Environmetnal Team Services for Contract No. SS H504 Design and Construction of Chai Wan Government Complex and Vehicle Depot

4th Monthly EM&A Report (February 2022)

Ce	tr	ifi	PH	by:
	C.	•••	Cu	₽y.

Fredrick Leong[√]

Environmental Team Leader (ETL)

Aurecon Hong Kong Limited

Date:

10 March 2022

Verified by:

W.K. Chiu

Independent Envirnonmental Checker (IEC)

Meinhardt Infrastructure and Environment Limited

Date:

10 March 2022

Contract No. SS H504
Design and
Construction of Chai
Wan Government
Complex and Vehicle
Depot

4th Monthly EM&A Report **Yau Lee Construction Co, Ltd**2022-03-10



Document control record

Document prepared by:

Aurecon Hong Kong Limited

Unit 1608, 16/F, Tower B, Manulife Financial Centre,

223 – 231 Wai Yip Street, Kwun Tong, Kowloon

Hong Kong S. A. R.

T +852 3664 6888

F +852 3664 6999

E hongkong@aurecongroup.com

W aurecongroup.com

A person using Aurecon documents or data accepts the risk of:

- Using the documents or data in electronic form without requesting and checking them for accuracy against the original hard copy version.
- b) Using the documents or data for any purpose not agreed to in writing by Aurecon.

Document control					áurecon	
Repo	rt title	Fourth Monthly EM&A Repor	t			
Docu	ment ID	MMR	Project nu	Project number P520574		
File p	ath	520574-0000-PLN-NM-0005 [0]				
Clien	t	Yau Lee Construction Co, Ltd				
Clien	t contact		Client reference			
Rev	Date	Revision details/status	Author	Reviewer	Verifier (if required)	Approver
0	8 March 2022	Submitted to IEC	Various	K.Chau		FL
1	10 March 2022	Submitted to IEC	Various	K.Chau		FL
Curre	Current revision 0					

Approval					
Reviewer's signature		Approver's signature	Two to		
Name	Keith Chau	Name	Fredrick Leong		
Title	Principal Consultant, Environmental	Title	Executive Director, Environment & Planning - Greater China		

Contents

Ex	ecutive Summary	1
1	Introduction	3
2	Project Information	4
	Environmental Monitoring Requirements	
	Implementation Status on Environmental Mitigation Measures	
	Monitoring Results	
	Environmental Site Inspection	
	Environmental Non-conformance	
8	Future Key Issues	.15
	Review of EM&A Data and EIA Predictions	
	Conclusion	

Appendix

Appendix 1	Construction Programme
Appendix 2	Project Organization Chart and Contact Details
Appendix 3	Monitoring Programme for Reporting Period
Appendix 4	Calibration Certificates
Appendix 5	Event and Action Plan
Appendix 6	Implementation Status of Mitigation Measures
Appendix 7	Monitoring Results with Graphical Presentations
Appendix 8	Waste Flow Table
Appendix 9	Joint site inspection record for Reporting Period
Appendix 10	Monitoring Schedule for the Next Month

All rights reserved | The information/data furnished in our document is confidential and competitive information proprietary to Aurecon or its subcontractors, the release of which would harm the competitive position of Aurecon or its sub-contractors/consultants. This information/data shall not be reproduced, stored in a retrieval system, transmitted in any form or by any means, used or disclosed in whole or in part, for any purpose other than to evaluate and adjudicate this document. If Aurecon is shortlisted or a contract is awarded to Aurecon as a result of this solicitation, or in connection with the submission of such information/data, the right (and the extent thereof) to reproduce, store, transmit, use or disclose this information/data must, by agreement, be included in such contract.



Executive Summary

Aurecon Hong Kong Limited (Aurecon) was commissioned by the Yau Lee Construction Co, Ltd (Yau Lee) to undertake the role of Environmental Team (ET) for carrying out the environmental monitoring and audit (EM&A) works for the "Contract No. SS H504 Design and Construction of Chai Wan Government Complex and Vehicle Depot (The Project).

An Environmental Permit (EP) No. EP-505/2015 was issued by the Environmental Protection Department (EPD) on 17 December 2015 for the construction of this project based on the Environmental Impact Assessment (EIA) Report (Register No: AEIAR-191/2015) approved by the EPD. The latest EP No. EP-505/2015/A was subsequently issued by the EPD on 8 November 2019 based on the documents (including an Environmental Review Report (ERR)) for the application of Variation of Environmental Permit.

The construction phase and EM&A programme of the Project commenced on 25 November 2021.

This 4th Monthly EM&A Report presents the EM&A works conducted from 1 February 2022 to 28 February 2022 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during Report Period

The major construction works undertaken during the reporting period include:

- Pre-drilling work. (Zone A & Zone B)
- Piling work
- Tree protection works

Environmental Monitoring and Audit Progress

A summary of the monitoring activities in this reporting period is listed below:

-	Construction Noise Monitoring during normal weekdays at each monitoring station	4 times
-	Joint Environmental Site Inspection	2 times

Nosie

4 sets of 30-minute construction noise measurement were carried out at each monitoring stations during normal weekdays of the reporting period. No exceedance of Action and Limit Levels of construction noise was recorded during the reporting period.

According to the email notification received from Chai Wan THEi Campus on 12 February 2022, due to current COVID-19 development, the monitoring location at NM3 (Rooftop of Chai Wan THEi Campus) is temporary inaccessible. The noise monitoring at NM3 has been temporary relocated to the adjusted location from 12 February 2022 until further notice from THEi.

Environmental Site Inspection

Joint environmental site inspections were carried out on 07 and 24 February 2022. The joint environmental site inspection was carried out by the representatives of the Engineer's

Representative (ER), the Contractor, IEC and the ET on 7 February 2022. The Contractor has generally implemented the mitigation measures as recommended. Due to COVID-19 preventative measures on site, the weekly site inspection on 17 Feb 2022 was cancelled. The arrangement has been notified to ER and IEC with no adverse comment received.

Environmental Exceedance/Non-conformance/Compliant/Summons and Prosecution

No exceedance of the Action and Limit Levels of construction noise was recorded at designated monitoring stations during the reporting period.

No non-compliance event was recorded during the reporting period.

No environmental complaint and summons/prosecutions was received in this reporting period.

Future Key Issues

Works to be undertaken in the next month include:

- Tree protection works
- Pre-drilling works. (Zone A & Zone B)
- Piling works.
- Sheet pile installation.
- ELS works.
- Off-site mock up construction.

Potential environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, site runoff and waste management.

1 Introduction

1.1.1 Aurecon Hong Kong Limited (Aurecon) was commissioned by the Yau Lee Construction Co, Ltd (Yau Lee) to undertake the role of Environmental Team (ET) for carrying out the environmental monitoring and audit (EM&A) works for the "Contract No. SS H504 Design and Construction of Chai Wan Government Complex and Vehicle Depot (The Project).

1.2 Purpose of this Report

1.2.1 This is the fourth EM&A report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 01 February 2022 to 28 February 2022.

1.3 Structure of the Report

1.3.1 The structure of the report is as follows:

Section 1 - Introduction

- details the background, purpose and structure of the report.

Section 2 - Project Information

 summarises background and scope of the Project, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permit(s)/License(s) during the reporting period.

Section 3 - Environmental Monitoring Requirement

- summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, Event/Action Plans.

Section 4 - Implementation Status on Environmental Mitigation Measures

- summarises the implementation of environmental protection measures during the reporting period.

Section 5 - Monitoring Results

- summarises the monitoring results obtained in the reporting period.

Section 6 - Environmental Site Auditing

 summarises the audit findings of the weekly site inspections undertaken within the reporting period.

Section 7 - Environmental Non-conformance

 summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

Section 8 - Future Key Issues

- summarises the impact forecast and monitoring schedule for the next reporting month.

Section 9 - Review of EM&A Data and EIA Predictions

 compares and contrasts the EM&A data in the month with the EIA predictions and annotates with explanation for any discrepancies.

Section 10 - Conclusions

2 Project Information

2.1 Background

- 2.1.1 On 5 October 2015, the Environment Impact Assessment (EIA) for the proposed "Chai Wan Government Complex and Vehicle Depot" (AEIAR-191/2015, hereafter referred to as "the Project") was approved and an Environmental Permit (EP) (EP-505/2015) for the construction of the Project was issued. The latest EP No. EP-505/2015/A was subsequently issued by the EPD on 8 November 2019 based on the documents (including an Environmental Review Report (ERR)) for the application of Variation of Environmental Permit.
- 2.1.2 The construction phase and EM&A programme of the Project commenced on 25 November 2021.

2.2 Site Description

2.2.1 The scope of works of the Project, which is a Designated Project under the EIA Ordinance (EIAO), will construct joint user building comprising the government office, store, laboratory, transport pool and vehicle depot facilities in Chai Wan District. The Site is bounded by NWFB Depot to the north, Sheung On Street to the east, Sheung Mau Street to the south and Sheung Tat Street to the west. A layout plan of the Project is provided in **Figure 1-1**.

Figure 1-1 A layout plan of the Project

2.3 Construction Activities

2.3.1 A summary of the major construction activities undertaken in this reporting period is shown in **Table 2.1** and the construction programme is illustrated in **Appendix 1**.

Table 2-1 Major Construction Activities Undertaken in the Reporting Period

	Construction Activities Undertaken		
-	Pre-drilling work. (Zone A & Zone B)		
-	- Pilling work.		
-	Tree protection works		

2.4 Project Organisation

2.4.1 The Project organization chart and contact details are shown in **Appendix 2**.

2.5 Status of Environmental Approval Document

2.5.1 A summary of the relevant valid permits, licences, and/or notifications on environmental protection for this Project since the granting of the EP is presented in **Table 2.2**.

Table 2-2 Major Construction Activities Undertaken in the Reporting Period

Permit / Licenses / Notifiation	Reference	Validity Period	Remark
Environmental Permit (EP)	EP-505/2015/A	Throughout the Contract	Permit granted on 8 November 2019
Notification of Construction Works as required under Air Pollution Control (Construction Dust) Regulation	469716	Throughout the Contract	Approved on 21 July 2021
Registration of Waste Producer under Waste Disposal Ordinance	7041313	Throughout the Contract	Approved on 13 August 2021
Registration as Chemical Waste Producer	5213-163-Y2782-01	Throughout the Contract	Approved on 24 August 2021
Construction Noise Permit	GW-RS0759-21	15 October 2021 - 14 April 2022	Approved on 4 October 2021
Effluent Discharge License under Water Pollution Control Ordinance	WT00038924-2021	30 September 2026	Approved on 9 December 2021

3 Environmental Monitoring Requirements

3.1 Nosie Monitoring Locations

3.1.1 The noise monitoring locations in approved EM&A Manual are summarised in **Table 3-1** and shown in **Figure 3-1**.

Table 3-1 Noise Monitoring Station in Approved EM&A Manual

Noise Monitoring ID	Proposed Noise Monitoring Location	Remark
NM1	Ground Floor at Heng Fa Chuen Block 50	-
NM2a	Lamp Post no. 47447 at Sheung Mau Street	*
NM3	Rooftop of THEi Campus	*

Remark: * - Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block (NM2) is the noise monitoring stations for the construction phase EM&A programme as identified in the approved EM&A Manual for the Project. The access to NM2 and Knight Court (as a VTC Senior Quarters and NSR3 in approved EIA) were denied. A search for alternative noise monitoring locations along Shing Tai Road and Sheung Mau Street was carried out during the site visit on 4

tober 2021.

Lamp Post no. 47447 at Sheung Mau Street (NM2a), which is located between project site and original noise monitoring location, Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block (NM2), is found suitable and available to be an alternative noise monitoring location for NM2. Also, NM2a, which has a direct line of sight towards project site (where construction works will be carried out and likely to have noise impacts), is located closer to project site than NM2 and thus considered as a representative noise monitoring location. Monitoring position at NM2a is proposed at 2m above ground due to security concerns and minimize the road traffic noise contribution. Noise measurement at NM2a will be considered as free-field and a correction of +3dB(A) would be made to the noise monitoring results. The alternative location of NM2a, were therefore proposed and agreed by the Independent Environmental Checker (IEC).

Due to the adjustment of the location of AM2 to AM2a, the measured noise levels at AM2a would represent the noise levels at AM2.

According to the email notification received from Chai Wan THEi Campus on 12 February 2022, due to current COVID-19 development, the monitoring location at NM3 (Rooftop of Chai Wan THEi Campus) is temporary inaccessible. The noise monitoring at NM3 has been temporary relocated to the adjusted location named NM3a from 12 February 2022 until further notice from THEi. The location of NM3a is shown in **Figure 3-1**. Due to the adjustment of the location of NM3a to NM3, the measured noise level at AM3a would represent the noise levels at NM3.



Figure 3-1 Location of Noise Monitoring Stations (NM1, NM2a, NM3 and NM3a)

3.2 Monitoring Parameters, Frequency and Duration

- 3.2.1 Weekly construction noise monitoring was conducted in accordance with the requirements stipulated in the EM&A Manual. The monitoring programme for this reporting period is shown in **Appendix 3.**
- 3.2.2 **Table 3-2** summarizes the monitoring parameters, frequency and duration of the impact noise monitoring.

Table 3-2 Noise Monitoring Parameters, Period and Frequency

Time Period	Parameters
Daytime on normal weekdays (0700-1900 hrs)	$L_{eq(30 \text{ mins})}$, $L_{10(5 \text{ mins})}$ and $L_{90(5 \text{ mins})}$
Evening time on all days (1900-2300 hrs) and Holidays (including Sundays) during daytime and evening (0700-2300 hrs)	$L_{eq(5 mins)}, L_{10(5 mins)}$ and $L_{90(5 mins)}$
All days during the night-time (2300-0700 hrs	L _{eq(5 mins)} L _{10(5 mins)} and L _{90(5 mins)}
of the next day)	

3.3 Monitoring Equipment

- 3.3.1 Noise measurements were conducted in accordance with the calibration and measurement procedures as stated in Annex General Calibration and Measurement Procedures of Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM) issued under the Noise Control Ordinance (NCO) (Cap.400).
- 3.3.2 The sound level meters and calibrator used for the noise measurement, as listed in Table
 3-3, complies with IEC 651: 1979 and 804:1985 (Type 1) specification. The calibration certificates of the sound level meter and calibrator are given in Appendix 4.

Table 2-5 Noise Monitoring Equipment

Monitoring Station	Monitoring Equipment (Sound Level Meter and Calibrator)
NM1	Sound Level Meter: Rion NL 52(s/n:00643040) and (s/n:01010406)
NM2a	Calibrator: Larson Davis Cal 200(s/n: 16878)
NM3	

- 3.3.3 Immediately prior to and following the noise measurements, the accuracy of the measurement equipment was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were accepted as the calibration level from before and after the noise measurement agree to within 1.0 d(B).
- 3.3.4 A portable wind speed meter shall be used for measuring wind speeds in m/s.

3.4 Event / Action Plan

Table 3-4 Action and Limit Levels for Construction Noise Monitoring

Monitoring	Action Level	Limit Level		
Station		Nosfff Noise Criteria,Leq _(30mins) , dB(A)	Remark	
NM1		75		
NM2a	When one documented complaint is received	70 65 (during examination)	Applicable during 0700 – 1900 hours,	
NM3		70 65 (during examination)	Monday to Saturday	

3.4.1 Should non-compliance of the noise criteria occur, the Event and Action Plan as presented in **Appendix 5** should be followed.

3.5 Mitigation Measures

3.5.1 The mitigation measures in accordance with the EP, EIA and EM&A Manual and their implementation status are presented in **Appendix 6**.

4 Implementation Status on Environmental Mitigation Measures

4.1.1 The Contractor has generally implemented environmental mitigation measures and requirements as stated in the EIA Report, the EP and EM&A Manual and the contract documents. The implementation status during the reporting period is summarized in **Appendix 6**.

5 Monitoring Results

5.1 Noise

5.1.1 A total of 4 sets of 30-minute construction noise measurements were carried out at the monitoring stations (NM1, NM2a and NM3) during normal weekdays of the reporting period. The monitoring results together with graphical presentations are presented in **Appendix**7. The local impacts observed near the monitoring stations were summarized below:

NM1: Road traffic noise and railway noise.
NM2a: Road traffic noise and Yau Lee Site.

NM3: Road Traffic Noise. Minor noise from Cargo Handling Area.

- 5.1.2 No exceedance of Action and Limit Levels of construction noise was recorded during the reporting period.
- 5.1.3 Baseline corrections was made on 8, 15 and 25 Feb 2022 at NM2a when the measured noise level is higher than both the noise limit level and the baseline level, and it is made by deducting the measured noise levels with their corresponding baseline noise level. The corrected noise level (ie. Construction Noise Level) would solely represent the noise levels of Construction works.
- 5.1.4 The methodology is shown as below:
 - When Measured noise level (Leq 30mins) > Baseline noise level (Leq30), Construction noise level is calculated
 - Construction noise level = Measured noise level (Leg 30 mins) Baseline noise level
 - If Measured noise level (Leq 30mins) < Baseline noise level, Corrected noise level = Measured noise level

5.2 Waste Management

Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Non-inert C&D materials were made up of general refuse, steel and paper/cardboard packaging materials. Steel materials generated from the Project were also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting period are summarised in **Appendix 8**. The non-inert C&D materials and general refuse generated from the Project were disposed of at the NENT Landfill. A total of 5m³ of general refuse were generated during the reporting period. The inert C&D materials and general refuse generated from the Project were disposed of at the Chai Wan Public Fill Barging Point (CW-PFBP) or Fill Bank at Tseung Kwan O Area 137(TKO137FB). A total of 960m³ of inert waste was generated during the reporting period.

6 Environmental Site Inspection

- 6.1.1 Joint environmental site inspection was conducted in the reporting period on 07 and 24 February 2022. Due to COVID-19 preventative measures on site, the weekly site inspection on 17 Feb 2022 was cancelled. The joint environmental site inspection was carried out by the representatives of the Engineer's Representative (ER), the Contractor, IEC and the ET on 7 February 2022. The joint environmental site inspection record is shown in **Appendix 9**. There was no noncompliance recorded during the site inspections.
- 6.1.2 Major findings and recommendations are summarized as follows:

07 February 2022

- Chemicals were observed without drip tray. Drip trays shall be provided for the chemical containers.
- Oil stain was observed underneath the generator. Oil stain shall be disposed
 of as chemical waste.
- The generator was observed without NRMM label. Proper NRMM label shall be affixed on the generator.
- Cement was not covered entirely by impervious sheeting. Cement bags shall be covered with impervious sheet.
- Muddy stockpile is observed next to vehicle entrance. Muddy stockpile next to the vehicle entrance shall be removed to prevent muddy washout site entrance.

24 February 2022

- The drip tray was full. The Contractor shall clean the drip tray regularly.
- The color of NRMM label was inaccurate. The Contractor was reminded to replace the NRMM labels.

7 Environmental Non-conformance

7.1	Summary	∕ of	Mon	itorina	Exceed	lance

- 7.1.1 No exceedance of the Action and Limit Levels of construction noise was recorded at monitoring station during the reporting period.
- 7.2 Summary of Environmental Non-compliance
- 7.2.1 No non-compliance event was recorded during the reporting period.
- 7.3 Summary of Environmental Complaint
- 7.3.1 No complaint was received during the reporting period.
- 7.4 Summary of Environmental Summons and Successful Prosecution
- 7.4.1 No summons was received during the reporting period.

8 Future Key Issues

8.1 Key Issues for the Coming Month

- 8.1.1 Works to be undertaken for the coming monitoring periods are summarized below:
 - Tree protection works
 - Pre-drilling works for pilling works. (Zone A & Zone B)
 - Piling works
 - Sheet pile installation.
 - ELS work.
 - Off site mock up construction.
- 8.1.2 Potential environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, site runoff and waste management.

8.2 Monitoring Schedule for the Next Month

8.2.1 The tentative schedule of noise monitoring for the next reporting period is presented in **Appendix 10**.

8.3 Construction Programme for the Next Month

8.3.1 The most updated construction programme for the Project is presented in **Appendix 1**.

9 Review of EM&A Data and EIA Predictions

9.1 Noise

9.1.1 The EIA predicted the construction noise levels during the day-time period. In this reporting period, pre-drilling works and piling works were conducted. Hence, a comparison between the measured noise results in this reporting month and predicted EIA noise levels was made. (**Table 9-1**).

Table 9-1 Comparison between the measured noise results and EIA predictions

Monitoring Station	EIA Predicted Construction	Baseline Noise Levels, dB(A)	Noise Monitor	ing Results, dB(A)
	Noise Levels, dB(A)		Leq _(30mins) , Average	Range
NM1	62	65.1	64.8	64-67
NM2a	69	73.4	73.8 (65.3*)	73-75 (51-73*)
NM3	66	69.8	67.3	67-68

Note: *The measured noise levels exceeded the noise level of 70dB(A) and they were higher than the baseline level of 73.4 dB(A) for NM2a. Therefore, baseline corrections were carried out and the corrected noise levels which solely represent the noise levels of Construction works are lower than the noise criteria. As such the EAP was not triggered. Details are mentioned in **Section 5.1.3** and summarised in **Appendix 7**.

9.1.2 The comparison shows that the average of 30-minute construction noise levels recorded at all monitoring stations during the reporting period were higher than the EIA predicted construction noise levels but lower than the baseline noise levels except NM2a. However, a baseline correction is made for NM2a and the corrected noise levels are similar to predicted construction noise level in the EIA report. Recommended mitigation measures in **Section 5.8** of EIA will be implemented throughout the construction period.

9.2 Waste Management

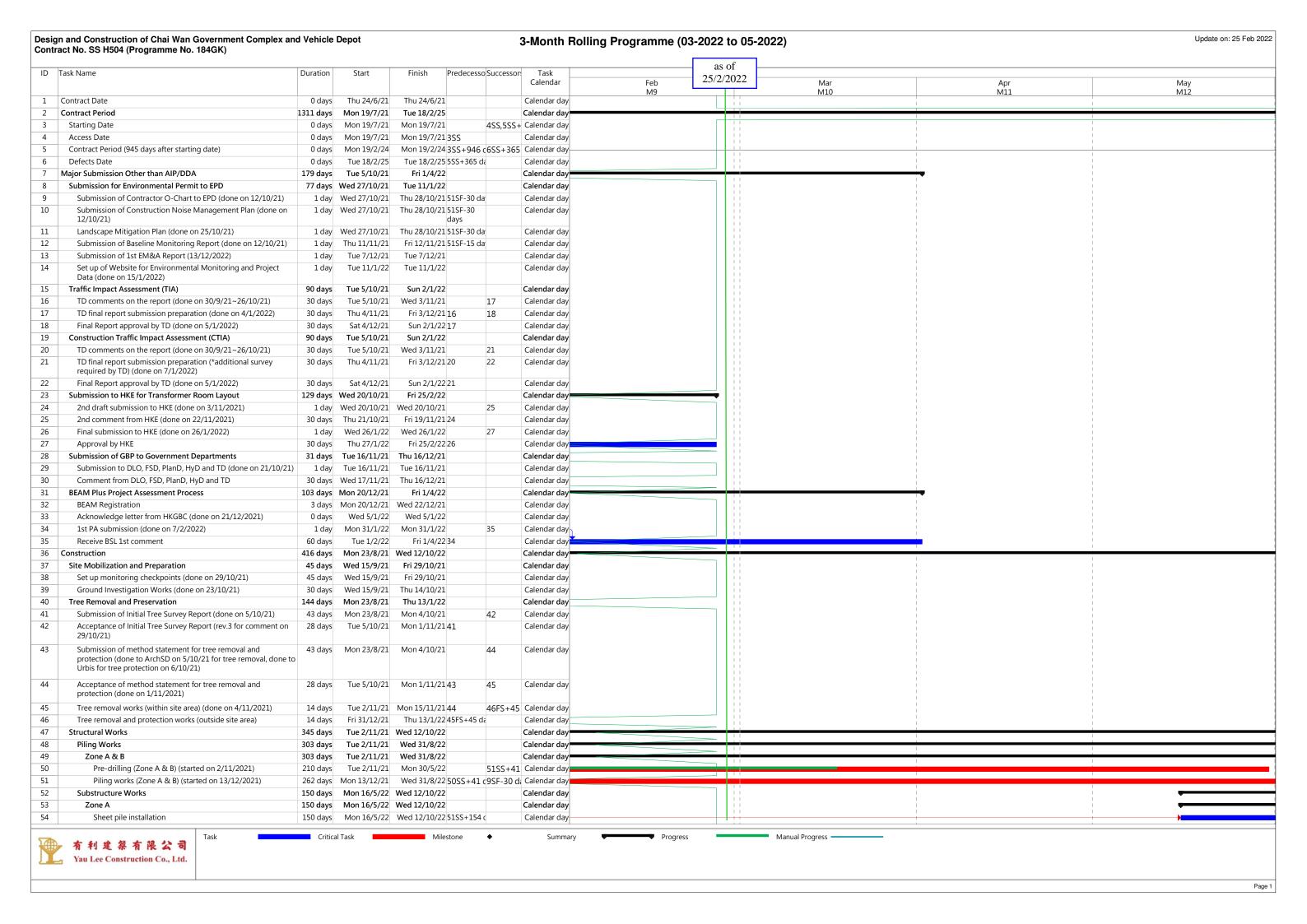
9.2.1 The estimated amount of waste generated in this Project and the accumulated quantities of waste generated up to this reporting month are presented in **Appendix 8**. No major construction works have commenced in this reporting month. The amount of construction waste generated are minimal. Recommended mitigation measures in **Section 8.5** of the EIA will be implemented during the construction stage.

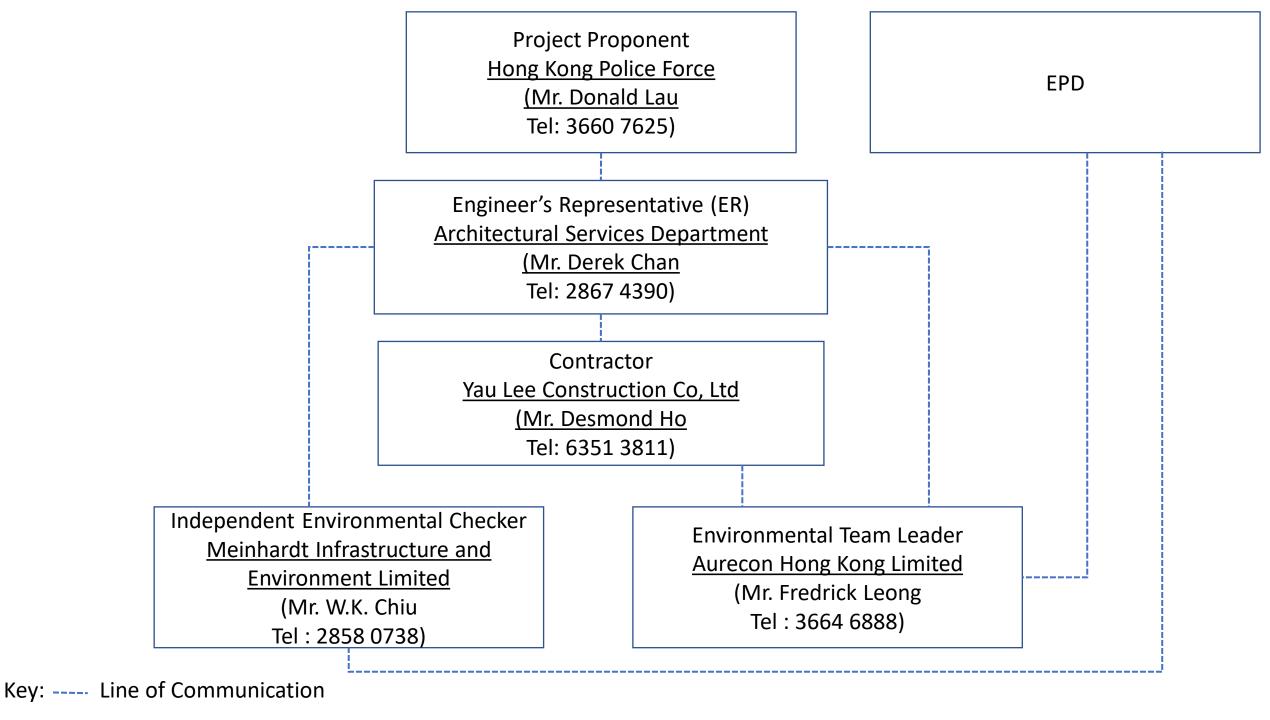
9.3 Conclusion of Review

9.3.1 The EIA predictions against the monitoring results since the commencement of construction works have been reviewed. The EIA concluded that the Project would not cause adverse impacts to the environment, and the monitoring results have also indicated the same so far. Mitigation measures recommended in the EP, EIA, EM&A Manual and the contract documents will continue to be implemented throughout the construction phase of the Project.

10 Conclusion

- 10.1.1 For construction noise, no Action and Limit Level exceedance was recorded at the monitoring stations during the reporting period.
- 10.1.2 Environmental site inspection was carried out on 07 and 24 February 2022. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.
- 10.1.3 No notification of summons and prosecution was received during the reporting period.
- 10.1.4 The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.





2022	Febr	ruary				
MONDAY 31	TUESDAY 01	WEDNESDAY 02	THURSDAY 03	FRIDAY 04	SATURDAY 05 Noise Monitoring (NM1, NM2a and NM3)	SUNDAY 06
07	08 Noise Monitoring (NM1, NM2a and NM3)	09	10	11	12	13
14	15 Noise Monitoring (NM1, NM2a and NM3)	16	17	18	19	20
21	22	23	24	25 Noise Monitoring (NM1, NM2a and NM3)	26	27
28	01	02	03	04	05	06
07	08	Notes: The noise monito	ring on 22 Feb was	rescheduled to 25 Feb	owing to rainy weath	ner.



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration

校正證書

Certificate No.: C214063

證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號: IC21-1260)

Date of Receipt / 收件日期: 28 June 2021

Description / 儀器名稱

Precision Acoustic Calibrator

Manufacturer / 製造商

LARSON DAVIS

Model No. /型號

CAL200

Serial No./編號

16878

Supplied By / 委託者

Line Voltage / 電壓 :

Envirotech Services Co.

Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,

New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}$ C

Relative Humidity / 相對濕度 : (50 ± 25)%

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期

13 July 2021

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

The results do not exceed manufacturer's specification.

The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies

- Fluke Everett Service Center, USA

Tested By 測試

K P Cheuk

Project Engineer

Certified By

K C Lee Engineer Date of Issue 簽發日期 15 July 2021

核證

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門與安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration

Certificate No.: C214063

證書編號

The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment:

> **Equipment ID** CL130 CL281 TST150A

Description

Universal Counter Multifunction Acoustic Calibrator Measuring Amplifier

Certificate No.

C213954 AV210017 C201309

Test procedure: MA100N.

5. Results:

Sound Level Accuracy 5.1

UUT	Measured Value	Mfr's Spec.	Uncertainty of Measured Value
Nominal Value	(dB)	(dB)	(dB)
94 dB, 1 kHz	93.9	± 0.2	± 0.2
114 dB, 1 kHz	113.9		

. 5.2 Frequency Accuracy

UUT Nominal Value	T Nominal Value Measured Value		Uncertainty of Measured Value		
(kHz)	(kHz)	Spec.	(Hz)		
1	1.000	1 kHz ± 1 %	± 1		

Remark: The uncertainties are for a confidence probability of not less than 95 %.

Note:

Only the original copy or the laboratory's certified true copy is valid.

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

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.:

C214064

證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號: IC21-1260)

Date of Receipt / 收件日期: 28 June 2021

Description / 儀器名稱

Sound Level Meter

Manufacturer / 製造商

Rion

Model No. / 型號 Serial No. / 編號

NL-52 00643040

Supplied By / 委託者

Envirotech Services Co.

Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,

New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 :

 $(23 \pm 2)^{\circ}$ C

Relative Humidity / 相對濕度 :

 $(50 \pm 25)\%$

Line Voltage / 電壓

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期

13 July 2021

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

The results do not exceed manufacturer's specification.

The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By

測試

K P Cheuk

Project Engineer

Certified By

Tel/電話: (852) 2927 2606

核證

K C Lee Engineer Date of Issue

15 July 2021

簽發日期

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory

E-mail/電郵: callab@suncreation.com

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Fax/傳真: (852) 2744 8986



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration

Certificate No.: C214064

證書編號

The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to . 1. warm up for over 10 minutes before the commencement of the test.

- 2. Self-calibration was performed before the test.
- 3. The results presented are the mean of 3 measurements at each calibration point.
- 4. Test equipment:

Equipment ID

Description

Certificate No.

CL280 CL281

40 MHz Arbitrary Waveform Generator

C210084 AV210017

Multifunction Acoustic Calibrator

- Test procedure: MA101N. 5.
- 6. Results:
- Sound Pressure Level 6.1

6.1.1 Reference Sound Pressure Level

UUT Setting			Applie	d Value	UUT	IEC 61672	
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 130	L_{A}	A	Fast	94.00	1	94.6	± 1.1

6.1.2 Linearity

UUT Setting				Applie	d Value	UUT	
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	
30 - 130	L_{A}	A	Fast	94.00	1	94.6 (Ref.)	
				104.00		104.6	
				114.00		114.6	

IEC 61672 Class 1 Spec. : \pm 0.6 dB per 10 dB step and \pm 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting			Applied Value		UUT	IEC 61672	
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Class 1 Spec.
30 - 130	L_{A}	A	Fast	94.00	1	94.6	Ref.
			Slow			94.6	± 0.3

Fax/傳真: (852) 2744 8986

Tel/電話: (852) 2927 2606

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.: C214064

證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

	UUT Setting			Applied Value		UUT	IEC 61672
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Class 1 Spec. (dB)
30 - 130	L _A	A	Fast	94.00	63 Hz	68.3	-26.2 ± 1.5
					125 Hz	78.3	-16.1 ± 1.5
		,			250 Hz	85.9	-8.6 ± 1.4
					500 Hz	91.3	-3.2 ± 1.4
					1 kHz	94.6	Ref.
			-		2 kHz	95.8	$+1.2 \pm 1.6$
					4 kHz	95.6	$+1.0 \pm 1.6$
					8 kHz	93.6	-1.1 (+2.1; -3.1)
					16 kHz	86.6	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting			Applied Value		UUT	IEC 61672	
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Class 1 Spec. (dB)
30 - 130	L _C	C	Fast	94.00	63 Hz	93.7	-0.8 ± 1.5
					125 Hz	94.4	-0.2 ± 1.5
	LEGET 1		2 1 1 1 1		250 Hz	94.6	0.0 ± 1.4
					500 Hz	94.6	0.0 ± 1.4
	EW + had				1 kHz	94.6	Ref.
					2 kHz	94.4	-0.2 ± 1.6
			176 5 0		4 kHz	93.8	-0.8 ± 1.6
					8 kHz	91.7	-3.0 (+2.1; -3.1)
					16 kHz	84.7	-8.5 (+3.5; -17.0)

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.: C214064

證書編號

Remarks: - UUT Microphone Model No.: UC-59 & S/N: 16652

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : \pm 0.35 dB

250 Hz - 500 Hz : $\pm 0.30 \text{ dB}$ 1 kHz : $\pm 0.20 \text{ dB}$ 2 kHz - 4 kHz : $\pm 0.35 \text{ dB}$ 8 kHz : $\pm 0.45 \text{ dB}$ 16 kHz : $\pm 0.70 \text{ dB}$

104 dB: 1 kHz : ± 0.10 dB (Ref. 94 dB)

Website/網址: www.suncreation.com

104 dB: 1 kHz : $\pm 0.10 \text{ dB} \text{ (Ref. 94 dB)}$ 114 dB: 1 kHz : $\pm 0.10 \text{ dB} \text{ (Ref. 94 dB)}$

Note:

Only the original copy or the laboratory's certified true copy is valid.

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

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

⁻ The uncertainties are for a confidence probability of not less than 95 %.



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.:

C215720

證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號: IC21-1859)

Date of Receipt / 收件日期: 6 September 2021

Description / 儀器名稱

Sound Level Meter

Manufacturer / 製造商

Rion NL-52

Model No. / 型號 Serial No. / 編號

01010406

Supplied By / 委託者

Envirotech Services Co.

Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun, New Territories, Hong Kong

TEST CONDITIONS/測試條件

Temperature / 溫度 :

 $(23 \pm 2)^{\circ}$ C

Relative Humidity / 相對濕度 :

 $(50 \pm 25)\%$

Line Voltage / 電壓 :

TEST SPECIFICATIONS / 測試規範

Calibration

DATE OF TEST / 測試日期

23 September 2021

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

The results do not exceed manufacturer's specification. (after adjustment)

The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試

K P Cheuk Project Engineer

Certified By

Tel/電話: (852) 2927 2606

Lee

Date of Issue 簽發日期

24 September 2021

核證

Engineer

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Fax/傳真: (852) 2744 8986

Sun Creation Engineering Limited - Calibration & Testing Laboratory c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong 輝創工程有限公司 - 校正及檢測實驗所 c/o 香港新界屯門興安里一號四樓

E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.: C215720

證書編號

. 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

Self-calibration using the internal standard (After Adjustment) was performed before the test 6.1.1.2 to 6.3.2. 2.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment:

> Equipment ID CL280

Description

Certificate No.

CL281

40 MHz Arbitrary Waveform Generator

C210084

Multifunction Acoustic Calibrator

AV210017

5. Test procedure: MA101N.

6. Results:

Sound Pressure Level 6.1

Reference Sound Pressure Level 6.1.1

6.1.1.1 Before Adjustment

	UUT Setting				Applied Value		IEC 61672
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Class 1 Spec. (dB)
30 - 130	L_{A}	A	Fast	94.00	1	* 96.7	± 1.1

^{*} Out of IEC 61672 Class 1 Spec.

6.1.1.2 After Adjustment

	UUT Setting				Applied Value		IEC 61672	
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.	
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)	
30 - 1/30	L_{A}	Α	Fast	94.00	1	94.0	± 1.1	

6.1.2 Linearity

	UU'	T Setting		Applie	ed Value	UUT
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
30 - 130	L_{A}	A	Fast	94.00 104.00	1	94.0 (Ref.) 104.0
				114.00		114.0

IEC 61672 Class 1 Spec. : \pm 0.6 dB per 10 dB step and \pm 1.1 dB for overall different.

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration

校正證書

Certificate No.: C215720

證書編號

6.2 Time Weighting

	UUT Setting				d Value	UUT	IEC 61672
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Class 1 Spec. (dB)
30 - 130	L_A	A	Fast	94.00	1	94.0	Ref.
			Slow			94.0	± 0.3

6.3 Frequency Weighting

6.3.1 A-Weighting

	UUT	Setting		Appl	ied Value	UUT	IEC 61672
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Class 1 Spec. (dB)
30 - 130	130 L _A A Fast 94.00 63 Hz 67.7		67.7	-26.2 ± 1.5			
					125 Hz	77.8	-16.1 ± 1.5
	- 455				250 Hz	85.4	-8.6 ± 1.4
					500 Hz	90.8	-3.2 ± 1.4
					1 kHz	94.0	Ref.
	r Life (in the	1		4	2 kHz	95.3	$+1.2 \pm 1.6$
	-2- 11				4 kHz	95.1	$+1.0 \pm 1.6$
	Ten to				8 kHz	93.0	-1.1 (+2.1; -3.1)
					16 kHz	86.1	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

	UUT	Setting		Appli	Applied Value UUT IE		IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
30 - 130	L_{C}	C	Fast	94.00	63 Hz	93.2	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.5
					250 Hz	94.0	0.0 ± 1.4
4				-0	500 Hz	94.1	0.0 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	93.9	-0.2 ± 1.6
					4 kHz	93.3	-0.8 ± 1.6
					8 kHz	91.1	-3.0 (+2.1; -3.1)
					16 kHz	84.2	-8.5 (+3.5 ; -17.0)

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

E-mail/電郵: callab@suncreation.com

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong 輝創工程有限公司 - 校正及檢測實驗所 c/o 香港新界屯門興安里一號四樓

Tel/電話: (852) 2927 2606

Fax/傳真: (852) 2744 8986



Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration

Certificate No.:

C215720

證書編號

Remarks: - UUT Microphone Model No.: UC-59 & S/N: 13748

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value:

94 dB : 63 Hz - 125 Hz $: \pm 0.35 \text{ dB}$

250 Hz - 500 Hz : \pm 0.30 dB

 $: \pm 0.20 \text{ dB}$ 1 kHz

2 kHz - 4 kHz $: \pm 0.35 \text{ dB}$

 $: \pm 0.45 \text{ dB}$ 8 kHz

 $: \pm 0.70 \text{ dB}$ 16 kHz

 $: \pm 0.10 \text{ dB (Ref. 94 dB)}$ 104 dB: 1 kHz : ± 0.10 dB (Ref. 94 dB) 114 dB: 1 kHz

Website/網址: www.suncreation.com

- The uncertainties are for a confidence probability of not less than 95 %.

Only the original copy or the laboratory's certified true copy is valid.

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

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory. 本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Appendix 5

Event and Action Plan for Construction Noise Monitoring

		Action				
	ET	IEC	ER	Contractor		
Action Level	 Notify the ER, IEC and Contractor. Carry out investigation. Report the results of investigation to the ER, IEC and Contractor. Discuss with the IEC and Contractor and formulate remedial measures. Increase monitoring frequency to check mitigation effectiveness. 	 Review the investigation results submitted by the ET. Review the proposed remedial measures by the Contractor and advise the ER accordingly. Advise the ER on the effectiveness of the proposed remedial measures. 	 Confirm receipt of notification of failure in writing. Notify the Contractor. Require the Contractor to propose remedial measures. Ensure remedial measures are properly implemented. 	 Submit noise mitigation proposals to the IEC and ER. Implement noise mitigation proposals 		
Limit Level	 Notify the ER, IEC, Contractor and EPD. Identify sources. Repeat measurements to confirm findings. Increase monitoring frequency. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. Inform the IEC, ER and Contractor the causes and action taken for the exceedances. Assess the effectiveness of the Contractor's remedial action and keep the IEC, EPD and ER informed of the results. If exceedance stops, cease additional monitoring. 	 Discuss amongst the ER, ET and Contractor on the potential remedial action. Review the Contractor's remedial action whenever necessary to assure their effectiveness and advise the ER accordingly. 	notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures.	 Take immediate action to avoid further exceedance. Submit proposals for remedial action to the IEC and ER within 3 working days of notification. Implement the agreed proposals. Submit further proposals if problems still not under control. Stop the relevant portion of works as determined by the ER until the exceedance is abated. 		

Notes

- (1) ET Environmental Team, IEC Independent Environmental Checker;
- (2) Each step of action should be undertaken within 1 working day unless otherwise specified

Appendix 6

Implementation Schedule for Environmental Mitigation Measures (EMIS)

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
Air Qua	1				
4.8.2	2.3.1	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:	All work sites	Contractor and sub-contractor(s)	√
		Use of regular watering, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;			
		Use of frequent watering for particularly dusty construction areas close to ASRs;			
		Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering should be applied to aggregate fines;			
		Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage plies near ASRs;			
		Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;			
		Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;			
		Imposition of speed controls for vehicles on unpaved site roads. 8 km/hr is the recommended limit;			
		Routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs;			
		• Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA), if applicable, should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3-sides; and			
		Loading, unloading, transfer, handling or storage of large amount of cement or dry PFA should be carried out in a totally enclosed system or facility, and nay vent or exhaust should be fitted with the an effective fabric filter or			

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		equivalent air pollution control system.			
Noise					
5.8.3	3.4.1 – 3.4.2	 Selection and Optimisation of Construction Processes Carefully arrange the timing and sequencing of the various construction activities according to the actual site work situation; Limit the quantity of PME to be operated concurrently; In the case during school examination, more stringent construction noise criteria should be imposed, the potentially most disruptive construction activities should be avoided, and arranged to be conducted during school holidays as far as practicable; and Preparation of the Construction Noise Management Plan. 	All work sites	Contractor and sub-contractor(s)	√
5.8.4 – 5.8.6	3.4.1 – 3.4.2	Use of QPME and Quiet Working Methods In order to reduce the excessive noise impacts at the NSRs, quieter PME are recommended. Whilst quieter PME are listed, the Contractor may be able to obtain particular models of plant that are quieter than the PMEs given in GW-TM. The associated mitigation measures to the particular PME should be reviewed by the Contractor. The use of plants with SWLs less than those in the GW-TM are summarized in <i>Table 5.14</i> of the EIA report and the proposed mitigated plant inventory for the	All work sites	Contractor and sub-contractor(s)	N/A

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		construction works of the proposed Project is detailed in <i>Appendix 5.8</i> .			
5.8.7 – 5.8.8	3.4.1 – 3.4.2	Use of movable noise barriers	All work sites	Contractor and sub-contractor(s)	N/A
		The use of movable noise barrier for certain PME could further minimize the			
		construction noise impact. In general 5dB(A) reduction for mobile PME and			
		10dB(A) for stationary PME can be achieved provided that the direct line-of site			
		of the PME is blocked. The Contractor shall be responsible for the design of the			
		movable noise barrier with due consideration given to the size of the PME and the			
		requirement of intercepting the line of sight between the NSRs and the PME, as			
		well as ensuring that the barriers should have no openings and gaps.			
5.8.9	3.4.1 –	Good site practices	All work sites	Contractor and	√
	3.4.2	Use of well-maintained and regularly-serviced plant during the works;		sub-contractor(s)	
		Plant operating on intermittent basis should be turned off or throttled down to a minimum;			
		Plant known to emit noise strongly in one direction should be orientated to face away from the NSRs;			
		• Silencers, mufflers and enclosures for plant should be used where possible and properly maintained throughout the works;			
		Where possible fixed plants should be sited away from NSRs; and			
		Stockpiles of excavated materials and other structures such as site buildings should be used effectively to screen noise from the works.			

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
6.9.1	4.4.2	 In accordance with Professional Persons Environmental Consultative Committee Practice Notes (ProPECC PN) 1/94, potential water quality impact shall be minimised by the implementation of construction phase mitigation measures and general good site practice including the following: At the establishment of works site, perimeter cut-off drains to direct off-site water around the Site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided to divert the stormwater to silt removal facilities. Dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the run-off discharge into an appropriate watercourse, through a silt/sediment trap. Silt/sediment traps should also be incorporated in the permanent drainage channels to enhance deposition rates; The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. The sizes may vary depending upon the flow rate, but for a flow rate of 0.1m³/s, a sedimentation basin of 30m³ would be required and for a 	All work sites	Contractor and sub-contractor(s)	

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		flow rate of 0.5m ³ /s the basin would be 150m ³ . The detailed design of the sand/silt raps should be undertaken by the Contractor prior to the commencement of construction.			V
		• The construction works should be programmed to minimise surface excavation works during rainy seasons (April to September), as possible. All exposed earth areas should be completed and vegetated as soon as possible after completion of the earthwork, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means;			
		• The overall slope of works sites should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads should be protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during the prolonged periods of inclement weather and the reduction of surface sheet flows;			
		 All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure their proper and efficient operation at all times particularly following rainstorms. Deposited silts and grits should be removed regularly and disposed of by spreading evenly over stable, vegetated areas; 			
		 Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet season is inevitable, they should be dug and backfilled in short sections wherever practicable. The water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities; 			
		 All open stockpiles of construction materials (for example, aggregates, sand and fill materials) should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system; 			
		• Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials			

EIA Ref. EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
	or debris being washed into the drainage system and storm run-off being directed into foul sewers; Precautions to be taken at any time of the year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted and during or after rainstorms, are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface run-off during storm events; All vehicles and plants should be cleaned before leaving the Project site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing bay should be provided at the exit of Project site where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-washing bay to public roads should be paved with sufficient backfall toward the wheel-washing bay to prevent vehicle tracking of soil and silty water to public roads and drains; Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain. Any drainage channels connecting storm drains via designed sand/silt removal facilities should be disconnected/removed after completion of construction stage to prevent any direct discharge to the stormwater system; The construction solid waste, debris and rubbish on-site should be collected, handled and disposed of properly to avoid causing any water quality impacts. The requirements for solid waste management are detailed in Section 8 of EIA report; and All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of	Measures		

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
6.9.3	4.4.3	There is a need to apply to the EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements as specified in the discharge licence. All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the Technical Memorandum. Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing seawater intakes. In addition, no new effluent discharges in nearby typhoon shelters should be allowed. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., would minimise water consumption and reduce the effluent discharge volume.	All work sites	Contractor and sub-contractor(s)	√ ·
6.9.4	4.4.4	Portable chemical toilets and sewage holding tanks are recommended for the handling of the construction sewage generated by the workforce. A licenced contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	All work sites	Contractor and sub-contractor(s)	V
6.9.6	4.4.5	Any maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should be undertaken within the areas appropriately equipped to control these discharges.	All work sites	Contractor and sub-contractor(s)	√ ·
6.9.7	4.4.6	All sewage arising from the proposed Project should be collected and diverted to the public foul water drainage system via proper connections to minimise water quality impact from the operation of the Project and ensure compliance with Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under the Water Pollution Control Ordinance (WPCO-TM).	The Government Complex and Vehicle Depot	Contractor and sub-contractor(s), HKPF, FEHD, EMSD and GL	V
6.9.8	4.4.7	Run-offs from the covered areas including vehicle washing bays and vehicle examination / maintenance / repair / testing area would be properly treated prior to discharge into the foul water drainage system. The wastewater treatment	The Government Complex and Vehicle Depot	Contractor and sub-contractor(s)	√

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		facilities for the proposed Project, which comprised of petrol interceptor and sedimentation tank, would be designed using sedimentation process with adequate treatment capacity. Oily waste collected by petrol interceptors is considered and disposed of as chemical waste. The wastewater treatment facilities for the proposed Project will be designed during the detailed design stage and the treated effluent for discharging into the public foul water drainage system should comply with the effluent standards as stated in the WPCO-TM.			
Landsca	pe and Visu	al	I	I	1
7.8.2	5.2.1	Hoardings should be provided with aesthetic treatment and designed to be subtle and camouflaged. It should be compatible with the surrounding landscape and visually "impermeable" to block the view of construction activities from VSRs.	All work sites	Contractor and sub-contractor(s)	V
7.8.3	5.2.1	Temporary landscape treatment, such as the provision of temporary landscape planting around the Site office in ornamental pots and application of green roof for Site office, should be considered during construction phase. Landscape planting in movable planters should also be considered as a temporary greening measure for the Project area (i.e. along Site hoarding). Design of the green roof and the type of species to be used shall be reviewed and confirmed during detailed design stage.	All work sites	Contractor and sub-contractor(s)	N/A

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
7.8.4	5.2.1	Disturbance to existing vegetation should be avoided as far as practicable. Where possible, the construction programme should retain all trees in situ that are not in direct conflict with the development proposals. Subject to the detailed design of the proposed Project, a review shall be carried out before commencement of construction phase to assess the potential conflict of the construction activities with existing roadside trees and the need of corresponding measures. Proper protective fencing should be provided by the Contractor to protect the preserved trees before commencement of any works within the Project site. The protective fencing should be erected along or beyond the perimeter of the tree protection zone of each individual tree.	All work sites	Contractor and sub-contractor(s)	

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
7.8.7	5.2.1	A multi-patch of landscape area should be provided on the roof of the proposed building to soften the impact of the built structure. An area of approximately 2600m² of shrub, which comprises of a mix of native and ornamental species, is proposed to be provided to enhance the aesthetics of views for those viewing the roof. The type of shrub species will be confirmed during detailed design stage. The planting should be commenced during construction stage and be completed before the completion of construction stage to ensure the measure will be implemented on Day 1 of operation stage. Vegetation maintenance should be provided by the Operator.	The Government Complex and Vehicle Depot	Contractor and sub-contractor(s), Operator	N/A
7.8.8 7.8.9	5.2.1	The exterior of the permanent structure of the proposed Project should use non-reflective external finishes in light colour that is visually unobtrusive with surrounding context. Non-reflective paving materials should be considered to reduce potential glare from surface reflectance. The finishing material and colour will be reviewed and confirmed during detailed design stage. Lighting should be efficiently designed so that minimum amount of lighting is required for safety and security. The design may make reference to the Guidelines on Industry Best Practices for External Lighting Installations by Environmental Bureau, EPD and EMSD. The mounting height and direction of exterior lighting fixtures shall be designed and arranged to point away from sensitive receivers where possible. Specification of lighting operation schedule shall be formed by the operator to impose restriction on lighting operation after business hours, such as limiting the operation of lighting except for security lighting only, and in areas with necessary night-time operation where applicable.	The Government Complex and Vehicle Depot	Contractor and sub-contractor(s), Operator	

EIA EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
8.5.1 6.2.1	 Recommendations for good site practices: The Contractor shall prepare a Waste Management Plan (WMP) in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Site, for the Engineer's Representative approval. The WMP shall include monthly and yearly Waste Flow Tables that indicate the amounts of waste generated, recycled and disposed of (including final disposal site); The Contractor's waste management practices and effectiveness shall be audited by the Engineer's Representative on regular basis; The Contractor shall provide training for site staff for the concept of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; The Contractor shall ensure sufficient waste disposal points and regular collection of waste; The Contractor shall use trucks with covering for the open-box bed and enclosed container shall be used to minimise windblown litter and dust during transportation of waste; The Contractor shall implement regular cleaning and maintenance programme for drainage systems, pumps and oil interceptors; Separation of chemical wastes for special handling and appropriate treatment at a Chemical Waste Treatment Facility (CWTF); Encourage collection of aluminium cans, paper and plastic bottles by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the workforce; Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads; 	All works sites	Contractor and Sub-contractors	

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		Make provisions in contract documents to allow and promote the use of recycled aggregates where appropriate;			\checkmark
		 No waste shall be burnt on-site; A recording system for the amount of wastes generated, recycled and disposed (including disposal sites) should be proposed; 			
		Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste; and			
		 Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers form utilizing them. Night soil should be regularly collected by licensed collectors. 			
8.5.1	6.2.1	C&D Materials / Waste:	All work sites	Contractor and	V
		Use standard formwork or pre-fabrication as far as practicable so as to minimise the C&D Materials arising;		Sub-contractors	
		Consider the use of more durable formwork or plastic facing for construction works;			
		Avoid the use of wooden hoardings and substitute with metal hoarding to facilitate recycling;			
		Purchase of construction materials should be carefully planned in order to avoid over-ordering and wastage;			
		• Establish a trip-ticket system in accordance with DevB TC(W) No. 6/2010 and Waste Disposal (Charges for Disposal of Construction Waste) Regulation in order to monitor the disposal of inert C&D Materials at public fill and the remaining C&D Waste to landfills, and control flytipping;			
		Design foundation works to minimise the amount of excavated material to be generated;			
		Sort construction debris and excavated materials on-site to recover			

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		reusable/recyclable portions (i.e. soil, broken concrete, metal, etc.) for backfilling and reinstatement; • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Specify in design & build contract the use of recycled aggregates where appropriate; • Plan and stock construction materials carefully to minimise the amount of waste to be generated and to avoid unnecessary generation of waste; and • Recommend the use of metal fencing or building panels, which are more durable than wooden panels, for the erection of construction site hoarding.			
8.5.1	6.2.1	 Chemical waste: Chemical waste producers should be registered with the EPD; Chemical waste should be handled in accordance with the "Code of Practice on the Packaging, Handling and Storage of Chemical Wastes" including but not limited to the followings: Good quality containers compatible with the chemical wastes should be used and maintained in good conditions and securely closed, with incompatible chemicals be stored separately. Appropriate labels should be securely attached on each chemical waste container in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. A licensed collector to transport and dispose of the chemical wastes should be employed by the Contractor, to either the Chemical Waste Treatment Centre at Tsing Yi, or any other licensed facilities. Waste oils, chemicals or solvents should not be discharged to drain; and Routine cleaning and maintenance programme for drainage systems, sumps 	The Government Complex and Vehicle Depot	Contractor and Sub-contractor; HKPF, FEHD, EMSD and GL	1

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures and oil interceptors during operation.	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
8.5.1	6.2.1	 General refuse: Sufficient dustbins should be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws; Sufficient enclosed bins should be provided for general refuse, food and beverage waste to reduce odour, pest and litter impacts; General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes; A reliable waste collector should be employed to clear general refuse from the construction site on a daily basis and disposed of to the licensed landfill or refuse transfer station; Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local collection scheme by the Contractor should be advocated; and Waste separation facilities for paper, aluminium cans, plastic bottles, etc. should be provided on-site and collected by individual collectors should be encouraged. 	The Government Complex and Vehicle Depot	Contractor and Sub-contractor; HKPF, FEHD, EMSD and GL	
Hazard t 10.11.1	8.2.1	Recommendations for good site practices in construction phase: • ignition of fire on site should be controlled throughout the construction programme; • any temporary storage of fuel and flammable chemical should be minimised to reduce chance of causing explosion or escalation of fire in the case of emergency event at nearby potentially hazardous sources;	All works area	Contractor and sub-contractors	V

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Status
		fire extinguisher or other firefighting equipment should be made easily accessible to on-site workers; and			
		establish communication channel and evacuation plan in the case of emergency event at nearby potentially hazardous sources.			

Remark:

- √ Compliance of Mitigation Measures
 <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- ▲ Non-compliance of Mitigation Measures

N/A Not Applicable in Reporting Period

Appendix 7

Contract No. SS H504 Design and Construction of Chai Wan Government Complex and Vehicle Depot Noise Monitoring Data

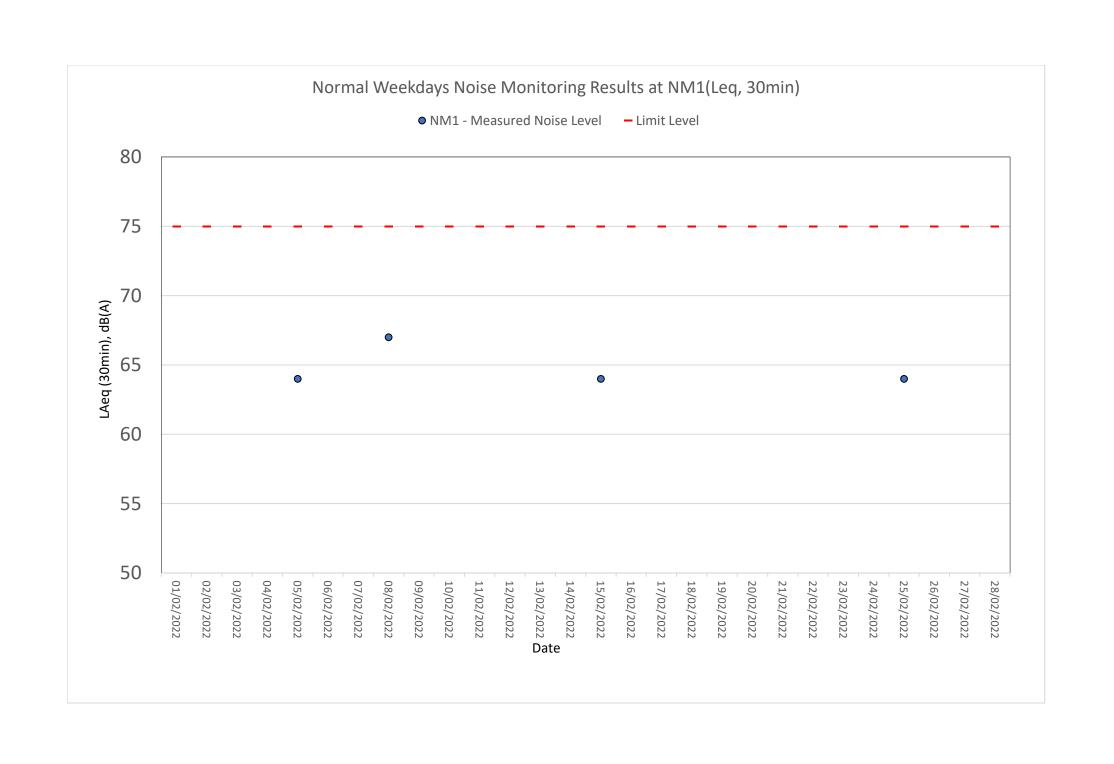
Date(yyyy- mm-dd)	Station	Start Time	Wind Speed, m/s	1st set 5mins	s, dB(A)	2nd set 5m	nins, dB(A)	3rd set 5m	ins, dB(A)	4th set 5m	nins, dB(A)	5th set 5n	nins, dB(A)	6th set 5n	nins, dB(A)	Level [Co	ed Noise nstruction evel], Leq s, dB(A)	Unit	Site Observation	Measure Level [Con Noise Lev	nstruction	Unit	Constructi on Noise Level #	Unit
2022-02-05	NM1*	14:25	1.9	Leq: L10: L90:	63.5 66.1 59.3	Leq: L10: L90:	63.2 65.4 59.4	Leq: L10: L90:	64.6 66.9 68.4	Leq: L10: L90:	64.7 67.1 60.5	Leq: L10: L90:	65.6 68.3 61.7	Leq: L10: L90:	64.0 66.5 60.0	Leq:	64	dB(A)	Major: Railway Noise Other: Traffic Noise	Leq:	64.34	dB(A)	N.A.	dB(A)
2022-02-05	NM2a *	13:47	0.9		72.1 73.7 67.1	Leq: L10: L90:	72.7 74.5 68.3	Leq: L10: L90:	74.4 76.5 69.1	Leq: L10: L90:	73.1 75.4 68.8	Leq: L10: L90:	72.9 74.5 68.6	Leq: L10: L90:	70.9 72.8 68.5	Leq:	73^	dB(A)	Major: Noise from Yau Lee Site Other: Traffic Noise.	Leq:	72.81	dB(A)	N.A.	dB(A)
2022-02-05	NM3	13:03	1.6	Leq: L10: L90:	66.0 68.9 62.8	Leq: L10: L90:	67.5 68.7 64.3	Leq: L10: L90:	66.4 67.7 64.2	Leq: L10: L90:	66.5 68.4 63.7	Leq: L10: L90:	68.7 71.7 64.1	Leq: L10: L90:	67.2 69.5 64.3	Leq:	67	dB(A)	Major: Noise from Cargo Handling Area Other: Traffic Noise.	Leq:	67.15	dB(A)	N.A.	dB(A)
2022-02-08	NM1*	14:22	1.6	Leq: L10:	69.2 70.9 61.8	Leq: L10: L90:	68.0 70.1 60.9	Leq: L10: L90:	64.7 67.2 60.7	Leq: L10: L90:	65.2 68.0 61.4	Leq: L10: L90:	64.4 67.3 60.1	Leq: L10: L90:	68.0 70.6 60.9	Leq:	67	dB(A)	Major: Railway Noise Other: Traffic Noise	Leq:	66.98	dB(A)	62.45	dB(A)
2022-02-08	NM2a *	13:45	2.2	Leq: L10: L90:	76.1 77.0 70.0	Leq: L10: L90:	75.6 78.3 70.2	Leq: L10: L90:	75.5 78.2 69.9	Leq: L10: L90:	73.4 75.1 68.0	Leq: L10: L90:	72.1 73.9 67.8	Leq: L10: L90:	76.0 76.9 69.1	Leq:	75 [70#]	dB(A)	Major: Noise from Yau Lee Site Other: Traffic Noise.	Leq:	75.02	dB(A)	69.94	dB(A)
2022-02-08	NM3	13:01	2.1	Leq: L10: L90:	67.8 69.6 64.6	Leq: L10: L90:	67.6 69.8 64.4	Leq: L10: L90:	68.2 70.1 64.7	Leq: L10: L90:	67.9 69.3 65.3	Leq: L10: L90:	66.9 68.1 68.4	Leq: L10: L90:	67.4 68.9 65.7	Leq:	68	dB(A)	Major: Noise from Cargo Handling Area Other: Traffic Noise.	Leq:	67.65	dB(A)	N.A.	dB(A)
2022-02-15	NM1*	13:09	0.8		64.3 67.0 59.2	Leq: L10: L90:	62.4 65.6 57.8	Leq: L10: L90:	63.1 66.5 57.9	Leq: L10: L90:	63.2 66.5 57.9	Leq: L10: L90:	64.2 67.1 59.9	Leq: L10: L90:	64.9 67.4 61.2	Leq:	64	dB(A)	Major: Railway Noise Other: Traffic Noise	Leq:	63.77	dB(A)	N.A.	dB(A)
2022-02-15	NM2a *	13:46	0.5	Leq: L10: L90:	75.1 79.9 66.5	Leq: L10: L90:	72.9 75.7 65.9	Leq: L10: L90:	72.2 75.7 65.9	Leq: L10: L90:	73.4 76.8 65.5	Leq: L10: L90:	75.3 77.9 65.4	Leq: L10: L90:	76.0 78.0 66.4	Leq:	74 [67 #]	dB(A)	Major: Noise from Yau Lee Site Other: Traffic Noise.	Leq:	74.37	dB(A)	67.37	dB(A)
2022-02-15	NM3	14:21	0.7	Leq: L10: L90:	67.7 71.8 61.5	Leq: L10: L90:	67.1 70.5 61.4	Leq: L10: L90:	65.1 67.9 61.1	Leq: L10: L90:	65.0 68.4 60.0	Leq: L10: L90:	67.7 69.9 61.0	Leq: L10: L90:	65.9 68.8 61.0	Leq:	67	dB(A)	Major: Noise from Cargo Handling Area Other: Traffic Noise.	Leq:	66.56	dB(A)	N.A.	dB(A)
2022-02-25	NM1*	13:12	0.9		64.9 66.8 59.2	Leq: L10: L90:	63.8 67.2 57.4	Leq: L10: L90:	63.8 67.1 58.2	Leq: L10: L90:	63.9 67.0 58.8	Leq: L10: L90:	63.9 66.8 59.0	Leq: L10: L90:	64.5 67.2 59.4	Leq:	64	dB(A)	Major: Railway Noise Other: Traffic Noise	Leq:	64.15	dB(A)	N.A.	dB(A)
2022-02-25	NM2a *	13:49	0.4	Leq: L10: L90:	74.4 78.4 64.9	Leq: L10: L90:	72.5 75.1 64.5	Leq: L10: L90:	71.3 73.5 65.7	Leq: L10: L90:	72.7 74.1 64.9	Leq: L10: L90:	72.8 74.4 63.9	Leq: L10: L90:	75.5 76.1 65.8	Leq:	73 [51 #]	dB(A)	Major: Noise from Yau Lee Site Other: Traffic Noise.	Leq:	73.42	dB(A)	50.71	dB(A)
2022-02-25	NM3	14:24	0.6	Leq: L10: L90:	65.1 67.8 61.3	Leq: L10: L90:	65.4 70.1 61.3	Leq: L10: L90:	65.9 69.0 61.7	Leq: L10: L90:	68.4 71.4 61.5	Leq: L10: L90:	68.2 70.9 61.7	Leq: L10: L90:	68.0 71.1 60.5	Leq:	67	dB(A)	Major: Noise from Cargo Handling Area Other: Traffic Noise.	Leq:	67.05	dB(A)	N.A.	dB(A)

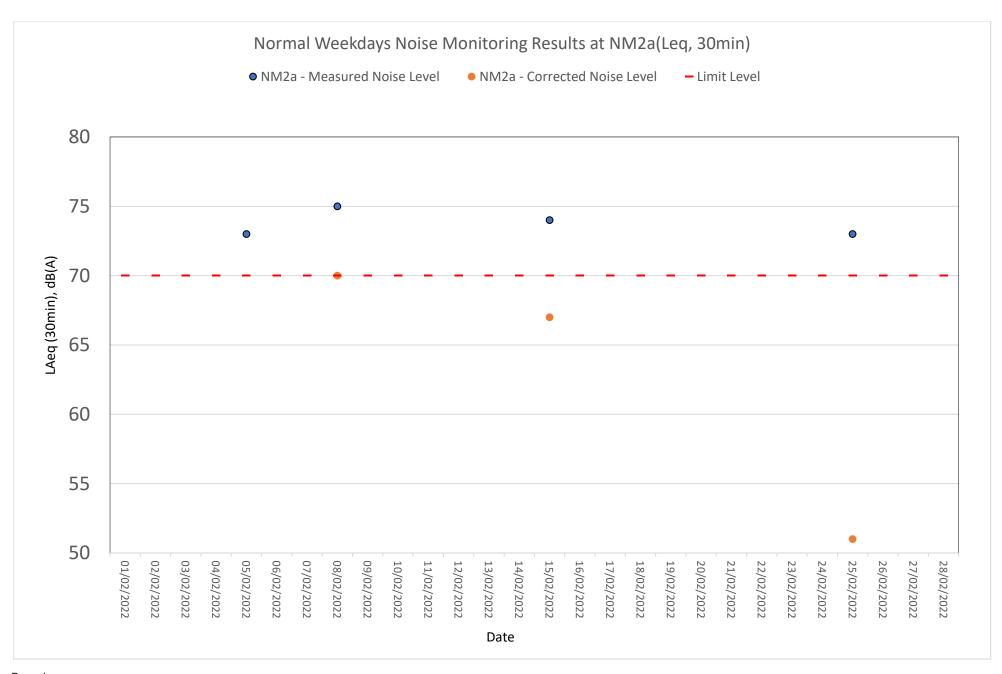
Remark: * A facade correction of +3 dB(A) was applied to the measured noise level.

Therefore, baseline corrections were carried out and the corrected noise level which solely represent the noise level of Construction works are lower than the noise criteria. As such the EAP was not triggered.

[#] The measured noise levels exceeded the noise level of 70dB(A) and they were higher than the baseline level of 73.4 dB(A) and 69.8dB(A) for NM2a and NM3 respectively.

[^]On 5 Feb 2022, the measured noise level of NM2a exceeded the limit level of 70dB(A). However, it was lower than the baseline level of 73.4dB(A). Therefore, it is not considered as an limit level exceedance.

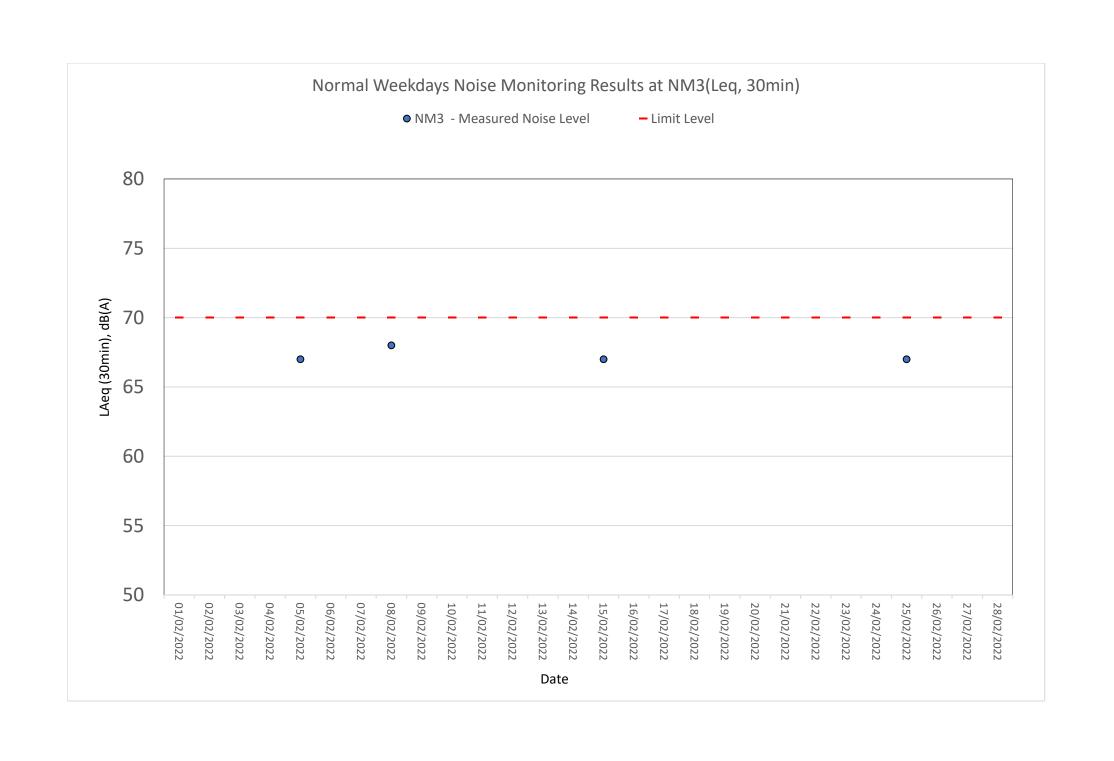




Remark:

The measured noise level exceeded the noise level of 70dB(A) and it was higher than the baseline level of 73.4 dB(A). Therefore, baseline correction was carried out and the corrected noise level which solely represent the noise level of Construction works are lower than the noise criteria. As such the EAP was not triggered.

On 5 Feb 2022, the measured nose level of NM2a exceeded the action level of 70dB(A). However, it was lower than the baseline level of 73.4dB(A). Therefore, It is not considered as an Action Level exceedance.



Appendix 8

Waste Flow Table

			Total Q	uantities of	C&D Materia	ls to be Ge	nerated fi	rom the Contract			
Month	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill (Inert waste)	Imported Fill	Metals	Timber	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse (Non-inert waste)
	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)
Jul-21	0	0	0	0	0	0	0	0	0	0	0
Aug-21	0	0	0	0	0	0	0	0	0	0	0
Sep-21	0	0	0	0	0	0	0	0	0	0	0.005
Oct-21	0	0	0	0	0	0	0	0	0	0	0.005
Nov-21	0	0	0	0.0	0	0	6.77	0.055	0	0	0.005
Dec-21	0	0	0	0.302	0	0	0	0	0	0	0.015
Jan-22	0	0	0	1.019	0	0	0	0	0	0	0.010
Feb-22	0	0	0	0.960	0	0	0	0	0	0	0.005
Total	0	0	0	2.281	0	0	6.77	0.055	0	0	0.045

- Inert waste will be disposed to Chai Wan Public Fill Barging Point (CW-PFBP) or Fill Bank at Tseung Kwan O Area 137(TKO137FB). Non-inert waste (General refuse) will be disposed to North East New Territories Landfill (NENT).
- -The conversion factor: 1 full load of dumping truck being equivalent to 0.0065m3 by volume & 3/4 load of dumping truck being equivalent to 0.005m3 by volume.

Appendix 9

Chai Wan Government omplex and Vehicle Depot Environmental Site Inspection Checklist (Rev. 0)

Inspection Date:	7 Feb 2022	Inspected By:	Daisy Au Yeung
Time:	14:00 – 14:30	Weather Condition:	Overcast
Participants:	Mr. K.Y. Yip (Engineer's Represent Yeung (ET), Bobo Hui (IEC)	ative); Desmond (Contra	actor); Alvin Kwok (Contractor); Daisy Au

		_			
Α	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?		\boxtimes		EP No.: EP-505/2015/A
A2	Are Construction Noise Permits available for inspection/posted at site entrance.		\boxtimes		CNP No.: GW-RS0759-21
A3	Is wastewater discharge licence available for inspection?		\boxtimes		
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	\boxtimes			
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	\boxtimes			
		_			
В	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?		\boxtimes		
B2	Are completed earthworks sealed as soon as practicable?		\boxtimes		
В3	Are plant and equipment well maintained (i. e. without black smoke from powered plant)?		\boxtimes		
B4	Any remedial action undertaken?	\boxtimes			N.A.
B5	Observed dust source(s)		•	1	
		☐ Wind ero	sion		
		Vehicle/ E	Equipment	Moveme	nts
		Loading/	unloading	of materi	als
		Others:		N.A.	<u>.</u>
B6	Are unpaved areas/ designated roads watered regularly to avoid dust generation?		\boxtimes		
B7	Are dusty materials covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading?				
B8	After removal of stockpile, are the remained dusty materials wetted with water and cleared from surface of roads?	\boxtimes			N.A.
В9	Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones?	\boxtimes			N.A.
B10	Are loaded dump trucks covered by impervious sheeting appropriately before leaving the site?	\boxtimes			N.A.
B11	Are wheel washing facilities with high pressure		\boxtimes		

water jet provided at all site exits if practicable?

Environmental Site Inspection Checklist (Rev. 0)

Report No. <u>0011-20220207</u>

Chai Wan	Government	Complex	and	Vehicle	Depot
----------	------------	---------	-----	---------	-------

B12	Are all vehicles and plant cleaned before they leave		\boxtimes		
	the construction site?				
B13	Are hoarding ≥ 2.4m tall provided beside roads or	\boxtimes	\boxtimes		
	area with public access?				
B14	Is the portion of any road leading only to		\boxtimes		
	construction site (within 30m of a vehicle entrance				
D45	or exit) kept clear of dusty materials?				
B15	Are surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical	\boxtimes			
	breaking operations takes place sprayed with water				N.A.
	or a dust suppression chemical continuously?				
B16	Is the area involved demolition activities sprayed				
D 10	with water or a dust suppression chemical	\boxtimes			
	immediately prior to, during and immediately after				N.A.
	the activities so as to maintain the entire surface				
	wet?				
B17	Is scaffolding erected around the perimeter of a	\boxtimes			NI A
	building under construction?				N.A.
B18	Are effective dust screens, sheeting or netting	\boxtimes			
	provided to enclose the scaffolding from the ground				
	floor level of the building, or a canopy provided from				N.A.
	the first floor level up to the highest level of the				
	scaffolding?				
B19	Is the skip hoist for materials transport enclosed by	\boxtimes			N.A.
DOO	impervious sheeting?	_			
B20	Is every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) covered entirely by			\boxtimes	
	impervious sheeting or placed in an area sheltered				Reminder (1)
	on the top and 3 sides?				
B21	Are the areas of washing facilities and the road				
521	section between the washing facilities and the exit		\boxtimes		
	point paved with concrete, bituminous materials or				
	hardcores?				
B22	hardcores? Are cement or dry PFA delivered in bulk stored in a	M			
B22		\boxtimes			N A
B22	Are cement or dry PFA delivered in bulk stored in a				N.A.
	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed?	\boxtimes			N.A.
B22 B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer,				
	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility?				
	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric				
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system?				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by	×			N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen,				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within				N.A.
B23	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies?				N.A.
B23 B24 B25 B26	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies? Are the worksites wetted with water regularly?				N.A.
B23 B24 B25	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies? Are the worksites wetted with water regularly?				N.A.
B23 B24 B25 B26 B27	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies? Are the worksites wetted with water regularly? Is generation of dust avoided during loading or unloading?		\boxtimes		N.A.
B23 B24 B25 B26	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies? Are the worksites wetted with water regularly?				N.A.
B23 B24 B25 B26 B27	Are cement or dry PFA delivered in bulk stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed? Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility? Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system? Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies? Are the worksites wetted with water regularly? Is generation of dust avoided during loading or unloading? Are all trucks loaded to a level within the side and		\boxtimes		N.A.

Contract No. SS H504 Design and Construction of

Chai Wan Government Complex and Vehicle Depot

Report No. <u>0011-20220207</u>

Environmental Site Inspection Checklist (Rev. 0)

B30	Are designated roads paved?		\boxtimes		
B31	Are site vehicle movements confined to designated roads?		\boxtimes		
•					
С	Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?		\boxtimes		
C2	Are vehicles and equipment switched off or throttled down while not in use?		\boxtimes		
C3	Is the noise directed away from nearby NSRs?		\boxtimes		
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?		\boxtimes		
C5	Are mobile and/or noisy plant sited as far away from NSRs as possible and practicable and orientated so that the noise is directed away from nearby NSRs?		\boxtimes		
C6	Are material stockpiles, mobile container officer and other structures utilised to screen noisy activates?	\boxtimes			N.A.
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?		\boxtimes		
C8	Are noise barriers (typically density @14kg/m²) acoustic mat or full enclosure close to noise plants including air compressor, generators and saw etc. provided to protect NSRs?	\boxtimes			N.A.
C9	Is the sequencing operation of construction plants where practicable?		\boxtimes		
C10	Is the hoarding maintained properly?		\boxtimes		
C11	Do air compressors have valid noise labels?		\boxtimes		
C12	Are compressor operated with doors closed?		\boxtimes		
C13	QPME used with valid noise labels?		\boxtimes		
C14	Major noise source(s)			•	
		☐ Traffic			
		⊠ Construct	ion activiti	es inside	of site
		Construct	ion activiti	es outsid	e of site
		Others:			

Environmental Site Inspection Checklist (Rev. 0)

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo	
Construction Activities						
D1	Are catchpits and perimeter channels constructed in advance of site formation works and earthworks?		\boxtimes			
D2	Is wastewater from temporary site facilities controlled to prevent direct discharge to surface or marine water?		\boxtimes			
D3	Is minimise surface excavation works during rainy seasons (April to September), as possible?	\boxtimes			N.A.	
D4	Is the storm drainage directed to storm drains via adequately designed sand/ silt removal facilities e.g. sand traps, silt?		\boxtimes			
D5	Are channels, earth bunds or sandbag barriers provided on site to properly direct stormwater to such silt removal facilities?		\boxtimes			
D6	Are the silt removal facilities, channels and manholes maintained regularly?		\boxtimes			
D7	Are the temporary access roads surfaced with crushed stone or gravel?		\boxtimes			
D8	Is the deposited silt and grit removed regularly?		\boxtimes			
D9	Is rainwater pumped out from trenches discharged into storm drains via silt system?	\boxtimes			N.A.	
D10	Are measures taken to prevent the washout of construction materials, soil, silt or debris into any drainage system?			\boxtimes	Reminder (2)	
D11	Are open stockpiles of construction materials e.g. aggregates and sand on site covered with tarpaulin or similar fabric during rainstorms??		\boxtimes			
D12	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?		\boxtimes			
D13	Are the discharges of surface run-off into foul sewer always prevented?		\boxtimes			
D14	Is a wheel washing bay provided at every site exit?		\boxtimes			
D15	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?		\boxtimes			
D16	Is the section of construction road between the wheel washing bay and the public road surfaced with crushed stone or coarse gravel?		\boxtimes			
D17	Is wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities screened to remove large objects?	\boxtimes			N.A.	
D18	Are the vehicle and plant serving areas, vehicle wash bays and lubrication facilities located under roofed areas?	\boxtimes				
D19	Is leakage or spillages contained and cleaned up immediately?			\boxtimes	Observation (2)	
D20	Does the surface runoff from bunded areas pass through oil/grease traps prior to discharge to the storm water system?	\boxtimes			N.A.	

D21	Are site drainage systems provided over the entire project site with sediment control facilities?		\boxtimes		
D22	5.		\boxtimes		
D23	Is the generated wastewater with high concentrations of SS collected to the sedimentation tanks or package treatment systems for proper treatment prior to disposal?		\boxtimes		
D24	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning?		\boxtimes		
D25	Is the sewage generated from toilets collected using a temporary storage system?		\boxtimes		
D26	Is there any sediment plume observed in nearby watercourses?	\boxtimes			Not observed.
D27	Are slit-grease traps deployed to prevent a direct input of road surface runoff to the marine waters?	\boxtimes			N.A.
E	Waste / Chemical Management	N/A or Not Observed	Yes	No	Remarks / Photo
Genera	al Waste				
E1	Is the general waste generated on-site stored in enclosed bins or compaction units separately from the construction and chemical wastes?		\boxtimes		
E2	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?				
E3	Does accumulation of waste avoid?				
E4	Is waste disposed regularly?				
Constr	uction Waste				
E5	Are the temporary stockpiles maintained regularly?	\boxtimes			N.A.
E6	Is the excavated fill material reused for backfilling and reinstatement?	\boxtimes			N.A.
E7	Are the C&D materials sorted and recycled onsite?	\boxtimes			N.A.
E8	Is there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	\boxtimes			Not observed.
E9	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	\boxtimes			N.A.
E10	Are the public fill and C&D waste segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal?		\boxtimes		
E11	Is the durable formwork or plastic facing for construction works used?	\boxtimes			N.A.
E12	Do the wooden hoardings avoid to be used?		\boxtimes		
E13	Is metal hoarding used to enhance the possibility of recycling?		\boxtimes		
E14	Is the segregation and storage of C&D wastes undertaken in designated are?		\boxtimes		

Report No. <u>0011-20220207</u>

Chai Wan Government Complex and Vehicle Depot

E15	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?		\boxtimes		
E16	Do the excavated materials appear contaminated?	\boxtimes			N.A.
E17	If suspected contaminated, appropriate procedures followed?				N.A.
Chemi	cal / Fuel Storage Area				
E18 Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?			\boxtimes		
E19	Are the storage area enclosed 3 sides by walls/ fence of ≥2m tall and bounded with adequate bund capacity (>110% of largest container) or do the storage area allow storage of 20% of total volume of waste?		\boxtimes		
E20	Are the storage areas labelled and separated (if needed)?		\boxtimes		
E21	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering?		\boxtimes		
E22	Are the containers used for the storage of chemical wastes suitable for the substance that are holding, resist to corrosion, maintained in a good condition, and securely closed?		\boxtimes		
E23	If no specification has been approved by EPD, are container with <450L capacity provided for storage of chemicals waste?		\boxtimes		
Chemi	cal Waste / Waste Oil				
E24	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area?			\boxtimes	Observation (1)
E25	Are chemicals and waste oil recycled or disposed properly?	\boxtimes			N.A
E26	Is waste oil collected and stored for recycling or disposal?	\boxtimes			N.A
Record	<u>ds</u>				
E27	Is a licensed waste haulier used for waste collection?		\boxtimes		
E28	Are the records of quantities of wastes generated, recycled and disposed properly kept?		\boxtimes		
E29	For the demolition material/ waste, is the number of loads for each day recorded as appropriate?	\boxtimes			N.A

Cobserved Cobs	F	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
F3				\boxtimes		
and designed to be subtle and camouflaged? F4	F2			\boxtimes		
(such as the provision of temporary landscape planting around the Site office in ornamental pots and application of green roof for Site office)? F5 Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree? G Environmental Complaint G1 Number of Environmental Complaint received from 11/11/2021 to 07/02/2022 H General Housekeeping H1 Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation Not observed No Remarks / Photo Observed N/A or Not Observed No Remarks / Photo Others	F3			\boxtimes		
the perimeter of the tree protection zone of each individual tree? Complete Complet	F4	Is the temporary landscape treatment provided (such as the provision of temporary landscape planting around the Site office in ornamental pots			Not observed.	
Complaint Comp	F5	the perimeter of the tree protection zone of each		\boxtimes		
Complaint Comp						
H General Housekeeping H1 Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation N/A or Not Observed	G	Environmental Complaint		Yes	No	Remarks / Photo
H General Housekeeping Observed Yes No Remarks / Photo Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation N/A or Not Yes No Remarks / Photo Remarks / Photo N/A or Not Yes No Remarks / Photo Re	G1	· ·			\boxtimes	
H General Housekeeping Observed Yes No Remarks / Photo Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation N/A or Not Yes No Remarks / Photo Remarks / Photo N/A or Not Yes No Remarks / Photo Re						
mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation N/A or Not Yes No Remarks / Photo	н	General Housekeeping		Yes	No	Remarks / Photo
identified to prevent loss of vegetation N/A or Not Yes No Remarks / Photo	H1	, , , , , , , , , , , , , , , , , , , ,		\boxtimes		
II Others Yes No Remarks / Photo	H2			\boxtimes		
II Others Yes No Remarks / Photo						
Observed	ı	Others	N/A or Not Observed	Yes	No	Remarks / Photo
I1 Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	I1	which will not deter the workers from utilizing		\boxtimes		

Follow up action for previous Site Inspection:

- 1. Oil stain was cleared and disposed of as chemical waste. (Photo F1)
- 2. The general refuse were cleared. (Photo F2)
- 3. The chemical container was removed. (Photo F3)
- 4. Cement bags were covered entirely by impervious sheets. (Photo F4)





Photo F1

Photo F2

Photo F4



Photo F3

Observations:

- 1. Chemicals are observed without drip tray. (Photo 1)
- 2. Oil stain is observed underneath the generator. (Photo 2)
- 3. The generator is observed without NRMM label. (Photo 3)

Reminders:

- 1. Cement is not covered entirely by impervious sheeting. (Photo 4)
- 2. Muddy stockpile is observed next to vehicle entrance. (Photo 5)







Photo 1 Photo 2





Photo 3 Photo 4



Photo 5

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

- 1. Drip trays shall be provided for the chemical containers.
- 2. Oil stain shall be disposed of as chemical waste.
- 3. Proper NRMM label shall be affixed on the generator.
- 4. Cement bags shall be covered with impervious sheet.
- 5. Muddy stockpile next to the vehicle entrance shall be removed to prevent muddy washout of the site entrance.

	Environmental Team Representative:	IEC's Representative:	Contractor's Representative:	Engineer's Representative
Signature:	D	Fi	Alm	Cam
Name:	Daisy Au Yeung	Bobo Hui	Alvin Kwok	Henry Lam
Date:	7 Feb 2022	7 Feb 2022	8 Feb 2022	8 Feb 2022

inspe	ction Date:	24 Feb 2022	ınsp	pected By:	Daisy Au Yeung			
Time:		15:00 – 15:30	Wea	ather Condition:	ndition: Sunny			
Participants: Alvin Kwok (Contractor); Erik Luk (Contractor), Daisy Au Yeung (ET), Andy Ng(ET)						Ng(ET)		
Α	Permits/Lic	enses		N/A or Not Observed	Yes	No	Remarks / Photo	
A1		mental Permit, license/ other permit major site exit and vehicle access?			\boxtimes		EP No.: EP-505/2015/A	
A2		ction Noise Permits available for osted at site entrance.			\boxtimes		CNP No.: GW-RS0759-21	
A3	Is wastewate inspection?	er discharge licence available for			\boxtimes			
A4	-	ets for chemical waste and constructions sal available for inspection?	n	\boxtimes				
A5		licence/permit for disposal of waste or excavated materials availabn?	ole	\boxtimes				
	·							
В	Air Quality			N/A or Not Observed	Yes	No	Remarks / Photo	
B1	Is open burn	ning avoided?			\boxtimes			
B2	Are complet practicable?	ed earthworks sealed as soon as			\boxtimes			
В3		d equipment well maintained (i. e. k smoke from powered plant)?			\boxtimes			
B4				\boxtimes			N.A.	
B5	Observed do	ust source(s)						
				☐ Wind eros	sion			
				Vehicle/ Equipment Movements				
				Loading/ u	unloading	of materia	als	
				Others:		N.A.		
B6	-	d areas/ designated roads watered avoid dust generation?			\boxtimes			
В7		aterials covered entirely by imperviou sprayed with water to maintain the	IS		\boxtimes			
	reinstated w	ce wet and then removed or backfilled where practicable within 24 hours of the or unloading?						
B8	After remova	al of stockpile, are the remained dusty etted with water and cleared from	/	\boxtimes			N.A.	
DΩ	surface of roads?							
B9	9 Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones?		\boxtimes			N.A.		
B10	Are loaded	dump trucks covered by impervious propriately before leaving the site?		\boxtimes			N.A.	
B11	Are wheel w	rashing facilities with high pressure ovided at all site exits if practicable?			\boxtimes			

B12	Are all vehicles and plant cleaned before they leave the construction site?		\boxtimes		
B13	Are hoarding ≥ 2.4m tall provided beside roads or				
ыз	area with public access?				
B14	Is the portion of any road leading only to		\boxtimes		
	construction site (within 30m of a vehicle entrance				
	or exit) kept clear of dusty materials?				
B15	Are surfaces where any pneumatic or power-driven	\boxtimes			
	drilling, cutting, polishing or other mechanical				N.A.
	breaking operations takes place sprayed with water				IN.A.
	or a dust suppression chemical continuously?				
B16	Is the area involved demolition activities sprayed	\boxtimes			
	with water or a dust suppression chemical				
	immediately prior to, during and immediately after				N.A.
	the activities so as to maintain the entire surface				
	wet?				
B17	Is scaffolding erected around the perimeter of a	\boxtimes			N.A.
	building under construction?				IN.A.
B18	Are effective dust screens, sheeting or netting	\boxtimes			
	provided to enclose the scaffolding from the ground				
	floor level of the building, or a canopy provided from				N.A.
	the first floor level up to the highest level of the				
	scaffolding?				
B19	Is the skip hoist for materials transport enclosed by	\boxtimes	П		N.A.
	impervious sheeting?				IN.A.
B20	Is every stock of more than 20 bags of cement or		\boxtimes		
	dry pulverized fuel ash (PFA) covered entirely by				
	impervious sheeting or placed in an area sheltered				
	on the top and 3 sides?				
B21	Are the areas of washing facilities and the road		\boxtimes		
	section between the washing facilities and the exit				
	point paved with concrete, bituminous materials or				
	hardcores?				
B22	Are cement or dry PFA delivered in bulk stored in a	\boxtimes			
	closed silo fitted with an audible high-level alarm				N.A.
	which is interlocked with the material filling line and				IV.A.
	no overfilling is allowed?				
B23	Are the activities of loading, unloading, transfer,	\boxtimes			
	handing or storage of bulk cement or dry PFA				N.A.
	carried out in a totally enclosed system or facility?				
B24	Is any vent or exhaust fitted with an effective fabric	\boxtimes			N.A.
	filter or equipment air pollution control system?				IV.A.
B25	Is the exposed earth properly treated by	\boxtimes			
	compaction, turfing, hydroseeding, vegetation				
	planting or sealing with latex, vinyl, bitumen,				
	shotcrete or other suitable surface stabiliser within				N.A.
	six months after last construction activity on the				
	construction site or part of the construction site				
	where the exposed earth lies?			<u> </u>	
B26	Are the worksites wetted with water regularly?		\boxtimes		
D.0=					
B27	Is generation of dust avoided during loading or		\boxtimes		
DOG	unloading?	_			
B28	Are all trucks loaded to a level within the side and tail boards?		\boxtimes		
B29	Are appropriate speed limit sign displayed?				
523	The appropriate speed with sign displayed:		\boxtimes		

Contract No. SS H504 Design and Construction of

Report No. <u>0012-20220224</u>

Chai Wan Government Complex and Vehicle Depot

B30	Are designated roads paved?		\boxtimes			
B31	Are site vehicle movements confined to designated roads?		\boxtimes			
С	Noise	N/A or Not Observed	Yes	No	Remarks / Photo	
C1	Is well-maintained plant operated on-site and plant served regularly?		\boxtimes			
C2	Are vehicles and equipment switched off or throttled down while not in use?		\boxtimes			
C3	Is the noise directed away from nearby NSRs?		\boxtimes			
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?		\boxtimes			
C5	Are mobile and/or noisy plant sited as far away from NSRs as possible and practicable and orientated so that the noise is directed away from nearby NSRs?		\boxtimes			
C6	Are material stockpiles, mobile container officer and other structures utilised to screen noisy activates?	\boxtimes			N.A.	
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?		\boxtimes			
C8	Are noise barriers (typically density @14kg/m²) acoustic mat or full enclosure close to noise plants including air compressor, generators and saw etc. provided to protect NSRs?	\boxtimes			N.A.	
C9	Is the sequencing operation of construction plants where practicable?		\boxtimes			
C10	Is the hoarding maintained properly?		\boxtimes			
C11	Do air compressors have valid noise labels?		\boxtimes			
C12	Are compressor operated with doors closed?		\boxtimes			
C13	QPME used with valid noise labels?		\boxtimes			
C14	Major noise source(s)					
		☐ Traffic				
		Construction activities inside of site				
Construction activities outside of site						
		Others:				

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo
Const	ruction Activities				
D1	Are catchpits and perimeter channels constructed in advance of site formation works and earthworks?		\boxtimes		
D2	Is wastewater from temporary site facilities controlled to prevent direct discharge to surface or marine water?		\boxtimes		
D3	Is minimise surface excavation works during rainy seasons (April to September), as possible?	\boxtimes			N.A.
D4	Is the storm drainage directed to storm drains via adequately designed sand/ silt removal facilities e.g. sand traps, silt?		\boxtimes		
D5	Are channels, earth bunds or sandbag barriers provided on site to properly direct stormwater to such silt removal facilities?		\boxtimes		
D6	Are the silt removal facilities, channels and manholes maintained regularly?		\boxtimes		
D7	Are the temporary access roads surfaced with crushed stone or gravel?		\boxtimes		
D8	Is the deposited silt and grit removed regularly?		\boxtimes		
D9	Is rainwater pumped out from trenches discharged into storm drains via silt system?				N.A.
D10	Are measures taken to prevent the washout of construction materials, soil, silt or debris into any drainage system?		\boxtimes		
D11	Are open stockpiles of construction materials e.g. aggregates and sand on site covered with tarpaulin or similar fabric during rainstorms??		\boxtimes		
D12	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?		\boxtimes		
D13	Are the discharges of surface run-off into foul sewer always prevented?		\boxtimes		
D14	Is a wheel washing bay provided at every site exit?		\boxtimes		
D15	D15 Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?		\boxtimes		
D16	Is the section of construction road between the wheel washing bay and the public road surfaced with crushed stone or coarse gravel?		\boxtimes		
D17	other similar activities screened to remove large objects?				N.A.
D18	Are the vehicle and plant serving areas, vehicle wash bays and lubrication facilities located under roofed areas?	\boxtimes			
D19	Is leakage or spillages contained and cleaned up immediately?		\boxtimes		
D20	Does the surface runoff from bunded areas pass through oil/grease traps prior to discharge to the storm water system?	\boxtimes			N.A.

D21	Are site drainage systems provided over the entire project site with sediment control facilities?		\boxtimes		
D22	Are sedimentation tanks or package treatment systems provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?		\boxtimes		
D23	Is the generated wastewater with high concentrations of SS collected to the sedimentation tanks or package treatment systems for proper treatment prior to disposal?		\boxtimes		
D24	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning?		\boxtimes		
D25	Is the sewage generated from toilets collected using a temporary storage system?		\boxtimes		
D26	Is there any sediment plume observed in nearby watercourses?	\boxtimes			Not observed.
D27	Are slit-grease traps deployed to prevent a direct input of road surface runoff to the marine waters?	\boxtimes			N.A.
E	Waste / Chemical Management	N/A or Not Observed	Yes	No	Remarks / Photo
Genera	ıl Waste				
E1	Is the general waste generated on-site stored in enclosed bins or compaction units separately from the construction and chemical wastes?		\boxtimes		
E2	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?		\boxtimes		
E3	Does accumulation of waste avoid?	\boxtimes			
E4	Is waste disposed regularly?	\boxtimes			
Constr	uction Waste				
E5	Are the temporary stockpiles maintained regularly?	\boxtimes			N.A.
E6	Is the excavated fill material reused for backfilling and reinstatement?	\boxtimes			N.A.
E7	Are the C&D materials sorted and recycled on- site?	\boxtimes			N.A.
E8	Is there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	\boxtimes			Not observed.
E9	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	\boxtimes			N.A.
E10	Are the public fill and C&D waste segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal?		\boxtimes		
E11	Is the durable formwork or plastic facing for construction works used?	\boxtimes			N.A.
E12	Do the wooden hoardings avoid to be used?		\boxtimes		
E13	Is metal hoarding used to enhance the possibility of recycling?		\boxtimes		
E14	Is the segregation and storage of C&D wastes undertaken in designated are?		\boxtimes		

Contract No. SS H504 Design and Construction of

Report No. <u>0012-20220224</u>

Environmental Site Inspection Checklist (Rev. 0)

Chai Wan Government Complex and Vehicle Depot

E15	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?		\boxtimes		
E16	Do the excavated materials appear contaminated?	\boxtimes			N.A.
E17	E17 If suspected contaminated, appropriate procedures followed?				N.A.
Chemi	cal / Fuel Storage Area				
E18	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?		\boxtimes		
E19	Are the storage area enclosed 3 sides by walls/ fence of ≥2m tall and bounded with adequate bund capacity (>110% of largest container) or do the storage area allow storage of 20% of total volume of waste?				
E20	Are the storage areas labelled and separated (if needed)?		\boxtimes		
E21	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering?		\boxtimes		
E22	Are the containers used for the storage of chemical wastes suitable for the substance that are holding, resist to corrosion, maintained in a good condition, and securely closed?			\boxtimes	Refer to Observation (1)
E23	If no specification has been approved by EPD, are container with <450L capacity provided for storage of chemicals waste?		\boxtimes		
<u>Chemi</u>	cal Waste / Waste Oil				
E24	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area?		\boxtimes		
E25	Are chemicals and waste oil recycled or disposed properly?	\boxtimes			N.A
E26	Is waste oil collected and stored for recycling or disposal?	\boxtimes			N.A
Record	<u>ds</u>				
E27	Is a licensed waste haulier used for waste collection?		\boxtimes		
E28	Are the records of quantities of wastes generated, recycled and disposed properly kept?		\boxtimes		
E29	For the demolition material/ waste, is the number of loads for each day recorded as appropriate?	\boxtimes			N.A
		· · · · · · · · · · · · · · · · · · ·	·		

F1 Is the work site confined within site boundaries?	F	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
F3	F1	Is the work site confined within site boundaries?		\boxtimes		
and designed to be subtle and camouflaged? F4 Is the temporary landscape treatment provided (such as the provision of temporary landscape planting around the Site office in ornamental pots and application of green roof for Site office)? F5 Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree? G Environmental Complaint N/A or Not Observed Site office)? F1 Number of Environmental Complaint received from 11/11/2021 to 24/02/2022 F8 No Remarks / Photo H1 Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation I Others No Remarks / Photo N/A or Not Observed Site office in ornamental complaint received individual tree: NO Remarks / Photo N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received individual tree: N/A or Not Observed Site office in ornamental complaint received in	F2	Is damage to surrounding areas avoided?		\boxtimes		
Such as the provision of temporary landscape planting around the Site office in ornamental pots and application of green roof for Site office)? F5	F3			\boxtimes		
the perimeter of the tree protection zone of each individual tree? Complete Complet	F4	Is the temporary landscape treatment provided (such as the provision of temporary landscape planting around the Site office in ornamental pots				Not observed.
Composition Complaint Co	F5	the perimeter of the tree protection zone of each		\boxtimes		
Composition Complaint Co						
H General Housekeeping N/A or Not Observed Obser	G	Environmental Complaint		Yes	No	Remarks / Photo
H General Housekeeping Observed Yes No Remarks / Photo Observed H1 Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation N/A or Not Observed Observed Yes No Remarks / Photo Remarks / Photo I Others I Are the portable toilets maintained in a state, which will not deter the workers from utilizing	G1	•		\boxtimes		
H General Housekeeping Observed Yes No Remarks / Photo Observed H1 Are potential stagnant pools cleared and mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation N/A or Not Observed Observed Yes No Remarks / Photo Remarks / Photo I Others I Are the portable toilets maintained in a state, which will not deter the workers from utilizing						
mosquito breeding prevented? H2 Are the defined boundaries of working areas identified to prevent loss of vegetation Others N/A or Not Observed Yes No Remarks / Photo	Н	General Housekeeping	1 47 1 61 1161	Yes	No	Remarks / Photo
I Others N/A or Not Observed Yes No Remarks / Photo I Are the portable toilets maintained in a state, which will not deter the workers from utilizing	H1	, , , , , , , , , , , , , , , , , , , ,		\boxtimes		
I Others Observed Yes No Remarks / Photo I1 Are the portable toilets maintained in a state, which will not deter the workers from utilizing	H2			\boxtimes		
I Others Observed Yes No Remarks / Photo I1 Are the portable toilets maintained in a state, which will not deter the workers from utilizing						
which will not deter the workers from utilizing	ı	Others		Yes	No	Remarks / Photo
	I1	which will not deter the workers from utilizing		\boxtimes		

Follow up action for previous Site Inspection:

- 1. The chemical container was removed.
- 2. Oil stain was cleaned and disposed of as chemical waste.
- 3. Proper NRMM label was affixed on the generator.
- 4. Cement bags were covered with impervious sheet.
- 5. Muddy stockpile next to the vehicle entrance was removed to prevent muddy washout of the site entrance.



Observations:

- 1. The drip tray is full. (Photo 1)
- 2. The color of NRMM label is inaccurate. (Photo 2)



Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

- 1. The Contractor shall clean the drip tray regularly.
- 2. The Contracts was reminded to replace the NRMM labels.

	Environmental Team Representative:	IEC's Representative:	Contractor's Representative:	Engineer's Representative
Signature:	D	/	A	/
Name:	Daisy Au Yeung	/	Erik Luk	/
Date:	24 Feb 2022	1	25 Feb 2022	/

Appendix 10

2022	Marc	ch				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
28	O1 Noise Monitoring (NM1, NM2a and NM3)	02	03	04	05	06
07	08 Noise Monitoring (NM1, NM2a and NM3)	09	10	11	12	13
14	15 Noise Monitoring (NM1, NM2a and NM3)	16	17	18	19	20
21	22 Noise Monitoring (NM1, NM2a and NM3)	23	24	25	26	27
28	29 Noise Monitoring (NM1, NM2a and NM3)	30	31	01	02	03
04	05	Notes: The schedule is sul	bject to change due t	o unforeseeable cir	cumstances (e.g. adver	se weather, etc.).

Prepared by:

Aurecon Hong Kong Limited
Unit 1608, 16/F, Tower B, Manulife Financial Centre,
223 – 231 Wai Yip Street, Kwun Tong,

Kowloon Hong Kong S. A. R.

T: +852 3664 6888 F: +852 3664 6999

E: hongkong@aurecongroup.com



