be reuse on-site as backfilling material.	Reuse of excavated sediment to minimize offsite disposal	1	Construction Contractor		1		Waste Disposal Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main Concerns to addressed	Location / Timing	Implementation Agent	Implementation Stages*			Relevant
						D	С	0	Legislation & Guidelines
·									
6.5.17	5.1.17	Good quality reusable topsoil should be stockpiled for later landscaping works. Stockpiles should be less than 2 m in height, formed to a safe angle of repose and hydroseeded or covered with tarpaulin to prevent erosion during the rainy season and to minimise dust generation.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor	,	1		Waste Disposal Ordinance ETWB TCW No: 19/2005
6.5.18	5.1.18	Control measures for temporary stockpiles on-site should be taken in order to minimize the noise, generation of dust, pollution of water and visual impact. These measures include:	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005
		 surface of stockpiled soil should be regularly wetted with water especially during dry season; 					-		137,2003
		 disturbance of stockpiled soil should be minimized; 		·					
		 stockpiled soil should be properly covered with tarpaulin especially when heavy rain storms are predicted; 							
		 stockpiling areas should be enclosed where space is available; 		· · · · · · · · · · · · · · · · · · ·				`	
		 stockpiling location should be away from the water bodies; and 							
		an independent surface water drainage system				į			

EIA	EM&A	Recommended Mitigation Measures	Objectives of the Recommended	Location /	Implementation	Imp	lementa Stages*	tion	Relevant Legislation &
Ref	Ref	Necommence Mingarion Measures	Measures and Main Concerns to addressed	Timing	Agent	D	Ċ	0	Guidelines
i		equipped with silt traps should be installed at the stockpiling area.							
6.5.19	5.1.19	The identification of final disposal sites for C&D materials generated by the construction works will be considered during the detailed design stage of the Project when the volume and types of C&D materials can be more accurately estimated. The Public Fill Committee of CEDD should be consulted on designated outlets (e.g. public filling area) for public fill, whilst EPD should be consulted on landfills for C&D waste. Disposal of C&D waste to landfill must not have more than 50% (by weight) inert material. The C&D waste delivered for landfill disposal should contain no free water and the liquid content should not exceed 70% by weight.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005
6.5.20	5.1.20	In order to avoid dust or odour impacts, any vehicle leaving a works area carrying C&D waste or public fill should have their load covered before leaving the construction site.	recycling and proper	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005 WBTC No. 19/2001
6.5.21	.5.1.21	C&D materials should be disposed of at designated public filling facilities or landfills. Disposal of	Waste reduction, reuse, recycling and proper	4	Construction Contractor		1		Waste Disposal Ordinance

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main	Location /	Implementation	Im	plement Stages	ation *	Relevant
		these materials for use at other construction	Concerns to addressed		Agent	D	C	0	Legislation & Guidelines
		projects is subject to the approval of the EPD, Engineer and/or relevant authorities, such as LandsD, PlanD, etc. Furthermore, unauthorized disposal of C&D materials in particular on private agricultural land is prohibited and may be subject to relevant enforcement and regulating actions. The contractor shall refer and strictly follow the tripticket system for the disposal of C&D material as stipulated in the ETWB TCW No. 31/2004.		construction					ETWB TCW No. 19/2005, 31/2004
		Chemical Waste		<u> </u>					
6.5.22	5.1.22	chemical waste producer. Wastes classified as chemical wastes are listed in the Waste Disposal (Chemical Waste) (General) Regulation. These wastes are subject to stringent disposal routes. EPD	Waste reduction, reuse, recycling and proper disposal of chemical waste	All work sites / during construction	Construction Contractor		4		Waste Disposal (Chemical Waste) (General) Regulation, Code of Practice on the Packaging
		requires information on the particulars of the waste generation processes including the types of waste produced, their location, quantities and generation rates. A nominated contact person must be registered with EPD. An updated list of licensed							Labelling and Storage of Chemical Waste
		chemical waste collector can be obtained from EPD.				,	-		
5.23	5.1.23	Storage, handling, transport and disposal of chemical waste should be arranged in accordance with the re		All work sites /	Construction Contractor		1		Waste Disposal (Chemical Waste)

			Objectives of the Recommended	Location /	Implementation	Imp	plementa Stages*	tion	Relevant Legislation &
EIA Ref	EM&A Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	C	0	Guidelines
		Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published by EPD, and should be collected by a licensed chemical waste collector.	disposal of chemical waste	construction					Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical Waste
6.5.24	5.1.24	Suitable containers should be used for specific types of chemical wastes, containers should be properly labelled (English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations), resistance to corrosion, stored safely and closely secure. Stored volume should not be kept more than 450 liters unless the specification has been approved by the EPD. Storage area should be enclosed by three sides by a wall, partition of fence that is at least 2 m height or height of tallest container with adequate ventilation and space.	Waste reduction, reuse, recycling and proper disposal of chemical waste	All work sites / during construction	Construction Contractor		7		Waste Disposal (Chemical Waste) (General) Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical Waste
6.5.25	5.1.25	Hard standing, impermeable surfaces draining via oil interceptors should be provided in works area compounds. Interceptors should be regularly emptied to prevent release of oils and grease into the surface water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain. Oil and fuel bunkers should be bunded and/or enclosed on three sides to prevent discharge due to accidental spillages or breaches of tanks. Bunding	recycling and proper disposal of chemical waste		Construction Contractor		1		Waste Disposal (Chemical Waste) (General) Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical Waste

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main	Location /	Implementation	Im	plement Stages'	ation	Relevant
		should be of sufficient capacity to accommodate	Concerns to addressed	Timing	Agent	D	C	0	Legislation & Guidelines
(506		of the total volume of the largest container or 20% of the total volume of waste, whichever is largest. Waste collected from any grease traps should be collected and disposed of by a licensed contractor.							
6.5.26	5.1.26	Lubricants, waste oils and other chemical wastes are likely to be generated during the maintenance of vehicles and mechanical equipment. Used lubricants should be collected and stored in individual containers which are fully labelled in English and Chinese and stored in a designated secure place. If possible, such waste should be sent to oil recycling companies, and the empty oil drums collected by appropriate companies for reuse or refill.	1, 10,000,	All work sites / during construction	Construction Contractor		1		Waste Disposal (Chemical Waste) (General) Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical Waste
5.5.27		be collected by licensed collectors. The licensed collector should regularly take the	Waste reduction, reuse, recycling and proper disposal of chemical waste	All work sites / during construction	Construction Contractor		√		Waste Disposal (Chemical Waste) (General) Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical Waste
5.28	5.1.28	No lubricants, oils, solvents or paint products V thould be allowed to discharge into water courses,		All work sites /	Construction		1		Waste Disposal

		A Jastin time Manager	Objectives of the Recommended	Location /	Implementation	Imp	olementa Stages*	tion	Relevant Legislation &
EIA Ref	EM&A Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	С	0	Guidelines
Ť		either by direct discharge, or as contaminants carried in surface water runoff from the construction site.	disposal of chemical waste	construction					(General) Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical Waste
6.5.29	5.1.29	Concrete Waste Dry concrete waste (considered as public fill) should be sorted out from the other wastes and recycled for reuse or sorted out for disposal at designated public filling facilities.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005, 33/2002
6.5.30	5.1.30	Wooden Materials All wooden materials used on-site should be kept separate from other wastes to avoid damage and to facilitate reuse. Timber which cannot be reused should be sorted out from other waste and stored separately from all inert waste before being disposed of to landfill.	recycling and proper disposal of waste	1	Construction Contractor				Waste Disposal Ordinance ETWB TCW No. 19/2005, 33/2002
6.5.31	5.1:31	Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimise wastage of wood. Attention should be paid to WBTC No. 19/2001 - Metallic Site Hoardings and Signboards to reduce the amount of	recycling and proper disposal of waste	1	Construction Contractor		1		Waste Disposal Ordinance ETWB TCW No. 19/2005, 33/2002

EIA Ref	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main	Location / Timing	Implementation	Im	plementa Stages*	ition	Relevant
		timber used on construction sites. Metallic alternatives to timber are readily available and	Concerns to addressed	l Anning	Agent	D	C	0	Legislation & Guidelines
		should be used rather than new timber. Recast concrete units should be adopted wherever feasible to minimize the use of timber formwork.							
6.5.32	5.1.32	Only waste material need be taken to a landfill. It should be separated from recyclable wood and steel materials. As for all waste types these materials should be reused on-site or other approved sites before disposal is considered as an option.	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance
		Disposal to landfill should only be considered as a final option. Contractors are responsible for storage of re-useable materials on-site.							ETWB TCW No. 19/2005, 33/2002
i.5.33		from other construction and chemical wastes and disposed of at designated landfill. A temporary	Waste reduction, reuse, recycling and proper disposal of waste	All work sites / during construction	Construction Contractor		1		Waste Disposal Ordinance
		refuse collection point should be set up by the contractor to facilitate the collection of refuse by licensed contractors. The removal of waste from the site should be arranged on a daily or at least on every second day by the contractor to minimise any potential odour impacts, minimise the presence of cests, vermin and other scavengers and prevent unsightly accumulation of waste.		***					ETWB TCW No. 19/2005

Table A5 Implementation Schedule of Ecological Impact Measures

			Objectives of the	Location /	Implementation	Imp	plementa Stages*	tion	Relevant Legislation &
EĮA Ref	EM&A Ref	Recommended Mitigation Measures	Recommended Measures and Main Concerns to addressed	Timing	Agent	D	Ĉ	O	Guidelines
Ecology	- Construct	ion Phase					1	Γ	
7.9.3	6.5.2	Civen the ecological importance of Lin Ma Hang stream, it is proposed that construction works at LMH01 should be restricted to the dry season period from 1 st November – 31 st March. The small scale of works should allow all construction to be completed within dry season to ensure that the risk of erosion and sedimentation due to heavy rain on the works areas, as well as disturbance impacts to surrounding areas, will be minimised.	impacts during construction at LMH01	All works sites at LMH01 / during construction	Construction Contractor		4		Environmental Impact Assessment Ordinance
7.9.4	6.5.3	In addition, the breaking of existing shotcrete banks at LMH01 should be restricted to hand-held equipment. Concrete should not be used for construction of the gabion banks.	impacts during	All works sites at LMH01 / during construction	Construction Contractor		7		Environmental Impact Assessment Ordinance
7.9.5	6.5.4	Potential disturbance impacts to surrounding habitats and pollution risks (water quality impacts) to the stream should be minimised by adoption of appropriate site managemen procedures, as detailed in ETWB TCW No 5/2005; including among others the location of access to the site and storage of materials, and treatment of construction site waste to prevent	impacts during construction at LMH01 t f f	All works sites at LMH01 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance

EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main	Location /	Implementation	Im	plementa Stages*	ition	Relevant
	pollution of the stream. These site management		1 ming	Agent	D	C	0	Legislation & Guidelines
	measures are listed in the subsequent section.							
	MUP05 (natural stream section) Streamhed							
	One of the main benefits of the proposed stream widening measures is that the existing natural stream bed is left undisturbed. Accordingly, works should be carried out in such a way that as much as possible of the natural stream bed should be left undisturbed and that where disturbance is essential this should be minimised in terms of area, magnitude and duration to minimise potential impacts to stream fauna and to ensure refuges for these species during the period of the works. Avoidance of the stream bed can be achieved by conducting the earthworks to widen the stream from the landward side, by not lowering the widened channel to the same level as, or below, the existing channel, and by leaving the existing stream untouched except during the final stage, when the newly formed widened	impacts during construction at	All works sites at MUP05 / during construction	Construction Contractor		✓		Environmental Impact Assessment Ordinance
6.5.9]	In addition, the widened stream bottom should be floored with natural materials (natural rock and increased for the rocky components of a natural stream bossible to the rocky components of a natural stream bossible to the rocky components of a natural stream bossible to the rocky components of a natural stream between the rocky c	impacts during construction at	MUP05 / during	Construction Contractor		٧ .	[]	Environmental Impact Assessment Ordinance
	6.5.9	pollution of the stream. These site management measures are listed in the subsequent section. MUPOS (natural stream section) Streambed 6.5.8 One of the main benefits of the proposed stream widening measures is that the existing natural stream bed is left undisturbed. Accordingly, works should be carried out in such a way that as much as possible of the natural stream bed should be left undisturbed and that where disturbance is essential this should be minimised in terms of area, magnitude and duration to minimise potential impacts to stream fauna and to ensure refuges for these species during the period of the works. Avoidance of the stream bed can be achieved by conducting the earthworks to widen the stream from the landward side, by not lowering the widened channel to the same level as, or below, the existing channel, and by leaving the existing stream untouched except during the final stage, when the newly formed widened stream bed is joined to the existing stream. 6.5.9 In addition, the widened stream bottom should be floored with natural materials (natural rock and fines of varying sizes) to approximate as closely as	pollution of the stream. These site management measures are listed in the subsequent section. MUP05 (natural stream section) Streambed 6.5.8 One of the main benefits of the proposed stream widening measures is that the existing natural stream bed is left undisturbed. Accordingly, works should be carried out in such a way that as much as possible of the natural stream bed should be left undisturbed and that where disturbance is essential this should be minimised in terms of area, magnitude and duration to minimise potential impacts to stream fauna and to ensure refuges for these species during the period of the works. Avoidance of the stream bed can be achieved by conducting the earthworks to widen the stream from the landward side, by not lowering the widened channel to the same level as, or below, the existing channel, and by leaving the existing stream untouched except during the final stage, when the newly formed widened stream bed is joined to the existing stream. 6.5.9 In addition, the widened stream bottom should be floored with natural materials (natural rock and fines of varying sizes) to approximate as closely as possible to the rocky components of a natural MUP05	Ref Recommended Measures and Main Concerns to addressed Timing	Ref pollution of the stream. These site management measures are listed in the subsequent section. MUPOS (natural stream section)	Ref pollution of the stream. These site management measures are listed in the subsequent section. MUP05 (natural stream section)	Ref pollution of the stream. These site management measures are listed in the subsequent section. MUP05 (natural stream section)	Ref

			Objectives of the Recommended	Location /	Implementation	Imp	lementa Stages*	tion	Relevant Legislation &
EIA Ref	EM&A Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	С	0	Guidelines
		deposited naturally.							
7.9.11	6.5.10	In order to minimise potential impacts to stream fauna during excavation of the widened "two-stage" channel, this work should be limited to the dry season as far as possible, between 1st October and 31st March. As rainfall is low at this time, erosion is less likely and deposition of sediment downstream of the works should be minimised. This also avoids the time when stream fauna are at the most vulnerable stage in their life cycle (eggs and young larvae). Any essential works outside the dry season should be temporarily isolated from the stream to prevent the risk of pollution or sedimentation affecting the ecological integrity of the stream.		All works sites at MUP05 / during construction	Construction Contractor		7		Environmental Impact Assessment Ordinance
7.9.12	6.5.11	As required to minmize potential water quality impacts (Section 5.6), excavation works at the stream section of MUP05 should be restricted to 300m length at any one time. No restriction is considered necessary for the first 300m upstream concrete drains section. Excavation works a MUP04A should be restricted to 100m to cater fo potential cumulative impact on MUP05.	construction at MUP05	All works sites at MUP05 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance
7.9.13	6.5.12	Appropriate site management procedures during the construction phase should be adopted, a	Minimize ecological impacts during	All works sites at MUP05 / during	Construction Contractor		1		Environmental Impact Assessment

,	recommended in ETWB TCW No. 5/2005, to	Measures and Main				_Stages*		Relevant
	To the state of th	Concerns to addressed construction at		Agent	D	C	0	Legislation & Guidelines
	pollution risks (water quality impacts) to the stream. This should include the location of access to the site and storage of materials, and treatment of construction site waste to prevent pollution of the stream. These site management pressures are	MUP05	construction					Ordinance
19 &	The loss of bankside trees and		·					!
i	transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and	bankside trees and associated riparian	MUP05 / during construction	Construction Contractor				Environmental Impact Assessmen Ordinance
-	Celtis tetranda (sinensis)							
•	Ficus hispida							
	4							
					:	.		•
-								
-	·			j				
	19 & e 6.6	the stream. These site management measures are listed in the subsequent section. The loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. Celtis tetranda (sinensis) Ficus microcarpa Litsea glutinosa Sapium discolor Schleffera arboricolar (octophylla)	of Construction site waste to prevent pollution of the stream. These site management measures are listed in the subsequent section. The loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. Celtis tetranda (sinensis) Ficus microcarpa Litsea glutinosa Sapium discolor Schleffera arboricolar (octophylla)	The loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. - Celtis tetranda (sinensis) - Ficus microcarpa - Litsea glutinosa - Sapium discolor - Schleffera arboricolar (octophylla)	19 & the loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. **Celtis tetranda (sinensis)** **Ficus microcarpa** **Litsea glutinosa** **Sapium discolor** **Schleffera arboricolar (octophylla)**	the stream. These site management measures are listed in the subsequent section. Mitigate the loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. Celtis tetranda (sinensis) Ficus microcarpa Litsea glutinosa Sapium discolor Schleffera arboricolar (octophylla)	the stream. These site management measures are listed in the subsequent section. Mitigate the loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. ■ Celtis tetranda (sinensis) ■ Ficus microcarpa ■ Litsea glutinosa ■ Sapium discolor ■ Schleffera arboricolar (octophylla)	19 & The loss of bankside trees, and associated riparian habitats, should be mitigated through transplanting existing trees to suitable locations wherever possible, and through supplemental planting of native trees and bamboos in locations where the project area includes sufficient space adjacent to the stream but outside the channel itself (in addition to retaining in-situ as much trees as possible). The appropriate species of trees and bamboos include. ■ Celtis tetranda (sinensis) ■ Ficus microcarpa ■ Litsea glutinosa ■ Sapium discolor ■ Schleffera arboricolar (octophylla)

			Objectives of the Recommended	Location /	Implementation	Imp	lementa Stages*	tion	Relevant Legislation &
EIA Ref	EM&A Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent	D	С	0	Guidelines
		Bambusa eutuldoides							
7.9.21	6.5.20	The proposed landscape compensatory planting of about 740 trees (approximately 1,100 m²) along the MUP channels will serve dual purpose of landscape impact mitigation as well as mitigating the loss of riparian trees.	Dual purpose of landscape impact mitigation and mitigate the loss of riparian trees at the MUP channels	MUP channels / during construction	Construction Contractor		√		Environmental Impact Assessment Ordinance
				All works site /	DSD (or its	1	1	 	Environmental
7.9.22	6.5.21	The Landscape Plan to be submitted prior to commencement of planting or landscaping works	To ensure the recommended plant	during detailed	appointed				Impact Assessment Ordinance
Table 7.29	Table 6.6	should take into account the recommended plant	species are taken into account in the	design and construction	Detailed Design Engineer)				
(8.11.27	(7.5.11)	species.	Landscape Plan						
)					Construction Contractor to				
1					implement the				
					approved planting plan				
7.9.23	6.5.22	The recommended site management measures are generally good site practices and proper wate quality control / waste management measures to be implemented by the contractor for all work near stream courses. These measures include:	to minimize ecological	All works sites at LMH01 and MUP05 / during construction	Construction Contractor		7		Environmental Impact Assessmen Ordinance
		 Construction activities should be restricted t works area that should be clearly demarcated 	0						

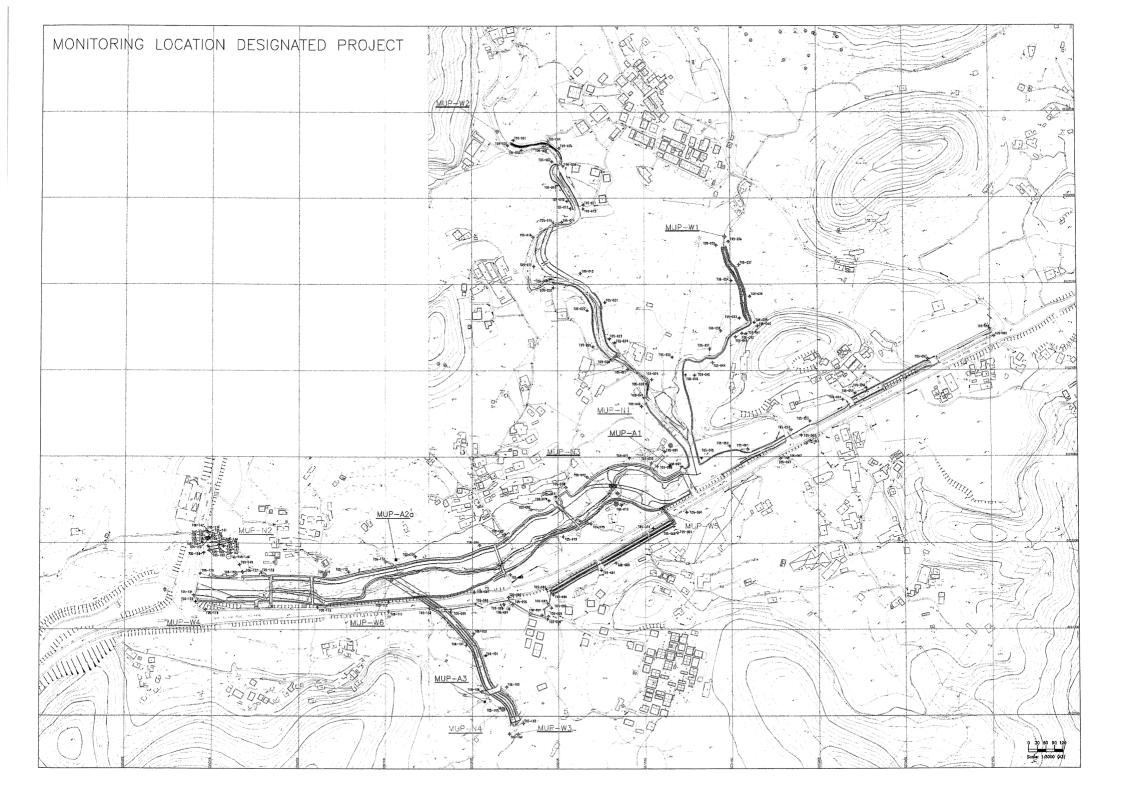
EIA Ref ·	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures and Main Concerns to addressed	Location / Timing	Implementation Agent	Im	plementa Stages*		Relevant Legislation &
		Excavation works should be carried out during the dry season where stream flow is low. Where adequate space is available, works should be carefully phased such that only one side of the channel is constructed. Temporary diversion should be provided to ensure continuous water flow to the downstream section.						0	Guidelines
		The proposed works site inside or in the proximity of natural streams should be temporarily isolated, such as using bunds or sandbag barriers (wrapped with geotextile fabric) or other similar techniques, to prevent adverse impacts on the stream water quality.							
	e,	For the stream section where the existing natural stream bed and bank will be left untouched, no disturbance to the stream bed and bank should be allowed from construction works, equipment or workers. If temporary access track on streambed is unavoidable, this should be kept to the minimum width and length. Temporary stream crossings should be supported on stilts above the stream bed.							
		Adequate temporary drainage measures including sediment and oil/grease traps should be provided to prevent contaminated site run-off entering the water bodies.							
	-	Stockpiling of construction materials, spoils and waste should be properly covered and located away from water bodies to prevent silty runoff and other pollutants from entering							

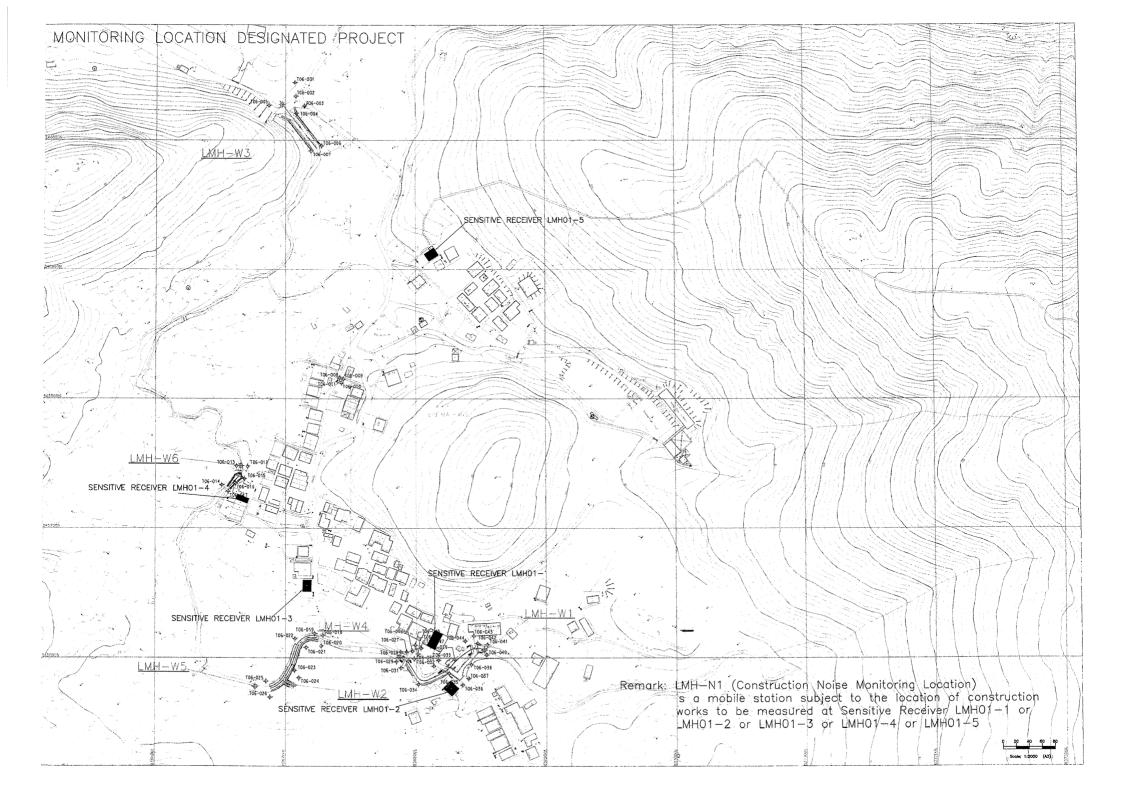
		No.	Objectives of the Recommended Location /	Implementation	Implementation Stages*		іоп	Relevant Legislation &		
EIA Ref	EM&A Ref	Recommended Mitigation Measures	Measures and Main Concerns to addressed	Timing	Agent		C	О	Guidelines	
		the water bodies during rain storms.								
		 Construction effluent, site run-off and sewage should be properly collected, treated and disposed. 			:				·	
		Supervisory staff of the contractor should be assigned to station on site to closely supervise and monitor the construction works. All workers should be regularly briefed to avoid disturbing the flora and fauna near the works area.							1	
7.9.24	6.5.23	The contractor should provide details of the mitigation measures to be implemented during construction stage as part of their working method statement to the Engineer for approval. This should be reviewed by the Environmental Team Leader.	construction at LMH01 and MUP05	All works sites at LMH01 and MUP05 / during construction	Construction Contractor		1		Environmental Impact Assessment Ordinance	
Ecology	- Operatio	n Phase				1	<u>'.</u>	1		
7.9.6	6.5.5	LMH01 Very little or no management / maintenance of the completed sections of LMH01 are expected Removal of obstruction should be undertaken only when flooding or safety issues have been identified.	operation of LMH01	LMH01 / during operation stage	DSD (or DSD's maintenance contractor)	-		1	Environmental Impact Assessment Ordinance	
		HUDDIA A								



Appendix D

Environmental Monitoring Locations







Appendix E

Certificates of Calibration



Equipment Calibration List

Items	Aspect	Description of Equipment	Date of Calibration	Date of Next Calibration
1		TSP Sampler Calibration Spreadsheet for MUP-A1	10 Dec 09	10 Mar 10
2		TSP Sampler Calibration Spreadsheet for MUP-A2	10 Dec 09	10 Mar 10
3	Air	TSP Sampler Calibration Spreadsheet for MUP-A3	10 Dec 09	10 Mar 10
4		TSI DustTrak Model 8520 (Serial No. 21060)	18 Jun 09	18 Jun 10
5		TSI DustTrak Model 8520 (Serial No. 23080)	18 Jun 09	18 Jun 10
6		TSI DustTrak Model 8520 (Serial No. 23079)		18 Jun 10
7		Bruel & Kjaer Integrating Sound Level Meter (Serial No. 2285762)	30 Apr 09	30 Apr 10
8	Noise	Bruel & Kjaer Integrating Sound Level Meter (Serial No. 2285690)	30 Apr 09	30 Apr 10
9		Bruel & Kjaer Acoustical Calibrator (Serial No. 2292168)	28 Apr 09	28 Apr 10
10		Bruel & Kjaer Acoustical Calibrator (Serial No. 2326408)	28 Apr 09	28 Apr 10
11*	YSI DO Meter 55 (Serial No. 97F0837AM)		27 Jan 09	27 Apr 10
12	Water	Extect EC500	20 Jan 10	20 Apr 10
13*		Turbidimeter HACH 2100p (Serial No. 950900008735)	27 Jan 10	27 Apr 10

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

CERTIFICATE OF ANALYSIS



Batch:

HK1001507

Date of Issue: 03/02/2010

ACTION UNITED ENVIRO SERVICES

Client Reference:

Calibration

Item:

YSI DO Meter 55

ALS Lab ID: HK1001507 -001 Model No.: YSI 52/12FT

Date of Calibration:

27/01/2010

Equipment No.: N/A

Serial No.: 97F0837AM

Testing Results:

Dissolved
Oxygen

Expected Reading	Recording Reading
4.74 mg/L	4.84 mg/L
6.71 mg/L	6.83 mg/L
8.58 mg/L	8.72 mg/L
Allowing Deviation	±0.2 mg/L

Testing Method:

APHA (20th edition), 4500-O C & G

Temperature

Reference Temperature (°C)	Recorded Temperature (°C)
20.5 °C 45.0 °C	20.6 °C 44.8 °C
Allowing Deviation	±2.0 ⁰ C

Testing Method:

In House

ALS Technichem (HK) Pty Ltd

ALS Environmental

Mr Chan Kwok Fai, Godfrey Laboratory Manager - Hong Kong

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CERTIFICATE OF ANALYSIS



Batch:

HK1001911

Date of Issue: 01/02/2010

ACTION UNITED ENVIRO SERVICES

Client Reference:

Calibration

Item:

HACH Turbidimeter

ALS Lab ID: HK1001911

-001

27/01/2010

Model No.: HACH 2100P

Equipment No.: EQ091

Serial No.: 950900008735

Testing Results:

Date of Calibration:

Turbidity

Expected Reading	Recording Reading
0.0 NTU	0.2 NTU
4.0 NTU	3.9 NTU
16.0 NTU	15.7 NTU
40.0 NTU	36.9 NTU
80.0 NTU	76.5 NTU
160 NTU	144 NTU
Allowing Deviation	±10%

Testing Method:

APHA (20th edition), 2130B

Mr Chan Kwok Fai, Godfrey Laboratory Manager Hong Kong

ALS Technichem (HK) Pty Ltd

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Appendix F

Details of the Event Action Plan

Event/Action Plan for Air Quality

EVENT	ACTION						
EVEINI	ET Leader	IEC	ER	Contractor			
ACTION LEVEL Exceedance for one sample Exceedance for two or more consecutive samples	Identify source Inform IEC, ER and Contractor Repeat measurement to confirm findings Increase monitoring frequency to daily Identify source Inform IEC, ER and Contractor Repeat measurement to confirm findings Increase monitoring frequency to daily Discuss with IEC, Contractor and ER on remedial actions required If exceedance continue, arrange meeting with IEC, ER and Contractor If exceedance stops, cease additional monitoring	Check monitoring data submitted by ET Leader Check Contractor's working method Check monitoring data submitted by ET Leader Check Contractor's working method Discuss with ET Leader and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Supervise implementation of remedial measures	Notify Contractor Confirm receipt of notification of failure in writing Notify Contractor Ensure remedial measure properly implemented	Rectify any unacceptable practice Amend working methods if appropriate Submit proposals for remedial actions to IEC and ER within 3 working days notification Implement the agreed proposals Amend proposal if apprpriate			
LIMIT LEVEL Exceedance for one sample	Identify source Inform IEC, ER, EPD and Contractor Repeat measurement to confirm findings Increase monitoring frequency to daily Access effectiveness of Contractor's remedial actions and kept IEC, EPD and ER informed of results	Check monitoring data submitted by ET Leader Check Contractor's working method Discuss with ET Leader and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Audit implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor Ensure remedial measures properly implemented	Take immediate action to avoid for the exceedance Submit proposals for remedial actions to IEC and ER within 3 working days of notification Implement the agreed proposals Amend proposal if appropriate			
Exceedance for two or more consecutive samples	 Notify IEC, ER, Contractor and EPD Identify source Repeat measurement to confirm findings Increase monitoring frequency to daily Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken Access effectiveness of Contractor's remedial actions and kept IEC, EPD and ER informed of results If exceedance stops, cease additional monitoring 	Discuss amongst ER, ET Leader and Contractor on the potential remedial actions Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly Audit the implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor In consultation with IEC, agree with the Contractor on the remedial measures to be implemented Ensure remedial measures properly implemented If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	Take immediate action to avoid for the exceedance Submit proposals for remedial actions to IEC and ER within 3 working days of notification Implement the agreed proposals Resubmit proposals if problem still not under control Stop the relevant portion of works as determined by the ER unit the exceedance is abate			

Event/Action Plan for Water Quality

EVENT	ET Leader	IEC	ER	Contractor
Action Level being exceeded by one sampling day	 Repeat in-situ measurement to confirm findings Identify source(s) of impact Inform IEC and Contractor Check monitoring data, all plant, equipment and Contractor's working methods Discuss mitigation measures with IEC and Contractor Repeat measurement on next day of exceedance 	Discuss with ET and Contractor on the mitigation measures Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly Assess the effectiveness of the implemented mitigation measures	Discuss with IEC on the proposed mitigation measures Make agreement on the mitigation measures to be implemented Assess effectiveness of the implemented mitigation measures	Inform the ER and confirm notification of the non-compliance in writing Rectify unacceptable practice Check all plant and equipment Consider changes of working methods Discuss with ET and IEC and propose mitigation measures to IEC and ER Implement the agreed mitigation measures
Action Level being exceeded by more than one consecutive sampling day	 Repeat in-situ measurement to confirm findings Identify source(s) of impact Inform IEC and Contractor Check monitoring data, all plant, equipment and Contractor's working methods Discuss mitigation measures with IEC and Contractor Ensure mitigation measures are implemented Prepare to increase the monitoring frequency to daily Repeat measurement on next day of exceedance 	 Discuss with ET and Contractor on the mitigation measures Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly Assess the effectiveness of the implemented mitigation measures 	Discuss with IEC on the proposed mitigation measures Make agreement on the mitigation measures to be implemented Assess effectiveness of the implemented mitigation measures	Inform the ER and confirm notification of the non-compliance in writing Rectify unacceptable practice Check all plant and equipment Consider changes of working methods Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days Implement the agreed mitigation measures
Limit Level being exceeded by one sampling day	 Repeat in-situ measurement to confirm findings Identify source(s) of impact Inform IEC, Contractor and EPD Check monitoring data, all plant, equipment and Contractor's working methods Discuss mitigation measures with IEC, ER and Contractor Ensure mitigation measures are implemented Increase the monitoring frequency to daily until no exceedance of Limit Level 	 Discuss with ET and Contractor on the mitigation measures Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly Assess the effectiveness of the implemented mitigation measures 	Discuss with IEC on the proposed mitigation measures Request Contractor to critically review the working methods Make agreement on the mitigation measures to be implemented Assess effectiveness of the implemented mitigation measures	 Inform the ER and confirm notification of the non-compliance in writing Rectify unacceptable practice Check all plant and equipment Consider changes of working methods Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days Implement the agreed mitigation measures
Limit Level being exceeded by more than one consecutive sampling day	 Repeat in-situ measurement to confirm findings Identify source(s) of impact Inform IEC, Contractor and EPD Check monitoring data, all plant, equipment and Contractor's working methods Discuss mitigation measures with IEC, ER and Contractor Ensure mitigation measures are implemented Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days 	 Discuss with ET and Contractor on the mitigation measures Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly Assess the effectiveness of the implemented mitigation measures 	Discuss with IEC on the proposed mitigation measures Request Contractor to critically review the working methods Make agreement on the mitigation measures to be implemented Assess effectiveness of the implemented mitigation measures Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the work until no exceedance of Limit Level	 Inform the ER and confirm notification of the non-compliance in writing Rectify unacceptable practice Check all plant and equipment Consider changes of working methods Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days Implement the agreed mitigation measures As directed by the ER, to slow down or to stop all or part of the work or construction activities

Event/Action Plan for Ecology

EVENT		ACTION		
EVEIVI	ET Leader	IEC	ER	Contractor
Non-conformity on one occasion	 Identify source Inform the IEC and ER Discuss remedial actions with IEC, the ER and the Contractor Monitor remedial actions until rectification has been completed 	Check monitoring results Check the Contractor's working method Discuss with the ET and Contractor on possible remedial measures Advise the ER on effectiveness of proposed remedial measures Check the implementation of remedial measures	Notify Contractor Ensure remedial measures are properly implemented Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works in the case of serous non-conformity until situation is rectified	 Take immediate action to avoid further problem Amend working methods if needed Submit proposals for remedial actions to ET, ER and IEC Rectify damage and implement the agreed remedial actions
Repeated Non-confirmity	 Identify source Inform the IEC, ER, EPD and AFCD Increase monitoring frequency Discuss remedial actions with IEC, the ER and the Contractor Monitor remedial actions until rectification has been completed If exceedance stops, cease additional monitoring 	Check monitoring results Check the Contractor's working method Discuss with the ET and Contractor on possible remedial measures Supervise the implementation of remedial measures Advise the ER on effectiveness of proposed remedial measures and keep EPD and AFCD informed	Notify Contractor Ensure remedial measures are properly implemented Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works in the case of serous non-conformity until situation is rectified	 Take immediate action to avoid further problem Amend working methods if needed Submit proposals for remedial actions to ET, ER and IEC Rectify damage and implement the agreed remedial actions

Event/Action Plan for Landscape and Visual Impact

EVENT	ACTION						
EVEIVI	ET Leader	IEC	ER	Contractor			
Non-conformity on one occasion	 Identify source Inform the IEC and the ER Discuss remedial actions with IEC, the ER and the Contractor Monitor remedial actions until rectification has been completed 	Check report Check the Contractor's working method Discuss with the ET and Contractor on possible remedial measures Advise the ER on effectiveness of proposed remedial measures	Notify the Contractor Ensure remedial measures are properly implemented.	Amend working methods if needed Rectify damage and undertake remedial measures or any necessary replacement			
Repeated Non-conformity	Identify source Inform the IEC, ER, EPD and AFCD Increase monitoring (site audit) frequency Discuss remedial actions with IEC, the ER and the Contractor Monitor remedial actions until rectification has been completed If exceedance stops, cease additional monitoring (site audit)	Check report Check the Contractor's working method Discuss with the ET and Contractor on possible remedial measures Advise the ER on effectiveness of proposed remedial measures. Supervise the implementation of remedial measures	Notify Contractor Ensure remedial measures are properly implemented	Amend working methods if needed Rectify damage and undertake remedial measures or any necessary replacement			

Event/Action Plan for Construction Noise

EV/ENT		Action		
EVENT	ET Leader	IEC	ER	Contractor
Action Level	 Notify IEC, Contractor and ER Carry out investigation and identify source Report the results of investigation to IEC, Contractor and ER Discuss with the Contractor and formulate remedial measures Increase monitoring frequency Check compliance to Action/limit Levels after application of mitigation measures 	Review the analysed results submitted by the ET Leader Review the proposed remedial measures by the Contractor and advise the ER & ER accordingly Review the implementation of remedial measures	Confirm receipt of notification of complaint in writing Notify Contractor Check monitoring data submitted by the ET Require Contractor to propose remedial measures for the analysed noise problem Ensure remedial measures are properly implemented	Submit noise mitigation proposals to ER and IEC within three working days Liaise with the ER to ensure the effectiveness of the agreed mitigation Amend proposal if required Implement noise mitigation proposals
Limit Level	 Notify IEC, Contractor and ER Identify source Repeat measurement to confirm findings Increase monitoring frequency Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented Inform IEC, ER and EPD the causes & actions taken form the exceedances Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results If exceedance stops, cease additional monitoring 	Check monitoring data submitted by ET Discuss amongst ER, ET Leader and Contractor on the potential remedial actions Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER & ET accordingly Audit the implementation of remedial measures	1. Confirm receipt of notification of exceedance 2. Notify Contractor 3. Check monitoring data submitted by the ET 4. Require Contractor to propose remedial measures for the analysed noise problem 5. Discuss with ET, IEC and Contractor on proposed remedial actions to be implemented 6. Ensure remedial measures are properly implemented 7. Assess the effectiveness of the remedial actions and keep the Contractor informed 8. If exceedance continues, consider what protion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated	 Take immediate action to avoid further exceedance Submit proposals for remedial actions to ER within three working days of notification Liaise with the ER to ensure the effectiveness of the agreed mitigation Amend proposal if required Implement the agreed proposals Resubmit proposals if problem still not under control Stop the relevant portion of works as determined by the ER until the exceedance is abated



Appendix G

Monitoring Schedule



Monitoring Schedule for Channels MUP in this Reporting Month

Date		Air Quality		Noise Leq	Water	Ecology		
		1-hour TSP	24-hour TSP	30min	Quality	Water Quality	Ecology Surveys	
Tue	26-Jan-10							
Wed	27-Jan-10							
Thu	28-Jan-10							
Fri	29-Jan-10							
Sat	30-Jan-10							
Sun	31-Jan-10							
Mon	1-Feb-10							
Tue	2-Feb-10							
Wed	3-Feb-10							
Thu	4-Feb-10							
Fri	5-Feb-10							
Sat	6-Feb-10							
Sun	7-Feb-10							
Mon	8-Feb-10							
Tue	9-Feb-10							
Wed	10-Feb-10							
Thu	11-Feb-10							
Fri	12-Feb-10							
Sat	13-Feb-10							
Sun	14-Feb-10							
Mon	15-Feb-10							
Tue	16-Feb-10							
Wed	17-Feb-10							
Thu	18-Feb-10							
Fri	19-Feb-10							
Sat	20-Feb-10							
Sun	21-Feb-10							
Mon	22-Feb-10							
Tue	23-Feb-10							
Wed	24-Feb-10							
Thu	25-Feb-10							

Monitoring Day
Sunday or Public Holiday

Parameters: Location ID

Air MUP-A1 (Same as MUP01/02-A1), MUP-A2a, MUP-A3,

Noise MUP05-N1 (Same as MUP01/02-N1), MUP-N2, MUP-N3, MUP-N4,

Water MUP-W1 (Same as MUP01/02-W1), MUP-W2 (Same as MUP01/02-W2),

MUP-W3, MUP-W4, MUP-W5, MUP-W6

Ecology Survey As location in MUP05



Monitoring Schedule for Channels MUP in coming month

	Date	Air Q	uality	NOISE	WATER	ECOLOG	Y
		1-hour TSP	24-hour TSP	LEQ 30MIN	QUALITY	Water Quality	ECOLOGY SURVEYS
Fri	26-Feb-10						
Sat	27-Feb-10						
Sun	28-Feb-10						
Mon	1-Mar-10						
Tue	2-Mar-10						
Wed	3-Mar-10						
Thu	4-Mar-10						
Fri	5-Mar-10						
Sat	6-Mar-10						
Sun	7-Mar-10						
Mon	8-Mar-10						
Tue	9-Mar-10						
Wed	10-Mar-10						
Thu	11-Mar-10						
Fri	12-Mar-10						
Sat	13-Mar-10						
Sun	14-Mar-10						
Mon	15-Mar-10						
Tue	16-Mar-10						
Wed	17-Mar-10						
Thu	18-Mar-10						
Fri	19-Mar-10						
Sat	20-Mar-10						
Sun	21-Mar-10						
Mon	22-Mar-10						
Tue	23-Mar-10						
Wed	24-Mar-10						
Thu	25-Mar-10						

Monitoring Day
Sunday or Public Holiday

Parameters: Location ID

Air MUP-A1 (Same as MUP01/02-A1), MUP-A2a, MUP-A3,

Noise MUP05-N1 (Same as MUP01/02-N1), MUP-N2, MUP-N3, MUP-N4,

Water MUP-W1 (Same as MUP01/02-W1), MUP-W2 (Same as MUP01/02-W2),

MUP-W3, MUP-W4, MUP-W5, MUP-W6

Ecology Survey As location in MUP05



Appendix H

Detailed Impact Monitoring Data of Air Quality and Water Quality

DSD CONTRACT NO. DC/2007/08 Drainage Improvements Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang

Water Quality Monitoring Data for MUP05

Date	27	Jan-10												
Location	Time	Depth (m)	Tem	p(oC)	n) OD	ng/L)	DOS	6(%)	Turbidi	ty(NTU)	р	Н	S	iS
MUP-W1 (Control)	11:33	0.2	19.2	19.2	3.31	3.4	54.10	54.5	6.19	6.2	7.00	7.1	51.00	51.0
(MUP01/02-W1)	11:33	0.2	19.2	19.2	3.39	3.4	54.80	34.3	6.23	0.2	7.10	7.1	51.00	51.0
MUP-W2 (Control)	10:18	0.3	19.0	19.0	5.39	5.4	64.10	64.6	3.93	3.9	7.10	7.1	3.00	3.0
(MUP01/02-W2)	10:18	0.3	19.0	19.0	5.41	5.4	65.00	04.0	3.96	3.9	7.10	7.1	3.00	3.0
MUP-W3 (Control)	11:48	0.1	19.3	10.2	3.41	3.4	53.90	54.3	6.01	6.0	7.00	7.0	94.00	94.0
MOP-W3 (Control)	11:46	0.1	19.3	19.3	3.46	3.4	54.70	54.3	5.97	6.0	7.00	7.0	94.00	94.0
MUP-W4 (Impact)	10:40	0.45	19.2	19.2	5.56	5.5	62.10	62.2	6.01	6.0	7.30	7.3	2.00	2.0
MUP-W4 (Impact)	10:40	0.45	19.2	19.2	5.53	5.5	62.30	62.2	6.06	6.0	7.30	7.3	2.00	2.0
MUD ME (44.05	0.45	19.2	40.0	4.98	5.0	58.10	57.0	3.88	3.9	7.50	7.5	2.00	
MUP-W5 (mobile)	11:05	0.45	19.2	19.2	4.94	5.0	57.70	57.9	3.85	3.9	7.40	7.5	2.00	2.0
MUP-W6 (mobile)	10:53	0.4	19.3	10.2	5.19	5.2	60.10	59.5	5.96	5.9	7.30	7.4	<2	2.0
wor-wo (mobile)	10:53	0.4	19.3	19.3	5.11	5.2	58.80	59.5	5.91	5.9	7.40	1.4	<2	2.0

Date	29	Jan-10												
Location	Time	Depth (m)	Tem	p(oC)	n) OD	mg/L)	DOS	6(%)	Turbidi	ty(NTU)	р	Н	S	S
MUP-W1 (Control)	03:20	0.2	19.6	19.6	3.43	3.4	53.60	53.8	5.60	5.6	7.30	7.3	12.00	12.0
(MUP01/02-W1)	03:20	0.2	19.6	19.0	3.46	3.4	53.90	33.8	5.63	5.0	7.30	1.3	12.00	12.0
MUP-W2 (Control)	02:00	0.2	19.5	19.5	5.36	5.4	62.10	62.3	2.63	2.6	7.20	7.2	<2	2.0
(MUP01/02-W2)	02:00	0.2	19.5	19.5	5.38	5.4	62.40	02.3	2.60	2.6	7.20	1.2	<2	2.0
MILID 1810 (0 1 1)	00.40		19.8	19.8	3.01		49.80	50.4	3.21	2.0	7.00	7.4	<2	2.0
MUP-W3 (Control)	03:40	0.1	19.8		3.06	3.0	50.30	50.1	3.16	3.2	7.10	7.1	<2	2.0
MUD WA (Immed)	02:25	0.45	19.4	19.4	5.41	5.4	59.80	59.5	5.43	4.9	7.40	7.4	<2	2.0
MUP-W4 (Impact)	02:25	0.45	19.4	19.4	5.36	5.4	59.10	39.3	4.44	4.9	7.30	7.4	<2	2.0
MUP-W5 (mobile)	02:50	0.5	19.5	19.5	4.77	4.8	56.60	56.9	4.15	4.2	7.50	7.5	<2	2.0
(Sildom) cw-quivi	02:50	0.5	19.5	19.5	4.81	4.8	57.10	50.9	4.16	4.2	7.50	1.5	<2	2.0
MUD W/ (makila)	02:40	0.25	19.5	10.5	5.00	F.0	58.60	F0 /	4.21	4.2	7.30	7.4	2.00	2.0
MUP-W6 (mobile)	02:40	0.35	19.5	4.94	5.0	58.50	58.6	4.24	4.2	7.40	7.4	2.00	2.0	

Date	1-F	eb-10												
Location	Time	Depth (m)	Tem	p(oC)	D0 (r	ng/L)	DOS	(%)	Turbidi	ty(NTU)	р	Н	S	s
MUP-W1 (Control)	15:30	0.45	24.7	04.7	3.41		52.20	50.4	6.03		7.20	7.0	2.00	0.0
(MUP01/02-W1)	15:30	0.15	24.7	24.7	3.44	3.4	52.60	52.4	6.08	6.1	7.20	7.2	2.00	2.0
MUP-W2 (Control)	14:15	0.2	24.2	04.0	5.22		61.30		4.01	4.0	7.30	7.0	2.00	
(MUP01/02-W2)	14:15	0.2	24.2	24.2	5.26	5.2	61.40	61.4	3.96	4.0	7.30	7.3	2.00	2.0
MUP-W3 (Control)	45.45	0.4	24.8	24.8	3.13	2.0	50.00	50.4	4.08		7.30	7.0	4.00	
WUP-W3 (Control)	15:45	0.1	24.8	24.8	3.19	3.2	50.80	50.4	4.04	4.1	7.30	7.3	4.00	4.0
MIID W/4 (1	44.40	0.45	24.5	04.5	5.35		59.80	50.5	4.94		7.50	7.5	<2	2.0
MUP-W4 (Impact)	14:40	0.45	24.5	24.5	5.33	5.3	59.20	59.5	4.98	5.0	7.50	7.5	<2	2.0
ANID ME (make)	45.05	0.4	24.8	04.0	4.64		56.10	-/-	4.81	4.0	7.70		4.00	
MUP-W5 (mobile)	15:05	0.4	24.8	24.8	4.68	4.7	56.80	56.5	4.86	4.8	7.60	7.7	4.00	4.0
	44.55		24.6	04.6	4.88	4.0	57.60		7.13		7.20	7.0	3.00	2.0
MUP-W6 (mobile)	14:55	0.4	24.6	24.6	4.83	4.9	57.20	57.4	7.11	7.1	7.30	7.3	3.00	3.0

Date	3-F	eb-10												
Location	Time	Depth (m)	Tem	p(oC)	n) OD	ng/L)	DOS	(%)	Turbidi	ty(NTU)	р	Н	S	S
MUP-W1 (Control)	00.55	0.0	19.2	40.0	3.18	2.0	51.20	F4.4	3.56	2.4	7.30	7.0	7.00	7.0
(MUP01/02-W1)	02:55	0.2	19.2	19.2	3.14	3.2	51.00	51.1	3.58	3.6	7.30	7.3	7.00	7.0
MUP-W2 (Control)	01:38	0.2	18.5	10.5	5.28	5.3	59.60	59.4	4.07	4.1	7.00	7.1	5.00	5.0
(MUP01/02-W2)	01:36	0.2	18.5	18.5	5.24	5.3	59.20	59.4	4.10	4.1	7.10	7.1	5.00	5.0
MUP-W3 (Control)	03:10	0.1	19.0	10.0	3.26	3.3	53.30	53.5	9.09	9.1	7.50	7.6	3.00	3.0
WOP-W3 (CONTROL)	03:10	0.1	19.0	19.0	3.28	3.3	53.60	53.5	9.11	9.1	7.60	7.0	3.00	3.0
MUD WA (Immant)	02:00	0.6	18.9	18.9	5.31	5.3	61.10	61.6	4.21	4.2	7.60	7.6	11.00	11.0
MUP-W4 (Impact)	02:00	0.6	18.9	18.9	5.38	5.3	62.00	01.0	4.22	4.2	7.60	7.0	11.00	11.0
MUP-W5 (mobile)	02:27	0.45	19.1	10.1	4.77	4.8	54.40	54.6	4.84	4.8	7.50	7.5	3.00	3.0
IVIUP-W5 (MODILE)	02:27	0.45	19.1	19.1	4.79	4.8	54.80	54.6	4.80	4.8	7.50	1.5	3.00	3.0
MUP-W6 (mobile)	02:15	0.3	18.9	18.9	4.88	6.4	56.70	56.9	6.04	6.1	7.40	7.5	<2	2.0
wor-wo (mobile)	02:15	0.3	18.9	10.9	7.89	0.4	57.10	50.9	6.08	0.1	7.50	7.5	<2	2.0

Date	5-F	eb-10												
Location	Time	Depth (m)	Tem	Temp(oC)		ng/L)	DOS	(%)	Turbidi	ty(NTU)	p	Н	S	S
MUP-W1 (Control)	03:00	0.1	20.3	20.3	3.18	3.2	49.30	49.1	5.89	5.9	7.30	7.3	<2	2.0
(MUP01/02-W1)	03:00	0.1	20.3	20.3	3.16	3.2	48.90	49.1	5.91	5.9	7.30	7.3	<2	2.0
MUP-W2 (Control)	01:45	0.2	20.9	20.9	5.20	5.2	62.20	62.3	6.15	6.1	7.20	7.3	8.00	8.0
(MUP01/02-W2)	01:45	0.2	20.9	20.9	5.18	5.2	62.40	02.3	6.11	0.1	7.30	7.3	8.00	8.0
MUP-W3 (Control)	02:35	0.1	20.0	20.0	3.09	3.1	48.80	49.2	27.80	27.6	7.00	7.1	14.00	14.0
WOP-W3 (CONTROL)	02:35	0.1	20.0		3.11	3.1	49.60	49.2	27.40	27.0	7.10	7.1	14.00	14.0
MUD WA (Immant)	02.10	0.7	20.1	20.1	5.41	5.4	63.30	/25	2.92	2.0	7.70	7.7	<2	2.0
MUP-W4 (Impact)	02:10	0.7	20.1	20.1	5.44	5.4	63.60	63.5	2.88	2.9	7.60	7.7	<2	2.0
MUP-W5 (mobile)	02:42	0.5	20.6	20.6	4.68	4.7	56.60	56.4	5.08	5.1	73	7.3	<2	2.0
WIDP-W5 (MODILE)	02:42	0.5	20.6	20.0	4.64	4.7	56.20	30.4	5.02	5.1	7.30	7.3	<2	2.0
MUP-W6 (mobile)	mobile) 02:25	0.3	20.5	20.5	4.63	4.6	55.60	55.8	3.73	3.8	7.40	7.4	3.00	3.0
WIDP-W6 (Mobile)	02:25	0.3	20.5	4.66	4.0	55.90	33.8	3.77	3.0	7.40	7.4	3.00	3.0	

Date	8-F	eb-10												
Location	Time	Depth (m)	Tem	Temp(oC)		ng/L)	DOS	(%)	Turbidi	ty(NTU)	р	Н	S	s
MUP-W1 (Control)	12:03	0.2	18.1	18.1	3.71	3.7	54.10	54.0	6.52	6.5	7.50	7.5	<2	2.0
(MUP01/02-W1)	12:03	0.2	18.1	10.1	3.64	3.7	53.80	54.0	6.49	0.5	7.50	7.5	<2	2.0
MUP-W2 (Control)	10:53	0.3	18.2	18.2	5.46	5.5	64.10	64.3	3.57	3.5	7.10	7.1	<2	2.0
(MUP01/02-W2)	10:53	0.3	18.2	10.2	5.48	5.5	64.40	04.3	3.52	3.5	7.10	7.1	<2	2.0
MUP-W3 (Control)	12:16	0.15	18.2	18.2	3.41	3.4	53.00	53.3	8.74	8.8	7.70	7.7	10.00	10.0
WIDP-W3 (CONTROL)	12:10	0.15	18.2		3.43	3.4	53.60	55.5	8.80	0.0	7.60	1.1	10.00	10.0
MUP-W4 (Impact)	11:16	0.55	18.1	18.1	5.63	5.6	65.10	65.1	5.33	5.3	7.30	7.3	<2	2.0
WOP-W4 (Impact)	11:10	0.55	18.1	10.1	5.61	5.0	65.00	00.1	5.36	5.3	7.20	7.3	<2	2.0
MID ME (make)	44.00		18.0	40.0	4.61		60.00		5.74		7.20	7.0	<2	2.0
MUP-W5 (mobile)	11:38	0.4	18.0	18.0	4.64	4.6	59.90	60.0	5.71	5.7	7.20	7.2	<2	2.0
MUP-W6 (mobile)	11:28	0.45	18.2	10.2	4.83	4.8	60.20	60.4	4.96	5.0	7.30	7.3	<2	2.0
WOP-W6 (MODILE)	11:20	0.45	18.2	18.2	4.84	4.8	60.50	00.4	4.98	5.0	7.30	7.3	<2	2.0

DSD CONTRACT NO. DC/2007/08 Drainage Improvements Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang

Water Quality Monitoring Data for MUP05

Date	10-1	Feb-10												
Location	Time	Depth (m)	Tem	o(oC)	D0 (r	ng/L)	DOS	(%)	Turbidi	ty(NTU)	р	Н	S	S
MUP-W1 (Control)	03:45	0.2	23.6	23.6	3.54	3.6	51.00	51.4	19.10	19.2	7.10	7.2	59.00	59.0
(MUP01/02-W1)	03:45	0.2	23.6	23.0	3.58	3.0	51.80	51.4	19.20	19.2	7.20	1.2	59.00	59.0
MUP-W2 (Control)	02:30	0.2	23.2	23.2	5.29	5.3	63.30	63.6	2.68	2.7	7.20	7.2	<2	2.0
(MUP01/02-W2)	02:30	0.2	23.2	23.2	5.31	5.3	63.80	03.0	2.69	2.1	7.20	1.2	<2	2.0
MUP-W3 (Control)	03:58	0.1	23.4	23.4	3.41	3.4	52.80	52.4	18.40	18.5	7.30	7.4	40.00	40.0
WOF-W3 (COILLOI)	03.36	0.1	23.4	23.4	3.38	3.4	52.00	32.4	18.60	10.5	7.40	7.4	40.00	40.0
MUP-W4 (Impact)	02:54	0.45	23.5	23.5	5.33	5.3	65.60	65.9	4.60	4.6	7.30	7.3	2.00	2.0
WOP-W4 (Impact)	02:54	0.45	23.5	23.5	5.36	5.3	66.10	05.9	4.61	4.0	7.30	7.3	2.00	2.0
MUP-W5 (mobile)	03:19	0.5	23.6	23.6	4.77	4.8	58.60	58.4	4.16	4.1	7.00	7.1	3.00	3.0
WUP-W5 (MOBILE)	03:19	0.5	23.6	23.0	4.74	4.0	58.10	38.4	4.13	4.1	7.10	7.1	3.00	3.0
MUP-W6 (mobile)	03:08	0.4	23.5	22.5	4.96	4.9	60.90	60.6	4.41	4.4	7.10	7.1	<2	2.0
IVIUP-VVO (MODITE)	03:08	0.4	23.5	4.93	4.9	60.30	60.6	4.45	4.4	7.10	7.1	<2	2.0	

Date	12-	Feb-10												
Location	Time	Depth (m)	Tem	p(oC)	DO (r	ng/L)	DOS	(%)	Turbidi	ty(NTU)	р	Н	S	s
MUP-W1 (Control)	10:20	0.2	23.6	23.6	3.70	3.6	53.30	53.1	12.80	12.9	7.60	7.6	32.00	32.0
(MUP01/02-W1)	10:20	0.2	23.6	23.0	3.59	3.0	52.80	53.1	13.00	12.9	7.60	7.0	32.00	32.0
MUP-W2 (Control)	9:10	0.25	23.0	23.0	5.26	5.3	63.10	63.2	2.13	2.1	7.00	7.1	2.00	2.0
(MUP01/02-W2)	9;10	0.25	23.0	23.0	5.28	5.3	63.30	03.2	2.11	2.1	7.10	7.1	2.00	2.0
MILID 1810 (0 1 1)	40.05	0.4	23.6	23.6	3.21	2.0	50.40	50.7	14.00		7.70	7.8	41.00	44.0
MUP-W3 (Control)	10:35	0.1	23.6		3.28	3.2	51.00	50.7	14.10	14.1	7.80	7.8	41.00	41.0
MUD MA (Imment)	09:33	0.6	23.3	23.3	5.41	5.4	60.00	60.1	5.24	5.3	7.30	7.3	2.00	2.0
MUP-W4 (Impact)	09:33	0.6	23.3	23.3	5.34	5.4	60.20	00.1	5.26	5.3	7.30	1.3	2.00	2.0
MUD WE (makile)	00.55	0.45	23.4	22.4	4.67	4.7	57.20	F7.4	5.41	5.4	7.40	7.5	3.00	3.0
MUP-W5 (mobile)	09:55	0.45	23.4	23.4	4.71	4./	57.60	57.4	5.38	5.4	7.50	1.5	3.00	3.0
MIID W/ (makila)	00.45	0.25	23.4	22.4	4.88	4.0	59.10	50.0	5.31	F 2	7.40	7.4	3.00	2.0
MUP-W6 (mobile)	09:45	0.35	23.4	23.4	4.83	4.9	58.60	58.9	5.33	5.3	7.40	7.4	3.00	3.0

Date	19-	Feb-10												
Location	Time	Depth (m)	Tem	o(oC)	D0 (r	ng/L)	DOS	(%)	Turbidi	ty(NTU)	р	Н	S	S
MUP-W1 (Control)	44.00	0.45	13.0	40.0	3.51	2.5	53.40	F0.4	4.29	4.0	7.30	7.0	<2	
(MUP01/02-W1)	11:00	0.15	13.0	13.0	3.48	3.5	53.40	53.4	4.24	4.3	7.30	7.3	<2	2.0
MUP-W2 (Control)	09:45	0.2	13.1	12.1	5.13	F 1	62.30	/2 F	4.96	4.0	7.40	7.4	6.00	
(MUP01/02-W2)	09:45	0.2	13.1	13.1	5.15	5.1	62.60	62.5	4.93	4.9	7.40	7.4	6.00	6.0
MUP-W3 (Control)	11:15	0.15	13.0	12.0	3.56	3.6	55.10	54.7	3.64	3.7	7.10	7.1	<2	2.0
WUP-W3 (CONTROL)	11:15	0.15	13.0	13.0	3.57	3.0	54.30	54.7	3.66	3.7	7.10	7.1	<2	2.0
MUD WA (Immant)	10:08	0.5	13.1	13.1	5.30	5.3	63.00	63.2	4.21	4.2	7.00	7.1	<2	2.0
MUP-W4 (Impact)	10:08	0.5	13.1	13.1	5.38	5.3	63.40	03.2	4.18	4.2	7.10	7.1	<2	2.0
MUD ME (makila)	10.21	0.45	12.8	12.0	4.80	4.0	60.00	F0 F	4.48	4.5	7.40	7.4	<2	2.0
MUP-W5 (mobile)	10:31	0.45	12.8	12.8	4.73	4.8	58.90	59.5	4.46	4.5	7.40	7.4	<2	2.0
	40.00	0.4	12.9	40.0	4.88	4.9	60.60		5.25		7.20	7.0	<2	
MUP-W6 (mobile)	10:20	0.4	12.9	12.9	4.92	4.9	60.80	60.7	5.19	5.2	7.30	7.3	<2	2.0

Date	22-	Feb-10												
Location	Time Depth (m)		Temp(oC)		D0 (mg/L)		DOS(%)		Turbidity(NTU)		pН		S	S
MUP-W1 (Control)	15:40	0.15	22.0	22.0	3.46	3.46 3.43	52.30	52.5	6.15	6.2	7.50	7.5	4.00	4.0
(MUP01/02-W1)			22.0	22.0	3.43		52.60		6.19		7.50	7.5	4.00	
MUP-W2 (Control) (MUP01/02-W2)	14:25	0.25	22.4	00.4	5.18	5.1	63.20	63.0	4.22	4.2	7.10	7.1	5.00	5.0
			22.4	22.4	5.11		62.70		4.26		7.10		5.00	
MIID 14/0 (0 1 1)	15:54	0.1	22.3	22.3	3.20	3.2	50.00	50.0	4.59	4.6	7.40	7.5	<2	2.0
MUP-W3 (Control)			22.3		3.26		50.50	50.3	4.56		7.50		<2	2.0
MIID 144 (11)	14:50	0.55	22.0	22.0	5.31	5.3	64.10	64.3	3.93	3.9	7.20	7.2	<2	2.0
MUP-W4 (Impact)			22.0		5.33		64.40		3.94		7.20		<2	2.0
MIID WE (makila)	15:12	0.4	22.0	22.0	4.63	4.5	57.60	57.9	4.03	4.0	7.10	7.1	<2	2.0
MUP-W5 (mobile)			22.0	22.0	4.33	4.5	58.20		4.04		7.10		<2	
MIID M. (markita)	15:02		21.9	04.0	4.96		59.70	59.4	3.50	3.5	6.90	7.0	<2	
MUP-W6 (mobile)		0.4	21.9	21.9	4.92	4.9	59.00		3.52		7.00		<2	2.0

Date	24-	Feb-10												
Location	Time Depth (m)		Temp(oC)		DO (mg/L)		DOS(%)		Turbidity(NTU)		pН		S	s
MUP-W1 (Control)	03:35	0.3	19.6	19.6	3.44	3.5	53.30	53.4	5.40	5.4	7.40	7.5	<2	2.0
(MUP01/02-W1)		0.3	19.6		3.46		53.40	53.4	5.42		7.50	7.5	<2	2.0
MUP-W2 (Control) (MUP01/02-W2)	02:15	0.2	19.1	19.1	5.24	5.3	62.60	62.9	3.09	3.1	7.00	7.1	2.00	2.0
			19.1		5.28		63.20	02.9	3.11		7.10		2.00	2.0
MUP-W3 (Control)	03:50	0.1	19.6	19.6	3.29	3.3	50.90	51.0	5.66	5.7	7.50	7.5	4.00	4.0
MOP-W3 (Control)			19.6		3.33		51.10	51.0	5.68	5.7	7.40		4.00	4.0
MUP-W4 (Impact)	02:40	0.5	19.6	19.6	5.45	5.5	59.80	60.1	4.19	4.2	7.20	7.2	<2	2.0
WOP-W4 (Impact)			19.6		5.49		60.30	00.1	4.17	4.2	7.20	1.2	<2	2.0
MUP-W5 (mobile)	03:07	0.5	19.7	10.7	4.76	4.8	55.90	56.3	5.48	5.5	6.90	7.0	<2	2.0
IVIUP-WS (MODILE)			19.7	19.7	4.79	4.8	56.60		5.43		7.00		<2	2.0
MUP-W6 (mobile)	02:40	0.45	19.6	19.6	4.98		58.40	58.2	4.28	4.3	6.90	6.9	<2	2.0
wide-we (mobile)			19.6	19.0	4.94	5.0	58.00		4.31		6.90		<2	2.0

DSD CONTRACT NO. DC/2007/08 Drainage Improvements Works in Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang 24- hour TSP Monitoring Data

	1		r	r	r	1	1		r	1				1	1	1		1		r	
										STANDARD		BLANK	BLANK	BLANK	BLANK	INITIAL	FINAL	WEIGHT	Dust 24-hr		
DATE	SAMPLE	ELAPSED	ELAPSED	ELAPSED	MIN	MAX	AVG	AVG	AVG	FLOW	AIR	SAMPLE	INTIAL	FINAL	DIFF	FILTER	FILTER	DUST	TSP in Air		
	NUMBER	TIME	TIME	TIME	CHART	CHART	CHART	TEMP	PRESS	RATE	VOLUME	NUMBER	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	COLLECTED	131 III AII		1 1
		INITIAL	FINAL	(min)	READING	READING	READING	(oC)	(hPa)	(m3/min)	(std m3)		(g)	(g)	(g)	(g)	(g)	(g)	(ug/m3)	Action Level	Limit Level
24-hour TSP Monitoring Data for MUP-A1 (same as MUP01/02-A1)																					
30-Jan-10	21427	1649.2	1672.88	1420.80	36	38	37	21.4	1016.5	1.2879	1829.81	NA	2.8736	2.8735	0.001	2.8196	3.0443	0.2247	122	194	260
5-Feb-10	21445	1672.88	1696.53	1419.00	36	38	37	17.4	1017.6	1.2962	1839.26	NA	2.8736	2.873	0.001	2.8491	2.9932	0.1441	78	194	260
11-Feb-10	21488	1696.53	1720.2	1420.20	36	38	37	15	1018.3	1.3012	1848.03	NA	2.8719	2.8723	0.001	2.8712	2.9386	0.0674	36	194	260
20-Feb-10	21519	1720.2	1743.82	1417.20	36	38	37	16.6	1018.3	1.2981	1839.69	NA	2.8726	2.8726	0.001	2.8656	2.9092	0.0436	23	194	260
			•	•	•				•											•	
24-hour TSP	Monitoring D	ata for MUP-	A2a																		
30-Jan-10																			Power Failure	178	260
5-Feb-10	21268	1398.62	1422.63	1440.60	36	38	37	17.4	1017.6	1.2447	1793.08	NA	2.8736	2.873	0.001	2.9018	3.0192	0.1174	65	178	260
11-Feb-10	21486	1422.63	1446.67	1442.40	36	38	37	15	1018.3	1.2486	1801.01	NA	2.8719	2.8723	0.001	2.8622	2.9293	0.0671	37	178	260
20-Feb-10	21526	1446.67	1470.74	1444.20	36	38	37	16.6	1018.3	1.2462	1799.74	NA	2.8726	2.8726	0.001	2.8622	2.9699	0.1077	59	178	260
24-hour TSP	Monitoring D	ata for MUP-	A3																		
30-Jan-10	21426	1623.1	1646.28	1390.80	36	38	37	21.4	1016.5	1.2344	1716.74	NA	2.8736	2.8735	0.001	2.818	2.9322	0.1142	66	158	260
5-Feb-10	21444	1646.28	1669.43	1389.00	36	38	37	17.4	1017.6	1.2423	1725.49	NA	2.8736	2.873	0.001	2.8585	2.9238	0.0653	37	158	260
11-Feb-10	21487	1669.43	1692.67	1394.40	36	38	37	15	1018.3	1.2471	1738.94	NA	2.8719	2.8723	0.001	2.8627	2.9156	0.0529	30	158	260
20-Feb-10	21520	1692.67	1715.9	1393.80	36	38	37	16.6	1018.3	1.2441	1734.03	NA	2.8726	2.8726	0.001	2.8596	2.9422	0.0826	47	158	260



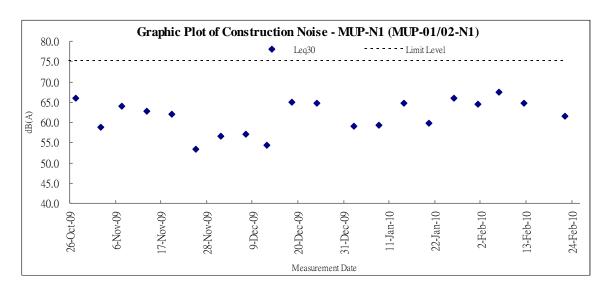
Appendix I

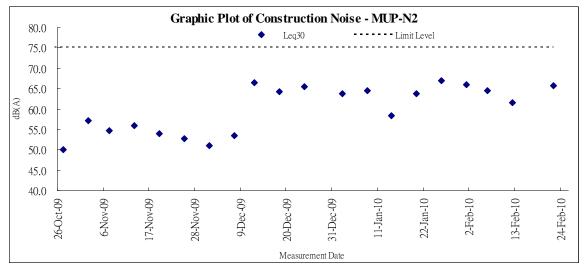
Graphic Plot of Monitoring

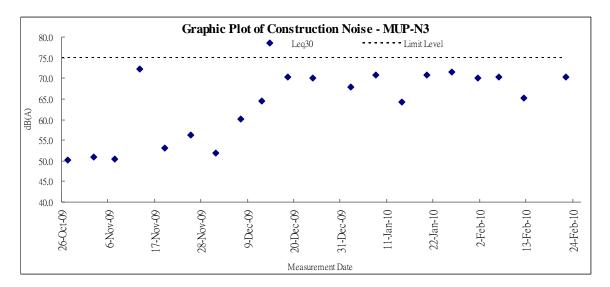
- 1. Construction Noise
- 2. Air Quality
- 3. Water Quality



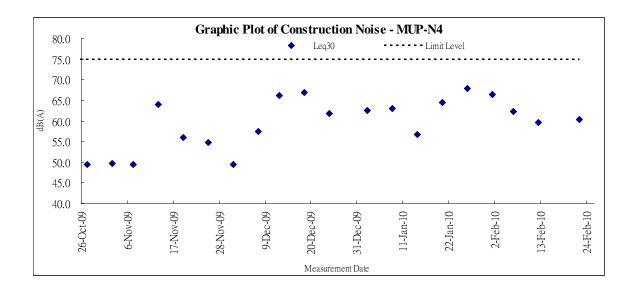
Graphic Plot of Monitoring - Construction Noise





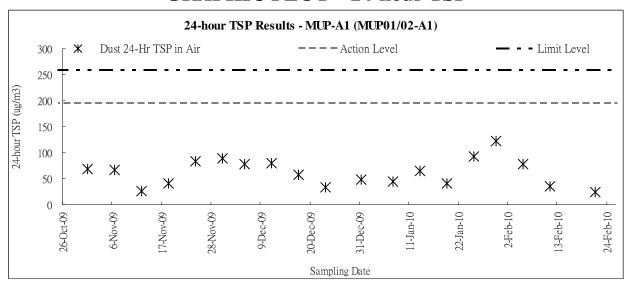


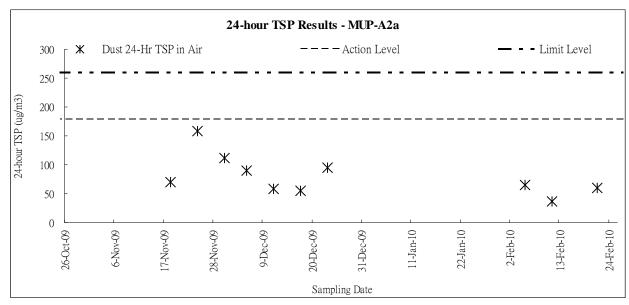


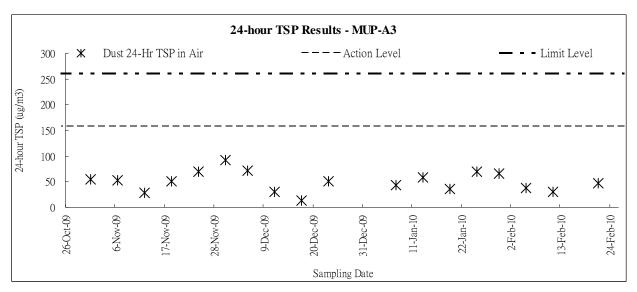




Graphic Plot of Monitoring - Air Quality GRAPHIC PLOT – 24-hour TSP

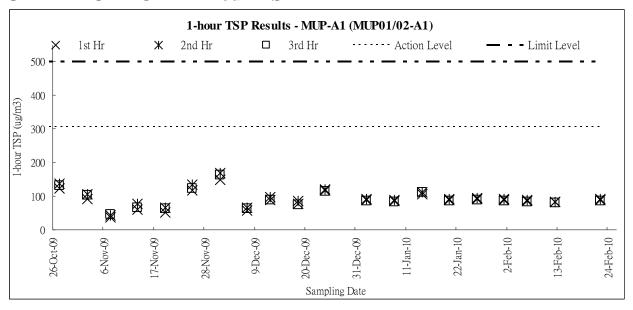


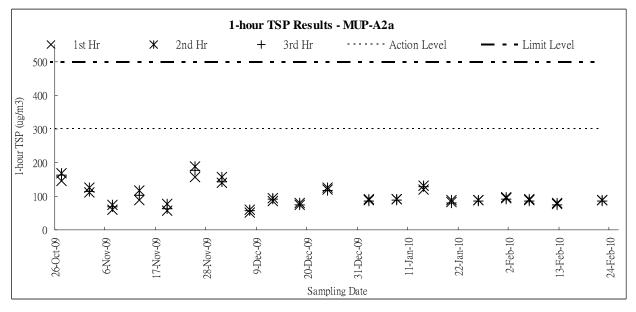


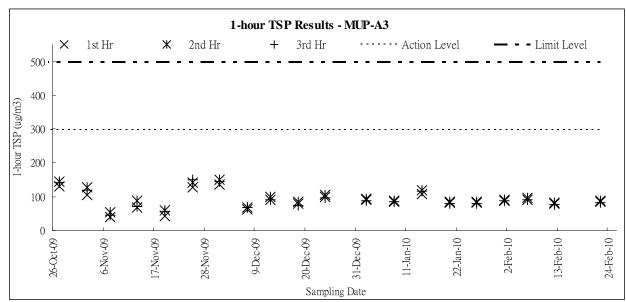




GRAPHIC PLOT – 1-hour TSP

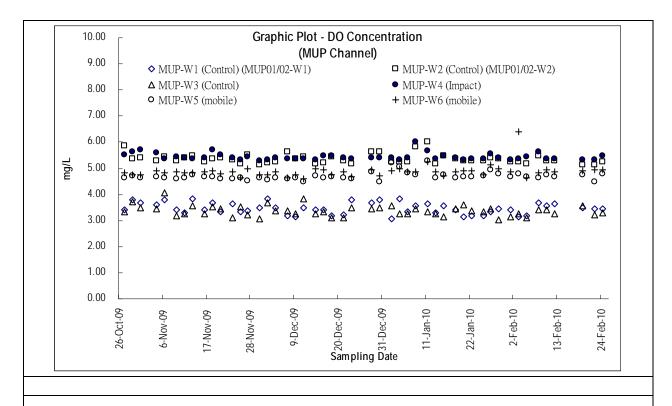


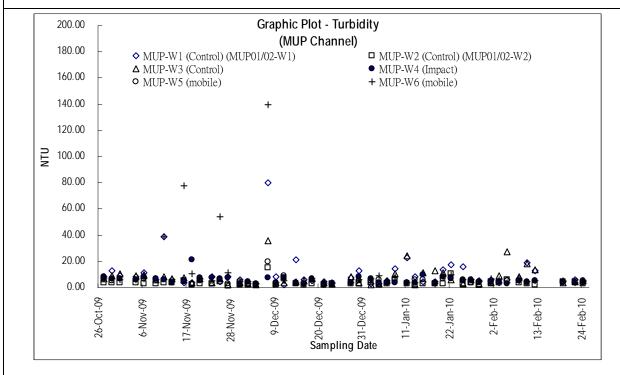




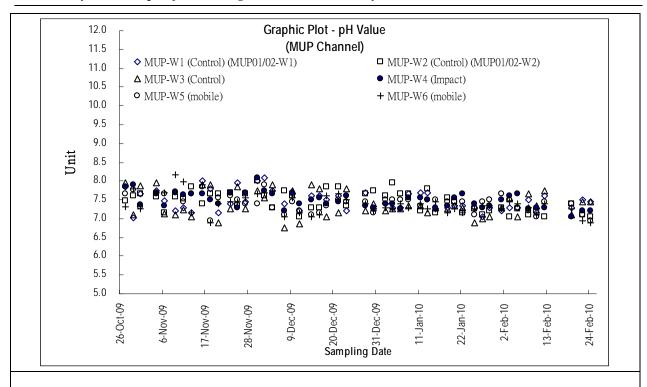


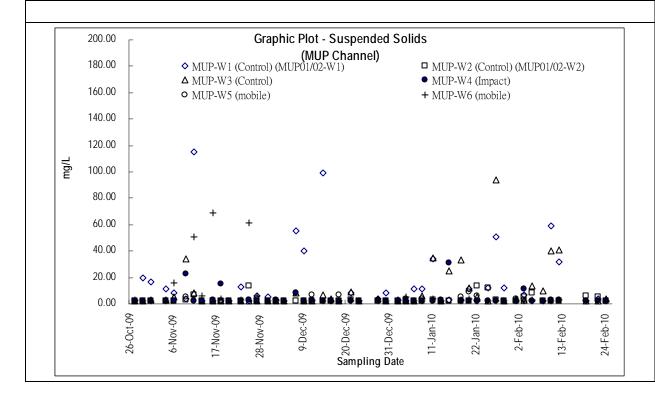
Graphic Plot of Monitoring - Water Quality













Appendix J

Meteorological Records



Meteorological Data in this Reporting Month

					Та К	wu Ling	
	Date	Weather	Total Rainfall (mm)	Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
Tue	26-Jan-10	Cloudy with a few light rain patches. Moderate to fresh easterly winds.	0.0	14.7	7.0	78	100
Wed	27-Jan-10	Cloudy and misty with one or two light rain patches.	0.0	16.7	7.9	82	100
Thu	28-Jan-10	Cloudy with fog patches. Light to moderate easterly winds.	0.0	19.6	5.1	89	110
Fri	29-Jan-10	Cloudy with a few rain patches. Misty at first.	0.0	17.8	10.5	84	120
Sat	30-Jan-10	Mist patches. Light winds.	0.0	18.8	11.7	78	100
Sun	31-Jan-10	Mainly fine. There will be coastal fog. Light winds.	0.0	21.4	6.6	81	100
Mon	1-Feb-10	Mainly cloudy and misty with one or two light rain patches.	0.0	20.8	3.5	84	110
Tue	2-Feb-10	Cloudy and misty with a few rain patches.	0.0	18.1	9.9	89	100
Wed	3-Feb-10	Mainly cloudy and misty with a few light rain patches.	0.0	18.3	13.8	84	110
Thu	4-Feb-10	Cloudy with light rain. Fresh easterly winds	0.0	17.3	13.3	87	100
Fri	5-Feb-10	Moderate to fresh easterly winds.	0.0	17.7	15.8	86	110
Sat	6-Feb-10	Cloudy with mist and one or two light rain patches.	0.0	17.9	15.2	86	110
Sun	7-Feb-10	Cloudy with a few rain patches.	59.0	16.9	10.9	96	120
Mon	8-Feb-10	Moderate to fresh easterly winds	3.5	18.4	11.6	92	110
Tue	9-Feb-10	Foggy with a few light rain patches at first.	0.0	21.6	10.6	90	110
Wed	10-Feb-10	Moderate to fresh easterly winds.	0.0	24.4	7.7	78	200
Thu	11-Feb-10	Mainly cloudy with light rain.	0.0	24.7	7.7	79	210
Fri	12-Feb-10	Cloudy to overcast with a few rain patches.	0.0	13	13.3	73	360
Sat	13-Feb-10	Holiday	0.5	10	10.3	89	360
Sun	14-Feb-10	Holiday	1.5	13.8	8.8	96	100
Mon	15-Feb-10	Holiday	0.5	9.3	9.0	90	350
Tue	16-Feb-10	Holiday	1.0	7.5	11.8	82	360
Wed	17-Feb-10	Moderate to fresh northerly winds.	0.5	7.8	13.0	77	350
Thu	18-Feb-10	It will be cold and cloudy with a few light rain patches.	1.0	7.6	11.8	71	360
Fri	19-Feb-10	Mainly cloudy with a few rain patches at first.	4.5	7.8	5.3	90	350
Sat	20-Feb-10	Cloudy with mist. A few showers at first.	0.0	11.9	4.2	77	100
Sun	21-Feb-10	Moderate east to northeasterly winds	0.0	15.7	8.9	76	100
Mon	22-Feb-10	Cloudy.Sunny periods during the day	0.0	18	7.5	85	100
Tue	23-Feb-10	Cloudy with mist patches. Sunny intervals during the day.	0.0	20.2	6.6	83	100
Wed	24-Feb-10	Mainly cloudy with a few showers.	0.0	22.1	8.8	85	110
Thu	25-Feb-10	Misty tomorrow morning. Sunny periods during the day.	0.5	24	5.7	87	140

^{*} The record was extracted from The Hong Kong Observatory Weather Stations # missing (less than 24 hourly observations a day)



Appendix K

Proforma of the Weekly ET Site Inspection Checklist



Projec	et: DSD Contract No. DC/2007/08	_ Ins	spected by		Che	Checklist No. <u>DC200708-280110</u>			
	Drainage Improvement Works at Tai Po Tin, Ping Che,		C/IEC's Rep			T			
Inspec	Man Uk Pin and Lin Ma Hang	_	RE/ SRE's Re TL/ ET's Rep	•		am Tang . Tam	_		
Date:	_28 January 2010		EO/ EO's Representative:			C.P. Chan			
Time:	10:30		ontractor's epresentativ	e:	Jacl	Jacky Tong			
PAR ⁻	T A: GENERAL INFORMATION			E	invironmen	tal Permit	No. EP-277/2007/A		
Weat		Rainy		Calm					
•	erature: 20.7 °C								
Humi Wind		Colm			N/A				
	:	Calm Area In	spected						
TKL TKL MUF MUF	07 P01/02								
PART	B: SITE AUDIT	_							
Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs	YAS	No	Follow Up	N/A	Photo/ Remarks		
Sectio	n 1: Water Quality								
1.01	Is an effluent discharge license obtained for the Project?	\checkmark							
1.02	Is the effluent discharged in accordance with the discharge licence?	\checkmark							
1.03	Is the discharge of turbid water avoided?		\checkmark						
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?				\checkmark		Photo A & B		
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?		\checkmark						
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?		\checkmark						
1.07	Is drainage system well maintained?		\checkmark						
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?		\checkmark						
1.09	Are temporary exposed slopes properly covered?		\checkmark						
1.10	Are earthworks final surfaces well compacted or protected?		\checkmark						
1.11	Are manholes adequately covered or temporarily sealed?	\checkmark							
1.12	Are there any procedures and equipment for rainstorm protection?		\checkmark						
1.13	Are wheel washing facilities well maintained?		\checkmark						
1.14	Is runoff from wheel washing facilities avoided?		\checkmark						
1.15	Are there toilets provided on site?		\checkmark						
1.16	Are toilets properly maintained?		\checkmark						
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?		\checkmark						
1.18	Is the oil leakage or spillage avoided?		\checkmark						
1.19	Are there any measures to prevent leaked oil from entering the drainage system?		\checkmark						
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	\checkmark							



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance;	Not	Yes	No	Follow	N/A	Photo/
	Follow Up: Observations requiring follow-Up actions N/A: Not Applicable Are there any oil interceptors/grease traps in the drainage systems	Obs.	169		Up		Remarks
1.21	for vehicle and plant servicing areas, canteen kitchen, etc?	$\overline{\checkmark}$					
1.22	Are the oil interceptors/grease traps maintained properly?	\checkmark					
1.23	Is used bentonite recycled where appropriate?	\checkmark					
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.		\checkmark				
1.25	No excavation is undertaken in the settlement area.		\checkmark				
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.	\checkmark					
1.27	Mobile toilets should provide on site and located away the stream course.		\checkmark				
1.25	License collector should be employed for handling the sewage of mobile toilet.		\checkmark				
Section	on 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?		\checkmark				
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		\checkmark				
2.03	Are the excavated materials sprayed with water during handling?		\checkmark				
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?		\checkmark				
2.05	Is the exposed earth properly treated within six months after the last construction activities?		\checkmark				
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?		\checkmark				
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?	\checkmark					
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?		\checkmark				
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?		\checkmark				
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?		\checkmark				
2.11	Is dark smoke emission from plant/equipment avoided?		\checkmark				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?	\checkmark					
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?		\checkmark				
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?	\checkmark					
2.15	Is open burning avoided?		\checkmark				
2.16	Excavated materials from the stream must remove form site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.		\checkmark				
Section	n 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?		\checkmark				
3.02	Is silenced equipment adopted?		\checkmark				
3.03	Is idle equipment turned off or throttled down?		\checkmark				
3.04	Are all plant and equipment well maintained and in good condition?		\checkmark				
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?	\checkmark					
3.06	Are hand held breakers fitted with valid noise emission labels during operation?	\checkmark					
3.07	Are air compressors fitted with valid noise emission labels during operation?	\checkmark					



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.08	Are flaps and panels of mechanical equipment closed during operation?		\checkmark				
3.09	Are Construction Noise Permit(s) applied for percussive piling works?	\checkmark					
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?		\checkmark				
3.11	Are valid Construction Noise Permit(s) posted at site entrances?		\checkmark				
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).	\checkmark					
3.13	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)	\checkmark					
3.14	Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).	\checkmark					
Section	on 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		\checkmark				
4.02	Are receptacles available for general refuse collection?		\checkmark				
4.03	Is general refuse sorting or recycling implemented?		\checkmark				
4.04	Is general refuse disposed of properly and regularly?		\checkmark				
4.05	Is the Contractor registered as a chemical waste producer?	\checkmark					
4.06	Are the chemical waste containers properly labelled?	\checkmark					
4.07	Are the chemical wastes stored in proper storage areas?		\checkmark				
4.08	Is the chemical waste storage area properly labelled?	\checkmark					
4.09	Is the chemical waste storage area used for storage of chemical waste only?		\checkmark				
4.10	Are incompatible chemical wastes stored in different areas?	\checkmark					
4.11	Are the chemical wastes disposed of by licensed collectors?	\checkmark					
4.12	Are trip tickets for chemical wastes disposal available for inspection?	\checkmark					
4.13	Are chemical/fuel storage areas bunded?		\checkmark				
4.14	Are designated areas identified for storage and sorting of construction wastes?	\checkmark					
4.15	Are construction wastes sorted (inert and non-inert) on site?	\checkmark					
4.16	Are construction wastes reused?	\checkmark					
4.17	Are construction wastes disposed of properly?		\checkmark				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		\checkmark				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		\checkmark				
4.20	Are appropriate procedures followed if contaminated material exists?		\checkmark				
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?		\checkmark				
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		\checkmark				
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.		\checkmark				



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Section	on 5: Landscape & Visual						
5.01	Are retained and transplanted trees in health condition?		\checkmark				
5.02	Are retained and transplanted trees properly protected?		\checkmark				
5.03	Are surgery works carried out for the damaged trees?					\checkmark	
5.04	Is damage to trees outside site boundary due to construction activities avoided?		\checkmark				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?		\checkmark				
Section	nn 6: Ecology						
6.01	Gabion banks and base had been provide for channel linings and banks for typical sections?	\checkmark					
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands?	\checkmark					
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands are prohibited?	\checkmark					
Section	nn 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		\checkmark				





Findings of Site Inspection on 28th January 2010:



Photo A and Photo B: Exposed slope has hard paved in some area, However, the Contractor is reminded to enhance the water mitigation measures, such as sand bag should be erected under loose open slope.

IEC's representative	SRE's representative	ET's representative	EO's representative		Contractor's representative	
		4				
()	() (T.W. Tam)	() (()



Projec	et: DSD Contract No. DC/2007/08	_ Inspe	ected by		Che	Checklist No. DC200708-050210			
	Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang		-	esentative:		- William Tang			
Inspec		_ SRE/ SRE's Representative: ETL/ ET's Representative:			-	T.W. Tam			
Date:	5 February 2010	•				Chan			
Time:	10:00	10:00 Contractor's Representative:							
PAR	T A: GENERAL INFORMATION	GENERAL INFORMATION							
Weat		Rainy	C	alm					
	perature: 17 °C			L	N/A				
Humi Wind		Calm		L	IN/A				
Cha	annel	Area Insp	ected						
TKL TKL MUI MUI	.07 P01/02								
PART	B: SITE AUDIT								
Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks		
Section	on 1: Water Quality				_				
1.01	Is an effluent discharge license obtained for the Project?	\checkmark							
1.02	Is the effluent discharged in accordance with the discharge licence?	$\overline{\checkmark}$							
1.03	Is the discharge of turbid water avoided?		\checkmark						
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?		\checkmark						
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?		\checkmark						
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?		\checkmark						
1.07	Is drainage system well maintained?		\checkmark						
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?		\checkmark						
1.09	Are temporary exposed slopes properly covered?		\checkmark						
1.10	Are earthworks final surfaces well compacted or protected?		\checkmark						
1.11	Are manholes adequately covered or temporarily sealed?	\checkmark							
1.12	Are there any procedures and equipment for rainstorm protection?		\checkmark						
1.13	Are wheel washing facilities well maintained?		\checkmark						
1.14	Is runoff from wheel washing facilities avoided?		\checkmark						
1.15	Are there toilets provided on site?		\checkmark						
1.16	Are toilets properly maintained?		\checkmark						
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?		\checkmark						
1.18	Is the oil leakage or spillage avoided?		\checkmark						
1.19	Are there any measures to prevent leaked oil from entering the drainage system?		\checkmark						
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	\checkmark							



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	\checkmark					
1.22	Are the oil interceptors/grease traps maintained properly?	\checkmark					
1.23	Is used bentonite recycled where appropriate?	\checkmark					
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.		\checkmark				
1.25	No excavation is undertaken in the settlement area.		\checkmark				
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.	\checkmark					
1.27	Mobile toilets should provide on site and located away the stream course.		\checkmark				
1.25	License collector should be employed for handling the sewage of mobile toilet.		\checkmark				
Section	on 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?		\checkmark				
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		\checkmark				
2.03	Are the excavated materials sprayed with water during handling?		\checkmark				
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?		\checkmark				
2.05	Is the exposed earth properly treated within six months after the last construction activities?		\checkmark				
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?				$\overline{\checkmark}$		Photo A
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?	\checkmark					
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?		\checkmark				
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?		\checkmark				
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?		\checkmark				
2.11	Is dark smoke emission from plant/equipment avoided?		\checkmark				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?	\checkmark					
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?		\checkmark				
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?	\checkmark					
2.15	Is open burning avoided?		\checkmark				
2.16	Excavated materials from the stream must remove form site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.		\checkmark				
Section	on 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?		\checkmark				
3.02	Is silenced equipment adopted?		\checkmark				
3.03	Is idle equipment turned off or throttled down?		\checkmark				
3.04	Are all plant and equipment well maintained and in good condition?		\checkmark				
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?	\checkmark					
3.06	Are hand held breakers fitted with valid noise emission labels during operation?	\checkmark					
3.07	Are air compressors fitted with valid noise emission labels during operation?	\checkmark					



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.08	Are flaps and panels of mechanical equipment closed during operation?		\checkmark				
3.09	Are Construction Noise Permit(s) applied for percussive piling works?	\checkmark					
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?		\checkmark				
3.11	Are valid Construction Noise Permit(s) posted at site entrances?		\checkmark				
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).	\checkmark					
3.13 3.14	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure) Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2	✓					
	mitigation measures).	٢		Ш		Ш	
	on 4: Waste/Chemical Management Waste Management Plan had been submit to Engineer for		\overline{V}				
4.01	approval.		_				
4.02	Are receptacles available for general refuse collection?						
4.03	Is general refuse sorting or recycling implemented?						
4.04	Is general refuse disposed of properly and regularly?		$\overline{\mathbf{V}}$				
4.05	Is the Contractor registered as a chemical waste producer?	\checkmark		Ш		Ш	
4.06	Are the chemical waste containers properly labelled?	\checkmark					
4.07	Are the chemical wastes stored in proper storage areas?		\checkmark				
4.08	Is the chemical waste storage area properly labelled?	\checkmark					
4.09	Is the chemical waste storage area used for storage of chemical waste only?		\checkmark				
4.10	Are incompatible chemical wastes stored in different areas?	\checkmark					
4.11	Are the chemical wastes disposed of by licensed collectors?	\checkmark					
4.12	Are trip tickets for chemical wastes disposal available for inspection?	\checkmark					
4.13	Are chemical/fuel storage areas bunded?		\checkmark				
4.14	Are designated areas identified for storage and sorting of construction wastes?	\checkmark					
4.15	Are construction wastes sorted (inert and non-inert) on site?	\checkmark					
4.16	Are construction wastes reused?	\checkmark					
4.17	Are construction wastes disposed of properly?		\checkmark				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		\checkmark				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		\checkmark				
4.20	Are appropriate procedures followed if contaminated material exists?		\checkmark				
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?		\checkmark				
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		\checkmark				
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.		\checkmark				



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Section	on 5: Landscape & Visual						
5.01	Are retained and transplanted trees in health condition?		\checkmark				
5.02	Are retained and transplanted trees properly protected?		\checkmark				
5.03	Are surgery works carried out for the damaged trees?					\checkmark	
5.04	Is damage to trees outside site boundary due to construction activities avoided?		\checkmark				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?		\checkmark				
Section	on 6: Ecology						
6.01	Gabion banks and base had been provide for channel linings and banks for typical sections?	\checkmark					
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands?	\checkmark					
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands are prohibited?	\checkmark					
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		\checkmark				



Remarks

Follow-Up of Last Site Inspection (28th January 2010):



Exposed slope has been well compacted and de-silting facilities was provided in water channel to enhance the water mitigation measures.

Findings of Site Inspection on 5th February 2010:



Photo A: Dry haul road was observed, the Contractor was reminded to provide water spraying more frequently.

IEC's representative	SRE's representative	ET's representative	EO's representative	Contractor representa	
		4			
		Shim			
()	()	(T.W. Tam)	() ()



Projec	et: DSD Contract No. DC/2007/08	Inspe	ected by		Che	cklist No.	DC200708-100210		
	Drainage Improvement Works at Tai Po Tin, Ping Che,	IEC/I	EC's Repre	esentative:	_				
	Man Uk Pin and Lin Ma Hang	_	SRE/ SRE's Representative:			William Tang T.W. Tam			
Inspector Date:	10 February 2010		-	esentative: esentative:	C.P. Chan				
Time:	10:00	Cont	ractor's esentative		Y. M. Mo				
PAR			cocmanive				No. EP-277/2007/A		
Weat		Rainy	С	alm	7				
Temp	perature: 22 °C		<u> </u>]				
Humi	idity: High Moderate Low				N/A				
Wind		Calm							
	annel	Area Insp	ected						
TKL TKL	07								
MUI	P01/02 P05								
PART	B: SITE AUDIT								
FARI		Not					Dhatai		
Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No '	Follow Up	N/A	Photo/ Remarks		
Section	on 1: Water Quality								
1.01	Is an effluent discharge license obtained for the Project?								
1.02	Is the effluent discharged in accordance with the discharge licence?	\checkmark							
1.03	Is the discharge of turbid water avoided?		\checkmark						
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?		\checkmark						
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?		\checkmark						
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?		\checkmark						
1.07	Is drainage system well maintained?		\checkmark						
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?		\checkmark						
1.09	Are temporary exposed slopes properly covered?		\checkmark						
1.10	Are earthworks final surfaces well compacted or protected?		\checkmark						
1.11	Are manholes adequately covered or temporarily sealed?	\checkmark							
1.12	Are there any procedures and equipment for rainstorm protection?		\checkmark						
1.13	Are wheel washing facilities well maintained?		\checkmark						
1.14	Is runoff from wheel washing facilities avoided?		\checkmark						
1.15	Are there toilets provided on site?		\checkmark						
1.16	Are toilets properly maintained?		\checkmark						
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?		\checkmark						
1.18	Is the oil leakage or spillage avoided?		\checkmark						
1.19	Are there any measures to prevent leaked oil from entering the drainage system?		\checkmark						
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	\checkmark							



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	\checkmark					
1.22	Are the oil interceptors/grease traps maintained properly?	\checkmark					
1.23	Is used bentonite recycled where appropriate?	\checkmark					
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.		\checkmark				
1.25	No excavation is undertaken in the settlement area.		\checkmark				
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.	\checkmark					
1.27	Mobile toilets should provide on site and located away the stream course.		\checkmark				
1.25	License collector should be employed for handling the sewage of mobile toilet.		\checkmark				
Section	on 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?		\checkmark				
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		\checkmark				
2.03	Are the excavated materials sprayed with water during handling?		\checkmark				
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?		\checkmark				
2.05	Is the exposed earth properly treated within six months after the last construction activities?		\checkmark				
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?		\checkmark				
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?	\checkmark					
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?		\checkmark				
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?		\checkmark				
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?		\checkmark				
2.11	Is dark smoke emission from plant/equipment avoided?		\checkmark				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?	\checkmark					
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?		\checkmark				
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?	\checkmark					
2.15	Is open burning avoided?		\checkmark				
2.16	Excavated materials from the stream must remove form site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.		\checkmark				
Section	on 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?		\checkmark				
3.02	Is silenced equipment adopted?		\checkmark				
3.03	Is idle equipment turned off or throttled down?		\checkmark				
3.04	Are all plant and equipment well maintained and in good condition?		\checkmark				
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?	\checkmark					
3.06	Are hand held breakers fitted with valid noise emission labels during operation?	\checkmark					
3.07	Are air compressors fitted with valid noise emission labels during operation?	\checkmark					



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.08	Are flaps and panels of mechanical equipment closed during operation?		$\overline{\checkmark}$				
3.09	Are Construction Noise Permit(s) applied for percussive piling works?	\checkmark					
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?		\checkmark				
3.11	Are valid Construction Noise Permit(s) posted at site entrances?		\checkmark				
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).	\checkmark					
3.13	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)	\checkmark					
3.14	Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).	\checkmark					
Section	n 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		\checkmark				
4.02	Are receptacles available for general refuse collection?		\checkmark				
4.03	Is general refuse sorting or recycling implemented?		\checkmark				
4.04	Is general refuse disposed of properly and regularly?		\checkmark				
4.05	Is the Contractor registered as a chemical waste producer?	\checkmark					
4.06	Are the chemical waste containers properly labelled?	\checkmark					
4.07	Are the chemical wastes stored in proper storage areas?		\checkmark				
4.08	Is the chemical waste storage area properly labelled?	\checkmark					
4.09	Is the chemical waste storage area used for storage of chemical waste only?		\checkmark				
4.10	Are incompatible chemical wastes stored in different areas?	\checkmark					
4.11	Are the chemical wastes disposed of by licensed collectors?	\checkmark					
4.12	Are trip tickets for chemical wastes disposal available for inspection?	\checkmark					
4.13	Are chemical/fuel storage areas bunded?		\checkmark				
4.14	Are designated areas identified for storage and sorting of construction wastes?	\checkmark					
4.15	Are construction wastes sorted (inert and non-inert) on site?	\checkmark					
4.16	Are construction wastes reused?	\checkmark					
4.17	Are construction wastes disposed of properly?		\checkmark				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		\checkmark				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		\checkmark				
4.20	Are appropriate procedures followed if contaminated material exists?		\checkmark				
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?		\checkmark				
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		\checkmark				
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.		\checkmark				





Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Section	on 5: Landscape & Visual						_
5.01	Are retained and transplanted trees in health condition?		\checkmark				
5.02	Are retained and transplanted trees properly protected?		\checkmark				
5.03	Are surgery works carried out for the damaged trees?					\checkmark	
5.04	Is damage to trees outside site boundary due to construction activities avoided?		\checkmark				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?		\checkmark				
Section	on 6: Ecology						
6.01	Gabion banks and base had been provide for channel linings and banks for typical sections?	\checkmark					
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands?	\checkmark					
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands are prohibited?	\checkmark					
Section 7: Others							
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		\checkmark				

1. Stagnant water accumulated is observed

Photo A



Follow-Up of Last Site Inspection (5th February 2010):

Haul road was sprayed with water more frequent.

Findings of Site Inspection on 10th February 2010:



Photo A: The stagnant water accumulated is observed. The Contractor was reminded to drain water away or apply larvidical oil to prevent mosquitoes breeding.

IEC's representative	SRE's representative	ET's representative	EO's representative		Contractor's representative	
()	() (T.W. Tam)	()	()



Projec	et: DSD Contract No. DC/2007/08	_ Inspe	ected by		Che	Checklist No. <u>DC200708-190210</u>			
	Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang		-	esentative: presentativ	 e- Willi:	am Tang			
Inspec		_		esentative:		Ray Cheung			
Date:	19 February 2010		EO's Representative: C.P. Chan						
Time:	10:00		ractor's esentative	:	<u>Y. M</u>	. Mo			
PAR	T A: GENERAL INFORMATION			En	vironmen	tal Permit	No. EP-277/2007/A		
Weat									
Temp	oerature: 10.5 °C idity: High Moderate Low			L	□ N/A				
Wind		Calm							
Cha	annel	Area Insp	ected						
TKL TKL MUI MUI	.07 P01/02								
PART	B: SITE AUDIT								
Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks		
Sectio	on 1: Water Quality			_					
1.01	Is an effluent discharge license obtained for the Project?	<u> </u>							
1.02	Is the effluent discharged in accordance with the discharge licence?	\checkmark							
1.03	Is the discharge of turbid water avoided?		\checkmark						
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?		\checkmark						
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?		\checkmark						
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?		\checkmark						
1.07	Is drainage system well maintained?		\checkmark						
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?		\checkmark						
1.09	Are temporary exposed slopes properly covered?		\checkmark						
1.10	Are earthworks final surfaces well compacted or protected?		\checkmark						
1.11	Are manholes adequately covered or temporarily sealed?	\checkmark							
1.12	Are there any procedures and equipment for rainstorm protection?		\checkmark						
1.13	Are wheel washing facilities well maintained?		\checkmark						
1.14	Is runoff from wheel washing facilities avoided?		\checkmark						
1.15	Are there toilets provided on site?		\checkmark						
1.16	Are toilets properly maintained?		\checkmark						
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?		\checkmark						
1.18	Is the oil leakage or spillage avoided?		\checkmark						
1.19	Are there any measures to prevent leaked oil from entering the drainage system?		\checkmark						
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	\checkmark							



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	\checkmark					
1.22	Are the oil interceptors/grease traps maintained properly?	\checkmark					
1.23	Is used bentonite recycled where appropriate?	\checkmark					
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.		\checkmark				
1.25	No excavation is undertaken in the settlement area.		\checkmark				
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.	\checkmark					
1.27	Mobile toilets should provide on site and located away the stream course.		\checkmark				
1.25	License collector should be employed for handling the sewage of mobile toilet.		\checkmark				
Section	on 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?		\checkmark				
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		\checkmark				
2.03	Are the excavated materials sprayed with water during handling?		\checkmark				
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?		\checkmark				
2.05	Is the exposed earth properly treated within six months after the last construction activities?		\checkmark				
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?		\checkmark				
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?	\checkmark					
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?		\checkmark				
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?		\checkmark				
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?		\checkmark				
2.11	Is dark smoke emission from plant/equipment avoided?		\checkmark				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?	\checkmark					
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?		\checkmark				
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?	\checkmark					
2.15	Is open burning avoided?		\checkmark				
2.16	Excavated materials from the stream must remove form site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.		\checkmark				
Section	on 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?		\checkmark				
3.02	Is silenced equipment adopted?		\checkmark				
3.03	Is idle equipment turned off or throttled down?		\checkmark				
3.04	Are all plant and equipment well maintained and in good condition?		\checkmark				
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?	\checkmark					
3.06	Are hand held breakers fitted with valid noise emission labels during operation?	\checkmark					
3.07	Are air compressors fitted with valid noise emission labels during operation?	\checkmark					



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.08	Are flaps and panels of mechanical equipment closed during operation?		V				
3.09	Are Construction Noise Permit(s) applied for percussive piling works?	\checkmark					
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?		\checkmark				
3.11	Are valid Construction Noise Permit(s) posted at site entrances?		\checkmark				
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).	\checkmark					
3.13	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure) Temporary/Moveable noise barrier equal to or more than 3m height	\checkmark					
3.14	with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).	\checkmark					
Section	on 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		\checkmark				
4.02	Are receptacles available for general refuse collection?		\checkmark				
4.03	Is general refuse sorting or recycling implemented?		\checkmark				
4.04	Is general refuse disposed of properly and regularly?		\checkmark				
4.05	Is the Contractor registered as a chemical waste producer?	\checkmark					
4.06	Are the chemical waste containers properly labelled?	\checkmark					
4.07	Are the chemical wastes stored in proper storage areas?		\checkmark				
4.08	Is the chemical waste storage area properly labelled?	\checkmark					
4.09	Is the chemical waste storage area used for storage of chemical waste only?		\checkmark				
4.10	Are incompatible chemical wastes stored in different areas?	\checkmark					
4.11	Are the chemical wastes disposed of by licensed collectors?	\checkmark					
4.12	Are trip tickets for chemical wastes disposal available for inspection?	\checkmark					
4.13	Are chemical/fuel storage areas bunded?		\checkmark				
4.14	Are designated areas identified for storage and sorting of construction wastes?	\checkmark					
4.15	Are construction wastes sorted (inert and non-inert) on site?	\checkmark					
4.16	Are construction wastes reused?	\checkmark					
4.17	Are construction wastes disposed of properly?		\checkmark				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		\checkmark				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		\checkmark				
4.20	Are appropriate procedures followed if contaminated material exists?		\checkmark				
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?		\checkmark				
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		\checkmark				
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.		\checkmark				





Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Section	on 5: Landscape & Visual						
5.01	Are retained and transplanted trees in health condition?		\checkmark				
5.02	Are retained and transplanted trees properly protected?		\checkmark				
5.03	Are surgery works carried out for the damaged trees?					\checkmark	
5.04	Is damage to trees outside site boundary due to construction activities avoided?		\checkmark				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?		\checkmark				
Section	on 6: Ecology						
6.01	Gabion banks and base had been provide for channel linings and banks for typical sections?	\checkmark					
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands?	\checkmark					
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands are prohibited?	\checkmark					
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		\checkmark				

1. Stagnant water accumulated is observed

Photo A



Remarks

Follow-Up of Last Site Inspection:



Stagnant water was eliminated

Findings of Site Inspection on 19th February 2010:



Photo A: Stagnant water was observed. The Contractor is reminded to remove it to prevent mosquito breeding.

IEC's representative	SRE's representative	ET's representative	EO's representative		Contractor's representative	
		Rayer				
()	()	(Ray Cheung)	()	()



Projec	ct: DSD Contract No. DC/2007/08	DSD Contract No. DC/2007/08 Inspected by					DC200708-250210	
	Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang		•	esentative: presentative:	- \//illi:	am Tang		
Inspec		_	-	esentative:	Ray Cheung			
Date:	25 February 2010	_ EO/ I	EO's Repre			Chan		
Time:	10:00		ractor's esentative	:	Y. M. Mo			
PAR	TA: GENERAL INFORMATION			Envir	onmen	tal Permit	No. EP-277/2007/A	
Weat		Rainy	С	alm				
•	perature: 22 °C							
Humi Wind		Calm			N/A			
	annel	Area Insp	ected					
TKL TKL MUI MUI	_07 P01/02							
PART	B: SITE AUDIT	_						
Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	NΩ	ollow Up	N/A	Photo/ Remarks	
Sectio	on 1: Water Quality							
1.01	Is an effluent discharge license obtained for the Project?	\checkmark			Ш			
1.02	Is the effluent discharged in accordance with the discharge licence?	\checkmark						
1.03	Is the discharge of turbid water avoided?		\checkmark					
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?		\checkmark					
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?		\checkmark					
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?		\checkmark					
1.07	Is drainage system well maintained?		\checkmark					
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?		\checkmark					
1.09	Are temporary exposed slopes properly covered?		\checkmark					
1.10	Are earthworks final surfaces well compacted or protected?		\checkmark					
1.11	Are manholes adequately covered or temporarily sealed?	\checkmark						
1.12	Are there any procedures and equipment for rainstorm protection?		\checkmark					
1.13	Are wheel washing facilities well maintained?		\checkmark					
1.14	Is runoff from wheel washing facilities avoided?		\checkmark					
1.15	Are there toilets provided on site?		\checkmark					
1.16	Are toilets properly maintained?		\checkmark					
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?		\checkmark					
1.18	Is the oil leakage or spillage avoided?		\checkmark					
1.19	Are there any measures to prevent leaked oil from entering the drainage system?		\checkmark					
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	\checkmark						



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	\checkmark					
1.22	Are the oil interceptors/grease traps maintained properly?	\checkmark					
1.23	Is used bentonite recycled where appropriate?	\checkmark					
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.		\checkmark				
1.25	No excavation is undertaken in the settlement area.		\checkmark				
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.	\checkmark					
1.27	Mobile toilets should provide on site and located away the stream course.		\checkmark				
1.25	License collector should be employed for handling the sewage of mobile toilet.		\checkmark				
Section	on 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?		\checkmark				
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		\checkmark				
2.03	Are the excavated materials sprayed with water during handling?		\checkmark				
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?		\checkmark				
2.05	Is the exposed earth properly treated within six months after the last construction activities?		\checkmark				
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?		\checkmark				
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?	\checkmark					
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?		\checkmark				
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?		\checkmark				
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?		\checkmark				
2.11	Is dark smoke emission from plant/equipment avoided?		\checkmark				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?	\checkmark					
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?		\checkmark				
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?	\checkmark					
2.15	Is open burning avoided?		\checkmark				
2.16	Excavated materials from the stream must remove form site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.		\checkmark				
Section	on 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?		\checkmark				
3.02	Is silenced equipment adopted?		\checkmark				
3.03	Is idle equipment turned off or throttled down?		\checkmark				
3.04	Are all plant and equipment well maintained and in good condition?		\checkmark				
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?	\checkmark					
3.06	Are hand held breakers fitted with valid noise emission labels during operation?	\checkmark					
3.07	Are air compressors fitted with valid noise emission labels during operation?	\checkmark					



Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.08	Are flaps and panels of mechanical equipment closed during operation?		\checkmark				
3.09	Are Construction Noise Permit(s) applied for percussive piling works?	\checkmark					
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?		\checkmark				
3.11	Are valid Construction Noise Permit(s) posted at site entrances?		\checkmark				
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).	\checkmark					
3.13	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure) Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2	✓					
	mitigation measures).	٢		Ш		ш	
	on 4: Waste/Chemical Management Waste Management Plan had been submit to Engineer for						
4.01	approval.						
4.02	Are receptacles available for general refuse collection?						
4.03	Is general refuse sorting or recycling implemented?		✓				_
4.04	Is general refuse disposed of properly and regularly?		\checkmark				
4.05	Is the Contractor registered as a chemical waste producer?	$\overline{\checkmark}$					_
4.06	Are the chemical waste containers properly labelled?	\checkmark					
4.07	Are the chemical wastes stored in proper storage areas?		\checkmark				
4.08	Is the chemical waste storage area properly labelled?	\checkmark					
4.09	Is the chemical waste storage area used for storage of chemical waste only?		\checkmark				
4.10	Are incompatible chemical wastes stored in different areas?	\checkmark					
4.11	Are the chemical wastes disposed of by licensed collectors?	\checkmark					
4.12	Are trip tickets for chemical wastes disposal available for inspection?	\checkmark					
4.13	Are chemical/fuel storage areas bunded?		\checkmark				
4.14	Are designated areas identified for storage and sorting of construction wastes?	\checkmark					
4.15	Are construction wastes sorted (inert and non-inert) on site?	\checkmark					
4.16	Are construction wastes reused?	\checkmark					
4.17	Are construction wastes disposed of properly?		\checkmark				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		\checkmark				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		\checkmark				
4.20	Are appropriate procedures followed if contaminated material exists?		\checkmark				
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?		\checkmark				
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		\checkmark				
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.		\checkmark				





Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Section	on 5: Landscape & Visual						
5.01	Are retained and transplanted trees in health condition?		\checkmark				
5.02	Are retained and transplanted trees properly protected?		\checkmark				
5.03	Are surgery works carried out for the damaged trees?					\checkmark	
5.04	Is damage to trees outside site boundary due to construction activities avoided?		\checkmark				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?		\checkmark				
Section	on 6: Ecology						
6.01	Gabion banks and base had been provide for channel linings and banks for typical sections?	\checkmark					
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands?	\checkmark					
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands are prohibited?	\checkmark					
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		\checkmark				

1. Stagnant water accumulated is observed

Photo A



Remarks Follow-Up of Last Site Inspection:

Stagnant water was eliminated

Findings of Site Inspection on 25th February 2010:



Photo A: Stagnant water was observed during the site inspection. Pump out the stagnant water or level off the land was reminded to be undertaken to prevent mosquitoes breeding

IEC's representative	SRE's representative	ET's representative	EO's representative		Contractor's representative	
		Rayer				
()	()	(Ray Cheung)	()	()



Appendix L

Proforma of Ecology Inspection Checklist

Hum Wind	T A: ther: erature: idity:	OC High Moderate Low Strong Breeze Light	Rainy Calm Area Ins	RE/RE's ETL/ ET/ EO/EO's Contract	s Repre Repres s Repre Repres tor's Re	EI	YW C(Wong Chan ental Permit No.
		/MiROI (MIPON	<u>A</u> r		boud			
PART Note:	B: EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not	Not Obs.	Yes	No.	Folfow Up	N/A	Photo/ Remarks
Section	on 6: Ec	Applicable ology	V D3.		_			. contains
1.01	6.5.8	earthworks to widen the stream have been undertaken from the landward side and existing stream untouched except during the final stage	ď				0	
1.04	6.5.9	widened stream bottom floored with natural materials to approximate as closely as possible to the rocky components of a natural stream bottom				4	Ð	Lore de prejuen
1.02	6.5.10	Any essential works outside the dry season have been temporarily isolated from the stream					0	
1.03	6.5.11	Excavation works have been restricted to 300m length at any one time						<u></u>
1.04	6.5.13	native riparian trees which would be impacted during construction works have been transplanted to suitable sites within the project area where possible	0			0		wirle in propriess
1.05	6.5.22	Construction activities have been restricted to works area that should be clearly demarcated		P				
1.06	6.5.22	Temporary diversions have been provided to ensure continuous water flow to the downstream section.		Q/				Mulo(/or
1.07	6.5.22	The proposed works site inside or in the proximity of natural streams have been temporarily isolated		v				
1.08	6. 5 .22	no disturbance to the stream bed and bank have been found from construction works, equipment or workers for the stream section where the existing natural stream bed and bank will be left untouched		/	0			
1.09	6.5.22	Temporary access track on streambed have been kept to the minimum width and length				0	œ	in access to
1.09	6.5.22	Temporary stream crossings are supported on stilts above the stream bed.		V				M 110 5
1.10	6.5.22	Adequate temporary drainage measures including sediment and oil/grease traps have been provided to prevent contaminated site run-off entering the water bodies				Ū∕.		Su pole.
1.11	6.5.22	Stockpiling of construction materials, spoils and waste have been properly covered and located away from water bodies						hulol Ce note

Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.12	6.5.22	Supervisory staff of the contractor have been assigned to station on site to closely supervise and monitor the construction works						
1.13	6.5.22	workers have bee regularly briefed to avoid disturbing the flora and fauna near the works area					_	_
1.14	6.5.22	Construction effluent, site run-off and sewage have been properly collected, treated and disposed		₽/		ò	_	
1.15	6.5.22	details of the mitigation measures to be implemented during construction stage have been submitted to the Engineer for approval		رًا	0		- -	-
	arks	Texameted material was	foun	d an	shdep 1d '	iled is	a Cle	de stood
Rema		of the natural streamented And it is recommended	H	d and	shdep to	iled in tot is re-cyc Should	in clean	destood Le stood Le savde disposed
		and it is recommended as seen as possible. - Please rune the he	the	a ance	re Et	Sich W	be uts 5	disposed
		and it is Mcommended as seen as possible.	He ainte	a ance tack	re Et	Sich W	be uts 5	disposed the
Mip		and it is recommended as seen as possible. - Please rune the he temporary sedimentat will be functioned	the ainte	a cince tack	te te	Sich W	be with 3	of spose

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representative	
()	()	(Kelh Dag)	(C. J. Chan.)	(

Inspection Date: Time: PART A: Weather: Temperature: Humidity: Wind: Channel MUP05		DSD Contract No. DC/2007/08 Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang GENERAL INFORMATION Sunny Fine Cloudy High Moderate Strong Breeze Jight					YW Wong Cr Clar vironmental Permit No. P-277/2007A		
PART	В:	SITE AUDIT				\			
Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks	
Sectio	n 6: Ecc								
1.01	6.5.8	earthworks to widen the stream have been undertaken from the landward side and existing stream untouched except during the final stage		b		0			
1.04	6.5.9	widened stream bottom floored with natural materials to approximate as closely as possible to the rocky components of a natural stream bottom				\mathbf{M}		bodes in	
1.02	6.5.10	Any essential works outside the dry season have been temporarily isolated from the stream					V	- (iv)	
.03	6.5.11	Excavation works have been restricted to 300m length at any one time	_						
1.04	6.5.13	native riparian trees which would be impacted during construction works have been transplanted to suitable sites within the project area where possible				\square		work in	
1.05	6.5.22	Construction activities have been restricted to works area that should be clearly demarcated		\checkmark					
1.06	6.5.22	Temporary diversions have been provided to ensure continuous water flow to the downstream section.			. 🗆			HUP 01/07	
1.07	6.5.22	The proposed works site inside or in the proximity of natural streams have been temporarily isolated							
1.08	6.5.22	no disturbance to the stream bed and bank have been found from construction works, equipment or workers for the stream section where the existing natural stream bed and bank will be left untouched		\checkmark			0		
1.09	6.5.22	Temporary access track on streambed have been kept to the minimum width and length					0	to stream had	
1.09	6.5.22	Temporary stream crossings are supported on stilts above the stream bed.		4				MJe o S	
1.10	6.5.22	Adequate temporary drainage measures including sediment and oil/grease traps have been provided to prevent contaminated site run-off entering the water bodies	_	0		v	0	See hole (Mol	
1.11	6.5.22	Stockpiling of construction materials, spoils and waste have been properly covered and located away from water bodies	0			□⁄	0	se who (use	

AUES

Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.12	6.5.2 2	Supervisory staff of the contractor have been assigned to station on site to closely supervise and monitor the construction works		TV.		D.		
1.13	6.5.22	workers have bee regularly briefed to avoid disturbing the flora and fauna near the works area						
1.14	6.5.22	Construction effluent, site run-off and sewage have been properly collected, treated and disposed						Eas wolk
1.15	6.5.22	details of the mitigation measures to be implemented during construction stage have been submitted to the Engineer for approval		10/				

Remarks

MUIOI - stockpiling of excavated haite was found near MUPOI.
and the contractor has been received to recoacte the waste.

MUPOS - PLACE Mines ALR adequacy of the temporary draingle measures (sedimention tank) and make sure It will be functioned jujed, before use.

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representative	_
()	()	(Kish Day)	(cp. Chan))

Inspe Date: Time:	ction _	DSD Contract No. DC/2007/08 Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk Pin and Lin Ma Hang	RE/RE's ETL/ ET EO/EO's	's Repre Repres 's Repre Repres	sentative: entative: sentative: entative: presentative:		Wong P Chan	
PAR	T A:	GENERAL INFORMATION				En	vironn	nental Permit No.
Wea	ither:	Sunny Fine Cloudy	Rainy		Calm	E	P-277/2	2007A
Tem	perature:	<u>∠</u> } °c						
Hum	nidity:	High Moderate Low				N/A		
Wind		Strong Sreeze Light	Calm					
	annel		Area Ins	pected				
М	UP05 /	MUPHIOL	Au	Areo	۷.			
PART	В:	SITE AUDIT						
Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
	on 6: Ec							
1.01	6.5.8	earthworks to widen the stream have been undertaken from the landward side and existing stream untouched except during the final stage		₽/				
1.04	6.5.9	widened stream bottom floored with natural materials to approximate as closely as possible to the rocky components of a natural stream bottom				10 /		work in
†. 02	6.5.10	Any essential works outside the dry season have been temporarily isolated from the stream					b ⁄	- poruss
1.03	6.5.11	Excavation works have been restricted to 300m length at any one time	_	5 /		đ		
1.04	6.5.13	native riparian trees which would be impacted during construction works have been transplanted to suitable sites within the project area where possible						work in
1.05	6.5.22	Construction activities have been restricted to works area that should be clearly demarcated						holes
1.06	6.5.22	Temporary diversions have been provided to ensure continuous water flow to the downstream section.						Li Muloi/ou
1.07	6.5.22	The proposed works site inside or in the proximity of natural streams have been temporarily isolated					_ ,	Man for
1.08	6.5.22	no disturbance to the stream bed and bank have been found from construction works, equipment or workers for the stream section where the existing natural stream bed and bank will be left untouched				0		
1.09	6.5.22	Temporary access track on streambed have been kept to the minimum width and length				B	4	he access to
1.09	6.5.22	Temporary stream crossings are supported on stilts above the stream bed.						Mulog
1.10	6.5.22	Adequate temporary drainage measures including sediment and oil/grease traps have been provided to prevent contaminated site run-off entering the water bodies	٥		<u> </u>	ŋ⁄		sex noto
1.11	6.5.22	Stockpiling of construction materials, spoils and waste have been properly covered and located away from water bodies				\forall		See note (vue of

AUES

Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.12	6.5.22	Supervisory staff of the contractor have been assigned to station on site to closely supervise and monitor the construction works		Ø		đ	0	
1.13	6.5.22	workers have bee regularly briefed to avoid disturbing the flora and fauna near the works area		_		0		
1.14	6.5.22	Construction effluent, site run-off and sewage have been properly collected, treated and disposed		9				
1.15	6.5.2 2	details of the mitigation measures to be implemented during construction stage have been submitted to the Engineer for approval		ď				

Remarks

MiPolr Record of excavaled worth hear the stream in strumpending

MIPOS - Mainkaanie work on the section tent tent is

Shill pending and the contractor has been reminded

to check its corporate use.

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representative
()	()	(Kih Word)	(c.p. Chan)	()

					Represons Represons	sentative: entative: sentative: entative: presentative:	YW Wong		
Hum Wind Cha	ther: erature: idity: l: annel	OC High Moderate Low Strong Breeze Light	Rainy Calm Area Ins		Calm		vironm(ental Permit No.	
PART	B:	SITE AUDIT			<u>. </u>				
Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks	
Section	n 6: Ec								
1.01	6.5.8	earthworks to widen the stream have been undertaken from the landward side and existing stream untouched except during the final stage							
1.04	6.5.9	widened stream bottom floored with natural materials to approximate as closely as possible to the rocky components of a natural stream bottom						work in	
1.02	6.5.10	Any essential works outside the dry season have been temporarily isolated from the stream						190	
1.03	6.5.11	Excavation works have been restricted to 300m length at any one time	0			- c			
1.04	6.5.13	native riparian trees which would be impacted during construction works have been transplanted to suitable sites within the project area where possible						work in	
1.05	6.5.22	Construction activities have been restricted to works area that should be clearly demarcated						1.7	
1.06	6.5.22	Temporary diversions have been provided to ensure continuous water flow to the downstream section.						MUP ollor	
1.07	6.5.22	The proposed works site inside or in the proximity of natural streams have been temporarily isolated							
1.08	6.5.22	no disturbance to the stream bed and bank have been found from construction works, equipment or workers for the stream section where the existing natural stream bed and bank will be left untouched				_	_		
1.09	6.5.22	Temporary access track on streambed have been kept to the minimum width and length					₽∕	ho access to	
1.09	6.5.22	Temporary stream crossings are supported on stilts above the stream bed.						mulo S	
1.10	6.5.22	Adequate temporary drainage measures including sediment and oil/grease traps have been provided to prevent contaminated site run-off entering the water bodies				а		see woll	
1.11	6.5.22	Stockpiling of construction materials, spoils and waste have been properly covered and located away from water bodies				⊿ ∕		se note.	



Note:	EM&A REF:	Not Obs.: Not Observed; Yes: Compliance; No. Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.12	6.5.22	Supervisory staff of the contractor have been assigned to station on site to closely supervise and monitor the construction works		Õ				
1.13	6.5.22	workers have bee regularly briefed to avoid disturbing the flora and fauna near the works area	. 🗆	6	0			
1.14	6.5.22	Construction effluent, site run-off and sewage have been properly collected, treated and disposed						
1.15	6.5.22	details of the mitigation measures to be implemented during construction stage have been submitted to the Engineer for approval						

Remarks

MUPOI - Stockpiling area for excavased worke hear the Stream is yet to be re-located.

MUPOS - It was understood that the temporary sediesation tank will no longer be used and now drainge I discharge system will be installed to thank. The 81th effect.

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representative	
()	()	(Kich Way)	(C.p. Chan.)	()



Appendix M

Monthly Summary Waste Flow Table

Name of Department: DSD Contract No.: DC/2007/08 Date: 1-Mar-10

Monthly Summary Waste Flow Table for 2010 (26 January to 25 February)

		Actual Quantities of Inert C&D Wastes Generated Monthly							of C&D Wastes G	enerated Monthly	
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	10.532	0	0	9.422	0	1.11	0.2	0	0	0	0.006
Feb	5.665	0	0	5.335	0	0.33	0.15	0	0	0	0
Mar											
Apr											
May											
Jun											
Sub-total	16.197	0	0	14.757	0	1.44	0.35	0	0	0	0.006
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	16.197	0	0	14.757	0	1.44	0.35	0	0	0	0.006

			Forecast of Tota	al Quantities of C	C&D Materials to	be Generated fron	n the Contract*			
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000m ³)
283.5	35.1	47.5	107	32	24	60	1	1	1	10

Notes:

- (1) The performance targets are given in PS Clause 25.01F(14).
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- * (4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (PS Clause 25.01E(4)(b) refers). [Delete Note (4) and the table above on the forecast, where inapplicable].

Summary Table for Work Processes or Activities Requiring Timber for Temporary Works

Contract No.	:	DC/2007/08	Date:	:	01 March 2010
	-			-	

Contract Title: DRAINAGE IMPROVEMENT WORKS AT TAI PO TIN, PING CHE, MAN UK PIN & LIN MA HANG

Item No.	Description of Works Process or Activity [see note (a) below]	Justifications for Using Timber in Temporary Construction Works	Est. Quantities of Timber Used (m ³)	Actual Quantities used (m³)	Remarks
	Construction of inlet chambers and access ramps of at channel TKL07	Wall & base slab formwork of ramp 2, 3 & 4 and wall of inlet chambers	7.5	7	
	Construction of retaining wall of at upstream of channel TKL07.	Wall of bay 6	2.7	3	
	Construction of access ramp at channel MUP05	Wall & base slab formwork	2.8	3.2	
	Construction of inlet chambers and footbridge of at channel MUP02	Base slab formwork of footbridge and wall of inlet chamber.	3.6	4.0	
5	Construction of inlet chambers at channel TKL02	Wall formwork	1.8	2.5	
		Total Estimated Quantity of Timber Used	18.4		

Notes:

- The Contractor shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.
- The summary table shall be submitted to the Engineer's Representative monthly together with the Waste Flow Table for review and monitoring in accordance with the PS Clause 25.01E(5).

APP25.5-1 DC/2007/08



Appendix N

Response to Comments



DSD Contract DC/2007/08 – Drainage Improvement Works at Tai Po Tin, Ping Che, Man Uk and Lin Ma Hang

1st Response to IEC Comments – EM&A Report (Designated Project)

Item	Section / Paragraph	Comment	Response
1	Section 5.1, Table 5-2	Please clarify the dates for the first and last 24-hrs TSP monitoring events.	The dates of 24-hr TSP should be on 30 Jan, 5 Feb, 11 Feb and 20 Feb 2010. The schedule is corrected and updated
2	Section 5.4 (Whole section)	Please update the information about ecology monitoring in this reporting period.	Amended.
3	Section 6.6.4 and 7	"The water implemented mitigation measures such as sand bags downstream" is recommended to be written as "The water implemented mitigation measures such as stacking of sand bags at downstream".	Amended.
4	Appendix J	Please update the meteorological data since it did not related to those of Ta Kwa Ling Station.	Revised.
5	Appendix G	There were 24-hr TSP and construction noise monitoring conducted on 12 Feb 2010, please update the monitoring schedule accordingly.	The dates of 24-hr TSP should be on 30 Jan, 5 Feb, 11 Feb and 20 Feb 2010. The schedule is corrected and updated
6	Appendix H	One of the data tables for water quality has been split, please reset the table for better vision.	Amended.