

# Hong Kong Kwong Tai Builders Limited

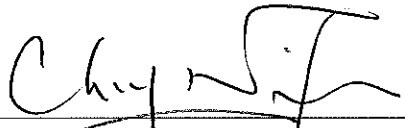
Contract No. SSW 317

## Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point

Environmental Monitoring and Audit Monthly Report

November 2010

(Version 1.1)

Certified By	 _____ Dr. Priscilla Choy (Environmental Team Leader)
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**REMARKS:**

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

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**EXECUTIVE SUMMARY****Introduction**

1. This is monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited (Cinotech) for the Contract No. SS W317 “Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point” (hereinafter called “the Project”). This document reports the findings of the environmental auditing works conducted on November 2010.

2. The site activities undertaken in the reporting month were:

*Before 15 November 2010:*

- Tree felling: 824M,
- Excavation Work:- 175M,
- Blinding concrete:- 255M,
- Fixing reinforcement and formwork for footing:- 590M,
- Placing footing concrete (grade 30/20) :- 670M,
- placing concrete for curb:- 1150M; and
- Backfill:- 1200M

*After 15 November 2010:*

- Fixing reinforcement and formwork for curb: 1190M.

**Environmental Monitoring and Audit Works**

3. Environmental monitoring and audit works for the Project was commenced on 17 March 2010.
4. Environmental monitoring and audit works for the Project is stipulated in the approved EM&A Manual. Site audits were conducted once per week. Environmental site audits were conducted on 3, 10, 17, and 25 November 2010. No non-compliance was observed during the site audits.
5. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
6. Summary of the events and action taken in the reporting month is tabulated in **Table I**.

**Table I Summary Table for Events Recorded in the Reporting Month**

Parameter	No. of Events		No. of Events Due to the Project	Action Taken
	Action Level	Limit Level		
Noise	0	0	0	N/A

**Construction Noise**

7. All construction noise monitoring was conducted as scheduled in reporting month. No Action/Limit Level exceedance was recorded.

**Environmental Licenses and Permits**

8. Licenses/Permits granted to the Project include Environmental Permit, Billing Account under Waste Disposal Ordinance, Notification pursuant to Section 3(1) of the Air Pollution Control Ordinance (Construction Dust) Regulation and Registration as Chemical Waste Producer.

**Inspection by Government related Departments**

9. Routine inspection by EPD was conducted on 23 November 2010 and spotted that a crane lorry was unloading a chain link fence panel, with intention for installing it onto the posts.
10. It is reminded by EPD that according to Section 3.3 of FEP-01/347/2009, ‘No construction works using power mechanical equipments shall be allowed between 15<sup>th</sup> November and 15<sup>th</sup> March inclusive in any consecutive year at Section 1 of the Project’.
11. Corrective Measures were carried by the Contractor are the followings:
  - Stop work immediately and no more crane truck operate during bird migratory period;
  - Conduct the training to all relevant parties, including the front-line labour and all sub-contractors;
  - Issue memo and stick on the site for notification; and
  - Conduct regular check by site foreman and keep record for non-compliance.
12. All the PME was removed from site by the Contractor. Investigation report on the incident was submitted to Engineer and ASD.

**Key Information in the Reporting Month**

13. Summary of key information in the reporting month are in **Table II**.

**Table II Summary of Key Information in the Reporting Month**

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	1	Monthly EM&A Report	Submitted to EPD on 16 November 2010	No Comment	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
<ul style="list-style-type: none"> <li>• Future Key Issues:</li> </ul> <p>Major site activities for the coming two months include:</p> <ul style="list-style-type: none"> <li>• Erect fencing and install steel post conducted by manual handling without using PME; and</li> <li>• Tree protection and maintenance: whole site.</li> </ul>					

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## 1 INTRODUCTION

### Background

- 1.1 The Project “Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point” with a Contract No. SS W317 is the Section 1 of the “Construction of a Secondary boundary Fence and new sections of Primary Boundary Fence and Boundary Patrol Road”. Hong Kong Kwong Tai Builders Limited (hereinafter called the “Contractor”) was commissioned by Architectural Services Department (ArchSD) of the Hong Kong Special Administrative Region (HKSAR) to undertake the construction.
- 1.2 The Project mainly comprises a construction purposed to erect a secondary fence along the existing boundary patrol road (approximately 4.1 km) and replace the existing checkpoint at Pak Hok Chau. **Figure 1.1** shown site layout plan.
- 1.3 An Environmental Permit No. EP-347/2009 was issued on 5 June 2009 to the Secretary for Security as the Permit Holder for “Construction of a Secondary Boundary Fence and new sections of Primary Boundary Fence and Boundary Patrol Road”. Later, a Further Environmental Permit (No. FEP-01/347/2009) (hereinafter called the FEP) was issued on 19 February 2010 to Contractor as Permit Holder for the Project. On 9 June 2010, a VEP (EP-347/2009/A) for the whole project was issued to Secretary for Security as the Permit Holder with amendments on the scale and scope of section 4 in whole project.
- 1.4 An environmental impact assessment (EIA) report of the Construction of a Secondary Boundary Fence and new sections of Primary Boundary Fence and Boundary Patrol Road (Register No. AEIAR-136/2009) has been prepared in January 2009.
- 1.5 The Environmental Monitoring and Audit Manual (Project’s EM&A Manual) was also included as part of the EIA report in the register and the Environmental Monitoring & Audit (EM&A) requirements are specified in Section 10. The Contractor shall follow the requirements stipulated in the EM&A requirements when implementing the Project.
- 1.6 Cinotech Consultants Ltd. (Cinotech) was commissioned by the Contractor to undertake the Environmental Monitoring and Audit (EM&A) works for the Project under Condition 2.1 of FEP.
- 1.7 Environmental monitoring and audit works for the Project was commenced at 17 March 2010.
- 1.8 This is monthly EM&A Report summarizing the EM&A works for the Project in November 2010.

## Project Organizations

1.9 Different parties with different levels of involvement in the project organization include:

- The Engineer for the Contract – Mott MacDonald Limited (MMD).
- Contractor – Hong Kong Kwong Tai Builders Limited (HKKT).
- Contractor Environmental Team (CET) – Cinotech Consultants Limited (Cinotech).
- Independent Environmental Checker (IEC) – ENVIRON Hong Kong Limited (ENVIRON).

1.10 The responsibilities of respective parties are provided in Section 2.2 to 2.7 of the EM&A Manual of the Project.

1.11 The key contacts of the Project are shown in Table 1.1.

**Table 1.1 Key Project Contacts**

Party	Name	Role	Phone No.	Fax No.
Engineer	Mr. Peter Tsang	Engineer's Representative	26831179	--
Contractor	Mr. Alex Cheung	Site Agent	64731088	27894184
	Mr. Tony Lau	Environmental Officer	61807827	
Contractor's ET	Dr. Priscilla Choy	Contractor's Environmental Team Leader (CETL)	2151 2089	3107 1388
	Mr. Gary Lau	Project Coordinator & Audit Team Leader	2151 2098	
	Mr. Henry Leung	Monitoring Team Leader	9779 7340	
IEC	Mr. David Yeung	Independent Environmental Checker (IEC)	3743 0717	3548-6988
	Mr. Simon Lam	Independent Environmental Checker (IEC) Representative	3743 0708	

1.12 The organization chart of ET and the Project are shown in **Figure 1.2** and **1.3** respectively.

## Construction Programme

1.13 The construction activities undertaken in the reporting month were:

*Before 15 November 2010:*

- Tree felling: 824M,
- Excavation Work:- 175M,
- Blinding concrete:- 255M,
- Fixing reinforcement and formwork for footing:- 590M,
- Placing footing concrete (grade 30/20) :- 670M,
- placing concrete for curb:- 1150M; and
- Backfill:- 1200M

*After 15 November 2010:*

- Fixing reinforcement and formwork for curb: 1190M.



**Summary of EM&A Requirements**

1.14 The EM&A programme requires construction phase monitoring for construction noise and environmental site audit. The duties and responsibilities comprise the following:

- monitor various environmental parameters as specified in the EM&A Manual;
- analyze the environmental monitoring and audit data;
- review the EM&A programme to confirm the adequacy and effectiveness of mitigation measures implemented and the validity of the EIA predictions and to identify and adverse environmental impacts arising;
- carry out site inspection to investigate and audit the Contractor's site practice, equipment and work methodologies with respect to pollution control and environmental mitigation, and effect proactive action to pre-empt problems;
- audit and prepare EM&A reports on the site environmental conditions;
- report the environmental audit results to the Contractor;
- recommend appropriate mitigation measures to the Contractor in case of exceedance of Action and Limit Levels in accordance with the Event and Action Plans

1.15 Summary of monitoring requirements are shown in the table below:

**Table 1.2 Monitoring Requirements**

<b>Monitoring Station</b>	<b>Parameter (Noise), dB(A)</b>	<b>Period</b>	<b>Frequency</b>	<b>Measurement</b>
VH 01 and VH 03	L <sub>10</sub> (30 min.) L <sub>90</sub> (30 min.) L <sub>eq</sub> (30 min.)	07:00-19:00 hours on normal weekdays (During construction)	Once per week	Façade

1.16 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 3 of this report.

1.17 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely noise levels and audit works for the Project in November 2010.

**2 NOISE****Monitoring Requirements**

- 2.1 In accordance with the EM&A Manual, two noise monitoring stations (VH01 and VH03) out of ten noise monitoring stations in EIA report were considered representative for Section 1 and designated for impact noise monitoring. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

**Monitoring Locations**

- 2.2 **Table 2.1** describes the locations of the monitoring stations and their locations are shown in **Figure 2.1**.

**Table 2.1 Locations of Noise Monitoring Stations**

Monitoring Station	Location
VH01	Village House at Mai Po
VH03	

**Monitoring Equipment**

- 2.3 **Table 2.2** summarizes the noise monitoring equipment models being used. Copies of calibration certificates are attached in **Appendix B**.

**Table 2.2 Noise Monitoring Equipment**

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	SVAN 955	1
Calibrator	SV30A	1

**Monitoring Parameters, Frequency and Duration**

- 2.4 **Table 2.3** summarizes the monitoring parameters, frequency and total duration of monitoring.

**Table 2.3 Noise Monitoring Parameters, Frequency and Duration**

Monitoring Station	Time Period	Frequency	Parameter	Method
VH01 and VH03	0700-1900 hrs on weekdays	Once per week	$L_{eq}(30min.)$ dB(A) $L_{10}(30min.)$ dB(A), & $L_{90}(30min.)$ dB(A)	Façade measurement

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## Monitoring Methodology and QA/QC Procedures

- The microphone head of the head level meter should position 1m exterior of the noise sensitive facade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
- The battery condition should check to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - time measurement : 30 minutes / 5 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1 dB(A), the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the  $L_{eq}$ ,  $L_{90}$  and  $L_{10}$  were recorded. In addition, site conditions and noise sources were record on a standard record sheet.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

## Maintenance and Calibration

2.5 Maintenance and Calibration procedures were as follows:

- The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- The meter and calibrator would send to laboratory to check and calibrate at yearly intervals.

## Results and Observations

2.6 All construction noise monitoring at two designated locations were conducted as scheduled in the reporting month. The Monitoring scheduled is shown in **Appendix J**.

2.7 No Action/Limit Level exceedance was recorded in the reporting month. Summary of exceedance is shown in **Appendix C**.

- 2.8 The effects of weather condition on the monitoring results are insignificant and the major noise source identified for these monitoring stations was road traffic noise. Weather condition, noise monitoring results and graphical presentations are shown in **Appendix D**.
- 2.9 In accordance with Condition 5.2 of the EP, all environmental monitoring data was made available to the public via internet access at the website <http://www.cinotech.com.hk/projects/SBF>.
- 2.10 All the Construction Noise Levels (CNLs) reported in this report had been adjusted with the corresponding baseline levels (i.e. Measured Leq – Baseline Leq = CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the allowed CNL at each construction noise monitoring station are presented in **Table 2.4**.

**Table 2.4 Baseline Noise Levels and Allowed Construction Noise Level (CNL) for the Monitoring Stations**

Station	Baseline Noise Level, dB (A)	Allowed CNL, dB (A)
VH01 Villager House	56.4	75
VH03 Villager House	49.8	75

- 2.11 The wind speed records on monitoring date were shown in **Table 2.5**.

**Table 2.5 Wind Speed on Monitoring Date**

Monitoring Date	Wind Speed (m/s)	
	Monitoring Station	
	VH01	VH03
2/11/2010	3.1	2.2
9/11/2010	0.4	0.6
18/11/2010	1.1	0.9
24/11/2010	1.1	1.2

**3 ENVIRONMENTAL AUDIT****Environmental Site Audits**

- 3.1 Environmental site audits were carried out on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 3.2 Site audits for the Project in the reporting month were conducted on 3, 10, 17 and 25 November 2010. No non-compliance was observed during the site audits.
- 3.3 Site inspections were undertaken to ensure and check the compliance with the FEP and that the implementation and maintenance of air quality, water quality, ecology and landscape and visual mitigation measures are being properly carried out in the reporting month in accordance to section 3.2, 5.2, 6.2 and 7.3 of the EM&A Manual respectively. No non-compliance was observed during the site inspections.
- 3.4 In accordance with to Condition 3.2 of the FEP, egret survey was jointly conducted with IEC representative on 5 August 2010.
- 3.5 No breeding Ardeids was found in the Tam Kon Chau Egretty or within the buffer area it is believed that there is currently no breeding activity in Tam Kon Chau Egretty within the 150m buffer zone.
- 3.6 Approvals from AFCD and EPD were received on 17th and 25th August 2010 respectively for commencement of construction works within the 150m buffer zone at Tam Kan Chau Egretty after 1st August 2010 and no construction works using power mechanical equipments shall be allowed between 15th November and 15th March inclusive in any consecutive year within the mentioned area.
- 3.7 Excavation works were commenced after 25th August 2010 within the 150m buffer zone from Tam Kon Chau Egretty.
- 3.8 The summaries of site audits are attached in **Appendix E**.
- 3.9 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations are summarized in **Table 3.1**.

**Table 3.1 Observations and Recommendations of Site Audits**

<b>Parameters</b>	<b>Date (Ref. no.)</b>	<b>Observations</b>	<b>Remediation/ Follow up</b>
Air Quality	03-11-10 (01103-O(2))	To cover the stockpile to reduce dust emission.	The situation was observed outstanding and remarked as item 01110-O (1) on 10-11-10.
	10-11-10 (01110-O(1))	To cover the stockpile to reduce dust emission.	The situation was improved / rectified on 17-11-10.
	10-11-10 (01110-O(3))	Cement bags were observed exposed. Contractor was reminded to cover it properly when it is not in use.	The situation was improved / rectified on 17-11-10.

Water Quality	03-11-10 (01103-O(2))	To cover the stockpile to reduce run-off.	The situation was observed outstanding and remarked as item 01110-O (1) on 10-11-10.
	03-11-10 (01103-O(3))	To improve the wheels washing bay to enhance the effectiveness of dust reduction measures.	The situation was improved / rectified on 10-11-10.
	10-11-10 (01110-O(1))	To cover the stockpile to reduce run-off.	The situation was improved / rectified on 17-11-10.
Landscape and Visual	03-11-10 (01103-O(1))	To erect protection fencing around the retaining trees. (Around 90% completed)	The situation was improved / rectified on 10-11-10.
	17-11-10 (01117-O(2))	Tree Protection fencing was found broken. Contractor was reminded to repair it regularly.	The situation was observed outstanding and remarked as item 01125-O (2) on 25-11-10.
	25-11-10 (01125-O(2))	Tree Protection fencing was found broken. Contractor was reminded to repair it regularly.	The situation will be followed up during coming audit sessions.
Waste / Chemical Management	10-11-10 (01110-O(2))	Oil/ Chemical containers were observed without proper handling. Contractor was reminded to provide drip tray or to remove it as chemical waste.	The situation was improved / rectified on 17-11-10.
	17-11-10 (01117-O(1))	To avoid accumulation of refuse in Construction site.	The situation was observed outstanding and remarked as item 01125-O (1) on 25-11-10.
	25-11-10 (01125-O(1))	To avoid accumulation of refuse in Construction site.	The situation will be followed up during coming audit sessions.

### Status of Environmental Licensing and Permitting

3.10 Environmental license or permit obtained in the reporting month is shown in **Table 3.2**.

**Table 3.2 Environmental License or Permit Obtained in Reporting Month**

Type of License/ Permit	Number	Valid Period		Details	Status
		From	To		
VEP	EP-347 /2009/A	15/06/2010	N/A	Location: Boundary patrol road between Mai Po and Lok Ma Chau Control Point	Valid
FEP	FEP-01/347/2009	19/02/2010	N/A		Valid
Registration as Chemical Waste Producer	5213-542-H3263-02	29/03/2010	N/A	i) Location of waste is produced: Border Road, Yuen Long ii) Major chemical waste: Waste paint drum, waste paint can and waste paint.	Valid
Billing Account under Waste Disposal Ordinance	7010229	11/02/2010	N/A	Disposal of construction and demolition waste under Waste Disposal Ordinance	Valid
Form NA	314415	23/02/2010	N/A	Notification pursuant to Section 3(1) of the Air Pollution Control Ordinance (Construction Dust) Regulation	N/A

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**Status of Waste Management**

- 3.11 The amount of waste generated by the construction activities of the Project in the reporting month is shown in **Appendix F**.

**Implementation Status of Environmental Mitigation Measures**

- 3.12 According to the Environmental Permit and the EM&A Manual, the mitigation measures detailed in the documents are required to be implemented. Details of implementation Status of Environmental Mitigation Measures are provided in **Appendix G**.

**Implementation Status of Event Action Plans**

- 3.13 The Event Action Plans for construction noise are presented in **Appendix H**.

Construction Noise

- 3.14 No Action/Limit Level exceedance was reported in the reporting month.

**Inspection by Government related Departments**

- 3.15 Routine inspection by EPD was conducted on 23 November 2010 and spotted that a crane lorry was unloading a chain link fence panel, with intention for installing it onto the posts.
- 3.16 It is reminded by EPD that according to Section 3.3 of FEP-01/347/2009, 'No construction works using power mechanical equipments shall be allowed between 15th November and 15th March inclusive in any consecutive year at Section 1 of the Project'.
- 3.17 Corrective Measures were carried by the Contractor are the followings:
- Stop work immediately and no more crane truck operate during bird migratory period;
  - Conduct the training to all relevant parties, including the front-line labour and all sub-contractors;
  - Issue memo and stick on the site for notification; and
  - Conduct regular check by site foreman and keep record for non-compliance.
- 3.18 All the PME was removed from site by the Contractor. Investigation report on the incident was submitted to Engineer and ASD.

**Summary of Complaints and Prosecutions**

- 3.19 No environmental complaint and prosecution related to the Project works was received in the reporting month.

## **4 FUTURE KEY ISSUES**

### **Key Issues for the Coming Month**

4.1 Key issues to be considered in the coming month include:

- Storage of chemicals/fuel and chemical waste/waste oil on-site;
- Larviciding against mosquito breeding in stagnant water should be carried out at least on a weekly basis;
- Site tidiness;
- Maintenance of the protection fence for retaining trees; and
- No using power mechanical equipments shall be allowed between 15th November and 15th March inclusive in any consecutive year.

### **Construction Program for the Next Month**

4.2 The tentative construction program for the Project is provided in **Appendix I**.

### **Monitoring Schedule for the Next Month**

4.3 The tentative environmental monitoring schedule for coming month for the Project is provided in **Appendix J**.



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## 5 CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 5.1 Four environmental site audits were performed in November 2010. No non-compliance was observed during the site audits.
- 5.2 All construction noise monitoring was conducted as scheduled in the reporting month. All monitoring results were checked and reviewed. No Action/Limit Level exceedance was recorded.
- 5.3 No environmental complaint and prosecution related to the project was received in the reporting month.

### Recommendations

- 5.4 According to the environmental audits performed in the reporting month, the following recommendations are recommended:

#### *Dust Impact*

- To implement dust suppression measures on haul road, stockpiles and dry surfaces.

#### *Noise Impact*

- No using power mechanical equipments shall be allowed between 15th November and 15th March inclusive in any consecutive year.

#### *Water Quality Impact*

- To regularly maintain the condition of u-channel, catch pits and wheel washing facilities on site;
- To regularly maintain the sediment control measures after rainstorms;
- To avoid water from accumulation on site and carry out larviciding against mosquito breeding for stagnant water when mosquito larvae are observed;

#### *Waste/Chemical Management*

- To check for any accumulation of waste materials or rubbish on site;
- To avoid any discharge of chemical waste or oil directly from the site;
- To well maintain the equipments and drip trays to avoid oil leakage;
- To avoid improper handling or storage of oil and paint drum on site.

#### *Landscape*

- To maintain the protection fencing surround the retaining trees;
- To remove the felled tree to avoid damage on retaining trees;
- To remove materials and equipments placed within the tree protection area;
- To conduct tree pruning works by approved landscape contractor; and
- To replant vegetation at the earliest possible stage of the construction phase.

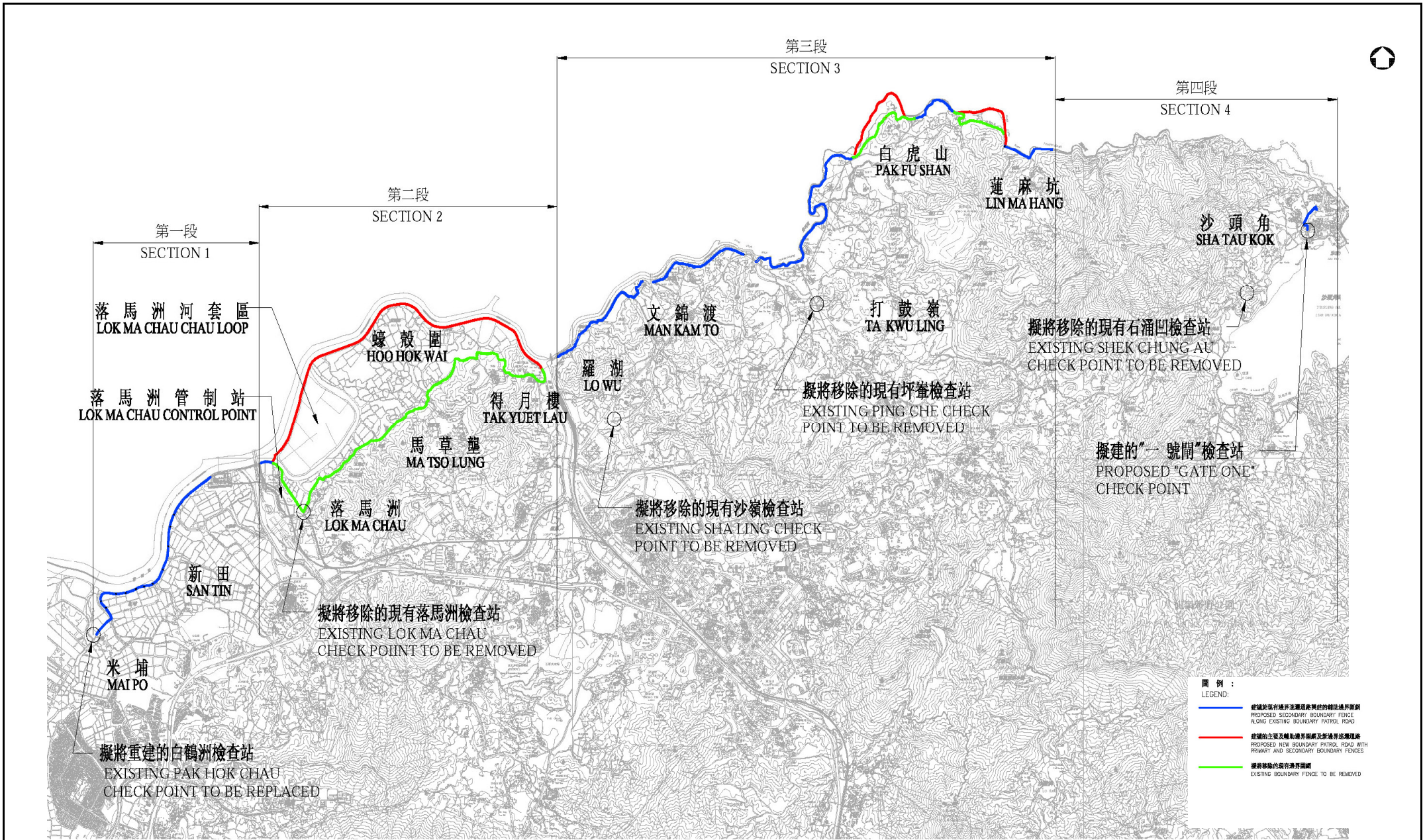
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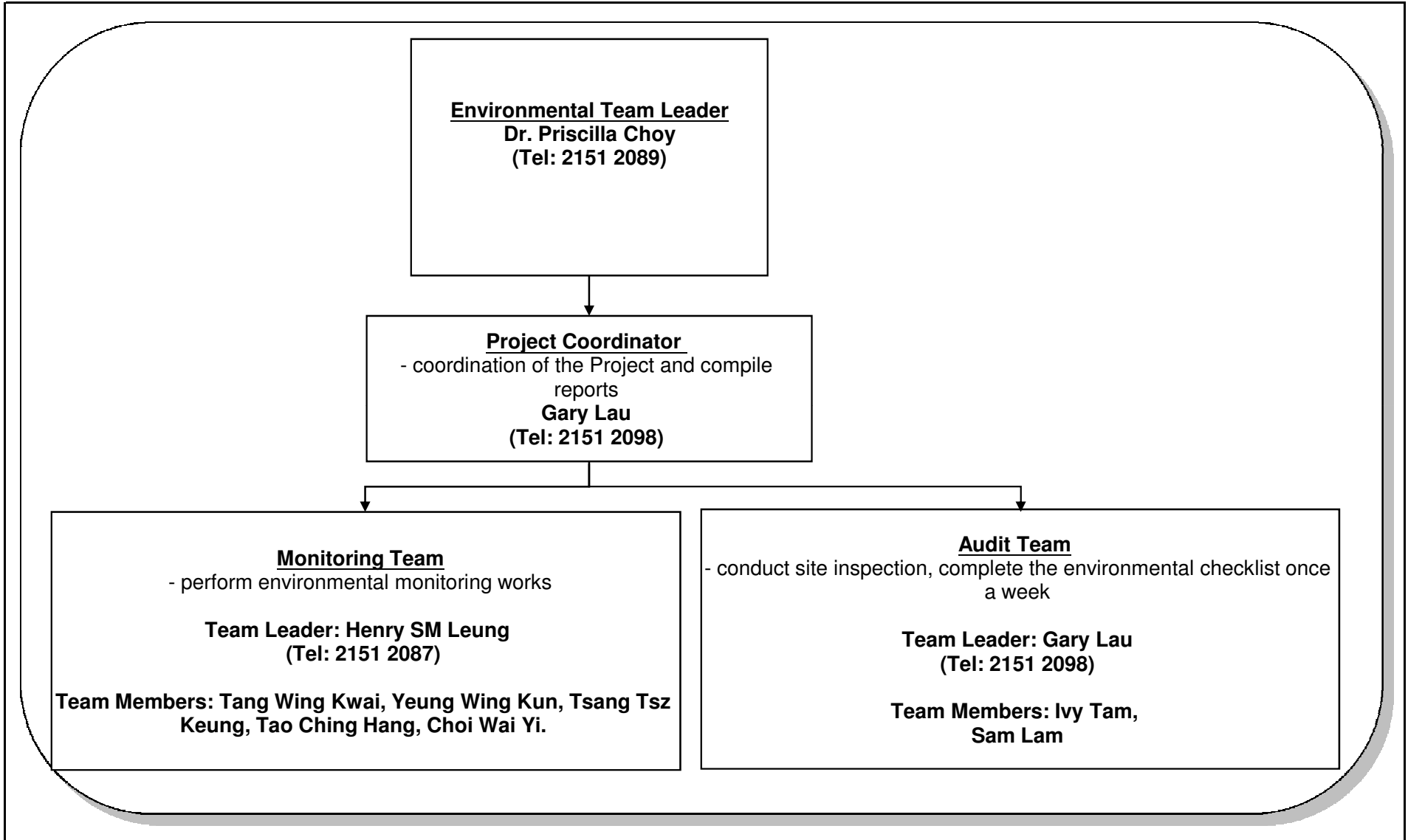
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**FIGURE**

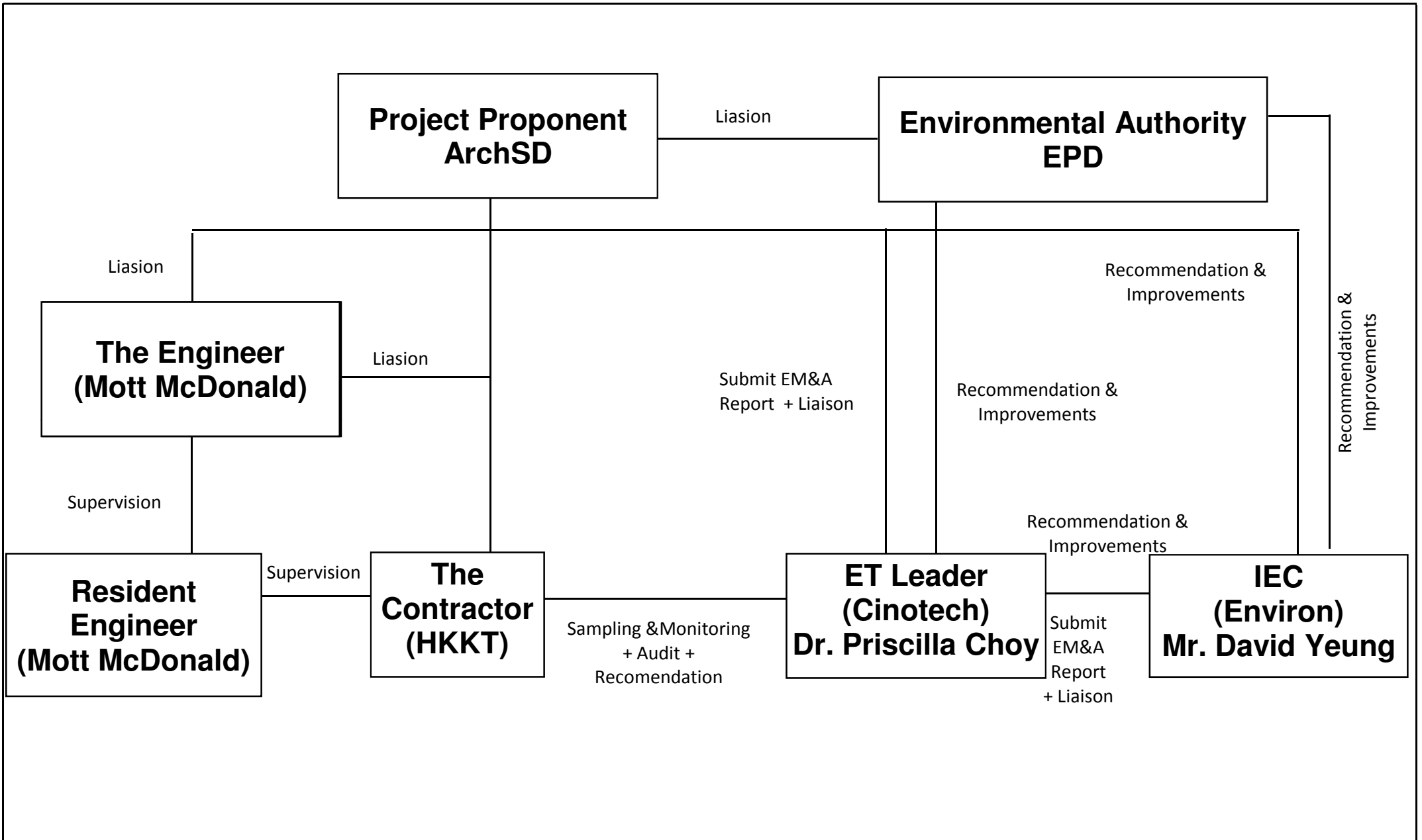
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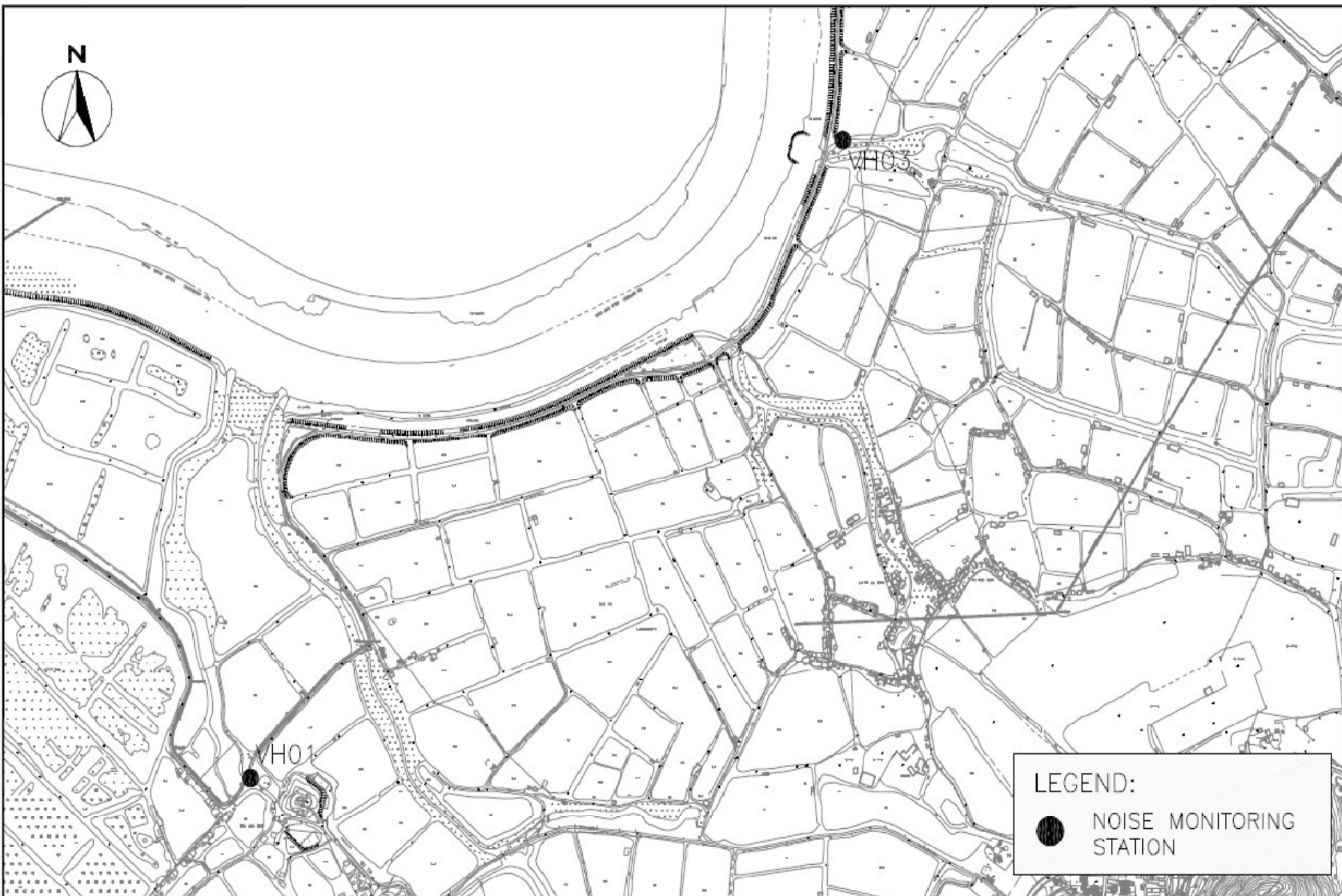
Title	Contract No: SSW 317 Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point  ET Organization Chart	Scale	N.T.S	Project No.	MA0001	CINOTECH
		Date	Jun-10	Figure	1.2	



Title	Contract No. SS W317 Construction of a Secondary Fence from Mai Po to Lok Ma Chau Control Point	Scale	N.T.S	Project No.	MA0001	<b>CINOTECH</b>
		Date	Apr-10	Figure	1.3	

Organization Chart of Project





LEGEND:

● NOISE MONITORING STATION



Contract No. SSW317  
Construction of a Secondary Boundary Fence from Mai Po to  
Lok Ma Chau Control Point

### LOCATION OF NOISE MONITORING STATIONS

SCALE	N.T.S.	DATE	FEB 2010
CHECK	CH	DRAWN	SL
JOB No.	MA0001	FIGURE NO.	2.1
		REV	-

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**APPENDIX A  
ACTION AND LIMIT LEVELS**

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**Appendix A - Action and Limit Level for Construction Noise**

<b>Time Period</b>	<b>Action Level</b>	<b>Limit Level</b>
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)

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**APPENDIX B  
COPIES OF CALIBRATION  
CERTIFICATES**

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## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/100123/1
Date of Issue:	2010-01-23
Date Received:	2010-01-22
Date Tested:	2010-01-23
Date Completed:	2010-01-23
Next Due Date:	2011-01-22

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 955
Serial No.	: 14303
Microphone No.	: 17204
Equipment No.	: N-08-05

**Test conditions:**

Room Temperature	: 21 degree Celsius
Relative Humidity	: 56%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/100924/2
Date of Issue:	2009-09-24
Date Received:	2010-09-22
Date Tested:	2010-09-22
Date Completed:	2010-09-24
Next Due Date:	2011-09-23

**ATTN:** Mr. Henry Leung

Page: 1 of 1

**Item for calibration:**

Description : Acoustical Calibrator  
Manufacturer : SVANTEK  
Model No. : SV30A  
Serial No. : 10929  
Equipment No. : N-09-01

**Test conditions:**

Room Temperature : 22 degree Celsius  
Relative Humidity : 59%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
\_\_\_\_\_  
**PATRICK TSE**  
Laboratory Manager

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/101110/1
Date of Issue:	2010-11-10
Date Received:	2010-11-08
Date Tested:	2010-11-08
Date Completed:	2010-11-10
Next Due Date:	2011-11-09

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 10965
Equipment No.	: N-09-02

### Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 57%

### Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

### Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

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**APPENDIX C  
SUMMARY OF EXCEEDANCE**

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**Appendix C – Summary of Exceedance**

**Reporting Month:** November 2010

**Exceedance Report for Construction Noise (NIL)**

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**APPENDIX D  
NOISE MONITORING RESULTS AND  
GRAPHICAL PRESENTATIONS**

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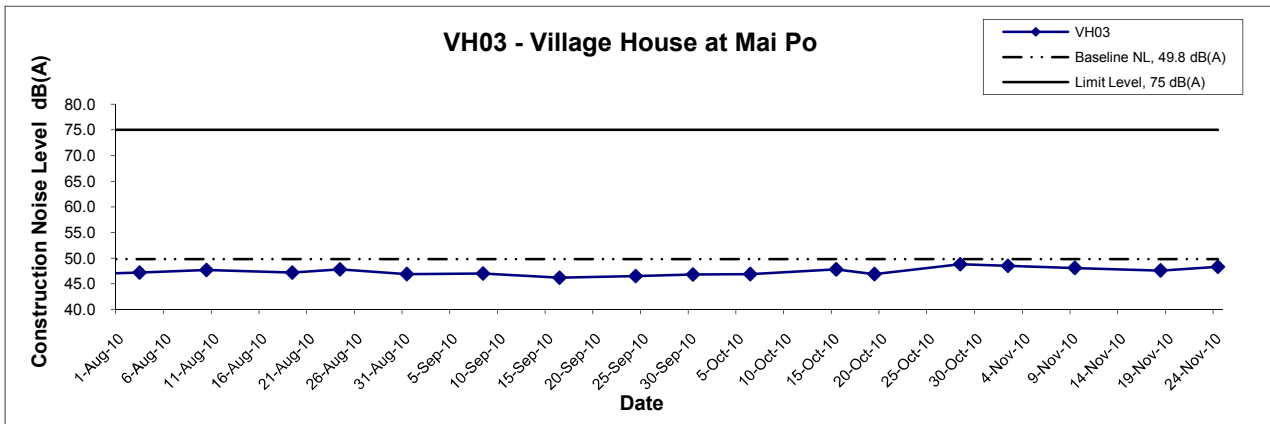
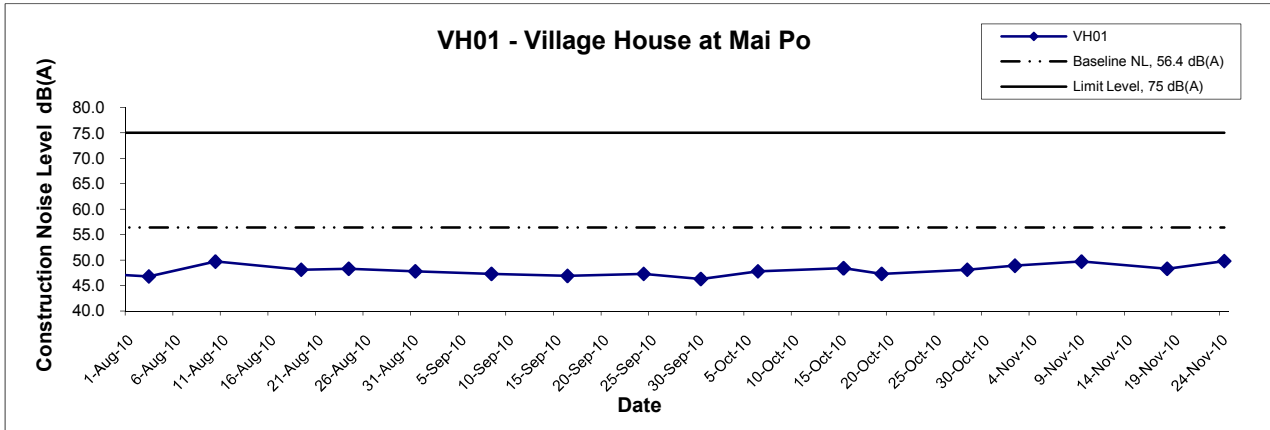


## Appendix D - Noise Monitoring Results

Location VH01 - Village House at Mai Po							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
2-Nov-10	14:00	Sunny	48.9	51.0	45.0	56.4	48.9 Measured ≤ Baseline
9-Nov-10	09:00	Sunny	49.7	51.5	44.5		49.7 Measured ≤ Baseline
18-Nov-10	13:00	Sunny	48.3	49.5	45.0		48.3 Measured ≤ Baseline
24-Nov-10	13:00	Sunny	49.8	51.5	45.0		49.8 Measured ≤ Baseline

Location VH03 - Village House at Mai Po							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
2-Nov-10	14:40	Sunny	48.5	50.5	44.5	49.8	48.5 Measured ≤ Baseline
9-Nov-10	09:40	Sunny	48.1	51.8	45.0		48.1 Measured ≤ Baseline
18-Nov-10	13:40	Sunny	47.6	49.5	44.0		47.6 Measured ≤ Baseline
24-Nov-10	13:40	Sunny	48.3	50.0	44.5		48.3 Measured ≤ Baseline

## Noise Levels



Title Contract No. SSW317 Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point  Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA0001	
	Date Nov 10	Appendix D	

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**APPENDIX E**  
**SITE AUDIT SUMMARY**

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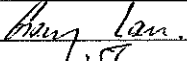

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Inspection Information

Checklist Reference Number	01103
Date	3 November 2010 (Wednesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Water Quality</b>	
01103-O(2)	• To cover the stockpile to reduce dust emission.	B 12
01103-O(3)	• To improve the wheels washing bay to enhance the effectiveness of dust reduction measures.	B 16ii
	•	
	<b>C. Air Quality</b>	
01103-O(2)	• To cover the stockpile to reduce dust emission.	C 6
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Landscape</b>	
01103-O(1)	• To erect protection fencing around the retaining trees.(Around 90% completed)	F 4
	<b>H. Others</b>	
	• Environmental deficiencies were not rectified/improved by the Contractor during the site inspection: items 01027-O(1) and (2) are remarked as items 01103-O(1) & (2)	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	<b>B. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	•	
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Landscape</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Others</b>	
	N/A	

	Name	Signature	Date
Recorded by	Gary Lau		5 November 2010
Checked by	Dr. Priscilla Choy		5 November 2010

Inspection Information

Checklist Reference Number	01110
Date	10 November 2010 (Wednesday)
Time	10:30 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Water Quality</b>	
01110-O(1)	• To cover the stockpile to reduce dust emission.	B 12
	<b>C. Air Quality</b>	
01110-O(1)	• To cover the stockpile to reduce dust emission.	C 6
01110-O(3)	• Cement bags were observed exposed. Contractor was reminded to cover it properly when it is not in use.	C 6
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
01110-O(2)	• Oil/ Chemical containers were observed without proper handling. Contractor was reminded to provide drip tray or to remove it as chemical waste.	E2
	<b>F. Landscape</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Others</b>	
	• Environmental deficiencies were not rectified/improved by the Contractor during the site inspection: items 01103-O (2) are remarked as items 01110-O(1)	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	<b>B. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	•	
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Landscape</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Others</b>	
	N/A	


	Name	Signature	Date
Recorded by	Gary Lau		10 November 2010
Checked by	Dr. Priscilla Choy		10 November 2010

Inspection Information

Checklist Reference Number	01117
Date	17 November 2010 (Wednesday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
01117-O(1)	• To avoid accumulation of refuse in Construction site.	E ii
	<b>F. Landscape</b>	
01117-O(2)	• Tree protection fencing was found broken. Contractor was reminded to repair it regularly.	F 4
	<b>G. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Others</b>	
	• N/A	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	<b>B. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	•	
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Landscape</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Others</b>	
	N/A	

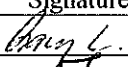

	Name	Signature	Date
Recorded by	Gary Lau		19 November 2010
Checked by	Dr. Priscilla Choy		19 November 2010

Inspection Information

Checklist Reference Number	01125
Date	25 November 2010 (Thursday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
01125-O(1)	• To avoid accumulation of refuse in Construction site.	E1 i
	<b>F. Landscape</b>	
01125-O(2)	• Tree protection fencing was found broken and felled. Contractor was reminded to repair it regularly.	F 4
	<b>H. Others</b>	
	• Environmental deficiencies were not rectified/improved by the Contractor during the site inspection: items 01117-O (1,2) are remarked as items 01125-O(1,2)	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	<b>B. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	•	
	<b>D. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Landscape</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Others</b>	
	N/A	

	Name	Signature	Date
Recorded by	Gary Lau		30 November 2010
Checked by	Dr. Priscilla Choy		30 November 2010

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**APPENDIX F**  
**SUMMARY OF WASTE GENERATED**

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Name of Department : Architectural Services Department

Contract No. : SS W317

Programme No. : 15 GB

**Monthly Summary Waste Flow Table for 2010** (year) [to be submitted not later than the 15<sup>th</sup> day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed as Public Fill	(f) Metals	(g) Paper/ cardboard packaging	(h) Plastics (see Note 3)	(i) Chemical Waste	(j) Others, e.g. general refuse disposed at Landfill
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	0.007	0	0	0	0.007	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0.072
<b>Sub-total</b>	<b>0.007</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.007</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.072</b>
July	0.085	0	0	0	0.085	0	0	0	0	0.215
Aug	0.904	0	0	0	0.904	0	0	0	0	0.072
Sept	0.377	0	0	0	0.377	0	0	0	0	0
Oct	0.322	0	0	0	0.322	0	0	0	0	0
Nov	0.670	0	0	0	0.670	0	0	0	0	0
Dec										
<b>Total</b>	<b>2.365</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.365</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.359</b>

- Notes: (1) The performance targets are given in the Particular Specification on Waste Management Plan, Sub-clause 2(5)(c).  
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.  
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.  
(4) Broken concrete for recycling into aggregates.  
(5) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 6.5 m<sup>3</sup> by volume.

**APPENDIX G  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

## Appendix G - Environmental Mitigation Implementation Schedule (EMIS)

Types of Impacts	Mitigation Measures	Status
Air Quality	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> <li>Excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading.</li> </ul>	*
	<ul style="list-style-type: none"> <li>The working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Vehicle washing area and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>The portion of road within 30m of designated vehicle entrance or exit should be kept clear of dusty materials.</li> </ul>	^
	<ul style="list-style-type: none"> <li>All dusty materials should be sprayed with water prior to any loading, unloading or transfer.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Vehicle speed should be limited to 10kph except on completed access roads.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.</li> </ul>	^
Noise	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> <li>Adopt the Code of Practice on Good Management Practice to comply with the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD</li> </ul>	^
	<ul style="list-style-type: none"> <li>Observe and comply with the statutory and non-statutory requirements and guidelines.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Before commencing any work, the Contractor shall submit to the Engineer Representative for approval the method of working, equipment and noise mitigation measures intended to be used at the site.</li> </ul>	^
	<ul style="list-style-type: none"> <li>The Contractor shall devise and execute working methods to minimise the noise impact on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Noisy equipment and noisy activities should be located as far away from the NSRs as is practical.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Unused equipment should be turned off. PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Regular maintenance of all plant and equipment.</li> </ul>	^

	<ul style="list-style-type: none"> <li>Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable.</li> </ul>	^
	<i>Use of Quiet Plant and Movable Noise Barrier</i>	
	<ul style="list-style-type: none"> <li>Purpose-built movable noise barriers should be used to mitigate construction noise directly at sources that are not usually mobile provide that the direct line of sight to the source is blocked.</li> </ul>	N/A
<b>Water Quality</b>	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> <li>The site should be confined to avoid silt runoff to the site.</li> </ul>	^
	<ul style="list-style-type: none"> <li>No discharge of silty water into the storm drain and drainage channel within and the vicinity of the site.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Stockpiles to be covered by tarpaulin to avoid spreading of materials during rainstorms;</li> </ul>	*
	<ul style="list-style-type: none"> <li>Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. There shall also be clear instructions showing what action to take in the event of an accidental.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Any construction plant which causes pollution to the water system due to leakage of oil or fuel shall be removed off-site immediately.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Spillage or leakage of chemical waste to be controlled by using suitable absorbent materials.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Chemicals will always be stored on drip trays or in bunded areas where the volume is 110% of the stored volume.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Regular clearance of domestic waste generated in the temporary sanitary facilities to avoid waste water spillage.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Temporary sanitary facilities to be provided for on-site workers during construction</li> </ul>	^
	<i>Concreting Work</i>	
	<ul style="list-style-type: none"> <li>Set up a temporary drainage channel to collect the runoff generated and prevent concrete-contaminated water from entering watercourses. Adjustment of pH can be achieved by adding a suitable neutralising reagent to wastewater prior to discharge.</li> </ul>	^
	<i>Soil Excavation and Stockpiling</i>	
	<ul style="list-style-type: none"> <li>Temporarily stockpiled excavated soil should be stored in a designated area and provided with a tarpaulin cover to avoid runoff into the drainage channels.</li> </ul>	*
	<i>Site Depot</i>	

	<ul style="list-style-type: none"> <li>All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds to allow interception and controlled release of settled/treated water.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>Hard standing compounds should drain via an oil interceptor, it should be regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A bypass should be provided to avoid overload of the interceptor's capacity.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>Registered as a chemical waste producer for contractor generating waste oil or other chemicals. Disposal of the waste oil should be done by a licensed collector</li> </ul>	^
	<ul style="list-style-type: none"> <li>Appropriate training including safety codes and relevant manuals should be given to the personnel who regularly handle the chemicals on site to keep the storage and the work space in a tidy and clean condition.</li> </ul>	N/A
	<i>Construction of Checkpoint</i>	
	<ul style="list-style-type: none"> <li>Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Shek Chung Au, to public sewer connected to government sewage treatment facilities.</li> </ul>	N/A
<b>Waste Management</b>	<i>Site Clearance</i>	
	<ul style="list-style-type: none"> <li>The topsoil and vegetation removed and excavated material may have to be temporarily stockpiled on-site to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels. Stockpiling of excavated materials during the wet season should be avoided as far as practicable.</li> </ul>	^
	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> <li>Good site management to minimize over-ordering and generation of waste materials such as concrete mortars and cement grouts.</li> </ul>	^
	<ul style="list-style-type: none"> <li>The Contractor should recycle as much of the C&amp;D materials as possible on-site.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Trip-ticket system should be employed to monitor the disposal of C&amp;D material and solid at public filling facilities and landfills, and to control fly-tipping.</li> </ul>	^
	<i>Chemical Waste</i>	
	<ul style="list-style-type: none"> <li>To reduce generating chemical waste as much as possible.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed, have a capacity of less than 450 litres with label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.</li> </ul>	^
	<ul style="list-style-type: none"> <li>The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste.</li> </ul>	*
	<ul style="list-style-type: none"> <li>The storage area should be enclosed on at least 3 sides, have adequate ventilation with impermeable floor, capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Rainfall entering should be avoided entering to storage area and adequately separated with incompatible materials.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Disposal of chemical waste should be via a licensed waste collector to licensed facility which can supply the necessary storage containers, or to be re-user of the waste, under approval from the EPD.</li> </ul>	^
<i>General Refuse</i>		

	<ul style="list-style-type: none"> <li>Should be stored in enclosed bins or compaction units separate from C&amp;D and chemical wastes. The Contractor should employ a reputable waste collector to remove general refuse from the site, separate from C&amp;D and chemical wastes, on a regular basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.</li> </ul>	*
	<ul style="list-style-type: none"> <li>Prohibition of refuse burning on construction sites</li> </ul>	^
	<i>Construction Waste Management Plan</i>	
	<ul style="list-style-type: none"> <li>Construction waste management plan (CWMP) should be prepared</li> </ul>	^
	<ul style="list-style-type: none"> <li>Contractor should ensure proper collection, treatment and disposal of waste on site.</li> </ul>	^
<b>Ecology</b>	<i>Ecological Impacts on Floral Species of Conservation Concern</i>	
	<ul style="list-style-type: none"> <li>Erection of protective fencing to protect the plant during construction period</li> </ul>	^
	<i>Potential Ecological Impacts on Offsite Habitats</i>	
	<ul style="list-style-type: none"> <li>Controlling the dust and water quality by avoiding stockpiles adjacent to wetlands and covering the stockpiles with impervious sheeting.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Controlling vehicle speed and ensure no discharge of silty water to the rivers, streams.</li> </ul>	^
	<i>Disturbance to Wetland-Dependent Birds, Raptors, Terrestrial Birds and Egretty</i>	
	<ul style="list-style-type: none"> <li>Restriction of excavation works within a 150m buffer zone from the egretty to ardeid non-breeding season (from August to February).</li> </ul>	^
	<ul style="list-style-type: none"> <li>Switching off unused equipment, keep minimum number of powered mechanical equipment in operation at the same period, the use of stockpiles and other structures to form noise barriers where practicable to avoid causing disturbance to feeding the wildlife.</li> </ul>	^
<ul style="list-style-type: none"> <li>Proper cover of stockpiles with impervious sheeting to minimize construction noise, uncontrolled surface runoff and discharge of silts.</li> </ul>	^	
<ul style="list-style-type: none"> <li>Avoidance of construction works using Power Mechanical Equipments within the Wetland Conservation Area during bird migratory season (15th November – 15th March).</li> </ul>	^	
<b>Landscape and Visual</b>	<i>Preservation of Existing Vegetation throughout construction phase</i>	
	<ul style="list-style-type: none"> <li>To retain trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Prohibition of the storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the precautionary area</li> </ul>	^
	<ul style="list-style-type: none"> <li>Phased segmental root pruning for trees to be retained over a suitable period (determined by species and size) prior to lifting or site formation works which affect the existing rootball of trees identified for retention. The extent of the pruning will be based on the size and the species of the tree in each case.</li> </ul>	^
	<ul style="list-style-type: none"> <li>Pruning of the branches of existing trees identified for retention to be based on the principle of crown thinning maintaining their form and amenity value.</li> </ul>	^
	<ul style="list-style-type: none"> <li>The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.</li> </ul>	^
<ul style="list-style-type: none"> <li>The rectification and repair of damaged vegetation following the construction phase to it's original condition prior to the commencement of the works or replacement using specimens of the same species, size and form</li> </ul>	^	

	where appropriate to the design intention of the area affected	
	<ul style="list-style-type: none"> <li>All works affecting the trees identified for retention will be carefully monitored, including the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period</li> </ul>	^
	<ul style="list-style-type: none"> <li>Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in accordance with ETWB TCW No. 2/2004 and WBTC No. 3/2006.</li> </ul>	^
	<ul style="list-style-type: none"> <li>The tree preservation works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection specification would be included within the contract documents.</li> </ul>	^
<i>Preservation of Existing Topsoil</i>		
	<ul style="list-style-type: none"> <li>Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-use.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>The soil will be stockpiled to a maximum height of 2m and will be either temporarily vegetated with hydroseeded grass during construction or covered with a waterproof covering to prevent erosion.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>Regularly turned over the stockpile to avoid acidification and the degradation of the organic material, and reused after completion.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>Considered for re-use in other projects when above actions are not practical.</li> </ul>	N/A
<i>Permanent and Temporary Works Areas</i>		
	<ul style="list-style-type: none"> <li>Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage.</li> </ul>	^
<i>Mitigation Planting</i>		
	<ul style="list-style-type: none"> <li>Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>Use of native plant species predominantly in the planting design for the buffer areas.</li> </ul>	N/A

Remarks:	^	Compliance of mitigation measure;
	N/A	Not Applicable;
	*	Recommendation was made during site audit but improved/rectified by the contractor.
	#	Recommendation was made during site audit and to be improved / rectified by the contractor.
	X	Non-compliance of mitigation measure;
	•	Non-compliance but rectified by the contractor;

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**APPENDIX H  
EVENT ACTION PLANS FOR  
CONSTRUCTION NOISE**

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**Appendix H- Event and Action Plan for Construction Noise**

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

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**APPENDIX I  
TENTATIVE CONSTRUCTION  
PROGRAMME**

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識別碼	WBS	Task Name	工期	開始時間	完成時間	2010年												2011年												2012年	
						Jan 2	Feb 2	Mar 2	Apr 2	May	Jun 2	Jul 20	Aug 2	Sep 2	Oct 2	Nov	Dec 2	Jan 2	Feb 2	Mar 2	Apr 2	May	Jun 2	Jul 20	Aug 2	Sep 2	Oct 2	Nov	Dec 2	Jan 2	Feb 2
1	1	Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point	512 days	2010/1/15	2011/6/18																										
2	1.1	bird migratory season	116 days	2010/11/15	2011/3/15																										
3	1.2	Application of permits and licences required under legislation	28 days	2010/1/15	2010/2/11																										
4	1.3	Conition surveying & submission of report	10 days	2010/1/21	2010/1/30																										
5	1.4	Site Office setup	24 days	2010/2/18	2010/3/13																										
6	1.5	Site mobilization	45 days	2010/2/1	2010/3/17																										
7	1.6	Material submissions	285 days	2010/1/20	2010/10/31																										
8	1.6.1	Submission and approval of XPM mesh	181 days	2010/1/20	2010/7/19																										
9	1.6.2	Submission of concrete mix design	107 days	2010/1/25	2010/5/11																										
10	1.6.3	submission of spacer	14 days	2010/3/5	2010/3/18																										
11	1.6.4	submission of sub-base material	28 days	2010/9/21	2010/10/18																										
12	1.6.5	submission of bituminous material	28 days	2010/10/4	2010/10/31																										
13	1.7	Initial site survey	30 days	2010/4/9	2010/5/8																										
14	1.8	Mock up panel	119 days	2010/3/30	2010/7/26																										
15	1.8.1	submission and approval of shop drawing and method statement	50 days	2010/3/30	2010/5/18																										
16	1.8.2	fix mock up panel	7 days	2010/7/20	2010/7/26																										
17	1.9	Submissions	104 days	2010/1/15	2010/4/28																										
18	1.9.1	Submission to EPD as required under the Environment Permit	1 day	2010/1/15	2010/1/15																										
19	1.9.2	Submission of temporary traffic arrangement	90 days	2010/1/15	2010/4/14																										
20	1.9.3	submission of safety aspect schedule	30 days	2010/1/15	2010/2/13																										
21	1.9.4	submission of safety plan	1 day	2010/4/28	2010/4/28																										
22	1.9.5	Submission of Environmental Management Plan	1 day	2010/3/1	2010/3/1																										
23	1.9.6	submission of waste management plan	30 days	2010/2/11	2010/3/12																										
24	1.9.7	Submission of Smart Card System	18 days	2010/3/18	2010/4/4																										
25	1.10	application of excavation permit (XP Permit)	270 days	2010/3/19	2010/12/13																										
26	1.10.1	CH0+285 to CH 0+315(Zone 30 - Zone 31)PlanID: 1006307	1 day	2010/9/3	2010/9/3																										
27	1.10.2	CH 3+270 to 3+300(Zone 54)PlanID: 1006328	1 day	2010/8/30	2010/8/30																										
28	1.10.3	CH 2+790 to CH 2+900(Zone 51)PlanID: 1006326	1 day	2010/7/12	2010/7/12																										
29	1.10.4	CH 2+900 to 3+030(Zone 51 - Zone 52)PlanID: 1006328	1 day	2010/7/12	2010/7/12																										
30	1.10.5	CH 3+030 to CH 3+270(Zone 52 - Zone 54)PlanID: 1006328	1 day	2010/7/29	2010/7/29																										
31	1.10.6	CH+000 to CH+090(Zone 29)PlanID: 1006307	1 day	2010/7/12	2010/7/12																										
32	1.10.7	CH+090 to CH 0+285(Zone 29 - Zone 30)PlanID: 1006307	1 day	2010/8/5	2010/8/5																										
33	1.10.8	CH 2+550 to CH 2+790(Zone 49 - Zone 51)PlanID: 1006326	1 day	2010/5/12	2010/5/12																										
34	1.10.9	CH 0+600 to CH 0+800(Zone 33 - Zone 35)PlanID: 1006317	1 day	2010/3/19	2010/3/19																										
35	1.10.10	CH 0+315 to CH 0+600(Zone 31 - Zone 33)PlanID: 1006317	1 day	2010/7/13	2010/7/13																										
36	1.10.11	CH 0+800 to CH 1+020(Zone 35 - Zone 37)PlanID: 1006319	1 day	2010/4/19	2010/4/19																										
37	1.10.12	CH 1+020 to CH 1+050(Zone 37)PlanID: 1006319	1 day	2010/5/17	2010/5/17																										
38	1.10.13	CH 1+050 to CH 1+260(Zone 37 - Zone 39)PlanID: 1006321	1 day	2010/6/14	2010/6/14																										
39	1.10.14	CH 1+260 to CH 1+500(Zone 39 - Zone 40)PlanID: 1006321	1 day	2010/8/26	2010/8/26																										
40	1.10.15	CH 1+500 to CH 1+650(Zone 41 - Zone 42)PlanID: 1006321	1 day	2010/7/27	2010/7/27																										
41	1.10.16	CH 1+650 to CH 1+850(Zone 42 - Zone 44)PlanID: 1006324	1 day	2010/3/19	2010/3/19																										
42	1.10.17	CH 1+850 to CH 2+070(Zone 44 - Zone 45)PlanID: 1006324	1 day	2010/4/19	2010/4/19																										













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**APPENDIX J  
ENVIRONMENTAL MONITORING  
SCHEDULE S**

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**Contract No. SS W317 Impact Noise Monitoring for  
Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point  
Noise Monitoring Schedule for November 2010**

<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
	1-Nov	2-Nov	3-Nov	4-Nov	5-Nov	6-Nov
		Noise				
<b>7-Nov</b>	8-Nov	9-Nov	10-Nov	11-Nov	12-Nov	13-Nov
		Noise				
<b>14-Nov</b>	15-Nov	16-Nov	17-Nov	18-Nov	19-Nov	20-Nov
				Noise		
<b>21-Nov</b>	22-Nov	23-Nov	24-Nov	25-Nov	26-Nov	27-Nov
			Noise			
<b>28-Nov</b>	29-Nov	30-Nov				

**Noise Monitoring Station**

VH01 - Village House at Mai Po  
VH03 - Village House at Mai Po

**Contract No. SS W317 Impact Noise Monitoring for  
Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point  
Tentative Noise Monitoring Schedule for December 2010**

<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
			1-Dec	2-Dec	3-Dec	4-Dec
			Noise			
<b>5-Dec</b>	6-Dec	7-Dec	8-Dec	9-Dec	10-Dec	11-Dec
				Noise		
<b>12-Dec</b>	13-Dec	14-Dec	15-Dec	16-Dec	17-Dec	18-Dec
				Noise		
<b>19-Dec</b>	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	<b>25-Dec</b>
		Noise				
<b>26-Dec</b>	<b>27-Dec</b>	28-Dec	29-Dec	30-Dec	31-Dec	
		Noise				

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

**Noise Monitoring Station**

VH01 - Village House at Mai Po  
VH03 - Village House at Mai Po