Telemax Environmental and Energy Management Limited
Unit 9-10, 16/F, Shatin Galleria, No. 18-24 Shan Mei Street, Fo Tan, Shatin, N.T., Hong Kong
Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telemaxeem.com

Our Ref. : TEEM/334/19/L/110/JT
Date : 16 July 2019

By Hand

Environmental Protection Department
Environmental Assessment Division
Metro Assessment Group, Kowloon Section (2)
27/F Southorn Centre, 130 Hennessy Road
Wan Chai, Hong Kong

Attn: Mr. Tse Kiu Chung

Dear Sir,

Contract No. SS D505
Environmental Permit No. EP-454/2013
Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area
Submission of Final EM&A Report

We are writing, on behalf of Environmental Permit Holder, Food and Environmental Hygiene Department, to provide four hard copies and one electronic copy of Final EM&A Report for your record in accordance with Clause 8.3.7 of the Environmental Monitoring and Audit Manual.

Should you have any questions, please do not hesitate to contact the undersigned at (852) 3610 8777 or our Ir Nelson Tam at (852) 3610 8701. Thank you.

Yours faithfully,

For and on behalf of
Telemax Environmental and Energy Management Limited

Ir Eagle MO
Managing Director

EM / NT / JT / WW

Encl.

c.c. ArchSD – Mr. Sing-hin SAT, Saadullah / Mr. WAN Koon Piu, Dick (by hand)
FEHD – Ms. May NG (by hand)
PTA – Ms. Clara PANG / Mr. Jim HUNG (by email)
AEC – Ms. Grace KWOK / Mr. HO Tin Kit (by email)
CRBC – Mr. Vincent CHUNG / Mr. FU Kwok Kwan (by email)

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel.: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com

AEC 沛然環境評估工程顧問有限公司

Our Ref: 1330/18-0021

15 July 2019

By Email

Food and Environmental Hygiene Department
Planning & Development Section
Room 101,
1/F, New Wan Chai Market
258 Queen's Road East, Wan Chai,
Hong Kong

Attn: Mr. Vincent TAM

Dear Madam,

Contract No. SS D505
Environmental Permit No. EP-454/2013
Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area
Independent Environmental Checker for Construction Phase
Condition 3.4 – Submission of Final EM&A Report (Issue 3)

Further to the receipt from Environmental Team (ET) of the captioned Final EM&A Report on 11th and 15th July 2019 via email, pursuant to Condition 3.4 of Environmental Permit, I hereby verify the captioned report (Issue 3).

Yours faithfully,
For ALLIED ENVIRONMENTAL CONSULTANTS LIMITED

Grace Kwok
Independent Environmental Checker
GK/cwh

c.c.

FEHD		Ms. May NG	Email
ArchSD		Mr. Alan NIP	Email
PTA		Ms. Clara PANG / Mr. Jim HUNG	Email
TEEM	(ET Leader)	Mr. Nelson TAM	Email
CRBC	(Main Contractor)	Mr. Vincent CHUNG, Project Manager / Mr. KK FU, Site Agent	Email

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Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

Environmental Monitoring and Audit

Final Report

Prepared by:

Telemax Environmental and Energy Management Limited

COMMERCIAL-IN-CONFIDENCE

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Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

Environmental Monitoring and Audit

Final Report

Verified by : _____

Grace Kwok

Position: Independent Environmental Checker

Date: 15th July 2019

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Environmental Monitoring and Audit

Final Report

Prepared by:

Telemax Environmental and Energy Management Limited

COMMERCIAL-IN-CONFIDENCE

Certified by:

Ir Nelson TAM
Environmental Team Leader

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Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

Environmental Monitoring and Audit

Final Report

Prepared by:

Telemax Environmental and Energy Management Limited

COMMERCIAL-IN-CONFIDENCE

Author:

Jackson TSE
Assistant Engineer

Checked:

Ir Nelson TAM
Associate Director

Approved:

Ir Nelson TAM
Associate Director

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Issue	Date	Prepared by	Checked by	Approved by	Remark
1	11th July 2019	Jackson TSE (Assistant Engineer) / Renny LONG (Assistant Engineer)	Ir Nelson TAM (Associate Director)	Ir Nelson TAM (Associate Director)	--
2	15th July 2019	Jackson TSE (Assistant Engineer)	Ir Nelson TAM (Associate Director)	Ir Nelson TAM (Associate Director)	--
3	15th July 2019	Jackson TSE (Assistant Engineer)	Ir Nelson TAM (Associate Director)	Ir Nelson TAM (Associate Director)	--

LIST OF CONTENTS

List of tables

Appendix

Appendix S Approval Letter of Termination of Construction Phase Environmental Monitoring and Audit Programme

1.0 Executive Summary

1.1 In December 2015, Telemax Environmental and Energy Management Limited (TEEM) was appointed to conduct an environmental monitoring and audit (EM&A) program for the proposed Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area, hereafter referred as "FEHD Offices-cum-vehicle Depot Project" or "the Project". The site clearance and tree felling works were undertaken during the period from 10th December 2015 to 7th February 2016. The construction works was commenced on 29th February 2016 and the Certificate of Completion was issued on 22nd November 2018. The notification letter of the commencement date of operation of the project was submitted to EPD on 27th May 2019 and the operation date was 28th June 2019. The termination proposal of construction phase Environmental Monitoring and Audit Programme was submitted to EPD on 25th June 2019 and it was accepted by EPD on 26th June 2019. The remaining minor works were completed on 27th June 2019.

1.2 In accordance with Section 3.3.5 of the EM&A Manual of the Project ***(Appendix G)***, impact environmental monitoring and noise monitoring for the Project have been carried out during the construction phase in March 2016 – June 2019 at Sir Ellis Kadoorie Secondary School (West Kowloon) (NSR1) and Fu Cheong Estate Fu Yun House (NSR7). Since no construction works were carried out during 1st Mar 2019 – 16th May 2019, no impact noise monitoring was conducted in this period.

1.3 Mitigation measures had been implemented to minimize the environmental issue due to the construction of the FEHD Offices-cum-vehicle Depot. The recommended mitigation measures in the EIA process and the EM&A programme were effective in protect the environment during the whole construction phase. Therefore, the environmental performance during the construction phase within the reporting period was considered satisfactory.

1.4 During the whole construction phase, there was no exceedance of the Limit Levels for the noise monitoring at the two NSRs. Examination sessions at Sir Ellis Kadoorie Secondary School (West Kowloon) (NSR1) was held in April 2016, June 2016, January 2017, March 2017, April 2017, June 2017, October 2017 January 2018, March 2018, April 2018, June 2018, October 2018, January 2019, March 2019, April 2019 and June 2019, there was no exceedance of the Limit Levels for noise monitoring during the corresponding examination sessions.

1.5 During the whole construction phase, a total of 29350.31 tonnes of inert C&D material were generated and disposed of as public fills and 2713.9 tonnes of non-inert C&D materials were generated and disposed of at landfills. Besides, 25.85 tonnes of metals were recycled.

1.6 During the whole construction phase, tree T21 within the Project site was preserved and protected according the Section 6.2.6 of the EM&A Manual **(*Appendix H*)**. Environmental protection measures such as erection of fencing around the tree was implemented accordingly during the whole construction phase.

1.7 There are four complaints since the project commencement. The environmental complaints were received on 17th March 2016, 14th April 2016, 19th May 2019 and 2nd June 2019, which were related to a noise complaint, a surface runoff complaint, wastewater discharge, air pollution and environmental hygiene complaint respectively. With reference to Appendix 7-1 of the supporting EM&A Manual, investigations were conducted by the Environmental Team upon receipt of the complaints. For the noise complaint, mitigation measures, such as noise barriers and checking on power mechanical equipment, were applied in order to address the complaint. These mitigations were verified to be considered as effective. For surface runoff complaint, the mitigation measures, including providing cement bunds as well as pavement at hoarding toe facing towards the site and provision of sump pumps, were applied in order to mitigate the problems. These mitigations were verified to be considered as effective. Details of the incidents and investigation results on the noise and surface runoff complaint were summarized in the corresponding Complaint Investigation Report submitted on 7th April 2016 and 10th May 2016 respectively. For the wastewater discharge, air pollution and environmental hygiene complaints, proper mitigation measures, such as suspension of the trainings, provision of drainage system and closed all windows, were applied in order to address the complaints. These mitigations were verified to be considered as effective. The details of investigation results on the wastewater discharge, air pollution and environmental hygiene complaint were summarized in the corresponding Complaint Investigation Report submitted on 11th June 2019.

1.8 During the whole construction phase, site inspections were conducted in a weekly basis since the Project construction works commenced on 29th February 2016. There was no major environmental deficiency and no non-conformance of implementation of environmental mitigation measures was identified. Weekly site inspection on the implementation of environmental mitigation measures will be further carried out in the

subsequent stages throughout the entire construction phase of the Project.

1.9 The monitoring results and statistics of non-compliance indicated that the EIA process with its recommended mitigation and EM&A programme were effective for protection of the environment, there was no unacceptable environmental impact posed by the Project during the whole construction phase.

2.0 Introduction

In December 2015, Telemax Environmental and Energy Management Limited (TEEM) was appointed to conduct an environmental monitoring and audit (EM&A) program for the proposed Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area, hereafter referred as "the Project". The site clearance and tree felling works were undertaken during the period from 10th December 2015 to 7th February 2016. The construction works was commenced on 29th February 2016 and the Certificate of Completion was issued on 22nd November 2018 (***Appendix R***). The notification letter of the commencement date of operation of the project was submitted to EPD on 27th May 2019 and the operation date was 28th June 2019. The termination proposal of construction phase Environmental Monitoring and Audit Programme was submitted on 25th June 2019 and it was approved by EPD on 26th June 2019. The approval letter issued by EPD is shown in ***Appendix S***. The remaining minor works were completed on 27th June 2019. This Final Report reviewed the EM&A works during the whole construction phase. During the reporting period, all EM&A works were undertaken in accordance with the EM&A Manual and the requirements under the Environmental Permit EP-454/2013.

3.0 Project Information

Background and Contacts of Key Management

3.1 The project proponent is the reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area (FEHD) and the Works Agent is the Architectural Services Department (ArchSD).

3.2 The proposed office-cum-vehicle depot building will be a five-story building comprising various facilities for vehicle washing and repair operation, parking of vehicles as well as offices. It will occupy a site area of about 8,278 m^2.

3.3 The FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot is categorized as a designated project under the Environmental Impact Assessment Ordinance (EIAO) and therefore a detailed Environmental Impact Assessment (EIA-216/2013) has been conducted in year 2013 and an Environmental Permit number EP-454/2013 was issued by Environmental Protection Department on November 2013.

3.4 The subject site is located at Yen Ming Road, West Kowloon Reclamation Area given in ***Appendix A***. The subject site is bounded to the north by Nam Cheong Station, to the east by CLP Tak Kok Tsui Substation, to the south by Yun Fat Building, and to the west by Cheung Sha Wan Wholesales Fish and Food Markets. Sir Ellis Kadoorie Secondary School (West Kowloon) and residential buildings on Nam Cheong Station, being the nearest educational and residential establishment, are located at around 100m and 120m from the site boundary respectively.

3.5 Key personnel and contact particulars are summarized in ***Table 1***. The organization chat is shown in ***Appendix B***.

Table 1 Contact Details of Key Personnel

Role	Department / Company	Names	Contact Number
Project Proponent	Food and Environmental Hygiene Department	Mr. Vincent Tam	2309 2049
Works Agent	Architectural Services Department	Mr. Alan Nip	2867 3655
Architect's representative	P&T Architects and Engineers (Architectural)	Mr. Jim Hung	2832 3016
Main Contractor	China Road and Bridge Corporation	Mr. Vincent Chung	2283 1688
Environmental Team Leader	Telemax Environmental and Energy Management Ltd.	Ir Nelson Tam	3610 8701
Independent Environmental Checker	Allied Environmental Consultants Ltd.	Ms. Grace Kwok	2815 7028

Works Progress during the Course of the Project

3.6 The major works completed during the whole construction phase are summarized below in ***Table 2***. The substantial construction works were completed on 22nd November 2018, while the landscaping works and minor defect rectification works were completed on 15th Jun 2019 and 27th Jun 2019 respectively.

Table 2 Summary of Works Undertaken during the Whole Construction Phase

Works Undertaken	Duration
Piling works	Dec 2015 – Feb 2017
Pile Caps works	March 2016 – August 2017
Superstructure works	April 2017 – August 2018
Internal Finishing Works	Dec 2017 – Dec 2018

Minor defect rectification works	Nov 2018 – Jun 2019
Landscaping works	Nov 2018 – Jun 2019

4.0 Summary of EM&A Requirements

According to the environmental findings detailed in the Environmental Impact Assessment (EIA) report and the EM&A Manual of the FEHD Offices-cum-vehicle Depot Project, the EM&A requirements of the noise, air quality, water quality, waste management, landscape and visual impacts are summarized as follows:

Environmental Audit

4.1 Site inspections should be conducted regularly to ensure that appropriate environmental protection and pollution control mitigation measures for noise, air quality, water quality, waste management and landscape and visual aspects are properly implemented for the construction works activities associated with the Project, as they are one of the most effective tools to enforce the environmental protection requirements at the works sites and works areas.

4.2 Regular site inspections should be carried out and led by the Architect's Representative and attended by the Contractor and Environmental Team (ET) at least once every week. The areas of inspection should not be limited to the environmental conditions, pollution control and mitigation measures within the works sites and works areas. It should also review the environmental conditions of that location that are beyond the boundary of the works sites and works areas likely to be affected directly or indirectly by the construction site activities. The ET Leader should make reference to the following information when conducting site inspection:

- The EIA and EM&A recommendations on the environmental protection and pollution control mitigation measures;
- On-going results of the EM&A programme;
- The works progress and programme;
- Proposals of individual works methodologies (which should include the proposal of the associated pollution control measures);
- Contract specifications on environmental protection and pollution prevention control;

- The relevant environmental protection and pollution control legislation; and
- Previous site inspection findings that were undertaken by the ET and/or others.

4.3 The Contractor should keep the Architect's Representative and ET updated with all the relevant environmental related information on the construction contract to carry out the site inspections. The inspection findings and associated recommendations for improvements to the environmental protection and pollution control and outcome of the improvement should be recorded and followed up by the Contractor in an agreed timeframe.

4.4 The Architect's Representative, ET and Contractor should also carry out ad hoc site inspections if significant environmental problems are identified. Inspections may also be required subsequent to the receipt of environmental complaints, or as part of the investigation work, as specified in the Event and Action Plans for the EM&A programme.

4.5 During the whole construction phase, site inspections were conducted in a weekly basis since the Project construction works commenced on 29th February 2016. There was no major environmental deficiency and no non-conformance of implementation of environmental mitigation measures was identified. Weekly site inspection on the implementation of environmental mitigation measures will be further carried out in the subsequent stages throughout the entire construction phase of the Project.

Noise

a) Environmental Impact Hypothesis Tested

4.6 According to the approved EIA Report, three noise impact hypotheses for the Project were studied and the assessment results are summarized as below;

i) Construction Noise during Project Construction Phase

The construction noise impacts owing to the Project construction phase were estimated by calculating the cumulative Sound Power Levels (SWLs) for the construction activities. With the consideration of the on-site Power Mechanical Equipment (PME) and their operation frequency during different construction stages (i.e. foundation, superstructure, finishes, etc.), the estimated total SWLs

are summarized in ***Table 5-10*** under Section 5.4.3 of the approved EIA Report ***(Appendix J)***.

The prediction of construction noise under unmitigated and mitigated scenarios at representative NSRs at different Assessment Years were assessed and compared. The estimated Project construction noise impacts under the unmitigated and mitigated scenarios are summarized in ***Table 5-14*** to ***Table 5-15*** under Section 5.6.8 ***(Appendix K)*** and in ***Table 5-24*** to ***Table 5-25*** under Section 5.8.2 of the approved EIA Report ***(Appendix L)***. The predicted construction noise levels at NSR1 – Sir Ellis Kadoorie Secondary School (West Kowloon) and NSR7 – Fu Cheong Estate Fu Yun House were both close to 65 dB(A) according to ***Table 5-24*** under Section 5.8.2 of the approved EIA Report ***(Appendix L)***.

From the view of marginal compliance with the assessment criteria during examination period, i.e. 65 dB(A), construction noise monitoring should be conducted at designated locations at NSR1 and NSR7 during the construction phase of the Project as stipulated in the Section 3.3.5 of the EM&A Manual of the Project **(*Appendix G)***.

ii) Fixed Plant Noise during the Project Operation Phase

Fixed plant noise from was considered as part of the potential noise sources during the Project operation phase. Two kinds of operation noise, (a) workshop vehicle repair activities; and (b) mechanical ventilation and air conditioning equipment were expected to be the major fixed plant noise owing to the operation of the Project development.

Using the maximum allowable SWLs emitted from the plant room, the Sound Pressure Levels (SPL) at representative NSRs were calculated based on consideration on distance attenuation, tonality correction, impulsiveness correction, noise shielding effect as well as façade correction. The corresponding noise impacts at representative NSRs owing to identified fixed plant noise sources are summarized in ***Table 5-16*** under Section 5.6.9 of the approved EIA Report **(*Appendix M*)**.

iii) Off-site Traffic Noise during the Project Operation Phase

During the Project Operation Phase, the off-site traffic from the Depot during one AM peak at 0700-0800 and one PM peak 1500-1600 were identified in accordance with the approved EIA Report Section 5.6.13 (***Appendix N***). Furthermore, two scenarios, "With Project" and "Without Project", were compared in order to determine the magnitude of traffic noise contribution owing to the Project development operation. In total of eight cases under two scenarios during the AM and PM peaks using year 2017 and 2032 traffic forecast respectively, were assessed. The off-site traffic noise assessment results are summarized in ***Table 5-21*** and ***Table 5-22*** under Section 5.6.18 of the approved EIA Report (***Appendix N***).

Based on the assessment results, the operation of the FEHD Depot would introduce insignificant traffic noise impact less than 1.0 dB(A) to all representative NSRs for short-term period and in the long run.

4.7 From the view on the assessment results of the three environmental hypotheses tested in the Project EIA study, noise control measures are required to be implemented during both the Project construction and operation phases. During the construction phase, with the implementation of noise mitigation measures, adverse construction noise impact is not anticipated. Notwithstanding, noise monitoring at NSR1 and NSR7 should be conducted as part of the EM&A procedures in accordance with Section 3.3.5 of the EM&A Manual of the Project (***Appendix G)***. During the operation phase, with the implementation of the mitigation measures for both workshop vehicle repair activities and MVAC installation, adverse impact to the NSRs due to the fixed plant noise would not be anticipated. On the other hand, noise mitigation measure is not necessary for the off-site traffic noise.

b) Monitoring Locations

4.8 In accordance with Section 3.3.5 of the EM&A Manual of the Project (***Appendix G)***, the designated locations for the construction noise monitoring are listed in ***Table 3*** and shown in ***Appendix A.***

Table 3 Representative Noise Sensitive Receivers Identified for Construction

NSR ID	Monitoring Location	NSR Type
NSR1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Educational Premises
NSR7	Fu Cheong Estate Fu Yun House	Residential Premises

*NSR = Noise Sensitive Receivers

4.9 The monitoring location NSR1 is located at the playground area nearby the main block of Sir Ellis Kadoorie Secondary School (West Kowloon) and the monitoring location NSR7 is located at the pedestrian nearby the Fu Yun House, Fu Cheong Estate.

c) Monitoring Methodology and Equipment

4.10 The construction noise level should be measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). The $L_{eq(30min)}$ should be used as the monitoring parameter for the time period from 0700 to 1900 hours on normal weekdays. The supplementary information for data auditing and statistical results, such as L_{10} and L_{90}, should be should be obtained and recorded for reference.

4.11 Impact noise monitoring was conducted at the designated noise monitoring location between 0700-1900 hours using a sound level meter which complies with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1).

4.12 Monitoring of $L_{eq(30min)}$ should be carried out at each station at 0700-1900 hours on normal weekdays at a frequency of once a week when construction is underway. The L_{eq}, L_{10} and L_{90} should be recorded at the specified intervals. The meter shall be mounted on a tripod at a height of 1.2m above ground with the microphone positioned at G/F adjacent the NSRs facing the works area.

4.13 Noise measurements shall not be made in the presence of fog, rain, and wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed will be checked with a portable anemometer capable of measuring the wind speed in m/s. Noise measurements shall be made when construction activities are underway.

4.14 The noise monitoring instrumentation details are given in ***Table 4***. Copies of calibration certificates were attached in the appendices of the Monthly EM&A Reports.

Table 4 Noise Monitoring Equipment

In 2016				
Item	**Equipment**	**Model Number**	**Serial Number**	**Period In Use**
1	Integrating Sound Level Meter	AWA5661	301134	Feb 16 – Oct 16
2	Integrating Sound Level Meter	AWA5661	301135	Feb 16 – Oct 16
3	Calibrator	Pulsar 101	028358	Feb 16 – Jul 16
4	Integrating Sound Level Meter	AWA5661	304042	Nov 16 – Dec 16
5	Integrating Sound Level Meter	AWA5661	304716	Nov 16 – Dec 16
6	Calibrator	QC-10	056-990	Aug 16 – Dec 16
In 2017				
Item	**Equipment**	**Model Number**	**Serial Number**	**Period In Use**
1	Integrating Sound Level Meter	AWA5661	304042	Jan 17 – Dec 17
2	Integrating Sound Level Meter	AWA5661	304716	Jan 17 – Aug 17
3	Calibrator	QC 10	056-990	Jan 17 – Dec 17
4	Integrating Sound Level Meter	AWA5661	304043	Sept 17 – Dec 17
In 2018				
Item	**Equipment**	**Model Number**	**Serial Number**	**Period In Use**
1	Integrating Sound Level Meter	AWA5661	304042	Jan 18 – Dec 18
2	Integrating Sound Level Meter	AWA5661	304043	Jan 18
3	Integrating Sound Level Meter	AWA5661	301143	Feb 18- Sep 18
4	Integrating Sound Level Meter	AWA5661	090078	Oct 18 – Dec 18
5	Calibrator	ND9	507258	Jan 18 – Sep 18
6	Calibrator	100B	039507	Oct 18 – Dec18
In 2019				
Item	**Equipment**	**Model Number**	**Serial Number**	**Period In Use**
1	Integrating Sound Level Meter	AWA5661	304042	Jan 19 – Feb 19; May 19 – Jun 19
2	Integrating Sound Level Meter	AWA5661	090078	Jan 19 – Feb 19; May 19 – Jun 19
2	Calibrator	ND9	507258	Feb 19; May 19 – Jun 19
3	Calibrator	100B	039507	Jan 19

d) Environmental Quality Performance Limits (Action and Limit Levels)

4.15 According to the EM&A requirement only noise impact of the construction stage requires impact monitoring. Corresponding Action and Limit Level is set up to provide an appropriate framework for the interpretation of monitoring results. The noise impact monitoring data shall be checked against the Action and Limit Levels as listed in ***Table 5***.

Table 5 Action and Limit Levels for Construction Noising Monitoring

Time Period	**Action Level**	**Limit Level, $L_{eq\ 30mins}$, dB(A)**
0700-1900 hours on normal weekdays	When one documented complaint is received	70 dB(A) for school 65 dB(A) during examination period.
		75 dB(A) for residential premises

e) Event and Action Plans

4.16 In case of non-compliance with the construction noise criteria, the contractor shall undertake corresponding actions in accordance with the Event and Action Plan given in EM&A Manual and shown in ***Table 6***.

Table 6 Event and Action Plan for Construction Noise Monitoring

Event	Action			
	ET	IEC	Architect's Representative	Contractor
Action Level	1. Notify the IEC and Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC and Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the Architect's Representative accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to the IEC. 2. Implement noise mitigation proposals.
Limit Level	1. Notify the IEC, Architect's Representative, EPD and Contractor. 2. Identify sources. 3. Repeat measurements to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform the IEC, Architect's Representative and EPD the causes and action taken for the exceedances. 7. Assess the effectiveness of the Contractor's remedial action and keep the IEC, EPD and Architect's Representative informed of the results. 8. If exceedance stops, crease additional monitoring	1. Discuss amongst the Architect's Representative, ET and Contractor on the potential remedial action. 2. Review the Contractor's remedial action whenever necessary to assure their effectiveness and advise the Architect's Representative accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what portion of work is responsible and instruct the Contractor to stop that portion of works until the exceedance is abated.	1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial action to the IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problems still not under control. 5. Stop the relevant portion of works as determined by the Architect's Representative until the exceedance is abated.

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

5.0 Implementation Status of Environmental Mitigation Measures

The Contractor implemented environmental mitigation measures to minimize the environmental impacts due to construction activities. Summary of environmental mitigation measures implementation schedule for construction stage and their status for the Project construction are given in ***Appendix C***.

6.0 Noise Management Status

6.1 Impact noise monitoring was conducted at Sir Ellis Kadoorie Secondary School (NSR1) and Fu Cheong Estate Fu Yun House (NSR7) throughout the whole construction phase.

6.2 Noise monitoring results in terms of $L_{eq(30min)}$, $L_{10(30min)}$ and $L_{90(30min)}$ measured at Sir Ellis Kadoorie Secondary School (NSR1) and Fu Cheong Estate Fu Yun House (NSR7) are summarized in ***Table 7*** and ***Table 8*** respectively and the corresponding graphical plot are given in ***Appendix D***. The measured noise levels L10 and L_{90} represent sound levels that are exceeded 10% and 90% of the time respectively. Normally, L_{10} measurements can be considered as the average peak levels, whilst L_{90} levels can be considered as the average background noise levels. No exceedance was found during the reporting period at both NSR1 and NSR7 according to the monitoring results.

Table 7 Noise Monitoring Results at NSR1

In 2016							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
2/3/2016	07:00-19:00	Fine	<5	67.3	63.8	64.8	70.0
7/3/2016	07:00-19:00	Fine	<5	67.0	63.5	64.5	70.0
12/3/2016	07:00-19:00	Fine	<5	71.5	66.9	67.7	70.0
18/3/2016	07:00-19:00	Fine	<5	71.3	66.7	67.5	70.0
24/3/2016	07:00-19:00	Cloudy	<5	71.2	66.7	67.2	70.0
30/3/2016	07:00-19:00	Fine	<5	64.7	56.0	62.6	70.0
#5/4/2016 (Exam)	08:30-12:00	Fine	<5	68.2	61.9	64.7	65.0
^5/4/2016 (Non-Exam)	07:00-08:30 12:00-19:00	Fine	<5	67.8	62.3	66.1	70.0
#11/4/2016 (Exam)	08:30-14:00	Fine	<5	66.0	60.4	64.0	65.0
^11/4/2016 (Non-Exam)	07:00-8:30 14:00-19:00	Fine	<5	65.5	59.4	63.2	70.0
#16/4/2016 (Exam)	08:30-13:00	Fine	<5	66.6	61.3	64.4	65.0
^16/4/2016 (Non-Exam)	07:00-8:30 13:00-19:00	Fine	<5	66.4	61.2	64.3	70.0
#22/4/2016 (Exam)	08:30-13:00	Fine	<5	66.8	61.2	64.5	65.0

In 2016							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
^22/4/2016 (Non-Exam)	07:00-8:30 13:00-19:00	Fine	<5	68.2	62.7	66.2	70.0
28/4/2016	07:00-19:00	Fine	<5	67.6	62.9	65.7	70.0
4/5/2016	07:00-19:00	Fine	<5	69.4	63.4	67.1	70.0
10/5/2016	07:00-19:00	Fine	<5	69.8	63.0	67.4	70.0
16/5/2016	07:00-19:00	Fine	<5	70.1	63.4	68.0	70.0
21/5/2016	07:00-19:00	Fine	<5	69.2	62.7	66.6	70.0
27/5/2016	07:00-19:00	Fine	<5	69.2	62.7	66.7	70.0
2/6/2016	07:00-19:00	Fine	<5	69.4	62.9	67.3	70.0
#8/6/2016 (Exam)	08:30-13:00	Fine	<5	66.3	61.7	64.2	65.0
^8/6/2016 (Non-Exam)	07:00-08:30 13:00-19:00	Fine	<5	66.2	61.8	64.2	70.0
#14/6/2016 (Exam)	08:30-13:00	Fine	<5	66.8	60.8	64.5	65.0
^14/6/2016 (Non-Exam)	07:00-08:30 13:00-19:00	Fine	<5	66.5	60.3	64.4	70.0
#20/6/2016 (Exam)	08:30-13:00	Fine	<5	66.9	60.8	64.5	65.0

In 2016							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
^20/6/2016 (Non-Exam)	07:00-08:30 13:00-19:00	Fine	<5	66.5	60.0	64.2	70.0
25/6/2016	07:00-19:00	Fine	<5	67.1	61.1	65.1	70.0
30/6/2016	07:00-19:00	Fine	<5	67.6	60.9	65.2	70.0
2/7/2016	07:00-19:00	Fine	<5	67.4	60.5	64.9	70.0
7/7/2016	07:00-19:00	Fine	<5	67.0	59.5	64.7	70.0
13/7/2016	07:00-19:00	Fine	<5	66.8	59.6	64.5	70.0
19/7/2016	07:00-19:00	Fine	<5	66.6	59.5	64.5	70.0
25/7/2016	07:00-19:00	Fine	<5	66.5	59.4	64.2	70.0
30/7/2016	07:00-19:00	Fine	<5	66.4	59.1	64.1	70.0
5/8/2016	07:00-19:00	Fine	<5	66.1	58.1	64.0	70.0
11/8/2016	07:00-19:00	Fine	<5	66.3	58.9	64.0	70.0
17/8/2016	07:00-19:00	Fine	<5	66.0	58.4	63.9	70.0
23/8/2016	07:00-19:00	Fine	<5	66.2	58.8	64.0	70.0
29/8/2016	07:00-19:00	Fine	<5	66.5	59.5	64.2	70.0
3/9/2016	07:00-19:00	Fine	<5	66.7	56.8	64.3	70.0
9/9/2016	07:00-19:00	Fine	<5	67.1	58.4	64.8	70.0

In 2016							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
15/9/2016	07:00-19:00	Fine	<5	66.5	58.7	64.3	70.0
21/9/2016	07:00-19:00	Fine	<5	66.6	58.7	64.4	70.0
27/9/2016	07:00-19:00	Fine	<5	67.0	59.3	64.7	70.0
3/10/2016	07:00-19:00	Fine	<5	66.8	58.8	64.6	70.0
8/10/2016	07:00-19:00	Fine	<5	66.7	58.1	64.5	70.0
14/10/2016	07:00-19:00	Fine	<5	67.2	60.4	65.1	70.0
20/10/2016	07:00-19:00	Fine	<5	67.2	59.4	64.9	70.0
26/10/2016	07:00-19:00	Fine	<5	66.4	56.9	64.2	70.0
1/11/2016	07:00-19:00	Fine	<5	67.1	59.6	64.9	70.0
7/11/2016	07:00-19:00	Fine	<5	66.7	58.2	64.6	70.0
12/11/2016	07:00-19:00	Fine	<5	67.1	57.9	65.0	70.0
18/11/2016	07:00-19:00	Fine	<5	67.4	59.4	65.2	70.0
24/11/2016	07:00-19:00	Fine	<5	67.3	59.3	65.1	70.0
30/11/2016	07:00-19:00	Fine	<5	67.4	59.9	65.3	70.0
6/12/2016	07:00-19:00	Sunny	<5	67.2	56.7	65.1	70.0
12/12/2016	07:00-19:00	Sunny	<5	66.8	57.4	64.7	70.0
17/12/2016	07:00-19:00	Sunny	<5	67.3	58.2	65.1	70.0

In 2016							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
23/12/2016	07:00-19:00	Fine	<5	66.5	57.9	64.4	70.0
29/12/2016	07:00-19:00	Sunny	<5	66.4	56.8	64.2	70.0
Average $L_{eq(30min)}$ for Exam Period in dB(A)						64.4	65.0
Average $L_{eq(30min)}$ for Non-Exam Days in dB(A) [Including Non-Exam periods on examination days]						65.2	70.0

In 2017							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
04/01/17	07:00-19:00	Sunny	<5	67.2	57.4	64.9	70.0
10/01/17 (Exam)	07:00-19:00	Fine	<5	66.4	56.7	64.2	65.0
16/01/17 (Exam)	07:00-19:00	Sunny	<5	66.4	57.0	64.1	65.0
21/01/17	07:00-19:00	Fine	<5	66.4	56.2	64.2	70.0
27/01/17	07:00-19:00	Sunny	<5	66.5	56.0	64.2	70.0
02/02/17	07:00-19:00	Fine	<5	66.9	56.9	64.8	70.0

In 2017							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
08/02/17	07:00-19:00	Fine	<5	66.9	56.3	64.7	70.0
14/02/17	07:00-19:00	Sunny	<5	66.8	58.6	64.7	70.0
20/02/17	07:00-19:00	Sunny	<5	66.5	58.0	64.3	70.0
25/02/17	07:00-19:00	Sunny	<5	66.4	58.5	64.3	70.0
03/03/17	07:00-19:00	Sunny	<5	66.8	57.7	64.7	70.0
09/03/17	07:00-19:00	Cloudy	<5	67.0	59.2	64.9	70.0
15/03/17	07:00-19:00	Cloudy	<5	66.3	56.9	64.3	70.0
21/03/17	07:00-19:00	Sunny	<5	66.8	58.8	64.8	70.0
27/03/17 (Exam)	07:00-19:00	Sunny	<5	66.4	57.6	64.3	65.0
01/04/17	07:00-19:00	Sunny	<5	66.2	56.2	64.2	70.0
07/04/17 (Exam)	07:00-19:00	Fine	<5	66.4	57.0	64.4	65.0
13/04/17	07:00-19:00	Sunny	<5	66.4	56.7	64.4	70.0
19/04/17	07:00-19:00	Fine	<5	66.4	56.7	64.4	70.0

In 2017							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
25/04/17 (Exam)	07:00-19:00	Cloudy	<5	66.2	56.9	64.2	65.0
28/04/17	07:00-19:00	Sunny	<5	66.5	56.5	64.4	70.0
02/05/17	07:00-19:00	Sunny	<5	66.7	56.2	64.7	70.0
06/05/17	07:00-19:00	Fine	<5	66.7	56.6	64.7	70.0
12/05/17	07:00-19:00	Sunny	<5	66.5	56.3	64.5	70.0
18/05/17	07:00-19:00	Fine	<5	66.4	56.7	64.4	70.0
25/05/17	07:00-19:00	Cloudy	<5	66.6	56.3	64.6	70.0
27/05/17	07:00-19:00	Sunny	<5	66.7	56.4	64.9	70.0
31/05/17	07:00-19:00	Sunny	<5	66.6	56.1	64.7	70.0
05/06/17	07:00-19:00	Sunny	<5	66.7	56.4	64.6	70.0
10/06/17 (Exam)	07:00-19:00	Fine	<5	66.3	56.7	64.3	65.0
16/06/17 (Exam)	07:00-19:00	Cloudy	<5	66.3	56.3	64.2	65.0
22/06/17 (Exam)	07:00-19:00	Cloudy	<5	66.4	56.8	64.4	65.0

In 2017							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
28/06/17	07:00-19:00	Sunny	<5	66.4	56.4	64.4	70.0
04/07/17	07:00-19:00	Sunny	<5	66.7	57.2	64.8	70.0
10/07/17	07:00-19:00	Sunny	<5	66.5	56.6	64.5	70.0
15/07/17	07:00-19:00	Sunny	<5	66.6	56.9	64.6	70.0
21/07/17	07:00-19:00	Fine	<5	66.6	57.1	64.6	70.0
27/07/17	07:00-19:00	Sunny	<5	66.5	56.9	64.5	70.0
02/08/17	07:00-19:00	Sunny	<5	66.4	57.6	64.4	70.0
08/08/17	07:00-19:00	Sunny	<5	66.4	56.7	64.3	70.0
14/08/17	07:00-19:00	Sunny	<5	66.2	56.6	64.1	70.0
19/08/17	07:00-19:00	Fine	<5	66.6	57.2	64.6	70.0
25/08/17	07:00-19:00	Sunny	<5	66.1	57.3	63.9	70.0
31/08/2017	07:00-19:00	Sunny	<5	66.4	58.6	64.3	70.0
06/09/17	07:00-19:00	Sunny	<5	66.6	56.5	64.5	70.0
12/09/17	07:00-19:00	Fine	<5	66.6	56.2	64.4	70.0
18/09/17	07:00-19:00	Sunny	<5	66.9	58.1	64.9	70.0
23/09/17	07:00-19:00	Occasional Shower	<5	66.8	58.0	64.8	70.0
29/09/17	07:00-19:00	Sunny	<5	66.7	57.8	64.6	70.0

In 2017							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
04/10/17	07:00-19:00	Cloudy	<5	66.6	57.0	64.3	70.0
07/10/17	07:00-19:00	Sunny	<5	66.6	56.6	64.4	70.0
11/10/17	07:00-19:00	Fine	<5	66.2	57.1	64.1	70.0
17/10/17	07:00-19:00	Cloudy	<5	66.0	56.4	63.9	70.0
23/10/17	07:00-19:00	Sunny	<5	66.3	56.3	64.2	70.0
26/10/17 (Exam)	07:00-19:00	Sunny	<5	65.7	55.4	63.7	65.0
1/11/17	07:00-19:00	Fine	<5	66.1	57.5	63.9	70.0
3/11/17	07:00-19:00	Sunny	<5	65.9	56.8	63.8	70.0
9/11/17	07:00-19:00	Partly Cloudy	<5	66.3	57.1	64.0	70.0
15/11/17	07:00-19:00	Fine	<5	66.7	57.2	64.4	70.0
21/11/17	07:00-19:00	Fine	<5	66.7	57.2	64.6	70.0
27/11/17	07:00-19:00	Sunny	<5	66.5	56.8	64.4	70.0
2/12/2017	07:00-19:00	Fine	<5	66.9	58.9	64.8	70.0
8/12/2017	07:00-19:00	Sunny	<5	66.5	59.1	64.5	70.0
14/12/2017	07:00-19:00	Cloudy	<5	66.6	59.3	64.5	70.0
20/12/2017	07:00-19:00	Fine	<5	66.4	56.4	64.4	70.0
23/12/2017	07:00-19:00	Sunny	<5	66.9	56.8	64.7	70.0

In 2017							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
29/12/2017	07:00-19:00	Sunny	<5	66.0	58.4	63.9	70.0
Average $L_{eq(30min)}$ for Exam Period in dB(A)						64.2	65.0
Average $L_{eq(30min)}$ for Non-Exam Days in dB(A)						64.4	70.0

In 2018							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
4/1/2018	07:00-19:00	Fine	<5	66.6	59.2	64.5	70.0
6/1/2018	07:00-19:00	Cloudy	<5	66.4	57.4	64.3	70.0
12/1/2018 (Exam)	07:00-19:00	Sunny	<5	66.2	56.6	64.2	65.0
18/1/2018 (Exam)	07:00-19:00	Fine	<5	65.5	56.5	63.6	65.0
24/1/2018	07:00-19:00	Sunny	<5	66.1	56.8	63.9	70.0
30/1/2018	07:00-19:00	Cloudy	<5	66.3	57.5	64.2	70.0
5/2/2018	07:00-19:00	Fine	<5	66.3	58.3	64.1	70.0

In 2018							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
10/2/2018	07:00-19:00	Sunny	<5	66.1	58.5	64.0	70.0
14/2/2018	07:00-19:00	Sunny	<5	66.0	58.4	64.0	70.0
20/2/2018	07:00-19:00	Cloudy	<5	66.2	59.8	64.1	70.0
22/2/2018	07:00-19:00	Cloudy	<5	66.0	59.2	63.9	70.0
28/2/2018	07:00-19:00	Bright	<5	66.3	59.2	64.2	70.0
6/3/2018	07:00-19:00	Cloudy	<5	66.7	60.3	64.5	70.0
12/3/2018	07:00-19:00	Sunny	<5	66.8	60.5	64.7	70.0
17/3/2018	07:00-19:00	Cloudy	<5	66.4	59.8	64.3	70.0
23/3/2018 (Exam)	07:00-19:00	Cloudy	<5	66.4	60.4	64.1	65.0
29/3/2018 (Exam)	07:00-19:00	Cloudy	<5	66.1	57.6	64.0	65.0
4/4/2018	07:00-19:00	Sunny	<5	66.6	60.3	64.4	70.0
10/4/2018 (Exam)	07:00-19:00	Fine	<5	66.2	60.0	64.1	65.0
16/4/2018 (Exam)	07:00-19:00	Cloudy	<5	66.0	58.4	64.0	65.0

In 2018							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
21/4/2018	07:00-19:00	Fine	<5	66.6	60.0	64.5	70.0
27/4/2018	07:00-19:00	Sunny	<5	66.3	59.2	64.2	70.0
3/5/2018	07:00-19:00	Sunny	<5	66.3	59.9	64.2	70.0
9/5/2018	07:00-19:00	Cloudy	<5	66.5	60.7	64.4	70.0
15/5/2018	07:00-19:00	Sunny	<5	66.5	60.2	64.4	70.0
21/5/2018	07:00-19:00	Fine	<5	66.4	60.0	64.3	70.0
26/5/2018	07:00-19:00	Sunny	<5	66.4	60.7	64.3	70.0
1/6/2018	07:00-19:00	Sunny	<5	66.2	60.1	64.0	70.0
7/6/2018 (Exam)	07:00-19:00	Overcast	<5	66.2	60.5	64.1	65.0
13/6/201 (Exam)	07:00-19:00	Overcast	<5	66.1	59.9	63.9	65.0
19/6/2018 (Exam)	07:00-19:00	Fine	<5	66.2	60.4	64.1	65.0
25/6/2018	07:00-19:00	Sunny	<5	66.1	60.4	64.0	70.0
30/6/2018	07:00-19:00	Sunny	<5	66.3	60.0	64.1	70.0

In 2018							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
6/7/2018	07:00-19:00	Sunny	<5	66.0	59.2	63.9	70.0
12/7/2018	07:00-19:00	Fine	<5	66.1	60.3	64.1	70.0
18/7/2018	07:00-19:00	Overcast	<5	65.3	58.6	63.2	70.0
24/7/2018	07:00-19:00	Fine	<5	66.5	60.6	64.4	70.0
30/7/2018	07:00-19:00	Fine	<5	66.0	59.7	64.0	70.0
4/8/2018	07:00-19:00	Fine	<5	65.8	60.6	63.8	70.0
10/8/2018	07:00-19:00	Overcast	<5	65.5	59.4	63.5	70.0
16/8/2018	07:00-19:00	Cloudy	<5	66.0	60.3	64.0	70.0
22/8/2018	07:00-19:00	Overcast	<5	65.9	59.9	63.8	70.0
28/8/2018	07:00-19:00	Overcast	<5	65.9	60.3	64.0	70.0
3/9/2018	07:00-19:00	Sunny	<5	66.2	61.0	64.1	70.0
8/9/2018	07:00-19:00	Cloudy	<5	66.0	60.7	63.9	70.0
14/9/2018	07:00-19:00	Cloudy	<5	66.0	60.4	64.0	70.0
20/9/2018	07:00-19:00	Sunny	<5	66.6	60.8	64.5	70.0
26/9/2018	07:00-19:00	Cloudy	<5	66.4	60.5	64.4	70.0
2/10/2018	07:00-19:00	Sunny	<5	66.6	60.4	64.6	70.0
8/10/2018	07:00-19:00	Sunny	<5	66.2	60.5	64.2	70.0

In 2018							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed (ms^{-1})	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level (dB(A))
13/10/2018	07:00-19:00	Sunny	<5	66.1	60.2	64.1	70.0
19/10/2018	07:00-19:00	Fine	<5	66.2	60.4	64.2	70.0
25/10/2018 (Exam)	07:00-19:00	Fine	<5	65.8	59.7	63.9	65.0
31/10/2018 (Exam)	07:00-19:00	Fine	<5	65.7	59.4	63.7	65.0
6/11/2018	07:00-19:00	Sunny	<5	66.6	60.8	64.6	70.0
12/11/2018	07:00-19:00	Cloudy	<5	66.3	60.4	64.2	70.0
17/11/2018	07:00-19:00	Sunny	<5	66.1	60.1	64.1	70.0
23/11/2018	07:00-19:00	Cloudy	<5	66.2	60.4	64.0	70.0
29/11/2018	07:00-19:00	Fine	<5	66.2	59.9	64.3	70.0
5/12/2018	07:00-19:00	Cloudy	<5	66.1	58.6	64.1	70.0
11/12/2018	07:00-19:00	Sunny	<5	65.8	58.3	63.8	70.0
17/12/2018	07:00-19:00	Sunny	<5	66.2	60.1	64.2	70.0
22/12/2018	07:00-19:00	Fine	<5	66.1	59.9	64.0	70.0
28/12/2018	07:00-19:00	Fine	<5	66.0	59.6	63.9	70.0
Average $L_{eq(30min)}$ for Exam Period in dB(A)						64.0	65.0
Average $L_{eq(30min)}$ for Non-Exam Days in dB(A)						64.1	70.0

In 2019							
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)						
Date	Monitoring	Weather Condition	Wind Speed	$L_{10,30min}$ (dB(A))	$L_{10,30min}$ (dB(A))	$L_{eq,30min}$ (dB(A))	Limit Level
3/1/2019	07:00-19:00	Sunny	<5	66.5	59.6	64.4	70.0
9/1/2019 (Exam)	07:00-19:00	Sunny	<5	65.9	58.4	63.9	65.0
15/1/2019 (Exam)	07:00-19:00	Sunny	<5	65.8	59.1	63.8	65.0
21/1/2019 (Exam)	07:00-19:00	Fine	<5	65.9	59.2	63.9	65.0
26/1/2019	07:00-19:00	Fine	<5	66.1	59.3	64.0	70.0
1/2/2019	07:00-19:00	Sunny	<5	66.2	59.5	64.1	70.0
4/2/2019	07:00-19:00	Sunny	<5	65.4	58.5	63.4	70.0
9/2/2019	07:00-19:00	Overcast	<5	66.0	59.4	64.0	70.0
13/2/2019	07:00-19:00	Fine	<5	66.1	59.6	64.1	70.0
19/2/2019	07:00-19:00	Overcast	<5	66.1	59.2	64.0	70.0
25/2/2019	07:00-19:00	Sunny	<5	66.1	59.4	64.1	70.0
17/5/2019	07:00-19:00	Sunny	<5	66	59.3	64	70
24/5/2019	07:00-19:00	Sunny	<5	65.9	59.2	63.6	70
31/5/2019	07:00-19:00	Overcast	<5	65.6	59.2	63.6	70
6/6/2019	07:00-19:00	Sunny	<5	65.1	59.2	63.1	70
13/6/2019 (Exam)	07:00-19:00	Cloudy	<5	65.9	59.7	63.9	65
20/6/2019 (Exam)	07:00-19:00	Sunny	<5	66.2	60	63.7	65
27/6/2019	07:00-19:00	Fine	<5	65.3	59.7	63.3	70
Average $L_{eq(30min)}$ for Exam Period in dB(A)						63.8	65
Average $L_{eq(30min)}$ for Non-Exam Days in dB(A)						63.8	70

#Exam = Monitoring period with examination session at NSR1 on examination days

Table 8 Noise Monitoring Results at NSR7

NSR 7 2016	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
2/3/2016	07:00-19:00	Fine	<5	74.6	71.1	72.1	75.0
7/3/2016	07:00-19:00	Fine	<5	74.0	70.5	71.5	75.0
12/3/2016	07:00-19:00	Fine	<5	74.4	70.9	71.9	75.0
18/3/2016	07:00-19:00	Fine	<5	74.6	71.2	72.1	75.0
24/3/2016	07:00-19:00	Cloudy	<5	74.4	70.9	72.0	75.0
30/3/2016	07:00-19:00	Fine	<5	73.5	66.5	71.2	75.0
5/4/2016	07:00-19:00	Fine	<5	69.3	74.4	72.3	75.0
11/4/2016	07:00-19:00	Fine	<5	69.1	76.1	73.3	75.0
16/4/2016	07:00-19:00	Fine	<5	67.4	74.6	72.3	75.0
22/4/2016	07:00-19:00	Fine	<5	68.5	75.0	72.7	75.0
28/4/2016	07:00-19:00	Fine	<5	70.0	74.3	72.4	75.0
4/5/2016	07:00-19:00	Fine	<5	73.9	67.2	71.6	75.0
10/5/2016	07:00-19:00	Fine	<5	73.7	67.2	71.6	75.0
16/5/2016	07:00-19:00	Fine	<5	74.1	66.8	71.5	75.0
21/5/2016	07:00-19:00	Fine	<5	73.3	66.0	70.9	75.0
27/5/2016	07:00-19:00	Fine	<5	74.2	65.9	71.7	75.0
2/6/2016	07:00-19:00	Fine	<5	73.9	67.0	71.5	75.0
8/6/2016	07:00-19:00	Fine	<5	73.4	66.0	71.4	75.0
14/6/2016	07:00-19:00	Fine	<5	74.0	67.0	71.4	75.0
20/6/2016	07:00-19:00	Fine	<5	74.3	66.1	71.5	75.0
25/6/2016	07:00-19:00	Fine	<5	73.4	66.7	71.0	75.0
30/6/2016	07:00-19:00	Fine	<5	73.7	66.5	71.7	75.0
2/7/2016	07:00-19:00	Fine	<5	74.0	64.9	71.4	75.0
7/7/2016	07:00-19:00	Fine	<5	74.4	67.5	71.9	75.0
13/7/2016	07:00-19:00	Fine	<5	73.3	66.8	71.0	75.0
19/7/2016	07:00-19:00	Fine	<5	74.3	68.2	72.2	75.0
25/7/2016	07:00-19:00	Fine	<5	74.4	68.3	72.1	75.0
30/7/2016	07:00-19:00	Fine	<5	74.3	67.6	71.9	75.0
5/8/2016	07:00-19:00	Fine	<5	74.3	67.6	72.2	75.0
11/8/2016	07:00-19:00	Fine	<5	74.2	67.9	72.1	75.0

NSR 7 2016	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
17/8/2016	07:00-19:00	Fine	<5	74.7	68.2	72.4	75.0
23/8/2016	07:00-19:00	Fine	<5	74.9	68.7	72.9	75.0
5/8/2016	07:00-19:00	Fine	<5	74.5	68.4	72.6	75.0
3/9/2016	07:00-19:00	Fine	<5	74.5	66.9	72.1	75.0
9/9/2016	07:00-19:00	Fine	<5	75.4	68.7	73.3	75.0
15/9/2016	07:00-19:00	Fine	<5	74.6	67.7	72.3	75.0
21/9/2016	07:00-19:00	Fine	<5	75.2	68.1	72.9	75.0
27/9/2016	07:00-19:00	Fine	<5	74.8	66.6	72.7	75.0
3/10/2016	07:00-19:00	Fine	<5	74.9	67.3	72.7	75.0
8/10/2016	07:00-19:00	Fine	<5	74.9	67.3	72.8	75.0
14/10/2016	07:00-19:00	Fine	<5	74.9	67.5	72.7	75.0
20/10/2016	07:00-19:00	Fine	<5	75.5	68.2	73.4	75.0
26/10/2016	07:00-19:00	Fine	<5	75.6	68.9	73.5	75.0
1/11/2016	07:00-19:00	Fine	<5	74.8	67.0	72.7	75.0
7/11/2016	07:00-19:00	Fine	<5	75.2	68.2	73.1	75.0
12/11/2016	07:00-19:00	Fine	<5	75.2	67.6	73.1	75.0
18/11/2016	07:00-19:00	Fine	<5	75.1	67.6	72.9	75.0
24/11/2016	07:00-19:00	Fine	<5	74.6	66.5	72.6	75.0
30/11/2016	07:00-19:00	Fine	<5	75.2	67.0	73.0	75.0
6/12/2016	07:00-19:00	Sunny	<5	75.0	67.3	72.8	75.0
12/12/2016	07:00-19:00	Sunny	<5	74.8	66.9	72.7	75.0
17/12/2016	07:00-19:00	Sunny	<5	74.7	67.1	72.7	75.0
23/12/2016	07:00-19:00	Fine	<5	74.5	66.0	72.3	75.0
29/12/2016	07:00-19:00	Sunny	<5	74.6	66.0	72.5	75.0
Average Leq(30min) in dB(A)						72.3	75.0

NSR 7 2017	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
04/01/17	07:00-19:00	Sunny	<5	74.5	66.5	72.2	75.0
10/01/17	07:00-19:00	Fine	<5	74.0	66.2	71.8	75.0
16/01/17	07:00-19:00	Sunny	<5	74.9	66.1	72.8	75.0
21/01/17	07:00-19:00	Fine	<5	73.7	65.0	71.4	75.0
27/01/17	07:00-19:00	Sunny	<5	73.7	65.3	71.6	75.0
02/02/17	07:00-19:00	Fine	<5	74.2	65.7	72.2	75.0
08/02/17	07:00-19:00	Fine	<5	74.3	66.0	72.0	75.0
14/02/17	07:00-19:00	Sunny	<5	74.3	66.2	72.2	75.0
20/02/17	07:00-19:00	Sunny	<5	74.0	66.0	71.8	75.0
25/02/17	07:00-19:00	Sunny	<5	73.6	65.3	71.5	75.0
03/03/17	07:00-19:00	Sunny	<5	73.3	65.5	71.3	75.0
09/03/17	07:00-19:00	Cloudy	<5	73.6	65.6	71.7	75.0
15/03/17	07:00-19:00	Cloudy	<5	73.3	65.2	71.3	75.0
21/03/17	07:00-19:00	Sunny	<5	73.4	65.5	71.3	75.0
27/03/17	07:00-19:00	Sunny	<5	73.4	65.7	71.5	75.0
01/04/17	07:00-19:00	Sunny	<5	73.5	65.4	71.5	75.0
07/04/17	07:00-19:00	Fine	<5	72.9	65.3	71.0	75.0
13/04/17	07:00-19:00	Sunny	<5	73.1	65.2	71.0	75.0
19/04/17	07:00-19:00	Fine	<5	73.3	65.4	71.3	75.0
25/04/17	07:00-19:00	Cloudy	<5	72.9	65.7	71.0	75.0
28/04/17	07:00-19:00	Sunny	<5	73.1	65.1	71.0	75.0
02/05/17	07:00-19:00	Sunny	<5	73.2	65.2	71.1	75.0
06/05/17	07:00-19:00	Fine	<5	73.0	64.8	71.1	75.0
12/05/17	07:00-19:00	Sunny	<5	73.4	64.8	71.5	75.0
18/05/17	07:00-19:00	Fine	<5	73.5	65.1	71.5	75.0
25/05/17	07:00-19:00	Cloudy	<5	73.2	65.2	71.1	75.0
27/05/17	07:00-19:00	Sunny	<5	72.9	64.6	70.9	75.0
31/05/17	07:00-19:00	Sunny	<5	72.7	64.8	70.7	75.0
05/06/17	07:00-19:00	Sunny	<5	72.3	65.4	70.2	75.0
10/06/17	07:00-19:00	Fine	<5	72.7	64.8	70.6	75.0
16/06/17	07:00-19:00	Cloudy	<5	72.7	65.0	70.6	75.0
22/06/17	07:00-19:00	Cloudy	<5	73.0	65.2	70.8	75.0

NSR 7 2017	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
28/06/17	07:00-19:00	Sunny	<5	73.0	65.3	71.0	75.0
04/07/17	07:00-19:00	Sunny	<5	73.1	65.1	71.0	75.0
10/07/17	07:00-19:00	Sunny	<5	73.6	65.1	71.5	75.0
15/07/17	07:00-19:00	Sunny	<5	73.7	65.1	71.6	75.0
21/07/17	07:00-19:00	Fine	<5	73.3	65.2	71.5	75.0
27/07/17	07:00-19:00	Sunny	<5	73.4	65.4	71.4	75.0
02/08/17	07:00-19:00	Sunny	<5	73.1	64.7	71.1	75.0
08/08/17	07:00-19:00	Sunny	<5	72.8	65.5	70.8	75.0
14/08/17	07:00-19:00	Sunny	<5	72.9	65.5	70.8	75.0
19/08/17	07:00-19:00	Fine	<5	72.6	65.4	70.6	75.0
25/08/17	07:00-19:00	Sunny	<5	72.7	64.8	70.6	75.0
31/08/2017	07:00-19:00	Sunny	<5	72.5	64.9	70.4	75
06/09/17	07:00-19:00	Sunny	<5	73.3	65.6	71.3	75.0
12/09/17	07:00-19:00	Fine	<5	73.8	65.3	71.7	75.0
18/09/17	07:00-19:00	Sunny	<5	72.4	64.5	70.2	75.0
23/09/17	07:00-19:00	Occasional Shower	<5	72.8	64.5	70.8	75.0
29/09/17	07:00-19:00	Sunny	<5	72.7	65.3	70.7	75.0
04/10/17	07:00-19:00	Cloudy	<5	71.9	64.6	69.9	75
07/10/17	07:00-19:00	Sunny	<5	72.6	64.4	70.4	75
11/10/17	07:00-19:00	Fine	<5	71.9	64.3	69.9	75
17/10/17	07:00-19:00	Cloudy	<5	72.3	64.3	70.2	75
23/10/17	07:00-19:00	Sunny	<5	72.8	65.0	70.7	75
26/10/17	07:00-19:00	Sunny	<5	71.7	64.9	69.5	75
1/11/17	07:00-19:00	Fine	<5	71.5	63.6	69.4	75.0
3/11/17	07:00-19:00	Sunny	<5	71.3	63.4	69.2	75.0
9/11/17	07:00-19:00	Cloudy	<5	72.6	64.5	70.0	75.0
15/11/17	07:00-19:00	Fine	<5	72.6	64.3	70.4	75.0
21/11/17	07:00-19:00	Fine	<5	72.6	65.0	70.4	75.0
27/11/17	07:00-19:00	Sunny	<5	72.0	64.3	70.0	75.0
2/12/2017	07:00-19:00	Fine	<5	73.1	64.9	70.9	75.0
8/12/2017	07:00-19:00	Sunny	<5	73.0	64.8	71.0	75.0

NSR 7 2017	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
14/12/2017	07:00-19:00	Cloudy	<5	72.2	64.3	70.2	75.0
20/12/2017	07:00-19:00	Fine	<5	72.1	64.2	70.0	75.0
23/12/2017	07:00-19:00	Sunny	<5	73.1	65.1	71.0	75.0
29/12/2017	07:00-19:00	Sunny	<5	71.7	64.8	69.8	75.0
Average $L_{eq(30min)}$ in dB(A)						70.9	75.0

NSR 7 2018	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
4/1/2018	07:00-19:00	Fine	<5	73.0	65.0	70.8	75.0
6/1/2018	07:00-19:00	Cloudy	<5	72.6	64.6	70.5	75.0
12/1/2018	07:00-19:00	Sunny	<5	72.8	64.2	70.7	75.0
18/1/2018	07:00-19:00	Fine	<5	72.5	64.3	70.3	75.0
24/1/2018	07:00-19:00	Sunny	<5	73.3	65.2	71.3	75.0
30/1/2018	07:00-19:00	Cloudy	<5	71.5	63.9	69.5	75.0
5/2/2018	07:00-19:00	Fine	<5	73.0	66.6	70.8	75.0
10/2/2018	07:00-19:00	Sunny	<5	72.9	65.5	70.9	75.0
14/2/2018	07:00-19:00	Sunny	<5	73.4	66.3	71.3	75.0
20/2/2018	07:00-19:00	Cloudy	<5	72.4	65.2	70.4	75.0
22/2/2018	07:00-19:00	Cloudy	<5	73.5	65.4	71.3	75.0
28/2/2018	07:00-19:00	Bright	<5	73.0	64.7	70.9	75.0
6/3/2018	07:00-19:00	Cloudy	<5	73.3	65.6	71.2	75.0
12/3/2018	07:00-19:00	Sunny	<5	73.3	65.4	71.3	75.0
17/3/2018	07:00-19:00	Cloudy	<5	73.2	65.5	71.2	75.0
23/3/2018	07:00-19:00	Cloudy	<5	72.7	64.7	70.7	75.0
29/3/2018	07:00-19:00	Cloudy	<5	73.8	66.4	71.7	75.0
4/4/2018	07:00-19:00	Sunny	<5	73.2	65.3	71.2	75.0
10/4/2018	07:00-19:00	Fine	<5	73.4	66.1	71.3	75.0

NSR 7 2018	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
16/4/2018	07:00-19:00	Cloudy	<5	72.6	65.2	70.6	75.0
21/4/2018	07:00-19:00	Fine	<5	72.6	64.4	70.7	75.0
27/4/2018	07:00-19:00	Sunny	<5	73.0	65.6	71.0	75.0
3/5/2018	07:00-19:00	Sunny	<5	72.6	64.4	70.5	75.0
9/5/2018	07:00-19:00	Cloudy	<5	72.5	65.7	70.5	75.0
15/5/2018	07:00-19:00	Sunny	<5	73.0	65.2	70.8	75.0
21/5/2018	07:00-19:00	Fine	<5	73.2	64.5	71.1	75.0
26/5/2018	07:00-19:00	Sunny	<5	72.7	65.0	70.6	75.0
1/6/2018	07:00-19:00	Sunny	<5	72.7	64.2	70.5	75.0
7/6/2018	07:00-19:00	Overcast	<5	72.5	65.0	70.5	75.0
13/6/2018	07:00-19:00	Overcast	<5	73.0	65.1	70.9	75.0
19/6/2018	07:00-19:00	Fine	<5	73.0	65.3	70.8	75.0
25/6/2018	07:00-19:00	Sunny	<5	73.4	66.0	71.2	75.0
30/6/2018	07:00-19:00	Sunny	<5	72.2	65.7	70.2	75.0
6/7/2018	07:00-19:00	Sunny	<5	72.4	64.4	70.4	75.0
12/7/2018	07:00-19:00	Fine	<5	72.6	65.5	70.5	75.0
18/7/2018	07:00-19:00	Overcast	<5	72.2	66.1	70.1	75.0
24/7/2018	07:00-19:00	Fine	<5	73.2	66.5	71.1	75.0
30/7/2018	07:00-19:00	Fine	<5	72.4	65.6	70.4	75.0
4/8/2018	07:00-19:00	Fine	<5	72.8	65.0	70.7	75.0
10/8/2018	07:00-19:00	Overcast	<5	73.1	66.3	71.0	75.0
16/8/2018	07:00-19:00	Cloudy	<5	73.0	65.7	71.1	75.0
22/8/2018	07:00-19:00	Overcast	<5	72.7	64.8	70.6	75.0
28/8/2018	07:00-19:00	Overcast	<5	71.9	64.5	69.8	75.0
3/9/2018	07:00-19:00	Sunny	<5	74.0	66.1	72.0	75.0
8/9/2018	07:00-19:00	Cloudy	<5	73.3	65.7	71.2	75.0
14/9/2018	07:00-19:00	Cloudy	<5	73.1	65.4	70.9	75.0
20/9/2018	07:00-19:00	Sunny	<5	73.4	66.6	71.3	75.0
26/9/2018	07:00-19:00	Cloudy	<5	72.8	65.2	70.7	75.0
2/10/2018	07:00-19:00	Sunny	<5	73.6	66.3	71.7	75.0
8/10/2018	07:00-19:00	Sunny	<5	73.8	65.9	71.7	75.0

NSR 7 2018	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
13/10/2018	07:00-19:00	Sunny	<5	73.8	66.3	71.7	75.0
19/10/2018	07:00-19:00	Fine	<5	73.2	65.5	71.0	75.0
25/10/2018	07:00-19:00	Fine	<5	73.0	65.8	70.9	75.0
31/10/2018	07:00-19:00	Fine	<5	73.1	65.9	71.1	75.0
6/11/2018	07:00-19:00	Sunny	<5	72.8	65.7	70.8	75.0
12/11/2018	07:00-19:00	Cloudy	<5	73.1	66.0	71.1	75.0
17/11/2018	07:00-19:00	Sunny	<5	73.5	66.1	71.5	75.0
23/11/2018	07:00-19:00	Cloudy	<5	72.4	65.4	70.4	75.0
29/11/2018	07:00-19:00	Fine	<5	73.0	65.8	71.0	75.0
5/12/2018	07:00-19:00	Cloudy	<5	72.0	65.1	69.9	75.0
11/12/2018	07:00-19:00	Sunny	<5	72.0	65.2	70.0	75.0
17/12/2018	07:00-19:00	Sunny	<5	72.5	66.2	70.4	75.0
22/12/2018	07:00-19:00	Fine	<5	73.4	66.5	71.3	75.0
28/12/2018	07:00-19:00	Fine	<5	73.4	65.8	71.3	75.0
Average $L_{eq(30min)}$ in dB(A)						70.9	75.0

NSR 7 2019	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
3/1/2019	07:00-19:00	Sunny	<5	73.1	65.5	71.2	75.0
9/1/2019	07:00-19:00	Sunny	<5	72.8	66.0	70.8	75.0
15/1/2019	07:00-19:00	Sunny	<5	72.9	66.4	70.9	75.0
21/1/2019	07:00-19:00	Fine	<5	72.9	66.2	70.9	75.0
26/1/2019	07:00-19:00	Fine	<5	73.0	66.0	70.9	75.0
1/2/2019	07:00-19:00	Sunny	<5	73.4	66.4	71.3	75.0
4/2/2019	07:00-19:00	Sunny	<5	73.1	66.7	71.0	75.0
9/2/2019	07:00-19:00	Overcast	<5	72.5	65.8	70.5	75.0

NSR 7 2019	Fu Cheong Estate Fu Yun House						
Date	Monitoring	Weather Condition	Wind Speed (ms-1)	L10, 30min (dB(A))	L90,30min (dB(A))	Leq,30min (dB(A))	Limit Level (dB(A))
13/2/2019	07:00-19:00	Fine	<5	72.4	65.6	70.3	75.0
19/2/2019	07:00-19:00	Overcast	<5	73.3	66.2	71.2	75.0
25/2/2019	07:00-19:00	Sunny	<5	73.2	66.3	71.2	75.0
17/5/2019	07:00-19:00	Sunny	<5	73.2	66.3	71.2	75
24/5/2019	07:00-19:00	Sunny	<5	72.9	65.9	70.8	75
31/5/2019	07:00-19:00	Overcast	<5	72	65.7	69.9	75
6/6/2019	07:00-19:00	Sunny	<5	72	65.5	70.2	75
13/6/2019	07:00-19:00	Cloudy	<5	72.5	66.2	70.5	75
20/6/2019	07:00-19:00	Sunny	<5	73	66.6	71	75
27/6/2019	07:00-19:00	Fine	<5	71.7	65.3	69.7	75
Average $L_{eq(30min)}$ in dB(A)						70.8	75.0

6.3 For those noise monitoring results among non-examination periods, the minimum and maximum noise level measured in a single 30-min period at Sir Ellis Kadoorie Secondary School (West Kowloon) (NSR1) was 62.6 dB(A) and 68.0 dB(A) respectively; while the minimum and maximum noise level measured in a single 30-min period at Fu Cheong Estate Fu Yun House (NSR7) was 69.2 dB(A) and 73.5 dB(A) respectively. Therefore, there was no exceedance of the Limit Level during the non-examination period, i.e. no greater than 70.0 dB(A) and 75.0 dB(A) for NSR1 and NSR7 respectively.

6.4 Examination at Sir Ellis Kadoorie Secondary School (West Kowloon) (NSR1) was held in April 2016, June 2016, January 2017, March 2017, April 2017, June 2017, October 2017 January 2018, March 2018, April 2018, June 2018, October 2018, January 2019, March 2019, April 2019 and June 2019. As to minimize the potential noise impacts on NSR1 owing to Project construction activities, the contractor suspended on-site piling works during the examination periods. Among the examination periods, the minimum

and maximum noise level measured in a single 30-min period at NSR1 was 63.6 dB(A) and 64.7 dB(A) respectively. Therefore, there was no exceedance of the Limit Level during the examination period, i.e. no greater than 65.0 dB(A) for NSR1. The detailed breakdown of examination schedule at NSR1 and the corresponding measured noise levels were summarized in the Monthly EM&A Report for April 2016, June 2016, January 2017, March 2017, April 2017, June 2017, October 2017 January 2018, March 2018, April 2018, June 2018, October 2018, January 2019, March 2019, April 2019 and June 2019.

A Review on the Monitoring Results

6.5 The construction works undertaken in the Project Site was given in ***Table 2*** and they were identified as the major on-site influencing factors affecting the monitoring results. During the whole construction phase, specifically the Foundation Stage, piling works was identified as the major potential noise source from the Project in accordance with Section 5.4.2 of the approved EIA Report **(*Appendix O*)**.

6.6 Meanwhile, there was a residential project development at top of Nam Chong station effectively close to NSR7 and the project was under construction since the commencement of this project. There was another construction works at NSR 7 which was the renovation of the Fu Cheong Estate Shopping Mall. The noise impacts from the abovementioned construction site would further affect monitoring results.

7.0 Non-compliance, Complaints, Notifications of Summons and Status of Prosecutions

7.1 The cumulative statistics for non-compliances, complaints, notifications of summons and status of prosecutions for the Project since the date of commencement of construction works (i.e. 29th February 2016) are summarized in ***Table 9*** and shown in ***Appendix Q***.

Table 9 Statistics for Non-compliances, Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Cumulative Statistics			
	Non-compliances	Complaints	Notifications of Summons	Successful Prosecutions
29/2/2016 - 27/6/2019	0	4	0	0

Record on Non-compliance of Action and Limit Levels

7.2 During the whole construction phase, there was no non-compliance of Action and Limit levels for the noise level. No actions nor follow-up procedures for non-compliance were taken during the whole construction phase.

Record on Environmental Complaints Received

7.3 During the whole construction phase, there are four complaints since the project commencement. The environmental complaints were received on 17th March 2016, 14th April 2016, 19th May 2019 and 2nd June 2019, which were related to a noise complaint, a surface runoff complaint, wastewater discharge complaint and air pollution complaint and environmental hygiene respectively. With reference to Appendix 7-1 of the supporting EM&A Manual, investigations were conducted by the Environmental Team upon receipt of the complaints. For the noise complaint, mitigation measures, such as

noise barriers and checking on power mechanical equipment, were applied in order to address the complaint. These mitigations were verified to be considered as effective. For surface runoff complaint, the mitigation measures, including providing cement bunds as well as pavement at hoarding toe facing towards the site and provision of sump pumps, were applied in order to mitigate the problems. These mitigations were verified to be considered as effective. Details of the incidents and investigation results on the noise and surface runoff complaint were summarized in the corresponding Complaint Investigation Report submitted on 7th April 2016 and 10th May 2016 respectively. For the wastewater discharge, air pollution and environmental hygiene complaints, proper mitigation measures, such as suspension of the trainings, provision of drainage system and closed all windows, were applied in order to address the complaints. These mitigations were verified to be considered as effective. The details of investigation results on the wastewater discharge, air pollution and environmental hygiene complaint were summarized in the corresponding Complaint Investigation Report submitted on 11th June 2019.

Record on Notifications of Summons and Successful Prosecution

7.4 During the whole construction phase, no notifications of summons nor successful prosecution were received. No actions nor follow-up procedures were required during the whole construction phase.

8.0 Waste Management Status

8.1 Waste disposal records were kept started from March 2016 to June 2019. As advised by the Contractor, during the whole construction phase, a total of 29350.31 tonnes of inert C&D material were generated and disposed of as public fills and 2713.9 tonnes of non-inert C&D materials were generated and disposed of at landfills. Besides, 25.85 tonnes of metals were recycled. Summary of waste flow table during the whole construction phase of the Project is given in ***Appendix E***.

8.2 The Contractor was advised to maintain on site waste sorting and recording system and maximize reused / recycle of C&D wastes.

9.0 Wastewater Management Status

9.1 Water sampling was started from the effective date of Discharge License, i.e. 22nd January 2016, to February 2019.

9.2 All water sampling results comply with the requirement of the Discharge License. No water samplings were conducted since March 2019 because no wastewater was discharged from March 2019 to June 2019.

10.0 Air Pollution Management Status

10.1 As mentioned in the EM&A Manual, adverse dust impact would not be anticipated at the Air Sensitive Receivers (ASRs) in the vicinity of the construction sites during construction period. Besides, the major construction works were completed in November 2018, and the minor works was completed in 27th June 2019. It is anticipated that construction dust emission from minor construction works would not cause adverse impacts to the ASRs.

10.2 As mentioned in Environmental Mitigation Measures, a commissioning test should be carried out for the deodorization system in order to ensure the odor removal efficiency can achieve more than 85%. All of the scrubbers show more than 85% of odor removal efficiency, which can comply with the commissioning test requirement. The test reports

are shown in ***Appendix F***.

11.0 Landscaping Management Status

11.1 According to the Section 6.2.6 of the EM&A Manual (***Appendix H***), tree T21 within the Project site was preserved and protected during the whole construction phase.

11.2 Erection of fencing around the T21 was provided and regular visual checking of the tree condition was conducted during the whole construction phase.

11.3 In accordance with the Section 6.2.9 to 6.2.13 of the EM&A Manual (***Appendix I***), planting of trees at various areas of the Project site should be completed before the completion of the construction work. The planting of these trees was completed on 17th June 2019.

12.0 Review of the Validity of EIA Predictions and Identification of Shortcomings in the Recommendation

12.1 During the whole construction phase, the monitoring results did not show major variations due to the construction activities being carried out and weather condition. The EM&A data was compared with the EIA predictions as summarized in ***Table 10***.

Table 10 Comparisons of the EIA Prediction with Measured Noise Levels during Baseline Monitoring and Impact Monitoring

NSR	Name	Maximum Predicted Unmitigated Construction Noise Level, dB(A)	Maximum Predicted Mitigated Construction Noise Level, dB(A)	Measured Average $L_{eq(30min)}$ during Baseline Monitoring, dB(A)	Measured Maximum $L_{eq(30min)}$ during Impact Monitoring, dB(A)
NSR 1	Sir Ellis Kadoorie Secondary School (West Kowloon)	69	63	64.2	68.0 #
NSR 7	Fu Cheong Estate Fu Yun House	66	65	64.1	73.5

# denotes for results in non-examination periods

12.2 The maximum construction noise level measured during the whole construction phase at NSR1 and NSR7 were above the corresponding maximum predicted mitigated construction noise level as given in the Section 5.8.2 of the approved Project EIA Report **(*Appendix L*)**. However, the prediction of construction noise levels involved the uncertainty in the construction noise impacts from Nam Cheong station development, also known as Phase 2A, as indicated in the Section 5.6.7 of the EIA Report **(*Appendix P*)**. Such a discrepancy between the maximum predicted mitigated noise level and the

maximum impact measurement values was more significant at NSR7 than that at NSR1 (7 dB(A)). Given that the Nam Cheong station development is located closer to NSR7, the construction noise impact from Nam Cheong station development is expected to be more significant at NSR7 than at NSR1, leading to the greater prediction discrepancy at NSR7.

12.3 Nevertheless, the maximum $L_{eq(30min)}$ measured noise levels at both NSRs complied with the relevant Limit Levels, including the examination periods at NSR1. The monitoring results and the non-compliance indicated that the EIA process with its recommended mitigation and EM&A programme were effective for protection of the environment and there were no unacceptable impacts posed by the Project.

13.0 Comments, Recommendations and Conclusions

13.1 Site clearance and tree felling works were undertaken during the period from 10th December 2015 to 7th February 2016. The construction works was commenced on 29th February 2016 and the Certificate of Completion was issued on 22nd November 2018. The minor defect rectification works were completed on 27th June 2019.

13.2 EM&A programme for the FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area was commenced on 29th February 2016 and construction phase EM&A programme was terminated on 27th June 2019 as approved by EPD.

13.3 The recommended mitigation measures are summarized in ***Appendix C***. The mitigation measures had been implemented to minimize the environmental impacts due to the whole construction phase of the Project. The recommended mitigation measures in the EIA process and the EM&A programme were effective in protecting the environment. As such, the environmental performance during the whole construction phase was considered satisfactory.

13.4 Noise monitoring had been undertaken during the whole construction phase in accordance with the EM&A Manual.

13.5 During the whole construction phase, there was no exceedance of the Limit Levels for noise monitoring in both non-examination period at NSR1 and NSR7. Examination was held in April 2016, June 2016, January 2017, March 2017, April 2017, June 2017, October 2017 January 2018, March 2018, April 2018, June 2018, October 2018, January 2019, March 2019, April 2019 and June 2019 at NSR1, no exceedance of Limit Levels during the examination periods with proper implementation of piling works schedule on-site.

13.6 During the whole construction phase, a total of 29350.31 tonnes of inert C&D material were generated and disposed of as public fills and 2713.9 tonnes of non-inert C&D materials were generated and disposed of at landfills. Besides, 25.85 tonnes of metals were recycled.

13.7 During the whole construction, water samplings were conducted from 22nd January 2016 to February 2019. All water sampling results comply with the requirement. No water sampling was conducted since March 2019 as no wastewater was discharged.

13.8 Commissioning tests for odor removal efficiency of the scrubbers were conducted. All scrubbers show more than 85% of odor removal efficiency, which can comply with the environmental mitigation measures as stated in EIA report.

13.9 During the whole construction, tree T21 within the Project site was preserved and protected according to the Section 6.2.6 of the EM&A Manual **(*Appendix H*)**. Environmental protection measures such as erection of fencing around the tree was implemented accordingly during the whole construction phase.

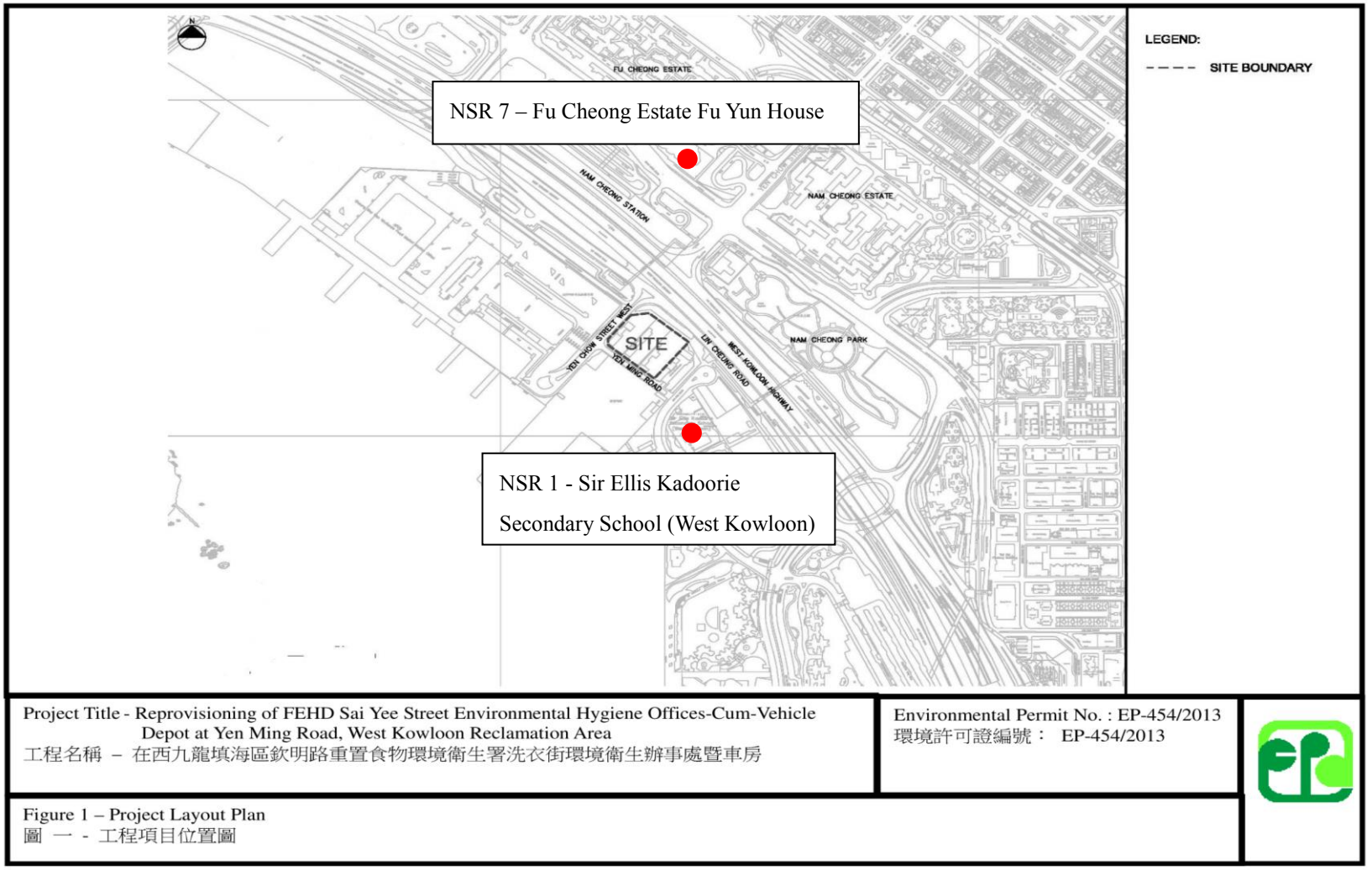
13.10 During the whole construction phase, there are four complaints since the project commencement. The environmental complaints were received on 17th March 2016, 14th April 2016, 19th May 2019 and 2nd June 2019, which were related to a noise complaint, a surface runoff complaint, wastewater discharge complaint and air pollution complaint and environmental hygiene respectively. With reference to Appendix 7-1 of the supporting EM&A Manual, investigations were conducted by the Environmental Team upon receipt of the complaints. For the noise complaint, mitigation measures, such as noise barriers and checking on power mechanical equipment, were applied in order to address the complaint. These mitigations were verified to be considered as effective. For surface runoff complaint, the mitigation measures, including providing cement bunds as well as pavement at hoarding toe facing towards the site and provision of sump pumps,

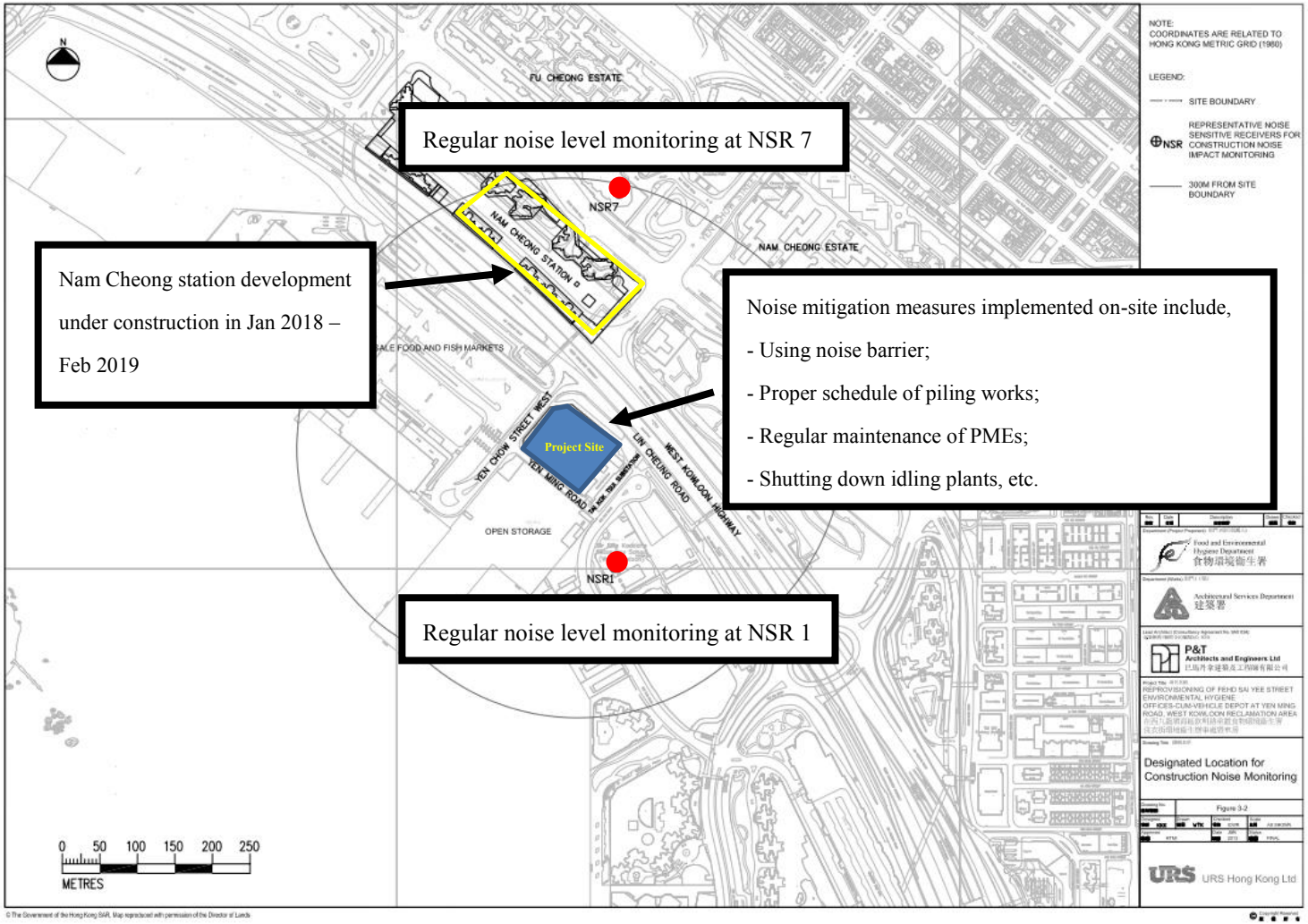
were applied in order to mitigate the problems. These mitigations were verified to be considered as effective. Details of the incidents and investigation results on the noise and surface runoff complaint were summarized in the corresponding Complaint Investigation Report submitted on 7th April 2016 and 10th May 2016 respectively. For the wastewater discharge, air pollution and environmental hygiene complaints, proper mitigation measures, such as suspension of the trainings, provision of drainage system and closed all windows, were applied in order to address the complaints. These mitigations were verified to be considered as effective. The details of investigation results on the wastewater discharge, air pollution and environmental hygiene complaint were summarized in the corresponding Complaint Investigation Report submitted on 11th June 2019.

13.11 During the whole construction phase, site inspections were conducted in a weekly basis since the Project construction works commenced on 29th February 2016. There was no major environmental deficiency and no non-conformance of implementation of environmental mitigation measures was identified. Weekly site inspection on the implementation of environmental mitigation measures will be further carried out in the subsequent stages throughout the entire construction phase of the Project.

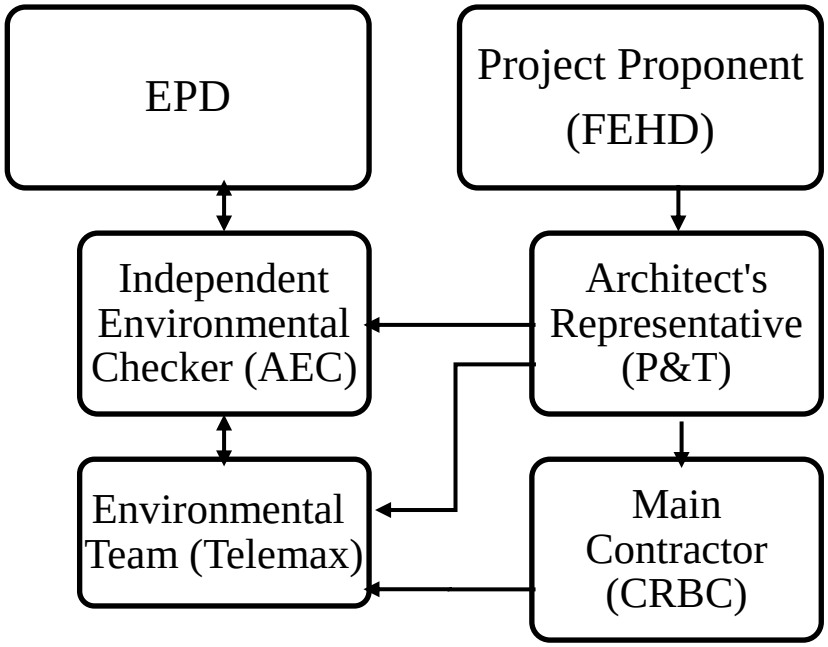
13.12 The monitoring results and statistics of non-compliance indicated that EIA process with its recommended mitigation and EM&A programme were effective for protection of the environment and there was no unacceptable environmental impact posed by the Project during the whole construction phase.

Appendix A Project Layout and Noise Monitoring Locations



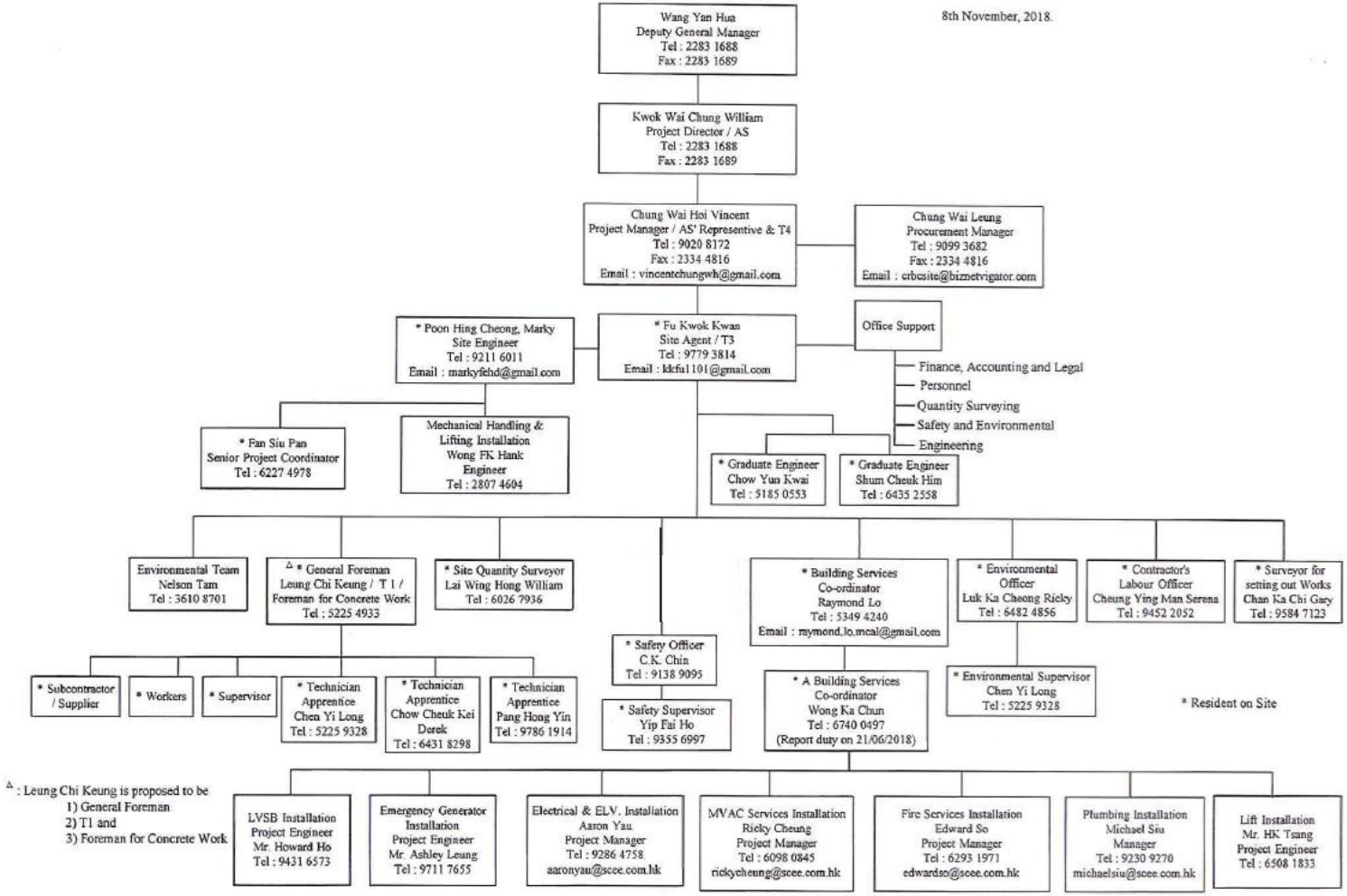

Regular noise level monitoring at NSR 7
Nam Cheong station development under construction in Jan 2018 – Feb 2019
Noise mitigation measures implemented on-site include,
- Using noise barrier;
- Proper schedule of piling works;
- Regular maintenance of PMEs;
- Shutting down idling plants, etc.
Regular noise level monitoring at NSR 1
FU CHEONG ESTATE
NAM CHEONG ESTATE
NSR7
NSR1
Project Site
YEN CHOW STREET WEST
YEN MING ROAD
LAI CHEUNG ROAD
WEST KOWLOON HIGHWAY
OPEN STORAGE
0 50 100 150 200 250
METRES
NOTE:
COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980)
LEGEND:
SITE BOUNDARY
REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT MONITORING
300M FROM SITE BOUNDARY
Food and Environmental Hygiene Department
Architectural Services Department
P&T Architects and Engineers Ltd
Designated Location for Construction Noise Monitoring
URS Hong Kong Ltd

Appendix B Organization Chart



Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area
Contract No.: SS D505 (Programme No. 182GK)

8th November, 2018.



Appendix C Summary of Environmental Mitigation Measures – Implementation Schedule

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
Air Quality										
4.12.2	2.3.1	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices: ● 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 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 piles near ASRs; ● Tarpaulin covering of all dust 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 vehicle son 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 buy 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	To minimise dust impacts	All works sites	Contractor and Sub-contractors	Air Pollution Control Ordinance		✓		Y Y Y Y Y Y Y Y Y Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		or facility, and nay vent or exhaust should be fitted with the an effective fabric filter or equivalent air pollution control system.								
4.11.4	/	Control of Odour Emission ● 3-sides enclosed washing bays and maintenance workshops, served with mechanical ventilations to maintain all the time with proper negative air pressure. ● Deodorisation system such as active carbon filters or chemical scrubber (or equivalent) will be applied at the ventilation duct prior to discharging to the atmosphere, having odour removal efficiency of 85% or above at normal operation, and under regular and proper maintenance and replacement.	To avoid air pollutants and minimal odour from emitting to the adjacent atmosphere	Washing bays and maintenance workshops	FEHD and Depot Designer	EIAO-TM	✓		✓	N/A N/A
4.17.3	2.4.4	Commissioning test requirement should be incorporated in the specification during commissioning period order to ensure the odour removal efficiency (at least 85%) of the proposed odour removal unit.	To avoid air pollutants and minimal odour from emitting to the adjacent atmosphere	Washing bays and maintenance workshops	Depot Designer and Contractor	EIAO-TM	✓	✓		Y
4.17.4	2.4.5	Monitoring test on odour removal efficiency of the odour removal unit should be carried out quarterly in the first year of operation. Development of monitoring and investigation plan, as well as work procedure, prior to operation of the unit is recommended.	To ensure and maintain odour removal efficiency of the unit	Washing bays and maintenance workshops	FEHD	EIAO-TM			✓	N/A
Noise										
5.7.3	3.4.2	Selection and Programming 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 and their proportion of usage were recommended in the Project and	To limit the amount of concurrent activities and where applicable, to avoid parallel operation of noisy PME in order to minimise the total noise generated	All works sites	Contractor and Sub-contractors	EIAO, Noise Control Ordinance		✓		Y Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		incorporated in the Noise Impact Assessment; ● The proposed quantity of PMEs and their proportion of usage should be confirmed feasible by the Engineer; ● 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.								Y Y
5.7.4 to 5.7.6	3.4.5	The use of Sound Power Levels (SWLs) for typical PME provided in the GW-TM and that for equivalent "quiet" plants: ● Loader, wheeled (Back-hoe)Excavator, Tracked Generator ● Mobile Crane	To minimise noise impacts	All works sites	Contractor and Sub-contractors	EIAO, Noise Control Ordinance		✓		Y
5.7.7 to 5.7.9	3.4.6	The use of temporary noise barriers if applicable ● Movable barriers with skid footing and a small cantilevered upper portion ● Noise jacket/muffler ● Applicable PME with temporary noise barriers: excavator and mobile crane ● Selection of insulation material: acoustic mats	To minimise noise impacts	All works sites	Contractor and Sub-contractors	EIAO, Noise Control Ordinance		✓		Y
5.7.10	3.4.7	Implementation of further good site practices: ● Only well-maintained plant should be operated on-site and plants should be operated on-site and plants should be serviced regularly during the construction period;	To minimise noise impacts	All works sites	Contractor and Sub-contractors	EIAO, Noise Control Ordinance		✓		Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		● Mobile plant, if any, should be sited as gar from NSRs as possible; ● Plant known to emit noise strongly in one direction should, wherever possible, be properly oriented so that the noise is directed away from the nearby NSRs; ● Use of site hoarding as a noise barrier to screen noise at low level NSRs; ● Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum; and ● Any material stockpiles and other structures should be effectively utilised, wherever practicable, to screen the noise from on-site construction activities								Y Y Y Y Y
5.7.11 to 5.7.12	3.4.9	Control on vehicle repair activities ● The Workshop Vehicle Repair Activities should be carried out under the covered area of the Transport Workshop Section on the G/F as the building of FEHD Depot itself provides screening effect to the NSRs ● The workshop vehicle repair activities should not be carried out during night-time period	To minimise noise impacts arising from workshop vehicle repair activities	Transport Workshop Section	FEHD	EIAO, Noise Control Ordinance			✓	N/A N/A
5.7.13	3.4.9	Acoustic treatment, such as acoustic louvres, silencers, enclosures could be applied to achieve noise attenuation on the use of MVAC and other Building Service Equipment so that the SWL of the equipment shall not exceed the specified “maximum allowable SWL” in various plant rooms.	To minimise noise impacts due to the MVAC installations	Plant Rooms	FEHD and Depot Designer	EIAO, Noise Control Ordinance	✓		✓	N/A

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
Water Quality and Sewerage										
6.10.2	4.4.1	In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures with best management practices should include 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. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction; ● Dikes or embankments for flood protection should be implemented around the boundaries of earthworks 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 flow rate of 0.5m3/s the basin would be 150m3. The detailed design of the sand / silt traps should be undertaken by the Contractor prior to the commencement of construction; ● The construction works should be programmed to minimise surface excavation works during rainy seasons (April to September), as soon as possible after the earthworks have been completed, or	To control water quality impact from construction site runoff	All works sites	Contractor and Sub-contractors	Water Pollution Control Ordinance		✓		Y Y Y Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		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 minimize 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 material0 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silts 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 or debris being washed into the drainage system and storm run-off being directed into foul sewers;								Y Y Y Y Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		● 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 summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface run-off during storm events;								Y
		● All vehicles and plant should be cleaned before leaving the Site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities / bay should be provided at the exit of the Site where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basic to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-washing bay to prevent vehicle tracking of soil and silty water to public roads and drains;								Y
		● 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 percent 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;								Y
		● The construction solid waste, debris and rubbish on-site should be collected handled and disposed of properly to avoid causing any water quality impacts; and								Y
		● 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 the largest tank to percent spilled fuel oils from reaching the nearby WSRs.								Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
6.10.4	4.4.1	Control of Effluent Discharge from the Site ● Application 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 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 distance of 100m should be maintained between the discharge points of construction site effluent and the existing seawater intakes. ● 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.	To control water quality impact from effluent discharge from construction site	All work sites	Contractor and Sub-contractors	Water Pollution Control Ordinance		✓		Y Y Y Y
6.10.5	4.4.1	Portable chemical toilets and sewage holding tanks are recommended for the handling of the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	To control water quality impact from sewage of workforce	All work sites	Contractor and sub-contractors	Water Pollution Control Ordinance Waste Disposal (Chemical Waste) (General) Regulation		✓		Y
6.10.7	4.4.1	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 only be undertaken within the areas appropriately equipped to control these discharges.	To control water quality impact from accidental chemical spillage	All work sites	Contractor and Sub-contractors	Water Pollution Control Ordinance, Waste Disposal (Chemical Waste) (General Regulation		✓		Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
6.10.8	4.4.1	All sewage arising from the Project should be collected and diverted to the public sewerage 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 Water under the WPCO.	To control water quality impact from sewage effluent discharge	The Offices-cum-Vehicle Depot	FEHD	Water Pollution Control Ordinance			✓	N/A
6.10.9 and 6.10..10	4.4.1	To prevent the potential contaminated wastewater from entering the existing public sewerage systems, run-offs from the covered areas including the vehicle washing bays and vehicle parking space will be properly treated prior to the discharge into the sewerage system. The treated effluent for discharging into the public sewerage system should comply with the effluent standards as stated in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under the WPCO.	To control water quality impact from sewage effluent discharge	The Offices-cum-Vehicle Depot	FEHD	Water Pollution Control Ordinance			✓	N/A
6.10.11	4.4.1	There is a need to apply to the EPD for a discharge licence for discharge of the operational effluent from the Project under the WPCO. The discharge quality must meet the requirements specified in the discharge licence.	To control water quality impact from sewage effluent discharge	The Offices-cum-Vehicle Depot	FEHD	Water Pollution Control Ordinance			✓	N/A

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
Waste Management and Land Contamination										
7.5.17	5.12	The requirements as stipulated in the ETWB TC(W) No. 19/2005 "Environmental Management on Construction Sites" and the other relevant guidelines should be included in the Particular Specification for the Contractor as appropriate. Contractor should be required to implement the recommended waste management measures through establishing a Waste Management Plan (WMP) in accordance with the ETWB TC(W) No.19/2005 so as to provide an overall framework of waste management and reduction. The WMP should be submitted to the Project/Site Engineer prior to the construction commencement of the Project for approval and include the followings: ● Waste management policy; ● Record of generated waste; ● Waste reduction target; ● Waste reduction programme; ● Role and responsibility of waste management team; ● Benefit of waste management; ● Analysis of waste materials; ● Reuse, recycling and disposal plans; ● Transportation process of waste products; and ● Monitoring and action plan. The waste management hierarchy below should be strictly followed. This hierarchy should be adopted to evaluate the waste management options in	To keep trace of the generation minimization, reuse and disposal of C&D materials	All works sites	FEHD and Depot Designer; and Contractor and Sub-contractors	ETWB TC(W) No. 19/2005	✓	✓		Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		order to minimize the extent of waste reduction and cost reduction. The records of quantities of waste generated, recycled and disposed (location) should be properly documented.								
7.6.1	5.2.1	Standard formwork or pre-fabrication should be used as far as practicable so as to minimize the C&D Materials arising. The use of more durable formwork or plastic facing for construction works should also be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should be carefully planned in order to avoid over-ordering and wastage. The Contractor should recycle as many C&D materials as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities.	To minimize, reuse and disposal of C&D materials	All works sites	Contractor and Sub-contractors	ETWB TC(W) No. 19/2005		✓		Y
7.5.19 to 7.5.21	5.2.1	A trip-ticket system should be established 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 fly-tipping. A trip-ticket system should be included as one of the contractual requirements and implemented by the Contractor. The Project/Site Engineer should regularly audit the effectiveness of the system. A recording system for the amount of waste generated, recycled and disposed (locations) should be established. The future Contractor should also provide proper training to workers regarding the appropriate concepts of site cleanliness and waste management procedures, e.g. waste reduction, reuse and recycling all the time.	To monitor disposal of waste and control fly-tipping	All work sites	Contractor and Sub-contractors	DevB TC(W) No. 6/2010		✓		Y
7.6.1	5.2.1	Recommendations for good site practices:	To implement good site practice for handling,	All works sites	Contractor and Sub-contractors	Waste Disposal Ordinance, Land		✓		

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		● All waste containers shall be in a secure area on hardstanding. ● Training of site personnel in, site cleanliness, proper waste management and chemical handling procedures. ● Provision of sufficient waste disposal points and regular collection of waste. ● Appropriate of sufficient waste disposal points and regular collection of waste by either covering trucks or by transporting wastes in enclosed containers. ● Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. ● Separation of chemical wastes for special handling and appropriate treatment. ● The site and surroundings shall be kept tidy and litter free. ● No waste shall be burnt on-site ● Make provisions in contract documents to allow and promote the use of recycled aggregates where appropriate. ● Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	sorting reuse and recycling of wastes			(Miscellaneous Provisions) Ordinance, ETWB TC(W) No. 31/2004				Y Y Y Y Y Y Y Y Y Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
7.6.1	5.2.1	Recommendations for waste reduction measures: ● Sorting of demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.). ● 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. ● Encourage collection of aluminum cans by providing separate labeled buns to enable this waste to be segregated from other general refuse generated by the workforce. ● Proper storage and site practices to minimize the potential for damage or contamination of construction materials. ● Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.	To implement on-site sorting facilitating reuse and recycling of materials as well as proper disposal of waste	All works sites	Contractor and Sub-contractors	Waste Disposal Ordinance, Land (Miscellaneous Provisions) Ordinance		✓		Y Y Y Y
7.6.1	5.2.1	Waste haulier must hold a valid permit for the collection of waste as stipulated in their permits, Removal of waste should be done in a timely manner.	To implement on-site facilitating reuse and recycling of materials as well as proper disposal of waste	All works sites	Contractor and Sub-contractors	Waste Disposal Ordinance, Land (Miscellaneous Provisions) Ordinance		✓		Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
6.10.6 and 7.6.1	5.2.1	Measures for chemical waste during construction: The Contract should register with the EPD as chemical waste producers when chemical waste is produced. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follows: ● Register as a Chemical Waste Producers to the EPD; ● Suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; ● Having a capacity of <450L unless the specifications have been approved by the EPD; ● Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations; ● Clearly labelled and used solely for the storage of chemical wastes; ● Enclosed with at least 3 sides; ● Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container of 20% by volume of the chemical waste stored in the area, whichever is greatest; ● Adequate ventilation; ● Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and ● Incompatible materials are adequately separated.	To properly store the chemical waste within works sites and works areas	All works sites	Contractor and Sub-contractors	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes		✓		 Y Y Y Y Y Y Y Y Y Y

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
7.6.1	5.2.1	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.	To ensure proper disposal of sewage sludge	All works sites	Main Contractor	-		✓		Y
7.6.1	5.2.1	Chemical waste during the operation of the workshop ● The requirements stipulated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes should be followed in handling of chemical waste as in construction phase. ● A trip-ticket system should be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation to monitor all movements of chemical wastes which would be collected by a licensed collector to a licensed facility for final treatment and disposal. ● The recommendations proposed for the mitigation of impacts from chemical waste in construction phase should also be followed.	To avoid environmental impacts in handling, storage and disposal of chemical waste	The Offices-cum-Vehicle Depot	FEHD	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, Waste Disposal (Chemical Waste) (General) Regulation			✓	N/A N/A N/A
7.6.1	5.2.1	General refuse during the operation of the workshop: ● Provide recycling bins at designated areas for proper recycling of papers, aluminum cans and plastics bottles ● Separation from other waste types and collected by licensed collectors at daily basis to minimize the potential impacts from odour and vermin.	To separate the general refuse from other waste types and proper disposal of the refuse	The Offices-cum-Vehicle Depot	FEHD	-			✓	N/A N/A

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
7.8	5.2.1	To implement the Preventive and Precautionary Plan ● Storage of Chemicals and Chemical Wastes ● Emergency Procedures ● Spillage/leakage of Liquid Chemical/Waste at Storage Area ● Spillage/Leakage at Repairing and Maintenance Areas ● Record of Incidents ● Procedures for Disposal of Wastes	To avoid land contamination	The Offices-cum-Vehicle Depot	FEHD	-			✓	 N/A N/A N/A N/A N/A N/A
Landscape and Visual										
8.8.4	6.2.3	Proper Control of Construction Activities ● Cautiously arrangement of the operation or placement of the construction plant and machinery, and the transportation or storage of material to reduce and confined the potential adverse impacts in certain areas in the Site. ● Minimise the height of temporary structures such as hoardings and site offices, and restore the temporary construction site locally to the existing condition in order to minimise any negative impacts and associated uncomfortable views. ● Check the site boundaries regularly to ensure the working area does not exceed and causes further damage to the surrounding area. ● In case of nighttime construction is conducted, control of nighttime lighting on the works areas to prevent undesired light pollution to the surrounding area, such as viewers from roads, should be implemented.	To minimise the disturbances to VSRs	All works sites	Contractor and Sub-contractors	-		✓		 Y Y Y Y

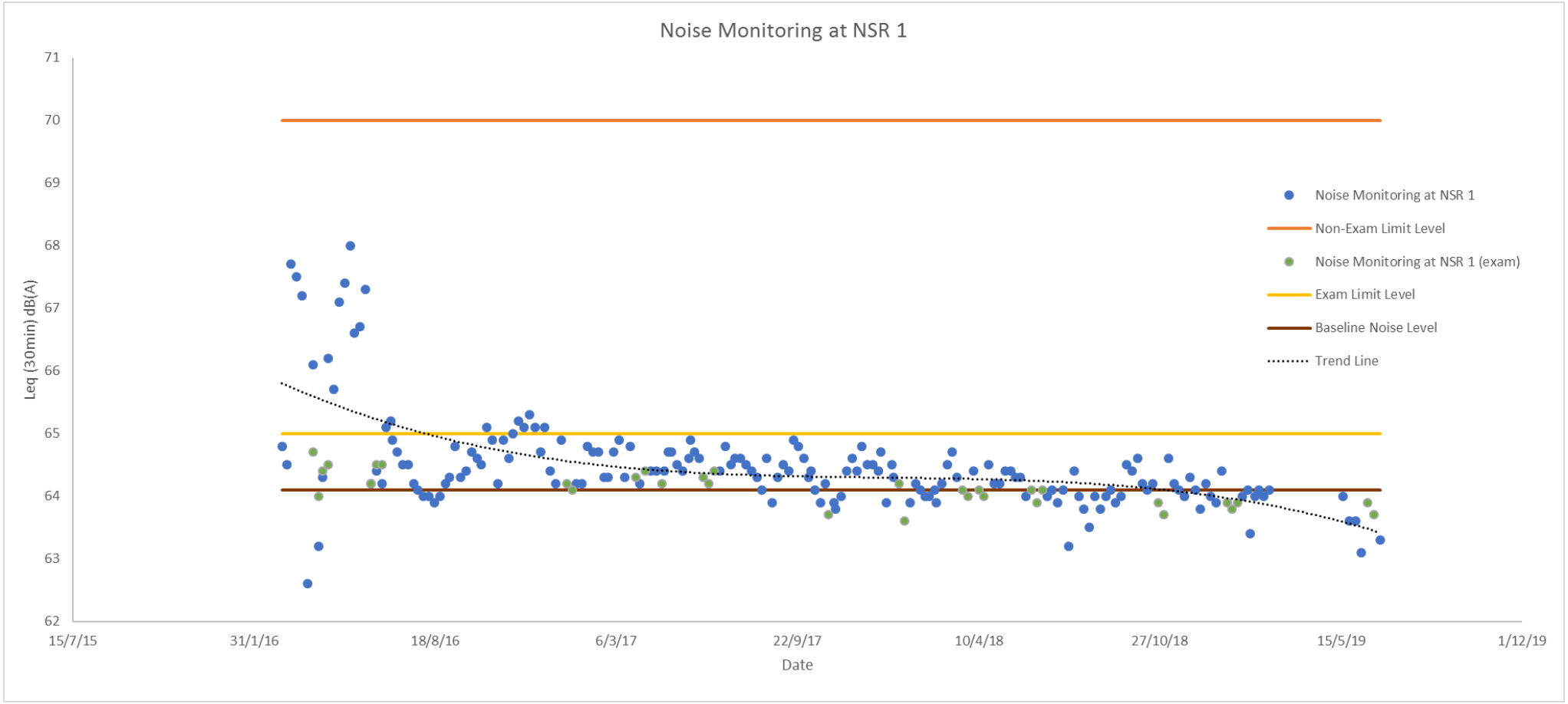
EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
8.8.5 to 8.8.6	6.2.4 to 6.2.5	Temporary Landscape Treatment ● Provision of temporary landscape treatment during construction phase, such as temporary planting around the site office, applying aesthetic treatments on site hoardings and/or façade of site office ● Provision of green roof of site office	To lessen the visual disturbance to the surroundings arising from construction activities	All works sites	Contractor and Sub-contractors	-		✓		Y Y
8.8.7	6.2.6	Tree Preservations ● Erection of fencing around the trees ● Avoidance of placing any construction materials close to the trees ● Apply mulching beyond root collar ● Conduct visual checking/monitoring in regular basis	To reduce the significant adverse impacts to the visual quality and trees	All works sites	Contractor and Sub-contractors	-		✓		Y Y Y Y
8.8.8	6.2.8	Proper arrangement of materials for operational activities, including vehicle repair, maintenance, operation and parking, carried out within the office-cum-vehicle depot building.	To reduce the significant adverse impacts to the visual quality of the VSRs	The Offices-cum-Vehicle Depot building and car parks	FEHD	-			✓	N/A
8.8.9 to 8.8.14	6.2.9 to 6.2.14	Landscape design ● Ground Floor Planting – Pedestrian Zone ● Vertical Greening ● Roof Gardens ● Hard Landscape Features	To soften the hard concrete structure of the proposed depot-cum0office building; To enable more functional outdoor space to accommodate a range of passive uses; To enhance the aesthetics of views by the staff working in the Depot; and to create an inviting and comfortable	The Offices-cum-Vehicle Depot	FEHD and its Designer	Annex 10 of EIAO-TM, ETWB TC(W) No. 3/2008	✓		✓	N/A N/A N/A N/A

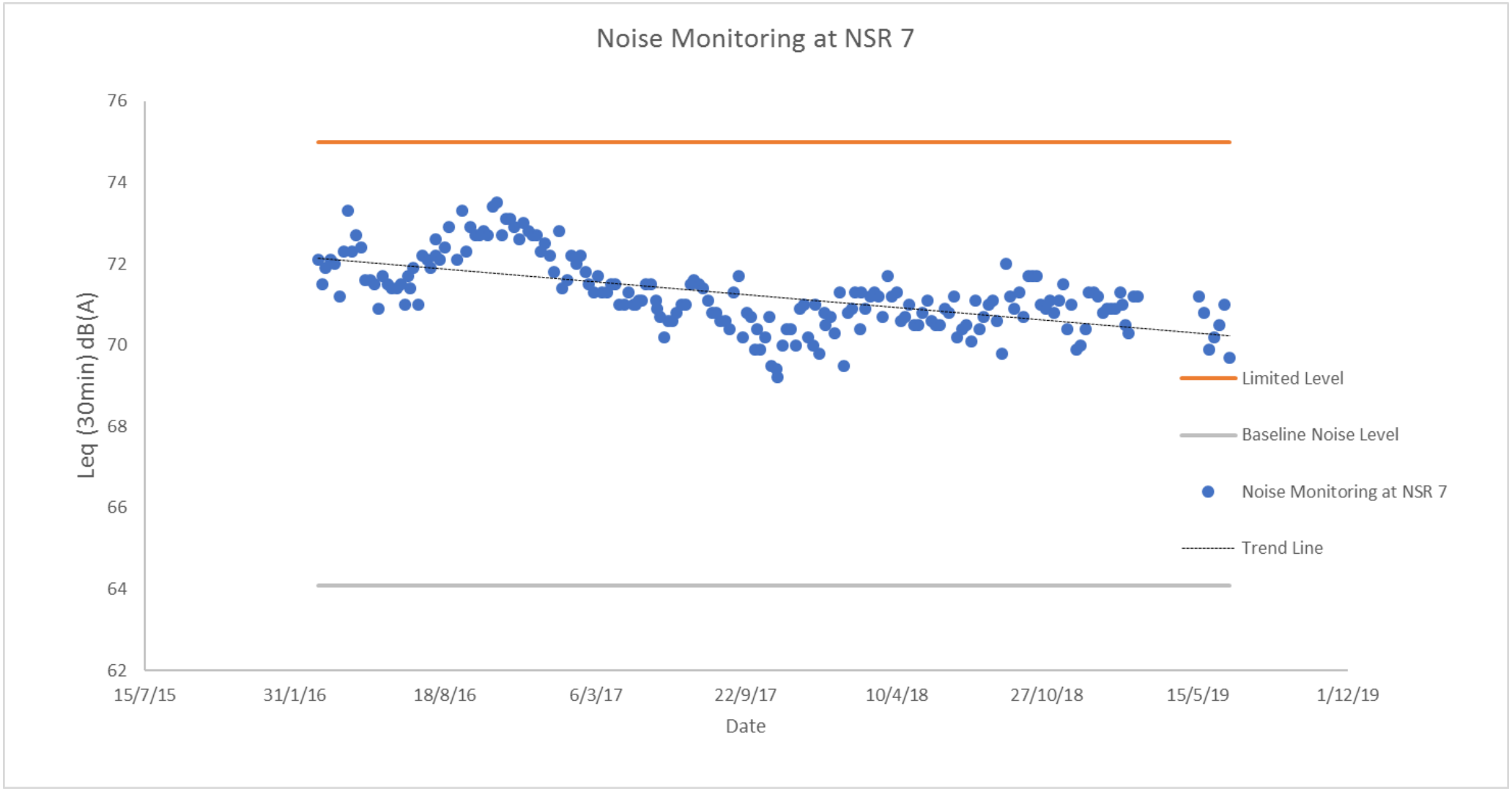
EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Objectives of Measures and Main Concern to Address	Location	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
							D	C	O	
		Planting of these trees should be completed before the completion of construction work of the Project. Approval on tree felling would be obtained from the relevant government departments including Lands Department. If it is required, monitoring of the compensatory planting after establishment should be conducted according to the tree felling approval conditions as required by the approval authorities.	landscape							N/A

Remarks:

Y	Implemented mitigation measures in the reporting period
N/A	Not applicable in the reporting period
X	Non-compliance of mitigation measure

Appendix D Graphical Plot of Noise Monitoring Results at NSR1 and NSR7




Noise Monitoring at NSR 7
Leq (30min) dB(A)
76
74
72
70
68
66
64
62
15/7/15
31/1/16
18/8/16
6/3/17
22/9/17
10/4/18
27/10/18
15/5/19
1/12/19
Date
Limited Level
Baseline Noise Level
Noise Monitoring at NSR 7
Trend Line

Appendix E Summary of Waste Flow Table for the whole construction phase

MA P3 ConstructionWaste Management Plan
MA 11 Construciton Waste Reduction

Project: Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

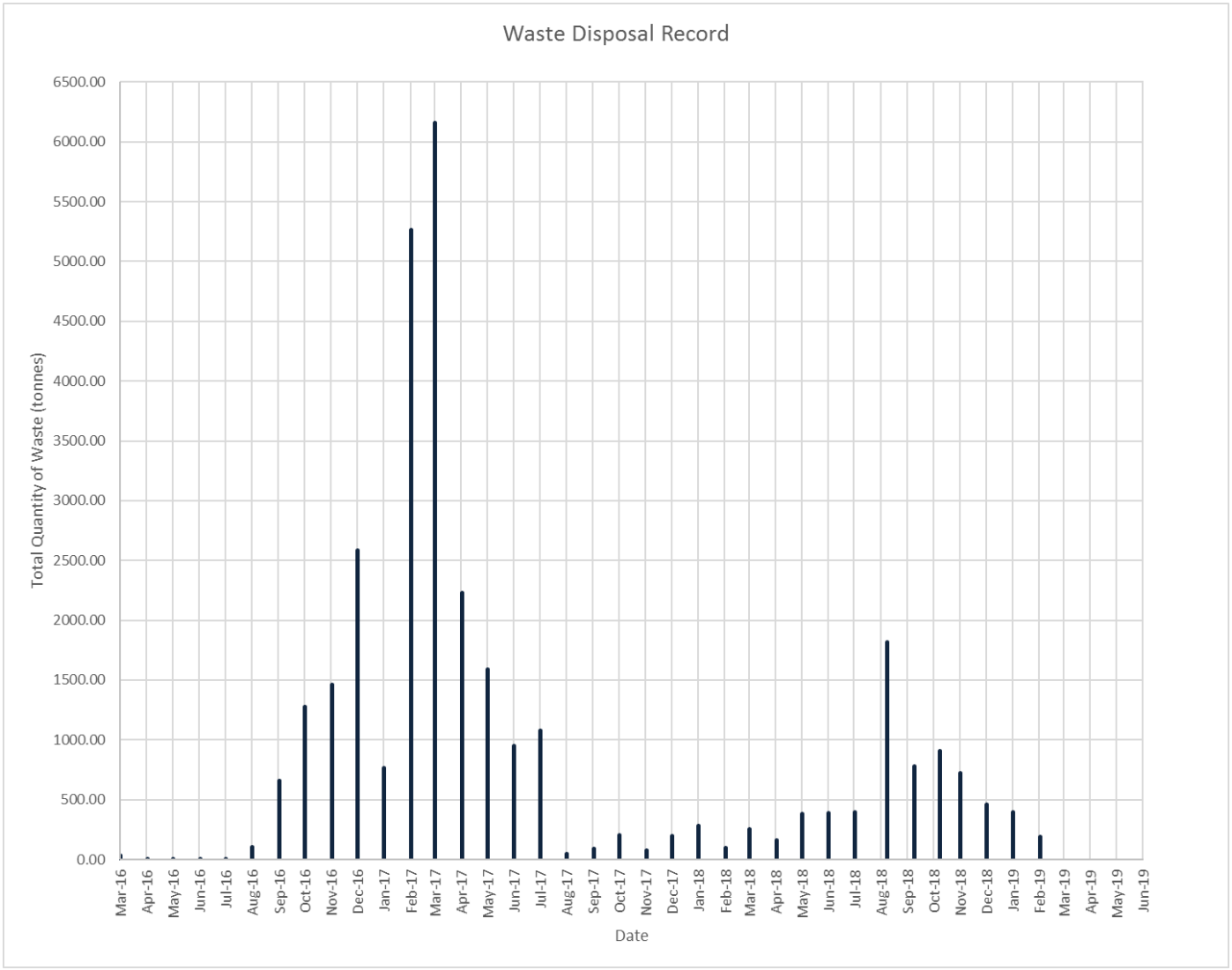
Record by: China Road and Bridge Corporation
Year of Record: 2019

Overall Summary Waste Flow Table

DD.MM.YY	Total Quantity Generated	Total Quantity Generated (Excluded Excavated Material)	Actual Quantities of Inert C&D Materials Generated Monthly									Actual Quantities of C&D Materials Generated Monthly					
			Excavated Materials			Non-excavated Materials											
			Disposed in Public Fill	Disposed in Sorting Facilities	Others (e.g Reused in the Contract / Other Projects)	Broken Concrete or Construction Waste Collected by Recycled Company	Reused in the Contract	Reused in other Projects	Disposed in Public Fill	Disposed in Landfill	Disposed in Sorting Facilities	Metals (steel bar / metal strip) (1)	Metals (aluminum can) (1)	Paper / cardboard packaging (1)	Plastics (1) & (4)	Chemical waste (wasted lubricant oil/oil container)	Other, e.g. general refuse
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
	a1	a2	b	b	b	c	d	e	f	g	h	i	j	k	l	m	n
Mar-16	36.48	4.58	31.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58	0.00	0.00	0.00	0.00	2.00
Apr-16	9.20	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.20
May-16	4.60	4.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.60
Jun-16	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.20
Jul-16	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80
Aug-16	109.80	0.50	109.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
Sep-16	659.70	8.10	651.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.10
Oct-16	1280.90	1.50	1279.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
Nov-16	1463.50	4.30	1459.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.30
Dec-16	2590.32	5.22	2585.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.00	0.00	0.00	0.00	3.50
Jan-17	765.30	17.90	747.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.90
Feb-17	5265.80	4.50	5261.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.50
Mar-17	6161.20	5.00	6156.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00
Apr-17	2230.12	24.12	2206.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.92	0.00	0.00	0.00	0.00	11.20
May-17	1592.44	26.74	1565.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.94	0.00	0.00	0.00	0.00	21.80
Jun-17	949.60	39.20	910.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.20
Jul-17	1081.92	31.88	1050.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.88
Aug-17	52.82	52.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.82
Sep-17	90.88	85.47	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.47
Oct-17	202.80	55.98	146.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.98
Nov-17	76.74	76.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.74
Dec-17	201.74	81.31	120.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.31
Jan-18	286.71	74.17	212.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.17
Feb-18	96.60	72.29	24.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.29
Mar-18	254.50	132.29	122.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.29
Apr-18	163.58	123.87	39.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	123.87
May-18	382.01	257.18	124.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	257.18
Jun-18	393.51	229.20	164.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.20
Jul-18	398.20	255.05	143.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	255.05
Aug-18	1822.02	220.44	1601.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	220.44
Sep-18	781.30	170.83	610.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	170.83
Oct-18	906.88	242.15	664.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	242.15
Nov-18	723.24	154.12	569.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.69	0.00	0.00	0.00	0.00	150.43
Dec-18	459.53	90.50	369.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.50
Jan-19	395.36	76.08	319.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.08
Feb-19	192.76	93.92	98.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.92
Mar-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jun-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	32090.06	2735.17	29350.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.85	0.00	0.00	0.00	0.00	2713.90

Total C&D waste generated	32090.06	tonnes	a1=b+c+d+e+f+g+h+i+j+k+l+m+n
Total C&D waste generated (excluded excavated materials)	2735.17	tonne	a2=c+d+e+f+g+h+i+j+k+l+m+n
Total recycled C&D waste	25.85	tonne	a3=c+d+e+i+j+k+l
% of recycled C&D waste for BEAM Plus MA11	0.95%	%	a4=a3/a2 x 100%

Notes:
(1) metal, paper & plastic were collected by recycler
(2) The performance target of waste recycling are specified in the Contractt.
(3) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(4) Plastics refer to plastic bottles/ containers, plastic/ foam from packaging material.
(5) Broken concrete for recycling into aggregates.
(6) Excavated materials/waste will NOT be considered as part of construction waste. It should be excluded in the calculation.
(7) Disposal of inert waste to public fill or sorting facilities will NOT be considered as recycled waste.


Waste Disposal Record
Total Quantity of Waste (tonnes)
6500.00
6000.00
5500.00
5000.00
4500.00
4000.00
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
0.00
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
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Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
Jun-19
Date

Appendix F – Commissioning Test Reports for Deodorization Equipment

ALS Technichem (HK) Pty Ltd
11/F, Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung, N.T., Hong Kong
T +852 2610 1044 F +852 2610 2021

CERTIFICATE OF ANALYSIS

CLIENT:	P2G Consulting Limited	WORK ORDER:	HK1926804
CONTACT:	Mr Grant Chau		
ADDRESS:	11/F, Dawning House 145 Connaught Road Central, Hong Kong	LABORATORY: SUB-BATCH: DATE RECEIVED: DATE OF ISSUE:	Hong Kong 0 19 June 2019 21 June 2019
PROJECT:	Test of the Odour Removal Efficiency for the Odour removal Units at FEHD Environmental Hygiene Office	SAMPLE TYPE:	Air
SITE:	Vehicle Depot – West Kowloon Reclamation Area	NO. of SAMPLES:	3 (Including one field blank sample)
PO:	---		

COMMENTS

Odour sampling was conducted by ALS Technichem (HK) staff on 19 June 2019.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Richard Fung
Managing Director - Hong Kong

Work Order: HK1926804

1. SUMMARY OF WORK

One (1) odour removal unit (Water Scrubber) was selected for the sampling of odour at both the inlet and outlet side. Pure hydrogen sulphide was fed into the inlet side of the odour removal unit for odour sampling in order to determine the removal efficiency of the water scrubber.
Odour samples at the inlet and outlet side were collected simultaneously by using passive sampling technique and then delivered to ALS Hong Kong laboratory for Olfactometry Analysis.

2. SAMPLING LOCATION DETAILS

Site Name	Water Scrubbers Unit ID
Sai Yee Street, FEHD Environmental Hygiene Office - Vehicle Depot, West Kowloon Reclamation Area	WSF-UGF-2

3. SAMPLING PERIOD

Parameters	WSF-UGF-2 (Inlet and Outlet) [1]
Odour [1]	19-Jun-2019 11:33 - 11:35

Note:
[1] Both Inlet and outlet sides were sampled simultaneously.

Work Order: HK1926804

4. SAMPLING SUMMARY
4.1 Odour Sampling

Figure 1a: Sampling Bag & Air-tightened Sampler

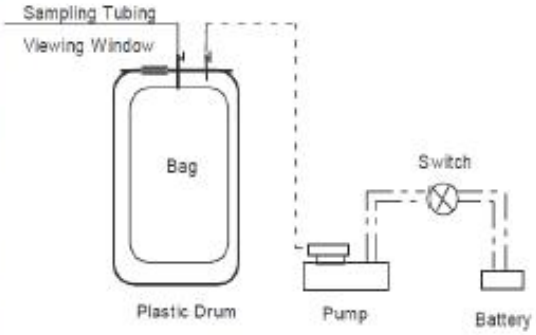


Figure 1b: Schematic Diagram of Sampling Device

Odour gas samples were collected by using the passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler which was drawn to vacuum by using a sampling pump. Approximately 60 litres of gas sample was collected into the sampling bag for testing. Diagram of the passive sampling equipment that was used was shown in Figure 1.

4.2 Olfactometry Analysis

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: ou_E/m^3. The odour concentration was measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold was by the definition as 1 OU_E/m^3. The odour concentration was then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 ou_E/m^3 to 10^7 ou_E/m^3.

Olfactometry analysis was performed by using the Scentroid™ SS6000 Olfactometer. The testing was performed by at least five qualified panellists who have been trained and selected through an n-butanol screening test. All the panellists are complied with the requirement of the European Standard method: BS EN13725 in the range of 20 to 80 ppbv and a standard deviation of R<2.3.

All samples were analysed within 24 hours after sampling.

5. RESULT

5.1 Odour Concentration

ALS Sample ID	Water Scrubber Unit	Before / After Scrubber	LOR [1] (OU_E/m^3)	Odour Concentration (OU_E/m^3)	Odour Characteristic
HK1926804-001	WSF-UGF-2	Before	11	6632	Rotten egg
HK1926804-002		After		886	Rotten egg
HK1926804-003	--	Field Blank		<11	Nil

Note:
1. LOR denotes Limit of Reporting
2. Field blank sample containing pure nitrogen gas was collected and filled by ALS staff.

5.2 Efficiency Calculation

Water Scrubber Unit	Removal efficiency (%) [1]
WSF-UGF-2	87

Note:
[1] Removal efficiency calculation is as below:

$$= \frac{(\text{Inlet Odour Concentration} - \text{Outlet Odour Concentration})}{\text{Inlet Odour Concentration}} \times 100\%$$

ALS Technichem (HK) Pty Ltd
11/F, Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung, N.T., Hong Kong
T +852 2610 1044 F +852 2610 2021

CERTIFICATE OF ANALYSIS

CLIENT:	China Road & Bridge Corporation	WORK ORDER:	HK1927367
CONTACT:	Mr Vincent Wong		
ADDRESS:	Units C-D, 10/F, Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon	LABORATORY:	Hong Kong
		SUB-BATCH:	0
		DATE RECEIVED:	26 June 2019
		DATE OF ISSUE:	26 June 2019
PROJECT:	Testing of the Odour Removal Efficiency of the Odour Removal Units at FEHD Environmental Hygiene Office	SAMPLE TYPE:	Air
SITE:	Vehicle Depot – West Kowloon Reclamation Area	NO. of SAMPLES:	3
PO:	---		

COMMENTS

Odour sampling was conducted by ALS Technichem (HK) staff on 26 June 2019.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

PP
Richard Fung
Managing Director - Hong Kong

Work Order: HK1927367

1. SUMMARY OF WORK

One (1) odour removal unit (Water Scrubber) was selected for the sampling of odour at both the inlet and outlet side. Odour samples at the inlet and outlet side were collected simultaneously by using passive sampling technique and then delivered to ALS Hong Kong laboratory for Olfactometry Analysis. Removal efficiency was determined by comparing the results of the Inlet and outlet odour concentration.

2. SAMPLING LOCATION DETAILS

Site Name	Water Scrubbers Unit ID
Sai Yee Street, FEHD Environmental Hygiene Office - Vehicle Depot, West Kowloon Reclamation Area	WSF-UGF-3

3. SAMPLING PERIOD

Parameters	WSF-UGF-3 (Inlet and Outlet) [1]
Odour	26-Jun-2019 10:48 – 10:53

Note:
[1] Both Inlet and outlet sides were sampled simultaneously.

Work Order: HK1927367

4. SAMPLING SUMMARY
4.1 Odour Sampling

Figure 1a: Sampling Bag & Air-tightened Sampler

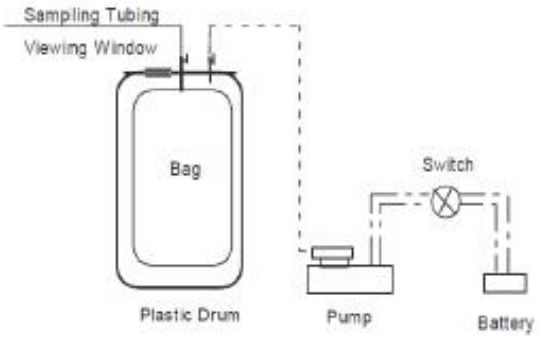


Figure 1b: Schematic Diagram of Sampling Device

Odour gas samples were collected by using the passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler which was drawn to vacuum by using a sampling pump. Approximately 60 litres of gas sample was collected into the sampling bag for testing. Diagram of the passive sampling equipment that was used was shown in Figure 1.

4.2 Olfactometry Analysis

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: ou_E/m^3. The odour concentration was measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold was by the definition as 1 OU_E/m^3. The odour concentration was then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 ou_E/m^3 to 10^7 ou_E/m^3.

Olfactometry analysis was performed by using the Scentroid™ SS6000 Olfactometer. The testing was performed by at least five qualified panellists who have been trained and selected through an n-butanol screening test. All the panellists are complied with the requirement of the European Standard method: BS EN13725 in the range of 20 to 80 ppbv and a standard deviation of R<2.3.

All samples were analysed within 24 hours after sampling.

5. RESULT

Odour Concentration

ALS Sample ID	Water Scrubber Unit	Sampling Location	LOR [1] (ou_E/m^3)	Odour Concentration (ou_E/m^3)	Removal Efficiency (%) [2]
HK1927367-001	WSF-UGF-3	Inlet	11	212	87
HK1927367-002		Outlet		28	
HK1927367-003	--	Field Blank		<11	--

Note:
[1] LOR denotes Limit of Reporting
[2] Removal efficiency calculation is as below:

$$= \frac{(\text{Inlet Odour Concentration} - \text{Outlet Odour Concentration})}{\text{Inlet Odour Concentration}} \times 100\%$$

Work Order: HK1927367

APPENDIX

Photos for the Sampling Locations

WSF-UGF-3 Inlet

WSF-UGF-3 Outlet

PIT LIMITED
Professional Inspection Testing
高準檢驗及檢測有限公司

TEST REPORT

Address	:	Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.			
Tel. No.	:	(852) 3568 6872	Fax No.	:	(852) 3568 6875
Report No	:	TR(A)1907/00012	Issue Date	:	2019-07-08
Application No	:	PIT-A-050719-01	Page No.	:	P. 1 of 6

Applicant Name	:	ENVIRONWORK (ASIA) COMPANY LIMITED
Applicant Address	:	Room B, 9/F, Southtex Building, 51 Tsun Yip Street, Kwun Tong, Kowloon, Hong Kong
Project Title	:	SSD505 FEHD Depot
Sample Descriptions	:	Three (3) sampling points for H2S (Inlet & Outlet)
Sampling Site	:	87 Yen Chow St W, Cheung Sha Wan
Sample Received	:	05th Jul 2019
Test Method	:	1. H_2S: Refer to Method 701: Determination of Hydrogen Sulfide Content of the Atmosphere
Result	:	WSF-UGF-1: 99.3% WSF-UGF-2: 99.3% WSF-UGF-3: 99.3%

For and on behalf of **PIT Ltd.**

Authorized Signature : _____

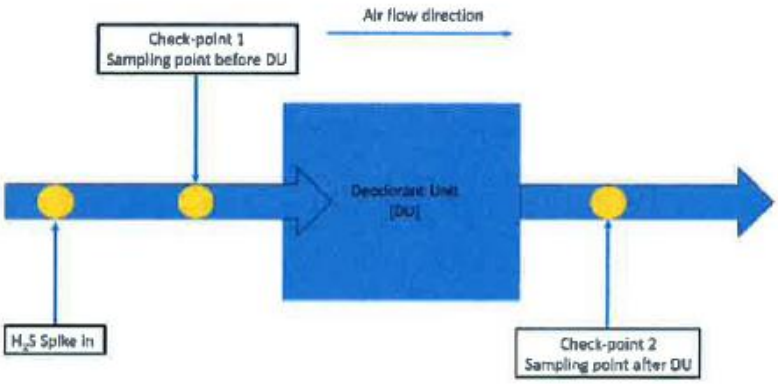
Mr Chun-Pong, Hui
Technical Manager

PIT LIMITED
Professional Inspection Testing
高準檢驗及檢測有限公司

TEST REPORT

Address	:	Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.			
Tel. No.	:	(852) 3568 6872	Fax No.	:	(852) 3568 6875
Report No	:	TR(A)1907/00012	Issue Date	:	2019-07-08
Application No	:	PIT-A-050719-01	Page No.	:	P. 2 of 6

1. Set-up:



2. Photo:

WSF-UGF-1	
Sampling point before DU	Sampling point after DU
	

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Professional Inspection Testing
高準檢驗及檢測有限公司

TEST REPORT

Address	:	Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.			
Tel. No.	:	(852) 3568 6872	Fax No.	:	(852) 3568 6875
Report No	:	TR(A)1907/00012	Issue Date	:	2019-07-08
Application No	:	PIT-A-050719-01	Page No.	:	P. 3 of 6

WSF-UGF-2	
Sampling point before DU2	Sampling point after DU2
	

WSF-UGF-3	
Sampling point before DU3	Sampling point after DU3
	

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高準檢驗及檢測有限公司

TEST REPORT

Address	:	Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.			
Tel. No.	:	(852) 3568 6872	Fax No.	:	(852) 3568 6875
Report No	:	TR(A)1907/00012	Issue Date	:	2019-07-08
Application No	:	PIT-A-050719-01	Page No.	:	P. 4 of 6

3. Result Table:

DU system 1: WSF-UGF-1

Part A: Concentration of H2S (Spike-in) before the DU System:

A1	DU System	:	On
A2	Impinger sampling point before the DU system	:	26.9 ppm (5 minutes sampling with 1 LPM)

Part B: Concentration of H2S (Spike-in) after the DU System:

B1	DU System	:	On
B2	Impinger sampling point after the DU system	:	< 0.2 ppm (5 minutes sampling with 1 LPM)

Part C: Calculation of the Removal Efficiency:

C3 *Rate of changes [(A2-B2)/A2] x 100%* = 99.26%

That mean the removal efficiency is more than 99.3%.

PIT LIMITED
Professional Inspection Testing
高準檢驗及檢測有限公司

TEST REPORT

Address	:	Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.			
Tel. No.	:	(852) 3568 6872	Fax No.	:	(852) 3568 6875
Report No	:	TR(A)1907/00012	Issue Date	:	2019-07-08
Application No	:	PIT-A-050719-01	Page No.	:	P. 5 of 6

DU system 2: WSF-UGF-2

Part A: Concentration of H2S (Spike-in) before the DU System:

A1	DU System	:	On
A2	Impinger sampling point before the DU system	:	28.4 ppm (5 minutes sampling with 1 LPM)

Part B: Concentration of H2S (Spike-in) after the DU System:

B1	DU System	:	On
B2	Impinger sampling point after the DU system	:	< 0.2 ppm (5 minutes sampling with 1 LPM)

Part C: Calculation of the Removal Efficiency:

C3 *Rate of changes [(A2-B2)/A2] x 100%* = 99.30%

That mean the removal efficiency is more than 99.3%.

PIT LIMITED
Professional Inspection Testing
高華檢驗及檢測有限公司

TEST REPORT

Address	:	Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.			
Tel. No.	:	(852) 3568 6872	Fax No.	:	(852) 3568 6875
Report No	:	TR(A)1907/00012	Issue Date	:	2019-07-08
Application No	:	PIT-A-050719-01	Page No.	:	P. 6 of 6

DU system 3: WSF-UGF-3

Part A: Concentration of H2S (Spike-in) before the DU System:

A1	DU System	:	On
A2	Impinger sampling point before the DU system	:	27.5 ppm (5 minutes sampling with 1 LPM)

Part B: Concentration of H2S (Spike-in) after the DU System:

B1	DU System	:	On
B2	Impinger sampling point after the DU system	:	< 0.2 ppm (5 minutes sampling with 1 LPM)

Part C: Calculation of the Removal Efficiency:

C3 *Rate of changes [(A2-B2)/A2] x 100%* = 99.27%

That mean the removal efficiency is more than 99.3%.

Result Table

***** End of Report *****

Appendix

I. Calibration Certificates

Calibration Certificate

Certificate No.: CCD081905

*** End of Certificate ***

***** End of Appendix *****

Appendix G Section 3.3.5 of EM&A Manual

3.3.3 The noise measurements should not be conducted in the presence of fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed should be checked with a portable wind speed meter capable of measuring wind speeds in m/s.

3.3.4 The ET is responsible for the provision of the monitoring equipment and should ensure that sufficient noise measuring equipment and associated instrumentation are available for conducting the baseline monitoring, regular impact monitoring and ad-hoc monitoring. All equipment and associated instrumentation should be labelled clearly.

Monitoring Locations

3.3.5 According to the assessment results provided in the EIA report, construction noise monitoring should be conducted at designated locations as listed in **Table 3-2** and shown in **Figure 3-2**.

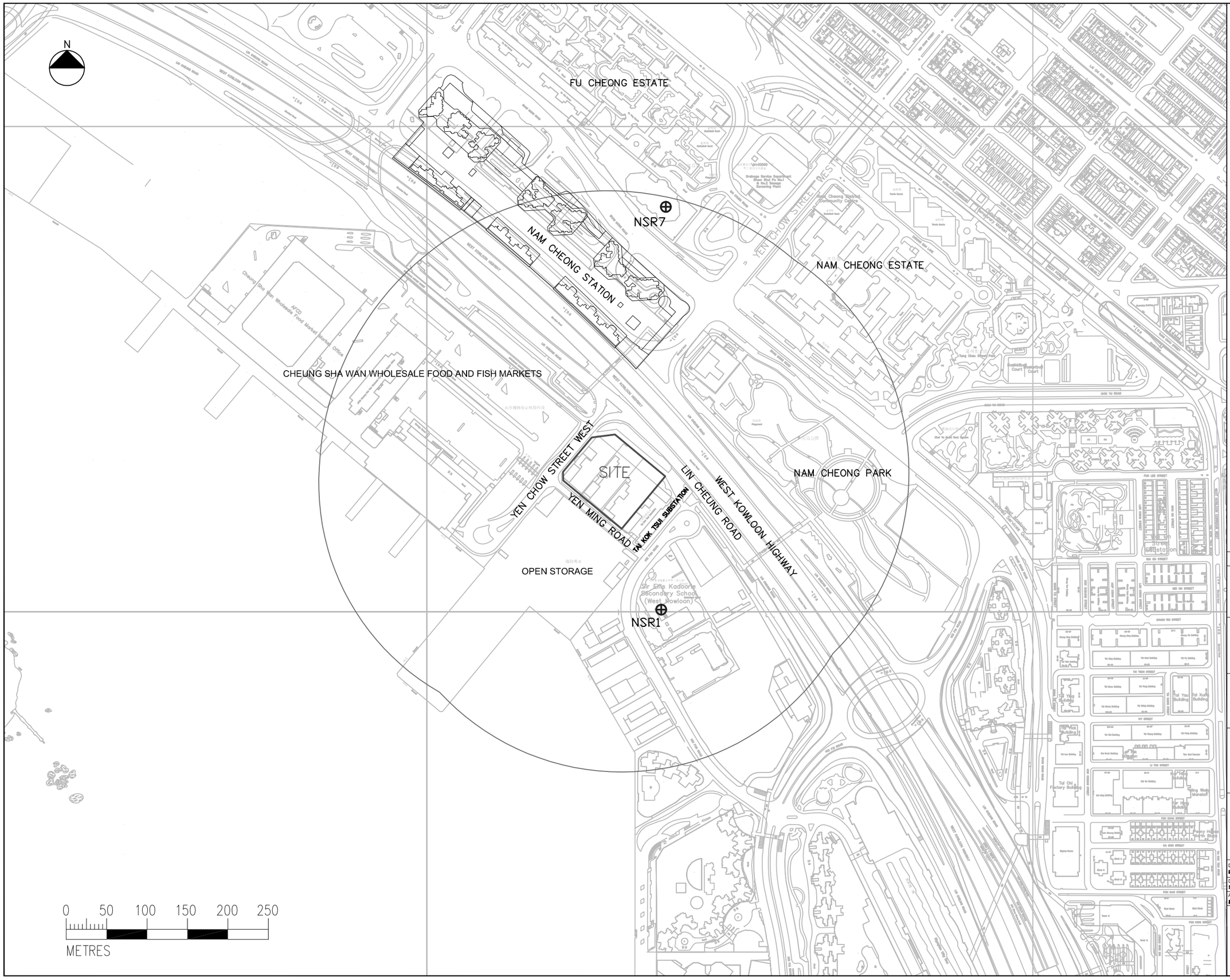
Table 3-2 Representative Noise Sensitive Receivers Identified for Construction Noise Impact Monitoring

NSR	Monitoring Location
1	Sir Ellis Kadorie Secondary School (West Kowloon)
7	Fu Cheong Estate Fu Yun House

3.3.6 If changes to the monitoring locations of the NSRs are considered necessary, the ET should propose alternative monitoring locations and seek the agreement from the IEC and EPD on such proposal. The alternative locations should be selected based on the following criteria:

- Close to the major construction works activities that are likely to have noise impacts;
- Close to the NSRs as defined in the EIAO-TM; and
- Ensure minimal disturbance and safe working condition to the occupants during the monitoring in the vicinity of the NSRs.

3.3.7 The monitoring stations should normally be at a point 1m from the exterior of the facade of the NSR and be at a position 1.2m above ground. If there is difficulty in accessing to the normal monitoring position, an alternative position should be chosen, and a correction to the measurement results should be made. For reference, a correction of +3dB(A) should be made to the free-field measurements. The ETL should seek for the agreement with the IEC and EPD on the alternative monitoring position and corrections adopted. Once the positions for the monitoring stations are chosen, the baseline and impact monitoring should be carried out at the same positions.



NOTE:
COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980)

LEGEND:

—·— SITE BOUNDARY

⊕NSR REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT MONITORING

——— 300M FROM SITE BOUNDARY

Rev. 修訂	Date 日期	Description 內容摘要	Drawn 繪圖	Checked 核核

Department (Project Proponent) 部門 (項目倡議人):
Food and Environmental Hygiene Department
食物環境衛生署

Department (Works) 部門 (工程):
Architectural Services Department
建築署

Lead Architect (Consultancy Agreement No. 9AX 034):
建築顧問 (顧問合約編號9AX 034)
P&T Architects and Engineers Ltd
巴馬丹拿建築及工程師有限公司

Project Title 項目名稱
REPROVISIONING OF FEHD SAI YEE STREET ENVIRONMENTAL HYGIENE OFFICES-CUM-VEHICLE DEPOT AT YEN MING ROAD, WEST KOWLOON RECLAMATION AREA
在西九龍填海區欽明路重置食物環境衛生署洗衣街環境衛生辦事處暨車房

Drawing Title 圖則名稱
Designated Location for Construction Noise Monitoring

Drawing No. 圖則編號	FIgure 3-2		
Designed 設計 KKK	Drawn 繪圖 WTK	Checked 核核 ICWR	Scale 比例 AS SHOWN
Approved 批准 HTMI		Date 日期 JUN 2013	Status 現況 FINAL

URS Hong Kong Ltd

Appendix H Section 6.2.6 of EM&A Manual

the works areas to prevent undesired light pollution to the surrounding area, such as viewers from roads, should be implemented.

Temporary Landscape Treatment

6.2.4 Provision of temporary landscape treatment during construction phase, such as temporary planting around the site office, applying aesthetic treatments on site hoardings and/or façade of site office, as well as providing green roof of site office, would lessen the visual disturbance to the surroundings arising from construction activities.

6.2.5 Examples of aesthetic treatments on site hoardings and green roof of site office can be referred to **Figure 6-1**.

Tree Preservation

6.2.6 There will be 1 nos. of tree to be retained on the site and thus the measures should be implemented during construction phase, such as erection of fencing around the trees avoidance of placing any construction materials close to the trees, apply mulching beyond root collar and also conduct visual checking/ monitoring in regular basis.

6.2.7 The following mitigation measure should be proposed during the operation phase:

Proper Arrangement of Materials during Operation

6.2.8 The majority of operational activities, including vehicle repair, maintenance, operation and parking, will be carried out within the office-cum-vehicle depot building. Some vehicles parking will occur in the uncovered car parks facing Lin Cheong Road. Given that most of the vehicles at the said uncovered car parks are light vehicles such as staff shuttle buses, 4-seats cars, instead of Refuse Collection Vehicles, it will not cause any significant adverse impacts to the visual quality of the VSRs.

Landscape Design

6.2.9 In order to soften the hard concrete structure of the proposed office-cum-vehicle depot building, ground floor planting, façade greening and roof gardens have been incorporated into the landscape design. The design enables more functional outdoor space to accommodate a range of passive uses as well as to enhance the aesthetics of views by the staff working in the building. Soft and hard landscape areas are arranged in a relaxed, contemporary style to create an inviting and comfortable landscape.

Ground Floor Planting – Pedestrian Zone

6.2.10 Tree planting with upright columnar form are proposed along the north fence wall to soften the edges and provide visual interest at the streetscape level and to maximise the amount of green space accessible to the public. It also enhances the streetscape amenity for pedestrians passing by from the MTR station, and enables screening of views from VSRs into vehicle maintenance depot. Similar trees planting will be taken along the west building façade to soften its edges and to enhance the main entrance. Feature trees are proposed at the northwest and southwest comers of the building to

Appendix I Section 6.2.9 to 6.2.13 of EM&A Manual

the works areas to prevent undesired light pollution to the surrounding area, such as viewers from roads, should be implemented.

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provide a strong vertical visual highlight.

6.2.11 An approximately 630m^2 of tree and shrub planting and groundcovers are proposed for pedestrian zone planting. A mix of native and ornamental species is proposed in **Appendix 6-1**.

Vertical Greening

6.2.12 Extensive vertical greening with area of about 330m^2 would be introduced to the Depot to screen views of the parking structure and enhance the visual amenity of the building facades. Climbing plants, such as *Lonicera japonica*, *Pyrostegia venusta*, *Quisqualis indica*, *Tristellateia australasiae*, are recommended to maximize the coverage and screening of parking levels. Planters located on each level of parking will provide sufficient space for the climbers to spread across grills incorporated into the architectural facades.

Roof Gardens

6.2.13 A multi-layered landscape is created using varying levels of planting, paving and landscape features in order to complement the strong architectural lines. Trees, shrubs and groundcovers with different textures, colours, and fragrances provide a rich overlay to the terraces providing year round visual interest for users of the roof landscape as well as for those viewing the roof garden from their workspaces. An area of about 1,400m^2 of shrub species are proposed to be provided either in built-in planters or large feature pots. Trees will be planted either in planters or in ornamental pots. A mix of native and ornamental shrubs and groundcovers will be planted to articulate the spatial arrangements as well as to further add to the visual amenity. A mix of local natural stone materials and recycled products will be explored for the paving and landscape features for both the pedestrian and roof areas. Recommended tree and shrub species are listed in **Appendix 6-1**.

Hard Landscape Features

6.2.14 Other than the soft landscape, hard landscape features such as natural locally materials and recycled products for paving, sitting out areas, as well as vertical green fence wall along existing footpath on Lin Cheung Road would be explored provide contemporary landscape for users. This improves the visual quality of the office interior and exterior spaces and integrates the themes on both soft and hard landscape characters. Examples of landscape finishes can be referred to **Appendix 6-2.**

6.2.15 **Appendix 6-3** shows the conceptual master landscape design for this Project.

6.2.16 In the event of complaints or non-compliances, the ET, Architect's Representative and Contractor should review the effectiveness of these mitigation measures, design alternatives or additional mitigation measures as appropriate. The Contractor should propose the corrective action to the Architect's Representative for approval, and implement them accordingly.

Appendix 6-1

List of Recommended Species

Pedestrian Zone

Tree Species suitable for Pedestrian Zone Planting	
Proposed Number = 26	
Ailanthus fordii (Ailanthus)*	*Melaleuca quinquenervia* (Paper-bark tree)
Bauhinia purpurea (Hong Kong orchid tree)*	*Plumeria rubra* (Red Frangipani)*
Cassia surattensis (Sunshine Tree)	*Terminalia mantaly* (Madagascar Almond)*
Grevillea robusta (Silky Oak)	

* Denotes species recommended in the Sham Shui Po Greening Master Plan

Shrub Species suitable for Pedestrian Zone Planting	
Total Area = 627.4m^2	
*Alpinia zerumbet 'Variegata'**	*Ligustrum sinense**
*Calliandra haematocephala**	*Melastoma candidum**
*Canna indica**	*Michelia figo**
*Gordonia axillaris**	*Murraya paniculata**
*Grevillea banksii**	*Phyllanthus myrtifolius**
*Ixora chinensis**	*Rhododendron pulchrum**
*Juniperus chinensis**	*Syngonium podophyllum**
*Lantana camara 'Flava'**	

* Denotes species recommended in the Sham Shui Po Greening Master Plan

Green Roof

Tree/Large Shrub Species suitable for Green Roof Planting	
Proposed Number = 22	
Cassia surattensis (Sunshine Tree)	*Osmanthus fragrans* (Sweet Osmanthus)
Lagerstroemia indica (Crape-myrtle)	*Plumeria rubra* (Red Frangipani)*

* Denotes species recommended in the Sham Shui Po Greening Master Plan

Shrub/Groundcover Species suitable for Green Roof Planting	
Total Area = 1423.7m^2	
*Alpinia zerumbet 'Variegata'**	*Lantana montevidensis*
Asparagus densiflorus 'Sprengeri'	*Leucophyllum frutescens*
Belamcanda chinensis	*Ligustrum sinense**
*Calliandra haematocephala**	*Melastoma candidum**
*Canna indica**	*Michelia figo**
Crinum asiaticum var. sinicum	*Murraya paniculata**
Cuphea hyssopifolia	*Phyllanthus myrtifolius**
Duranta erecta	*Pittosporum tobira*
*Gordonia axillaris**	*Portulaca grandiflora*
*Grevillea banksii**	*Rhaphiolepis indica*
Hymenocallis littoralis	*Rhododendron pulchrum**
*Ixora chinensis**	*Rhodomyrtus tomentosa*
*Juniperus chinensis**	*Scaevola taccada*
Lagerstroemia indica	*Schefflera arboricola 'Variegata'*
*Lantana camara 'Flava'**	*Syngonium podophyllum**
	Tradescantia pallida

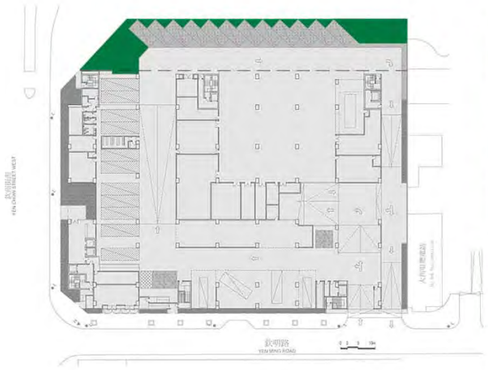
* Denotes species recommended in the Sham Shui Po Greening Master Plan

Vertical Greening

Climber Species suitable for Vertical Greening Planting	
Lonicera japonica	*Quisqualis indica*
Pyrostegia venusta	*Tristellateia australasiae*

* Denotes species recommended in the Sham Shui Po Greening Master Plan

1.Streetscape



Ophiopogon japonica 'Variegata'

花葉沿階草

300(H) x 200(W)

Asparagus densiflorus cv. Sprengeri

天冬

200(H) x 200(W)

Gardenia jasminoides

梔子 / 水橫枝

600(H) x 300(W)

Schefflera arboricola cv. Trinette

黃金鵝掌藤

600(H) x 350(W)

Rhapis humilis

細葉棕竹

500(H) x 500(W)

2.Ornamental

Zephyranthes candida

蔥蓮

300(H) x 200(W)

Hymenocallis littoralis

蜘蛛蘭

500(H) x 500(W)

Rhodomyrtus tomentosa

桃金孃

300(H) x 350(W)

Gordonia axillaris

大頭茶

1000(H) x 350(W)

Melastoma sanguineum

毛棯

600(H) x 350(W)

Shrub Planting Plans

3.Gardenesque

Duranta erecta

假連翹

300(H) x 350(W)

Lantana camara

馬纓丹

500(H) x 500(W)

Codiaeum variegatum

變葉木

300(H) x 350(W)

Catharanthus roseus

長春花

250(H) x 200(W)

Hymenocallis littoralis

蜘蛛蘭

500(H) x 500(W)

Tradescantia spathacea

蚌花

300(H) x 300(W)

Rhododendron mucronatum

白杜鵑

500(H) x 500(W)

Philodendron selloum

春羽

1000(H) x 800(W)

Phyllanthus myrtifolius

錫蘭葉下珠

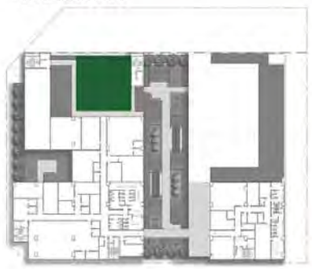
500(H) x 500(W)

Rhapis humilis

細葉棕竹

500(H) x 500(W)

4.Lawn



Zoysia japonica

朝鮮草

Turf Size: 450 x 300

Note: All proposed species for green roof planting and vertical greening are recommended in the "Lists of Potentially Suitable Plant Species for Skyrise Greening in Hong Kong."

Shrub Planting Plans

At-Grade Tree Planting

Sapium sebiferum (Native)
烏桕

Lagerstroemia speciosa
大花紫薇

Ornamental Tree on Green Roof

Gordonia axillaris (Native)
大頭茶

Elaeocarpus hainanensis
水石榕

Hibiscus tiliaceus (Native)
黃槿

Street Tree

Terminalia mantaly
小葉欖仁

Native Woodland Tree

Ailanthus fordii
福氏臭椿

Note: All proposed species for green roof planting and vertical greening are recommended in the "Lists of Potentially Suitable Plant Species for Skyrise Greening in Hong Kong."

Tree Schedule

Shrubs


Codiaeum variegatum
變葉木
300(H) x 350(W)


Duranta erecta
假連翹
300(H) x 350(W)


Gardenia jasminoides
梔子 / 水橫枝
600(H) x 300(W)


Gordonia axillaris
大頭茶
1000(H) x 350(W)


Lantana camara
馬纓丹
500(H) x 500(W)


Melastoma sanguineum
毛稔
600(H) x 350(W)


Phyllanthus myrtifolius
錫蘭葉下珠
500(H) x 500(W)


Rhapis humilis
細葉棕竹
500(H) x 500(W)


Rhododendron mucronatum
白杜鵑
500(H) x 500(W)


Rhodomyrtus tomentosa
桃金孃
300(H) x 350(W)


Schefflera arboricola cv. Trinette
黃金鵝掌藤
600(H) x 350(W)

Note: All proposed species for green roof planting and vertical greening are recommended in the "Lists of Potentially Suitable Plant Species for Skyrise Greening in Hong Kong."

Groundcovers


Asparagus densiflorus cv. Sprengeri
天冬
200(H) x 200(W)


Catharanthus roseus
長春花
250(H) x 200(W)


Hymenocallis littoralis
蜘蛛蘭
500(H) x 500(W)


Ophiopogon japonica 'Variegata'
花葉沿階草
300(H) x 200(W)


Philodendron selloum
春羽
1000(H) x 800(W)


Tradescantia spathacea
蚌花
300(H) x 300(W)


Zephyranthes candida
蔥蓮
300(H) x 200(W)

Grass


Zoysia japonica
朝鮮草
Turf Size: 450 x 300

Climbers


Epipremnum aureum
黃金葛
2000(L) x 100(W)


Pyrostegia venusta
炮仗花
2000(L) x 100(W)


Tristellateia australasiae
三星果
2000(L) x 100(W)


Lonicera japonica
忍冬
2000(L) x 100(W)

Shrub, Groundcover & Grass Schedule

Appendix J Section 5.4.3 of EIA Report

percussive piling noise limits set out within the PP-TM, the assessment of this type of noise are thus not to be included in this EIA Report, and it is upon the authority to make final judgment in granting of CNP and this report make no binding effect to the authority in executing of NCO. However, other auxiliary PME for the piling works, other than the hydraulic hammer driving rig for steel pile, including mobile crane, generator for welder and generator will be included in construction noise impact assessment to reflect construction noise from these PMEs.

5.4.3 The key PME to be used for the construction works activities are shown in **Table 5-10**. In order to provide a realistic assessment of the works activities, the percentages of time that PME will be operating on site have also been considered when calculating the cumulative Sound Power Levels (SWL) for the construction activities. The noise levels at the NSRs have been assessed on a monthly basis in respect to the individual noise levels induced by the construction works activities, assuming they are operating cumulatively.

Table 5-10 PME identified as Major Noise Sources

PME [1]	TM or other ref.	No. of PME	SWL in dB(A)	On time %	Total SWL [2]
1-1 Site Mobilisation and Hoarding					
Loader, wheeled (Back-hoe) (All)	CNP 081	1	112	50	115.3
Excavator, Tracked (All)	CNP 081	1	112	50	
Lorry, with crane, 5.5 tonne <GVH <= 38 tonne (All)	Other ref. [3]	1	105	50	
Generator (All)	CNP 103	1	95	100	
Breaker, mini-robot mounted (Act 1)	Other ref. [3]	1	115	50	
Air Compressor, air flow < 10m^3/min (Act 1)	CNP 001	1	100	50	
Concrete Lorry Mixer (Act 2)	CNP 044	1	109	100	
Poker, Vibratory, hand-held, electric (Act 2)	Other ref. [3]	2	102	100	
2-1 Piling (Driven H Pile)					
Mobile Crane (All)	CNP 048	3	112	100	116.8
Generator, portable (All)	Other ref. [3]	1	100	50	
Generator (All)	CNP 103	1	95	100	
Driven H-Pile Rig	(Controlled under PP-TM)				
3-1 Superstructure (Pile Cap Construction)					
Excavator, Tracked (Act 1)	CNP 081	2	112	50	114.3
Lorry, with crane, 5.5 tonne	Other ref. [3]	2	105	50	

PME [1]	TM or other ref.	No. of PME	SWL in dB(A)	On time %	Total SWL [2]
<GVH <= 38 tonne (Act 1)					
Mobile Crane (Act 1)	CNP 048	1	112	50	
Concrete Lorry Mixer (Act 2)	CNP 044	1	109	50	
Poker, Vibratory, hand-held, electric (Act 2)	Other ref. [3]	2	102	100	
Bar Bender and cutter, electric (All)	CNP 021	1	90	70	
3-2 Superstructure (Superstructure and Concreting)					
Lorry, with crane, 5.5 tonne <GVH <= 38 tonne (All)	Other ref. [3]	2	105	50	111.7
Concrete Lorry Mixer (All)	CNP 044	1	109	50	
Concrete Pump (All)	CNP 047	1	109	50	
Poker, Vibratory, hand-held, electric (All)	Other ref. [3]	2	102	100	
Tower Crane, electric (All)	CNP 049	1	95	100	
Bar bender and cutter, electric (All)	CNP 021	3	90	50	
3-3 Finishes					
Drill, hand-held, battery (All)	Other ref. [3]	3	89	50	106.9
Jig-saw, hand-held, wood, electric (All)	Other ref. [3]	1	99	50	
Saw, wire (All)	Other ref. [3]	2	101	50	
Lorry, with crane, 5.5 tonne <GVH <= 38 tonne (All)	Other ref. [3]	2	105	50	

Notes:

[1] The grouping of PMEs in sub-construction task is reflected in brackets. “(ALL)” denotes that the PME would be adopted for all sub-construction tasks in that construction activity. “(Act 1)”, ”(Act 2)”, etc. denotes that the PME would be adopted for particular sub-construction task of a construction activity only.

[2] Total SWL reflects the predicted total SWL in consideration of the number of PMEs, their on-time percentage and accounts for the inventory grouping (sub-construction tasks) contributing to the highest noise level.

[3] PME referenced to the document “Sound power levels of other commonly used PME”.

5.4.4 The proposed plant inventory involves the use of Specified Powered Mechanical Equipment (SPME), as detailed in **Section 5.2.2**, including hand-held breaker, concrete lorry mixer and hand-held poker vibrator. As such, should construction

Appendix K Section 5.6.8 of EIA Report

5.6.5 The approved EIA report of the XRL project with EPD Register No. AEIAR-143/2009 has been referenced. The following NSRs are in the vicinity of both XRL and proposed FEHD project:

- Cheong Chit House, Nam Cheong Estate
- Cheong Yat House, Nam Cheong Estate
- Fu Yun House, Fu Cheong Estate

5.6.6 According to the predicted construction noise levels in Appendix 5-8 of AERIA-143/2009, construction noise impact due to the XRL project at the above corresponding NSRs during different works stages are updated with XRL construction schedule provided in **Table 5-13** above. Corresponding section of Appendix 5-8 of AEIAR-143/2009, the location of noise sensitive receivers in the AEIAR-143/2009, correspondence showing updated construction schedule of XRL project, and the corresponding potential construction noise impact due to XRL project to relevant NSRs considered in this assessment are provided in **Appendix 5-9**.

5.6.7 For the uncertainty in detailed construction noise impact from Nam Cheong Station development, construction plant inventory of Nam Cheong Station development was assumed, with construction schedule assumed lasting from before 2012 towards end 2019 to represent the worst case scenario. The assumed plant inventory is also provided in **Appendix 5-8**. Predicted construction noise levels of cumulative construction noise impact from the proposed FEHD depot development together with XRL construction and the Nam Cheong Station development, as well as construction noise impact from the proposed FEHD development alone are provided.

5.6.8 The predicted construction noise levels shown in **Tables 5-14 and 5-15** indicate that construction activities of the Project, if unmitigated, would result in exceedance of the daytime construction noise criteria during normal working hours at Sir Ellis kadoorie Secondary School (West Kowloon), Tai Kok Tsui Catholic Primary School (Hoi Fan Road) and Fu Cheong Estate Fu Yun House (**NSR N1, N2 and N7 respectively).** Mitigation measures are therefore considered to reduce the construction noise impact to acceptable levels.

Table 5-14 Predicted Cumulative Construction Noise Levels at Selected NSRs during Normal Daytime Working Hours under the Unmitigated Scenario

NSR ID	Descriptions	Land Use	ANL, dB(A)	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Education Institute	65 [1]	**69**	**72**	**66**
N2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	Education Institute	65 [1]	65	**68**	61
N3	Hampton Place	Residential	75	61	64	58
N4	Nam Cheong Estate Block 6 Cheong Chit House	Residential	75	63	66	60

NSR ID	Descriptions	Land Use	ANL, dB(A)	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N5	Nam Cheong Estate Block 5 Cheong Yat House	Residential	75	63	66	60
N6	Nam Cheong Estate Block 4 Cheong Shun House	Residential	75	62	65	60
N7	Fu Cheong Estate Fu Yun House	Education / Homes for the Aged	65 [1]	**66**	**67**	65
N8	Planned Residential Development on Nam Cheong Station	Residential	75	68	71	64

Notes:

1. Construction noise standard for schools is 70 dB(A) at normal school days and is reduced to 65 dB(A) during examination period. The more conservative 65 dB(A) standard is applied in this construction noise impact assessment.
2. Noise levels exceeding the construction noise standards are **bold**.

Table 5-15 Predicted Construction Noise Levels at Selected NSRs during Normal Daytime Working Hours under the Unmitigated Scenario due to the Project ONLY

NSR ID	Descriptions	Land Use	ANL, dB(A)	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Education Institute	65 [1]	**69**	**72**	65
N2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	Education Institute	65 [1]	65	**68**	61
N3	Hampton Place	Residential	75	60	64	57
N4	Nam Cheong Estate Block 6 Cheong Chit House	Residential	75	61	65	58
N5	Nam Cheong Estate Block 5 Cheong Yat House	Residential	75	62	65	58
N6	Nam Cheong Estate Block 4 Cheong Shun House	Residential	75	60	64	57

NSR ID	Descriptions	Land Use	ANL, dB(A)	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N7	Fu Cheong Estate Fu Yun House	Education / Homes for the Aged	65 [1]	61	64	57
N8	Planned Residential Development on Nam Cheong Station	Residential	75	68	71	64

Notes:

1. Construction noise standard for schools is 70 dB(A) at normal school days and is reduced to 65 dB(A) during examination period. The more conservative 65 dB(A) standard is applied in this construction noise impact assessment.
2. Noise levels exceeding the construction noise standards are **bold**.

Operation Phase

Fixed Plant Noise

5.6.9 During the operational phase, noise impact due to the identified fixed plant noise sources including (a) workshop vehicle repair activities and (b) MVAC installation has been assessed. Based upon the assumptions discussed in **Sections 5.5.3 to 5.5.6**, the predicted operational noise levels at the representative NSRs are shown in **Table 5-16**. Detailed calculations of fixed plant noise impact assessment are in **Appendix 5-10**.

Table 5-16 Summary of Predicted Operational Levels at NSRs

NSR ID	Name	Daytime & Evening Time (D) / Nighttime (N)	Predicted Maximum Noise Level /Leq, 30mins dB(A)	EIAO-TM Noise Criteria / Leq,30mins /dB(A)
1	Sir Ellis Kadoorie Secondary School (West Kowloon)	D	54.4	65
		N	N/A	N/A
2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	D	48.4	62
		N	N/A	N/A
3	Hampton Place	D	46.6	65
		N	43.7	55
4	Nam Cheong Estate Block 6 Cheong Chit House	D	53.7	65
		N	49.4	55
5	Nam Cheong	D	53.4	65

Appendix L Section 5.8.2 of EIA Report

5.8 ASSESSMENT OF NOISE IMPACTS WITH THE APPLICATION OF MITIGATION MEASURES

Construction Phase

5.8.1 Construction noise calculations have been carried out with the incorporation of different noise mitigation measures as discussed in **Section 5.7**, as far as practicable according to the actual construction condition and limitation. Mitigation measures adopted in this assessment include:

- the use of quiet plants for PME (QPME);
- temporary noise barriers for PME, as well as noise jacket and mufflers to cover the noisy part of PME and at the engine exhaust of mobile plants respectively;
- limiting of number of plants operated concurrently.

5.8.2 Construction noise levels at the selected NSRs (which are predicted to be the worst affected by the associated construction works) under the mitigated scenario are summarized in **Tables 5-24 and 5-25**. Detailed calculations of the construction noise impact assessment and complete PME inventory are provided in **Appendix 5-11**.

Table 5-24 Predicted Cumulative Construction Noise Levels at Selected NSRs during Normal Daytime Working Hours under the Mitigated Scenario

NSR ID	Descriptions	Land Use	Limit	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Education Institute	65 [1]	63	64	64
N2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	Education Institute	65 [1]	59	60	60
N3	Hampton Place	Residential	75	55	56	56
N4	Nam Cheong Estate Block 6 Cheong Chit House	Residential	75	60	60	59
N5	Nam Cheong Estate Block 5 Cheong Yat House	Residential	75	59	59	59
N6	Nam Cheong Estate Block 4 Cheong Shun House	Residential	75	58	59	59
N7	Fu Cheong Estate Fu Yun House	Education / Homes for the Aged	65 [1]	65	64	64
N8	Planned Residential Development on Nam Cheong Station	Residential	75	61	62	62

Note:

1. Construction noise standard for schools is70 dB(A) at normal school days and is reduced to 65 dB(A) during examination period. The more conservative 65dB(A) standard is applied in this construction noise impact assessment.

Table 5-25 Predicted Construction Noise Levels at Selected NSRs during Normal Daytime Working Hours under the Mitigated Scenario due to the Project ONLY

NSR ID	Descriptions	Land Use	Limit	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Education Institute	65 [1]	63	63	63
N2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	Education Institute	65 [1]	58	59	59
N3	Hampton Place	Residential	75	54	55	55
N4	Nam Cheong Estate Block 6 Cheong Chit House	Residential	75	55	56	56
N5	Nam Cheong Estate Block 5 Cheong Yat House	Residential	75	55	56	56
N6	Nam Cheong Estate Block 4 Cheong Shun House	Residential	75	54	55	55
N7	Fu Cheong Estate Fu Yun House	Education / Homes for the Aged	65 [1]	54	55	55
N8	Planned Residential Development on Nam Cheong Station	Residential	75	61	62	62

Note:

1. Construction noise standard for schools is 70dB(A) at normal school days and is reduced to 65 dB(A) during examination period. The more conservative 65dB(A) standard is applied in this construction noise impact assessment.

5.8.3 In view of the results listed on **Tables 5-24 and 5-25**, it can be noted that the predicted construction noise levels with noise mitigation measures at the NSRs shall comply with the corresponding construction noise limits.

5.8.4 It is noted that predicted construction noise levels at nearby educational institutions, such as Fu Cheong Estate Fu Yun House and Sir Ellis Kadoorie Secondary School complies with corresponding assessment criteria during normal school days, i.e. 70dB(A), but only marginally comply with the assessment criteria of examination period, i.e. 65dB(A). Although this predicted overall construction noise level has taken into account concurrent construction works in the vicinity and the contribution due to the Project itself is minimal with the implementation of mitigation measures, it is recommended that more detailed construction work programme should be considered before actual construction work is undertaken by the contractor, and applicable noise mitigation measures should be implemented according to the actual site condition and constraints, in order to minimise the potential cumulative construction noise impact with concurrent projects. In particular, the Contractor shall keep close liaison with the nearby educational institutions, and special arrangement on PME operations should be determined during school examination periods.

Operation Phase

Appendix M Section 5.6.9 of EIA Report

NSR ID	Descriptions	Land Use	ANL, dB(A)	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N7	Fu Cheong Estate Fu Yun House	Education / Homes for the Aged	65 [1]	61	64	57
N8	Planned Residential Development on Nam Cheong Station	Residential	75	68	71	64

Notes:

1. Construction noise standard for schools is 70 dB(A) at normal school days and is reduced to 65 dB(A) during examination period. The more conservative 65 dB(A) standard is applied in this construction noise impact assessment.
2. Noise levels exceeding the construction noise standards are **bold**.

Operation Phase

Fixed Plant Noise

5.6.9 During the operational phase, noise impact due to the identified fixed plant noise sources including (a) workshop vehicle repair activities and (b) MVAC installation has been assessed. Based upon the assumptions discussed in **Sections 5.5.3 to 5.5.6**, the predicted operational noise levels at the representative NSRs are shown in **Table 5-16**. Detailed calculations of fixed plant noise impact assessment are in **Appendix 5-10**.

Table 5-16 Summary of Predicted Operational Levels at NSRs

NSR ID	Name	Daytime & Evening Time (D) / Nighttime (N)	Predicted Maximum Noise Level /Leq, 30mins dB(A)	EIAO-TM Noise Criteria / Leq,30mins /dB(A)
1	Sir Ellis Kadoorie Secondary School (West Kowloon)	D	54.4	65
		N	N/A	N/A
2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	D	48.4	62
		N	N/A	N/A
3	Hampton Place	D	46.6	65
		N	43.7	55
4	Nam Cheong Estate Block 6 Cheong Chit House	D	53.7	65
		N	49.4	55
5	Nam Cheong	D	53.4	65

NSR ID	Name	Daytime & Evening Time (D) / Nighttime (N)	Predicted Maximum Noise Level /Leq, 30mins dB(A)	EIAO-TM Noise Criteria / Leq,30mins /dB(A)
	Estate Block 5 Cheong Yat House	N	49.8	55
6	Nam Cheong Estate Block 4 Cheong Shun House	D	51.8	65
		N	47.1	55
7	Fu Cheong Estate Fu Yun House	D	52.0	65
		N	48.8	55
8	Planned Residential Development on Nam Cheong Station	D	58.2	65
		N	54.9	55

5.6.10 The maximum allowable Sound Power Level (SWL) of each of the equipment in the plant rooms would be 90 dB(A), which should not be exceeded in order to achieve the noise criteria.

5.6.11 Results in **Table 5-16** show that the predicted maximum noise levels at the identified NSRs due to workshop vehicle repair activities and the MVAC installations would comply with both daytime and nighttime EIAO–TM noise criteria.

Off-site Traffic Noise

5.6.12 The inbound and outbound routings of the off-site traffic of the proposed depot have been agreed with the Government in the Traffic Impact Assessment (TIA) report (endorsed by Transport Department). The agreed inbound and outbound vehicle routing plans are shown in **Appendix 5-7**.

5.6.13 The peak flows of the off-site traffic from the Depot would be at 0700 to 0800hour and 1500 to 1600hour during AM and PM respectively. By comparing of the noise levels between “with project” and “without project” during AM and PM peaks off-site traffic of the Depot, the highest noise contribution generated by the Depot could be assessed.

5.6.14 In order to assess the off-site traffic noise short-term and long-term contribution generated by the Depot, the assessment years for the off-site traffic noise are 2017 and 2032, which are the tentative commencement of occupation year and 15 years after operation respectively.

5.6.15 The traffic forecast at AM peak (0700 – 0800) and PM peak (1500 – 1600) for two scenarios including “with project” and “without project” were provided by the Project Traffic Consultant and endorsed by TD. The traffic forecasts for year 2017 and year 2032 are shown in **Table 5-17** and **Table 5-18** respectively. Relevant correspondence showing the endorsement of the traffic forecast data by the Authority is presented in **Appendix 5-7**. Alignment of the road carriageways is shown in **Appendix 5-7.**

Appendix N Section 5.6.13 of EIA Report

NSR ID	Name	Daytime & Evening Time (D) / Nighttime (N)	Predicted Maximum Noise Level /Leq, 30mins dB(A)	EIAO-TM Noise Criteria / Leq,30mins /dB(A)
	Estate Block 5 Cheong Yat House	N	49.8	55
6	Nam Cheong Estate Block 4 Cheong Shun House	D	51.8	65
		N	47.1	55
7	Fu Cheong Estate Fu Yun House	D	52.0	65
		N	48.8	55
8	Planned Residential Development on Nam Cheong Station	D	58.2	65
		N	54.9	55

5.6.10 The maximum allowable Sound Power Level (SWL) of each of the equipment in the plant rooms would be 90 dB(A), which should not be exceeded in order to achieve the noise criteria.

5.6.11 Results in **Table 5-16** show that the predicted maximum noise levels at the identified NSRs due to workshop vehicle repair activities and the MVAC installations would comply with both daytime and nighttime EIAO–TM noise criteria.

Off-site Traffic Noise

5.6.12 The inbound and outbound routings of the off-site traffic of the proposed depot have been agreed with the Government in the Traffic Impact Assessment (TIA) report (endorsed by Transport Department). The agreed inbound and outbound vehicle routing plans are shown in **Appendix 5-7**.

5.6.13 The peak flows of the off-site traffic from the Depot would be at 0700 to 0800hour and 1500 to 1600hour during AM and PM respectively. By comparing of the noise levels between “with project” and “without project” during AM and PM peaks off-site traffic of the Depot, the highest noise contribution generated by the Depot could be assessed.

5.6.14 In order to assess the off-site traffic noise short-term and long-term contribution generated by the Depot, the assessment years for the off-site traffic noise are 2017 and 2032, which are the tentative commencement of occupation year and 15 years after operation respectively.

5.6.15 The traffic forecast at AM peak (0700 – 0800) and PM peak (1500 – 1600) for two scenarios including “with project” and “without project” were provided by the Project Traffic Consultant and endorsed by TD. The traffic forecasts for year 2017 and year 2032 are shown in **Table 5-17** and **Table 5-18** respectively. Relevant correspondence showing the endorsement of the traffic forecast data by the Authority is presented in **Appendix 5-7**. Alignment of the road carriageways is shown in **Appendix 5-7.**

Appendix O Section 5.4.2 of EIA Report

locations are illustrated in **Figure 5-3** for operational noise impact assessments and in **Figure 5-4** for construction noise impact assessments.

Table 5-9 Summary of Selected Noise Assessment Points at Each Representative NSR

NSR ID	Description	Land Use	No. of Noise Sensitive Storeys above Podium/Site Level	Podium (P)/Site Level (S) (mPD)	No. of Noise Assessment Points at Each Floor
1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Education Institute	8	5.6 (S)	3
2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	Education Institute	8	5.5 (S)	3
3	Hampton Place	Residential	48	14.8 (P)	1
4	Nam Cheong Estate Block 6 Cheong Chit House	Residential	15	5.2 (S)	1
5	Nam Cheong Estate Block 5 Cheong Yat House	Residential	15	5.2 (S)	1
6	Nam Cheong Estate Block 4 Cheong Shun House	Residential	15	5.2 (S)	1
7	Fu Cheong Estate Fu Yun House	Education / Homes for the Aged	5	16.2 (P)	1
8	Planned Residential Development on Nam Cheong Station	Residential	9	26.4 (P)	2[1]
			40		3[1]

Remark:
[1] Noise assessment points of N801 to N805 in **Figure 5-3** are selected for operational noise impact assessments. Noise assessment points of N811 to N815 in **Figure 5-4** are selected for construction noise impact assessment.

5.4 IDENTIFICATION OF POTENTIAL NOISE IMPACTS

Construction Phase

5.4.1 The potential sources of noise impact during the construction phase of the Project would be the use of Powered Mechanical Equipment (PME) for various construction activities. As broadly indicated in construction programme in **Appendix 5-4**, the construction of the project would be tentatively starts from end 2014 and lasts for about 25 months. Location of notional noise sources are provided in **Figure 5-4**. The key construction noise activities include:

- Site mobilisation and hoarding
- Foundation
- Superstructure
- Finishes

5.4.2 Foundation construction will adopt driven H-pile, which is kind of percussive piling as controlled under “Technical memorandum on Noise from Percussive Piling” under Noise Control Ordinance, would be adopted for foundation construction. Since the issuance of a CNP by the Noise Control Authority would depend on the submission of an application by the contractor, and on the contractor’s compliance with the

percussive piling noise limits set out within the PP-TM, the assessment of this type of noise are thus not to be included in this EIA Report, and it is upon the authority to make final judgment in granting of CNP and this report make no binding effect to the authority in executing of NCO. However, other auxiliary PME for the piling works, other than the hydraulic hammer driving rig for steel pile, including mobile crane, generator for welder and generator will be included in construction noise impact assessment to reflect construction noise from these PMEs.

5.4.3 The key PME to be used for the construction works activities are shown in **Table 5-10**. In order to provide a realistic assessment of the works activities, the percentages of time that PME will be operating on site have also been considered when calculating the cumulative Sound Power Levels (SWL) for the construction activities. The noise levels at the NSRs have been assessed on a monthly basis in respect to the individual noise levels induced by the construction works activities, assuming they are operating cumulatively.

Table 5-10 PME identified as Major Noise Sources

PME [1]	TM or other ref.	No. of PME	SWL in dB(A)	On time %	Total SWL [2]
1-1 Site Mobilisation and Hoarding					
Loader, wheeled (Back-hoe) (All)	CNP 081	1	112	50	115.3
Excavator, Tracked (All)	CNP 081	1	112	50	
Lorry, with crane, 5.5 tonne <GVH <= 38 tonne (All)	Other ref. [3]	1	105	50	
Generator (All)	CNP 103	1	95	100	
Breaker, mini-robot mounted (Act 1)	Other ref. [3]	1	115	50	
Air Compressor, air flow < 10m^3/min (Act 1)	CNP 001	1	100	50	
Concrete Lorry Mixer (Act 2)	CNP 044	1	109	100	
Poker, Vibratory, hand-held, electric (Act 2)	Other ref. [3]	2	102	100	
2-1 Piling (Driven H Pile)					
Mobile Crane (All)	CNP 048	3	112	100	116.8
Generator, portable (All)	Other ref. [3]	1	100	50	
Generator (All)	CNP 103	1	95	100	
Driven H-Pile Rig	(Controlled under PP-TM)				
3-1 Superstructure (Pile Cap Construction)					
Excavator, Tracked (Act 1)	CNP 081	2	112	50	114.3
Lorry, with crane, 5.5 tonne	Other ref. [3]	2	105	50	

Appendix P Section 5.6.7 of EIA Report

5.6.5 The approved EIA report of the XRL project with EPD Register No. AEIAR-143/2009 has been referenced. The following NSRs are in the vicinity of both XRL and proposed FEHD project:

- Cheong Chit House, Nam Cheong Estate
- Cheong Yat House, Nam Cheong Estate
- Fu Yun House, Fu Cheong Estate

5.6.6 According to the predicted construction noise levels in Appendix 5-8 of AERIA-143/2009, construction noise impact due to the XRL project at the above corresponding NSRs during different works stages are updated with XRL construction schedule provided in **Table 5-13** above. Corresponding section of Appendix 5-8 of AEIAR-143/2009, the location of noise sensitive receivers in the AEIAR-143/2009, correspondence showing updated construction schedule of XRL project, and the corresponding potential construction noise impact due to XRL project to relevant NSRs considered in this assessment are provided in **Appendix 5-9**.

5.6.7 For the uncertainty in detailed construction noise impact from Nam Cheong Station development, construction plant inventory of Nam Cheong Station development was assumed, with construction schedule assumed lasting from before 2012 towards end 2019 to represent the worst case scenario. The assumed plant inventory is also provided in **Appendix 5-8**. Predicted construction noise levels of cumulative construction noise impact from the proposed FEHD depot development together with XRL construction and the Nam Cheong Station development, as well as construction noise impact from the proposed FEHD development alone are provided.

5.6.8 The predicted construction noise levels shown in **Tables 5-14 and 5-15** indicate that construction activities of the Project, if unmitigated, would result in exceedance of the daytime construction noise criteria during normal working hours at Sir Ellis kadoorie Secondary School (West Kowloon), Tai Kok Tsui Catholic Primary School (Hoi Fan Road) and Fu Cheong Estate Fu Yun House (**NSR N1, N2 and N7 respectively).** Mitigation measures are therefore considered to reduce the construction noise impact to acceptable levels.

Table 5-14 Predicted Cumulative Construction Noise Levels at Selected NSRs during Normal Daytime Working Hours under the Unmitigated Scenario

NSR ID	Descriptions	Land Use	ANL, dB(A)	Predicted Construction Noise Levels at each Assessment Year (Leq, dB(A))		
				2014	2015	2016
N1	Sir Ellis Kadoorie Secondary School (West Kowloon)	Education Institute	65 [1]	**69**	**72**	**66**
N2	Tai Kok Tsui Catholic Primary School (Hoi Fan Road)	Education Institute	65 [1]	65	**68**	61
N3	Hampton Place	Residential	75	61	64	58
N4	Nam Cheong Estate Block 6 Cheong Chit House	Residential	75	63	66	60

Appendix Q Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Table P1 Summary of Environmental Complaints

Date of Complaint Received	Details	Analysis / Remedial Actions	Status
17 March 2016	A complaint was received regarding the piling noise	Based on the investigation, the piling works were conducted in the scheduled period, i.e. 12:25 to 13:40 and 15:30 to 18:30. Noise barriers were applied, and all Powered Mechanical Equipment (PME) was recommended to check regularly with proper maintenance procedures to ensure the sound pressure levels were within the specific limits. The main contractor was also recommended to send a new notification letter regarding the piling works to Guardian so that the residents at Hampton Place get notified.	Closed
14 April 2016	A complaint was received regarding the water seeping out to pedestrian footpath through the toe of temporary hoarding at Yen Chow Street West on a rainy day.	In order to control storm water impact, mitigation measures were suggested and implemented. A total of 5 pumps, where 4 were duty pumps and 1 was stand-by pump, were used along hoarding inside. Cement bunds and pavement works were carried out at hoarding foe facing towards the site since 15 April 2016 and completed on 21 April 2016. Lunch shift of environmental staff had been arranged during rainy days to ensure adequate human resources, in terms of environmental technical skills, could be always provided to deal with ad-hoc surface water issue immediately.	Closed
19 May 2019	A complaint was received regarding the wastewater discharge, air pollution and environmental hygiene complaint.	As advised by FEHD, trainings were provided to the staff during 19 May 2019 to 2 June 2019 before the operation. Therefore, refuse collection vehicles were deployed for trainings. In the trainings, staffs were taught how to use the hydraulic pressure of water tap to wash the refuse collection vehicles. Therefore, the wastewater discharge, air pollution and environmental hygiene problems were related to the trainings. During the site inspection, no wastewater discharged was observed. Wastewater treatment facility were installed for wastewater treatment, and the license for discharge of institutional trade effluent was effective since 7 March 2019. Therefore, the wastewater discharges from 19 May to 2 June 2019 were complied with the water discharge license. For the air pollution	Closed
2 June 2019			Closed

		problem, all trainings after 2 June 2019 were suspended to stop the odor emission. The washing bays were blocked so that no training related activities could be conducted. For the environmental hygiene issue, no rodents and mosquitos were found in the site inspection. The site was clean and tidied up. Mouse trap and ultrasonic pest repeller were installed on site. Regular inspection on the rodents and mosquitos will be carried out to maintain a good environmental hygiene condition.	

Table L2 Cumulative Statistics for Valid Exceedances for the Environmental Monitoring

		Total no. recorded since the project commenced
Noise	Action	0
	Limit	0

Table L3 Cumulative Statistics for Non-compliance, Complaints, Notifications of Summons and Prosecution

	Cumulative Statistics			
	Non-compliance	Complaints	Notification of Summons	Prosecutions
From 29 February 2016 to the reporting month	0	4	0	0

Appendix R – PC Certificate

BY EMAIL AND TO BE COLLECTED
China Road and Bridge Corporation
Units 07-11, 23A/F, K. Wah Centre
191 Java Road, North Point
Hong Kong

Attn: Mr. Vincent Chung
(Project Manager)

21 December 2018

Dear Sir,

Contract No. SS D505
REPROVISIONING OF FEHD SAI YEE STREET
ENVIRONMENTAL HYGIENE OFFICES-CUM-VEHICLE DEPOT
AT YEN MING ROAD
Main Contract
- Certificate of Completion
Our Ref.: 4710/4/894/wml

In accordance with Clause 53 of the General Conditions of Contract I hereby certify that, in my opinion, the Works were substantially completed on 22/11/2018. The Maintenance Period commenced on 23/11/2018 and will expire on 22/11/2019.

Yours faithfully,

Clara Pang
for P&T Architects and Engineers Limited

cc.: FEHD – Mr. CHUI Chak Ming, Joseph (by email)

CTA(F), DEVB (by email)
Audit Commission – D of Audit (by email)

ArchSD - SPM335 – Mr. TSE Lok Man (by hand and by email)
PM342 – Mr. NIP Ka Ho, Alan (by email)
PM360 – Mr. WONG Sing Lam, Ken (LA) (by email)
PM373 – Ms. LUI Wun, Vicky (LBSE) (by email)
PM369 – Mr. YIP Siu Hung (LQS) (by email)
ER(COW) – Mr. CHOI Wai Yin (by email)
ER(BSI) – Mr. HO Man-wai (by email)
CCOW/Admin – Mr. LAM Kwok-kit (by email)
AD(PS) – (Attn: SPSM/Y&KT – Mr. TANG Luen Tai, Lawrence) (by email)

TS/Contractor Management (F: 3542 5400)

Consultant Team – PSE – PTAE – Mr. Simon HO (by email)
PBSE – PTME – Mr. Matt YAU (by email)
PLA – Urbis Ltd – Mr. Tuan Huy TRAN (by email)
PQS – Arcadis – Mr. Arthur CHEUNG (by email)

RSS Team – RCOW – Mr. Marco LEUNG (by email)
RWSI(Building) – Mr. Benny TSUI (by email)
RBSI – Mr. Kai Cheong PANG (by email)

CP/JHUNG/WF/wml

P&T Architects and Engineers Limited
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Appendix S – Approval Letter of Termination of Construction Phase Environmental Monitoring and Audit Programme

27-JUN-2019 10:07 FROM EPD EIAO REGISTER OFFICE TO 35637018 P.001/001

本署檔號
OUR REF: EP2/K20/A/20 Pt.7
來函檔號
YOUR REF:
電 話
TEL. NO.: 2835 1129
圖文傳真
FAX NO: 2591 0558
電子郵件
E-MAIL: raymondlai@epd.gov.hk
網 址
HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Branch Office
28th Floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong.

環境保護署分處
香港灣仔
軒尼詩道
一百三十號
修頓中心廿八樓

By Fax 2789 0304
26 June 2019

Food and Environmental Hygiene Department
Rm 313, 3/F
FEHD Nam Cheong Offices and Vehicle Depot
87 Yen Chow Street West, Kowloon
(Attn: Mr. Vincent TAM, Chief Transport Services Officer (Operations) 2)

Dear Mr. TAM,

Reprovisioning of FEHD Sai Yee Street Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area
Environmental Permit (EP) No. EP-454/2013
Termination of Construction Phase Environmental Monitoring and Audit (EM&A) Programme

I refer to the letter dated 25 June 2019 (Ref.: TEEM/334/19/L/089/JT) from Telemax Environmental and Energy Management Limited (TEEM) on behalf of FEHD for the subject.

According to the information as submitted to us via the above letter and as observed during the joint site inspection among FEHD, ArchSD, Environmental Team Leader (ETL), Independent Environmental Checker (IEC), the Contractor and EPD on 29 May 2019, all major construction activities that have the potential to cause significant environmental impacts have been completed. The remaining works are minor defect rectification works which will be completed by 27 June 2019. It is also noted that relevant local communities and the IEC have no adverse comment on the proposed termination of EM&A programme.

Section 8.3.5 of the EM&A Manual states "*The EM&A programme should be terminated upon the completion of the construction activities that have the potential to cause significant environmental impacts*". Based on the information provided and the joint site inspection, the proposed termination of construction phase EM&A programme upon completion of construction on 27 June 2019 is hereby approved pursuant to section 8.3.6 of the EM&A Manual. Please be reminded to submit the Final EM&A Report in accordance with section 8.3.7 of the EM&A Manual.

Yours sincerely,

(Raymond LAI)
Acting Senior Environmental Protection Officer
for Director of Environmental Protection

c.c.

FEHD (Planning & Development Section)	(Attn.: Ms. May NG)	Fax: 3101 0450
AEC (IEC)	(Attn.: Ms. Grace KWOK)	Fax: 2815 5399
TEEM (ETL)	(Attn.: Ir. Nelson TAM)	Fax: 3563 7018
(Internal)		
S(RE)1		

TOTAL P.001