



東業德勤測試顧問有限公司

ETS-TESTCONSULT LIMITED

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

Tel : 2695 8318

E-mail : etl@ets-testconsult.com

Fax : 2695 3944

Web site : www.ets-testconsult.com

TEST REPORT

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.10**

(NOVEMBER 2013)

Prepared by:

LAW, Sau Yee
Senior Environmental Officer

Checked by:

LAU, Chi Leung
Environmental Team Leader

Issued Date: 05 December 2013

Report No.: ENA32175

Ref.: ASDBFBPREM00_0_0531L.13

6 December 2013

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. 10 for November 2013 (01 – 30 November 2013)**

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report No. 10 for November 2013 by E-mail on 5 December 2013.

We are pleased to inform you that we have no adverse comments on the captioned report received on 5 December 2013. 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. Peter Tsang	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.10 was prepared by ETS-Testconsult Ltd (ET) for the Project. This report documented the findings of EM&A Works conducted during the Project from November 2013.

Site Activities

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

- Foundation;
- Concrete works;
- Metal works; and
- Backfilling works.

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): 4 Occasions at LW02, MW02, WL01(R) and WL03
- Weekly-site inspection: 4 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	06, 13, 20 and 27 November 2013
Monthly Joint site inspection	20 November 2013

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 November 2013.

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 Man 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:

- Demolition works

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

4 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	06/11/13	64.5	X	60.7	X	55.0	X	52.1	X
	13/11/13	56.2	X	47.1	X	48.8	X	46.1	X
	20/11/13	56.0	X	55.6	X	54.0	X	50.0	X
	27/11/13	55.3	X	45.9	X	47.3	X	44.1	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 06, 13, 20 and 27 November 2013 by ET. Monthly joint site inspection at 20 November 2013 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 October 2013, 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
06 November 2013	Oil drums without drip tray was observed in Pak Fu Shan site. (New item)	The Contractor was reminded to provide drip tray for the oil drums to avoid leakage of oil.	---	Follow-up
	Rubbish was observed near fence no.137 in Man Kam Road site. (New item)	The Contractor was reminded to collect the rubbish regularly to keep good site practices.	---	Follow-up
	Stockpile without cover and mud inside the drainage were observed near fence no.141 in Man Kam Road site. (New item)	The Contractor was reminded to cover the stockpile and clean the drainage regularly.	---	Follow-up
13 November 2013	Oil drums without drip tray was observed in Pak Fu Shan site. (Pervious item)	The Contractor was reminded to provide drip tray for the oil drums to avoid leakage of oil.	---	Follow-up
	Rubbish was observed near fence no.137 in Man Kam Road site. (Pervious item)	The Contractor was reminded to collect the rubbish regularly to keep good site practices.	---	Follow-up
	Stockpile without cover and mud inside the drainage were observed near fence no.141 in Man Kam Road site. (Pervious item)	The Contractor was reminded to cover the stockpile and clean the drainage regularly.	---	Follow-up
20 November 2013	Oil drums without drip tray was observed in Pak Fu Shan site. (Pervious item)	The Contractor was reminded to provide drip tray for the oil drums to avoid leakage of oil.	---	Follow-up
	Rubbish was observed near fence no.137 in Man Kam Road site. (Pervious item)	The Contractor was reminded to collect the rubbish regularly to keep good site practices.	Rubbish observed near the fence and inside the drainage in Man Kam Road site was improved	Closed
	Stockpile without cover and mud inside the drainage were observed near fence no.141 in Man Kam Road site. (Pervious item)	The Contractor was reminded to cover the stockpile and clean the drainage regularly.	Stockpile without cover and mud inside the drainage observed near fence no.141 in Man Kam Road site were improved.	Closed
	Mud trail on the access road was observed near Fence No. 203 in Pak Fu Shan site. (New item)	The Contractor was reminded to spray with water and clean the road regularly.	---	Follow-up
	Mud trail on the access road was observed near Fence No. 114 and 115 in Lo Wu site. (New item)	The Contractor was reminded to spray with water and clean the road regularly.	---	Follow-up



Date	Key Findings	Action(s) Taken recommended by ET	Action(s) Taken by the Contractor during the site audit	Rectification Status by ET
27 November 2013	Oil drums without drip tray was observed in Pak Fu Shan site. (Pervious item)	The Contractor was reminded to provide drip tray for the oil drums to avoid leakage of oil.	oil drum without drip tray observed in Pak Fu Shan site was improved.	Closed
	Mud trail on the access road was observed near Fence No. 203 in Pak Fu Shan site. (Previous item)	The Contractor was reminded to spray with water and clean the road regularly.	mud trail on the access road observed near Fence No. 203 in Pak Fu Shan site was sprayed with water and cleaned.	Closed
	Mud trail on the access road was observed near Fence No. 114 and 115 in Lo Wu site. (Previous item)	The Contractor was reminded to spray with water and clean the road regularly.	mud trail on the access road observed near Fence No. 114 and 115 in Lo Wu site was cleaned.	Closed

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	0
C&D Waste	Metals (in '000kg)	0	0.02
	Paper/Cardboard Packaging (in '000kg)	0.005	0.126
	Plastics (in '000kg)	0	0
	Chemical Waste (in '000kg)	0	0
	Other, e.g. General Refuse (in '000m ³)	0	0.7865

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 reporting 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	
November 2013	Overall Cumulative from February 2013	November 2013	Overall Cumulative from February 2013	November 2013	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:

- *Demolition works*

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

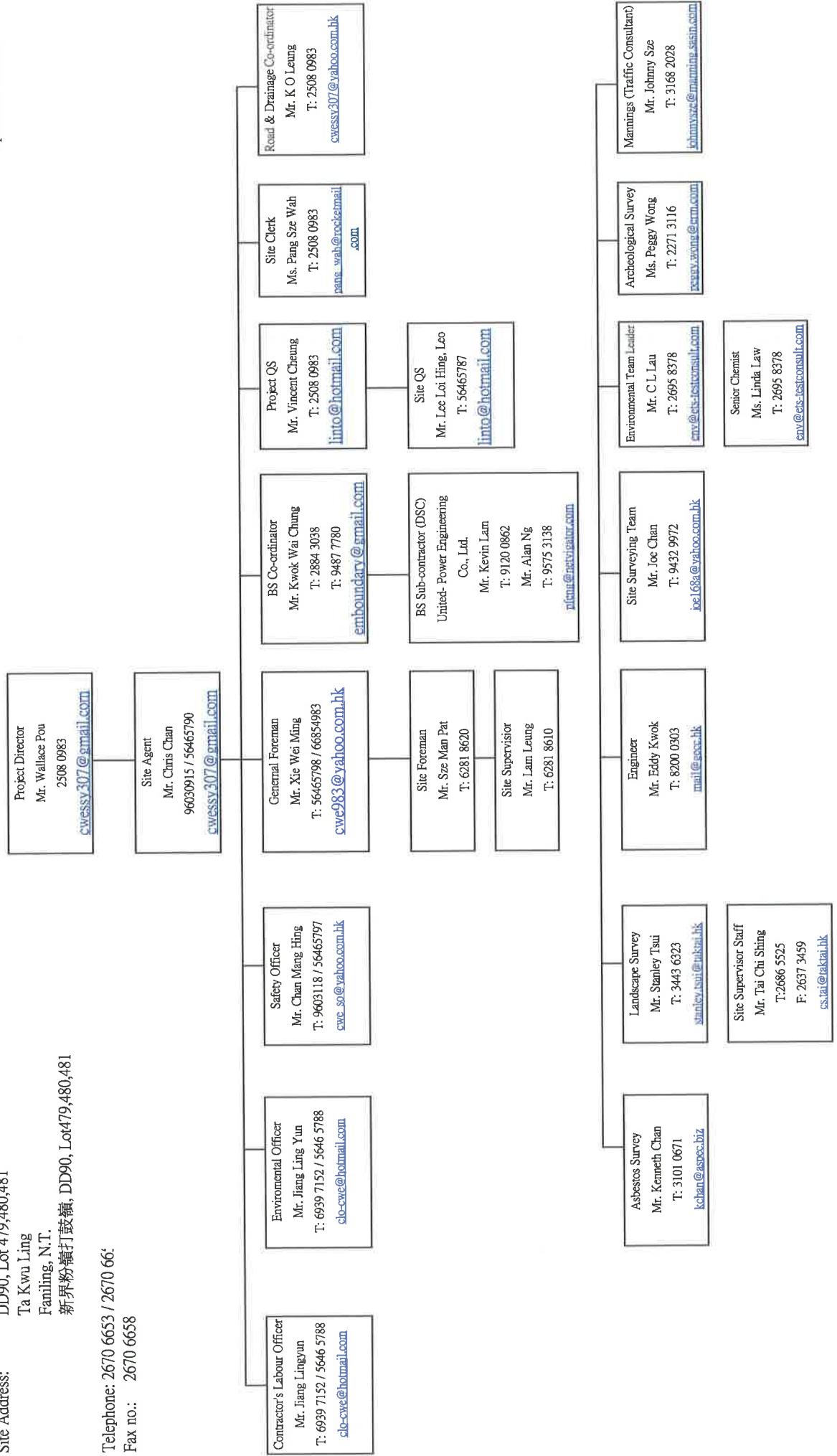
CHINA INTERNATIONAL WATER & ELECTRIC CORP.

Site Address: DD90, Lot 479,480,481
 Ta Kwu Ling
 Fanling, N.T.
 新界粉嶺打鼓嶺, DD90, Lot479,480,481

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

Site Organization Chart for Project SS Y307

Rev.: 4
 Updated on 14-2-2013





Appendix B1

Calibration Certificates for Impact Noise Monitoring Equipment



Calibration Certificate

Certificate No. **27389**

Page 1 of 3 Pages

Customer : ETS-Testconsult Limited

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

Order No. : Q22892

Date of receipt : 31-Oct-12

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 : 16-Nov-12

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type1 and IEC 804 Type1 specifications after adjustment.

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	C101623	SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & 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 :


Stephen Chu

Approved by :


Dorothy Cheuk

Date: 16-Nov-12

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. 27389

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
30 – 120	L _A	Fast	94.0	93.9
		Slow		93.9
	L _C	Fast		94.0
	L _p	Fast		94.0
30 – 120	L _A	Fast	114.0	113.9
		Slow		113.9
	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	113.9	0.0	± 0.7 dB
130	104.0	103.9	0.0	
120	94.0	93.9 (Ref.)	--	
110	84.0	84.0	+ 0.1	
100	74.0	74.0	+ 0.1	
90	64.0	64.0	+ 0.1	
80	54.0	54.1	+ 0.2	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 27389

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	+ 0.1	± 0.4 dB
	94.0	93.9 (Ref.)	--	
	95.0	94.9	- 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	- 39.7	- 39.4 dB, ± 1.5 dB
63 Hz	- 26.3	- 26.2 dB, ± 1.5 dB
125 Hz	- 16.3	- 16.1 dB, ± 1 dB
250 Hz	- 8.8	- 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	- 1.2	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	- 6.7	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

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	40.0	± 0.5 dB
1/10 ²	40.0	40.0	
1/10 ³	40.0	40.0	± 1.0 dB
1/10 ⁴	40.0	39.9	

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 : 1007 hPa
 4. The UUT's internal calibration was performed 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.

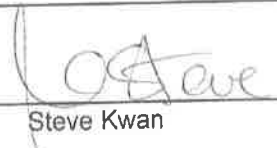
The test equipment used for calibration are traceable to International System of Units (SI).

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

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		
06/11/13	Cloudy	10:50	11:20	64.5	65.9	63.0	75.0	60.4
13/11/13	Cloudy	9:35	10:05	56.2	57.8	52.3	75.0	60.4
20/11/13	Cloudy	10:30	11:00	56.0	58.4	54.6	75.0	60.4
27/11/13	Cloudy	13:00	13:30	55.3	57.6	53.6	75.0	60.4

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		
06/11/13	Cloudy	10:00	10:30	60.7	61.8	59.3	75.0	51.5
13/11/13	Cloudy	10:15	10:45	47.1	48.8	42.2	75.0	51.5
20/11/13	Cloudy	9:40	10:10	55.6	57.9	48.5	75.0	51.5
27/11/13	Cloudy	13:40	14:10	45.9	47.7	42.2	75.0	51.5

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		
06/11/13	Cloudy	13:20	13:50	55.0	56.6	52.7	75.0	53.3
13/11/13	Cloudy	10:55	11:25	48.8	49.5	44.7	75.0	53.3
20/11/13	Cloudy	14:05	14:35	54.0	57.3	45.1	75.0	53.3
27/11/13	Cloudy	14:40	15:10	47.3	49.8	43.5	75.0	53.3

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		
06/11/13	Cloudy	15:45	16:15	52.1	53.7	50.8	75.0	56.3
13/11/13	Cloudy	11:30	12:00	46.1	47.7	40.4	75.0	56.3
20/11/13	Cloudy	14:45	15:15	50.0	51.3	39.9	75.0	56.3
27/11/13	Cloudy	15:15	15:45	44.1	46.8	41.9	75.0	56.3

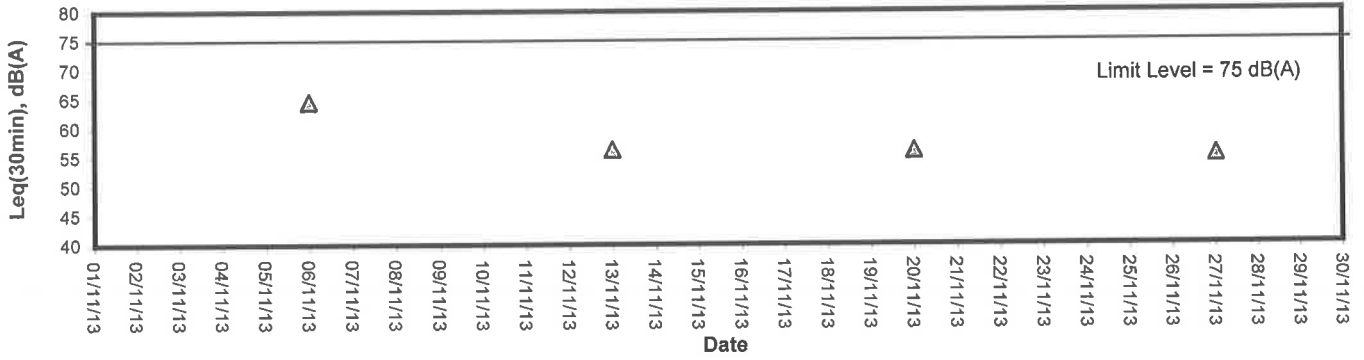
Appendix B3

Graphical Plots of Impact Noise Monitoring Data

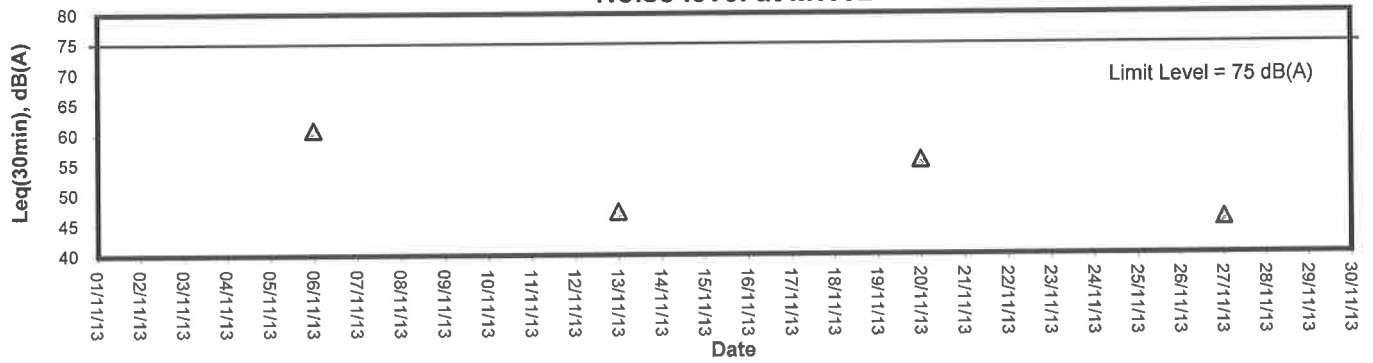


Noise Monitoring (Day-time)

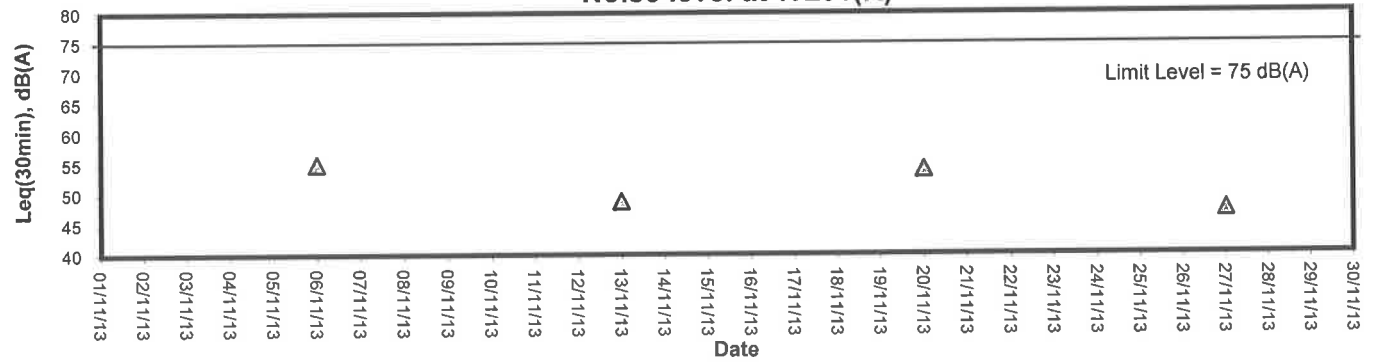
Noise level at LW02



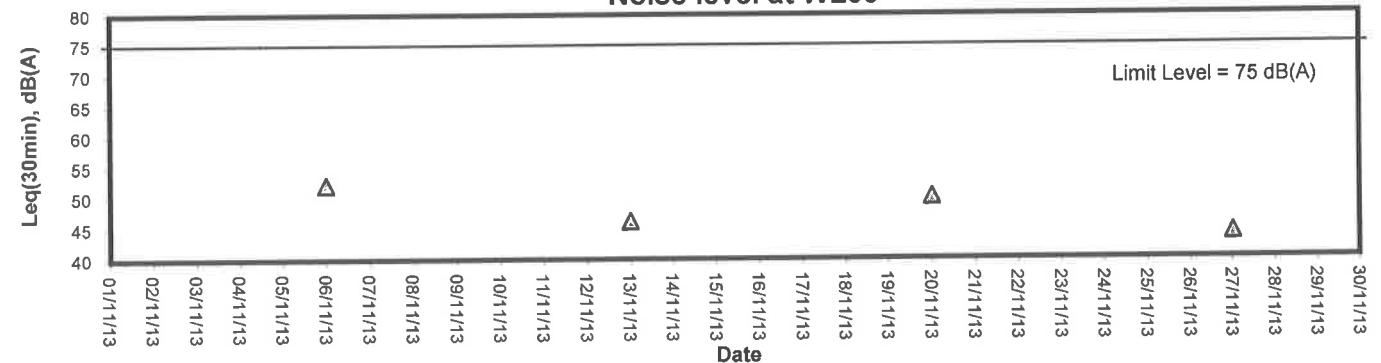
Noise level at MW02



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.



東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

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	682 工作日	2012/7/25	2014/6/6						
2	General Site Office setup	60 工作日	2012/7/25	2012/9/22						
3	General Site mobilization	30 工作日	2012/9/24	2012/10/23						
4	Apply for working permit	584 工作日	2012/7/25	2014/2/28						
5	- car, site personnel, worker for preparation & surveying works	37 工作日	2012/7/25	2012/8/30						
6	- car, site personnel, worker for construction works	584 工作日	2012/7/25	2014/2/28						
7	General Submission works	682 工作日	2012/7/25	2014/6/6						
8	Initial site survey	50 工作日	2012/10/8	2012/11/26						
9	Submission to EPD required under further Environment Permit:	1 工作日	2012/7/30	2012/7/30						
10	Submission of temporary traffic arrangement	560 工作日	2012/9/10	2014/3/23						
11	1st submission of site aspect schedule	1 工作日	2012/7/30	2012/7/30						
12	1st submission of safety plan	1 工作日	2012/7/30	2012/7/30						
13	1st Submission of Environmental Management Plan:	1 工作日	2012/7/30	2012/7/30						
14	Submission of waste management plan for trip tick	1 工作日	2012/7/30	2012/7/30						
15	Submission of Smart Card System(subject to site possession)	90 工作日	2012/7/30	2012/10/27						
16	Submission of method statement for construction works	180 工作日	2012/8/11	2013/2/6						
17	Submission of tree risk assessment: including initial tree survey report	110 工作日	2012/8/13	2012/11/30						
18	Submission of tree planting stock	122 工作日	2013/9/1	2013/12/31						
19	Submission of method statement for tree works	250 工作日	2012/7/25	2013/3/31						
20	Materials submission & approval	558 工作日	2012/8/20	2014/2/28						
21										
22	Steelwork	310 工作日	2013/8/1	2014/6/6						
23	fabrication of steel material	286 工作日	2013/8/25	2014/6/6						
24	fabrication of mesh									
25										
26	Section A (Lin Ma Hang)	333 工作日	2012/7/25	2013/6/22						
27	1. Setting out & Topographical survey for site boundary	143 工作日	2012/8/11	2012/12/31						
28	2. Site clearance for new road / archaeological survey	28 工作日	2013/1/1	2013/1/28						
29	3. Archaeological survey	333 工作日	2012/7/25	2013/6/22						
30	-preparation & submission of archeological proposal	225 工作日	2012/7/25	2013/3/6						
31	-seek AMO's approval & Licence	45 工作日	2013/3/7	2013/4/20						
32	-carry out the field survey (subject to licence's approval)	21 工作日	2013/4/21	2013/5/11						
33	-preparation & submission of report to AMO & EPD	30 工作日	2013/5/12	2013/6/10						
34	-submission of report to IEC	14 工作日	2013/6/9	2013/6/22						
35	-submission of report to AMO & IEC	14 工作日	2013/6/9	2013/6/22						
36										

專案: Programme for Frontier

日期: 17-5-2013

task

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

China International Water & Electric Corp.

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
37	Section B (Man Kam To Lo Wu, Pak Fu Shan to Lin Ma Hang)	682 工作日?	2012/7/25	2014/6/6						
38	Site mobilization	118 工作日	2012/9/15	2013/1/10						
39	1. condition survey	88 工作日	2012/9/12	2012/12/8						
40	2. Initial tree survey	682 工作日	2012/7/25	2014/6/6						
41	3. Setting out for works	119 工作日	2012/9/1	2012/12/28						
42	4. Underground detection & submission report									
43										
44	6a. Boundary Fence (Man Kam To Section)	682 工作日?	2012/7/25	2014/6/6						
45	1. site clearance	682 工作日	2012/7/25	2014/6/6						
46	2. Implementation & Maintenance landscaping works (protection/punning/checking/inspection works etc)	682 工作日	2012/7/25	2014/6/6						
47	- RC footings									
48	- Footing excavation	505 工作日	2012/11/12	2014/3/31						
49	- Blinding layer	501 工作日	2012/11/12	2014/3/27						
50	- Formwork	501 工作日	2012/11/13	2014/3/28						
51	- Bar fixing	501 工作日	2012/11/14	2014/3/29						
52	- Threaded rod	501 工作日	2012/11/15	2014/3/30						
53	- Concreting	501 工作日	2012/11/15	2014/3/30						
54	- Backfilling works	501 工作日	2012/11/16	2014/3/31						
55	- Reinstatement works	506 工作日	2012/11/17	2014/4/6						
56	- erection of metal fence	396 工作日	2013/5/7	2014/6/6						
57	1. steel frame works	200 工作日	2013/11/19	2014/6/6						
58	2. mesh	180 工作日	2013/11/19	2014/5/17						
59	3. barbed wire	184 工作日	2013/11/21	2014/5/23						
60	4. installation of gates	31 工作日	2014/5/7	2014/6/6						
61	5. painting works	61 工作日	2014/4/7	2014/6/6						
62	6. Installation of copper tape / cable tray	61 工作日	2014/4/7	2014/6/6						
63		91 工作日	2014/3/8	2014/6/6						
64										
65	6b. Boundary Fence (Lo Wu Section)	682 工作日?	2012/7/25	2014/6/6						
66	1. site clearance	624 工作日	2012/9/21	2014/6/6						
67	2. Implementation & Maintenance landscaping works (protection/punning/checking/inspection works etc)	682 工作日	2012/7/25	2014/6/6						
68	-RC footings	572 工作日	2012/11/12	2014/6/6						
69	- footing excavation works	501 工作日	2012/11/12	2014/3/27						
70	- blinding layer	501 工作日	2012/11/13	2014/3/28						
71	-Formwork	501 工作日	2012/11/14	2014/3/29						
72										

專案: Programme for Frontier
日期: 17-5-2013

task

識別碼 / 任務名稱	工期	開竣時間	完成時間	2012年8月							2012年9月								
				下週	上週	中週	下週	上週	中週	下週	上週	中週	下週						
73	- Bar fixing	501 工作日	2012/11/15	2014/3/30															
74	- Threaded rod	501 工作日	2012/11/15	2014/3/30															
75	- Concreting	501 工作日	2012/11/16	2014/3/31															
76	- backfilling works	501 工作日	2012/11/17	2014/4/1															
77	- Reinstatement works	89 工作日	2014/3/10	2014/6/6															
78	- erection of metal fence	192 工作日	2013/11/27	2014/6/6															
79	1. steel frame works	180 工作日	2013/11/27	2014/5/25															
80	2. mesh	184 工作日	2013/11/28	2014/5/30															
81	3. barbed wire	31 工作日	2014/5/7	2014/6/6															
82	4. installation of gates	61 工作日	2014/4/7	2014/6/6															
83	5. painting works	61 工作日	2014/4/7	2014/6/6															
84	6. Installation of copper tape / cable tray	91 工作日	2014/3/8	2014/6/6															
85																			
86	= Demolition/Alternation of extg fence	249 工作日	2013/10/1	2014/6/6															
87																			
88	6c. Bound fence (Pak Fu Shan Section)	682 工作日?	2012/7/25	2014/6/6															
89	Implementation & Maintenance landscaping works (protection/punning/checking/inspection works etc)	624 工作日	2012/9/21	2014/6/6															
90																			
91	1. site cleaance & preparation works	89 工作日	2013/1/1	2013/3/30															
92	2. excavation works	492 工作日	2013/1/1	2014/5/7															
93	3. blinding layer	492 工作日	2013/1/2	2014/5/8															
94	4. erection of formwork	492 工作日	2013/1/3	2014/5/9															
95	5. bar fixing	492 工作日	2013/1/4	2014/5/10															
96	6 Threaded rod	492 工作日	2013/1/4	2014/5/10															
97	7. concrete works	492 工作日	2013/1/5	2014/5/11															
98	8. backfilling works	495 工作日	2013/1/6	2014/5/15															
99	9. reinstatement works	98 工作日	2014/3/1	2014/6/6															
100	10. steel frame erection	95 工作日	2014/2/10	2014/5/15															
101	11. mesh	31 工作日	2014/3/24	2014/4/23															
102	12. barbed wire	31 工作日	2014/5/7	2014/6/6															
103	13. installation of gates	61 工作日	2014/4/7	2014/6/6															
104	14. painting works	130 工作日	2014/1/28	2014/6/6															
105	15. installation of copper tape (BS) / cable tray	91 工作日	2014/3/8	2014/6/6															
106																			
107	- Demolition/Alternation of extg fence	249 工作日	2013/10/1	2014/6/6															
108																			

專案: Program for Frontier

task

日期: 17-5-2013

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

識別碼	任務名稱	工期	開始時間				完成時間				
			下旬	上旬	中旬	下旬	下旬	上旬	中旬	下旬	
109	6d. Bound fence (Lin Ma Hang Section)	464 工作日	2013/1/1			2014/4/9					
110	Implementation & Maintenance landscaping works (protection/purmming/checking/inspection works etc)	682 工作日	2012/7/25			2014/6/6					
111	1. site clearance	89 工作日	2013/1/1			2013/3/30					
112	2. excavation works	492 工作日	2013/1/1			2014/5/7					
113	3. blinding layer	492 工作日	2013/1/2			2014/5/8					
114	4. erection of formwork	492 工作日	2013/1/3			2014/5/9					
115	5. bar fixing	492 工作日	2013/1/4			2014/5/10					
116	6 Threaded rod	492 工作日	2013/1/4			2014/5/10					
117	7. concrete works	492 工作日	2013/1/5			2014/5/11					
118	8. backfilling works	495 工作日	2013/1/6			2014/5/15					
119	9. reinstatement works	98 工作日	2014/3/1			2014/6/6					
120	10. steel frame erection	95 工作日	2014/2/10			2014/5/15					
121	11. mesh	31 工作日	2014/3/24			2014/4/23					
122	12. barbed wire	31 工作日	2014/5/7			2014/6/6					
123	13. installation of gates	61 工作日	2014/4/7			2014/6/6					
124	14. painting works	130 工作日	2014/1/28			2014/6/6					
125	15. installation of copper tape (BS)	91 工作日	2014/3/8			2014/6/6					
126											
127		249 工作日	2013/10/1			2014/6/6					
128	- Demolition/Alternation of extg fence										
129											
130	Section C(subject to excision) (subject to item 29)	245 工作日	2013/7/5			2014/3/6					
131	- Setting out for site boundary	30 工作日	2013/7/5			2013/8/3					
132	- Condition survey	30 工作日	2013/7/5			2013/8/3					
133	- Setting out	30 工作日	2013/7/5			2013/8/3					
134	- Implementation & Maintenance landscaping works (removal/purmming/protection).	245 工作日	2013/7/5			2014/3/6					
135	Road work & Boundary fence	228 工作日	2013/7/22			2014/3/6					
136	- Backfilling works for road	160 工作日	2013/7/22			2013/12/28					
137	- footing excavation	61 工作日	2013/10/26			2013/12/25					
138	- blinding layer	61 工作日	2013/10/27			2013/12/26					
139	- erection of formwork	61 工作日	2013/10/28			2013/12/27					
140	- reinforcement works	61 工作日	2013/10/29			2013/12/28					
141	- threaded rod	61 工作日	2013/10/29			2013/12/28					
142	- concrete	61 工作日	2013/10/30			2013/12/29					
143	- backfilling works	61 工作日	2013/11/6			2014/1/5					
144	- steel frame erection	45 工作日	2013/11/29			2014/1/12					

專案: Programme for Frontier

日期: 17-5-2013

task

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

China International Water & Electric Corp.

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
145	- installation of mesh	30 工作日	2013/12/27	2014/1/25						
146	- installation of barbed wire	42 工作日	2014/1/24	2014/3/6						
147	- installation of gates	42 工作日	2014/1/24	2014/3/6						
148	- painting works	31 工作日	2014/1/10	2014/2/9						
149	- Drainage & U-channel works	80 工作日	2013/11/30	2014/2/17						
150	- BS works (installation of copper tape / cable tray)	31 工作日	2013/11/23	2013/12/23						
151	- construction of cable draw pit / duct / lamp pole footing	61 工作日	2013/12/1	2014/1/30						
152	- road surfacing	60 工作日	2014/1/6	2014/3/6						
153	- erection of lamp pole	31 工作日	2014/1/9	2014/2/8						
154	- flood-light wiring & miscellaneous works	32 工作日	2014/1/9	2014/2/9						
155	- T&C inspection	25 工作日	2014/2/10	2014/3/6						
156	- power energizing	25 工作日	2014/2/10	2014/3/6						
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	Section D (Shek Chung Au)									
	-Submission of method statement on Tree survey works	107 工作日	2012/7/25	2012/11/8						
	-Seek IEC's approval and carry out Baseline monitoring	37 工作日	2012/8/10	2012/9/15						
	-Carry out initial tree survey	40 工作日	2012/8/12	2012/9/20						
	-Removed extg UU by Others	14 工作日	2012/9/3	2012/9/16						
	-Carry out the asbestos survey	53 工作日	2012/8/7	2012/9/28						
	-Application for TTA approved by TD/RMO	3 工作日	2012/9/5	2012/9/7						
	-Seek EPD's approval	30 工作日	2012/8/27	2012/9/25						
	-Preparation,submission & approval of method statement & demolition works	3 工作日	2012/9/26	2012/9/28						
	-Preparation work for site demolition works	10 工作日	2012/9/26	2012/10/5						
	-Removal of extg fixture & funitures fittings	53 工作日	2012/7/25	2012/9/15						
	-Demolition of extg structure & signage	21 工作日	2012/9/17	2012/10/7						
		14 工作日	2012/9/24	2012/10/7						
		32 工作日	2012/10/8	2012/11/8						
	Preparation works for Section E									
	- Asbestos survey	31 工作日	2012/12/1	2012/12/31						
	- Submission & approval of Demolition plan	70 工作日	2012/12/1	2013/2/8						
	-Application for TTA	30 工作日	2013/9/16	2013/10/15						
	Section E (Lok Ma Chau)									
	-Demolition of extg structure/checkpoints	199 工作日	2013/7/31	2014/2/14						
		199 工作日	2013/7/31	2014/2/14						
	17. Anticipated completion date	1 工作日	2014/6/6	2014/6/6						

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	6-11-2013	Inspected by	PE Cheng P. Wong C.I. King	IEC	Contractor	ET
Time	14:00	Name			W. M. Lau	

Weather Condition Wind : Sunny / Fine Cloudy Drizzle / Rain / Storm / Hazy
: Calm / Light / Breeze / Strong
Temperature : 26.5°C
Humidity : High / Moderate / Low

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 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.

Implementation Stages*	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
	<input checked="" type="checkbox"/>			Item 3
	<input checked="" type="checkbox"/>			
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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
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 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. 	<div style="display: flex; justify-content: space-between;"> ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ </div>			
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 	<div style="display: flex; justify-content: space-between;"> ✓ ✓ ✓ </div>			

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	
<ul style="list-style-type: none"> Stockpiles to be covered by tarpaulin to avoid spreading of materials during rainstorms 	✓			Item 3
<ul style="list-style-type: none"> Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. 	✓			Item 1
<ul style="list-style-type: none"> 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. 	✓			
<ul style="list-style-type: none"> Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area. 	✓			
<ul style="list-style-type: none"> Any construction plant which causes pollution to the water system due to leakage of oil or fuel shall be removed off-site immediately. 	✓			
<ul style="list-style-type: none"> Spillage or leakage of chemical waste to be controlled by using suitable absorbent materials. 	✓			
<ul style="list-style-type: none"> Chemicals will always be stored on drip trays or in bunded areas where the volume is 110% of the stored volume. 	✓			
<ul style="list-style-type: none"> Regular clearance of domestic waste generated in the temporary sanitary facilities to avoid waste water spillage. 	✓			
<ul style="list-style-type: none"> Temporary sanitary facilities to be provided for on-site workers during construction. 	✓			
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. 	✓			
<ul style="list-style-type: none"> 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				
<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. 	✓			
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. 			✓	
<ul style="list-style-type: none"> 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. 			✓	
<ul style="list-style-type: none"> Any contractor generating waste oil or other chemicals as a result of his activities should be register as a chemical waste producer. 			✓	
<ul style="list-style-type: none"> Disposal of the waste oil should be done by a licensed collector. 			✓	
<ul style="list-style-type: none"> 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. 	✓			
<ul style="list-style-type: none"> Appropriate training including safety codes and relevant manuals should be given to the personnel who regularly handle the chemicals on site. 	✓			
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. 				✓

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 	✓			
<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. 	✓			
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 of 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 transpiration 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 transpiration 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. 				✓



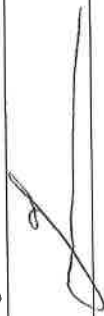
Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

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 2
▪	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.		√	Item 3
▪	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	√		

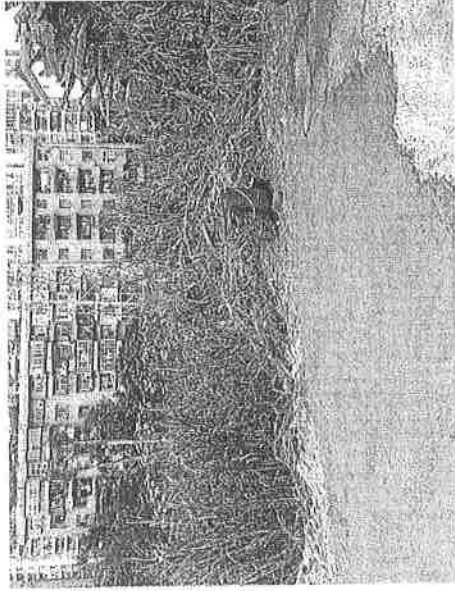


Summary of the Weekly Site Inspection:

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	Oil drums without drip tray was observed in Pak Fu Shan site.	Follow-up	The Contractor was reminded to provide drip tray for the oil drums to avoid leakage of oil.	131106_001	13/11/13
2	Rubbish was observed near fence no.137 in Man Kam Road site.	Follow-up	The Contractor was reminded to collect the rubbish regularly to keep good site practices.	131106_002	13/11/13
3	Stockpile without cover and mud inside the drainage were observed near fence no.141 in Man Kam Road site.	Follow-up	The Contractor was reminded to cover the stockpile and clean the drainage regularly.	131106_003	13/11/13

Remark

Checked by	Name	Signature		Date
	C. L. Lau			06 November 2013
	Title			
	ET Leader			

Photos

 <p>Photo 131106_001 – Oil drums without drip tray was observed in Pak Fu Shan site.</p>	 <p>Photo 131106_002 –Rubbish was observed near Fence No. 137 in Man Kam Road site</p>	 <p>Photo 131106_003 – Stockpile without cover and mud inside the drainage were observed near Fence No. 141 in Man Kam Road site.</p>	
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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	13 / 11 / 13	Inspected by	BE P OW	IEC	Contractor	ET
Time	14:40	Name	C.K. (ing)			Mark

Weather Condition Wind : Sunny / Fine / cloudy / Drizzle / Rain / Storm / Hazy
 : Calm / light / Breeze / Strong
 Temperature : 20 °C
 Humidity : High / Moderate / Low

Environmental Checklist

Fugitive Dust Emission	Implementation Stages*			Remark
	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.	✓			Item 2
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.	✓			

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	
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 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				
<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)

	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. 	√			Item 2	
Environmental Checklist					
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. 	√			√	
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. 	√				
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. 	√		√		
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. 	√				√



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					
<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. 	✓			
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 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 1
▪	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.		√		Item 1 & 2
▪	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:

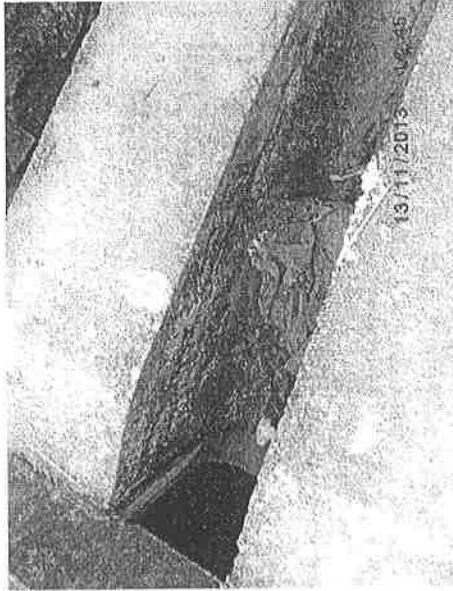
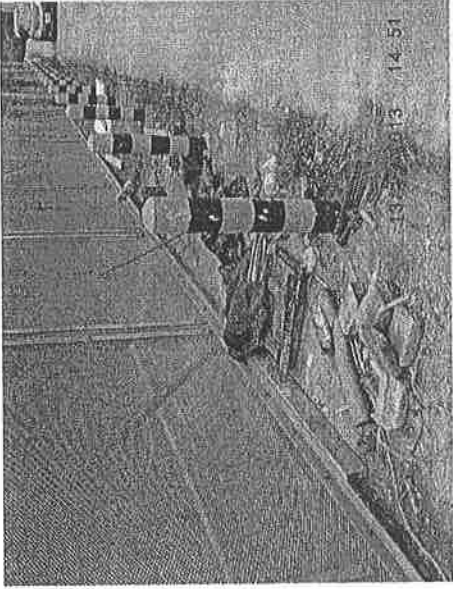

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Rubbish was observed near the fence and inside the drainage in Man Kam Road site.	Follow-up	The Contractor was reminded to collect the rubbish regularly to keep good site practices.	131113_001 & 002	20/11/13
2	Stockpile without cover and mud inside the drainage were observed near fence no. 141 in Man Kam Road site.	Follow-up	The Contractor was reminded to cover the stockpile and clean the drainage regularly.	131113_003	20/11/13

Remark

Checked by	Name	Title	Signature	Date
	C. L. Lau	ET Leader		13 November 2013

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

Photos

 <p>13/11/2013 14:45</p>	 <p>13/11/2013 14:51</p>	 <p>13/11/2013 14:59</p>
<p>Photo 131113_001 –Rubbish was observed in drainage near Fence No. 141 in Man Kam Road site</p>	<p>Photo 131113_002 –Rubbish was observed near Fence No. 141 in Man Kam Road site</p>	<p>Photo 131113_003 – Stockpile without cover and mud inside the drainage were observed near Fence No. 141 in Man Kam 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	20 November 2013	Inspected by	RE	IEC	Contractor	ET
Time	14:30	Name	Or		李廷 (Tso)	C.L. Lau

Weather : Sunny / Fine (Cloudy) / Drizzle / Rain / Storm / Hazy
 Condition : (Calm) / Light / Breeze / Strong
 Wind

Temperature : 21°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.	✓		X	Item 4 & 5
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)

		Implementation Stages*			Remark
		Yes	No	Not Obs	
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 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					
<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	
• 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.		✓		Item 1
• Chemical waste containers shall be labeled 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.				✓

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 	✓			
<ul style="list-style-type: none"> Disposal of chemical waste should <ul style="list-style-type: none"> 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. 	✓			
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. 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 re-erected 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 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. 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)

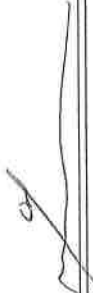
Mitigation Planting	
• Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.	✓
• Use of native plant species predominantly in the planting design for the buffer areas.	✓
Good Site Practices	
• The Environmental Permit should be displaced conspicuously 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.	✓

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	Oil drum without drip tray was observed in Pak Fu Shan site.	Follow-up	The Contractor was reminded to provide drip tray for the oil drums to avoid leakage of oil.	131120_001	27/11/13
2	Follow-up action to item 1 on 13/11/13, rubbish observed near the fence and inside the drainage in Man Kam Road site was improved	Closed	---	131120_004	---
3	Follow-up action to item 2 on 13/11/13, stockpile without cover and mud inside the drainage observed near fence no. 141 in Man Kam Road site were improved	Closed	---	131120_003	---
4	Mud trail on the access road was observed near Fence No 203 in Pak Fu Shan site.	Follow-up	The Contractor was reminded to spray with water and clean the road regularly.	131120_002	27/11/13
5	Mud trail on the access road was observed near Fence No. 114 and 115 in Lo Wu site.	Follow-up	The Contractor was reminded to spray with water and clean the road regularly.	131120_005	27/11/13

Remark

Checked by	Name C. L. Lau	Title ET Leader	Signature 	Date 20 November 2013
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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 131120_001 – Oil drum without drip tray was observed in Pak Fu Shan site.



Photo 131120_002 – Mud trail on the access road was observed near Fence No. 203 in Pak Fu Shan site

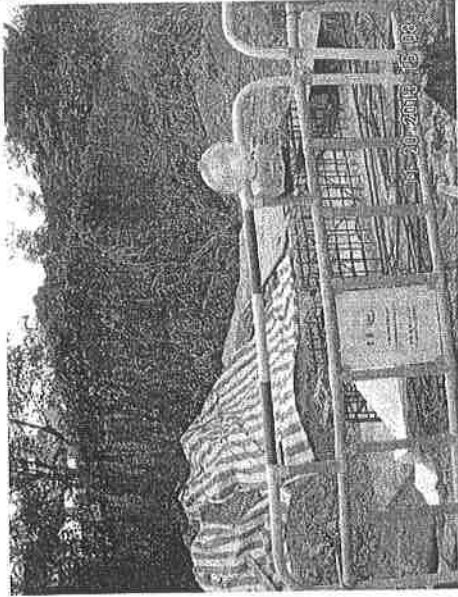


Photo 131120_003 – Stockpile without cover and mud inside the drainage observed near Fence No. 141 in Man Kam Road site was improved.



Photo 131120_004 – Rubbish observed in drainage near Fence No. 141 in Man Kam Road site was improved.

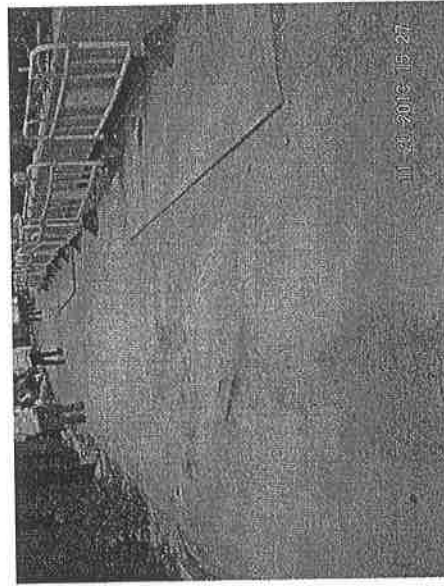


Photo 131120_002 – Mud trail on the access road was observed near Fence No. 114 – 115 in Lo Wu site.

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New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	27/11/13	Inspected by	RE	IEC	Contractor	ET
Time	14:15	Name	/	/	Wong (BO)	Mark

Weather : Sunny / Fine / cloudy / Drizzle / Rain / Storm / Hazy
 Condition :
 Wind : Calm / Light / Breeze / Strong
 Temperature : 22°C
 Humidity : High / Moderate / Low

Environmental Checklist

Fugitive Dust Emission	Implementation Stages*			Remark
	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.				
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)

		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 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
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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 labeled 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. 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ 			
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. 	<ul style="list-style-type: none"> ✓ 			✓
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. 	<ul style="list-style-type: none"> ✓ 			
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. 	<ul style="list-style-type: none"> ✓ ✓ ✓ 		<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ 	
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. 	<ul style="list-style-type: none"> 			✓



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	
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 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 ▪ 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 o 20% by volume of the chemical waste stored in that area whichever is the greatest. ▪ Have adequate ventilation 	√						




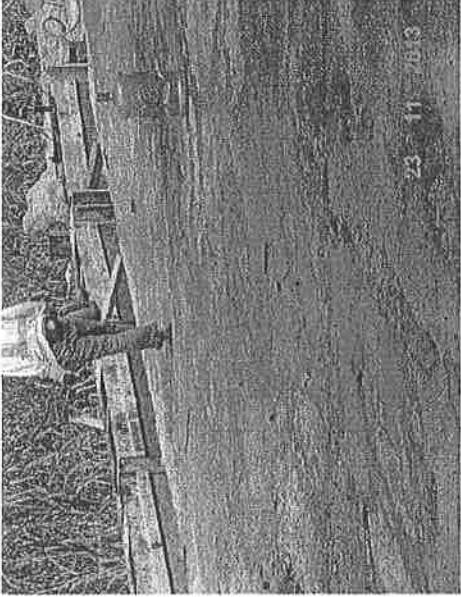
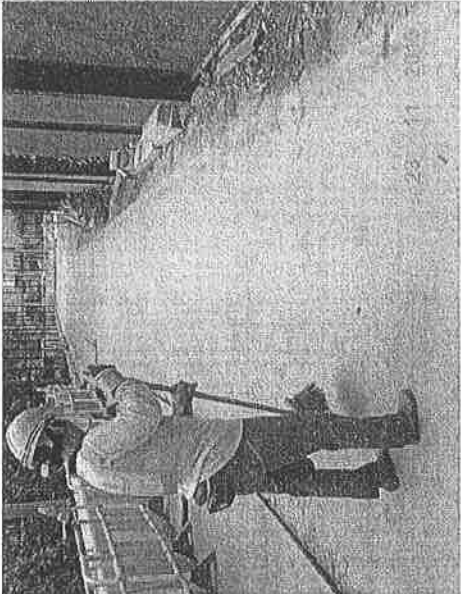
Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
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<ul style="list-style-type: none"> Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary) 	✓		
<ul 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. 	✓		
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 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. 			✓
<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. 			✓

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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>Photo 131127_001 – Oil drum without drip tray observed in Pak Fu Shan site was improved.</p>	<p>Photo 131127_002 – Mud trail on the access road observed near Fence No. 203 in Pak Fu Shan site was sprayed with water and cleaned.</p>	<p>Photo 131127_003 – Mud trail on the access road observed near Fence No. 114 – 115 in Lo Wu site was cleaned.</p>

Appendix F

Implementation Schedule of Mitigation Measures

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 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. 						
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 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. 						

	Location	Implementation Status			
		Implemented	Not implemented	Not Observed	Not Applicable
Environmental Protection Measures					
Noise Impact					
<ul style="list-style-type: none"> ▪ 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 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					
<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 ▪ 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 banded 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					
<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. 					
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. 					



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

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Not Implemented	Not Observed	Not Applicable
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		✓		
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 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: <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	✓			



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

Environmental Protection Measures	Location	Implementation Status		
		Implemented	Not implemented	Not Observed
Waste Management				
Chemical Waste				
<ul style="list-style-type: none"> 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 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 <ul style="list-style-type: none"> 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. 				

Environmental Protection Measures	Location	Implementation Status				
		Implemented	Not implemented	Not Observed	Not Applicable	
Landscaping 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-use. ▪ 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				√	
	All areas					√
	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				√	
	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				√	
	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	√				

Appendix G

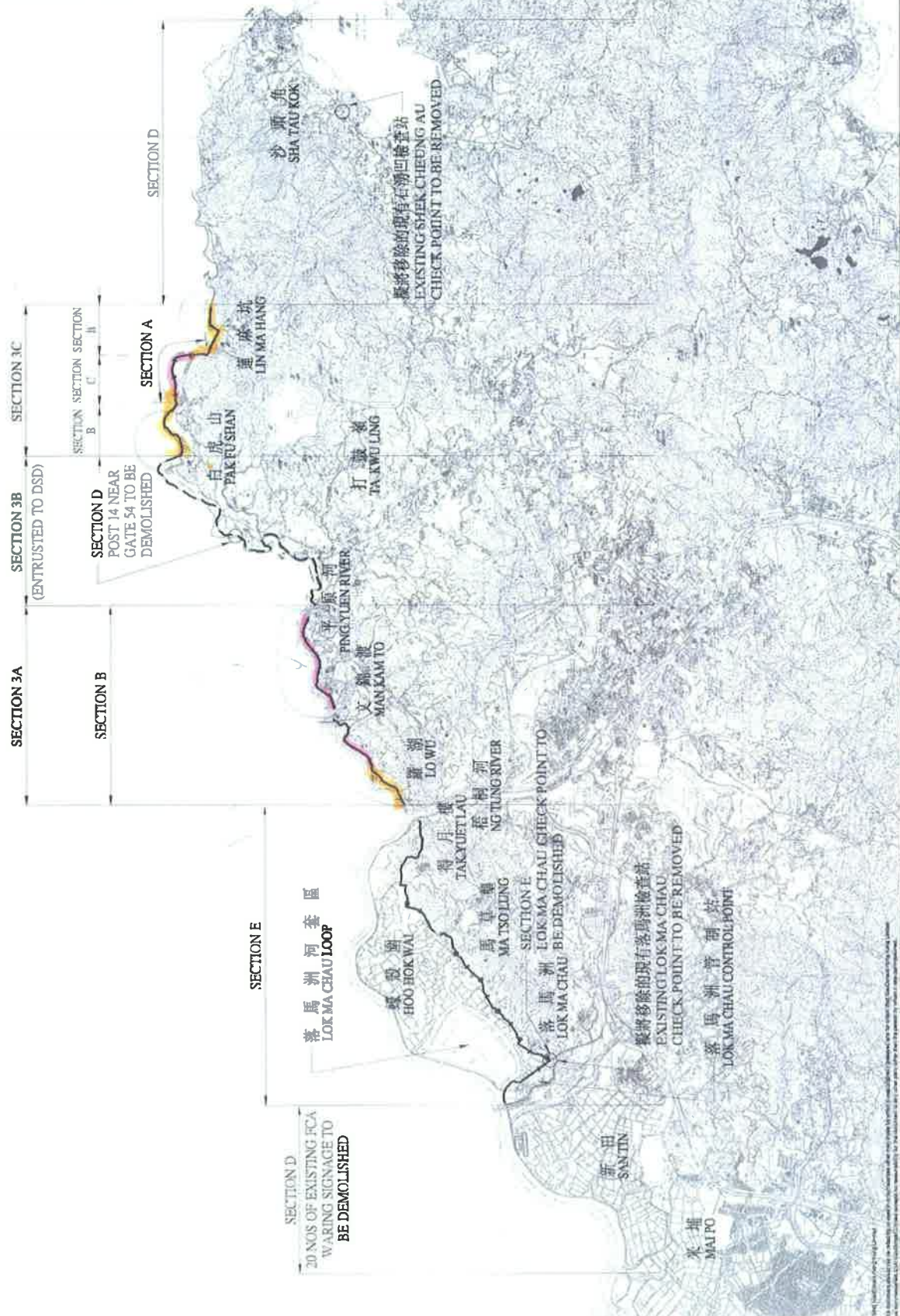
Site General Layout plan

SCOPE OF WORKS:

- SECTION A : PREPARATORY WORKS TO THE NEW BOUNDARY PARTOL ROAD INCLUDES 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 FACILITATES 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.

Name: _____

- LEGEND:**
- PROPOSED NEW SECTIONS OF PRIMARY BOUNDARY FENCE OF BOUNDARY PATROL ROAD
 - PROPOSED NEW SECTIONS OF BOUNDARY PATROL ROAD WITH PRIMARY AND SECONDARY BOUNDARY FENCES
 - EXISTING BOUNDARY PATROL ROAD TO BE DEMOLISHED
 - PROPOSED REINFORCEMENT OF BOUNDARY PATROL ROAD AND BOUNDARY FENCE AND PROPOSED SECONDARY BOUNDARY FENCE SUBMITTED TO THE CONTRACTOR FOR THEIR CONSTRUCTION UNDER ANOTHER PROJECT NAME, REGULATION OF SHOOTING FOR STAGES 4 - INCLINAR ROAD PASSES



SECTION D
20 NOS OF EXISTING RCA
WARNING SIGNAGE TO
BE DEMOLISHED

SECTION E
落馬洲河套區
LOK MA CHAU LOOP

SECTION E
落馬洲 LOK MA CHAU CHECK POINT TO
BE DEMOLISHED

落馬洲河套區
EXISTING LOK MA CHAU
CHECK POINT TO BE REMOVED

SECTION D
POST 14 NEAR
GATE 54 TO BE
DEMOLISHED

將移除的現有石湖四檢查站
EXISTING SHEK CHEUNG AU
CHECK POINT TO BE REMOVED

沙頭角
SHA TAU KOK

蓮花坑
LIN MA HANG

白虎山
PAK FU SHAN

打鼓嶺
TA KWU LING

文錦渡
MAN KAM TO

平頂河
PUNG YUEN RIVER

落馬洲
LO WU

得月樓
TAK YUET LAU

榕樹河
NG TUNG RIVER

馬草壩
MA TSOLLING

新田
SIN TIN

水埔
MAI PO

No.	0	07/12	RS&L 1007-10079	Initial
Name	Cheng	Description		
Revision				
Contractual Project No.	276127			



Name	Signed	Date
Designed	DC	06-08-11
Drawn	LYK	06-08-11
Checked	LW	08-08-11
Approved	TT	09-08-11

Contract No.	SS Y307
File No.	ASD/201/7906
Project No.	1268
Consultant Agreement No.	95N005
Customer	

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		

The Architect of the Contract
ARCHITECTURAL SERVICES DEPARTMENT

Appendix H

Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table for 2013 (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 (sec Note 3) (in '000kg)	Chemical Waste (in '000kg)	Others, e.g. general refuse (in '000m ³)	
Jan												
Feb	0.03	0.03	0	0	0	0	0.02	0.03	0	0	0	
Mar	0	0	0	0	0	0	0	0.05	0	0	0	
Apr	0.091	0	0	0	0.091	0	0	0.01	0	0	0	
May	0.104	0	0	0	0.104	0	0	0.02	0	0	0	
June	0	0	0	0	0	0	0	0.003	0	0	0	
Sub-total	0.225	0.03	0	0	0.195	0	0.02	0.113	0	0	0	
July	0	0	0	0	0	0	0	0.002	0	0	0.4225	
Aug	0	0	0	0	0	0	0	0.001	0	0	0.2795	
Sept	0.013	0	0	0	0.013	0	0	0.002	0	0	0.0845	
Oct	0	0	0	0	0	0	0	0.003	0	0	0	
Nov	0	0	0	0	0	0	0	0.005	0	0	0	
Dec												
Total	0.238	0.03	0	0	0.208	0	0.02	0.126	0	0	0.7865	

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)

November 2013

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



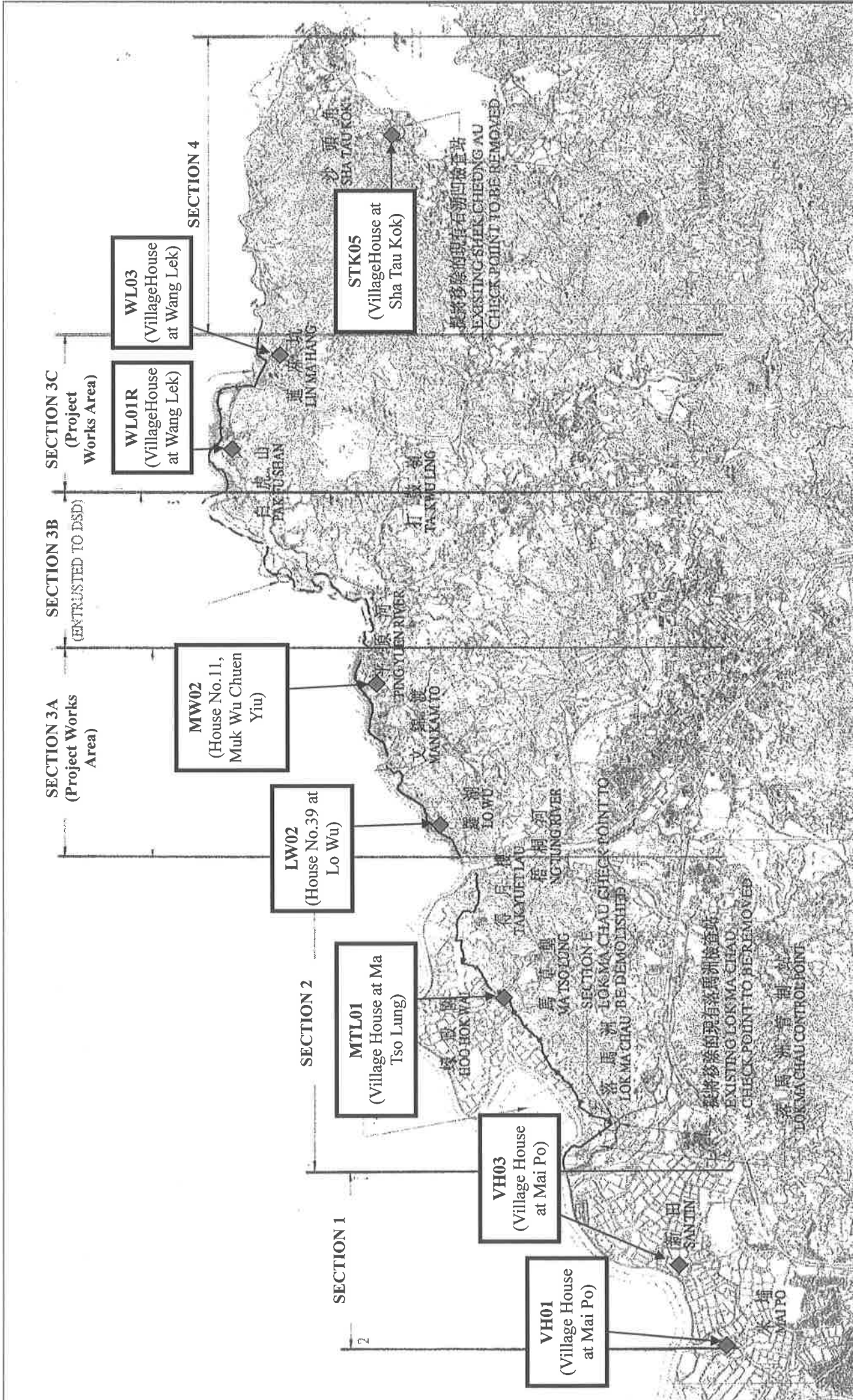
**Contract No.: SS Y307 - Construction of a Secondary Boundary Fence and
New Sections of Primary Boundary Fence and Boundary Patrol Road (Phase 2)**

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

December 2013

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