

CONTRACT NO: CV/2012/07

DEVELOPMENT AT ANDERSON ROAD -FOOTBRIDGE D AND ASSOCIATED WORKS AREA

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

-FEBRUARY 2016 -

CLIENTS:

Lam-Po Wing Joint Venture

PREPARED BY:

Lam Environmental Services Limited

11/F Centre Point 181-185 Gloucester Road, Wanchai, H.K.

Telephone: (852) 2882-3939 Facsimile: (852) 2882-3331 E-mail: <u>info@lamenviro.com</u> Website: <u>http://www.lamenviro.com</u>

CERTIFIED BY:

Derek Lo Environmental Team Leader

DATE:

7 March 2016



Ref.: OAPANDSNEM00_0_1658L.16.docx

10 March 2016

By Post and Fax: 2407 8382

Engineer's Representative Ove Arup & Partners Level 5, Festival Walk 80 Tat Chee Avenue Kowloon Tong, Kowloon Hong Kong

Attention: Mr. Dennis Leung

Dear Sir/Madam,

Re: Contract No. CV/2012/07 Development at Anderson Road Footbridge D and Associated Works Area <u>Monthly EM&A Report for February 2016</u>

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for February 2016 received by e-mail on 10 March 2016 for our review and comment.

We are pleased to inform you that we have no adverse comment on the captioned report.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours faithfully,

David Yeung Managing Director

c.c. Lam LPWJV Attn.: Mr. Derek Lo Attn.: Mr. Tak-Leung Lo Fax: 2882 3331 Fax: 3171 7222

Q:\Projects\OAPANDSNEM00\Corr\OAPANDSNEM00_0_1658L.16.docx



TABLE OF CONTENTS

EXE	CUTIVE	SUMMARY	. 3
1.	INTRO	DUCTION	.5
	1.1 1.2	Scope of the Report Structure of the Report	
2.	PROJE	CT BACKGROUND	.7
	2.1 2.2 2.3	Background Scope of the Project and Site Description Project Organization and Contact Personnel	.7
3.	STATU	S OF REGULATORY COMPLIANCE	.9
	3.1	Status of Environmental Licensing and Permitting under the Project	0
4.	MONIT	ORING REQUIREMENTS	1
	4.1 4.2	Noise Monitoring	
5.	MONIT	ORING RESULTS	14
	5.1 5.2 5.3	Noise Monitoring Results Air Monitoring Results Waste Monitoring Results	14
6.	COMPL	LIANCE AUDIT	17
	6.1 6.2 6.3 6.4	Noise Monitoring Air Monitoring Review of the Reasons for and the Implications of Non-compliance Summary of action taken in the event of and follow-up on non-compliance	17 17
7.	ENVIR	ONMENTAL SITE AUDIT	8
8.	COMPL	_AINTS, NOTIFICATION OF SUMMONS AND PROSECUTION	9
9.	CONCL	USION	20



LIST OF TABLES

Table 2.1	Contact Details of Key Personnel
Table 3.1	Summary of the current status on licences and/or permits on environmental
	protection pertinent to the Project
Table 4.1	Noise Monitoring Stations
Table 4.2	Air Monitoring Station
Table 5.1	Summary of Noise Monitoring Results at NM1 and NM2
Table 5.2	Summary of Air Monitoring Results at AQM1 - 24 hr TSP Monitoring
Table 5.3	Summary of Air Monitoring Results at AQM1 - 1 hr TSP Monitoring
Table 5.4	Details of Waste Disposal for Contract no. CV/2012/07
Table 7.1	Summary of Environmental Inspections for Contract no. CV/2012/07
Table 8.1	Cumulative Statistics on Complaints
Table 8.2	Cumulative Statistics on Successful Prosecutions

LIST OF FIGURES

Figure 2.1 Project Layout

- Figure 2.2 Project Organization Chart
- Figure 4.1 Locations of Environmental Monitoring Stations

LIST OF APPENDICES

- Appendix 3.1 Environmental Mitigation Implementation Schedule
- Appendix 4.1 Action and Limit Level
- Appendix 4.2 Copies of Calibration Certificates
- <u>Appendix 5.1</u> Monitoring Schedule for Reporting Month and Coming month
- <u>Appendix 5.2</u> Noise Monitoring Results and Graphical Presentations
- <u>Appendix 5.3</u> Air Quality Monitoring Results and Graphical Presentations
- Appendix 6.1 Event Action Plans
- <u>Appendix 6.2</u> Summary for Notification of Exceedance_Air and Noise
- Appendix 8.1 Complaint Log
- Appendix 9.1 Construction Programme



EXECUTIVE SUMMARY

 This is the Environmental Monitoring and Audit (EM&A) Monthly Report – February 2016 of "Development at Anderson Road – Footbridge D and Associated Works Area" (Hereafter called "this Project"). The construction works of this project was commenced on 20 July 2013. This is the 32nd month of EM&A report presenting the environmental monitoring findings and information recorded during the period of 1 February 2016 to 29 February 2016. The cut-off date of reporting is at the end of each reporting month.

Construction Activities for the Reported Period

- Construction Tower C (Portion C2)
- Construction of Pier D (Portion C2)
- Construction of tower B (Portion C2)
- Reinstatement works of tower A (Portion C3)

Noise Monitoring

ii. Noise monitoring during daytime was conducted at the stations NM1 and NM2 on a weekly basis in the reporting month. No exceedance was recorded in the reporting month.

Air Quality Monitoring

iii. Air quality monitoring has been conducted at station AQM1. No exceedance was recorded in the reporting month.

Complaints, Notifications of Summons and Successful Prosecutions

i. No complaint and notifications of summons or successful prosecutions were recorded in this reporting month.

Site Inspections and Audit

ii. The Environmental Team (ET) conducted weekly site inspections for Contract no. CV/2012/07 in the reporting month. Major observations and recommendations made during the audit sessions were rectified by the Contractors. No non-conformance was identified during the site inspections.

Future Key Issues

- iii. In coming reporting month, the principal work activities of individual contracts are anticipated as follows:
 - Construction Tower C (Portion C2)
 - Construction of Pier D (Portion C2)



- Construction of tower B (Portion C2)
- Reinstatement works of tower A (Portion C3)
- Footpath construction (Portion A)

Reporting Change

vii. There are no reporting changes in this Reporting Period.



1. Introduction

1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for Development of Anderson Road.
- 1.1.2. This report presents the environmental monitoring and auditing work carried out in accordance to the Section 1.4 of EM&A Manual and "*Environmental Monitoring and Audit Requirements*" under Particular Specification Section 25.
- 1.1.3. The construction works of this project was commenced on 20 July 2013. This report documents the finding of EM&A works for this Project and during the period of 1 February 2016 to 29 February 2016. The cut-off date of reporting is at the end of each reporting month.

1.2 Structure of the Report

- **Section 1** *Introduction* details the scope and structure of the report.
- Section 2 *Project Background* summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- Section 3 Status of Regulatory Compliance summarizes the status of valid Environmental Permits / Licenses during the reporting period.
- Section 4 *Monitoring Requirements* summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.
- Section 5 *Monitoring Results* summarizes the monitoring results obtained in the reporting period.
- Section 6 Compliance Audit summarizes the auditing of monitoring results, all exceedances environmental parameters.
- Section 7 Cumulative Construction Impact due to the Concurrent Projects summarizes the relevant cumulative construction impact due to the concurrent



activities of the concurrent Projects.

- Section 8 Site Inspection summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.
- Section 9 Complaints, Notification of summons and Prosecution summarizes the cumulative statistics on complaints, notification of summons and prosecution
- Section 10 Conclusion



2. Project Background

2.1 Background

- 2.1.1. The main objective of the project "Development at Anderson Road Footbridge D and Associated Works Area" (Hereafter called "this Project") is to construct a footbridge, Footbridge D, and associated lift towers across Shun On Road between the existing Shun Tin Estate and the future development platform.
- 2.1.2. For this project, Tin Wan House (NM1) and Ning Po No.2 College (NM2 and AQM1) are the designated monitoring station during the construction period. Owing to this contract is under the master project and on the other hand, the construction area is vicinity to the monitoring station (On Yat House) ID2 and (Sau Nga House) ID3 of the master project, so that the baseline noise and air quality monitoring will adopt the baseline data from those stations instead of conducting baseline monitoring. All the baseline data are referred to the baseline report from the public domain web site (www.anderson-road.com/main.htm).
- 2.1.3. The construction works of this project was commenced on 20 July 2013. During the construction phase of the project, air quality (dust) and noise impacts from the development site itself and the adjacent Anderson Road Quarry and other nearby construction sites are identified as the major environmental issues of concern. Besides, waste management is also identified in the EIA study as another environmental issue during the construction phase of the project that requires mitigation measures.

2.2 Scope of the Project and Site Description

- 2.2.1. The Project is located mainly near Shun Tin Estate and Ning Po No.2 College, as shown in *Figure 2.1.*
- 2.2.2. The scope of the Project comprises:
 - Construction of footbridge and associated lift towers between Shun On Road and future platform at +152mPD and across Shun On Road. In Conjunction with these footbridge works are the associated furniture, drainage system, irrigation system and traffic signs.
 - Construction of drainage system for diversion of an existing stream on the slope adjoining Footbridge D.
 - Site formation and associated slope works for Footbridge D adjacent to Shun On Road.



2.3 Project Organization and Contact Personnel

- 2.3.1. Civil Engineering and Development Department is the overall project controllers for this project. For the construction phase of the Project, Project Engineer, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.
- 2.3.2. The proposed project organization and lines of communication with respect to environmental protection works are shown in *Figure 2.2.* Key personnel and contact particulars are summarized in *Table 2.1*.

Party	Role	Post	Name	Contact	Contact
				No.	Fax
Ove Arup	Engineer	Chief	Dennis	2407 0300	2407
		Resident	Leung		8382
		Engineer			
		Resident	Heidi Fung	3656 3000	3656
		Engineer			1000
Lam-Po Wing	Contractor	Project	K.C. Wong	2318 0281	3171
Joint Venture	under	Manager			7222
	Contract no. CV/2012/07	Site Agent	T.L. Lo	2318 0281	
		Safety Officer	K.W. Lau	2318 0281	
		Environment	K.I. Ip	2318 0281	
		al Officer			
Ramboll	Independent	Independent	Mr. David	3465 2888	3465
Environ Hong	Environment	Environment	Yeung		2899
Kong Limited	al Checker	al Checker			
	(IEC)	(IEC)			
Lam	Environment	Environment	Mr. Derek Lo	2882 3939	2882
Environmenta	al Team (ET)	al Team			3331
I Services		Leader (ETL)			
Limited					

Table 2.1 Contact Details of Key Personnel

8



- 2.3.3. For Contract no. CV/2012/07, the principal work activities in this reporting month included:
 - Construction Tower C (Portion C2)
 - Construction of Pier D (Portion C2)
 - Construction of tower B (Portion C2)
 - Reinstatement works of tower A (Portion C3)
- 2.3.4. In coming reporting month, the principal work activities of individual contracts are anticipated as follows:
 - Construction Tower C (Portion C2)
 - Construction of Pier D (Portion C2)
 - Construction of tower B (Portion C2)
 - Reinstatement works of tower A (Portion C3)
 - Footpath construction (Portion A)



3. Status of Regulatory Compliance

3.1 Status of Environmental Licensing and Permitting under the Project

3.1.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in *Table 3.1*.

Table 3.1 Summary of the current status on licences and/or permits on environmentalprotection pertinent to the Project

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Discharge Licence	WT00015447-20 13	27 March 2013	31 March 2018	Valid
Billing Account under Waste Disposal Ordinance	7017083	15 March 2013	N/A	Valid
The Air Pollution Control (Construction Dust) Regulation	355705	14 February 2013	N/A	Valid
Form A – Application for Water Pollution Control Licence	355706	14 February 2013	N/A	Valid
Application for Registration as a Chemical Waste Producer	WPN5213-292-L 2825-01	28 November 2013	N/A	Valid



4. Monitoring Requirements

4.1 Noise Monitoring

NOISE MONITORING STATIONS

4.1.1. The noise monitoring has been undertaken at the designated locations Tin Wan House (NM1) and Ning Po No.2 College (NM2). The detailed information of monitoring stations for the Project are listed and shown in *Table 4.1* and *Figure 4.1*. *Appendix 4.1* shows the established Action/Limit Levels for the monitoring works.

Table 4.1 Noise Monitoring Stations

Station ID	Monitoring Location
NM1	G/F of Tin Wan House
NM2	G/F of Ning Po No.2 College

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.1.2. The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). L_{eq (30 minutes)} shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods, L_{eq (5 minutes)} shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. Supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.
- 4.1.3. Noise monitoring shall be carried out at all the designated monitoring stations. The monitoring frequency shall depend on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities are underway:
 - one set of measurements between 0700 and 1900 hours on normal weekdays.
- 4.1.4. If construction works are extended to include works during the hours of 1900 0700 as well as public holidays and Sundays, additional weekly impact monitoring shall be carried out during respective restricted hours periods. Applicable permits under NCO shall be obtained by the Contractor.

MONITORING EQUIPMENT

4.1.5. As referred to in the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound



pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

4.1.6. Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

4.2 Air Monitoring

AIR QUALITY MONITORING STATIONS

4.2.1. The air monitoring has been conducted at the designated location Ning Po No.2 College (AQM1). The air monitoring stations for the Project are listed and shown in *Table 4.2* and *Figure 4.1*. *Appendix 4.1* shows the established Action/Limit Levels for the monitoring works.

Table 4.2 Air Monitoring Station

Station ID	Monitoring Location		
AQM1	Roof Top of Ning Po No.2 College		

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.2.2. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality. The 24-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.
- 4.2.3. All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any other local atmospheric factors affecting or affected by site conditions, etc., shall be recorded down in detail.
- 4.2.4. For regular impact monitoring, the sampling frequency of at least once in every six-days, shall be strictly observed at all the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.5. High volume samplers (HVSs) in compliance with the following specifications shall be used for carrying out the 1-hour and 24-hour TSP monitoring:
 - 0.6 1.7 m³ per minute adjustable flow range;
 - equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
 - installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;



- capable of providing a minimum exposed area of 406 cm²;
- flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
- equipped with a shelter to protect the filter and sampler;
- incorporated with an electronic mass flow rate controller or other equivalent devices;
- equipped with a flow recorder for continuous monitoring;
- provided with a peaked roof inlet;
- incorporated with a manometer;
- able to hold and seal the filter paper to the sampler housing at horizontal position;
- easily changeable filter; and
- capable of operating continuously for a 24-hour period.
- 4.2.6. Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. The calibration data shall be properly documented for future reference by concerned parties such as the IEC. All the data should be converted into standard temperature and pressure equivalents.

LABORATORY MEASUREMENT / ANALYSIS

- 4.2.7. A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.
- 4.2.8. If a site laboratory is set up or a non-HOKLAS accredited laboratory is retained for analysis, laboratory equipment shall be provided by the ER in consultation with the IC(E). Measurement performed by the laboratory shall be demonstrated to the satisfaction of the ER and the IC(E). The IC(E) shall conduct regular audit to the measurement performed by the laboratory to ensure the accuracy of measurement results. The ET leader shall provide the ER with one copy of the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), and Appendix B for his reference.
- 4.2.9. Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24-hours and be pre-weighed before use for the sampling.
- 4.2.10. After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.
- 4.2.11. All the collected samples shall be kept in a good condition for 6 months prior to disposal.



5. Monitoring Results

- 5.0.1. The environmental monitoring will be implemented based on the sensitive receivers which would be mostly affected. Overall layout showing the work area, latest status of work commencement and monitoring stations are shown in <u>Figure 2.1</u> and <u>Figure 4.1</u>.
- 5.0.2. The environment monitoring schedules for reporting month and coming month are presented in *Appendix 5.1*.

5.1 Noise Monitoring Results

5.1.1. The noise monitoring results for Contract no. CV/2012/07 are summarized in *Table 5.1* below:

Date	Time	Location	Leq (dB)	Limit Level
2 Eab 40	13:08	NM1	66.3	75
2-Feb-16	14:16	NM2	64.7	65
10 Eab 10	8:22	NM1	67.1	75
12-Feb-16	9:31	NM2	64.9	65
18-Feb-16	8:43	NM1	68.1	75
10-Feb-10	9:52	NM2	64.8	65
24-Feb-16	8:31	NM1	67.9	75
24-rep-16	9:40	NM2	64.9	65
	Limit Level		65 / 70 /75*	

Table 5.1 Summary of Noise Monitoring Results at NM1 and NM2

Note :

- 70dB(A) and 65 dB(A) for schools during normal teaching periods and school examination periods, respectively.
- 5.1.2. Day time period noise monitoring was conducted at the Tin Wan House (NM1) and Ning Po No.2 College (NM2). In the reporting month, school examination is undertaken at Ning Po No.2 College (NM2) from 1 26 February 2016. Therefore, the noise Limited Level during that date would be reduced to 65dB(A).
- 5.1.3. Noise monitoring results measured in this reporting period are reviewed and summarized. No exceedance was recorded in reporting month. Details of noise monitoring results and graphical presentation can be referred in <u>Appendix 5.2</u>.

5.2 Air Monitoring Results

5.2.1. The air monitoring results are summarized in *Table 5.2* and *Table 5.3* below. No exceedance was recorded in the reporting month.

 Table 5.2
 Summary of Air Monitoring Results at AQM1 - 24 hr TSP Monitoring

Date	Time	TSP Level, (μg /m³)
1-Feb-16	8:00	24
5-Feb-16	8:00	31
11-Feb-16	8:00	113
17-Feb-16	8:00	50
23-Feb-16	8:00	38
29-Feb-16	8:00	158
Actior	n Level	200
Limit	Level:	260

Date	Time	TSP Level, (µg /m³)
2-Feb-16	13:00	88
2-Feb-16	14:10	110
2-Feb-16	15:30	81
6-Feb-16	8:05	81
6-Feb-16	9:15	104
6-Feb-16	10:20	98
12-Feb-16	8:10	77
12-Feb-16	9:21	79
12-Feb-16	11:00	70
18-Feb-16	8:20	74
18-Feb-16	9:30	43
18-Feb-16	10:45	51
24-Feb-16	8:40	57
24-Feb-16	9:45	49
24-Feb-16 10:50		25
Actio	n Level	197
Limit	t Level:	500

5.2.2. Air monitoring results measured in this reporting period are reviewed and summarized. No exceedance was recorded in reporting month. Details of air monitoring results can be referred in *Appendix 5.3*.



5.3 Waste Monitoring Results

5.3.1. Inert and non-inert C&D waste were disposed of in this reporting month. Details of the waste flow table are summarized in *Table 5.4.*

Table 5.4 Details of Waste Disposal for Contract no. CV/2012/07

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	0.00570	11.71114	ТКО137
Inert C&D materials recycled, m ³	0	0	N/A
Non-inert C&D materials disposed, m ³	0	0	N/A
Non-inert C&D materials recycled, kg	0	34.54	N/A
Chemical waste disposed, kg	0	0	N/A
General refuse,m ³	0.00374	0.06976	NENT



6. Compliance Audit

6.0.1. The Event Action Plan for construction noise, air quality and water quality are presented in Appendix 6.1.

6.1 Noise Monitoring

6.1.1. No exceedance was recorded in the reporting month.

6.2 Air Monitoring

6.2.1. No exceedance was recorded in the TSP monitoring in the reporting month.

6.3 Review of the Reasons for and the Implications of Non-compliance

6.3.1. There was no non-compliance from the site audits in the reporting period. The observations and recommendations made in each individual site audit session were presented in Section 7.

6.4 Summary of action taken in the event of and follow-up on non-compliance

6.4.1. There was no particular action taken since no project-related non-compliance was recorded from the site audits and environmental monitoring in the reporting period.



7. Environmental Site Audit

7.0.1. According to EM&A Manual stipulation, the regular weekly site inspections on 2, 12, 16 and 23 February 2016 were carried out by ET, IEC, the Contractor and ARUP for Contracts no. CV/2012/07 to ensure the environmental performance. Observations and findings are summarized in *Table 7.1*.

Table 7.1 Summary of Environmental Inspections for Contract no. CV/2012/07

Date	Observations	Follow-Up
2 - Feb - 2016	R1: Contractor was reminded to keep the site	The findings were rectified
	clean and tidy during Chinese New Year	before inspection on 12
	holiday.	February 2016
12 - Feb - 2016	R1: The catch pit and U-channel at C2 should	The findings were rectified
	be cleaned regularly.	before inspection on 1 March
		2016
16 - Feb - 2016	No particular finding.	N/A
23 - Feb - 2016	Contractor was reminded to remove debris in	The findings were rectified
	the U-channel regularly.	before inspection on 1 March
		2016



8. Complaints, Notification of Summons and Prosecution

- 8.0.1. No complaint and notification of summons or successful prosecutions were recorded in this reporting month.
- 8.0.2. The details of cumulative complaint log and updated summary of complaints are presented in *Appendix 8.1*.
- 8.0.3. Cumulative statistic on complaints and successful prosecutions are summarized in *Table 8.1* and *Table 8.2* respectively.

Table 8.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints				
February 2016	0				
Project-to-Date	1				

Table 8.2 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	-	0	0
Noise	-	0	0
Waste	-	0	0
Total	-	0	0



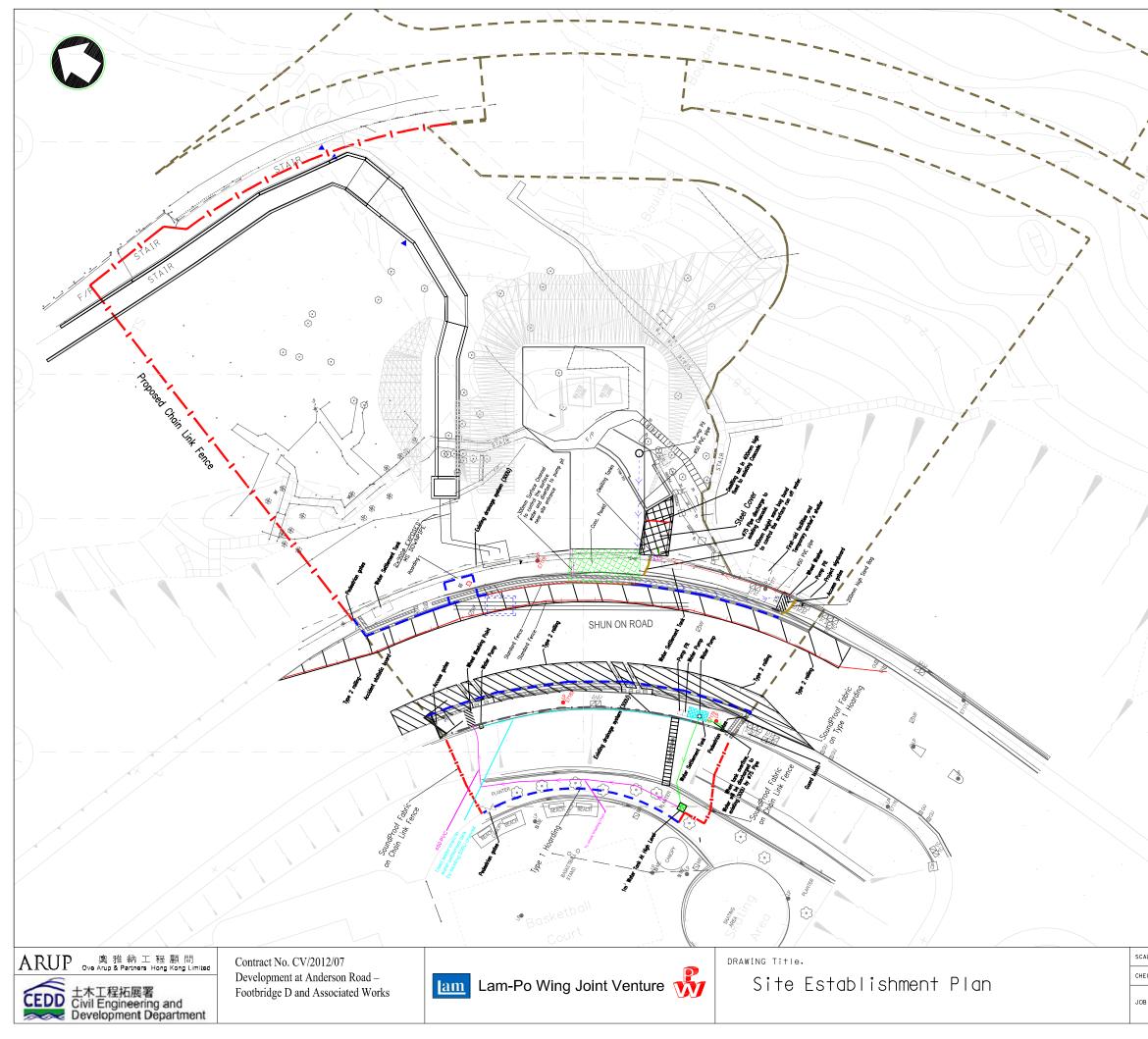
9. Conclusion

- 9.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 9.0.2. No construction air and noise monitoring results that triggered the Limit Level and Action level was recorded. No complaint of air and noise were received by the ARUP and the contractor. Furthermore, no notification of summons or successful prosecution was received in this reporting month.
- 9.0.3. Construction noise should be a key environmental impact during the works. The noise mitigation measures such as use of quiet plants and installation of temporary noise barrier at the construction noise predominate area should be fully implemented as accordance with the EM&A requirement. Moreover, breaking works should be the potential construction dust impact since the construction site located nearby residential area of Shun Tin Estate. It is reminded that mitigation measures for dust should be properly implemented.



Figure 2.1

Project Layout



NOTES:

- 1. This drawing shall be read in conjunction with Drawing 24711/1052.
- 2. The location of fencing and hoarding is indicative only. The exact location is approved on site by Engineer.
- 3. For Detail of Access gate refer to CEDD Standard Drawing No. C1007.
- 4. Dimensions Are in Meters Unless Otherwise Shown.
- 5. The surface water inside Portion C3 will be collected by a pump pit and pump into water settlement tank for recycle purpose. In case the water inside the settlement tank is overflow, a @75 pipe will discharge the overflow water into existing 300U on slope toe.

Legend

 Proposed Chain Link Fence
 Proposed Safety Fence (Type A)
 Proposed Hoarding (Type I)
 Site Boundary

ALE	1:500 @ A3	DATE	30 Sept. 20	13
ЕСК	HUNG	DRAWN	Bobby	
		DRAWING N	o .	REV
3 NO.	CV/2012/07		SK011	I

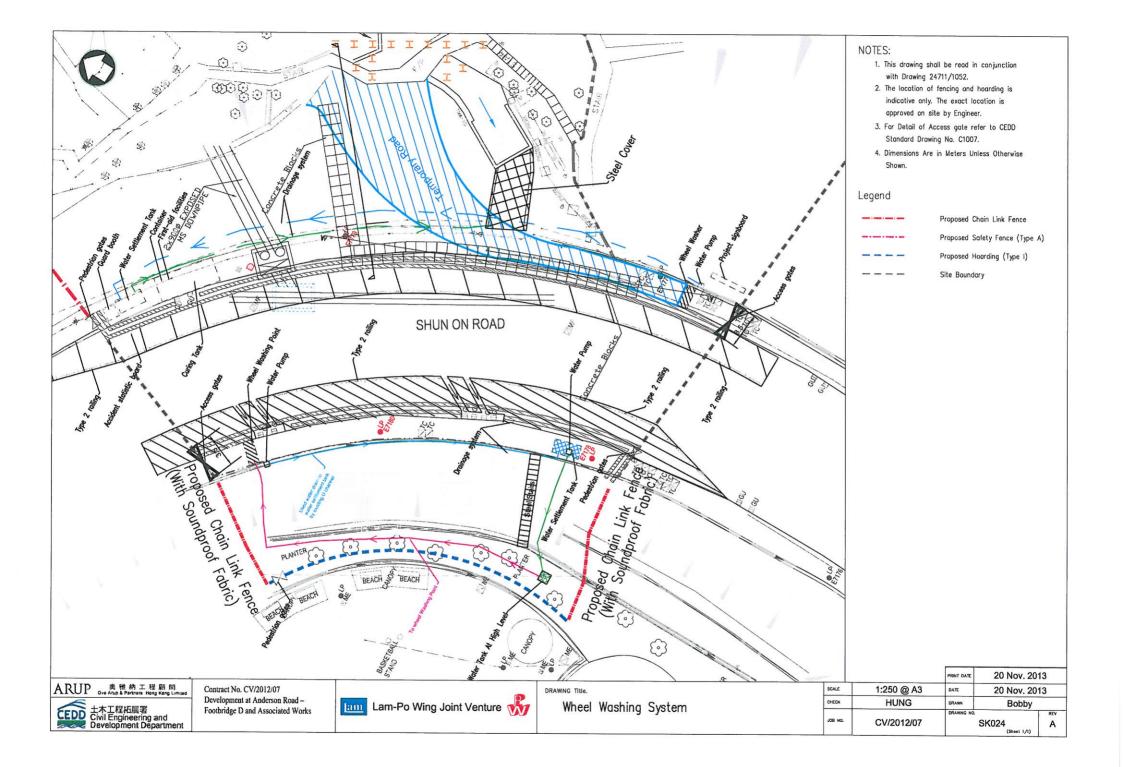




Figure 2.2

Project Organization Chart



Project Organization Chart

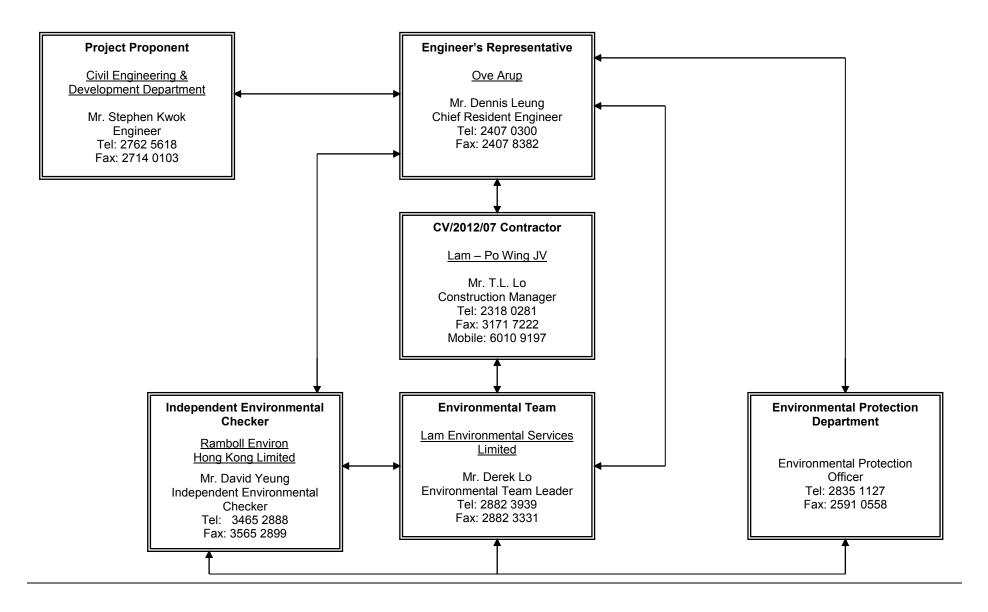
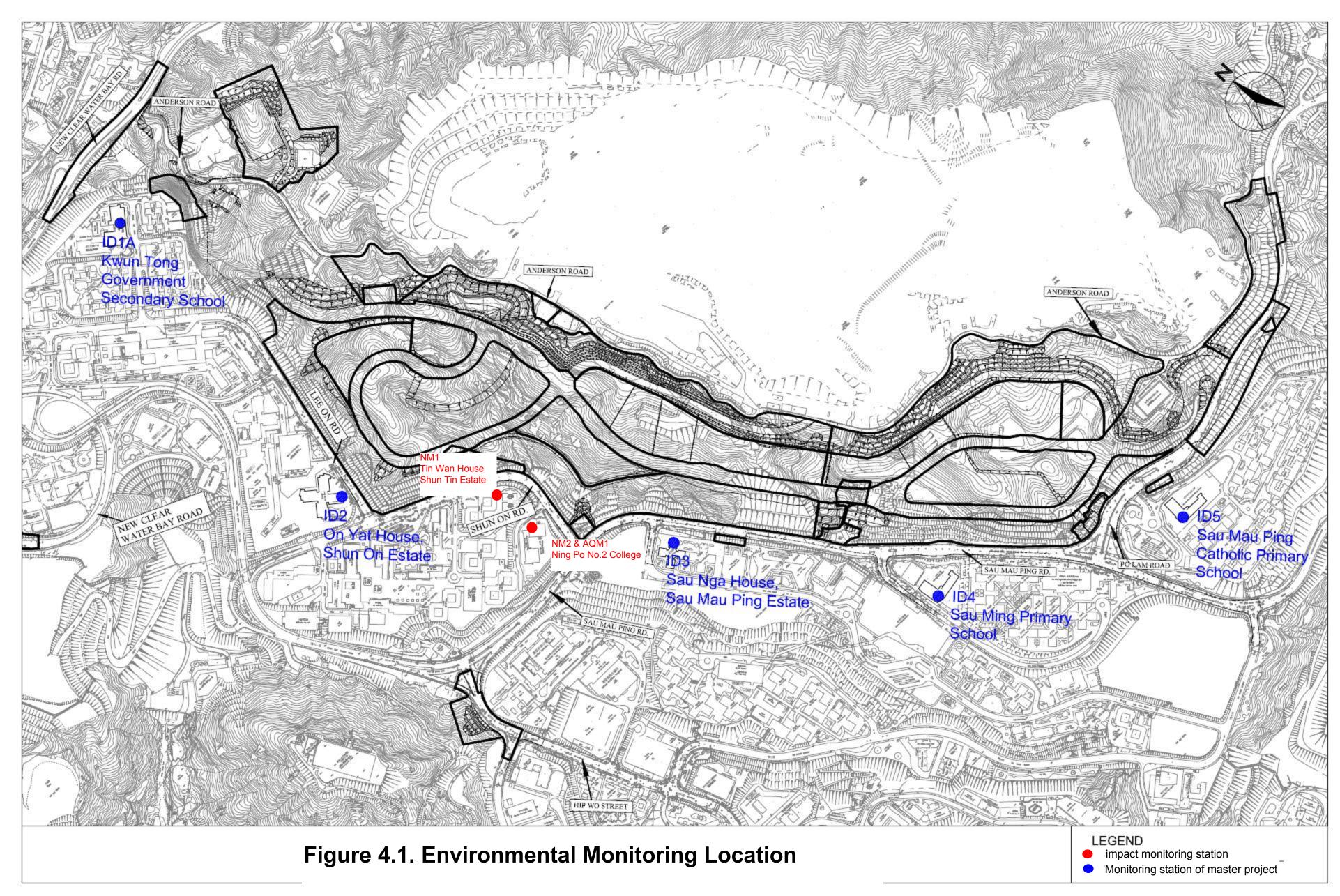




Figure 4.1

Locations of Environmental Monitoring Stations





Appendix 3.1

Environmental Mitigation Implementation Schedule



Environmental Mitigation Implementation Schedule

Implementation Schedule for Construction Dust Control

 Log Ref.	Location (duration/ completion of	Funding Agent	ent Implementation Agent			Relevant Legislation & Guidelines	
		measures)			D	С	
S1, S2.8	 Site Practice Mean vehicle speed of haulage trucks at 10 km/hr. Twice daily watering of all open site areas. Regular watering (once every 1 hour) of all site roads and access roads with frequent truck movement. Tarpaulin covering of all dusty vehicle loads transported to, form and between site locations. Establishment and use of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary. Suitable side and tailboards on haulage vehicles. Watering of temporary stockpiles. Blasting Use of select aggregate and fines to stem the charge with drill holes and watering of blast face. Use of vaccum extraction drilling methods. Carefully sequenced blasting. Crushing Fabric filters installed for the crushing plant. Water sprays on the crusher. Loading and Unloading Points, and conyeyor Belt System Water sprays at all fixed loading and unloading points (at the crusher and conveyor belts). The loading point at the crusher is enclosed with dust curtains are used for controlling dust. When transferring materials from conveyor belt or crusher to the dump trucks, chutes or dust curtains are used for controlling dust.	All Construction sites (late 2007 to 2016)	CEDD	Lam – Po Wing JV			TM on EIA Process, APCO, Air Pollution Control (Construction Dust) Regulation

* All recommendations and requirements are summarized from approved EIA resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project,



EIA EM&A Ref. Log Ref.		Location (duration/ completion of	Funding Agent	Implementation Agent	Implementation Stages**		Relevant Legislation & Guidelines	
			measures)			D	С	
\$3.7	S1, S3.7	 Site Formation Silenced powered mechanical equipment (PME) for most equipment5 (including drill rig, backhoe, dump truck, breaker and crane) and the decrease of percentage on time usage of drill rig among the Central Area form 50% to 40% is prosed. Temporary movable noise barrier shall be used to shield the noise emanating from the drilling rig in order to provide adequate shielding for the affected NSRs. 	All Construction sites (late 2007 to 2016)	CEDD	Lam – Po Wing JV	J	J	TM on EIA Process, NCO, TM on Noise from Construction Work other than Percussive Pilling, ProPECC Note PN2/93

Implementation Schedule for Construction Noise Control

* All recommendations and requirements are summarized from approved EIA resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project,



Implementation Schedule for	Water Quality Control
-----------------------------	-----------------------

EIA Ref.	EM&A Log Ref.		Location (duration/ completion of	Funding Agent	Implementation Agent	Implementation Stages**		Relevant Legislation & Guidelines
			measures)			D	С	
S6.4	S1	 Construction Phase All active working areas should be bounded to retain storm water with sufficient retention time to ensure that suspended solids are not discharged from the site in concentrations above those specified in the TM for the Victor Harbour (Phase I) WCZ. All fuel storage areas should be bounded with drainage directed to an oil interceptor. Separate treatment facilities may be required for effluent from site offices, toilets (unless chemical toilets are used) and canteens. Discharged wastewater from the construction sites to surface water and /or public drainage systems should be controlled through licensing. Discharges should follow fully the terms and conditions in the licences. Relevant practice for dealing with various typr of construction discharges provided in EPD's ProPECC Note 1/94 should be adopted. 	All Construction sites (late 2007 to 2016)	CEDD	Lam – Po Wing JV	J	J	TM on EIA Process, WPCO, ProPECC Note PN 1/94

* All recommendations and requirements are summarized from approved EIA resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project,



EIA Ref.	EM&A Log Ref.		Location (duration/ completion of	Funding Agent	Implementation Agent	Implementation Stages**		Relevant Legislation & Guidelines
			measures)			D	С	
S8.4	S1,S4	 Waste Disposal Different types of wastes should be segregated, stored, transported and disposed of proper practice of waste management. Sorting of wastes should be done on-site. Different types of wastes should be segregated and stored in different stockpiles, containers or skips to enhance recycling of materials and proper disposal of wastes. Excavated spoil should be used as much as possible to minimize off-site fill material requirements and disposal of spoil. During road transportation of excavated spoil, vehicles should be installed at all site exits together with regular qatering of the site access roads. Chemical waste should be recycled on-site or removed by licenced companies. It should be handled according to the Code of practice on the packaging, Labelling and Storage of Chemical Wastes. When off-site disposal is required, it should be collected and delivered by licenced contractors to Tsing Yi Chemical Waste Treatment Facility and disposed of in accordance with the Chemical Waste (General) Regulation. Necessary mitigation measures should be adopted to prevent the uncontrolled disposal of chemical and hazardous waste into air, soil, surface waters and ground waters. 	All Construction sites (late 2007 to 2016)	CEDD	Lam – Po Wing JV	J	J	TM on EIA Process, WDO, DGO, Waste Disposal (Chemical Waste) (General) Regulation

Implementation Schedule for Construction Waste Management



Waste Storage			
 Chemical material storage areas should be bounded, constructed of impervious materials, and have the capacity to contain 120 percent of the total volume of the containers. Indoor storage areas must have sufficient ventilation to prevent the build-up of fumes, and must be capable of evacuating the space in the event of an accidental release. Outdoor storage areas must be covered with a canopy or contain provisions for the safe removal of rainwater. In both cases, storage areas must not be connected to the foul or stormwater sewer system. 			
 Dangerous materials as defined under the DGO, including fuel, oil and lubricants, should be stored and properly labeled on site in accordance with the requirements in the DGO. If transportation of hazardous materials is necessary, hazardous materials, chemical wastes and fuel should be packed or stored in containers or vessels of suitable design and construction to prevent leakage, spillage or escape. 			
 Human waste should be discharged into septic tanks provided by the contractors and removed regularly by a hygiene services company. Refuse containers such as open skips should be provided at every work site for use by the workforce; On-site refuse collection points must also be provided. 			

* All recommendations and requirements are summarized from approved EIA resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project,



Appendix 4.1

Action and Limit Level



Action and Limit Level

Action and Limit Level for Noise Monitoring

Time Period	Action Level	Limit Level	
07:00 – 19:00 hours on normal weekdays	When one documented complaint is received.	75 dB(A)/ 70 dB(A)/ 65 db(A) ^{Note 1}	

Note 1:

- 70dB(A) and 65 dB(A) for schools during normal teaching periods and school examination periods, respectively.

- If works are to be carried out during the restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

Action and Limit Level for Air Monitoring

Monitoring Location	1-hour TSP Level in μ g/m ³ 2		24-hour TSP Level in μ g/m ³		
	Action Level	Limit Level	Action Level	Limit Level	
AQM1	197	500	200	260	



Appendix 4.2

Copies of Calibration Certificates



Tel : (852) 2873 6860 Fax : (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:	15CA0312 03		Page	1	of	2
Item tested						
Description:	Sound Level Meter (Microphone			
Manufacturer:	CESVA Instruments	s.l. ,	CESVA			
Type/Model No.:	SC-20e	1	C-130			
Serial/Equipment No.:	T217501	,	12624			
Adaptors used:	.	,	-			
Item submitted by						
Customer Name:	Pilot Testing Limited					
Address of Customer:						
Request No.:	-					
Date of receipt:	12-Mar-2015					
Date of test:	13-Mar-2015					
Reference equipment	used in the calibra	tion				
	Model:	Serial No.	Expiry Date:		Traceal	hle to:
Description:	woder.	ocharito.	LApity Date.		Tracca	010 10.
1	B&K 4226	2288444	20-Jun-2015		CIGISM	
Multi function sound calibrator						EC
Multi function sound calibrator Signal generator	B&K 4226	2288444	20-Jun-2015		CIGISM	EC
Description: Multi function sound calibrator Signal generator Signal generator Ambient conditions	B&K 4226 DS 360	2288444 33873	20-Jun-2015 09-Apr-2015		CIGISM	EC
Multi function sound calibrator Signal generator Signal generator	B&K 4226 DS 360	2288444 33873	20-Jun-2015 09-Apr-2015		CIGISM	EC
Multi function sound calibrator Signal generator Signal generator Ambient conditions	B&K 4226 DS 360 DS 360	2288444 33873	20-Jun-2015 09-Apr-2015		CIGISM	EC

Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

Huang Jian Min/Feng Jun Qi

13-Mar-2015 Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

Date:

© Soils & Materials Engineering Co., Ltd.

Form No.CARP152-1/Issue 1/Rev.C/01/02/2007

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 Website: www.cigismec.com E-mail: smec@cigismec.com

Tel : (852) 2873 6860 Fax : (852) 2555 7533



Coverage

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

15CA0312 03

Page 2 of

2

Evenended

1, **Electrical Tests**

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertanity (dB)	Coverage Factor
Self-generated noise	А	Pass	0.3	
Sell-generated holse	C	Pass	0.8	2.1
	Lin	N/A	N/A	2
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
Emounty range for Loq	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	A	Pass	0.3	
	С	Pass	0.3	
	Lin	N/A	N/A	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	N/A	N/A	
	Repeated at frequency of 100 Hz	N/A	N/A	
Time averaging	1 ms burst duty factor 1/10 ³ at 4kHz	Pass	0.3	
0 0	1 ms burst duty factor 1/10 ⁴ at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertanity (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

Response to associated sound calibrator 3,

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.



The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

© Soils & Materials Engineering Co., Ltd.

Form No CARP152-2/Issue 1/Rev C/01/02/2007

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com Tel : (852) 2873 6860 Fax : (852) 2555 7533

A CIGIS GROUP COMPANY

Test Data for So	und Level Me	eter				Page 1 of 5
Sound level me	eter type:	SC-20e	Serial No.	T217501	Date	13-Mar-2015
Microphone	type:	C-130	Serial No.	12624		
					Report	:: 15CA0312 03

SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting	17.3	dB
Noise level in C weighting	21.6	dB

LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals.(SLM set to LEQ/SPL)

Reference/Expected level	Actual level		Tolerance	Devia	Deviation		
Reference/Expected lever	non-integrated	integrated		non-integrated	integrated		
dB	dB	dB	+/- dB	dB	dB		
94.0	94.0	94.0	0.7	0.0	0.0		
99.0	99.0	99.0	0.7	0.0	0.0		
104.0	104.0	104.0	0.7	0.0	0.0		
109.0	109.0	109.0	0.7	0.0	0.0		
114.0	114.0	114.0	0.7	0.0	0.0		
119.0	119.0	119.0	0.7	0.0	0.0		
124.0	124.0	124.0	0.7	0.0	0.0		
125.0	125.0	125.0	0.7	0.0	0.0		
126.0	126.0	126.0	0.7	0.0	0.0		
127.0	127.0	127.0	0.7	0.0	0.0		
128.0	127.9	127.9	0.7	-0.1	-0.1		
129.0	128.9	128.9	0.7	-0.1	-0.1		
130.0	129.9	129.9	0.7	-0.1	-0.1		
89.0	89.0	89.0	0.7	0.0	0.0		
84.0	84.0	84.0	0.7	0.0	0.0		
79.0	79.0	79.0	0.7	0.0	0.0		
74.0	74.0	74.0	0.7	0.0	0.0		
69.0	69.0	69.0	0.7	0.0	0.0		
64.0	64.0	64.0	0.7	0.0	0.0		
59.0	59.0	59.0	0.7	0.0	0.0		
54.0	53.9	53.9	0.7	-0.1	-0.1		
49.0	48.9	48.9	0.7	-0.1	-0.1		
44.0	43.9	43.9	0.7	-0.1	-0.1		
39.0	38.9	38.9	0.7	-0.1	-0.1		
34.0	33.9	33.9	0.7	-0.1	-0.1		

Form No CAWS 152/Issue 1/Rev. B/01/02/2007



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com CIGISME(

Tel : (852) 2873 6860

Fax : (852) 2555 7533

A CIGIS GROUP COMPANY

Page 2 of 5

Test Data for Sound Level Meter

Sound level meter type: Microphone type:	SC-20e C-130		Serial No. Serial No.	T217501 12624	Date Repo	13-Mar-2015 rt: 15CA0312 03
33.0	33.0	33.0	0.7		0.0	0.0
32.0	32.1	32.1	0.7		0.1	0.1
31.0	31.1	31.1	0.7		0.1	0.1
30.0	30.1	30.1	0.7		0.1	0.1

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
30-130	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
30-130	32.0	32.1	0.7	0.1
30-130	128.0	127.9	0.7	-0.1

FREQUENCY WEIGHTING TEST

The frequency response of the weighting netwoks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL. Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerar	nce(dB)	Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.4	1.5	1.5	-0.2
63.1	94.0	67.8	67.7	1.5	1.5	-0.1
125.9	94.0	77.9	77.8	1.0	1.0	-0.1
251.2	94.0	85.4	85.3	1.0	1.0	-0.1
501.2	94.0	90.8	90.7	1.0	1.0	-0.1
1995.0	94.0	95.2	95.2	1.0	1.0	0.0
3981.0	94.0	95.0	95.0	1.0	1.0	0.0
7943.0	94.0	92.9	92.8	1.5	3.0	-0.1
12590.0	94.0	89.7	87.8	3.0	6.0	-1.9
Frequency weigh	nting C:					
Frequency	Ref. level	Expected level	Actual level	Tolerar	nce(dB)	Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	90.9	1.5	1.5	-0.1
63.1	94.0	93.2	93.0	1.5	1.5	-0.2
125.9	94.0	93.8	93.7	1.0	1.0	-0.1
251.2	94.0	94.0	93.9	1.0	1.0	-0.1

(c)Soils Materials Eng. Co., Ltd

Form No : CAWS 152/Issue 1/Rev. B/01/02/2007



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓, 12樓, 13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com

Tel : (852) 2873 6860 Fax : (852) 2555 7533

A CIGIS GROUP COMPANY

Page 3 of 5

ound level me	eter type:	SC-20e		Serial No.	T21	7501	Date	13-Mar-2015
licrophone	type:	C-130		Serial No.	126	24		
				A			Report:	15CA0312 03
501.2	94.0		94.0	94.0	1.0	1.0	0.0	
1995.0	94.0		93.8	93.8	1.0	1.0	0.0	
3981.0	94.0		93.2	93.2	1.0	1.0	0.0	
7943.0	94.0		91.0	90.9	1.5	3.0	-0.1	
12590.0	94.0		87.8	85.8	3.0	6.0	-2.0	

TIME WEIGHTING FAST TEST

Test Data for Sound Level Meter

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A. Maximum hold)

	(·····			
Ref. level	Expected level	Expected level Actual level		nce(dB)	Deviation
dB	dB	dB	+	-	dB
86.0	85.0	85.0	1.0	1.0	0.0

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A. Maximum hold)

inter alle eignal te eentanaeae.	(
Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation	
dB	dB	dB	+	-	dB	
86.0	81.9	81.9	1.0	1.0	0.0	

PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range. Positive polarities: (Weighting C, set the generator signal to single, Lcpmax)

			· · · · · · · · · · · · · · · · · · ·	
Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
89.0	89.0	88.5	2.0	-0.5
Negative polarities:				
Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
89.0	89.0	88.5	2.0	-0.5

RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency Amplitude: Burst repetition Tone burst sign	frequency:	40 Hz	per limit of the primar e wave of frequency 2		to INT)
	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time wighting	dB	dB	indication(dB)	+/- dB	dB
Slow	88.0+6.6	88.0	88.0	0.5	0.0

(c)Soils Materials Eng. Co . Ltd

Form No : CAWS 152/Issue 1/Rev. B/01/02/2007

The copyright of this report is owned by the Soils & Materials Engineering Co., Ltd. It may not be reproduced except with prior written approval of the issuing laboratory.



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com Tel : (852) 2873 6860

Fax : (852) 2555 7533

A CIGIS GROUP COMPANY

Test Data for Sou	ind Level Me	ter				Page 4 of 5
Sound level me	ter type:	SC-20e	Serial No.	T217501	Date	13-Mar-2015
Microphone	type:	C-130	Serial No.	12624	Report	15CA0312 03

TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst:	4000 Hz
--------------------------	---------

Duration of tone burst:	1 ms					
Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	100.0	100.0	99.9	1.0	-0.1	60s integ.
10000	90.0	90.0	89.9	1.0	-0.1	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference rar Test frequency: 4000 Hz

Integration time: 10 sec

The integrating sound level meter set to Leq:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	88.0	58.0	58.0	1.7	0.0

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	88.0	68.0	68.0	1.7	0.0

OVERLOAD INDICATION TEST

For SLM capable of operating in a non-integrating mode.

Test frequency: Amplitude: Burst repetition frequency: Tone burst signal:		 2000 Hz 2 dB below the upper limit of the primary indicator range. 40 Hz 11 cycles of a sine wave of frequency 2000 Hz. 					
Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation		
at overload (dB)	1 dB	3 dB	dB	dB	dB		
132.3	131.3	128.3	3.0	1.0	0.0		

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as follow The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference rar Test frequency: 4000 Hz Integration time: 10 sec Single burst duration: 1 msec **Rms** level Level reduced by Expected level Actual level Tolerance Deviation at overload (dB) 1 dB dB dB dB dB

(c)Soils Materials Eng. Co., Ltd



G/F, 9/F, 12/F, 13/F. & 20/F, Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com

Tel : (852) 2873 6860

Fax : (852) 2555 7533

A CIGIS GROUP COMPANY

Test Data for So	und Level Me	eter					Page 5 of 5
Sound level m Microphone	eter type: type:	SC-20e C-130		Serial No. Serial No.	T217501 12624	Date Report	13-Mar-2015 : 15CA0312 03
137.1	136.	1	96.1	96.1	2.2	0.0	

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level	Tolerar	nce (dB)	Deviation
Hz	dB	Measured (dB)	+	-	dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	77.9	1.0	1.0	0.0
8000	92.9	91.6	1.5	3.0	-1.3

-----END------





CERTIFICATE OF CALIBRATION

Certificate No.:	15CA1203 04-02		Page:	1	of	2
Item tested						
Description:	Acoustical Calibra	tor (Class 1)				
Manufacturer:	Rion Co., Ltd.					
Type/Model No.:	NC-73					
Serial/Equipment No.:	10707358					
Adaptors used:	-					
Item submitted by						
Curstomer:	Lam Geotechnics	Ltd.				
Address of Customer:	-					
Request No .:	-					
Date of receipt:	03-Dec-2015					
Date of test:	04-Dec-2015					
Reference equipment	used in the calib	ration				
Description:	Model:	Serial No.	Expiry Date:		Traceab	le to:
Lab standard microphone	B&K 4180	2341427	15-Apr-2016		SCL	
Preamplifier	B&K 2673	2239857	22-Apr-2016		CEPREI	
Measuring amplifier	B&K 2610	2346941	22-Apr-2016		CEPREI	
Signal generator	DS 360	61227	16-Apr-2016		CEPREI	
Digital multi-meter	34401A	US36087050	17-Apr-2016		CEPREI	
Audio analyzer	8903B	GB41300350	17-Apr-2016		CEPREI	
	53132A	MY40003662	16-Apr-2016		CEPREI	
Universal counter						
Ambient conditions						
	22 ± 1 °C					
Ambient conditions	22 ± 1 °C 50 ± 10 %					

Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on page 2 of this certificate.

Huang Jian Min/Feng Jun Qi

05-Dec-2015 Company Chop:



Comments: The results reported in this certificate refer to the conditon of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

Date:

Soils & Materials Engineering Co., Ltd.

Approved Signatory:

Form No.CARP156-1/Issue 1/Rev.D/01/03/2007

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.



Tel : (852) 2873 6860 Fax : (852) 2555 7533



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

15CA1203 04-02

Page: 2 of

2

Measured Sound Pressure Level 1,

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties

Frequency	Output Sound Pressure	Measured Output	Estimated Expanded
Shown	Level Setting	Sound Pressure Level	Uncertainty
Hz	dB	dB	dB
1000	94.00	94.05	0.10

Sound Pressure Level Stability - Short Term Fluctuations 2,

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz	STF = 0.002 dB
Estimated expanded uncertainty	0.005 dB

3. Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz	Actual Frequency = 992.8 Hz	
Estimated expanded uncertainty	0.1 Hz	Coverage factor k = 2.2

Total Noise and Distortion 4,

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz	TND = 0.3 %
Estimated expanded uncertainty	0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.



The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

© Soils & Materials Engineering Co., Ltd.	Form No.CARP156-2/Issue 1/Rev.C/01/05/2005
Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under th	e Hong Kong Laboratory Accreditation Scheme
(HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laborator	es. The results shown in this certificate were
determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation s	tipulate that the results shall be traceable to the
International System of Units (S.I.) or recognised measurement standards. This certificate	shall not be reproduced except in full.



Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	Ning Po No.2 College	Calbration Date	:	30-Jan-16
ID	:	AQM1	Calbration Due Date	:	30-Mar-16

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition								
Temperature, T _a		290		Kelvin	Pressure, P	a		1018 mmHg
			Orifice Tra	ansfer Sta	ndard Inform	nation		
Equipment No.		EL086 Slope, m _c 2.00072 Intercept, bc -0.01209						
Last Calibration Date		30-Jun-1	5		(Hx	P _a / 10	13.3 x 298	$(T_a)^{1/2}$
Next Calibration Date		30-Jun-1	6		=	m _c :	$x Q_{std} + b_c$	
Calibration of TSP								
Calibration	Mar	nometer R	eading	C	Q _{std}	Contin	nuous Flow	IC
Point	H (inches of water)		(m ³	/ min.)	min.) Record		(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)	
	(up)	(down)	(difference)	Х-	axis		(CFM)	Y-axis
1	6.3	6.3	12.6	1.8	.8087 52		52	52.8345
2	5.2	5.2	10.4	1.0	6438		42	42.6740
3	3.5	3.5	7.0	1.3	3497		31	31.4975
4	2.2	2.2	4.4	1.0	0713		23	23.3691
5	1.5	1.5	3.0	0.6	8856		16	16.2568
By Linear Regression of	Y on X							
	Slope, m	=	37.9	607	Int	ercept, b	=	7.9896
Correlation Co	pefficient*	=	0.99	932				
Calibration	Accepted	=	Yes/	No**				

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks :					
Calibrated by	:	LuLu Mar	Checked by	:	Derek Lo
Date	:	30-Jan-16	Date	:	30-Jan-16



TISCH ENVIRONMENTAL, INC. 145 SOUTH MIAMI AVE VILLAGE OF CLEVES, OH 45002 513.467.9000 877.263.7610 TOLL FREE 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Ji Operator		A Rootsmeter Orifice I.I		438320 0005	Ta (K) - Pa (mm) -	298 - 749.3
======================================	VOLUME START (m3) NA NA NA NA NA NA	VOLUME STOP (m3) NA NA NA NA NA NA	DIFF VOLUME (m3) 1.00 1.00 1.00 1.00 1.00	DIFF TIME (min) 1.3870 0.9830 0.8760 0.8340 0.6860	METER DIFF Hg (mm) 3.2 6.4 7.9 8.8 12.7	ORFICE DIFF H2O (in.) 2.00 4.00 5.00 5.50 8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9817 0.9775 0.9754 0.9743 0.9692	0.7078 0.9944 1.1135 1.1683 1.4128	1.4042 1.9859 2.2203 2.3286 2.8084	0.9957 0.9915 0.9894 0.9882 0.9830	0.7179 1.0086 1.1294 1.1849 1.4330	0.8919 1.2613 1.4101 1.4790 1.7837
Qstd slo intercep coeffici	t (b) = ent (r) =	1.99175 -0.00041 0.99991 Pa/760) (298/1	Qa slope intercept coefficie	t (b) =	1.24720 -0.00026 0.99991

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa] Qa = Va/Time

For subsequent flow rate calculations:

Qstd = $1/m\{ [SQRT(H2O(Pa/760)(298/Ta))] - b \}$ Qa = $1/m\{ [SQRT H2O(Ta/Pa)] - b \}$



Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month



Contract No. CV/2012/07 Development at Anderson Road - Footbridge D and Associated Works Area Environmental Monitoring Schedule February 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Feb 24 hr TSP	1hr TSP x 3	3-Feb			6-Feb 1hr TSP x 3
8-Feb	9-Feb		24 hr TSP	1hr TSP x 3	13-Feb
15-Feb		24 hr TSP	18-Feb 1hr TSP x 3 Noise		20-Feb 24 hr TSP
22-Feb	24 hr TSP	1hr TSP x 3	25-Feb	26-Feb	27-Feb
29-Feb 24 hr TSP	1hr TSP x 3	2-Mar	3-Mar	4-Mar	5-Mar
	1-Feb 24 hr TSP 8-Feb 15-Feb 22-Feb 24 hr TSP	1-Feb 2-Feb 24 hr TSP 1hr TSP x 3 Noise 9-Feb 8-Feb 9-Feb 15-Feb 16-Feb 22-Feb 24 hr TSP 29-Feb 1-Mar	1-Feb 2-Feb 3-Feb 24 hr TSP 1hr TSP x 3 Noise 8-Feb 9-Feb 10-Feb 15-Feb 16-Feb 24 hr TSP 15-Feb 16-Feb 24 hr TSP 22-Feb 24 hr TSP 17-Feb 24 hr TSP 16-Feb 24 hr TSP 24 hr TSP 16-Feb 24 hr TSP 24 hr TSP 10-Feb 10-Feb 24 hr TSP 16-Feb 24 hr TSP 24 hr TSP 10-Feb 24 hr TSP 24 hr TSP 1-Mar 2-Mar 24 hr TSP 1hr TSP x 3 2-Mar	1-Feb2-Feb3-Feb4-Feb24 hr TSP1hr TSP x 3 Noise9-Feb10-Feb24 hr TSP8-Feb9-Feb10-Feb24 hr TSP11-Feb15-Feb16-Feb24 hr TSP17-Feb1hr TSP x 3 Noise15-Feb22-Feb23-Feb24 hr TSP1hr TSP x 3 Noise22-Feb24 hr TSP1hr TSP x 3 Noise24-Feb25-Feb24 hr TSP1-Mar2-Mar3-Mar24 hr TSP1hr TSP x 31-Mar3-Mar	1.Feb 2.Feb 3.Feb 4.Feb 4.Feb 5.Feb 24 hr TSP 1hr TSP x 3 Noise 9.Feb 10.Feb 24 hr TSP 11.Feb 11.Feb 8.Feb 9.Feb 9.Feb 10.Feb 24 hr TSP 11.Feb 11.Feb 15.Feb 16.Feb 24 hr TSP 11.Feb 11.Feb 11.Feb 19.Feb 22.Feb 24 hr TSP 16.Feb 24 hr TSP 11.Feb 19.Feb 19.Feb 22.Feb 24 hr TSP 16.Feb 11.Fr TSP x 3 Noise 19.Feb 11.Feb 19.Feb 24 hr TSP 16.Feb 11.Fr TSP x 3 Noise 19.Feb 11.Feb 19.Feb 24 hr TSP 24 hr TSP 10.Feb 11.Feb 11.Feb 19.Feb 24 hr TSP 11.Fr TSP x 3 Noise 24.Feb 25.Feb 26.Feb 24 hr TSP 11.Mar 2.Mar 3.Mar 4.Mar

Noise Monitoring Station NM1: Tin Wan House NM2: Ning Po No. 2 College Air Monitoring Station AQM1: Ning Po No.2 College

am

Contract No. CV/2012/07 Development at Anderson Road - Footbridge D and Associated Works Area Tentative Environmental Monitoring Schedule March 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Feb	24 hr TSP	1-Mar 1hr TSP x 3 Noise	2-Mar	3-Mar		5-Mar 24 hr TSP
	7-Mar 1hr TSP x 3 Noise	8-Mar	9-Mar	10-Mar		12-Mar 1hr TSP x 3
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar 24 hr TSP	18-Mar 1hr TSP x 3 Noise	19-Mar
20-Mar	21-Mar		23-Mar 24 hr TSP	24-Mar 1hr TSP x 3 Noise	25-Mar	26-Mar
27-Mar	28-Mar	24 hr TSP	30-Mar 1hr TSP x 3 Noise	31-Mar		2-Apr 24 hr TSP

Noise Monitoring Station NM1: Tin Wan House NM2: Ning Po No. 2 College Air Monitoring Station AQM1: Ning Po No.2 College



Appendix 5.2

Noise Monitoring Results and Graphical Presentations



Contract No. CV/2012/07 Development at Anderson Road -Footbridge D and Associated Works Area

 JOB NO :
 CS_J2013-02_CV201207

 CLIENT :
 LPWJV

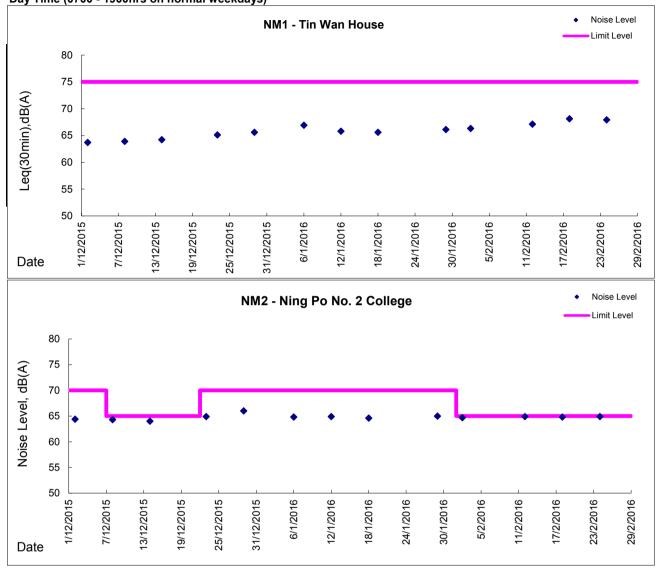
		Daytir	ne(07:00-19:00)		
Date	Time	Location	Leq (dB)	L10 (dB)	L90 (dB)
2-Feb-16	13:08	NM1	66.3	69.0	62.0
2-1 60-10	14:16	NM2	64.7	69.0	61.0
12-Feb-16	8:22	NM1	67.1	70.0	62.0
12-1 60-10	9:31	NM2	64.9	68.0	60.0
18-Feb-16	8:43	NM1	68.1	71.0	63.0
10-1 60-10	9:52	NM2	64.8	69.0	62.0
24-Feb-16	8:31	NM1	67.9	70.0	62.0
24-1 80-10	9:40	NM2	64.9	69.0	62.0

NM1 - Tin Wan House

NM2 - Ning Po No. 2 College



Graphic Presentation of Noise Monitoring Result Day Time (0700 - 1900hrs on normal weekdays)





Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations

Location: AQM1-Ning Po No.2 College

Report on 24-hour TSP monitoring Action Level (µg/m3) - 200 Limit Level (µg/m3) - 260

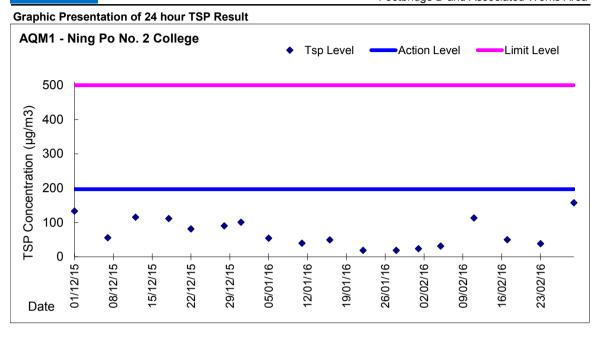
Date	Sampling	Weather	Filter	Filter Weig	Filter Weight, g		Elapse Time, hr		Flow	/ Rate, m ³	[/] /min	Total	TSP Level,
	Time	Condition	paper no.	Initial	Final	Initial	Final	Time, hr	Initial, Q _{si}	Final, Q _{sf}	Average	/olume, m	µg/m³
1-Feb-16	8:00	Cloudy	014585	2.8086	2.8540	4471.08	4495.08	24.00	1.32	1.32	1.32	1901	24
5-Feb-16	8:00	Fine	014584	2.8205	2.8799	4498.13	4522.13	24.00	1.31	1.32	1.31	1892	31
11-Feb-16	8:00	Cloudy	014573	2.8356	3.0482	4525.13	4549.13	24.00	1.30	1.30	1.30	1874	113
17-Feb-16	8:00	Fine	014577	2.8197	2.9229	4552.14	4576.14	24.00	1.43	1.43	1.43	2063	50
23-Feb-16	8:00	Cloudy	014618	2.8437	2.9160	4579.14	4603.14	24.00	1.31	1.32	1.31	1893	38
29-Feb-16	8:00	Fine	014623	2.8252	3.1224	4606.14	4630.14	24.00	1.31	1.31	1.31	1885	158

Report on 1-hour TSP monitoring Action Level (μg/m3) - 197 Limit Level (μg/m3) - 500

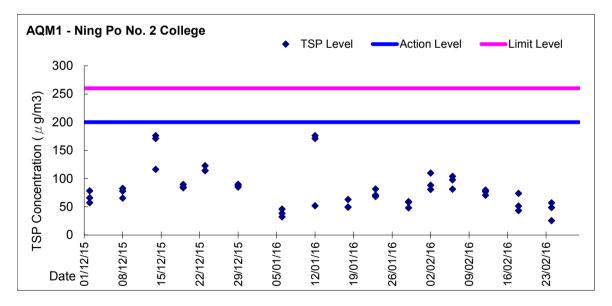
Date	Sampling	Weather	Filter	Filter Weig	ht, g	Elapse Tim	ie, hr	Sampling	Flov	v Rate, m ^a	³/min	Total	TSP Level,
	Time	Condition	paper no.	Initial	Final	Initial	Final	Time, hr	Initial, Q _{si}	Final, Q _{sf}	Average	/olume, m	µg/m ³
2-Feb-16	13:00	Cloudy	014583	2.8041	2.8111	4495.13	4496.13	1.00	1.32	1.32	1.32	79	88
2-Feb-16	14:10	Cloudy	014582	2.8103	2.8190	4496.13	4497.13	1.00	1.32	1.32	1.32	79	110
2-Feb-16	15:30	Cloudy	014581	2.8035	2.8099	4497.13	4498.13	1.00	1.32	1.32	1.32	79	81
6-Feb-16	8:05	Fine	014580	2.8177	2.8241	4522.13	4523.13	1.00	1.32	1.32	1.32	79	81
6-Feb-16	9:15	Fine	014572	2.8228	2.8310	4523.13	4524.13	1.00	1.32	1.32	1.32	79	104
6-Feb-16	10:20	Fine	014579	2.8268	2.8345	4524.13	4525.13	1.00	1.32	1.32	1.32	79	98
12-Feb-16	8:10	Cloudy	014578	2.8191	2.8251	4549.14	4550.14	1.00	1.30	1.30	1.30	78	77
12-Feb-16	9:21	Cloudy	014574	2.8230	2.8292	4550.14	4551.14	1.00	1.30	1.30	1.30	78	79
12-Feb-16	11:00	Cloudy	014576	2.8254	2.8309	4551.14	4552.14	1.00	1.30	1.30	1.30	78	70
18-Feb-16	8:20	Fine	014575	2.8091	2.8149	4576.14	4577.14	1.00	1.31	1.31	1.31	79	74
18-Feb-16	9:30	Fine	014619	2.8519	2.8553	4577.14	4578.14	1.00	1.31	1.31	1.31	79	43
18-Feb-16	10:45	Fine	014625	2.8166	2.8210	4578.14	4579.14	1.00	1.43	1.43	1.43	86	51
24-Feb-16	8:40	Cloudy	014620	2.8305	2.8352	4603.14	4604.14	1.00	1.38	1.38	1.38	83	57
24-Feb-16	9:45	Cloudy	014621	2.8428	2.8469	4604.14	4605.14	1.00	1.41	1.41	1.41	84	49
24-Feb-16	10:50	Cloudy	014622	2.8288	2.8308	4605.14	4606.14	1.00	1.32	1.32	1.32	79	25

am

Contract No. CV/2012/07 Development at Anderson Road -Footbridge D and Associated Works Area



Graphic Presentation of 1 hour TSP Result





Appendix 6.1

Event Action Plans



Event/Action Plan for Construction Noise

EVENT		A	CTION	
	ET	IC(E)	ER	CONTRACTOR
Exceedance for Action Level	 Notify IC(E) and Contractor; Carry out investigation; Report the results of investigation to IC(E) and Contractor; Discuss with Contractor and formulate remedial measures;; Increase monitoring frequency to check mitigation effectiveness. 	 Review the analysed results submitted by ET; Review the proposed remedial measures by the Contractor and advise ER accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented. 	 Submit noise mitigation proposals to IC(E); Implement noise mitigation proposals.
Exceedance for Limited Level	 Notify IC(E), ER, EPD and Contractor; Identify sources; Repeat measurements to confirm finding; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IC(E), ER and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct Contractor to stop that portion of work until the exceedance is abated. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IC(E) within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Event / Action Plan for Construction Air Quality

EVENT		ACTION		_
	ET	IC(E)	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	 Identify source; Inform IC(E) and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	 Identify source; Inform IC(E) and ER; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IC(E) and Contractor for remedial actions required; If exceedance continues, arrange meeting with IC(E) and ER; If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Submit proposals for remedial actions to IC(E) within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
LIMITED LEVEL		1		
1. Exceedance for one sample	 Identify source; Inform ER, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	 Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IC(E), agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IC(E) within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Appendix 6.2

Summary for Notification of Exceedance_Air and Noise

Summary for Notification of Exceedance

Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Summary for Notification of Exceedance

Ref. No.	Date	Time	Location	Construction Noise Level	Unit	Action Level	Limit Level	Follow-up action
N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A



Appendix 8.1

Complaint Log



Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Out	tcome	Status
140813	13 Aug 2014	Resident complained via hotline by RE	The slope opposite to Tin Wan House, Shun Tin Estate, Kowloon	Noise was emanated from the construction site at the slope opposite to Tin Wan House, Shun Tin Estate, Kowloon at around 1620 hrs on 13 Aug 2014 and requested follow up action by relevant department.	2)	RSS notified ET on 15 Aug 2014 ET confirmed with site staff the major noise generating construction activities undertaken at works area at the slope opposite to Tin Wan House including slope works After reviewing the noise monitoring data at monitoring stations (NM1 - Tin Wan House and NM2 - Ning Po No.2 College), no limit level exceedances were recorded during routine noise monitoring event on 14 Aug 2014. As similar construction works activities conducted on 13 Aug 2014 was continued across the above monitoring period, the noise emanated from the construction activities under Contract CV/2012/07 was considered to comply with the statutory requirement. In addition, weekly environmental site inspection was conducted on 12 Aug 2014 at around 10:00. According to the inspection record, no particular observation regarding noise impact was recorded and the mitigation measures including erection of temporary noise barrier was observed in place.	Closed



Appendix 9.1

Construction Programme

Master Programme For Contract No. CV/2012/07	
Development at Anderson Road - Footbridge D and Associated Works	

D WBS	Task Name	Duration	Start	Finish Predecessors	Successors Tot	al Slack De	2013 c Jan FebMarAprMayJun Jul AugSepOctNovDe	2014 ec Jan FebMarAprMayJun Jul AugSepOctNovDec Ja
1 1	Development at Anderson Road - Footbridge D and Associated Works		Thu 31/01/13			0 days		
2 1.1	PRELIMINARY WORK	578 days	Thu 31/01/13	Sun 01/02/15		541 days	-	
3 1.1.1	Application of XP, Site Access from Highways	140 days	Thu 31/01/13	Wed 31/07/13	88	889 days	······	
4 1.1.2	Tree Survey	12 days	Mon 18/02/13	Sat 02/03/13	5	0 days		
5 1.1.3	Transplant	30 days	Mon 04/03/13	Thu 11/04/13 4		0 days		
5 1.1.4	Air & noise baseline monitoring	50 days	Mon 18/02/13	Sat 20/04/13	46,47	8 days		
1.1.5	Record Survey, Condition Survey and Setting Ou	t 90 days	Thu 31/01/13	Thu 30/05/13		1029 days		
3 1.1.6	Erect Fencing and Hoarding As Directed		Mon 08/04/13	Tue 04/06/13	16	491 days		
) 1.1.7	Design and material submission	120 days	Thu 31/01/13	Sat 06/07/13	38,79	128 days		
0 1.1.8	Handover of Portion A, B & Cl	0 days	Sat 28/09/13	Sat 28/09/13	61	109 days	♦_28/09	
1 1.1.9	Handover of Portion E1	0 days	Fri 31/05/13	Fri 31/05/13		1029 days	♦ 31/05	
2 1.1.10	Handover of Portion E2	0 days	Sun 01/02/15	Sun 01/02/15		541 days		
3 1.2	Section 1		Mon 08/04/13			20 days		·
.5 1.2 .4 1.2.1	Lift Tower D-A		Wed 05/06/13			491 days		
	Method statement and material submission			Tue 29/10/13 18SS-60 days		905 days		
5 1.2.1.1			Wed 05/06/13		17SS	491 days		
6 1.2.1.2	Excavation for Raft footing				1733	491 days		
7 1.2.1.3	Rock Joint Mapping for founding material of		Wed 05/06/13	Tue 03/12/13 16SS				
8 1.2.1.4	Construct Raft footing		Wed 04/12/13	Fri 10/01/14 17	19,15SS-60 days	491 days		
.9 1.2.1.5	Construct RC Lift Tower and Retaining Wall		Sat 11/01/14	Sat 26/04/14 18	20,41	491 days		·
20 1.2.1.6	Erect Steelwork for Lift Shaft			Tue 22/07/14 19	21,22	491 days		
1.2.1.7	Installation of Lift	100 days	Wed 23/07/14	Wed 19/11/14 20	22FF+5 days,23,24FS-60 days,54	491 days		
22 1.2.1.8	M&E Installation	100 days	Tue 29/07/14	Tue 25/11/14 20,21FF+5 day:	s 23,24FS-60 days	550 days		
23 1.2.1.9	T & C of M&E Equipment	30 days	Wed 26/11/14	Fri 02/01/15 21,22	24FF+7 days	553 days		
1.2.1.10	Finishing and Metal Works	100 days	Mon 15/09/14	Wed 14/01/15 21FS-60 days,22FS-60 days,23FF+7 days		550 days		
25 1.2.2	Lift Tower D-B	480 days	Tue 08/10/13	Mon 01/06/15		439 days		
26 1.2.2.1	Method statement and material submission	30 days	Tue 08/10/13	Tue 12/11/13 27SS-60 days		893 days		
27 1.2.2.2	Excavation for Raft footing	100 days	Wed 18/12/13	Tue 29/04/14 74	28SS,26SS-60 days	379 days		
28 1.2.2.3	Rock Joint Mapping for founding material of	raft footing 100 days	Wed 18/12/13	Tue 29/04/14 27SS	29	379 days		
29 1.2.2.4	Construct Raft footing	30 days	Wed 30/04/14	Thu 05/06/14 28	30	379 days		
30 1.2.2.5	Construct RC Lift Tower and Retaining Wall	80 days	Fri 06/06/14	Wed 10/09/14 29	31,41	379 days		
31 1.2.2.6	Erect Steelwork for Lift Shaft	70 days	Thu 11/09/14	Wed 03/12/14 30	32,33	379 days		
32 1.2.2.7	Installation of Lift	100 days	Thu 04/12/14	Mon 13/04/15 31	33FF,34,35FS-60 days,54	379 days		
Date: Mon 10 Prepared By: 7		Baseline Milestone ◇ Baseline Summary	*		Milestone Summary	*	Baseline Progress	
	act Start On 31-Jan-2013					Po Wi		

.

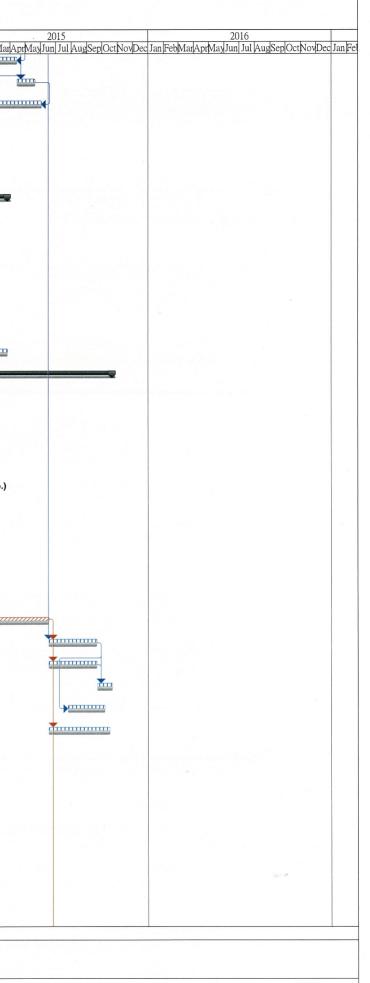
e

2015 [ayJun] Jul AugSepOctNovDec	2016 Jan FebMarAprMayJun Jul AugSepOctNovDec	Jan
	9	
- Signature		
	Start of	

4/1 3.1 Bridge Deck D.AB 553 days Ved 2400/15 Ved 2500/15 588 days 5/7 1.2.5.1 Method softwarent tod material administion 30 days Wed 2400/15 Tot 30005133885 60 days 1020 days 5/7 1.2.5.1 Method softwarent tod material administion 30 days Wed 2400/15 Tot 30005133885 60 days 1020 days 5/7 1.2.3.3 Concenting the Biblings on the 60 days Fei 1400/14 425 2001/15 99,7785 60 days 125 days 1/2.3.3 Exercing Seed bridge finanz 7 days The 1000 days Wed 2001/14 704 5001/19 48.52 days 1/2.3.3 Exercing Seed bridge finanz 7 days The 2010/14 44.552 days 406 days 1/2.3.4 Utit Twow D-G 72 days The 2010/14 40.52 days 405 days 1/2.3.4 Utit Twow D-G 72 days The 2010/15 40 days 40 days 1/2.4.2 Prechtil Advoorming on binxings 90 days The 2010/15 40 days 40 days 1/2.4.3 Denotish the existing strenture 30 days The 2010/14 40 days 40 days 1/2.4.4 <th></th> <th></th> <th colspan="8">Master Programme For Contract No. CV/2012/07 Development at Anderson Road - Footbridge D and Associated Works (Rev. 2)</th> <th></th>			Master Programme For Contract No. CV/2012/07 Development at Anderson Road - Footbridge D and Associated Works (Rev. 2)										
No. Dist. D		Name	Duration	Start	Finish	Predecessors	Successors	Total Slack D	20 ec Ian FebMarAprMayJun	13 Jul AugSepOct	NovDec Jan FebMar	2014 AprMayJun Jul Au	SepOctNovDec
S 2.3.0 Finding and Mail Wals 100 day Ph 1500/13 Man B3503 3277-0 day 44 day S 2.3.1 Endog Lack D.4 55 day Vel 240403 Wel 250035 184 day S 2.3.1 Ordering to Mail And Mail 100 day No 1860013 78.1500/13 29.3575-60 day 12.4 day S 2.3.2 Ordering to Mail And Mail 100 day No 1860013 78.1500/13 29.3575-60 day 12.4 day S 12.3.4 Ordering to Mail And Mail 100 day No 18600143 78.1500/13 40.8 day S 12.3.4 Ordering to Mail And Mail 100 day No 18600143 78.1500/13 40.8 day S 12.3.5 Antig Moil Mail And Mail No 18600143 Vel 2500134 40.4 day S 12.3.7 Antig Moil Mail And Mail No 18600143 Vel 2500134 40.4 day S 12.3.7 Antig Moil Mail And Mail No 18600143 Vel 2500134 40.4 day S 12.3.1.4 Mail Antig Moil Mail Mail Mail Mail No 1860014 No 18600144 40.4 day S 12.4.2 Partificit Antinenearch		M&E Installation		Thu 04/12/14	Mon 13/04/	15 32FF,31							
All Social State Social State Social State Social State All 2.3.3 Bodge Dash Dall Social State Med 2404/13 Med 2404/14	34 1.2.2.9	T & C of M&E Equipment	30 days	Tue 14/04/15	Tue 19/05/	15 32,33	35FF+7 days	446 days					
No. No. <td>35 1.2.2.10</td> <td>Finishing and Metal Works</td> <td>100 days</td> <td>Fri 30/01/15</td> <td>Mon 01/06/</td> <td>days,33FS-60 days,34FF+7</td> <td></td> <td>443 days</td> <td></td> <td></td> <td></td> <td></td> <td></td>	35 1.2.2.10	Finishing and Metal Works	100 days	Fri 30/01/15	Mon 01/06/	days,33FS-60 days,34FF+7		443 days					
IDEA Decked Statute and Statutes Decked St	6 1.2.3	Bridge Deck D-AB	563 days	Wed 24/04/13	Wed 25/03/	15		188 days	-				
12.22 Outman and Markan 10.000 Number 100.000 10.0000 12.33 Presention of Skill orket of aire 01.000 10.0001/80 40.000 10.2001/80 40.000 10.2001/80 12.33 Presention of Skill orket of aire 71.400 10.0001/80 40.000 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00 10.2001/80 40.00	7 1.2.3.1	Method statement and material submission	30 days	Wed 24/04/13	Thu 30/05/	13 38SS-60 days		1029 days					
9 12.5.5 Prantame and accent use in balance 100 days Fit Loop /	38 1.2.3.2	Ordering of Material	100 days	Mon 08/07/13	Tue 05/11/	139	39,37SS-60 days	128 days			ካ		
Dial Lab. Constraint get higher is the Outget is in the intervent of	39 1.2.3.3	Fabrication of Steel work off site	100 days	Wed 06/11/13	Thu 13/03/	14 38	40,80	128 days					
Image: Construct matrix modulation Guidan Sci 201/14/41 43 496 days Image: Construct modulation Guidan Sci 201/14/41 43 496 days Image: Construct modulation Guidan Sci 201/14/41 43 496 days Image: Construct modulation Guidan Sci 201/14/41 43 496 days Image: Construct modulation Guidan Sci 201/14/41 43 496 days Image: Construct modulation Guidan Sci 201/14/41 Construct modulation Guidan Sci 201/14/41 Construct modulation Guidan Sci 201/14/41 Guidan Guidan Sci 201/14/41 Guidan Guidan Sci 201/14/41 Guidan Guidan <td>40 1.2.3.4</td> <td>Connecting the Bridge on site</td> <td>60 days</td> <td>Fri 14/03/14</td> <td>Wed 28/05/</td> <td>14 39</td> <td>41</td> <td>582 days</td> <td></td> <td></td> <td></td> <td></td> <td>- </td>	40 1.2.3.4	Connecting the Bridge on site	60 days	Fri 14/03/14	Wed 28/05/	14 39	41	582 days					-
2 12.30 Exclamate infinite vectors on bridge 00 days Million (174) 40 200001 12.12.7 Excling and finite vectors on bridge 00 days Million (174) 90 400 12.4 12.4 Likh Tower D-C 728 days Tuo 0200513 Tuo 2010/15 90 303 days 6 12.4.1 Medical durament and material oblishion 30 days Tuo 0200513 Tuo 2010/15 90 303 days 67 12.4.3 Demolshic floc collars of floc datad all necessary 40 days Tuo 0200513 Fil 2500113 46.6 48 120 days 68 12.4.4 Cemence by E-bored 11 High: 60 ms/ (included all necessary 40 days Fil 2500114 40 40.555.60 days 0 days 70 12.4.5 Fil Testing 40 days Fil 2500114 40 51 0 days 71 12.4.5 Fil Testing 40 days Fil 2500114 40 51 0 days 72 12.4.6 Construct gile cap 10 days Tuo 101/14 40 51 0 days 73 12.4.1 Medical intercent and material schemeting cancer 10 days Tuo 1000/15 52 54.	41 1.2.3.5	Erecting Steel bridge frame	7 days	Thu 11/09/14	Thu 18/09/	14 40,30,19	89,42	496 days					T
13. 12.1.7 Recording and Hittoring works minutage 90.000 Note 2000 Note 2000 Note 2000 14. 12.4.1 Uth Tower DC 72 days Tow 2000/15 72 days 7000 9000/13 7000/13 <	42 1.2.3.6	Irrigation system installation	60 days	Fri 19/09/14	Sat 29/11/	14 41	43	496 days					to compare the second
Interface Number of the civiting structure: Number	43 1.2.3.7	Roofing and finishing works on bridge	90 days	Mon 01/12/14	Wed 25/03/	15 42		496 days					
Interpretation Prechail & determine FL (included all necessary preparation doll les) Into QUOVI3 Wed 19/00/13 6 47.70.73 O days preparation 47 12.4.3 Demolish the existing structure 30 days Fin 2000/13 Fin 2000/13 66 48 120 days preparation 120 days	44 1.2.4	Lift Tower D-C	726 days	Thu 02/05/13	Tue 20/10/	15		0 days	s -				
Internation and test) preparation and test) Product of the existing structure 30 days The 2007/13 46,6 48 120 days 47 12.4.3 Denodish the existing structure 30 days The 2007/13 46,6 48 120 days 48 12.4.4 Construct Pre-burdel H pile (60 no) (included all necessary 100 days Mon 1407/14 The 2008/14 48 50 0 days 51 12.4.5 Pit: Testing 40 days Mon 1407/14 The 2008/14 48 50 0 days 51 12.4.7 Construct superstructure to level 103.8 30 days The 2008/14 48 50 0 days 52 12.4.8 Backfilling above pile cap 12 days The 2008/14 48 50 0 days 53 12.4.1 Construct superstructure to level 103.8 10 days The 2017/14 Mon 1506/15 52 54.58.58.2 0 days 54 12.4.10 Mathematican of Lat 80 days The 2010/15 54.55 327 days 37 32.4.13 Rocing Cramecian Tower D-3 & D-C 10 days The 2010/15 54.55 327 days 331 days <	45 1.2.4.1	Method statement and material submission	30 days	Tue 08/10/13	Tue 12/11/	13 48SS-60 days		893 days		*	9		
12.4.1 Definition the locking balance 1.0 about 1 in locking in the locking in t	46 1.2.4.2		40 days	Thu 02/05/13	Wed 19/06/	13 6	47,70,73	0 days	22223-				
12.24 Construct related in Figure (00 fb) (included all necessary) 100 alps Not 10/2713 0.0000 (00 alps) 0.0000 44 12.45 Pile Testing 40 days Mon 10/1714 Thu 220/074/144 50 0.0000 50 12.46 Construct pile cap 30 days Fit 290/8714 Mon 06/10/14 49 51 0.0000 51 12.4.7 Construct pile cap 30 days Fit 290/8714 Mon 06/10/14 49 51 0.0000 52 12.4.8 Backfilling above pile cap 12 days Tac 11/11/14 Mon 1500/15 52 54.58.55.52 0.00000 53 12.4.9 Construct superstructure level 103.8-158.05 160 days Tac 100/105 53.21.3.2 56.5778-49 days 327 days 54 12.4.10 Installation of Lift 80 days Tue 1600/15 Stat 1900/15 53.3 56 327 days 55 12.4.13 Roofing Connection Tower Da Be D-C 60 days Fit 2407/16 Mon 02/00/15 Stat 1900/15 548-49 days 331 days 59 12.4.1 Method statement and material submission 30 days The 1200/13 follos/548-49 days 900 days 100 days <t< td=""><td>47 1.2.4.3</td><td>Demolish the exixting structure</td><td>30 days</td><td>Thu 20/06/13</td><td>Fri 26/07/</td><td>13 46,6</td><td>48</td><td>120 days</td><td></td><td></td><td></td><td></td><td></td></t<>	47 1.2.4.3	Demolish the exixting structure	30 days	Thu 20/06/13	Fri 26/07/	13 46,6	48	120 days					
50 1.2.4.6 Construct pile cap 30 days Fri 2908/14 Mon 09/10/14 49 51 0 days 51 1.2.4.7 Construct superstructure to level 103.8 30 days Tue 07/10/14 Mon 10/11/14 50 52 0 days 52 1.2.4.8 Backfilling above pile cap 1.2 days Tue 11/11/14 Mon 20/11/14 51 53 0 days 53 1.2.4.9 Construct superstructure level 103.8-158.05 160 days Tue 25/11/14 Mon 1506/15 52 54.58.55.82 0 days 54 1.2.4.10 Installation of Lift 80 days Tue 1606/15 Sat 1909/15 53.21.32 56.5718-49 days 327 days 55 1.2.4.12 T.& C of M&E Equipment 24 days Mon 2009/15 Tue 2010/15 54/78-49 days 331 days 56 1.2.4.12 T.& C of M&E Equipment 24 days Mon 2009/15 Tue 2010/15 54/78-49 days 331 days 57 1.2.4.13 Roofing Connection Tower D-B & D-C 60 days Thu 10/01/15 Mon 2002/15 109 days 58 1.2.4.14 Finishing and Metal Works 100 days Tue 10/01/13 100 202/15 109 days 50 <td>48 1.2.4.4</td> <td></td> <td>160 days</td> <td>Wed 18/12/13</td> <td>Sat 12/07/</td> <td>14 47,72,74</td> <td>49,45SS-60 days</td> <td>0 days</td> <td></td> <td></td> <td></td> <td>Bore</td> <td>ed pile machine</td>	48 1.2.4.4		160 days	Wed 18/12/13	Sat 12/07/	14 47,72,74	49,45SS-60 days	0 days				Bore	ed pile machine
1.2.4.7 Construct uperstructure to level 103.8 30 days Tue 07/10/14 Mon 10/11/14 50 52 0 days 52 1.2.4.8 Backfilling above pile cap 12 days Tue 11/11/14 Mon 24/11/14 51 53 0 days 53 1.2.4.9 Construct superstructure level 103.8-158.05 160 days Tue 25/11/14 Mon 15/06/15 52 54,58,55,82 0 days 54 1.2.4.10 Installation of Lift 80 days Tue 16/06/15 Sat 1900/15 53.21.32 56,57F8-49 days 327 days 55 1.2.4.10 Installation of Lift 80 days Tue 16/06/15 Sat 1900/15 54,55 327 days 56 1.2.4.12 T.& C of M&E Equipment 24 days Mon 21/101/15 54/55 327 days 57 1.2.4.13 Roofing Connection Tower D-B & D-C 60 days Tue 201/015 54/55 327 days 58 1.2.4.14 Finishing and Metal Works 100 days Tue 16/06/15 Tue 15/10/15 53 331 days 59 1.2.5.1 Method statement and material submission 30 days Thu 18/07/13 Thu 22/08/13 6188-60 days 960 days 61 1.2.5.2 Slope Cutting	49 1.2.4.5	Pile Testing	40 days	Mon 14/07/14	Thu 28/08/	14 48	50	0 days					η
12.12.4.8 Baackfilling above pile cap 12 days Tue 11/11/4 Mon 24/11/14 51 53 0 days 53 1.24.4.9 Construct superstructure level 103.8-158.0.5 160 days Tue 25/11/14 Mon 1506/15 52 54,58,55.8.2 0 days 54 1.24.10 Installation of Lift 80 days Tue 100/015 Sat 1909/15 53.21.32 56,57E.49 days 327 days 55 1.24.11 M&E Installation 80 days Tue 100/015 Sat 1909/15 53.3 56 327 days 56 1.24.12 T.& C of M&E Equipment 24 days Mon 21/09/15 Tue 201/01/5 54/ES-49 days 301 days 57 1.24.14 Finishing and Metal Works 100 days Tue 160/01/5 Tue 15/10/15 53 311 days 58 1.24.14 Finishing and Metal Works 100 days Tue 160/01/5 Tue 120/01/15 64/ES 960 days 59 1.25. Pier D-D 450 days Tue 10/01/13 Mon 02/02/15 169 days 61 1.25.2 Slope Cutting 10 days Thu 10/10/13 10 62,60585-60 days 109 days 62 1.25.4 Prechrill & determine F/L (included all nec	50 1.2.4.6	Construct pile cap	30 days	Fri 29/08/14	Mon 06/10/	14 49	51	0 days					2000
a 10.0 Construct superstructure level 103.8-158.05 160 days Tue 25/11/14 Mon 1506/15 52 54,58,55,82 0 days 53 1.2.4.10 Installation of Lift 80 days Tue 1606/15 Sat 1909/15 53,21,32 56,57FS-49 days 327 days 55 1.2.4.10 M&E Installation 80 days Tue 1606/15 Sat 1909/15 53 56 327 days 56 1.2.4.12 T & C of M&E Equipment 24 days Mon 2109/15 Tue 2010/15 54,55 327 days 57 1.2.4.13 Roofing Connection Tower D-B & D-C 60 days Fri 2407/15 Mon 2020/15 31 days 59 1.2.4.14 Finishing and Metal Works 100 days Tue 1606/15 Thu 15/10/15 53 331 days 59 1.2.5.1 Method statement and material submission 30 days Thu 120/07/13 Thu 2208/13 61SS-60 days 960 days 61 1.2.5.2 Slope Cutting 10 days Fri 20/12/13 62 64 109 days 62 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days St 21/12/13 Thu 170/1/16 63 65 109 days 64 1.	51 1.2.4.7	Construct superstructure to level 103.8	30 days	Tue 07/10/14	Mon 10/11/	14 50	52	0 days					T
35 12.4.9 Construct subjects tubelity level 105.8-158.05 100 days	52 1.2.4.8	Backfilling above pile cap	12 days	Tue 11/11/14	Mon 24/11/	14 51	53	0 days					E
12.4.11 M&E Installation 80 days Tue 16/06/15 Sat 19/09/15 53 56 327 days 56 1.2.4.12 T & C of M&E Equipment 24 days Mon 21/09/15 Tue 20/10/15 54.55 327 days 57 1.2.4.13 Roofing Connection Tower D-B & D-C 60 days Fri 24/07/15 Mon 05/10/15 54FS-49 days 340 days 58 1.2.4.14 Finishing and Metal Works 100 days Tue 16/06/15 Thu 15/10/15 53 331 days 59 1.2.5 Pier D-D 450 days Thu 18/07/13 Mon 02/02/15 169 days 60 1.2.5.1 Method statement and material submission 30 days Thu 18/07/13 Thu 22/08/13 61SS-60 days 960 days 61 1.2.5.2 Slope Cutting 10 days Fri 11/10/13 Wed 27/11/13 61 63 109 days 62 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/1/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	53 1.2.4.9	Construct superstructure level 103.8~158.05	160 days	Tue 25/11/14	Mon 15/06/	15 52	54,58,55,82	0 days					
12.4.112 T & C of M&E Equipment 24 days Mon 21/09/15 Tue 20/10/15 54,55 327 days 17 1.2.4.12 T & C of M&E Equipment 24 days Mon 21/09/15 Tue 20/10/15 54,55 327 days 17 1.2.4.13 Roofing Connection Tower D-B & D-C 60 days Fri 24/07/15 Mon 05/10/15 54FS.49 days 340 days 18 1.2.4.14 Finishing and Metal Works 100 days Tue 16/06/15 Thu 15/10/15 53 331 days 19 1.2.5.1 Method statement and material submission 30 days Thu 18/07/13 Thu 20/8/13 61SS-60 days 960 days 10 1.2.5.2 Slope Cutting 10 days Sat 28/09/13 Thu 10/10/13 10 62,60SS-60 days 109 days 10 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 10 41.2.5.5 Construct mini pile (30 nos) (included all necessary preparation and test) 90 days 53 10/12/13 65 109 days	54 1.2.4.10	Installation of Lift	80 days	Tue 16/06/15	Sat 19/09/	15 53,21,32	56,57FS-49 days	327 days					
a hand b b connection Tower D-B & D-C 60 days Fri 24/07/15 Mon 05/10/15 54FS-49 days 340 days 57 1.2.4.13 Roofing Connection Tower D-B & D-C 60 days Twe 160/6/15 Thu 15/10/15 53 331 days 58 1.2.4.14 Finishing and Metal Works 100 days Twe 160/6/15 Thu 15/10/15 53 331 days 59 1.2.5 Pier D-D 450 days Thu 18/07/13 Thu 22/08/13 61SS-60 days 960 days 60 1.2.5.1 Method statement and material submission 30 days Thu 18/07/13 Thu 22/08/13 61SS-60 days 960 days 61 1.2.5.2 Slope Cutting 10 days Sat 28/09/13 Thu 10/10/13 10 62,60SS-60 days 109 days 62 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days Fri 20/12/13 62 64 109 days	55 1.2.4.11	M&E Installation	80 days	Tue 16/06/15	Sat 19/09/	15 53	56	327 days					
1.2.4.14 Finishing and Metal Works 100 days Tue 16/06/15 Thu 15/10/15 53 331 days 59 1.2.5 Pier D-D 450 days Thu 18/07/13 Mon 02/02/15 169 days 60 1.2.5.1 Method statement and material submission 30 days Thu 18/07/13 Thu 22/08/13 61SS-60 days 960 days 61 1.2.5.2 Slope Cutting 10 days Sat 28/09/13 Thu 10/10/13 10 62,60SS-60 days 109 days 62 1.2.5.3 Working platform for mini pile 40 days Fri 11/10/13 Wed 27/11/13 61 63 109 days 63 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary preparation and test) 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	56 1.2.4.12	T & C of M&E Equipment	24 days	Mon 21/09/15	Tue 20/10/	15 54,55		327 days					
Solution Finance	57 1.2.4.13	Roofing Connection Tower D-B & D-C	60 days	Fri 24/07/15	Mon 05/10/	15 54FS-49 days		340 days					
60 1.2.5.1 Method statement and material submission 30 days Thu 18/07/13 Thu 22/08/13 61SS-60 days 960 days 61 1.2.5.2 Slope Cutting 10 days Sat 28/09/13 Thu 10/10/13 10 62,60SS-60 days 109 days 62 1.2.5.3 Working platform for mini pile 40 days Fri 11/10/13 Wed 27/11/13 61 63 109 days 63 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary preparation and test) 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	58 1.2.4.14	Finishing and Metal Works	100 days	Tue 16/06/15	Thu 15/10/	15 53		331 days					
61 1.2.5.2 Slope Cutting 10 days Sat 28/09/13 Thu 10/10/13 10 62,60SS-60 days 109 days 62 1.2.5.3 Working platform for mini pile 40 days Fri 11/10/13 Wed 27/11/13 61 63 109 days 63 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	59 1.2.5	Pier D-D	450 days	Thu 18/07/13	Mon 02/02/	15		169 days					
61 1.2.5.3 Working platform for mini pile 40 days Fri 11/10/13 Wed 27/11/13 61 63 109 days 62 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	60 1.2.5.1	Method statement and material submission	30 days	Thu 18/07/13	Thu 22/08/	13 61SS-60 days		960 days					
02 1.2.5.5 working platform for mini pile 40 days 11111015 wed 211115 01 05 109 days 63 1.2.5.4 Predrill & determine F/L (included all necessary preparation and test) 20 days Thu 28/11/13 Fri 20/12/13 62 64 109 days 64 1.2.5.5 Construct mini pile (30 nos) (included all necessary 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	61 1.2.5.2	Slope Cutting	10 days	Sat 28/09/13	Thu 10/10/	/13 10	62,60SS-60 days	109 days		_			
64 1.2.5.5 Construct mini pile (30 nos) (included all necessary 90 days Sat 21/12/13 Thu 17/04/14 63 65 109 days	62 1.2.5.3	Working platform for mini pile	40 days	Fri 11/10/13	Wed 27/11/	/13 61	63	109 days					
1.2.5.5 Construct mini pie (50 nos) (included an necessary 50 days bla 21/12/15 mid monthes	63 1.2.5.4	Predrill & determine F/L (included all necessary preparation and test)	20 days	Thu 28/11/13	Fri 20/12/	/13 62	64	109 days		- vix	*		
	64 1.2.5.5		90 days	Sat 21/12/13	Thu 17/04,	/14 63	65	109 days				₩ Mini pile mach	nine - A (1no)

and Finish On 30-Nov-2016 (1399 days) Duration as shown by week day

.



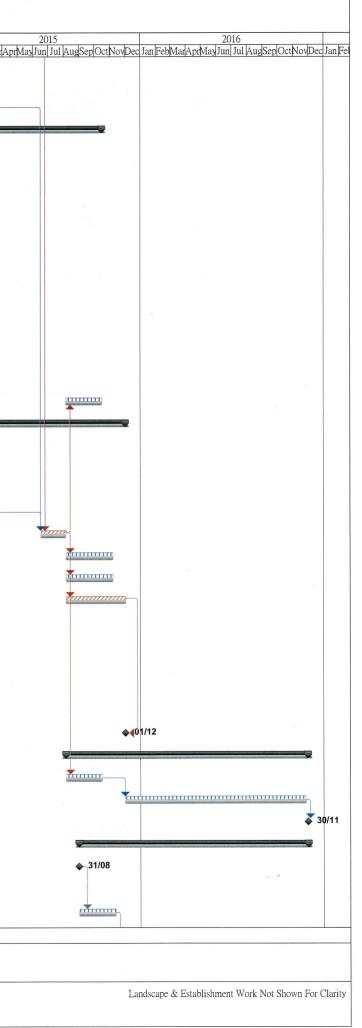
Landscape & Establishment Work Not Shown For Clarity

Master Programme For Contract No. CV/2012/07 Development at Anderson Road - Footbridge D and Associated Works

(Rev. 2) 2013 2014 2015 2016 ec Jan FebMarAprMayJun Jul AugSepOctNovDec Jan FebMarAprMayJun Jul Aug ID Task Name Total Slack Star Finish Successors WBS Duration 65 1.2.5.6 Pile Testing 40 days Tue 22/04/14 Mon 09/06/14 64 66 109 day 67 109 days 66 1.2.5.7 100 days Tue 10/06/14 Thu 09/10/14 65 Construct pile cap 109 day: 82 ····· Fri 10/10/14 Mon 02/02/15 66 67 1.2.5.8 Construct pier to level 152.1 90 days 60 days 742 days Mon 08/04/13 Thu 15/10/15 68 1.2.6 Slope Works 1043 days 69 1.2.6.1 Method statement and material submission 30 days Mon 08/04/13 Mon 13/05/13 70SS-60 days Soil nail machine-A (1no. 71SS.72.69SS-60 50 days 50 days Thu 20/06/13 Mon 19/08/13 46 70 1.2.6.2 Slope Cutting, Soil Nail and Raking Drain (Row D-F) days (included all necessary preparation and test) 31nos 893 days 71 1.2.6.3 Construct Cascade and down pipe 120 days Thu 20/06/13 Tue 12/11/13 70SS Soil nail machine-A (1no.) 48 50 days Tue 20/08/13 Sat 19/10/13 70 72 1.2.6.4 Slope Cutting, Soil Nail and Raking Drain (Row C-A) 50 days (included all necessary preparation and test) 40nos 74 Soil nail machine-B (1no.) 0 days 73 1.2.6.5 Slope Cutting, Soil Nail and Raking Drain (Row S-L) 90 days Thu 20/06/13 Mon 07/10/13 46 (included all necessary preparation and test) 103nos Soil nail machine-B (1no.),Soil nail machine-A (1no.) Slope Cutting, Soil Nail and Raking Drain (Row K-G) Tue 08/10/13 Tue 17/12/13 73 75,27,48 0 days 74 1.2.6.6 60 days (included all necessary preparation and test) 102nos 743 days 75 1.2.6.7 Construction of Inspection Access to Slope 120 days Wed 18/12/13 Fri 23/05/14 74 Wed 05/08/15 Thu 15/10/15 82 331 days 76 1.2.6.8 Constructio of Footpath (Portion B) 60 days 767 days Wed 24/04/13 Tue 01/12/15 208 days 77 1.2.7 Bridge Deck D-CE Wed 24/04/13 Thu 30/05/13 79SS-60 days 1029 days 78 1.2.7.1 Method statement and material submission 30 days 79 1.2.7.2 Mon 08/07/13 Tue 18/02/14 9 80,78SS-60 days 148 days Ordering of Material 180 days 81 128 days 80 1.2.7.3 Fabrication of Steel work off site 150 days Fri 14/03/14 Mon 15/09/14 79,39 82 128 days Tue 16/09/14 Sat 03/01/15 80 81 1.2.7.4 Connecting the Bridge on site 90 days 83.85.93.76.84 0 days Tue 16/06/15 Tue 04/08/15 81,67,53 82 1.2.7.5 Erecting Steel bridge frame 40 days Wed 05/08/15 Fri 06/11/15 82 313 days 83 1.2.7.6 M&E Installation 78 days 313 days Wed 05/08/15 Fri 06/11/15 82 84 1.2.7.7 Irrigation system installation 78 days 85 1.2.7.8 Roofing and finishing works on bridge 99 days Wed 05/08/15 Tue 01/12/15 82 91FF 0 days Tue 20/08/13 Wed 18/02/15 526 days 86 1.2.8 Drainage Works at Shun On Road 437 days 87 1.2.8.1 Method statement and material submission 30 days Tue 20/08/13 Tue 24/09/13 88SS-60 days 933 days 88 1.2.8.2 Fri 01/11/13 Tue 25/02/14 3 87SS-60 days 813 days DN1500 drainage construction 90 days ······ 90 526 days 89 1.2.8.3 DN375 and DN225 Drainage construction 60 days Fri 19/09/14 Sat 29/11/14 41 Toluno 526 days 90 1.2.8.4 Mon 01/12/14 Wed 18/02/15 89 Road Works and Reinstatement Works 60 days 0 days Tue 01/12/15 Tue 01/12/15 85FF 91 1.2.9 Completion of Section 1 0 days 92 1.3 390 days Wed 05/08/15 Wed 30/11/16 1 day Section 2 94 42 days 93 1.3.1 Wed 05/08/15 Thu 15/10/15 82 60 days Landscape Softworks for Footbridge D 95 94 1.3.2 Establishment Works for Footbridge D 289 days Tue 01/12/15 Fri 25/11/16 93 4 days 1 day 95 1.3.3 Completion of Section 2 0 days Wed 30/11/16 Wed 30/11/16 94 369 days Mon 31/08/15 Wed 30/11/16 0 days 96 1.4 Section 3 0 days 97 1.4.1 0 days Mon 31/08/15 Mon 31/08/15 98 Notified by The Engineer for commencing (Subject to Excision) 99 20 days 60 days Mon 31/08/15 Wed 11/11/15 97 98 1.4.2 Landscape Softworks for Footbridge D Baseline Milestone Task Milestone . Baseline Date: Mon 10/06/13 mm Progress Prepared By: T.L. Lo Critical Task Summary Baseline Summary

Assume Contract Start On 31-Jan-2013 and Finish On 30-Nov-2016 (1399 days) Duration as shown by week day

Lam - Po Wing Joint Venture



						De	Master velopment at A	Programme Anderson Ro	e For Contract No. oad - Footbridge D (Rev. 2)	CV/2012/07 and Associated Wo	orks	
ID 99	WBS 1.4.3	Task Name Landscape Softworks and Establishment Works for Footbridge A, B and C	Duration 289 days	Start Thu 12/11/15	Finish Mon 07/11/	Predecessors 16 98	Successors 100	Total Slack) 20 day		2013 Jun Jul AugSep OctNovDec	2014 c Jan FebMarAprMayJun Jul AugSepOctNovD	ec Jan FebMarApr
100	1.4.4	Completion of Section 3	0 days	Wed 30/11/16	Wed 30/11/	16 99		0 day	/S			

Date: Mon 10/06/13 Baseline Milestone Task Infinition Milestone Baseline Prepared By: T.L. Lo Baseline Summary Critical Task Critical Task Summary Progress	_
Date: MOI 10/00/15 Deserve Micsione V 1 ask difference Deserve Des	
Date: Mon 10/06/13 Baseline Milestone A Task Milestone A Baseline	

.

Assume Contract Start On 31-Jan-2013 and Finish On 30-Nov-2016 (1399 days) Duration as shown by week day

Lam - Po Wing Joint Venture

2015 prMayJun Jul AugSepOctNovDe	20 cc Jan FebMarlAprMay Jun	16 Jul AugSenOctNo	vDec Jan F
			♦ 30/11
		5.1	