

**JOB No.: TCS00371/07**

**REVISION No.: 4**

**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 **JANUARY  
2009 (No. 19)****

**PREPARED FOR**

**CHIT CHEUNG CONSTRUCTION COMPANY LIMITED**

**Quality Index**

<b>Date</b>	<b>Reference No.</b>	<b>Prepared By</b>	<b>Certified By</b>
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**EXECUTIVE SUMMARY**

- ES01. 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.
- ES02. 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).
- ES03. 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.
- ES04. This Monthly EM&A Report for **January 2009 (No. 19)** is present the environmental impact monitoring and audit (EM&A) results of the project EM&A program for the reporting month **January 2009** during the period from **26 December 2008 to 25 January 2009**.

**BREACH OF ACTION AND LIMIT (A/L) LEVELS**

- ES05. Dated and parameters exceedance recorded in this reporting period are summaries in following table.

<b>Monitoring</b>	<b>Parameters</b>	<b>Action Level</b>	<b>Limit Level</b>
Air Quality	1-Hour TSP	-	-
	24-Hour TSP	-	-
Noise	Leq (30min) Daytime	-	-
Stream Water	Dissolve Oxygen (DO)	-	-
	Turbidity (NTU)	-	-
	pH	-	-
	Suspended Solids (SS)	-	-
	Ammonia Nitrogen	-	-
Ecology	Zinc	-	-
	Number of species of wetland birds	-	18 Jan 09
	Total number of wetland birds	-	18 Jan 09

Note: According to the EM&A Manual S7.5.1(b), fauna monitoring only undertaken during wet seasons (April to July)

**COMPLAINTS LOG**

- ES06. No environmental complaint was received in this reporting period.

**NOTIFICATIONS OF ANY SUMMONS AND SUCCESSFUL PROSECUTIONS**

- ES07. There was no environmental summons or successful prosecution was recorded in this reporting period.

### REPORTING CHANGES

ES08. There are no changes to be reported in this reporting period.

### FUTURE KEY ISSUES

ES09. Construction activities to be undertaken in **February 2009** included construction and excavation works, stream diversion, tree protection and tree transplanting works, carrying out joined survey, utilities companies liaison, dumping activities and gabion installation. 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

ES10. A summary of the monitoring activities in this reporting period is listed below: -

• 1-Hour TSP Monitoring	15 Events
• 24-Hour TSP Monitoring	5 Events
• Noise Monitoring	5 Events
• Stream Water Quality	16 Events
• Ecology (Fauna)	1 Event
• Site Inspection Audit	4 Times

### AIR QUALITY

ES11. No 1-Hour and 24-Hour TSP monitoring results trigger the Action or Limit Level was recorded in this reporting period.

### CONSTRUCTION NOISE

ES12. No construction noise compliant (Action Level) was received and no construction noise monitoring exceeded the Limit Level was recorded in this reporting period.

### STREAM WATER QUALITY

ES13. No stream water quality monitoring result trigger the Action or Limit Level was recorded in this reporting period.

### ECOLOGY (FAUNA)

ES14. Non-compliance with the ecological criteria was found during the monitoring month on 18 January 2009. No intrusions of construction activities into the wetland areas nor adverse impact was observed. Based on the findings in the pervious monthly monitoring, the non-compliance in wetland dependent bird or fauna was not caused by the project.

**SUMMARY OF MONITORING EXCEEDANCES**

ES15. A summary of monitoring exceedances during the reporting period for air quality, construction noise, stream water quality and ecology (fauna) monitoring are presented below:-

<b>Monitoring</b>	<b>Parameters</b>	<b>Work-Related Exceedance %</b>	<b>Investigation &amp; Corrective Actions</b>
Air Quality	1-Hour TSP	0	Not Required for 0% Project Related Exceedance
	24-Hour TSP	0	Not Required for 0% Project Related Exceedance
Noise	Leq (30min) Daytime	0	Not Required for 0% Project Related Exceedance
Stream Water	Dissolve Oxygen (DO)	0	Not Required for 0% Project Related Exceedance
	Turbidity (NTU)	0	Not Required for 0% Project Related Exceedance
	pH	0	Not Required for 0% Project Related Exceedance
	Suspended Solids (SS)	0	Not Required for 0% Project Related Exceedance
	Ammonia Nitrogen	0	Not Required for 0% Project Related Exceedance
	Zinc	0	Not Required for 0% Project Related Exceedance
Ecology	Decrease in number of species of wetland birds of conservation importance from baseline.	0	Not Required for 0% Project Related Exceedance
	Decrease in the total number of wetland birds of conservation importance from baseline.	0	Not Required for 0% Project Related Exceedance

Note: According to the Project Profile Secondary Channels KT14 & KT15 Attachment 4 EM&A Manual Section 7.5.1 (b), fauna monitoring only undertaken in wet seasons (April to July) in monthly basis.

**SITE INSPECTION BY EXTERNAL PARTIES**

ES16. Environmental Protection Department had undertaken the site visit at Portion 7 on 30 December 2008, no comment was received from EPD.

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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. Location plan of the project site is presented in **Appendix A** and the 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 **January 2009** during the period from **26 December 2008 to 25 January 2009**.

### 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**
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- 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:-

- Construction and excavation works;
- Dumping activities;
- Sheet pile driving;
- Tree protection and tree transplanting works;
- Utilities companies liaison;
- Carrying out joined survey; and
- Gabion Installation.

### 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**

Items	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)	Registration on 20 April 2007
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	Type 1 (Open Sea Disposal) Marine Dumping Permit (EP/MD/09-027) (valid from 13 Oct 2008 to 12 Apr 2009)	Return to EPD on 20 Jan 2009
9	Type 2 (Confined Sea Disposal) Marine Dumping Permit (EP/MD/09-040) (valid from 29 Dec 2008 to 28 Jan 2009)	Return to EPD on 20 Jan 2009



### 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	Monitoring Parameters	Monitoring Stations	
Air Quality	1-Hour and 24-Hour TSP	A10	
Construction Noise	Leq <sub>(30min)</sub> during normal working hours	N10a*	
	Supplementary data of L <sub>10</sub> and L <sub>90</sub> for reference		
Stream Water Quality	In Situ Measurement	W9A & W9B	
			• Dissolved Oxygen Concentration (mg/L);
			• Dissolved Oxygen Saturation (% Sat);
			• Turbidity (NTU);
			• pH;
	• Salinity (%); Water Depth (m) and		
Laboratory Analysis	• Temperature (°C);		
	• Suspended Solids (mg/L);		
	• Ammonia Nitrogen (mg/L); and		
	• Zinc (µg/L).		
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 attributable to the project, if any; Photographic records at six-month intervals; and Monthly surveys of fauna in the wetland areas during the wet season (April to July inclusive) for reptiles, amphibians, dragonflies, and butterflies, and throughout the year for birds.		

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<sub>(30min)</sub> shall be taken between 0700 and 1900 with supplementary L<sub>10</sub> and L<sub>90</sub> data will be collected for reference.
- 3.05 Stream water quality monitoring is conducted were undertaken at two locations (W9A and W9B) twice per week. Dissolved Oxygen (DO), pH and 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 through the year and other faunal groups (reptiles, amphibians, dragonflies and butterflies) are conducted monthly in wet season (April to July inclusive) only. Photographic record should be made at six month intervals.
- 3.07 A summary of the Action/Limit (A/L) Levels for air quality, construction noise, stream water quality and ecology monitoring are shown in [Tables 3-2, 3-3, 3-4 & 3-5](#).

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

Monitoring Station	Action Level ( $\mu\text{g}/\text{m}^3$ )		Limit Level ( $\mu\text{g}/\text{m}^3$ )	
	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 complaints are received	> 75* dB(A)

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)
<b>Action Level</b>	NA	< 0.3
<b>Limit Level</b>	NA	< 0.2
<b>Turbidity (NTU)</b>		
<b>Action Level</b>	NA	> 73.5*
<b>Limit Level</b>	NA	> 78.2**
<b>pH</b>		
<b>Action Level</b>	NA	> 7.0*
<b>Limit Level</b>	NA	> 7.1**
<b>Suspended Solids (mg/L)</b>		
<b>Action Level</b>	NA	> 148*
<b>Limit Level</b>	NA	> 159**
<b>Ammonia Nitrogen (mg/L)</b>		
<b>Action Level</b>	NA	> 30.91*
<b>Limit Level</b>	NA	> 32.20**
<b>Zinc (<math>\mu\text{g}/\text{L}</math>)</b>		
<b>Action Level</b>	NA	> 242*
<b>Limit Level</b>	NA	> 252**

Note: # Act as Control Station for Impact Stream Water Quality Monitoring.  
 \* Alternative Action Level is 120% of upstream control station of same day.  
 \*\* Alternative Limit Level is 130% of upstream control station of same day.

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

Parameters	Action Level	Limit Level
Fauna: decrease in the total number of wetland dependant species or individuals of the surveyed faunal groups from baseline	20 – 40% of individuals and species	> 40% of individuals and species

- 3.08 The Event/Action Plan of air quality, construction noise, stream water quality and ecology monitoring has been implemented for this project. Details of the Event/Action Plan were presented in the [Appendix E](#).

#### 4.0 IMPACT MONITORING METHDOLOGY

##### MONITORING LOCATIONS

- 4.01 The 1-Hour 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, Construction Noise & Stream Water Quality Monitoring Station/Locations**

<b>Air Quality Station</b>	
A10	Village House in Tin Sam San Tsuen
<b>Construction Noise Location</b>	
N10*	Village House in Tin Sam San Tsuen
N10a	Village House in Tin Sam San Tsuen
<b>Water Quality Locations</b>	
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

# Act as control station in impact monitoring

- 4.02 The meteorological data during the reporting period was extracted 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 **5** monitoring events were carried out in this reporting period.

###### NOISE MONITORING

- 4.05 Impact noise monitoring was undertaken at 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 was undertaken at two locations W9A & W9B twice per week. Total of **16** monitoring events were carried out in this reporting period.

**ECOLOGY MONITORING**

4.07 Bird survey should be conducted in monthly throughout the year and other faunal groups (reptiles, amphibians, dragonflies and butterflies) are conducted monthly in wet season (April to July inclusive) in the seasonal wetland area. Photographic record should be made at six monthly intervals.

**MONITORING EQUIPMENT**

4.08 Monitoring equipment used by the ET in EM&A program is presented in **Table 4-2**.

**Table 4-2 Monitoring Equipment Used in EM&A Program**

<b>Parameters</b>	<b>Equipment</b>	<b>Monitoring Equipment</b>
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 550A or YSI 85/10FT
DO	Thermometer & DO Meter	YSI 550A or YSI 85/10FT
pH	pH Meter	Hanna HI 98128 or 98107
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 The 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 ±2 minutes accuracy for 24-Hour operation;
- Minimum exposed area of 63 in<sup>2</sup>;
- Flow control accuracy of ±2.5% deviation over 24-Hour operation;
- An anodized aluminum shelter to protect the filter and sampler;
- A motor speed-voltage control to control mass flow rate with accuracy of ±2.5% deviation over 24-Hour sampling period;
- Provision of a flow recorder for continuous monitoring;
- Provision of a peaked roof inlet;
- Incorporation with a manometer; and
- An 8"x10" stainless steel filter holder to hold, seal and easy to change the filter paper.

- 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 Measurement of 1-Hour TSP monitoring was taken by 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 extracted 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 ( $L_{eq}$ ) 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 and associated acoustical calibrators in compliance with the International Electrotechnical Commission (IEC) Publication 651:1979 (Type 1) and 804:1985 (Type 1) specifications were used for taking the 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 ( $L_{eq}$ ).
- 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.

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 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.

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.

Turbidity (NTU)

- 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.

Salinity

- 4.24 A portable salinometer capable of measuring salinity in percentage (g/L) will be used for in-situ measure the salinity of stream 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 4°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 (NTU), 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 is 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 magnifications; 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.

- 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 concentration by HVS.
- 4.37 The sound level meters are calibrated using an acoustical calibrator prior to and after measurements. The meters are regularly calibrated in accordance with the manufacturer's instructions. Prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustical calibrator generating a known sound pressure level at a known frequency. Measurements 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 stream water quality monitoring instruments are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at 3 monthly intervals throughout all monitoring stages.
- 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	Detection Limit
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 was 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 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 monitoring was carried out by the ET in compliance with the project specific EM&A Manual. The impact monitoring schedules are shown in [Appendix G](#) and the monitoring results are present in the following sub-sections.

### AIR QUALITY

5.02 The 1-Hour and 24-Hour TSP impact monitoring data are summarized in [Tables 5-1](#) and [5-2](#). Graphical plots of the past four month monitoring results are shown in [Appendix H](#).

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

Monitoring Date	Start Time	1 <sup>st</sup> Result ( $\mu\text{g}/\text{m}^3$ )	2 <sup>nd</sup> Result ( $\mu\text{g}/\text{m}^3$ )	3 <sup>rd</sup> Result ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
27-Dec-08	09:28	102	105	106	> 307	> 500
02-Jan-09	09:27	118	121	123	> 307	> 500
08-Jan-09	09:33	131	135	136	> 307	> 500
14-Jan-09	09:29	135	138	139	> 307	> 500
20-Jan-09	09:26	175	176	178	> 307	> 500

Note: Bold and italic is exceed the Action Level.  
 Bold and underline is exceed the Limit Level

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

Monitoring Date	Monitoring Results ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
31-Dec-08	23	> 165	> 260
07-Jan-09	126	> 165	> 260
13-Jan-09	125	> 165	> 260
19-Jan-09	77	> 165	> 260
24-Jan-09	94	> 165	> 260

Note: Bold and italic is exceed the Action Level.  
 Bold and underline is exceed the Limit Level

5.03 No 1-Hour and 24-Hour TSP monitoring results trigger the Action or Limit Level was recorded in this reporting period.

5.04 The meteorological data during the monitoring period are summarized in [Appendix I](#).

### CONSTRUCTION NOISE

5.05 The impact construction noise monitoring results are summarized in [Table 5-3](#). Graphical plots of the past four month monitoring results are shown in [Appendix H](#).

**Table 5-3 Summary of Noise Monitoring Results at N10a**

Date	Start Time	1st Leq5	2nd Leq5	3 <sup>rd</sup> Leq5	4th Leq5	5th Leq5	6 <sup>th</sup> Leq5	Leq30
27-Dec-08	09:44	46.2	44.4	45.7	47.9	46.4	45.7	46.2
02-Jan-09	09:43	43.4	43.1	42.7	41.1	42.8	42.4	42.6
08-Jan-09	09:56	45.4	46.9	48.2	46.0	47.8	46.5	46.9
14-Jan-09	09:52	53.9	51.0	50.8	52.5	53.9	50.6	52.3
20-Jan-09	09:48	47.1	47.1	48.2	47.3	46.7	48.8	47.6
<b>Limit Level</b>		-						> 75 dB(A)

5.06 No construction noise complaint (Action Level) was received and all noise level below the Limit Level in this reporting period.

**STREAM WATER QUALITY**

5.07 No stream water quality monitoring result trigger the Action or Limit Level was recorded in this reporting period. The impact monitoring schedules are shown in [Appendix G](#).

5.08 The stream water quality monitoring results are summarized in [Table 5-4](#) and graphical plots are presented in [Appendix H](#).

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

Monitoring Date	DO in mg/L		Turbidity (NTU)		pH		SS in mg/L		Ammonia (mg/L)		Zinc (µg/L)	
	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B	W9A <sup>#</sup>	W9B
29-Dec-08	3.8	3.6	19.8	20.3	6.9	6.9	339	108	4.42	4.36	77	33
31-Dec-08	5.1	5.0	9.3	10.3	6.8	6.8	13	12	4.70	4.50	24	22
5-Jan-09	5.2	4.7	47.4	29.5	6.9	6.8	49	27	154.00	7.93	217	37
7-Jan-09	2.9	2.6	101.0	28.5	7.2	6.9	73	16	189.00	8.33	344	34
12-Jan-09	1.5	2.4	>999	24.3	7.3	6.9	3320	19	1070.00	11.30	15800	43
16-Jan-09	4.1	4.0	63.2	51.7	7.0	6.9	976	604	0.03	0.02	90	56
19-Jan-09	3.9	4.0	739.0	37.1	7.1	6.8	484	41	508.00	30.30	3080	75
21-Jan-09	2.5	4.1	224.5	72.8	7.3	6.9	246	79	457.00	8.77	1450	104
<b>Action Level</b>	-	< 0.3*	-	> 73.5*	-	> 7.0*	-	> 148*	-	> 30.91*	-	> 242*
<b>Limit Level</b>	-	< 0.2**	-	> 78.2**	-	> 7.1**	-	> 159**	-	> 32.20**	-	> 252**

Notes: # Act as Control Station for the Impact Water Quality Monitoring.  
 Bold and italic is exceed the Action Level.  
 Bold and underline is exceed the Limit Level  
 \* Alternative Action Level is 120% of upstream control station of same day.  
 \*\* Alternative Limit Level is 130% of upstream control station of same day.

## ECOLOGY

- 5.09 47 individuals of birds from 17 species were recorded during the survey for the present monthly monitoring on 18 January 2009. Among the birds recorded, no individual from any wetland bird species with abundance from the baseline (i.e. Cattle Egret and Chinese Pond Heron) was recorded. Compared with the average abundance of 1.2 individuals from 2 species of wetland dependent birds recorded during the baseline study for the KT15 Project Profile, the species number and individual number of wetland dependent bird 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).
- 5.10 No intrusions of construction activities into the wetland areas nor adverse impact on the wetlands was found. Based on the findings in the previous monthly monitoring, the non-compliance in wetland dependent bird species and individual number was not caused by the project.
- 5.11 From the EM&A Manual Section 7.5.1(b), fauna survey is required during wet season (i.e. April to July) and thus no fauna undertaken in this reporting period.
- 5.12 Photographic records are scheduled in six-month intervals, and the last photographic record was undertaken at **December 2008**. Thus no photographic records need undertaken in this report period. The next photographic record is schedule at **June 2009**.

5.13 The ecology impact monitoring results are presented in **Table 5-5**.

**Table 5-5 Summary of Ecology Impact Monitoring Surveys Bird Survey**

Scientific Name	Common Name	Abundance reported in the project profile	Abundance recorded in the present survey (18 January 09)
<b>Birds</b>			
<i>Bubulcus ibis</i>	Cattle Egret	<b>0.4</b>	
<i>Ardeola bacchus</i>	Chinese Pond Heron	<b>0.8</b>	
<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	Recorded only	1
<i>Streptopelia chinensis</i>	Spotted Dove	Recorded only	4
<i>Hirundo rustica</i>	Barn Swallow	Recorded only	
<i>Motacilla alba</i>	White Wagtail	Recorded only	2
<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	Recorded only	2
<i>Pycnonotus sinensis</i>	Chinese Bulbul	Recorded only	3
<i>Lanius schach</i>	Long-tailed Shrike	Recorded only	2
<i>Copsychus saularis</i>	Oriental Magpie Robin	Recorded only	1
<i>Orthotomus sutorius</i>	Common Tailorbird	Recorded only	
<i>Lonchura striata</i>	White-rumped Munia	Recorded only	
<i>Passer montanus</i>	Eurasian Tree Sparrow	Recorded only	5
<i>Sturnus nigricollis</i>	Black-collared Starling	Recorded only	5
<i>Acridotheres cristatellus</i>	Crested Myna	Recorded only	2
<i>Prinia flaviventris</i>	Yellow-bellied Prinia	\	4
<i>Eudynamis scolopacea</i>	Common Koel	\	
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	\	
<i>Garrulax perspicillatus</i>	Masked Laughingthrush	\	3
<i>Zosterops japonica</i>	Japanese White Eye	\	6
<i>Lonchura punctulata</i>	Scaly-breasted Munia	\	
<i>Egretta garzetta</i>	Little Egret	\	
<i>Anthus hodgsoni</i>	Olive-backed Pipit	\	1
<i>Phylloscopus subaffinis</i>	Dusky Warbler	\	
<i>Phylloscopus inornatus</i>	Yellow-Browed Warbler	\	
<i>Parus major</i>	Great Tit	\	2
<i>Prinia inornata</i>	Plain Prinia	\	2
<i>Sturnus sericeus</i>	Red-billed Starling		
<i>Centropus bengalensis</i>	Lesser Coucal	\	
<i>Centropus sinensis</i>	Greater Coucal	\	
<i>Tringa glareola</i>	Wood Sandpiper	\	
<i>Motacilla citreola</i>	Grey Wagtail	\	2
<b>Species Number</b>		<b>15 spp. recorded, (only 2 species of wetland birds with abundance)</b>	<b>17 spp. (0 sp. from the wetland birds with abundance in the baseline)</b>
<b>Individual Number</b>		<b>1.2 (from the 2 species of wetland birds with abundance)</b>	<b>47 (0 from the wetland birds with abundance in the baseline)</b>

Note: \* Wetland dependent species recorded with abundance during the baseline study 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

6.02 All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste;
- General Refuse; and
- Excavated Soil.

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	Tuen Mun Area 38

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

Type of Waste	Quantity	Disposal Location
Recycled Metal (kg)	0	NA
Recycled Paper / Cardboard Packing (kg)	0	NA
Recycled Plastic (kg)	0	NENT Landfill
Chemical Wastes (kg)	0	License Collector
General Refuses (m <sup>3</sup> )	0	NENT Landfill

6.04 The quantities of excavation soil for marine disposal in this reporting period are summarized in **Table 6-3**.

**Table 6-3 Summary of Excavated Soil for Marine Disposal**

Type of Waste	Location	Date	Total	Disposal Location
Type 1 Materials (m <sup>3</sup> )	-	-	-	East Sha Chau (Pitch 4a & 4b)
Type 2 Materials (m <sup>3</sup> )	Bay 32-34 (121.5 m <sup>3</sup> ) Bay 31-34 (144 m <sup>3</sup> )	05 Jan 2009 07 Jan 2009	265.5	East Sha Chau (Pitch 4c)

## 7.0 SITE INSPECTION

- 7.01 According to the EM&A Manual Section 9.1.2, the environmental weekly site inspection should be formulation by ET Leader. ET had carried out the environmental weekly site inspection on **02, 09, 16 and 21 January 2009** with the Representatives of the Engineer and the Contractor to evaluate the site environmental performance in this reporting period. The IEC monthly site audit was conducted on **16 January 2008** by IEC's representative with the Engineer's, the Contractor's 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:-
- Stagnant water was cumulated at CH474; the Contractor was reminded to clean up to prevent mosquito breeding;
  - C&D material scattered on site was observed at Bay 52, the Contractor was reminded to improve the housekeeping to maintain the site clean and tidy;
  - Watering by water truck at haul roads should be regularly maintained and increased in the frequency of watering in order to suppress the dust impacts; and
  - Sedimentation tank system at W9B should be improved in order to increase the retention time of the effluent, so as to improve the water quality.
- 7.03 The ET weekly site inspection and IEC monthly site audit checklists are shown in **Appendix J**. In general, the construction area of KT15 was kept clean and tidy.
- 7.04 Environmental Protection Department had undertaken the site visit at Portion 7 on 30 December 2008, no comment was received from EPD.

## 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. Statistical summaries environmental complaint, summon and prosecution are presented in **Tables 8-1, 8-2** and **8-3**.

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

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
July – December 2007	0	0	NA
January – December 2008	0	0	NA
January 2009	0	0	NA

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

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Nature
July – December 2007	0	0	NA
January – December 2008	0	0	NA
January 2009	0	0	NA

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

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Nature
July – December 2007	0	0	NA
January – December 2008	0	0	NA
January 2009	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 minimize 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 **January 2009** 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 in **Table 11-1**.

**Table 11-1 Summary of the Exceedances for Impact Monitoring**

Monitoring	Parameters	Work-Related Exceedance %	Investigation & Corrective Actions
Air Quality	1-Hour TSP	0	Not Required for 0% Project Related Exceedance
	24-Hour TSP	0	Not Required for 0% Project Related Exceedance
Noise	Leq (30min) Daytime	0	Not Required for 0% Project Related Exceedance
Stream Water	Dissolve Oxygen (DO)	0	Not Required for 0% Project Related Exceedance
	Turbidity (NTU)	0	Not Required for 0% Project Related Exceedance
	pH	0	Not Required for 0% Project Related Exceedance
	Suspended Solids (SS)	0	Not Required for 0% Project Related Exceedance
	Ammonia Nitrogen	0	Not Required for 0% Project Related Exceedance
	Zinc	0	Not Required for 0% Project Related Exceedance
Ecology	Decrease in number of species of wetland birds of conservation importance from baseline.	0	Not Required for 0% Project Related Exceedance
	Decrease in the total number of wetland birds of conservation importance from baseline.	0	Not Required for 0% Project Related Exceedance

Note: According to the EM&A Manual S7.5.1(b), fauna monitoring only undertaken during wet seasons (April to July)

11.02 No 1-Hour and 24-Hour TSP monitoring results trigger the Action or Limit Level was recorded in this reporting period.

11.03 No construction noise complaint (Action Level) was received and no monitoring noise level above the Limit Level was recorded in this reporting period.

11.04 No stream water quality monitoring result trigger the Action or Limit Level was recorded in this reporting period.

11.05 Non-compliance with the ecological criteria was found during the monitoring on 18 January 2009. No intrusions of construction activities into the wetland areas nor adverse impact was observed. Based on the findings in the pervious monthly monitoring, the non-compliance in wetland dependent bird or fauna was not caused by the project.

11.06 No environmental complaint, summons or prosecution was received in this reporting period.

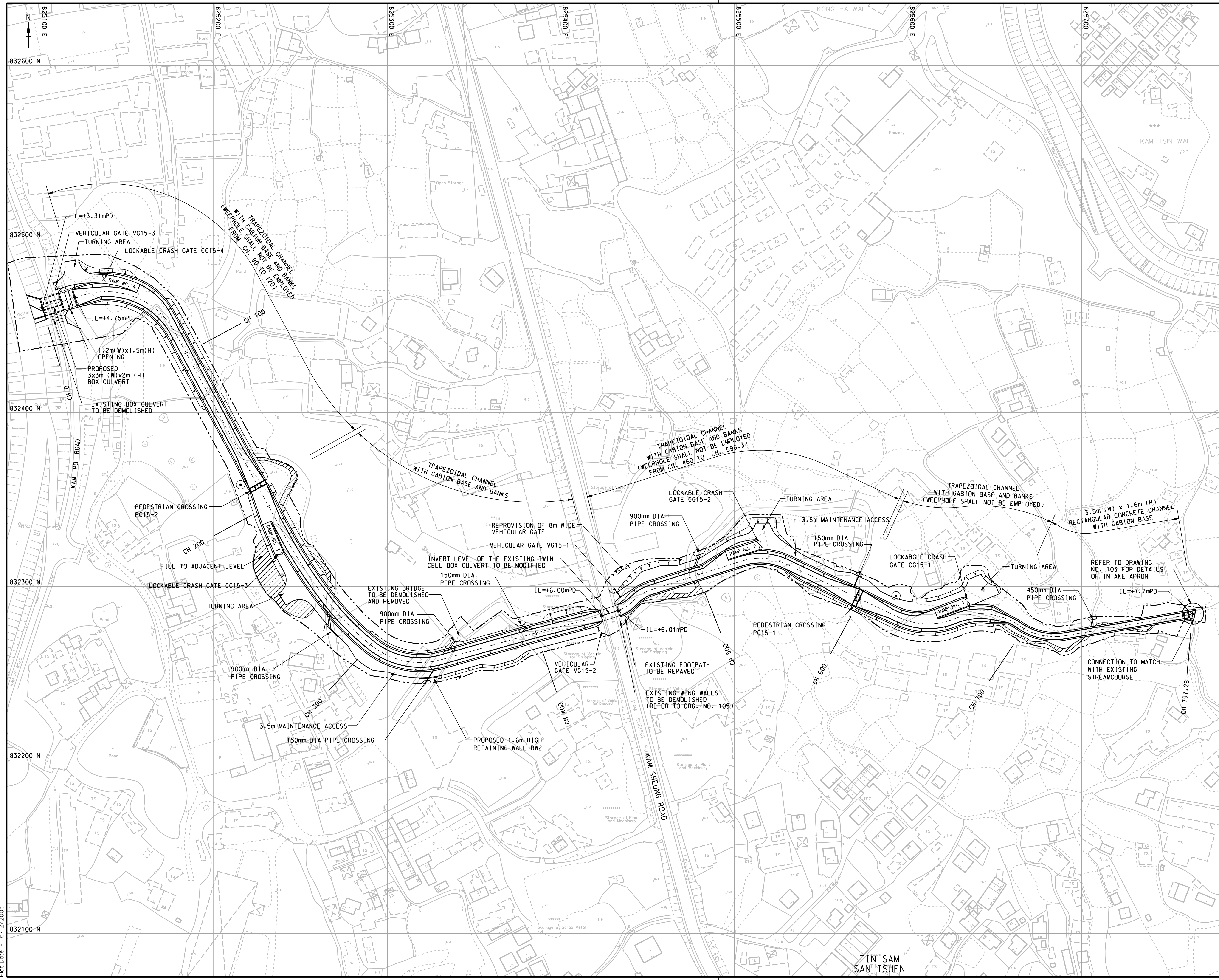
## RECOMMENDATIONS

- 11.07 Based on the ET environmental weekly site inspection and IEC monthly site audit records on **02, 09, 16 and 21 January 2009**, no non-compliance and **four** observations were recorded. Details of the observations as follows:-
- Stagnant water was cumulated at CH474; the Contractor was reminded to clean up to prevent mosquito breeding;
  - C&D material scattered on site was observed at Bay 52, the Contractor was reminded to improve the housekeeping to maintain the site clean and tidy;
  - Watering by water truck at haul roads should be regularly maintained and increased in the frequency of watering in order to suppress the dust impacts; and
  - Sedimentation tank system at W9B should be improved in order to increase the retention time of the effluent, so as to improve the water quality.
- 11.08 Environmental Protection Department had undertaken the site visit at Portion 7 on 30 December 2008, no comment was received from EPD.
- 11.09 The ET will continue to implement the EM&A program and audit the implementation of the environmental mitigation measures.

**APPENDIX A**

**PROJECT SITE LAYOUT**





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NOTES :  
1. REFER TO DRAWING NO. 020 FOR NOTES AND LEGENDS.

Revision	Date	Description			Initial
		Designed	Checked	Drawn	
		SFL	KIL	MK	KIL
Date	12/05	12/05	12/05	12/05	12/05

Approved

CONTRACT NO. DG200602

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

Drawing title  
CHANNEL KT15 GENERAL LAYOUT PLAN

Drawing no. 021

Scale  
1:1000 A1  
1:2000 A3

香港特別行政區政府渠務署  
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION  
DRAINAGE SERVICES DEPARTMENT

BLACK & VEATCH HONG KONG LIMITED  
博威工程顧問有限公司

Plot Date : 6/12/2005

## **APPENDIX B**

### **THREE-MONTH CONSTRUCTION PROGRAM**

ID	Task Name	Duration	Start	Finish	Predecessors	2009			
						Jan	Feb	Mar	Apr
1	Letter of Acceptance	1 day	Wed 21/3/07	Wed 21/3/07					
2	Date for commencement of Works	1 day	Fri 30/3/07	Fri 30/3/07					
3	Execution of Article of Agreement	1 day	Tue 3/4/07	Tue 3/4/07					
4									
5	<b>Master Programme of the Works</b>	<b>902 days</b>	<b>Wed 21/3/07</b>	<b>Mon 7/9/09</b>					
6									
7	<b>Completion Dates</b>	<b>893 days</b>	<b>Fri 30/3/07</b>	<b>Mon 7/9/09</b>					
8	Section I - portions 1, 2 and 3	893 days	Fri 30/3/07	Mon 7/9/09	2SS				
9	Section II - portions 4, 5 and 5C	893 days	Fri 30/3/07	Mon 7/9/09	2SS				
10	Section III - portions 5A1, 5A2 and 5B	740 days	Thu 28/6/07	Mon 6/7/09	20FS-1 day				
11	Section IV - temp vehicular access at portion 5A1	90 days	Thu 28/6/07	Tue 25/9/07	20FS-1 day				
12	Section V - preservation and protection of existing trees	893 days	Fri 30/3/07	Mon 7/9/09	2SS				
13									
14	<b>Possession of Site</b>	<b>200 days</b>	<b>Fri 30/3/07</b>	<b>Mon 15/10/07</b>					
15	Portion 1 - channel KT2	1 day	Fri 30/3/07	Fri 30/3/07	2SS				
16	Portion 2 - channel KT2	61 days	Fri 30/3/07	Tue 29/5/07	2SS				
17	Portion 3 - channel KT2	91 days	Fri 30/3/07	Thu 28/6/07	2SS				
18	Portion 4 - channel KT15	1 day	Fri 30/3/07	Fri 30/3/07	2SS				
19	Portion 5 - channel KT15	91 days	Fri 30/3/07	Thu 28/6/07	2SS				
20	Portion 5A1 - channel KT15	91 days	Fri 30/3/07	Thu 28/6/07	2SS				
21	Portion 5A2 - channel KT15	91 days	Fri 30/3/07	Thu 28/6/07	2SS				
22	Portion 5B - channel KT15	20 days	Wed 26/9/07	Mon 15/10/07	11				
23	Portion 5C - channel KT15	91 days	Fri 30/3/07	Thu 28/6/07	2SS				
24	Portion 6 - Temp Storage Area at Chi Ho Road	1 day	Fri 30/3/07	Fri 30/3/07	2SS				
25	Portion 7 - Berthing Area	1 day	Fri 30/3/07	Fri 30/3/07	2SS				
26	Portion 8 - Site Accommodation	1 day	Fri 30/3/07	Fri 30/3/07	2SS				
27									
28	<b>A. Preliminary Works</b>	<b>902 days</b>	<b>Wed 21/3/07</b>	<b>Mon 7/9/09</b>					
29	<b>1. Setting out of Works</b>	<b>893 days</b>	<b>Fri 30/3/07</b>	<b>Mon 7/9/09</b>	2SS				
30	<b>2. Environmental Monitoring and Audit</b>	<b>893 days</b>	<b>Fri 30/3/07</b>	<b>Mon 7/9/09</b>					
31	2.1 Establishment of Environmental Team	14 days	Fri 30/3/07	Thu 12/4/07	8SS				
32	2.2 approval by the Engineer	7 days	Fri 13/4/07	Thu 19/4/07	31				
33	2.3 Environmental baseline monitoring	77 days	Fri 20/4/07	Thu 5/7/07					
34	a. Technical proposal & methodology	7 days	Fri 20/4/07	Thu 26/4/07	32				
35	b. Approval by the Engineer	7 days	Fri 27/4/07	Thu 3/5/07	34				
36	c. Baseline monitoring	63 days	Fri 4/5/07	Thu 5/7/07	35				
37	2.4 Environmental impact monitoring and audit	777 days	Tue 24/7/07	Mon 7/9/09	36,8FF				
38	<b>3. Environmental Management and Environmental Management Plan</b>	<b>73 days</b>	<b>Fri 30/3/07</b>	<b>Sun 10/6/07</b>					
39	3.1 Submission of draft EMP	21 days	Fri 30/3/07	Thu 19/4/07	2SS				
40	3.2 Comment from the Engineer	7 days	Fri 20/4/07	Thu 26/4/07	39				
41	3.3 Submission of EMP	45 days	Fri 27/4/07	Sun 10/6/07	40				
42	<b>4. Engineer's Accommodation</b>	<b>51 days</b>	<b>Fri 30/3/07</b>	<b>Sat 19/5/07</b>					
43	4.1 Renovation	30 days	Fri 30/3/07	Sat 28/4/07	26SS				
44	4.2 Equipment	51 days	Fri 30/3/07	Sat 19/5/07					
45	a. Contract telephone	21 days	Fri 30/3/07	Thu 19/4/07	26SS				
46	b. Survey equipment	45 days	Fri 30/3/07	Sun 13/5/07	26SS				
47	c. Contract computer facilities	<b>51 days</b>	<b>Fri 30/3/07</b>	<b>Sat 19/5/07</b>					
48	submission	14 days	Fri 30/3/07	Thu 12/4/07	26SS				
49	approval	7 days	Fri 13/4/07	Thu 19/4/07	48				
50	installation	21 days	Sun 22/4/07	Sat 12/5/07	49,43FS-7 days				
51	testing & commissioning	7 days	Sun 13/5/07	Sat 19/5/07	50				
52	4.3 utilities servicing	33 days	Fri 30/3/07	Tue 1/5/07					
53	a. Water	1 day	Fri 30/3/07	Fri 30/3/07	26SS				
54	b. Electricity	1 day	Fri 30/3/07	Fri 30/3/07	26SS				
55	c. Telephone	<b>33 days</b>	<b>Fri 30/3/07</b>	<b>Tue 1/5/07</b>					
56	temporary service	32 days	Fri 30/3/07	Mon 30/4/07	26SS				
57	new service	<b>19 days</b>	<b>Fri 13/4/07</b>	<b>Tue 1/5/07</b>					
58	application	5 days	Fri 13/4/07	Tue 17/4/07	56SS+14 days				
59	installation	14 days	Wed 18/4/07	Tue 1/5/07	58				
60	d. Facsimile	<b>33 days</b>	<b>Fri 30/3/07</b>	<b>Tue 1/5/07</b>					
61	temporary service	32 days	Fri 30/3/07	Mon 30/4/07	26SS				
62	new service	<b>19 days</b>	<b>Fri 13/4/07</b>	<b>Tue 1/5/07</b>					
63	application	5 days	Fri 13/4/07	Tue 17/4/07	61SS+14 days				
64	installation	14 days	Wed 18/4/07	Tue 1/5/07	63				
65	e. Internet broadband	<b>33 days</b>	<b>Fri 30/3/07</b>	<b>Tue 1/5/07</b>					
66	temporary service (56K)	32 days	Fri 30/3/07	Mon 30/4/07	26SS				

Task		Progress		Summary		Rolled Up Critical Task		Rolled Up Progress		External Tasks		Group By Summary	
Critical Task		Milestone		Rolled Up Task		Rolled Up Milestone		Split		Project Summary		Deadline	



ID	Task Name	Duration	Start	Finish	Predecessors	2009			
						Jan	Feb	Mar	Apr
67	new service	19 days	Fri 13/4/07	Tue 1/5/07					
68	application	5 days	Fri 13/4/07	Tue 17/4/07	66SS+14 days				
69	installation	14 days	Wed 18/4/07	Tue 1/5/07	68				
70	<b>5. Contractor's Accommodation</b>	<b>45 days</b>	<b>Fri 30/3/07</b>	<b>Sun 13/5/07</b>					
71	5.1 Provision	45 days	Fri 30/3/07	Sun 13/5/07					
72	a. Premises	45 days	Fri 30/3/07	Sun 13/5/07	26SS				
73	b. Toilet facilities	21 days	Mon 23/4/07	Sun 13/5/07	72FF				
74	c. Telephone service	30 days	Sat 14/4/07	Sun 13/5/07	72FF				
75	d. Facsimile service	30 days	Sat 14/4/07	Sun 13/5/07	72FF				
76	e. Internet broadband service	30 days	Sat 14/4/07	Sun 13/5/07	72FF				
77	f. Water	1 day	Fri 30/3/07	Fri 30/3/07	26SS				
78	g. electricity	1 day	Fri 30/3/07	Fri 30/3/07	26SS				
79	<b>6. Transport (land) for the Engineer</b>	<b>124 days</b>	<b>Fri 30/3/07</b>	<b>Tue 31/7/07</b>					
80	6.1 submission	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
81	6.2 comment & approval	14 days	Fri 6/4/07	Thu 19/4/07	80				
82	6.3 delivery	103 days	Fri 20/4/07	Tue 31/7/07	81				
83	6.4 temp service	124 days	Fri 30/3/07	Tue 31/7/07	2SS,82FF				
84	<b>7. Transport (land) for Public Works Regional Laboratory</b>	<b>124 days</b>	<b>Fri 30/3/07</b>	<b>Tue 31/7/07</b>					
85	7.1 submission	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
86	7.2 comment, approval & instruction	14 days	Fri 6/4/07	Thu 19/4/07	85				
87	7.3 delivery	103 days	Fri 20/4/07	Tue 31/7/07	86				
88	<b>8. Signboard</b>	<b>150 days</b>	<b>Fri 30/3/07</b>	<b>Sun 26/8/07</b>					
89	8.1 Major	150 days	Fri 30/3/07	Sun 26/8/07					
90	submission	90 days	Fri 30/3/07	Wed 27/6/07	2SS				
91	comment & approval	90 days	Sun 29/4/07	Fri 27/7/07	90SS+30 days				
92	erection	90 days	Tue 29/5/07	Sun 26/8/07	91SS+30 days				
93	8.2 Minor	150 days	Fri 30/3/07	Sun 26/8/07					
94	submission	90 days	Fri 30/3/07	Wed 27/6/07	2SS				
95	comment & approval	90 days	Sun 29/4/07	Fri 27/7/07	94SS+30 days				
96	erection	90 days	Tue 29/5/07	Sun 26/8/07	95SS+30 days				
97	<b>9. Telephone hotline</b>	<b>15 days</b>	<b>Sun 29/4/07</b>	<b>Sun 13/5/07</b>					
98	9.1 Engineer's instruction	1 day	Sun 29/4/07	Mon 30/4/07	99SF				
99	9.2 installation	14 days	Mon 30/4/07	Sun 13/5/07	74FF				
100	<b>10. Contractual general submissions</b>	<b>902 days</b>	<b>Wed 21/3/07</b>	<b>Mon 7/9/09</b>					
101	10.1 programmes	28 days	Wed 21/3/07	Tue 17/4/07					
102	a. GCC Clause 16 programme	14 days	Wed 21/3/07	Tue 3/4/07	1SS				
103	b. Works programme & financial programme	14 days	Wed 4/4/07	Tue 17/4/07	102				
104	c. 3-month rolling programme	14 days	Wed 4/4/07	Tue 17/4/07	102				
105	10.2 contractor's superintendence	14 days	Fri 30/3/07	Thu 12/4/07					
106	a. Agent	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
107	b. Surveyor	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
108	c. Sub-agent	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
109	d. Geotechnical Engineer	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
110	e. Geotechnical Supervisor	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
111	f. Foreman - concrete	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
112	g. Foreman - drainage	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
113	h. Staff Organization Plan	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
114	10.3 Safety Organization	14 days	Fri 30/3/07	Thu 12/4/07					
115	a. Safety Officer	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
116	b. Safety Supervisor	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
117	c. Safety Representative	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
118	10.4 TTMS design	7 days	Fri 30/3/07	Thu 5/4/07					
119	a. Independent Traffic Consultant	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
120	b. Traffic Engineer	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
121	10.5 Assistant to Engineer	33 days	Fri 30/3/07	Tue 1/5/07					
122	a. Chainmen (4)	33 days	Fri 30/3/07	Tue 1/5/07	2SS				
123	b. Watchmen (2)	33 days	Fri 30/3/07	Tue 1/5/07	2SS				
124	c. Field assistant (1)	33 days	Fri 30/3/07	Tue 1/5/07	2SS				
125	d. Technical assistant (1)	33 days	Fri 30/3/07	Tue 1/5/07	2SS				
126	e. Clerical assistant (1)	33 days	Fri 30/3/07	Tue 1/5/07	2SS				
127	f. Office assistant (1)	33 days	Fri 30/3/07	Tue 1/5/07	2SS				
128	10.6 Underground service detection equipment	35 days	Fri 30/3/07	Thu 3/5/07					
129	a. Submission	7 days	Fri 30/3/07	Thu 5/4/07	2SS				
130	b. Comment & approval	14 days	Fri 6/4/07	Thu 19/4/07	129				
131	c. Provision	14 days	Fri 20/4/07	Thu 3/5/07	130				
132	10.7 Independent Checking of Temporary Works	28 days	Fri 30/3/07	Thu 26/4/07					
133	a. Submission of independent checking engineer	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
134	b. Comment & approval	14 days	Fri 13/4/07	Thu 26/4/07	133				
135	10.8 Trip ticket system for C & D material	59 days	Fri 30/3/07	Sun 27/5/07					

Task Progress Summary Rolled Up Critical Task Rolled Up Progress External Tasks Group By Summary

Critical Task Milestone Rolled Up Task Rolled Up Milestone Split Project Summary Deadline

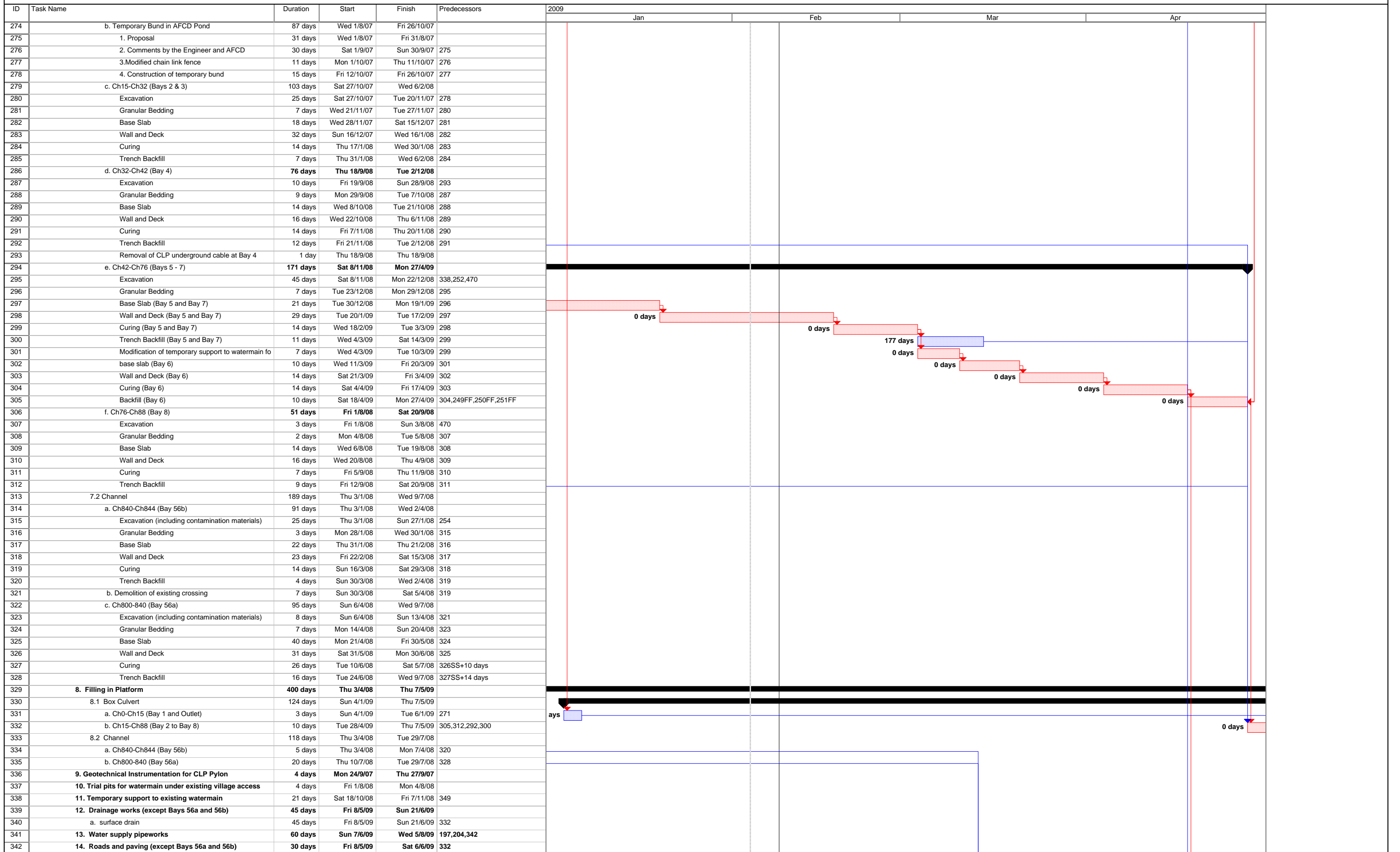
ID	Task Name	Duration	Start	Finish	Predecessors	2009			
						Jan	Feb	Mar	Apr
136	a. Submission of site management plan	45 days	Fri 30/3/07	Sun 13/5/07	2SS				
137	b. Comment & approval	14 days	Mon 14/5/07	Sun 27/5/07	136				
138	10.9. Condition survey and structural monitoring	893 days	Fri 30/3/07	Mon 7/9/09					
139	a. Submission of Independent Structural Engineer	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
140	b. Comment & approval	7 days	Fri 13/4/07	Thu 19/4/07	139				
141	c. Proposal for condition survey & structural monitoring	209 days	Fri 20/4/07	Wed 14/11/07					
142	Portion 1, 4, 6, 7, 8	30 days	Fri 20/4/07	Sat 19/5/07	140				
143	Portion 2	30 days	Wed 30/5/07	Thu 28/6/07	16				
144	Portion 3, 5	30 days	Fri 29/6/07	Sat 28/7/07	17,19,20,21				
145	Portion 5A1, 5A2 and 5B	30 days	Tue 16/10/07	Wed 14/11/07	22				
146	d. Comment & approval	193 days	Sun 20/5/07	Wed 28/11/07					
147	Portion 1, 4, 6, 7, 8	14 days	Sun 20/5/07	Sat 2/6/07	142				
148	Portion 2	14 days	Fri 29/6/07	Thu 12/7/07	143				
149	Portion 3, 5	14 days	Sun 29/7/07	Sat 11/8/07	144				
150	Portion 5A1, 5A2 and 5B	14 days	Thu 15/11/07	Wed 28/11/07	145				
151	e. Condition survey & structural monitoring	828 days	Sun 3/6/07	Mon 7/9/09					
152	Portion 1, 4, 6, 7, 8	828 days	Sun 3/6/07	Mon 7/9/09	147				
153	Portion 2	788 days	Fri 13/7/07	Mon 7/9/09	148				
154	Portion 3, 5	758 days	Sun 12/8/07	Mon 7/9/09	149				
155	Portion 5A1, 5A2 and 5B	586 days	Thu 29/11/07	Mon 6/7/09	150				
156	10.10 Handling & disposal of Type 1 & 2 contaminated material:	74 days	Sat 14/7/07	Tue 25/9/07					
157	a. Proposed type of dump truck	44 days	Sun 15/7/07	Mon 27/8/07					
158	Submission	30 days	Sun 15/7/07	Mon 13/8/07	832SS-44 days				
159	Comment & approval	14 days	Tue 14/8/07	Mon 27/8/07	158				
160	b. Proposal of berthing area arrangement	44 days	Mon 30/7/07	Tue 11/9/07					
161	Submission	30 days	Mon 30/7/07	Tue 28/8/07					
162	Comment & approval	14 days	Wed 29/8/07	Tue 11/9/07	161				
163	c. Proposal of disposal arrangement	74 days	Sat 14/7/07	Tue 25/9/07					
164	Submission	60 days	Sat 14/7/07	Tue 11/9/07					
165	Comment & approval	14 days	Wed 12/9/07	Tue 25/9/07	164				
166	10.11 Type 3 contaminated material	290 days	Fri 30/3/07	Sun 13/1/08					
167	a. Decontamination specialist	134 days	Fri 30/3/07	Fri 10/8/07					
168	Submission	120 days	Fri 30/3/07	Fri 27/7/07	2SS				
169	Comment & approval	14 days	Sat 28/7/07	Fri 10/8/07	168				
170	b. Statement & treatment programme	42 days	Sat 11/8/07	Fri 21/9/07					
171	(1) Submission	28 days	Sat 11/8/07	Fri 7/9/07	169				
172	(2) Comment & approval	14 days	Sat 8/9/07	Fri 21/9/07					
173	by the Engineer	14 days	Sat 8/9/07	Fri 21/9/07	171				
174	by the EPD	14 days	Sat 8/9/07	Fri 21/9/07	171				
175	c. Setting up of Treatment Plant	60 days	Thu 15/11/07	Sun 13/1/08	174				
176	10.12 Safety Plan	35 days	Wed 21/3/07	Tue 24/4/07					
177	a. Submission of draft Safety Plan	14 days	Wed 21/3/07	Tue 3/4/07	1SS				
178	b. Comment by the Engineer	7 days	Wed 4/4/07	Tue 10/4/07	177				
179	c. Submission of Safety Plan	14 days	Wed 11/4/07	Tue 24/4/07	178				
180	10.13 Sub-contractor Management Plan	902 days	Wed 21/3/07	Mon 7/9/09					
181	a. Submission of SMP	30 days	Wed 21/3/07	Thu 19/4/07	1SS				
182	b. For information & Comments	14 days	Fri 20/4/07	Thu 3/5/07	181				
183	c. Update SMP	858 days	Fri 4/5/07	Mon 7/9/09	182				
184	10.14 proof of plant ownership	893 days	Fri 30/3/07	Mon 7/9/09					
185	a. Submission of draft written undertaking	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
186	b. Comment by the Engineer / Employer	14 days	Fri 13/4/07	Thu 26/4/07	185				
187	c. Engineer's request	865 days	Fri 27/4/07	Mon 7/9/09	186				
188	10.15 Contractor's Management Team	893 days	Fri 30/3/07	Mon 7/9/09					
189	a. Submission of staff member details	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
190	b. Update management / site supervision team	879 days	Fri 13/4/07	Mon 7/9/09	189				
191	10.16 Water supply pipeworks material	651 days	Wed 21/3/07	Tue 30/12/08					
192	a. Supplier	28 days	Wed 21/3/07	Tue 17/4/07					
193	Submission	14 days	Wed 21/3/07	Tue 3/4/07	1SS				
194	comment & approval	14 days	Wed 4/4/07	Tue 17/4/07	193				
195	b. Manufacturer	28 days	Wed 21/3/07	Tue 17/4/07					
196	Submission	14 days	Wed 21/3/07	Tue 3/4/07	1SS				
197	comment & approval	14 days	Wed 4/4/07	Tue 17/4/07	196				
198	c. Independent Inspection Agent ( IIA )	28 days	Wed 21/3/07	Tue 17/4/07					
199	Submission	14 days	Wed 21/3/07	Tue 3/4/07	1SS				
200	comment & approval	14 days	Wed 4/4/07	Tue 17/4/07	199				
201	d. Representative of the IIA	28 days	Wed 21/3/07	Tue 17/4/07					
202	Submission	14 days	Wed 21/3/07	Tue 3/4/07	1SS				
203	comment & approval	14 days	Wed 4/4/07	Tue 17/4/07	202				

Task Progress Summary Rolled Up Critical Task Rolled Up Progress External Tasks Group By Summary  
Critical Task Milestone Rolled Up Task Rolled Up Milestone Split Project Summary Deadline

ID	Task Name	Duration	Start	Finish	Predecessors	2009			
						Jan	Feb	Mar	Apr
205	10.17 Landscape softworks and establishment works	28 days	Fri 30/3/07	Thu 26/4/07					
206	a. Submission of technical information	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
207	b. Comment & approval	14 days	Fri 13/4/07	Thu 26/4/07	206				
208	10.18 Preservation and protection of existing trees	59 days	Wed 21/3/07	Fri 18/5/07					
209	a. Specialist contractor ( landscaping Class I )	28 days	Fri 30/3/07	Thu 26/4/07					
210	Submission	14 days	Fri 30/3/07	Thu 12/4/07	2SS				
211	Comment & approval	14 days	Fri 13/4/07	Thu 26/4/07	210				
212	b. Site supervisory staff	59 days	Wed 21/3/07	Fri 18/5/07					
213	Submission	45 days	Wed 21/3/07	Fri 4/5/07	1SS				
214	Comment & approval	14 days	Sat 5/5/07	Fri 18/5/07	213				
215	10.19 Concrete ( ready mix )	28 days	Fri 30/3/07	Thu 26/4/07					
216	a. Submission of supplier & design mix	21 days	Fri 30/3/07	Thu 19/4/07	2SS				
217	b. Comment & approval	7 days	Fri 20/4/07	Thu 26/4/07	216				
218	10.20 Steel reinforcement	35 days	Fri 30/3/07	Thu 3/5/07					
219	a. Submission of supplier	28 days	Fri 30/3/07	Thu 26/4/07	2SS				
220	b. Comment & approval	7 days	Fri 27/4/07	Thu 3/5/07	219				
221	10.21 Submissions of method statement / materials	811 days	Tue 15/5/07	Sun 2/8/09					
222	a. Submission of materials	811 days	Tue 15/5/07	Sun 2/8/09	15FS+45 days				
223	b. Submission of method statement	811 days	Tue 15/5/07	Sun 2/8/09	15FS+45 days				
224	<b>11. Provision of wheel washing facilities</b>	<b>180 days</b>	<b>Fri 30/3/07</b>	<b>Tue 25/9/07</b>					
225	11.1 Channel KT2	120 days	Fri 30/3/07	Fri 27/7/07	2SS				
226	11.2 Channel KT15	90 days	Thu 28/6/07	Tue 25/9/07	19FS-1 day				
227	11.3 Berthing area	90 days	Fri 30/3/07	Wed 27/6/07	2SS				
228	11.4 Portion 6	45 days	Fri 30/3/07	Sun 13/5/07	2SS				
229	<b>12. Setting up of traffic management liaison group</b>	<b>30 days</b>	<b>Fri 30/3/07</b>	<b>Sat 28/4/07</b>	<b>2SS</b>				
230									
231	<b>B. Section I of the Works</b>	<b>893 days</b>	<b>Fri 30/3/07</b>	<b>Mon 7/9/09</b>					
232	<b>B1. Portion 1</b>	<b>893 days</b>	<b>Fri 30/3/07</b>	<b>Mon 7/9/09</b>					
233	<b>1. Site clearance</b>	<b>30 days</b>	<b>Sat 28/7/07</b>	<b>Sun 26/8/07</b>					
234	1.1 General site clearance	30 days	Sat 28/7/07	Sun 26/8/07	36,225,1021,1019				
235	<b>2. Temporary Traffic Management Scheme</b>	<b>59 days</b>	<b>Fri 30/3/07</b>	<b>Sun 27/5/07</b>					
236	2.1 TTMS Proposal (trial pits in Chi Ho Road for utilities)	59 days	Fri 30/3/07	Sun 27/5/07					
237	a. Submission	45 days	Fri 30/3/07	Sun 13/5/07	2SS				
238	b. comments & approvals by Engineer & TMLG	14 days	Mon 14/5/07	Sun 27/5/07	237				
239	2.2 TTMS Proposal (for construction of box culvert)	59 days	Fri 30/3/07	Sun 27/5/07					
240	a. Submission	45 days	Fri 30/3/07	Sun 13/5/07					
241	b. comments & approvals by Engineer & TMLG	14 days	Mon 14/5/07	Sun 27/5/07	240				
242	<b>3. Excavation Permits</b>	<b>507 days</b>	<b>Mon 28/5/07</b>	<b>Wed 15/10/08</b>					
243	3.1 application and issue of permit (trial pits in Chi Ho Road	180 days	Mon 28/5/07	Fri 23/11/07	238				
244	3.2 application and issue of permits (for construction of box culvert)	180 days	Sat 19/4/08	Wed 15/10/08	241				
245	<b>4. Underground utilities detection</b>	<b>253 days</b>	<b>Fri 30/3/07</b>	<b>Fri 7/12/07</b>					
246	4.1 utilities detection	28 days	Fri 30/3/07	Thu 26/4/07	2SS				
247	4.2 trial trench excavation & identification	14 days	Sat 24/11/07	Fri 7/12/07	246,243				
248	<b>5. Utilities temporary diversion / protection</b>	<b>579 days</b>	<b>Thu 27/9/07</b>	<b>Mon 27/4/09</b>					
249	a. WSD watermain along village vehicular access	171 days	Sat 8/11/08	Mon 27/4/09	338				
250	b. Street lighting along village vehicular access	171 days	Sat 8/11/08	Mon 27/4/09	295SS				
251	c. PCCW along village vehicular access	171 days	Sat 8/11/08	Mon 27/4/09	295SS				
252	d. CLP overhead cable at Bay 4	160 days	Thu 7/2/08	Tue 15/7/08	285				
253	e. CH 816-CH841 underground cables (33kV)	42 days	Thu 27/9/07	Wed 7/11/07	260				
254	f. CH 816-CH841 underground cables (132kV)	56 days	Thu 8/11/07	Wed 2/1/08	253				
255	g. Street lighting at Chi Ho Road	86 days	Thu 23/10/08	Fri 16/1/09	266SS,247				
256	h. Irrigation pipe at Chi Ho Road	86 days	Thu 23/10/08	Fri 16/1/09	266SS				
257	<b>6. Drainage Management Plan (Ch810 to Ch850)</b>	<b>77 days</b>	<b>Thu 12/7/07</b>	<b>Wed 26/9/07</b>					
258	6.1 Submission of DMPs	1 day	Thu 12/7/07	Thu 12/7/07					
259	6.2 Comments by the Engineer	14 days	Fri 13/7/07	Thu 26/7/07	258				
260	6.3 Implementation of DMP	3 days	Mon 24/9/07	Wed 26/9/07	259SF				
261	<b>7. Box Culvert and Channel</b>	<b>636 days</b>	<b>Wed 1/8/07</b>	<b>Mon 27/4/09</b>					
262	7.1 Box Culvert BC2-1	636 days	Wed 1/8/07	Mon 27/4/09	78				
263	a. Ch0-Ch15 (Bay 1 and Outlet)	167 days	Thu 16/10/08	Tue 31/3/09					
264	Construction of cofferdam	7 days	Thu 16/10/08	Wed 22/10/08	244				
265	Remove road pavement and expose existing utiliti	7 days	Thu 16/10/08	Wed 22/10/08	244				
266	Excavation	9 days	Thu 23/10/08	Fri 31/10/08	265,348,264				
267	Granular Bedding	4 days	Sat 1/11/08	Tue 4/11/08	266				
268	Base Slab	21 days	Wed 5/11/08	Tue 25/11/08	267				
269	Wall and Deck	22 days	Wed 26/11/08	Wed 17/12/08	268				
270	Curing	10 days	Thu 18/12/08	Sat 27/12/08	269				
271	Trench Backfill	7 days	Sun 28/12/08	Sat 3/1/09	270				
272	Reinstatement of Chi Ho Road	13 days	Sun 4/1/09	Fri 16/1/09	271,255FF,256FF				

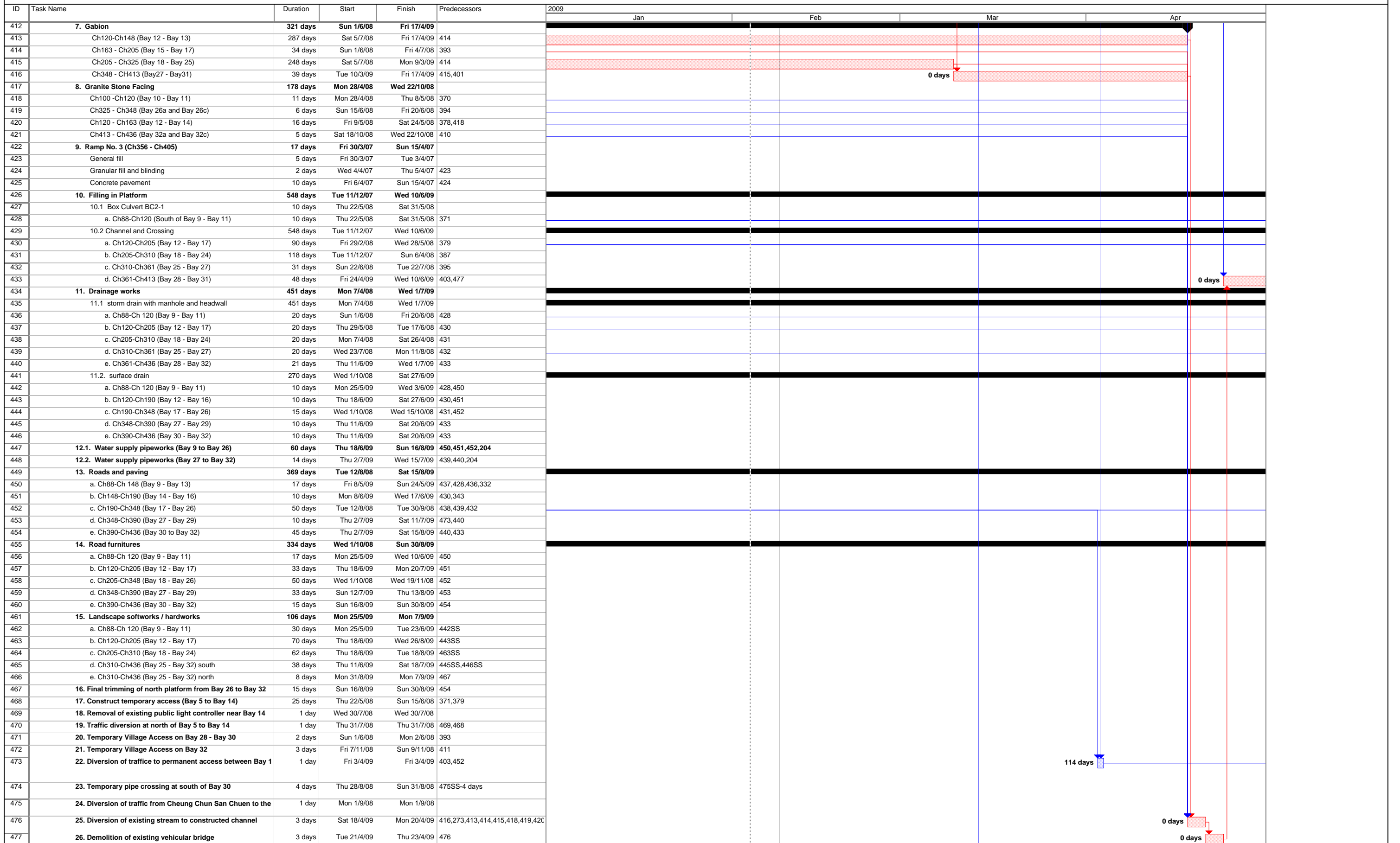
Legend for Gantt chart symbols:

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- Summary: Thick black bar
- Rolled Up Critical Task: Red box
- Rolled Up Progress: Thick black bar
- External Tasks: Grey box
- Group By Summary: Thick black bar
- Critical Task: Red box
- Milestone: Blue box
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- Rolled Up Milestone: Blue box
- Split: Dotted line
- Project Summary: Thick black bar
- Deadline: Thick black bar



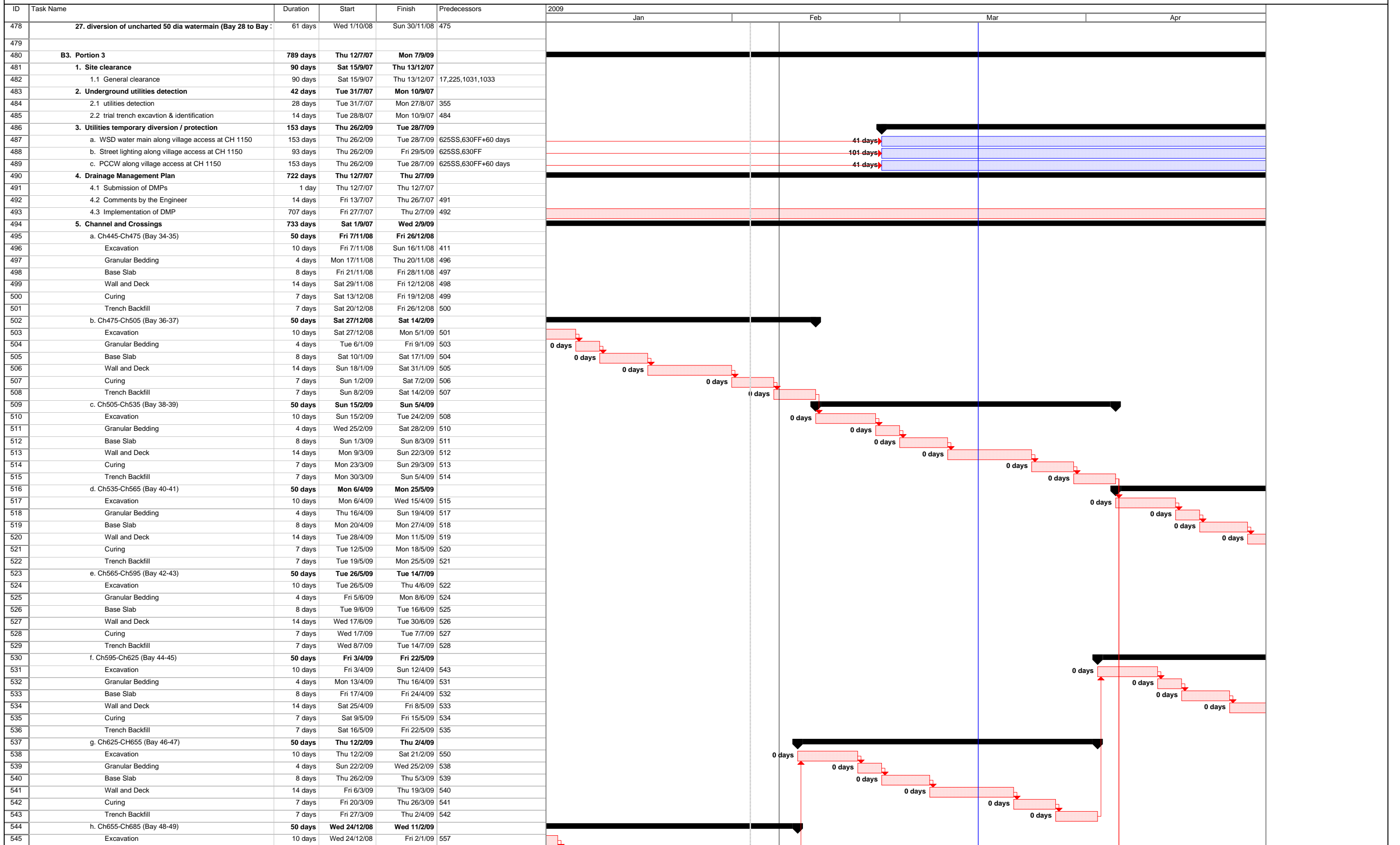
ID	Task Name	Duration	Start	Finish	Predecessors	2009			
						Jan	Feb	Mar	Apr
343	15. Diversion of traffic to permanent access from Bay 4 to B	1 day	Sun 7/6/09	Sun 7/6/09	342				
344	16. Street furnitures / traffic sign / road marking (except Bay 4)	16 days	Thu 6/8/09	Fri 21/8/09	341				
345	17. Landscape softworks / hardworks (except Bays 56a and 56b)	63 days	Sun 7/6/09	Sat 8/8/09	331,332,342				
346	18. Road Diversion in Chi Ho Road	5 days	Thu 16/10/08	Mon 20/10/08					
347	a. Construction of temporary footpath above Box Culvert	4 days	Thu 16/10/08	Sun 19/10/08	244				
348	b. Implementation of footpath diversion	1 day	Mon 20/10/08	Mon 20/10/08	347				
349	19. Removal of Tree No. 501	2 days	Thu 16/10/08	Fri 17/10/08					
350	20. Permanent footpath	33 days	Thu 6/8/09	Mon 7/9/09	341				
351	<b>B2. Portion 2</b>	<b>893 days</b>	<b>Fri 30/3/07</b>	<b>Mon 7/9/09</b>					
352	1. Site clearance	90 days	Tue 14/8/07	Sun 11/11/07					
353	1.1 General clearance	90 days	Tue 14/8/07	Sun 11/11/07	36,1025,225,1027				
354	2. Underground utilities detection	42 days	Tue 3/7/07	Mon 13/8/07					
355	2.1 utilities detection	28 days	Tue 3/7/07	Mon 30/7/07					
356	2.2 Trial trench excavation & identification	14 days	Tue 31/7/07	Mon 13/8/07	355				
357	3. Utilities temporary diversion / protection	463 days	Fri 30/3/07	Fri 4/7/08					
358	a. WSD water main along village vehicular access	90 days	Wed 10/10/07	Mon 7/1/08	374SS				
359	b. Street lighting along village vehicular access	269 days	Wed 10/10/07	Fri 4/7/08	374SS				
360	c. PCCW along village vehicular access	245 days	Wed 10/10/07	Tue 10/6/08	374SS				
361	d. CLP overhead cables / street lighting at CH 290 - CH 300	90 days	Fri 30/3/07	Wed 27/6/07					
362	4. Geotechnical Instrumentation for AFCD	6 days	Thu 27/9/07	Tue 2/10/07					
363	5. Discussion with Pond Owner	39 days	Wed 1/8/07	Sat 8/9/07					
364	6. Box Culvert, Channel and Crossings	572 days	Sun 9/9/07	Thu 2/4/09					
365	a. Ch88-Ch120 (Bays 9 - 11)	83 days	Fri 29/2/08	Wed 21/5/08					
366	Excavation	21 days	Fri 29/2/08	Thu 20/3/08	336,362,379				
367	Granular Bedding	15 days	Mon 10/3/08	Mon 24/3/08	366SS+10 days				
368	Base Slab	15 days	Sun 16/3/08	Sun 30/3/08	367SS+6 days				
369	Wall and Deck	22 days	Sun 23/3/08	Sun 13/4/08	368SS+7 days				
370	Curing	25 days	Thu 3/4/08	Sun 27/4/08	369SS+11 days				
371	Trench Backfill	35 days	Thu 17/4/08	Wed 21/5/08	370SS+14 days				
372	b. Ch120-Ch205 (Bay 12 - Bay 17)	159 days	Sun 23/9/07	Thu 28/2/08					
373	Haul access	16 days	Sun 23/9/07	Mon 8/10/07	381				
374	Excavation	46 days	Wed 10/10/07	Sat 24/11/07	362,356,373				
375	Granular Bedding	43 days	Sat 20/10/07	Sat 1/12/07	374SS+10 days				
376	Base Slab	50 days	Fri 26/10/07	Fri 14/12/07	375SS+6 days				
377	Wall and Deck	53 days	Tue 6/11/07	Fri 28/12/07	376SS+11 days				
378	Curing	53 days	Tue 13/11/07	Fri 4/1/08	377SS+7 days				
379	Trench Backfill	46 days	Mon 14/1/08	Thu 28/2/08	378SS+62 days,358FF				
380	c. Ch205-Ch310 (Bay 18 - Bay 24)	93 days	Sun 9/9/07	Mon 10/12/07					
381	Haul access	14 days	Sun 9/9/07	Sat 22/9/07	363				
382	Excavation	27 days	Sun 23/9/07	Fri 19/10/07	361,381				
383	Granular Bedding	23 days	Wed 3/10/07	Thu 25/10/07	382SS+10 days,381				
384	Base Slab	39 days	Tue 9/10/07	Fri 16/11/07	383SS+6 days				
385	Wall and Deck	42 days	Sat 20/10/07	Fri 30/11/07	384SS+11 days				
386	Curing	42 days	Sat 27/10/07	Fri 7/12/07	385SS+7 days				
387	Trench Backfill	31 days	Sat 10/11/07	Mon 10/12/07	386SS+14 days				
388	d. Ch310-Ch361 (Bay 25 - Bay 27)	273 days	Sun 23/9/07	Sat 21/6/08					
389	Haul access	15 days	Sun 23/9/07	Sun 7/10/07	381				
390	Excavation	52 days	Tue 11/12/07	Thu 31/1/08	389,387				
391	Granular Bedding	85 days	Fri 1/2/08	Fri 25/4/08	390				
392	Base Slab	78 days	Sat 1/3/08	Sat 17/5/08	391SS+29 days				
393	Wall and Deck	83 days	Mon 10/3/08	Sat 31/5/08	392SS+9 days				
394	Curing	90 days	Mon 17/3/08	Sat 14/6/08	393SS+7 days				
395	Trench Backfill	83 days	Mon 31/3/08	Sat 21/6/08	394SS+14 days				
396	e. Ch361-Ch413 (Bays 28 to Bay 31)	543 days	Mon 8/10/07	Thu 2/4/09					
397	Haul access	10 days	Mon 8/10/07	Wed 17/10/07	389				
398	Excavation	68 days	Mon 1/12/08	Fri 6/2/09	472,397,395,478				
399	Granular Bedding	65 days	Thu 11/12/08	Fri 13/2/09	398SS+10 days				
400	Base Slab	65 days	Sun 21/12/08	Mon 23/2/09	399SS+10 days				
401	Wall and Deck	65 days	Sun 4/1/09	Mon 9/3/09	400SS+14 days				
402	Curing	72 days	Sun 11/1/09	Mon 23/3/09	401SS+7 days				
403	Trench Backfill	68 days	Sun 25/1/09	Thu 2/4/09	402SS+14 days				
404	f. Ch413-Ch445 (Bay 32 and Bay 33)	164 days	Tue 27/5/08	Thu 6/11/08					
405	Flow diversion	7 days	Tue 27/5/08	Mon 2/6/08	406SS-7 days				
406	Excavation	40 days	Tue 3/6/08	Sat 12/7/08	471				
407	Granular Bedding	5 days	Sun 13/7/08	Thu 17/7/08	406				
408	Base Slab	35 days	Fri 18/7/08	Thu 21/8/08	407				
409	Wall and Deck	43 days	Fri 22/8/08	Fri 3/10/08	408				
410	Curing	14 days	Sat 4/10/08	Fri 17/10/08	409				





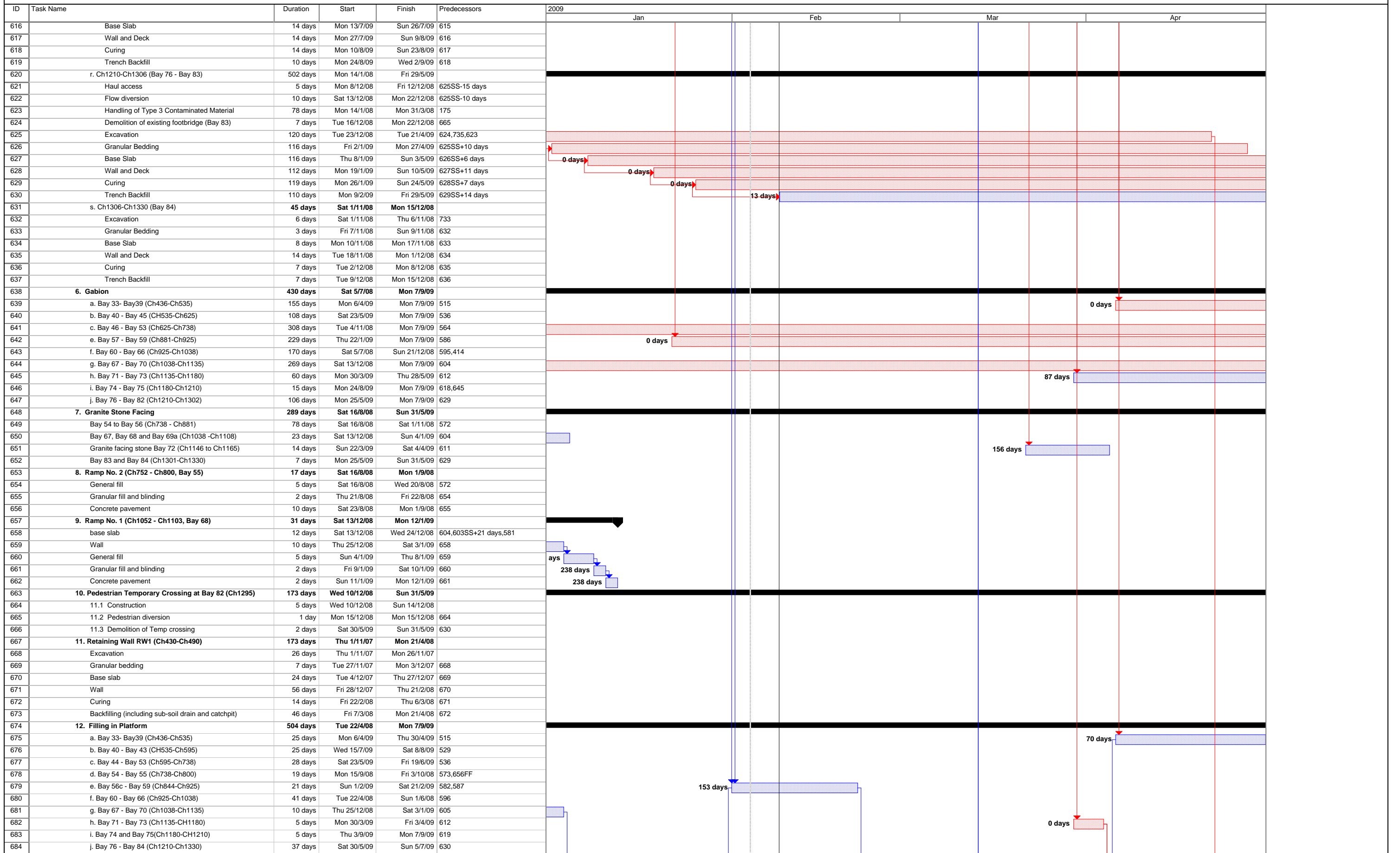
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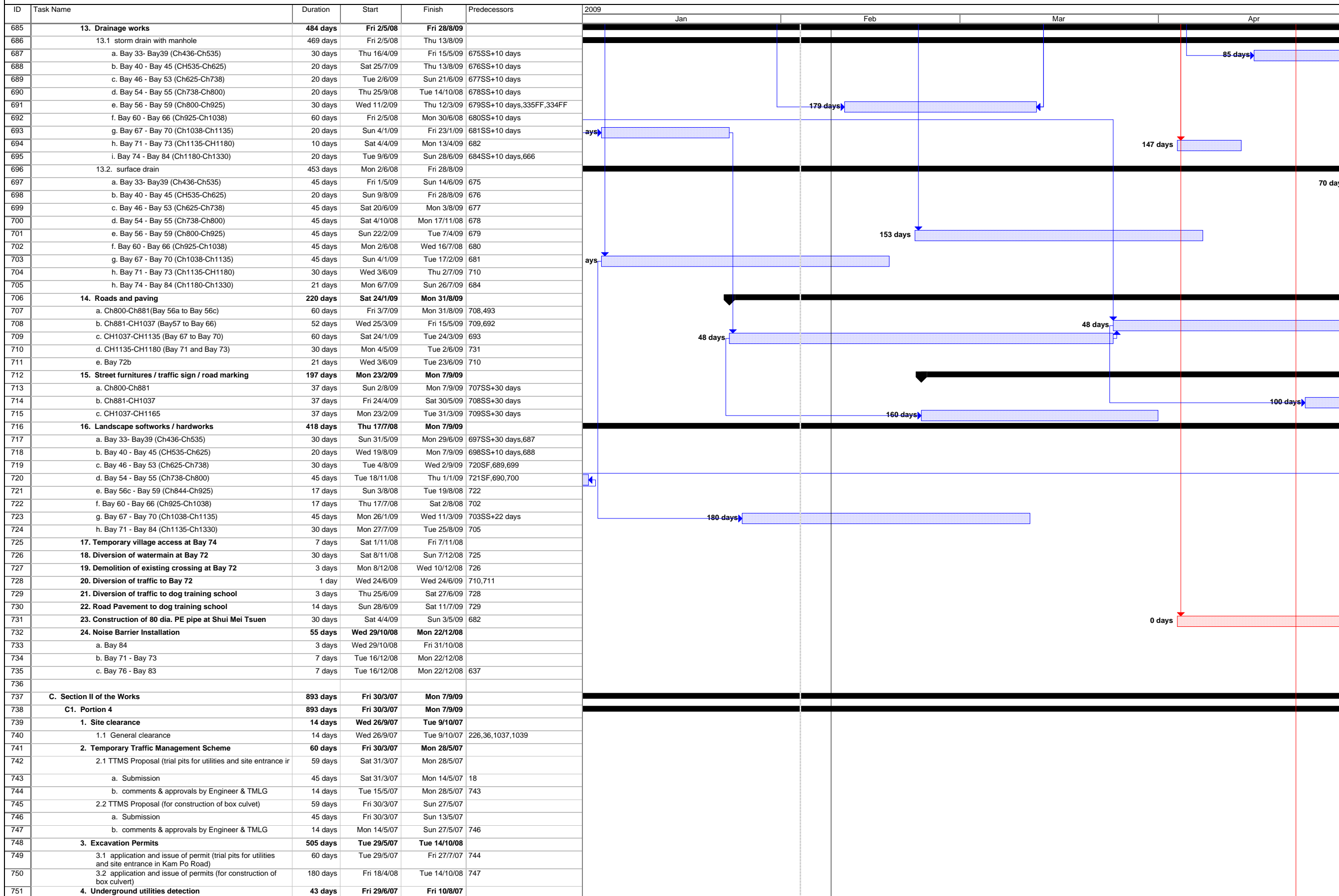
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- Group By Summary: Thick black box
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- Milestone: Blue box
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- Rolled Up Milestone: Blue box
- Split: Dotted line
- Project Summary: Thick black box
- Deadline: Thick black box





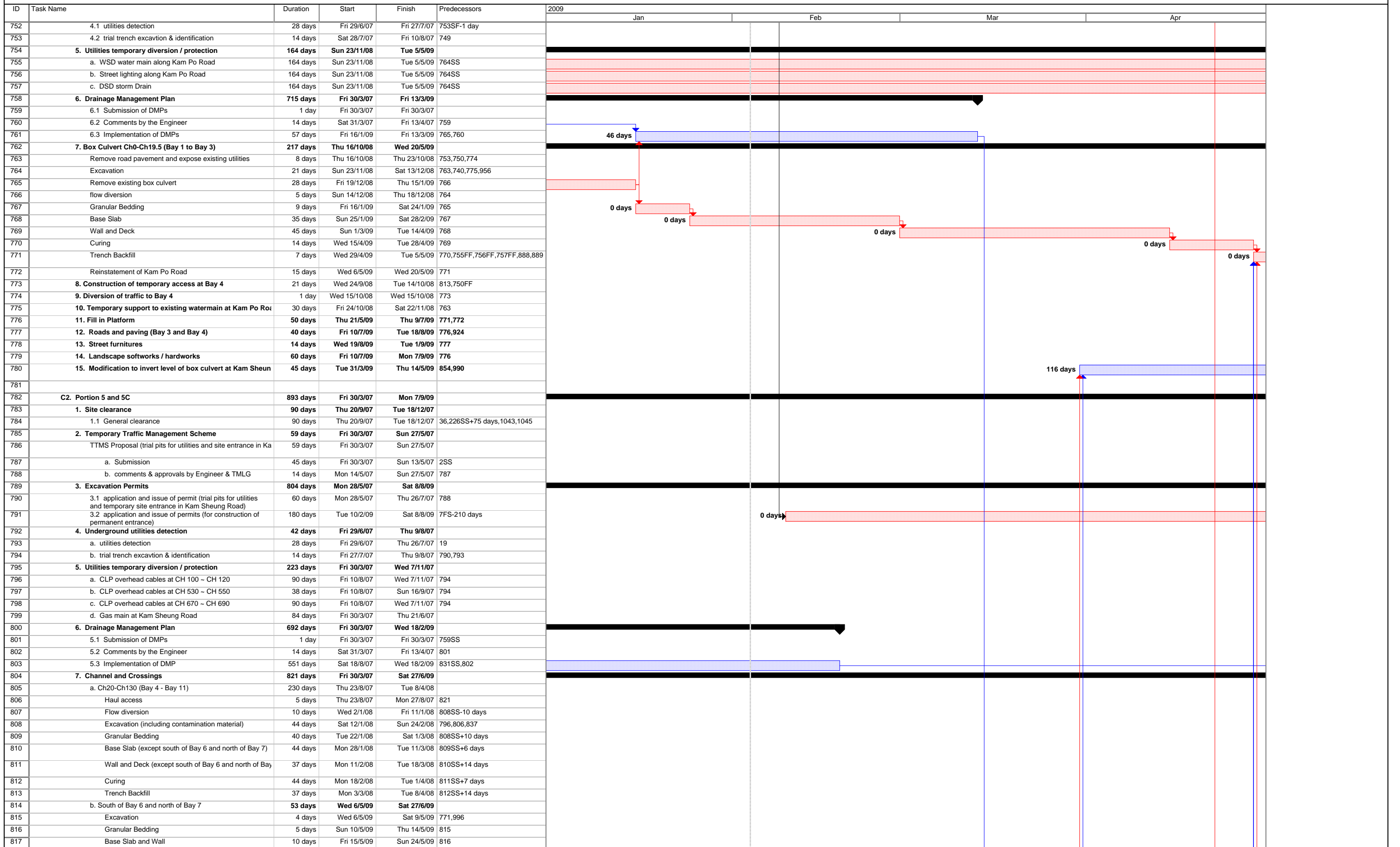




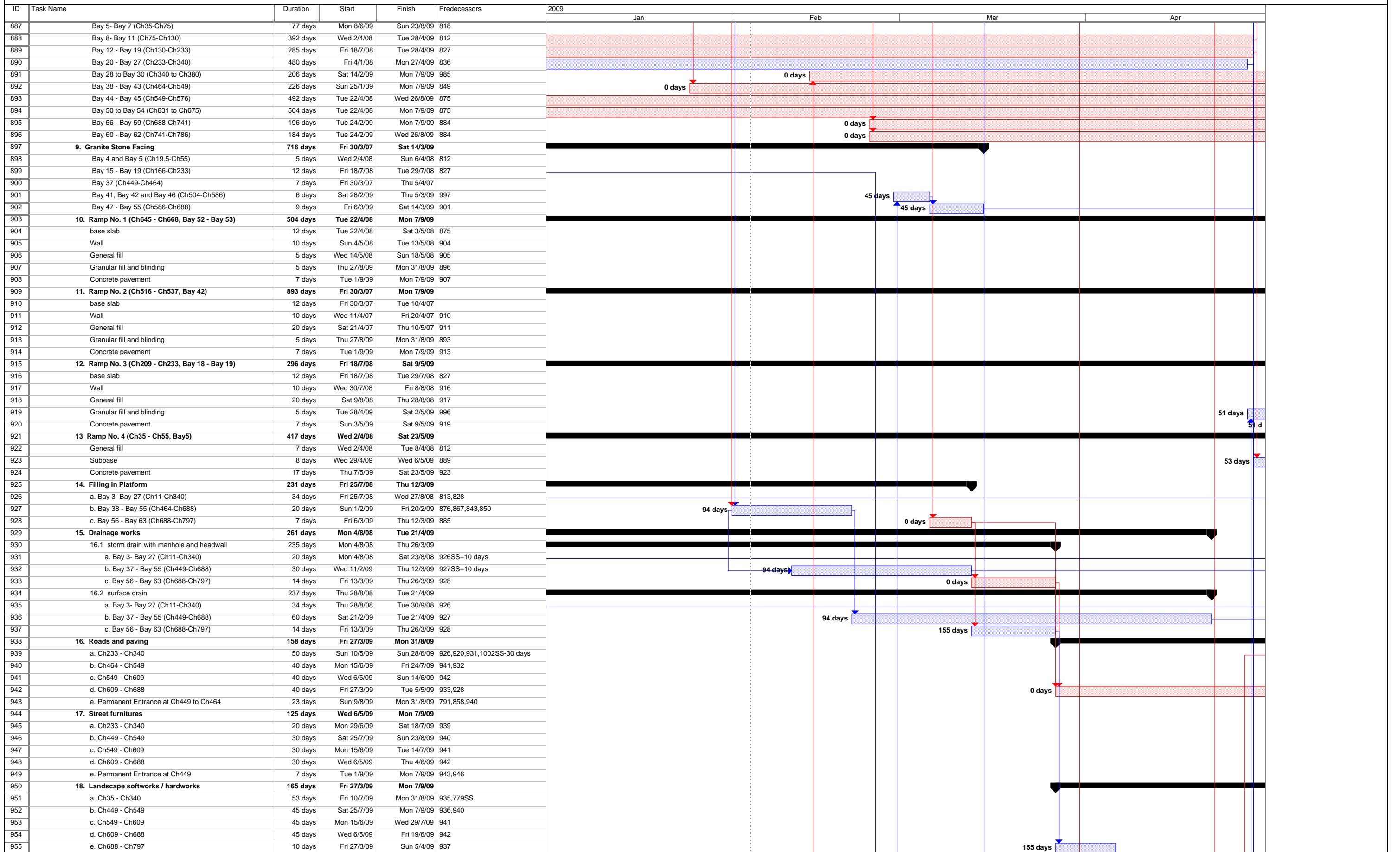


Task  Progress  Summary  Rolled Up Critical Task  Rolled Up Progress  External Tasks  Group By Summary

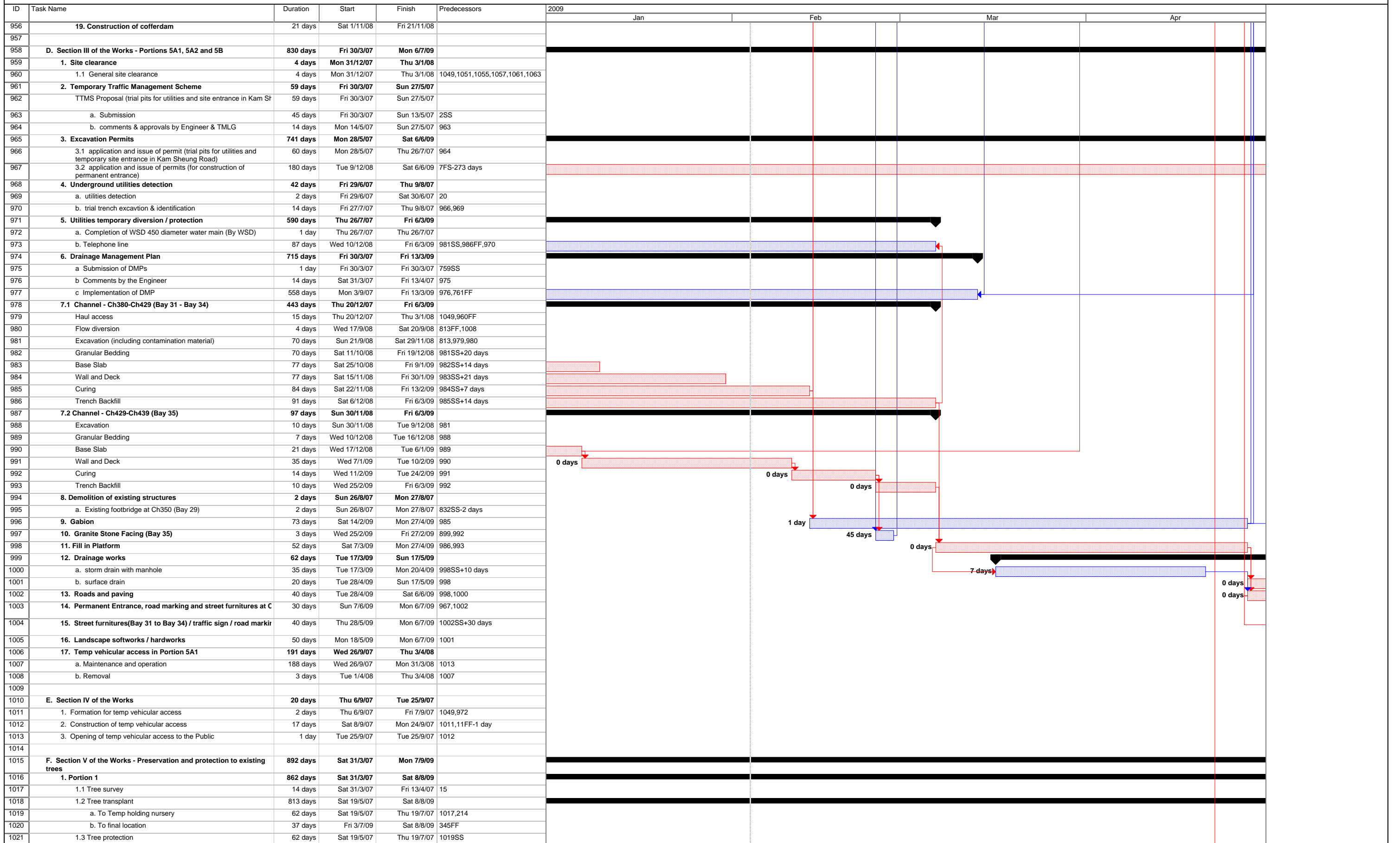
Critical Task  Milestone  Rolled Up Task  Rolled Up Milestone  Split  Project Summary  Deadline



ID	Task Name	Duration	Start	Finish	Predecessors	2009					
						Jan	Feb	Mar	Apr		
818	Curing	14 days	Mon 25/5/09	Sun 7/6/09	817						
819	Trench Backfill	20 days	Mon 8/6/09	Sat 27/6/09	818						
820	c. Ch130-Ch233 (Bay 12 - Bay 19)	342 days	Sat 18/8/07	Thu 24/7/08							
821	Haul access	5 days	Sat 18/8/07	Wed 22/8/07	830						
822	Flow diversion	10 days	Sun 30/3/08	Tue 8/4/08	823SS-10 days						
823	Excavation (including contamination material)	33 days	Wed 9/4/08	Sun 11/5/08	821,813						
824	Granular Bedding	29 days	Sat 19/4/08	Sat 17/5/08	823SS+10 days						
825	Base Slab	50 days	Fri 25/4/08	Fri 13/6/08	824SS+6 days						
826	Wall and Deck	56 days	Fri 9/5/08	Thu 3/7/08	825SS+14 days						
827	Curing	63 days	Fri 16/5/08	Thu 17/7/08	826SS+7 days						
828	Trench Backfill	56 days	Fri 30/5/08	Thu 24/7/08	827SS+14 days						
829	d. Ch233-Ch380 (Bay 20 - Bay 30)	152 days	Mon 13/8/07	Fri 11/1/08							
830	Haul access	5 days	Mon 13/8/07	Fri 17/8/07	832SS-15 days						
831	Flow diversion	10 days	Sat 18/8/07	Mon 27/8/07	830						
832	Excavation (including contamination material)	60 days	Tue 28/8/07	Fri 26/10/07							
833	Granular Bedding	70 days	Fri 7/9/07	Thu 15/11/07	832SS+10 days						
834	Base Slab	78 days	Thu 13/9/07	Thu 29/11/07	833SS+6 days						
835	Wall and Deck	85 days	Thu 27/9/07	Thu 20/12/07	834SS+14 days						
836	Curing	92 days	Thu 4/10/07	Thu 3/1/08	835SS+7 days						
837	Trench Backfill	86 days	Thu 18/10/07	Fri 11/1/08	836SS+14 days						
838	e. Ch464-Ch489 (North of Bay 38 and Bay 39)	95 days	Thu 5/6/08	Sun 7/9/08							
839	Excavation	28 days	Thu 5/6/08	Wed 2/7/08	876SS+97 days						
840	Granular Bedding	10 days	Thu 3/7/08	Sat 12/7/08	839						
841	Base Slab and Wall	24 days	Sun 13/7/08	Tue 5/8/08	840						
842	Curing	14 days	Wed 6/8/08	Tue 19/8/08	841						
843	Trench Backfill	17 days	Wed 20/8/08	Fri 5/9/08	842						
844	Forming site access at north of Bay 38 and Bay 39	2 days	Sat 6/9/08	Sun 7/9/08	843						
845	f. Ch464-CH504 (Bay 40, South of Bay 38 and Bay 39)	146 days	Mon 8/9/08	Sat 31/1/09							
846	Excavation	97 days	Mon 8/9/08	Sat 13/12/08	844						
847	Granular Bedding	97 days	Mon 22/9/08	Sat 27/12/08	846SS+14 days						
848	Base Slab and Wall	96 days	Tue 30/9/08	Sat 3/1/09	847SS+8 days						
849	Curing	96 days	Tue 21/10/08	Sat 24/1/09	848SS+21 days						
850	Trench Backfill	96 days	Tue 28/10/08	Sat 31/1/09	849SS+7 days						
851	g. Ch449-Ch464 (Bay 37)	124 days	Sun 1/2/09	Thu 4/6/09							
852	Excavation	21 days	Sun 1/2/09	Sat 21/2/09	850						
853	Granular Bedding	7 days	Sun 22/2/09	Sat 28/2/09	852						
854	Base Slab	30 days	Sun 1/3/09	Mon 30/3/09	853						
855	Wall and Deck	30 days	Tue 31/3/09	Wed 29/4/09	854						
856	Curing	14 days	Thu 30/4/09	Wed 13/5/09	855,803FF						
857	Trench Backfill	10 days	Thu 14/5/09	Sat 23/5/09	856						
858	Filling Platform Bay 37	12 days	Sun 24/5/09	Thu 4/6/09	857						
859	h. Ch504-Ch586 (Bay 41 - Bay 46)	285 days	Fri 30/3/07	Tue 8/1/08							
860	Haul access	3 days	Fri 30/3/07	Sun 1/4/07							
861	Flow diversion	5 days	Fri 7/9/07	Tue 11/9/07	862SS-10 days						
862	Excavation (including contamination material)	45 days	Mon 17/9/07	Wed 31/10/07	797						
863	Granular Bedding	55 days	Thu 27/9/07	Tue 20/11/07	862SS+10 days						
864	Base Slab	63 days	Wed 3/10/07	Tue 4/12/07	863SS+6 days						
865	Wall and Deck	63 days	Wed 17/10/07	Tue 18/12/07	864SS+14 days						
866	Curing	70 days	Wed 24/10/07	Tue 1/1/08	865SS+7 days						
867	Trench Backfill	63 days	Wed 7/11/07	Tue 8/1/08	866SS+14 days						
868	i. Ch586-Ch712 (Bay 47 - Bay 57)	393 days	Mon 2/4/07	Mon 28/4/08							
869	Haul access	5 days	Mon 2/4/07	Fri 6/4/07	860						
870	Flow diversion	3 days	Sun 30/12/07	Tue 1/1/08	871SS-10 days						
871	Excavation (including contamination material)	60 days	Wed 9/1/08	Sat 8/3/08	1066,867,798						
872	Granular Bedding	60 days	Sat 19/1/08	Tue 18/3/08	871SS+10 days						
873	Base Slab	60 days	Fri 25/1/08	Mon 24/3/08	872SS+6 days						
874	Wall and Deck	60 days	Fri 8/2/08	Mon 7/4/08	873SS+14 days						
875	Curing	67 days	Fri 15/2/08	Mon 21/4/08	874SS+7 days						
876	Trench Backfill	60 days	Fri 29/2/08	Mon 28/4/08	875SS+14 days						
877	j. Ch712-Ch799 (Bay 58 - Bay 63)	699 days	Sat 7/4/07	Thu 5/3/09							
878	Haul access	3 days	Sat 7/4/07	Mon 9/4/07	869						
879	Flow diversion	3 days	Fri 5/9/08	Sun 7/9/08	880SS-3 days						
880	Excavation (including contamination material)	134 days	Mon 8/9/08	Mon 19/1/09	878,876,844						
881	Granular Bedding	134 days	Thu 18/9/08	Thu 29/1/09	880SS+10 days						
882	Base Slab	134 days	Wed 24/9/08	Wed 4/2/09	881SS+6 days						
883	Wall and Deck	125 days	Wed 8/10/08	Mon 9/2/09	882SS+14 days						
884	Curing	132 days	Wed 15/10/08	Mon 23/2/09	883SS+7 days						
885	Trench Backfill	128 days	Wed 29/10/08	Thu 5/3/09	884SS+14 days						
886	8. Gabion	613 days	Fri 4/1/08	Mon 7/9/09							







Task:   Progress   Summary   Rolled Up Critical Task   External Tasks   Group By Summary  

Critical Task:   Milestone   Rolled Up Task   Rolled Up Milestone   Split   Project Summary   Deadline

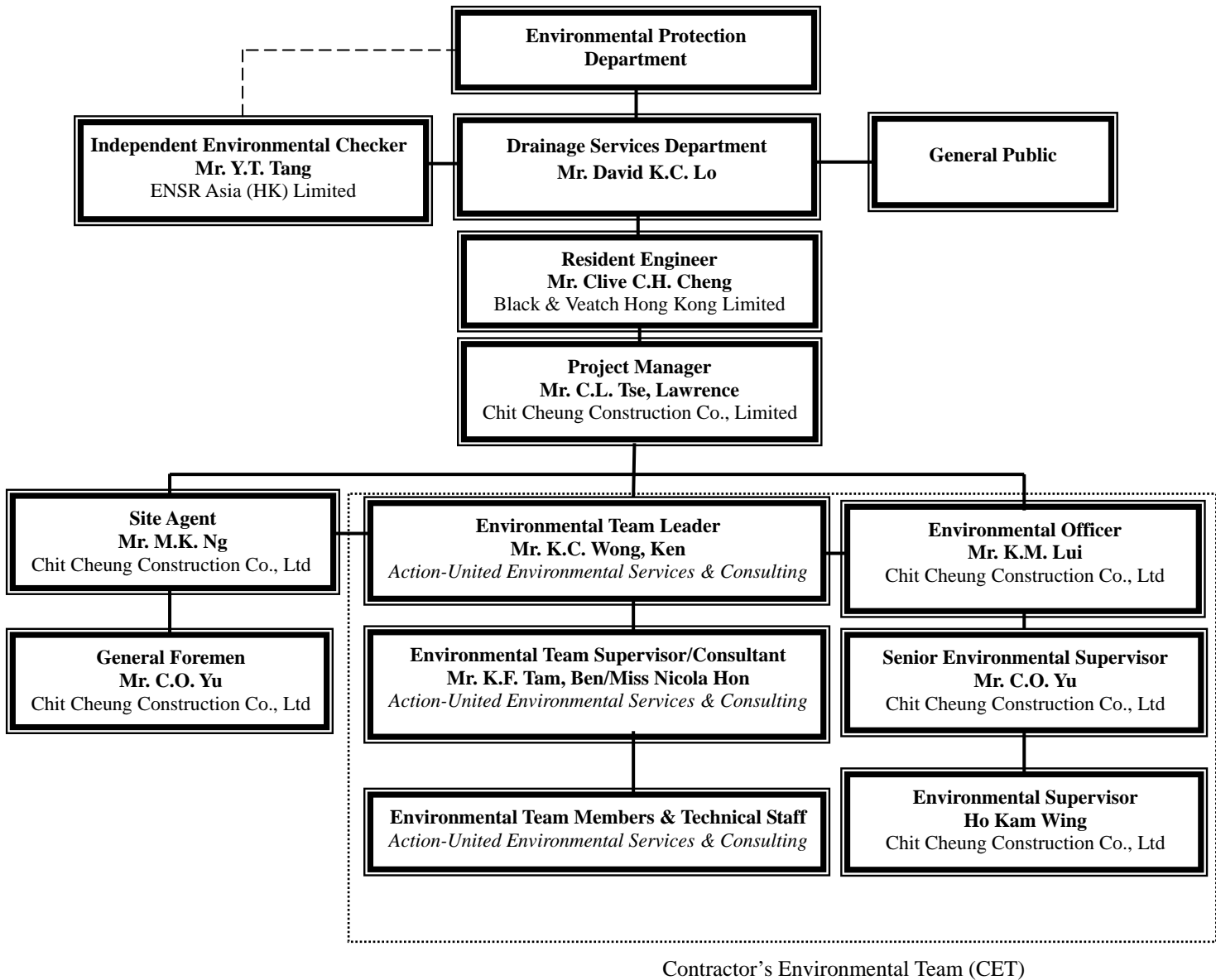
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						Jan	Feb	Mar	Apr
1022	<b>2. Portion 2</b>	<b>832 days</b>	<b>Wed 30/5/07</b>	<b>Mon 7/9/09</b>					
1023	2.1 Tree survey	14 days	Wed 30/5/07	Tue 12/6/07	16				
1024	2.2 Tree transplant	818 days	Wed 13/6/07	Mon 7/9/09					
1025	a. To Temp holding nursery	62 days	Wed 13/6/07	Mon 13/8/07	1023,214,228				
1026	b. To final location	132 days	Wed 29/4/09	Mon 7/9/09	461FF				0 days
1027	2.3 Tree protection	62 days	Wed 13/6/07	Mon 13/8/07	1025SS				
1028	<b>3. Portion 3</b>	<b>802 days</b>	<b>Fri 29/6/07</b>	<b>Mon 7/9/09</b>					
1029	3.1 Tree survey	14 days	Fri 29/6/07	Thu 12/7/07	17				
1030	3.2 Tree transplant	788 days	Fri 13/7/07	Mon 7/9/09					
1031	a. To Temp holding nursery	64 days	Fri 13/7/07	Fri 14/9/07	1029,214				
1032	b. To final location	301 days	Tue 11/11/08	Mon 7/9/09	716FF				
1033	3.3 Tree protection	64 days	Fri 13/7/07	Fri 14/9/07	1031SS				
1034	<b>4. Portion 4</b>	<b>892 days</b>	<b>Sat 31/3/07</b>	<b>Mon 7/9/09</b>					
1035	4.1 Tree survey	14 days	Sat 31/3/07	Fri 13/4/07	18				
1036	4.2 Tree transplant	843 days	Sat 19/5/07	Mon 7/9/09					
1037	a. To Temp holding nursery	62 days	Sat 19/5/07	Thu 19/7/07	1035,214				
1038	b. To final location	53 days	Fri 17/7/09	Mon 7/9/09	779FF				
1039	4.3 Tree protection	62 days	Sat 19/5/07	Thu 19/7/07	1037SS				
1040	<b>5. Portion 5</b>	<b>802 days</b>	<b>Fri 29/6/07</b>	<b>Mon 7/9/09</b>					
1041	5.1 Tree survey	14 days	Fri 29/6/07	Thu 12/7/07	19				
1042	5.2 Tree transplant	788 days	Fri 13/7/07	Mon 7/9/09					
1043	a. To Temp holding nursery	69 days	Fri 13/7/07	Wed 19/9/07	1041,214				
1044	b. To final location	195 days	Wed 25/2/09	Mon 7/9/09	950FF		0 days		
1045	5.3 Tree protection	69 days	Fri 13/7/07	Wed 19/9/07	1043SS				
1046	<b>6. Portion 5A1</b>	<b>739 days</b>	<b>Fri 29/6/07</b>	<b>Mon 6/7/09</b>					
1047	6.1 Tree survey	7 days	Fri 29/6/07	Thu 5/7/07	20				
1048	6.2 Tree transplant	732 days	Fri 6/7/07	Mon 6/7/09					
1049	a. To Temp holding nursery	62 days	Fri 6/7/07	Wed 5/9/07	1047,214				
1050	b. To final location	61 days	Thu 7/5/09	Mon 6/7/09	1005FF				
1051	6.3 Tree protection	62 days	Fri 6/7/07	Wed 5/9/07	1049SS				
1052	<b>7. Portion 5A2</b>	<b>739 days</b>	<b>Fri 29/6/07</b>	<b>Mon 6/7/09</b>					
1053	7.1 Tree survey	14 days	Fri 29/6/07	Thu 12/7/07	21				
1054	7.2 Tree transplant	725 days	Fri 13/7/07	Mon 6/7/09					
1055	a. To Temp holding nursery	62 days	Fri 13/7/07	Wed 12/9/07	1053,214				
1056	b. To final location	61 days	Thu 7/5/09	Mon 6/7/09	1005FF				
1057	7.3 Tree protection	62 days	Fri 13/7/07	Wed 12/9/07	1055SS				
1058	<b>8. Portion 5B</b>	<b>630 days</b>	<b>Tue 16/10/07</b>	<b>Mon 6/7/09</b>					
1059	8.1 Tree survey	14 days	Tue 16/10/07	Mon 29/10/07	22				
1060	8.2 Tree transplant	616 days	Tue 30/10/07	Mon 6/7/09					
1061	a. To Temp holding nursery	62 days	Tue 30/10/07	Sun 30/12/07	1059,214				
1062	b. To final location	61 days	Thu 7/5/09	Mon 6/7/09	1005FF				
1063	8.3 Tree protection	62 days	Tue 30/10/07	Sun 30/12/07	1061SS				
1064									
1065	<b>G. Berthing Area</b>	<b>597 days</b>	<b>Wed 12/9/07</b>	<b>Thu 30/4/09</b>					
1066	1. Construction of Loading Facilities	27 days	Wed 12/9/07	Mon 8/10/07	162				
1067	2. Removal of Loading Facilities	2 days	Wed 22/4/09	Thu 23/4/09	625				130 days
1068	3. Reinstatement of Berthing Area	7 days	Fri 24/4/09	Thu 30/4/09	1067				130 days

## APPENDIX C

### ENVIRONMENTAL ORGANIZATION STRUCTURE



### Environmental Organization Structure



**Contact Details of Key Personnel**

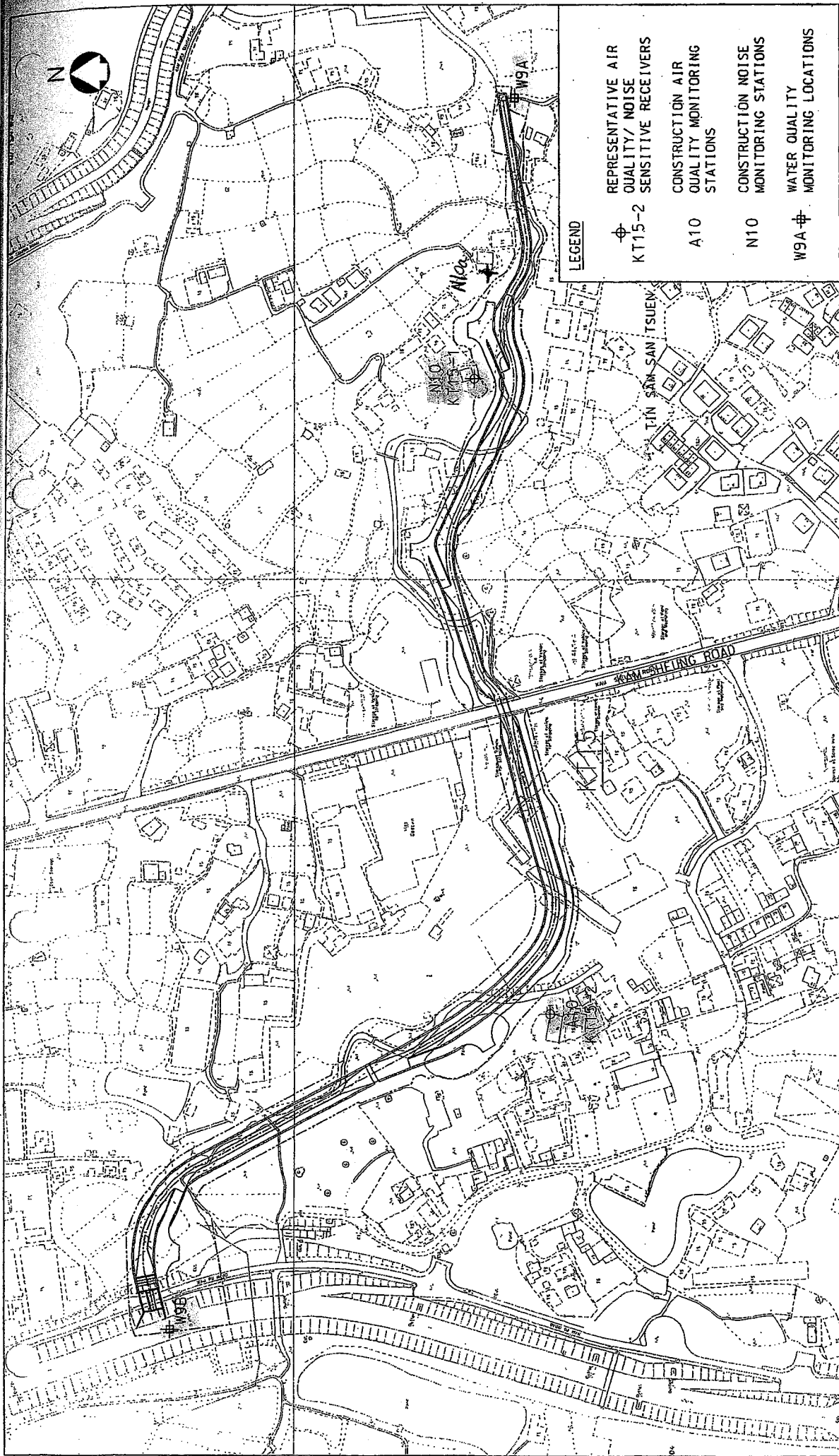
Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
DSD	Employer	Mr. David K.C. LO	2594-7254	2827-8526
B&V	Engineer	Mr. Kelvin N.F. LAU	2601-1000	2601-3988
B&V	Engineer's Representative	Mr. Clive C.H. CHENG	2478-9161	2478-9396
ENSR	Independent Environmental Checker	Mr. Y.T. Tang	3105-8537	2891-0305
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	Ho Kam Wing	9016-0592	2479-1365
CCC	Safety Officer	Mr. SHEA Yan Keung	6086-4658	2479-1365
AUES	Environmental Team Leader	Ken Wong	2959-6059	2959-6079
AUES	Environmental Team Supervisor	Ben Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Nicola Hon	2959-6059	2959-6079
AUES	Ecologist	Vincent Lai	9406-9784	2959-6079
AUES	Decontamination Specialist	FN Wong	2959-6059	2959-6079

Legend:

DSD (Employer)	-	Drainage Services Department
B&V (Engineer)	-	Black & Veatch Hong Kong Limited
CCC (Contractor)	-	Chit Cheung Construction Company Limited.
ENSR (IEC)	-	ENSR Asia (HK) Ltd.
AUES (ET)	-	Action-United Environmental Services & Consulting

## **APPENDIX D**

### **LOCATIONS OF DESIGNATED MONITORING STATION/LOCATIONS/AREA**



**LEGEND**


- ⊕ REPRESENTATIVE AIR QUALITY/ NOISE SENSITIVE RECEIVERS
- ⊕ KT15-2
- ⊕ A10 CONSTRUCTION AIR QUALITY MONITORING STATIONS
- ⊕ N10 CONSTRUCTION NOISE MONITORING STATIONS
- ⊕ W9A WATER QUALITY MONITORING LOCATIONS

Figure No.	ATT4-4.3	Revision	-
Reference	-	File Name	3820470201-137.DGN
Prepared	WYC	Checked	MC
Date	DEC. 2002	Scale	1 : 2000

**CONSTRUCTION PHASE AIR QUALITY/NOISE/WATER QUALITY  
 MONITORING LOCATIONS AT KT15**

Title :

YUEN LONG, KAM TIN,  
 NGAU TAM MEI AND TIN SHUI WAI  
 DRAINAGE IMPROVEMENT, STAGE 1, PHASE 2B



**BLACK & VEATCH HONG KONG LIMITED**  
 博威工程顧問有限公司

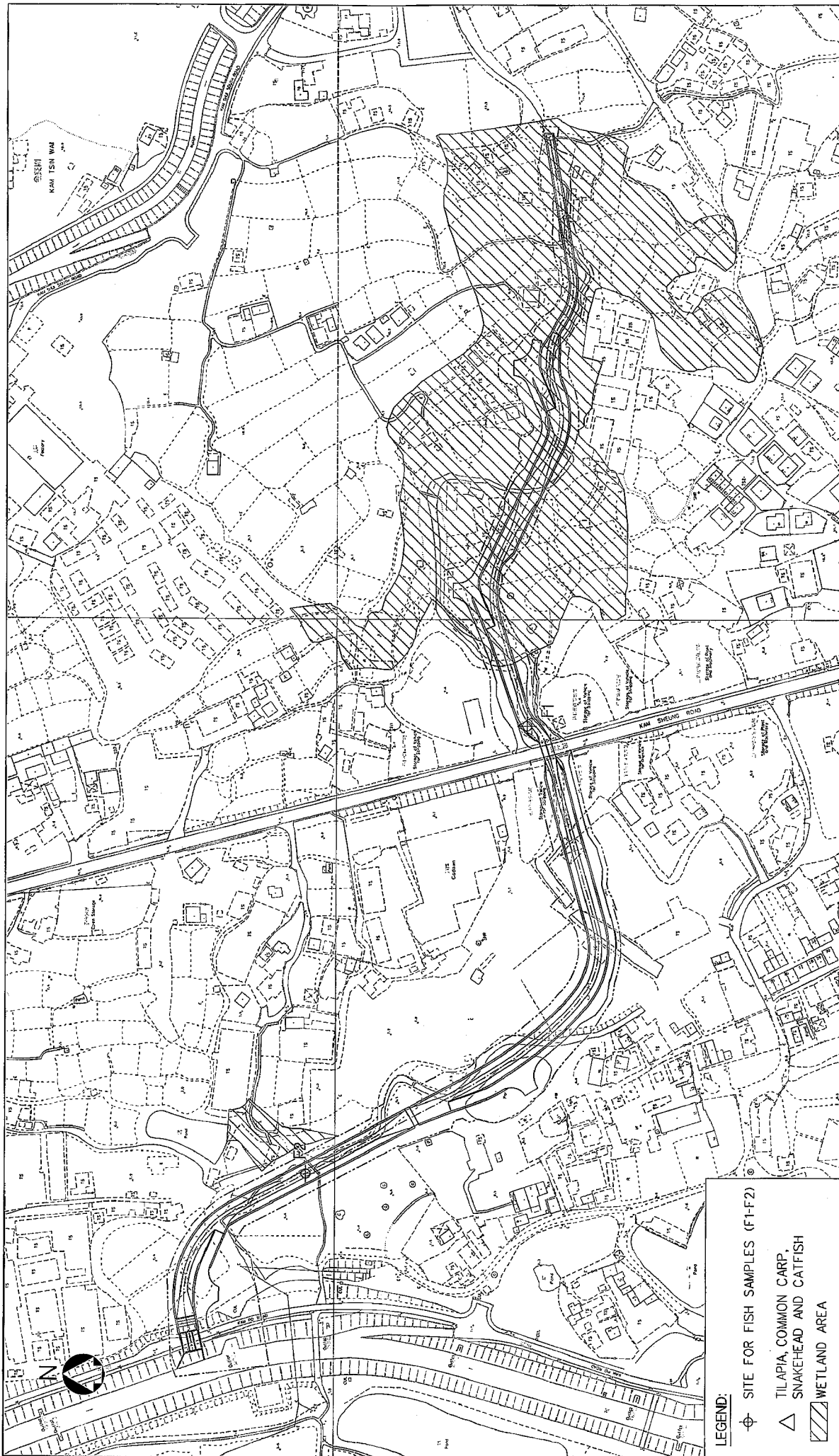



Figure No.	3.3	Revision	0
Reference		File Name	3820470201-114.DGN
Prepared	AEC	Checked	WYC
Date	MAR. 2003	Scale	1 : 2000

Title :

**ECOLOGICAL MONITORING AREA KT15**

- LEGEND:**
- ⊕ SITE FOR FISH SAMPLES (F1-F2)
  - △ TILAPIA, COMMON CARP, SNAKEHEAD AND CATFISH
  - ▨ WETLAND AREA

YUEN LONG, KAM TIN,  
 NGAU TAM MEI AND TIN SHUI WAI  
 DRAINAGE IMPROVEMENT, STAGE1, PHASE 2B

 **BLACK & VEATCH HONG KONG LIMITED**  
 博威工程顧問有限公司

## **APPENDIX E**

### **EVENT/ACTION PLAN FOR AIR QUALITY, CONSTRUCTION NOISE, STREAM WATER QUALITY AND ECOLOGY**

### Event/Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	Engineer	Contractor
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>Identify source</li> <li>Inform IEC and Engineer</li> <li>Repeat measurement to confirm finding</li> <li>Increase monitoring frequency to daily</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET</li> <li>Check Contractor's working method</li> </ol>	Notify Contractor	<ol style="list-style-type: none"> <li>Rectify any unacceptable practice</li> <li>Amend working methods if appropriate</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>Identify source</li> <li>Inform IEC and Engineer</li> <li>Repeat measurements to confirm findings</li> <li>Increase monitoring frequency to daily</li> <li>Discuss with IEC and Contractor on remedial actions required</li> <li>If exceedance continues, arrange meeting with IEC and Engineer</li> <li>If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET</li> <li>Check Contractor's working method</li> <li>Discuss with ET and Contractor on possible remedial measures</li> <li>Advice Engineer on the effectiveness of the proposed remedial measures</li> <li>Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing</li> <li>Notify Contractor</li> <li>Ensure remedial measures properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>Implement the agreed proposals</li> <li>Amend proposal if appropriate</li> </ol>
<b>LIMIT LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>Identify source</li> <li>Inform Engineer and EPD</li> <li>Repeat measurement to confirm finding</li> <li>Increase monitoring frequency to daily</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Engineer informed of the results</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET</li> <li>Check Contractor's working method</li> <li>Discuss with ET and Contractor on possible remedial measures</li> <li>Advice Engineer on the effectiveness of the proposed remedial measures</li> <li>Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing</li> <li>Notify Contractor</li> <li>Ensure remedial measures properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>Take immediate action to avoid further exceedance</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>Implement the agreed proposals</li> <li>Amend proposal if appropriate</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>Notify IEC, Engineer and EPD</li> <li>Identify source</li> <li>Repeat measurement to confirm findings</li> <li>Increase monitoring frequency to daily</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>Arrange meeting with IEC and Engineer to discuss the remedial actions to be taken</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Engineer informed of the results</li> <li>If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>Discuss amongst Engineer, ET and Contractor on potential remedial actions</li> <li>Review Contractor's remedial actions whether necessary to assure their effectiveness and advice the Engineer accordingly</li> <li>Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing</li> <li>Notify Contractor</li> <li>In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented</li> <li>Discuss amongst Environmental Team Leader and the Contractor potential remedial actions</li> <li>Ensure remedial measures properly implemented</li> <li>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</li> </ol>	<ol style="list-style-type: none"> <li>Take immediate action to avoid further exceedance</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>Implement the agreed proposals</li> <li>Resubmit proposals if problem still not under control</li> <li>Stop the relevant portion of works as determined by the Engineer until the exceedance is abated</li> </ol>

### Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET Leader	IEC	Engineer	Contractor
<b>ACTION LEVEL</b>	<ol style="list-style-type: none"> <li>1. Notify Contractor and Engineer</li> <li>2. Carry out investigation</li> <li>3. Report the results of investigation to the IEC and Contractor</li> <li>4. Discuss with the Contractor and formulate remedial measures</li> <li>5. Increase monitoring frequency to check mitigation effectiveness</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by ET</li> <li>2. Review the proposed remedial measures by the Contractor and advice the Engineer accordingly</li> <li>3. Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem</li> <li>4. Ensure remedial measures properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals for remedial actions to IEC</li> <li>2. Implement the agreed proposals</li> </ol>
<b>LIMIT LEVEL</b>	<ol style="list-style-type: none"> <li>1. Notify IEC, Engineer, EPD and Contractor</li> <li>2. Identify source</li> <li>3. Repeat measurement to confirm findings</li> <li>4. Increase monitoring frequency</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented</li> <li>6. Inform IEC, Engineer and EPD the causes &amp; actions taken for the exceedances</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Engineer informed of the results</li> <li>8. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst Engineer, ET and Contractor on potential remedial actions</li> <li>2. Review Contractor's remedial actions whether necessary to assure their effectiveness and advice the Engineer accordingly</li> <li>3. Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem</li> <li>4. Ensure remedial measures properly implemented</li> <li>5. 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</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Resubmit proposals if problem still not under control</li> <li>5. Stop the relevant portion of works as determined by the Engineer until the exceedance is abated</li> </ol>



### Event and Action Plan for Stream Water Quality

Event	ET Leader	IEC	Engineer	Contractor
<b>ACTION LEVEL</b> (being exceeded by one sampling day)	<ol style="list-style-type: none"> <li>Repeat in-situ measurement to confirm findings</li> <li>Identify source(s) of impact</li> <li>Inform IEC and Contractor</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods</li> <li>Discuss mitigation measures IEC and Contractor</li> <li>Repeat measurement on next day of exceedance</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures</li> <li>Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures</li> <li>Make agreement on the mitigation measures to be implemented</li> </ol>	<ol style="list-style-type: none"> <li>Inform Engineer and confirm notification of the non-compliance in writing</li> <li>Rectify unacceptable practice</li> <li>Check all plant and equipment</li> <li>Consider changes of working methods</li> <li>Discuss with ET and Contractor and propose mitigation measures to IEC and Engineer</li> <li>Implement the agreed mitigation measures</li> </ol>
<b>ACTION LEVEL</b> (being exceeded by more than one sampling day)	<ol style="list-style-type: none"> <li>Repeat in-situ measurement to confirm findings</li> <li>Identify source(s) of impact</li> <li>Inform IEC, Contractor and EPD</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods</li> <li>Discuss mitigation measures IEC, Engineer and Contractor</li> <li>Repeat measurement on next day of exceedance</li> <li>Ensure mitigation measures are implemented</li> <li>Prepare to increase the monitoring frequency to daily</li> <li>Repeat measurement on next day of exceedance</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures</li> <li>Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures</li> <li>Make agreement on the mitigation measures to be implemented</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>Inform Engineer and confirm notification of the non-compliance in writing</li> <li>Rectify unacceptable practice</li> <li>Check all plant and equipment</li> <li>Consider changes of working methods</li> <li>Discuss with ET and IEC and propose mitigation measures to IEC and Engineer within 3 working days</li> <li>Implement the agreed mitigation measures</li> </ol>
<b>LIMIT LEVEL</b> (being exceeded by one sampling days)	<ol style="list-style-type: none"> <li>Repeat in-situ measurement to confirm findings</li> <li>Identify source(s) of impact</li> <li>Inform IEC, Contractor and EPD</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods</li> <li>Discuss mitigation measures IEC, Engineer and Contractor</li> <li>Ensure mitigation measures are implemented</li> <li>Increase the monitoring frequency to daily until no exceedance of Limit level</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures</li> <li>Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC, ET and Contractor on the proposed mitigation measures</li> <li>Request Contractor to critically review the working methods</li> <li>Make agreement on the mitigation measures to be implemented</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>Inform Engineer and confirm notification of the non-compliance in writing</li> <li>Rectify unacceptable practice</li> <li>Check all plant and equipment</li> <li>Consider changes of working methods</li> <li>Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within 3 working days</li> <li>Implement the agreed mitigation measures</li> </ol>
<b>LIMIT LEVEL</b> (being exceeded by more than one sampling days)	<ol style="list-style-type: none"> <li>Repeat in-situ measurement to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform Contractor, Engineer, IEC and EPD;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC, Engineer and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Increase the monitoring frequency to daily until no exceedance of Limit level</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures</li> <li>Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC, ET and Contractor on the proposed mitigation measures</li> <li>Request Contractor to critically review the working methods</li> <li>Make agreement on the mitigation measures to be implemented</li> <li>Assess the effectiveness of the implemented mitigation measures</li> <li>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</li> </ol>	<ol style="list-style-type: none"> <li>Inform Engineer and confirm notification of the non-compliance in writing</li> <li>Rectify unacceptable practice</li> <li>Check all plant and equipment</li> <li>Consider changes of working methods</li> <li>Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within 3 working days</li> <li>Propose mitigation measures to Engineer within 3 working days</li> <li>Implement the agreed mitigation measures;</li> <li>As directed by Engineer, to slow down or to stop all or part of the construction activities</li> </ol>

**Event/Action Plan for Ecology**

Event	ET Leader	IEC	Engineer	Contractor
<p><b>Fauna</b></p> <p>The total number of species or individuals of the surveyed wetland dependent faunal groups is reduced by 20-40% from baseline</p>	<ul style="list-style-type: none"> <li>Notify IEC and Contractor;</li> <li>Check the position and state of the current works to identify the causes;</li> <li>Discuss mitigation measures with IEC and Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures</li> <li>Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Reach agreement on the mitigation measures to be implemented</li> </ul>	<ul style="list-style-type: none"> <li>Inform Engineer and confirm notification of the non-compliance in writing</li> <li>Take immediate action to avoid further exceedances;</li> <li>Check all plant and equipment and working methods, especially noise emanating ones</li> <li>Discuss with ET and IEC and propose mitigation measures to IEC and Engineer</li> <li>Implement the agreed mitigation measures</li> </ul>

**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

Items	Aspect	Description of Equipment	Date of Calibration	Date of Next Calibration
1*	Air	Greasby Anderson GMWS2310 High Volume Sampler	08 Jan 09	08 Mar 09
2		EQ094 - Sibata LD-3 Laser Dust Meter	20 Jun 08	19 Jun 09
3		EQ096 - Sibata LD-3 Laser Dust Meter	20 Jun 08	19 Jun 09
4	Noise	Bruel & Kjaer 4231 Acoustical Calibrator	22 Apr 08	22 Apr 09
5		Bruel & Kjaer 2238 Integrating Sound Level Meter	22 Apr 08	22 Apr 09
6*	Water	YSI Multimeter YSI 550A (Serial No. 05F2063AZ)	19 Jan 09	19 Apr 09
7		Hanna pH Meter HI98128 (Serial No. S229924)	08 Dec 08	08 Mar 09
8		Turbidimeter HACH 2100p (Serial No. 950900008735)	01 Dec 08	01 Mar 09
9*		Hand refractometer ATAGO (Serial No. 289468)	19 Jan 09	19 Apr 09

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: 8-Jan-09
Location ID : A10	Next Calibration Date: 8-Mar-09
	Technician: Mr. Ben Tam

### CONDITIONS

Sea Level Pressure (hPa)	1024.1	Corrected Pressure (mm Hg)	768.075
Temperature (°C)	15.2	Temperature (K)	288

### CALIBRATION ORIFICE

Make-> TISCH	Qstd Slope ->
Model-> 515N	1.94872
Serial # -> 9833620	Qstd Intercept -> 0.00202

### CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	4.2	4.2	8.4	1.519	51	53.01	Slope = 49.3083 Intercept = -23.0971 Corr. coeff. = 0.9973
13	3.4	3.4	6.8	1.367	42	43.66	
10	2.5	2.5	5	1.172	33	34.30	
7	1.9	1.9	3.8	1.022	25	25.99	
5	1	1	2	0.741	14	14.55	

**Calculations :**

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

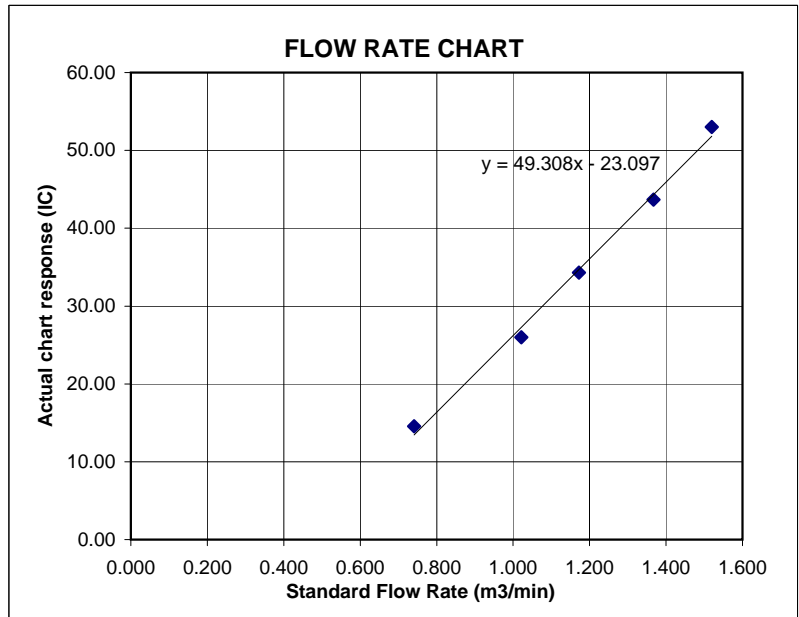
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate  
 IC = corrected chart responses  
 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:**

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope  
 b = sampler intercept  
 I = chart response  
 Tav = daily average temperature  
 Pav = daily average pressure



# CERTIFICATE OF ANALYSIS



Batch: HK0901066  
Date of Issue: 19/01/2009  
Client: ACTION UNITED ENVIRO SERVICES  
Client Reference:

## Calibration of DO System

Item : YSI Multimeter  
Model No. : YSI 550A  
Serial No. : 05F2063AZ  
Equipment No. : --  
Calibration Method : This meter was calibrated in accordance with standard method APHA (18th Ed.) 4500-0C & G  
Date of Calibration : 19 January, 2009

### Testing Results :

Expected Reading	Recording Reading
3.80 mg/L	3.90 mg/L
5.81 mg/L	5.90 mg/L
9.12 mg/L	9.08 mg/L
Allowing Deviation	±0.2 mg/L

Ms Wong Wai Man, Alice  
Laboratory Manager - Hong Kong

# CERTIFICATE OF ANALYSIS



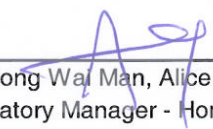
Batch: HK0901067  
Date of Issue: 19/01/2009  
Client: ACTION UNITED ENVIRO SERVICES  
Client Reference:

## Calibration of Salinity System

Item : HAND REFRACTOMETER  
Model No. : ATAGO  
Serial No. : 289468  
Equipment No. : EQ114  
Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 2520 A and B  
Date of Calibration : 19 January, 2009

### Testing Results :

Expected Reading	Recording Reading
0 g/L	0 g/L
10 g/L	9 g/L
20 g/L	18 g/L
30 g/L	27 g/L
40 g/L	37 g/L
Allowing Deviation	±10%

  
Ms Wong Wa 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 Quality	Ecology Surveys
		1-Hour TSP	24-Hour TSP			
26-Dec-08	Fri					
27-Dec-08	Sat	✓		✓		
28-Dec-08	Sun					
29-Dec-08	Mon				✓	
30-Dec-08	Tue					
31-Dec-08	Wed		✓		✓	
1-Jan-09	Thu					
2-Jan-09	Fri	✓		✓		
3-Jan-09	Sat					
4-Jan-09	Sun					
5-Jan-09	Mon				✓	
6-Jan-09	Tue					
7-Jan-09	Wed		✓		✓	
8-Jan-09	Thu	✓		✓		
9-Jan-09	Fri					
10-Jan-09	Sat					
11-Jan-09	Sun					
12-Jan-09	Mon				✓	
13-Jan-09	Tue		✓			
14-Jan-09	Wed	✓		✓		
15-Jan-09	Thu					
16-Jan-09	Fri				✓	
17-Jan-09	Sat					
18-Jan-09	Sun					✓
19-Jan-09	Mon		✓		✓	
20-Jan-09	Tue	✓		✓		
21-Jan-09	Wed				✓	
22-Jan-09	Thu					
23-Jan-09	Fri					
24-Jan-09	Sat		✓			
25-Jan-09	Sun					

✓	Monitoring Day
	Sunday or Public Holiday

**Impact Monitoring Schedules in the Next Reporting Period**

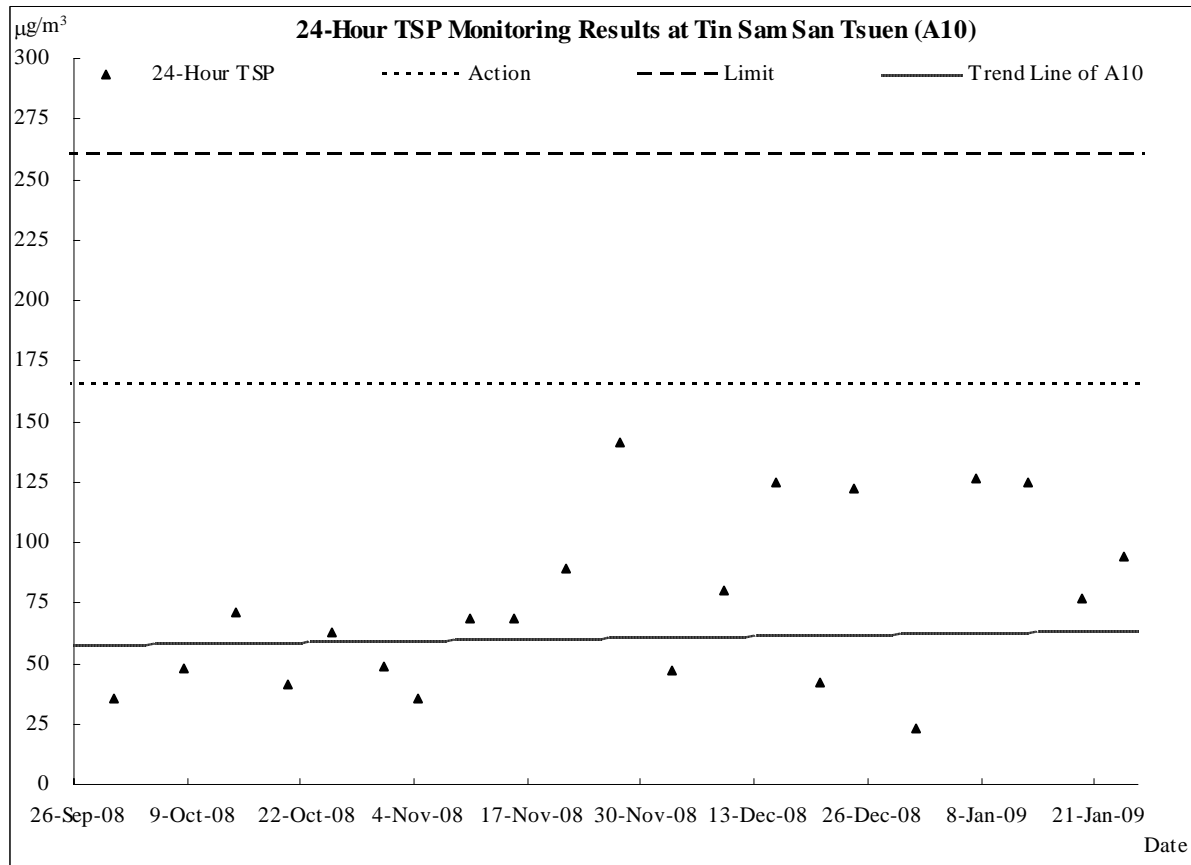
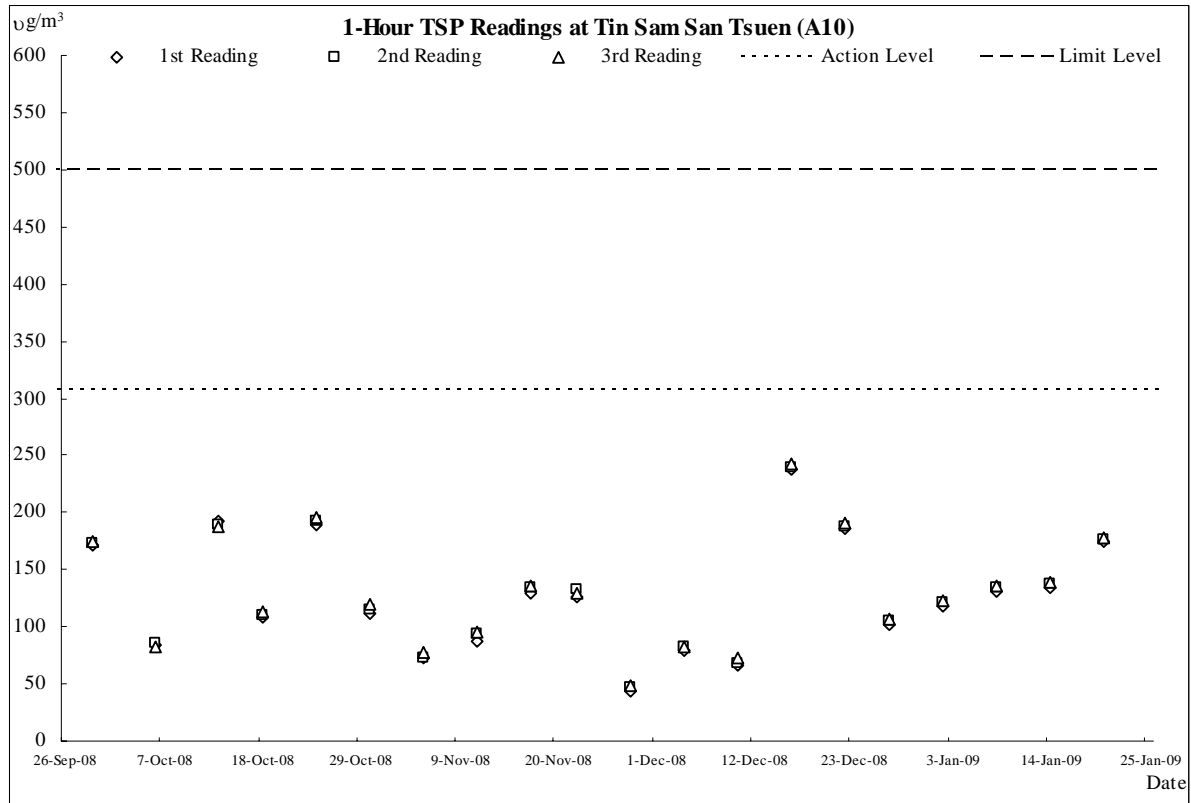
Date		Air Quality		Noise Leq 30min	Stream Water Quality	Ecology Surveys
		1-Hour TSP	24-Hour TSP			
26-Jan-09	Mon					
27-Jan-09	Tue					
28-Jan-09	Wed					
29-Jan-09	Thu	✓			✓	
30-Jan-09	Fri		✓			
31-Jan-09	Sat	✓		✓	✓	
1-Feb-09	Sun					
2-Feb-09	Mon				✓	
3-Feb-09	Tue					
4-Feb-09	Wed				✓	
5-Feb-09	Thu		✓			
6-Feb-09	Fri	✓		✓		
7-Feb-09	Sat					
8-Feb-09	Sun					
9-Feb-09	Mon				✓	
10-Feb-09	Tue					
11-Feb-09	Wed		✓		✓	
12-Feb-09	Thu	✓		✓		
13-Feb-09	Fri					
14-Feb-09	Sat					✓
15-Feb-09	Sun					
16-Feb-09	Mon				✓	
17-Feb-09	Tue		✓			
18-Feb-09	Wed	✓		✓	✓	
19-Feb-09	Thu					
20-Feb-09	Fri					
21-Feb-09	Sat					
22-Feb-09	Sun					
23-Feb-09	Mon		✓		✓	
24-Feb-09	Tue	✓		✓		
25-Feb-09	Wed				✓	

✓	Monitoring Day
	Sunday or Public Holiday

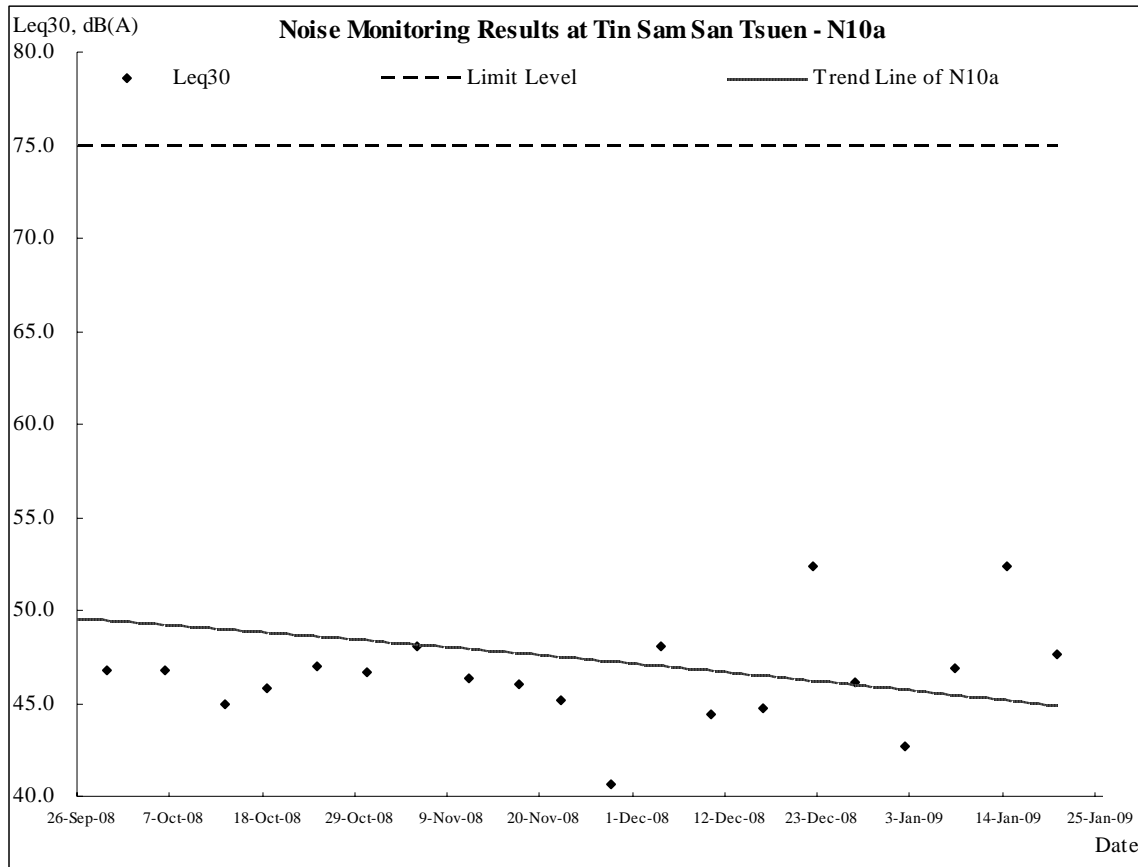
## **APPENDIX H**

### **GRAPHICAL PLOTS OF AIR QUALITY, CONSTRUCTION NOISE AND STREAM WATER QUALITY MONITORING RESULTS**

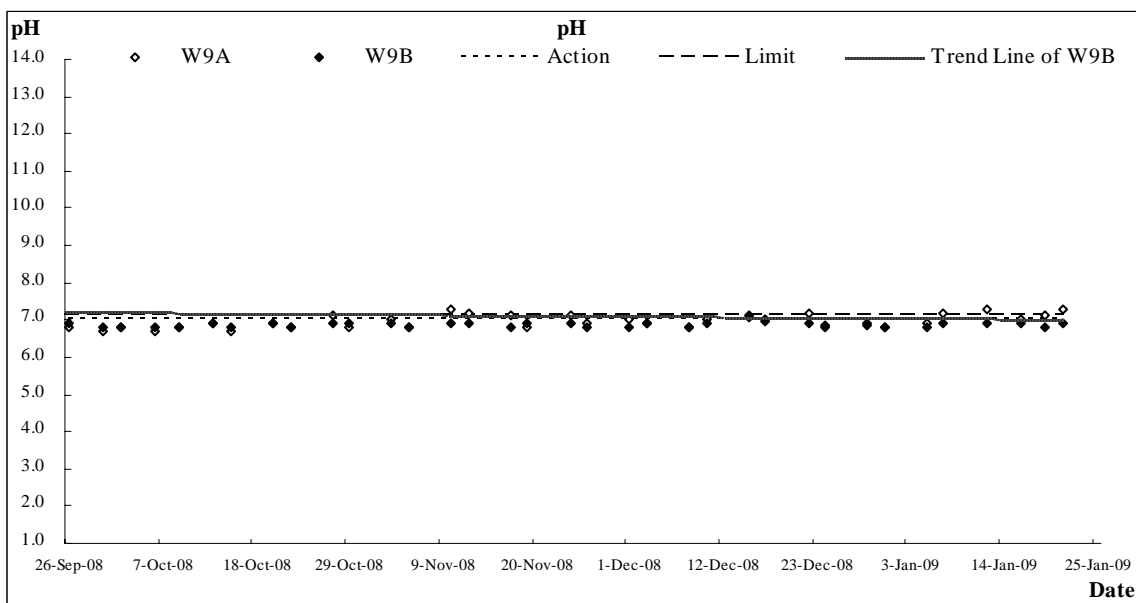
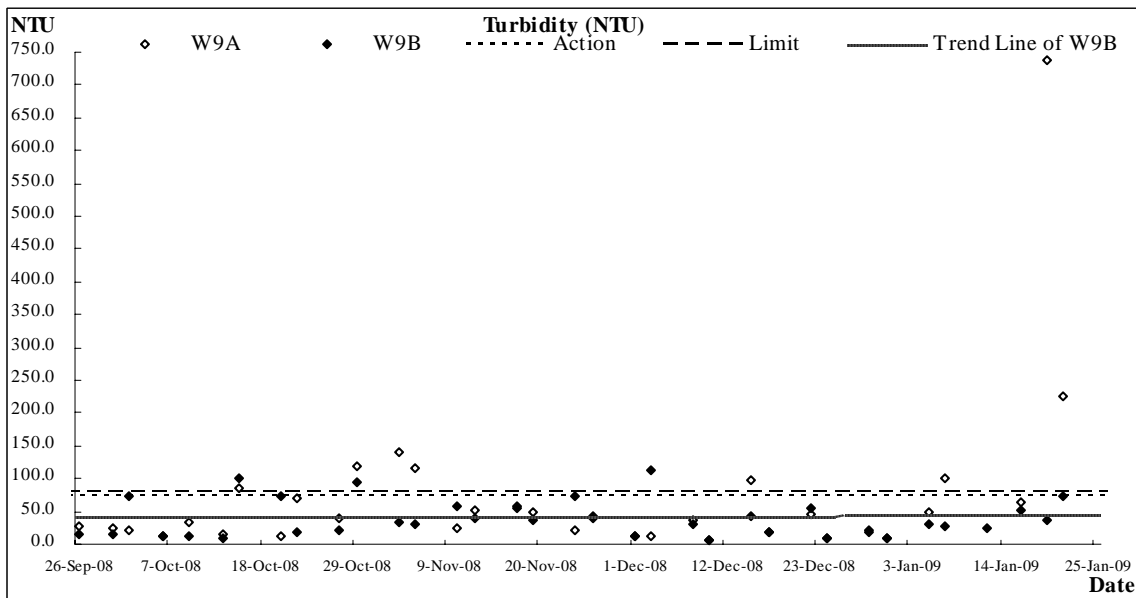
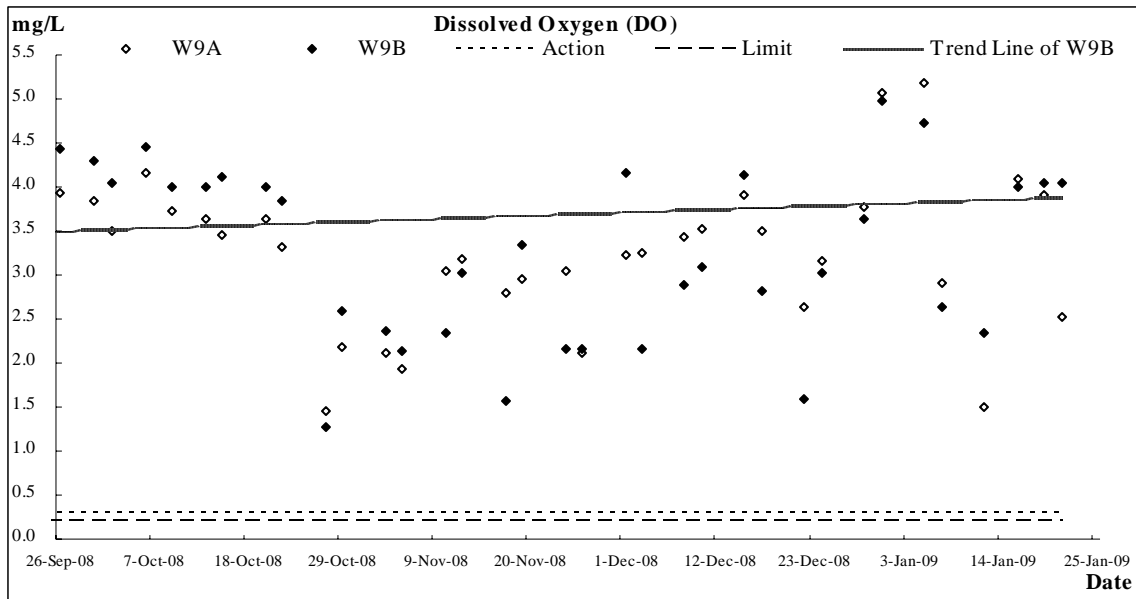
**AIR QUALITY**



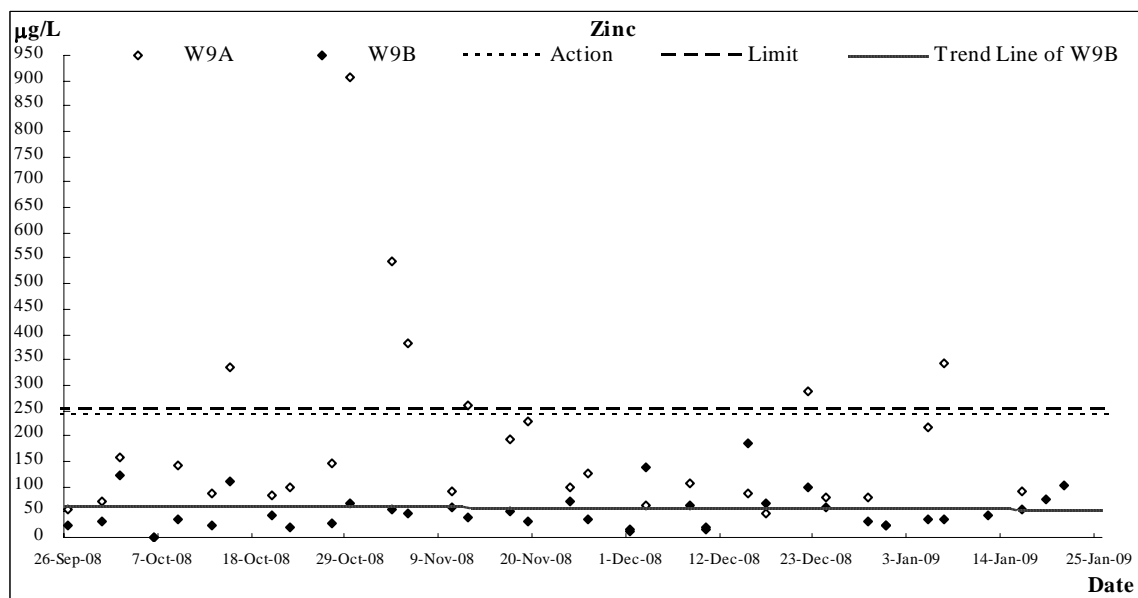
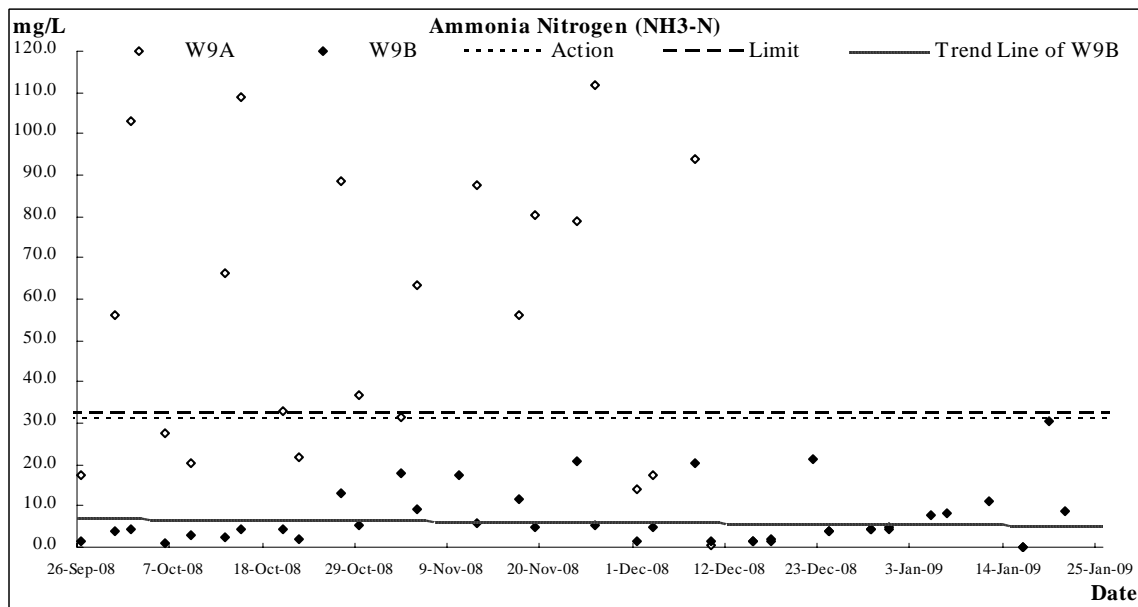
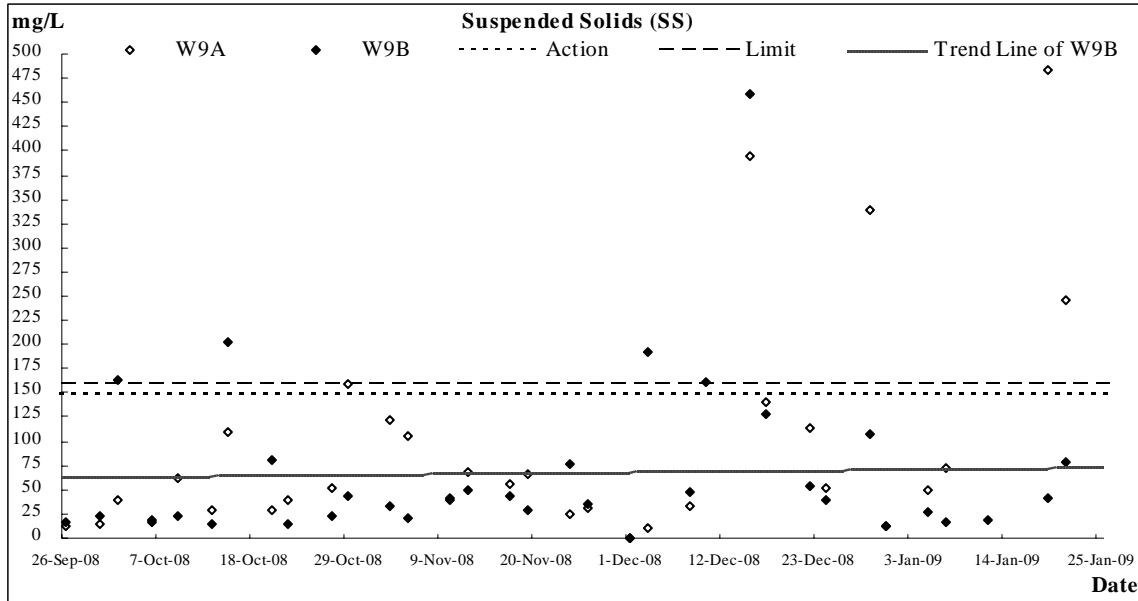
**CONSTRUCTION NOISE**



**STREAM WATER QUALITY**







Note: Monitoring results of Turbidity (12 Jan 2009), SS (12 & 16 Jan 2009), NH<sub>3</sub>-N (5, 7, 12, 19 & 21 Jan 2009), Zinc (12, 19 & 21 Jan 2009) at W9A, SS (16 Jan 2009) at W9B were extremely high which not appropriate present in the graphical plot.

Date 29-Dec-08																	
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	12:30	0.14	21.6	21.6	3.83	3.77	41.2	41.1	19.7	19.8	0	0.0	6.88	6.88	339.0	4.4	77.0
			21.6		3.71		40.9		19.9		6.88						
W9B	12:35	0.22	21.7	21.7	3.65	3.64	39.6	39.4	20.3	20.3	0	0.0	6.91	6.91	108.0	4.4	33.0
			21.7		3.62		39.1		20.2		6.91						

Date 31-Dec-08																	
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	09:55	0.12	20.8	20.8	5.13	5.08	53.4	52.6	9.2	9.3	0	0.0	6.80	6.80	13.0	4.7	24.0
			20.8		5.02		51.7		9.3		6.80						
W9B	10:05	0.20	20.9	20.9	4.96	4.97	51.0	51.3	10.2	10.3	0	0.0	6.80	6.80	12.0	4.5	22.0
			20.9		4.98		51.5		10.3		6.80						

Date 5-Jan-09																	
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	12:35	0.18	20.9	20.9	5.16	5.18	54.3	54.7	45.5	47.4	0	0.0	6.90	6.90	49.0	154.0	217.0
			20.9		5.19		55.0		49.2		6.90						
W9B	12:45	0.23	20.7	20.7	4.77	4.74	48.2	47.7	29.2	29.5	0	0.0	6.80	6.80	27.0	7.9	37.0
			20.7		4.7		47.1		29.7		6.80						

Date 7-Jan-09																	
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	09:45	0.16	16.9	16.9	2.93	2.92	30.1	30.0	102.0	101.0	0	0.0	7.20	7.20	73.0	189.0	344.0
			16.9		2.9		29.8		100.0		7.20						
W9B	09:55	0.20	18.9	18.9	2.6	2.64	27.9	28.4	28.0	28.5	0	0.0	6.90	6.90	16.0	8.3	34.0
			18.9		2.68		28.9		28.9		6.90						

Date 12-Jan-09																	
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	09:45	0.21	15.1	15.1	1.42	1.50	14.9	15.6	>999	>999	0	0.0	7.30	7.30	3320.0	1070.0	15800.0
			15.1		1.57		16.3		>999		7.30						
W9B	09:55	0.18	16.9	16.9	2.32	2.35	23.9	24.2	23.7	24.3	0	0.0	6.90	6.90	19.0	11.3	43.0
			16.9		2.37		24.4		24.9		6.90						

Date															16-Jan-09		
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	10:30	0.14	14.0	14.0	4.16	4.10	42.4	41.8	63.2	63.2	0	0.0	7.00	7.00	976.0	0.03	90.0
			14.0		4.03		41.1		63.2		0		7.00				
W9B	10:40	0.18	14.1	14.1	3.95	4.01	40.8	41.2	51.6	51.7	0	0.0	6.90	6.90	604.0	0.02	56.0
			14.1		4.07		41.5		51.8		0		6.90				

Date															19-Jan-09		
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	09:20	0.18	19.3	19.3	3.89	3.91	39.8	40.2	747.0	739.0	0	0.0	7.10	7.10	484.0	508.0	3080.0
			19.3		3.93		40.5		731.0		0		7.10				
W9B	09:30	0.20	20.6	20.6	4.01	4.04	41.4	41.7	36.9	37.1	0	0.0	6.80	6.80	41.0	30.3	75.0
			20.6		4.06		41.9		37.3		0		6.80				

Date															21-Jan-09		
Location	Time	Depth (m)	Temp (oC)		DO (mg/L)		DOS (%)		Turbidity (NTU)		Salinity		pH		SS	NH3-N	Zinc
W9A	10:45	0.21	20.1	20.1	2.48	2.52	26.3	26.7	226.0	224.5	0	0.0	7.30	7.30	246.0	457.0	1450.0
			20.1		2.56		27.1		223.0		0		7.30				
W9B	10:55	0.21	21.5	21.5	3.98	4.05	40.5	41.3	73.5	72.8	0	0.0	6.90	6.90	79.0	8.8	104.0
			21.5		4.12		42.0		72.1		0		6.90				

## **APPENDIX I**

### **METEOROLOGICAL DATA IN THE REPORTING PERIOD**

**Meteorological Data Extracted from HKO in the Reporting Period**

Date	Weather	Lau Fau Shan Weather Station					
		Total Rainfall (mm)	Mean Air Temperature (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction	
26-Dec-08	Fri	Holiday					
27-Dec-08	Sat	cloudy/rain/moderate/fresh	Trace	20	9	64	E/NE
28-Dec-08	Sun	cloudy/haze/moderate/fresh	0.1	19.4	8.2	81	N/NE
29-Dec-08	Mon	cloudy/haze/moderate/fresh	2	19.5	11.7	76	N/NE
30-Dec-08	Tue	cloudy/rain/cool/moderate/fresh	5.2	15.9	12.2	76	E/NE
31-Dec-08	Wed	rain/fine/moderate/fresh	1.1	13.9	19	72.5	NE
1-Jan-09	Thu	Holiday					
2-Jan-09	Fri	fine/dry/moderate	0	10.7	19	35.5	E/NE
3-Jan-09	Sat	fine/dry/cloudy/moderate/fresh	0	14.7	9	48.5	E/NE
4-Jan-09	Sun	fine/dry/moderate/fresh	Trace	18	13	50	E/NE
5-Jan-09	Mon	fine/dry/moderate/fresh	0	18	7.5	43.5	E/NE
6-Jan-09	Tue	fine/fresh/strong	0	19.3	10.5	66.7	E/SE
7-Jan-09	Wed	fine/dry/hazy/moderate/fresh	0	16.5	14.7	65	E/NE
8-Jan-09	Thu	fine/dry/moderate/fresh	0	13.8	17	57	NE
9-Jan-09	Fri	fine/dry/cold/fresh/strong	0	12.1	22.5	48.5	N/NE
10-Jan-09	Sat	fine/very dry/cold/fresh/strong	0	12.1	21.5	32.5	NE
11-Jan-09	Sun	fine/cold/very dry/moderate/fresh	0	11.6	9	Maintenance	E/SE
12-Jan-09	Mon	fine/very dry/cold/moderate/fresh	0	13.8	17.7	Maintenance	E/NE
13-Jan-09	Tue	fine/cold/very dry/moderate/fresh	0	12.5	18.7	28	E/NE
14-Jan-09	Wed	fine/dry/cold/moderate/fresh	0	11.8	16.5	25	E/NE
15-Jan-09	Thu	fine/very dry/cool/moderate	0	12.9	10.7	47.5	E/NE
16-Jan-09	Fri	fine/dry/cool/moderate	0	13.4	11.5	52.7	E/SE
17-Jan-09	Sat	fine/dry/cool/moderate	0	15.9	11	57.5	E/SE
18-Jan-09	Sun	fine/haze/moderate/fresh	0	17.7	8	63.5	W/SW
19-Jan-09	Mon	fine/haze/moderate/fresh	0	22	10	60.5	E/SE
20-Jan-09	Tue	sunny periods/cloudy/moderate/fresh	0	18.8	12.2	54.5	E
21-Jan-09	Wed	fine/hazy/light winds/moderate	0	21.7	9	63	E
22-Jan-09	Thu	fine/dry/hazy/moderate	0	18.5	12	66	W/SW
23-Jan-09	Fri	cloudy/dry/hazy/moderate/fresh	0	16.3	16	70	E/NE
24-Jan-09	Sat	cloudy/very dry/cold/fresh/strong	0	12.6	22.5	47	NE
25-Jan-09	Sun	cloudy/very dry/cold/fresh/strong	0	12.6	24	43.5	NE

## **APPENDIX J**

### **ENVIRONMENTAL TEAM SITE INSPECTION CHECKLISTS**

# Environmental Site Inspection Checklist for KT15

<b>Project:</b>	<u>Contract No.: DC/2006/02</u> <u>Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsui Wai</u>	<b>Inspected by</b>	
<b>Inspection</b>		<b>RE/RE's representative:</b>	<u>Mr. A. F. Ng</u>
<b>Date:</b>	<u>02 January 2009</u>	<b>IEC/IEC's representative:</b>	<u></u>
<b>Time:</b>	<u>14:00</u>	<b>ETL/ ET's representative:</b>	<u>Ben Tam</u>
		<b>Contractor's representative:</b>	<u>M. K. Ng / K. M. Lui</u>
		<b>Checklist No.</b>	<u>KT15-020109</u>

**PART A: GENERAL INFORMATION** Environmental Permit No. EP-231/2005/A

Weather:  Sunny  Fine  Cloudy  Rainy

Temperature:  °C

Humidity:  High  Moderate  Low

Wind:  Strong  Breeze  Light  Calm

**PART B: SITE AUDIT**

		Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
<b>Section 1: Water Quality</b>							
1.01	Is an effluent discharge license obtained for the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.02	Is the effluent discharged in accordance with the discharge licence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Is the discharge of turbid water avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Is drainage system well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are temporary exposed slopes properly covered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10	Are earthworks final surfaces well compacted or protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Are manholes adequately covered or temporarily sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	Are there any procedures and equipment for rainstorm protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.13	Are wheel washing facilities well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14	Is runoff from wheel washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.15	Are there toilets provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Are toilets properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.18	Is the oil leakage or spillage avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.19	Are there any measures to prevent leaked oil from entering the drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
1.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.24	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.27	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.28	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.29	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Remarks 1
<b>Section 2: Air Quality</b>						
2.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 3: Noise</b>						
3.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
3.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 4: Waste/Chemical Management</b>						
4.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.17	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.18	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.19	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.21	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.22	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 5: Landscape &amp; Visual</b>						
5.01 Are retained and transplanted trees in health condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.02 Are retained and transplanted trees properly protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.03 Are surgery works carried out for the damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.04 Is damage to trees outside site boundary due to construction activities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.05 Is the night-time lighting controlled to minimize glare to sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 6: Ecology</b>						
6.01 Gabion banks and base had been provide for channel linings and banks for typical sections of KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.02 Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.03 Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 7: Others</b>						
7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Remarks

Follow-Up of Last Site Inspection (24 December 2008):

Nil

Finding of Site Inspection on 02 January 2009:




1. Stagnant water was cumulated at CH474; the Contractor was reminded to clean up to prevent mosquito breeding.

RE's representative

IEC's representative

ET's representative

Contractor's representative

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Ben Tam )

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# Environmental Site Inspection Checklist for KT15

**Project:** 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

**Inspected by** \_\_\_\_\_  
**RE/RE's representative:** Mr. A. F. Ng  
**IEC/IEC's representative:** \_\_\_\_\_  
**ETL/ ET's representative:** Ben Tam  
**Contractor's representative:** M. K. Ng / K. M. Lui  
**Checklist No.** KT15-090109

**Inspection**  
**Date:** 09 January 2009  
**Time:** 10:00

**PART A: GENERAL INFORMATION** Environmental Permit No. EP-231/2005/A

Weather:  Sunny  Fine  Cloudy  Rainy  
 Temperature: 16 °C  
 Humidity:  High  Moderate  Low  
 Wind:  Strong  Breeze  Light  Calm

**PART B: SITE AUDIT**

		Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
<b>Section 1: Water Quality</b>							
1.01	Is an effluent discharge license obtained for the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.02	Is the effluent discharged in accordance with the discharge licence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.03	Is the discharge of turbid water avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.07	Is drainage system well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.09	Are temporary exposed slopes properly covered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.10	Are earthworks final surfaces well compacted or protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.11	Are manholes adequately covered or temporarily sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.12	Are there any procedures and equipment for rainstorm protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.13	Are wheel washing facilities well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.14	Is runoff from wheel washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.15	Are there toilets provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.16	Are toilets properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.18	Is the oil leakage or spillage avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.19	Are there any measures to prevent leaked oil from entering the drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
1.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.24	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.27	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.28	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.29	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 2: Air Quality</b>						
2.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 3: Noise</b>						
3.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
3.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 4: Waste/Chemical Management</b>						
4.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.17	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Remarks 1
4.18	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.19	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.21	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.22	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 5: Landscape &amp; Visual</b>						
5.01 Are retained and transplanted trees in health condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.02 Are retained and transplanted trees properly protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.03 Are surgery works carried out for the damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.04 Is damage to trees outside site boundary due to construction activities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.05 Is the night-time lighting controlled to minimize glare to sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 6: Ecology</b>						
6.01 Gabion banks and base had been provide for channel linings and banks for typical sections of KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.02 Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.03 Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 7: Others</b>						
7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____



Remarks

Follow-Up of Last Site Inspection (02 January 2009):

Stagnant water at CH474 was cleared.

Finding of Site Inspection on 09 January 2009:




1. C&D material scattered on site was observed at Bay 52, the Contractor was reminded to improve the housekeeping to maintain the site clean and tidy.

RE's representative

IEC's representative

ET's representative

Contractor's representative

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Ben Tam )

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**Environmental Site Inspection Checklist for KT15**

**Project:** 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 Tsui Wai

Inspected by

**Inspection**  
**Date:** 16-1-2009  
**Time:** 2:30pm

RE's representative: CHAN Wing Lung  
 IEC's representative: Cyrus Lam  
 ET's representative: Antonie Chow  
 Contractor's representative: K.M. Lau  
 Checklist No.                     

**PART A: GENERAL INFORMATION** Environmental Permit No. EP-231/2005/A

Weather:  Sunny  Fine  Cloudy  Rainy  
 Temperature: 20 °C  
 Humidity:  High  Moderate  Low  
 Wind:  Strong  Breeze  Light  Calm

**PART B: SITE AUDIT**

**Section 1: Water Quality**

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
1.01	Is an effluent discharge license obtained for the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.02	Is the effluent discharged in accordance with the discharge licence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Is the discharge of turbid water avoided?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Remarks 17</u>
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Remarks 18</u>
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Is drainage system well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are temporary exposed slopes properly covered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10	Are earthworks final surfaces well compacted or protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Are manholes adequately covered or temporarily sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	Are there any procedures and equipment for rainstorm protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.13	Are wheel washing facilities well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14	Is runoff from wheel washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.15	Are there toilets provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Are toilets properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.18	Is the oil leakage or spillage avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.19	Are there any measures to prevent leaked oil from entering the drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.20	Are there any measures to collect spill cement and concrete washings during concreting works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.22	Are the oil interceptors/grease traps maintained properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Environmental Site Inspection Checklist for KT15**

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
1.23 Is used bentonite recycled where appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.24 Is designated settlement area for runoff / wheel wash water provided and located at the streambed with 1-2m deep, 12m long and around 50m <sup>3</sup> capacities for sedimentation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.25 Is excavation prohibited in the settlement area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.26 Is concreting wastes water neutralized below the pH Action Levels before discharge?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.27 Are mobile toilets provided on site and located away from the KT15 stream course?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.28 Is License collector employed for handling the sewage of mobile toilet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 2: Air Quality</b>						
2.01 Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02 Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.03 Are the excavated materials sprayed with water during handling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04 Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05 Is the exposed earth properly treated within six months after the last construction activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06 Are the access roads sprayed with water to maintain the entire road surface wet or paved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Remade (3)
2.07 Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08 Is the load on vehicles covered entirely by clean impervious sheeting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09 Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10 Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11 Is dark smoke emission from plant/equipment avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12 Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13 Are site vehicles travelling within the speed limit not more than 15km/hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.14 Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.15 Is open burning avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.16 Are excavated materials from the stream removed from site on the same day and be stored in covered impermeable skips while awaiting removal from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 3: Noise</b>						
3.01 Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02 Is silenced equipment adopted?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03 Is idle equipment turned off or throttled down?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04 Are all plant and equipment well maintained and in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05 Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06 Are hand held breakers fitted with valid noise emission labels during operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07 Are air compressors fitted with valid noise emission labels during operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.08 Are flaps and panels of mechanical equipment closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09 Are Construction Noise Permit(s) applied for percussive piling works?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Environmental Site Inspection Checklist for KT15**

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
3.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 4: Waste/Chemical Management</b>						
4.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.17	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.18	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.19	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.21	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.22	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.23	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 5: Landscape &amp; Visual</b>						
5.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Environmental Site Inspection Checklist for KT15**

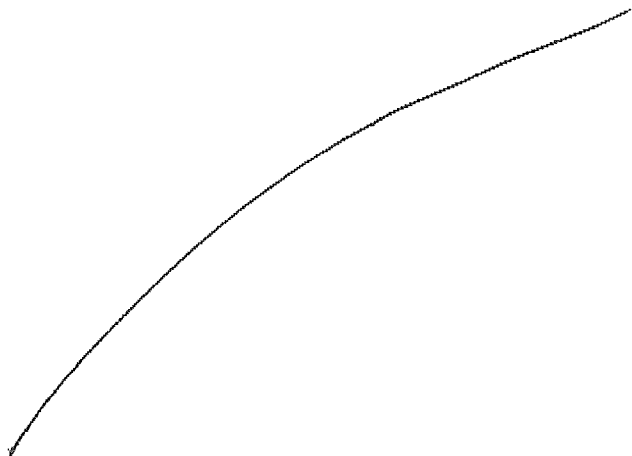
	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
5.02 Are retained and transplanted trees properly protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.03 Are surgery works carried out for the damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04 Is damage to trees outside site boundary due to construction activities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05 Is the night-time lighting controlled to minimize glare to sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 6: Ecology</b>						
6.01 Are gabion banks and base provided for channel linings and banks for typical sections of KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.02 Is site effluent/runoff discharge to the seasonal wetlands at KT15 prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03 Are stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 7: Others</b>						
7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

< Follow up observation >:

- ① Sedimentation tank at CH 300 was well maintained. <sup>(closed)</sup> But sedimentation tank system at CH 300 should be improved to increase the retention time of the effluent so as to improve the water quality <sup>in order</sup> (Follow-up)
- ② No. stockpile of wastes (general refuse) was observed at CH 300. (closed)

< New observation >:

- ③ Watering by water trucks at haul roads should be regularly maintained & increase in the frequency of watering in order to suppress the dust impacts.



**Environmental Site Inspection Checklist for KT15**

Remarks

*[A large, hand-drawn curved line with an arrowhead at the top right, spanning most of the page width.]*

*RE's representative*

*IEC's representative*

*ET's representative*

*Contractor's representative*

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

*( Cheung Wai Yee )*

*( Yung Yee )*

*( Andrew Chan )*

*( K.M. Lau )*

# Environmental Site Inspection Checklist for KT15

<b>Project:</b>	<u>Contract No.: DC/2006/02</u> <u>Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsui Wai</u>	<b>Inspected by</b>	
<b>Inspection</b>		<b>RE/RE's representative:</b>	<u>Mr. A. F. Ng</u>
<b>Date:</b>	<u>16 January 2009</u>	<b>IEC/IEC's representative:</b>	<u>Cyrus Lau</u>
<b>Time:</b>	<u>14:00</u>	<b>ETL/ ET's representative:</b>	<u>Anfernee Chow</u>
		<b>Contractor's representative:</b>	<u>M. K. Ng / K. M. Lui</u>
		<b>Checklist No.</b>	<u>KT15-160109</u>

**PART A: GENERAL INFORMATION** Environmental Permit No. EP-231/2005/A

Weather:  Sunny  Fine  Cloudy  Rainy

Temperature:  °C

Humidity:  High  Moderate  Low

Wind:  Strong  Breeze  Light  Calm

**PART B: SITE AUDIT**

		Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
<b>Section 1: Water Quality</b>							
1.01	Is an effluent discharge license obtained for the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.02	Is the effluent discharged in accordance with the discharge licence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Is the discharge of turbid water avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Is drainage system well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are temporary exposed slopes properly covered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10	Are earthworks final surfaces well compacted or protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Are manholes adequately covered or temporarily sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	Are there any procedures and equipment for rainstorm protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.13	Are wheel washing facilities well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14	Is runoff from wheel washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.15	Are there toilets provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Are toilets properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.18	Is the oil leakage or spillage avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.19	Are there any measures to prevent leaked oil from entering the drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
1.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.24	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.27	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.28	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.29	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 2: Air Quality</b>						
2.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 3: Noise</b>						
3.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
3.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 4: Waste/Chemical Management</b>						
4.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.17	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.18	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.19	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.21	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.22	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15



	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 5: Landscape &amp; Visual</b>						
5.01 Are retained and transplanted trees in health condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.02 Are retained and transplanted trees properly protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.03 Are surgery works carried out for the damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.04 Is damage to trees outside site boundary due to construction activities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.05 Is the night-time lighting controlled to minimize glare to sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 6: Ecology</b>						
6.01 Gabion banks and base had been provide for channel linings and banks for typical sections of KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.02 Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.03 Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 7: Others</b>						
7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Remarks




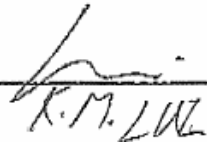
**Follow-Up of Last Site Inspection (09 January 2009):**

C&D materials at Bay 52 had been cleared.

**Finding of Site Inspection on 16 January 2009:**

There were no adverse observations identified during the site inspection on 16 January 2009, as a reminder, the Contractor should spray water on haul roads more frequently during dry seasons.

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<i>RE's representative</i>	<i>IEC's representative</i>	<i>ET's representative</i>	<i>Contractor's representative</i>
 _____ ( Chan Wai Yee )	 _____ ( Eyoung Lam )	 _____ ( Ansona Chan )	 _____ ( K.M. LUK )

# Environmental Site Inspection Checklist for KT15

**Project:** 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 Tsui Wai

**Inspected by** \_\_\_\_\_  
**RE/RE's representative:** Mr. A. F. Ng  
**IEC/IEC's representative:** \_\_\_\_\_  
**ETL/ ET's representative:** Anfernee Chow  
**Contractor's representative:** M. K. Ng / K. M. Lui  
**Checklist No.** KT15-210109

**Inspection**

**Date:** 21 January 2009  
**Time:** 09:30

**PART A: GENERAL INFORMATION Environmental Permit No. EP-231/2005/A**

Weather:  Sunny  Fine  Cloudy  Rainy  
 Temperature: 22 °C  
 Humidity:  High  Moderate  Low  
 Wind:  Strong  Breeze  Light  Calm

**PART B: SITE AUDIT**

**Section 1: Water Quality**

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
1.01	Is an effluent discharge license obtained for the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.02	Is the effluent discharged in accordance with the discharge licence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Is the discharge of turbid water avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Are there proper desilting facilities in the drainage systems to reduce SS levels in effluent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Is drainage system well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	As excavation proceeds, are temporary access roads protected by crushed stone or gravel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are temporary exposed slopes properly covered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10	Are earthworks final surfaces well compacted or protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Are manholes adequately covered or temporarily sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	Are there any procedures and equipment for rainstorm protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.13	Are wheel washing facilities well maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14	Is runoff from wheel washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.15	Are there toilets provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Are toilets properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Are the vehicle and plant servicing areas paved and located within roofed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.18	Is the oil leakage or spillage avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.19	Are there any measures to prevent leaked oil from entering the drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.20	Are there any measures to collect spilt cement and concrete washings during concreting works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.21	Are there any oil interceptors/grease traps in the drainage systems for vehicle and plant servicing areas, canteen kitchen, etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
1.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.24	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.27	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.28	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.29	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 2: Air Quality</b>						
2.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 3: Noise</b>						
3.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

		Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
3.07	Are air compressors fitted with valid noise emission labels during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.08	Are flaps and panels of mechanical equipment closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	Are Construction Noise Permit(s) applied for percussive piling works?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.11	Are valid Construction Noise Permit(s) posted at site entrances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Section 4: Waste/Chemical Management</b>							
4.01	Waste Management Plan had been submit to Engineer for approval.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02	Are receptacles available for general refuse collection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03	Is general refuse sorting or recycling implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Are the chemical waste containers properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	Are the chemical wastes stored in proper storage areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	Is the chemical waste storage area properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09	Is the chemical waste storage area used for storage of chemical waste only?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.11	Are the chemical wastes disposed of by licensed collectors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	Are trip tickets for chemical wastes disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.13	Are chemical/fuel storage areas banded?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.14	Are designated areas identified for storage and sorting of construction wastes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.15	Are construction wastes sorted (inert and non-inert) on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.16	Are construction wastes reused?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.17	Are construction wastes disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.18	Are site hoardings and signboards made of durable materials instead of timber?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.20	Are appropriate procedures followed if contaminated material exists?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Environmental Site Inspection Checklist for KT15

	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 5: Landscape &amp; Visual</b>						
5.01 Are retained and transplanted trees in health condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.02 Are retained and transplanted trees properly protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.03 Are surgery works carried out for the damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.04 Is damage to trees outside site boundary due to construction activities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.05 Is the night-time lighting controlled to minimize glare to sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 6: Ecology</b>						
6.01 Gabion banks and base had been provide for channel linings and banks for typical sections of KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.02 Prevent site effluent/runoff discharge to the seasonal wetlands at KT15?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.03 Stockpiling or disposal of materials, and any dredging or construction activities at the seasonal wetlands at KT15 are prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Section 7: Others</b>						
7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____






Remarks

Follow-Up of Last Site Inspection (16 January 2009):

Nil.

Finding of Site Inspection on 21 January 2009:

There was no adverse observation identified during the site inspection on 21 January 2009.

<i>RE's representative</i>	<i>IEC's representative</i>	<i>ET's representative</i>	<i>Contractor's representative</i>
			
( )	( )	( Anfernee Chow )	( )

**APPENDIX K**

**RESPONSE TO COMMENT**

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 Summary Report for January 2009 (R1128 Revision 1) submit on 31 January 2009 (12:29)

Response to IEC's comments [Received from e-mail on 03 February 2009]

Items.	Section / Paragraph	Comments	Response to Comments
1	ES09.	It is advised to rewrite the sentences as “Construction activities to be undertaken in February 2009 included <b>construction</b> and <b>excavation</b> works, <b>stream diversion</b> , <b>tree</b> protection and tree transplanting works, <b>carrying</b> out joined survey, <b>utilities</b> companies liaison, <b>dumping</b> activities and <b>gabion</b> installation.”.	Noted.
2	ES10./4.06	The number of stream water quality monitoring events should be 16 instead of 18 as listed.	Noted.
3	Table 5-2	The monitoring data of 24-Hour TSP monitoring results recorded on 24-Jan-09 at A10 is missing.	Noted.
4	Table 5-4	1. The measured value of D.O. recorded on 12-Jan-09 at W9B should be rounded off as 2.4 rather than 2.3. 2. The monitoring data of SS, Ammonia and Zinc monitoring results recorded on 21- Jan-09 at W9A and W9B are missing.	Noted. Noted.
5	7.01/11.07	According to the site inspections and monthly audit checklists, there are <b>four</b> observations recorded. Please check and revise accordingly.	Noted
6	7.02/11.07	1. There are typos in point 1 and 3. It is advised to add the word “up” after “...was reminded to clean...” at point 1 and replace the word “tanks” to “trucks” at point 3. 2. Please add the observation “Sedimentation tank system at W9B should be improved in order to increase the retention time of the effluent, so as to improve the water quality.” into the list as it is recorded at the monthly audit checklist on 16-Jan-09.	Noted. Noted.
7	Appendix B	Please update the three-month construction program which showing the tentative works in the coming two months.	Noted.
8	Appendix F	1. Updated calibration certificate for YSI Multimeter TSI 550A (Serial number: 05F2063AZ) is missing. 2. Date of Next Calibration for Hanna pH Meter HI98128 (Serial No. S229924) and Hand refractometer ATAGO (Serial No. 289468) should be 08 Mar 09 and 19 Apr 09 respectively. 3. Date of Calibration for Hand refractometer ATAGO (Serial No. 289468) should be 19 Jan 09.	Noted. Noted. Noted.
9	Appendix G	It is reminded to keep the impact monitoring for 24-hour TSP with every 6-day basis for the onward impact monitoring.	Noted.
10	Appendix H	1. Please revise the graph of 1-Hour TSP monitoring for the reporting period, as the graph presented is not related to the captioned project. Please revise and update the graph. 2. Measured value of 24-Hour TSP recorded on 24-Jan-09 is missing in the graph of 24- Hour TSP Monitoring Results at Tin Sam San Tsuen (A10). Please revise and update the graph. 3. Measured value of turbidity recorded on 12-Jan-09 at W9A is incorrectly marked. Please revise and update the graph. 4. Measured values of SS, Ammonia Nitrogen and Zinc recorded on 21-Jan-09 are incorrectly marked. Please revise and update the graph.	Noted. Noted. Noted. Noted.
11	Appendix I	Please revise the data set so as to report the meteorological data recorded during the reporting period only.	Noted.

Items.	Section / Paragraph	Comments	Response to Comments
12	Appendix J	<ol style="list-style-type: none"><li>1. All checklists should be recorded in Year 2009. Please revise the checklists accordingly.</li><li>2. In site inspection checklist on 02-Jan-09, it is advised to add the word “up” after the words “...reminded to clean..” recorded in finding. The date of finding recorded should be 02 January 2009.</li><li>3. In site inspection checklist on 16-Jan-09, it is advised to add the exact location of C&amp;D materials cleared in the follow-up observation.</li></ol>	<p>Noted.</p> <p>Noted.</p> <p>Noted.</p>

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 Summary Report for January 2009 (R1128 Revision 2) submit on 04 February 2009  
Response to IEC’s comments [Received from e-mail on 04 February 2009]

Item	Section / Paragraph	Comments	Response to Comments
1	Table 5-4	The measured value of D.O. recorded on 12-Jan-09 at W9B should be rounded off as 2.4 rather than 2.3	Noted.
2	7.02	There is typo in point 1. It is advised to add the word “to” after “...was reminded to clean up...”.	Noted.
3	11.07	There are typos in point 1 and 3. It is advised to add the word “up” after “...was reminded to clean...” at point 1 and replace the word “tanks” to “trucks” at point 3, in order to keep consistency with S7.02	Noted.
4	Appendix G	It is reminded to keep the impact monitoring for 24-hour TSP with every 6-day basis for the onward impact monitoring.	Noted. Noted.
5	Appendix H	1. Please revise the graph of 1-Hour TSP monitoring for the reporting period, as the graph presented is not related to the captioned project. Please revise and update the graph. 2. Measured value of turbidity recorded on 12-Jan-09 at W9A is incorrectly marked. Please revise and update the graph. 3. The monitoring results on 5 and 7 January 2009 (NH3-N at W9A), 16 January 2009 (SS at W9A and W9B) were also not presented in the related graphs. Please also add them into the “Note”. 4. The monitoring result on 16 January 2009 (Turbidity at W9A) was appropriate to be presented in the graph. Please delete it from the “Note”.	Noted Noted Noted Noted
6	Appendix I	Please revise the data set so as to report the meteorological data recorded during the reporting period only.	Noted.
7	Appendix J	1. All checklists should be recorded in Year 2009. Please revise the checklists accordingly. 2. In site inspection checklist on 02-Jan-09, it is advised to add the word “up” after the words “...reminded to clean..” recorded in finding. The date of finding recorded should be 02 January 2009. 3. In site inspection checklist on 16-Jan-09, it is advised to add the exact location of C&D materials cleared in the follow-up observation.	Noted Noted Noted
8	Appendix K	There should be 2 pages for comments on revision 1 (Ref: lchc9020307 KT15 Jan Monthly EM&A Report (Revision 1) –Comments.pdf), which was submitted to ET by e-mail on 3-Feb-2009.	Noted

**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 Summary Report for January 2009 (R1128 Revision 3) submit on 04 February 2009**  
**Response to IEC's comments [Received from e-mail on 04 February 2009]**

Item	Section / Paragraph	Comments	Response to Comments
1	Appendix J	1. All checklists should be recorded in Year 2009. Please revise the checklists accordingly. 2. In site inspection checklist on 02-Jan-09, it is advised to add the word “up” after the words “...reminded to clean..” recorded in finding. The date of finding recorded should be 02 January 2009. 3. In site inspection checklist on 16-Jan-09, it is advised to add the exact location of C&D materials cleared in the follow-up observation.	Noted. Noted Noted
2	Appendix K	There should be 2 pages for comments on revision 1 (Ref: lchc9020307 KT15 Jan Monthly EM&A Report (Revision 1) –Comments.pdf) and revision 2 (Ref: lchc9020407 KT15 Jan Monthly EM&A Report (Revision 2) –Comments.pdf), which were submitted to ET by email on 3-Feb-2009 and 4-Feb-2009 respectively. Please check and update the response to comments	Noted.