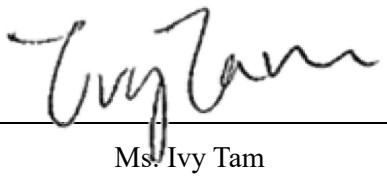
# Civil Engineering and Development Department

## 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 2022

# (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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Civil Engineering and Development Department
North Development Office
Unit 2320, Level 23, Tower 1, Metroplaza
223 Hing Fong Road,
Kwai Fong, New Territories,
Hong Kong

Attention: Mr. William WONG

6 February 2023

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 2022**

I refer to the email from the Environmental Team concerning the captioned. I have no adverse comment on the Quarterly EM&A Report for October to December 2022 (Version 1.0) and verify the report according to Conditions 1.9 of the Environmental Permit with permit number EP-510/2016.

Yours faithfully,

Melody Cheng
Independent Environmental Checker

cc. CEDD – Joseph Yan
AECOM – Mr. Steven Leung
ET Leader – Ivy Tam

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# EXECUTIVE SUMMARY

## Introduction

1. This is the 10th Quarterly Environmental Monitoring and Audit (EM&A) Report for the Project of Police Facilities in Kong Nga Po under Environmental Permit No. EP-510/2016. 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 2022.

2. Part of the construction site was handed over to Architectural Services Department (ArchSD) on 23rd December 2022 whom taken over responsibility for the construction of building works and as maintenance agent for Hong Kong Police Force (HKPF) during operation phase. ArchSD is processing the application of a further environmental permit (FEP) for the construction of building works.

3. During the reporting period, the following Works Contracts were undertaken for the Project of Police Facilities in Kong Nga Po under Environmental Permit No. EP-510/2016:

    - Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po
    - Contract No. SSK509 - Design and Construction of Kong Nga Po Police Training Facilities

## Summary of Construction Works undertaken during the Reporting Quarter

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

    Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

    - Site Formation at Portion D
    - Retaining Wall Construction
    - Backfilling for Stormwater Storage Tank & Underpass
    - Slope Upgrading Works
    - Road & Associated Works
    - Sewerage Trenchless Works
    - Drainage & Watermain Trenchless Works
    - Bridge & Associated Works

    Contract No. SSK509 - Design and Construction of Kong Nga Po Police Training Facilities (Starting from 23 December 2022)

    - Setting-up of temporary site office and site entrance
    - Concreting for blinding layer for site office
    - Condition survey at neighboring area
    - Condition survey at site

- Topographical survey
- General cleaning and housekeeping works

**Environmental Monitoring and Audit Works**

5. 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.

6. 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 | 0 | 0 | N/A |

**Air Quality**

7. 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**

8. All Construction noise monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded in the reporting quarter.

**Ecological Monitoring**

9. All ecological monitoring was conducted as scheduled in the reporting quarter. The ecological monitoring photo records and results were shown in the relevant Monthly EM&A Reports.

**Environmental Non-Compliance**

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

**Environmental Complaint**

11. No environmental complaint was received in the reporting quarter. The Complaint Log is presented in **Appendix I**.

**Notification of Summons and Successful Prosecutions**

12. No notification of summons or successful environmental prosecutions was received in the

reporting quarter.

**Future Key Issues**

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

Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

- Site Formation at Portion D
- Retaining Wall Construction
- Slope Upgrading Works
- Road & Associated Works
- Sewerage Trenchless Works
- Drainage & Watermain Trenchless works
- Bridge & Associated Works

Contract No. SSK509 - Design and Construction of Kong Nga Po Police Training Facilities

- Setting-up of temporary site office
- Concreting for blinding layer for site office
- Setting-up for site office
- Condition Survey
- Tree Survey
- Topographical survey
- G.I. plate load test and soil test
- Open cut excavation
- Removal of soil
- General cleaning and housekeeping works

14. 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 Project of Police Facilities in Kong Nga Po under Environmental Permit No. EP-510/2016 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 10th 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 2022. The major construction works for the Project commenced on 3rd July 2020 and the main site in Kong Nga Po was handed over to Architectural Services Department (ASD) on 23rd December 2022 whom taken over responsibility for the construction of building works and as maintenance agent for Hong Kong Police Force (HKPF) during operation phase.

**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 results 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 According to approved Environmental Monitoring and Audit (EM&A) Manual, an air quality and noise monitoring programme is recommended during the construction phases of the 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.

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

## Project Organization

2.7 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

2.8 The key personnel contact names and numbers under Contract No. ND/2018/01 and the other contact names and numbers under ArchSD Contract No. SSK509 are summarised in **Table 2.1**.

**Table 2.1 Key Contacts of the Project**

| Party | Role | Contact Person | Phone No. | Fax No. |
|---|---|---|---|---|
| Contract No. ND/2018/01 | | | | |
| Civil Engineering and Development Department, HKSAR (CEDD) | Project Proponent | Mr. Joseph YAN | 3152 3551 | 3547 1658 |
| *Supervisor / Supervisor's* Representative (AECOM) | Senior Resident Engineer | Mr. Steven Leung | 5287 4331 | 3922 9797 |
| Environmental Team (Wellab Limited) | Environmental Team Leader | Ms. Ivy Tam | 2151 2090 | 2898 7076 |
| | Qualified Ecologist | Dr. Priscilla Choy | 2898 7388 | 2898 7076 |
| | Registered Landscape Architect | Mr. Ted Lam | 2898 7388 | 2898 7076 |
| Independent Environmental Checker (Acuity Sustainability Consulting Limited) | Independent Environmental Checker | Ms. Melody Cheng | 2698 6833 | 2693 9383 |
| Contractor (Build King Construction Limited) | Site Agent | Mr. Book Kin Man | 2272 3128 | 2528 1751 |
| | Environmental Officer | Mr. Alex Liu | 9754 3432 | |
| Contract No. SSK509 | | | | |
| Architectural Services Department | Project Proponent | Mr. Vincent Kwok | 2867 3939 | 3542 5223 |
| Contractor (China State JV) | Site Agent | Mr. Kelvin Chan | 6272 8828 | 2866 6325 |
| | Environmental Officer | Ms. Marian Kong | 6174 9735 | 2866 6325 |

**Summary of Construction Works Undertaken During Reporting Quarter**

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

Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

- Site Formation at Portion D
- Retaining Wall Construction
- Backfilling for Stormwater Storage Tank & Underpass
- Slope Upgrading Works
- Road & Associated Works
- Sewerage Trenchless Works
- Drainage & Watermain Trenchless Works
- Bridge & Associated Works

Contract No. SSK509 - Design and Construction of Kong Nga Po Police Training Facilities (Starting from 23 December 2022)

- Setting-up of temporary site office and site entrance
- Concreting for blinding layer for site office
- Condition survey at neighboring area
- Condition survey at site
- Topographical survey
- General cleaning and housekeeping works

**Status of Environmental Licences, Notifications and Permits**

2.10 A summary of the relevant permits, licences and/or notifications on environmental protection for this Project is presented in **Table 2.2(a-b)**.

**Table 2.2a Status of Environmental Licences, Notifications and Permits (Contract No. ND/2018/01)**

| Permit / Licence No. | Valid Period | | Status |
|---|---|---|---|
| | From | To | |
| **Environmental Permit (EP)** | | | |
| EP-510/2016 | N/A | N/A | Valid |
| **Construction Noise Permit (CNP)** | | | |
| GW-RN0881-22 | 29-09-2022 | 28-12-2022 | Valid |
| GW-RN0873-22 | 28-09-2022 | 27-01-2023 | 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** | | | |
| WPN5213-641-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 |

**Table 2.2b Status of Environmental Licences, Notifications and Permits (Contract No. SSK509)**

| Permit / Licence No. | Valid Period | | Status |
|---|---|---|---|
| | From | To | |
| **Construction Noise Permit (CNP)** | | | |
| N/A | -- | -- | -- |
| **Notification pursuant to Air Pollution Control (Construction Dust) Regulation** | | | |
| EPD Ref no.: 487864 | N/A | N/A | N/A |
| **Billing Account for Construction Waste Disposal** | | | |
| Application No. RE06412 | -- | -- | Pending for approval |
| **Registration of Chemical Waste Producer** | | | |
| Application No. 487865 | -- | -- | Pending for approval |
| **Effluent Discharge Licence under Water Pollution Control Ordinance** | | | |
| Application No. 488094 | - | -- | Pending for approval |

**Summary of EM&A Requirement**

2.11 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/equipment were conducted/calibrated regularly in accordance with the Project Specific EM&A Manual. Copies of calibration certificates were attached in 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 2022 | AM1 | 85.9 | 32.6 – 152.4 | 308 | 500 |
| | AM2 | 104.3 | 54.1 – 138.9 | 311 | |
| Nov 2022 | AM1 | 109.7 | 64.2 – 197.4 | 308 | |
| | AM2 | 63.1 | 37.6 – 98.4 | 311 | |
| Dec 2022 | AM1 | 66.9 | 31.5 – 91.7 | 308 | |
| | AM2 | 64.4 | 42.6 – 97.2 | 311 | |

## Construction Noise

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

4.6 One Action Level exceedance was recorded due to a documented complaint received in this reporting month. No Limit Level exceedance was recorded. 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**

**Remarks:**

| 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 2022 | NM1[1] | 59.5 | 56.3 – 62.4 | 54.9 | 75.0 |
| | NM2[1] | 66.7 | 55.8 – 72.2 | 56.7 | |
| | NM3 | 57.3 | 54.2 – 58.9 | 54.5 | |
| | NM4 | 62.9 | 57.3 – 67.0 | 58.7 | |
| | NM5 | 59.2 | 54.5 – 61.5 | 57.0 | |
| | NM6[1] | 63.6 | 52.9 – 68.2 | 56.0 | |
| | NM7 | 57.3 | 53.2 – 60.8 | 49.8 | |
| | NM8[1] | 53.4 | 51.1 – 54.8 | 57.6 | |
| | NM9[1] | 64.3 | 63.9 – 64.8 | 55.9 | |
| | NM10[1] | 55.1 | 54.4 – 56.2 | 52.8 | |
| | NM11 | 47.2 | 45.8 – 47.8 | 46.4 | |
| | NM12 | 66.2 | 49.5 – 70.0 | 54.7 | |
| | NM13[1] | 48.0 | 42.0 – 51.0 | 61.3 | |
| | NM14[1] | 53.7 | 48.1 – 58.4 | 59.6 | |
| Nov 2022 | NM1[1] | 58.6 | 56.8 – 60.6 | 54.9 | |
| | NM2[1] | 60.0 | 59.2 – 60.5 | 56.7 | |
| | NM3 | 55.7 | 52.8 – 58.7 | 54.5 | |
| | NM4 | 60.6 | 57.5 – 63.8 | 58.7 | |
| | NM5 | 58.4 | 53.0 – 62.7 | 57.0 | |
| | NM6[1] | 63.2 | 55.1 – 68.8 | 56.0 | |
| | NM7 | 53.7 | 47.9 – 56.6 | 49.8 | |
| | NM8[1] | 52.6 | 49.6 – 55.1 | 57.6 | |
| | NM9[1] | 65.3 | 57.4 – 70.8 | 55.9 | |
| | NM10[1] | 56.5 | 53.9 – 59.6 | 52.8 | |
| | NM11 | 52.3 | 50.1 – 54.5 | 46.4 | |
| | NM12 | 54.2 | 43.5 – 58.3 | 54.7 | |
| | NM13[1] | 49.4 | 43.5 – 53.8 | 61.3 | |
| | NM14[1] | 55.8 | 49.6 – 58.7 | 59.6 | |
| Dec 2022 | NM1[1] | 59.3 | 55.0 – 62.6 | 54.9 | |
| | NM2[1] | 62.5 | 57.6 – 63.8 | 56.7 | |
| | NM3 | 58.3 | 55.6 – 60.0 | 54.5 | |
| | NM4 | 59.1 | 57.5 – 60.4 | 58.7 | |
| | NM5 | 60.2 | 56.0 – 63.0 | 57.0 | |
| | NM6[1] | 60.7 | 56.3 – 62.4 | 56.0 | |
| | NM7 | 57.9 | 53.0 – 60.3 | 49.8 | |
| | NM8[1] | 54.3 | 50.2 – 58.3 | 57.6 | |
| | NM9[1] | 58.7 | 47.0 – 62.7 | 55.9 | |
| | NM10[1] | 53.8 | 46.9 – 55.3 | 52.8 | |
| | NM11 | 51.0 | 49.0 – 53.1 | 46.4 | |
| | NM12 | 54.2 | 44.9 – 59.4 | 54.7 | |
| | NM13[1] | 54.4 | 46.9 – 58.8 | 61.3 | |
| | NM14[1] | 58.9 | 54.0 – 63.1 | 59.6 | |

[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. The Contractor was reminded to closely monitored the transplanted species and implemented the protection measures according to the approved transplantation proposal to protect the transplanted / retained species. In addition, the Contractor was also reminded of the following based on the observation during the monitoring:

1) To review the watering frequency so the soil condition at the receptor site is wet enough for the plant growth;
2) The maintenance works (e.g. pruning etc.) on the *Keteleeria fortune* shall be conducted under the supervision of Landscape Specialist;
3) Coordinate and arrange landscape specialist to visit / monitor those *Keteleeria fortune* with broken branches;
4) The faded plant tags shall be replaced for clear identification of flora species of conservation interest;
5) To remove the litter / unwanted materials and plants / weeds within the receptor site;
6) To remove the construction materials / wastes within the protection zone for *Keteleeria fortune;*
7) To erect protective fence properly for the flora species of conservation interest;
8) Remind frontline staff about the requirements to protect the flora species of conservation interest; and
9) To arrange the new tags for those *Brainea insignis* with missing tags.

4.9 Nevertheless, three individuals of transplanted *Aquilaria sinensis* A-008, A-0009 and A-0010 were collapsed after Typhoon Signal No. 8. According to the Tree Risk Assessment Report provided by the Contractor's landscape specialist, the collapsed trees have been removed on 16th July 2022. The ecological monitoring photo records and results were shown in the relevant Monthly EM&A Reports.

4.10 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* and *Spiranthes sinensis* were conducted by the Contractor once per month on 29th October 2022, 29th November 2022 and 30th December 2022. No post-transplantation monitoring was conducted for *Aquilaria sinensis* as they were collapsed due to the Typhoon and removed on 16th July 2022.

4.11 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. In view of the condition of transplanted individuals after the 12-month establishment period, maintenance works were recommended to extend during the Post-establishment Period until the end of Construction Phase. The post-transplantation monitoring record were submitted to ET, IEC and the supervisors for review and record and were shown in 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 and construction noise was recorded in the reporting quarter.

**Summary of Environmental Non-Compliance**

6.3 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**

6.4 No environmental complaint was received in the reporting quarter. The Cumulative Complaint Log since the commencement of the Project is attached in **Appendix I**.

**Summary of Environmental Summon and Successful Prosecution**

6.5 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:

Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po

- Site Formation at Portion D
- Retaining Wall Construction
- Slope Upgrading Works
- Road & Associated Works
- Sewerage Trenchless Works
- Drainage & Watermain Trenchless works
- Bridge & Associated Works

Contract No. SSK509 - Design and Construction of Kong Nga Po Police Training Facilities

- Setting-up of temporary site office
- Concreting for blinding layer for site office
- Setting-up for site office
- Condition Survey
- Tree Survey

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 during dry weather. To prevent high dust concentrations during the dry weather, 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 In addition, 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 The Contractor is also recommended to maintain water quality mitigation measures during construction works. The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a site/sediment trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates. Efficient silt removal facilities shall deploy to ensure all treated effluent from wastewater treatment plant shall meet the requirements as stated in WPCO licences. The site drainage plan shall also be updated based on the site condition and construction programme.

7.6 Moreover, the tree protection zone for the existing *Keteleeria fortunei* and *Aquilaria sinensis* shall be properly maintained during the Kong Nga Po Road upgrading works in close proximity of the plant species of conservation importance according to the approved "Explanatory Statement for Revised Layout Plan of Kong Nga Po Road (Final)".

7.7 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 2022 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. No Limit Level exceedance was recorded.

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 No environmental complaint, notification of summons or successful prosecutions was 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 maintain the cover for stockpile of dusty materials and exposed slope for dust suppression;
- To enhance the dust suppression measures including watering for the dust generation works,

exposed site area and haul road;
- To regular check the valid NRMM labels are properly displayed on the regulated machines and non-road vehicles; and
- To maintain the wheel washing facilities provided at every construction site exit where practicable are functioning properly.

*Construction Noise Impact*

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

*Water Impact*

- To maintain the cover for open stockpile of and exposed slope;
- To keep reviewing and update temporary drainage system;
- To maintain the earth bunds or sand bag barriers on site to direct stormwater to silt removal facilities;
- To maintain and ensure the silt removal facilities are functioning properly;
- To maintain the wheel washing facilities provided at every construction site exit where practicable are functioning properly; and
- To divert the muddy water at the retention pond to the wetsep for treatment before discharging out.

*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.

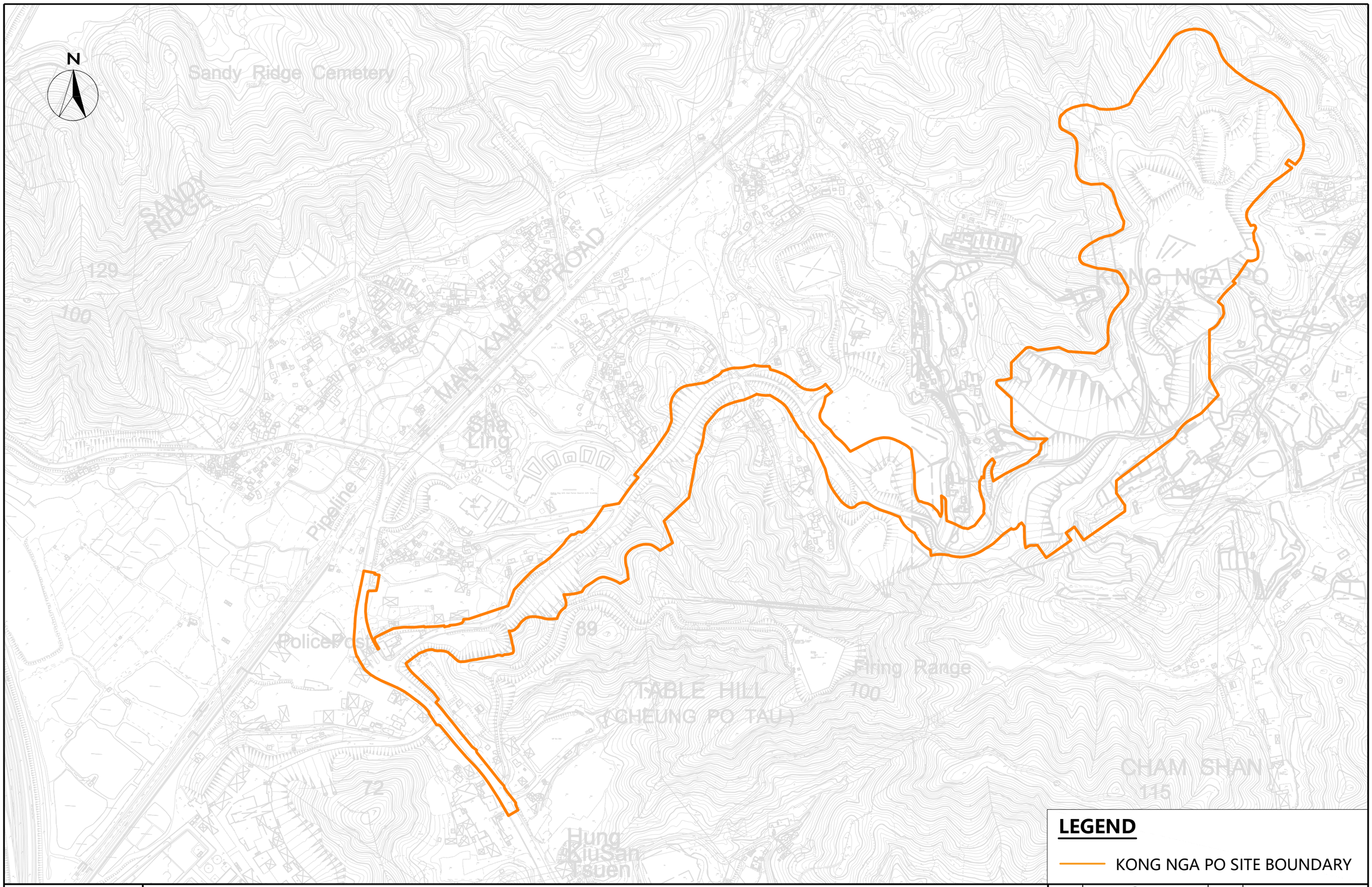
*Ecology*

- To erect and maintain the protection fence around the retained trees / conservation species;
- To keep the tree protection zone large enough to protect the tress; and
- To remove the construction materials within the tree protection zone.

*Landscape and Visual*

- To erect and maintain the protection fencing and tree protection zone around the preserved trees;
- To remove the construction materials within the tree protection zone;
- To avoid hanging materials on the retain tree; and
- To keep the tree protection zone large enough to protect the tress.

**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 – |

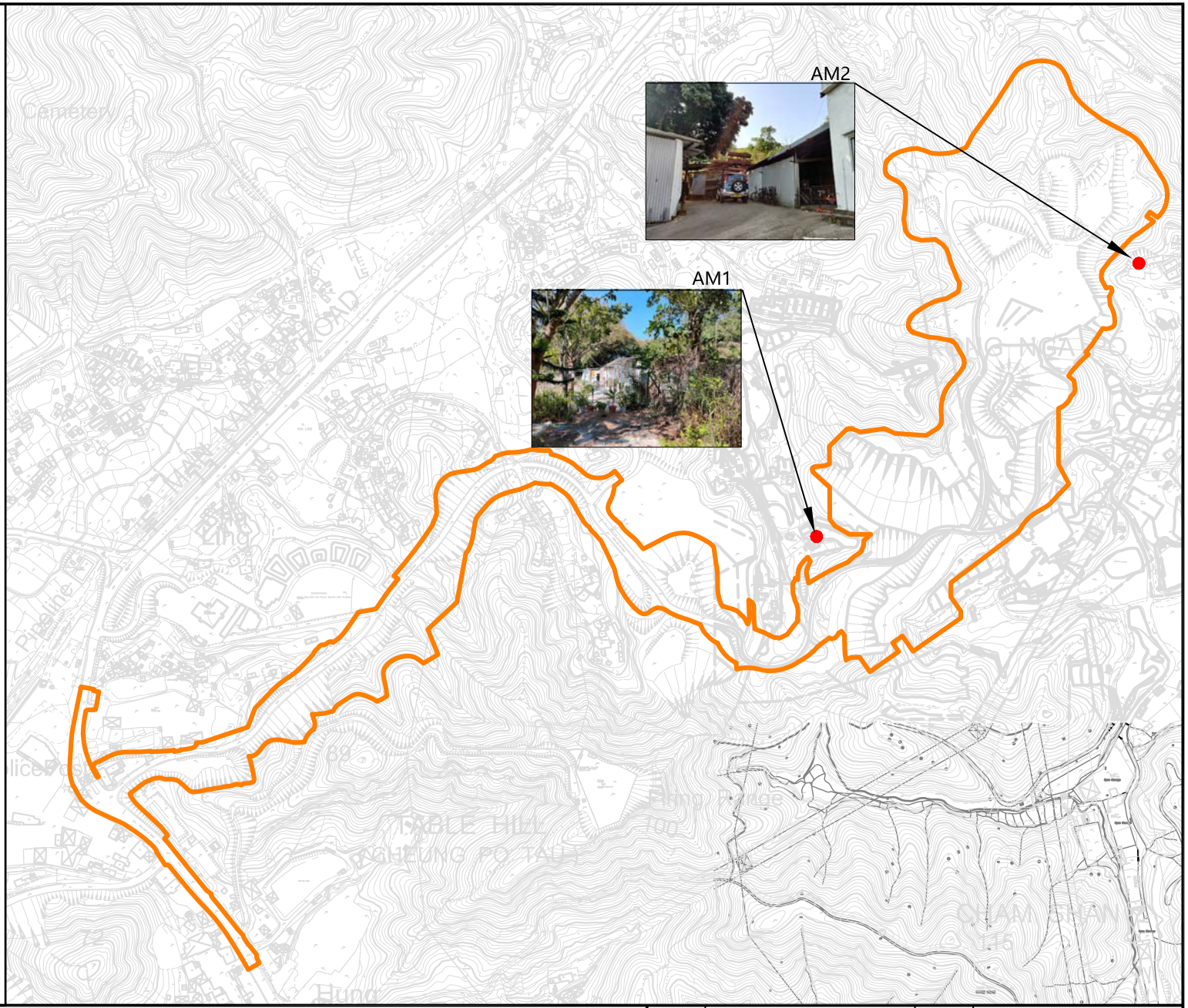
N

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

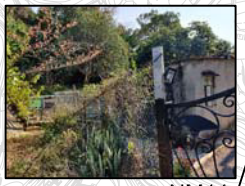
| | | | |
|---|---|---|---|
| SCALE | A4 @ 1:50000 | DATE | JUL 2020 |
| CHECK | IT | DRAWN | NL |
| JOB No. | WMA20001 | FIGURE NO. 2 | REV – |

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 | |

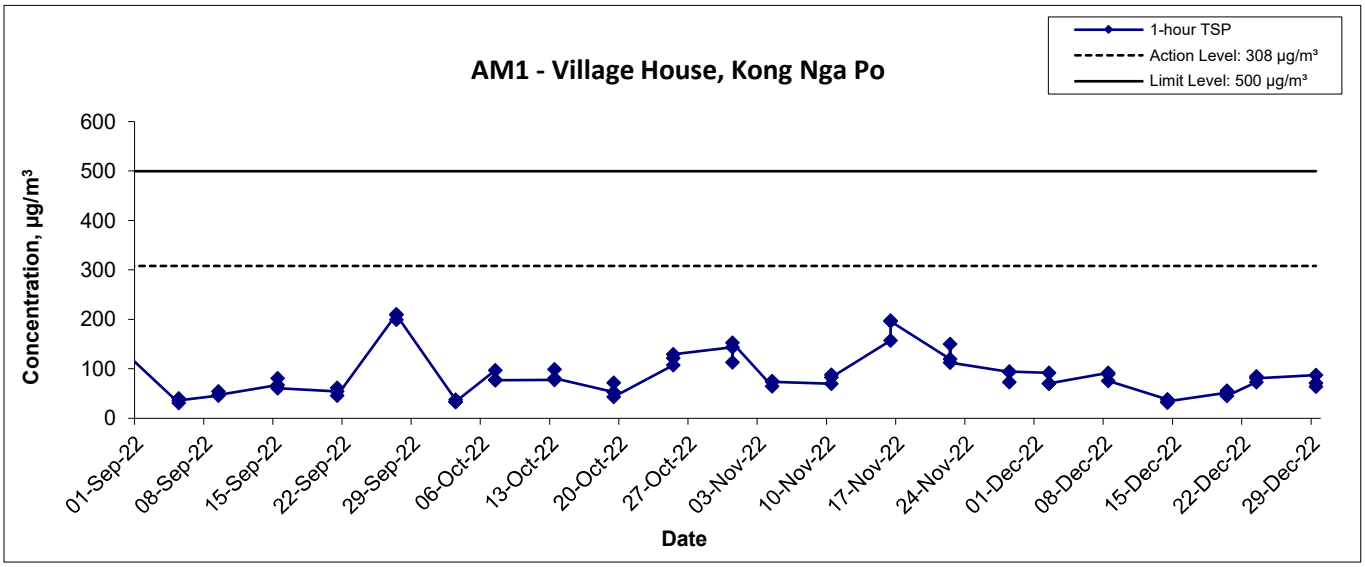
## TableA-2 Action and Limit Levels for Construction Noise

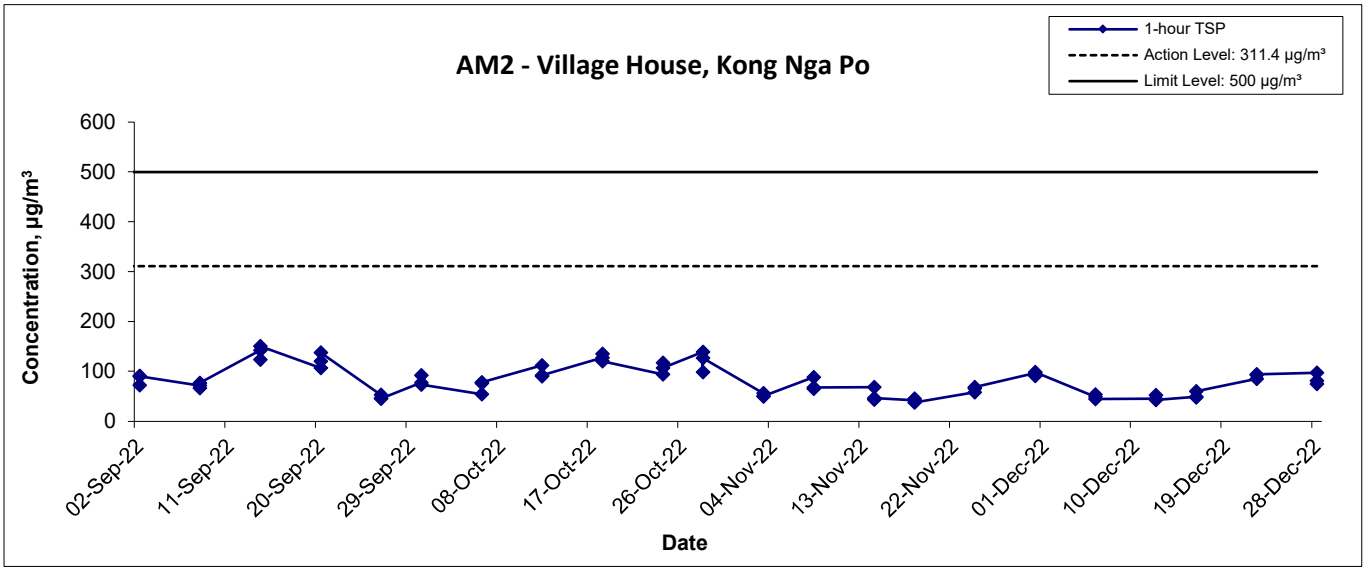
| Time Period | Action Level | Limit Level |
|---|---|---|
| 0700-1900 hours on normal weekdays | When one documented complaint is received | 75 dB(A) |

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**

## 1-hr TSP Concentration Levels

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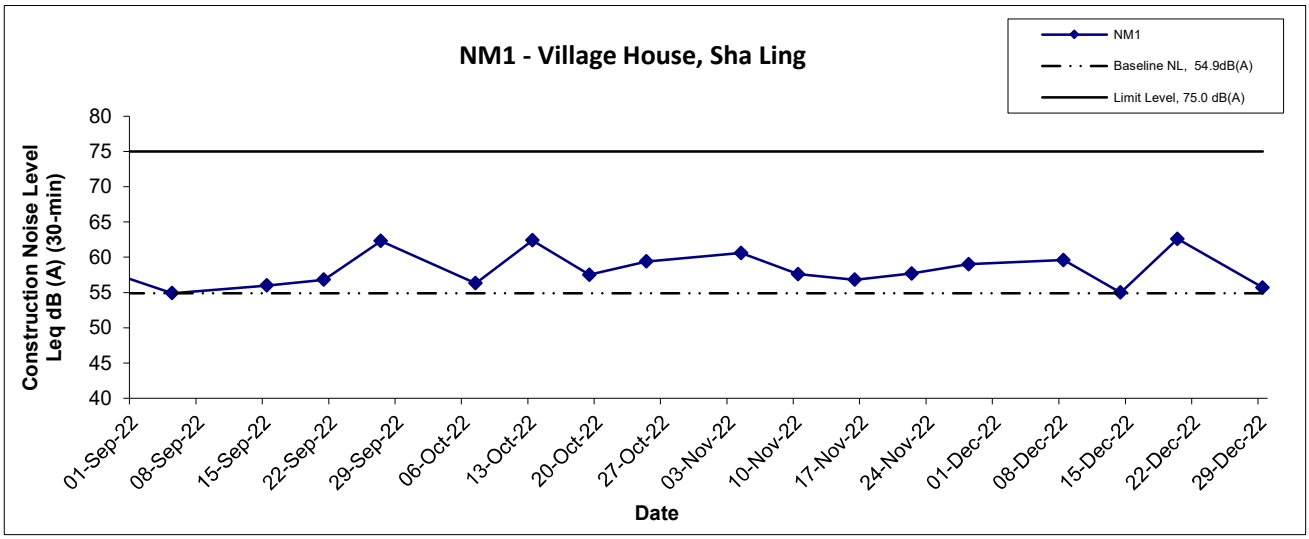
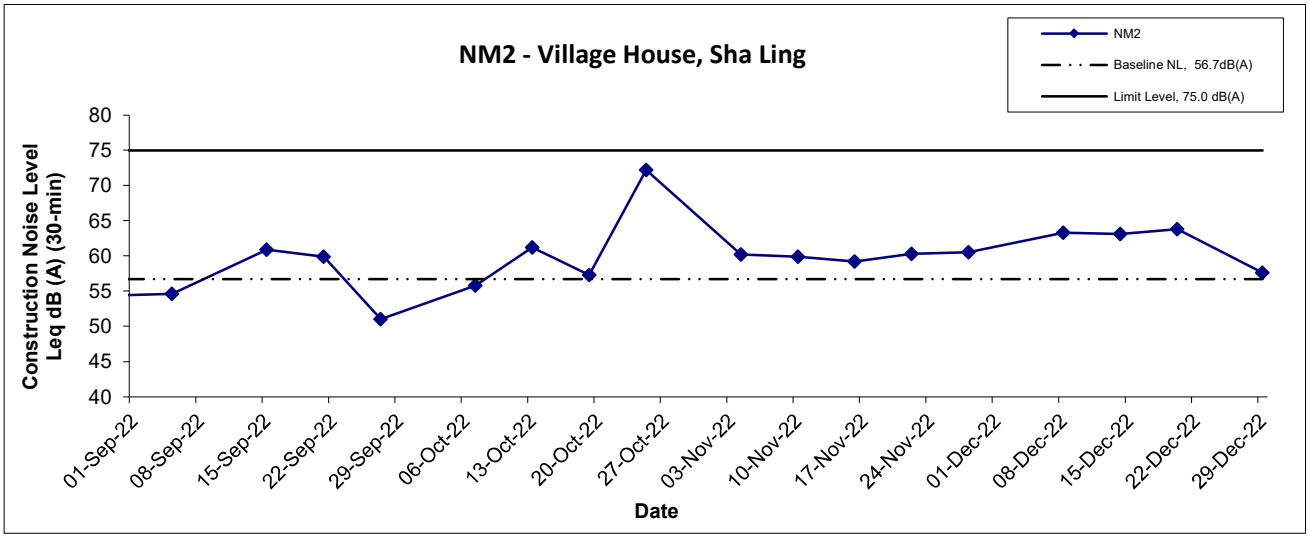
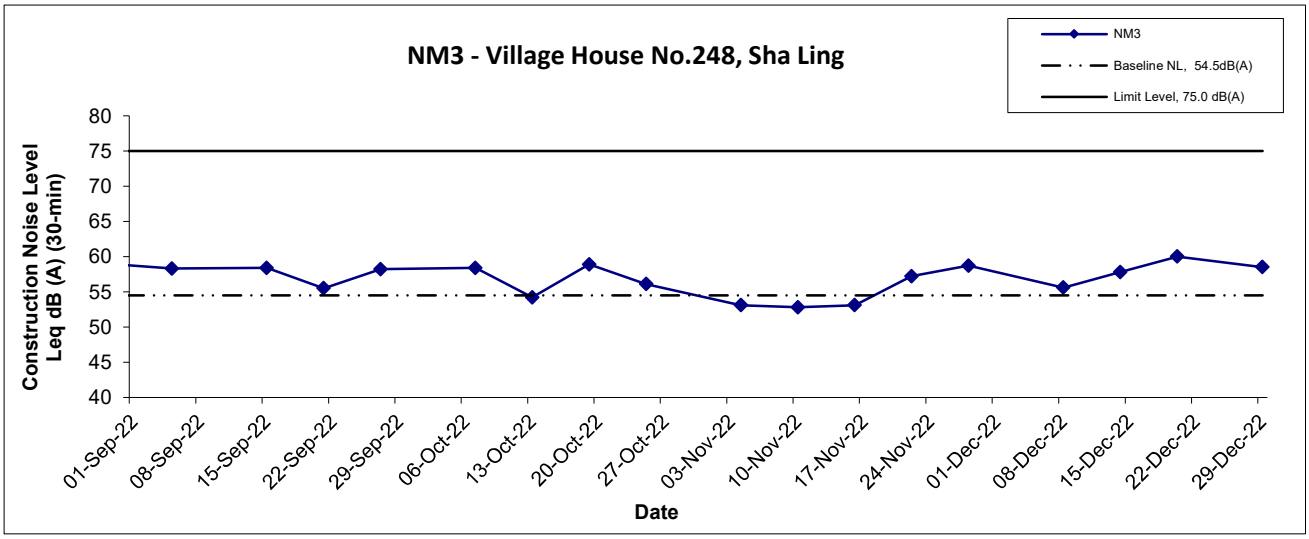
| Title: Service Contract No. NDO 07/2019<br>Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po<br>Graphical Presentation of 1-hour TSP Monitoring Results | Scale: N.T.S<br>Date: Dec 22 | Project No.: WMA20001<br>Appendix: B | WELLAB 匯力 consulting . testing . research |

**APPENDIX C**
**NOISE MONITORING GRAPHICAL PRESENTATION**

# Noise Levels




| Title | Scale | Project No. |
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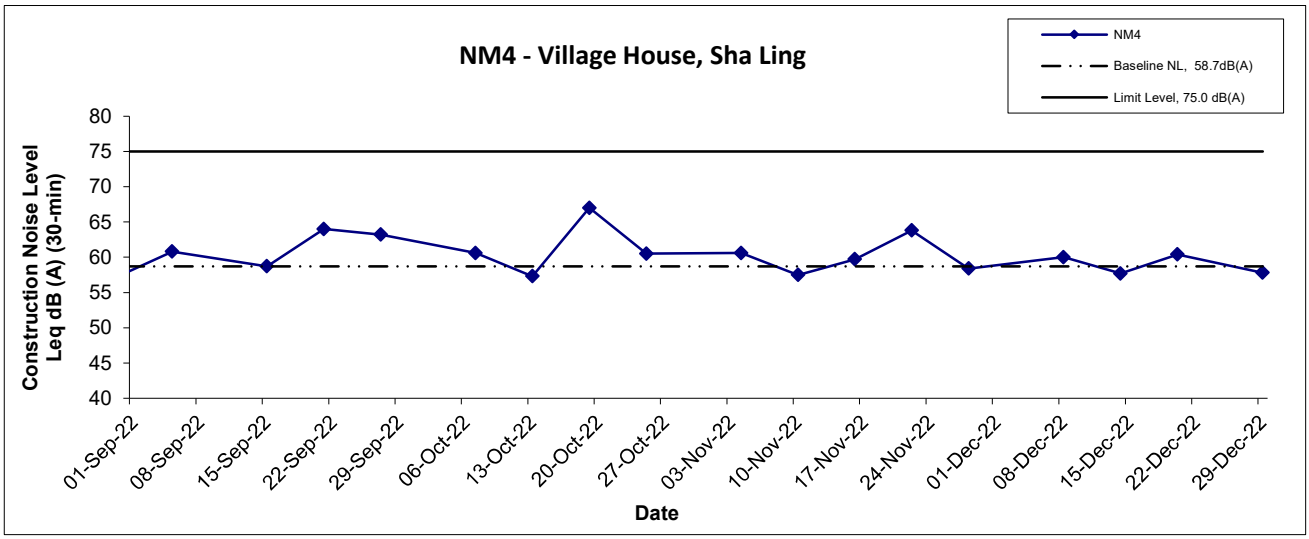
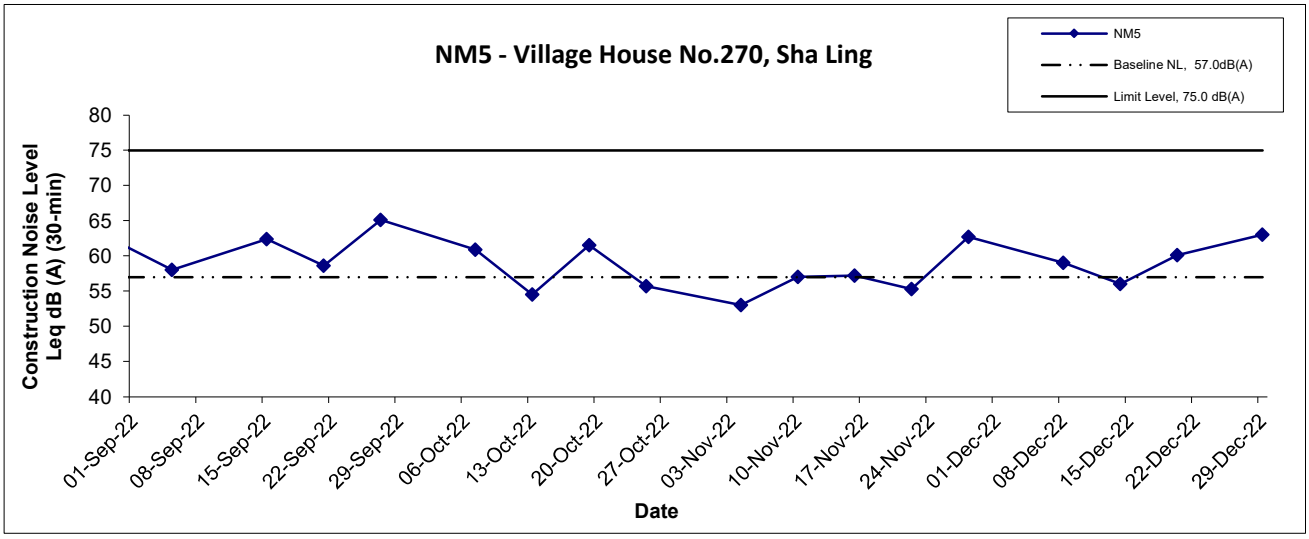
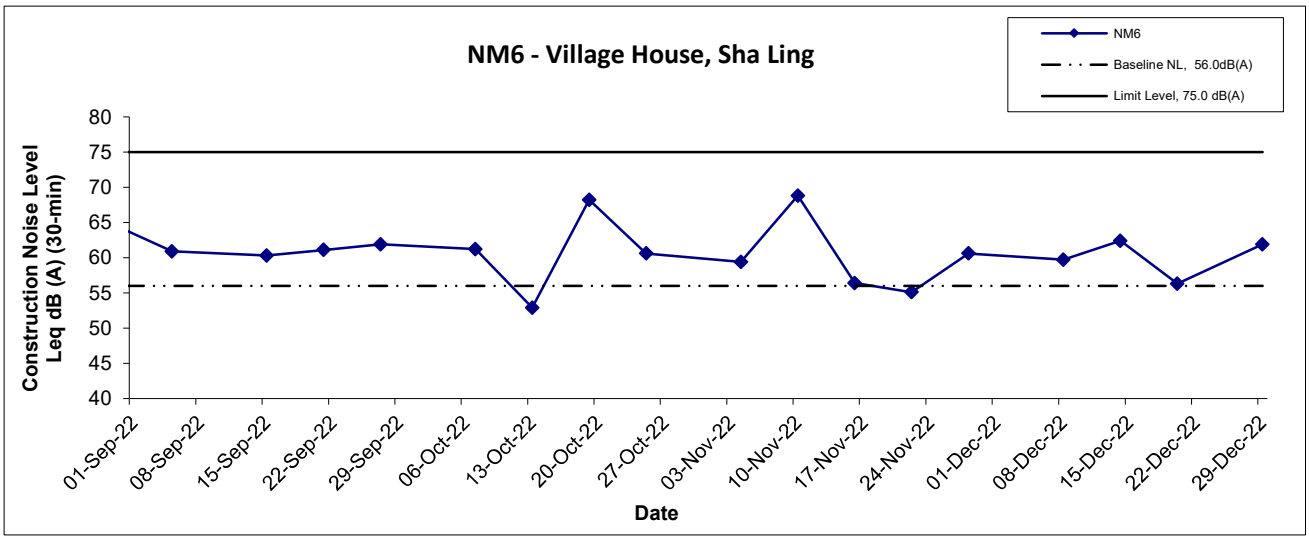
| Service Contract No. NDO 07/2019<br>Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po<br>Graphical Presentation of Construction Noise Monitoring Results | N.T.S | WMA20001 |
| | Date: Dec 22 | Appendix: C |

WELLAB 匯力 consulting . testing . research

# Noise Levels

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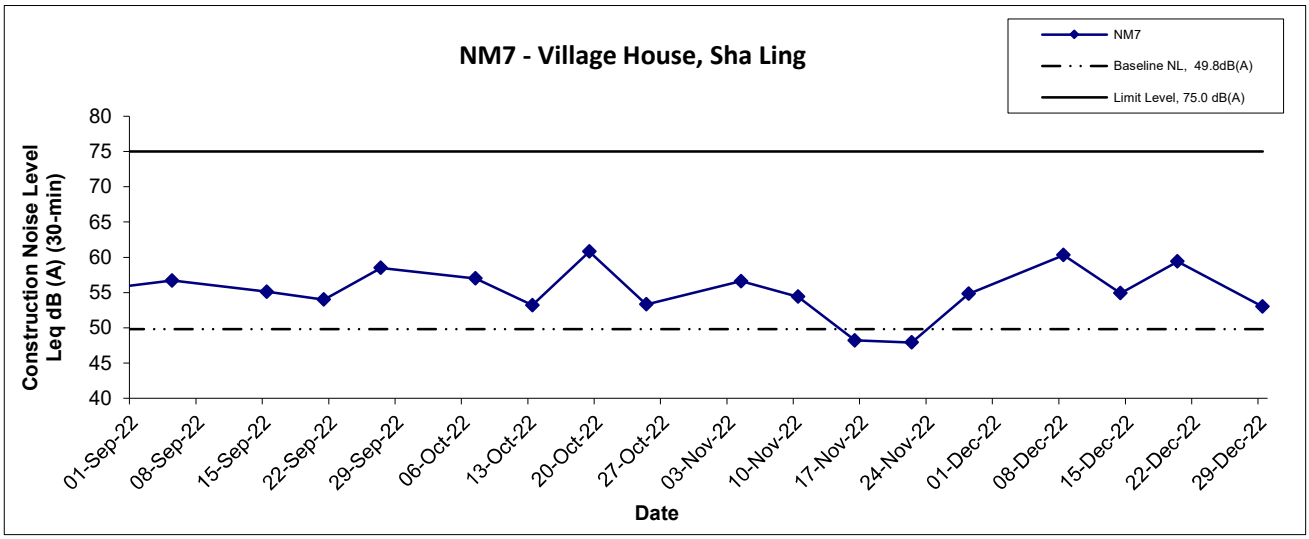
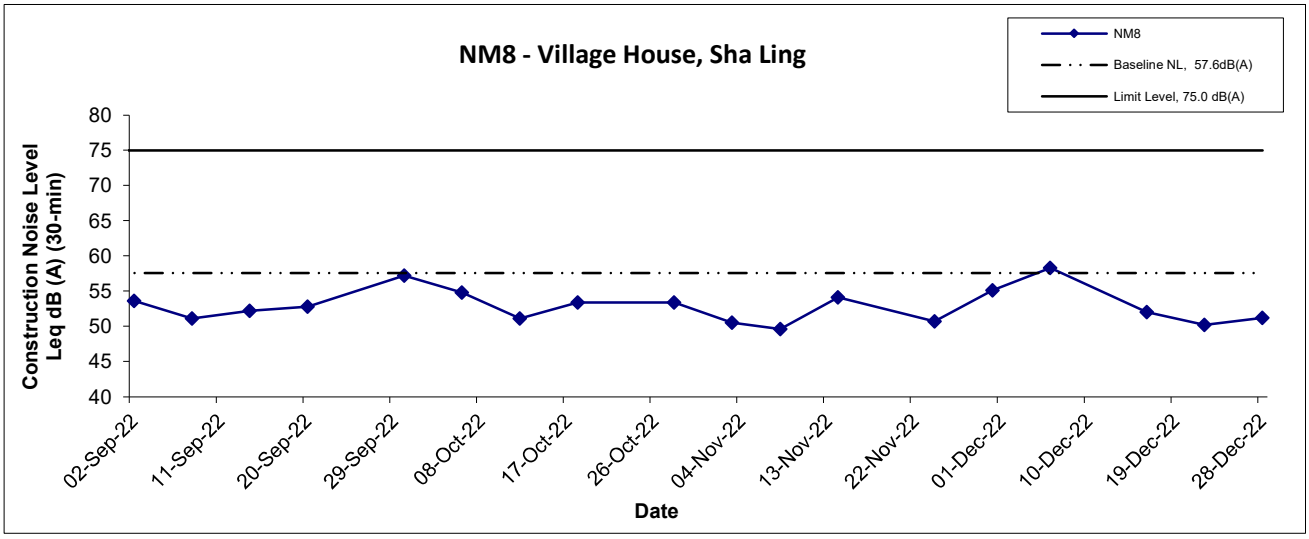
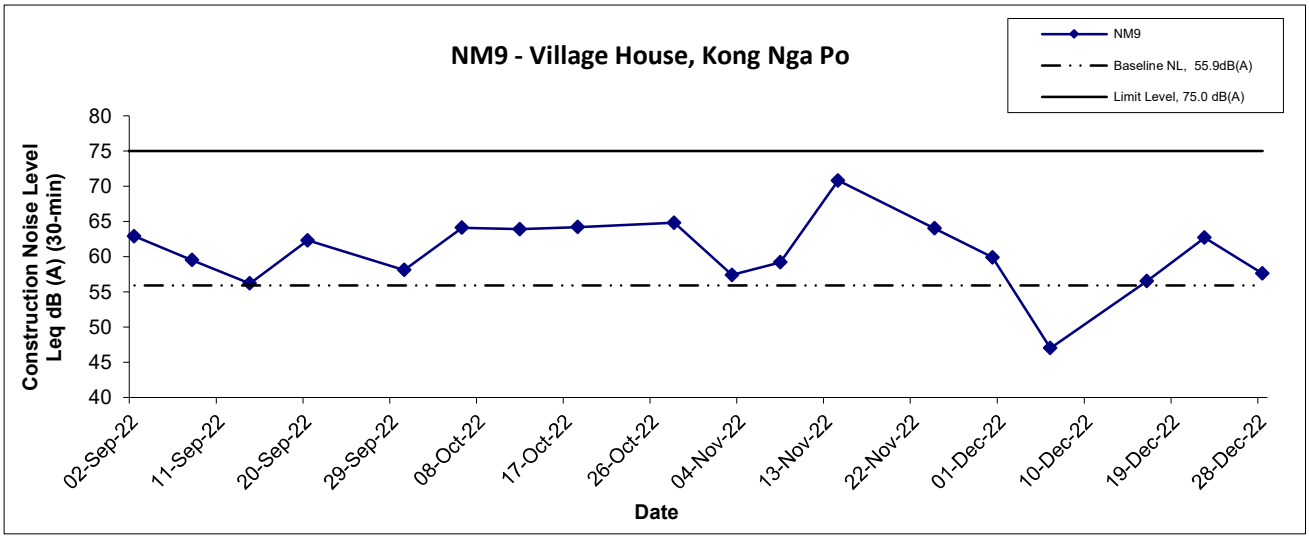
# Noise Levels

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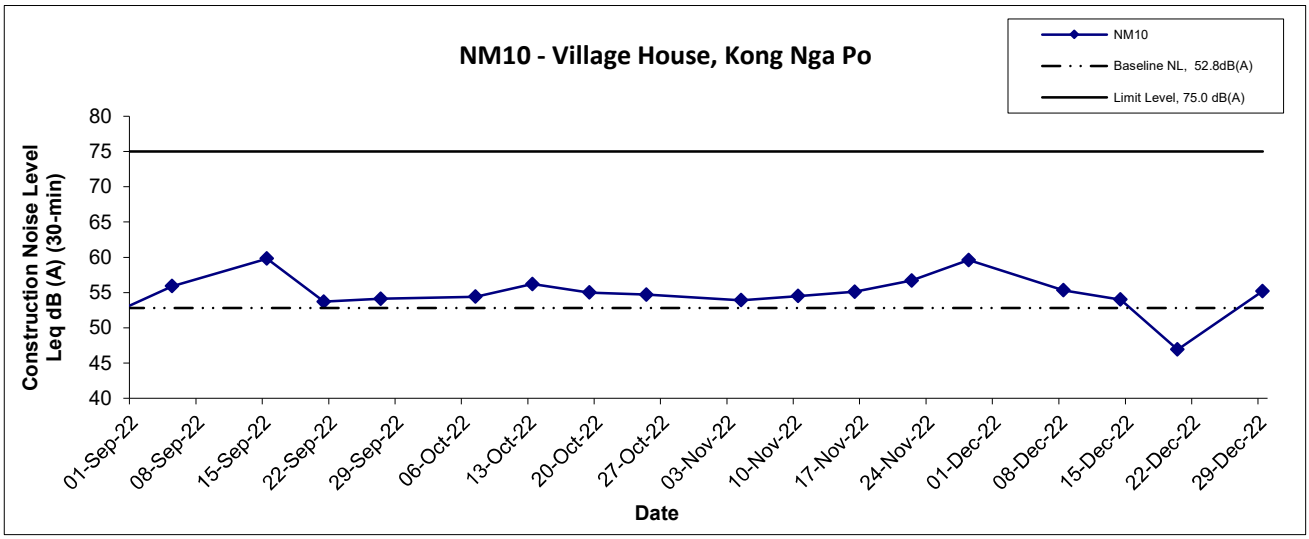
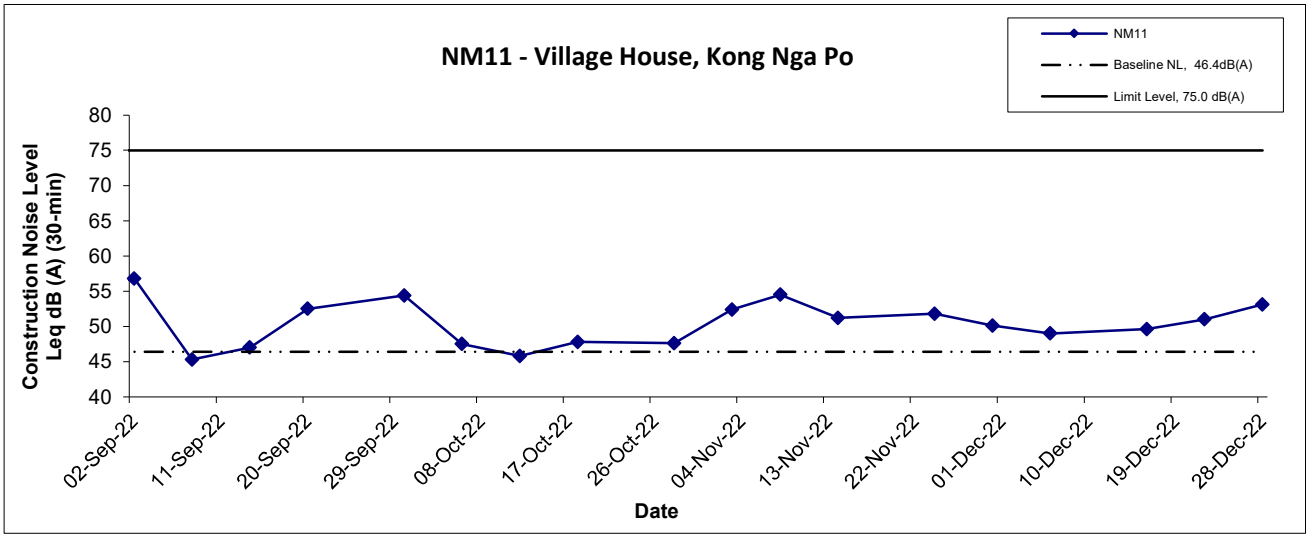
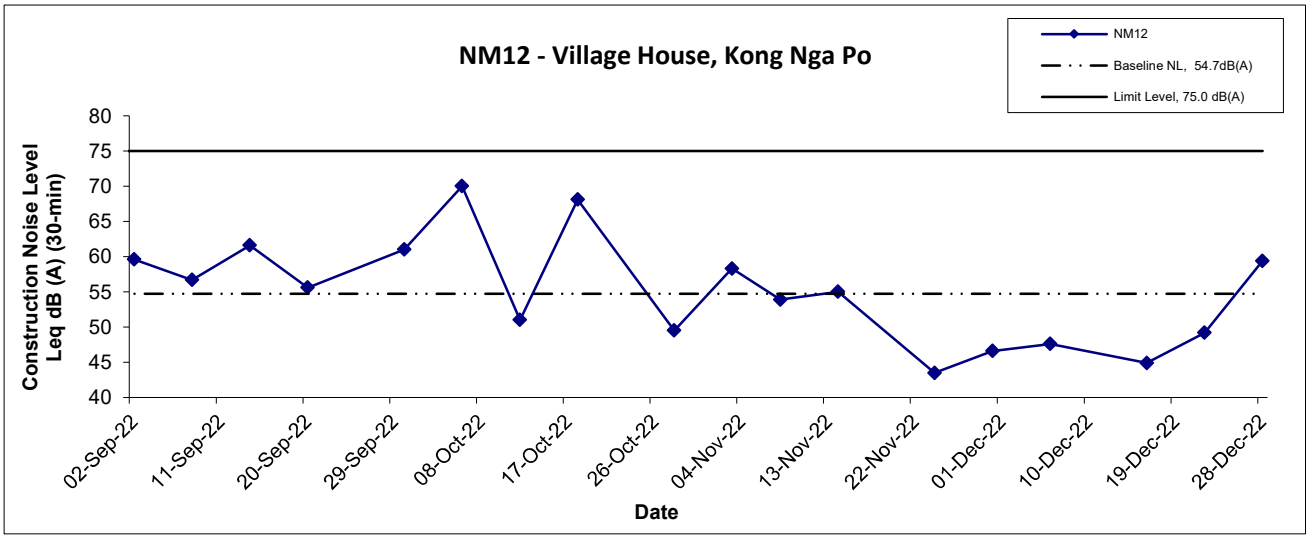
# Noise Levels

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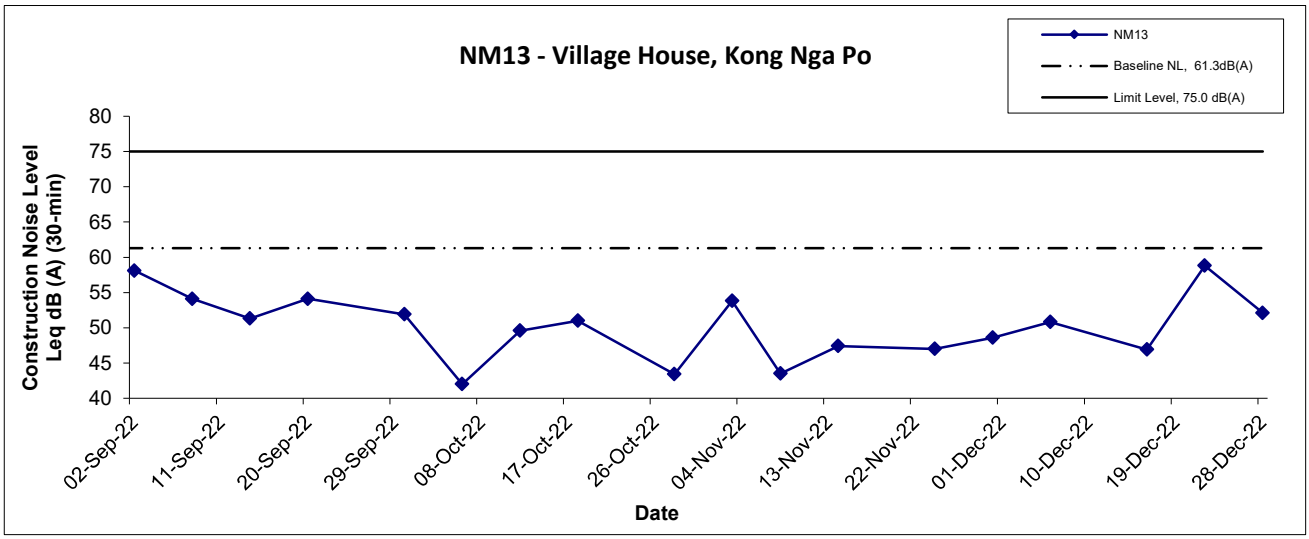
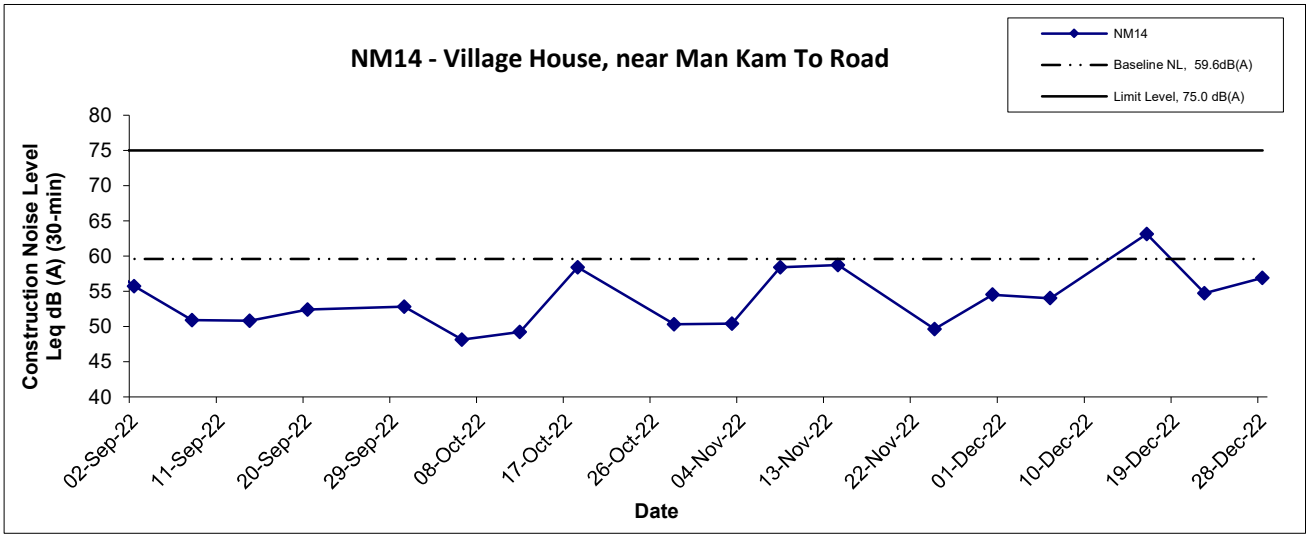
| | Date: Dec 22 | Appendix: C | |

# Noise Levels

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

| EVENT | ACTION | | | |
|---|---|---|---|---|
| | ET | IEC | ER | CONTRACTOR |
| | 7. If exceedance continues, arrange meeting with IEC and ER; and<br>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;<br>2. Inform ER, Contractor and EPD;<br>3. Repeat measurement to confirm finding;<br>4. Increase monitoring frequency to daily; and<br>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;<br>2. Check Contractor's working method;<br>3. Discuss with ET and Contractor on possible remedial measures;<br>4. Advise the ER on the effectiveness of the proposed remedial measures; and<br>5. Monitor the implementation of remedial measures. | 1. Confirm receipt of notification of failure in writing;<br>2. Notify Contractor; and<br>3. Ensure remedial measures properly implemented. | 1. Take immediate action to avoid furthrt exceedance;<br>2. Submit proposals for remedial actions to IEC within 3 working days of notification;<br>3. Implement the agreed proposals; and<br>4. Amend proposal if appropriate. |
| 2.Exceedance for two or more consecutive samples | 1. Notify IEC, the ER, Contractor and EPD;<br>2. Identify source;<br>3. Repeat measurement to confirm findings;<br>4. Increase monitoring frequency to daily; | 1. Check monitoring data submitted by ET;<br>2. Check Contractor's working method;<br>3. Discuss amongst ER, ET, and Contractor on | 1. Confirm receipt of notification of failure in writing;<br>2. Notify Contractor;<br>3. In consultation with IEC, agree with the Contractor | 1. Take immediate action to avoid further exceedance;<br>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;<br>6. Arrange meeting with IEC, and ER to discuss the remedial actions to be taken;<br>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and<br>8. If exceedance stops, cease additional monitoring. | the potential remedial actions;<br>4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and<br>5. Monitor implementation of remedial measures. | on the remedial measures to be implemented;<br>4. Ensure remedial measures properly implemented; and<br>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;<br>3. Implement the agreed proposals;<br>4. Resubmit proposals if problem still not under control; and<br>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;<br>2. Carry out investigation;<br>3. Report the results of investigation to the IEC, ER and Contractor;<br>4. Discuss with the IEC and Contractor on remedial measures required; and<br>5. Increase monitoring frequency to check mitigation effectiveness. | 1. Review the monitoring data submitted by the ET;<br>2. Review the proposed remedial measures by the Contractor and advise ER; and<br>3. Advise the ER on the effectiveness of the proposed remedial measures. | 1. Confirm receipt of notification of failure in writing;<br>2. Notify Contractor;<br>3. In consolidation with the IEC, agree with the Contractor on the remedial measure to be implemented: and<br>4. Supervise the implementation of remedial measure. | 1. Submit noise mitigation proposals to IEC and ER; and<br>2. Implement noise mitigation proposals. |
| Limit Level | 1. Inform IEC, ER and Contractor and EPD;<br>2. Repeat measurements to confirm findings;<br>3. Increase the monitoring frequency;<br>4. Identify source and investigate the cause of exceedance;<br>5. Carry out analysis of Contractor's working procedures;<br>6. Discuss with the IEC, Contractor and ER on | 1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions; and<br>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;<br>2. Notify the Contractor;<br>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;<br>4. Supervise the implementation of remedial measures; and<br>5. If exceedance continues, consider | 1. Take immediate action to avoid further exceedance;<br>2. Submit proposals for remedial actions to the IEC and ER within 3 working days of notification;<br>3. Implement the agreed proposals;<br>4. Submit further proposal if problem still not under control; and<br>5. Stop the relevant portion of works as |

| EVENT | ACTION | | | |
|---|---|---|---|---|
| | **ET** | **IEC** | **ER** | **CONTRACTOR** |
| | remedial measure required;<br>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and<br>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.<br>Discuss remedial actions with IEC, ER and Contractor.<br>Monitor remedial actions until rectification has been completed. | Check report.<br>Check Contractor's working method.<br>Discuss with ET and Contractor on possible remedial measures.<br>Advise ER on effectiveness of proposed remedial measures.<br>Check implementation of remedial measures. | Notify Contractor. Ensure remedial measures are properly implemented | Amend working methods to prevent recurrence of nonconformity.<br>Rectify damage and undertake additional action necessary. |
| Repeated Nonconformity | Identify source.<br>Inform IEC and ER.<br>Increase monitoring frequency. Discuss remedial actions with IEC, ER and Contractor.<br>Monitor remedial actions until rectification has been completed.<br>If non-conformity stops, cease additional monitoring. | Check monitoring report. Check Contractor's working method.<br>Discuss with ET and Contractor on possible remedial measures.<br>Advise ER on effectiveness of proposed remedial measures.<br>Supervise implementation of remedial measures. | Notify Contractor.<br>Ensure remedial measures are properly implemented. | Amend working methods to prevent recurrence of nonconformity.<br>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 2022**

| 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 | 0 | 0 | 6 |

**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**<br>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:<br>• 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.<br>• 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:<br>**Good Site Management**<br>• Good site management is important to help reduce potential air quality impact down to an acceptable level. | | | | | ^<br>^ |

## 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**<br>• Main temporary access points should be paved with concrete, bituminous hardcore materials or metal plates and be kept clear of dusty materials; or<br>• 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**<br>• 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 Dusty Materials**<br>• 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**<br>• Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.<br>• Before debris is dumped into a chute, water should be sprayed onto the debris so that it remains wet when it is dumped. | | | | | ^<br>^ |
| | | **Transport of Dusty Materials**<br>• 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**<br>• 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**<br>• 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<br>• Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.<br>• 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. | | | | | ^<br>^<br>^ |
| | | **Site hoarding**<br>• 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**<br>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:<br>• Only well-maintained plant to be operated onsite and plant should be serviced regularly during the construction works;<br>• Machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum;<br>• Plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;<br>• Mobile plant should be sited as far away from NSRs as possible; and<br>• 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 | ^<br>^<br>^<br>^<br>^ |
| 4.4.6 | 3.2 | **Adoption of QPME**<br>• 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**<br>• 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**<br>• Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator. | | | | | N/A |
| 4.4.6 | | **Use of Noise Insulating Fabric**<br>• 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**<br>The following measures should be implemented:<br>• Construction waste, debris and refuse generated on-site should be stored or contained appropriately to prevent them entering nearby watercourses or blocking stormwater drains.<br>• 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.<br>• 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 | ^<br>^<br>* |

## 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**<br>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:<br>• 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.<br>• 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.<br>• 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.<br>• 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 | ^<br>^<br>^<br>* |

## 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.<br>• Final surface levels should be compacted and final surface protections installed to prevent erosion caused by rainstorms.<br>• 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.<br>• 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.<br>• 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<br>• 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 | | | | | ^<br>*<br>*<br>^<br>^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | storm runoff from entering foul sewers. The discharge of surface runoff into foul sewers should be prevented so as not to overload the sewerage system.<br>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**<br>In accordance with the Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C), the following measures should be implemented:<br>• 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.<br>• Oils and fuels should only be stored in designated areas which have appropriate pollution prevention control | Prevent accidental discharge of chemicals into the surrounding environment | Contractor | Within the Project site / During construction phase | Construction phase | ^<br>^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | facilities such as oil and grease traps.<br>• The maintenance of vehicles should only be undertaken in areas of the site served by appropriate pollution prevention control facilities.<br>• 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. | | | | | ^<br>^ |
| 5.6.1.4 | 4.2 | **Sewage from Construction Workforce**<br>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**<br>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* | Minimise/ control construction site discharges to avoid pollution of nearby watercourses | 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 |
|---|---|---|---|---|---|---|---|
| | | *Site Drainage and ETWB TC (Works) No. 5/2005 Protection of Natural Streams/rivers from Adverse Impacts Arising from Construction Works*. Measures include the following:<br>• Stockpiling of construction materials and spoil, should be properly covered and located away from any natural stream/river.<br>• 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.<br>• 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<br>N/A<br>N/A |
| ***Waste Management Implications – Construction Phase*** | | | | | | | |
| 7.5.1.1 | 6.2 | **Good Site Practice**<br>Recommendations for good site practices during the construction activities include:<br>• 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 | Implement good site practices to minimize waste generation | Contractor | Project construction site / Throughout construction stage / Until completion of all construction | 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 |
|---|---|---|---|---|---|---|---|
| | | appropriate facility, of all wastes generated at the site<br>• Training of site personnel in proper waste management and chemical handling procedures<br>• Provision of sufficient waste disposal points and regular collection of waste<br>• Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers<br>• Stockpiles of C&D materials should be kept covered by impervious sheets to avoid windblown dust<br>• 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<br>• Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads<br>• 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 | | | activities | | ^<br>^<br>^<br>^<br>^<br>^<br>^ |
| 7.5.1.2 | 6.2 | **Waste Reduction Measures** | Implement good | Contractor | Project | 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 |
|---|---|---|---|---|---|---|---|
| | | Good management and control can prevent the generation of a 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:<br>• Sort non-inert C&D materials to recover any recyclable portions<br>• 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<br>• 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<br>• Proper site practices to minimize the potential for damage or contamination of inert C&D materials<br>• Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste | management and control to minimize waste generation | | construction site / Throughout construction stage / Until completion of all construction activities | | ^<br>^<br>^<br>^<br>^ |
| 7.5.1.3 | 6.2 | **Inert and Non-inert C&D Materials**<br>In order to minimise impacts resulting from collection and transportation of inert C&D materials for off-site disposal, the | Minimise impacts resulting from collection and transportation of inert C&D | Contractor | Project construction site / Throughout | 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 |
|---|---|---|---|---|---|---|---|
| | | inert C&D materials should be reused on-site as fill material as far 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.<br>The surplus inert C&D materials will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.<br>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.<br>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 | materials | | construction stage / Until completion of all construction activities | | ^<br>^<br>^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | Management on Construction Site | | | | | |
| 7.5.1.4 | 6.2 | **Chemical Waste**<br>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.<br>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 | ^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 7.5.1.5 | 6.2 | **General Refuse**<br>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 | Minimise impacts resulting | Contractor | Project | 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 |
|---|---|---|---|---|---|---|---|
| | | contaminated material excavation and transportation of contaminated materials (if any), in order to minimise the potentially adverse effects health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials:<br>• To minimise the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;<br>• 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;<br>• Stockpiling of contaminated excavated materials on site should be avoided as far as possible;<br>• The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;<br>• Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and / or release of contaminated wastewater;<br>• Truck bodies and tailgates should be sealed to stop any | from excavation and transportation in the of contaminated materials | | construction site / Throughout construction stage / Until completion of all construction activities | | N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>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 |
|---|---|---|---|---|---|---|---|
| | | discharge;<br>• Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping;<br>• Speed control for trucks carrying contaminated materials should be exercised;<br>• 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<br>• Maintain records of waste generation, disposal quantities and disposal arrangements. | | | | | N/A<br>N/A<br>N/A<br>N/A |
| ***Ecological Impact*** | | | | | | | |
| 9.7.1 | 8.3 | **Temporary Protective Fence for Flora Species of Conservation Interest**<br>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.<br>Monthly monitoring of any other flora species of conservation | To avoid potential impact on flora species of conservation interest from construction activities such as materials storage;<br>To make sure that the flora species of conservation | Contractor | Project construction site / Throughout construction stage / Until completion of all construction activities | 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 |
|---|---|---|---|---|---|---|---|
| | | interest identified in the detailed vegetation survey should be conducted during the construction phase. | interest are not affected by the construction activities of 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:<br>• Silencers or mufflers on well-maintained construction equipment should be utilized and properly maintained during the construction program<br>• Noise enclosure or acoustic shed should be effectively utilized, where practicable<br>• 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<br>^<br>^ |
| - | - | The following mitigation measures are proposed for minimizing light impacts:<br>• Adjusting the outdoor lighting to lower intensity<br>• Use of directional lighting to avoid light spill into sensitive areas<br>• 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 | ^<br>^<br>^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| - | - | **Drainage system**<br>• Proper drainage system should be installed to collect and dispose rainwater<br>• 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 | ^<br>^ |
| - | - | **Good Site Practice Measures**<br>• Placement of stockpiling into designated area should be selected at disturbed area in order to minimize the disturbance to wildlife<br>• Open fire should be strictly prohibited<br>• The boundary of project boundary should be clearly demarcated<br>• General drainage system arrangement should include sediment and oil trapper to collect the site run-off<br>• 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 | ^<br>^<br>^<br>^<br>^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| ***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.<br>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<br>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 | CM03: Construction area control, where possible, to ensure that | Minimise landscape and | Contractor | Project area / | 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 |
|---|---|---|---|---|---|---|---|
| | 9.1 | the landscape and visual impacts arising from the construction activities are minimised. This includes the reduction of the extent 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. | visual impacts. | | During design stage / construction 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 | ^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| ***Landscape and Visual Impacts (Recommended Mitigation Measures from Landscape and Visual Mitigation Plan)*** | | | | | | | |
| - | - | **Tree protection and preservation**<br>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.<br>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<br>ArchSD: Within KNP Police Facilities Site | Design and construction phase of CEDD's and ArchSD's Contracts | * |
| - | - | **Tree transplantation**<br>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** | To minimize the landscape | CEDD's and | CEDD: Along | Construction | ^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | a. Reduction of the extent and location of working areas to avoid sensitive LRs<br>b. Siting of offices or temporary structures so that they are not visually prominent<br>c. Consideration of detailed schedules to shorten the construction period<br>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. | and visual impacts by construction area control | ArchSD's Contractors | KNP Road where applicable and slopes within KNP Police Facilities Site<br>ArchSD: Within KNP Police Facilities Site | Stage of CEDD's and ArchSD's Contracts | ^<br>^<br>^ |
| - | - | **Advance implementation of mitigation planting**<br>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**<br>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)<br>b. It is proposed that the screening be compatible with the | 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 | Construction Phase CEDD's and ArchSD's Contracts | ^<br>^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | surrounding environment and where possible, non-reflective, recessive colours be used. | | | accessible routes and/or is close to visually sensitive receivers (VSRs) | | |
| - | - | **Detail design considerations**<br>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<br>ArchSD's Detailed Designers / Consultants | CEDD: Along KNP Road where applicable and slopes within KNP Police Facilities Site<br>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**<br>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 | a. To reduce the visibility of the development components<br>b. To further improve visual amenity<br>c. To reduce the mass of development<br>d. To minimise the 'wall | ArchSD's Detailed Designers / Consultants | Within KNP Police Facilities Site | Design Stage 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 |
|---|---|---|---|---|---|---|---|
| | | b. Adopting natural building materials such as stone and timber should be for architectural features, where technically feasible.<br>c. Using responsive design for the disposition of the main elements of the proposed scheme including the locations of buildings and utility structures.<br>d. Grouping of utilities and infrastructure components into proposed buildings as far as technically feasible to reduce the mass of development<br>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,<br>f. Creation of setbacks, articulating the development frontage and maintenance of view corridors when technically feasible | effects' and create a subtle transition at the edges of the site<br>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**<br>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.<br>b. The detailed design landscape consultants shall work in unison with the engineers on the aesthetic aspects of the structures and | 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 | ^ |

## 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 |
|---|---|---|---|---|---|---|---|
| | | their relationship with the landscape.<br>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 design solutions. | | | | | |
| - | - | **Design of retaining walls and slopes**<br>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".<br>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**<br>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.<br>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,<br>c. Some compensatory shrub and ground cover planting will also | 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<br>ArchSD: Within KNP Police | 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 |
|---|---|---|---|---|---|---|---|
| | | be provided within the woodland area to create a more structurally diverse woodland.<br>d. Woodland areas will utilise a combination of large sized tree stock (including heavy standard sized trees) and whip sized trees to create a more naturalistic<br>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.<br>f. Roadside and amenity planting will utilise largely heavy standard sized trees. | | | Facilities Site | | |
| - | - | **Landscape buffer tree planting**<br>a. Tree planting using larger sized tree stock shall be provided to screen the proposed structures and associated facilities.<br>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<br>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)** | To enhance the landscape and visual quality of the existing and proposed | ArchSD's Contractor | KNP Police Facilities Site | Construction Stage of ArchSD's | 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 |
|---|---|---|---|---|---|---|---|
| | | a. Roadside and amenity planting using predominantly native species | transport routes and car parks. | | | Contract | |
| - | - | **Grassland (ecological mitigation)**<br>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)**<br>a. Green roofs predominantly using native species shall be introduced where technically feasible on proposed buildings to reduce exposure of untreated concrete surfaces<br>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**<br>a. Vertical planting shall be introduced using predominantly native species.<br>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<br>ArchSD : within KNP Police Facilitate Site | Construction Stage of CEDD's and ArchSD's Contracts | N/A |
| - | - | **Green paving (within KNP Police Facilitate Site)** | To reduce the area of | ArchSD's Contractor | Within KNP | Construction stage | 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 |
|---|---|---|---|---|---|---|---|
| | | a. Green paving approach such as grass-crete or grass-grid to maximise the area of planting and reduce the area of hard paving<br>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. | hard paving | | Police Facilitate Site | of ArchSD's Contracts | |
| - | - | **Light control (operation)**<br>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<br>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 2022

| Parameters | Date | Observations | Follow Up Action |
|---|---|---|---|
| **Air Quality** | 21/10/2022 | To enhance the dust suppression measures at the exposed site area at Portion D. | Water spraying was applied on the exposed site area by the Contractor as observed during follow-up audit session on 28/10/2022. |
| **Construction Noise Impact** | -- | No environmental deficiency was identified during the reporting month. | -- |
| **Water Quality** | 14/10/2022 | The site discharge should be properly diverted to the sedimentation facilities or reuse on site at Feature A. | The collected site discharge was reused for dust suppression by the Contractor as observed during follow-up audit session on 21/10/2022. |
| | 21/10/2022 | To update the maintenance record of wetsep at Abutement B. | The maintenance record of wetsep at Abutement B was updated by the Contractor as observed during follow-up audit session on 4/11/2022. |
| **Waste/ Chemical Management** | -- | No environmental deficiency was identified during the reporting month. | -- |
| **Landscape and Visual** | 21/10/2022 | To remove the construction material within the tree protection zone and ensure sufficient space of protection zone to protect the trees (site area near dog unit). | The construction material within the tree protection zone were cleared and protection fence has been re-arranged to allow sufficient space of protection zone to protect the trees by the Contractor as observed during follow-up audit session on 4/11/2022. |
| **Ecology** | -- | No environmental deficiency was identified during the reporting month. | -- |
| **Permit/Licences** | -- | No environmental deficiency was identified during the reporting month. | -- |

## Table G-2: Observations and Recommendations of Site Audit in November 2022

| Parameters | Date | Observations | Follow Up Action |
|---|---|---|---|
| **Air Quality** | 11/11/2022 | To enhance the dust suppression measures for the dusty haul road. | Water spray vehicle was provided for the dusty haul road regularly by the Contractor as observed during follow-up audit session on 18/11/2022. |
| **Construction Noise Impact** | -- | No environmental deficiency was identified during the reporting month. | -- |
| **Water Quality** | 04/11/2022 | The muddy water at the retention pond at Abutement B should be pumped to the wetsep for treatment before discharging out. | The muddy water at the retention pond was pumped to the wetsep for treatment before discharging out by the Contractor as observed during follow-up audit session on 11/11/2022. |
| **Waste/ Chemical Management** | 18/11/2022 | The used cement bags and construction wastes should be disposed properly at site area for the slope works near dog unit. | The used cement bags and construction wastes were cleared properly by the Contractor as observed during follow-up audit session on 25/11/2022. |
| **Landscape and Visual** | 18/11/2022 | The retain tree used for hanging materials should be avoided at the site area for the slope works near dog unit. | The hanged materials were removed by the Contractor as observed during follow-up audit session on 25/11/2022. |
| **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 2022**

| Parameters | Date | Observations | Follow Up Action |
|---|---|---|---|
| **Air Quality** | 09/12/2022 | To enhance dust suppression measures by covering the idling stockpiles of dusty materials at Portion D. | The dusty materials (i.e., cement) have been removed. by the Contractor as observed during follow-up audit session on 16/12/2022. |
| | 22/12/2022 | Dust screen should be deployed for the shotcreting works at the slope area near dog unit. | The dust screen was deployed surrounding the shotcreting works by the Contractor as observed during follow-up audit session on 30/12/2022. |
| | 30/12/2022 | Provide wheel washing facilities at site exit of RD-A to ensure all vehicles and plants are cleaned before leaving the site. | Wheel washing facilities was provided at the site exit of RD-A by the Contractor as observed during follow-up audit session on 06/01/2023. |
| **Construction Noise Impact** | -- | No environmental deficiency was identified during the reporting month. | -- |
| **Water Quality** | 16/12/2022 | Mud trial was observed outside site exit of Platform A. The Contractor was reminded to ensure all vehicles and plants were cleaned before leaving construction site. | The public road was cleaned.by the Contractor and no further mud trail was observed during follow-up audit session on 30/12/2022. |
| | 30/12/2022 | Provide wheel washing facilities at site exit of RD-A to ensure all vehicles and plants are cleaned before leaving the site. | The rubbish was properly cleared by the Contractor as observed during follow-up audit session on 06/01/2023. |
| **Waste/ Chemical Management** | 30/12/2022 | To clear the rubbish which was not disposed properly at Abutment B. | The used cement bags and construction wastes were cleared properly by the Contractor as |

| Parameters | Date | Observations | Follow Up Action |
|---|---|---|---|
| | | | observed during follow-up audit session on 06/01/2023. |
| **Landscape and Visual** | 01/12/2022 | Construction wastes / materials inside the protection fence enclosing the tree species of conservation important should be removed and the protection fence should be erected properly (near dog unit). | The construction wastes / materials inside the protection fence have been removed and the protective fence was erected properly by the Contractor as observed during follow-up audit session on 09/12/2022. |
| | 22/12/2022 | The temporary protective fence should be properly erected and maintained for the retain tree at the site area near dog unit. | The temporary protective fence was properly erected to enclose the retain trees by the Contractor as observed during follow-up audit session on 30/12/2022. |
| **Ecology** | 01/12/2022 | Construction wastes / materials inside the protection fence enclosing the tree species of conservation important should be removed and the protection fence should be erected properly (near dog unit). | The construction wastes / materials inside the protection fence have been removed and the protective fence was erected properly by the Contractor as observed during follow-up audit session on 09/12/2022. |
| **Permit/Licences** | -- | No environmental deficiency was identified during the reporting month. | -- |

**APPENDIX H**
**WASTE GENERATION IN THE REPORTING PERIOD**

# Contract No. ND/2018/01 –
# Site Formation and Infrastructure Works
# for Police Facilities in Kong Nga Po

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 '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000$m^3$) |
| **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 '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000$m^3$) |
| **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

## Monthly Summary Waste Flow Table for 2022

| 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 '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000$m^3$) |
| **Cumulative up to 2021** | 586.09580 | 0.00000 | 93.04080 | 399.67493 | 88.42240 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 4.95767 |
| **Jan** | 15.52131 | N/A | 14.62310 | 0.00000 | 0.75883 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.13939 |
| **Feb** | 0.75965 | N/A | 0.00000# | 0.00000 | 0.68681 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.07283 |
| **Mar** | 11.42694 | N/A | 11.19380 | 0.00000 | 0.13435 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.09879 |
| **Apr** | 21.11792 | N/A | 20.93220 | 0.00000 | 0.03174 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.15399 |
| **May** | 23.62989 | N/A | 22.75850 | 0.00000 | 0.78923 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.08216 |
| **Jun** | 50.32256 | N/A | 49.84710 | 0.00000 | 0.38282 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.09264 |
| **Sub-Total** | 708.87407 | 0.00000 | 212.39550 | 399.67493 | 91.20618 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 5.59747 |
| **Jul** | 55.65088 | N/A | 54.26760 | 0.00000 | 0.37304 | 0.91776 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.09247 |
| **Aug** | 43.19611 | N/A | 29.70000 | 0.00000 | 8.72599 | 4.69637 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.07375 |
| **Sep** | 36.80396 | N/A | 33.21960 | 0.00000 | 3.50538 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.07898 |
| **Oct** | 5.67507 | N/A | 5.40497 | 0.00000 | 0.19936 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.07074 |
| **Nov** | 0.21425 | N/A | 0.00000 | 0.00000 | 0.10276 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.11149 |
| **Dec** | 1.48147 | N/A | 0.00000 | 0.00000 | 1.26914 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.21233 |
| **Total** | 851.89581 | 0.00000 | 334.98767 | 399.67493 | 105.38185 | 5.61413 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 6.23723 |

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 '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000$m^3$) |
| 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

#Quantity to be included in Mar-2022 since lack of manpower of Survey Team for data logging in Feb-2022 due to Covid-19

*The quantity of Inert Materials reused in the contract to be updated upon surveying record

# Contract No. SSK509 –
# Design and Construction of Kong Nga Po Police Training Facilities

Name of Department: ArchSD

# Monthly Summary Waste Flow Table for 2022 (year)

Project : Design and Construction of Kong Nga Po Police Training Facilities Contract No.: SS K509

| Month | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | | Actual Quantities of C&D Wastes Generated Monthly | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Quantity Generated | Hard Rock and Large Broken Concrete | Bituminous Material | Reused in the Contract | Reused in other Projects | Disposed as Public Fill | Imported Fill | Metals | Paper/ cardboard packaging | Plastics (see Note 3) | Chemical Waste | Others, e.g. general refuse |
| | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000$m^3$) | (in '000 kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000 $m^3$) |
| Jan | | | | | | | | | | | | |
| Feb | | | | | | | | | | | | |
| Mar | | | | | | | | | | | | |
| Apr | | | | | | | | | | | | |
| May | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | |
| Sub-total | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Jul | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | |
| Dec | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Total | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Notes: (1) The performance targets are given in Clause 6(14) of this PS.
(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 material.
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000 m3. (Clause 5(4)(b) of this PS refers).

**APPENDIX I**
**COMPLAINT LOG**

**Appendix I - Complaint Log**

**Reporting Quarter: October to December 2022**

| 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.<br>Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow:<br>• Erect noise isolating mat at Portion B1 to reduce noise nuisance arising from the site<br>Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site, such as:<br>• Selection of quieter plant;<br>• 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.<br>• To strengthen site supervision and provide regular training to the workers to increase awareness of their environmental responsibilities and minimize the noise impact | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | to the nearby residents during working hours as well as restricted hours. | |
| 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.<br><br>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.<br><br>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:<br>• Provision of soil berm at edge near retaining wall DAM Bay 43-46<br>• Setting up of wastewater treatment facilities near wheel washing bay | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | • Re-formation of haul road in Portion D<br>• Provision of soil berm near Platform B<br>• Increase in capacity of retention pit near Platform B<br>• Reinforcement of soil berm near excavation area and near retaining wall at Portion D to minimize water leakage<br>• Regular maintenance of clear U-channel which was blocked by natural debris at Kong Nga Po Road<br><br>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 | 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 | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | is sufficient to handle the discharge. | along the Kong Nga Po Road during heavy rainfall.<br><br>Continuous improvement works on the temporary 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.<br><br>In addition, the Contractor has taken the following mitigation measures to minimize the water quality impact arising from the construction works:<br>● Regular inspection and maintenance on sediment control measure at Project site;<br>● *Ad-hoc* inspection on the water pollution control measures at Project site before onset of the typhoon;<br>● Regular maintenance record on wastewater treatment facilities; and<br>● Provision of vegetated filter strips at outer side of existing soil berms and slope surface to act as natural filtration for water pollution control.<br><br>The environmental condition of the site and the control of work will be continuously reviewed and monitored by the Supervisor, ET and IEC. | |
| 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. | | |

| 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.<br><br>Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow:<br>● Setting up of double layers of noise barrier to block the transmission of noise from breaking point to Noise Sensitive Receivers;<br>● Conducting internal noise monitoring to ensure the noise mitigation measures are properly implemented; and<br>● To check and maintain the noise insulating fabric enclosed the noisy part of the breaker.<br><br>Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site , such as<br>● To frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers;<br>● To proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary;<br>● To provide regular training to the workers to | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | increase awareness of their environmental responsibilities and minimize the noise impact to the nearby residents during working hours as well as restricted hours;<br>● 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.<br><br>Existing U-channel near slope toe had been covered and | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | 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.<br><br>Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow:<br>● Excavated slop had been covered by erosion mat<br>● Strictly implemented trip ticket system to monitor the C&D waste disposal<br>● 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.<br><br>In addition, Contractor has also undertaken the follow up action as follow:<br>● The hammer of excavator had been wrapped with sound proof canvas;<br>● Silent-up retractable noise barriers were deployed for noise mitigation measure during the rock breaking works.<br>Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site , such as: | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | ● To frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers;<br>● To proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary;<br>● 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<br>● 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:<br>● noisy part of sheet-piling plant has been enclosed by sound insulation materials;<br>● proactive environmental protection proforma has been prepared to identify the potential noise impact to NSRs and corresponding mitigation measures has been implemented;<br>● toolbox talk training for site engineers and frontline workers on construction noise suppression has been conducted.<br><br>In addition, noise mitigation measures have been implemented for rock breaking activities as below:<br><br>● hammer of the excavator has been wrapped by | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | soundproofing material;<br>● checking and maintenance of the soundproofing material wrapped on the hammer has been implemented before operation;<br>● SilentUP Retractable Noise Barriers have been installed to block the noise transmission to the village of complainant;<br>● proactive environmental protection proforma has been prepared to identify the potential noise impact to NSRs and corresponding mitigation measures has been implemented;<br>● toolbox talk training for site engineers and frontline workers on construction noise suppression has been conducted;<br>● nearby villagers close to the rock breaking works have been informed before the commencement of the works<br><br>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.<br><br>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 rock sawing will be considered for the upcoming | |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | rock breaking works.<br><br>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.<br>The following was observed during the investigation:<br>● wheel washing facilities have been provided for vehicles and plants leaving the works areas;<br>● the section before the site exits have been paved with backfall to prevent the wheel washing water from entering the public road;<br>● frontline worker was carrying out public road washing for public cleanliness in the perspective of the general public;<br>● no earth, mud or muddy water were deposited on roads.<br>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 |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| C-012 | N/A | Works Area Near Lamp Post GD0460 at Kong Nga Po Road | 3rd May 2022 | The complainant complained about the following issues:<br>- Noise from construction activities that caused nuisance to public<br>- Vibration may cause damage to nearby structure<br>- Suspected muddy water discharged into private drainage | The main construction works near the complaint location as stated by the complainant was the pre-boring works at works area "S0131" from 21 April 2022 to 30 April 2022. Observations have been spotted during the investigation as below:<br><u>Noise & Vibration</u><br>- Additional noise barrier has been erected for the pre-boring works to minimize the noise transmitted to the noise sensitive receiver (NSR) even the line of sight between the noise source point and the NSR was blocked by the natural barrier.<br><u>Muddy Water Discharge</u><br>- Wastewater Treatment Facilities has been in place and functioning to treat the wastewater generated from the pre-boring works.<br>- discharged effluent from the wastewater treatment system for the works area "S0131" has been sampled on 25 April 2022 and the test report showed a result of Total Suspended Solid of < 1mg/L which complied with the requirement of < 30mg/L as stipulated in Discharge Licence.<br>- no muddy water along the drainage near the complaint location was observed, the water flowing in the drainage was clean even after the heavy rainstorm on 12 May 2022.<br>- no chemical along the drainage near the complaint location was observed.<br><br>The following additional measures were implemented by the Contractor: | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | Noise & Vibration (26/4/2022)<br>- self-monitoring on noise at the NSR has been conducted and the result showed a noise level of Leq,T = 58.7dB(A) that no exceedance of noise level from the pre-boring works.<br>- self-monitoring on vibration at the NSR has been conducted and the result showed a vibration level of 2.977mm/s that was far lower than the Peak Particle Velocity Limits of 15mm/s.<br>Muddy Water Discharge<br>- additional clearance works for the existing drainage to help to clear the soil accumulated in the drainage brought from nearby existing earth and to ensure no blockage of the drainage. | |
| C-013 | N/A | Works Area Near Lamp Post BD2355 at Kong Nga Po Road | 23rd June 2022 | The complainant complained about vibration from construction activities that caused nuisance to a nearby Sensitive Receiver of the Police Dog Unit and Force Search Unit Training School (HKPDU) | The main construction works near the HKPDU mentioned by the complainant was the pre-boring works at Works Area "RD-A". The works were commenced on 11 June 2022 and completed on 21 June 2022. The following observations were made during the investigation:<br>- no vibration was noticed during the site inspection at Works Area "RD-A" for the pre-boring works on 15 June 2022<br>- a difference in elevation (at least 3m) between the Works Area "RD-A" and the nearby Sensitive Receiver was formed after the completion of backfilling for the retaining wall system and might has already reduced the vibration transmission to the Sensitive Receiver | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | The following additional measures were implemented by the Contractor:<br>- self-monitoring on vibration at the nearby Sensitive Receiver was conducted on 21 June 2022 and the result showed a vibration level of 0.348 mm/s that was far lower than the Peak Particle Velocity Limits of 15mm/s<br>- feasibility of alternative working methods to further minimize the vibration to nearby Sensitive Receivers for upcoming pre-boring works at other works area will be considered by the Contractor | |
| C-014 | N/A | Works Area Near Lamp Post GD0460 at Kong Nga Po Road | 17th Aug 2022 | The complainant complained about the muddy surface runoff flowing from the construction site into the private lots during rainy days | According to the finding of ad-hoc site inspection conducted during raining on 13 August 2022, the surface runoff was flowing from the carriageway surface and passing through Kong Nga Po Bridge works area, where had been hard paved, to the lower drainage. No muddy water generated from the construction works area was observed.<br><br>The discharged effluent from the wastewater treatment system has been sampled on 24 July 2022 and the test report showed a result of Total Suspended Solid of < 1mg/L which complied with the requirement of < 30mg/L as stipulated in Discharge Licence.<br><br>In addition, the suspected complaint location is an existing low-lying area even before the | Closed |

| Complaint Log Ref. | EPD Log Ref. | Location | Received Date | Details of Complaint | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | commencement of the construction. The water accumulation at the suspected location of complaint is considered due to the existing terrain according to the initial topographic survey records.<br><br>However, additional clearance works for the existing drainage would be conducted to clear the soil accumulated in the drainage brought from nearby existing earth and to ensure no blockage of the drainage. | |

**Cumulative Complaint Log**

| Reporting Period | Total no. of Complaint Received |
|---|---|
| This reporting quarter | 0 |
| From 3rd July 2020 to end of the reporting period | 14 |

**APPENDIX J**
**SUMMARY OF SUCCESSFUL PROSECUTION**

**Appendix J - Summary of Successful Prosecution**

**Reporting Quarter: October to December 2022**

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