Civil Engineering and Development Department

EP-510/2016 – Police Facilities in Kong Nga Po

Service Contract No. NDO 07/2019
Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

Quarterly Environmental Monitoring and Audit Report for October to December 2021

(Version 1.0)

Certified By 

Ms. Ivy Tam

(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

WELLAB accepts no responsibility for changes made to this report by third parties.

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KWAI FONG, NEW TERRITORIES,
HONG KONG

Attention: Mr. William WONG

16 February 2022

Dear William,

Contract No. NDO/02/2018
Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po
Quarterly Environmental Monitoring and Audit Report for October to December 2021

I refer to the email from the Environmental Team concerning the captioned. I have no adverse comment on the Quarterly Environmental Monitoring and Audit Report for October to December 2021 (Version 1.0) and verify the report according to section 1.9 of Environmental Permit with permit number EP-510/2016.

Yours faithfully,

Kevin W.M. Li
Independent Environmental Checker

cc. CEDD - Mr. K.M. CHENG
AECOM - Gloria TANG
ET Leader – Ivy TAM

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EXECUTIVE SUMMARY

Introduction

1. This is the 6th Quarterly Environmental Monitoring and Audit (EM&A) Report under the Work Contract (Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po) (the Project). This report was prepared by Wellab Limited (Wellab) under "Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po" (hereinafter called the "Service Contract"). This report documents the findings of Environmental Monitoring and Audit (EM&A) work conducted from October to December 2021.

Summary of Construction Works undertaken during the Reporting Quarter

2. The major site activities undertaken in the reporting quarter included:

- Site formation at Portion D
- Retaining wall construction
- Piling works (foundation socketed H-piles for Retaining Walls)
- Stormwater Storage Tank, Sewage storage tank and underpass construction
- Slope upgrading works
- Road and associated works
- Sewage Trenchless works
- Drainage Trenchless works
- Watermain Trenchless Works

Environmental Monitoring and Audit Works

3. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

4. Summary of the environmental exceedances of the reporting quarter for the Project is tabulated in **Table I**.

Table I Summary Table for Events Recorded in the Reporting Quarter

Environmental Monitoring	Parameter	No. of Non-Project related Exceedances		No. of Exceedance related to the Construction Works of the Contract		Action Taken
		Action Level	Limit Level	Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	N/A
Noise	$L_{eq(30min)}$	0	0	2	0	Refer to Appendix I

Air Quality

5. All construction air quality monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded in the reporting quarter.

Construction Noise

6. All Construction noise monitoring was conducted as scheduled in the reporting quarter. Two Action Level exceedances were recorded due to documented complaint received in this reporting quarter. No Limit Level exceedance was recorded in the reporting quarter.

Ecological Monitoring

7. All ecological monitoring were conducted as scheduled in the reporting quarter. The ecological monitoring photo records and result could refer to the relevant Monthly EM&A Reports.

Environmental Non-Compliance

8. No environmental non-compliance was recorded in the reporting quarter.

Environmental Complaint

9. Three environmental complaints were recorded in the reporting quarter. The Complaint Log is presented in **Appendix I**.

Notification of Summons and Successful Prosecutions

10. No notification of summons or successful environmental prosecutions was received in the reporting quarter.

Future Key Issues

11. The major site activities for the coming three months include**:**

- Tree felling works
- Site formation at Portion D
- Retaining Walls, Stormwater Storage Tank and Underpass Construction
- Road and associated works at Kong Nga Po Road
- Slope upgrading works
- Drainage and watermains trenchless works

12. Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, water quality and waste management. The anticipated major impacts from the construction works and corresponding recommended mitigation measures are detailed in Appendix A of relevant Monthly EM&A Reports.

1 INTRODUCTION

1.1 Wellab Limited was commissioned by the Civil Engineering Development Department (CEDD) as the Environmental Team to undertake the Environmental Monitoring and Audit (EM&A) works for the Work Contract (Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po) to ensure that the environmental performance of the Works Contracts comply with the requirements specified in the Environmental Permits (EPs), Environmental Impact Assessment (EIA) Report and Environmental Monitoring & Audit (EM&A) Manual of the Police Facilities in Kong Nga Po Project and other relevant statutory requirements.

Purpose of the report

1.2 This is the 6th Quarterly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from October to December 2021. The major construction works for the Project commenced on 3rd July 2020.

Structure of the report

1.3 The structure of the report is as follows:

Section 1: **Introduction -** purpose and structure of the report.

Section 2: **Project Information –** summarises background and scope of the Project, site description, project organisation and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licences during the reporting period.

Section 3: **Environmental Monitoring and Audit Requirement –** summarises monitoring location and parameters, monitoring programmes, monitoring frequencies, Action and Limit Levels, Event / Action Plans, and Site Audit inspection.

Section 4: **Monitoring Result –** summarises the monitoring result in the reporting quarter.

Section 5: **Environmental Site Inspection –** summarises the audit findings of the weekly site inspections undertaken within the reporting period.

Section 6: **Non-Compliance of the Environmental Quality Performance Limits (Action and Limit) –** summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting period.

Section 7: **Future Key Issues –** summarises the impact forecast and monitoring schedule for the next three months.

Section 8: **Conclusions and Recommendations**

2 PROJECT INFORMATION

Background

2.1 The Project consists of site formation works and building works for the co-location of various police facilities in the Project site at Kong Nga Po as well as road improvement works to a section of the existing Kong Nga Po Road between the police facilities and Man Kam To Road. The police facilities include:

- Lo Wu Firing Range (LWFR) to be relocated from Lo Wu;
- Ma Tso Lung Firing Range (MTLFR) to be relocated from Ma Tso Lung;
- Weapons Training Facilities (WTF) and Police Driving and Traffic Training Facilities (PD&TTF) to be relocated from Fan Garden;
- Helipad to be relocated from Lo Wu;
- A Proposed Police Training Facility (PTF); and
- A new internal access road network with underpass within the Project site

2.2 The improvement works to Kong Nga Po Road between the police facilities and Man Kam To Road includes roadworks, viaduct of less than 100m between abutments, and associated works such as slopeworks and retaining walls.

2.3 In addition to the above, associated supporting infrastructure and utilities including an underground stormwater storage tank, sewage pumping station, petrol / diesel filling station, a multi-storey training complex associated with the PD&TFF, and other ancillary facilities will also be provided.

2.4 The Project is a Designated Project under the Environmental Impact Assessment Ordinance (EIAO). An Environmental Impact Assessment (EIA) Report (Report No.: AEIAR-201/2016) for the Project was approved under EIAO in October 2016 in accordance with the EIA Study Brief (No. ESB-276/2014) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM). The corresponding Environmental Permit was issued (EP no.: EP-510/2016) by the Director of Environmental Protection (DEP) in November 2016.

2.5 The Works Contract (Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po) generally consists of site formation & infrastructure works for the co-location of various police facilities at Kong Nga Po as well as upgrading works to a section of the existing Kong Nga Po Road between the police facilities and Man Kam To Road (hereinafter called “the Project”).

2.6 The major construction activities of the Project are site formation and infrastructure works which will include site clearance, excavation and filling, construction of access road, utilities laying and landscaping works. As such, an air quality and noise monitoring programme is recommended in the approved Environmental Monitoring and Audit (EM&A) Manual during the construction phases of this Project to monitor the expected dust and noise nuisances. Baseline air quality and noise monitoring were conducted by ET from 14th March 2020 to 2nd April 2020 to establish the background conditions of the designated sensitive receivers prior to the commencement of the Project’s construction works.

2.7 The site layout plan for the Project is shown in **Figure 1**.

Project Organization

2.8 Different parties with different levels of involvement in the Project organization include:

- Project Proponent – Civil Engineering and Development Department (CEDD)
- *Supervisor / Supervisor's* Representative – AECOM
- Environmental Team (ET) – Wellab Limited
- Independent Environmental Checker (IEC) – Acuity Sustainability Consulting Limited

2.9 The key personnel contact names and numbers are summarised in **Table 2.1**.

Table 2.1 Key Contacts of the Project

Party	Role	Contact Person	Phone No.	Fax No.
Civil Engineering and Development Department, HKSAR (CEDD)	Project Proponent	Mr. Raymond Cheng	3152 3500	3547 1658
Supervisor / Supervisor's Representative (AECOM)	Chief Resident Engineer	Ms. Gloria Tang	9325 0836	3922 9797
Environmental Team (Wellab Limited)	Environmental Team Leader	Ms. Ivy Tam	2151 2090	2898 7076
Independent Environmental Checker (Acuity Sustainability Consulting Limited)	Independent Environmental Checker	Mr. Kevin Li	9779 2247	2693 9383
Contractor (Build King Construction Limited)	Site Agent	Mr. Book Kin Man	2272 3128	2528 1751
	Environmental Officer	Mr. Kyan Yan	5308 4367	

Summary of Construction Works Undertaken During Reporting Quarter

2.10 The major site activities undertaken in the reporting quarter included**:**

- Site formation at Portion D
- Retaining wall construction
- Piling works (foundation socketed H-piles for Retaining Walls)
- Stormwater Storage Tank, Sewage storage tank and underpass construction
- Slope upgrading works
- Road and associated works
- Sewage Trenchless works
- Drainage Trenchless works
- Watermain Trenchless Works

Status of Environmental Licences, Notifications and Permits

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

Table 2.2 Status of Environmental Licences, Notifications and Permits

Permit / Licence No.	Valid Period		Status
	From	To	
Environmental Permit (EP)			
EP-510/2016	N/A	N/A	Valid
Construction Noise Permit (CNP)			
GW-RN0698-21	28-9-2021	27-12-2021	Expired in the reporting quarter
GW-RN0918-21	28-12-2021	27-06-2022	Valid
GW-RN0950-21	28-12-2021	27-03-2022	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation			
EPD Ref no.: 451555	N/A	N/A	N/A
Billing Account for Construction Waste Disposal			
Account No. 7036173	24-12-2019	N/A	Valid
Registration of Chemical Waste Producer			
Waste Producer No. 5213-641-B2590-01	18-5-2020	N/A	Valid
Effluent Discharge Licence under Water Pollution Control Ordinance			
WT00035709-2020	11-5-2020	31-5-2025	Valid

Summary of EM&A Requirement

2.12 The EM&A programme requires construction noise monitoring, air quality monitoring, ecological monitoring and environmental site audits. The EM&A requirements are described in the following sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event / Action Plans;
- Environmental mitigation measures, as recommended in the Project EIA study final report; and
- Environmental requirements in contract documents.

3 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENT

Monitoring Parameters and Monitoring Locations

Air Quality Monitoring

3.1 In accordance with the EM&A Manual, impact 1-hour TSP monitoring was conducted to monitor the air quality for the Works Contracts. The location of the monitoring stations are shown in **Figure 2**. **Table 3.1** describes the location of the air quality monitoring stations.

Table 3.1 Location for Air Quality Monitoring Stations

Monitoring Station	Location of Measurement
AM1	Village House, Kong Nga Po
AM2	Village House, Kong Nga Po

3.2 **Table 3.2** summarises the monitoring parameters and frequencies of impact air quality monitoring during the Works Contracts activities.

Table 3.2 Impact Air Quality Monitoring Parameters, Frequency and Duration

Parameters	Frequency
1-hr TSP	Three times/ 6 days

Noise Monitoring

3.3 In accordance with the EM&A Manual, construction noise monitoring were conducted to monitor the construction noise arising from the construction activities. The location of the monitoring stations are shown in **Figure 3**. **Table 3.3** describes the location of the noise monitoring stations.

Table 3.3 Location of Noise Monitoring Stations

Monitoring Station	Location of Measurement
NM1	Village House, Sha Ling
NM2	Village House, Sha Ling
NM3	Village House No. 248, Sha Ling
NM4	Village House, Sha Ling
NM5	*Village House No. 270, Sha Ling
NM6	Village House, Sha Ling
NM7	Village House, Sha Ling
NM8	Village House, Sha Ling
NM9	Village House, Kong Nga Po
NM10	Village House, Kong Nga Po
NM11	Village House, Kong Nga Po

Monitoring Station	Location of Measurement
NM12	Village House, Kong Nga Po
NM13	Village House, Kong Nga Po
NM14	Village House, near Man Kam To Road

Note: *The location of NM5 as shown in Figure 3.1 of EM&A Manual and Figure 4.2 of the EIA Report is Village House No.270, Sha Ling, not Village No. 272, Sha Ling according to https://www.map.gov.hk/gm/map/s/B/1107625418

3.4 **Table 3.4** summarises the monitoring parameters and frequencies of construction noise monitoring during the Works Contracts activities.

Table 3.4 Noise Monitoring Parameters, Duration and Frequency

Monitoring Stations	Parameter	Duration	Frequency	Measurement
NM1	$L_{10(30\ min.)}$ dB(A)[2] $L_{90(30\ min.)}$ dB(A)[2] $L_{eq(30\ min.)}$ dB(A)[2] (as six consecutive $L_{eq,\ 5min}$ readings)	0700-1900 hrs on normal weekdays	Once per week	Free field[1]
NM2				Free field[1]
NM3				Facade
NM4				Facade
NM5				Facade
NM6				Free field[1]
NM7				Facade
NM8				Free field[1]
NM9				Free field[1]
NM10				Free field[1]
NM11				Facade
NM12				Facade
NM13				Free field[1]
NM14				Free field[1]

Remarks:
[1]: Correction of +3dB (A) for Free-field Measurement.
[2]: A-weighted equivalent continuous sound pressure level (L_{eq}). It is the constant noise level which, under a given situation and time period, contains the same acoustic energy as the actual time-varying noise level.
L_{10} is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above L_{10}.
L_{90} is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

Monitoring Methodology and Calibration Details

3.5 Monitoring works/equipments were conducted/calibrated regularly in accordance with the Project Specific EM&A Manual. Copies of calibration certificates could refer to the relevant Monthly EM&A Reports.

Environmental Quality Performance Limits (Action and Limit Levels)

3.6 The environmental quality performance limit i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in **Appendix A**

Landscape and visual

3.7 Bi-weekly inspection of the implementation of landscape and visual mitigation measures was conducted during weekly site audit. Most of the necessary mitigation measures have been implemented and recommended follow-up actions have been discharged by the Contractor. Details of the audit findings and implementation status are summarized in **Appendix F** and **Appendix G**.

Ecology Monitoring

3.8 Ecology monitoring was carried out on a monthly basis to monitor the timely implementation of proper environmental management practices and mitigation measures for the retained and transplanted individuals of flora species of conservation interest. Proper erection and maintenance of the temporary protective fence enclosing the individuals was inspected for the effectiveness. The ecological monitoring photo records and result could refer to the relevant Monthly EM&A Reports.

Site Audit Summary

3.9 Site audit were carried out on a weekly basis to monitor and audit the timely implementation of proper environmental management practices and mitigation measure of this Project. The observations and recommendations made during the reporting period are summarized in **Appendix G**.

Environmental Mitigation Measures

3.10 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the Project EM&A Manual for the Contractor to implement. A summary of the Environmental Mitigation Implementation Schedule (EMIS) is given in **Appendix F**.

Status of Waste Management

3.11 The amount of wastes generated by the major site activities of this Project during the reporting quarter is shown in **Appendix H**.

4 MONITORING RESULTS

Weather Conditions

4.1 The detail of weather conditions for each individual monitoring session could be referred to monthly EM&A reports.

Air Quality

1-hr TSP Monitoring

4.2 All construction air quality monitoring was conducted as scheduled during the reporting quarter.

4.3 No Action/Limit Level exceedance was recorded in this reporting quarter. A summary of exceedance is attached in **Appendix E**.

4.4 **Table 4.1** summarizes the air quality monitoring results which were extracted from the monthly reports for this Project. The graphical presentation of the air quality monitoring results are shown in **Appendix B**.

Table 4.1 Summary of 1-hour TSP Monitoring Result in Reporting Quarter

Reporting Months	Air Quality Monitoring Station	Average $\mu g/m^3$	Range $\mu g/m^3$	Action Level $\mu g/m^3$	Limit Level $\mu g/m^3$
Oct 2021	AM1	97.2	42.8 – 139.0	308	500
	AM2	65.5	32.7 – 106.7	311	
Nov 2021	AM1	71.4	36.5 – 155.1	308	
	AM2	98.8	73.0 – 147.0	311	
Dec 2021	AM1	110.2	41.3 – 190.6	308	
	AM2	118.8	63.0 – 189.4	311	

Construction Noise

4.5 All cconstruction noise monitoring was conducted as scheduled in the reporting quarter.

4.6 Two Action Level exceedances were recorded due to documented complaints received in this reporting quarter. No Limit Level exceedance was recorded in the reporting quarter. A summary of exceedance is attached in **Appendix E**.

4.7 **Table 4.2** summarizes the noise monitoring results which were extracted from the monthly reports for this Project. The graphical presentations of the construction noise monitoring results are shown in **Appendix C**.

Table 4.2 Summary of Noise Monitoring Result in Reporting Quarter

Reporting Months	Noise Quality Monitoring Station	Average $L_{eq\ (30\ min)}$, dB(A)	Range $L_{eq\ (30\ min)}$, dB(A)	Baseline Level dB(A)	Limit Level, dB(A)
Oct 2021	NM1[1]	58.6	54.9 – 61.0	54.9	75.0
	NM2[1]	62.7	53.9 – 65.9	56.7	
	NM3	56.7	54.0 – 59.6	54.5	
	NM4	63.7	60.2 – 66.3	58.7	
	NM5	57.7	55.3 – 59.1	57.0	
	NM6[1]	60.7	55.4 – 63.9	56.0	
	NM7	52.8	48.7 – 54.5	49.8	
	NM8[1]	58.1	52.1 – 61.6	57.6	
	NM9[1]	60.7	56.7 – 62.8	55.9	
	NM10[1]	53.7	51.2 – 55.1	52.8	
	NM11	55.5	44.7 – 60.9	46.4	
	NM12	59.4	49.6 – 62.3	54.7	
	NM13[1]	55.6	46.4 – 59.4	61.3	
	NM14[1]	50.4	48.4 – 52.8	59.6	
Nov 2021	NM1[1]	56.0	54.2 – 58.0	54.9	
	NM2[1]	56.3	51.4 – 59.8	56.7	
	NM3	56.8	54.1 – 59.4	54.5	
	NM4	63.0	57.5 – 68.2	58.7	
	NM5	58.3	52.8 – 59.9	57.0	
	NM6[1]	61.0	59.1 – 63.4	56.0	
	NM7	60.1	49.8 – 65.6	49.8	
	NM8[1]	60.4	49.4 – 66.8	57.6	
	NM9[1]	56.1	56.2 – 57.8	55.9	
	NM10[1]	56.5	54.1 – 58.1	52.8	
	NM11	51.6	50.5 – 54.9	46.4	
	NM12	52.0	49.3 – 55.1	54.7	
	NM13[1]	53.7	47.9 – 57.7	61.3	
	NM14[1]	53.8	49.5 – 56.5	59.6	
Dec 2021	NM1[1]	63.1	54.3 – 68.1	54.9	
	NM2[1]	60.8	51.2 – 66.1	56.7	
	NM3	62.4	54.4 – 67.5	54.5	
	NM4	60.5	59.3 – 61.9	58.7	
	NM5	60.9	58.2 – 62.8	57.0	
	NM6[1]	58.5	52.1 – 61.9	56.0	
	NM7	53.1	49.0 – 57.1	49.8	
	NM8[1]	58.3	50.6 – 64.5	57.6	
	NM9[1]	63.6	58.6 – 67.2	55.9	
	NM10[1]	55.9	52.1 – 58.0	52.8	
	NM11	52.8	47.1 – 55.7	46.4	
	NM12	56.1	48.9 – 58.9	54.7	
	NM13[1]	48.2	45.3 – 50.1	61.3	
	NM14[1]	52.9	48.1 – 55.0	59.6	

Remarks:
[1]: Correction of +3dB (A) for Free-field Measurement.

Ecological Monitoring

4.8 Monthly monitoring of flora species of conservation interest were conducted by ET as scheduled in the reporting quarter. No construction activity and equipment storage were observed within the receptor site. Temporary protective fence were found properly erected and maintained for the transplanted species. Nevertheless, poor health conditions of *Aquilaria sinensis* A-008, A-0009 and A-0010 (defoliation, dead branches, dieback twigs on tree crown etc.) were observed in the reporting quarter. The Contractor was reminded to closely monitor and take appropriate and prompt action (e.g. pruning, mulching etc.) according to the tree conditions to rescue the trees with reference to the approved transplantation proposal. The ecological monitoring photo records and result could refer to the relevant Monthly EM&A Reports.

4.9 According to approved transplantation proposal, the post-transplantation monitoring for transplanted *Brainea insignis* and *Spiranthes sinensis* was conducted by Contractor once per week in the first three months (June to August 2020) after the transplantation of *Brainea insignis* and *Spiranthes sinensis* from 21st to 26th May 2020 and once per month during the 12-month establishment period and the post establishment period until the end of construction phase of the Project. Also, post-transplantation monitoring for *Aquilaria sinensis* was conducted by Contractor once per week in the first three months (October 2020 to January 2021) after the transplantation of *Aquilaria sinensis* from 3rd to 19th October 2020 and once per month during the 12-month establishment period and the post establishment period until the end of construction phase of the Project. During the reporting quarter, the post-transplantation monitoring on transplanted *Brainea insignis, Spiranthes sinensis* and *Aquilaria sinensis* were conducted by the Contractor once per month on 30th October, 27th November and 30th December 2021. Due to the poor health condition of transplanted *Aquilaria sinensis,* the monitoring frequency for transplanted *Aquilaria sinensis* was increased to bi-weekly in the reporting quarter upon recommended by ET and IEC.

4.10 The contractor provided maintenance works including watering, use of mulch and weeding in the first year of establishment to allow healthy growth of the transplanted species. The post-transplantation monitoring record were submitted to ET, IEC and the supervisors for review and record and could refer to the relevant Monthly EM&A Reports.

5 ENVIRONMENTAL SITE INSPECTION

Site Audits

5.1 Site audits were carried out by ET on weekly basis in the reporting quarter to monitor the timely implementation of proper environmental management practices and mitigation measures on the project site. No non-conformance was identified and the observation and recommendations made in each individual site audit session in the reporting period are summarized in **Appendix G**.

Implementation Status of Environmental Mitigation Measures

5.2 According to the EIA Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix F**.

Solid and Liquid Waste Management Status

5.3 In accordance with the EM&A Manual, waste management was audited during weekly site audit to determine if wastes are being managed in accordance with the Waste Management Plan (WMP) prepared for the Project and the relevant legislative and contractual requirements. Waste management practice including waste handling, storage, transportation and disposal were audited.

5.4 The Contractors are advised to minimize the wastes generated through the recycling or reusing. All mitigation measures stipulated in the EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summarised in **Appendix F**.

5.5 Waste generated from this Project includes inert C&D materials and non-inert C&D materials. Non-inert C&D materials are made up of general refuse and waste that cannot be reused or recycled and has to be disposed of at the designated landfill sites. The amount of wastes generated by the construction works of the Project during the reporting quarter is shown in **Appendix H**.

6 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

Summary of Exceedances

6.1 Environmental monitoring works were performed in the reporting quarter and all monitoring results were checked and reviewed. A summary of exceedance is attached in **Appendix E**.

6.2 No exceedance of Action/Limit Levels of air quality was recorded in the reporting quarter.

6.3 Two Action Level exceedances for noise monitoring were recorded due to the documented complaints received in this reporting quarter. No exceedance of Limit Level of construction noise was recorded in the reporting quarter.

Summary of Environmental Non-Compliance

6.4 No environmental non-compliance was recorded in the reporting quarter. The observations and recommendations made in each individual site audit session were presented in **Appendix G**.

Summary of Environmental Complaint

6.5 Three environmental complaints were received in the reporting quarter. The Cumulative Complaint Log sine the commencement of the Project is attached in **Appendix I**.

Summary of Environmental Summon and Successful Prosecution

6.6 There was no successful environmental prosecution or notification of summons received in the reporting quarter. The Cumulative Log for environmental summon and successful prosecution since the commencement of the Project is presented in **Appendix J**.

7 FUTURE KEY ISSUES

Key Issues in the Coming Three Months

7.1 The major construction activities undertaken in the coming three months will include:

- Tree felling works
- Site formation at Portion D
- Retaining Walls, Stormwater Storage Tank and Underpass Construction
- Road and associated works at Kong Nga Po Road
- Slope upgrading works
- Drainage and watermains trenchless works

7.2 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, water quality, waste management and ecology. The proactive Environmental Protection Proforma summarizing the major site activities, potential environmental impacts and recommended mitigation measures for the coming months could refer to relevant Monthly EM&A Report.

7.3 Dust can be generated during construction works and exposed site area especially during dry, windy weather. During dry season, the Contractor should pay attention on the air quality mitigation measures as far as practicable to minimise the dust impact to the villages which are located adjacent to the Project works. The Contractor was also reminded to follow the Project Implementation Schedule in approved EIA report / EM&A Manual to implement appropriate dust control measure including "Use of regular water spraying (once every 1.25 hours or 8 times per day) to reduce dust emissions from heavy construction activities (including ground excavation, earth moving, etc.) at all active works area exposed site surfaces and unpaved roads, particularly during dry weather and covering 80% of stockpiling area by impervious sheets and spraying all dusty material with water immediately prior to any loading transfer operations to keep the dusty materials wet during material handling at the stockpile areas" as well as the relevant dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation so that no adverse dust impact arising from the Project works site.

7.4 Construction noise is also one of the key environmental issues during construction of the Project. Noise mitigation measures such as using quiet plants and noise barriers should be in place, where applicable. In addition, the Contractor was reminded to frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers; proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary; and provide notification to nearby villagers in Kong Nga Po for potential noisy works at works area.

7.5 All other mitigation measures recommended in the Project Implementation Schedule in approved EIA report / EM&A Manual should be properly implemented and maintained as far as practicable.

8 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

8.1 This Quarterly EM&A Report presents the EM&A work undertaken in October to December 2021 in accordance with EM&A Manual.

8.2 Environmental monitoring and audit works were performed in the reporting quarter and all monitoring results were checked and reviewed.

Air Quality Monitoring

8.3 Air Quality monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

Construction Noise Monitoring

8.4 Construction Noise monitoring was conducted as scheduled in the reporting quarter. Two Action Level exceedances for noise monitoring were recorded due to the documented complaints received in this reporting quarter. No exceedance of Limit Level of construction noise was recorded in the reporting quarter.

Environmental Site inspections

8.5 Environmental site inspections were conducted as weekly basis in the reporting quarter. No environmental non-compliance was recorded.

Environmental Complaint and Successful Prosecution

8.6 Three environmental complaints and no notification of summons or successful prosecutions were received in the reporting quarter.

Recommendations

8.7 The mitigation measures recommended in the EIA report and EM&A Manual are considered effective and efficient in minimizing environmental impacts due to construction of the project during the reporting quarter. The EM&A programme implemented by the ET has effectively monitored the environmental impacts arising from the construction activities and ensure the proper implementation of mitigation measures.

8.8 The effectiveness and efficiency of the EM&A programme will be continuously reviewed. The EM&A programme will be improved if deficiencies of the existing EM&A programme are identified.

8.9 According to the environmental audits performed in the reporting quarter, the following recommendations were provided to remediate any potential impacts due to the Project:

Air Quality Impact

- To provide dust mitigation measures for dusty work like grouting during operation;
- Non-Road Mobile Machinery (NRMM) Labels must be demonstrated on the registered equipment for inspection;
- To cover stockpile of dusty materials and exposed slope for dust suppression;
- To deploy dust screen for socketed H pile during piling work;
- Only well-maintained plant to be operated onsite and plant should be serviced regularly during the construction works; and
- To enhance the dust suppression measures for the exposed site area and haul road.

Construction Noise Impact

- To inspect the noise sources inside the site;
- To space out noisy equipment and position the equipment as far away as possible from sensitive receivers; and
- To provide temporary noise barriers for operations of noisy equipment near the noise sensitive receivers, if necessary.

Water Impact

- To keep review on and enhance the sediment control measures regarding the storm water management, especially during the rainy season;
- To keep review and implement temporary drainage system;
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge;
- To ensure surface runoff discharge to temporary drainage and treated before discharging;
- To ensure wastewater treatment facilities were functioning properly; and
- To prevent wheel washing water from entering to the public road.

Waste/Chemical Management

- To check for any accumulation of waste materials or rubbish on site;
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the site;
- To maintain the drip tray well to prevent oil and chemical leakage; and
- To avoid improper handling, storage and dispose of oil drums or chemical containers on site.

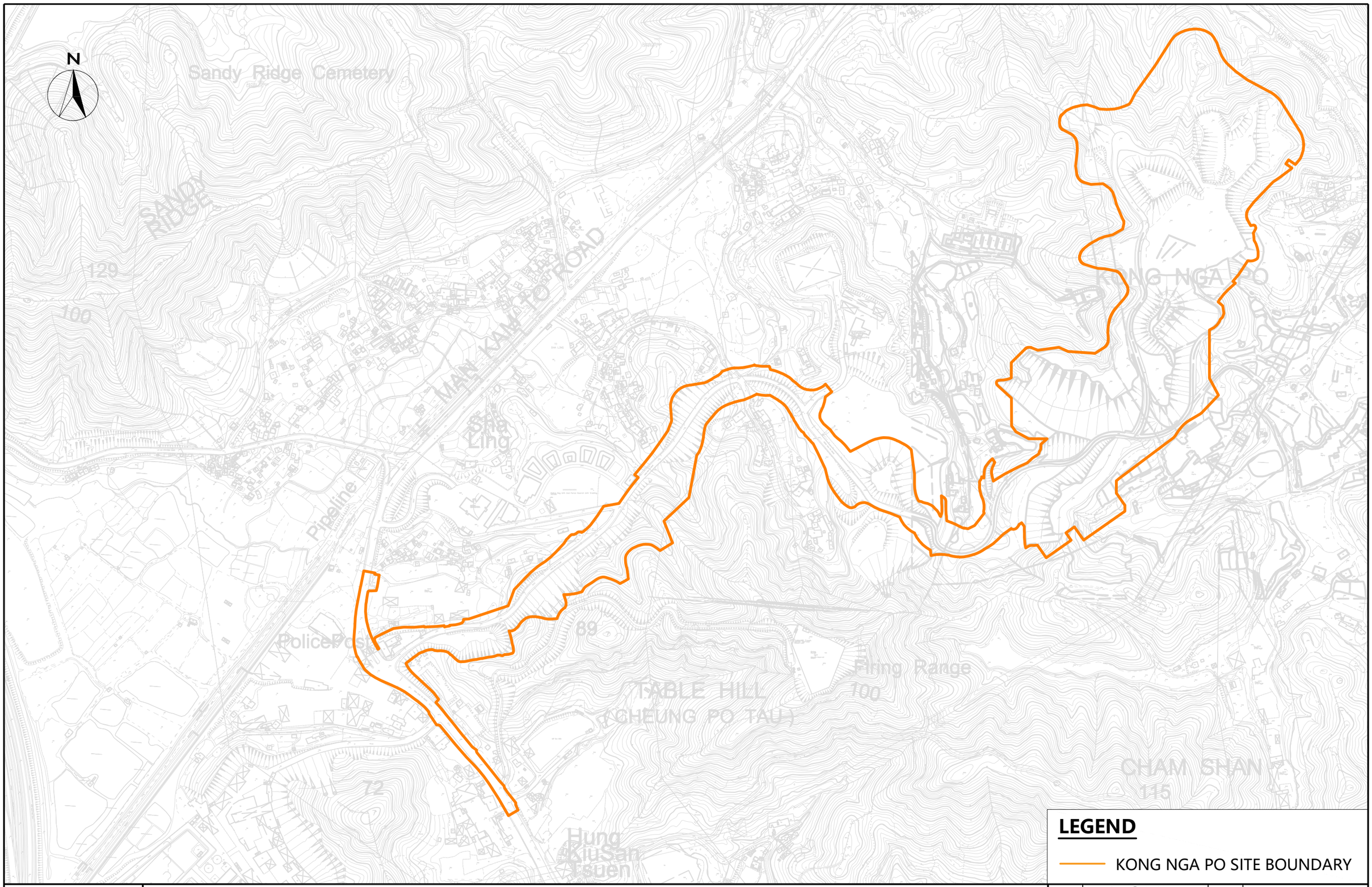
Landscape and Visual

- To erect and maintain the protection fencing and tree protection zone around the preserved trees.

Ecology

- To erect and maintain the protection fence around the retained trees; and
- To keep close monitor of conservation species and avoid dead/ detached branches.

FIGURE(S)



WELLAB

Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

Site Layout Plan

SCALE	A3 @1:40000	DATE	MAY 2020
CHECK	IT	DRAWN	KIKI
JOB No.	WMA20001	FIGURE No. 1	REV –

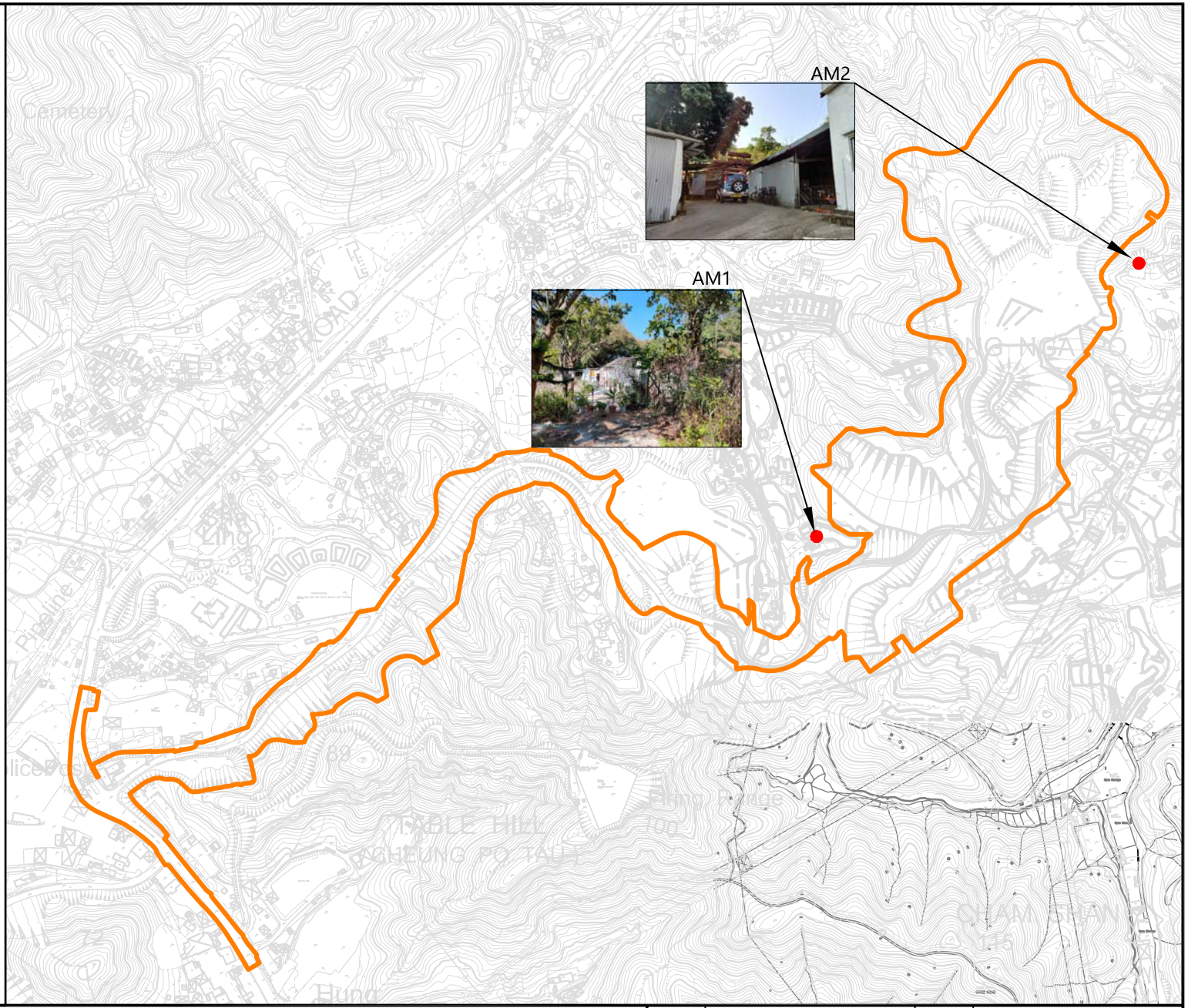
N

LEGEND

SITE BOUNDARY

AIR QUALITY MONITORING STATIONS

AIR QUALITY MONITORING STATIONS	
I.D	Description
AM1	Village House, Kong Nga Po
AM2	Village House, Kong Nga Po



WELLAB

Service Contract No. NDO 07/2019
Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

Air Quality Monitoring Stations

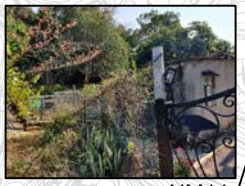
SCALE	A4 @ 1:50000	DATE	JUL 2020
CHECK	IT	DRAWN	NL
JOB No.	WMA20001	FIGURE NO. 2	REV –

LEGEND

SITE BOUNDARY

NOISE MONITORING STATIONS

NOISE MONITORING STATIONS	
I.D	Description
NM1	Village House, Sha Ling
NM2	Village House, Sha Ling
NM3	Village House No. 248, Sha Ling
NM4	Village House, Sha Ling
NM5	Village House No. 270, Sha Ling
NM6	Village House, Sha Ling
NM7	Village House, Sha Ling
NM8	Village House, Sha Ling
NM9	Village House, Kong Nga Po
NM10	Village House, Kong Nga Po
NM11	Village House, Kong Nga Po
NM12	Village House, Kong Nga Po
NM13	Village House, Kong Nga Po
NM14	Village House, near Man Kam To Road











NM13 NM14 NM4 NM6 NM7 NM11 NM12 NM3 NM2 NM5 NM8 NM9 NM10 NM1

N

WELLAB

Service Contract No. NDO 07/2019

Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

Noise Monitoring Stations

SCALE	A4 @ 1:50000	DATE	JUL 2020
CHECK	IT	DRAWN	NL
JOB No.	WMA20001	FIGURE NO. 3	REV –

APPENDIX A
ACTION AND LIMIT LEVELS

Appendix A - Action and Limit Levels

Table A-1 Action and Limit Levels for 1-hour TSP

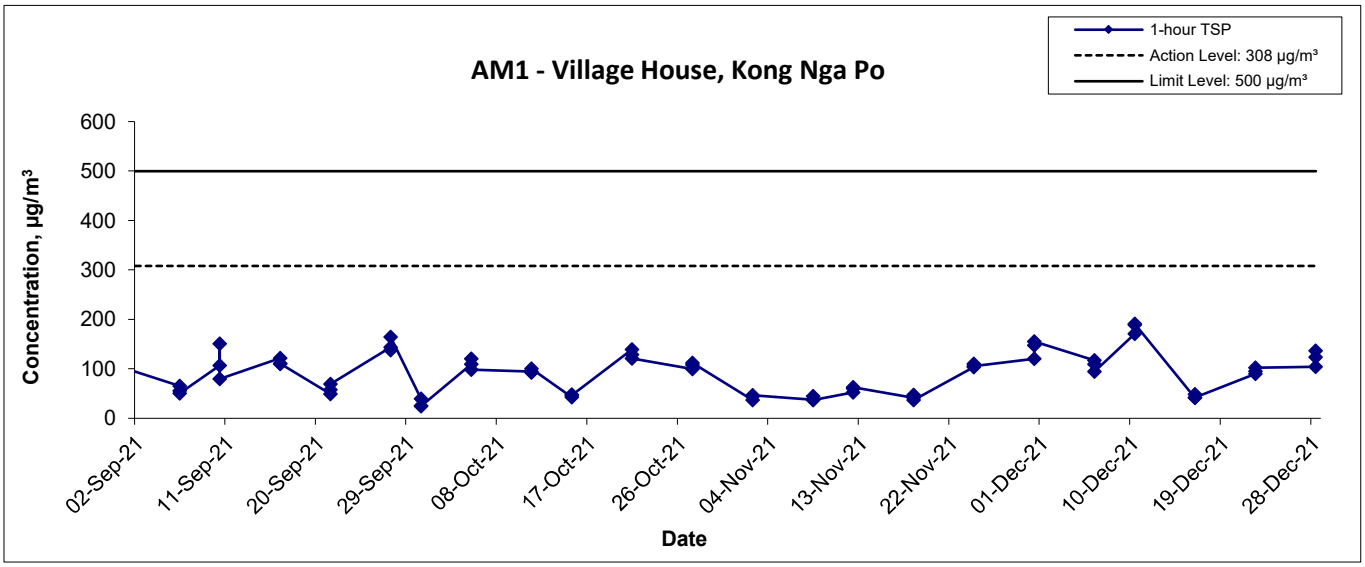
Monitoring station	Action Level (ug/m^3)	Limit Level (ug/m^3)
AM1	308	500
AM2	311	

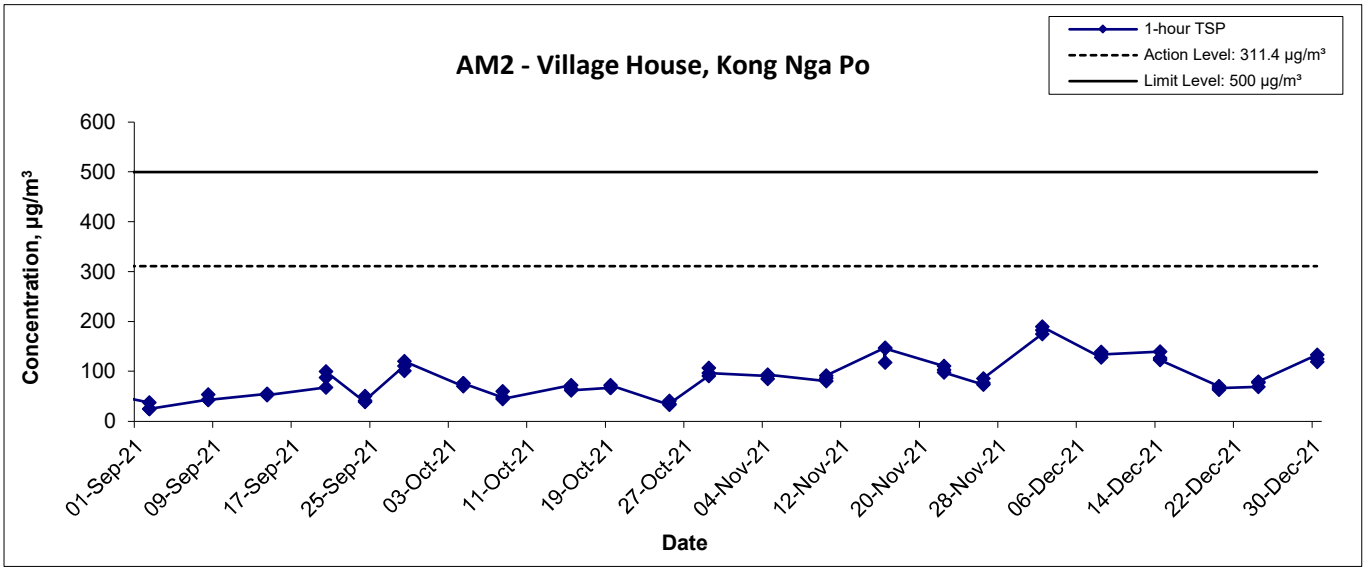
TableA-2 Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700-1900 hours on normal weekdays	When one documented complaint is received	75 dB(A)

Noted:
If works are to be carried during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

APPENDIX B
1-HOUR TSP MONITORING
GRAPHICAL PRESENTATION

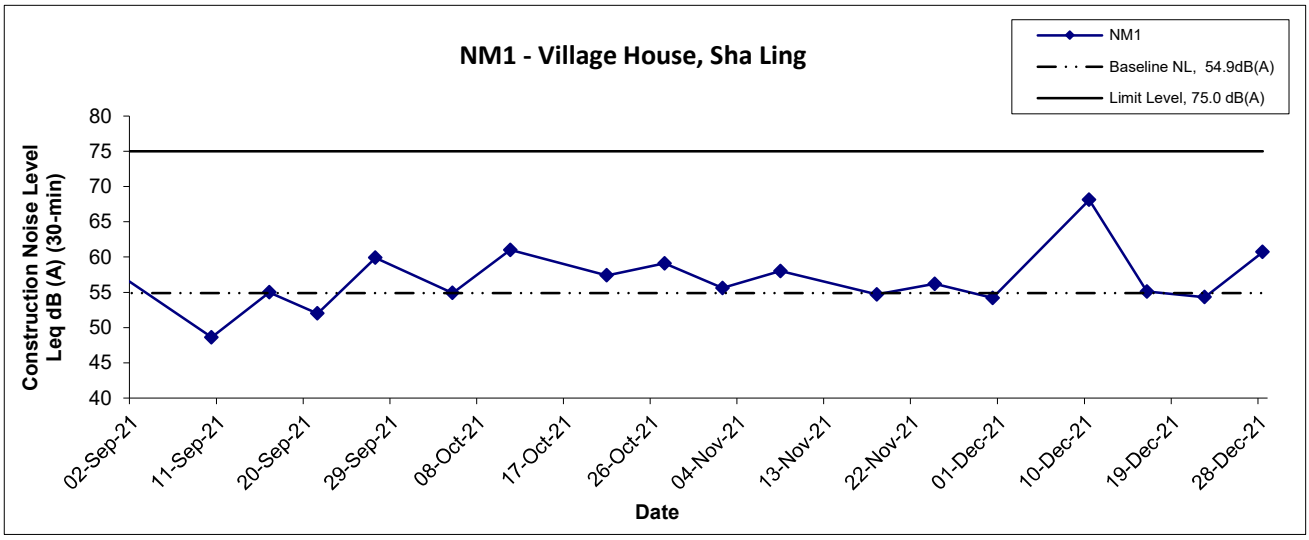


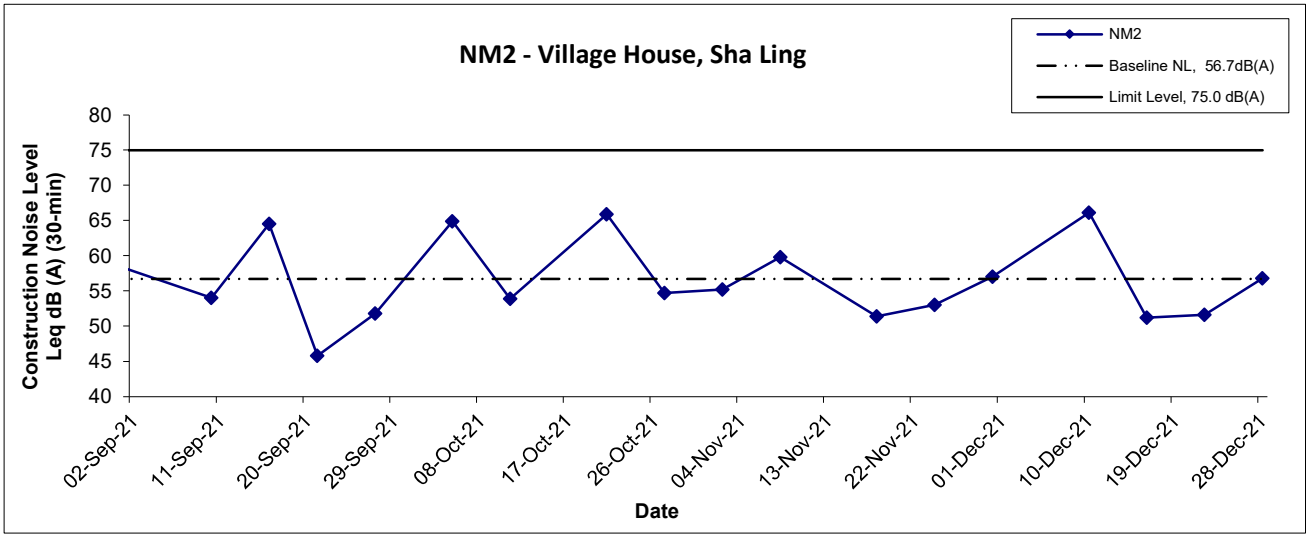


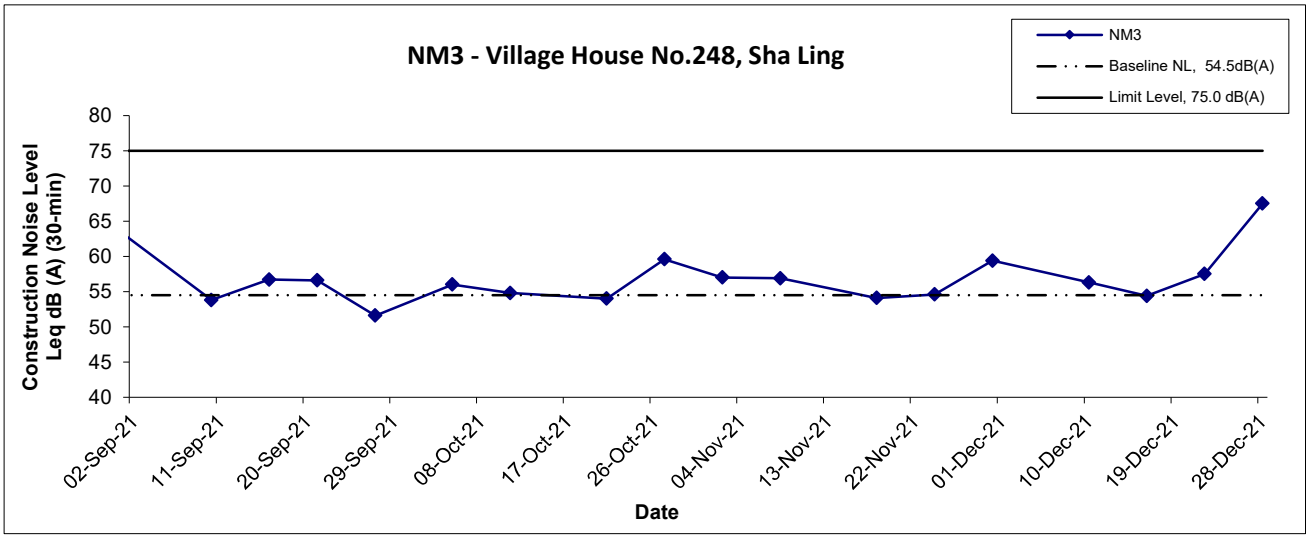
Title: Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S	Project No.: WMA20001	WELLAB 匯力 consulting . testing . research
	Date: Dec 21	Appendix: B	

APPENDIX C
NOISE MONITORING GRAPHICAL PRESENTATION

Noise Levels







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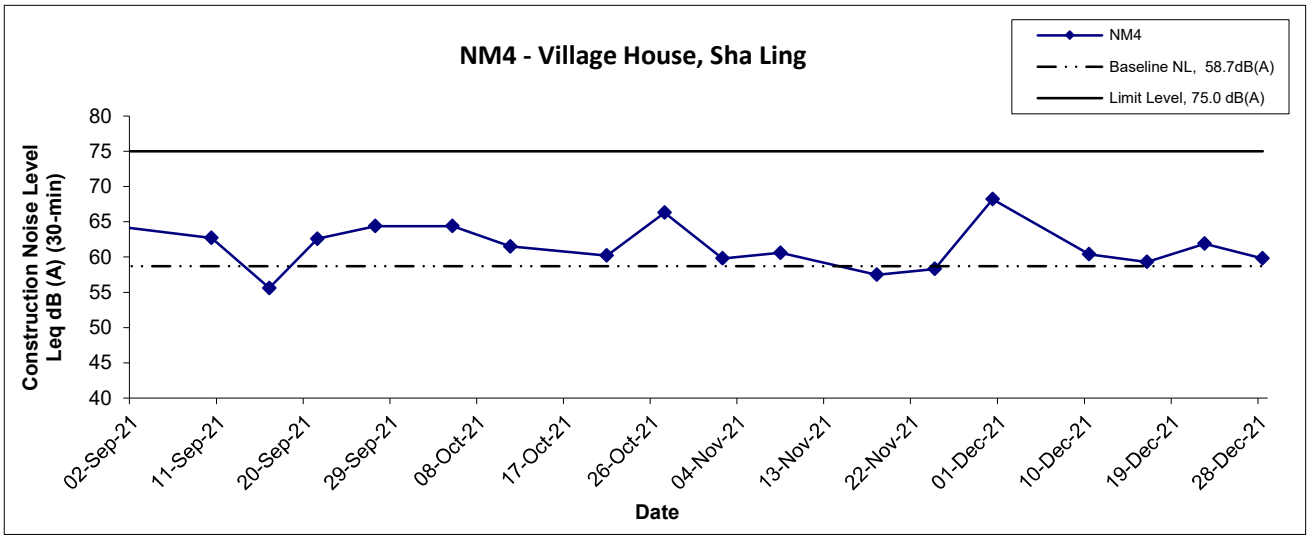
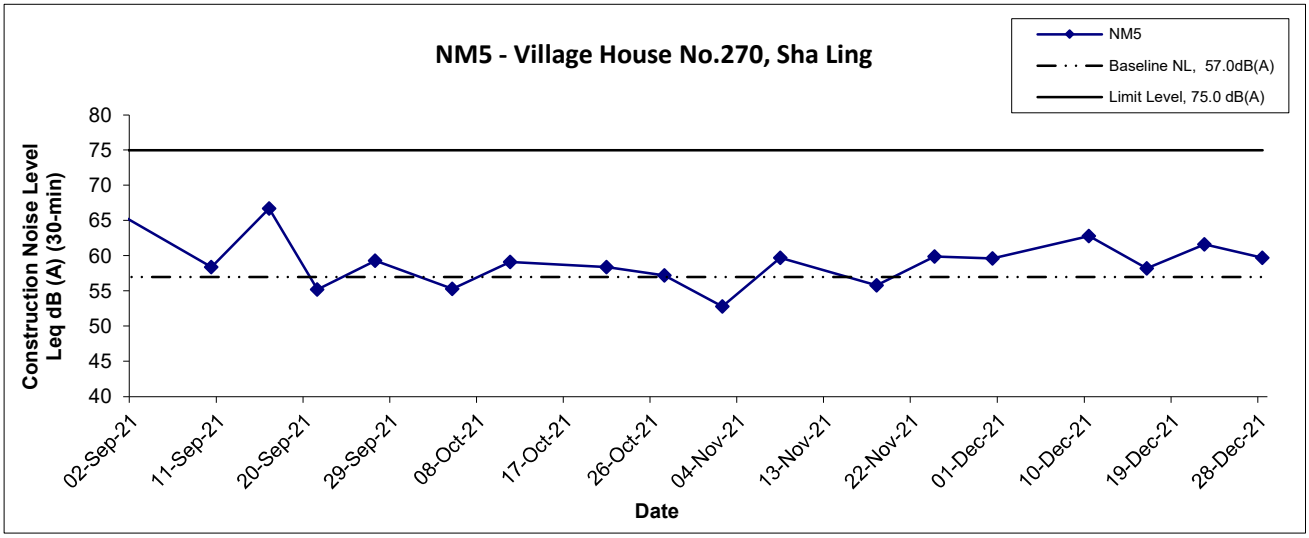
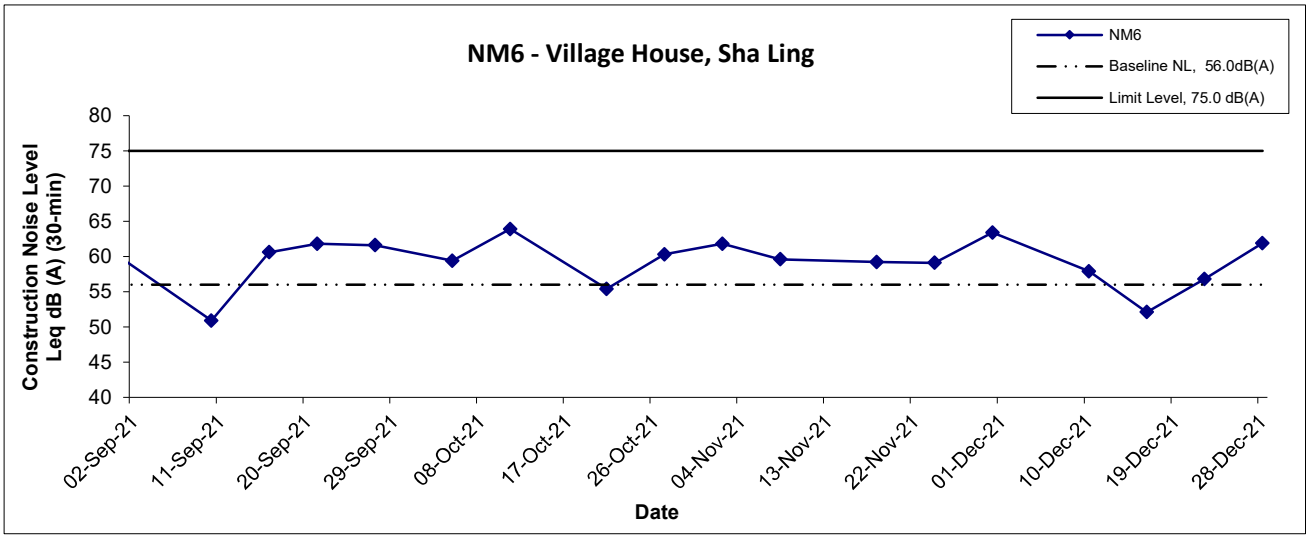
	Date: Dec 21	Appendix: C	

Noise Levels

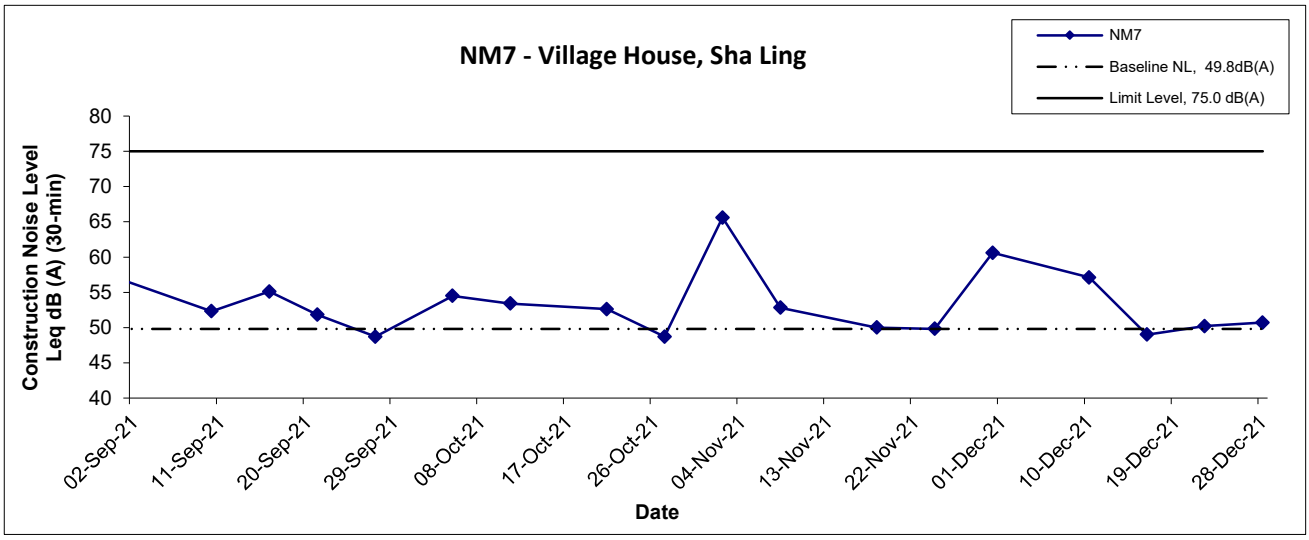


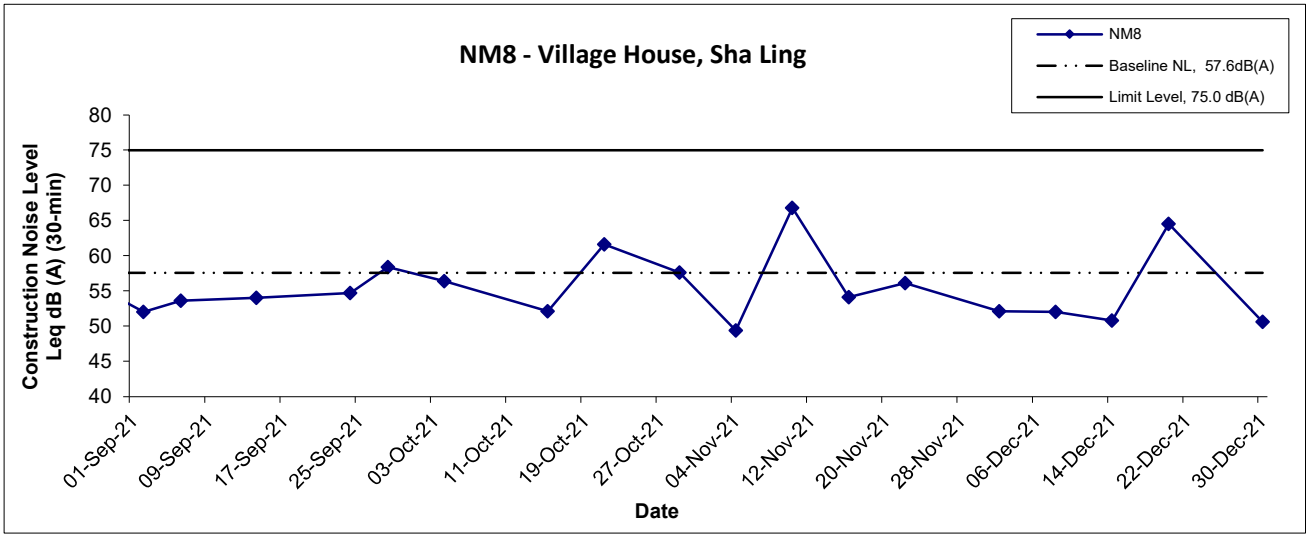


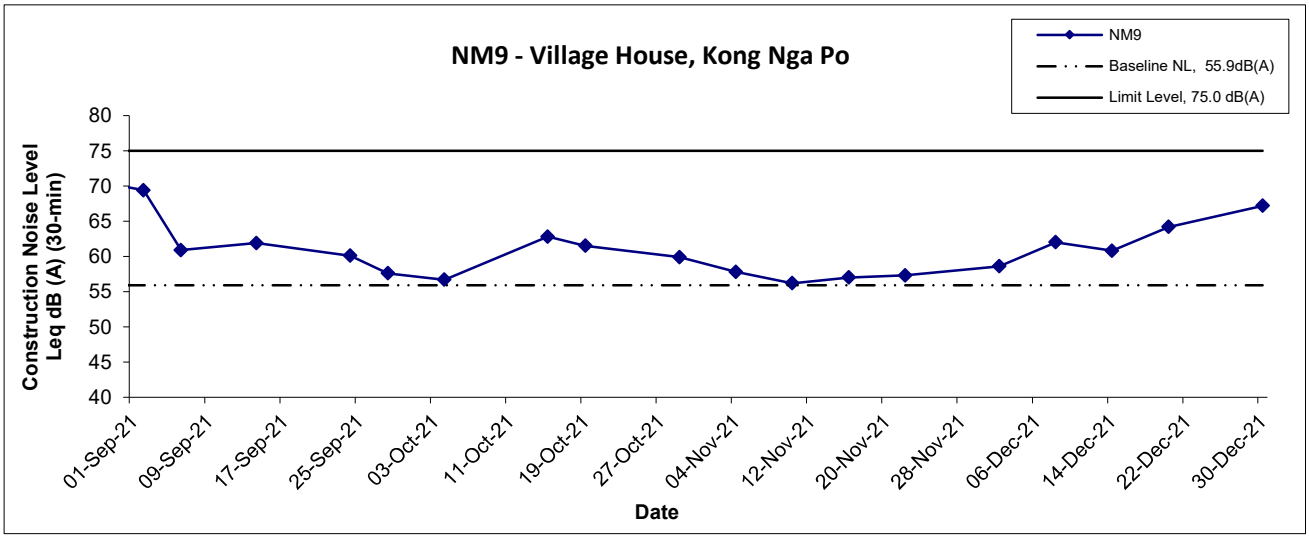


Title: Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: WMA20001	WELLAB 匯力 consulting . testing . research
	Date: Dec 21	Appendix: C	

Noise Levels



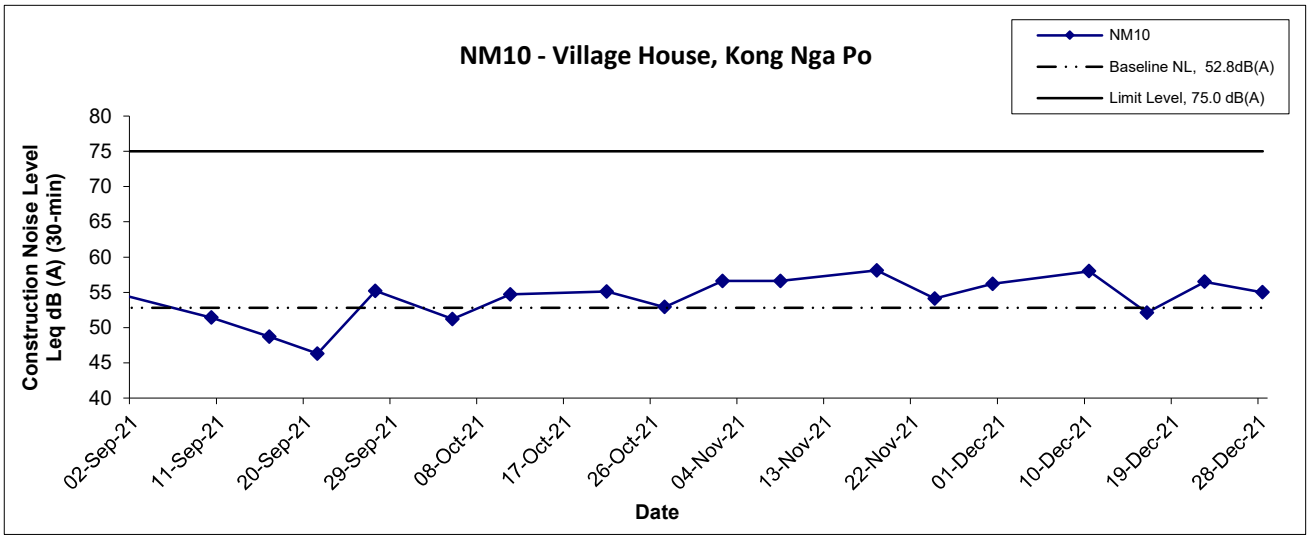


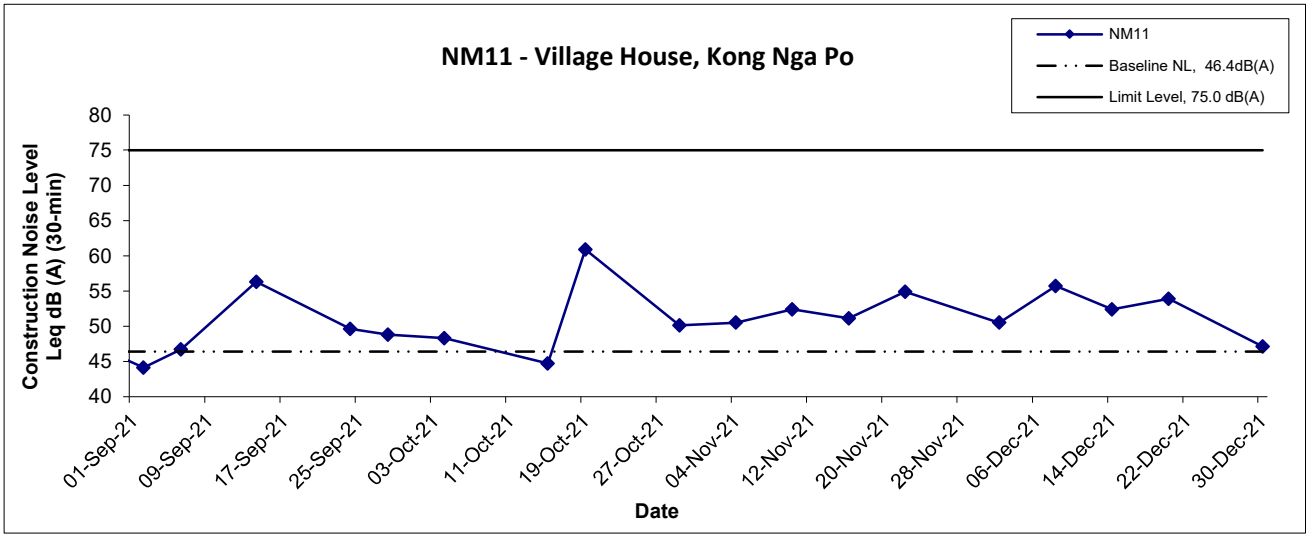


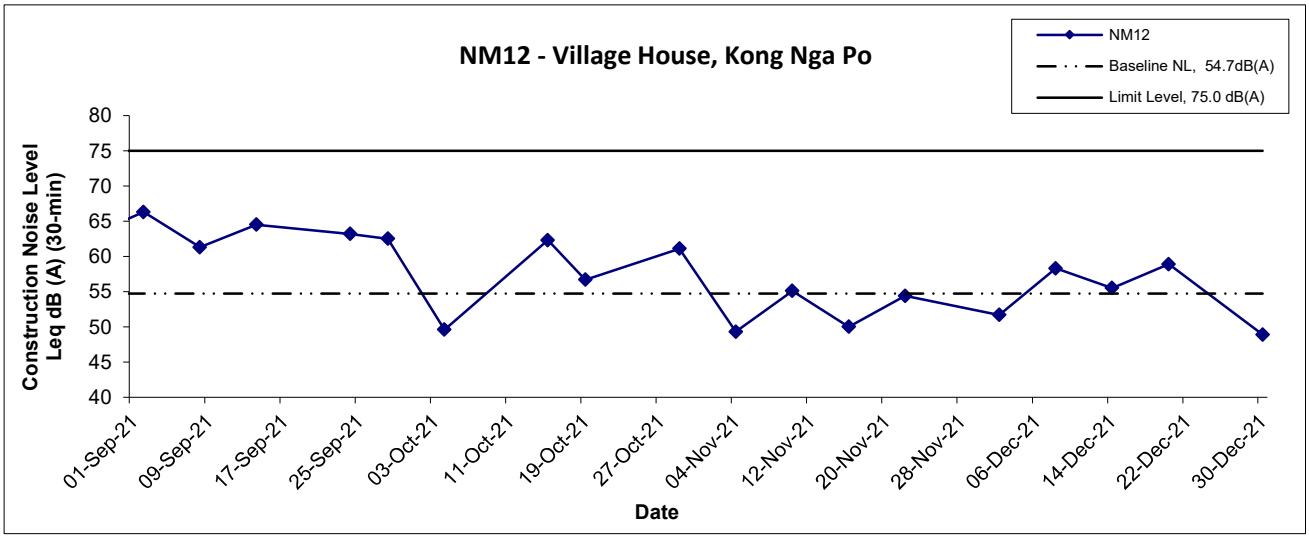
Title	Scale	Project No.
Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Graphical Presentation of Construction Noise Monitoring Results	N.T.S	WMA20001
	Date: Dec 21	Appendix: C

WELLAB 匯力 consulting . testing . research

Noise Levels

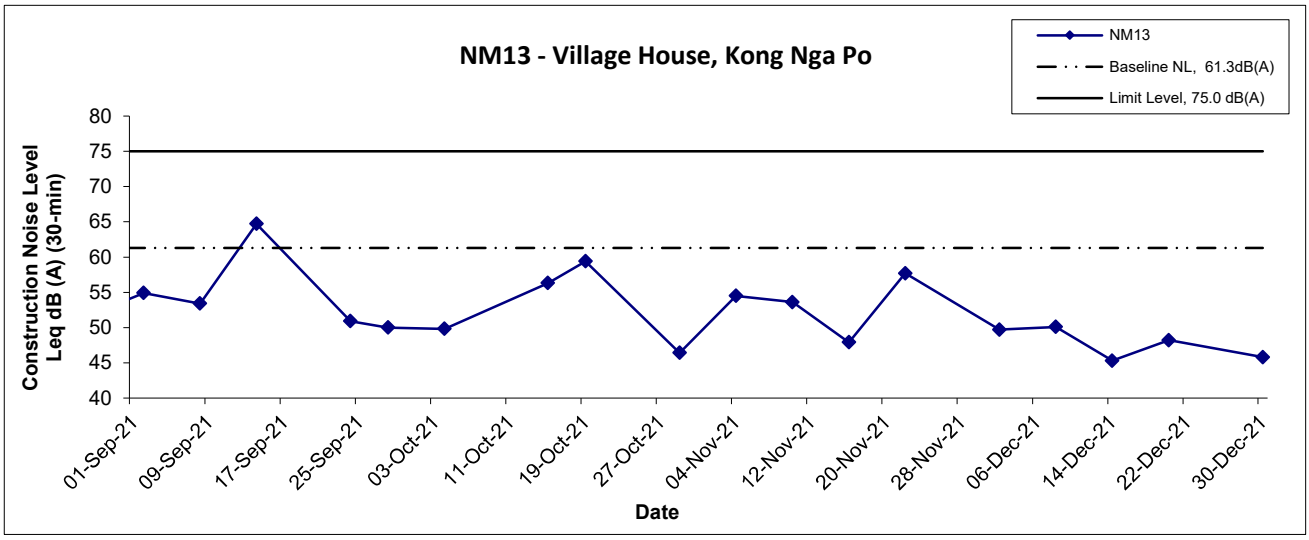


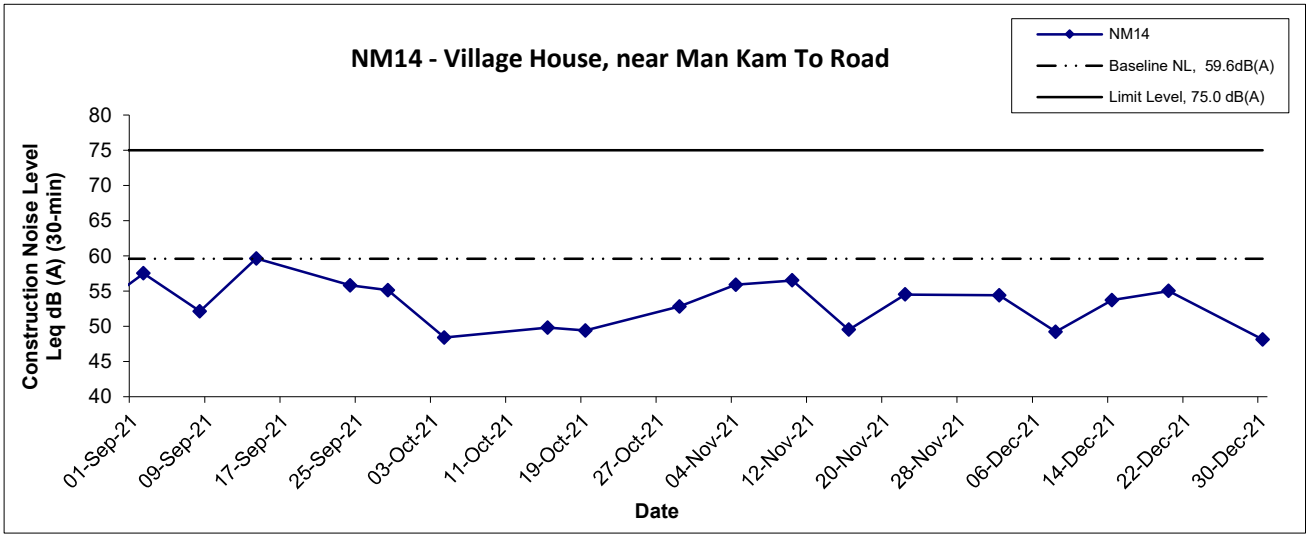




Title	Scale	Project No.	
Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Graphical Presentation of Construction Noise Monitoring Results	N.T.S	WMA20001	WELLAB 匯力 consulting . testing . research
	Date Dec 21	Appendix C	

Noise Levels





Title: Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: WMA20001	WELLAB 匯力 consulting . testing . research
	Date: Dec 21	Appendix: C	

APPENDIX D
EVENT ACTION PLANS

Appendix D:

Table D-1: Event / Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice: 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC, ER and Contractor; 3. Advise the WKCDA on the effectiveness of the proposed remedial measure; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required;	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; and	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	5. Monitor Implementation of remedial measures.		
LIMIT LEVEL				
1.Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; and 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and the ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; and 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid furthrt exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	1. Notify IEC, the ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily;	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with IEC, agree with the Contractor	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Monitor implementation of remedial measures.	on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedances is abated.	working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; and 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table D-2: Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; and 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise ER; and 3. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measure to be implemented: and 4. Supervise the implementation of remedial measure.	1. Submit noise mitigation proposals to IEC and ER; and 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER and Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase the monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on	1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions; and 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; and 5. If exceedance continues, consider	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; and 5. Stop the relevant portion of works as

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	remedial measure required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.		stopping the Contractor to continue working in that portion of work which causes the exceedance until the exceedance is abated.	determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table D-3: Event / Action Plan for Landscape and Visual Mitigation Measures

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Non-conformity on one occasion	Identify source. Inform IEC and ER. Discuss remedial actions with IEC, ER and Contractor. Monitor remedial actions until rectification has been completed.	Check report. Check Contractor's working method. Discuss with ET and Contractor on possible remedial measures. Advise ER on effectiveness of proposed remedial measures. Check implementation of remedial measures.	Notify Contractor. Ensure remedial measures are properly implemented	Amend working methods to prevent recurrence of nonconformity. Rectify damage and undertake additional action necessary.
Repeated Nonconformity	Identify source. Inform IEC and ER. Increase monitoring frequency. Discuss remedial actions with IEC, ER and Contractor. Monitor remedial actions until rectification has been completed. If non-conformity stops, cease additional monitoring.	Check monitoring report. Check Contractor's working method. Discuss with ET and Contractor on possible remedial measures. Advise ER on effectiveness of proposed remedial measures. Supervise implementation of remedial measures.	Notify Contractor. Ensure remedial measures are properly implemented.	Amend working methods to prevent recurrence of nonconformity. Rectify damage and undertake additional action necessary.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

APPENDIX E
SUMMARY OF EXCEEDANCE

Appendix E: Exceedance Report

(A) Exceedance Report for Air Quality

Reporting Quarter: October to December 2021

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract		Cumulative No. of Exceedance recorded
		Action Level	Limit Level	Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	0

(B) Exceedance Report for Construction Noise

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract		Cumulative No. of Exceedance recorded
		Action Level	Limit Level	Action Level	Limit Level	
Noise	$L_{eq(30\ min.)}$ dB(A)	0	0	2	0	5

APPENDIX F
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Air Quality Impact – Construction Phase							
3.91	2.2	**Dust Control Measures** To achieve compliance with the FSP, RSP and TSP criteria during the construction phase, good practices for dust control should be implemented to reduce dust impacts. The dust control measures are detailed as follows: • Use of regular water spraying (once every 1.25 hours or 8 times per day) to reduce dust emissions from heavy construction activities (including ground excavation, earth moving, etc.) at all active works area exposed site surfaces and unpaved roads, particularly during dry weather. • Covering 80% of stockpiling area by impervious sheets and spraying all dusty material with water immediately prior to any loading transfer operations to keep the dusty materials wet during material handing at the stockpile areas.	Construction Dust	Contractor	Project construction site / Duration of the construction phase / Prior to commencement of operation	Construction phase	*
		Relevant dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted: **Good Site Management** • Good site management is important to help reduce potential air quality impact down to an acceptable level.					*
							^

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		As a general guide, the Contractor should maintain high standards of housekeeping to prevent emissions of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or byproducts should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.					
		Disturbed Parts of the Roads • Main temporary access points should be paved with concrete, bituminous hardcore materials or metal plates and be kept clear of dusty materials; or • Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road wet.					^ *
		Exposed Earth • Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex,					^

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.					
		Loading, Unloading or Transfer of Duty Materials • All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.					^
		Debris Handing • Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. • Before debris is dumped into a chute, water should be sprayed onto the debris so that it remains wet when it is dumped.					^ ^
		Transport of Dusty Materials • Vehicles used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.					^
		Wheel Washing • Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the					^

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.					
		Use of Vehicles • The speed of the trucks within the site should be controlled to about 10 km/hour in order to reduce adverse dust impacts and secure the safe movement around the site • Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. • Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.					^ ^ ^
		Site hoarding • Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.					^

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Noise Impact – Construction Phase							
4.4.6	3.2	**Good Site Practice** Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction: • Only well-maintained plant to be operated onsite and plant should be serviced regularly during the construction works; • Machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; • Mobile plant should be sited as far away from NSRs as possible; and • Material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.	Maintain good site practice to minimise / avoid construction noise impact	Contractor	Within the Project site / During construction phase / Prior to commencement of operation.	Construction Phase	^ ^ ^ ^ ^
4.4.6	3.2	**Adoption of QPME** • QPME should be adopted as far as applicable.	Minimise/ avoid construction noise	Contractor	Within the	Construction Phase	^

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
4.4.6	3.2	**Use of Movable Barriers** • Movable noise barriers should be placed along the active works area and mobile plants to block the direct line of sight between PME and the NSRs.	impacts to the surrounding NSRs		Project site / During construction phase / Prior to commencement of operation.		^
4.4.6		**Use of Noise Enclosure/ Acoustic Shed** • Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator.					^
4.4.6		**Use of Noise Insulating Fabric** • Noise insulating fabric can also be adopted for certain PME (e.g. pilling machine etc.).					*
Water Quality Impact – Construction Phase							
5.6.1.1	4.2	**General Construction Activities** The following measures should be implemented: • Construction waste, debris and refuse generated on-site should be stored or contained appropriately to prevent them entering nearby watercourses or blocking stormwater drains. • Regular off-site removal of these materials should be maintained to minimise the volume of waste present on the construction site at any one time. • Stockpiles of construction materials such as cement and	Maintain good site practices to avoid pollution of water courses	Contractor	Within the Project site / During construction phase	Construction Phase	* ^ *

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		excavated material should be covered when not in use to reduce the potential for water pollution.					
5.6.1.2	4.2	**Construction Site Runoff** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended: • Temporary site drainage facilities are to be designed and implemented by the Contractor prior to commencement of construction to convey surface runoff to storm drains applying adequately designed silt/ sand removal traps and sediment basins. • Perimeter cut-off drains shall be installed in advance of any earthworks and site formation work to convey site runoff from the works areas to the silt removal facilities.\ • Runoff into the excavation areas during rainstorm events shall be minimised as far as practicable. Any wastewater pumped out of the excavation areas shall be treated to remove suspended solids prior to discharge. • Maintenance and inspection of the drainage system and sediment removal facilities should be carried out regularly to remove any sediment and blockages, especially when	Minimise / control construction site runoff to avoid pollution of water courses	Contractor	Within the Project site / During construction phase	Construction Phase	* ^ ^ *

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		rainstorms are forecast. • Final surface levels should be compacted and final surface protections installed to prevent erosion caused by rainstorms. • Open stockpiles of material should be covered on site with waterproof layers such as tarpaulin to reduce the potential for sediment laden runoff entering the drainage system. • The wheels of all vehicles and plant should be cleaned before leaving the works areas to remove sediment, soil and debris from the tracks. The washwater should be treated to remove any suspended sediment. • Surface water from concrete batching areas and the rest of the site should be separated as far as possible. Wastewater from any concrete batching plant (if required) shall be treated to the required standards including pH adjustment and settlement of suspended sediments before discharging to stormwater drains • Manholes (including those constructed as part of the Project) should be adequately covered and temporarily sealed at all times to prevent silt, construction materials or debris from entering the drainage system, and to prevent storm runoff from entering foul sewers. The discharge of					^ ^ * ^ ^

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		surface runoff into foul sewers should be prevented so as not to overload the sewerage system. Discharges should be collected by the temporary drainage system installed by the Contractor and treated on-site to remove sediment prior to discharge to the off-site drainage areas. The Contractor is required to obtain a discharge licence from EPD under the WPCO for all discharges from site with all discharges meeting the water quality requirements of the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS).					*
5.6.1.3	4.2	**Accidental Spillage of Chemicals** In accordance with the Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C), the following measures should be implemented: • The labelling and storage of chemicals should be in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and maintained at all times by the Contractor. • Oils and fuels should only be stored in designated areas which have appropriate pollution prevention control facilities such as oil and grease traps.	Prevent accidental discharge of chemicals into the surrounding environment	Contractor	Within the Project site / During construction phase	Construction phase	^ *

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		• The maintenance of vehicles should only be undertaken in areas of the site served by appropriate pollution prevention control facilities. • To prevent the spillage of fuels and solvents to nearby stormwater drains, all fuel tanks and storage areas should be locked and sited on sealed areas of the site, within bunded areas with a capacity equal to 110% of the storage capacity of the largest container. The bund should be kept free of surface water at all times and after each rainfall event.					^ *
5.6.1.4	4.2	**Sewage from Construction Workforce** Portable toilets should be available throughout the construction phase and regularly maintained, collected and disposed by a licensed waste collector to a public sewage treatment works for suitable treatment.	Prevent discharge of sewage into the surrounding environment	Contractor	Within the Project site / During construction phase	construction phase	^
5.6.1.5	4.2	**Construction Works in Close Proximity to Inland Watercourses** Mitigation measures such as such as temporary diversions of existing drainage culverts/ watercourses before construction commences and during construction should be implemented, in addition to those listed in ProPECC Note PN1/94 *Construction Site Drainage and ETWB TC (Works) No. 5/2005 Protection of*	Minimise/ control construction site discharges to avoid pollution of nearby watercourses	Contractor	Within the Project site / During construction phase	construction phase	

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Natural Streams/rivers from Adverse Impacts Arising from Construction Works. Measures include the following: • Stockpiling of construction materials and spoil, should be properly covered and located away from any natural stream/river. • Construction works close to the inland waters should be carried out in dry season as far as practicable where the flow in the surface channel or stream is low. • Removal of existing vegetation alongside the riverbanks should be avoided or minimised. When disturbance to vegetation is unavoidable, all disturbed areas should be hydroseeded or planted with suitable vegetation to blend in with the natural environment upon completion of works.					N/A N/A N/A
Waste Management Implications – Construction Phase							
7.5.1.1	6.2	**Good Site Practice** Recommendations for good site practices during the construction activities include: • Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	Implement good site practices to minimize waste generation	Contractor	Project construction site / Throughout construction stage / Until completion of all construction activities	Construction phase	*

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		• Training of site personnel in proper waste management and chemical handling procedures • Provision of sufficient waste disposal points and regular collection of waste • Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers • Stockpiles of C&D materials should be kept covered by impervious sheets to avoid windblown dust • All dusty materials including C&D materials should be sprayed with water immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling at the stockpile areas • Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads • Well planned delivery programme for off-site disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated					^ ^ ^ ^ ^ ^ ^
7.5.1.2	6.2	**Waste Reduction Measures** Good management and control can prevent the generation of a	Implement good management and control to	Contractor	Project construction site /	Construction phase	

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: • Sort non-inert C&D materials to recover any recyclable portions • Segregation and storage of different types of waste in different containers or skips or stockpiles to enhance reuse or recycling of materials and their proper disposal • Encourage collection of recyclable waste such as waste paper and aluminum cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force • Proper site practices to minimize the potential for damage or contamination of inert C&D materials • Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste	minimize waste generation		Throughout construction stage / Until completion of all construction activities		^ ^ ^ ^ ^
7.5.1.3	6.2	**Inert and Non-inert C&D Materials** In order to minimise impacts resulting from collection and transportation of inert C&D materials for off-site disposal, the inert C&D materials should be reused on-site as fill material as far	Minimise impacts resulting from collection and transportation of inert C&D materials	Contractor	Project construction site / Throughout construction stage	Construction phase	^

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		as practicable. In addition, inert C&D materials generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation. The surplus inert C&D materials will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the DEVB Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the ETWB Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site			/ Until completion of all construction activities		^ ^ ^

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7.5.1.4	6.2	**Chemical Waste** If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the "Code of Practice on the Packaging Labelling and Storage of Chemical Wastes". Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended	Implement good practices to avoid chemical waste impact.	Contractor	Project construction site / Throughout construction stage / Until completion of all construction activities	Construction phase	*

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7.5.1.5	6.2	**General Refuse** General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'windblown' light material.	Implement good practices to avoid odour nuisance or pest/vermin problem and waste impact.	Contractor	Project construction site / Throughout construction stage / Until completion of all construction activities	Construction phase	*
Land Contamination – Construction Phase							
8.6.1	7.2	In any case where contaminated soil is identified after the commencement of works, a Contamination Assessment Plan (CAP) is required to be prepared for EPD's endorsement prior to the site investigation. The Contamination Assessment Report (CAR) and/ or Remediation Action Plan (RAP) should be prepared for EPD's approval after the site investigation. If land contamination is confirmed, remediation works should be carried out according to the approved RAP. A Remediation Report (RR) should also be prepared for EPD's endorsement to demonstrate that the clean-up of the contaminated land is completed. No construction work or development of the site should be carried out before the approval of the RR.	Assessment is required for EPD approval in any case where contaminated soil is identified	Contractor	Project construction site / Before construction stage	Design phase	N/A
8.6.1	7.2	The following mitigation measures are proposed for contaminated material excavation and transportation of contaminated materials	Minimise impacts resulting from excavation and	Contractor	Project construction site /	Construction phase	

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		(if any), in order to minimise the potentially adverse effects in the health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials: • To minimise the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; • Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when working directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; • Stockpiling of contaminated excavated materials on site should be avoided as far as possible; • The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; • Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and / or release of contaminated wastewater; • Truck bodies and tailgates should be sealed to stop any discharge; • Only licensed waste haulers should be used to collect and	transportation of contaminated materials		Throughout construction stage / Until completion of all construction activities		N/A N/A N/A N/A N/A N/A N/A

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		transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; • Speed control for trucks carrying contaminated materials should be exercised; • Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C) and obtain all necessary permits where required; and • Maintain records of waste generation, disposal quantities and disposal arrangements.					N/A N/A N/A
Ecological Impact							
9.7.1	8.3	**Temporary Protective Fence for Flora Species of Conservation Interest** During construction phase, erection and maintenance of a temporary protective fence enclosing the flora species of conservation interest identified under the detailed vegetation survey is recommended. Monthly monitoring of any other flora species of conservation interest identified in the detailed vegetation survey should be conducted during the construction phase.	To avoid potential impact on flora species of conservation interest from construction activities such as materials storage; To make sure that the flora species of conservation interest are not affected by the construction activities of	Contractor	Project construction site / Throughout construction stage / Until completion of all construction activities	Construction phase	^

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			the project.				
Golden-headed Cisticola (Recommended Mitigation Measures from Baseline Survey Report of Golden-headed Cisticola)							
-	-	The following mitigation measures are proposed for minimizing noise impacts induced by construction works: • Silencers or mufflers on well-maintained construction equipment should be utilized and properly maintained during the construction program • Noise enclosure or acoustic shed should be effectively utilized, where practicable • Machines or equipment known to emit noise or light strongly in one direction should, wherever possible, be orientated the noise away from the adjacent habitat	Construction noise	Contractor	Project area – areas adjacent to sensitive receivers / During construction phase	Construction phase	N/A ^ ^
-	-	The following mitigation measures are proposed for minimizing light impacts: • Adjusting the outdoor lighting to lower intensity • Use of directional lighting to avoid light spill into sensitive areas • Control/timing of lighting periods of some facilities, particularly those close to the ecological sensitive receivers	To minimize the light disturbance to avifauna	Contractor	Project area – areas adjacent to sensitive receivers / During construction phase	Construction phase	^ ^ ^

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
-	-	**Drainage system** • Proper drainage system should be installed to collect and dispose rainwater • Installation of sediment/rubbish trapping facilities (e.g. catch pits or sand/silt traps to contain the increase in suspended solids and materials in the storm water drainage system so as to avoid pollutants being washed out during heavy rainstorms)	Prevent discharge of pollutant into the surrounding environment	Contractor	Project area – areas adjacent to sensitive receivers / During construction phase	Construction phase	^ ^
-	-	**Good Site Practice Measures** • Placement of stockpiling into designated area should be selected at disturbed area in order to minimize the disturbance to wildlife • Open fire should be strictly prohibited • The boundary of project boundary should be clearly demarcated • General drainage system arrangement should include sediment and oil trapper to collect the site run-off • Waste bin should be provided to collect the general refuse and construction waste	To avoid potential impact on Golden-headed Cisticola	Contractor	Project area – areas adjacent to sensitive receivers / During construction phase	Construction phase	^ ^ ^ ^ ^

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Landscape and Visual Impacts – Construction Phase							
Table 10.11	Table 9.1	CM01: Trees / woodland within the Project Site which are unaffected by the works shall be protected and preserved during the detailed design stage and construction phase. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at detailed design stage for further retention of individual trees. The preservation of existing tree shall provide instant greening and screening effect for proposed works. Tree protection works will be undertaken in accordance with DEVB TC (W) 7/2015 on "Tree Preservation" and tree risk assessment in accordance with "Guidelines for Tree Risk Assessment and Management Arrangement" by DEVB.	Preserve and protect existing trees	Contractor	Project area / During design stage / construction phase / Establishment Period	Design and construction phase	*
Table 10.11	Table 9.1	CM02: If removal of trees unavoidable due to construction impacts, trees will be transplanted where technically feasible in accordance with "Guidelines on Tree Transplanting" by DEVB and HQ/GN/13 and HQ/GN/13 – Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit where applicable.	Preserve and protect existing trees	Contractor	Project area / During design stage / construction phase / Establishment Period	Design and construction phase	^
Table 10.11	Table 9.1	CM03: Construction area control, where possible, to ensure that the landscape and visual impacts arising from the construction activities are minimised. This includes the reduction of the extent	Minimise landscape and visual impacts.	Contractor	Project area / During design stage / construction	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		and location of working areas to avoid sensitive LRs, siting of offices or temporary structures so that they are not visually prominent, and consideration of detailed schedules to shorten the construction period. Temporary landscape treatments are considered to be adopted such as applying hydro-seeding on temporary stockpiles and areas of earthworks to alleviate the potential impacts and minimise soil erosion.			phase.		
Table 10.11	Table 9.1	CM04: Replanting of existing / disturbed vegetation shall be undertaken as soon as technically feasible during the construction phase. The priority shall be areas at the periphery of the site to ensure that proposed planting fulfils its role in mitigating the predicted impacts including screening views of the proposals as early as possible during the operation phase.	Maximise the mitigation effect of the planting to minimise landscape and visual impacts.	Contractor	Project area / During design stage / construction phase / Establishment Period	Construction phase	N/A
Table 10.11	Table 9.1	CM05: Decorative screen hoarding will be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs) to screen undesirable views of the works site. It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	Minimise landscape and visual impacts.	Contractor	Project area – areas adjacent to sensitive receivers / During construction phase.	Construction phase	N/A

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Landscape and Visual Impacts (Recommended Mitigation Measures from Landscape and Visual Mitigation Plan)							
-	-	**Tree protection and preservation** a. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at the detailed design stage for further retention of individual trees. b. During construction period, retained trees will be protected from impact from construction activity as per General Specification for Civil Engineering Works (2006 Edition), Section 26 – Preservation and Protection of Trees and Guidelines on Tree Preservation during Development.	To avoid potential impact on retained tree from construction activities such as materials storage; To make sure that the retained tree are not affected by the construction activities of the Project	CEDD's and ArchSD's Contractors	CEDD: Along KNP Road where applicable and slopes within KNP Police Facilities Site ArchSD: Within KNP Police Facilities Site	Design and construction phase of CEDD's and ArchSD's Contracts	*
-	-	**Tree transplantation** a. If removal of trees unavoidable due to construction impacts, trees will be transplanted where technically feasible in accordance with "Guidelines on Tree Transplanting" by DEVB and HQ/GN/13 and HQ/GN/13 – Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit where applicable.	To preserve the trees with conservation interest which are unavoidably affected by the construction activities.	CEDD's Contractors	The location of three *Aquilaria sinensis* at Site Portion B and D, and the receptor site for the transplanted trees opposite Portion B1 of the site.	Construction Stage of CEDD's contracts	^
-	-	**Work area and temporary works area** a. Reduction of the extent and location of working areas to avoid sensitive LRs	To minimize the landscape and visual impacts by construction area control	CEDD's and ArchSD's Contractors	CEDD: Along KNP Road where applicable and	Construction Stage of CEDD's and ArchSD's	^

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		b. Siting of offices or temporary structures so that they are not visually prominent c. Consideration of detailed schedules to shorten the construction period d. Temporary landscape treatments are considered to be adopted such as applying hydro-seeding on temporary stockpiles and areas of earthworks to alleviate the potential impacts and minimise soil erosion.			slopes within KNP Police Facilities Site ArchSD: Within KNP Police Facilities Site	Contracts	^ ^ ^
-	-	**Advance implementation of mitigation planting** a. Replanting of existing / disturbed vegetation shall be undertaken as soon astechnically feasible during the construction phase.	To mitigate the predicted impacts including screening views of the proposals as early as possible during the operation phase.	CEDD's and ArchSD's Contractors	Whole project site area, priority given to periphery of the site	Construction Stage of CEDD's and ArchSD's Contracts	N/A
-	-	**Decorative screen hoarding** a. Decorative screen hoarding will be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs) b. It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	To screen undesirable views of the works site.	CEDD's and ArchSD's Contractors	Along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive	Construction Phase CEDD's and ArchSD's Contracts	N/A N/A

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					receivers (VSRs)		
-	-	**Detail design considerations** a. Detailed design of development components should reduce landscape footprint and visibility of structures.	To reduce the area allowed for any development to a practical minimum	CEDD's Detailed Designers / Consultants ArchSD's Detailed Designers / Consultants	CEDD: Along KNP Road where applicable and slopes within KNP Police Facilities Site ArchSD: Within KNP Police Facilities Site	Design Stage of CEDD's and ArchSD's Contracts	N/A
-	-	**Aesthetically pleasing design and responsive design of buildings and structures** a. The form, textures, finishes and colours of the proposed development components should be compatible with the existing surroundings. Light earthy tone colours such as shades of green, grey, brown and off-white may be utilised where technically feasible to reduce the visibility of the development components, including all roadwork, buildings and noise barriers etc. b. Adopting natural building materials such as stone and timber should be for architectural features, where technically feasible. c. Using responsive design for the disposition of the main elements	a. To reduce the visibility of the development components b. To further improve visual amenity c. To reduce the mass of development d. To minimise the 'wall effects' and create a subtle transition at the edges of the site	ArchSD's Detailed Designers / Consultants	Within KNP Police Facilities Site	Design Stage ArchSD's Contract	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		of the proposed scheme including the locations of buildings and utility structures. d. Grouping of utilities and infrastructure components into proposed buildings as far as technically feasible to reduce the mass of development e. The disposition and height profile of the developments and above ground utilities structures to respond to the existing context particularly the existing landform and preserved trees, f. Creation of setbacks, articulating the development frontage and maintenance of view corridors when technically feasible	e. To enhance the sense of visual integration with the existing context, avoid abrupt transitions between the existing and proposed built environment and reduce the apparent visual mass of the proposed developments.				
-	-	**Design of engineering structure** a. The design of the proposed Engineering Structures such as the proposed road layout and any ancillary structures including the sewage pumping station and the Ma Tso Lung Firing Range should pay particular attention to the appearance and construction methods. b. The detailed design landscape consultants shall work in unison with the engineers on the aesthetic aspects of the structures and their relationship with the landscape. c. The design of engineering structures shall avoid any unnecessary visual clutter achieved through the co-ordination of the various engineering disciplines involved to arrive at integrated	To give the engineering structures a more natural appearance that allows them to blend into the local rural landscape.	CEDD's Detailed Designers / Consultants	Whole project site area	Design Stage of CEDD's Contracts	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		design solutions.					
-	-	**Design of retaining walls and slopes** a. The proposed treatment of Retaining Wall and Slopes will be undertaken in accordance with GEO Publication No. 1/2011 "Technical Guidelines on Landscape Treatment and Bioengineering for Man-made Slopes and Retaining Walls". b. These engineering structures will be aesthetically enhanced through the use of soft landscape works including tree and shrub planting.	To give man-made slopes a more natural appearance blending into the local rural landscape.	CEDD's Detailed Designers / Consultants	Retaining walls and slopes within the whole site area	Design Stage of CEDD's Contracts	^
-	-	**Compensatory planting proposal** a. All compensatory planting of trees is to be carried out in accordance with DEVB TCW No. 7/2015. A total woodland compensation area of 5.54 ha is proposed. b. The planting proposals will utilise largely native species in accordance with GLTM/DEVB's - Guiding Principles on Use of Native Plant Species in Public Works Projects, c. Some compensatory shrub and ground cover planting will also be provided within the woodland area to create a more structurally diverse woodland. d. Woodland areas will utilise a combination of large sized tree stock (including heavy standard sized trees) and whip sized trees	To compensate for the existing dead trees to be removed and create a more structurally diverse woodland.	CEDD's and ArchSD's Contractors	CEDD: Along KNP Road where applicable and slopes within KNP Police Facilities Site ArchSD: Within KNP Police Facilities Site	Construction Stage of CEDD's and ArchSD's Contract	N/A

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		to create a more naturalistic e. The smaller, younger plant stock will adapt to their new growing conditions more quickly than larger sized stock and establish a naturalistic effect more rapidly. f. Roadside and amenity planting will utilise largely heavy standard sized trees.					
-	-	**Landscape buffer tree planting** a. Tree planting using larger sized tree stock shall be provided to screen the proposed structures and associated facilities. b. The planting will utilise native species wherever possible.	To improve compatibility with the surrounding environment and create a pleasant pedestrian environment.	CEDD's and ArchSD's Contractors	CEDD: along KNP Road where applicable and slopes within KNP Police Facilities Site ArchSD : within KNP Police Facilities Site	Construction Stage of CEDD's and ArchSD's Contract	N/A
-	-	**Roadside and amenity planting (within KNP Police Facilitate Site)** a. Roadside and amenity planting using predominantly native species	To enhance the landscape and visual quality of the existing and proposed transport routes and car parks.	ArchSD's Contractor	KNP Police Facilities Site	Construction Stage of ArchSD's Contract	N/A

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
-	-	**Grassland (ecological mitigation)** a. Creation of new grassland areas approximately 1.02 ha in size. Inclusion of common grass species *Ischaemum barbatum* and *Tetradium glabrifolium* (the larval food plants for butterfly species).	To provide larval food plants for the butterfly species.	ArchSD's Contractor	ArchSD : within KNP Police Facilities Site	Construction Stage of ArchSD's Contract	N/A
-	-	**Green roof (within KNP Police Facilitate Site)** a. Green roofs predominantly using native species shall be introduced where technically feasible on proposed buildings to reduce exposure of untreated concrete surfaces b. Location and extent of green roof subject to detailed design.	To enhance the sustainability of the design and mitigate visual impact to VSRs at high levels	ArchSD's Contractor	Within KNP Police Facilitate Site	Construction stage of ArchSD's Contract	N/A
-	-	**Vertical greening** a. Vertical planting shall be introduced using predominantly native species. b. Planting to utilise climbing and trailing plants. Location and extent of vertical greening subject to detailed design.	To soften the hard, vertical surfaces of the proposed development components including the walls of the proposed buildings and retaining walls.	CEDD's and ArchSD's Contractors	CEDD: along KNP Road where applicable and slopes within KNP Police Facilitate Site ArchSD : within KNP Police Facilitate Site	Construction Stage of CEDD's and ArchSD's Contracts	N/A
-	-	**Green paving (within KNP Police Facilitate Site)** a. Green paving approach such as grass-crete or grass-grid to maximise the area of planting and reduce the area of hard paving	To reduce the area of hard paving	ArchSD's Contractor	Within KNP Police Facilitate Site	Construction stage of ArchSD's Contracts	N/A

Appendix F – Implementation Schedule and Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		b. Location and extent of green paving subject to detailed design of the ArchSD's contract. This includes the use of permeable paving where grass-crete / grass grid is not practicable.					
-	-	**Light control (operation)** a. Street and night time lighting glare will be controlled	To minimize glare impact to adjacent VSRs during the operation stage.	HKPF and HyD	HKPF: Within KNP Police Facilitate Site HyD: Along Kong Nga Po Road	Operation Stage	N/A

Implementation status:

^ Mitigation measure was fully implemented

* Observation/reminder was made during site audit but improved/rectified by the contractor

\# Observation/reminder was made during site audit but not yet improved/rectified by the contractor

X Non-compliance of mitigation measure

• Non-compliance but rectified by the contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period

APPENDIX G
SITE AUDIT SUMMARY

Appendix G: Site Audit Summary

Table G-1: Observations and Recommendations of Site Audit in October 2021

Parameters	Date	Observations	Follow Up Action
Air Quality	30/9/2021	Dust emission was observed from the silo tank at piling area. The Contractor was reminded to check and rectify it as soon as possible.	Improvement/Rectification was observed during follow-up audit session on 7/10/2021.
	30/9/2021	Reminder Provide dust mitigation measures for the dusty stockpiles at platform G.	Improvement/Rectification was observed during follow-up audit session on 7/10/2021.
	7/10/2021	Reminder Properly check and repair the piling machine to avoid heavy smoke emission.	Improvement/Rectification was observed during follow-up audit session on 22/10/2021.
	15/10/2021	Reminder Properly check and maintain the piling equipment to avoid heavy smoke emission at middle platform.	Improvement/Rectification was observed during follow-up audit session on 22/10/2021.
	22/10/2021	Reminder Provide dust screen to enclose the shaker of desander at Portion B1.	Improvement/Rectification was observed during follow-up audit session on 29/10/2021.
	22/10/2021	Reminder The perimeter bund should be enhanced at middle platform.	Follow-up action is needed to be reported in the following month.
	29/10/2021	Reminder The perimeter bund should be enhanced at middle platform.	Follow-up action is needed to be reported in the following month.
Construction Noise Impact	--	No environmental deficiency was identified during the reporting month.	--
Water Quality	7/10/2021	Reminder Provide a designated area for washing the concreting machine.	Improvement/Rectification was observed during follow-up audit session on 7/10/2021.
	7/10/2021	Reminder Clear the site drainage to avoid blockage at RD-A.	Improvement/Rectification was observed during follow-up audit session on 15/10/2021.
	15/10/2021	The sedimentation tank at RD-B was observed not functioning properly. The	Improvement/Rectification was observed during follow-up

Parameters	Date	Observations	Follow Up Action
		Contractor was reminded to review the effectiveness of the treatment facilities / system immediately.	audit session on 22/10/2021.
	15/10/2021	Reminder To replace the damaged discharge hose at DA-C.	Improvement/Rectification was observed during follow-up audit session on 22/10/2021.
	22/10/2021	Reminder Clear the sedimentation tank at DA-A.	Improvement/Rectification was observed during follow-up audit session on 29/10/2021.
	22/10/2021	Reminder The perimeter bund should be enhanced at middle platform.	Follow-up action is needed to be reported in the following month.
Waste/ Chemical Management	30/9/2021	Reminder Clear the drip tray for the air compressor at C37.	Improvement/Rectification was observed during follow-up audit session on 7/10/2021.
	7/10/2021	Reminder Clear the oil spillage as chemical waste and check the generator to avoid further oil leakage at near piling area.	Follow-up action is needed to be reported in the following month.
	15/10/2021	Reminder Properly check the generator to avoid the oil leakage and clear the oil spillage as chemical waste at middle platform.	Follow-up action is needed to be reported in the following month.
	22/10/2021	Reminder The accumulated general refuse at Portion B1 should be cleared regularly.	Improvement/Rectification was observed during follow-up audit session on 29/10/2021.
	22/10/2021	Reminder Provide drip tray for the chemical containers and remove the empty container as chemical waste at Portion B1.	Improvement/Rectification was observed during follow-up audit session on 29/10/2021.
	22/10/2021	Reminder Clear the stagnant water with oil film at the drip tray at C37.	Improvement/Rectification was observed during follow-up audit session on 29/10/2021.
	22/10/2021	Reminder	Follow-up action is needed to be reported in the following

Parameters	Date	Observations	Follow Up Action
		The generator at near middle platform shall be repaired to avoid oil leakage and clear the oil spillage around the drip tray properly.	month.
	29/10/2021	Reminder Clear the oil leakage at the drip tray as chemical waste and drain hole of the drip tray should be sealed at middle platform.	Follow-up action is needed to be reported in the following month.
Landscape and Visual	--	No environmental deficiency was identified during the reporting month.	--
Ecology	--	No environmental deficiency was identified during the reporting month.	--
Permit/Licences	30/9/2021	Reminder To replace the expired CNP at the site entrance of lower platform (Portion D).	Improvement/Rectification was observed during follow-up audit session on 7/10/2021.

Table G-2: Observations and Recommendations of Site Audit in November 2021

Parameters	Date	Observations	Follow Up Action
Air Quality	12/11/2021	To enhance the dust mitigation measures for the dust generation activities at middle platform.	Improvement/Rectification was observed during follow-up audit session on 19/11/2021.
	19/11/2021	The long-term idle exposed slope at DA-A shall be covered completely.	Improvement/Rectification was observed during follow-up audit session on 26/11/2021.
	26/11/2021	The damage tarpaulin sheet to cover the exposed slope at Bay 61 shall be replaced.	Improvement/Rectification was observed during follow-up audit session on 3/12/2021.
	26/11/2021	Properly cover the cement bags and provide enclosure with three-side and top shelter for the upcoming grouting works (Portion B1).	Improvement/Rectification was observed during follow-up audit session on 3/12/2021.
Construction Noise Impact	19/11/2021	Noise mitigation measures shall be provided for the rock breaking works at RD-F.	Improvement/Rectification was observed during follow-up audit session on 26/11/2021.
Water Quality	5/11/2021	The perimeter bund at middle platform shall be enhanced to divert the muddy surface runoff to the wastewater treatment facilities.	Improvement/Rectification was observed during follow-up audit session on 12/11/2021.
	5/11/2021	The exposed slope at Abutement B shall be covered completely.	Improvement/Rectification was observed during follow-up audit session on 12/11/2021.
	12/11/2021	Provide mitigation measures to avoid the wheel washing runoff discharging outside the site boundary.	Improvement/Rectification was observed during follow-up audit session on 19/11/2021.
	12/11/2021	Clear the sedimentation tank to ensure it functioning properly at C37.	Improvement/Rectification was observed during follow-up audit session on 19/11/2021.
	19/11/2021	The construction waste at the sedimentation tank at Abutement A shall be cleared.	Improvement/Rectification was observed during follow-up audit session on 26/11/2021.

Parameters	Date	Observations	Follow Up Action
Waste/ Chemical Management	5/11/2021	Properly clear the empty chemical containers as chemical wastes at middle platform.	Improvement/Rectification was observed during follow-up audit session on 12/11/2021.
	19/11/2021	The accumulated construction wastes at Portion B1 and Abutement A should be cleared regularly..	Improvement/Rectification was observed during follow-up audit session on 26/11/2021.
	26/11/2021	The empty chemical containers at middle platform shall be disposed properly as chemical waste.	Improvement/Rectification was observed during follow-up audit session on 3/12/2021.
	26/11/2021	Provide drip tray for the chemical containers at Hin Sum Container Site Office.	Improvement/Rectification was observed during follow-up audit session on 3/12/2021.
	26/11/2021	The drain hole of the drip tray shall be sealed at Portion B1.	Improvement/Rectification was observed during follow-up audit session on 3/12/2021.
Landscape and Visual	--	No environmental deficiency was identified during the reporting month.	--
Ecology	--	No environmental deficiency was identified during the reporting month.	--
Permit/Licences	--	No environmental deficiency was identified during the reporting month.	--

Table G-3: Observations and Recommendations of Site Audit in December 2021

Parameters	Date	Observations	Follow Up Action
Air Quality	3/12/2021	The damaged tarpaulin sheet to cover the exposed slopes should be replaced at DA-L.	Improvement/Rectification was observed during follow-up audit session on 10/12/2021.
	3/12/2021	To enhance the dust mitigation measures for the dusty haul road at Bay 40.	Improvement/Rectification was observed during follow-up audit session on 10/12/2021.
	10/12/2021	The faded NRMM Label attached on the air compressor at Portion B1 should be replaced..	Improvement/Rectification was observed during follow-up audit session on 17/12/2021.
	17/12/2021	To enhance the dust suppression measures at Platform A.	Improvement/Rectification was observed during follow-up audit session on 24/12/2021.
	24/12/2021	Properly cover or clear the used cement bags at Portion B1.	Improvement/Rectification was observed during follow-up audit session on 31/12/2021.
	24/12/2021	The exposed slopes / surface of dusty materials should be covered completely at C37.	Improvement/Rectification was observed during follow-up audit session on 31/12/2021.
	24/12/2021	The valid NRMM label with correct colour should be displayed on the excavator at C37.	Improvement/Rectification was observed during follow-up audit session on 31/12/2021.
Construction Noise Impact	--	No environmental deficiency was identified during the reporting month.	--
Water Quality	17/12/2021	To designate the wheel washing area behind the cut-off drain at the exit near the water tank area.	Improvement/Rectification was observed during follow-up audit session on 24/12/2021.
Waste/ Chemical Management	10/12/2021	Properly clear the general refuse and rubbish at Hin Sum Container Office and water tank area.	Improvement/Rectification was observed during follow-up audit session on 17/12/2021.
	17/12/2021	Clear the oil leakage at the chemical container storage area near water tank area.	Improvement/Rectification was observed during follow-up audit session on 24/12/2021.
	24/12/2021	Clear the oil stains at near the site entrance area at Portion B1.	Improvement/Rectification was observed during follow-up audit

Parameters	Date	Observations	Follow Up Action
			session on 31/12/2021.
	24/12/2021	The rubbish at near the platform G should be disposed properly.	Improvement/Rectification was observed during follow-up audit session on 31/12/2021.
Landscape and Visual	3/12/2021	The fencing surrounding the retained trees should be erected properly at Portion B1.	Improvement/Rectification was observed during follow-up audit session on 10/12/2021.
	31/12/2021	To avoid displaying the signs on the tree and provide tree protection fencing at Dead End Road.	Improvement/Rectification was observed during follow-up audit session on 7/1/2022.
Ecology	--	No environmental deficiency was identified during the reporting month.	--
Permit/Licences	--	No environmental deficiency was identified during the reporting month.	--

APPENDIX H
WASTE GENERATION IN THE REPORTING PERIOD

Name of Department: ~~ArchSD~~ / CEDD / ~~DSD~~ / ~~EMSD~~ / ~~HyD~~ / ~~WSD~~ Contracto No.: ND/2018/01

Environmental Permit No.: EP-510/2016

Monthly Summary Waste Flow Table for 2020

Month	Total Quantity Generated	Actual Quantities of Inert C&D Waste Generated Monthly					Actual Quantities of C&D Waste Generated Monthly				
		Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	0.00304	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00304
Feb	0.00699	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00699
Mar	0.01294	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01294
Apr	0.02173	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02173
May	0.02534	0.00000	0.00000	0.00000	0.01329	0.00000	0.00000	0.00000	0.00000	0.00000	0.01205
Jun	0.10368	0.00000	0.00000	0.00000	0.00687	0.00000	0.00000	0.00000	0.00000	0.00000	0.09681
Sub-Total	0.17372	0.00000	0.00000	0.00000	0.02016	0.00000	0.00000	0.00000	0.00000	0.00000	0.15355
Jul	33.65416	0.00000	0.00000	33.07233	0.07872	0.00000	0.00000	0.00000	0.00000	0.00000	0.50311
Aug	26.60619	0.00000	0.00000	25.47880	0.48478	0.00000	0.00000	0.00000	0.00000	0.00000	0.64260
Sep	50.56237	0.00000	0.00000	48.88600	0.45676	0.00000	0.00000	0.00000	0.00000	0.00000	1.21961
Oct	41.97128	0.00000	0.00000	41.63335	0.02784	0.00000	0.00000	0.00000	0.00000	0.00000	0.31009
Nov	62.67238	0.00000	0.00000	61.98935	0.09226	0.00000	0.00000	0.00000	0.00000	0.00000	0.59077
Dec	61.43492	0.00000	0.00000	52.40582	8.76826	0.00000	0.00000	0.00000	0.00000	0.00000	0.26083
Total	277.07501	0.00000	0.00000	263.46567	9.92879	0.00000	0.00000	0.00000	0.00000	0.00000	3.68056

Name of Department: ~~ArchSD~~ / CEDD / ~~DSD~~ / ~~EMSD~~ / ~~HyD~~ / ~~WSD~~ Contracto No.: ND/2018/01

Environmental Permit No.: EP-510/2016

Monthly Summary Waste Flow Table for 2021

Month	Total Quantity Generated	Actual Quantities of Inert C&D Waste Generated Monthly					Actual Quantities of C&D Waste Generated Monthly				
		Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Cumulative in 2020	277.07501	0.00000	0.00000	263.46567	9.92879	0.00000	0.00000	0.00000	0.00000	0.00000	3.68056
Jan	44.91877	0.00000	0.00000	20.33601	24.31886	0.00000	0.00000	0.00000	0.00000	0.00000	0.26389
Feb	13.08831	N/A	N/A	9.64034	3.40955	N/A	N/A	N/A	N/A	N/A	0.03841
Mar	35.52359	N/A	N/A	19.92956	15.50902	N/A	N/A	N/A	N/A	N/A	0.08501
Apr	42.22569	N/A	11.95500	7.21197	22.96688	N/A	N/A	N/A	N/A	N/A	0.09183
May	9.09491	N/A	4.13844	4.47821	0.43554	N/A	N/A	N/A	N/A	N/A	0.04272
Jun	40.50170	N/A	22.95720	16.78316	0.68899	N/A	N/A	N/A	N/A	N/A	0.07235
Sub-Total	462.42797	0.00000	39.05064	341.84492	77.25764	0.00000	0.00000	0.00000	0.00000	0.00000	4.27477
Jul	38.56656	N/A	2.04766	34.19166	2.26520	N/A	N/A	N/A	N/A	N/A	0.06204
Aug	32.57509	N/A	3.80440	23.63834	4.94379	N/A	N/A	N/A	N/A	N/A	0.18856
Sep	14.56695	N/A	13.46440	0.00000	0.99677	N/A	N/A	N/A	N/A	N/A	0.10578
Oct	6.10194	N/A	5.02740	0.00000	0.96228	N/A	N/A	N/A	N/A	N/A	0.11225
Nov	15.41373	N/A	14.04710	0.00000	1.25681	N/A	N/A	N/A	N/A	N/A	0.10982
Dec	16.44356	N/A	15.59920	0.00000	0.73992	N/A	N/A	N/A	N/A	N/A	0.10444
Total	586.09580	0.00000	93.04080	399.67493	88.42240	0.00000	0.00000	0.00000	0.00000	0.00000	4.95767

Name of Department: ~~ArchSD~~ / CEDD / ~~DSD~~ / ~~EMSD~~ / ~~HyD~~ / ~~WSD~~ Contracto No.: ND/2018/01

Environmental Permit No.: EP-510/2016

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
630.500	0.000	190.000	358.000	78.000	0.000	0.000	0.000	0.000	0.000	4.500

Notes:

(1) Not Used.

(2) The waste flow table shall also include C&D materials that are specified in this contract to be imported for use at the Site

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

(4) The summary table shall be submitted to the *Supervisor* monthly together with the Waste Flow Table for review and monitoring in accordance with the PS Clause 25.20A(4)

(5) The density of inert C&D is assumed 2.2 tonnes per cubic meter

(6) The density of non-inert C&D is assumed 1.5 tonnes per cubic meter

(7) The C&D materials generated before Jul 2020 are from domestic activities, site investigation, clearance, and preparation for surveying works

*The total quantity of C&D materials to be generated from the Contract had been updated by surveying record

APPENDIX I
COMPLAINT LOG

Appendix I - Complaint Log

Reporting Quarter: October to December 2021

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
C-001	EP3/N07/RN/ 18746-20	Kong Nga Po Road	19th August 2020	The complainant complained about the construction noise nuisance of the Kong Nga Po Road and requested noise monitoring and mitigation measures to lower the noise level.	According to the results from regular noise monitoring, no Limit Level Exceedance was recorded at sensitive receivers since the commencement of the construction of the Project. In addition, there was no environmental deficiency regarding construction noise impact recorded during site inspection. It is considered that no adverse construction noise impact was brought to the nearby sensitive receivers due to the site works in July and August 2020. Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow: • Erect noise isolating mat at Portion B1 to reduce noise nuisance arising from the site Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site, such as: • Selection of quieter plant; • Provision of sufficient noise mitigation measures (e.g. movable noise barrier, noise enclosure. acoustic shed, noise insulating fabric etc.) for the site activities on nearby NSRs where appropriate. • To strengthen site supervision and provide regular training to the workers to increase awareness of their environmental responsibilities and minimize the noise impact to the nearby residents during working hours as well as restricted hours.	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
C-002	EP3/N07/RN/ 21538-20	Kong Nga Po Road	22nd September 2020	The complainant complained about the polluting effluent discharged from construction site, leading to flooding and pollution problem.	According to EM&A Manual of the Project, the complaint was referred to the ET for investigation. *Ad-hoc* site inspections were conducted by ET and IEC to identify the source of the complaint, review the effectiveness of the Contractor's remedial measures and the updated situation once received the complaint. According to the site inspection finding, no muddy effluent discharged from Portion D entrance was observed at Kong Nga Po Road. Wastewater generated from wheel washing, construction works or surface runoff was collected and treated in wastewater treatment facilities. Wastewater treatment facilities were functioning properly. No Limit Level exceedance for pH, suspended solid and chemical oxygen demand was recorded in effluent discharge monitoring. In order to avoid any circumstances that may lead to the complaint, ET and IEC have recommended enhancement on water quality mitigation measures. The Contractor had undertaken the follow up actions and additional mitigation measures on drainage system to minimize the water quality impact arising from the construction works as follow: • Provision of soil berm at edge near retaining wall DA-M Bay 43-46 • Setting up of wastewater treatment facilities near wheel washing bay • Re-formation of haul road in Portion D	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					• Provision of soil berm near Platform B • Increase in capacity of retention pit near Platform B • Reinforcement of soil berm near excavation area and near retaining wall at Portion D to minimize water leakage • Regular maintenance of clear U-channel which was blocked by natural debris at Kong Nga Po Road Nevertheless, the Contractor was reminded to ensure the wastewater generated from construction works must comply with the condition stated in the Effluent Discharge license and enhance sediment control measure regarding storm water management to assure no muddy water is being discharged from the construction site. The environmental conditions of the site and the control of works will be continuously reviewed and monitored by the *Supervisor*, ET and IEC.	
C-003	N/A	Kong Nga Po Road	8th October 2020	The complainant complained about the muddy water discharged from construction site into Kong Nga Po Road during heavy rainfall. Also, he concerned if there is illegal discharge and if the design of drainage system is sufficient to handle the discharge.	According to the finding of *ad-hoc* site inspection, no muddy effluent discharge was observed on road surface and road drainage along the Kong Nga Po road section from construction site to the location of complaint during rainfall. Also, no direct slope surface and pathway for muddy water outflew from the site to the location of complaint was observed. Potential source of muddy water to the location of complaint is likely from natural surface runoff from shrubland and grassland along the Kong Nga Po Road during heavy rainfall. Continuous improvement works on the temporary	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
C-004	N/A	Kong Nga Po Road	28th October 2020	The complainant complained about the polluting effluent discharged from construction site, leading to flooding and water pollution problem.	drainage system at Project site have been conducted for water pollution control since September 2020. Regular checking were carried out by the Contractor to ensure the system is working properly. All wastewater were collected and treated to ensure discharge comply with condition stated in the Effluent Discharge Licence. In addition, the Contractor has taken the following mitigation measures to minimize the water quality impact arising from the construction works: ● Regular inspection and maintenance on sediment control measure at Project site; ● *Ad-hoc* inspection on the water pollution control measures at Project site before onset of the typhoon; ● Regular maintenance record on wastewater treatment facilities; and ● Provision of vegetated filter strips at outer side of existing soil berms and slope surface to act as natural filtration for water pollution control. The environmental condition of the site and the control of work will be continuously reviewed and monitored by the *Supervisor*, ET and IEC.	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
C-005	N/A	Slope Feature A at Kong Nga Po Road	28th October 2020	The complainant complained about the noise generated from the construction activities at Slope Feature A that caused annoyance to his family.	According to the results from regular noise monitoring, no Limit Level exceedance was recorded at sensitive receivers during the time of complaint. In addition, there was no environmental deficiency regarding construction noise impact was recorded during site inspection. In view of the above, it is considered that no adverse construction noise impact was brought to the nearby sensitive receivers due to the site works. Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow: ● Setting up of double layers of noise barrier to block the transmission of noise from breaking point to Noise Sensitive Receivers; ● Conducting internal noise monitoring to ensure the noise mitigation measures are properly implemented; and ● To check and maintain the noise insulating fabric enclosed the noisy part of the breaker. Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site , such as ● To frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers; ● To proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary;	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					• To provide regular training to the workers to increase awareness of their environmental responsibilities and minimize the noise impact to the nearby residents during working hours as well as restricted hours; • To provide notification to nearby villagers in Kong Nga Po for potential noisy works at works area	
C-006	N/A	Portion C at Kong Nga Po Road	30th November 2020	The complainant complained about the noise nuisance from the construction activities at Portion C on Kong Nga Po Road.	No complaint investigation is required as this complaint has been withdrawn by the complainant.	Closed
C-007	N/A	Portion C at Kong Nga Po Road	30th November 2020	The complainant complained about the muddy water discharged from construction site into nearby drainage system and some oil slicks observed at the downstream of the drainage.	No complaint investigation is required as this complaint has been withdrawn by the complainant.	Closed
C-008	EP3/N07/RN/ 8845-21	Near Lamp Post BD2370 at Kong Nga Po Road	19th April 2021	The complainant complained about suspected dumping soil at nullah, causing blockage and flooding near lamp post BD2370.	According to the finding of *ad-hoc* site inspection conducted by the Contractor, no excavation nor construction works were carried out by ND/2018/01 near Lamp Post BD2370. Slope excavation was carrying out at Slope Feature 3NW-C/C38, the disposal was recorded and controlled by trip ticket system.	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					Existing U-channel near slope toe had been covered and surface runoff was guided to sedimentation tank by submersible pump. No discharge was taken place due to dry season and excavation was not a wastewater-generated activity. Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow: ● Excavated slop had been covered by erosion mat ● Strictly implemented trip ticket system to monitor the C&D waste disposal ● Deployed sufficient submersible pump and wastewater treatment facilities for the surface runoff treatment	
C-009	N/A	Kong Nga Po Road (Feature A)	22nd October 2021	The complainant complained about noise generated from rock breaking activities at Construction Site caused nuisance to his family and the village.	According to the results from regular noise monitoring, no Limit Level exceedance was recorded at the noise sensitive receivers during the construction works. In addition, there was no environmental deficiency regarding construction noise impact was recorded during site inspection. In addition, Contractor has also undertaken the follow up action as follow: ● The hammer of excavator had been wrapped with sound proof canvas; ● Silent-up retractable noise barriers were deployed for noise mitigation measure during the rock breaking works. Nevertheless, the Contractor was reminded to fully	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					implement the relevant noise mitigation measures according to the EM&A Manual on site , such as: ● To frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers; ● To proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary; ● o provide regular training to the workers to increase awareness of their environmental responsibilities and minimize the noise impact to the nearby residents during working hours as well as restricted hours; and To provide notification to nearby villagers in Kong Nga Po for potential noisy works at works area.	
C-010	N/A	Kong Nga Po Road	18th November 2021	The complainant complained about noise and vibration generated from sheet-piling works and rock breaking works for pipe laying works at Kong Nga Po Road	Noise mitigation measures have been implemented for sheet-piling works as below: ● noisy part of sheet-piling plant has been enclosed by sound insulation materials; ● proactive environmental protection proforma has been prepared to identify the potential noise impact to NSRs and corresponding mitigation measures has been implemented; ● toolbox talk training for site engineers and frontline workers on construction noise suppression has been conducted. In addition, noise mitigation measures have been implemented for rock breaking activities as below:	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					● hammer of the excavator has been wrapped by soundproofing material; ● checking and maintenance of the soundproofing material wrapped on the hammer has been implemented before operation; ● SilentUP Retractable Noise Barriers have been installed to block the noise transmission to the village of complainant; ● proactive environmental protection proforma has been prepared to identify the potential noise impact to NSRs and corresponding mitigation measures has been implemented; ● toolbox talk training for site engineers and frontline workers on construction noise suppression has been conducted; ● nearby villagers close to the rock breaking works have been informed before the commencement of the works Moreover, no Limit Level exceedance was recorded at the noise sensitive receivers during the construction works. There was also no environmental deficiency regarding construction noise impact at Kong Nga Po Road was recorded during site inspection. However, in order to avoid the recurrence of the complaint due to the rock breaking works at Feature A works area, alternative working methods such as the use of hydraulic splitters, hydraulic jaw crushers and	

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					rock sawing will be considered for the upcoming rock breaking works. Enhancement on the noise mitigation measures such as strengthening the use of noise barriers to enclose the noise source from rock breaking works and controlling the working period to avoid continuous noisy works will also be implemented for upcoming rock breaking works.	
C-011	N/A	Kong Nga Po Road near 警察訓練學校	22nd December 2021	The complainant complained about soil / muddy water discharging out from construction site near 警察訓練學校 at Kong Nga Po Road	Internal movement of excavated materials by dump truck were carried out by ND/2018/01 at 3NW-C/C37 near Lamp Post BD2369 and RD-A near Lamp Post BD2356, and both near the Police Dog Unit and Force Search Unit Training School as mentioned in the complaint. The following was observed during the investigation: ● wheel washing facilities have been provided for vehicles and plants leaving the works areas; ● the section before the site exits have been paved with backfall to prevent the wheel washing water from entering the public road; ● frontline worker was carrying out public road washing for public cleanliness in the perspective of the general public; ● no earth, mud or muddy water were deposited on roads. Enhancement measures have been carried out RD-A to restore the pavement quality and further prevent the wheel washing water from entering the public road.	Closed

Cumulative Complaint Log

Reporting Period	Total no. of Complaint Received
This reporting quarter	3
From 3rd July 2020 to end of the reporting Quarterly	11

APPENDIX J
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix J - Summary of Successful Prosecution

Reporting Quarter: October to December 2021

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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