

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 2011

(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 in November 2011.
2. The site activity undertaken in the reporting month was:
 - Tree planting and protection works.

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 2, 8, 16, 22 and 30 November 2011. 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.

Key Information in the Reporting Month

9. Substantial completion certificate to the Project was issued by the Architect on 28 September 2011.
10. Termination of site inspection and impact noise monitoring of the construction phase EM&A programme was approved by the IEC in the reporting month and is under reviewing by the Project Architect.
11. 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	1	EM&A Report of August 2011	Submitted to EPD on 2 November 2011	No Comment	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---
<ul style="list-style-type: none"> • Future Key Issues: Major site activities for the coming two months include: <ul style="list-style-type: none"> • Remaining tree planting works; and • Tree protection and maintenance: whole site. 					

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 2011.

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:

- Tree planting and protection works.

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; and
- recommending 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

Monitoring Station	Parameter (Noise), dB(A)	Period	Frequency	Measurement
VH 01 and VH 03	L ₁₀ (30 min.) L ₉₀ (30 min.) L _{eq} (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 Substantial completion certificate to the Project was issued by the Architect on 28 November 2011.

1.18 Termination of site inspection and impact noise monitoring of the construction phase EM&A programme was approved by the IEC in the reporting month and is under reviewing by the Project Architect.

1.19 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 2011.

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	SV 30 A	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

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	48.9	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
3/11/2011	0.7	1.8
10/11/2011	2.0	2.1
16/11/2011	1.5	1.8
23/11/2011	1.0	1.3
29/11/2011	0.6	0.5

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 2, 8, 16, 22 and 30 November 2011. 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 The summaries of site audits are attached in **Appendix E**.
- 3.5 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

Parameters	Date (Ref. no.)	Observations	Remediation/ Follow up
Air Quality	N/A	No major environmental deficiency was observed in the reporting month.	N/A
Water Quality	N/A	No major environmental deficiency was observed in the reporting month.	N/A
Landscape and Visual	N/A	No major environmental deficiency was observed in the reporting month.	N/A
Waste / Chemical Management	N/A	No major environmental deficiency was observed in the reporting month.	N/A

Status of Environmental Licensing and Permitting

- 3.6 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

Status of Waste Management

3.7 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

3.8 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

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

Construction Noise

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

Summary of Complaints and Prosecutions

3.11 No environmental complaint was received in the reporting month. Table 3.3 shows the accumulated number of complaint received since the commencement of the Project.

Table 3.3 Accumulated Number of Complaint Received Since the Commencement of the Project

Nature of Complaint	Number of Complaint in the Reporting Month	Accumulated Number of Complaint Since the Commencement of the Project
Public Complaint	0	1

4 FUTURE KEY ISSUES

Key Issues for the Coming Month

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

- Remaining tree planting works; and
- Tree protection and maintenance: whole site.

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**.

5 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 5.1 Five environmental site audits were performed in November 2011. 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 no 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.

Water Quality Impact

- To regularly maintain the condition of u-channel, catch pits and wheel washing facilities on site;

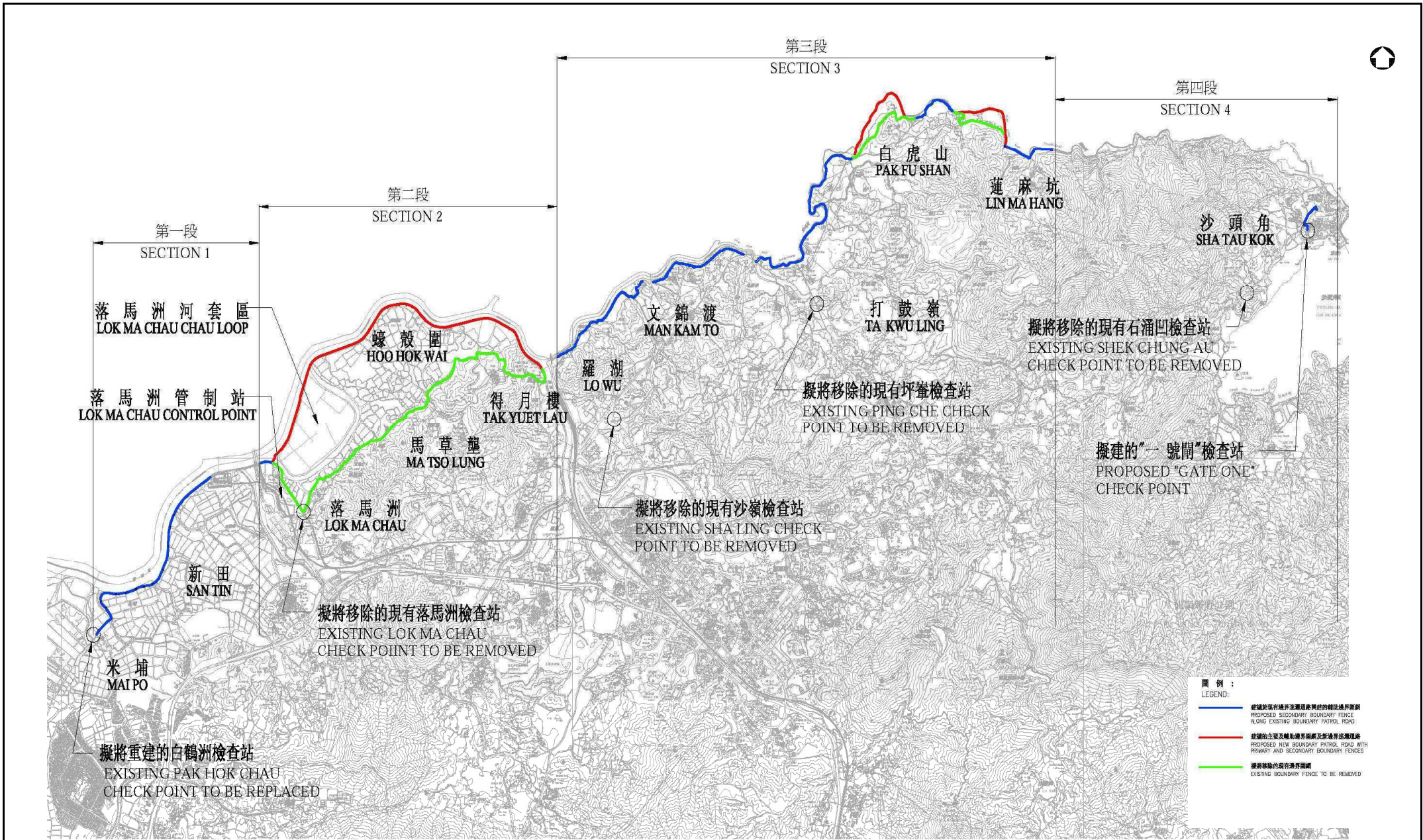
Waste/Chemical Management

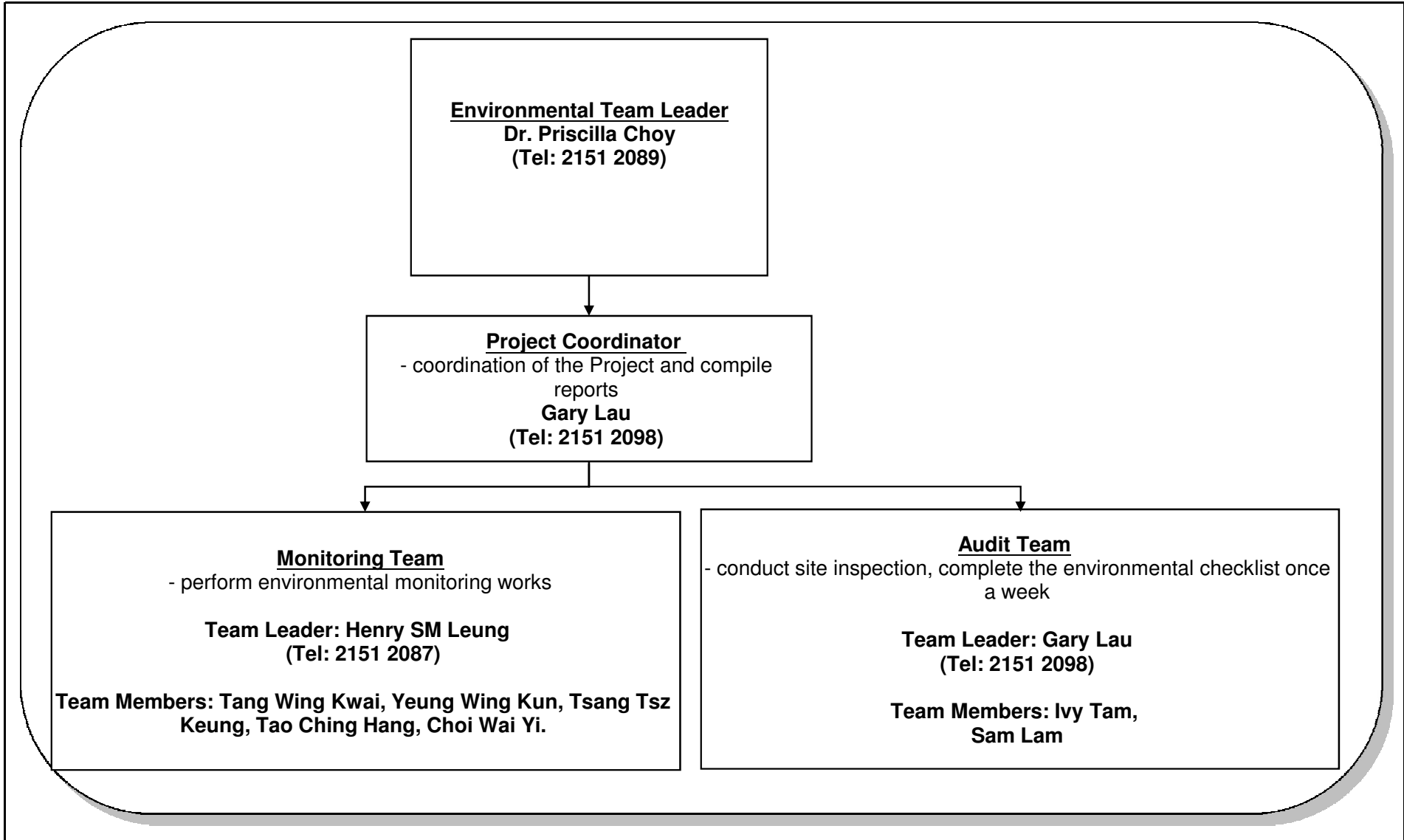
- To check for any accumulation of waste materials or rubbish on site;
- To avoid improper handling or storage of oil and paint drum on site.

Landscape

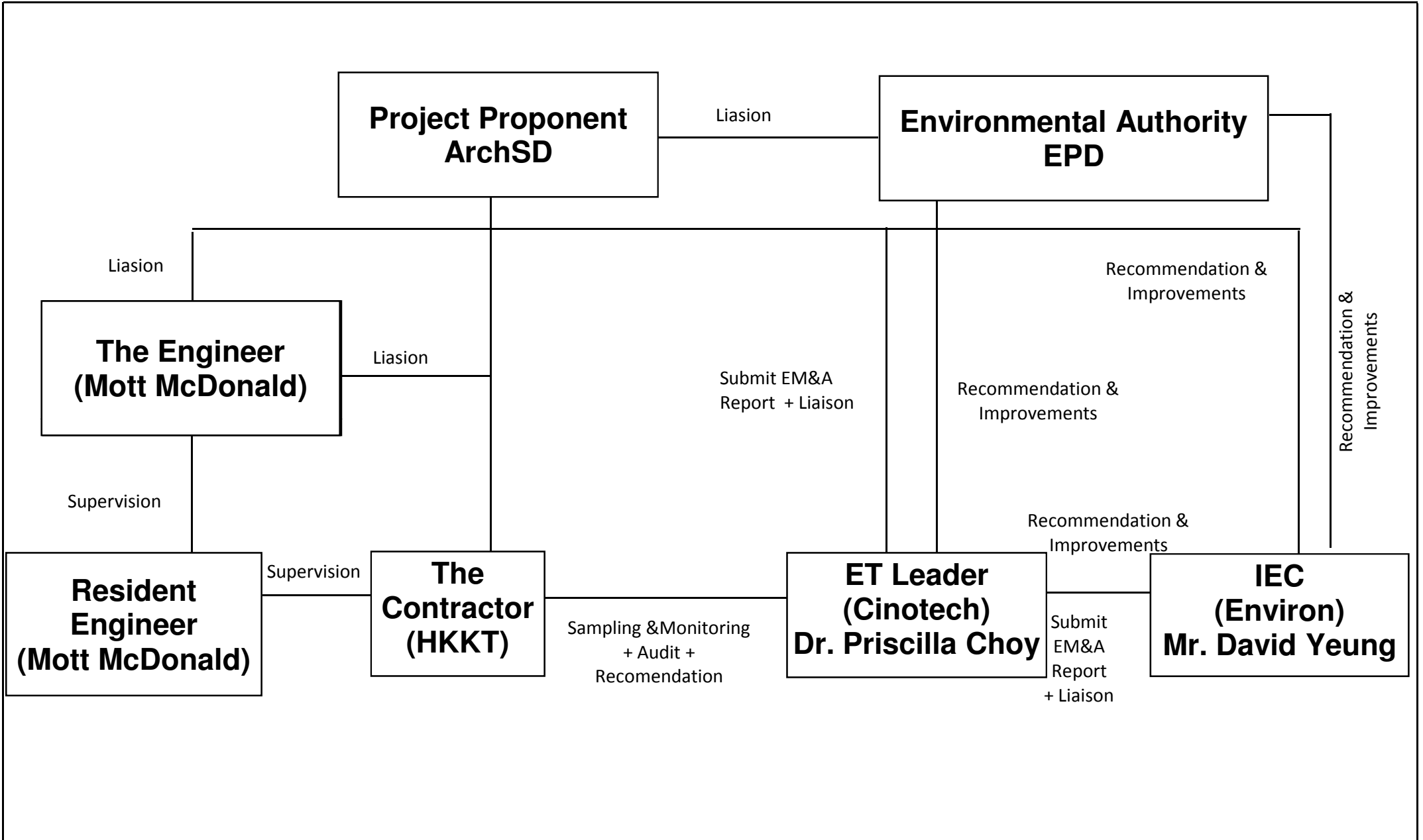
- To maintain the protection fencing surround the retaining trees;
- To remove materials and equipments placed within the tree protection area;
- To replant vegetation at the earliest possible stage of the construction phase.

FIGURE





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	

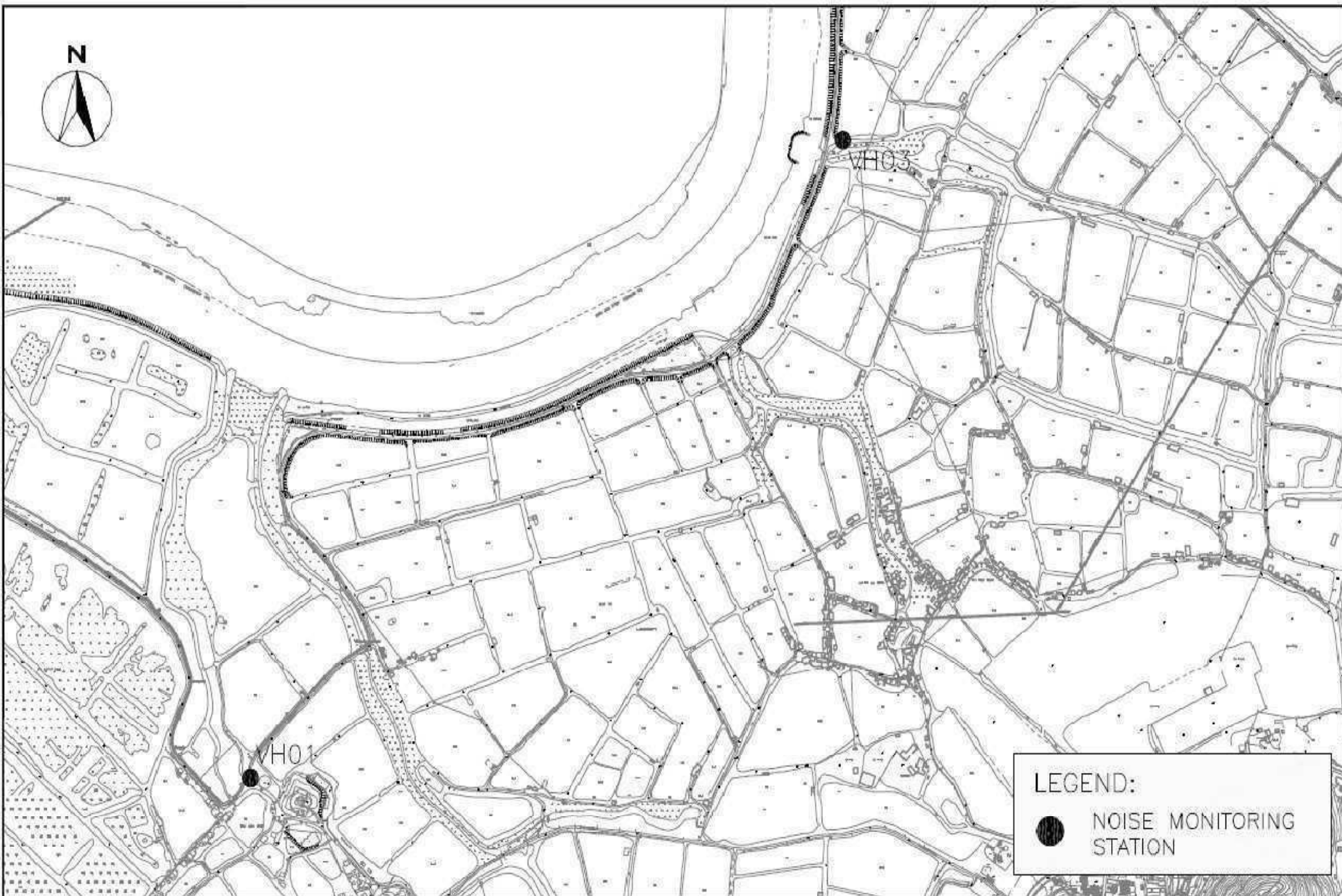


Title Contract No. SS W317 Construction of a Secondary Fence from Mai Po to Lok Ma Chau Control Point

Organization Chart of Project

Scale	N.T.S	Project No.	MA0001
Date	Apr-10	Figure	1.3





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	-

**APPENDIX A
ACTION AND LIMIT LEVELS**

Appendix A - Action and Limit Level for Construction Noise

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

**APPENDIX B
COPIES OF CALIBRATION
CERTIFICATES**

TEST REPORT

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

Test Report No.:	C/N/110124/1
Date of Issue:	2011-01-24
Date Received:	2011-01-21
Date Tested:	2011-01-21
Date Completed:	2011-01-24
Next Due Date:	2012-01-23

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	: 23 degree Celsius
Relative Humidity	: 55%

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/111008/1
Date of Issue:	2011-10-10
Date Received:	2011-10-08
Date Tested:	2011-10-08
Date Completed:	2011-10-10
Next Due Date:	2012-10-09

ATTN: Mr. Henry Leung

Page: 1 of 1

Item for calibration:

Description : Acoustical Calibrator
Manufacturer : SVANTEK
Model No. : SV30A
Serial No. : 24803
Equipment No. : N-09-03

Test conditions:

Room Temperature : 22 degree Celsius
Relative Humidity : 62%

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

**APPENDIX C
SUMMARY OF EXCEEDANCE**

Appendix C – Summary of Exceedance

Reporting Month: November 2011

Exceedance Report for Construction Noise (NIL)

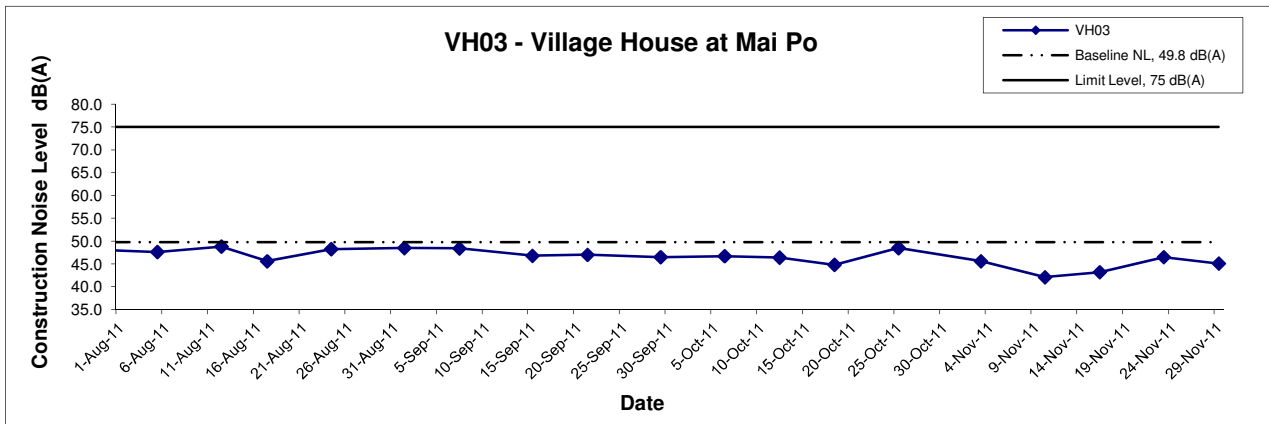
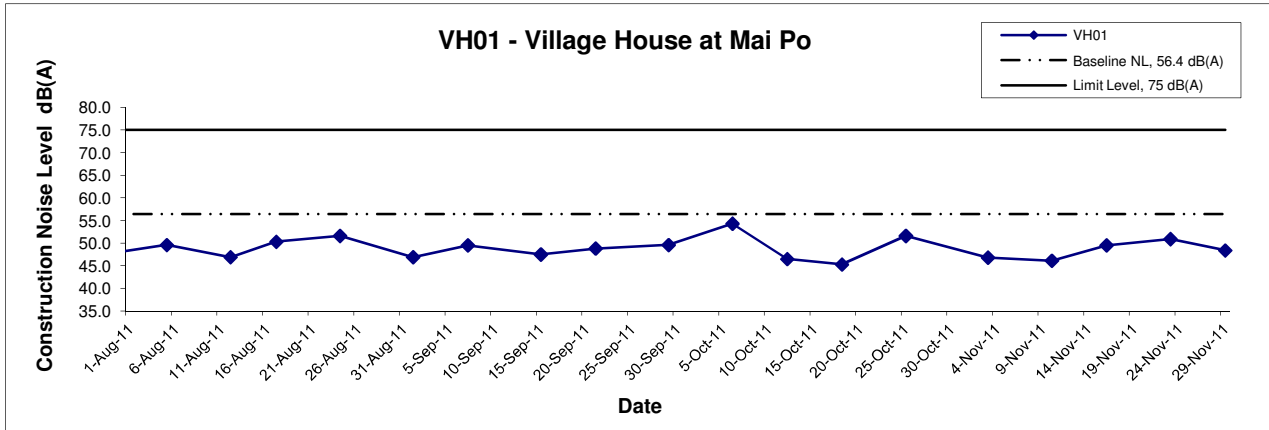
**APPENDIX D
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

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 _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
3-Nov-11	14:00	Sunny	46.8	48.1	44.6	56.4	46.8 Measured ≤ Baseline
10-Nov-11	10:00	Cloudy	46.1	47.6	45.2		46.1 Measured ≤ Baseline
16-Nov-11	09:00	Sunny	49.5	50.9	47.4		49.5 Measured ≤ Baseline
23-Nov-11	15:00	Sunny	50.9	52.1	48.2		50.9 Measured ≤ Baseline
29-Nov-11	10:30	Cloudy	48.4	59.9	46.5		48.4 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 _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
3-Nov-11	14:45	Sunny	45.6	47.1	44.6	49.8	45.6 Measured ≤ Baseline
10-Nov-11	10:45	Cloudy	42.1	45.1	41.1		42.1 Measured ≤ Baseline
16-Nov-11	09:45	Sunny	43.2	45.2	42.1		43.2 Measured ≤ Baseline
23-Nov-11	15:45	Sunny	46.5	48.9	44.6		46.5 Measured ≤ Baseline
29-Nov-11	11:15	Cloudy	45.1	47.5	44.1		45.1 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 11	Appendix D	

APPENDIX E
SITE AUDIT SUMMARY

Inspection Information

Checklist Reference Number	111102
Date	2 November 2011 (Wednesday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	• N/A	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	G. Permits/Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	Follow-up on previous audit session (Ref. 111027), all environmental deficiency was improved by the Contractor.	

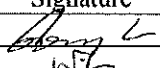
	Name	Signature	Date
Recorded by	Gary Lau		3 November 2011
Checked by	Dr. Priscilla Choy		3 November 2011

Inspection Information

Checklist Reference Number	111108
Date	8 November 2011 (Tuesday)
Time	11:00 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	• N/A	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	G. Permits/Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	Follow-up on previous audit session (Ref. 111102), all environmental deficiency was improved by the Contractor.	

	Name	Signature	Date
Recorded by	Gary Lau		9 November 2011
Checked by	Dr. Priscilla Choy		9 November 2011

Inspection Information

Checklist Reference Number	111116
Date	16 November 2011 (Wednesday)
Time	13:00 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	• N/A	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	G. Permits/Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	Follow-up on previous audit session (Ref. 111108), all environmental deficiency was improved by the Contractor.	

	Name	Signature	Date
Recorded by	Gary Lau		16 November 2011
Checked by	Dr. Priscilla Choy		16 November 2011

Inspection Information

Checklist Reference Number	111122
Date	22 November 2011 (Tuesday)
Time	10:15 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	• N/A	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	G. Permits/Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	Follow-up on previous audit session (Ref. 111116), all environmental deficiency was improved by the Contractor.	



	Name	Signature	Date
Recorded by	Gary Lau		23 November 2011
Checked by	Dr. Priscilla Choy		23 November 2011

Inspection Information

Checklist Reference Number	111130
Date	30 November 2011 (Wednesday)
Time	16:00 – 17:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	• N/A	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape	
	• No environmental deficiency was identified during site inspection.	
	G. Permits/Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	Follow-up on previous audit session (Ref. 111122), all environmental deficiency was improved by the Contractor.	

	Name	Signature	Date
Recorded by	Gary Lau		30 November 2011
Checked by	Dr. Priscilla Choy		30 November 2011

**APPENDIX F
SUMMARY OF WASTE GENERATED**

Contract No.: SS W317

Monthly Summary Waste Flow Table for 2011 [to be submitted not later than the 15th day of each month following reporting month]

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

Month	Actual Quantities of Inert Construction Waste Generated Monthly					Actual Quantities of Non-inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Total Quantity Generated (in '000m ³)	Broken Concrete (see Note 4) (in '000m ³)	Reused in the Contract (in '000m ³)	Reused in other Projects (in '000m ³)	Disposed of as Public Fill (in '000m ³)	Metals (in '000kg)	Paper/ cardboard packaging (in '000kg)	Plastics (see Note 3) (in '000kg)	Chemical Waste (in '000kg)	Others, e.g. general refuse disposed of at Landfill (in '000m ³)
Jan	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0.135	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0
May	0.429	0	0	0	0.429	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0
Sub-total	0.429	0	0	0	0.429	0	0	0	0.135	0
Jul	0	0	0	0	0	0	0	0	0	0
Aug	0.306	0	0	0	0.306	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0
Oct	0.195	0	0	0	0.195	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0
Dec										
Total	0.93	0	0	0	0.93	0	0	0	0.135	0

- Notes:
- (1) The performance targets are given in the Particular Specification on Environmental Management Plan.
 - (2) The waste flow table shall also include construction waste 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 m³ 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"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting. 	^
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> The portion of road within 30m of designated vehicle entrance or exit should be kept clear of dusty materials. 	^
	<ul style="list-style-type: none"> All dusty materials should be sprayed with water prior to any loading, unloading or transfer. 	^
	<ul style="list-style-type: none"> Vehicle speed should be limited to 10kph except on completed access roads. 	^
Noise	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> Adopt the Code of Practice on Good Management Practice to comply with the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD 	^
	<ul style="list-style-type: none"> Observe and comply with the statutory and non-statutory requirements and guidelines. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Noisy equipment and noisy activities should be located as far away from the NSRs as is practical. 	^
	<ul style="list-style-type: none"> Unused equipment should be turned off. PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided. 	^
	<ul style="list-style-type: none"> Regular maintenance of all plant and equipment. 	^
<ul style="list-style-type: none"> Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable. 	^	

	<i>Use of Quiet Plant and Movable Noise Barrier</i>	
	<ul style="list-style-type: none"> 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. 	N/A
Water Quality	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> The site should be confined to avoid silt runoff to the site. 	^
	<ul style="list-style-type: none"> No discharge of silty water into the storm drain and drainage channel within and the vicinity of the site. 	^
	<ul style="list-style-type: none"> Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. 	^
	<ul style="list-style-type: none"> Stockpiles to be covered by tarpaulin to avoid spreading of materials during rainstorms; 	^
	<ul style="list-style-type: none"> Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area. 	^
	<ul style="list-style-type: none"> Any construction plant which causes pollution to the water system due to leakage of oil or fuel shall be removed off-site immediately. 	^
	<ul style="list-style-type: none"> Spillage or leakage of chemical waste to be controlled by using suitable absorbent materials. 	^
	<ul style="list-style-type: none"> Chemicals will always be stored on drip trays or in bunded areas where the volume is 110% of the stored volume. 	^
	<ul style="list-style-type: none"> Regular clearance of domestic waste generated in the temporary sanitary facilities to avoid waste water spillage. 	^
	<ul style="list-style-type: none"> Temporary sanitary facilities to be provided for on-site workers during construction 	^
	<i>Concreting Work</i>	
	<ul style="list-style-type: none"> 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. 	^
	<i>Soil Excavation and Stockpiling</i>	
	<ul style="list-style-type: none"> Temporarily stockpiled excavated soil should be stored in a designated area and provided with a tarpaulin cover to avoid runoff into the drainage channel. 	^
	<i>Site Depot</i>	
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> 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. 	N/A

	<ul style="list-style-type: none"> 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 	^
	<ul style="list-style-type: none"> 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. 	N/A
	<i>Construction of Checkpoint</i>	
	<ul style="list-style-type: none"> 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. 	N/A
Waste Management	<i>Site Clearance</i>	
	<ul style="list-style-type: none"> 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. 	^
	<i>Construction Phase</i>	
	<ul style="list-style-type: none"> Good site management to minimize over-ordering and generation of waste materials such as concrete mortars and cement grouts. 	^
	<ul style="list-style-type: none"> The Contractor should recycle as much of the C&D materials as possible on-site. 	^
	<ul style="list-style-type: none"> Trip-ticket system should be employed to monitor the disposal of C&D material and solid at public filling facilities and landfills, and to control fly-tipping. 	^
	<i>Chemical Waste</i>	
	<ul style="list-style-type: none"> To reduce generating chemical waste as much as possible. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Rainfall entering should be avoided entering to storage area and adequately separated with incompatible materials. 	^
	<ul style="list-style-type: none"> 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. 	^
	<i>General Refuse</i>	
	<ul style="list-style-type: none"> Should be stored in enclosed bins or compaction units separate from C&D and chemical wastes. The Contractor should employ a reputable waste collector to remove general refuse from the site, separate from C&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. 	^
	<ul style="list-style-type: none"> Prohibition of refuse burning on construction sites 	^
<i>Construction Waste Management Plan</i>		

	<ul style="list-style-type: none"> Construction waste management plan (CWMP) should be prepared 	^
	<ul style="list-style-type: none"> Contractor should ensure proper collection, treatment and disposal of waste on site. 	^
Ecology	<i>Ecological Impacts on Floral Species of Conservation Concern</i>	
	<ul style="list-style-type: none"> Erection of protective fencing to protect the plant during construction period 	^
	<i>Potential Ecological Impacts on Offsite Habitats</i>	
	<ul style="list-style-type: none"> Controlling the dust and water quality by avoiding stockpiles adjacent to wetlands and covering the stockpiles with impervious sheeting. 	^
	<ul style="list-style-type: none"> Controlling vehicle speed and ensure no discharge of silty water to the rivers, streams. 	^
	<i>Disturbance to Wetland-Dependent Birds, Raptors, Terrestrial Birds and Egret</i>	
	<ul style="list-style-type: none"> Restriction of excavation works within a 150m buffer zone from the egret to ardeid non-breeding season (from August to February). 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Proper cover of stockpiles with impervious sheeting to minimize construction noise, uncontrolled surface runoff and discharge of silts. 	^
	<ul style="list-style-type: none"> Avoidance of construction works using Power Mechanical Equipments within the Wetland Conservation Area during bird migratory season (15th November – 15th March). 	^
Landscape and Visual	<i>Preservation of Existing Vegetation throughout construction phase</i>	
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered. 	^
	<ul style="list-style-type: none"> 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 where appropriate to the design intention of the area affected 	^
	<ul style="list-style-type: none"> 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 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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.	
	<i>Preservation of Existing Topsoil</i>	
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> Regularly turned over the stockpile to avoid acidification and the degradation of the organic material, and reused after completion. 	N/A
	<ul style="list-style-type: none"> Considered for re-use in other projects when above actions are not practical. 	N/A
	<i>Permanent and Temporary Works Areas</i>	
	<ul style="list-style-type: none"> Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. 	N/A
	<ul style="list-style-type: none"> 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. 	^
	<i>Mitigation Planting</i>	
	<ul style="list-style-type: none"> Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase 	N/A
	<ul style="list-style-type: none"> Use of native plant species predominantly in the planting design for the buffer areas. 	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;

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

Appendix H- Event and Action Plan for Construction Noise

EXCEEDANCE	ACTION			
	ET	IEC	Engineer	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and the HKKT. 2. Carry out investigation. 3. Report the results of investigation to IEC and the HKKT. 4. Discuss with the HKKT and formulate remedial measures. 5. Increase monitoring frequency to check mitigation measures. 	<ol style="list-style-type: none"> 1. Review with analyzed results submitted by ET. 2. Review the proposed remedial measures by the HKKT and advise ER accordingly. 3. Supervise the implement of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the HKKT. 3. Require the HKKT to propose remedial measures for the analyzed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Identify the source. 2. Notify IEC, ER, EPD and the HKKT. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of HKKT's working procedures to determine possible mitigation to be implemented. 6. Inform IEC, ER, and EPD the causes & actions taken for the exceedances. 7. Assess effectiveness of the HKKT's remedial actions and keep IEC, EPD and ER informed of the results. 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET Leader and the HKKT on the potential remedial actions. 2. Review the HKKT's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the HKKT. 3. Require the HKKT to propose remedial measures for the analyzed noise problem. 4. Ensure remedial measures are properly implemented. 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. 	<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 activity of works as determined by the ER until the exceedance is abated.

**APPENDIX I
TENTATIVE CONSTRUCTION
PROGRAMME**

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 2	Dec 2	Jan 20	Feb 2
1	1	Construction of a Secondary Boundary Fence from Mai Po to Lok Ma Chau Control Point	548 days	15/1/2010	27/7/2011																										
2	1.1	bird migratory season	116 days	15/11/2010	15/3/2011																										
3	1.2	Application of permits and licences required under legislative	28 days	15/1/2010	11/2/2010																										
4	1.3	Condition surveying & submission of report	10 days	21/1/2010	30/1/2010																										
5	1.4	Site Office setup	24 days	18/2/2010	13/3/2010																										
6	1.5	Site mobilization	45 days	1/2/2010	17/3/2010																										
7	1.6	Material submissions	285 days	20/1/2010	31/10/2010																										
8	1.6.1	Submission and approval of XPM mesh	181 days	20/1/2010	19/7/2010																										
9	1.6.2	Submission of concrete mix design	107 days	25/1/2010	11/5/2010																										
10	1.6.3	submission of spacer	14 days	5/3/2010	18/3/2010																										
11	1.6.4	submission of sub-base material	28 days	21/9/2010	18/10/2010																										
12	1.6.5	submission of bituminous material	28 days	4/10/2010	31/10/2010																										
13	1.7	Initial site survey	30 days	9/4/2010	8/5/2010																										
14	1.8	Mock up panel	119 days	30/3/2010	26/7/2010																										
15	1.8.1	submission and approval of shop drawing and method statement	50 days	30/3/2010	18/5/2010																										
16	1.8.2	fix mock up panel	7 days	20/7/2010	26/7/2010																										
17	1.9	Submissions	104 days	15/1/2010	28/4/2010																										
18	1.9.1	Submission to EPD as required under the Environment Permit	1 day	15/1/2010	15/1/2010																										
19	1.9.2	Submission of temporary traffic arrangement	90 days	15/1/2010	14/4/2010																										
20	1.9.3	submission of safety aspect schedule	30 days	15/1/2010	13/2/2010																										
21	1.9.4	submission of safety plan	1 day	28/4/2010	28/4/2010																										
22	1.9.5	Submission of Environmental Management Plan	1 day	1/3/2010	1/3/2010																										
23	1.9.6	submission of waste management plan	30 days	11/2/2010	12/3/2010																										
24	1.9.7	Submission of Smart Card System	18 days	18/3/2010	4/4/2010																										
25	1.10	application of excavation permit (XP Permit)	303 days	19/3/2010	17/1/2011																										
26	1.10.1	1st stage	169 days	19/3/2010	3/9/2010																										
27	1.10.1.1	CH0+285 to CH 0+315(Zone 30 - Zone 31)PlanID: 1006307	1 day	3/9/2010	3/9/2010																										
28	1.10.1.2	CH 3+270 to 3+300(Zone 54)PlanID: 1006328	1 day	30/8/2010	30/8/2010																										
29	1.10.1.3	CH 2+790 to CH 2+900(Zone 51)PlanID: 1006321	1 day	12/7/2010	12/7/2010																										
30	1.10.1.4	CH 2+900 to 3+030(Zone 51 - Zone 52)PlanID: 1006328	1 day	12/7/2010	12/7/2010																										
31	1.10.1.5	CH 3+030 to CH 3+270(Zone 52 - Zone 54)PlanID: 1006328	1 day	29/7/2010	29/7/2010																										
32	1.10.1.6	CH+000 to CH+090(Zone 29)PlanID: 1006307	1 day	12/7/2010	12/7/2010																										
33	1.10.1.7	CH+090 to CH 0+285(Zone 29 - Zone 30)PlanID: 1006307	1 day	5/8/2010	5/8/2010																										
34	1.10.1.8	CH 2+550 to CH 2+790(Zone 49 - Zone 51)PlanID: 1006326	1 day	12/5/2010	12/5/2010																										
35	1.10.1.9	CH 0+600 to CH 0+800(Zone 33 - Zone 35)PlanID: 1006317	1 day	19/3/2010	19/3/2010																										
36	1.10.1.10	CH 0+315 to CH 0+600(Zone 31 - Zone 33)PlanID: 1006317	1 day	13/7/2010	13/7/2010																										
37	1.10.1.11	CH 0+800 to CH 1+020(Zone 35 - Zone 37)PlanID: 1006319	1 day	19/4/2010	19/4/2010																										
38	1.10.1.12	CH 1+020 to CH 1+050(Zone 37)PlanID: 1006319	1 day	17/5/2010	17/5/2010																										
39	1.10.1.13	CH 1+050 to CH 1+260(Zone 37 - Zone 39)PlanID: 1006321	1 day	14/6/2010	14/6/2010																										
40	1.10.1.14	CH 1+260 to CH 1+500(Zone 39 - Zone 40)PlanID: 1006321	1 day	26/8/2010	26/8/2010																										
41	1.10.1.15	CH 1+500 to CH 1+650(Zone 41 - Zone 42)PlanID: 1006321	1 day	27/7/2010	27/7/2010																										
42	1.10.1.16	CH 1+650 to CH 1+850(Zone 42 - Zone 44)PlanID: 1006324	1 day	19/3/2010	19/3/2010																										

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 2	Dec 2	Jan 20	Feb 2
141	1.15.13.1	placing concrete	25 days	22/4/2011	19/5/2011																										
142	1.15.13.2	Fence Kerb	10 days	20/5/2011	29/5/2011																										
143	1.15.13.2	Erect formwork	7 days	20/5/2011	26/5/2011																										
144	1.15.13.2	placing concrete	7 days	23/5/2011	29/5/2011																										
145	1.15.14	CH3+125 to CH 3+255	84 days	16/3/2011	12/6/2011																										
146	1.15.14.1	Fence Footing	61 days	16/3/2011	19/5/2011																										
147	1.15.14.1	excavation and erect formwork	55 days	16/3/2011	13/5/2011																										
148	1.15.14.1	rebar fixing	55 days	19/3/2011	16/5/2011																										
149	1.15.14.1	placing concrete	55 days	22/3/2011	19/5/2011																										
150	1.15.14.2	Fence Kerb	16 days	27/5/2011	12/6/2011																										
151	1.15.14.2	Erect formwork	13 days	27/5/2011	9/6/2011																										
152	1.15.14.2	placing concrete	13 days	30/5/2011	12/6/2011																										
153	1.15.15	Gates	60 days	18/4/2011	20/6/2011																										
154	1.15.15.1	excavation and erect formwork	58 days	18/4/2011	18/6/2011																										
155	1.15.15.2	rebar fixing	58 days	19/4/2011	19/6/2011																										
156	1.15.15.3	placing concrete	58 days	20/4/2011	20/6/2011																										
157	1.16	Structural post and Fencing construction	238 days	16/11/2010	22/7/2011																										
158	1.16.1	CH0+050 to CH3+255	238 days	16/11/2010	22/7/2011																										
159	1.16.1.1	Post installation	235 days	16/11/2010	19/7/2011																										
160	1.16.1.2	Fence installation	238 days	16/11/2010	22/7/2011																										
161	1.17	Soft Landscape	547 days	15/1/2010	26/7/2011																										
162	1.17.1	tree survey report	94 days	25/2/2010	29/5/2010																										
163	1.17.2	Tree felling	167 days	28/5/2010	10/11/2010																										
164	1.17.3	tree protection and maintenance	545 days	15/1/2010	24/7/2011																										
165	1.17.4	new planting	257 days	1/11/2010	26/7/2011																										
166	1.17.4.1	submission	208 days	1/11/2010	5/6/2011																										
167	1.17.4.1.	soil mix	208 days	1/11/2010	5/6/2011																										
168	1.17.4.1.	fertilizer	173 days	6/12/2010	5/6/2011																										
169	1.17.4.1.	conditioner and mulching	166 days	13/12/2010	5/6/2011																										
170	1.17.4.1.	plant stock photographs	208 days	1/11/2010	5/6/2011																										
171	1.17.4.1.	drawing of tree stakes	159 days	20/12/2010	5/6/2011																										
172	1.17.4.2	planting	24 days	7/6/2011	30/6/2011																										
173	1.17.4.3	confirmation from ADI for additional trees	1 day	2/6/2011	2/6/2011																										
174	1.17.4.4	submission and approval of additional trees	28 days	3/6/2011	2/7/2011																										
175	1.17.4.5	planting for additional trees	24 days	3/7/2011	26/7/2011																										
176	1.18	Remove obstructions	143 days	20/9/2010	14/2/2011																										
177	1.18.1	Joint inspection with CLP and telephone company for the obstructed CLP pole and telephone pole	20 days	20/9/2010	9/10/2010																										
178	1.18.2	anticipated removal of CLP pole and Telephone pole	30 days	13/1/2011	14/2/2011																										
179	1.19	Steelwork	430 days	9/4/2010	22/6/2011																										
180	1.19.1	Submission of proposed steel fabricator	1 day	21/4/2010	21/4/2010																										
181	1.19.2	submission of proposed hot-dipped galvanizing factory	1 day	9/4/2010	9/4/2010																										
182	1.19.3	submission and approval of shop drawing	200 days	5/7/2010	22/1/2011																										
183	1.19.4	testing of steel material	14 days	19/7/2010	1/8/2010																										
184	1.19.5	procurement of steel material	1 day	15/7/2010	15/7/2010																										
185	1.19.6	fabrication of steel material	180 days	2/8/2010	30/1/2011																										
186	1.19.7	delivery of steel material to site	60 days	16/3/2011	18/5/2011																										
187	1.19.8	installation of steel gate	17 days	5/6/2011	22/6/2011																										
188	1.20	Electrical Installation	486 days	1/3/2010	10/7/2011																										
189	1.20.1	Submission	90 days	1/3/2010	29/5/2010																										

**APPENDIX J
ENVIRONMENTAL MONITORING
SCHEDULE S**

**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 2011**

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

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 2011**

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