Issue No.:1Issue Date:August 2010Project No.:944

CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTION OF PRIMARY BOUNDARY FENCE AND BOUNDARY FENCE AND (SECTION 2 LOK MA CHAU CONTROL POINT TO NG TUNG RIVER)

## **ENVIRONMENTAL MONITORING & AUDIT REPORT (JULY 2010)**

Prepared By:

ALLIED ENVIRONMENTAL CONSULTANTS LTD.

#### **COMMERCIAL-IN-CONFIDENCE**



#### Ref.: ASDBFBPREM00\_0\_0122L 10

17 August 2010

Mott MacDonald Hong Kong Limited 20/F Two Landmark East, 100 How Ming Street, Kwun Tong, Hong Kong By Fax (2827 1823) and Post

Attention: Mr. James Kam / Mr. Y. K. Or

Dear Sirs,

#### Re: Environmental Permit No. EP-347/2009/A and FEP-02/347/2009/A Contract No. SSW306 - Section 2 Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road from Lok Ma Chau Control Point to Ng Tung River Monthly EM&A Report for July 2010

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report for July 2010 (Issue No. 1) by E-mail on 17 August 2010.

We are pleased to inform you that we have no further comments on the captioned report. We write to verify that the captioned submission in accordance with Condition 4.5 of EP-347/2009/A and FEP-02/347/2009/A.

Thank you for your attention and please feel free to contact the undersigned should you have any queries.

Yours faithfully,

David Yeung Independent Environmental Checker

c.c.	ArchSD	Attn: Mr. W. K. Yiu (CPM203) / Mr. Carl Lam (SPM225)	Fax: 2810 5372
	MMHK(site)	Attn: Mr. Danny Wong	Fax: 2683 1195
	AEC (ETL)	Attn: Ms. Grace Kwok	Fax: 2815 5399
	Able	Attn: Mr. Gavin Lee	Fax: 2796 0519

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Issue No.	:	1
Issue Date	:	July 2010
Project No.	:	944

CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTION OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL ROAD (SECTION 2 LOK MA CHAU CONTROL POINT TO NG TUNG RIVER)

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Grace M. H. Kwok Environmental Team Deader

Certified by:

Issue No. : 1 Issue Date : August 2010 Project No. ٠ 944

**CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW** SECTION OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL **ROAD (SECTION 2 LOK MA CHAU CONTROL POINT TO NG TUNG RIVER)** 

## **ENVIRONMENTAL MONITORING &** AUDIT REPORT (JULY 2010)

Prepared By:

ALLIED ENVIRONMENTAL CONSULTANTS LTD.

#### **COMMERCIAL-IN-CONFIDENCE**

Author:

H. Y. Tang H.Dip Checked: Ađi M. Lee MSc MHKIEIA MHKIOA

Approved:

Arace M/H. Kwok

BEng(Hors) MHKIEIA MHKIOA MISWA MAIA MRAPA LEED AP

This report has been prepared by Allied Environmental Consultants Limited with all reasonable skill, care and diligence within the terms of the Agreement with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

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### **EXECUTIVE SUMMARY**

Architectural Services Department (ArchSD) has awarded the contract for the Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road - Section 2 Lok Ma Chau Control Point to Ng Tung River. (hereafter referred to as the "Project") to Able Engineering Co. Ltd. ("the Contractor"). The contractor has appointed Allied Environmental Consultants Limited (AEC) as the Environmental Team (ET) to undertake Environmental Monitoring and Audit (EM&A) programme in accordance with the EM&A Manual, the Environmental Permit (EP-329/2009/A) and Further Environmental Permit (FEP-02/347/2009/A) for the Project. The site parathion works and EM&A programme commenced on 25<sup>th</sup> March 2010 and the construction works will be commenced on 12<sup>th</sup> April 2010. This report is the fifth monthly EM&A report, which details the EM&A results recorded during the period from 1<sup>st</sup> July 2010 to 31<sup>st</sup> July 2010.

According to the EM&A Manual, there are total 10 designated noise monitoring locations for the entire Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road project, where only MTL01 is within 300m from the construction area for Section 2 (Lok Ma Chau Contorl Point to Ng Tung River), thus only MTL01 is covered in this EM&A report for Section 2. Impact noise monitoring for the Project was carried out on 6th, 13<sup>th</sup>, 20<sup>th</sup> and 28<sup>th</sup> July 2010. Noise monitoring was conducted within the period of 0700-1900, non-restricted hours.

Noise monitoring results at the monitoring location MTL01, based on the monitoring results, the noise levels comply with the environmental requirements in EM&A Manual. There were no exceedances of the action and limit levels during the reporting month.

Five environmental site inspections were conducted by the Contractor and the ET on  $2^{nd}$ ,  $7^{th}$ ,  $16^{th}$ ,  $22^{nd}$  and  $26^{th}$  July 2010. Major findings and deficiency were summarized at **Table 7** of this report. No non-compliance was observed in the reporting month.

There were no environmental complaints received in the reporting month.

No notification of summons or prosecution was received in the reporting month.

A total nos. of 20m<sup>3</sup> of general refuse were disposed to NENT Landfill and 3,361m<sup>3</sup> inert C&D waste were disposed to Tuen Mun Area 38 Fill Bank in this reporting period.

Construction activities to be undertaken in August 2010 will include excavation for footing, pouring blinding layer, and concreting for footing of SBF, PBF & Wave wall and laying granular for wave wall. Potential environmental impacts include dust generation from the backfilling works; noise from operation of the equipments, C&D materials drop in ponds due to backfilling works, damage to tree branch by power mechanical equipments and the storage of various C&D and chemical wastes. The Contractor should properly implement environmental mitigation measures as per the implementation schedule in the EM&A manual to ensure no adverse environmental impacts to be arisen from the construction works. The Contractor was reminded to maintain good housekeeping at the site.

### **1. PROJECT BACKGROUND**

The Frontier Closed Area (FCA) is an integral part of the package of measures for maintaining the integrity of the Hong Kong SAR's boundary with the Mainland and for combating illegal immigration and other cross-boundary criminal activities. Following a recent review, the Government has concluded that with the erection of a secondary boundary fence (SBF) along the boundary patrol road (BPR) and construction of new sections of the BPR and primary boundary fence (PBF) at certain sections along the boundary, the FCA coverage can be substantially reduced without affecting the objective of maintaining the integrity of the boundary. The PBF and SBF will be erected along the northern and southern curbs of the realigned BPR respectively to facilitate the Police in combating cross-boundary criminal activities. The reduced FCA will comprise a narrow strip of land covering the realigned BPR and areas to its north, together with the points of crossing the boundary (i.e. the Boundary Control Points and Sha Tau Kok town). Areas south of the SBF will generally be excised from the FCA. The site location plan is shown in *Figure 1*.

The proposed Secondary Boundary Fence is categorized as a Designated Project (DP) under the Environmental Impact Assessment Ordinance (EIAO) and therefore a detailed Environmental Impact Assessment (EIA- 161/2008) was conducted in year 2009.

An Environmental Permit (EP-347/2009) and a Variation of Environmental Permit (EP-347/2009/A) for the construction of whole project was issued by Environmental Protection Department in June 2009 and June 2010 respectively. A Further Environmental Permit (FEP-02/347/2009) and a Variation of Further Environmental Permit (FEP-02/347/2009/A) for the construction of the subject project was issued in February 2010 and July 2010 respectively.

Architectural Services Department (ArchSD) as the works agent has awarded the construction contract of the Project to Able Engineering Co. Ltd. ("the Contractor"). The Contractor has appointed Allied Environmental Consultants Limited (AEC) as the Environmental Team (ET) to undertake Environmental Monitoring and Audit (EM&A) programme in accordance with the EM&A Manual under the approved EIA report, which details the EM&A requirements for the construction of the Project, the EP-347/2009/A and FEP-02/347/2009/A.

The Construction Programme of the Project is shown in *Appendix A*. The site preparation works and EM&A programme commenced on  $25^{\text{th}}$  March 2010 and the construction works commenced on  $12^{\text{th}}$  April 2010. This report is the fifth monthly EM&A report, which details the EM&A results recorded during the period from  $1^{\text{st}}$  July 2010 to  $31^{\text{st}}$  July 2010.

#### 1.1 Project Organization and Contact Personnel

Key personnel and contact particulars are summarized in *Table 1*.

Role	Department /	Names	Contact	Fax Number
	Company		Number	

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Engineer Representative	Mott McDonald Hong Kong Limited	Mr. YK Or	2828 5740	2827 1823
representative		Mr. Danny Wong	2828 5921	2827 1823
Main Contractor	Able Engineering Co., Limited	Mr. Gavin Lee	9282 8158	2676 7966
Environmental Team Leader	Allied Environmental Consultants Limited	Ms. Grace Kwok	2815 7028	2815 5399
Independent Environmental Checker	ENVIRON Hong Kong Limited	Mr. David Yeung	3743 0788	3548 6988

Table 1 Contact Details of Key Personnel

The organizational structure and lines of communication during the construction work with respect to environmental management is given in *Appendix B*.

## 2. CONSTRUCTION WORKS & PROGRAMME

The major works undertaken and/or completed during the monitoring period were construction of secondary boundary fence works including the following works items:

- excavation for footing;
- reinforcement bar fixing, formwork & concreting for footing;
- disposal of soil; and
- backfilling trench.

The interrelationship between construction activities and environmental mitigation measures in the reporting month are shown in *Table 2*.

<b>Construction Works</b>	Major Environmental Impact	Mitigation Measures
Excavation for footing.	Air quality, noise impacts and	Water spraying provided, well-
	waste management	maintained and quiet plants were
		used. Quantities and record of
		waste transfer should be well-
		maintained.
Reinforcement bar	Noise quality impacts, water	Well-maintained and quiet plants
fixing, formwork &	quality impact.	were used. Concrete washing in
concreting for footing.		designated area.
Disposal of soil.	Air quality, waste management	Water spraying provided,
		Quantities and record of waste
		transfer should be well-maintained.
Backfilling trench.	Air quality	Water spraying provided

 Table 2 Interrelationship between Construction Activities and Mitigation Measures

## 3. SUMMARY OF EM&A REQUIREMENT

Weekly site inspection is required for air quality, noise quality, water quality, waste management, ecology, cultural heritage and landscape and visual. The inspection is to ensure mitigation measures recommended in EIA and EM&A manual implemented during construction phase. Mitigation measures implementation schedule and their status are given in *Appendix F* 

For regular impact noise monitoring, the sampling frequency of at least once a week for a  $L_{eq(30mins)}$ . The Action and Limit Levels for Impact noise are summarized in *Table 3*.

Time Period	Action Level	Limit Level		
Daytime (0700-1900) except general holidays and Sunday	When one documented complaint is received.	75 dB(A)		
Measurements in Leq (30min)				
Table 3 Action and Limit Level for Noise Impact Monitoring				

 Table 3
 Action and Limit Level for Noise Impact Monitoring

Should non-compliance of the above Action and Limit levels occurs, actions in accordance with the Event and Action Plan in *Table 4*.

Action							
ЕТ	Leader	IEC	r -	ER		Cor	ntractor
1. 2.	Notify IEC and the Contractor. Carry out investigation.	1. 2.	Review with analyzed results submitted by ET Review the	1.	Confirm receipt of notification of exceedance in writing,	1.	Submit noise mitigation proposals to IEC.
3.	Report the results of investigation to IEC and the Contractor. Discuss with the Contractor and formulate remedial	3.	proposed remedial measures by the Contractor and advise ER accordingly. Supervise the implement of remedial measures	2. 3.	Notify the Contractor. Require the Contractor to propose remedial measures for the analyzed noise problem.	2.	Implement noise mitigation proposals.
5.	Increase monitoring frequency to check mitigation measures.		incusures:		measures are properly implemented.		
1. 2.	Identify the source. Notify IEC, ER, EPD and the	1.	Discuss amongst ER, ET Leader and the Contractor on	1.	Confirm receipt of notification of exceedance in writing.	1.	Take immediate action to avoid further exceedance.
3.	Contractor. Repeat measurement to confirm findings.	2.	the potential remedial actions. Review the Contractor's	2. 3.	Notify the Contractor. Require the Contractor to propose	2.	Submit proposals for remedial actions to IEC within 3 working days of notification.
	ET 1. 2. 3. 4. 5. 1. 2.	ET Leader1.Notify IEC and the Contractor.2.Carry out investigation.3.Report the results of investigation to IEC and the Contractor.4.Discuss with the Contractor and formulate remedial measures.5.Increase monitoring frequency to check mitigation measures.1.Identify the source.2.Notify IEC, ER, EPD and the Contractor.3.Repeat measurement to confirm findings.	ET LeaderIEC1.Notify IEC and the Contractor.1.2.Carry out investigation.2.3.Report the results of investigation to IEC and the Contractor.2.4.Discuss with the Contractor and formulate remedial measures.3.5.Increase monitoring frequency to check mitigation measures.1.1.Identify the source.1.2.Notify IEC, ER, EPD and the Contractor.2.3.Repeat measurement to confirm findings.2.	ET LeaderIEC1.Notify IEC and the Contractor.1.Review with analyzed results submitted by ET2.Carry out investigation.2.Review the proposed remedial measures by the Contractor and formulate remedial measures.2.Review with analyzed results submitted by ET4.Discuss with the Contractor and formulate remedial measures.3.Supervise the implement of remedial measures.5.Increase monitoring frequency to check mitigation measures.1.Discuss amongst ER, ET Leader and the Contractor on the potential remedial measures.1.Identify the source.1.Discuss amongst ER, ET Leader and the Contractor on the potential remedial measurement to confirm findings.1.Discuss amongst ER, ET Leader actions.	ET LeaderIECER1.Notify IEC and the Contractor.1.Review with analyzed results submitted by ET1.2.Carry out investigation.2.Review the proposed2.3.Report the results of investigation to IEC and the Contractor.proposed accordingly.2.4.Discuss with the formulate measures.3.Supervise the implement of remedial measures.3.5.Increase monitoring frequency to check mitigation 	ET LeaderIECER1.Notify IEC and the Contractor.1.Review with analyzed results submitted by ET1.Confirm receipt of notification of exceedance in writing,2.Carry out investigation.2.Review the proposed remedial1.Confirm receipt of notification of exceedance in writing,3.Report the results of investigation to IEC and the Contractor.2.Notify the Contractor and advise ER accordingly.3.Require the Contractor to propose4.Discuss with the Contractor and formulate measures.3.Supervise the implement of remedial measures.4.Ensure remedial measures are problem.5.Increase monitoring frequency to check mitigation measures.1.Discuss amongst ER, ET Leader and the Contractor on the potential remedial measures.1.Confirm receipt of notification1.Identify the contractor.1.Discuss amongst and the Contractor on the potential remedial actions.1.Confirm receipt contractor.3.Repeat remedial actions.1.Confirm the contractor.2.Notify the contractor.3.Repeat remedial actions.2.Notify the contractor.2.Notify the contractor.3.Repeat remedial actions.2.Notify the contractor.3.Require the contractor.3.Repeat remedial remedial actions.2.Notify the contractor.	ET LeaderIECERCould1.Notify IEC and the Contractor.1.Review with analyzed results submitted by ET1.Confirm receipt of notification of exceedance in writing,1.2.Carry out investigation.2.Review the proposed remedial1.Confirm receipt of notification of exceedance in writing,1.3.Report the results of investigation to IEC and the Contractor.2.Notify the contractor and advise ER accordingly.2.Notify the Contractor to propose propose2.4.Discuss with the formulate remedial measures.3.Supervise the implement of remedial measures.measures.4.Ensure remedial measures are properly implemented.5.Increase monitoring frequency to check mitigation measures.1.Discuss amongst ER, ET Leader and the Contractor on the potential1.Confirm receipt of notification properly implemented.1.Identify the source.1.Discuss amongst ER, ET Leader and the Contractor.1.Confirm receipt of notification of exceedance in writing.2.Notify IEC, ER, and the Contractor.1.Confirm receipt contractor.1.3.Repeat remedial remedial Contractor.1.Confirm receipt contractor.1.3.Repeat remedial remedial contractor.2.Notify the contractor.2.3.Repeat remedial remedial contractor.<

Issue 1

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Event	Action							
	ET Leader	IEC	ER	Contractor				
	ET Leader         monitoring         frequency.         5.       Carry out         analysis of         Contractor's         working         procedures to         determine         possible         mitigation to be	<ul> <li>whenever necessary to assure their effectiveness and advise ER accordingly.</li> <li>3. Supervise the implementation of remedial</li> </ul>	ERmeasures for the analyzed noise problem.4.Ensure remedial measures are properly implemented.5.If exceedance continues, consider what	Contractor3.Implement the agreed proposals.4.Resubmit proposals if problem still not under control.5.Stop the relevant activity of works as determined				
	<ul> <li>implemented.</li> <li>6. Inform IEC, EF and EPD to causes &amp; action taken for the exceedances.</li> </ul>	e	activity of the work is responsible and instruct the Contractor to stop that activity	by the ER until the exceedance is abated.				
	<ul> <li>7. Assess</li> <li>effectiveness of the Contractor' remedial action and keep IEC, EPD and ER informed of the results.</li> </ul>	3	of work until the exceedance is abate.					
	8. If exceedance stops, cease additional monitoring.							

Table 4 Event and Action Plan

## 4. NOISE MONITORING METHODOLOGY

#### 4.1 Noise Monitoring Procedure

Noise monitoring was conducted at the designated noise monitoring location between 0700-1900 hours using a sound level meter which complies with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). Noise instrumentation details are given in *Table 5*.

Manufacturer	Type/Model No.	Equipment
RION	Model NL 31	Precision Sound Level
		Analyser with windshield
RION	Model NC 73	Calibrator

Noise levels measurements were recorded in terms of thirty minutes A-weighted equivalent continuous sound pressure level ( $Leq(_{30mins})$ ) on a weekly basis. The sound level meter was calibrated immediately prior to and following each noise measurement. The meter was mounted

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Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road (Section 2 Lok Ma Chau Control Point to Ng Tung River) Environmental Monitoring & Audit Report (Jul 2010)

on a tripod at a height of 1.2m and the microphone was positioned at 1m away the building façade of the noise monitoring station facing the construction site. The sound level meters, including the calibrators, are verified by the manufacturer every one year to ensure they perform to the same level of accuracy as stated in the manufacturer's specifications. The calibration certificates for the sound level meter and calibrator are given in *Appendix C*.

Noise measurements were not made in the presence of fog, rain, and wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed was checked with a portable anemometer capable of measuring the wind speed in m/s.

#### 4.2 Noise Monitoring Programme

Noise monitoring was conducted at designated noise monitoring locations during construction phase: a village house at Village House at Ma Tso Lung (MTL01) as shown in *Figure 2* on  $6^{nd}$ ,  $13^{th}$ ,  $20^{th}$  and  $28^{th}$  July 2010. Details of the noise monitoring stations are shown in *Table 6*. *Appendix D* shows detailed schedule of the monitoring programme in the reporting month and upcoming month.

ID	<b>Monitoring Location</b>	Description of Monitoring Location
MTL01	Village House at Ma Tso	G/F boundary wall of Village House at Ma Tso
WIILUI	Lung	Lung

 Table 6 Descriptions of Noise Monitoring Locations

#### 5. RESULTS

Noise monitoring results are summarized in *Table 7*. Weather condition during the monitoring period was mainly fine with occasional cloudy. Detailed results and graphical plots of noise monitoring are given in *Appendices E*. There were no exceedances of the action and limit levels during the reporting month.

Location	Date	Weather Condition	Time	L <sub>eq</sub> (30mins)	L <sub>10</sub> (30mins)	L90 (30mins)	Remarks
	06 Jul 10	Sunny	10:12  10:42	53.3	55.8	49.2	Noise from excavations works by adjacent site, noise from bird.
MTL01	13 Jul 10	Fine	11:00 - 11:30	49.5	51.5	42.7	Noise from excavations works by adjacent site, noise from bird.
	20 Jul 10	Fine	15:18 - 15:48	47.5	50.5	40.7	Noise from excavations works by adjacent site, noise from bird.
	28 Jul 10	Cloudy	09:12	45.5	47.4	42.3	Noise from excavations works

Location	Date	Weather Condition	Time	L <sub>eq</sub> (30mins)	L <sub>10</sub> (30mins)	L90 (30mins)	Remarks
			09:42				by adjacent site, traffic noise.

Table 7 Noise Monitoring Results

## 6. SITE INSPECTION & AUDIT

A total of five site inspections were conducted by the Environmental Team (ET) in this reporting month. Observations by the ET, actions by the Contractor and outcome are summarized in the *Table 8*.

Date	Observations	Action taken by Contractor	Outcome
02 Jul 2010	No major environmental deficiency.	-	-
07 Jul 2010	No major environmental deficiency.	-	-
16 Jul 2010	Stagnant water was observed on-site.	The Contractor was stabilized the uneven surface on-site.	The situation was rectified as observed on 22 July 2010 (Closed).
22 Jul 2010	Muddy water in public drain was observed near materials storage area.	Sand bags has been provided to prevent muddy water enter public drain directly.	The situation was rectified as observed on 26 July 2010 (Closed).
26 Jul 2010	Dry stockpile was observed on-site.	Cover the stockpile with tarpaulin sheet.	The situation was rectified as observed on 2 August 2010 (Closed).

Table 8 Summary of Site Inspections

During site inspections in the reporting month, no non-conformance of implementation of environmental mitigation measures was identified. All environmental mitigation measures for construction stages as stated in approved EIA Report, EM&A Manual and EP-347/2009/A were carried out properly in the reporting month. The mitigation measures implementation schedule is shown in *Appendix F*.

## 7. NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

In this reporting period, no complaint, notification of summons or prosecution was received. No non-compliance for general works and no non-compliance against EP condition was recorded. The complaint log is appended in *Appendix G*.

## 8. WASTE MANAGEMENT

There are a total of  $3,361m^3$  inert C&D waste was disposed to Tuen Mun Area 38 Fill Bank,  $0m^3$  of metal wastes,  $0m^3$  of paper and cardboard packing and  $20m^3$  of general refuse were disposed to North East New Territories Landfill. There are a total of  $0m^3$  of chemical waste was transported off site to Chemical Waste Treatment Centre at Tsing Yi in this reporting period. The monthly Waste Flow Table is given in *Appendix H*.

Good site practice shall be maintained and specific procedures in dealing with different kind of wastes shall be followed during construction. The Contractor shall maintain and record all triptickets as stipulated in the Waste Management Plan (WMP) and project EM&A Manual and make a thorough reference from the relevant Legislations and guidelines by the EPD.

## 9. STATUS OF LICENSE AND PERMIT

A summary of relevant permits, licences, and notifications on environmental protection for the Project is given in *Appendix I*.

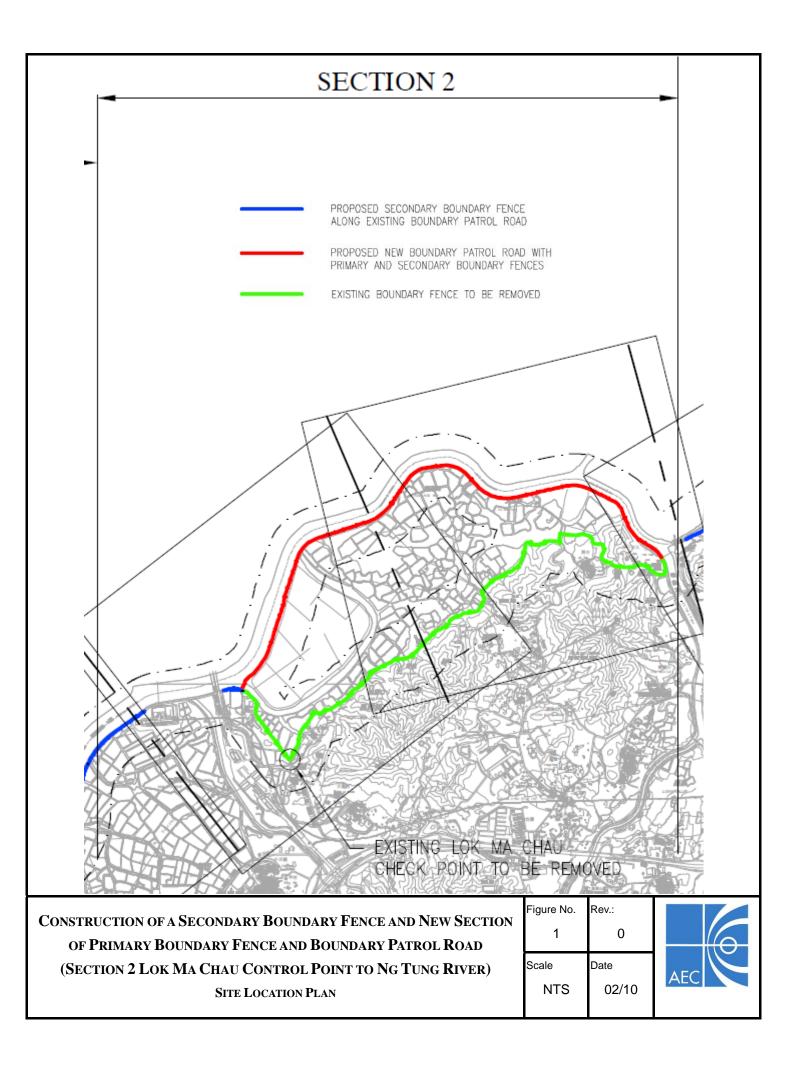
## **10. CONCLUSIONS AND FUTURE KEY ISSUES**

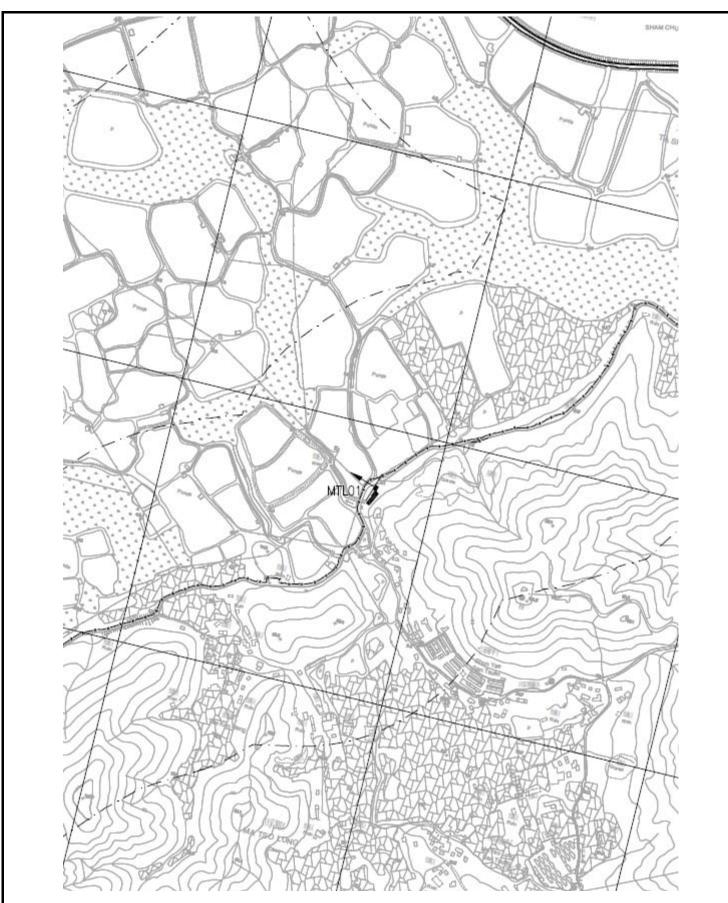
Environmental monitoring was carried out for the Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road (Section 2 Lok Ma Chau Control Point to Ng Tung River) in the reporting month. Noise monitoring was conducted at a village house at Ma Tso Lung (MTL01) during the period from 1<sup>st</sup> July 2010 to 31<sup>st</sup> July 2010.

Noise monitoring was conducted at the monitoring location MTL01. All monitoring results complied with the relevant action and limit levels.

A total nos. of 20m<sup>3</sup> of general refuse were disposed to NENT Landfill and 3,361m<sup>3</sup> inert C&D waste were disposed to Tuen Mun Area 38 Fill Bank in this reporting period.

Construction activities to be undertaken in August 2010 will include excavation for footing, pouring blinding layer, and concreting for footing of SBF, PBF & Wave wall and laying granular for wave wall. Potential environmental impacts include dust generation from the backfilling works; noise from operation of the equipments, C&D materials drop in ponds due to backfilling works, damage to tree branch by power mechanical equipments and the storage of various C&D and chemical wastes. The Contractor should properly implement environmental mitigation measures as per the implementation schedule in the EM&A manual to ensure no adverse environmental impacts to be arisen from the construction works. The Contractor was reminded to maintain good housekeeping at the site.





CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTION OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL ROAD (SECTION 2 LOK MA CHAU CONTROL POINT TO NG TUNG RIVER) LOCATION OF NOISE MONITORING STATION





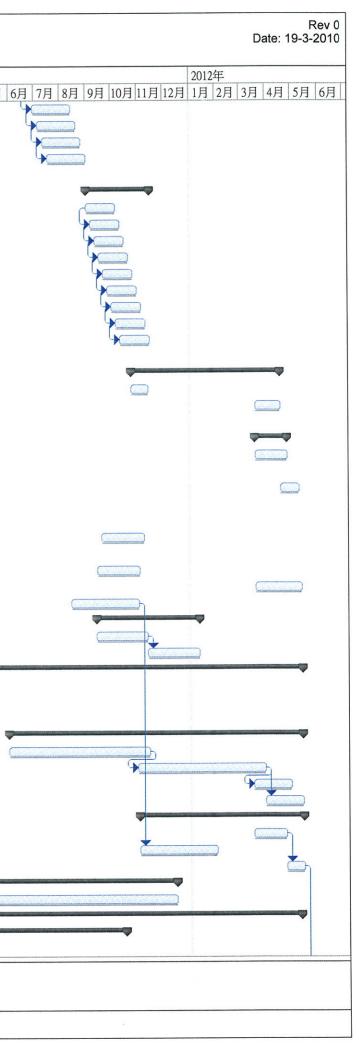
Appendix AProject Construction Programme

ble Eng	gineering Company Limite	d	Cons	truction of a Second	ary Boundary Fo Lok Ma Chau (	<u>Master Programm</u> nce and New Section of P Control Point to Ng Tung	rimary Boundary Fenc	e and Boundary Patro SW306)	l Road	Re Date: 19-3-20
<b>識別碼</b>	任務名稱		工期	開始時間	完成時間	2010年			2011年 1月 2月 3月 4月 5月 6月 7月 8月 9月 10月	2012年
1 5	Section A		870 days	2009/12/30	2012/5/17		47 37 07 77 07			
2	Site Possession		0 days	2009/12/30	2009/12/30					· · · · ·
3	Application entrance permi	I	14 days	2009/12/30	2010/1/12					
4	Site Office Erection	-	9 days	2010/1/13	2010/1/21					
5	Site Condition / Tree Surve	v	50 days	2010/1/17	2010/3/7	*				
6	Preparation works	5	28 days	2010/3/16	2010/4/12		-0			
7	Mobilization for prepa	ration works	14 days	2010/3/16	2010/3/29	Ċ.	•			
8	Set up wheel wish equ		14 days	2010/3/30	2010/4/12		5			
9	Tree transplanting		776 days	2010/3/20	2012/5/3					
10	Tree Protection		21 days	2010/3/20	2010/4/9		2			•
11	Pruning		90 days	2010/4/10	2010/7/8					
12	Transplanting		45 days	2010/7/9	2010/8/22			ſ		
13	Planting & Hydroseed	ng	45 days	2012/3/20	2012/5/3			2		
14			is dujo	DOTLIGIDO	2012/0/0					
15	Zone 1 SBF CH3000 to CI	H 150	432 days	2010/4/20	2011/6/25					
16	CH3000 -2920		46 days	2010/4/20	2010/6/4		*		·	
17	CH2920-2840		46 days	2010/4/26	2010/6/10					
18	CH2840-2760		46 days	2010/5/2	2010/6/16					
19	CH2760-2680		46 days	2010/5/8	2010/6/22					
20	CH2680-2600		46 days	2010/5/14	2010/6/28					
21	CH2600-2520		46 days	2010/5/20	2010/7/4					
22	CH2520-2440		46 days	2010/5/26	2010/7/10					
23	CH2440-2360		46 days	2010/6/1	2010/7/16					
24	CH2360-2280		46 days	2010/6/7	2010/7/22					
25	CH2280-2200		46 days	2010/6/13	2010/7/28					
26	CH2200-2120		46 days	2010/6/19	2010/8/3					
27	CH2120-2040		46 days	2010/6/25	2010/8/9					
28	CH2040-1960		46 days	2010/7/1	2010/8/15					
29	CH1960-1880		46 days	2010/7/7	2010/8/21			1		
30	CH1880-1800		46 days	2010/7/13	2010/8/27			- 1		
31	CH1800-1720		46 days	2010/7/19	2010/9/2					
32	CH1720-1640		46 days	2010/7/25	2010/9/8					
33	CH1640-1560		46 days	2010/7/31	2010/9/14					
34	CH1560-1480		46 days	2010/8/6	2010/9/20					
35	CH1480-1400		46 days	2010/8/12	2010/9/26					
36	CH1400-1320		46 days	2010/8/18	2010/10/2		G			
37	CH1320-1240		46 days	2010/8/24	2010/10/8		G			
38	CH1240-1160		46 days	2010/8/30	2010/10/14					
39	CH1160-1080		46 days	2010/9/5	2010/10/20					
40	CH1080-1000		46 days	2010/9/11	2010/10/26					
41	CH1000-920		46 days	2010/9/17	2010/11/1					
42	CH920-840		46 days	2010/9/23	2010/11/7					
43	CH840-760		46 days	2010/9/29	2010/11/13					
44	CH760-680		46 days	2011/3/30	2011/5/14			·		
45	CH680-600		46 days	2011/4/5	2011/5/20					
46	CH600-520		46 days	2011/4/11	2011/5/26					
47	CH520-440		46 days	2011/4/17	2011/6/1					
48	CH440-360		46 days	2011/4/23	2011/6/7					
49	CH360-280		46 days	2011/4/29	2011/6/13					
50	CH280-200		46 days	2011/5/5	2011/6/19					
51	CH200-150		46 days	2011/5/11	2011/6/25					
52										
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		N 83			于不同女子	ч <b>н</b>				

Able Eng	gineering Company Limited	Cons	truction of a Second	lary Boundary Fo	<u>Master Programme</u> nce and New Section of Primary Boundary Fence and Boundary Patrol Road	Re Date: 19-3-20
胡碼	任務名稱	工期	from 開始時間	n Lok Ma Chau ( 完成時間	Control Point to Ng Tung River (Contract No. : SSW306) 2010年 2011年	2012年
			MANAGATES		11月 12月 1月 2月 3月 4月 5月 6月 7月 8月 9月 10月 11月 12月 1月 2月 3月 4月 5月 6月 7月 8	
53	Zone 1 PBF CH3000 to CH 150	210 days	2011/4/1	2011/10/27		
54	CH3000-2920	35 days	2011/4/1	2011/5/5		
55	CH2920-2840	35 days	2011/4/6	2011/5/10		
56	CH2840-2760	35 days	2011/4/11	2011/5/15		
57	CH2760-2680	35 days	2011/4/16	2011/5/20		
58	CH2680-2600	35 days	2011/4/21	2011/5/25	▶ <u></u>	
59	CH2600-2520	35 days	2011/4/26	2011/5/30		
60	CH2520-2440	35 days	2011/5/1	2011/6/4		
61	CH2440-2360	35 days	2011/5/6	2011/6/9		
62	CH2360-2280	35 days	2011/5/11	2011/6/14		
63	CH2280-2200	35 days	2011/5/16	2011/6/19		
64	CH2200-2120	35 days	2011/5/21	2011/6/24		
65	CH2120-2040	35 days	2011/5/26	2011/6/29		
66	CH2040-1960	35 days	2011/5/31	2011/7/4		
67	CH1960-1880	35 days	2011/6/5	2011/7/9		
68	CH1880-1800	35 days	2011/6/10	2011/7/14		
69	CH1800-1720	35 days	2011/6/15	2011/7/19		
70	CH1720-1640	35 days	2011/6/20	2011/7/24		
71	CH1640-1560	35 days	2011/6/25	2011/7/29		
72	CH1560-1480	35 days	2011/6/30	2011/8/3		
73	CH1480-1400	35 days	2011/7/5	2011/8/8		1
74	CH1400-1320	35 days	2011/7/10	2011/8/13		
75	CH1320-1240	35 days	2011/7/15	2011/8/18		
76	CH1240-1160	35 days	2011/7/20	2011/8/23		
77	CH1160-1080	35 days	2011/7/25	2011/8/28		
78	CH1080-1000	35 days	2011/7/30	2011/9/2		
79	CH1000-920	35 days	2011/8/4	2011/9/7	×	
80	CH920-840	35 days	2011/8/9	2011/9/12		
81	CH840-760	35 days	2011/8/14	2011/9/17		
82	CH760-680	35 days	2011/8/19	2011/9/22		Y
83	CH680-600	35 days	2011/8/24	2011/9/27		
84	CH600-520	35 days	2011/8/29	2011/10/2		
85	CH520-440	35 days	2011/9/3	2011/10/7		
86	CH440-360	35 days	2011/9/8	2011/10/12		
87	CH360-280	35 days	2011/9/13	2011/10/17		
88	CH280-200	35 days	2011/9/18	2011/10/22		
89	CH200-150	35 days	2011/9/23	2011/10/27		¥
90						
91	Zone 1 Patrol road CH3000 to CH 150	216 days	2011/9/15	2012/4/17		<b>V</b>
92	Road surface CH3000-1880	62 days	2011/9/15	2011/11/15		
93	Road surface CH1880-150	30 days	2012/3/19	2012/4/17		
94						
95	Zone 2 SBF CH 5000 to CH3000	190 days	2010/5/10	2010/11/15		
96	CH5000-4920	46 days	2010/5/10	2010/6/24		
97	CH4920-4840	46 days	2010/5/16	2010/6/30		
98	CH4840-4760	46 days	2010/5/22	2010/7/6		
99	CH4760-4680	46 days	2010/5/28	2010/7/12		
100	CH4680-4600	46 days	2010/6/3	2010/7/18		
101	CH4600-4520	46 days	2010/6/9	2010/7/24		
102	CH4520-4440	46 days	2010/6/15	2010/7/30		
103	CH4440-4360	46 days	2010/6/21	2010/8/5		
104	CH4360-4280	46 days	2010/6/27	2010/8/11		
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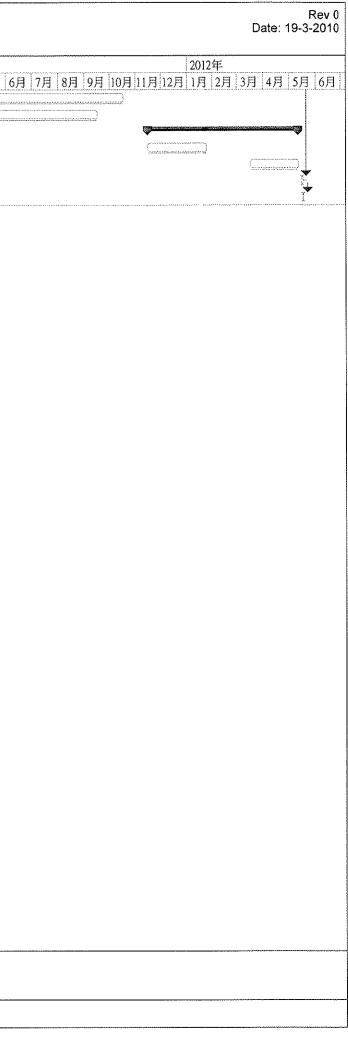
Line Ling	ineering Company Limit	ed	Cons	struction of a Second	lary Boundary Fo	<u>Master Programme</u> ence and New Section of Primary Boundary Fence and Boun Control Point to Ng Tung River (Contract No. : SSW306)	dary Patrol Road	Rev Date: 19-3-20
識別碼(	壬務名稱		工期	開始時間	完成時間	2010年		2012年
105	CH4280-4200		46 days	2010/7/3	2010/8/17	11月 12月 1月 2月 3月 4月 5月 6月 7月 8月 9月 10月	月11月12月1月2月3月3月4月5月6月7月8月9月	10月11月12月1月2月3月4月3月0
106	CH4200-4120		46 days	2010/7/9	2010/8/23			
107	CH4120-4040		46 days	2010/7/15	2010/8/29			
108	CH4040-3960		46 days	2010/7/21	2010/9/4			
109	CH3960-3880		46 days	2010/7/27	2010/9/10			
110	CH3980-3800		46 days	2010/8/2	2010/9/16			
111	CH3800-3720		46 days	2010/8/8	2010/9/22			
112	CH3720-3640		46 days	2010/8/14	2010/9/28			
113	CH3640-3560		46 days	2010/8/20	2010/10/4	¥		
114	CH3560-3480		46 days	2010/8/26	2010/10/10			
115	CH3480-3400		46 days	2010/9/1	2010/10/16			
116	CH3400-3320		46 days	2010/9/7	2010/10/22			
117	CH3320-3240		46 days	2010/9/13	2010/10/28			
118	CH3240-3160		46 days	2010/9/19	2010/11/3			
119	CH3160-3080		46 days	2010/9/25	2010/11/9			
120	CH3080-3000		46 days	2010/10/1	2010/11/15			
121								
122	Zone 2 PBF CH 5000-300	00	155 days	2011/4/4	2011/9/5		<b>Q</b>	
123	CH5000-4920		35 days	2011/4/4	2011/5/8			
124	CH4920-4840		35 days	2011/4/9	2011/5/13			
125	CH4840-4760		35 days	2011/4/14	2011/5/18			
126	CH4760-4680		35 days	2011/4/19	2011/5/23			
127	CH4680-4600		35 days	2011/4/24	2011/5/28			
128	CH4600-4520		35 days	2011/4/29	2011/6/2			
129	CH4520-4440		35 days	2011/5/4	2011/6/7		¥	
130	CH4440-4360		35 days	2011/5/9	2011/6/12			
131	CH4360-4280		35 days	2011/5/14	2011/6/17			
132	CH4280-4200		35 days	2011/5/19	2011/6/22			
133	CH4200-4120		35 days	2011/5/24	2011/6/27			
134	CH4120-4040		35 days	2011/5/29	2011/7/2			
135	CH4040-3960		35 days	2011/6/3	2011/7/7			
136	CH3960-3880		35 days	2011/6/8	2011/7/12			
137	CH3880-3800		35 days	2011/6/13	2011/7/17			
138	CH3800-3720		35 days	2011/6/18	2011/7/22			
139	CH3720-3640		35 days	2011/6/23	2011/7/27			
140	CH3640-3560		35 days	2011/6/28	2011/8/1			
141	CH3560-3480		35 days	2011/7/3	2011/8/6			
142	CH3480-3400		35 days	2011/7/8	2011/8/11			
143	CH3400-3320		35 days	2011/7/13	2011/8/16			
144	CH3320-3240		35 days	2011/7/18	2011/8/21			
145	CH3240-3160		35 days	2011/7/23	2011/8/26			
146	CH3160-3080		35 days	2011/7/28	2011/8/31			
147	CH3080-3000		35 days	2011/8/2	2011/9/5		↓	
148								
149	Zone 2 Patrol road CH 50	00-3000	92 days	2011/8/15	2011/11/14			
150								
151	Zone 3 SBF CH5700 to C	H5000	94 days	2011/5/31	2011/9/1			
152	CH5700-5640		46 days	2011/5/31	2011/7/15			
153	CH5640-5560		46 days	2011/6/6	2011/7/21		▶ <u></u>	
154	CH5560-5480		46 days	2011/6/12	2011/7/27			
155	CH5480-5400		46 days	2011/6/18	2011/8/2		₩ <u></u>	
156	CH5400-5320		46 days	2011/6/24	2011/8/8			
安. M	Programma Day 0 10 2 0	<b>仁</b> 孜	※ 中		協西	6 如仁致	■期限  少	
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	gineering Company Limited					rimary Boundary Fence and Bou River (Contract No. : SSW306)	indary Patrol Road
識別碼	任務名稱	工期	開始時間	完成時間	2010年		2011年
157	CH5320-5240		days 2011/6/3	0 2011/8/14		4月 5月 6月 7月 8月 9月 IC	0月 11月 12月 1月 2月 3月 4月 5月
157	CH5240-5160		days 2011/0/3 days 2011/7/				
159	CH5240-5160 CH5160-5080		days 2011/7/1				
160	CH5100-5000 CH5080-5000		days 2011/7/1				
161	C115060-5000	40	uays 2011//1	2011/7	L		
162	Zone 3 PBF CH5700 to CH5000	75	days 2011/9/	2 2011/11/15	5		
163	CH5700-5640		days 2011/9/				
164	CH5640-5560		days 2011/9/				
165	CH5560-5480		days 2011/9/1				
166	CH5480-5400		days 2011/9/1				
167	CH5400-5320		days 2011/9/2				
168	CH5320-5240		days 2011/9/2				
169	CH5240-5160		days 2011/10/				
170	CH5160-5080		days 2011/10/				
171	CH5080-5000		days 2011/10/1				
172							
173	Zone 3 Patrol road CH5700 to CH5000	176	days 2011/10/2	5 2012/4/17	7		
174	CH5700-5400		days 2011/10/2				
175	CH5400-5000		days 2012/3/1				
176							
177	Zone 4 SBF CH150 to CH000	38	days 2012/3/1	9 2012/4/25	5		
178	CH5700-5640		days 2012/3/1		-		
179							
180	Zone 4 Patrol road CH150 to CH000	22 0	days 2012/4/1	8 2012/5/9	)		
181							
182	1st Backfilling From CH4300 to CH557	5 50 6	days 2010/9/2	0 2010/11/8	3		
183	2nd Backfilling From CH4300 to CH55		days 2011/9/2				
184	Modification works for the U-channel &		days 2010/9/2				
185	New Catch Pit		days 2011/9/1				
186	Road mark	55 0	days 2012/3/1	9 2012/5/12	2		
187	RC meter Kiosk	80 (	days 2011/8/1	5 2011/11/2	2		
188	Bollard	120 0	days 2011/9/1	4 2012/1/11	l		
189	Steel bollard installation	60	days 2011/9/1	4 2011/11/12	2		
190	Painting	60	days 2011/11/1	3 2012/1/11	l		
191	PBF & SBF & Lamp Post	684 0	lays 2010/6/3	0 2012/5/13	3	-	
192	BF Sample erection	50	days 2010/6/3	0 2010/8/18	3		
193	Steel work testing	60	days 2010/8/1	9 2010/10/17	7		<u>F</u>
194	Fabrication	90	days 2010/10/1	8 2011/1/15	5		
195	Site installation	347 0	lays 2011/6/	2 2012/5/13	3		
196	PBF / SBF / Lamp Post erection	n 166 i	days 2011/6/				
197	XPM mesk fixing	150					
198	Painting		days 2012/3/1				
199	Razor Barbed wire fixing	45 0	days 2012/3/3	0 2012/5/13	3		
200	E&M works	194 0					
201	Flood light installation	39 (	days 2012/3/1				
202	Wiring works	90 (	days 2011/11/				
203	T&C inspection		days 2012/4/2				
204	Section B	270 0					
205	New wave wall ~ CH 4+200 to ~CH						Constanting of the second s
206	Section D	570 0					V-
207	Strengthen the wave wall footing	363 0					•
208	Preparation works	24 0	days 2010/10/2	0 2010/11/12	2		
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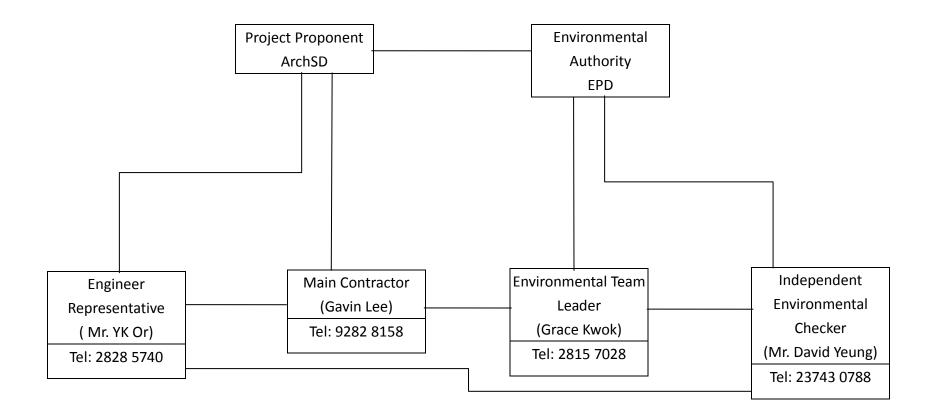
Able Er	ngineering Company Limited	<u>Master Programme</u> Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road from Lok Ma Chau Control Point to Ng Tung River (Contract No. : SSW306)									
識別碼	任務名稱	工期	開始時間	完成時間	2010年	2011年					
					11月12月1月2月3	3月 4月 5月 6月 7月 8月 9月 10月 11月 12月 1月 2月 3月 4月 5月 6					
209	Zone 1	196 days	2011/4/5	2011/10/17							
210	Zone 2	150 days	2011/4/20	2011/9/16	9 7 7 7 7 7 7 7 7 7 7 7 7 7 7						
211	Modification works for existing wave wall	178 days	2011/11/16	2012/5/11							
212	Zone 1	70 days	2011/11/16	2012/1/24	9 9 9 9 9 9						
213	Zone 2	56 days	2012/3/17	2012/5/11							
214	Genal Cleaning	2 days	2012/5/15	2012/5/16							
215	Handover	1 day	2012/5/17	2012/5/17	- <b>6 3 4 6 5 5 5</b>						

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Appendix B Organization Chart — Line of communication



Appendix C Calibration Certificates of Noise Monitoring Instruments



輝創工程有限公司 Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C095683

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Meter Manufacturer : Rion Model No. : NL-31 Serial No. : 00983400

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C095683.

The equipment is supplied by

Co. Name : Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

Date of Issue : 23 October 2009

Certified by : K Q Lee

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F. Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com



Certificate No. : C093598

# Certificate of Calibration

*This is to certify that the equipment* 

Description : Sound Level Calibrator Manufacturer : Rion Model No. : NC-73 Serial No. : 10786708

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C093598.

The equipment is supplied by

Co. Name : Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

Date of Issue: 10 July 2009

Certified by : \_\_\_\_\_\_\_ Here the HC Chan

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com



Certificate No. : C103766

# Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Calibrator Manufacturer : Rion Model No. : NC-73 Serial No. : 10786708

## has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C103766.

The equipment is supplied by

Co. Name : Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

Date of Issue: 13 July 2010

Certified by : KC Lee

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

Appendix DDetail Schedule of Noise Monitoring Programme

Schedule for noise monitoring programme of Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road (Section 2 Lok Ma Chau Control Point to Ng Tung River)

<u> </u>	1 0
Date	Start Time
6 <sup>th</sup> July 2010	10:12
13 <sup>th</sup> July 2010	11:00
20 <sup>th</sup> July 2010	15:18
28 <sup>th</sup> July 2010	09:12

#### Monitoring schedule for the reporting month

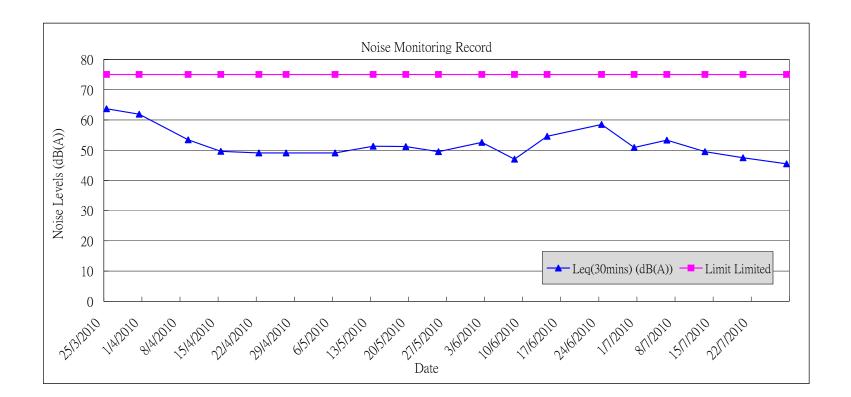
#### Monitoring schedule of the coming month

Date	Time
3 <sup>rd</sup> August 2010	To be confirmed
10 <sup>th</sup> August 2010	To be confirmed
19 <sup>th</sup> August 2010	To be confirmed
25 <sup>th</sup> August 2010	To be confirmed
31 <sup>st</sup> August 2010	To be confirmed

Appendix E Summary and Graphical Plot of Noise Monitoring Record Noise Monitoring Result for Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road (Section 2 Lok Ma Chau Control Point to Ng Tung River)

Month: July 2010

Date	Time	Leq(30mins) (dB(A))	L10(30mins) (dB(A))	L90(30mins) (dB(A))	Limit Level
6-Jul-10	10:12 - 10:42	53.3	55.8	49.2	75
13-Jul-10	11:00 - 11:30	49.5	51.5	42.7	75
20-Jul-10	15:18 - 15:48	47.5	50.5	40.7	75
28-Jul-10	09:12 - 09:42	45.5	47.4	42.3	75



Appendix F Mitigation Measures Implementation Schedule for Construction Stage

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
<u>Air Q</u>	<u>uality</u>							
Durin	g Constr	uction	1	1	1		1	
2.5.2	3.2.2	<ul> <li>The following good site practice should be implemented:</li> <li>any 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> <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> <li>dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting;</li> <li>the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should paved with concrete, bituminous materials or hardcores;</li> <li>the portion of road leading only to a construction site that is within 30m of designated vehicle entrance or exit should be kept clear of dusty materials;</li> </ul>	impact	Contractor	Constructi on Work Sites	During Construction	EIAO-TM, Air Pollution Control (Construction Dust) Regulation	*

Remarks:

- ^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

N/A

EIA Ref.	EM&A Log Ref.		Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
		<ul> <li>all dusty materials should be sprayed with water prior to any loading, unloading or transfer;</li> <li>vehicle speed should be limited to 10kph except on completed access roads;</li> <li>every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.</li> </ul>						^
<u>Noise</u>								
Durin	g Constru	uction						
3.8.14	4.8.1	The following good site practical should be implemented:	To mitigate construction noise	Contractor	Constructi on Work	During Construction	EIAO-TM, NCO	
		<ul> <li>The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD;</li> <li>The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines;</li> <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>	impact		Sites			^

Remarks:

- Implement mitigation measure in the reporting month; Not Applicable in the reporting month; N/A
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

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EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
		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;						
		• Noisy equipment and noisy activities should be located as far away from the						^
		NSRs as is practical;						
		• Unused equipment should be turned off. PME should be kept to a minimum						^
		and the parallel use of noisy equipment / machinery should be avoided;						
		• Regular maintenance of all plant and equipment;						^
		• Material stockpiles and other structures should be effectively utilised as noise						N/A
		barriers, where practicable.						

Remarks:

Х Non-compliance of mitigation measure;

\* Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

N/A

Ref.	EM&A Log Ref.		Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
3.8.1	4.8.2	Other than good site practice, the Contractor is required to adopt Levels 1 and 2	To mitigate	Contractor	Constructi	During	EIAO-TM, NCO	N/A
-3.8.3	-4.8.3	site-specific direct mitigation measures as specified below during the construction	construction noise		on work	construction		
		phase.	impact		sites,			
					Figure 4.9			
		With construction / demolition work undertaken at a distance of 60m or less to the			shows the			
		NSRs, below mitigation measures should be included:			typical			
					section			
		Level 1 – Use of Quiet Plant and Movable Noise Barrier			of movable			
		• The Contractor shall obtain particular models of plant that are quieter than			noise			
		standards given in GW-TM.			barrier			
		• 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.						

- ^ Implement mitigation measure in the reporting month;
- N/A

Х Non-compliance of mitigation measure;

\*

- Not Applicable in the reporting month;
- Not satisfactory but rectified by the contractor.

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
3.8.9	4.8.4	In addition to the use of quiet plant and movable noise barrier, alternative	To mitigate	Contractor	Constructi	Before the	EIAO-TM, NCO	^
		demolition method of existing boundary fence at Section 2-3 shall be used where	construction noise		on work	commenceme		
		demolition works would be undertaken at a distance of 12m or less to the NSRs.	impact for demolition		sites	nt of		
		These particular mitigation measures should be included:	of existing boundary		(Section 2	demolition		
			fence		- 3)	works		
		Level 2 – Alternative Demolition Method of Existing Boundary Fence						
		• The use of welder is recommended to replace the use of hand-held driller;						
		• The use of hand-held breaker with movable noise barrier is recommended to						
		replace the use of mini-robot mounted breaker; and the duration for the use of						
		hand-held breaker is minimal as only the surface level of the footing to be						
		broken; and						
		• The removal of the footing of the existing boundary fence should be carried by						
		concrete crusher mini-robot mounted after the surface level broken by						
		hand-held breaker.						

- ^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

# Appendix F Environmental Mitigation Implementation Schedule

Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
During	g Constru	iction						
4.7.1		<ul> <li>Good site practices in addition to the implementation of mitigation measures would minimize the impact to the surrounding environment.</li> <li><i>General Prevention and Precaution Measures</i></li> <li>The site should be confined to avoid silt runoff to the site.</li> <li>No discharge of silty water into the storm drain and drainage channel within and the vicinity of the site.</li> <li>Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials.</li> <li>Stockpiles to be covered by tarpaulin to avoid spreading of materials during rainstorms;</li> <li>Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;</li> </ul>	and chemical leakage	Contractor	Constructi on work sites	During construction	Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and TM standard under the WPCO	^ ^ * ^ ^

#### Remarks:

- ^ Implement mitigation measure in the reporting month;
  - Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

N/A

\*

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
		• 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;						
		• Storage areas shall be selected at safe locations on site and adequate space shall						^
		be allocated to the storage area;						
		• Any construction plant which causes pollution to the water system due to						N/A
		leakage of oil or fuel shall be removed off-site immediately;						
		• Spillage or leakage of chemical waste to be controlled by using suitable						^
		absorbent materials;						
		• Chemicals will always be stored on drip trays or in bunded areas where the						*
		volume is 110% of the stored volume;						
		• Regular clearance of domestic waste generated in the temporary sanitary						^
		facilities to avoid waste water spillage.						
		• Temporary sanitary facilities to be provided for on-site workers during						^
		construction.						

- ^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

	EM&A Log Ref.		Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
4.7.2 –	5.3.2-5.	Concreting Work	To collect runoff	Contractor	Constructi	During	Practice Note for	N/A
4.7.3	3.3	A temporary drainage channel and associated facilities should be provided to collect	generated and prevent		on work	construction	Professional Persons with	
		the runoff generated and prevent concrete-contaminated water from entering	concrete-contaminated		sites		regard to site drainage	
		watercourses. Adjustment of pH can be achieved by adding a suitable neutralising	water from entering				(ProPECC PN 1/94) and	
		reagent to wastewater prior to discharge.	watercourses				TM standard under the	
							WPCO	
		The concreting works should be temporarily isolated with proper methods, such as					CEDD General	
		by placing of sandbags or silt curtains with lead edge at bottom and properly	To prevent adverse				Specification- Protection	
		supported props.	impacts on the water		Work sites		of natural streams/rivers-	
			quality of Lin Ma		of Section		Clause 25.09	
			Hang Stream SSSI		3 in the			
					proximity			
					of Lin Ma			
					Hang			
					Stream			
					SSSI			

^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;

Х Non-compliance of mitigation measure;

As updated on 13 July 2010

N/A

Not satisfactory but rectified by the contractor.

\*

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
4.7.4	5.3.4	Soil Excavation and Stockpiling	To avoid site runoff	Contractor	Constructi	During	Practice Note for	^
		Excavated soil which needs to be temporarily stockpiled should be stored in a			on work	construction	Professional Persons with	
		specially designated area and provided with a tarpaulin cover to avoid runoff into			Sites		regard to site drainage	
		the drainage channels.					(ProPECC PN 1/94) and	
							TM standard under the	
							WPCO	

X Non-compliance of mitigation measure;

\*

N/A Not Applicable in the reporting month;

Not satisfactory but rectified by the contractor.

	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
4.7.5 -	5.3.5-5.	Site Depot	To avoid wash-out of	Contractor	Constructi	During	Practice Note for	N/A
4.7.6	3.6	All compounds in works areas should be located on areas of hard standing with	oil during storm		on work	construction	Professional Persons with	
		provision of drainage channels and settlement ponds where necessary to allow	conditions		Sites		regard to site drainage	
		interception and controlled release of settled/treated water. Hard standing					(ProPECC PN 1/94) and	
		compounds should drain via an oil interceptor. The oil interceptor should be					TM standard under the	
		regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A					WPCO	
		bypass should be provided to avoid overload of the interceptor's capacity. Any						
		contractor generating waste oil or other chemicals as a result of his activities should						
		register as a chemical waste producer. Disposal of the waste oil should be done by a						
		licensed collector.						
		Good housekeeping practices should be implemented to minimise careless spillage						
		and to keep the storage and the work space in a tidy and clean condition.						
		Appropriate training including safety codes and relevant manuals should be given to						
		the personnel who regularly handle the chemicals on site.						

- ^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
4.7.7	5.3.7	Construction of Checkpoint	To avoid disposal of	Contractor	Constructi	During	N/A	N/A
		Sewage system should be constructed to divert domestic sewage, which will be	domestic sewage into		on work	construction		
		generated from the sanitary facilities provided in the new checkpoint at Shek Chung	watercourses.		Site at			
		Au, to public sewer connected to government sewage treatment facilities.			Checkpoin			
					t			
Waste	Manager	<u>ment</u>						
Durin	g Constru	ıction						
5.6.7	6.3.6	Site Clearance	Prevent the generation	Contractor	Constructi	During	Waste Disposal	^
		The topsoil and vegetation removed and excavated material may have to be	of dust and pollution		on work	construction	Ordinance (Cap.354);	
		temporarily stockpiled on-site. Control measures should be taken at the stockpiling	of storm water		sites		ETWBTC No. 15/2003,	
		area to prevent the generation of dust and pollution of stormwater channels, fish	channels				Waste Management on	
		ponds or river channels. However, to eliminate the risk of blocking drains in the wet					Construction Site	
		season, it is recommended that stockpiling of excavated materials during the wet						
		season should be avoided as far as practicable.						

- ^ Implement mitigation measure in the reporting month;
- X Non-compliance of mitigation measure;
- Not Applicable in the reporting month;
- \* Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
5.6.10	6.3.8	Construction and Demolition Materials	Minimize	Contractor	Constructi	During	Waste Disposal	^
_		Careful design, planning and good site management can minimize over-ordering	over-ordering and		on work	construction	Ordinance (Cap.354);	
5.6.12		and generation of waste materials such as concrete mortars and cement grouts. The	generation of waste		sites		ETWBTC No. 15/2003,	
		design of formwork should maximize the use of standard wooden panels so to	materials				Waste Management on	
		achieve high reuse levels. Alternatives such as steel formwork or plastic facing					Construction Site	
		should be considered to increase the potential for reuse.						

Implement mitigation measure in the reporting month;

N/A Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

\* Not satisfactory but rectified by the contractor.

	EM&A Log Ref.		Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
		The Contractor should recycle as much of the C&D materials as possible on-site. Proper segregation of waste on-site will increase the feasibility of certain components of the waste stream by the recycling contractors. Different areas of the worksite shall be designated for such segregation and storage wherever site conditions permit.						^
		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. Government has established a differentiated charging scheme for the disposal of waste to landfill, construction waste sorting facilities and public fill facilities. This will provide additional incentives to reduce the volume of waste generated and to ensure proper segregation of wastes.						
5.6.13- 5.6.14	6.3.13	Chemical Waste For those processes which generate chemical waste, it may be possible to find alternatives which generate reduced quantities or even no chemical waste, or less dangerous types of chemical waste.	To avoid chemical leakage	Contractor	Constructi on work sites	During construction planning	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, Waste Disposal	^

^ Implement mitigation measure in the reporting month;

X Non-compliance of mitigation measure;

N/A Not Applicable in the reporting month;

\* Not satisfactory but rectified by the contractor.

EIA Ref.	EM&A Log	Recommended Mitigation Measures	Objectives of the Recommended	Who to implement	Location of the	When to implement	What requirements or standards for the	Status
	Ref.		Measures & Main Concerns to address	the measure?	measure	the measure?	measure to achieve?	
		Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal					(Chemical Waste)	^
		(Chemical Waste) (General) Regulation, should be handed in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as					(General) Regulation	
		follows: Containers used for the storage of chemical wastes should:						N/A
		• be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed:						N/A
		• have a capacity of less than 450 litres unless the specification have been approved by the EPD; and						N/A
		• display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations,						N/A
		<ul><li>The storage area for chemical wastes should:</li><li>be clearly labelled and used solely for the storage of chemical waste;</li></ul>						N/A N/A
		<ul> <li>be enclosed on at least 3 sides;</li> <li>have an impermeable floor and bunding, of capacity to accommodate 110% of</li> </ul>						N/A N/A
		the volume of the largest container or 20% by volume of the chemical waste stored in that area whichever is the greatest;						

- <sup>^</sup> Implement mitigation measure in the reporting month;N/A Not Applicable in the reporting month;
- X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
		have adequate ventilation;						N/A
		• be covered to prevent rainfall entering (water collected within the bund must be						N/A
		tested and disposed as chemical waste if necessary); and						
		• be arranged so that incompatible materials are adequately separated.						N/A
		Disposal of chemical waste should:						N/A
		• be via a licensed waste collector; and						^
		• be to a facility licensed to receive chemical waste, such as the Chemical Waste						^
		Treatment Facility which also offers a chemical waste collection service and						
		can supply the necessary storage containers, or						
		• to be re-user of the waste, under approval from the EPD.						N/A
5.6.16	6.3.15	General Refuse	Minimise odour, pest	Contractor	Constructi	During	Public Health and	^
		Should be stored in enclosed bins or compaction units separate from C&D and	and litter impacts		on work	construction	Municipal Services	
		chemical wastes. The Contractor should employ a reputable waste collector to			sites		Ordinance (Cap. 132)	
		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.						

^ Implement mitigation measure in the reporting month;

Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
5.6.18	6.3.16	Construction Waste Management Plan	Waste management	Contractor	Constructi	During	ETWB TCW No.	^
		A construction waste management plan (CWMP) should be prepared and developed	during construction		on work	construction	19/2005, Waste	
		by the contractor to ensure proper collection, treatment and disposal of waste on			sites		Management on	
		site. This CWMP will also take into account the requirement to handle chemical					Construction Sites	
		wastes on site which will need to be managed by a licensed waste collection						
		contractor.						
Ecol	ogy						I	
Table	7.2	Ecological Impacts on Floral Species of Conservation Concern	Protect the plant	Contractor	Constructi	During	EIAO	^
6.38		Erection of protective fencing to protect the plant during construction period	during construction		on work	construction		
			period		sites			
Table	7.2	Potential Ecological Impacts on Offsite Habitats	To avoid site runoff	Contractor	Constructi	During	EIAO / Air Pollution	^
6.40		Good site practices for controlling the dust and water quality (avoid stockpiles	and dust impact		on work	construction	Control	
		adjacent to wetlands, covering the stockpiles with impervious sheeting, control of			sites		(Construction Dust)	
		vehicle speed, no discharge of silty water to the rivers, streams and drainage					Regulation / WPCO	
		channels);						
		Clear definition of works limit to avoid impact on adjacent habitats						

Implement mitigation measure in the reporting month;

Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

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As updated on 13 July 2010

^

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Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
Table	7.2	Disturbance to Wetland-Dependent Birds, Raptors, Terrestrial Birds and	To minimize	Contractor	Constructi	During	EIAO / Air Pollution	^
6.39-T		Egretry	disturbance to wildlife		on work	construction	Control	
able		Good working practices include switching off unused equipment, keep minimum			sites		(Construction Dust)	
6.45		number of powered mechanical equipment in operation at the same period, the use					Regulation / WPCO	
		of stockpiles and other structures to form noise barriers where practicable,						
		avoidance of feeding the wildlife to cause disturbance, site confinement and proper						
		cover of stockpiles with impervious sheeting to minimize construction noise,						
		uncontrolled surface runoff and discharge of silts;						
		Avoidance of construction works using Power Mechanical Equipments within the						
		Wetland Conservation Area during bird migratory season (15th November – 15th						
		March); and						
		Restriction of excavation works within a 150m buffer zone from the egretry						
		to ardeid non-breeding season (from August to February).						
Cultur	al Herita	ge					•	

- ^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
8.7.1 –	8.1.1 -	An archaeological survey should be undertaken at the study areas of Pak Fu Shan	Assess the	Contractor	The study	After land	Antiquities and	N/A
8.7.4	8.1.4	and Lin Ma Hang of Section 3 after land resumption and before commencement of	archaeological impact	(through	areas of	resumption	Monuments Ordinance /	
		construction works	on the two identified	professional	Pak Fu	and before	EIAO	
			sites of archaeological	archaeologist)	Shan and	commenceme		
			potential.		Lin Ma	nt of		
					Hang of	construction		
					Section 3	works		

- ^ Implement mitigation measure in the reporting month;
- N/A Not Applicable in the reporting month;

- X Non-compliance of mitigation measure;
- \* Not satisfactory but rectified by the contractor.

Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
8.7.6		<ul> <li>Built Heritage Resources</li> <li>Mitigation in the form of buffer zones and safe public access have been proposed for one shrine (BF-HB1) and two graves (BF-G1 and G2)</li> <li>BF-HB1</li> <li>A buffer zone of a minimum distance of 1 metres should be established between the shrine and any construction works in close proximity. The buffer zone should be marked out by temporary fencing. Safe public access should be provided to the shrine during any construction works in close proximity.</li> <li>BF-G1 and BF-G2</li> <li>A buffer zone of a minimum distance of 1 metres should be established between the graves and any construction works in close proximity. The buffer zone should be marked out by temporary fencing. Safe public access should be provided to the graves and any construction works in close proximity. The buffer zone should be marked out by temporary fencing. Safe public access should be established between the graves during any construction works in close proximity.</li> </ul>	Avoid impacts to built heritage resources	Contractor	The works that are located in the vicinity of built heritage resources (BF-HB1 and BF-G1 and G2)	During Construction	EIAO	N/A

Implement mitigation measure in the reporting month; Not Applicable in the reporting month; Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

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As updated on 13 July 2010

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EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures Preservation of Existing Vegetation	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
Table 7-13 CP1	Table 9-1	<ul> <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>	Preservation of Existing Vegetation	Project Landscape Architect / Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^
Table 7-13 CP1	Table 9-1	<ul> <li>Creation of precautionary area around trees to be retained equal to half of the trees canopy diameter. Precautionary area to be fenced.</li> </ul>	To ensure the success of the tree preservation proposals.	Project Landscape Architect / Contractor	Site	Before construction phase commences	TM-EIA	^
Table 7-13 CP1	Table 9-1	<ul> <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>	To ensure the success of the tree preservation proposals.	Project Landscape Architect / Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^
Table 7-13 CP1	Table 9-1	<ul> <li>Phased segmental root pruning for trees to be retained and transplanted 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>	To ensure the success of the tree preservation proposals.	Project Landscape Architect / Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^

Remarks: ^ Implement mitigation measure in the reporting month;

Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
Table 7-13 CP1	Table 9-1	• Pruning of the branches of existing trees identified for transplantation and retention to be based on the principle of crown thinning maintaining their form and amenity value.	To ensure the success of the tree preservation proposals.	Project Landscape Architect / Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^
Table 7-13 CP1	Table 9-1	• The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.	To ensure the success of the tree preservation proposals.	Project Landscape Architect / Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^
Table 7-13 CP1	Table 9-1	• 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	of the tree	Project Landscape Architect / Contractor	Site	Throughout construction phase	Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	N/A
Table 7-13 CP1	Table 9-1	• All works affecting the trees identified for retention and transplantation will be carefully monitored. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period	success of the tree	Project Landscape Architect / Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^

^ Implement mitigation measure in the reporting month;

Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

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Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
						<b>T</b> 1		
able	Table	• Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in		Project	Site	Throughout construction	TM-EIA Annex 18,	^
-13	9-1	accordance with ETWB TCW No. 2/2004 and WBTC No. 3/2006.	preservation and	Landscape		phase	ETWB TCW No. 2/2004	
			planting proposals are integrated with the	Architect /		-	& ETWB TCW No.	
CP1			existing landscape	Contractor			3/2006	
			context and that the					
			landscape resources					
			are preserved where					
			appropriate.					
able	Table	• The tree preservation works should be implemented by approved Landscape	To ensure the tree	Contractor	Site	Throughout	TM-EIA Annex 18,	^
-13	9-1	Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection specification would be included within the contract	preservation and			construction phase	ETWB TCW No. 2/2004	
		documents.	planting proposals are			phase	& ETWB TCW No.	
			integrated with the					
CP1			existing landscape				3/2006	
			context and that the					
			landscape resources					
			are preserved where					
			appropriate.					
		Preservation of Existing Topsoil	1			1	1	

^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;

Х Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
Table	Table	• Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of	To provide a viable	Contractor	Site	Throughout	TM-EIA	^
7-13	9-1	retention stored for re-use.	growing medium			construction	Annex 18	
			suited to the existing			phase		
CP2			conditions and reduce					
			the need for the					
			importation of top					
			soil.					
Table	Table	• The soil will be stockpiled to a maximum height of 2m and will be either temporarily vegetated with hydroseeded grass during construction or covered	To provide a viable	Contractor	Site	Throughout	TM-EIA	^
7-13	9-1	with a waterproof covering to prevent erosion.	growing medium			construction	Annex 18	
			suited to the existing			phase		
CP2			conditions and reduce					
			the need for the					
			importation of top					
			soil.					

- ^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;
- Х Non-compliance of mitigation measure;

\*

Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
Table	Table	• The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion.	To provide a viable	Contractor	Site	Throughout	TM-EIA	^
7-13	9-1	Alternatively, if this is not practicable, it should be considered for use	growing medium			construction	Annex 18	
		elsewhere, including other projects.	suited to the existing			phase		
CP2			conditions and reduce					
			the need for the					
			importation of top					
			soil.					
		Permanent and Temporary Works Areas						
Table	Table	<ul> <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>	To minimise the disturbance to existing	Contractor	Site	Through out construction	TM-EIA	N/A
7-13	9-1	be restored following the completion of the construction phase.	landscape resources and change of visual amenity.			phase	Annex 18	
CP3								
Table	Table		To minimise the disturbance to existing	Contractor	Site	Through out construction	TM-EIA	^
7-13	9-1	site lighting to prevent light spillage.	landscape resources and change of visual amenity.			phase	Annex 18	
CP3								
		Mitigation Planting						

Remarks: ^ Implement mitigation

Implement mitigation measure in the reporting month;

Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
Table	Table	<ul> <li>Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase</li> </ul>	To minimise the disturbance to existing	Contractor	Site	Through out construction	TM-EIA Annex 18	N/A
7-13	9-1	and a management to the second s	landscape resources and change of visual amenity.			phase	Annex 18	
CP4								
Table	Table	<ul> <li>Use of native plant species predominantly in the planting design for the buffer areas.</li> </ul>	To minimise the disturbance to existing	Contractor	Site	Through out construction	TM-EIA	N/A
7-13	9-1		landscape resources and change of visual amenity.			phase	Annex 18	
CP4								
Table	Table	• The tree planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape	To minimise the disturbance to existing	Contractor	Site	Through out construction	TM-EIA	^
7-13	9-1	Architect. A tree planting specification would be included within the contract documents.	landscape resources and change of visual amenity.			phase	Annex 18	
CP4								
		Transplantation of Existing Trees						

^ Implement mitigation measure in the reporting month; Not Applicable in the reporting month;

Х Non-compliance of mitigation measure;

> \* Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
Table	Table	• The tree transplanting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape		Contractor	Site	Prior to the	TM-EIA	N/A
7-13	9-1	Architect. A tree protection / transplanting specification would be included	landscape resources			commencem	Annex 18, ETWB TCW	
		within the contract documents.	and minimize the impacts on the visual			ent of the	No. 2/2004 & ETWB	
CP5			amenity of the area.			proposed	TCW No. 3/2006	
						works		
		Design of the Fence and associated Structures						
Table	Table	<ul> <li>Design of Boundary Fence, Boundary Patrol Road and Police Check Point – These structural elements will be designed in accordance with security</li> </ul>		ArchSD	Site	Throughout	TM-EIA	^
7-14	9-2	requirement from Police Force and incorporate design features as part of				design phase	Annex 18 and BD	
		design mitigation measures including:	into their landscape					
OP1			and visual context.					

Implement mitigation measure in the reporting month;

X Non-compliance of mitigation measure;

\*

N/A Not Applicable in the reporting month;

Not satisfactory but rectified by the contractor.

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
		1. Integrated design approach – the boundary fence should integrated, as						^
		far as technically feasible, with existing built structures such as existing						
		road, footpath and track and embankment of fishponds, river and						
		drainage channel as part of design mitigation measures to reduce the						
		potential cumulative impact of the proposed works. The location and						
		orientation of the police check points should be away from landscape						
		and visually sensitive areas such wetland, fishpond and agricultural						
		field.						
		2. Building massing - the proposed use of simple responsive design for the						^
		built structures with a low building height profile to reduce the potential						
		visual mass of the structure within a rural context.						
								^
		3. Treatment of built structures - the architectural design should seek to						
		reduce the apparent visual mass of the facilities further through the use						
		of natural materials such as wooden frame, vertical greening or other						
		sustainable materials such as recycled plastic.						

Implement mitigation measure in the reporting month;

X Non-compliance of mitigation measure;

\*

N/A Not Applicable in the reporting month;

Not satisfactory but rectified by the contractor.

EIA Ref.	EM&A Log Ref.		Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Status
		4. Responsive building and fence finishes - In terms of the proposed finishes natural tones should be considered for the colour palette with non-reflective finishes are recommended to reduce glare effect. The use of colour blocking on the proposed fence could be used to break up the visual mass of the structure.						^
		<ul> <li>5. Responsive lighting design – Aesthetic design of architectural and track lighting with following glare design measures:</li> <li>Directional and full cut off lighting is recommended particularly for areas adjacent to existing village to minimise light spillage.</li> <li>Minimise geographical spread of lighting, only applied for safety and security reasons;</li> <li>Limited lighting intensity to meet the minimum safety and operation requirement; and</li> <li>High-pressure sodium road lighting is recommended for more stringent light control reducing spillage and thus visual impacts.</li> </ul>						^

Remarks: ^ Implement mitigation measure in the reporting month;

N/A Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	of the implement		What requirements or standards for the measure to achieve?	Status
		Compensatory Planting Proposals						
Table 7-14	Table 9-2	• Utilise native to Hong Kong will be utilized within the buffer planting areas.	Planting will serve to visually integrate the proposals within the existing landscape framework.	Contractor	Site	Throughout design phase	TM-EIA Annex 18, HKPSG and BD	N/A
OP2								
Table 7-14 OP 2 / 3	Table 9-2	<ul> <li>A qualified or registered landscape architect will be involved in the design, construction supervision and monitoring, and maintenance period to oversee the implementation of the recommended landscape and visual mitigation measures including the tree preservation and landscape works on site.</li> </ul>	areas creating a more coherent landscape framework whilst also improving the ecological connectivity between existing and proposed woodland habitats.	Contractor	Site	Throughout design phase	TM-EIA Annex 18, HKPSG and BD	^
Table 7-14 OP 2	Table 9-2	Tree and Shrub Planting – Given the rural nature of the proposed alignment it is recommended that the where possible tree and shrub species which are native to Hong Kong be used. In addition where possible the planting of new trees and shrubs will aim to link together existing woodland areas and small tree groups to improve the connectivity between habitats and create more coherent landscape framework. The planting of small groups of trees along the alignment of the proposed fence will serve to de-emphasise the horizontality of the fence structure and provide for better sense of visual integration with the landscape context. Where practicable vertical greening measures should also be considered on engineering structures.	seeks to compensate for the predicted tree loss.	Contractor	Site	Throughout design phase	TM-EIA Annex 18, HKPSG and BD	^

^ Implement mitigation measure in the reporting month;

Not Applicable in the reporting month;

X Non-compliance of mitigation measure;

Not satisfactory but rectified by the contractor.

\*

As updated on 13 July 2010

EIA	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location	When to	What requirements or	Status
Ref.	Log		Recommended	implement	of the	implement	standards for the	
	Ref.		Measures & Main	the measure?	measure	the measure?	measure to achieve?	
			Concerns to address					
Table	Table	Compensatory Planting Proposals – Given the works extent is largely limited	The planting proposal seeks to compensate	Contractor	Site	Throughout design phase	TM-EIA Annex 18, HKPSG and BD	N/A
7-14	9-2	along existing roadside embankment to minimise impact to existing village settlements and valuable landscape resources such as wetland, fishpond,	for the predicted tree			design phase	Thinks 10, The bo and bb	
		stream course and existing trees, and considered the importance of tree retention within the works area, new tree planting will concentrate in selected						
OP 3		new amenity areas along the alignment, infilling between retained and transplanted trees. The preliminary planting proposals for the proposed works						
		include the planting of some 357 new trees utilising a combination of mature						
		to light standard sized stock (i.e. approximately 15% of mature trees, 75% of standard trees, and 10% light standard trees). These trees will be planted in						
		woodland clumps and small tree groups at strategic locations to de-emphasise						
		the horizontality of the fence alignment. Based on preliminary findings the						
		proposed planting will result in a compensatory planting ratio of 1:1 (new planting: trees recommended for felling). This compares favourably with the						
		report's assertion that some 357 trees would be felled due to the proposed						
		works. With the proposed preservation of existing trees, transplantation of trees in conflict with the proposals and the planting of new trees the project						
		area will contain approximately 2000 trees. Trees forming part of the new						
		planting will provide screening to neighbourhood villagers and will utilise						
		species native to Hong Kong. These proposals will be subject to review at detailed design stage of the project						
		detailed design stage of the project.	1					

- Implement mitigation measure in the reporting month;
  - Not Applicable in the reporting month;
- X Non-compliance of mitigation measure;
   \* Not satisfactory but rectified by the contractor.

As updated on 13 July 2010

Appendix G Complaint Log

## Appendix G – Complaint Logs

## Complaints

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status

Appendix H Monthly Waste Flow Table

Contract No. :SSW306Programme No. :15 GB

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

		ual Quantities of Ir	. /	als Generated Mon	thly	Actual Quantities of C&D Wastes Generated Monthly				
Month	Generated	(b) Broken Concrete (see Note 4)	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	0.085
Apr	1.905	0	0	0	1.905	0	0	0	0	1.125
May	4.160	0	0	0	4.160	0	0	0	0	1.463
June	4.258	0	0	0	4.258					0.631
Sub-total	10.323	0	0	0	10.323	0	0	0	0	3.304
July	3.361				3.361					0.020
Aug										
Sept										
Oct										
Nov										
Dec										
Total	13.684	0	0	0	13.684	0	0	0	0	3.324

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

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  $6.5 \text{ m}^3$  by volume.

*Appendix I Status of License and Permit* 

Itom	Permit/License /Ref.	Vali	dity	Remarks
Item	No.	From	То	Remarks
Variation of Further Environmental Permit	FEP-02/347/2009/A	13 <sup>th</sup> Jul 2010	N.A.	
Variation of Environmental Permit	EP-347/2009/A	9 <sup>th</sup> Jun 2010	N.A.	
Notification Pursuant to Section 3(1) of The Air Pollution Control	313192	8 <sup>th</sup> Jan 2010	N.A.	
(Construction Dust) Regulation	515172	0 Juli 2010	14.71.	
Registration of Chemical Waste Producer	5213-542-A2587-02	4 <sup>th</sup> Mar 2010	N.A.	