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**DRAINAGE SERVICES DEPARTMENT
CONTRACT NO. DC/2006/02**


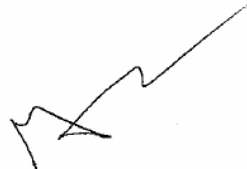
**YUEN LONG, KAM TIN, NGAU TAM MEI AND TIN SHUI
WAI DRAINAGE IMPROVEMENTS, STAGE 1, PHASE
2B – CHEUNG CHUN SAN TSUEN AND KAM TSIN WAI**

**KT15 - MONTHLY EM&A REPORT FOR
DECEMBER 2009 (NO. 30)**

PREPARED FOR

CHIT CHEUNG CONSTRUCTION COMPANY LIMITED

Quality Index

| Date | Reference No. | Prepared By | Certified By |
|-----------------|-------------------------|--|---|
| 20 January 2010 | TCS00371/07/600/R1586v3 | Nicola Hon | Andrew Lau |
| | |  |  |
| | | Environmental Consultant | Environmental Team Leader |

| Ver. No. | Date | Remarks |
|----------|-----------------|---|
| 1 | 13 January 2010 | First Submission |
| 2 | 15 January 2010 | Amended against IEC's comments on 15 January 2010 |
| 3 | 20 January 2010 | Amended against IEC's comments on 18 January 2010 |
| | | |

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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 (the Project) on 3 April 2007. According to the contract specification requirements, an Environmental Monitoring & Audit (EM&A) program has to be implemented by an 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 were defined as Designated Projects and governed by an Environmental Permit (EP-231/2005/A).
- ES03. Action-United Environmental Services and Consulting (AUES) has been commissioned by CCC to be the ET to implement the EM&A program in accordance with the requirements as stated in the Environmental Permit and EM&A Manual for Secondary Channels KT14 & KT15 (August 2005). This Contract (DC/2006/02) covers KT15 only; and KT14 will be carried out under another contract.
- ES04. Upon notification of completion by the Contractor, last site audit was conducted on 16 December 2009 which confirmed no works of environmental significance remain was observed. The impact monitoring carried out by ET was ceased on 19 December 2009, except for ecological monitoring which was last carried out on 21 December 2009 during the Reporting Period. Due to the termination of impact monitoring and EM&A Programme, this serves as the last monthly report of the EM&A Programme and covers data obtained between **26 November** and **31 December 2009** (the Reporting Period) for **December 2009 (No. 30)** as agreed by the IEC and RE.

BREACH OF ACTION AND LIMIT (A/L) LEVELS

- ES05. The monitored results of air quality, construction noise and water quality were in full compliance with the environmental quality criteria except for ecology as shown below.

| Monitoring | Parameters | Action Level | Limit Level |
|--------------|------------------------------------|--------------|------------------|
| 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 | - | 21 December 2009 |
| | Total number of wetland birds | - | - |

COMPLAINTS LOG

- ES06. No environmental complaint was received in this Reporting Period (**26 November – 31 December 2009**)

NOTIFICATIONS OF ANY SUMMONS AND SUCCESSFUL PROSECUTIONS

- ES07. There was no environmental summons or successful prosecution recorded in this Reporting Period (**26 November – 31 December 2009**).

REPORTING CHANGES

ES08. There are no changes to be reported in this Reporting Period.

FUTURE KEY ISSUES

ES09. This is the last monthly EM&A report for Channel KT15 following substantial completion on 10 November 2009. However, CCC should still keep in mind for the construction noise and other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the EIA and summarized in Mitigation Measure Implementation Schedule should be fully implemented for the maintenance period of construction.

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 4 Events
- Noise Monitoring 5 Events
- Stream Water Quality 12 Events
- Ecology 1 Event
- Site Inspection Audit 4 Times

AIR QUALITY

ES11. No 1-hour and 24-hour TSP monitoring results that triggered the Action or Limit Level was recorded in this Reporting Period.

CONSTRUCTION NOISE

ES12. No construction noise complaint (an Action Level exceedance) was received and no construction noise monitoring result that exceeded the Limit Level was recorded in this Reporting Period.

STREAM WATER QUALITY

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

ECOLOGY

ES14. One (1) individual from one (1) wetland bird species with abundance from the baseline was observed during the survey on 21 December 2009 and a total of fifty-four (54) individuals of birds from twenty-three (23) species were recorded. The species number of wetland dependent bird triggered the Limit Level. However, no intrusion of construction activities into the wetland areas and no discharge to the adjacent wetlands were found on 21 December 2009 during the site audit. Investigation report revealed that the major construction works being carried out during the exceedance day were only tree planting and installation of fencing. Those activities would not cause excessive disturbance to the adjacent wetlands. Therefore, it is concluded that the exceedance was not caused by work under 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 are presented in the following table:-

| Issues | Parameters | Work-Related Exceedance % | Investigation & Corrective Actions |
|-------------|-------------|---------------------------|-------------------------------------|
| Air Quality | 1-hour TSP | 0 | Not Required for 0% Project Related |
| | 24-hour TSP | 0 | Not Required for 0% Project Related |

| | | | |
|--------------|--|---|--|
| Noise | Leq (30min) Daytime | 0 | Not Required for 0% Project Related |
| Stream Water | Dissolve Oxygen (DO) | 0 | Not Required for 0% Project Related |
| | Turbidity (NTU) | 0 | Not Required for 0% Project Related |
| | pH | 0 | Not Required for 0% Project Related |
| | Suspended Solids (SS) | 0 | Not Required for 0% Project Related |
| | Ammonia Nitrogen | 0 | Not Required for 0% Project Related |
| | Zinc | 0 | Not Required for 0% Project Related |
| Ecology | Decrease in the total number of species or individuals of wetland dependent bird 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 is only required to be undertaken in wet seasons (April to July) on a monthly basis.

SITE INSPECTION BY EXTERNAL PARTIES

ES16. No site visit or inspection was carried out by the Environmental Protection Department in this Reporting Period.

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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 (the Project) on 3 April 2007. According to the contract specification requirements the Project should implement an Environmental Monitoring & Audit (EM&A) program by an Environmental Team (ET) throughout the construction period in accordance 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 proposed 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 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 Upon notification of completion by the Contractor, last site audit was conducted on 16 December 2009 which confirmed no works of environmental significance remain was observed. The impact monitoring carried out by ET was ceased on 19 December 2009, except for ecological monitoring which was last carried out on 21 December 2009 during the Reporting Period. Due to the termination of impact monitoring and EM&A Programme, this serves as the last monthly report of the EM&A Programme and covers data obtained between **26 November** and **31 December 2009** (the Reporting Period) for **December 2009 (No. 30)** as agreed by the IEC and RE.

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 |
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| 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 listed below:-

- Planting Tree
- Hydroseeding
- Carrying out joined survey;
- Tree protection and tree transplanting works;
- Utilities companies liasion;

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 9 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 | Updated on 20 June 2009 |
| 7 | Billing Account for Disposal of Construction Waste (Account Number: 7005311) | Valid on 7 May 2007 |

3.0 SUMMARY OF IMPACT MONITORING REQUIREMENTS

- 3.01 The 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 this 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 stations of the air quality, construction noise, stream water quality and ecology monitoring are shown in **Appendix D**.

Table 3-1 Summary of EM&A Requirements

| Environmental Issues | Monitoring Parameters | | Monitoring Stations |
|----------------------|---|--|---------------------|
| Air Quality | 1-hour and 24-hour TSP | | A10 |
| Construction Noise | Leq _(30min) during normal working hours | | N10a* |
| | Supplementary data of L ₁₀ and L ₉₀ for reference | | |
| Stream Water Quality | In Situ Measurement | • Dissolved Oxygen Concentration (mg/L); | W9A & W9B |
| | | • Dissolved Oxygen Saturation (% Sat); | |
| | | • Turbidity (NTU); | |
| | | • pH; | |
| | | • Salinity (%); Water Depth (m) and | |
| | • Temperature (°C); | | |
| Laboratory Analysis | • 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 ambient noise condition within the victim area without significant change. Due to accessibility problems, noise monitoring will be undertaken at N10a. Once access is available, the impact noise monitoring will be undertaken at N10.

- 3.03 Air monitoring is carried out once every six days for 24-hour TSP and 3 times every six days for 1-hour TSP at one designated monitoring station A10.
- 3.04 Noise monitoring is conducted once per week at one designated monitoring location (N10a). Measurements of Leq_(30min) shall be taken between 0700 and 1900 hours with supplementary L₁₀ and L₉₀ data collected for reference.
- 3.05 Stream water quality monitoring is conducted at two locations (W9A and W9B) twice per week. Dissolved Oxygen (DO), pH and turbidity (NTU) are measured in-situ; water depth, temperature and salinity are collected for relevant data. Suspended solids (SS), ammonia nitrogen and zinc are determined in a HOKLAS accredited laboratory.
- 3.06 Ecological monitoring is conducted in the seasonal wetland area as shown in the Project Profile of KT15 (Figure ATT 4-7.2). 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. Photographic records of

vegetation within the monitoring area 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. Bird survey should be conducted monthly throughout the year and other faunal groups (reptiles, amphibians, dragonflies and butterflies) are conducted monthly in wet season (April to July inclusive) only.

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 hours 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) [#] | W9B (Downstream) |
|---|-----------------------------|------------------|
| Action Level | NA | < 0.3 |
| Limit Level | NA | < 0.2 |
| Turbidity (NTU) | | |
| Action Level | NA | > 73.5* |
| Limit Level | NA | > 78.2** |
| pH | | |
| Action Level | NA | > 7.0* |
| Limit Level | NA | > 7.1** |
| Suspended Solids (mg/L) | | |
| Action Level | NA | > 148* |
| Limit Level | NA | > 159** |
| Ammonia Nitrogen (mg/L) | | |
| Action Level | NA | > 30.91* |
| Limit Level | NA | > 32.20** |
| Zinc ($\mu\text{g}/\text{L}$) | | |
| Action Level | NA | > 242* |
| Limit Level | NA | > 252** |

Notes: # Act as Control Station for 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 ecological monitoring has been implemented for this project. Details of the Event/Action Plan are presented in **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 ecological 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**; and locations are shown in **Appendix D**.

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

| Air Quality Station | |
|------------------------------------|------------------------------------|
| A10 | Village House in Tin Sam San Tsuen |
| Construction Noise Location | |
| N10 * | Village House in Tin Sam San Tsuen |
| N10a | Village House in Tin Sam San Tsuen |
| Water Quality Locations | |
| W9A # | Tin Sam San Tsuen |
| W9B | Tin Sam San Tsuen |

Notes: * 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.

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. A 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. A total of **4** monitoring events were carried out in this Reporting Period.

NOISE MONITORING

- 4.05 Impact noise monitoring was undertaken at location N10a once per week. A 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. A total of **12** 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 records of vegetation within the monitoring area should be made at six monthly intervals and presented in this reporting month. One event of monthly monitoring by means of walk through survey, along the boundary and within the wetland areas in KT15 was undertaken on **21 December 2009** this month.

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

| Parameters | Equipment | Monitoring Equipment |
|-------------|-------------------------------|--|
| 1-hour TSP | Portable dust meter | Sibata LD-3 Laser Dust Meter or TSI DuskTrak Model 8520 |
| 24-hour TSP | High Volume Sampler | Grasby Anderson GMWS 2310 HVS |
| | Calibration Kit | TISCH Model TE-5025A |
| Leq30min | Integrating Sound Level Meter | Cesva SC-20c Sound Level Meter |
| | Calibrator | Cesva CB-5 Acoustical Calibrator |
| | Portable Wind Speed Indicator | Testo Anemometer |
| Water Depth | Water Depth Detector | Eagle Sonar |
| Temperature | Thermometer & DO Meter | YSI 550A or YSI 55/12FT |
| DO | Thermometer & DO Meter | YSI 550A or YSI 55/12FT |
| pH | pH Meter | Hanna HI 98128 or 98107 or Extech Instruments, ExStik™ Model pH110 |
| 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 m³/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 in²;
- 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 TSI DuskTrak Model 8520. 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.

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 10m/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 550A 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 Extech / 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 presented in the following sub-sections. Upon notification of completion by the Contractor, last site audit was conducted on 16 December 2009 which confirmed no works of environmental significance remain was observed. The impact monitoring carried out by ET was ceased on 19 December 2009, except for ecological monitoring which was last carried out on 21 December 2009 during the Reporting Period. Due to the termination of impact monitoring and EM&A Programme, this section covers data obtained between **26 November** and **31 December 2009** (the Reporting Period) for **December 2009 (No. 30)** as agreed by the IEC and RE.

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 st Result ($\mu\text{g}/\text{m}^3$) | 2 nd Result ($\mu\text{g}/\text{m}^3$) | 3 rd Result ($\mu\text{g}/\text{m}^3$) | Action Level ($\mu\text{g}/\text{m}^3$) | Limit Level ($\mu\text{g}/\text{m}^3$) |
|-----------------|------------|---|---|---|---|--|
| 26-Nov-09 | 09:30 | 89 | 109 | 95 | > 307 | > 500 |
| 2-Dec-09 | 09:26 | 206 | 198 | 212 | > 307 | > 500 |
| 8-Dec-09 | 14:00 | 82 | 90 | 89 | > 307 | > 500 |
| 14-Dec-09 | 09:01 | 89 | 94 | 87 | > 307 | > 500 |
| 19-Dec-09 | 09:19 | 92 | 94 | 89 | > 307 | > 500 |

Notes: *Bold and italic means exceeded the Action Level.*
Bold and underline means exceeded 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 ($\mu\text{g}/\text{m}^3$) |
|-----------------|---|---|--|
| 1-Dec-09 | 29 | > 165 | > 260 |
| 7-Dec-09 | 104 | > 165 | > 260 |
| 12-Dec-09 | 84 | > 165 | > 260 |
| 18-Dec-09 | 150 | > 165 | > 260 |

Notes: *Bold and italic means exceeded the Action Level.*
Bold and underline means exceeded the Limit Level.

5.03 No 1-hour and 24-hour TSP monitoring results that triggered 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 rd Leq5 | 4th Leq5 | 5th Leq5 | 6 th Leq5 | Leq30 |
|-----------|------------|----------|----------|----------------------|----------|----------|----------------------|-------|
| 26-Nov-09 | 09:37 | 48.8 | 49.6 | 51.1 | 49.3 | 50.8 | 52.6 | 50.6 |
| 2-Dec-09 | 09:34 | 47.2 | 47.7 | 46.5 | 46.8 | 48.3 | 47.9 | 47.4 |
| 8-Dec-09 | 13:35 | 52.9 | 52.2 | 51.7 | 53.2 | 54.1 | 52.3 | 52.8 |
| 14-Dec-09 | 11:17 | 53.0 | 50.5 | 50.1 | 55.0 | 56.1 | 54.3 | 53.7 |
| 19-Dec-09 | 10:45 | 50.2 | 52.1 | 51.2 | 52.1 | 51.9 | 52.4 | 51.7 |

| | | |
|-------------|---|------------|
| Limit Level | - | > 75 dB(A) |
|-------------|---|------------|

- 5.06 No construction noise complaint (Action Level) was received and all measured noise levels were 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. 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 nitrogen (mg/L) | | Zinc (µg/L) | |
|---------------------|------------|---------|-----------------|----------|------|---------|------------|---------|-------------------------|-----------|-------------|---------|
| | W9A# | W9B | W9A# | W9B | W9A# | W9B | W9A# | W9B | W9A# | W9B | W9A# | W9B |
| 30-Nov-09 | 3.5 | 4.1 | 3.9 | 5.1 | 7.5 | 6.8 | 6.0 | 5 | 0.0 | 0.0 | 11.0 | 12 |
| 2-Dec-09 | 3.7 | 4.7 | 4.2 | 4.7 | 7.7 | 6.9 | 8.0 | 9 | 0.3 | 0.3 | 14.0 | 13 |
| 7-Dec-09 | 3.5 | 4.1 | 4.6 | 5.1 | 7.2 | 6.9 | 13.0 | 16 | 0.2 | 0.3 | 15.0 | 21 |
| 9-Dec-09 | 4.1 | 4.5 | 4.2 | 5.3 | 7.6 | 6.8 | 12.0 | 12 | 0.2 | 0.4 | 23.0 | 36 |
| 14-Dec-09 | 3.9 | 4.3 | 12.5 | 9.5 | 7.4 | 6.9 | 25.0 | 19 | 0.5 | 0.5 | 17.0 | 28 |
| 16-Dec-09 | 4.1 | 4.0 | 12.4 | 9.6 | 7.5 | 6.6 | 7.0 | 8 | 0.4 | 0.5 | 26.0 | 27 |
| Action Level | - | < 0.3* | - | > 73.5* | - | > 7.0* | - | > 148* | - | > 30.91* | - | > 242* |
| Limit Level | - | < 0.2** | - | > 78.2** | - | > 7.1** | - | > 159** | - | > 32.20** | - | > 252** |

Notes: # Act 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 Fifty-four (54) individuals of birds from twenty-three (23) species were recorded during the survey on 21 December 2009. Among the birds recorded, one (1) individual from one wetland bird species with abundance from the baseline (i.e. 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, the species number of wetland dependent bird recorded triggered 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 intrusion of construction activities into the wetland areas and no discharge to the adjacent wetlands were found during the site audit on 21 December 2009. Investigation report revealed that the major construction works being carried out during the exceedance day were only tree planting and installation of fencing. Those activities would not cause excessive disturbance to the adjacent wetlands. Therefore, it is concluded that the exceedance was not caused by work under the project.
- 5.11 Photographic records of vegetation within the monitoring area are scheduled in six-month intervals, and thus shown in **Appendix K**. One of the trees recorded during the baseline photographic records and within the Project boundary (i.e. Tree A) was removed due to the needs of the construction works. Other recorded trees are still intact. Fauna monitoring are scheduled in wet season between April and July, and thus are not required in the reporting month.
- 5.12 Ecology Impact Monitoring Results are presented in **Tables 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 (21 December 2009) |
|----------------------------------|-------------------------|---|--|
| Birds | | | |
| <i>Bubulcus ibis</i> | Cattle Egret | 0.4 | |
| <i>Ardeola bacchus</i> | Chinese Pond Heron | 0.8 | 1 |
| <i>Amaurornis phoenicurus</i> | White-breasted Waterhen | Recorded only | 1 |
| <i>Streptopelia chinensis</i> | Spotted Dove | Recorded only | 3 |
| <i>Hirundo rustica</i> | Barn Swallow | Recorded only | |
| <i>Motacilla alba</i> | White Wagtail | Recorded only | 11 |
| <i>Pycnonotus jocosus</i> | Red-whiskered Bulbul | Recorded only | 3 |
| <i>Pycnonotus sinensis</i> | Chinese Bulbul | Recorded only | 2 |
| <i>Lanius schach</i> | Long-tailed Shrike | Recorded only | 1 |
| <i>Copsychus saularis</i> | Oriental Magpie Robin | Recorded only | 3 |
| <i>Orthotomus sutorius</i> | Common Tailorbird | Recorded only | 1 |
| <i>Lonchura striata</i> | White-rumped Munia | Recorded only | |
| <i>Passer montanus</i> | Eurasian Tree Sparrow | Recorded only | 4 |
| <i>Sturnus nigricollis</i> | Black-collared Starling | Recorded only | 3 |
| <i>Acridotheres cristatellus</i> | Crested Myna | Recorded only | 1 |
| <i>Prinia flaviventris</i> | Yellow-bellied Prinia | \ | 2 |
| <i>Garrulax perspicillatus</i> | Masked Laughingthrush | \ | 1 |
| <i>Zosterops japonica</i> | Japanese White Eye | \ | 5 |
| <i>Lonchura punctulata</i> | Scaly-breasted Munia | \ | 3 |
| <i>Egretta garzetta</i> | Little Egret | \ | 1 |
| <i>Anthus hodgsoni</i> | Olive-backed Pipit | \ | 1 |
| <i>Parus major</i> | Great Tit | \ | 2 |
| <i>Motacilla citreola</i> | Grey Wagtail | \ | 2 |
| <i>Turdus merula</i> | Common Blackbird | | 1 |
| <i>Tringa ochropus</i> | Green Sandpiper | | 1 |
| <i>Spilornis cheela</i> | Crested Serpent Eagle | | 1 |
| Species Number | | 15 spp. recorded, (only 2 species of wetland birds with abundance) | 23 spp. (1 sp. from the wetland birds with abundance in the baseline) |

| Scientific Name | Common Name | Abundance reported in the project profile | Abundance recorded in the present survey (21 December 2009) |
|-------------------|-------------|---|---|
| Individual Number | | 1.2 (from the 2 species of wetland birds with abundance) | 54 (1 from the wetland birds with abundance in the baseline) |

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 an 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 ³) | 0 | Public Filling |
| Reused in this Contract (Inert) (m ³) | 0 | N/A |
| Reused in other Projects (Inert) (m ³) | 0 | N/A |
| Disposal as Public Fill (Inert) (m ³) | 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 | NA |
| Chemical Wastes (kg) | 0 | License Collector |
| General Refuses (m ³) | 56 | 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 ³) | - | - | - | East Sha Chau (Pitch 4a & 4b) |
| Type 2 Materials (m ³) | - | - | - | East Sha Chau (Pitch 4c) |

7.0 SITE INSPECTION

7.01 According to Section 9.1.2 of the EM&A Manual, the environmental weekly site inspection should be formulated by the ET Leader. The ET had carried out the environmental weekly site inspection on **27 November, 2, 9 and 16 December 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 December 2009** by IEC's representative with the Engineer's, the Contractor's and ET's representatives. No non-compliance or observation was noted. Upon notification of completion by the Contractor, last site audit was conducted on 16 December 2009 which confirmed no works of environmental significance remain was observed.

7.02 Findings of the site inspection and environmental audit are summarized below –

Table 7-1 Summary of Findings of Site Inspection and Environmental Audit

| Date | Findings / Deficiencies | Follow-Up Status |
|------------------|--|-----------------------------|
| 27 November 2009 | No adverse environmental impact was observed during site inspection. | No follow-up was necessary. |
| 2 December 2009 | No adverse environmental impact was observed during site inspection. | No follow-up was necessary. |
| 9 December 2009 | No adverse environmental impact was observed during site inspection. | No follow-up was necessary. |
| 16 December 2009 | No adverse environmental impact was observed during site inspection. | No follow-up was necessary. |

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 No site visit or inspection carried out by Environmental Protection Department took place in this Reporting Period.

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 –November 2009 | 0 | 0 | NA |
| December 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 –November 2009 | 0 | 0 | NA |
| December 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 –November 2009 | 0 | 0 | NA |
| December 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 clear of mud and debris before leaving the site;
- Site vehicles were limited to 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;
- 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 Upon notification of completion by the Contractor, last site audit was conducted on 16 December 2009 which confirmed no works of environmental significance remain was observed. The impact monitoring carried out by ET was ceased on 19 December 2009. The operational phase is commenced following the termination of the construction phase.
- 10.02 Although the construction phase of the Project has completed, CCC should still keep in mind for the construction noise and other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the EIA and summarized in Mitigation Measure Implementation Schedule should be fully implemented for the maintenance period.
- 10.03 The tentative 3-month rolling program for the remaining work is presented in **Appendix B**.

11.0 CONCLUSION

11.01 The EM&A program in **December 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

| Issues | Parameters | Work-Related Exceedance % | Investigation & Corrective Actions |
|--------------|--|---------------------------|------------------------------------|
| Air Quality | 1-hour TSP | 0 | Not required as not due to project |
| | 24-hour TSP | 0 | Not required as not due to project |
| Noise | Leq (30min) Daytime | 0 | Not required as not due to project |
| Stream Water | Dissolve Oxygen (DO) | 0 | Not required as not due to project |
| | Turbidity (NTU) | 0 | Not required as not due to project |
| | pH | 0 | Not required as not due to project |
| | Suspended Solids (SS) | 0 | Not required as not due to project |
| | Ammonia Nitrogen | 0 | Not required as not due to project |
| | Zinc | 0 | Not required as not due to project |
| Ecology | Decrease in the total number of species or individuals of wetland dependent bird from baseline | 0 | Not required as not due to project |

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

11.02 Upon notification of completion by the Contractor, last site audit was conducted on 16 December 2009 which confirmed no works of environmental significance remain was observed. The impact monitoring carried out by ET was ceased on 19 December 2009, except for ecological monitoring which was last carried out on 21 December 2009 during the Reporting Period. Due to the termination of impact monitoring and EM&A Programme, this serves as the last monthly report of the EM&A Programme and covers data obtained between **26 November** and **31 December 2009** (the Reporting Period) for **December 2009 (No. 30)** as agreed by the IEC and RE.

11.03 No 1-hour and 24-hour TSP monitoring results that triggered the Action or Limit Level was recorded in this Reporting Period.

11.04 No construction noise complaint (an Action Level exceedance) was received and no monitoring noise level above the Limit Level was recorded in this Reporting Period.

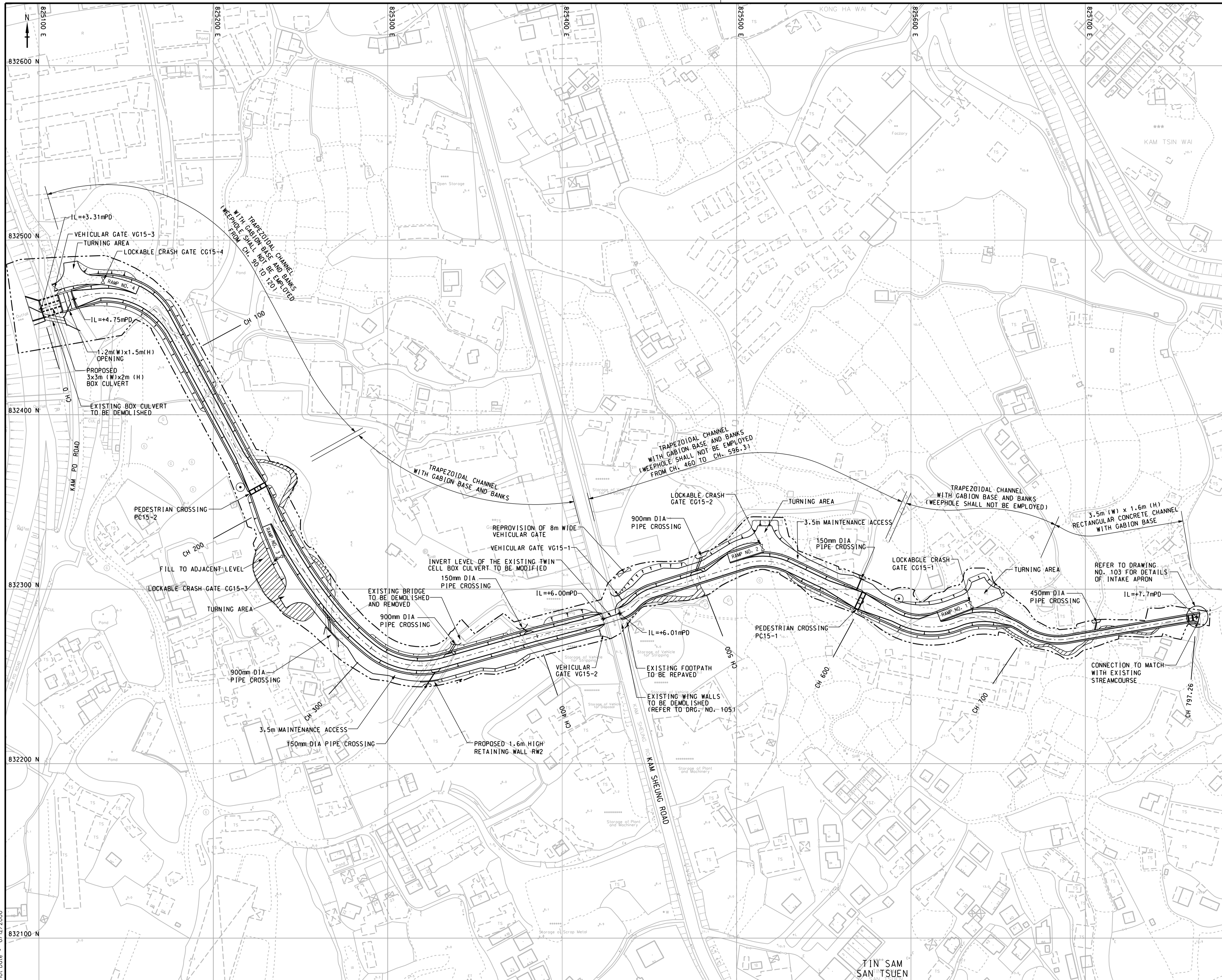
11.05 No water quality monitoring results exceedances were recorded in this Reporting Period.

11.06 One (1) individual from one (1) wetland bird species with abundance from the baseline was observed during the survey on 21 December 2009 and a total of fifty-four (54) individuals of birds from twenty-three (23) species were recorded. The species number of wetland dependent bird triggered the Limit Level. However, no intrusion of construction activities into the wetland areas and no discharge to the adjacent wetlands were found on 21 December 2009 during the site audit. Investigation report revealed that the major construction works being carried out during the exceedance day were only tree planting and installation of fencing. Those activities would not cause excessive disturbance to the adjacent wetlands. Therefore, it is concluded that the exceedance was not caused by work under the project.

- 11.07 No environmental complaint, summons or prosecution was received in this Reporting Period.
- 11.08 The ET environmental weekly site inspections were conducted on 27 November, 2, 9 and 16 December 2009. No non-compliance or observation was recorded.
- 11.09 No site visit or inspection carried out by Environmental Protection Department took place in this Reporting Period.
- 11.10 This is the last monthly EM&A report for Channel KT15 of the Project following substantial completion on 10 November 2009. However, CCC should still keep in mind for the construction noise and other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the EIA and summarized in Mitigation Measure Implementation Schedule should be fully implemented for the maintenance period of construction.

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. | Scale |
| 021 | 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 | Successors | % Complete | December 2009 | | | | | | | | | | | | January 2010 | | | | | | | Febr | | | | | |
|----|--|-----------------|---------------------|--------------------|--------------|------------|----------------|---------------|----|---|---|---|----|----|----|----|----|----|----|--------------|---|---|----|----|----|----|------|----|----|---|--|--|
| | | | | | | | | 27 | 30 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 2 | 5 | 8 | 11 | 14 | 17 | 20 | 23 | 26 | 29 | 1 | | |
| 1 | Remaining Works In Channel KT15 | 121 days | Mon 30/11/09 | Thu 22/4/10 | | | 30% | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Installation of Vehicular Gate 2 nos | 3 days | Wed 9/12/09 | Fri 11/12/09 | | | 19 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | fabricate and delivery of catcpit cover and U-channel cover | 14 days | Mon 30/11/09 | Tue 15/12/09 | | | 4 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Installation of covers to catchpits | 1 day | Wed 16/12/09 | Wed 16/12/09 | 3 | | 20 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Installation of Safety Chain at Box Culvert | 1 day | Sat 5/12/09 | Sat 5/12/09 | | | 25 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Installation of Survey Markers and Chainage Marker Plates | 2 days | Fri 4/12/09 | Sat 5/12/09 | | | 26 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Perparation Works for DSD Inspection | 3 days | Wed 9/12/09 | Fri 11/12/09 | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Granolithic Paving at PC15-1 and PC15-2 | 4 days | Thu 24/12/09 | Wed 30/12/09 | 36 | | 41 | 50% | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Construction Works by CLP | 90 days | Mon 30/11/09 | Wed 17/3/10 | | | 11 | 10% | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Hard Paving the maintenance Access near Kam Sheung Road | 30 days | Thu 18/3/10 | Wed 21/4/10 | 10 | | 13,43 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Installation of Chain Link Fencing | 6 days | Mon 30/11/09 | Sat 5/12/09 | | | | 90% | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Road Marking | 1 day | Thu 22/4/10 | Thu 22/4/10 | 11 | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Joint Sealant to road slab | 3 days | Mon 30/11/09 | Wed 2/12/09 | | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Planting remaining new trees | 10 days | Mon 14/12/09 | Thu 24/12/09 | | | | 80% | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Hydroseeding | 2 days | Mon 7/12/09 | Tue 8/12/09 | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Remaining Works In Channel KT2 | 121 days | Mon 30/11/09 | Thu 22/4/10 | | | 68% | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Installation of Vehicular Gate 2 nos and Lockable Crash Gate 2 nos | 4 days | Sat 12/12/09 | Wed 16/12/09 | 2 | | 42 | 50% | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Installation of covers to catchpits | 3 days | Thu 17/12/09 | Sat 19/12/09 | 4 | | | 95% | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | construction of U-channel CP2-1A.1, 10m | 1 day | Fri 4/12/09 | Fri 4/12/09 | 21 | | 22 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | construction of U-channel CP2-6.2, 15m | 1 day | Sat 5/12/09 | Sat 5/12/09 | 21 | | 23 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | construction of U-channel CP2-9.1, 15m | 2 days | Mon 7/12/09 | Tue 8/12/09 | 22 | | 24 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | construction of U-channel CP2-11A.1, 80m | 8 days | Wed 9/12/09 | Thu 17/12/09 | 23 | | 46,31SS+2 days | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | installation of safety chain at box culvert | 1 day | Mon 7/12/09 | Mon 7/12/09 | 5 | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | installation of survey markers and chainage marker plates | 1 day | Mon 7/12/09 | Mon 7/12/09 | 6 | | 29 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | installation of tubular amenity railings | 8 days | Mon 30/11/09 | Tue 8/12/09 | | | 28 | 80% | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | installation of remaining type II railing at Channel and Refuse Collection Point | 3 days | Wed 9/12/09 | Fri 11/12/09 | 27 | | 30 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | installation of flooding warning signs | 5 days | Tue 8/12/09 | Sat 12/12/09 | 26 | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Providing spot weld to the installed type II railing | 10 days | Sat 12/12/09 | Wed 23/12/09 | 28 | | 40 | 50% | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | Desilting Channel | 6 days | Fri 11/12/09 | Thu 17/12/09 | 24SS+2 days | | 36,34 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Clear Drainage Pipe for CCTV Inspection | 15 days | Mon 30/11/09 | Wed 16/12/09 | | | 33 | 95% | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | submission of CCTV Report | 1 day | Thu 17/12/09 | Thu 17/12/09 | 32 | | | 95% | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | exposing sealed weepholes at chanenl base slab | 2 days | Fri 18/12/09 | Sat 19/12/09 | 31 | | 35 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | Removal of Temporary Flapvalve | 3 days | Mon 21/12/09 | Wed 23/12/09 | 34 | | | 90% | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | Preparartion Works for DSD Inspection | 5 days | Fri 18/12/09 | Wed 23/12/09 | 31 | | 9 | 50% | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | Clearing AFCD' s Pond | 14 days | Mon 30/11/09 | Tue 15/12/09 | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | Triming Slope from Ch1000 to CH800 | 10 days | Mon 30/11/09 | Thu 10/12/09 | | | 46 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | installation of remaining type II railing from Ch800 to Ch1250 | 15 days | Thu 24/12/09 | Wed 13/1/10 | 30 | | | 50% | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | construct pavement at all crossing | 4 days | Thu 31/12/09 | Tue 5/1/10 | 9 | | 44,47 | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | installation of chain link fence | 30 days | Thu 17/12/09 | Sat 23/1/10 | 19 | | | 50% | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | Road marking | 1 day | Thu 22/4/10 | Thu 22/4/10 | 11 | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Joint Sealant | 7 days | Wed 6/1/10 | Wed 13/1/10 | 41 | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | Planting remaining new trees | 10 days | Mon 14/12/09 | Thu 24/12/09 | | | | 80% | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | hydroseeding | 6 days | Fri 18/12/09 | Thu 24/12/09 | 24,39 | | | 90% | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | Construct remaining Pedestrian near VC2-1 | 5 days | Wed 6/1/10 | Mon 11/1/10 | 41 | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | Housekeeping | 45 days | Mon 30/11/09 | Sat 23/1/10 | | | | 35% | | | | | | | | | | | | | | | | | | | | | | | | |

Program for Remaining Works at Channel KT2 and KT15 (Rev.C)
 Date: Fri 18/12/09

Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone

APPENDIX C

ENVIRONMENTAL ORGANIZATION STRUCTURE

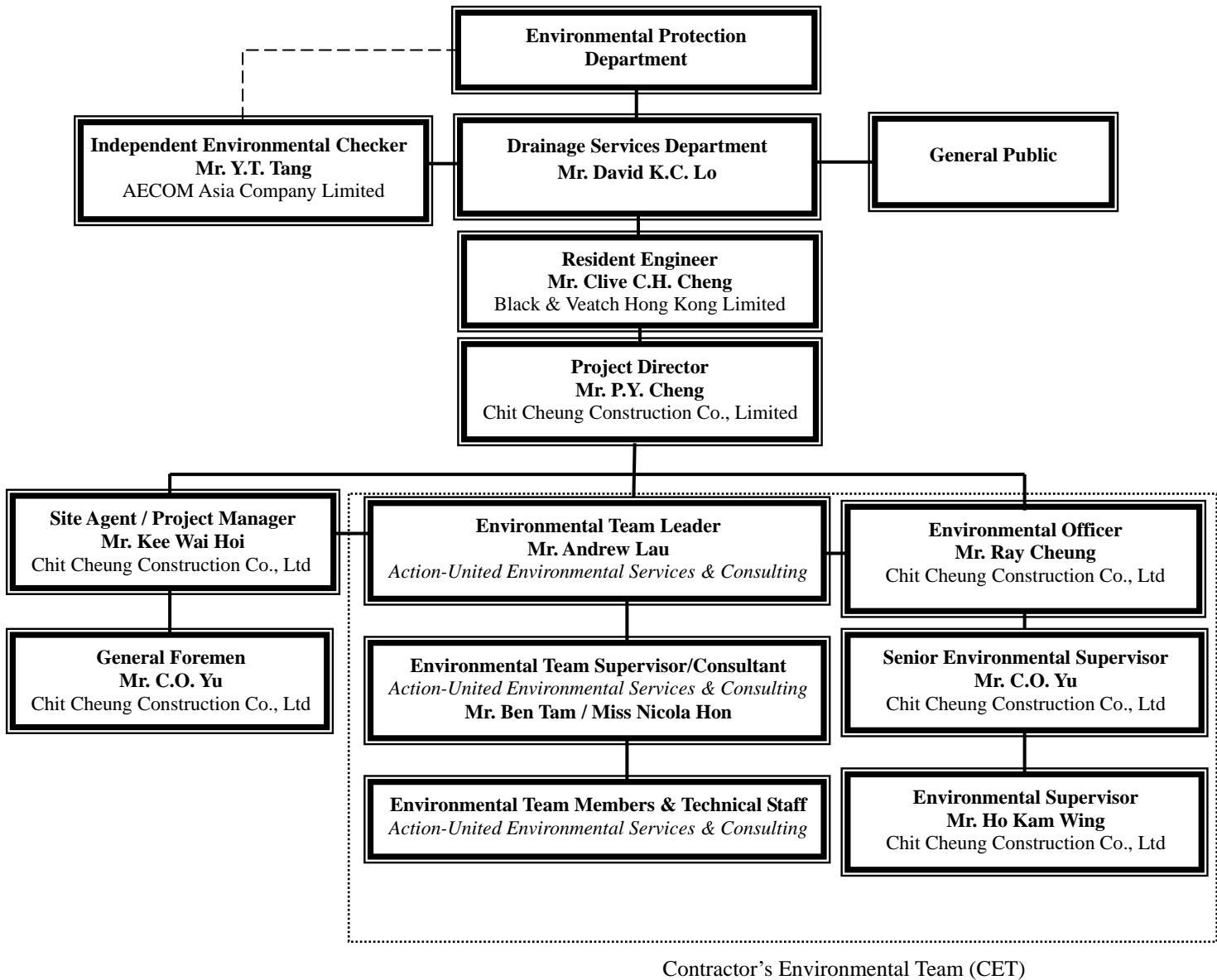
Contact Details of Key Personnel

| 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 |
| AECOM | 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. K.W. Hoi | 6603-9711 | 2479-1365 |
| CCC | Site Agent | Mr. K.W. Hoi | 6603-9711 | 2479-1365 |
| CCC | Site Engineer | Mr. Jimmy CHAN | 9234-8632 | 2479-1365 |
| CCC | Environmental Officer | Mr. Ray Cheung | 6103-7404 | 2479-1365 |
| CCC | Senior Environmental Supervisor | Mr. K W Ho | 9016-0592 | 2479-1365 |
| CCC | Environmental Supervisor | Mr. K W Ho | 9016-0592 | 2479-1365 |
| CCC | Safety Officer | Mr. C.C Yu | 6086-4658 | 2479-1365 |
| AUES | Environmental Team Leader | Mr. Andrew Lau | 2959-6059 | 2959-6079 |
| AUES | Ecologist | Mr. Vincent Lai | 9406-9784 | 2959-6079 |

Legend:

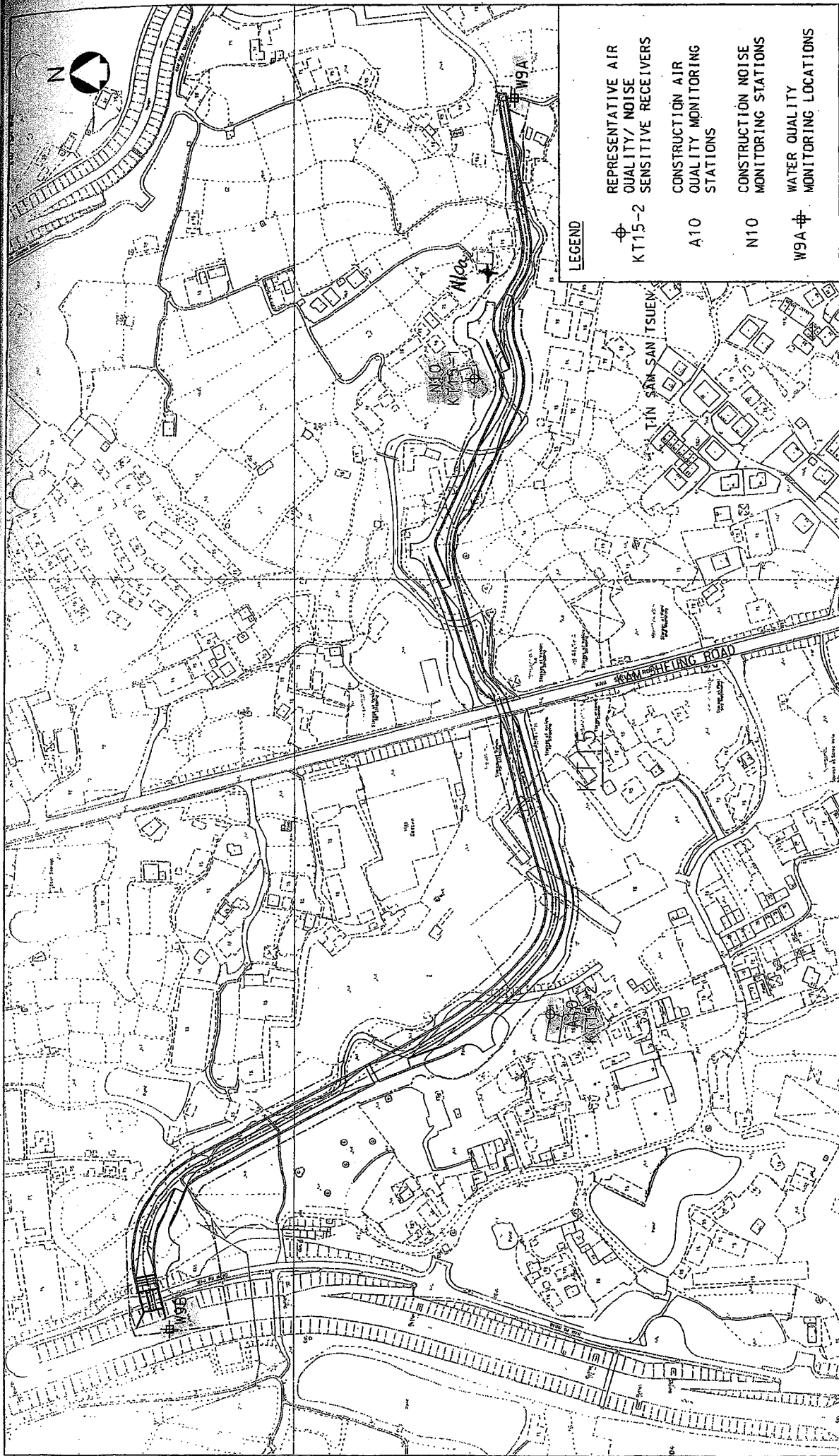
| | | |
|------------------|---|---|
| DSD (Employer) | - | Drainage Services Department |
| B&V (Engineer) | - | Black & Veatch Hong Kong Limited |
| CCC (Contractor) | - | Chit Cheung Construction Company Limited |
| AECOM (IEC) | - | AECOM Asia Company Limited |
| AUES (ET) | - | Action-United Environmental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

Environmental Organization Structure



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 |

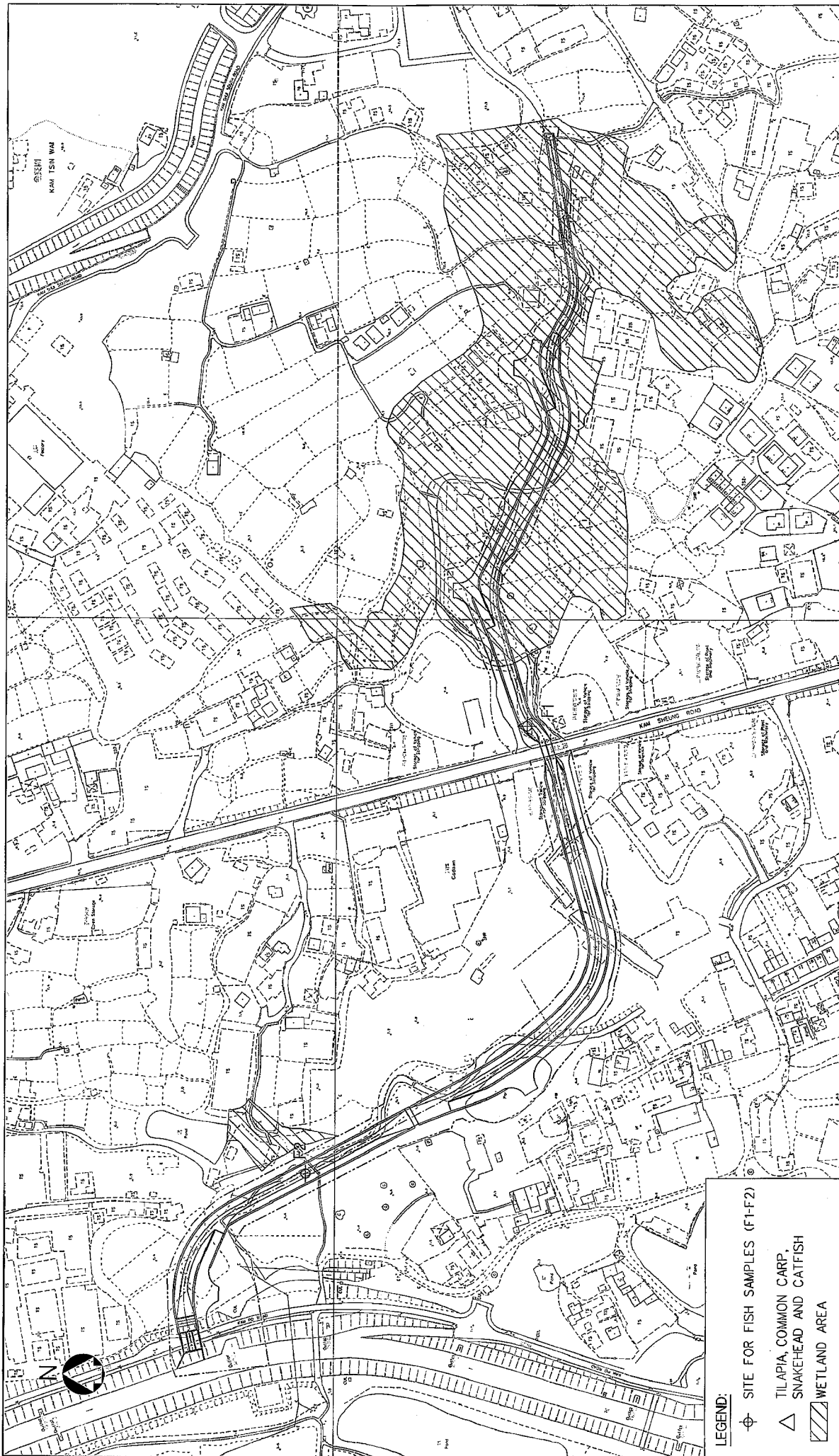
Title :

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

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

Event/Action Plan for Construction Noise

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

Event and Action Plan for Stream Water Quality

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

Event/Action Plan for Ecology

| Event | ET Leader | IEC | Engineer | Contractor |
|--|--|---|---|---|
| <p>Fauna</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"> Notify IEC and Contractor; Check the position and state of the current works to identify the causes; Discuss mitigation measures with IEC and Contractor | <ul style="list-style-type: none"> Discuss with ET and Contractor on the mitigation measures Review proposals on mitigation measures submitted by Contractor and advice Engineer accordingly Assess the effectiveness of the implemented mitigation measures | <ul style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures; Reach agreement on the mitigation measures to be implemented | <ul style="list-style-type: none"> Inform Engineer and confirm notification of the non-compliance in writing Take immediate action to avoid further exceedances; Check all plant and equipment and working methods, especially noise emanating ones Discuss with ET and IEC and propose mitigation measures to IEC and Engineer Implement the agreed mitigation measures |

APPENDIX F

EQUIPMENT CALIBRATION CERTIFICATES

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

| Items | Aspect | Description of Equipment | Date of Calibration | Date of Next Calibration |
|-------|--------|--|---------------------|--------------------------|
| 1 | Air | Graseby Andersen GMWS2310 High Volume Sampler | 9 Nov 09 | 9 Jan 10 |
| 2 | | Calibration Kit TISCH Model TE-5025A – Orifcs ID 1612 and Rootsmeter S/N 9833620 | 2 June 2009 | 2 June 2010 |
| 3 | | TSI DuskTrak Model 8520 (21060) | 18 Jun 09 | 18 Jun 10 |
| 4 | | TSI DuskTrak Model 8520 (23080) | 18 Jun 09 | 18 Jun 10 |
| 5 | Noise | Cesva CB-5 Acoustical Calibrator (Serial No. 030934) | 28 Apr 09 | 28 Apr 10 |
| 6 | | Cesva SC-20c Sound Level Meter (Serial No. T212509) | 28 Apr 09 | 28 Apr 10 |
| 7 | Water | YSI 550A (Serial No. 05F2063AZ) | 17 Oct 09 | 17 Jan 10 |
| 8 | | Hanna HI98107 (Serial No. S411364) | 21 Oct 09 | 21 Jan 10 |
| 9 | | Turbidimeter HACH 2100p (Serial No. 08070C031408) | 27 Oct 09 | 27 Jan 10 |
| 10 | | Hand refractometer ATAGO (Serial No. 289468) | 21 Oct 09 | 21 Jan 10 |

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

APPENDIX G

IMPACT MONITORING SCHEDULES

Impact Monitoring Schedules in this Reporting Period

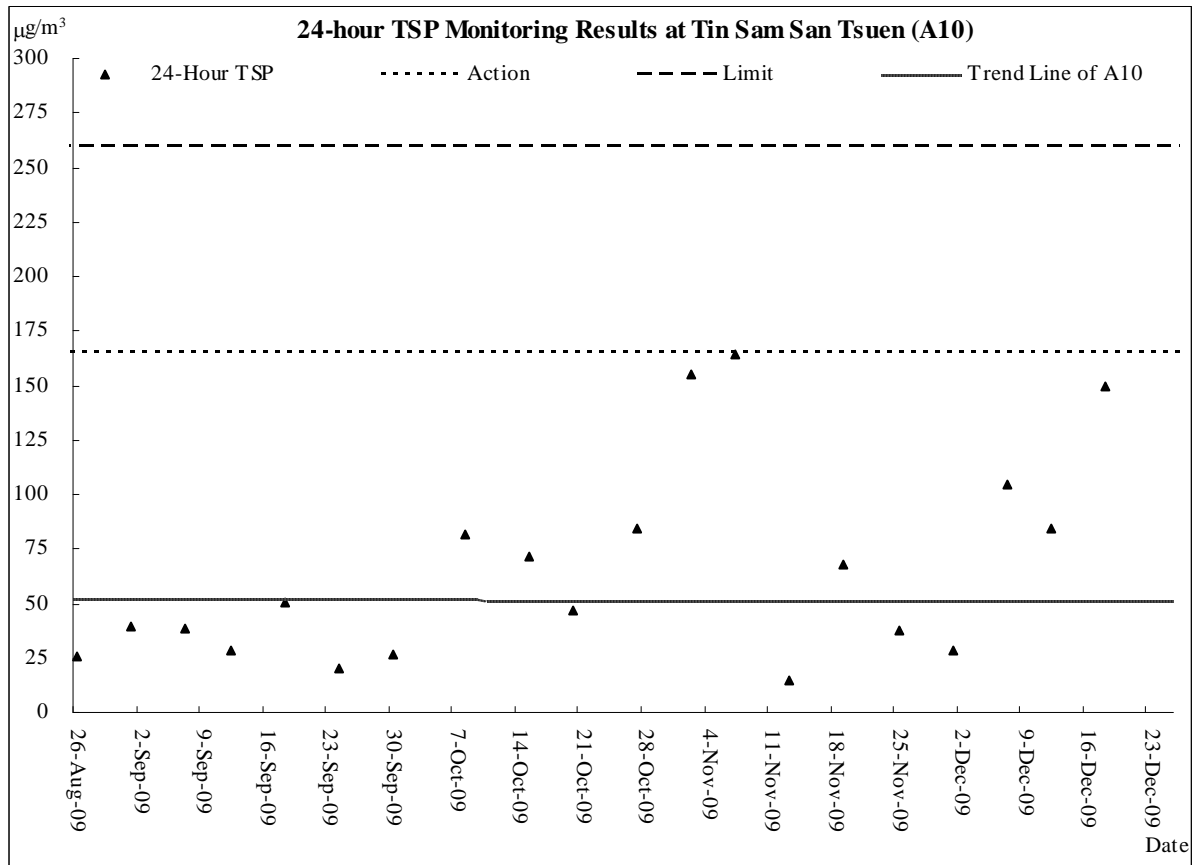
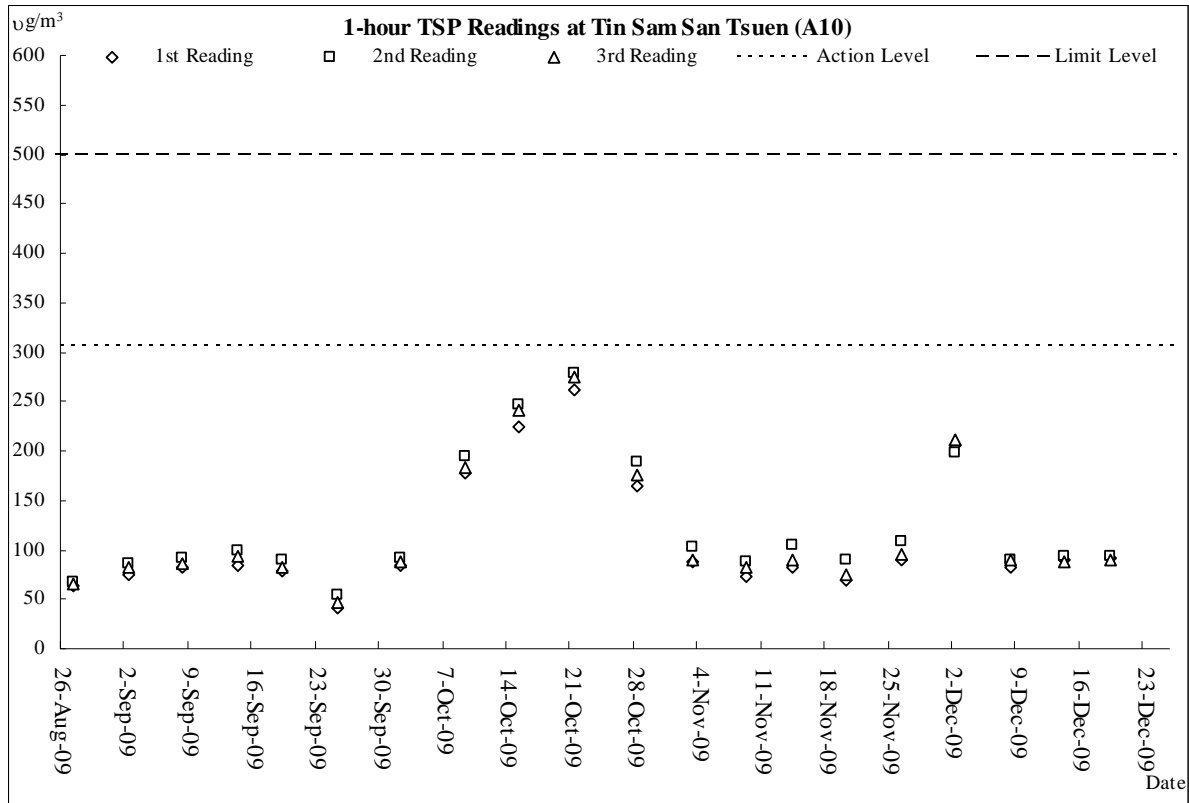
| Date | | Air Quality | | Noise Leq 30min | Water Quality | Ecology Surveys |
|------|-----------|-------------|-------------|--------------------|---------------|-----------------|
| | | 1-hour TSP | 24-hour TSP | | | |
| Thu | 26-Nov-09 | | | | | |
| Fri | 27-Nov-09 | | | | | |
| Sat | 28-Nov-09 |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

| | |
|--|--------------------------|
| | Monitoring Day |
| | Sunday or Public Holiday |

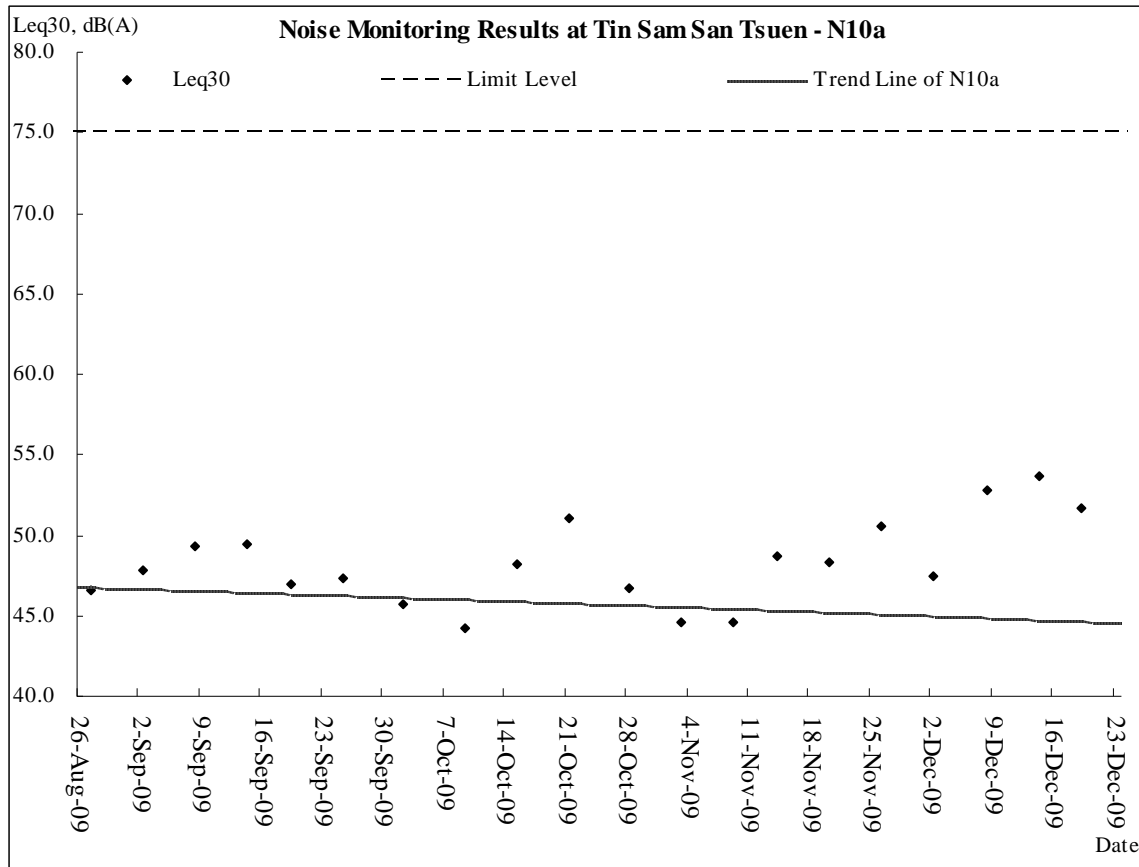
APPENDIX H

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

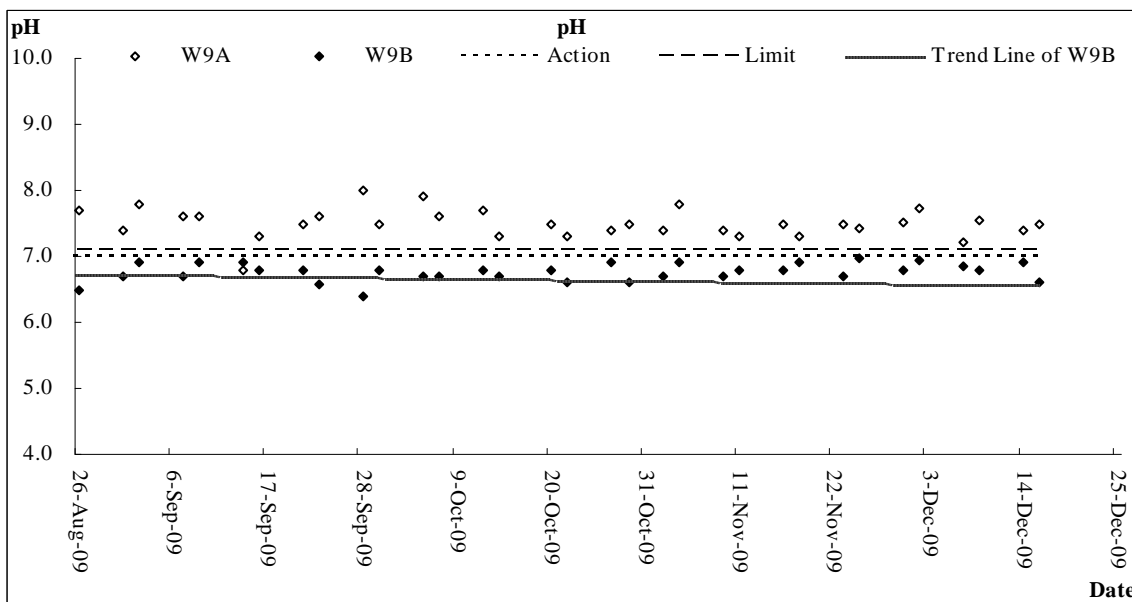
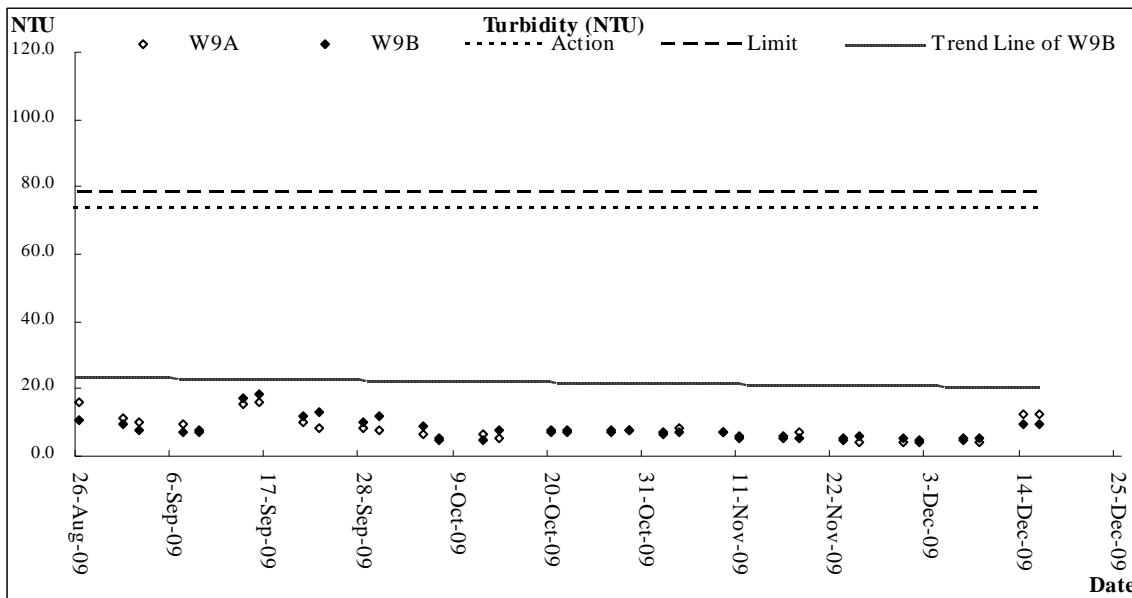
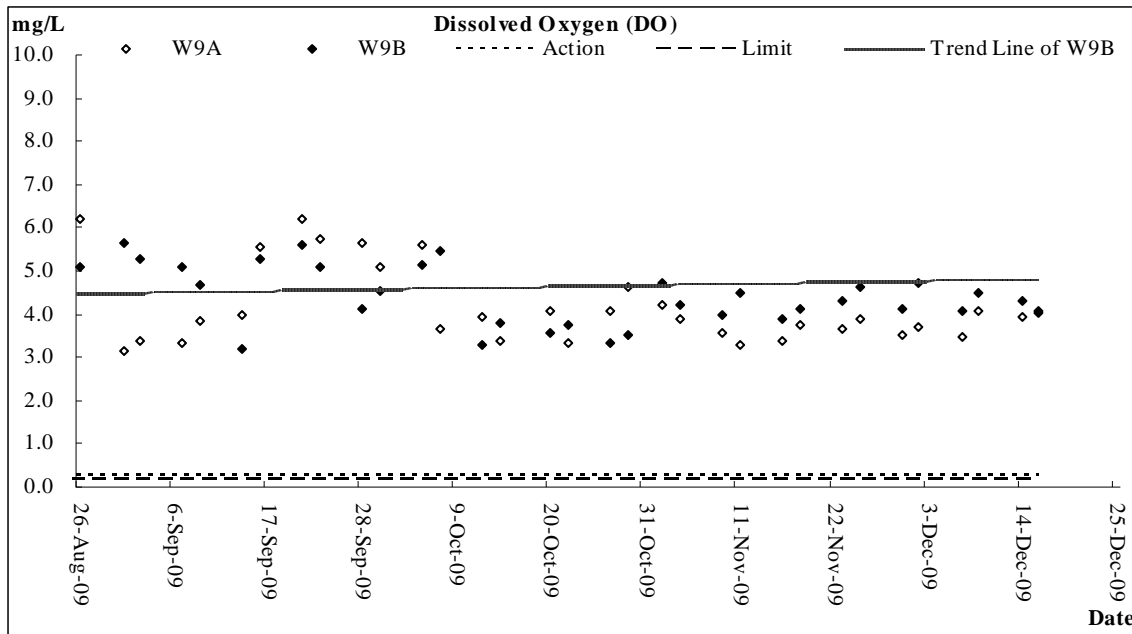
AIR QUALITY

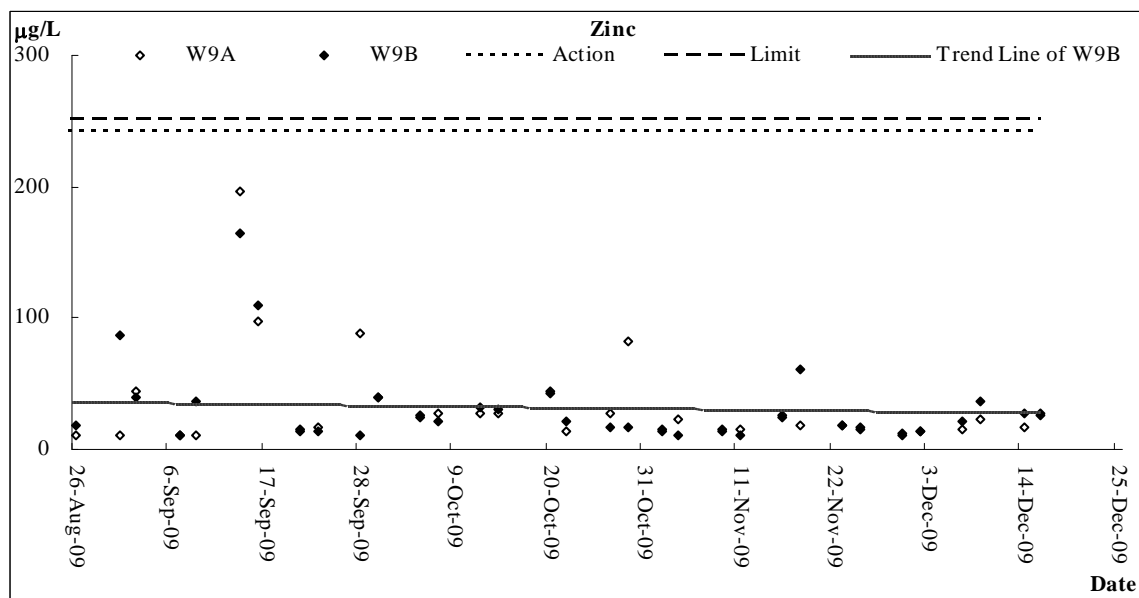
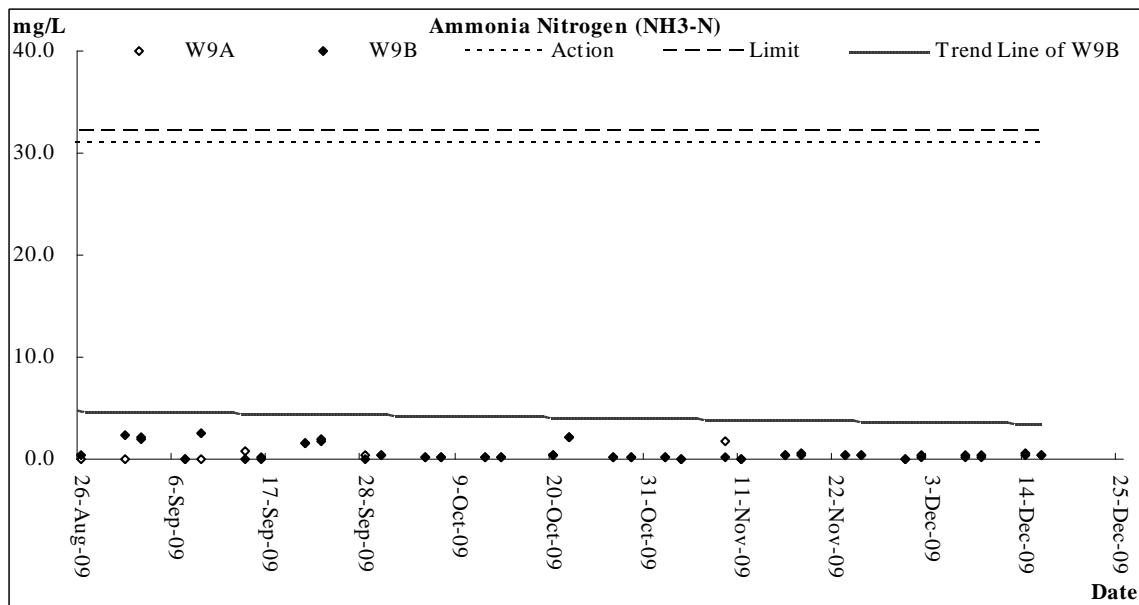
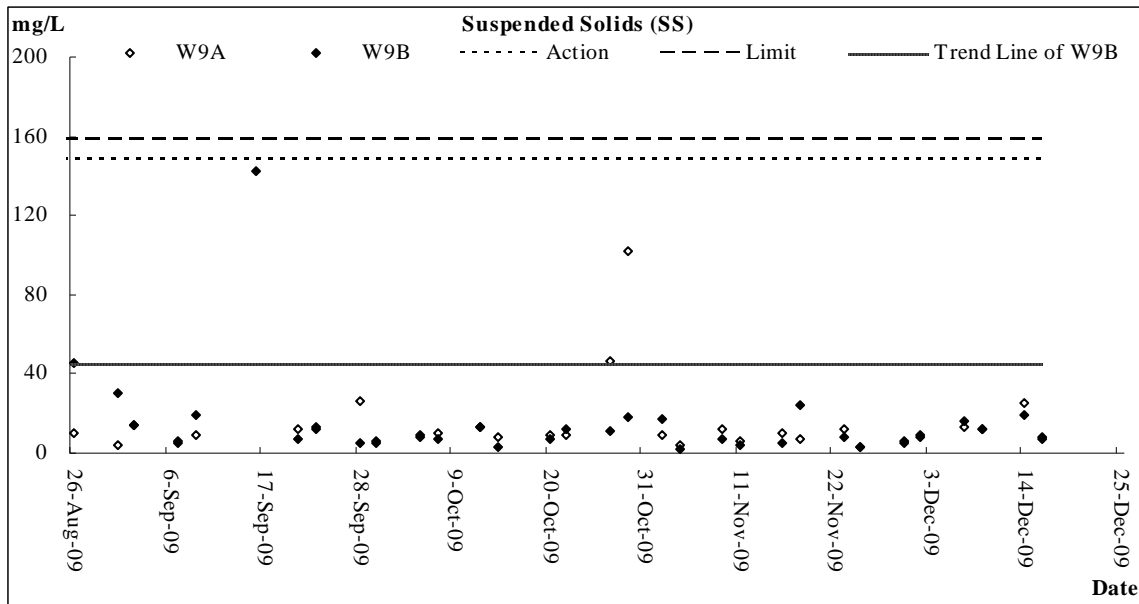


CONSTRUCTION NOISE



STREAM WATER QUALITY





| Date 30-Nov-09 | | | | | | | | | | | | | | | | | |
|----------------|-------|-----------|-----------|------|-----------|------|---------|------|-----------------|-----|----------|-----|------|------|-----|-------|------|
| Location | Time | Depth (m) | Temp (oC) | | DO (mg/L) | | DOS (%) | | Turbidity (NTU) | | Salinity | | pH | | SS | NH3-N | Zinc |
| W9A | 15:25 | 0.10 | 21.2 | 21.2 | 3.53 | 3.51 | 46.7 | 46.3 | 3.9 | 3.9 | 0 | 0.0 | 7.53 | 7.53 | 6.0 | 0.0 | 11.0 |
| | | | 21.2 | | 3.48 | | 45.9 | | 3.9 | | 0 | | 7.53 | | | | |
| W9B | 15:30 | 0.10 | 20.5 | 20.5 | 4.16 | 4.13 | 53.1 | 52.7 | 5.1 | 5.1 | 0 | 0.0 | 6.78 | 6.78 | 5.0 | 0.0 | 12.0 |
| | | | 20.5 | | 4.09 | | 52.2 | | 5.0 | | 0 | | 6.78 | | | | |

| Date 2-Dec-09 | | | | | | | | | | | | | | | | | |
|---------------|-------|-----------|-----------|------|-----------|------|---------|------|-----------------|-----|----------|-----|------|------|-----|-------|------|
| Location | Time | Depth (m) | Temp (oC) | | DO (mg/L) | | DOS (%) | | Turbidity (NTU) | | Salinity | | pH | | SS | NH3-N | Zinc |
| W9A | 15:35 | 0.10 | 18.9 | 18.9 | 3.75 | 3.73 | 50.4 | 50.1 | 4.2 | 4.2 | 0 | 0.0 | 7.73 | 7.73 | 8.0 | 0.3 | 14.0 |
| | | | 18.9 | | 3.7 | | 49.7 | | 4.1 | | 0 | | 7.73 | | | | |
| W9B | 16:00 | 0.10 | 19.5 | 19.5 | 4.76 | 4.74 | 57.2 | 56.8 | 4.7 | 4.7 | 0 | 0.0 | 6.94 | 6.94 | 9.0 | 0.3 | 13.0 |
| | | | 19.5 | | 4.72 | | 56.4 | | 4.6 | | 0 | | 6.94 | | | | |

| Date 7-Dec-09 | | | | | | | | | | | | | | | | | |
|---------------|-------|-----------|-----------|------|-----------|------|---------|------|-----------------|-----|----------|-----|------|------|------|-------|------|
| Location | Time | Depth (m) | Temp (oC) | | DO (mg/L) | | DOS (%) | | Turbidity (NTU) | | Salinity | | pH | | SS | NH3-N | Zinc |
| W9A | 15:05 | 0.10 | 17.6 | 17.6 | 3.52 | 3.49 | 47.6 | 47.2 | 4.6 | 4.6 | 0 | 0.0 | 7.22 | 7.22 | 13.0 | 0.2 | 15.0 |
| | | | 17.6 | | 3.46 | | 46.8 | | 4.5 | | 0 | | 7.22 | | | | |
| W9B | 15:25 | 0.10 | 17.9 | 17.9 | 4.11 | 4.08 | 51.3 | 50.9 | 5.1 | 5.1 | 0 | 0.0 | 6.86 | 6.86 | 16.0 | 0.3 | 21.0 |
| | | | 17.9 | | 4.05 | | 50.5 | | 5.0 | | 0 | | 6.86 | | | | |

| Date 9-Dec-09 | | | | | | | | | | | | | | | | | |
|---------------|-------|-----------|-----------|------|-----------|------|---------|------|-----------------|-----|----------|-----|------|------|------|-------|------|
| Location | Time | Depth (m) | Temp (oC) | | DO (mg/L) | | DOS (%) | | Turbidity (NTU) | | Salinity | | pH | | SS | NH3-N | Zinc |
| W9A | 14:55 | 0.10 | 18.9 | 18.9 | 4.13 | 4.09 | 53.1 | 52.6 | 4.2 | 4.2 | 0 | 0.0 | 7.55 | 7.55 | 12.0 | 0.2 | 23.0 |
| | | | 18.9 | | 4.05 | | 52.1 | | 4.1 | | 0 | | 7.55 | | | | |
| W9B | 15:20 | 0.10 | 19.3 | 19.3 | 4.53 | 4.51 | 59.7 | 59.3 | 5.3 | 5.3 | 0 | 0.0 | 6.78 | 6.78 | 12.0 | 0.4 | 36.0 |
| | | | 19.3 | | 4.49 | | 58.9 | | 5.2 | | 0 | | 6.77 | | | | |

| Date 14-Dec-09 | | | | | | | | | | | | | | | | | |
|----------------|-------|-----------|-----------|------|-----------|------|---------|------|-----------------|------|----------|-----|------|------|------|-------|------|
| Location | Time | Depth (m) | Temp (oC) | | DO (mg/L) | | DOS (%) | | Turbidity (NTU) | | Salinity | | pH | | SS | NH3-N | Zinc |
| W9A | 15:35 | 0.10 | 20.8 | 20.8 | 3.97 | 3.93 | 41.8 | 41.2 | 12.9 | 12.5 | 0 | 0.0 | 7.40 | 7.40 | 25.0 | 0.5 | 17.0 |
| | | | 20.8 | | 3.89 | | 40.6 | | 12.1 | | 0 | | 7.40 | | | | |
| W9B | 15:50 | 0.10 | 21.6 | 21.6 | 4.35 | 4.33 | 45.3 | 45.0 | 9.2 | 9.5 | 0 | 0.0 | 6.90 | 6.90 | 19.0 | 0.5 | 28.0 |
| | | | 21.6 | | 4.3 | | 44.7 | | 9.8 | | 0 | | 6.90 | | | | |

| Date 16-Dec-09 | | | | | | | | | | | | | | | | | |
|----------------|-------|-----------|-----------|------|-----------|------|---------|------|-----------------|------|----------|-----|------|------|-----|-------|------|
| Location | Time | Depth (m) | Temp (oC) | | DO (mg/L) | | DOS (%) | | Turbidity (NTU) | | Salinity | | pH | | SS | NH3-N | Zinc |
| W9A | 16:00 | 0.10 | 23.4 | 23.3 | 4.01 | 4.07 | 42.5 | 42.9 | 12.4 | 12.4 | 0 | 0.0 | 7.50 | 7.50 | 7.0 | 0.4 | 26.0 |
| | | | 23.2 | | 4.13 | | 43.3 | | 12.4 | | 0 | | 7.50 | | | | |
| W9B | 16:15 | 0.10 | 23.3 | 23.3 | 4.06 | 4.01 | 41.7 | 41.0 | 9.5 | 9.6 | 0 | 0.0 | 6.60 | 6.60 | 8.0 | 0.5 | 27.0 |
| | | | 23.3 | | 3.95 | | 40.2 | | 9.6 | | 0 | | 6.60 | | | | |

APPENDIX I

METEOROLOGICAL DATA IN THE REPORTING PERIOD

Meteorological Data Extracted from Hong Kong Observatory 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 |
| Thu 26-Nov-09 | Sunny periods. Moderate east to northeasterly winds. | 0.0 | 21.5 | 11.0 | 76 | 90 |
| Fri 27-Nov-09 | Sunny periods in the afternoon. Mainly cloudy | 0.0 | 22.2 | 8.4 | 77 | 90 |
| Sat 28-Nov-09 | Mainly fine and dry. Fresh easterly winds, | 0.0 | 22 | 11.0 | 67 | 110 |
| Sun 29-Nov-09 | Fine but hazy. Dry during the day. Moderate | 0.0 | 20.3 | 10.0 | 71 | 80 |
| Mon 30-Nov-09 | Fine but hazy. Moderate north to northeasterly winds. | 0.0 | 18.1 | 12.2 | 69 | 80 |
| Tue 1-Dec-09 | Mainly fine but hazy. Moderate northeasterly winds, | 0.0 | 17.1 | 10.4 | 70 | 90 |
| Wed 2-Dec-09 | Fine and dry. Moderate to fresh north to northeasterly | 0.0 | 19.2 | 11.6# | 67 | 360# |
| Thu 3-Dec-09 | Fine and dry. Cool in the morning. Moderate to fresh | 0.0 | 16.6 | 18.1 | 56 | 10 |
| Fri 4-Dec-09 | Fine and dry apart from some haze. Cool | 0.0 | 16.8 | 11.4 | 56 | 90 |
| Sat 5-Dec-09 | Very dry in the afternoon. Moderate northerly winds, | 0.0 | 16.5 | 11.9 | 52 | 80 |
| Sun 6-Dec-09 | Cloudy. Fresh easterly winds, occasionally strong over | 0.0 | 18.2 | 10.8 | 63 | 80 |
| Mon 7-Dec-09 | Mainly cloudy with a few rain patches. Moderate | 6.0 | 17 | 14.5 | 88 | 80 |
| Tue 8-Dec-09 | Mainly cloudy with a few rain patches. Moderate | 3.5 | 17.6 | 12.8 | 92 | 50 |
| Wed 9-Dec-09 | Mainly fine apart from relatively low visibility at first. | 0.0 | 18.3 | 6.5 | 90 | 80 |
| Thu 10-Dec-09 | Mainly fine apart from some haze | 0.0 | 19 | 9.1 | 86 | 350 |
| Fri 11-Dec-09 | Sunny periods. Visibility relatively low at first. Light | 0.0 | 19.8 | 8.5 | 85 | 90 |
| Sat 12-Dec-09 | Sunny periods. Moderate to fresh easterly winds. | 0.0 | 21 | 11.0 | 79 | 90 |
| Sun 13-Dec-09 | Cloudy with a few rain patches. Moderate easterly | 0.0 | 19.5 | 8.0 | 84 | 140 |
| Mon 14-Dec-09 | Mainly cloudy. Visibility rather low. Moderate to fresh | 0.0 | 19.8 | 14.0 | 81 | 80 |
| Tue 15-Dec-09 | Moderate northerly winds, occasionally fresh over | 7.5 | 19 | 13.8 | 85 | 80 |
| Wed 16-Dec-09 | Cloudy with a few rain patches at first. It will be cold. | 0.5 | 12.3 | 16.4 | 77 | 50 |
| Thu 17-Dec-09 | Sunny intervals and dry tomorrow with a maximum | 0.0 | 10.8 | 18.1 | 75 | 10 |
| Fri 18-Dec-09 | Mainly cloudy and cold. Dry during the day. | 0.0 | 10.8 | 13.9 | 68 | 50 |
| Sat 19-Dec-09 | Cold and dry. Cloudy at first. Sunny periods during the | 0.0 | 12.2 | 12.9 | 58 | 40 |

missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

APPENDIX J

ENVIRONMENTAL TEAM SITE INSPECTION CHECKLISTS

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: K. P. Cheung
 IEC/IEC's representative: _____
 ETL/ ET's representative: Ben Tam
 Contractor's representative: Ray Cheung
 Checklist No. KT15-261109

Inspection
 Date: 26 November 2009
 Time: 10:00

PART A: GENERAL INFORMATION Environmental Permit No. NA

Weather: Sunny Fine Cloudy Rainy
 Temperature: 18 °C
 Humidity: High Moderate Low
 Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

| | | Not Obs. | Yes | No | Follow up | N/A | Photo/ Remarks |
|---------------------------------|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|----------------|
| Section 1: Water Quality | | | | | | | |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | _____ |

| | | 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 | Concreting wastes water should be neutralized below the pH Action Levels before discharge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.25 | Any mitigation is implemented during de-watering of the stream within the proposed channel to avoid pollutants entering Kam Tin River? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.26 | Sediments at the dewatering of the streams should be dry before excavation. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.27 | Dam or barrier should be provided at the interaction of old and new channels to prevent concrete washing from the construction works flow into the exist channel. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.28 | License collector should be employed for handling the sewage of mobile toilet. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.29 | Prevent any stagnant water accumulated within the excavation trench or site working area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 2: Air Quality | | | | | | | |
| 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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.06 | Are the access roads sprayed with water to maintain the entire road surface wet or paved? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.07 | Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.08 | Is the load on vehicles covered entirely by clean impervious sheeting? | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.13 | Are site vehicles travelling within the speed limit not more than 20km/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 | Excavated odourous materials shall be transported away from site immediately if possible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.17 | If on-site stockpiling cannot be avoided, it should covered properly at all time and shortest duration storage on-site as possible? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.18 | All vehicle exhaust are directed vertically upwards or directed away from the ground? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.19 | Any materials dropped on sealed roads are clean up immediately to prevent dust emission? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 3: Noise | | | | | | | |
| 3.01 | Are noisy equipment and activities positioned as far as practicable from the sensitive receivers (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 3.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.06 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.07 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.08 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.13 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.14 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.15 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.16 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.17 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.18 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.19 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 4: Waste/Chemical Management | | | | | | |
| 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"/> | |

Environmental Site Inspection Checklist for KT15

| | Not Obs. | Yes | No | Follow up | N/A | Photo/ Remarks |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|----------------|
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | |
| Section 5: Landscape & Visual | | | | | | |
| 5.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.03 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 5.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 6: Ecology | | | | | | |
| 6.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.03 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.06 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 7: Others | | | | | | |
| 7.01 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Remarks

Follow-Up of Last Site Inspection (17 November 2009):

Nil.

Finding of Site Inspection on 26 November 2009:

No adverse environmental impact was observed during site inspection.

RE's representative

IEC's representative

ET's representative

Contractor's representative



(KPOHEUNG)

(

)



(Ben Tam)



(Ray Cheung)

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: K. P. Cheung
IEC/IEC's representative: _____
ETL/ ET's representative: Nicola Hon
Contractor's representative: Ray Cheung
Checklist No. KT15-021209

Inspection
Date: 2 December 2009
Time: 10:00

PART A: GENERAL INFORMATION Environmental Permit No. NA

Weather: Sunny Fine Cloudy Rainy
 Temperature: 19.2 °C
 Humidity: High Moderate Low
 Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

| | | Not Obs. | Yes | No | Follow up | N/A | Photo/ Remarks |
|---------------------------------|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|----------------|
| Section 1: Water Quality | | | | | | | |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | _____ |

| | | 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 | Concreting wastes water should be neutralized below the pH Action Levels before discharge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.25 | Any mitigation is implemented during de-watering of the stream within the proposed channel to avoid pollutants entering Kam Tin River? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.26 | Sediments at the dewatering of the streams should be dry before excavation. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.27 | Dam or barrier should be provided at the interaction of old and new channels to prevent concrete washing from the construction works flow into the exist channel. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.28 | License collector should be employed for handling the sewage of mobile toilet. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.29 | Prevent any stagnant water accumulated within the excavation trench or site working area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 2: Air Quality | | | | | | | |
| 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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.06 | Are the access roads sprayed with water to maintain the entire road surface wet or paved? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.07 | Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.08 | Is the load on vehicles covered entirely by clean impervious sheeting? | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.13 | Are site vehicles travelling within the speed limit not more than 20km/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 | Excavated odourous materials shall be transported away from site immediately if possible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.17 | If on-site stockpiling cannot be avoided, it should covered properly at all time and shortest duration storage on-site as possible? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.18 | All vehicle exhaust are directed vertically upwards or directed away from the ground? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.19 | Any materials dropped on sealed roads are clean up immediately to prevent dust emission? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 3: Noise | | | | | | | |
| 3.01 | Are noisy equipment and activities positioned as far as practicable from the sensitive receivers (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 3.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.06 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.07 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.08 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.13 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.14 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.15 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.16 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.17 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.18 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.19 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 4: Waste/Chemical Management | | | | | | |
| 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"/> | |

Environmental Site Inspection Checklist for KT15

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | |
| Section 5: Landscape & Visual | | | | | | |
| 5.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.03 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 5.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 6: Ecology | | | | | | |
| 6.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.03 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.06 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 7: Others | | | | | | |
| 7.01 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |


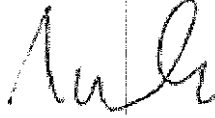

Remarks

Follow-Up of Last Site Inspection (26 November 2009):

Nil.

Finding of Site Inspection on 2 December 2009:

No adverse environmental impact was observed during site inspection.

| RE's representative | IEC's representative | ET's representative | Contractor's representative |
|---|----------------------|---|--|
|  (<i>Ed Cheung</i>) | () |  (Nicola Hon) |  (<i>Ray Cheung</i>) |

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: K. P. Cheung
IEC/IEC's representative: _____
ETL/ ET's representative: Ben Tam
Contractor's representative: Ray Cheung
Checklist No. KT15-091209

Inspection
Date: 9 December 2009
Time: 10:00

PART A: GENERAL INFORMATION Environmental Permit No. NA

Weather: Sunny Fine Cloudy Rainy
 Temperature: 21 °C
 Humidity: High Moderate Low
 Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

| | | Not Obs. | Yes | No | Follow up | N/A | Photo/ Remarks |
|---------------------------------|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|----------------|
| Section 1: Water Quality | | | | | | | |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | _____ |

| | | 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 | Concreting wastes water should be neutralized below the pH Action Levels before discharge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.25 | Any mitigation is implemented during de-watering of the stream within the proposed channel to avoid pollutants entering Kam Tin River? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.26 | Sediments at the dewatering of the streams should be dry before excavation. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.27 | Dam or barrier should be provided at the interaction of old and new channels to prevent concrete washing from the construction works flow into the exist channel. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.28 | License collector should be employed for handling the sewage of mobile toilet. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.29 | Prevent any stagnant water accumulated within the excavation trench or site working area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 2: Air Quality | | | | | | | |
| 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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.06 | Are the access roads sprayed with water to maintain the entire road surface wet or paved? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.07 | Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.08 | Is the load on vehicles covered entirely by clean impervious sheeting? | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.13 | Are site vehicles travelling within the speed limit not more than 20km/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 | Excavated odourous materials shall be transported away from site immediately if possible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.17 | If on-site stockpiling cannot be avoided, it should covered properly at all time and shortest duration storage on-site as possible? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.18 | All vehicle exhaust are directed vertically upwards or directed away from the ground? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.19 | Any materials dropped on sealed roads are clean up immediately to prevent dust emission? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 3: Noise | | | | | | | |
| 3.01 | Are noisy equipment and activities positioned as far as practicable from the sensitive receivers (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 3.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.06 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.07 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.08 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.13 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.14 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.15 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.16 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.17 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.18 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.19 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 4: Waste/Chemical Management | | | | | | |
| 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"/> | |

Environmental Site Inspection Checklist for KT15

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | |
| Section 5: Landscape & Visual | | | | | | |
| 5.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.03 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 5.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 6: Ecology | | | | | | |
| 6.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.03 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.06 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 7: Others | | | | | | |
| 7.01 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Remarks

Follow-Up of Last Site Inspection (2 December 2009):

Nil.

Finding of Site Inspection on 9 December 2009:

No adverse environmental impact was observed during site inspection.

RE's representative

IEC's representative

ET's representative

Contractor's representative




(*EP CHEUNG*)

(

)

(



Ben Tam

)



(*Ray Cheung*)

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: K. P. Cheung
IEC/IEC's representative: _____
ETL/ ET's representative: Nicola Hon
Contractor's representative: Ray Cheung
Checklist No. KT15-161209

Inspection
Date: 16 December 2009
Time: 2:30pm

PART A: GENERAL INFORMATION Environmental Permit No. NA

Weather: Sunny Fine Cloudy Rainy
 Temperature: 13 °C
 Humidity: High Moderate Low
 Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

| | | Not Obs. | Yes | No | Follow up | N/A | Photo/ Remarks |
|---------------------------------|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|----------------|
| Section 1: Water Quality | | | | | | | |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 | Concreting wastes water should be neutralized below the pH Action Levels before discharge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.25 | Any mitigation is implemented during de-watering of the stream within the proposed channel to avoid pollutants entering Kam Tin River? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.26 | Sediments at the dewatering of the streams should be dry before excavation. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.27 | Dam or barrier should be provided at the interaction of old and new channels to prevent concrete washing from the construction works flow into the exist channel. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1.28 | License collector should be employed for handling the sewage of mobile toilet. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.29 | Prevent any stagnant water accumulated within the excavation trench or site working area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 2: Air Quality | | | | | | | |
| 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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.06 | Are the access roads sprayed with water to maintain the entire road surface wet or paved? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.07 | Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.08 | Is the load on vehicles covered entirely by clean impervious sheeting? | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.13 | Are site vehicles travelling within the speed limit not more than 20km/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 | Excavated odourous materials shall be transported away from site immediately if possible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.17 | If on-site stockpiling cannot be avoided, it should covered properly at all time and shortest duration storage on-site as possible? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.18 | All vehicle exhaust are directed vertically upwards or directed away from the ground? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.19 | Any materials dropped on sealed roads are clean up immediately to prevent dust emission? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 3: Noise | | | | | | | |
| 3.01 | Are noisy equipment and activities positioned as far as practicable from the sensitive receivers (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <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 (Level 3 mitigation measures)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 3.05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.06 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.07 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.08 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.13 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.14 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.15 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.16 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.17 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.18 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.19 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 4: Waste/Chemical Management | | | | | | |
| 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"/> | |

Environmental Site Inspection Checklist for KT15

| | Not Obs. | Yes | No | Follow up | N/A | Photo/Remarks |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---------------|
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | |
| Section 5: Landscape & Visual | | | | | | |
| 5.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.03 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 5.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 6: Ecology | | | | | | |
| 6.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.02 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.03 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.04 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.05 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6.06 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Section 7: Others | | | | | | |
| 7.01 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Remarks

Follow-Up of Last Site Inspection (9 December 2009):

Nil

Finding of Site Inspection on 16 December 2009:


No adverse environmental impact was observed during site inspection.


RE's representative

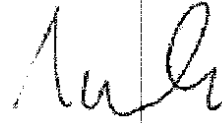
IEC's representative


ET's representative

Contractor's representative


(*IP CHEUNG*)


(*Alyssa Law*)


(Nicola Hon)


(*Ray Chan*)



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's representative: K. P. Cheung
 IEC's representative: James Lau
 ET's representative: Nicolan Hon
 Contractor's representative: Ray Cheung
 Checklist No.

Inspection
Date: 16-12-2008
Time: 2:30 pm

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

Weather: Sunny Fine Cloudy Rainy

Temperature: 13 °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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 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 ³ 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"/> | |
| 1.25 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"/> | |
| Section 2: Air Quality | | | | | | |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2.04 Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.07 Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> | |
| Section 3: Noise | | | | | | |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.13 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3.14 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Section 4: Waste/Chemical Management | | | | | | |
| 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"/> | |
| Section 5: Landscape & Visual | | | | | | |
| 5.01 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

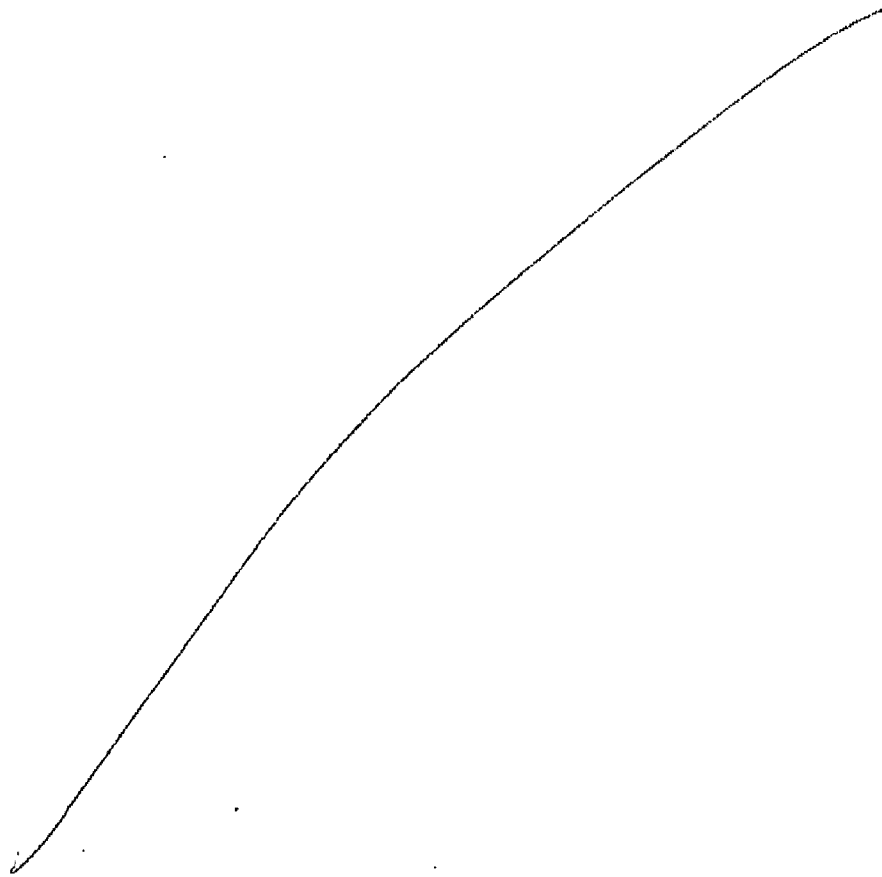


Environmental Site Inspection Checklist for KT15

| | 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 type="checkbox"/> | <input checked="" 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"/> | |
| Section 6: Ecology | | | | | | |
| 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"/> | |
| Section 7: Others | | | | | | |
| 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>
Nil.

<New observation>
Nil.



Environmental Site Inspection Checklist for KT15

Remarks

(A large diagonal line is drawn across the main body of the page, indicating that the checklist items are not applicable or have been reviewed.)

RE's representative

IEC's representative

ET's representative

Contractor's representative

(Handwritten signature)

(Handwritten signature)

(Handwritten signature)

(Handwritten signature)

(*FP CHEUNG*)

(*Cyrus Lam*)

(*Nicola Hon*)

(*T.F. Cheung*)

APPENDIX K

TREES PHOTOGRAPHIC RECORDS

Photo Records for KT15 (December 2009)

(A)



(B)



(C)



(D)



(E)



(F)



(G)



(H)



(I)



(J)



APPENDIX L

RESPONSE TO COMMENTS

DSD Contract No.: DC/2006/02

Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvements, Stage 1, Phase 2B – Cheung Chun San Tsuen and Kam Tsin Wai
KT15 – Monthly EM&A Summary Report for December 2009 (R1586v1 Version 2)

Response to IEC's comments [Received from e-mail on 18 January 2010]

| Items | Section / Paragraph | Comments | Response to Comments |
|-------|--|--|----------------------|
| 1 | ES04./ Section 1.04/ Section 5.01/ Section 7.01/ Section 11.02 | Please clarify whether “notification of completion by Contractor” and “substantial completion confirmation from RE” is mentioning the same item. If yes, please group the text up to avoid confusion. It is advised to revise the text in order to clarify that because of no works of environmental significance remain was observed during the site audit on 16-Dec-2009 and therefore, termination on impact monitoring and EM&A Program was proposed and notification was submitted to EPD. Please revise the text and present in a logic way. It should be because of termination of impact monitoring and EM&A Program, the captioned report is last report of EM&A Program. | Done. |
| 2 | Section 7.01 | Please rewrite 2nd last sentence as the sentence is incomplete. Please delete out the text on impact monitoring termination as it is irrelevant. | Done. |
| 3 | Section 10.01 | Please consider to delete out the irrelevant information in the text. Please consider to rewrite the text mentioning the termination of EM&A Program for construction phase and commence of operational phase. | Done. |
| 4 | Appendix H | Please check and revise the graph of 24-hour TSP result recorded during the reporting period as there is no data recorded on 31-Dec-2009. | Done. |
| 5 | Appendix I | As impact air quality monitoring was ceased on 19-December-2009, the meteorological data after 19-December-2009 can be deleted out from the list as Appendix I is only quoted in Section 5.04 and should be relevant to the air quality monitoring only. | Done. |
| 6 | Appendix J | In site inspection checklist on 16-Dec-09, please include the signature of IEC's representative. | Done. |

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 December 2009 (R1586v1 Version 1)

Response to IEC's comments [Received from e-mail on 15 January 2010]

| Items | Section / Paragraph | Comments | Response to Comments |
|-------|----------------------------------|--|--|
| 1 | ES04./Section 1.04/Section 5.01/ | Please double check the date of written confirmation of substantially completion by RE. It is advised to state the reason(s) for termination of impact monitoring and EM&A programme. | Please refer to the letter from BV ref. KL/KIL/382047/2006/02/M15/902 on 25 November 2009 which stated the work was substantially completed on 10 November 2009. Upon receipt of the completion certificate from the Contractor, ET should terminate the impact monitoring by the reason that the impact phase has completed. |
| 2 | ES14./Section 5.10/Section 11.06 | Please cross check with the investigation report of the captioned exceedance on the issue of major construction works being carried out during the exceedance day. Please elaborate on the phrase "site clearing" and works conducted during site clearing. | According to the information from the Contractor, the construction activities were only tree planting and installation of fencing. |
| 3 | Table 5-3 | Please double check the 1 st 5-minute measured noise level, Leq(5min), recorded on 14-December-2009 and the Leq (30min) recorded on 14-December-2009 as the listed value is not reasonable. | Typo. |
| 4 | Section 5.07 | It is advised to delete out the 1 st sentence as it already mentioned in Section 5.01. | Done. |
| 5 | Section 7.01 | It is advised to include text on termination of EM&A Programme in order to explain the termination of regular site audit. Please provide the date of substantially completion of construction activities. Please revise the last sentence as the text is not logical in meaning. | Revised. |
| 6 | Section 10.01 | Please revise the 1 st sentence as it is not grammatically correct. | Done. |
| 7 | Section 11.02 | It is advised to inert the text on termination of impact monitoring and EM&A programme in order to explain why this report is the last monthly EM&A report. | Done. |
| 8 | Appendix H | Please double check the graph title of the graph for 1-hour TSP results. Please check and revise the data presented in the graph for 1-hour TSP results during the reporting month. All 1-hour TSP and 24-hour TSP result recorded during the reporting month should be presented. Please check and revise the graphs. | Revised. |

| Items | Section / Paragraph | Comments | Response to Comments |
|-------|---------------------|---|--|
| 9 | Appendix I | Please double check the data on mean air temperature and mean relative humidity as the data listed are not consistent with those listed in HKO's homepage. As impact monitoring was ceased on 19-December-2009, the meteorological data after 19-December-2009 can be deleted out from the list. | Done. It is not recommended to deleted our the data after 19 December 2009 as the ecology monitoring was undertaking. |
| 10 | Appendix J | In site inspection checklist on 16-Dec-09, please include the signature of IEC's representative. Please incorporate IEC's site inspection checklist recorded on 16-Dec-2009. | Done. |