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**CHINA INTERNATIONAL WATER &
ELECTRIC CORP**

**CONTRACT NO.: SS Y307 –
CONSTRUCTION OF A SECONDARY
BOUNDARY FENCE AND NEW
SECTIONS OF PRIMARY BOUNDARY
FENCE AND BOUNDARY PATROL
ROAD (PHASE 2)**

**MONTHLY EM&A REPORT
NO.20**

(SEPTEMBER 2014)

Prepared by:

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Senior Environmental Officer

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Issued Date: 07 October 2014

Report No.: ENA41659

Ref.: ASDBFBPREM00_0_0592L.14

8 October 2014

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. F. Y. Wong

Dear Sirs,

**Re: Environmental Permit No. EP-347/2009/A and FEP-05/347/2009/A
Contract No. SSY307 - Section 3
Construction of a Secondary Boundary Fence and New Section of Primary
Boundary Fence and Boundary Patrol Road (Phase 2)
Monthly EM&A Report No. 20 for September 2014 (01 – 30 September 2014)**

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report No. 20 for September 2014 by e-mail on 7 October 2014 for our review and comment.

We are pleased to inform you that we have no adverse comments on the captioned report received on 7 October 2014. We write to verify that the captioned submission in accordance with Condition 4.5 of EP-347/2009/A and FEP-05/347/2009/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. Laurence Kwan (SPM225)	Fax: 2810 5372
	MMHK (Site)	Attn.: Mr. Philip Wong	Fax: 2683 1195
	CWE	Attn.: Mr. Chris Chan	Fax: 2670 6658
	ETS	Attn.: Mr. C. L. Lau	Fax: 2695 3944

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EXECUTIVE SUMMARY

Under the requirements of "Environmental Monitoring & Audit Manual (Final) – Construction of Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road" (the EM&A Manual), impact environmental monitoring and audit is required to be implemented for the "Contract No.: SS Y307 – Construction of Secondary Boundary Fence and New Section of Primary Boundary Fence and Boundary Patrol Road (Phase 2)" (the Project).

This monthly Environmental Monitoring and Audit (EM&A) report No.20 was prepared by ETS-Testconsult Ltd (ET) for the Project. This report documented the findings of EM&A Works conducted during the Project in September 2014.

Site Activities

As informed by the Contractor, site activities were carried out in this reporting month:

- Foundation;
- Concrete works;
- Metal works;
- Backfilling works;
- Installation of metal works; and
- Installation of lamp pole.

Environmental Monitoring Progress

The summary of the monitoring activities in this monitoring month is listed below:

- Day-time Noise Monitoring (0700-1900 on normal weekday): 5 Occasions at LW02, MW02, WL01(R) and WL03
- Weekly-site inspection: 5 Occasions

Noise Monitoring

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month.

Site Inspection

Environmental site inspections conducted in this reporting month are presented as follows:

<u>Concerned Parties</u>	<u>Dates of Audit / Inspection</u>
ET Weekly site inspection	03, 10, 17, 24 and 30 September 2014
Monthly Joint site inspection	10 September 2014

In general, performance on environmental mitigation measures implemented was found to be satisfactory in this reporting month. The major findings observed during site inspections are presented in Section 5.0.

Environmental Complaints, Notification of summons and successful prosecutions

No complaint, notification of summons and prosecution with respect to environmental issues was received in this reporting month.

Change in Environmental Aspect in this Reporting Month

No change on environmental aspect was reported in this reporting month.

Future Key Issues

Based on the forecast of site works in the coming month, key issues to be considered are as follows:

- Noise impact due to construction works;
- Maintain good site practice to minimize environmental impacts at the site.



1.0 INTRODUCTION

China International Water & Electric Corp. (CWE) has appointed Environmental Team of ETS-Testconsult Limited (ETL) to undertake the Environmental Impact Monitoring for "Contract No.: SS Y307 – Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)" (the Project) under the requirements of "Environmental Monitoring & Audit Manual (Final) – Construction of Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road" (the EM&A Manual) and "the Further Environmental Permit No. FEP-05/347/2009/A - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road" (the FEP).

This report documented the findings of EM&A Works conducted in September 2014.

2.0 PROJECT INFORMATION

2.1 Project Background

ASD Contract SS Y307 namely "The Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)" to be executed comprise the following works generally along the boundary from Ng Tung River to Ping Yuen River (Section 3A) and from Pak Fu Shan to Lin Ma Hang (Section 3C):

- Construction of secondary boundary fence along the existing boundary patrol road completed with vehicular and pedestrian gate;
- Construction of new bituminous boundary patrol road to the northwest of Lin Ma Hang;
- Construction of primary boundary fence along the northern side of the new boundary patrol road and secondary boundary fence along the southern side of the new boundary patrol road complete with electrical and manual vehicular and pedestrian gates;
- Provision of security lighting posts and luminaries along the boundary patrol road together with associated power supply installation including pillar boxes, electrical cables, power distribution system and the like;
- Reinstatement and modification of existing bituminous road;
- Associated landscaping works including tree felling, transplanting existing trees and provision of ground cover;
- Provision of drainage system along the new boundary patrol road and modification of existing catchpits, box culverts and the like;
- Provision of builder's works in a subsequent installation of CCTV system and Fence Protection System carried out by the Hong Kong Police Force (HKPF);
- Erection of frontier closed area warning signages;
- Demolition works to be executed comprise the following works generally along the existing boundary fence from Lok Ma Chau Control Point to Sha Tau Kok:
 - Demolition of original primary boundary fence and associated facilities to the south of Lok Ma Chau Loop and Hoo Hok Wai;
 - Demolition of existing police posts and the associated facilities;
 - Demolition of existing FCA warning signs;
 - Demolition of exiting check points at Lok Ma Chau and Shek Chung Au.

Surrounding the construction site, there are village houses at Mai Po, Ma Tso Lung, Lo Wu, Muk Wu Chuen Yiu, Chuk Yuen, Wang Lek and Sha Tau Kok, which are considered as noise sensitive receivers of this Project.

Areas of the Project present in Appendix G. Locations of environmental monitoring stations is shown in Figure 1.

2.2 Work Programme

Details of work programme are shown in Appendix D.



2.3 Project Organization

Organization chart with respect to the on-site environmental management is shown in Appendix A.

2.4 Contact Details of Key Personnel

The key personnel contact names and telephone numbers are shown in Table 2.1.

Table 2.1 Contact Details of Key Personnel

Project Role	Organization	Name of Key Staff	Tel. No.	Fax No.
Engineer's Representative	Mott MacDonald	Mr. James Kam Mr. F. Y. Wong	2828 5757	2827 1823
IEC	ENVIRON	Mr David Yeung	3465 2888	3465 2899
Contractor's Agent	CWE	Mr. Chris Chan	5646 5790	2508 0987
ET Leader	ET (ETL)	Mr C. L. Lau	2946 7791	2695 3944

3.0 WORK PROGRESS IN THIS REPORTING MONTH

As informed by the Contractor, site activity was carried out in the reporting month:

- Foundation;
- Concrete works;
- Metal works;
- Backfilling works;
- Installation of metal works; and
- Installation of lamp pole.

4.0 IMPACT NOISE MONITORING

4.1 Monitoring Requirements

As the requirement in the EM&A Manual, impact noise monitoring was conducted for a weekly basis at designated monitoring locations.

4.2 Monitoring Equipment

Integrating Sound Level Meters used for impact noise monitoring were Type 1 sound level meters capable of giving a continuous readout of the noise level reading including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x). They complied with International Electro technical Commission Publications 651:1979 (Type1) and 804:1985 (Type1).

Table 4.1 summarized the noise monitoring equipment model used during the impact monitoring. Copies of calibration certificates and calibration summary for noise meters and calibrators used are attached in Appendix B1.

Table 4.1 Noise Monitoring Equipment

Equipment	Model
Sound Level Meter	Rion NL-31
Sound Level Calibrator	Rion NC-73

4.3 Monitoring Parameters, Duration and Frequency

Impact noise monitoring for the A-weighted levels L_{eq} , L_{10} and L_{90} were recorded once per week. Data obtained from impact noise monitoring was processed and presented as below:

- Daytime: three sets of 30-minute noise level monitored between 0700-1900 hrs on normal weekdays;
 - Evening-time*: three sets of 5-minute noise level monitored between 1900-2300 hrs ;
 - Night-time*: three sets of 5-minute noise level monitored between 2300-0700 hrs of next day; and
 - Holiday*: three sets of 5-minute noise level monitored between 0700-1900 hrs on holiday.
- (*): Noise monitoring to be conducted only when there is construction work.



4.4 Monitoring Locations

There was eight noise monitoring stations, VH01, VH03, MTL01, LW02, MW02, WL01(R), WL03 and STK05, were required to perform impact noise monitoring during the construction phase.

The detail of noise monitoring locations is summarized in Table 4.2.

Table 4.2 Details of Noise Monitoring Stations

Noise Monitoring Station	Description	Section	Type of Measurement
VH01	Village House at Mai Po	Section 1	Façade
VH03	Village House at Mai Po	Section 1	Façade
MTL01	Village House at Ma Tso Lung	Section 2	Façade
LW02	House No.39 at Lo Wu	Section 3A	Free Field *
MW02	House No.11, Muk Wu Chuen Yiu	Section 3A	Free Field *
WL01(R)	Village House at Wang Lek	Section 3C	Free Field *
WL03	Village House at Wang Lek	Section 3C	Free Field *
STK05	Village House at Sha Tau Kok	Section 4	Free Field *

Remark (*): The monitoring stations LW02, MW02, WL01(R), WL03 and STK05 are all free-field located outside the premises of the nearby NSRs since they are enclosed areas and not willing to be entered. 3 dB(A) correction had been added to the results if noise measurement was free-field.

In this reporting month, the major construction works were carried out at Section 3A and therefore the impact noise monitoring was implemented at LW02 and MW02. Since minor site works, such as site preparation and site clearance work, were carried out at Section 3C in this reporting month, noise monitoring performed at WL01(R) and WL03 were used as reference. No noise monitoring was required at MTL01 at Section 2 in this reporting month since no construction work was undertaken in this reporting month.

4.5 Monitoring Methodology

Instrumentation

Integrating Sound Level Meters were employed for noise monitoring.

Operation/Analysis Procedures

- Sound Level Meter was set on a tripod at a height of 1.2m above the ground;
- For free field measurement, the meter was positioned away from any nearby reflective surfaces.
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting : A
 - Time weighting : Fast
 - Time measurement : 30 mins
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000HZ. If the difference in the calibration level before and after measurement was more than 1.0 dB(A), the measurement would be considered invalid and repeat measurement would be required after re-calibration or repair of the equipment;
- During the monitoring period, the L_{eq} , L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- 3dB(A) correction had been added to the results if noise measurements were free-field; and
- Noise monitoring would be cancelled in the presence of fog, rain, storm, wind with a steady speed exceeding 5m/s, or wind gusts exceeding 10m/s.

Maintenance and Calibration

- The microphone head of the sound level meter and calibrator are cleaned with soft cloth at quarterly intervals; and
- The meters are sent to supplier or HOKLAS laboratory to check and calibrated at yearly intervals.



4.6 Actions and Limit Levels

The Action and Limit Levels (AL Levels) were established in accordance to the Table 4.3 of the EM&A Manual. Table 4.4 presents the AL levels for noise monitoring.

Table 4.3 Action and Limit Levels for Noise Monitoring

Time Period	Action	Limit
0700 – 1900 hrs on normal weekday (Day-time)	When one documented complaint is received	75 dB(A) *
1900-2300 hrs (Evening-time)		70 dB(A)
0700-1900 hrs on Holiday (Holiday-time)		70 dB(A)
Restricted hours (2300-0700 hrs of next day) (Night-time)		55 dB(A)

* reduce to 70dB(A) for school and 65dB(A) during school examination periods

4.7 Event-Action Plans

Should the results of the monitoring parameters at any designated monitoring stations indicate that the noise level criteria are exceeded, the actions in accordance with the Event and Action Plan that summarized in Appendix C should be carried out.

4.8 Results

5 occasions of Day-time noise monitoring at noise monitoring stations, LW02, MW02, WL01(R) and WL03 were carried out at this reporting month.

No Day-time noise monitoring results at all monitoring stations exceeded the Action Level since no documented complaints on noise issue were received during the reporting period. Besides, no exceedances in Limit Level were recorded according to the results from Day-time noise monitoring. Table 4.4 summaries the noise daytime monitoring results in the reporting period.

Table 4.4 Summary of Impact Noise Monitoring Results

Monitoring Parameter	Date	LW02		MW02		WL01(R)		WL03	
		Result	Exceed*	Result	Exceed*	Result	Exceed*	Result	Exceed*
Daytime	03/09/14	56.1	X	48.0	X	46.2	X	47.4	X
	10/09/14	55.7	X	48.2	X	46.6	X	45.4	X
	17/09/14	54.8	X	48.1	X	47.5	X	47.5	X
	24/09/14	56.0	X	47.7	X	46.9	X	45.2	X
	30/09/14	56.7	X	48.0	X	46.7	X	44.6	X

Remark (*): L = Limit Level Exceedance, A = Action Level Exceedance and X = not an Exceedance

5.0 SITE ENVIRONMENTAL AUDIT

During this reporting month, weekly site inspections were undertaken on 03, 10, 17, 24 and 30 September 2014 by ET. Monthly joint site inspection at 10 September 2014 was carried out by IEC, CWE and ET. A summary of implementation status of mitigation measures on site inspections is presented in Appendix F.

5.1 Summary of the ET weekly site inspection findings

According to the summary of the ET weekly site inspections carried out in September 2014, it indicated that site practices of the Contractor were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory. Summaries of key findings of weekly ET site inspections in this month are described in Table 5.1.



Table 5.1 Key Findings of Weekly ET Site Inspections in this reporting month

Date	Key Findings	Action(s) Taken recommended by ET	Action(s) Taken by the Contractor during the site audit	Rectification Status by ET
03 September 2014	Stagnant water was observed near the entrance of New Road site. (New item)	The Contractor was reminded to drain down the stagnant water or add mosquito oil on the water to avoid breeding of mosquitoes.	---	Follow-up
	Waste chemical container was observed near the entrance of New Road site. (New item)	The Contractor was reminded to collect the waste chemical container after used.	---	Follow-up
10 September 2014	Stagnant water was observed near the entrance of New Road site. (Previous item)	The Contractor was reminded to drain down the stagnant water or add mosquito oil on the water to avoid breeding of mosquitoes.	Stagnant water observed near the entrance of New Road site was removed or added mosquito oil.	Closed
	Waste chemical container was observed near the entrance of New Road site. (Previous item)	The Contractor was reminded to collect the waste chemical container after used.	Waste chemical container observed near the entrance of New Road site was collected.	Closed
	Mud trail was observed near the entrance of New Road site. (New item)	The Contractor was reminded to clear the mud trail.	---	Follow-up
	General refuse was observed near the entrance of New Road site. (New item)	The Contractor was reminded to collect the general refuse regularly.	---	Follow-up
17 September 2014	Mud trail was observed near the entrance of New Road site. (Previous item)	The Contractor was reminded to clear the mud trail.	Mud trail observed at the entrance of New Road site was cleared.	Closed
	General refuse was observed near the entrance of New Road site. (Previous item)	The Contractor was reminded to collect the general refuse regularly.	General refuse observed near the entrance of New Road site was collected.	Closed
	Mud trail was observed near the entrance of New Road site. (New item)	The Contractor was reminded to clear the mud trail.	---	Follow-up
	Stagnant water was observed near the middle section of New Road site. (New item)	The Contractor was reminded to drain down the stagnant water.	---	Follow-up
24 September 2014	Mud trail was observed near the entrance of New Road site. (Previous item)	The Contractor was reminded to clear the mud trail.	Mud trail observed near the entrance of New Road site was cleared.	Closed
	Stagnant water was observed near the middle section of New Road site. (Previous item)	The Contractor was reminded to drain down the stagnant water.	Stagnant water observed near the middle section of New Road site was drained.	Closed
30 September 2014	No defective work or observation was recorded during the weekly site inspection.			



5.2 Recommendations on site inspection findings in Site Inspections of this month

Based on the site inspection findings, the recommendations are as below:

- Minimize noise impact due to construction works;
- Clean the access road regularly;
- Cover or water the stockpile;
- Checking and maintaining all the site machines to prevent black smoke emission;
- Providing briefing to the concerned site staff on remedial actions, such as handling method of chemicals and chemical waste;
- Implement all necessary preventive measures to avoid oil leakage. In the event an oil leakage happens, the Contractor should properly remove the leaked oil and handle the contaminated soil and all materials using for this cleaning works as chemical waste;
- Maintain good waste management at the site
- Remove all stagnant water; and
- Apply proper treatment facilities to wastewater before discharge.

6.0 STATUS OF ENVIRONMENTAL PERMITS

Permits/licenses valid in this reporting month are summarized in Table 6.1.

Table 6.1 Summary of Environmental Licensing and Permit valid in this reporting month

Description	Permit No.	Valid Period		Concerned Locations
		From	To	
Environmental Permit	FEP-05/347/2009/A	10/08/12	End of Project	Section 3 – from Ng Tung River to Ping Yuen River and from Pak Fu Shan to Lin Ma Hang
Wastewater Discharge Licence	W5/1G43/1	09/10/12	31/10/17	Section 3A and Section 3C (Effluent arising from Construction site Sedimentation Tank(s) and other necessary treatment facilities)
Chemical Waste Producer	5213-641-C1206-09	09/10/12	End of Project	Section 3A and Section 3C (Spent Paints, Spent Diesel and Spent Lubricating Oil)
Notification under APCO	Application had been submitted to EPD on 28/08/12 and approved from 30/08/12.			
Notification under WCO	Application had been submitted to EPD on 28/08/12 and approved from 30/08/12.			

7.0 WASTE MANAGEMENT

7.1 Monthly Waste Summary

The quantities of waste generated from the Project in this month are summarized in Table 7.1 and monthly summary waste flow table present in Appendix H.

Table 7.1 Summary of Quantities of Waste generated in this reporting month

Type of Waste		Quantity	Cumulative Quantity from February 2013
Inert C&D Materials	Total Quantity Generated (in '000m ³)	0	0.238
	Hard Rocks and Large Broken Concrete (in '000m ³)	0	0.03
	Reused in the Contract (in '000m ³)	0	0
	Reused in other Projects (in '000m ³)	0	0
	Disposal as Public Fill (in '000m ³)	0	0.208
	Imported Fill (in '000m ³)	0	1.842
C&D Waste	Metals (in '000kg)	0	0.02
	Paper/Cardboard Packaging (in '000kg)	0	0.140
	Plastics (in '000kg)	0	0
	Chemical Waste (in '000kg)	0	0.1
	Other, e.g. General Refuse (in '000m ³)	0	0.9945



7.2 Advice on the Solid and Liquid Waste Management Status

The Contractor should provide sufficient preventive measures during equipment maintenance works so as to avoid oil leakage on the ground. In the event of any oil leakage, the Contractor should clean up the polluted soil and handle all the materials used for this cleaning works as chemical waste.

Besides, pre-cast drip trays were provided for oil drums at several areas, such as generator and chemical storage area. The Contractor should collect and dispose of any stagnant water accumulated in the drip trays and handle them as chemical waste.

The Contractor should use suitable containers with proper labels to store chemical wastes in accordance with Code of Practice on the Packaging, Labeling and Storage of Chemical Waste. The Contractor should also advise their workers of the proper procedures in handling the chemical waste.

All the trip tickets for chemical waste disposal were properly kept in the site office. No chemical waste disposal was undertaken in the reporting month.

The Contractor was reminded to increase the frequency of inspection and cleaning of the site drainage system, including desilting facilities. Moreover, the Contractor should apply approved pesticides in the stagnant water.

8.0 ENVIRONMENTAL NON-CONFORMANCE

8.1 Summary of Non-Conformance

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month.

8.2 Summary of Environmental Complaints

No complaint was received in this reporting month.

8.3 Summary of Notification of Summons and Prosecution

There was no notification of summons respect to environmental issues registered in this month.

9.0 IMPLEMENTATION STATUS

9.1 Implementation Status of Environmental Mitigation Measures

An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in Appendix F. Most of the necessary mitigation measures were implemented properly. Any deficiencies were noted in the remarks of the schedule.

9.2 Implementation Status of Event and Action Plan

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month. Hence, no further action was required.

9.3 Implementation Status of Environmental Complaint, Notifications of Summons and Successful Prosecutions Handling

No complaint, notification of summons and successful prosecution were received in this reporting month. A summary of environmental complaints, notifications of summons and successful prosecutions was given in Table 9.1.

Table 9.1 Summary of Environmental Complaints and Prosecutions

Complaints logged		Summons served		Successful prosecution received	
September 2014	Overall Cumulative from February 2013	September 2014	Overall Cumulative from February 2013	September 2014	Overall Cumulative from February 2013
0	0	0	0	0	0



10.0 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

Comments and Conclusions

Impact noise monitoring was carried out at designated locations in accordance with the EM&A Manual in this reporting month.

No exceedance of Action and Limit Level of impact noise monitoring was recorded in this reporting month.

According to the ET weekly site inspections carried out in this reporting month, the Contractor generally implemented sufficient environmental mitigation measures.

No complaint, prosecution or notification of summon was received in this reporting month.

Recommendations

According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

Air Quality

- *Ensure the frequency of water spraying on unloading areas and stockpiles to be sufficient to suppress the dust sources;*
- *Provide proper maintenance for the powered mechanical equipment and barges to avoid emission of dark smoke; and*
- *Implement the dust mitigation measures for the site activities.*

Noise

- *Conduct noisy activities at a farther location from the NSRs.*

Water Quality

- *Provide proper treatment for the wastewater discharge; and*
- *Remove the stagnant water or provide approved pesticides for the stagnant water, if any.*

Chemical and Waste Management

- *Remove waste materials from the site to avoid accumulation regularly;*
- *Handle and store chemical wastes properly;*
- *Remove unwanted material in the existing stockpiles and avoid further dumping of such material;*
- *Provide and maintain sufficient drip trays for diesel drums, chemical containers, chemical waste storage drums and diesel operated generator set; and*
- *Maintain good housekeeping at the works area.*

11.0 FUTURE KEY ISSUES

11.1 Work Programme for the Coming Month

As informed by the Contractor, site activities proposed to be carried out in the coming month:

- *Foundation;*
- *Concrete works;*
- *Metal works;*
- *Backfilling works;*
- *Installation of metal works; and*
- *Installation of lamp pole.*

11.2 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

- *Minimize noise impact due to construction works;*
- *Clean the access road regularly;*
- *Cover or water the stockpile;*
- *Checking and maintaining all the site machines to prevent black smoke emission;*



- Providing briefing to the concerned site staff on remedial actions, such as handling method of chemicals and chemical waste;
- Implement all necessary preventive measures to avoid oil leakage. In the event an oil leakage happens, the Contractor should properly remove the leaked oil and handle the contaminated soil and all materials using for this cleaning works as chemical waste;
- Maintain good waste management at the site
- Remove all stagnant water; and
- Apply proper treatment facilities to wastewater before discharge.

Mitigation measures to be required in the coming month:

Air Quality Impact

- To ensure implementation of the dust mitigation measures for the site activities;
- To provide proper maintenance for vehicles and machines on site; and
- To investigate any other dust sources around the air sensitive receivers

Noise

- To switch off equipment if not in use;
- To operate silent equipment; and
- To re-schedule the work activities in the event of valid noise exceedance.

Water Quality Impact

- To maintain the drainage system;
- To provide covers for the drip trays to avoid stagnant water due to rainfall;
- To provide proper treatment for wastewater from the area; and
- To avoid any stagnant water or provide insecticide to avoid mosquito breeding.

Chemical and Waste Management

- To remove waste from the site regularly;
- To properly store and handle chemical wastes on site;
- To provide and manage sufficiently sized drip trays for diesel drums or chemical containers;
- To maintain proper housekeeping;
- To remove the oil stains in the event of leakage and handle all materials using for this cleaning works as chemical waste; and
- To identify C&D material by packaging, labeling, storage, transportation and disposal in accordance with statutory regulations.

- END OF REPORT -



Appendix A

Organization Chart



中国水利电力对外公司

CHINA INTERNATIONAL WATER & ELECTRIC CORP.

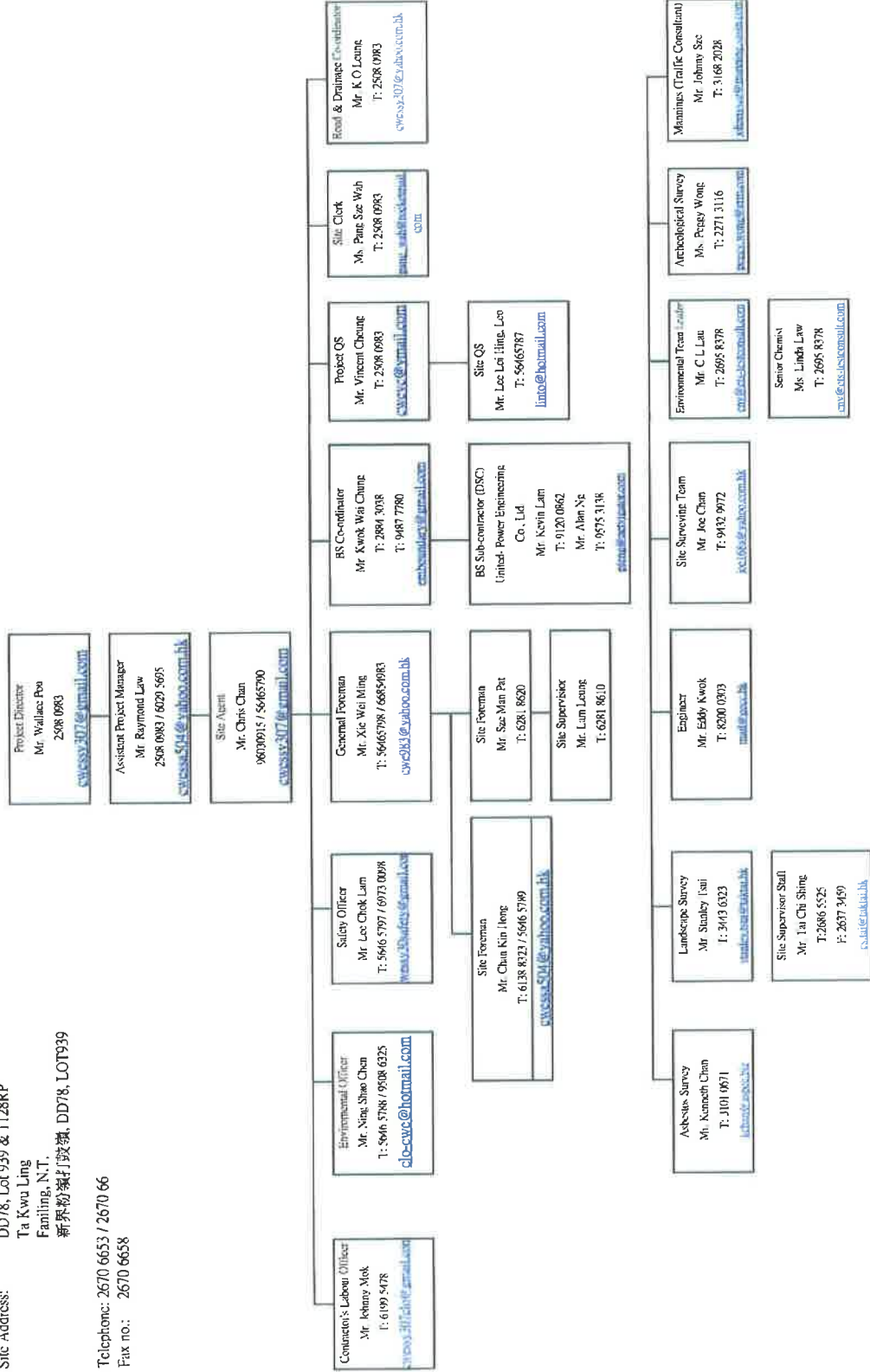
Site Address:

DD78, Lot 939 & 1128RP
Ta Kwu Lung
Famling, N.T.
新界粉嶺打鼓嶺, DD78, LOT939

Telephone: 2670 6653 / 2670 66
Fax no.: 2670 6658

Site Organization Chart for Project SS Y307

Rev: 8





Appendix B1

Calibration Certificates for Impact Noise Monitoring Equipment



Calibration Certificate

Certificate No. **38223**

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q33271

Date of receipt : 13-Nov-13

Item Tested

Description : Precision Integrating Sound Level Meter (ET/EN/003/13)

Manufacturer : Rion

Model : NL-31

Serial No. : 00593620

Test Conditions

Date of Test : 15-Nov-13

Ambient Temperature : (23 ± 3)°C

Supply Voltage : --

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type1 specification.
The results are shown in the attached page(s).


Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C127181	SCL-HKSAR
S205	Ref. Sound Level Calibrator	PHCO40002	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Dorothy Cheuk

Approved by : 
Steve Kwan

Date: 15-Nov-13

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 38223

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 - 100	L _A	Fast	94.0	94.0
		Slow		94.0
	L _C	Fast		94.0
	L _p	Fast		94.0
30 - 120	L _A	Fast	94.0	94.0
		Slow		94.0
	L _C	Fast		94.0
	L _p	Fast		94.0
30 - 120	L _A	Fast	114.0	114.0
		Slow		114.0
	L _C	Fast		114.0
	L _p	Fast		114.0

IEC 651 Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. **Level Stability** : 0.0 dB
IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.0	0.0	± 0.7 dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	--	
110	84.0	84.0	0.0	
100	74.0	74.0	0.0	
90	64.0	64.1	0.1	
80	54.0	54.1	0.1	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 38223

Page 3 of 3 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.0	0.0	± 0.4 dB
	94.0	94.0 (Ref.)	--	
	95.0	95.0	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting - A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	39.6	- 39.4 dB, ± 1.5 dB
63 Hz	-36.3	- 26.2 dB, ± 1.5 dB
125 Hz	-16.3	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.2	+ 1.2 dB, ± 1 dB
4 kHz	+1.1	+ 1.0 dB, ± 1 dB
8 kHz	-1.0	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.4	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

6.

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.9	± 0.5 dB
1/10 ²	40.0	39.7	
1/10 ³	40.0	39.8	± 1.0 dB
1/10 ⁴	40.0	39.8	

Uncertainty : ± 0.1 dB

- Remarks:
1. UUT : Unit-Under-Test
 2. The uncertainty claimed is for a confidence probability of not less than 95%.
 3. Atmospheric Pressure : 1006 hPa
 4. The UUT was adjusted with the supplied sound calibrator at the reference sound pressure level before the calibration.

----- END -----



Calibration Certificate

Certificate No. **38224**

Page 1 of 2 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q33271

Date of receipt : 13-Nov-13

Item Tested

Description : Sound Level Calibrator (ET/EN/002/01)

Manufacturer : Rion

Model : NC-73

Serial No. : 10196943

Test Conditions

Date of Test : 15-Nov-13

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	35730	NIM-PRC & SCL-HKSAR
S205	Ref. Sound Level Calibrator	PHCO40002	SCL-HKSAR
S041	Universal Counter	34621	SCL-HKSAR
S206	Sound Level Meter	36203	SCL-HKSAR
S031	6½ dgt. Multimeter	30128	NIM-PRC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Dorothy Cheuk

Approved by : 
Steve Kwan

Date: 15-Nov-13

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 38224

Page 2 of 2 Pages

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value	Mfr's Spec.
94 dB	94.1 dB	± 1 dB

Uncertainty : ± 0.2 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.986 kHz	± 2 %

Uncertainty : ± 0.1 %

3. Level Stability : 0.0 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.1 %

Mfr's Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remarks: 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1006 hPa

----- END -----



Appendix B2

Impact Noise Monitoring Results



Day-time Noise monitoring Results

Location		LW02 - House No.39 at Lo Wu (Section 3A)						
Date	Weather Condition	Start Time	End Time	Noise Level for 30 min, dB(A)			Limit Level	Baseline Noise Level
				Leq	L10	L90		
03/09/14	Fine	16:55	17:25	56.1	58.2	52.2	75.0	60.4
10/09/14	Fine	13:40	14:10	55.7	57.2	49.9	75.0	60.4
17/09/14	Drizzle	11:10	11:40	54.8	57.5	51.3	75.0	60.4
24/09/14	Fine	10:40	11:10	56.0	58.2	51.1	75.0	60.4
30/09/14	Fine	9:30	10:00	56.7	58.2	51.1	75.0	60.4

Location		MW02 - House No.11, Muk Wu Chuen Yiu (Section 3A)						
Date	Weather Condition	Start Time	End Time	Noise Level for 30 min, dB(A)			Limit Level	Baseline Noise Level
				Leq	L10	L90		
03/09/14	Fine	16:15	16:45	48.0	49.7	42.4	75.0	51.5
10/09/14	Fine	13:00	13:30	48.2	49.7	44.3	75.0	51.5
17/09/14	Drizzle	10:30	11:00	48.1	49.7	43.6	75.0	51.5
24/09/14	Fine	11:20	11:50	47.7	49.4	42.2	75.0	51.5
30/09/14	Fine	10:10	10:40	48.0	49.7	43.3	75.0	51.5

Location		WL01(R) - Village House at Wang Lek (Section 3C)						
Date	Weather Condition	Start Time	End Time	Noise Level for 30 min, dB(A)			Limit Level	Baseline Noise Level
				Leq	L10	L90		
03/09/14	Fine	13:00	13:03	46.2	48.0	41.1	75.0	53.3
10/09/14	Fine	16:00	16:30	46.6	48.1	41.7	75.0	53.3
17/09/14	Drizzle	9:50	10:20	47.5	49.0	42.5	75.0	53.3
24/09/14	Fine	13:35	14:05	46.9	48.5	42.2	75.0	53.3
30/09/14	Fine	11:25	11:55	46.7	48.5	42.3	75.0	53.3

Location		WL03 - Village House at Wang Lek (Section 3C)						
Date	Weather Condition	Start Time	End Time	Noise Level for 30 min, dB(A)			Limit Level	Baseline Noise Level
				Leq	L10	L90		
03/09/14	Fine	13:35	14:05	47.4	49.3	43.0	75.0	56.3
10/09/14	Fine	16:35	17:05	45.4	47.2	40.5	75.0	56.3
17/09/14	Drizzle	9:50	10:10	47.5	49.0	42.5	75.0	56.3
24/09/14	Fine	13:00	13:30	45.2	47.1	40.3	75.0	56.3
30/09/14	Fine	10:50	11:20	44.6	46.9	40.4	75.0	56.3

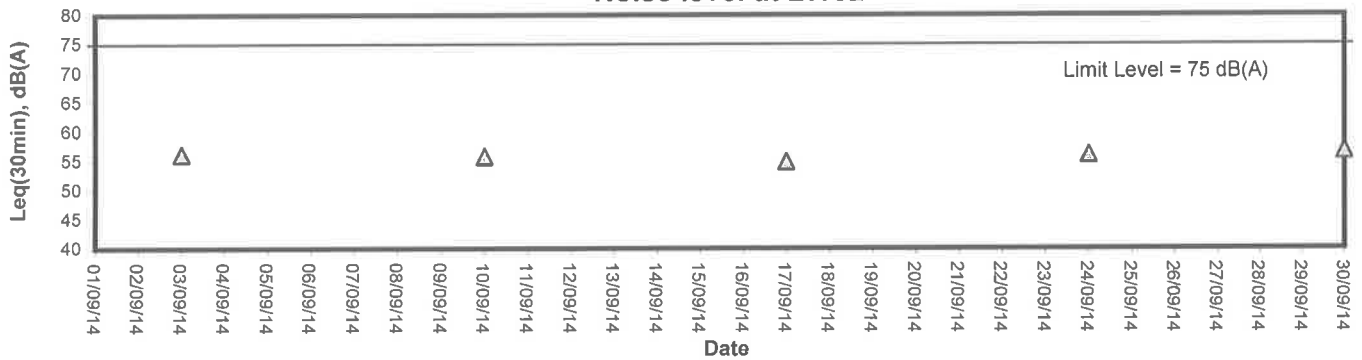
Appendix B3

Graphical Plots of Impact Noise Monitoring Data

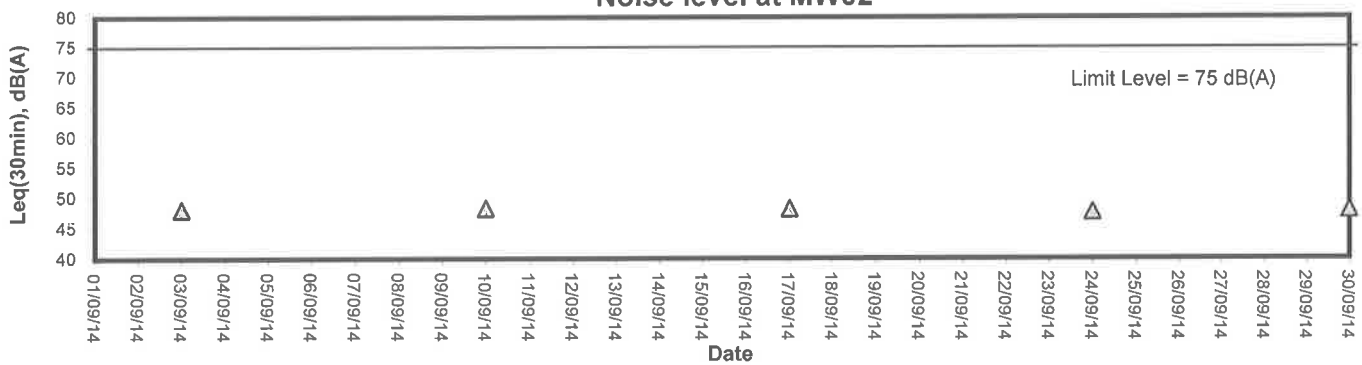


Noise Monitoring (Day-time)

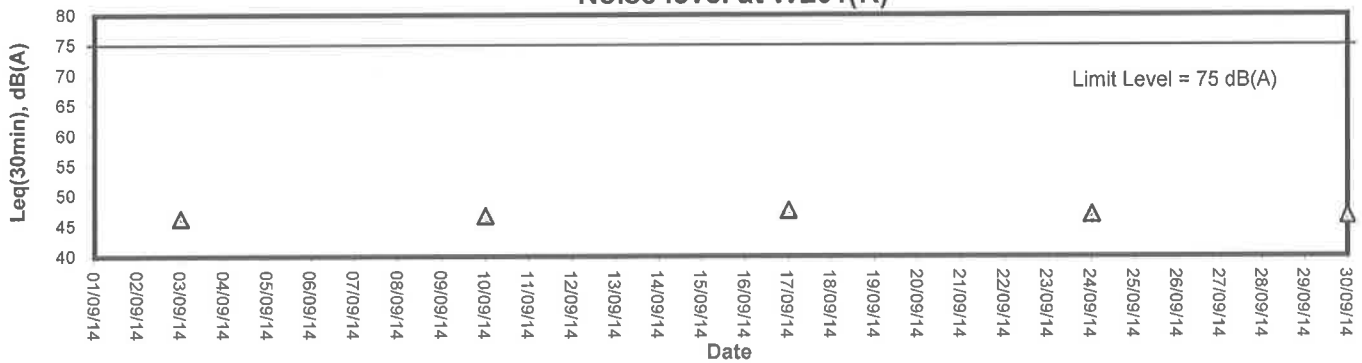
Noise level at LW02



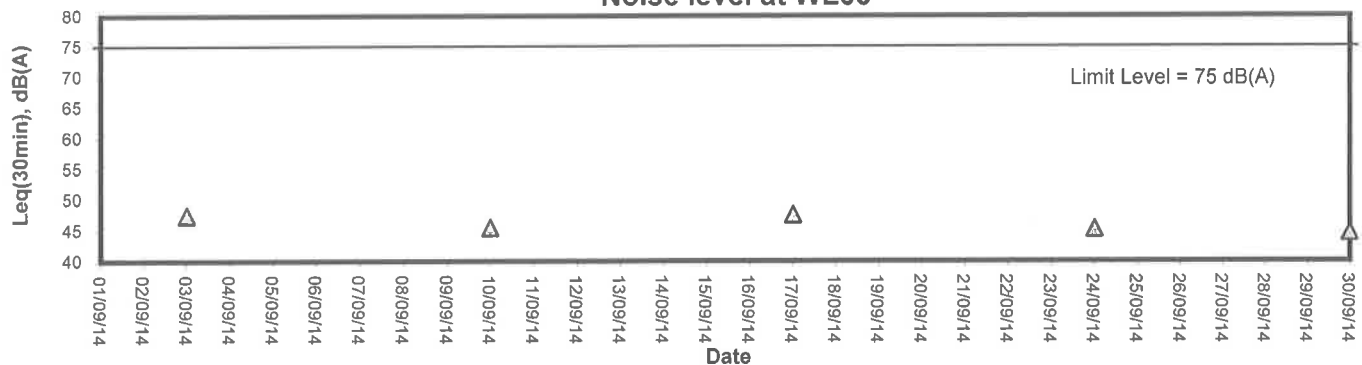
Noise level at MW02



Noise level at WL01(R)



Noise level at WL03





Appendix C

Event-Action Plans



Event and Action Plan for Construction Noise

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Review with analysed results submitted by ET. 2. Review the proposed remedial measures by the Contractor and advise ER accordingly. 3. Supervise the implement of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Identify the source. 2. Notify IEC, ER, EPD and the 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 the 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. 	<ol style="list-style-type: none"> 1. Discuss 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed 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 abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.



Appendix D

Work Programme

識別碼	任務名稱	工期	開始時間	完成時間	2012年8月			2012年9月		
					下旬	中旬	下旬	下旬	中旬	下旬
1	Construction of SBF & PBF & Patrol Road at Frontier (Section B)	764 days?	2012/7/25	2014/8/27						
2	General Site Office setup	60 days	2012/7/25	2012/9/22						
3	General Site mobilization	30 days	2012/9/24	2012/10/23						
4	Apply for working permit	584 days	2012/7/25	2014/2/28						
5	- car, site personnel, worker for preparation & surveying works	37 days	2012/7/25	2012/8/30						
6	- car, site personnel, worker for construction works	584 days	2012/7/25	2014/2/28						
7	General Submission works	764 days	2012/7/25	2014/8/27						
8	Initial site survey	50 days	2012/10/8	2012/11/26						
9	Submission to EPD required under further Environment Permit	1 day	2012/7/30	2012/7/30						
10	Submission of temporary traffic arrangement	717 days	2012/9/10	2014/8/27						
11	1st submission of site aspect schedule	1 day	2012/7/30	2012/7/30						
12	1st submission of safety plan	1 day	2012/7/30	2012/7/30						
13	1st Submission of Environmental Management Plan	1 day	2012/7/30	2012/7/30						
14	submission of waste management plan for trip tick	1 day	2012/7/30	2012/7/30						
15	Submission of Smart Card System(subject to site possession)	90 days	2012/7/30	2012/10/27						
16	Submission of method statement for construction works	180 days	2012/8/11	2013/2/6						
17	Submission of initial tree survey	110 days	2012/8/13	2012/11/30						
18	Submission of tree risk assessment. (2013)	110 days	2012/8/13	2012/11/30						
19	Submission of method statement for tree works	764 days	2012/7/25	2014/8/27						
20	Materials submission & approval	558 days	2012/8/20	2014/2/28						
21	Submission of tree risk assessment. (2014)	172 days	2014/3/9	2014/8/27						
22										
23	Steelwork									
24	fabrication of steel material	334 days	2013/8/1	2014/6/30						
25	fabrication of mesh	243 days	2013/6/25	2014/2/22						
26										
27	Section A (Lin Ma Hang)	333 days	2012/7/25	2013/6/22						
28	1. Setting out & Topographical survey for site boundary	143 days	2012/8/11	2012/12/31						
29	2. Site clearance for new road / archaeological survey	28 days	2013/1/1	2013/1/28						
30	3. Archaeological survey	333 days	2012/7/25	2013/6/22						
31	-preparation & submission of archeological proposal	225 days	2012/7/25	2013/3/6						
32	-seek AMC's approval & Licence	45 days	2013/3/6	2013/4/19						
33	-carry out the field survey (subject to licence's approval)	21 days	2013/4/20	2013/5/10						
34	-preparation & submission of report to AMC & EPD	30 days	2013/5/11	2013/6/9						

專案: Programme for Frontier

lask

日期: 19-5-2014

識別碼	任務名稱	工期	開始時間	完成時間	2012年8月			2012年9月		
					下旬	中旬	下旬	下旬	中旬	下旬
35	-submission of report to IEC	14 days	2013/6/9	2013/6/22						
36	-submission of report to AMO & IEC	14 days	2013/6/9	2013/6/22						
37										
38	Section B (Man Kam To Lo Wu , Pak Fu Shan to Lin Ma Hang)	764 days?	2012/7/25	2014/8/27						
39	Site mobilization									
40	1. condition survey	199 days	2012/9/15	2013/4/1						
41	2. Initial tree survey	169 days	2012/9/12	2013/2/27						
42	3. Settling out for works	764 days	2012/7/25	2014/8/27						
43	4. Underground detection & submission report	119 days	2012/9/1	2012/11/28						
44										
45	6a. Boundary Fence (Man Kam To Section)	764 days?	2012/7/25	2014/8/27						
46	1. site clearance	764 days	2012/7/25	2014/8/27						
47	2. Maintenance landscaping works	764 days	2012/7/25	2014/8/27						
48	2. Implementation landscaping works (protection/punning/checking/inspection works etc)	764 days	2012/7/25	2014/8/27						
49	- RC footings	586 days	2012/11/12	2014/6/20						
50	- Footing excavation	582 days	2012/11/12	2014/6/16						
51	-Blinding layer	582 days	2012/11/13	2014/6/17						
52	-Formwork	582 days	2012/11/14	2014/6/18						
53	-Bar fixing	582 days	2012/11/15	2014/6/19						
54	-Threaded rod	582 days	2012/11/15	2014/6/19						
55	-Concreting	582 days	2012/11/16	2014/6/20						
56	- Backfilling works	582 days	2012/11/17	2014/6/21						
57	-Reinstatement works	478 days	2013/5/7	2014/8/27						
58	- erection of metal fence	282 days	2013/11/19	2014/8/27						
59	1. steel frame works	261 days	2013/11/19	2014/8/6						
60	2. mesh	265 days	2013/11/21	2014/8/12						
61	3. barbed wire	59 days	2014/6/30	2014/8/27						
62	4. installation of gates	59 days	2014/6/30	2014/8/27						
63	5. painting works	73 days	2014/6/16	2014/8/27						
64	6. Installation of copper tape	173 days	2014/3/8	2014/8/27						
65	7. Installation of cable tray (including gate)	40 days	2014/7/19	2014/8/27						
66										
67	6b. Boundary Fence (Lo Wu Section)	764 days?	2012/7/25	2014/8/27						
68										

專案: Programe for Frontier

日期: 19-5-2014

task

識別碼	任務名稱	工期	開始時間	完成時間	2012年8月			2012年9月		
					下旬	中旬	下旬	下旬	中旬	下旬
69	1. site clearance	706 days	2012/9/21	2014/8/27						
70	2. Maintenance landscaping works	764 days	2012/7/25	2014/8/27						
71	3. Implementation landscaping works	764 days	2012/7/25	2014/8/27						
72	(protection/punning/checking/inspection works etc)									
73	-RC footings	654 days	2012/1/12	2014/8/27						
74	- footing excavation works	582 days	2012/1/12	2014/6/16						
75	- blinding layer	582 days	2012/1/13	2014/6/17						
76	-Formwork	582 days	2012/1/14	2014/6/18						
77	-Bar fixing	582 days	2012/1/15	2014/6/19						
78	- Threaded rod	582 days	2012/1/15	2014/6/19						
79	- Concreting	582 days	2012/1/16	2014/6/20						
80	- backfilling works	582 days	2012/1/17	2014/6/21						
81	-Reinstatement works	171 days	2014/3/10	2014/8/27						
82	- erection of metal fence	274 days	2013/1/27	2014/8/27						
83	1. steel frame works	180 days	2013/1/27	2014/5/25						
84	2. mesh	184 days	2013/1/28	2014/5/30						
85	3. barbed wire	113 days	2014/5/7	2014/8/27						
86	4. installation of gates	59 days	2014/6/30	2014/8/27						
87	5. painting works	143 days	2014/4/7	2014/8/27						
88	6. Installation of copper tape	173 days	2014/3/8	2014/8/27						
89	7. Installation of cable tray	40 days	2014/7/19	2014/8/27						
90										
91	- Demolition/Alteration of exig fence	331 days	2013/10/1	2014/8/27						
92										
93	6c. Bound fence (Pak Fu Shan Section)	764 days?	2012/7/25	2014/8/27						
94	Maintenance landscaping works	706 days	2012/9/21	2014/8/27						
95	Implementation landscaping works	706 days	2012/9/21	2014/8/27						
96	(protection/punning/checking/inspection works etc)									
97	1. site clearance & preparation works	89 days	2013/1/1	2013/3/30						
98	2. excavation works	573 days	2013/1/1	2014/7/27						
99	3. blinding layer	573 days	2013/1/2	2014/7/28						
100	4. erection of formwork	573 days	2013/1/3	2014/7/29						
101	5. bar fixing	573 days	2013/1/4	2014/7/30						
102	6 Threaded rod	573 days	2013/1/4	2014/7/30						

專案: Programme for Frontier

task

日期: 19-5-2014

識別碼	任務名稱	工期	開始時間	完成時間	2012年8月			2012年9月		
					下旬	中旬	下旬	下旬	中旬	下旬
103	7. concrete works	573 days	2013/1/5	2014/7/31						
104	8. backfilling works	573 days	2013/1/6	2014/8/1						
105	9. reinstatement works	59 days	2014/6/30	2014/8/27						
106	10. steel frame erection	113 days	2014/3/10	2014/6/30						
107	11. mesh	31 days	2014/6/16	2014/7/16						
108	12. barbed wire	27 days	2014/8/1	2014/8/27						
109	13. installation of gates	45 days	2014/7/14	2014/8/27						
110	14. painting works	130 days	2014/4/20	2014/8/27						
111	15. installation of copper tape (BS)	142 days	2014/4/8	2014/8/27						
112	16. installation of cable tray	40 days	2014/7/19	2014/8/27						
113										
114	- Demolition/Alternation of exig fence	331 days	2013/10/1	2014/8/27						
115										
116	6d. Bound fence (Jin Ma Hang Section)	604 days	2013/1/1	2014/8/27						
117	Maintenance landscaping works	764 days	2012/7/25	2014/8/27						
118	Implementation of planning works	764 days	2012/7/25	2014/8/27						
119	(protection/punning/checking/inspection works etc)	1 day?	2012/8/11	2012/8/11						
120	1. site clearance	89 days	2013/1/1	2013/3/30						
121	2. excavation works	573 days	2013/1/1	2014/7/27						
122	3. blinding layer	573 days	2013/1/2	2014/7/28						
123	4. erection of formwork	573 days	2013/1/3	2014/7/29						
124	5. bar fixing	573 days	2013/1/4	2014/7/30						
125	6 Threaded rod	573 days	2013/1/4	2014/7/30						
126	7. concrete works	573 days	2013/1/5	2014/7/31						
127	8. backfilling works	573 days	2013/1/6	2014/8/1						
128	9. reinstatement works	179 days	2013/12/10	2014/6/6						
129	10. steel frame erection	113 days	2014/2/10	2014/6/2						
130	11. mesh	31 days	2014/3/24	2014/4/23						
131	12. barbed wire	31 days	2014/7/28	2014/8/27						
132	13. installation of gates	61 days	2014/4/7	2014/6/6						
133	14. painting works	130 days	2014/1/28	2014/6/6						
134	15. installation of copper tape (BS)	91 days	2014/5/29	2014/8/27						
135	16. installation of cable tray	91 days	2014/5/29	2014/8/27						
136	17. construction of solar lamp poles	45 days	2014/7/14	2014/8/27						

China International Water & Electric Corp.

Construction of A Secondary Boundary Fence & New Boundary Patrol Road (Phase 2)

識別碼	任務名稱	工期	開始時間	完成時間	2012年8月			2012年9月		
					下旬	中旬	下旬	下旬	中旬	下旬
137	- Demolition/Alteration of extg fence	331 days	2013/10/1	2014/8/27						
138										
139										
140	Works disturbance by local villagers, pending for commencement of works	436 days	2013/3/4	2014/5/13						
141										
142	Section C(subject to excision) (subject to item 29)	419 days	2013/7/5	2014/8/27						
143	- Setting out for site boundary	30 days	2013/7/5	2013/8/3						
144	- Condition survey	30 days	2013/7/5	2013/8/3						
145	- Setting out	30 days	2013/7/5	2013/8/3						
146	- Maintenance landscaping works	419 days	2013/7/5	2014/8/27						
147	- Implementation landscaping works (removal/purming/protection)	419 days	2013/7/5	2014/8/27						
148	Road work & Boundary fence	402 days	2013/7/22	2014/8/27						
149	Road work & Boundary fence	364 days	2013/7/22	2014/7/20						
150	- Backfilling works for road	314 days	2013/7/22	2014/5/31						
151	- footing excavation	209 days	2013/10/26	2014/5/22						
152	- blinding layer	209 days	2013/10/27	2014/5/23						
153	- erection of formwork	209 days	2013/10/28	2014/5/24						
154	- reinforcement works	209 days	2013/10/29	2014/5/25						
155	- threaded rod	209 days	2013/10/29	2014/5/25						
156	- concrete	209 days	2013/10/30	2014/5/26						
157	- construction of pillar box (2 nos.)	30 days	2014/6/16	2014/7/15						
158	- backfilling works	30 days	2014/6/30	2014/7/29						
159	- steel frame erection	45 days	2014/6/26	2014/8/9						
160	- installation of mesh	30 days	2014/7/14	2014/8/12						
161	- installation of barbed wire	30 days	2014/7/14	2014/8/12						
162	- installation of gates	30 days	2014/7/14	2014/8/12						
163	- painting works	30 days	2014/4/1	2014/4/30						
164	- Drainage & U-channel works & catch pit	31 days	2014/7/14	2014/8/13						
165	- BS works (installation of cable tray)	75 days	2014/5/19	2014/8/1						
166	- BS works (installation of copper tape)	31 days	2014/6/23	2014/7/23						
167	- BS works (installation of copper tape)	31 days	2014/6/23	2014/7/23						
168	- construction of cable draw pit / duct / lamp pole footing	176 days	2014/2/6	2014/7/31						
169	- erection of lamp pole	31 days	2014/6/30	2014/7/30						
170	- flood-light wiring & miscellaneous works	31 days	2014/6/30	2014/7/30						
	- road surfacing	61 days	2014/6/3	2014/8/2						

專案: Programe for Frontier

日期: 19-5-2014

task

識別碼	任務名稱	工期	開始時間	完成時間	2012年8月			2012年9月		
					下旬	中旬	下旬	下旬	中旬	下旬
171	- power energizing	15 days	2014/7/29	2014/8/13						
172	- T&C inspection	15 days	2014/8/13	2014/8/27						
173										
174	Pending for GI works at fish pond									
175	*pending for provision of method statement of backfilling at fish pond									
176	*works for backfilling works									
177										
178	Section D (Shek Chung Au)	107 days	2012/7/25	2012/11/8						
179	-Submission of method statement on Tree survey works	37 days	2012/8/10	2012/9/15						
180	-Seek IEC's approval and carry out Baseline monitoring	40 days	2012/8/12	2012/9/20						
181	-Carry out initial tree survey	14 days	2012/9/3	2012/9/16						
182	-Removed extg UU by Others	53 days	2012/8/7	2012/9/28						
183	-Carry out the asbestos survey	3 days	2012/9/5	2012/9/7						
184	-Application for TTA approved by TD/RMO	30 days	2012/8/27	2012/9/25						
185	-Seek Police's approval	3 days	2012/9/26	2012/9/28						
186	-Seek EPD's noise approval	10 days	2012/9/26	2012/10/5						
187	- Preparation,submission & approval of method statement & demolition works	53 days	2012/7/25	2012/9/15						
188	-Preparation works for site demolition works	21 days	2012/9/17	2012/10/7						
189	-Removal of extg fixture & furnitures fittings	14 days	2012/9/24	2012/10/7						
190	-Demolition of extg structure & signage	32 days	2012/10/8	2012/11/8						
191										
192	Preparation works for Section E									
193	- Asbestos survey	31 days	2012/12/1	2012/12/31						
194	- Submission & approval of Demolition plan	70 days	2012/12/1	2013/2/8						
195	-Application for TTA	30 days	2013/9/16	2013/10/15						
196	Section E (Lok Ma Chau)	199 days	2013/7/31	2014/2/14						
197	-Demolition of extg structure/checkpoints	199 days	2013/7/31	2014/2/14						
198										
199	7. Anticipated completion date	1 day	2014/8/27	2014/8/27						

專案: Programme for Frontier

日期: 19-5-2014

task

Appendix E

ET Weekly Site Inspection Records



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	3/9/14	Inspected by	RE PLOUS	IEC	Contractor	ET
Time	14:40	Name	(S. Cheng / PLOUS)			Slak

Weather : Sunny (Fine) / cloudy / Drizzle / Rain / Storm / Hazy
 Condition : Calm / (Light) Breeze / Strong
 Temperature : 32°C
 Humidity : High / Moderate / (Low)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
Fugitive Dust Emission				
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 to ensure that the dusty materials do not leak from the vehicle.			✓	
Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.			✓	
The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardwoods.	✓			
The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.	✓			
All dusty materials should be sprayed with water prior to any loading, unloading or transfer.			✓	
Vehicle speed should be limited to 10 kph, 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.	✓			
Vehicle and equipment should be switched off while not in use.	✓			
All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
Open burning should be prohibited.	✓			

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Noise Impact				
<ul style="list-style-type: none"> The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted. The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process. Noisy equipment and noisy activities shall be located as far away from NSRs as is practical. Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of Powered mechanical equipment (PME) whenever practicable. PME should be covered or shielded by appropriate acoustic materials. Air compressors and hand held breakers should have noise labels. Compressors and generators should operate with door closed. With construction / demolition work undertaken at a distance of 60m or less to the NSRs, Level 1 – use of Quiet Plant and Moveable Noise barrier shall be adopted. Below mitigation measures should be included: <ul style="list-style-type: none"> Particular models of plants should be quieter than the 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. With demolition work undertaken at a distance of 12m or less to the NSRs, Level 2 – Alternative demolition method of existing boundary fence should be adopted. Below mitigation measures should be included: <ul style="list-style-type: none"> Use of welder is recommended to replace the use of hand-held drillers 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 used of hand-held breaker is minimal as only the surface level of the footing to be broken. 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. 	√			
Water Quality				
Mitigation Measures for General Construction Activities				
<ul style="list-style-type: none"> 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 	√			
	√			
	√			
	√			



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
<ul style="list-style-type: none"> ▪ 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. ▪ Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. Clear instructions showing what action to take in the event of an accidental should be provided. ▪ 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. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>			
Mitigation Measures for Concreting Works				
<ul style="list-style-type: none"> ▪ 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 neutralizing reagent to wastewater prior to discharge. ▪ For work sites of Section 3 in the proximity of Lin Ma Hang Stream SSSI, the concreting works should be temporarily isolated with proper method, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props. 	<p>✓</p>			<p>✓</p>
Mitigation Measures for Soil Excavation and Stockpiling				
<ul style="list-style-type: none"> ▪ Excavated soil with 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. 	<p>✓</p>			
Mitigation Measures for Site Depot				
<ul style="list-style-type: none"> ▪ All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds 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 by pass 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 be 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. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>		<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	
Mitigation Measures for Construction of Checkpoint at Shek Chung Au				
<ul style="list-style-type: none"> ▪ Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Shek Chung Au, to public sewer connected to government sewage treatment facilities. 	<p>✓</p>			<p>✓</p>

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
Environmental Checklist					
Waste Management					
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 stockpile area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels.			✓	
▪	During the wet season, stockpiling of excavated materials should be avoided to eliminate the risk of blocking drains.			✓	
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.	✓			
▪	C&D materials should be recycled as much as possible on-site.	✓			
▪	Proper segregation of waste on-site will increase the feasibility of certain components of the waste system 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 disposed of C&D material and solid at public filling facilities and landfills, and to control fly-tipping.	✓			
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.	✓			
▪	Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follows:	✓			
▪	Containers used for the storage of chemical wastes should:				
▪	Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	✓			
▪	Have a capacity of less than 450 litres unless the specifications have been approved by the EPD.	✓			
▪	Display a label in English and Chinese in accordance with instructions prescribed in Schedule 1 of the Regulations	✓			
▪	The storage area for chemical wastes should:				
▪	Be clearly labelled and used solely for the storage of chemical waste.	✓			
▪	Be enclosed on at least 3 sides.	✓			
▪	Have an impermeable floor and bounding, 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.	✓			
▪	Have adequate ventilation	✓			

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

<ul style="list-style-type: none"> Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary) 	✓			
<ul style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated 	✓			
<ul style="list-style-type: none"> Disposal of chemical waste should <ul style="list-style-type: none"> Be via a licensed waste collector 	✓			
<ul style="list-style-type: none"> 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 	✓			
<ul style="list-style-type: none"> To be re-user of the waste, under approval from the EPD 			✓	
General Refuse				
<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D and chemical waste. 	✓			
<ul style="list-style-type: none"> A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D and chemical waste, on a regular basis to minimise odour, pest and litter impacts. 	✓			
<ul style="list-style-type: none"> Burning of refuse on construction sites is prohibited by law. 	✓			
Landscaping and Visual				
Preservation of Existing Vegetation				
<ul style="list-style-type: none"> Trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs should be retained. 	✓			
<ul style="list-style-type: none"> 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 should be prohibited. 	✓			
<ul style="list-style-type: none"> Phase segmental root pruning for trees should 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. 	✓			
<ul style="list-style-type: none"> Pruning of the branches of existing trees identified for transplantation and retention should be based on the principle of crown thinning maintaining their form and amenity value. 	✓			
<ul style="list-style-type: none"> Existing vegetation should be watered particularly during periods of excavation when the water table beneath the existing vegetation is lowered. 				✓
<ul style="list-style-type: none"> The damaged vegetation should be rectified and repaired following the construction phase to its original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected. 				✓
<ul style="list-style-type: none"> All works affecting the trees identified for retention and transplantation should be monitored carefully. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring throughout the construction period. 	✓			
Preservation of Existing Topsoil				
<ul style="list-style-type: none"> Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-use. 				✓
<ul style="list-style-type: none"> The soil should 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 				✓
<ul style="list-style-type: none"> The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. 				✓
Permanent and Temporary Works Areas				
<ul style="list-style-type: none"> Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. 				✓
<ul style="list-style-type: none"> Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage. 				✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Mitigation Planting				
•	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.			√
•	Use of native plant species predominantly in the planting design for the buffer areas.			√
Good Site Practices				
•	The Environmental Permit should be displayed conspicuously on site.	√		
•	Construction noise permits should be posted at site entrance or available for site inspection.			√
■	Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.		√	Item 2
■	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√		
■	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	√		



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)




Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Stagnant water was observed near the entrance of New Road site.	Follow-up	The Contractor was reminded to drain down the stagnant water or add mosquito oil on the water to avoid breeding of mosquitoes.	140903_001 & 002	10/09/14
2	Waste chemical container was observed near the entrance of New Road site.	Follow-up	The Contractor was reminded to collect the waste chemical container after used.	140903_003	10/09/14

Remark

Checked by	Name	Title	Signature	Date
	C. L. Lau	ET Leader		03 September 2014

Photos

 <p>Photo 140903_001 -- Stagnant water was observed near the entrance of New Road site.</p>	 <p>Photo 140903_002 -- Stagnant water was observed near the entrance of New Road site.</p>	 <p>Photo 140903_003 -- Waste chemical container was observed at New Road site.</p>



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	10 / 9 / 14	Inspected by	RE SUI HAI PAN / SSI	IEC	Contractor	ET
Time	14:45	Name	<i>[Signature]</i>		<i>[Signature]</i>	<i>[Signature]</i>

Weather : Sunny / Fine / cloudy / Drizzle / Rain / Storm / Hazy
 Condition : Calm / Light / Breeze / Strong
 Wind : 3.2 °C
 Humidity : High / Moderate / Low

Environmental Checklist

Fugitive Dust Emission

Remark	Implementation Stages*		
	Yes	No	Not Obs. / N/A
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 to ensure that the dusty materials do not leak from the vehicle.	✓		Highly dusty photo - site 4
Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.			✓
The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	✓		
The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.	✓		
All dusty materials should be sprayed with water prior to any loading, unloading or transfer.	✓		
Vehicle speed should be limited to 10 kph 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.	✓		
Vehicle and equipment should be switched off while not in use.	✓		
All plant and equipment should be well maintained e.g. without black smoke emission.	✓		
Open burning should be prohibited.	✓		

Item 3



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
Noise Impact					
▪	The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted.	√			
▪	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	√			
▪	The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	√			
▪	Noisy equipment and noisy activities shall be located as far away from NSRs as is practical.	√			
▪	Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	√			
▪	Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	√			
▪	Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	√			
▪	Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of Powered mechanical equipment (PME) whenever practicable.			√	
▪	PME should be covered or shielded by appropriate acoustic materials.	√			
▪	Air compressors and hand held breakers should have noise labels.	√			
▪	Compressors and generators should operate with door closed.	√			
▪	With construction / demolition work undertaken at a distance of 60m or less to the NSRs, Level 1 – use of Quiet Plant and Moveable Noise barrier shall be adopted. Below mitigation measures should be included:	√			
▪	Particular models of plants should be quieter than the 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.	√			
▪	With demolition work undertaken at a distance of 12m or less to the NSRs, Level 2 – Alternative demolition method of existing boundary fence should be adopted. Below mitigation measures should be included:			√	
▪	Use of welder is recommended to replace the use of hand-held driller			√	
▪	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 used of hand-held breaker is minimal as only the surface level of the footing to be broken.			√	
▪	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.			√	
Water Quality					
Mitigation Measures for General Construction Activities					
▪	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	√			



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
▪ 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.	✓			
▪ Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. Clear instructions showing what action to take in the event of an accidental should be provided.	✓			
▪ 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.	✓			
Mitigation Measures for Concreting Works				
▪ 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 neutralizing reagent to wastewater prior to discharge.	✓			
▪ For work sites of Section 3 in the proximity of Lin Ma Hang Stream SSSI, the concreting works should be temporarily isolated with proper method, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props.				✓
Mitigation Measures for Soil Excavation and Stockpiling				
▪ Excavated soil with 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.	✓			
Mitigation Measures for 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 by pass 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 be 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.	✓			
Mitigation Measures for Construction of Checkpoint at Shek Chung Au				
▪ 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.				✓



Contract No. : SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

<ul style="list-style-type: none"> Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary) 	✓			
<ul style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated 	✓			
Disposal of chemical waste should				
<ul style="list-style-type: none"> Be via a licensed waste collector 	✓			
<ul style="list-style-type: none"> 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 	✓			
<ul style="list-style-type: none"> To be re-user of the waste, under approval from the EPD 				✓
General Refuse				
<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D and chemical waste. 	✓			
<ul style="list-style-type: none"> A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D and chemical waste, on a regular basis to minimise odour, pest and litter impacts. 	✓			
<ul style="list-style-type: none"> Burning of refuse on construction sites is prohibited by law. 	✓			
Landscape and Visual				
Preservation of Existing Vegetation				
<ul style="list-style-type: none"> Trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs should be retained. 	✓			
<ul style="list-style-type: none"> 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 should be prohibited. 	✓			
<ul style="list-style-type: none"> Phase segmental root pruning for trees should 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. 	✓			
<ul style="list-style-type: none"> Pruning of the branches of existing trees identified for transplanted and retention should be based on the principle of crown thinning maintaining their form and amenity value. 	✓			
<ul style="list-style-type: none"> Existing vegetation should be watered particularly during periods of excavation when the water table beneath the existing vegetation is lowered. 				✓
<ul style="list-style-type: none"> The damaged vegetation should be rectified and repaired following the construction phase to its original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected. 				✓
<ul style="list-style-type: none"> All works affecting the trees identified for retention and transplanted should be monitored carefully. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period. 	✓			
Preservation of Existing Topsoil				
<ul style="list-style-type: none"> Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-used. 				✓
<ul style="list-style-type: none"> The soil should 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 				✓
<ul style="list-style-type: none"> The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. 				✓
Permanent and Temporary Works Areas				
<ul style="list-style-type: none"> Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. 				✓
<ul style="list-style-type: none"> Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage. 				✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Mitigation Planting							
•	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.					√	
•	Use of native plant species predominantly in the planting design for the buffer areas.					√	
Good Site Practices							
•	The Environmental Permit should be displaced conspicuously on site.	√					
•	Construction noise permits should be posted at site entrance or available for site inspection.					√	
▪	Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.			√			Item 4
▪	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√					
▪	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	√					



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Follow-up action to item 1 on 03/09/2014, stagnant water observed near the entrance of New Road site was removed or added mosquito oil.	Closed		140910_001 & 002	---
2	Follow-up action to item 2 on 03/09/2014, waste chemical container observed near the entrance of New Road site was collected.	Closed		140910_003	---
3	Mud trail was observed near the entrance of New Road site.	Follow-up	The Contractor was reminded to clear the mud trail.	140910_004	17/09/14
4	General refuse was observed near the entrance of New Road site.	Follow-up	The Contractor was reminded to collect the general refuse regularly.	140910_005	17/09/14

Remark

Name	Title	Signature	Date
Checked by C. L. Lau	ET Leader		10 September 2014

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
 New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Photos



Photo 140910_001 – Stagnant water observed near the entrance of New Road site was removed.

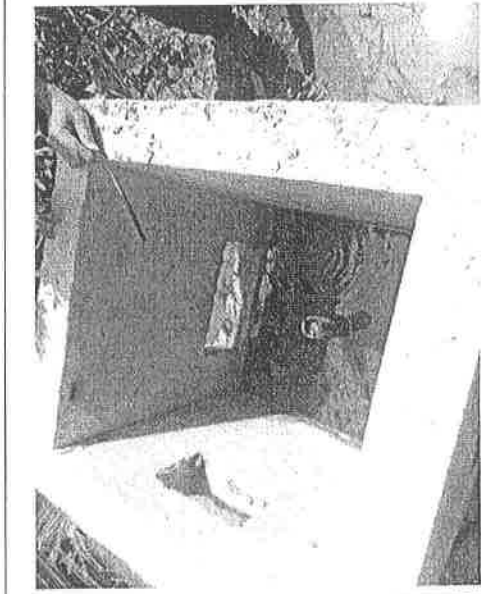


Photo 140910_002 – Stagnant water observed near the entrance of New Road site was added mosquito oil.



Photo 140910_003 – Waste chemical container observed at New Road site was collected.

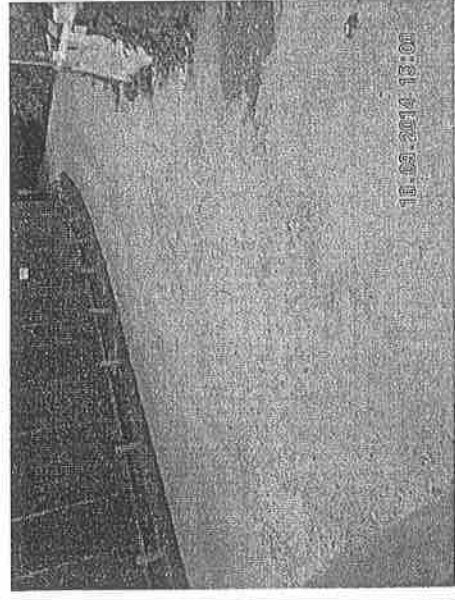


Photo 140910_004 – Mud trail was observed near the entrance of New Road site.



Photo 140910_005 - General refuse was observed near the entrance of New Road site.

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	17/9/14	Inspected by	BE PLOK	IEC	Contractor	ET
Time	14:00	Name	Z. Ching			Ma

Weather : Sunny / Fine / cloudy / Drizzle / Rain / Storm / Hazy
 Condition :
 Wind : Calm / Light / Breeze / Strong
 Temperature : 30°C
 Humidity : High / Moderate / Low

	Implementation Stages*			Remark
	Yes	No	Not Obs. / N/A	
Environmental Checklist				
Fugitive Dust Emission				
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 to ensure that the dusty materials do not leak from the vehicle.	✓			
Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.	✓			
The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	✓			
The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.	✓			
All dusty materials should be sprayed with water prior to any loading, unloading or transfer.	✓			
Vehicle speed should be limited to 10 kph 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.	✓			Item 3
Vehicle and equipment should be switched off while not in use.	✓			
All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
Open burning should be prohibited.	✓			



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist	Implementation Stages*				Remark
	Yes	No	Not Obs	N/A	
Noise Impact					
<ul style="list-style-type: none"> ▪ The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted. ▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. ▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process. ▪ Noisy equipment and noisy activities shall be located as far away from NSRs as is practical. ▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. ▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. ▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. ▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of Powered mechanical equipment (PME) whenever practicable. ▪ PME should be covered or shielded by appropriate acoustic materials. ▪ Air compressors and hand held breakers should have noise labels. ▪ Compressors and generators should operate with door closed. ▪ With construction / demolition work undertaken at a distance of 60m or less to the NSRs, Level 1 – use of Quiet Plant and Moveable Noise barrier shall be adopted. Below mitigation measures should be included: <ul style="list-style-type: none"> ▪ Particular models of plants should be quieter than the 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. ▪ With demolition work undertaken at a distance of 12m or less to the NSRs, Level 2 – Alternative demolition method of existing boundary fence should be adopted. Below mitigation measures should be included: <ul style="list-style-type: none"> ▪ Use of welder is recommended to replace the use of hand-held drillers ▪ 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 used of hand-held breaker is minimal as only the surface level of the footing to be broken. ▪ 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. 	✓				
Water Quality					
Mitigation Measures for General Construction Activities					
<ul style="list-style-type: none"> ▪ 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 	✓				Item 4

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
<ul style="list-style-type: none"> 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. Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. Clear instructions showing what action to take in the event of an accidental should be provided. 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. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>			
Mitigation Measures for Concreting Works				
<ul style="list-style-type: none"> 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 neutralizing reagent to wastewater prior to discharge. For work sites of Section 3 in the proximity of Lin Ma Hang Stream SSSI, the concreting works should be temporarily isolated with proper method, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props. 	<p>✓</p>			✓
Mitigation Measures for Soil Excavation and Stockpiling				
<ul style="list-style-type: none"> Excavated soil with 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. 	<p>✓</p>			
Mitigation Measures for Site Depot				
<ul style="list-style-type: none"> All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds 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 by pass 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 be 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. 			<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	
Mitigation Measures for Construction of Checkpoint at Shek Chung Au				
<ul style="list-style-type: none"> Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Shek Chung Au, to public sewer connected to government sewage treatment facilities. 	<p>✓</p>			✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Waste Management				
Site Clearance				
<ul style="list-style-type: none"> The topsoil and vegetation removed and excavated material may have to be temporarily stockpiled on site. Control measures should be taken at the stockpile area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels. During the wet season, stockpiling of excavated materials should be avoided to eliminate the risk of blocking drains. 			✓	
Construction and Demolition Materials				
<ul style="list-style-type: none"> 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. C&D materials should be recycled as much as possible on-site. Proper segregation of waste on-site will increase the feasibility of certain components of the waste system 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 disposed of C&D material and solid at public filling facilities and landfills, and to control fly-tipping. 	✓			
Chemical Waste				
<ul style="list-style-type: none"> 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. Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follows: Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 1 of the Regulations The storage area for chemical wastes should: <ul style="list-style-type: none"> Be clearly labelled and used solely for the storage of chemical waste. Be enclosed on at least 3 sides. Have an impermeable floor and bounding, 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. Have adequate ventilation 	✓			



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

<ul style="list-style-type: none"> Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary) 	✓			
<ul style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated 	✓			
Disposal of chemical waste should				
<ul style="list-style-type: none"> Be via a licensed waste collector 	✓			
<ul style="list-style-type: none"> 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 	✓			
<ul style="list-style-type: none"> To be re-user of the waste, under approval from the EPD 				✓
General Refuse				
<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D and chemical waste. 	✓			
<ul style="list-style-type: none"> A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D and chemical waste, on a regular basis to minimise odour, pest and litter impacts. 	✓			
<ul style="list-style-type: none"> Burning of refuse on construction sites is prohibited by law. 	✓			
Landscape and Visual				
Preservation of Existing Vegetation				
<ul style="list-style-type: none"> Trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs should be retained. 	✓			
<ul style="list-style-type: none"> 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 should be prohibited. 	✓			
<ul style="list-style-type: none"> Phase segmental root pruning for trees should 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. 	✓			
<ul style="list-style-type: none"> Pruning of the branches of existing trees identified for transplantation and retention should be based on the principle of crown thinning maintaining their form and amenity value. 	✓			
<ul style="list-style-type: none"> Existing vegetation should be watered particularly during periods of excavation when the water table beneath the existing vegetation is lowered. 				✓
<ul style="list-style-type: none"> The damaged vegetation should be rectified and repaired following the construction phase to its original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected. 				✓
<ul style="list-style-type: none"> All works affecting the trees identified for retention and transplantation should be monitored carefully. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period. 	✓			
Preservation of Existing Topsoil				
<ul style="list-style-type: none"> Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-used. 				✓
<ul style="list-style-type: none"> The soil should 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 				✓
<ul style="list-style-type: none"> The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. 				✓
Permanent and Temporary Works Areas				
<ul style="list-style-type: none"> Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. 				✓
<ul style="list-style-type: none"> Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage. 				✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Mitigation Planting					
•	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.			✓	
•	Use of native plant species predominantly in the planting design for the buffer areas.			✓	
Good Site Practices					
•	The Environmental Permit should be displaced conspicuously on site.	✓			
•	Construction noise permits should be posted at site entrance or available for site inspection.			✓	
■	Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	✓			
■	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	✓			
■	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	✓			



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

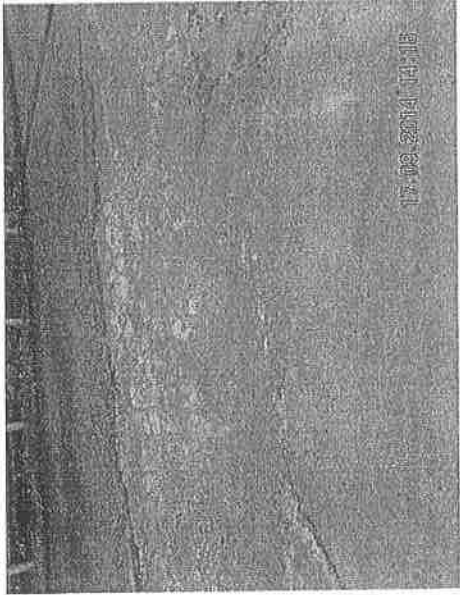

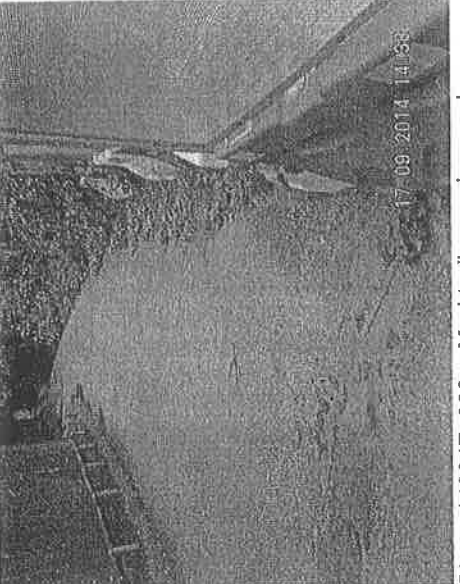
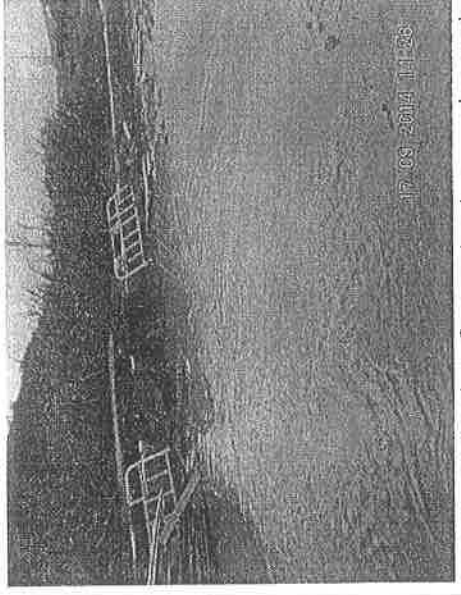
Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Follow-up action to item 3 on 10/09/2014, mud trail observed at the entrance of New Road site was cleared..	Closed	---	140917_001	---
2	Follow-up action to item 4 on 10/09/2014, general refuse observed near the entrance of New Road site was collected.	Closed	---	140917_002	---
3	Mud trail was observed near the entrance of New Road site.	Follow-up	The Contractor was reminded to clear the mud trail.	140917_003	24/09/14
4	Stagnant water was observed near the middle section of New Road site.	Follow-up	The Contractor was reminded to drain down the stagnant water.	140917_004	24/09/14

Remark

Name	Title	Signature	Date
Checked by C. L. Lau	ET Leader		17 September 2014

Photos

 <p>17-09-2014 14:18</p> <p>Photo 140917_001 – Mud trail observed at the entrance of New Road site was cleared.</p>	 <p>17-09-2014 14:15</p> <p>Photo 140917_002 – General refuse observed near the entrance of New Road site was collected.</p>	 <p>17-09-2014 14:38</p> <p>Photo 140917_003 – Mud trail was observed near the New Road site.</p>
 <p>17-09-2014 14:28</p> <p>Photo 140917_004 – Stagnant water was observed near the middle section of New Road site.</p>		

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	24/9/14	Inspected by	RE	IEC	Contractor	ET
Time	14:10	Name	/	/	<i>[Signature]</i>	<i>[Signature]</i> Male

Weather : Sunny / Fine / cloudy / Drizzle / Rain / Storm / Hazy
 Condition : Calm / Light / Breeze / Strong
 Wind : Temperature : 32°C
 Humidity : High / Moderate / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
Fugitive Dust Emission				
• 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 to ensure that the dusty materials do not leak from the vehicle.			✓	
• Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.				✓
• The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	✓			
• The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.	✓			
• All dusty materials should be sprayed with water prior to any loading, unloading or transfer.			✓	
• Vehicle speed should be limited to 10 kph 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.	✓			
• Vehicle and equipment should be switched off while not in use.	✓			
• All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
• Open burning should be prohibited.	✓			

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
Noise Impact					
▪	The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopt.	√			
▪	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	√			
▪	The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	√			
▪	Noisy equipment and noisy activities shall be located as far away from NSRs as is practical.	√			
▪	Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	√			
▪	Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	√			
▪	Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	√			
▪	Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of Powered mechanical equipment (PME) whenever practicable.			√	
▪	PME should be covered or shielded by appropriate acoustic materials.	√			
▪	Air compressors and hand held breakers should have noise labels.	√			
▪	Compressors and generators should operate with door closed.	√			
▪	With construction / demolition work undertaken at a distance of 60m or less to the NSRs, Level 1 – use of Quiet Plant and Moveable Noise barrier shall be adopted. Below mitigation measures should be included:	√			
▪	Particular models of plants should be quieter than the 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.	√			
▪	With demolition work undertaken at a distance of 12m or less to the NSRs, Level 2 – Alternative demolition method of existing boundary fence should be adopted. Below mitigation measures should be included:			√	
▪	Use of welder is recommended to replace the use of hand-held drill			√	
▪	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 used of hand-held breaker is minimal as only the surface level of the footing to be broken.			√	
▪	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.			√	
Water Quality					
Mitigation Measures for General Construction Activities					
▪	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	√			

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
▪	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.	√			
▪	Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. Clear instructions showing what action to take in the event of an accidental should be provided.	√			
▪	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.	√			
Mitigation Measures for Concreting Works					
▪	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 neutralizing reagent to wastewater prior to discharge.	√			
▪	For work sites of Section 3 in the proximity of Lin Ma Hang Stream SSSI, the concreting works should be temporarily isolated with proper method, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props.			√	
Mitigation Measures for Soil Excavation and Stockpiling					
▪	Excavated soil with 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.	√			
Mitigation Measures for 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 by pass 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 be 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.	√			
Mitigation Measures for Construction of Checkpoint at Shek Chung Au					
▪	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.				√

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Waste Management				
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 stockpile area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels.			✓	
▪ During the wet season, stockpiling of excavated materials should be avoided to eliminate the risk of blocking drains.			✓	
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.	✓			
▪ C&D materials should be recycled as much as possible on-site.	✓			
▪ Proper segregation of waste on-site will increase the feasibility of certain components of the waste system 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 disposed of C&D material and solid at public filling facilities and landfills, and to control fly-tipping.	✓			
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.	✓			
▪ Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follow.	✓			
▪ Containers used for the storage of chemical wastes should:				
▪ Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	✓			
▪ Have a capacity of less than 450 litres unless the specifications have been approved by the EPD.	✓			
▪ Display a label in English and Chinese in accordance with instructions prescribed in Schedule 1 of the Regulations	✓			
▪ The storage area for chemical wastes should:				
▪ Be clearly labelled and used solely for the storage of chemical waste.	✓			
▪ Be enclosed on at least 3 sides.	✓			
▪ Have an impermeable floor and bounding, 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.	✓			
▪ Have adequate ventilation.	✓			

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)


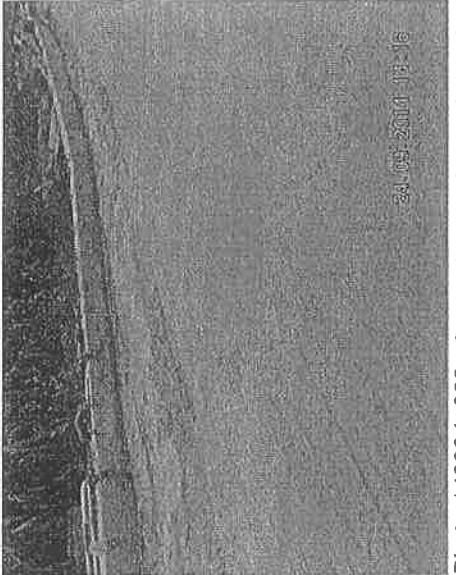
<ul style="list-style-type: none"> ▪ Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary) ▪ Be arranged so that incompatible materials are adequately separated 	✓			
<ul style="list-style-type: none"> ▪ Disposal of chemical waste should ▪ Be via a licensed waste collector ▪ 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 ▪ To be re-user of the waste, under approval from the EPD 	✓			✓
General Refuse				
<ul style="list-style-type: none"> ▪ General refuse should be stored in enclosed bins or compaction units separate from C&D and chemical waste. ▪ A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D and chemical waste, on a regular basis to minimise odour, pest and litter impacts. ▪ Burning of refuse on construction sites is prohibited by law. 	✓			
Landscape and Visual				
Preservation of Existing Vegetation				
<ul style="list-style-type: none"> • Trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs should be retained. • 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 should be prohibited. • Phase segmental root pruning for trees should 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. • Pruning of the branches of existing trees identified for transplantation and retention should be based on the principle of crown thinning maintaining their form and amenity value. • Existing vegetation should be watered particularly during periods of excavation when the water table beneath the existing vegetation is lowered. • The damaged vegetation should be rectified and repaired following the construction phase to its 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. • All works affecting the trees identified for retention and transplantation should be monitored carefully. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring throughout the construction period. 	✓			✓
Preservation of Existing Topsoil				
<ul style="list-style-type: none"> • Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-used. • The soil should 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 • The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. 				✓
Permanent and Temporary Works Areas				
<ul style="list-style-type: none"> • Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. • 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. 				✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Mitigation Planting					
•	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.			✓	
•	Use of native plant species predominantly in the planting design for the buffer areas.			✓	
Good Site Practices					
•	The Environmental Permit should be displaced conspicuously on site.	✓			
•	Construction noise permits should be posted at site entrance or available for site inspection.			✓	
▪	Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	✓			
▪	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	✓			
▪	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	✓			

Photos

 <p>24.09.2014 14:10</p> <p>Photo 140924_001 – Mud trail observed near the entrance of New Road site was cleared.</p>	 <p>24.09.2014 13:16</p> <p>Photo 140924_002 – Stagnant water observed near the middle section of New Road site was drained.</p>	

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	30/4/14	Inspected by	RE	IEC	Contractor	ET
Time	13:30	Name	/	/	<i>[Signature]</i>	<i>[Signature]</i>

Weather : Sunny / Fine / cloudy / Drizzle / Rain / Storm / Hazy Temperature : 32°C
 Wind : Calm / Light / Breeze / Strong Humidity : High / Moderate / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs. / N/A	
Fugitive Dust Emission				
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.	<input checked="" type="checkbox"/>			
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.	<input checked="" type="checkbox"/>			
Dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.	<input checked="" type="checkbox"/>			
Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.	<input checked="" type="checkbox"/>			
The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	<input checked="" type="checkbox"/>			
The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.	<input checked="" type="checkbox"/>			
All dusty materials should be sprayed with water prior to any loading, unloading or transfer.	<input checked="" type="checkbox"/>			
Vehicle speed should be limited to 10 kph except on completed access roads.	<input checked="" type="checkbox"/>			
Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	<input checked="" type="checkbox"/>			
Vehicle and equipment should be switched off while not in use.	<input checked="" type="checkbox"/>			
All plant and equipment should be well maintained e.g. without black smoke emission.	<input checked="" type="checkbox"/>			
Open burning should be prohibited.	<input checked="" type="checkbox"/>			



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
Noise Impact					
▪	The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted.	√			
▪	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	√			
▪	The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	√			
▪	Noisy equipment and noisy activities shall be located as far away from NSRs as is practical.	√			
▪	Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	√			
▪	Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	√			
▪	Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	√			
▪	Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of Powered mechanical equipment (PME) whenever practicable.			√	
▪	PME should be covered or shielded by appropriate acoustic materials.	√			
▪	Air compressors and hand held breakers should have noise labels.	√			
▪	Compressors and generators should operate with door closed.	√			
▪	With construction / demolition work undertaken at a distance of 60m or less to the NSRs, Level 1 – use of Quiet Plant and Moveable Noise barrier shall be adopted. Below mitigation measures should be included:	√			
▪	Particular models of plants should be quieter than the 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.	√			
▪	With demolition work undertaken at a distance of 12m or less to the NSRs, Level 2 – Alternative demolition method of existing boundary fence should be adopted. Below mitigation measures should be included:			√	
▪	Use of welder is recommended to replace the use of hand-held drill			√	
▪	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 used of hand-held breaker is minimal as only the surface level of the footing to be broken.			√	
▪	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.			√	
Water Quality					
Mitigation Measures for General Construction Activities					
▪	The site should be confined to avoid silt runoff to the site	√			
▪	No discharge of silt 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	√			

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
<ul style="list-style-type: none"> 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. Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. Clear instructions showing what action to take in the event of an accidental should be provided. 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. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>			
Mitigation Measures for Concreting Works				
<ul style="list-style-type: none"> 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 neutralizing reagent to wastewater prior to discharge. For work sites of Section 3 in the proximity of Lin Ma Hang Stream SSSI, the concreting works should be temporarily isolated with proper method, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props. 	<p>✓</p>			✓
Mitigation Measures for Soil Excavation and Stockpiling				
<ul style="list-style-type: none"> Excavated soil with 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. 	<p>✓</p>			
Mitigation Measures for Site Depot				
<ul style="list-style-type: none"> All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds 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 by pass 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 be 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. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>			
Mitigation Measures for Construction of Checkpoint at Shek Chung Au				
<ul style="list-style-type: none"> Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Shek Chung Au, to public sewer connected to government sewage treatment facilities. 	<p>✓</p>			✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Implementation Stages*		Remark			
			Yes	No	Not Obs
Environmental Checklist					
Waste Management					
Site Clearance					
<ul style="list-style-type: none"> ▪ The topsoil and vegetation removed and excavated material may have to be temporarily stockpiled on site. Control measures should be taken at the stockpile area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels. ▪ During the wet season, stockpiling of excavated materials should be avoided to eliminate the risk of blocking drains. 	✓			✓	
Construction and Demolition Materials					
<ul style="list-style-type: none"> ▪ 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. ▪ C&D materials should be recycled as much as possible on-site. ▪ Proper segregation of waste on-site will increase the feasibility of certain components of the waste system 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 disposed of C&D material and solid at public filling facilities and landfills, and to control fly-tipping. 	✓				
Chemical Waste					
<ul style="list-style-type: none"> ▪ 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. ▪ Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follows: ▪ Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> ▪ Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed. ▪ Have a capacity of less than 450 litres unless the specifications have been approved by the EPD. ▪ Display a label in English and Chinese in accordance with instructions prescribed in Schedule 1 of the Regulations ▪ The storage area for chemical wastes should: <ul style="list-style-type: none"> ▪ Be clearly labelled and used solely for the storage of chemical waste. ▪ Be enclosed on at least 3 sides. ▪ Have an impermeable floor and bounding, 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. ▪ Have adequate ventilation 	✓				



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

<ul style="list-style-type: none"> Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary) 	✓		
<ul style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated 	✓		
<ul style="list-style-type: none"> Disposal of chemical waste should 			
<ul style="list-style-type: none"> Be via a licensed waste collector 	✓		
<ul style="list-style-type: none"> 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 	✓		
<ul style="list-style-type: none"> To be re-user of the waste, under approval from the EPD 			✓
General Refuse			
<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D and chemical waste. 	✓		
<ul style="list-style-type: none"> A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D and chemical waste, on a regular basis to minimise odour, pest and litter impacts. 	✓		
<ul style="list-style-type: none"> Burning of refuse on construction sites is prohibited by law. 	✓		
Landscaping and Visual			
Preservation of Existing Vegetation			
<ul style="list-style-type: none"> Trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs should be retained. 	✓		
<ul style="list-style-type: none"> 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 should be prohibited. 	✓		
<ul style="list-style-type: none"> Phase segmental root pruning for trees should 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. 	✓		
<ul style="list-style-type: none"> Pruning of the branches of existing trees identified for transplanted and retention should be based on the principle of crown thinning maintaining their form and amenity value. 	✓		
<ul style="list-style-type: none"> Existing vegetation should be watered particularly during periods of excavation when the water table beneath the existing vegetation is lowered. 			✓
<ul style="list-style-type: none"> The damaged vegetation should be rectified and repaired following the construction phase to its original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected. 			✓
<ul style="list-style-type: none"> All works affecting the trees identified for retention and transplanted should be monitored carefully. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period. 	✓		
Preservation of Existing Topsoil			
<ul style="list-style-type: none"> Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-used. 			✓
<ul style="list-style-type: none"> The soil should 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 			✓
<ul style="list-style-type: none"> The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. 			✓
Permanent and Temporary Works Areas			
<ul style="list-style-type: none"> Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. 			✓
<ul style="list-style-type: none"> Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage. 			✓



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Mitigation Planting				
•	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.			√
•	Use of native plant species predominantly in the planting design for the buffer areas.			√
Good Site Practices				
•	The Environmental Permit should be displaced conspicuously on site.	√		
•	Construction noise permits should be posted at site entrance or available for site inspection.			√
▪	Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	√		
▪	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√		
▪	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	√		



Photos

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Appendix F

Implementation Schedule of Mitigation Measures

Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Environmental Mitigation Implementation Schedule

	Location	Implementation Status				
		Implemented	Not implemented	Not Observed	Not Applicable	
Environmental Protection Measures						
Air Quality						
<ul style="list-style-type: none"> ▪ 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 to ensure that the dusty materials do not leak from the vehicle. ▪ Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit. ▪ The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore. ▪ The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials. ▪ All dusty materials should be sprayed with water prior to any loading, unloading or transfer. ▪ Vehicle speed should be limited to 10 kph 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. ▪ Vehicle and equipment should be switched off while not in use. ▪ All plant and equipment should be well maintained e.g. without black smoke emission. ▪ Open burning should be prohibited. 						
Noise Impact						
<ul style="list-style-type: none"> ▪ The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted. ▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. ▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process. ▪ Noisy equipment and noisy activities shall be located as far away from NSRs as is practical. ▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. ▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. ▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. ▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of Powered mechanical equipment (PME) whenever practicable. ▪ PME should be covered or shielded by appropriate acoustic materials. ▪ Air compressors and hand held breakers should have noise labels. ▪ Compressors and generators should operate with door closed. 						

	Location	Implementation Status			
		Implemented	Not implemented	Not Observed	Not Applicable
Environmental Protection Measures					
Water Quality					
Mitigation Measures for Site Depot					
<ul style="list-style-type: none"> ▪ All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds 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 by pass 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 be 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 chemicals. 	All areas			√	
	All areas			√	
	All areas			√	
	All areas			√	
	All areas	√			
	All areas	√			
Mitigation Measures for Construction of Checkpoint at Shek Chung Au					
<ul style="list-style-type: none"> ▪ Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Shek Chung Au, to public sewer connected to government sewage treatment facilities. 	All areas				√
Waste Management					
Site Clearance					
<ul style="list-style-type: none"> ▪ The topsoil and vegetation removed and excavated material may have to be temporarily stockpiled on site. Control measures should be taken at the stockpile area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels. ▪ During the wet season, stockpiling of excavated materials should be avoided to eliminate the risk of blocking drains. 	All areas				√
	All areas				√
Construction and Demolition Materials					
<ul style="list-style-type: none"> ▪ 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. ▪ C&D materials should be recycled as much as possible on-site. ▪ Proper segregation of waste on-site will increase the feasibility of certain components of the waste system 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 disposed of C&D material and solid at public filling facilities and landfills, and to control fly-tipping. 	All areas	√			
	All areas	√			
	All areas	√			
	All areas	√			
	All areas	√			
	All areas	√			
Chemical Waste					
<ul style="list-style-type: none"> ▪ 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. ▪ Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in according with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follow: ▪ Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> ▪ Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed. ▪ Have a capacity of less than 450 litres unless the specifications have been approved by the EPD. ▪ Display a label in English and Chinese in accordance with instructions prescribed in Schedule 1 of the Regulations 	All areas	√			
	All areas	√			
	All areas	√			
	All areas	√			

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Not implemented	Not Observed	Not Applicable
Landscape and Visual					
Preservation of Existing Topsoil					
<ul style="list-style-type: none"> ▪ Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-used. ▪ The soil should 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 ▪ The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. 	All areas				√
Permanent and Temporary Works Areas					
<ul style="list-style-type: none"> ▪ Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase. ▪ 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. 	All areas				√
Mitigation Planting					
<ul style="list-style-type: none"> ▪ Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase. ▪ Use of native plant species predominantly in the planting design for the buffer areas. 	All areas				√
Good Site Practices					
<ul style="list-style-type: none"> ▪ The Environmental Permit should be displaced conspicuously on site. ▪ Construction noise permits should be posted at site entrance or available for site inspection. ▪ Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment. ▪ Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. ▪ Proper storage and site practices to minimise the potential for damage or contamination of construction materials. 	All areas	√			
	All areas				
	All areas				
	All areas	√			
	All areas		√		
	All areas	√			
	All areas	√			

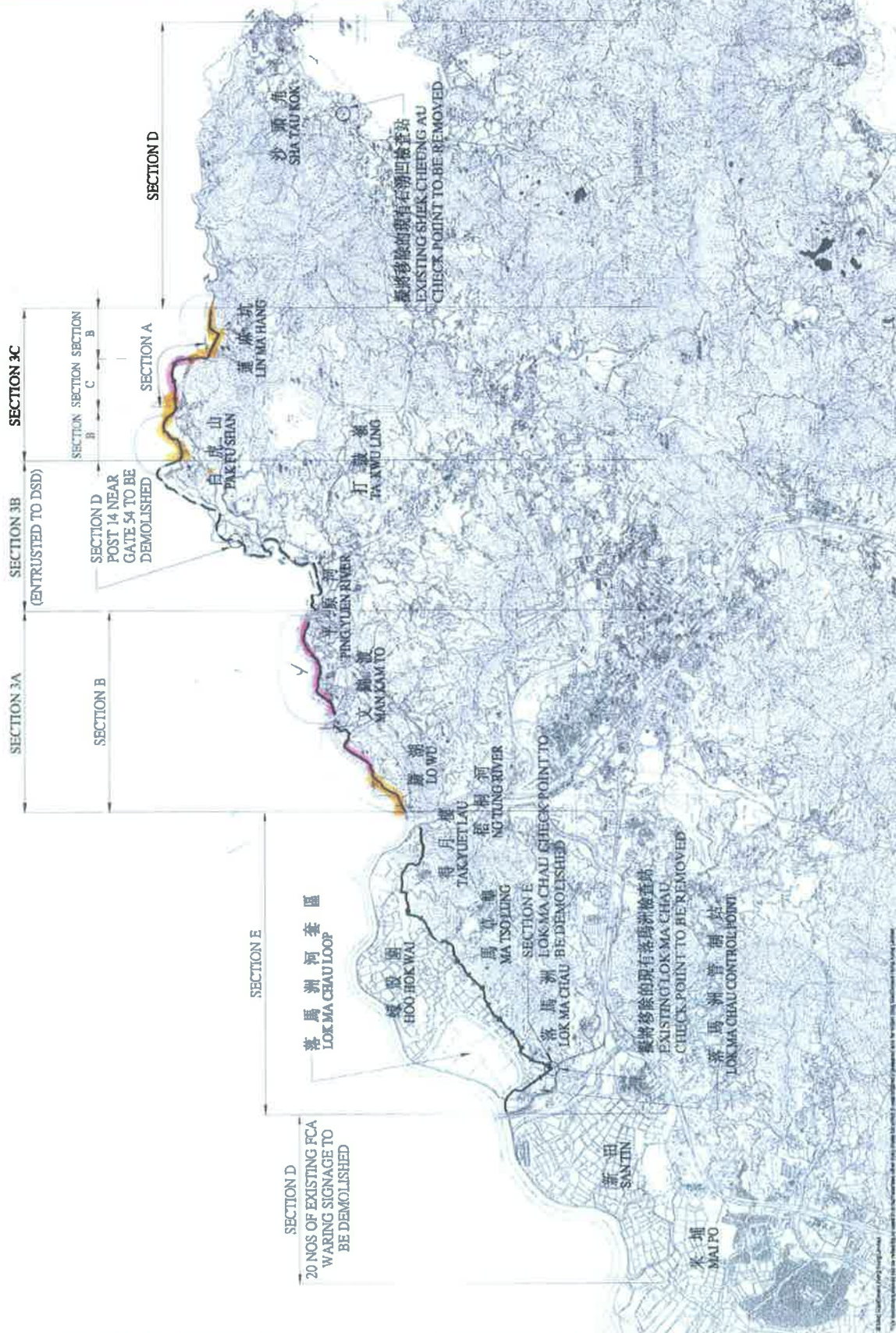


Appendix G

Site General Layout plan

SCOPE OF WORKS:

- SECTION A : PREPARATORY WORKS TO THE NEW BOUNDARY PATROL ROAD INCLUDING ARCHAEOLOGICAL SURVEY AND SOFT LANDSCAPE WORKS.
- SECTION B : CONSTRUCTION OF THE BOUNDARY FENCES FROM NG TUNG RIVER TO PING YUEN RIVER AND FROM PAK FU SHAN TO LIN MA HANG, OTHER THAN THAT ALONG THE NEW BOUNDARY PATROL ROAD, INCLUDING ASSOCIATED DEMOLISHED WORKS AS DESCRIBED UNDER THE CONTRACT TO FACILITATE THE CONSTRUCTION OF NEW BOUNDARY FENCES.
- SECTION C : CONSTRUCTION OF BOUNDARY FENCES, ROADWORK AND LANDSCAPING WORK ALONG NEW BOUNDARY PATROL ROAD INCLUDING ASSOCIATED DEMOLITION WORKS AS DESCRIBED UNDER THE CONTRACT TO FACILITATE THE CONSTRUCTION OF NEW BOUNDARY FENCES
- SECTION D : DEMOLITION WORKS AT SHEK CHUNG AU, NEAR GATE 54 AND WARNING SIGNS AT MAI PO TO LOK MA CHAU CONTROL SECTION
- SECTION E : DEMOLITION WORKS FROM LOK MA CHAU CONTROL POINT TO NG TUNG RIVER SECTION



LEGEND:

- PROPOSED NEW SECTIONS OF PRIMARY BOUNDARY FENCE OF EXISTING BOUNDARY PATROL ROAD
- PROPOSED NEW SECTIONS OF BOUNDARY PATROL ROAD WITH PRIMARY AND SECONDARY BOUNDARY FENCES
- EXISTING BOUNDARY PATROL ROAD TO BE DEMOLISHED
- PROPOSED RELOCATION OF BOUNDARY PATROL ROAD AND PRIMARY BOUNDARY FENCE AND PROPOSED SECONDARY BOUNDARY FENCE ENTIRELY TO BE DEMOLISHED FOR THEIR CONSTRUCTION UNDER ANOTHER PROJECT NAMELY "RELOCATION OF SHEK/HEI RIVER BRIDGE 4 - AUXILIARY ROAD BRIDGE"

No.	Date	Description	Initial
1	04/12/11	Issue for Tender	JKL
2	04/12/11	Final	JKL

Client/Project No. 216727



Name	Designated	Date
DC	09-08-11	09-08-11
LYK	09-08-11	09-08-11
LW	09-08-11	09-08-11
TT	09-08-11	09-08-11

Contract No. SS Y307
 File No. ASD/201/7906
 Project No. 1268
 Contract Agreement No. 9SN005

CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTIONS OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL ROAD (PHASE 2)

Drawing Title: GENERAL LAYOUT PLAN
 Drawing No. FIGURE 1
 Scale: N.T.S.
 Date: 01/12/12
 The Architect of the Contract: [Signature]





Appendix H

Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table for 2014 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated (in '000m ³)	Hard Rocks and Large Broken Concrete (in '000m ³)	Reused in the Contract (in '000m ³)	Reused in other Projects (in '000m ³)	Disposed as Public Fill (in '000m ³)	Imported Fill (in '000m ³)	Metals (in '000 kg)	Paper/ cardboard packaging (in '000kg)	Plastics (see Note 3) (in '000kg)	Chemical Waste (in '000kg)	Others, e.g. general refuse (in '000m ³)
Jan	0	0	0	0	0	0	0	0.01	0	0	0
Feb	0	0	0	0	0	0.052	0	0.02	0	0	0
Mar	0	0	0	0	0	0.884	0	0	0	0.1	0
Apr	0	0	0	0	0	0.906	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	1.842	0	0.03	0	0.1	0
Oct											
Nov											
Dec											
Total											

Notes: The performance targets are given in PS Clause 6(14).

The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site. Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Appendix I

Monitoring Schedule for this Reporting Month and the Coming Month



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Schedule for Noise Monitoring (NM) and Weekly Site Inspection (Weekly SI)

September 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 NM Weekly SI	4	5	6
7	8	9	10 NM Weekly SI	11	12	13
14	15	16	17 NM Weekly SI	18	19	20
21	22	23	24 NM Weekly SI	25	26	27
28	29	30 NM Weekly SI				



Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

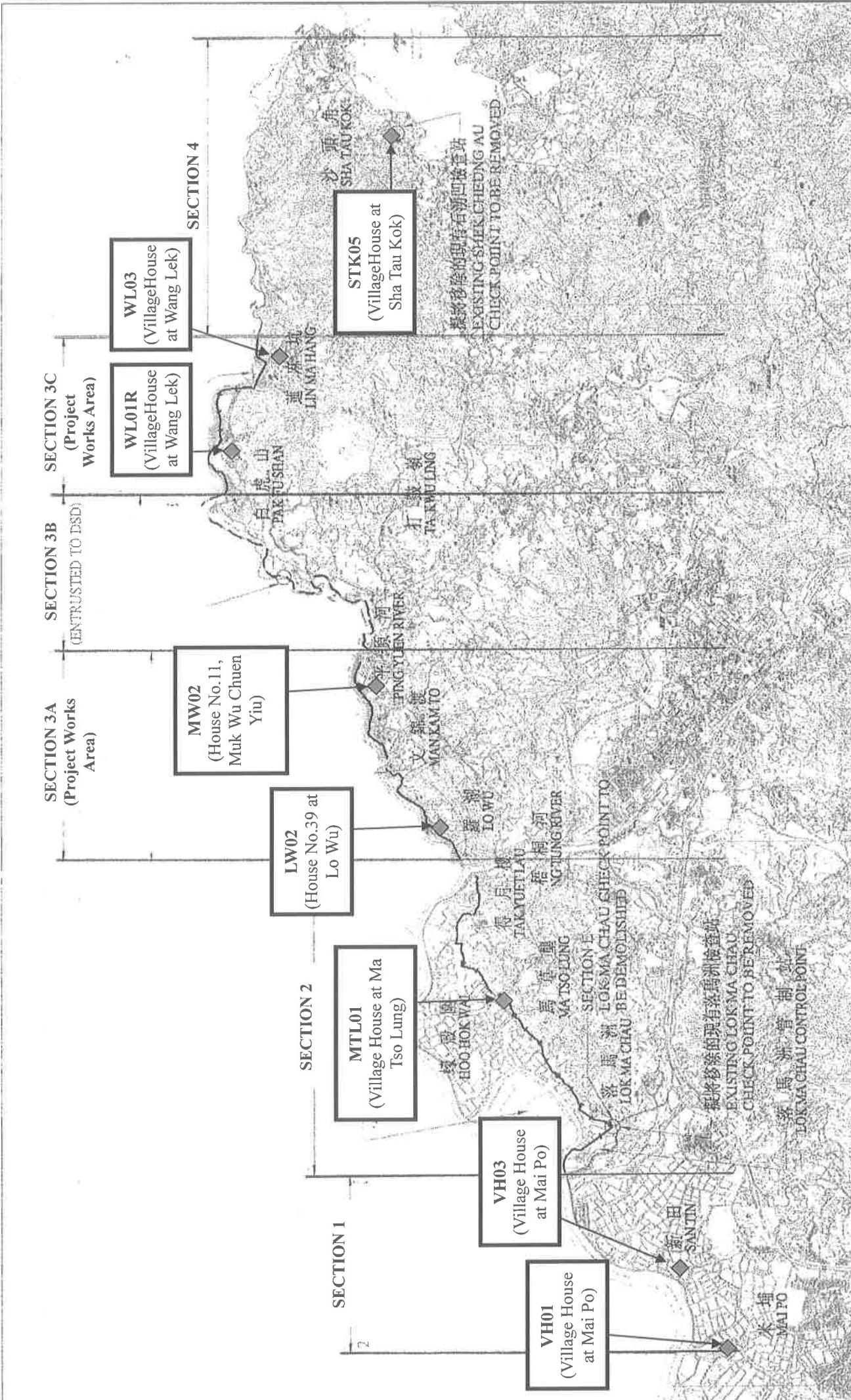
Schedule for Noise Monitoring (NM) and Weekly Site Inspection (Weekly SI)

October 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30 NM Weekly SI	1	2	3	4
5	6	7	8 NM Weekly SI	9	10	11
12	13	14	15 NM Weekly SI	16	17	18
19	20	21	22 NM Weekly SI	23	24	25
26	27	28	29 NM Weekly SI	30	31	



Figure



Title: Locations of Noise Monitoring Stations

ETS-Testconsult Ltd

Project: Contract No. SS Y307 – Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

Figure 1