Issue No.	:	1
Issue Date	:	April 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)

ENVIRONMENTAL MONITORING & AUDIT REPORT (MARCH 2010)

Prepared By:

ALLIED ENVIRONMENTAL CONSULTANTS LTD.

ENVIRON

Ref.: ASDBFBPREM00_0_0057L 10 29 April 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. Taj Ishola / Mr. Danny Wong

Dear Sirs,

Re: Environmental Permit No. EP-347/2009 and FEP-02/347/2009
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 March 2010

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report for March 2010 (Issue No. 1) by E-mail on 29 April 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 and FEP-02/347/2009.

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: Ms. Peggy Yu	Fax: 2804 6805
	AEC (ETL)	Attn: Ms. Grace Kwok	Fax: 2815 5399
	Able	Attn: Mr. Gavin Lee	Fax: 2796 0519

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Issue No. : 1
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COMMERCIAL-IN-CONFIDENCE

Certified by:

Grace M. H. Kwok
Environmental Team Leader

Issue No. : 1
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COMMERCIAL-IN-CONFIDENCE

Author: _____
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Adi Y. M. Lee
MSc MHKIEIA MHKIOA

Approved: _____
Grace M. H. Kwok
BEng(Hons) MHKIEIA MHKIOA
MISWA MIAIA MRAPA LEED AP

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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) and Further Environmental Permit (FEP-02/347/2009) for the Project. The site parathion works and EM&A programme commenced on 25th March 2010 and the construction works will be commenced on 12th April 2010. This report is the first monthly EM&A report, which details the EM&A results recorded during the period from 25th March 2010 to 31st March 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 25th and 31st March 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.

One environmental site inspections were conducted by the Contractor and the ET on 25th March 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 84.5m^3 of general refuse were disposed of to NENT Landfill in this reporting period.

Construction activities undertaken in April 2010 will include shrubs cleaning, excavation works and SBF footing construction. Potential environmental impacts include dust generation from the excavation works; noise from operation of the equipments, C&D materials drop in ponds due to excavation 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 Further Environmental Permit (FEP-02/347/2009) for the construction of the project was issued by Environmental Protection Department in June 2009 and February 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 and FEP-02/347/2009.

The Construction Programme of the Project is shown in ***Appendix A***. The site parathion works and EM&A programme commenced on 25th March 2010 and the construction works will be commenced on 12th April 2010. This report is the first monthly EM&A report, which details the EM&A results recorded during the period from 25th March 2010 to 31st March 2010.

1.1 Project Organization and Contact Personnel

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

Role	Department / Company	Names	Contact Number	Fax Number
Engineer	Mott McDonald Hong	Mr. YK Or	2828 5740	2827 1823

Representative	Kong Limited	Mr. Danny Wong	2828 5921	2827 1823
Main Contractor	Able Engineering Co., Limited	Mr. Gavin Lee	9282 8158	2676 7966
		Mr. Jethro Chan	9272 0034	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 site preparation works including the following works items:

- Shrubs cleaning;
- Setting up of wheel washing bay; and
- Setting up of site office.

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

Construction Works	Major Environmental Impact	Mitigation Measures
Shrubs cleaning	Air quality, noise impacts and waste management	Water sparying provided, well-maintained and quiet plants were used. Quantities and record of waste transfer should be well-maintained.
Setting up of wheel washing bay	Noise quality impacts	Well-maintained and quiet plants were used.
Setting up of site office	Noise impacts and waste management	Well-maintained and quiet plants were used. Quantities and record of waste transfer should be well-maintained.

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 Measurements in Leq (30min)	When one documented complaint is received.	75 dB(A)

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***.

Event	**Action**			
	ET Leader	**IEC**	**ER**	**Contractor**
Action Level	1. 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. Review with analyzed results submitted by ET 2. Review the proposed remedial measures by the Contractor and advise ER accordingly. 3. Supervise the implement of remedial measures.	1. Confirm receipt of notification of exceedance in writing, 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analyzed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit	1. Identify the	1. Discuss	1. Confirm	1. Take

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Level	source. 2. Notify IEC, ER, EPD and the Contractor. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform IEC, ER and EPD to causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 8. If exceedance stops, cease additional monitoring.	amongst ER, ET Leader and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 3. Supervise the implementation of remedial measures.	receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analyzed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abate.	immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.

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

Table 5 Noise Monitoring Equipment

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 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 25th and 31st March 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	Monitoring Location	Description of Monitoring Location
MTL01	Village House at Ma Tso Lung	G/F boundary wall of Village House at Ma Tso 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_{eq} (30mins)	L_{10} (30mins)	L_{90} (30mins)	Remarks
MTL01	25-03-10	Fine	09:05 – 09:35	49.8	51.4	46.9	Noise from excavations works by adjacent site, noise from bird.
	31-03-10	Fine	15:50 – 16:20	51.7	53.9	48.6	Noise from excavations works by adjacent site, noise from bird.

Table 7 Noise Monitoring Results

6. SITE INSPECTION & AUDIT

A total of one 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
25 March 2010	No valid Environmental Permit was display at the site entrance.	The Contractor had display the updates Environmental Permit at the site entrance.	The situation was rectified as observed on 1 April 2010 (Closed).
	Stagnant water was observed at the hole on concrete block outside the site office.	The Contractor had filled the hole with sand to prevent accumulation of water.	The situation was rectified as observed on 1 April 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 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 $0m^3$ 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 $84.5m^3$ 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 trip-tickets 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 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

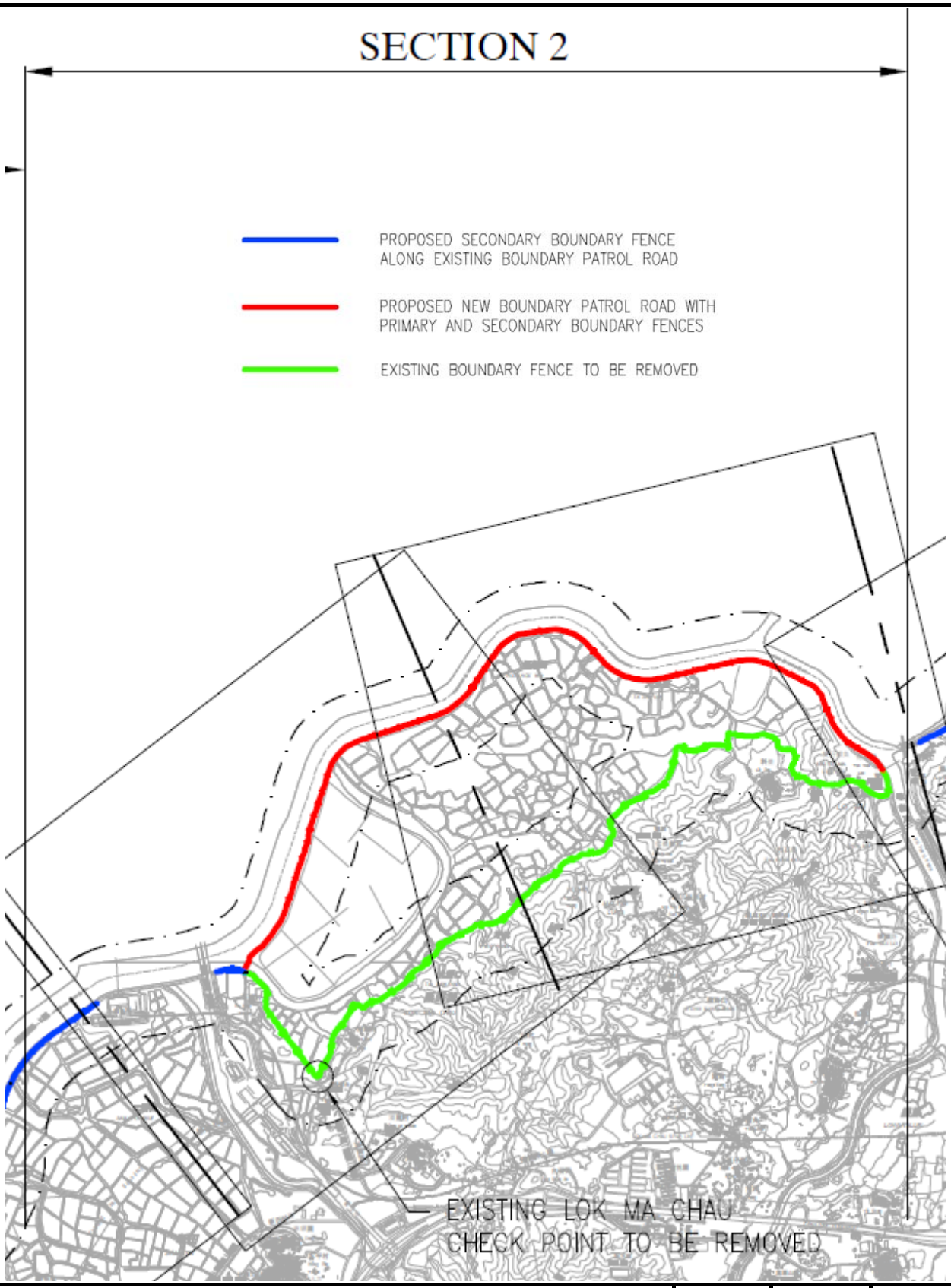
Environmental monitoring was carried out for the Construction of a Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road (Section 2 Lok Ma Chau Control Point to Ng Tung River) in the reporting month. Noise monitoring was conducted at a village house at Ma Tso Lung (MTL01) during the period from 25th March 2010 to 31st March 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 $84.5m^3$ of general refuse were disposed of to NENT Landfill in this reporting period.

Construction activities undertaken in April 2010 will include shrubs cleaning, excavation works and SBF footing construction. Potential environmental impacts include dust generation from the excavation works; noise from operation of the equipments, C&D materials drop in ponds due to excavation 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)

SITE LOCATION PLAN

Figure No.	Rev.:
1	0
Scale	Date
NTS	02/10

AEC

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

Figure No.	Rev.:
2	0
Scale	Date
NTS	02/10

AEC

Appendix A
Project Construction Programme

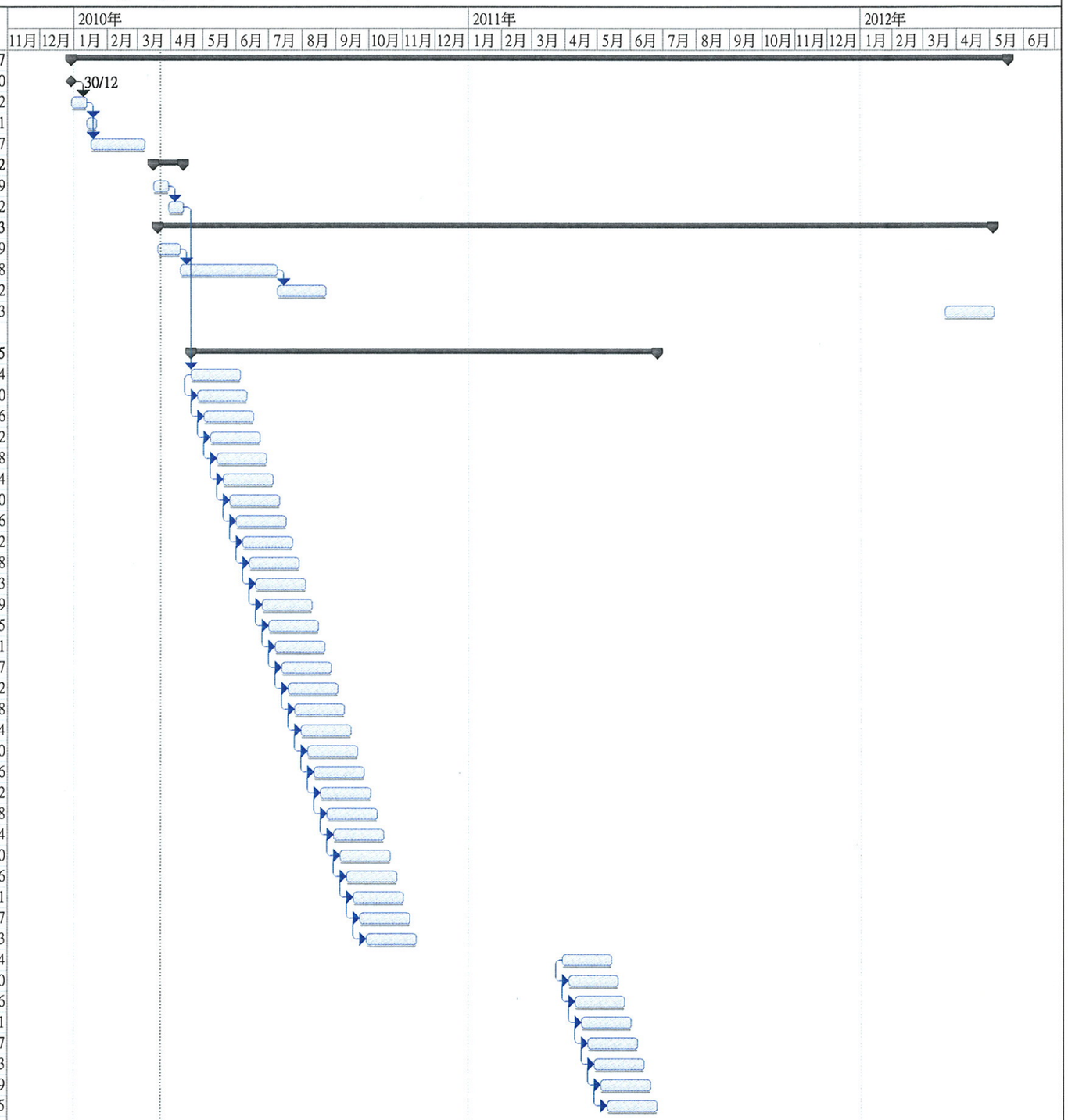
Able Engineering Company Limited

Master Programme

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)

Rev 0
Date: 19-3-2010

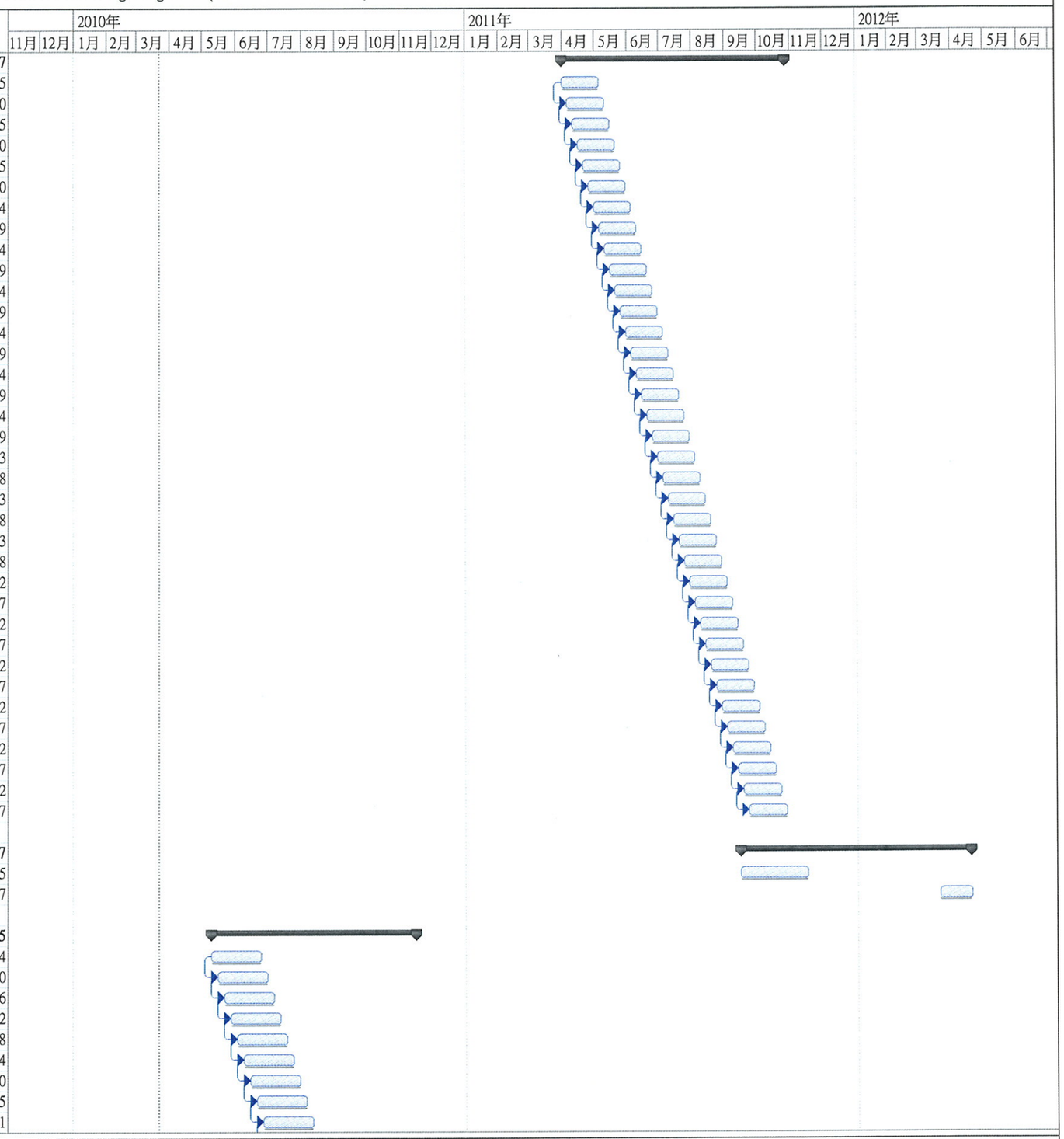
識別碼	任務名稱	工期	開始時間	完成時間
1	Section A	870 days	2009/12/30	2012/5/17
2	Site Possession	0 days	2009/12/30	2009/12/30
3	Application entrance permit	14 days	2009/12/30	2010/1/12
4	Site Office Erection	9 days	2010/1/13	2010/1/21
5	Site Condition / Tree Survey	50 days	2010/1/17	2010/3/7
6	Preparation works	28 days	2010/3/16	2010/4/12
7	Mobilization for preparation works	14 days	2010/3/16	2010/3/29
8	Set up wheel wish equipment	14 days	2010/3/30	2010/4/12
9	Tree transplanting	776 days	2010/3/20	2012/5/3
10	Tree Protection	21 days	2010/3/20	2010/4/9
11	Pruning	90 days	2010/4/10	2010/7/8
12	Transplanting	45 days	2010/7/9	2010/8/22
13	Planting & Hydroseeding	45 days	2012/3/20	2012/5/3
14				
15	Zone 1 SBF CH3000 to CH 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
30	CH1880-1800	46 days	2010/7/13	2010/8/27
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
37	CH1320-1240	46 days	2010/8/24	2010/10/8
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				



專案: Master Programme Rev 0 19-3-2

任務 進度 摘要 外部任務 期限
分割 里程碑 專案摘要報告 外部里程碑

識別碼	任務名稱	工期	開始時間	完成時間
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
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
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
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**
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



識別碼	任務名稱	工期	開始時間	完成時間
105	CH4280-4200	46 days	2010/7/3	2010/8/17
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 5000-3000**	**155 days**	**2011/4/4**	**2011/9/5**
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 5000-3000**	**92 days**	**2011/8/15**	**2011/11/14**
150				
151	**Zone 3 SBF CH5700 to CH5000**	**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
154	CH5560-5480	46 days	2011/6/12	2011/7/27
155	CH5480-5400	46 days	2011/6/18	2011/8/2
156	CH5400-5320	46 days	2011/6/24	2011/8/8

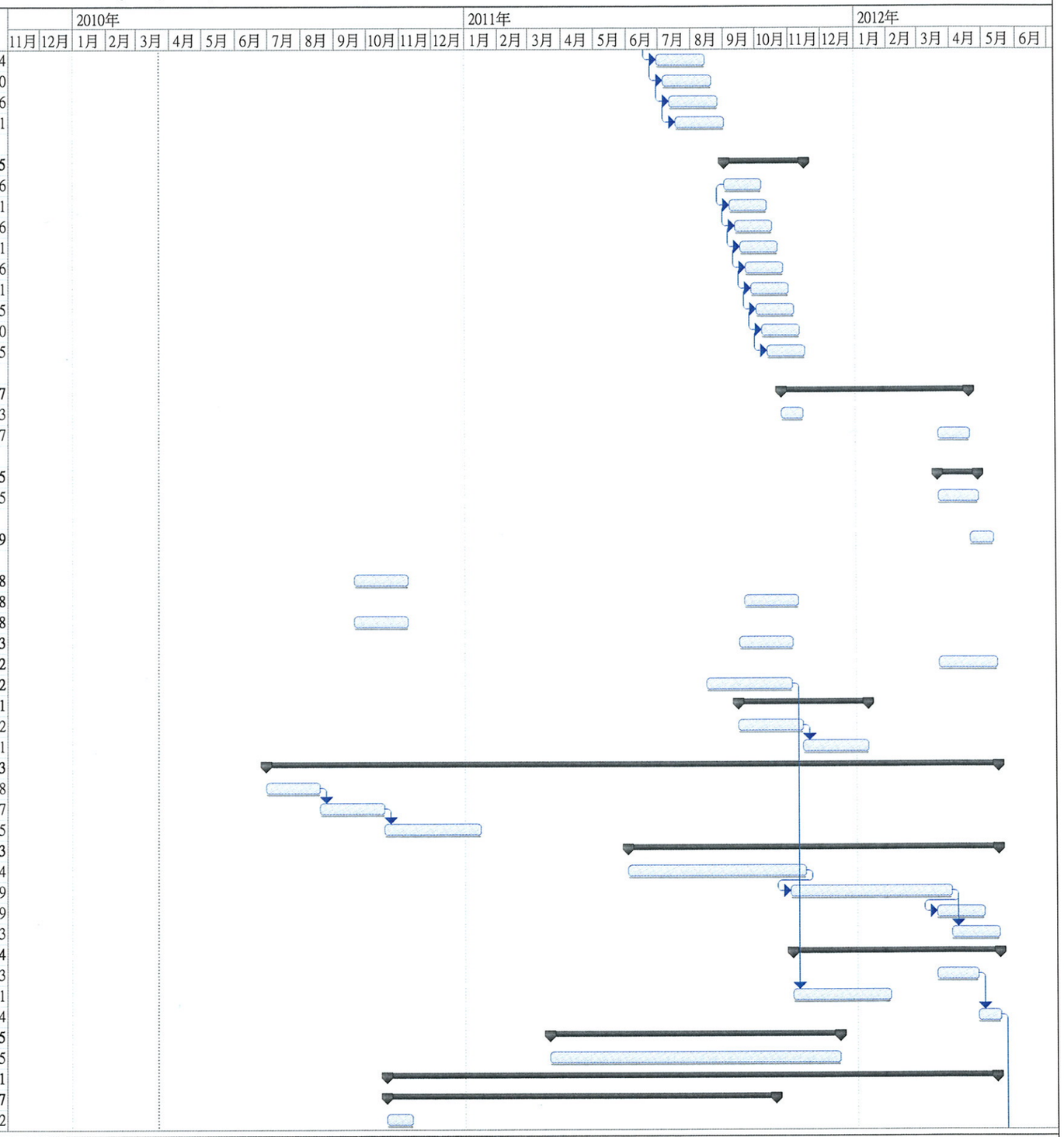
Able Engineering Company Limited

Master Programme

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)

Rev 0
Date: 19-3-2010

識別碼	任務名稱	工期	開始時間	完成時間
157	CH5320-5240	46 days	2011/6/30	2011/8/14
158	CH5240-5160	46 days	2011/7/6	2011/8/20
159	CH5160-5080	46 days	2011/7/12	2011/8/26
160	CH5080-5000	46 days	2011/7/18	2011/9/1
161				
162	**Zone 3 PBF CH5700 to CH5000**	**75 days**	**2011/9/2**	**2011/11/15**
163	CH5700-5640	35 days	2011/9/2	2011/10/6
164	CH5640-5560	35 days	2011/9/7	2011/10/11
165	CH5560-5480	35 days	2011/9/12	2011/10/16
166	CH5480-5400	35 days	2011/9/17	2011/10/21
167	CH5400-5320	35 days	2011/9/22	2011/10/26
168	CH5320-5240	35 days	2011/9/27	2011/10/31
169	CH5240-5160	35 days	2011/10/2	2011/11/5
170	CH5160-5080	35 days	2011/10/7	2011/11/10
171	CH5080-5000	35 days	2011/10/12	2011/11/15
172				
173	**Zone 3 Patrol road CH5700 to CH5000**	**176 days**	**2011/10/25**	**2012/4/17**
174	CH5700-5400	20 days	2011/10/25	2011/11/13
175	CH5400-5000	30 days	2012/3/19	2012/4/17
176				
177	**Zone 4 SBF CH150 to CH000**	**38 days**	**2012/3/19**	**2012/4/25**
178	CH5700-5640	38 days	2012/3/19	2012/4/25
179				
180	**Zone 4 Patrol road CH150 to CH000**	**22 days**	**2012/4/18**	**2012/5/9**
181				
182	**1st Backfilling From CH4300 to CH5575**	**50 days**	**2010/9/20**	**2010/11/8**
183	**2nd Backfilling From CH4300 to CH5575**	**50 days**	**2011/9/20**	**2011/11/8**
184	**Modification works for the U-channel & Catch Pit**	**50 days**	**2010/9/20**	**2010/11/8**
185	**New Catch Pit**	**50 days**	**2011/9/15**	**2011/11/3**
186	**Road mark**	**55 days**	**2012/3/19**	**2012/5/12**
187	**RC meter Kiosk**	**80 days**	**2011/8/15**	**2011/11/2**
188	**Bollard**	**120 days**	**2011/9/14**	**2012/1/11**
189	Steel bollard installation	60 days	2011/9/14	2011/11/12
190	Painting	60 days	2011/11/13	2012/1/11
191	**PBF & SBF & Lamp Post**	**684 days**	**2010/6/30**	**2012/5/13**
192	BF Sample erection	50 days	2010/6/30	2010/8/18
193	Steel work testing	60 days	2010/8/19	2010/10/17
194	Fabrication	90 days	2010/10/18	2011/1/15
195	**Site installation**	**347 days**	**2011/6/2**	**2012/5/13**
196	PBF / SBF / Lamp Post erection	166 days	2011/6/2	2011/11/14
197	XPM mesk fixing	150 days	2011/11/1	2012/3/29
198	Painting	45 days	2012/3/16	2012/4/29
199	Razor Barbed wire fixing	45 days	2012/3/30	2012/5/13
200	**E&M works**	**194 days**	**2011/11/3**	**2012/5/14**
201	Flood light installation	39 days	2012/3/16	2012/4/23
202	Wiring works	90 days	2011/11/3	2012/1/31
203	T&C inspection	21 days	2012/4/24	2012/5/14
204	**Section B**	**270 days**	**2011/3/21**	**2011/12/15**
205	New wave wall ~ CH 4+200 to ~CH 5+400	270 days	2011/3/21	2011/12/15
206	**Section D**	**570 days**	**2010/10/20**	**2012/5/11**
207	**Strengthen the wave wall footing**	**363 days**	**2010/10/20**	**2011/10/17**
208	Preparation works	24 days	2010/10/20	2010/11/12



專案: Master Programme Rev 0 19-3-2

任務 進度 摘要 外部任務 期限
分割 里程碑 專案摘要報告 外部里程碑

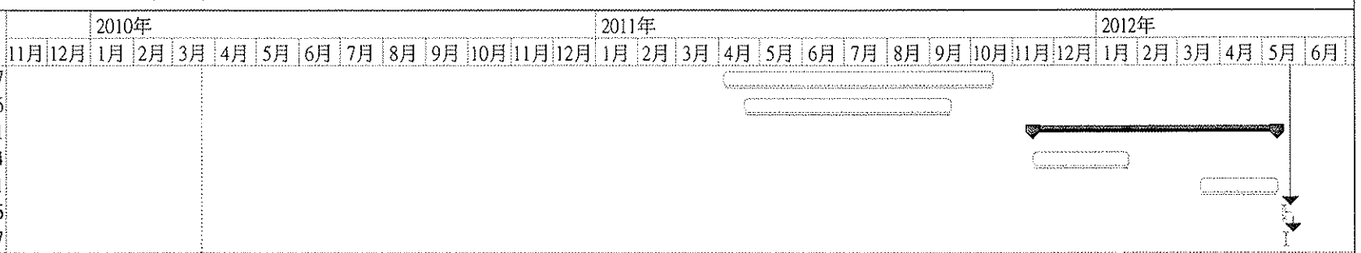
Able Engineering Company Limited

Master Programme

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)

Rev 0
Date: 19-3-2010

識別碼	任務名稱	工期	開始時間	完成時間
209	Zone 1	196 days	2011/4/5	2011/10/17
210	Zone 2	150 days	2011/4/20	2011/9/16
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
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

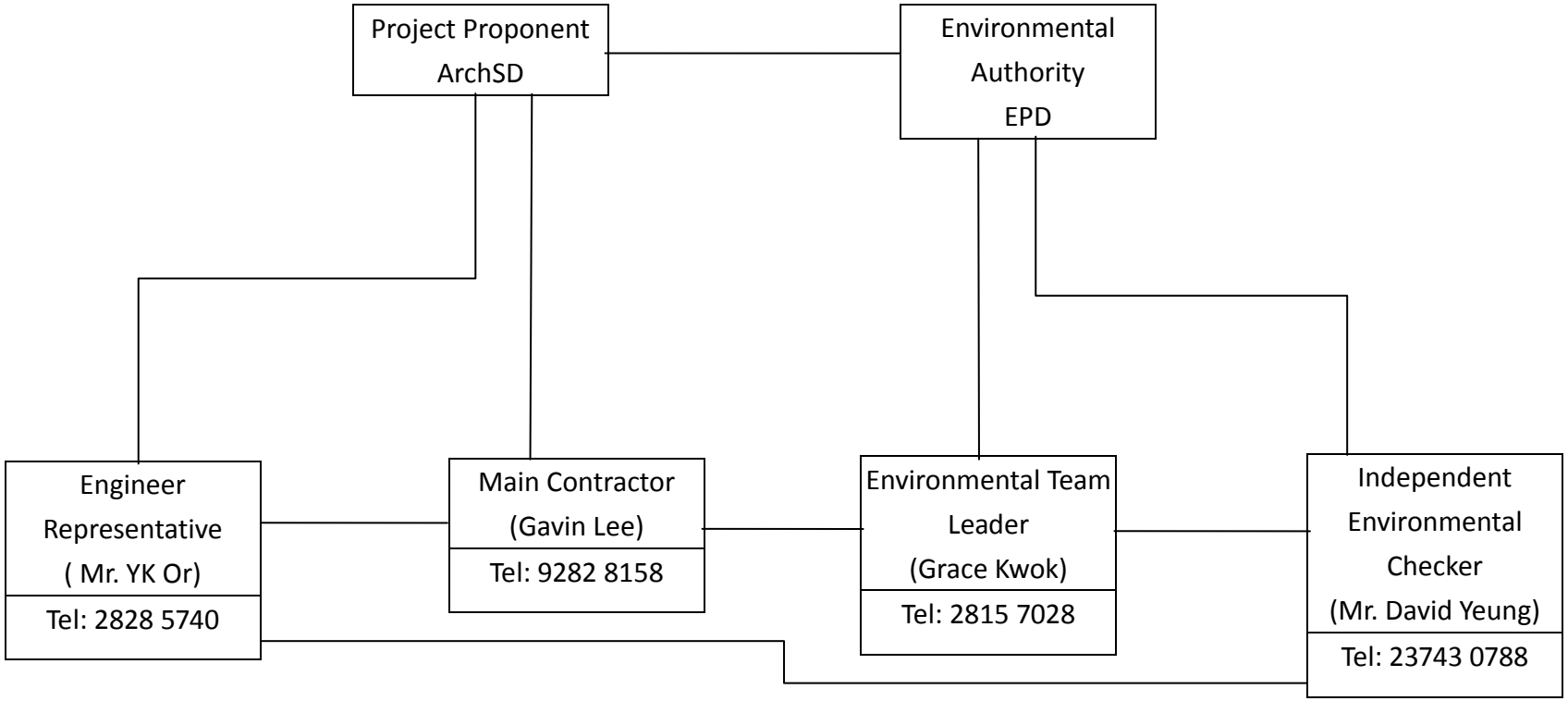


專案: Master Programme Rev 0 19-3-2	任務	進度	摘要	外部任務	期限		
	分割	里程碑	專案摘要報告	外部里程碑			

Appendix B
Organization Chart

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 C Lee

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

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

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 : H C Chan

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

Appendix D

Detail 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)

Monitoring schedule for the reporting month

Date	Start Time
25th March 2010	09:05
31st March 2010	15:50

Monitoring schedule of the coming month

Date	Time
9th April 2010	To be confirmed
15th April 2010	To be confirmed
22nd April 2010	To be confirmed
27th April 2010	To be confirmed

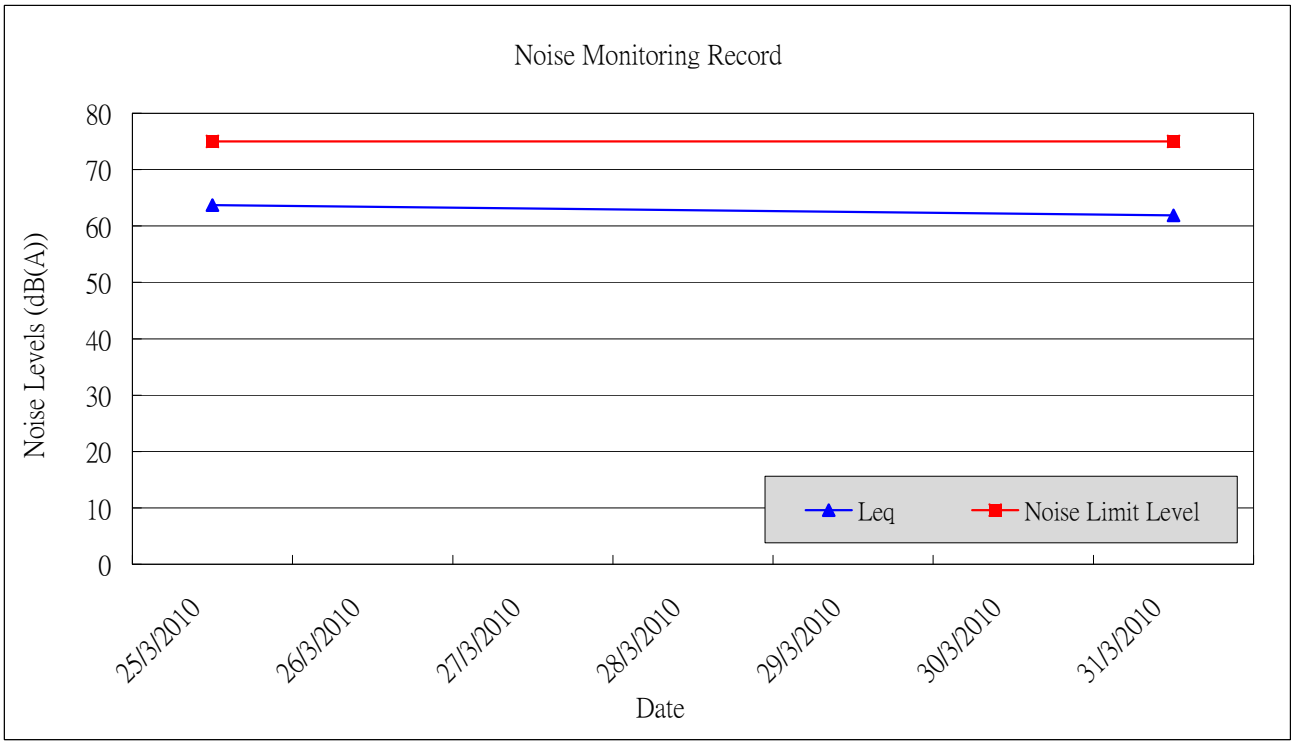
Appendix E

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: March 2010

Date	Time	Leq(30mins) (dB(A))	L10(30mins) (dB(A))	L90(30mins) (dB(A))	Limit Level
25-Mar-10	09:05 - 09:35	49.8	51.4	46.9	75
31-Mar-10	15:50 - 16:20	51.7	53.9	48.6	75



Appendix F

Mitigation Measures Implementation Schedule for Construction Stage

Appendix F Environmental Mitigation Implementation Schedule

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
Air Quality								
During Construction								
2.5.2	3.2.2	The following good site practice should be implemented: • 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; • 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; • dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting; • 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; • 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;	To minimize construction dust impact	Contractor	Construction Work Sites	During Construction	EIAO-TM, Air Pollution Control (Construction Dust) Regulation	N/A N/A ^ ^ ^

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
		• all dusty materials should be sprayed with water prior to any loading, unloading or transfer; • vehicle speed should be limited to 10kph except on completed access roads; • every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.						N/A ^ ^
Noise								
During Construction								
3.8.14	4.8.1	The following good site practical should be implemented: • 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; • The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines; • 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;	To mitigate construction noise impact	Contractor	Construction Work Sites	During Construction	EIAO-TM, NCO	^ ^ ^

Remarks: ^ 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.

Appendix F Environmental Mitigation Implementation Schedule

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
		• 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 barriers, where practicable.						N/A ^ ^ ^ N/A

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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
3.8.1 -3.8.3	4.8.2 -4.8.3	Other than good site practice, the Contractor is required to adopt Levels 1 and 2 site-specific direct mitigation measures as specified below during the construction phase. With construction / demolition work undertaken at a distance of 60m or less to the NSRs, below mitigation measures should be included: **Level 1 – Use of Quiet Plant and Movable Noise Barrier** • The Contractor shall obtain particular models of plant that are quieter than standards given in GW-TM. • 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.	To mitigate construction noise impact	Contractor	Construction work sites, **Figure 4.9** shows the typical section of movable noise barrier	During construction	EIAO-TM, NCO	N/A

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
3.8.9	4.8.4	In addition to the use of quiet plant and movable noise barrier, alternative demolition method of existing boundary fence at Section 2-3 shall be used where demolition works would be undertaken at a distance of 12m or less to the NSRs. These particular mitigation measures should be included: **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.	To mitigate construction noise impact for demolition of existing boundary fence	Contractor	Construction work sites (Section 2 - 3)	Before the commencement of demolition works	EIAO-TM, NCO	N/A

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
Water Quality								
During Construction								
4.7.1	5.3.1	Good site practices in addition to the implementation of mitigation measures would minimize the impact to the surrounding environment. *General Prevention and Precaution Measures* • The site should be confined to avoid silt runoff to the site. • No discharge of silty water into the storm drain and drainage channel within and the vicinity of the site. • Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. • Stockpiles to be covered by tarpaulin to avoid spreading of materials during rainstorms; • Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;	To avoid site runoff and chemical leakage	Contractor	Construction work sites	During construction	Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and TM standard under the WPCO	N/A ^ ^ N/A N/A ^

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
		• 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 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.						N/A ^ N/A N/A ^ ^ ^

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
4.7.2 – 4.7.3	5.3.2-5.3.3	**Concreting Work** A temporary drainage channel and associated facilities should be provided to collect the runoff generated and prevent concrete-contaminated water from entering watercourses. Adjustment of pH can be achieved by adding a suitable neutralising reagent to wastewater prior to discharge. The concreting works should be temporarily isolated with proper methods, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props.	To collect runoff generated and prevent concrete-contaminated water from entering watercourses To prevent adverse impacts on the water quality of Lin Ma Hang Stream SSSI	Contractor	Construction work sites Work sites of Section 3 in the proximity of Lin Ma Hang Stream SSSI	During construction	Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and TM standard under the WPCO CEDD General Specification- Protection of natural streams/rivers- Clause 25.09	N/A

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
4.7.4	5.3.4	**Soil Excavation and Stockpiling** Excavated soil which needs to be temporarily stockpiled should be stored in a specially designated area and provided with a tarpaulin cover to avoid runoff into the drainage channels.	To avoid site runoff	Contractor	Construction work Sites	During construction	Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and TM standard under the WPCO	N/A

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
4.7.5 - 4.7.6	5.3.5-5.3.6	**Site Depot** All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds where necessary to allow interception and controlled release of settled/treated water. Hard standing compounds should drain via an oil interceptor. The oil interceptor should be regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A bypass should be provided to avoid overload of the interceptor's capacity. 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.	To avoid wash-out of oil during storm conditions	Contractor	Construction work Sites	During construction	Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and TM standard under the WPCO	N/A

Remarks: ^ 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.

As updated on 15April 2010

Appendix F Environmental Mitigation Implementation Schedule

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
4.7.7	5.3.7	**Construction of Checkpoint** Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Shek Chung Au, to public sewer connected to government sewage treatment facilities.	To avoid disposal of domestic sewage into watercourses.	Contractor	Construction work Site at Checkpoint	During construction	N/A	N/A
Waste Management								
During Construction								
5.6.7	6.3.6	**Site Clearance** The topsoil and vegetation removed and excavated material may have to be temporarily stockpiled on-site. Control measures should be taken at the stockpiling area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels. However, to eliminate the risk of blocking drains in the wet season, it is recommended that stockpiling of excavated materials during the wet season should be avoided as far as practicable.	Prevent the generation of dust and pollution of storm water channels	Contractor	Construction work sites	During construction	Waste Disposal Ordinance (Cap.354); ETWBTC No. 15/2003, Waste Management on Construction Site	^

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N/A Not Applicable in the reporting month; * Not satisfactory but rectified by the contractor.

As updated on 15April 2010

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5.6.10 – 5.6.12	6.3.8	**Construction and Demolition Materials** Careful design, planning and good site management can minimize over-ordering and generation of waste materials such as concrete mortars and cement grouts. The design of formwork should maximize the use of standard wooden panels so to achieve high reuse levels. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse.	Minimize over-ordering and generation of waste materials	Contractor	Construction work sites	During construction	Waste Disposal Ordinance (Cap.354); ETWBTC No. 15/2003, Waste Management on Construction Site	N/A

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		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	6.3.9 – 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	Construction work sites	During construction planning	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, Waste Disposal	N/A

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		Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handed in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follows:					(Chemical Waste) (General) Regulation	N/A
		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
		The storage area for chemical wastes should:						N/A
		• be clearly labelled and used solely for the storage of chemical waste;						N/A
		• be enclosed on at least 3 sides;						N/A
		• have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area whichever is the greatest;						N/A

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		• have adequate ventilation; • be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); and • be arranged so that incompatible materials are adequately separated. Disposal of chemical waste should: • 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 N/A N/A N/A N/A N/A N/A
5.6.16	6.3.15	**General Refuse** Should be stored in enclosed bins or compaction units separate from C&D and chemical wastes. The Contractor should employ a reputable waste collector to remove general refuse from the site, separate from C&D and chemical wastes, on a regular basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.	Minimise odour, pest and litter impacts	Contractor	Construction work sites	During construction	Public Health and Municipal Services Ordinance (Cap. 132)	^

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

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Table 6.39-Table 6.45	7.2	**Disturbance to Wetland-Dependent Birds, Raptors, Terrestrial Birds and Egretry** Good working practices include switching off unused equipment, keep minimum number of powered mechanical equipment in operation at the same period, the use of stockpiles and other structures to form noise barriers where practicable, 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).	To minimize disturbance to wildlife	Contractor	Construction work sites	During construction	EIAO / Air Pollution Control (Construction Dust) Regulation / WPCO	N/A
Cultural Heritage								

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8.7.1 – 8.7.4	8.1.1 - 8.1.4	An archaeological survey should be undertaken at the study areas of Pak Fu Shan and Lin Ma Hang of Section 3 after land resumption and before commencement of construction works	Assess the archaeological impact on the two identified sites of archaeological potential.	Contractor (through professional archaeologist)	The study areas of Pak Fu Shan and Lin Ma Hang of Section 3	After land resumption and before commencement of construction works	Antiquities and Monuments Ordinance / EIAO	N/A

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8.7.6	8.2.1	Built Heritage Resources 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) BF-HB1 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. BF-G1 and BF-G2 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 during any construction works in close proximity.	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
Landscape and Visual								

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		Preservation of Existing Vegetation						
Table 7-13 CP1	Table 9-1	• 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.	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	• Creation of precautionary area around trees to be retained equal to half of the trees canopy diameter. Precautionary area to be fenced.	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	• 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.	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	• 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.	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	^

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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	To ensure the success of the tree preservation proposals.	Project Landscape Architect / Contractor	Site	Throughout construction phase	Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^
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	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	^

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Table 7-13 CP1	Table 9-1	• Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in accordance with ETWB TCW No. 2/2004 and WBTC No. 3/2006.	To ensure the tree preservation and planting proposals are integrated with the existing landscape context and that the landscape resources are preserved where appropriate.	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 tree preservation works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection specification would be included within the contract documents.	To ensure the tree preservation and planting proposals are integrated with the existing landscape context and that the landscape resources are preserved where appropriate.	Contractor	Site	Throughout construction phase	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	^
		Preservation of Existing Topsoil						

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Table 7-13 CP2	Table 9-1	• Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-use.	To provide a viable growing medium suited to the existing conditions and reduce the need for the importation of top soil.	Contractor	Site	Throughout construction phase	TM-EIA Annex 18	^
Table 7-13 CP2	Table 9-1	• The soil will be stockpiled to a maximum height of 2m and will be either temporarily vegetated with hydroseeded grass during construction or covered with a waterproof covering to prevent erosion.	To provide a viable growing medium suited to the existing conditions and reduce the need for the importation of top soil.	Contractor	Site	Throughout construction phase	TM-EIA Annex 18	N/A

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Table 7-13 CP2	Table 9-1	• The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. Alternatively, if this is not practicable, it should be considered for use elsewhere, including other projects.	To provide a viable growing medium suited to the existing conditions and reduce the need for the importation of top soil.	Contractor	Site	Throughout construction phase	TM-EIA Annex 18	N/A
		Permanent and Temporary Works Areas						
Table 7-13 CP3	Table 9-1	• Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase.	To minimise the disturbance to existing landscape resources and change of visual amenity.	Contractor	Site	Through out construction phase	TM-EIA Annex 18	N/A
Table 7-13 CP3	Table 9-1	• Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage.	To minimise the disturbance to existing landscape resources and change of visual amenity.	Contractor	Site	Through out construction phase	TM-EIA Annex 18	N/A
		Mitigation Planting						

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Table 7-13 CP4	Table 9-1	• Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase	To minimise the disturbance to existing landscape resources and change of visual amenity.	Contractor	Site	Through out construction phase	TM-EIA Annex 18	N/A
Table 7-13 CP4	Table 9-1	• Use of native plant species predominantly in the planting design for the buffer areas.	To minimise the disturbance to existing landscape resources and change of visual amenity.	Contractor	Site	Through out construction phase	TM-EIA Annex 18	N/A
Table 7-13 CP4	Table 9-1	• The tree planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree planting specification would be included within the contract documents.	To minimise the disturbance to existing landscape resources and change of visual amenity.	Contractor	Site	Through out construction phase	TM-EIA Annex 18	N/A
		Transplantation of Existing Trees						

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Table 7-13 CP5	Table 9-1	• The tree transplanting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection / transplanting specification would be included within the contract documents.	To minimise the disturbance to existing landscape resources and minimize the impacts on the visual amenity of the area.	Contractor	Site	Prior to the commencement of the proposed works	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	N/A
		Design of the Fence and associated Structures						
Table 7-14 OP1	Table 9-2	• Design of Boundary Fence, Boundary Patrol Road and Police Check Point – These structural elements will be designed in accordance with security requirement from Police Force and incorporate design features as part of design mitigation measures including:	Responsive design to integrate the proposals into their landscape and visual context.	ArchSD	Site	Throughout design phase	TM-EIA Annex 18 and BD	^

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		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.						^

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		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.						^
		5. Responsive lighting design – Aesthetic design of architectural and track lighting with following glare design measures: ▪ Directional and full cut off lighting is recommended particularly for areas adjacent to existing village to minimise light spillage. ▪ Minimise geographical spread of lighting, only applied for safety and security reasons; ▪ Limited lighting intensity to meet the minimum safety and operation requirement; and ▪ High-pressure sodium road lighting is recommended for more stringent light control reducing spillage and thus visual impacts.						^

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		Compensatory Planting Proposals						
Table 7-14 OP2	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
Table 7-14 OP 2 / 3	Table 9-2	• 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.	Provide a linkage with the existing wooded 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	N/A
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.	The planting proposal seeks to compensate for the predicted tree loss.	Contractor	Site	Throughout design phase	TM-EIA Annex 18, HKPSG and BD	N/A

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Table 7-14 OP 3	Table 9-2	Compensatory Planting Proposals – Given the works extent is largely limited along existing roadside embankment to minimise impact to existing village settlements and valuable landscape resources such as wetland, fishpond, stream course and existing trees, and considered the importance of tree retention within the works area, new tree planting will concentrate in selected 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.	The planting proposal seeks to compensate for the predicted tree loss.	Contractor	Site	Throughout design phase	TM-EIA Annex 18, HKPSG and BD	N/A

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As updated on 15April 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

Appendix G

Name of Department : Architectural Services Department

Contract No. : SSW306
Programme No. : 15 GB

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

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

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed as Public Fill	(f) Metals	(g) Paper/ cardboard packaging	(h) Plastics (see Note 3)	(i) Chemical Waste	(j) Others, e.g. general refuse disposed at Landfill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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	0.0845
Apr										
May										
June										
Sub-total	0	0	0	0	0	0	0	0	0	0.0845
July										
Aug										
Sept										
Oct										
Nov										
Dec										
Total	0	0	0	0	0	0	0	0	0	0.0845

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

Appendix I

Status of License and Permit

Appendix I-Status of License and Permit

Item	Permit/License /Ref. No.	Validity		Remarks
		From	To	
Environmental Permit	EP-347/2009	5th Jun 2009	N.A.	
Further Environmental Permit	FEP-02/347/2009	19th Feb 2010	N.A.	
Notification Pursuant to Section 3(1) of The Air Pollution Control (Construction Dust) Regulation	313192	8th Jan 2010	N.A.	
Effluent Discharge License				Under Application
Registration of Chemical Waste Producer	5213-542-A2587-02	4th Mar 2010	N.A.	