

**PROJECT NO.: TCS00371/07** 

DRAINAGE SERVICES DEPARTMENT (DSD) CONTRACT NO. DC/2006/02

YUEN LONG, KAM TIN, NGAU TAM MEI AND TIN SHUI WAI DRAINAGE IMPROVEMENTS, STAGE 1, PHASE 2B – CHEUNG CHUN SAN TSUEN AND KAM TSIN WAI

KT15 - Monthly EM&A Report for September 2007 (No. 3)

(Revision: 1)

PREPARED FOR
Chit Cheung Construction Company Limited

#### **Quality Index**

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# **Executive Summary**

- ES.01 Chit Cheung Construction Company Limited (CCC) has been awarded the Drainage Services Department (DSD) Contract No. DC/2006/02 Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B Cheung Chun San Tsuen and Kam Tsin Wai (hereinafter "the Project") on 03 April 2007. According to the contract specification requirements an Environmental Monitoring & Audit program to be implemented by an Independent Environmental Team (ET) throughout the contract period.
- ES.02 Under the Project Profile for Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai, Drainage Improvement Stage 1 Phase 2B Kam Tin Secondary Drainage Channels KT14 & KT15 (Ref.: 382047/E/PP/Issue 5), KT14 & KT15 was defined as Designated Project and governed by Environmental Permit (EP-231/2005/A).
- ES.03 Action-United Environmental Services and Consulting (AUES) has been commissioned by CCC to be an Independent Environmental Team (ET) to implement the EM&A program in compliance with the requirements as stated in the Environmental Permit (EP-231/2005/A) and Environmental Monitoring &Audit Manual (EM&A Manual) for Secondary Channel KT14 & KT15 (August 2005). For this Contract (DC/2006/02) only covered KT15 and KT14 will carried out under other contract.
- ES.04 This is Monthly EM&A Report for September 2007 (No. 3) reporting the environmental impact monitoring and audit (EM&A) results of the project EM&A program for the reporting month **September 2007** during the period from 26 August to 25 September 2007.

#### **Breach of Action and Limit (AL) Levels**

ES.05 One Limit Level exceedance was recorded in ecology during this reporting period. The wetland dependent bird number and individual number recorded fell within the limit level, but the non-compliance was not considered to be caused by the project, as the major construction works have not commenced. No Action/Limit Level exceedance was recorded for air, noise and stream water in this reporting period.

#### **Complaints Log**

ES.06 No environmental complaint was received in this reporting period.

#### **Notifications of Any Summons and Successful Prosecutions**

ES.07 There was no environmental summons or successful prosecution was recorded in this reporting period.

#### **Reporting Changes**

ES.08 There are no changes to be reported in this reporting period.

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# **Future Key Issues**

ES.09 Construction activities to be undertaken in October 2007 included Open sea dumping of contaminated material, construction and excavation works, installation of geotechnical instruments, installation of steel tank at Berthing Area of portion 7, construction of temporary entrance at portion 5, tree protection and tree transplanting works, construction of temporary noise barrier along ch.504 to ch.590 of portion 5, construction of hoarding at CH221 to 276 of portion 5, carrying out joined survey and utilities companies liaison. Potential environmental impacts for this project generally include air quality, noise, ecology, surface runoff and construction waste. The contractor shall properly implement the required environmental mitigation measures as per the Implementation Schedule in the EM&A manual to ensure no significant adverse environmental impact arises from the construction works. The contractor was reminded to maintain good house-keeping throughout the construction phase.

# EM&A Activities in the Reporting Period

ES.10 A summary of the monitoring activities in this reporting period is listed below:

•	1-Hour TSP Monitoring	15	<b>Events</b>
•	24-Hour TSP Monitoring	6	<b>Events</b>
•	Noise Monitoring	5	<b>Events</b>
•	Stream Water Quality	18	<b>Events</b>
•	Ecology (Fauna)	1	Event
•	Site Inspection Audit	4	Times

# **Air Quality**

ES.11 No Action or Limit Level of 1-Hour and 24-Hour TSP exceedance was recorded in this reporting period.

#### **Construction Noise**

ES.12 No exceedance in construction noise measurements was recorded and no construction noise complaint was received in this reporting period.

#### **Stream Water Quality**

ES.13 No exceedance in stream water quality was recorded in the reporting period.

# **Ecology (Fauna)**

ES.14 One Limit Level exceedance was found in the wetland dependent bird number and individual number recorded during the reporting period. But it was not considered a consequence of the project as the major construction works for the project have not commenced.



# **Summary of Monitoring Exceedances**

ES.15 A summary of monitoring exceedances in this reporting period of air quality, noise, stream water quality and ecology (fauna) monitoring are presented below:

Env. Quality	Parameters	Work-Related Exceedance %	Investigation & Corrective Actions
Air Quality	1-Hour TSP	0	Not Required for 0% Exceedance
	24-Hour TSP	0	Not Required for 0% Exceedance
Noise	Leq (30min) Daytime	0	Not Required for 0% Exceedance
Stream Water	Dissolve Oxygen (DO)	0	Not Required for 0% Exceedance
	Suspended Solids (SS)	0	Not Required for 0% Exceedance
	Turbidity (NTU)	0	Not Required for 0% Exceedance
	pН	0	Not Required for 0% Exceedance
	Ammonia Nitrogen	0	Not Required for 0% Exceedance
	Zinc	0	Not Required for 0% Exceedance
Ecology	Wetland Bird	0	Not Required for 0% Exceedance



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# 1.0 INTRODUCTION

- 1.01 Chit Cheung Construction Company Limited (CCC) has been awarded the Drainage Services Department (DSD) Contract No. DC/2006/02 Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B Cheung Chun San Tsuen and Kam Tsin Wai (hereinafter "the Project") on 03 April 2007. According to the contract specification requirements the Project should implemented an Environmental Monitoring & Audit (EM&A) program by an Independent Environmental Team (ET) throughout the construction period in compliance with the requirements as stated in the project particular specification, Environmental Permit (EP-231/2005/A) and EM&A Manual for KT15. The location of the project site is presented in **Appendix A**. The project construction program is presented in **Appendix B**.
- 1.02 The works to be executed at the propose drainage Channel KT15 mainly comprise the following:
  - Construction of about 0.8 km secondary drainage channels;
  - Construction of DSD maintenances access;
  - Provisioning and re-provisioning of pedestrian crossings;
  - Associated ancillary works; and
  - Construction of temporary vehicular access in Portion 5A1 of the site for vehicular access from Kam Sheung Road to Lot Nos. 398RP, 395 in DD106 which are adjacent to the site.
- 1.03 Action-United Environmental Services and Consulting (AUES) has been commissioned by CCC to be the Independent Environmental Team (ET) for implementation of the EM&A program in accordance with the requirements as set out in the contract particular specification, Environmental Permit (EP-231/2005/A), EM&A Manual for KT15 and the Environment Impact Assessment Ordinance (EIAO).
- 1.04 This report presents the results of the project EM&A program for the reporting month **September 2007** during the period from 26 August to 25 September 2007.

#### REPORT STRUCTURE

- 1.05 The EM&A report is structured into the following sections:
  - **Section 1** Introduction
  - **Section 2** Project Organization and Construction Progress
  - **Section 3** Summary of Monitoring Requirements
  - **Section 4** Impact Monitoring Methodology
  - **Section 5** Impact Monitoring Results
  - **Section 6** Waste Management
  - **Section 7** Site Inspection
  - **Section 8** Environmental Complaint and Non-Compliance
  - **Section 9** Implementation Status of Mitigation Measures
  - **Section 10** Impact Forecast
  - **Section 11** Conclusions



#### 2.0 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

#### PROJECT ORGANIZATION AND MANAGEMENT STRUCTURE

2.01 The organization chart and lines of communication with respect to the on-site environmental management and monitoring program are shown in **Appendix C**.

#### **CONSTRUCTION PROGRESS**

- 2.02 The major construction activities undertaken in this reporting period are list below:-
  - Provision of temporary entrance at portion 5;
  - Construction of temporary noise barrier along ch.230 to ch.327 of portion5;
  - Construction of hoarding at ch.419 and ch.427 of portion5;
  - Installation of geotechnical instruments;
  - Channel wall construction at ch.290 of portion 5;
  - Tree protection and tree transplanting works;
  - Site Clearance work;
  - Construction and excavation works at portion 5;
  - Utilities companies liaison and underground utility ducting detection; and
  - Carrying out joined survey.

# SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.03 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project in this reporting period is presented in **Table 2-1**.

Table 2-1 Status of Environmental Licenses and Permits

Item	Item Description	License/Permit Status
1	Environmental Permit (EP-231/2005/A)	-
2	Air Pollution Control (Construction Dust)	Notified EPD on 09 July 2007
3	Chemical Waste Producer Registration WPN:5296-519-C3430-01 (Portion 8, Ma Fung Ling Road, Tong Yan San Tsuen, Yuen Long)	
4	Chemical Waste Producer Registration WPN:5113-533-C3434-09 (Kam Tsin Wai, Kam Tin, Yuen Long)	Registration on 20 April 2007
5	Chemical Waste Producer Registration WPN:5213-424-C3431-01 (Portion 7, Birthing Area, Hoi Wan Road, Tuen Mun)	Registration on 20 April 2007
6	Water Pollution Control Ordinance (Discharge License) License No.: 1U450/1	Obtained on 20 July 2007
7	Billing Account for Disposal of Construction Waste (Account Number: 7005311)	Valid on 07 May 2007
8	Dumping at Sea Permit of Type II Contaminated Material (Permit No. EP/MD/08-044)	Obtained on 20 September 2007



# 3.0 SUMMARY OF IMPACT MONITORING REQUIREMENTS

- 3.01 Environmental monitoring and audit requirements are set out in the EM&A Manual. Air quality, construction noise, stream water quality and ecology have been identified to be the key environmental issues during the construction phase of the project.
- 3.02 A summary of the EM&A requirements for air quality, construction noise, stream water quality and ecology monitoring are shown in **Table 3-1**. The designated station of the air quality, construction noise, stream water quality locations and ecology monitoring area are shown in **Appendix D**.

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

Environmental Aspect	I	Monitoring Stations	
Air Quality	1-Hour and 24-Hour To	SP	A10
Construction Noise	Leq <sub>(30min)</sub> during norma	l working hours	N10a*
	Supplementary data of	$L_{10}$ and $L_{90}$ for reference.	
Stream Water Quality	In Situ Measurement	Dissolved Oxygen Concentration (mg/L);	W9A & W9B
		<ul> <li>Dissolved Oxygen Saturation (% Sat);</li> </ul>	
		Turbidity (NTU);	
		• pH;	
		• Salinity (%); Water Depth (m) and	
		• Temperature (°C).	
	Laboratory Analysis • Suspended Solids (mg/L);		
	<ul> <li>Ammonia Nitrogen (mg/L); and</li> </ul>		
	<ul> <li>Zinc (μg/L).</li> </ul>		
Ecology	Monthly monitoring of construction activities adjacent to the wetland areas to identify any intrusions of construction activities into the wetland areas;  Monthly monitoring of wetland areas themselves to check that there is no adverse impact on the wetlands as a consequence of changes to the		
	water table that are attr		
	Photographic records a		
	•	una in the wetland areas during the wet season ive) for reptiles, amphibians, dragonflies, and	
	butterflies, and through		

Note: \* The noise ambient condition within the victim area without significant change. Due to the accessibility, noise monitoring will undertake at N10a. Once the access is available, the impact noise monitoring will undertake at N10.

- 3.03 Air monitoring is carried out once every six days for 24-Hour TSP and 3 times every six days for 1-Hour TSP at one designated monitoring station A10.
- 3.04 Noise monitoring is conducted once per week at one designated monitoring location (N10a). Measurements of  $Leq_{(30min)}$  shall be taken between 0700 and 1900 with supplementary  $L_{10}$  and  $L_{90}$  data will be collected for reference.
- 3.05 Stream water quality monitoring is conducted were undertaken at two location W9A & W9B twice per week. Dissolved Oxygen (DO), pH, Turbidity (NTU) were measured in-situ, water depth, temperature and salinity will be collected for relevant data. Suspended Solids (SS), Ammonia Nitrogen and Zinc were determined in a HOKLAS accredited laboratory respectively.
- 3.06 Ecological monitoring is conducted in the seasonal wetland area as shown in Project profile of KT15 Figure ATT 4-7.2). Bird survey should be conducted in monthly and other faunal groups (reptiles, amphibians, dragonflies and butterflies) are conducted in wet season (April to July inclusive).



3.07 A summary of the Action/Limit (A/L) Levels for air quality, construction noise, stream water quality and ecology are shown in **Tables 3-2, 3-3, 3-4** and **3-5.** 

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

Monitoring Station	Action Level (μg/m³)		Limit Level (µg/m³)	
Withitto ing Station	1-Hour TSP	24-Hour TSP	1-Hour TSP	24-Hour TSP
A10	> 307	> 165	> 500	> 260

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

Time Period	Action Level in dB(A)	Limit Level in dB(A)	
0700-1900 hrs on normal weekdays	When one or more documented	> 75* dB(A)	
0700 1700 ms on normal weekdays	complaints are received	> 13 GB(11)	

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

Table 3-4 Action and Limit Levels for Stream Water Quality Monitoring

Dissolved Oxygen (mg/l)	W9A (Upstream) <sup>#</sup>	W9B (Downstream)
Action Level	NA	0.3
Limit Level	NA	0.2
Turbidity (NTU)	W9A (Upstream) <sup>#</sup>	W9B (Downstream)
Action Level	NA	73.5*
Limit Level	NA	78.2**
pН	W9A (Upstream) <sup>#</sup>	W9B (Downstream)
Action Level	NA	7.0*
Limit Level	NA	7.1**
·		
Suspended Solids (mg/L)	W9A (Upstream) <sup>#</sup>	W9B (Downstream)
Action Level	NA	148*
Limit Level	NA	159**
Ammonia Nitrogen (mg/L)	W9A (Upstream) <sup>#</sup>	W9B (Downstream)
Action Level	NA	30.91*
Limit Level	NA	32.20**
<u> </u>		•
Zinc (μg/L)	W9A (Upstream)#	W9B (Downstream)
Action Level	NA	242*
Limit Level	NA	252**

Notes: \* Act as Control Station for the Impact Water Quality Monitoring.

Table 3-5 Action and Limit Levels for Construction Ecology Monitoring

Parameters	Action Level	Limit Level
Bird: decrease in the total number of wetland dependent bird species or individuals of the wetland dependent bird species from baseline		> 40% of 1.2 individuals and 3 species

3.08 The Event/Action Plan of air quality, construction noise, stream water quality and ecology has been implemented for this project. Details of the Event/Action Plan were presented in the **Appendix E**.

<sup>\*</sup> Alternative Action Level of the Turbidity, pH, Suspended Solid, Ammonia Nitrogen and Zinc are 120% of upstream control station of same day.

<sup>\*\*</sup> Alternative Limit Level of the Turbidity, pH, Suspended Solid, Ammonia Nitrogen and Zinc are 130% of upstream control station of same day.



## 4.0 IMPACT MONITORING METHDOLOGY

#### MONITORING LOCATIONS

4.01 The 1-Hour TSP and 24-Hour TSP monitoring was carried out at one designated station A10. Impact construction noise monitoring was undertaken at the designated location N10a. Stream water quality monitoring was undertaken at two designated locations (W9A & W9B). The ecology monitoring was conducted within the wetland area in according to the EM&A Manual of KT15. The descriptions of monitoring stations are presented in **Tables 4-1.** The geographically location are shown in **Appendix D**.

Table 4-1 Location of Air Quality, Noise & Stream Water Quality Monitoring Station/Locations

Air Quality Station			
A10	Village House in Tin Sam San Tsuen		
<b>Construction Noise</b>	Construction Noise Location		
N10*	Village House in Tin Sam San Tsuen		
N10a	Village House in Tin Sam San Tsuen		
Water Quality Loca	ions		
W9A <sup>#</sup>	Tin Sam San Tsuen		
W9B	Tin Sam San Tsuen		

Note: \* The noise ambient condition within the victim area without significant change. Due to the accessibility, noise monitoring will undertake at N10a. Once the access is available, the impact noise monitoring will undertake at N10

4.02 The meteorological data during the reporting period was obtained from the Lau Fau Shan Station of the Hong Kong Observatory (HKO).

### MONITORING FREQUENCY AND PERIOD

#### 1-HOUR TSP MONITORING

4.03 The 1-Hour TSP monitoring was conducted in designated station A10 in according to the EM&A Manual three times every 6 days. Total of 15 monitoring events were carried out in this reporting period.

## **24-HOUR TSP MONITORING**

4.04 The 24-Hour TSP monitoring was conducted at station A10 once every six days. Total of 6 monitoring events were carried out in this reporting period.

#### **NOISE MONITORING**

4.05 Impact noise monitoring was undertaken at one location N10a once per week. Total of 5 monitoring events were carried out in this reporting period.

# STREAM WATER QUALITY MONITORING

4.06 The stream water quality monitoring were undertaken at two locations W9A & W9B two time per week. Total of 18 monitoring events were carried out in this reporting period.

<sup>#</sup> Act as control station in impact monitoring

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# **ECOLOGY MONITORING**

4.07 Bird survey should be conducted in monthly and other faunal groups (reptiles, amphibians, dragonflies and butterflies) are conducted in wet season (April to July inclusive) in the seasonal wetland area.

#### MONITORING EQUIPMENT

**Table 4-2** 

4.08 The monitoring equipment used by the ET in the EM&A program is presented in the following table:

Monitoring Equipment Used in EM&A Program

<b>Parameters</b>	Equipment	Monitoring Equipment				
1-Hour TSP	Portable dust meter	Sibata LD-3 Laser Dust Meter				
24-Hour TSP	High Volume Sampler	Grasby Anderson GMWS 2310 HVS / Tisch High Volume Sampler 515N				
	Calibration Kit	TISCH Model TE-5028A				
Leq30min	Integrating Sound Level Meter (Type1)	B&K Type 2238				
	Calibrator	B&K Type 4231				
	Portable Wind Speed Indicator	Testo Anemometer				
Water Depth	Water Depth Detector	Eagle Sonar				
Temperature	Thermometer & DO Meter	YSI 85/10FT				
DO	Thermometer & DO Meter	YSI 85/10FT				
pН	pH Meter	Hanna HI 98128				
Turbidity	Turbidimeter	Hach 2100P				
Salinity	Salinometer	ATAGO refractometer				
-	Water Sampler	Teflon bailer / bucket				
-	Sample Container	High density polythene bottles (provided by laboratory)				
-	Storage Container	'Willow' 33-litter plastic cool box				

# **24-HOUR TSP MONITORING**

- 4.09 24-Hour TSP monitoring was carried out by a High Volume Sampler (HVS) in compliance with the USEPA Standards Title 40, Code of Federal Regulations Chapter 1 (Part 50) specifications. The HVS employed complied with the PS specifications including.
  - Power supply of 220v/50 hz for 24-Hour continuous operation;
  - 0.6-1.7 m<sup>3</sup>/min (20-60 SCFM) adjustable flow rate;
  - A 7-day mechanical timer for 24-Hour operation;
  - An elapsed time indicator with  $\pm 2$  minutes accuracy for 24-Hour operation;
  - Minimum exposed area of 63 in<sup>2</sup>;
  - Flow control accuracy of  $\pm 2.5\%$  deviation over 24-Hour operation;
  - An anodized aluminum shelter to protect the filter and sampler;
  - A motor speed-voltage control to control mass flow rate with accuracy of ±2.5% deviation over 24-Hour sampling period;
  - Provision of a flow recorder for continuous monitoring;
  - Provision of a peaked roof inlet;
  - Incorporation with a manometer; and
  - An 8"x10" stainless steel filter holder to hold, seal and easy to change the filter paper.
- 4.10 The filter papers used in 24-Hour TSP monitoring were of size 8"x10" and provided by a local HOKLAS-accredited laboratory, ALS Techichem Pty (HK) Limited (HOKLAS No. 66). The filters papers after measurements were returned to the laboratory for the required treatment and analysis.



## 1-HOUR TSP MONITORING

4.11 Measurements of 1-Hour TSP monitoring were taken by a Sibata LD-3 Laser Dust Meter that is a portable and battery-operated laser photometer capable of performing real time 1-Hour TSP measurements. A comparison test with HVS was carried out prior to baseline monitoring in compliance with the EM&A requirements and a conversion factor for direct reading of the dust meter has been established.

# WIND DATA MONITORING

4.12 The meteorological data during the reporting period was obtained from the Lau Fau Shan Station of the Hong Kong Observatory (HKO).

#### **NOISE MONITORING**

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

# **STREAM WATER QUALITY MONITORING**

#### Water Depth

- 4.17 Water quality monitoring will be conducted at the middle of the water columns (Mid-Depth) if the depths of the water columns at the sampling locations are less than 3 meters during monitoring. Or else, monitoring will be performed at two depths, at 1 meter from surface and bottom respectively when the water depth is less than 6m.
- 4.18 Water depths will be determined prior to measurement and sampling at W9A and W9B, using a portable battery operated depth detector, brand named 'Eagle Sonar', if the depths exceed 3 meter. For the depths well below 1 meter, an appropriate steel ruler or rope with appropriate weight will be used for the depth estimation.

#### Water Temperature

4.19 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 will be recorded in the field data sheets. Calibration of the equipment will be regularly performed by ALS on quarterly basis.



# Dissolved Oxygen (DO)

- 4.20 A portable YSI 85/10FT DO Meter will be 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.
- 4.21 Although the DO Meter automatically compensates ambient water temperature to a standard temperature of 200°C for ease of comparison of the data under the changing reality, the temperature readings of the DO Meter will be recorded in the field data sheets. Calibration of the equipment will be regularly performed by ALS on quarterly basis.

#### pH

4.22 A portable Hanna pH Meter will be 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 at least pH7 and pH10 shall be used for calibration of the instrument before and after use. Calibration of the equipment will be regularly performed by ALS on quarterly basis.

# **Turbidity**

4.23 A portable Hach 2100p turbidity Meter will be used for in-situ turbidity measurement. The turbidity meter is capable of measuring turbidity in the range of 0 – 1000 NTU. Calibration of the equipment will be regularly performed by ALS on quarterly basis.

#### Salinity

4.24 A portable salinometer capable of measuring salinity in percentage (g/L) will be used for measuring salinity of the water at each monitoring location.

# Water Sampler

4.25 Water samples will be collected by the ET using a water sampler and 'PE' (Poly-Ethylene) sampling bottles provided by the laboratory. The water sampler will be rinsed before collection with the sample to be taken. Kahlsico Water Sampler will be used for sampling. One liter or 1000mL water sample will be collected from each depth for SS determination. The samples collected are stored in a cool box maintained at 40°C and delivered to ALS upon completion of the sampling by end of each sampling day. Sampling in the stream with shallow water condition, plastic bucket will be used for sample collection.

#### Sample Container

4.26 Water samples will be contained in screw-cap PE (Poly-Ethylene) bottles, which will be provided and pretreated immediately prior to sampling according to HOKLAS quality requirements by ALS. The sampling bottles will be rinsed with the water to be contained. Water sample is then transferred from the sampler to the sample bottles to 95% bottle capacity to allow possible volume changes during delivery and storage.



# Sample Storage

- 4.27 A 'Willow' 33-litter plastic cool box packed with ice will be used to preserve the collected water samples prior to arrival at the laboratory for SS determination. The water temperature of the cool box will be maintained at a temperature as close to 4°C as possible without being frozen. Samples collected will be delivered to the laboratory upon collection.
- 4.28 DO, water temperature, turbidity, pH, salinity and water depth were measured in-situ whereas SS, Ammonia Nitrogen and Zinc were determined in a HOKLAS accredited laboratory (ALS).

# **ECOLOGY MONITORING**

#### Study Area

4.29 The study area for the ecological monitoring programme for KT15 covers the seasonal wetland area as shown in Project Profile of KT15 Figures ATT 4-7.2.

#### Survey Method

- 4.30 Monthly monitoring was conducted by means of walk through survey, along the boundary and within the wetland areas in KT15. Any adverse impacts to the habitat, intrusions of construction activities into the wetland areas, and adverse changes in the wetlands were checked and reported if any.
- 4.31 Photographic records on the fixed photo record points selected during the baseline survey are made every six months. The photos from the construction phase ecological monitoring will be compared with those taken during the baseline which are used as the baseline conditions.
- 4.32 Bird monitoring was conducted in the study areas monthly for KT15. Survey areas in KT15 was the seasonal wetland area covered same as the Project Profile of KT15 Figures ATT 4-7.2.
- 4.33 Fauna monitoring is conducted only during the wet season (April to July inclusive for KT15) in the same survey areas for bird monitoring. For KT15, the survey frequency is monthly, and the surveys cover reptiles, amphibians, dragonflies and butterflies.

# **Equipment**

4.34 Standard portable field survey equipment was used for ecological monitoring, including 1) Binoculars of 10 x 40 magnification; 2) Digital camera; 3) Notebook; and/or 4) Butterfly net (when it is necessary to confirm identities of butterflies and dragonflies).

#### **EQUIPMENT CALIBRATION**

4.35 Initial calibration of the HVS was performed upon installation and thereafter at bi-monthly intervals in accordance with the manufacturer's instruction using the NIST-certified standard calibrator. The calibration data are properly documented and the records are maintained by ET for future reference.

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concentration by HVS.

- 4.36 The 1-Hour TSP meter was calibrated by the supplier prior to purchase. Zero response of the equipment is checked before and after each monitoring event. A comparison test was carried out with a HVS. A conversion factor (K) of 4.0 was generated in accordance with the equipment manufacturer's instruction. The meter counts in minutes multiplied by the conversion factor will generate the equivalent dust
- 4.37 The sound level meters are calibrated using an acoustic calibrator prior to and after measurements. The meters are regularly calibrated in accordance with the manufacturer's instructions. Prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements are considered valid only if the calibration levels before and after the noise measurement agree to within 1.0 dB.
- 4.38 All in-situ monitoring instruments are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at 3 monthly intervals throughout all stages of the water quality monitoring.
- 4.39 The calibration certificates of the monitoring equipment used during the impact monitoring program are attached in **Appendix F**.

#### ANALYTICAL LABORATORY

4.40 Our ET has commissioned a local HOKLAS-accredited laboratory, ALS Technichem (HK) Pty Ltd (HOKLAS No. 66) to provide analytical services for this project. ALS carried out sample and analysis control in accordance with the HOKLAS QA/QC requirements. The specified testing services provided by ALS as shown in **Table 4-3**.

Table 4-3 Analytical Method applied to Water Quality Samples

Determinant	Standard Method	<b>Detection Limit</b>
Suspended Solids	ALS Method EA025	2 mg/L
Ammonia Nitrogen	ALS Method EK055A	0.01 mg/L
Zinc	ALS Method EG020	10 μg/L

4.41 The analysis of suspended solids, ammonia nitrogen and zinc concentrations were follow the APHA Standard Methods for the Examination of Water and Wastewater 19ed 2540D. ALS Environmental has comprehensive quality assurance and quality control programs and has attained HOKLAS accreditation for a range of environmental testing. For QA/QC procedures, one duplicate sample for every batch of samples were analyses as required by the HOKLAS. The QA/QC results are presented in **Appendix H**.

# DATA MANAGEMENT AND DATA QA/QC CONTROL

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



- 4.43 The monitoring data recorded in the equipment e.g. 1-Hour TSP meters and noise meters are downloaded directly from the equipment 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.
- 4.44 For monitoring activities require laboratory analysis, the local laboratory follows the QA/QC requirements as set out under the HOKLAS scheme for all laboratory testing.



# 5.0 IMPACT MONITORING RESULTS

5.01 The impact EM&A program was carried out by the ET in compliance with the project specific EM&A Manual in this reporting period. The impact monitoring schedules are presented in **Appendix G** and the monitoring results are detailed in the following sub-sections.

# **AIR QUALITY**

5.02 The 1-Hour and 24-Hour TSP impact air quality monitoring data are summarized in **Tables 5-1** and **5-2**. Graphical plots of the monitoring results are shown in **Appendix H** respectively.

Table 5-1 Summary of 1-Hour TSP Monitoring Results at A10

Monitoring Date	Start Time	1 <sup>st</sup> Result (μg/m <sup>3</sup> )	2 <sup>nd</sup> Result (μg/m <sup>3</sup> )	3 <sup>rd</sup> Result (μg/m <sup>3</sup> )	Action Level (µg/m³)	Limit Level (µg/m³)
30-Aug-07	13:03	37	43	54	> 307	> 500
5-Sep-07	9:22	143	126	138	> 307	> 500
11-Sep-07	9:21	84	92	98	> 307	> 500
17-Sep-07	13:15	262	254	279	> 307	> 500
22-Sep-07	9:08	174	192	207	> 307	> 500

Note: \* Monitoring result was exceeded the Action Level # Monitoring result was exceeded the Limit Level

Table 5-2 Summary of 24-Hour TSP Monitoring Results at A10

<b>Monitoring Date</b>	Monitoring Results (μg/m³)	Action Level (μg/m³)	Limit Level (µg/m³)
28-Aug-07	36	> 165	> 260
3-Sep-07	24	> 165	> 260
8-Sep-07	71	> 165	> 260
14-Sep-07	85	> 165	> 260
20-Sep-07	164	> 165	> 260
25-Sep-07	21	> 165	> 260

Note: \* Monitoring result was exceeded the Action Level

- # Monitoring result was exceeded the Limit Level
- 5.03 No 1-Hour and 24-Hour TSP Action or Limit Level exceedance was recorded in this reporting period.
- 5.04 The meteorological data during the monitoring period are summarized in **Appendix I**.



## **CONSTRUCTION NOISE**

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5.05 The impact construction noise monitoring results are summarized in **Table 5-3**. Graphical plots of the monitoring data are presented in **Appendix H**.

Table 5-3 Summary of Noise Monitoring Results at N10a

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6 <sup>th</sup> Leq5	Leq30
30-Aug-07	13:47	45.4	44.5	49.2	49.6	48.4	46.7	47.7
5-Sep-07	9:41	50.7	47.7	55.5	46.7	43.9	54.7	51.7
11-Sep-07	10:00	44.4	45.9	44.1	45.1	45.0	42.1	44.6
17-Sep-07	10:45	48.0	43.4	43.4	45.2	48.5	44.3	46.0
22-Sep-07	11:23	46.1	48.0	48.7	49.8	49.3	49.4	48.7
Limit Level -					> 75 dB(A)			

Note: \* The noise ambient condition within the victim area without significant change. Due to the accessibility, baseline monitoring will undertake at N10a. The impact monitoring will undertake at N10 once the access is available.

5.06 No construction noise exceedance (Action/Limit Level) was recorded in this reporting period.

# STREAM WATER QUALITY

5.07 The stream water quality monitoring results are summarized in **Table 5-4**. Details of the monitoring results and graphical plots for each parameter are presented in **Appendix H**.



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Table 5-4 Summary of Stream Water Quality Results at W9A & W9B

Monitoring	DO in	mg/L	Turbidit	ty (NTU)	p	H	SS in	mg/L	Ammoni	ia (mg/L)	Zinc (	(μg/L)
Date	<b>W9A</b> <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B
27-Aug-07	1.4	1.8	23.5	11.3	7.9	7.7	19	12	33.40	7.19	42	26
30-Aug-07	3.1	2.8	8.8	27.7	7.8	7.7	9	22	12.80	9.07	22	54
5-Sep-07	3.3	3.8	41.9	25.4	7.8	7.7	49	22	47.80	6.82	123	43
7-Sep-07	1.9	2.6	151.0	19.8	7.7	7.3	115	10	52.40	6.08	210	34
11-Sep-07	1.2	1.5	239.5	18.1	7.9	7.8	119	18	293.00	11.30	546	47
13-Sep-07	2.0	0.8	17.9	36.6	7.8	7.7	20	71	122.00	4.84	186	73
17-Sep-07	0.7	1.3	209.5	21.2	7.8	7.8	26	4	122.00	10.90	186	56
22-Sep-07	2.2	2.1	89.9	14.9	7.9	7.8	99	18	50.90	10.20	170	56
24-Sep-07	3.1	3.3	10.5	35.9	7.7	7.9	10	30	5.90	3.10	37	71
Action Level	-	< 0.3*	-	> 73.5*	-	> 7.0*	-	> 148*	-	> 30.91*	-	> 242*
Limit Level	-	< 0.2**	-	> 78.2**	-	> 7.1**	-	> 159**	-	> 32.20**	-	> 252**

Notes: # Act

Act as Control Station for the Impact Water Quality Monitoring.

<sup>\*</sup> Alternative Action Level of the Turbidity, pH, Suspended Solid, Ammonia Nitrogen and Zinc are 120% of upstream control station of same day.

<sup>\*\*</sup> Alternative Limit Level of the Turbidity, pH, Suspended Solid, Ammonia Nitrogen and Zinc are 130% of upstream control station of same day.



#### **ECOLOGY**

- 5.08 28 individuals of birds from 10 species were recorded during the survey for the present monthly monitoring. Among the bird species recorded, none was wetland dependent birds, and no individual from the two wetland bird species with abundance from the baseline (i.e. Cattle Egret and Chinese Pond Heron) was found. Compared with the average abundance of 1.2 individuals and 3 species of wetland dependent birds recorded during the study for the KT15 Project Profile, the species number and the individual number recorded in the present monitoring survey was zero. The wetland dependent bird species number and individual number recorded fell within the limit level for the monitoring requirements for ecology (i.e. decrease in the number of species or individuals > 40% from the baseline).
- 5.09 As the major construction works for the project was not commenced when the survey for the present monthly monitoring were conducted, the site basically remained the same conditions as reported in baseline monitoring report, and no intrusions of construction activities into the wetland areas nor adverse impact on the wetlands was found. Based on the findings on the monthly monitoring of construction activities, the non-compliance in wetland dependent bird species and individual number was not caused by the project.
- 5.10 Photographic records are scheduled in six-month intervals and thus are not required in the present monthly monitoring. Fauna survey is conducted during the wetland season (April to July), and thus are not required in the present monthly monitoring.
- 5.11 Ecology Impact Monitoring Results are presented in the **Table 5-5**.

**Table 5-5 Summary of Ecology Impact Monitoring Results** 

	1	,	
Scientific Name	Common Name	Abundance reported in the project profile	Abundance recorded in the present survey
Birds	L	project prome	one present survey
Bubulcus ibis	Cattle Egret	0.4	
Ardeola bacchus	Chinese Pond Heron	0.8	
Amaurornis phoenicurus	White-breasted Waterhen	Recorded only	
Streptopelia chinensis	Spotted Dove	Recorded only	3
Hirundo rustica	Barn Swallow	Recorded only	
Motacilla alba	White Wagtail	Recorded only	
Pycnonotus jocosus	Red-whiskered Bulbul	Recorded only	6
Pycnonotus sinesis	Chinese Bulbul	Recorded only	4
Lanius schach	Long-tailed Shrike	Recorded only	1
Copsychus saularis	Oriental Magpie Robin	Recorded only	2
Orthotomus sutorius	Common Tailorbird	Recorded only	
Lonchura striata	White-rumped Munia	Recorded only	
Passer montanus	Eurasian Tree Sparrow	Recorded only	5
Sturnus nigricollis	Black-collared Starling	Recorded only	1
Acridotheres cristatellus	Crested Myna	Recorded only	1
Prinia flaviventris	Yellow-bellied Prinia	1	1
Eudynamis scolopacea	Common Koel	1	
Halcyon smyrnensis	White-throated Kingfisher	1	
Garrulax perspicillatus	Masked Laughingthrush	1	
Zosterops japonica	Japanese White Eye	1	
Lonchura punctulata	Scaly-breasted Munia	1	4
Species Number		15 spp. recorded, only 2 species with abundance	10
Individual Number		1.2	28

<sup>\*</sup>Wetland dependent species with the names bolded.



#### **6.0 WASTE MANAGEMENT**

6.01 The waste management was implemented by on-site Environmental Officer or Environmental Supervisor from time to time.

#### **RECORDS OF WASTE QUANTITIES**

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- 6.02 All types of waste arising from the construction work are classified into the following:
  - Construction & Demolition (C&D) Material;
  - Chemical Waste; and
  - General Refuse.
- 6.03 The quantities of waste for disposal in this reporting period are summarized in **Tables** 6-1 and 6-2. Whenever possible, materials were reused on-site as far as practicable.

Table 6-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity	Disposal Location
Broken Concrete (Inert) (m <sup>3</sup> )	0	Public Filling
Reused in this Contract (Inert) (m <sup>3</sup> )	0	N/A
Reused in other Projects (Inert) (m <sup>3</sup> )	0	N/A
Disposal as Public Fill (Inert) (m <sup>3</sup> )	0.364	N/A

Table 6-2 Summary of Quantities of C&D Wastes

Type of Waste	Quantity	Disposal Location
Recycled Metal (kg)	0.65	NA
Recycled Paper / Cardboard Packing (kg)	0	NA
Recycled Plastic (kg)	0	NENT Landfill
Chemical Wastes (kg)	0	License Collector
General Refuses (kg)	182	NENT Landfill

# 7.0 SITE INSPECTION

7.01 According to the EM&A Manual Section 9.1.2, the environmental site inspection should been formulation by ET Leader. ET had carried out the environmental site inspection on 29 August, 06, 12, and 21 September 2007 with the Representatives of the Engineer and the Contractor to evaluate the site environmental performance in this reporting period. The monthly site audit conducted on 12 September 2007 by IEC's representative with the representatives of the Engineer, the Contractor and ET's representative. No non-compliance and four observations were noted.



- 7.02 The details of observation during the site inspections and monthly audit as follows:
  - Fugitive dust emission from the site was observed at CH290 during the site inspection, the Contractor was reminded to provide water spraying or implement the dust suppression on necessary basis;
  - Muddy water discharge into the drainage channel from the sedimentation tank was observed at CH290. The Contractor was reminded to stop the discharge and provide the effective sedimentation or improved the desilting system efficiency before any discharge was undertaken;
  - Rubbish skip at the site office was full, the Contractor was reminded to disposal the general refuse in regular period; and
  - Muddy water discharge from the sedimentation tank was observed at CH200, the Contractor was reminded to improve the desilting system in effective/efficiency condition.
- 7.03 The ET site inspection checklists as shown in **Appendix J**. In general, the construction area of KT15 was kept clean and tidy.

# 8.0 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

### ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

8.01 No environmental complaint, summons and prosecution was received in this reporting period. The statistical summary table of environmental complaint is presented in **Table 8-1**, **8-2** and **8-3**.

**Table 8-1** Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics				
reporting reflect	Frequency	Cumulative	Complaint Nature		
20 – 25 Jul 2007	0	0	NA		
26 Jul – 25 Aug 2007	0	0	NA		
26 Aug – 25 Sep 2007	0	0	NA		

**Table 8-2 Statistical Summary of Environmental Summons** 

Reporting Period	<b>Environmental Summons Statistics</b>					
reporting remot	Frequency	Cumulative	Nature			
20 – 25 July 2007	0	0	NA			
26 Jul – 25 Aug 2007	0	0	NA			
26 Aug – 25 Sep 2007	0	0	NA			

**Table 8-3 Statistical Summary of Environmental Prosecution** 

Reporting Period	<b>Environmental Prosecution Statistics</b>					
Reporting 1 criou	Frequency	Cumulative	Nature			
20 – 25 July 2007	0	0	NA			
26 Jul – 25 Aug 2007	0	0	NA			
26 Aug – 25 Sep 2007	0	0	NA			



# 9.0 IMPLEMENTATION STATUS OF MITIGATION MEASURES

- 9.01 CCC has been implementing the required environmental mitigation measures according to the EM&A Manual of KT15 Mitigation Measures Implementation Schedule.
- 9.02 A summary of environmental mitigation measures generally implemented by CCC in this reporting period is presented as follows;

# **Water Quality**

- Wastewater were appropriately treated by treatment facilities;
- Drainage channels were provided to convey run-off into the treatment facilities;
- Drainage systems were regularly and adequately maintained.

# Air Quality

- Vehicles were cleaned of mud and debris before leaving the site;
- Site vehicles were limited to within 8 km/hr;
- Public roads around the site entrance/exit had been kept clean and free from dust:
- Dust suppression measures were properly provided to reduce dust emission from stockpile.

# **Noise**

- Works and equipment were located to minimise noise nuisance from the nearest sensitive receiver;
- Idle equipments were either turned off or throttled down;
- Some of the Powered Mechanical Equipments were covered or shielded by appropriate acoustic materials if practicable.

#### Waste and Chemical Management

- Wastes were properly segregated into inert and non-inert in appropriate containers/areas;
- Excavated materials were reused where practicable.
- A chemical waste storage area had been provided on site;

# General

• The site was generally kept tidy and clean.



#### 10.0 IMPACT FORECAST

#### **KEY ISSUES FOR THE COMING MONTH**

- 10.01 Key issues to be considered in the coming month include:
  - Implementation of dust suppression measures at all times;
  - Potential wastewater quality impact due to surface runoff;
  - Potential fugitive dust quality impact due to dry/windy season (November to March) from the dry/loose/exposure soil surface/dusty material;
  - Disposal of empty engine oil containers within site area;
  - Ensure dust suppression measures are implemented properly;
  - Sediment catch-pits and silt removal facilities should be regularly maintained;
  - Management of chemical wastes;
  - Discharge of site effluent to the nearby wetland, stockpiling or disposal of materials, and any dredging or construction area at this area are prohibited;
  - Follow-up of improvement on general waste management issues; and
  - Implementation of construction noise preventative control measures.
- 10.02 The tentative 3-month rolling program is presented in **Appendix B**.

#### 11.0 CONCLUSION

11.01 The EM&A program in September 2007 was undertaken in compliance with the EM&A Manual for KT15. A summary of environmental compliance of air, noise, stream water quality and ecology in this reporting period are presented as follows:

#### **Summary of the Exceedances for Impact Monitoring**

Env. Quality	Parameters	Work-Related Exceedance %	Investigation & Corrective Actions
Air Quality	1-Hour TSP	0	Not Required for 0% Exceedance
	24-Hour TSP	0	Not Required for 0% Exceedance
Noise	Leq (30min) Daytime	0	Not Required for 0% Exceedance
Stream Water	DO in mg/L	0	Not Required for 0% Exceedance
	SS in mg/L	0	Not Required for 0% Exceedance
	Turbidity (NTU)	0	Not Required for 0% Exceedance
	pН	0	Not Required for 0% Exceedance
	Ammonia Nitrogen (mg/L)	0	Not Required for 0% Exceedance
	Zinc (µg/L)	0	Not Required for 0% Exceedance
Ecology	Decrease in the total number of species or individuals of wetland dependent bird from baseline	0	Not Required for 0% Exceedance

- 11.02 No 1-Hour and 24-Hour TSP exceeded the Action/Limit Level was recorded in this reporting period.
- 11.03 All measured daytime construction noise levels were below the Limit level and no complaint was received in this reporting period.
- 11.04 No stream water quality exceeded the Action/Limit Level was recorded during the reporting period.



- 11.05 No intrusions into the wetland area/adverse impact on the wetlands was found during the reporting period. Although exceedance on the decrease of wetland dependent bird species number and individual number was recorded for Ecology, it was not caused by the project as the major construction works have not commenced.
- 11.06 No environmental complaint, summons or prosecution was received in this reporting period.

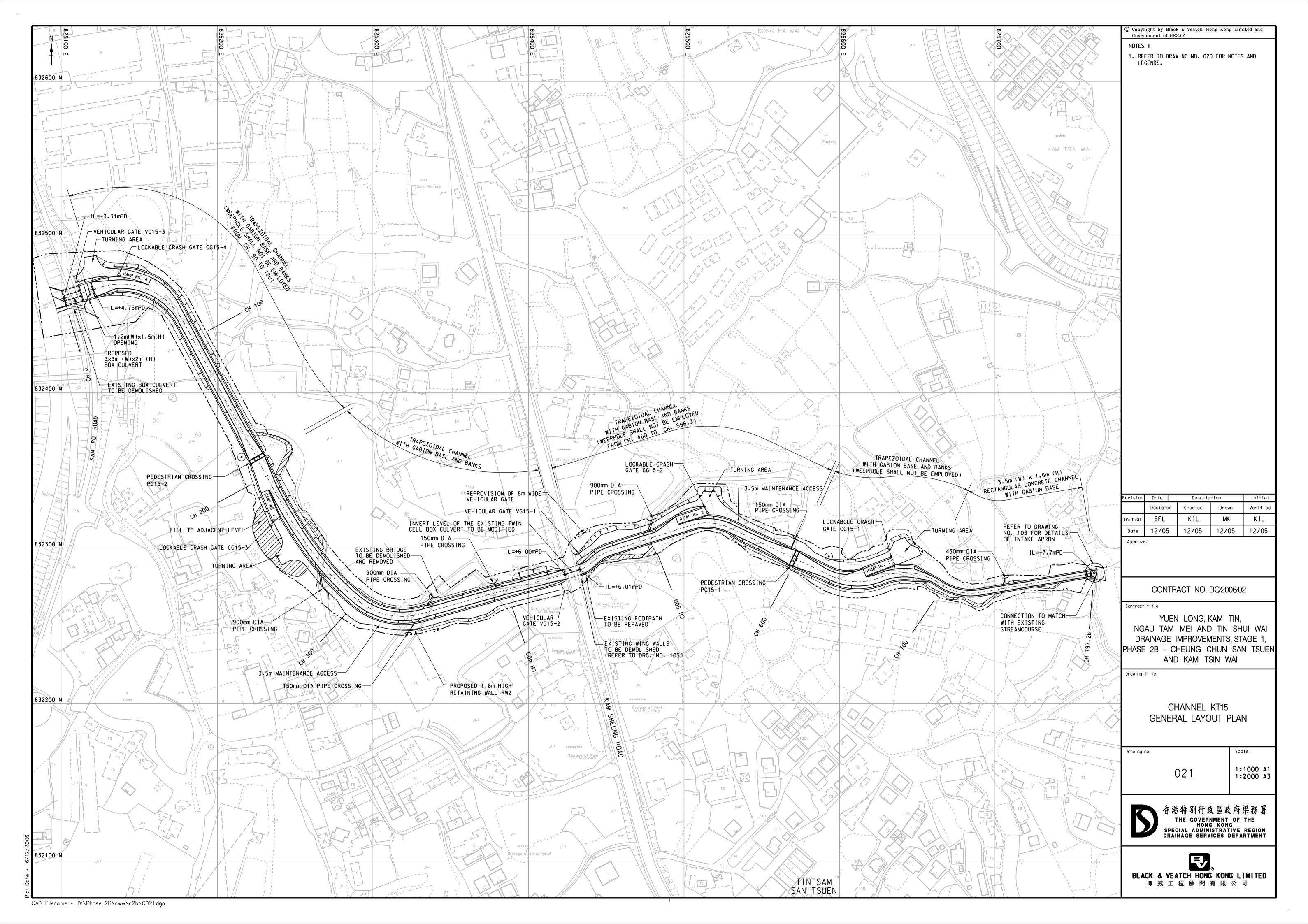
#### RECOMMENDATIONS

- 11.07 Based on the ET regular and monthly IEC site inspection records on 29 August, 06, 12 and 21 September 2007, no non-compliance and four observations were recorded. Details of the observations as follows:-
  - Fugitive dust emission from the site was observed at CH290 during the site inspection, the Contractor was reminded to provide water spraying or implement the dust suppression on necessary basis;
  - Muddy water discharge into the drainage channel from the sedimentation tank was observed at CH290. The Contractor was reminded to stop the discharge and provide the effective sedimentation or improved the desilting system efficiency before any discharge was undertaken;
  - Rubbish skip at the site office was full, the Contractor was reminded to disposal the general refuse in regular period; and
  - Muddy water discharge from the sedimentation tank was observed at CH200, the Contractor was reminded to improve the desilting system in effective/efficiency condition.
- 11.08 The ET will continue to implement the EM&A program and audit the implementation of the environmental mitigation measures.



# Appendix A

**Project Site Layout** 





# Appendix B

**Three-Month Construction Program** 

CHIT CHEUNG CONSTRUCTION CO., LTD. DATE: July 2007

PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

ter of Acceptance ter of Accep	Buration  1 day 839 days 830 days 830 days 90 days 91 days 1 day 91 days 91 days 91 days 91 days 91 days	'07 Mar 21 '07 Mar 30 '07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	Finish  '07 Mar 21  '07 Mar 30  '07 Apr 3  '09 Jul 6  '07 Sep 25  '09 Jul 6  '07 Mar 30 '07 Mar 30 '07 May 29 '07 Jun 28		Aug			<u> </u>		Oct		Nov		Dec	
e for commencement of Works cution of Article of Agreement  Ster Programme of the Works  Completion Dates  Section I - portions 1, 2 and 3 Section II - portions 4, 5 and 5C Section III - portions 5A1, 5A2 and 5B Section IV - temp vehicular access at portion 5A1 Section V - preservation and protection of existing trees  Possession of Site  Portion 1 - channel KT2 Portion 2 - channel KT2 Portion 3 - channel KT2 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15	1 day 1 day 1 day 1 day 839 days 830 days 830 days 830 days 90 days 90 days 830 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Apr 3 '07 Mar 21 '07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	'07 Mar 30 '09 Jul 6 '07 Sep 25 '09 Jul 6 '07 Mar 30 '07 Mar 30 '07 May 29 '07 Jun 28					22222222 22222222 22222222							
ster Programme of the Works  Completion Dates  Section I - portions 1, 2 and 3 Section II - portions 4, 5 and 5C Section III - portions 5A1, 5A2 and 5B Section IV - temp vehicular access at portion 5A1 Section V - preservation and protection of existing trees  Possession of Site  Portion 1 - channel KT2 Portion 2 - channel KT2 Portion 3 - channel KT2 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5B - channel KT15 Portion 5B - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15	839 days 830 days 830 days 830 days 830 days 740 days 90 days 830 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days	'07 Apr 3  '07 Mar 21  '07 Mar 30  '07 Mar 30  '07 Mar 30  '07 Jun 28  '07 Jun 28  '07 Mar 30	'07 Apr 3  '09 Jul 6  '07 Sep 25  '09 Jul 6  '07 Mar 30  '07 Mar 30  '07 May 29  '07 Jun 28	29292929292 2022292929 2022292929 202229 202229				<u> </u>		<u>:::::::::::::::::::::::::::::::::::::</u>					<u> </u>
Ster Programme of the Works  Completion Dates  Section I - portions 1, 2 and 3  Section III - portions 4, 5 and 5C  Section III - portions 5A1, 5A2 and 5B  Section IV - temp vehicular access at portion 5A1  Section V - preservation and protection of existing trees  Possession of Site  Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT2  Portion 4 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5B - channel KT15  Portion 5C - channel KT15	839 days  830 days  830 days  830 days  830 days  740 days  90 days  830 days  1 days  1 day  61 days  91 days  1 day  91 days  91 days  91 days  91 days  91 days  91 days	'07 Mar 21  '07 Mar 30  '07 Mar 30  '07 Mar 30  '07 Jun 28  '07 Jun 28  '07 Mar 30	'09 Jul 6  '07 Sep 25  '09 Jul 6  '07 Nov 24  '07 Mar 30  '07 May 29  '07 Jun 28	20000000000000000000000000000000000000				<u> </u>		<u> </u>					<u> </u>
Completion Dates  Section I - portions 1, 2 and 3  Section III - portions 4, 5 and 5C  Section III - portions 5A1, 5A2 and 5B  Section IV - temp vehicular access at portion 5A1  Section V - preservation and protection of existing trees  Possession of Site  Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5B - channel KT15  Portion 5B - channel KT15  Portion 5C - channel KT15  Portion 5C - channel KT15  Portion 5C - channel KT15  Portion 6 - Temp Storage Area at Chi Ho Road	830 days 830 days 830 days 830 days 740 days 90 days 830 days  240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	'09 Jul 6 '07 Sep 25 '09 Jul 6 '07 Nov 24 '07 Mar 30 '07 May 29 '07 Jun 28									<u>-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0</u>			(1010101010101
Section I - portions 1, 2 and 3 Section II - portions 4, 5 and 5C Section III - portions 5A1, 5A2 and 5B Section IV - temp vehicular access at portion 5A1 Section V - preservation and protection of existing trees  Possession of Site Portion 1 - channel KT2 Portion 2 - channel KT2 Portion 3 - channel KT15 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 5C - channel KT15 Portion 5C - channel KT15	830 days 830 days 740 days 90 days 830 days  240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	'09 Jul 6 '09 Jul 6 '09 Jul 6 '09 Jul 6 '07 Sep 25 '09 Jul 6 '07 Nov 24 '07 Mar 30 '07 May 29 '07 Jun 28												(40404040404)
Section I - portions 1, 2 and 3 Section II - portions 4, 5 and 5C Section III - portions 5A1, 5A2 and 5B Section IV - temp vehicular access at portion 5A1 Section V - preservation and protection of existing trees  Possession of Site Portion 1 - channel KT2 Portion 2 - channel KT2 Portion 3 - channel KT15 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 5C - channel KT15 Portion 5C - channel KT15	830 days 830 days 740 days 90 days 830 days  240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	'09 Jul 6 '09 Jul 6 '09 Jul 6 '09 Jul 6 '07 Sep 25 '09 Jul 6 '07 Nov 24 '07 Mar 30 '07 May 29 '07 Jun 28												1-1-1-1-1-1-1-1
Section II - portions 4, 5 and 5C  Section III - portions 5A1, 5A2 and 5B  Section IV - temp vehicular access at portion 5A1  Section V - preservation and protection of existing trees  Possession of Site  Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT15  Portion 5 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5B - channel KT15  Portion 5C - channel KT15	830 days 740 days 90 days 830 days  240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	'09 Jul 6 - '07 Nov 24 '07 Mar 30 '07 May 29 '07 Jun 28			- A					<u></u>	<u> </u>	<u>+2+2+2+2+2+2+2+2+2+</u> 		<u> </u>
Section III - portions 5A1, 5A2 and 5B Section IV - temp vehicular access at portion 5A1 Section V - preservation and protection of existing trees  Possession of Site Portion 1 - channel KT2 Portion 2 - channel KT2 Portion 3 - channel KT2 Portion 4 - channel KT15 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5B2 - channel KT15 Portion 5B - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 5C - channel KT15	740 days 90 days 830 days  240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days 91 days	'07 Jun 28 '07 Jun 28 '07 Jun 28 '07 Mar 30	'09 Jul 6 '07 Sep 25 '09 Jul 6 <b>'07 Nov 24</b> '07 Mar 30 '07 May 29 '07 Jun 28												
Section V - preservation and protection of existing trees  Possession of Site  Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT2  Portion 4 - channel KT15  Portion 5 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5B - channel KT15  Portion 6 - Temp Storage Area at Chi Ho Road	240 days 240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days	'07 Mar 30	'09 Jul 6  '07 Nov 24  '07 Mar 30  '07 May 29  '07 Jun 28						-0-0-0-0-0-0-0-0						
Possession of Site  Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT2  Portion 4 - channel KT15  Portion 5 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5C - channel KT15  Portion 6 - Temp Storage Area at Chi Ho Road	240 days 1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30	'07 Nov 24 '07 Mar 30 '07 May 29 '07 Jun 28			<u></u>			9/25						
Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT2  Portion 4 - channel KT15  Portion 5 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5C - channel KT15  Portion 6 - Temp Storage Area at Chi Ho Road	1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30	'07 Mar 30 '07 May 29 '07 Jun 28			1	<u></u>				,,,,,,,,,,,,,,,,		:::::::::::::::::::::::::::::::::::::::		
Portion 1 - channel KT2  Portion 2 - channel KT2  Portion 3 - channel KT2  Portion 4 - channel KT15  Portion 5 - channel KT15  Portion 5A1 - channel KT15  Portion 5A2 - channel KT15  Portion 5B - channel KT15  Portion 5C - channel KT15  Portion 6 - Temp Storage Area at Chi Ho Road	1 day 61 days 91 days 1 day 91 days 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30	'07 Mar 30 '07 May 29 '07 Jun 28												
Portion 2 - channel KT2 Portion 3 - channel KT2 Portion 4 - channel KT15 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 6 - Temp Storage Area at Chi Ho Road	61 days 91 days 1 day 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30 '07 Mar 30 '07 Mar 30	'07 May 29 '07 Jun 28			i									
Portion 4 - channel KT15 Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 6 - Temp Storage Area at Chi Ho Road	91 days 1 day 91 days 91 days 91 days	'07 Mar 30 '07 Mar 30	'07 Jun 28												
Portion 5 - channel KT15 Portion 5A1 - channel KT15 Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 6 - Temp Storage Area at Chi Ho Road	91 days 91 days 91 days	'07 Mar 30	107.14												
Portion 5A1 - channel KT15 Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 6 - Temp Storage Area at Chi Ho Road	91 days 91 days		'07 Mar 30			1									
Portion 5A2 - channel KT15 Portion 5B - channel KT15 Portion 5C - channel KT15 Portion 6 - Temp Storage Area at Chi Ho Road	91 days	'07 Mar 30	'07 Jun 28			1									
Portion 5B - channel KT15  Portion 5C - channel KT15  Portion 6 - Temp Storage Area at Chi Ho Road		107 84- 00	'07 Jun 28			1									
Portion 5C - channel KT15 Portion 6 - Temp Storage Area at Chi Ho Road	1 OU days	'07 Mar 30 '07 Sep 26	'07 Jun 28 '07 Nov 24			1		acio					11/24		
Portion 6 - Temp Storage Area at Chi Ho Road	91 days	'07 Mar 30	'07 Jun 28					3/20	<u> -:-:-:-:-:-:</u>	<u></u>	<u> </u>	<u> </u>	<u></u> 7' '' <sup></sup>		
Portion 7 - Berthing Area	1 day	'07 Mar 30	'07 Mar 30												
	1 day	'07 Mar 30	'07 Mar 30			1									
Portion 8 - Site Accommodation	1 day	'07 Mar 30	'07 Mar 30			1									
A. Preliminary Works	830 4216	'07 Mar 21	9 Jul. 90'												
		'07 Mar 30		0-0-0-0-0-0	-3-3-3-3-3-3-	<del></del>						0-0-0-0-0-0-0-0-0-0		<u> </u>	
Environmental Monitoring and Audit	830 days	'07 Mar 30	'09 Jul 6												
2.1 Establishment of Environmental Team	14 days	'07 Mar 30	'07 Apr 12			i i									
2.2 approval by the Engineer	7 days	'07 Apr 13	'07 Apr 19			1									
	77 days	•				1									
						1									
						1									
2.4 Environmental impact monitoring and audit		'07 Jul 8	'09 Jul 6	3-3-3-3-3-3	-1-1-1-1-1-1-1-	-:*:-:-:-:-:-:		3-3-3-3-	1-1-1-1-1-1-1-1-				-3-3-3-3-3-3-3-3-3-		
3. Environmental Management and Environmental		'07 Mar 30	'07 Jun 10			<u> </u>							· · · · · · · · · · · · · · · · · · ·		
3.1 Submission of draft EMP	21 days	'07 Mar 30	'07 Apr 19			i									
		•				1									
						i									
		'07 Mar 30				1									
4.2 Equipment	51 days	'07 Mar 30	'07 May 19			1									
a. Contract telephone	21 days	'07 Mar 30	'07 Apr 19			1									
b. Survey equipment	45 days	'07 Mar 30	'07 May 13			1									
·	51 days	'07 Mar 30	'07 May 19			i									
						1									
installation	21 days	'07 Apr 22	'07 May 12												
testing & commissioning	7 days	'07 May 13	'07 May 19			1									
4.3 utilities servicing	33 days	'07 Mar 30	'07 May 1			1									
a. Water	1 day	'07 Mar 30	'07 Mar 30			1									
						1									
temporary service		'07 Mar 30	'07 Apr 30			1									
new service	19 days	'07 Apr 13	'07 May 1			1									
application	5 days	'07 Apr 13	'07 Apr 17			1									
installation	14 days	'07 Apr 18	'07 May 1			1									
d. Facsimile	33 days	'07 Mar 30	'07 May 1			1									
						1									
		-				1									
installation	14 days	'07 Apr 18	'07 May 1			i									
e. Internet broadband	33 days	'07 Mar 30	'07 May 1			1									
temporary service (56K)	32 days	'07 Mar 30	'07 Apr 30			1									
new service	19 days	'07 Apr 13	'07 May 1			i I									
	5 days	'07 Apr 13	'07 Apr 17			1									
application															
application  OGRAMME OF WORKS  Task		Progre			Summary		Rolled Up Critical Tas			p Progress			Group By Summary		
	A. Preliminary Works  1. Setting out of Works  2. Environmental Monitoring and Audit  2.1 Establishment of Environmental Team  2.2 approval by the Engineer  2.3 Environmental baseline monitoring  a. Technical proposal & methodology  b. Approval by the Engineer  c. Baseline monitoring  2.4 Environmental management and Environmental  3.1 Submission of draft EMP  3.2 Comment from the Engineer  3.3 Submission of EMP  4. Engineer's Accommodation  4.1 Renovation  4.2 Equipment  a. Contract telephone  b. Survey equipment  c. Contract computer facilities  submission  approval  installation  testing & commissioning  4.3 utilities servicing  a. Water  b. Electricity  c. Telephone  temporary service  new service  application  installation  d. Facsimile  temporary service  new service  application  installation  e. Internet broadband  temporary service (56K)  new service	A. Preliminary Works  1. Setting out of Works  2. Environmental Monitoring and Audit  2.1 Establishment of Environmental Team  2.2 approval by the Engineer  3. Technical proposal & methodology  4. Approval by the Engineer  5. Baseline monitoring  6. Approval by the Engineer  6. Baseline monitoring  7. days  7. days  8. Environmental impact monitoring and audit  7. days  7. days  7. days  7. days  8. Environmental impact monitoring and audit  7. days  8. Days equipment  8. Contract telephone  9. days  1. days  1	A. Preliminary Works 1. Setting out of Works 2. Environmental Monitoring and Audit 2. Environmental Monitoring and Audit 3. days 2. Environmental Monitoring and Audit 2. Establishment of Environmental Team 14 days 107 Mar 30 2. approval by the Engineer 7 days 107 Apr 13 2. approval by the Engineer 7 days 107 Apr 20 a. Technical proposal & methodology 7 days 107 Apr 20 b. Approval by the Engineer 7 days 107 Apr 20 c. Baseline monitoring 83 days 107 May 4 2.4 Environmental impact monitoring and audit 3. Environmental impact monitoring and audit 3. Environmental impact monitoring and audit 3. Submission of draft EMP 3. Comment from the Engineer 7 days 107 Apr 20 3. Submission of draft EMP 3. Comment from the Engineer 7 days 107 Apr 20 4. Engineer's Accommodation 51 days 107 Mar 30 4.1 Renovation 51 days 107 Mar 30 4.2 Equipment 51 days 107 Mar 30 6. Survey equipment 45 days 107 Mar 30 6. Contract computer facilities 51 days 107 Mar 30 6. Survey equipment 107 Mar 30 6. Survey equipment 108 days 109 Mar 30 707	A. Preliminary Works 1. Setting out of Works 2. Environmental Monitoring and Audit 2. Environmental Monitoring and Audit 330 days 300 Aways 300 Aw	A. Preliminary Works 1. Setting out of Works 2. Environmental Monitoring and Audit 2. Environmental Monitoring and Audit 3. Statistishment of Environmental Team 4. days 7. da	A. Preliminary Works  1. Setting out of Works  2. Environmental Monitoring and Audit  2. Environmental Monitoring and Audit  3. Submission of Environmental Team  4. Approval by the Engineer  5. Approval by the Engineer  6. Baseline monitoring  7. days  7.	A Preliminary Works  1. Setting out of Works  2. Environmental Monitoring and Audit  3. So days  2. Environmental Monitoring and Audit  3. So days  3. So days  3. So days  4. Le Stabishment of Environmental Team  1. days  7. day	Performancy Works	A. Preliminary Works  1. Seting ox of Works  2. Environmental Monitoring and Audit  2.1 Essablishment of Environmental Toam  1.4 days  7.	A. Preliminary Works	A. Perliminary Works	A Parliminary Works  1. Setting mort Works  8. Storage  1. Setting mort Works  8. Storage  1. Setting mort Works  2. Environmental Monitoring and Audet  2. Environmental Monitoring mort works  2. Environmental Monitoring moretal mort works  2. Environmental Monitoring mort works  2. Envir	Particularion y Works   150 days   10 mar 21   10 July   10 July	Part   Part	1. Series of Windows   1. Series of Windows

CHIT CHEUNG CONSTRUCTION CO., LTD. DATE: July 2007

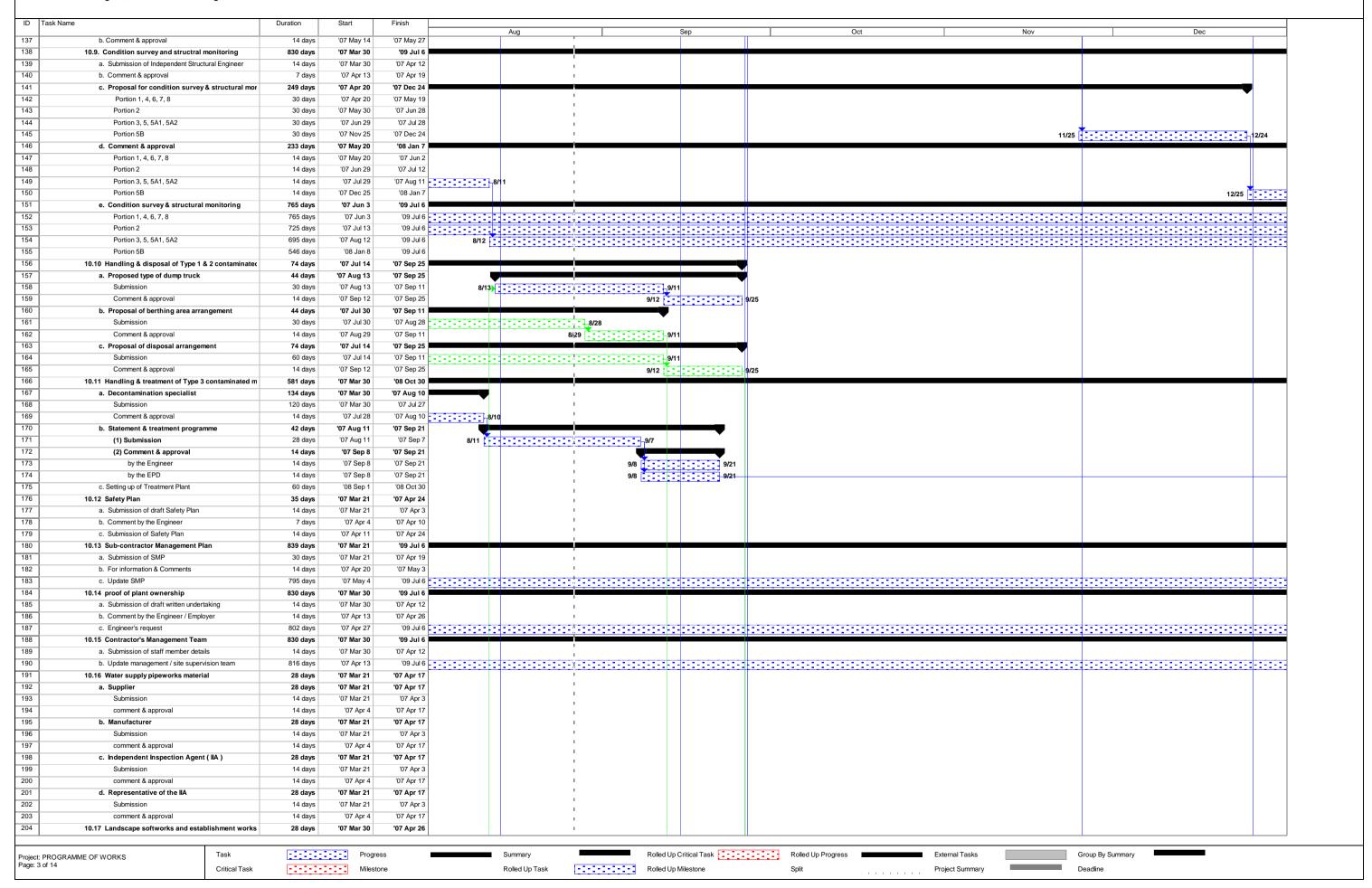
PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

	ı	Duration	Start	Finish	Διια		Sep		Oct		Nov	Dec	
	installation	14 days	'07 Apr 18	'07 May 1	Aug	<u> </u>	Эер	<u> </u>	OG	<u> </u>	INU∜	l Dec	
+	5. Contractor's Accommodation	45 days	'07 Mar 30	'07 May 13		1							
1	5.1 Provision	45 days	'07 Mar 30	'07 May 13		1							
2	a. Premises	45 days	'07 Mar 30	'07 May 13		1							
73	b. Toilet facilities	21 days	'07 Apr 23	'07 May 13		1							
74	c. Telephone service	30 days	'07 Apr 14	'07 May 13		1							
75	d. Fascimile service	30 days	'07 Apr 14	'07 May 13		1							
76	e. Internet broadband service	30 days	'07 Apr 14	'07 May 13		1							
77	f. Water	1 day	'07 Mar 30	'07 Mar 30		i							
78	g. electricity	1 day	'07 Mar 30	'07 Mar 30		1							
79	6. Transport (land ) for the Engineer	124 days	'07 Mar 30	'07 Jul 31		1							
80	6.1 submission	7 days	'07 Mar 30	'07 Apr 5		1							
81	6.2 comment & approval	14 days	'07 Apr 6	'07 Apr 19									
82	6.3 delivery	103 days	'07 Apr 20	'07 Jul 31 _ <b>7/31</b>									
83	6.4 temp service	124 days	'07 Mar 30	'07 Jul 31 17/31		1							
84	·					1							
85	7. Transport (land) for Public Works Regional Laboratory	124 days	'07 Mar 30	'07 Jul 31		1							
	7.1 submission	7 days	'07 Mar 30	'07 Apr 5		1							
86 87	7.2 comment, approval & instruction	14 days	'07 Apr 6	'07 Apr 19		1							
	7.3 delivery	103 days	'07 Apr 20	'07 Jul 31 <b>7/31</b>									
88	8. Signboard	150 days	'07 Mar 30	'07 Aug 26		<u>Y</u>							
89	8.1 Major	150 days	'07 Mar 30	'07 Aug 26		V							
90	submission	90 days	'07 Mar 30	'07 Jun 27		1							
91	comment & approval	90 days	'07 Apr 29	'07 Jul 27		I							
92	erection	90 days	'07 May 29	'07 Aug 26		8/26							
93	8.2 Minor	150 days	'07 Mar 30	'07 Aug 26		V							
94	submission	90 days	'07 Mar 30	'07 Jun 27		1							
95	comment & approval	90 days	'07 Apr 29	'07 Jul 27		1							
96	erection	90 days	'07 May 29	'07 Aug 26	-1-1-1-1-1-1-1	8/26							
97	9. Telephone hotline	15 days	'07 Apr 29	'07 May 13									
98	9.1 Engineer's instruction	1 day	'07 Apr 29	'07 Apr 30		1							
99	9.2 installation	14 days	'07 Apr 30	'07 May 13		1							
00	10. Contractual general submissions	839 days	'07 Mar 21	'09 Jul 6									
01	10.1 programmes	28 days	'07 Mar 21	'07 Apr 17		1							
02	a. GCC Clause 16 programme	14 days	'07 Mar 21	'07 Apr 3									
03	b. Works programme & financial programme	14 days	'07 Apr 4	'07 Apr 17		1							
104	c. 3-month rolling programme	14 days	'07 Apr 4	'07 Apr 17		1							
05	10.2 contractor's superintendence	14 days	'07 Mar 30	'07 Apr 12		1							
106	a. Agent	7 days	'07 Mar 30	'07 Apr 5		1							
07	b. Surveyor	14 days	'07 Mar 30	'07 Apr 12		1							
108	c. Sub-agent	14 days	'07 Mar 30	'07 Apr 12		1							
09	d. Geotechnical Engineer	7 days	'07 Mar 30	'07 Apr 5		1							
10	e. Geotechnical Supervisor	14 days	'07 Mar 30	'07 Apr 12		1							
111	f. Foreman - concrete	14 days	'07 Mar 30	'07 Apr 12		1							
112	g. Foreman - drainage	14 days	'07 Mar 30	'07 Apr 12		1							
13	h. Staff Organization Plan	14 days	'07 Mar 30	'07 Apr 12									
114	10.3 Safety Organization	14 days	'07 Mar 30	'07 Apr 12		1							
15	a. Safety Officer	14 days	'07 Mar 30	'07 Apr 12		1							
116	b. Safety Supervisor	14 days	'07 Mar 30	'07 Apr 12		1							
117	c. Safety Representative	14 days	'07 Mar 30	'07 Apr 12		1							
118	10.4 TTMS design	7 days	'07 Mar 30	'07 Apr 5									
119	a. Independent Traffic Consultant	7 days	'07 Mar 30	'07 Apr 5		1							
20	b. Traffic Engineer	7 days	'07 Mar 30	'07 Apr 5		1							
121	-		'07 Mar 30	'07 May 1		1							
22	10.5 Assistant to Engineer  a. Chainmen (4)	33 days	'07 Mar 30	'07 May 1		1							
23	a. Chainmen (4) b. Watchmen (2)	33 days	'07 Mar 30	'07 May 1									
24	c. Field assistant (1)	33 days		The second secon		1							
- 1		33 days	'07 Mar 30	'07 May 1		1							
25	d. Technical assistant (1)	33 days	'07 Mar 30	'07 May 1		1							
26	e. Clerical assistant (1)	33 days	'07 Mar 30	'07 May 1		1							
- 1	f. Office assistant (1)	33 days	'07 Mar 30	'07 May 1		1							
28	10.6 Underground service detection equipment	35 days	'07 Mar 30	'07 May 3		1							
29	a. Submission	7 days	'07 Mar 30	'07 Apr 5		1							
30	b. Comment & approval	14 days	'07 Apr 6	'07 Apr 19		1							
31	c. Provision	14 days	'07 Apr 20	'07 May 3		1							
32	10.7 Independent Checking of Temporary Works	28 days	'07 Mar 30	'07 Apr 26		1							
33	Submission of independent checking engineer	14 days	'07 Mar 30	'07 Apr 12		1							
34	b. Comment & approval	14 days	'07 Apr 13	'07 Apr 26		1							
35	10.8 Trip ticket system for C & D material	59 days	'07 Mar 30	'07 May 27		1							
36	a. Submission of site management plan	45 days	'07 Mar 30	'07 May 13		1							
				I			1	ı				1	
	<b>-</b> .	-1-1-1-	Progres	s ==========	Summary		Rolled Up Critical Task	Rolled Up Pro	ress	External Tasks		Group By Summary	
	PROGRAMME OF WORKS Task		- Flogres	~	-arring y		AOIIOU OP OHIIOUH I don	Nolled Up PIC	g. 000	-Accida Lasks		Crosp by Cultilliary	

Contract No. : DC / 2006 / 02

Contract Title: Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,

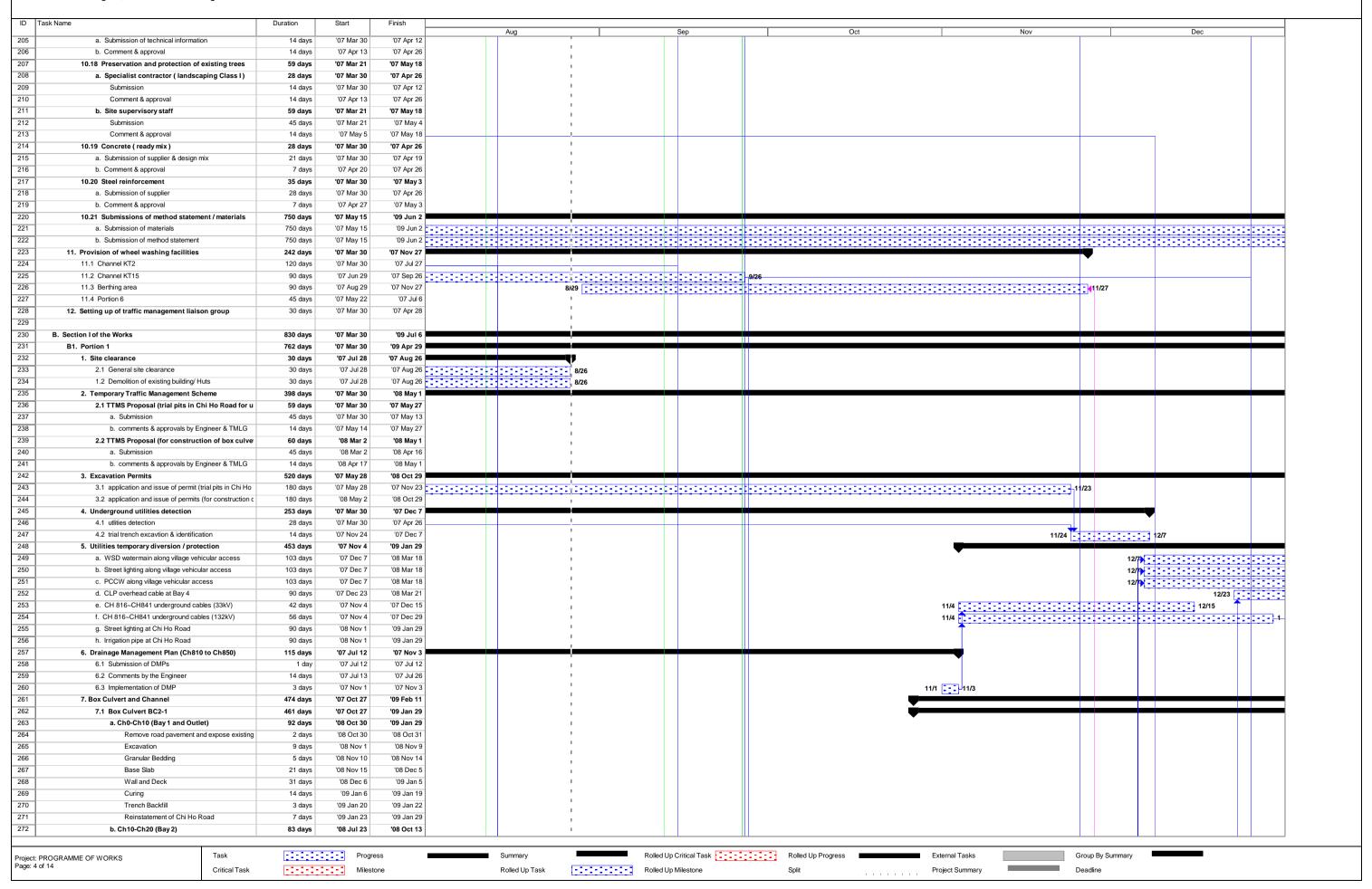
Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai



Contract No. : DC / 2006 / 02

Contract Title: Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,

Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai



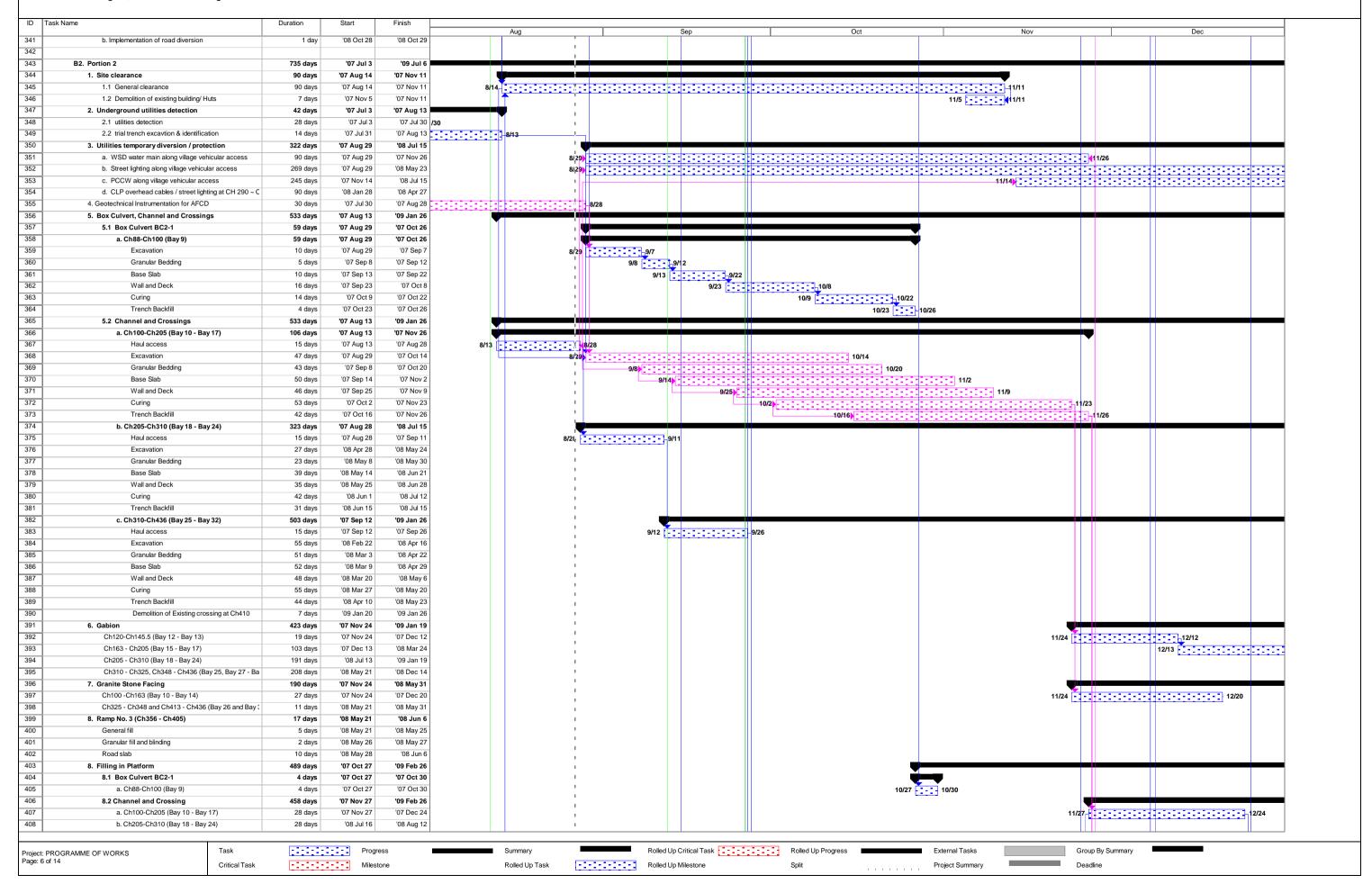
PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill c. Ch20-Ch32 (Bay 3) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	9 days 5 days 21 days 31 days 31 days 14 days 3 days 57 days 9 days 16 days 14 days 4 days 57 days 9 days 16 days 14 days 4 days 52 days 16 days 14 days 16 days 17 days 18 days 19 days 103 days	'08 Jul 23 '08 Aug 1 '08 Aug 6 '08 Aug 6 '08 Aug 27 '08 Sep 27 '08 Oct 11 '07 Oct 27 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 30 '08 May 14 '07 Dec 7 '08 Jan 1 '08 Jan 2 '08 Jan 27 '08 Feb 12 '08 Mar 13	'08 Jul 31 '08 Aug 5 '08 Aug 26 '08 Sep 26 '08 Oct 10 '08 Oct 13 '07 Dec 22 '07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 22 '08 May 17 '08 Apr 29 '08 Apr 39 '08 Apr 39 '08 May 17 '08 May 17 '08 May 13 '08 May 17 '08 Mar 30 '08 Apr 39 '08 May 17 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 17 '08 Feb 11	Aug	Sep	10/27	Nov  11/15 [	12/1 12/2 12/2 12/18 12/19 12/22
Base Slab Wall and Deck Curing Trench Backfill C. Ch20-Ch32 (Bay 3) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill	21 days 31 days 31 days 31 days 14 days 3 days 57 days 9 days 16 days 14 days 4 days 57 days 9 days 16 days 14 days 57 days 9 days 16 days 17 days 18 days 19 days 103 days 25 days 8 days 9 days 16 days 17 days 18 days 19 days 19 days 103 days 25 days 25 days 31 days 32 days 33 days 34 days 4 days 55 days 56 days 57 days 58 days 59 days 59 days 50 days	'08 Aug 6 '08 Aug 27 '08 Sep 27 '08 Oct 11 '07 Oct 27 '07 Oct 27 '07 Nov 5 '07 Nov 10 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Aug 26 '08 Sep 26 '08 Oct 10 '08 Oct 13 '07 Dec 22 '07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 22 '08 May 17 '08 Apr 13 '08 Apr 29 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17			10/27	11/5 11/9 11/10	12/5 12/19 12/18
Wall and Deck Curing Trench Backfill  c. Ch20-Ch32 (Bay 3)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill	31 days 14 days 3 days 57 days 9 days 5 days 9 days 16 days 14 days 4 days 57 days 9 days 5 days 9 days 16 days 14 days 16 days 14 days 103 days 25 days 8 days 9 days 16 days 11 days 11 days 12 days 13 days 14 days 15 days 16 days 17 days 18 days 19 days 19 days 19 days 10 days 10 days 11 days 11 days 12 days 13 days 14 days 15 days 16 days 17 days 18 days 19 days 19 days 19 days 19 days 19 days 10 days 10 days 10 days	'08 Aug 27 '08 Sep 27 '08 Oct 11 '07 Oct 27 '07 Oct 27 '07 Nov 5 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Sep 26 '08 Oct 10 '08 Oct 13 '07 Dec 22 '07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 22 '08 May 17 '08 Apr 4 '08 Apr 29 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17			10/27	11/5 11/9 11/10 11/18 11/19	12/5 12/19 12/18 12/19 12/22
Curing Trench Backfill  c. Ch20-Ch32 (Bay 3)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill	14 days 3 days 57 days 9 days 5 days 9 days 16 days 14 days 5 days 9 days 16 days 14 days 5 days 9 days 16 days 14 days 4 days 16 days 103 days 25 days 8 days 9 days 16 days 16 days 17 days 18 days 19 days 19 days 103 days 25 days 25 days 25 days 36 days 37 days 38 days 39 days 40 days	'08 Sep 27 '08 Oct 11 '07 Oct 27 '07 Oct 27 '07 Nov 5 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Oct 10 '08 Oct 13 '07 Dec 22 '07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 18 '07 Dec 22 '08 May 17 '08 Mar 30 '08 Apr 13 '08 Apr 29 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17			10/27	11/5 11/4 11/5 11/10 11/9 11/10 11/19 11/18	12/5 12/19 12/18
Trench Backfill  c. Ch20-Ch32 (Bay 3)  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  d. Ch32-Ch42 (Bay 4)  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab  Base Slab  Granular Bedding  Granular Bedding	3 days 57 days 9 days 5 days 9 days 16 days 14 days 4 days 57 days 9 days 16 days 14 days 57 days 9 days 16 days 16 days 16 days 16 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 103 days 25 days 16 days 17 days 18 days 19 days 19 days 19 days 19 days 19 days 10 days	'08 Oct 11 '07 Oct 27 '07 Oct 27 '07 Nov 5 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 5 '07 B Mar 22 '08 Mar 31 '08 Apr 31 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Oct 13 '07 Dec 22 '07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 18 '07 Dec 22 '08 May 17 '08 Apr 3 '08 Apr 4 '08 Apr 3 '08 Apr 3 '08 May 17 '08 May 17 '08 May 17 '08 May 13 '08 May 17 '08 May 18 '07 Dec 31 '08 Jan 8			10/27	11/16 11/19 11/10 11/19 11/19 11/19	12/5 12/19 12/18 12/19 12/12
c. Ch20-Ch32 (Bay 3)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab Granular Bedding Base Slab	57 days 9 days 5 days 9 days 16 days 14 days 4 days 57 days 9 days 5 days 9 days 16 days 14 days 16 days 16 days 16 days 14 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 11 days 11 days 12 days 13 days 14 days 15 days 16 days 17 days 18 days 19 days 19 days 19 days 10 days	'07 Oct 27 '07 Oct 27 '07 Nov 5 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 30 '08 Apr 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 27 '08 Feb 12	'07 Dec 22 '07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 22 '08 May 17 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 17 '08 May 17 '08 May 17 '08 May 17 '08 May 13 '08 Apr 29 '08 May 13 '08 Apr 30 '08 Apr 4 '08 Apr 30			10/27	11/5 11/4 11/5 11/10 11/9 11/10 11/19 11/18	12/5
Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	9 days 5 days 9 days 16 days 14 days 4 days 57 days 9 days 5 days 16 days 16 days 16 days 16 days 16 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 16 days 103 days 25 days 16 days 17 days 18 days 25 days 25 days 25 days	'07 Oct 27 '07 Nov 5 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'07 Nov 4 '07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 22 '08 May 17 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 17 '08 May 17 '08 May 17 '08 May 13 '08 Apr 29 '08 May 13 '08 Apr 30			10/27	11/5 11/4 11/5 11/9 11/10 11/18 11/19	12/5
Granular Bedding Base Slab Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	5 days 9 days 16 days 14 days 4 days 57 days 9 days 5 days 16 days 11 days 12 days 13 days 14 days 14 days 15 days 16 days 16 days 17 days 18 days 19 days 19 days 103 days 104 days 105 days 107 days 108 days 109 days	'07 Nov 5 '07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'07 Nov 9 '07 Nov 18 '07 Dec 4 '07 Dec 18 '07 Dec 22 '08 May 17 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8			10/27	11/5 [	12/5
Base Slab  Wall and Deck Curing Trench Backfill  d. Ch32-Ch42 (Bay 4)  Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab  Mall and Deck Curing Trench Backfill	9 days 16 days 14 days 4 days 57 days 9 days 5 days 9 days 16 days 14 days 103 days 25 days 9 days 104 days 105 days 105 days 107 days 108 days 109 days	'07 Nov 10 '07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'07 Nov 18 '07 Dec 4 '07 Dec 18 '07 Dec 22 '08 May 17 '08 Mar 30 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 17 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17				11/5 [	12/5 12/19 12/18 12/19 12/12
Wall and Deck Curing Trench Backfill d. Ch32-Ch42 (Bay 4) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab Mall and Deck	16 days 14 days 4 days 57 days 9 days 5 days 9 days 16 days 14 days 4 days 103 days 25 days 9 days 16 days 103 days 25 days 8 days 9 days 16 days 16 days 17 days 18 days 19 days 19 days 10 days	'07 Nov 19 '07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'07 Dec 4 '07 Dec 18 '07 Dec 22 '08 May 17 '08 Mar 30 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 17 '08 May 17 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8				11/10 <u> 1</u> 1/18 11/19 <u></u>	12/5 12/19 12/18 12/19 12/22
Curing Trench Backfill  d. Ch32-Ch42 (Bay 4)  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab  Mall and Deck	14 days 4 days 57 days 9 days 5 days 9 days 16 days 14 days 103 days 25 days 9 days 16 days 103 days 25 days 8 days 9 days 16 days 16 days 17 days 18 days 19 days 19 days 10 days 10 days 10 days 10 days 10 days 10 days	'07 Dec 5 '07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'07 Dec 18 '07 Dec 22 '08 May 17 '08 Mar 30 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8				11/19 [	12/5 12/19 12/18 12/19 12/22
Trench Backfill  d. Ch32-Ch42 (Bay 4)  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab  August Slab  Granular Bedding  Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab	4 days 57 days 9 days 5 days 9 days 16 days 14 days 103 days 25 days 8 days 9 days 16 days 103 days 25 days 16 days 16 days 17 days 18 days 19 days 19 days 10 days 10 days 10 days 10 days 10 days 10 days	'07 Dec 19 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'07 Dec 22 '08 May 17 '08 Mar 30 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8					12/5 12/19 12/18 12/19 12/12
d. Ch32-Ch42 (Bay 4)  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab	57 days 9 days 5 days 9 days 16 days 14 days 14 days 25 days 8 days 9 days 16 days 11 days 25 days 8 days 9 days 16 days 11 days 12 days 13 days 14 days 15 days 16 days 17 days 18 days 19 days 19 days 11 days	'08 Mar 22 '08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 May 17 '08 Mar 30 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17					12/1
Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	9 days 5 days 9 days 16 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 14 days 16 days 17 days 18 days 19 days 19 days 10 days 10 days 10 days 10 days 10 days	'08 Mar 22 '08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Mar 30 '08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17					12/1
Granular Bedding Base Slab Wall and Deck Curing Trench Backfill e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	5 days 9 days 16 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 14 days 16 days 114 days 15 days 16 days 17 days 18 days 18 days 19 days 19 days 11 days	'08 Mar 31 '08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Apr 4 '08 Apr 13 '08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17	 				<u> </u>
Base Slab  Wall and Deck  Curing  Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay  Excavation  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab	9 days 16 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 14 days 6 days 25 days	'08 Apr 5 '08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Apr 13 '08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17					<u> </u>
Wall and Deck Curing Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay) Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay) Excavation Granular Bedding Base Slab	16 days 14 days 4 days 103 days 25 days 8 days 9 days 16 days 14 days 6 days 25 days	'08 Apr 14 '08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27	'08 Apr 29 '08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17					<u> </u>
Curing Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	14 days 4 days 103 days 25 days 8 days 9 days 16 days 14 days 6 days 103 days 25 days	'08 Apr 30 '08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27 '08 Feb 12	'08 May 13 '08 May 17 '08 Mar 18 '07 Dec 31 '08 Jan 8					<u> </u>
Trench Backfill  e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	4 days 103 days 25 days 8 days 9 days 16 days 14 days 6 days 103 days 25 days	'08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27 '08 Feb 12	'08 May 17  '08 Mar 18  '07 Dec 31  '08 Jan 8  '08 Jan 17	1				<u> </u>
e. Ch42-Ch52 and Ch64-Ch76 (Bay 5 and Bay Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	4 days 103 days 25 days 8 days 9 days 16 days 14 days 6 days 103 days 25 days	'08 May 14 '07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27 '08 Feb 12	'08 May 17  '08 Mar 18  '07 Dec 31  '08 Jan 8  '08 Jan 17	1				<u> </u>
Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	103 days 25 days 8 days 9 days 16 days 14 days 6 days 103 days	'07 Dec 7 '07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27 '08 Feb 12	'08 Mar 18 '07 Dec 31 '08 Jan 8 '08 Jan 17	1				<u> </u>
Excavation Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	25 days 8 days 9 days 16 days 14 days 6 days 103 days	'07 Dec 7 '08 Jan 1 '08 Jan 9 '08 Jan 27 '08 Feb 12	'07 Dec 31 '08 Jan 8 '08 Jan 17	i i				<u> </u>
Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	8 days 9 days 16 days 14 days 6 days 103 days 25 days	'08 Jan 1 '08 Jan 9 '08 Jan 27 '08 Feb 12	'08 Jan 8 '08 Jan 17					<u> </u>
Base Slab Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	9 days 16 days 14 days 6 days 103 days 25 days	'08 Jan 9 '08 Jan 27 '08 Feb 12	'08 Jan 17	The state of the s	1 1			
Wall and Deck Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	16 days 14 days 6 days 103 days 25 days	'08 Jan 27 '08 Feb 12		1				
Curing Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	14 days 6 days 103 days 25 days	'08 Feb 12		1				
Trench Backfill  f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay Excavation Granular Bedding Base Slab	6 days 103 days 25 days		'08 Feb 25	1				
f. Ch52-Ch64 and Ch76-Ch88 (Bay 6 and Bay  Excavation  Granular Bedding  Base Slab	103 days 25 days	UK MIST 13	'08 Mar 18					
Excavation Granular Bedding Base Slab	25 days	'07 Dec 7	'08 Mar 18	i				
Granular Bedding Base Slab		'07 Dec 7	'07 Dec 31	i i				420
Base Slab	U Maria			T I				12/
	8 days	'08 Jan 1	'08 Jan 8	1				1/1
14/-11 15 1	9 days	'08 Jan 18	'08 Jan 26					
Wall and Deck	16 days	'08 Feb 12	'08 Feb 27					
Curing	14 days	'08 Feb 28	'08 Mar 12	i				
	6 days	'08 Mar 13		i i				
7.2 Channel	387 days	'08 Jan 22	'09 Feb 11	1				
a. Ch832-Ch844 (Bay 56b)	91 days	'08 Jan 22	'08 Apr 21	1				
Excavation (including contamination material:	25 days	'08 Jan 22	'08 Feb 15	1				
Granular Bedding	3 days	'08 Feb 16	'08 Feb 18					
Base Slab	22 days	'08 Feb 19	'08 Mar 11	i				
Wall and Deck	23 days	'08 Mar 12	'08 Apr 3	i i				
Curing	14 days	'08 Apr 4	'08 Apr 17	T. Control of the con				
Trench Backfill	4 days	'08 Apr 18	'08 Apr 21	1				
b. Demolition of existing crossing	20 days	'08 Nov 17	'08 Dec 6					
c. Ch800-833 (Bay 56a)	67 days	'08 Dec 7	'09 Feb 11	i				
Excavation (including contamination material	12 days	'08 Dec 7	'08 Dec 18	i i				
Granular Bedding	3 days	'08 Dec 19	'08 Dec 21	1				
Base Slab	12 days	'08 Dec 22	'09 Jan 2	I I				
Wall and Deck	22 days	'09 Jan 3	'09 Jan 24	!				
Curing	26 days	'09 Jan 13	'09 Feb 7					
Trench Backfill		'09 Jan 27	'09 Feb 11	i				
			'09 Mar 3	1				
8.1 Box Culvert		'08 Mar 19	'08 Oct 20	T .				
				!				
				i				
				1				
				T I				
			I	 				
				i l				
			I	i i				
				T I				
14. Landscape softworks / hardworks (except Bays 56a an		'09 Jan 30	'09 Apr 29					
15. Diversion of Village Vehicular Access	1 day	'07 Dec 6		i l				12/6
16. Road Diversion in Chi Ho Road		'08 Oct 21	'08 Oct 29	i i				
Construction of temporary road above Bay 2	7 days	'08 Oct 21	'08 Oct 27	1				
	a. Ch832-Ch844 (Bay 56b)  Excavation (including contamination material: Granular Bedding Base Slab Wall and Deck Curing Trench Backfill b. Demolition of existing crossing c. Ch800-833 (Bay 56a)  Excavation (including contamination material: Granular Bedding Base Slab Wall and Deck Curing Trench Backfill 8. Filling in Platform 8.1 Box Culvert a. Ch10-Ch20 (Bay 2) b. Ch20-Ch88 (Bay 3 to Bay 8) 8.2 Channel a. Ch832-Ch844 (Bay 56b) b. Ch800-833 (Bay 56a) 9. Geotechnical Instrumentation for CLP Pylon 10. Drainage works (except Bays 56a and 56b) a. storm drain with manhole b. surface drain 11. Water supply pipeworks 12. Roads and paving (except Bays 56a and 56b) 13. Street furnitures / traffic sign / road marking (except Bay 14. Landscape softworks / hardworks (except Bays 56a and 15. Diversion of Village Vehicular Access 16. Road Diversion in Chi Ho Road	Trench Backfill   6 days   7.2 Channel   387 days   a. Ch832-Ch844 (Bay 56b)   91 days   Excavation (including contamination material:   25 days   Granular Bedding   3 days   Base Slab   22 days   Wall and Deck   23 days   Curing   14 days   4 days   5 days   5 days   5 days   5 days   6	Trench Backfill   6 days   7.2 Channel   387 days   7.2 Channel   387 days   7.2 Channel   387 days   7.8 Jan 22   a. Ch832-Ch844 (Bay 56b)   91 days   7.8 Jan 22   Excavation (including contamination material   25 days   7.8 Jan 22   6 days   7.8 Jan 22   6 days   7.8 Jan 22   6 days   7.8 Jan 22   7	Trench Backfill 6 days 08 Mar 13 08 Mar 18  7.2 Channel 387 days 198 Jan 22 199 Feb 11  a. Ch832-Ch844 (Bay 56b) 91 days 198 Jan 22 198 Apr 21  Excavation (including contamination materials 25 days 198 Jan 22 198 Feb 15  Granular Bedding 3 days 198 Feb 16 19 198 Feb 18  Base Slab 22 days 198 Feb 19 198 Mar 11  Wall and Deck 23 days 198 Mar 12 198 Apr 37  Curring 14 days 198 Apr 4 198 Apr 17  Trench Backfill 4 days 198 Apr 18 198 Apr 17  Trench Backfill 4 days 198 Apr 18 198 Apr 17  Excavation (including contamination materials 12 days 198 Dec 7 198 Feb 18 198 Dec 21 198 Dec 21 198 Dec 21 199 Jan 28 199 Jan 28 199 Jan 28 199 Jan 29 199 Jan 29 199 Feb 11 198 Dec 21 199 Jan 29 199 Feb 11 198 Dec 21 199 Jan 29 199 Feb 11 199 Jan 29 199 Feb 11 199 Jan 29 199 Feb 11 199 Jan 29 199 Jan 29 199 Feb 11 199 Jan 29 199 Jan 29 199 Feb 11 199 Jan 29 199 Jan 29 199 Jan 29 199 Jan 29 199 Feb 11 199 Jan 29 199 Jan 29 199 Feb 11 199 Jan 29	Trench Backfill 6 days 108 Mar 13 1 08 Mar 18  7.2 Channel 387 days 108 Jan 22 109 Feb 11  a. Ch532-Ch644 (Bay 56b) 91 days 108 Jan 22 108 Feb 15  Excavation (including contamination materials 25 days 108 Jan 22 108 Feb 15  Granulus Bedding 3 days 108 Feb 19 108 Mar 11  Wall and Deck 23 days 108 Feb 19 108 Mar 11  Wall and Deck 23 days 108 Feb 19 108 Mar 11  Ternch Backfill 4 days 108 Apr 41 108 Apr 31  b. Demolition of existing crossing 20 days 108 New 17 108 Dec 6  c. Ch800-833 (Bay 56a) 67 days 108 Dec 7 108 Dec 18  Granulus Bedding 3 days 108 Dec 7 108 Dec 18  Granulus Bedding 12 days 108 Dec 7 108 Dec 18  Granulus Bedding 2 days 108 Dec 7 108 Dec 18  Granulus Bedding 2 days 108 Dec 7 108 Dec 18  Granulus Bedding 3 days 108 Dec 22 109 Jan 24  Curing 2 days 108 Dec 22 109 Jan 24  Wall and Deck 22 days 109 Jan 3 109 Feb 11  Excavation (including contamination materials 16 days 109 Jan 13 109 Feb 17  Trench Backfill 16 days 109 Jan 27 109 Feb 11  S. Filling in Platform 350 days 108 Mar 19 108 Dec 20  b. Ch20-Ch88 (Bay 3 to Bay 8) 41 days 108 Dec 14 108 Dec 20  b. Ch20-Ch88 (Bay 3 to Bay 8) 41 days 108 Mar 19 108 Ma	Tronch Backfill 6 days	Trever-Backill 6 days 200 Mar 12 00 Mar 12 1 7.2 Channell 337 days 37 days 20 43 as 22 00 64 pz 1  8. Ch82C-Ch84 (Bay Seb) 91 days 20 00 43 as 22 00 64 pz 1  6. Channell crediting proteomation material 3 days 100 45 days 1	Troch Bachil

Contract No. : DC / 2006 / 02

Contract Title: Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,

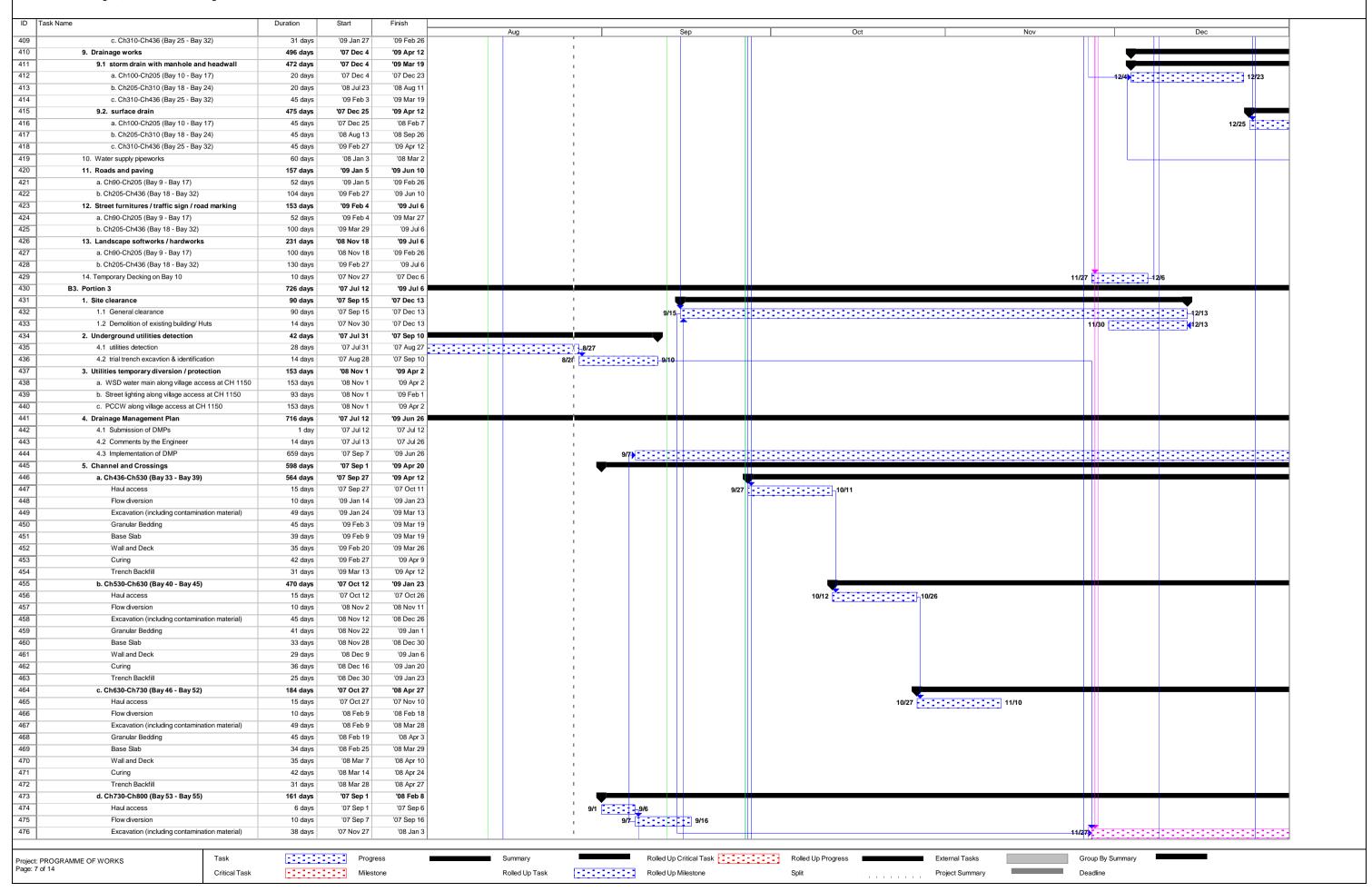
Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai



Contract No. : DC / 2006 / 02

Contract Title: Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,

Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai



PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  Ch840-Ch1037 (Bay 56c - Bay 67) Haul access Flow diversion Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	34 days 34 days 34 days 30 days 37 days 26 days 432 days 10 days 10 days 66 days 64 days 75 days 75 days 71 days 582 days 10 days 582 days 41 days 54 days 33 days 29 days 44 days 41 days 30 days 499 days 5 days 10 days 33 days 34 days 35 days	'07 Dec 7 '07 Dec 7 '07 Dec 13 '07 Dec 24 '07 Dec 31 '08 Jan 14 '07 Sep 7 '08 Jul 6 '08 Jul 16 '08 Jul 16 '08 Aug 11 '08 Aug 12 '08 Aug 12 '08 Sep 2 '07 Sep 17 '09 Jan 23 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22 '08 Not 2 18	'08 Jan 9 '08 Jan 15 '08 Jan 22 '08 Feb 5 '08 Feb 8 '08 Nov 11 '07 Sep 16 '08 Jul 15 '08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 12 '09 Apr 3 '09 Apr 3 '09 Apr 3
Wall and Deck Curing Trench Backfill Ch840-Ch1037 (Bay 56c - Bay 67) Haul access Flow diversion Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1041-Ch105-C	30 days 37 days 26 days 432 days 10 days 10 days 66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 434 days 44 days 45 days 33 days 29 days 28 days 41 days 30 days 499 days 5 days	'07 Dec 24 '07 Dec 31 '08 Jan 14 '07 Sep 7 '08 Jul 6 '08 Jul 16 '08 Jul 26 '08 Aug 1 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Jan 22 '08 Feb 5 '08 Feb 8 '08 Nov 11 '07 Sep 16 '08 Jul 15 '08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 17
Curing Trench Backfill  Ch840-Ch1037 (Bay 56c - Bay 67) Haul access Flow diversion Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1046-Ch1330 (Bay 72 - Bay 84) Haul access	37 days 26 days 432 days 10 days 10 days 66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 33 days 29 days 28 days 41 days 30 days 49 days 5 days	'07 Dec 31 '08 Jan 14 '07 Sep 7 '07 Sep 7 '08 Jul 6 '08 Jul 16 '08 Jul 26 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Feb 5 '08 Feb 8 '08 Nov 11 '07 Sep 16 '08 Jul 15 '08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Trench Backfill  Ch840-Ch1037 (Bay 56c - Bay 67)  Haul access  Flow diversion  Excavation (including contamination material)  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  Ch1037-Ch1160 (Bay 68 - Bay 71)  Haul access  Flow diversion  Excavation and Handling of Type 3 Contaminated  Granular Bedding  Base Slab  Wall and Deck  Curing  Trench Backfill  Ch1046-Ch1330 (Bay 72 - Bay 84)  Haul access	26 days 432 days 10 days 10 days 66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 33 days 29 days 28 days 41 days 41 days 30 days 499 days 5 days	'08 Jan 14 '07 Sep 7 '07 Sep 7 '08 Jul 6 '08 Jul 16 '08 Jul 26 '08 Aug 1 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Feb 8  '08 Nov 11  '07 Sep 16  '08 Jul 15  '08 Sep 19  '08 Sep 27  '08 Oct 18  '08 Oct 25  '08 Nov 8  '08 Nov 11  '09 Apr 20  '07 Sep 21  '09 Feb 1  '09 Mar 6  '09 Mar 12  '09 Mar 17  '09 Apr 3  '09 Apr 3
Ch840-Ch1037 (Bay 56c - Bay 67) Haul access Flow diversion Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1046-Ch1330 (Bay 72 - Bay 84) Haul access	432 days 10 days 10 days 66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 33 days 29 days 28 days 41 days 30 days 49 days 5 days	'07 Sep 7 '08 Jul 6 '08 Jul 16 '08 Jul 26 '08 Aug 12 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Nov 11 '07 Sep 16 '08 Jul 15 '08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Haul access Flow diversion Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	10 days 10 days 66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'07 Sep 7 '08 Jul 6 '08 Jul 16 '08 Jul 26 '08 Aug 1 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 12 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'07 Sep 16 '08 Jul 15 '08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Flow diversion Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	10 days 66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 33 days 29 days 28 days 41 days 30 days 499 days 5 days	'08 Jul 6 '08 Jul 16 '08 Jul 26 '08 Aug 12 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Jul 15 '08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Excavation (including contamination material) Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill . Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	66 days 64 days 79 days 75 days 82 days 71 days 582 days 10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'08 Jul 16 '08 Jul 26 '08 Aug 1 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Sep 19 '08 Sep 27 '08 Oct 18 '08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill . Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	64 days 79 days 79 days 75 days 82 days 71 days 582 days 10 days 33 days 29 days 28 days 41 days 30 days 499 days 5 days	'08 Jul 26 '08 Aug 1 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22	'08 Sep 27 '08 Oct 18 '08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Base Slab Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	79 days 75 days 82 days 71 days 582 days 5 days 10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'08 Aug 1 '08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'08 Oct 18 '08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Wall and Deck Curing Trench Backfill Ch1037-Ch1160 (Bay 68 - Bay 71) Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill . Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	75 days 82 days 71 days 582 days 5 days 10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'08 Aug 12 '08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'08 Oct 25 '08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 3
Curing Trench Backfill  Ch1037-Ch1160 (Bay 68 - Bay 71)  Haul access Flow diversion  Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	82 days 71 days 71 days 582 days 5 days 10 days 33 days 29 days 28 days 34 days 41 days 49 days 5 days	'08 Aug 19 '08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'08 Nov 8 '08 Nov 11 '09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Apr 3 '09 Apr 17
Trench Backfill  Ch1037-Ch1160 (Bay 68 - Bay 71)  Haul access Flow diversion  Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	71 days 582 days 5 days 10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'08 Sep 2 '07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'08 Nov 11  '09 Apr 20  '07 Sep 21  '09 Feb 1  '09 Mar 6  '09 Mar 12  '09 Mar 17  '09 Apr 3  '09 Apr 17
Ch1037-Ch1160 (Bay 68 - Bay 71)  Haul access Flow diversion  Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	582 days 5 days 10 days 33 days 29 days 28 days 34 days 41 days 49 days 5 days	'07 Sep 17 '07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Apr 20 '07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Mar 17 '09 Apr 3
Haul access Flow diversion Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	5 days 10 days 10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'07 Sep 21 '09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Mar 17 '09 Apr 3 '09 Apr 17
Flow diversion  Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	5 days 10 days 10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'07 Sep 17 '09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Mar 17 '09 Apr 3 '09 Apr 17
Flow diversion  Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab  Wall and Deck Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	10 days 33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days	'09 Jan 23 '09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Feb 1 '09 Mar 6 '09 Mar 12 '09 Mar 17 '09 Apr 3 '09 Apr 17
Excavation and Handling of Type 3 Contaminated Granular Bedding Base Slab Wall and Deck Curing Trench Backfill . Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	33 days 29 days 28 days 34 days 41 days 30 days 499 days 5 days 10 days	'09 Feb 2 '09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Mar 6 '09 Mar 12 '09 Mar 17 '09 Apr 3 '09 Apr 17
Granular Bedding Base Slab Wall and Deck Curing Trench Backfill . Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	29 days 28 days 34 days 41 days 30 days 499 days 5 days	'09 Feb 12 '09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Mar 12 '09 Mar 17 '09 Apr 3 '09 Apr 17
Base Slab  Wall and Deck  Curing  Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84)  Haul access	28 days 34 days 41 days 30 days 499 days 5 days	'09 Feb 18 '09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Mar 17 '09 Apr 3 '09 Apr 17
Wall and Deck Curing Trench Backfill . Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	34 days 41 days 30 days <b>499 days</b> 5 days	'09 Mar 1 '09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Apr 3 '09 Apr 17
Curing Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84)  Haul access	41 days 30 days <b>499 days</b> 5 days	'09 Mar 8 '09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	'09 Apr 17
Trench Backfill  Ch1146-Ch1330 (Bay 72 - Bay 84)  Haul access	30 days 499 days 5 days 10 days	'09 Mar 22 '07 Sep 22 '07 Sep 22 '08 Oct 22	· ·
. Ch1146-Ch1330 (Bay 72 - Bay 84) Haul access	499 days 5 days 10 days	'07 Sep 22 '07 Sep 22 '08 Oct 22	US ADI ZU
Haul access	5 days 10 days	'07 Sep 22 '08 Oct 22	'09 Feb 1
	10 days	'08 Oct 22	'07 Sep 26
Flow diversion			'08 Oct 31
Demolition of existing crossing (Bay 72)	,0	'08 Nov 16	'08 Nov 18
Demolition of existing footbridge (Bay 83)	7 days	'08 Nov 17	'08 Nov 23
Excavation and Handling of Type 3 Contaminated		'08 Nov 1	'08 Dec 27
Granular Bedding	53 days	'08 Nov 11	'09 Jan 2
Base Slab	53 days	'08 Nov 17	'09 Jan 8
Wall and Deck	49 days	'08 Nov 28	'09 Jan 15
Curing	56 days	'08 Dec 5	'09 Jan 29
Trench Backfill	45 days	'08 Dec 19	'09 Feb 1
bion	507 days	'08 Feb 6	'09 Jun 26
. Bay 33- Bay39 (Ch436-Ch530)	100 days	'09 Mar 19	'09 Jun 26
Bay 40 - Bay 45 (CH530-Ch630)	120 days	'09 Jan 21	'09 May 20
Bay 46 - Bay 52 (Ch630-Ch730)	247 days	'08 Apr 25	'08 Dec 27
Bay 53 - Bay 55 (Ch730-Ch800)	37 days	'08 Feb 6	'08 Mar 13
. Bay 56c - Bay 67 (Ch840-Ch1037)	200 days	'08 Nov 9	'09 May 27
Bay 68 - Bay 71 (Ch1037-Ch1160)	60 days	'09 Apr 18	'09 Jun 16
Bay 72 - Bay 84 (Ch1160-Ch1330)	130 days	'09 Jan 30	'09 Jun 8
anite Stone Facing	460 days	'08 Feb 6	'09 May 10
ay 54 to Bay 55 (Ch738 - Ch800)	78 days	'08 Feb 6	'08 Apr 23
ay 68 and Bay 72 (Ch1038 - Ch1165)	23 days	'09 Apr 18	'09 May 10
ay 83 and Bay 84 (Ch1301-Ch1330)	7 days	'09 Jan 30	'09 Feb 5
mp Crossing at Bay 71 (Ch1145)	86 days	'08 Nov 10	'09 Feb 3
.1 Construction	5 days	'08 Nov 10	'08 Nov 14
.2 Pesdestrian diversion	1 day	'08 Nov 15	'08 Nov 15
.3 Demolition of Temp crossing	2 days	'09 Feb 2	'09 Feb 3
mp No. 2 (Ch752 - Ch800, Bay 55)		'08 Feb 6	'08 Feb 22
mp 140. = (0111 02 - 011000, Day 00)	17 days 5 days	'08 Feb 6	'08 Feb 10
eneral fill	2 days	'08 Feb 11	'08 Feb 12
eneral fill	10 days	'08 Feb 13	'08 Feb 22
ranular fill and blinding	31 days	'09 Apr 18	'09 May 18
eranular fill and blinding oad slab		-	'09 Apr 29
oranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68)			'09 May 9
oranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab			'09 May 14
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all	o uays		
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all	2 do		'09 May 16
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all ieneral fill iranular fill and blinding	2 days		'09 May 18
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all teneral fill tranular fill and blinding oad slab	2 days		'09 Feb 3
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all seneral fill stranular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306)	2 days 85 days		'08 Nov 15
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all seneral fill branular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306)	2 days 85 days 5 days	'08 Nov 16	'08 Nov 16
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all seneral fill branular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306) 1.1 Construction 1.2 Pedestrian diversion	2 days <b>85 days</b> 5 days 1 day	100 - 1	'09 Feb 3
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all seneral fill branular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306) 1.1 Construction 1.2 Pedestrian diversion 1.3 Demolition of Temp crossing	2 days 85 days 5 days 1 day 2 days	'09 Feb 2	'08 Feb 21
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab Vall seneral fill branular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306) 1.1 Construction 1.2 Pedestrian diversion 1.3 Demolition of Temp crossing taining Wall RW1 (Ch430-Ch490)	2 days 85 days 5 days 1 day 2 days 113 days	'07 Nov 1	'07 Nov 25
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab /all seneral fill branular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306) 1.1 Construction 1.2 Pedestrian diversion 1.3 Demolition of Temp crossing staining Wall RW1 (Ch430-Ch490) xcavation	2 days  85 days 5 days 1 day 2 days 113 days 25 days	'07 Nov 1 '07 Nov 1	
ranular fill and blinding oad slab amp No. 1 (Ch1052 - Ch1100, Bay 68) ase slab Vall seneral fill branular fill and blinding oad slab destrian Temporary Crossing at Bay 83 (Ch1306) 1.1 Construction 1.2 Pedestrian diversion 1.3 Demolition of Temp crossing taining Wall RW1 (Ch430-Ch490)	2 days 85 days 5 days 1 day 2 days 113 days	'07 Nov 1	'07 Dec 2
ranula oad sl		10 days   1 days   1 days   5 days   5 days   7 fill and blinding   2 days   2 day	10 days   '09 Apr 30     1 fill   5 days   '09 May 10     1 fill and blinding   2 days   '09 May 15     2 days   '09 May 17     3 days   '09 May 17     4 days   '09 May 17     5 days   '08 Nov 11     6 destrian diversion   1 day   '08 Nov 16     6 emolition of Temp crossing   2 days   '09 Feb 2     7 days   '09 Feb 2     8 days   '09 Feb 2     9 days   '09 Feb 2     113 days   '07 Nov 1     1 days   '07 Nov

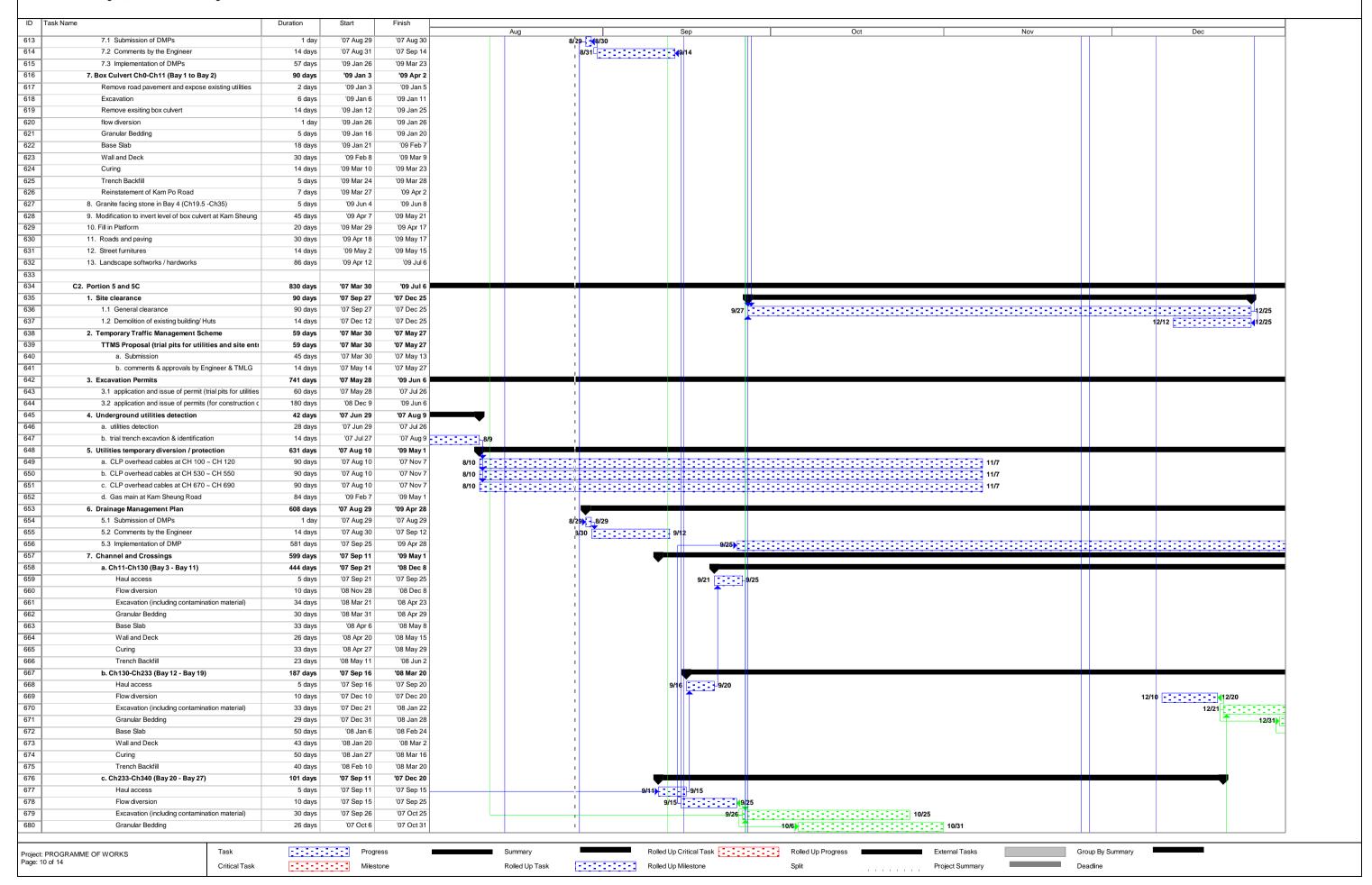
PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

ID Tas	ik Name	Duration	Start	Finish	A	2	0-4	NI	D
545	Wall	26 days	'07 Dec 27	'08 Jan 21	Aug	Sep	Oct	Nov	Dec 12/27
546	Curing	14 days	'08 Jan 22	'08 Feb 4					<del> </del>
547	Backfilling	17 days	'08 Feb 5	'08 Feb 21		i			
548	13. Filling in Platform	454 days	'08 Feb 9	'09 May 7		1			
549	a. Bay 33- Bay39 (Ch436-Ch530)	25 days	'09 Apr 13	'09 May 7					
550 551	b. Bay 40 - Bay 45 (CH530-Ch630)	28 days	'09 Jan 24	'09 Feb 20		1			
552	c. Bay 46 - Bay 52 (Ch630-Ch730) d. Bay 53 - Bay 55 (Ch730-Ch800)	28 days 19 days	'08 Apr 28 '08 Feb 9	'08 May 25 '08 Feb 27		1			
553	e. Bay 56c - Bay 67 (Ch844-Ch1037)	62 days	'08 Nov 12	'09 Jan 12					
554	f. Bay 68 - Bay 71 (Ch1037-Ch1146)	10 days	'09 Apr 21	'09 Apr 30		1			
555	g. Bay 72 - Bay 84 (Ch1146-Ch1330)	14 days	'09 Feb 2	'09 Feb 15		1			
556	14. Drainage works	489 days	'08 Feb 19	'09 Jun 21		i			
557	14.1 storm drain with manhole	459 days	'08 Feb 19	'09 May 22		1			
558	a. Bay 33- Bay39 (Ch436-Ch530)	30 days	'09 Apr 23	'09 May 22		1			
559	b. Bay 40 - Bay 45 (CH530-Ch630)	20 days	'09 Feb 3	'09 Feb 22					
560	c. Bay 46 - Bay 52 (Ch630-Ch730)	20 days	'08 May 8	'08 May 27		1			
561	d. Bay 53 - Bay 55 (Ch730-Ch800)	20 days	'08 Feb 19	'08 Mar 9		1			
562 563	e. Bay 56c - Bay 67 (Ch844-Ch1037) f. Bay 68 - Bay 71 (Ch1037-Ch1146)	90 days	'08 Nov 22 '09 May 1	'09 Feb 19 '09 May 20					
564	g. Bay 72 - Bay 84 (Ch1146-Ch1330)	20 days 20 days	'09 Feb 12	'09 Mar 3		1			
565	14.2. surface drain	480 days	'08 Feb 28	'09 Jun 21					
566	a. Bay 33- Bay39 (Ch436-Ch530)	45 days	'09 May 8	'09 Jun 21					
567	b. Bay 40 - Bay 45 (CH530-Ch630)	45 days	'09 Feb 21	'09 Apr 6		The state of the s			
568	c. Bay 46 - Bay 52 (Ch630-Ch730)	45 days	'08 May 26	'08 Jul 9					
569	d. Bay 53 - Bay 55 (Ch730-Ch800)	45 days	'08 Feb 28	'08 Apr 12					
570	e. Bay 56c - Bay 67 (Ch844-Ch1037)	45 days	'09 Jan 13	'09 Feb 26		i i			
571	f. Bay 68 - Bay 71 (Ch1037-Ch1146)	45 days	'09 May 1	'09 Jun 14		1			
572	g. Bay 72 - Bay 84 (Ch1146-Ch1330)	45 days	'09 Feb 16	'09 Apr 1					
573	15. Roads and paving	168 days	'09 Jan 13	'09 Jun 29		i			
574	a. Ch800-Ch881	60 days	'09 Jan 13	'09 Mar 13		1			
575 576	b. Ch881-CH1037 c. CH1037-CH1165	52 days 60 days	'09 Mar 14 '09 May 1	'09 May 4 '09 Jun 29					
577	16. Street furnitures / traffic sign / road marking	145 days	'09 Feb 12	'09 Jul 6		i			
578	a. Ch800-Ch881	37 days	'09 Feb 12	'09 Mar 20		1			
579	b. Ch881-CH1037	37 days	'09 Apr 13	'09 May 19					
580	c. CH1037-CH1165	37 days	'09 May 31	'09 Jul 6		i			
581	17. Landscape softworks / hardworks	246 days	'08 Nov 3	'09 Jul 6		T. Comments			
582	a. Bay 33- Bay39 (Ch436-Ch530)	30 days	'09 Jun 7	'09 Jul 6					
583	b. Bay 40 - Bay 45 (CH530-Ch630)	45 days	'09 Mar 23	'09 May 6		i			
584	c. Bay 46 - Bay 52 (Ch630-Ch730)	45 days	'08 Nov 3	'08 Dec 18		1			
585 586	d. Bay 53 - Bay 55 (Ch730-Ch800)	45 days	'08 Dec 18	'09 Feb 1		:			
587	e. Bay 56c - Bay 67 (Ch844-Ch1037) f. Bay 68 - Bay 71 (Ch1037-Ch1146)	45 days 45 days	'09 Feb 1 '09 May 23	'09 Mar 18 '09 Jul 6		i			
588	g. Bay 72 - Bay 84 (Ch1146-Ch1330)	45 days	'09 Mar 18	'09 May 1		1			
589	g. 1.1, 1.1 (2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1								
590	C. Section II of the Works	830 days	'07 Mar 30	'09 Jul 6					
591	C1. Portion 4	829 days	'07 Mar 31	'09 Jul 6		_			
592	1. Site clearance	14 days	'07 Dec 26	'08 Jan 8		i i			<b>V</b>
593	1.1 General clearance	14 days	'07 Dec 26	'08 Jan 8		1			12/26
594	1.2 Demolition of existing building/ Huts	2 days	'08 Jan 7	'08 Jan 8					Ţ
595 596	Temporary Traffic Management Scheme     2.1 TTMS Proposal (trial pits for utilities and sit	462 days	'07 Mar 31 '07 Mar 31	'08 Jul 5					
597	a. Submission	59 days 45 days	'07 Mar 31	'07 May 14		1			
598	b. comments & approvals by Engineer & TMLG		'07 May 15	'07 May 28					
599	2.2 TTMS Proposal (for construction of box cult		'08 May 6	'08 Jul 5		1			
600	a. Submission	45 days	'08 May 6	'08 Jun 20					
601	b. comments & approvals by Engineer & TMLG	14 days	'08 Jun 21	'08 Jul 5					
602	3. Excavation Permits	584 days	'07 May 29	'09 Jan 2					
303	3.1 application and issue of permit (trial pits for utiliti		'07 May 29	'07 Jul 27		1			
604	3.2 application and issue of permits (for construction		'08 Jul 6	'09 Jan 2					
305	4. Underground utilities detection	43 days	'07 Jun 29	'07 Aug 10	<b>-</b>	1			
606	4.1 utilities detection	28 days	'07 Jun 29	'07 Jul 27	-	1			
607 608	4.2 trial trench excavtion & identification	14 days	'07 Jul 28	'07 Aug 10	8/10				
608	Utilities temporary diversion / protection     a. WSD water main along Kam Po Road	94 days	'09 Jan 6	'09 Apr 9					
610	b. Street lighting along Kam Po Road	94 days 94 days	'09 Jan 6	'09 Apr 9		1			
611	c. DSD storm Drain	94 days	'09 Jan 6	'09 Apr 9					
612	6. Drainage Management Plan	573 days	'07 Aug 29	'09 Mar 23					
		,-	3 .			<b>▼</b>	III	<u> </u>	1 1
roject: DD	OGRAMME OF WORKS Task	-1:1:1	Progres	s ====	Summary	Rolled Up Critical Task	Rolled Up Progress Ex	ternal Tasks Gro	up By Summary
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Contract No. : DC / 2006 / 02

Contract Title: Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,

Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai



PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

81		Duration	Start	Finish	Aug Sep	Oct	Nov	Dec
	Base Slab	45 days	'07 Oct 12	'07 Nov 25	1		11/25	
	Wall and Deck	38 days	'07 Oct 26	'07 Dec 2		10/26	1-	
	Curing	45 days	'07 Nov 2	'07 Dec 16		11/2		12/16
	Trench Backfill	35 days	'07 Nov 16	'07 Dec 20			11/16	12/20
	d. Ch449-Ch549 (Bay 37 - Bay 43)	584 days	'07 Sep 26	'09 May 1				
	Haul access	5 days	'07 Sep 26	'07 Sep 30		9/26 9/30		
	Flow diversion	10 days	'09 Jan 27	'09 Feb 6				
	Excavation (including contamination material)  Granular Bedding	29 days 25 days	'09 Feb 7	'09 Mar 7 '09 Mar 13				
	Base Slab		'09 Feb 17	'09 Apr 6	i			
	Wall and Deck	43 days 36 days	'09 Mar 9	'09 Apr 13	ı			
	Curing	43 days	'09 Mar 16	'09 Apr 27	I I			
	Trench Backfill	33 days	'09 Mar 30	'09 May 1	!			
	e. Ch549-Ch608 (Bay 44 - Bay 47)	408 days	'07 Oct 1	'08 Nov 11				
	Haul access	3 days	'07 Oct 1	'07 Oct 3	ı	10/110/3		
	Flow diversion	5 days	'08 Aug 23	'08 Aug 28	ı	101 103		
	Excavation (including contamination material)	19 days	'08 Aug 29	'08 Sep 16				
-	Granular Bedding	15 days	'08 Sep 8	'08 Sep 22				
-	Base Slab	23 days	'08 Sep 14	'08 Oct 6				
	Wall and Deck	27 days	'08 Sep 28	'08 Oct 24				
<del>                                     </del>	Curing	34 days	'08 Oct 5	'08 Nov 7				
	Trench Backfill	24 days	'08 Oct 19	'08 Nov 11				
	f. Ch608-Ch688 (Bay 48 - Bay 55)	492 days	'07 Oct 4	'09 Feb 6				
	Haul access	5 days	'07 Oct 4	'07 Oct 8		10/4		
	Flow diversion	3 days	'08 Nov 8	'08 Nov 11	!	" <u></u>		
	Excavation (including contamination material)	26 days	'08 Nov 12	'08 Dec 7				
1	Granular Bedding	22 days	'08 Nov 22	'08 Dec 13				
	Base Slab	46 days	'08 Nov 28	'09 Jan 12				
	Wall and Deck	39 days	'08 Dec 12	'09 Jan 19				
	Curing	46 days	'08 Dec 19	'09 Feb 2				
	Trench Backfill	36 days	'09 Jan 2	'09 Feb 6				
	g. Ch688-Ch745 (Bay 56 - Bay 59)	291 days	'07 Oct 9	'08 Jul 25		<u>_</u>		
	Haul access	3 days	'07 Oct 9	'07 Oct 11		10/910/11		
	Flow diversion	3 days	'08 May 20	'08 May 23				
	Excavation (including contamination material)	13 days	'08 May 24	'08 Jun 5				
	Granular Bedding	10 days	'08 Jun 3	'08 Jun 12				
	Base Slab	20 days	'08 Jun 9	'08 Jun 28				
	Wall and Deck	15 days	'08 Jun 23	'08 Jul 7				
	Curing	22 days	'08 Jun 30	'08 Jul 21				
	Trench Backfill	12 days	'08 Jul 14	'08 Jul 25			<u> </u>	
	h. Ch745-Ch797 (Bay 60 - Bay 63)	351 days	'07 Oct 12	'08 Sep 26				
<u> </u>	Haul access	3 days	'07 Oct 12	'07 Oct 14		10/12 10/14		
<u></u>	Flow diversion	3 days	'08 Jul 22	'08 Jul 25				
	Excavation (including contamination material)	16 days	'08 Jul 26	'08 Aug 10	•			
<u> </u>	Granular Bedding	12 days	'08 Aug 5	'08 Aug 16				
<u> </u>	Base Slab	20 days	'08 Aug 11	'08 Aug 30				
<del> </del>	Wall and Deck Curing	15 days	'08 Aug 25	'08 Sep 8				
-	Trench Backfill	22 days	'08 Sep 1 '08 Sep 15	'08 Sep 22 '08 Sep 26				
-	8. Retaining Wall RW2 (Ch340-Ch350)	12 days		'08 Sep 26				
	Excavation	41 days 4 days	'08 Aug 29 '08 Aug 29	'08 Sep 1				
<del> </del>	Granular bedding	4 days	'08 Sep 2	'08 Sep 5	1			
	Base slab	10 days	'08 Sep 6	'08 Sep 15	•			
-	Wall	6 days	'08 Sep 16	'08 Sep 21				
+-	Curing	14 days	'08 Sep 22	'08 Oct 5				
+-	Backfilling	3 days	'08 Oct 6	'08 Oct 8				
	9. Gabion	568 days	'07 Dec 17	'09 Jul 6	1			
-	Bay 5- Bay 11 (Ch35-Ch130)	147 days	'08 May 30	'08 Oct 23				<b>—</b>
-	Bay 12 - Bay 19 (Ch130-Ch233)	93 days	'08 Mar 17	'08 Jun 17				
	Bay 20 - Bay 27 (Ch233-Ch340)	159 days	'07 Dec 17	'08 May 23				12/17
	Bay 37 - Bay 43 (Ch449-Ch549)	70 days	'09 Apr 28	'09 Jul 6				
	Bay 48 - Bay 55 (Ch608-Ch688)	79 days	'09 Feb 3	'09 Apr 22	•			
	Bay 56 - Bay 59 (Ch688-Ch745)	20 days	'08 Jul 22	'08 Aug 10				
	Bay 60 - Bay 63 (Ch745-Ch797)	17 days	'08 Sep 23	'08 Oct 9				
-	10. Granite Stone Facing	37 days	'09 Apr 28	'09 Jun 3				
-	Bay 12 - Bay 19 (Ch130-Ch233)	12 days	'09 May 5	'09 May 16				
-	Bay 37 - Bay 43 (Ch449-Ch549)	7 days	'09 Apr 28	'09 May 4				
	Bay 44 - Bay 47 (Ch549-Ch608)	6 days	'09 May 20	'09 May 25				
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CHIT CHEUNG CONSTRUCTION CO., LTD. DATE: July 2007

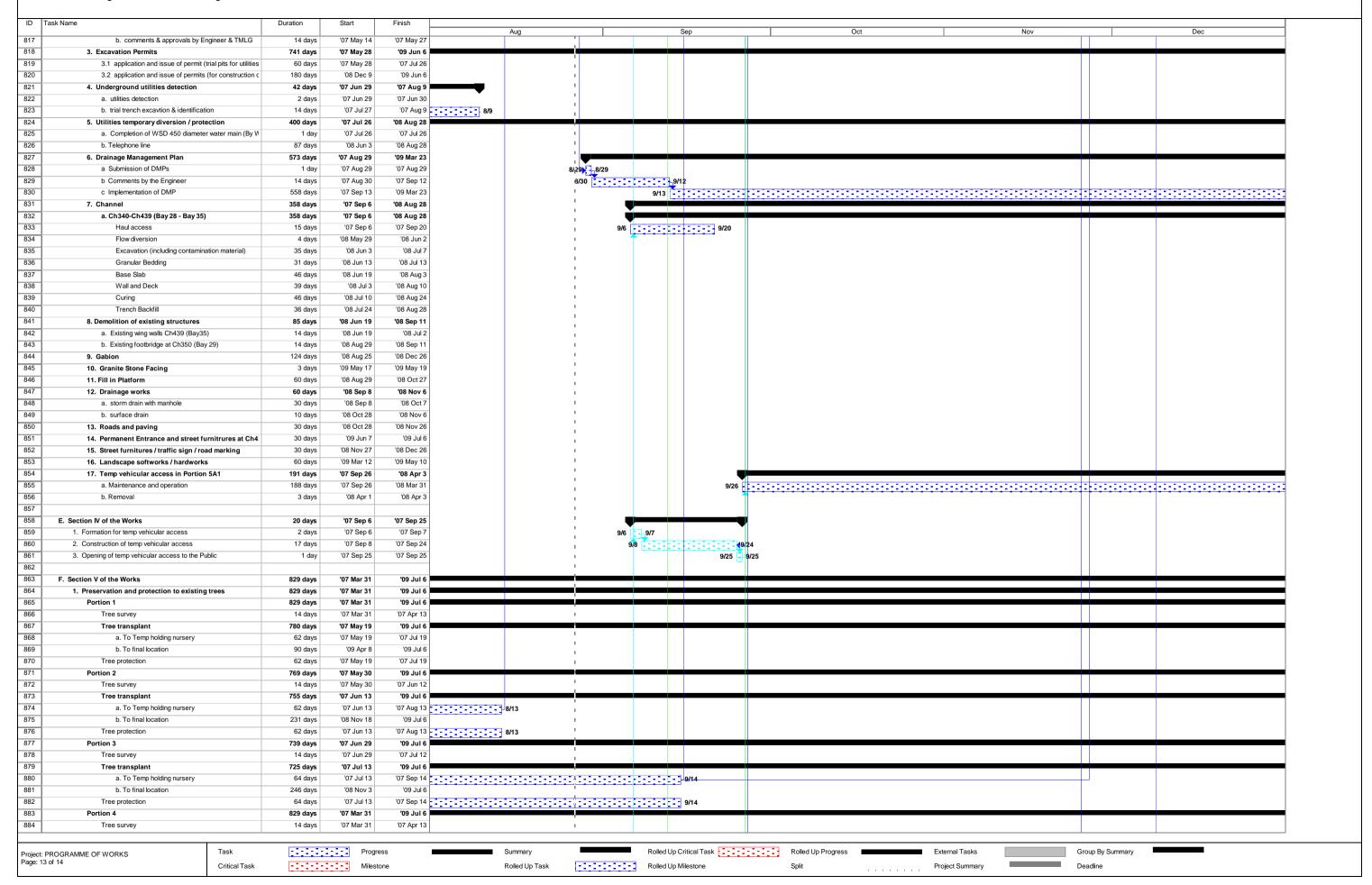
PROGRAMME OF WORKS - MP02 Contract No. : DC / 2006 / 02 Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

	·	1			Aug	l l	Sep		Oct		Nov	Dec
9	Bay 48 - Bay 55 (Ch608-Ch688)	9 days	'09 May 26	'09 Jun 3		: :		<u> </u>		'		
50	11. Ramp No. 1 (Ch650 - Ch675, Bay 52-Bay 53)	33 days	'09 Feb 3	'09 Mar 7		i						
751	base slab	12 days	'09 Feb 3	'09 Feb 14		1						
52	Wall	10 days	'09 Feb 15	'09 Feb 24								
753 754	General fill	5 days	'09 Feb 25	'09 Mar 1		i						
55	Granular fill and blinding  Road slab	3 days	'09 Mar 2 '09 Mar 5	'09 Mar 4 '09 Mar 7		1						
756	12. Ramp No. 2 (Ch515 - Ch540, Bay 42)	3 days	'09 Apr 28	'09 May 30		1						
757	base slab	33 days 12 days	'09 Apr 28	'09 May 9								
758	Wall	10 days	'09 May 10	'09 May 19		i						
759	General fill	5 days	'09 May 20	'09 May 24		1						
760	Granular fill and blinding	3 days	'09 May 25	'09 May 27		1						
761	Road slab	3 days	'09 May 28	'09 May 30								
762	13. Ramp No. 3 (Ch210 - Ch235, Bay 18-Bay19)	33 days	'08 Mar 17	'08 Apr 18		i						
763	base slab	12 days	'08 Mar 17	'08 Mar 28		1						
64	Wall	10 days	'08 Mar 29	'08 Apr 7								
65	General fill	5 days	'08 Apr 8	'08 Apr 12								
66	Granular fill and blinding	3 days	'08 Apr 13	'08 Apr 15		1						
67	Road slab	3 days	'08 Apr 16	'08 Apr 18		1						
68	14 Ramp No. 4 (Ch20 - Ch45, Bay 4-Bay5)	28 days	'08 May 30	'08 Jun 26								
69	General fill	7 days	'08 May 30	'08 Jun 5		i						
70	Granular fill and blinding	4 days	'08 Jun 6	'08 Jun 9		1						
71	Sloping side wall and road slab	17 days	'08 Jun 10	'08 Jun 26		!						
72	15. Demolition of existing wing walls Ch449	14 days	'09 Feb 23	'09 Mar 8								
73	16. Filling in Platform	123 days	'08 Jun 3	'08 Oct 3		i						
74	a. Bay 3- Bay 27 (Ch11-Ch340)	34 days	'08 Jun 3	'08 Jul 6		1						
775	b. Bay 37 - Bay 55 (Ch449-Ch688)	34 days	'08 Aug 29	'08 Oct 1		!						
76	c. Bay 56 - Bay 63 (Ch688-Ch797)	7 days	'08 Sep 27	'08 Oct 3								
777	17. Drainage works	146 days	'08 Jun 13	'08 Nov 5		1						
778	17.1 storm drain with manhole and headwall	132 days	'08 Jun 13	'08 Oct 22		1						
80	a. Bay 3- Bay 27 (Ch11-Ch340) b. Bay 37 - Bay 55 (Ch449-Ch688)	20 days	'08 Jun 13 '08 Sep 8	'08 Jul 2 '08 Oct 22								
81	c. Bay 56 - Bay 63 (Ch688-Ch797)	45 days 14 days	'08 Oct 4	'08 Oct 17								
782	17.2 surface drain	122 days	'08 Jul 7	'08 Nov 5		1						
83	a. Bay 3- Bay 27 (Ch11-Ch340)	34 days	'08 Jul 7	'08 Aug 9		1						
84	b. Bay 37 - Bay 55 (Ch449-Ch688)	35 days	'08 Oct 2	'08 Nov 5								
85	c. Bay 56 - Bay 63 (Ch688-Ch797)	14 days	'08 Oct 4	'08 Oct 17		i						
86	18. Roads and paving	275 days	'08 Sep 28	'09 Jun 29		1						
87	a. Ch233 - Ch340	30 days	'08 Sep 28	'08 Oct 27								
'88	b. Ch449 - Ch549	30 days	'08 Dec 1	'08 Dec 30								
89	c. Ch549 - Ch609	30 days	'08 Nov 1	'08 Nov 30		1						
90	d. Ch609 - Ch688	30 days	'08 Oct 2	'08 Oct 31		1						
'91	e. Permanent Entrance at Ch449	23 days	'09 Jun 7	'09 Jun 29								
92	19. Street furnitures	252 days	'08 Oct 28	'09 Jul 6		i						
93	a. Ch233 - Ch340	30 days	'08 Oct 28	'08 Nov 26		1						
794	b. Ch449 - Ch549	30 days	'08 Dec 31	'09 Jan 29								
795	c. Ch549 - Ch609	30 days	'08 Dec 1	'08 Dec 30								
796	d. Ch609 - Ch688	30 days	'08 Nov 1	'08 Nov 30		1						
797	e. Permanent Entrance at Ch449	7 days	'09 Jun 30	'09 Jul 6		1						
798	20. Landscape softworks / hardworks	250 days	'08 Oct 18	'09 Jun 24								
799	a. Ch35 - Ch340	45 days	'09 May 11	'09 Jun 24		i						
300	b. Ch449 - Ch549	45 days	'09 Jan 26	'09 Mar 11		1						
301	c. Ch549 - Ch609 d. Ch609 - Ch688	45 days	'08 Dec 12	'09 Jan 25 '08 Dec 11		!						
302	e. Ch688 - Ch797	45 days 10 days	'08 Oct 28	'08 Oct 27								
303	21. Road Diversion in Kam Po Road	10 days	'08 Dec 23	'09 Apr 3		i						
305	a. Temp Decking above Bay 3 and temp road pavemer	102 days	'08 Dec 23	'09 Apr 3		1						
806	b. Implementation of road diversion	1 day	'09 Jan 2	'09 Jan 2		:						
807	c. Removal of decking	1 day	'09 Apr 3	'09 Apr 3								
808		, 443,	22.40.0	<del></del>		1						
	). Section III of the Works	830 days	'07 Mar 30	'09 Jul 6								
310	D1. Portions 5A1, 5A2 and 5B	830 days	'07 Mar 30	'09 Jul 6								
11	1. Site clearance	4 days	'07 Sep 6	'07 Sep 9								
312	1.1 General site clearance	4 days	'07 Sep 6	'07 Sep 9		ı g	/6 9/9					
813	1.2 Demolition of existing building/ Huts	4 days	'07 Sep 6	'07 Sep 9		ı g	/6) 9/9					
814	2. Temporary Traffic Management Scheme	59 days	'07 Mar 30	'07 May 27								
815	TTMS Proposal (trial pits for utilities and site enti	59 days	'07 Mar 30	'07 May 27								
816	a. Submission	45 days	'07 Mar 30	'07 May 13		1						

Contract No. : DC / 2006 / 02

Contract Title: Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,

Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai



PROGRAMME OF WORKS - MP02
Contract No. : DC / 2006 / 02
Contract Title : Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements,
Stage 1, Phase 2B - Cheung Chun San Tsuen and Kam Tsin Wai

ID I	Task Name	Duration	Start	Finish							
"	Task Hallie	Duration	Start	1 11 11 311	Aug			Sep	Oct	Nov	Dec
885	Tree transplant	780 days	'07 May 19	'09 Jul 6	·						
886	a. To Temp holding nursery	62 days	'07 May 19	'07 Jul 19		i					
887	b. To final location	86 days	'09 Apr 12	'09 Jul 6		1					
888	Tree protection	62 days	'07 May 19	'07 Jul 19		1					
889	Portion 5	739 days	'07 Jun 29	'09 Jul 6							
890	Tree survey	14 days	'07 Jun 29	'07 Jul 12		1					
891	Tree transplant	725 days	'07 Jul 13	'09 Jul 6							
892	a. To Temp holding nursery	69 days	'07 Jul 13			X - 1 - 1 - 1 - 1	5 - 5 - 5 - 5 - 5	9/19	4		
893	b. To final location	262 days	'08 Oct 18	'09 Jul 6		1					
894	Tree protection	69 days	'07 Jul 13	'07 Sep 19		å-d-d-d-d-d		9/19			
895	Portion 5A1	682 days	'07 Jun 29	'09 May 10		•					
896	Tree survey	7 days	'07 Jun 29	'07 Jul 5		1					
897	Tree transplant	675 days	'07 Jul 6	'09 May 10							
898	a. To Temp holding nursery	62 days	'07 Jul 6	'07 Sep 5	-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	: <u>#0808080808</u>	9/5				
899	b. To final location	60 days	'09 Mar 12	'09 May 10							
900	Tree protection	62 days	'07 Jul 6	'07 Sep 5		<u> </u>	9/5				
901	Portion 5A2	682 days	'07 Jun 29	'09 May 10							
902	Tree survey	14 days	'07 Jun 29	'07 Jul 12		1					
903	Tree transplant	668 days	'07 Jul 13	'09 May 10		•					
904	a. To Temp holding nursery	62 days	'07 Jul 13	'07 Sep 12				9/12			
905	b. To final location	60 days	'09 Mar 12	'09 May 10		1					
906	Tree protection	62 days	'07 Jul 13	'07 Sep 12		A:-:-:-:-		9/12			
907	Portion 5B	533 days	'07 Nov 25	'09 May 10		1					
908	Tree survey	14 days	'07 Nov 25	'07 Dec 8						11/25	12/8
909	Tree transplant	519 days	'07 Dec 9	'09 May 10		i					<u> </u>
910	a. To Temp holding nursery	62 days	'07 Dec 9	'08 Feb 8		1					12/9
911	b. To final location	60 days	'09 Mar 12	'09 May 10		1					
912	Tree protection	62 days	'07 Dec 9	'08 Feb 8		1					12/9
913						i					
914	H. Berthing Area	558 days	'07 Sep 12	'09 Mar 22		1	Ų		4		
915	Construction of Loading Facilities	14 days	'07 Sep 12	'07 Sep 25		1	9/12		9/25		
916	Removal of Loading Facilities	2 days	'09 Mar 14	'09 Mar 15		1					
917	Reinstatement of Berthing Area	7 days	'09 Mar 16	'09 Mar 22		1					

CHIT CHEUNG CONSTRUCTION CO., LTD. DATE: July 2007



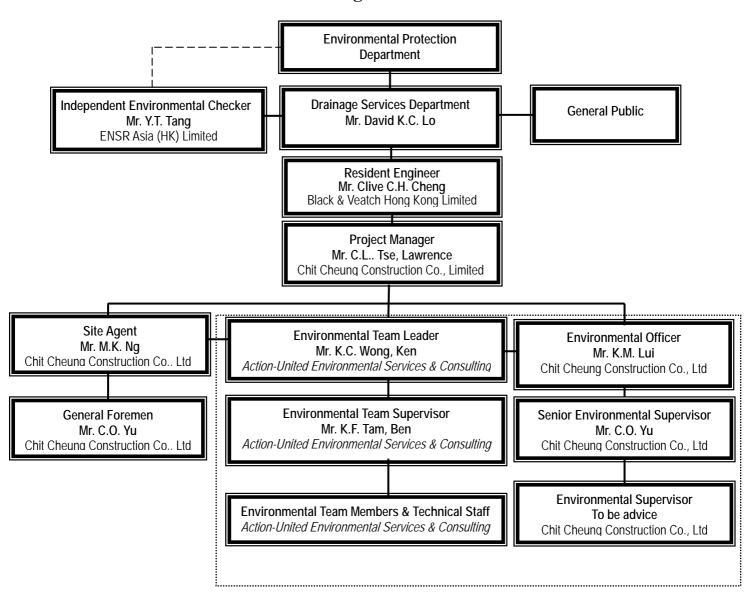


# **Appendix C**

**Environmental Organization Structure** 



# **Environmental Organization Structure**



Contractor's Environmental Team (CET)



# **Contact Details of Key Personnel**

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
DSD	Employer	Mr. David K.C. LO	2594-7254	2827-8526
B&V	Engineer	Mr. Kelvin N.F. LAU	2601-1000	2601-3988
B&V	Engineer's Representative	Mr. Clive C.H. CHENG	2443-1442	2443-7307
ENSR	Independent Environmental Checker	Mr. Y.T. Tang	3105-8537	2891-0305
CCC	Project Director	Mr. P.Y. CHENG	9023-4821	2403-1162
CCC	Project Manager	Mr. Lawrence TSE	9752-0748	2479-1365
CCC	Site Agent	Mr. M.K. NG	6603-9711	2479-1365
CCC	Site Engineer	Mr. Jimmy CHAN	9234-8632	2479-1365
CCC	Environmental Officer	Mr. LUI Kam Man	9257-9111	2479-1365
CCC	Senior Environmental Supervisor	Mr. YU Chor-on	9026-9501	2479-1365
CCC	Environmental Supervisor	To be advice by CCC	-	2479-1365
CCC	Safety Officer	Mr. SHEA Yan Keung	6086-4658	2479-1365
AUES	Environmental Team Leader	Ken Wong	2959-6059	2959-6079
AUES	Ecologist	Vincent Lai	9406-9784	2959-6079
AUES	Decontamination Specialist	David Yeung	2959-6059	2959-6079

Legend:

DSD (Employer) Drainage Services Department B&V (Engineer) Black & Veatch Hong Kong Limited

CCC (Contractor) ENSR (IEC) Chit Cheung Construction Company Limited.

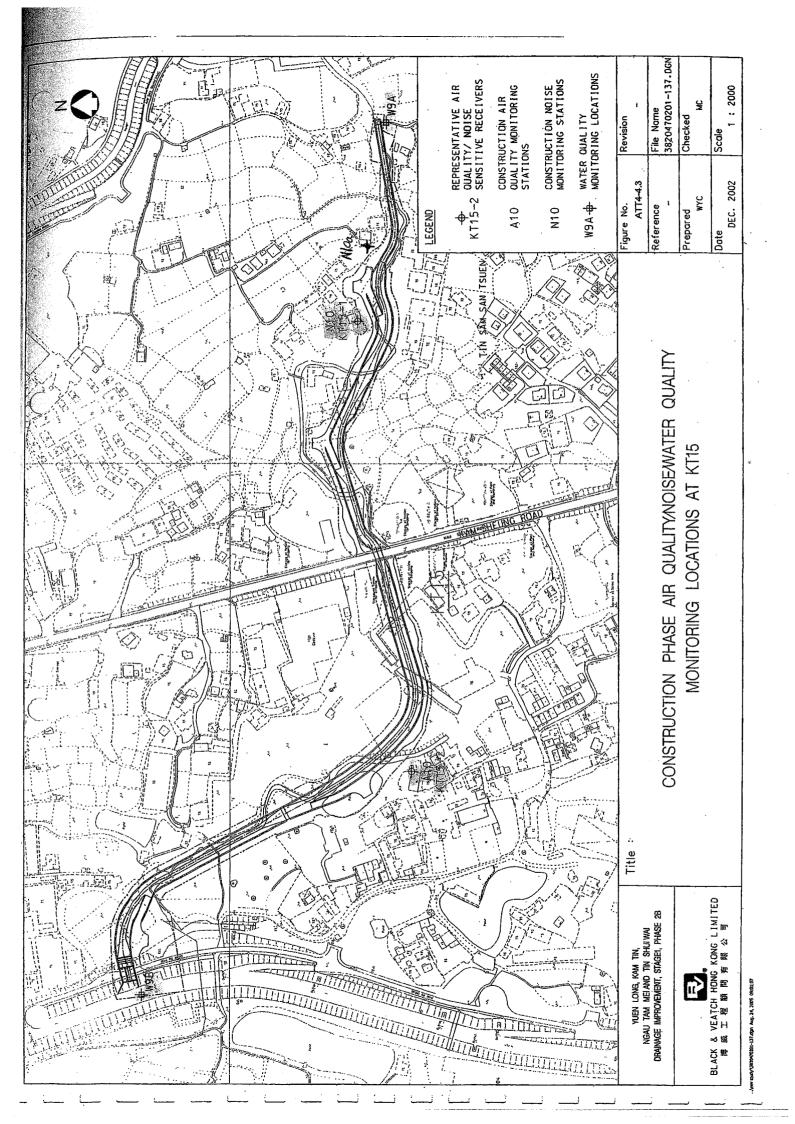
ENSR Asia (HK) Ltd.

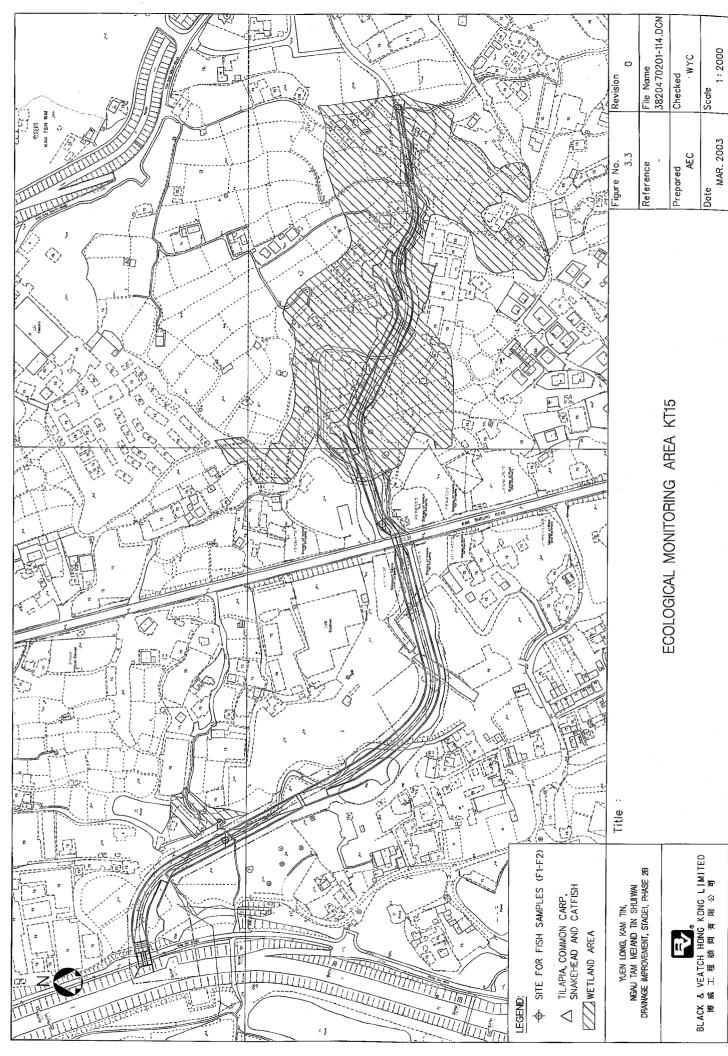
AUES (ET) Action-United Environmental Services & Consulting



# **Appendix D**

**Locations of Designated Monitoring Station/Locations/Area** 





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# Appendix E

**Event/Action Plan for Air Quality, Construction Noise, Stream Water Quality and Ecology** 



# **Event/Action Plan for Air Quality**

EVENT		ACTION		
EVENI	ET	IEC	Engineer	Contractor
ACTION LEVEL				
Exeedance for one sample	Identify source     Inform IEC and Engineer     Repeat measurement to confirm finding     Increase monitoring frequency to daily	Check monitoring data submitted by ET     Check Contractor's working method	Notify Contractor	Rectify any unacceptable practice     Amend working methods if appropriate
Exeedance for two or more consecutive samples	Identify source     Inform IEC and Engineer     Repeat measurements to confirm findings     Increase monitoring frequency to daily     Discuss with IEC and Contractor on remedial actions required     Fexceedance continues, arrange meeting with IEC and Engineer     T. If exceedance stops, cease additional monitoring	Check monitoring data submitted by ET     Check Contractor's working method     Discuss with ET and Contractor on possible remedial measures     Advice Engineer on the effectiveness of the proposed remedial measures     Supervise implementation of remedial measures	Confirm receipt of notification of failure in writing     Notify Contractor     Ensure remedial measures properly implemented	Submit proposals for remedial actions to IEC within 3 working days of notification     Implement the agreed proposals     Amend proposal if appropriate
LIMIT LEVEL				
Exeedance for one sample	Identify source     Inform Engineer and EPD     Repeat measurement to confirm finding     Increase monitoring frequency to daily     Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Engineer informed of the results	Check monitoring data submitted by ET     Check Contractor's working method     Discuss with ET and Contractor on possible remedial measures     Advice Engineer on the effectiveness of the proposed remedial measures     Supervise implementation of remedial measures	Confirm receipt of notification of failure in writing     Notify Contractor     Ensure remedial measures properly implemented	Take immediate action to avoid further exceedance     Submit proposals for remedial actions to IEC within 3 working days of notification     Implement the agreed proposals     Amend proposal if appropriate
Exceedance for two or more consecutive samples	Notify IEC, Engineer 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 and Engineer to discuss the remedial actions to be taken     Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Engineer informed of the results     If exceedance stops, cease additional monitoring	Discuss amongst Engineer, ET and Contractor on potential remedial actions     Review Contractor's remedial actions whether necessary to assure their effectiveness and advice the Engineer accordingly     Supervise implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented 4. Discuss amongst Environmental Team Leader and the Contractor potential remedial actions 5. Ensure remedial measures properly implemented 6. 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	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals if problem still not under control 5. Stop the relevant portion of works as determined by the Engineer until the exceedance is abated



## **Event/Action Plan for Construction Noise**

EVENT		ACTION		
EVENT	ET Leader	IEC	Engineer	Contractor
ACTION LEVEL	Notify Contractor and Engineer     Carry out investigation     Report the results of investigation to the IEC and Contractor     Discuss with the Contractor and formulate remedial measures     Increase monitoring frequency to check mitigation effectiveness	Review the analysed results submitted by ET     Review the proposed remedial measures by the Contractor and advice the Engineer accordingly     Supervise implementation of remedial measures	Confirm receipt of notification of failure in writing     Notify Contractor     Require Contractor to propose remedial measures for the analysed noise problem     Ensure remedial measures properly implemented	Submit noise mitigation proposals for remedial actions to IEC     Implement the agreed proposals
LIMIT LEVEL	Notify IEC, Engineer, EPD and Contractor     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, Engineer and EPD the causes & actions taken for the exceedances     Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Engineer informed of the results     If exceedance stops, cease additional monitoring	Discuss amongst Engineer, ET and Contractor on potential remedial actions     Review Contractor's remedial actions whether necessary to assure their effectiveness and advice the Engineer accordingly     Supervise implementation of remedial measures	Confirm receipt of notification of failure in writing     Notify Contractor     Require Contractor to propose remedial measures for the analysed noise problem     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 further exceedance     Submit proposals for remedial actions to IEC 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 Engineer until the exceedance is abated

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# **Event and Action Plan for Stream Water Quality**

Event	ET Leader	IEC	Engineer	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 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 advice Engineer 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	Inform Engineer 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 Contractor and propose mitigation measures to IEC and Engineer     Implement the agreed mitigation measures
ACTION LEVEL (being exceeded by more than 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 IEC, Engineer and Contractor     Repeat measurement on next day of exceedance     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 advice Engineer 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 the effectiveness of the implemented mitigation measures	Inform Engineer 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 Engineer within 3 working days     Implement the agreed mitigation measures
LIMIT LEVEL (being exceeded by one sampling days)	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 IEC, Engineer 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 advice Engineer accordingly     Assess the effectiveness of the implemented mitigation measures	Discuss with IEC, ET and Contractor on the proposed mitigation measures     Request Contractor to critically review the working methods     Make agreement on the mitigation measures to be implemented     Assess the effectiveness of the implemented mitigation measures	Inform Engineer 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, IEC and Engineer and propose mitigation measures to IEC and Engineer within 3 working days     Implement the agreed mitigation measures
LIMIT LEVEL (being exceeded by more than one sampling days)	Repeat in-situ measurement to confirm findings;     Identify source(s) of impact;     Inform Contractor, Engineer, IEC and EPD;     Check monitoring data, all plant, equipment and Contractor's working methods;     Discuss mitigation measures with IEC, Engineer 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 advice Engineer accordingly     Assess the effectiveness of the implemented mitigation measures	Discuss with IEC, ET and Contractor on the proposed mitigation measures     Request Contractor to critically review the working methods     Make agreement on the mitigation measures to be implemented     Assess the effectiveness of the implemented mitigation measures     Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until daily until no exceedance of Limit level	Inform Engineer 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, IEC and Engineer and propose mitigation measures to IEC and Engineer within 3 working days Propose mitigation measures to Engineer within 3 working days     Implement the agreed mitigation measures;     As directed by Engineer, to slow down or to stop all or part of the construction activities



# **Event/Action Plan for Ecology**

Event	ET Leader	IEC	Engineer	Contractor
Fauna The total number of species or individuals of the surveyed wetland dependent faunal groups is reduced by 20-40% from baseline	Notify IEC and Contractor;     Check the position and state of the current works to identify the causes;     Discuss mitigation measures with IEC and Contractor	Discuss with ET and Contractor on the mitigation measures     Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly     Assess the effectiveness of the implemented mitigation measures	Discuss with IEC on the proposed mitigation measures;     Reach agreement on the mitigation measures to be implemented	Inform Engineer and confirm notification of the non-compliance in writing Take immediate action to avoid further exceedances; Check all plant and equipment and working methods, especially noise emanating ones Discuss with ET and IEC and propose mitigation measures to IEC and Engineer Implement the agreed mitigation measures



# Appendix F

**Equipment Calibration Certificates** 



Equipment Calibration List for Construction of Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai Project

Item	Aspect	Description of Equipment	Date of Calibration	Date of Next Calibration
1*	Air	Greasby Anderson GMWS2310 High Volume Sampler	03 Sep 07	03 Nov 07
2		EQ094 - Sibata LD-3 Laser Dust Meter	22 Jun 07	21 Jun 08
3		EQ096 - Sibata LD-3 Laser Dust Meter	22 Jun 07	21 Jun 08
4	Noise	Bruel & Kjaer 4231 Acoustical Calibrator	17 Apr 07	17 Apr 08
5		Bruel & Kjaer 2238 Integrating Sound Level Meter	17 Apr 07	17 Apr 08
6	Water	YSI 550A or YSI 85/10FT DO Meter	19 Jul 07	19 Oct 07
7		Hanna HI 98128	19 Jul 07	19 Oct 07
8		Hach 2100p	19 Jul 07	19 Oct 07
9		ATAGO refractometer	19 Jul 07	19 Oct 07

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

### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location: Tin Sam San Tsuen

Date of Calibration: 3-Sep-07

Location ID: A10

Next Calibration Date: 3-Nov-07

Technician: Mr. Ben Tam

### CONDITIONS

Sea Level Pressure (hPa)
Temperature (°C)

1020.6 19.1 Corrected Pressure (mm Hg) Temperature (K) 765.45 292

### **CALIBRATION ORIFICE**

Make-> TISCH Model-> 515N Serial # -> 9833620 Qstd Slope -> Qstd Intercept ->

1.94872 0.00202

### **CALIBRATION**

Plate	H20 (L)	H2O (R)	H20	Qstd		IC	LINEAR
No.	(in)	(in)	(in)	(m3/min)	(chart)	corrected	REGRESSION
18	4.1	4.1	8.2	1.489	42	43.00	Slope = 36.1799
13	3.2	3.2	6.4	1.315	35	35.83	Intercept = -11.8292
10	2.4	2.4	4.8	1.139	27	27.64	Corr. coeff. = 0.9952
7	1.6	1.6	3.2	0.929	21	21.50	
5	0.9	0.9	1.8	0.697	14	14.33	

### Calculations:

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart respones

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration ( deg K )
Pstd = actual pressure during calibration ( mm Hg )

### For subsequent calculation of sampler flow:

1/m(( I )[Sqrt(298/Tav)(Pav/760)]-b)

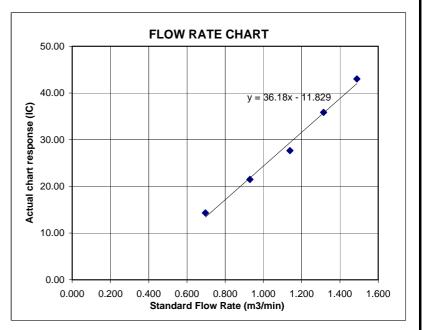
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure





### **Equipment Calibrated:**

Type: Laser Dust monitor

Manufacturer: Sibata

Serial No. 362337

Equipment Ref: EQ094

Sensitivity 722 CPM

### **Standard Equipment:**

Standard Equipment: Higher Volume Sampler

Location & Location ID: Au Tau abutment next to Yoho Town Phase 2

Equipment Ref: AM 7

Last Calibration Date: 20 May 2007

## **Equipment Calibration Results:**

Calibration Date: 22 June 2007

Hour	Time	Temp °C	RH %	Concentration in mg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
1	13:12 ~ 14:12	32.3	74	0.133	3613	60.2
1	14:15 ~ 15:15	31.7	77	0.139	3872	64.5
1	15:20 ~ 16:20	31.3	79	0.122	3204	53.4

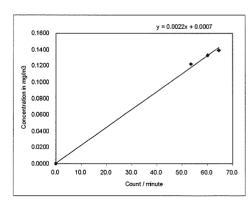
Sensitivity Adjustment Scale Setting (Before Calibration) 722 (CPM)
Sensitivity Adjustment Scale Setting (After Calibration) 722 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9987

Validity of Calibration Record \_\_\_\_\_\_ 25 June 2007



Operator : Ben Toun Signature : Date : 25 June 2007

QC Reviewer: Con Works Signature: Date: 25 Ine 2007



### **Equipment Calibrated:**

Type: Laser Dust monitor

Manufacturer: Sibata

Serial No. 362359

Equipment Ref: EQ096

Sensitivity 769 CPM

### Standard Equipment:

Standard Equipment: Higher Volume Sampler

Location & Location ID: Au Tau abutment next to Yoho Town Phase 2

Equipment Ref: AM 7

Last Calibration Date: 20 May 2007

## **Equipment Calibration Results:**

Calibration Date: 22 June 2007

Hour	Time	Temp °C	RH %	Concentration in mg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
1	13:12 ~ 14:12	32.3	74	0.133	3603	60.1
1	14:15 ~ 15:15	31.7	77	0.139	3930	65.5
1	15:20 ~ 16:20	31.3	79	0.122	3311	55.2

Sensitivity Adjustment Scale Setting (Before Calibration) 709 (CPM) Sensitivity Adjustment Scale Setting (After Calibration) 709 (CPM)

## Linear Regression of Y or X

Slope (K-factor): 0.0021 **Correlation Coefficient** 0.9990

Validity of Calibration Record 25 June 2007

y = 0.0022x + 0.0005 0.1600 0.1400 0.1200 0.1000 0.0600 0.0000 30.0

Operator: Ben Tom Signature:

QC Reviewer: Kan Won 6 Signature:



# 輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No.: C071764

# Certificate of Calibration

# This is to certify that the equipment

Description: Acoustical Calibrator (EQ017)

Manufacturer: Bruel & Kjaer

Model No.: 4231

Serial No.: 2292168

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C071764.

# The equipment is supplied by

Co. Name: Action-United Environmental Services and Consulting

Address: Unit A, 20/F., Gold King Industrial Building. 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

Date of Issue: 17 April 2007

Certified by:

K O Lee



# 輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No.: C071765

# Certificate of Calibration

This is to certify that the equipment

Description: Integrating Sound Level Meter (EQ010)

Manufacturer: Bruel & Kjaer

Model No.: 2238

Serial No.: 2285721

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C071765.

The equipment is supplied by

Co. Name: Action-United Environmental Services and Consulting

Address: Unit A, 20/F., Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

Date of Issue: 17 April 2007

Certified by:

K.C. Lee

The test equipment used for testing are traceable to the National Standards as specified in this report. This report shall not be reproduced except in full and with prior written approval from this laboratory.

HK0709810 Date of Issue: Client: Batch:

19/07/2007 ACTION UNITED ENVIRO SERVICES

Calibration of DO System

Client Reference:

YSI Multimeter Item:

YSI 550A Model No.:

HK0607963 05F2063AZ Equipment No.: Serial No.:

This meter was calibrated in accordance with standard method APHA (19th Ed.) 4500-O C and G Calibration Method:

19 July, 2007 Date of Calibration:

Testing Results:

Expected Reading	Recording Reading
2.80 mg/L	2.89 mg/L
4.82 mg/L	4.93 mg/L
7.76 mg/L	7.59 mg/L
Allowing Deviation	±0.2 mg/L

Laboratory Manager - Hong Kong Ms Wong Wai Mah, Alice

HK0709811

Date of Issue:

Batch:

19/07/2007 ACTION UNITED ENVIRO SERVICES

Client: Client Reference:

# Calibration of pH System

HANNA pH Meter Item:

H198128 Model No.:

S229924 Serial No.:

EQ110 Equipment No.:

This meter was calibrated in accordance with standard method APHA (19th Ed.) 4500-H Calibration Method:

19 July, 2007 Date of Calibration:

Testing Results:

Expected Reading	Recording Reading
4.00	4.05
7.00	7.02
10.0	9.91
Allowing Deviation	+ 0.2

Laboratory Manager - Hong Kong Ms Wong War Man, Alice

HK0709812 19/07/2007 ACTION UNITED ENVIRO SERVICES

Calibration of Salinity System

Client Reference:

Date of Issue:

Batch:

Client:

HAND REFRACTOMETER Item:

ATAGO Model No.:

289468 Serial No.:

EQ114 Equipment No.: This meter was calibrated in accordance with standard method APHA (19th Ed.) 2520 A and B Calibration Method:

Date of Calibration:

19 July, 2007

Testing Results:

Expected Reading	Recording Reading
10.0 g/L	9.8 g/L
20.0 g/L	21.0 g/L
30.0 g/L	29.0 g/L
Allowing Deviation	+10%

Ms Wong Wai Man, Alice Laboratory Manager - Hong Kong

HK0709813 Date of Issue: Client: Batch:

19/07/2007 ACTION UNITED ENVIRO SERVICES

Client Reference:

# Calibration of Tubidimeter

HACH Turbidimeter Item:

**HACH 2100P** Model No.:

950900008735 Serial No.:

EQ091 Equipment No.: This meter was calibrated in accordance with standard method APHA (19th Ed.) 2130B Calibration Method:

19 July, 2007 Date of Calibration:

Testing Results:

Expected Reading	Recording Reading
UTN 0.0	0.1 NTU
4.0 NTU	4.3 NTU
16.0 NTU	15.4 NTU
40.0 NTU	37.0 NTU
80.0 NTU	81.0 NTU
Allowing Deviation	±10%

Ms Wong Wai Man, Alice Laboratory Manager Hong Kong



# Appendix G

**Impact Monitoring Schedules** 



# **Impact Monitoring Schedules in this Reporting Period**

Date		Air Quality		Noise Leq 30min	Stream Water	Ecology Surveys
		1-Hour TSP	24-Hour TSP	Noise Leq 30mm	Quality	Leology Bulveys
26-Aug-07	Sun					
27-Aug-07	Mon					
28-Aug-07	Tue					
29-Aug-07	Wed					
30-Aug-07	Thu					
31-Aug-07	Fri					
1-Sep-07	Sat					
2-Sep-07	Sun					
3-Sep-07	Mon					
4-Sep-07	Tue					
5-Sep-07	Wed					
6-Sep-07	Thu					
7-Sep-07	Fri					
8-Sep-07	Sat					
9-Sep-07	Sun					
10-Sep-07	Mon					
11-Sep-07	Tue					
12-Sep-07	Wed					
13-Sep-07	Thu					
14-Sep-07	Fri					
15-Sep-07	Sat					
16-Sep-07	Sun					
17-Sep-07	Mon					
18-Sep-07	Tue					
19-Sep-07	Wed					
20-Sep-07	Thu					
21-Sep-07	Fri					
22-Sep-07	Sat					
23-Sep-07	Sun					
24-Sep-07	Mon					
25-Sep-07	Tue					

Monitoring Day
Sunday or Public Holiday



# Impact Monitoring Schedules in the Next Reporting Month

Date		Air Qı	ıality	Noise Leq 30min	Stream Water	Ecology Surveys
Date		1-Hour TSP	24-Hour TSP	Noise Leq Somm	Quality	Leology Bull veys
26-Sep-07	Wed					
27-Sep-07	Thu					
28-Sep-07	Fri					
29-Sep-07	Sat					
30-Sep-07	Sun					
1-Oct-07	Mon					
2-Oct-07	Tue					
3-Oct-07	Wed					
4-Oct-07	Thu					
5-Oct-07	Fri					
6-Oct-07	Sat					
7-Oct-07	Sun					
8-Oct-07	Mon					
9-Oct-07	Tue					
10-Oct-07	Wed					
11-Oct-07	Thu					
12-Oct-07	Fri					
13-Oct-07	Sat					
14-Oct-07	Sun					
15-Oct-07	Mon					
16-Oct-07	Tue					
17-Oct-07	Wed					
18-Oct-07	Thu					
19-Oct-07	Fri					
20-Oct-07	Sat					
21-Oct-07	Sun					
22-Oct-07	Mon					
23-Oct-07	Tue					
24-Oct-07	Wed					
25-Oct-07	Thu					

Monitoring Day
Sunday or Public Holiday

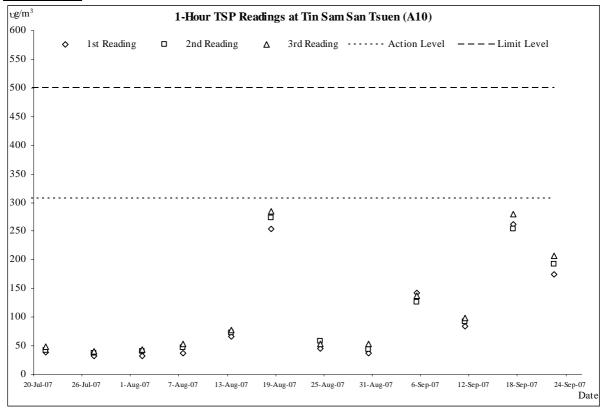


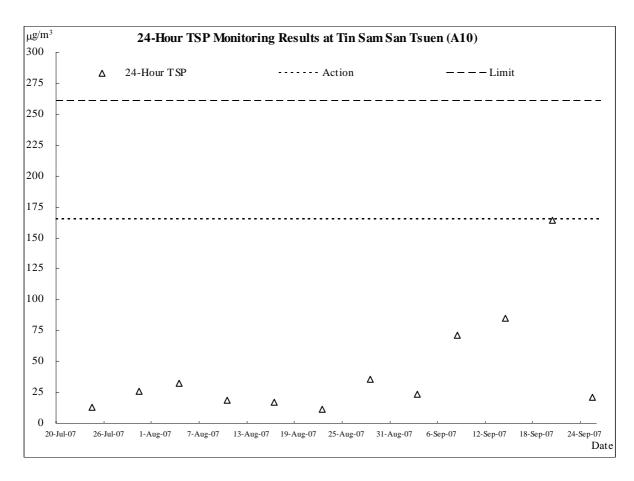
# Appendix H

Graphical Plots of Air, Noise and Stream Water Quality Monitoring Results



### **Air Quality**

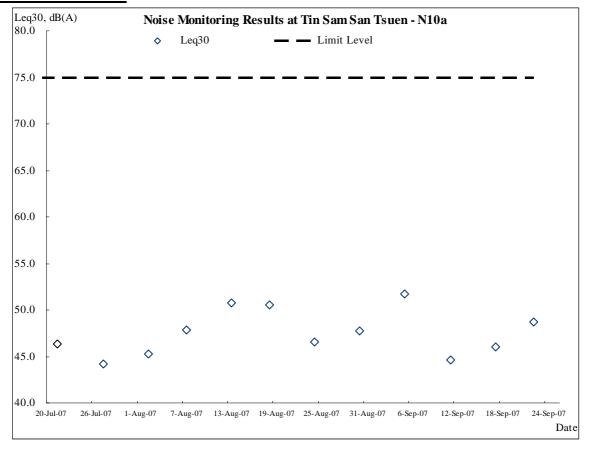




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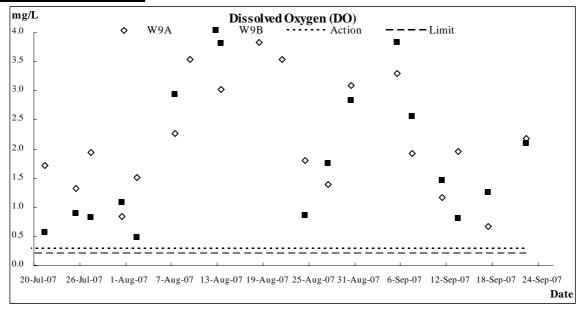


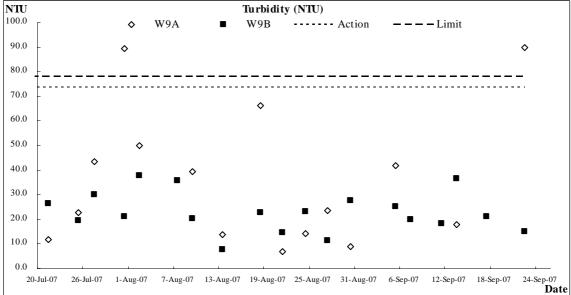
## **Construction Noise**

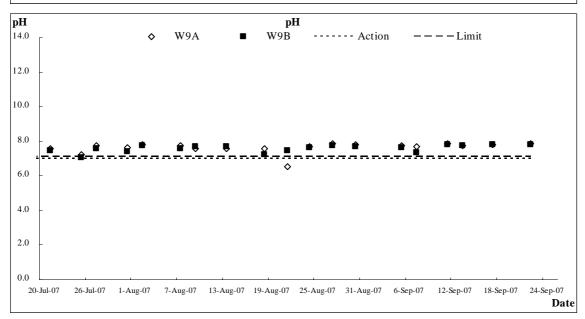




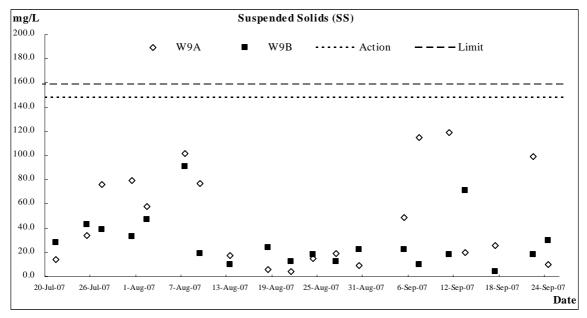
### **Stream Water Quality**

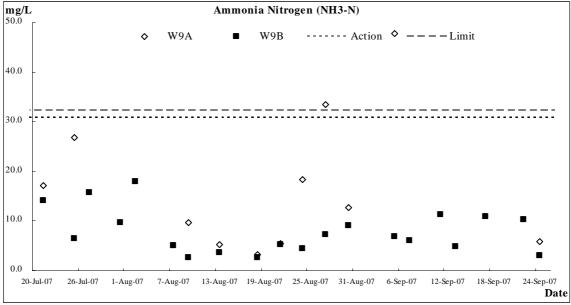


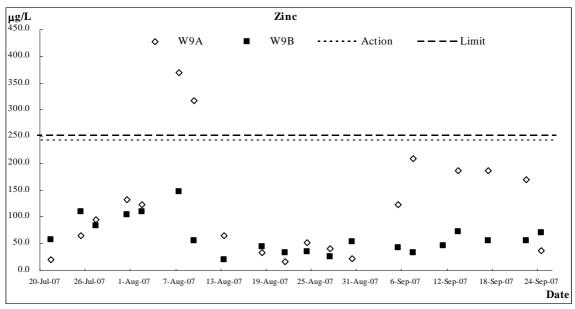












#### DSD Contract No. DC/2006/02

# Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai KT15 – Monthly EM&A Report for September 2007 (No. 3)



Date	27	/-Aug-07															
Location	Time	Depth (m)	Tem	p (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	Salinity		рH	SS	NH3-N	Zinc
W9A	13:16	0.19	29.4 29.4	29.4	1.39	1.39	18.8 18.8	18.8	23.1	23.5	0	0.0	7.85 7.86	7.86	19.0	33.4	42.0
W9B	13:37	0.26	30.8 30.8	30.8	1.75 1.76	1.76	24.4 24.6	24.5	11.3 11.3	11.3	0	0.0	7.73 7.72	7.73	12.0	7.2	26.0

Date	30	)-Aug-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	Salinity		рH	SS	NH3-N	Zinc
W9A	15:20	0.12	29.3	29.3	3.08	3.09	40.3	40.5	8.1	8.8	0	0.0	7.82	7.82	9.0	12.8	22.0
W9A	13:20	0.12	29.3	29.3	3.1	3.09	40.7	40.3	9.6	0.0	0	0.0	7.82	1.62	9.0	12.8	22.0
W9B	15:35	0.26	30.2	30.2	2.82	2.83	37.4	37.5	27.6	27.7	0	0.0	7.68	7.69	22.0	0.1	54.0
WAD	15:55	0.20	30.2	30.2	2.83	2.83	37.6	37.3	27.8	21.1	0	0.0	7.69	7.09	22.0	9.1	34.0

Date	5	-Sep-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	Salinity		рH	SS	NH3-N	Zinc
W9A	10:27	0.29	26.6 26.6	26.6	3.28	3.29	40.8	41.0	42.5	41.9	0	0.0	7.76 7.76	7.76	49.0	47.8	123.0
W9B	10:43	0.35	27.1 27.2	27.2	3.82 3.83	3.83	48.0 48.2	48.1	25.2 25.5	25.4	0	0.0	7.65 7.66	7.66	22.0	6.8	43.0

Date	7	'-Sep-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	Salinity		pН	SS	NH3-N	Zinc
W9A	12:32	0.23	26.7	26.7	1.92	1.93	24.0	24.1	152.0	151.0	0	0.0	7.71	7 71	115.0	52.4	210.0
WJA	12.32	0.23	26.7	20.7	1.93	1.93	24.2	24.1	150.0	131.0	0	0.0	7.71	7.71	113.0	32.4	210.0
W9B	12:37	0.32	27.8	27.8	2.55	2.56	35.2	35.4	19.3	19.8	0	0.0	7.34	7.34	10.0	6.1	34.0
WAD	12.37	0.32	27.8	27.0	2.57	2.30	35.6	33.4	20.3	19.0	0	0.0	7.34	7.34	10.0	6.1	34.0

Date	11	1-Sep-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	5	Salinity		pН	SS	NH3-N	Zinc
W9A	10:34	0.39	27.4	27.4	1.16	1.17	14.6	14.8	240.0	239.5	0	0.0	7.85	7.85	119.0	293.0	546.0
W9A	10:34	0.39	27.4	27.4	1.18	1.17	15.0	14.6	239.0	239.3	0	0.0	7.85	7.63	119.0	293.0	340.0
W9B	10:42	0.44	29.1	29.1	1.45	1.46	18.8	18.9	17.9	18.1	0	0.0	7.79	7.70	18.0	11.3	47.0
WAP	10:42	0.44	29.1	29.1	1.46	1.40	19.0	18.9	18.3	16.1	0	0.0	7.79	1.19	18.0	11.5	47.0



Date	13	3-Sep-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	alinity	]	pН	SS	NH3-N	Zinc
W9A	14:10	0.16	28.3	28.3	1.96 1.97	1.97	25.4 25.6	25.5	18.0 17.7	17.9	0	0.0	7.77 7.77	7.77	20.0	24.0	22.0
W9B	14:26	0.21	31.2	31.2	0.8	0.81	10.6	10.7	37.9 35.3	36.6	0	0.0	7.74 7.74	7.74	71.0	4.8	73.0

Date	1′	7-Sep-07															
Location	Time	Depth (m)	Tem	p (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	Salinity	]	рH	SS	NH3-N	Zinc
W9A	10:14	0.26	27.9	27.9	0.66	0.67	8.2	8.4	209.0	209.5	0	0.0	7.80 7.80	7.80	26.0	122.0	186.0
			27.8		0.68		8.6		210.0		U						ļ
W9B	10:36	0.34	29.5	29.5	1.25	1.26	16.4 16.5	16.5	21.1	21.2	0	0.0	7.83 7.83	7.83	4.0	10.9	56.0

Date	2	2-Sep-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	5	Salinity		pН	SS	NH3-N	Zinc
W9A	9:50	0.21	25.7	25.7	2.18	2.19	26.9	27.0	91.2	89.9	0	0.0	7.89	7.89	99.0	50.9	170.0
			25.7		2.19		27.1		88.6		0		7.89				
W9B	9:58	0.36	26.9	26.9	2.09	2.10	25.2	25.3	14.5	14.9	0	0.0	7.79	7.70	18.0	10.2	56.0
Wab	9.36	0.30	26.9	20.9	2.1	2.10	25.4	23.3	15.3	14.9	0	0.0	7.79	1.19	10.0	10.2	30.0

Date	24	4-Sep-07															
Location	Time	Depth (m)	Tem	ıp (oC)	DO	(mg/L)	DO	S (%)	Turbidi	ty (NTU)	S	Salinity	]	pН	SS	NH3-N	Zinc
W9A	13.12	0.32	26.1	26.1	3.04	3.05	37.4	37.6	10.3	10.5	0	0.0	7.72	7 72	10.0	5.9	37.0
*** > 11	13.12	0.32	26.1	20.1	3.06	3.03	37.8	37.0	10.7	10.5	0	0.0	7.72	1.12	10.0	3.7	37.0
W9B	13:26	0.69	26.7	26.7	3.34	3.35	41.7	41.8	37.6	35.9	0	0.0	7.83	7.83	30.0	3 1	71.0
WAD	13.20	0.09	26.7	20.7	3.35	5.55	41.9	41.0	34.2	33.9	0	0.0	7.82	1.63	30.0	3.1	/1.0

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0712156



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER						Duplicate (DUP)	Results	
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Agg	regate Properties (QC Lot: 48131	0)						
HK0712134-002	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	268	259	3.2
HK0712156-003	W1C -1 & 2 (MIX)	EA025: Suspended Solids (SS)		2	mg/L	18	18	0.0
ED/EK: Inorganic Nonme	tallic Parameters (QC Lot: 482355	)						
HK0712126-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	0.3	0.2	40.0
HK0712179-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0
EG: Metals and Major Cat	tions (QC Lot: 481233)							
HK0711978-001	Anonymous	EG020: Zinc	7440-66-6	10	μg/L	737	747	1.4

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER			Method Blank (MI	B) Results		Single Co.	ntrol Spike (SCS) and D	uplicate Con	trol Spike (DC	CS) Results	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPL	Os (%)
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Proper	rties (QCLot: 481310)	•									
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	95.5		85	115		
ED/EK: Inorganic Nonmetallic Paramet	ers (QCLot: 482355)										
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5.0 mg/L	95.2		85	115		
EG: Metals and Major Cations (QCLot:	: 481233)										
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	90.1		85	115		

Matrix Type: WATER					Matrix S	Spike (MS) and Matrix S	Spike Duplica	ate (MSD) Re	sults	
				Spike	Spike Rec	overy (%)	Recovery	Limits (%)	RPDs (%	6)
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonme	tallic Parameters (QCLot:	182355)								
HK0712179-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	107		75	125		
EG: Metals and Major Cat	ions (QCLot: 481233)									
HK0711978-001	Anonymous	EG020: Zinc	7440-66-6	100 μg/L	Not Determined		75	125		

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0712418



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER				Duplicate (DUP) Results							
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical and Aggi	regate Properties (QC Lot: 484172	2)									
HK0712384-001	Anonymous	EA025: Suspended Solids (SS)		3	mg/L	88	82	7.1			
HK0712418-003	W1C - 1 & 2 (MIX)	EA025: Suspended Solids (SS)		2	mg/L	40	38	6.9			
ED/EK: Inorganic Nonmet	allic Parameters (QC Lot: 486687)										
HK0712529-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0			
HK0712561-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	0.3	0.3	0.0			
EG: Metals and Major Cati	EG: Metals and Major Cations (QC Lot: 484109)										
HK0712418-001	W1A - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	10	μg/L	15	16	6.4			

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPL	Os (%)	
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Proper	rties (QCLot: 484172)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	95.5		85	115			
ED/EK: Inorganic Nonmetallic Paramet	ters (QCLot: 486687)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5 mg/L	99.9		85	115			
G: Metals and Major Cations (QCLot: 484109)												
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	98.0		85	115			

Matrix Type: WATER	atrix Type: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results								
				Spike	Spike Rec	overy (%)	Recovery	Limits (%)	RPDs (%	%)			
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit			
ED/EK: Inorganic Nonme	tallic Parameters (QCLot:	486687)											
HK0712428-001	Anonymous	EK055A: Ammonia as N	7664-41-7	5 mg/L	Not Determined		75	125					
EG: Metals and Major Ca	tions (QCLot: 484109)												
HK0712310-003	Anonymous	EG020: Zinc	7440-66-6	100 μg/L	Not Determined		75	125					

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0712745



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER						Duplicate (DUP)	Results	
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Ag	gregate Properties (QC Lot: 4879)	02)						
HK0712625-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	4	6	37.1
HK0712695-005	Anonymous	EA025: Suspended Solids (SS)		1	mg/L	<1	<1	0.0
EA/ED: Physical and Ag	gregate Properties (QC Lot: 4879)	05)						
HK0712745-005	W9B - 1 & 2 (MIX)	EA025: Suspended Solids (SS)		2	mg/L	22	25	12.6
HK0712787-002	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	17	19	9.8
ED/EK: Inorganic Nonm	etallic Parameters (QC Lot: 49054	2)						
HK0712768-010	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0
HK0712768-018	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0
EG: Metals and Major C	ations (QC Lot: 488399)							
HK0712745-002	W1B - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	10	μg/L	53	55	4.0

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results				Single Co.	ntrol Spike (SCS) and De	uplicate Con	trol Spike (D	CS) Results	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properti	es (QCLot: 487902)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.0		85	115		
EA/ED: Physical and Aggregate Properti	es (QCLot: 487905)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	87.5		85	115		
ED/EK: Inorganic Nonmetallic Parameter	rs (QCLot: 490542)										
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5.0 mg/L	96.0		85	115		
EG: Metals and Major Cations (QCLot: 4	88399)										
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	93.9		85	115		

Matrix Type: WATER	atrix Type: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results							
					Spike Red	overy (%)	Recovery	Limits (%)	RPDs (%	6)		
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit		
ED/EK: Inorganic Nonme	tallic Parameters (QCLot: 4	190542)										
HK0712768-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	101		75	125				
EG: Metals and Major Cat	tions (QCLot: 488399)											
HK0712745-001	W1A - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	100 μg/L	92.6		75	125				

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0712869



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER				Duplicate (DUP) Results							
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical and Ago	gregate Properties (QC Lot: 48940	4)									
HK0712810-002	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	10	8	23.5			
HK0712862-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	<2	<2	0.0			
ED/EK: Inorganic Nonme	tallic Parameters (QC Lot: 490544	)									
HK0712801-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	16.0	15.8	1.2			
HK0712802-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	15.6	15.8	1.3			
EG: Metals and Major Ca	tions (QC Lot: 489383)										
HK0712869-002	W1B - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	10	μg/L	59	60	1.7			

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPL	Os (%)	
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Property	ties (QCLot: 489404)			_					•			
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	94.0		85	115			
ED/EK: Inorganic Nonmetallic Paramete	ers (QCLot: 490544)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5.0 mg/L	93.2		85	115			
G: Metals and Major Cations (QCLot: 489383)												
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	102		85	115			

Matrix Type: WATER	atrix Type: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results								
				Spike	Spike Rec	overy (%)	Recovery	Limits (%)	RPDs (%	6)			
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit			
ED/EK: Inorganic Nonme	tallic Parameters (QCLot:	490544)											
HK0712799-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	Not Determined		75	125					
EG: Metals and Major Ca	ions (QCLot: 489383)												
HK0712869-001	W1A - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	100 μg/L	97.2		75	125					

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0712980



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER				Duplicate (DUP) Results							
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical and Agg	regate Properties (QC Lot: 492272	2)									
HK0712939-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	57	58	1.7			
HK0712980-003	W1C - 1 & 2 (MIX)	EA025: Suspended Solids (SS)		2	mg/L	16	15	9.5			
ED/EK: Inorganic Nonme	allic Parameters (QC Lot: 492645)										
HK0712902-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0			
HK0713109-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	0.8	0.8	0.0			
EG: Metals and Major Cations (QC Lot: 492258)											
HK0712980-002	W1B - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	10	μg/L	31	30	3.8			

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPL	Os (%)	
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Property	ties (QCLot: 492272)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.0		85	115			
ED/EK: Inorganic Nonmetallic Paramete	ers (QCLot: 492645)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5.0 mg/L	99.2		85	115			
EG: Metals and Major Cations (QCLot:	G: Metals and Major Cations (QCLot: 492258)											
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	94.3		85	115			

Matrix Type: WATER	atrix Type: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results								
					Spike Spike Recovery (%)			Limits (%)	RPDs (%)				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit			
ED/EK: Inorganic Nonme	tallic Parameters (QCLot:	492645)											
HK0712902-002	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	102		75	125					
EG: Metals and Major Car	tions (QCLot: 492258)				·	·							
HK0712980-001	W1A - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	100 μg/L	92.8		75	125					

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0713229



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER	trix Type: WATER				Duplicate (DUP) Results						
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR Units Original Result Duplicate Result RPD (%							
EA/ED: Physical and Aggr	regate Properties (QC Lot: 495317	<b>'</b> )									
HK0713226-014	Anonymous	EA025: Suspended Solids (SS)		1	mg/L	74	73	1.9			
HK0713246-002	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	16	13	19.1			
ED/EK: Inorganic Nonmet	allic Parameters (QC Lot: 496672)										
HK0713350-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	0.9	0.8	0.0			
HK0713355-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0			
EG: Metals and Major Cati	EG: Metals and Major Cations (QC Lot: 494535)										
HK0713229-002	W1B - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	10	μg/L	53	55	4.8			

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)			
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properti	ies (QCLot: 495317)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115			
ED/EK: Inorganic Nonmetallic Paramete	rs (QCLot: 496672)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5.0 mg/L	99.6		85	115			
EG: Metals and Major Cations (QCLot: 494535)												
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	85.2		85	115			

Matrix Type: WATER	atrix Type: WATER			Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results							
				Spike	Spike Red	overy (%)	Recovery	Limits (%)	RPDs (%	6)	
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 496672)											
HK0713229-001	W1A - 1 & 2 (MIX)	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	110		75	125			
EG: Metals and Major Ca	EG: Metals and Major Cations (QCLot: 494535)										
HK0713229-001	W1A - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	100 μg/L	85.0		75	125			

Client : ACTION UNITED ENVIRO SERVICES

Work Order HK0713320



## **Quality Control - Laboratory Duplicate (DUP) Results**

Matrix Type: WATER	atrix Type: WATER				Duplicate (DUP) Results						
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR Units Original Result Duplicate Result RPD							
EA/ED: Physical and Agg	regate Properties (QC Lot: 49616	1)									
HK0713315-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	<2	2	0.0			
HK0713327-004	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	8	8	0.0			
ED/EK: Inorganic Nonme	tallic Parameters (QC Lot: 496672										
HK0713350-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	0.9	0.8	0.0			
HK0713355-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	0.0			
EG: Metals and Major Cat	EG: Metals and Major Cations (QC Lot: 496132)										
HK0713320-001	W1A - 1 & 2 (MIX)	EG020: Zinc	7440-66-6	10	μg/L	11	<10	11.8			

## Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)			
Method: Analysis Description	CAS number	LOR	Units	Result	Concentration	scs	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Prope	rties (QCLot: 496161)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	98.5		85	115			
ED/EK: Inorganic Nonmetallic Parame	ters (QCLot: 496672)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	5.0 mg/L	99.6		85	115			
EG: Metals and Major Cations (QCLot: 496132)												
EG020: Zinc	7440-66-6	10	μg/L	<10	100 μg/L	87.5		85	115			

Matrix Type: WATER	ntrix Type: WATER			Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results							
				Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPDs (%	%)	
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Concentration	MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonme	tallic Parameters (QCLot										
HK0713229-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	110		75	125			
EG: Metals and Major Ca	EG: Metals and Major Cations (QCLot: 496132)										
HK0713288-001	Anonymous	EG020: Zinc	7440-66-6	100 μg/L	76.0		75	125			



# Appendix I

**Meteorological Data in the Reporting Period** 



## $\label{eq:meteorological} \textbf{Meteorological Data Extracted from HKO in the Reporting Period}$

				Lau Fau Shan Weather Station				
Date		Weather	Total Rainfall (mm)	Mean Air Temperature s(°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction	
26-Aug-07	Sun	sunny intervals/a few showers/moderate	Trace	27.9	12	73	S/SE	
27-Aug-07	Mon	a few showers/sunny intervals/moderate	25	28.5	12	78	Е	
28-Aug-07	Tue	a few showers/sunny intervals/moderate	25.9	28.5	13	83.5	Е	
29-Aug-07	Wed	sunny periods/isolated showers/moderate	1.3	29.3	12	80	Е	
30-Aug-07	Thu	fine/isolated showers/thunderstorms/light winds	0.1	28.1	12	79.5	SE	
31-Aug-07	Fri	fine/hot/isolated showers/light winds	0	28.4	14	79.5	SE	
1-Sep-07	Sat	fine/hot/isolated showers/thunderstorms/light winds	0	28.3	12	75	S/SE	
2-Sep-07	Sun	sunny intervals/a few showers/squally thunderstorms/light winds	3.7	27.7	9.5	84	E/SE	
3-Aug-07	Mon	cloudy/a few showers/squally thunderstorms/light winds	Trace	28.9	14.5	77	SE	
4-Sep-07	Tue	cloudy/a few showers/light winds	2.3	27	15	81.5	S/SE	
5-Sep-07	Wed	cloudy/a few showers/sunny intervals/moderate	1.5	26.6	15	78.5	E/NE	
6-Sep-07	Thu	cloudy/sunny intervals/hazy/moderate	0	26.1	14.5	69.5	E/NE	
7-Sep-07	Fri	sunny periods/hazy/moderate	0.1	26.7	8.2	72	E/SE	
8-Sep-07	Sat	sunny periods/cloudy/moderate	Trace	28.3	9.5	74	Е	
9-Sep-07	Sun	sunny periods/cloudy/moderate	Trace	28.3	16	74	E/SE	
10-Sep-07	Mon	cloudy/sunny intervals/rain moderate fresh	Trace	28.6	16.5	74.5	Е	
11-Sep-07	Tue	Sunny periods/rain/moderate/fresh	10.7	28.7	16.5	68.7	Е	
12-Sep-07	Wed	fine/isolated showers/moderate	Trace	28.3	13	72.5	Е	
13-Sep-07	Thu	fine/dry/moderate/fresh	0	28.9	14	63.5	Е	
14-Sep-07	Fri	fine/hazy/dry/light winds	0	27.9	8	64.5	E/SE	
15-Sep-07	Sat	fine/hazy/isolated showers/light winds	0	28.6	9	69.5	S/SE	
16-Sep-07	Sun	hazy/isolated showers/light winds	6	28.9	7.5	77	E/SE	
17-Sep-07	Mon	hazy/isolated showers/light winds	0.5	28.5	6	81	Е	
18-Sep-07	Tue	fine/very dry/haze/moderate/fresh	0	28.5	20	56	N	
19-Sep-07	Wed	fine/dry/hazy/fresh/strong	0	27.6	24.2	51	N/NW	
20-Sep-07	Thu	sunny periods/dry/moderate/fresh	0.1	28.4	21	53.5	NE	
21-Sep-07	Fri	sunny periods/haze/rain/moderate/fresh	1.7	27.8	13.5	66.5	E/NE	
22-Sep-07	Sat	fine/dry/haze/moderate/fresh	0	28.2	15.5	6.12	NE	
23-Sep-07	Sun	cloudy/overcast/rain/fresh/strong	12.5	25.4	24.5	83.5	N/NE	
24-Sep-07	Mon	cloudy/overcast/rain/fresh/strong	60.1	24.8	17	94	E/NE	
25-Sep-07	Tue	cloudy/rain/thunderstorms/fresh/strong	2.1	26.8	15.5	88	E	



# Appendix J

**ET Site Inspection Checklists** 

**AUES** 

Projec	ct:	Contract No.: DC/2006/02 Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai		pected b	oy presentat	ive:	A.F. Ng / WL Chan					
Inspe	ction		IEC	C/IEC's re	epresenta	itive:						
Date:		29 August 2007	ET	L/ ET's r	epresenta	ative:	Ben Tam	1				
Time:	:	13:30			s represe	entative:		/ K.M. Lui				
			Ch	ecklist N	lo.		KT15-29	0807				
PART		GENERAL INFORMATION Environmental	Per		EP-231/20	05/A						
Weath		✓ Sunny Fine Cloudy  29 °C		Rainy								
Humic	erature:	29										
Wind:	•	Strong Breeze V Light		Calm								
-				1								
PART B: SITE AUDIT												
				Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks			
Section	on 1: W	ater Quality		_	_		_					
1.01	ls an e	offluent discharge license obtained for the Project?		Ш	$\checkmark$							
1.02	Is the	effluent discharged in accordance with the discharge e?	)	$\checkmark$								
1.03	Is the	discharge of turbid water avoided?				$\checkmark$						
1.04		ere proper desilting facilities in the drainage systems to SS levels in effluent?	)	$\checkmark$								
1.05		ere channels, sandbags or bunds to direct surface run-off to entation tanks?	)	$\checkmark$								
1.06		ere any perimeter channels provided at site boundaries to ept storm runoff from crossing the site?	)	$\checkmark$								
1.07	Is drai	nage system well maintained?		$\checkmark$								
1.08		cavation proceeds, are temporary access roads protected by ed stone or gravel?	′					$\checkmark$				
1.09	Are te	mporary exposed slopes properly covered?						$\checkmark$				
1.10	Are ea	orthworks final surfaces well compacted or protected?						$\overline{\checkmark}$				
1.11	Are ma	anholes adequately covered or temporarily sealed?			$\checkmark$							
1.12	Are the	ere any procedures and equipment for rainstorm protection?			$\overline{\checkmark}$							
1.13	Are wh	neel washing facilities well maintained?						$\overline{\mathbf{V}}$				
1.14	Is runc	off from wheel washing facilities avoided?						$\overline{\checkmark}$				
1.15	Are the	ere toilets provided on site?			$\overline{\mathbf{V}}$							
1.16	Are toi	lets properly maintained?			$\checkmark$							
1.17		e vehicle and plant servicing areas paved and located within areas?	1					$\overline{\checkmark}$				
1.18	Is the	oil leakage or spillage avoided?			$\checkmark$							
1.19		ere any measures to prevent leaked oil from entering the ge system?	)		$\checkmark$							
1.20		nere any measures to collect spilt cement and concreteings during concreting works?	)					$\overline{\checkmark}$				
1.21		ere any oil interceptors/grease traps in the drainage systems nicle and plant servicing areas, canteen kitchen, etc?	\$					$\checkmark$				



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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 KT15 stream course.		$\checkmark$				
1.25	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.26	Any stagnant water accumulated within the excavation trench or site working area.		$\checkmark$				
Sectio	n 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.					$\checkmark$	
Sectio	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?					$\checkmark$	



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
3.07	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
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).	$\checkmark$					
Sectio	n 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
4.05	Is the Contractor registered as a chemical waste producer?		$\overline{\checkmark}$				
4.06	Are the chemical waste containers properly labelled?		$\overline{\checkmark}$				
4.07	Are the chemical wastes stored in proper storage areas?		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
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.		$\checkmark$				

**AUES** 

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
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 of KT15?					$\checkmark$	
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?		$\checkmark$				
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?		$\checkmark$				
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		$\checkmark$				

#### Remarks

#### **Last Site Inspection:**



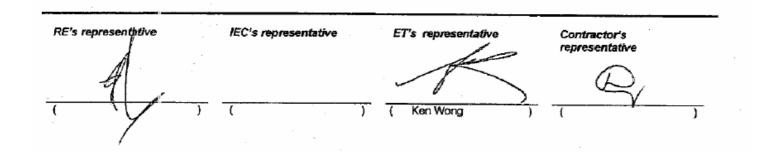
No silty water seepage into the stream was observed at CH155. (ref.: KT15-210807).

#### Findings of Site Inspection on 29 Aug 2007:

Site Inspection was covered the site area from CH150-CH290.



Obs 1 – Fugitive dust emission from the site was observed at CH290 during the site inspection, the Contractor was reminded to provide water spraying or implement the dust suppression on necessary basis.



**AUES** 

Projec	ct:	Contract No.: DC/2006/02  Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui	Inspected by								
		Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai	RE/RE's re	oresentati	ive:	A.F. Ng	WL Chan				
Inspe	ction		IEC/IEC's r	•							
Date: Time:		06 September 2007	ETL/ ET's r	•		Ben Tam M.K. Ng / K.M. Lui					
rime:		14:30	Contractor Checklist N	-	ntative:	KT15-060907					
PART	Δ-	GENERAL INFORMATION Environmental			05/Δ						
Weath		Sunny Fine Cloudy	Rainy	_1 -231/20	00/A						
Tempe	erature:	27 °C									
Humid	dity:	High Moderate Low									
Wind:		Strong Breeze ✓ Light	Calm								
PART	В:	SITE AUDIT									
			Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks			
Section	on 1: Wa	ater Quality									
1.01	Is an e	ffluent discharge license obtained for the Project?		$\checkmark$							
1.02	Is the	effluent discharged in accordance with the discharge ?	· 🗸								
1.03	Is the	discharge of turbid water avoided?			$\checkmark$						
1.04		ere proper desilting facilities in the drainage systems to SS levels in effluent?	· 🗆		$\checkmark$						
1.05		ere channels, sandbags or bunds to direct surface run-off to entation tanks?	· 🔽								
1.06		ere any perimeter channels provided at site boundaries to pt storm runoff from crossing the site?	· 🗹								
1.07	Is drain	nage system well maintained?	$\checkmark$								
1.08		eavation proceeds, are temporary access roads protected by d stone or gravel?	′ 🔲				$\overline{\checkmark}$				
1.09	Are ter	mporary exposed slopes properly covered?					$\overline{\checkmark}$				
1.10	Are ea	rthworks final surfaces well compacted or protected?					$\overline{\checkmark}$				
1.11	Are ma	anholes adequately covered or temporarily sealed?		$\checkmark$							
1.12	Are the	ere any procedures and equipment for rainstorm protection?		$\checkmark$							
1.13	Are wh	neel washing facilities well maintained?					$\overline{\checkmark}$				
1.14	Is runc	off from wheel washing facilities avoided?					$\overline{\checkmark}$				
1.15	Are the	ere toilets provided on site?		$\checkmark$							
1.16	Are toi	lets properly maintained?		$\checkmark$							
1.17		e vehicle and plant servicing areas paved and located within areas?					$\overline{\checkmark}$				
1.18	Is the	oil leakage or spillage avoided?		$\checkmark$							
1.19		ere any measures to prevent leaked oil from entering the ge system?	· 🗆	$\checkmark$							
1.20		ere any measures to collect spilt cement and concrete ags during concreting works?	· 🗌				$\checkmark$				
1.21		ere any oil interceptors/grease traps in the drainage systems picle and plant servicing areas, canteen kitchen, etc?	· 🗆				$\overline{\checkmark}$				



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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 KT15 stream course.		$\checkmark$				
1.25	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.26	Any stagnant water accumulated within the excavation trench or site working area.		$\checkmark$				
Sectio	n 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.					$\checkmark$	
Sectio	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?					$\checkmark$	

**AUES** 

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
3.07	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
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).	$\checkmark$					
Sectio	n 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		$\overline{\checkmark}$				
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?			$\overline{\checkmark}$			
4.05	Is the Contractor registered as a chemical waste producer?		$\overline{\checkmark}$				
4.06	Are the chemical waste containers properly labelled?		$\overline{\checkmark}$				
4.07	Are the chemical wastes stored in proper storage areas?		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
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?		$\overline{\checkmark}$				
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.		$\checkmark$				

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
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 of KT15?					$\checkmark$	
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?		$\checkmark$				
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?		$\checkmark$				
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		$\checkmark$				

#### Remarks

#### **Last Site Inspection:**

No fugitive dust was observed at the CH290 during the site inspection. (ref.: KT15-290807).

#### Findings of Site Inspection on 06 September 2007:

Site Inspection was covered the site area from CH150-CH290.



Muddy water discharge into the drainage channel from the sedimentation tank was observed at CH290. The Contractor was reminded to stop the discharge and provide the effective sedimentation or improved the desilting system efficiency before any discharge was undertaken.



Rubbish skip at the site office was full, the Contractor was reminded to disposal the general refuse in regular period.

RE's representative IEC's representative ET's representative Contractor's representative Ben Tam

**AUES** 

Proje	ct: Contract No.: DC/2006/02 Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B –	Inspected by Shui								
	Cheung Chun San Tsuen and Kam Tsin Wai	R	E/RE's rep	oresentati	ive:	A.F. Ng	WL Chan			
Inspe	ction	IE	EC/IEC's re	epresenta	tive:	Benny Liu				
Date:	12 September 2007	E	TL/ ET's r	epresenta	itive:	Ben Tam				
Time:	15:00	C	ontractor'	s represe	ntative:	ve: M.K. Ng / K.M. Lui				
		С	hecklist N	0.		KT15-12	0907			
PART	A: GENERAL INFORMATION Environment	tal P	ermit No. I	EP-231/20	05/A					
Weath	ner: Sunny Fine Cloudy		Rainy							
Temp	erature: 30 °C									
Humid	dity: High  Moderate Low									
Wind:	Strong Breeze  Light		Calm							
PART	B: SITE AUDIT									
			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 discharlicence?	rge	$\checkmark$							
1.03	Is the discharge of turbid water avoided?			$\checkmark$						
1.04	Are there proper desilting facilities in the drainage systems reduce SS levels in effluent?	to		$\checkmark$						
1.05	Are there channels, sandbags or bunds to direct surface run-off sedimentation tanks?	f to	$\checkmark$							
1.06	Are there any perimeter channels provided at site boundaries intercept storm runoff from crossing the site?	to	$\checkmark$							
1.07	Is drainage system well maintained?		$\checkmark$							
1.08	As excavation proceeds, are temporary access roads protected crushed stone or gravel?	by					$\overline{\checkmark}$			
1.09	Are temporary exposed slopes properly covered?						$\overline{\checkmark}$			
1.10	Are earthworks final surfaces well compacted or protected?						$\overline{\checkmark}$			
1.11	Are manholes adequately covered or temporarily sealed?			$\checkmark$						
1.12	Are there any procedures and equipment for rainstorm protection	า?		$\checkmark$						
1.13	Are wheel washing facilities well maintained?						$\overline{\checkmark}$			
1.14	Is runoff from wheel washing facilities avoided?						$\overline{\checkmark}$			
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 with roofed areas?	hin					$\overline{\checkmark}$			
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?	the		$\checkmark$						
1.20	Are there any measures to collect spilt cement and concrewashings during concreting works?	ete					$\overline{\checkmark}$			
1.21	Are there any oil interceptors/grease traps in the drainage system for vehicle and plant servicing areas, canteen kitchen, etc?	ms					$\checkmark$			



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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 KT15 stream course.		$\checkmark$				
1.25	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.26	Any stagnant water accumulated within the excavation trench or site working area.		$\checkmark$				
Sectio	n 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.					$\checkmark$	
Sectio	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?					$\overline{\checkmark}$	



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
3.07	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
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).	$\checkmark$					
Sectio	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.		$\checkmark$				

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
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 of KT15?					$\checkmark$	
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?		$\checkmark$				
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?		$\checkmark$				
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		$\checkmark$				



#### Remarks

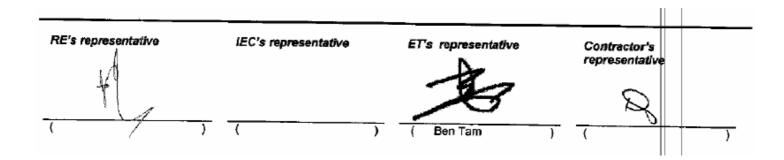
#### **Last Site Inspection:**

No muddy water discharge into the drainage channel from the sedimentation tank was observed at CH290. Rubbish skip at the site office was cleared.

#### Findings of Site Inspection on 12 September 2007:

Site Inspection was covered the site area from CH200-CH600.

No major environmental issue was observed. In general, the site was keep clean and tidy within the site boundary.





Projec	ct:	Contract No.: DC/2006/02 Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B –	Inspected I	by						
		Cheung Chun San Tsuen and Kam Tsin Wai	RE/RE's re	presentati	ive:	A.F. Ng / WL Chan				
Inspe	ction		IEC/IEC's r	•		<u>-</u>				
Date: Time:		21 September 2007	ETL/ ET's r	•		Ken Wor				
mine.		14:00	Contractor Checklist N	•	manve.	KT15-21	/ K.M. Lui 0907			
PART	Α:	GENERAL INFORMATION Environmental			05/A	-				
Weath		Sunny Fine ✓ Cloudy	Rainy		00// (					
Tempe	erature:	°C								
Humid	dity:	☐ High ✓ Moderate ☐ Low								
Wind:		Strong Breeze ✓ Light	Calm							
PART	В:	SITE AUDIT								
			Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks		
Section	on 1: Wa	ater Quality								
1.01	Is an e	ffluent discharge license obtained for the Project?		$\checkmark$						
1.02	Is the	effluent discharged in accordance with the discharge ?								
1.03	Is the	discharge of turbid water avoided?			$\checkmark$					
1.04		ere proper desilting facilities in the drainage systems to SS levels in effluent?	· 🗆		$\checkmark$					
1.05		ere channels, sandbags or bunds to direct surface run-off to entation tanks?	· 1							
1.06		ere any perimeter channels provided at site boundaries to pt storm runoff from crossing the site?								
1.07	Is drain	nage system well maintained?	$\checkmark$							
1.08		eavation proceeds, are temporary access roads protected by d stone or gravel?	′ 🔲				$\overline{\checkmark}$			
1.09	Are ter	mporary exposed slopes properly covered?					$\overline{\checkmark}$			
1.10	Are ea	rthworks final surfaces well compacted or protected?					$\overline{\checkmark}$			
1.11	Are ma	anholes adequately covered or temporarily sealed?		$\checkmark$						
1.12	Are the	ere any procedures and equipment for rainstorm protection?		$\checkmark$						
1.13	Are wh	neel washing facilities well maintained?					$\overline{\checkmark}$			
1.14	ls runc	off from wheel washing facilities avoided?					$\overline{\checkmark}$			
1.15	Are the	ere toilets provided on site?		$\checkmark$						
1.16	Are toi	lets properly maintained?		$\checkmark$						
1.17		e vehicle and plant servicing areas paved and located within areas?					$\overline{\checkmark}$			
1.18	Is the	oil leakage or spillage avoided?		$\checkmark$						
1.19		ere any measures to prevent leaked oil from entering the ge system?		$\checkmark$						
1.20		ere any measures to collect spilt cement and concrete ags during concreting works?					$\overline{\checkmark}$			
1.21		ere any oil interceptors/grease traps in the drainage systems sicle and plant servicing areas, canteen kitchen, etc?	· 🗌				$\checkmark$			



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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 KT15 stream course.		$\checkmark$				
1.25	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.26	Any stagnant water accumulated within the excavation trench or site working area.		$\checkmark$				
Sectio	n 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.					$\checkmark$	
Sectio	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?					$\checkmark$	



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
3.07	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
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	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.		$\checkmark$				



		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
4.23	Contaminated sediments will managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
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 of KT15?					$\checkmark$	
6.02	Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?		$\checkmark$				
6.03	Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?		$\checkmark$				
Section	on 7: Others						
7.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?		$\checkmark$				



#### Remarks

#### **Last Site Inspection:**

Findings of Site Inspection on 21 September 2007:

Site Inspection was covered the site area from CH200-350, CH450-620



Muddy water discharge from the sedimentation tank was observed at CH200, the Contractor was reminded to improve the desilting system in effective/efficiency condition.

RE's representative

IEC's representative

ET's representative

Contractor's representative

Ken Wong



# Appendix K

**Response to Comments** 

#### DSD Contract No. DC/2006/02

Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai KT15 – Monthly EM&A Report for September 2007 (No. 3)



#### Contract No. DC/2006/02

Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai Response to IEC's comments on KT15 Monthly EM&A Report for September 2007 (Revision 0) [Received from e-mail on 09 Oct 2007 10:17]

No.	Section / Paragraph	Comments	Ref.	Response to Comments
1	5.08	The survey results for bird (total number of wetland dependent bird species or individuals of the	EM&A Manual	Noted
		wetland dependent bird species compared from baseline) fell within the limit level (decrease >40%). We	Table ATT4-11.	
		agreed as the site basically had not been affected by the project for small scale construction works.		
		We advise that the ET should follow the procedure detailed in the Event/Action Plan for Ecology in		
		case of same circumstance in the future.		
2	5.09	Please add "Based on the findings on the monthly monitoring of construction activities, the	-	The underline words had been
		non-compliance in wetland dependent bird species and individual number was not caused by the		added in the last sentence.
		project."		
3	Appendix D	For water quality monitoring, please provide QA/QC results	EM&A Manual	QA/QC results provided.
			10.3.4 (v)	
4	Appendix J	Please include relevant period of site inspection checklists	-	Noted.